POST-TEMPORARY SOLUTION STATUS REPORT NO. 8
FORMER GENERAL ELECTRIC FACILITY
50 FORDHAM ROAD, WILMINGTON, MA
RTN 3-0518

Prepared for:
Lockheed Martin Corporation

Prepared by:
AECOM Technical Services, Inc.

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Approved by:
Lockheed Martin, Inc.

Revision: 0

Scott G. Olson, PG

Daniel W. Folan, PhD, PG, LSP

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ACRONYMS AND ABBREVIATIONS

AUL	Activity and Use Limitation
AECOM	AECOM Technical Services, Inc.
bgs	below ground surface
BWSC	Bureau of Waste Site Cleanup
BTEX	benzene, toluene, ethylbenzene, xylenes
CAM	Compendium of Analytical Methods
C/I	commercial/industrial
CMR	Code of Massachusetts Regulations
COC	chemical(s) of concern
CVOC	chlorinated volatile organic compound
1,1-DCA	1,1-dichloroethane
1,1-DCE	1,1-dichloroethene
cis-1,2-DCE	cis-1,2-dichloroethene
1,4-D	1,4-dioxane
DNAPL	dense non aqueous phase liquid
DO	dissolved oxygen
EPH	extractable petroleum hydrocarbons
EPL	Eastern Parking Lot
°F	degrees Fahrenheit
FID	flame ionization detector
ft	foot/feet
GE	General Electric Company
GC	gas chromatography
IDW	investigation derived waste
kg	kilograms
LNAPL	light non aqueous phase liquid
MassDEP	Massachusetts Department of Environmental Protection

MCP	Massachusetts Contingency Plan
µg/L	micrograms per liter
MNA	monitored natural attenuation
MS	mass spectrometry
MTBE	methyl tertiary butyl ether
OMM	operation, maintenance, and/or monitoring
PAH	polynuclear aromatic hydrocarbon
PIANO	n-paraffins (P), iso-paraffins (I), aromatics (A), naphthenes (N) and olefins (O)
PID	photoionization detector
PIP	Public Involvement Plan
PCE	tetrachloroethene
ppmv	parts per million by volume
TCE	trichloroethene
trans-1,2-DCE	trans-1,2-dichloroethene
UCL	upper concentration limit
USEPA	United States Environmental Protection Agency
UPS	United Parcel Service
VC	vinyl chloride
VOC	volatile organic compound
VPH	volatile petroleum hydrocarbon
WRT	Wilmington Realty Trust
YRC	YRC Freight

SECTION 1
INTRODUCTION

AECOM Technical Services, Inc. has prepared this Post-temporary Solution Status Report Number 8 on behalf of Lockheed Martin Corporation in fulfillment of the requirements of Post-temporary Solution Operation, Maintenance, and/or Monitoring under the Massachusetts Contingency Plan, 310 Code of Massachusetts Regulations 40.0897. This report also has been prepared in accordance with the Temporary Solution Statement submitted in May 2017 for Release Tracking Number 3-0518 (AECOM Technical Services, Inc., 2017a), which pertains to the former General Electric Company Facility at 50 Fordham Road, Wilmington, Massachusetts (site). The site location is depicted on Figure 1-1.

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

1.1 BACKGROUND

Contamination of the Stickney Well, a currently inactive public supply well for the Town of North Reading, was discovered in the late 1970s. Subsequent investigations of multiple surrounding properties, including the former General Electric property, began in the early 1980s. On October 9, 1987, prior to the adoption of the Massachusetts Contingency Plan in 1988, the Massachusetts Department of Environment classified the former General Electric facility as a Priority Disposal Site. Under the Massachusetts Contingency Plan (Massachusetts Department of Environmental Protection, 2014), the site is a Tier 1 Classified site, under Release Tracking Number 3-0518, with four original operable units, as listed below and further defined in previous reports submitted to the Massachusetts Department of Environment.

- Operable Unit-1—Former Tank Farm source area (includes Pump House/Vault and Oil House) and adjacent Eastern Parking Lot

- Operable Unit-2—Former Tank Farm source area and downgradient groundwater plume both on- and off-property
- Operable Unit-3—Storm water/Wastewater Outfalls 001 and 002
- Operable Unit-4—Former Tank K Source Area and immediately downgradient groundwater plume

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

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

therefore, Post-temporary Solution Status and Remedial Monitoring Reports are required to be submitted to the Massachusetts Department of Environmental Protection every six months, by May 2 and November 2 of each year, with evaluations of the Temporary Solution conducted every five years.

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

1.2 OBJECTIVE

The objective of this Post-temporary Solution Status Report Number 8 is to document the monitoring activities conducted at the site during the six-month reporting period of November 2, 2020 through May 1, 2021, in accordance with the Operations, Maintenance, and/or Monitoring Plan detailed in the Temporary Solution Statement submitted to the Massachusetts Department of Environmental Protection in May 2017.

1.3 LIST OF CONTACTS

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

Potentially Responsible Party:

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

LSP-of-Record:

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

Current Property Owner:

Wilmington Realty Trust
424 Broadway
Somerville, MA 02145
Contact: Mr. Gary Stanieich
Phone: (603) 860-5508

1.4 REPORT ORGANIZATION

This Post-temporary Solution Status Report is organized as follows:

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

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

- **Section 4**—presents a description and the results of the light non-aqueous phase liquid monitoring and subsequent product recovery, a discussion of the performance of the monitored natural attenuation relating to the light non-aqueous phase liquid, and a discussion of the remedial objectives related to the light non-aqueous phase liquid and the progress toward meeting these objectives.

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

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

- **Section 7**—provides a description of the effective institutional controls in place at the site.

- **Section 8**—provides a description of conditions identified during the monitoring period, which may be affecting the performance of the remedial action.

- **Section 9**—provides a description of modifications made to the monitoring program.

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

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

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

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

SECTION 2
MONITORING AND FIELD ACTIVITIES

The Post-temporary Solution Operations, Maintenance, and/or Monitoring (OMM) Program continued during this reporting period in accordance with the monitoring plan presented in the Temporary Solution Statement submitted to the Massachusetts Department of Environmental Protection (MassDEP) on May 2, 2017, and the updated Post-temporary Solution OMM annual groundwater monitoring plan submitted to MassDEP on September 6, 2018. The activities completed as part of the OMM Program during this reporting period (November 2, 2020 through May 1, 2021) are discussed below.

2.1 GROUNDWATER SAMPLING

The annual groundwater-gauging and subsequent groundwater sampling event conducted in September 2020 are summarized below.

2.1.1 Site-Wide Water Level Measurements – September 8, 2020

On September 8, 2020, prior to commencing the groundwater sampling event, AECOM Technical Services, Inc. (AECOM) collected site-wide water level measurements. Depth to water was measured in all monitoring wells both on-site and off-site. AECOM obtained measurements of surface water at well locations where standing water was present. In addition, AECOM obtained a surface water elevation from the pond on Concord Street east of the site and northeast of the STM-3 wells. Surface water was not present on September 8 at any of the staff gauges or wells in the wetlands north or east of the Eastern Parking Lot (EPL) nor adjacent to the Ipswich River on the Wilmington Masonry property. During this gauging event, AECOM measured depth to water in nine monitoring wells on the YRC Freight (YRC) property at 95 Concord Street including AE-106-S-D-R in the wetland, AE-111R adjacent to the wetland, and five YRC wells MW-1-S-R, MW-7S, and MW-13-S-R along the YRC property line with the International Family Church. AECOM did not measure depth to water in other YRC wells as YRC was actively pumping and recirculating groundwater as part of ongoing remedial activity in the southeast corner of the property. Table 2-1 presents a summary of water levels measured along with the resulting

groundwater and surface water elevations, including wells on the YRC property. AECOM purged the standard Water FLUTes™ on September 4, 2020 to equilibrate the water levels prior to the site-wide measurements on September 8, 2020. AECOM measured the water levels within the Shallow Water FLUTes™ using the procedure provided by FLUTe™. The field records from the site-wide water level measurement event are included in Appendix A. An evaluation of the measurements collected is included in Section 3 of this report.

2.1.2 Groundwater-Sampling Event – September 2020

From September 9 to 25, 2020, AECOM collected groundwater samples from a comprehensive list of the site-wide monitoring wells in accordance with the Post-temporary Solution OMM Plan. Table 2-2 details the September 2020 updated annual groundwater monitoring plan. This scope was executed with one deviation, in that the groundwater sample from AE-106R-3 was not analyzed for sulfide as it was inadvertently omitted from the chain-of-custody to the laboratory. Figure 1-3 shows all monitoring well locations sampled in September 2020.

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

Groundwater quality parameters (temperature, pH, specific conductance, dissolved oxygen, and oxidation-reduction potential) were measured during purging at all wells using a YSI water quality meter with flow through cell and a separate Geotech turbidity meter. These September 2020 groundwater quality parameter data are summarized in Table 2-3. Field records (water level forms, calibration logs, groundwater-sampling forms, and field logbook notes) from the sampling event are provided in Appendix A.

All samples were collected into laboratory-supplied glassware and either picked up by the lab courier or shipped to each laboratory in accordance with standard chain-of-custody procedures. All samples were analyzed for volatile organic compounds with select samples analyzed by area for

additional site chemical(s) of concern (COC), including 1,4-dioxane, total and dissolved arsenic, and extractable and volatile petroleum hydrocarbons. A focused group of samples was analyzed to evaluate monitored natural attenuation processes that may be affecting the COC at the site. These select samples were analyzed for some or all the following: chloride, the terminal electron acceptor processes (e.g., dissolved iron, manganese, nitrate, nitrite, sulfate, sulfide), total organic carbon, and dissolved gases including hydrogen, ethane, ethene, methane, propane, and acetylene. Groundwater analyses are detailed in Table 2-2. The analytical results are discussed in Section 5 of this report.

2.2 LIGHT NON-AQUEOUS PHASE LIQUID MONITORING AND PRODUCT RECOVERY

In accordance with the OMM Program, AECOM conducted quarterly light non-aqueous phase liquid (LNAPL) monitoring and product recovery from select monitoring wells in December 2020 and February 2021. These gauging events are summarized below. An evaluation of the LNAPL monitoring results is presented in Section 4.

2.2.1 December 2020 Gauging Event

On December 7, 2020, AECOM gauged seven overburden monitoring wells for depth to water and the presence of LNAPL: AE-3, AE-4, CW-1, CW-2, GZA-102S, PZ-2S, and TRC-101. At the time of the gauging, none of the wells contained an absorbent sock. LNAPL was not detected in any of the monitoring wells gauged. Based on the lack of measurable LNAPL, AECOM did not install absorbent socks in any of the wells. Monitoring wells gauged during this event are depicted on Figure 1-3, and Table 2-4 includes a summary of LNAPL gauging and removal data. A copy of the field record completed during the LNAPL-gauging event is included in Appendix B.

2.2.2 February 2021 Gauging Event

On February 17, 2021, AECOM gauged seven overburden monitoring wells for depth to water and the presence of LNAPL: AE-3, AE-4, CW-1, CW-2, GZA-102S, PZ-2S, and TRC-101. At the time of the gauging, none of the wells contained an absorbent sock. LNAPL was not detected in any of the monitoring wells gauged. Based on the lack of measurable LNAPL, AECOM did not install absorbent socks in any of the wells. Monitoring wells gauged during this event are depicted on Figure 1-3. Table 2-4 includes a summary of LNAPL gauging and removal data. A copy of the field record completed during the LNAPL-gauging event is included in Appendix B.

2.3 INVESTIGATION-DERIVED WASTE MANAGEMENT

During the groundwater-sampling event completed in September 2020, five 55-gallon drums of purge water and decontamination rinse water were generated. This investigation-derived waste (IDW) was properly containerized and temporarily stored at a central staging area on-site, pending characterization and off-site disposal in accordance with Lockheed Martin Corporation procedures. Similar to past years, this IDW was characterized as hazardous based on the elevated trichloroethene and tetrachloroethene concentrations. The drums were removed on November 20, 2020 under a uniform hazardous waste manifest by Clean Harbors Environmental Services (CHES). A copy of the manifest documenting receipt at the CHES Braintree, MA facility on November 20, 2020 is included in Appendix C.

2.4 INDOOR AIR SAMPLING

In accordance with the OMM Program, AECOM performed annual indoor air monitoring during the heating season in January 2021. The United Parcel Service (UPS) began occupation of Building 1, under a lease with Wilmington Realty Trust, in October 2017, and has conducted seasonal operations from October through December in 2017, 2018, and 2019. In September 2020 UPS began full-time occupancy within Building 1 with active operations six days-per-week Monday through Saturday. UPS operations were active during the indoor air sampling on January 26, 2021. In order to obtain samples as representative of the indoor air as possible, AECOM collected indoor air samples when the trucks were out on delivery between approximately 9:00 am and 5:00 pm.

AECOM reviewed meteorological data from the Weather.gov website. On January 26, 2021, the ambient temperature ranged from a low of 16 degrees Fahrenheit (°F) to a daytime high of 34°F. Building 1 indoor air temperatures ranged from 59 to 64°F on the first floor, and from 63 to 64°F on the second floor. The heating, ventilation, and air conditioning units were operational in Building 1 during the sampling event. The units were preset by UPS to maintain cool conditions and prevent freezing of pipes within the building. As a result, the heating units kicked on/off occasionally and were not continually running during the January 26, 2021 sampling event.

Barometric pressure readings on January 26, 2021 ranged from 762.2 to 765.2 millimeters of mercury according to Weather.gov online records.

Prior to and during the sample collection, on January 19 and 26, 2021, AECOM completed an indoor air quality building survey per WSC #16-435 Vapor Intrusion Guidance dated October 14, 2016 (MassDEP, 2016a). The purpose of the survey is to document general building information such as construction, structural integrity, utility, materials storage, operations, and occupancy information that could be relevant to the indoor air sampling event. The survey was completed based on visual inspection of the building and information contained in prior survey forms. A copy of the completed survey is included in Appendix D.

Indoor air screening for volatile organic compounds (VOCs) was conducted with a photoionization detector (PID) (miniRAE™ 3000 with 10.6 electron volt lamp) on January 26, 2021, concurrent with the sample collection. The PID readings were recorded at each of the indoor air sample locations, at holes, drains, trenches, or cracks in the floor, and near the materials that could potentially be sources of VOCs. The PID readings at the indoor and ambient air sample locations were all less than 1 part-per-million by volume (ppmv). Additionally, PID readings of less than 1 ppmv were noted at holes, drains, and joints in the floor, and near the materials that could potentially be sources of VOCs within Buildings 1 and 1A. These PID readings are all similar to past PID screening results conducted in Building 1.

The January 26, 2021 indoor air sampling event consisted of the collection of air samples from five locations (IA-2, IA-3, IA-4, IA-7, and IA-8) on the first floor and one (IA-9) second floor location of Building 1. All indoor air samples were co-located as best as possible (within approximately 10 to 20 feet) with the prior indoor air sample locations collected from 2009-2020. Historic sample locations IA-10 on the mezzanine of Building 1, IA-5 in Building 3, and IA-6 in the guard shack physically no longer exist. One field duplicate sample was collected at location IA-8 by collecting two canisters concurrently immediately adjacent to each other.

One ambient background air sample (21A-AA1-1) was collected outside the south end of Building 1 during the same period as the indoor air samples. The ambient air sample location south of Building 1 under the awning was selected to shield the canister from light rain/snow on January 26, 2021. All sample locations are shown in Figures 2-1 and 2-2. The field records, including indoor air sampling records and photographs are provided in Appendix D.

All samples were collected into 6-liter, batch-certified SUMMA® canisters using eight-hour calibrated regulators set by the laboratory. The SUMMA® canisters were submitted to Alpha

Analytical, located in Mansfield, Massachusetts under chain-of-custody within 24 hours of sampling. All samples were analyzed for Massachusetts Contingency Plan volatile organics in air via Method TO-15 with selective ion monitoring. Analytical results are discussed in Section 6 of this document.

2.5 ACTIVITY AND USE LIMITATION

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

The AUL does not restrict the use of groundwater for drinking water purposes. However, the Stickney Well in North Reading and the Reading municipal wells south of the Ipswich River remain inactive, and no drinking water wells exist within one half mile of the site. In March 2021, AECOM checked the Massachusetts online drinking water well data portal (https://eeaonline.eea.state.ma.us/portal#!/search/drinking-water) to confirm that no new drinking water wells have been installed within 0.5 mile of the site in the towns of Wilmington, Reading, or North Reading between January 21, 2020 and February 26, 2021.

Based on site inspections and monitoring activities conducted during this monitoring period, the conditions of the AUL are being met.

SECTION 3
GROUNDWATER FLOW EVALUATION

AECOM Technical Services, Inc. (AECOM) conducted a site-wide round of water level measurements on September 8, 2020, prior to commencing the groundwater-sampling event. Table 2-1 presents a summary of all water levels measured along with the resulting groundwater and surface water elevations.

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

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

The groundwater contours include elevations from nine wells (AE-106-S-D-R, AE-111R, MW-1-S-R, MW-7S, and MW-13-S-R) on the YRC property on September 8, 2020. Therefore, the contours are based on a smaller data set from the YRC property compared to the groundwater

contours from 2018 and 2019 when YRC had conducted water level measurements of more wells on their property.

Because the YRC property is located on a bedrock knob that is higher in elevation than surrounding areas, natural radial groundwater flow is typically observed. The groundwater contours derived from the September 8, 2020 measurements are similar to previous years and indicate radial flow from the YRC property. As shown in Figures 3-1, 3-2, and 3-3, this radial flow from YRC causes diversion of flow from the eastern portion of the Wilmington Realty Trust property around the YRC property. A review of the January 2021 *Remedy Operation Status/Remedial Monitoring and RAM Status Report* for the YRC site (Release Tracking Number 3-2363) indicates that an active groundwater recirculation system was operational at YRC during the September 8, 2020 gauging event (CCC Environmental Services, 2021). On September 8, 2020, one extraction well was pumping from the YRC source area located southeast of the large YRC warehouse at a rate of 4.5 gpm and four injection wells were re-introducing treated groundwater downgradient (southeast) of the injection well at a combined total rate of 4.4 gpm. A groundwater contour map provided in the January 2021 *YRC Remedy Operation Status/Remedial Monitoring and RAM Status Report* indicates bedrock groundwater flow on October 10, 2020 within the treatment area was travelling to the southeast (CCC Environmental Services, 2021).

For the Former General Electric Company facility property, shallow groundwater elevations recorded in September 2020 were lower than in October 2019. Groundwater elevations in overburden and areas with shallow depth to bedrock were down approximately 0.25 ft from 2019 to 2020 and were the lowest groundwater elevations recorded at the site in the past five years.

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

This section provides an evaluation of the current light non-aqueous phase liquid (LNAPL) conditions at the site.

4.1 LIGHT NON-AQUEOUS PHASE LIQUID FREE PRODUCT RECOVERY

Recovery of LNAPL free product is intermittently performed as detailed in the Temporary Solution Statement. During this reporting period, AECOM Technical Services, Inc. (AECOM) did not deploy any absorbent socks, as a measurable thickness of LNAPL was not detected in any monitoring wells gauged during the monitoring events completed in December 2020 and February 2021.

4.2 LIGHT NON-AQUEOUS PHASE LIQUID MONITORED NATURAL ATTENUATION PERFORMANCE

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

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

The decrease in measurable LNAPL is consistent with seasonal fluctuations observed since 2010, and the thicknesses and frequency of LNAPL detections appear to have decreased overall. The presence of LNAPL over the past 10 years has primarily been limited to wells CW-1 and CW-2 with occasional sheen in well PZ-2S. Wells CW-1 and CW-2 are shallow wells installed within a former excavation immediately downgradient of where the bedrock surface dips to the east beneath the Eastern Parking Lot (EPL). The presence of LNAPL in these wells typically results when increases in the depth to groundwater (i.e., a lower groundwater table) allow small amounts of residual LNAPL to weep from bedrock fractures into the unconsolidated aquifer and then into those wells. Table 2-4 includes a summary of the historical LNAPL measurements, and Figure 4-1 depicts the reduction of the LNAPL plume on-site from 1992 to the present.

Although the very limited LNAPL plume size has not changed significantly in some time, it continues to generate a dissolved plume of petroleum hydrocarbons. Changes in extractable petroleum hydrocarbon (EPH) and volatile petroleum hydrocarbon (VPH) fraction concentrations can be meaningful indicators of natural source-zone depletion. Long-term changes in these concentrations will be monitored in wells adjacent to the LNAPL plume to determine the effect MNA has on the plume. This monitoring may include additional parameters in the future. Further discussion of the EPH and VPH fractions associated with the LNAPL is presented in Section 5.7.3.

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

During this reporting period, there have been no changes in conditions affecting LNAPL MNA. As shown in Figures 4-2 through 4-5, detectable LNAPL thicknesses generally coincide with increased depth to groundwater. Groundwater elevations from September 2020 in overburden and areas with shallow depth to bedrock were 0.25 feet (ft) lower than in October 2019. The depths to water measured in monitoring wells during this reporting period are similar to those measured in past periods when little to no measurable LNAPL was detected.

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

Response actions have been performed previously to assess LNAPL mobility and to meet the requirements of 310 Code of Massachusetts Regulation (CMR) 40.1003(7)(b). Based on the extensive measurement and evaluation of the LNAPL present at the site, it is apparent that the LNAPL is stable, as defined at 310 CMR 40.0006. The LNAPL footprint is not expanding as shown in Figure 4-1, nor is LNAPL migrating through any subsurface strata or discharging to a surface water body, structure, or utility. The extent of LNAPL has been well defined and measured regularly, with product removal through three historical recovery wells between 1992 and 2002 and through subsequent manual and passive measures from 1999 through November 2017, the last time absorbent socks were installed/removed. LNAPL at the site has micro-scale mobility, as it continues to be observed in small amounts intermittently in wells CW-1 and CW-2 when the water table is depressed sufficiently for residual LNAPL to weep from bedrock into soil.

Graphs of the depth to groundwater compared to LNAPL thickness over time in wells CW-1, CW-2, PZ-2S, and TRC-201R are presented in Figures 4-2 through 4-5. These graphs show that, in general,

greater LNAPL thickness tends to coincide with increased depth to groundwater. The amount of recoverable LNAPL has decreased over time due to the LNAPL removal efforts. The lack of LNAPL in monitoring wells TRC-101, AE-03, AE-04, and PZ-2S bounds the area around CW-1 and CW-2, where LNAPL is periodically detected. As a result, active LNAPL removal is no longer occurring and LNAPL removal via passive measures is currently minimal.

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

Since December 2010, well CW-1 has had little evidence of LNAPL while CW-2 generally exhibits a sheen. Both wells have had periodic measurable LNAPL thickness generally ranging from 0.01 to 0.03 ft, with the thickest measurements of 0.12 ft in CW-1 observed in September 2016 and 0.08 ft in CW-2 in September 2015. The two thickest measurements were taken when the seasonal depth to groundwater was the greatest observed on-site in over 10 years. LNAPL has not been detected in TRC-101 since 2002. LNAPL has not been detected in wells AE-03 or AE-04 since their installation in 2012. It is apparent that the LNAPL remaining at the site is limited, stable, and only has micro-scale mobility , based on the behavior of the LNAPL in the wells.

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

The remedial objectives for LNAPL are being attained by continued monitoring and passive recovery (when possible), as detailed below and in the Temporary Solution Statement submitted to the Massachusetts Department of Environmental Protection (MassDEP) in May 2017. Given the intermittent presence of LNAPL in monitoring wells in the EPL area and the limited recoverability of LNAPL (approximately 2.81 gallons removed between December 2010 and November 2017), it has been demonstrated, in accordance with the MassDEP LNAPL Guidance (MassDEP, 2016a), that active LNAPL recovery is no longer feasible. However, based on data collected between 2010 and September 2020 (the last time trace LNAPL was present in a well), the potential for LNAPL with micro-scale mobility remains within the area adjacent to the former Tank Farm and EPL.

A remedial alternative evaluation was presented as Table 5-1 of the Phase III Remedial Action Plan (AECOM, 2017c) relating to residual petroleum contaminants at the aquifer capillary fringe in the former Tank Farm and EPL areas, where free product with micro-scale mobility has been observed. Continued monitoring of natural attenuation processes and passive recovery of product, if possible,

was selected as the alternative for LNAPL present in these areas. These areas have been shown to have low levels of volatile organic compounds in groundwater and soils, but contain EPH/VPH, particularly the C5-C8 aliphatic and C9-C10 aromatic fractions, above standards, in addition to the potential for free-phase LNAPL with micro-scale mobility.

The selected remedial alternative to continue to monitor and passively remove LNAPL (if present) to below observable levels in collection and monitoring wells in the area is being performed and appears to be proceeding toward attainment of the remedial objectives for LNAPL. Given the limited presence of measurable LNAPL from 2017 to 2021, active monitoring of LNAPL thickness in the EPL may no longer be necessary following completion of the initial five years of monitoring in 2022.

SECTION 5
EVALUATION OF GROUNDWATER QUALITY CONCENTRATION TRENDS

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

The MassDEP has established three categories for groundwater within the MCP (310 CMR 40.0932) that relate to the following types of groundwater exposures:

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

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

A portion of site groundwater, which has an average depth less than 15 ft bgs and is within 30 ft of Building 1/1A at 50 Fordham Road, is also categorized as GW-2. Similar site groundwater conditions are also present within 30 ft of the building located at 87 Concord Street (Howland Development) in North Reading. The average depth to shallow groundwater beneath these buildings is less than 15 ft. Therefore, site groundwater within 30 ft of occupied buildings along Concord Street is categorized as GW-2.

All site groundwater is categorized as GW-3.

5.1 QUALITY ASSURANCE AND QUALITY CONTROL

In September 2020, AECOM Technical Services, Inc. (AECOM) collected groundwater samples from 118 monitoring wells/screens. All samples were analyzed for volatile organic compounds (VOCs) with select samples analyzed for additional parameters, as detailed in Table 2-2. Upon receipt of the laboratory analytical reports, the data contained in each report was validated and reviewed for compliance with the Massachusetts Department of Environmental Protection (MassDEP) Compendium of Analytical Methods performance standards, as detailed in Policy WSC-02-3209 (MassDEP, 2010). Results of the validation are discussed in detail in the data validation memoranda prepared with each laboratory data package included in Appendix F.

The chemical data are valid as reported and may be used for decision-making purposes. Most of the data were accepted, with qualifiers added where required. Data for two VOCs (acetone and tetrachloroethane) were rejected at select monitoring wells due to laboratory analytical nonconformances, as noted in the data validation memoranda. Acetone is not a key COC, while tetrachloroethene (PCE) is a key COC for the site. The rejected data consisted of non-detect results that were rejected due to results of the laboratory quality assurance limit exceedances (initial and continuing calibrations, control samples and duplicates). A total of 16 acetone values (13%) and 40 PCE values (32%) were rejected.

The analytical results met the requirements for "presumptive certainty" status for all compounds for which there is a Compendium of Analytical Methods (CAM) protocol under the Massachusetts Contingency Plan (MCP), with one exception of 1,4-dioxane at well GZA-105D which was analyzed outside of hold time due to a miscommunication error with the laboratory. The result from GZA-105D was qualified as estimated. See Appendix F for further details.

5.2 ANALYTICAL RESULTS – ARSENIC

A summary of the 2016-2020 arsenic analytical results is presented in Table 5-1. The arsenic concentrations are consistent from 2016 through 2020. The total and dissolved arsenic results are similar in all wells analyzed indicating that the arsenic present is predominantly dissolved arsenic. Nine of the 36 wells sampled had dissolved and total arsenic concentrations above the GW-1 value of 10 micrograms per liter (µg/L) in 2020. The dissolved arsenic plume in groundwater at four intervals (overburden and upper, middle, and lower bedrock) is presented in Figures 5-1 through

5-4. These figures depict the 2016, 2017, 2018, 2019, and 2020 plumes from results in the wells sampled each year. The extent of the plumes is the same with concentrations on the same order of magnitude at each interval from 2016 to 2020 with insignificant differences.

Concentration trend graphs of the dissolved arsenic results from all wells sampled in September 2020 are presented in Appendix G. The graphs include all available historical dissolved arsenic results for these wells. A summary of Mann Kendall statistical analyses based on these trend graphs is presented in Table 5-2. Fourteen monitoring wells have enough data from which to generate statistical trends. A downward trend, at the 80% confidence level, is noted in overburden monitoring wells AE-03 and AE-102M in the Eastern Parking Lot (EPL), and AE-105S in the wetland. An upward trend, at the 80% confidence level, is noted in overburden monitoring well GZA-06; however, the dissolved arsenic concentration in this well over the past three years has remained at or just below the GW-1 concentration. The remaining ten monitoring wells (AE-102RR-6, AE-103S, GZA-10, GZA-101R, GZA-105S, GZA-14A, MW-4A, STM-8R-1, TRC-102, and TRC-301R-4) show no trend or non-significant trends.

Based on these results, dissolved arsenic concentrations are similar to past results. No significant upward trends are evident. The plume is identical from 2016 to 2020 and is stable in overburden and bedrock intervals.

5.3 ANALYTICAL RESULTS – 1,4-DIOXANE

A summary of the 2016-2020 (1,4-D) analytical results is presented in Table 5-3. The 1,4-D concentrations are of the same order of magnitude from 2016 to 2020 in all wells with the exception of well AE23R, which decreased to nondetectable concentrations (<0.20 µg/l) in 2020. Concentrations detected in AE23R from 2016 to 2019 ranged from 15 ug/l to 19 ug/l. A total of 40 wells show 1,4-D concentrations above the GW-1 value of 0.3 µg/L in 2020. The 1,4-D plume in groundwater at four intervals (overburden and upper, middle, and lower bedrock) is presented in Figures 5-5 through 5-8. These figures depict the 2016, 2017, 2018, 2019, and 2020 plumes from results in wells sampled each year. The extent of the plumes is the same with concentrations fluctuating within the same order of magnitude in each of the four intervals from 2016 to 2020.

Concentration trend graphs of the 1,4-D results from all wells sampled in September 2020 are included on the CVOC trend graphs presented in Appendix G. The graphs include all available

historical 1,4-D results for these wells that were analyzed via United States Environmental Protection Agency SW-846 Method 8270 or 8270 selective ion monitoring. A summary of Mann Kendall statistical analyses based on these trend graphs is presented in Table 5-8. Forty-one of the 45 monitoring wells sampled have enough data from which to generate statistical trends. Four wells at the edge of the EPL (AE-103R-1 AE-109R-5, AE-110R-6, and GZA-105D) show a downward trend. Five wells (AE-101R-6, AE-102RR-6, AE-104D, AE-109D, and AE29R-6) at the former Tank Farm and Building 1 source areas and at the edge of the EPL show an upward trend at the 80% and 90% confidence levels. Three wells (AE-100R-4, AE-102RR-2, and AE-103R-5) at the former Tank Farm and in the EPL show an upward trend at just the 80% confidence level. In each of these eight wells with upward trends the concentrations remain at the same order of magnitude. The remaining 29 of 41 wells show no trend or non-significant trends.

Based on these results, 1,4-D concentrations are of the same order of magnitude as past results with slightly increased concentrations in middle and lower bedrock, and to a lesser extent in overburden and upper bedrock. The 2020 plume geometry is like the 2016-2019 plumes and is stable in the overburden and bedrock intervals.

5.4 ANALYTICAL RESULTS – PETROLEUM HYDROCARBONS

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

- C5-C8 hydrocarbons in 2016 and 2017 and C11-C22 hydrocarbons in 2017 in GZA-105D;

- C5-C8 hydrocarbons in 2018 in AE-100R-1;
- C9-C10 hydrocarbons in AE-03 from 2016-2020; and
- C9-C10 hydrocarbons in TRC-101 from 2018-2020, and C9-C18 hydrocarbons in 2020.

In addition, benzo(a)pyrene was detected in 2018 at concentrations just above the GW-1 standard in five wells, AE-03, PZ-2S, TRC-101, and TRC-102 in the EPL, and EMW-11R-2 at the edge of the wetland. Two PAHs, dibenzo(a,h)anthracene and indeno(123-cd)pyrene, exceeded the GW-1 standard in GZA-105D in the EPL in 2017. None of these PAH exceedances of GW-1 were observed in 2019 or 2020.

These localized fluctuations include a mixture of increases and decreases in 2020 dissolved phase petroleum hydrocarbon compound concentrations which coincide with a 0.25 feet (ft) decrease in the overburden and shallow bedrock groundwater elevations from 2019 to 2020.

The C5-C8 hydrocarbons also were detected above the GW-1 standard in one or multiple years from 2016-2020 in five wells along the eastern edge of the EPL at the wetland (AE-102RR-6, AE-103R-1, EMW-11R-2, AE-104R-4, and AE-109R-5) and in four wells beneath or near Building 1 (AE-23R, AE-26R-1, AE-28R-2, and AE-29R-6). The C11-C22 hydrocarbons also were detected above GW-1 standards in wells AE-106R-5, AE-109R-5, and EMW-11R-2 in 2017-2018. In each of these cases, with the exception of well AE-26R-1, the results in 2020 were similar to or lower than the 2016-2019 results in each of these wells. Well AE-26R-1 shows an increase in C5-C8 hydrocarbons in 2020. Toluene was detected above the GW-1 standard in well AE-23R beneath Building 1 from 2016-2020. As noted in section 5.5, exceedances in some of these wells may be due to false positive VPH results due to interference from elevated CVOC concentrations, particularly at depth in bedrock and away from source areas.

Figures 5-9 through 5-12 present the 2016-2020 petroleum plumes in groundwater at four intervals (overburden and upper, middle, and lower bedrock). A comparison shows that the plume is similar in size and shape at all four intervals from 2016-2020, with subtle differences:

- The overburden plume is the same size and shape with similar concentrations in the EPL and Tank Farm area from 2016 to 2020, with higher concentrations detected in 2017 and 2020 when groundwater elevations were lower than in 2016, 2018, and 2019.

- The upper bedrock plume is similar in size and shape from 2016 to 2020 beneath Building 1, in the Tank Farm area, and in the EPL. The concentrations are on the same order of magnitude in these areas.

- The middle bedrock plume has decreased in size and shape from 2016-2020 with lower concentrations in the wetland and in AE-110R. Beneath Building 1, concentrations increased one order of magnitude in AE-28R-2 in 2019-2020 than in 2016-2018.

- The lower bedrock plume has decreased in size and shape from 2017 to 2020 with decreased concentrations in AE-105R and AE-112R in the downgradient wetland.

Concentration trend graphs of the petroleum results from all wells sampled in September 2020 (whether analyzed for EPH/VPH or not) are presented in Appendix G. The graphs depict BTEX, methyl-tertiary-butyl ether (MTBE), naphthalene, and calculated VPH fractions of all available historical results for these wells. A summary of Mann Kendall statistical analyses based on these trend graphs is presented in Table 5-5. For the 46 wells with enough data to run statistics, upward trends at the 80% and 90% confidence levels are noted for calculated VPH fractions in AE-102RR-6, AE-26R-1, and TRC-101; toluene in AE-23R and MTBE in AE-105D, AE-105S, STM-8D, TRC-301R-2, and TRC-301R-4. Downward trends are noted in 30% of the data, for five compounds in 24 wells across the site. All other compounds show no trends or non-significant trends.

Based on these results, petroleum concentrations are like past results with fluctuations in concentrations of select compounds and some downward trends at this time. The 2020 petroleum plume geometry is similar to the 2016-2019 plume and is stable or shrinking in the overburden and bedrock intervals.

5.5 INTERFERENCE OF CHLORINATED VOLATILE ORGANIC COMPOUNDS WITH VOLATILE PETROLEUM HYDROCARBON ANALYSES

In the former Tank Farm EPL area and in the Building 1 former Tank F area, source materials were released directly into the overburden, which has limited thickness onsite, and into shallow fractured bedrock, the top of which ranges from 3 to 45 ft below ground surface beneath the former Tank Farm EPL area and in the Building 1 former Tank F area. Comingling with CVOCs may account for some of the hydrocarbon concentrations migrating deeper into bedrock; however, in the absence of significant downward gradients, lighter phase hydrocarbons are not expected and not typically detected at depth in bedrock in areas away from source zones. In contrast, in 2016-2019, elevated total petroleum impacts (particularly C5-C8 aliphatics) were observed in deep bedrock wells

EMW-11R-2, AE-102RR-6, and AE-104R-4 that also displayed elevated CVOC concentrations. There are no significant downward gradients observed at the site and these detections of petroleum hydrocarbons in deep bedrock away from source areas are circumspect.

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

To better quantify petroleum hydrocarbon concentrations in groundwater, and to separate potential CVOC interferences, in September 2018, AECOM submitted groundwater samples from four wells for analysis of VOCs via Method 8260, VPH via the MassDEP GC/PID/FID Method at Eurofins Spectrum Laboratories, and VPH by MassDEP GC/MS Method at Alpha Analytical Laboratories. The laboratory data were included in Post-temporary Solution Status Report Number 4 submitted to the MassDEP in May 2019. In three of the four wells sampled, the VPH-GC/MS Method did not identify C5-C8 aliphatics or C9-C12 aliphatics where those compounds were identified using the VPH-FID/PID Method and clearly showed interference from tentatively identified non-VPH compounds. These results were supported by the VOC-8260 data (i.e., lack of identification of BTEX and alkyl-benzene compounds). A review of the data indicated that the interferences causing false positive results for C5-C8 aliphatics and C9-C12 aliphatics in the VPH-FID/PID Method were predominantly from CVOCs (tetrachloroethene [PCE], trichloroethene [TCE], 1,1-dichloroethane [1,1-DCA], 1,1-dichloroethene [1,1-DCE], cis-1,2-dichloroethene [cis-1,2-DCE], and trans-1,2-dichloroethene [trans-1,2-DCE]). One of the three samples did show the presence of many alkyl-benzene compounds and no CVOCs. The VPH-GC/MS and VPH-GC/FID/PID results were similar for this sample.

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

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

In September 2020, AECOM submitted groundwater samples from six wells for PIANO analysis at Alpha Analytical Laboratories. A PIANO analysis is a forensic GC/MS analytical tool for fingerprinting light-end refined products, e.g., gasoline and jet fuel, in contaminated soil and groundwater. PIANO is an acronym for n-paraffins (P), iso-paraffins (I), aromatics (A), naphthenes (N) and olefins (O). This method identifies and measures 144 volatile petroleum hydrocarbon compounds. Two overburden wells AE-03 and TRC-101 were selected for PIANO analysis as they exhibit petroleum impacts and little to no CVOC impacts. Four bedrock wells AE-102RR-6, AE-103R-1, AE-104R-4, and EMW-11R2 were also selected for PIANO analysis as they are

screened in bedrock away from the source areas and exhibit elevated CVOC impacts. The results of the PIANO analyses are presented in Table 5-6.

The PIANO analytical results from Alpha indicate that all 144 compounds were below laboratory detection limits in two bedrock wells, AE-102RR-6 and AE-103R-1. In the other two bedrock wells, AE-104R-1 and EMW-11R-2, all compounds were below laboratory detection limits, except for low concentrations of toluene . In contrast, 19 and 25 light-end refined petroleum products were detected in both overburden wells AE-03 and TRC-101, respectively. For this subset of monitoring wells, these results support the hypothesis that, despite having comingled chlorinated VOCs and petroleum products in groundwater at the site, the petroleum products are not detected at depth in bedrock away from the source, and that elevated concentrations of chlorinated VOCs are causing false positives in the VPH GC analyses (VPH is a GC method with no MS). Lockheed Martin plans to analyze additional site wells with the PIANO method in 2021 to further confirm this observation and to support a reduction in monitoring for petroleum compounds in bedrock wells located away from the source areas onsite.

5.6 ANALYTICAL RESULTS – VOLATILE ORGANIC COMPOUNDS

A summary of the annual 2016 through 2020 VOC analytical results is presented in Table 5-7. The detected VOC concentrations are consistent from 2016 to 2020. Nine different CVOCs were detected in groundwater in 2020 at concentrations above MCP groundwater standards. These compounds include: 1,1,1-trichloroethane, 1,1-DCA, 1,1-DCE, cis-1,2-DCE, trans-1,2-DCE, PCE, TCE, toluene, and vinyl chloride (VC). One or more of these nine constituents were detected above GW-1 standards at 76 different well screen/port locations. One or more of the following CVOCs (1,1-DCE, cis-1,2-DCE, trans-1,2-DCE, PCE, TCE, and VC) were detected at concentrations greater than MCP GW-2 standards (within 30 ft of a building with depth to groundwater less than 15 ft) in the following wells sampled within 30 ft of or beneath Building 1 in 2020: AE-23R, AE-24, AE-26R1, AE-26R2, AE-26R5, AE-26S, AE-28R1, AE-28R2, AE-28R3, AE-28R4, and GZA-101R. Only PCE and TCE were detected at concentrations greater than GW-3 standards, TCE at 10 well screen/port locations under Building 1 and in the EPL, and PCE at one well screen/port location (AE-23R) beneath Building 1.

Consistent with observations from 2016-2019, the highest total CVOC concentration (189,670 µg/L) observed at the site in 2020 is in upper bedrock well AE-23R located beneath

Building 1. The concentration of TCE (130,000 µg/L) detected in 2020 exceeds the upper concentration limit (UCL) of 50,000 µg/L. Concentrations of TCE have historically exceeded the UCL in this well. This is the only UCL exceedance for any constituent at any monitoring well location in 2020. In 2020, the highest PCE concentration (54,000 µg/L) was detected in AE-23R, which is above the GW-3 standard but below the UCL for PCE. Although never detected in AE-23R when gauged, the potential exists for dense non-aqueous phase liquid (DNAPL) to be present near this well based on current and historical concentrations.

Figures 5-13 through 5-24 present the 2016-2020 PCE, TCE, and total CVOC plumes in groundwater at four intervals (overburden and upper, middle, and lower bedrock). These figures depict the 2016, 2017, 2018, 2019, and 2020 plumes from results in wells sampled each year. The 2016-2020 PCE, TCE, and total CVOC plumes are similar in size at all four intervals with the following order of magnitude differences in concentrations:

- One order of magnitude increase in overburden TCE concentration in AE-102D from 1.1 to 27 µg/L)
- One order of magnitude increase in lower bedrock vinyl chloride concentration in AE-109R-7 (from <1 to 11 µg/L)

Wells AE-102D and AE-104R-5 are located in the EPL downgradient of the former Tank Farm secondary source area where fluctuations in concentrations are not unexpected.

Well AE-109R-7 is located in the EPL and the edge of the wetland, downgradient of the former Tank Farm secondary source area, and on the southern property line. Concentrations of VC in well AE-109R-7 were below the detection limit from 2016 through 2019; <5 µg/L in 2016 and 2017, <2 µg/L in 2018, and <1 µg/L in 2019. The increase to 11 µg/L seen in 2020 suggests that natural degradation of cis-1,2-DCE may be occurring. Concentration trend graphs of the CVOC results from all wells sampled in 2020 are presented in Appendix G. The graphs depict all available historical PCE, TCE, cis-1,2-DCE, toluene, VC, and 1,4-D results for wells sampled in September 2020. A summary of Mann Kendall statistical analyses based on these trend graphs is presented in Table 5-8.

In September 2020, 118 monitoring well screen/port locations were sampled. Of those 118, 102 have enough data from which to generate statistical trends at this time. Sixty-six percent of the 2020 CVOC data (67 of 102 wells) show no trend or non-significant trends. Downward trends at the 90% confidence level for parent compounds (i.e., PCE and TCE) are noted in 31 well screens sampled

across the site in 2020 in the bedrock at Building 1, overburden and bedrock in the EPL and Tank F area, in the overburden in the downgradient wetland, in bedrock in Transect A and B and in overburden and bedrock in Transect C. Upward trends at the 90% confidence level of daughter products (e.g., cis-1,2-DCE, and VC) are noted in 41 well screens sampled in 2020 mainly in middle to lower bedrock and to a lesser extent in upper bedrock in Building 1, the EPL, and Transects A and B1/2, and also in overburden in the downgradient woods, wetland, and Transect C.

The Mann Kendall results indicate that twelve well screen/port locations have upward trends at the 90% confidence level for parent compounds (i.e., PCE and/or TCE). These include: AE-100R-4, AE-100R-6, AE-101R-1, AE-108R-3, AE-108R-5, AE-23R, AE-26R-5, AE-28R-1, AE-28R-4, EMW-11R1, EMW-11R-2, and GZA-105R. These wells are in areas of elevated CVOC concentrations and, therefore, fluctuations in concentrations are not unexpected.

The STM-8 well cluster is a key monitoring point since it is located at the furthest extent of the plume. The results from this well cluster are indicative of ongoing attenuation of parent compounds to daughter products at the tail end of the plume. At STM-8D, the concentration of cis-1,2-DCE over the last six sampling rounds in 2014-2019 has consistently been approximately one order of magnitude higher than PCE and TCE. In 2019, the PCE and the TCE concentrations were 1.3 µg/L each, whereas cis-1,2-DCE was 10 µg/L. In 2020, the concentration of cis-1,2-DCE decreased to 4.9 µg/L and the concentration of TCE decreased to non-detect (<1.0 µg/L). PCE was not detected at STM-8 wells in 2020; however, the 2020 PCE data was rejected as noted in Section 5.1. The concentration ratio of parent compounds to cis-1,2-DCE is consistently low, indicative of degradation.

5.7 MONITORED NATURAL ATTENUATION

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

5.7.1 Arsenic Monitored Natural Attenuation Performance

This section presents an evaluation of arsenic MNA performance.

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

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

5.7.1.2 Changed Conditions Affecting Arsenic Monitored Natural Attenuation

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

5.7.1.3 Absence of Toxic Transformation Products of Arsenic

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

5.7.1.4 Verification that Arsenic Plume is not Expanding

As shown in Figures 5-1 through 5-4, the extent of the plumes is the same with concentrations on the same order of magnitude in each interval from 2016 to 2019. In addition, dissolved arsenic concentrations have decreased slightly in wells AE-03, AE-102M, and AE-105S.

5.7.1.5 Demonstration of Effective Institutional Controls

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

5.7.1.6 Verification of Attainment of Remedial Objective for Arsenic

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

5.7.2 1,4-Dioxane Monitored Natural Attenuation Performance

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

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

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

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

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

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

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

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

As shown in Figures 5-5 through 5-8, the extent of the 2016, 2017, 2018, 2019, and 2020 plumes is the same, with concentrations on the same order of magnitude in each of the four intervals. The plumes are therefore considered stable and not expanding.

5.7.2.5 Demonstration of Effective Institutional Controls

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

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

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

5.7.3 Petroleum Hydrocarbons Monitored Natural Attenuation Performance

This section presents an evaluation of petroleum hydrocarbon MNA performance.

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

Relative to the LNAPL presence and distribution described in Section 4 above, the petroleum hydrocarbon plume has not changed significantly. While the LNAPL thickness has varied over the past decade and is only observed as sheen in wells CW-1 and CW-2, certain wells in the former Tank Farm/EPL area (AE-03, AE-04, GZA-105D, PZ-2S, and TRC-101) have shown recent fluctuations in both VPH and EPH fractions. This observation may be due to the continued

dissolution of LNAPL constituents into the aqueous phase, which would further decrease the LNAPL thickness and make the dissolved constituents more available to natural attenuation processes over time. Further evaluation of this process will be considered in future monitoring events.

5.7.3.2 Changed Conditions Affecting Petroleum Hydrocarbons

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

As detailed in Section 5.4, the 2020 groundwater data from the PIANO and SW8260 analytical methods confirm interferences from elevated CVOC concentrations, particularly in bedrock wells away from source areas onsite. Lockheed Martin plans to use this combination of methods further in 2021 to improve quantification of VPH compounds in groundwater by identifying and excluding CVOC interferences.

5.7.3.3 Absence of Toxic Transformation Products of Petroleum Hydrocarbons

Petroleum hydrocarbons typically degrade to less toxic forms as they undergo biological degradation in the environment. The most toxic petroleum hydrocarbons include PAHs and smaller aromatic compounds such as BTEX. Based on the 2020 analytical results, there have been some noted fluctuations in petroleum hydrocarbon concentrations but no significant increases in the amounts of PAHs or BTEX compounds.

5.7.3.4 Verification that Petroleum Hydrocarbons Plume is not Expanding

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

5.7.3.5 Demonstration of Effective Institutional Controls

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

5.7.3.6 Verification of Attainment of Remedial Objective for Petroleum Hydrocarbons

The remedial objective for petroleum hydrocarbons is reduction of the concentrations in overburden and bedrock groundwater over time through MNA. Based on groundwater data collected during this reporting period, there is evidence of some biodegradation of petroleum hydrocarbons and the existing groundwater plume for petroleum hydrocarbons is stable and not expanding. Therefore, the remedial objective for petroleum hydrocarbons in groundwater is being met.

5.7.4 Chlorinated Volatile Organic Compounds Monitored Natural Attenuation Performance

This section presents an evaluation of CVOC MNA performance. A summary of the 2020 MNA parameters analyzed in groundwater is provided in Table 5-9.

5.7.4.1 Demonstration that Monitored Natural Attenuation is Occurring as Expected for CVOCs

A review of the 2020 CVOC and associated MNA data indicates that the site continues to be a complex and conflicting situation of locations where MNA is observed and other areas devoid of evidence of MNA. Some well locations show clear indications of MNA (both biological and abiotic), and other wells where select parameters suggest MNA but no clear predominance of data shows such convincing evidence. The main point that the plume shape and size has not increased or exhibited further migration is the overarching conclusion supporting attenuation.

Most wells monitored underneath Building 1 through Transects A, B, and C indicated strongly reducing conditions in the groundwater (dissolved oxygen [DO] levels below 1.0 milligrams per liter and oxidation-reduction potential values between +37 and -270 millivolts). These low redox conditions are also conducive to the reduction of CVOCs from reductive dechlorination processes (biological or abiotic), if other factors are also favorable. A possible exception to this is that the AE-103R bedrock well ports exhibited elevated and quite oxygenated DO readings. However, the Field Team Leader confirmed that the elevated DO measurements at AE-103R are likely due to the DO readings being recorded before achieving stable conditions; therefore, the DO measurements at AE-103R are not considered accurate. A summary of the 2020 geochemical parameters is provided in Table 2-1.

Based on data collected to date, limited reductive dechlorination of CVOCs appears to be occurring at certain locations of the site, in both the overburden and bedrock. Complete mineralization of CVOCs however is only evident in a few wells, based on the presence of ethene and ethane (such as in wells AE-103R-5 and EMW-11R-2). These products could be from either biological or abiotic reductive dechlorination. Methane is also present at increased levels in a few wells, indicating that redox conditions have progressed sufficiently for reductive dechlorination. Elevated sulfide levels were present in select wells indicating evidence of some sulfate reduction observed from the 2020 analytical data. The presence of some daughter products such as cis-1,2-DCE or VC, relative to their parent PCE and TCE concentrations, indicates biodegradation. While the aquifer has some capacity to support microbial degradation, it is not occurring over large areas, most likely due to the very limited microbial populations documented for the site and limited electron donors present. Generally speaking, biological attenuation does not appear to currently be playing a major role in CVOC reduction.

Abiotic degradation by reactive iron minerals may play a role in the natural transformation of certain CVOCs. Iron sulfides such as pyrite have been documented to react with PCE, TCE, and cis-1,2-DCE to cause a complete dechlorination transformation to acetylene and ethene without daughter products. Groundwater hydrogen levels indicate that sulfate reducing conditions could occur, and sulfate is observed at 10-50 milligrams per liter in the aquifer. Although hydrogen sulfide is only present in elevated levels in a few wells (notably AE-28R-2, AE-26R-1, AE-109R-5, and TRC-301R-4), sulfide may be sequestered by iron minerals in the soil and rock during the reduction process, generating the reactive minerals needed for abiotic transformation of CVOCs.

Acetylene is a signature product from the abiotic transformation process. Its presence may suggest that abiotic reductive dechlorination may play at least some role in transformation of CVOCs in specific areas of the site. The groundwater at all of these locations is reduced to some extent but noticeable concentrations of acetylene were not observed except in well AE-103R-5, likely due to an abiotic transformation process. Similarly, very low concentrations of ethane (0.57 to 6 µg/l) and ethene (1 to 10 µg/l) were observed. Although acetylene is short-lived in the environment, no appreciable demonstration of the abiotic dechlorination process is present in 2020 data.

Geochemical data (DO, manganese, iron, nitrate, sulfate, and methane) from the 2020 groundwater-sampling event for selected wells were plotted on radar plots shown on Figure 5-25.

Smaller sized colored hexagonal graph areas indicate more favorable conditions for reductive dechlorination biodegradation than larger hexagonal areas when comparing select well locations to background and other site wells. The figures for the wells evaluated indicate that wells AE-03 and AE-108R-1 show more favorable geochemical conditions than other wells evaluated.

Parent and daughter products related to the reductive dechlorination and/or abiotic transformation of chlorinated ethenes (PCE, TCE, cis-1,2-DCE, VC, ethene-ethane-acetylene, and chloride) observed during the 2020 groundwater-sampling event for selected wells were plotted on radar plots (Figure 5-26). Larger colored hexagonal areas indicate stronger evidence of biodegradation than smaller areas. The figures show that wells AE-108R-1, AE-106D, GZA-12, and AE-03 demonstrate that biodegradation and/or abiotic transformation processes are occurring to some extent in them, more than in other wells evaluated. As can be seen in Figures 5-21 through 5-24, there are a number of wells that contain concentrations of CVOCs below 100 µg/l. These not only include wells further downgradient in the plume, but also select wells in Transect A and the EPL. At these low concentrations, it is well known that reductive dechlorination may not continue, or stall at the cis-1,2-DCE by-product, without added electron donor (natural organic carbon, petroleum hydrocarbons, or remedial amendments) as the levels of the CVOCs are not significant enough to act as sufficient electron acceptors for the process.

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

In summary, based on the 2020 data, there is evidence of MNA occurring to a limited extent in select areas of the site to control the CVOC plume. The exact processes and their proportional contributions that are causing the attenuation are not clear. Biotic and abiotic degradation appear to occur in isolated areas and their contribution to attenuation of the CVOC plume is believed to be

much less than that of diffusion. The conceptual model shows that diffusion of CVOCs into the rock matrix micro-fractures and micro-cracks is believed to be the predominant attenuation mechanism at the site for bedrock groundwater contamination.

5.7.4.2 Changed Conditions Affecting CVOC Monitored Natural Attenuation

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

5.7.4.3 Absence of Toxic Transformation Products of CVOCs

Although elevated VC concentrations in a few wells could be toxic (if ingested), they could be considered indicators of reductive dechlorination where it aligns with elevated parent concentrations. As discussed in Section 2.5, the groundwater at the site is not used for drinking water purposes.

Analytical data from many wells exhibit mixed behavior (upward and downward trends) and the fluctuations are likely the result of different influences, such as changes in water levels and high concentrations near source areas. Elevated concentrations of VC were observed in well AE-28R-1 (located in Building 1-Tank F area) and well AE-101R-6 (located in Transect A) for the 2020 sampling round. VC is the least susceptible to reductive dechlorination because it is the least oxidized of these compounds. Therefore, the rate of reductive dechlorination decreases as the degree of chlorination decreases. Additionally, the anaerobic reduction of VC to ethene is slow and inefficient under weak reducing conditions (that are present at both locations), which favors the persistence of VC in PCE and TCE plumes that are undergoing reductive dechlorination. However, as the vinyl chloride moves out of the anaerobic zone with ambient groundwater flow into more aerobic zones, the concentrations of vinyl chloride are expected to decrease since vinyl chloride is known to degrade under aerobic conditions.

5.7.4.4 Verification that CVOC Plume is not Expanding

Groundwater contamination has been documented at the site since the 1980s. Although groundwater monitoring wells have been sampled at this site for over 30 years, the number of monitoring wells over the entire MCP site has increased significantly over time, particularly between 2012 and 2016. For this reason, the volume of data available for any point in time in the past is not consistent with

the volume of data available currently, though the number of wells has not changed since 2016. This situation makes an analysis of changes over time difficult to interpret relative to historical data.

For the 2020 analytical data, occasional PCE and TCE and cis-1,2-DCE concentrations have increased in a few select wells. However, PCE and TCE have generally decreased in a large number of wells. Localized increases in concentrations noted in 2020 are primarily in wells at the presumptive source area underneath Building 1, where potential residual DNAPL may be present. Of the wells evaluated for trend statistics (Table 5-8), there are 59 individual cases in which wells (or well screens/ports) show decreasing trends in PCE, TCE, cis-1,2-DCE, or VC which would be an indication of improving conditions. There are another 26 cases in which cis-1,2-DCE trends appear to be increasing. It is believed that these well ports are exhibiting increased daughter product generation based on downward trends and reduction of PCE and TCE concentrations. Similarly, eight cases of increasing trends of VC were documented, which are likely due to some degradation of cis-1,2-DCE. A number of additional well port cases evaluated also exhibited stable trends.

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

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

Three-dimensional volumetric calculations of the total CVOC groundwater data were made using the Environmental Visualization System model to create a plume volume used to estimate the plume mass for five separate dates in 2016, 2017, 2018, 2019, and 2020. This is presented in Figure 5-27. The results of this calculation indicate that the plume mass was approximately 150 kilograms (kg) in 2016, 137 kg in 2017, 162 kg in 2018, 173 kg in 2019, and 160 kg in 2020.

The decrease in contaminant mass in 2020, which also corresponds to an upgradient movement of the center of plume mass, is consistent with historical data showing that the center of the mass is closer to the source area. These circumstances indicate that the plume is stable or shrinking while undergoing natural attenuation.

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

5.7.4.5 Demonstration of Effective Institutional Controls

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

5.7.4.6 Verification of Attainment of Remedial Objective for CVOCs

The remedial objective for CVOCs is reduction of CVOC concentrations in overburden and bedrock groundwater over time through MNA. Given the elevated concentrations of CVOCs at the site, including mass within bedrock fractures and micro-fractures, the time frame for reduction in overall CVOC concentrations is on the order of decades. Based on groundwater data collected during this reporting period, the existing groundwater plumes for dissolved CVOC are stable and not expanding. Therefore, the remedial objective for CVOCs in groundwater is being met.

SECTION 6
INDOOR AIR SAMPLING RESULTS

Table 6-1 presents a summary of the historical laboratory analytical results for each of the air sample locations within Building 1. A copy of the Alpha Analytical Laboratory data package from the January 2021 sampling event is included as Appendix H. Results from the January 2021 air sampling event are summarized below.

6.1 QUALITY ASSURANCE AND QUALITY CONTROL

The quality of the analytical data from the January 26, 2021 sampling event is acceptable for decision-making purposes based on the data validation results. All sampling canisters were batch-certified by the laboratory prior to sampling. There was good precision in the data based on the close agreement of the parent and duplicate samples from IA-8, as observed in Table 6-1. The volatile organic compound (VOC) data were validated and are discussed in detail in the data validation summary memorandum included in Appendix H. Data were evaluated and all were accepted with select qualifications as noted in the data validation memorandum. All results complied with the applicable Massachusetts Department of Environmental Protection (MassDEP) Compendium of Analytical Methods performance standards listed in Policy WSC-02-320 (MassDEP, 2010).

6.2 INDOOR AIR ANALYTICAL RESULTS

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

The indoor air analytical sample results from Building 1 detected several solvent and petroleum-related VOCs at low concentrations. The detected compounds in Building 1 are consistent with compounds observed in previous indoor air sampling events from 2009 to 2020. The detected concentrations of these compounds in January 2021 are consistent for each sampling

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

In January 2021, increased concentrations of acetone, styrene, and naphthalene, as well as benzene, toluene, ethylbenzene, and xylenes (BTEX) are present at sample locations in Building 1. The 2021 detected concentrations of these compounds are higher at the high bay sample locations than in sample locations in the southwest corner room and on the second floor. Each of these compounds were detected in sub-slab vapor samples collected beneath Building 1 between 2009-2013 at concentrations similar to or higher than detected in indoor air in Building 1. The BTEX compounds along with naphthalene and styrene are present in gasoline and/or exhaust from gasoline combustion engines such as the trucks in the high bay. Given that these compounds have historically been detected in Building 1 and were not increasing between 2009-2020, the sub-slab vapors are not considered to be the source of the increases in 2021 indoor air concentrations. Also, detected concentrations of other compounds such as chlorofluorocarbon halomethane, 1,1,2-trichloro-1,2,2-trifluoroethane, tetrachloroethene, and trichloroethene, historically present in sub-slab vapor, did not increase in indoor air in 2021. This, along with the timing of the increased concentrations in 2021 aligning with UPS starting full time operations in fall 2020, indicate that the source of the increased concentrations in indoor air is the gasoline contained in, and the exhaust from, the approximately 30 to 40 trucks that drive in and out of Building 1 daily and park within Building 1 each night during operations (Monday through Saturday).

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

SECTION 7
DEMONSTRATION OF EFFECTIVE INSTITUTIONAL CONTROLS

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

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

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

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

- the performance standards for Release Abatement Measures set forth by the MCP at 310 CMR 40.0440 (Massachusetts Department of Environmental Protection [MassDEP], 2014)
- the soil management procedures pursuant to 310 CMR 40.0030, the Similar Soils Provisions Guidance (WSC# 13-500; MassDEP, 2014)
- Construction of Buildings in Contaminated Areas (Policy WSC# 00 425; MassDEP, 2000a)

- applicable health and safety procedures outlined in 310 CMR 40.0018

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

SECTION 8
CONDITIONS OR PROBLEMS AFFECTING THE REMEDIAL ACTION

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

SECTION 9
MODIFICATIONS TO THE MONITORING PROGRAM

No modifications to the monitoring program occurred during this monitoring period. The wells and analytes monitored were as detailed in the updated Operations, Maintenance, and/or Monitoring Program groundwater monitoring plan submitted to the Massachusetts Department of Environmental Protection in September 2018, with one exception: analysis of sulfide was accidentally omitted at monitoring well AE-106R-3 due to a miscommunication with the laboratory.

SECTION 10
FUTURE MONITORING

The Post-temporary Solution Operations, Maintenance, and/or Monitoring Plan will continue to be implemented according to the schedule presented in Table 10-1, which includes activities described below to be completed up to the submittal of the first five-year review of the Temporary Solution.

- Annual indoor air monitoring of pertinent on-site buildings will continue to be conducted during the heating season (typically in January or February) until the first five-year review in May 2022. During this event, indoor air samples will be collected from approximately 7 to 10 locations in Building 1/1A. Samples will be collected following procedures contained in the Massachusetts Department of Environmental Protection (MassDEP) Vapor Intrusion Guidance Policy #WSC-16-435 dated October 14, 2016 (MassDEP, 2016c). One ambient air sample will be collected during each annual event. Samples will be analyzed for volatile organic compounds via method TO-15 selective ion monitoring including 1,1,2-trichloro-1,2,2-trifluoroethane. Meteorological data will be obtained from a weather station within a few miles of the site. The next indoor air-sampling event is scheduled to take place in January or February 2022.

- Quarterly light non-aqueous phase liquid (LNAPL) gauging of seven monitoring wells (i.e., AE-03, AE-04, CW-1, CW-2, GZA-102S, PZ-2S, and TRC-101) located in the western portion of the eastern parking lot will be conducted to monitor the presence/absence of LNAPL in this area. If LNAPL thickness of greater than 0.1 ft is detected in a well, an absorbent sock will be deployed to absorb the LNAPL for subsequent disposal. Gauging events will be conducted in March, June, September, and December, annually, with the December and March results presented in May, and the June and September results presented in November. The next quarterly LNAPL-gauging event is scheduled to take place in June 2021. The remedial alternative selected for LNAPL is monitored natural attenuation (MNA). To monitor the progress of LNAPL behavior more specifically, the dissolved phase petroleum hydrocarbon "halo" surrounding the LNAPL pool will be evaluated over time. This evaluation will provide a leading indicator of the potential dissolution of LNAPL and subsequent natural degradation of the associated dissolved phase plume.

- Annual groundwater sampling of select monitoring wells for analysis of site chemicals of concern (i.e., chlorinated volatile organic compounds, 1,4-dioxane, petroleum hydrocarbons, and arsenic) and relevant MNA parameters in overburden and bedrock groundwater will be conducted. Each groundwater-sampling event will include a site-wide water level measurement round. The next annual groundwater-sampling event will occur in September-October 2021. The scope of the annual groundwater monitoring will be expanded in 2021 to be similar to the scope of the monitoring event conducted in fall of 2016 and 2017

while maintaining some of the revisions and updates incorporated in 2018-2020. The 2021 groundwater sampling plan is detailed in Table 10-2.

- As noted in Section 5.4.1 and Table 10-2, Lockheed Martin plans to analyze volatile petroleum hydrocarbon samples from additional site wells with the PIANO method in 2021 to further confirm interference from chlorinated volatile organic compounds and to support a reduction in monitoring for petroleum compounds in bedrock wells away from the source areas onsite.

- Post-temporary Solution Status and Remedial Monitoring Reports will continue to be submitted semiannually. The next semiannual report is due to the MassDEP in November 2021.

- Periodic reviews of site conditions will be conducted every five years to evaluate new technologies and their potential to achieve a Permanent Solution. The next five-year review of the Temporary Solution is due to the MassDEP in May 2022.

SECTION 11
LICENSED SITE PROFESSIONAL OPINION AND CONCLUSIONS

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

The seal and signature of the Licensed Site Professional who reviewed this Post-temporary Solution Status Report No. 4 are contained on the applicable Massachusetts Department of Environment Bureau of Waste Site Cleanup transmittal forms (BWSC-108) submitted via eDEP.

SECTION 12
PUBLIC NOTIFICATION

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

During the Post-temporary Solution period, Post-temporary Solution Status Reports are required by the Massachusetts Contingency Plan (MCP) to be submitted every six months to the Massachusetts Department of Environmental Protection (MassDEP). In accordance with the November 17, 2000 PIP (MassDEP, 2000b), these Status Reports are also required to be provided to the designated information repository established in the PIP (Flint Memorial Library, Town of North Reading). All members of the PIP mailing list, including the Chief Municipal Officer and Board of Health agents for the towns of Reading, North Reading, and Wilmington, have been notified of the availability of this report by mail. A copy of the letter sent to the PIP mailing list concerning the availability of documents in the repository, as required under the PIP (MassDEP, 2000b), was included in the initial Post-temporary Solution Status Report submitted to the MassDEP in November 2017. The 2017 PIP notice informed the mailing list of the availability of semiannual Post-temporary Solution Status Reports from November 2017 through May 2021.

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

- Wilmington Realty Trust – 40-50 Fordham Road in Wilmington and North Reading
- Howland Development – 87 Concord Street in North Reading
- International Family Church – 99 Concord Street in Wilmington and North Reading
- Ed & Gail Melanson – 0 Furbish Pond Lane in North Reading
- North Reading Town Water – Wells along Concord Street in North Reading

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

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

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

SECTION 13
REFERENCES

AECOM Technical Services, Inc. (AECOM) 2013. Remedy Operation Status Report, ROS Termination, and Tier 1A Permit Extension, Former General Electric Site, 50 Fordham Road, Wilmington, MA. March 2013.

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_____, 2017b. Draft MCP Phase II Comprehensive Site Assessment, Former General Electric Facility, 50 Fordham Road, Wilmington, MA, RTN 3-0518. May 2017.

_____, 2017c. Draft Phase III Remedial Action Plan, Former General Electric Facility, 50 Fordham Road, Wilmington, MA, RTN 3-0518. May 2017.

CCC Environmental Services LLC, 2020. Remedy Operation Status/Remedial Monitoring and RAM Status Report, YRC Freight Terminal, 95 Concord Street, North Reading, MA, RTN 3-0002363, January 2020.

Massachusetts Department of Environmental Protection (MassDEP), 2000a. Construction of Buildings in Contaminated Areas, Policy WSC# 00 425; MassDEP, 2000a.

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_____, 2016a. Light Nonaqueous Phase Liquids (LNAPL) and the MCP: Guidance for Site Assessment and Closure, Policy #WSC-16-450. February 19, 2016.

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_____, 2010. Partial Response Action Outcome, Tank K Area, Former GE Facility (RTN 3-0518), Wilmington, Massachusetts. November 2010.

United States Environmental Protection Agency Region 1, 2010. *Low Stress (low flow) Purging and Sampling Procedure for the Collection of Groundwater Samples from Monitoring Wells.* January 2010, revised September 2017.

FIGURES

Figure 1-1 Site Location Map

Figure 1-2 Site Plan

Figure 1-3 Monitoring Well Locations

Figure 3-1 Groundwater Contour Map 0-60 Feet, September 8, 2020

Figure 3-2 Groundwater Contour Map 61-120 Feet, September 8, 2020

Figure 3-3 Groundwater Contour Map 121-250 Feet, September 8, 2020

Figure 4-1 Tank Farm EPL Extent of LNAPL Impacts

Figure 4-2 CW-1 – Depth to Water versus LNAPL Thickness

Figure 4-3 CW-2 – Depth to Water versus LNAPL Thickness

Figure 4-4 PZ-2S – Depth to Water versus LNAPL Thickness

Figure 4-5 TRC-101 – Depth to Water versus LNAPL Thickness

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

Figure 5--2 Dissolved Arsenic in Groundwater – Upper Bedrock (0-60 ft bgs)

Figure 5-3 Dissolved Arsenic in Groundwater – Middle Bedrock (61-120 ft bgs)

Figure 5-4 Dissolved Arsenic in Groundwater – Lower Bedrock (121-232 ft bgs)

Figure 5-5 1,4-Dioxane (SW8270D SIM) in Groundwater – Overburden (0--78 ft bgs)

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

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

Figure 5-8 1,4-Dioxane (SW8270D SIM) in Groundwater – Lower Bedrock (121-232 ft bgs)

Figure 5-9 Total Petroleum in Groundwater – Overburden (0-78 ft bgs)

Figure 5-10 Total Petroleum in Groundwater – Upper Bedrock (0-60 ft bgs)

Figure 5-11 Total Petroleum in Groundwater – Middle Bedrock (61-120 ft bgs)

Figure 5-12 Total Petroleum in Groundwater – Lower Bedrock (121-232 ft bgs)

Figure 5-13 PCE in Groundwater – Overburden (0-78 ft bgs)

Figure 5-14 PCE in Groundwater – Upper Bedrock (0-60 ft bgs)

Figure 5-15 PCE in Groundwater – Middle Bedrock (61-120 ft bgs)

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

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

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

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

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

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

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

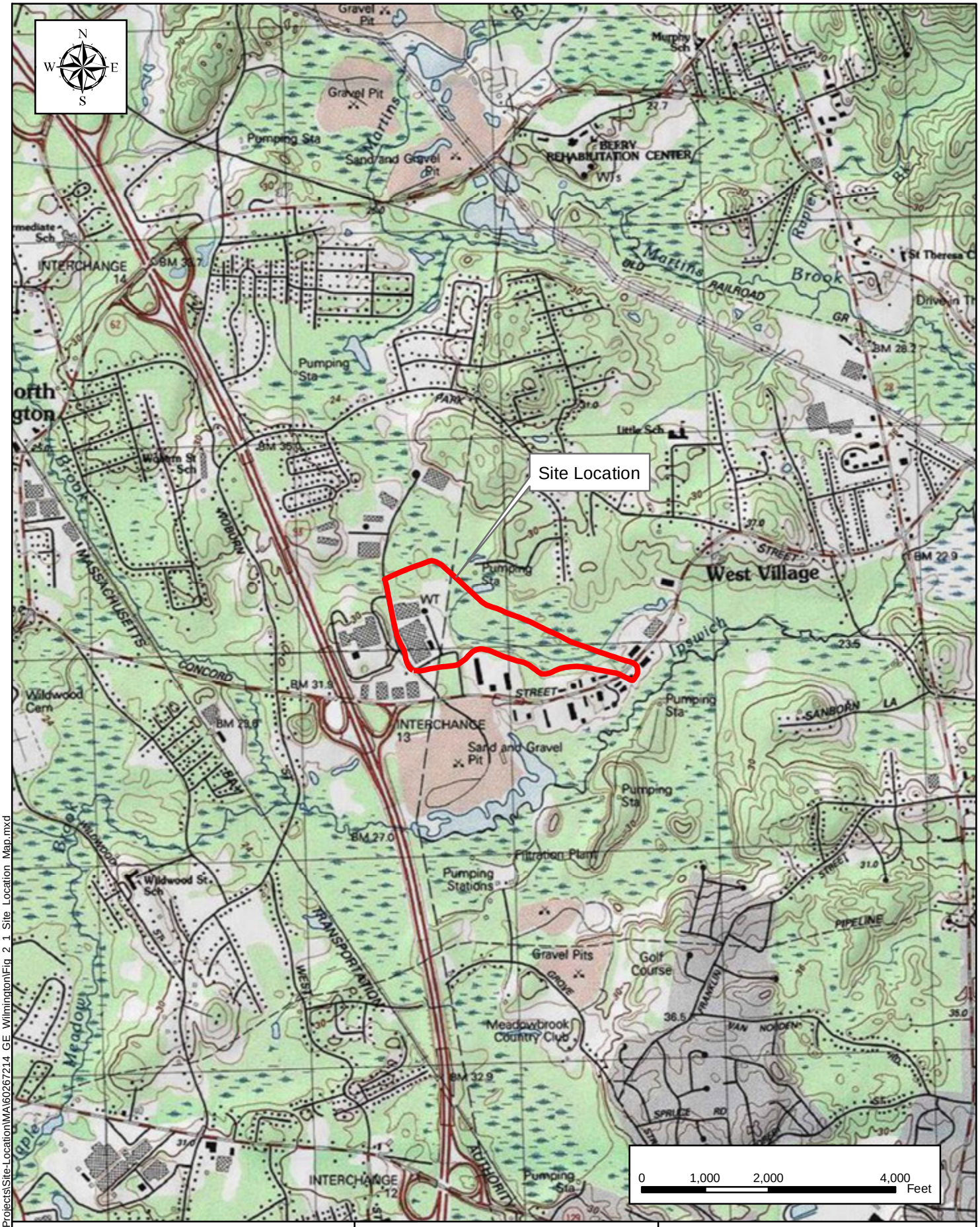
Figure 5-23 Total CVOCs in Groundwater – Middle Bedrock (61-120 ft bgs)

Figure 5-24 Total CVOCs in Groundwater – Lower Bedrock (121-232 ft bgs)

Figure 5-25 2020 Geochemical Parameter Radar Plots

Figure 5-26 2020 PCE and Daughters Radar Plots

Figure 5-27 CVOC Plume Mass and Center of Mass Over Time



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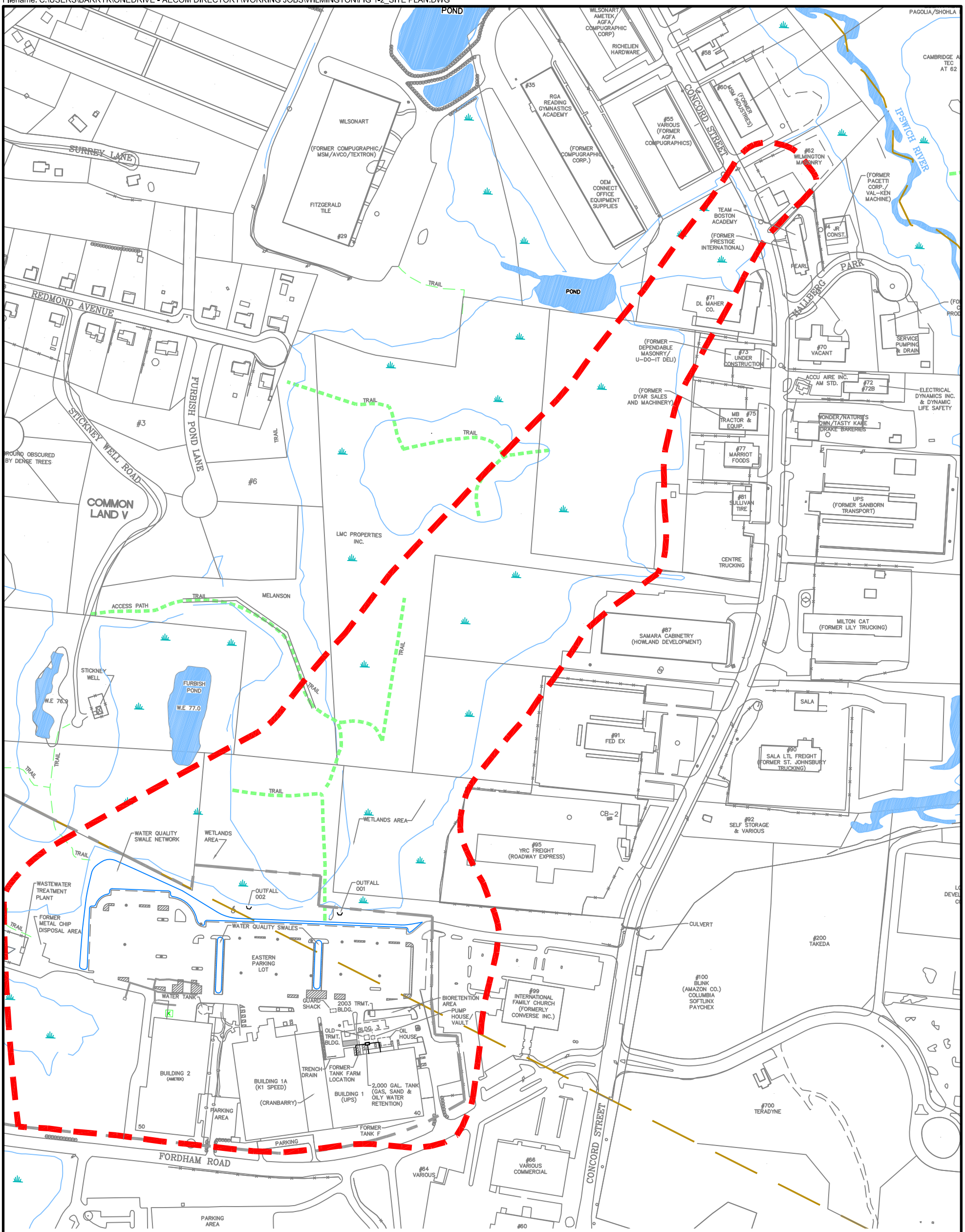
Former GE Facility
50 Fordham Road, Wilmington, MA

SITE LOCATION MAP

DATE: 10/10/2017			PROJECT: 60552044	FIGURE: 1-1

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Filename: C:\USERS\BARRYK\ONEDRIVE - AECOM DIRECTORY\WORKING JOBS\WILMINGTON\FIG 1-2_SITE PLAN.DWG

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



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

SITE PLAN

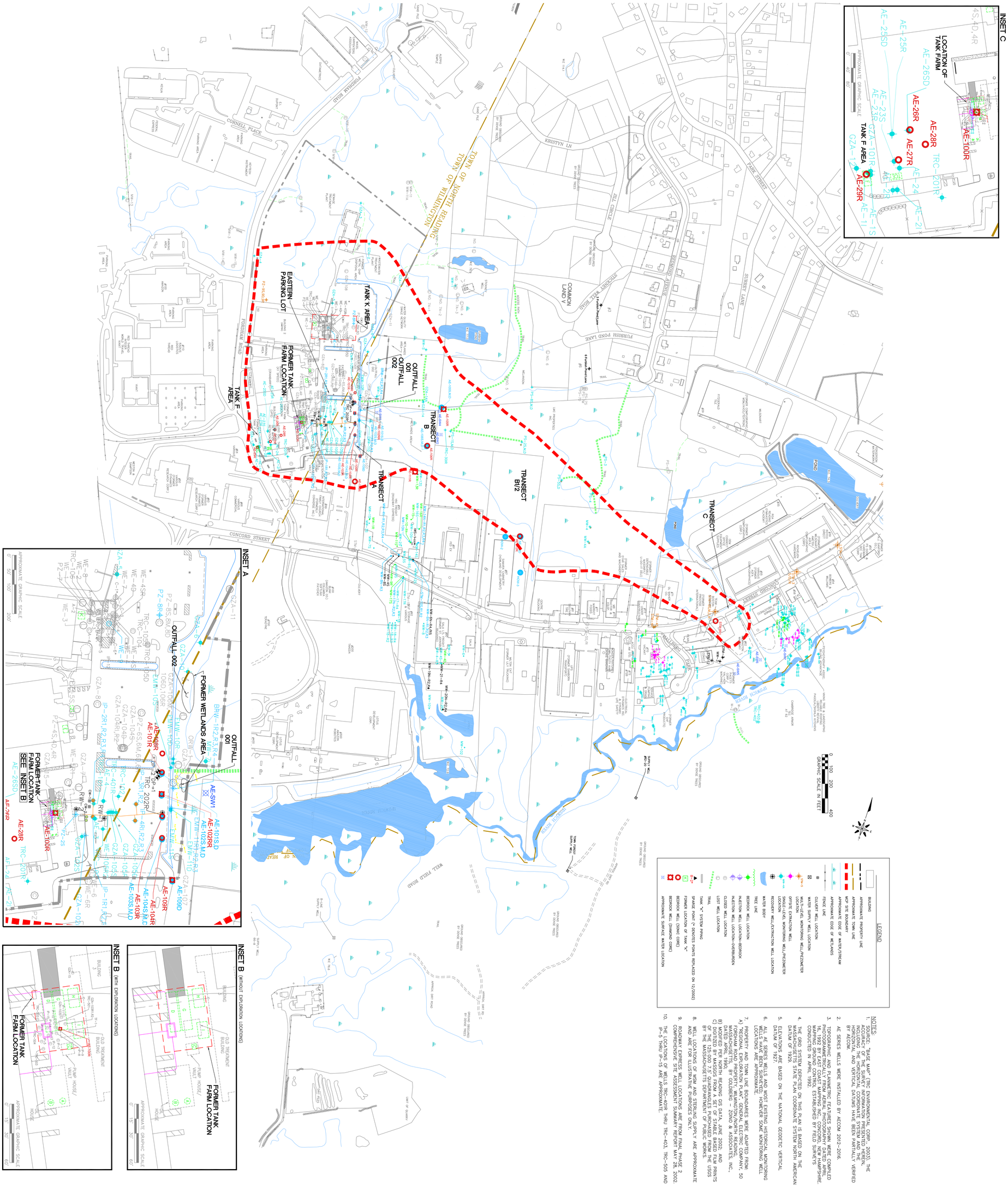
AECOM

60552044 2021-04-12

FIGURE: 1-2

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Project Management Initials: Designer: K.P.B. Checked: S.O. Approved: S.O. ARCH C 18" x 24"
K.P.B. S.O. S.O.



NOTES:

1. SOURCE: "BASE MAP" (TRC ENVIRONMENTAL CORP., 2003). THE ACCURACY OF THE SURVEY INFORMATION PRESENTED HEREIN, INCLUDING THE LOCATIONS OF MONITORING WELLS, AND THE HORIZONTAL AND VERTICAL DATUMS HAVE BEEN PARTIALLY VERIFIED BY AECOM.
2. AE SERIES WELLS WERE INSTALLED BY AECOM 2012–2016.
3. TOPOGRAPHIC AND PLANIMETRIC FEATURES SHOWN WERE COMPILED PHOTOGRAMMETRICALLY FROM AERIAL PHOTOGRAPHY DATED APRIL 1990 BY MASSACHUSETTS HIGHWAY DEPARTMENT, MAPPING AND CONTROL APPROVED BY FIELD SURVEYS CONDUCTED IN APRIL 1992.
4. THE GRID SYSTEM DEPICTED ON THIS PLAN IS BASED ON THE MASSACHUSETTS STATE PLAN COORDINATE SYSTEM NORTH AMERICAN DATUM OF 1929.
5. ELEVATIONS ARE BASED ON THE NATIONAL GEODETIC VERTICAL DATUM OF 1927.
6. WELL LOCATIONS AND MOST ELECTRONIC/PHYSICAL MONITORING WELL LOCATIONS ARE APPROXIMATE.
7. PROPERTY AND TOWN LINE BOUNDARIES WERE ADAPTED FROM: A) "REGIONAL EXPLORATION PLAN", GENERAL ELECTRIC COMPANY, 50 MASSACHUSETTS, BY GOLDBERG ZOINO & ASSOCIATES, INC., DATED APRIL 1990; B) "BOUNDARY AND TOPOGRAPHIC SURVEY PLAN", DATED JUNE 2000, AND C) DIGITIZED BY MASSGIS FROM A SET OF STABLE BASED FILM PRINTS OF THE 1:25,000 7.5' QUADRANGLES PURCHASED FROM THE USGS BY THE MASSACHUSETTS DEPARTMENT OF PUBLIC WORKS.
8. WELL LOCATIONS OF MSW AND STERLING SUPPLY ARE APPROXIMATE AND ARE FOR ILLUSTRATIVE PURPOSES ONLY.
9. ROADWAY EXPRESS WELL LOCATIONS ARE FROM FINAL PHASE 2 COMPREHENSIVE SITE ASSESSMENT SUMMARY REPORT MAY 28, 2002.
10. THE LOCATIONS OF WELLS TRC-401R THRU TRC-403, TRC-505 AND IP-5 THRU IP-15 ARE APPROXIMATE.

Former GE Facility - 50 Fordham Rd, Wilmington, MA

Lockheed Martin Corporation

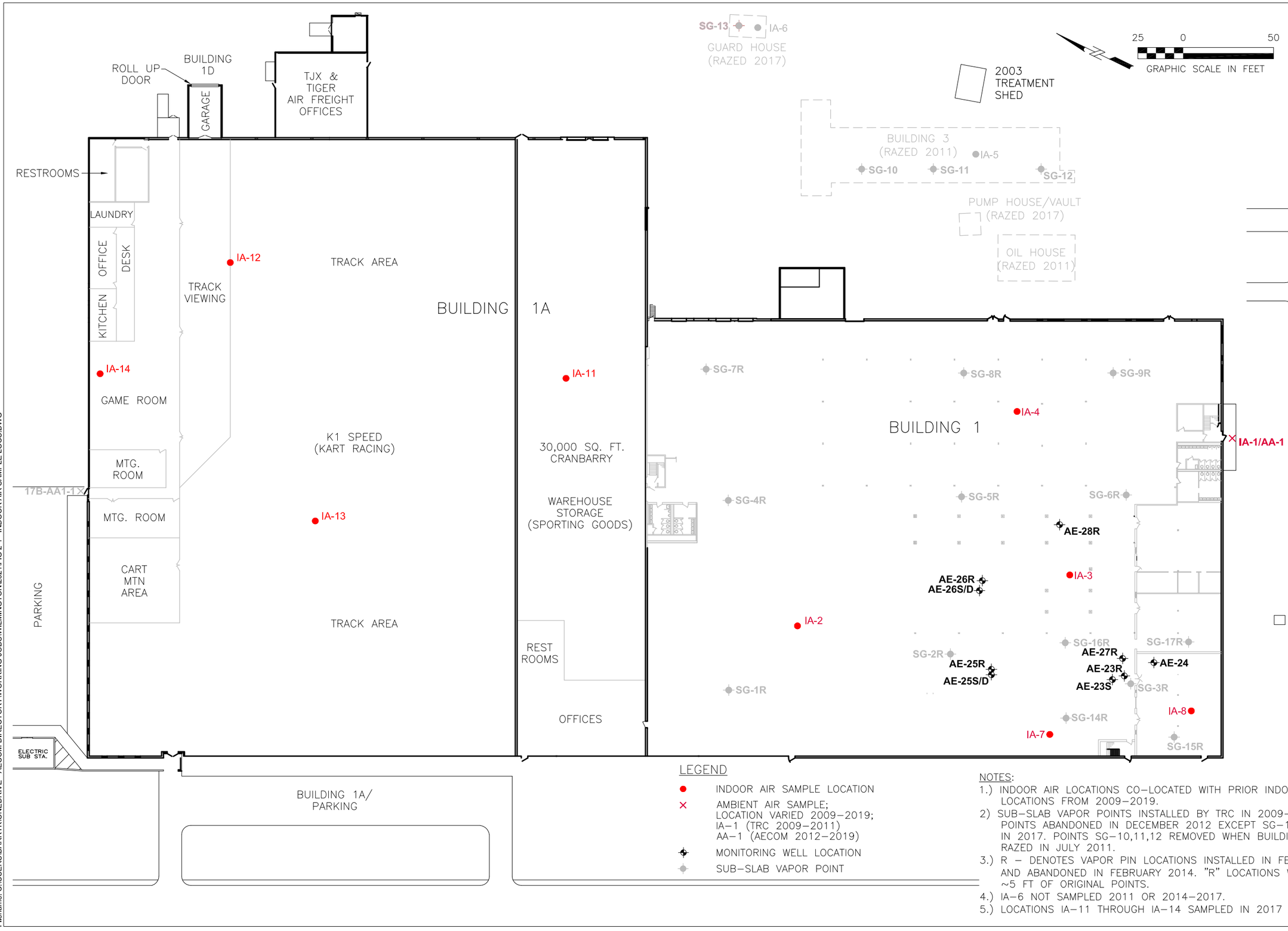
MONITORING WELL LOCATIONS

AECOM

60552044

Date: 2021-04-12

FIGURE: 1-3



LEGEND

- ● INDOOR AIR SAMPLE LOCATION
- × AMBIENT AIR SAMPLE; LOCATION VARIED 2009–2019; IA–1 (TRC 2009–2011) AA–1 (AECOM 2012–2019)
- ⌖ MONITORING WELL LOCATION
- ⌖ SUB–SLAB VAPOR POINT

NOTES:

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

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FIGURE: 2-1

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

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

2021-03-01

60552044

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

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

25 0 50

GRAPHIC SCALE IN FEET

BUILDING 1A

K1 SPEED
(KART RACING)

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

ELECTRICAL SUBSTATION

BUILDING 1

IA-10

IA-9

OFFICES

LEGEND

● INDOOR AIR SAMPLE LOCATION

NOTES:

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

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

AECOM

FIGURE: 2-2

INDOOR AIR SAMPLE LOCATIONS
BUILDING 1 SECOND FLOOR

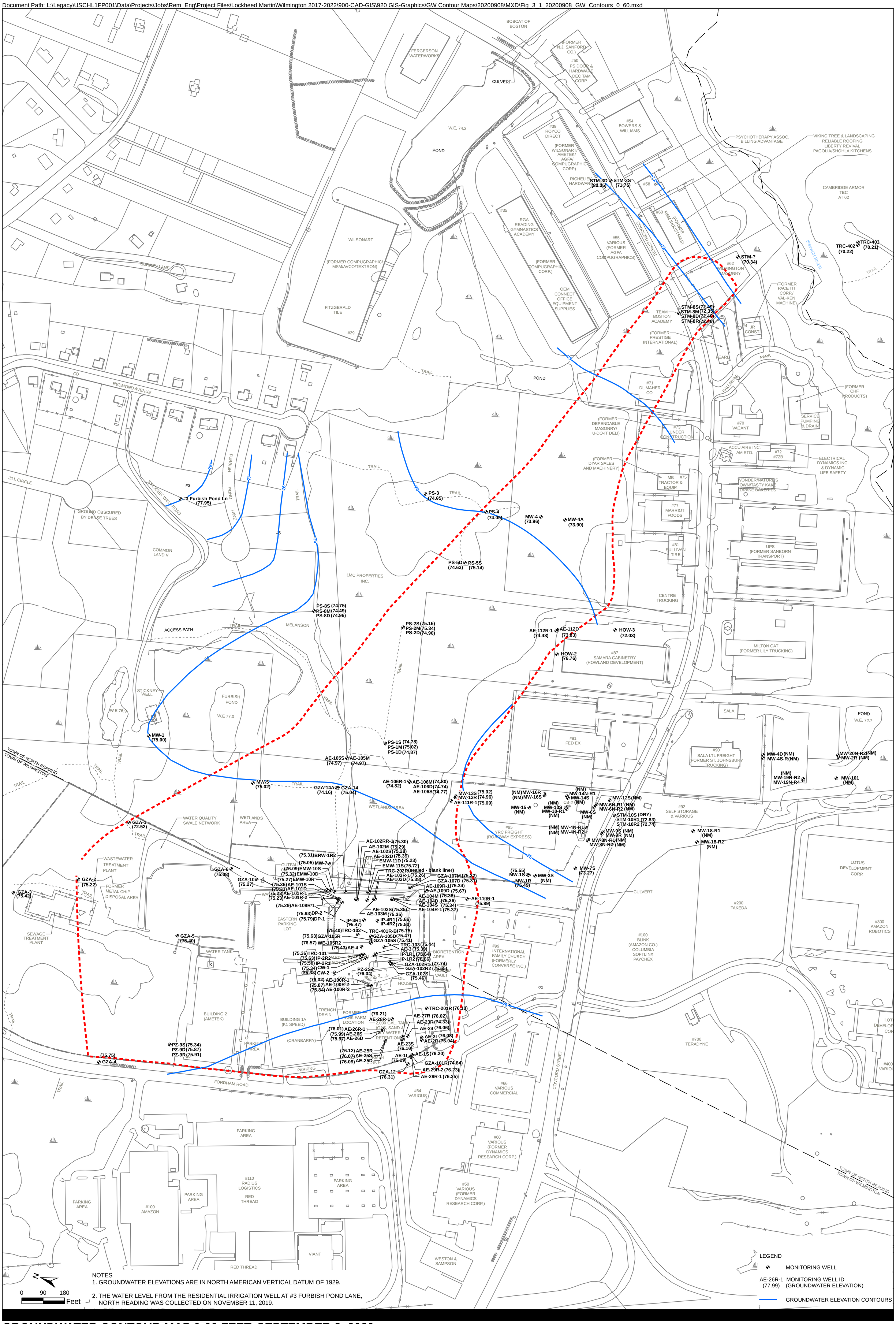
Former GE Facility - 50 Fordham Rd, Wilmington, MA
Lockheed Martin Corporation

60552044 2021-03-01

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Last saved by: BARRYK(2021-03-01) Last Plotted: 2021-03-01
Filename: C:\USERS\BARRYK\ONEDRIVE - AECOM DIRECTORY\WORKING JOBS\WILMINGTON\2021\FIG 2-2 - INDOOR AIR SAMPLE LOCS.DWG

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GROUNDWATER CONTOUR MAP 0-60 FEET, SEPTEMBER 8, 2020

FORMER GE FACILITY

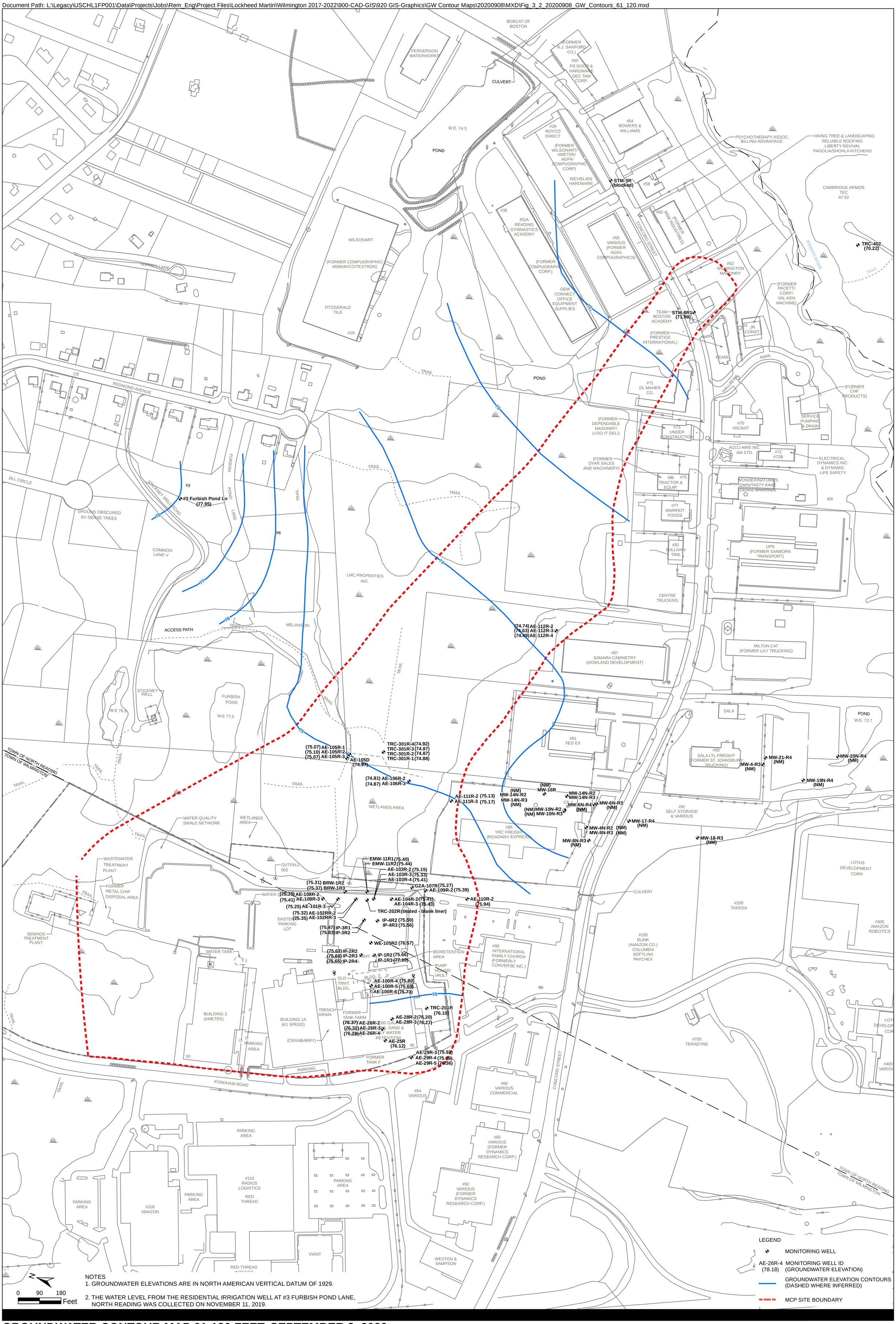
50 FORDHAM RD, WILMINGTON, MA

Project No.: 60552044.19

AECOM

FIGURE 3-1

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GROUNDWATER CONTOUR MAP 61-120 FEET, SEPTEMBER 8, 2020

FORMER GE FACILITY

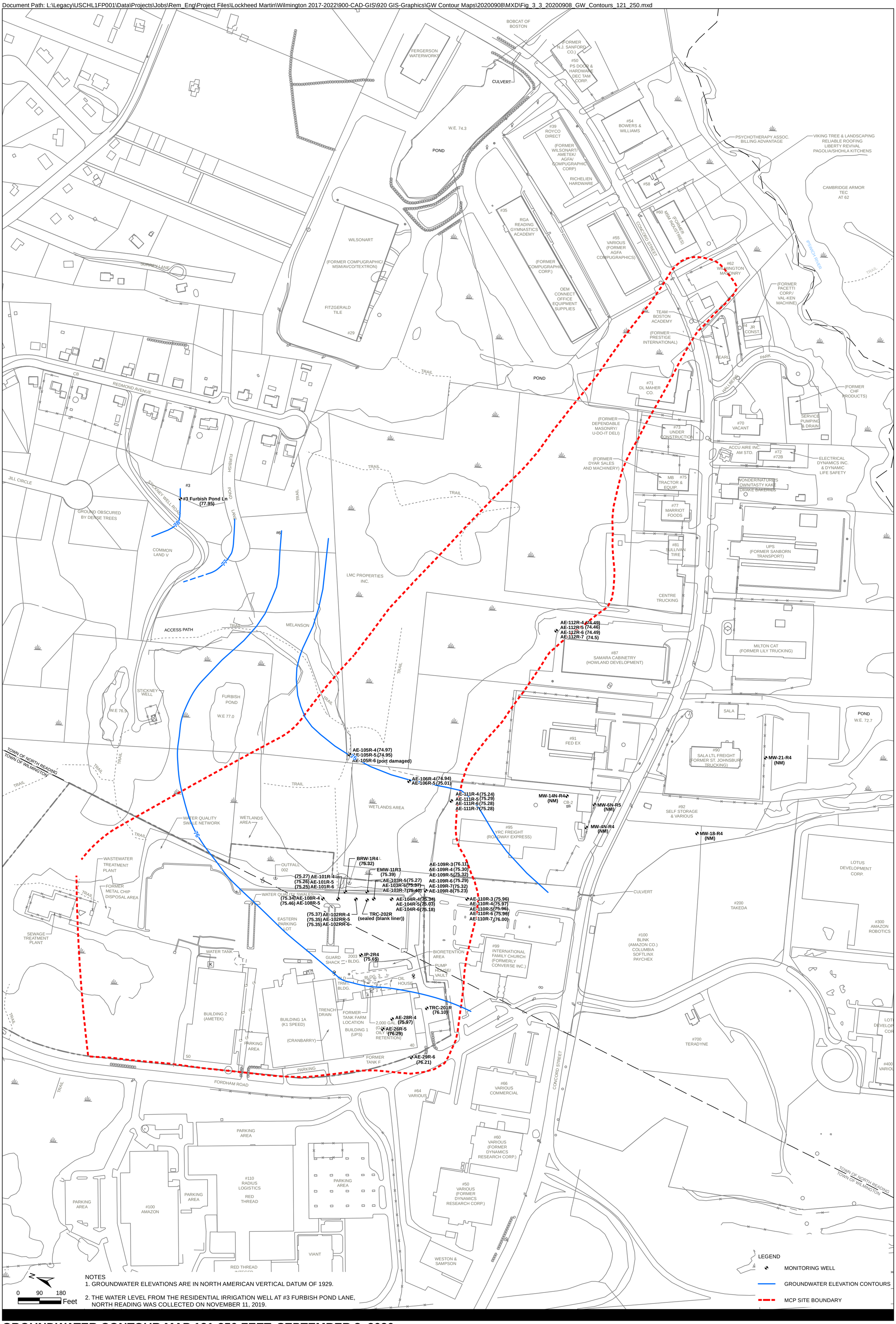
50 FORDHAM RD, WILMINGTON, MA

Project No.: 60552044.19

AECOM

FIGURE 3-2

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NOTES
1. GROUNDWATER ELEVATIONS ARE IN NORTH AMERICAN VERTICAL DATUM OF 1929.
2. THE WATER LEVEL FROM THE RESIDENTIAL IRRIGATION WELL AT #3 FURBISH POND LANE, NORTH READING WAS COLLECTED ON NOVEMBER 11, 2019.

GROUNDWATER CONTOUR MAP 121-250 FEET, SEPTEMBER 8, 2020

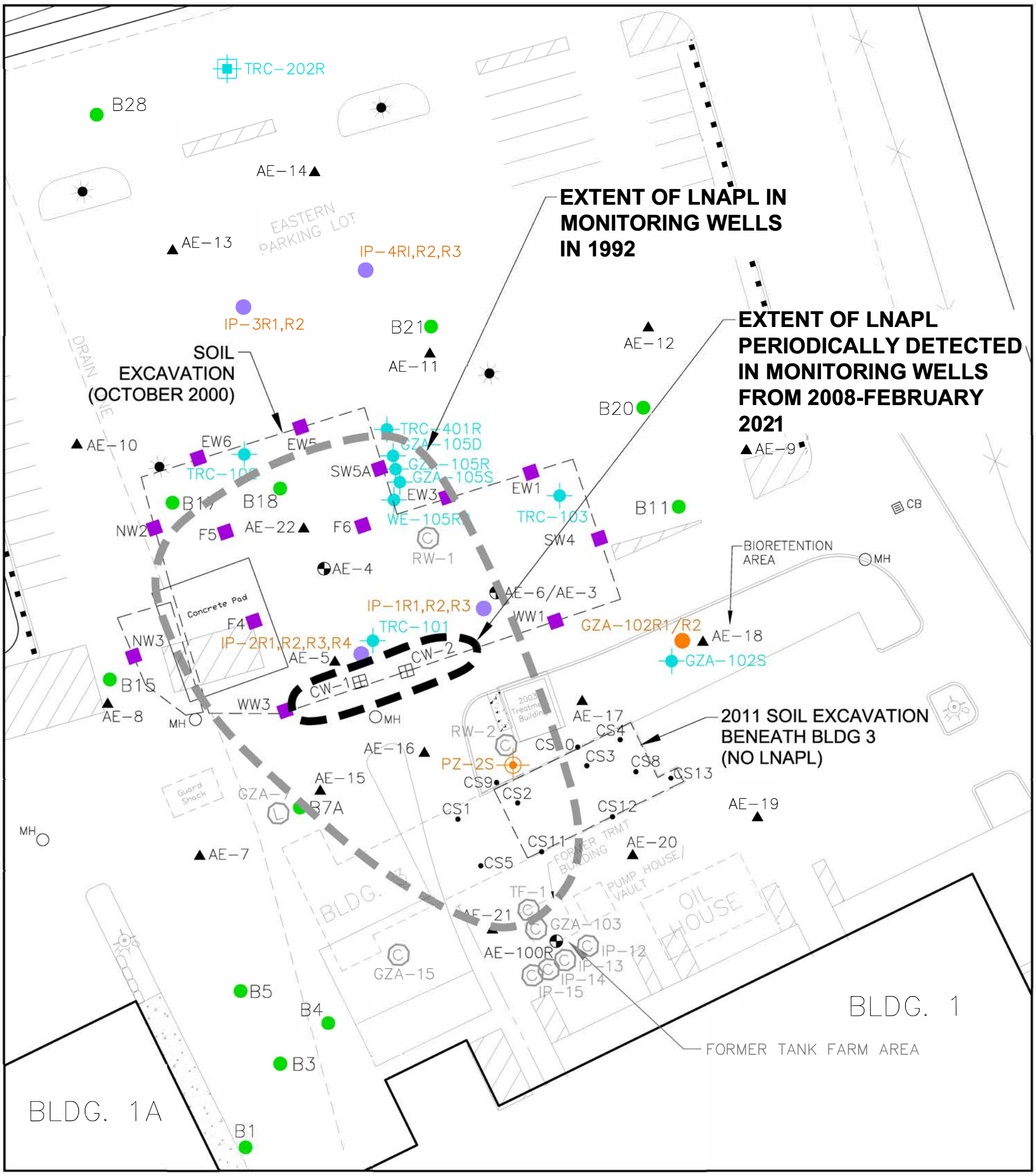
FORMER GE FACILITY

50 FORDHAM RD, WILMINGTON, MA

Project No.: 60552044.19

AECOM

FIGURE 3-3



LEGEND

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

SOURCE:

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

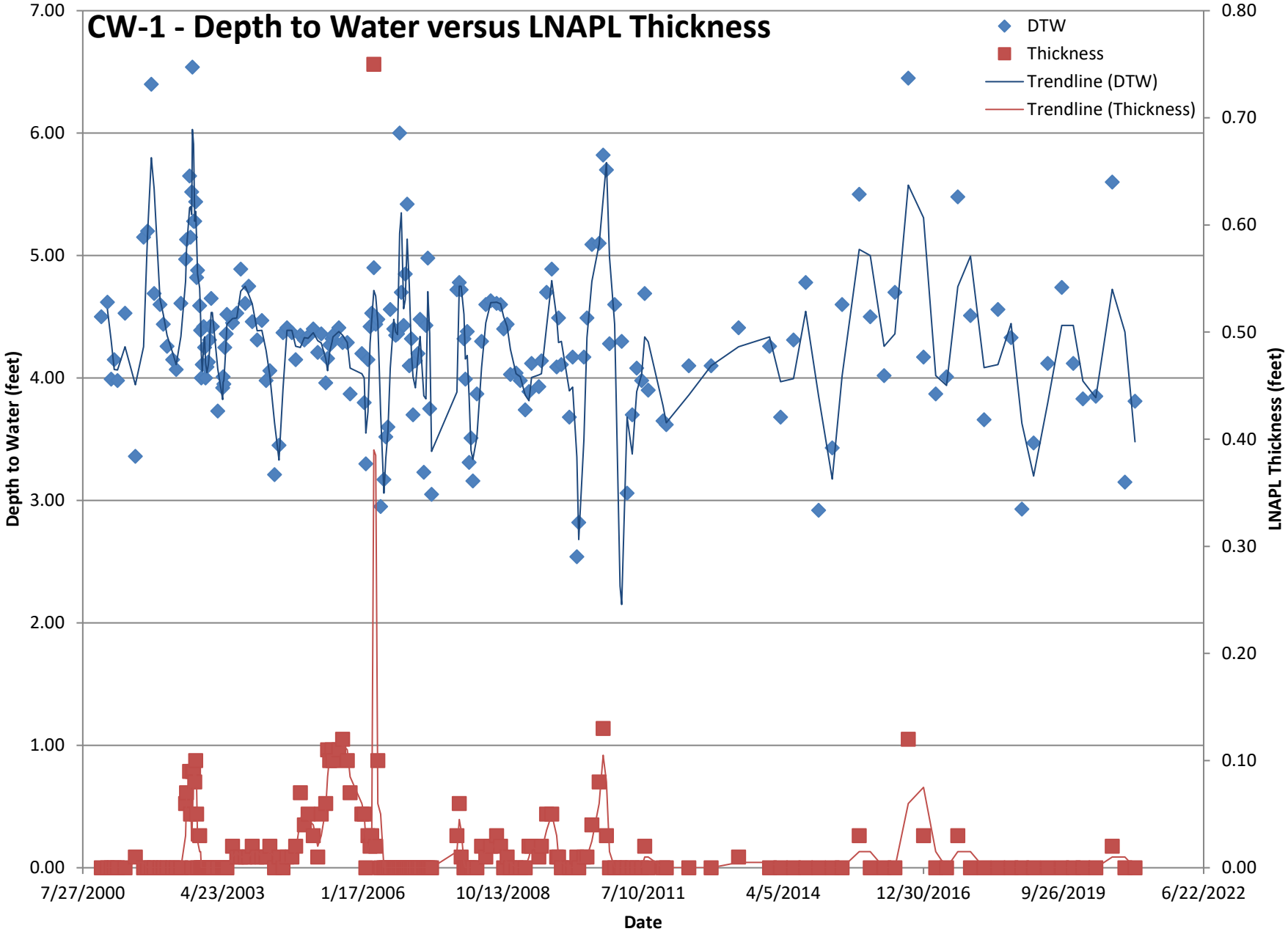
Former GE Facility - 50 Fordham Rd, Wilmington, MA
Lockheed Martin Corporation

TANK FARM - EPL
EXTENT OF LNAPL IMPACTS

AECOM

60552044 2020-09-14

FIGURE: 4-1



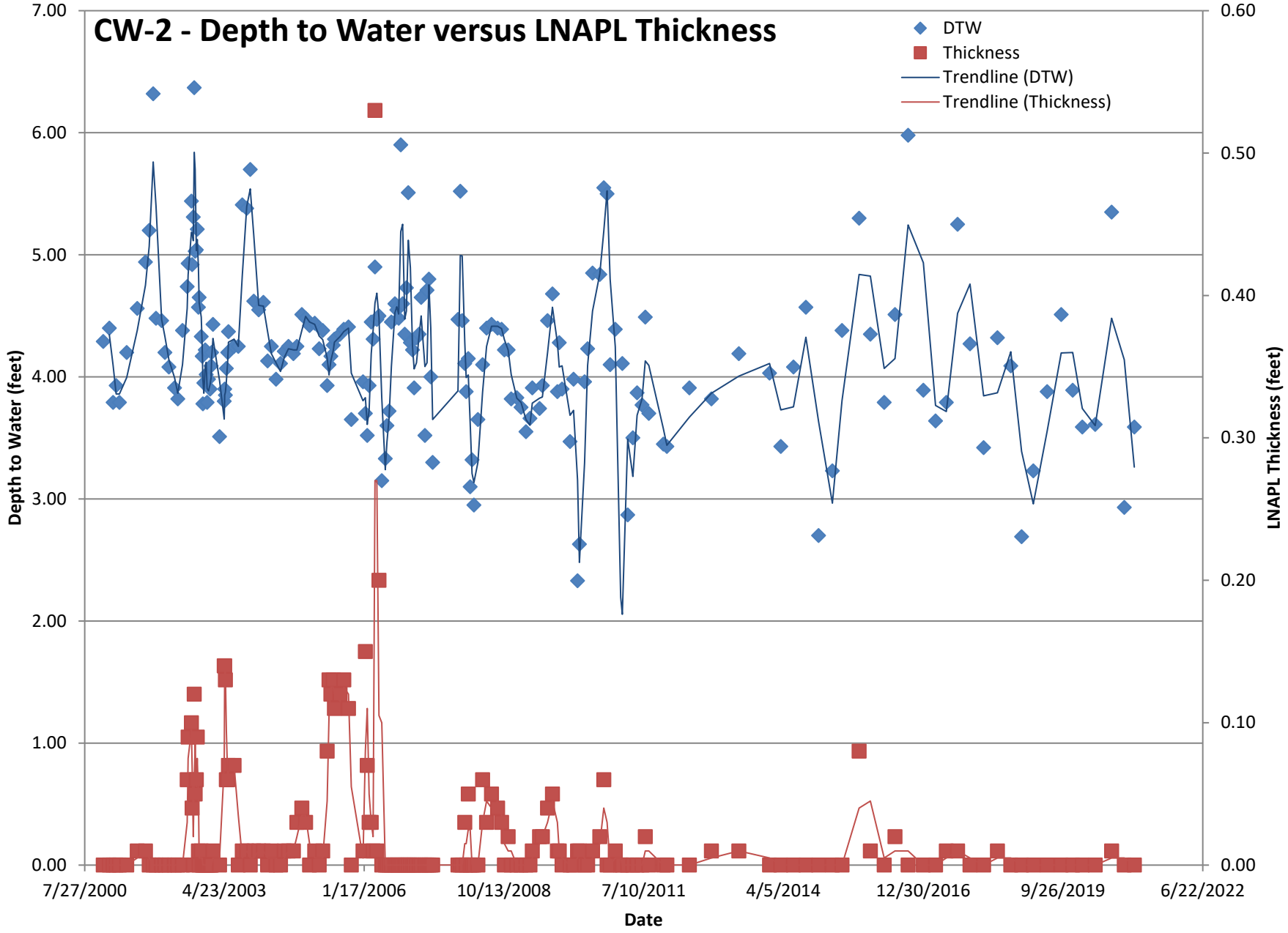
AECOM

Figure: 4-2

CW-1 - DEPTH TO WATER VS LNAPL THICKNESS

Former GE Facility - 50 Fordham Rd, Wilmington, MA
Client Lockheed Martin Corporation
60552044

2/25/2021



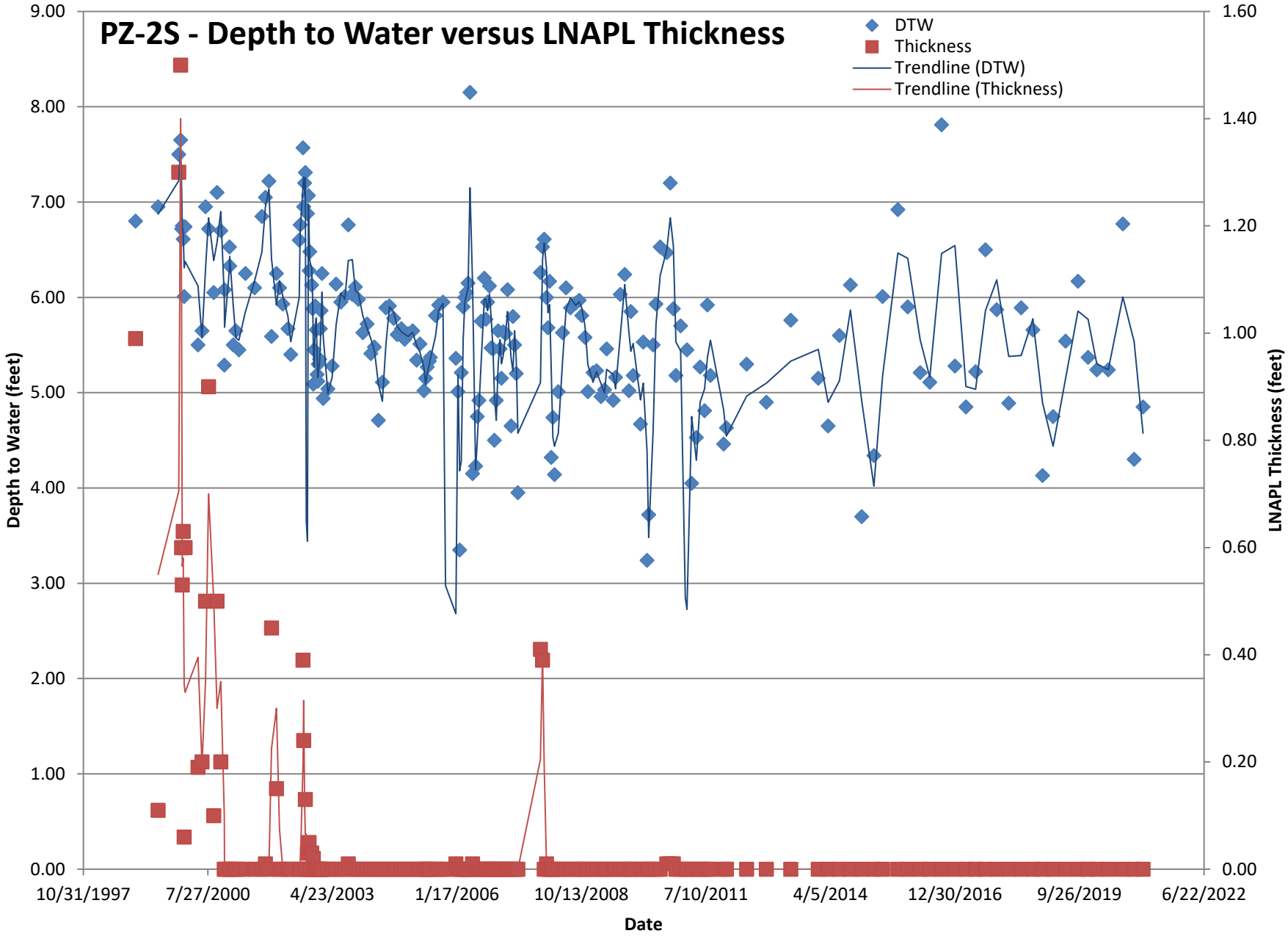
AECOM

Figure: 4-3

CW-2 - DEPTH TO WATER VS LNAPL THICKNESS

Former GE Facility - 50 Fordham Rd, Wilmington, MA
Client Lockheed Martin Corporation
60552044

2/25/2021



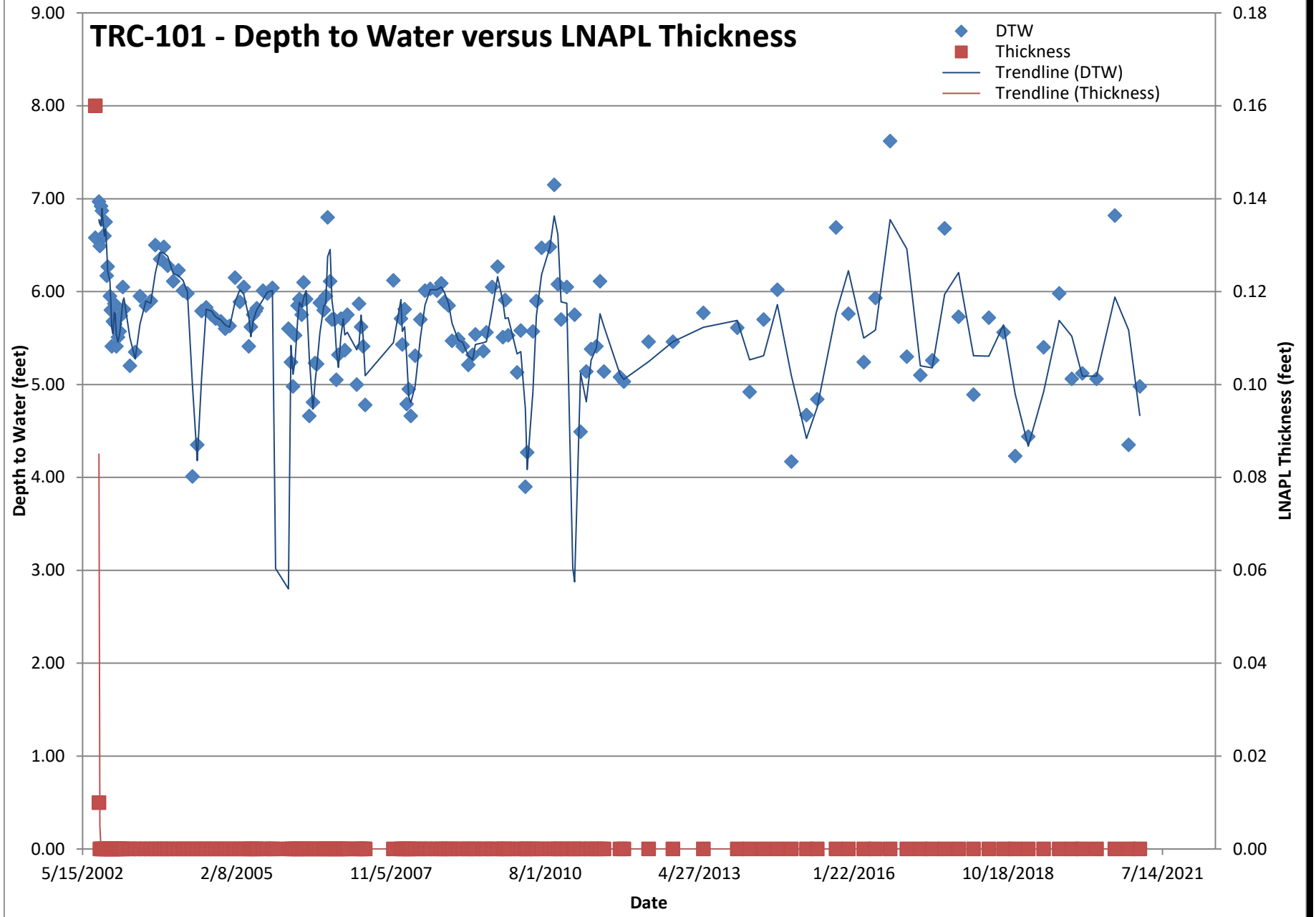
AECOM

Figure: 4-4

PZ-2S - DEPTH TO WATER VS LNAPL THICKNESS

Former GE Facility - 50 Fordham Rd, Wilmington, MA
Client Lockheed Martin Corporation
60552044

2/25/2021

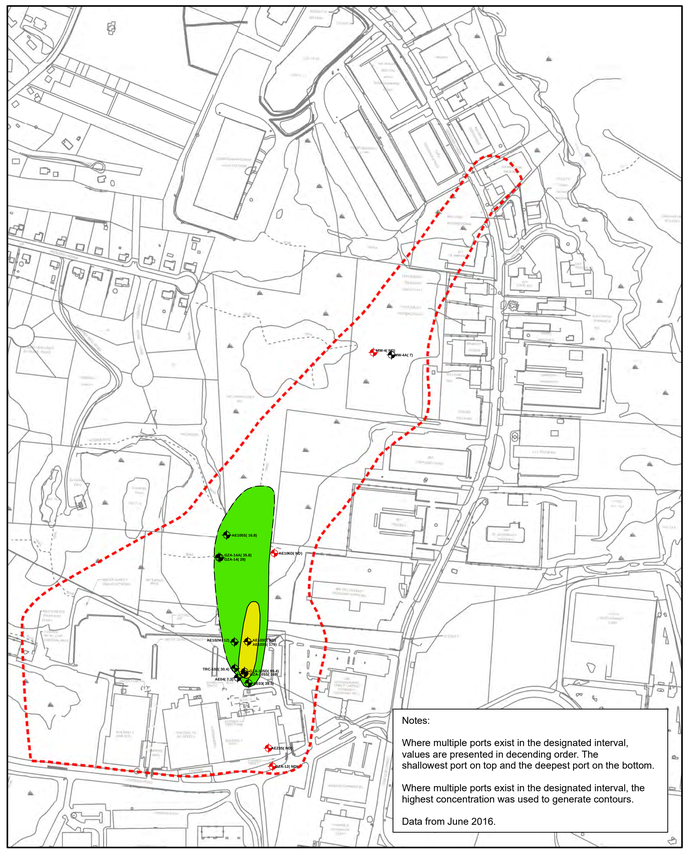


AECOM

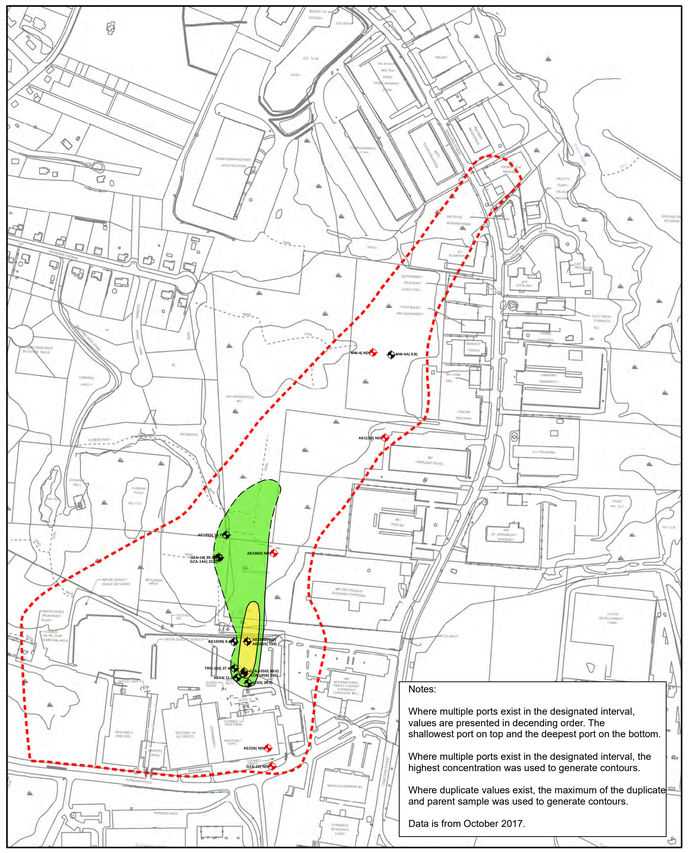
Figure: 4-5

TRC-101 - DEPTH TO WATER VS LNAPL THICKNESS

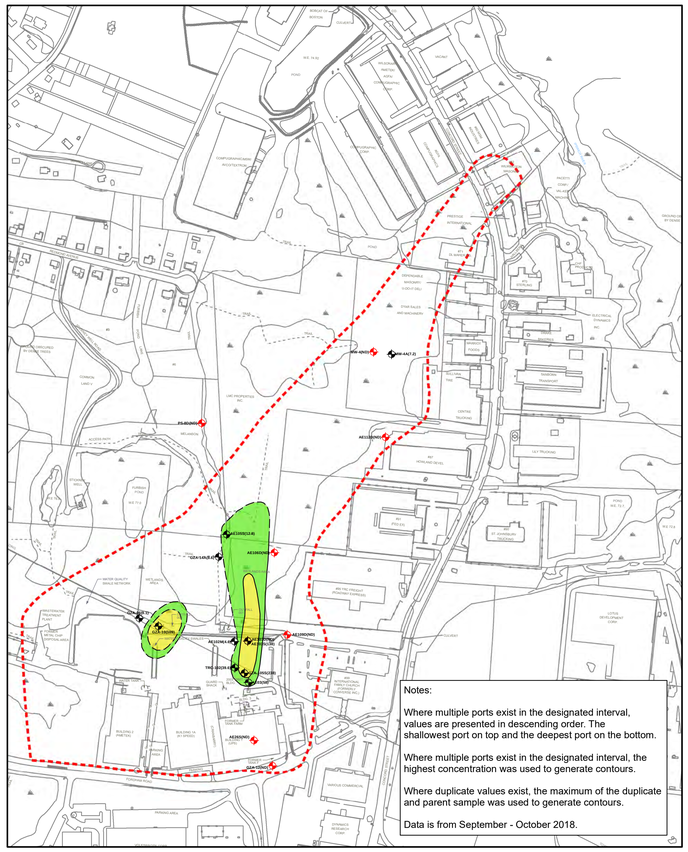
Former GE Facility - 50 Fordham Rd, Wilmington, MA
Client Lockheed Martin Corporation
60552044
2/25/2021



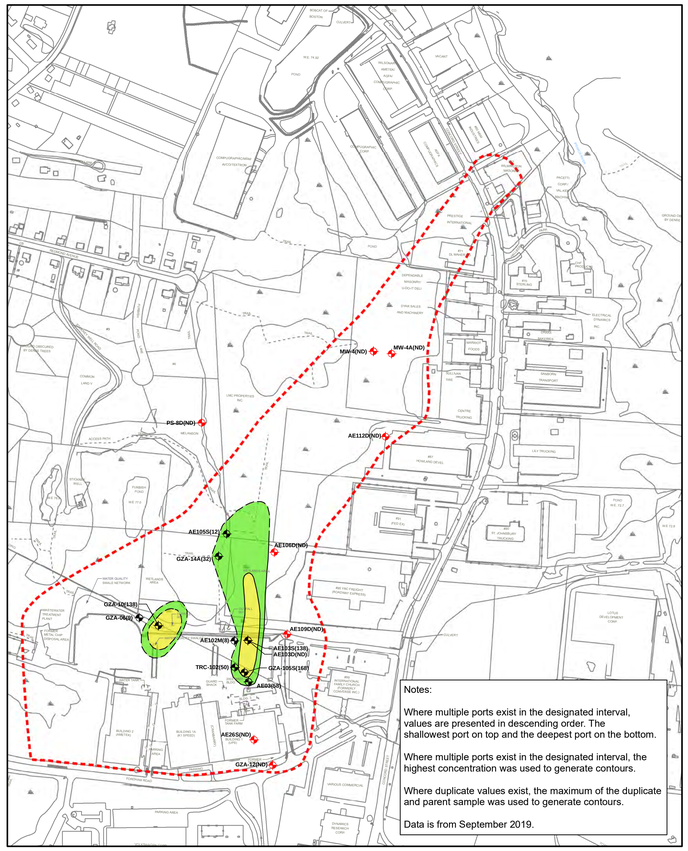
2016 Dissolved Arsenic in Groundwater
Overburden (0 - 78 ft bgs)



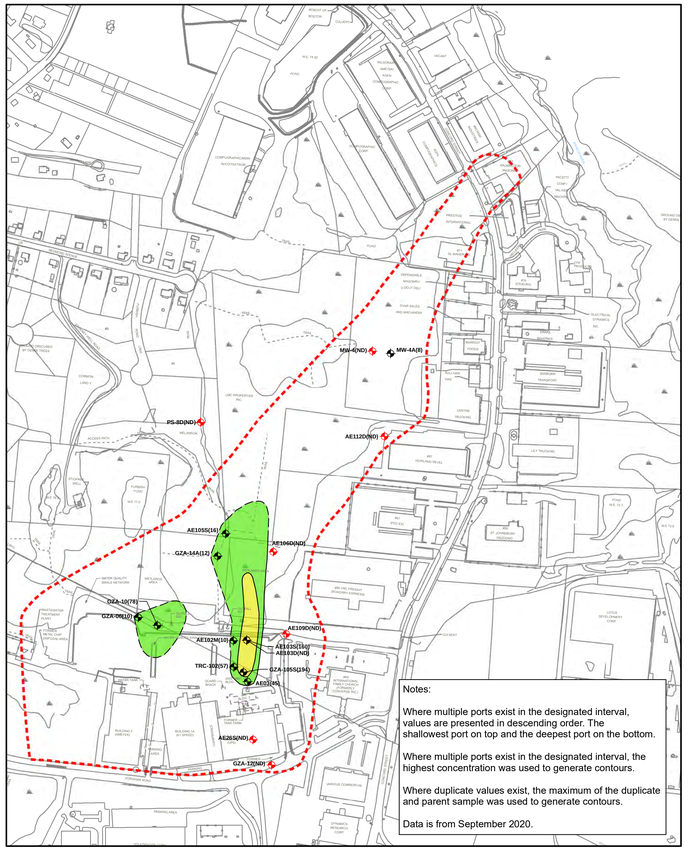
2017 Dissolved Arsenic in Groundwater
Overburden (0 - 78 ft bgs)



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



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



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

AECOM

Legend

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

MCP GW-1 Standard = 10 µg/l

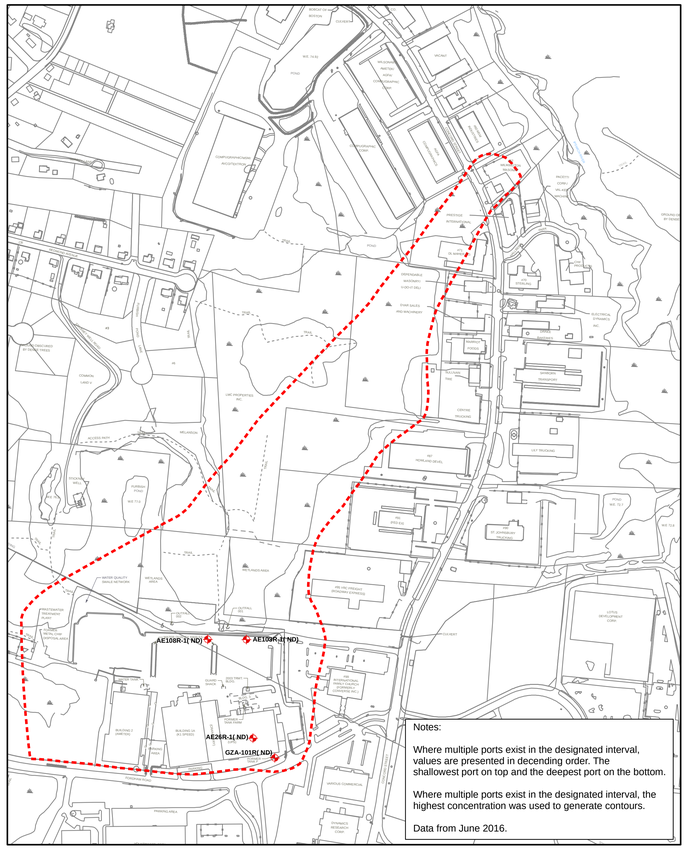
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0 100 200 400 600 800 Feet

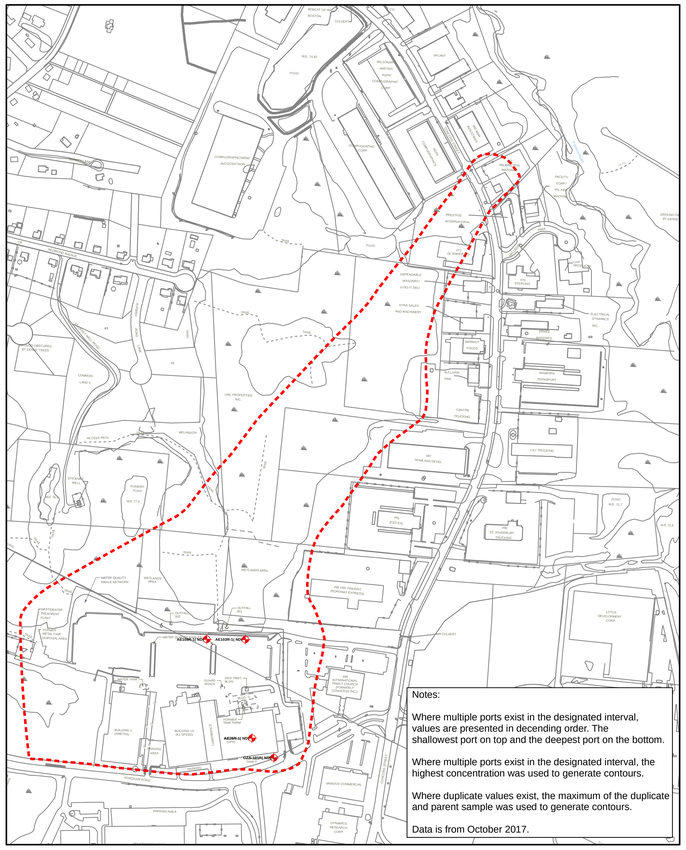
Dissolved Arsenic in Groundwater
Overburden (0 - 78 ft bgs)

Figure 5-1

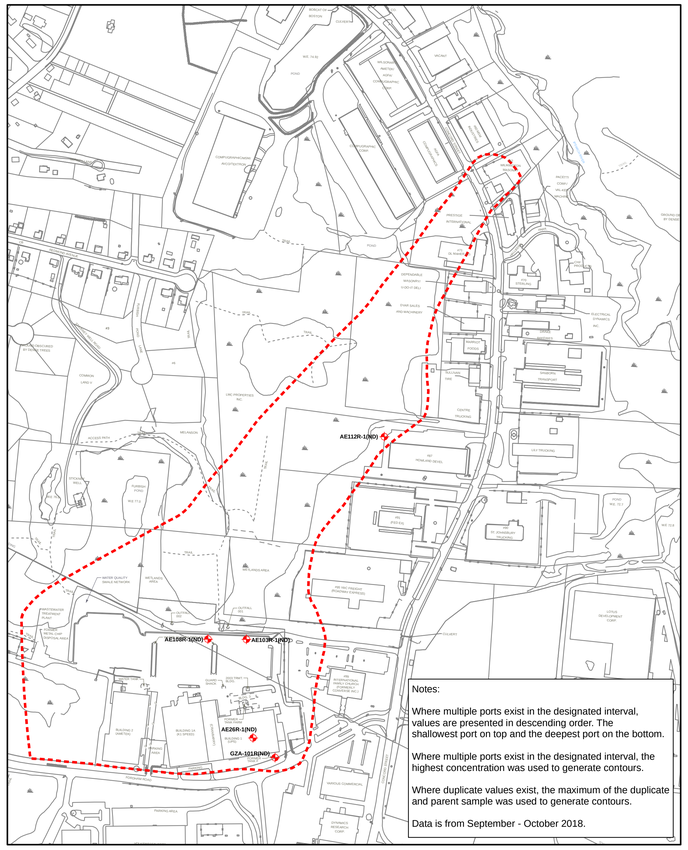
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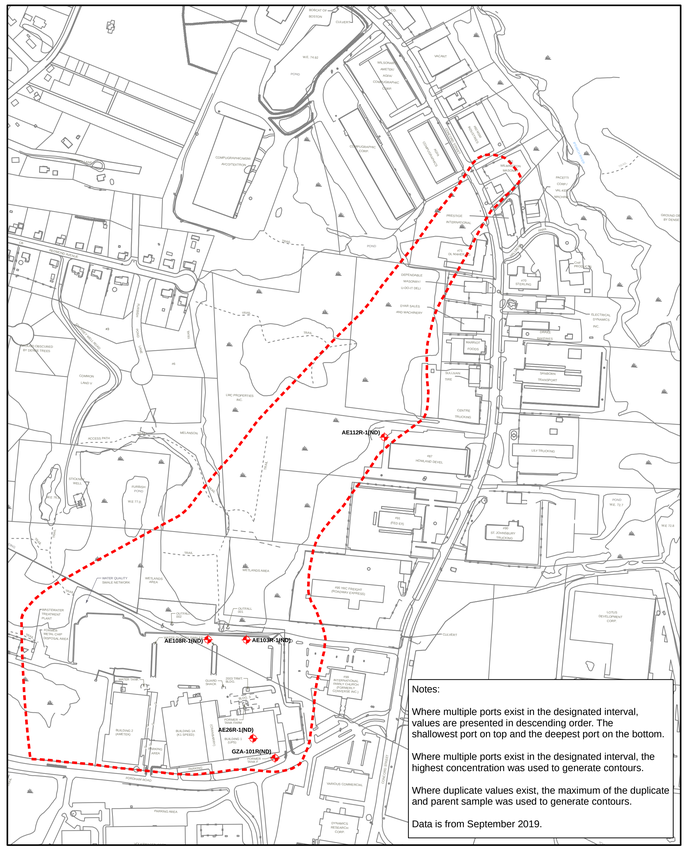
2016 Dissolved Arsenic in Groundwater
Upper Bedrock (0 - 60 ft bgs)



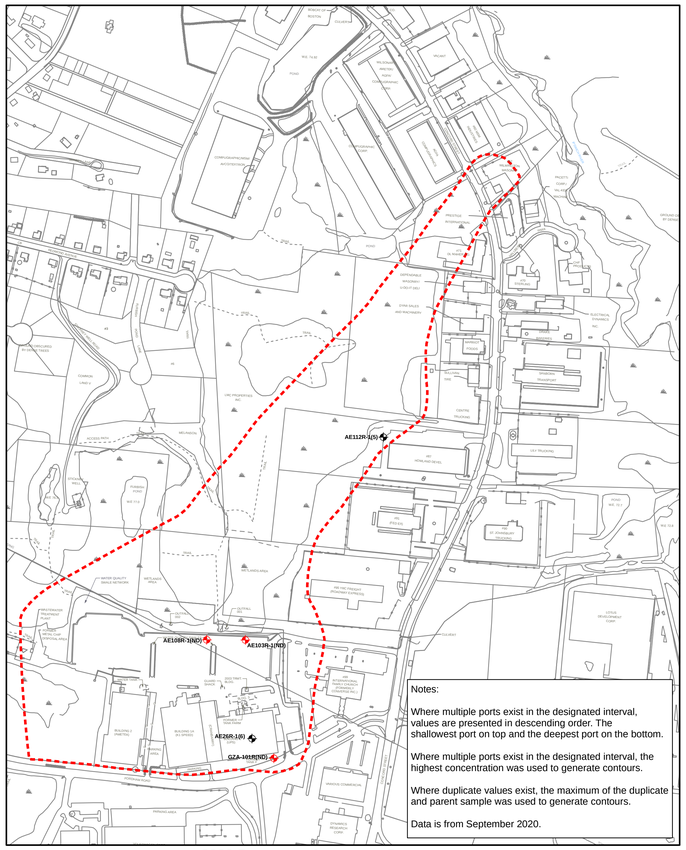
2017 Dissolved Arsenic in Groundwater
Upper Bedrock (0 - 60 ft bgs)



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



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



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

AECOM

Legend

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

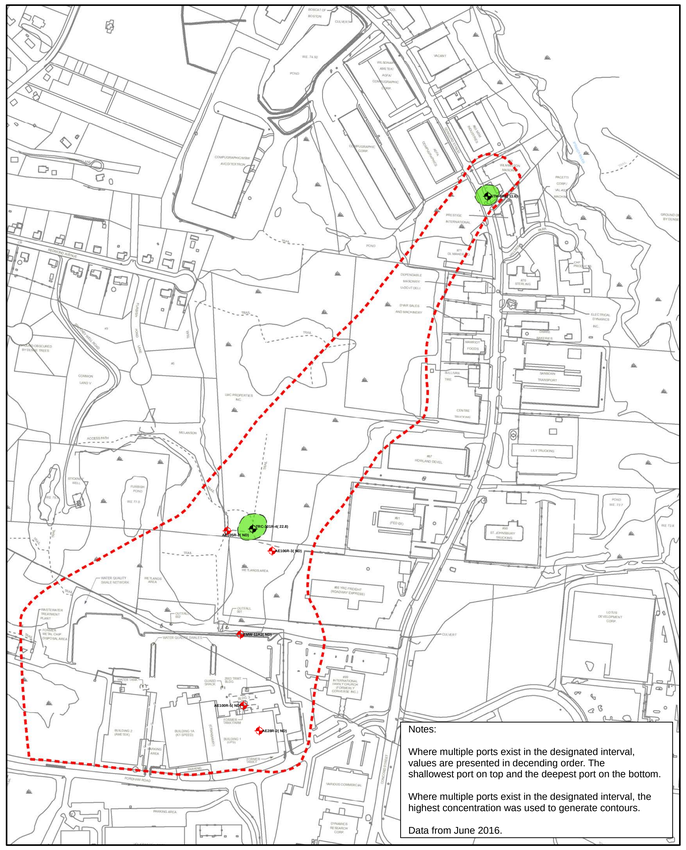
MCP GW-1 Standard = 10 µg/l

0 100 200 400 600 800 Feet

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

Figure 5-2

Path: \\uschl1fp001\data\Projects\Jobs\Rem_Eng\Project Files\Lockheed Martin\Wilmington 2017-2022\900-CAD-GIS\920 GIS-Graphics\2016-2020 Plume Maps\MXD\Fig_5_2_As_UB_2016_2020.mxd



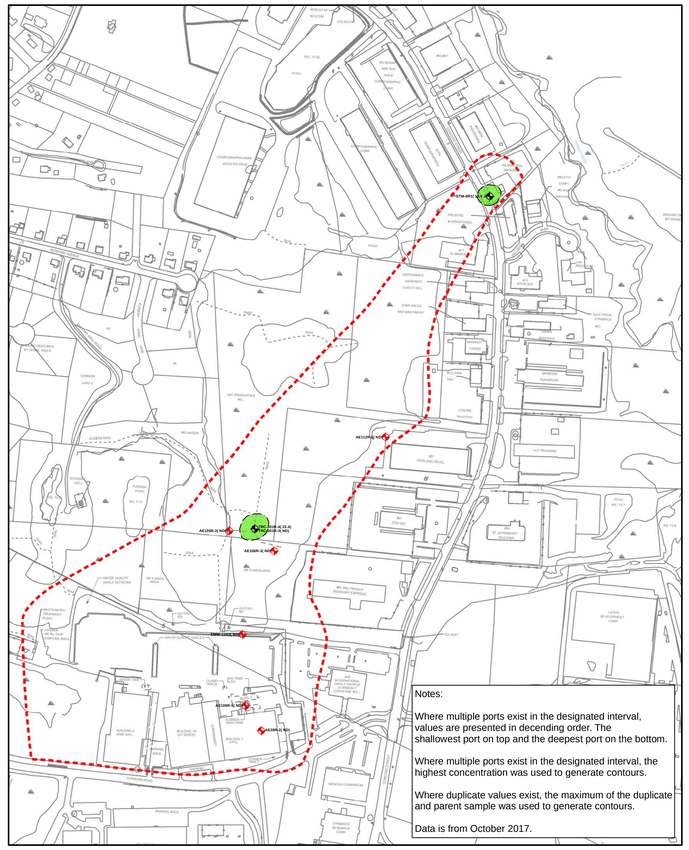
Notes:

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

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

Data from June 2016.

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



Notes:

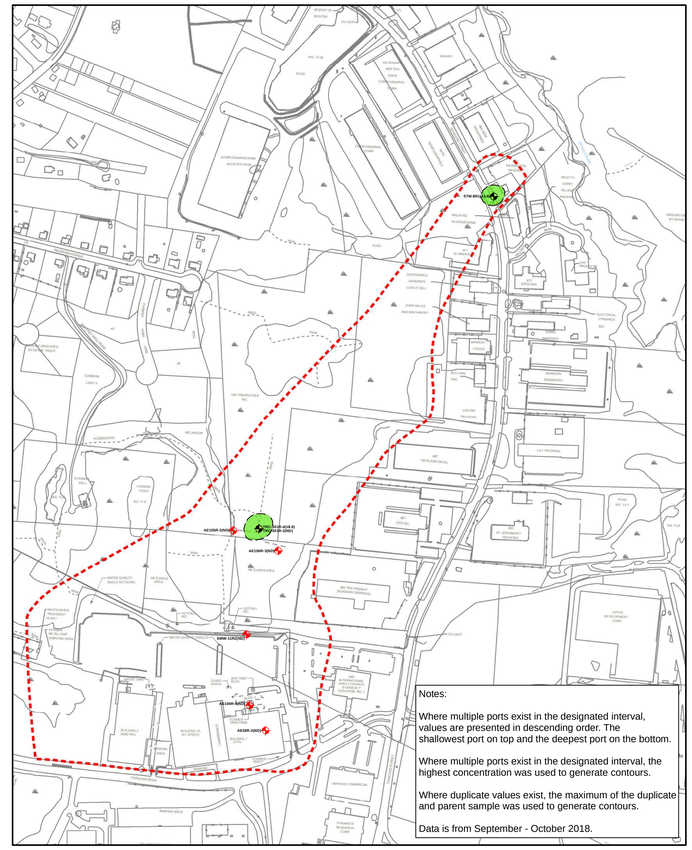
Where multiple ports exist in the designated interval, values are presented in decending order. The shallowest port on top and the deepest port on the bottom.

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

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

Data is from October 2017.

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



Notes:

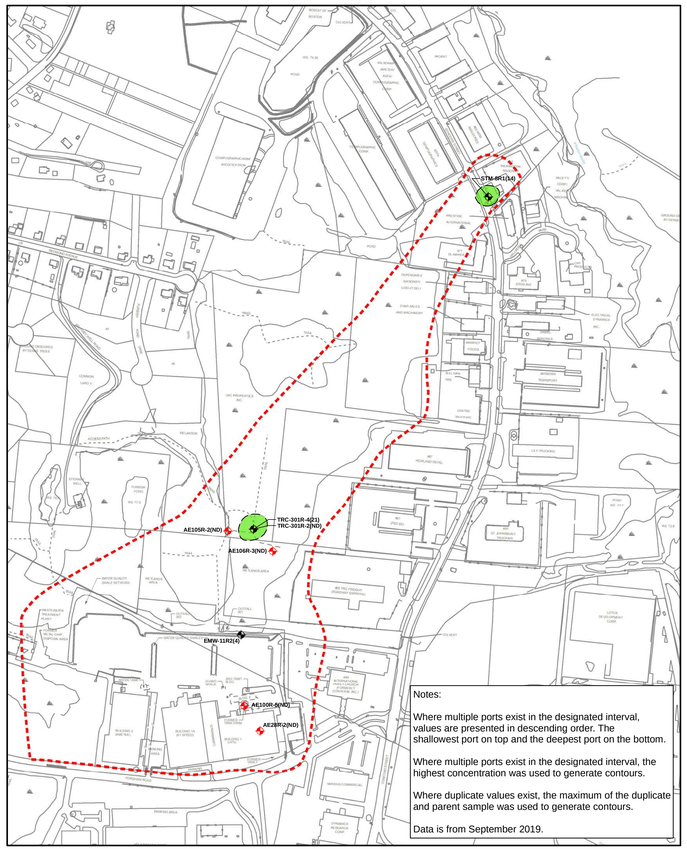
Where multiple ports exist in the designated interval, values are presented in descending order. The shallowest port on top and the deepest port on the bottom.

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

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

Data is from September - October 2018.

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



Notes:

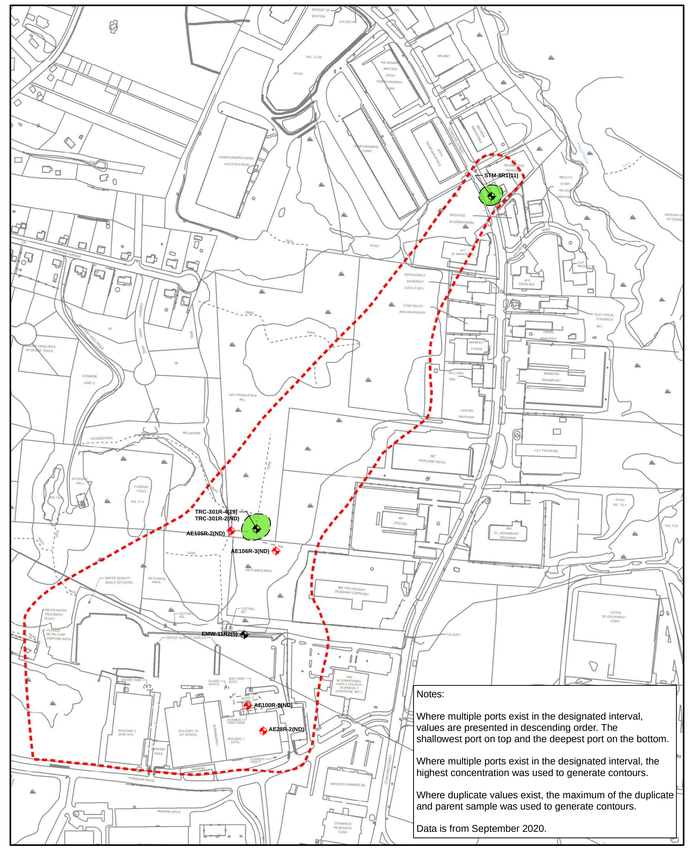
Where multiple ports exist in the designated interval, values are presented in descending order. The shallowest port on top and the deepest port on the bottom.

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

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

Data is from September 2019.

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



Notes:

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

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

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

Data is from September 2020.

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

Legend

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

MCP GW-1 Standard = 10 µg/l

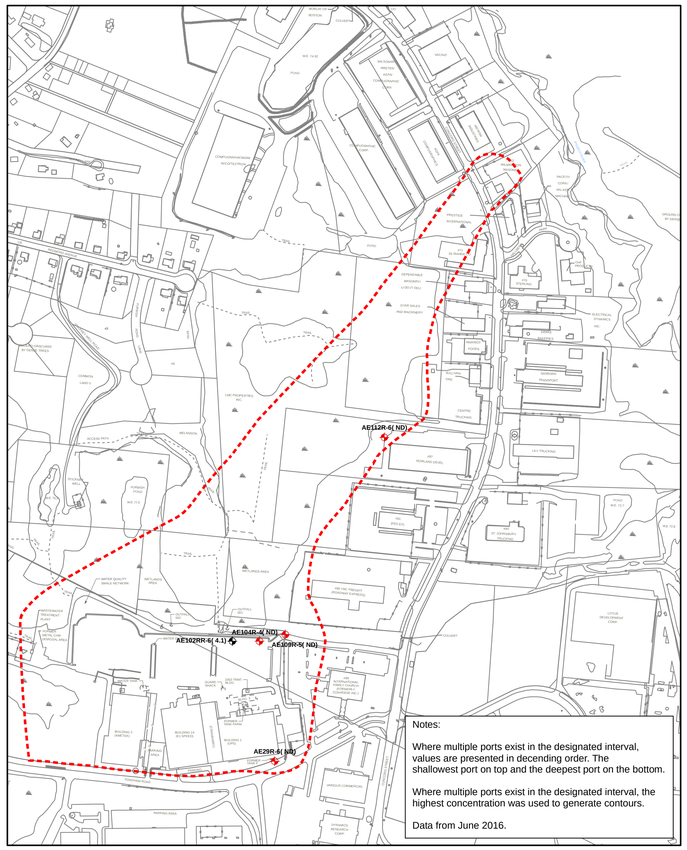
N

0 100 200 400 600 800 Feet

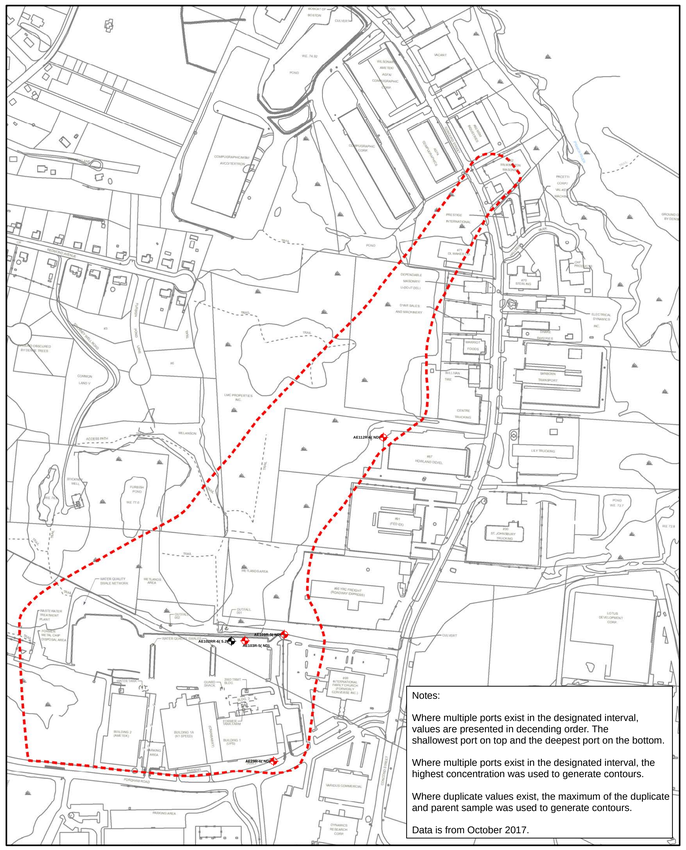
Dissolved Arsenic in Groundwater
Middle Bedrock (61 - 120 ft bgs)

Figure 5-3

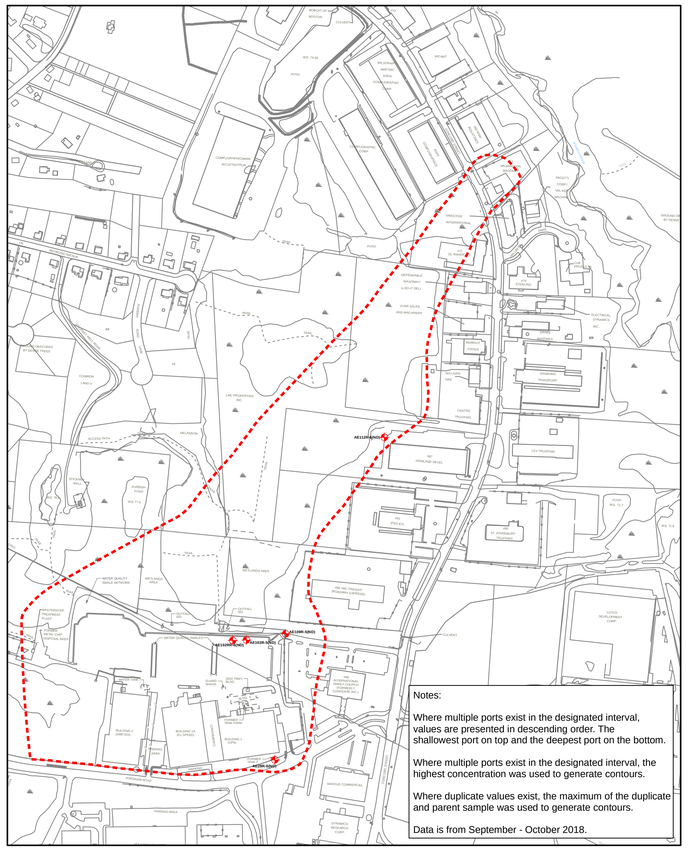
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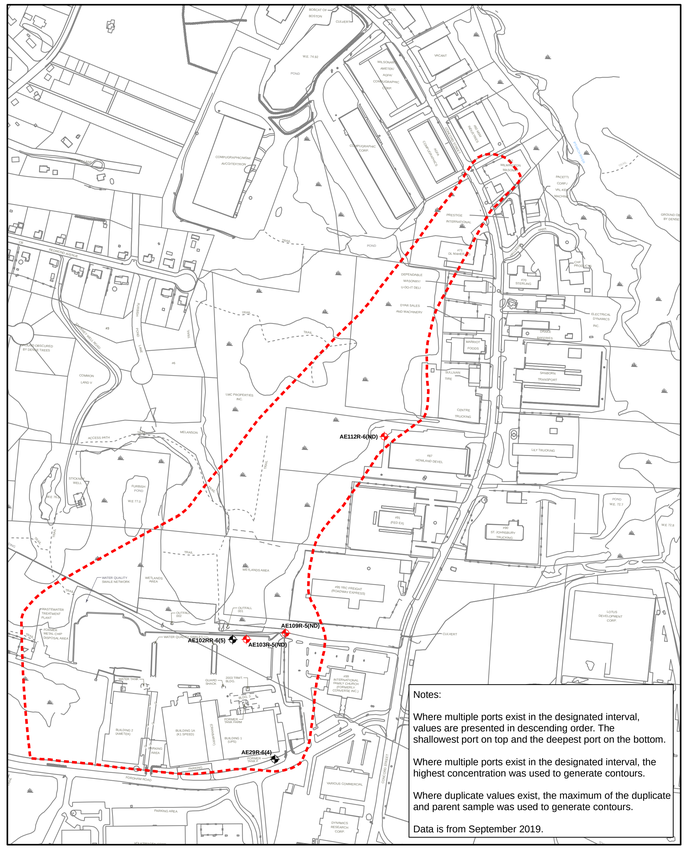
2016 Dissolved Arsenic in Groundwater
Lower Bedrock (121 - 232 ft bgs)



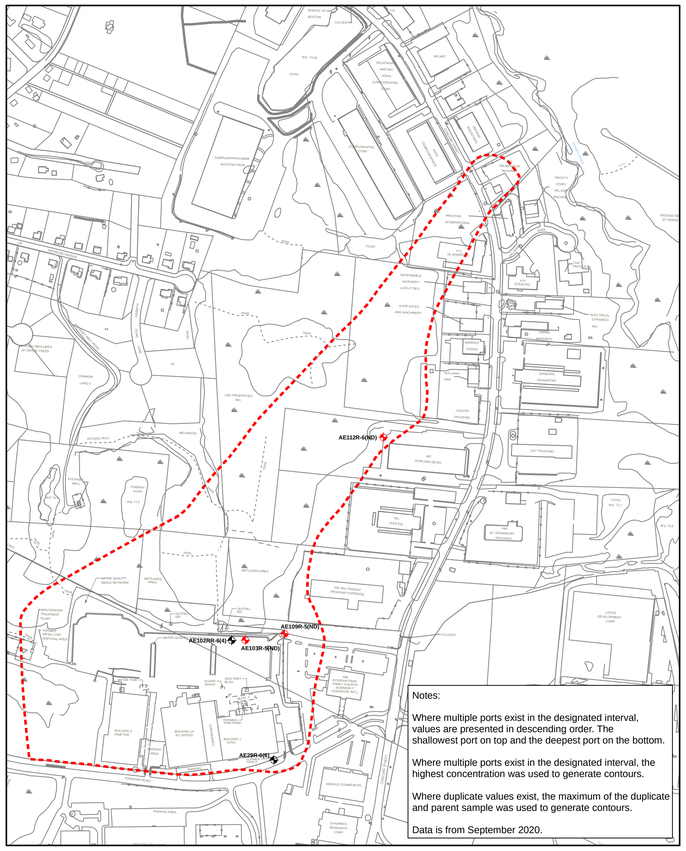
2017 Dissolved Arsenic in Groundwater
Lower Bedrock (121 - 232 ft bgs)



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



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



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

Legend

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

MCP GW-1 Standard = 10 µg/l

N

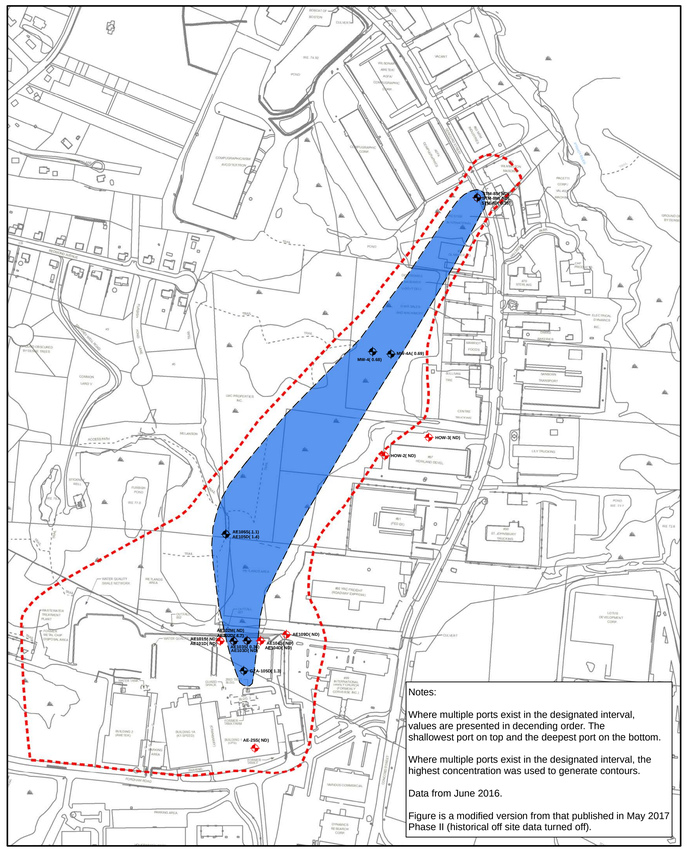
0 100 200 400 600 800 Feet

AECOM

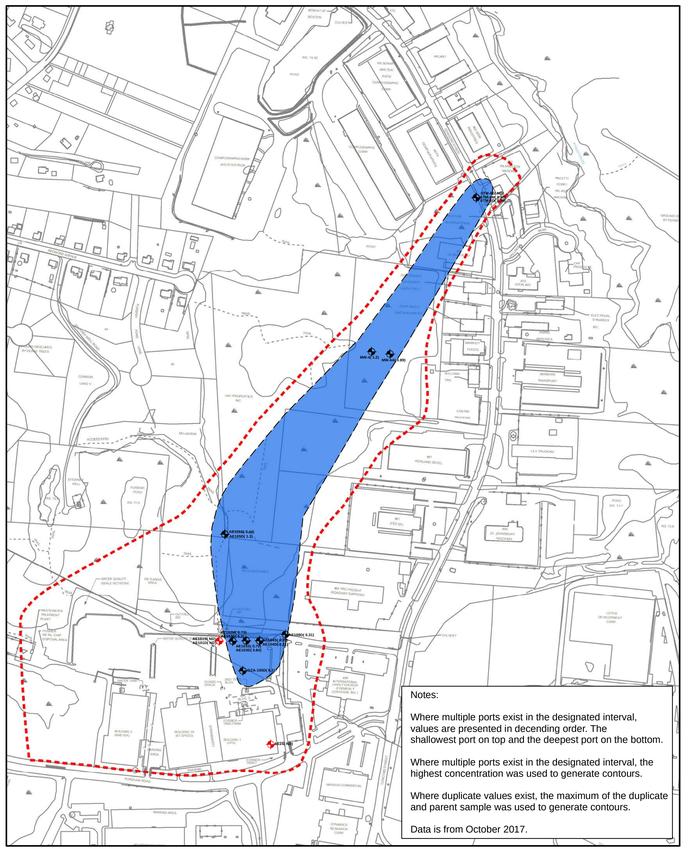
Dissolved Arsenic in Groundwater
Lower Bedrock (121 - 232 ft bgs)

Figure 5-4

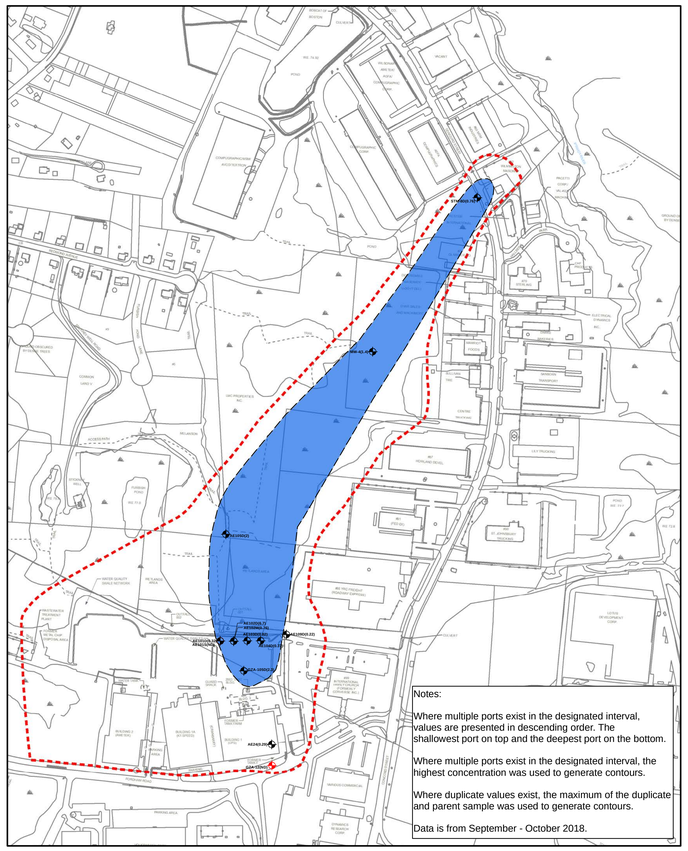
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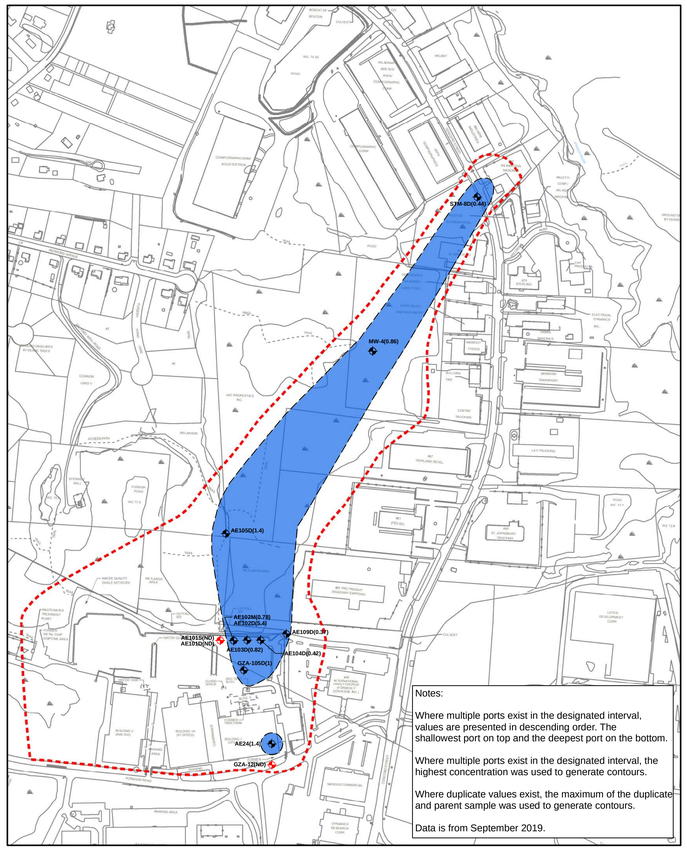
2016 1,4-Dioxane (SW8270D-SIM) in Groundwater Overburden (0 - 78 ft bgs)



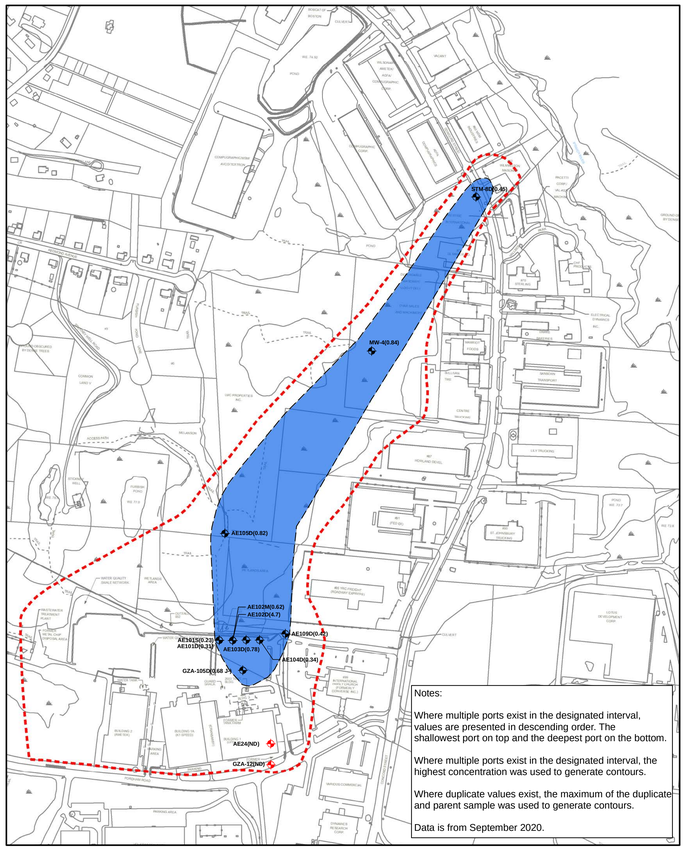
2017 1,4-Dioxane (SW8270D-SIM) in Groundwater Overburden (0 - 78 ft bgs)



2018 1,4-Dioxane (SW8270D-SIM) in Groundwater Overburden (0 - 78 ft bgs)



2019 1,4-Dioxane (SW8270D-SIM) in Groundwater Overburden (0 - 78 ft bgs)



2020 1,4-Dioxane (SW8270D-SIM) in Groundwater Overburden (0 - 78 ft bgs)

Legend

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

MCP GW-1 Standard = 0.3 µg/l

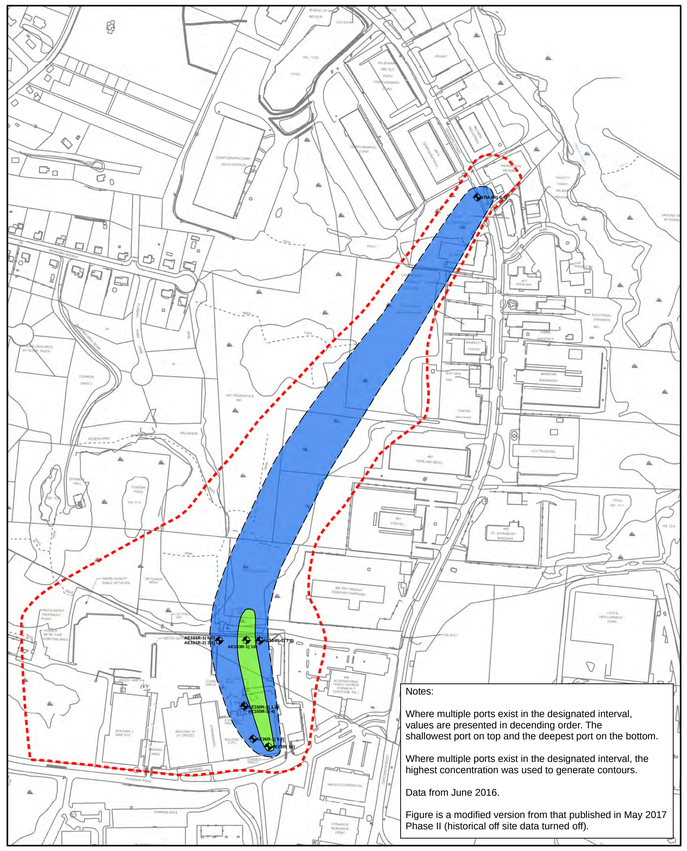
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AECOM

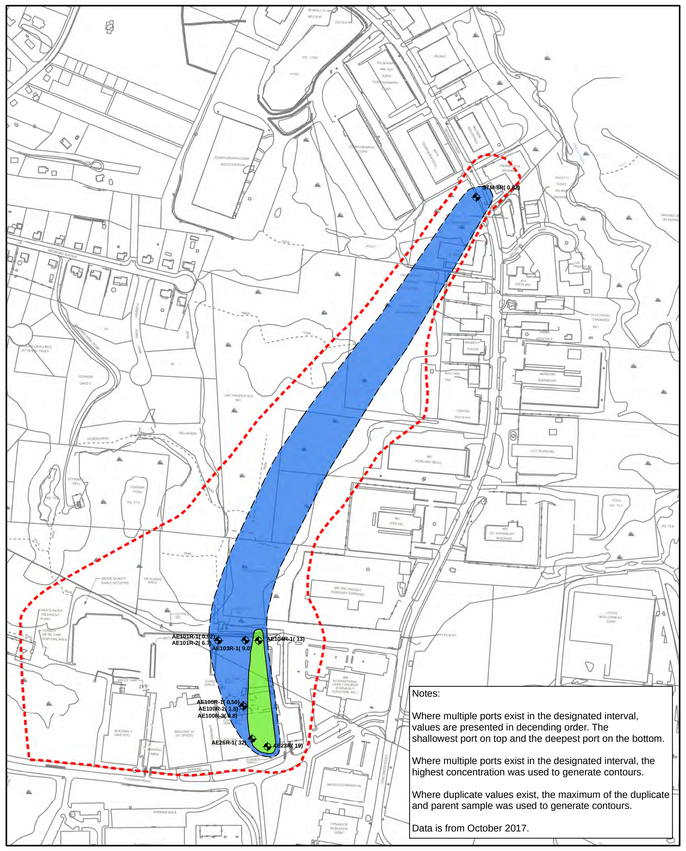
1,4-Dioxane (SW8270D-SIM) in Groundwater Overburden (0 - 78 ft bgs)

Figure 5-5

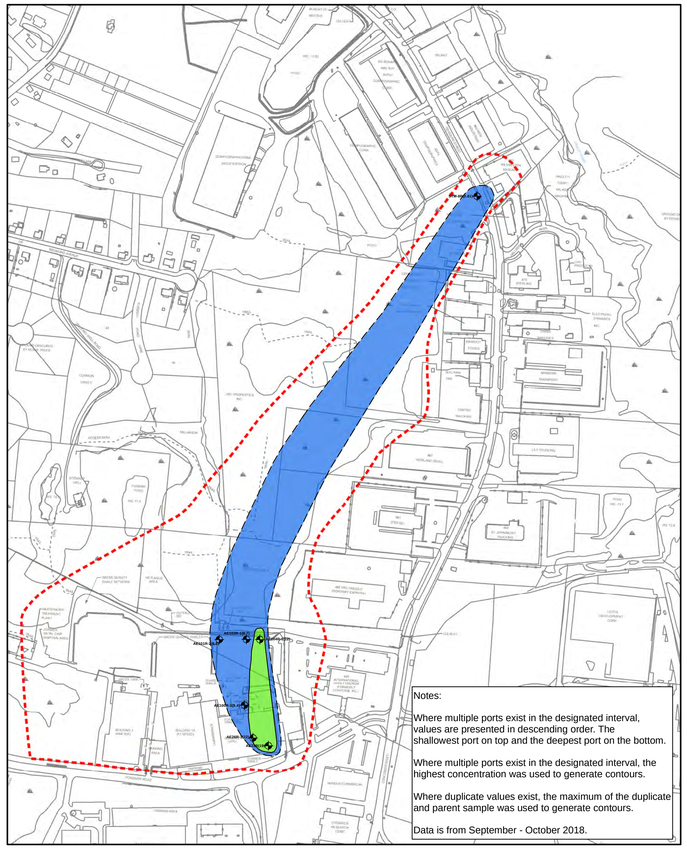
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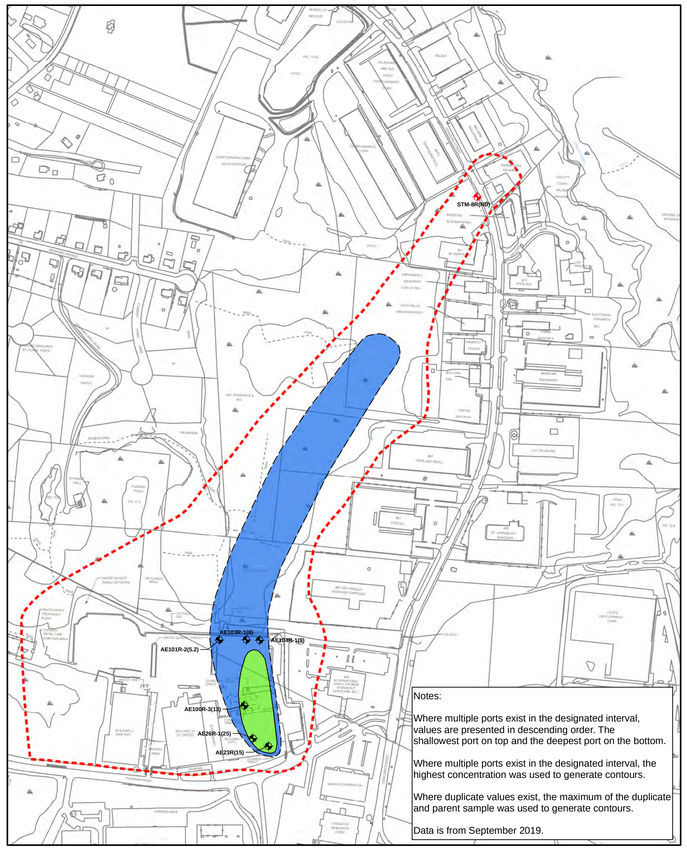
2016 1,4-Dioxane (SW8270D-SIM) in Groundwater
Upper Bedrock (0 - 60 ft bgs)



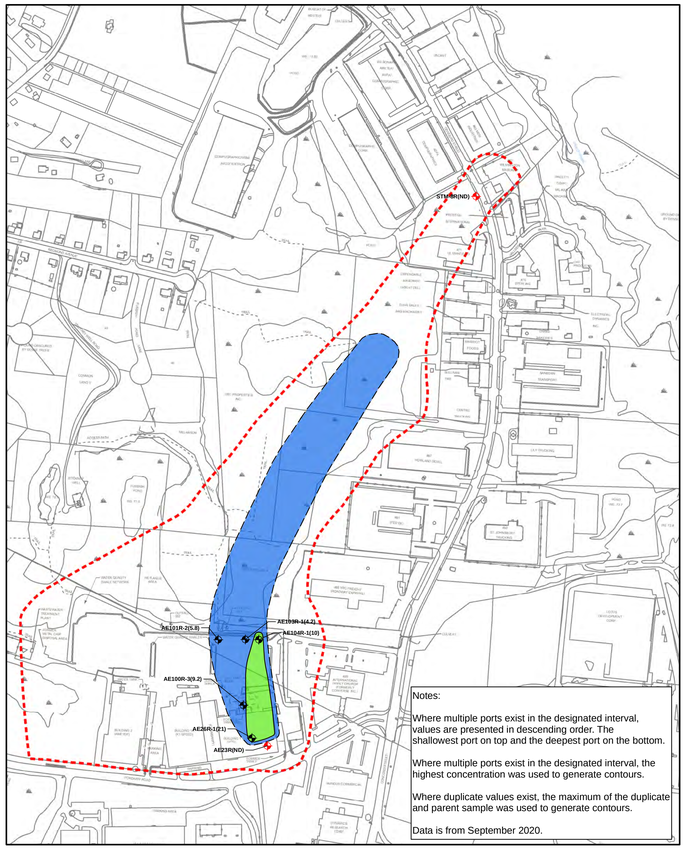
2017 1,4-Dioxane (SW8270D-SIM) in Groundwater
Upper Bedrock (0 - 60 ft bgs)



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



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



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

Legend

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

MCP GW-1 Standard = 0.3 µg/l

N

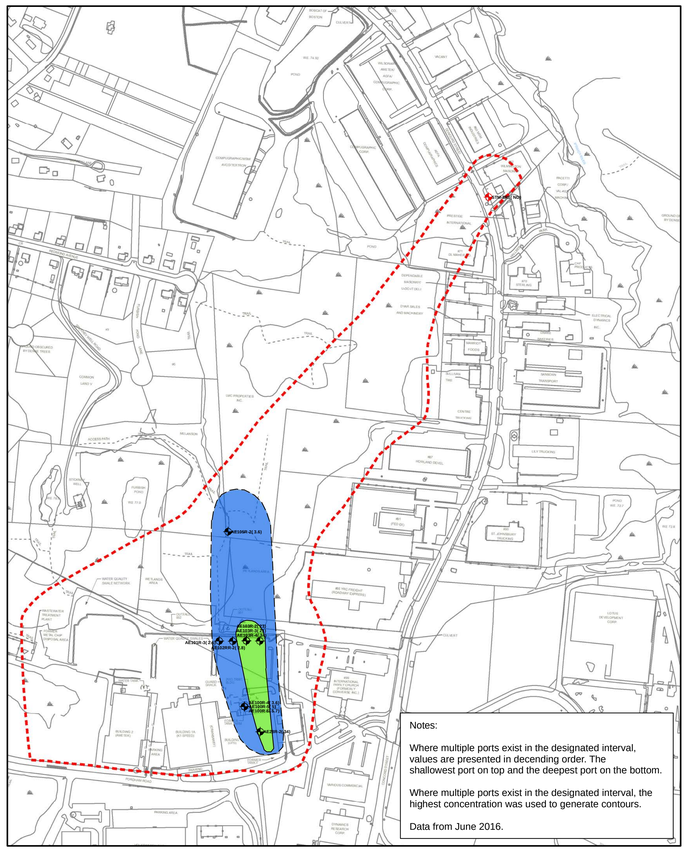
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1,4-Dioxane (SW8270D-SIM) in Groundwater
Upper Bedrock (0 - 60 ft bgs)

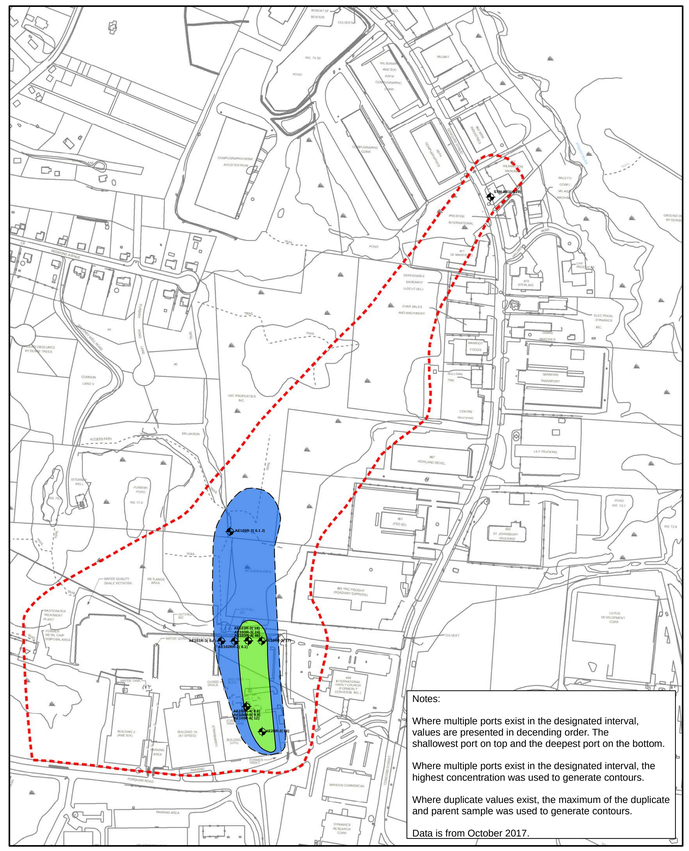
Figure 5-6

AECOM

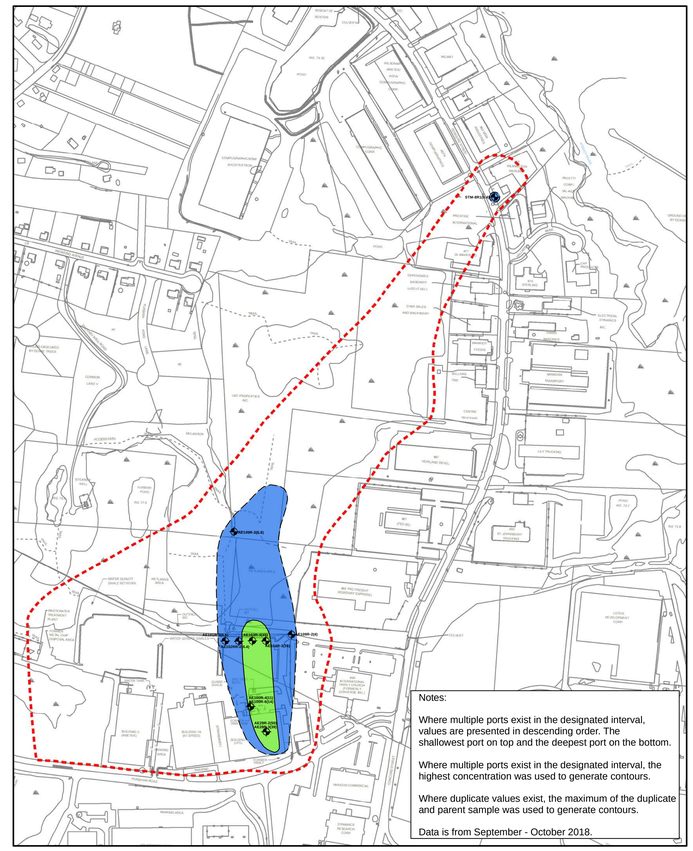
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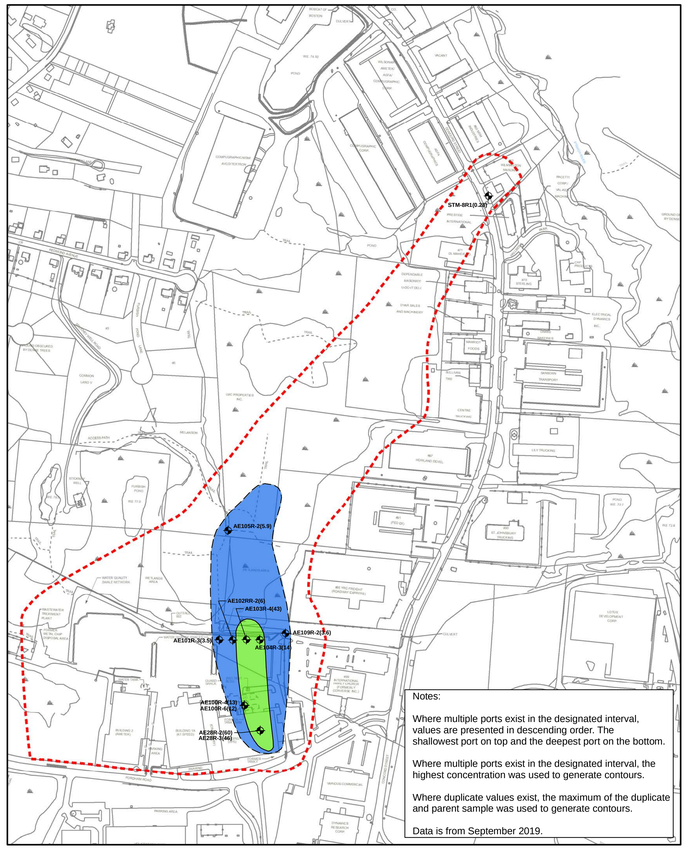
2016 1,4-Dioxane (SW8270D-SIM) in Groundwater
Middle Bedrock (61 - 120 ft bgs)



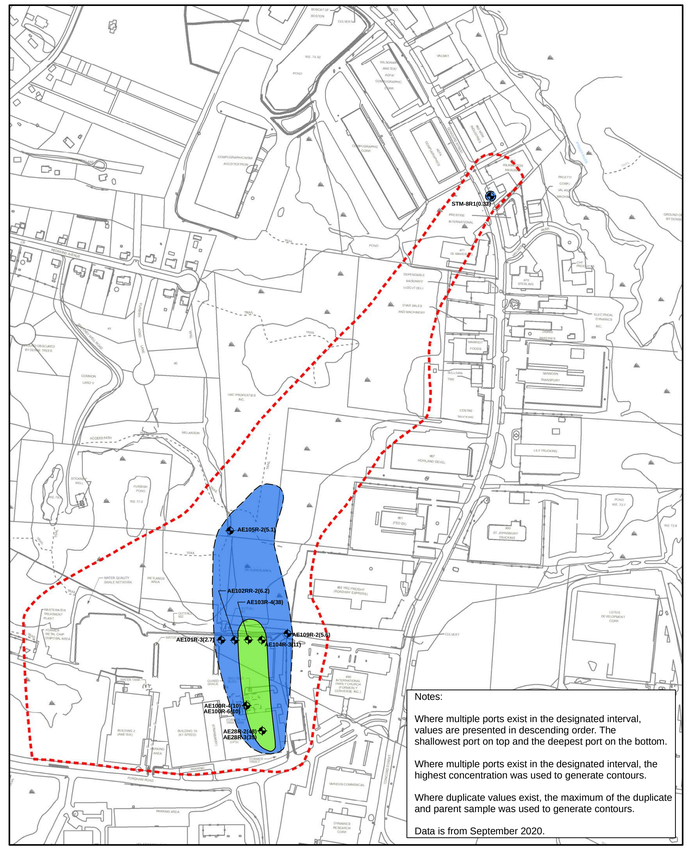
2017 1,4-Dioxane (SW8270D-SIM) in Groundwater
Middle Bedrock (61 - 120 ft bgs)



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



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



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

Legend

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

MCP GW-1 Standard = 0.3 µg/l

N

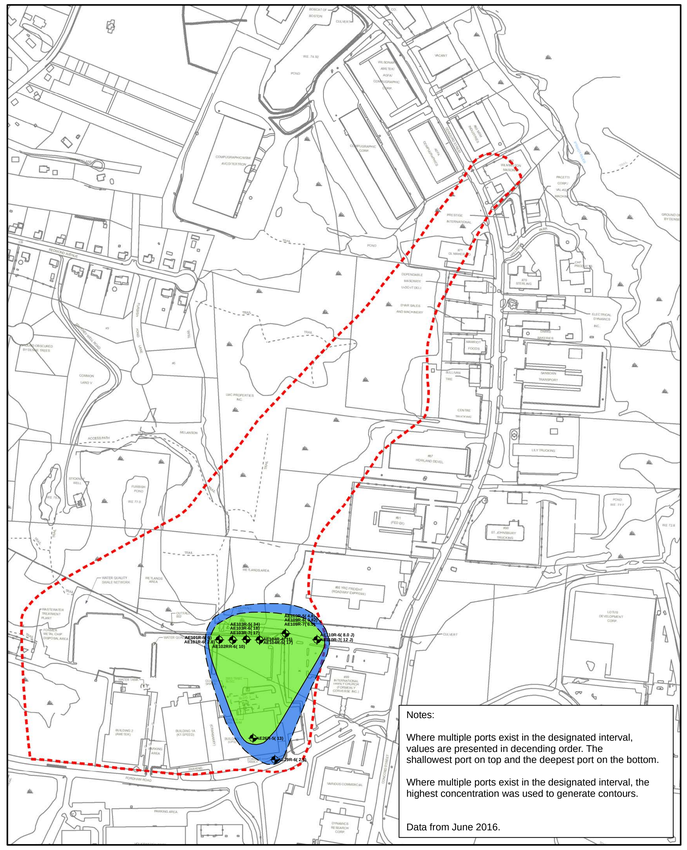
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AECOM

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

Figure 5-7

Path: L:\Legacy\USCHL1FP001\Data\Projects\Jobs\Rem_Eng\Project Files\Lockheed Martin\Wilmington 2017-2022\900-CAD-GIS\920 GIS-Graphics\2016-2020 Plume Maps\MXD\Fig_5_7_Dox_Middle_BR_2016_2020.mxd



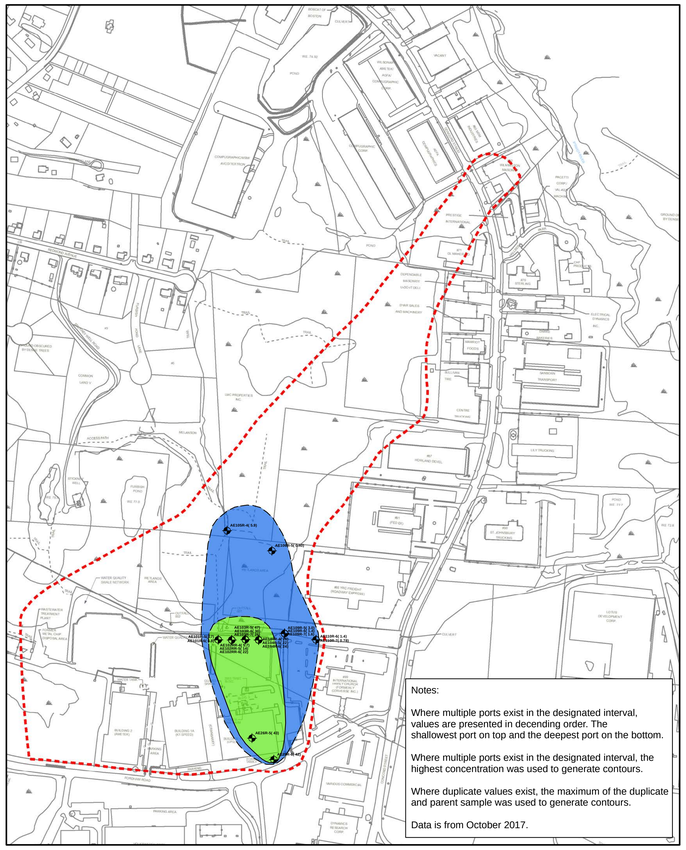
Notes:

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

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

Data from June 2016.

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



Notes:

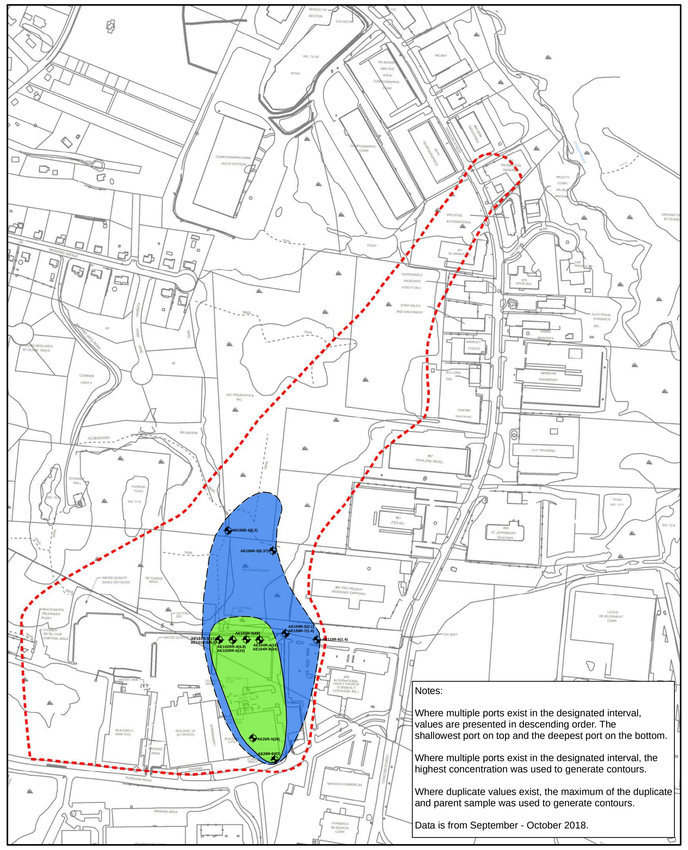
Where multiple ports exist in the designated interval, values are presented in decending order. The shallowest port on top and the deepest port on the bottom.

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

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

Data is from October 2017.

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



Notes:

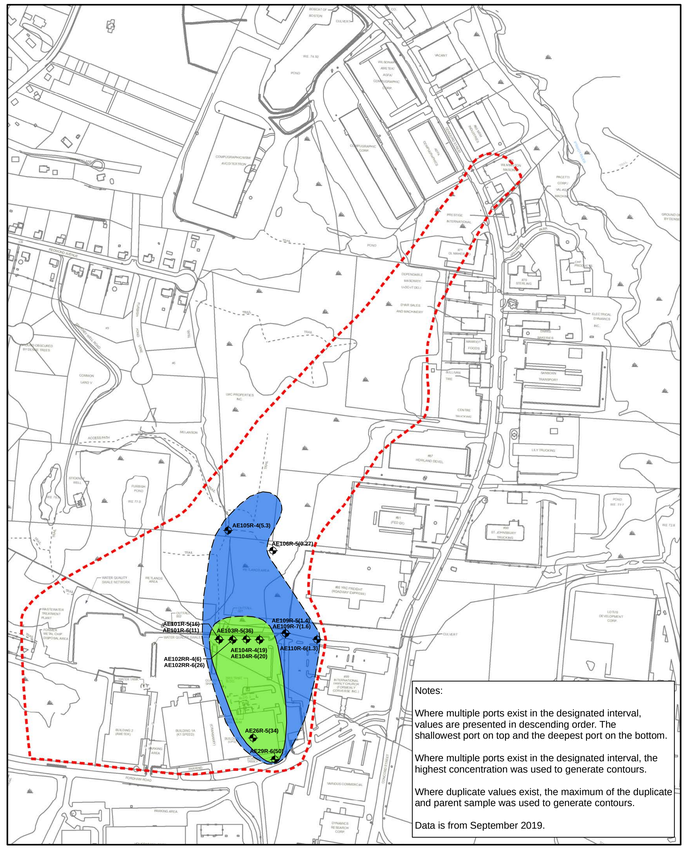
Where multiple ports exist in the designated interval, values are presented in descending order. The shallowest port on top and the deepest port on the bottom.

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

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

Data is from September - October 2018.

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



Notes:

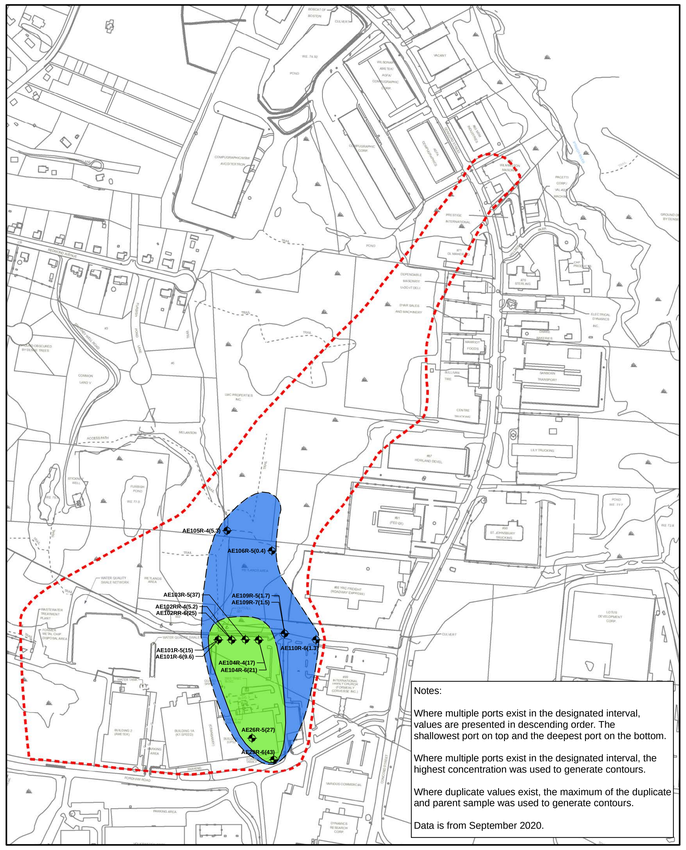
Where multiple ports exist in the designated interval, values are presented in descending order. The shallowest port on top and the deepest port on the bottom.

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

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

Data is from September 2019.

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



Notes:

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

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

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

Data is from September 2020.

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

AECOM

Legend

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

MCP GW-1 Standard = 0.3 µg/l

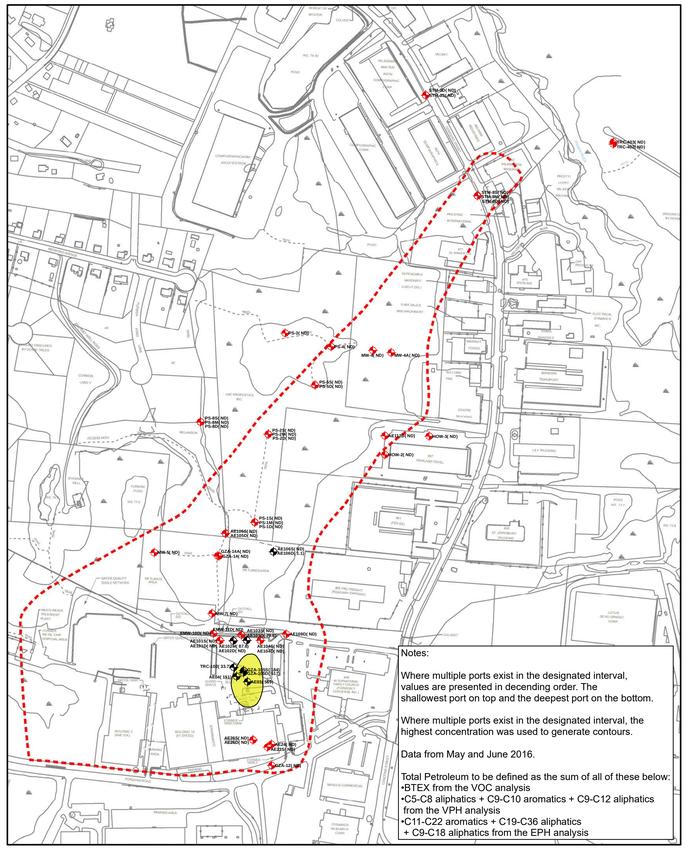
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0 100 200 400 600 800 Feet

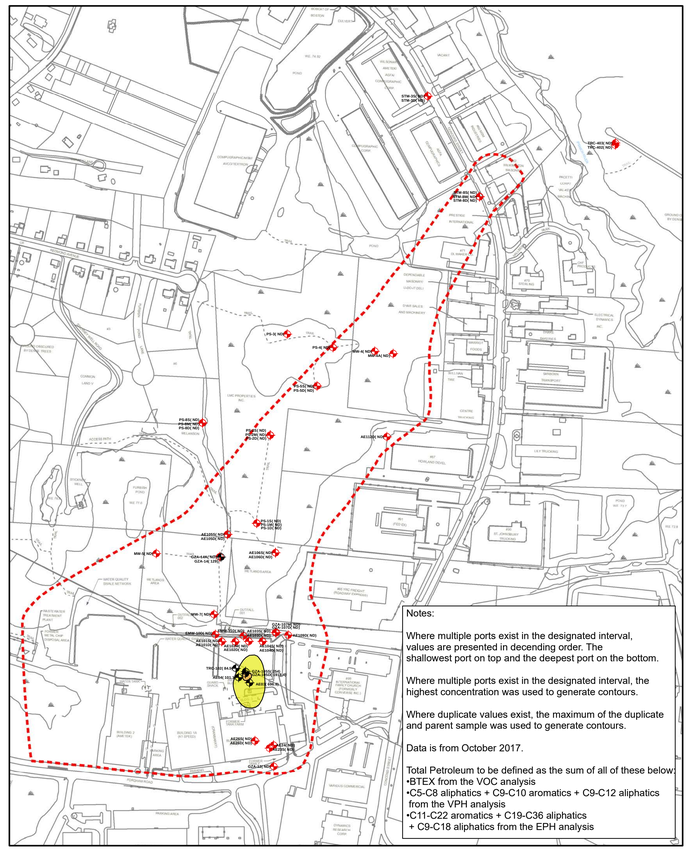
1,4-Dioxane (SW8270D-SIM) in Groundwater
Lower Bedrock (121 - 232 ft bgs)

Figure 5-8

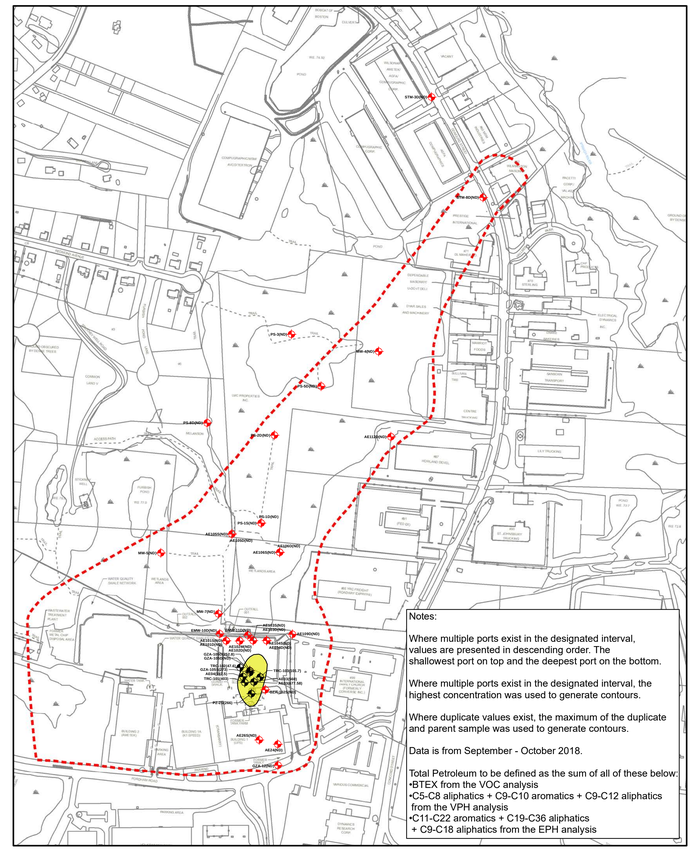
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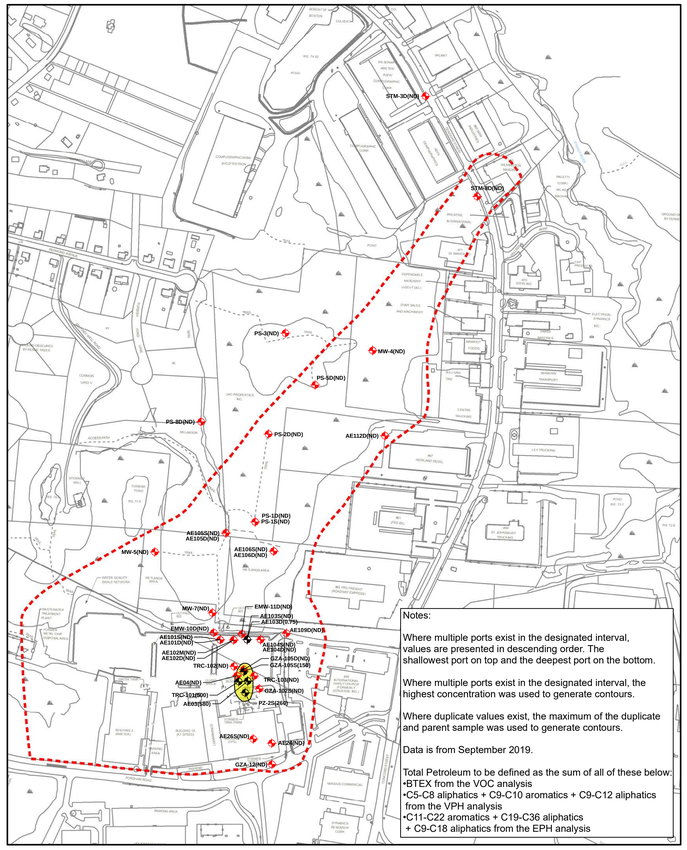
2016 Total Petroleum in Groundwater
Overburden (0 - 78 ft bgs)



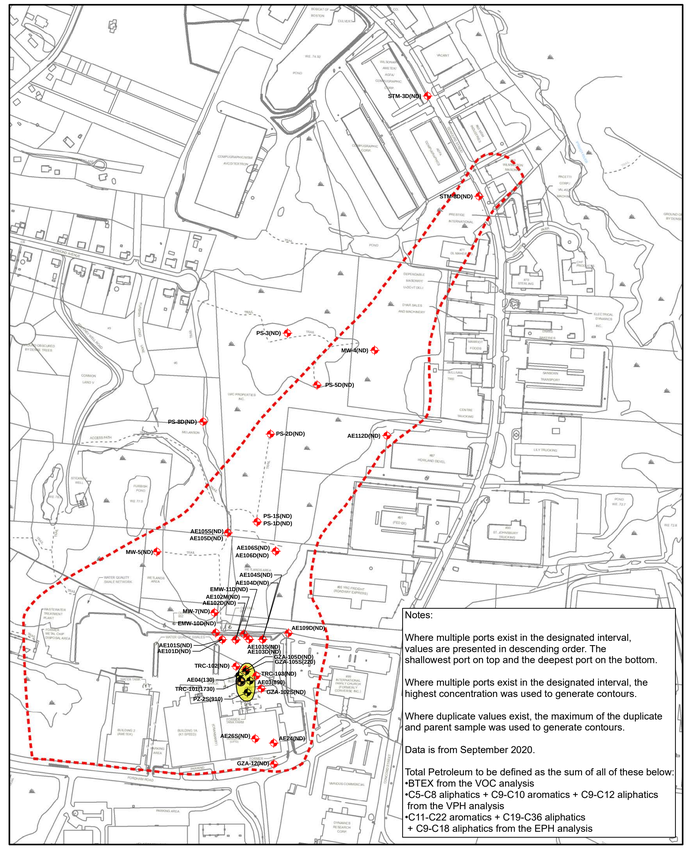
2017 Total Petroleum in Groundwater
Overburden (0 - 78 ft bgs)



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



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



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

Legend

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

N

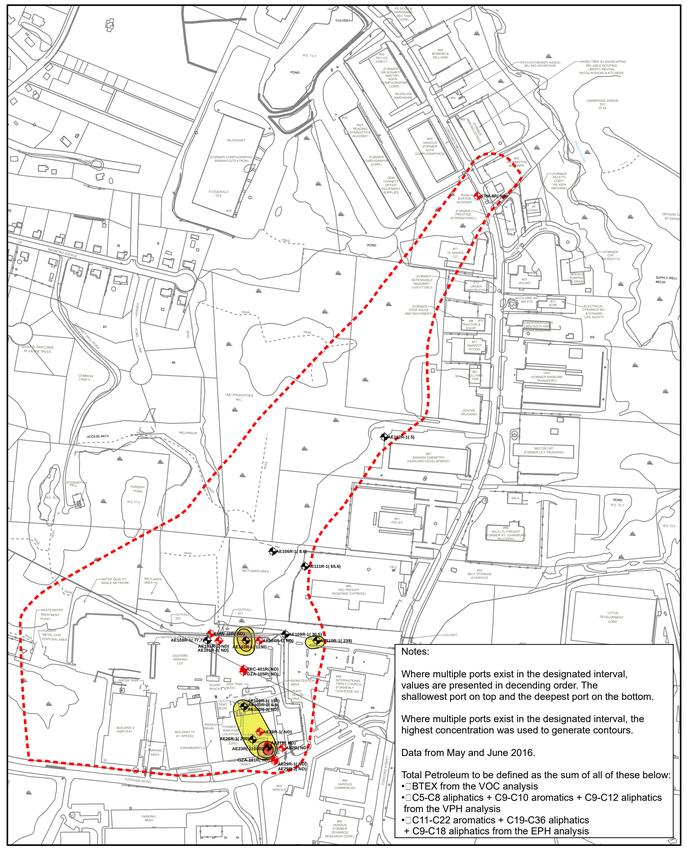
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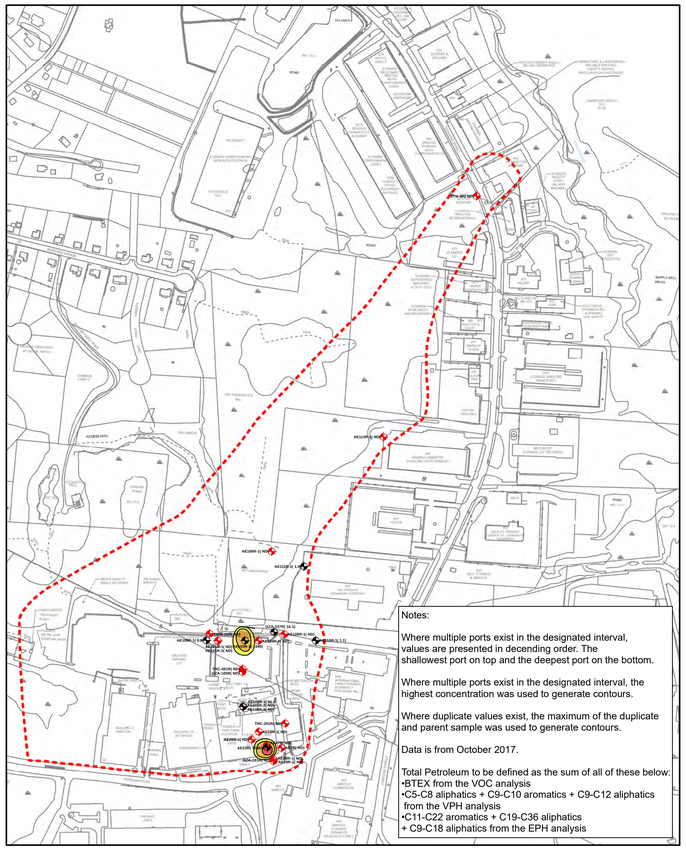
Total Petroleum in Groundwater
Overburden (0 - 78 ft bgs)

Figure 5-9

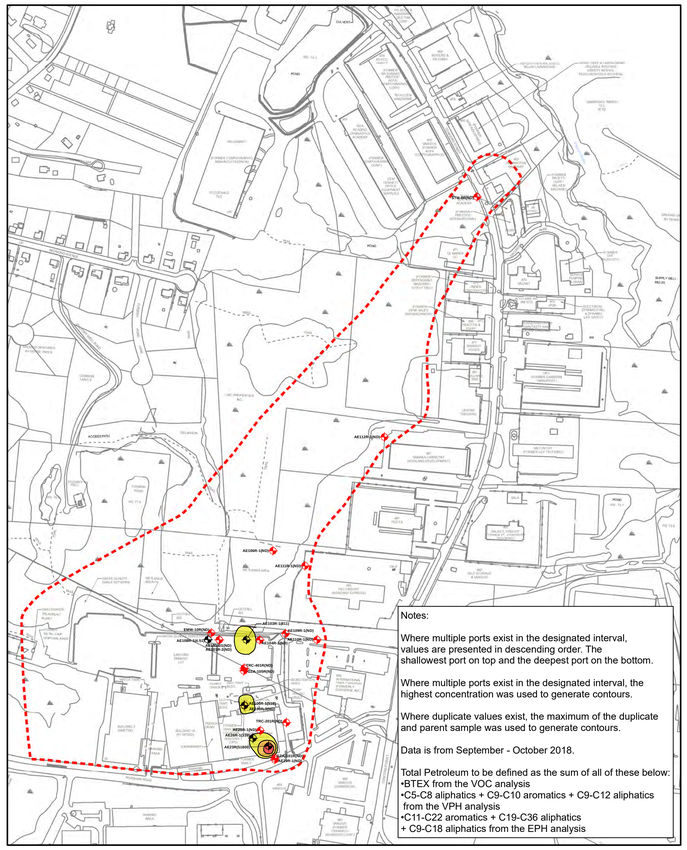
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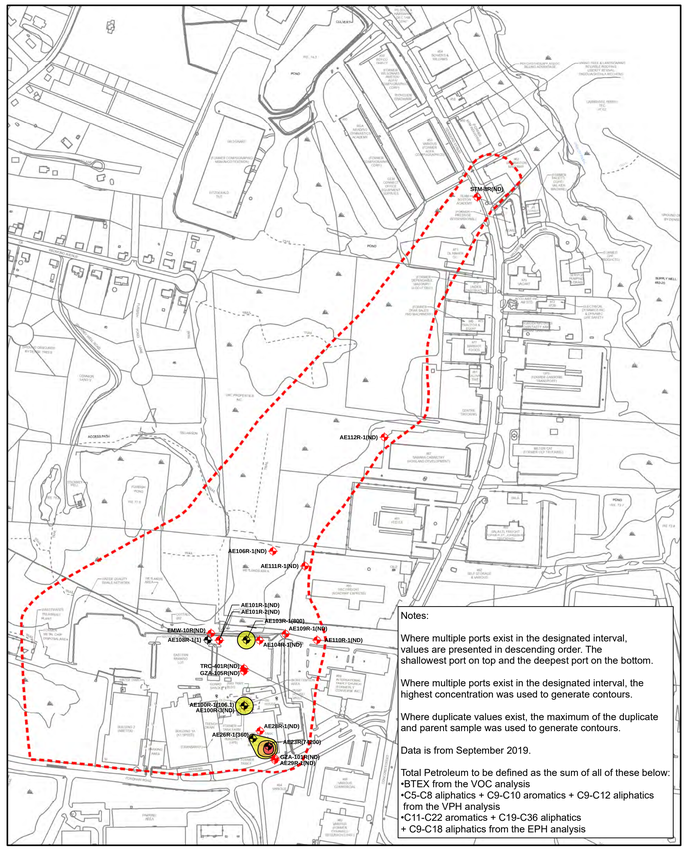
2016 Total Petroleum in Groundwater
Upper Bedrock (0 - 60 ft bgs)



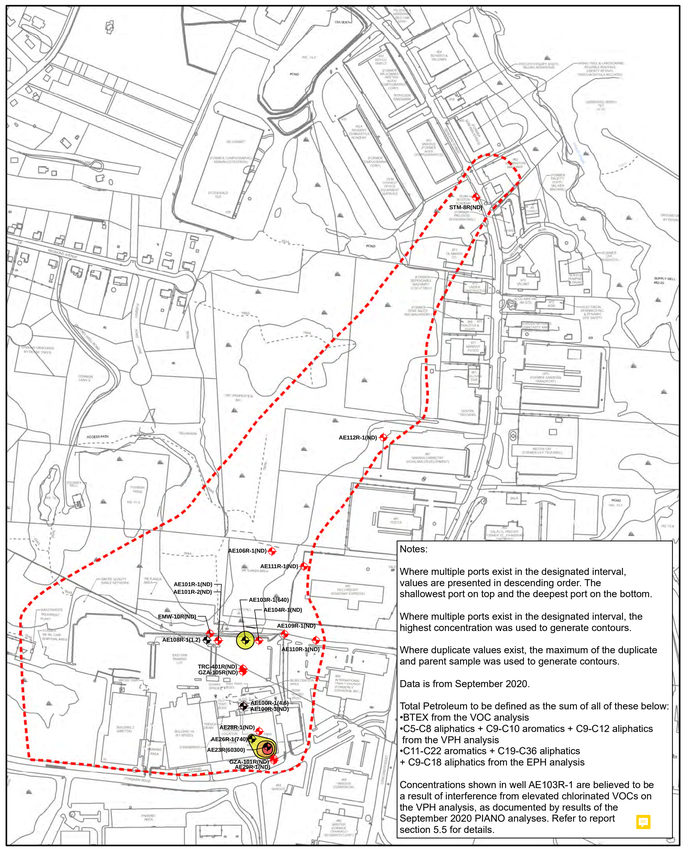
2017 Total Petroleum in Groundwater
Upper Bedrock (0 - 60 ft bgs)



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



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



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

Legend

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

N

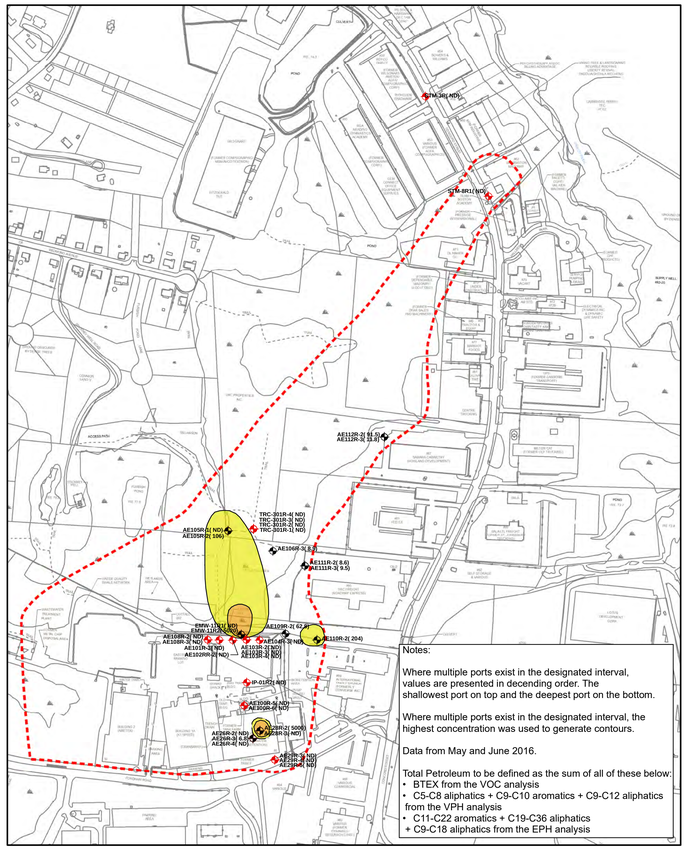
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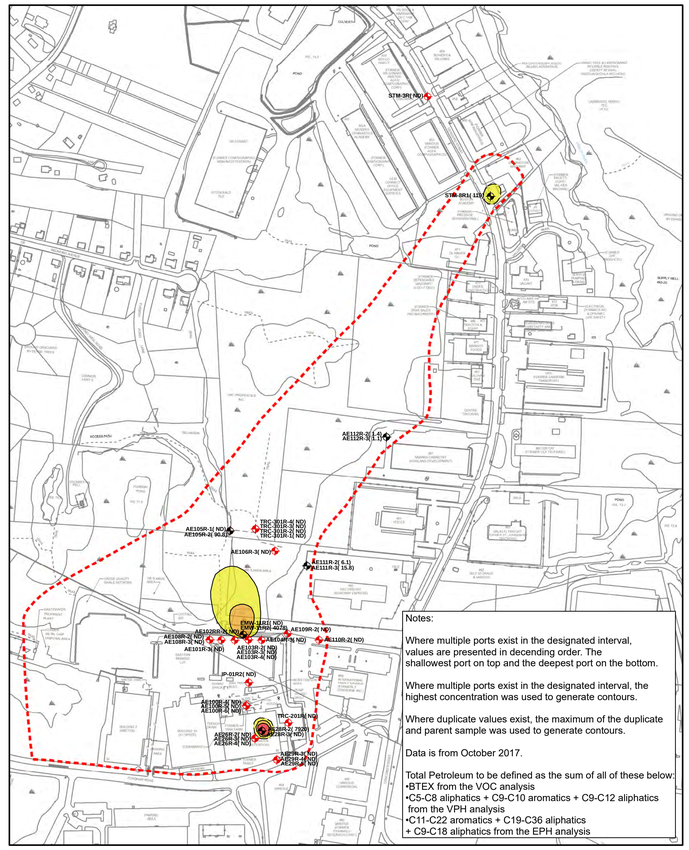
Total Petroleum in Groundwater
Upper Bedrock (0 - 60 ft bgs)

Figure 5-10

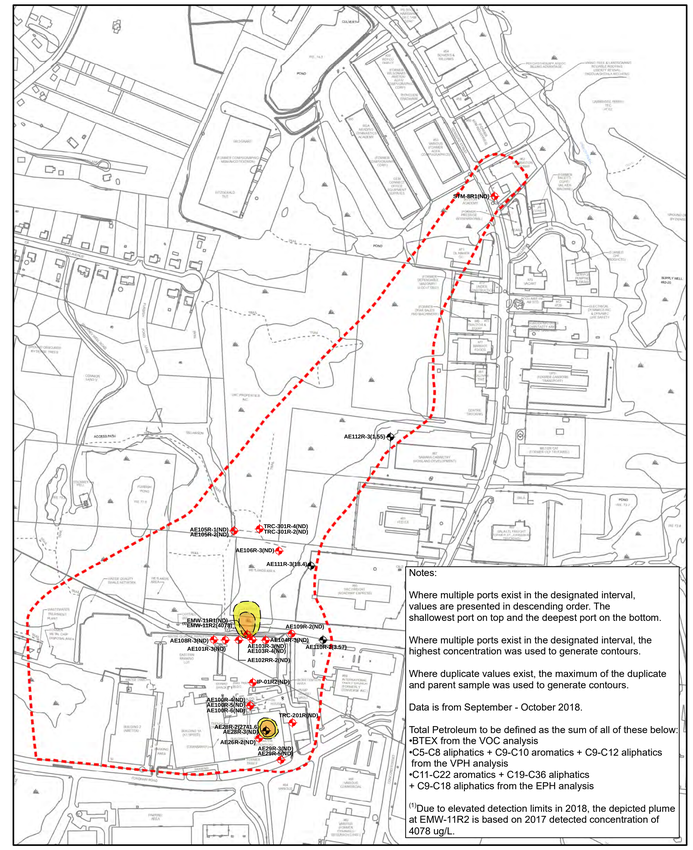
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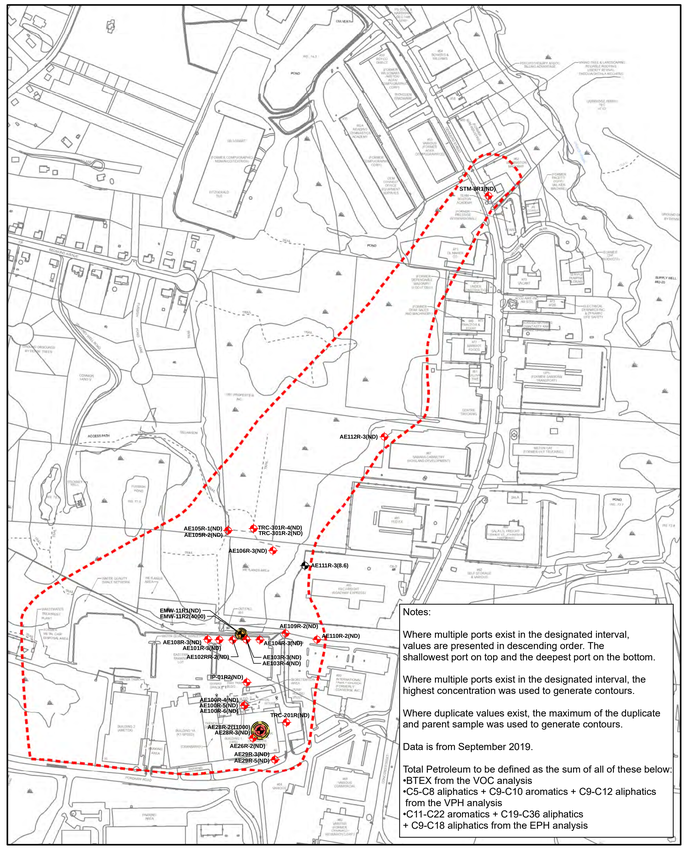
2016 Total Petroleum in Groundwater
Middle Bedrock (61 - 120 ft bgs)



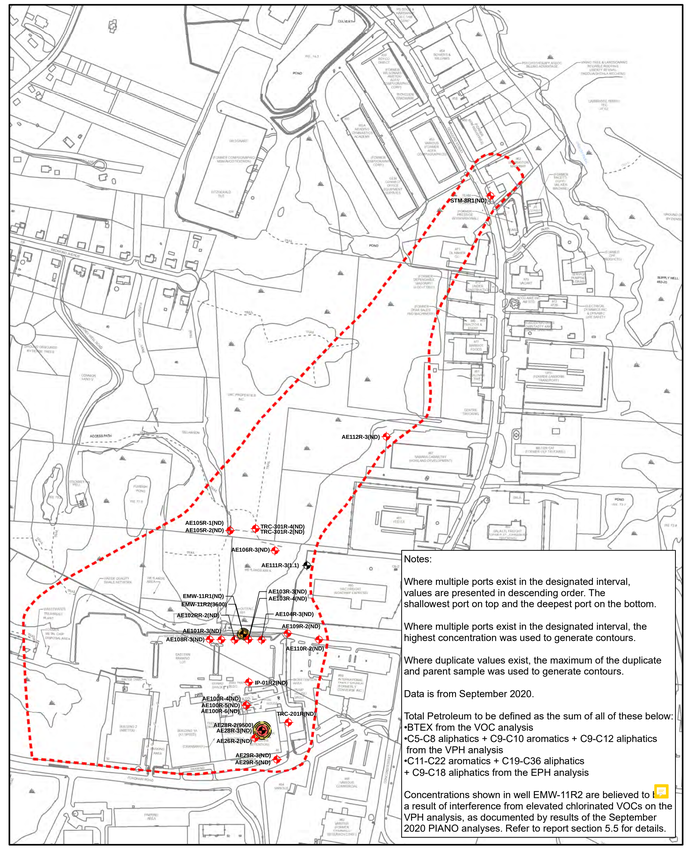
2017 Total Petroleum in Groundwater
Middle Bedrock (61 - 120 ft bgs)



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



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



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

Legend

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

N

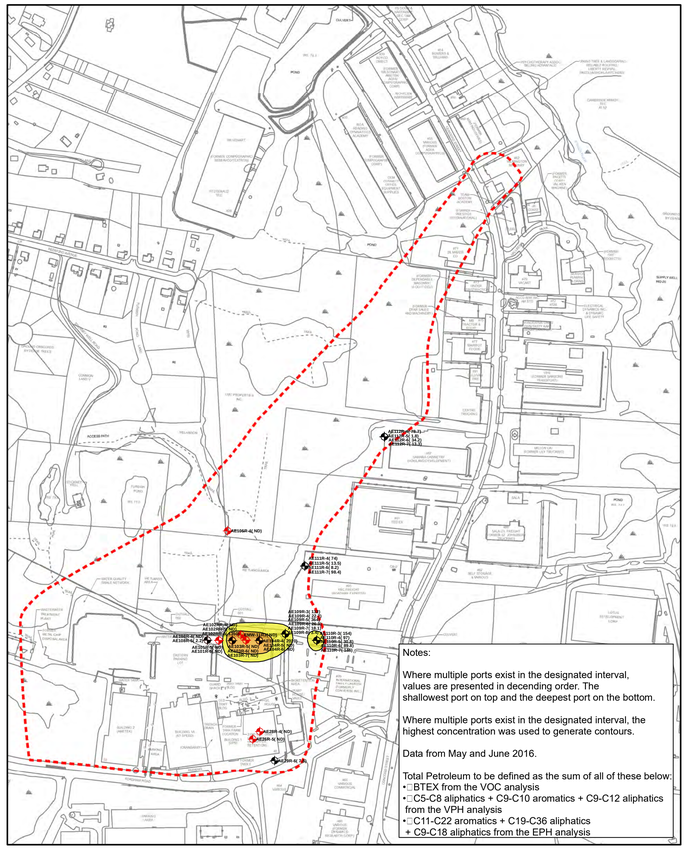
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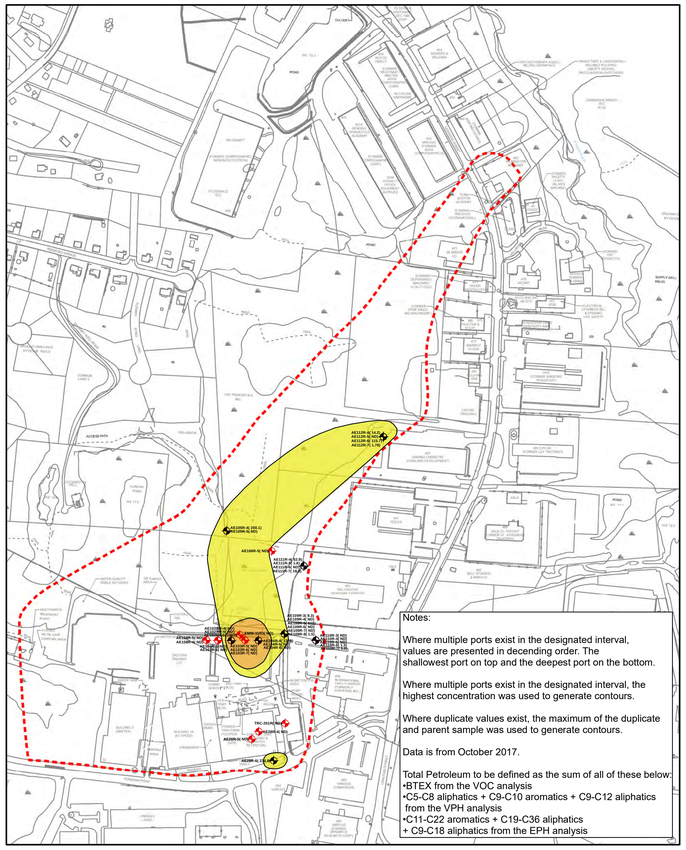
Total Petroleum in Groundwater
Middle Bedrock (61 - 120 ft bgs)

Figure 5-11

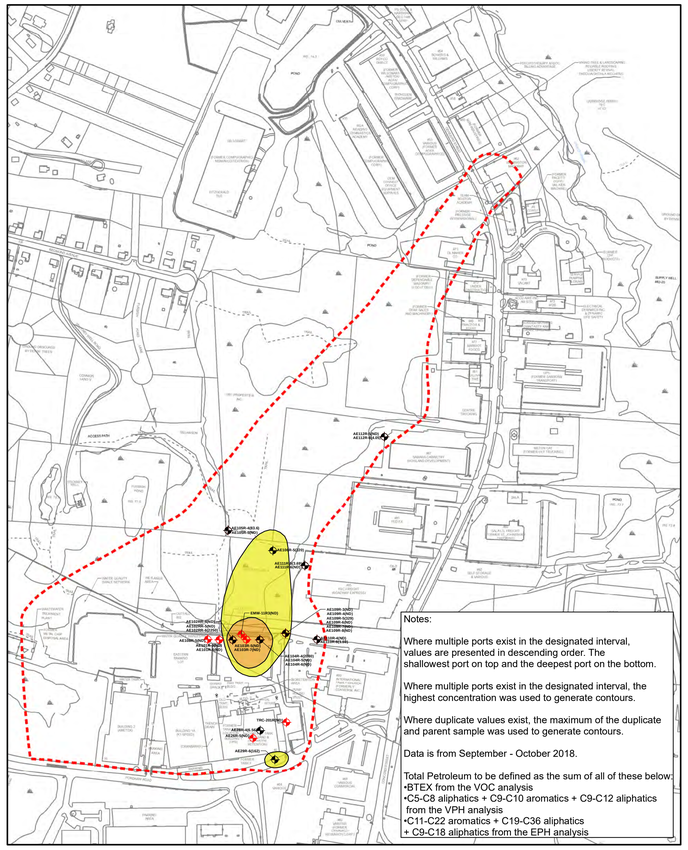
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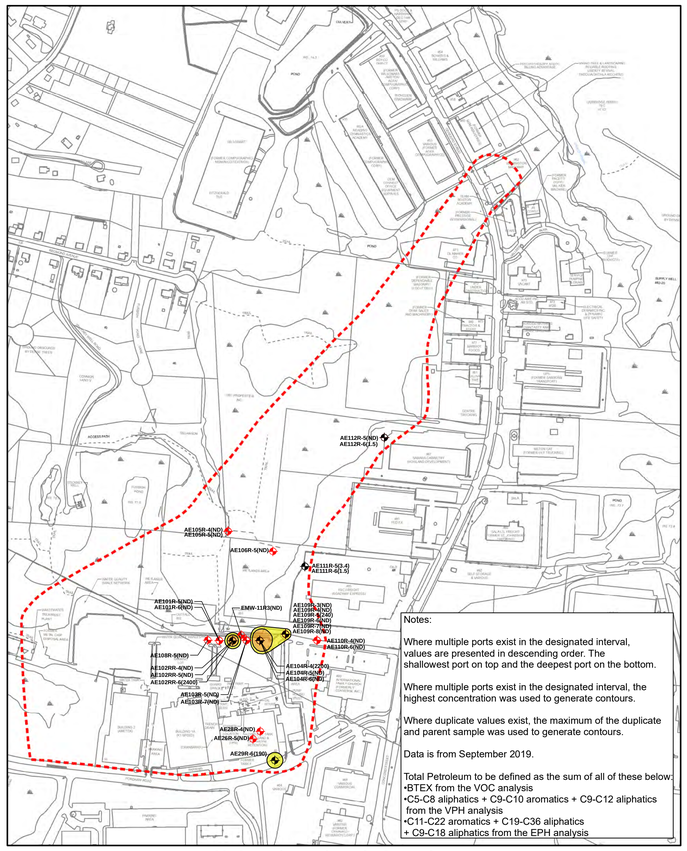
2016 Total Petroleum in Groundwater
Lower Bedrock (121 - 232 ft bgs)



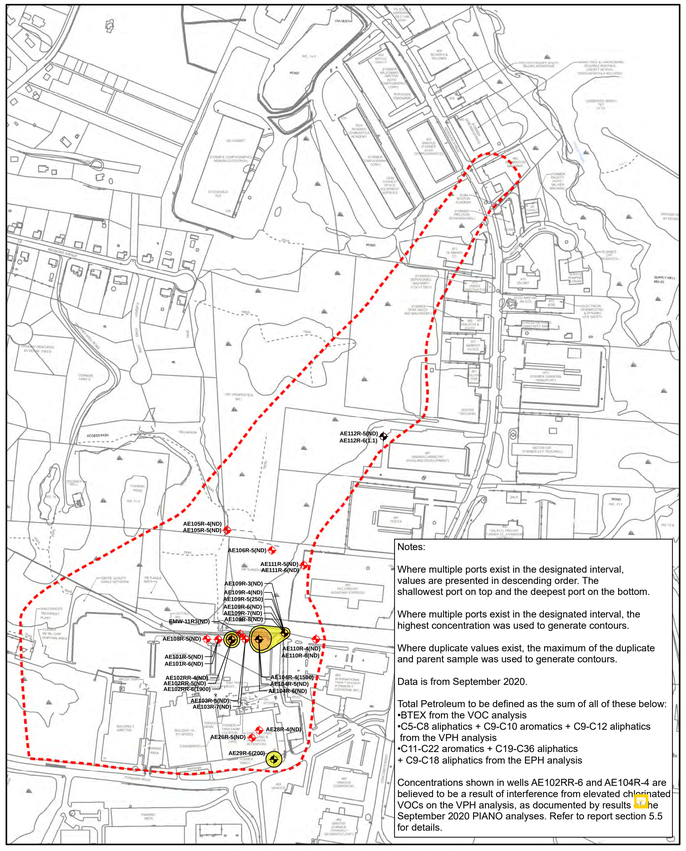
2017 Total Petroleum in Groundwater
Lower Bedrock (121 - 232 ft bgs)



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



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



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

Legend

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

N

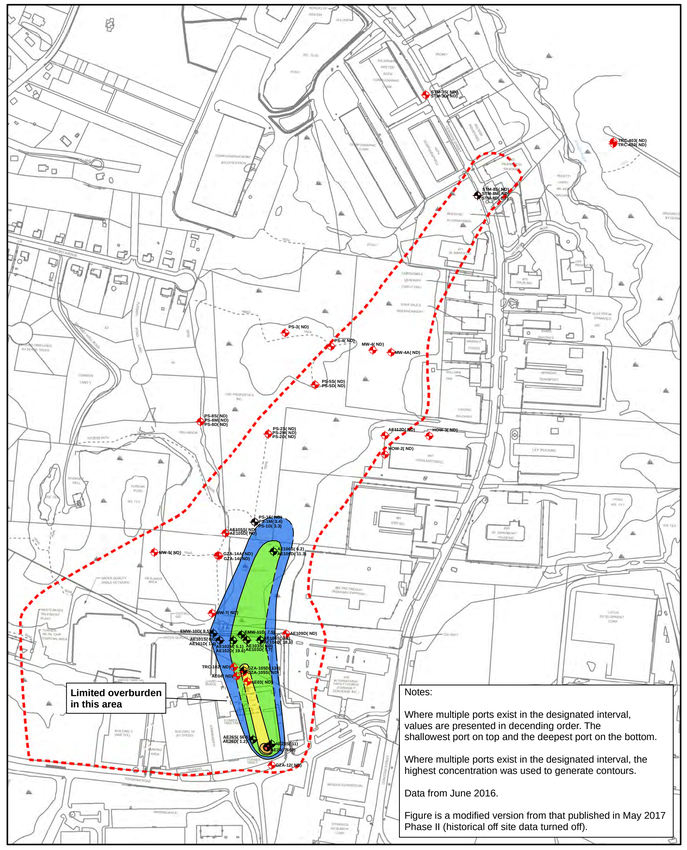
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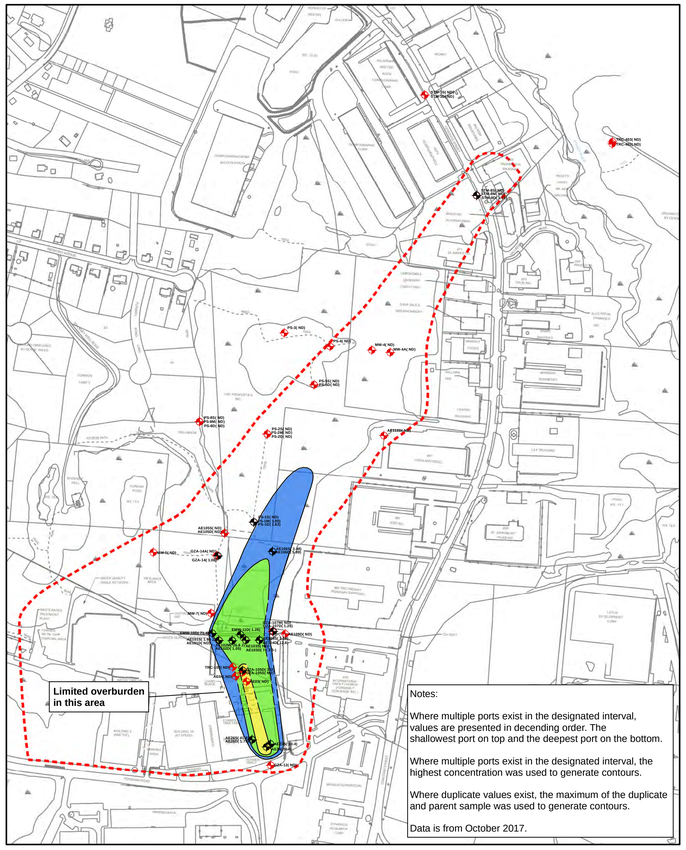
Total Petroleum in Groundwater
Lower Bedrock (121 - 232 ft bgs)

Figure 5-12

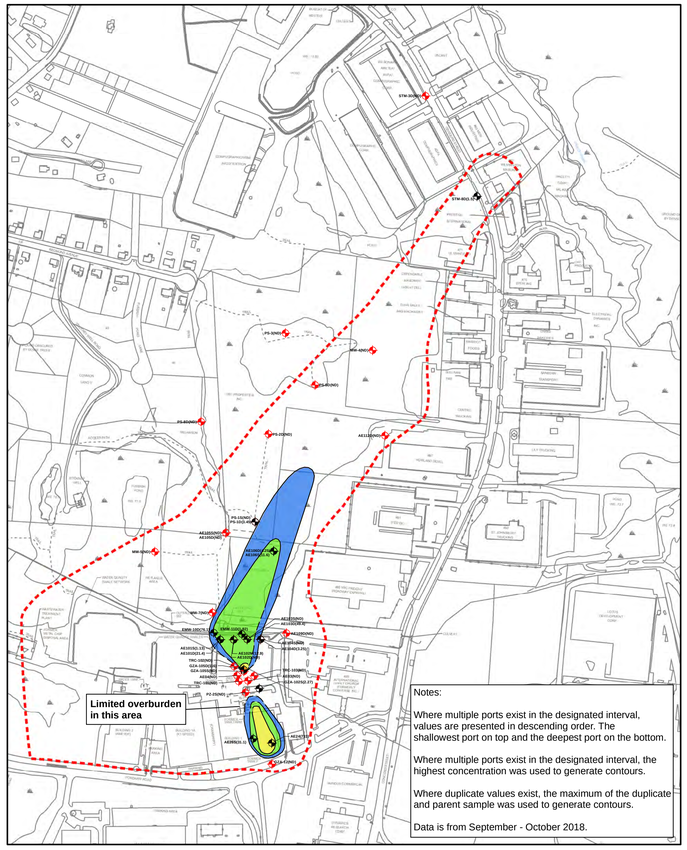
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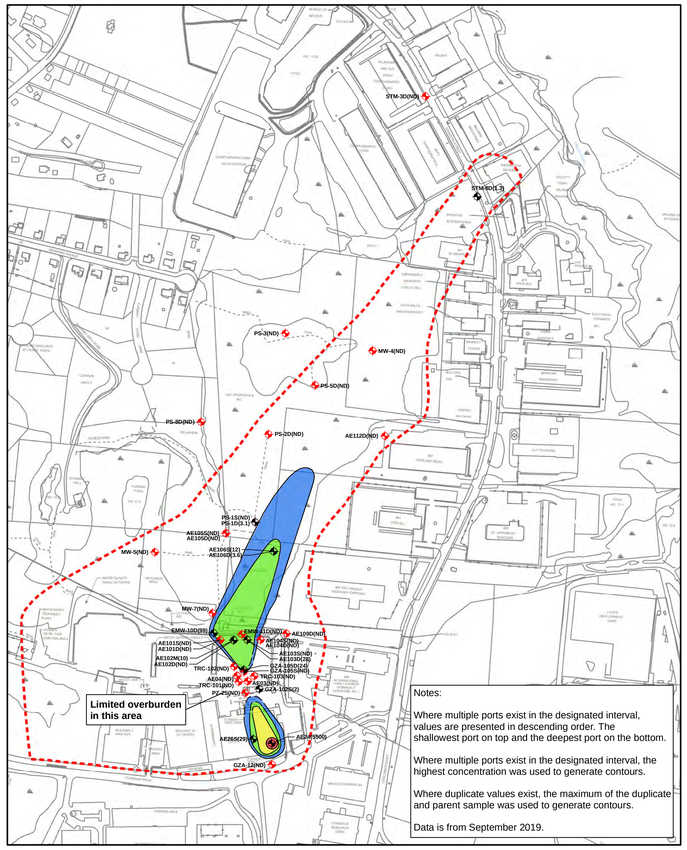
2016 PCE in Groundwater
Overburden (0 - 78 ft bgs)



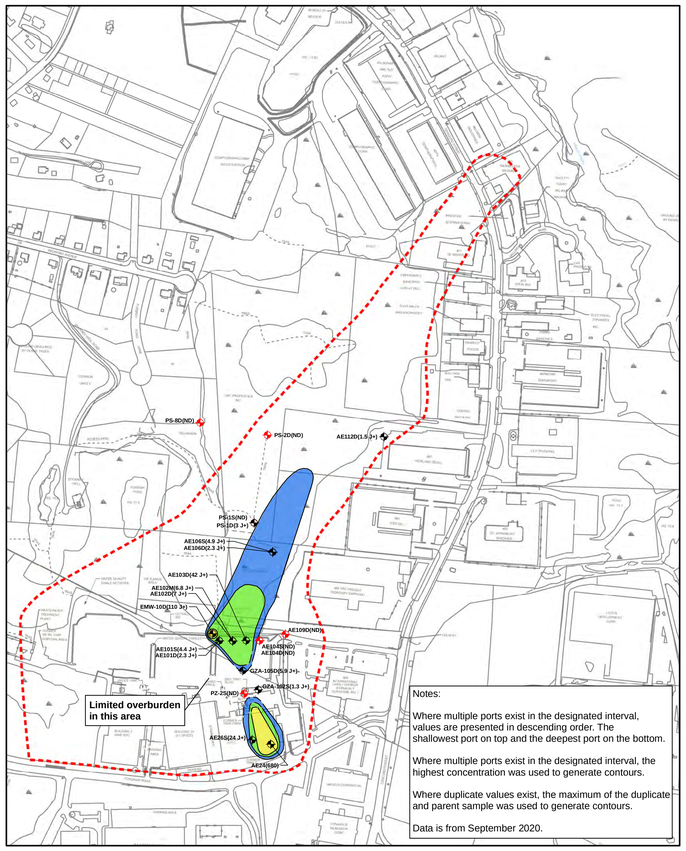
2017 PCE in Groundwater
Overburden (0 - 78 ft bgs)



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



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



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

Legend

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

N

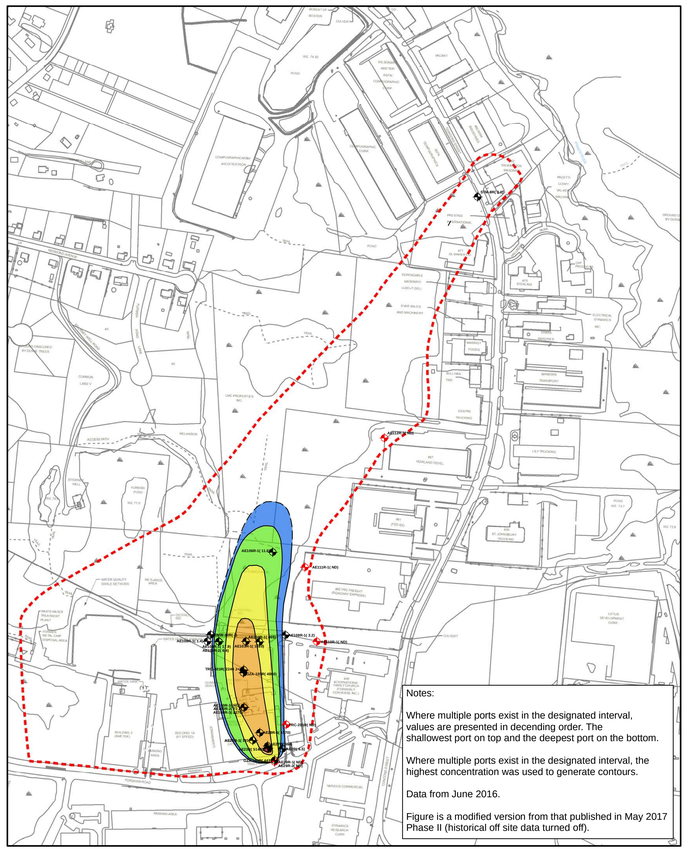
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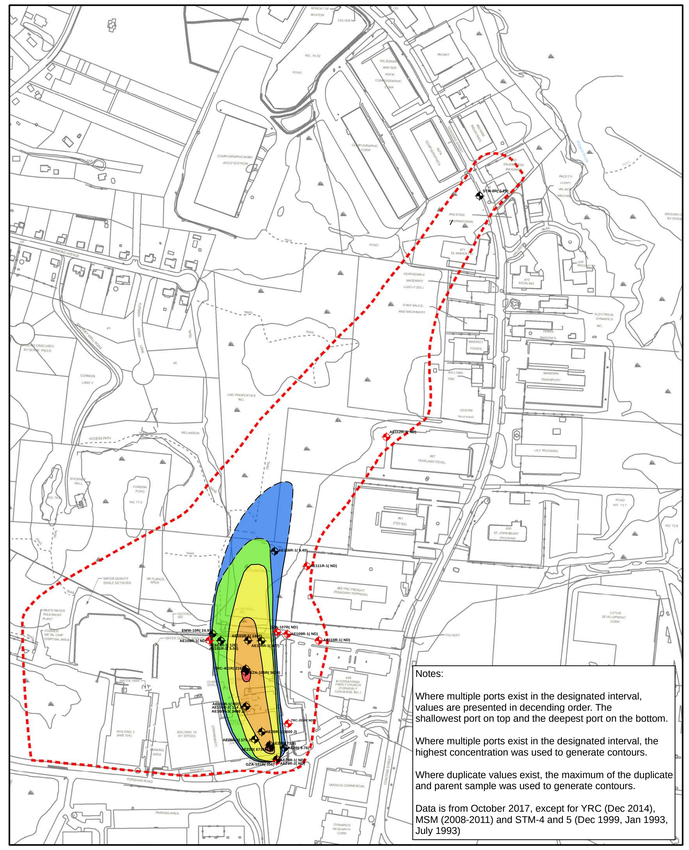
PCE in Groundwater
Overburden (0 - 78 ft bgs)

Figure 5-13

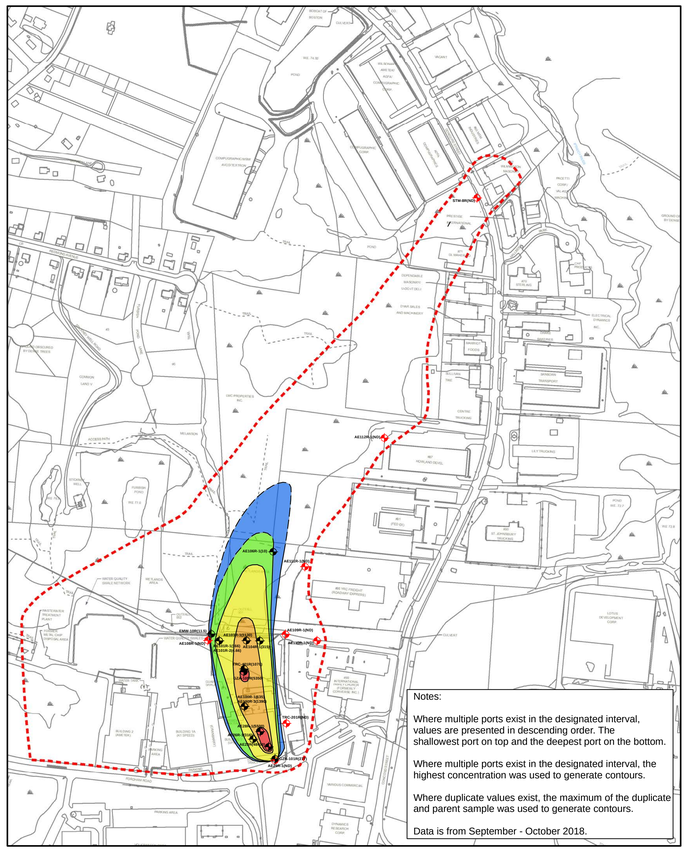
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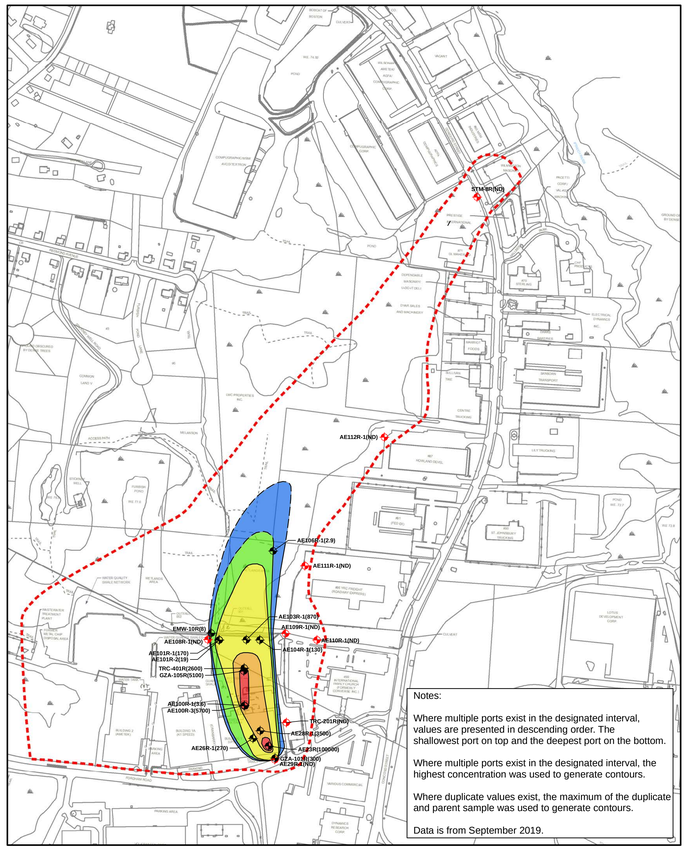
2020 PCE in Groundwater
Upper Bedrock (0 - 60 ft bgs)



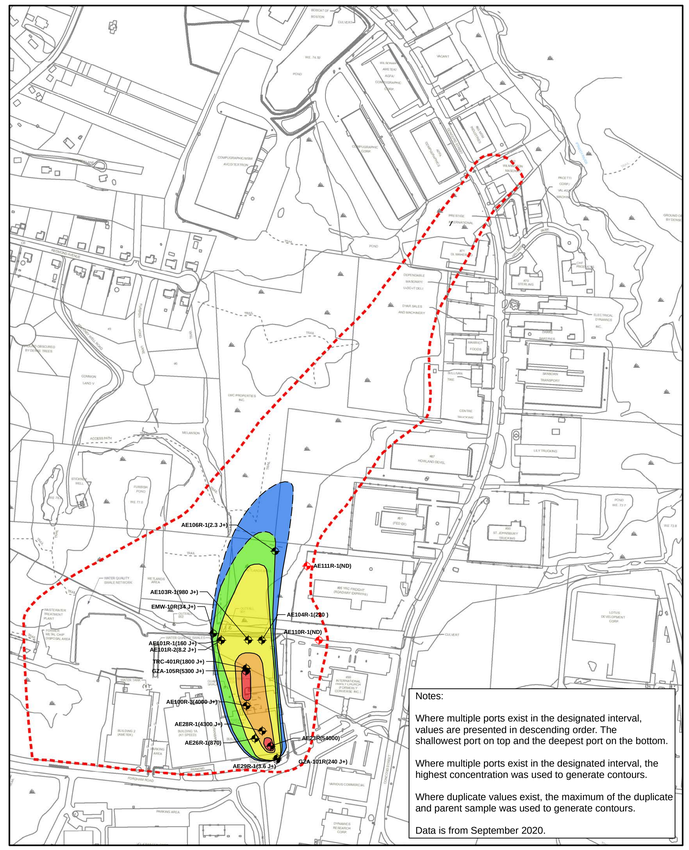
2020 PCE in Groundwater
Upper Bedrock (0 - 60 ft bgs)



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



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



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

Legend

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

MCP GW-1 Standard = 5 µg/l

N

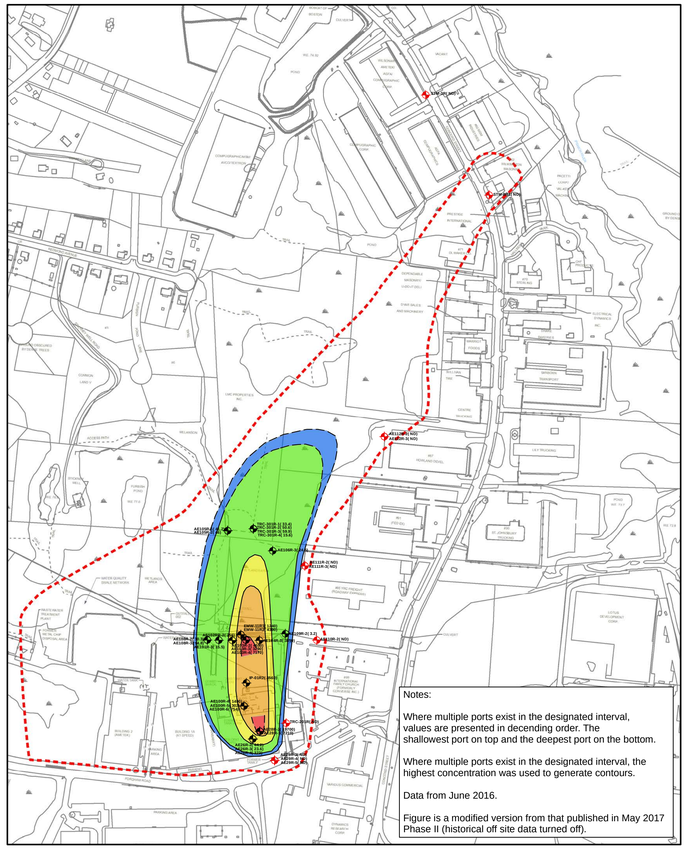
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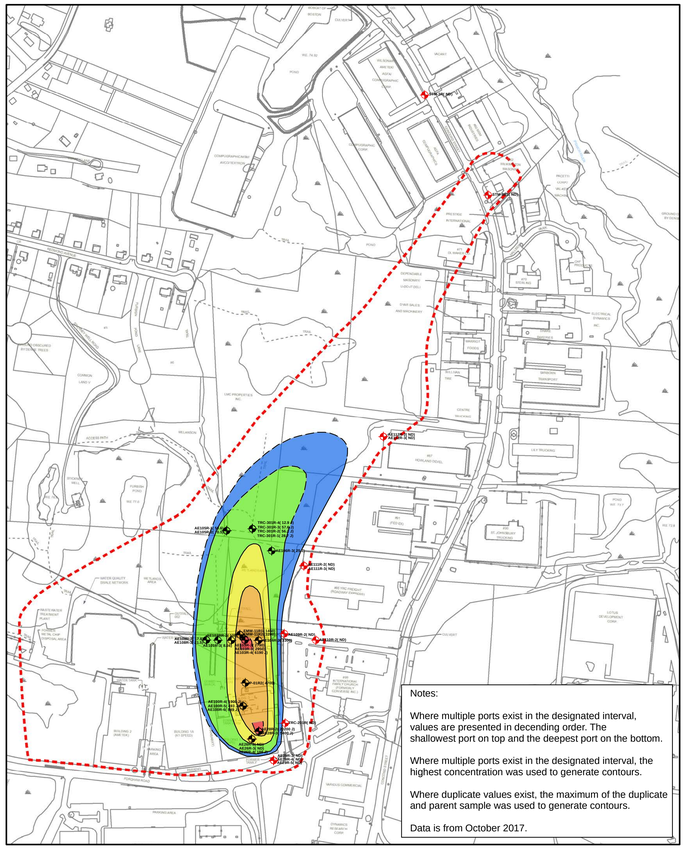
PCE in Groundwater
Upper Bedrock (0 - 60 ft bgs)

Figure 5-14

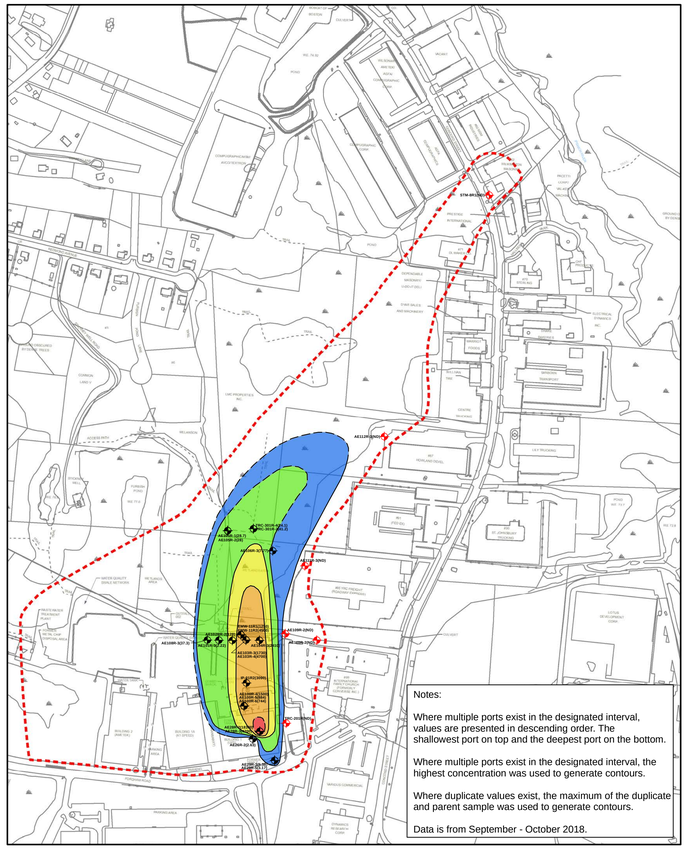
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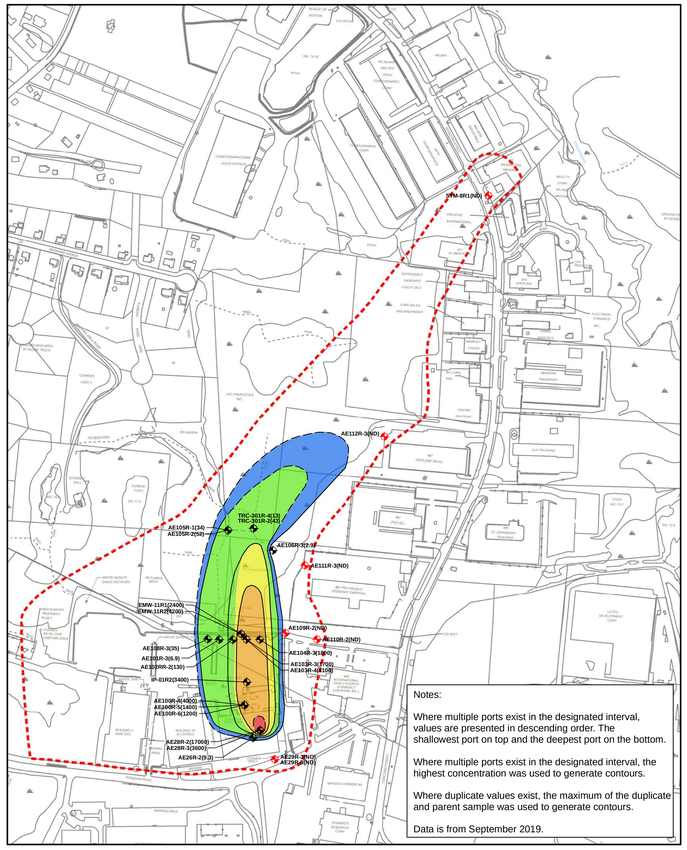
2016 PCE in Groundwater
Middle Bedrock (61 - 120 ft bgs)



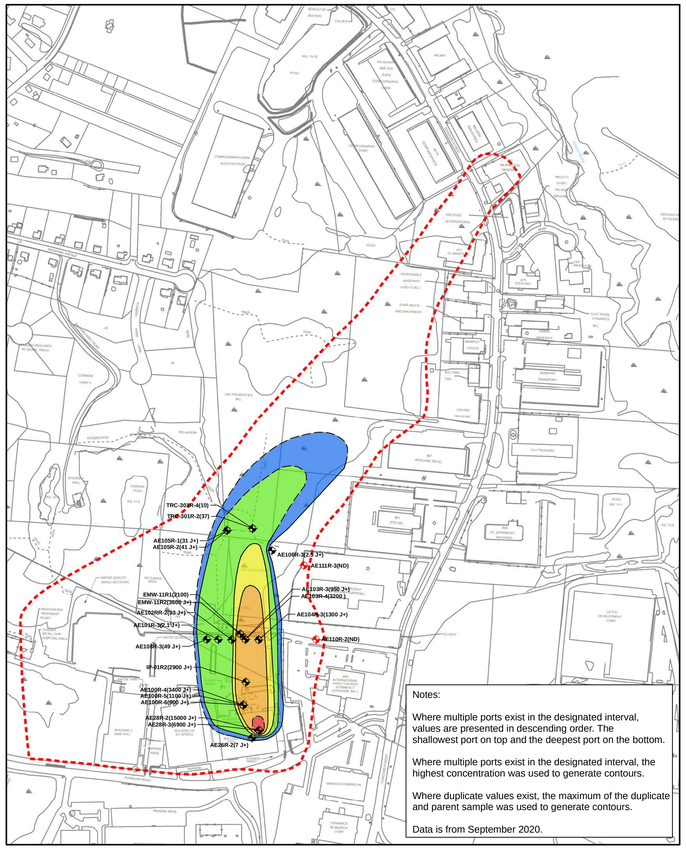
2017 PCE in Groundwater
Middle Bedrock (61 - 120 ft bgs)



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



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



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

Legend

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

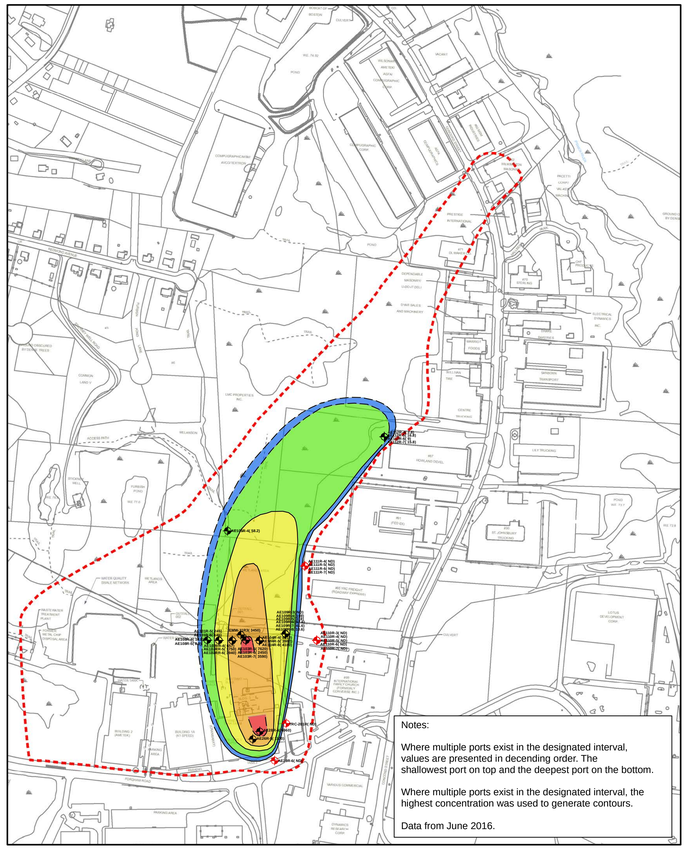
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0 100 200 400 600 800 Feet

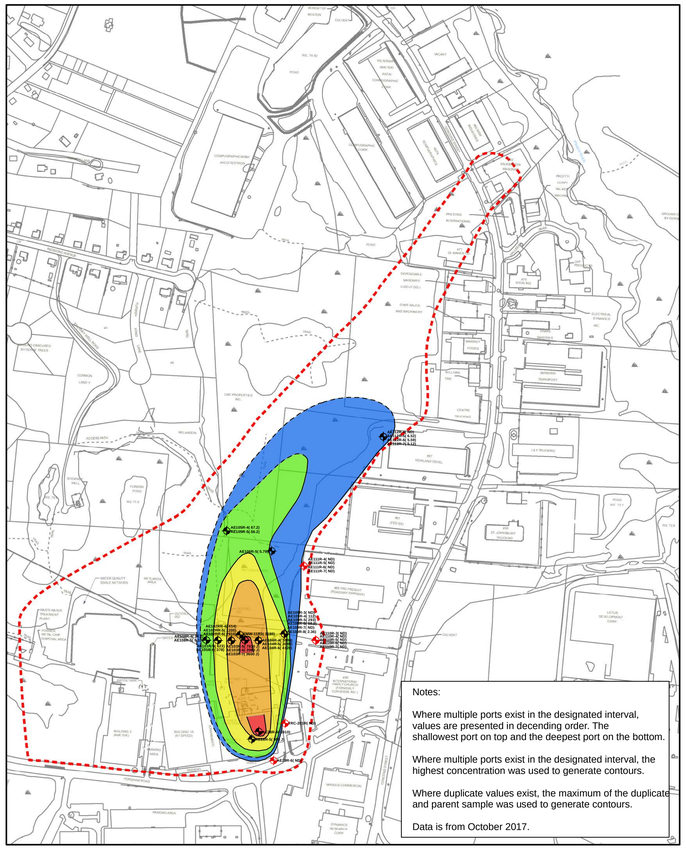
PCE in Groundwater
Middle Bedrock (61 - 120 ft bgs)

Figure 5-15

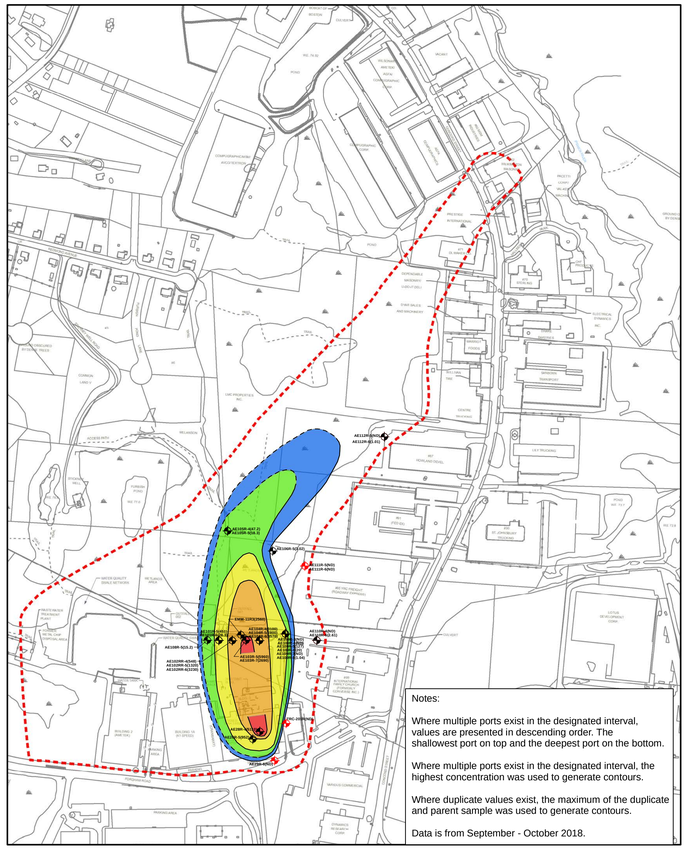
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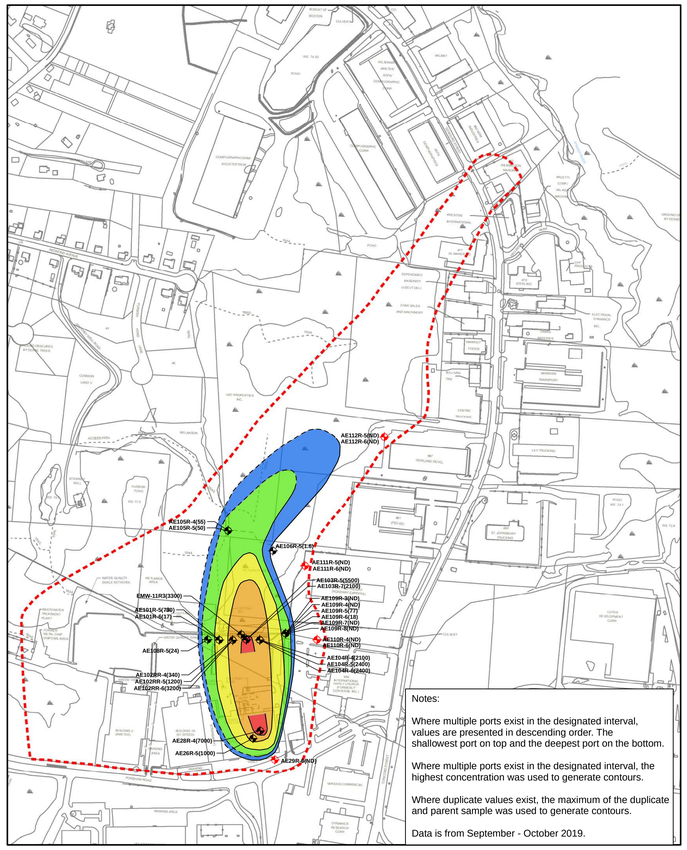
2016 PCE in Groundwater
Lower Bedrock (121 - 232 ft bgs)



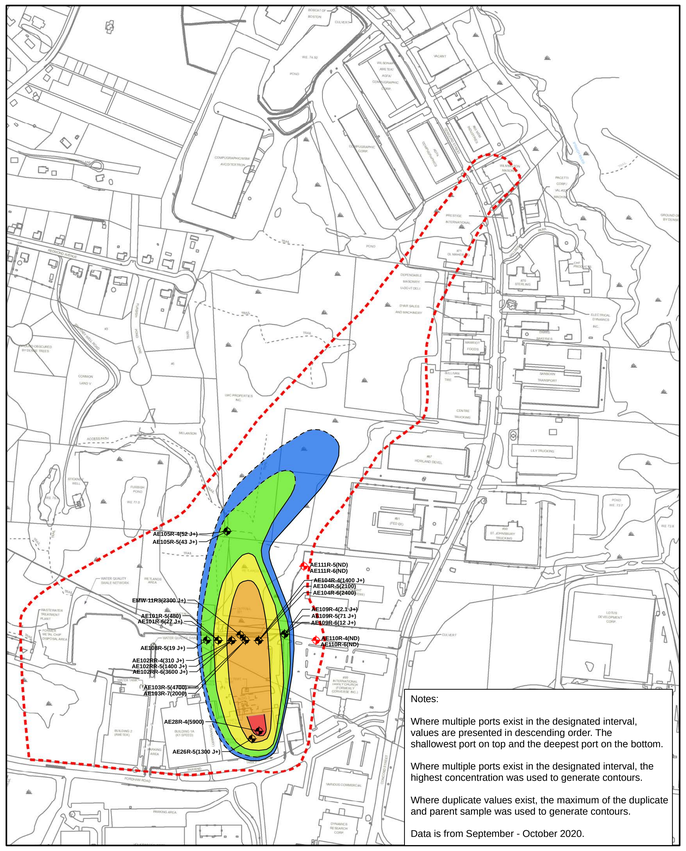
2017 PCE in Groundwater
Lower Bedrock (121 - 232 ft bgs)



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



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



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

Legend

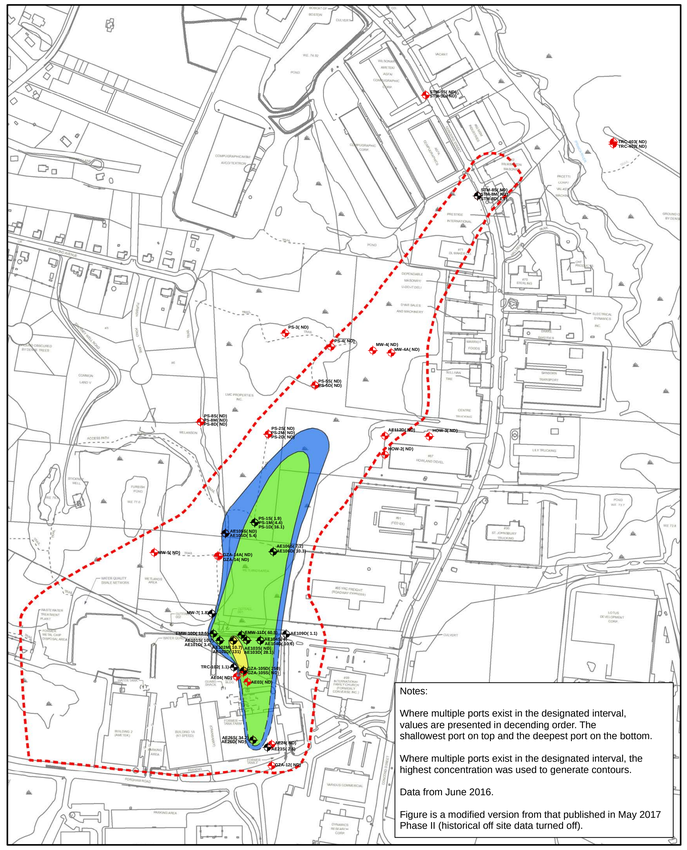
- Monitoring Well
- Monitoring Well - Non Detect (ND)
- 5-10 ug/L
- 10-100 ug/L
- 100-1,000 ug/L
- 1,000-5,000 ug/L
- >5,000 ug/L
- MCP Site Boundary
- MCP GW-1 Standard = 5 µg/l

0 100 200 400 600 800 Feet

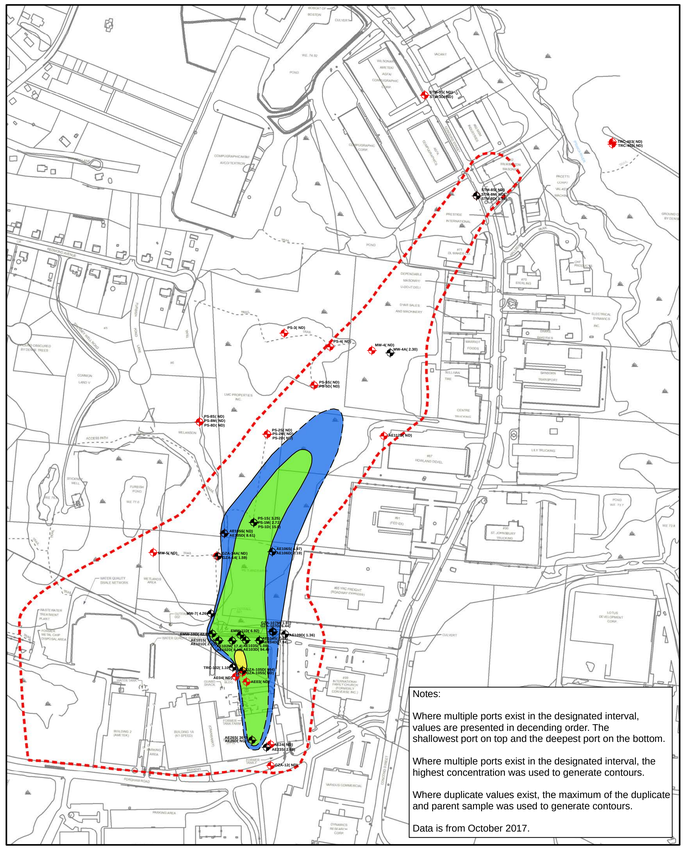
PCE in Groundwater
Lower Bedrock (121 - 232 ft bgs)

Figure 5-16

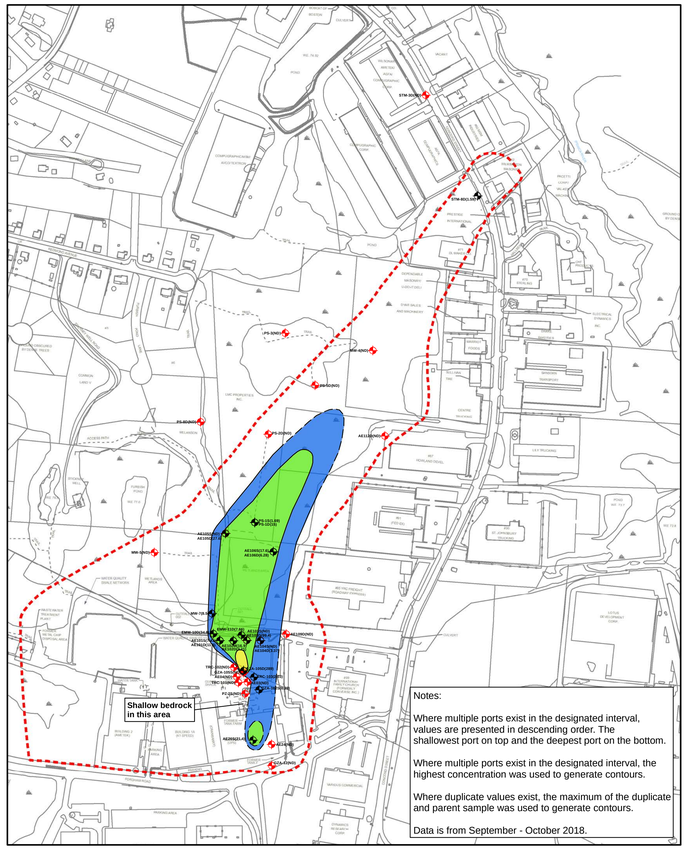
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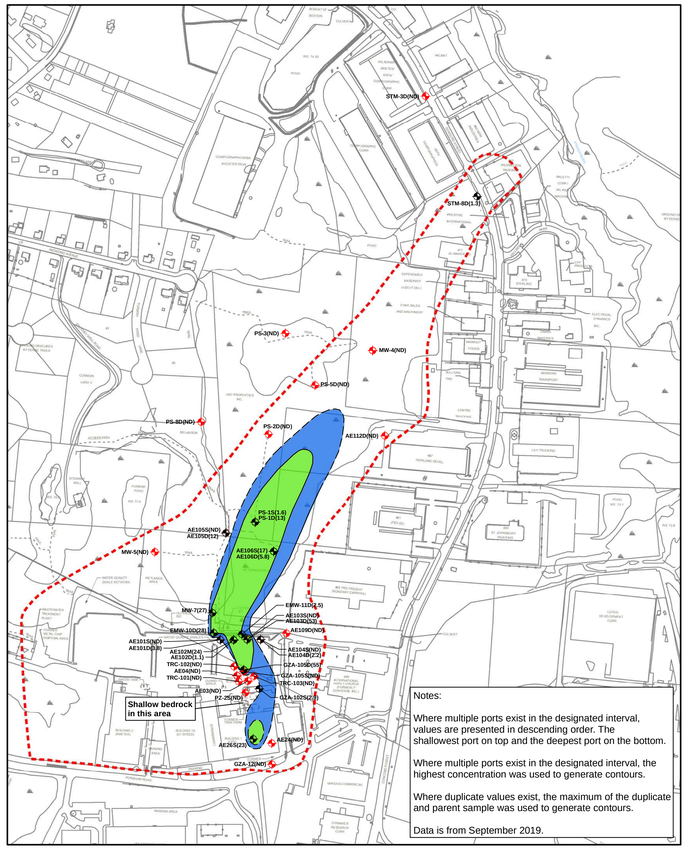
2016 TCE in Groundwater
Overburden (0 - 78 ft bgs)



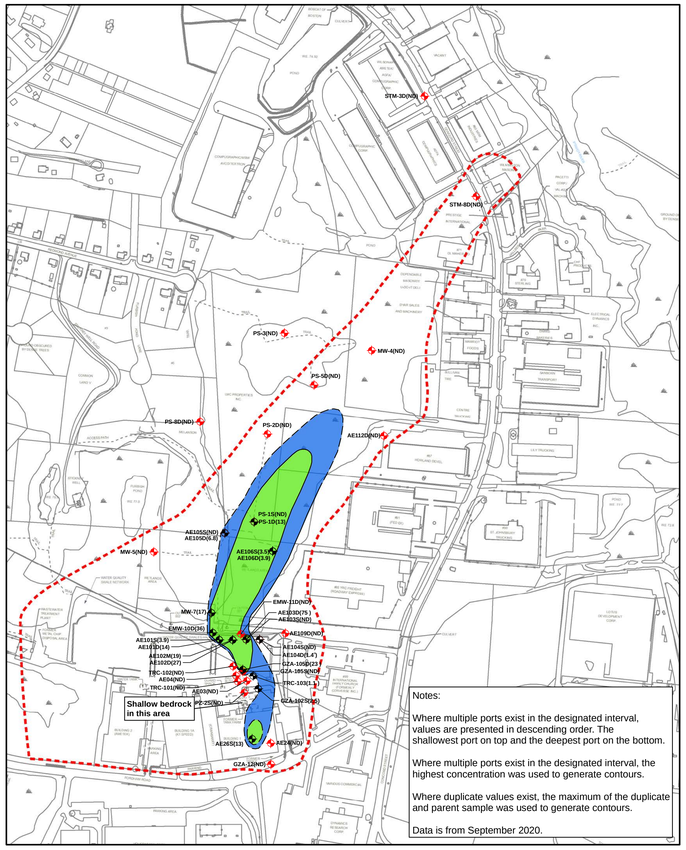
2017 TCE in Groundwater
Overburden (0 - 78 ft bgs)



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



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



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

Legend

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

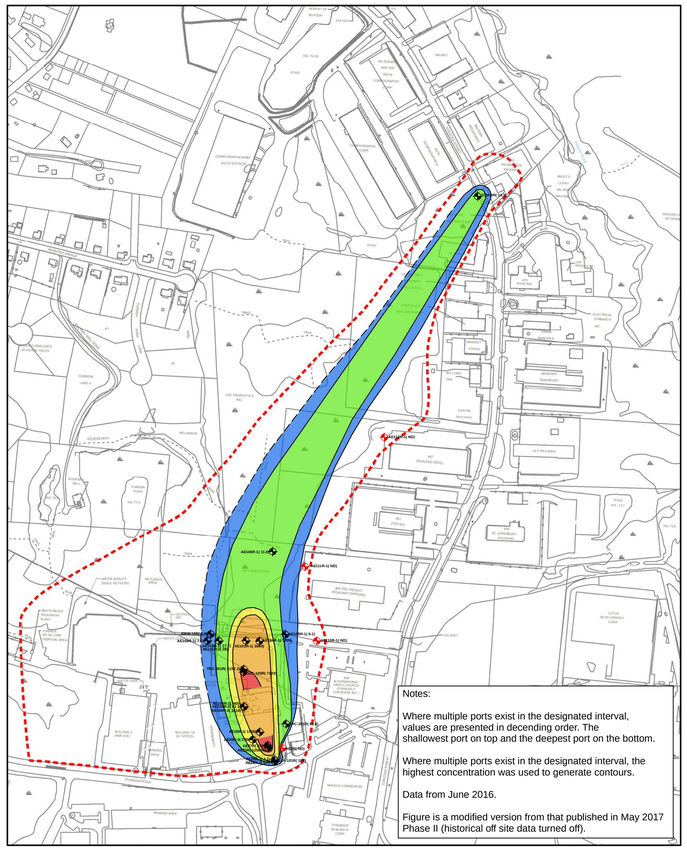
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AECOM

TCE in Groundwater
Overburden (0 - 78 ft bgs)

Figure 5-17

Path: L:\Legacy\USCHL1FP001\Data\Projects\Jobs\Rem_Eng\Project Files\Lockheed Martin\Wilmington 2017-2022\900-CAD-GIS\920 GIS-Graphics\2016-2020 Plume Maps\MXD\Fig_5_17_TCE_OB_2016_2020.mxd



Notes:

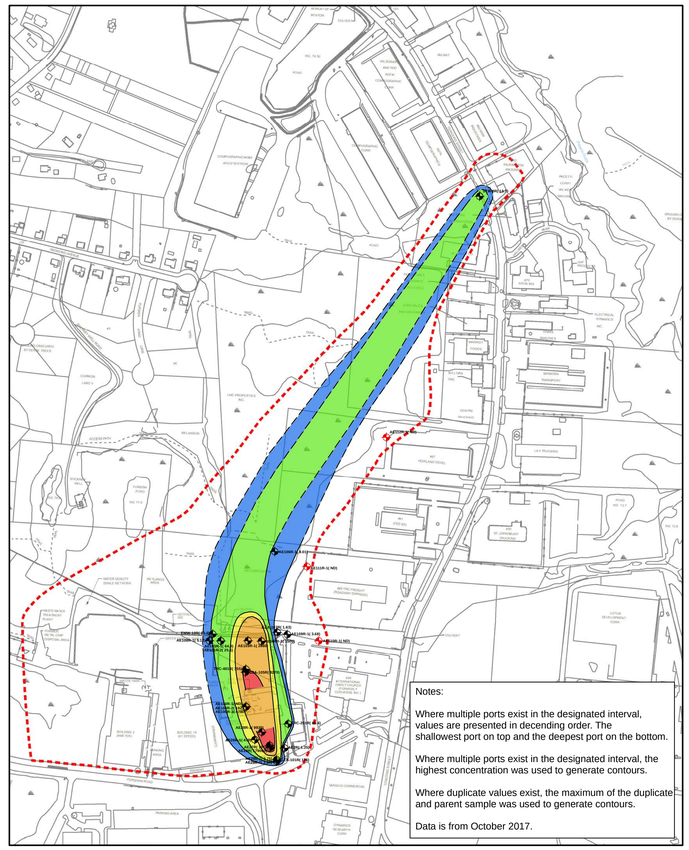
Where multiple ports exist in the designated interval, values are presented in decending order. The shallowest port on top and the deepest port on the bottom.

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

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

Data is from September 2019.

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



Notes:

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

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

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

Data is from September 2020.

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

Notes:

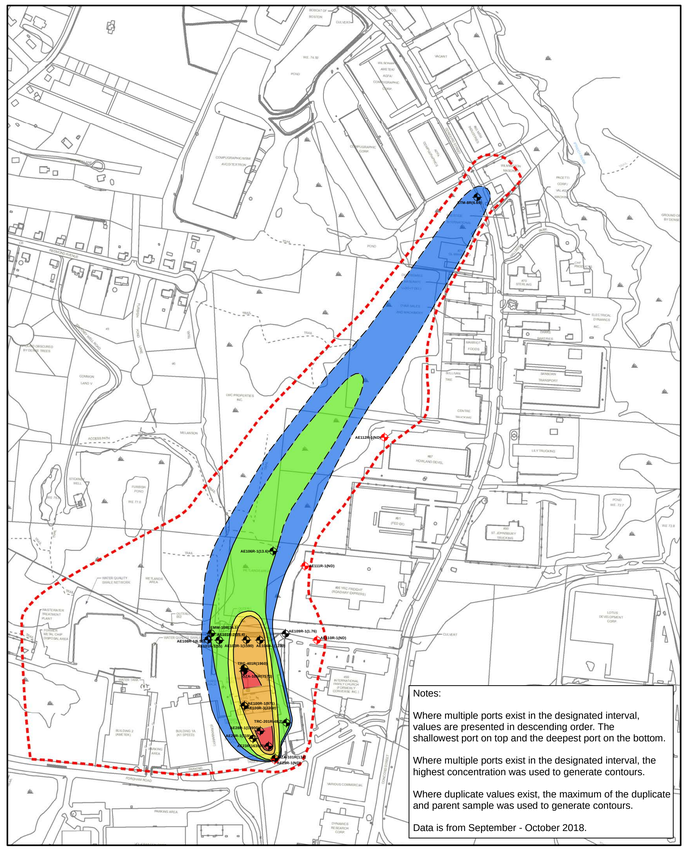
Where multiple ports exist in the designated interval, values are presented in decending order. The shallowest port on top and the deepest port on the bottom.

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

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

Data is from October 2017.

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



Notes:

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

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

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

Data is from September - October 2018.

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

Legend

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

N

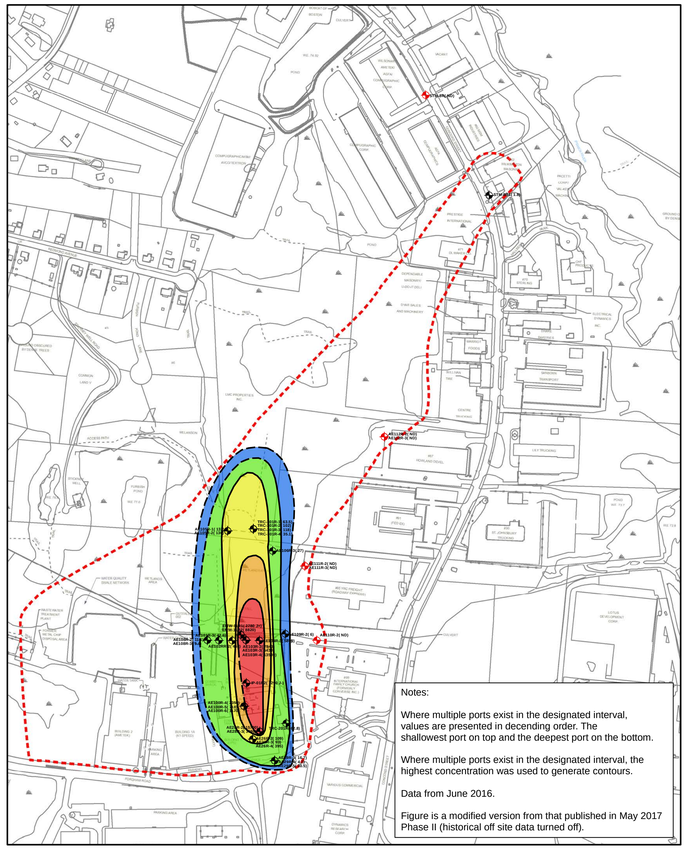
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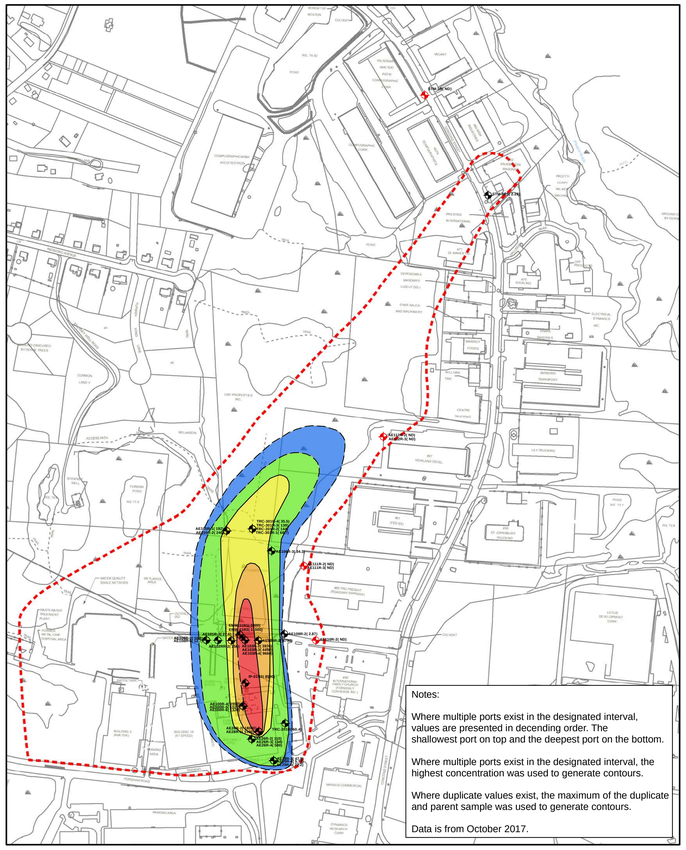
TCE in Groundwater
Upper Bedrock (0 - 60 ft bgs)

Figure 5-18

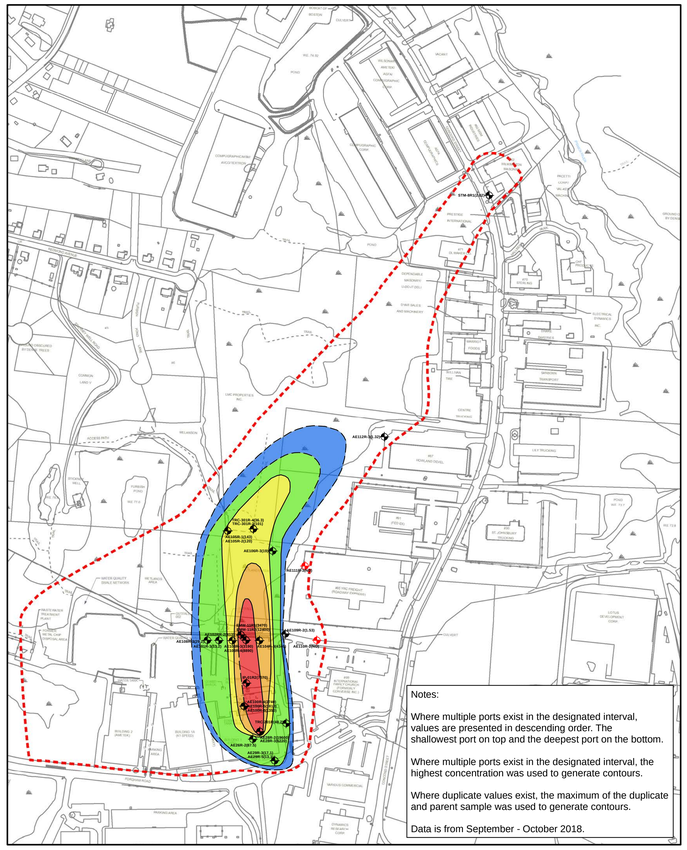
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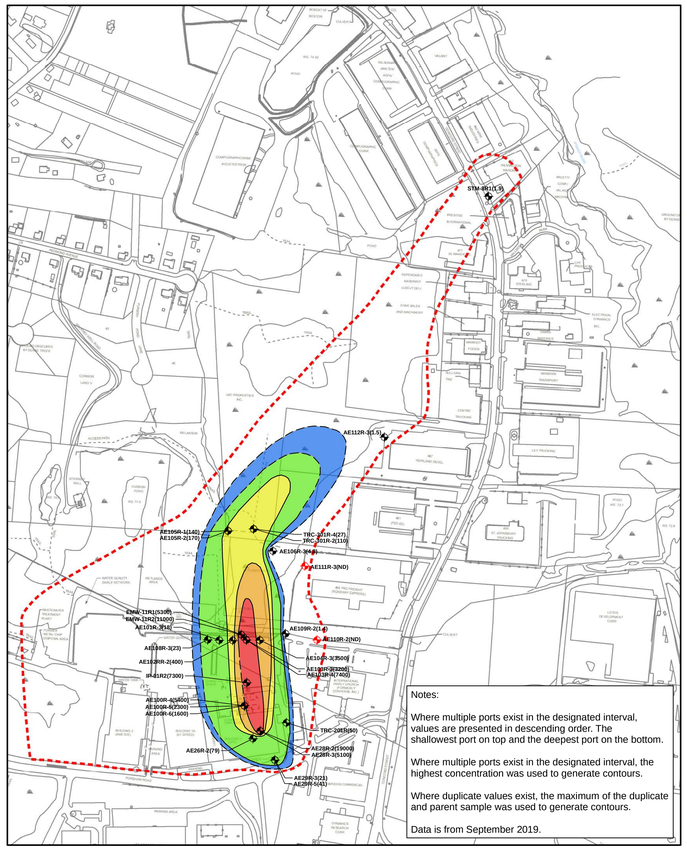
2016 TCE in Groundwater
Middle Bedrock (61 - 120 ft bgs)



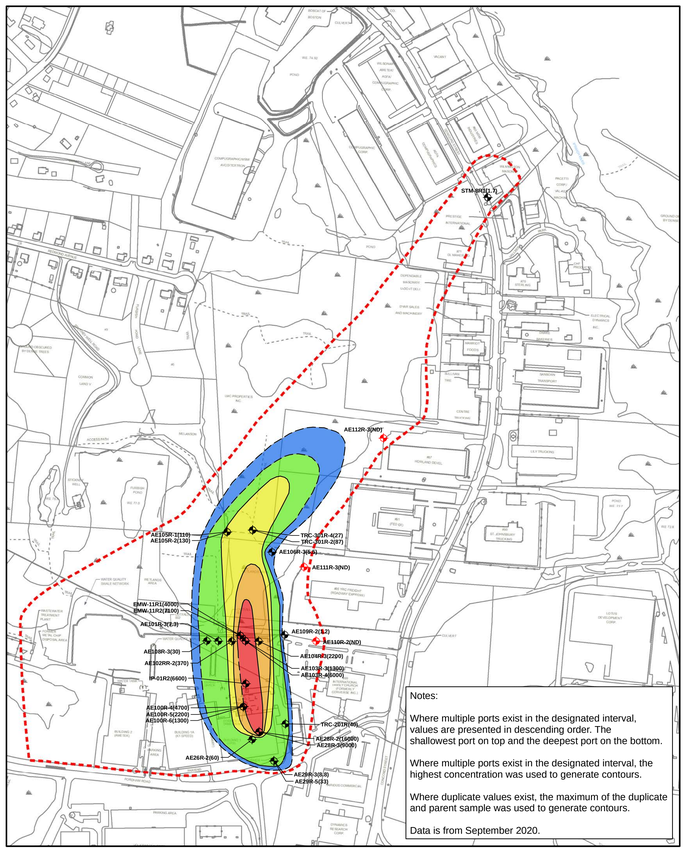
2017 TCE in Groundwater
Middle Bedrock (61 - 120 ft bgs)



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



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



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

Legend

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

N

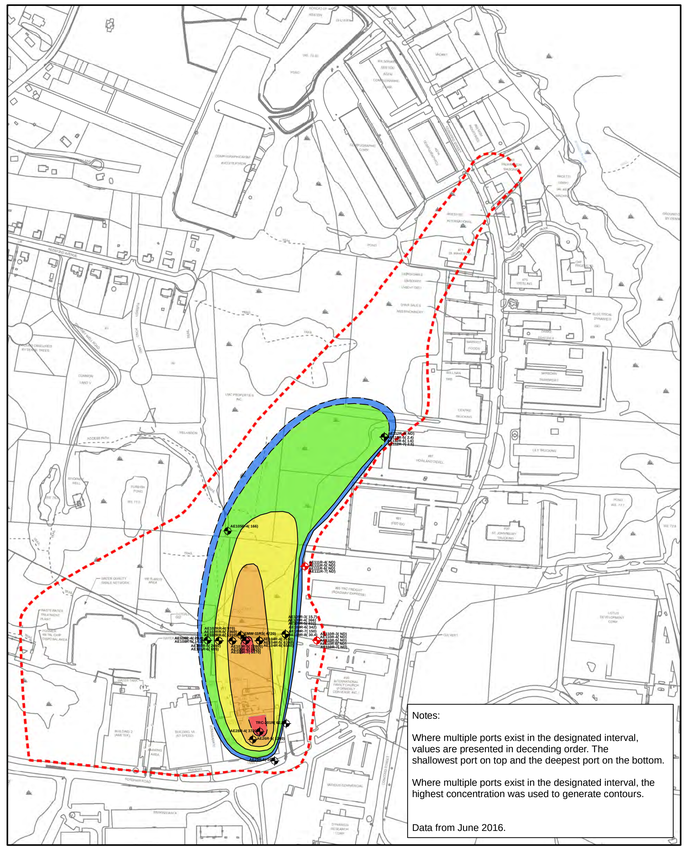
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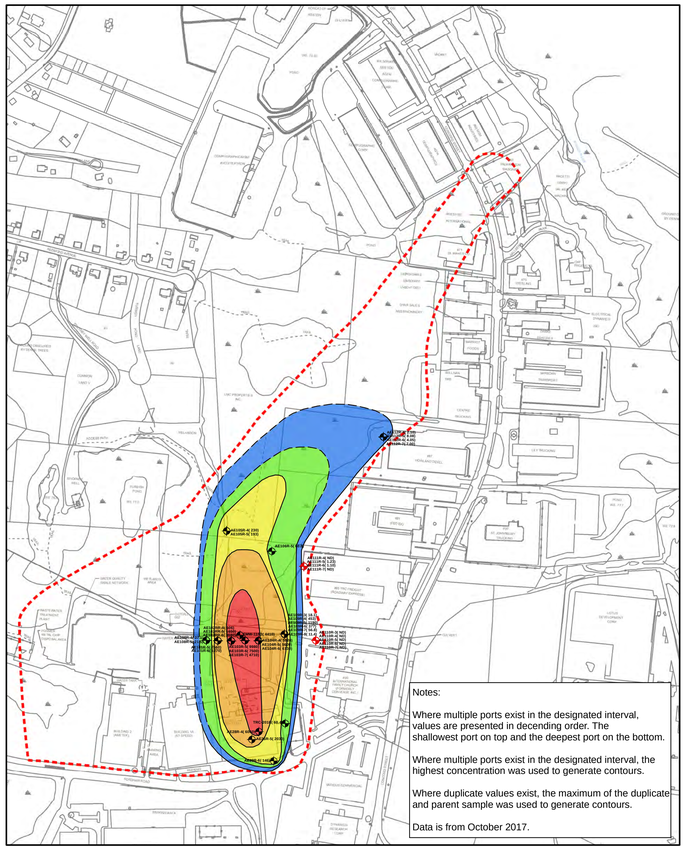
TCE in Groundwater
Middle Bedrock (61 - 120 ft bgs)

Figure 5-19

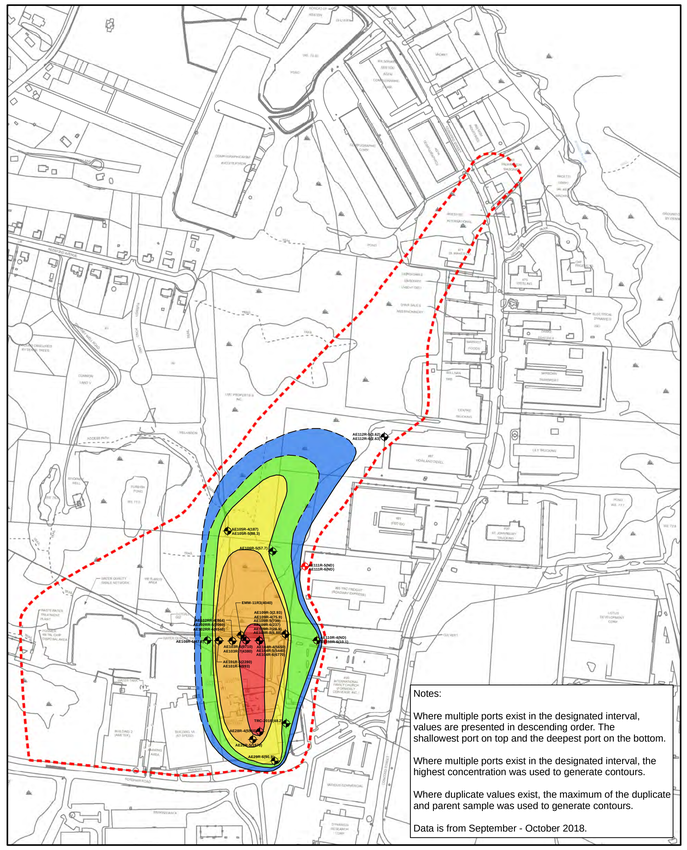
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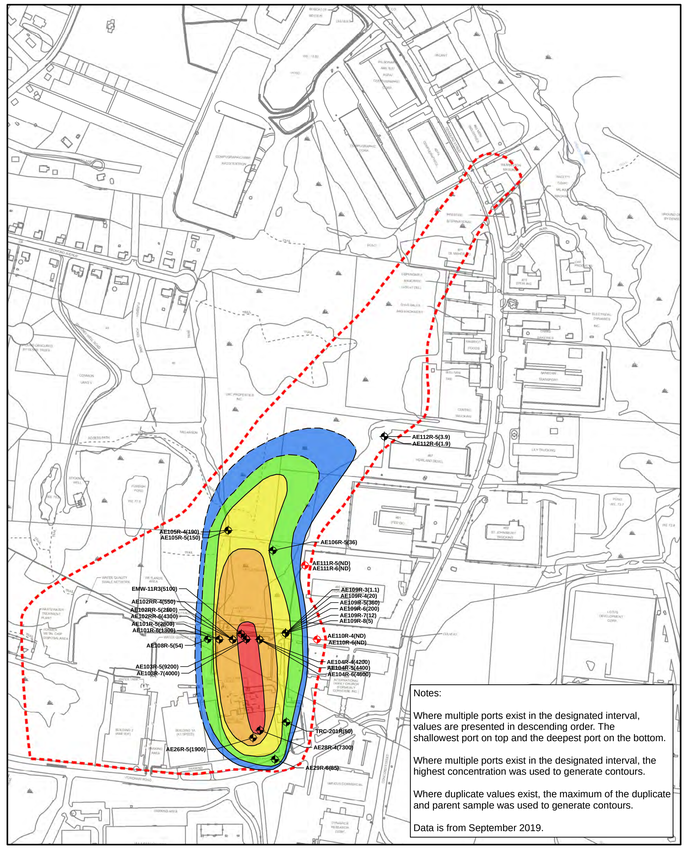
2016 TCE in Groundwater
Lower Bedrock (121 - 232 ft bgs)



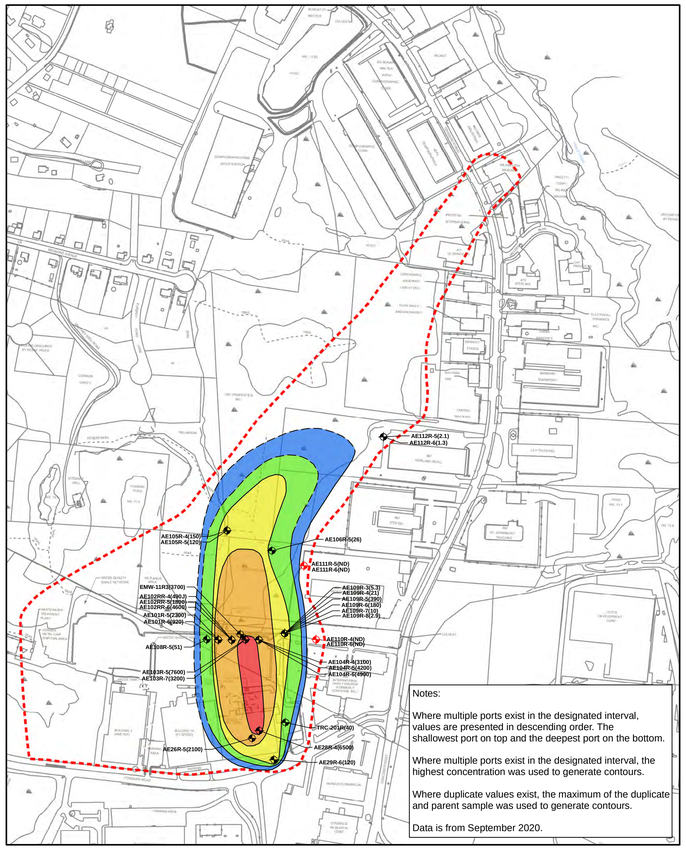
2017 TCE in Groundwater
Lower Bedrock (121 - 232 ft bgs)



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



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



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

Legend

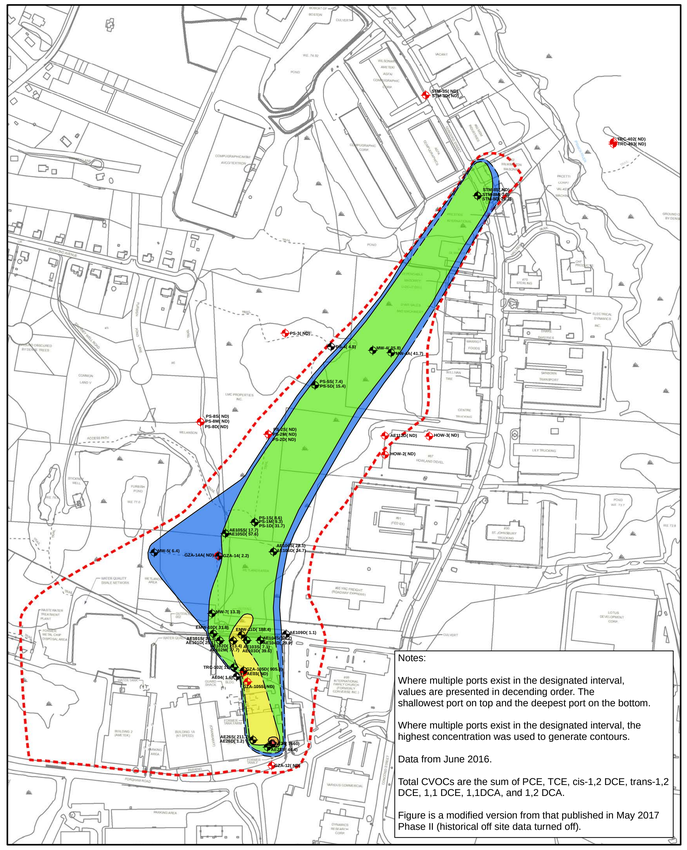
- Monitoring Well
- Monitoring Well - Non Detect (ND)
- 5-10 ug/L
- 10-100 ug/L
- 100-1,000 ug/L
- 1,000-5,000 ug/L
- >5,000 ug/L
- MCP Site Boundary
- MCP GW-1 Standard = 5 µg/l

0 100 200 400 600 800 Feet

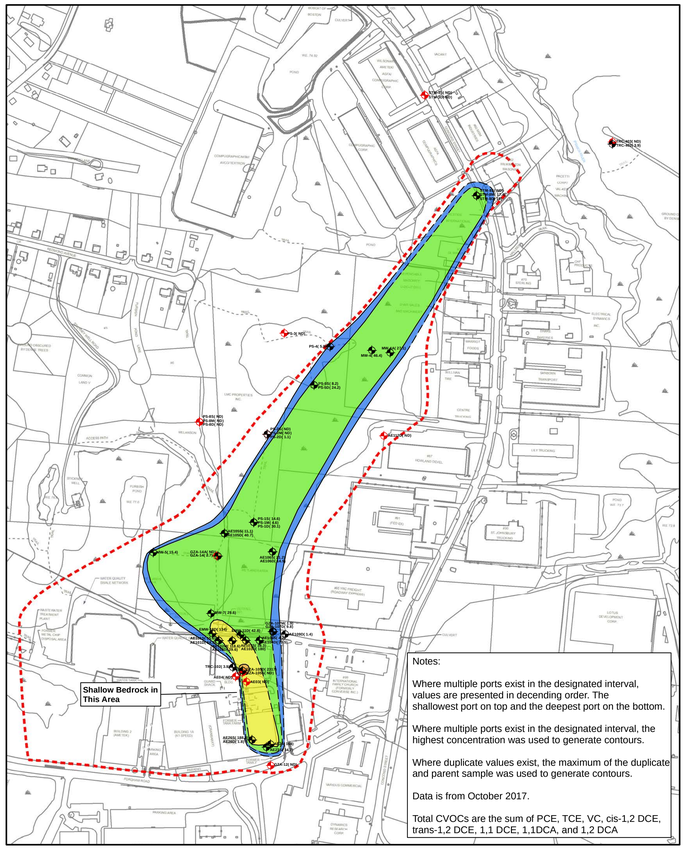
TCE in Groundwater
Lower Bedrock (121 - 232 ft bgs)

Figure 5-20

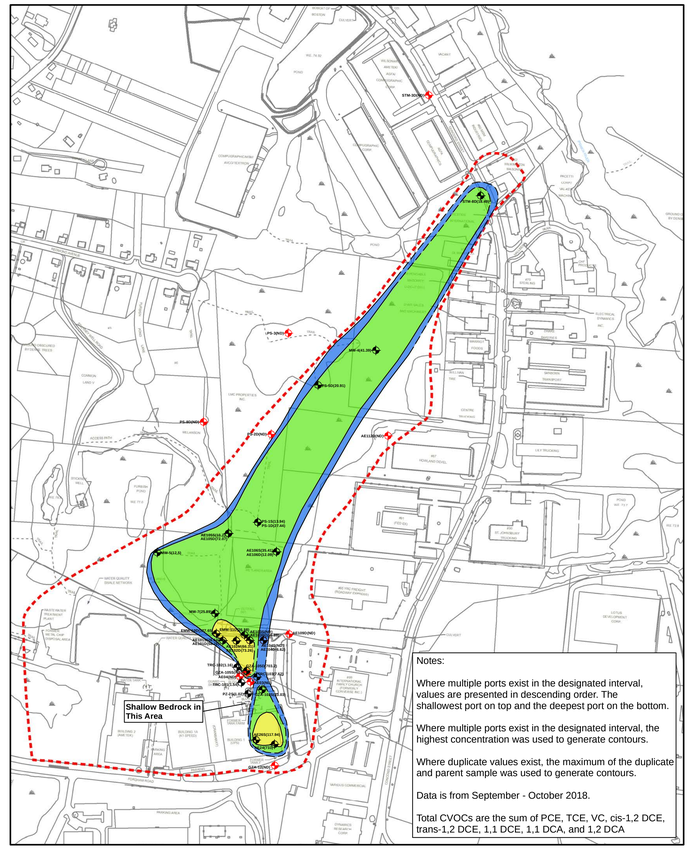
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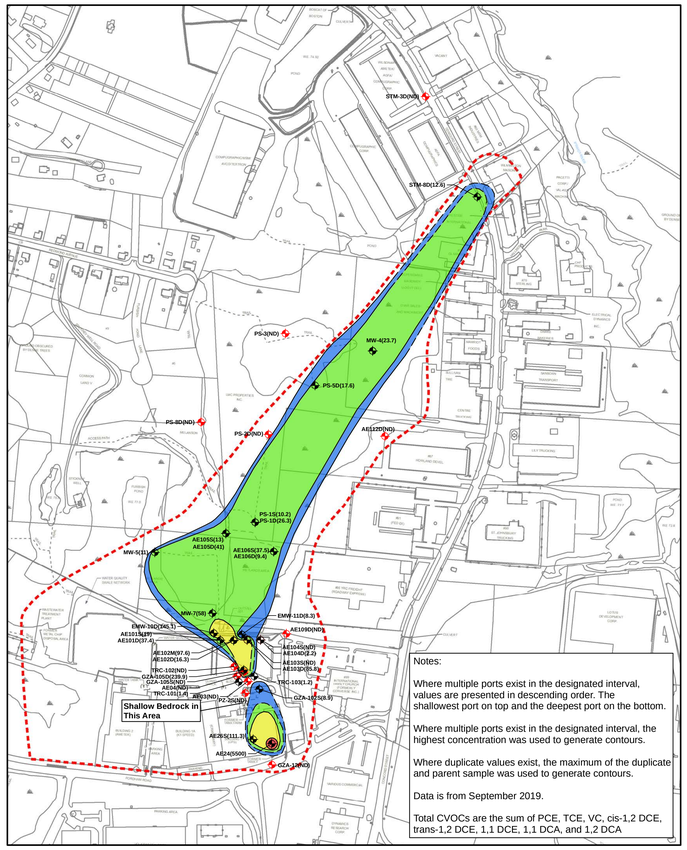
2016 Total CVOCs in Groundwater
Overburden (0 - 78 ft bgs)



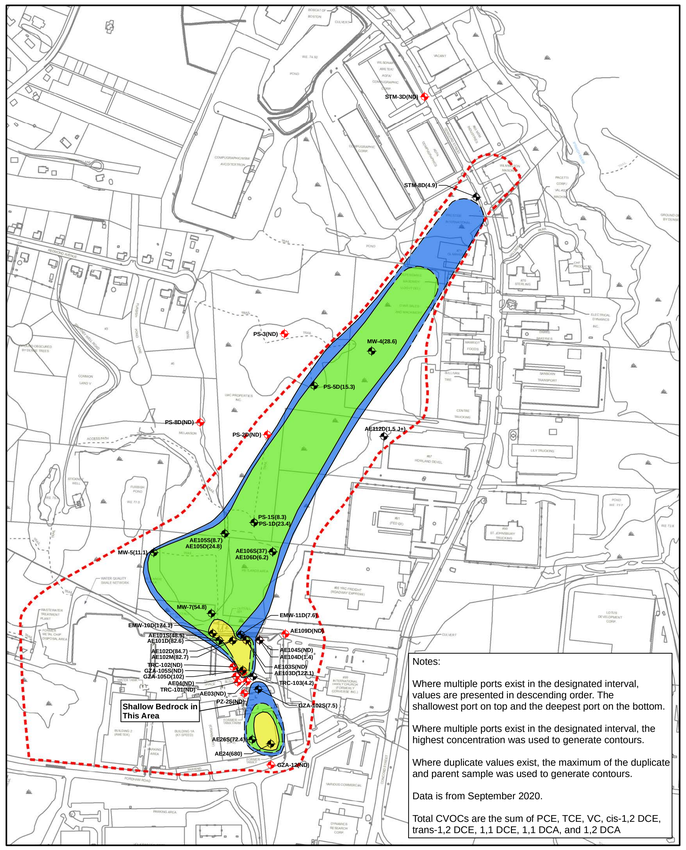
2017 Total CVOCs in Groundwater
Overburden (0 - 78 ft bgs)



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



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



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

Legend

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

N

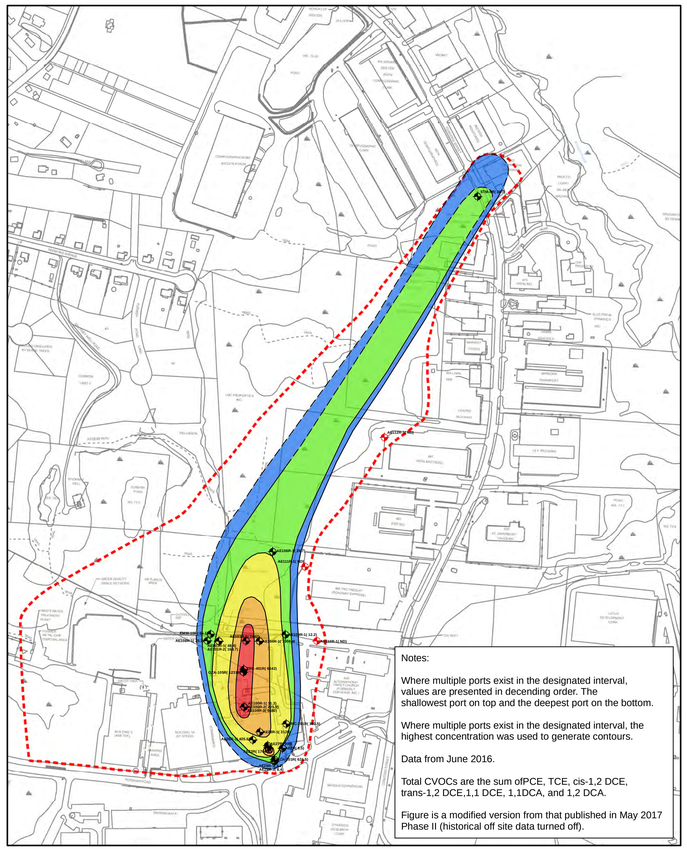
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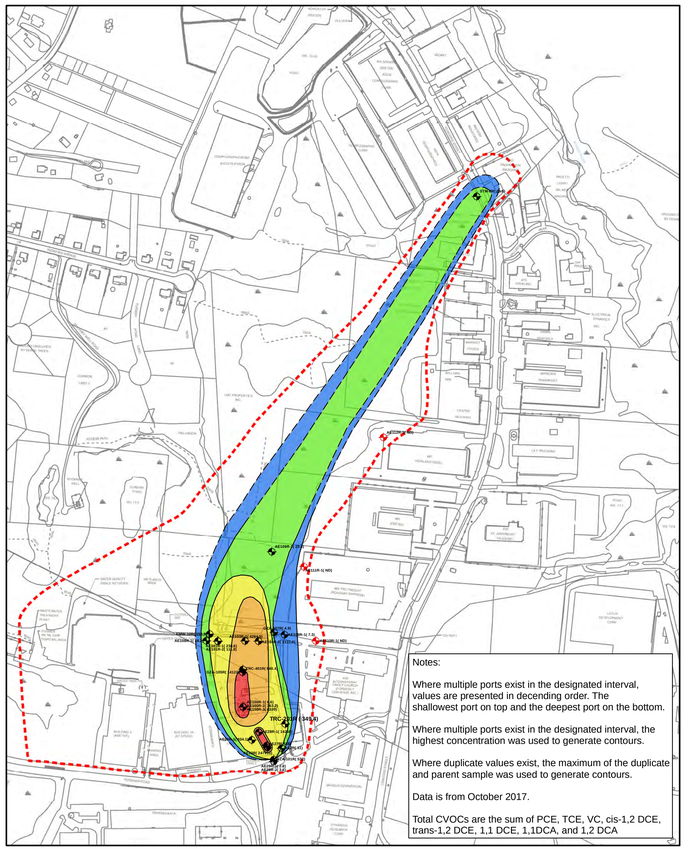
Total CVOCs in Groundwater
Overburden (0 - 78 ft bgs)

Figure 5-21

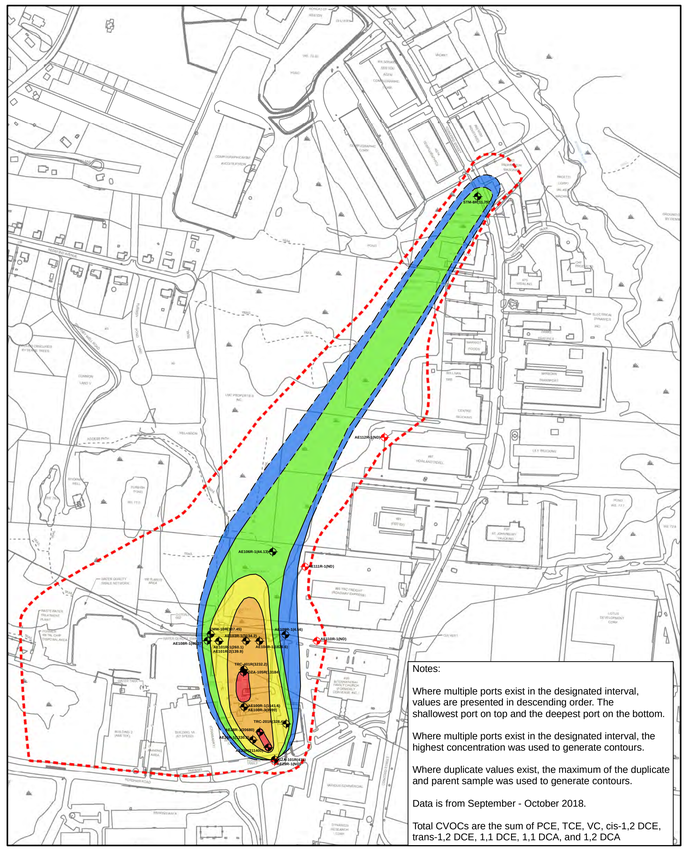
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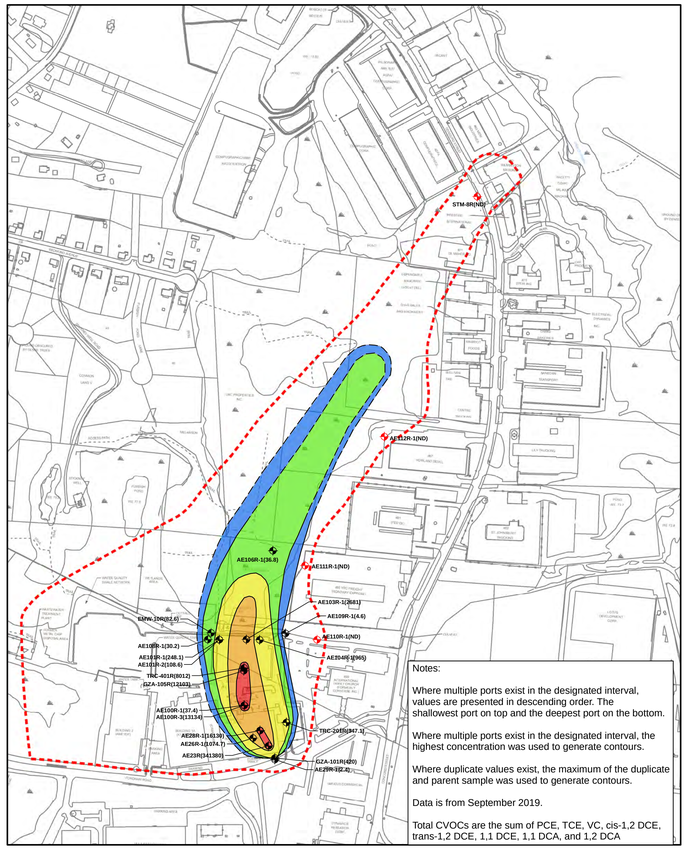
2016 Total CVOCs in Groundwater
Upper Bedrock (0 - 60 ft bgs)



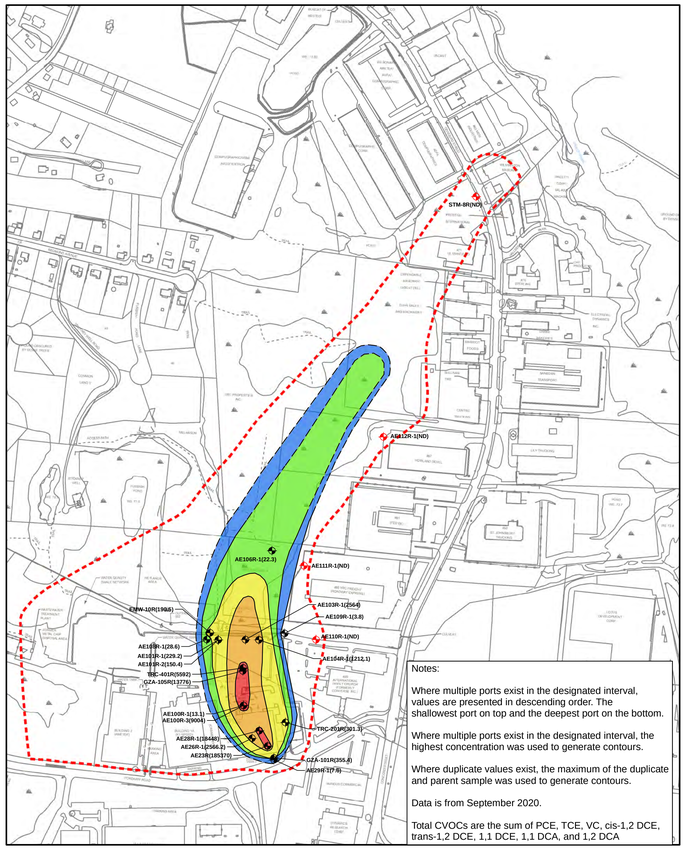
2017 Total CVOCs in Groundwater
Upper Bedrock (0 - 60 ft bgs)



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



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



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

Legend

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

N

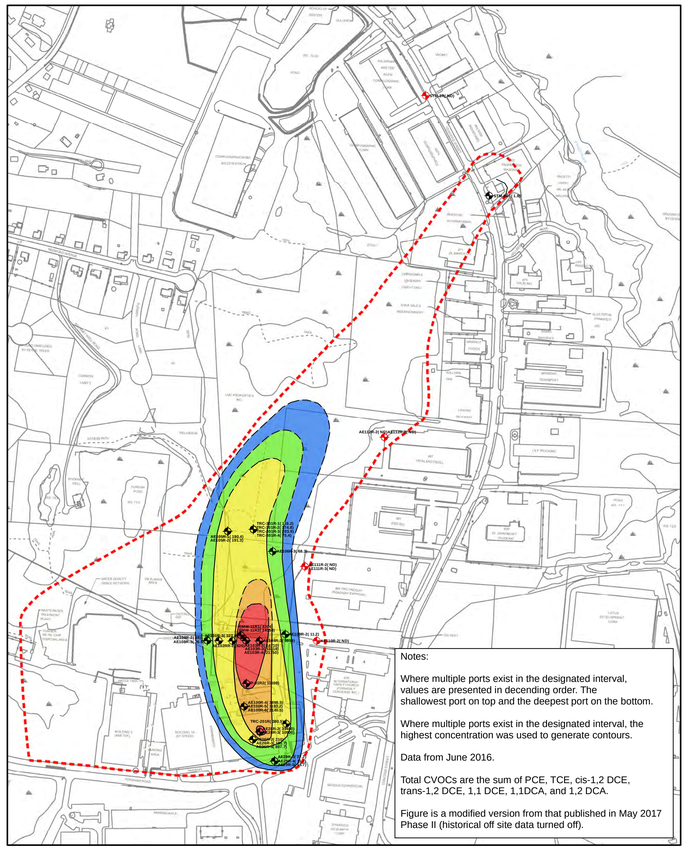
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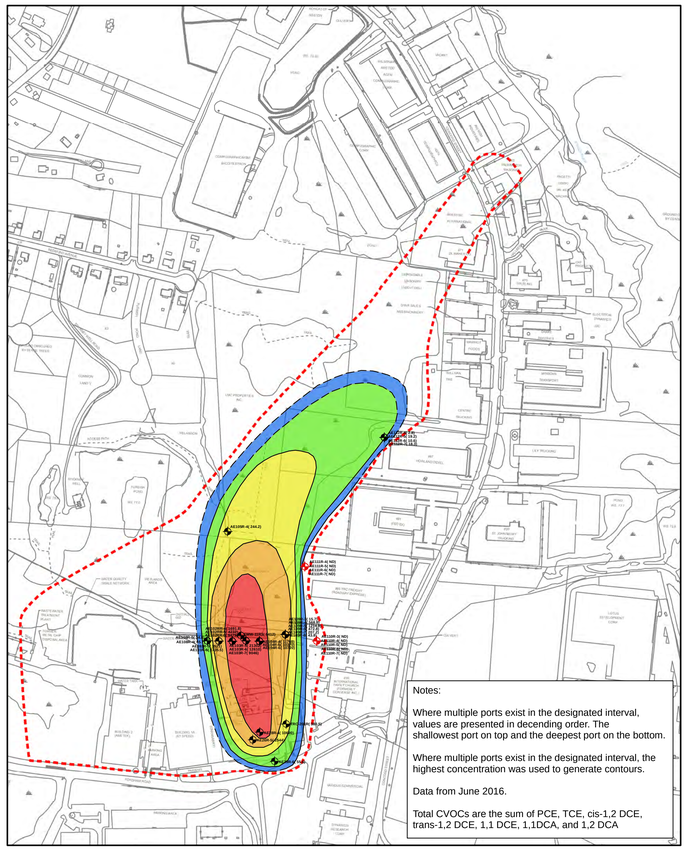
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Total CVOCs in Groundwater
Upper Bedrock (0 - 60 ft bgs)

Figure 5-22

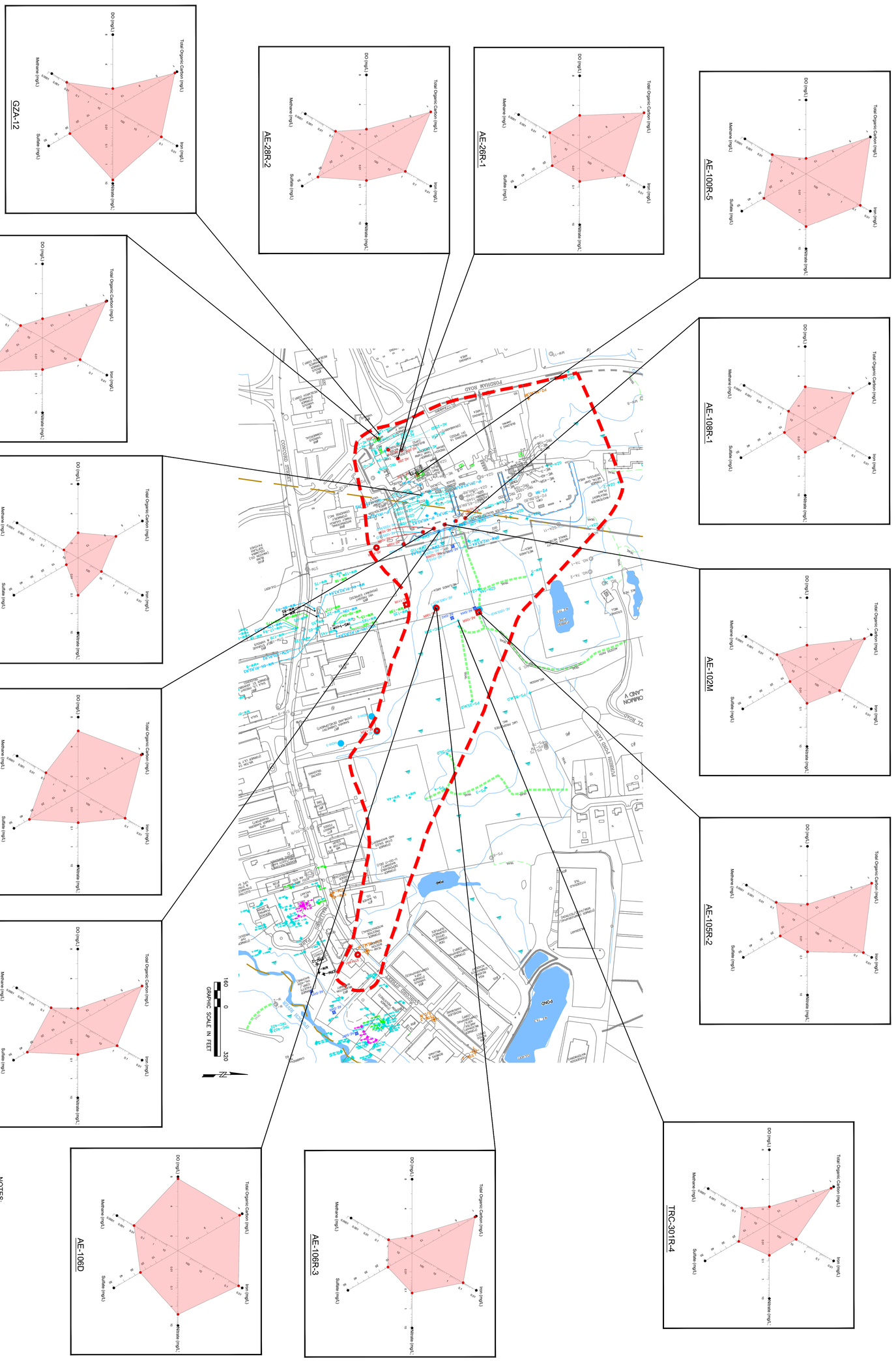
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STM-MW(1.7)
AE110R-2(ND)
AE111R-3(ND)
AE109R-2(3.7)
AE108R-3(58.6)
AE101R-3(12.8)
AE102RR-2(376.8)
AE104R-3(540)
AE103R-3(1427)
AE103R-4(124.6)
AE105R-6(9439)
AE105R-5(1860)
AE106R-6(2942)
AE26R-2(247.3)
AE29R-2(27899)
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AE112R-4(2.5)
AE113R-2(1.5)
AE113R-3(1.5)
AE113R-4(2.5)
AE114R-2(1.5)
AE114R-3(1.5)
AE114R-4(2.5)
AE115R-2(1.5)
AE115R-3(1.5)
AE115R-4(2.5)
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AE117R-2(1.5)
AE117R-3(1.5)
AE117R-4(2.5)
AE118R-2(1.5)
AE118R-3(1.5)
AE118R-4(2.5)
AE119R-2(1.5)
AE119R-3(1.5)
AE119R-4(2.5)
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AE120R-3(1.5)
AE120R-4(2.5)
AE121R-2(1.5)
AE121R-3(1.5)
AE121R-4(2.5)
AE122R-2(1.5)
AE122R-3(1.5)
AE122R-4(2.5)
AE123R-2(1.5)
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AE123R-4(2.5)
AE124R-2(1.5)
AE124R-3(1.5)


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AE111R-5(ND)
AE111R-6(ND)
AE109R-3(15.1)
AE109R-4(227)
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AE109R-6(1,040)
AE109R-7(144.4)
AE109R-8(9.7)
AE102R-5(2538)
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AE103R-5(103.5)
AE101R-5(4809)
AE101R-6(3134)
AE103R-6(16110)
AE103R-7(9615)
AE28R-4(4922)
AE26R-5(3485)
AE29R-6(499)
TRC-2(FR)(347.1)
AE112R-5(17.9)
AE112R-6(10.5)
AE106R-5(54)
AE110R-5(1.5)
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EMW-11R3(9365)
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AE102RR-43(ND)
AE102RR-44(ND)

Last saved by: BARRYK(2021-04-12) Last Plotted: 2021-04-12
Filename: C:\USERS\BARRYK\ONEDRIVE - AECOM DIRECTORY\WORKING JOBS\WILMINGTON\2020 RADAR PLOTS\FIG 5-25_GEOCHEM PARAMETER RADAR PLOTS.DWG

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



NOTES:
1. FOR EMW-11R2 PLOT, THE 2017 CONCENTRATIONS FOR DO WAS USED.
2. FOR AE-03 PLOT, THE 2017 CONCENTRATIONS FOR NITRATE, SULFATE, METHANE AND TOC WERE USED.

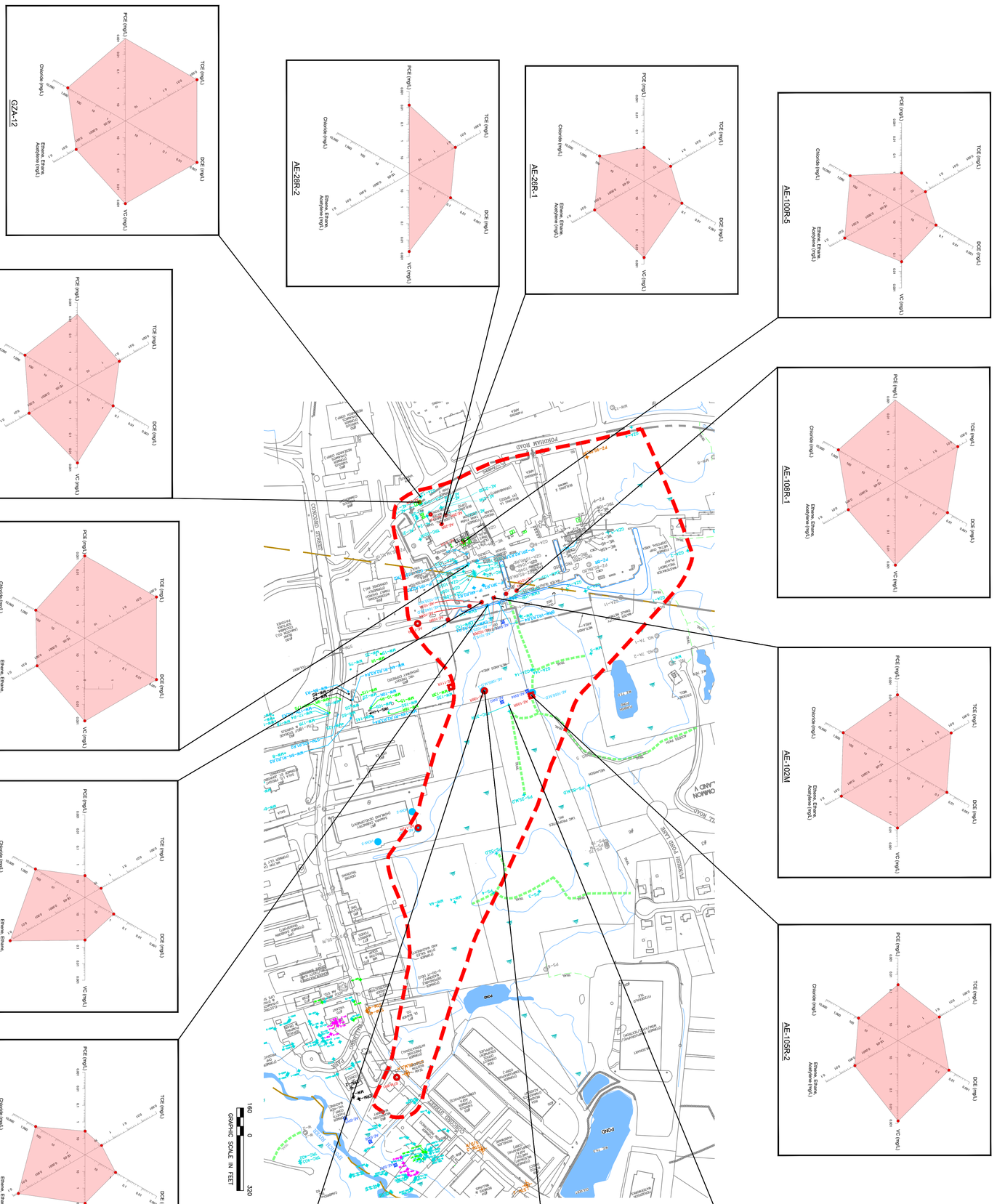
Former GE Facility - 50 Fordham Rd, Wilmington, MA
Lockheed Martin Corporation

2020 GEOCHEMICAL
PARAMETER RADAR PLOTS

60552044 Date: 2021-04-12

AECOM

FIGURE: 5-25



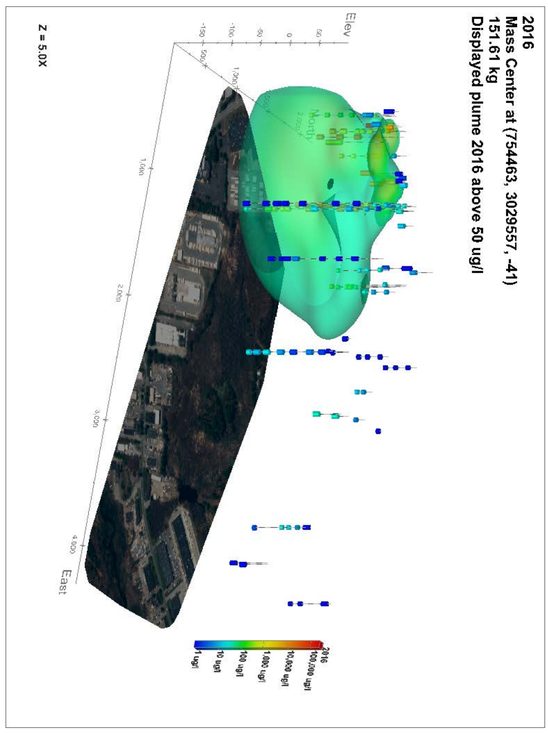
Former GE Facility - 50 Fordham Rd, Wilmington, MA
Lockheed Martin Corporation

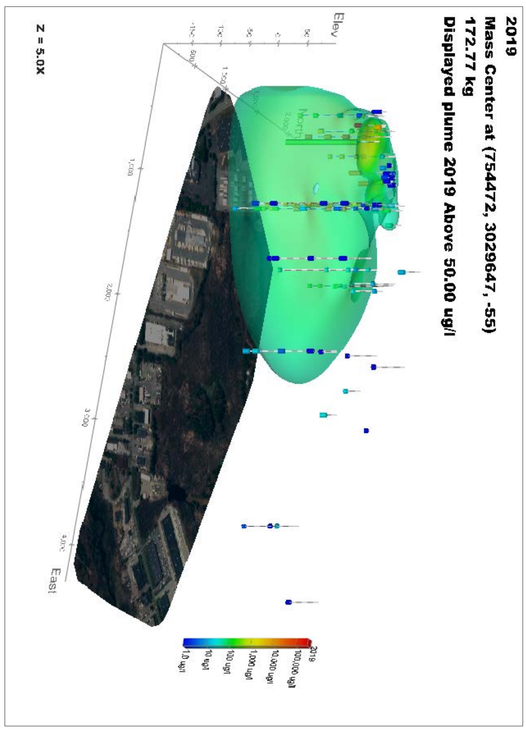
2020 PCE AND DAUGHTERS
RADAR PLOTS

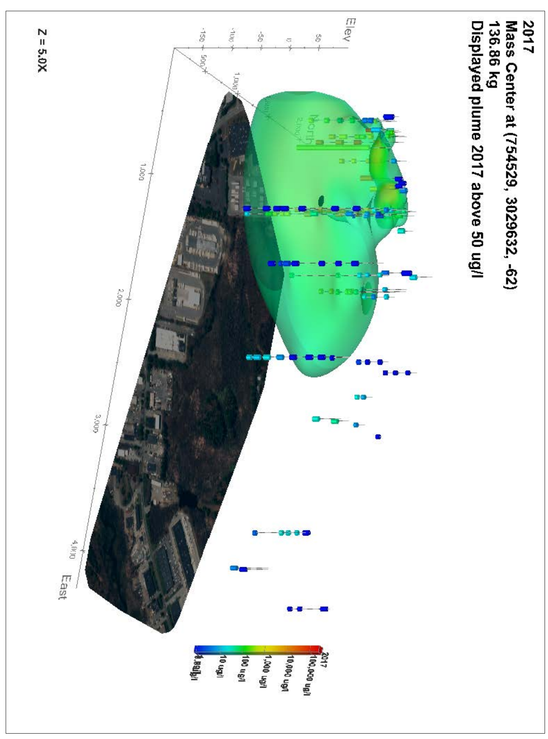
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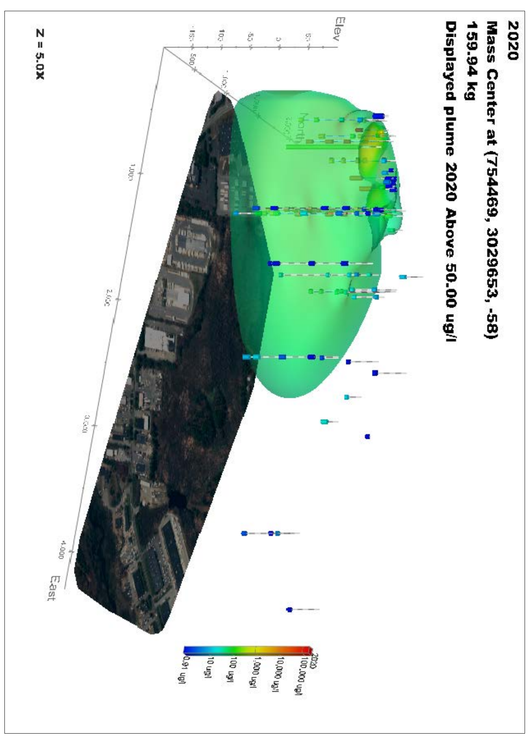
AECOM

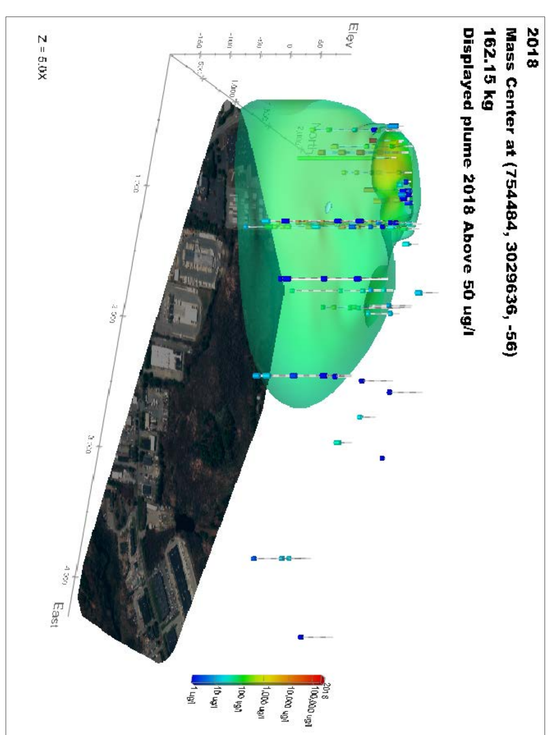
FIGURE: 5-26











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

CVOC PLUME MASS AND CENTER OF MASS OVER TIME

AECOM

60552044 Date: 2021-01-13

FIGURE: 5-27

TABLES

Table 2-1 Summary of September 2020 Groundwater Elevations

Table 2-2 Summary of September 2020 Groundwater Sampling

Table 2-3 Summary of September 2020 Groundwater Field Parameter Data

Table 2-4 Historical Summary of LNAPL Observations and Removal

Table 5-1 Summary of 2016 – 2020 Groundwater Analytical Results for Arsenic

Table 5-2 Summary of Mann Kendall Results for Arsenic in Groundwater

Table 5-3 Summary of 2016 – 2020 Groundwater Analytical Results for 1,4-Dioxane

Table 5-4 Summary of 2016 – 2020 Groundwater Analytical Results for Petroleum Compounds

Table 5-5 Summary of Mann Kendall Results for Petroleum Compounds in Groundwater

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Table 5-8 Summary of Mann Kendall Results for Chlorinated Volatile Organic Compounds in Groundwater

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Table 6-1 Summary of Historical Indoor and Ambient Air Analytical Results

Table 10-1 Post Temporary Solution Operations, Maintenance, and Monitoring Schedule

Table 10-2 Post Temporary Solution Operations, Maintenance, and Monitoring Groundwater Monitoring Plan

Table 2-1
September 8, 2020 Water Level Measurements, Groundwater and Surface Water Elevations
Lockheed Martin Corporation
Former G# Facility - Wilmington MA

Weather: Sunny, 82 degrees | Recorders: D.Potter, F. Burton, A. Grossman, B. Hoch, B. Maye, S. Haggett, A. Borden, M. Fitzgerald, L.Zogby

Well	Date	Time	Depth to Water	TOC Ref Elev	Calc'ed Elevation	Comments	PID Reading (ppmv)
AE-100R-1 (18-24)	9/8/2020	15:30	7.57	83.59	76.02		0.1
AE-100R-2 (43-48)		15:31	7.73	83.60	75.87		0.1
AE-100R-3 (50-56)		15:32	7.71	83.55	75.84		0.3
AE-100R-4 (63-68)		15:33	7.72	83.52	75.80		0.3
AE-100R-5 (88-93)		15:34	7.82	83.51	75.69		0.2
AE-100R-6 (108.5-113.5)		15:35	7.78	83.51	75.73		0.2
AE-101R-1 (30.5-35.5)		11:15	3.84	79.07	75.23	Water in road box	0.2
AE-101R-2 (55-60)		11:17	3.84	79.07	75.23	R=3.84	0.2
AE-101R-3 (80-85)		11:18	3.82	79.07	75.25		0.2
AE-101R-4 (153-158)		11:20	3.80	79.07	75.27		0.3
AE-101R-5 (175-180)		11:21	3.81	79.07	75.26		0.2
AE-101R-6 (227-232)		11:22	3.82	79.07	75.25		0.2
AE-101S		11:09	3.98	79.34	75.36		2.0
AE-101D		11:10	4.04	79.37	75.33		14.7
AE-102RR-1 (43-48)		9:22	4.53	79.83	75.30	Light corrosion on ports	0.3
AE-102RR-2 (75-80)		9:23	4.52	79.84	75.32	Missing red cap on port	0.3
AE-102RR-3 (111-116)		9:24	4.54	79.89	75.35		0.2
AE-102RR-4 (125-130)		9:25	4.47	79.84	75.37		0.5
AE-102RR-5 (141-146)		9:26	4.47	79.82	75.35		1.3
AE-102RR-6 (153-158)		9:27	4.48	79.83	75.35		1.9
AE-102S		9:14	4.84	80.12	75.28	Broken gasket	0.7
AE-102M		9:18	4.88	80.17	75.29	R=4.88	6.1
AE-102D		9:17	4.77	80.16	75.39		3.0
AE-103R-1 (48-53)		8:43	3.73	78.99	75.26	Corrosion on ports 1-6	0.1
AE-103R-2 (62-67)		8:44	3.84	78.99	75.15		0.2
AE-103R-3 (70-76)		8:46	3.68	79.01	75.33		0.2
AE-103R-4 (98-105)		8:47	3.59	79.00	75.41		0.9
AE-103R-5 (122-128)		8:48	3.81	79.08	75.27		0.4
AE-103R-6 (138-144)		8:49	3.63	79.00	75.37		1.1
AE-103R-7 (162.5-168)		8:50	3.59	78.99	75.40	R=3.59	0.3
AE-103S		8:36	4.08	79.43	75.35		4.9
AE-103M		8:37	4.07	79.42	75.35	One of the bolts is broken	0.6
AE-103D		8:38	4.04	79.42	75.38		4.0
AE-104R-1 (48-54)		8:26	3.53	78.90	75.37	Silt coating on dry bag over fittings	0.1
AE-104R-2 (62-68)		8:29	3.44	78.85	75.41		0.2
AE-104R-3 (97-102)		8:30	3.43	78.86	75.43	R=3.43	0.3
AE-104R-4 (128-133)		8:32	3.52	78.86	75.34		1.6
AE-104R-5 (156-162)		8:33	3.83	78.86	75.03		3.6
AE-104R-6 (168-174)		8:34	3.67	78.85	75.18		2.7

Notes: R = replicate field measurement

Table 2-1
September 8, 2020 Water Level Measurements, Groundwater and Surface Water Elevations
Lockheed Martin Corporation
Former G# Facility - Wilmington MA

Weather: Sunny, 82 degrees

Recorders: D.Potter, F. Burton, A. Grossman, B. Hoch, B. Maye, S. Haggett, A. Borden, M. Fitzgerald, L.Zogby

Well	Date	Time	Depth to Water	TOC Ref Elev	Calc'ed Elevation	Comments	PID Reading (ppmv)
AE-104S	9/8/2020	8:20	3.96	79.30	75.34		0.8
AE-104M		8:22	3.90	79.28	75.38		0.4
AE-104D		8:23	3.94	79.30	75.36	R = 3.94	0.5
AE-108R-1 (36.5-43.5)		10:56	3.52	78.81	75.29	Rusted casing, broken gasket	0.4
AE-108R-2 (68-73)		10:58	3.50	78.85	75.35	Rusted U-bolt.	1.9
AE-108R-3 (84-89)		10:59	3.41	78.82	75.41		2.6
AE-108R-4 (145-150)		11:01	3.45	78.79	75.34		0.3
AE-108R-5 (163-168)		11:03	3.34	78.80	75.46		1.4
AE-105R-1 (90.5-95.5)		16:17	4.74	79.81	75.07		6.1
AE-105R-2 (98-103)		16:18	4.79	79.89	75.10		0
AE-105R-3 (107.5-112.5)		16:19	4.80	79.87	75.07	R = 2.00	0.1
AE-105R-4 (125-130)		16:20	4.86	79.83	74.97		0.0
AE-105R-5 (143-148)		16:21	4.86	79.81	74.95		0.00
AE-105R-6 (156-161)		-	-	79.87	-	Port not functional (since install)	-
AE-105S		16:22	4.42	79.39	74.97		8.5
AE-105M		16:23	4.38	79.35	74.97		0.8
AE-105D		16:24	4.45	79.42	74.97		6.1
AE-106R-1 (47-52)		16:00	4.33	79.15	74.82		0.3
AE-106R-2 (69.5-74.5)		16:01	4.31	79.12	74.81		0.2
AE-106R-3 (84-88)		16:02	4.26	79.13	74.87		0.4
AE-106R-4 (144.5-150.5)		16:03	4.21	79.15	74.94		0.5
AE-106R-5 (164-169)		16:04	4.13	79.14	75.01		0.4
AE-106S		16:05	3.65	78.42	74.77	SW = 3.55 ft	1.0
AE-106M		16:06	3.64	78.44	74.80		0.7
AE-106D		16:07	3.67	78.41	74.74		1.2
TRC-301R-1 (96.5-100.5)		16:08	3.69	78.57	74.88		0.0
TRC-301R- 2 (81.5-85.5)		16:09	3.70	78.57	74.87		0.0
TRC-301R-3 (75.5-79.5)		16:10	3.70	78.57	74.87		0.0
TRC-301R-4 (65.5-69.5)		16:11	3.65	78.57	74.92		0.1
PZ-9S		13:34	6.94	82.28	75.34		0.0
PZ-9D		13:32	6.38	82.25	75.87		0.0
PZ-9R		13:30	6.46	82.37	75.91		0.0
GZA-12		8:17	11.31	87.62	76.31		1.0
GZA-101R		13:24	12.57	87.41	74.84		0.2
AE-1S		8:22	10.06	86.26	76.20		0.8
AE-1I		8:20	10.49	86.68	76.19		0.7
AE-2R		8:32	9.19	85.23	76.04		1.9
AE-2I		8:34	9.36	85.39	76.03		1.0

Notes:
R = replicate field measurement
SW = surface water

Table 2-1
September 8, 2020 Water Level Measurements, Groundwater and Surface Water Elevations
Lockheed Martin Corporation
Former G# Facility - Wilmington MA

Weather: Sunny, 82 degrees | Recorders: D.Potter, F. Burton, A. Grossman, B. Hoch, B. Maye, S. Haggett, A. Borden, M. Fitzgerald, L.Zogby

Well	Date	Time	Depth to Water	TOC Ref Elev	Calc'ed Elevation	Comments	PID Reading (ppmv)
TRC-101	9/8/2020	11:32	6.82	82.18	75.36	No LNAPL	73.5
TRC-102		9:45	5.81	81.21	75.40		2.3
TRC-103		14:00	6.58	82.02	75.44		10.0
TRC-201R		14:48	8.92	85.02	76.10		0.1
TRC-202R		-	-	78.53	-	Borehole sealed with blank FLUTe Liner	-
GZA-102S		13:55	7.36	82.82	75.46		0.3
GZA-102R1		15:09	5.35	83.09	77.74		0.3
GZA-102R2		15:09	7.43	83.08	75.65		0.0
PZ-2S		13:24	6.77	82.81	76.04	No LNAPL	1.0
TRC-401R		9:49	6.25	82.00	75.75		1.1
GZA-105S		10:04	6.48	81.89	75.41	R=6.48; stripped bolts	733.8
GZA-105D		9:54	6.35	81.82	75.47		5.7
GZA-105R		9:59	6.17	81.80	75.63		0.3
WE-105R2		14:28	5.48	82.05	76.57		0.4
BRW-1R2		10:27	5.45	80.76	75.31	R=5.45	1.6
BRW-1R3		10:30	5.20	80.57	75.37		2.3
BRW-1R4		10:32	5.28	80.60	75.32		2.6
EMW-10S		10:35	4.79	80.88	76.09		0.2
EMW-10D		10:38	5.46	80.78	75.32		6.8
EMD-10R		10:45	5.66	80.93	75.27		0.5
EMW-11S		8:56	4.60	80.32	75.72		0.2
EMW-11D		9:00	5.18	80.41	75.23		0.3
EMW-11R1		9:02	5.44	80.84	75.40		0.4
EMW-11R2		9:03	5.39	80.83	75.44		1.3
EMW-11R3		9:05	5.41	80.80	75.39		1.0
IP-1R1		13:54	6.48	82.12	75.64		1.6
IP-1R2		13:55	6.41	82.07	75.66		6.7
IP-1R3		13:56	4.94	82.04	77.10		19.6
IP-2R1		11:39	6.67	82.17	75.50		17.2
IP-2R2		11:42	6.51	82.14	75.63		38.5
IP-2R3		11:44	6.44	82.12	75.68		1.3
IP-2R4		11:46	6.43	82.08	75.65		179.3
IP-3R1		9:31	5.55	81.02	75.47	J-Plugs not on upon opening	0.6
IP-3R2		9:33	5.15	80.98	75.83	R=5.15	23.3
IP-4R1		14:17	5.18	80.84	75.66		6.2
IP-4R2		14:18	5.29	80.79	75.50		408.0
IP-4R3		14:19	5.21	80.77	75.56		58.2

Notes: R = replicate field measurement NA = Not Applicable

Table 2-1
September 8, 2020 Water Level Measurements, Groundwater and Surface Water Elevations
Lockheed Martin Corporation
Former G# Facility - Wilmington MA

Weather: Sunny, 82 degrees | Recorders: D.Potter, F. Burton, A. Grossman, B. Hoch, B. Maye, S. Haggett, A. Borden, M. Fitzgerald, L.Zogby

Well	Date	Time	Depth to Water	TOC Ref Elev	Calc'ed Elevation	Comments	PID Reading (ppmv)
AE-23S	9/8/2020	10:33	9.52	85.62	76.10	R=9.53	3.1
AE-23R		10:44	11.21	85.54	74.33	gauged bottom 9/24; no DNAPL	3,400
AE-24		11:15	9.57	85.63	76.06	gauged bottom 9/24; no DNAPL	57.5
AE-25S		10:40	9.42	85.49	76.07		0.8
AE-25D		10:38	9.29	85.38	76.09		0.2
AE-25R		10:42	9.23	85.35	76.12		0.2
AE-26S		10:20	9.50	85.49	75.99	gauged bottom 9/24; no DNAPL	0.4
AE-26D		10:23	9.28	85.25	75.97	gauged bottom 9/24; no DNAPL	0.1
AE-27R		10:26	9.46	85.48	76.02	Well is on 25° angle.	0.1
AE-3		13:58	7.02	82.41	75.39	No LNAPL on 9/8	65.3
AE-4		11:28	6.60	82.03	75.43	No LNAPL on 9/8	0.2
IP-12		-	-	-	-	Abandoned June 2017	
IP-13		-	-	-	-	Abandoned June 2017	
IP-14		-	-	-	-	Abandoned June 2017	
IP-15		-	-	-	-	Abandoned June 2017	
DP-1		9:01	4.22	80.01	75.79		1.5
DP-2		9:05	3.82	79.75	75.93		2.7
CW-1		13:14	5.60	80.94	75.34	depth to LNAPL = 5.58 ft	342.2
CW-2		11:55	5.35	80.73	75.38	depth to LNAPL = 5.34 ft	19.1
PZ-8R		-	-	-	-	Abandoned	
GZA-5		9:21	4.63	80.03	75.40	R=4.63, no j-plug	0.0
GZA-6		9:15	5.38	80.46	75.08		0.0
GZA-10		9:12	5.12	80.39	75.27		1.1
STM-3S		11:15	11.21	82.97	71.76		0
STM-3D		11:17	2.58	82.93	80.35		0
STM-3R		11:24	-	82.94	-	Blockage at 0.03 ft. bgs. Possibly silted in	-
STM-8S		11:41	6.42	78.91	72.49		0
STM-8M		11:38	6.52	78.87	72.35		0
STM-8D		11:32	6.46	78.86	72.40	R=6.46	0
STM-8R		11:35	6.38	78.78	72.40		0
STM-8R1		11:52	7.58	79.08	71.50		0
STM-10S		10:06	-	95.70	DRY	Dry at 19.60 ft. bgs.	0
STM-10R1		10:08	22.96	95.79	72.83		0
STM-10R2		10:10	23.05	95.79	72.74		0
TRC-402 (Reading)		11:15	27.25	97.47	70.22		1.1
TRC-403 (Reading)		11:14	27.52	97.73	70.21		1.5

Notes: R = replicate field measurement NR = Not recorded

Table 2-1
September 8, 2020 Water Level Measurements, Groundwater and Surface Water Elevations
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Former G# Facility - Wilmington MA

Weather: Sunny, 82 degrees

Recorders: D.Potter, F. Burton, A. Grossman, B. Hoch, B. Maye, S. Haggett, A. Borden, M. Fitzgerald, L.Zogby

Well	Date	Time	Depth to Water	TOC Ref Elev	Calc'ed Elevation	Comments	PID Reading (ppmv)
MW-1	9/8/2020	16:59	3.81	78.81	75.00		-
MW-4		9:46	3.27	77.23	73.96	SW= dry	1.0
MW-4A		9:34	2.56	76.46	73.90	SW= dry	0.0
MW-5		16:45	3.97	78.99	75.02		0.8
MW-7		16:15	5.28	80.33	75.05	R=5.28	4.2
GZA-14		16:25	7.60	82.64	75.04		0.0
GZA-14A		16:30	8.15	82.31	74.16		0.8
PS-1S		14:02	4.43	79.21	74.78		0.1
PS-1M		14:01	2.28	77.30	75.02	Steel drive point stickup broken; AECOM repaired by installing outer PVC casing over steel (Ref elevation changes November 2020 forward)	0.0
PS-1D		14:00	1.64	76.51	74.87		0.6
PS-2S		14:57	2.55	77.71	75.16		0.0
PS-2M		15:00	2.27	77.61	75.34		-
PS-2D		14:52	2.01	76.91	74.90	R=2.00	-
PS-3		10:26	2.59	76.64	74.05		0.0
PS-4		10:05	4.61	78.66	74.05		0.0
PS-5S		10:15	5.35	80.49	75.14		0
PS-5D		10:17	5.05	79.68	74.63	R=5.05	0
PS-8S		16:48	8.62	83.37	74.75		0
PS-8M		16:49	8.04	82.53	74.49		0
PS-8D		16:50	7.81	82.77	74.96		0
GZA-1 (wwtp)		14:02	6.53	79.05	72.52	SW= Dry.	0
GZA-2 (wwtp)		13:40	3.90	79.12	75.22	SW= Dry. R=3.91	-
GZA-3 (wwtp)		13:46	4.51	79.93	75.42	SW = Dry.	0
GZA-4 (wwtp)		14:10	7.62	83.37	75.75		0
STM-? (Wilm. Masonry)		13:50	5.23	75.57	70.34		0
AE-112R-1 (41-51)		10:22	7.28	81.76	74.48		0.1
AE-112R-2 (62-72)		10:24	7.04	81.78	74.74		0.1
AE-112R-3 (91-101)		10:26	7.15	81.78	74.63		0
AE-112R-4 (113-123)		10:28	7.31	81.80	74.49		0
AE-112R-5 (136-146)		10:30	7.29	81.75	74.46	R=7.29	0
AE-112R-6 (153-163)		10:32	7.24	81.73	74.49		0.2
AE-112R-7 (168-175)		10:35	7.24	81.74	74.50		0
AE-112D		10:38	8.83	82.66	73.83		0.8
HOW-2 (MW-2)		11:10	7.59	84.35	76.76		0.2
HOW-3 (MW-3)		10:43	9.80	81.83	72.03		0
# 3 Furbish Pond Ln (Residential Irrigation)		15:17	25.26	103.21	77.95		-
GZA-107D		14:35	5.77	81.08	75.31		0
GZA-107M		14:37	5.55	80.87	75.32		0
GZA-107R		14:45	5.31	80.58	75.27		0

Notes:

R = replicate field measurement
SW = surface water
NM = not measured

Table 2-1
September 8, 2020 Water Level Measurements, Groundwater and Surface Water Elevations
Lockheed Martin Corporation
Former G# Facility - Wilmington MA

Weather: Sunny, 82 degrees | Recorders: D.Potter, F. Burton, A. Grossman, B. Hoch, B. Maye, S. Haggett, A. Borden, M. Fitzgerald, L.Zogby

Well	Date	Time	Depth to Water	TOC Ref Elev	Calc'ed Elevation	Comments	PID Reading (ppmv)
AE-26R-1 (50-56)	9/8/2020	9:47	9.83	85.84	76.01	GW elevations calculated from measurements taken with vacuum water level gauge at shallow water FLUTes (AE-26R, AE-28R, AE-29R) TOC reference elevation for these calculations is the Rim elevation. These groundwater elevations are estimated as the distance from the Rim to the gauge was not recorded in the field. These elevations are estimated based approximate distance of 2 ft from Rim to Gauge on 9/8/2020.	NM
AE-26R-2 (72-78)		9:56	9.47	85.84	76.37		NM
AE-26R-3 (81-88)		10:03	9.52	85.84	76.32		NM
AE-26R-4 (104-114)		10:08	9.55	85.84	76.30		NM
AE-26R-5 (123-132)		10:15	9.55	85.84	76.29		NM
AE-28R-1 (45-51)		10:53	9.67	85.88	76.21		NM
AE-28R-2 (75-85)		10:57	9.68	85.88	76.21		NM
AE-28R-3 (98-108)		11:03	9.61	85.88	76.27		NM
AE-28R-4 (132-142)		11:09	9.91	85.88	75.98		NM
AE-29R-1 (37-44)		11:24	10.72	86.97	76.25		NM
AE-29R-2 (47-54)		11:28	10.74	86.97	76.23		NM
AE-29R-3 (70-76)		11:32	11.05	86.97	75.93		NM
AE-29R-4 (90-96)		11:42	11.28	86.97	75.69		NM
AE-29R-5 (113-119)		11:48	10.61	86.97	76.36		NM
AE-29R-6 (140-146)		11:54	10.76	86.97	76.21		NM
AE-109R-1 (38-43)		8:15	4.86	80.20	75.34		0.1
AE-109R-2 (66-76)		8:17	4.78	80.17	75.39		0.0
AE-109R-3 (126-136)		8:19	4.08	80.19	76.11		0.0
AE-109R-4 (174-180.5)		8:21	4.87	80.17	75.30		0.0
AE-109R-5 (183-189)		8:23	4.86	80.18	75.32		0.0
AE-109R-6 (196-201)		8:25	4.86	80.15	75.29		0.0
AE-109R-7 (204-214)		8:27	4.85	80.17	75.32		0.0
AE-109R-8 (245-250)		8:29	4.97	80.20	75.23		0.0
AE-109D		8:31	5.12	80.79	75.67		0.2
AE-110R-1 (34-44)		8:38	4.78	80.67	75.89	R=4.78	0.2
AE-110R-2 (70-80)		8:40	4.74	80.68	75.94		0.0
AE-110R-3 (128-138)		8:42	4.68	80.64	75.96		0.0
AE-110R-4 (158-168)		8:44	4.65	80.62	75.97		0.0
AE-110R-5 (171-182)		8:46	4.66	80.62	75.96		0.1
AE-110R-6 (190-200)		8:48	4.66	80.62	75.96		0.2
AE-110R-7 (224-234)		8:50	4.64	80.64	76.00		0.2
AE-111R-1 (44-54)		9:08	13.94	89.03	75.09		0.0
AE-111R-2 (66-74)		9:10	13.88	89.01	75.13		0.4
AE-111R-3 (95-103)		9:15	13.85	89.02	75.17		0.3
AE-111R-4 (140-150)		9:17	13.78	89.02	75.24	R=13.78	0.2
AE-111R-5 (155-165)		9:19	13.76	89.05	75.29		0.4
AE-111R-6 (168-173)		9:23	13.76	89.04	75.28		0.0
AE-111R-7 (181-191)		9:25	13.78	89.06	75.28		0.1

Notes: R = replicate field measurement

Table 2-1
September 8, 2020 Water Level Measurements, Groundwater and Surface Water Elevations
Lockheed Martin Corporation
Former G# Facility - Wilmington MA

Weather: Sunny, 82 degrees

Recorders: D.Potter, F. Burton, A. Grossman, B. Hoch, B. Maye, S. Haggett, A. Borden, M. Fitzgerald, L.Zogb

Well	Date	Time	Depth to Water	TOC Ref Elev	Calc'ed Elevation	Comments
MW-1R	9/9/2020	16:25	13.99	89.48	75.49	Small number of monitoring wells on YRC property measured by AECOM on 9/9/2020, one day following the site-wide water levels on 9/8/2020. Unable to measure depths to water in more YRC site wells on 9/8 due to groundwater remediation pumping/recirculation at the time.
MW-1S		16:27	14.01	89.56	75.55	
MW-4N-R1		-	NM	88.05	NM	
MW-4N-R2		-	NM	88.02	NM	
MW-4N-R3		-	NM	88.07	NM	
MW-4N-R4		-	NM	88.06	NM	
MW-6N-R1		-	NM	90.61	NM	
MW-6N-R2		-	NM	90.40	NM	
MW-6N-R3		-	NM	90.73	NM	
MW-6N-R4		-	NM	90.51	NM	
MW-6N-R5		-	NM	90.51	NM	
MW-7S		16:26	13.30	86.57	73.27	
MW-12S		-	NM	92.43	NM	
MW-13R		16:31	15.23	90.19	74.96	
MW-13S		16:32	15.21	90.23	75.02	
MW-14N-R1		-	NM	91.09	NM	
MW-14N-R2		-	NM	91.14	NM	
MW-14N-R3		-	NM	91.26	NM	
MW-14N-R4		-	NM	91.39	NM	

Notes: R = replicate field measurement

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September 8, 2020 Water Level Measurements, Groundwater and Surface Water Elevations
Lockheed Martin Corporation
Former G# Facility - Wilmington MA

Weather: Sunny, 82 degrees | Recorders: D.Potter, F. Burton, A. Grossman, B. Hoch, B. Maye, S. Haggett, A. Borden, M. Fitzgerald, L.Zogby

Well	Date	Time	Depth to Water	TOC Ref Elev	Calc'ed Elevation	Comments
AE-106S	1/0/1900	11:10	DRY - No Surface Water present around wells	78.42	-	
AE-106R-1 (47-52)		11:14		79.15	-	
TRC-301R-1 (96.5-100.5)		11:18		78.57	-	
MW-4		9:53		77.23	-	Dug down ~ 6 inches - no water
MW-4A		9:47		76.46	-	
MW-5		15:43		78.99	-	
PS-1S		14:02		79.21	-	
PS-1M		14:01		77.30	-	
PS-1D		14:00		76.51	-	
PS-2S		14:57		77.71	-	
PS-2M		15:00		77.61	-	
PS-2D		14:52		76.91	-	
GZA-1 (wwtp)		14:02		79.05	-	
GZA-2 (wwtp)		13:40		79.12	-	
SG-1		17:40	DRY	75.78	--	Dug down 12 inches - no water
SG-2		18:00	DRY	70.82	--	Dug down 12 inches - no water
Concord Street Pond		17:45	1.14	75.91	74.77	Ref Elev is top of 2nd outfall pipe into Pond, west of Fordham Rd

Notes: R = replicate field measurement

Table 2-2
September 2020 Groundwater Sample Summary
Former GE Facility, 50 Fordham Road, Wilmington, MA

Date Sampled	Area	Location ID	FLUTe port	Interval	Well Diameter (inch)	Screen Interval (Ft bgs)	Water Level Measurements (1)	VOCs (SW846 -USEPA Method 8260C)	1,4-dioxane (SW846/USEPA Method 8270D SIM) DL <0.3 ug/l	VPH (MassDEP VPH Method)	EPH and polycyclic aromatic hydrocarbons (PAH) (MassDEP- EPH-04-1.1 Revision 1)	Total As, Fe, Mn (SW846 - U SEPA Method 6010C)	Dissolved As, Fe, Mn (field filtered) (SW846 - USEPA Method 6010C)	Chloride (USEPA 300.0)	Nitrite	Nitrate (USEPA 300.0)	Sulfate (USEPA 300.0)	Sulfide	Total organic carbon (SW- 846 9060A)	Methane, Ethane, Ethene, Acetylene, Propane (Pace-Microseeps AM20Gax)	Dissolved hydrogen (Pace - Microseeps - Bubble Strip)	PIANO - Petroleum Analyses (Alpha Analytical Services)	Comments
9/14/2020	Building 1, inside	AE-26R	R1	Upper Bedrock	Shallow FLUTE	50 - 56	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1		
9/14/2020	Building 1, inside	AE-26R	R2	Middle Bedrock	Shallow FLUTE	72 - 78	1	1															
9/14/2020	Building 1, inside	AE-26R	R5	Lower Bedrock	Shallow FLUTE	123 - 132	1	1	1														
9/14/2020	Building 1, inside	AE-28R	R1	Upper Bedrock	Shallow FLUTE	45 - 51	1	1															
9/14/2020	Building 1, inside	AE-28R	R2	Middle Bedrock	Shallow FLUTE	75 - 85	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1		
9/14/2020	Building 1, inside	AE-28R	R3	Middle Bedrock	Shallow FLUTE	98 - 108	1	1	1														
9/14/2020	Building 1, inside	AE-28R	R4	Lower Bedrock	Shallow FLUTE	132 - 142	1	1															
9/14/2020	Building 1, inside	AE-26S	--	Overburden	2	25 - 30	1	1				1	1										
9/14/2020	Building 1, inside	AE-23R	--	Upper Bedrock	1.5	44.75 - 54.75	1	1	1	1	1												
9/14/2020	Building 1, inside	AE-24	--	Overburden	2	7.25 - 17.2.5	1	1	1														
9/22/2020	Tank F	AE-29R	R1	Upper Bedrock	Shallow FLUTE	37 - 44	1	1															
9/22/2020	Tank F	AE-29R	R3	Middle Bedrock	Shallow FLUTE	70 -76	1	1															
9/22/2020	Tank F	AE-29R	R5	Middle Bedrock	Shallow FLUTE	113 - 119	1	1															
9/22/2020	Tank F	AE-29R	R6	Lower Bedrock	Shallow FLUTE	140 -146	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1		
9/24/2020	Tank F	GZA-101R	--	Upper Bedrock	PVC	36 - 38	1	1				1	1	1	1	1	1	1		1	1		
9/10/2020	Former Tank Farm	AE-100R	R1	Upper Bedrock	FLUTE	18 - 24	1	1	0	1	1												
9/10/2020	Former Tank Farm	AE-100R	R3	Upper Bedrock	FLUTE	50 - 56	1	1	1														
9/10/2020	Former Tank Farm	AE-100R	R4	Middle Bedrock	FLUTE	63 - 68	1	1	1														
9/10/2020	Former Tank Farm	AE-100R	R5	Middle Bedrock	FLUTE	88 - 93	1	1	0			1	1	1	1	1	1	1	1	1	1		
9/10/2020	Former Tank Farm	AE-100R	R6	Middle Bedrock	FLUTE	108.5 - 113.5	1	1	1														
9/18/2020	Transect A	AE-101D	--	Overburden	2	20 - 25	1	1	1														Matrix Spike/Matrix Spike Duplicate (MS/MSD)
9/23/2020	Transect A	AE-101R	R1	Upper Bedrock	CMT	30.5 - 35.5	1	1	0														Duplicate for VOCs
9/23/2020	Transect A	AE-101R	R2	Upper Bedrock	CMT	55-60	1	1	1														
9/23/2020	Transect A	AE-101R	R3	Middle Bedrock	CMT	80 - 85	1	1	1														
9/24/2020	Transect A	AE-101R	R5	Lower Bedrock	CMT	175 - 180	1	1	1														MS/MSD
9/24/2020	Transect A	AE-101R	R6	Lower Bedrock	CMT	227-232	1	1	1														
9/18/2020	Transect A	AE-101S	--	Overburden	2	10 - 15	1	1	1														
9/9/2020	Transect A	AE-102D	--	Overburden	2	33 - 38	1	1	1														
9/9/2020	Transect A	AE-102M	--	Overburden	2	23 - 28	1	1	1	0	0	1	1	1	1	1	1	1	1	1	1		Duplicate for all but metals
9/9/2020	Transect A	AE-102RR	R2	Middle Bedrock	FLUTE	75 - 80	1	1	1														
9/9/2020	Transect A	AE-102RR	R4	Lower Bedrock	FLUTE	125 - 130	1	1	1														MS/MSD
9/9/2020	Transect A	AE-102RR	R5	Lower Bedrock	FLUTE	141-146	1	1	0														
9/9/2020	Transect A	AE-102RR	R6	Lower Bedrock	FLUTE	153-158	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
9/10/2020	Transect A	AE-103D	--	Overburden	2	35 - 40	1	1	1	0	0	1	1	1	1	1	1	1	1	1	1		
9/10/2020	Transect A	AE-103R	R1	Upper Bedrock	FLUTE	48 - 53	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
9/10/2020	Transect A	AE-103R	R3	Middle Bedrock	FLUTE	70 -76	1	1	0														
9/10/2020	Transect A	AE-103R	R4	Middle Bedrock	FLUTE	98-105	1	1	1														
9/10/2020	Transect A	AE-103R	R5	Lower Bedrock	FLUTE	122 - 128	1	1	1			1	1	1	1	1	1	1	1	1	1		
9/10/2020	Transect A	AE-103R	R7	Lower Bedrock	FLUTE	162.5-168	1	1	0														
9/10/2020	Transect A	AE-103S	--	Overburden	2	15 - 20	1	1	0			1	1										
9/16/2020	Transect A	AE-104D	--	Overburden	2	35 - 40	1	1	1														
9/11/2020	Transect A	AE-104R	R1	Upper Bedrock	FLUTE	48 - 54	1	1	1														
9/11/2020	Transect A	AE-104R	R3	Middle Bedrock	FLUTE	97-102	1	1	1														
9/11/2020	Transect A	AE-104R	R4	Lower Bedrock	FLUTE	128-133	1	1	1	1	1											1	
9/11/2020	Transect A	AE-104R	R5	Lower Bedrock	FLUTE	156 - 162	1	1	0														
9/11/2020	Transect A	AE-104R	R6	Lower Bedrock	FLUTE	168-174	1	1	1														
9/16/2020	Transect A	AE-104S	--	Overburden	2	15 - 20	1	1	0														
9/9/2020	Transect A	AE-108R	R1	Upper Bedrock	FLUTE	36.5 - 43.5	1	1				1	1	1	1	1	1	1	1	1	1		MS/MSD (not for dissolved gases or hydrogen)
9/9/2020	Transect A	AE-108R	R3	Middle Bedrock	FLUTE	84 - 89	1	1															
9/9/2020	Transect A	AE-108R	R5	Lower Bedrock	FLUTE	163 - 168	1	1															

Table 2-2
September 2020 Groundwater Sample Summary
Former GE Facility, 50 Fordham Road, Wilmington, MA

Date Sampled	Area	Location ID	FLUTe port	Interval	Well Diameter (inch)	Screen Interval (Ft bgs)	Water Level Measurements (1)	VOCs (SW846 -USEPA Method 8260C)	1,4-dioxane (SW846/USEPA Method 8270D SIM) DL <0.3 ug/l	VPH (MassDEP VPH Method)	EPH and polycyclic aromatic hydrocarbons (PAH) (MassDEP- EPH-04-1.1 Revision 1)	Total As, Fe, Mn (SW846 - U SEPA Method 6010C)	Dissolved As, Fe, Mn (field filtered) (SW846 - USEPA Method 6010C)	Chloride (USEPA 300.0)	Nitrite	Nitrate (USEPA 300.0)	Sulfate (USEPA 300.0)	Sulfide	Total organic carbon (SW- 846 9060A)	Methane, Ethane, Ethene, Acetylene, Propane (Pace-Microseeps AM20Gax)	Dissolved hydrogen (Pace - Microseeps - Bubble Strip)	PIANO - Petroleum Analyses (Alpha Analytical Services)	Comments
9/16/2020	Transect A	AE-109R	R1	Upper Bedrock	FLUTE	38 - 43	1	1															
9/16/2020	Transect A	AE-109R	R2	Middle Bedrock	FLUTE	66 - 76	1	1	1														
9/16/2020	Transect A	AE-109R	R3	Lower Bedrock	FLUTE	126 - 136	1	1															
9/16/2020	Transect A	AE-109R	R4	Lower Bedrock	FLUTE	174 - 180.5	1	1															
9/16/2020	Transect A	AE-109R	R5	Lower Bedrock	FLUTE	183 - 189	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1		
9/16/2020	Transect A	AE-109R	R6	Lower Bedrock	FLUTE	196-201	1	1	0														
9/16/2020	Transect A	AE-109R	R7	Lower Bedrock	FLUTE	204 - 214	1	1	1														Duplicate for VOCs, 1,4-D
9/16/2020	Transect A	AE-109R	R8	Lower Bedrock	FLUTE	245 - 250	1	1															
9/16/2020	Transect A	AE-109D	--	Overburden	2	18 - 23	1	1	1			1	1										
9/16/2020	Transect A	AE-110R	R1	Upper Bedrock	FLUTE	34 - 44	1	1															
9/16/2020	Transect A	AE-110R	R2	Middle Bedrock	FLUTE	70 - 80	1	1															
9/16/2020	Transect A	AE-110R	R4	Lower Bedrock	FLUTE	158 - 168	1	1															
9/16/2020	Transect A	AE-110R	R6	Lower Bedrock	FLUTE	190 - 200	1	1	1														
9/17/2020	Transect B	AE-105D	--	Overburden	2	73 - 78	1	1	1														
9/17/2020	Transect B	AE-105R	R1	Middle Bedrock	FLUTE	90.5 - 95.5	1	1															
9/17/2020	Transect B	AE-105R	R2	Middle Bedrock	FLUTE	98 - 103	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1		
9/17/2020	Transect B	AE-105R	R4	Lower Bedrock	FLUTE	125 - 130	1	1	1	1	1												
9/17/2020	Transect B	AE-105R	R5	Lower Bedrock	FLUTE	143 - 148	1	1															
9/17/2020	Transect B	AE-105S	--	Overburden	2	35 - 40	1	1	0	0	0	1	1	1	1	1	1	1	1	1	1		
9/17/2020	Transect B	AE-106D	--	Overburden	2	34 - 39	1	1		0	0	1	1	1	1	1	1	1	1	1	1		
9/17/2020	Transect B	AE-106R	R1	Upper Bedrock	FLUTE	47 - 52	1	1															
9/17/2020	Transect B	AE-106R	R3	Middle Bedrock	FLUTE	84 - 88	1	1		1	1	1	1	1	1	1	1	~~1~~	1	1	1		Sulfide accidentally omitted from Laboratory COC; AE106R3 sample was not analyzed for sulfide.
9/17/2020	Transect B	AE-106R	R5	Lower Bedrock	FLUTE	164 - 169	1	1	1	1	1												
9/17/2020	Transect B	AE-106S	--	Overburden	2	12 - 17	1	1															
9/15/2020	Transect B	TRC-301R	R4	Middle Bedrock	CMT	65.5 - 69.5	1	1				1	1	1	1	1	1	1	1	1	1		
9/15/2020	Transect B	TRC-301R	R2	Middle Bedrock	CMT	81.5 - 85.5	1	1				1	1										
9/16/2020	Transect B	AE-111R	R1	Upper Bedrock	FLUTE	44 - 54	1	1															
9/16/2020	Transect B	AE-111R	R3	Middle Bedrock	FLUTE	95 - 103	1	1															
9/16/2020	Transect B	AE-111R	R5	Lower Bedrock	FLUTE	155 - 165	1	1															
9/16/2020	Transect B	AE-111R	R6	Lower Bedrock	FLUTE	168 -173	1	1															
9/11/2020	Transect B 1/2	AE-112R	R1	Upper Bedrock	FLUTE	41 - 51	1	1				1	1										T/D Metals at site over weekend - Delivered 9/14
9/11/2020	Transect B 1/2	AE-112R	R3	Middle Bedrock	FLUTE	91 - 101	1	1															
9/11/2020	Transect B 1/2	AE-112R	R5	Lower Bedrock	FLUTE	136 - 146	1	1															
9/11/2020	Transect B 1/2	AE-112R	R6	Lower Bedrock	FLUTE	153 - 163	1	1		1	1	1	1	0	0	0	0	0	0	0	0		
9/11/2020	Transect B 1/2	AE-112D	--	Overburden	2	24.5 - 29.5	1	1				1	1										
9/23/2020	Transect C - Concord Street	STM-8D	--	Overburden	0.75	34.7 - 39.7	1	1	1														
9/23/2020	Transect C - Concord Street	STM-8R	--	Upper Bedrock	0.75	46.5 - 51.5	1	1	1														
9/23/2020	Transect C - Concord Street	STM-8R1	--	Middle Bedrock	2	85 - 90	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1		Equipment Blank all analyses except dissolved H_2 and PIANO
9/24/2020	Transect C - Concord Street	STM-3D	--	Overburden	0.75	49.8 - 54.8	1	1															
9/24/2020	Upgradient	GZA-12	--	Overburden	1.5	9.5 - 24.5	1	1	1			1	1	1	1	1	1	1	1	1	1		
9/23/2020	EPL Area	AE-03	--	Overburden	2	3 - 13	1	1		1	1	1	1	0	0	0	0	0	0	0	0	1	Duplicate for VOCs, VPH, EPH, metals
9/23/2020	EPL Area	AE-04	--	Overburden	2	3 - 13	1	1		1	1	0	0										Duplicate for VOCs, VPH, EPH
9/23/2020	EPL Area	GZA-102S	--	Overburden	1.5	1.7 - 10.7	1	1		1	1												
9/25/2020	EPL Area	PZ-2S	--	Overburden	4	3.55 - 8.55	1	1		1	1												well was going dry with very slow recharge
9/24/2020	EPL Area	GZA-105D	--	Overburden	1.5	16 - 26	1	1	1	1	1	0	0										MS/MSD only for VOCs, EPH, VPH
9/24/2020	EPL Area	GZA-105R	--	Upper Bedrock	0.5	34.5 - 36.5	1	1															
9/24/2020	EPL Area	GZA-105S	--	Overburden	1.5	4 - 14	1	1		1	1	1	1	0	0	0	0	0	0	0	0		
9/23/2020	EPL Area	TRC-101	--	Overburden	1.25	1.5 - 10.5	1	1		1	1											1	
9/23/2020	EPL Area	TRC-102	--	Overburden	1.25	2.25 - 12.25	1	1		1	1	1	1										MS/ MSD
9/23/2020	EPL Area	TRC-103	--	Overburden	1.25	1.25 - 11.25	1	1		1	1												

Table 2-2
September 2020 Groundwater Sample Summary
Former GE Facility, 50 Fordham Road, Wilmington, MA

Date Sampled	Area	Location ID	FLUTe port	Interval	Well Diameter (inch)	Screen Interval (Ft bgs)	Water Level Measurements (1)	VOCs (SW846 -USEPA Method 8260C)	1,4-dioxane (SW846/USEPA Method 8270D SIM) DL <0.3 ug/l	VPH (MassDEP VPH Method)	EPH and polycyclic aromatic hydrocarbons (PAH) (MassDEP- EPH-04-1.1 Revision 1)	Total As, Fe, Mn (SW846 - U SEPA Method 6010C)	Dissolved As, Fe, Mn (field filtered) (SW846 - USEPA Method 6010C)	Chloride (USEPA 300.0)	Nitrite	Nitrate (USEPA 300.0)	Sulfate (USEPA 300.0)	Sulfide	Total organic carbon (SW- 846 9060A)	Methane, Ethane, Ethene, Acetylene, Propane (Pace-Microseeps AM20Gax)	Dissolved hydrogen (Pace - Microseeps - Bubble Strip)	PIANO - Petroleum Analyses (Alpha Analytical Services)	Comments
9/11/2020	LTGMP	EMW-10D	--	Overburden	2	19 - 29	1	1															
9/11/2020	LTGMP	EMW-10R	--	Upper Bedrock	2	42 - 52	1	1															MS/MSD
9/11/2020	LTGMP	EMW-11D	--	Overburden	2	22 - 32	1	1															
9/21/2020	LTGMP	EMW-11R1	--	Middle Bedrock	0.75	79 - 89	1	1															
9/21/2020	LTGMP	EMW-11R2	--	Middle Bedrock	0.75	104 - 114	1	1		1	1	1	1	1	1	1	1	1	1	1	1	1	
9/21/2020	LTGMP	EMW-11R3	--	Lower Bedrock	0.75	158 - 168	1	1															
9/21/2020	LTGMP	GZA-6	--	Overburden	2	8 - 18	1	0				1	1										
9/21/2020	LTGMP	GZA-10	--	Overburden	1.5	13 - 38	1	0				1	1										
9/17/2020	Source Control - Downgradient	GZA-14A	--	Overburden	1.5	0 - 15	1	0				1	1										
9/18/2020	Source Control - Downgradient	MW-4	--	Overburden	1.5	18 - 28	1	1	1			1	1										Duplicate for VOCs, 1,4-D, metals
9/18/2020	Source Control - Downgradient	MW-4A	--	Overburden	1.5	38 - 48	1	0	0			1	1										
9/21/2020	Source Control - Downgradient	MW-5	--	Overburden	1.5	28 - 38	1	1															
9/17/2020	Source Control - Downgradient	MW-7	--	Overburden	1.5	15 - 25	1	1															
9/15/2020	Source Control - Downgradient	PS-1D	--	Overburden	0.62	49.25 - 54.25	1	1															
9/15/2020	Source Control - Downgradient	PS-1S	--	Overburden	0.62	12 - 17	1	1															
9/15/2020	Source Control - Downgradient	PS-2D	--	Overburden	0.62	49.1 - 54.1	1	1															
9/18/2020	Source Control - Downgradient	PS-3	--	Overburden	0.62	2.7 - 7.7	1	1															
9/18/2020	Source Control - Downgradient	PS-5D	--	Overburden	0.62	24.1 - 29.1	1	1															
9/15/2020	Source Control - Downgradient	PS-8D	--	Overburden	0.62	51.8 - 56.8	1	1				1	1										
9/22/2020	Source Control - Onsite	TRC-201R	--	Upper-Middle-Lower Bedrock	6"	38 - 161	1	1															Equipment Blank VOCs only
9/24/2020	Source Control - Onsite	IP-1R2	--	Middle Bedrock	2	54 - 74	1	1															
9/24/2020	Source Control - Onsite	TRC-401R	--	Upper Bedrock	0.5	38 - 58	1	1															

Notes:

(1) All wells to be measured during site-wide water level event

(2) 1 per 20 for wells with non-dedicated sampling equipment

1 = Well was analyzed for these parameters

0 = Analyses removed from these wells under Post Temp Solution O&M

2020 Totals

Total number of samples	122	118	45	25	25	36	36	20	20	20	20	19	18	20	20	6
Duplicates (1 per 20)		6	3	2	2	2	2	1	1	1	1	1	1	1	0	0
Equipment blanks (1 per 20 (2))		2	1	1	1	1	1	1	1	1	1	1	1	1	0	0
Trip blanks (1 per shipment)		14	0	0	0	0	0	0	0	0	0	0	0	3	0	0
Total		**140**	**49**	**28**	**28**	**39**	**39**	**22**	**22**	**22**	**22**	**21**	**20**	**25**	**20**	**6**

Table 2-3
Groundwater Field Parameter Data Summary September 2020
Former GE Facility, Wilmington, MA

Well ID	Date	Temperature (degrees C)	pH	Specific Conductivity (uS/cm)	Dissolved Oxygen (mg/l)	Oxidation Reduction Potential (mV)	Turbidity (NTU)	Visual	Odor
On-Site									
AE-3	9/23/2020	22.3	6.34	1080	0.28	-95.1	1.81	clear	none
AE-4	9/23/2020	22.9	6.24	1523	0.1	-61.8	8.43	Moderate Fe	none
AE-23R	9/14/2020	16.4	6.92	1934	0.19	-100.2	8.81	clear	strong solvent-like
AE-24	9/14/2020	17.4	5.83	604	6.04	239.4	2.99	clear	none
AE-26R-1	9/14/2020	16.2	10.46	655	2.65	-357.1	0.02	clear	strong org. decay
AE-26R-2	9/14/2020	16.8	8.22	589	0.64	-271.9	0.12	clear	strong org. decay
AE-26R-5	9/14/2020	18	7.69	1401	3.62	-297.8	1.63	clear	strong org. decay
AE-26S	9/14/2020	16.3	5.47	1000	0.06	235.1	0.37	clear	none
AE-28R-1	9/14/2020	16	7.21	1886	4.79	201.3	0.27	clear	none
AE-28R-2	9/14/2020	16.6	7.49	1539	0.68	347.2	0.22	clear	rotten
AE-28R-3	9/14/2020	16.8	7.82	1226	0	-350.7	0.68	clear	sulfur
AE-28R-4	9/14/2020	17.7	7.77	1558	0.46	-369.4	2.16	clear	sulfur
AE-29R-1	9/22/2020	13.2	9.39	4393	2.31	220.2	5.48	clear	none
AE-29R-3	9/22/2020	14.7	7.15	3949	0.02	31.3	0.02	clear	none
AE-29R-5	9/22/2020	16	8.21	660	1.28	-51.3	0.8	clear	none
AE-29R-6	9/22/2020	14.9	7.21	2457	0.61	174.2	3.77	clear	none
AE-100R-1	9/10/2020	15.8	6.31	2527	0.26	-80.1	0.02	clear	none
AE-100R-3	9/10/2020	15.4	6.46	2311	0.17	131.5	0.02	clear	none
AE-100R-4	9/10/2020	15.4	6.62	1928	0.13	88.1	0.02	clear	none
AE-100R-5	9/10/2020	15.6	6.81	1438	0.12	81.6	0.02	clear	none
AE-100R-6	9/10/2020	15.3	7.17	787	0.24	-49.3	0.02	clear	none
GZA-12	9/24/2020	16.3	5.37	3744	0.73	-154	3.9	clear	none
GZA-101R	9/24/2020	15.1	6.48	4005	0	-84.7	1.34	clear	none
GZA-102S	9/23/2020	21	6.13	2381	0.07	-47	0.43	clear	none
GZA-105D	9/24/2020	17.9	6.1	2312	0.36	8.5	5.78	clear	org. decay
GZA-105R	9/24/2020	18.8	6.99	1076	0.44	-60.4	0.02	clear	org. decay
GZA-105S	9/24/2020	22.5	6.43	1381	0.17	-98.1	0.02	clear	org. decay
IP-1R2	9/24/2020	20	7.39	1794	0.31	-143.8	3.07	clear	none
PZ-2S	9/25/2020	21.1	6.29	207.4	0.37	-19.7	-	clear	sediment, petrol-like
TRC-101	9/23/2020	23.2	6.3	1722	0.24	-112.4	8.21	clear	org. decay
TRC-102	9/23/2020	21.7	6.07	1344	0.72	-92.9	2.34	clear	strong org. decay
TRC-103	9/23/2020	22.4	6.47	990	0.17	-160.4	3.18	clear	strong org. decay
TRC-201R	9/21/2020	16.8	7.72	976	0.27	-175.4	33.7	black/purplish	none
TRC-401R	9/24/2020	20.1	7.38	852	0	-236.6	120	cloudy	none
Transect A									
AE-101D	9/18/2020	17	5.91	1841	0.28	-305.8	4.2	clear	none
AE-101R-1	9/23/2020	17.8	6.18	2225	0.26	249.5	0.02	clear	none
AE-101R-2	9/23/2020	18.1	7.3	1435	0.28	-51.1	0.02	clear	none
AE-101R-3	9/23/2020	18.6	7.32	2351	0.21	-69.3	0.46	clear	none
AE-101R-5	9/24/2020	16.4	6.54	524	1.03	-209.7	0	clear	none
AE-101R-6	9/24/2020	17.6	6.46	563	5.21	-138.1	0	clear	none
AE-101S	9/18/2020	18.6	5.94	1536	0.44	-286.8	3.4	clear	none
AE-102D	9/9/2020	18.3	6.59	2198	0.51	-111.1	0.28	clear	none
AE-102M	9/9/2020	16.9	5.88	2153	1.6	56.9	0.02	clear	none
AE-102RR-2	9/9/2020	14.8	7.07	413	0.19	-3.8	0.13	clear	none
AE-102RR-4	9/9/2020	14.8	6.87	328.9	0.31	-3.1	0.02	clear	none
AE-102RR-5	9/9/2020	14.5	7.02	394.2	0.08	-40.5	0.02	clear	none
AE-102RR-6	9/9/2020	14.5	7.13	725	0	-95.4	0.02	clear	none
AE-103D	9/10/2020	16.7	5.61	2735	0.43	214.7	0.2	clear	none
AE-103R-1	9/10/2020	13.9	7.91	1650	4.2 [1]	18.6	0.02	clear	none
AE-103R-3	9/10/2020	14.1	6.91	1497	8.7 [1]	87	0.02	clear	none
AE-103R-4	9/10/2020	14	6.99	678	7.85 [1]	20.7	0.02	clear	none
AE-103R-5	9/10/2020	14	7.03	713	6.12 [1]	-20.4	0.02	clear	none
AE-103R-7	9/10/2020	14	7.26	425	7.12 [1]	-74.9	0.02	clear	none
AE-103S	9/10/2020	19.8	6.31	500.6	0.05	-23.6	0.77	clear	none
AE-104D	9/16/2020	15.3	5.71	2287	0.83	-196.6	0.74	clear	none
AE-104R-1	9/11/2020	13.8	8.08	804	0.26	-249.6	0	clear	none
AE-104R-3	9/11/2020	13.2	8.02	781	0.17	-303.5	0	clear	none
AE-104R-4	9/11/2020	13.3	7.96	911	0.16	-323.5	0	clear	none
AE-104R-5	9/11/2020	13.2	7.97	800	0.12	-333.4	0	clear	none
AE-104R-6	9/11/2020	13.9	7.95	747	0.25	-290	0	clear	none
AE-104S	9/16/2020	15.3	6.33	314	0.27	-305	1.06	clear	none
AE-108R-1	9/9/2020	14.7	9.22	2916	2.57	-278.5	0.22	clear	none
AE-108R-3	9/9/2020	14.7	7.83	2847	1.16	-144.7	0.02	clear	none
AE-108R-5	9/9/2020	14.4	7.67	940	0.69	-121.9	0.17	clear	none
AE-109D	9/16/2020	16.4	6.52	1225	0.59	-308	0	clear	none
AE-109R-1	9/15/2020	13.8	8.03	1334	1.54	-130.9	1.07	clear	org. decay
AE-109R-2	9/15/2020	13.9	7.54	1269	0.82	-154.2	0.76	clear	org. decay
AE-109R-3	9/15/2020	13.9	7.64	521	0.62	-161.9	0.91	clear	org. decay

Table 2-3
Groundwater Field Parameter Data Summary September 2020
Former GE Facility, Wilmington, MA

Well ID	Date	Temperature (degrees C)	pH	Specific Conductivity (uS/cm)	Dissolved Oxygen (mg/l)	Oxidation Reduction Potential (mV)	Turbidity (NTU)	Visual	Odor
Transect A (continued)									
AE-109R-4	9/15/2020	14	7.74	296.8	0.7	-185.9	0.02	clear	org. decay
AE-109R-5	9/15/2020	14	8.11	276.5	1	-172.9	0.61	clear	org. decay
AE-109R-6	9/15/2020	13.9	7.69	381.2	0.71	-167.9	2.06	clear	org. decay
AE-109R-7	9/15/2020	13.9	7.7	201.3	0.61	-169.9	0.02	clear	org. decay
AE-109R-8	9/15/2020	14	7.69	166.8	1.04	-185.9	1.73	clear	org. decay
AE-110R-1	9/16/2020	14	7.58	683	0.44	-158.2	5.22	clear	none
AE-110R-2	9/16/2020	14.1	7.33	662	0.22	-174.5	0.44	clear	none
AE-110R-4	9/16/2020	14.2	7.5	462.8	0.17	-148.9	0.42	clear	none
AE-110R-6	9/16/2020	14.1	7.2	461	0.08	-126.8	0.3	clear	none
EMW-10D	9/11/2020	15.5	5.38	1319	0	201.6	1.39	clear	none
EMW-10R	9/11/2020	15.3	7.06	691	0	-101.1	2.32	clear	none
EMW-11D	9/11/2020	14.6	6.69	1462	0.14	-99.8	1.76	clear	none
EMW-11R1	9/21/2020	15.6	7.4	713	0.03	-47.5	3.11	clear	none
EMW-11R2	9/21/2020	14.9	7.67	958	0	-34	0.32	clear	none
EMW-11R3	9/21/2020	14.9	7.83	632	0.07	-64.5	0.61	clear	none
Transect B									
AE-105D	9/17/2020	12.5	7.5	816	0.16	-87.8	0.17	clear	none
AE-105R-1	9/17/2020	11.1	7.64	404	0.69	-227.1	0	clear	none
AE-105R-2	9/17/2020	11	7.47	362	0.19	-278.9	0	clear	none
AE-105R-4	9/17/2020	11.1	7.4	337	0.16	-321.9	0	clear	none
AE-105R-5	9/17/2020	11	7.46	310	0.1	-327.5	0	clear	none
AE-105S	9/17/2020	13.1	7.01	1046	0.11	-39.5	0.02	clear	none
AE-106D	9/17/2020	12	5.79	2042	7.73	210.1	0.02	clear	none
AE-106R-1	9/17/2020	11.2	7.06	1133	0.14	-78.8	2.81	clear	none
AE-106R-3	9/17/2020	11	7.05	588.3	0.32	-52.5	1.01	clear	none
AE-106R-5	9/17/2020	11.2	7.78	196.7	0.18	-121.5	0.02	clear	none
AE-106S	9/17/2020	12.3	5.73	1816	0.81	111.8	1.98	clear	none
AE-111R-1	9/16/2020	13.6	8.94	1050	1.36	165.7	0.07	clear	none
AE-111R-3	9/16/2020	14	8.33	1015	0.19	145.8	0.61	clear	none
AE-111R-5	9/16/2020	13.4	8.48	408.7	0.1	91.3	0.12	clear	none
AE-111R-6	9/16/2020	13.4	8.34	413.6	0.06	2.3	0.03	clear	none
TRC-301R-2	9/15/2020	11.1	7.74	617.5	0.23	-145.1	0.02	clear	none
TRC-301R-4	9/15/2020	11.2	7.08	712	0.32	-161	0.02	clear	none
Transect B 1/2									
AE-112D	9/11/2020	14.3	5.15	1318	1.92	309.6	0.81	clear	none
AE-112R-1	9/11/2020	12.8	6.91	1289	0.1	-81.6	0.97	clear	biological
AE-112R-3	9/11/2020	12.8	6.86	822	0.41	-72.1	0.02	clear	biological
AE-112R-5	9/11/2020	12.8	6.63	1084	0.11	-70.3	0.02	clear	biological
AE-112R-6	9/11/2020	12.8	6.28	966	0.34	-29.9	0.02	clear	biological
Transect C									
STM-3D	9/24/2020	19.6	6.71	506.4	0.06	-88.6	9.2	light sediment	none
STM-8D	9/23/2020	15.1	6.13	951	0.81	-313.6	0	clear	none
STM-8R	9/23/2020	18.4	5.89	1369	0.57	-315.5	0	clear	none
STM-8R1	9/23/2020	NM	NM	NM	NM	NM	NM	-	-
Wetlands/Wooded Area									
GZA-10	9/21/2020	14.7	6.1	1028	0.05	-20.3	1.6	Iron Floc	none
GZA-14A	9/17/2020	13.2	6.37	583.5	0	113.7	0.79	yellowish hue	none
GZA-6	9/21/2020	16.1	6.09	158.2	0.13	-15.9	0.09	yellow tint	biological
MW-4	9/18/2020	10.2	6.44	760	0.22	-104.3	0.02	clear	none
MW-4A	9/18/2020	10.8	6.27	1002	0.42	-63.2	0.02	clear	none
MW-5	9/21/2020	10.5	6.42	693	0.11	-96.1	0.02	clear	none
MW-7	9/17/2020	14.8	5.47	2000	0.36	37.9	8.33	clear	none
PS-1D	9/15/2020	12	6.78	931	5.69	-104.3	3.08	clear	none
PS-1S	9/15/2020	12.3	6.31	523.9	0.72	-91.1	2.14	clear	strong org. decay
PS-2D	9/15/2020	11	6.8	502.1	1.25	-188.6	49	clear	none
PS-3	9/18/2020	13.6	5.92	375.5	0.85	-9.1	0.5	clear	none
PS-5D	9/18/2020	NM	NM	NM	NM	NM	NM	silty	none
PS-8D	9/15/2020	11.2	6.4	307.7	0.41	-124.3	0.9	clear	none

Notes:
Summary presents the final stabilized reading at each well just prior to sampling.
C - Celsius
mV - millivolts
uS/cm - microsiemens per centimeter
NTU - nephelometric turbidity units
mg/l - milligrams per liter
NM - not measured - well purged dry with only sufficient recharge to fill sample bottles.
1. Readings taken before achieving stable conditions; therefore, the DO readings at AE-103R are not considered accurate.

Table 2-4
Historical LNAPL Gauging Data 1994 to February 2021
Former GE Facility, 50 Fordham Road, Wilmington, MA

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

Notes:

LNAPL gauging results above from 1994 through 2011 collected by TRC or others. Data collection by AECOM started in 2012.
Bgs – Below ground surface.
NA – Not Applicable.
NM – Not Measured.
* LNAPL gauging at monitoring well PZ-2S was conducted on a semi-annual basis from April 1994 through May 2000. TRC then increased gauging frequency to monthly. MA DEP then requested that monthly LNAPL gauging continue at PZ-2S, CW-1, and CW-2 as part of the requirements of the Phase V O&M program, beginning December 2000.

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

Table 2-4
Historical LNAPL Gauging Data 1994 to February 2021
Former GE Facility, 50 Fordham Road, Wilmington, MA

	PZ-2S				CW-1				CW-2				TRC-101				AE-3				AE-4				GZA-102S			
Date	DTW (ft.)	DTP (ft.)	Thickness (ft.)	Volume Removed (gal.)	DTW (ft.)	DTP (ft.)	Thickness (ft.)	Volume Removed (gal.)	DTW (ft.)	DTP (ft.)	Thickness (ft.)	Volume Removed (gal.)	DTW (ft.)	DTP (ft.)	Thickness (ft.)	Volume Removed (gal.)	DTW (ft.)	DTP (ft.)	Thickness (ft.)	Volume Removed (gal.)	DTW (ft.)	DTP (ft.)	Thickness (ft.)	Volume Removed (gal.)	DTW (ft.)	DTP (ft.)	Thickness (ft.)	Volume Removed (gal.)
Monitoring Frequency Increased to Weekly																	(3)				(3)				(9)			
9/4/2002	LNAPL removed via vacuum extraction at PZ-2S, CW-1, CW-2, and TRC-101.																(3)				(3)				(9)			
9/4/2002	6.95	6.71	0.24	0	5.15(6)	5.10	0.05	0.00	4.92	4.88	0.04	0	6.49	NA	0	0	(3)				(3)				(9)			
9/12/2002	7.20	NA	0	0	5.52(6)	NA	0	0	5.31	NA	0	0	6.92	NA	0	0	(3)				(3)				(9)			
9/18/2002	7.31	7.18	0.13	0.11	6.54(6)	6.45	0.09	0.04	6.37	6.25	0.12	0.05	6.87	NA	0	0	(3)				(3)				(9)			
9/25/2002	6.85(6)	6.85	0	0	5.28(6)	5.19	0.09	1.50	5.03	4.98	0.05	0.13	6.60	NA	0	0	(3)				(3)				(9)			
10/4/2002	6.88	6.85	0.03	0	5.28(6)	5.20	0.08	0.00	5.04	4.98	0.06	0.00	6.60	NA	0	0	(3)				(3)				(9)			
10/11/2002	7.07	7.04	0.03	0	5.44(6)	5.34	0.10	0.00	5.21	5.12	0.09	0.00	6.75	NA	0	0	(3)				(3)				(9)			
10/18/2002	6.28	6.23	0.05	0	4.82(6)	4.77	0.05	0.00	4.57	4.56	0.01	0.00	6.17	NA	0	0	(3)				(3)				(9)			
10/24/2002	6.48	NA	0	0	4.88(6)	NA	0	0	4.65(6)	NA	0	0	6.27	NA	0	0	(3)				(3)				(9)			
11/8/2002	6.13	6.10	0.03	0	4.59(6)	4.56	0.03	0	4.33	4.32	0.01	0	5.95	NA	0	0	(3)				(3)				(9)			
11/15/2002	5.88	NA	0	0	4.39(6)	NA	0	0	4.17	NA	0	0	5.80	NA	0	0	(3)				(3)				(9)			
11/20/2002	5.09	5.07	0.02	0.01	4.00(6)	NA	0	0	3.78(6)	NA	0	0	5.41	NA	0	0	(3)				(3)				(9)			
11/27/2002	5.45	NA	0	0	4.11(6)	NA	0	0	3.95(6)	NA	0	0	5.68	NA	0	0	(3)				(3)				(9)			
12/6/2002	5.91	NA	0	0	4.42(6)	4.42(7)	0	0	4.22(6)	NA	0	0	5.87	NA	0	0	(3)				(3)				(9)			
12/13/2002	5.66	NA	0	0	4.25(6)	NA	0	0	4.02(6)	4.02(7)	0	0	5.65	NA	0	0	(3)				(3)				(9)			
12/20/2002	5.19	NA	0	0	4.00(6)	NA	0	0	3.79(6)	NA	0	0	5.41	NA	0	0	(3)				(3)				(9)			
12/27/2002	5.12	NA	0	0	NM	NM	NM	0	NM	NM	NM	0	NM	NM	NM	0	(3)				(3)				(9)			
12/30/2002	5.30	NA	0	0	4.09(6)	NA	0	0	3.98(6)	NA	0	0	5.51	NA	0	0	(3)				(3)				(9)			
1/10/2003	5.35	NA	0	0	4.13(6)	NA	0	0	3.90(6)	NA	0	0	5.57	NA	0	0	(3)				(3)				(9)			
1/17/2003	5.67	NA	0	0	4.31(6)	NA	0	0	4.09(6)	4.09(7)	0	0	5.74	NA	0	0	(3)				(3)				(9)			
1/21/2003	5.86	NA	0	0	4.42(6)	NA	0	0	4.20(6)	4.20(7)	0	0	NA	NA	NA	NA	(3)				(3)				(9)			
1/30/2003	6.25	NA	0	0	4.65(6)	NA	0	0	4.43(6)	4.44	0.01	0	6.05	NA	0	0	(3)				(3)				(9)			
2/7/2003	4.94	NA	0	0	4.42	NA	0	0	NM	NM	NM	0	5.81	NA	0	0	(3)				(3)				(9)			
Monitoring Frequency Decreased to Monthly																	(3)				(3)				NM			
3/18/2003	5.04	NA	0	0	3.73(6)	NA	0	0	3.51(6)	NA	0	0	5.20	NA	0	0	(3)				(3)				NM			
4/21/2003	5.28	NA	0	0	3.92	NA	0	0	3.80	3.66	0.14	0	5.35	NA	0	0	(3)				(3)				NM			
4/25/2003	NM	NM	0	0	4.01	NA	0	0	3.90	3.76	0.14	0.5	NM	NM	0	0	(3)				(3)				NM			
4/30/2003	NM	NM	0	0	3.95	NA	0	0	3.85	3.72	0.13	0	NM	NM	0	0	(3)				(3)				NM			
4/30/2003	LNAPL removed via vacuum extraction at CW-1, and CW-2.																(3)				(3)				NM			
5/7/2003	NM	NM	0	0	4.25	NA	0	0	4.07	4.01	0.06	0	NM	NM	0	0	(3)				(3)				NM			
5/16/2003	NM	NM	0	0	4.36	NA	0	0	4.20	4.14	0.06	0	NM	NM	0	0	(3)				(3)				NM			
5/22/2003	6.14	NA	0	0	4.52	NA	0	0	4.37	4.30	0.07	0	5.95	NA	0	0	(3)				(3)				NM			
6/30/2003	5.95	NA	0	0	4.45	4.43	0.02	0	4.25	4.18	0.07	0	5.85	NA	0	0	(3)				(3)				NM			
7/31/2003	6.01	NA	0	0	4.53	4.52	0.01	0	4.25	NA	sheen	0	5.9	NA	0	0	(3)				(3)				NM			
8/29/2003	6.76	6.75	0.01	0	4.89	4.88	0.01	0	5.41	5.40	0.01	0	6.5	NA	0	0	(3)				(3)				NM			
9/29/2003	6.03	NA	sheen	0	4.61	4.6	0.01	0	5.38	5.37	0.01	0	6.35	NA	0	0	(3)				(3)				NM			
10/24/2003	6.11	NA	sheen	0	4.75	4.74	0.01	0	5.7	NA	sheen	0	6.48	NA	0	0	(3)				(3)				NM			
11/18/2003	5.98	NA	sheen	0	4.46	4.44	0.02	0	4.62	4.61	0.01	0	6.28	NA	0	0	(3)				(3)				NM			
12/23/2003	5.63	NA	sheen	0	4.31	4.30	0.01	0	4.55	4.54	0.01	0	6.11	NA	0	0	(3)				(3)				NM			
1/26/2004	5.72	NA	sheen	0	4.47	4.46	0.01	0	4.61	4.6	0.01	0	6.23	NA	0	0	(3)				(3)				NM			
2/25/2004	5.41	NA	sheen	0	3.98	3.99	0.01	0	4.13	4.13	sheen	0	6.01	NA	0	0	(3)				(3)				NM			
3/24/2004	5.48	NA	sheen	0	4.06	4.04	0.02	0	4.25	4.24	0.01	0	5.98	NA	0	0	(3)				(3)				NM			
4/26/2004	4.71	NA	sheen	0	3.21	NA	sheen	0	3.98	NA	sheen	0	4.01	NA	0	0	(3)				(3)				NM			
5/27/2004	5.11	NA	sheen	0	3.45	3.44	0.01	0	4.11	NA	sheen	0	4.35	NA	0	0	(3)				(3)				NM			
6/24/2004	5.89	NA	sheen	0	4.37	NA	sheen	0	4.21	4.2	0.01	0	5.79	NA	0	0	(3)				(3)				NM			
7/23/2004	5.91	NA	sheen	0	4.41	4.40	0.01	0	4.25	4.24	0.01	0	5.83	NA	0	0	(3)				(3)				NM			
8/27/2004	5.78	NA	sheen	0	4.37	4.36	0.01	0	4.19	4.18	0.01	0	5.75	NA	0	0	(3)				(3)				NM			
9/23/2004	5.61	NA	sheen	0	4.15	4.13	0.02	0	4.25	4.22	0.03	0	5.71	NA	0	0	(3)				(3)				NM			
10/27/2004	5.67	NA	sheen	0	4.35	4.28	0.07	0	4.51	4.47	0.04	0	5.68	NA	0	0	(3)				(3)				NM			
11/24/2004	5.56	NA	sheen	0	4.31	4.27	0.04	0	4.48	4.45	0.03	0	5.60	NA	0	0	(3)				(3)				NM			
12/22/2004	5.62	NA	sheen	0	4.34	4.29	0.05	0	4.42	NA	sheen	0	5.63	NA	0	0	(3)				(3)				NM			
1/27/2005	5.65	NA	sheen	0	4.40	4.37	0.03	0	4.44	4.43	0.01	0	6.15	NA	0	0	(3)				(3)				NM			

Notes:

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Former GE Facility, 50 Fordham Road, Wilmington, MA

	PZ-2S				CW-1				CW-2				TRC-101				AE-3				AE-4				GZA-102S			
Date	DTW (ft.)	DTP (ft.)	Thickness (ft.)	Volume Removed (gal.)	DTW (ft.)	DTP (ft.)	Thickness (ft.)	Volume Removed (gal.)	DTW (ft.)	DTP (ft.)	Thickness (ft.)	Volume Removed (gal.)	DTW (ft.)	DTP (ft.)	Thickness (ft.)	Volume Removed (gal.)	DTW (ft.)	DTP (ft.)	Thickness (ft.)	Volume Removed (gal.)	DTW (ft.)	DTP (ft.)	Thickness (ft.)	Volume Removed (gal.)	DTW (ft.)	DTP (ft.)	Thickness (ft.)	Volume Removed (gal.)
2/28/2005	5.34	NA	sheen	0	4.21	4.20	0.01	0	4.23	4.23	sheen	0	5.89	NA	0	0	(3)				(3)				NM			
3/25/2005	5.51	NA	sheen	0	4.36	4.31	0.05	0	4.38	4.35	0.01	0	6.05	NA	0	0	(3)				(3)				NM			
4/26/2005	5.02	NA		0	3.96	3.90	0.06	3	3.93	3.85	0.08	6	5.41	NA	0	0	(3)				(3)				NM			
4/26/2005	LNAPL removed via peristaltic pump at CW-1, and CW-2.																(3)				(3)				NM			
4/26/2005	Gauging after LNAPL removal:				3.95	3.92	0.03		3.84	3.86	0.02						(3)				(3)				NM			
5/1/2005	Installed 3 TB-400 Soakease Absorbent booms into both CW-1 and CW-2																(3)				(3)				NM			
5/10/2005	5.15	NA		0	4.16	4.05	0.11	2.25	4.10	3.97	0.13	2.25	5.62	NA	0	0	(3)				(3)				NM			
5/10/2005	Removed and replaced 3 Soakease Absorbent booms in CW-1 and CW-2																(3)				(3)				NM			
5/24/2005	5.27	NA		0	4.27	4.17	0.10	2.25	4.17	4.05	0.12	2.25	5.75	NA	0	0	(3)				(3)				NM			
5/24/2005	Removed and replaced 3 Soakease Absorbent booms in both CW-1 and CW-2																(3)				(3)				NM			
6/10/2005	5.33	NA		0	4.32	4.21	0.11	2.25	4.26	4.13	0.13	2.25	5.79	NA	0	0	(3)				(3)				NM			
6/10/2005	Removed 3 Soakease Absorbent booms in both CW-1 and CW-2																(3)				(3)				NM			
6/17/2005	5.37	NA		0	4.35	4.25	0.10	0	4.31	4.20	0.11	0	5.82	NA	0	0	(3)				(3)				NM			
7/5/2005	LNAPL removed via peristaltic pump at CW-1 and CW-2																(3)				(3)				NM			
7/5/2005							0.01	10			0.04	3					(3)				(3)				NM			
7/6/2005							0.05	0			0.07	0					(3)				(3)				NM			
7/28/2005	5.81	NA		0	4.41	4.30	0.11	0	4.35	4.23	0.12	0	6.01	NA	0	0	(3)				(3)				NM			
8/24/2005	5.92	NA		0	4.29	4.41	0.12	0	4.39	4.26	0.13	0	5.98	NA	0	0	(3)				(3)				NM			
9/27/2005	5.95	NA		0	4.29	4.39	0.1	0	4.41	4.30	0.11	0	6.04	NA	0	0	(3)				(3)				NM			
10/17/2005	NA	NA		0	3.87	3.94	0.07	10	3.65	3.65	sheen	0	NA	NA	0	0	(3)				(3)				NM			
10/17/2005	LNAPL removed via peristaltic pump at CW-1																(3)				(3)				NM			
1/9/2006	5.36	5.35	0.01	0	4.2	4.15	0.05	2.25	3.96	3.95	0.01	2.25	5.60	NA	NA	0	(3)				(3)				NM			
1/9/2006	Removed and replaced 3 Soakease Absorbent booms in CW-1 and CW-2																(3)				(3)				NM			
1/9/2006	Gauging after LNAPL removal:				4.17	4.15	0.02		3.98	3.95	0.03						(3)				(3)				NM			
1/25/2006	5.01	5.01	sheen	0	3.8	3.75	0.05	2.5	3.7	3.55	0.15	2.5	5.24	NA	NA	0	(3)				(3)				NM			
1/25/2006	Removed and replaced 3 Soakease Absorbent booms in CW-1 and CW-2																(3)				(3)				NM			
1/25/2006	Gauging after LNAPL removal:				3.81	3.80	0.01		3.6	NA	sheen						(3)				(3)				NM			
2/7/2006	3.35	NA	sheen	0	3.30	NA	sheen	1.5	3.52	3.45	0.07	1.5	4.98	NA	NA	0	(3)				(3)				NM			
2/7/2006	Removed and replaced 3 Soakease Absorbent booms in CW-1 and CW-2																(3)				(3)				NM			
2/7/2006	Gauging after LNAPL removal:				3.52	3.5	0.02		3.3	NA	sheen						(3)				(3)				NM			
2/21/2006	5.21	NA	sheen	0	4.15	4.12	0.03	0	3.93	3.9	0.03	0	5.53	NA	NA	0	(3)				(3)				NM			
3/8/2006	5.9	NA	sheen	0	4.42	4.4	0.02	0	4.45	4.42	0.03	0	5.85	NA	NA	0	(3)				(3)				NM			
3/21/2006	6	NA	sheen	0	4.53	4.5	0.03	0	4.31	4.3	0.01	0	5.92	NA	NA	0	(3)				(3)				NM			
4/4/2006	6.05	NA	sheen	0	4.90	4.15	0.75	2.25	4.9	4.37	0.53	2.25	5.75	NA	NA	0	(3)				(3)				NM			
4/4/2006	Removed and replaced 3 Soakease Absorbent booms in CW-1 and CW-2																(3)				(3)				NM			
4/4/2006	Gauging after LNAPL removal:				4.25	4.15	0.1		4.6	4.37	0.23						(3)				(3)				NM			
4/17/2006	6.15	NA	sheen	0	4.44	4.42	0.02	0	4.47	4.46	0.01	0	6.10	NA	NA	0	(3)				(3)				NM			
5/2/2006	8.15	NA	sheen	0	4.48	4.38	0.1	2.25	4.5	4.3	0.2	2.25	5.92	NA	NA	0	(3)				(3)				NM			
5/2/2006	Removed and replaced 3 Soakease Absorbent booms in CW-1 and CW-2																(3)				(3)				NM			
5/2/2006	Gauging after LNAPL removal:				4.49	4.49	sheen		4.5	4.49	0.01						(3)				(3)				NM			
5/23/2006	4.15	4.14	0.01	0	2.95	NA	NA	2.25	3.15	NA	NA	2.25	4.66	NA	NA	0	(3)				(3)				NM			
5/23/2006	Removed and replaced 3 Soakease Absorbent booms in CW-1 and CW-2																(3)				(3)				NM			
5/23/2006	Gauging after LNAPL removal:				2.95		sheen		3.15		sheen						(3)				(3)				NM			
6/16/2006	4.23	NA	sheen	0	3.17	NA	NA	0	3.33	NA	sheen	0	4.81	NA	NA	0	(3)				(3)				NM			
6/29/2006	4.75	NA	sheen	0	3.52	NA	sheen	0	3.6	NA	NA	0	5.23	NA	NA	0	(3)				(3)				NM			
7/13/2006	4.92	NA	sheen	0	3.6	NA	sheen	0	3.72	NA	sheen	0	5.22	NA	NA	0	(3)				(3)				NM			
7/31/2006	5.75	NA	sheen	0	4.56	NA	sheen	0	4.45	NA	sheen	0	5.88	NA	NA	0	(3)				(3)				NM			
8/25/2006	6.2	NA	sheen	0	4.4	NA	sheen	0	4.6	NA	sheen	0	5.8	NA	NA	0	(3)				(3)				NM			
9/7/2006	5.77	NA	sheen	0	4.35	NA	sheen	0	4.55	NA	sheen	0	5.95	NA	NA	0	(3)				(3)				NM			
9/20/2006	5.95	NA	sheen	0	4.36	NA	sheen	0	4.48	NA	sheen	0	6.8	NA	NA	0	(3)				(3)				NM			
10/5/2006	6.12	NA	sheen	0	6	NA	sheen	0	5.9	NA	sheen	0	6.11	NA	NA	0	(3)				(3)				NM			
10/18/2006	5.47	NA	sheen	0	4.7	NA	sheen	0	4.6	NA	sheen	0	5.7	NA	NA	0	(3)				(3)				NM			
11/3/2006	5.46	NA	sheen	0	4.43	NA	sheen	0	4.35	NA	sheen	0	5.7	NA	NA	0	(3)				(3)				NM			

Notes:

LNAPL gauging results above from 1994 through 2011 collected by TRC or others. Data collection by AECOM started in 2012.
Bgs – Below ground surface.
NA – Not Applicable.
NM – Not Measured.
* LNAPL gauging at monitoring well PZ-2S was conducted on a semi-annual basis from April 1994 through May 2000. TRC then increased gauging frequency to monthly. MA DEP then requested that monthly LNAPL gauging continue at PZ-2S, CW-1, and CW-2 as part of the requirements of the Phase V O&M program, beginning December 2000.

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(3) Well not installed.
(4) Water level meter may have been unreliable due to low temperature.
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(7) Product was detected with interface probe but not a measurable amount (product thickness < 0.01 ft)
(8) It is not understood why in November and December of 2011 that 3 gallons were indicated as removed from wells PZ-2S and TRC-101R when no LNAPL was detected. These 3 gallons are not included in approximate total LNAPL volume removed from these wells.

Table 2-4
Historical LNAPL Gauging Data 1994 to February 2021
Former GE Facility, 50 Fordham Road, Wilmington, MA

	PZ-2S				CW-1				CW-2				TRC-101				AE-3				AE-4				GZA-102S			
Date	DTW (ft.)	DTP (ft.)	Thickness (ft.)	Volume Removed (gal.)	DTW (ft.)	DTP (ft.)	Thickness (ft.)	Volume Removed (gal.)	DTW (ft.)	DTP (ft.)	Thickness (ft.)	Volume Removed (gal.)	DTW (ft.)	DTP (ft.)	Thickness (ft.)	Volume Removed (gal.)	DTW (ft.)	DTP (ft.)	Thickness (ft.)	Volume Removed (gal.)	DTW (ft.)	DTP (ft.)	Thickness (ft.)	Volume Removed (gal.)	DTW (ft.)	DTP (ft.)	Thickness (ft.)	Volume Removed (gal.)
11/14/2006	4.5	NA	NA	0	4.85	NA	sheen	0	4.73	NA	sheen	0	5.05	NA	NA	0	(3)				(3)				NM			
11/28/2006	4.92	NA	NA	0	5.42	NA	sheen	0	5.51	NA	sheen	0	5.32	NA	NA	0	(3)				(3)				NM			
12/14/2006	5.65	NA	NA	0	4.10	NA	sheen	0	4.28	NA	sheen	0	5.71	NA	NA	0	(3)				(3)				NM			
12/29/2006	5.46	NA	NA	0	4.32	NA	sheen	0	4.22	NA	NA	0	5.70	NA	NA	0	(3)				(3)				NM			
1/9/2007	5.15	NA	NA	0	3.70	NA	NA	0	3.91	NA	sheen	0	5.37	NA	NA	0	(3)				(3)				NM			
1/25/2007	5.64	NA	NA	0	4.14	NA	sheen	0	4.32	NA	sheen	0	5.75	NA	NA	0	(3)				(3)				NM			
2/13/2007	5.62	NA	NA	0	4.20	NA	sheen	0	4.35	NA	NA	0	NM	NM	NM	0	(3)				(3)				NM			
2/28/2007	6.08	NA	NA	0	4.48	NA	sheen	1	4.65	NA	sheen	1	NM	NM	NM	0	(3)				(3)				NM			
3/27/2007	4.65	NA	NA	0	3.23	NA	sheen	0	3.52	NA	sheen	0	5.00	NA	NA	0	(3)				(3)				NM			
4/11/2007	5.8	NA	NA	0	4.43	NA	NA	0	4.71	NA	sheen	0	5.87	NA	NA	0	(3)				(3)				NM			
4/24/2007	5.50	NA	NA	0	4.98	NA	sheen	0	4.80	NA	NA	0	5.62	NA	NA	0	(3)				(3)				NM			
5/8/2007	5.20	NA	NA	0	3.75	NA	sheen	0	4.00	NA	NA	0	5.41	NA	NA	0	(3)				(3)				NM			
5/21/2007	3.95	NA	NA	0	3.05	NA	sheen	0	3.30	NA	NA	0	4.78	NA	sheen	0	(3)				(3)				NM			
11/19/2007	6.26	5.85	0.41	0	4.72	4.69	0.03	0	4.47	NA	sheen	0	6.12	NA	NA	0	(3)				(3)				NM			
12/5/2007	6.53	6.14	0.39	0	4.78	4.72	0.06	0	5.52	NA	sheen	0	NM	NM	NM	0	(3)				(3)				NM			
12/19/2007	6.61	NA	NA	0	4.72	4.71	0.01	0	4.46	NA	NA	0	NM	NM	NM	0	(3)				(3)				NM			
1/7/2008	6.00	5.99	0.01	0	4.32	NA	sheen	0	4.11	4.08	0.03	0	5.71	NA	NA	0	(3)				(3)				NM			
1/17/2008	5.68	NA	NA	0	3.99	NA	NA	0	3.88	NA	NA	0	5.43	NA	NA	0	(3)				(3)				NM			
1/31/2008	6.17	NA	sheen	0.35	4.38	NA	sheen	0.35	4.15	4.20	0.05	1.3	5.81	NA	NA	0	(3)				(3)				NM			
2/14/2008	4.32	NA	sheen	0	3.31	NA	sheen	0	3.10	NA	sheen	0	4.79	NA	NA	0	(3)				(3)				NM			
2/27/2008	4.74	NA	sheen	0	3.51	NA	sheen	0	3.32	NA	sheen	1.1	4.95	NA	NA	0	(3)				(3)				NM			
3/11/2008	4.14	NA	sheen	0	3.16	NA	sheen	0	2.95	NA	sheen	0	4.66	NA	NA	0	(3)				(3)				NM			
4/9/2008	5.01	NA	sheen	0	3.87	NA	sheen	0	3.65	NA	sheen[7]	0	5.31	NA	NA	0	(3)				(3)				NM			
5/13/2008	5.63	NA	NA	0	4.30	4.28	0.02	0	4.10	4.04	0.06	0	5.70	NA	NA	0	(3)				(3)				NM			
6/11/2008	6.10	NA	NA	0	4.60	4.59	0.01	0	4.40	4.37	0.03	1.1	6.01	NA	NA	0	(3)				(3)				NM			
7/16/2008	5.89	NA	NA	0	4.63	4.61	0.02	0	4.43	4.38	0.05	1.2	6.03	NA	NA	0	(3)				(3)				NM			
8/28/2008	5.94	NA	NA	0	4.61	4.58	0.03	0	4.40	4.36	0.04	1.4	6.01	NA	NA	0	(3)				(3)				NM			
9/25/2008	5.97	NA	NA	0	4.60	4.58	0.02	1.5	4.39	4.36	0.03	1.1	6.09	NA	NA	0	(3)				(3)				NM			
10/16/2008	5.81	NA	NA	0	4.40	NA	sheen	0.75	4.22	NA	sheen	0.75	5.89	NA	NA	0	(3)				(3)				NM			
11/11/2008	5.58	NA	NA	0	4.44	4.43	0.01	0	4.22	4.20	0.02	0	5.85	NA	NA	0	(3)				(3)				NM			
12/4/2008	5.01	NA	NA	0	4.03	NA	sheen	1	3.82	NA	sheen	0.5	5.47	NA	NA	0	(3)				(3)				NM			
1/13/2009	5.21	NA	NA	0	4.04	NA	sheen	0	3.83	NA	sheen	0	5.49	NA	NA	0	(3)				(3)				NM			
2/12/2009	5.23	NA	NA	0	3.98	NA	sheen	0	3.75	NA	sheen	0	5.41	NA	NA	0	(3)				(3)				NM			
3/19/2009	4.96	NA	NA	0	3.74	NA	sheen	0	3.55	NA	sheen	0	5.21	NA	NA	0	(3)				(3)				NM			
4/16/2009	5.03	NA	NA	0	3.89	3.87	0.02	0	3.66	NA	NA	0	5.32	NA	NA	0	(3)				(3)				NM			
5/4/2009	5.46	5.46[7]	0	0	4.12	4.10	0.02	0	3.91	3.90	0.01	0	5.54	NA	NA	0	(3)				(3)				NM			
6/25/2009	4.92	NA	sheen	0	3.93	3.92	0.01	0	3.74	3.72	0.02	0	5.36	NA	NA	0	(3)				(3)				NM			
7/14/2009	5.16	NA	NA	0	4.14	4.12	0.02	0	3.93	3.91	0.02	0	5.56	NA	NA	0	(3)				(3)				NM			
8/20/2009	6.03	NA	NA	0	4.70	4.65	0.05	0	4.46	4.42	0.04	0	6.05	NA	NA	0	(3)				(3)				NM			
9/25/2009	6.24	NA	NA	0	4.89	4.84	0.05	1.5	4.68	4.63	0.05	1.1	6.27	NA	NA	0	(3)				(3)				NM			
10/30/2009	5.02	NA	NA	0	4.09	4.08	0.01	1.5	3.88	3.87	0.01	1.5	5.51	NA	NA	0	(3)				(3)				NM			
11/13/2009	5.85	NA	NA	0	4.49	4.48	0.01	0	4.28	4.27	<0.01	0	5.91	NA	NA	0	(3)				(3)				NM			
12/2/2009	5.18	NA	NA	0	4.11	NA	sheen	0	3.90	NA	sheen	0	5.53	NA	NA	0	(3)				(3)				NM			
1/29/2010	4.67	NA	NA	0	3.68	3.68[7]	0	0	3.47	NA	sheen	0	5.13	NA	NA	0	(3)				(3)				NM			
2/22/2010	5.53	NA	NA	0	4.17	NA	sheen	0	3.98	NA	sheen	0	5.58	NA	NA	0	(3)				(3)				NM			
3/24/2010	3.24	NA	sheen	0	2.54	2.53	0.01	0	2.33	2.32	0.01	0	3.90	NA	NA	0	(3)				(3)				NM			
4/5/2010	3.72	NA	NA	0	2.82	2.82[7]	0	0	2.63	2.62	0.01	0	4.27	NA	NA	0	(3)				(3)				NM			
5/12/2010	5.50	NA	NA	0	4.17	4.16	0.01	0	3.96	NA	sheen	0	5.57	NA	NA	0	(3)				(3)				NM			
6/4/2010	5.93	NA	NA	0	4.49	4.48	0.01	0	4.23	NA	sheen	0	5.90	NA	NA	0	(3)				(3)				NM			
7/8/2010	6.53	NA	NA	0	5.09	5.05	0.04	0	4.85	4.84	0.01	0	6.47	NA	NA	0	(3)				(3)				NM			
8/30/2010	6.47	6.46	0.01	0	5.10	5.02	0.08	0	4.84	4.82	0.02	0	6.48	NA	NA	0	(3)				(3)				NM			
9/27/2010	7.20	7.19	0.01	0	5.82	5.69	0.13	1.1	5.55	5.49	0.06	0.75	7.15	NA	NA	0	(3)				(3)				NM			
10/21/2010	5.88	5.87	0.01	0	5.70	5.67	0.03	1.5	5.50	NA	sheen	1.1	6.08	NA	NA	0	(3)				(3)				NM			

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Date	DTW (ft.)	DTP (ft.)	Thickness (ft.)	Volume Removed (gal.)	DTW (ft.)	DTP (ft.)	Thickness (ft.)	Volume Removed (gal.)	DTW (ft.)	DTP (ft.)	Thickness (ft.)	Volume Removed (gal.)	DTW (ft.)	DTP (ft.)	Thickness (ft.)	Volume Removed (gal.)	DTW (ft.)	DTP (ft.)	Thickness (ft.)	Volume Removed (gal.)	DTW (ft.)	DTP (ft.)	Thickness (ft.)	Volume Removed (gal.)	DTW (ft.)	DTP (ft.)	Thickness (ft.)	Volume Removed (gal.)
11/11/2010	5.18	NA	sheen	0	4.28	NA	NA	1.5	4.10	NA	NA	0	5.70	NA	NA	0	(3)				(3)				NM			
12/18/2010	5.70	NA	NA	0	4.60	4.60[7]	0	0	4.39	4.38	0.01	0	6.05	NA	NA	0	(3)				(3)				NM			
1/26/2011	NA	NA	NA	0	NA	NA	NA	0	NA	NA	NA	0	NA	NA	NA	0	(3)				(3)				NM			
2/7/2011	5.45	NA	NA	0	4.3	NA	NA	0	4.11	NA	NA	0	5.75	NA	NA	0	(3)				(3)				NM			
3/17/2011	4.05	NA	NA	0	3.06	NA	NA	0	2.87	NA	film	0	4.49	NA	NA	0	(3)				(3)				NM			
4/23/2011	4.53	NA	NA	0	3.7	NA	NA	0	3.5	NA	NA	0	5.14	NA	NA	0	(3)				(3)				NM			
5/24/2011	5.27	NA	NA	0	4.08	NA	NA	0	3.87	NA	NA	0	5.38	NA	NA	0	(3)				(3)				NM			
6/28/2011	4.81	NA	NA	0	3.98	NA	NA	0.00	3.77	NA	sheen	0.00	5.41	NA	NA	0	(3)				(3)				NM			
7/21/2011	5.92	NA	NA	0	4.69	4.67	0.02	0.00	4.49	4.47	0.02	0.00	6.11	NA	NA	0	(3)				(3)				NM			
8/15/2011	5.18	NA	NA	0	3.90	NA	sheen	0.00	3.70	NA	NA	0.00	5.14	NA	NA	0	(3)				(3)				NM			
11/28/2011	4.46	NA	NA	1 [8]	3.65	NA	NA	0	3.45	NA	NA	0.00	5.08	NA	NA	1 [8]	(3)				(3)				NM			
12/22/2011	4.63	NA	NA	2 [8]	3.62	NA	NA	0	3.43	NA	sheen	0.00	5.03	NA	NA	2 [8]	(3)				(3)				NM			
5/31/2012	5.30	NA	NA	0	4.10	NA	NA	0	3.91	NA	sheen	0.00	5.46	NA	NA	0	(3)				(3)				NM			
11/5/2012	4.90	NA	NA	0	4.10	NA	NA	0	3.82	3.81	0.01	0.00	5.46	NA	NA	0	5.44	NA	NA	0	5.08	NA	NA	0	NM	NM	NA	NA
5/21/2013	5.76	NA	NA	0	4.41	4.40	0.01	0.00	4.19	4.18	0.01	0.00	5.77	NA	NA	0	5.80	NA	NA	0	5.42	NA	NA	0	5.87	NA	NA	0
12/27/2013	5.15	NA	NA	0	4.26	NA	NA	0	4.03	NA	NA	0.00	5.61	NA	NA	0	5.66	NA	NA	0	5.31	NA	NA	0	5.41	NA	NA	0
3/17/2014	4.65	NA	NA	0	3.68	NA	NA	0	3.43	NA	NA	0.00	4.92	NA	NA	0	5.10	NA	NA	0	4.75	NA	NA	0	4.78	NA	NA	0
6/16/2014	5.60	NA	NA	0	4.31	NA	NA	0	4.08	NA	NA	0.00	5.70	NA	NA	0	5.72	NA	NA	0	5.28	NA	NA	0	5.35	NA	NA	0
9/12/2014	6.13	NA	NA	0	4.78	NA	NA	0	4.57	NA	NA	0.00	6.02	NA	NA	0	6.22	NA	NA	0	5.80	NA	NA	0	6.15	NA	NA	0
12/12/2014	3.70	NA	NA	0	2.92	NA	NA	0	2.70	NA	NA	0.00	4.17	NA	NA	0	4.38	NA	NA	0	4.05	NA	NA	0	4.00	NA	NA	0
3/20/2015	4.34	NA	NA	0	3.43	NA	NA	0	3.23	NA	NA	0.00	4.67	NA	NA	0	4.96	NA	NA	0	4.51	NA	NA	0	4.65	NA	NA	0
5/29/2015	6.01	NA	NA	0	4.60	NA	NA	0	4.38	NA	NA	0.00	4.84	NA	NA	0	6.07	NA	NA	0	4.55	NA	NA	0	5.94	NA	NA	0
9/28/2015	6.92	NA	NA	0	5.50	5.47	0.03	0.00	5.30	5.22	0.08	0.75	6.69	NA	NA	0	6.92	NA	NA	0	6.50	NA	NA	0	6.83	NA	NA	0
12/17/2015	5.90	NA	NA	0	4.50	NA	NA	0.00	4.35	4.34	0.01	0.00	5.76	NA	NA	0	6.01	NA	NA	0	5.55	NA	NA	0	5.91	NA	NA	0
3/25/2016	5.21	NA	NA	0	4.02	NA	NA	0.00	3.79	NA	NA	0.00	5.24	NA	NA	0	5.45	NA	NA	0	4.89	NA	NA	0	5.22	NA	NA	0
6/10/2016	5.11	NA	NA	0	4.70	NA	NA	0.00	4.51	4.49	0.02	0.00	5.93	NA	NA	0	6.15	NA	NA	0	4.61	NA	NA	0	6.04	NA	NA	0
9/13/2016	7.81	NA	NA	0	6.45	6.33	0.12	0.75	5.98	NA	NA	0.00	7.62	NA	NA	0	7.79	NA	NA	0	7.39	NA	NA	0	7.66	NA	NA	0
12/30/2016	5.28	NA	NA	0	4.17	4.14	0.03	0.75	3.89	NA	NA	0.00	5.30	NA	NA	0	5.51	NA	NA	0	5.12	NA	NA	0	5.38	NA	NA	0
3/28/2017	4.85	NA	NA	0	3.87	NA	NA	0.00	3.64	NA	NA	0.00	5.10	NA	NA	0	5.30	NA	NA	0	4.78	NA	NA	0	5.05	NA	NA	0
6/13/2017	5.22	NA	NA	0	4.01	NA	NA	0.00	3.79	3.78	0.01	0.00	5.26	NA	NA	0	5.44	NA	NA	0	4.89	NA	NA	0	5.19	NA	NA	0
9/1/2017	6.50	NA	NA	0	5.48	5.45	0.03	0.00	5.25	5.24	0.01	0.00	6.68	NA	NA	0	6.89	NA	NA	0	6.30	NA	NA	0	7.26	NA	NA	0
11/30/2017	5.87	NA	NA	0	4.51	NA	NA	0.56	4.27	NA	NA	0.00	5.73	NA	NA	0	5.96	NA	NA	0	5.55	NA	NA	0	6.32	NA	NA	0
3/7/2018	4.89	NA	NA	0	3.66	NA	NA	0.00	3.42	NA	NA	0.00	4.89	NA	NA	0	4.12	NA	NA	0	4.63	NA	NA	0	5.35	NA	NA	0
6/14/2018	5.89	NA	NA	0	4.56	4.55	0.01 (sheen)	0.00	4.32	4.31	0.01 (sheen)	0.00	5.72	NA	NA	0	6.99	NA	NA	0	5.49	NA	NA	0	6.35	NA	NA	0
9/17/2018	5.66	NA	NA	0	4.33	NA	NA	0.00	4.09	NA	NA	0.00	5.56	NA	NA	0	5.79	NA	NA	0	5.31	NA	NA	0	6.15	NA	NA	0
12/3/2018	4.13	NA	NA	0	2.93	NA	NA	0.00	2.69	NA	NA	0.00	4.23	NA	NA	0	4.36	NA	NA	0	4.02	NA	NA	0	4.52	NA	NA	0
2/25/2019	4.75	NA	NA	0	3.47	NA	NA	0.00	3.23	NA	NA	0.00	4.44	NA	NA	0	4.86	NA	NA	0	4.46	NA	NA	0	5.01	NA	NA	0
6/5/2019	5.54	NA	NA	0	4.12	NA	NA	0.00	3.88	NA	NA	0.00	5.40	NA	NA	0	5.58	NA	NA	0	5.02	NA	NA	0	5.89	NA	NA	0
9/13/2019	6.17	NA	NA	0	4.74	NA	NA	0.00	4.51	NA	NA	0.00	5.98	NA	NA	0	6.19	NA	NA	0	5.71	NA	NA	0	6.57	NA	NA	0
12/4/2019	5.37	NA	NA	0	4.12	NA	NA	0.00	3.89	NA	NA	0.00	5.06	NA	NA	0	5.50	NA	NA	0	5.09	NA	NA	0	5.61	NA	NA	0
2/11/2020	5.24	NA	NA	0	3.83	NA	NA	0.00	3.59	NA	NA	0.00	5.12	NA	NA	0	5.26	NA	NA	0	4.74	NA	NA	0	5.40	NA	NA	0
5/13/2020	5.24	NA	NA	0	3.85	NA	NA	0.00	3.61	NA	NA	0.00	5.06	NA	NA	0	5.28	NA	NA	0	4.67	NA	NA	0	5.54	NA	NA	0
9/8/2020	6.77	NA	NA	0	5.60	5.58	0.02	0.00	5.35	5.35	0.01	0.00	6.82	NA	NA	0	7.02	NA	NA	0	6.60	NA	NA	0	7.36	NA	NA	0
12/7/2020	4.30	NA	NA	0	3.15	NA	NA	0.00	2.93	NA	NA	0.00	4.35	NA	NA	0	4.58	NA	NA	0	4.27	NA	NA	0	4.76	NA	NA	0
2/17/2021	4.85	NA	NA	0	3.81	NA	NA	0.00	3.59	NA	NA	0.00	4.98	NA	NA	0	5.19	NA	NA	0	4.83	NA	NA	0	5.33	NA	NA	0
gals removed (approx.):				2.1				58.23				44.24				0				0				0				0

Notes:
LNAPL gauging results above from 1994 through 2011 collected by TRC or others. Data collection by AECOM started in 2012.
Bgs – Below ground surface.
NA – Not Applicable.
NM – Not Measured.
NR – Not Recorded.
* LNAPL gauging at monitoring well PZ-2S was conducted on a semi-annual basis from April 1994 through May 2000. TRC then increased gauging frequency to monthly. MA DEP then requested that monthly LNAPL gauging continue at PZ-2S, CW-1, and CW-2 as part of the requirements of the Phase V O&M program, beginning December 2000.

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

Table 5-1
Summary of 2016 - 2020 Groundwater Analytical Results for Arsenic
Former GE Facility, 50 Fordham Road, Wilmington, MA

Location Group	Location ID	Sample ID	Sample Type	Sample Date	Depth Interval (ft)	Dissolved Arsenic (ug/L)	Total Arsenic (ug/L)
					MCP Method 1 GW-1 Standard:	10	10
					MCP Method 1 GW-2 Standard:	NE	NE
					MCP Method 1 GW-3 Standard:	900	900
					MCP Upper Concentration Limit (UCL):	9,000	9,000
Building 1_TankF	AE26R-1	16B-AE26R1-062316-1	Normal	6/23/2016	50 - 56	4.0 U	4.0 U
		17A-AE26R1-100417-1	Normal	10/4/2017		4.0 U	4.0 U
		18A-AE26R1-091818-1	Normal	9/18/2018		4.0 U	4.0 U
		19A-AE26R1-092319-1	Normal	9/23/2019		4.0 U	4.0 U
		20A-AE26R1-091420-1	Normal	9/14/2020		**6**	**6**
	AE26S	18A-AE26S-092518-1	Normal	9/25/2018	25 - 30	4.0 U	4.0 U
		19A-AE26S-092319-1	Normal	9/23/2019		4.0 U	4.0 U
		20A-AE26S-091420-1	Normal	9/14/2020		4.0 U	4.0 U
	AE28R-2	16B-AE28R2-062316-1	Normal	6/23/2016	75 - 85	4.0 U	4.0 U
		17A-AE28R2-100417-1	Normal	10/4/2017		4.0 U	4.0 U
		18A-AE28R2-091818-1	Normal	9/18/2018		4.0 U	4.0 U
		19A-AE28R2-092319-1	Normal	9/23/2019		4.0 U	4.0 U
		20A-AE28R2-091420-1	Normal	9/14/2020		4.0 U	4.0 U
	AE29R-6	16B-AE29R6-062816-1	Normal	6/28/2016	140 - 146	4.0 U	4.0 U
		17A-AE29R6-101717-1	Normal	10/17/2017		4.0 U	4.0 U
		18A-AE29R6-091818-1	Normal	9/18/2018		4.0 U	4.0 U
		19A-AE29R6-092419-1	Normal	9/24/2019		**4**	4.0 U
		20A-AE29R6-092220-1	Normal	9/22/2020		**6**	4 U
	GZA-101R	16A-GZA101R-061416-1	Normal	6/14/2016	36.5 - 38	4.0 U	4.0 U
		17A-GZA101R-101017-1	Normal	10/10/2017		4.0 U	**10.6**
		18A-GZA101R-091818-1	Normal	9/18/2018		4.0 U	4.0 U
		19A-GZA101R-092619-1	Normal	9/26/2019		4.0 U	4.0 U
		20A-GZA101R-092420-1	Normal	9/24/2020		4.0 U	4.0 U
Downgradient Wetland	GZA-14A	16A-GZA14A-061716-1	Normal	6/17/2016	0 - 15	**35.8**	**35.4**
		16A-GZA14A-061716-2	Duplicate	6/17/2016		**35.8**	**34.7**
		17A-GZA14A-102017-1	Normal	10/20/2017		**22.8**	**24.8**
		18A-GZA14A-092818-1	Normal	9/28/2018		**8.6**	**12.3**
		19A-GZA14A-093019-1	Normal	9/30/2019		**32**	**43**
		20A-GZA14A-091720-1	Normal	9/17/2020		**12**	**14**
	MW-4	16A-MW4-062416-1	Normal	6/24/2016	18 - 28	4.0 U	**8.1**
		17A-MW4-101817-1	Normal	10/18/2017		4.0 U	4.0 U
		18A-MW4-100418-1	Normal	10/4/2018		4.0 U	4.0 U
		19A-MW4-091919-1	Normal	9/19/2019		4.0 U	4.0 U
		19A-MW4-091919-2	Duplicate	9/19/2019		4.0 U	4.0 U
		20A-MW4-091820-1	Normal	9/18/2020		4.0 U	4.0 U
		20A-MW4-091820-2	Duplicate	9/18/2020		4.0 U	4.0 U
	MW-4A	16A-MW4A-062416-1	Normal	6/24/2016	38 - 48	**7**	4.0 U
		17A-MW4A-101817-1	Normal	10/18/2017		**6.8**	**6.8**
		18A-MW4A-100418-1	Normal	10/4/2018		**7.2**	**7.95**
		19A-MW4A-091919-1	Normal	9/19/2019		4.0 U	**11**
		20A-MW4A-091820-1	Normal	9/18/2020		**8**	**9**
	PS-8D	18A-PS8D-100218-1	Normal	10/2/2018	51.8 - 56.8	4.0 U	4.0 U
		19A-PS8D-091719-1	Normal	9/17/2019		4.0 U	4.0 U
		20A-PS8D-091520-1	Normal	9/15/2020		4.0 U	4.0 U
EPL	AE03	16A-AE03-062816-1	Normal	6/28/2016	3 - 13	**39.5**	**40.4**
		17A-AE03-100917-1	Normal	10/9/2017		**39.3**	**38.8**
		18A-AE03-092418-1	Normal	9/24/2018		**58**	**57.15**
		18A-AE03-092418-2	Duplicate	9/24/2018		**57.2**	**59.0**
		19A-AE03-091219-1	Normal	9/12/2019		**57**	**58**
		19A-AE03-091219-2	Duplicate	9/12/2019		**58**	**56**
		20A-AE3-092320-1	Normal	9/23/2020		**44**	**43**
		20A-AE3-092320-2	Duplicate	9/23/2020		**45**	**45**

Table 5-1
Summary of 2016 - 2020 Groundwater Analytical Results for Arsenic
Former GE Facility, 50 Fordham Road, Wilmington, MA

Location Group	Location ID	Sample ID	Sample Type	Sample Date	Depth Interval (ft)	Dissolved Arsenic (ug/L)	Total Arsenic (ug/L)
					MCP Method 1 GW-1 Standard:	10	10
					MCP Method 1 GW-2 Standard:	NE	NE
					MCP Method 1 GW-3 Standard:	900	900
					MCP Upper Concentration Limit (UCL):	9,000	9,000
EPL, continued	GZA-105S	16A-GZA105S-061516-1	Normal	6/15/2016	4 - 14	**169**	**152**
		17A-GZA105S-100917-1	Normal	10/9/2017		**242**	**242**
		17A-GZA105S-100917-2	Duplicate	10/9/2017		**239**	**234**
		18A-GZA105S-092518-1	Normal	9/25/2018		**238**	**228.05**
		19A-GZA105S-091819-1	Normal	9/18/2019		**168**	**182**
		20A-GZA105S-092420-1	Normal	9/24/2020		**194**	**195**
	TRC-102	16A-TRC102-062716-1	Normal	6/27/2016	2.25 - 12.25	**30.4**	**33.8**
		17A-TRC102-100217-1	Normal	10/2/2017		**27.4**	**27.3**
		18A-TRC102-092418-1	Normal	9/24/2018		**39.6**	**41.75**
		19A-TRC102-092019-1	Normal	9/20/2019		**50**	**60**
		20A-TRC102-092320-1	Normal	9/23/2020		**57**	**56**
	GZA-06	18A-GZA6-100118-1	Normal	10/1/2018	8 - 18	**9.1**	**9.1**
		19A-GZA6-092019-1	Normal	9/20/2019		**9**	**11**
		20A-GZA6-092120-1	Normal	9/21/2020		**10**	**9**
	GZA-10	18A-GZA10-100118-1	Normal	10/1/2018	13 - 38	**109**	**122.05**
		19A-GZA10-092619-1	Normal	9/26/2019		**138**	**130**
		20A-GZA10-092120-1	Normal	9/21/2020		**78**	**77**
Tank Farm	AE100R-5	16A-AE100R5-061516-1	Normal	6/15/2016	88 -93	4.0 U	4.0 U
		17A-AE100R5-100417-1	Normal	10/4/2017		4.0 U	4.0 U
		18A-AE100R5-091918-1	Normal	9/19/2018		4.0 U	4.0 U
		19A-AE100R5-092319-1	Normal	9/23/2019		4.0 U	4.0 U
		20A-AE100R5-091020-1	Normal	9/10/2020		4.0 U	4.0 U
Transect A	AE102M	16A-AE102M-061316-1	Normal	6/13/2016	23 - 28	**12**	**14.1**
		17A-AE102M-100217-1	Normal	10/2/2017		**9.8**	**9.8**
		18A-AE102M-100118-1	Normal	10/1/2018		**4.6**	**4.35**
		19A-AE102M-092519-1	Normal	9/25/2019		**8**	**9**
		20A-AE102M-090920-1	Normal	9/9/2020		**10**	**10**
	AE102RR-6	16A-AE102RR6-061416-1	Normal	6/14/2016	153 - 158	**4.1**	**4.5**
		17A-AE102RR6-100317-1	Normal	10/3/2017		**5.2**	**5.3**
		18A-AE102RR6-091918-1	Normal	9/19/2018		4.0 U	4.0 U
		19A-AE102RR6-092419-1	Normal	9/24/2019		**5**	4.0 U
		20A-AE102RR6-090920-1	Normal	9/9/2020		**4**	**4**
	AE103D	16A-AE103D-061316-1	Normal	6/13/2016	35 - 40	4.0 U	4.0 U
		17A-AE103D-100317-1	Normal	10/3/2017		4.0 U	4.0 U
		18A-AE103D-092418-1	Normal	9/24/2018		4.0 U	4.0 U
		18A-AE103D-092418-2	Duplicate	9/24/2018		4.0 U	4.0 U
		19A-AE103D-091919-1	Normal	9/19/2019		4.0 U	4.0 U
		20A-AE103D-091020-1	Normal	9/10/2020		4.0 U	4.0 U
	AE103R-1	16A-AE103R1-061516-1	Normal	6/15/2016	48 - 53	4.0 U	4.0 U
		17A-AE103R1-100217-1	Normal	10/2/2017		4.0 U	4.0 U
		18A-AE103R1-092518-1	Normal	9/25/2018		4.0 U	4.0 U
		19A-AE103R1-091819-1	Normal	9/18/2019		4.0 U	**5**
		20A-AE103R1-091020-1	Normal	9/10/2020		4.0 U	4.0 U
	AE103R-5	17A-AE103R5-100217-1	Normal	10/2/2017	122 - 128	4.0 U	4.0 U
		18A-AE103R5-092518-1	Normal	9/25/2018		4.0 U	4.0 U
		19A-AE103R5-091819-1	Normal	9/18/2019		4.0 U	**5**
		20A-AE103R5-091020-1	Normal	9/10/2020		4.0 U	4.0 U
	AE103S	16A-AE103S-061516-1	Normal	6/15/2016	15 - 20	**179**	**175**
		17A-AE103S-100317-1	Normal	10/3/2017		**159**	**143**
		18A-AE103S-092418-1	Normal	9/24/2018		**138**	**171.2**
		19A-AE103S-091919-1	Normal	9/19/2019		**138**	**162**
		20A-AE103S-091020-1	Normal	9/10/2020		**160**	**172**

Table 5-1
Summary of 2016 - 2020 Groundwater Analytical Results for Arsenic
Former GE Facility, 50 Fordham Road, Wilmington, MA

Location Group	Location ID	Sample ID	Sample Type	Sample Date	Depth Interval (ft)	Dissolved Arsenic (ug/L)	Total Arsenic (ug/L)
					MCP Method 1 GW-1 Standard:	10	10
					MCP Method 1 GW-2 Standard:	NE	NE
					MCP Method 1 GW-3 Standard:	900	900
					MCP Upper Concentration Limit (UCL):	9,000	9,000
Transect A (continued)	AE108R-1	16A-AE108R1-061616-1	Normal	6/16/2016	36.5 - 43.5	4.0 U	4.0 U
		16A-AE108R1-061616-2	Duplicate	6/16/2016		4.0 U	4.0 U
		17A-AE108R1-100917-1	Normal	10/9/2017		4.0 U	4.0 U
		18A-AE108R1-091918-1	Normal	9/19/2018		4.0 U	4.0 U
		19A-AE108R1-092419-1	Normal	9/24/2019		4.0 U	4.0 U
		20A-AE108R1-090920-1	Normal	9/9/2020		4.0 U	4.0 U
	AE109D	18A-AE109D-092618-1	Normal	9/26/2018	18 - 23	4.0 U	4.0 U
		19A-AE109D-092019-1	Normal	9/20/2019		4.0 U	4.0 U
		18A-AE109D-091620-1	Normal	9/16/2020		4.0 U	4.0 U
	AE109R-5	16A-AE109R5-061616-1	Normal	6/16/2016	183 - 189	4.0 U	4.0 U
		17A-AE109R5-101017-1	Normal	10/10/2017		4.0 U	4.0 U
		18A-AE109R5-100218-1	Normal	10/2/2018		4.0 U	4.00 U
		19A-AE109R5-091819-1	Normal	9/18/2019		4.0 U	4.0 U
		20A-AE109R5-091620-1	Normal	9/16/2020		4.0 U	4.0 U
	EMW-11R2	16A-EMW11R2-062116-1	Normal	6/21/2016	104 - 114	4.0 U	4.0 U
		17A-EMW11R2-101017-1	Normal	10/10/2017		4.0 U	4.0 U
		18A-EMW11R2-092418-1	Normal	9/24/2018		4.0 U	**4.05**
		19A-EMW11R2-091719-1	Normal	9/17/2019		**4**	4.0 U
		20A-EMW11R2-092120-1	Normal	9/21/2020		**5**	**4**
Transect B	AE105R-2	16A-AE105R2-062016-1	Normal	6/20/2016	98 - 103	4.0 U	4.0 U
		17A-AE105R2-101217-1	Normal	10/12/2017		4.0 U	4.0 U
		18A-AE105R2-100318-1	Normal	10/3/2018		4.0 U	4.0 U
		19A-AE105R2-091619-1	Normal	9/16/2019		4.0 U	4.0 U
		20A-AE105R2-091720-1	Normal	9/17/2020		4.0 U	4.0 U
	AE105S	16A-AE105S-062216-1	Normal	6/22/2016	35 - 40	**16.8**	**17.8**
		17A-AE105S-101217-1	Normal	10/12/2017		**15.7**	**16.8**
		18A-AE105S-100318-1	Normal	10/3/2018		**12.8**	**14.7**
		19A-AE105S-091619-1	Normal	9/16/2019		**12**	**13**
		20A-AE105S-091720-1	Normal	9/17/2020		**16**	**17**
	AE106D	16A-AE106D-062016-1	Normal	6/20/2016	34 - 39	4.0 U	4.0 U
		17A-AE106D-101217-1	Normal	10/12/2017		4.0 U	4.0 U
		18A-AE106D-100318-1	Normal	10/3/2018		4.0 U	4.0 U
		19A-AE106D-091719-1	Normal	9/17/2019		4.0 U	4.0 U
		20A-AE106D-091720-1	Normal	9/17/2020		4.0 U	4.0 U
	AE106R-3	16A-AE106R3-062016-1	Normal	6/20/2016	84 - 88	4.0 U	4.0 U
		17A-AE106R3-101217-1	Normal	10/12/2017		4.0 U	4.0 U
		18A-AE106R3-100318-1	Normal	10/3/2018		4.0 U	4.0 U
		19A-AE106R3-091619-1	Normal	9/16/2019		4.0 U	4.0 U
		20A-AE106R3-091720-1	Normal	9/17/2020		4.0 U	4.0 U
	TRC-301R2	18A-TRC301R2-092718-1	Normal	9/27/2018	81.5 - 85.5	4.0 U	4.0 U
		19A-TRC301R2-091719-1	Normal	9/17/2019		4.0 U	4.0 U
		20A-TRC301R2-091520-1	Normal	9/15/2020		4.0 U	4.0 U
	TRC-301R4	16A-TRC301R4-062216-1	Normal	6/22/2016	65.5 - 69.5	**22.8**	**23.0**
		17A-TRC301R4-102317-1	Normal	10/23/2017		**22.4**	**21.6**
		18A-TRC301R4-092718-1	Normal	9/27/2018		**18.6**	**19.70**
		19A-TRC301R4-091719-1	Normal	9/17/2019		**21**	**19**
		20A-TRC301R4-091520-1	Normal	9/15/2020		**19**	**23**

Table 5-1
Summary of 2016 - 2020 Groundwater Analytical Results for Arsenic
Former GE Facility, 50 Fordham Road, Wilmington, MA

Location Group	Location ID	Sample ID	Sample Type	Sample Date	Depth Interval (ft)	Dissolved Arsenic (ug/L)	Total Arsenic (ug/L)
					MCP Method 1 GW-1 Standard:	10	10
					MCP Method 1 GW-2 Standard:	NE	NE
					MCP Method 1 GW-3 Standard:	900	900
					MCP Upper Concentration Limit (UCL):	9,000	9,000
Transect B1/2	AE112D	17A-AE112D-101717-1	Normal	10/17/2017	24.5 - 29.5	4.0 U	4.0 U
		18A-AE112D-092618-1	Normal	9/26/2018		4.0 U	4.00 U
		19A-AE112D-091319-1	Normal	9/13/2019		4.0 U	4.00 U
		20A-AE112D-091120-1	Normal	9/11/2020		4.0 U	4.0 U
	AE112R-1	18A-AE112R1-092618-1	Normal	9/26/2018	41 - 51	4.0 U	**4.15**
		19A-AE112R1-091319-1	Normal	9/13/2019		4.0 U	**5**
		20A-AE112R1-091120-1	Normal	9/11/2020		**5**	**5**
	AE112R-6	16B-AE112R6-062116-1	Normal	6/21/2016	153 - 163	4.0 U	4.0 U
		17A-AE112R6-101717-1	Normal	10/17/2017		4.0 U	4.0 U
		18A-AE112R6-092618-1	Normal	9/26/2018		4.0 U	4.0 U
		18A-AE112R6-092618-2	Duplicate	9/26/2018		4.0 U	4.0 U
		19A-AE112R6-091319-1	Normal	9/13/2019		4.0 U	4.0 U
		20A-AE112R6-091120-1	Normal	9/11/2020		4.0 U	4.0 U
Transect C	STM-8R1	16A-STM8R1-062816-1	Normal	6/28/2016	85 - 90	**11.6**	**12.6**
		17A-STM8R1-101717-1	Normal	10/17/2017		**15.4 J**	**11.9 J**
		17A-STM8R1-101717-2	Duplicate	10/17/2017		**15.2 J**	**10.3 J**
		18A-STM8R1-100218-1	Normal	10/2/2018		**14.8**	**14.45**
		19A-STM8R1-092619-1	Normal	9/26/2019		**14**	**17**
		20A-STM8R1-092320-1	Normal	9/23/2020		**11**	**18**
Upgradient	GZA-12	16A-GZA12-061416-1	Normal	6/14/2016	9.5 - 24.5	4.0 U	4.0 U
		17A-GZA12-101017-1	Normal	10/10/2017		4.0 U	4.0 U
		18A-GZA12-100118-1	Normal	10/1/2018		4.0 U	4.0 U
		19A-GZA12-092619-1	Normal	9/26/2019		4.0 U	4.0 U
		20A-GZA12-092420-1	Normal	9/24/2020		4.0 U	4.0 U

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

Table 5-2
Groundwater Mann Kendall Trend Tests for Arsenic
Former GE Facility, Wilmington, MA

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

Notes:
Datasets presented for wells that were included in the sampling program in September 2020
Field duplicates assigned the maximum value for the purposes of the trend test
The detection limit was used for non-detect concentrations for the purposes of the trend test.
Trend test results were interpreted using a confidence level of 80% and 90%. If the absolute value of the statistic is equal to or greater than the critical value, a significant trend is concluded. The direction of the trend is determined by the sign of the statistic with positive statistics indicating an upward trend and negative statistics indicating a downward trend.
* When sample size > 10, the normal approximation is used and calculated per box 4-9 in Data Quality Assessment: Statistical Methods for Practitioners, EPA QA/G-9S. When the normal approximation is used, the critical value is the standard normal distribution.
When S is 0, no critical value is calculated and a conclusion of no trend is made

Table 5-3
Summary of 2016 - 2020 Groundwater Analytical Results for 1,4-Dioxane
Former GE Facility, 50 Fordham Road, Wilmington, MA

Location Group	Location ID	Sample ID	Sample Date	Sample Type	Depth Interval (ft)	1,4-Dioxane via 8270 SIM (µg/l)
					MCP Method 1 GW-1 Standard:	0.3
					MCP Method 1 GW-2 Standard:	6,000
					MCP Method 1 GW-3 Standard:	50,000
					MCP Upper Concentration Limit (UCL):	100,000
Upgradient	GZA-12	18A-GZA12-100118-1	10/1/2018	Normal	9.5 - 24.5	0.20 U
		19A-GZA12-092619-1	9/26/2019	Normal		0.20 U
		20A-GZA12-092420-1	9/24/2020	Normal		0.20 U
Building 1 Tank F	AE23R	16B-AE23R-062716-1	6/27/2016	Normal	44.75 - 54.75	**16**
		17A-AE23R-101317-1	10/13/2017	Normal		**19**
		18A-AE23R-091918-1	9/19/2018	Normal		**19**
		19A-AE23R-092319-1	9/23/2019	Normal		**15**
		20A-AE23R-091420-1	9/14/2020	Normal		0.20 U
	AE24	17A-AE24-101917-1	10/19/2017	Normal	7.25 - 17.25	0.20 U
		17A-AE24-101917-2	10/19/2017	Duplicate		0.20 U
		18A-AE24-092518-1	9/25/2018	Normal		**0.29**
		19A-AE24-092319-1	9/23/2019	Normal		**1.4**
		20A-AE24-091420-1	9/14/2020	Normal		0.20 U
	AE26R-1	16B-AE26R1-062316-1	6/23/2016	Normal	50 - 56	**9.2**
		17A-AE26R1-100417-1	10/4/2017	Normal		**32**
		18A-AE26R1-091818-1	9/18/2018	Normal		**22**
		19A-AE26R1-092319-1	9/23/2019	Normal		**25**
		20A-AE26R1-091420-1	9/14/2020	Normal		**21**
	AE26R-5	16B-AE26R5-062316-1	6/23/2016	Normal	123 - 132	**13**
		17A-AE26R5-100417-1	10/4/2017	Normal		**43**
		18A-AE26R5-091818-1	9/18/2018	Normal		**29**
		19A-AE26R5-092319-1	9/23/2019	Normal		**34**
		20A-AE26R5-091420-1	9/14/2020	Normal		**27**
	AE28R-2	16B-AE28R2-062316-1	6/23/2016	Normal	75 - 85	**34**
		17A-AE28R2-100417-1	10/4/2017	Normal		**66**
		18A-AE28R2-091818-1	9/18/2018	Normal		**50**
		19A-AE28R2-092319-1	9/23/2019	Normal		**60**
		20A-AE28R2-091420-1	9/14/2020	Normal		**48**
	AE28R-3	18A-AE28R3-091818-1	9/18/2018	Normal	98 - 108	**39**
		19A-AE28R3-092319-1	9/23/2019	Normal		**46**
		20A-AE28R3-091420-1	9/14/2020	Normal		**39**
	AE29R-6	16B-AE29R6-062816-1	6/28/2016	Normal	140 - 146	**2.5**
		17A-AE29R6-101717-1	10/17/2017	Normal		**42**
		18A-AE29R6-091818-1	9/18/2018	Normal		**43**
		19A-AE29R6-092419-1	9/24/2019	Normal		**50**
		20A-AE29R6-092220-1	9/22/2020	Normal		**43**
Downgradient Wetland	MW-4	16A-MW4-062416-1	6/24/2016	Normal	18 - 28	**0.68**
		17A-MW4-101817-1	10/18/2017	Normal		**1.2**
		18A-MW4-100418-1	10/4/2018	Normal		**1.4**
		19A-MW4-091919-1	9/19/2019	Normal		**0.84**
		19A-MW4-091919-2	9/19/2019	Duplicate		**0.86**
		20A-MW4-091820-1	9/18/2020	Normal		**0.84**
		20A-MW4-091820-2	9/18/2020	Duplicate		**0.83**
EPL	GZA-105D	16A-GZA105D-061516-	6/15/2016	Normal	16 - 26	**1.3**
		17A-GZA-105D-101917	10/19/2017	Normal		**6.1**
		17A-GZA-105D-101917	10/19/2017	Duplicate		**5.8**
		18A-GZA105D-092518-	9/25/2018	Normal		**2.3**
		19A-GZA105D-091819-	9/18/2019	Normal		**1**
		20A-GZA105D-092420-	9/24/2020	Normal		**0.68 J-**
	AE100R-3	16A-AE100R3-061516-1	6/15/2016	Normal	50 - 56	**4**
		17A-AE100R3-100417-1	10/4/2017	Normal		**9.8**
		18A-AE100R3-091918-1	9/19/2018	Normal		**9.4**
		19A-AE100R3-092319-1	9/23/2019	Normal		**13**
		20A-AE100R3-091020-1	9/10/2020	Normal		**9.2**

Table 5-3
Summary of 2016 - 2020 Groundwater Analytical Results for 1,4-Dioxane
Former GE Facility, 50 Fordham Road, Wilmington, MA

Location Group	Location ID	Sample ID	Sample Date	Sample Type	Depth Interval (ft)	1,4-Dioxane via 8270 SIM (µg/l)
					MCP Method 1 GW-1 Standard:	0.3
					MCP Method 1 GW-2 Standard:	6,000
					MCP Method 1 GW-3 Standard:	50,000
					MCP Upper Concentration Limit (UCL):	100,000
EPL, continued	AE100R-4	16A-AE100R4-061516-1	6/15/2016	Normal	63 - 68	**3.6**
		17A-AE100R4-100417-1	10/4/2017	Normal		**8.6**
		18A-AE100R4-091918-1	9/19/2018	Normal		**11**
		19A-AE100R4-092319-1	9/23/2019	Normal		**13**
		20A-AE100R4-091020-1	9/10/2020	Normal		**10**
	AE100R-6	16A-AE100R6-061516-1	6/15/2016	Normal	108.5 - 113.5	**5.7**
		17A-AE100R6-100417-1	10/4/2017	Normal		**12**
		18A-AE100R6-091918-1	9/19/2018	Normal		**14**
		19A-AE100R6-092319-1	9/23/2019	Normal		**12**
		20A-AE100R6-091020-1	9/10/2020	Normal		**10**
Transect A	AE101D	16A-AE101D-061516-1	6/15/2016	Normal	20 - 25	0.20 U
		16A-AE101D-061516-2	6/15/2016	Duplicate		0.20 U
		17A-AE101D-100217-1	10/2/2017	Normal		0.20 U
		18A-AE101D-092618-1	9/26/2018	Normal		**0.32**
		19A-AE101D-093019-1	9/30/2019	Normal		0.20 U
		20A-AE101D-091820-1	9/18/2020	Normal		**0.31**
	AE101R-2	16A-AE101R2-061616-1	6/16/2016	Normal	55 - 60	**3.3**
		17A-AE101R2-101117-1	10/11/2017	Normal		**6.7**
		18A-AE101R2-092018-1	9/20/2018	Normal		**6.8**
		19A-AE101R2-092519-1	9/25/2019	Normal		**5.2**
		20A-AE101R2-092320-1	9/23/2020	Normal		**5.8**
	AE101R-3	16A-AE101R3-061616-1	6/16/2016	Normal	80 - 85	**2.6**
		17A-AE101R3-101117-1	10/11/2017	Normal		**5.4**
		18A-AE101R3-092018-1	9/20/2018	Normal		**4.6**
		18A-AE101R3-092018-2	9/20/2018	Duplicate		**4.5**
		19A-AE101R3-092519-1	9/25/2019	Normal		**3.5 J**
		20A-AE101R3-092320-1	9/23/2020	Normal		**2.7**
	AE101R-5	16A-AE101R5-061616-1	6/16/2016	Normal	175 - 180	**9**
		17A-AE101R5-101917-1	10/19/2017	Normal		**17**
		18A-AE101R5-092618-1	9/26/2018	Normal		**17**
		19A-AE101R5-092519-1	9/25/2019	Normal		**16**
		20A-AE101R5-092420-1	9/24/2020	Normal		**15**
	AE101R-6	16A-AE101R6-061716-1	6/17/2016	Normal	227 - 232	**2.8**
		17A-AE101R6-101917-1	10/19/2017	Normal		**6.8**
		18A-AE101R6-092618-1	9/26/2018	Normal		**8.5**
		19A-AE101R6-093019-1	9/30/2019	Normal		**11**
		20A-AE101R6-092420-1	9/24/2020	Normal		**9.6**
	AE101S	16A-AE101S-061716-1	6/17/2016	Normal	10 - 15	0.20 U
		17A-AE101S-100217-1	10/2/2017	Normal		0.20 U
		18A-AE101S-092618-1	9/26/2018	Normal		0.20 U
		19A-AE101S-093019-1	9/30/2019	Normal		0.20 U
		20A-AE101S-091820-1	9/18/2020	Normal		**0.23**
	AE102D	16A-AE102D-061316-1	6/13/2016	Normal	33 - 38	**4.7**
		17A-AE102D-100217-1	10/2/2017	Normal		**6.2**
		18A-AE102D-100118-1	10/1/2018	Normal		**6.7**
		19A-AE102D-092519-1	9/25/2019	Normal		**5.4**
		20A-AE102D-090920-1	9/9/2020	Normal		**4.7**
	AE102M	16A-AE102M-061316-1	6/13/2016	Normal	23 - 28	0.20 U
		17A-AE102M-100217-1	10/2/2017	Normal		**0.73**
		18A-AE102M-100118-1	10/1/2018	Normal		**0.76**
		19A-AE102M-092519-1	9/25/2019	Normal		**0.76**
		19A-AE102M-092519-2	9/25/2019	Duplicate		**0.78**
		20A-AE102M-090920-1	9/9/2020	Normal		**0.62**
		20A-AE102M-090920-2	9/9/2020	Duplicate		**0.58**

Table 5-3
Summary of 2016 - 2020 Groundwater Analytical Results for 1,4-Dioxane
Former GE Facility, 50 Fordham Road, Wilmington, MA

Location Group	Location ID	Sample ID	Sample Date	Sample Type	Depth Interval (ft)	1,4-Dioxane via 8270 SIM (µg/l)
					MCP Method 1 GW-1 Standard:	0.3
					MCP Method 1 GW-2 Standard:	6,000
					MCP Method 1 GW-3 Standard:	50,000
					MCP Upper Concentration Limit (UCL):	100,000
Transect A, continued	AE102RR-2	16A-AE102RR2-061416	6/14/2016	Normal	75 - 80	**2.8**
		17A-AE102RR2-100317	10/3/2017	Normal		**6.1**
		18A-AE102RR2-091918	9/19/2018	Normal		**6.4**
		18A-AE102RR2-091918	9/19/2018	Duplicate		**6.3**
		19A-AE102RR2-092419	9/24/2019	Normal		**6**
		20A-AE102RR2-090920	9/9/2020	Normal		**6.2**
	AE102RR-4	16A-AE102RR4-061416	6/14/2016	Normal	125 - 130	**4.4**
		17A-AE102RR4-100317	10/3/2017	Normal		**5.7**
		18A-AE102RR4-091918	9/19/2018	Normal		**6.8**
		19A-AE102RR4-092419	9/24/2019	Normal		**6**
		20A-AE102RR4-090920	9/9/2020	Normal		**5.2**
	AE102RR-6	16A-AE102RR6-061416	6/14/2016	Normal	153 - 158	**10**
		17A-AE102RR6-100317	10/3/2017	Normal		**22**
		18A-AE102RR6-091918	9/19/2018	Normal		**23**
		19A-AE102RR6-092419	9/24/2019	Normal		**26**
		20A-AE102RR6-090920	9/9/2020	Normal		**25**
	AE103D	16A-AE103D-061316-1	6/13/2016	Normal	35 - 40	0.20 U
		17A-AE103D-100317-1	10/3/2017	Normal		**0.84**
		18A-AE103D-092418-1	9/24/2018	Normal		**0.82**
		18A-AE103D-092418-2	9/24/2018	Duplicate		**0.72**
		19A-AE103D-091919-1	9/19/2019	Normal		**0.82**
		20A-AE103D-091020-1	9/10/2020	Normal		**0.78**
	AE103R-1	16A-AE103R1-061516-1	6/15/2016	Normal	48 - 53	**16**
		17A-AE103R1-100217-1	10/2/2017	Normal		**9**
		18A-AE103R1-092518-1	9/25/2018	Normal		**8.7**
		19A-AE103R1-091819-1	9/18/2019	Normal		**8**
		20A-AE103R1-091020-1	9/10/2020	Normal		**4.2**
	AE103R-4	16A-AE103R4-061516-1	6/15/2016	Normal	98 - 105	**34**
		17A-AE103R4-100217-1	10/2/2017	Normal		**46**
		18A-AE103R4-092518-1	9/25/2018	Normal		**45**
		19A-AE103R4-091819-1	9/18/2019	Normal		**43**
		20A-AE103R4-091020-1	9/10/2020	Normal		**38**
	AE103R-5	16A-AE103R5-061516-1	6/15/2016	Normal	122 - 128	**34**
		17A-AE103R5-100217-1	10/2/2017	Normal		**47**
		18A-AE103R5-092518-1	9/25/2018	Normal		**48**
		19A-AE103R5-091819-1	9/18/2019	Normal		**36**
		20A-AE103R5-091020-1	9/10/2020	Normal		**37**
	AE104D	16A-AE104D-061316-1	6/13/2016	Normal	35 - 40	0.20 U
		17A-AE104D-101017-1	10/10/2017	Normal		**0.31**
		18A-AE104D-092618-1	9/26/2018	Normal		**0.37**
		19A-AE104D-092019-1	9/20/2019	Normal		**0.42**
		20A-AE104D-091620-1	9/16/2020	Normal		**0.34**
	AE104R-1	16A-AE104R1-061416-1	6/14/2016	Normal	48 - 54	**7.2**
		17A-AE104R1-100317-1	10/3/2017	Normal		**13**
		18A-AE104R1-092618-1	9/26/2018	Normal		**12**
		19A-AE104R1-091819-1	9/18/2019	Normal		**9**
		20A-AE104R1-091120-1	9/11/2020	Normal		**10**
	AE104R-3	16A-AE104R3-061416-1	6/14/2016	Normal	97 - 102	**17**
		17A-AE104R3-100317-1	10/3/2017	Normal		**17**
		18A-AE104R3-092618-1	9/26/2018	Normal		**16**
		19A-AE104R3-091819-1	9/18/2019	Normal		**14**
		20A-AE104R3-091120-1	9/11/2020	Normal		**11**

Table 5-3
Summary of 2016 - 2020 Groundwater Analytical Results for 1,4-Dioxane
Former GE Facility, 50 Fordham Road, Wilmington, MA

Location Group	Location ID	Sample ID	Sample Date	Sample Type	Depth Interval (ft)	1,4-Dioxane via 8270 SIM (µg/l)
					MCP Method 1 GW-1 Standard:	0.3
					MCP Method 1 GW-2 Standard:	6,000
					MCP Method 1 GW-3 Standard:	50,000
					MCP Upper Concentration Limit (UCL):	100,000
Transect A, continued	AE104R-4	16A-AE104R4-061416-1	6/14/2016	Normal	128 - 133	**11**
		17A-AE104R4-100317-1	10/3/2017	Normal		**26**
		18A-AE104R4-092618-1	9/26/2018	Normal		**19**
		19A-AE104R4-091819-1	9/18/2019	Normal		**19**
		20A-AE104R4-091120-1	9/11/2020	Normal		**17**
	AE104R-6	16A-AE104R6-061416-1	6/14/2016	Normal	168 - 174	**10**
		17A-AE104R6-100317-1	10/3/2017	Normal		**24**
		18A-AE104R6-092618-1	9/26/2018	Normal		**24**
		19A-AE104R6-091819-1	9/18/2019	Normal		**20**
		20A-AE104R6-091120-1	9/11/2020	Normal		**21**
	AE109D	16A-AE109D-062116-1	6/21/2016	Normal	18 - 23	0.20 U
		16A-AE109D-062116-2	6/21/2016	Duplicate		0.20 U
		17A-AE109D-101317-1	10/13/2017	Normal		**0.31**
		18A-AE109D-092618-1	9/26/2018	Normal		**0.22**
		19A-AE109D-092019-1	9/20/2019	Normal		**0.37**
		20A-AE109D-091620-1	9/16/2020	Normal		**0.42**
	AE109R-2	18A-AE109R2-100218-1	10/2/2018	Normal	66 - 76	**4.0**
		19A-AE109R2-091819-1	9/18/2019	Normal		**3.6**
		20A-AE109R2-091620-1	9/16/2020	Normal		**5.6**
	AE109R-5	16A-AE109R5-061616-1	6/16/2016	Normal	183 - 189	**4.8**
		17A-AE109R5-101017-1	10/10/2017	Normal		**3**
		18A-AE109R5-100218-1	10/2/2018	Normal		**2.1**
		19A-AE109R5-091819-1	9/18/2019	Normal		**1.4**
		20A-AE109R5-091620-1	9/16/2020	Normal		**1.7**
	AE109R-7	16A-AE109R7-061616-1	6/16/2016	Normal	204 - 214	**6.5**
		17A-AE109R7-101017-1	10/10/2017	Normal		**1.6**
		18A-AE109R7-100218-1	10/2/2018	Normal		**1.4**
		19A-AE109R7-091819-1	9/18/2019	Normal		**1.5**
		19A-AE109R7-091819-2	9/18/2019	Duplicate		**1.6**
		20A-AE109R7-091620-1	9/16/2020	Normal		**1.5**
		20A-AE109R7-091620-2	9/16/2020	Duplicate		**1.4**
	AE110R-6	16A-AE110R6-061716-1	6/17/2016	Normal	190 - 200	**8.0 J**
		17A-AE110R6-101117-1	10/11/2017	Normal		**1.4**
		18A-AE110R6-092518-1	9/25/2018	Normal		**1.4**
		19A-AE110R6-091319-1	9/13/2019	Normal		**1.3**
		20A-AE110R6-091620-1	9/16/2020	Normal		**1.3**
Transect B	AE105D	16A-AE105D-062216-1	6/22/2016	Normal	73 - 78	**1.4**
		17A-AE105D-101217-1	10/12/2017	Normal		**1.3**
		18A-AE105D-100318-1	10/3/2018	Normal		**2.0**
		19A-AE105D-091619-1	9/16/2019	Normal		**1.4**
		20A-AE105D-091720-1	9/17/2020	Normal		**0.82**
	AE105R-2	16A-AE105R2-062016-1	6/20/2016	Normal	98 - 103	**3.6**
		17A-AE105R2-101217-1	10/12/2017	Normal		**6.1 J**
		18A-AE105R2-100318-1	10/3/2018	Normal		**5.8**
		19A-AE105R2-091619-1	9/16/2019	Normal		**5.9**
		20A-AE105R2-091720-1	9/17/2020	Normal		**5.1**
	AE105R-4	17A-AE105R4-101217-1	10/12/2017	Normal	125 - 130	**5.9**
		18A-AE105R4-100318-1	10/3/2018	Normal		**6.3**
		19A-AE105R4-091619-1	9/16/2019	Normal		**5.3**
		20A-AE105R4-091720-1	9/17/2020	Normal		**5.3**
	AE106R-5	17A-AE106R5-101217-1	10/12/2017	Normal	164 - 169	**0.4**
		18A-AE106R5-100318-1	10/3/2018	Normal		**0.37**
		19A-AE106R5-091619-1	9/16/2019	Normal		**0.27**
		20A-AE106R5-091720-1	9/17/2020	Normal		**0.40**

Table 5-3
Summary of 2016 - 2020 Groundwater Analytical Results for 1,4-Dioxane
Former GE Facility, 50 Fordham Road, Wilmington, MA

Location Group	Location ID	Sample ID	Sample Date	Sample Type	Depth Interval (ft)	1,4-Dioxane via 8270 SIM (µg/l)
					MCP Method 1 GW-1 Standard:	0.3
					MCP Method 1 GW-2 Standard:	6,000
					MCP Method 1 GW-3 Standard:	50,000
					MCP Upper Concentration Limit (UCL):	100,000
Transect C	STM-8D	16A-STM8D-063016-1	6/30/2016	Normal	34.7 - 39.7	**0.35**
		17A-STM8D-101117-1	10/11/2017	Normal		**0.78**
		18A-STM8D-092818-1	9/28/2018	Normal		**0.76**
		19A-STM8D-092619-1	9/26/2019	Normal		**0.44**
		20A-STM8D-092320-1	9/23/2020	Normal		**0.45**
	STM-8R	16A-STM8R-063016-1	6/30/2016	Normal	46.5 - 51.5	**0.4**
		17A-STM8R-101117-1	10/11/2017	Normal		**0.82**
		18A-STM8R-092818-1	9/28/2018	Normal		**0.81**
		19A-STM8R-092619-1	9/26/2019	Normal		0.20 U
		20A-STM8R-092320-1	9/23/2020	Normal		0.20 U
	STM-8R1	16A-STM8R1-062816-1	6/28/2016	Normal	85 - 90	0.20 U
		17A-STM8R1-101717-1	10/17/2017	Normal		**0.29**
		17A-STM8R1-101717-2	10/17/2017	Duplicate		**0.29**
		18A-STM8R1-100218-1	10/2/2018	Normal		**0.40**
		19A-STM8R1-092619-1	9/26/2019	Normal		**0.28**
		20A-STM8R1-092320-1	9/23/2020	Normal		**0.32**

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

Table 5-4
Summary of 2016 - 2020 Groundwater Analytical Results for Petroleum Hydrocarbons
Former GE Facility, 50 Fordham Road, Wilmington, MA

					Location Group:	Building 1_TankF										
					Location ID:	AE23R	AE23R	AE23R	AE23R	AE23R	AE26R-1	AE26R-1	AE26R-1	AE26R-1	AE26R-1	AE28R-2	AE28R-2
					Sample ID:	16B-AE23R-062716-1	17A-AE23R-101317-1	18A-AE23R-091918-1	19A-AE23R-092319-1	20A-AE23R-091420-	16B-AE26R1-062316-1	17A-AE26R1-100417-1	18A-AE26R1-091818-1	19A-AE26R1-092319-1	20A-AE26R1-091420-	16B-AE28R2-062316-1	17A-AE28R2-100417-1
					Sample Date:	6/27/2016	10/13/2017	9/19/2018	9/23/2019	9/14/2020	6/23/2016	10/4/2017	9/18/2018	9/23/2019	9/14/2020	6/23/2016	10/4/2017
					Sample Type:	N	N	N	N	N	N	N	N	N	N	N	N
					Depth Interval:	44.75 - 54.75 ft	44.75 - 54.75 ft	44.75 - 54.75 ft	44.75-54.75 ft	44.75 - 54.75 ft	50 - 56 ft	50 - 56 ft	50 - 56 ft	50-56 ft	50 - 56 ft	75 - 85 ft	75 - 85 ft
Analyte	**MCP Method 1 GW-1 Standards**	**MCP Method 1 GW-2 Standards**	**MCP Method 1 GW-3 Standards**	**Upper Concentration**												
EPH (ug/l)																
2-Methylnaphthalene	10	2000	20000	100000	5.05 U	5.00 U	5.00 U	0.47 U	0.47 U	5.21 U	5.05 U	4.85 U	0.47 U	0.47 U	5.21 U	4.90 U
Acenaphthene	20		10000	100000	5.05 U	5.00 U	5.00 U	0.47 U	0.47 U	5.21 U	5.05 U	4.85 U	0.47 U	0.47 U	5.21 U	4.90 U
Acenaphthylene	30	10000	40	100000	5.05 U	5.00 U	5.00 U	0.09 U	0.09 U	5.21 U	5.05 U	4.85 U	0.09 U	0.09 U	5.21 U	4.90 U
Anthracene	60		30	600	5.05 U	5.00 U	5.00 U	0.09 U	0.09 U	5.21 U	5.05 U	4.85 U	0.09 U	0.09 U	5.21 U	4.90 U
Benzo(a)Anthracene	**1**		1000	10000	5.05 U	5.00 U	5.00 U	0.09 U	0.09 U	5.21 U	5.05 U	4.85 U	0.09 U	0.09 U	5.21 U	4.90 U
Benzo(a)Pyrene	**0.2**		500	5000	5.05 U	5.00 U	5.00 U	0.19 U	0.19 U	5.21 U	5.05 U	4.85 U	0.19 U	0.19 U	5.21 U	4.90 U
Benzo(b)Fluoranthene	1		400	4000	5.05 U	5.00 U	5.00 U	0.09 U	0.09 U	5.21 U	5.05 U	4.85 U	0.09 U	0.09 U	5.21 U	4.90 U
Benzo(g,h,i)Perylene	50		20	500	5.05 U	5.00 U	5.00 U	0.02 U	0.02 U	5.21 U	5.05 U	4.85 U	0.02 U	0.02 U	5.21 U	4.90 U
Benzo(k)Fluoranthene	1		100	1000	5.05 U	5.00 U	5.00 U	0.09 U	0.09 U	5.21 U	5.05 U	4.85 U	0.09 U	0.09 U	5.21 U	4.90 U
C11-C22 Aromatic Hydrocarbons	**200**	50000	5000	100000	101 U	100 U	100 U	190 U	200 U	104 U	101 U	97.1 U	190 U	190 U	104 U	98.0 U
C19-C36 Aliphatic Hydrocarbons	14000		50000	100000	101 U	100 U	100 U	190 U	200 U	104 U	101 U	97.1 U	190 U	190 U	104 U	98.0 U
C9-C18 Aliphatic Hydrocarbons	700	5000	50000	100000	101 U	100 U	100 UJ	190 UJ	200 U	104 U	101 U	97.1 UJ	190 UJ	190 UJ	104 U	98.0 U
Chrysene	**2**		70	700	5.05 U	5.00 U	5.00 U	0.05 U	0.05 U	5.21 U	5.05 U	4.85 U	0.05 U	0.05 U	5.21 U	4.90 U
Dibenzo(a,h)Anthracene	**0.5**		**40**	400	5.05 U	5.00 U	5.00 U	0.02 U	0.02 U	5.21 U	5.05 U	4.85 U	0.02 U	0.02 U	5.21 U	4.90 U
Fluoranthene	90		200	2000	5.05 U	5.00 U	5.00 U	0.47 U	0.47 U	5.21 U	5.05 U	4.85 U	0.47 U	0.47 U	5.21 U	4.90 U
Fluorene	30		40	400	5.05 U	5.00 U	5.00 U	0.09 U	0.09 U	5.21 U	5.05 U	4.85 U	0.09 U	0.09 U	5.21 U	4.90 U
Indeno(1,2,3-cd)Pyrene	**0.5**		100	1000	5.05 U	5.00 U	5.00 U	0.09 U	0.09 U	5.21 U	5.05 U	4.85 U	0.09 U	0.09 U	5.21 U	4.90 U
Naphthalene	140	700	20000	100000	5.05 U	5.00 U	5.00 U	**1.1**	**0.71 J**	5.21 UJ	5.05 U	4.85 U	0.47 U	0.47 U	5.21 U	4.90 U
Phenanthrene	40		10000	100000	5.05 U	5.00 U	5.00 U	0.47 U	0.47 U	5.21 U	5.05 U	4.85 U	0.47 U	0.47 U	5.21 U	4.90 U
Pyrene	60		20	600	5.05 U	5.00 U	5.00 U	0.07 U	0.07 U	5.21 U	5.05 U	4.85 U	0.07 U	0.07 U	5.21 U	4.90 U
VPH (ug/l)																
Benzene	5	1000	10000	100000	2000 U	100 U	50.0 U	1.0 U	20 U	5.00 U	5.00 U	1.00 U	1.0 U	5.0 U	5.00 U	20.0 U
C5-C8 Aliphatic Hydrocarbons	**300**	**3000**	**50000**	100000	**107000 J+**	**65800 J+**	**51800 J+**	**70000**	**57000**	**179 J+**	375 U	**339 J+**	**360**	**740**	**4950 J+**	**7920 J+**
C9-C10 Aromatic Hydrocarbons	**200**	4000	50000	100000	10000 U	2500 U	1250 U	100 U	2000 U	25.0 U	125 U	25.0 U	100 U	500 U	**48.8**	500 U
C9-C12 Aliphatic Hydrocarbons	700	5000	50000	100000	10000 U	2500 U	1250 U	100 U	2000 U	25.0 U	125 U	25.0 U	100 U	500 U	25.0 U	500 U
Ethylbenzene	700	20000	5000	100000	2000 U	100 U	50.0 U	1.0 U	**37**	5.00 U	5.00 U	1.00 U	1.0 U	5.0 U	5.00 U	20.0 U
M, P XYLENES	10000	3000	5000	100000	4000 U	200 U	100 U	**33**	40 U	10.0 U	10.0 U	2.00 U	2.0 U	10 U	10.0 U	40.0 U
Methyl Tert-Butyl Ether				100000	2000 U	100 U	50.0 U	1.0 U	20 U	5.00 U	5.00 UJ	1.00 U	1.0 U	5.0 U	5.00 UJ	20.0 UJ
Naphthalene	140	700	20000	100000	2000 U	100 U	50.0 U	5.0 U	100 U	5.00 UJ	5.00 U	1.00 U	5.0 U	25 U	5.00 U	20.0 U
o-Xylene	10000	3000	5000	100000	2000 U	100 U	50.0 U	**12**	20 U	5.00 U	5.00 U	1.00 U	1.0 U	5.0 U	5.00 UJ	20.0 U
Toluene	**1000**	50000	40000	100000	**3320**	**4540**	**4060**	**4000**	**3900**	**17.3**	5.00 U	1.00 U	1.0 U	5.0 U	**14.4**	20.0 U
Xylenes (Total)	10000	3000	5000	100000	4000 U	200 U	100 U	**45**	40 U	10.0 U	10.0 U	2.00 U	2.0 U	10 U	10.0 U	40.0 U

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

Table 5-4
Summary of 2016 - 2020 Groundwater Analytical Results for Petroleum Hydrocarbons
Former GE Facility, 50 Fordham Road, Wilmington, MA

					Location Group:	Building 1_TankF (continued)								EPL			
					Location ID:	AE28R-2	AE28R-2	AE28R-2	AE29R-6	AE29R-6	AE29R-6	AE29R-6	AE29R-6	AE03	AE03	AE03	AE03
					Sample ID:	18A-AE28R2-091818-1	19A-AE28R2-092319-1	0A-AE28R2-091420-	16B-AE29R6-062816-1	17A-AE29R6-101717-1	18A-AE29R6-091818-1	19A-AE29R6-092419-1	0A-AE29R6-092220-	16A-AE03-062816-1	16A-AE03-062816-2	17A-AE03-100917-1	18A-AE03-092418-1
					Sample Date:	9/18/2018	9/23/2019	9/14/2020	6/28/2016	10/17/2017	9/18/2018	9/24/2019	9/22/2020	6/28/2016	6/28/2016	10/9/2017	9/24/2018
					Sample Type:	N	N	N	N	N	N	N	N	N	FD	N	N
					Depth Interval:	75 - 85 ft	75-85 ft	75 - 85 ft	140 - 146 ft	140 - 146 ft	140 - 146 ft	140-146 ft	140 - 146 ft	3 - 13 ft	3 - 13 ft	3 - 13 ft	3 - 13 ft
Analyte	**MCP Method 1 GW-1 Standards**	**MCP Method 1 GW-2 Standards**	**MCP Method 1 GW-3 Standards**	**Upper Concentration**													
EPH (ug/l)																	
2-Methylnaphthalene	10	2000	20000	100000	5.10 U	0.47 U	0.47 U	5.10 U	4.85 U	4.85 U	0.47 U	0.47 U	5.15 UJ	5.10 U	4.85 UJ	4.85 UJ
Acenaphthene	20		10000	100000	5.10 U	0.47 U	0.47 U	5.10 U	4.85 U	4.85 U	0.47 U	0.47 U	5.15 U	5.10 U	4.85 UJ	4.85 UJ
Acenaphthylene	30	10000	40	100000	5.10 U	0.09 U	0.09 U	5.10 U	4.85 U	4.85 U	0.09 U	0.09 U	5.15 U	5.10 U	4.85 UJ	4.85 UJ
Anthracene	60		30	600	5.10 U	0.09 U	0.09 U	5.10 U	4.85 U	4.85 U	0.09 U	0.09 U	5.15 U	5.10 U	4.85 U	4.85 UJ
Benzo(a)Anthracene	**1**		1000	10000	5.10 U	0.09 U	0.09 U	5.10 U	4.85 U	4.85 U	0.09 U	0.09 U	5.15 U	5.10 U	4.85 U	4.85 UJ
Benzo(a)Pyrene	**0.2**		500	5000	5.10 U	0.19 U	0.19 U	5.10 U	4.85 U	4.85 U	0.19 U	0.19 UJ	5.15 U	5.10 U	4.85 UJ	**10.1 J-**
Benzo(b)Fluoranthene	1		400	4000	5.10 U	0.09 U	0.09 U	5.10 U	4.85 U	4.85 U	0.09 U	0.09 U	5.15 U	5.10 U	4.85 UJ	4.85 UJ
Benzo(g,h,i)Perylene	50		20	500	5.10 U	0.02 U	0.02 U	5.10 U	4.85 U	4.85 U	0.02 U	0.02 U	5.15 U	5.10 U	4.85 UJ	**9.36 J-**
Benzo(k)Fluoranthene	1		100	1000	5.10 U	0.09 U	0.09 U	5.10 U	4.85 U	4.85 U	0.09 U	0.09 U	5.15 U	5.10 U	4.85 U	4.85 UJ
C11-C22 Aromatic Hydrocarbons	**200**	50000	5000	100000	102 U	190 U	200 U	102 U	97.1 U	97.1 U	190 U	200 U	103 U	102 U	97.1 U	97.1 U
C19-C36 Aliphatic Hydrocarbons	14000		50000	100000	102 U	190 U	200 U	102 U	97.1 U	97.1 U	190 U	200 U	103 U	102 U	97.1 U	97.1 U
C9-C18 Aliphatic Hydrocarbons	700	5000	50000	100000	102 UJ	190 UJ	200 UJ	102 U	97.1 U	97.1 UJ	190 U	200 U	**105**	**173**	97.1 U	97.1 UJ
Chrysene	**2**		70	700	5.10 U	0.05 U	0.05 U	5.10 U	4.85 U	4.85 U	0.05 U	0.05 U	5.15 U	5.10 U	4.85 U	4.85 UJ
Dibenzo(a,h)Anthracene	**0.5**		**40**	400	5.10 U	0.02 U	0.02 U	5.10 U	4.85 U	4.85 U	0.02 U	0.02 U	5.15 U	5.10 U	4.85 UJ	4.85 UJ
Fluoranthene	90		200	2000	5.10 U	0.47 U	0.47 U	5.10 U	4.85 U	4.85 U	0.47 U	0.47 U	5.15 U	5.10 U	4.85 U	4.85 UJ
Fluorene	30		40	400	5.10 U	0.09 U	0.09 U	5.10 U	4.85 U	4.85 U	0.09 U	0.09 U	5.15 U	5.10 U	4.85 U	4.85 UJ
Indeno(1,2,3-cd)Pyrene	**0.5**		100	1000	5.10 U	0.09 U	0.09 U	5.10 U	4.85 U	4.85 U	0.09 U	0.09 UJ	5.15 U	5.10 U	4.85 UJ	4.85 UJ
Naphthalene	140	700	20000	100000	5.10 U	**0.87**	**0.65 J**	5.10 U	4.85 U	4.85 U	0.47 U	0.47 U	5.15 UJ	5.10 U	4.85 UJ	4.85 UJ
Phenanthrene	40		10000	100000	5.10 U	0.47 U	0.47 U	5.10 U	4.85 U	4.85 U	0.47 U	0.47 U	5.15 U	5.10 U	4.85 U	4.85 UJ
Pyrene	60		20	600	5.10 U	0.07 U	0.07 U	5.10 U	4.85 U	4.85 U	0.07 U	0.07 U	5.15 U	5.10 U	4.85 U	4.85 UJ
VPH (ug/l)																	
Benzene	5	1000	10000	100000	1.00 U	5 U	20 U	5.00 U	1.00 U	1.00 U	1.0 U	1.0 U	5.00 U	5.00 U	1.00 U	1.00 U
C5-C8 Aliphatic Hydrocarbons	**300**	**3000**	**50000**	100000	**2690 J+**	**11000**	**9500**	75.0 U	**233 J+**	**162 J+**	**190**	**200**	75.0 U	75.0 U	75.0 UJ	**83.2 J**
C9-C10 Aromatic Hydrocarbons	**200**	4000	50000	100000	**51.6**	100 U	2000 U	25.0 U	25.0 U	25.0 U	100 U	100 U	**212 J+**	**230**	**363 J+**	**398**
C9-C12 Aliphatic Hydrocarbons	700	5000	50000	100000	25.0 U	100 U	2000 U	25.0 U	25.0 U	25.0 U	100 U	100 U	**186**	**164**	**332 J-**	**195**
Ethylbenzene	700	20000	5000	100000	**5.99**	5 U	20 U	5.00 U	1.00 U	1.00 U	1.0 U	1.0 U	5.00 U	5.00 U	**1.53**	**1.19**
M, P XYLENES	10000	3000	5000	100000	**7.52**	10 U	40 U	10.0 U	2.00 U	2.00 U	2.0 U	2.0 U	10.0 U	10.0 U	**2.33**	2.00 U
Methyl Tert-Butyl Ether				100000	1.00 U	5 U	20 U	5.00 U	1.00 U	1.00 U	1.0 U	1.0 U	5.00 U	5.00 U	1.00 UJ	1.00 U
Naphthalene	140	700	20000	100000	**1.56**	5.0 U	100 U	5.00 U	1.00 U	1.00 U	5.0 U	5.0 U	**8.62**	**8.94**	**13.7**	**12.8**
o-Xylene	10000	3000	5000	100000	1.00 U	5 U	20 U	5.00 U	1.00 U	1.00 U	1.0 U	1.0 U	5.00 U	5.00 U	**3.98**	1.00 U
Toluene	**1000**	50000	40000	100000	**13.4**	10 U	20 U	**7.06**	**2.21**	1.00 U	1.0 U	1.0 U	5.00 U	5.00 U	1.00 U	1.00 U
Xylenes (Total)	10000	3000	5000	100000	**7.52**	10 U	40 U	10.0 U	2.00 U	2.00 U	2.0 U	2.0 U	10.0 U	10.0 U	**6.31**	2.00 U

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

173
230
164
8.94

Table 5-4
Summary of 2016 - 2020 Groundwater Analytical Results for Petroleum Hydrocarbons
Former GE Facility, 50 Fordham Road, Wilmington, MA

					EPL (continued)											
Location Group:																
Location ID:					**AE03**	**AE03**	**AE03**	**AE03**	**AE03**	**AE04**	**AE04**	**AE04**	**AE04**	**AE04**	**AE04**	**AE04**
Sample ID:					18A-AE03-092418-2	19A-AE03-091219-1	19A-AE03-091219-2	20A-AE3-092320-1	20A-AE3-092320-2	16A-AE04-061316-1	17A-AE04-100917-1	18A-AE04-092518-1	18A-AE04-092518-2	19A-AE04-091219-1	19A-AE04-091219-2	20A-AE4-092320-1
Sample Date:					9/24/2018	9/12/2019	9/12/2019	9/23/2020	9/23/2020	6/13/2016	10/9/2017	9/25/2018	9/25/2018	9/12/2019	9/12/2019	9/23/2020
Sample Type:					FD	N	FD	N	FD	N	N	N	FD	N	FD	N
Depth Interval:					3 - 13 ft	3-13 ft	3-13 ft	3 - 13 ft	3 - 13 ft	3 - 13 ft	3 - 13 ft	3 - 13 ft	3 - 13 ft	3-13 ft	3-13 ft	3 - 13 ft
Analyte	**MCP Method 1 GW-1 Standards**	**MCP Method 1 GW-2 Standards**	**MCP Method 1 GW-3 Standards**	**Upper Concentration**												
EPH (ug/l)																
2-Methylnaphthalene	10	2000	20000	100000	4.85 UJ	**3.3**	**3.2**	**3.5**	**3.2**	5.10 U	4.90 U	4.81 U	4.85 U	4.85 U	0.47 U	0.47 U
Acenaphthene	20		10000	100000	4.85 UJ	0.47 U	0.47 U	0.47 U	0.47 U	5.10 U	4.90 U	4.81 U	4.85 U	0.47 U	0.47 U	0.47 U
Acenaphthylene	30	10000	40	100000	4.85 UJ	0.09 U	0.09 U	0.09 U	0.09 U	5.10 U	4.90 U	4.81 U	4.85 U	0.47 U	**0.12**	0.09 U
Anthracene	60		30	600	4.85 UJ	0.09 U	0.09 U	0.09 U	0.09 U	5.10 U	4.90 U	4.81 U	4.85 U	0.09 U	0.09 U	0.09 U
Benzo(a)Anthracene	**1**		1000	10000	4.85 UJ	0.09 U	0.09 U	0.09 U	0.09 U	5.10 U	4.90 U	4.81 U	4.85 U	0.09 U	0.09 U	0.09 U
Benzo(a)Pyrene	**0.2**		500	5000	**11.0 J-**	0.19 U	0.19 U	0.19 U	0.19 U	5.10 U	4.90 U	4.81 U	4.85 U	0.09 U	0.19 U	0.19 U
Benzo(b)Fluoranthene	1		400	4000	4.85 UJ	0.09 U	0.09 U	0.09 U	0.09 U	5.10 U	4.90 U	4.81 U	4.85 U	0.19 U	0.09 U	0.09 U
Benzo(g,h,i)Perylene	50		20	500	**11.3 J-**	0.02 U	0.02 U	0.02 U	0.02 U	5.10 U	4.90 U	4.81 U	4.85 U	0.09 U	0.02 U	0.02 U
Benzo(k)Fluoranthene	1		100	1000	4.85 UJ	0.09 U	0.09 U	0.09 U	0.09 U	5.10 U	4.90 U	4.81 U	4.85 U	0.02 U	0.09 U	0.09 U
C11-C22 Aromatic Hydrocarbons	**200**	50000	5000	100000	97.1 U	190 U	190 U	190 U	190 U	102 U	98.0 U	96.2 U	97.1 U	0.09 U	190 U	200 U
C19-C36 Aliphatic Hydrocarbons	14000		50000	100000	97.1 U	190 U	190 U	190 U	190 U	102 U	98.0 U	96.2 U	97.1 U	190 U	190 U	200 U
C9-C18 Aliphatic Hydrocarbons	700	5000	50000	100000	97.1 UJ	190 U	190 U	190 U	190 U	102 U	98.0 U	96.2 U	97.1 U	190 U	190 U	200 U
Chrysene	**2**		70	700	4.85 UJ	0.05 U	0.05 U	0.05 U	0.05 U	5.10 U	4.90 U	4.81 U	4.85 U	190 U	0.05 U	0.05 U
Dibenzo(a,h)Anthracene	**0.5**		**40**	400	4.85 UJ	0.02 U	0.02 U	0.02 U	0.02 U	5.10 U	4.90 U	4.81 U	4.85 U	0.05 U	0.02 U	0.02 U
Fluoranthene	90		200	2000	4.85 UJ	0.47 U	0.47 U	0.47 U	0.47 U	5.10 U	4.90 U	4.81 U	4.85 U	0.02 U	0.47 U	0.47 U
Fluorene	30		40	400	4.85 UJ	0.09 U	0.09 U	0.09 U	0.09 U	5.10 U	4.90 U	4.81 U	4.85 U	0.47 U	0.09 U	0.09 U
Indeno(1,2,3-cd)Pyrene	**0.5**		100	1000	4.85 UJ	0.09 U	0.09 U	0.09 U	0.09 U	5.10 U	4.90 U	4.81 U	4.85 U	0.09 U	0.09 U	0.09 U
Naphthalene	140	700	20000	100000	4.85 UJ	**5.1**	**5.0**	**5.8**	**5.4**	5.10 U	4.90 U	4.81 U	4.85 U	0.09 U	0.47 U	0.47 U
Phenanthrene	40		10000	100000	4.85 UJ	0.47 U	0.47 U	0.47 U	0.47 U	5.10 U	4.90 U	4.81 U	4.85 U	0.47 U	0.47 U	0.47 U
Pyrene	60		20	600	4.85 UJ	0.07 U	0.07 U	0.07 U	0.07 U	5.10 U	4.90 U	4.81 U	4.85 U	0.47 U	0.07 U	0.07 U
VPH (ug/l)																
Benzene	5	1000	10000	100000	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	5.00 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U
C5-C8 Aliphatic Hydrocarbons	**300**	**3000**	**50000**	100000	**82.3 J**	100 U	100 U	100 U	100 U	75.0 U	75.0 U	75.0 U	75.0 U	100 U	100 U	100 U
C9-C10 Aromatic Hydrocarbons	**200**	4000	50000	100000	**379**	**240**	**240**	**280**	**260**	**89.6**	**55.3**	**137**	**141**	100 U	100 U	100 U
C9-C12 Aliphatic Hydrocarbons	700	5000	50000	100000	**172**	**340**	**300**	**540**	**630**	**61.7**	**45.8**	**56.5**	**52.6**	100 U	100 U	**130**
Ethylbenzene	700	20000	5000	100000	**1.01**	1.0 U	1.0 U	1.0 U	1.0 U	5.00 U	1.00 U	1.00 U	**1.00**	1.0 U	**1.5**	1.0 U
M, P XYLENES	10000	3000	5000	100000	2.00 U	2.0 U	2.0 U	2.0 U	2.0 U	10.0 U	2.00 U	2.00 U	2.00 U	2.0 U	2.0 U	2.0 U
Methyl Tert-Butyl Ether				100000	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	5.00 U	1.00 UJ	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U
Naphthalene	140	700	20000	100000	**12.6**	**7.9**	**8.3**	**7.2**	**9.4**	5.00 U	1.00 U	**1.72**	1.00 U	5.0 U	5.0 U	5.0 U
o-Xylene	10000	3000	5000	100000	1.00 U	**1.4**	**1.3**	**2.1**	**2.1**	5.00 U	**1.10**	1.00 U	1.00 U	1.0 U	**1.7**	1.0 U
Toluene	**1000**	50000	40000	100000	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	5.00 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U
Xylenes (Total)	10000	3000	5000	100000	2.00 U	**1.4**	**1.3**	**2.1**	**2.1**	10.0 U	**1.1**	2.00 U	2.00 U	2.0 U	**1.7**	2.0 U

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

Table 5-4
Summary of 2016 - 2020 Groundwater Analytical Results for Petroleum Hydrocarbons
Former GE Facility, 50 Fordham Road, Wilmington, MA

					EPL (continued)											
Location Group:																
Location ID:					**AE04**	**GZA-102S**	**GZA-102S**	**GZA-102S**	**GZA-105D**	**GZA-105D**	**GZA-105D**	**GZA-105D**	**GZA-105D**	**GZA-105S**	**GZA-105S**	**GZA-105S**
Sample ID:					20A-AE4-092320-2	18A-GZA102S-092418-1	19A-GZA102S-091319-1	A-GZA102S-09232	16A-GZA105D-061516-1	17A-GZA-105D-101917-1	18A-GZA105D-092518-1	19A-GZA105D-091819-1	A-GZA105D-09242	16A-GZA105S-061516-1	17A-GZA105S-100917-1	17A-GZA105S-100917-2
Sample Date:					9/23/2020	9/24/2018	9/13/2019	9/23/2020	6/15/2016	10/19/2017	9/25/2018	9/18/2019	9/24/2020	6/15/2016	10/9/2017	10/9/2017
Sample Type:					FD	N	N	N	N	N	N	N	N	N	N	FD
Depth Interval:					3 - 13 ft	2.5 - 11.5 ft	2.5 - 11.5 ft	1.7 - 10.7 ft	16 - 26 ft	16 - 26 ft	16 - 26 ft	16-26 ft	16 - 26 ft	4 - 14 ft	4 - 14 ft	4 - 14 ft
Analyte	**MCP Method 1 GW-1 Standards**	**MCP Method 1 GW-2 Standards**	**MCP Method 1 GW-3 Standards**	**Upper Concentration**												
EPH (ug/l)																
2-Methylnaphthalene	10	2000	20000	100000	0.47 U	5.00 U	0.47 U	0.47 U	5.15 U	4.95 U	4.81 U	0.47 U	0.47 U	5.10 UJ	4.81 U	4.85 U
Acenaphthene	20		10000	100000	0.47 U	5.00 U	0.47 U	0.47 U	5.15 U	4.95 U	4.81 U	0.47 U	0.47 U	5.10 UJ	4.81 U	4.85 U
Acenaphthylene	30	10000	40	100000	0.09 U	5.00 U	0.09 U	0.09 U	5.15 U	4.95 U	4.81 U	0.09 U	0.09 U	5.10 UJ	4.81 U	4.85 U
Anthracene	60		30	600	0.09 U	5.00 U	0.09 U	0.09 U	5.15 U	4.95 U	4.81 U	0.09 U	0.09 U	5.10 U	4.81 U	4.85 U
Benzo(a)Anthracene	**1**		1000	10000	0.09 U	5.00 U	0.09 U	0.09 U	5.15 U	4.95 U	4.81 U	0.09 U	0.09 U	5.10 U	4.81 U	4.85 U
Benzo(a)Pyrene	**0.2**		500	5000	0.19 U	5.00 U	0.19 U	0.19 U	5.15 U	4.95 U	4.81 U	0.19 U	0.19 U	5.10 U	4.81 U	4.85 U
Benzo(b)Fluoranthene	1		400	4000	0.09 U	5.00 U	0.09 U	0.09 U	5.15 U	4.95 U	4.81 U	0.09 U	0.09 U	5.10 UJ	4.81 U	4.85 U
Benzo(g,h,i)Perylene	50		20	500	0.02 U	5.00 U	0.02 U	0.02 U	5.15 U	4.95 U	4.81 U	0.02 U	0.02 U	5.10 U	4.81 U	4.85 U
Benzo(k)Fluoranthene	1		100	1000	0.09 U	5.00 U	0.09 U	0.09 U	5.15 U	4.95 U	4.81 U	0.09 U	0.09 U	5.10 U	4.81 U	4.85 U
C11-C22 Aromatic Hydrocarbons	**200**	50000	5000	100000	200 U	100 U	190 U	190 U	103 U	**1060**	96.2 U	200 U	200 U	102 UJ	96.2 U	97.1 U
C19-C36 Aliphatic Hydrocarbons	14000		50000	100000	200 U	100 U	190 U	190 U	103 U	99.0 U	96.2 U	200 U	200 U	102 U	96.2 U	97.1 U
C9-C18 Aliphatic Hydrocarbons	700	5000	50000	100000	200 U	100 U	190 U	190 U	103 U	99.0 U	96.2 U	200 U	200 U	102 U	96.2 U	97.1 U
Chrysene	**2**		70	700	0.05 U	5.00 U	0.05 U	0.05 U	5.15 U	4.95 U	4.81 U	0.05 U	0.05 U	5.10 U	4.81 U	4.85 U
Dibenzo(a,h)Anthracene	**0.5**		**40**	400	0.02 U	5.00 U	0.02 U	0.02 U	5.15 U	**86.3**	4.81 U	0.02 U	0.02 U	5.10 U	4.81 U	4.85 U
Fluoranthene	90		200	2000	0.47 U	5.00 U	0.47 U	0.47 U	5.15 U	4.95 U	4.81 U	0.47 U	0.47 U	5.10 U	4.81 U	4.85 U
Fluorene	30		40	400	0.09 U	5.00 U	0.09 U	0.09 U	5.15 U	4.95 U	4.81 U	0.09 U	0.09 U	5.10 U	4.81 U	4.85 U
Indeno(1,2,3-cd)Pyrene	**0.5**		100	1000	0.09 U	5.00 U	0.09 U	0.09 U	5.15 U	**43.8**	4.81 U	0.09 U	0.09 U	5.10 U	4.81 U	4.85 U
Naphthalene	140	700	20000	100000	0.47 U	5.00 U	0.47 U	0.47 U	5.15 U	4.95 U	4.81 U	0.47 U	0.47 U	5.10 UJ	4.81 U	4.85 U
Phenanthrene	40		10000	100000	0.47 U	5.00 U	0.47 U	0.47 U	5.15 U	4.95 U	4.81 U	0.47 U	0.47 U	5.10 U	4.81 U	4.85 U
Pyrene	60		20	600	0.07 U	5.00 U	0.07 U	0.07 U	5.15 U	4.95 U	4.81 U	0.07 U	0.07 U	5.10 U	4.81 U	4.85 U
VPH (ug/l)																
Benzene	5	1000	10000	100000	1.0 U	1.00 U	1.0 U	1.0 U	5.00 U	1.00 U	1.00 U	1.0 U	1.0 U	5.00 U	1.00 U	1.00 U
C5-C8 Aliphatic Hydrocarbons	**300**	**3000**	**50000**	100000	100 U	75.0 U	100 U	100 U	**402 J+**	**785 J+**	**224 J+**	100 U	100 U	75.0 U	75.0 U	75.0 U
C9-C10 Aromatic Hydrocarbons	**200**	4000	50000	100000	100 U	25.0 U	100 U	100 U	**59.3**	**38.5**	**28.8**	100 U	100 U	**106 J+**	**127**	**124**
C9-C12 Aliphatic Hydrocarbons	700	5000	50000	100000	**130**	25.0 U	100 U	100 U	**55.9**	**34.9**	25.0 U	100 U	100 U	**77.9**	**127**	**125**
Ethylbenzene	700	20000	5000	100000	**2.2**	1.00 U	1.0 U	1.0 U	5.00 U	1.00 U	1.00 U	1.0 U	1.0 U	5.00 U	1.00 U	1.00 U
M, P XYLENES	10000	3000	5000	100000	2.0 U	2.00 U	2.0 U	2.0 U	10.0 U	2.00 U	2.00 U	2.0 U	2.0 U	10.0 U	2.00 U	2.00 U
Methyl Tert-Butyl Ether				100000	1.0 U	1.00 U	1.0 U	1.0 U	5.00 U	1.00 U	1.00 U	1.0 U	1.0 U	5.00 U	1.00 UJ	1.00 UJ
Naphthalene	140	700	20000	100000	5.0 U	1.00 U	5.0 U	5.0 U	5.00 U	1.00 U	1.00 U	5.0 U	5.0 U	5.00 U	**1.08**	**1.18**
o-Xylene	10000	3000	5000	100000	1.0 U	1.00 U	**1.2**	1.0 U	5.00 U	**1.59**	1.00 U	**1.4**	1.0 U	5.00 U	**3.00**	**2.88**
Toluene	**1000**	50000	40000	100000	1.0 U	1.00 U	1.0 U	1.0 U	5.00 U	1.00 U	1.00 U	1.0 U	1.0 U	5.00 U	1.00 U	1.00 U
Xylenes (Total)	10000	3000	5000	100000	2.0 U	2.00 U	**1.2**	2.0 U	10.0 U	**1.59**	2.00 U	**1.4**	2.0 U	10.0 U	**3**	**2.88**

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

Table 5-4
Summary of 2016 - 2020 Groundwater Analytical Results for Petroleum Hydrocarbons
Former GE Facility, 50 Fordham Road, Wilmington, MA

					EPL (continued)											
Location Group:																
Location ID:					GZA-105S	GZA-105S	GZA-105S	PZ-2S	PZ-2S	PZ-2S	TRC-101	TRC-101	TRC-101	TRC-102	TRC-102	TRC-102
Sample ID:					18A-GZA105S-092518-1	19A-GZA105S-091819-1	20A-GZA105S-092420-1	18A-PZ2S-092418-1	19A-PZ2S-093019-1	20A-PZ2S-092520-1	18A-TRC101-092418-1	19A-TRC101-091919-1	0A-TRC101-092320-	16A-TRC102-062716-1	16A-TRC102-062716-2	17A-TRC102-100217-1
Sample Date:					9/25/2018	9/18/2019	9/24/2020	9/24/2018	9/30/2019	9/25/2020	9/24/2018	9/19/2019	9/23/2020	6/27/2016	6/27/2016	10/2/2017
Sample Type:					N	N	N	N	N	N	N	N	N	N	FD	N
Depth Interval:					4 - 14 ft	4-14 ft	4 - 14 ft	3.5 - 8.5 ft	3.5 to 8.5 ft	3.55 - 8.55 ft	1.5 - 10.5 ft	1.5-10.5 ft	1.5 - 10.5 ft	2.25 - 12.25 ft	2.25 - 12.25 ft	2.25 - 12.25 ft
Analyte	**MCP Method 1 GW-1 Standards**	**MCP Method 1 GW-2 Standards**	**MCP Method 1 GW-3 Standards**	**Upper Concentration**												
EPH (ug/l)																
2-Methylnaphthalene	10	2000	20000	100000	4.85 U	0.47 U	0.47 U	4.85 UJ	0.49 U	0.49 U	4.85 UJ	**0.62**	**0.52**	5.15 U	5.15 U	5.00 U
Acenaphthene	20		10000	100000	4.85 U	0.47 U	0.47 U	4.85 UJ	0.49 U	0.49 U	4.85 UJ	0.47 U	0.48 U	5.15 U	5.15 U	5.00 U
Acenaphthylene	30	10000	40	100000	4.85 U	0.09 U	0.09 U	4.85 UJ	0.10 U	0.10 U	4.85 UJ	0.09 U	0.10 U	5.15 U	5.15 U	5.00 U
Anthracene	60		30	600	4.85 U	0.09 U	0.09 U	4.85 UJ	0.09 U	0.09 U	4.85 UJ	0.09 U	0.09 U	5.15 U	5.15 U	5.00 U
Benzo(a)Anthracene	**1**		1000	10000	4.85 U	0.09 U	0.09 U	4.85 UJ	0.10 U	0.10 U	4.85 UJ	0.09 U	**0.10**	5.15 U	5.15 U	5.00 U
Benzo(a)Pyrene	**0.2**		500	5000	4.85 U	0.19 U	0.19 U	**11.0 J-**	0.19 U	0.20 U	**11.1 J-**	0.19 U	0.19 U	5.15 U	5.15 U	5.00 U
Benzo(b)Fluoranthene	1		400	4000	4.85 U	0.09 U	0.09 U	4.85 UJ	0.10 U	0.10 U	4.85 UJ	0.09 U	**0.20**	5.15 U	5.15 U	5.00 U
Benzo(g,h,i)Perylene	50		20	500	4.85 U	0.02 U	0.02 U	**10.9 J-**	0.02 UJ	**0.06**	**11.0 J-**	**0.03**	**0.16**	5.15 U	5.15 U	5.00 U
Benzo(k)Fluoranthene	1		100	1000	4.85 U	0.09 U	0.09 U	4.85 UJ	0.10 U	0.10 U	4.85 UJ	0.09 U	**0.13**	5.15 U	5.15 U	5.00 U
C11-C22 Aromatic Hydrocarbons	**200**	50000	5000	100000	97.1 U	200 U	200 U	97.1 U	200 U	200 U	97.1 U	200 U	200 U	103 U	103 U	100 U
C19-C36 Aliphatic Hydrocarbons	14000		50000	100000	97.1 U	200 U	200 U	97.1 U	200 U	200 U	97.1 U	200 U	200 U	103 U	103 U	100 U
C9-C18 Aliphatic Hydrocarbons	700	5000	50000	100000	97.1 U	200 U	200 U	97.1 UJ	200 UJ	**690**	97.1 UJ	200 U	**1100**	103 U	103 U	100 U
Chrysene	**2**		70	700	4.85 U	0.05 U	0.05 U	4.85 UJ	0.05 U	**0.06**	4.85 UJ	0.05 U	**0.16**	5.15 U	5.15 U	5.00 U
Dibenzo(a,h)Anthracene	**0.5**		**40**	400	4.85 U	0.02 U	0.02 U	4.85 UJ	0.02 UJ	0.02 U	4.85 UJ	0.02 U	**0.03**	5.15 U	5.15 U	5.00 U
Fluoranthene	90		200	2000	4.85 U	0.47 U	0.47 U	4.85 UJ	0.49 U	0.49 U	4.85 UJ	0.47 U	0.48 U	5.15 U	5.15 U	5.00 U
Fluorene	30		40	400	4.85 U	0.09 U	0.09 U	4.85 UJ	0.10 U	0.10 U	4.85 UJ	0.09 U	0.10 U	5.15 U	5.15 U	5.00 U
Indeno(1,2,3-cd)Pyrene	**0.5**		100	1000	4.85 U	0.09 U	0.09 U	4.85 UJ	0.10 U	0.10 U	4.85 UJ	0.09 UJ	**0.17**	5.15 U	5.15 U	5.00 U
Naphthalene	140	700	20000	100000	4.85 U	0.47 U	0.47 U	4.85 UJ	0.49 U	0.49 U	4.85 UJ	0.47 U	0.48 U	5.15 U	5.15 U	5.00 U
Phenanthrene	40		10000	100000	4.85 U	0.47 U	0.47 U	4.85 UJ	0.49 U	0.49 U	4.85 UJ	0.47 U	0.48 U	5.15 U	5.15 U	5.00 U
Pyrene	60		20	600	4.85 U	0.07 U	0.07 U	4.85 UJ	0.07 U	**0.14**	4.85 UJ	**0.09**	**0.26**	5.15 U	5.15 U	5.00 U
VPH (ug/l)																
Benzene	5	1000	10000	100000	1.00 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	5.00 U	5.00 U	1.00 U
C5-C8 Aliphatic Hydrocarbons	**300**	**3000**	**50000**	100000	75.0 U	100 U	100 U	75.0 U	100 U	100 U	75.0 U	100 U	100 U	75.0 U	75.0 U	75.0 U
C9-C10 Aromatic Hydrocarbons	**200**	4000	50000	100000	**161**	100 U	100 U	**159 J-**	**100**	100 U	**272**	**220**	**210**	**33.7**	**31.6**	**43.0**
C9-C12 Aliphatic Hydrocarbons	700	5000	50000	100000	**112**	**150**	**220**	**107**	**160**	**220**	**131**	**280**	**420**	25.0 U	25.0 U	**41.5**
Ethylbenzene	700	20000	5000	100000	1.00 U	**1.8**	**2.3**	1.00 U	1.0 U	1.0 U	**1.15**	1.0 U	1.0 U	5.00 U	5.00 U	1.00 U
M, P XYLENES	10000	3000	5000	100000	2.00 U	2.0 U	2.0 U	2.00 U	2.0 U	2.0 U	2.00 U	2.0 U	2.0 U	10.0 U	10.0 U	2.00 U
Methyl Tert-Butyl Ether				100000	1.00 U	1.0 U	1.0 U	1.00 UJ	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	5.00 U	5.00 U	1.00 U
Naphthalene	140	700	20000	100000	1.00 U	5.0 U	5.0 U	**1.10**	5.0 U	5.0 U	**1.59**	5.0 U	5.0 U	5.00 U	5.00 U	1.00 U
o-Xylene	10000	3000	5000	100000	1.00 U	1.0 U	**1.3**	**4.40**	**2.0**	**2.1**	1.00 U	1.0 U	**1.4**	5.00 U	5.00 U	**1.18**
Toluene	**1000**	50000	40000	100000	1.00 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	5.00 U	5.00 U	1.00 U
Xylenes (Total)	10000	3000	5000	100000	2.00 U	2.0 U	**1.3**	**4.4**	**2**	**2.1**	2.00 U	2.0 U	**1.4**	10.0 U	10.0 U	**1.18**

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

Table 5-4
Summary of 2016 - 2020 Groundwater Analytical Results for Petroleum Hydrocarbons
Former GE Facility, 50 Fordham Road, Wilmington, MA

Location Group:					**EPL (continued)**						**Tank Farm**			**Transect A**			
Location ID:					**TRC-102**	**TRC-102**	**TRC-102**	**TRC-103**	**TRC-103**	**TRC-103**	**AE100R-1**	**AE100R-1**	**AE100R-1**	**AE102RR-6**	**AE102RR-6**	**AE102RR-6**
Sample ID:					18A-TRC102-092418-1	19A-TRC102-092019-1	20A-TRC102-092320-1	18A-TRC103-092418-1	19A-TRC103-091919-1	20A-TRC103-092320-1	18A-AE100R1-091918-1	19A-AE100R1-092319-1	20A-AE100R1-091020	16A-AE102RR6-061416-1	17A-AE102RR6-100317-	18A-AE102RR6-091918-
Sample Date:					9/24/2018	9/20/2019	9/23/2020	9/24/2018	9/19/2019	9/23/2020	9/19/2018	9/23/2019	9/10/2020	6/14/2016	10/3/2017	9/19/2018
Sample Type:					N	N	N	N	N	N	N	N	N	N	N	N
Depth Interval:					2.25 - 12.25 ft	2.25-12.25 ft	2.25 - 12.25 ft	1.25 - 11.25 ft	1.25-11.25 ft	1.25 - 11.25 ft	18 - 24 ft	18-24 ft	18 - 24 ft	153 - 158 ft	153 - 158 ft	153 - 158 ft
Analyte	**MCP Method 1 GW-1 Standards**	**MCP Method 1 GW-2 Standards**	**MCP Method 1 GW-3 Standards**	**Upper Concentration**												
EPH (ug/l)																
2-Methylnaphthalene	10	2000	20000	100000	4.90 UJ	0.47 U	0.47 U	4.90 U	0.47 U	0.47 U	4.90 U	0.49 U	0.47 U	5.10 U	4.90 U	5.26 U
Acenaphthene	20		10000	100000	4.90 UJ	0.47 U	0.47 U	4.90 U	0.47 U	0.47 U	4.90 U	0.49 U	0.47 U	5.10 U	4.90 U	5.26 U
Acenaphthylene	30	10000	40	100000	4.90 UJ	**0.21**	0.09 U	4.90 U	0.09 U	0.09 U	4.90 U	0.10 U	0.09 U	5.10 U	4.90 U	5.26 U
Anthracene	60		30	600	4.90 UJ	0.09 U	0.09 U	4.90 U	0.09 U	0.09 U	4.90 U	0.09 U	0.09 U	5.10 U	4.90 U	5.26 U
Benzo(a)Anthracene	**1**		1000	10000	4.90 UJ	0.09 U	0.09 U	4.90 U	0.09 U	0.09 U	4.90 U	0.10 U	0.09 U	5.10 U	4.90 U	5.26 U
Benzo(a)Pyrene	**0.2**		500	5000	**9.13 J-**	0.19 U	0.19 U	4.90 U	0.19 U	0.19 U	4.90 U	0.20 U	0.19 U	5.10 U	4.90 U	5.26 U
Benzo(b)Fluoranthene	1		400	4000	4.90 UJ	0.09 U	0.09 U	4.90 U	0.09 U	0.09 U	4.90 U	0.10 U	0.09 U	5.10 U	4.90 U	5.26 U
Benzo(g,h,i)Perylene	50		20	500	**8.90 J-**	0.02 U	0.02 U	4.90 U	0.02 U	0.02 U	4.90 U	0.02 U	0.02 U	5.10 U	4.90 U	5.26 U
Benzo(k)Fluoranthene	1		100	1000	4.90 UJ	0.09 U	0.09 UJ	4.90 U	0.09 U	0.09 U	4.90 U	0.10 U	0.09 U	5.10 U	4.90 U	5.26 U
C11-C22 Aromatic Hydrocarbons	**200**	50000	5000	100000	98.0 U	200 U	190 U	98.0 U	200 U	200 U	98.0 U	190 U	200 U	102 U	98.0 U	105 U
C19-C36 Aliphatic Hydrocarbons	14000		50000	100000	98.0 U	200 U	190 U	98.0 U	200 U	200 U	98.0 U	190 U	200 U	102 U	98.0 U	105 U
C9-C18 Aliphatic Hydrocarbons	700	5000	50000	100000	98.0 UJ	200 U	190 U	98.0 U	200 U	200 U	98.0 UJ	190 UJ	200 U	102 U	98.0 U	105 UJ
Chrysene	**2**		70	700	4.90 UJ	0.05 U	0.05 U	4.90 U	0.05 U	0.05 U	4.90 U	0.05 U	0.05 U	5.10 U	4.90 U	5.26 U
Dibenzo(a,h)Anthracene	**0.5**		**40**	400	4.90 UJ	0.02 UJ	0.02 U	4.90 U	0.02 UJ	0.02 U	4.90 U	0.02 U	0.02 U	5.10 U	4.90 U	5.26 U
Fluoranthene	90		200	2000	4.90 UJ	0.47 U	0.47 U	4.90 U	0.47 U	0.47 U	4.90 U	0.49 U	0.47 U	5.10 U	4.90 U	5.26 U
Fluorene	30		40	400	4.90 UJ	0.09 U	0.09 U	4.90 U	0.09 U	0.09 U	4.90 U	0.10 U	0.09 U	5.10 U	4.90 U	5.26 U
Indeno(1,2,3-cd)Pyrene	**0.5**		100	1000	4.90 UJ	0.09 U	0.09 U	4.90 U	0.09 U	0.09 U	4.90 U	0.10 U	0.09 U	5.10 U	4.90 U	5.26 U
Naphthalene	140	700	20000	100000	4.90 UJ	0.47 U	0.47 U	4.90 U	0.47 U	0.47 U	4.90 U	**1.7**	**0.76**	5.10 U	4.90 U	5.26 U
Phenanthrene	40		10000	100000	4.90 UJ	0.47 U	0.47 U	4.90 U	0.47 U	0.47 U	4.90 U	0.49 U	0.47 U	5.10 U	4.90 U	5.26 U
Pyrene	60		20	600	4.90 UJ	0.07 U	0.07 U	4.90 U	0.07 U	0.07 U	4.90 U	0.07 U	0.07 U	5.10 U	4.90 U	5.26 U
VPH (ug/l)																
Benzene	5	1000	10000	100000	1.00 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	5.00 U	1.00 U	5.00 U
C5-C8 Aliphatic Hydrocarbons	**300**	**3000**	**50000**	100000	75.0 U	100 U	100 U	75.0 U	100 U	100 U	**393 J+**	100 U	100 U	**1350**	**1860 J+**	**2250 J+**
C9-C10 Aromatic Hydrocarbons	**200**	4000	50000	100000	**47.6**	100 U	100 U	**65.7**	100 U	100 U	**123**	**100**	100 U	25.0 U	25.0 U	125 U
C9-C12 Aliphatic Hydrocarbons	700	5000	50000	100000	25.0 U	100 U	100 U	**36.0**	100 U	100 U	25.0 U	100 U	100 U	25.0 U	25.0 U	125 U
Ethylbenzene	700	20000	5000	100000	1.00 U	**1.1**	**1.5**	1.00 U	1.0 U	**1.9**	**7.84**	**4.4**	**2.8**	5.00 U	1.00 U	5.00 U
M, P XYLENES	10000	3000	5000	100000	2.00 U	2.0 U	2.0 U	2.00 U	2.0 U	2.0 U	2.00 U	2.0 U	2.0 U	10.0 U	2.00 U	10.0 U
Methyl Tert-Butyl Ether				100000	1.00 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	5.00 U	1.00 U	5.00 U
Naphthalene	140	700	20000	100000	1.00 U	5.0 U	5.0 U	1.00 U	5.0 U	5.0 U	**1.74**	5.0 U	5.0 U	5.00 U	1.00 U	5.00 U
o-Xylene	10000	3000	5000	100000	1.00 U	**2.4**	**2.7**	**1.61**	1.0 U	**2.7**	**2.49**	1.0 U	1.0 U	5.00 U	1.00 U	5.00 U
Toluene	**1000**	50000	40000	100000	1.00 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	**3.23**	**1.3**	**2.4**	5.00 U	1.00 U	5.00 U
Xylenes (Total)	10000	3000	5000	100000	2.00 U	**2.4**	**2.7**	**1.61**	2.0 U	**2.7**	**2.49**	2.0 U	2.0 U	10.0 U	2.00 U	10.0 U

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

Table 5-4
Summary of 2016 - 2020 Groundwater Analytical Results for Petroleum Hydrocarbons
Former GE Facility, 50 Fordham Road, Wilmington, MA

					Location Group:	Transect A (continued)										
					Location ID:	AE102RR-6	AE102RR-6	AE103R-1	AE103R-1	AE103R-1	AE103R-1	AE103R-1	AE104R-4	AE104R-4	AE104R-4	AE104R-4	AE104R-4
					Sample ID:	19A-AE102RR6-092419-1	A-AE102RR6-09092	16A-AE103R1-061516-1	17A-AE103R1-100217-1	18A-AE103R1-092518-1	19A-AE103R1-091819-1	A-AE103R1-09102	16A-AE104R4-061416-1	17A-AE104R4-100317-1	18A-AE104R4-092618-1	19A-AE104R4-091819-1	A-AE104R4-091120
					Sample Date:	9/24/2019	9/9/2020	6/15/2016	10/2/2017	9/25/2018	9/18/2019	9/10/2020	6/14/2016	10/3/2017	9/26/2018	9/18/2019	9/11/2020
					Sample Type:	N	N	N	N	N	N	N	N	N	N	N	N
					Depth Interval:	153-158 ft	153 - 158 ft	48 - 53 ft	48 - 53 ft	48 - 53 ft	48-53 ft	48 - 53 ft	128 - 133 ft	128 - 133 ft	128 - 133 ft	128-133 ft	128 - 133 ft
Analyte	**MCP Method 1 GW-1 Standards**	**MCP Method 1 GW-2 Standards**	**MCP Method 1 GW-3 Standards**	**Upper Concentration**												
EPH (ug/l)																
2-Methylnaphthalene	10	2000	20000	100000	0.47 U	0.47 U	5.10 U	4.90 U	4.85 U	0.47 U	0.48 U	5.26 U	5.00 U	5.00 U	0.47 U	0.47 U
Acenaphthene	20		10000	100000	0.47 U	0.47 U	5.10 U	4.90 U	4.85 U	0.47 U	0.48 U	5.26 U	5.00 U	5.00 U	0.47 U	0.47 U
Acenaphthylene	30	10000	40	100000	0.09 U	0.09 U	5.10 U	4.90 U	4.85 U	0.09 U	0.10 U	5.26 U	5.00 U	5.00 U	0.09 U	0.09 U
Anthracene	60		30	600	0.09 U	0.09 U	5.10 U	4.90 U	4.85 U	0.09 U	0.09 U	5.26 U	5.00 U	5.00 U	0.09 U	0.09 U
Benzo(a)Anthracene	**1**		1000	10000	0.09 U	0.09 U	5.10 U	4.90 U	4.85 U	0.09 U	0.10 U	5.26 U	5.00 U	5.00 U	0.09 U	0.09 U
Benzo(a)Pyrene	**0.2**		500	5000	0.19 U	0.19 U	5.10 U	4.90 U	4.85 U	0.19 U	0.19 U	5.26 U	5.00 U	5.00 U	0.19 U	0.19 U
Benzo(b)Fluoranthene	1		400	4000	0.09 U	0.09 U	5.10 U	4.90 U	4.85 U	0.09 U	0.10 U	5.26 U	5.00 U	5.00 U	0.09 U	0.09 U
Benzo(g,h,i)Perylene	50		20	500	0.02 U	0.02 U	5.10 U	4.90 U	4.85 U	0.02 U	0.02 U	5.26 U	5.00 U	5.00 U	0.02 U	0.02 U
Benzo(k)Fluoranthene	1		100	1000	0.09 U	0.09 U	5.10 U	4.90 U	4.85 U	0.09 U	0.10 U	5.26 U	5.00 U	5.00 U	0.09 U	0.09 U
C11-C22 Aromatic Hydrocarbons	**200**	50000	5000	100000	190 U	200 U	102 U	98.0 U	97.1 U	200 U	200 U	105 U	100 U	100 U	200 U	200 U
C19-C36 Aliphatic Hydrocarbons	14000		50000	100000	190 U	200 U	102 U	98.0 U	97.1 U	200 U	200 U	105 U	100 U	100 U	200 U	200 U
C9-C18 Aliphatic Hydrocarbons	700	5000	50000	100000	190 U	200 U	102 U	98.0 U	97.1 U	200 U	200 U	105 U	100 U	100 UJ	200 U	200 U
Chrysene	**2**		70	700	0.05 U	0.05 U	5.10 U	4.90 U	4.85 U	0.05 U	0.05 U	5.26 U	5.00 U	5.00 U	0.05 U	0.05 U
Dibenzo(a,h)Anthracene	**0.5**		**40**	400	0.02 U	0.02 U	5.10 U	4.90 U	4.85 U	0.02 U	0.02 U	5.26 U	5.00 U	5.00 U	0.02 U	0.02 U
Fluoranthene	90		200	2000	0.47 U	0.47 U	5.10 U	4.90 U	4.85 U	0.47 U	0.48 U	5.26 U	5.00 U	5.00 U	0.47 U	0.47 U
Fluorene	30		40	400	0.09 U	0.09 U	5.10 U	4.90 U	4.85 U	0.09 U	0.10 U	5.26 U	5.00 U	5.00 U	0.09 U	0.09 U
Indeno(1,2,3-cd)Pyrene	**0.5**		100	1000	0.09 U	0.09 U	5.10 U	4.90 U	4.85 U	0.09 U	0.10 U	5.26 U	5.00 U	5.00 U	0.09 U	0.09 U
Naphthalene	140	700	20000	100000	0.47 U	0.47 U	5.10 U	4.90 U	4.85 U	0.47 U	0.48 U	5.26 U	5.00 U	5.00 U	0.47 U	0.47 U
Phenanthrene	40		10000	100000	0.47 U	0.47 U	5.10 U	4.90 U	4.85 U	0.47 U	0.48 U	5.26 U	5.00 U	5.00 U	0.47 U	0.47 U
Pyrene	60		20	600	0.07 U	0.07 U	5.10 U	4.90 U	4.85 U	0.07 U	0.07 U	5.26 U	5.00 U	5.00 U	0.07 U	0.07 U
VPH (ug/l)																
Benzene	5	1000	10000	100000	1.0 U	5.0 U	20.0 U	1.00 U	1.00 U	1.0 U	5.0 U	10.0 U	1.00 U	R	1.0 U	5.0 U
C5-C8 Aliphatic Hydrocarbons	**300**	**3000**	**50000**	100000	**2400**	**1900**	**1150 J+**	**1040 J+**	**811 J+**	**800**	**640**	**2020**	**1560 J+**	**2080 J**	**2200**	**1500**
C9-C10 Aromatic Hydrocarbons	**200**	4000	50000	100000	100 U	500 U	100 U	25.0 U	25.0 U	100 U	500 U	50.0 U	25.0 U	R	100 U	500 U
C9-C12 Aliphatic Hydrocarbons	700	5000	50000	100000	100 U	500 U	100 U	25.0 U	25.0 U	100 U	500 U	50.0 U	25.0 U	R	100 U	500 U
Ethylbenzene	700	20000	5000	100000	1.0 U	5.0 U	20.0 U	1.00 U	1.00 U	1.0 U	5.0 U	10.0 U	1.00 U	R	1.0 U	5.0 U
M, P XYLENES	10000	3000	5000	100000	2.0 U	10 U	40.0 U	2.00 U	2.00 U	2.0 U	10 U	20.0 U	2.00 U	R	2.0 U	10 U
Methyl Tert-Butyl Ether				100000	1.0 U	5.0 U	20.0 U	1.00 UJ	1.00 U	1.0 U	5.0 U	10.0 U	1.00 U	R	1.0 U	5.0 U
Naphthalene	140	700	20000	100000	5.0 U	25 U	20.0 U	1.00 U	1.00 U	5.0 U	25 U	10.0 U	1.00 U	R	5.0 U	25 U
o-Xylene	10000	3000	5000	100000	1.0 U	5.0 U	20.0 U	1.00 U	1.00 U	1.0 U	5.0 U	10.0 U	1.00 U	R	1.0 U	5.0 U
Toluene	**1000**	50000	40000	100000	1.0 U	5.0 U	20.0 U	1.00 U	1.00 U	1.0 U	5.0 U	10.0 U	1.00 U	R	**3.4**	5.0 U
Xylenes (Total)	10000	3000	5000	100000	2.0 U	10 U	40.0 U	2.00 U	2.00 U	2.0 U	10 U	20.0 U	2.00 U	**R**	2.0 U	10 U

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

Table 5-4
Summary of 2016 - 2020 Groundwater Analytical Results for Petroleum Hydrocarbons
Former GE Facility, 50 Fordham Road, Wilmington, MA

					Transect A (continued)										Transect B	
Location Group:																
Location ID:					AE109R-5	AE109R-5	AE109R-5	AE109R-5	AE109R-5	EMW-11R2	EMW-11R2	EMW-11R2	EMW-11R2	EMW-11R2	AE105R-2	AE105R-2
Sample ID:					16A-AE109R5-061616-1	17A-AE109R5-101017-1	18A-AE109R5-100218-1	19A-AE109R5-091819-1	0A-AE109R5-091620	16A-EMW11R2-062116-1	17A-EMW11R2-101017-1	18A-EMW11R2-092418-1	19A-EMW11R2-091719-1	A-EMW11R2-09212	16A-AE105R2-062016-1	17A-AE105R2-101217-1
Sample Date:					6/16/2016	10/10/2017	10/2/2018	9/18/2019	9/16/2020	6/21/2016	10/10/2017	9/24/2018	9/17/2019	9/21/2020	6/20/2016	10/12/2017
Sample Type:					N	N	N	N	N	N	N	N	N	N	N	N
Depth Interval:					183 - 189 ft	183 - 189 ft	183 - 189 ft	183-189 ft	183 - 189 ft	104 - 114 ft	104 - 114 ft	104 - 114 ft	104-114 ft	104 - 114 ft	98 - 103 ft	98 - 103 ft
Analyte	**MCP Method 1 GW-1 Standards**	**MCP Method 1 GW-2 Standards**	**MCP Method 1 GW-3 Standards**	**Upper Concentration**												
EPH (ug/l)																
2-Methylnaphthalene	10	2000	20000	100000	5.15 U	4.90 U	4.85 U	0.47 U	0.47 U	5.10 U	4.90 U	4.90 UJ	0.47 U	0.47 U	5.15 U	4.95 U
Acenaphthene	20		10000	100000	5.15 U	4.90 U	4.85 U	0.47 U	0.47 U	5.10 U	4.90 U	4.90 UJ	0.47 U	0.47 U	5.15 U	4.95 U
Acenaphthylene	30	10000	40	100000	5.15 U	4.90 U	4.85 U	0.09 U	0.09 U	5.10 U	4.90 U	4.90 UJ	0.09 UJ	0.09 U	5.15 U	4.95 U
Anthracene	60		30	600	5.15 U	4.90 U	4.85 U	0.09 U	0.09 U	5.10 U	4.90 U	4.90 UJ	0.09 U	0.09 U	5.15 U	4.95 U
Benzo(a)Anthracene	**1**		1000	10000	5.15 U	4.90 U	4.85 U	**0.13**	0.09 U	5.10 U	4.90 U	4.90 UJ	0.09 U	0.09 U	5.15 U	4.95 U
Benzo(a)Pyrene	**0.2**		500	5000	5.15 U	4.90 U	4.85 U	0.19 U	0.19 U	5.10 U	4.90 U	**13.6 J-**	0.19 U	0.19 U	5.15 U	4.95 U
Benzo(b)Fluoranthene	1		400	4000	5.15 U	4.90 U	4.85 U	**0.19**	0.09 U	5.10 U	4.90 U	4.90 UJ	0.09 U	0.09 U	5.15 U	4.95 U
Benzo(g,h,i)Perylene	50		20	500	5.15 U	4.90 U	4.85 U	**0.12**	0.02 U	5.10 U	4.90 U	**13.6 J-**	0.02 U	0.02 U	5.15 U	4.95 U
Benzo(k)Fluoranthene	1		100	1000	5.15 U	4.90 U	4.85 U	**0.14**	0.09 U	5.10 U	4.90 U	4.90 UJ	0.09 U	0.09 U	5.15 U	4.95 U
C11-C22 Aromatic Hydrocarbons	**200**	50000	5000	100000	103 U	**332**	97.1 U	190 U	200 U	102 U	**248**	98.0 U	190 U	200 U	103 U	99.0 U
C19-C36 Aliphatic Hydrocarbons	14000		50000	100000	103 U	98.0 U	97.1 U	190 U	200 U	102 U	98.0 U	98.0 U	190 U	200 U	103 U	99.0 U
C9-C18 Aliphatic Hydrocarbons	700	5000	50000	100000	103 U	98.0 U	97.1 U	190 U	200 U	102 U	98.0 U	98.0 UJ	190 U	200 U	103 U	99.0 U
Chrysene	**2**		70	700	5.15 U	4.90 U	4.85 U	**0.18**	0.05 U	5.10 U	4.90 U	4.90 UJ	0.05 U	0.05 U	5.15 U	4.95 U
Dibenzo(a,h)Anthracene	**0.5**		**40**	400	5.15 U	4.90 U	4.85 U	**0.03**	0.02 U	5.10 U	4.90 U	4.90 UJ	0.02 U	0.02 U	5.15 U	4.95 U
Fluoranthene	90		200	2000	5.15 U	4.90 U	4.85 U	0.47 U	0.47 U	5.10 U	4.90 U	4.90 UJ	0.47 U	0.47 U	5.15 U	4.95 U
Fluorene	30		40	400	5.15 U	4.90 U	4.85 U	0.09 U	0.09 U	5.10 U	4.90 U	4.90 UJ	0.09 U	0.09 U	5.15 U	4.95 U
Indeno(1,2,3-cd)Pyrene	**0.5**		100	1000	5.15 U	4.90 U	4.85 U	**0.14**	0.09 U	5.10 U	4.90 U	4.90 UJ	0.09 U	0.09 U	5.15 U	4.95 U
Naphthalene	140	700	20000	100000	5.15 U	4.90 U	4.85 U	0.47 U	0.47 U	5.10 U	4.90 U	4.90 UJ	0.47 U	0.47 U	5.15 U	4.95 U
Phenanthrene	40		10000	100000	5.15 U	4.90 U	4.85 U	0.47 U	0.47 U	5.10 U	4.90 U	4.90 UJ	0.47 U	0.47 U	5.15 U	4.95 U
Pyrene	60		20	600	5.15 U	4.90 U	4.85 U	**0.26**	0.07 U	5.10 U	4.90 U	4.90 UJ	0.07 U	0.07 U	5.15 U	4.95 U
VPH (ug/l)																
Benzene	5	1000	10000	100000	5.00 U	1.00 U	1.00 U	1.0 U	1.0 U	50.0 U	10.0 U	1.00 U	2.0 U	1.0 U	5.00 U	1.00 U
C5-C8 Aliphatic Hydrocarbons	**300**	**3000**	**50000**	100000	**324 J+**	**283 J+**	**329 J+**	**240**	**250**	**5020 J+**	**3830 J+**	37500 U	**4000**	**3600**	**106 J+**	**90.8 J+**
C9-C10 Aromatic Hydrocarbons	**200**	4000	50000	100000	**28.9**	25.0 U	25.0 U	100 U	100 U	250 U	250 U	12500 U	200 U	100 U	25.0 U	25.0 U
C9-C12 Aliphatic Hydrocarbons	700	5000	50000	100000	25.0 U	25.0 U	25.0 U	100 U	100 U	250 U	250 U	12500 U	200 U	100 U	25.0 U	25.0 U
Ethylbenzene	700	20000	5000	100000	5.00 U	1.00 U	1.00 U	1.0 U	1.0 U	50.0 U	10.0 U	1.00 U	2.0 U	**2.1**	5.00 U	1.00 U
M, P XYLENES	10000	3000	5000	100000	10.0 U	2.00 U	2.00 U	2.0 U	2.0 U	100 U	20.0 U	2.00 U	4.0 U	2.0 U	10.0 U	2.00 U
Methyl Tert-Butyl Ether				100000	5.00 U	1.00 UJ	1.00 U	1.0 U	1.0 U	50.0 U	10.0 UJ	1.00 U	2.0 U	1.0 U	5.00 U	**2.48**
Naphthalene	140	700	20000	100000	5.00 U	1.00 U	1.00 U	5.0 U	5.0 U	50.0 U	10.0 U	1.00 U	10 U	5.0 U	5.00 U	1.00 U
o-Xylene	10000	3000	5000	100000	5.00 U	1.00 U	1.00 U	1.0 U	1.0 U	50.0 U	10.0 U	1.00 U	2.0 U	1.0 U	5.00 U	1.00 U
Toluene	**1000**	50000	40000	100000	**12.1**	1.00 U	1.00 U	1.0 U	1.0 U	50.0 U	10.0 U	1.00 U	2.0 U	1.0 U	5.00 U	1.00 U
Xylenes (Total)	10000	3000	5000	100000	10.0 U	2.00 U	2.00 U	2.0 U	2.0 U	100 U	20.0 U	2.00 U	4.0 U	2.0 U	10.0 U	2.00 U

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

Table 5-4
Summary of 2016 - 2020 Groundwater Analytical Results for Petroleum Hydrocarbons
Former GE Facility, 50 Fordham Road, Wilmington, MA

					Transect B (continued)											
Location Group:																
Location ID:					AE105R-2	AE105R-2	AE105R-2	AE105R-4	AE105R-4	AE105R-4	AE105R-4	AE106R-3	AE106R-3	AE106R-3	AE106R-3	AE106R-3
Sample ID:					18A-AE105R2-100318-1	19A-AE105R2-091619-1	A-AE105R2-091720	17A-AE105R4-101217-1	18A-AE105R4-100318-1	19A-AE105R4-091619-1	A-AE105R4-091720	16A-AE106R3-062016-1	17A-AE106R3-101217-1	18A-AE106R3-100318-1	19A-AE106R3-091619-1	20A-AE106R3-091720-1
Sample Date:					10/3/2018	9/16/2019	9/17/2020	10/12/2017	10/3/2018	9/16/2019	9/17/2020	6/20/2016	10/12/2017	10/3/2018	9/16/2019	9/17/2020
Sample Type:					N	N	N	N	N	N	N	N	N	N	N	N
Depth Interval:					98 - 103 ft	98-103 ft	98 - 103 ft	125 - 130 ft	125 - 130 ft	125-130 ft	125 - 130 ft	84 - 88 ft	84 - 88 ft	84 - 88 ft	84-88 ft	84 - 88 ft
Analyte	**MCP Method 1 GW-1 Standards**	**MCP Method 1 GW-2 Standards**	**MCP Method 1 GW-3 Standards**	**Upper Concentration**												
EPH (ug/l)																
2-Methylnaphthalene	10	2000	20000	100000	4.85 U	0.47 U	0.47 U	4.95 U	4.85 U	0.47 U	0.47 U	5.21 U	5.00 U	4.95 U	0.47 U	0.47 U
Acenaphthene	20		10000	100000	4.85 U	0.47 U	0.47 U	**5.04**	4.85 U	0.47 U	0.47 U	5.21 U	5.00 U	4.95 U	0.47 U	0.47 U
Acenaphthylene	30	10000	40	100000	4.85 U	0.09 U	0.09 U	4.95 U	4.85 U	0.09 U	0.09 U	5.21 U	5.00 U	4.95 U	0.09 UJ	0.09 U
Anthracene	60		30	600	4.85 U	0.09 U	0.09 U	4.95 U	4.85 U	0.09 U	0.09 U	5.21 U	5.00 U	4.95 U	0.09 U	0.09 U
Benzo(a)Anthracene	**1**		1000	10000	4.85 U	0.09 U	0.09 U	4.95 U	4.85 U	0.09 U	0.09 U	5.21 U	5.00 U	4.95 U	0.09 U	0.09 U
Benzo(a)Pyrene	**0.2**		500	5000	4.85 U	0.19 U	0.19 U	4.95 U	4.85 U	0.19 U	0.19 U	5.21 U	5.00 U	4.95 U	0.19 U	0.19 U
Benzo(b)Fluoranthene	1		400	4000	4.85 U	0.09 U	0.09 U	4.95 U	4.85 U	0.09 U	0.09 U	5.21 U	5.00 U	4.95 U	0.09 U	0.09 U
Benzo(g,h,i)Perylene	50		20	500	4.85 U	0.02 U	0.02 U	4.95 U	4.85 U	0.02 U	0.02 U	5.21 U	5.00 U	4.95 U	0.02 U	0.02 U
Benzo(k)Fluoranthene	1		100	1000	4.85 U	0.09 U	0.09 U	4.95 U	4.85 U	0.09 U	0.09 U	5.21 U	5.00 U	4.95 U	0.09 U	0.09 U
C11-C22 Aromatic Hydrocarbons	**200**	50000	5000	100000	97.1 U	190 U	200 U	**108**	97.1 U	190 U	200 U	104 U	100 U	99.0 U	190 U	200 U
C19-C36 Aliphatic Hydrocarbons	14000		50000	100000	97.1 UJ	190 U	200 U	99.0 U	97.1 UJ	190 U	200 U	104 U	100 U	99.0 UJ	190 U	200 U
C9-C18 Aliphatic Hydrocarbons	700	5000	50000	100000	97.1 UJ	190 U	200 U	99.0 U	97.1 UJ	190 U	200 U	104 U	100 U	99.0 UJ	190 U	200 U
Chrysene	**2**		70	700	4.85 U	0.05 U	0.05 U	4.95 U	4.85 U	0.05 U	0.05 U	5.21 U	5.00 U	4.95 U	0.05 U	0.05 U
Dibenzo(a,h)Anthracene	**0.5**		**40**	400	4.85 U	0.02 U	0.02 U	4.95 U	4.85 U	0.02 U	0.02 U	5.21 U	5.00 U	4.95 U	0.02 U	0.02 U
Fluoranthene	90		200	2000	4.85 U	0.47 U	0.47 U	4.95 U	4.85 U	0.47 U	0.47 U	5.21 U	5.00 U	4.95 U	0.47 U	0.47 U
Fluorene	30		40	400	4.85 U	0.09 U	0.09 U	4.95 U	4.85 U	0.09 U	0.09 U	5.21 U	5.00 U	4.95 U	0.09 U	0.09 U
Indeno(1,2,3-cd)Pyrene	**0.5**		100	1000	4.85 U	0.09 U	0.09 U	4.95 U	4.85 U	0.09 U	0.09 U	5.21 U	5.00 U	4.95 U	0.09 U	0.09 U
Naphthalene	140	700	20000	100000	4.85 U	0.47 U	0.47 U	4.95 U	4.85 U	0.47 U	0.47 U	5.21 U	5.00 U	4.95 U	0.47 U	0.47 U
Phenanthrene	40		10000	100000	4.85 U	0.47 U	0.47 U	4.95 U	4.85 U	0.47 U	0.47 U	5.21 U	5.00 U	4.95 U	0.47 U	0.47 U
Pyrene	60		20	600	4.85 U	0.07 U	0.07 U	4.95 U	4.85 U	0.07 U	0.07 U	5.21 U	5.00 U	4.95 U	0.07 U	0.07 U
VPH (ug/l)																
Benzene	5	1000	10000	100000	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	5.00 U	1.00 U	1.00 U	1.0 U	1.0 U
C5-C8 Aliphatic Hydrocarbons	**300**	**3000**	**50000**	100000	75.0 U	100 U	100 U	**92.1 J+**	**83.6 J+**	100 U	100 U	75.0 U	75.0 U	75.0 U	100 U	100 U
C9-C10 Aromatic Hydrocarbons	**200**	4000	50000	100000	25.0 U	100 U	100 U	25.0 U	25.0 U	100 U	100 U	25.0 U	25.0 U	25.0 U	100 U	100 U
C9-C12 Aliphatic Hydrocarbons	700	5000	50000	100000	25.0 U	100 U	100 U	25.0 U	25.0 U	100 U	100 U	25.0 U	25.0 U	25.0 U	100 U	100 U
Ethylbenzene	700	20000	5000	100000	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	5.00 U	1.00 U	1.00 U	1.0 U	1.0 U
M, P XYLENES	10000	3000	5000	100000	2.00 U	2.0 U	2.0 U	2.00 U	2.00 U	2.0 U	2.0 U	10.0 U	2.00 U	2.00 U	2.0 U	2.0 U
Methyl Tert-Butyl Ether				100000	**1.97**	**2.4**	**3.0 J**	**2.42**	**2.35**	**2.6**	**3.4 J**	5.00 U	1.00 U	1.00 U	1.0 U	1.0 U
Naphthalene	140	700	20000	100000	1.00 U	5.0 U	5.0 U	1.00 U	1.00 U	5.0 U	5.0 U	5.00 U	1.00 U	1.00 U	5.0 U	5.0 U
o-Xylene	10000	3000	5000	100000	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	5.00 U	1.00 U	1.00 U	1.0 U	1.0 U
Toluene	**1000**	50000	40000	100000	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	**7.30**	1.00 U	1.00 U	1.0 U	1.0 U
Xylenes (Total)	10000	3000	5000	100000	2.00 U	2.0 U	2.0 U	2.00 U	2.00 U	2.0 U	2.0 U	10.0 U	2.00 U	2.00 U	2.0 U	2.0 U

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

Table 5-4
Summary of 2016 - 2020 Groundwater Analytical Results for Petroleum Hydrocarbons
Former GE Facility, 50 Fordham Road, Wilmington, MA

					Location Group:	Transect B (continued)				Transect B-1/2					
					Location ID:	AE106R5	AE106R5	AE106R5	AE106R5	AE112R6	AE112R6	AE112R6	AE112R6	AE112R6	AE112R6
					Sample ID:	17A-AE106R5-101217-1	18A-AE106R5-100318-1	19A-AE106R5-091619-1	20A-AE106R5-091720-1	16B-AE112R6-062116-1	17A-AE112R6-101717-1	18A-AE112R6-092618-1	18A-AE112R6-092618-2	19A-AE112R6-091319-1	A-AE112R6-091120
					Sample Date:	10/12/2017	10/3/2018	9/16/2019	9/17/2020	6/21/2016	10/17/2017	9/26/2018	9/26/2018	9/13/2019	9/11/2020
					Sample Type:	N	N	N	N	N	N	N	FD	N	N
					Depth Interval:	164 - 169 ft	164 - 169 ft	164-169 ft	164 - 169 ft	153 - 163 ft	153 - 163 ft	153 - 163 ft	153 - 163 ft	153-163 ft	153 - 163 ft
Analyte	**MCP Method 1 GW-1 Standards**	**MCP Method 1 GW-2 Standards**	**MCP Method 1 GW-3 Standards**	**Upper Concentration**											
EPH (ug/l)															
2-Methylnaphthalene	10	2000	20000	100000	5.00 U	4.90 U	0.47 U	0.47 U	5.15 U	4.85 U	4.95 U	5.00 U	0.47 U	0.47 U
Acenaphthene	20		10000	100000	5.00 U	4.90 U	0.47 U	0.47 U	5.15 U	4.85 U	4.95 U	5.00 U	0.47 U	0.47 U
Acenaphthylene	30	10000	40	100000	5.00 U	4.90 U	0.09 UJ	0.09 U	5.15 U	4.85 U	4.95 U	5.00 U	0.09 U	0.09 U
Anthracene	60		30	600	5.00 U	4.90 U	0.09 U	0.09 U	5.15 U	4.85 U	4.95 U	5.00 U	0.09 U	0.09 U
Benzo(a)Anthracene	**1**		1000	10000	5.00 U	4.90 U	0.09 U	0.09 U	5.15 U	4.85 U	4.95 U	5.00 U	0.09 U	0.09 U
Benzo(a)Pyrene	**0.2**		500	5000	5.00 U	4.90 U	0.19 U	0.19 U	5.15 U	4.85 U	4.95 U	5.00 U	0.19 U	0.19 U
Benzo(b)Fluoranthene	1		400	4000	5.00 U	4.90 U	0.09 U	0.09 U	5.15 U	4.85 U	4.95 U	5.00 U	0.09 U	0.09 U
Benzo(g,h,i)Perylene	50		20	500	5.00 U	4.90 U	0.02 U	0.02 U	5.15 U	4.85 U	4.95 U	5.00 U	0.02 U	0.02 U
Benzo(k)Fluoranthene	1		100	1000	5.00 U	4.90 U	0.09 U	0.09 U	5.15 U	4.85 U	4.95 U	5.00 U	0.09 U	0.09 U
C11-C22 Aromatic Hydrocarbons	**200**	50000	5000	100000	100 U	**220**	190 U	200 U	103 U	**102**	99.0 U	100 U	200 U	200 U
C19-C36 Aliphatic Hydrocarbons	14000		50000	100000	100 U	98.0 UJ	190 U	200 U	103 U	97.1 U	99.0 UJ	100 UJ	200 U	200 U
C9-C18 Aliphatic Hydrocarbons	700	5000	50000	100000	100 U	98.0 UJ	190 U	200 U	103 U	97.1 U	99.0 UJ	100 UJ	200 U	200 U
Chrysene	**2**		70	700	5.00 U	4.90 U	0.05 U	0.05 U	5.15 U	4.85 U	4.95 U	5.00 U	0.05 U	0.05 U
Dibenzo(a,h)Anthracene	**0.5**		**40**	400	5.00 U	4.90 U	0.02 U	0.02 U	5.15 U	4.85 U	4.95 U	5.00 U	0.02 U	0.02 U
Fluoranthene	90		200	2000	5.00 U	4.90 U	0.47 U	0.47 U	5.15 U	4.85 U	4.95 U	5.00 U	0.47 U	0.47 U
Fluorene	30		40	400	5.00 U	4.90 U	0.09 U	0.09 U	5.15 U	4.85 U	4.95 U	5.00 U	0.09 U	0.09 U
Indeno(1,2,3-cd)Pyrene	**0.5**		100	1000	5.00 U	4.90 U	0.09 U	0.09 U	5.15 U	4.85 U	4.95 U	5.00 U	0.09 U	0.09 U
Naphthalene	140	700	20000	100000	5.00 U	4.90 U	0.47 U	0.47 U	5.15 U	4.85 U	4.95 U	5.00 U	0.47 U	0.47 U
Phenanthrene	40		10000	100000	5.00 U	4.90 U	0.47 U	0.47 U	5.15 U	4.85 U	4.95 U	5.00 U	0.47 U	0.47 U
Pyrene	60		20	600	5.00 U	4.90 U	0.07 U	0.07 U	5.15 U	4.85 U	4.95 U	5.00 U	0.07 U	0.07 U
VPH (ug/l)															
Benzene	5	1000	10000	100000	1.00 U	1.00 U	1.0 U	1.0 U	5.00 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U
C5-C8 Aliphatic Hydrocarbons	**300**	**3000**	**50000**	100000	75.0 U	75.0 U	100 U	100 U	75.0 U	75.0 U	75.0 U	75.0 U	100 U	100 U
C9-C10 Aromatic Hydrocarbons	**200**	4000	50000	100000	25.0 U	25.0 U	100 U	100 U	25.0 U	25.0 U	25.0 U	25.0 U	100 U	100 U
C9-C12 Aliphatic Hydrocarbons	700	5000	50000	100000	25.0 U	25.0 U	100 U	100 U	25.0 U	25.0 U	25.0 U	25.0 U	100 U	100 U
Ethylbenzene	700	20000	5000	100000	1.00 U	1.00 U	1.0 U	1.0 U	5.00 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U
M, P XYLENES	10000	3000	5000	100000	2.00 U	2.00 U	2.0 U	2.0 U	10.0 U	2.00 U	2.00 U	2.00 U	2.0 U	2.0 U
Methyl Tert-Butyl Ether				100000	1.00 U	1.00 U	1.0 U	1.0 U	5.00 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U
Naphthalene	140	700	20000	100000	1.00 U	1.00 U	5.0 U	5.0 U	5.00 U	1.00 U	1.00 U	1.00 U	5.0 U	5.0 U
o-Xylene	10000	3000	5000	100000	1.00 U	1.00 U	1.0 U	1.0 U	5.00 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U
Toluene	**1000**	50000	40000	100000	1.00 U	1.00 U	1.0 U	1.0 U	**23.5**	**15.2**	**3.55 J**	**4.90 J**	**1.7**	1.0 U
Xylenes (Total)	10000	3000	5000	100000	2.00 U	2.00 U	2.0 U	2.0 U	10.0 U	2.00 U	2.00 U	2.00 U	2.0 U	2.0 U

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

Table 5-4
Summary of 2016 - 2020 Groundwater Analytical Results for Petroleum Hydrocarbons
Former GE Facility, 50 Fordham Road, Wilmington, MA

					Location Group:	Transect C					
					Location ID:	STM-8R1	STM-8R1	STM-8R1	STM-8R1	STM-8R1	STM-8R1
					Sample ID:	16A-STM8R1-062816-1	17A-STM8R1-101717-1	17A-STM8R1-101717-2	18A-STM8R1-100218-1	19A-STM8R1-092619-1	20A-STM8R1-092320-1
					Sample Date:	6/28/2016	10/17/2017	10/17/2017	10/2/2018	9/26/2019	9/23/2020
					Sample Type:	N	N	FD	N	N	N
					Depth Interval:	85 - 90 ft	85 - 90 ft	85 - 90 ft	85 - 90 ft	85-90 ft	85 - 90 ft
Analyte	**MCP Method 1 GW-1 Standards**	**MCP Method 1 GW-2 Standards**	**MCP Method 1 GW-3 Standards**	**Upper Concentration**							
EPH (ug/l)											
2-Methylnaphthalene	10	2000	20000	100000	4.85 U	4.95 U	4.85 U	4.85 U	0.48 U	0.49 U
Acenaphthene	20		10000	100000	4.85 U	4.95 U	4.85 U	4.85 U	0.48 U	0.49 U
Acenaphthylene	30	10000	40	100000	4.85 U	4.95 U	4.85 U	4.85 U	0.10 U	0.10 U
Anthracene	60		30	600	4.85 U	4.95 U	4.85 U	4.85 U	0.09 U	0.09 U
Benzo(a)Anthracene	**1**		1000	10000	4.85 U	4.95 U	4.85 U	4.85 U	0.10 U	0.10 U
Benzo(a)Pyrene	**0.2**		500	5000	4.85 U	4.95 U	4.85 U	4.85 U	0.19 U	0.19 U
Benzo(b)Fluoranthene	1		400	4000	4.85 U	4.95 U	4.85 U	4.85 U	0.10 U	0.10 U
Benzo(g,h,i)Perylene	50		20	500	4.85 U	4.95 U	4.85 U	4.85 U	0.02 U	0.02 U
Benzo(k)Fluoranthene	1		100	1000	4.85 U	4.95 U	4.85 U	4.85 U	0.10 U	0.10 U
C11-C22 Aromatic Hydrocarbons	**200**	50000	5000	100000	97.1 U	**115**	**119**	97.1 U	190 U	190 U
C19-C36 Aliphatic Hydrocarbons	14000		50000	100000	97.1 U	99.0 U	97.1 U	97.1 U	190 U	190 U
C9-C18 Aliphatic Hydrocarbons	700	5000	50000	100000	97.1 U	99.0 U	97.1 U	97.1 U	190 UJ	190 U
Chrysene	**2**		70	700	4.85 U	4.95 U	4.85 U	4.85 U	0.05 U	0.05 U
Dibenzo(a,h)Anthracene	**0.5**		**40**	400	4.85 U	4.95 U	4.85 U	4.85 U	0.02 U	0.02 U
Fluoranthene	90		200	2000	4.85 U	4.95 U	4.85 U	4.85 U	0.48 U	0.49 U
Fluorene	30		40	400	4.85 U	4.95 U	4.85 U	4.85 U	0.10 U	0.10 U
Indeno(1,2,3-cd)Pyrene	**0.5**		100	1000	4.85 U	4.95 U	4.85 U	4.85 U	0.10 U	0.10 U
Naphthalene	140	700	20000	100000	4.85 U	4.95 U	4.85 U	4.85 U	0.48 U	0.49 U
Phenanthrene	40		10000	100000	4.85 U	4.95 U	4.85 U	4.85 U	0.48 U	0.49 U
Pyrene	60		20	600	4.85 U	4.95 U	4.85 U	4.85 U	0.07 U	0.07 U
VPH (ug/l)										
Benzene	5	1000	10000	100000	5.00 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U
C5-C8 Aliphatic Hydrocarbons	**300**	**3000**	**50000**	100000	75.0 U	75.0 U	75.0 U	75.0 U	100 U	100 U
C9-C10 Aromatic Hydrocarbons	**200**	4000	50000	100000	25.0 U	25.0 U	25.0 U	25.0 U	100 U	100 U
C9-C12 Aliphatic Hydrocarbons	700	5000	50000	100000	25.0 U	25.0 U	25.0 U	25.0 U	100 U	100 U
Ethylbenzene	700	20000	5000	100000	5.00 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U
M, P XYLENES	10000	3000	5000	100000	10.0 U	2.00 U	2.00 U	2.00 U	2.0 U	2.0 U
Methyl Tert-Butyl Ether				100000	5.00 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U
Naphthalene	140	700	20000	100000	5.00 U	1.00 U	1.00 U	1.00 U	5.0 U	5.0 U
o-Xylene	10000	3000	5000	100000	5.00 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U
Toluene	**1000**	50000	40000	100000	5.00 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U
Xylenes (Total)	10000	3000	5000	100000	10.0 U	2.00 U	2.00 U	2.00 U	2.0 U	2.0 U

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

Table 5-5
Groundwater Mann Kendall Trend Tests for Petroleum Compounds
Former GE Facility
Wilmington, MA

Well	Parameter	Sample Size	Number Detects	S-Statistics	Test Statistic*	80% Confidence		90% Confidence	
						Critical Value	Conclusion	Critical Value	Conclusion
AE03	Ethylbenzene	9	7	-31	-31	10	Downward Trend	14	Downward Trend
AE03	Naphthalene	9	9	-28	-28	10	Downward Trend	14	Downward Trend
AE03	Calculated VPH	8	8	-10	-10	8	Downward Trend	12	Not Significant
AE04	Calculated VPH	8	8	-16	-16	8	Downward Trend	12	Downward Trend
AE100R-1	Ethylbenzene	7	6	-9	-9	7	Downward Trend	11	Not Significant
AE100R-1	Toluene	7	6	-15	-15	7	Downward Trend	11	Downward Trend
AE100R-1	Xylenes (Total)	7	4	-10	-10	7	Downward Trend	11	Not Significant
AE100R-1	Naphthalene	7	6	-9	-9	7	Downward Trend	11	Not Significant
AE102RR-6	Calculated VPH	5	5	6	6	6	Upward Trend	8	Not Significant
AE103R-1	Calculated VPH	5	5	-10	-10	6	Downward Trend	8	Downward Trend
AE104R-4	Calculated VPH	5	5	0	0		No Trend		No Trend
AE105D	Methyl Tert-Butyl Ether	7	4	14	14	7	Upward Trend	11	Upward Trend
AE105R-1	Methyl Tert-Butyl Ether	7	3	3	3	7	Not Significant	11	Not Significant
AE105R-2	Methyl Tert-Butyl Ether	7	4	6	6	7	Not Significant	11	Not Significant
AE105R-2	Calculated VPH	5	5	-4	-4	6	Not Significant	8	Not Significant
AE105R-4	Methyl Tert-Butyl Ether	7	4	4	4	7	Not Significant	11	Not Significant
AE105R-4	Calculated VPH	4	4	-4	-4	4	Downward Trend	6	Not Significant
AE105R-5	Methyl Tert-Butyl Ether	6	3	4	4	7	Not Significant	9	Not Significant
AE105S	Methyl Tert-Butyl Ether	7	4	10	10	7	Upward Trend	11	Not Significant
AE106R-1	Toluene	7	3	-15	-15	7	Downward Trend	11	Downward Trend
AE106R-3	Toluene	7	3	-11	-11	7	Downward Trend	11	Downward Trend
AE106S	Methyl Tert-Butyl Ether	7	7	-21	-21	7	Downward Trend	11	Downward Trend
AE108R-1	Toluene	7	7	-17	-17	7	Downward Trend	11	Downward Trend
AE108R-5	Toluene	7	3	-13	-13	7	Downward Trend	11	Downward Trend
AE109R-5	Calculated VPH	5	5	-6	-6	6	Downward Trend	8	Not Significant
AE110R-6	Toluene	5	3	-7	-7	6	Downward Trend	8	Not Significant
AE111R-1	Toluene	6	3	-10	-10	7	Downward Trend	9	Downward Trend
AE111R-3	Toluene	6	6	-9	-9	7	Downward Trend	9	Downward Trend
AE111R-5	Toluene	6	5	-9	-9	7	Downward Trend	9	Downward Trend
AE111R-6	Toluene	6	3	-6	-6	7	Not Significant	9	Not Significant
AE112R-3	Toluene	6	4	-12	-12	7	Downward Trend	9	Downward Trend
AE112R-6	Toluene	6	6	-15	-15	7	Downward Trend	9	Downward Trend
AE112R-6	Calculated VPH	5	4	-6	-6	6	Downward Trend	8	Not Significant
AE23R	Toluene	9	7	13	13	10	Upward Trend	14	Not Significant
AE23R	Calculated VPH	5	5	-4	-4	6	Not Significant	8	Not Significant
AE26R-1	Calculated VPH	5	4	8	8	6	Upward Trend	8	Upward Trend
AE28R-2	Calculated VPH	5	5	4	4	6	Not Significant	8	Not Significant

Table 5-5
Groundwater Mann Kendall Trend Tests for Petroleum Compounds
Former GE Facility
Wilmington, MA

Well	Parameter	Sample Size	Number Detects	S-Statistics	Test Statistic*	80% Confidence		90% Confidence	
						Critical Value	Conclusion	Critical Value	Conclusion
AE29R-6	Toluene	7	4	-12	-12	7	Downward Trend	11	Downward Trend
AE29R-6	Calculated VPH	5	5	4	4	6	Not Significant	8	Not Significant
EMW-11R2	Calculated VPH	5	4	-4	-4	6	Not Significant	8	Not Significant
GZA-101R	Toluene	22	8	-132	-3.731	0.8416	Downward Trend	1.282	Downward Trend
GZA-105D	Calculated VPH	5	4	-6	-6	6	Downward Trend	8	Not Significant
GZA-105R	Toluene	31	3	-5	-0.06883	0.8416	Not Significant	1.282	Not Significant
GZA-105S	Calculated VPH	11	8	-10	-0.7086	0.8416	Not Significant	1.282	Not Significant
MW-4	Methyl Tert-Butyl Ether	9	9	8	8	10	Not Significant	14	Not Significant
PS-1D	Methyl Tert-Butyl Ether	16	16	-74	-3.293	0.8416	Downward Trend	1.282	Downward Trend
PS-1S	Methyl Tert-Butyl Ether	9	8	2	2	10	Not Significant	14	Not Significant
PS-2D	Methyl Tert-Butyl Ether	8	4	-14	-14	8	Downward Trend	12	Downward Trend
PS-5D	Methyl Tert-Butyl Ether	11	10	-23	-1.723	0.8416	Downward Trend	1.282	Downward Trend
PZ-2S	Calculated VPH	4	4	0	0		No Trend		No Trend
STM-8D	Methyl Tert-Butyl Ether	14	10	20	1.046	0.8416	Upward Trend	1.282	Not Significant
STM-8R	Methyl Tert-Butyl Ether	15	6	-6	-0.2714	0.8416	Not Significant	1.282	Not Significant
TRC-101	Calculated VPH	7	4	12	12	7	Upward Trend	11	Upward Trend
TRC-102	Calculated VPH	11	7	-46	-3.543	0.8416	Downward Trend	1.282	Downward Trend
TRC-301R-2	Methyl Tert-Butyl Ether	7	4	12	12	7	Upward Trend	11	Upward Trend
TRC-301R-4	Methyl Tert-Butyl Ether	7	7	7	7	7	Upward Trend	11	Not Significant

Notes:
Datasets presented for wells that were included in the sampling program in September 2020.
Field duplicates assigned the maximum value for the purposes of the trend test.
The detection limit was used for non-detect concentrations for the purposes of the trend test.
Trend test results were interpreted using a confidence level of 80% and 90%. If the absolute value of the statistic is equal to or greater than the critical value, a significan
concluded. The direction of the trend is determined by the sign of the statistic with positive statistics indicating an upward trend and negative statistics indicating a downv
* When sample size > 10, the normal approximation is used and calculated per box 4-9 in Data Quality Assessment: Statistical Methods for Practitioners, EPA QA/G-9S.
used, the critical value is the standard normal distribution.
When S is 0, no critical value is calculated and a conclusion of no trend is made.

Table 5-6
Summary of Groundwater PIANO Analytical Results - September 2020
Former GE Facility, Wilmington, MA

					Location Group:	EPL		Transect A		Transect A	
					Location ID:	AE03	TRC-101	AE102RR-6	AE103R-1	AE104R-4	EMW-11R2
					Sample ID:	20A-AE3-092320-1	20A-TRC101-092320-1	20A-AE102RR6-090920-1	20A-AE103R1-091020-1	20A-AE104R4-091120-1	20A-EMW11R2-092120-1
					Sample Date:	44097.45486	44097.66667	44083.53125	44084.54167	44085.52083	44095.44792
					Sample Type:	3 - 13 ft	1.5 - 10.5 ft	153 - 158 ft	48 - 53 ft	128 - 133 ft	104 - 114 ft
					Depth Interval:	N	N	N	N	N	N
					Lab Name:	ALPWE	ALPWE	ALPWE	ALPWE	ALPWE	ALPWE
Analyte	**GW-1**	**GW-2**	**GW-3**	**UCL**							
VOCs (ug/l)											
1,1,4-Trimethylcyclohexane	NE	NE	NE	NE	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	
1,1-Dimethylcyclopentane	NE	NE	NE	NE	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	
1,2,3,4-Tetramethylbenzene	NE	NE	NE	NE	**7.04**	**4.25**	2.00 U	2.00 U	2.00 U	2.00 U	
1,2,3,5-Tetramethylbenzene	NE	NE	NE	NE	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	
1,2,3-Trimethylbenzene	NE	NE	NE	NE	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	
1,2,4,5-Tetramethylbenzene	NE	NE	NE	NE	**12.2**	**13.8**	2.00 U	2.00 U	2.00 U	2.00 U	
1,2,4-Triethylbenzene	NE	NE	NE	NE	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	
1,2,4-Trimethylbenzene	NE	NE	NE	NE	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	
1,2-Dibromoethane	0.02	2	50000	100000	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	
1,2-Dichloroethane	5	5	20000	100000	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	
1,2-Diethylbenzene	NE	NE	NE	NE	**4.86**	**6.29**	2.00 U	2.00 U	2.00 U	2.00 U	
1,2-Dimethyl-3-Ethylbenzene	NE	NE	NE	NE	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	
1,2-Dimethyl-4-Ethylbenzene	NE	NE	NE	NE	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	
1,2-Dimethylcyclohexane (cis)	NE	NE	NE	NE	**1.56 J**	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	
1,2-Dimethylcyclohexane (trans)	NE	NE	NE	NE	**0.825 J**	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	
1,3,5-Triethylbenzene	NE	NE	NE	NE	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	
1,3,5-Trimethylbenzene	NE	NE	NE	NE	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	
1,3-Diethylbenzene	NE	NE	NE	NE	**12.4**	**13.3**	2.00 U	2.00 U	2.00 U	2.00 U	
1,3-Dimethyl-2-Ethylbenzene	NE	NE	NE	NE	**3.65**	**3.61**	2.00 U	2.00 U	2.00 U	2.00 U	
1,3-Dimethyl-4-Ethylbenzene	NE	NE	NE	NE	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	
1,3-Dimethyl-5-Ethylbenzene	NE	NE	NE	NE	**13.9**	**12.6**	2.00 U	2.00 U	2.00 U	2.00 U	
1,3-Dimethyl-5-tert-Butylbenzene	NE	NE	NE	NE	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	
1,3-Dimethylcyclopentane (cis)	NE	NE	NE	NE	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	
1,3-DMCP (trans)/2-Methyl-1-hexene	NE	NE	NE	NE	4.00 U	4.00 U	4.00 U	4.00 U	4.00 U	4.00 U	
1,4-Dimethyl-2-Ethylbenzene	NE	NE	NE	NE	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	
1,4-Dimethylcyclohexane (trans)	NE	NE	NE	NE	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	
1-Decene	NE	NE	NE	NE	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	
1-Heptene/1,2-DMCP (trans)	NE	NE	NE	NE	4.00 U	4.00 U	4.00 U	4.00 U	4.00 U	4.00 U	
1-Hexene	NE	NE	NE	NE	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	
1-Methyl-2-Ethylbenzene	NE	NE	NE	NE	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	
1-Methyl-2-Isopropylbenzene	NE	NE	NE	NE	**2.50**	**3.22**	2.00 U	2.00 U	2.00 U	2.00 U	
1-Methyl-2-N-Propylbenzene	NE	NE	NE	NE	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	
1-Methyl-3-Ethylbenzene	NE	NE	NE	NE	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	
1-Methyl-3-Isopropylbenzene	NE	NE	NE	NE	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	
1-Methyl-3-N-Propylbenzene	NE	NE	NE	NE	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	
1-Methyl-4-N-Propylbenzene	NE	NE	NE	NE	**1.68 J**	**1.86 J**	2.00 U	2.00 U	2.00 U	2.00 U	
1-Methylnaphthalene	NE	NE	NE	NE	**3.75 J**	**1.56 J**	5.00 U	5.00 U	5.00 U	5.00 U	
1-Nonene	NE	NE	NE	NE	5.00 U	5.00 U	5.00 U	5.00 U	5.00 U	5.00 U	
1-Octene	NE	NE	NE	NE	5.00 U	5.00 U	5.00 U	5.00 U	5.00 U	5.00 U	
1-Pentene	NE	NE	NE	NE	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	
2,2,3-Trimethylbutane	NE	NE	NE	NE	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	
2,2,3-Trimethylpentane	NE	NE	NE	NE	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	
2,2,4-TRIMETHYLPENTANE	NE	NE	NE	NE	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	
2,2-Dimethylbutane	NE	NE	NE	NE	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	
2,2-Dimethylhexane	NE	NE	NE	NE	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	
2,2-Dimethylpentane	NE	NE	NE	NE	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	
2,3,3-Trimethylpentane	NE	NE	NE	NE	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	
2,3,4-Trimethylpentane	NE	NE	NE	NE	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	
2,3-Dimethylbutane	NE	NE	NE	NE	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	
2,3-Dimethylheptane	NE	NE	NE	NE	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	
2,3-Dimethylhexane	NE	NE	NE	NE	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	
2,3-Dimethylpentane	NE	NE	NE	NE	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	
2,4-Dimethylhexane	NE	NE	NE	NE	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	
2,4-Dimethylpentane	NE	NE	NE	NE	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	
2,5-Dimethylheptane	NE	NE	NE	NE	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	
2,5-Dimethylhexane	NE	NE	NE	NE	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	
2-Ethylthiophene	NE	NE	NE	NE	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	
2-Methyl-1-Butene	NE	NE	NE	NE	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	
2-Methyl-2-pentene	NE	NE	NE	NE	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	
2-Methylheptane	NE	NE	NE	NE	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	
2-Methylhexane	NE	NE	NE	NE	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	
2-Methylnaphthalene	10	2000	20000	100000	**3.22 J**	5.00 U	5.00 U	5.00 U	5.00 U	5.00 U	
2-Methylnonane	NE	NE	NE	NE	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	
2-Methyloctane	NE	NE	NE	NE	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	
2-Methylpentane	NE	NE	NE	NE	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	
2-Methylthiophene	NE	NE	NE	NE	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	
2-Nonene	NE	NE	NE	NE	5.00 U	5.00 U	5.00 U	5.00 U	5.00 U	5.00 U	
2-Phenylbutane	NE	NE	NE	NE	**5.25**	**5.19**	2.00 U	2.00 U	2.00 U	2.00 U	
3,3-Diethylpentane	NE	NE	NE	NE	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	
3,3-Dimethylheptane	NE	NE	NE	NE	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	
3,3-Dimethyloctane	NE	NE	NE	NE	2.00 U	**1.33 J**	2.00 U	2.00 U	2.00 U	2.00 U	
3,3-Dimethylpentane	NE	NE	NE	NE	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	
3,4-Dimethylheptane	NE	NE	NE	NE	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	
3,5-Dimethylheptane	NE	NE	NE	NE	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	
3-Ethylhexane	NE	NE	NE	NE	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	
3-Ethylpentane	NE	NE	NE	NE	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	
3-Methyl-1-butene	NE	NE	NE	NE	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	
3-Methylheptane	NE	NE	NE	NE	2.00 U	2.00 U	2.00 UJ	2.00 UJ	2.00 UJ	2.00 U	
3-Methylhexane	NE	NE	NE	NE	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	
3-Methylnonane	NE	NE	NE	NE	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	
3-Methyloctane	NE	NE	NE	NE	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	
3-Methylpentane	NE	NE	NE	NE	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	
3-Methylthiophene	NE	NE	NE	NE	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	
4-ETHYL TOLUENE	NE	NE	NE	NE	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	
4-Methyl-1-pentene	NE	NE	NE	NE	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	
4-Methylheptane	NE	NE	NE	NE	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	
4-Methyloctane	NE	NE	NE	NE	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	
Benzene	5	1000	10000	100000	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	
Benzothiophene	NE	NE	NE	NE	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	
cis-2-Heptene	NE	NE	NE	NE	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	
cis-2-Hexene	NE	NE	NE	NE	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	
cis-2-Octene	NE	NE	NE	NE	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	
cis-2-Pentene	NE	NE	NE	NE	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	
cis-3-Nonene	NE	NE	NE	NE	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	

Table 5-6
Summary of Groundwater PIANO Analytical Results - September 2020
Former GE Facility, Wilmington, MA

					Location Group:	EPL	Transect A		Transect A	
					Location ID:	AE03	TRC-101	AE102RR-6	AE103R-1	AE104R-4	EMW-11R2
					Sample ID:	20A-AE3-092320-1	20A-TRC101-092320-1	20A-AE102RR6-090920-1	20A-AE103R1-091020-1	20A-AE104R4-091120-1	20A-EMW11R2-092120-1
					Sample Date:	44097.45486	44097.66667	44083.53125	44084.54167	44085.52083	44095.44792
					Sample Type:	3 - 13 ft	1.5 - 10.5 ft	153 - 158 ft	48 - 53 ft	128 - 133 ft	104 - 114 ft
					Depth Interval:	N	N	N	N	N	N
					Lab Name:	ALPWE	ALPWE	ALPWE	ALPWE	ALPWE	ALPWE
Analyte	**GW-1**	**GW-2**	**GW-3**	**UCL**							
Cyclohexane	NE	NE	NE	NE	**0.947 J**	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	
Cyclopentane	NE	NE	NE	NE	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	
Cymene	NE	NE	NE	NE	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	
Diisopropyl Ether	NE	NE	NE	NE	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	
Ethyl Tertiary-Butyl Ether	NE	NE	NE	NE	2.00 U	2.00 U	2.00 UJ	2.00 UJ	2.00 UJ	2.00 U	
Ethylbenzene	700	20000	5000	100000	**0.500 J**	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	
Ethylcyclopentane	NE	NE	NE	NE	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	
HEPTANE	NE	NE	NE	NE	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	
HEXANE	NE	NE	NE	NE	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	
Hexylbenzene	NE	NE	NE	NE	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	
Indane	NE	NE	NE	NE	**6.07**	**2.17**	2.00 U	2.00 U	2.00 U	2.00 U	
Indene	NE	NE	NE	NE	**0.450 J**	**0.488 J**	2.00 U	2.00 U	2.00 U	2.00 U	
Isobutylbenzene	NE	NE	NE	NE	**5.61**	**5.94**	2.00 U	2.00 U	2.00 U	2.00 U	
Isobutylcyclohexane	NE	NE	NE	NE	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	
Isopentane	NE	NE	NE	NE	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	
Isoprene	NE	NE	NE	NE	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	
Isopropylbenzene	NE	NE	NE	NE	**3.57**	**2.38**	2.00 UJ	2.00 UJ	2.00 UJ	2.00 U	
Isopropylcyclohexane	NE	NE	NE	NE	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	
Isopropylcyclopentane	NE	NE	NE	NE	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	
Methyl tert-butyl ether	NE	NE	NE	100000	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	
Methylcyclohexane	NE	NE	NE	NE	**1.45 J**	**0.438 J**	2.00 U	2.00 U	2.00 U	2.00 U	
Methylcyclopentane	NE	NE	NE	NE	**0.764 J**	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	
MMT	NE	NE	NE	NE	5.00 U	5.00 U	5.00 U	5.00 U	5.00 U	5.00 U	
mp-xylene	10000	3000	5000	NE	4.00 U	4.00 U	4.00 U	4.00 U	4.00 U	4.00 U	
Naphthalene	140	700	20000	100000	**5.42**	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	
N-Butylbenzene	NE	NE	NE	NE	**3.97**	**4.09**	2.00 U	2.00 U	2.00 U	2.00 U	
N-DECANE	NE	NE	NE	NE	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	
N-DODECANE	NE	NE	NE	NE	5.00 UJ	5.00 UJ	5.00 UJ	5.00 UJ	5.00 UJ	5.00 UJ	
n-Nonane	NE	NE	NE	NE	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	
n-Pentane	NE	NE	NE	NE	2.00 UJ	2.00 UJ	2.00 UJ	2.00 UJ	2.00 UJ	2.00 UJ	
N-Pentylbenzene	NE	NE	NE	NE	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	
N-Propylbenzene	NE	NE	NE	NE	**8.82**	**8.46**	2.00 U	2.00 U	2.00 U	2.00 U	
N-TETRADECANE	NE	NE	NE	NE	5.00 U	5.00 U	5.00 U	5.00 U	5.00 U	5.00 U	
OCTANE	NE	NE	NE	NE	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	
o-Xylene	10000	3000	5000	NE	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	
Pentadecane	NE	NE	NE	NE	5.00 U	5.00 U	5.00 UJ	5.00 UJ	5.00 UJ	5.00 U	
Styrene	100	100	6000	60000	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	
TERT-BUTYL ALCOHOL	NE	NE	NE	NE	25.0 UJ	25.0 UJ	25.0 UJ	25.0 UJ	25.0 UJ	25.0 UJ	
Tert-Butylbenzene	NE	NE	NE	NE	**4.46**	**8.17**	2.00 U	2.00 U	2.00 U	2.00 U	
Tertiary-Amyl Methyl Ether	NE	NE	NE	NE	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	
Thiophene	NE	NE	NE	NE	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	
Toluene	1000	50000	40000	100000	2.00 U	2.00 U	2.00 U	2.00 U	**0.347 J**	**0.720 J**	
trans-2-Heptene	NE	NE	NE	NE	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	
trans-2-Hexene	NE	NE	NE	NE	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	
trans-2-Pentene	NE	NE	NE	NE	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	
trans-3-Heptene	NE	NE	NE	NE	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	
trans-3-Nonene	NE	NE	NE	NE	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	
Tridecane	NE	NE	NE	NE	5.00 U	5.00 U	5.00 U	5.00 U	5.00 U	5.00 U	
UNDECANE	NE	NE	NE	NE	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	
Xylenes (Total)	10000	3000	5000	NE	4.00 U	4.00 U	4.00 U	4.00 U	4.00 U	4.00 U	

Notes:

1) Bolded results represent detections

2) Yellow highlighted results exceed GW standard(s)

3) U = Non-detect at laboratory detection limit

4) UJ = Non-detect at laboratory detection limit. Detection limit is estimated.

5) J = Estimated Value (J- biased low and J+ biased high)

6) NE = Not Established

7) Sample Type N = normal sample; FD = field duplicate

8) R = Rejected based on data validation results

9) GW standards listed for mp-xylenes and o-xylenes are for Total Xylenes

Table 5-7
Summary of 2016 - 2020 Groundwater Analytical Results for Volatile Organic Compounds
Former GE Facility, 50 Fordham Road, Wilmington, MA

				Location Group:	Downgradient Wetland													
				Location ID:	MW-4	MW-4	MW-4	MW-4	MW-4	MW-4	MW-4	MW-5	MW-5	MW-5	MW-5	MW-5	MW-7	MW-7	MW-7
				Sample ID:	16A-MW4-062416-1	17A-MW4-101817-1	18A-MW4-100418-1	19A-MW4-091919-1	19A-MW4-091919-2	20A-MW4-091820-1	20A-MW4-091820-2	16A-MW5-061716-1	17A-MW5-102017-1	18A-MW-5-092818-1	19A-MW5-093019-1	20A-MW5-092120-1	16A-MW7-061716-1	17A-MW7-102017-1	18A-MW-7-092818-1
				Sample Date:	6/24/2016	10/18/2017	10/4/2018	9/19/2019	9/19/2019	9/18/2020	9/18/2020	6/17/2016	10/20/2017	9/28/2018	9/30/2019	9/21/2020	6/17/2016	10/20/2017	9/28/2018
				Sample Type:	N	N	N	N	FD	N	FD	N	N	N	N	N	N	N	N
				Depth Interval:	18 - 28 ft	18 - 28 ft	18 - 28 ft	18-28 ft	18-28 ft	18 - 28 ft	18 - 28 ft	28 - 38 ft	28 - 38 ft	28 - 38 ft	28-38 ft	28 - 38 ft	15 - 25 ft	15 - 25 ft	15 - 25 ft
Analyte	**MCP Method 1 GW-1 Stds**	**MCP Method 1 GW-2 Stds**	**MCP Method 1 GW-3 Stds**	**Upper Concentration Limit (UCL)**															
Volatile Organic Compounds (µg/l)																			
1,1,1,2-Tetrachloroethane	5	10	50000	100000	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U
1,1,1-Trichloroethane	**200**	4000	20000	100000	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U
1,1,2,2-Tetrachloroethane	2	9	50000	100000	0.5 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.5 U	0.50 U	0.50 UJ	R	0.50 U	0.5 U	0.50 U	0.50 U
1,1,2-Trichloroethane	5	900	50000	100000	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U
1,1-Dichloroethane	**70**	2000	20000	100000	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U
1,1-Dichloroethylene	**7**	**80**	30000	100000	1.0 U	1.00 UJ	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 UJ	1.00 UJ	1.0 U	1.0 U	1.0 U	1.00 UJ	1.00 U
1,1-Dichloropropene	NE	NE	NE	NE	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U
1,2,3-Trichlorobenzene	NE	NE	NE	NE	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U
1,2,3-Trichloropropane	NE	NE	NE	NE	1.0 U	1.00 U	1.00 U	0.50 U	0.50 U	0.50 U	0.50 U	1.0 U	1.00 U	1.00 U	0.50 U	0.50 U	1.0 U	1.00 U	1.00 U
1,2,4-Trichlorobenzene	70	200	50000	100000	1.0 UJ	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U
1,2,4-Trimethylbenzene	NE	NE	NE	NE	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U
1,2-Dibromo-3-Chloropropane (DBC	NE	NE	NE	NE	2.0 U	2.00 U	2.00 U	R	R	0.50 U	0.50 U	2.0 U	2.00 U	2.00 U	R	0.50 U	2.0 U	2.00 U	2.00 U
1,2-Dibromoethane	0.02	2	50000	100000	0.5 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.5 U	0.50 U	0.50 U	0.50 U	0.50 U	0.5 U	0.50 U	0.50 U
1,2-Dichlorobenzene	600	8000	2000	80000	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U
1,2-Dichloroethane	5	5	20000	100000	1.0 U	1.00 U	1.00 U	0.60 U	0.60 U	0.60 U	0.60 U	1.0 U	1.00 U	1.00 U	0.60 U	0.60 U	1.0 U	1.00 U	1.00 U
1,2-Dichloropropane	5	3	50000	100000	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U
1,3,5-Trimethylbenzene	NE	NE	NE	NE	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U
1,3-Dichlorobenzene	100	6000	50000	100000	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U
1,3-Dichloropropane	NE	NE	NE	NE	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U
1,4-Dichlorobenzene	5	60	8000	80000	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U
1,4-Dioxane	**0.3**	6000	50000	100000	20.0 U	20.0 U	20.0 U	40 U	40 U	NS	NS	20.0 U	20.0 U	20.0 U	40 U	100 U	20.0 U	20.0 U	20.0 U
2,2-Dichloropropane	NE	NE	NE	NE	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 UJ	1.0 UJ	1.0 U	1.00 UJ	1.00 U	1.0 U	1.0 U	1.0 U	1.00 UJ	1.00 U
2-Butanone	4000	50000	50000	100000	10.0 U	2.00 U	2.00 U	R	R	5.0 U	5.0 U	10.0 U	2.00 UJ	2.00 U	R	5.0 U	10.0 U	2.00 UJ	2.00 U
2-Chlorotoluene	NE	NE	NE	NE	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U
2-Hexanone	NE	NE	NE	NE	10.0 U	2.00 U	2.00 U	5.0 U	5.0 U	5.0 U	5.0 U	10.0 U	2.00 U	2.00 U	R	5.0 U	10.0 U	2.00 U	2.00 U
2-Phenylbutane	NE	NE	NE	NE	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 UJ	1.0 U	1.0 U	1.0 U	1.00 U	1.00 UJ
4-Chlorotoluene	NE	NE	NE	NE	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U
4-Methyl-2-Pentanone	350	50000	50000	100000	10.0 U	2.00 U	2.00 U	5.0 U	5.0 U	5.0 U	5.0 U	10.0 U	2.00 U	2.00 U	R	5.0 U	10.0 U	2.00 U	2.00 U
Acetone	6300	50000	50000	100000	10.0 U	10.0 U	10.0 U	R	R	25 U	25 U	10.0 U	10.0 U	10.0 U	R	25 U	10.0 U	10.0 U	10.0 UJ
Benzene	5	1000	10000	100000	1.0 U	1.00 U	1.00 U	0.70 U	0.70 U	0.70 U	0.70 U	1.0 U	1.00 U	1.00 U	0.70 U	0.70 U	1.0 U	1.00 U	1.00 U
Bromobenzene	NE	NE	NE	NE	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U
Bromochloromethane	NE	NE	NE	NE	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U
Bromodichloromethane	3	6	50000	100000	0.5 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.5 U	0.50 U	0.50 U	0.50 U	0.50 U	0.5 U	0.50 U	0.50 UJ
Bromoform	4	700	50000	100000	1.0 U	1.00 U	1.00 U	R	R	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U
Bromomethane	10	7	800	8000	2.0 U	2.00 U	2.00 U	1.0 U	1.0 U	1.0 U	1.0 U	2.0 UJ	2.00 UJ	2.00 U	R	1.0 U	2.0 UJ	2.00 UJ	2.00 UJ
Carbon Disulfide	NE	NE	NE	NE	2.0 U	2.00 UJ	2.00 U	5.0 U	5.0 U	5.0 U	5.0 U	2.0 U	2.00 U	2.00 UJ	5.0 U	5.0 U	2.0 U	2.00 U	2.00 U
Carbon Tetrachloride	5	2	5000	50000	1.0 U	1.00 UJ	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U
Chlorobenzene	100	200	1000	10000	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U
Chloroethane	NE	NE	NE	NE	2.0 U	2.00 U	2.00 U	1.0 U	1.0 U	1.0 UJ	1.0 UJ	2.0 U	2.00 U	2.00 UJ	1.0 U	1.0 UJ	2.0 U	2.00 U	2.00 UJ
Chloroform	70	50	20000	100000	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U
Chloromethane	NE	NE	NE	NE	2.0 UJ	2.00 U	2.00 U	1.0 U	1.0 U	1.0 U	1.0 U	2.0 UJ	2.00 U	2.00 UJ	1.0 U	1.0 U	2.0 UJ	2.00 U	2.00 U
cis-1,2-Dichloroethene	**70**	**20**	50000	100000	**34.1**	**44.9**	**39.8**	**20**	**19**	**26**	**27**	**6.4**	**14.1**	**12.5**	**11**	**10**	**10.0**	**23.8**	**16.0**
cis-1,3-Dichloropropene	NE	NE	NE	NE	0.5 U	0.50 U	0.50 U	0.40 U	0.40 U	0.40 U	0.40 U	0.5 U	0.50 U	0.50 U	0.40 U	0.40 U	0.5 U	0.50 U	0.50 U
Cymene	NE	NE	NE	NE	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U
Dibromochloromethane	2	20	50000	100000	0.5 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.5 U	0.50 U	0.50 U	0.50 U	0.50 U	0.5 U	0.50 U	0.50 U
Dibromomethane	NE	NE	NE	NE	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U
Dichlorodifluoromethane (CFC-12)	NE	NE	NE	NE	2.0 U	2.00 U	2.00 U	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	2.00 U	2.00 U	1.0 U	1.0 U	2.0 U	2.00 U	2.00 U
Diethyl Ether	NE	NE	NE	NE	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U
Diisopropyl Ether	NE	NE	NE	NE	1.0 U	**1.61**	**1.14**	1.0 U	1.0 U	**1.0 J**	**1.0 J**	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U
Ethyl Tertiary-Butyl Ether	NE	NE	NE	NE	1.0 UJ	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U
Ethylbenzene	700	20000	5000	100000	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U
Freon TF (Chlorinated fluorocarbon)	NE	NE	NE	NE	1.0 U	1.00 UJ	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U
Hexachloro-1,3-Butadiene	0.6	50	3000	3000	0.5 U	0.50 UJ	0.50 U	0.40 U	0.40 U	0.40 U	0.40 U	0.5 U	0.50 U	0.50 U	0.40 U	0.40 U	0.5 U	0.50 U	0.50 U
Isopropylbenzene	NE	NE	NE	NE	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U
M, P Xylenes	10000	3000	5000	100000	2.0 U	2.00 U	2.00 U	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	2.00 U	2.00 U	1.0 U	1.0 U	2.0 U	2.00 U	2.00 U
Methyl Tert-Butyl Ether	NE	NE	NE	100000	**6.1**	**8.59**	**6.64**	**4.7**	**4.5**	**6.5**	**6.4**	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U
Methylene Chloride	5	2000	50000	100000	2.0 U	2.00 UJ	2.00 U	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	2.00 U	2.00 U	1.0 U	1.0 U	2.0 U	2.00 U	2.00 U
Naphthalene	140	700	20000	100000	1.0 UJ	1.00 U	2.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 UJ	1.00 U	2.00 U	1.0 U	1.0 U	1.0 UJ	1.00 U	2.00 U
N-Butylbenzene	NE	NE	NE	NE	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U
N-Propylbenzene	NE	NE	NE	NE	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 UJ	1.0 U	1.0 U	1.0 U	1.00 U	1.00 UJ
o-Xylene	10000	3000	5000	100000	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U
Styrene	100	100	6000	60000	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U
Tert-Butylbenzene	NE	NE	NE	NE	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U
Tertiary-Amyl Methyl Ether	NE	NE	NE	NE	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U
Tetrachloroethene	**5**	**50**	**30000**	100000	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	R	R	1.0 U	1.00 U	1.00 U	1.0 U	R	1.0 U	1.00 U	1.00 U
Tetrahydrofuran	NE	NE	NE	NE	2.0 U	2.00 U	2.00 U	2.5 U	2.5 U	2.5 U	2.5 U	2.0 U	2.00 U	2.00 U	R	2.5 U	2.0 U	2.00 U	2.00 U
Toluene	**1000**	50000	40000	100000	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U
Trans-1,2-Dichloroethene	**100**	**80**	50000	100000	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	**1.25**	1.00 U	1.0 U	**1.1**	1.0 U	1.00 U	1.00 U
Trans-1,3-Dichloropropene	NE	NE	NE	NE	0.5 U	0.50 U	0.50 U	0.40 U	0.40 U	0.40 U	0.40 U	0.5 U	0.50 U	0.50 U	0.40 U	0.40 U	0.5 U	0.50 U	0.50 U
Trichloroethene	**5**	**5**	**5000**	**50000**	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	**1.8**	**4.26**	**8.50**
Trichlorofluoromethane	NE	NE	NE	NE	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U
Vinyl Chloride	**2**	**2**	50000	100000	**1.7 J**	**1.47**	**1.59**	**3.7**	**3.8**	**1.5**	**1.6**	1.0 U	1.00 U	1.00 UJ	1.0 U	1.0 U	**1.5**	**1.52**	**1.39 J**
Xylenes (Total)	10000	3000	5000	100000	2.0 U	2.00 U	2.00 U	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	2.00 U	2.00 U	1.0 U	1.0 U	2.0 U	2.00 U	2.00 U

Notes:

ft = feet

mg/l = miligrams per liter

µg/l = micrograms per liter

NE = not established

U - Non-detect at laboratory detection limit

J = Estimated Value, J+ = biased high, J- = biased low, R = rejected

Detects are bolded

Criteria exceedances are highlighted

Table 5-7
Summary of 2016 - 2020 Groundwater Analytical Results for Volatile Organic Compounds
Former GE Facility, 50 Fordham Road, Wilmington, MA

				Location Group:	Downgradient Wetland													
				Location ID:	MW-7	MW-7	PS-1D	PS-1D	PS-1D	PS-1D	PS-1D	PS-1S	PS-1S	PS-1S	PS-1S	PS-1S	PS-2D	PS-2D	PS-2D
				Sample ID:	19A-MW7-092619-1	20A-MW7-091720-1	16A-PS1D-062916-1	17A-PS1D-101617-1	18A-PS1D-092718-1	19A-PS1D-091719-1	20A-PS1D-091520-1	16A-PS1S-062916-1	17A-PS1S-101617-1	18A-PS1S-092718-1	19A-PS1S-091719-1	20A-PS1S-091520-1	16A-PS2D-062916-1	17A-PS2D-101617-1	18A-PS2D-092718-1
				Sample Date:	9/26/2019	9/17/2020	6/29/2016	10/16/2017	9/27/2018	9/17/2019	9/15/2020	6/29/2016	10/16/2017	9/27/2018	9/17/2019	9/15/2020	6/29/2016	10/16/2017	9/27/2018
				Sample Type:	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
				Depth Interval:	15-25 ft	15 - 25 ft	49.25 - 54.25 ft	49.25 - 54.25 ft	49.25 - 54.25 ft	49.25-54.25 ft	49.25 - 54.25 ft	12 - 17 ft	12 - 17 ft	12 - 17 ft	12-17 ft	12 - 17 ft	49.1 - 54.1 ft	49.1 - 54.1 ft	49.1 - 54.1 ft
Analyte	**MCP Method 1 GW-1 Stds**	**MCP Method 1 GW-2 Stds**	**MCP Method 1 GW-3 Stds**	**Upper Concentration Limit (UCL)**															
Volatile Organic Compounds (µg/l)																			
1,1,1,2-Tetrachloroethane	5	10	50000	100000	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U
1,1,1-Trichloroethane	**200**	4000	20000	100000	1.0 U	1.0 U	1.0 U	1.00 UJ	1.00 U	1.0 U	1.0 U	1.0 U	1.00 UJ	1.00 U	1.0 U	1.0 U	1.0 U	1.00 UJ	1.00 U
1,1,2,2-Tetrachloroethane	2	9	50000	100000	R	0.50 U	0.5 U	0.50 U	0.50 U	R	0.50 U	0.5 U	0.50 U	0.50 U	0.50 U	0.50 U	0.5 U	0.50 U	0.50 U
1,1,2-Trichloroethane	5	900	50000	100000	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U
1,1-Dichloroethane	**70**	2000	20000	100000	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U
1,1-Dichloroethylene	**7**	**80**	30000	100000	1.0 U	1.0 U	1.0 U	1.00 UJ	1.00 U	1.0 U	1.0 U	1.0 U	1.00 UJ	1.00 U	1.0 U	1.0 U	1.0 U	1.00 UJ	1.00 UJ
1,1-Dichloropropene	NE	NE	NE	NE	1.0 U	1.0 U	1.0 U	1.00 UJ	1.00 U	1.0 U	1.0 U	1.0 U	1.00 UJ	1.00 UJ	1.0 U	1.0 U	1.0 U	1.00 UJ	1.00 U
1,2,3-Trichlorobenzene	NE	NE	NE	NE	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U
1,2,3-Trichloropropane	NE	NE	NE	NE	0.50 U	0.50 U	1.0 U	1.00 U	1.00 U	0.50 U	0.50 U	1.0 U	1.00 U	1.00 U	0.50 U	0.50 U	1.0 U	1.00 U	1.00 U
1,2,4-Trichlorobenzene	70	200	50000	100000	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U
1,2,4-Trimethylbenzene	NE	NE	NE	NE	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U
1,2-Dibromo-3-Chloropropane (DBC	NE	NE	NE	NE	R	0.50 U	2.0 U	2.00 U	2.00 U	R	0.50 U	2.0 U	2.00 U	2.00 U	R	0.50 U	2.0 U	2.00 U	2.00 U
1,2-Dibromoethane	0.02	2	50000	100000	0.50 U	0.50 U	0.5 U	0.50 U	0.50 U	0.50 U	0.50 U	0.5 U	0.50 U	0.50 U	0.50 U	0.50 U	0.5 U	0.50 U	0.50 U
1,2-Dichlorobenzene	600	8000	2000	80000	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U
1,2-Dichloroethane	5	5	20000	100000	0.60 U	0.60 U	1.0 U	1.00 U	1.00 U	0.60 U	0.60 U	1.0 U	1.00 U	1.00 U	0.60 U	0.60 U	1.0 U	1.00 U	1.00 U
1,2-Dichloropropane	5	3	50000	100000	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U
1,3,5-Trimethylbenzene	NE	NE	NE	NE	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U
1,3-Dichlorobenzene	100	6000	50000	100000	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U
1,3-Dichloropropane	NE	NE	NE	NE	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U
1,4-Dichlorobenzene	5	60	8000	80000	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U
1,4-Dioxane	**0.3**	6000	50000	100000	40 U	100 U	20.0 U	20.0 U	20.0 U	40 U	100 U	20.0 U	20.0 U	20.0 UJ	40 U	100 U	20.0 U	20.0 U	20.0 U
2,2-Dichloropropane	NE	NE	NE	NE	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U
2-Butanone	4000	50000	50000	100000	R	5.0 U	10.0 U	2.00 U	2.00 UJ	R	5.0 U	10.0 U	2.00 U	2.00 U	R	5.0 U	10.0 U	2.00 U	2.00 U
2-Chlorotoluene	NE	NE	NE	NE	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 UJ	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U
2-Hexanone	NE	NE	NE	NE	R	5.0 U	10.0 U	2.00 U	2.00 UJ	R	5.0 U	10.0 U	2.00 U	2.00 UJ	5.0 U	5.0 U	10.0 U	2.00 U	2.00 U
2-Phenylbutane	NE	NE	NE	NE	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U
4-Chlorotoluene	NE	NE	NE	NE	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U
4-Methyl-2-Pentanone	350	50000	50000	100000	R	5.0 U	10.0 U	2.00 U	2.00 UJ	R	5.0 U	10.0 U	2.00 U	2.00 UJ	5.0 U	5.0 U	10.0 U	2.00 U	2.00 U
Acetone	6300	50000	50000	100000	R	25 U	10.0 U	10.0 U	10.0 UJ	R	25 U	10.0 UJ	10.0 U	10.0 U	R	25 U	10.0 U	10.0 U	10.0 U
Benzene	5	1000	10000	100000	0.70 U	0.70 U	1.0 U	1.00 U	1.00 U	0.70 U	0.70 U	1.0 U	1.00 U	1.00 U	0.70 U	0.70 U	1.0 U	1.00 U	1.00 U
Bromobenzene	NE	NE	NE	NE	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 UJ	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U
Bromochloromethane	NE	NE	NE	NE	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U
Bromodichloromethane	3	6	50000	100000	0.50 U	0.50 U	0.5 U	0.50 U	0.50 U	0.50 U	0.50 U	0.5 U	0.50 U	0.50 U	0.50 U	0.50 U	0.5 U	0.50 U	0.50 UJ
Bromoform	4	700	50000	100000	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 UJ	R	1.0 U	1.0 U	1.00 U	1.00 U
Bromomethane	10	7	800	8000	1.0 UJ	1.0 U	2.0 U	2.00 U	2.00 U	R	1.0 U	2.0 UJ	2.00 U	2.00 U	1.0 U	1.0 U	2.0 U	2.00 U	2.00 UJ
Carbon Disulfide	NE	NE	NE	NE	5.0 U	5.0 U	2.0 U	2.00 UJ	2.00 U	5.0 U	5.0 U	2.0 U	2.00 UJ	2.00 U	5.0 U	5.0 U	2.0 U	2.00 UJ	2.00 UJ
Carbon Tetrachloride	5	2	5000	50000	1.0 U	1.0 U	1.0 U	1.00 UJ	1.00 U	1.0 U	1.0 U	1.0 U	1.00 UJ	1.00 U	1.0 U	1.0 U	1.0 U	1.00 UJ	1.00 U
Chlorobenzene	100	200	1000	10000	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U
Chloroethane	NE	NE	NE	NE	1.0 U	1.0 UJ	2.0 U	2.00 U	2.00 UJ	1.0 U	1.0 UJ	2.0 UJ	2.00 U	2.00 U	1.0 U	1.0 UJ	2.0 U	2.00 U	2.00 U
Chloroform	70	50	20000	100000	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U
Chloromethane	NE	NE	NE	NE	1.0 U	1.0 U	2.0 U	2.00 U	2.00 U	1.0 U	1.0 U	2.0 UJ	2.00 U	2.00 U	1.0 U	1.0 U	2.0 U	2.00 U	2.00 U
cis-1,2-Dichloroethene	**70**	**20**	50000	100000	**29**	**35**	**12.3**	**13.5**	**8.99**	**9.0**	**7.4**	**5.7**	**9.88**	**10.2**	**7.3**	**6.6**	1.0 U	**1.07**	1.00 U
cis-1,3-Dichloropropene	NE	NE	NE	NE	0.40 U	0.40 U	0.5 U	0.50 U	0.50 U	0.40 U	0.40 U	0.5 U	0.50 U	0.50 UJ	0.40 U	0.40 U	0.5 U	0.50 U	0.50 U
Cymene	NE	NE	NE	NE	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U
Dibromochloromethane	2	20	50000	100000	0.50 U	0.50 U	0.5 U	0.50 U	0.50 U	0.50 U	0.50 U	0.5 U	0.50 U	0.50 U	0.50 U	0.50 U	0.5 U	0.50 U	0.50 U
Dibromomethane	NE	NE	NE	NE	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U
Dichlorodifluoromethane (CFC-12)	NE	NE	NE	NE	1.0 U	1.0 U	2.0 U	2.00 U	2.00 U	1.0 U	1.0 U	2.0 UJ	2.00 U	2.00 U	1.0 U	1.0 U	2.0 U	2.00 U	2.00 U
Diethyl Ether	NE	NE	NE	NE	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 UJ	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U
Diisopropyl Ether	NE	NE	NE	NE	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	**2.1**	**4.20**	**3.85**	**3.3**	**3.3 J-**	1.0 U	1.00 U	1.00 U
Ethyl Tertiary-Butyl Ether	NE	NE	NE	NE	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U
Ethylbenzene	700	20000	5000	100000	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U
Freon TF (Chlorinated fluorocarbon)	NE	NE	NE	NE	1.0 U	1.0 U	1.0 U	1.00 UJ	1.00 U	1.0 U	1.0 U	1.0 U	1.00 UJ	1.00 U	1.0 U	1.0 U	1.0 U	1.00 UJ	1.00 UJ
Hexachloro-1,3-Butadiene	0.6	50	3000	3000	0.40 U	0.40 U	0.5 U	0.50 UJ	0.50 U	0.40 U	0.40 U	0.5 U	0.50 UJ	0.50 U	0.40 U	0.40 U	0.5 U	0.50 UJ	0.50 U
Isopropylbenzene	NE	NE	NE	NE	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U
M, P Xylenes	10000	3000	5000	100000	1.0 U	1.0 U	2.0 U	2.00 U	2.00 U	1.0 U	1.0 U	2.0 U	2.00 U	2.00 U	1.0 U	1.0 U	2.0 U	2.00 U	2.00 U
Methyl Tert-Butyl Ether	NE	NE	NE	100000	1.0 U	1.0 U	**1.0**	**1.10**	**1.34**	**2.2**	**2.5**	**18.2**	**25.6**	**23.3**	**21**	**22**	**1.0**	**1.08**	1.00 U
Methylene Chloride	5	2000	50000	100000	1.0 U	1.0 U	2.0 U	2.00 UJ	2.00 U	1.0 U	1.0 U	2.0 UJ	2.00 UJ	2.00 U	1.0 U	1.0 U	2.0 U	2.00 UJ	2.00 UJ
Naphthalene	140	700	20000	100000	1.0 U	1.0 U	1.0 U	1.00 U	2.00 U	1.0 U	1.0 U	1.0 U	1.00 U	2.00 UJ	1.0 U	1.0 U	1.0 U	1.00 U	2.00 U
N-Butylbenzene	NE	NE	NE	NE	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U
N-Propylbenzene	NE	NE	NE	NE	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U
o-Xylene	10000	3000	5000	100000	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U
Styrene	100	100	6000	60000	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U
Tert-Butylbenzene	NE	NE	NE	NE	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U
Tertiary-Amyl Methyl Ether	NE	NE	NE	NE	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U
Tetrachloroethene	**5**	**50**	**30000**	100000	1.0 U	R	**3.3**	**1.62**	**3.45**	**3.1**	**3.0 J+**	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U
Tetrahydrofuran	NE	NE	NE	NE	R	2.5 U	2.0 U	2.00 U	2.00 UJ	R	2.5 U	2.0 U	2.00 U	2.00 U	2.5 U	2.5 U	2.0 U	2.00 U	2.00 U
Toluene	**1000**	50000	40000	100000	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U
Trans-1,2-Dichloroethene	**100**	**80**	50000	100000	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U
Trans-1,3-Dichloropropene	NE	NE	NE	NE	0.40 U	0.40 U	0.5 U	0.50 U	0.50 U	0.40 U	0.40 U	0.5 U	0.50 U	0.50 U	0.40 U	0.40 U	0.5 U	0.50 U	0.50 U
Trichloroethene	**5**	**5**	**5000**	**50000**	**27**	**17**	**16.1**	**15.0**	**15.0**	**13**	**13**	**1.9**	**3.25**	**1.69**	**1.6**	1.0 U	1.0 U	1.00 U	1.00 U
Trichlorofluoromethane	NE	NE	NE	NE	1.0 U	1.0 U	1.0 U	1.00 UJ	1.00 U	1.0 U	1.0 U	1.0 U	1.00 UJ	1.00 U	1.0 U	1.0 U	1.0 U	1.00 UJ	1.00 U
Vinyl Chloride	**2**	**2**	50000	100000	**2.0**	**2.8**	1.0 UJ	1.00 U	1.00 U	**1.2**	1.0 U	**1.0**	**1.46**	**2.05 J**	**1.3**	**1.7**	1.0 UJ	1.00 U	1.00 UJ
Xylenes (Total)	10000	3000	5000	100000	1.0 U	1.0 U	2.0 U	2.00 U	2.00 U	1.0 U	1.0 U	2.0 U	2.00 U	2.00 U	1.0 U	1.0 U	2.0 U	2.00 U	2.00 U

Notes:

ft = feet

mg/l = miligrams per liter

µg/l = micrograms per liter

NE = not established

U - Non-detect at laboratory detection limit

J = Estimated Value, J+ = biased high, J- = biased low, R

Detects are bolded

Criteria exceedances are highlighted

Table 5-7
Summary of 2016 - 2020 Groundwater Analytical Results for Volatile Organic Compounds
Former GE Facility, 50 Fordham Road, Wilmington, MA

				Location Group:	Downgradient Wetland													
				Location ID:	PS-2D	PS-2D	PS-3	PS-3	PS-3	PS-3	PS-3	PS-5D	PS-5D	PS-5D	PS-5D	PS-5D	PS-8D	PS-8D	PS-8D
				Sample ID:	19A-PS2D-091719-1	20A-PS2D-091520-1	16A-PS3-062416-1	17A-PS3-101817-1	18A-PS3-100418-1	19A-PS3-091919-1	20A-PS3-091820-1	16A-PS5D-062716-1	17A-PS5D-101917-1	18A-PS5D-100418-1	19A-PS5D-091919-1	20A-PS5D-091820-1	16A-PS8D-062916-1	17A-PS8D-101917-1	18A-PS8D-100218-1
				Sample Date:	9/17/2019	9/15/2020	6/24/2016	10/18/2017	10/4/2018	9/19/2019	9/18/2020	6/27/2016	10/19/2017	10/4/2018	9/19/2019	9/18/2020	6/29/2016	10/19/2017	10/2/2018
				Sample Type:	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
				Depth Interval:	49.1-54.1 ft	49.1 - 54.1 ft	2.7 - 7.7 ft	2.7 - 7.7 ft	2.7 - 7.7 ft	2.7-7.7 ft	2.7 - 7.7 ft	24.1 - 29.1 ft	24.1 - 29.1 ft	24.1 - 29.1 ft	24.1-29.1 ft	24.1 - 29.1 ft	51.8 - 56.8 ft	51.8 - 56.8 ft	51.8 - 56.8 ft
Analyte	**MCP Method 1 GW-1 Stds**	**MCP Method 1 GW-2 Stds**	**MCP Method 1 GW-3 Stds**	**Upper Concentration Limit (UCL)**															
Volatile Organic Compounds (µg/l)																			
1,1,1,2-Tetrachloroethane	5	10	50000	100000	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U
1,1,1-Trichloroethane	**200**	4000	20000	100000	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 UJ	1.00 U	1.00 U
1,1,2,2-Tetrachloroethane	2	9	50000	100000	0.50 U	0.50 U	0.5 U	0.50 U	0.50 U	0.50 U	0.50 U	0.5 U	0.50 U	0.50 U	0.50 U	0.50 U	0.5 U	0.50 U	0.50 U
1,1,2-Trichloroethane	5	900	50000	100000	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U
1,1-Dichloroethane	**70**	2000	20000	100000	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U
1,1-Dichloroethylene	**7**	**80**	30000	100000	1.0 U	1.0 U	1.0 U	1.00 UJ	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 UJ
1,1-Dichloropropene	NE	NE	NE	NE	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U
1,2,3-Trichlorobenzene	NE	NE	NE	NE	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U
1,2,3-Trichloropropane	NE	NE	NE	NE	0.50 U	0.50 U	1.0 U	1.00 U	1.00 U	0.50 U	0.50 U	1.0 U	1.00 U	1.00 U	0.50 U	0.50 U	1.0 U	1.00 U	1.00 U
1,2,4-Trichlorobenzene	70	200	50000	100000	1.0 U	1.0 U	1.0 UJ	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U
1,2,4-Trimethylbenzene	NE	NE	NE	NE	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U
1,2-Dibromo-3-Chloropropane (DBC	NE	NE	NE	NE	R	0.50 U	2.0 U	2.00 U	2.00 U	R	0.50 U	2.0 U	2.00 U	2.00 U	R	0.50 U	2.0 U	2.00 U	2.00 U
1,2-Dibromoethane	0.02	2	50000	100000	0.50 U	0.50 U	0.5 U	0.50 U	0.50 U	0.50 U	0.50 U	0.5 U	0.50 U	0.50 U	0.50 U	0.50 U	0.5 U	0.50 U	0.50 U
1,2-Dichlorobenzene	600	8000	2000	80000	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U
1,2-Dichloroethane	5	5	20000	100000	0.60 U	0.60 U	1.0 U	1.00 U	1.00 U	0.60 U	0.60 U	1.0 U	1.00 U	1.00 U	0.60 U	0.60 U	1.0 U	1.00 U	1.00 U
1,2-Dichloropropane	5	3	50000	100000	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U
1,3,5-Trimethylbenzene	NE	NE	NE	NE	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U
1,3-Dichlorobenzene	100	6000	50000	100000	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U
1,3-Dichloropropane	NE	NE	NE	NE	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U
1,4-Dichlorobenzene	5	60	8000	80000	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U
1,4-Dioxane	**0.3**	6000	50000	100000	40 U	100 U	20.0 U	20.0 U	20.0 U	40 U	100 U	20.0 U	20.0 U	20.0 U	40 U	100 U	20.0 U	20.0 U	20.0 U
2,2-Dichloropropane	NE	NE	NE	NE	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 UJ	1.0 U	1.00 UJ	1.00 U	1.0 U	1.0 U	1.0 UJ	1.00 UJ	1.00 U
2-Butanone	4000	50000	50000	100000	R	5.0 U	10.0 U	2.00 U	2.00 U	R	5.0 U	10.0 U	**2.62**	**5.75**	**14 J+**	5.0 U	10.0 U	2.00 U	2.00 U
2-Chlorotoluene	NE	NE	NE	NE	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U
2-Hexanone	NE	NE	NE	NE	5.0 U	5.0 U	10.0 U	2.00 U	2.00 U	5.0 U	5.0 U	10.0 U	2.00 U	2.00 U	5.0 U	5.0 U	10.0 U	2.00 U	2.00 U
2-Phenylbutane	NE	NE	NE	NE	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U
4-Chlorotoluene	NE	NE	NE	NE	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U
4-Methyl-2-Pentanone	350	50000	50000	100000	5.0 U	5.0 U	10.0 U	2.00 U	2.00 U	5.0 U	5.0 U	10.0 U	2.00 U	2.00 U	5.0 U	5.0 U	10.0 U	2.00 U	2.00 U
Acetone	6300	50000	50000	100000	R	25 U	10.0 U	10.0 U	10.0 U	R	25 U	10.0 UJ	**51.8**	**33.3**	**29 J+**	25 U	10.0 U	10.0 U	10.0 U
Benzene	5	1000	10000	100000	0.70 U	0.70 U	1.0 U	1.00 U	1.00 U	0.70 U	0.70 U	1.0 U	1.00 U	1.00 U	0.70 U	0.70 U	1.0 U	1.00 U	1.00 U
Bromobenzene	NE	NE	NE	NE	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U
Bromochloromethane	NE	NE	NE	NE	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U
Bromodichloromethane	3	6	50000	100000	0.50 U	0.50 U	0.5 U	0.50 U	0.50 U	0.50 U	0.50 U	0.5 U	0.50 U	0.50 U	0.50 U	0.50 U	0.5 U	0.50 U	0.50 U
Bromoform	4	700	50000	100000	R	1.0 U	1.0 U	1.00 U	1.00 U	R	1.0 U	1.0 U	1.00 U	1.00 U	R	1.0 U	1.0 U	1.00 U	1.00 U
Bromomethane	10	7	800	8000	1.0 U	1.0 U	2.0 U	2.00 U	2.00 U	1.0 U	1.0 U	2.0 U	2.00 U	2.00 U	1.0 U	1.0 U	2.0 UJ	2.00 U	2.00 UJ
Carbon Disulfide	NE	NE	NE	NE	5.0 U	5.0 U	2.0 U	2.00 UJ	2.00 U	5.0 U	5.0 U	2.0 U	2.00 UJ	2.00 U	5.0 U	5.0 U	2.0 U	2.00 UJ	2.00 U
Carbon Tetrachloride	5	2	5000	50000	1.0 U	1.0 U	1.0 U	1.00 UJ	1.00 U	1.0 U	1.0 U	1.0 U	1.00 UJ	1.00 U	1.0 U	1.0 U	1.0 UJ	1.00 UJ	1.00 U
Chlorobenzene	100	200	1000	10000	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U
Chloroethane	NE	NE	NE	NE	1.0 U	1.0 UJ	2.0 U	2.00 U	2.00 U	1.0 U	1.0 UJ	2.0 U	2.00 U	2.00 U	1.0 U	1.0 UJ	2.0 U	2.00 U	2.00 U
Chloroform	70	50	20000	100000	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U
Chloromethane	NE	NE	NE	NE	1.0 U	1.0 U	2.0 UJ	2.00 U	2.00 U	1.0 U	1.0 U	2.0 U	2.00 U	2.00 U	1.0 U	1.0 U	2.0 U	2.00 U	2.00 U
cis-1,2-Dichloroethene	**70**	**20**	50000	100000	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	**11.6**	**21.0**	**16.6**	**13**	**13**	1.0 U	1.00 U	1.00 U
cis-1,3-Dichloropropene	NE	NE	NE	NE	0.40 U	0.40 U	0.5 U	0.50 U	0.50 U	0.40 U	0.40 U	0.5 U	0.50 U	0.50 U	0.40 U	0.40 U	0.5 U	0.50 U	0.50 U
Cymene	NE	NE	NE	NE	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U
Dibromochloromethane	2	20	50000	100000	0.50 U	0.50 U	0.5 U	0.50 U	0.50 U	0.50 U	0.50 U	0.5 U	0.50 U	0.50 U	0.50 U	0.50 U	0.5 U	0.50 U	0.50 U
Dibromomethane	NE	NE	NE	NE	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U
Dichlorodifluoromethane (CFC-12)	NE	NE	NE	NE	1.0 U	1.0 U	2.0 U	2.00 U	2.00 U	1.0 U	1.0 U	2.0 U	2.00 U	2.00 U	1.0 U	1.0 U	2.0 U	2.00 U	2.00 U
Diethyl Ether	NE	NE	NE	NE	1.0 U	1.0 UJ	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 UJ	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U
Diisopropyl Ether	NE	NE	NE	NE	1.0 U	1.0 UJ	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U
Ethyl Tertiary-Butyl Ether	NE	NE	NE	NE	1.0 U	1.0 U	1.0 UJ	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U
Ethylbenzene	700	20000	5000	100000	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U
Freon TF (Chlorinated fluorocarbon)	NE	NE	NE	NE	1.0 U	1.0 U	1.0 U	1.00 UJ	1.00 U	1.0 U	1.0 U	1.0 U	1.00 UJ	1.00 U	1.0 U	1.0 U	1.0 U	1.00 UJ	1.00 U
Hexachloro-1,3-Butadiene	0.6	50	3000	3000	0.40 U	0.40 U	0.5 U	0.50 UJ	0.50 U	0.40 U	0.40 U	0.5 U	0.50 UJ	0.50 U	0.40 U	0.40 U	0.5 U	0.50 UJ	0.50 U
Isopropylbenzene	NE	NE	NE	NE	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U
M, P Xylenes	10000	3000	5000	100000	1.0 U	1.0 U	2.0 U	2.00 U	2.00 U	1.0 U	1.0 U	2.0 U	2.00 U	2.00 U	1.0 U	1.0 U	2.0 U	2.00 U	2.00 U
Methyl Tert-Butyl Ether	NE	NE	NE	100000	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	**1.8**	**1.86**	**1.39**	**1.8**	**1.5**	1.0 U	1.00 U	1.00 U
Methylene Chloride	5	2000	50000	100000	1.0 U	1.0 U	2.0 U	2.00 UJ	2.00 U	1.0 U	1.0 U	2.0 UJ	2.00 UJ	2.00 U	1.0 U	1.0 U	2.0 U	2.00 UJ	2.00 U
Naphthalene	140	700	20000	100000	1.0 U	1.0 U	1.0 UJ	1.00 U	2.00 U	1.0 U	1.0 U	1.0 U	1.00 U	2.00 U	1.0 U	1.0 U	1.0 U	1.00 U	2.00 UJ
N-Butylbenzene	NE	NE	NE	NE	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U
N-Propylbenzene	NE	NE	NE	NE	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U
o-Xylene	10000	3000	5000	100000	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U
Styrene	100	100	6000	60000	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U
Tert-Butylbenzene	NE	NE	NE	NE	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U
Tertiary-Amyl Methyl Ether	NE	NE	NE	NE	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U
Tetrachloroethene	**5**	**50**	**30000**	100000	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	R	1.0 U	1.00 U	1.00 U	1.0 U	R	1.0 U	1.00 U	1.00 U
Tetrahydrofuran	NE	NE	NE	NE	2.5 U	2.5 U	2.0 U	2.00 U	2.00 U	2.5 U	2.5 U	2.0 U	2.00 U	2.00 U	2.5 U	2.5 U	2.0 U	2.00 U	2.00 U
Toluene	**1000**	50000	40000	100000	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U
Trans-1,2-Dichloroethene	**100**	**80**	50000	100000	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U
Trans-1,3-Dichloropropene	NE	NE	NE	NE	0.40 U	0.40 U	0.5 U	0.50 U	0.50 U	0.40 U	0.40 U	0.5 U	0.50 U	0.50 U	0.40 U	0.40 U	0.5 U	0.50 U	0.50 U
Trichloroethene	**5**	**5**	**5000**	**50000**	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U
Trichlorofluoromethane	NE	NE	NE	NE	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 UJ	1.00 U	1.0 U	1.0 U	1.0 U	1.00 UJ	1.00 U
Vinyl Chloride	**2**	**2**	50000	100000	1.0 U	1.0 U	1.0 UJ	1.00 U	1.00 U	1.0 U	1.0 U	**3.8**	**3.16**	**4.31**	**4.6**	**2.3**	1.0 UJ	1.00 U	1.00 U
Xylenes (Total)	10000	3000	5000	100000	1.0 U	1.0 U	2.0 U	2.00 U	2.00 U	1.0 U	1.0 U	2.0 U	2.00 U	2.00 U	1.0 U	1.0 U	2.0 U	2.00 U	2.00 U

Notes:

ft = feet

mg/l = miligrams per liter

µg/l = micrograms per liter

NE = not established

U - Non-detect at laboratory detection limit

J = Estimated Value, J+ = biased high, J- = biased low, R

Detects are bolded

Criteria exceedances are highlighted

Table 5-7
Summary of 2016 - 2020 Groundwater Analytical Results for Volatile Organic Compounds
Former GE Facility, 50 Fordham Road, Wilmington, MA

				Location Group:	Downgradient Wetland		Building 1_TankF											
				Location ID:	PS-8D	PS-8D	AE23R	AE23R	AE23R	AE23R	AE23R	AE24	AE24	AE24	AE24	AE24	AE26R-1	AE26R-1
				Sample ID:	19A-PS8D-091719-1	20A-PS8D-091520-1	16B-AE23R-062716-1	17A-AE23R-101317-1	18A-AE23R-091918-1	19A-AE23R-092319-1	20A-AE23R-091420-1	16A-AE24-062316-1	17A-AE24-101917-1	17A-AE24-101917-2	18A-AE24-092518-1	19A-AE24-092319-1	20A-AE24-091420-1	16B-AE26R1-062316-1	17A-AE26R1-100417-1
				Sample Date:	9/17/2019	9/15/2020	6/27/2016	10/13/2017	9/19/2018	9/23/2019	9/14/2020	6/23/2016	10/19/2017	10/19/2017	9/25/2018	9/23/2019	9/14/2020	6/23/2016	10/4/2017
				Sample Type:	N	N	N	N	N	N	N	N	N	FD	N	N	N	N	N
				Depth Interval:	51.8-56.8 ft	51.8 - 56.8 ft	44.75 - 54.75 ft	44.75 - 54.75 ft	44.75 - 54.75 ft	44.75-54.75 ft	44.75 - 54.75 ft	7.25 - 17.25 ft	7.25 - 17.25 ft	7.25 - 17.25 ft	7.25 - 17.25 ft	7.25-17.25 ft	7.25 - 17.25 ft	50 - 56 ft	50 - 56 ft
Analyte	**MCP Method 1 GW-1 Stds**	**MCP Method 1 GW-2 Stds**	**MCP Method 1 GW-3 Stds**	**Upper Concentration Limit (UCL)**															
Volatile Organic Compounds (µg/l)																			
1,1,1,2-Tetrachloroethane	5	10	50000	100000	1.0 U	1.0 U	2000 U	500 U	5000 U	500 U	500 U	200 U	5.00 U	5.00 U	10.0 UJ	50 U	5.0 U	5.0 U	10.0 U
1,1,1-Trichloroethane	**200**	4000	20000	100000	1.0 U	1.0 U	2000 U	**1520**	5000 U	**1200**	**1000**	200 U	5.00 U	5.00 U	10.0 U	100 U	5.0 U	5.0 U	10.0 U
1,1,2,2-Tetrachloroethane	2	9	50000	100000	0.50 U	0.50 U	1000 U	250 U	2500 U	R	500 U	100 U	2.50 U	2.50 U	5.00 U	R	2.5 U	2.5 U	5.00 U
1,1,2-Trichloroethane	5	900	50000	100000	1.0 U	1.0 U	2000 U	500 U	5000 U	500 U	500 U	200 U	5.00 U	5.00 U	10.0 U	50 U	5.0 U	5.0 U	10.0 U
1,1-Dichloroethane	**70**	2000	20000	100000	1.0 U	1.0 U	2000 U	**965**	5000 U	**800**	**730**	200 U	5.00 U	5.00 U	10.0 U	70 U	5.0 U	**15.8**	**25.1**
1,1-Dichloroethylene	**7**	**80**	30000	100000	1.0 U	1.0 U	2000 U	**645**	5000 U	**580**	**640**	200 U	5.00 UJ	5.00 UJ	10.0 U	50 U	5.0 U	5.0 U	10.0 U
1,1-Dichloropropene	NE	NE	NE	NE	1.0 U	1.0 U	2000 U	500 U	5000 U	1000 U	1000 U	200 U	5.00 U	5.00 U	10.0 UJ	100 U	5.0 U	5.0 U	10.0 U
1,2,3-Trichlorobenzene	NE	NE	NE	NE	1.0 U	1.0 U	2000 U	500 U	5000 U	500 U	500 U	200 U	5.00 U	5.00 U	10.0 U	50 U	5.0 U	5.0 U	10.0 U
1,2,3-Trichloropropane	NE	NE	NE	NE	0.50 U	0.50 U	2000 U	500 U	5000 U	500 U	500 U	200 U	5.00 U	5.00 U	10.0 U	50 U	2.5 U	5.0 U	10.0 U
1,2,4-Trichlorobenzene	70	200	50000	100000	1.0 U	1.0 U	2000 U	500 U	5000 U	500 U	500 U	200 U	5.00 U	5.00 U	10.0 U	70 U	5.0 U	5.0 U	10.0 U
1,2,4-Trimethylbenzene	NE	NE	NE	NE	1.0 U	1.0 U	3000 U	500 U	5000 U	500 U	500 U	200 U	5.00 U	5.00 U	10.0 U	56 U	5.0 U	5.0 U	10.0 U
1,2-Dibromo-3-Chloropropane (DBC	NE	NE	NE	NE	R	0.50 U	4000 U	1000 U	10000 UJ	R	500 U	400 UJ	10.0 U	10.0 U	20.0 U	R	2.5 U	10.0 U	20.0 UJ
1,2-Dibromoethane	0.02	2	50000	100000	0.50 U	0.50 U	1000 U	250 U	2500 U	500 U	500 U	100 U	2.50 U	2.50 U	5.00 U	50 U	2.5 U	2.5 U	5.00 U
1,2-Dichlorobenzene	600	8000	2000	80000	1.0 U	1.0 U	2000 U	500 U	5000 U	600 U	600 U	200 U	5.00 U	5.00 U	10.0 U	100 U	5.0 U	5.0 U	10.0 U
1,2-Dichloroethane	5	5	20000	100000	0.60 U	0.60 U	2000 U	500 U	5000 U	500 U	500 U	200 U	5.00 U	5.00 U	10.0 U	50 U	3.0 U	5.0 U	10.0 U
1,2-Dichloropropane	5	3	50000	100000	1.0 U	1.0 U	2000 U	500 U	5000 U	500 U	500 U	200 U	5.00 U	5.00 U	10.0 U	50 U	3.0 U	5.0 U	10.0 U
1,3,5-Trimethylbenzene	NE	NE	NE	NE	1.0 U	1.0 U	2000 U	500 U	5000 U	500 U	500 U	200 U	5.00 U	5.00 U	10.0 U	60 U	5.0 U	5.0 U	10.0 U
1,3-Dichlorobenzene	100	6000	50000	100000	1.0 U	1.0 U	2000 U	500 U	5000 U	500 U	500 U	200 U	5.00 U	5.00 U	10.0 U	50 U	5.0 U	5.0 U	10.0 U
1,3-Dichloropropane	NE	NE	NE	NE	1.0 U	1.0 U	2000 U	500 U	5000 U	500 U	500 U	200 U	5.00 U	5.00 U	10.0 U	100 U	5.0 U	5.0 U	10.0 U
1,4-Dichlorobenzene	5	60	8000	80000	1.0 U	1.0 U	2000 U	500 U	5000 U	500 U	500 U	200 U	5.00 U	5.00 U	10.0 U	50 U	5.0 U	5.0 U	10.0 U
1,4-Dioxane	**0.3**	6000	50000	100000	40 U	100 U	NS	10000 U	100000 UJ	40000 U	NS	4000 U	100 U	100 U	200 UJ	4000 U	NS	NS	200 U
2,2-Dichloropropane	NE	NE	NE	NE	1.0 U	1.0 U	2000 U	500 U	5000 UJ	1000 U	1000 U	200 UJ	5.00 U	5.00 U	10.0 U	100 U	5.0 U	5.0 U	10.0 UJ
2-Butanone	4000	50000	50000	100000	R	5.0 U	20000 U	1000 U	10000 U	R	5000 U	2000 U	10.0 UJ	10.0 UJ	20.0 U	R	25 U	50.0 U	20.0 U
2-Chlorotoluene	NE	NE	NE	NE	1.0 U	1.0 U	2000 U	500 U	5000 U	500 U	500 U	200 U	5.00 U	5.00 U	10.0 U	100 U	5.0 U	5.0 U	10.0 U
2-Hexanone	NE	NE	NE	NE	5.0 U	5.0 U	20000 U	1000 U	10000 UJ	R	5000 U	2000 UJ	10.0 U	10.0 U	20.0 UJ	R	25 U	50.0 U	20.0 U
2-Phenylbutane	NE	NE	NE	NE	1.0 U	1.0 U	2000 U	500 U	5000 U	1000 U	1000 U	200 U	5.00 U	5.00 U	10.0 U	100 U	5.0 U	5.0 U	10.0 U
4-Chlorotoluene	NE	NE	NE	NE	1.0 U	1.0 U	2000 U	500 U	5000 U	500 U	500 U	200 U	5.00 U	5.00 U	10.0 U	100 U	5.0 U	5.0 U	10.0 U
4-Methyl-2-Pentanone	350	50000	50000	100000	5.0 U	5.0 U	20000 U	1000 U	10000 U	R	5000 U	2000 UJ	10.0 U	10.0 U	20.0 UJ	R	25 U	50.0 U	20.0 U
Acetone	6300	50000	50000	100000	R	25 U	20000 UJ	5000 U	50000 UJ	R	6300 U	2000 UJ	50.0 U	50.0 U	100 U	R	130 U	50.0 U	100 U
Benzene	5	1000	10000	100000	0.70 U	0.70 U	2000 U	500 U	5000 U	500 U	500 U	200 U	5.00 U	5.00 U	10.0 U	50 U	3.5 U	5.0 U	10.0 U
Bromobenzene	NE	NE	NE	NE	1.0 U	1.0 U	2000 U	500 U	5000 U	500 U	500 U	200 U	5.00 U	5.00 U	10.0 U	62 U	5.0 U	5.0 U	10.0 U
Bromochloromethane	NE	NE	NE	NE	1.0 U	1.0 U	2000 U	500 U	5000 U	500 U	500 U	200 U	5.00 U	5.00 U	10.0 U	83 U	5.0 U	5.0 U	10.0 U
Bromodichloromethane	3	6	50000	100000	0.50 U	0.50 U	1000 U	250 U	2500 U	500 U	500 U	100 U	2.50 U	2.50 U	5.00 U	50 U	2.5 U	2.5 U	5.00 U
Bromoform	4	700	50000	100000	R	1.0 U	2000 U	500 U	5000 UJ	500 UJ	500 U	200 U	5.00 U	5.00 U	10.0 UJ	50 U	4.0 U	5.0 U	10.0 UJ
Bromomethane	10	7	800	8000	1.0 U	1.0 U	4000 UJ	1000 UJ	10000 UJ	R	500 U	400 U	10.0 UJ	10.0 UJ	20.0 U	R	5.0 U	10.0 U	20.0 U
Carbon Disulfide	NE	NE	NE	NE	5.0 U	5.0 U	4000 U	1000 U	10000 U	810 U	810 U	400 U	10.0 U	10.0 U	20.0 U	500 U	25 U	10.0 U	20.0 U
Carbon Tetrachloride	5	2	5000	50000	1.0 U	1.0 U	2000 U	500 U	5000 UJ	500 U	500 U	200 U	5.00 U	5.00 U	10.0 U	50 U	2.5 U	5.0 U	10.0 U
Chlorobenzene	100	200	1000	10000	1.0 U	1.0 U	2000 U	500 U	5000 U	500 U	500 U	200 U	5.00 U	5.00 U	10.0 U	100 U	5.0 U	5.0 U	10.0 U
Chloroethane	NE	NE	NE	NE	1.0 U	1.0 UJ	4000 UJ	1000 U	10000 U	1000 U	1000 UJ	400 U	10.0 U	10.0 U	20.0 U	100 U	5.0 UJ	10.0 U	20.0 U
Chloroform	70	50	20000	100000	1.0 U	1.0 U	2000 U	500 U	5000 U	500 U	500 U	200 U	5.00 U	5.00 U	10.0 U	50 U	5.0 U	5.0 U	10.0 U
Chloromethane	NE	NE	NE	NE	1.0 U	1.0 U	4000 UJ	1000 UJ	10000 U	500 U	500 U	400 UJ	10.0 U	10.0 U	20.0 U	100 U	5.0 U	10.0 U	20.0 U
cis-1,2-Dichloroethene	**70**	**20**	50000	100000	1.0 U	1.0 U	2000 U	500 U	5000 U	500 U	500 U	200 U	5.00 U	5.00 U	10.0 U	50 U	5.0 U	**22.8**	**152**
cis-1,3-Dichloropropene	NE	NE	NE	NE	0.40 U	0.40 U	1000 U	250 U	2500 U	500 U	500 U	100 UJ	2.50 U	2.50 U	5.00 U	50 U	2.5 U	2.5 U	5.00 U
Cymene	NE	NE	NE	NE	1.0 U	1.0 U	2000 U	500 U	5000 U	1000 U	1000 U	200 U	5.00 U	5.00 U	10.0 U	100 U	5.0 U	5.0 U	10.0 U
Dibromochloromethane	2	20	50000	100000	0.50 U	0.50 U	1000 U	250 U	2500 UJ	500 U	500 U	100 U	2.50 U	2.50 U	5.00 U	50 U	2.5 U	2.5 U	5.00 U
Dibromomethane	NE	NE	NE	NE	1.0 U	1.0 U	2000 U	500 U	5000 U	500 U	500 U	200 U	5.00 U	5.00 U	10.0 U	50 U	5.0 U	5.0 U	10.0 U
Dichlorodifluoromethane (CFC-12)	NE	NE	NE	NE	1.0 U	1.0 U	4000 UJ	1000 U	10000 U	500 U	500 U	400 U	10.0 U	10.0 U	20.0 U	100 U	5.0 U	10.0 U	20.0 UJ
Diethyl Ether	NE	NE	NE	NE	1.0 U	1.0 U	2000 UJ	500 U	5000 U	1000 U	1000 UJ	200 U	5.00 U	5.00 U	10.0 U	100 U	5.0 U	5.0 U	10.0 U
Diisopropyl Ether	NE	NE	NE	NE	1.0 U	1.0 UJ	2000 U	500 U	5000 U	1000 U	1000 UJ	200 U	5.00 U	5.00 U	10.0 U	100 U	5.0 U	5.0 U	10.0 U
Ethyl Tertiary-Butyl Ether	NE	NE	NE	NE	1.0 U	1.0 U	2000 U	500 U	5000 U	1000 U	1000 U	200 UJ	5.00 U	5.00 U	10.0 U	100 U	5.0 U	5.0 U	10.0 UJ
Ethylbenzene	700	20000	5000	100000	1.0 U	1.0 U	2000 U	500 U	5000 U	700 U	700 U	200 U	5.00 U	5.00 U	10.0 U	100 U	5.0 U	5.0 U	10.0 U
Freon TF (Chlorinated fluorocarbon)	NE	NE	NE	NE	1.0 U	1.0 U	2000 U	500 U	5000 U	1000 U	1000 U	200 U	5.00 U	5.00 U	10.0 U	100 U	5.0 U	5.0 U	10.0 U
Hexachloro-1,3-Butadiene	0.6	50	3000	3000	0.40 U	0.40 U	1000 U	250 U	2500 U	500 U	500 U	100 U	2.50 U	2.50 U	5.00 U	50 U	2.5 U	2.5 U	5.00 UJ
Isopropylbenzene	NE	NE	NE	NE	1.0 U	1.0 U	2000 U	500 U	5000 U	500 U	500 U	200 U	5.00 U	5.00 U	10.0 U	100 U	5.0 U	5.0 U	10.0 U
M, P Xylenes	10000	3000	5000	100000	1.0 U	1.0 U	4000 U	1000 U	10000 U	1000 U	1000 U	400 U	10.0 U	10.0 U	20.0 U	100 U	5.0 U	10.0 U	20.0 U
Methyl Tert-Butyl Ether	NE	NE	NE	100000	1.0 U	1.0 U	2000 U	500 U	5000 U	500 U	500 U	200 UJ	5.00 U	5.00 U	10.0 U	70 U	5.0 U	5.0 U	10.0 UJ
Methylene Chloride	5	2000	50000	100000	1.0 U	1.0 U	4000 UJ	1000 U	10000 U	500 U	1000 U	400 U	10.0 U	10.0 U	20.0 U	50 U	5.0 U	10.0 U	20.0 U
Naphthalene	140	700	20000	100000	1.0 U	1.0 U	2000 U	500 U	10000 U	500 U	1000 U	200 U	5.00 U	5.00 U	20.0 U	100 U	5.0 U	5.0 UJ	10.0 U
N-Butylbenzene	NE	NE	NE	NE	1.0 U	1.0 U	2000 U	500 U	5000 U	1000 U	1000 U	200 U	5.00 U	5.00 U	10.0 U	100 U	5.0 U	5.0 U	10.0 U
N-Propylbenzene	NE	NE	NE	NE	1.0 U	1.0 U	2000 U	500 U	5000 U	660 U	660 U	200 U	5.00 U	5.00 U	10.0 U	100 U	5.0 U	5.0 U	10.0 U
o-Xylene	10000	3000	5000	100000	1.0 U	1.0 U	2000 U	500 U	5000 U	1000 U	1000 U	200 U	5.00 U	5.00 U	10.0 U	100 U	5.0 U	5.0 U	10.0 U
Styrene	100	100	6000	60000	1.0 U	1.0 U	2000 U	500 U	5000 U	500 U	500 U	200 U	5.00 U	5.00 U	10.0 U	100 U	5.0 U	5.0 U	10.0 U
Tert-Butylbenzene	NE	NE	NE	NE	1.0 U	1.0 U	2000 U	500 U	5000 U	690 U	690 U	200 U	5.00 U	5.00 U	10.0 U	100 U	5.0 U	5.0 U	10.0 U
Tertiary-Amyl Methyl Ether	NE	NE	NE	NE	1.0 U	1.0 U	2000 U	500 U	5000 U	1000 U	1000 U	200 U	5.00 U	5.00 U	10.0 U	100 U	5.0 U	5.0 U	10.0 UJ
Tetrachloroethene	**5**	**50**	**30000**	100000	1.0 U	1.0 U	**51400**	**67300**	**48400**	**100000**	**54000**	**7660**	**164**	**157**	**733**	**5500**	**680**	**131**	**179 J**
Tetrahydrofuran	NE	NE	NE	NE	2.5 U	2.5 U	4000 U	1000 U	10000 U	R	2500 U	400 U	10.0 U	10.0 U	20.0 U	R	13 U	10.0 U	20.0 U
Toluene	**1000**	50000	40000	100000	1.0 U	1.0 U	**3280**	**4660**	5000 U	**4200**	**3300**	200 U	5.00 U	5.00 U	10.0 U	100 U	5.0 U	**20.7**	10.0 U
Trans-1,2-Dichloroethene	**100**	**80**	50000	100000	1.0 U	1.0 U	2000 U	500 U	5000 U	500 U	500 U	200 U	5.00 U	5.00 U	10.0 U	80 U	5.0 U	5.0 U	10.0 U
Trans-1,3-Dichloropropene	NE	NE	NE	NE	0.40 U	0.40 U	1000 U	250 U	2500 U	500 U	500 U	100 UJ	2.50 U	2.50 U	5.00 U	50 U	2.5 U	2.5 U	5.00 UJ
Trichloroethene	**5**	**5**	**5000**	**50000**	1.0 U	1.0 U	**125000**	**179000**	**163000**	**240000**	**130000**	200 U	5.00 U	5.00 U	10.0 U	50 U	5.0 U	**236**	**478**
Trichlorofluoromethane	NE	NE	NE	NE	1.0 U	1.0 U	2000 U	500 U	5000 UJ	1000 U	1000 U	200 U	5.00 U	5.00 U	10.0 U	100 U	5.0 U	5.0 U	10.0 U
Vinyl Chloride	**2**	**2**	50000	100000	1.0 U	1.0 U	2000 U	500 U	5000 U	500 U	500 U	200 U	5.00 U	5.00 U	10.0 U	50 U	2.5 U	5.0 UJ	10.0 U
Xylenes (Total)	10000	3000	5000	100000	1.0 U	1.0 U	4000 U	1000 U	10000 U	1000 U	1000 U	400 U	10.0 U	10.0 U	20.0 U	100 U	5.0 U	10.0 U	20.0 U
							179680	**254590**	**211400**	**346780**	**189670**								

Notes:

ft = feet

mg/l = miligrams per liter

µg/l = micrograms per liter

NE = not established

U - Non-detect at laboratory detection limit

J = Estimated Value, J+ = biased high, J- = biased low, R

Detects are bolded

Criteria exceedances are highlighted

Table 5-7
Summary of 2016 - 2020 Groundwater Analytical Results for Volatile Organic Compounds
Former GE Facility, 50 Fordham Road, Wilmington, MA

				Location Group:	Building 1_TankF (continued)														
				Location ID:	AE26R-1	AE26R-1	AE26R-1	AE26R-2	AE26R-2	AE26R-2	AE26R-2	AE26R-2	AE26R-5	AE26R-5	AE26R-5	AE26R-5	AE26R-5	AE26S	AE26S
				Sample ID:	18A-AE26R1-091818-1	19A-AE26R1-092319-1	20A-AE26R1-091420-1	16B-AE26R2-062316-1	17A-AE26R2-100417-1	18A-AE26R2-091818-1	19A-AE26R2-092319-1	20A-AE26R2-091420-1	16B-AE26R5-062316-1	17A-AE26R5-100417-1	18A-AE26R5-091818-1	19A-AE26R5-092319-1	20A-AE26R5-091420-1	16A-AE26S-062316-1	17A-AE26S-100517-1
				Sample Date:	9/18/2018	9/23/2019	9/14/2020	6/23/2016	10/4/2017	9/18/2018	9/23/2019	9/14/2020	6/23/2016	10/4/2017	9/18/2018	9/23/2019	9/14/2020	6/23/2016	10/5/2017
				Sample Type:	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
				Depth Interval:	50 - 56 ft	50-56 ft	50 - 56 ft	72 - 78 ft	72 - 78 ft	72 - 78 ft	72-78 ft	72 - 78 ft	123 - 132 ft	123 - 132 ft	123 - 132 ft	123-132 ft	123 - 132 ft	25 - 30 ft	25 - 30 ft
Analyte	**MCP Method 1 GW-1 Stds**	**MCP Method 1 GW-2 Stds**	**MCP Method 1 GW-3 Stds**	**Upper Concentration Limit (UCL)**															
Volatile Organic Compounds (µg/l)																			
1,1,1,2-Tetrachloroethane	5	10	50000	100000	5.00 U	5.0 U	5.0 U	5.0 U	5.00 U	1.00 U	2.0 U	2.0 U	20.0 U	50.0 U	5.00 U	10 U	10 U	1.0 U	5.00 UJ
1,1,1-Trichloroethane	**200**	4000	20000	100000	5.00 U	5.0 U	5.0 U	5.0 U	5.00 U	1.00 U	2.0 U	2.0 U	20.0 U	50.0 U	5.00 U	20 U	20 U	1.0 U	5.00 UJ
1,1,2,2-Tetrachloroethane	2	9	50000	100000	2.50 U	2.5 U	2.5 U	2.5 U	2.50 U	0.50 U	1.0 U	1.0 U	10.0 U	25.0 U	2.50 U	R	10 U	0.5 U	2.50 U
1,1,2-Trichloroethane	5	900	50000	100000	5.00 U	5.0 U	5.0 U	5.0 U	5.00 U	1.00 U	2.0 U	2.0 U	20.0 U	50.0 U	5.00 U	10 U	10 U	1.0 U	5.00 U
1,1-Dichloroethane	**70**	2000	20000	100000	**29.3**	**22**	**36**	**23.2**	**31.2**	**30.7**	**20**	**24**	**43.0**	**50.5**	**42.9**	**38**	**42**	1.0 U	5.00 U
1,1-Dichloroethylene	**7**	**80**	30000	100000	**5.40 J**	**3.7**	**6.7**	5.0 U	5.00 U	**4.94 J**	**2.4**	**3.1**	20.0 U	50.0 U	**12.4 J**	10 U	**14**	1.0 U	5.00 U
1,1-Dichloropropene	NE	NE	NE	NE	5.00 U	5.0 U	5.0 U	5.0 U	5.00 U	1.00 U	2.0 U	2.0 U	20.0 U	50.0 U	5.00 U	20 U	20 U	1.0 U	5.00 U
1,2,3-Trichlorobenzene	NE	NE	NE	NE	5.00 U	5.0 U	5.0 U	5.0 U	5.00 U	1.00 U	2.0 U	2.0 U	20.0 U	50.0 U	5.00 U	10 U	10 U	1.0 U	5.00 U
1,2,3-Trichloropropane	NE	NE	NE	NE	5.00 U	2.5 U	2.5 U	5.0 U	5.00 U	1.00 U	1.0 U	1.0 U	20.0 U	50.0 U	5.00 U	10 U	10 U	1.0 U	5.00 U
1,2,4-Trichlorobenzene	70	200	50000	100000	5.00 U	5.0 U	5.0 U	5.0 U	5.00 U	1.00 U	2.0 U	2.0 U	20.0 U	50.0 U	5.00 U	20 U	20 U	1.0 U	5.00 U
1,2,4-Trimethylbenzene	NE	NE	NE	NE	5.00 U	5.0 U	5.0 U	5.0 U	5.00 U	1.00 U	2.0 U	2.0 U	20.0 U	50.0 U	5.00 U	20 U	20 U	1.0 U	5.00 U
1,2-Dibromo-3-Chloropropane (DBC	NE	NE	NE	NE	10.0 U	R	2.5 UJ	10.0 U	10.0 UJ	2.00 U	R	1.0 UJ	40.0 U	100 UJ	10.0 U	R	10 UJ	2.0 U	10.0 UJ
1,2-Dibromoethane	0.02	2	50000	100000	2.50 U	2.5 U	2.5 U	2.5 U	2.50 U	0.50 U	1.0 U	1.0 U	10.0 U	25.0 U	2.50 U	10 U	10 U	0.5 U	2.50 U
1,2-Dichlorobenzene	600	8000	2000	80000	5.00 U	5.0 U	5.0 U	5.0 U	5.00 U	1.00 U	2.0 U	2.0 U	20.0 U	50.0 U	5.00 U	20 U	20 U	1.0 U	5.00 U
1,2-Dichloroethane	5	5	20000	100000	5.00 U	3.0 U	3.0 U	5.0 U	5.00 U	1.00 U	1.2 U	1.2 U	20.0 U	50.0 U	5.00 U	10 U	10 U	1.0 U	5.00 U
1,2-Dichloropropane	5	3	50000	100000	5.00 U	3.0 U	3.0 U	5.0 U	5.00 U	1.00 U	2.0 U	2.0 U	20.0 U	50.0 U	5.00 U	10 U	10 U	1.0 U	5.00 U
1,3,5-Trimethylbenzene	NE	NE	NE	NE	5.00 U	5.0 U	5.0 U	5.0 U	5.00 U	1.00 U	2.0 U	2.0 U	20.0 U	50.0 U	5.00 U	20 U	20 U	1.0 U	5.00 U
1,3-Dichlorobenzene	100	6000	50000	100000	5.00 U	5.0 U	5.0 U	5.0 U	5.00 U	1.00 U	2.0 U	2.0 U	20.0 U	50.0 U	5.00 U	20 U	20 U	1.0 U	5.00 U
1,3-Dichloropropane	NE	NE	NE	NE	5.00 U	5.0 U	5.0 U	5.0 U	5.00 U	1.00 U	2.0 U	2.0 U	20.0 U	50.0 U	5.00 U	20 U	20 U	1.0 U	5.00 U
1,4-Dichlorobenzene	5	60	8000	80000	5.00 U	5.0 U	5.0 U	5.0 U	5.00 U	1.00 U	2.0 U	2.0 U	20.0 U	50.0 U	5.00 U	10 U	10 U	1.0 U	5.00 U
1,4-Dioxane	**0.3**	6000	50000	100000	100 UJ	200 U	NS	100 U	100 U	20.0 U	80 U	200 U	NS	1000 U	100 U	800 U	NS	20.0 U	100 U
2,2-Dichloropropane	NE	NE	NE	NE	NS R	5.0 U	5.0 U	5.0 U	5.00 UJ	1.00 U	2.0 U	2.0 U	20.0 U	50.0 UJ	5.00 U	20 U	20 U	1.0 U	5.00 U
2-Butanone	4000	50000	50000	100000	10.0 U	R	25 U	50.0 U	10.0 U	2.00 U	R	10 U	200 U	100 U	10.0 U	R	100 U	10.0 U	10.0 U
2-Chlorotoluene	NE	NE	NE	NE	5.00 U	5.0 U	5.0 U	5.0 U	5.00 U	1.00 U	2.0 U	2.0 U	20.0 U	50.0 U	5.00 U	20 U	20 U	1.0 U	5.00 U
2-Hexanone	NE	NE	NE	NE	10.0 U	25 U	25 U	50.0 U	10.0 U	2.00 U	10 U	10 U	200 U	100 U	10.0 U	R	100 U	10.0 U	10.0 U
2-Phenylbutane	NE	NE	NE	NE	5.00 U	5.0 U	5.0 U	5.0 U	5.00 U	1.00 U	2.0 U	2.0 U	20.0 U	50.0 U	5.00 U	20 U	20 U	1.0 U	5.00 U
4-Chlorotoluene	NE	NE	NE	NE	5.00 U	5.0 U	5.0 U	5.0 U	5.00 U	1.00 U	2.0 U	2.0 U	20.0 U	50.0 U	5.00 U	20 U	20 U	1.0 U	5.00 U
4-Methyl-2-Pentanone	350	50000	50000	100000	10.0 U	25 U	25 U	50.0 U	10.0 U	2.00 U	10 U	10 U	200 U	100 U	10.0 U	R	100 U	10.0 U	10.0 U
Acetone	6300	50000	50000	100000	50.0 UJ	R	130 UJ	50.0 U	50.0 U	10.0 UJ	R	50 UJ	200 U	500 U	50.0 UJ	R	500 UJ	10.0 U	50.0 U
Benzene	5	1000	10000	100000	5.00 U	3.5 U	3.5 U	5.0 U	5.00 U	1.00 U	1.4 U	1.4 U	20.0 U	50.0 U	5.00 U	10 U	10 U	1.0 U	5.00 U
Bromobenzene	NE	NE	NE	NE	5.00 U	5.0 U	5.0 U	5.0 U	5.00 U	1.00 U	2.0 U	2.0 U	20.0 U	50.0 U	5.00 U	20 U	20 U	1.0 U	5.00 U
Bromochloromethane	NE	NE	NE	NE	5.00 U	5.0 U	5.0 U	5.0 U	5.00 U	1.00 U	2.0 U	2.0 U	20.0 U	50.0 U	5.00 U	20 U	20 U	1.0 U	5.00 U
Bromodichloromethane	3	6	50000	100000	2.50 U	2.5 U	2.5 U	2.5 U	2.50 U	0.50 U	1.0 U	1.0 U	10.0 U	25.0 U	2.50 U	10 U	10 U	0.5 U	2.50 U
Bromoform	4	700	50000	100000	5.00 U	R	4.0 U	5.0 U	5.00 UJ	1.00 U	R	2.0 U	20.0 U	50.0 UJ	5.00 U	10 U	10 U	1.0 U	5.00 UJ
Bromomethane	10	7	800	8000	10.0 UJ	5.0 U	5.0 UJ	10.0 U	10.0 U	2.00 UJ	2.0 U	2.0 UJ	40.0 U	100 U	10.0 UJ	R	10 UJ	2.0 U	10.0 U
Carbon Disulfide	NE	NE	NE	NE	10.0 U	25 U	25 U	10.0 U	10.0 U	2.00 U	10 U	10 U	40.0 U	100 U	10.0 U	100 U	100 U	2.0 U	10.0 UJ
Carbon Tetrachloride	5	2	5000	50000	5.00 U	2.5 U	2.5 U	5.0 U	5.00 U	1.00 U	2.0 U	2.0 U	20.0 U	50.0 U	5.00 U	10 U	10 U	1.0 U	5.00 UJ
Chlorobenzene	100	200	1000	10000	5.00 U	5.0 U	5.0 U	5.0 U	5.00 U	1.00 U	2.0 U	2.0 U	20.0 U	50.0 U	5.00 U	20 U	20 U	1.0 U	5.00 U
Chloroethane	NE	NE	NE	NE	10.0 UJ	5.0 U	5.0 UJ	10.0 U	10.0 U	2.00 UJ	2.0 U	2.0 UJ	40.0 U	100 U	10.0 UJ	20 U	20 UJ	2.0 U	10.0 U
Chloroform	70	50	20000	100000	5.00 U	5.0 U	5.0 U	5.0 U	5.00 U	1.00 U	2.0 U	2.0 U	20.0 U	50.0 U	5.00 U	20 U	20 U	1.0 U	5.00 U
Chloromethane	NE	NE	NE	NE	10.0 U	5.0 U	5.0 U	10.0 UJ	10.0 U	2.00 U	2.0 U	2.0 U	40.0 U	100 U	10.0 U	20 U	20 U	2.0 UJ	10.0 U
cis-1,2-Dichloroethene	**70**	**20**	50000	100000	**248 J-**	**260**	**230**	**33.6**	**131**	**153**	**130**	**130**	**111**	**310**	**466**	**510**	**390**	**117**	**111**
cis-1,3-Dichloropropene	NE	NE	NE	NE	2.50 UJ	2.5 U	2.5 U	2.5 U	2.50 U	0.50 U	1.0 U	1.0 U	10.0 U	25.0 U	2.50 U	10 U	10 U	0.5 U	2.50 U
Cymene	NE	NE	NE	NE	5.00 U	5.0 U	5.0 U	5.0 U	5.00 U	1.00 U	2.0 U	2.0 U	20.0 U	50.0 U	5.00 U	20 U	20 U	1.0 U	5.00 U
Dibromochloromethane	2	20	50000	100000	2.50 U	2.5 U	2.5 U	2.5 U	2.50 U	0.50 U	1.0 U	1.0 U	10.0 U	25.0 U	2.50 U	10 U	10 U	0.5 U	2.50 UJ
Dibromomethane	NE	NE	NE	NE	5.00 U	5.0 U	5.0 U	5.0 U	5.00 U	1.00 U	2.0 U	2.0 U	20.0 U	50.0 U	5.00 U	10 U	10 U	1.0 U	5.00 U
Dichlorodifluoromethane (CFC-12)	NE	NE	NE	NE	10.0 U	5.0 U	5.0 U	10.0 U	10.0 UJ	2.00 U	2.0 U	2.0 U	40.0 U	100 UJ	10.0 U	20 U	20 U	2.0 U	10.0 U
Diethyl Ether	NE	NE	NE	NE	5.00 U	5.0 U	5.0 U	5.0 U	5.00 U	1.00 U	2.0 U	2.0 U	20.0 U	50.0 U	5.00 U	20 U	20 U	1.0 U	5.00 U
Diisopropyl Ether	NE	NE	NE	NE	5.00 U	5.0 U	5.0 U	5.0 U	5.00 U	1.00 U	2.0 U	2.0 U	20.0 U	50.0 U	5.00 U	20 U	20 U	1.0 U	5.00 U
Ethyl Tertiary-Butyl Ether	NE	NE	NE	NE	5.00 U	5.0 U	5.0 U	5.0 UJ	5.00 UJ	1.00 U	2.0 U	2.0 U	20.0 U	50.0 UJ	5.00 U	20 U	20 U	1.0 UJ	5.00 U
Ethylbenzene	700	20000	5000	100000	5.00 U	5.0 U	5.0 U	5.0 U	5.00 U	1.00 U	2.0 U	2.0 U	20.0 U	50.0 U	5.00 U	20 U	20 U	1.0 U	5.00 U
Freon TF (Chlorinated fluorocarbon)	NE	NE	NE	NE	5.00 UJ	5.0 U	5.0 U	5.0 U	5.00 U	1.00 UJ	2.0 U	2.0 U	20.0 U	50.0 U	5.00 UJ	20 U	20 U	**4.1**	5.00 UJ
Hexachloro-1,3-Butadiene	0.6	50	3000	3000	2.50 U	2.5 U	2.5 U	2.5 U	2.50 UJ	0.50 U	1.0 U	1.0 U	10.0 U	25.0 UJ	2.50 U	10 U	10 U	0.5 U	2.50 U
Isopropylbenzene	NE	NE	NE	NE	5.00 U	5.0 U	5.0 U	5.0 U	5.00 U	1.00 U	2.0 U	2.0 U	20.0 U	50.0 U	5.00 U	20 U	20 U	1.0 U	5.00 U
M, P Xylenes	10000	3000	5000	100000	10.0 U	5.0 U	5.0 U	10.0 U	10.0 U	2.00 U	2.0 U	2.0 U	40.0 U	100 U	10.0 U	20 U	20 U	2.0 U	10.0 U
Methyl Tert-Butyl Ether	NE	NE	NE	100000	5.00 U	5.0 U	5.0 U	5.0 UJ	5.00 UJ	1.00 U	2.0 U	2.0 U	20.0 U	50.0 UJ	5.00 U	20 U	20 U	1.0 UJ	5.00 U
Methylene Chloride	5	2000	50000	100000	10.0 UJ	5.0 U	5.0 UJ	10.0 U	10.0 U	2.00 UJ	2.0 U	2.0 UJ	40.0 U	100 U	10.0 UJ	10 U	20 UJ	2.0 U	10.0 UJ
Naphthalene	140	700	20000	100000	10.0 UJ	5.0 U	5.0 U	5.0 U	5.00 U	2.00 U	2.0 U	2.0 U	20.0 UJ	50.0 U	10.0 U	20 U	20 U	1.0 U	5.00 U
N-Butylbenzene	NE	NE	NE	NE	5.00 U	5.0 U	5.0 U	5.0 U	5.00 U	1.00 U	2.0 U	2.0 U	20.0 U	50.0 U	5.00 U	20 U	20 U	1.0 U	5.00 U
N-Propylbenzene	NE	NE	NE	NE	5.00 U	5.0 U	5.0 U	5.0 U	5.00 U	1.00 U	2.0 U	2.0 U	20.0 U	50.0 U	5.00 U	20 U	20 U	1.0 U	5.00 U
o-Xylene	10000	3000	5000	100000	5.00 U	5.0 U	5.0 U	5.0 UJ	5.00 U	1.00 U	2.0 U	2.0 U	20.0 U	50.0 U	5.00 U	20 U	20 U	1.0 UJ	5.00 U
Styrene	100	100	6000	60000	5.00 U	5.0 U	5.0 U	5.0 U	5.00 U	1.00 U	2.0 U	2.0 U	20.0 U	50.0 U	5.00 U	20 U	20 U	1.0 U	5.00 U
Tert-Butylbenzene	NE	NE	NE	NE	5.00 U	5.0 U	5.0 U	5.0 U	5.00 U	1.00 U	2.0 U	2.0 U	20.0 U	50.0 U	5.00 U	20 U	20 U	1.0 U	5.00 U
Tertiary-Amyl Methyl Ether	NE	NE	NE	NE	5.00 U	5.0 U	5.0 U	5.0 U	5.00 UJ	1.00 U	2.0 U	2.0 U	20.0 U	50.0 UJ	5.00 U	20 U	20 U	1.0 U	5.00 U
Tetrachloroethene	**5**	**50**	**30000**	100000	**316 J-**	**270**	**870**	**44.2**	5.00 U	**2.63**	**9.3**	**7.0 J+**	**1130**	**965 J**	**952**	**1000**	**1300 J+**	**56.5**	**41.8**
Tetrahydrofuran	NE	NE	NE	NE	10.0 U	13 U	13 U	10.0 U	10.0 U	2.00 U	5.0 U	5.0 U	40.0 U	100 U	10.0 U	R	50 U	2.0 U	10.0 U
Toluene	**1000**	50000	40000	100000	5.00 U	5.0 U	5.0 U	5.0 U	5.00 U	1.00 U	2.0 U	2.0 U	20.0 U	50.0 U	5.00 U	20 U	20 U	1.0 U	5.00 U
Trans-1,2-Dichloroethene	**100**	**80**	50000	100000	**12.6**	**19**	**21**	5.0 U	5.00 U	**7.23**	**6.6**	**11**	20.0 U	50.0 U	**18.4**	**37**	**30**	**4.0**	5.00 U
Trans-1,3-Dichloropropene	NE	NE	NE	NE	2.50 UJ	2.5 U	2.5 U	2.5 UJ	2.50 UJ	0.50 U	1.0 U	1.0 U	10.0 U	25.0 UJ	2.50 U	10 U	10 U	0.5 UJ	2.50 U
Trichloroethene	**5**	**5**	**5000**	**50000**	**719**	**500**	**1400**	**109**	**110**	**87.5**	**79**	**60**	**1260**	**2030**	**1970**	**1900**	**2100**	**34.2**	**36.0**
Trichlorofluoromethane	NE	NE	NE	NE	5.00 U	5.0 U	5.0 U	5.0 U	5.00 U	1.00 U	2.0 U	2.0 U	20.0 U	50.0 U	5.00 U	20 U	20 U	1.0 U	5.00 U
Vinyl Chloride	**2**	**2**	50000	100000	5.00 UJ	2.5 U	**2.5**	5.0 U	5.00 U	1.00 UJ	2.0 U	2.0 U	20.0 UJ	50.0 U	5.00 UJ	10 U	10 U	1.0 U	5.00 U
Xylenes (Total)	10000	3000	5000	100000	10.0 U	5.0 U	5.0 U	10.0 U	10.0 U	2.00 U	2.0 U	2.0 U	40.0 U	100 U	10.0 U	20 U	20 U	2.0 U	10.0 U

Notes:

ft = feet

mg/l = miligrams per liter

µg/l = micrograms per liter

NE = not established

U - Non-detect at laboratory detection limit

J = Estimated Value, J+ = biased high, J- = biased low, R

Detects are bolded

Criteria exceedances are highlighted

Table 5-7
Summary of 2016 - 2020 Groundwater Analytical Results for Volatile Organic Compounds
Former GE Facility, 50 Fordham Road, Wilmington, MA

				Location Group:	Building 1_TankF (continued)														
				Location ID:	AE26S	AE26S	AE26S	AE28R-1	AE28R-1	AE28R-1	AE28R-1	AE28R-1	AE28R-2	AE28R-2	AE28R-2	AE28R-2	AE28R-2	AE28R-3	AE28R-3
				Sample ID:	18A-AE26S-092518-1	19A-AE26S-092319-1	20A-AE26S-091420-1	16B-AE28R1-062316-1	17A-AE28R1-100417-1	18A-AE28R1-091818-1	19A-AE28R1-092319-1	20A-AE28R1-091420-1	16B-AE28R2-062316-1	17A-AE28R2-100417-1	18A-AE28R2-091818-1	19A-AE28R2-092319-1	20A-AE28R2-091420-1	16B-AE28R3-062316-1	17A-AE28R3-100417-1
				Sample Date:	9/25/2018	9/23/2019	9/14/2020	6/23/2016	10/4/2017	9/18/2018	9/23/2019	9/14/2020	6/23/2016	10/4/2017	9/18/2018	9/23/2019	9/14/2020	6/23/2016	10/4/2017
				Sample Type:	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
				Depth Interval:	25 - 30 ft	25-30 ft	25 - 30 ft	45 - 51 ft	45 - 51 ft	45 - 51 ft	45-51 ft	45 - 51 ft	75 - 85 ft	75 - 85 ft	75 - 85 ft	75-85 ft	75 - 85 ft	98 - 108 ft	98 - 108 ft
Analyte	**MCP Method 1 GW-1 Stds**	**MCP Method 1 GW-2 Stds**	**MCP Method 1 GW-3 Stds**	**Upper Concentration Limit (UCL)**															
Volatile Organic Compounds (µg/l)																			
1,1,1,2-Tetrachloroethane	5	10	50000	100000	1.00 U	1.0 U	1.0 U	50.0 U	200 U	500 U	50 U	50 U	500 U	200 U	500 U	50 U	50 U	200 U	200 U
1,1,1-Trichloroethane	**200**	4000	20000	100000	1.00 U	1.0 U	1.0 U	50.0 U	200 U	500 U	100 U	100 U	500 U	200 U	500 U	100 U	100 U	200 U	200 U
1,1,2,2-Tetrachloroethane	2	9	50000	100000	0.50 U	0.50 U	0.50 U	25.0 U	100 U	250 U	R	50 U	250 U	100 U	250 U	R	50 U	100 U	100 U
1,1,2-Trichloroethane	5	900	50000	100000	1.00 U	1.0 U	1.0 U	50.0 U	200 U	500 U	50 U	50 U	500 U	200 U	500 U	50 U	50 U	200 U	200 U
1,1-Dichloroethane	**70**	2000	20000	100000	1.00 U	1.0 U	1.0 U	50.0 U	200 U	500 U	**100**	**98**	500 U	200 U	500 U	**160**	**140**	200 U	200 U
1,1-Dichloroethylene	**7**	**80**	30000	100000	1.00 U	1.0 U	1.0 U	50.0 U	200 U	500 U	50 U	50 U	500 U	200 U	500 UJ	**50**	50 U	200 U	200 U
1,1-Dichloropropene	NE	NE	NE	NE	1.00 UJ	1.0 U	1.0 U	50.0 U	200 U	500 U	100 U	100 U	500 U	200 U	500 U	100 U	100 U	200 U	200 U
1,2,3-Trichlorobenzene	NE	NE	NE	NE	1.00 U	1.0 U	1.0 U	50.0 U	200 U	500 U	50 U	50 U	500 U	200 U	500 U	50 U	50 U	200 U	200 U
1,2,3-Trichloropropane	NE	NE	NE	NE	1.00 U	0.50 U	0.50 U	50.0 U	200 U	500 U	50 U	50 U	500 U	200 U	500 U	50 U	50 U	200 U	200 U
1,2,4-Trichlorobenzene	70	200	50000	100000	1.00 U	1.0 U	1.0 U	50.0 U	200 U	500 U	70 U	70 U	500 U	200 U	500 U	70 U	70 U	200 U	200 U
1,2,4-Trimethylbenzene	NE	NE	NE	NE	1.00 U	1.0 U	1.0 U	50.0 U	200 U	500 U	56 U	56 U	500 U	200 U	500 U	56 U	56 U	200 U	200 U
1,2-Dibromo-3-Chloropropane (DBC	NE	NE	NE	NE	2.00 U	R	0.50 UJ	100 U	400 UJ	1000 U	R	50 U	1000 U	400 UJ	1000 U	R	50 U	400 U	400 UJ
1,2-Dibromoethane	0.02	2	50000	100000	0.50 U	0.50 U	0.50 U	25.0 U	100 U	250 U	50 U	50 U	250 U	100 U	250 U	50 U	50 U	100 U	100 U
1,2-Dichlorobenzene	600	8000	2000	80000	1.00 U	1.0 U	1.0 U	50.0 U	200 U	500 U	100 U	100 U	500 U	200 U	500 U	100 U	100 U	200 U	200 U
1,2-Dichloroethane	5	5	20000	100000	1.00 U	0.60 U	0.60 U	50.0 U	200 U	500 U	50 U	50 U	500 U	200 U	500 U	50 U	50 U	200 U	200 U
1,2-Dichloropropane	5	3	50000	100000	1.00 U	1.0 U	1.0 U	50.0 U	200 U	500 U	50 U	50 U	500 U	200 U	500 U	50 U	50 U	200 U	200 U
1,3,5-Trimethylbenzene	NE	NE	NE	NE	1.00 U	1.0 U	1.0 U	50.0 U	200 U	500 U	60 U	60 U	500 U	200 U	500 U	60 U	60 U	200 U	200 U
1,3-Dichlorobenzene	100	6000	50000	100000	1.00 U	1.0 U	1.0 U	50.0 U	200 U	500 U	50 U	50 U	500 U	200 U	500 U	50 U	50 U	200 U	200 U
1,3-Dichloropropane	NE	NE	NE	NE	1.00 U	1.0 U	1.0 U	50.0 U	200 U	500 U	100 U	100 U	500 U	200 U	500 U	100 U	100 U	200 U	200 U
1,4-Dichlorobenzene	5	60	8000	80000	1.00 U	1.0 U	1.0 U	50.0 U	200 U	500 U	50 U	50 U	500 U	200 U	500 U	50 U	50 U	200 U	200 U
1,4-Dioxane	**0.3**	6000	50000	100000	20.0 UJ	40 U	100 U	1000 U	4000 U	10000 U	4000 U	10000 U	NS	4000 U	10000 U	4000 U	NS	4000 U	4000 U
2,2-Dichloropropane	NE	NE	NE	NE	1.00 U	1.0 U	1.0 U	50.0 U	200 UJ	500 UJ	100 U	100 U	500 U	200 UJ	500 U	100 U	100 U	200 U	200 UJ
2-Butanone	4000	50000	50000	100000	2.00 UJ	R	5.0 U	500 U	400 U	1000 U	R	500 U	5000 U	400 U	1000 U	R	500 U	2000 U	400 U
2-Chlorotoluene	NE	NE	NE	NE	1.00 U	1.0 U	1.0 U	50.0 U	200 U	500 U	100 U	100 U	500 U	200 U	500 U	100 U	100 U	200 U	200 U
2-Hexanone	NE	NE	NE	NE	2.00 UJ	5.0 U	5.0 U	500 U	400 U	1000 U	R	500 U	5000 U	400 U	1000 U	R	500 U	2000 U	400 U
2-Phenylbutane	NE	NE	NE	NE	1.00 U	1.0 U	1.0 U	50.0 U	200 U	500 U	100 U	100 U	500 U	200 U	500 U	100 U	100 U	200 U	200 U
4-Chlorotoluene	NE	NE	NE	NE	1.00 U	1.0 U	1.0 U	50.0 U	200 U	500 U	100 U	100 U	500 U	200 U	500 U	100 U	100 U	200 U	200 U
4-Methyl-2-Pentanone	350	50000	50000	100000	2.00 U	5.0 U	5.0 U	500 U	400 U	1000 U	R	500 U	5000 U	400 U	1000 U	R	500 U	2000 U	400 U
Acetone	6300	50000	50000	100000	10.0 U	R	25 UJ	500 U	2000 U	5000 U	R	2500 U	5000 U	2000 U	5000 UJ	R	2500 U	2000 U	2000 U
Benzene	5	1000	10000	100000	1.00 U	0.70 U	0.70 U	50.0 U	200 U	500 U	50 U	50 U	500 U	200 U	500 U	50 U	50 U	200 U	200 U
Bromobenzene	NE	NE	NE	NE	1.00 U	1.0 U	1.0 U	50.0 U	200 U	500 U	62 U	62 U	500 U	200 U	500 U	62 U	62 U	200 U	200 U
Bromochloromethane	NE	NE	NE	NE	1.00 U	1.0 U	1.0 U	50.0 U	200 U	500 U	83 U	83 U	500 U	200 U	500 U	83 U	83 U	200 U	200 U
Bromodichloromethane	3	6	50000	100000	0.50 U	0.50 U	0.50 U	25.0 U	100 U	250 U	50 U	50 U	250 U	100 U	250 U	50 U	50 U	100 U	100 U
Bromoform	4	700	50000	100000	1.00 U	R	1.0 U	50.0 U	200 UJ	500 U	50 U	50 U	500 U	200 UJ	500 U	50 U	50 U	200 U	200 UJ
Bromomethane	10	7	800	8000	2.00 UJ	1.0 U	1.0 UJ	100 U	400 U	1000 U	R	50 U	1000 U	400 U	1000 UJ	R	50 U	400 U	400 U
Carbon Disulfide	NE	NE	NE	NE	2.00 U	5.0 U	5.0 U	100 U	400 U	1000 UJ	500 U	500 U	1000 U	400 U	1000 U	500 U	500 U	400 U	400 U
Carbon Tetrachloride	5	2	5000	50000	1.00 U	1.0 U	1.0 U	50.0 U	200 U	500 U	50 U	50 U	500 U	200 U	500 U	50 U	50 U	200 U	200 U
Chlorobenzene	100	200	1000	10000	1.00 U	1.0 U	1.0 U	50.0 U	200 U	500 U	100 U	100 U	500 U	200 U	500 U	100 U	100 U	200 U	200 U
Chloroethane	NE	NE	NE	NE	2.00 U	1.0 U	1.0 UJ	100 U	400 U	1000 U	100 U	100 UJ	1000 U	400 U	1000 UJ	100 U	100 UJ	400 U	400 U
Chloroform	70	50	20000	100000	1.00 U	1.0 U	1.0 U	50.0 U	200 U	500 U	50 U	50 U	500 U	200 U	500 U	50 U	50 U	200 U	200 U
Chloromethane	NE	NE	NE	NE	2.00 U	1.0 U	1.0 U	100 UJ	400 U	1000 U	100 U	100 U	1000 UJ	400 U	1000 U	100 U	100 U	400 UJ	400 U
cis-1,2-Dichloroethene	**70**	**20**	50000	100000	**63.2**	**57**	**34**	50.0 U	**738**	**1280**	**1900**	**2200**	500 U	**298**	500 U	**840**	**1100**	200 U	**294**
cis-1,3-Dichloropropene	NE	NE	NE	NE	0.50 U	0.40 U	0.40 U	25.0 U	100 U	250 U	50 U	50 U	250 U	100 U	250 U	50 U	50 U	100 U	100 U
Cymene	NE	NE	NE	NE	1.00 U	1.0 U	1.0 U	50.0 U	200 U	500 U	100 U	100 U	500 U	200 U	500 U	100 U	100 U	200 U	200 U
Dibromochloromethane	2	20	50000	100000	0.50 U	0.50 U	0.50 U	25.0 U	100 U	250 U	50 U	50 U	250 U	100 U	250 U	50 U	50 U	100 U	100 U
Dibromomethane	NE	NE	NE	NE	1.00 U	1.0 U	1.0 U	50.0 U	200 U	500 U	50 U	50 U	500 U	200 U	500 U	50 U	50 U	200 U	200 U
Dichlorodifluoromethane (CFC-12)	NE	NE	NE	NE	2.00 U	1.0 U	1.0 U	100 U	400 UJ	1000 U	100 U	100 U	1000 U	400 UJ	1000 U	100 U	100 U	400 U	400 UJ
Diethyl Ether	NE	NE	NE	NE	1.00 U	1.0 U	1.0 U	50.0 U	200 U	500 U	100 U	100 U	500 U	200 U	500 U	100 U	100 U	200 U	200 U
Diisopropyl Ether	NE	NE	NE	NE	1.00 U	1.0 U	1.0 U	50.0 U	200 U	500 U	100 U	100 U	500 U	200 U	500 U	100 U	100 U	200 U	200 U
Ethyl Tertiary-Butyl Ether	NE	NE	NE	NE	1.00 U	1.0 U	1.0 U	50.0 UJ	200 UJ	500 U	100 U	100 U	500 UJ	200 UJ	500 U	100 U	100 U	200 UJ	200 UJ
Ethylbenzene	700	20000	5000	100000	1.00 U	1.0 U	1.0 U	50.0 U	200 U	500 U	100 U	100 U	500 U	200 U	500 U	100 U	100 U	200 U	200 U
Freon TF (Chlorinated fluorocarbon)	NE	NE	NE	NE	**2.04**	**2.2**	**1.4**	50.0 U	200 U	500 U	100 U	100 U	500 U	200 U	500 UJ	100 U	100 U	200 U	200 U
Hexachloro-1,3-Butadiene	0.6	50	3000	3000	0.50 U	0.40 U	0.40 U	25.0 U	100 UJ	250 U	50 U	50 U	250 U	100 UJ	250 U	50 U	50 U	100 U	100 UJ
Isopropylbenzene	NE	NE	NE	NE	1.00 U	1.0 U	1.0 U	50.0 U	200 U	500 U	100 U	100 U	500 U	200 U	500 U	100 U	100 U	200 U	200 U
M, P Xylenes	10000	3000	5000	100000	2.00 U	1.0 U	1.0 U	100 U	400 U	1000 U	100 U	100 U	1000 U	400 U	1000 U	100 U	100 U	400 U	400 U
Methyl Tert-Butyl Ether	NE	NE	NE	100000	1.00 U	1.0 U	1.0 U	50.0 UJ	200 UJ	500 U	70 U	70 U	500 UJ	200 UJ	500 U	70 U	70 U	200 UJ	200 UJ
Methylene Chloride	5	2000	50000	100000	2.00 U	1.0 U	1.0 UJ	100 U	400 U	1000 U	50 U	100 U	1000 U	400 U	1000 UJ	50 U	100 U	400 U	400 U
Naphthalene	140	700	20000	100000	2.00 U	1.0 U	1.0 U	50.0 U	200 U	1000 U	100 U	100 U	500 U	200 U	1000 U	100 U	100 U	200 U	200 U
N-Butylbenzene	NE	NE	NE	NE	1.00 U	1.0 U	1.0 U	50.0 U	200 U	500 U	100 U	100 U	500 U	200 U	500 U	100 U	100 U	200 U	200 U
N-Propylbenzene	NE	NE	NE	NE	1.00 U	1.0 U	1.0 U	50.0 U	200 U	500 U	100 U	100 U	500 U	200 U	500 U	100 U	100 U	200 U	200 U
o-Xylene	10000	3000	5000	100000	1.00 U	1.0 U	1.0 U	50.0 UJ	200 U	500 U	100 U	100 U	500 UJ	200 U	500 U	100 U	100 U	200 UJ	200 U
Styrene	100	100	6000	60000	1.00 U	1.0 U	1.0 U	50.0 U	200 U	500 U	100 U	100 U	500 U	200 U	500 U	100 U	100 U	200 U	200 U
Tert-Butylbenzene	NE	NE	NE	NE	1.00 U	1.0 U	1.0 U	50.0 U	200 U	500 U	100 U	100 U	500 U	200 U	500 U	100 U	100 U	200 U	200 U
Tertiary-Amyl Methyl Ether	NE	NE	NE	NE	1.00 U	1.0 U	1.0 U	50.0 U	200 UJ	500 U	100 U	100 U	500 U	200 UJ	500 U	100 U	100 U	200 U	200 UJ
Tetrachloroethene	**5**	**50**	**30000**	100000	**31.1**	**29**	**24 J+**	**1570**	**3600 J**	**5500**	**3500**	**4300 J+**	**19700**	**20200 J**	**18300**	**17000**	**15000 J+**	**7210**	**5400 J**
Tetrahydrofuran	NE	NE	NE	NE	2.00 U	2.5 U	2.5 U	100 U	400 U	1000 U	R	250 U	1000 U	400 U	1000 U	R	250 U	400 U	400 U
Toluene	**1000**	50000	40000	100000	1.00 U	1.0 U	1.0 U	50.0 U	200 U	500 U	100 U	100 U	500 U	200 U	500 U	100 U	100 U	200 U	200 U
Trans-1,2-Dichloroethene	**100**	**80**	50000	100000	**2.24**	**2.3**	**1.4**	50.0 U	200 U	500 U	**250**	**310**	500 U	200 U	500 U	**140**	**260**	200 U	200 U
Trans-1,3-Dichloropropene	NE	NE	NE	NE	0.50 U	0.40 U	0.40 U	25.0 UJ	100 UJ	250 U	50 U	50 U	250 UJ	100 UJ	250 U	50 U	50 U	100 UJ	100 UJ
Trichloroethene	**5**	**5**	**5000**	**50000**	**21.4**	**23**	**13**	**1550**	**9930**	**13900**	**10000**	**11000**	**15700**	**18000**	**19600**	**19000**	**16000**	**3690**	**5190**
Trichlorofluoromethane	NE	NE	NE	NE	1.00 U	1.0 U	1.0 U	50.0 U	200 U	500 U	100 U	100 U	500 U	200 U	500 U	100 U	100 U	200 U	200 U
Vinyl Chloride	**2**	**2**	50000	100000	1.00 U	1.0 U	1.0 U	50.0 U	200 U	500 U	**380**	**540**	500 U	200 U	500 UJ	**99**	**370**	200 U	200 U
Xylenes (Total)	10000	3000	5000	100000	2.00 U	1.0 U	1.0 U	100 U	400 U	1000 U	100 U	100 U	1000 U	400 U	1000 U	100 U	100 U	400 U	400 U

Notes:

ft = feet — U - Non-detect at laboratory detection limit

mg/l = miligrams per liter — J = Estimated Value, J+ = biased high, J- = biased low, R

µg/l = micrograms per liter — **Detects are bolded**

NE = not established — Criteria exceedances are highlighted

Table 5-7
Summary of 2016 - 2020 Groundwater Analytical Results for Volatile Organic Compounds
Former GE Facility, 50 Fordham Road, Wilmington, MA

				Location Group:	Building 1_TankF (continued)													
				Location ID:	AE28R-3	AE28R-3	AE28R-3	AE28R-4	AE28R-4	AE28R-4	AE28R-4	AE28R-4	AE29R-1	AE29R-1	AE29R-1	AE29R-1	AE29R-1	AE29R-3	AE29R-3
				Sample ID:	18A-AE28R3-091818-	19A-AE28R3-092319-	20A-AE28R3-091420-	16B-AE28R4-062316-	17A-AE28R4-100517-	18A-AE28R4-091818-	19A-AE28R4-092319-	20A-AE28R4-091420-	16B-AE29R1-062816-	17A-AE29R1-101717-	18A-AE29R1-091818-	19A-AE29R1-092419-	20A-AE29R1-092220-	16B-AE29R3-062816-	17A-AE29R3-101717-
				Sample Date:	9/18/2018	9/23/2019	9/14/2020	6/23/2016	10/5/2017	9/18/2018	9/23/2019	9/14/2020	6/28/2016	10/17/2017	9/18/2018	9/24/2019	9/22/2020	6/28/2016	10/17/2017
				Sample Type:	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
				Depth Interval:	98 - 108 ft	98-108 ft	98 - 108 ft	132 - 142 ft	132 - 142 ft	132 - 142 ft	132-142 ft	132 - 142 ft	37 - 44 ft	37 - 44 ft	37 - 44 ft	37-44 ft	37 - 44 ft	70 - 76 ft	70 - 76 ft
Analyte	**MCP Method 1 GW-1 Stds**	**MCP Method 1 GW-2 Stds**	**MCP Method 1 GW-3 Stds**	**Upper Concentration Limit (UCL)**															
Volatile Organic Compounds (µg/l)																			
1,1,1,2-Tetrachloroethane	5	10	50000	100000	100 U	50 U	50 U	200 U	100 UJ	1.00 U	50 U	50 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U
1,1,1-Trichloroethane	**200**	4000	20000	100000	100 U	100 U	100 U	200 U	100 UJ	**3.94**	100 U	100 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U
1,1,2,2-Tetrachloroethane	2	9	50000	100000	50.0 U	R	50 U	100 U	50.0 U	0.50 U	R	50 U	0.5 UJ	0.50 U	0.50 U	0.50 U	0.50 U	0.5 UJ	0.50 U
1,1,2-Trichloroethane	5	900	50000	100000	100 U	50 U	50 U	200 U	100 U	1.00 U	50 U	50 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U
1,1-Dichloroethane	**70**	2000	20000	100000	100 U	70 U	**140**	200 U	**100**	**77.1**	**72**	**78**	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	**3.6**	**10.8**
1,1-Dichloroethylene	**7**	**80**	30000	100000	100 U	50 U	50 U	200 U	100 U	**31.0**	50 U	50 U	1.0 U	1.00 UJ	1.00 U	1.0 U	1.0 U	**1.2**	**3.53 J**
1,1-Dichloropropene	NE	NE	NE	NE	100 U	100 U	100 U	200 U	100 U	1.00 U	100 U	100 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U
1,2,3-Trichlorobenzene	NE	NE	NE	NE	100 U	50 U	50 U	200 U	100 U	1.00 U	50 U	50 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U
1,2,3-Trichloropropane	NE	NE	NE	NE	100 U	50 U	50 U	200 U	100 U	1.00 U	50 U	50 U	1.0 U	1.00 U	1.00 U	1.0 U	0.50 U	1.0 U	1.00 U
1,2,4-Trichlorobenzene	70	200	50000	100000	100 U	70 U	70 U	200 U	100 U	1.00 U	70 U	70 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U
1,2,4-Trimethylbenzene	NE	NE	NE	NE	100 U	56 U	56 U	200 U	100 U	**3.53**	56 U	56 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U
1,2-Dibromo-3-Chloropropane (DBC	NE	NE	NE	NE	200 U	R	50 UJ	400 U	200 UJ	2.00 U	R	50 U	2.0 U	2.00 U	2.00 U	1.0 U	0.50 U	2.0 U	2.00 U
1,2-Dibromoethane	0.02	2	50000	100000	50.0 U	50 U	50 U	100 U	50.0 U	0.50 U	50 U	50 U	0.5 U	0.50 U	0.50 U	0.50 U	0.50 U	0.5 U	0.50 U
1,2-Dichlorobenzene	600	8000	2000	80000	100 U	100 U	100 U	200 U	100 U	1.00 U	100 U	100 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U
1,2-Dichloroethane	5	5	20000	100000	100 U	50 U	50 U	200 U	100 U	1.00 U	50 U	50 U	1.0 U	1.00 U	1.00 U	0.60 U	0.60 U	1.0 U	1.00 U
1,2-Dichloropropane	5	3	50000	100000	100 U	50 U	50 U	200 U	100 U	1.00 U	50 U	50 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U
1,3,5-Trimethylbenzene	NE	NE	NE	NE	100 U	60 U	60 U	200 U	100 U	**1.94**	60 U	60 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U
1,3-Dichlorobenzene	100	6000	50000	100000	100 U	50 U	50 U	200 U	100 U	1.00 U	50 U	50 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U
1,3-Dichloropropane	NE	NE	NE	NE	100 U	100 U	100 U	200 U	100 U	1.00 U	100 U	100 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U
1,4-Dichlorobenzene	5	60	8000	80000	100 U	50 U	50 U	200 U	100 U	1.00 U	50 U	50 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U
1,4-Dioxane	**0.3**	6000	50000	100000	2000 U	4000 U	NS	4000 U	2000 U	20.0 U	4000 U	10000 U	20.0 U	20.0 U	20.0 U	100 U	100 U	20.0 U	**23.3**
2,2-Dichloropropane	NE	NE	NE	NE	100 UJ	100 U	100 U	200 U	100 U	1.00 U	100 U	100 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U
2-Butanone	4000	50000	50000	100000	200 U	R	500 U	2000 U	200 U	2.00 U	R	500 U	10.0 U	2.00 U	2.00 U	5.0 U	5.0 U	10.0 U	2.00 U
2-Chlorotoluene	NE	NE	NE	NE	100 U	100 U	100 U	200 U	100 U	1.00 U	100 U	100 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U
2-Hexanone	NE	NE	NE	NE	200 U	R	500 U	2000 U	200 U	2.00 U	R	500 U	10.0 U	2.00 U	2.00 U	5.0 U	5.0 U	10.0 U	2.00 U
2-Phenylbutane	NE	NE	NE	NE	100 U	100 U	100 U	200 U	100 U	1.00 U	100 U	100 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U
4-Chlorotoluene	NE	NE	NE	NE	100 U	100 U	100 U	200 U	100 U	1.00 U	100 U	100 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U
4-Methyl-2-Pentanone	350	50000	50000	100000	200 U	R	500 U	2000 U	200 U	2.00 U	R	500 U	10.0 U	2.00 U	2.00 U	5.0 U	5.0 U	10.0 U	2.00 U
Acetone	6300	50000	50000	100000	1000 U	R	2500 UJ	2000 U	1000 U	10.0 U	R	2500 U	10.0 U	10.0 U	10.0 U	25 U	25 U	10.0 U	10.0 U
Benzene	5	1000	10000	100000	100 U	50 U	50 U	200 U	100 U	1.00 U	50 U	50 U	1.0 U	1.00 U	1.00 U	0.70 U	0.70 U	1.0 U	1.00 U
Bromobenzene	NE	NE	NE	NE	100 U	62 U	62 U	200 U	100 U	1.00 U	62 U	62 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U
Bromochloromethane	NE	NE	NE	NE	100 U	83 U	83 U	200 U	100 U	1.00 U	83 U	83 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U
Bromodichloromethane	3	6	50000	100000	50.0 U	50 U	50 U	100 U	50.0 U	0.50 U	50 U	50 U	0.5 U	0.50 U	0.50 U	0.50 U	0.50 U	0.5 U	0.50 U
Bromoform	4	700	50000	100000	100 U	50 UJ	50 U	200 U	100 UJ	1.00 U	50 UJ	50 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U
Bromomethane	10	7	800	8000	200 U	R	50 UJ	400 U	200 U	2.00 U	R	50 U	2.0 U	2.00 U	2.00 U	1.0 U	1.0 U	2.0 U	2.00 U
Carbon Disulfide	NE	NE	NE	NE	200 UJ	500 U	500 U	400 U	200 UJ	2.00 U	500 U	500 U	2.0 U	2.00 UJ	2.00 U	5.0 U	5.0 U	2.0 U	2.00 UJ
Carbon Tetrachloride	5	2	5000	50000	100 U	50 U	50 U	200 U	100 UJ	1.00 U	50 U	50 U	1.0 U	1.00 UJ	1.00 U	1.0 U	1.0 U	1.0 U	1.00 UJ
Chlorobenzene	100	200	1000	10000	100 U	100 U	100 U	200 U	100 U	**1.41**	100 U	100 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U
Chloroethane	NE	NE	NE	NE	200 U	100 U	100 UJ	400 U	200 U	2.00 U	100 U	100 UJ	2.0 U	2.00 U	2.00 U	1.0 U	1.0 UJ	2.0 U	2.00 U
Chloroform	70	50	20000	100000	100 U	50 U	50 U	200 U	100 U	1.00 U	50 U	50 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U
Chloromethane	NE	NE	NE	NE	200 U	100 U	100 U	400 UJ	200 U	2.00 U	100 U	100 U	2.0 UJ	2.00 U	2.00 U	1.0 U	1.0 U	2.0 UJ	2.00 U
cis-1,2-Dichloroethene	**70**	**20**	50000	100000	**462**	**730**	**1500**	200 U	**311**	**484**	**540**	**640**	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	**5.7**	**47.5**
cis-1,3-Dichloropropene	NE	NE	NE	NE	50.0 U	50 U	50 U	100 U	50.0 U	0.50 U	50 U	50 U	0.5 U	0.50 U	0.50 U	0.40 U	0.40 U	0.5 U	0.50 U
Cymene	NE	NE	NE	NE	100 U	100 U	100 U	200 U	100 U	1.00 U	100 U	100 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U
Dibromochloromethane	2	20	50000	100000	50.0 U	50 U	50 U	100 U	50.0 UJ	0.50 U	50 U	50 U	0.5 U	0.50 U	0.50 U	0.50 U	0.50 U	0.5 U	0.50 U
Dibromomethane	NE	NE	NE	NE	100 U	50 U	50 U	200 U	100 U	1.00 U	50 U	50 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U
Dichlorodifluoromethane (CFC-12)	NE	NE	NE	NE	200 U	100 U	100 U	400 U	200 U	2.00 UJ	100 U	100 U	2.0 U	2.00 U	2.00 U	1.0 U	1.0 U	2.0 U	2.00 U
Diethyl Ether	NE	NE	NE	NE	100 U	100 U	100 U	200 U	100 U	1.00 U	100 U	100 UJ	1.0 UJ	1.00 U	1.00 U	1.0 U	1.0 U	1.0 UJ	1.00 U
Diisopropyl Ether	NE	NE	NE	NE	100 U	100 U	100 U	200 U	100 U	1.00 U	100 U	100 UJ	1.0 UJ	1.00 U	1.00 U	1.0 U	1.0 U	1.0 UJ	1.00 U
Ethyl Tertiary-Butyl Ether	NE	NE	NE	NE	100 U	100 U	100 U	200 UJ	100 U	1.00 U	100 U	100 U	1.0 UJ	1.00 U	1.00 U	1.0 U	1.0 U	1.0 UJ	1.00 U
Ethylbenzene	700	20000	5000	100000	100 U	100 U	100 U	200 U	100 U	**1.11**	100 U	100 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U
Freon TF (Chlorinated fluorocarbon)	NE	NE	NE	NE	100 U	100 U	100 U	200 U	100 UJ	1.00 U	100 U	100 U	1.0 U	1.00 UJ	1.00 U	1.0 U	1.0 U	1.0 U	1.00 UJ
Hexachloro-1,3-Butadiene	0.6	50	3000	3000	50.0 U	50 U	50 U	100 U	50.0 U	0.50 U	50 U	50 U	0.5 U	0.50 UJ	0.50 U	0.40 U	0.40 U	0.5 U	0.50 UJ
Isopropylbenzene	NE	NE	NE	NE	100 U	100 U	100 U	200 U	100 U	1.00 U	100 U	100 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U
M, P Xylenes	10000	3000	5000	100000	200 U	100 U	100 U	400 U	200 U	2.00 U	100 U	100 U	2.0 U	2.00 U	2.00 U	1.0 U	1.0 U	2.0 U	2.00 U
Methyl Tert-Butyl Ether	NE	NE	NE	100000	100 U	70 U	70 U	200 UJ	100 U	1.00 U	70 U	70 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U
Methylene Chloride	5	2000	50000	100000	200 U	50 U	100 UJ	400 U	200 UJ	2.00 U	50 U	100 U	2.0 U	2.00 UJ	2.00 U	1.0 U	1.0 U	2.0 U	2.00 UJ
Naphthalene	140	700	20000	100000	200 U	100 U	100 U	200 U	100 U	2.00 U	100 U	100 U	1.0 UJ	1.00 U	2.00 U	1.0 U	1.0 U	1.0 UJ	1.00 U
N-Butylbenzene	NE	NE	NE	NE	100 U	100 U	100 U	200 U	100 U	1.00 U	100 U	100 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U
N-Propylbenzene	NE	NE	NE	NE	100 U	100 U	100 U	200 U	100 U	1.00 U	100 U	100 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U
o-Xylene	10000	3000	5000	100000	100 U	100 U	100 U	200 UJ	100 U	1.00 U	100 U	100 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U
Styrene	100	100	6000	60000	100 U	100 U	100 U	200 U	100 U	1.00 U	100 U	100 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U
Tert-Butylbenzene	NE	NE	NE	NE	100 U	100 U	100 U	200 U	100 U	1.00 U	100 U	100 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U
Tertiary-Amyl Methyl Ether	NE	NE	NE	NE	100 U	100 U	100 U	200 U	100 U	1.00 U	100 U	100 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U
Tetrachloroethene	**5**	**50**	**30000**	100000	**4200**	**3600**	**6900 J+**	**6960**	**6910**	**5110 J-**	**7000**	**5900**	1.0 U	1.00 U	1.00 U	1.0 U	**3.6 J+**	1.0 U	1.00 U
Tetrahydrofuran	NE	NE	NE	NE	200 U	R	250 U	400 U	200 U	2.00 U	R	250 U	2.0 U	2.00 U	2.00 UJ	2.5 U	2.5 U	2.0 U	2.00 U
Toluene	**1000**	50000	40000	100000	100 U	100 U	100 U	200 U	100 U	**5.45**	100 U	100 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U
Trans-1,2-Dichloroethene	**100**	**80**	50000	100000	100 U	**120**	**280**	200 U	100 U	**61.3**	80 U	**120**	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	**1.12**
Trans-1,3-Dichloropropene	NE	NE	NE	NE	50.0 U	50 U	50 U	100 UJ	50.0 U	0.50 U	50 U	50 U	0.5 U	0.50 U	0.50 U	0.40 U	0.40 U	0.5 U	0.50 U
Trichloroethene	**5**	**5**	**5000**	**50000**	**6220**	**5100**	**9000**	**3730**	**6060**	**5550 J-**	**7300**	**6500**	**4.2**	**2.75**	1.00 U	**2.4**	**4.0**	**16.7**	**47.9**
Trichlorofluoromethane	NE	NE	NE	NE	100 U	100 U	100 U	200 U	100 U	1.00 UJ	100 U	100 U	1.0 UJ	1.00 U	1.00 U	1.0 U	1.0 U	1.0 UJ	1.00 U
Vinyl Chloride	**2**	**2**	50000	100000	100 U	50 U	**290**	200 U	100 U	1.00 UJ	50 U	**76**	1.0 UJ	1.00 U	1.00 U	1.0 U	1.0 U	1.0 UJ	1.00 U
Xylenes (Total)	10000	3000	5000	100000	200 U	100 U	100 U	400 U	200 U	2.00 U	100 U	100 U	2.0 U	2.00 U	2.00 U	1.0 U	1.0 U	2.0 U	2.00 U

Notes:

ft = feet

mg/l = miligrams per liter

µg/l = micrograms per liter

NE = not established

U - Non-detect at laboratory detection limit

J = Estimated Value, J+ = biased high, J- = biased low, R

Detects are bolded

Criteria exceedances are highlighted

Table 5-7
Summary of 2016 - 2020 Groundwater Analytical Results for Volatile Organic Compounds
Former GE Facility, 50 Fordham Road, Wilmington, MA

				Location Group:	Building 1_TankF (continued)													
				Location ID:	AE29R-3	AE29R-3	AE29R-3	AE29R-5	AE29R-5	AE29R-5	AE29R-5	AE29R-5	AE29R-6	AE29R-6	AE29R-6	AE29R-6	AE29R-6	GZA-101R	GZA-101R
				Sample ID:	18A-AE29R3-091818-	19A-AE29R3-092419-	20A-AE29R3-092220-	16B-AE29R5-062816-	17A-AE29R5-101717-	18A-AE29R5-091818-	19A-AE29R5-092419-	20A-AE29R5-092220-	16B-AE29R6-062816-	17A-AE29R6-101717-	18A-AE29R6-091818-	19A-AE29R6-092419-	20A-AE29R6-092220-	16A-GZA101R-061416-	7A-GZA101R-101017-
				Sample Date:	9/18/2018	9/24/2019	9/22/2020	6/28/2016	10/17/2017	9/18/2018	9/24/2019	9/22/2020	6/28/2016	10/17/2017	9/18/2018	9/24/2019	9/22/2020	6/14/2016	10/10/2017
				Sample Type:	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
				Depth Interval:	70 - 76 ft	70-76 ft	70 - 76 ft	113 - 119 ft	113 - 119 ft	113 - 119 ft	113-119 ft	113 - 119 ft	140 - 146 ft	140 - 146 ft	140 - 146 ft	140-146 ft	140 - 146 ft	36.5 - 38 ft	36.5 - 38 ft
Analyte	**MCP Method 1 GW-1 Stds**	**MCP Method 1 GW-2 Stds**	**MCP Method 1 GW-3 Stds**	**Upper Concentration Limit (UCL)**															
Volatile Organic Compounds (µg/l)																			
1,1,1,2-Tetrachloroethane	5	10	50000	100000	1.00 U	1.0 U	1.0 U	1.0 U	5.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	5.00 U	5.0 U	2.0 U	1.0 U	10.0 UJ
1,1,1-Trichloroethane	**200**	4000	20000	100000	1.00 U	1.0 U	1.0 U	1.0 U	5.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	5.00 U	5.0 U	2.0 U	1.0 U	10.0 UJ
1,1,2,2-Tetrachloroethane	2	9	50000	100000	0.50 U	0.50 U	0.50 U	0.5 UJ	2.50 U	0.50 U	0.50 U	0.50 U	0.5 UJ	0.50 U	2.50 U	2.5 U	1.0 U	0.5 U	5.00 U
1,1,2-Trichloroethane	5	900	50000	100000	1.00 U	1.0 U	1.0 U	1.0 U	5.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	5.00 U	5.0 U	2.0 U	1.0 U	10.0 U
1,1-Dichloroethane	**70**	2000	20000	100000	**3.81**	**6.3**	**5.2**	**10.1**	**37.2**	**33.1**	**34**	**36**	**8.3**	**89.0 J**	**60.6**	**56**	**47**	1.0 U	10.0 U
1,1-Dichloroethylene	**7**	**80**	30000	100000	1.00 U	**1.7**	**1.2**	**2.4**	**8.45 J**	**6.06**	**7.5**	**7.5**	**2.0**	**19.6**	**13.3 J**	**13**	**12**	1.0 U	10.0 U
1,1-Dichloropropene	NE	NE	NE	NE	1.00 U	1.0 U	1.0 U	1.0 U	5.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	5.00 U	5.0 U	2.0 U	1.0 U	10.0 U
1,2,3-Trichlorobenzene	NE	NE	NE	NE	1.00 U	1.0 U	1.0 U	1.0 U	5.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	5.00 U	5.0 U	2.0 U	1.0 U	10.0 U
1,2,3-Trichloropropane	NE	NE	NE	NE	1.00 U	0.50 U	0.50 U	1.0 U	5.00 U	1.00 U	0.50 U	0.50 U	1.0 U	1.00 U	5.00 U	5.0 U	1.0 U	1.0 U	10.0 U
1,2,4-Trichlorobenzene	70	200	50000	100000	1.00 U	1.0 U	1.0 U	1.0 U	5.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	5.00 U	5.0 U	2.0 U	1.0 U	10.0 U
1,2,4-Trimethylbenzene	NE	NE	NE	NE	1.00 U	1.0 U	1.0 U	1.0 U	5.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	5.00 U	5.0 U	2.0 U	1.0 U	10.0 U
1,2-Dibromo-3-Chloropropane (DBC	NE	NE	NE	NE	2.00 U	0.50 U	0.50 U	2.0 U	10.0 U	2.00 U	0.50 U	0.50 U	2.0 U	2.00 U	10.0 U	5.0 U	1.0 U	2.0 UJ	20.0 UJ
1,2-Dibromoethane	0.02	2	50000	100000	0.50 U	0.50 U	0.50 U	0.5 U	2.50 U	0.50 U	0.50 U	0.50 U	0.5 U	0.50 U	2.50 U	2.5 U	1.0 U	0.5 U	5.00 U
1,2-Dichlorobenzene	600	8000	2000	80000	1.00 U	1.0 U	1.0 U	1.0 U	5.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	5.00 U	5.0 U	2.0 U	1.0 U	10.0 U
1,2-Dichloroethane	5	5	20000	100000	1.00 U	0.60 U	0.60 U	1.0 U	5.00 U	1.00 U	0.60 U	0.60 U	1.0 U	1.00 UJ	5.00 U	3.0 U	1.2 U	1.0 U	10.0 U
1,2-Dichloropropane	5	3	50000	100000	1.00 U	1.0 U	1.0 U	1.0 U	5.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	5.00 U	3.0 U	2.0 U	1.0 U	10.0 U
1,3,5-Trimethylbenzene	NE	NE	NE	NE	1.00 U	1.0 U	1.0 U	1.0 U	5.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	5.00 U	5.0 U	2.0 U	1.0 U	10.0 U
1,3-Dichlorobenzene	100	6000	50000	100000	1.00 U	1.0 U	1.0 U	1.0 U	5.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	5.00 U	5.0 U	2.0 U	1.0 U	10.0 U
1,3-Dichloropropane	NE	NE	NE	NE	1.00 U	1.0 U	1.0 U	1.0 U	5.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	5.00 U	5.0 U	2.0 U	1.0 U	10.0 U
1,4-Dichlorobenzene	5	60	8000	80000	1.00 U	1.0 U	1.0 U	1.0 U	5.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	5.00 U	5.0 U	2.0 U	1.0 U	10.0 U
1,4-Dioxane	**0.3**	6000	50000	100000	20.0 U	10 U	100 U	20.0 U	100 U	20.0 U	10 U	100 U	NS	**50.8**	100 U	500 U	200 U	20.0 U	200 U
2,2-Dichloropropane	NE	NE	NE	NE	1.00 U	1.0 U	1.0 U	1.0 U	5.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 UJ	5.00 U	5.0 U	2.0 U	1.0 U	10.0 UJ
2-Butanone	4000	50000	50000	100000	**2.89**	5.0 UJ	5.0 U	10.0 U	10.0 U	2.00 U	5.0 UJ	5.0 U	10.0 U	2.00 U	10.0 U	25 U	10 U	10.0 U	20.0 U
2-Chlorotoluene	NE	NE	NE	NE	1.00 U	1.0 U	1.0 U	1.0 U	5.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	5.00 U	5.0 U	2.0 U	1.0 U	10.0 U
2-Hexanone	NE	NE	NE	NE	2.00 U	5.0 U	5.0 U	10.0 U	10.0 U	2.00 U	5.0 U	5.0 U	10.0 U	2.00 U	10.0 U	25 U	10 U	10.0 U	20.0 U
2-Phenylbutane	NE	NE	NE	NE	1.00 U	1.0 U	1.0 U	1.0 U	5.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	5.00 U	5.0 U	2.0 U	1.0 U	10.0 U
4-Chlorotoluene	NE	NE	NE	NE	1.00 U	1.0 U	1.0 U	1.0 U	5.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	5.00 U	5.0 U	2.0 U	1.0 U	10.0 U
4-Methyl-2-Pentanone	350	50000	50000	100000	2.00 U	5.0 U	5.0 U	10.0 U	10.0 U	2.00 U	5.0 U	5.0 U	10.0 U	2.00 U	10.0 U	25 U	10 U	10.0 U	20.0 U
Acetone	6300	50000	50000	100000	10.0 U	25 U	25 U	10.0 U	50.0 U	10.0 U	25 U	25 U	10.0 U	10.0 U	50.0 UJ	130 U	50 U	10.0 U	100 U
Benzene	5	1000	10000	100000	1.00 U	0.70 U	0.70 U	1.0 U	5.00 U	1.00 U	0.70 U	0.70 U	1.0 U	1.00 U	5.00 U	3.5 U	1.4 U	1.0 U	10.0 U
Bromobenzene	NE	NE	NE	NE	1.00 U	1.0 U	1.0 U	1.0 U	5.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	5.00 U	5.0 U	2.0 U	1.0 U	10.0 U
Bromochloromethane	NE	NE	NE	NE	1.00 U	1.0 U	1.0 U	1.0 U	5.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	5.00 U	5.0 U	2.0 U	1.0 U	10.0 U
Bromodichloromethane	3	6	50000	100000	0.50 U	0.50 U	0.50 U	0.5 U	2.50 U	0.50 U	0.50 U	0.50 U	0.5 U	0.50 U	2.50 U	2.5 U	1.0 U	0.5 U	5.00 UJ
Bromoform	4	700	50000	100000	1.00 U	1.0 U	1.0 U	1.0 U	5.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	5.00 U	4.0 U	2.0 U	1.0 U	10.0 UJ
Bromomethane	10	7	800	8000	2.00 U	1.0 U	1.0 U	2.0 U	10.0 U	2.00 U	1.0 U	1.0 U	2.0 U	2.00 UJ	10.0 UJ	5.0 U	2.0 U	2.0 U	20.0 U
Carbon Disulfide	NE	NE	NE	NE	2.00 U	5.0 U	5.0 U	2.0 U	10.0 U	2.00 U	5.0 U	5.0 U	2.0 U	2.00 U	10.0 U	25 U	10 U	2.0 U	20.0 U
Carbon Tetrachloride	5	2	5000	50000	1.00 U	1.0 U	1.0 U	1.0 U	5.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 UJ	5.00 U	2.5 U	2.0 U	1.0 U	10.0 UJ
Chlorobenzene	100	200	1000	10000	1.00 U	1.0 U	1.0 U	1.0 U	5.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	5.00 U	5.0 U	2.0 U	1.0 U	10.0 U
Chloroethane	NE	NE	NE	NE	2.00 U	1.0 UJ	1.0 UJ	2.0 U	10.0 U	2.00 U	1.0 UJ	1.0 UJ	2.0 U	2.00 U	10.0 UJ	5.0 U	2.0 U	2.0 U	20.0 U
Chloroform	70	50	20000	100000	1.00 U	1.0 U	1.0 U	1.0 U	5.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	5.00 U	5.0 U	2.0 U	1.0 U	10.0 U
Chloromethane	NE	NE	NE	NE	2.00 U	1.0 U	1.0 U	2.0 UJ	10.0 U	2.00 U	1.0 U	1.0 U	2.0 UJ	2.00 UJ	10.0 U	5.0 U	2.0 U	2.0 U	20.0 U
cis-1,2-Dichloroethene	**70**	**20**	50000	100000	**21.2**	**36**	**31**	**20.7**	**212**	**224**	**190**	**220**	**27.8**	**325**	**349**	**320**	**320**	**4.5**	10.0 U
cis-1,3-Dichloropropene	NE	NE	NE	NE	0.50 U	0.40 U	0.40 U	0.5 U	2.50 U	0.50 U	0.40 U	0.40 U	0.5 U	0.50 U	2.50 U	2.5 U	1.0 U	0.5 UJ	5.00 U
Cymene	NE	NE	NE	NE	1.00 U	1.0 U	1.0 U	1.0 U	5.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	5.00 U	5.0 U	2.0 U	1.0 U	10.0 U
Dibromochloromethane	2	20	50000	100000	0.50 U	0.50 U	0.50 U	0.5 U	2.50 U	0.50 U	0.50 U	0.50 U	0.5 U	0.50 U	2.50 U	2.5 U	1.0 U	0.5 U	5.00 UJ
Dibromomethane	NE	NE	NE	NE	1.00 U	1.0 U	1.0 U	1.0 U	5.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	5.00 U	5.0 U	2.0 U	1.0 U	10.0 U
Dichlorodifluoromethane (CFC-12)	NE	NE	NE	NE	2.00 UJ	1.0 U	1.0 U	2.0 U	10.0 U	2.00 UJ	1.0 U	1.0 U	2.0 U	2.00 U	10.0 U	5.0 U	2.0 UJ	2.0 U	20.0 U
Diethyl Ether	NE	NE	NE	NE	1.00 U	1.0 U	1.0 U	1.0 UJ	5.00 U	1.00 U	1.0 U	1.0 U	1.0 UJ	1.00 U	5.00 U	5.0 U	2.0 U	1.0 U	10.0 U
Diisopropyl Ether	NE	NE	NE	NE	1.00 U	1.0 U	1.0 U	1.0 UJ	5.00 U	1.00 U	1.0 U	1.0 U	1.0 UJ	1.00 U	5.00 U	5.0 U	2.0 U	1.0 U	10.0 U
Ethyl Tertiary-Butyl Ether	NE	NE	NE	NE	1.00 U	1.0 U	1.0 U	1.0 UJ	5.00 U	1.00 U	1.0 U	1.0 U	1.0 UJ	1.00 U	5.00 U	5.0 U	2.0 U	1.0 U	10.0 UJ
Ethylbenzene	700	20000	5000	100000	1.00 U	1.0 U	1.0 U	1.0 U	5.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	5.00 U	5.0 U	2.0 U	1.0 U	10.0 U
Freon TF (Chlorinated fluorocarbon)	NE	NE	NE	NE	1.00 U	1.0 U	1.0 U	1.0 U	5.00 UJ	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	5.00 UJ	5.0 U	2.0 UJ	1.0 U	10.0 U
Hexachloro-1,3-Butadiene	0.6	50	3000	3000	0.50 U	0.40 U	0.40 U	0.5 U	2.50 U	0.50 U	0.40 U	0.40 U	0.5 U	0.50 U	2.50 U	2.5 U	1.0 U	0.5 U	5.00 U
Isopropylbenzene	NE	NE	NE	NE	1.00 U	1.0 U	1.0 U	1.0 U	5.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	5.00 U	5.0 U	2.0 U	1.0 U	10.0 U
M, P Xylenes	10000	3000	5000	100000	2.00 U	1.0 U	1.0 U	2.0 U	10.0 U	2.00 U	1.0 U	1.0 U	2.0 U	2.00 U	10.0 U	5.0 U	2.0 U	2.0 U	20.0 U
Methyl Tert-Butyl Ether	NE	NE	NE	100000	1.00 U	1.0 U	1.0 U	1.0 U	5.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	5.00 U	5.0 U	2.0 U	1.0 U	10.0 UJ
Methylene Chloride	5	2000	50000	100000	2.00 U	1.0 UJ	1.0 U	2.0 U	10.0 U	2.00 U	1.0 UJ	1.0 U	2.0 U	2.00 U	10.0 UJ	5.0 U	2.0 U	2.0 U	20.0 U
Naphthalene	140	700	20000	100000	2.00 U	1.0 U	1.0 U	1.0 UJ	5.00 U	2.00 U	1.0 U	1.0 U	1.0 UJ	1.00 U	10.0 U	5.0 U	2.0 U	1.0 UJ	10.0 U
N-Butylbenzene	NE	NE	NE	NE	1.00 U	1.0 U	1.0 U	1.0 U	5.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	5.00 U	5.0 U	2.0 U	1.0 U	10.0 U
N-Propylbenzene	NE	NE	NE	NE	1.00 U	1.0 U	1.0 U	1.0 U	5.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	5.00 U	5.0 U	2.0 U	1.0 U	10.0 U
o-Xylene	10000	3000	5000	100000	1.00 U	1.0 U	1.0 U	1.0 U	5.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	5.00 U	5.0 U	2.0 U	1.0 U	10.0 U
Styrene	100	100	6000	60000	1.00 U	1.0 U	1.0 U	1.0 U	5.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	5.00 U	5.0 U	2.0 U	1.0 U	10.0 U
Tert-Butylbenzene	NE	NE	NE	NE	1.00 U	1.0 U	1.0 U	1.0 U	5.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	5.00 U	5.0 U	2.0 U	1.0 U	10.0 U
Tertiary-Amyl Methyl Ether	NE	NE	NE	NE	1.00 U	1.0 U	1.0 U	1.0 U	5.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	5.00 U	5.0 U	2.0 U	1.0 U	10.0 UJ
Tetrachloroethene	**5**	**50**	**30000**	100000	**5.38**	1.0 U	R	1.0 U	5.00 U	**3.17**	1.0 U	R	1.0 U	1.00 U	5.00 U	5.0 U	R	**441**	**356**
Tetrahydrofuran	NE	NE	NE	NE	2.00 U	2.5 UJ	2.5 U	2.0 U	10.0 U	2.00 U	2.5 UJ	2.5 U	2.0 U	2.00 U	10.0 U	13 U	5.0 U	2.0 U	20.0 U
Toluene	**1000**	50000	40000	100000	1.00 U	1.0 U	1.0 U	1.0 U	5.00 U	1.00 U	1.0 U	1.0 U	**7.8**	**1.80**	5.00 U	5.0 U	2.0 U	1.0 U	10.0 U
Trans-1,2-Dichloroethene	**100**	**80**	50000	100000	1.00 U	1.0 U	**1.0**	1.0 U	**5.95**	**5.25**	**5.8**	**6.5**	**1.5**	**23.8 J**	**17.2**	**19**	**19**	1.0 U	10.0 U
Trans-1,3-Dichloropropene	NE	NE	NE	NE	0.50 U	0.40 U	0.40 U	0.5 U	2.50 U	0.50 U	0.40 U	0.40 U	0.5 U	0.50 U	2.50 U	2.5 U	1.0 U	0.5 UJ	5.00 UJ
Trichloroethene	**5**	**5**	**5000**	**50000**	**17.1**	**21**	**8.8**	**20.5**	**22.2**	**13.3**	**41**	**33**	**16.0**	**146**	**90.9**	**85**	**120**	**186**	**176**
Trichlorofluoromethane	NE	NE	NE	NE	1.00 UJ	1.0 U	1.0 U	1.0 UJ	5.00 U	1.00 UJ	1.0 U	1.0 U	1.0 UJ	1.00 UJ	5.00 U	5.0 U	2.0 UJ	1.0 U	10.0 U
Vinyl Chloride	**2**	**2**	50000	100000	1.00 UJ	1.0 U	1.0 U	1.0 UJ	5.00 U	1.00 UJ	1.0 U	1.0 U	1.0 UJ	**1.78**	5.00 UJ	2.5 U	2.0 U	1.0 UJ	10.0 U
Xylenes (Total)	10000	3000	5000	100000	2.00 U	1.0 U	1.0 U	2.0 U	10.0 U	2.00 U	1.0 U	1.0 U	2.0 U	2.00 U	10.0 U	5.0 U	2.0 U	2.0 U	20.0 U

Notes:

ft = feet

mg/l = miligrams per liter

µg/l = micrograms per liter

NE = not established

U - Non-detect at laboratory detection limit

J = Estimated Value, J+ = biased high, J- = biased low, R

Detects are bolded

Criteria exceedances are highlighted

Table 5-7
Summary of 2016 - 2020 Groundwater Analytical Results for Volatile Organic Compounds
Former GE Facility, 50 Fordham Road, Wilmington, MA

				Location Group:	Building 1_TankF (continued)								EPL						
				Location ID:	GZA-101R	GZA-101R	GZA-101R	TRC-201R	TRC-201R	TRC-201R	TRC-201R	TRC-201R	AE03	AE03	AE03	AE03	AE03	AE03	AE03
				Sample ID:	8A-GZA101R-091818-	9A-GZA101R-092619-	0A-GZA101R-092420-	6A-TRC201R-062816-	7A-TRC201R-100617-	8A-TRC201R-092618-	9A-TRC201R-092519-	0A-TRC201R-092220-	16A-AE03-062816-1	16A-AE03-062816-2	17A-AE03-100917-1	18A-AE03-092418-1	18A-AE03-092418-2	19A-AE03-091219-1	19A-AE03-091219-2
				Sample Date:	9/18/2018	9/26/2019	9/24/2020	6/28/2016	10/6/2017	9/26/2018	9/25/2019	9/22/2020	6/28/2016	6/28/2016	10/9/2017	9/24/2018	9/24/2018	9/12/2019	9/12/2019
				Sample Type:	N	N	N	N	N	N	N	N	N	FD	N	N	FD	N	FD
				Depth Interval:	36.5 - 38 ft	36.5-38 ft	36.5 - 38 ft	38 - 161.3 ft	38 - 161.3 ft	38 - 161.3 ft	38 - 161.3 ft	38 - 161 ft	3 - 13 ft	3 - 13 ft	3 - 13 ft	3 - 13 ft	3 - 13 ft	3-13 ft	3-13 ft
Analyte	**MCP Method 1 GW-1 Stds**	**MCP Method 1 GW-2 Stds**	**MCP Method 1 GW-3 Stds**	**Upper Concentration Limit (UCL)**															
Volatile Organic Compounds (µg/l)																			
1,1,1,2-Tetrachloroethane	5	10	50000	100000	5.00 U	5.0 U	1.0 U	5.0 U	5.00 U	5.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 UJ	1.00 U	1.00 U	1.0 U	1.0 U
1,1,1-Trichloroethane	**200**	4000	20000	100000	5.00 U	5.0 U	1.0 U	5.0 U	5.00 U	5.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U
1,1,2,2-Tetrachloroethane	2	9	50000	100000	2.50 U	R	0.50 U	2.5 U	2.50 U	2.50 U	R	0.50 U	0.5 UJ	0.5 UJ	0.50 U	0.50 U	0.50 U	R	R
1,1,2-Trichloroethane	5	900	50000	100000	5.00 U	5.0 U	1.0 U	5.0 U	5.00 U	5.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U
1,1-Dichloroethane	**70**	2000	20000	100000	5.00 U	5.0 U	1.0 U	**95.3**	**67.7**	**73.2**	**77**	**73**	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U
1,1-Dichloroethylene	**7**	**80**	30000	100000	5.00 UJ	5.0 U	1.0 U	**23.4**	**16.9**	**18.0**	**20**	**17**	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U
1,1-Dichloropropene	NE	NE	NE	NE	5.00 U	5.0 U	1.0 U	5.0 U	5.00 U	5.00 UJ	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 UJ	1.00 U	1.0 U	1.0 U
1,2,3-Trichlorobenzene	NE	NE	NE	NE	5.00 U	5.0 U	1.0 U	5.0 U	5.00 U	5.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U
1,2,3-Trichloropropane	NE	NE	NE	NE	5.00 U	5.0 U	0.50 U	5.0 U	5.00 U	5.00 U	1.0 U	0.50 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	0.50 U	0.50 U
1,2,4-Trichlorobenzene	70	200	50000	100000	5.00 U	5.0 U	1.0 U	5.0 U	5.00 U	5.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U
1,2,4-Trimethylbenzene	NE	NE	NE	NE	5.00 U	5.0 U	1.0 U	5.0 U	5.00 U	5.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U
1,2-Dibromo-3-Chloropropane (DBC	NE	NE	NE	NE	10.0 U	R	0.50 U	10.0 U	10.0 U	10.0 U	R	0.50 U	2.0 U	2.0 U	2.00 U	2.00 U	2.00 U	R	R
1,2-Dibromoethane	0.02	2	50000	100000	2.50 U	2.5 U	0.50 U	2.5 U	2.50 U	2.50 U	0.50 U	0.50 U	0.5 U	0.5 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U
1,2-Dichlorobenzene	600	8000	2000	80000	5.00 U	5.0 U	1.0 U	5.0 U	5.00 U	5.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U
1,2-Dichloroethane	5	5	20000	100000	5.00 U	3.0 U	0.60 U	5.0 U	5.00 U	5.00 U	0.60 U	0.60 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	0.60 U	0.60 U
1,2-Dichloropropane	5	3	50000	100000	5.00 U	3.0 U	1.0 U	5.0 U	5.00 U	5.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U
1,3,5-Trimethylbenzene	NE	NE	NE	NE	5.00 U	5.0 U	1.0 U	5.0 U	5.00 U	5.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U
1,3-Dichlorobenzene	100	6000	50000	100000	5.00 U	5.0 U	1.0 U	5.0 U	5.00 UJ	5.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 UJ	1.00 U	1.0 U	1.0 U
1,3-Dichloropropane	NE	NE	NE	NE	5.00 U	5.0 U	1.0 U	5.0 U	5.00 U	5.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U
1,4-Dichlorobenzene	5	60	8000	80000	5.00 U	5.0 U	1.0 U	5.0 U	5.00 U	5.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U
1,4-Dioxane	**0.3**	6000	50000	100000	100 U	200 U	100 U	100 U	100 U	100 UJ	**55 J**	100 U	20.0 U	20.0 U	20.0 U	20.0 U	20.0 U	40 U	40 U
2,2-Dichloropropane	NE	NE	NE	NE	5.00 U	5.0 U	1.0 U	5.0 U	5.00 UJ	5.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 UJ	1.00 U	1.0 U	1.0 U
2-Butanone	4000	50000	50000	100000	10.0 U	R	5.0 U	50.0 U	10.0 U	10.0 U	R	5.0 U	10.0 U	10.0 U	2.00 U	2.00 U	2.00 UJ	R	R
2-Chlorotoluene	NE	NE	NE	NE	5.00 U	5.0 U	1.0 U	5.0 U	5.00 U	5.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U
2-Hexanone	NE	NE	NE	NE	10.0 U	R	5.0 U	50.0 U	10.0 U	10.0 UJ	R	5.0 U	10.0 U	10.0 U	2.00 U	2.00 U	2.00 UJ	R	R
2-Phenylbutane	NE	NE	NE	NE	5.00 U	5.0 U	1.0 U	5.0 U	5.00 U	5.00 U	1.0 U	1.0 U	**9.0**	**9.2**	**9.79 J**	1.00 UJ	**8.17 J**	**7.7**	**7.6**
4-Chlorotoluene	NE	NE	NE	NE	5.00 U	5.0 U	1.0 U	5.0 U	5.00 UJ	5.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U
4-Methyl-2-Pentanone	350	50000	50000	100000	10.0 U	R	5.0 U	50.0 U	10.0 U	10.0 U	R	5.0 U	10.0 U	10.0 U	2.00 U	2.00 U	2.00 U	R	R
Acetone	6300	50000	50000	100000	50.0 UJ	R	R	50.0 UJ	50.0 U	50.0 U	R	25 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 UJ	R	R
Benzene	5	1000	10000	100000	5.00 U	3.5 U	0.70 U	5.0 U	5.00 U	5.00 U	0.70 U	0.70 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	0.70 U	0.70 U
Bromobenzene	NE	NE	NE	NE	5.00 U	5.0 U	1.0 U	5.0 U	5.00 UJ	5.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U
Bromochloromethane	NE	NE	NE	NE	5.00 U	5.0 U	1.0 U	5.0 U	5.00 UJ	5.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U
Bromodichloromethane	3	6	50000	100000	2.50 U	2.5 U	0.50 U	2.5 U	2.50 U	2.50 U	0.50 U	0.50 U	0.5 U	0.5 U	0.50 UJ	0.50 U	0.50 U	0.50 U	0.50 U
Bromoform	4	700	50000	100000	5.00 U	R	1.0 U	5.0 U	5.00 U	5.00 UJ	1.0 U	1.0 U	1.0 U	1.0 U	1.00 UJ	1.00 U	1.00 U	1.0 U	1.0 U
Bromomethane	10	7	800	8000	10.0 UJ	R	1.0 UJ	10.0 UJ	10.0 U	10.0 U	1.0 UJ	1.0 U	2.0 U	2.0 U	2.00 U	2.00 UJ	2.00 U	1.0 U	1.0 U
Carbon Disulfide	NE	NE	NE	NE	10.0 U	25 UJ	5.0 U	10.0 U	10.0 U	10.0 U	5.0 U	5.0 U	2.0 U	2.0 U	2.00 U	2.00 U	2.00 U	5.0 U	5.0 U
Carbon Tetrachloride	5	2	5000	50000	5.00 U	2.5 U	1.0 U	5.0 U	5.00 U	5.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U
Chlorobenzene	100	200	1000	10000	5.00 U	5.0 U	1.0 U	5.0 U	5.00 U	5.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U
Chloroethane	NE	NE	NE	NE	10.0 UJ	5.0 U	1.0 U	10.0 UJ	10.0 U	10.0 U	1.0 U	1.0 UJ	2.0 U	2.0 U	2.00 U	2.00 U	2.00 U	1.0 U	1.0 U
Chloroform	70	50	20000	100000	5.00 U	5.0 U	1.0 U	5.0 U	5.00 U	5.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 UJ	1.00 U	1.0 U	1.0 U
Chloromethane	NE	NE	NE	NE	10.0 U	5.0 U	1.0 U	10.0 UJ	10.0 U	10.0 U	1.0 U	1.0 U	2.0 UJ	2.0 UJ	2.00 U	2.00 U	2.00 U	1.0 U	1.0 U
cis-1,2-Dichloroethene	**70**	**20**	50000	100000	5.00 U	5.0 U	**5.4**	**165**	**178 J**	**160**	**170**	**140**	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U
cis-1,3-Dichloropropene	NE	NE	NE	NE	2.50 U	2.5 U	0.40 U	2.5 U	2.50 U	2.50 U	0.40 U	0.40 U	0.5 U	0.5 U	0.50 U	0.50 U	0.50 U	0.40 U	0.40 U
Cymene	NE	NE	NE	NE	5.00 U	5.0 U	1.0 U	5.0 U	5.00 U	5.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 UJ	1.00 U	1.00 U	1.0 U	1.0 U
Dibromochloromethane	2	20	50000	100000	2.50 U	2.5 U	0.50 U	2.5 U	2.50 U	2.50 U	0.50 U	0.50 U	0.5 U	0.5 U	0.50 UJ	0.50 U	0.50 U	0.50 U	0.50 U
Dibromomethane	NE	NE	NE	NE	5.00 U	5.0 U	1.0 U	5.0 U	5.00 U	5.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U
Dichlorodifluoromethane (CFC-12)	NE	NE	NE	NE	10.0 U	5.0 U	1.0 U	10.0 UJ	10.0 U	10.0 U	1.0 U	1.0 U	2.0 U	2.0 U	2.00 UJ	2.00 UJ	2.00 U	1.0 U	1.0 U
Diethyl Ether	NE	NE	NE	NE	5.00 U	5.0 U	1.0 U	5.0 UJ	5.00 U	5.00 U	1.0 U	1.0 U	1.0 UJ	1.0 UJ	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U
Diisopropyl Ether	NE	NE	NE	NE	5.00 U	5.0 U	1.0 U	5.0 U	5.00 U	5.00 U	1.0 U	1.0 U	1.0 UJ	1.0 UJ	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U
Ethyl Tertiary-Butyl Ether	NE	NE	NE	NE	5.00 U	5.0 U	1.0 U	5.0 U	5.00 UJ	5.00 U	1.0 U	1.0 U	1.0 UJ	1.0 UJ	1.00 UJ	1.00 UJ	1.00 U	1.0 U	1.0 U
Ethylbenzene	700	20000	5000	100000	5.00 U	5.0 U	1.0 U	5.0 U	5.00 U	5.00 U	1.0 U	1.0 U	**1.5**	**1.5**	**1.82 J**	**1.38**	**1.18**	1.0 U	1.0 U
Freon TF (Chlorinated fluorocarbon)	NE	NE	NE	NE	5.00 UJ	5.0 U	1.0 U	5.0 U	5.00 U	5.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U
Hexachloro-1,3-Butadiene	0.6	50	3000	3000	2.50 U	2.5 U	0.40 U	2.5 U	2.50 U	2.50 U	0.40 U	0.40 U	0.5 U	0.5 U	0.50 U	0.50 U	0.50 U	0.40 U	0.40 U
Isopropylbenzene	NE	NE	NE	NE	5.00 U	5.0 U	1.0 U	5.0 U	5.00 U	5.00 U	1.0 U	1.0 U	**6.2**	**6.2**	**7.40**	**7.51**	**5.91**	**4.6**	**4.6**
M, P Xylenes	10000	3000	5000	100000	10.0 U	5.0 U	1.0 U	10.0 U	10.0 U	10.0 U	1.0 U	1.0 U	2.0 U	2.0 U	2.00 U	2.00 U	2.00 U	1.0 U	1.0 U
Methyl Tert-Butyl Ether	NE	NE	NE	100000	5.00 U	5.0 U	1.0 U	5.0 U	5.00 UJ	5.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 UJ	1.00 U	1.00 U	1.0 U	1.0 U
Methylene Chloride	5	2000	50000	100000	10.0 UJ	5.0 UJ	1.0 U	10.0 UJ	10.0 U	10.0 U	1.0 U	1.0 U	2.0 U	2.0 U	2.00 U	2.00 U	2.00 U	1.0 U	1.0 U
Naphthalene	140	700	20000	100000	10.0 U	5.0 U	1.0 U	5.0 U	5.00 U	10.0 U	1.0 U	1.0 U	**8.7 J**	**9.3 J**	**12.6**	**10.4**	**12.1**	**9.4**	**9.5**
N-Butylbenzene	NE	NE	NE	NE	5.00 U	5.0 U	1.0 U	5.0 U	5.00 U	5.00 U	1.0 U	1.0 U	**9.0**	**9.6**	**9.55 J**	**10.4**	**7.19**	**6.0**	**5.8**
N-Propylbenzene	NE	NE	NE	NE	5.00 U	5.0 U	1.0 U	5.0 U	5.00 U	5.00 U	1.0 U	1.0 U	**16.6**	**17.3**	**17.9**	**18.0**	**16.3**	**12**	**12**
o-Xylene	10000	3000	5000	100000	5.00 U	5.0 U	1.0 U	5.0 U	5.00 U	5.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U
Styrene	100	100	6000	60000	5.00 U	5.0 U	1.0 U	5.0 U	5.00 U	5.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U
Tert-Butylbenzene	NE	NE	NE	NE	5.00 U	5.0 U	1.0 U	5.0 U	5.00 U	5.00 U	1.0 U	1.0 U	**9.1**	**9.2**	**10.6**	1.00 UJ	**7.72 J**	**6.3**	**6.2**
Tertiary-Amyl Methyl Ether	NE	NE	NE	NE	5.00 U	5.0 U	1.0 U	5.0 U	5.00 UJ	5.00 UJ	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U
Tetrachloroethene	**5**	**50**	**30000**	100000	**277**	**300**	**240 J+**	5.0 U	5.00 U	5.00 U	1.0 U	R	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U
Tetrahydrofuran	NE	NE	NE	NE	10.0 U	R	2.5 U	10.0 U	10.0 U	10.0 U	R	2.5 U	2.0 U	2.0 U	2.00 U	2.00 U	2.00 U	R	R
Toluene	**1000**	50000	40000	100000	5.00 U	5.0 U	1.0 U	5.0 U	5.00 U	5.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U
Trans-1,2-Dichloroethene	**100**	**80**	50000	100000	5.00 U	5.0 U	1.0 U	**34.0 J**	**26.4**	**29.0**	**28**	**29**	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U
Trans-1,3-Dichloropropene	NE	NE	NE	NE	2.50 U	2.5 U	0.40 U	2.5 U	2.50 UJ	2.50 U	0.40 U	0.40 U	0.5 U	0.5 U	0.50 U	0.50 U	0.50 U	0.40 U	0.40 U
Trichloroethene	**5**	**5**	**5000**	**50000**	**134**	**120**	**110**	**62.8**	**60.4**	**48.2**	**50**	**40**	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U
Trichlorofluoromethane	NE	NE	NE	NE	5.00 U	5.0 U	1.0 U	5.0 U	5.00 U	5.00 U	1.0 U	1.0 U	1.0 UJ	1.0 UJ	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U
Vinyl Chloride	**2**	**2**	50000	100000	5.00 UJ	2.5 UJ	1.0 U	5.0 U	5.00 U	5.00 U	**2.1**	**2.3**	1.0 UJ	1.0 UJ	1.00 U	1.00 U	1.00 U	1.0 UJ	1.0 U
Xylenes (Total)	10000	3000	5000	100000	10.0 U	5.0 U	1.0 U	10.0 U	10.0 U	10.0 U	1.0 U	1.0 U	2.0 U	2.0 U	2.00 U	2.00 U	2.00 U	1.0 U	1.0 U

Notes:

ft = feet

mg/l = miligrams per liter

µg/l = micrograms per liter

NE = not established

U - Non-detect at laboratory detection limit

J = Estimated Value, J+ = biased high, J- = biased low, R

Detects are bolded

Criteria exceedances are highlighted

Table 5-7
Summary of 2016 - 2020 Groundwater Analytical Results for Volatile Organic Compounds
Former GE Facility, 50 Fordham Road, Wilmington, MA

				Location Group:	EPL (continued)														
				Location ID:	AE03	AE03	AE04	AE04	AE04	AE04	AE04	AE04	AE04	AE04	GZA-102S	GZA-102S	GZA-102S	GZA-105D	GZA-105D
				Sample ID:	20A-AE3-092320-1	20A-AE3-092320-2	16A-AE04-061316-1	17A-AE04-100917-1	18A-AE04-092518-1	18A-AE04-092518-2	19A-AE04-091219-1	19A-AE04-091219-2	20A-AE4-092320-1	20A-AE4-092320-2	8A-GZA102S-092418-	9A-GZA102S-091319-	0A-GZA102S-092320-	6A-GZA105D-061516-	7A-GZA-105D-101917-
				Sample Date:	9/23/2020	9/23/2020	6/13/2016	10/9/2017	9/25/2018	9/25/2018	9/12/2019	9/12/2019	9/23/2020	9/23/2020	9/24/2018	9/13/2019	9/23/2020	6/15/2016	10/19/2017
				Sample Type:	N	FD	N	N	N	FD	N	FD	N	FD	N	N	N	N	N
				Depth Interval:	3 - 13 ft	3 - 13 ft	3 - 13 ft	3 - 13 ft	3 - 13 ft	3 - 13 ft	3-13 ft	3-13 ft	3 - 13 ft	3 - 13 ft	2.5-11.5 ft	2.5-11.5 ft	1.7 - 10.7 ft	16 - 26 ft	16 - 26 ft
Analyte	**MCP Method 1 GW-1 Stds**	**MCP Method 1 GW-2 Stds**	**MCP Method 1 GW-3 Stds**	**Upper Concentration Limit (UCL)**															
Volatile Organic Compounds (µg/l)																			
1,1,1,2-Tetrachloroethane	5	10	50000	100000	1.0 U	1.0 U	1.0 U	1.00 UJ	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	10.0 U	10.0 U
1,1,1-Trichloroethane	**200**	4000	20000	100000	1.0 U	1.0 U	1.0 U	1.00 UJ	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	10.0 U	10.0 U
1,1,2,2-Tetrachloroethane	2	9	50000	100000	0.50 U	0.50 U	0.5 U	0.50 U	0.50 U	0.50 U	R	R	0.50 U	0.50 U	0.50 U	R	0.50 U	5.0 U	5.00 U
1,1,2-Trichloroethane	5	900	50000	100000	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	10.0 U	10.0 U
1,1-Dichloroethane	**70**	2000	20000	100000	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	**11.5**	**23.0**
1,1-Dichloroethylene	**7**	**80**	30000	100000	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	**11.6**	**11.0 J**
1,1-Dichloropropene	NE	NE	NE	NE	1.0 U	1.0 U	1.0 U	1.00 U	1.00 UJ	1.00 UJ	1.0 U	1.0 U	1.0 U	1.0 U	1.00 UJ	1.0 U	1.0 U	10.0 U	10.0 U
1,2,3-Trichlorobenzene	NE	NE	NE	NE	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	10.0 U	10.0 U
1,2,3-Trichloropropane	NE	NE	NE	NE	0.50 U	0.50 U	1.0 U	1.00 U	1.00 U	1.00 U	0.50 U	0.50 U	0.50 U	0.50 U	1.00 U	0.50 U	0.50 U	10.0 U	10.0 U
1,2,4-Trichlorobenzene	70	200	50000	100000	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	10.0 U	10.0 U
1,2,4-Trimethylbenzene	NE	NE	NE	NE	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	10.0 U	10.0 U
1,2-Dibromo-3-Chloropropane (DBC	NE	NE	NE	NE	0.50 U	0.50 U	2.0 UJ	2.00 UJ	2.00 U	2.00 U	R	R	0.50 U	0.50 U	2.00 U	R	0.50 U	20.0 U	20.0 U
1,2-Dibromoethane	0.02	2	50000	100000	0.50 U	0.50 U	0.5 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	5.0 U	5.00 U
1,2-Dichlorobenzene	600	8000	2000	80000	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	10.0 U	10.0 U
1,2-Dichloroethane	5	5	20000	100000	0.60 U	0.60 U	1.0 U	1.00 U	1.00 U	1.00 U	0.60 U	0.60 U	0.60 U	0.60 U	1.00 U	0.60 U	0.60 U	10.0 U	10.0 U
1,2-Dichloropropane	5	3	50000	100000	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	10.0 U	10.0 U
1,3,5-Trimethylbenzene	NE	NE	NE	NE	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	10.0 U	10.0 U
1,3-Dichlorobenzene	100	6000	50000	100000	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	10.0 U	10.0 U
1,3-Dichloropropane	NE	NE	NE	NE	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	10.0 U	10.0 U
1,4-Dichlorobenzene	5	60	8000	80000	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	10.0 U	10.0 U
1,4-Dioxane	**0.3**	6000	50000	100000	100 U	100 U	20.0 U	20.0 U	20.0 UJ	20.0 UJ	40 U	40 U	100 U	100 U	20.0 UJ	40 U	100 U	NS	200 U
2,2-Dichloropropane	NE	NE	NE	NE	1.0 U	1.0 U	1.0 U	1.00 UJ	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	10.0 U	10.0 UJ
2-Butanone	4000	50000	50000	100000	5.0 U	5.0 U	10.0 U	2.00 U	2.00 UJ	2.00 UJ	R	R	5.0 U	5.0 U	2.00 U	R	5.0 U	100 U	20.0 UJ
2-Chlorotoluene	NE	NE	NE	NE	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	10.0 U	10.0 U
2-Hexanone	NE	NE	NE	NE	5.0 U	5.0 U	10.0 U	2.00 U	2.00 UJ	2.00 UJ	R	R	5.0 U	5.0 U	2.00 UJ	R	5.0 U	100 U	20.0 U
2-Phenylbutane	NE	NE	NE	NE	**8.2**	**8.2**	**2.6**	1.00 U	**3.49**	**3.71**	**2.4**	**2.4**	**2.4**	**2.5**	1.00 U	1.0 U	1.0 U	10.0 U	10.0 U
4-Chlorotoluene	NE	NE	NE	NE	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	10.0 U	10.0 U
4-Methyl-2-Pentanone	350	50000	50000	100000	5.0 U	5.0 U	10.0 U	2.00 U	2.00 U	2.00 U	R	R	5.0 U	5.0 U	2.00 UJ	R	5.0 U	100 U	20.0 U
Acetone	6300	50000	50000	100000	25 U	25 U	10.0 U	10.0 U	10.0 U	10.0 U	R	R	25 U	25 U	10.0 UJ	R	25 U	100 U	100 U
Benzene	5	1000	10000	100000	0.70 U	0.70 U	1.0 U	1.00 U	1.00 U	1.00 U	0.70 U	0.70 U	0.70 U	0.70 U	1.00 U	0.70 U	0.70 U	10.0 U	10.0 U
Bromobenzene	NE	NE	NE	NE	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	10.0 U	10.0 U
Bromochloromethane	NE	NE	NE	NE	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	10.0 U	10.0 U
Bromodichloromethane	3	6	50000	100000	0.50 U	0.50 U	0.5 U	0.50 UJ	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	5.0 U	5.00 U
Bromoform	4	700	50000	100000	1.0 U	1.0 U	1.0 U	1.00 UJ	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	10.0 U	10.0 U
Bromomethane	10	7	800	8000	1.0 U	1.0 U	2.0 U	2.00 U	2.00 UJ	2.00 UJ	1.0 U	1.0 U	1.0 UJ	1.0 UJ	2.00 U	1.0 U	1.0 UJ	20.0 U	20.0 UJ
Carbon Disulfide	NE	NE	NE	NE	5.0 U	5.0 U	2.0 U	2.00 U	2.00 U	2.00 U	5.0 U	5.0 U	5.0 U	5.0 U	2.00 U	5.0 U	5.0 U	20.0 U	20.0 U
Carbon Tetrachloride	5	2	5000	50000	1.0 U	1.0 U	1.0 U	1.00 UJ	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	10.0 U	10.0 U
Chlorobenzene	100	200	1000	10000	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	10.0 U	10.0 U
Chloroethane	NE	NE	NE	NE	1.0 UJ	1.0 UJ	2.0 U	2.00 U	2.00 U	2.00 U	1.0 U	1.0 U	1.0 U	1.0 U	2.00 U	1.0 U	1.0 U	20.0 UJ	20.0 U
Chloroform	70	50	20000	100000	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	10.0 U	10.0 U
Chloromethane	NE	NE	NE	NE	1.0 U	1.0 U	2.0 U	2.00 U	2.00 U	2.00 U	1.0 U	1.0 U	1.0 U	1.0 U	2.00 U	1.0 U	1.0 U	20.0 UJ	20.0 U
cis-1,2-Dichloroethene	**70**	**20**	50000	100000	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	**14.8**	**2.7**	**2.5**	**419**	**823**
cis-1,3-Dichloropropene	NE	NE	NE	NE	0.40 U	0.40 U	0.5 UJ	0.50 U	0.50 U	0.50 U	0.40 U	0.40 U	0.40 U	0.40 U	0.50 U	0.40 U	0.40 U	5.0 U	5.00 U
Cymene	NE	NE	NE	NE	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	10.0 U	10.0 U
Dibromochloromethane	2	20	50000	100000	0.50 U	0.50 U	0.5 U	0.50 UJ	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	5.0 U	5.00 U
Dibromomethane	NE	NE	NE	NE	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	10.0 U	10.0 U
Dichlorodifluoromethane (CFC-12)	NE	NE	NE	NE	1.0 U	1.0 U	2.0 U	2.00 U	2.00 U	2.00 U	1.0 U	1.0 U	1.0 U	1.0 U	2.00 U	1.0 U	1.0 U	20.0 U	20.0 U
Diethyl Ether	NE	NE	NE	NE	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	10.0 U	10.0 U
Diisopropyl Ether	NE	NE	NE	NE	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	10.0 U	10.0 U
Ethyl Tertiary-Butyl Ether	NE	NE	NE	NE	1.0 U	1.0 U	1.0 U	1.00 UJ	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	10.0 U	10.0 U
Ethylbenzene	700	20000	5000	100000	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	10.0 U	10.0 U
Freon TF (Chlorinated fluorocarbon)	NE	NE	NE	NE	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	10.0 U	10.0 U
Hexachloro-1,3-Butadiene	0.6	50	3000	3000	0.40 U	0.40 U	0.5 U	0.50 U	0.50 U	0.50 U	0.40 U	0.40 U	0.40 U	0.40 U	0.50 U	0.40 U	0.40 U	5.0 U	5.00 U
Isopropylbenzene	NE	NE	NE	NE	**4.3**	**4.5**	**2.6**	**1.68**	**4.11**	**4.40**	**2.0**	**2.0**	**2.0**	**2.1**	1.00 U	1.0 U	1.0 U	10.0 U	10.0 U
M, P Xylenes	10000	3000	5000	100000	1.0 U	1.0 U	2.0 U	2.00 U	2.00 U	2.00 U	1.0 U	1.0 U	1.0 U	1.0 U	2.00 U	1.0 U	1.0 U	20.0 U	20.0 U
Methyl Tert-Butyl Ether	NE	NE	NE	100000	1.0 U	1.0 U	1.0 U	1.00 UJ	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	10.0 U	10.0 U
Methylene Chloride	5	2000	50000	100000	1.0 U	1.0 U	2.0 U	2.00 U	2.00 U	2.00 U	1.0 U	1.0 U	1.0 U	1.0 U	2.00 U	1.0 U	1.0 U	20.0 U	20.0 U
Naphthalene	140	700	20000	100000	**8.2**	**7.8**	1.0 UJ	1.00 U	2.00 U	2.00 U	1.0 U	1.0 U	1.0 U	1.0 U	2.00 U	1.0 U	1.0 U	10.0 U	10.0 U
N-Butylbenzene	NE	NE	NE	NE	**6.3**	**6.2**	**1.8**	1.00 U	**3.05**	**3.33**	**1.1**	**1.0**	1.0 U	**1.0**	1.00 U	1.0 U	1.0 U	10.0 U	10.0 U
N-Propylbenzene	NE	NE	NE	NE	**12**	**12**	**3.8**	**1.65**	**7.55**	**7.92**	**4.5**	**4.6**	**3.8**	**4.0**	1.00 U	1.0 U	1.0 U	10.0 U	10.0 U
o-Xylene	10000	3000	5000	100000	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	10.0 U	10.0 U
Styrene	100	100	6000	60000	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	10.0 U	10.0 U
Tert-Butylbenzene	NE	NE	NE	NE	**6.1**	**6.4**	**4.5**	**4.76**	**9.19**	**9.47**	**8.9**	**9.0**	**8.8**	**9.0**	1.00 U	1.0 U	1.0 U	10.0 U	10.0 U
Tertiary-Amyl Methyl Ether	NE	NE	NE	NE	1.0 U	1.0 U	1.0 U	1.00 UJ	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	10.0 U	10.0 U
Tetrachloroethene	**5**	**50**	**30000**	100000	R	R	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	R	R	**2.27 J**	**2.0**	**1.3 J+**	**134**	**382**
Tetrahydrofuran	NE	NE	NE	NE	2.5 U	2.5 U	2.0 U	2.00 U	2.00 U	2.00 U	R	R	2.5 U	2.5 U	2.00 U	R	2.5 U	20.0 U	20.0 U
Toluene	**1000**	50000	40000	100000	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	10.0 U	10.0 U
Trans-1,2-Dichloroethene	**100**	**80**	50000	100000	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	10.0 U	10.0 U
Trans-1,3-Dichloropropene	NE	NE	NE	NE	0.40 U	0.40 U	0.5 UJ	0.50 UJ	0.50 U	0.50 U	0.40 U	0.40 U	0.40 U	0.40 U	0.50 U	0.40 U	0.40 U	5.0 U	5.00 U
Trichloroethene	**5**	**5**	**5000**	**50000**	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	**6.39**	**2.9**	**2.5**	**250**	**994**
Trichlorofluoromethane	NE	NE	NE	NE	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	10.0 U	10.0 U
Vinyl Chloride	**2**	**2**	50000	100000	1.0 U	1.0 U	**1.6 J**	1.00 U	1.00 U	1.00 U	1.0 UJ	1.0 UJ	1.0 U	1.0 U	**9.57**	**1.3**	**1.2**	**79.7**	**83.9**
Xylenes (Total)	10000	3000	5000	100000	1.0 U	1.0 U	2.0 U	2.00 U	2.00 U	2.00 U	1.0 U	1.0 U	1.0 U	1.0 U	2.00 U	1.0 U	1.0 U	20.0 U	20.0 U

Notes:

ft = feet

mg/l = miligrams per liter

µg/l = micrograms per liter

NE = not established

U - Non-detect at laboratory detection limit

J = Estimated Value, J+ = biased high, J- = biased low, R

Detects are bolded

Criteria exceedances are highlighted

Table 5-7
Summary of 2016 - 2020 Groundwater Analytical Results for Volatile Organic Compounds
Former GE Facility, 50 Fordham Road, Wilmington, MA

				Location Group:	EPL (continued)													
				Location ID:	GZA-105D	GZA-105D	GZA-105D	GZA-105R	GZA-105R	GZA-105R	GZA-105R	GZA-105R	GZA-105S	GZA-105S	GZA-105S	GZA-105S	GZA-105S	IP-01R2
				Sample ID:	8A-GZA105D-092518-	9A-GZA105D-091819-	0A-GZA105D-092420-	6A-GZA105R-061516-	7A-GZA105R-100917-	8A-GZA105R-091918-	9A-GZA105R-091819-	0A-GZA105R-092420-	6A-GZA105S-061516-	7A-GZA105S-100917-	7A-GZA105S-100917-	8A-GZA105S-092518-	9A-GZA105S-091819-	0A-GZA105S-092420-	16A-IPIR2-062716-1
				Sample Date:	9/25/2018	9/18/2019	9/24/2020	6/15/2016	10/9/2017	9/19/2018	9/18/2019	9/24/2020	6/15/2016	10/9/2017	10/9/2017	9/25/2018	9/18/2019	9/24/2020	6/27/2016
				Sample Type:	N	N	N	N	N	N	N	N	N	N	FD	N	N	N	N
				Depth Interval:	16 - 26 ft	16-26 ft	16 - 26 ft	34.5 - 36.5 ft	34.5 - 36.5 ft	34.5 - 36.5 ft	34.5-36.5 ft	34.5 - 36.5 ft	4 - 14 ft	4 - 14 ft	4 - 14 ft	4 - 14 ft	4 - 14 ft	4 - 14 ft	54 - 74 ft
Analyte	**MCP Method 1 GW-1 Stds**	**MCP Method 1 GW-2 Stds**	**MCP Method 1 GW-3 Stds**	**Upper Concentration Limit (UCL)**															
Volatile Organic Compounds (µg/l)																			
1,1,1,2-Tetrachloroethane	5	10	50000	100000	5.00 UJ	1.0 U	1.0 U	200 U	200 UJ	200 UJ	50 U	50 U	1.0 U	1.00 UJ	1.00 UJ	1.00 U	1.0 U	1.0 U	100 U
1,1,1-Trichloroethane	**200**	4000	20000	100000	5.00 U	1.0 U	1.0 U	200 U	200 UJ	200 U	100 U	100 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	100 U
1,1,2,2-Tetrachloroethane	2	9	50000	100000	2.50 U	0.50 U	0.50 U	100 U	100 U	100 U	50 U	50 U	0.5 U	0.50 U	0.50 U	0.50 U	R	0.50 U	50.0 U
1,1,2-Trichloroethane	5	900	50000	100000	5.00 U	1.0 U	1.0 U	200 U	200 U	200 U	50 U	50 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	100 U
1,1-Dichloroethane	**70**	2000	20000	100000	**7.40**	**3.6**	**1.8**	200 U	200 U	200 U	**93**	**86**	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	**149**
1,1-Dichloroethylene	**7**	**80**	30000	100000	5.00 U	**2.8**	**1.3**	200 U	200 U	200 U	50 U	50 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	100 U
1,1-Dichloropropene	NE	NE	NE	NE	5.00 UJ	1.0 U	1.0 U	200 U	200 U	200 U	100 U	100 U	1.0 U	1.00 U	1.00 U	1.00 UJ	1.0 U	1.0 U	100 U
1,2,3-Trichlorobenzene	NE	NE	NE	NE	5.00 U	1.0 U	1.0 U	200 U	200 U	200 U	50 U	50 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	100 U
1,2,3-Trichloropropane	NE	NE	NE	NE	5.00 U	0.50 U	0.50 U	200 U	200 U	200 U	50 U	50 U	1.0 U	1.00 U	1.00 U	1.00 U	0.50 U	0.50 U	100 U
1,2,4-Trichlorobenzene	70	200	50000	100000	5.00 U	1.0 U	1.0 U	200 U	200 U	200 U	70 U	70 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	100 UJ
1,2,4-Trimethylbenzene	NE	NE	NE	NE	5.00 U	1.0 U	1.0 U	200 U	200 U	200 U	56 U	56 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	100 U
1,2-Dibromo-3-Chloropropane (DBC	NE	NE	NE	NE	10.0 U	R	0.50 U	400 UJ	400 UJ	400 UJ	R	50 U	2.0 UJ	2.00 U	2.00 U	2.00 U	R	0.50 U	200 U
1,2-Dibromoethane	0.02	2	50000	100000	2.50 U	0.50 U	0.50 U	100 U	100 U	100 U	50 U	50 U	0.5 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	50.0 U
1,2-Dichlorobenzene	600	8000	2000	80000	5.00 U	1.0 U	1.0 U	200 U	200 U	200 U	100 U	100 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	100 U
1,2-Dichloroethane	5	5	20000	100000	5.00 U	0.60 U	0.60 U	200 U	200 U	200 U	50 U	50 U	1.0 U	1.00 U	1.00 U	1.00 U	0.60 U	0.60 U	100 U
1,2-Dichloropropane	5	3	50000	100000	5.00 U	1.0 U	1.0 U	200 U	200 U	200 U	50 U	50 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	100 U
1,3,5-Trimethylbenzene	NE	NE	NE	NE	5.00 U	1.0 U	1.0 U	200 U	200 U	200 U	60 U	60 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	100 U
1,3-Dichlorobenzene	100	6000	50000	100000	5.00 U	1.0 U	1.0 U	200 U	200 U	200 U	50 U	50 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	100 U
1,3-Dichloropropane	NE	NE	NE	NE	5.00 U	1.0 U	1.0 U	200 U	200 U	200 U	100 U	100 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	100 U
1,4-Dichlorobenzene	5	60	8000	80000	5.00 U	1.0 U	1.0 U	200 U	200 U	200 U	50 U	50 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	100 U
1,4-Dioxane	**0.3**	6000	50000	100000	100 UJ	40 U	NS	4000 U	4000 U	4000 UJ	4000 U	10000 U	20.0 U	20.0 U	20.0 U	20.0 UJ	40 U	100 U	2000 U
2,2-Dichloropropane	NE	NE	NE	NE	5.00 U	1.0 U	1.0 U	200 U	200 UJ	200 U	100 U	100 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	100 U
2-Butanone	4000	50000	50000	100000	10.0 U	R	5.0 U	2000 U	400 U	400 U	R	500 U	10.0 U	2.00 U	2.00 U	2.00 UJ	R	5.0 U	1000 U
2-Chlorotoluene	NE	NE	NE	NE	5.00 U	1.0 U	1.0 U	200 U	200 U	200 U	100 U	100 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	100 U
2-Hexanone	NE	NE	NE	NE	10.0 UJ	5.0 U	5.0 U	2000 U	400 U	400 U	200 U	500 U	10.0 U	2.00 U	2.00 U	2.00 UJ	R	5.0 U	1000 U
2-Phenylbutane	NE	NE	NE	NE	5.00 U	1.0 U	1.0 U	200 U	200 U	200 U	100 U	100 U	**1.8**	**1.77 J**	**1.93 J**	**1.19**	1.0 U	1.0 U	100 U
4-Chlorotoluene	NE	NE	NE	NE	5.00 U	1.0 U	1.0 U	200 U	200 U	200 U	100 U	100 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	100 U
4-Methyl-2-Pentanone	350	50000	50000	100000	10.0 UJ	5.0 U	5.0 U	2000 U	400 U	400 U	350 U	500 U	10.0 U	2.00 U	2.00 U	2.00 U	R	5.0 U	1000 U
Acetone	6300	50000	50000	100000	50.0 U	R	25 U	2000 U	2000 U	2000 UJ	R	2500 U	10.0 UJ	10.0 U	10.0 U	10.0 U	R	25 U	1000 U
Benzene	5	1000	10000	100000	5.00 U	0.70 U	0.70 U	200 U	200 U	200 U	50 U	50 U	1.0 U	1.00 U	1.00 U	1.00 U	0.70 U	0.70 U	100 U
Bromobenzene	NE	NE	NE	NE	5.00 U	1.0 U	1.0 U	200 U	200 U	200 U	62 U	62 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	100 U
Bromochloromethane	NE	NE	NE	NE	5.00 U	1.0 U	1.0 U	200 U	200 U	200 U	83 U	83 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	100 U
Bromodichloromethane	3	6	50000	100000	2.50 U	0.50 U	0.50 U	100 U	100 UJ	100 U	50 U	50 U	0.5 U	0.50 UJ	0.50 UJ	0.50 U	0.50 U	0.50 U	50.0 U
Bromoform	4	700	50000	100000	5.00 UJ	R	1.0 U	200 U	200 UJ	200 UJ	R	50 U	1.0 U	1.00 UJ	1.00 UJ	1.00 U	1.0 U	1.0 U	100 U
Bromomethane	10	7	800	8000	10.0 U	1.0 U	1.0 UJ	400 UJ	400 U	400 U	50 U	50 UJ	2.0 U	2.00 U	2.00 U	2.00 UJ	R	1.0 UJ	200 U
Carbon Disulfide	NE	NE	NE	NE	10.0 U	5.0 U	5.0 U	400 U	400 U	400 U	500 U	500 U	2.0 U	2.00 U	2.00 U	2.00 U	5.0 U	5.0 U	200 U
Carbon Tetrachloride	5	2	5000	50000	5.00 U	1.0 U	1.0 U	200 U	200 UJ	200 UJ	50 U	50 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	100 U
Chlorobenzene	100	200	1000	10000	5.00 U	1.0 U	1.0 U	200 U	200 U	200 U	100 U	100 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	100 U
Chloroethane	NE	NE	NE	NE	10.0 U	1.0 U	1.0 U	400 U	400 U	400 U	100 U	100 U	2.0 U	2.00 U	2.00 U	2.00 U	1.0 U	1.0 U	200 UJ
Chloroform	70	50	20000	100000	5.00 U	1.0 U	1.0 U	200 U	200 U	200 U	50 U	50 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	100 U
Chloromethane	NE	NE	NE	NE	10.0 U	1.0 U	1.0 U	400 UJ	400 U	400 UJ	100 U	100 U	2.0 U	2.00 U	2.00 U	2.00 U	1.0 U	1.0 U	200 UJ
cis-1,2-Dichloroethene	**70**	**20**	50000	100000	**244**	**130**	**54**	**216**	**222**	**264**	**210**	**190**	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	**110**
cis-1,3-Dichloropropene	NE	NE	NE	NE	2.50 U	0.40 U	0.40 U	100 U	100 U	100 U	50 U	50 U	0.5 U	0.50 U	0.50 U	0.50 U	0.40 U	0.40 U	50.0 U
Cymene	NE	NE	NE	NE	5.00 U	1.0 U	1.0 U	200 U	200 U	200 U	100 U	100 U	1.0 U	1.00 UJ	1.00 UJ	1.00 U	1.0 U	1.0 U	100 U
Dibromochloromethane	2	20	50000	100000	2.50 U	0.50 UJ	0.50 U	100 U	100 UJ	100 UJ	50 UJ	50 U	0.5 U	0.50 UJ	0.50 UJ	0.50 U	0.50 U	0.50 U	50.0 U
Dibromomethane	NE	NE	NE	NE	5.00 U	1.0 U	1.0 U	200 U	200 U	200 U	50 U	50 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	100 U
Dichlorodifluoromethane (CFC-12)	NE	NE	NE	NE	10.0 U	1.0 U	1.0 U	400 U	400 U	400 U	100 U	100 U	2.0 U	2.00 UJ	2.00 UJ	2.00 U	1.0 U	1.0 U	200 U
Diethyl Ether	NE	NE	NE	NE	5.00 U	1.0 U	1.0 U	200 U	200 U	200 U	100 U	100 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	100 UJ
Diisopropyl Ether	NE	NE	NE	NE	5.00 U	1.0 U	1.0 U	200 U	200 U	200 U	100 U	100 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	100 UJ
Ethyl Tertiary-Butyl Ether	NE	NE	NE	NE	5.00 U	1.0 U	1.0 U	200 U	200 UJ	200 U	100 U	100 U	1.0 U	1.00 UJ	1.00 UJ	1.00 U	1.0 U	1.0 U	100 UJ
Ethylbenzene	700	20000	5000	100000	5.00 U	1.0 U	1.0 U	200 U	200 U	200 U	100 U	100 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	100 U
Freon TF (Chlorinated fluorocarbon)	NE	NE	NE	NE	5.00 U	1.0 U	1.0 U	200 U	200 U	200 U	100 U	100 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	100 U
Hexachloro-1,3-Butadiene	0.6	50	3000	3000	2.50 U	0.40 U	0.40 U	100 U	100 U	100 U	50 U	50 U	0.5 U	0.50 U	0.50 U	0.50 U	0.40 U	0.40 U	50.0 U
Isopropylbenzene	NE	NE	NE	NE	5.00 U	1.0 U	1.0 U	200 U	200 U	200 U	100 U	100 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	100 U
M, P Xylenes	10000	3000	5000	100000	10.0 U	1.0 U	1.0 U	400 U	400 U	400 U	100 U	100 U	2.0 U	2.00 U	2.00 U	2.00 U	1.0 U	1.0 U	200 U
Methyl Tert-Butyl Ether	NE	NE	NE	100000	5.00 U	1.0 U	1.0 U	200 U	200 UJ	200 U	70 U	70 U	1.0 U	1.00 UJ	1.00 UJ	1.00 U	1.0 U	1.0 U	100 U
Methylene Chloride	5	2000	50000	100000	10.0 U	1.0 U	1.0 U	400 U	400 U	400 U	50 U	100 U	2.0 U	2.00 U	2.00 U	2.00 U	1.0 U	1.0 U	200 U
Naphthalene	140	700	20000	100000	10.0 U	1.0 U	1.0 U	200 UJ	200 U	400 U	100 U	100 U	1.0 UJ	**2.00**	**1.31**	2.00 U	1.0 U	1.0 U	100 UJ
N-Butylbenzene	NE	NE	NE	NE	5.00 U	1.0 U	1.0 U	200 U	200 U	200 U	100 U	100 U	**1.1**	**1.90 J**	**1.47 J**	1.00 U	1.0 U	1.0 U	100 U
N-Propylbenzene	NE	NE	NE	NE	5.00 U	1.0 U	1.0 U	200 U	200 U	200 U	100 U	100 U	1.0 U	**1.03**	**1.12**	1.00 U	1.0 U	1.0 U	100 U
o-Xylene	10000	3000	5000	100000	5.00 U	1.0 U	1.0 U	200 U	200 U	200 U	100 U	100 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	100 U
Styrene	100	100	6000	60000	5.00 U	1.0 U	1.0 U	200 U	200 U	200 U	100 U	100 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	100 UJ
Tert-Butylbenzene	NE	NE	NE	NE	5.00 U	1.0 U	1.0 U	200 U	200 U	200 U	100 U	100 U	**7.1**	**4.17**	**4.77**	**2.54**	**2.9**	**1.8**	100 U
Tertiary-Amyl Methyl Ether	NE	NE	NE	NE	5.00 U	1.0 U	1.0 U	200 U	200 UJ	200 U	100 U	100 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	100 U
Tetrachloroethene	**5**	**50**	**30000**	100000	**116**	**24**	**5.9 J+**	**4980**	**5630**	**5350**	**5100**	**5300 J+**	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	R	**3560**
Tetrahydrofuran	NE	NE	NE	NE	10.0 U	2.5 U	2.5 U	400 U	400 U	400 U	250 U	250 U	2.0 U	2.00 U	2.00 U	2.00 U	R	2.5 U	200 U
Toluene	**1000**	50000	40000	100000	5.00 U	1.0 U	1.0 U	200 U	200 U	200 U	100 U	100 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	100 U
Trans-1,2-Dichloroethene	**100**	**80**	50000	100000	5.00 U	**1.5**	1.0 U	200 U	200 U	200 U	80 U	80 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	100 U
Trans-1,3-Dichloropropene	NE	NE	NE	NE	2.50 U	0.40 U	0.40 U	100 U	100 UJ	100 U	50 U	50 U	0.5 U	0.50 U	0.50 U	0.50 U	0.40 U	0.40 U	50.0 U
Trichloroethene	**5**	**5**	**5000**	**50000**	**289**	**55**	**23**	**7120**	**8270**	**7570**	**6700**	**8200**	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	**7290 J-**
Trichlorofluoromethane	NE	NE	NE	NE	5.00 U	1.0 U	1.0 U	200 U	200 U	200 U	100 U	100 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	100 UJ
Vinyl Chloride	**2**	**2**	50000	100000	**46.8**	**23**	**16**	200 U	200 U	200 U	50 U	50 U	1.0 UJ	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	100 UJ
Xylenes (Total)	10000	3000	5000	100000	10.0 U	1.0 U	1.0 U	400 U	400 U	400 U	100 U	100 U	2.0 U	2.00 U	2.00 U	2.00 U	1.0 U	1.0 U	200 U

Notes:

ft = feet

mg/l = miligrams per liter

µg/l = micrograms per liter

NE = not established

U - Non-detect at laboratory detection limit

J = Estimated Value, J+ = biased high, J- = biased low, R

Detects are bolded

Criteria exceedances are highlighted

Table 5-7
Summary of 2016 - 2020 Groundwater Analytical Results for Volatile Organic Compounds
Former GE Facility, 50 Fordham Road, Wilmington, MA

					EPL (continued)													
Location Group:																		
Location ID:					**IP-01R2**	**IP-01R2**	**IP-01R2**	**IP-01R2**	**IP-01R2**	**IP-01R2**	**PZ-2S**	**PZ-2S**	**PZ-2S**	**TRC-101**	**TRC-101**	**TRC-101**	**TRC-102**	**TRC-102**	**TRC-102**
Sample ID:					17A-IP1R2-100617-1	17A-IP1R2-100617-2	18A-IP1R2-092418-1	18A-IP1R2-092418-2	19A-IP1R2-091319-1	20A-IP1R2-092420-1	18A-PZ2S-092418-1	19A-PZ2S-093019-1	20A-PZ2S-092520-1	18A-TRC101-092418-1	19A-TRC101-091919-1	20A-TRC101-092320-1	16A-TRC102-062716-1	16A-TRC102-062716-2	17A-TRC102-100217-1
Sample Date:					10/6/2017	10/6/2017	9/24/2018	9/24/2018	9/13/2019	9/24/2020	9/24/2018	9/30/2019	9/25/2020	9/24/2018	9/19/2019	9/23/2020	6/27/2016	6/27/2016	10/2/2017
Sample Type:					N	FD	N	FD	N	N	N	N	N	N	N	N	N	FD	N
Depth Interval:					54 - 74 ft	54 - 74 ft	54 - 74 ft	54 - 74 ft	54-74 ft	54 - 74 ft	3.5 - 8.5 ft	3.5 to 8.5 ft	3.55 - 8.55 ft	1.5 - 10.5 ft	1.5-10.5 ft	1.5 - 10.5 ft	2.25 - 12.25 ft	2.25 - 12.25 ft	2.25 - 12.25 ft
Analyte	**MCP Method 1 GW-1 Stds**	**MCP Method 1 GW-2 Stds**	**MCP Method 1 GW-3 Stds**	**Upper Concentration Limit (UCL)**															
Volatile Organic Compounds (µg/l)																			
1,1,1,2-Tetrachloroethane	5	10	50000	100000	100 U	100 U	200 U	200 U	20 U	10 U	1.00 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 UJ	1.00 U
1,1,1-Trichloroethane	**200**	4000	20000	100000	100 U	100 U	200 U	200 U	40 U	20 U	1.00 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 UJ	1.00 U
1,1,2,2-Tetrachloroethane	2	9	50000	100000	50.0 U	50.0 U	100 U	100 U	20 U	10 U	0.50 U	R	0.50 U	0.50 U	0.50 U	0.50 U	0.5 U	0.5 UJ	0.50 U
1,1,2-Trichloroethane	5	900	50000	100000	100 U	100 U	200 U	200 U	20 U	10 U	1.00 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 UJ	1.00 U
1,1-Dichloroethane	**70**	2000	20000	100000	**109**	**101**	200 U	200 U	**130**	**86**	1.00 U	1.0 U	1.0 U	**1.54**	**1.4**	1.0 U	1.0 U	1.0 UJ	1.00 U
1,1-Dichloroethylene	**7**	**80**	30000	100000	100 U	100 U	200 U	200 U	**34**	**24**	1.00 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 UJ	1.00 U
1,1-Dichloropropene	NE	NE	NE	NE	100 U	100 U	200 UJ	200 UJ	40 U	20 U	1.00 UJ	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 UJ	1.00 U
1,2,3-Trichlorobenzene	NE	NE	NE	NE	100 U	100 U	200 U	200 U	20 U	10 U	1.00 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 UJ	1.00 U
1,2,3-Trichloropropane	NE	NE	NE	NE	100 U	100 U	200 U	200 U	20 U	10 U	1.00 U	0.50 U	0.50 U	1.00 U	1.0 U	0.50 U	1.0 U	1.0 UJ	1.00 U
1,2,4-Trichlorobenzene	70	200	50000	100000	100 U	100 U	200 U	200 U	40 U	20 U	1.00 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 UJ	1.00 U
1,2,4-Trimethylbenzene	NE	NE	NE	NE	100 U	100 U	200 U	200 U	40 U	20 U	1.00 U	**1.4**	1.0 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 UJ	1.00 U
1,2-Dibromo-3-Chloropropane (DBC	NE	NE	NE	NE	200 U	200 U	400 U	400 U	R	10 U	2.00 U	R	0.50 U	2.00 U	R	0.50 U	2.0 U	2.0 UJ	2.00 U
1,2-Dibromoethane	0.02	2	50000	100000	50.0 U	50.0 U	100 U	100 U	20 U	10 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.5 U	0.5 UJ	0.50 U
1,2-Dichlorobenzene	600	8000	2000	80000	100 U	100 U	200 U	200 U	40 U	20 U	1.00 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 UJ	1.00 U
1,2-Dichloroethane	5	5	20000	100000	100 U	100 U	200 U	200 U	20 U	10 U	1.00 U	0.60 U	0.60 U	1.00 U	0.60 U	0.60 U	1.0 U	1.0 UJ	1.00 U
1,2-Dichloropropane	5	3	50000	100000	100 U	100 U	200 U	200 U	20 U	10 U	1.00 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 UJ	1.00 U
1,3,5-Trimethylbenzene	NE	NE	NE	NE	100 U	100 U	200 U	200 U	40 U	20 U	1.00 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 UJ	1.00 U
1,3-Dichlorobenzene	100	6000	50000	100000	100 UJ	100 UJ	200 U	200 U	40 U	20 U	1.00 UJ	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 UJ	1.00 U
1,3-Dichloropropane	NE	NE	NE	NE	100 U	100 U	200 U	200 U	40 U	20 U	1.00 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 UJ	1.00 U
1,4-Dichlorobenzene	5	60	8000	80000	100 U	100 U	200 U	200 U	20 U	10 U	1.00 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 UJ	1.00 U
1,4-Dioxane	**0.3**	6000	50000	100000	2000 U	2000 U	4000 UJ	4000 UJ	1600 U	2000 U	20.0 U	40 U	100 U	20.0 U	40 U	100 U	20.0 U	20.0 UJ	20.0 U
2,2-Dichloropropane	NE	NE	NE	NE	100 UJ	100 UJ	200 U	200 U	40 U	20 U	1.00 UJ	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 UJ	1.00 UJ
2-Butanone	4000	50000	50000	100000	200 U	200 U	400 U	400 U	R	100 U	2.00 U	R	5.0 U	2.00 U	R	5.0 U	10.0 U	10.0 UJ	2.00 U
2-Chlorotoluene	NE	NE	NE	NE	100 U	100 U	200 U	200 U	40 U	20 U	1.00 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 UJ	1.00 U
2-Hexanone	NE	NE	NE	NE	200 U	200 U	400 UJ	400 UJ	80 U	100 U	2.00 U	R	5.0 U	2.00 U	5.0 U	5.0 U	10.0 U	10.0 UJ	2.00 U
2-Phenylbutane	NE	NE	NE	NE	100 U	100 U	200 U	200 U	40 U	20 U	1.00 U	1.0 U	1.0 U	**8.41**	**7.6**	**7.9**	1.0 U	1.0 UJ	1.00 U
4-Chlorotoluene	NE	NE	NE	NE	100 UJ	100 UJ	200 U	200 U	40 U	20 U	1.00 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 UJ	1.00 U
4-Methyl-2-Pentanone	350	50000	50000	100000	200 U	200 U	400 UJ	400 UJ	200 U	100 U	2.00 U	R	5.0 U	2.00 U	5.0 U	5.0 U	10.0 U	10.0 UJ	2.00 U
Acetone	6300	50000	50000	100000	1000 U	1000 U	2000 UJ	2000 UJ	R	500 U	10.0 U	R	25 U	10.0 U	R	25 U	10.0 UJ	10.0 UJ	10.0 U
Benzene	5	1000	10000	100000	100 U	100 U	200 U	200 U	20 U	10 U	1.00 U	0.70 U	0.70 U	1.00 U	0.70 U	0.70 U	1.0 U	1.0 UJ	1.00 U
Bromobenzene	NE	NE	NE	NE	100 UJ	100 UJ	200 U	200 U	40 U	20 U	1.00 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 UJ	1.00 U
Bromochloromethane	NE	NE	NE	NE	100 UJ	100 UJ	200 U	200 U	40 U	20 U	1.00 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 UJ	1.00 U
Bromodichloromethane	3	6	50000	100000	50.0 U	50.0 U	100 U	100 U	20 U	10 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.5 U	0.5 UJ	0.50 U
Bromoform	4	700	50000	100000	100 U	100 U	200 U	200 U	R	10 U	1.00 U	1.0 U	1.0 U	1.00 U	R	1.0 U	1.0 U	1.0 UJ	1.00 U
Bromomethane	10	7	800	8000	200 U	200 U	400 U	400 U	20 U	10 UJ	2.00 UJ	R	1.0 UJ	2.00 U	1.0 U	1.0 UJ	2.0 U	2.0 UJ	2.00 U
Carbon Disulfide	NE	NE	NE	NE	200 U	200 U	400 U	400 U	200 U	100 U	2.00 U	5.0 U	5.0 U	2.00 U	5.0 U	5.0 U	2.0 U	2.0 UJ	2.00 UJ
Carbon Tetrachloride	5	2	5000	50000	100 U	100 U	200 U	200 U	20 U	10 U	1.00 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 UJ	1.00 U
Chlorobenzene	100	200	1000	10000	100 U	100 U	200 U	200 U	40 U	20 U	1.00 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 UJ	1.00 U
Chloroethane	NE	NE	NE	NE	200 U	200 U	400 U	400 U	40 U	20 U	2.00 U	1.0 UJ	1.0 U	2.00 U	1.0 U	1.0 U	2.0 U	2.0 UJ	2.00 U
Chloroform	70	50	20000	100000	100 U	100 U	200 U	200 U	40 U	20 U	1.00 UJ	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 UJ	1.00 U
Chloromethane	NE	NE	NE	NE	200 U	200 U	400 U	400 U	40 U	20 U	2.00 U	1.0 U	1.0 U	2.00 U	1.0 U	1.0 U	2.0 U	2.0 UJ	2.00 UJ
cis-1,2-Dichloroethene	**70**	**20**	50000	100000	**105 J**	**121 J**	200 U	200 U	**120**	**87**	**1.02**	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	**6.7 J**	**3.8 J**	**1.66**
cis-1,3-Dichloropropene	NE	NE	NE	NE	50.0 U	50.0 U	100 U	100 U	20 U	10 U	0.50 U	0.40 U	0.40 U	0.50 U	0.40 U	0.40 U	0.5 U	0.5 UJ	0.50 UJ
Cymene	NE	NE	NE	NE	100 U	100 U	200 U	200 U	40 U	20 U	1.00 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 UJ	1.00 U
Dibromochloromethane	2	20	50000	100000	50.0 U	50.0 U	100 U	100 U	20 U	10 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.5 U	0.5 UJ	0.50 U
Dibromomethane	NE	NE	NE	NE	100 U	100 U	200 U	200 U	20 U	10 U	1.00 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 UJ	1.00 U
Dichlorodifluoromethane (CFC-12)	NE	NE	NE	NE	200 U	200 U	400 U	400 U	40 U	20 U	2.00 UJ	1.0 U	1.0 U	2.00 U	1.0 U	1.0 U	2.0 U	2.0 UJ	2.00 U
Diethyl Ether	NE	NE	NE	NE	100 U	100 U	200 U	200 U	40 U	20 U	1.00 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.0 UJ	1.0 UJ	1.00 U
Diisopropyl Ether	NE	NE	NE	NE	100 U	100 U	200 U	200 U	40 U	20 U	1.00 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 UJ	1.00 U
Ethyl Tertiary-Butyl Ether	NE	NE	NE	NE	100 UJ	100 UJ	200 U	200 U	40 U	20 U	1.00 UJ	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 UJ	1.00 UJ
Ethylbenzene	700	20000	5000	100000	100 U	100 U	200 U	200 U	40 U	20 U	1.00 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 UJ	1.00 U
Freon TF (Chlorinated fluorocarbon)	NE	NE	NE	NE	100 U	100 U	200 U	200 U	40 U	20 U	1.00 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 UJ	1.00 U
Hexachloro-1,3-Butadiene	0.6	50	3000	3000	50.0 U	50.0 U	100 U	100 U	20 U	10 U	0.50 U	0.40 U	0.40 U	0.50 U	0.40 U	0.40 U	0.5 U	0.5 UJ	0.50 U
Isopropylbenzene	NE	NE	NE	NE	100 U	100 U	200 U	200 U	40 U	20 U	1.00 U	1.0 U	1.0 U	**4.67**	**3.0**	**3.2**	1.0 U	1.0 UJ	1.00 U
M, P Xylenes	10000	3000	5000	100000	200 U	200 U	400 U	400 U	40 U	20 U	2.00 U	1.0 U	1.0 U	2.00 U	1.0 U	1.0 U	2.0 U	2.0 UJ	2.00 U
Methyl Tert-Butyl Ether	NE	NE	NE	100000	100 UJ	100 UJ	200 U	200 U	40 U	20 U	1.00 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 UJ	1.00 UJ
Methylene Chloride	5	2000	50000	100000	200 U	200 U	400 U	400 U	20 UJ	20 U	2.00 U	1.0 U	1.0 U	2.00 U	1.0 U	1.0 U	2.0 UJ	2.0 UJ	2.00 U
Naphthalene	140	700	20000	100000	100 U	100 U	400 U	400 U	40 U	20 U	2.00 U	1.0 U	1.0 U	2.00 U	1.0 U	1.0 U	1.0 U	1.0 UJ	1.00 U
N-Butylbenzene	NE	NE	NE	NE	100 U	100 U	200 U	200 U	40 U	20 U	1.00 U	1.0 U	1.0 U	**7.95**	**5.6**	**5.7**	1.0 U	1.0 UJ	1.00 U
N-Propylbenzene	NE	NE	NE	NE	100 U	100 U	200 U	200 U	40 U	20 U	1.00 U	1.0 U	1.0 U	**17.2**	**11**	**12**	1.0 U	1.0 UJ	1.00 U
o-Xylene	10000	3000	5000	100000	100 U	100 U	200 U	200 U	40 U	20 U	1.00 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 UJ	1.00 U
Styrene	100	100	6000	60000	100 U	100 U	200 U	200 U	40 U	20 U	1.00 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 UJ	1.00 U
Tert-Butylbenzene	NE	NE	NE	NE	100 U	100 U	200 U	200 U	40 U	20 U	1.00 U	1.0 U	1.0 U	**15.4**	**11**	**12**	1.0 U	1.0 UJ	**2.88**
Tertiary-Amyl Methyl Ether	NE	NE	NE	NE	100 UJ	100 UJ	200 U	200 U	40 U	20 U	1.00 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 UJ	1.00 U
Tetrachloroethene	**5**	**50**	**30000**	100000	**4450**	**4700**	**2930 J**	**3090 J**	**3400**	**2900 J+**	1.00 U	1.0 U	1.0 U	1.00 U	1.0 U	R	1.0 U	1.0 UJ	1.00 U
Tetrahydrofuran	NE	NE	NE	NE	200 U	200 U	400 U	400 U	100 U	50 U	2.00 U	R	2.5 U	2.00 UJ	2.5 U	2.5 U	2.0 U	2.0 UJ	2.00 U
Toluene	**1000**	50000	40000	100000	100 U	100 U	200 U	200 U	40 U	20 U	1.00 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 UJ	1.00 U
Trans-1,2-Dichloroethene	**100**	**80**	50000	100000	100 U	100 U	200 U	200 U	40 U	20 U	1.00 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 UJ	1.00 U
Trans-1,3-Dichloropropene	NE	NE	NE	NE	50.0 UJ	50.0 UJ	100 U	100 U	20 U	10 U	0.50 U	0.40 U	0.40 U	0.50 U	0.40 U	0.40 U	0.5 U	0.5 UJ	0.50 UJ
Trichloroethene	**5**	**5**	**5000**	**50000**	**8450**	**8590**	**7430**	**7570**	**7300**	**6600**	1.00 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	**1.1**	**1.0 J-**	**1.10**
Trichlorofluoromethane	NE	NE	NE	NE	100 U	100 U	200 U	200 U	40 U	20 U	1.00 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 UJ	1.00 U
Vinyl Chloride	**2**	**2**	50000	100000	100 U	100 U	200 U	200 U	20 U	10 U	1.00 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	**5.2**	**5.2 J-**	**1.09 J**
Xylenes (Total)	10000	3000	5000	100000	200 U	200 U	400 U	400 U	40 U	20 U	2.00 U	1.0 U	1.0 U	2.00 U	1.0 U	1.0 U	2.0 U	2.0 UJ	2.00 U

Notes:

ft = feet — U - Non-detect at laboratory detection limit

mg/l = miligrams per liter — J = Estimated Value, J+ = biased high, J- = biased low, R

µg/l = micrograms per liter — **Detects are bolded**

NE = not established — Criteria exceedances are highlighted

Table 5-7
Summary of 2016 - 2020 Groundwater Analytical Results for Volatile Organic Compounds
Former GE Facility, 50 Fordham Road, Wilmington, MA

				Location Group:	EPL (continued)											Tank Farm			
				Location ID:	TRC-102	TRC-102	TRC-102	TRC-103	TRC-103	TRC-103	TRC-401R	TRC-401R	TRC-401R	TRC-401R	TRC-401R	AE100R-1	AE100R-1	AE100R-1	AE100R-1
				Sample ID:	18A-TRC102-092418-	19A-TRC102-092019-	20A-TRC102-092320-	18A-TRC103-092418-	19A-TRC103-091919-	20A-TRC103-092320-	16A-TRC401R-062716-	7A-TRC401R-100917-	8A-TRC401R-091918-	9A-TRC401R-093019-	0A-TRC401R-092420-	6A-AE100R1-061516-	7A-AE100R1-100417-	8A-AE100R1-091918-	9A-AE100R1-092319-
				Sample Date:	9/24/2018	9/20/2019	9/23/2020	9/24/2018	9/19/2019	9/23/2020	6/27/2016	10/9/2017	9/19/2018	9/30/2019	9/24/2020	6/15/2016	10/4/2017	9/19/2018	9/23/2019
				Sample Type:	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
				Depth Interval:	2.25 - 12.25 ft	2.25-12.25 ft	2.25 - 12.25 ft	1.25 - 11.25 ft	1.25-11.25 ft	1.25 - 11.25 ft	38 - 58 ft	38 - 58 ft	38 - 58 ft	38-58 ft	38 - 58 ft	18 - 24 ft	18 - 24 ft	18 - 24 ft	18-24 ft
Analyte	**MCP Method 1 GW-1 Stds**	**MCP Method 1 GW-2 Stds**	**MCP Method 1 GW-3 Stds**	**Upper Concentration Limit (UCL)**															
Volatile Organic Compounds (µg/l)																			
1,1,1,2-Tetrachloroethane	5	10	50000	100000	1.00 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	100 U	5.00 U	20.0 UJ	10 U	10 U	1.0 U	1.00 U	20.0 UJ	1.0 U
1,1,1-Trichloroethane	**200**	4000	20000	100000	1.00 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	100 U	5.00 U	20.0 U	20 U	20 U	1.0 U	1.00 U	20.0 U	1.0 U
1,1,2,2-Tetrachloroethane	2	9	50000	100000	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	50.0 U	2.50 U	10.0 U	R	10 U	0.5 U	0.50 U	10.0 U	R
1,1,2-Trichloroethane	5	900	50000	100000	1.00 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	100 U	5.00 U	20.0 U	10 U	10 U	1.0 U	1.00 U	20.0 U	1.0 U
1,1-Dichloroethane	**70**	2000	20000	100000	1.00 UJ	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	**145**	**40.8**	**75.2 J**	**92**	**86**	1.0 U	1.00 U	20.0 U	1.0 U
1,1-Dichloroethylene	**7**	**80**	30000	100000	1.00 UJ	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	100 U	5.00 U	20.0 U	**20**	**16**	1.0 U	1.00 U	20.0 U	1.0 U
1,1-Dichloropropene	NE	NE	NE	NE	1.00 U	1.0 U	1.0 U	1.00 UJ	1.0 U	1.0 U	100 U	5.00 U	20.0 U	20 U	20 U	1.0 U	1.00 U	20.0 U	1.0 U
1,2,3-Trichlorobenzene	NE	NE	NE	NE	1.00 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	100 U	5.00 U	20.0 U	10 U	10 U	1.0 U	1.00 U	20.0 U	1.0 U
1,2,3-Trichloropropane	NE	NE	NE	NE	1.00 U	1.0 U	0.50 U	1.00 U	1.0 U	0.50 U	100 U	5.00 U	20.0 U	10 U	10 U	1.0 U	1.00 U	20.0 U	1.0 U
1,2,4-Trichlorobenzene	70	200	50000	100000	1.00 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	100 U	5.00 U	20.0 U	20 U	20 U	1.0 U	1.00 U	20.0 U	1.0 U
1,2,4-Trimethylbenzene	NE	NE	NE	NE	1.00 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	100 U	5.00 U	20.0 U	20 U	20 U	**46.5**	**6.12**	20.0 U	1.0 U
1,2-Dibromo-3-Chloropropane (DBC	NE	NE	NE	NE	2.00 U	R	0.50 U	2.00 U	R	0.50 U	200 U	10.0 U	40.0 UJ	R	10 U	2.0 U	2.00 U	40.0 UJ	R
1,2-Dibromoethane	0.02	2	50000	100000	0.50 UJ	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	50.0 U	2.50 U	10.0 U	10 U	10 U	0.5 U	0.50 U	10.0 U	0.50 U
1,2-Dichlorobenzene	600	8000	2000	80000	1.00 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	100 U	5.00 U	20.0 U	20 U	20 U	1.0 U	1.00 U	20.0 U	1.0 U
1,2-Dichloroethane	5	5	20000	100000	1.00 UJ	0.60 U	0.60 U	1.00 U	0.60 U	0.60 U	100 U	5.00 U	20.0 U	10 U	10 U	1.0 U	1.00 U	20.0 U	0.60 U
1,2-Dichloropropane	5	3	50000	100000	1.00 UJ	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	100 U	5.00 U	20.0 U	10 U	10 U	1.0 U	1.00 U	20.0 U	1.0 U
1,3,5-Trimethylbenzene	NE	NE	NE	NE	1.00 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	100 U	5.00 U	20.0 U	20 U	20 U	**2.8**	**1.11**	20.0 U	1.0 U
1,3-Dichlorobenzene	100	6000	50000	100000	1.00 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	100 U	5.00 U	20.0 U	20 U	20 U	1.0 U	1.00 U	20.0 U	1.0 U
1,3-Dichloropropane	NE	NE	NE	NE	1.00 UJ	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	100 U	5.00 U	20.0 U	20 U	20 U	1.0 U	1.00 U	20.0 U	1.0 U
1,4-Dichlorobenzene	5	60	8000	80000	1.00 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	100 U	5.00 U	20.0 U	10 U	10 U	1.0 U	1.00 U	20.0 U	1.0 U
1,4-Dioxane	**0.3**	6000	50000	100000	20.0 U	40 U	100 U	20.0 UJ	40 U	100 U	2000 U	100 UJ	400 UJ	800 U	2000 U	NS	20.0 U	400 UJ	40 U
2,2-Dichloropropane	NE	NE	NE	NE	1.00 UJ	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	100 U	5.00 UJ	20.0 UJ	20 U	20 U	1.0 U	1.00 UJ	20.0 U	1.0 U
2-Butanone	4000	50000	50000	100000	2.00 U	R	5.0 U	2.00 U	R	5.0 U	1000 U	10.0 U	40.0 U	R	100 U	10.0 U	2.00 U	40.0 U	R
2-Chlorotoluene	NE	NE	NE	NE	1.00 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	100 U	5.00 U	20.0 U	20 U	20 U	1.0 U	1.00 U	20.0 U	1.0 U
2-Hexanone	NE	NE	NE	NE	2.00 U	5.0 U	5.0 U	2.00 UJ	5.0 U	5.0 U	1000 U	10.0 U	40.0 U	R	100 U	10.0 U	2.00 U	40.0 U	R
2-Phenylbutane	NE	NE	NE	NE	1.00 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	100 U	5.00 U	20.0 U	20 U	20 U	**3.0**	**2.75**	20.0 U	**2.2**
4-Chlorotoluene	NE	NE	NE	NE	1.00 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	100 U	5.00 U	20.0 U	20 U	20 U	1.0 U	1.00 U	20.0 U	1.0 U
4-Methyl-2-Pentanone	350	50000	50000	100000	2.00 UJ	5.0 U	5.0 U	2.00 UJ	5.0 U	5.0 U	1000 U	10.0 U	40.0 U	R	100 U	10.0 U	2.00 U	40.0 U	R
Acetone	6300	50000	50000	100000	10.0 U	R	25 U	10.0 UJ	R	25 U	1000 UJ	50.0 U	200 UJ	R	500 U	10.0 U	10.0 U	200 UJ	R
Benzene	5	1000	10000	100000	1.00 U	0.70 U	0.70 U	1.00 U	0.70 U	0.70 U	100 U	5.00 U	20.0 U	10 U	10 U	1.0 U	1.00 U	20.0 U	0.70 U
Bromobenzene	NE	NE	NE	NE	1.00 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	100 U	5.00 U	20.0 U	20 U	20 U	1.0 U	1.00 U	20.0 U	1.0 U
Bromochloromethane	NE	NE	NE	NE	1.00 UJ	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	100 U	5.00 U	20.0 U	20 U	20 U	1.0 U	1.00 U	20.0 U	1.0 U
Bromodichloromethane	3	6	50000	100000	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	50.0 U	2.50 U	10.0 U	10 U	10 U	0.5 U	0.50 U	10.0 U	0.50 U
Bromoform	4	700	50000	100000	1.00 U	R	1.0 U	1.00 U	R	1.0 U	100 U	5.00 U	20.0 UJ	10 U	10 U	1.0 U	1.00 UJ	20.0 UJ	1.0 U
Bromomethane	10	7	800	8000	2.00 U	1.0 U	1.0 UJ	2.00 U	1.0 U	1.0 U	200 U	10.0 U	40.0 U	R	10 UJ	2.0 UJ	2.00 U	40.0 U	R
Carbon Disulfide	NE	NE	NE	NE	2.00 UJ	5.0 U	5.0 U	2.00 U	5.0 U	5.0 U	200 U	10.0 U	40.0 U	100 U	100 U	2.0 U	2.00 U	40.0 U	5.0 U
Carbon Tetrachloride	5	2	5000	50000	1.00 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	100 U	5.00 U	20.0 UJ	10 U	10 U	1.0 U	1.00 U	20.0 UJ	1.0 U
Chlorobenzene	100	200	1000	10000	1.00 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	100 U	5.00 U	20.0 U	20 U	20 U	1.0 U	1.00 U	20.0 U	1.0 U
Chloroethane	NE	NE	NE	NE	2.00 UJ	1.0 U	1.0 U	2.00 U	1.0 U	1.0 UJ	200 U	10.0 U	40.0 U	20 U	20 U	2.0 U	2.00 U	40.0 U	1.0 U
Chloroform	70	50	20000	100000	1.00 UJ	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	100 U	5.00 U	20.0 U	20 U	20 U	1.0 U	1.00 U	20.0 U	1.0 U
Chloromethane	NE	NE	NE	NE	2.00 U	1.0 U	1.0 U	2.00 U	1.0 U	1.0 U	200 UJ	10.0 U	40.0 UJ	20 U	20 U	2.0 U	2.00 U	40.0 UJ	1.0 U
cis-1,2-Dichloroethene	**70**	**20**	50000	100000	**1.16 J**	1.0 U	1.0 U	**3.20**	**1.2**	**2.1**	**107**	**28.6**	**127**	**100**	**90**	**7.5**	**5.29**	**35.6**	**16**
cis-1,3-Dichloropropene	NE	NE	NE	NE	0.50 U	0.40 U	0.40 U	0.50 U	0.40 U	0.40 U	50.0 U	2.50 U	10.0 U	10 U	10 U	0.5 U	0.50 U	10.0 U	0.40 U
Cymene	NE	NE	NE	NE	1.00 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	100 U	5.00 U	20.0 U	20 U	20 U	**2.5**	**1.40**	20.0 U	1.0 U
Dibromochloromethane	2	20	50000	100000	0.50 U	0.50 UJ	0.50 U	0.50 U	0.50 U	0.50 U	50.0 U	2.50 U	10.0 U	10 U	10 U	0.5 U	0.50 U	10.0 UJ	0.50 U
Dibromomethane	NE	NE	NE	NE	1.00 UJ	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	100 U	5.00 U	20.0 U	10 U	10 U	1.0 U	1.00 U	20.0 U	1.0 U
Dichlorodifluoromethane (CFC-12)	NE	NE	NE	NE	2.00 UJ	1.0 U	1.0 U	2.00 U	1.0 U	1.0 U	200 UJ	10.0 U	40.0 U	20 U	20 U	2.0 U	2.00 U	40.0 U	1.0 U
Diethyl Ether	NE	NE	NE	NE	1.00 UJ	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	100 UJ	5.00 U	20.0 U	20 U	20 U	1.0 U	1.00 U	20.0 U	1.0 U
Diisopropyl Ether	NE	NE	NE	NE	1.00 UJ	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	100 U	5.00 U	20.0 U	20 U	20 U	1.0 U	1.00 U	20.0 U	1.0 U
Ethyl Tertiary-Butyl Ether	NE	NE	NE	NE	1.00 UJ	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	100 U	5.00 U	20.0 U	20 U	20 U	1.0 U	1.00 UJ	20.0 U	1.0 U
Ethylbenzene	700	20000	5000	100000	1.00 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	100 U	5.00 U	20.0 U	20 U	20 U	**49.2**	**38.1**	20.0 U	**4.7**
Freon TF (Chlorinated fluorocarbon)	NE	NE	NE	NE	1.00 UJ	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	100 U	5.00 U	20.0 U	20 U	20 U	**3.1**	1.00 U	20.0 U	1.0 U
Hexachloro-1,3-Butadiene	0.6	50	3000	3000	0.50 U	0.40 U	0.40 U	0.50 U	0.40 U	0.40 U	50.0 U	2.50 U	10.0 U	10 U	10 U	0.5 U	0.50 U	10.0 U	0.40 U
Isopropylbenzene	NE	NE	NE	NE	1.00 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	100 U	5.00 U	20.0 U	20 U	20 U	**16.0**	**14.7**	20.0 U	**4.3**
M, P Xylenes	10000	3000	5000	100000	2.00 U	1.0 U	1.0 U	2.00 U	1.0 U	1.0 U	200 U	10.0 U	40.0 U	20 U	20 U	**33.7**	**8.61**	40.0 U	1.0 U
Methyl Tert-Butyl Ether	NE	NE	NE	100000	1.00 UJ	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	100 U	5.00 U	20.0 U	20 U	20 U	1.0 U	1.00 UJ	20.0 U	1.0 U
Methylene Chloride	5	2000	50000	100000	2.00 UJ	1.0 U	1.0 U	2.00 U	1.0 U	1.0 U	200 UJ	10.0 U	40.0 U	10 U	20 U	2.0 U	2.00 U	40.0 U	1.0 U
Naphthalene	140	700	20000	100000	2.00 UJ	1.0 U	1.0 U	2.00 U	1.0 U	1.0 U	100 U	5.00 U	40.0 U	20 U	20 U	**15.9 J**	**11.2**	40.0 U	**2.0**
N-Butylbenzene	NE	NE	NE	NE	1.00 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	100 U	5.00 U	20.0 U	20 U	20 U	**2.8**	**2.55**	20.0 U	**1.2**
N-Propylbenzene	NE	NE	NE	NE	1.00 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	100 U	5.00 U	20.0 U	20 U	20 U	**38.3**	**35.3**	20.0 U	**13**
o-Xylene	10000	3000	5000	100000	1.00 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	100 U	5.00 U	20.0 U	20 U	20 U	**31.9**	**11.0**	20.0 U	1.0 U
Styrene	100	100	6000	60000	1.00 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	100 U	5.00 U	20.0 U	20 U	20 U	1.0 U	1.00 U	20.0 U	1.0 U
Tert-Butylbenzene	NE	NE	NE	NE	**2.81**	**6.1**	**6.7**	**1.25**	**1.1**	1.0 U	100 U	5.00 U	20.0 U	20 U	20 U	**6.1**	**6.38**	20.0 U	**6.7**
Tertiary-Amyl Methyl Ether	NE	NE	NE	NE	1.00 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	100 U	5.00 U	20.0 U	20 U	20 U	1.0 U	1.00 U	20.0 U	1.0 U
Tetrachloroethene	**5**	**50**	**30000**	100000	1.00 U	1.0 U	R	1.00 UJ	1.0 U	R	**2240 J+**	**216**	**1070**	**2600**	**1800 J+**	1.0 U	1.00 U	**635**	**3.6**
Tetrahydrofuran	NE	NE	NE	NE	2.00 U	2.5 U	2.5 U	2.00 U	2.5 U	2.5 U	200 U	10.0 U	40.0 U	R	50 U	2.0 U	2.00 U	40.0 U	R
Toluene	**1000**	50000	40000	100000	1.00 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	100 U	5.00 U	20.0 U	20 U	20 U	**78.7**	**29.2**	20.0 U	**1.4**
Trans-1,2-Dichloroethene	**100**	**80**	50000	100000	1.00 UJ	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	100 U	5.00 U	20.0 U	20 U	20 U	1.0 U	1.00 U	20.0 U	1.0 U
Trans-1,3-Dichloropropene	NE	NE	NE	NE	0.50 U	0.40 U	0.40 U	0.50 U	0.40 U	0.40 U	50.0 U	2.50 U	10.0 UJ	10 U	10 U	0.5 U	0.50 UJ	10.0 U	0.40 U
Trichloroethene	**5**	**5**	**5000**	**50000**	1.00 U	1.0 U	1.0 U	**2.03**	1.0 U	**1.1**	**4150 J**	**355**	**1960**	**5200**	**3600**	1.0 U	1.00 U	**971**	**13**
Trichlorofluoromethane	NE	NE	NE	NE	1.00 UJ	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	100 U	5.00 U	20.0 U	20 U	20 U	1.0 U	1.00 U	20.0 U	1.0 U
Vinyl Chloride	**2**	**2**	50000	100000	1.00 UJ	1.0 U	1.0 U	**2.39**	1.0 U	**1.0**	100 U	5.00 U	20.0 U	10 U	10 U	**3.8**	**1.35**	20.0 U	**4.8**
Xylenes (Total)	10000	3000	5000	100000	2.00 U	1.0 U	1.0 U	2.00 U	1.0 U	1.0 U	200 U	10.0 U	40.0 U	20 U	20 U	**65.6**	**19.6**	40.0 U	1.0 U

Notes:

ft = feet — U - Non-detect at laboratory detection limit

mg/l = miligrams per liter — J = Estimated Value, J+ = biased high, J- = biased low, R

µg/l = micrograms per liter — **Detects are bolded**

NE = not established — Criteria exceedances are highlighted

Table 5-7
Summary of 2016 - 2020 Groundwater Analytical Results for Volatile Organic Compounds
Former GE Facility, 50 Fordham Road, Wilmington, MA

				Location Group:	Tank Farm (continued)														
				Location ID:	AE100R-1	AE100R-3	AE100R-3	AE100R-3	AE100R-3	AE100R-3	AE100R-4	AE100R-4	AE100R-4	AE100R-4	AE100R-4	AE100R-5	AE100R-5	AE100R-5	AE100R-5
				Sample ID:	0A-AE100R1-091020-	6A-AE100R3-061516-	7A-AE100R3-100417-	8A-AE100R3-091918-	9A-AE100R3-092319-	0A-AE100R3-091020-	6A-AE100R4-061516-	7A-AE100R4-100417-	8A-AE100R4-091918-	9A-AE100R4-092319-	0A-AE100R4-091020-	6A-AE100R5-061516-	7A-AE100R5-100417-	8A-AE100R5-091918-	9A-AE100R5-092319-
				Sample Date:	9/10/2020	6/15/2016	10/4/2017	9/19/2018	9/23/2019	9/10/2020	6/15/2016	10/4/2017	9/19/2018	9/23/2019	9/10/2020	6/15/2016	10/4/2017	9/19/2018	9/23/2019
				Sample Type:	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
				Depth Interval:	18 - 24 ft	50 - 56 ft	50 - 56 ft	50 - 56 ft	50-56 ft	50 - 56 ft	63 - 68 ft	63 - 68 ft	63 - 68 ft	63-68 ft	63 - 68 ft	88 - 93 ft	88 - 93 ft	88 - 93 ft	88-93 ft
Analyte	**MCP Method 1 GW-1 Stds**	**MCP Method 1 GW-2 Stds**	**MCP Method 1 GW-3 Stds**	**Upper Concentration Limit (UCL)**															
Volatile Organic Compounds (µg/l)																			
1,1,1,2-Tetrachloroethane	5	10	50000	100000	1.0 U	50.0 U	50.0 U	100 U	50 U	25 U	50.0 U	50.0 U	100 U	50 U	25 U	10.0 U	10.0 U	50.0 U	25 U
1,1,1-Trichloroethane	**200**	4000	20000	100000	1.0 U	50.0 U	50.0 U	100 U	100 U	50 U	50.0 U	50.0 U	100 U	100 U	50 U	10.0 U	10.0 U	50.0 U	50 U
1,1,2,2-Tetrachloroethane	2	9	50000	100000	0.50 U	25.0 U	25.0 U	50.0 U	R	25 U	25.0 U	25.0 U	50.0 U	R	25 U	5.0 U	5.00 U	25.0 U	R
1,1,2-Trichloroethane	5	900	50000	100000	1.0 U	50.0 U	50.0 U	100 U	50 U	25 U	50.0 U	50.0 U	100 U	50 U	25 U	10.0 U	10.0 U	50.0 U	25 U
1,1-Dichloroethane	**70**	2000	20000	100000	1.0 U	50.0 U	50.0 U	100 U	**73**	**52**	50.0 U	50.0 U	100 U	70 U	**53**	**22.0**	**27.1**	50.0 U	50 U
1,1-Dichloroethylene	**7**	**80**	30000	100000	1.0 U	50.0 U	50.0 U	100 U	50 U	25 U	50.0 U	50.0 U	100 U	50 U	25 U	10.0 U	10.0 U	50.0 U	25 U
1,1-Dichloropropene	NE	NE	NE	NE	1.0 U	50.0 U	50.0 U	100 U	100 U	50 U	50.0 U	50.0 U	100 U	100 U	50 U	10.0 U	10.0 U	50.0 U	50 U
1,2,3-Trichlorobenzene	NE	NE	NE	NE	1.0 U	50.0 U	50.0 U	100 U	100 U	25 U	50.0 U	50.0 U	100 U	100 U	25 U	10.0 U	10.0 U	50.0 U	50 U
1,2,3-Trichloropropane	NE	NE	NE	NE	0.50 U	50.0 U	50.0 U	100 U	100 U	25 U	50.0 U	50.0 U	100 U	100 U	25 U	10.0 U	10.0 U	50.0 U	50 U
1,2,4-Trichlorobenzene	70	200	50000	100000	1.0 U	50.0 U	50.0 U	100 U	70 U	50 U	50.0 U	50.0 U	100 U	70 U	50 U	10.0 U	10.0 U	50.0 U	50 U
1,2,4-Trimethylbenzene	NE	NE	NE	NE	1.0 U	50.0 U	50.0 U	100 U	100 U	50 U	50.0 U	50.0 U	100 U	100 U	50 U	10.0 U	10.0 U	50.0 U	50 U
1,2-Dibromo-3-Chloropropane (DBC	NE	NE	NE	NE	0.50 UJ	100 UJ	100 UJ	200 UJ	R	25 UJ	100 UJ	100 UJ	200 UJ	R	25 UJ	20.0 U	20.0 UJ	100 UJ	R
1,2-Dibromoethane	0.02	2	50000	100000	0.50 U	25.0 U	25.0 U	50.0 U	50 U	25 U	25.0 U	25.0 U	50.0 U	50 U	25 U	5.0 U	5.00 U	25.0 U	25 U
1,2-Dichlorobenzene	600	8000	2000	80000	1.0 U	50.0 U	50.0 U	100 U	100 U	50 U	50.0 U	50.0 U	100 U	100 U	50 U	10.0 U	10.0 U	50.0 U	50 U
1,2-Dichloroethane	5	5	20000	100000	0.60 U	50.0 U	50.0 U	100 U	50 U	25 U	50.0 U	50.0 U	100 U	50 U	25 U	10.0 U	10.0 U	50.0 U	25 U
1,2-Dichloropropane	5	3	50000	100000	1.0 U	50.0 U	50.0 U	100 U	50 U	25 U	50.0 U	50.0 U	100 U	50 U	25 U	10.0 U	10.0 U	50.0 U	25 U
1,3,5-Trimethylbenzene	NE	NE	NE	NE	1.0 U	50.0 U	50.0 U	100 U	100 U	50 U	50.0 U	50.0 U	100 U	100 U	50 U	10.0 U	10.0 U	50.0 U	50 U
1,3-Dichlorobenzene	100	6000	50000	100000	1.0 U	50.0 U	50.0 U	100 U	50 U	40 U	50.0 U	50.0 U	100 U	50 U	40 U	10.0 U	10.0 U	50.0 U	40 U
1,3-Dichloropropane	NE	NE	NE	NE	1.0 U	50.0 U	50.0 U	100 U	100 U	50 U	50.0 U	50.0 U	100 U	100 U	50 U	10.0 U	10.0 U	50.0 U	50 U
1,4-Dichlorobenzene	5	60	8000	80000	1.0 U	50.0 U	50.0 U	100 U	50 U	25 U	50.0 U	50.0 U	100 U	50 U	25 U	10.0 U	10.0 U	50.0 U	25 U
1,4-Dioxane	**0.3**	6000	50000	100000	100 U	NS	1000 U	2000 UJ	4000 U	NS	NS	1000 U	2000 UJ	4000 U	NS	NS	200 U	1000 UJ	2000 U
2,2-Dichloropropane	NE	NE	NE	NE	1.0 U	50.0 U	50.0 UJ	100 UJ	100 U	50 U	50.0 U	50.0 UJ	100 UJ	100 U	50 U	10.0 U	10.0 UJ	50.0 UJ	50 U
2-Butanone	4000	50000	50000	100000	5.0 U	500 U	100 U	200 U	R	250 U	500 U	100 U	200 U	R	250 U	100 U	20.0 U	100 U	R
2-Chlorotoluene	NE	NE	NE	NE	1.0 U	50.0 U	50.0 U	100 U	100 U	50 U	50.0 U	50.0 U	100 U	100 U	50 U	10.0 U	10.0 U	50.0 U	50 U
2-Hexanone	NE	NE	NE	NE	5.0 U	500 U	100 U	200 UJ	R	250 U	500 U	100 U	200 UJ	R	250 U	100 U	20.0 U	100 UJ	R
2-Phenylbutane	NE	NE	NE	NE	**2.0**	50.0 U	50.0 U	100 U	100 U	50 U	50.0 U	50.0 U	100 U	100 U	50 U	10.0 U	10.0 U	50.0 U	50 U
4-Chlorotoluene	NE	NE	NE	NE	1.0 U	50.0 U	50.0 U	100 U	100 U	50 U	50.0 U	50.0 U	100 U	100 U	50 U	10.0 U	10.0 U	50.0 U	50 U
4-Methyl-2-Pentanone	350	50000	50000	100000	5.0 U	500 U	100 U	200 U	R	250 U	500 U	100 U	200 U	R	250 U	100 U	20.0 U	100 U	R
Acetone	6300	50000	50000	100000	R	500 U	500 U	1000 UJ	R	1300 UJ	500 U	500 U	1000 UJ	R	1300 UJ	100 U	100 U	500 UJ	R
Benzene	5	1000	10000	100000	0.70 U	50.0 U	50.0 U	100 U	50 U	25 U	50.0 U	50.0 U	100 U	50 U	25 U	10.0 U	10.0 U	50.0 U	25 U
Bromobenzene	NE	NE	NE	NE	1.0 U	50.0 U	50.0 U	100 U	100 U	50 U	50.0 U	50.0 U	100 U	100 U	50 U	10.0 U	10.0 U	50.0 U	50 U
Bromochloromethane	NE	NE	NE	NE	1.0 U	50.0 U	50.0 U	100 U	100 U	50 U	50.0 U	50.0 U	100 U	100 U	50 U	10.0 U	10.0 U	50.0 U	50 U
Bromodichloromethane	3	6	50000	100000	0.50 U	25.0 U	25.0 U	50.0 U	50 U	25 U	25.0 U	25.0 U	50.0 U	50 U	25 U	5.0 U	5.00 U	25.0 U	25 U
Bromoform	4	700	50000	100000	1.0 UJ	50.0 U	50.0 UJ	100 UJ	50 U	25 U	50.0 U	50.0 UJ	100 UJ	50 U	25 U	10.0 U	10.0 UJ	50.0 UJ	25 U
Bromomethane	10	7	800	8000	1.0 UJ	100 U	100 U	200 UJ	R	25 UJ	100 U	100 U	200 UJ	R	25 UJ	20.0 UJ	20.0 U	100 UJ	R
Carbon Disulfide	NE	NE	NE	NE	5.0 U	100 U	100 U	200 U	500 U	250 U	100 U	100 U	200 U	500 U	250 U	20.0 U	20.0 U	100 U	250 U
Carbon Tetrachloride	5	2	5000	50000	1.0 U	50.0 U	50.0 U	100 UJ	50 U	25 U	50.0 U	50.0 U	100 UJ	50 U	25 U	10.0 U	10.0 U	50.0 UJ	25 U
Chlorobenzene	100	200	1000	10000	1.0 U	50.0 U	50.0 U	100 U	100 U	50 U	50.0 U	50.0 U	100 U	100 U	50 U	10.0 U	10.0 U	50.0 U	50 U
Chloroethane	NE	NE	NE	NE	1.0 UJ	100 U	100 U	200 U	100 U	50 UJ	100 U	100 U	200 U	100 U	50 UJ	20.0 U	20.0 U	100 U	50 U
Chloroform	70	50	20000	100000	1.0 U	50.0 U	50.0 U	100 U	50 U	50 U	50.0 U	50.0 U	100 U	50 U	50 U	10.0 U	10.0 U	50.0 U	50 U
Chloromethane	NE	NE	NE	NE	1.0 U	100 U	100 U	200 U	100 U	50 U	100 U	100 U	200 U	100 U	50 U	20.0 U	20.0 U	100 U	50 U
cis-1,2-Dichloroethene	**70**	**20**	50000	100000	**6.5**	50.0 U	50.0 U	100 U	**61**	**52**	**58.5**	50.0 U	100 U	**89**	**92**	**118**	**65.2**	**68.5**	**160**
cis-1,3-Dichloropropene	NE	NE	NE	NE	0.40 U	25.0 U	25.0 U	50.0 U	50 U	25 U	25.0 U	25.0 U	50.0 U	50 U	25 U	5.0 U	5.00 U	25.0 U	25 U
Cymene	NE	NE	NE	NE	1.0 U	50.0 U	50.0 U	100 U	100 U	50 U	50.0 U	50.0 U	100 U	100 U	50 U	10.0 U	10.0 U	50.0 U	50 U
Dibromochloromethane	2	20	50000	100000	0.50 U	25.0 U	25.0 U	50.0 UJ	50 U	25 U	25.0 U	25.0 U	50.0 UJ	50 U	25 U	5.0 U	5.00 U	25.0 UJ	25 U
Dibromomethane	NE	NE	NE	NE	1.0 U	50.0 U	50.0 U	100 U	100 U	25 U	50.0 U	50.0 U	100 U	100 U	25 U	10.0 U	10.0 U	50.0 U	50 U
Dichlorodifluoromethane (CFC-12)	NE	NE	NE	NE	1.0 U	100 U	100 UJ	200 U	100 U	50 U	100 U	100 UJ	200 U	100 U	50 U	20.0 U	20.0 UJ	100 U	50 U
Diethyl Ether	NE	NE	NE	NE	1.0 U	50.0 U	50.0 U	100 U	100 U	50 U	50.0 U	50.0 U	100 U	100 U	50 U	10.0 U	10.0 U	50.0 U	50 U
Diisopropyl Ether	NE	NE	NE	NE	1.0 U	50.0 U	50.0 U	100 U	100 U	50 UJ	50.0 U	50.0 U	100 U	100 U	50 UJ	10.0 U	10.0 U	50.0 U	50 U
Ethyl Tertiary-Butyl Ether	NE	NE	NE	NE	1.0 U	50.0 U	50.0 UJ	100 U	100 U	50 U	50.0 U	50.0 UJ	100 U	100 U	50 U	10.0 U	10.0 UJ	50.0 U	50 U
Ethylbenzene	700	20000	5000	100000	**2.7**	50.0 U	50.0 U	100 U	100 U	50 U	50.0 U	50.0 U	100 U	100 U	50 U	10.0 U	10.0 U	50.0 U	50 U
Freon TF (Chlorinated fluorocarbon)	NE	NE	NE	NE	1.0 U	50.0 U	50.0 U	100 U	100 U	50 U	50.0 U	50.0 U	100 U	100 U	50 U	10.0 U	10.0 U	50.0 U	50 U
Hexachloro-1,3-Butadiene	0.6	50	3000	3000	0.40 U	25.0 U	25.0 UJ	50.0 U	50 U	25 U	25.0 U	25.0 UJ	50.0 U	50 U	25 U	5.0 U	5.00 UJ	25.0 U	25 U
Isopropylbenzene	NE	NE	NE	NE	**2.6**	50.0 U	50.0 U	100 U	100 U	50 U	50.0 U	50.0 U	100 U	100 U	50 U	10.0 U	10.0 U	50.0 U	50 U
M, P Xylenes	10000	3000	5000	100000	1.0 U	100 U	100 U	200 U	100 U	50 U	100 U	100 U	200 U	100 U	50 U	20.0 U	20.0 U	100 U	50 U
Methyl Tert-Butyl Ether	NE	NE	NE	100000	1.0 U	50.0 U	50.0 UJ	100 U	70 U	50 U	50.0 U	50.0 UJ	100 U	70 U	50 U	10.0 U	10.0 UJ	50.0 U	50 U
Methylene Chloride	5	2000	50000	100000	1.0 U	100 U	100 U	200 U	50 U	50 UJ	100 U	100 U	200 U	50 U	50 UJ	20.0 U	20.0 U	100 U	25 U
Naphthalene	140	700	20000	100000	**1.4**	50.0 UJ	50.0 U	200 U	100 U	50 U	50.0 UJ	50.0 U	200 U	100 U	50 U	10.0 UJ	10.0 U	100 U	50 U
N-Butylbenzene	NE	NE	NE	NE	1.0 U	50.0 U	50.0 U	100 U	100 U	50 U	50.0 U	50.0 U	100 U	100 U	50 U	10.0 U	10.0 U	50.0 U	50 U
N-Propylbenzene	NE	NE	NE	NE	**5.3**	50.0 U	50.0 U	100 U	100 U	50 U	50.0 U	50.0 U	100 U	100 U	50 U	10.0 U	10.0 U	50.0 U	50 U
o-Xylene	10000	3000	5000	100000	1.0 U	50.0 U	50.0 U	100 U	100 U	50 U	50.0 U	50.0 U	100 U	100 U	50 U	10.0 U	10.0 U	50.0 U	50 U
Styrene	100	100	6000	60000	1.0 U	50.0 U	50.0 U	100 U	100 U	50 U	50.0 U	50.0 U	100 U	100 U	50 U	10.0 U	10.0 U	50.0 U	50 U
Tert-Butylbenzene	NE	NE	NE	NE	**6.7**	50.0 U	50.0 U	100 U	100 U	50 U	50.0 U	50.0 U	100 U	100 U	50 U	10.0 U	10.0 U	50.0 U	50 U
Tertiary-Amyl Methyl Ether	NE	NE	NE	NE	1.0 U	50.0 U	50.0 UJ	100 U	100 U	50 U	50.0 U	50.0 UJ	100 U	100 U	50 U	10.0 U	10.0 UJ	50.0 U	50 U
Tetrachloroethene	**5**	**50**	**30000**	100000	R	**2270**	**3440 J**	**1390**	**5700**	**4000 J+**	**1490**	**1900 J**	**1500**	**4000**	**3400 J+**	**302**	**493 J**	**884**	**1400**
Tetrahydrofuran	NE	NE	NE	NE	2.5 U	100 U	100 U	200 U	R	130 U	100 U	100 U	200 U	R	130 U	30.0 U	20.0 U	100 U	R
Toluene	**1000**	50000	40000	100000	**1.9**	50.0 U	50.0 U	100 U	100 U	50 U	50.0 U	50.0 U	100 U	100 U	50 U	10.0 U	10.0 U	50.0 U	50 U
Trans-1,2-Dichloroethene	**100**	**80**	50000	100000	1.0 U	50.0 U	50.0 U	100 U	80 U	50 U	50.0 U	50.0 U	100 U	80 U	50 U	10.0 U	10.0 U	50.0 U	50 U
Trans-1,3-Dichloropropene	NE	NE	NE	NE	0.40 U	25.0 U	25.0 UJ	50.0 U	50 U	25 U	25.0 U	25.0 UJ	50.0 U	50 U	25 U	5.0 U	5.00 UJ	25.0 U	25 U
Trichloroethene	**5**	**5**	**5000**	**50000**	**2.5**	**3410**	**4780**	**2200**	**7300**	**4900**	**2350**	**2990**	**2740**	**5400**	**4700**	**718**	**1020**	**1810**	**2300**
Trichlorofluoromethane	NE	NE	NE	NE	1.0 U	50.0 U	50.0 U	100 UJ	100 U	50 U	50.0 U	50.0 U	100 UJ	100 U	50 U	10.0 U	10.0 U	50.0 UJ	50 U
Vinyl Chloride	**2**	**2**	50000	100000	**4.1**	50.0 UJ	50.0 U	100 U	50 U	25 U	50.0 UJ	50.0 U	100 U	50 U	25 U	**33.2**	10.0 U	50.0 U	25 U
Xylenes (Total)	10000	3000	5000	100000	1.0 U	100 U	100 U	200 U	100 U	50 U	100 U	100 U	200 U	100 U	50 U	20.0 U	20.0 U	100 U	50 U

Notes:

ft = feet

mg/l = miligrams per liter

µg/l = micrograms per liter

NE = not established

U - Non-detect at laboratory detection limit

J = Estimated Value, J+ = biased high, J- = biased low, R

Detects are bolded

Criteria exceedances are highlighted

Table 5-7
Summary of 2016 - 2020 Groundwater Analytical Results for Volatile Organic Compounds
Former GE Facility, 50 Fordham Road, Wilmington, MA

				Location Group:	Transect A (continued)														
				Location ID:	AE100R-5	AE100R-6	AE100R-6	AE100R-6	AE100R-6	AE100R-6	AE101D	AE101D	AE101D	AE101D	AE101D	AE101D	AE101R-1	AE101R-1	AE101R-1
				Sample ID:	0A-AE100R5-091020-	6A-AE100R6-061516-	7A-AE100R6-100417-	8A-AE100R6-091918-	9A-AE100R6-092319-	0A-AE100R6-091020-	16A-AE101D-061516-	16A-AE101D-061516-	17A-AE101D-100217-	18A-AE101D-092618-	19A-AE101D-093019-	20A-AE101D-091820-	16A-AE101R1-061616-	7A-AE101R1-101117-	8A-AE101R1-092018-
				Sample Date:	9/10/2020	6/15/2016	10/4/2017	9/19/2018	9/23/2019	9/10/2020	6/15/2016	6/15/2016	10/2/2017	9/26/2018	9/30/2019	9/18/2020	6/16/2016	10/11/2017	9/20/2018
				Sample Type:	N	N	N	N	N	N	N	FD	N	N	N	N	N	N	N
				Depth Interval:	88 - 93 ft	108.5 - 113.5 ft	108.5 - 113.5 ft	108.5 - 113.5 ft	108.5-113.5 ft	108.5 - 113.5 ft	20 - 25 ft	20 - 25 ft	20 - 25 ft	20 - 25 ft	20-25 ft	20 - 25 ft	30.5 - 35.5 ft	30.5 - 35.5 ft	30.5 - 35.5 ft
Analyte	**MCP Method 1 GW-1 Stds**	**MCP Method 1 GW-2 Stds**	**MCP Method 1 GW-3 Stds**	**Upper Concentration Limit (UCL)**															
Volatile Organic Compounds (µg/l)																			
1,1,1,2-Tetrachloroethane	5	10	50000	100000	10 U	25.0 U	20.0 U	50.0 U	10 U	5.0 U	1.0 U	1.0 U	1.00 UJ	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	2.00 UJ
1,1,1-Trichloroethane	**200**	4000	20000	100000	20 U	25.0 U	20.0 U	50.0 U	20 U	10 U	1.0 U	1.0 U	1.00 UJ	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	2.00 U
1,1,2,2-Tetrachloroethane	2	9	50000	100000	10 U	12.5 U	10.0 U	25.0 U	R	5.0 U	0.5 U	0.5 U	0.50 U	0.50 U	R	0.50 U	0.5 U	0.50 U	1.00 U
1,1,2-Trichloroethane	5	900	50000	100000	10 U	25.0 U	20.0 U	50.0 U	10 U	5.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	2.00 U
1,1-Dichloroethane	**70**	2000	20000	100000	**36**	**28.5**	**31.6**	50.0 U	**32**	**28**	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	**1.55**	2.00 UJ
1,1-Dichloroethylene	**7**	**80**	30000	100000	**10**	25.0 U	20.0 U	50.0 U	10 U	**7.3**	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	2.00 U
1,1-Dichloropropene	NE	NE	NE	NE	20 U	25.0 U	20.0 U	50.0 U	20 U	10 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	2.00 U
1,2,3-Trichlorobenzene	NE	NE	NE	NE	10 U	25.0 U	20.0 U	50.0 U	20 U	7.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	2.00 U
1,2,3-Trichloropropane	NE	NE	NE	NE	10 U	25.0 U	20.0 U	50.0 U	20 U	5.0 U	1.0 U	1.0 U	1.00 U	1.00 U	0.50 U	0.50 U	1.0 U	1.00 U	2.00 U
1,2,4-Trichlorobenzene	70	200	50000	100000	20 U	25.0 U	20.0 U	50.0 U	20 U	10 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	2.00 U
1,2,4-Trimethylbenzene	NE	NE	NE	NE	20 U	25.0 U	20.0 U	50.0 U	20 U	10 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	2.00 U
1,2-Dibromo-3-Chloropropane (DBC	NE	NE	NE	NE	10 UJ	50.0 UJ	40.0 UJ	100 UJ	R	5.0 UJ	2.0 U	2.0 U	2.00 U	2.00 U	R	0.50 U	2.0 UJ	2.00 U	4.00 UJ
1,2-Dibromoethane	0.02	2	50000	100000	10 U	12.5 U	10.0 U	25.0 U	10 U	5.0 U	0.5 U	0.5 U	0.50 U	0.50 U	0.50 U	0.50 U	0.5 U	0.50 U	1.00 U
1,2-Dichlorobenzene	600	8000	2000	80000	20 U	25.0 U	20.0 U	50.0 U	20 U	10 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	2.00 U
1,2-Dichloroethane	5	5	20000	100000	10 U	25.0 U	20.0 U	50.0 U	10 U	5.0 U	1.0 U	1.0 U	1.00 U	1.00 U	0.60 U	0.60 U	1.0 U	1.00 U	2.00 U
1,2-Dichloropropane	5	3	50000	100000	10 U	25.0 U	20.0 U	50.0 U	10 U	5.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	2.00 U
1,3,5-Trimethylbenzene	NE	NE	NE	NE	20 U	25.0 U	20.0 U	50.0 U	20 U	10 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	2.00 U
1,3-Dichlorobenzene	100	6000	50000	100000	20 U	25.0 U	20.0 U	50.0 U	20 U	10 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	2.00 U
1,3-Dichloropropane	NE	NE	NE	NE	20 U	25.0 U	20.0 U	50.0 U	20 U	10 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	2.00 U
1,4-Dichlorobenzene	5	60	8000	80000	10 U	25.0 U	20.0 U	50.0 U	10 U	5.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	2.00 U
1,4-Dioxane	**0.3**	6000	50000	100000	2000 U	NS	400 U	1000 UJ	800 U	NS	NS	20.0 U	20.0 U	20.0 U	40 U	NS	20.0 U	20.0 U	40.0 UJ
2,2-Dichloropropane	NE	NE	NE	NE	20 U	25.0 U	20.0 UJ	50.0 UJ	20 U	10 U	1.0 U	1.0 U	1.00 UJ	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	2.00 UJ
2-Butanone	4000	50000	50000	100000	100 U	250 U	40.0 U	100 U	R	50 U	10.0 U	10.0 U	2.00 U	2.00 UJ	R	5.0 U	10.0 U	2.00 U	4.00 U
2-Chlorotoluene	NE	NE	NE	NE	20 U	25.0 U	20.0 U	50.0 U	20 U	10 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	2.00 U
2-Hexanone	NE	NE	NE	NE	100 U	250 U	40.0 U	100 UJ	R	50 U	10.0 U	10.0 U	2.00 U	2.00 UJ	R	5.0 U	10.0 U	2.00 U	4.00 U
2-Phenylbutane	NE	NE	NE	NE	20 U	25.0 U	20.0 U	50.0 U	20 U	10 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	2.00 U
4-Chlorotoluene	NE	NE	NE	NE	20 U	25.0 U	20.0 U	50.0 U	20 U	10 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	2.00 U
4-Methyl-2-Pentanone	350	50000	50000	100000	100 U	250 U	40.0 U	100 U	R	50 U	10.0 U	10.0 U	2.00 U	2.00 U	R	5.0 U	10.0 U	2.00 U	4.00 U
Acetone	6300	50000	50000	100000	500 UJ	250 U	200 U	500 UJ	R	250 UJ	10.0 U	10.0 U	10.0 U	10.0 UJ	R	25 U	10.0 U	10.0 U	20.0 UJ
Benzene	5	1000	10000	100000	10 U	25.0 U	20.0 U	50.0 U	10 U	5.0 U	1.0 U	1.0 U	1.00 U	1.00 U	0.70 U	0.70 U	1.0 U	1.00 U	2.00 U
Bromobenzene	NE	NE	NE	NE	20 U	25.0 U	20.0 U	50.0 U	20 U	10 U	1.0 U	1.0 U	1.00 UJ	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	2.00 U
Bromochloromethane	NE	NE	NE	NE	20 U	25.0 U	20.0 U	50.0 U	20 U	10 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	2.00 U
Bromodichloromethane	3	6	50000	100000	10 U	12.5 U	10.0 U	25.0 U	10 U	5.0 U	0.5 U	0.5 U	0.50 UJ	0.50 U	0.50 U	0.50 U	0.5 U	0.50 U	1.00 U
Bromoform	4	700	50000	100000	10 U	25.0 U	20.0 UJ	50.0 UJ	10 U	5.0 U	1.0 U	1.0 U	1.00 UJ	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	2.00 UJ
Bromomethane	10	7	800	8000	10 UJ	50.0 U	40.0 U	100 UJ	R	7.0 UJ	2.0 UJ	2.0 UJ	2.00 UJ	2.00 U	R	1.0 U	2.0 U	2.00 UJ	4.00 U
Carbon Disulfide	NE	NE	NE	NE	100 U	50.0 U	40.0 U	100 U	100 U	50 U	2.0 U	2.0 U	2.00 U	2.00 U	5.0 U	5.0 U	2.0 U	2.00 U	4.00 U
Carbon Tetrachloride	5	2	5000	50000	10 U	25.0 U	20.0 U	50.0 UJ	10 U	5.0 U	1.0 U	1.0 U	1.00 UJ	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	2.00 UJ
Chlorobenzene	100	200	1000	10000	20 U	25.0 U	20.0 U	50.0 U	20 U	10 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	2.00 U
Chloroethane	NE	NE	NE	NE	20 UJ	50.0 U	40.0 U	100 U	20 U	10 UJ	2.0 U	2.0 U	2.00 U	2.00 U	1.0 U	1.0 UJ	2.0 UJ	2.00 U	4.00 U
Chloroform	70	50	20000	100000	20 U	25.0 U	20.0 U	50.0 U	20 U	10 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	2.00 U
Chloromethane	NE	NE	NE	NE	20 U	50.0 U	40.0 U	100 U	20 U	10 U	2.0 UJ	2.0 UJ	2.00 U	2.00 U	**1.5**	1.0 U	2.0 UJ	2.00 UJ	4.00 UJ
cis-1,2-Dichloroethene	**70**	**20**	50000	100000	**400**	**188**	**160**	**101 D**	**110**	**140**	**20.2**	**20.3**	**51.6**	**24.4**	**32**	**64**	**12.8**	**38.7**	**32.7**
cis-1,3-Dichloropropene	NE	NE	NE	NE	10 U	12.5 U	10.0 U	25.0 U	10 U	5.0 U	0.5 U	0.5 U	0.50 U	0.50 U	0.40 U	0.40 U	0.5 U	0.50 U	1.00 U
Cymene	NE	NE	NE	NE	20 U	25.0 U	20.0 U	50.0 U	20 U	10 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	2.00 U
Dibromochloromethane	2	20	50000	100000	10 U	12.5 U	10.0 U	25.0 UJ	10 U	5.0 U	0.5 U	0.5 U	0.50 UJ	0.50 U	0.50 U	0.50 U	0.5 U	0.50 U	1.00 U
Dibromomethane	NE	NE	NE	NE	10 U	25.0 U	20.0 U	50.0 U	20 U	8.3 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	2.00 U
Dichlorodifluoromethane (CFC-12)	NE	NE	NE	NE	20 U	50.0 U	40.0 UJ	100 U	20 U	10 U	2.0 U	2.0 U	2.00 U	2.00 U	1.0 U	1.0 U	2.0 U	2.00 U	4.00 U
Diethyl Ether	NE	NE	NE	NE	20 U	25.0 U	20.0 U	50.0 U	20 U	10 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	2.00 U
Diisopropyl Ether	NE	NE	NE	NE	20 U	25.0 U	20.0 U	50.0 U	20 U	10 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	2.00 U
Ethyl Tertiary-Butyl Ether	NE	NE	NE	NE	20 U	25.0 U	20.0 UJ	50.0 U	20 U	10 U	1.0 U	1.0 U	1.00 UJ	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	2.00 U
Ethylbenzene	700	20000	5000	100000	20 U	25.0 U	20.0 U	50.0 U	20 U	10 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	2.00 U
Freon TF (Chlorinated fluorocarbon)	NE	NE	NE	NE	20 U	25.0 U	20.0 U	50.0 U	20 U	10 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	2.00 U
Hexachloro-1,3-Butadiene	0.6	50	3000	3000	10 U	12.5 U	10.0 UJ	25.0 U	10 U	5.0 U	0.5 U	0.5 U	0.50 U	0.50 U	0.40 U	0.40 U	0.5 U	0.50 U	1.00 U
Isopropylbenzene	NE	NE	NE	NE	20 U	25.0 U	20.0 U	50.0 U	20 U	10 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	2.00 U
M, P Xylenes	10000	3000	5000	100000	20 U	50.0 U	40.0 U	100 U	20 U	10 U	2.0 U	2.0 U	2.00 U	2.00 U	1.0 U	1.0 U	2.0 U	2.00 U	4.00 U
Methyl Tert-Butyl Ether	NE	NE	NE	100000	20 U	25.0 U	20.0 UJ	50.0 U	20 U	10 U	1.0 U	1.0 U	1.00 UJ	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	2.00 U
Methylene Chloride	5	2000	50000	100000	20 UJ	50.0 U	40.0 U	100 U	10 U	10 UJ	2.0 U	2.0 U	2.00 U	2.00 U	1.0 U	1.0 U	2.0 U	2.00 U	4.00 U
Naphthalene	140	700	20000	100000	20 U	25.0 UJ	20.0 U	100 U	20 U	10 U	1.0 UJ	1.0 UJ	1.00 U	2.00 U	1.0 U	1.0 U	1.0 UJ	1.00 U	4.00 U
N-Butylbenzene	NE	NE	NE	NE	20 U	25.0 U	20.0 U	50.0 U	20 U	10 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	2.00 U
N-Propylbenzene	NE	NE	NE	NE	20 U	25.0 U	20.0 U	50.0 U	20 U	10 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	2.00 U
o-Xylene	10000	3000	5000	100000	20 U	25.0 U	20.0 U	50.0 U	20 U	10 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	2.00 U
Styrene	100	100	6000	60000	20 U	25.0 U	20.0 U	50.0 U	20 U	10 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	2.00 U
Tert-Butylbenzene	NE	NE	NE	NE	20 U	25.0 U	20.0 U	50.0 U	20 U	10 U	1.0 U	1.0 U	1.00 U	1.00 U	**1.2**	1.0 U	1.0 U	1.00 U	2.00 U
Tertiary-Amyl Methyl Ether	NE	NE	NE	NE	20 U	25.0 U	20.0 UJ	50.0 U	20 U	10 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	2.00 U
Tetrachloroethene	**5**	**50**	**30000**	100000	**1100 J+**	**754**	**849 J**	**744 D**	**1200**	**900 J+**	**1.4**	**1.3**	1.00 UJ	**21.4**	1.0 U	**2.3 J+**	**17.9**	**126**	**166**
Tetrahydrofuran	NE	NE	NE	NE	50 U	50.0 U	40.0 U	100 U	R	25 U	2.0 U	2.0 U	2.00 U	2.00 U	R	2.5 U	2.0 U	2.00 U	4.00 U
Toluene	**1000**	50000	40000	100000	20 U	25.0 U	20.0 U	50.0 U	20 U	10 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	2.00 U
Trans-1,2-Dichloroethene	**100**	**80**	50000	100000	20 U	25.0 U	20.0 U	50.0 U	20 U	10 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	2.00 U
Trans-1,3-Dichloropropene	NE	NE	NE	NE	10 U	12.5 U	10.0 UJ	25.0 U	10 U	5.0 U	0.5 U	0.5 U	0.50 U	0.50 U	0.40 U	0.40 U	0.5 U	0.50 U	1.00 UJ
Trichloroethene	**5**	**5**	**5000**	**50000**	**2200**	**1170**	**1320**	**1350 D**	**1600**	**1300**	**3.4**	**3.0**	**2.73**	**11.3**	**3.8**	**14**	**17.7**	**64.9**	**55.0**
Trichlorofluoromethane	NE	NE	NE	NE	20 U	25.0 U	20.0 U	50.0 UJ	20 U	10 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	2.00 U
Vinyl Chloride	**2**	**2**	50000	100000	**38**	25.0 UJ	20.0 U	50.0 U	10 U	**7.0**	1.0 U	1.0 U	1.00 UJ	**1.66**	**1.6**	**2.3**	1.0 U	**7.40**	**6.40**
Xylenes (Total)	10000	3000	5000	100000	20 U	50.0 U	40.0 U	100 U	20 U	10 U	2.0 U	2.0 U	2.00 U	2.00 U	1.0 U	1.0 U	2.0 U	2.00 U	4.00 U

Notes:

ft = feet

mg/l = miligrams per liter

µg/l = micrograms per liter

NE = not established

U - Non-detect at laboratory detection limit

J = Estimated Value, J+ = biased high, J- = biased low, R

Detects are bolded

Criteria exceedances are highlighted

Table 5-7
Summary of 2016 - 2020 Groundwater Analytical Results for Volatile Organic Compounds
Former GE Facility, 50 Fordham Road, Wilmington, MA

				Location Group:	Transect A (continued)														
				Location ID:	AE101R-1	AE101R-1	AE101R-1	AE101R-1	AE101R-2	AE101R-2	AE101R-2	AE101R-2	AE101R-2	AE101R-3	AE101R-3	AE101R-3	AE101R-3	AE101R-3	AE101R-3
				Sample ID:	9A-AE101R1-092519-	9A-AE101R1-092519-1	0A-AE101R1-092320-	0A-AE101R1-092320-	6A-AE101R2-061616-	7A-AE101R2-101117-	8A-AE101R2-092018-	9A-AE101R2-092519-	0A-AE101R2-092320-	6A-AE101R3-061616-	7A-AE101R3-101117-	8A-AE101R3-092018-	8A-AE101R3-092018-	9A-AE101R3-092519-	0A-AE101R3-092320-
				Sample Date:	9/25/2019	9/25/2019	9/23/2020	9/23/2020	6/16/2016	10/11/2017	9/20/2018	9/25/2019	9/23/2020	6/16/2016	10/11/2017	9/20/2018	9/20/2018	9/25/2019	9/23/2020
				Sample Type:	N	FD	N	FD	N	N	N	N	N	N	N	N	FD	N	N
				Depth Interval:	30.5-35.5 ft	30.5-35.5 ft	30.5 - 35.5 ft	30.5 - 35.5 ft	55 - 60 ft	55 - 60 ft	55 - 60 ft	55-60 ft	55 - 60 ft	80 - 85 ft	80 - 85 ft	80 - 85 ft	80 - 85 ft	80-85 ft	80 - 85 ft
Analyte	**MCP Method 1 GW-1 Stds**	**MCP Method 1 GW-2 Stds**	**MCP Method 1 GW-3 Stds**	**Upper Concentration Limit (UCL)**															
Volatile Organic Compounds (µg/l)																			
1,1,1,2-Tetrachloroethane	5	10	50000	100000	1.0 U	2.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 UJ	1.0 U	1.0 U	1.0 U	1.00 U	1.00 UJ	1.00 UJ	1.0 U	1.0 U
1,1,1-Trichloroethane	**200**	4000	20000	100000	1.0 U	2.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 UJ	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U
1,1,2,2-Tetrachloroethane	2	9	50000	100000	0.50 U	R	0.50 U	0.50 U	0.5 U	0.50 U	0.50 U	R	0.50 U	0.5 U	0.50 U	0.50 U	0.50 U	R	0.50 U
1,1,2-Trichloroethane	5	900	50000	100000	1.0 U	2.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U
1,1-Dichloroethane	**70**	2000	20000	100000	**1.7**	2.0 U	**1.7**	**1.8**	**7.7**	**7.88**	**5.44 J**	**5.8**	**7.2**	**9.9**	**6.52**	**3.88 J**	**3.91 J**	**4.0**	**2.5**
1,1-Dichloroethylene	**7**	**80**	30000	100000	1.0 U	2.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U
1,1-Dichloropropene	NE	NE	NE	NE	1.0 U	2.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U
1,2,3-Trichlorobenzene	NE	NE	NE	NE	1.0 U	2.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U
1,2,3-Trichloropropane	NE	NE	NE	NE	0.50 U	1.0 U	0.50 U	0.50 U	1.0 U	1.00 U	1.00 U	0.50 U	0.50 U	1.0 U	1.00 U	1.00 U	1.00 U	0.50 U	0.50 U
1,2,4-Trichlorobenzene	70	200	50000	100000	1.0 U	2.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U
1,2,4-Trimethylbenzene	NE	NE	NE	NE	1.0 U	2.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U
1,2-Dibromo-3-Chloropropane (DBC	NE	NE	NE	NE	0.50 U	R	0.50 U	0.50 U	2.0 U	2.00 U	2.00 UJ	R	0.50 U	2.0 U	2.00 U	2.00 UJ	2.00 UJ	R	0.50 U
1,2-Dibromoethane	0.02	2	50000	100000	0.50 U	1.0 U	0.50 U	0.50 U	0.5 U	0.50 U	0.50 U	0.50 U	0.50 U	0.5 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U
1,2-Dichlorobenzene	600	8000	2000	80000	1.0 U	2.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U
1,2-Dichloroethane	5	5	20000	100000	0.60 U	1.2 U	0.60 U	0.60 U	1.0 U	1.00 U	1.00 U	0.60 U	0.60 U	1.0 U	1.00 U	1.00 U	1.00 U	0.60 U	0.60 U
1,2-Dichloropropane	5	3	50000	100000	1.0 U	2.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U
1,3,5-Trimethylbenzene	NE	NE	NE	NE	1.0 U	2.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U
1,3-Dichlorobenzene	100	6000	50000	100000	1.0 U	2.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U
1,3-Dichloropropane	NE	NE	NE	NE	1.0 U	2.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U
1,4-Dichlorobenzene	5	60	8000	80000	1.0 U	2.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U
1,4-Dioxane	**0.3**	6000	50000	100000	10 U	80 U	100 U	100 U	20.0 U	20.0 U	20.0 UJ	40 U	NS	NS	20.0 U	20.0 UJ	20.0 UJ	40 U	NS
2,2-Dichloropropane	NE	NE	NE	NE	1.0 U	2.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 UJ	1.0 U	1.0 U	1.0 UJ	1.00 U	1.00 UJ	1.00 UJ	1.0 U	1.0 U
2-Butanone	4000	50000	50000	100000	5.0 UJ	R	5.0 U	5.0 U	10.0 U	2.00 U	2.00 U	R	5.0 U	10.0 U	2.00 U	2.00 U	2.00 U	R	5.0 U
2-Chlorotoluene	NE	NE	NE	NE	1.0 U	2.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U
2-Hexanone	NE	NE	NE	NE	5.0 U	R	5.0 U	5.0 U	10.0 U	2.00 U	2.00 U	R	5.0 U	10.0 U	2.00 U	2.00 U	2.00 U	R	5.0 U
2-Phenylbutane	NE	NE	NE	NE	1.0 U	2.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U
4-Chlorotoluene	NE	NE	NE	NE	1.0 U	2.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U
4-Methyl-2-Pentanone	350	50000	50000	100000	5.0 U	R	5.0 U	5.0 U	10.0 U	2.00 U	2.00 U	R	5.0 U	10.0 U	2.00 U	2.00 U	2.00 U	R	5.0 U
Acetone	6300	50000	50000	100000	25 U	R	25 U	25 U	10.0 U	10.0 U	10.0 UJ	R	25 U	10.0 U	10.0 U	10.0 UJ	10.0 UJ	R	25 U
Benzene	5	1000	10000	100000	0.70 U	1.4 U	0.70 U	0.70 U	1.0 U	1.00 U	1.00 U	0.70 U	0.70 U	1.0 U	1.00 U	1.00 U	1.00 U	0.70 U	0.70 U
Bromobenzene	NE	NE	NE	NE	1.0 U	2.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U
Bromochloromethane	NE	NE	NE	NE	1.0 U	2.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U
Bromodichloromethane	3	6	50000	100000	0.50 U	1.0 U	0.50 U	0.50 U	0.5 U	0.50 U	0.50 U	0.50 U	0.50 U	0.5 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U
Bromoform	4	700	50000	100000	1.0 U	R	1.0 U	1.0 U	1.0 U	1.00 U	1.00 UJ	1.0 U	1.0 U	1.0 U	1.00 U	1.00 UJ	1.00 UJ	1.0 U	1.0 U
Bromomethane	10	7	800	8000	1.0 U	R	1.0 U	1.0 U	2.0 U	2.00 UJ	2.00 U	1.0 UJ	1.0 U	2.0 U	2.00 U	2.00 U	2.00 U	1.0 UJ	1.0 U
Carbon Disulfide	NE	NE	NE	NE	5.0 U	10 UJ	5.0 U	5.0 U	2.0 U	2.00 U	2.00 U	5.0 U	5.0 U	2.0 U	2.00 U	2.00 U	2.00 U	5.0 U	5.0 U
Carbon Tetrachloride	5	2	5000	50000	1.0 U	2.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 UJ	1.0 U	1.0 U	1.0 UJ	1.00 U	1.00 UJ	1.00 UJ	1.0 U	1.0 U
Chlorobenzene	100	200	1000	10000	1.0 U	2.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U
Chloroethane	NE	NE	NE	NE	1.0 UJ	2.0 U	1.0 UJ	1.0 U	2.0 UJ	2.00 U	2.00 U	1.0 U	1.0 UJ	2.0 U	2.00 U	2.00 U	2.00 U	1.0 U	1.0 UJ
Chloroform	70	50	20000	100000	1.0 U	2.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U
Chloromethane	NE	NE	NE	NE	1.0 U	2.0 U	1.0 U	1.0 U	2.0 UJ	2.00 UJ	2.00 UJ	1.0 U	1.0 U	2.0 U	2.00 U	2.00 UJ	2.00 UJ	1.0 U	1.0 U
cis-1,2-Dichloroethene	**70**	**20**	50000	100000	**30**	**27**	**27**	**29**	**116**	**62.8**	**80.1**	**34**	**71**	**32.2**	**20.6**	**38.8**	**39.0**	**19**	**9.6**
cis-1,3-Dichloropropene	NE	NE	NE	NE	0.40 U	1.0 U	0.40 U	0.40 U	0.5 U	0.50 U	0.50 U	0.40 U	0.40 U	0.5 UJ	0.50 U	0.50 U	0.50 U	0.40 U	0.40 U
Cymene	NE	NE	NE	NE	1.0 U	2.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U
Dibromochloromethane	2	20	50000	100000	0.50 U	1.0 U	0.50 U	0.50 U	0.5 U	0.50 U	0.50 U	0.50 U	0.50 U	0.5 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U
Dibromomethane	NE	NE	NE	NE	1.0 U	2.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U
Dichlorodifluoromethane (CFC-12)	NE	NE	NE	NE	1.0 U	2.0 U	1.0 U	1.0 UJ	2.0 U	2.00 U	2.00 U	1.0 U	1.0 U	2.0 U	2.00 U	2.00 U	2.00 U	1.0 U	1.0 U
Diethyl Ether	NE	NE	NE	NE	1.0 U	2.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U
Diisopropyl Ether	NE	NE	NE	NE	1.0 U	2.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U
Ethyl Tertiary-Butyl Ether	NE	NE	NE	NE	1.0 U	2.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 UJ	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U
Ethylbenzene	700	20000	5000	100000	1.0 U	2.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U
Freon TF (Chlorinated fluorocarbon)	NE	NE	NE	NE	1.0 U	2.0 U	1.0 U	1.0 UJ	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U
Hexachloro-1,3-Butadiene	0.6	50	3000	3000	0.40 U	1.0 U	0.40 U	0.40 U	0.5 U	0.50 U	0.50 U	0.40 U	0.40 U	0.5 U	0.50 U	0.50 U	0.50 U	0.40 U	0.40 U
Isopropylbenzene	NE	NE	NE	NE	1.0 U	2.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U
M, P Xylenes	10000	3000	5000	100000	1.0 U	2.0 U	1.0 U	1.0 U	2.0 U	2.00 U	2.00 U	1.0 U	1.0 U	2.0 U	2.00 U	2.00 U	2.00 U	1.0 U	1.0 U
Methyl Tert-Butyl Ether	NE	NE	NE	100000	1.0 U	2.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 UJ	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U
Methylene Chloride	5	2000	50000	100000	1.0 UJ	2.0 UJ	1.0 U	1.0 U	2.0 U	2.00 U	2.00 U	1.0 U	1.0 U	2.0 U	2.00 UJ	2.00 U	2.00 U	1.0 U	1.0 U
Naphthalene	140	700	20000	100000	1.0 U	2.0 U	1.0 U	1.0 U	1.0 U	1.00 U	2.00 U	1.0 U	1.0 U	1.0 U	1.00 U	2.00 U	2.00 U	1.0 U	1.0 U
N-Butylbenzene	NE	NE	NE	NE	1.0 U	2.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U
N-Propylbenzene	NE	NE	NE	NE	1.0 U	2.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U
o-Xylene	10000	3000	5000	100000	1.0 U	2.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U
Styrene	100	100	6000	60000	1.0 U	2.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U
Tert-Butylbenzene	NE	NE	NE	NE	**1.1**	2.0 U	**1.4**	**1.7**	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U
Tertiary-Amyl Methyl Ether	NE	NE	NE	NE	1.0 U	2.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U
Tetrachloroethene	**5**	**50**	**30000**	100000	**160**	**170**	**160 J+**	**130 J+**	**6.4**	**5.06**	**4.66**	**19**	**8.2 J+**	**15.5**	**8.66**	**2.22**	**2.06**	**6.9**	**2.1 J+**
Tetrahydrofuran	NE	NE	NE	NE	2.5 UJ	R	2.5 U	2.5 U	2.0 U	2.00 U	2.00 U	R	2.5 U	**2.9**	2.00 U	2.00 U	2.00 U	R	2.5 U
Toluene	**1000**	50000	40000	100000	1.0 U	2.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U
Trans-1,2-Dichloroethene	**100**	**80**	50000	100000	1.0 U	2.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	**1.4**	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U
Trans-1,3-Dichloropropene	NE	NE	NE	NE	0.40 U	1.0 U	0.40 U	0.40 U	0.5 U	0.50 U	0.50 UJ	0.40 U	0.40 U	0.5 UJ	0.50 U	0.50 UJ	0.50 UJ	0.40 U	0.40 U
Trichloroethene	**5**	**5**	**5000**	**50000**	**50**	**39**	**33**	**44**	**28.0**	**25.6**	**35.4**	**44**	**46**	**42.6**	**27.6**	**13.0**	**13.2**	**18**	**7.3**
Trichlorofluoromethane	NE	NE	NE	NE	1.0 U	2.0 U	1.0 U	1.0 UJ	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U
Vinyl Chloride	**2**	**2**	50000	100000	**6.4**	**5.5 J-**	**7.5**	**7.6**	**11.6**	**10.5**	**14.3**	**5.8**	**18**	**5.8**	**2.86**	**10.8**	**10.2**	**4.9**	**3.6**
Xylenes (Total)	10000	3000	5000	100000	1.0 U	2.0 U	1.0 U	1.0 U	2.0 U	2.00 U	2.00 U	1.0 U	1.0 U	2.0 U	2.00 U	2.00 U	2.00 U	1.0 U	1.0 U

Notes:

ft = feet

mg/l = miligrams per liter

µg/l = micrograms per liter

NE = not established

U - Non-detect at laboratory detection limit

J = Estimated Value, J+ = biased high, J- = biased low, R

Detects are bolded

Criteria exceedances are highlighted

Table 5-7
Summary of 2016 - 2020 Groundwater Analytical Results for Volatile Organic Compounds
Former GE Facility, 50 Fordham Road, Wilmington, MA

				Location Group:	Transect A (continued)													
				Location ID:	AE101R-5	AE101R-5	AE101R-5	AE101R-5	AE101R-5	AE101R-6	AE101R-6	AE101R-6	AE101R-6	AE101R-6	AE101S	AE101S	AE101S	AE101S	AE101S
				Sample ID:	6A-AE101R5-061616-	7A-AE101R5-101917-	8A-AE101R5-092618-	9A-AE101R5-092519-	0A-AE101R5-092420-	6A-AE101R6-061716-	7A-AE101R6-101917-	8A-AE101R6-092618-	9A-AE101R6-093019-	0A-AE101R6-092420-	16A-AE101S-061716-	17A-AE101S-100217-	18A-AE101S-092618-	19A-AE101S-093019-	20A-AE101S-091820-1
				Sample Date:	6/16/2016	10/19/2017	9/26/2018	9/25/2019	9/24/2020	6/17/2016	10/19/2017	9/26/2018	9/30/2019	9/24/2020	6/17/2016	10/2/2017	9/26/2018	9/30/2019	9/18/2020
				Sample Type:	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
				Depth Interval:	175 - 180 ft	175 - 180 ft	175 - 180 ft	175-180 ft	175 - 180 ft	227 - 232 ft	227 - 232 ft	227 - 232 ft	227-232 ft	227 - 232 ft	10 - 15 ft	10 - 15 ft	10 - 15 ft	10-15 ft	10 - 15 ft
Analyte	**MCP Method 1 GW-1 Stds**	**MCP Method 1 GW-2 Stds**	**MCP Method 1 GW-3 Stds**	**Upper Concentration Limit (UCL)**															
Volatile Organic Compounds (µg/l)																			
1,1,1,2-Tetrachloroethane	5	10	50000	100000	50.0 U	50.0 U	20.0 U	10 U	10 U	10.0 UJ	20.0 U	10.0 U	10 U	10 U	1.0 U	1.00 UJ	1.00 U	1.0 U	1.0 U
1,1,1-Trichloroethane	**200**	4000	20000	100000	50.0 U	50.0 U	20.0 U	20 U	20 U	10.0 UJ	20.0 U	10.0 U	20 U	20 U	1.0 UJ	1.00 UJ	1.00 U	1.0 U	1.0 U
1,1,2,2-Tetrachloroethane	2	9	50000	100000	25.0 U	25.0 U	10.0 U	R	10 U	5.0 U	10.0 U	5.00 U	R	10 U	0.5 U	0.50 U	0.50 U	R	0.50 U
1,1,2-Trichloroethane	5	900	50000	100000	50.0 U	50.0 U	20.0 U	10 U	10 U	10.0 U	20.0 U	10.0 U	10 U	10 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U
1,1-Dichloroethane	**70**	2000	20000	100000	50.0 U	**51.5**	**47.8**	**51**	**45**	**30.5 J**	**36.2**	**33.8**	**42**	**36**	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U
1,1-Dichloroethylene	**7**	**80**	30000	100000	50.0 U	50.0 U	20.0 U	**14**	**12**	10.0 U	20.0 U	10.0 U	10 U	**12**	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U
1,1-Dichloropropene	NE	NE	NE	NE	50.0 U	50.0 U	20.0 U	20 U	20 U	10.0 U	20.0 U	10.0 U	20 U	20 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U
1,2,3-Trichlorobenzene	NE	NE	NE	NE	50.0 U	50.0 U	20.0 U	20 U	10 U	10.0 U	20.0 U	10.0 U	10 U	10 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U
1,2,3-Trichloropropane	NE	NE	NE	NE	50.0 U	50.0 U	20.0 U	20 U	10 U	10.0 U	20.0 U	10.0 U	10 U	10 U	1.0 U	1.00 U	1.00 U	0.50 U	0.50 U
1,2,4-Trichlorobenzene	70	200	50000	100000	50.0 U	50.0 U	20.0 U	20 U	20 U	10.0 U	20.0 U	10.0 U	20 U	20 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U
1,2,4-Trimethylbenzene	NE	NE	NE	NE	50.0 U	50.0 U	20.0 U	20 U	20 U	10.0 UJ	20.0 U	10.0 U	20 U	20 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U
1,2-Dibromo-3-Chloropropane (DBC	NE	NE	NE	NE	100 U	100 U	40.0 U	R	10 U	20.0 U	40.0 U	20.0 U	R	10 U	2.0 U	2.00 U	2.00 U	R	0.50 U
1,2-Dibromoethane	0.02	2	50000	100000	25.0 U	25.0 U	10.0 U	10 U	10 U	5.0 U	10.0 U	5.00 U	10 U	10 U	0.5 U	0.50 U	0.50 U	0.50 U	0.50 U
1,2-Dichlorobenzene	600	8000	2000	80000	50.0 U	50.0 U	20.0 U	20 U	20 U	10.0 U	20.0 U	10.0 U	20 U	20 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U
1,2-Dichloroethane	5	5	20000	100000	50.0 U	50.0 U	20.0 U	10 U	10 U	10.0 U	20.0 U	10.0 U	10 U	10 U	1.0 U	1.00 U	1.00 U	0.60 U	0.60 U
1,2-Dichloropropane	5	3	50000	100000	50.0 U	50.0 U	20.0 U	10 U	10 U	10.0 U	20.0 U	10.0 U	10 U	10 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U
1,3,5-Trimethylbenzene	NE	NE	NE	NE	50.0 U	50.0 U	20.0 U	20 U	20 U	10.0 UJ	20.0 U	10.0 U	20 U	20 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U
1,3-Dichlorobenzene	100	6000	50000	100000	50.0 U	50.0 U	20.0 U	20 U	20 U	10.0 U	20.0 U	10.0 U	20 U	20 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U
1,3-Dichloropropane	NE	NE	NE	NE	50.0 U	50.0 U	20.0 U	20 U	20 U	10.0 U	20.0 U	10.0 U	20 U	20 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U
1,4-Dichlorobenzene	5	60	8000	80000	50.0 U	50.0 U	20.0 U	10 U	10 U	10.0 U	20.0 U	10.0 U	10 U	10 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U
1,4-Dioxane	**0.3**	6000	50000	100000	NS	1000 U	400 U	800 U	NS	NS	400 U	200 U	800 U	NS	NS	20.0 U	20.0 U	40 U	NS
2,2-Dichloropropane	NE	NE	NE	NE	50.0 U	50.0 UJ	20.0 U	20 U	20 U	10.0 UJ	20.0 UJ	10.0 U	20 U	20 U	1.0 UJ	1.00 UJ	1.00 U	1.0 U	1.0 UJ
2-Butanone	4000	50000	50000	100000	500 U	100 U	40.0 UJ	R	100 U	100 U	40.0 U	20.0 UJ	R	100 U	10.0 U	2.00 U	2.00 UJ	R	5.0 U
2-Chlorotoluene	NE	NE	NE	NE	50.0 U	50.0 U	20.0 U	20 U	20 U	10.0 U	20.0 U	10.0 U	20 U	20 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U
2-Hexanone	NE	NE	NE	NE	500 U	100 U	40.0 UJ	R	100 U	100 U	40.0 U	20.0 UJ	R	100 U	10.0 U	2.00 U	2.00 UJ	R	5.0 U
2-Phenylbutane	NE	NE	NE	NE	50.0 U	50.0 U	20.0 U	20 U	20 U	10.0 U	20.0 U	10.0 U	20 U	20 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U
4-Chlorotoluene	NE	NE	NE	NE	50.0 U	50.0 U	20.0 U	20 U	20 U	10.0 U	20.0 U	10.0 U	20 U	20 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U
4-Methyl-2-Pentanone	350	50000	50000	100000	500 U	100 U	40.0 U	R	100 U	100 U	40.0 U	20.0 U	R	100 U	10.0 U	2.00 U	2.00 U	R	5.0 U
Acetone	6300	50000	50000	100000	500 U	500 U	200 UJ	R	500 U	100 U	200 U	100 UJ	R	500 U	10.0 U	10.0 U	10.0 UJ	R	25 U
Benzene	5	1000	10000	100000	50.0 U	50.0 U	20.0 U	10 U	10 U	10.0 U	20.0 U	10.0 U	10 U	10 U	1.0 U	1.00 U	1.00 U	0.70 U	0.70 U
Bromobenzene	NE	NE	NE	NE	50.0 U	50.0 U	20.0 U	20 U	20 U	10.0 U	20.0 U	10.0 U	20 U	20 U	1.0 U	1.00 UJ	1.00 U	1.0 U	1.0 U
Bromochloromethane	NE	NE	NE	NE	50.0 U	50.0 U	20.0 U	20 U	20 U	10.0 U	20.0 U	10.0 U	20 U	20 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U
Bromodichloromethane	3	6	50000	100000	25.0 U	25.0 U	10.0 U	10 U	10 U	5.0 U	10.0 U	5.00 U	10 U	10 U	0.5 U	0.50 UJ	0.50 U	0.50 U	0.50 U
Bromoform	4	700	50000	100000	50.0 U	50.0 U	20.0 U	10 U	10 U	10.0 U	20.0 U	10.0 U	10 U	10 U	1.0 U	1.00 UJ	1.00 U	1.0 U	1.0 U
Bromomethane	10	7	800	8000	100 UJ	100 U	40.0 U	10 UJ	10 UJ	20.0 U	40.0 U	20.0 U	R	10 UJ	2.0 U	2.00 UJ	2.00 U	R	1.0 U
Carbon Disulfide	NE	NE	NE	NE	100 U	100 UJ	40.0 U	100 U	100 U	20.0 U	40.0 UJ	20.0 U	100 U	100 U	2.0 U	2.00 U	2.00 U	5.0 U	5.0 U
Carbon Tetrachloride	5	2	5000	50000	50.0 U	50.0 UJ	20.0 U	10 U	10 U	10.0 UJ	20.0 UJ	10.0 U	10 U	10 U	1.0 UJ	1.00 UJ	1.00 U	1.0 U	1.0 U
Chlorobenzene	100	200	1000	10000	50.0 U	50.0 U	20.0 U	20 U	20 U	10.0 U	20.0 U	10.0 U	20 U	20 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U
Chloroethane	NE	NE	NE	NE	100 U	100 U	40.0 U	20 U	20 U	20.0 U	40.0 U	20.0 U	20 U	20 U	2.0 U	2.00 U	2.00 U	1.0 U	1.0 UJ
Chloroform	70	50	20000	100000	50.0 U	50.0 U	20.0 U	20 U	20 U	10.0 U	20.0 U	10.0 U	20 U	20 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U
Chloromethane	NE	NE	NE	NE	100 UJ	100 U	40.0 U	20 U	20 U	20.0 U	40.0 U	20.0 U	20 U	20 U	2.0 U	2.00 U	2.00 U	1.0 U	1.0 U
cis-1,2-Dichloroethene	**70**	**20**	50000	100000	**786**	**924**	**809**	**1200**	**1300**	**853**	**1140**	**1620**	**1500**	**1700**	**18.6**	**40.8**	**17.5**	**19**	**39**
cis-1,3-Dichloropropene	NE	NE	NE	NE	25.0 U	25.0 U	10.0 U	10 U	10 U	5.0 UJ	10.0 U	5.00 U	10 U	10 U	0.5 UJ	0.50 U	0.50 U	0.40 U	0.40 U
Cymene	NE	NE	NE	NE	50.0 U	50.0 U	20.0 U	20 U	20 U	10.0 U	20.0 U	10.0 U	20 U	20 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U
Dibromochloromethane	2	20	50000	100000	25.0 U	25.0 U	10.0 U	10 U	10 U	5.0 U	10.0 U	5.00 U	10 U	10 U	0.5 U	0.50 UJ	0.50 U	0.50 U	0.50 U
Dibromomethane	NE	NE	NE	NE	50.0 U	50.0 U	20.0 U	20 U	10 U	10.0 U	20.0 U	10.0 U	10 U	10 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U
Dichlorodifluoromethane (CFC-12)	NE	NE	NE	NE	100 U	100 U	40.0 U	20 U	20 U	20.0 U	40.0 U	20.0 U	20 U	20 U	2.0 U	2.00 U	2.00 U	1.0 U	1.0 U
Diethyl Ether	NE	NE	NE	NE	50.0 U	50.0 U	20.0 U	20 U	20 U	10.0 U	20.0 U	10.0 U	20 U	20 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U
Diisopropyl Ether	NE	NE	NE	NE	50.0 U	50.0 U	20.0 U	20 U	20 U	10.0 U	20.0 U	10.0 U	20 U	20 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U
Ethyl Tertiary-Butyl Ether	NE	NE	NE	NE	50.0 U	50.0 U	20.0 U	20 U	20 U	10.0 UJ	20.0 U	10.0 U	20 U	20 U	1.0 UJ	1.00 UJ	1.00 U	1.0 U	1.0 U
Ethylbenzene	700	20000	5000	100000	50.0 U	50.0 U	20.0 U	20 U	20 U	10.0 U	20.0 U	10.0 U	20 U	20 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U
Freon TF (Chlorinated fluorocarbon)	NE	NE	NE	NE	50.0 U	50.0 UJ	20.0 U	20 U	20 U	10.0 U	20.0 UJ	10.0 U	20 U	20 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U
Hexachloro-1,3-Butadiene	0.6	50	3000	3000	25.0 U	25.0 UJ	10.0 U	10 U	10 U	5.0 U	10.0 UJ	5.00 U	10 U	10 U	0.5 U	0.50 U	0.50 U	0.40 U	0.40 U
Isopropylbenzene	NE	NE	NE	NE	50.0 U	50.0 U	20.0 U	20 U	20 U	10.0 U	20.0 U	10.0 U	20 U	20 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U
M, P Xylenes	10000	3000	5000	100000	100 U	100 U	40.0 U	20 U	20 U	20.0 U	40.0 U	20.0 U	20 U	20 U	2.0 U	2.00 U	2.00 U	1.0 U	1.0 U
Methyl Tert-Butyl Ether	NE	NE	NE	100000	50.0 U	50.0 U	20.0 U	20 U	20 U	10.0 UJ	20.0 U	10.0 U	20 U	20 U	1.0 UJ	1.00 UJ	1.00 U	1.0 U	1.0 U
Methylene Chloride	5	2000	50000	100000	100 U	100 UJ	40.0 U	10 U	20 U	20.0 U	40.0 UJ	20.0 U	10 U	20 U	2.0 U	2.00 U	2.00 U	1.0 U	1.0 U
Naphthalene	140	700	20000	100000	50.0 UJ	50.0 U	40.0 U	20 U	20 U	10.0 U	20.0 U	20.0 U	20 U	20 U	1.0 U	1.00 U	2.00 U	1.0 U	1.0 U
N-Butylbenzene	NE	NE	NE	NE	50.0 U	50.0 U	20.0 U	20 U	20 U	10.0 U	20.0 U	10.0 U	20 U	20 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U
N-Propylbenzene	NE	NE	NE	NE	50.0 U	50.0 U	20.0 U	20 U	20 U	10.0 U	20.0 U	10.0 U	20 U	20 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U
o-Xylene	10000	3000	5000	100000	50.0 U	50.0 U	20.0 U	20 U	20 U	10.0 U	20.0 U	10.0 U	20 U	20 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U
Styrene	100	100	6000	60000	50.0 U	50.0 U	20.0 U	20 U	20 U	10.0 U	20.0 U	10.0 U	20 U	20 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U
Tert-Butylbenzene	NE	NE	NE	NE	50.0 U	50.0 U	20.0 U	20 U	20 U	10.0 U	20.0 U	10.0 U	20 U	20 U	1.0 U	1.00 U	1.00 U	**1.3**	1.0 U
Tertiary-Amyl Methyl Ether	NE	NE	NE	NE	50.0 U	50.0 U	20.0 U	20 U	20 U	10.0 U	20.0 U	10.0 U	20 U	20 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U
Tetrachloroethene	**5**	**50**	**30000**	100000	**245**	**623**	**451**	**730**	**480**	**145**	**378**	**28.3**	**17**	**27 J+**	1.0 U	**1.94 J**	**1.13**	1.0 U	**4.4 J+**
Tetrahydrofuran	NE	NE	NE	NE	100 U	100 U	40.0 U	R	50 U	20.0 U	40.0 U	20.0 U	R	50 U	2.0 U	2.00 U	2.00 U	R	2.5 U
Toluene	**1000**	50000	40000	100000	50.0 U	50.0 U	20.0 U	20 U	20 U	10.0 U	20.0 U	10.0 U	20 U	20 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U
Trans-1,2-Dichloroethene	**100**	**80**	50000	100000	50.0 U	50.0 U	20.0 U	20 U	**22**	**12.0**	20.0 U	**15.6**	**25**	**32**	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U
Trans-1,3-Dichloropropene	NE	NE	NE	NE	25.0 U	25.0 U	10.0 U	10 U	10 U	5.0 UJ	10.0 U	5.00 U	10 U	10 U	0.5 UJ	0.50 U	0.50 U	0.40 U	0.40 U
Trichloroethene	**5**	**5**	**5000**	**50000**	**2490**	**2560**	**2280**	**2800**	**2300**	**695**	**1270**	**993**	**1300**	**920**	**10.7**	**12.9**	**7.41**	1.0 U	**3.9**
Trichlorofluoromethane	NE	NE	NE	NE	50.0 U	50.0 UJ	20.0 U	20 U	20 U	10.0 U	20.0 UJ	10.0 U	20 U	20 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U
Vinyl Chloride	**2**	**2**	50000	100000	50.0 U	50.0 U	20.0 U	**14**	**16**	10.0 U	20.0 U	**52.4**	**250**	**310**	1.0 U	1.00 UJ	1.00 U	1.0 U	**1.2**
Xylenes (Total)	10000	3000	5000	100000	100 U	100 U	40.0 U	20 U	20 U	20.0 U	40.0 U	20.0 U	20 U	20 U	2.0 U	2.00 U	2.00 U	1.0 U	1.0 U

Notes:

ft = feet

mg/l = miligrams per liter

µg/l = micrograms per liter

NE = not established

U - Non-detect at laboratory detection limit

J = Estimated Value, J+ = biased high, J- = biased low, R

Detects are bolded

Criteria exceedances are highlighted

Table 5-7
Summary of 2016 - 2020 Groundwater Analytical Results for Volatile Organic Compounds
Former GE Facility, 50 Fordham Road, Wilmington, MA

					Location Group:	Transect A (continued)														
					Location ID:	AE102D	AE102D	AE102D	AE102D	AE102D	AE102M	AE102M	AE102M	AE102M	AE102M	AE102M	AE102M	AE102RR-2	AE102RR-2	AE102RR-2
					Sample ID:	16A-AE102D-061316-	17A-AE102D-100217-	18A-AE102D-100118-	19A-AE102D-092519-	20A-AE102D-090920-	16A-AE102M-061316-	17A-AE102M-100217-	18A-AE102M-100118-	19A-AE102M-092519-	19A-AE102M-092519-	20A-AE102M-090920-	20A-AE102M-090920-	25A-AE102RR2-0614167	A-AE102RR2-1003173	A-AE102RR2-091918
					Sample Date:	6/13/2016	10/2/2017	10/1/2018	9/25/2019	9/9/2020	6/13/2016	10/2/2017	10/1/2018	9/25/2019	9/25/2019	9/9/2020	9/9/2020	6/14/2016	10/3/2017	9/19/2018
					Sample Type:	N	N	N	N	N	N	N	N	N	FD	N	FD	N	N	N
					Depth Interval:	33 - 38 ft	33 - 38 ft	33 - 38 ft	33-38 ft	33 - 38 ft	23 - 28 ft	23 - 28 ft	23 - 28 ft	23-28 ft	23-28 ft	23 - 28 ft	23 - 28 ft	75 - 80 ft	75 - 80 ft	75 - 80 ft
Analyte	**MCP Method 1 GW-1 Stds**	**MCP Method 1 GW-2 Stds**	**MCP Method 1 GW-3 Stds**	**Upper Concentration Limit (UCL)**																
Volatile Organic Compounds (µg/l)																				
1,1,1,2-Tetrachloroethane	5	10	50000	100000	5.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 UJ	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	5.00 U	5.00 U	
1,1,1-Trichloroethane	**200**	4000	20000	100000	5.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 UJ	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	5.00 U	5.00 U	
1,1,2,2-Tetrachloroethane	2	9	50000	100000	2.5 U	0.50 U	0.50 U	0.50 U	0.50 U	0.5 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.5 U	2.50 U	2.50 U	
1,1,2-Trichloroethane	5	900	50000	100000	5.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	5.00 U	5.00 U	
1,1-Dichloroethane	**70**	2000	20000	100000	**6.8**	**1.90**	**7.33**	**6.0**	**7.1**	**1.3**	**1.82**	**1.91**	**2.4**	**2.5**	**2.2**	**2.4**	**10.3**	**7.95**	**12.2**	
1,1-Dichloroethylene	**7**	**80**	30000	100000	5.0 U	1.00 U	1.00 UJ	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.1 J+	**2.9**	5.00 U	
1,1-Dichloropropene	NE	NE	NE	NE	5.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	5.00 U	5.00 U	
1,2,3-Trichlorobenzene	NE	NE	NE	NE	5.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	5.00 U	5.00 U	
1,2,3-Trichloropropane	NE	NE	NE	NE	5.0 U	1.00 U	1.00 U	0.50 U	0.50 U	1.0 U	1.00 U	1.00 U	0.50 U	0.50 U	0.50 U	0.50 U	1.0 U	5.00 U	5.00 U	
1,2,4-Trichlorobenzene	70	200	50000	100000	5.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	5.00 U	5.00 U	
1,2,4-Trimethylbenzene	NE	NE	NE	NE	5.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	5.00 U	5.00 U	
1,2-Dibromo-3-Chloropropane (DBC	NE	NE	NE	NE	10.0 UJ	2.00 U	2.00 U	0.50 U	0.50 UJ	2.0 U	2.00 U	2.00 U	0.50 U	0.50 U	0.50 UJ	0.50 UJ	2.0 UJ	10.0 U	10.0 U	
1,2-Dibromoethane	0.02	2	50000	100000	2.5 U	0.50 U	0.50 U	0.50 U	0.50 U	0.5 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.5 U	2.50 U	2.50 U	
1,2-Dichlorobenzene	600	8000	2000	80000	5.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	5.00 U	5.00 U	
1,2-Dichloroethane	5	5	20000	100000	5.0 U	1.00 UJ	1.00 U	0.60 U	0.60 U	1.0 U	1.00 U	1.00 U	0.60 U	0.60 U	0.60 U	0.60 U	1.0 U	5.00 UJ	5.00 U	
1,2-Dichloropropane	5	3	50000	100000	5.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	5.00 U	5.00 U	
1,3,5-Trimethylbenzene	NE	NE	NE	NE	5.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	5.00 U	5.00 U	
1,3-Dichlorobenzene	100	6000	50000	100000	5.0 U	1.00 UJ	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	5.00 UJ	5.00 U	
1,3-Dichloropropane	NE	NE	NE	NE	5.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	5.00 U	5.00 U	
1,4-Dichlorobenzene	5	60	8000	80000	5.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	5.00 U	5.00 U	
1,4-Dioxane	**0.3**	6000	50000	100000	NS	20.0 U	20.0 U	10 U	NS	NS	20.0 U	20.0 U	10 U	10 U	100 U	100 U	200 U	100 U	100 U	
2,2-Dichloropropane	NE	NE	NE	NE	5.0 U	1.00 UJ	1.00 U	1.0 U	1.0 U	1.0 U	1.00 UJ	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	5.00 UJ	5.00 U	
2-Butanone	4000	50000	50000	100000	50.0 U	2.00 U	2.00 U	5.0 UJ	5.0 U	10.0 U	2.00 U	2.00 UJ	5.0 UJ	5.0 UJ	5.0 U	5.0 U	10.0 U	10.0 U	10.0 U	
2-Chlorotoluene	NE	NE	NE	NE	5.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	5.00 U	5.00 U	
2-Hexanone	NE	NE	NE	NE	50.0 U	2.00 U	2.00 U	5.0 U	5.0 U	10.0 U	2.00 U	2.00 UJ	5.0 U	5.0 U	5.0 U	5.0 U	10.0 U	10.0 U	10.0 U	
2-Phenylbutane	NE	NE	NE	NE	5.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	5.00 U	5.00 U	
4-Chlorotoluene	NE	NE	NE	NE	5.0 U	1.00 UJ	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	5.00 UJ	5.00 U	
4-Methyl-2-Pentanone	350	50000	50000	100000	50.0 U	2.00 U	2.00 U	5.0 U	5.0 U	10.0 U	2.00 U	2.00 U	5.0 U	5.0 U	5.0 U	5.0 U	10.0 U	10.0 U	10.0 U	
Acetone	6300	50000	50000	100000	50.0 U	10.0 U	10.0 U	25 U	R	10.0 U	10.0 U	10.0 UJ	25 U	25 U	R	R	10.0 U	50.0 U	50.0 U	
Benzene	5	1000	10000	100000	5.0 U	1.00 U	1.00 U	0.70 U	0.70 U	1.0 U	1.00 U	1.00 U	0.70 U	0.70 U	0.70 U	0.70 U	1.0 U	5.00 U	5.00 U	
Bromobenzene	NE	NE	NE	NE	5.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 UJ	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	5.00 U	5.00 U	
Bromochloromethane	NE	NE	NE	NE	5.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	5.00 U	5.00 U	
Bromodichloromethane	3	6	50000	100000	2.5 U	0.50 U	0.50 U	0.50 U	0.50 U	0.5 U	0.50 UJ	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.5 U	2.50 U	2.50 U	
Bromoform	4	700	50000	100000	5.0 U	1.00 U	1.00 U	1.0 U	1.0 UJ	1.0 U	1.00 UJ	1.00 U	1.0 U	1.0 U	1.0 UJ	1.0 UJ	1.0 U	5.00 U	5.00 U	
Bromomethane	10	7	800	8000	10.0 U	2.00 U	2.00 UJ	1.0 U	1.0 UJ	2.0 U	2.00 UJ	2.00 U	1.0 U	1.0 U	1.0 UJ	1.0 UJ	2.0 U	10.0 U	10.0 U	
Carbon Disulfide	NE	NE	NE	NE	10.0 U	2.00 U	2.00 U	5.0 U	5.0 U	2.0 U	2.00 U	2.00 UJ	5.0 U	5.0 U	5.0 U	5.0 U	2.0 U	10.0 U	10.0 U	
Carbon Tetrachloride	5	2	5000	50000	5.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 UJ	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	5.00 U	5.00 U	
Chlorobenzene	100	200	1000	10000	5.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	5.00 U	5.00 U	
Chloroethane	NE	NE	NE	NE	10.0 U	**3.02**	2.00 U	1.0 UJ	1.0 UJ	2.0 U	2.00 U	2.00 UJ	1.0 UJ	1.0 UJ	1.0 UJ	1.0 UJ	2.0 U	10.0 U	10.0 U	
Chloroform	70	50	20000	100000	5.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	5.00 U	5.00 U	
Chloromethane	NE	NE	NE	NE	10.0 U	2.00 U	2.00 U	1.0 U	1.0 U	2.0 U	2.00 U	2.00 UJ	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	10.0 U	10.0 U	
cis-1,2-Dichloroethene	**70**	**20**	50000	100000	**36.6**	**12.4**	**60.2**	**4.6**	**30**	**51.0**	**50.3**	**23.2**	**43**	**45**	**36**	**39**	**88.8**	**211**	**188**	
cis-1,3-Dichloropropene	NE	NE	NE	NE	2.5 UJ	0.50 U	0.50 U	0.40 U	0.40 U	0.5 U	0.50 U	0.50 U	0.40 U	0.40 U	0.40 U	0.40 U	0.5 UJ	2.50 U	2.50 U	
Cymene	NE	NE	NE	NE	5.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	5.00 U	5.00 U	
Dibromochloromethane	2	20	50000	100000	2.5 U	0.50 U	0.50 U	0.50 U	0.50 U	0.5 U	0.50 UJ	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.5 U	2.50 U	2.50 U	
Dibromomethane	NE	NE	NE	NE	5.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	5.00 U	5.00 U	
Dichlorodifluoromethane (CFC-12)	NE	NE	NE	NE	10.0 U	2.00 U	2.00 U	1.0 U	1.0 U	2.0 U	2.00 U	2.00 U	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	10.0 U	10.0 U	
Diethyl Ether	NE	NE	NE	NE	5.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	5.00 U	5.00 U	
Diisopropyl Ether	NE	NE	NE	NE	5.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	5.00 U	5.00 U	
Ethyl Tertiary-Butyl Ether	NE	NE	NE	NE	5.0 U	1.00 UJ	1.00 U	1.0 U	1.0 U	1.0 U	1.00 UJ	1.00 UJ	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	5.00 UJ	5.00 U	
Ethylbenzene	700	20000	5000	100000	5.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	5.00 U	5.00 U	
Freon TF (Chlorinated fluorocarbon)	NE	NE	NE	NE	5.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	5.00 U	5.00 U	
Hexachloro-1,3-Butadiene	0.6	50	3000	3000	2.5 U	0.50 U	0.50 U	0.40 U	0.40 U	0.5 U	0.50 U	0.50 U	0.40 U	0.40 U	0.40 U	0.40 U	0.5 U	2.50 U	2.50 U	
Isopropylbenzene	NE	NE	NE	NE	5.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	5.00 U	5.00 U	
M, P Xylenes	10000	3000	5000	100000	10.0 U	2.00 U	2.00 U	1.0 U	1.0 U	2.0 U	2.00 U	2.00 U	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	10.0 U	10.0 U	
Methyl Tert-Butyl Ether	NE	NE	NE	NE	5.0 U	1.00 UJ	1.00 U	1.0 U	1.0 U	1.0 U	1.00 UJ	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	5.00 UJ	5.00 U	
Methylene Chloride	5	2000	50000	100000	10.0 U	2.00 U	2.00 U	1.0 UJ	1.0 U	2.0 U	2.00 U	2.00 U	1.0 UJ	1.0 UJ	1.0 U	1.0 U	2.0 U	10.0 U	10.0 U	
Naphthalene	140	700	20000	100000	5.0 UJ	1.00 U	2.00 UJ	1.0 U	1.0 U	1.0 UJ	1.00 U	2.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 UJ	5.00 U	10.0 U	
N-Butylbenzene	NE	NE	NE	NE	5.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	5.00 U	5.00 U	
N-Propylbenzene	NE	NE	NE	NE	5.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	5.00 U	5.00 U	
o-Xylene	10000	3000	5000	100000	5.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	5.00 U	5.00 U	
Styrene	100	100	6000	60000	5.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	5.00 U	5.00 U	
Tert-Butylbenzene	NE	NE	NE	NE	5.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	**1.79**	**2.85**	**2.8**	**3.0**	**3.2**	**3.2**	1.0 U	5.00 U	5.00 U	
Tertiary-Amyl Methyl Ether	NE	NE	NE	NE	5.0 U	1.00 UJ	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	5.00 UJ	5.00 U	
Tetrachloroethene	**5**	**50**	**30000**	100000	**19.6**	**1.05**	1.00 U	1.0 U	**7.0 J+**	**5.1**	**26.8 J**	**12.9**	**8.8**	**10**	**6.7 J+**	**6.8 J+**	**256**	**109**	**122**	
Tetrahydrofuran	NE	NE	NE	NE	10.0 U	2.00 U	2.00 U	2.5 UJ	2.5 U	2.0 U	2.00 U	2.00 UJ	2.5 UJ	2.5 UJ	2.5 U	2.5 U	2.0 U	10.0 U	10.0 UJ	
Toluene	**1000**	50000	40000	100000	5.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	5.00 U	5.00 U	
Trans-1,2-Dichloroethene	**100**	**80**	50000	100000	5.0 U	**1.33**	**2.52**	**1.9**	**2.6**	1.0 U	1.00 U	1.00 U	**1.2**	**1.1**	**1.2 J+**	**1.4 J+**	1.0 U	5.00 U	5.00 U	
Trans-1,3-Dichloropropene	NE	NE	NE	NE	2.5 UJ	0.50 UJ	0.50 U	0.40 U	0.40 U	0.5 U	0.50 U	0.50 U	0.40 U	0.40 U	0.40 U	0.40 U	0.5 UJ	2.50 UJ	2.50 U	
Trichloroethene	**5**	**5**	**5000**	**50000**	**131**	**8.18**	**3.21**	**1.1**	**27**	**10.7**	**17.4**	**16.9**	**23**	**24**	**18**	**19**	**468**	**256**	**408**	
Trichlorofluoromethane	NE	NE	NE	NE	5.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	5.00 U	5.00 U	
Vinyl Chloride	**2**	**2**	50000	100000	**19.4 J**	**4.71**	1.00 U	**2.7**	**11**	**9.6**	**22.3 J**	**11.4 J-**	**14**	**15**	**13**	**13**	1.0 UJ	**5.25**	**9.05**	
Xylenes (Total)	10000	3000	5000	100000	10.0 U	2.00 U	2.00 U	1.0 U	1.0 U	2.0 U	2.00 U	2.00 U	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	10.0 U	10.0 U	

Notes:

ft = feet — U - Non-detect at laboratory detection limit

mg/l = miligrams per liter — J = Estimated Value, J+ = biased high, J- = biased low, R

µg/l = micrograms per liter — **Detects are bolded**

NE = not established — Criteria exceedances are highlighted

Table 5-7
Summary of 2016 - 2020 Groundwater Analytical Results for Volatile Organic Compounds
Former GE Facility, 50 Fordham Road, Wilmington, MA

				Location Group:	Transect A (continued)														
				Location ID:	AE102RR2-2	AE102RR2-2	AE102RR2-2	AE102RR4-2	AE102RR4-2	AE102RR4-2	AE102RR4-2	AE102RR4-2	AE102RR5-2	AE102RR5-2	AE102RR5-2	AE102RR5-2	AE102RR5-2	AE102RR6-2	AE102RR6-2
				Sample ID:	3A-AE102RR2-0919189	A-AE102RR2-0924190	A-AE102RR2-0909205	3A-AE102RR4-0614167	A-AE102RR4-1003173	3A-AE102RR4-0919189	A-AE102RR4-0924190	A-AE102RR4-0909205	A-AE102RR5-0614167	A-AE102RR5-1003173	3A-AE102RR5-0919189	A-AE102RR5-0924190	A-AE102RR5-0909205	5A-AE102RR6-0614167	A-AE102RR6-1003173
				Sample Date:	9/19/2018	9/24/2019	9/9/2020	6/14/2016	10/3/2017	9/19/2018	9/24/2019	9/9/2020	6/14/2016	10/3/2017	9/19/2018	9/24/2019	9/9/2020	6/14/2016	10/3/2017
				Sample Type:	FD	N	N	N	N	N	N	N	N	N	N	N	N	N	N
				Depth Interval:	75 - 80 ft	75-80 ft	75 - 80 ft	125 - 130 ft	125 - 130 ft	125 - 130 ft	125-130 ft	125 - 130 ft	141 - 146 ft	141 - 146 ft	141 - 146 ft	141-146 ft	141 - 146 ft	153 - 158 ft	153 - 158 ft
Analyte	**MCP Method 1 GW-1 Stds**	**MCP Method 1 GW-2 Stds**	**MCP Method 1 GW-3 Stds**	**Upper Concentration Limit (UCL)**															
Volatile Organic Compounds (µg/l)																			
1,1,1,2-Tetrachloroethane	5	10	50000	100000	5.00 U	5.0 U	5.0 U	20.0 U	20.0 U	20.0 UJ	5.0 U	5.0 U	50.0 U	50.0 U	100 U	10 U	10 U	100 U	100 U
1,1,1-Trichloroethane	**200**	4000	20000	100000	5.00 U	5.0 U	5.0 U	20.0 U	20.0 U	20.0 U	5.0 U	5.0 U	50.0 U	50.0 U	100 U	20 U	20 U	100 U	100 U
1,1,2,2-Tetrachloroethane	2	9	50000	100000	2.50 U	2.5 U	2.5 U	10.0 U	10.0 U	10.0 U	2.5 U	2.5 U	25.0 U	25.0 U	50.0 U	10 U	10 U	50.0 U	50.0 U
1,1,2-Trichloroethane	5	900	50000	100000	5.00 U	5.0 U	5.0 U	20.0 U	20.0 U	20.0 U	5.0 U	5.0 U	50.0 U	50.0 U	100 U	10 U	10 U	100 U	100 U
1,1-Dichloroethane	**70**	2000	20000	100000	**12.8**	**11**	**11**	20.0 U	20.0 U	20.0 U	**13**	**12**	50.0 U	50.0 U	100 U	**47**	**38**	100 U	100 U
1,1-Dichloroethylene	**7**	**80**	30000	100000	5.00 U	5.0 U	5.0 U	20.0 U	20.0 U	20.0 U	5.0 U	5.0 U	50.0 U	50.0 U	100 U	**11**	**11**	100 U	100 U
1,1-Dichloropropene	NE	NE	NE	NE	5.00 U	5.0 U	5.0 U	20.0 U	20.0 U	20.0 U	5.0 U	5.0 U	50.0 U	50.0 U	100 U	20 U	20 U	100 U	100 U
1,2,3-Trichlorobenzene	NE	NE	NE	NE	5.00 U	5.0 U	5.0 U	20.0 U	20.0 U	20.0 U	5.0 U	5.0 U	50.0 U	50.0 U	100 U	20 U	10 U	100 U	100 U
1,2,3-Trichloropropane	NE	NE	NE	NE	5.00 U	5.0 U	2.5 U	20.0 U	20.0 U	20.0 U	5.0 U	2.5 U	50.0 U	50.0 U	100 U	20 U	10 U	100 U	100 U
1,2,4-Trichlorobenzene	70	200	50000	100000	5.00 U	5.0 U	5.0 U	20.0 U	20.0 U	20.0 U	5.0 U	5.0 U	50.0 U	50.0 U	100 U	20 U	20 U	100 U	100 U
1,2,4-Trimethylbenzene	NE	NE	NE	NE	5.00 U	5.0 U	5.0 U	20.0 U	20.0 U	20.0 U	5.0 U	5.0 U	50.0 U	50.0 U	100 U	20 U	20 U	100 U	100 U
1,2-Dibromo-3-Chloropropane (DBC	NE	NE	NE	NE	10.0 U	5.0 U	2.5 UJ	40.0 U	40.0 U	40.0 UJ	R	2.5 UJ	100 U	100 U	200 UJ	20 U	10 UJ	200 U	200 U
1,2-Dibromoethane	0.02	2	50000	100000	2.50 U	2.5 U	2.5 U	10.0 U	10.0 U	10.0 U	2.5 U	2.5 U	25.0 U	25.0 U	50.0 U	10 U	10 U	50.0 U	50.0 U
1,2-Dichlorobenzene	600	8000	2000	80000	5.00 U	5.0 U	5.0 U	20.0 U	20.0 U	20.0 U	5.0 U	5.0 U	50.0 U	50.0 U	100 U	20 U	20 U	100 U	100 U
1,2-Dichloroethane	5	5	20000	100000	5.00 U	3.0 U	3.0 U	20.0 U	20.0 U	20.0 U	3.0 U	3.0 U	50.0 U	50.0 U	100 U	10 U	10 U	100 U	100 U
1,2-Dichloropropane	5	3	50000	100000	5.00 U	3.0 U	3.0 U	20.0 U	20.0 U	20.0 U	3.0 U	3.0 U	50.0 U	50.0 U	100 U	10 U	10 U	100 U	100 U
1,3,5-Trimethylbenzene	NE	NE	NE	NE	5.00 U	5.0 U	5.0 U	20.0 U	20.0 U	20.0 U	5.0 U	5.0 U	50.0 U	50.0 U	100 U	20 U	20 U	100 U	100 U
1,3-Dichlorobenzene	100	6000	50000	100000	5.00 U	5.0 U	5.0 U	20.0 U	20.0 U	20.0 U	5.0 U	5.0 U	50.0 U	50.0 U	100 U	20 U	20 U	100 U	100 U
1,3-Dichloropropane	NE	NE	NE	NE	5.00 U	5.0 U	5.0 U	20.0 U	20.0 U	20.0 U	5.0 U	5.0 U	50.0 U	50.0 U	100 U	20 U	20 U	100 U	100 U
1,4-Dichlorobenzene	5	60	8000	80000	5.00 U	5.0 U	5.0 U	20.0 U	20.0 U	20.0 U	5.0 U	5.0 U	50.0 U	50.0 U	100 U	10 U	10 U	100 U	100 U
1,4-Dioxane	**0.3**	6000	50000	100000	100 U	500 U	NS	NS	400 U	400 UJ	200 U	NS	NS	1000 U	2000 UJ	2000 U	2000 U	NS	2000 U
2,2-Dichloropropane	NE	NE	NE	NE	5.00 U	5.0 U	5.0 U	20.0 U	20.0 UJ	20.0 U	5.0 U	5.0 U	50.0 U	50.0 UJ	100 UJ	20 U	20 U	100 U	100 UJ
2-Butanone	4000	50000	50000	100000	10.0 U	25 U	25 U	200 U	40.0 U	40.0 U	R	25 U	500 U	100 U	200 U	100 U	100 U	1000 U	200 U
2-Chlorotoluene	NE	NE	NE	NE	5.00 U	5.0 U	5.0 U	20.0 U	20.0 U	20.0 U	5.0 U	5.0 U	50.0 U	50.0 U	100 U	20 U	20 U	100 U	100 U
2-Hexanone	NE	NE	NE	NE	10.0 U	25 U	25 U	200 U	40.0 U	40.0 U	R	25 U	500 U	100 U	200 UJ	100 U	100 U	1000 U	200 U
2-Phenylbutane	NE	NE	NE	NE	5.00 U	5.0 U	5.0 U	20.0 U	20.0 U	20.0 U	5.0 U	5.0 U	50.0 U	50.0 U	100 U	20 U	20 U	100 U	100 U
4-Chlorotoluene	NE	NE	NE	NE	5.00 U	5.0 U	5.0 U	20.0 U	20.0 U	20.0 U	5.0 U	5.0 U	50.0 U	50.0 U	100 U	20 U	20 U	100 U	100 U
4-Methyl-2-Pentanone	350	50000	50000	100000	10.0 U	25 U	25 U	200 U	40.0 U	40.0 U	25 U	25 U	500 U	100 U	200 U	100 U	100 U	1000 U	200 U
Acetone	6300	50000	50000	100000	50.0 U	130 U	130 UJ	200 UJ	200 U	200 UJ	R	130 UJ	500 UJ	500 U	1000 UJ	500 U	500 UJ	1000 UJ	1000 U
Benzene	5	1000	10000	100000	5.00 U	3.5 U	3.5 U	20.0 U	20.0 U	20.0 U	3.5 U	3.5 U	50.0 U	50.0 U	100 U	10 U	10 U	100 U	100 U
Bromobenzene	NE	NE	NE	NE	5.00 U	5.0 U	5.0 U	20.0 U	20.0 U	20.0 U	5.0 U	5.0 U	50.0 U	50.0 U	100 U	20 U	20 U	100 U	100 U
Bromochloromethane	NE	NE	NE	NE	5.00 U	5.0 U	5.0 U	20.0 U	20.0 U	20.0 U	5.0 U	5.0 U	50.0 U	50.0 U	100 U	20 U	20 U	100 U	100 U
Bromodichloromethane	3	6	50000	100000	2.50 U	2.5 U	2.5 U	10.0 U	10.0 U	10.0 U	2.5 U	2.5 U	25.0 U	25.0 U	50.0 U	10 U	10 U	50.0 U	50.0 U
Bromoform	4	700	50000	100000	5.00 U	4.0 U	4.0 U	20.0 U	20.0 U	20.0 UJ	R	4.0 U	50.0 U	50.0 U	100 UJ	10 U	10 U	100 U	100 U
Bromomethane	10	7	800	8000	10.0 U	5.0 U	5.0 UJ	40.0 UJ	40.0 U	40.0 U	5.0 U	5.0 UJ	100 UJ	100 U	200 UJ	10 U	10 UJ	200 UJ	200 U
Carbon Disulfide	NE	NE	NE	NE	10.0 U	25 U	25 U	40.0 U	40.0 UJ	40.0 U	25 U	25 U	100 U	100 UJ	200 U	100 U	100 U	200 U	200 UJ
Carbon Tetrachloride	5	2	5000	50000	5.00 U	2.5 U	2.5 U	20.0 U	20.0 U	20.0 UJ	2.5 U	2.5 U	50.0 U	50.0 U	100 UJ	10 U	10 U	100 U	100 U
Chlorobenzene	100	200	1000	10000	5.00 U	5.0 U	5.0 U	20.0 U	20.0 U	20.0 U	5.0 U	5.0 U	50.0 U	50.0 U	100 U	20 U	20 U	100 U	100 U
Chloroethane	NE	NE	NE	NE	10.0 U	5.0 U	5.0 UJ	40.0 U	40.0 U	40.0 U	5.0 U	5.0 UJ	100 U	100 U	200 U	20 U	20 UJ	200 U	200 U
Chloroform	70	50	20000	100000	5.00 U	5.0 U	5.0 U	20.0 U	20.0 U	20.0 U	5.0 U	5.0 U	50.0 U	50.0 U	100 U	20 U	20 U	100 U	100 U
Chloromethane	NE	NE	NE	NE	10.0 U	5.0 U	5.0 U	40.0 U	40.0 UJ	40.0 UJ	5.0 U	5.0 U	100 U	100 UJ	200 U	20 U	20 U	200 U	200 UJ
cis-1,2-Dichloroethene	**70**	**20**	50000	100000	**184**	**130**	**170**	**64.8**	**74.4**	**91.8**	**83**	**61**	**122**	**125**	**127**	**180**	**130**	**229**	**215**
cis-1,3-Dichloropropene	NE	NE	NE	NE	2.50 U	2.5 U	2.5 U	10.0 U	10.0 UJ	10.0 U	2.5 U	2.5 U	25.0 U	25.0 UJ	50.0 U	10 U	10 U	50.0 U	50.0 UJ
Cymene	NE	NE	NE	NE	5.00 U	5.0 U	5.0 U	20.0 U	20.0 U	20.0 U	5.0 U	5.0 U	50.0 U	50.0 U	100 U	20 U	20 U	100 U	100 U
Dibromochloromethane	2	20	50000	100000	2.50 U	2.5 U	2.5 U	10.0 U	10.0 U	10.0 UJ	2.5 U	2.5 U	25.0 U	25.0 U	50.0 UJ	10 U	10 U	50.0 U	50.0 U
Dibromomethane	NE	NE	NE	NE	5.00 U	5.0 U	5.0 U	20.0 U	20.0 U	20.0 U	5.0 U	5.0 U	50.0 U	50.0 U	100 U	20 U	10 U	100 U	100 U
Dichlorodifluoromethane (CFC-12)	NE	NE	NE	NE	10.0 U	5.0 U	5.0 U	40.0 U	40.0 U	40.0 U	5.0 U	5.0 U	100 U	100 U	200 U	20 U	20 U	200 U	200 U
Diethyl Ether	NE	NE	NE	NE	5.00 U	5.0 U	5.0 U	20.0 U	20.0 U	20.0 U	5.0 U	5.0 U	50.0 U	50.0 U	100 U	20 U	20 U	100 U	100 U
Diisopropyl Ether	NE	NE	NE	NE	5.00 U	5.0 U	5.0 U	20.0 U	20.0 U	20.0 U	5.0 U	5.0 U	50.0 U	50.0 U	100 U	20 U	20 U	100 U	100 U
Ethyl Tertiary-Butyl Ether	NE	NE	NE	NE	5.00 U	5.0 U	5.0 U	20.0 U	20.0 UJ	20.0 U	5.0 U	5.0 U	50.0 U	50.0 UJ	100 U	20 U	20 U	100 U	100 UJ
Ethylbenzene	700	20000	5000	100000	5.00 U	5.0 U	5.0 U	20.0 U	20.0 U	20.0 U	5.0 U	5.0 U	50.0 U	50.0 U	100 U	20 U	20 U	100 U	100 U
Freon TF (Chlorinated fluorocarbon)	NE	NE	NE	NE	5.00 U	5.0 U	5.0 U	20.0 U	20.0 U	20.0 U	5.0 U	5.0 U	50.0 U	50.0 U	100 U	20 U	20 U	100 U	100 U
Hexachloro-1,3-Butadiene	0.6	50	3000	3000	2.50 U	2.5 U	2.5 U	10.0 U	10.0 U	10.0 U	2.5 U	2.5 U	25.0 U	25.0 U	50.0 U	10 U	10 U	50.0 U	50.0 U
Isopropylbenzene	NE	NE	NE	NE	5.00 U	5.0 U	5.0 U	20.0 U	20.0 U	20.0 U	5.0 U	5.0 U	50.0 U	50.0 U	100 U	20 U	20 U	100 U	100 U
M, P Xylenes	10000	3000	5000	100000	10.0 U	5.0 U	5.0 U	40.0 U	40.0 U	40.0 U	5.0 U	5.0 U	100 U	100 U	200 U	20 U	20 U	200 U	200 U
Methyl Tert-Butyl Ether	NE	NE	NE	100000	5.00 U	5.0 U	5.0 U	20.0 U	20.0 UJ	20.0 U	5.0 U	5.0 U	50.0 U	50.0 UJ	100 U	20 U	20 U	100 U	100 UJ
Methylene Chloride	5	2000	50000	100000	10.0 U	5.0 U	5.0 UJ	40.0 U	40.0 U	40.0 U	5.0 U	5.0 UJ	100 U	100 U	200 U	10 U	20 UJ	200 U	200 U
Naphthalene	140	700	20000	100000	10.0 U	5.0 U	5.0 U	20.0 UJ	20.0 U	40.0 U	5.0 U	5.0 U	50.0 UJ	50.0 U	200 U	20 U	20 U	100 UJ	100 U
N-Butylbenzene	NE	NE	NE	NE	5.00 U	5.0 U	5.0 U	20.0 U	20.0 U	20.0 U	5.0 U	5.0 U	50.0 U	50.0 U	100 U	20 U	20 U	100 U	100 U
N-Propylbenzene	NE	NE	NE	NE	5.00 U	5.0 U	5.0 U	20.0 U	20.0 U	20.0 U	5.0 U	5.0 U	50.0 U	50.0 U	100 U	20 U	20 U	100 U	100 U
o-Xylene	10000	3000	5000	100000	5.00 U	5.0 U	5.0 U	20.0 U	20.0 U	20.0 U	5.0 U	5.0 U	50.0 U	50.0 U	100 U	20 U	20 U	100 U	100 U
Styrene	100	100	6000	60000	5.00 U	5.0 U	5.0 U	20.0 U	20.0 U	20.0 U	5.0 U	5.0 U	50.0 U	50.0 U	100 U	20 U	20 U	100 U	100 U
Tert-Butylbenzene	NE	NE	NE	NE	5.00 U	5.0 U	5.0 U	20.0 U	20.0 U	20.0 U	5.0 U	5.0 U	50.0 U	50.0 U	100 U	20 U	20 U	100 U	100 U
Tertiary-Amyl Methyl Ether	NE	NE	NE	NE	5.00 U	5.0 U	5.0 U	20.0 U	20.0 U	20.0 U	5.0 U	5.0 U	50.0 U	50.0 U	100 U	20 U	20 U	100 U	100 U
Tetrachloroethene	**5**	**50**	**30000**	100000	**128**	**130**	**93 J+**	**657**	**414**	**548**	**340**	**310 J+**	**1750**	**1200**	**1320**	**1200**	**1400 J+**	**3940**	**2910**
Tetrahydrofuran	NE	NE	NE	NE	10.0 UJ	13 U	13 U	40.0 U	40.0 U	40.0 U	13 U	13 U	100 U	100 U	200 U	50 U	50 U	200 U	200 U
Toluene	**1000**	50000	40000	100000	5.00 U	5.0 U	5.0 U	20.0 U	20.0 U	20.0 U	5.0 U	5.0 U	50.0 U	50.0 U	100 U	20 U	20 U	100 U	100 U
Trans-1,2-Dichloroethene	**100**	**80**	50000	100000	5.00 U	5.0 U	5.0 U	20.0 U	20.0 U	20.0 U	5.0 U	5.0 U	50.0 U	50.0 U	100 U	20 U	20 U	100 U	100 U
Trans-1,3-Dichloropropene	NE	NE	NE	NE	2.50 U	2.5 U	2.5 U	10.0 U	10.0 UJ	10.0 U	2.5 U	2.5 U	25.0 U	25.0 UJ	50.0 U	10 U	10 U	50.0 U	50.0 UJ
Trichloroethene	**5**	**5**	**5000**	**50000**	**413**	**400**	**370**	**970**	**606**	**864 J-**	**550**	**490 J**	**2360**	**1650**	**2060**	**2100**	**1800**	**5310**	**3680**
Trichlorofluoromethane	NE	NE	NE	NE	5.00 U	5.0 U	5.0 U	20.0 U	20.0 U	20.0 U	5.0 U	5.0 U	50.0 U	50.0 U	100 UJ	20 U	20 U	100 U	100 U
Vinyl Chloride	**2**	**2**	50000	100000	**8.05**	**5.8**	**12**	20.0 U	20.0 UJ	20.0 U	2.5 U	2.5 U	50.0 U	50.0 UJ	100 U	10 U	10 U	100 U	100 UJ
Xylenes (Total)	10000	3000	5000	100000	10.0 U	5.0 U	5.0 U	40.0 U	40.0 U	40.0 U	5.0 U	5.0 U	100 U	100 U	200 U	20 U	20 U	200 U	200 U

Notes:

ft = feet

mg/l = miligrams per liter

µg/l = micrograms per liter

NE = not established

U - Non-detect at laboratory detection limit

J = Estimated Value, J+ = biased high, J- = biased low, R

Detects are bolded

Criteria exceedances are highlighted

Table 5-7
Summary of 2016 - 2020 Groundwater Analytical Results for Volatile Organic Compounds
Former GE Facility, 50 Fordham Road, Wilmington, MA

				Location Group:	Transect A (continued)													
				Location ID:	AE102RR-6	AE102RR-6	AE102RR-6	AE103D	AE103D	AE103D	AE103D	AE103D	AE103D	AE103R-1	AE103R-1	AE103R-1	AE103R-1	AE103R-3
				Sample ID:	8A-AE102RR6-091918	9A-AE102RR6-092419	0A-AE102RR6-090920	16A-AE103D-061316-	17A-AE103D-100317-	18A-AE103D-092418-	18A-AE103D-092418-2	19A-AE103D-091919-	20A-AE103D-091020-	16A-AE103R1-061516-	7A-AE103R1-100217-	8A-AE103R1-092518-	9A-AE103R1-091819-	0A-AE103R1-091020-	6A-AE103R3-061516-
				Sample Date:	9/19/2018	9/24/2019	9/9/2020	6/13/2016	10/3/2017	9/24/2018	9/24/2018	9/19/2019	9/10/2020	6/15/2016	10/2/2017	9/25/2018	9/18/2019	9/10/2020	6/15/2016
				Sample Type:	N	N	N	N	N	N	FD	N	N	N	N	N	N	N	N
				Depth Interval:	153 - 158 ft	153-158 ft	153 - 158 ft	35 - 40 ft	35 - 40 ft	35 - 40 ft	35 - 40 ft	35-40 ft	35 - 40 ft	48 - 53 ft	48 - 53 ft	48 - 53 ft	48-53 ft	48 - 53 ft	70 - 76 ft
Analyte	**MCP Method 1 GW-1 Stds**	**MCP Method 1 GW-2 Stds**	**MCP Method 1 GW-3 Stds**	**Upper Concentration Limit (UCL)**														
Volatile Organic Compounds (µg/l)																		
1,1,1,2-Tetrachloroethane	5	10	50000	100000	200 U	10 U	10 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	100 U	50.0 U	20.0 UJ	10 U	5.0 U	200 U
1,1,1-Trichloroethane	**200**	4000	20000	100000	200 U	20 U	20 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	100 U	50.0 UJ	20.0 U	20 U	10 U	200 U
1,1,2,2-Tetrachloroethane	2	9	50000	100000	100 U	10 U	10 U	0.5 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	50.0 U	25.0 U	10.0 U	10 U	5.0 U	100 U
1,1,2-Trichloroethane	5	900	50000	100000	200 U	10 U	10 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	100 U	50.0 U	20.0 U	10 U	5.0 U	200 U
1,1-Dichloroethane	**70**	2000	20000	100000	200 U	**80**	**61**	**1.9**	**2.31**	**2.15**	**2.35 J**	**1.6**	**1.9**	100 U	50.0 U	**29.0**	**28**	**21**	200 U
1,1-Dichloroethylene	**7**	**80**	30000	100000	200 U	**23**	**19**	1.0 U	1.00 U	1.00 U	1.00 UJ	1.0 U	1.0 U	100 U	50.0 U	20.0 U	10 U	7.0 U	200 U
1,1-Dichloropropene	NE	NE	NE	NE	200 U	20 U	20 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	100 U	50.0 U	20.0 UJ	20 U	10 U	200 U
1,2,3-Trichlorobenzene	NE	NE	NE	NE	200 U	20 U	10 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	100 U	50.0 U	20.0 U	10 U	7.0 U	200 U
1,2,3-Trichloropropane	NE	NE	NE	NE	200 U	20 U	10 U	1.0 U	1.00 U	1.00 U	1.00 U	0.50 U	0.50 U	100 U	50.0 U	20.0 U	10 U	5.0 U	200 U
1,2,4-Trichlorobenzene	70	200	50000	100000	200 U	20 U	20 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	100 U	50.0 U	20.0 U	20 U	10 U	200 U
1,2,4-Trimethylbenzene	NE	NE	NE	NE	200 U	20 U	20 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	100 U	50.0 U	20.0 U	20 U	10 U	200 U
1,2-Dibromo-3-Chloropropane (DBC	NE	NE	NE	NE	400 UJ	20 U	10 UJ	2.0 U	2.00 U	2.00 U	2.00 U	R	0.50 UJ	200 U	100 UJ	40.0 U	R	5.0 UJ	400 UJ
1,2-Dibromoethane	0.02	2	50000	100000	100 U	10 U	10 U	0.5 U	0.50 U	0.50 U	0.50 UJ	0.50 U	0.50 U	50.0 U	25.0 U	10.0 U	10 U	5.0 U	100 U
1,2-Dichlorobenzene	600	8000	2000	80000	200 U	20 U	20 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	100 U	50.0 U	20.0 U	20 U	10 U	200 U
1,2-Dichloroethane	5	5	20000	100000	200 U	10 U	10 U	1.0 U	1.00 U	1.00 U	1.00 UJ	0.60 U	0.60 U	100 U	50.0 U	20.0 U	10 U	5.0 U	200 U
1,2-Dichloropropane	5	3	50000	100000	200 U	10 U	10 U	1.0 U	1.00 U	1.00 U	1.00 UJ	1.0 U	1.0 U	100 U	50.0 U	20.0 U	10 U	5.0 U	200 U
1,3,5-Trimethylbenzene	NE	NE	NE	NE	200 U	20 U	20 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	100 U	50.0 U	20.0 U	20 U	10 U	200 U
1,3-Dichlorobenzene	100	6000	50000	100000	200 U	20 U	20 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	100 U	50.0 U	20.0 U	20 U	10 U	200 U
1,3-Dichloropropane	NE	NE	NE	NE	200 U	20 U	20 U	1.0 U	1.00 U	1.00 U	1.00 UJ	1.0 U	1.0 U	100 U	50.0 U	20.0 U	20 U	10 U	200 U
1,4-Dichlorobenzene	5	60	8000	80000	200 U	10 U	10 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	100 U	50.0 U	20.0 U	10 U	5.0 U	200 U
1,4-Dioxane	**0.3**	6000	50000	100000	4000 UJ	2000 U	NS	NS	20.0 U	20.0 U	20.0 U	40 U	NS	NS	1000 U	400 UJ	800 U	NS	NS
2,2-Dichloropropane	NE	NE	NE	NE	200 UJ	20 U	20 U	1.0 U	1.00 UJ	1.00 U	1.00 UJ	1.0 U	1.0 U	100 U	50.0 UJ	20.0 U	20 U	10 U	200 U
2-Butanone	4000	50000	50000	100000	400 U	100 U	100 U	10.0 U	2.00 U	2.00 U	2.00 U	R	5.0 U	1000 UJ	100 U	40.0 U	R	50 U	2000 U
2-Chlorotoluene	NE	NE	NE	NE	200 U	20 U	20 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	100 U	50.0 U	20.0 U	20 U	10 U	200 U
2-Hexanone	NE	NE	NE	NE	400 UJ	100 U	100 U	10.0 U	2.00 U	2.00 U	2.00 U	5.0 U	5.0 U	1000 U	100 U	40.0 UJ	40 U	50 U	2000 U
2-Phenylbutane	NE	NE	NE	NE	200 U	20 U	20 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	100 U	50.0 U	20.0 U	20 U	10 U	200 U
4-Chlorotoluene	NE	NE	NE	NE	200 U	20 U	20 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	100 U	50.0 U	20.0 U	20 U	10 U	200 U
4-Methyl-2-Pentanone	350	50000	50000	100000	400 U	100 U	100 U	10.0 U	2.00 U	2.00 U	2.00 UJ	5.0 U	5.0 U	1000 U	100 U	40.0 UJ	100 U	50 U	2000 U
Acetone	6300	50000	50000	100000	2000 UJ	500 U	500 UJ	10.0 U	10.0 U	10.0 U	10.0 U	R	25 UJ	1000 UJ	500 U	200 U	R	250 UJ	2000 U
Benzene	5	1000	10000	100000	200 U	10 U	10 U	1.0 U	1.00 U	1.00 U	1.00 U	**0.75**	0.70 U	100 U	50.0 U	20.0 U	10 U	5.0 U	200 U
Bromobenzene	NE	NE	NE	NE	200 U	20 U	20 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	100 U	50.0 U	20.0 U	20 U	10 U	200 U
Bromochloromethane	NE	NE	NE	NE	200 U	20 U	20 U	1.0 U	1.00 U	1.00 U	1.00 UJ	1.0 U	1.0 U	100 U	50.0 U	20.0 U	20 U	10 U	200 U
Bromodichloromethane	3	6	50000	100000	100 U	10 U	10 U	0.5 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	50.0 U	25.0 UJ	10.0 U	10 U	5.0 U	100 U
Bromoform	4	700	50000	100000	200 UJ	10 U	10 U	1.0 U	1.00 U	1.00 U	1.00 U	R	1.0 U	100 U	50.0 UJ	20.0 UJ	R	5.0 U	200 U
Bromomethane	10	7	800	8000	400 UJ	10 U	10 UJ	2.0 U	2.00 U	2.00 U	2.00 U	1.0 U	1.0 UJ	200 UJ	100 UJ	40.0 U	10 U	7.0 UJ	400 U
Carbon Disulfide	NE	NE	NE	NE	400 U	100 U	100 U	2.0 U	2.00 UJ	2.00 U	2.00 UJ	5.0 U	5.0 U	200 U	100 UJ	40.0 U	100 U	50 U	400 U
Carbon Tetrachloride	5	2	5000	50000	200 UJ	10 U	10 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	100 U	50.0 UJ	20.0 U	10 U	5.0 U	200 U
Chlorobenzene	100	200	1000	10000	200 U	20 U	20 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	100 U	50.0 U	20.0 U	20 U	10 U	200 U
Chloroethane	NE	NE	NE	NE	400 U	20 U	20 UJ	2.0 U	2.00 U	2.00 U	2.00 UJ	1.0 U	1.0 UJ	200 U	100 U	40.0 U	20 U	10 UJ	400 U
Chloroform	70	50	20000	100000	200 U	20 U	20 U	1.0 U	1.00 U	1.00 U	1.00 UJ	1.0 U	1.0 U	100 U	50.0 U	20.0 U	20 U	10 U	200 U
Chloromethane	NE	NE	NE	NE	400 U	20 U	20 U	2.0 U	2.00 UJ	2.00 U	2.00 U	1.0 U	1.0 U	200 UJ	100 U	40.0 U	20 U	10 U	400 U
cis-1,2-Dichloroethene	**70**	**20**	50000	100000	**202**	**240**	**120**	**3.9**	**4.99**	**5.20**	**5.74 J**	**3.2**	**3.2**	**1830**	**630**	**336**	**360**	**340**	**3130**
cis-1,3-Dichloropropene	NE	NE	NE	NE	100 U	10 U	10 U	0.5 U	0.50 UJ	0.50 U	0.50 U	0.40 U	0.40 U	50.0 U	25.0 U	10.0 U	10 U	5.0 U	100 U
Cymene	NE	NE	NE	NE	200 U	20 U	20 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	100 U	50.0 U	20.0 U	20 U	10 U	200 U
Dibromochloromethane	2	20	50000	100000	100 UJ	10 U	10 U	0.5 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	50.0 U	25.0 UJ	10.0 U	10 UJ	5.0 U	100 U
Dibromomethane	NE	NE	NE	NE	200 U	20 U	10 U	1.0 U	1.00 U	1.00 U	1.00 UJ	1.0 U	1.0 U	100 U	50.0 U	20.0 U	10 U	8.3 U	200 U
Dichlorodifluoromethane (CFC-12)	NE	NE	NE	NE	400 U	20 U	20 U	2.0 U	2.00 U	2.00 U	2.00 UJ	1.0 U	1.0 U	200 U	100 U	40.0 U	20 U	10 U	400 U
Diethyl Ether	NE	NE	NE	NE	200 U	20 U	20 U	1.0 U	1.00 U	1.00 U	1.00 UJ	1.0 U	1.0 U	100 UJ	50.0 U	20.0 U	20 U	10 U	200 U
Diisopropyl Ether	NE	NE	NE	NE	200 U	20 U	20 U	1.0 U	1.00 U	1.00 U	1.00 UJ	1.0 U	1.0 U	100 U	50.0 U	20.0 U	20 U	10 U	200 U
Ethyl Tertiary-Butyl Ether	NE	NE	NE	NE	200 U	20 U	20 U	1.0 U	1.00 UJ	1.00 U	1.00 UJ	1.0 U	1.0 U	100 U	50.0 UJ	20.0 U	20 U	10 U	200 U
Ethylbenzene	700	20000	5000	100000	200 U	20 U	20 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	100 U	50.0 U	20.0 U	20 U	10 U	200 U
Freon TF (Chlorinated fluorocarbon)	NE	NE	NE	NE	200 U	20 U	20 U	1.0 U	1.00 U	1.00 U	1.00 UJ	1.0 U	1.0 U	100 U	50.0 U	20.0 U	20 U	10 U	200 U
Hexachloro-1,3-Butadiene	0.6	50	3000	3000	100 U	10 U	10 U	0.5 U	0.50 U	0.50 U	0.50 U	0.40 U	0.40 U	50.0 U	25.0 U	10.0 U	10 U	5.0 U	100 U
Isopropylbenzene	NE	NE	NE	NE	200 U	20 U	20 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	100 U	50.0 U	20.0 U	20 U	10 U	200 U
M, P Xylenes	10000	3000	5000	100000	400 U	20 U	20 U	2.0 U	2.00 U	2.00 U	2.00 U	1.0 U	1.0 U	200 U	100 U	40.0 U	20 U	10 U	400 U
Methyl Tert-Butyl Ether	NE	NE	NE	100000	200 U	20 U	20 U	1.0 U	1.00 UJ	1.00 U	1.00 UJ	1.0 U	1.0 U	100 U	50.0 UJ	20.0 U	20 U	10 U	200 U
Methylene Chloride	5	2000	50000	100000	400 U	10 U	20 UJ	2.0 U	2.00 U	2.00 U	2.00 UJ	1.0 U	1.0 UJ	200 U	100 U	40.0 U	10 U	10 UJ	400 U
Naphthalene	140	700	20000	100000	400 U	20 U	20 U	1.0 UJ	1.00 U	2.00 U	2.00 UJ	1.0 U	1.0 U	100 U	50.0 U	40.0 U	20 U	10 U	200 UJ
N-Butylbenzene	NE	NE	NE	NE	200 U	20 U	20 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	100 U	50.0 U	20.0 U	20 U	10 U	200 U
N-Propylbenzene	NE	NE	NE	NE	200 U	20 U	20 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	100 U	50.0 U	20.0 U	20 U	10 U	200 U
o-Xylene	10000	3000	5000	100000	200 U	20 U	20 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	100 U	50.0 U	20.0 U	20 U	10 U	200 U
Styrene	100	100	6000	60000	200 U	20 U	20 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	100 U	50.0 U	20.0 U	20 U	10 U	200 U
Tert-Butylbenzene	NE	NE	NE	NE	200 U	20 U	20 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	100 U	50.0 U	20.0 U	20 U	10 U	200 U
Tertiary-Amyl Methyl Ether	NE	NE	NE	NE	200 U	20 U	20 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	100 U	50.0 U	20.0 U	20 U	10 U	200 U
Tetrachloroethene	**5**	**50**	**30000**	100000	**3230**	**3200**	**3600 J+**	**5.7**	**78.3 J-**	**45.9**	**49.4**	**28**	**42 J+**	**1620**	**1480**	**1130**	**870**	**980 J+**	**3290**
Tetrahydrofuran	NE	NE	NE	NE	400 U	50 U	50 U	2.0 U	2.00 U	2.00 UJ	2.00 U	2.5 U	2.5 U	200 U	100 U	40.0 U	50 U	25 U	400 U
Toluene	**1000**	50000	40000	100000	200 U	20 U	20 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	100 U	50.0 U	20.0 U	20 U	10 U	200 U
Trans-1,2-Dichloroethene	**100**	**80**	50000	100000	200 U	20 U	20 U	1.0 U	1.00 U	1.00 U	1.00 UJ	1.0 U	1.0 U	100 U	50.0 U	20.0 U	20 U	10 U	200 U
Trans-1,3-Dichloropropene	NE	NE	NE	NE	100 U	10 U	10 U	0.5 U	0.50 UJ	0.50 U	0.50 U	0.40 U	0.40 U	50.0 U	25.0 U	10.0 U	10 U	5.0 U	100 U
Trichloroethene	**5**	**5**	**5000**	**50000**	**4540**	**4300**	**4600**	**28.1**	**94.4**	**99.4 J**	**58.8 J**	**53**	**75**	**3880**	**2080**	**1590**	**1400**	**1200**	**6430**
Trichlorofluoromethane	NE	NE	NE	NE	200 UJ	20 U	20 U	1.0 U	1.00 U	1.00 U	1.00 UJ	1.0 U	1.0 U	100 U	50.0 U	20.0 U	20 U	10 U	200 U
Vinyl Chloride	**2**	**2**	50000	100000	200 U	10 U	10 U	1.0 U	1.00 UJ	1.00 U	1.00 UJ	1.0 U	1.0 U	**112**	**74.5**	**49.2**	**23**	**23**	**268 J**
Xylenes (Total)	10000	3000	5000	100000	400 U	20 U	20 U	2.0 U	2.00 U	2.00 U	2.00 U	1.0 U	1.0 U	200 U	100 U	40.0 U	20 U	10 U	400 U

Notes:

ft = feet — U - Non-detect at laboratory detection limit

mg/l = miligrams per liter — J = Estimated Value, J+ = biased high, J- = biased low, R

µg/l = micrograms per liter — **Detects are bolded**

NE = not established — Criteria exceedances are highlighted

Table 5-7
Summary of 2016 - 2020 Groundwater Analytical Results for Volatile Organic Compounds
Former GE Facility, 50 Fordham Road, Wilmington, MA

				Location Group:	Transect A (continued)														
				Location ID:	AE103R-3	AE103R-3	AE103R-3	AE103R-3	AE103R-4	AE103R-4	AE103R-4	AE103R-4	AE103R-4	AE103R-5	AE103R-5	AE103R-5	AE103R-5	AE103R-5	AE103R-7
				Sample ID:	7A-AE103R3-100217-	8A-AE103R3-092518-	9A-AE103R3-091819-	0A-AE103R3-091020-	6A-AE103R4-061516-	7A-AE103R4-100217-	8A-AE103R4-092518-	9A-AE103R4-091819-	0A-AE103R4-091020-	6A-AE103R5-061516-	7A-AE103R5-100217-	8A-AE103R5-092518-	9A-AE103R5-091819-	0A-AE103R5-091020-	6A-AE103R7-061516-
				Sample Date:	10/2/2017	9/25/2018	9/18/2019	9/10/2020	6/15/2016	10/2/2017	9/25/2018	9/18/2019	9/10/2020	6/15/2016	10/2/2017	9/25/2018	9/18/2019	9/10/2020	6/15/2016
				Sample Type:	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
				Depth Interval:	70 - 76 ft	70 - 76 ft	70-76 ft	70 - 76 ft	98 - 105 ft	98 - 105 ft	98 - 105 ft	98-105 ft	98 - 105 ft	122 - 128 ft	122 - 128 ft	122 - 128 ft	122-128 ft	122 - 128 ft	162.5 - 168 ft
Analyte	**MCP Method 1 GW-1 Stds**	**MCP Method 1 GW-2 Stds**	**MCP Method 1 GW-3 Stds**	**Upper Concentration Limit (UCL)**															
Volatile Organic Compounds (µg/l)																			
1,1,1,2-Tetrachloroethane	5	10	50000	100000	100 U	20.0 U	10 U	5.0 U	200 U	200 UJ	200 UJ	50 U	50 U	200 U	200 UJ	200 UJ	50 U	50 U	100 U
1,1,1-Trichloroethane	**200**	4000	20000	100000	100 UJ	20.0 U	20 U	10 U	200 U	200 UJ	200 U	100 U	100 U	200 U	200 UJ	200 U	100 U	100 U	100 U
1,1,2,2-Tetrachloroethane	2	9	50000	100000	50.0 U	10.0 U	10 U	5.0 U	100 U	100 U	100 U	50 U	50 U	100 U	100 U	100 U	50 U	50 U	50.0 U
1,1,2-Trichloroethane	5	900	50000	100000	100 U	20.0 U	10 U	5.0 U	200 U	200 U	200 U	50 U	50 U	200 U	200 U	200 U	50 U	50 U	100 U
1,1-Dichloroethane	**70**	2000	20000	100000	100 U	**66.6**	**77 J+**	**32**	200 U	200 U	200 U	**140**	**100**	200 U	200 U	200 U	**120**	**110**	100 U
1,1-Dichloroethylene	**7**	**80**	30000	100000	100 U	20.0 U	**20 J+**	**7.3**	200 U	200 U	200 U	50 U	50 U	200 U	200 U	200 U	50 U	50 U	100 U
1,1-Dichloropropene	NE	NE	NE	NE	100 U	20.0 UJ	20 U	10 U	200 U	200 U	200 UJ	100 U	100 U	200 U	200 U	200 UJ	100 U	100 U	100 U
1,2,3-Trichlorobenzene	NE	NE	NE	NE	100 U	20.0 U	10 U	7.0 U	200 U	200 U	200 U	50 U	50 U	200 U	200 U	200 U	50 U	50 U	100 U
1,2,3-Trichloropropane	NE	NE	NE	NE	100 U	20.0 U	10 U	5.0 U	200 U	200 U	200 U	50 U	50 U	200 U	200 U	200 U	50 U	50 U	100 U
1,2,4-Trichlorobenzene	70	200	50000	100000	100 U	20.0 U	20 U	10 U	200 U	200 U	200 U	70 U	70 U	200 U	200 U	200 U	70 U	70 U	100 U
1,2,4-Trimethylbenzene	NE	NE	NE	NE	100 U	20.0 U	20 U	10 U	200 U	200 U	200 U	56 U	56 U	200 U	200 U	200 U	56 U	56 U	100 U
1,2-Dibromo-3-Chloropropane (DBC	NE	NE	NE	NE	200 UJ	40.0 U	R	5.0 UJ	400 UJ	400 U	400 U	R	50 U	400 UJ	400 U	400 U	R	50 U	200 UJ
1,2-Dibromoethane	0.02	2	50000	100000	50.0 U	10.0 U	10 U	5.0 U	100 U	100 U	100 U	50 U	50 U	100 U	100 U	100 U	50 U	50 U	50.0 U
1,2-Dichlorobenzene	600	8000	2000	80000	100 U	20.0 U	20 U	10 U	200 U	200 U	200 U	100 U	100 U	200 U	200 U	200 U	100 U	100 U	100 U
1,2-Dichloroethane	5	5	20000	100000	100 U	20.0 U	10 U	5.0 U	200 U	200 U	200 U	50 U	50 U	200 U	200 U	200 U	50 U	50 U	100 U
1,2-Dichloropropane	5	3	50000	100000	100 U	20.0 U	10 U	5.0 U	200 U	200 U	200 U	50 U	50 U	200 U	200 U	200 U	50 U	50 U	100 U
1,3,5-Trimethylbenzene	NE	NE	NE	NE	100 U	20.0 U	20 U	10 U	200 U	200 U	200 U	60 U	60 U	200 U	200 U	200 U	60 U	60 U	100 U
1,3-Dichlorobenzene	100	6000	50000	100000	100 U	20.0 U	20 U	10 U	200 U	200 U	200 U	50 U	50 U	200 U	200 U	200 U	50 U	50 U	100 U
1,3-Dichloropropane	NE	NE	NE	NE	100 U	20.0 U	20 U	10 U	200 U	200 U	200 U	100 U	100 U	200 U	200 U	200 U	100 U	100 U	100 U
1,4-Dichlorobenzene	5	60	8000	80000	100 U	20.0 U	10 U	5.0 U	200 U	200 U	200 U	50 U	50 U	200 U	200 U	200 U	50 U	50 U	100 U
1,4-Dioxane	**0.3**	6000	50000	100000	2000 U	400 UJ	800 U	1000 U	NS	4000 U	4000 UJ	4000 U	NS	NS	4000 U	4000 UJ	4000 U	NS	NS
2,2-Dichloropropane	NE	NE	NE	NE	100 UJ	20.0 U	20 U	10 U	200 U	200 UJ	200 U	100 U	100 U	200 U	200 UJ	200 U	100 U	100 U	100 U
2-Butanone	4000	50000	50000	100000	200 U	40.0 UJ	R	50 U	2000 U	400 U	400 U	R	500 U	2000 U	400 U	400 U	R	500 U	1000 U
2-Chlorotoluene	NE	NE	NE	NE	100 U	20.0 U	20 U	10 U	200 U	200 U	200 U	100 U	100 U	200 U	200 U	200 U	100 U	100 U	100 U
2-Hexanone	NE	NE	NE	NE	200 U	40.0 UJ	40 U	50 U	2000 U	400 U	400 UJ	200 U	500 U	2000 U	400 U	400 UJ	200 U	500 U	1000 U
2-Phenylbutane	NE	NE	NE	NE	100 U	20.0 U	20 U	10 U	200 U	200 U	200 U	100 U	100 U	200 U	200 U	200 U	100 U	100 U	100 U
4-Chlorotoluene	NE	NE	NE	NE	100 U	20.0 U	20 U	10 U	200 U	200 U	200 U	100 U	100 U	200 U	200 U	200 U	100 U	100 U	100 U
4-Methyl-2-Pentanone	350	50000	50000	100000	200 U	40.0 U	100 U	50 U	2000 U	400 U	400 UJ	350 U	500 U	2000 U	400 U	400 UJ	350 U	500 U	1000 U
Acetone	6300	50000	50000	100000	1000 U	200 U	R	250 UJ	2000 U	2000 U	2000 U	R	2500 U	2000 U	2000 U	2000 U	R	2500 U	1000 U
Benzene	5	1000	10000	100000	100 U	20.0 U	10 U	5.0 U	200 U	200 U	200 U	50 U	50 U	200 U	200 U	200 U	50 U	50 U	100 U
Bromobenzene	NE	NE	NE	NE	100 U	20.0 U	20 U	10 U	200 U	200 UJ	200 U	62 U	62 U	200 U	200 UJ	200 U	62 U	62 U	100 U
Bromochloromethane	NE	NE	NE	NE	100 U	20.0 U	20 U	10 U	200 U	200 U	200 U	83 U	83 U	200 U	200 U	200 U	83 U	83 U	100 U
Bromodichloromethane	3	6	50000	100000	50.0 UJ	10.0 U	10 U	5.0 U	100 U	100 UJ	100 U	50 U	50 U	100 U	100 UJ	100 U	50 U	50 U	50.0 U
Bromoform	4	700	50000	100000	100 UJ	20.0 U	R	5.0 U	200 U	200 UJ	200 UJ	R	50 U	200 U	200 UJ	200 UJ	R	50 U	100 U
Bromomethane	10	7	800	8000	200 UJ	40.0 UJ	10 U	7.0 UJ	400 U	400 UJ	400 U	50 U	50 U	400 U	400 UJ	400 U	50 U	50 U	200 U
Carbon Disulfide	NE	NE	NE	NE	200 UJ	40.0 U	100 U	50 U	400 U	400 U	400 U	500 U	500 U	400 U	400 U	400 U	500 U	500 U	200 U
Carbon Tetrachloride	5	2	5000	50000	100 UJ	20.0 U	10 U	5.0 U	200 U	200 UJ	200 U	50 U	50 U	200 U	200 UJ	200 U	50 U	50 U	100 U
Chlorobenzene	100	200	1000	10000	100 U	20.0 U	20 U	10 U	200 U	200 U	200 U	100 U	100 U	200 U	200 U	200 U	100 U	100 U	100 U
Chloroethane	NE	NE	NE	NE	200 U	40.0 U	20 U	10 UJ	400 U	400 U	400 U	100 U	100 UJ	400 U	400 U	400 U	100 U	100 UJ	200 U
Chloroform	70	50	20000	100000	100 U	20.0 U	20 U	10 U	200 U	200 U	200 U	50 U	50 U	200 U	200 U	200 U	50 U	50 U	100 U
Chloromethane	NE	NE	NE	NE	200 U	40.0 U	20 U	10 U	400 U	400 U	400 U	100 U	100 U	400 U	400 U	400 U	100 U	100 U	200 U
cis-1,2-Dichloroethene	**70**	**20**	50000	100000	**511**	**436**	**330 J+**	**140**	**1080**	**1290**	**888**	**700**	**690**	**882**	**936**	**1190**	**1100**	**1000**	**286**
cis-1,3-Dichloropropene	NE	NE	NE	NE	50.0 U	10.0 U	10 U	5.0 U	100 U	100 U	100 U	50 U	50 U	100 U	100 U	100 U	50 U	50 U	50.0 U
Cymene	NE	NE	NE	NE	100 U	20.0 U	20 U	10 U	200 U	200 U	200 U	100 U	100 U	200 U	200 U	200 U	100 U	100 U	100 U
Dibromochloromethane	2	20	50000	100000	50.0 UJ	10.0 U	10 UJ	5.0 U	100 U	100 UJ	100 U	50 UJ	50 U	100 U	100 UJ	100 U	50 UJ	50 U	50.0 U
Dibromomethane	NE	NE	NE	NE	100 U	20.0 U	10 U	8.3 U	200 U	200 U	200 U	50 U	50 U	200 U	200 U	200 U	50 U	50 U	100 U
Dichlorodifluoromethane (CFC-12)	NE	NE	NE	NE	200 U	40.0 U	20 U	10 U	400 U	400 U	400 U	100 U	100 U	400 U	400 U	400 U	100 U	100 U	200 U
Diethyl Ether	NE	NE	NE	NE	100 U	20.0 U	20 U	10 U	200 U	200 U	200 U	100 U	100 U	200 U	200 U	200 U	100 U	100 U	100 U
Diisopropyl Ether	NE	NE	NE	NE	100 U	20.0 U	20 U	10 U	200 U	200 U	200 U	100 U	100 U	200 U	200 U	200 U	100 U	100 U	100 U
Ethyl Tertiary-Butyl Ether	NE	NE	NE	NE	100 UJ	20.0 U	20 U	10 U	200 U	200 UJ	200 U	100 U	100 U	200 U	200 UJ	200 U	100 U	100 U	100 U
Ethylbenzene	700	20000	5000	100000	100 U	20.0 U	20 U	10 U	200 U	200 U	200 U	100 U	100 U	200 U	200 U	200 U	100 U	100 U	100 U
Freon TF (Chlorinated fluorocarbon)	NE	NE	NE	NE	100 U	20.0 U	20 U	10 U	200 U	200 U	200 U	100 U	100 U	200 U	200 U	200 U	100 U	100 U	100 U
Hexachloro-1,3-Butadiene	0.6	50	3000	3000	50.0 U	10.0 U	10 U	5.0 U	100 U	100 U	100 U	50 U	50 U	100 U	100 U	100 U	50 U	50 U	50.0 U
Isopropylbenzene	NE	NE	NE	NE	100 U	20.0 U	20 U	10 U	200 U	200 U	200 U	100 U	100 U	200 U	200 U	200 U	100 U	100 U	100 U
M, P Xylenes	10000	3000	5000	100000	200 U	40.0 U	20 U	10 U	400 U	400 U	400 U	100 U	100 U	400 U	400 U	400 U	100 U	100 U	200 U
Methyl Tert-Butyl Ether	NE	NE	NE	100000	100 UJ	20.0 U	20 U	10 U	200 U	200 UJ	200 U	70 U	70 U	200 U	200 UJ	200 U	70 U	70 U	100 U
Methylene Chloride	5	2000	50000	100000	200 U	40.0 U	10 U	10 UJ	400 U	400 U	400 U	50 U	100 U	400 U	400 U	400 U	50 U	100 U	200 U
Naphthalene	140	700	20000	100000	100 U	40.0 U	20 U	10 U	200 UJ	200 U	400 U	100 U	100 U	200 UJ	200 U	400 U	100 U	100 U	100 UJ
N-Butylbenzene	NE	NE	NE	NE	100 U	20.0 U	20 U	10 U	200 U	200 U	200 U	100 U	100 U	200 U	200 U	200 U	100 U	100 U	100 U
N-Propylbenzene	NE	NE	NE	NE	100 U	20.0 U	20 U	10 U	200 U	200 U	200 U	100 U	100 U	200 U	200 U	200 U	100 U	100 U	100 U
o-Xylene	10000	3000	5000	100000	100 U	20.0 U	20 U	10 U	200 U	200 U	200 U	100 U	100 U	200 U	200 U	200 U	100 U	100 U	100 U
Styrene	100	100	6000	60000	100 U	20.0 U	20 U	10 U	200 U	200 U	200 U	100 U	100 U	200 U	200 U	200 U	100 U	100 U	100 U
Tert-Butylbenzene	NE	NE	NE	NE	100 U	20.0 U	20 U	10 U	200 U	200 U	200 U	100 U	100 U	200 U	200 U	200 U	100 U	100 U	100 U
Tertiary-Amyl Methyl Ether	NE	NE	NE	NE	100 U	20.0 U	20 U	10 U	200 U	200 U	200 U	100 U	100 U	200 U	200 U	200 U	100 U	100 U	100 U
Tetrachloroethene	**5**	**50**	**30000**	100000	**2950**	**1730**	**1700**	**950 J+**	**7170**	**6190 J**	**4700**	**4100**	**3200**	**7620**	**7030 J**	**5960**	**5500**	**4700**	**3590**
Tetrahydrofuran	NE	NE	NE	NE	200 U	40.0 U	50 U	25 U	400 U	400 U	400 U	250 U	250 U	400 U	400 U	400 U	250 U	250 U	200 U
Toluene	**1000**	50000	40000	100000	100 U	20.0 U	20 U	10 U	200 U	200 U	200 U	100 U	100 U	200 U	200 U	200 U	100 U	100 U	100 U
Trans-1,2-Dichloroethene	**100**	**80**	50000	100000	100 U	20.0 U	20 U	10 U	200 U	200 U	200 U	80 U	80 U	200 U	200 U	200 U	80 U	80 U	100 U
Trans-1,3-Dichloropropene	NE	NE	NE	NE	50.0 U	10.0 U	10 U	5.0 U	100 U	100 U	100 U	50 U	50 U	100 U	100 U	100 U	50 U	50 U	50.0 U
Trichloroethene	**5**	**5**	**5000**	**50000**	**4450**	**3190**	**3200**	**1300**	**13500**	**9660**	**8890**	**7400**	**6000**	**12800**	**9980**	**9710**	**9200**	**7600**	**5170**
Trichlorofluoromethane	NE	NE	NE	NE	100 U	20.0 U	20 U	10 U	200 U	200 U	200 U	100 U	100 U	200 U	200 U	200 U	100 U	100 U	100 U
Vinyl Chloride	**2**	**2**	50000	100000	**139**	**147**	**100 J+**	**36**	200 UJ	200 UJ	200 U	**100**	**150**	200 UJ	200 UJ	200 U	**190**	**270**	100 UJ
Xylenes (Total)	10000	3000	5000	100000	200 U	40.0 U	20 U	10 U	400 U	400 U	400 U	100 U	100 U	400 U	400 U	400 U	100 U	100 U	200 U

Notes:

ft = feet — U - Non-detect at laboratory detection limit

mg/l = miligrams per liter — J = Estimated Value, J+ = biased high, J- = biased low, R

µg/l = micrograms per liter — **Detects are bolded**

NE = not established — Criteria exceedances are highlighted

Table 5-7
Summary of 2016 - 2020 Groundwater Analytical Results for Volatile Organic Compounds
Former GE Facility, 50 Fordham Road, Wilmington, MA

				Location Group:	Transect A (continued)														
				Location ID:	AE103R-7	AE103R-7	AE103R-7	AE103R-7	AE103S	AE103S	AE103S	AE103S	AE103S	AE104D	AE104D	AE104D	AE104D	AE104D	AE104R-1
				Sample ID:	7A-AE103R7-100217-	8A-AE103R7-092518-	9A-AE103R7-091819-	0A-AE103R7-091020-	16A-AE103S-061516-	17A-AE103S-100317-	18A-AE103S-092418-	19A-AE103S-091919-	20A-AE103S-091020-	16A-AE104D-061316-	17A-AE104D-101017-	18A-AE104D-092618-	19A-AE104D-092019-	20A-AE104D-091620-	16A-AE104R1-061416-
				Sample Date:	10/2/2017	9/25/2018	9/18/2019	9/10/2020	6/15/2016	10/3/2017	9/24/2018	9/19/2019	9/10/2020	6/13/2016	10/10/2017	9/26/2018	9/20/2019	9/16/2020	6/14/2016
				Sample Type:	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
				Depth Interval:	162.5 - 168 ft	162.5 - 168 ft	162.5-168 ft	162.5 - 168 ft	15 - 20 ft	15 - 20 ft	15 - 20 ft	15-20 ft	15 - 20 ft	35 - 40 ft	35 - 40 ft	35 - 40 ft	35-40 ft	35 - 40 ft	48 - 54 ft
Analyte	**MCP Method 1 GW-1 Stds**	**MCP Method 1 GW-2 Stds**	**MCP Method 1 GW-3 Stds**	**Upper Concentration Limit (UCL)**															
Volatile Organic Compounds (µg/l)																			
1,1,1,2-Tetrachloroethane	5	10	50000	100000	100 UJ	100 UJ	10 U	10 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	20.0 U
1,1,1-Trichloroethane	**200**	4000	20000	100000	100 UJ	100 U	20 U	20 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	**1.0**	1.00 U	1.00 U	1.0 U	1.0 U	20.0 U
1,1,2,2-Tetrachloroethane	2	9	50000	100000	50.0 U	50.0 U	10 U	10 U	0.5 U	0.50 U	0.50 U	0.50 U	0.50 U	0.5 U	0.50 U	0.50 U	0.50 U	0.50 U	10.0 U
1,1,2-Trichloroethane	5	900	50000	100000	100 U	100 U	10 U	10 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	20.0 U
1,1-Dichloroethane	**70**	2000	20000	100000	100 U	100 U	**66**	**50**	**1.2**	**1.68**	1.00 UJ	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	**36.8**
1,1-Dichloroethylene	**7**	**80**	30000	100000	100 U	100 U	**17**	**10**	1.0 U	1.00 U	1.00 UJ	1.0 U	1.0 U	1.0 U	1.00 U	1.00 UJ	1.0 U	1.0 U	20.0 U
1,1-Dichloropropene	NE	NE	NE	NE	100 U	100 UJ	20 U	20 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	20.0 U
1,2,3-Trichlorobenzene	NE	NE	NE	NE	100 U	100 U	10 U	10 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	20.0 U
1,2,3-Trichloropropane	NE	NE	NE	NE	100 U	100 U	10 U	10 U	1.0 U	1.00 U	1.00 U	0.50 U	0.50 U	1.0 U	1.00 U	1.00 U	1.0 U	0.50 U	20.0 U
1,2,4-Trichlorobenzene	70	200	50000	100000	100 U	100 U	20 U	20 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	20.0 U
1,2,4-Trimethylbenzene	NE	NE	NE	NE	100 U	100 U	20 U	20 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	20.0 U
1,2-Dibromo-3-Chloropropane (DBC	NE	NE	NE	NE	200 U	200 U	R	10 UJ	2.0 U	2.00 UJ	2.00 U	R	0.50 UJ	2.0 UJ	2.00 U	2.00 U	R	0.50 U	40.0 UJ
1,2-Dibromoethane	0.02	2	50000	100000	50.0 U	50.0 U	10 U	10 U	0.5 U	0.50 U	0.50 UJ	0.50 U	0.50 U	0.5 U	0.50 U	0.50 U	0.50 U	0.50 U	10.0 U
1,2-Dichlorobenzene	600	8000	2000	80000	100 U	100 U	20 U	20 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	20.0 U
1,2-Dichloroethane	5	5	20000	100000	100 U	100 U	10 U	10 U	1.0 U	1.00 U	1.00 UJ	0.60 U	0.60 U	1.0 U	1.00 U	1.00 U	0.60 U	0.60 U	20.0 U
1,2-Dichloropropane	5	3	50000	100000	100 U	100 U	10 U	10 U	1.0 U	1.00 U	1.00 UJ	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	20.0 U
1,3,5-Trimethylbenzene	NE	NE	NE	NE	100 U	100 U	20 U	20 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	20.0 U
1,3-Dichlorobenzene	100	6000	50000	100000	100 U	100 U	20 U	20 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	20.0 U
1,3-Dichloropropane	NE	NE	NE	NE	100 U	100 U	20 U	20 U	1.0 U	1.00 U	1.00 UJ	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	20.0 U
1,4-Dichlorobenzene	5	60	8000	80000	100 U	100 U	10 U	10 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	20.0 U
1,4-Dioxane	**0.3**	6000	50000	100000	2000 U	2000 UJ	800 U	2000 U	NS	20.0 U	20.0 U	40 U	100 U	NS	20.0 U	20.0 U	40 U	NS	NS
2,2-Dichloropropane	NE	NE	NE	NE	100 UJ	100 U	20 U	20 U	1.0 U	1.00 UJ	1.00 UJ	1.0 U	1.0 U	1.0 U	1.00 UJ	1.00 U	1.0 U	1.0 U	20.0 U
2-Butanone	4000	50000	50000	100000	200 U	200 U	R	100 U	10.0 U	2.00 U	2.00 U	R	5.0 U	10.0 U	2.00 U	2.00 U	R	5.0 U	200 U
2-Chlorotoluene	NE	NE	NE	NE	100 U	100 U	20 U	20 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	20.0 U
2-Hexanone	NE	NE	NE	NE	200 U	200 UJ	40 U	100 U	10.0 U	2.00 U	2.00 U	5.0 U	5.0 U	10.0 U	2.00 U	2.00 U	5.0 U	5.0 U	200 U
2-Phenylbutane	NE	NE	NE	NE	100 U	100 U	20 U	20 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	20.0 U
4-Chlorotoluene	NE	NE	NE	NE	100 U	100 U	20 U	20 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	20.0 U
4-Methyl-2-Pentanone	350	50000	50000	100000	200 U	200 UJ	100 U	100 U	10.0 U	2.00 U	2.00 UJ	5.0 U	5.0 U	10.0 U	2.00 U	2.00 U	5.0 U	5.0 U	200 U
Acetone	6300	50000	50000	100000	1000 U	1000 U	R	500 UJ	10.0 U	10.0 U	10.0 U	R	R	10.0 U	10.0 U	10.0 U	R	25 U	200 U
Benzene	5	1000	10000	100000	100 U	100 U	10 U	10 U	1.0 U	1.00 U	1.00 U	0.70 U	0.70 U	1.0 U	1.00 U	1.00 U	0.70 U	0.70 U	20.0 U
Bromobenzene	NE	NE	NE	NE	100 UJ	100 U	20 U	20 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	20.0 U
Bromochloromethane	NE	NE	NE	NE	100 U	100 U	20 U	20 U	1.0 U	1.00 U	1.00 UJ	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	20.0 U
Bromodichloromethane	3	6	50000	100000	50.0 UJ	50.0 U	10 U	10 U	0.5 U	0.50 U	0.50 U	0.50 U	0.50 U	0.5 U	0.50 U	0.50 UJ	0.50 U	0.50 U	10.0 U
Bromoform	4	700	50000	100000	100 UJ	100 UJ	R	10 U	1.0 U	1.00 UJ	1.00 U	R	1.0 UJ	1.0 U	1.00 U	1.00 U	R	1.0 U	20.0 U
Bromomethane	10	7	800	8000	200 UJ	200 U	10 U	10 UJ	2.0 UJ	2.00 U	2.00 U	1.0 U	1.0 UJ	2.0 U	2.00 U	2.00 UJ	1.0 U	1.0 U	40.0 U
Carbon Disulfide	NE	NE	NE	NE	200 U	200 U	100 U	100 U	2.0 U	2.00 U	2.00 UJ	5.0 U	5.0 U	2.0 U	2.00 U	2.00 UJ	5.0 U	5.0 U	40.0 U
Carbon Tetrachloride	5	2	5000	50000	100 UJ	100 U	10 U	10 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	20.0 U
Chlorobenzene	100	200	1000	10000	100 U	100 U	20 U	20 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	20.0 U
Chloroethane	NE	NE	NE	NE	200 U	200 U	20 U	20 UJ	2.0 U	2.00 U	2.00 UJ	1.0 U	1.0 UJ	2.0 U	2.00 U	2.00 U	1.0 U	1.0 UJ	40.0 U
Chloroform	70	50	20000	100000	100 U	100 U	20 U	20 U	1.0 U	1.00 U	1.00 UJ	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	20.0 U
Chloromethane	NE	NE	NE	NE	200 U	200 U	20 U	20 U	2.0 UJ	2.00 U	2.00 U	1.0 U	1.0 U	2.0 U	2.00 UJ	2.00 U	1.0 U	1.0 U	40.0 U
cis-1,2-Dichloroethene	**70**	**20**	50000	100000	**341**	**381**	**390**	**400**	**3.0**	**8.08**	1.00 UJ	1.0 U	1.0 U	**1.2**	1.00 U	1.00 U	1.0 U	1.0 U	**78.6**
cis-1,3-Dichloropropene	NE	NE	NE	NE	50.0 U	50.0 U	10 U	10 U	0.5 U	0.50 U	0.50 U	0.40 U	0.40 U	0.5 UJ	0.50 U	0.50 U	0.40 U	0.40 U	10.0 UJ
Cymene	NE	NE	NE	NE	100 U	100 U	20 U	20 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	20.0 U
Dibromochloromethane	2	20	50000	100000	50.0 UJ	50.0 U	10 UJ	10 U	0.5 U	0.50 U	0.50 U	0.50 U	0.50 U	0.5 U	0.50 U	0.50 U	0.50 U	0.50 U	10.0 U
Dibromomethane	NE	NE	NE	NE	100 U	100 U	10 U	10 U	1.0 U	1.00 U	1.00 UJ	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	20.0 U
Dichlorodifluoromethane (CFC-12)	NE	NE	NE	NE	200 U	200 U	20 U	20 U	2.0 U	2.00 UJ	2.00 UJ	1.0 U	1.0 U	2.0 U	2.00 U	2.00 U	1.0 U	1.0 U	40.0 U
Diethyl Ether	NE	NE	NE	NE	100 U	100 U	20 U	20 U	1.0 U	1.00 U	1.00 UJ	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	20.0 U
Diisopropyl Ether	NE	NE	NE	NE	100 U	100 U	20 U	20 U	1.0 U	1.00 U	1.00 UJ	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	20.0 U
Ethyl Tertiary-Butyl Ether	NE	NE	NE	NE	100 UJ	100 U	20 U	20 U	1.0 U	1.00 UJ	1.00 UJ	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	20.0 U
Ethylbenzene	700	20000	5000	100000	100 U	100 U	20 U	20 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	20.0 U
Freon TF (Chlorinated fluorocarbon)	NE	NE	NE	NE	100 U	100 U	20 U	20 U	1.0 U	1.00 U	1.00 UJ	1.0 U	1.0 U	1.0 U	1.00 U	1.00 UJ	1.0 U	1.0 U	20.0 U
Hexachloro-1,3-Butadiene	0.6	50	3000	3000	50.0 U	50.0 U	10 U	10 U	0.5 U	0.50 UJ	0.50 U	0.40 U	0.40 U	0.5 U	0.50 U	0.50 U	0.40 U	0.40 U	10.0 U
Isopropylbenzene	NE	NE	NE	NE	100 U	100 U	20 U	20 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	20.0 U
M, P Xylenes	10000	3000	5000	100000	200 U	200 U	20 U	20 U	2.0 U	2.00 U	2.00 U	1.0 U	1.0 U	2.0 U	2.00 U	2.00 U	1.0 U	1.0 U	40.0 U
Methyl Tert-Butyl Ether	NE	NE	NE	100000	100 UJ	100 U	20 U	20 U	1.0 U	1.00 UJ	1.00 UJ	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	20.0 U
Methylene Chloride	5	2000	50000	100000	200 U	200 U	10 U	20 UJ	2.0 U	2.00 U	2.00 UJ	1.0 U	1.0 U	2.0 U	2.00 U	2.00 UJ	1.0 U	1.0 U	40.0 U
Naphthalene	140	700	20000	100000	100 U	200 U	20 U	20 U	1.0 UJ	1.00 U	2.00 UJ	1.0 U	1.0 U	1.0 UJ	1.00 U	2.00 U	1.0 U	1.0 U	20.0 UJ
N-Butylbenzene	NE	NE	NE	NE	100 U	100 U	20 U	20 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	20.0 U
N-Propylbenzene	NE	NE	NE	NE	100 U	100 U	20 U	20 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	20.0 U
o-Xylene	10000	3000	5000	100000	100 U	100 U	20 U	20 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	20.0 U
Styrene	100	100	6000	60000	100 U	100 U	20 U	20 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	20.0 U
Tert-Butylbenzene	NE	NE	NE	NE	100 U	100 U	20 U	20 U	**1.8**	**1.49**	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	20.0 U
Tertiary-Amyl Methyl Ether	NE	NE	NE	NE	100 U	100 U	20 U	20 U	1.0 U	1.00 UJ	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	20.0 U
Tetrachloroethene	**5**	**50**	**30000**	100000	**3600 J**	**2690**	**2100**	**2000**	1.0 U	1.00 U	1.00 U	1.0 U	R	**18.1**	**12.6**	**3.25**	1.0 U	1.0 U	**469**
Tetrahydrofuran	NE	NE	NE	NE	200 U	200 U	50 U	50 U	2.0 U	2.00 U	2.00 U	2.5 U	2.5 U	2.0 U	2.00 U	2.00 U	2.5 U	2.5 U	40.0 U
Toluene	**1000**	50000	40000	100000	100 U	100 U	20 U	20 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	20.0 U
Trans-1,2-Dichloroethene	**100**	**80**	50000	100000	100 U	100 U	20 U	**20**	1.0 U	1.00 U	1.00 UJ	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	20.0 U
Trans-1,3-Dichloropropene	NE	NE	NE	NE	50.0 U	50.0 U	10 U	10 U	0.5 U	0.50 UJ	0.50 U	0.40 U	0.40 U	0.5 UJ	0.50 U	0.50 U	0.40 U	0.40 U	10.0 UJ
Trichloroethene	**5**	**5**	**5000**	**50000**	**4710**	**4380**	**4000**	**3200**	1.0 U	**1.08**	1.00 U	1.0 U	1.0 U	**10.6**	**7.94**	**3.37**	**2.2**	**1.4**	**1320**
Trichlorofluoromethane	NE	NE	NE	NE	100 U	100 U	20 U	20 U	1.0 U	1.00 U	1.00 UJ	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	20.0 U
Vinyl Chloride	**2**	**2**	50000	100000	100 UJ	100 U	**42**	**68**	**2.9**	**7.44 J**	1.00 UJ	1.0 U	1.0 U	1.0 UJ	1.00 U	1.00 UJ	1.0 U	1.0 U	20.0 UJ
Xylenes (Total)	10000	3000	5000	100000	200 U	200 U	20 U	20 U	2.0 U	2.00 U	2.00 U	1.0 U	1.0 U	2.0 U	2.00 U	2.00 U	1.0 U	1.0 U	40.0 U

Notes:

ft = feet — U - Non-detect at laboratory detection limit

mg/l = miligrams per liter — J = Estimated Value, J+ = biased high, J- = biased low, R

µg/l = micrograms per liter — **Detects are bolded**

NE = not established — Criteria exceedances are highlighted

Table 5-7
Summary of 2016 - 2020 Groundwater Analytical Results for Volatile Organic Compounds
Former GE Facility, 50 Fordham Road, Wilmington, MA

				Location Group:	Transect A (continued)													
				Location ID:	AE104R-1	AE104R-1	AE104R-1	AE104R-1	AE104R-3	AE104R-3	AE104R-3	AE104R-3	AE104R-3	AE104R-4	AE104R-4	AE104R-4	AE104R-4	AE104R-5
				Sample ID:	7A-AE104R1-100317-	8A-AE104R1-092618-	9A-AE104R1-091819-	0A-AE104R1-091120-	6A-AE104R3-061416-	7A-AE104R3-100317-	8A-AE104R3-092618-	9A-AE104R3-091819-	0A-AE104R3-091120-	6A-AE104R4-061416-	7A-AE104R4-100317-	8A-AE104R4-092618-	9A-AE104R4-091819-	0A-AE104R4-091120-	6A-AE104R5-061416-
				Sample Date:	10/3/2017	9/26/2018	9/18/2019	9/11/2020	6/14/2016	10/3/2017	9/26/2018	9/18/2019	9/11/2020	6/14/2016	10/3/2017	9/26/2018	9/18/2019	9/11/2020	6/14/2016
				Sample Type:	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
				Depth Interval:	48 - 54 ft	48 - 54 ft	48-54 ft	48 - 54 ft	97 - 102 ft	97 - 102 ft	97 - 102 ft	97-102 ft	97 - 102 ft	128 - 133 ft	128 - 133 ft	128 - 133 ft	128-133 ft	128 - 133 ft	156 - 162 ft
Analyte	**MCP Method 1 GW-1 Stds**	**MCP Method 1 GW-2 Stds**	**MCP Method 1 GW-3 Stds**	**Upper Concentration Limit (UCL)**															
Volatile Organic Compounds (µg/l)																			
1,1,1,2-Tetrachloroethane	5	10	50000	100000	20.0 U	20.0 U	5.0 U	5.0 U	100 U	100 U	100 U	10 U	5.0 U	200 U	100 U	100 U	25 U	10 U	200 U
1,1,1-Trichloroethane	**200**	4000	20000	100000	20.0 U	20.0 U	5.0 U	5.0 U	100 U	100 U	100 U	20 U	5.0 U	200 U	100 U	100 U	50 U	20 U	200 U
1,1,2,2-Tetrachloroethane	2	9	50000	100000	10.0 U	10.0 U	2.5 U	2.5 U	50.0 U	50.0 U	50.0 U	R	2.5 U	100 U	50.0 U	50.0 U	R	10 U	100 U
1,1,2-Trichloroethane	5	900	50000	100000	20.0 U	20.0 U	5.0 U	5.0 U	100 U	100 U	100 U	10 U	5.0 U	200 U	100 U	100 U	25 U	10 U	200 U
1,1-Dichloroethane	**70**	2000	20000	100000	**38.6**	**39.4**	**26**	**27**	100 U	100 U	100 U	**49**	**45**	200 U	100 U	100 U	**75**	**57**	200 U
1,1-Dichloroethylene	**7**	**80**	30000	100000	20.0 U	20.0 U	5.0 U	**5.1**	100 U	100 U	100 UJ	**12**	**12**	200 U	100 U	100 UJ	25 U	**14**	200 U
1,1-Dichloropropene	NE	NE	NE	NE	20.0 U	20.0 UJ	5.0 U	5.0 U	100 U	100 U	100 U	20 U	5.0 U	200 U	100 U	100 U	50 U	20 U	200 U
1,2,3-Trichlorobenzene	NE	NE	NE	NE	20.0 U	20.0 U	5.0 U	5.0 U	100 U	100 U	100 U	10 U	5.0 U	200 U	100 U	100 U	25 U	10 U	200 U
1,2,3-Trichloropropane	NE	NE	NE	NE	20.0 U	20.0 U	2.5 U	2.5 U	100 U	100 U	100 U	10 U	2.5 U	200 U	100 U	100 U	25 U	10 U	200 U
1,2,4-Trichlorobenzene	70	200	50000	100000	20.0 U	20.0 U	5.0 U	5.0 U	100 U	100 U	100 U	20 U	5.0 U	200 U	100 U	100 U	50 U	20 U	200 U
1,2,4-Trimethylbenzene	NE	NE	NE	NE	20.0 U	20.0 U	5.0 U	5.0 U	100 U	100 U	100 U	20 U	5.0 U	200 U	100 U	100 U	50 U	20 U	200 U
1,2-Dibromo-3-Chloropropane (DBC	NE	NE	NE	NE	40.0 U	40.0 U	R	2.5 U	200 U	200 U	200 U	R	2.5 U	400 UJ	200 U	200 U	R	10 UJ	400 UJ
1,2-Dibromoethane	0.02	2	50000	100000	10.0 U	10.0 U	2.5 U	2.5 U	50.0 U	50.0 U	50.0 U	10 U	2.5 U	100 U	50.0 U	50.0 U	25 U	10 U	100 U
1,2-Dichlorobenzene	600	8000	2000	80000	20.0 U	20.0 U	5.0 U	5.0 U	100 U	100 U	100 U	20 U	5.0 U	200 U	100 U	100 U	50 U	20 U	200 U
1,2-Dichloroethane	5	5	20000	100000	20.0 U	20.0 U	3.0 U	3.0 U	100 U	100 U	100 U	10 U	3.0 U	200 U	100 UJ	100 U	25 U	10 U	200 U
1,2-Dichloropropane	5	3	50000	100000	20.0 U	20.0 U	3.0 U	3.0 U	100 U	100 U	100 U	10 U	3.0 U	200 U	100 U	100 U	25 U	10 U	200 U
1,3,5-Trimethylbenzene	NE	NE	NE	NE	20.0 U	20.0 U	5.0 U	5.0 U	100 U	100 U	100 U	20 U	5.0 U	200 U	100 U	100 U	50 U	20 U	200 U
1,3-Dichlorobenzene	100	6000	50000	100000	20.0 U	20.0 U	5.0 U	5.0 U	100 U	100 U	100 U	20 U	5.0 U	200 U	100 UJ	100 U	40 U	20 U	200 U
1,3-Dichloropropane	NE	NE	NE	NE	20.0 U	20.0 U	5.0 U	5.0 U	100 U	100 U	100 U	20 U	5.0 U	200 U	100 U	100 U	50 U	20 U	200 U
1,4-Dichlorobenzene	5	60	8000	80000	20.0 U	20.0 U	5.0 U	5.0 U	100 U	100 U	100 U	10 U	5.0 U	200 U	100 U	100 U	25 U	10 U	200 U
1,4-Dioxane	**0.3**	6000	50000	100000	400 U	400 UJ	200 U	NS	NS	2000 U	2000 U	800 U	NS	NS	2000 U	2000 U	2000 U	NS	NS
2,2-Dichloropropane	NE	NE	NE	NE	20.0 UJ	20.0 U	5.0 U	5.0 U	100 U	100 UJ	100 U	20 U	5.0 U	200 U	100 UJ	100 U	50 U	20 U	200 U
2-Butanone	4000	50000	50000	100000	40.0 U	40.0 U	R	25 U	1000 U	200 U	200 U	R	25 U	2000 U	200 U	200 U	R	100 U	2000 U
2-Chlorotoluene	NE	NE	NE	NE	20.0 U	20.0 UJ	5.0 U	5.0 U	100 U	100 U	100 U	20 U	5.0 U	200 U	100 U	100 U	50 U	20 U	200 U
2-Hexanone	NE	NE	NE	NE	40.0 U	40.0 UJ	25 U	25 U	1000 U	200 U	200 U	R	25 U	2000 U	200 U	200 U	R	100 U	2000 U
2-Phenylbutane	NE	NE	NE	NE	20.0 U	20.0 U	5.0 U	5.0 U	100 U	100 U	100 U	20 U	5.0 U	200 U	100 U	100 U	50 U	20 U	200 U
4-Chlorotoluene	NE	NE	NE	NE	20.0 U	20.0 U	5.0 U	5.0 U	100 U	100 U	100 U	20 U	5.0 U	200 U	100 UJ	100 U	50 U	20 U	200 U
4-Methyl-2-Pentanone	350	50000	50000	100000	40.0 U	40.0 UJ	25 U	25 U	1000 U	200 U	200 U	R	25 U	2000 U	200 U	200 U	R	100 U	2000 U
Acetone	6300	50000	50000	100000	200 U	200 U	R	130 U	1000 UJ	1000 U	1000 U	R	130 U	2000 U	1000 U	1000 U	R	500 UJ	2000 U
Benzene	5	1000	10000	100000	20.0 U	20.0 U	3.5 U	3.5 U	100 U	100 U	100 U	10 U	3.5 U	200 U	100 U	100 U	25 U	10 U	200 U
Bromobenzene	NE	NE	NE	NE	20.0 U	20.0 UJ	5.0 U	5.0 U	100 U	100 U	100 U	20 U	5.0 U	200 U	100 U	100 U	50 U	20 U	200 U
Bromochloromethane	NE	NE	NE	NE	20.0 U	20.0 U	5.0 U	5.0 U	100 U	100 U	100 U	20 U	5.0 U	200 U	100 U	100 U	50 U	20 U	200 U
Bromodichloromethane	3	6	50000	100000	10.0 U	10.0 U	2.5 U	2.5 U	50.0 U	50.0 U	50.0 UJ	10 U	2.5 U	100 U	50.0 U	50.0 UJ	25 U	10 U	100 U
Bromoform	4	700	50000	100000	20.0 U	20.0 UJ	R	4.0 U	100 U	100 U	100 U	10 U	4.0 U	200 U	100 U	100 U	25 U	10 U	200 U
Bromomethane	10	7	800	8000	40.0 U	40.0 U	5.0 U	5.0 U	200 UJ	200 U	200 UJ	R	5.0 U	400 U	200 U	200 UJ	R	10 UJ	400 U
Carbon Disulfide	NE	NE	NE	NE	40.0 UJ	40.0 U	25 U	25 U	200 U	200 UJ	200 UJ	100 U	25 U	400 U	200 U	200 UJ	250 U	100 U	400 U
Carbon Tetrachloride	5	2	5000	50000	20.0 U	20.0 U	2.5 U	2.5 U	100 U	100 U	100 U	10 U	2.5 U	200 U	100 U	100 U	25 U	10 U	200 U
Chlorobenzene	100	200	1000	10000	20.0 U	20.0 U	5.0 U	5.0 U	100 U	100 U	100 U	20 U	5.0 U	200 U	100 U	100 U	50 U	20 U	200 U
Chloroethane	NE	NE	NE	NE	40.0 U	40.0 U	5.0 U	5.0 UJ	200 U	200 U	200 U	20 U	5.0 UJ	400 U	200 U	200 U	50 U	20 UJ	400 U
Chloroform	70	50	20000	100000	20.0 U	20.0 U	5.0 U	5.0 U	100 U	100 U	100 U	20 U	5.0 U	200 U	100 U	100 U	50 U	20 U	200 U
Chloromethane	NE	NE	NE	NE	40.0 UJ	40.0 U	5.0 U	5.0 U	200 U	200 UJ	200 U	20 U	5.0 U	400 U	200 U	200 U	50 U	20 U	400 U
cis-1,2-Dichloroethene	**70**	**20**	50000	100000	**122**	**166**	**240**	**220**	**149**	**136**	**139**	**230**	**140**	200 U	**224**	**218**	**490**	**550**	200 U
cis-1,3-Dichloropropene	NE	NE	NE	NE	10.0 UJ	10.0 UJ	2.5 U	2.5 U	50.0 U	50.0 UJ	50.0 U	10 U	2.5 U	100 UJ	50.0 U	50.0 U	25 U	10 U	100 UJ
Cymene	NE	NE	NE	NE	20.0 U	20.0 U	5.0 U	5.0 U	100 U	100 U	100 U	20 U	5.0 U	200 U	100 U	100 U	50 U	20 U	200 U
Dibromochloromethane	2	20	50000	100000	10.0 U	10.0 U	2.5 U	2.5 U	50.0 U	50.0 U	50.0 U	10 U	2.5 U	100 U	50.0 U	50.0 U	25 U	10 U	100 U
Dibromomethane	NE	NE	NE	NE	20.0 U	20.0 U	5.0 U	5.0 U	100 U	100 U	100 U	10 U	5.0 U	200 U	100 U	100 U	25 U	10 U	200 U
Dichlorodifluoromethane (CFC-12)	NE	NE	NE	NE	40.0 U	40.0 UJ	5.0 U	5.0 U	200 U	200 U	200 U	20 U	5.0 U	400 U	200 U	200 U	50 U	20 U	400 U
Diethyl Ether	NE	NE	NE	NE	20.0 U	20.0 U	5.0 U	5.0 U	100 U	100 U	100 U	20 U	5.0 U	200 U	100 U	100 U	50 U	20 U	200 U
Diisopropyl Ether	NE	NE	NE	NE	20.0 U	20.0 U	5.0 U	5.0 UJ	100 U	100 U	100 U	20 U	5.0 U	200 U	100 U	100 U	50 U	20 U	200 U
Ethyl Tertiary-Butyl Ether	NE	NE	NE	NE	20.0 UJ	20.0 U	5.0 U	5.0 U	100 U	100 UJ	100 U	20 U	5.0 U	200 U	100 UJ	100 U	50 U	20 U	200 U
Ethylbenzene	700	20000	5000	100000	20.0 U	20.0 U	5.0 U	5.0 U	100 U	100 U	100 U	20 U	5.0 U	200 U	100 U	100 U	50 U	20 U	200 U
Freon TF (Chlorinated fluorocarbon)	NE	NE	NE	NE	20.0 U	20.0 U	5.0 U	5.0 U	100 U	100 U	100 UJ	20 U	5.0 U	200 U	100 U	100 UJ	50 U	20 U	200 U
Hexachloro-1,3-Butadiene	0.6	50	3000	3000	10.0 U	10.0 U	2.5 U	2.5 U	50.0 U	50.0 U	50.0 U	10 U	2.5 U	100 U	50.0 U	50.0 U	25 U	10 U	100 U
Isopropylbenzene	NE	NE	NE	NE	20.0 U	20.0 U	5.0 U	5.0 U	100 U	100 U	100 U	20 U	5.0 U	200 U	100 U	100 U	50 U	20 U	200 U
M, P Xylenes	10000	3000	5000	100000	40.0 U	40.0 U	5.0 U	5.0 U	200 U	200 U	200 U	20 U	5.0 U	400 U	200 U	200 U	50 U	20 U	400 U
Methyl Tert-Butyl Ether	NE	NE	NE	100000	20.0 UJ	20.0 U	5.0 U	5.0 U	100 U	100 UJ	100 U	20 U	5.0 U	200 U	100 UJ	100 U	50 U	20 U	200 U
Methylene Chloride	5	2000	50000	100000	40.0 U	40.0 U	5.0 U	5.0 U	200 U	200 U	200 UJ	10 U	5.0 U	400 U	200 U	200 UJ	25 U	20 UJ	400 U
Naphthalene	140	700	20000	100000	20.0 U	40.0 UJ	5.0 U	5.0 U	100 UJ	100 U	200 U	20 U	5.0 U	200 UJ	100 U	200 U	50 U	20 U	200 UJ
N-Butylbenzene	NE	NE	NE	NE	20.0 U	20.0 U	5.0 U	5.0 U	100 U	100 U	100 U	20 U	5.0 U	200 U	100 U	100 U	50 U	20 U	200 U
N-Propylbenzene	NE	NE	NE	NE	20.0 U	20.0 U	5.0 U	5.0 U	100 U	100 U	100 U	20 U	5.0 U	200 U	100 U	100 U	50 U	20 U	200 U
o-Xylene	10000	3000	5000	100000	20.0 U	20.0 U	5.0 U	5.0 U	100 U	100 U	100 U	20 U	5.0 U	200 U	100 U	100 U	50 U	20 U	200 U
Styrene	100	100	6000	60000	20.0 U	20.0 U	5.0 U	5.0 U	100 U	100 U	100 U	20 U	5.0 U	200 U	100 U	100 U	50 U	20 U	200 U
Tert-Butylbenzene	NE	NE	NE	NE	20.0 U	20.0 U	5.0 U	5.0 U	100 U	100 U	100 U	20 U	5.0 U	200 U	100 U	100 U	50 U	20 U	200 U
Tertiary-Amyl Methyl Ether	NE	NE	NE	NE	20.0 U	20.0 U	5.0 U	5.0 U	100 U	100 U	100 U	20 U	5.0 U	200 U	100 UJ	100 U	50 U	20 U	200 U
Tetrachloroethene	**5**	**50**	**30000**	100000	**477**	**315**	**130**	**220**	**3850**	**3300**	**2410**	**1800**	**1300 J+**	**4610**	**3800**	**3100**	**2100**	**1400 J+**	**3980**
Tetrahydrofuran	NE	NE	NE	NE	40.0 U	40.0 U	13 U	13 U	200 U	200 U	200 U	R	13 U	400 U	200 U	200 U	R	50 U	400 U
Toluene	**1000**	50000	40000	100000	20.0 U	20.0 U	5.0 U	5.0 U	100 U	100 U	100 U	20 U	5.0 U	200 U	100 U	100 U	50 U	20 U	200 U
Trans-1,2-Dichloroethene	**100**	**80**	50000	100000	20.0 U	20.0 U	5.0 U	**6.0**	100 U	100 U	100 U	20 U	5.0 U	200 U	100 U	100 U	50 U	20 U	200 U
Trans-1,3-Dichloropropene	NE	NE	NE	NE	10.0 UJ	10.0 U	2.5 U	2.5 U	50.0 U	50.0 UJ	50.0 U	10 U	2.5 U	100 UJ	50.0 UJ	50.0 U	25 U	10 U	100 UJ
Trichloroethene	**5**	**5**	**5000**	**50000**	**1500**	**1280**	**540**	**700**	**5860**	**4790**	**4340**	**3500**	**2200**	**7150**	**5820**	**5650**	**4200**	**3100**	**6390**
Trichlorofluoromethane	NE	NE	NE	NE	20.0 U	20.0 U	5.0 U	5.0 U	100 U	100 U	100 U	20 U	5.0 U	200 U	100 U	100 U	50 U	20 U	200 U
Vinyl Chloride	**2**	**2**	50000	100000	20.0 UJ	**26.2 J**	**29**	**34**	100 U	100 UJ	100 UJ	**16**	**11**	200 UJ	100 U	100 UJ	**49**	**63**	200 UJ
Xylenes (Total)	10000	3000	5000	100000	40.0 U	40.0 U	5.0 U	5.0 U	200 U	200 U	200 U	20 U	5.0 U	400 U	200 U	200 U	50 U	20 U	400 U

Notes:

ft = feet

mg/l = miligrams per liter

µg/l = micrograms per liter

NE = not established

U - Non-detect at laboratory detection limit

J = Estimated Value, J+ = biased high, J- = biased low, R

Detects are bolded

Criteria exceedances are highlighted

Table 5-7
Summary of 2016 - 2020 Groundwater Analytical Results for Volatile Organic Compounds
Former GE Facility, 50 Fordham Road, Wilmington, MA

				Location Group:	Transect A (continued)														
				Location ID:	AE104R-5	AE104R-5	AE104R-5	AE104R-5	AE104R-6	AE104R-6	AE104R-6	AE104R-6	AE104R-6	AE104S	AE104S	AE104S	AE104S	AE104S	AE108R-1
				Sample ID:	7A-AE104R5-100317-	8A-AE104R5-092618-	9A-AE104R5-091819-	0A-AE104R5-091120-	6A-AE104R6-061416-	7A-AE104R6-100317-	8A-AE104R6-092618-	9A-AE104R6-091819-	0A-AE104R6-091120-	16A-AE104S-061316-	17A-AE104S-101017-	18A-AE104S-100118-	19A-AE104S-092019-	20A-AE104S-091620-	16A-AE108R1-061616-
				Sample Date:	10/3/2017	9/26/2018	9/18/2019	9/11/2020	6/14/2016	10/3/2017	9/26/2018	9/18/2019	9/11/2020	6/13/2016	10/10/2017	10/1/2018	9/20/2019	9/16/2020	6/16/2016
				Sample Type:	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
				Depth Interval:	156 - 162 ft	156 - 162 ft	156-162 ft	156 - 162 ft	168 - 174 ft	168 - 174 ft	168 - 174 ft	168-174 ft	168 - 174 ft	15 - 20 ft	15 - 20 ft	15 - 20 ft	15-20 ft	15 - 20 ft	36.5 - 43.5 ft
Analyte	**MCP Method 1 GW-1 Stds**	**MCP Method 1 GW-2 Stds**	**MCP Method 1 GW-3 Stds**	**Upper Concentration Limit (UCL)**															
Volatile Organic Compounds (µg/l)																			
1,1,1,2-Tetrachloroethane	5	10	50000	100000	100 U	100 U	25 U	10 U	200 U	200 U	200 U	25 U	10 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U
1,1,1-Trichloroethane	**200**	4000	20000	100000	100 U	100 U	50 U	20 U	200 U	200 U	200 U	50 U	20 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U
1,1,2,2-Tetrachloroethane	2	9	50000	100000	50.0 U	50.0 U	R	10 U	100 U	100 U	100 U	R	10 U	0.5 U	0.50 U	0.50 U	0.50 U	0.50 U	0.5 U
1,1,2-Trichloroethane	5	900	50000	100000	100 U	100 U	25 U	10 U	200 U	200 U	200 U	25 U	10 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U
1,1-Dichloroethane	**70**	2000	20000	100000	100 U	100 U	**66**	**63**	200 U	200 U	200 U	**68**	**71**	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	**1.2**
1,1-Dichloroethylene	**7**	**80**	30000	100000	100 U	100 UJ	25 U	**17**	200 U	200 U	200 UJ	25 U	**19**	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U
1,1-Dichloropropene	NE	NE	NE	NE	100 U	100 U	50 U	20 U	200 U	200 U	200 U	50 U	20 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U
1,2,3-Trichlorobenzene	NE	NE	NE	NE	100 U	100 U	25 U	10 U	200 U	200 U	200 U	25 U	10 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U
1,2,3-Trichloropropane	NE	NE	NE	NE	100 U	100 U	25 U	10 U	200 U	200 U	200 U	25 U	10 U	1.0 U	1.00 U	1.00 U	1.0 U	0.50 U	1.0 U
1,2,4-Trichlorobenzene	70	200	50000	100000	100 U	100 U	50 U	20 U	200 U	200 U	200 U	50 U	20 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U
1,2,4-Trimethylbenzene	NE	NE	NE	NE	100 U	100 U	50 U	20 U	200 U	200 U	200 U	50 U	20 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U
1,2-Dibromo-3-Chloropropane (DBC	NE	NE	NE	NE	200 U	200 U	R	10 UJ	400 UJ	400 U	400 U	R	10 UJ	2.0 U	2.00 U	2.00 U	R	0.50 U	2.0 U
1,2-Dibromoethane	0.02	2	50000	100000	50.0 U	50.0 U	25 U	10 U	100 U	100 U	100 U	25 U	10 U	0.5 U	0.50 U	0.50 U	0.50 U	0.50 U	0.5 U
1,2-Dichlorobenzene	600	8000	2000	80000	100 U	100 U	50 U	20 U	200 U	200 U	200 U	50 U	20 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U
1,2-Dichloroethane	5	5	20000	100000	100 UJ	100 U	25 U	10 U	200 U	200 U	200 U	25 U	10 U	1.0 U	1.00 U	1.00 U	0.60 U	0.60 U	1.0 U
1,2-Dichloropropane	5	3	50000	100000	100 U	100 U	25 U	10 U	200 U	200 U	200 U	25 U	10 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U
1,3,5-Trimethylbenzene	NE	NE	NE	NE	100 U	100 U	50 U	20 U	200 U	200 U	200 U	50 U	20 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U
1,3-Dichlorobenzene	100	6000	50000	100000	100 UJ	100 U	40 U	20 U	200 U	200 U	200 U	40 U	20 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U
1,3-Dichloropropane	NE	NE	NE	NE	100 U	100 U	50 U	20 U	200 U	200 U	200 U	50 U	20 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U
1,4-Dichlorobenzene	5	60	8000	80000	100 U	100 U	25 U	10 U	200 U	200 U	200 U	25 U	10 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U
1,4-Dioxane	**0.3**	6000	50000	100000	2000 U	2000 U	2000 U	2000 U	NS	4000 U	4000 U	2000 U	NS	NS	20.0 U	20.0 U	40 U	100 U	20.0 U
2,2-Dichloropropane	NE	NE	NE	NE	100 UJ	100 U	50 U	20 U	200 U	200 UJ	200 U	50 U	20 U	1.0 U	1.00 UJ	1.00 U	1.0 U	1.0 U	1.0 U
2-Butanone	4000	50000	50000	100000	200 U	200 U	R	100 U	2000 U	400 U	400 U	R	100 U	10.0 U	2.00 U	2.00 UJ	R	5.0 U	10.0 U
2-Chlorotoluene	NE	NE	NE	NE	100 U	100 U	50 U	20 U	200 U	200 U	200 U	50 U	20 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U
2-Hexanone	NE	NE	NE	NE	200 U	200 U	R	100 U	2000 U	400 U	400 U	R	100 U	10.0 U	2.00 U	2.00 UJ	5.0 U	5.0 U	10.0 U
2-Phenylbutane	NE	NE	NE	NE	100 U	100 U	50 U	20 U	200 U	200 U	200 U	50 U	20 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U
4-Chlorotoluene	NE	NE	NE	NE	100 UJ	100 U	50 U	20 U	200 U	200 U	200 U	50 U	20 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U
4-Methyl-2-Pentanone	350	50000	50000	100000	200 U	200 U	R	100 U	2000 U	400 U	400 U	R	100 U	10.0 U	2.00 U	2.00 U	5.0 U	5.0 U	10.0 U
Acetone	6300	50000	50000	100000	1000 U	1000 U	R	500 UJ	2000 U	2000 U	2000 U	R	500 UJ	10.0 U	10.0 U	10.0 UJ	R	25 U	10.0 U
Benzene	5	1000	10000	100000	100 U	100 U	25 U	10 U	200 U	200 U	200 U	25 U	10 U	1.0 U	1.00 U	1.00 U	0.70 U	0.70 U	1.0 U
Bromobenzene	NE	NE	NE	NE	100 U	100 U	50 U	20 U	200 U	200 U	200 U	50 U	20 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U
Bromochloromethane	NE	NE	NE	NE	100 U	100 U	50 U	20 U	200 U	200 U	200 U	50 U	20 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U
Bromodichloromethane	3	6	50000	100000	50.0 U	50.0 UJ	25 U	10 U	100 U	100 U	100 UJ	25 U	10 U	0.5 U	0.50 U	0.50 U	0.50 U	0.50 U	0.5 U
Bromoform	4	700	50000	100000	100 U	100 U	25 U	10 U	200 U	200 U	200 U	25 U	10 U	1.0 U	1.00 U	1.00 U	R	1.0 U	1.0 U
Bromomethane	10	7	800	8000	200 U	200 UJ	R	10 UJ	400 U	400 U	400 UJ	R	10 UJ	2.0 U	2.00 U	2.00 U	1.0 U	1.0 U	2.0 U
Carbon Disulfide	NE	NE	NE	NE	200 U	200 UJ	250 U	100 U	400 U	400 UJ	400 UJ	250 U	100 U	2.0 U	2.00 U	2.00 U	5.0 U	5.0 U	2.0 U
Carbon Tetrachloride	5	2	5000	50000	100 U	100 U	25 U	10 U	200 U	200 U	200 U	25 U	10 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U
Chlorobenzene	100	200	1000	10000	100 U	100 U	50 U	20 U	200 U	200 U	200 U	50 U	20 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U
Chloroethane	NE	NE	NE	NE	200 U	200 U	50 U	20 UJ	400 U	400 U	400 U	50 U	20 UJ	2.0 U	2.00 U	2.00 U	1.0 U	1.0 UJ	2.0 UJ
Chloroform	70	50	20000	100000	100 U	100 U	50 U	20 U	200 U	200 U	200 U	50 U	20 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U
Chloromethane	NE	NE	NE	NE	200 U	200 U	50 U	20 U	400 U	400 UJ	400 U	50 U	20 U	2.0 U	2.00 UJ	2.00 UJ	1.0 U	1.0 U	2.0 UJ
cis-1,2-Dichloroethene	**70**	**20**	50000	100000	**291**	**280**	**520**	**590**	200 U	**324**	**338**	**490**	**520**	**6.4**	**1.86**	1.00 U	1.0 U	1.0 U	**15.1**
cis-1,3-Dichloropropene	NE	NE	NE	NE	50.0 U	50.0 U	25 U	10 U	100 UJ	100 UJ	100 U	25 U	10 U	0.5 U	0.50 U	0.50 U	0.40 U	0.40 U	0.5 U
Cymene	NE	NE	NE	NE	100 U	100 U	50 U	20 U	200 U	200 U	200 U	50 U	20 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U
Dibromochloromethane	2	20	50000	100000	50.0 U	50.0 U	25 U	10 U	100 U	100 U	100 U	25 U	10 U	0.5 U	0.50 U	0.50 U	0.50 U	0.50 U	0.5 U
Dibromomethane	NE	NE	NE	NE	100 U	100 U	25 U	10 U	200 U	200 U	200 U	25 U	10 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U
Dichlorodifluoromethane (CFC-12)	NE	NE	NE	NE	200 U	200 U	50 U	20 U	400 U	400 U	400 U	50 U	20 U	2.0 U	2.00 U	2.00 U	1.0 U	1.0 U	2.0 U
Diethyl Ether	NE	NE	NE	NE	100 U	100 U	50 U	20 U	200 U	200 U	200 U	50 U	20 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U
Diisopropyl Ether	NE	NE	NE	NE	100 U	100 U	50 U	20 U	200 U	200 U	200 U	50 U	20 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U
Ethyl Tertiary-Butyl Ether	NE	NE	NE	NE	100 UJ	100 U	50 U	20 U	200 U	200 UJ	200 U	50 U	20 U	1.0 U	1.00 U	1.00 UJ	1.0 U	1.0 U	1.0 U
Ethylbenzene	700	20000	5000	100000	100 U	100 U	50 U	20 U	200 U	200 U	200 U	50 U	20 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U
Freon TF (Chlorinated fluorocarbon)	NE	NE	NE	NE	100 U	100 UJ	50 U	20 U	200 U	200 U	200 UJ	50 U	20 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U
Hexachloro-1,3-Butadiene	0.6	50	3000	3000	50.0 U	50.0 U	25 U	10 U	100 U	100 U	100 U	25 U	10 U	0.5 U	0.50 U	0.50 U	0.40 U	0.40 U	0.5 U
Isopropylbenzene	NE	NE	NE	NE	100 U	100 U	50 U	20 U	200 U	200 U	200 U	50 U	20 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U
M, P Xylenes	10000	3000	5000	100000	200 U	200 U	50 U	20 U	400 U	400 U	400 U	50 U	20 U	2.0 U	2.00 U	2.00 U	1.0 U	1.0 U	2.0 U
Methyl Tert-Butyl Ether	NE	NE	NE	100000	100 UJ	100 U	50 U	20 U	200 U	200 UJ	200 U	50 U	20 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U
Methylene Chloride	5	2000	50000	100000	200 U	200 UJ	25 U	20 UJ	400 U	400 U	400 UJ	25 U	20 UJ	2.0 U	2.00 U	2.00 U	1.0 U	1.0 U	2.0 U
Naphthalene	140	700	20000	100000	100 U	200 U	50 U	20 U	200 UJ	200 U	400 U	50 U	20 U	1.0 UJ	1.00 U	2.00 U	1.0 U	1.0 U	1.0 U
N-Butylbenzene	NE	NE	NE	NE	100 U	100 U	50 U	20 U	200 U	200 U	200 U	50 U	20 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U
N-Propylbenzene	NE	NE	NE	NE	100 U	100 U	50 U	20 U	200 U	200 U	200 U	50 U	20 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U
o-Xylene	10000	3000	5000	100000	100 U	100 U	50 U	20 U	200 U	200 U	200 U	50 U	20 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U
Styrene	100	100	6000	60000	100 U	100 U	50 U	20 U	200 U	200 U	200 U	50 U	20 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U
Tert-Butylbenzene	NE	NE	NE	NE	100 U	100 U	50 U	20 U	200 U	200 U	200 U	50 U	20 U	**1.3**	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U
Tertiary-Amyl Methyl Ether	NE	NE	NE	NE	100 UJ	100 U	50 U	20 U	200 U	200 U	200 U	50 U	20 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U
Tetrachloroethene	**5**	**50**	**30000**	100000	**3890**	**2800**	**2400**	**2100**	**4180**	**4120**	**3570**	**2400**	**2400**	**3.8**	**1.19**	1.00 U	1.0 U	1.0 U	**1.4**
Tetrahydrofuran	NE	NE	NE	NE	200 U	200 U	R	50 U	400 U	400 U	400 U	R	50 U	2.0 U	2.00 U	2.00 U	2.5 U	2.5 U	**2.9**
Toluene	**1000**	50000	40000	100000	100 U	100 U	50 U	20 U	200 U	200 U	200 U	50 U	20 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	**48.8 J**
Trans-1,2-Dichloroethene	**100**	**80**	50000	100000	100 U	100 U	50 U	**28**	200 U	200 U	200 U	50 U	**41**	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U
Trans-1,3-Dichloropropene	NE	NE	NE	NE	50.0 UJ	50.0 U	25 U	10 U	100 UJ	100 UJ	100 U	25 U	10 U	0.5 U	0.50 U	0.50 U	0.40 U	0.40 U	0.5 U
Trichloroethene	**5**	**5**	**5000**	**50000**	**5600**	**5440**	**4400**	**4200**	**6540**	**6130**	**6770**	**4600**	**4900**	**4.0**	**1.13**	1.00 U	1.0 U	1.0 U	**7.6**
Trichlorofluoromethane	NE	NE	NE	NE	100 U	100 U	50 U	20 U	200 U	200 U	200 U	50 U	20 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U
Vinyl Chloride	**2**	**2**	50000	100000	100 U	100 UJ	**71**	**91**	200 UJ	200 UJ	200 UJ	**56**	**75**	1.0 U	1.00 U	1.00 UJ	1.0 U	1.0 U	1.0 U
Xylenes (Total)	10000	3000	5000	100000	200 U	200 U	50 U	20 U	400 U	400 U	400 U	50 U	20 U	2.0 U	2.00 U	2.00 U	1.0 U	1.0 U	2.0 U

Notes:

ft = feet

mg/l = miligrams per liter

µg/l = micrograms per liter

NE = not established

U - Non-detect at laboratory detection limit

J = Estimated Value, J+ = biased high, J- = biased low, R

Detects are bolded

Criteria exceedances are highlighted

Table 5-7
Summary of 2016 - 2020 Groundwater Analytical Results for Volatile Organic Compounds
Former GE Facility, 50 Fordham Road, Wilmington, MA

				Location Group:	Transect A (continued)														
				Location ID:	AE108R-1	AE108R-1	AE108R-1	AE108R-1	AE108R-1	AE108R-3	AE108R-3	AE108R-3	AE108R-3	AE108R-3	AE108R-3	AE108R-5	AE108R-5	AE108R-5	AE108R-5
				Sample ID:	6A-AE108R1-061616-	7A-AE108R1-100917-	8A-AE108R1-091918-	9A-AE108R1-092419-	0A-AE108R1-090920-	6A-AE108R3-061616-	7A-AE108R3-100917-	8A-AE108R3-091918-	8A-AE108R3-091918-	9A-AE108R3-092419-	0A-AE108R3-090920-	6A-AE108R5-061616-	7A-AE108R5-100917-	8A-AE108R5-091918-	9A-AE108R5-092419-
				Sample Date:	6/16/2016	10/9/2017	9/19/2018	9/24/2019	9/9/2020	6/16/2016	10/9/2017	9/19/2018	9/19/2018	9/24/2019	9/9/2020	6/16/2016	10/9/2017	9/19/2018	9/24/2019
				Sample Type:	FD	N	N	N	N	N	N	N	FD	N	N	N	N	N	N
				Depth Interval:	36.5 - 43.5 ft	36.5 - 43.5 ft	36.5 - 43.5 ft	36.5-43.5 ft	36.5 - 43.5 ft	84 - 89 ft	84 - 89 ft	84 - 89 ft	84 - 89 ft	84-89 ft	84 - 89 ft	163 - 168 ft	163 - 168 ft	163 - 168 ft	163-168 ft
Analyte	**MCP Method 1 GW-1 Stds**	**MCP Method 1 GW-2 Stds**	**MCP Method 1 GW-3 Stds**	**Upper Concentration Limit (UCL)**															
Volatile Organic Compounds (µg/l)																			
1,1,1,2-Tetrachloroethane	5	10	50000	100000	1.0 U	1.00 UJ	1.00 U	1.0 U	1.0 U	1.0 U	1.00 UJ	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 UJ	1.00 U	1.0 U
1,1,1-Trichloroethane	**200**	4000	20000	100000	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U
1,1,2,2-Tetrachloroethane	2	9	50000	100000	0.5 U	0.50 U	0.50 U	0.50 U	0.50 U	0.5 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.5 U	0.50 U	0.50 U	0.50 U
1,1,2-Trichloroethane	5	900	50000	100000	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U
1,1-Dichloroethane	**70**	2000	20000	100000	1.0 U	**1.13**	**1.82**	**1.3**	**1.2**	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	**1.3**	**1.63**	**2.93**	**2.5**
1,1-Dichloroethylene	**7**	**80**	30000	100000	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U
1,1-Dichloropropene	NE	NE	NE	NE	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U
1,2,3-Trichlorobenzene	NE	NE	NE	NE	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U
1,2,3-Trichloropropane	NE	NE	NE	NE	1.0 U	1.00 U	1.00 U	1.0 U	0.50 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	0.50 U	1.0 U	1.00 U	1.00 U	1.0 U
1,2,4-Trichlorobenzene	70	200	50000	100000	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U
1,2,4-Trimethylbenzene	NE	NE	NE	NE	1.0 U	1.00 U	1.00 U	1.0 UJ	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U
1,2-Dibromo-3-Chloropropane (DBC	NE	NE	NE	NE	2.0 U	2.00 U	2.00 U	R	0.50 UJ	2.0 U	2.00 U	2.00 U	2.00 U	1.0 U	0.50 UJ	2.0 U	2.00 U	2.00 U	1.0 U
1,2-Dibromoethane	0.02	2	50000	100000	0.5 U	0.50 U	0.50 U	0.50 U	0.50 U	0.5 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.5 U	0.50 U	0.50 U	0.50 U
1,2-Dichlorobenzene	600	8000	2000	80000	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U
1,2-Dichloroethane	5	5	20000	100000	1.0 U	1.00 U	1.00 U	0.60 U	0.60 U	1.0 U	1.00 U	1.00 U	1.00 U	0.60 U	0.60 U	1.0 U	1.00 U	1.00 U	0.60 U
1,2-Dichloropropane	5	3	50000	100000	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U
1,3,5-Trimethylbenzene	NE	NE	NE	NE	1.0 U	1.00 U	1.00 U	1.0 UJ	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U
1,3-Dichlorobenzene	100	6000	50000	100000	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U
1,3-Dichloropropane	NE	NE	NE	NE	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U
1,4-Dichlorobenzene	5	60	8000	80000	1.0 U	1.00 U	1.00 U	1.0 UJ	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U
1,4-Dioxane	**0.3**	6000	50000	100000	20.0 U	20.0 U	20.0 U	40 U	100 U	20.0 U	20.0 U	20.0 U	20.0 U	10 U	100 U	20.0 U	20.0 U	20.0 U	10 U
2,2-Dichloropropane	NE	NE	NE	NE	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U
2-Butanone	4000	50000	50000	100000	10.0 U	2.00 U	2.00 U	R	5.0 U	10.0 U	2.00 U	2.00 U	2.00 U	5.0 U	5.0 U	10.0 U	2.00 U	2.00 U	5.0 U
2-Chlorotoluene	NE	NE	NE	NE	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U
2-Hexanone	NE	NE	NE	NE	10.0 U	2.00 U	2.00 U	5.0 U	5.0 U	10.0 U	2.00 U	2.00 U	2.00 U	5.0 U	5.0 U	10.0 U	2.00 U	2.00 U	5.0 U
2-Phenylbutane	NE	NE	NE	NE	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U
4-Chlorotoluene	NE	NE	NE	NE	1.0 U	1.00 U	1.00 U	1.0 UJ	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U
4-Methyl-2-Pentanone	350	50000	50000	100000	10.0 U	2.00 U	2.00 U	5.0 U	5.0 U	10.0 U	2.00 U	2.00 U	2.00 U	5.0 U	5.0 U	10.0 U	2.00 U	2.00 U	5.0 U
Acetone	6300	50000	50000	100000	10.0 U	10.0 U	10.0 U	R	R	10.0 U	10.0 U	10.0 U	10.0 U	25 U	R	10.0 U	10.0 U	10.0 U	25 U
Benzene	5	1000	10000	100000	1.0 U	1.00 U	1.00 U	0.70 U	0.70 U	1.0 U	1.00 U	1.00 U	1.00 U	0.70 U	0.70 U	1.0 U	1.00 U	1.00 U	0.70 U
Bromobenzene	NE	NE	NE	NE	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U
Bromochloromethane	NE	NE	NE	NE	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U
Bromodichloromethane	3	6	50000	100000	0.5 U	0.50 UJ	0.50 U	0.50 U	0.50 U	0.5 U	0.50 UJ	0.50 U	0.50 U	0.50 U	0.50 U	0.5 U	0.50 UJ	0.50 U	0.50 U
Bromoform	4	700	50000	100000	1.0 U	1.00 UJ	1.00 U	R	1.0 UJ	1.0 U	1.00 UJ	1.00 U	1.00 U	1.0 U	1.0 UJ	1.0 U	1.00 UJ	1.00 U	1.0 U
Bromomethane	10	7	800	8000	2.0 U	2.00 U	2.00 U	1.0 U	1.0 UJ	2.0 U	2.00 U	2.00 U	2.00 U	1.0 U	1.0 UJ	2.0 U	2.00 U	2.00 U	1.0 U
Carbon Disulfide	NE	NE	NE	NE	2.0 U	2.00 U	2.00 U	5.0 U	5.0 U	2.0 U	2.00 U	2.00 U	2.00 U	5.0 U	5.0 U	2.0 U	2.00 U	2.00 U	5.0 U
Carbon Tetrachloride	5	2	5000	50000	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U
Chlorobenzene	100	200	1000	10000	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U
Chloroethane	NE	NE	NE	NE	2.0 UJ	2.00 U	2.00 U	1.0 U	1.0 UJ	2.0 UJ	2.00 U	2.00 U	2.00 U	1.0 U	1.0 UJ	2.0 UJ	2.00 U	2.00 U	1.0 U
Chloroform	70	50	20000	100000	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U
Chloromethane	NE	NE	NE	NE	2.0 UJ	2.00 U	2.00 U	1.0 U	1.0 U	2.0 UJ	2.00 U	2.00 U	2.00 U	1.0 U	1.0 U	2.0 UJ	2.00 U	2.00 U	1.0 U
cis-1,2-Dichloroethene	**70**	**20**	50000	100000	**12.8**	**21.9**	**38.0**	**24**	**23**	**2.3**	**2.89**	**8.44**	**8.28**	**7.6**	**9.4**	**10.5**	**14.2**	**25.8**	**23**
cis-1,3-Dichloropropene	NE	NE	NE	NE	0.5 U	0.50 U	0.50 U	0.40 U	0.40 U	0.5 U	0.50 U	0.50 U	0.50 U	0.40 U	0.40 U	0.5 U	0.50 U	0.50 U	0.40 U
Cymene	NE	NE	NE	NE	1.0 U	1.00 UJ	1.00 U	1.0 UJ	1.0 U	1.0 U	1.00 UJ	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 UJ	1.00 U	1.0 U
Dibromochloromethane	2	20	50000	100000	0.5 U	0.50 UJ	0.50 U	0.50 U	0.50 U	0.5 U	0.50 UJ	0.50 U	0.50 U	0.50 U	0.50 U	0.5 U	0.50 UJ	0.50 U	0.50 U
Dibromomethane	NE	NE	NE	NE	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U
Dichlorodifluoromethane (CFC-12)	NE	NE	NE	NE	2.0 U	2.00 UJ	2.00 U	1.0 U	1.0 U	2.0 U	2.00 UJ	2.00 U	2.00 U	1.0 U	1.0 U	2.0 U	2.00 UJ	2.00 U	1.0 U
Diethyl Ether	NE	NE	NE	NE	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U
Diisopropyl Ether	NE	NE	NE	NE	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U
Ethyl Tertiary-Butyl Ether	NE	NE	NE	NE	1.0 U	1.00 UJ	1.00 U	1.0 U	1.0 U	1.0 U	1.00 UJ	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 UJ	1.00 U	1.0 U
Ethylbenzene	700	20000	5000	100000	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U
Freon TF (Chlorinated fluorocarbon)	NE	NE	NE	NE	1.0 U	1.00 U	1.00 U	1.0 UJ	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U
Hexachloro-1,3-Butadiene	0.6	50	3000	3000	0.5 U	0.50 U	0.50 U	0.40 U	0.40 U	0.5 U	0.50 U	0.50 U	0.50 U	0.40 U	0.40 U	0.5 U	0.50 U	0.50 U	0.40 U
Isopropylbenzene	NE	NE	NE	NE	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U
M, P Xylenes	10000	3000	5000	100000	2.0 U	2.00 U	2.00 U	1.0 U	1.0 U	2.0 U	2.00 U	2.00 U	2.00 U	1.0 U	1.0 U	2.0 U	2.00 U	2.00 U	1.0 U
Methyl Tert-Butyl Ether	NE	NE	NE	100000	1.0 U	1.00 UJ	1.00 U	1.0 U	1.0 U	1.0 U	1.00 UJ	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 UJ	1.00 U	1.0 U
Methylene Chloride	5	2000	50000	100000	2.0 U	2.00 U	2.00 U	1.0 U	1.0 U	2.0 U	2.00 U	2.00 U	2.00 U	1.0 U	1.0 U	2.0 U	2.00 U	2.00 U	1.0 U
Naphthalene	140	700	20000	100000	1.0 U	1.00 U	2.00 U	1.0 U	1.0 U	1.0 U	1.00 U	2.00 U	2.00 U	1.0 U	1.0 U	1.0 U	1.00 U	2.00 UJ	1.0 U
N-Butylbenzene	NE	NE	NE	NE	1.0 U	1.00 UJ	1.00 U	1.0 UJ	1.0 U	1.0 U	1.00 UJ	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 UJ	1.00 U	1.0 U
N-Propylbenzene	NE	NE	NE	NE	1.0 U	1.00 U	1.00 U	1.0 UJ	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U
o-Xylene	10000	3000	5000	100000	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U
Styrene	100	100	6000	60000	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U
Tert-Butylbenzene	NE	NE	NE	NE	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U
Tertiary-Amyl Methyl Ether	NE	NE	NE	NE	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U
Tetrachloroethene	**5**	**50**	**30000**	100000	**1.3**	1.00 U	1.00 U	1.0 U	R	**14.8**	**21.5**	**37.3**	**36.9**	**35**	**49 J+**	**8.9**	**9.33**	**15.2**	**24**
Tetrahydrofuran	NE	NE	NE	NE	**3.6**	2.00 U	2.00 UJ	**3.1 J-**	2.5 U	2.0 U	2.00 U	2.00 UJ	2.00 UJ	2.5 U	2.5 U	2.0 U	2.00 U	2.00 UJ	2.5 U
Toluene	**1000**	50000	40000	100000	**77.7 J**	**9.80**	**4.51**	**1.0**	**1.2**	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	**2.2**	1.00 U	1.00 U	1.0 U
Trans-1,2-Dichloroethene	**100**	**80**	50000	100000	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U
Trans-1,3-Dichloropropene	NE	NE	NE	NE	0.5 U	0.50 U	0.50 U	0.40 U	0.40 U	0.5 U	0.50 U	0.50 U	0.50 U	0.40 U	0.40 U	0.5 U	0.50 U	0.50 U	0.40 U
Trichloroethene	**5**	**5**	**5000**	**50000**	**6.5**	**5.12**	**6.55**	**4.9 J-**	**4.4**	**9.4**	**12.7**	**29.2**	**28.8**	**23**	**30**	**14.1**	**21.5**	**47.8 J+**	**54**
Trichlorofluoromethane	NE	NE	NE	NE	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U
Vinyl Chloride	**2**	**2**	50000	100000	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U
Xylenes (Total)	10000	3000	5000	100000	2.0 U	2.00 U	2.00 U	1.0 U	1.0 U	2.0 U	2.00 U	2.00 U	2.00 U	1.0 U	1.0 U	2.0 U	2.00 U	2.00 U	1.0 U

Notes:

ft = feet — U - Non-detect at laboratory detection limit

mg/l = miligrams per liter — J = Estimated Value, J+ = biased high, J- = biased low, R

µg/l = micrograms per liter — **Detects are bolded**

NE = not established — Criteria exceedances are highlighted

Table 5-7
Summary of 2016 - 2020 Groundwater Analytical Results for Volatile Organic Compounds
Former GE Facility, 50 Fordham Road, Wilmington, MA

				Location Group:	Transect A (continued)														
				Location ID:	AE108R-5	AE109D	AE109D	AE109D	AE109D	AE109D	AE109D	AE109R-1	AE109R-1	AE109R-1	AE109R-1	AE109R-1	AE109R-2	AE109R-2	AE109R-2
				Sample ID:	0A-AE108R5-090920-	16A-AE109D-062116-	16A-AE109D-062116-2	17A-AE109D-101317-	18A-AE109D-092618-	19A-AE109D-092019-	18A-AE109D-091620-	16A-AE109R1-061616-	7A-AE109R1-101017-	8A-AE109R1-100218-	9A-AE109R1-091819-	0A-AE109R1-091620-	6A-AE109R2-061616-	7A-AE109R2-101017-	8A-AE109R2-100218-
				Sample Date:	9/9/2020	6/21/2016	6/21/2016	10/13/2017	9/26/2018	9/20/2019	9/16/2020	6/16/2016	10/10/2017	10/2/2018	9/18/2019	9/16/2020	6/16/2016	10/10/2017	10/2/2018
				Sample Type:	N	N	FD	N	N	N	N	N	N	N	N	N	N	N	N
				Depth Interval:	163 - 168 ft	18 - 23 ft	18 - 23 ft	18 - 23 ft	18 - 23 ft	18-23 ft	18 - 23 ft	38 - 43 ft	38 - 43 ft	38 - 43 ft	38-43 ft	38 - 43 ft	66 - 76 ft	66 - 76 ft	66 - 76 ft
Analyte	**MCP Method 1 GW-1 Stds**	**MCP Method 1 GW-2 Stds**	**MCP Method 1 GW-3 Stds**	**Upper Concentration Limit (UCL)**															
Volatile Organic Compounds (µg/l)																			
1,1,1,2-Tetrachloroethane	5	10	50000	100000	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 UJ	1.00 U	1.0 U	1.0 U	1.0 U	1.00 UJ	1.00 U
1,1,1-Trichloroethane	**200**	4000	20000	100000	1.0 U	1.0 U	1.0 U	1.00 UJ	1.00 U	1.0 U	1.0 U	1.0 U	1.00 UJ	1.00 U	1.0 U	1.0 U	1.0 U	1.00 UJ	1.00 U
1,1,2,2-Tetrachloroethane	2	9	50000	100000	0.50 U	0.5 U	0.5 U	0.50 U	0.50 U	0.50 U	0.50 U	0.5 U	0.50 U	0.50 U	0.50 U	0.50 U	0.5 U	0.50 U	0.50 U
1,1,2-Trichloroethane	5	900	50000	100000	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U
1,1-Dichloroethane	**70**	2000	20000	100000	**2.7**	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U
1,1-Dichloroethylene	**7**	**80**	30000	100000	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 UJ	1.0 U	1.0 U	1.0 U	1.00 U	1.00 UJ
1,1-Dichloropropene	NE	NE	NE	NE	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U
1,2,3-Trichlorobenzene	NE	NE	NE	NE	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U
1,2,3-Trichloropropane	NE	NE	NE	NE	0.50 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	0.50 U	1.0 U	1.00 U	1.00 U	0.50 U	0.50 U	1.0 U	1.00 U	1.00 U
1,2,4-Trichlorobenzene	70	200	50000	100000	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U
1,2,4-Trimethylbenzene	NE	NE	NE	NE	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U
1,2-Dibromo-3-Chloropropane (DBC	NE	NE	NE	NE	0.50 UJ	2.0 U	2.0 U	2.00 U	2.00 U	R	0.50 U	2.0 U	2.00 UJ	2.00 U	R	0.50 U	2.0 U	2.00 UJ	2.00 U
1,2-Dibromoethane	0.02	2	50000	100000	0.50 U	0.5 U	0.5 U	0.50 U	0.50 U	0.50 U	0.50 U	0.5 U	0.50 U	0.50 U	0.50 U	0.50 U	0.5 U	0.50 U	0.50 U
1,2-Dichlorobenzene	600	8000	2000	80000	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U
1,2-Dichloroethane	5	5	20000	100000	0.60 U	1.0 U	1.0 U	1.00 U	1.00 U	0.60 U	0.60 U	1.0 U	1.00 U	1.00 U	0.60 U	0.60 U	1.0 U	1.00 U	1.00 U
1,2-Dichloropropane	5	3	50000	100000	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U
1,3,5-Trimethylbenzene	NE	NE	NE	NE	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U
1,3-Dichlorobenzene	100	6000	50000	100000	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U
1,3-Dichloropropane	NE	NE	NE	NE	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U
1,4-Dichlorobenzene	5	60	8000	80000	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U
1,4-Dioxane	**0.3**	6000	50000	100000	100 U	NS	NS	20.0 U	20.0 U	40 U	NS	20.0 U	20.0 U	20.0 U	40 U	100 U	20.0 U	20.0 U	20.0 U
2,2-Dichloropropane	NE	NE	NE	NE	1.0 U	1.0 U	1.0 U	1.00 UJ	1.00 U	1.0 U	1.0 U	1.0 UJ	1.00 UJ	1.00 U	1.0 U	1.0 U	1.0 UJ	1.00 UJ	1.00 U
2-Butanone	4000	50000	50000	100000	5.0 U	10.0 UJ	10.0 UJ	2.00 U	2.00 UJ	R	5.0 U	**10.6**	**3.24**	2.00 U	R	5.0 U	**17.1**	**5.00**	2.00 U
2-Chlorotoluene	NE	NE	NE	NE	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U
2-Hexanone	NE	NE	NE	NE	5.0 U	10.0 U	10.0 U	2.00 U	2.00 UJ	5.0 U	5.0 U	10.0 U	2.00 U	2.00 U	5.0 U	5.0 U	10.0 U	2.00 U	2.00 U
2-Phenylbutane	NE	NE	NE	NE	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U
4-Chlorotoluene	NE	NE	NE	NE	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U
4-Methyl-2-Pentanone	350	50000	50000	100000	5.0 U	10.0 U	10.0 U	2.00 U	2.00 U	5.0 U	5.0 U	10.0 U	2.00 U	2.00 U	5.0 U	5.0 U	10.0 U	2.00 U	2.00 U
Acetone	6300	50000	50000	100000	R	10.0 U	10.0 U	10.0 U	10.0 UJ	R	25 U	10.0 U	10.0 U	10.0 U	R	25 U	10.0 U	10.0 U	10.0 U
Benzene	5	1000	10000	100000	0.70 U	1.0 U	1.0 U	1.00 U	1.00 U	0.70 U	0.70 U	1.0 U	1.00 U	1.00 U	0.70 U	0.70 U	1.0 U	1.00 U	1.00 U
Bromobenzene	NE	NE	NE	NE	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U
Bromochloromethane	NE	NE	NE	NE	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U
Bromodichloromethane	3	6	50000	100000	0.50 U	0.5 U	0.5 U	0.50 U	0.50 U	0.50 U	0.50 U	0.5 U	0.50 UJ	0.50 U	0.50 U	0.50 U	0.5 U	0.50 UJ	0.50 U
Bromoform	4	700	50000	100000	1.0 UJ	1.0 U	1.0 U	1.00 UJ	1.00 U	R	1.0 U	1.0 U	1.00 UJ	1.00 U	R	1.0 U	1.0 U	1.00 UJ	1.00 U
Bromomethane	10	7	800	8000	1.0 UJ	2.0 U	2.0 U	2.00 UJ	2.00 U	1.0 U	1.0 U	2.0 U	2.00 U	2.00 U	1.0 U	1.0 U	2.0 U	2.00 U	2.00 U
Carbon Disulfide	NE	NE	NE	NE	5.0 U	2.0 U	2.0 U	2.00 U	2.00 U	5.0 U	5.0 U	2.0 U	2.00 U	2.00 U	5.0 U	5.0 U	2.0 U	2.00 U	2.00 U
Carbon Tetrachloride	5	2	5000	50000	1.0 U	1.0 U	1.0 U	1.00 UJ	1.00 U	1.0 U	1.0 U	1.0 U	1.00 UJ	1.00 U	1.0 U	1.0 U	1.0 U	1.00 UJ	1.00 U
Chlorobenzene	100	200	1000	10000	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U
Chloroethane	NE	NE	NE	NE	1.0 UJ	2.0 U	2.0 U	2.00 U	2.00 U	1.0 U	1.0 UJ	2.0 UJ	2.00 U	2.00 U	1.0 U	1.0 UJ	2.0 UJ	2.00 U	2.00 U
Chloroform	70	50	20000	100000	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U
Chloromethane	NE	NE	NE	NE	1.0 U	2.0 UJ	2.0 UJ	2.00 UJ	2.00 U	1.0 U	1.0 U	2.0 UJ	2.00 U	2.00 U	1.0 U	1.0 U	2.0 UJ	2.00 U	2.00 U
cis-1,2-Dichloroethene	**70**	**20**	50000	100000	**27**	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	**2.9**	**3.66**	**2.80**	**3.1**	**2.6**	**2.0**	**2.01**	**2.07**
cis-1,3-Dichloropropene	NE	NE	NE	NE	0.40 U	0.5 U	0.5 U	0.50 U	0.50 U	0.40 U	0.40 U	0.5 U	0.50 U	0.50 U	0.40 U	0.40 U	0.5 U	0.50 U	0.50 U
Cymene	NE	NE	NE	NE	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U
Dibromochloromethane	2	20	50000	100000	0.50 U	0.5 U	0.5 U	0.50 U	0.50 U	0.50 U	0.50 U	0.5 U	0.50 UJ	0.50 U	0.50 UJ	0.50 U	0.5 U	0.50 UJ	0.50 U
Dibromomethane	NE	NE	NE	NE	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U
Dichlorodifluoromethane (CFC-12)	NE	NE	NE	NE	1.0 U	2.0 U	2.0 U	2.00 U	2.00 U	1.0 U	1.0 U	2.0 U	2.00 U	2.00 U	1.0 U	1.0 U	2.0 U	2.00 U	2.00 U
Diethyl Ether	NE	NE	NE	NE	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U
Diisopropyl Ether	NE	NE	NE	NE	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U
Ethyl Tertiary-Butyl Ether	NE	NE	NE	NE	1.0 U	1.0 UJ	1.0 UJ	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 UJ	1.00 U	1.0 U	1.0 U	1.0 U	1.00 UJ	1.00 U
Ethylbenzene	700	20000	5000	100000	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U
Freon TF (Chlorinated fluorocarbon)	NE	NE	NE	NE	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U
Hexachloro-1,3-Butadiene	0.6	50	3000	3000	0.40 U	0.5 U	0.5 U	0.50 U	0.50 U	0.40 U	0.40 U	0.5 U	0.50 U	0.50 U	0.40 U	0.40 U	0.5 U	0.50 U	0.50 U
Isopropylbenzene	NE	NE	NE	NE	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U
M, P Xylenes	10000	3000	5000	100000	1.0 U	2.0 U	2.0 U	2.00 U	2.00 U	1.0 U	1.0 U	2.0 U	2.00 U	2.00 U	1.0 U	1.0 U	2.0 U	2.00 U	2.00 U
Methyl Tert-Butyl Ether	NE	NE	NE	100000	1.0 U	1.0 UJ	1.0 UJ	1.00 U	1.00 U	1.0 U	1.0 U	1.0 UJ	1.00 UJ	1.00 U	1.0 U	1.0 U	1.0 UJ	1.00 UJ	1.00 U
Methylene Chloride	5	2000	50000	100000	1.0 U	2.0 U	2.0 U	2.00 U	2.00 U	1.0 U	1.0 U	2.0 U	2.00 U	2.00 U	1.0 U	1.0 U	2.0 U	2.00 U	2.00 U
Naphthalene	140	700	20000	100000	1.0 U	1.0 U	1.0 U	1.00 U	2.00 U	1.0 U	1.0 U	1.0 U	1.00 U	2.00 U	1.0 U	1.0 U	1.0 U	1.00 U	2.00 U
N-Butylbenzene	NE	NE	NE	NE	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U
N-Propylbenzene	NE	NE	NE	NE	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U
o-Xylene	10000	3000	5000	100000	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U
Styrene	100	100	6000	60000	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U
Tert-Butylbenzene	NE	NE	NE	NE	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U
Tertiary-Amyl Methyl Ether	NE	NE	NE	NE	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 UJ	1.00 U	1.0 U	1.0 U	1.0 U	1.00 UJ	1.00 U
Tetrachloroethene	**5**	**50**	**30000**	100000	**19 J+**	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	**3.2**	1.00 U	1.00 U	1.0 U	R	**3.2**	1.00 U	1.00 U
Tetrahydrofuran	NE	NE	NE	NE	2.5 U	2.0 U	2.0 U	2.00 U	2.00 U	2.5 U	2.5 U	**5.8**	2.00 U	2.00 U	2.5 U	2.5 U	**6.9**	2.00 U	2.00 U
Toluene	**1000**	50000	40000	100000	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	**30.5**	1.00 U	1.00 U	1.0 U	1.0 U	**62.8**	1.00 U	1.00 U
Trans-1,2-Dichloroethene	**100**	**80**	50000	100000	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U
Trans-1,3-Dichloropropene	NE	NE	NE	NE	0.40 U	0.5 U	0.5 U	0.50 U	0.50 U	0.40 U	0.40 U	0.5 U	0.50 UJ	0.50 U	0.40 U	0.40 U	0.5 U	0.50 UJ	0.50 U
Trichloroethene	**5**	**5**	**5000**	**50000**	**51**	**1.0**	**1.1**	**1.36**	1.00 U	1.0 U	1.0 U	**6.1**	**3.68**	**1.76**	**1.5**	**1.2**	**6.0**	**2.87**	**1.53**
Trichlorofluoromethane	NE	NE	NE	NE	1.0 U	1.0 U	1.0 U	1.00 UJ	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U
Vinyl Chloride	**2**	**2**	50000	100000	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U
Xylenes (Total)	10000	3000	5000	100000	1.0 U	2.0 U	2.0 U	2.00 U	2.00 U	1.0 U	1.0 U	2.0 U	2.00 U	2.00 U	1.0 U	1.0 U	2.0 U	2.00 U	2.00 U

Notes:

ft = feet

mg/l = miligrams per liter

µg/l = micrograms per liter

NE = not established

U - Non-detect at laboratory detection limit

J = Estimated Value, J+ = biased high, J- = biased low, R

Detects are bolded

Criteria exceedances are highlighted

Table 5-7
Summary of 2016 - 2020 Groundwater Analytical Results for Volatile Organic Compounds
Former GE Facility, 50 Fordham Road, Wilmington, MA

				Location Group:	Transect A (continued)														
				Location ID:	AE109R2	AE109R2	AE109R3	AE109R3	AE109R3	AE109R3	AE109R3	AE109R4	AE109R4	AE109R4	AE109R4	AE109R4	AE109R5	AE109R5	AE109R5
				Sample ID:	9A-AE109R2-091819-	0A-AE109R2-091620-	6A-AE109R3-061616-	7A-AE109R3-101017-	8A-AE109R3-100218-	9A-AE109R3-091819-	0A-AE109R3-091620-	6A-AE109R4-061616-	7A-AE109R4-101017-	8A-AE109R4-100218-	9A-AE109R4-091819-	0A-AE109R4-091620-	6A-AE109R5-061616-	7A-AE109R5-101017-	8A-AE109R5-100218-
				Sample Date:	9/18/2019	9/16/2020	6/16/2016	10/10/2017	10/2/2018	9/18/2019	9/16/2020	6/16/2016	10/10/2017	10/2/2018	9/18/2019	9/16/2020	6/16/2016	10/10/2017	10/2/2018
				Sample Type:	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
				Depth Interval:	66-76 ft	66 - 76 ft	126 - 136 ft	126 - 136 ft	126 - 136 ft	126-136 ft	126 - 136 ft	174 - 180.5 ft	174 - 180.5 ft	174 - 180.5 ft	174-180.5 ft	174 - 180.5 ft	183 - 189 ft	183 - 189 ft	183 - 189 ft
Analyte	**MCP Method 1 GW-1 Stds**	**MCP Method 1 GW-2 Stds**	**MCP Method 1 GW-3 Stds**	**Upper Concentration Limit (UCL)**															
Volatile Organic Compounds (µg/l)																			
1,1,1,2-Tetrachloroethane	5	10	50000	100000	1.0 U	1.0 U	5.0 U	1.00 U	1.00 U	1.0 U	1.0 U	5.0 U	5.00 UJ	10.0 U	2.0 U	1.0 U	10.0 U	10.0 UJ	20.0 U
1,1,1-Trichloroethane	**200**	4000	20000	100000	1.0 U	1.0 U	5.0 U	1.00 U	1.00 U	1.0 U	1.0 U	5.0 U	5.00 UJ	10.0 U	2.0 U	1.0 U	10.0 U	10.0 UJ	20.0 U
1,1,2,2-Tetrachloroethane	2	9	50000	100000	0.50 U	0.50 U	2.5 U	0.50 U	0.50 U	0.50 U	0.50 U	2.5 U	2.50 U	5.00 U	1.0 U	0.50 U	5.0 U	5.00 U	10.0 U
1,1,2-Trichloroethane	5	900	50000	100000	1.0 U	1.0 U	5.0 U	1.00 U	1.00 U	1.0 U	1.0 U	5.0 U	5.00 U	10.0 U	2.0 U	1.0 U	10.0 U	10.0 U	20.0 U
1,1-Dichloroethane	**70**	2000	20000	100000	1.0 U	1.0 U	5.0 U	**2.07**	**1.04**	1.0 U	1.0 U	**7.8**	**16.2**	10.0 U	**3.5**	**3.3**	**11.6**	**19.6**	20.0 U
1,1-Dichloroethylene	**7**	**80**	30000	100000	1.0 U	1.0 U	5.0 U	1.00 U	1.00 UJ	1.0 U	1.0 U	5.0 U	5.00 U	10.0 UJ	2.0 U	1.0 U	10.0 U	10.0 U	20.0 UJ
1,1-Dichloropropene	NE	NE	NE	NE	1.0 U	1.0 U	5.0 U	1.00 U	1.00 U	1.0 U	1.0 U	5.0 U	5.00 U	10.0 U	2.0 U	1.0 U	10.0 U	10.0 U	20.0 U
1,2,3-Trichlorobenzene	NE	NE	NE	NE	1.0 U	1.0 U	5.0 U	1.00 U	1.00 U	1.0 U	1.0 U	5.0 U	5.00 U	10.0 U	2.0 U	1.0 U	10.0 U	10.0 U	20.0 U
1,2,3-Trichloropropane	NE	NE	NE	NE	0.50 U	0.50 U	5.0 U	1.00 U	1.00 U	0.50 U	0.50 U	5.0 U	5.00 U	10.0 U	1.0 U	0.50 U	10.0 U	10.0 U	20.0 U
1,2,4-Trichlorobenzene	70	200	50000	100000	1.0 U	1.0 U	5.0 U	1.00 U	1.00 U	1.0 U	1.0 U	5.0 U	5.00 U	10.0 U	2.0 U	1.0 U	10.0 U	10.0 U	20.0 U
1,2,4-Trimethylbenzene	NE	NE	NE	NE	1.0 U	1.0 U	5.0 U	1.00 U	1.00 U	1.0 U	1.0 U	5.0 U	5.00 U	10.0 U	2.0 U	1.0 U	10.0 U	10.0 U	20.0 U
1,2-Dibromo-3-Chloropropane (DBC	NE	NE	NE	NE	R	0.50 U	10.0 U	2.00 U	2.00 U	R	0.50 U	10.0 U	10.0 UJ	20.0 U	R	0.50 U	20.0 U	20.0 UJ	40.0 U
1,2-Dibromoethane	0.02	2	50000	100000	0.50 U	0.50 U	2.5 U	0.50 U	0.50 U	0.50 U	0.50 U	2.5 U	2.50 U	5.00 U	1.0 U	0.50 U	5.0 U	5.00 U	10.0 U
1,2-Dichlorobenzene	600	8000	2000	80000	1.0 U	1.0 U	5.0 U	1.00 U	1.00 U	1.0 U	1.0 U	5.0 U	5.00 U	10.0 U	2.0 U	1.0 U	10.0 U	10.0 U	20.0 U
1,2-Dichloroethane	5	5	20000	100000	0.60 U	0.60 U	5.0 U	1.00 U	1.00 U	0.60 U	0.60 U	5.0 U	5.00 U	10.0 U	1.2 U	0.60 U	10.0 U	10.0 U	20.0 U
1,2-Dichloropropane	5	3	50000	100000	1.0 U	1.0 U	5.0 U	1.00 U	1.00 U	1.0 U	1.0 U	5.0 U	5.00 U	10.0 U	2.0 U	1.0 U	10.0 U	10.0 U	20.0 U
1,3,5-Trimethylbenzene	NE	NE	NE	NE	1.0 U	1.0 U	5.0 U	1.00 U	1.00 U	1.0 U	1.0 U	5.0 U	5.00 U	10.0 U	2.0 U	1.0 U	10.0 U	10.0 U	20.0 U
1,3-Dichlorobenzene	100	6000	50000	100000	1.0 U	1.0 U	5.0 U	1.00 U	1.00 U	1.0 U	1.0 U	5.0 U	5.00 U	10.0 U	2.0 U	1.0 U	10.0 U	10.0 U	20.0 U
1,3-Dichloropropane	NE	NE	NE	NE	1.0 U	1.0 U	5.0 U	1.00 U	1.00 U	1.0 U	1.0 U	5.0 U	5.00 U	10.0 U	2.0 U	1.0 U	10.0 U	10.0 U	20.0 U
1,4-Dichlorobenzene	5	60	8000	80000	1.0 U	1.0 U	5.0 U	1.00 U	1.00 U	1.0 U	1.0 U	5.0 U	5.00 U	10.0 U	2.0 U	1.0 U	10.0 U	10.0 U	20.0 U
1,4-Dioxane	**0.3**	6000	50000	100000	40 U	NS	100 U	20.0 U	20.0 U	40 U	100 U	100 U	100 U	200 U	80 U	100 U	NS	200 U	400 UJ
2,2-Dichloropropane	NE	NE	NE	NE	1.0 U	1.0 U	5.0 UJ	1.00 UJ	1.00 U	1.0 U	1.0 U	5.0 UJ	5.00 UJ	10.0 U	2.0 U	1.0 U	10.0 U	10.0 UJ	20.0 U
2-Butanone	4000	50000	50000	100000	R	5.0 U	50.0 U	**4.73**	2.00 U	R	5.0 U	50.0 U	10.0 U	20.0 U	R	5.0 U	100 U	20.0 U	40.0 U
2-Chlorotoluene	NE	NE	NE	NE	1.0 U	1.0 U	5.0 U	1.00 U	1.00 U	1.0 U	1.0 U	5.0 U	5.00 U	10.0 U	2.0 U	1.0 U	10.0 U	10.0 U	20.0 U
2-Hexanone	NE	NE	NE	NE	5.0 U	5.0 U	50.0 U	2.00 U	2.00 U	5.0 U	5.0 U	50.0 U	10.0 U	20.0 U	10 U	5.0 U	100 U	20.0 U	40.0 U
2-Phenylbutane	NE	NE	NE	NE	1.0 U	1.0 U	5.0 U	1.00 U	1.00 U	1.0 U	1.0 U	5.0 U	5.00 U	10.0 U	2.0 U	1.0 U	10.0 U	10.0 U	20.0 U
4-Chlorotoluene	NE	NE	NE	NE	1.0 U	1.0 U	5.0 U	1.00 U	1.00 U	1.0 U	1.0 U	5.0 U	5.00 U	10.0 U	2.0 U	1.0 U	10.0 U	10.0 U	20.0 U
4-Methyl-2-Pentanone	350	50000	50000	100000	5.0 U	5.0 U	50.0 U	2.00 U	2.00 U	5.0 U	5.0 U	50.0 U	10.0 U	20.0 U	10 U	5.0 U	100 U	20.0 U	40.0 U
Acetone	6300	50000	50000	100000	R	25 U	50.0 U	10.0 U	10.0 U	R	25 U	50.0 U	50.0 U	100 U	R	25 U	100 U	100 U	200 U
Benzene	5	1000	10000	100000	0.70 U	0.70 U	5.0 U	1.00 U	1.00 U	0.70 U	0.70 U	5.0 U	5.00 U	10.0 U	1.4 U	0.70 U	10.0 U	10.0 U	20.0 U
Bromobenzene	NE	NE	NE	NE	1.0 U	1.0 U	5.0 U	1.00 U	1.00 U	1.0 U	1.0 U	5.0 U	5.00 U	10.0 U	2.0 U	1.0 U	10.0 U	10.0 U	20.0 U
Bromochloromethane	NE	NE	NE	NE	1.0 U	1.0 U	5.0 U	1.00 U	1.00 U	1.0 U	1.0 U	5.0 U	5.00 U	10.0 U	2.0 U	1.0 U	10.0 U	10.0 U	20.0 U
Bromodichloromethane	3	6	50000	100000	0.50 U	0.50 U	2.5 U	0.50 U	0.50 U	0.50 U	0.50 U	2.5 U	2.50 UJ	5.00 U	1.0 U	0.50 U	5.0 U	5.00 UJ	10.0 U
Bromoform	4	700	50000	100000	R	1.0 U	5.0 U	1.00 U	1.00 U	R	1.0 U	5.0 U	5.00 UJ	10.0 U	R	1.0 U	10.0 U	10.0 UJ	20.0 U
Bromomethane	10	7	800	8000	1.0 U	1.0 U	10.0 U	2.00 U	2.00 U	1.0 U	1.0 U	10.0 U	10.0 U	20.0 U	2.0 U	1.0 U	20.0 UJ	20.0 U	40.0 U
Carbon Disulfide	NE	NE	NE	NE	5.0 U	5.0 U	10.0 U	2.00 U	2.00 U	5.0 U	5.0 U	10.0 U	10.0 U	20.0 U	10 U	5.0 U	20.0 U	20.0 U	40.0 U
Carbon Tetrachloride	5	2	5000	50000	1.0 U	1.0 U	5.0 U	1.00 U	1.00 U	1.0 U	1.0 U	5.0 U	5.00 UJ	10.0 U	2.0 U	1.0 U	10.0 U	10.0 UJ	20.0 U
Chlorobenzene	100	200	1000	10000	1.0 U	1.0 U	5.0 U	1.00 U	1.00 U	1.0 U	1.0 U	5.0 U	5.00 U	10.0 U	2.0 U	1.0 U	10.0 U	10.0 U	20.0 U
Chloroethane	NE	NE	NE	NE	1.0 U	1.0 UJ	10.0 UJ	2.00 U	2.00 U	1.0 U	1.0 UJ	10.0 UJ	10.0 U	20.0 U	2.0 U	1.0 UJ	20.0 U	20.0 U	40.0 U
Chloroform	70	50	20000	100000	1.0 U	1.0 U	5.0 U	1.00 U	1.00 U	1.0 U	1.0 U	5.0 U	5.00 U	10.0 U	2.0 U	1.0 U	10.0 U	10.0 U	20.0 U
Chloromethane	NE	NE	NE	NE	1.0 U	1.0 U	10.0 UJ	2.00 U	2.00 U	1.0 U	1.0 U	10.0 UJ	10.0 U	20.0 U	2.0 U	1.0 U	20.0 U	20.0 U	40.0 U
cis-1,2-Dichloroethene	**70**	**20**	50000	100000	**2.3**	**2.7**	5.0 U	**31.6**	**27.4**	**14**	**17**	**36.0**	**439**	**299**	**200**	**170**	**53.2**	**230**	**351**
cis-1,3-Dichloropropene	NE	NE	NE	NE	0.40 U	0.40 U	2.5 U	0.50 U	0.50 U	0.40 U	0.40 U	2.5 U	2.50 U	5.00 U	1.0 U	0.40 U	5.0 U	5.00 U	10.0 U
Cymene	NE	NE	NE	NE	1.0 U	1.0 U	5.0 U	1.00 U	1.00 U	1.0 U	1.0 U	5.0 U	5.00 U	10.0 U	2.0 U	1.0 U	10.0 U	10.0 U	20.0 U
Dibromochloromethane	2	20	50000	100000	0.50 UJ	0.50 U	2.5 U	0.50 U	0.50 U	0.50 UJ	0.50 U	2.5 U	2.50 UJ	5.00 U	1.0 UJ	0.50 U	5.0 U	5.00 UJ	10.0 U
Dibromomethane	NE	NE	NE	NE	1.0 U	1.0 U	5.0 U	1.00 U	1.00 U	1.0 U	1.0 U	5.0 U	5.00 U	10.0 U	2.0 U	1.0 U	10.0 U	10.0 U	20.0 U
Dichlorodifluoromethane (CFC-12)	NE	NE	NE	NE	1.0 U	1.0 U	10.0 U	2.00 U	2.00 U	1.0 U	1.0 U	10.0 U	10.0 U	20.0 U	2.0 U	1.0 U	20.0 U	20.0 U	40.0 U
Diethyl Ether	NE	NE	NE	NE	1.0 U	1.0 U	5.0 U	1.00 U	1.00 U	1.0 U	1.0 U	5.0 U	5.00 U	10.0 U	2.0 U	1.0 U	10.0 U	10.0 U	20.0 U
Diisopropyl Ether	NE	NE	NE	NE	1.0 U	1.0 U	5.0 U	1.00 U	1.00 U	1.0 U	1.0 U	5.0 U	5.00 U	10.0 U	2.0 U	1.0 U	10.0 U	10.0 U	20.0 U
Ethyl Tertiary-Butyl Ether	NE	NE	NE	NE	1.0 U	1.0 U	5.0 U	1.00 U	1.00 U	1.0 U	1.0 U	5.0 U	5.00 UJ	10.0 U	2.0 U	1.0 U	10.0 U	10.0 UJ	20.0 U
Ethylbenzene	700	20000	5000	100000	1.0 U	1.0 U	5.0 U	1.00 U	1.00 U	1.0 U	1.0 U	5.0 U	5.00 U	10.0 U	2.0 U	1.0 U	10.0 U	10.0 U	20.0 U
Freon TF (Chlorinated fluorocarbon)	NE	NE	NE	NE	1.0 U	1.0 U	5.0 U	1.00 U	1.00 U	1.0 U	1.0 U	5.0 U	5.00 U	10.0 U	2.0 U	1.0 U	10.0 U	10.0 U	20.0 U
Hexachloro-1,3-Butadiene	0.6	50	3000	3000	0.40 U	0.40 U	2.5 U	0.50 U	0.50 U	0.40 U	0.40 U	2.5 U	2.50 U	5.00 U	1.0 U	0.40 U	5.0 U	5.00 U	10.0 U
Isopropylbenzene	NE	NE	NE	NE	1.0 U	1.0 U	5.0 U	1.00 U	1.00 U	1.0 U	1.0 U	5.0 U	5.00 U	10.0 U	2.0 U	1.0 U	10.0 U	10.0 U	20.0 U
M, P Xylenes	10000	3000	5000	100000	1.0 U	1.0 U	10.0 U	2.00 U	2.00 U	1.0 U	1.0 U	10.0 U	10.0 U	20.0 U	2.0 U	1.0 U	20.0 U	20.0 U	40.0 U
Methyl Tert-Butyl Ether	NE	NE	NE	100000	1.0 U	1.0 U	5.0 UJ	1.00 U	1.00 U	1.0 U	1.0 U	5.0 UJ	5.00 UJ	10.0 U	2.0 U	1.0 U	10.0 U	10.0 UJ	20.0 U
Methylene Chloride	5	2000	50000	100000	1.0 U	1.0 U	10.0 U	2.00 U	2.00 U	1.0 U	1.0 U	10.0 U	10.0 U	20.0 U	2.0 U	1.0 U	20.0 U	20.0 U	40.0 U
Naphthalene	140	700	20000	100000	1.0 U	1.0 U	5.0 U	1.00 U	2.00 U	1.0 U	1.0 U	5.0 U	5.00 U	20.0 U	2.0 U	1.0 U	10.0 UJ	10.0 U	40.0 U
N-Butylbenzene	NE	NE	NE	NE	1.0 U	1.0 U	5.0 U	1.00 U	1.00 U	1.0 U	1.0 U	5.0 U	5.00 U	10.0 U	2.0 U	1.0 U	10.0 U	10.0 U	20.0 U
N-Propylbenzene	NE	NE	NE	NE	1.0 U	1.0 U	5.0 U	1.00 U	1.00 U	1.0 U	1.0 U	5.0 U	5.00 U	10.0 U	2.0 U	1.0 U	10.0 U	10.0 U	20.0 U
o-Xylene	10000	3000	5000	100000	1.0 U	1.0 U	5.0 U	1.00 U	1.00 U	1.0 U	1.0 U	5.0 U	5.00 U	10.0 U	2.0 U	1.0 U	10.0 U	10.0 U	20.0 U
Styrene	100	100	6000	60000	1.0 U	1.0 U	5.0 U	1.00 U	1.00 U	1.0 U	1.0 U	5.0 U	5.00 U	10.0 U	2.0 U	1.0 U	10.0 U	10.0 U	20.0 U
Tert-Butylbenzene	NE	NE	NE	NE	1.0 U	1.0 U	5.0 U	1.00 U	1.00 U	1.0 U	1.0 U	5.0 U	5.00 U	10.0 U	2.0 U	1.0 U	10.0 U	10.0 U	20.0 U
Tertiary-Amyl Methyl Ether	NE	NE	NE	NE	1.0 U	1.0 U	5.0 U	1.00 U	1.00 U	1.0 U	1.0 U	5.0 U	5.00 UJ	10.0 U	2.0 U	1.0 U	10.0 U	10.0 UJ	20.0 U
Tetrachloroethene	**5**	**50**	**30000**	100000	1.0 U	R	5.0 U	1.00 U	1.00 U	1.0 U	R	**159**	**112**	10.0 U	2.0 U	**2.1 J+**	**318**	**293**	**127**
Tetrahydrofuran	NE	NE	NE	NE	**2.9**	2.5 U	**24.8**	2.00 U	2.00 U	**5.2**	2.5 U	**13.3**	10.0 U	20.0 U	5.0 U	2.5 U	20.0 U	20.0 U	40.0 U
Toluene	**1000**	50000	40000	100000	1.0 U	1.0 U	**132**	**8.28**	1.00 U	1.0 U	1.0 U	**22.7**	5.00 U	10.0 U	2.0 U	1.0 U	**11.4**	10.0 U	20.0 U
Trans-1,2-Dichloroethene	**100**	**80**	50000	100000	1.0 U	1.0 U	5.0 U	1.00 U	1.00 U	1.0 U	1.0 U	5.0 U	**7.35**	10.0 U	**3.5**	**3.6**	10.0 U	10.0 U	20.0 U
Trans-1,3-Dichloropropene	NE	NE	NE	NE	0.40 U	0.40 U	2.5 U	0.50 U	0.50 U	0.40 U	0.40 U	2.5 U	2.50 UJ	5.00 U	1.0 U	0.40 U	5.0 U	5.00 UJ	10.0 U
Trichloroethene	**5**	**5**	**5000**	**50000**	**1.4**	**1.2**	**15.7**	**18.1**	**2.93**	**1.1**	**5.3**	**366**	**453**	**75.9**	**20**	**21**	**832**	**1190**	**739**
Trichlorofluoromethane	NE	NE	NE	NE	1.0 U	1.0 U	5.0 U	1.00 U	1.00 U	1.0 U	1.0 U	5.0 U	5.00 U	10.0 U	2.0 U	1.0 U	10.0 U	10.0 U	20.0 U
Vinyl Chloride	**2**	**2**	50000	100000	1.0 U	1.0 U	5.0 U	1.00 U	1.00 U	1.0 U	1.0 U	5.0 U	5.00 U	10.0 U	2.0 U	1.0 U	10.0 U	10.0 U	20.0 U
Xylenes (Total)	10000	3000	5000	100000	1.0 U	1.0 U	10.0 U	2.00 U	2.00 U	1.0 U	1.0 U	10.0 U	10.0 U	20.0 U	2.0 U	1.0 U	20.0 U	20.0 U	40.0 U

Notes:

ft = feet

mg/l = miligrams per liter

µg/l = micrograms per liter

NE = not established

U - Non-detect at laboratory detection limit

J = Estimated Value, J+ = biased high, J- = biased low, R

Detects are bolded

Criteria exceedances are highlighted

Table 5-7
Summary of 2016 - 2020 Groundwater Analytical Results for Volatile Organic Compounds
Former GE Facility, 50 Fordham Road, Wilmington, MA

				Location Group:	Transect A (continued)													
				Location ID:	AE109R-5	AE109R-5	AE109R-6	AE109R-6	AE109R-6	AE109R-6	AE109R-6	AE109R-7	AE109R-7	AE109R-7	AE109R-7	AE109R-7	AE109R-7	AE109R-8
				Sample ID:	9A-AE109R5-091819-	0A-AE109R5-091620-	6A-AE109R6-061616-	7A-AE109R6-101017-	8A-AE109R6-100218-	9A-AE109R6-091819-	0A-AE109R6-091620-	6A-AE109R7-061616-	7A-AE109R7-101017-	8A-AE109R7-100218-	9A-AE109R7-091819-	9A-AE109R7-091819-	0A-AE109R7-091620-	6A-AE109R8-061616-
				Sample Date:	9/18/2019	9/16/2020	6/16/2016	10/10/2017	10/2/2018	9/18/2019	9/16/2020	6/16/2016	10/10/2017	10/2/2018	9/18/2019	9/18/2019	9/16/2020	6/16/2016
				Sample Type:	N	N	N	N	N	N	N	N	N	N	N	FD	N	N
				Depth Interval:	183-189 ft	183 - 189 ft	196 - 201 ft	196 - 201 ft	196 - 201 ft	196-201 ft	196 - 201 ft	204 - 214 ft	204 - 214 ft	204 - 214 ft	204-214 ft	204-214 ft	204 - 214 ft	245 - 250 ft
Analyte	**MCP Method 1 GW-1 Stds**	**MCP Method 1 GW-2 Stds**	**MCP Method 1 GW-3 Stds**	**Upper Concentration Limit (UCL)**														
Volatile Organic Compounds (µg/l)																		
1,1,1,2-Tetrachloroethane	5	10	50000	100000	5.0 U	1.0 U	5.0 U	5.00 UJ	10.0 U	5.0 U	1.0 U	5.0 U	5.00 UJ	2.00 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1,1-Trichloroethane	**200**	4000	20000	100000	5.0 U	1.0 U	5.0 U	5.00 UJ	10.0 U	5.0 U	1.0 U	5.0 U	5.00 UJ	2.00 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1,2,2-Tetrachloroethane	2	9	50000	100000	2.5 U	0.50 U	2.5 U	2.50 U	5.00 U	2.5 U	0.50 U	2.5 U	2.50 U	1.00 U	R	R	0.50 U	0.50 U
1,1,2-Trichloroethane	5	900	50000	100000	5.0 U	1.0 U	5.0 U	5.00 U	10.0 U	5.0 U	1.0 U	5.0 U	5.00 U	2.00 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1-Dichloroethane	**70**	2000	20000	100000	**10**	**9.8**	**6.4**	**8.75**	10.0 U	**6.5**	**6.7**	5.0 U	5.00 U	**3.06**	**2.9**	**2.8**	**2.4**	**2.4**
1,1-Dichloroethylene	**7**	**80**	30000	100000	5.0 U	**2.3**	5.0 U	5.00 U	10.0 UJ	5.0 U	**1.6**	5.0 U	5.00 U	2.00 UJ	1.0 U	1.0 U	1.0 U	1.0 U
1,1-Dichloropropene	NE	NE	NE	NE	5.0 U	1.0 U	5.0 U	5.00 U	10.0 U	5.0 U	1.0 U	5.0 U	5.00 U	2.00 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2,3-Trichlorobenzene	NE	NE	NE	NE	5.0 U	1.0 U	5.0 U	5.00 U	10.0 U	5.0 U	1.0 U	5.0 U	5.00 U	2.00 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2,3-Trichloropropane	NE	NE	NE	NE	2.5 U	0.50 U	5.0 U	5.00 U	10.0 U	2.5 U	0.50 U	5.0 U	5.00 U	2.00 U	0.50 U	0.50 U	0.50 U	0.50 U
1,2,4-Trichlorobenzene	70	200	50000	100000	5.0 U	1.0 U	5.0 U	5.00 U	10.0 U	5.0 U	1.0 U	5.0 U	5.00 U	2.00 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2,4-Trimethylbenzene	NE	NE	NE	NE	5.0 U	1.0 U	5.0 U	5.00 U	10.0 U	5.0 U	1.0 U	5.0 U	5.00 U	2.00 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2-Dibromo-3-Chloropropane (DBC	NE	NE	NE	NE	R	0.50 U	10.0 U	10.0 UJ	20.0 U	R	0.50 U	10.0 U	10.0 UJ	4.00 U	R	R	0.50 U	0.50 U
1,2-Dibromoethane	0.02	2	50000	100000	2.5 U	0.50 U	2.5 U	2.50 U	5.00 U	2.5 U	0.50 U	2.5 U	2.50 U	1.00 U	0.50 U	0.50 U	0.50 U	0.50 U
1,2-Dichlorobenzene	600	8000	2000	80000	5.0 U	1.0 U	5.0 U	5.00 U	10.0 U	5.0 U	1.0 U	5.0 U	5.00 U	2.00 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2-Dichloroethane	5	5	20000	100000	3.0 U	0.60 U	5.0 U	5.00 U	10.0 U	3.0 U	0.60 U	5.0 U	5.00 U	2.00 U	0.60 U	0.60 U	0.60 U	0.60 U
1,2-Dichloropropane	5	3	50000	100000	3.0 U	1.0 U	5.0 U	5.00 U	10.0 U	3.0 U	1.0 U	5.0 U	5.00 U	2.00 U	1.0 U	1.0 U	1.0 U	1.0 U
1,3,5-Trimethylbenzene	NE	NE	NE	NE	5.0 U	1.0 U	5.0 U	5.00 U	10.0 U	5.0 U	1.0 U	5.0 U	5.00 U	2.00 U	1.0 U	1.0 U	1.0 U	1.0 U
1,3-Dichlorobenzene	100	6000	50000	100000	5.0 U	1.0 U	5.0 U	5.00 U	10.0 U	5.0 U	1.0 U	5.0 U	5.00 U	2.00 U	1.0 U	1.0 U	1.0 U	1.0 U
1,3-Dichloropropane	NE	NE	NE	NE	5.0 U	1.0 U	5.0 U	5.00 U	10.0 U	5.0 U	1.0 U	5.0 U	5.00 U	2.00 U	1.0 U	1.0 U	1.0 U	1.0 U
1,4-Dichlorobenzene	5	60	8000	80000	5.0 U	1.0 U	5.0 U	5.00 U	10.0 U	5.0 U	1.0 U	5.0 U	5.00 U	2.00 U	1.0 U	1.0 U	1.0 U	1.0 U
1,4-Dioxane	**0.3**	6000	50000	100000	200 U	NS	NS	100 U	200 U	200 U	100 U	NS	100 U	40.0 U	40 U	40 U	NS	NS
2,2-Dichloropropane	NE	NE	NE	NE	5.0 U	1.0 UJ	5.0 U	5.00 UJ	10.0 U	5.0 U	1.0 UJ	5.0 U	5.00 UJ	2.00 U	1.0 U	1.0 U	1.0 U	1.0 U
2-Butanone	4000	50000	50000	100000	R	5.0 U	50.0 U	10.0 U	20.0 U	R	5.0 U	50.0 U	10.0 U	4.00 U	R	R	5.0 U	5.0 U
2-Chlorotoluene	NE	NE	NE	NE	5.0 U	1.0 U	5.0 U	5.00 U	10.0 U	5.0 U	1.0 U	5.0 U	5.00 U	2.00 U	1.0 U	1.0 U	1.0 U	1.0 U
2-Hexanone	NE	NE	NE	NE	25 U	5.0 U	50.0 U	10.0 U	20.0 U	25 U	5.0 U	50.0 U	10.0 U	4.00 U	R	R	5.0 U	5.0 U
2-Phenylbutane	NE	NE	NE	NE	5.0 U	1.0 U	5.0 U	5.00 U	10.0 U	5.0 U	1.0 U	5.0 U	5.00 U	2.00 U	1.0 U	1.0 U	1.0 U	1.0 U
4-Chlorotoluene	NE	NE	NE	NE	5.0 U	1.0 U	5.0 U	5.00 U	10.0 U	5.0 U	1.0 U	5.0 U	5.00 U	2.00 U	1.0 U	1.0 U	1.0 U	1.0 U
4-Methyl-2-Pentanone	350	50000	50000	100000	25 U	5.0 U	50.0 U	10.0 U	20.0 U	25 U	5.0 U	50.0 U	10.0 U	4.00 U	R	R	5.0 U	5.0 U
Acetone	6300	50000	50000	100000	R	25 U	50.0 U	50.0 U	100 U	R	25 U	50.0 U	50.0 U	20.0 U	R	R	25 U	25 U
Benzene	5	1000	10000	100000	3.5 U	0.70 U	5.0 U	5.00 U	10.0 U	3.5 U	0.70 U	5.0 U	5.00 U	2.00 U	0.70 U	0.70 U	0.70 U	0.70 U
Bromobenzene	NE	NE	NE	NE	5.0 U	1.0 U	5.0 U	5.00 U	10.0 U	5.0 U	1.0 U	5.0 U	5.00 U	2.00 U	1.0 U	1.0 U	1.0 U	1.0 U
Bromochloromethane	NE	NE	NE	NE	5.0 U	1.0 U	5.0 U	5.00 U	10.0 U	5.0 U	1.0 U	5.0 U	5.00 U	2.00 U	1.0 U	1.0 U	1.0 U	1.0 U
Bromodichloromethane	3	6	50000	100000	2.5 U	0.50 U	2.5 U	2.50 UJ	5.00 U	2.5 U	0.50 U	2.5 U	2.50 UJ	1.00 U	0.50 U	0.50 U	0.50 U	0.50 U
Bromoform	4	700	50000	100000	R	1.0 U	5.0 U	5.00 UJ	10.0 U	R	1.0 U	5.0 U	5.00 UJ	2.00 U	1.0 U	1.0 U	1.0 U	1.0 U
Bromomethane	10	7	800	8000	5.0 U	1.0 U	10.0 UJ	10.0 U	20.0 U	5.0 U	1.0 U	10.0 UJ	10.0 U	4.00 U	R	R	1.0 U	1.0 U
Carbon Disulfide	NE	NE	NE	NE	25 U	5.0 U	10.0 U	10.0 U	20.0 U	25 U	5.0 U	10.0 U	10.0 U	4.00 U	5.0 U	5.0 U	5.0 U	5.0 U
Carbon Tetrachloride	5	2	5000	50000	2.5 U	1.0 U	5.0 U	5.00 UJ	10.0 U	2.5 U	1.0 U	5.0 U	5.00 UJ	2.00 U	1.0 U	1.0 U	1.0 U	1.0 U
Chlorobenzene	100	200	1000	10000	5.0 U	1.0 U	5.0 U	5.00 U	10.0 U	5.0 U	1.0 U	5.0 U	5.00 U	2.00 U	1.0 U	1.0 U	1.0 U	1.0 U
Chloroethane	NE	NE	NE	NE	5.0 U	1.0 UJ	10.0 U	10.0 U	20.0 U	5.0 U	1.0 UJ	10.0 U	10.0 U	4.00 U	1.0 U	1.0 U	1.0 UJ	1.0 UJ
Chloroform	70	50	20000	100000	5.0 U	1.0 U	5.0 U	5.00 U	10.0 U	5.0 U	1.0 U	5.0 U	5.00 U	2.00 U	1.0 U	1.0 U	1.0 U	1.0 U
Chloromethane	NE	NE	NE	NE	5.0 U	1.0 U	10.0 U	10.0 U	20.0 U	5.0 U	1.0 U	10.0 U	10.0 U	4.00 U	1.0 U	1.0 U	1.0 U	2.0 U
cis-1,2-Dichloroethene	**70**	**20**	50000	100000	**240**	**220**	**26.8**	**121**	**159**	**180**	**170**	**15.6**	**96.0**	**138**	**130**	**130**	**89**	**92**
cis-1,3-Dichloropropene	NE	NE	NE	NE	2.5 U	0.40 U	2.5 U	2.50 U	5.00 U	2.5 U	0.40 U	2.5 U	2.50 U	1.00 U	0.40 U	0.40 U	0.40 U	0.40 U
Cymene	NE	NE	NE	NE	5.0 U	1.0 U	5.0 U	5.00 U	10.0 U	5.0 U	1.0 U	5.0 U	5.00 U	2.00 U	1.0 U	1.0 U	1.0 U	1.0 U
Dibromochloromethane	2	20	50000	100000	2.5 UJ	0.50 U	2.5 U	2.50 UJ	5.00 U	2.5 UJ	0.50 U	2.5 U	2.50 UJ	1.00 U	0.50 U	0.50 U	0.50 U	0.50 U
Dibromomethane	NE	NE	NE	NE	5.0 U	1.0 U	5.0 U	5.00 U	10.0 U	5.0 U	1.0 U	5.0 U	5.00 U	2.00 U	1.0 U	1.0 U	1.0 U	1.0 U
Dichlorodifluoromethane (CFC-12)	NE	NE	NE	NE	5.0 U	1.0 U	10.0 U	10.0 U	20.0 U	5.0 U	1.0 U	10.0 U	10.0 U	4.00 U	1.0 U	1.0 U	1.0 U	2.0 U
Diethyl Ether	NE	NE	NE	NE	5.0 U	1.0 U	5.0 U	5.00 U	10.0 U	5.0 U	1.0 U	5.0 U	5.00 U	2.00 U	1.0 U	1.0 U	1.0 U	1.0 U
Diisopropyl Ether	NE	NE	NE	NE	5.0 U	1.0 U	5.0 U	5.00 U	10.0 U	5.0 U	1.0 U	5.0 U	5.00 U	2.00 U	1.0 U	1.0 U	1.0 U	1.0 U
Ethyl Tertiary-Butyl Ether	NE	NE	NE	NE	5.0 U	1.0 U	5.0 U	5.00 UJ	10.0 U	5.0 U	1.0 U	5.0 U	5.00 UJ	2.00 U	1.0 U	1.0 U	1.0 U	1.0 U
Ethylbenzene	700	20000	5000	100000	5.0 U	1.0 U	5.0 U	5.00 U	10.0 U	5.0 U	1.0 U	5.0 U	5.00 U	2.00 U	1.0 U	1.0 U	1.0 U	1.0 U
Freon TF (Chlorinated fluorocarbon)	NE	NE	NE	NE	5.0 U	1.0 U	5.0 U	5.00 U	10.0 U	5.0 U	1.0 U	5.0 U	5.00 U	2.00 U	1.0 U	1.0 U	1.0 U	1.0 U
Hexachloro-1,3-Butadiene	0.6	50	3000	3000	2.5 U	0.40 U	2.5 U	2.50 U	5.00 U	2.5 U	0.40 U	2.5 U	2.50 U	1.00 U	0.40 U	0.40 U	0.40 U	0.40 U
Isopropylbenzene	NE	NE	NE	NE	5.0 U	1.0 U	5.0 U	5.00 U	10.0 U	5.0 U	1.0 U	5.0 U	5.00 U	2.00 U	1.0 U	1.0 U	1.0 U	1.0 U
M, P Xylenes	10000	3000	5000	100000	5.0 U	1.0 U	10.0 U	10.0 U	20.0 U	5.0 U	1.0 U	10.0 U	10.0 U	4.00 U	1.0 U	1.0 U	1.0 U	2.0 U
Methyl Tert-Butyl Ether	NE	NE	NE	100000	5.0 U	1.0 U	5.0 U	5.00 UJ	10.0 U	5.0 U	1.0 U	5.0 U	5.00 UJ	2.00 U	1.0 U	1.0 U	1.0 U	1.0 U
Methylene Chloride	5	2000	50000	100000	5.0 U	1.0 U	10.0 U	10.0 U	20.0 U	5.0 U	1.0 U	10.0 U	10.0 U	4.00 U	1.0 U	1.0 U	1.0 U	2.0 U
Naphthalene	140	700	20000	100000	5.0 U	1.0 U	5.0 UJ	5.00 U	20.0 U	5.0 U	1.0 U	5.0 UJ	5.00 U	4.00 U	1.0 U	1.0 U	1.0 U	1.0 UJ
N-Butylbenzene	NE	NE	NE	NE	5.0 U	1.0 U	5.0 U	5.00 U	10.0 U	5.0 U	1.0 U	5.0 U	5.00 U	2.00 U	1.0 U	1.0 U	1.0 U	1.0 U
N-Propylbenzene	NE	NE	NE	NE	5.0 U	1.0 U	5.0 U	5.00 U	10.0 U	5.0 U	1.0 U	5.0 U	5.00 U	2.00 U	1.0 U	1.0 U	1.0 U	1.0 U
o-Xylene	10000	3000	5000	100000	5.0 U	1.0 U	5.0 U	5.00 U	10.0 U	5.0 U	1.0 U	5.0 U	5.00 U	2.00 U	1.0 U	1.0 U	1.0 U	1.0 U
Styrene	100	100	6000	60000	5.0 U	1.0 U	5.0 U	5.00 U	10.0 U	5.0 U	1.0 U	5.0 U	5.00 U	2.00 U	1.0 U	1.0 U	1.0 U	1.0 U
Tert-Butylbenzene	NE	NE	NE	NE	5.0 U	1.0 U	5.0 U	5.00 U	10.0 U	5.0 U	1.0 U	5.0 U	5.00 U	2.00 U	1.0 U	1.0 U	1.0 U	1.0 U
Tertiary-Amyl Methyl Ether	NE	NE	NE	NE	5.0 U	1.0 U	5.0 U	5.00 UJ	10.0 U	5.0 U	1.0 U	5.0 U	5.00 UJ	2.00 U	1.0 U	1.0 U	1.0 U	1.0 U
Tetrachloroethene	**5**	**50**	**30000**	100000	**77**	**71 J+**	**97.6**	**58.0**	**20.0**	**18**	**12 J+**	**41.6**	5.00 U	2.00 U	1.0 U	1.0 U	R	R
Tetrahydrofuran	NE	NE	NE	NE	13 U	2.5 U	10.0 U	10.0 U	20.0 U	13 U	2.5 U	20.0 U	10.0 U	4.00 U	R	R	2.5 U	2.5 U
Toluene	**1000**	50000	40000	100000	5.0 U	1.0 U	**26.3**	5.00 U	10.0 U	5.0 U	1.0 U	**18.1**	5.00 U	2.00 U	1.0 U	1.0 U	1.0 U	**3.4**
Trans-1,2-Dichloroethene	**100**	**80**	50000	100000	5.0 U	**4.5**	5.0 U	5.00 U	10.0 U	5.0 U	**3.4**	5.0 U	5.00 U	2.00 U	**1.7**	**1.7**	**1.9**	**1.8**
Trans-1,3-Dichloropropene	NE	NE	NE	NE	2.5 U	0.40 U	2.5 U	2.50 UJ	5.00 U	2.5 U	0.40 U	2.5 U	2.50 UJ	1.00 U	0.40 U	0.40 U	0.40 U	0.40 U
Trichloroethene	**5**	**5**	**5000**	**50000**	**360**	**390**	**342**	**377**	**237**	**200**	**180**	**150**	**56.8**	**28.9**	**12 J**	**7.9 J**	**9.2**	**10**
Trichlorofluoromethane	NE	NE	NE	NE	5.0 U	1.0 U	5.0 U	5.00 U	10.0 U	5.0 U	1.0 U	5.0 U	5.00 U	2.00 U	1.0 U	1.0 U	1.0 U	1.0 U
Vinyl Chloride	**2**	**2**	50000	100000	2.5 U	1.0 U	5.0 U	5.00 U	10.0 U	2.5 U	**3.7**	5.0 U	5.00 U	2.00 U	1.0 U	1.0 U	**11**	**11**
Xylenes (Total)	10000	3000	5000	100000	5.0 U	1.0 U	10.0 U	10.0 U	20.0 U	5.0 U	1.0 U	10.0 U	10.0 U	4.00 U	1.0 U	1.0 U	1.0 U	1.0 U

Notes:

ft = feet — U - Non-detect at laboratory detection limit

mg/l = miligrams per liter — J = Estimated Value, J+ = biased high, J- = biased low, R

µg/l = micrograms per liter — **Detects are bolded**

NE = not established — Criteria exceedances are highlighted

Table 5-7
Summary of 2016 - 2020 Groundwater Analytical Results for Volatile Organic Compounds
Former GE Facility, 50 Fordham Road, Wilmington, MA

				Location Group:	Transect A (continued)														
				Location ID:	AE109R-8	AE109R-8	AE109R-8	AE109R-8	AE110R-1	AE110R-1	AE110R-1	AE110R-1	AE110R-1	AE110R-2	AE110R-2	AE110R-2	AE110R-2	AE110R-2	AE110R-4
				Sample ID:	7A-AE109R8-101017-	8A-AE109R8-100218-	9A-AE109R8-091819-	0A-AE109R8-091620-	6A-AE110R1-061716-	7A-AE110R1-101117-	8A-AE110R1-092518-	9A-AE110R1-091319-	0A-AE110R1-091620-	6A-AE110R2-061716-	7A-AE110R2-101117-	8A-AE110R2-092518-	9A-AE110R2-091319-	0A-AE110R2-091620-	6A-AE110R4-061716-
				Sample Date:	10/10/2017	10/2/2018	9/18/2019	9/16/2020	6/17/2016	10/11/2017	9/25/2018	9/13/2019	9/16/2020	6/17/2016	10/11/2017	9/25/2018	9/13/2019	9/16/2020	6/17/2016
				Sample Type:	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
				Depth Interval:	245 - 250 ft	245 - 250 ft	245-250 ft	245 - 250 ft	34 - 44 ft	34 - 44 ft	34 - 44 ft	34-44 ft	34 - 44 ft	70 - 80 ft	70 - 80 ft	70 - 80 ft	70-80 ft	70 - 80 ft	158 - 168 ft
Analyte	**MCP Method 1 GW-1 Stds**	**MCP Method 1 GW-2 Stds**	**MCP Method 1 GW-3 Stds**	**Upper Concentration Limit (UCL)**															
Volatile Organic Compounds (µg/l)																			
1,1,1,2-Tetrachloroethane	5	10	50000	100000	1.00 UJ	1.00 U	1.0 U	1.0 U	1.0 UJ	1.00 U	1.00 U	1.0 U	1.0 U	1.0 UJ	1.00 U	1.00 U	1.0 U	1.0 U	1.0 UJ
1,1,1-Trichloroethane	**200**	4000	20000	100000	1.00 UJ	1.00 U	1.0 U	1.0 U	1.0 UJ	1.00 U	1.00 U	1.0 U	1.0 U	1.0 UJ	1.00 U	1.00 U	1.0 U	1.0 U	1.0 UJ
1,1,2,2-Tetrachloroethane	2	9	50000	100000	0.50 U	0.50 U	0.50 U	0.50 U	0.5 U	0.50 U	0.50 U	0.50 U	0.50 U	0.5 U	0.50 U	0.50 U	0.50 U	0.50 U	0.5 U
1,1,2-Trichloroethane	5	900	50000	100000	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U
1,1-Dichloroethane	**70**	2000	20000	100000	1.00 U	1.00 U	1.0 U	1.0 U	1.0 UJ	1.00 U	1.00 U	1.0 U	1.0 U	1.0 UJ	1.00 U	1.00 U	1.0 U	1.0 U	1.0 UJ
1,1-Dichloroethylene	**7**	**80**	30000	100000	1.00 U	1.00 UJ	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U
1,1-Dichloropropene	NE	NE	NE	NE	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 UJ	1.0 U	1.0 U	1.0 U	1.00 U	1.00 UJ	1.0 U	1.0 U	1.0 U
1,2,3-Trichlorobenzene	NE	NE	NE	NE	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U
1,2,3-Trichloropropane	NE	NE	NE	NE	1.00 U	1.00 U	0.50 U	0.50 U	1.0 U	1.00 U	1.00 U	0.50 U	0.50 U	1.0 U	1.00 U	1.00 U	0.50 U	0.50 U	1.0 U
1,2,4-Trichlorobenzene	70	200	50000	100000	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U
1,2,4-Trimethylbenzene	NE	NE	NE	NE	1.00 U	1.00 U	1.0 U	1.0 U	1.0 UJ	1.00 U	1.00 U	1.0 U	1.0 U	1.0 UJ	1.00 U	1.00 U	1.0 U	1.0 U	1.0 UJ
1,2-Dibromo-3-Chloropropane (DBC	NE	NE	NE	NE	2.00 UJ	2.00 U	R	0.50 U	2.0 U	2.00 U	2.00 U	R	0.50 U	2.0 U	2.00 U	2.00 U	R	0.50 U	2.0 U
1,2-Dibromoethane	0.02	2	50000	100000	0.50 U	0.50 U	0.50 U	0.50 U	0.5 U	0.50 U	0.50 U	0.50 U	0.50 U	0.5 U	0.50 U	0.50 U	0.50 U	0.50 U	0.5 U
1,2-Dichlorobenzene	600	8000	2000	80000	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U
1,2-Dichloroethane	5	5	20000	100000	1.00 U	1.00 U	0.60 U	0.60 U	1.0 U	1.00 U	1.00 U	0.60 U	0.60 U	1.0 U	1.00 U	1.00 U	0.60 U	0.60 U	1.0 U
1,2-Dichloropropane	5	3	50000	100000	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U
1,3,5-Trimethylbenzene	NE	NE	NE	NE	1.00 U	1.00 U	1.0 U	1.0 U	1.0 UJ	1.00 U	1.00 U	1.0 U	1.0 U	1.0 UJ	1.00 U	1.00 U	1.0 U	1.0 U	1.0 UJ
1,3-Dichlorobenzene	100	6000	50000	100000	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U
1,3-Dichloropropane	NE	NE	NE	NE	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U
1,4-Dichlorobenzene	5	60	8000	80000	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U
1,4-Dioxane	**0.3**	6000	50000	100000	20.0 U	20.0 U	40 U	100 U	20.0 U	20.0 U	20.0 UJ	40 U	100 U	20.0 U	20.0 U	**67.3 J**	40 U	100 U	20.0 U
2,2-Dichloropropane	NE	NE	NE	NE	1.00 UJ	1.00 U	1.0 U	1.0 U	1.0 UJ	1.00 UJ	1.00 U	1.0 U	1.0 U	1.0 UJ	1.00 UJ	1.00 U	1.0 U	1.0 U	1.0 UJ
2-Butanone	4000	50000	50000	100000	2.00 U	2.00 U	R	5.0 U	**26.9**	**8.88**	**3.43**	R	5.0 U	**97.1**	**12.9**	**16.7**	R	5.0 U	10.0 U
2-Chlorotoluene	NE	NE	NE	NE	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U
2-Hexanone	NE	NE	NE	NE	2.00 U	2.00 U	5.0 U	5.0 U	10.0 U	2.00 U	2.00 UJ	5.0 U	5.0 U	10.0 U	2.00 U	2.00 UJ	5.0 U	5.0 U	10.0 U
2-Phenylbutane	NE	NE	NE	NE	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U
4-Chlorotoluene	NE	NE	NE	NE	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U
4-Methyl-2-Pentanone	350	50000	50000	100000	2.00 U	2.00 U	5.0 U	5.0 U	10.0 U	2.00 U	2.00 U	5.0 U	5.0 U	10.0 U	2.00 U	2.00 U	5.0 U	5.0 U	10.0 U
Acetone	6300	50000	50000	100000	10.0 U	10.0 U	R	25 U	10.0 U	10.0 U	10.0 U	R	25 U	10.0 U	10.0 U	**50.0**	R	25 U	10.0 U
Benzene	5	1000	10000	100000	1.00 U	1.00 U	0.70 U	0.70 U	1.0 U	1.00 U	1.00 U	0.70 U	0.70 U	1.0 U	1.00 U	1.00 U	0.70 U	0.70 U	1.0 U
Bromobenzene	NE	NE	NE	NE	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U
Bromochloromethane	NE	NE	NE	NE	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U
Bromodichloromethane	3	6	50000	100000	0.50 UJ	0.50 U	0.50 U	0.50 U	**0.8**	0.50 U	0.50 U	0.50 U	0.50 U	**0.5**	0.50 U	0.50 U	0.50 U	0.50 U	0.5 U
Bromoform	4	700	50000	100000	1.00 UJ	1.00 U	R	1.0 U	1.0 U	1.00 U	1.00 U	R	1.0 U	1.0 U	1.00 U	1.00 U	R	1.0 U	1.0 U
Bromomethane	10	7	800	8000	2.00 U	2.00 U	1.0 U	1.0 U	2.0 U	2.00 U	2.00 U	1.0 U	1.0 U	2.0 U	2.00 U	2.00 U	1.0 U	1.0 U	2.0 U
Carbon Disulfide	NE	NE	NE	NE	2.00 U	2.00 U	5.0 U	5.0 U	2.0 U	2.00 U	2.00 U	5.0 U	5.0 U	2.0 U	2.00 U	2.00 U	5.0 U	5.0 U	2.0 U
Carbon Tetrachloride	5	2	5000	50000	1.00 UJ	1.00 U	1.0 U	1.0 U	1.0 UJ	1.00 U	1.00 U	1.0 U	1.0 U	1.0 UJ	1.00 U	1.00 U	1.0 U	1.0 U	1.0 UJ
Chlorobenzene	100	200	1000	10000	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U
Chloroethane	NE	NE	NE	NE	2.00 U	2.00 U	1.0 U	1.0 UJ	2.0 U	2.00 U	2.00 U	1.0 U	1.0 UJ	2.0 U	2.00 U	2.00 U	1.0 U	1.0 UJ	2.0 U
Chloroform	70	50	20000	100000	1.00 U	1.00 U	1.0 U	1.0 U	**1.9**	1.00 U	1.00 U	1.0 U	1.0 U	**1.3**	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U
Chloromethane	NE	NE	NE	NE	2.00 U	2.00 U	1.0 U	1.0 U	2.0 U	2.00 UJ	2.00 U	1.0 U	1.0 U	2.0 U	2.00 UJ	2.00 U	1.0 U	1.0 U	2.0 U
cis-1,2-Dichloroethene	**70**	**20**	50000	100000	**2.22**	**3.75**	**4.7**	**4.6**	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U
cis-1,3-Dichloropropene	NE	NE	NE	NE	0.50 U	0.50 U	0.40 U	0.40 U	0.5 UJ	0.50 U	0.50 U	0.40 U	0.40 U	0.5 UJ	0.50 U	0.50 U	0.40 U	0.40 U	0.5 UJ
Cymene	NE	NE	NE	NE	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U
Dibromochloromethane	2	20	50000	100000	0.50 UJ	0.50 U	0.50 UJ	0.50 U	**0.7**	0.50 U	0.50 U	0.50 U	0.50 U	**0.6**	0.50 U	0.50 U	0.50 U	0.50 U	0.5 U
Dibromomethane	NE	NE	NE	NE	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U
Dichlorodifluoromethane (CFC-12)	NE	NE	NE	NE	2.00 U	2.00 U	1.0 U	1.0 U	2.0 U	2.00 U	2.00 U	1.0 U	1.0 U	2.0 U	2.00 U	2.00 U	1.0 U	1.0 U	2.0 U
Diethyl Ether	NE	NE	NE	NE	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U
Diisopropyl Ether	NE	NE	NE	NE	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U
Ethyl Tertiary-Butyl Ether	NE	NE	NE	NE	1.00 UJ	1.00 U	1.0 U	1.0 U	1.0 UJ	1.00 U	1.00 U	1.0 U	1.0 U	1.0 UJ	1.00 U	1.00 U	1.0 U	1.0 U	1.0 UJ
Ethylbenzene	700	20000	5000	100000	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U
Freon TF (Chlorinated fluorocarbon)	NE	NE	NE	NE	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U
Hexachloro-1,3-Butadiene	0.6	50	3000	3000	0.50 U	0.50 U	0.40 U	0.40 U	0.5 U	0.50 U	0.50 U	0.40 U	0.40 U	0.5 U	0.50 U	0.50 U	0.40 U	0.40 U	0.5 U
Isopropylbenzene	NE	NE	NE	NE	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U
M, P Xylenes	10000	3000	5000	100000	2.00 U	2.00 U	1.0 U	1.0 U	2.0 U	2.00 U	2.00 U	1.0 U	1.0 U	2.0 U	2.00 U	2.00 U	1.0 U	1.0 U	2.0 U
Methyl Tert-Butyl Ether	NE	NE	NE	100000	1.00 UJ	1.00 U	1.0 U	1.0 U	1.0 UJ	1.00 U	1.00 U	1.0 U	1.0 U	1.0 UJ	1.00 U	1.00 U	1.0 U	1.0 U	1.0 UJ
Methylene Chloride	5	2000	50000	100000	2.00 U	2.00 U	1.0 U	1.0 U	2.0 U	2.00 U	2.00 U	1.0 UJ	1.0 U	2.0 U	2.00 U	2.00 U	1.0 UJ	1.0 U	2.0 U
Naphthalene	140	700	20000	100000	1.00 U	2.00 U	1.0 U	1.0 U	1.0 U	1.00 U	2.00 U	1.0 U	1.0 U	1.0 U	1.00 U	2.00 U	1.0 U	1.0 U	1.0 U
N-Butylbenzene	NE	NE	NE	NE	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U
N-Propylbenzene	NE	NE	NE	NE	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U
o-Xylene	10000	3000	5000	100000	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U
Styrene	100	100	6000	60000	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U
Tert-Butylbenzene	NE	NE	NE	NE	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U
Tertiary-Amyl Methyl Ether	NE	NE	NE	NE	1.00 UJ	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U
Tetrachloroethene	**5**	**50**	**30000**	100000	**2.36**	**1.04**	1.0 U	R	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U
Tetrahydrofuran	NE	NE	NE	NE	2.00 U	2.00 U	2.5 U	2.5 U	2.0 U	2.00 U	2.00 U	**15**	2.5 U	**3.4**	**2.07**	2.00 U	**30**	2.5 U	**5.8**
Toluene	**1000**	50000	40000	100000	**1.48**	1.00 U	1.0 U	1.0 U	**238**	**1.13**	1.00 U	1.0 U	1.0 U	**204**	1.00 U	**3.57**	1.0 U	1.0 U	**97.0**
Trans-1,2-Dichloroethene	**100**	**80**	50000	100000	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U
Trans-1,3-Dichloropropene	NE	NE	NE	NE	0.50 UJ	0.50 U	0.40 U	0.40 U	0.5 UJ	0.50 U	0.50 U	0.40 U	0.40 U	0.5 UJ	0.50 U	0.50 U	0.40 U	0.40 U	0.5 UJ
Trichloroethene	**5**	**5**	**5000**	**50000**	**11.4**	**6.88**	**5.0**	**2.9**	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U
Trichlorofluoromethane	NE	NE	NE	NE	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U
Vinyl Chloride	**2**	**2**	50000	100000	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U
Xylenes (Total)	10000	3000	5000	100000	2.00 U	2.00 U	1.0 U	1.0 U	2.0 U	2.00 U	2.00 U	1.0 U	1.0 U	2.0 U	2.00 U	2.00 U	1.0 U	1.0 U	2.0 U

Notes:

ft = feet

mg/l = miligrams per liter

µg/l = micrograms per liter

NE = not established

U - Non-detect at laboratory detection limit

J = Estimated Value, J+ = biased high, J- = biased low, R

Detects are bolded

Criteria exceedances are highlighted

Table 5-7
Summary of 2016 - 2020 Groundwater Analytical Results for Volatile Organic Compounds
Former GE Facility, 50 Fordham Road, Wilmington, MA

				Location Group:	Transect A (continued)														
				Location ID:	AE110R-4	AE110R-4	AE110R-4	AE110R-4	AE110R-6	AE110R-6	AE110R-6	AE110R-6	AE110R-6	EMW-10D	EMW-10D	EMW-10D	EMW-10D	EMW-10D	EMW-10D
				Sample ID:	7A-AE110R4-101117-	8A-AE110R4-092518-	9A-AE110R4-091319-	0A-AE110R4-091620-	6A-AE110R6-061716-	7A-AE110R6-101117-	8A-AE110R6-092518-	9A-AE110R6-091319-	0A-AE110R6-091620-	6A-EMW10D-061316-	7A-EMW10D-101117-	7A-EMW10D-101117-	8A-EMW10D-092018-	9A-EMW10D-093019-	0A-EMW10D-091120-
				Sample Date:	10/11/2017	9/25/2018	9/13/2019	9/16/2020	6/17/2016	10/11/2017	9/25/2018	9/13/2019	9/16/2020	6/13/2016	10/11/2017	10/11/2017	9/20/2018	9/30/2019	9/11/2020
				Sample Type:	N	N	N	N	N	N	N	N	N	N	N	FD	N	N	N
				Depth Interval:	158 - 168 ft	158 - 168 ft	158-168 ft	158 - 168 ft	190 - 200 ft	190 - 200 ft	190 - 200 ft	190-200 ft	190 - 200 ft	19 - 29 ft	19 - 29 ft	19 - 29 ft	19 - 29 ft	19-29 ft	19 - 29 ft
Analyte	**MCP Method 1 GW-1 Stds**	**MCP Method 1 GW-2 Stds**	**MCP Method 1 GW-3 Stds**	**Upper Concentration Limit (UCL)**															
Volatile Organic Compounds (µg/l)																			
1,1,1,2-Tetrachloroethane	5	10	50000	100000	1.00 U	1.00 U	1.0 U	1.0 U	1.0 UJ	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 UJ	1.0 U	1.0 U
1,1,1-Trichloroethane	**200**	4000	20000	100000	1.00 U	1.00 U	1.0 U	1.0 U	1.0 UJ	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U
1,1,2,2-Tetrachloroethane	2	9	50000	100000	0.50 U	0.50 U	0.50 U	0.50 U	0.5 U	0.50 U	0.50 U	0.50 U	0.50 U	0.5 U	0.50 U	0.50 U	0.50 U	R	0.50 U
1,1,2-Trichloroethane	5	900	50000	100000	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U
1,1-Dichloroethane	**70**	2000	20000	100000	1.00 U	1.00 U	1.0 U	1.0 U	1.0 UJ	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 UJ	1.0 U	**1.4**
1,1-Dichloroethylene	**7**	**80**	30000	100000	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U
1,1-Dichloropropene	NE	NE	NE	NE	1.00 U	1.00 UJ	1.0 U	1.0 U	1.0 U	1.00 U	1.00 UJ	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U
1,2,3-Trichlorobenzene	NE	NE	NE	NE	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U
1,2,3-Trichloropropane	NE	NE	NE	NE	1.00 U	1.00 U	0.50 U	0.50 U	1.0 U	1.00 U	1.00 U	0.50 U	0.50 U	1.0 U	1.00 U	1.00 U	1.00 U	0.50 U	0.50 U
1,2,4-Trichlorobenzene	70	200	50000	100000	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U
1,2,4-Trimethylbenzene	NE	NE	NE	NE	1.00 U	1.00 U	1.0 U	1.0 U	1.0 UJ	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U
1,2-Dibromo-3-Chloropropane (DBC	NE	NE	NE	NE	2.00 U	2.00 U	R	0.50 U	2.0 U	2.00 U	2.00 U	R	0.50 U	2.0 U	2.00 U	2.00 U	2.00 UJ	R	0.50 UJ
1,2-Dibromoethane	0.02	2	50000	100000	0.50 U	0.50 U	0.50 U	0.50 U	0.5 U	0.50 U	0.50 U	0.50 U	0.50 U	0.5 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U
1,2-Dichlorobenzene	600	8000	2000	80000	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U
1,2-Dichloroethane	5	5	20000	100000	1.00 U	1.00 U	0.60 U	0.60 U	1.0 U	1.00 U	1.00 U	0.60 U	0.60 U	1.0 U	1.00 U	1.00 U	1.00 U	0.60 U	0.60 U
1,2-Dichloropropane	5	3	50000	100000	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U
1,3,5-Trimethylbenzene	NE	NE	NE	NE	1.00 U	1.00 U	1.0 U	1.0 U	1.0 UJ	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U
1,3-Dichlorobenzene	100	6000	50000	100000	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U
1,3-Dichloropropane	NE	NE	NE	NE	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U
1,4-Dichlorobenzene	5	60	8000	80000	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U
1,4-Dioxane	**0.3**	6000	50000	100000	20.0 U	20.0 UJ	40 U	100 U	NS	20.0 U	20.0 UJ	40 U	NS	20.0 U	20.0 U	20.0 U	20.0 UJ	40 U	100 U
2,2-Dichloropropane	NE	NE	NE	NE	1.00 U	1.00 U	1.0 U	1.0 U	1.0 UJ	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 UJ	1.0 U	1.0 U
2-Butanone	4000	50000	50000	100000	**2.49**	2.00 U	R	5.0 U	**36.6 J+**	**12.2**	**2.71**	R	5.0 U	10.0 U	2.00 U	2.00 U	2.00 U	R	5.0 U
2-Chlorotoluene	NE	NE	NE	NE	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U
2-Hexanone	NE	NE	NE	NE	2.00 U	2.00 UJ	5.0 U	5.0 U	10.0 U	2.00 U	2.00 UJ	5.0 U	5.0 U	10.0 U	2.00 U	2.00 U	2.00 U	R	5.0 U
2-Phenylbutane	NE	NE	NE	NE	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U
4-Chlorotoluene	NE	NE	NE	NE	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U
4-Methyl-2-Pentanone	350	50000	50000	100000	2.00 U	2.00 U	5.0 U	5.0 U	10.0 U	2.00 U	2.00 U	5.0 U	5.0 U	10.0 U	2.00 U	2.00 U	2.00 U	R	5.0 U
Acetone	6300	50000	50000	100000	10.0 U	10.0 U	R	25 U	10.0 U	10.0 U	**31.8**	R	25 U	10.0 U	10.0 U	10.0 U	10.0 UJ	R	R
Benzene	5	1000	10000	100000	1.00 U	1.00 U	0.70 U	0.70 U	1.0 U	1.00 U	1.00 U	0.70 U	0.70 U	1.0 U	1.00 U	1.00 U	1.00 U	0.70 U	0.70 U
Bromobenzene	NE	NE	NE	NE	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U
Bromochloromethane	NE	NE	NE	NE	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U
Bromodichloromethane	3	6	50000	100000	0.50 U	0.50 U	0.50 U	0.50 U	0.5 U	0.50 U	0.50 U	0.50 U	0.50 U	0.5 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U
Bromoform	4	700	50000	100000	1.00 U	1.00 U	R	1.0 U	1.0 U	1.00 U	1.00 U	R	1.0 U	1.0 U	1.00 U	1.00 U	1.00 UJ	1.0 U	1.0 UJ
Bromomethane	10	7	800	8000	2.00 UJ	2.00 U	1.0 U	1.0 U	2.0 U	2.00 UJ	2.00 U	1.0 U	1.0 U	2.0 U	2.00 UJ	2.00 UJ	2.00 U	1.0 UJ	1.0 UJ
Carbon Disulfide	NE	NE	NE	NE	2.00 U	2.00 U	5.0 U	5.0 U	2.0 U	2.00 U	2.00 U	5.0 U	5.0 U	2.0 U	2.00 U	2.00 U	2.00 U	5.0 U	5.0 U
Carbon Tetrachloride	5	2	5000	50000	1.00 U	1.00 U	1.0 U	1.0 U	1.0 UJ	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 UJ	1.0 U	1.0 U
Chlorobenzene	100	200	1000	10000	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U
Chloroethane	NE	NE	NE	NE	2.00 U	2.00 U	1.0 U	1.0 UJ	2.0 U	2.00 U	2.00 U	1.0 U	1.0 UJ	2.0 U	2.00 U	2.00 U	2.00 U	1.0 U	1.0 UJ
Chloroform	70	50	20000	100000	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U
Chloromethane	NE	NE	NE	NE	2.00 UJ	2.00 U	1.0 U	1.0 U	2.0 U	2.00 UJ	2.00 U	1.0 U	1.0 U	2.0 U	2.00 UJ	2.00 UJ	2.00 UJ	1.0 U	1.0 U
cis-1,2-Dichloroethene	**70**	**20**	50000	100000	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	**3.99**	**1.5**	**1.5**	**9.8**	**17.9**	**18.5**	**15.0**	**16**	**21**
cis-1,3-Dichloropropene	NE	NE	NE	NE	0.50 U	0.50 U	0.40 U	0.40 U	0.5 UJ	0.50 U	0.50 U	0.40 U	0.40 U	0.5 U	0.50 U	0.50 U	0.50 U	0.40 U	0.40 U
Cymene	NE	NE	NE	NE	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U
Dibromochloromethane	2	20	50000	100000	0.50 U	0.50 U	0.50 U	0.50 U	0.5 U	0.50 U	0.50 U	0.50 U	0.50 U	0.5 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U
Dibromomethane	NE	NE	NE	NE	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U
Dichlorodifluoromethane (CFC-12)	NE	NE	NE	NE	2.00 U	2.00 U	1.0 U	1.0 U	2.0 U	2.00 U	2.00 U	1.0 U	1.0 U	2.0 U	2.00 U	2.00 U	2.00 U	1.0 U	1.0 U
Diethyl Ether	NE	NE	NE	NE	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U
Diisopropyl Ether	NE	NE	NE	NE	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U
Ethyl Tertiary-Butyl Ether	NE	NE	NE	NE	1.00 U	1.00 U	1.0 U	1.0 U	1.0 UJ	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U
Ethylbenzene	700	20000	5000	100000	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U
Freon TF (Chlorinated fluorocarbon)	NE	NE	NE	NE	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U
Hexachloro-1,3-Butadiene	0.6	50	3000	3000	0.50 U	0.50 U	0.40 U	0.40 U	0.5 U	0.50 U	0.50 U	0.40 U	0.40 U	0.5 U	0.50 U	0.50 U	0.50 U	0.40 U	0.40 U
Isopropylbenzene	NE	NE	NE	NE	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U
M, P Xylenes	10000	3000	5000	100000	2.00 U	2.00 U	1.0 U	1.0 U	2.0 U	2.00 U	2.00 U	1.0 U	1.0 U	2.0 U	2.00 U	2.00 U	2.00 U	1.0 U	1.0 U
Methyl Tert-Butyl Ether	NE	NE	NE	100000	1.00 U	1.00 U	1.0 U	1.0 U	1.0 UJ	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U
Methylene Chloride	5	2000	50000	100000	2.00 U	2.00 U	1.0 UJ	1.0 U	2.0 U	2.00 U	2.00 U	1.0 UJ	1.0 U	2.0 U	2.00 U	2.00 U	2.00 U	1.0 U	1.0 U
Naphthalene	140	700	20000	100000	1.00 U	2.00 U	1.0 U	1.0 U	1.0 U	1.00 U	2.00 U	1.0 U	1.0 U	1.0 UJ	1.00 U	1.00 U	2.00 U	1.0 U	1.0 U
N-Butylbenzene	NE	NE	NE	NE	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U
N-Propylbenzene	NE	NE	NE	NE	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U
o-Xylene	10000	3000	5000	100000	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U
Styrene	100	100	6000	60000	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U
Tert-Butylbenzene	NE	NE	NE	NE	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	**1.1**
Tertiary-Amyl Methyl Ether	NE	NE	NE	NE	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U
Tetrachloroethene	**5**	**50**	**30000**	100000	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	**2.61**	1.0 U	1.0 U	**9.5**	**71.4**	**71.2**	**76.1**	**99**	**110 J+**
Tetrahydrofuran	NE	NE	NE	NE	2.00 U	2.00 U	**15**	2.5 U	**6.7**	2.00 U	2.00 U	**9.1**	2.5 U	2.0 U	2.00 U	2.00 U	2.00 U	R	2.5 U
Toluene	**1000**	50000	40000	100000	1.00 U	1.00 U	1.0 U	1.0 U	**89.8**	**1.28**	**1.59**	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U
Trans-1,2-Dichloroethene	**100**	**80**	50000	100000	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U
Trans-1,3-Dichloropropene	NE	NE	NE	NE	0.50 U	0.50 U	0.40 U	0.40 U	0.5 UJ	0.50 U	0.50 U	0.40 U	0.40 U	0.5 U	0.50 U	0.50 U	0.50 UJ	0.40 U	0.40 U
Trichloroethene	**5**	**5**	**5000**	**50000**	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	**10.1**	1.0 U	1.0 U	**12.5**	**42.3**	**42.6**	**34.8**	**28**	**36**
Trichlorofluoromethane	NE	NE	NE	NE	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U
Vinyl Chloride	**2**	**2**	50000	100000	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	**1.78**	**1.70**	**1.75**	**2.1**	**5.7**
Xylenes (Total)	10000	3000	5000	100000	2.00 U	2.00 U	1.0 U	1.0 U	2.0 U	2.00 U	2.00 U	1.0 U	1.0 U	2.0 U	2.00 U	2.00 U	2.00 U	1.0 U	1.0 U

Notes:

ft = feet

mg/l = miligrams per liter

µg/l = micrograms per liter

NE = not established

U - Non-detect at laboratory detection limit

J = Estimated Value, J+ = biased high, J- = biased low, R

Detects are bolded

Criteria exceedances are highlighted

Table 5-7
Summary of 2016 - 2020 Groundwater Analytical Results for Volatile Organic Compounds
Former GE Facility, 50 Fordham Road, Wilmington, MA

				Location Group:	Transect A (continued)													
				Location ID:	EMW-10R	EMW-10R	EMW-10R	EMW-10R	EMW-10R	EMW-10R	EMW-11D	EMW-11D	EMW-11D	EMW-11D	EMW-11D	EMW-11R1	EMW-11R1	EMW-11R1	EMW-11R1
				Sample ID:	6A-EMW10R-061316-	7A-EMW10R-101117-	8A-EMW10R-092018-	8A-EMW10R-092018-	9A-EMW10R-093019-	0A-EMW10R-091120-	6A-EMW11D-061316-	7A-EMW11D-101117-	8A-EMW11D-092018-	9A-EMW11D-091919-	0A-EMW11D-091120-	6A-EMW11R1-061316	7A-EMW11R1-101117	8A-EMW11R1-092418	9A-EMW11R1-091719-
				Sample Date:	6/13/2016	10/11/2017	9/20/2018	9/20/2018	9/30/2019	9/11/2020	6/13/2016	10/11/2017	9/20/2018	9/19/2019	9/11/2020	6/13/2016	10/11/2017	9/24/2018	9/17/2019
				Sample Type:	N	N	N	FD	N	N	N	N	N	N	N	N	N	N	N
				Depth Interval:	42 - 52 ft	42 - 52 ft	42 - 52 ft	42 - 52 ft	42-52 ft	42 - 52 ft	22 - 32 ft	22 - 32 ft	22 - 32 ft	22-32 ft	22 - 32 ft	79 - 89 ft	79 - 89 ft	79 - 89 ft	79-89 ft
Analyte	**MCP Method 1 GW-1 Stds**	**MCP Method 1 GW-2 Stds**	**MCP Method 1 GW-3 Stds**	**Upper Concentration Limit (UCL)**															
Volatile Organic Compounds (µg/l)																			
1,1,1,2-Tetrachloroethane	5	10	50000	100000	1.0 U	1.00 U	1.00 UJ	1.00 UJ	1.0 U	1.0 U	1.0 U	1.00 U	1.00 UJ	1.0 U	1.0 U	25.0 U	50.0 U	1.00 U	10 U
1,1,1-Trichloroethane	**200**	4000	20000	100000	1.0 U	1.00 U	1.00 UJ	1.00 UJ	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	25.0 U	50.0 U	1.00 U	20 U
1,1,2,2-Tetrachloroethane	2	9	50000	100000	0.5 U	0.50 U	0.50 U	0.50 U	R	0.50 U	0.5 U	0.50 U	0.50 U	0.50 U	0.50 U	12.5 U	25.0 U	0.50 U	R
1,1,2-Trichloroethane	5	900	50000	100000	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	25.0 U	50.0 U	1.00 U	10 U
1,1-Dichloroethane	**70**	2000	20000	100000	**5.5**	**8.23**	**4.51 J**	**4.85 J**	**5.6**	**8.5**	**3.4**	**1.41**	1.00 UJ	1.0 U	1.0 U	**50.0**	**54.5**	**95.5 J**	**64**
1,1-Dichloroethylene	**7**	**80**	30000	100000	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	**1.1**	1.00 U	1.00 U	1.0 U	1.0 U	25.0 U	50.0 U	**26.5 J**	**18**
1,1-Dichloropropene	NE	NE	NE	NE	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	25.0 U	50.0 U	1.00 U	20 U
1,2,3-Trichlorobenzene	NE	NE	NE	NE	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	25.0 U	50.0 U	1.00 U	10 U
1,2,3-Trichloropropane	NE	NE	NE	NE	1.0 U	1.00 U	1.00 U	1.00 U	0.50 U	0.50 U	1.0 U	1.00 U	1.00 U	0.50 U	0.50 U	25.0 U	50.0 U	1.00 U	10 U
1,2,4-Trichlorobenzene	70	200	50000	100000	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	25.0 U	50.0 U	1.00 U	20 U
1,2,4-Trimethylbenzene	NE	NE	NE	NE	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	25.0 U	50.0 U	1.00 U	20 U
1,2-Dibromo-3-Chloropropane (DBC	NE	NE	NE	NE	2.0 U	2.00 U	2.00 UJ	2.00 UJ	R	0.50 UJ	2.0 U	2.00 U	2.00 UJ	R	0.50 UJ	50.0 U	100 U	2.00 U	R
1,2-Dibromoethane	0.02	2	50000	100000	0.5 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.5 U	0.50 U	0.50 U	0.50 U	0.50 U	12.5 U	25.0 U	0.50 UJ	10 U
1,2-Dichlorobenzene	600	8000	2000	80000	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	25.0 U	50.0 U	1.00 U	20 U
1,2-Dichloroethane	5	5	20000	100000	1.0 U	1.00 U	1.00 U	1.00 U	0.60 U	0.60 U	1.0 U	1.00 U	1.00 U	0.60 U	0.60 U	25.0 U	50.0 U	1.00 UJ	10 U
1,2-Dichloropropane	5	3	50000	100000	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	25.0 U	50.0 U	1.00 UJ	10 U
1,3,5-Trimethylbenzene	NE	NE	NE	NE	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	25.0 U	50.0 U	1.00 U	20 U
1,3-Dichlorobenzene	100	6000	50000	100000	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	25.0 U	50.0 U	1.00 U	20 U
1,3-Dichloropropane	NE	NE	NE	NE	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	25.0 U	50.0 U	1.00 UJ	20 U
1,4-Dichlorobenzene	5	60	8000	80000	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	25.0 U	50.0 U	1.00 U	10 U
1,4-Dioxane	**0.3**	6000	50000	100000	20.0 U	20.0 U	20.0 UJ	20.0 UJ	40 U	100 U	20.0 U	20.0 U	20.0 UJ	40 U	100 U	500 U	1000 U	20.0 U	800 U
2,2-Dichloropropane	NE	NE	NE	NE	1.0 U	1.00 U	1.00 UJ	1.00 UJ	1.0 U	1.0 U	1.0 U	1.00 U	1.00 UJ	1.0 U	1.0 U	25.0 U	50.0 U	1.00 UJ	20 U
2-Butanone	4000	50000	50000	100000	10.0 U	2.00 U	2.00 UJ	2.00 UJ	R	5.0 U	10.0 U	2.00 U	2.00 U	R	5.0 U	250 U	100 U	2.00 U	R
2-Chlorotoluene	NE	NE	NE	NE	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	25.0 U	50.0 U	1.00 U	20 U
2-Hexanone	NE	NE	NE	NE	10.0 U	2.00 U	2.00 UJ	2.00 UJ	R	5.0 U	10.0 U	2.00 U	2.00 U	5.0 U	5.0 U	250 U	100 U	2.00 U	R
2-Phenylbutane	NE	NE	NE	NE	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	25.0 U	50.0 U	1.00 U	20 U
4-Chlorotoluene	NE	NE	NE	NE	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	25.0 U	50.0 U	1.00 U	20 U
4-Methyl-2-Pentanone	350	50000	50000	100000	10.0 U	2.00 U	2.00 UJ	2.00 UJ	R	5.0 U	10.0 U	2.00 U	2.00 U	5.0 U	5.0 U	250 U	100 U	2.00 UJ	R
Acetone	6300	50000	50000	100000	10.0 U	10.0 U	10.0 UJ	10.0 UJ	R	25 UJ	10.0 U	10.0 U	10.0 UJ	R	R	250 U	500 U	10.0 U	R
Benzene	5	1000	10000	100000	1.0 U	1.00 U	1.00 U	1.00 U	0.70 U	0.70 U	1.0 U	1.00 U	1.00 U	0.70 U	0.70 U	25.0 U	50.0 U	1.00 U	10 U
Bromobenzene	NE	NE	NE	NE	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	25.0 U	50.0 U	1.00 U	20 U
Bromochloromethane	NE	NE	NE	NE	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	25.0 U	50.0 U	1.00 UJ	20 U
Bromodichloromethane	3	6	50000	100000	0.5 U	0.50 U	0.50 UJ	0.50 UJ	0.50 U	0.50 U	0.5 U	0.50 U	0.50 U	0.50 U	0.50 U	12.5 U	25.0 U	0.50 U	10 U
Bromoform	4	700	50000	100000	1.0 U	1.00 U	1.00 UJ	1.00 UJ	1.0 U	1.0 U	1.0 U	1.00 U	1.00 UJ	R	1.0 UJ	25.0 U	50.0 U	1.00 U	10 U
Bromomethane	10	7	800	8000	2.0 U	2.00 UJ	2.00 UJ	2.00 UJ	R	1.0 UJ	2.0 U	2.00 U	2.00 U	1.0 U	1.0 UJ	50.0 U	100 U	2.00 U	10 UJ
Carbon Disulfide	NE	NE	NE	NE	2.0 U	2.00 U	2.00 UJ	2.00 UJ	5.0 U	5.0 U	2.0 U	2.00 U	2.00 U	5.0 U	5.0 U	50.0 U	100 U	2.00 UJ	100 U
Carbon Tetrachloride	5	2	5000	50000	1.0 U	1.00 U	1.00 UJ	1.00 UJ	1.0 U	1.0 U	1.0 U	1.00 U	1.00 UJ	1.0 U	1.0 U	25.0 U	50.0 U	1.00 U	10 U
Chlorobenzene	100	200	1000	10000	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	25.0 U	50.0 U	1.00 U	20 U
Chloroethane	NE	NE	NE	NE	2.0 U	2.00 U	2.00 U	2.00 U	1.0 U	1.0 UJ	2.0 U	2.00 U	2.00 U	1.0 U	1.0 UJ	50.0 U	100 U	2.00 UJ	20 U
Chloroform	70	50	20000	100000	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	25.0 U	50.0 U	1.00 UJ	20 U
Chloromethane	NE	NE	NE	NE	2.0 U	2.00 UJ	2.00 UJ	2.00 UJ	1.0 U	1.0 U	2.0 U	2.00 U	2.00 UJ	1.0 U	1.0 U	50.0 U	100 U	2.00 U	20 U
cis-1,2-Dichloroethene	**70**	**20**	50000	100000	**37.2**	**56.4**	**38.4**	**41.8**	**29**	**56**	**75.1**	**22.4**	**13.1**	**4.6**	**5.3**	**234**	**330**	**609**	**420**
cis-1,3-Dichloropropene	NE	NE	NE	NE	0.5 U	0.50 U	0.50 UJ	0.50 UJ	0.40 U	0.40 U	0.5 U	0.50 U	0.50 U	0.40 U	0.40 U	12.5 U	25.0 U	0.50 U	10 U
Cymene	NE	NE	NE	NE	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	25.0 U	50.0 U	1.00 U	20 U
Dibromochloromethane	2	20	50000	100000	0.5 U	0.50 U	0.50 UJ	0.50 UJ	0.50 U	0.50 U	0.5 U	0.50 U	0.50 U	0.50 U	0.50 U	12.5 U	25.0 U	0.50 U	10 U
Dibromomethane	NE	NE	NE	NE	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	25.0 U	50.0 U	1.00 UJ	10 U
Dichlorodifluoromethane (CFC-12)	NE	NE	NE	NE	2.0 U	2.00 U	2.00 UJ	2.00 UJ	1.0 U	1.0 U	2.0 U	2.00 U	2.00 U	1.0 U	1.0 U	50.0 U	100 U	**3.27 J**	20 U
Diethyl Ether	NE	NE	NE	NE	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	25.0 U	50.0 U	1.00 UJ	20 U
Diisopropyl Ether	NE	NE	NE	NE	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	25.0 U	50.0 U	1.00 UJ	20 U
Ethyl Tertiary-Butyl Ether	NE	NE	NE	NE	1.0 U	1.00 U	1.00 UJ	1.00 UJ	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	25.0 U	50.0 U	1.00 UJ	20 U
Ethylbenzene	700	20000	5000	100000	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	25.0 U	50.0 U	1.00 U	20 U
Freon TF (Chlorinated fluorocarbon)	NE	NE	NE	NE	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	25.0 U	50.0 U	1.00 UJ	20 U
Hexachloro-1,3-Butadiene	0.6	50	3000	3000	0.5 U	0.50 U	0.50 U	0.50 U	0.40 U	0.40 U	0.5 U	0.50 U	0.50 U	0.40 U	0.40 U	12.5 U	25.0 U	0.50 U	10 U
Isopropylbenzene	NE	NE	NE	NE	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	25.0 U	50.0 U	1.00 U	20 U
M, P Xylenes	10000	3000	5000	100000	2.0 U	2.00 U	2.00 U	2.00 U	1.0 U	1.0 U	2.0 U	2.00 U	2.00 U	1.0 U	1.0 U	50.0 U	100 U	2.00 U	20 U
Methyl Tert-Butyl Ether	NE	NE	NE	100000	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	25.0 U	50.0 U	1.00 UJ	20 U
Methylene Chloride	5	2000	50000	100000	2.0 U	2.00 U	2.00 U	2.00 U	1.0 U	1.0 UJ	2.0 U	2.00 UJ	2.00 U	1.0 U	1.0 U	50.0 U	100 UJ	2.00 UJ	10 U
Naphthalene	140	700	20000	100000	1.0 UJ	1.00 U	2.00 UJ	2.00 UJ	1.0 U	1.0 U	1.0 UJ	1.00 U	2.00 U	1.0 U	1.0 U	25.0 UJ	50.0 U	2.00 UJ	20 U
N-Butylbenzene	NE	NE	NE	NE	1.0 U	1.00 U	1.00 UJ	1.00 UJ	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	25.0 U	50.0 U	1.00 U	20 U
N-Propylbenzene	NE	NE	NE	NE	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	25.0 U	50.0 U	1.00 U	20 U
o-Xylene	10000	3000	5000	100000	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	25.0 U	50.0 U	1.00 U	20 U
Styrene	100	100	6000	60000	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	25.0 U	50.0 U	1.00 U	20 U
Tert-Butylbenzene	NE	NE	NE	NE	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	**2.5**	**2.94**	1.00 U	1.0 U	1.0 U	25.0 U	50.0 U	1.00 U	20 U
Tertiary-Amyl Methyl Ether	NE	NE	NE	NE	1.0 U	1.00 U	1.00 UJ	1.00 UJ	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	25.0 U	50.0 U	1.00 U	20 U
Tetrachloroethene	**5**	**50**	**30000**	100000	**2.0**	**24.9**	**9.29**	**11.5**	**8.0**	**34 J+**	**7.5**	**1.26**	**1.92**	1.0 U	R	**1240**	**1450**	**1250**	**2400**
Tetrahydrofuran	NE	NE	NE	NE	2.0 U	2.00 U	2.00 UJ	2.00 UJ	R	2.5 U	2.0 U	2.00 U	2.00 U	2.5 U	2.5 U	50.0 U	100 U	2.00 U	R
Toluene	**1000**	50000	40000	100000	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	25.0 U	50.0 U	1.00 U	20 U
Trans-1,2-Dichloroethene	**100**	**80**	50000	100000	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	**1.3**	1.00 U	1.00 U	1.0 U	1.0 U	25.0 U	50.0 U	**15.3 J**	20 U
Trans-1,3-Dichloropropene	NE	NE	NE	NE	0.5 U	0.50 U	0.50 UJ	0.50 UJ	0.40 U	0.40 U	0.5 U	0.50 U	0.50 UJ	0.40 U	0.40 U	12.5 U	25.0 U	0.50 U	10 U
Trichloroethene	**5**	**5**	**5000**	**50000**	**5.9**	**63.0**	**29.3**	**34.5**	**23**	**81**	**60.9**	**6.92**	**7.66**	**2.5**	1.0 U	**2780 J+**	**3400**	**3470**	**5300**
Trichlorofluoromethane	NE	NE	NE	NE	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	25.0 U	50.0 U	1.00 UJ	20 U
Vinyl Chloride	**2**	**2**	50000	100000	**4.5**	**6.23**	**12.7 J-**	**14.8 J-**	**17**	**11**	**39.1**	**10.8**	**3.90**	**1.2**	**2.3**	25.0 U	50.0 U	1.00 UJ	**71**
Xylenes (Total)	10000	3000	5000	100000	2.0 U	2.00 U	2.00 U	2.00 U	1.0 U	1.0 U	2.0 U	2.00 U	2.00 U	1.0 U	1.0 U	50.0 U	100 U	2.00 U	20 U

Notes:

ft = feet

mg/l = miligrams per liter

µg/l = micrograms per liter

NE = not established

U - Non-detect at laboratory detection limit

J = Estimated Value, J+ = biased high, J- = biased low, R

Detects are bolded

Criteria exceedances are highlighted

Table 5-7
Summary of 2016 - 2020 Groundwater Analytical Results for Volatile Organic Compounds
Former GE Facility, 50 Fordham Road, Wilmington, MA

					Location Group:	Transect A (continued)											Transect B			
					Location ID:	EMW-11R1	EMW-11R2	EMW-11R2	EMW-11R2	EMW-11R2	EMW-11R2	EMW-11R3	EMW-11R3	EMW-11R3	EMW-11R3	EMW-11R3	AE105D	AE105D	AE105D	AE105D
					Sample ID:	0A-EMW11R1-0921206	A-EMW11R2-0621167	A-EMW11R2-1010178	A-EMW11R2-0924189	A-EMW11R2-0917190	A-EMW11R2-0921206	A-EMW11R3-0613167	A-EMW11R3-1013178	A-EMW11R3-0924189	A-EMW11R3-0917190	A-EMW11R3-0921206	16A-AE105D-062216-1	17A-AE105D-101217-1	18A-AE105D-100318-1	19A-AE105D-091619-1
					Sample Date:	9/21/2020	6/21/2016	10/10/2017	9/24/2018	9/17/2019	9/21/2020	6/13/2016	10/13/2017	9/24/2018	9/17/2019	9/21/2020	6/22/2016	10/12/2017	10/3/2018	9/16/2019
					Sample Type:	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
					Depth Interval:	79 - 89 ft	104 - 114 ft	104 - 114 ft	104 - 114 ft	104-114 ft	104 - 114 ft	158 - 168 ft	158 - 168 ft	158 - 168 ft	158-168 ft	158 - 168 ft	73 - 78 ft	73 - 78 ft	73 - 78 ft	73-78 ft
Analyte	**MCP Method 1 GW-1 Stds**	**MCP Method 1 GW-2 Stds**	**MCP Method 1 GW-3 Stds**	**Upper Concentration Limit (UCL)**																
Volatile Organic Compounds (µg/l)																				
1,1,1,2-Tetrachloroethane	5	10	50000	100000	10 U	200 U	200 UJ	200 U	50 U	50 U	100 U	100 U	100 U	20 U	20 U	1.0 U	1.00 U	1.00 U	1.0 U
1,1,1-Trichloroethane	**200**	4000	20000	100000	20 U	200 U	200 UJ	200 U	100 U	100 U	100 U	100 U	100 U	40 U	40 U	1.0 U	1.00 U	1.00 U	1.0 U
1,1,2,2-Tetrachloroethane	2	9	50000	100000	10 U	100 U	100 U	100 U	R	50 U	50.0 U	50.0 U	50.0 U	R	20 U	0.5 U	0.50 U	0.50 U	0.50 U
1,1,2-Trichloroethane	5	900	50000	100000	10 U	200 U	200 U	200 U	50 U	50 U	100 U	100 U	100 U	20 U	20 U	1.0 U	1.00 U	1.00 U	1.0 U
1,1-Dichloroethane	**70**	2000	20000	100000	**70**	200 U	200 U	200 UJ	**130**	**100**	100 U	100 U	100 U	**100**	**67**	**1.0**	1.00 U	**1.27**	1.0 U
1,1-Dichloroethylene	**7**	**80**	30000	100000	**20**	200 U	200 U	200 UJ	50 U	50 U	100 U	100 U	100 U	**25**	20 U	**1.1**	1.00 U	**1.07 J**	1.0 U
1,1-Dichloropropene	NE	NE	NE	NE	20 U	200 U	200 U	200 U	100 U	100 U	100 U	100 U	100 U	40 U	40 U	1.0 U	1.00 U	1.00 U	1.0 U
1,2,3-Trichlorobenzene	NE	NE	NE	NE	10 U	200 U	200 U	200 U	50 U	50 U	100 U	100 U	100 U	20 U	20 U	1.0 U	1.00 U	1.00 U	1.0 U
1,2,3-Trichloropropane	NE	NE	NE	NE	10 U	200 U	200 U	200 U	50 U	50 U	100 U	100 U	100 U	20 U	20 U	1.0 U	1.00 U	1.00 U	0.50 U
1,2,4-Trichlorobenzene	70	200	50000	100000	20 U	200 U	200 U	200 U	70 U	70 U	100 U	100 U	100 U	40 U	40 U	1.0 U	1.00 U	1.00 U	1.0 U
1,2,4-Trimethylbenzene	NE	NE	NE	NE	20 U	200 U	200 U	200 U	56 U	56 U	100 U	100 U	100 U	40 U	40 U	1.0 U	1.00 U	1.00 U	1.0 U
1,2-Dibromo-3-Chloropropane (DBC	NE	NE	NE	NE	10 U	400 U	400 UJ	400 U	R	50 U	200 UJ	200 U	200 U	R	20 U	2.0 UJ	2.00 U	2.00 U	R
1,2-Dibromoethane	0.02	2	50000	100000	10 U	100 U	100 U	100 UJ	50 U	50 U	50.0 U	50.0 U	50.0 U	20 U	20 U	0.5 U	0.50 U	0.50 U	0.50 U
1,2-Dichlorobenzene	600	8000	2000	80000	20 U	200 U	200 U	200 U	100 U	100 U	100 U	100 U	100 U	40 U	40 U	1.0 U	1.00 U	1.00 U	1.0 U
1,2-Dichloroethane	5	5	20000	100000	10 U	200 U	200 U	200 UJ	50 U	50 U	100 U	100 U	100 U	20 U	20 U	1.0 U	1.00 U	1.00 U	0.60 U
1,2-Dichloropropane	5	3	50000	100000	10 U	200 U	200 U	200 UJ	50 U	50 U	100 U	100 U	100 U	20 U	20 U	1.0 U	1.00 U	1.00 U	1.0 U
1,3,5-Trimethylbenzene	NE	NE	NE	NE	20 U	200 U	200 U	200 U	60 U	60 U	100 U	100 U	100 U	40 U	40 U	1.0 U	1.00 U	1.00 U	1.0 U
1,3-Dichlorobenzene	100	6000	50000	100000	20 U	200 U	200 U	200 U	50 U	50 U	100 U	100 U	100 U	40 U	40 U	1.0 U	1.00 U	1.00 U	1.0 U
1,3-Dichloropropane	NE	NE	NE	NE	20 U	200 U	200 U	200 UJ	100 U	100 U	100 U	100 U	100 U	40 U	40 U	1.0 U	1.00 U	1.00 U	1.0 U
1,4-Dichlorobenzene	5	60	8000	80000	10 U	200 U	200 U	200 U	50 U	50 U	100 U	100 U	100 U	20 U	20 U	1.0 U	1.00 U	1.00 U	1.0 U
1,4-Dioxane	**0.3**	6000	50000	100000	2000 U	4000 UJ	4000 U	4000 U	4000 U	10000 U	2000 U	2000 U	2000 U	1600 U	4000 U	NS	20.0 U	20.0 U	40 U
2,2-Dichloropropane	NE	NE	NE	NE	20 U	200 U	200 UJ	200 UJ	100 U	100 UJ	100 U	100 U	100 U	40 U	40 U	1.0 UJ	1.00 U	1.00 U	1.0 U
2-Butanone	4000	50000	50000	100000	100 U	2000 U	400 U	400 U	R	500 U	1000 U	200 U	200 UJ	R	200 U	10.0 U	2.00 U	2.00 U	R
2-Chlorotoluene	NE	NE	NE	NE	20 U	200 U	200 U	200 U	100 U	100 U	100 U	100 U	100 U	40 U	40 U	1.0 U	1.00 U	1.00 U	1.0 U
2-Hexanone	NE	NE	NE	NE	100 U	2000 U	400 U	400 U	R	500 U	1000 U	200 U	200 UJ	R	200 U	10.0 UJ	2.00 U	2.00 U	5.0 U
2-Phenylbutane	NE	NE	NE	NE	20 U	200 U	200 U	200 U	100 U	100 U	100 U	100 U	100 U	40 U	40 U	1.0 U	1.00 U	1.00 U	1.0 U
4-Chlorotoluene	NE	NE	NE	NE	20 U	200 U	200 U	200 U	100 U	100 U	100 U	100 U	100 U	40 U	40 U	1.0 U	1.00 U	1.00 U	1.0 U
4-Methyl-2-Pentanone	350	50000	50000	100000	100 U	2000 U	400 U	400 UJ	R	500 U	1000 U	200 U	200 U	R	200 U	10.0 UJ	2.00 U	2.00 U	5.0 U
Acetone	6300	50000	50000	100000	500 U	2000 U	2000 U	2000 U	R	2500 U	1000 UJ	1000 U	1000 UJ	R	1000 U	10.0 UJ	10.0 U	10.0 U	R
Benzene	5	1000	10000	100000	10 U	200 U	200 U	200 U	50 U	50 U	100 U	100 U	100 U	20 U	20 U	1.0 U	1.00 U	1.00 U	0.70 U
Bromobenzene	NE	NE	NE	NE	20 U	200 U	200 U	200 U	62 U	62 U	100 U	100 U	100 U	40 U	40 U	1.0 U	1.00 U	1.00 U	1.0 U
Bromochloromethane	NE	NE	NE	NE	20 U	200 U	200 U	200 UJ	83 U	83 U	100 U	100 U	100 U	40 U	40 U	1.0 U	1.00 U	1.00 U	1.0 U
Bromodichloromethane	3	6	50000	100000	10 U	100 U	100 UJ	100 U	50 U	50 U	50.0 U	50.0 U	50.0 U	20 U	20 U	0.5 U	0.50 U	0.50 U	0.50 U
Bromoform	4	700	50000	100000	10 U	200 U	200 UJ	200 U	50 U	50 U	100 U	100 U	100 U	20 U	20 U	1.0 U	1.00 U	1.00 U	R
Bromomethane	10	7	800	8000	10 U	400 UJ	400 U	400 U	R	50 U	200 U	200 UJ	200 U	R	20 U	2.0 U	2.00 U	2.00 UJ	1.0 U
Carbon Disulfide	NE	NE	NE	NE	100 U	400 U	400 U	400 UJ	500 U	500 U	200 U	200 U	200 U	200 U	200 U	2.0 U	2.00 U	2.00 U	5.0 U
Carbon Tetrachloride	5	2	5000	50000	10 U	200 U	200 UJ	200 U	50 U	50 U	100 U	100 U	100 U	20 U	20 U	1.0 U	1.00 U	1.00 U	1.0 U
Chlorobenzene	100	200	1000	10000	20 U	200 U	200 U	200 U	100 U	100 U	100 U	100 U	100 U	40 U	40 U	1.0 U	1.00 U	1.00 U	1.0 U
Chloroethane	NE	NE	NE	NE	20 UJ	400 U	400 U	400 UJ	100 U	100 UJ	200 U	200 U	200 U	40 U	40 UJ	2.0 U	2.00 U	2.00 U	1.0 U
Chloroform	70	50	20000	100000	20 U	200 U	200 U	200 UJ	50 U	50 U	100 U	100 U	100 U	40 U	40 U	1.0 U	1.00 U	1.00 U	1.0 U
Chloromethane	NE	NE	NE	NE	20 U	400 U	400 U	400 U	100 U	100 U	200 U	200 UJ	200 U	40 U	40 U	2.0 UJ	2.00 U	2.00 U	1.0 U
cis-1,2-Dichloroethene	**70**	**20**	50000	100000	**300**	**844**	**1320**	**1430 J**	**1500**	**750**	**242**	**429**	**432**	**840**	**600**	**50.1 J-**	**32.1**	**40.9**	**29**
cis-1,3-Dichloropropene	NE	NE	NE	NE	10 U	100 U	100 U	100 U	50 U	50 U	50.0 UJ	50.0 U	50.0 U	20 U	20 U	0.5 UJ	0.50 U	0.50 U	0.40 U
Cymene	NE	NE	NE	NE	20 U	200 U	200 U	200 U	100 U	100 U	100 U	100 U	100 U	40 U	40 U	1.0 U	1.00 U	1.00 U	1.0 U
Dibromochloromethane	2	20	50000	100000	10 U	100 U	100 UJ	100 U	50 U	50 U	50.0 U	50.0 U	50.0 U	20 U	20 U	0.5 U	0.50 U	0.50 U	0.50 U
Dibromomethane	NE	NE	NE	NE	10 U	200 U	200 U	200 UJ	50 U	50 U	100 U	100 U	100 U	20 U	20 U	1.0 U	1.00 U	1.00 U	1.0 U
Dichlorodifluoromethane (CFC-12)	NE	NE	NE	NE	20 U	400 U	400 U	400 UJ	100 U	100 U	200 U	200 U	200 U	40 U	40 U	2.0 UJ	2.00 U	2.00 U	1.0 U
Diethyl Ether	NE	NE	NE	NE	20 U	200 U	200 U	200 UJ	100 U	100 U	100 U	100 U	100 U	40 U	40 U	1.0 U	1.00 U	1.00 U	1.0 U
Diisopropyl Ether	NE	NE	NE	NE	20 U	200 U	200 U	200 UJ	100 U	100 U	100 U	100 U	100 U	40 U	40 U	1.0 U	1.00 U	1.00 U	1.0 U
Ethyl Tertiary-Butyl Ether	NE	NE	NE	NE	20 U	200 U	200 UJ	200 UJ	100 U	100 U	100 U	100 U	100 U	40 U	40 U	1.0 UJ	1.00 U	1.00 U	1.0 U
Ethylbenzene	700	20000	5000	100000	20 U	200 U	200 U	200 U	100 U	100 U	100 U	100 U	100 U	40 U	40 U	1.0 U	1.00 U	1.00 U	1.0 U
Freon TF (Chlorinated fluorocarbon)	NE	NE	NE	NE	20 U	200 U	200 U	200 UJ	100 U	100 U	100 U	100 U	100 U	40 U	40 U	1.0 U	1.00 U	1.00 U	1.0 U
Hexachloro-1,3-Butadiene	0.6	50	3000	3000	10 U	100 U	100 U	100 U	50 U	50 U	50.0 U	50.0 U	50.0 U	20 U	20 U	0.5 U	0.50 U	0.50 U	0.40 U
Isopropylbenzene	NE	NE	NE	NE	20 U	200 U	200 U	200 U	100 U	100 U	100 U	100 U	100 U	40 U	40 U	1.0 U	1.00 U	1.00 U	1.0 U
M, P Xylenes	10000	3000	5000	100000	20 U	400 U	400 U	400 U	100 U	100 U	200 U	200 U	200 U	40 U	40 U	2.0 U	2.00 U	2.00 U	1.0 U
Methyl Tert-Butyl Ether	NE	NE	NE	100000	20 U	200 U	200 UJ	200 UJ	70 U	70 U	100 U	100 U	100 U	40 U	40 U	1.0 UJ	**1.83**	**1.81**	**2.6**
Methylene Chloride	5	2000	50000	100000	20 U	400 U	400 U	400 UJ	50 U	100 U	200 U	200 U	200 U	20 U	40 U	2.0 U	2.00 UJ	2.00 U	1.0 UJ
Naphthalene	140	700	20000	100000	20 U	200 UJ	200 U	400 UJ	100 U	100 U	100 UJ	100 U	200 U	40 U	40 U	1.0 U	1.00 U	2.00 UJ	1.0 U
N-Butylbenzene	NE	NE	NE	NE	20 U	200 U	200 U	200 U	100 U	100 U	100 U	100 U	100 U	40 U	40 U	1.0 U	1.00 U	1.00 U	1.0 U
N-Propylbenzene	NE	NE	NE	NE	20 U	200 U	200 U	200 U	100 U	100 U	100 U	100 U	100 U	40 U	40 U	1.0 U	1.00 U	1.00 U	1.0 U
o-Xylene	10000	3000	5000	100000	20 U	200 U	200 U	200 U	100 U	100 U	100 U	100 U	100 U	40 U	40 U	1.0 U	1.00 U	1.00 U	1.0 U
Styrene	100	100	6000	60000	20 U	200 U	200 U	200 U	100 U	100 U	100 U	100 U	100 U	40 U	40 U	1.0 U	1.00 U	1.00 U	1.0 U
Tert-Butylbenzene	NE	NE	NE	NE	20 U	200 U	200 U	200 U	100 U	100 U	100 U	100 U	100 U	40 U	40 U	1.0 U	1.00 U	1.00 U	1.0 U
Tertiary-Amyl Methyl Ether	NE	NE	NE	NE	20 U	200 U	200 UJ	200 U	100 U	100 U	100 U	100 U	100 U	40 U	40 U	1.0 U	1.00 U	1.00 U	1.0 U
Tetrachloroethene	**5**	**50**	**30000**	100000	**2100**	**4390**	**3200**	**4500**	**4200**	**3600 J+**	**3450**	**3180**	**2560**	**3300**	**2300 J+**	1.0 U	1.00 U	1.00 U	1.0 U
Tetrahydrofuran	NE	NE	NE	NE	50 U	400 U	400 U	400 U	R	250 U	200 U	200 U	200 U	R	100 U	2.0 U	2.00 U	2.00 U	2.5 U
Toluene	**1000**	50000	40000	100000	20 U	200 U	200 U	200 U	100 U	100 U	100 U	100 U	100 U	40 U	40 U	1.0 U	1.00 U	1.00 U	1.0 U
Trans-1,2-Dichloroethene	**100**	**80**	50000	100000	20 U	200 U	200 U	200 UJ	80 U	80 U	100 U	100 U	100 U	40 U	40 U	1.0 U	1.00 U	1.00 U	1.0 U
Trans-1,3-Dichloropropene	NE	NE	NE	NE	10 U	100 U	100 UJ	100 U	50 U	50 U	50.0 UJ	50.0 U	50.0 U	20 U	20 U	0.5 UJ	0.50 U	0.50 U	0.40 U
Trichloroethene	**5**	**5**	**5000**	**50000**	**4000**	**8820**	**11500**	**12400**	**11000**	**7100**	**4720**	**4410**	**4040**	**5100**	**3700**	**5.4**	**8.61**	**27.6**	**12**
Trichlorofluoromethane	NE	NE	NE	NE	20 U	200 U	200 U	200 UJ	100 U	100 U	100 U	100 U	100 U	40 U	40 U	1.0 U	1.00 U	1.00 U	1.0 U
Vinyl Chloride	**2**	**2**	50000	100000	**50**	200 UJ	200 U	**234 J**	**140**	**120**	100 UJ	100 U	100 U	20 U	20 U	1.0 U	1.00 U	**1.23**	1.0 U
Xylenes (Total)	10000	3000	5000	100000	20 U	400 U	400 U	400 U	100 U	100 U	200 U	200 U	200 U	40 U	40 U	2.0 U	2.00 U	2.00 U	1.0 U

Notes:

ft = feet

mg/l = miligrams per liter

µg/l = micrograms per liter

NE = not established

U - Non-detect at laboratory detection limit

J = Estimated Value, J+ = biased high, J- = biased low, R

Detects are bolded

Criteria exceedances are highlighted

Table 5-7
Summary of 2016 - 2020 Groundwater Analytical Results for Volatile Organic Compounds
Former GE Facility, 50 Fordham Road, Wilmington, MA

				Location Group:	Transect B (continued)														
				Location ID:	AE105D	AE105R-1	AE105R-1	AE105R-1	AE105R-1	AE105R-1	AE105R-2	AE105R-2	AE105R-2	AE105R-2	AE105R-2	AE105R-4	AE105R-4	AE105R-4	AE105R-4
				Sample ID:	20A-AE105D-091720-1	6A-AE105R1-062016-	7A-AE105R1-101217-	8A-AE105R1-100318-	9A-AE105R1-091619-	0A-AE105R1-091720-	6A-AE105R2-062016-	7A-AE105R2-101217-	8A-AE105R2-100318-	9A-AE105R2-091619-	0A-AE105R2-091720-	6A-AE105R4-062016-	7A-AE105R4-101217-	8A-AE105R4-100318-	9A-AE105R4-091619-
				Sample Date:	9/17/2020	6/20/2016	10/12/2017	10/3/2018	9/16/2019	9/17/2020	6/20/2016	10/12/2017	10/3/2018	9/16/2019	9/17/2020	6/20/2016	10/12/2017	10/3/2018	9/16/2019
				Sample Type:	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
				Depth Interval:	73 - 78 ft	90.5 - 95.5 ft	90.5 - 95.5 ft	90.5 - 95.5 ft	90.5-95.5 ft	90.5 - 95.5 ft	98 - 103 ft	98 - 103 ft	98 - 103 ft	98-103 ft	98 - 103 ft	125 - 130 ft	125 - 130 ft	125 - 130 ft	125-130 ft
Analyte	**MCP Method 1 GW-1 Stds**	**MCP Method 1 GW-2 Stds**	**MCP Method 1 GW-3 Stds**	**Upper Concentration Limit (UCL)**															
Volatile Organic Compounds (µg/l)																			
1,1,1,2-Tetrachloroethane	5	10	50000	100000	1.0 U	5.0 U	5.00 U	5.00 U	1.0 U	1.0 U	5.0 U	5.00 U	5.00 U	1.0 U	1.0 U	5.0 U	5.00 U	5.00 U	2.0 U
1,1,1-Trichloroethane	**200**	4000	20000	100000	1.0 U	5.0 U	5.00 U	5.00 U	1.0 U	1.0 U	5.0 U	5.00 U	5.00 U	1.0 U	1.0 U	5.0 U	5.00 U	5.00 U	2.0 U
1,1,2,2-Tetrachloroethane	2	9	50000	100000	0.50 U	2.5 U	2.50 U	2.50 U	0.50 U	0.50 U	2.5 U	2.50 U	2.50 U	0.50 U	0.50 U	2.5 U	2.50 U	2.50 U	1.0 U
1,1,2-Trichloroethane	5	900	50000	100000	1.0 U	5.0 U	5.00 U	5.00 U	1.0 U	1.0 U	5.0 U	5.00 U	5.00 U	1.0 U	1.0 U	5.0 U	5.00 U	5.00 U	2.0 U
1,1-Dichloroethane	**70**	2000	20000	100000	1.0 U	5.0 U	5.00 U	5.00 U	**3.3**	**3.2**	5.0 U	**5.00**	5.00 U	**3.9**	**3.7**	5.0 U	5.00 U	5.00 U	**3.9**
1,1-Dichloroethylene	**7**	**80**	30000	100000	1.0 U	5.0 U	5.00 U	5.00 U	**2.3**	**2.4**	5.0 U	5.00 U	5.00 U	**2.8**	**2.7**	5.0 U	5.00 U	5.00 U	**2.7**
1,1-Dichloropropene	NE	NE	NE	NE	1.0 U	5.0 U	5.00 U	5.00 U	1.0 U	1.0 U	5.0 U	5.00 U	5.00 U	1.0 U	1.0 U	5.0 U	5.00 U	5.00 U	2.0 U
1,2,3-Trichlorobenzene	NE	NE	NE	NE	1.0 U	5.0 U	5.00 U	5.00 U	1.0 U	1.0 U	5.0 U	5.00 U	5.00 U	1.0 U	1.0 U	5.0 U	5.00 U	5.00 U	2.0 U
1,2,3-Trichloropropane	NE	NE	NE	NE	0.50 U	5.0 U	5.00 U	5.00 U	0.50 U	0.50 U	5.0 U	5.00 U	5.00 U	0.50 U	0.50 U	5.0 U	5.00 U	5.00 U	1.0 U
1,2,4-Trichlorobenzene	70	200	50000	100000	1.0 U	5.0 U	5.00 U	5.00 U	1.0 U	1.0 U	5.0 U	5.00 U	5.00 U	1.0 U	1.0 U	5.0 U	5.00 U	5.00 U	2.0 U
1,2,4-Trimethylbenzene	NE	NE	NE	NE	1.0 U	5.0 U	5.00 U	5.00 U	1.0 U	1.0 U	5.0 U	5.00 U	5.00 U	1.0 U	1.0 U	5.0 U	5.00 U	5.00 U	2.0 U
1,2-Dibromo-3-Chloropropane (DBC	NE	NE	NE	NE	0.50 U	10.0 U	10.0 U	10.0 U	R	0.50 U	10.0 U	10.0 U	10.0 U	R	0.50 U	10.0 U	10.0 U	10.0 U	R
1,2-Dibromoethane	0.02	2	50000	100000	0.50 U	2.5 U	2.50 U	2.50 U	0.50 U	0.50 U	2.5 U	2.50 U	2.50 U	0.50 U	0.50 U	2.5 U	2.50 U	2.50 U	1.0 U
1,2-Dichlorobenzene	600	8000	2000	80000	1.0 U	5.0 U	5.00 U	5.00 U	1.0 U	1.0 U	5.0 U	5.00 U	5.00 U	1.0 U	1.0 U	5.0 U	5.00 U	5.00 U	2.0 U
1,2-Dichloroethane	5	5	20000	100000	0.60 U	5.0 U	5.00 U	5.00 U	0.60 U	0.60 U	5.0 U	5.00 U	5.00 U	0.60 U	0.60 U	5.0 U	5.00 U	5.00 U	1.2 U
1,2-Dichloropropane	5	3	50000	100000	1.0 U	5.0 U	5.00 U	5.00 U	1.0 U	1.0 U	5.0 U	5.00 U	5.00 U	1.0 U	1.0 U	5.0 U	5.00 U	5.00 U	2.0 U
1,3,5-Trimethylbenzene	NE	NE	NE	NE	1.0 U	5.0 U	5.00 U	5.00 U	1.0 U	1.0 U	5.0 U	5.00 U	5.00 U	1.0 U	1.0 U	5.0 U	5.00 U	5.00 U	2.0 U
1,3-Dichlorobenzene	100	6000	50000	100000	1.0 U	5.0 U	5.00 U	5.00 U	1.0 U	1.0 U	5.0 U	5.00 U	5.00 U	1.0 U	1.0 U	5.0 U	5.00 U	5.00 U	2.0 U
1,3-Dichloropropane	NE	NE	NE	NE	1.0 U	5.0 U	5.00 U	5.00 U	1.0 U	1.0 U	5.0 U	5.00 U	5.00 U	1.0 U	1.0 U	5.0 U	5.00 U	5.00 U	2.0 U
1,4-Dichlorobenzene	5	60	8000	80000	1.0 U	5.0 U	5.00 U	5.00 U	1.0 U	1.0 U	5.0 U	5.00 U	5.00 U	1.0 U	1.0 U	5.0 U	5.00 U	5.00 U	2.0 U
1,4-Dioxane	**0.3**	6000	50000	100000	NS	100 U	100 U	100 U	40 U	100 U	100 U	100 U	100 U	40 U	NS	100 U	100 U	100 U	80 U
2,2-Dichloropropane	NE	NE	NE	NE	1.0 UJ	5.0 UJ	5.00 U	5.00 U	1.0 U	1.0 UJ	5.0 UJ	5.00 U	5.00 U	1.0 U	1.0 UJ	5.0 UJ	5.00 U	5.00 U	2.0 U
2-Butanone	4000	50000	50000	100000	5.0 U	50.0 U	10.0 U	10.0 U	R	5.0 U	50.0 U	10.0 U	10.0 U	R	5.0 U	50.0 U	10.0 U	10.0 U	R
2-Chlorotoluene	NE	NE	NE	NE	1.0 U	5.0 U	5.00 U	5.00 U	1.0 U	1.0 U	5.0 U	5.00 U	5.00 U	1.0 U	1.0 U	5.0 U	5.00 U	5.00 U	2.0 U
2-Hexanone	NE	NE	NE	NE	5.0 U	50.0 U	10.0 U	10.0 U	5.0 U	5.0 U	50.0 U	10.0 U	10.0 U	5.0 U	5.0 U	50.0 U	10.0 U	10.0 U	10 U
2-Phenylbutane	NE	NE	NE	NE	1.0 U	5.0 U	5.00 U	5.00 U	1.0 U	1.0 U	5.0 U	5.00 U	5.00 U	1.0 U	1.0 U	5.0 U	5.00 U	5.00 U	2.0 U
4-Chlorotoluene	NE	NE	NE	NE	1.0 U	5.0 U	5.00 U	5.00 U	1.0 U	1.0 U	5.0 U	5.00 U	5.00 U	1.0 U	1.0 U	5.0 U	5.00 U	5.00 U	2.0 U
4-Methyl-2-Pentanone	350	50000	50000	100000	5.0 U	50.0 U	10.0 U	10.0 U	5.0 U	5.0 U	50.0 U	10.0 U	10.0 U	5.0 U	5.0 U	50.0 U	10.0 U	10.0 U	10 U
Acetone	6300	50000	50000	100000	25 U	50.0 U	50.0 U	50.0 U	R	25 U	50.0 U	50.0 U	50.0 U	R	25 U	50.0 U	50.0 U	50.0 U	R
Benzene	5	1000	10000	100000	0.70 U	5.0 U	5.00 U	5.00 U	0.70 U	0.70 U	5.0 U	5.00 U	5.00 U	0.70 U	0.70 U	5.0 U	5.00 U	5.00 U	1.4 U
Bromobenzene	NE	NE	NE	NE	1.0 U	5.0 U	5.00 U	5.00 U	1.0 U	1.0 U	5.0 U	5.00 U	5.00 U	1.0 U	1.0 U	5.0 U	5.00 U	5.00 U	2.0 U
Bromochloromethane	NE	NE	NE	NE	1.0 U	5.0 U	5.00 U	5.00 U	1.0 U	1.0 U	5.0 U	5.00 U	5.00 U	1.0 U	1.0 U	5.0 U	5.00 U	5.00 U	2.0 U
Bromodichloromethane	3	6	50000	100000	0.50 U	2.5 U	2.50 U	2.50 U	0.50 U	0.50 U	2.5 U	2.50 U	2.50 U	0.50 U	0.50 U	2.5 U	2.50 U	2.50 U	1.0 U
Bromoform	4	700	50000	100000	1.0 U	5.0 U	5.00 U	5.00 U	R	1.0 U	5.0 U	5.00 U	5.00 U	R	1.0 U	5.0 U	5.00 U	5.00 U	R
Bromomethane	10	7	800	8000	1.0 U	10.0 U	10.0 U	10.0 U	1.0 U	1.0 U	10.0 U	10.0 U	10.0 U	1.0 U	1.0 U	10.0 U	10.0 U	10.0 U	2.0 U
Carbon Disulfide	NE	NE	NE	NE	5.0 U	10.0 U	10.0 U	10.0 U	5.0 U	5.0 U	10.0 U	10.0 U	10.0 U	5.0 U	5.0 U	10.0 U	10.0 U	10.0 U	10 U
Carbon Tetrachloride	5	2	5000	50000	1.0 U	5.0 U	5.00 U	5.00 U	1.0 U	1.0 U	5.0 U	5.00 U	5.00 U	1.0 U	1.0 U	5.0 U	5.00 U	5.00 U	2.0 U
Chlorobenzene	100	200	1000	10000	1.0 U	5.0 U	5.00 U	5.00 U	1.0 U	1.0 U	5.0 U	5.00 U	5.00 U	1.0 U	1.0 U	5.0 U	5.00 U	5.00 U	2.0 U
Chloroethane	NE	NE	NE	NE	1.0 UJ	10.0 UJ	10.0 U	10.0 U	1.0 U	1.0 UJ	10.0 UJ	10.0 U	10.0 U	1.0 U	1.0 UJ	10.0 UJ	10.0 U	10.0 U	2.0 U
Chloroform	70	50	20000	100000	1.0 U	5.0 U	5.00 U	5.00 U	1.0 U	1.0 U	5.0 U	5.00 U	5.00 U	1.0 U	1.0 U	5.0 U	5.00 U	5.00 U	2.0 U
Chloromethane	NE	NE	NE	NE	1.0 U	10.0 UJ	10.0 U	10.0 U	1.0 U	1.0 U	10.0 UJ	10.0 U	10.0 U	1.0 U	1.0 U	10.0 UJ	10.0 U	10.0 U	2.0 U
cis-1,2-Dichloroethene	**70**	**20**	50000	100000	**18**	**17.2**	**25.0**	**23.4**	**26**	**26**	**15.3**	**25.1**	**20.8**	**30**	**28**	**20.0**	**24.0**	**32.0**	**37**
cis-1,3-Dichloropropene	NE	NE	NE	NE	0.40 U	2.5 U	2.50 U	2.50 U	0.40 U	0.40 U	2.5 U	2.50 U	2.50 U	0.40 U	0.40 U	2.5 U	2.50 U	2.50 U	1.0 U
Cymene	NE	NE	NE	NE	1.0 U	5.0 U	5.00 U	5.00 U	1.0 U	1.0 U	5.0 U	5.00 U	5.00 U	1.0 U	1.0 U	5.0 U	5.00 U	5.00 U	2.0 U
Dibromochloromethane	2	20	50000	100000	0.50 U	2.5 U	2.50 U	2.50 U	0.50 U	0.50 U	2.5 U	2.50 U	2.50 U	0.50 U	0.50 U	2.5 U	2.50 U	2.50 U	1.0 U
Dibromomethane	NE	NE	NE	NE	1.0 U	5.0 U	5.00 U	5.00 U	1.0 U	1.0 U	5.0 U	5.00 U	5.00 U	1.0 U	1.0 U	5.0 U	5.00 U	5.00 U	2.0 U
Dichlorodifluoromethane (CFC-12)	NE	NE	NE	NE	1.0 U	10.0 U	10.0 U	10.0 U	1.0 U	1.0 U	10.0 U	10.0 U	10.0 U	1.0 U	1.0 U	10.0 U	10.0 U	10.0 U	2.0 U
Diethyl Ether	NE	NE	NE	NE	1.0 U	5.0 U	5.00 U	5.00 U	1.0 UJ	1.0 U	5.0 U	5.00 U	5.00 U	1.0 UJ	1.0 U	5.0 U	5.00 U	5.00 U	2.0 UJ
Diisopropyl Ether	NE	NE	NE	NE	1.0 U	5.0 U	5.00 U	5.00 U	1.0 U	1.0 U	5.0 U	5.00 U	5.00 U	1.0 U	1.0 U	5.0 U	5.00 U	5.00 U	2.0 U
Ethyl Tertiary-Butyl Ether	NE	NE	NE	NE	1.0 U	5.0 U	5.00 U	5.00 U	1.0 U	1.0 U	5.0 U	5.00 U	5.00 U	1.0 U	1.0 U	5.0 U	5.00 U	5.00 U	2.0 U
Ethylbenzene	700	20000	5000	100000	1.0 U	5.0 U	5.00 U	5.00 U	1.0 U	1.0 U	5.0 U	5.00 U	5.00 U	1.0 U	1.0 U	5.0 U	5.00 U	5.00 U	2.0 U
Freon TF (Chlorinated fluorocarbon)	NE	NE	NE	NE	1.0 U	5.0 U	5.00 U	5.00 U	1.0 U	1.0 U	5.0 U	5.00 U	5.00 U	1.0 U	1.0 U	5.0 U	5.00 U	5.00 U	2.0 U
Hexachloro-1,3-Butadiene	0.6	50	3000	3000	0.40 U	2.5 U	2.50 U	2.50 U	0.40 U	0.40 U	2.5 U	2.50 U	2.50 U	0.40 U	0.40 U	2.5 U	2.50 U	2.50 U	1.0 U
Isopropylbenzene	NE	NE	NE	NE	1.0 U	5.0 U	5.00 U	5.00 U	1.0 U	1.0 U	5.0 U	5.00 U	5.00 U	1.0 U	1.0 U	5.0 U	5.00 U	5.00 U	2.0 U
M, P Xylenes	10000	3000	5000	100000	1.0 U	10.0 U	10.0 U	10.0 U	1.0 U	1.0 U	10.0 U	10.0 U	10.0 U	1.0 U	1.0 U	10.0 U	10.0 U	10.0 U	2.0 U
Methyl Tert-Butyl Ether	NE	NE	NE	100000	**2.4**	5.0 UJ	5.00 U	5.00 U	**1.8**	**1.8**	5.0 UJ	5.00 U	5.00 U	**2.3**	**2.4**	5.0 UJ	5.00 U	5.00 U	**2.5**
Methylene Chloride	5	2000	50000	100000	1.0 U	10.0 U	10.0 UJ	10.0 U	1.0 U	1.0 U	10.0 U	10.0 UJ	10.0 U	1.0 U	1.0 U	10.0 U	10.0 UJ	10.0 U	2.0 U
Naphthalene	140	700	20000	100000	1.0 U	5.0 U	5.00 U	10.0 U	1.0 U	1.0 U	5.0 U	5.00 U	10.0 U	1.0 U	1.0 U	5.0 U	5.00 U	10.0 U	2.0 U
N-Butylbenzene	NE	NE	NE	NE	1.0 U	5.0 U	5.00 U	5.00 U	1.0 U	1.0 U	5.0 U	5.00 U	5.00 U	1.0 U	1.0 U	5.0 U	5.00 U	5.00 U	2.0 U
N-Propylbenzene	NE	NE	NE	NE	1.0 U	5.0 U	5.00 U	5.00 U	1.0 U	1.0 U	5.0 U	5.00 U	5.00 U	1.0 U	1.0 U	5.0 U	5.00 U	5.00 U	2.0 U
o-Xylene	10000	3000	5000	100000	1.0 U	5.0 U	5.00 U	5.00 U	1.0 U	1.0 U	5.0 U	5.00 U	5.00 U	1.0 U	1.0 U	5.0 U	5.00 U	5.00 U	2.0 U
Styrene	100	100	6000	60000	1.0 U	5.0 U	5.00 U	5.00 U	1.0 U	1.0 U	5.0 U	5.00 U	5.00 U	1.0 U	1.0 U	5.0 U	5.00 U	5.00 U	2.0 U
Tert-Butylbenzene	NE	NE	NE	NE	1.0 U	5.0 U	5.00 U	5.00 U	1.0 U	1.0 U	5.0 U	5.00 U	5.00 U	1.0 U	1.0 U	5.0 U	5.00 U	5.00 U	2.0 U
Tertiary-Amyl Methyl Ether	NE	NE	NE	NE	1.0 U	5.0 U	5.00 U	5.00 U	1.0 U	1.0 U	5.0 U	5.00 U	5.00 U	1.0 U	1.0 U	5.0 U	5.00 U	5.00 U	2.0 U
Tetrachloroethene	**5**	**50**	**30000**	100000	R	**41.2**	**50.6**	**28.7**	**34**	**31 J+**	**46.0**	**70.5**	**28.0**	**52**	**41 J+**	**58.2**	**67.2**	**47.2**	**55**
Tetrahydrofuran	NE	NE	NE	NE	2.5 U	**12.2**	10.0 U	10.0 U	2.5 UJ	2.5 U	**10.0**	10.0 U	10.0 U	2.5 UJ	2.5 U	10.0 U	10.0 U	10.0 U	5.0 UJ
Toluene	**1000**	50000	40000	100000	1.0 U	5.0 U	5.00 U	5.00 U	1.0 U	1.0 U	5.0 U	5.00 U	5.00 U	1.0 U	1.0 U	5.0 U	5.00 U	5.00 U	2.0 U
Trans-1,2-Dichloroethene	**100**	**80**	50000	100000	1.0 U	5.0 U	5.00 U	5.00 U	1.0 U	1.0 U	5.0 U	5.00 U	5.00 U	1.0 U	1.0 U	5.0 U	5.00 U	5.00 U	2.0 U
Trans-1,3-Dichloropropene	NE	NE	NE	NE	0.40 U	2.5 U	2.50 U	2.50 U	0.40 U	0.40 U	2.5 U	2.50 U	2.50 U	0.40 U	0.40 U	2.5 U	2.50 U	2.50 U	1.0 U
Trichloroethene	**5**	**5**	**5000**	**50000**	**6.8**	**132**	**192**	**143**	**140**	**110**	**130**	**246**	**120**	**170**	**130**	**166**	**230**	**187**	**190**
Trichlorofluoromethane	NE	NE	NE	NE	1.0 U	5.0 U	5.00 U	5.00 U	1.0 U	1.0 U	5.0 U	5.00 U	5.00 U	1.0 U	1.0 U	5.0 U	5.00 U	5.00 U	2.0 U
Vinyl Chloride	**2**	**2**	50000	100000	1.0 U	5.0 U	5.00 U	5.00 U	1.0 U	**1.1**	5.0 U	5.00 U	5.00 U	1.0 U	**1.4**	5.0 U	5.00 U	5.00 U	2.0 U
Xylenes (Total)	10000	3000	5000	100000	1.0 U	10.0 U	10.0 U	10.0 U	1.0 U	1.0 U	10.0 U	10.0 U	10.0 U	1.0 U	1.0 U	10.0 U	10.0 U	10.0 U	2.0 U

Notes:
ft = feet
mg/l = miligrams per liter
µg/l = micrograms per liter
NE = not established

U - Non-detect at laboratory detection limit
J = Estimated Value, J+ = biased high, J- = biased low, R
Detects are bolded
Criteria exceedances are highlighted

Table 5-7
Summary of 2016 - 2020 Groundwater Analytical Results for Volatile Organic Compounds
Former GE Facility, 50 Fordham Road, Wilmington, MA

				Location Group:	Transect B (continued)														
				Location ID:	AE105R-4	AE105R-5	AE105R-5	AE105R-5	AE105R-5	AE105S	AE105S	AE105S	AE105S	AE105S	AE106D	AE106D	AE106D	AE106D	AE106D
				Sample ID:	0A-AE105R4-091720-	7A-AE105R5-101217-	8A-AE105R5-100318-	9A-AE105R5-091619-	0A-AE105R5-091720-	16A-AE105S-062216-	17A-AE105S-101217-	18A-AE105S-100318-	19A-AE105S-091619-	20A-AE105S-091720-	16A-AE106D-062016-	17A-AE106D-101217-	18A-AE106D-100318-	19A-AE106D-091719-	20A-AE106D-091720-
				Sample Date:	9/17/2020	10/12/2017	10/3/2018	9/16/2019	9/17/2020	6/22/2016	10/12/2017	10/3/2018	9/16/2019	9/17/2020	6/20/2016	10/12/2017	10/3/2018	9/17/2019	9/17/2020
				Sample Type:	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
				Depth Interval:	125 - 130 ft	143 - 148 ft	143 - 148 ft	143-148 ft	143 - 148 ft	35 - 40 ft	35 - 40 ft	35 - 40 ft	35-40 ft	35 - 40 ft	34 - 39 ft	34 - 39 ft	34 - 39 ft	34-39 ft	34 - 39 ft
Analyte	**MCP Method 1 GW-1 Stds**	**MCP Method 1 GW-2 Stds**	**MCP Method 1 GW-3 Stds**	**Upper Concentration Limit (UCL)**															
Volatile Organic Compounds (µg/l)																			
1,1,1,2-Tetrachloroethane	5	10	50000	100000	1.0 U	5.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U
1,1,1-Trichloroethane	**200**	4000	20000	100000	1.0 U	5.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U
1,1,2,2-Tetrachloroethane	2	9	50000	100000	0.50 U	2.50 U	0.50 U	0.50 U	0.50 U	0.5 U	0.50 U	0.50 U	0.50 U	0.50 U	0.5 U	0.50 U	0.50 U	0.50 U	0.50 U
1,1,2-Trichloroethane	5	900	50000	100000	1.0 U	5.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U
1,1-Dichloroethane	**70**	2000	20000	100000	**3.9**	5.00 U	**2.07**	**3.7**	**3.5**	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U
1,1-Dichloroethylene	**7**	**80**	30000	100000	**3.2**	5.00 U	**1.36**	**3.0**	**2.7**	1.0 U	1.00 U	1.00 UJ	1.0 U	1.0 U	1.0 U	1.00 U	1.00 UJ	1.0 U	1.0 U
1,1-Dichloropropene	NE	NE	NE	NE	1.0 U	5.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U
1,2,3-Trichlorobenzene	NE	NE	NE	NE	1.0 U	5.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U
1,2,3-Trichloropropane	NE	NE	NE	NE	0.50 U	5.00 U	1.00 U	0.50 U	0.50 U	1.0 U	1.00 U	1.00 U	0.50 U	0.50 U	1.0 U	1.00 U	1.00 U	0.50 U	0.50 U
1,2,4-Trichlorobenzene	70	200	50000	100000	1.0 U	5.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U
1,2,4-Trimethylbenzene	NE	NE	NE	NE	1.0 U	5.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U
1,2-Dibromo-3-Chloropropane (DBC	NE	NE	NE	NE	0.50 U	10.0 U	2.00 U	R	0.50 U	2.0 UJ	2.00 U	2.00 U	R	0.50 U	2.0 U	2.00 U	2.00 U	R	0.50 U
1,2-Dibromoethane	0.02	2	50000	100000	0.50 U	2.50 U	0.50 U	0.50 U	0.50 U	0.5 U	0.50 U	0.50 U	0.50 U	0.50 U	0.5 U	0.50 U	0.50 U	0.50 U	0.50 U
1,2-Dichlorobenzene	600	8000	2000	80000	1.0 U	5.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U
1,2-Dichloroethane	5	5	20000	100000	0.60 U	5.00 U	1.00 U	0.60 U	0.60 U	1.0 U	1.00 U	1.00 U	0.60 U	0.60 U	1.0 U	1.00 U	1.00 U	0.60 U	0.60 U
1,2-Dichloropropane	5	3	50000	100000	1.0 U	5.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U
1,3,5-Trimethylbenzene	NE	NE	NE	NE	1.0 U	5.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U
1,3-Dichlorobenzene	100	6000	50000	100000	1.0 U	5.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U
1,3-Dichloropropane	NE	NE	NE	NE	1.0 U	5.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U
1,4-Dichlorobenzene	5	60	8000	80000	1.0 U	5.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U
1,4-Dioxane	**0.3**	6000	50000	100000	NS	100 U	20.0 UJ	40 U	100 U	NS	20.0 U	20.0 U	40 U	100 U	20.0 U	20.0 U	20.0 U	40 U	100 U
2,2-Dichloropropane	NE	NE	NE	NE	1.0 UJ	5.00 U	1.00 U	1.0 U	1.0 UJ	1.0 UJ	1.00 U	1.00 U	1.0 U	1.0 U	1.0 UJ	1.00 U	1.00 U	1.0 U	1.0 U
2-Butanone	4000	50000	50000	100000	5.0 U	10.0 U	2.00 U	R	5.0 U	10.0 U	2.00 U	2.00 U	R	5.0 U	10.0 U	2.00 U	2.00 U	R	5.0 U
2-Chlorotoluene	NE	NE	NE	NE	1.0 U	5.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U
2-Hexanone	NE	NE	NE	NE	5.0 U	10.0 U	2.00 U	5.0 U	5.0 U	10.0 UJ	2.00 U	2.00 U	5.0 U	5.0 U	10.0 U	2.00 U	2.00 U	5.0 U	5.0 U
2-Phenylbutane	NE	NE	NE	NE	1.0 U	5.00 U	1.00 UJ	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U
4-Chlorotoluene	NE	NE	NE	NE	1.0 U	5.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U
4-Methyl-2-Pentanone	350	50000	50000	100000	5.0 U	10.0 U	2.00 U	5.0 U	5.0 U	10.0 UJ	2.00 U	2.00 U	5.0 U	5.0 U	10.0 U	2.00 U	2.00 U	5.0 U	5.0 U
Acetone	6300	50000	50000	100000	25 U	50.0 U	10.0 U	R	25 U	10.0 U	10.0 U	10.0 U	R	25 U	10.0 U	10.0 U	10.0 U	R	25 U
Benzene	5	1000	10000	100000	0.70 U	5.00 U	1.00 U	0.70 U	0.70 U	1.0 U	1.00 U	1.00 U	0.70 U	0.70 U	1.0 U	1.00 U	1.00 U	0.70 U	0.70 U
Bromobenzene	NE	NE	NE	NE	1.0 U	5.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U
Bromochloromethane	NE	NE	NE	NE	1.0 U	5.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U
Bromodichloromethane	3	6	50000	100000	0.50 U	2.50 U	0.50 U	0.50 U	0.50 U	0.5 U	0.50 U	0.50 U	0.50 U	0.50 U	0.5 U	0.50 U	0.50 U	0.50 U	0.50 U
Bromoform	4	700	50000	100000	1.0 U	5.00 U	1.00 U	R	1.0 U	1.0 U	1.00 U	1.00 U	R	1.0 U	1.0 U	1.00 U	1.00 U	R	1.0 U
Bromomethane	10	7	800	8000	1.0 U	10.0 U	2.00 UJ	1.0 U	1.0 U	2.0 UJ	2.00 U	2.00 UJ	1.0 U	1.0 U	2.0 U	2.00 U	2.00 UJ	1.0 U	1.0 U
Carbon Disulfide	NE	NE	NE	NE	5.0 U	10.0 U	2.00 U	5.0 U	5.0 U	2.0 U	2.00 U	2.00 U	5.0 U	5.0 U	2.0 U	2.00 U	2.00 U	5.0 U	5.0 U
Carbon Tetrachloride	5	2	5000	50000	1.0 U	5.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U
Chlorobenzene	100	200	1000	10000	1.0 U	5.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U
Chloroethane	NE	NE	NE	NE	1.0 UJ	10.0 U	2.00 U	1.0 U	1.0 UJ	2.0 U	2.00 U	2.00 U	1.0 U	1.0 UJ	2.0 UJ	2.00 U	2.00 U	1.0 U	1.0 UJ
Chloroform	70	50	20000	100000	1.0 U	5.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U
Chloromethane	NE	NE	NE	NE	1.0 U	10.0 U	**3.45**	1.0 U	1.0 U	2.0 UJ	2.00 U	2.00 U	1.0 U	1.0 U	2.0 UJ	2.00 U	2.00 U	1.0 U	1.0 U
cis-1,2-Dichloroethene	**70**	**20**	50000	100000	**36**	**18.8**	**18.4**	**41**	**37**	**17.7**	**11.1**	**10.2**	**13**	**8.7**	**3.1**	**1.75**	**1.56**	1.0 U	1.0 U
cis-1,3-Dichloropropene	NE	NE	NE	NE	0.40 U	2.50 U	0.50 U	0.40 U	0.40 U	0.5 U	0.50 U	0.50 U	0.40 U	0.40 U	0.5 U	0.50 U	0.50 U	0.40 U	0.40 U
Cymene	NE	NE	NE	NE	1.0 U	5.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U
Dibromochloromethane	2	20	50000	100000	0.50 U	2.50 U	0.50 U	0.50 U	0.50 U	0.5 U	0.50 U	0.50 U	0.50 U	0.50 U	0.5 U	0.50 U	0.50 U	0.50 U	0.50 U
Dibromomethane	NE	NE	NE	NE	1.0 U	5.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U
Dichlorodifluoromethane (CFC-12)	NE	NE	NE	NE	1.0 U	10.0 U	2.00 U	1.0 U	1.0 U	2.0 U	2.00 U	2.00 U	1.0 U	1.0 U	2.0 U	2.00 U	2.00 U	1.0 U	1.0 U
Diethyl Ether	NE	NE	NE	NE	1.0 U	5.00 U	1.00 U	1.0 UJ	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U
Diisopropyl Ether	NE	NE	NE	NE	1.0 U	5.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U
Ethyl Tertiary-Butyl Ether	NE	NE	NE	NE	1.0 U	5.00 U	1.00 U	1.0 U	1.0 U	1.0 UJ	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U
Ethylbenzene	700	20000	5000	100000	1.0 U	5.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U
Freon TF (Chlorinated fluorocarbon)	NE	NE	NE	NE	1.0 U	5.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U
Hexachloro-1,3-Butadiene	0.6	50	3000	3000	0.40 U	2.50 U	0.50 U	0.40 U	0.40 U	0.5 U	0.50 U	0.50 U	0.40 U	0.40 U	0.5 U	0.50 U	0.50 U	0.40 U	0.40 U
Isopropylbenzene	NE	NE	NE	NE	1.0 U	5.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U
M, P Xylenes	10000	3000	5000	100000	1.0 U	10.0 U	2.00 U	1.0 U	1.0 U	2.0 U	2.00 U	2.00 U	1.0 U	1.0 U	2.0 U	2.00 U	2.00 U	1.0 U	1.0 U
Methyl Tert-Butyl Ether	NE	NE	NE	100000	**2.4**	5.00 U	1.00 U	**1.9**	**1.7**	1.0 UJ	**2.24**	**3.12**	**1.8**	**2.2**	1.0 UJ	1.00 U	1.00 U	1.0 U	1.0 U
Methylene Chloride	5	2000	50000	100000	1.0 U	10.0 UJ	2.00 U	1.0 U	1.0 U	2.0 U	2.00 UJ	2.00 U	1.0 UJ	1.0 U	2.0 U	2.00 UJ	2.00 U	1.0 U	1.0 U
Naphthalene	140	700	20000	100000	1.0 U	5.00 U	2.00 U	1.0 U	1.0 U	1.0 U	1.00 U	2.00 UJ	1.0 U	1.0 U	1.0 U	1.00 U	2.00 UJ	1.0 U	1.0 U
N-Butylbenzene	NE	NE	NE	NE	1.0 U	5.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U
N-Propylbenzene	NE	NE	NE	NE	1.0 U	5.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U
o-Xylene	10000	3000	5000	100000	1.0 U	5.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U
Styrene	100	100	6000	60000	1.0 U	5.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U
Tert-Butylbenzene	NE	NE	NE	NE	1.0 U	5.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U
Tertiary-Amyl Methyl Ether	NE	NE	NE	NE	1.0 U	5.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U
Tetrachloroethene	**5**	**50**	**30000**	100000	**52 J+**	**56.2**	**18.3**	**50**	**43 J+**	1.0 U	1.00 U	1.00 U	1.0 U	R	**11.3**	**5.99**	**4.25**	**3.6**	**2.3 J+**
Tetrahydrofuran	NE	NE	NE	NE	2.5 U	10.0 U	2.00 U	2.5 UJ	2.5 U	2.0 U	2.00 U	2.00 U	**3.5**	2.5 U	**7.5**	2.00 U	2.00 U	2.5 U	2.5 U
Toluene	**1000**	50000	40000	100000	1.0 U	5.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	**1.1**	1.00 U	1.00 U	1.0 U	1.0 U
Trans-1,2-Dichloroethene	**100**	**80**	50000	100000	1.0 U	5.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U
Trans-1,3-Dichloropropene	NE	NE	NE	NE	0.40 U	2.50 U	0.50 U	0.40 U	0.40 U	0.5 UJ	0.50 U	0.50 U	0.40 U	0.40 U	0.5 U	0.50 U	0.50 U	0.40 U	0.40 U
Trichloroethene	**5**	**5**	**5000**	**50000**	**150**	**193**	**88.3**	**150**	**120**	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	**10.3**	**7.19**	**6.28**	**5.8**	**3.9**
Trichlorofluoromethane	NE	NE	NE	NE	1.0 U	5.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U
Vinyl Chloride	**2**	**2**	50000	100000	**1.2**	5.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U
Xylenes (Total)	10000	3000	5000	100000	1.0 U	10.0 U	2.00 U	1.0 U	1.0 U	2.0 U	2.00 U	2.00 U	1.0 U	1.0 U	2.0 U	2.00 U	2.00 U	1.0 U	1.0 U

Notes:

ft = feet

mg/l = miligrams per liter

µg/l = micrograms per liter

NE = not established

U - Non-detect at laboratory detection limit

J = Estimated Value, J+ = biased high, J- = biased low, R

Detects are bolded

Criteria exceedances are highlighted

Table 5-7
Summary of 2016 - 2020 Groundwater Analytical Results for Volatile Organic Compounds
Former GE Facility, 50 Fordham Road, Wilmington, MA

				Location Group:	Transect B (continued)														
				Location ID:	AE106R-1	AE106R-1	AE106R-1	AE106R-1	AE106R-1	AE106R-3	AE106R-3	AE106R-3	AE106R-3	AE106R-3	AE106R-5	AE106R-5	AE106R-5	AE106R-5	AE106S
				Sample ID:	6A-AE106R1-062016-	7A-AE106R1-101217-	8A-AE106R1-100318-	9A-AE106R1-091619-	0A-AE106R1-091720-	6A-AE106R3-062016-	7A-AE106R3-101217-	8A-AE106R3-100318-	9A-AE106R3-091619-	0A-AE106R3-091720-	7A-AE106R5-101217-	8A-AE106R5-100318-	9A-AE106R5-091619-	0A-AE106R5-091720-	16A-AE106S-062916-1
				Sample Date:	6/20/2016	10/12/2017	10/3/2018	9/16/2019	9/17/2020	6/20/2016	10/12/2017	10/3/2018	9/16/2019	9/17/2020	10/12/2017	10/3/2018	9/16/2019	9/17/2020	6/29/2016
				Sample Type:	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
				Depth Interval:	47 - 52 ft	47 - 52 ft	47 - 52 ft	47-52 ft	47 - 52 ft	84 - 88 ft	84 - 88 ft	84 - 88 ft	84-88 ft	84 - 88 ft	164 - 169 ft	164 - 169 ft	164-169 ft	164 - 169 ft	12 - 17 ft
Analyte	**MCP Method 1 GW-1 Stds**	**MCP Method 1 GW-2 Stds**	**MCP Method 1 GW-3 Stds**	**Upper Concentration Limit (UCL)**															
Volatile Organic Compounds (µg/l)																			
1,1,1,2-Tetrachloroethane	5	10	50000	100000	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U
1,1,1-Trichloroethane	**200**	4000	20000	100000	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 UJ
1,1,2,2-Tetrachloroethane	2	9	50000	100000	0.5 U	0.50 U	0.50 U	R	0.50 U	0.5 U	0.50 U	0.50 U	R	0.50 U	0.50 U	0.50 U	R	0.50 U	0.5 U
1,1,2-Trichloroethane	5	900	50000	100000	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U
1,1-Dichloroethane	**70**	2000	20000	100000	1.0 U	1.00 U	**1.28**	**1.3**	**1.1**	**1.2**	**1.26**	**1.74**	**1.4**	**1.3**	**1.81**	**1.86**	**1.4**	**1.3**	1.0 U
1,1-Dichloroethylene	**7**	**80**	30000	100000	1.0 U	1.00 U	1.00 UJ	1.0 U	1.0 U	1.0 U	1.00 U	1.00 UJ	1.0 U	1.0 U	1.00 U	1.00 UJ	1.0 U	1.0 U	1.0 U
1,1-Dichloropropene	NE	NE	NE	NE	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U
1,2,3-Trichlorobenzene	NE	NE	NE	NE	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U
1,2,3-Trichloropropane	NE	NE	NE	NE	1.0 U	1.00 U	1.00 U	0.50 U	0.50 U	1.0 U	1.00 U	1.00 U	0.50 U	0.50 U	1.00 U	1.00 U	0.50 U	0.50 U	1.0 U
1,2,4-Trichlorobenzene	70	200	50000	100000	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U
1,2,4-Trimethylbenzene	NE	NE	NE	NE	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U
1,2-Dibromo-3-Chloropropane (DBC	NE	NE	NE	NE	2.0 U	2.00 U	2.00 U	R	0.50 U	2.0 U	2.00 U	2.00 U	R	0.50 U	2.00 U	2.00 U	R	0.50 U	2.0 U
1,2-Dibromoethane	0.02	2	50000	100000	0.5 U	0.50 U	0.50 U	0.50 U	0.50 U	0.5 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.5 U
1,2-Dichlorobenzene	600	8000	2000	80000	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U
1,2-Dichloroethane	5	5	20000	100000	1.0 U	1.00 U	1.00 U	0.60 U	0.60 U	1.0 U	1.00 U	1.00 U	0.60 U	0.60 U	1.00 U	1.00 U	0.60 U	0.60 U	1.0 U
1,2-Dichloropropane	5	3	50000	100000	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U
1,3,5-Trimethylbenzene	NE	NE	NE	NE	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U
1,3-Dichlorobenzene	100	6000	50000	100000	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U
1,3-Dichloropropane	NE	NE	NE	NE	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U
1,4-Dichlorobenzene	5	60	8000	80000	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U
1,4-Dioxane	**0.3**	6000	50000	100000	20.0 U	20.0 U	20.0 U	40 U	100 U	20.0 U	20.0 U	20.0 U	40 U	100 U	20.0 U	20.0 U	40 U	NS	20.0 U
2,2-Dichloropropane	NE	NE	NE	NE	1.0 UJ	1.00 U	1.00 U	1.0 U	1.0 U	1.0 UJ	1.00 U	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 UJ
2-Butanone	4000	50000	50000	100000	10.0 U	2.00 U	2.00 U	R	5.0 U	10.0 U	2.00 U	2.00 U	R	5.0 U	2.00 U	2.00 U	R	5.0 U	10.0 U
2-Chlorotoluene	NE	NE	NE	NE	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U
2-Hexanone	NE	NE	NE	NE	10.0 U	2.00 U	2.00 U	R	5.0 U	10.0 U	2.00 U	2.00 U	R	5.0 U	2.00 U	2.00 U	R	5.0 U	10.0 U
2-Phenylbutane	NE	NE	NE	NE	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U
4-Chlorotoluene	NE	NE	NE	NE	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U
4-Methyl-2-Pentanone	350	50000	50000	100000	10.0 U	2.00 U	2.00 U	R	5.0 U	10.0 U	2.00 U	2.00 U	R	5.0 U	2.00 U	2.00 U	R	5.0 U	10.0 U
Acetone	6300	50000	50000	100000	10.0 U	10.0 U	10.0 U	R	25 U	10.0 U	10.0 U	10.0 U	R	25 U	10.0 U	10.0 U	R	25 U	10.0 U
Benzene	5	1000	10000	100000	1.0 U	1.00 U	1.00 U	0.70 U	0.70 U	1.0 U	1.00 U	1.00 U	0.70 U	0.70 U	1.00 U	1.00 U	0.70 U	0.70 U	1.0 U
Bromobenzene	NE	NE	NE	NE	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U
Bromochloromethane	NE	NE	NE	NE	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U
Bromodichloromethane	3	6	50000	100000	0.5 U	0.50 U	0.50 U	0.50 U	0.50 U	0.5 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.5 U
Bromoform	4	700	50000	100000	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U
Bromomethane	10	7	800	8000	2.0 U	2.00 U	2.00 UJ	R	1.0 U	2.0 U	2.00 U	2.00 UJ	R	1.0 U	2.00 U	2.00 UJ	R	1.0 U	2.0 UJ
Carbon Disulfide	NE	NE	NE	NE	2.0 U	2.00 U	2.00 U	5.0 U	5.0 U	2.0 U	2.00 U	2.00 U	5.0 U	5.0 U	2.00 U	2.00 U	5.0 U	5.0 U	2.0 U
Carbon Tetrachloride	5	2	5000	50000	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 UJ
Chlorobenzene	100	200	1000	10000	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U
Chloroethane	NE	NE	NE	NE	2.0 UJ	2.00 U	2.00 U	1.0 U	1.0 UJ	2.0 UJ	2.00 U	2.00 U	1.0 U	1.0 UJ	2.00 U	2.00 U	1.0 U	1.0 UJ	2.0 U
Chloroform	70	50	20000	100000	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U
Chloromethane	NE	NE	NE	NE	2.0 UJ	2.00 U	2.00 U	1.0 U	1.0 U	2.0 UJ	2.00 U	2.00 U	1.0 U	1.0 U	2.00 U	2.00 U	1.0 U	1.0 U	2.0 U
cis-1,2-Dichloroethene	**70**	**20**	50000	100000	**5.5**	**4.98**	**18.0**	**28**	**14**	**13.9**	**14.2**	**41.8**	**33**	**19**	**10.7**	**11.9**	**15**	**17**	**13.5**
cis-1,3-Dichloropropene	NE	NE	NE	NE	0.5 U	0.50 U	0.50 U	0.40 U	0.40 U	0.5 U	0.50 U	0.50 U	0.40 U	0.40 U	0.50 U	0.50 U	0.40 U	0.40 U	0.5 U
Cymene	NE	NE	NE	NE	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U
Dibromochloromethane	2	20	50000	100000	0.5 U	0.50 U	0.50 U	0.50 U	0.50 U	0.5 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.5 U
Dibromomethane	NE	NE	NE	NE	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U
Dichlorodifluoromethane (CFC-12)	NE	NE	NE	NE	2.0 U	2.00 U	2.00 U	1.0 U	1.0 U	2.0 U	2.00 U	2.00 U	1.0 U	1.0 U	2.00 U	2.00 U	1.0 U	1.0 U	2.0 U
Diethyl Ether	NE	NE	NE	NE	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U
Diisopropyl Ether	NE	NE	NE	NE	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	**1.0**
Ethyl Tertiary-Butyl Ether	NE	NE	NE	NE	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U
Ethylbenzene	700	20000	5000	100000	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U
Freon TF (Chlorinated fluorocarbon)	NE	NE	NE	NE	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U
Hexachloro-1,3-Butadiene	0.6	50	3000	3000	0.5 U	0.50 U	0.50 U	0.40 U	0.40 U	0.5 U	0.50 U	0.50 U	0.40 U	0.40 U	0.50 U	0.50 U	0.40 U	0.40 U	0.5 U
Isopropylbenzene	NE	NE	NE	NE	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U
M, P Xylenes	10000	3000	5000	100000	2.0 U	2.00 U	2.00 U	1.0 U	1.0 U	2.0 U	2.00 U	2.00 U	1.0 U	1.0 U	2.00 U	2.00 U	1.0 U	1.0 U	2.0 U
Methyl Tert-Butyl Ether	NE	NE	NE	100000	1.0 UJ	1.00 U	1.00 U	1.0 U	1.0 U	1.0 UJ	1.00 U	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	**9.1**
Methylene Chloride	5	2000	50000	100000	2.0 U	2.00 UJ	2.00 U	1.0 U	1.0 U	2.0 U	2.00 UJ	2.00 U	1.0 U	1.0 U	2.00 UJ	2.00 U	1.0 U	1.0 U	2.0 U
Naphthalene	140	700	20000	100000	1.0 U	1.00 U	2.00 UJ	1.0 U	1.0 U	1.0 U	1.00 U	2.00 UJ	1.0 U	1.0 U	1.00 U	2.00 UJ	1.0 U	1.0 U	1.0 U
N-Butylbenzene	NE	NE	NE	NE	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U
N-Propylbenzene	NE	NE	NE	NE	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U
o-Xylene	10000	3000	5000	100000	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U
Styrene	100	100	6000	60000	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U
Tert-Butylbenzene	NE	NE	NE	NE	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U
Tertiary-Amyl Methyl Ether	NE	NE	NE	NE	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U
Tetrachloroethene	**5**	**50**	**30000**	100000	**11.6**	**9.40**	**10.0**	**2.9**	**2.3 J+**	**24.5**	**25.3**	**7.77**	**2.3**	**2.5 J+**	**5.79**	**3.02**	**1.6**	R	**6.2**
Tetrahydrofuran	NE	NE	NE	NE	2.6 U	2.00 U	2.00 U	R	2.5 U	2.0 U	2.00 U	2.00 U	R	2.5 U	2.00 U	2.00 U	R	2.5 U	2.0 U
Toluene	**1000**	50000	40000	100000	**8.6**	1.00 U	1.00 U	1.0 U	1.0 U	**8.9**	1.00 U	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U
Trans-1,2-Dichloroethene	**100**	**80**	50000	100000	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U
Trans-1,3-Dichloropropene	NE	NE	NE	NE	0.5 U	0.50 U	0.50 U	0.40 U	0.40 U	0.5 U	0.50 U	0.50 U	0.40 U	0.40 U	0.50 U	0.50 U	0.40 U	0.40 U	0.5 U
Trichloroethene	**5**	**5**	**5000**	**50000**	**11.6**	**9.01**	**13.6**	**4.6**	**4.9**	**27.0**	**34.3**	**19.0**	**4.8**	**5.5**	**60.8**	**57.7**	**36**	**26**	**7.2**
Trichlorofluoromethane	NE	NE	NE	NE	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U
Vinyl Chloride	**2**	**2**	50000	100000	1.0 U	1.00 U	**1.25**	1.0 U	1.0 U	**1.7**	**1.54**	**1.32**	**1.6**	**1.6**	1.00 U	1.00 U	1.0 U	1.0 U	**1.2 J**
Xylenes (Total)	10000	3000	5000	100000	2.0 U	2.00 U	2.00 U	1.0 U	1.0 U	2.0 U	2.00 U	2.00 U	1.0 U	1.0 U	2.00 U	2.00 U	1.0 U	1.0 U	2.0 U

Notes:

ft = feet

mg/l = miligrams per liter

µg/l = micrograms per liter

NE = not established

U - Non-detect at laboratory detection limit

J = Estimated Value, J+ = biased high, J- = biased low, R

Detects are bolded

Criteria exceedances are highlighted

Table 5-7
Summary of 2016 - 2020 Groundwater Analytical Results for Volatile Organic Compounds
Former GE Facility, 50 Fordham Road, Wilmington, MA

				Location Group:	Transect B (continued)													
				Location ID:	AE106S	AE106S	AE106S	AE106S	AE111R-1	AE111R-1	AE111R-1	AE111R-1	AE111R-1	AE111R-1	AE111R-3	AE111R-3	AE111R-3	AE111R-3
				Sample ID:	17A-AE106S-101217-	18A-AE106S-100318-	19A-AE106S-091619-	20A-AE106S-091720-	16B-AE111R1-061716-	7A-AE111R1-100517-	7A-AE111R1-100517-	8A-AE111R1-100218-	9A-AE111R1-092519-	0A-AE111R1-091620-	6B-AE111R3-061716-	7A-AE111R3-100517-	8A-AE111R3-100218-	9A-AE111R3-092519-	0A-AE111R3-091620-
				Sample Date:	10/12/2017	10/3/2018	9/16/2019	9/17/2020	6/17/2016	10/5/2017	10/5/2017	10/2/2018	9/25/2019	9/16/2020	6/17/2016	10/5/2017	10/2/2018	9/25/2019	9/16/2020
				Sample Type:	N	N	N	N	N	N	FD	N	N	N	N	N	N	N	N
				Depth Interval:	12 - 17 ft	12 - 17 ft	12-17 ft	12 - 17 ft	44 - 54 ft	44 - 54 ft	44 - 54 ft	44 - 54 ft	44-54 ft	44 - 54 ft	95 - 103 ft	95 - 103 ft	95 - 103 ft	95-103 ft	95 - 103 ft
Analyte	**MCP Method 1 GW-1 Stds**	**MCP Method 1 GW-2 Stds**	**MCP Method 1 GW-3 Stds**	**Upper Concentration Limit (UCL)**															
Volatile Organic Compounds (µg/l)																			
1,1,1,2-Tetrachloroethane	5	10	50000	100000	1.00 U	1.00 U	1.0 U	1.0 U	1.0 UJ	1.00 UJ	1.00 UJ	1.00 U	1.0 U	1.0 U	1.0 UJ	1.00 UJ	1.00 U	1.0 U	1.0 U
1,1,1-Trichloroethane	**200**	4000	20000	100000	1.00 U	1.00 U	1.0 U	1.0 U	1.0 UJ	1.00 UJ	1.00 UJ	1.00 U	1.0 U	1.0 U	1.0 UJ	1.00 UJ	1.00 U	1.0 U	1.0 U
1,1,2,2-Tetrachloroethane	2	9	50000	100000	0.50 U	0.50 U	0.50 U	0.50 U	0.5 U	0.50 U	0.50 U	0.50 U	R	0.50 U	0.5 U	0.50 U	0.50 U	R	0.50 U
1,1,2-Trichloroethane	5	900	50000	100000	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U
1,1-Dichloroethane	**70**	2000	20000	100000	1.00 U	1.00 U	1.0 U	1.0 U	1.0 UJ	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 UJ	1.00 U	1.00 U	1.0 U	1.0 U
1,1-Dichloroethylene	**7**	**80**	30000	100000	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U
1,1-Dichloropropene	NE	NE	NE	NE	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U
1,2,3-Trichlorobenzene	NE	NE	NE	NE	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U
1,2,3-Trichloropropane	NE	NE	NE	NE	1.00 U	1.00 U	0.50 U	0.50 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	0.50 U	1.0 U	1.00 U	1.00 U	1.0 U	0.50 U
1,2,4-Trichlorobenzene	70	200	50000	100000	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U
1,2,4-Trimethylbenzene	NE	NE	NE	NE	1.00 U	1.00 U	1.0 U	1.0 U	1.0 UJ	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 UJ	1.00 U	1.00 U	1.0 U	1.0 U
1,2-Dibromo-3-Chloropropane (DBC	NE	NE	NE	NE	2.00 U	2.00 U	R	0.50 U	2.0 U	2.00 UJ	2.00 UJ	2.00 U	R	0.50 U	2.0 U	2.00 UJ	2.00 U	R	0.50 U
1,2-Dibromoethane	0.02	2	50000	100000	0.50 U	0.50 U	0.50 U	0.50 U	0.5 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.5 U	0.50 U	0.50 U	0.50 U	0.50 U
1,2-Dichlorobenzene	600	8000	2000	80000	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U
1,2-Dichloroethane	5	5	20000	100000	1.00 U	1.00 U	0.60 U	0.60 U	1.0 U	1.00 U	1.00 U	1.00 U	0.60 U	0.60 U	1.0 U	1.00 U	1.00 U	0.60 U	0.60 U
1,2-Dichloropropane	5	3	50000	100000	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U
1,3,5-Trimethylbenzene	NE	NE	NE	NE	1.00 U	1.00 U	1.0 U	1.0 U	1.0 UJ	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 UJ	1.00 U	1.00 U	1.0 U	1.0 U
1,3-Dichlorobenzene	100	6000	50000	100000	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U
1,3-Dichloropropane	NE	NE	NE	NE	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U
1,4-Dichlorobenzene	5	60	8000	80000	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U
1,4-Dioxane	**0.3**	6000	50000	100000	20.0 U	20.0 U	40 U	100 U	20.0 U	20.0 U	20.0 U	20.0 U	40 U	100 U	20.0 U	20.0 U	20.0 U	40 U	100 U
2,2-Dichloropropane	NE	NE	NE	NE	1.00 U	1.00 U	1.0 U	1.0 U	1.0 UJ	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 UJ	1.00 U	1.00 U	1.0 U	1.0 U
2-Butanone	4000	50000	50000	100000	2.00 U	2.00 U	R	5.0 U	10.0 U	2.00 U	2.00 U	2.00 UJ	R	5.0 U	10.0 U	2.00 U	2.00 UJ	R	5.0 U
2-Chlorotoluene	NE	NE	NE	NE	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U
2-Hexanone	NE	NE	NE	NE	2.00 U	2.00 U	5.0 U	5.0 U	10.0 U	2.00 U	2.00 U	2.00 UJ	R	5.0 U	10.0 U	2.00 U	2.00 UJ	R	5.0 U
2-Phenylbutane	NE	NE	NE	NE	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U
4-Chlorotoluene	NE	NE	NE	NE	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U
4-Methyl-2-Pentanone	350	50000	50000	100000	2.00 U	2.00 U	5.0 U	5.0 U	10.0 U	2.00 U	2.00 U	2.00 U	R	5.0 U	10.0 U	2.00 U	2.00 U	R	5.0 U
Acetone	6300	50000	50000	100000	10.0 U	10.0 U	R	25 U	10.0 U	10.0 U	10.0 U	10.0 UJ	R	25 U	10.0 U	10.0 U	10.0 UJ	R	25 U
Benzene	5	1000	10000	100000	1.00 U	1.00 U	0.70 U	0.70 U	1.0 U	1.00 U	1.00 U	1.00 U	0.70 U	0.70 U	1.0 U	1.00 U	1.00 U	0.70 U	0.70 U
Bromobenzene	NE	NE	NE	NE	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U
Bromochloromethane	NE	NE	NE	NE	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U
Bromodichloromethane	3	6	50000	100000	0.50 U	0.50 U	0.50 U	0.50 U	0.5 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.5 U	0.50 U	0.50 U	0.50 U	0.50 U
Bromoform	4	700	50000	100000	1.00 U	1.00 U	R	1.0 U	1.0 U	1.00 UJ	1.00 UJ	1.00 U	1.0 U	1.0 U	1.0 U	1.00 UJ	1.00 U	1.0 U	1.0 U
Bromomethane	10	7	800	8000	2.00 U	2.00 U	1.0 U	1.0 U	2.0 U	2.00 U	2.00 U	2.00 U	1.0 UJ	1.0 U	2.0 U	2.00 U	2.00 U	1.0 UJ	1.0 U
Carbon Disulfide	NE	NE	NE	NE	2.00 U	2.00 U	5.0 U	5.0 U	2.0 U	2.00 UJ	2.00 UJ	2.00 U	5.0 U	5.0 U	2.0 U	2.00 UJ	2.00 U	5.0 U	5.0 U
Carbon Tetrachloride	5	2	5000	50000	1.00 U	1.00 U	1.0 U	1.0 U	1.0 UJ	1.00 UJ	1.00 UJ	1.00 U	1.0 U	1.0 U	1.0 UJ	1.00 UJ	1.00 U	1.0 U	1.0 U
Chlorobenzene	100	200	1000	10000	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U
Chloroethane	NE	NE	NE	NE	2.00 U	2.00 U	1.0 U	1.0 UJ	2.0 U	2.00 U	2.00 U	2.00 U	1.0 U	1.0 UJ	2.0 U	2.00 U	2.00 U	1.0 U	1.0 UJ
Chloroform	70	50	20000	100000	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U
Chloromethane	NE	NE	NE	NE	2.00 U	2.00 U	1.0 U	1.0 U	2.0 U	2.00 U	2.00 U	2.00 UJ	1.0 U	1.0 U	2.0 U	2.00 U	2.00 UJ	1.0 U	1.0 U
cis-1,2-Dichloroethene	**70**	**20**	50000	100000	**12.7**	**6.21**	**8.5**	**25**	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U
cis-1,3-Dichloropropene	NE	NE	NE	NE	0.50 U	0.50 U	0.40 U	0.40 U	0.5 UJ	0.50 U	0.50 U	0.50 U	0.40 U	0.40 U	0.5 UJ	0.50 U	0.50 U	0.40 U	0.40 U
Cymene	NE	NE	NE	NE	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U
Dibromochloromethane	2	20	50000	100000	0.50 U	0.50 U	0.50 U	0.50 U	0.5 U	0.50 UJ	0.50 UJ	0.50 U	0.50 U	0.50 U	0.5 U	0.50 UJ	0.50 U	0.50 U	0.50 U
Dibromomethane	NE	NE	NE	NE	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U
Dichlorodifluoromethane (CFC-12)	NE	NE	NE	NE	2.00 U	2.00 U	1.0 U	1.0 U	2.0 U	2.00 U	2.00 U	2.00 U	1.0 U	1.0 U	2.0 U	2.00 U	2.00 U	1.0 U	1.0 U
Diethyl Ether	NE	NE	NE	NE	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U
Diisopropyl Ether	NE	NE	NE	NE	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U
Ethyl Tertiary-Butyl Ether	NE	NE	NE	NE	1.00 U	1.00 U	1.0 U	1.0 U	1.0 UJ	1.00 U	1.00 U	1.00 UJ	1.0 U	1.0 U	1.0 UJ	1.00 U	1.00 UJ	1.0 U	1.0 U
Ethylbenzene	700	20000	5000	100000	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U
Freon TF (Chlorinated fluorocarbon)	NE	NE	NE	NE	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 UJ	1.00 UJ	1.00 U	1.0 U	1.0 U	1.0 U	1.00 UJ	1.00 U	1.0 U	1.0 U
Hexachloro-1,3-Butadiene	0.6	50	3000	3000	0.50 U	0.50 U	0.40 U	0.40 U	0.5 U	0.50 U	0.50 U	0.50 U	0.40 U	0.40 U	0.5 U	0.50 U	0.50 U	0.40 U	0.40 U
Isopropylbenzene	NE	NE	NE	NE	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U
M, P Xylenes	10000	3000	5000	100000	2.00 U	2.00 U	1.0 U	1.0 U	2.0 U	2.00 U	2.00 U	2.00 U	1.0 U	1.0 U	2.0 U	2.00 U	2.00 U	1.0 U	1.0 U
Methyl Tert-Butyl Ether	NE	NE	NE	100000	**7.70**	**6.23**	**3.5**	**2.0**	1.0 UJ	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 UJ	1.00 U	1.00 U	1.0 U	1.0 U
Methylene Chloride	5	2000	50000	100000	2.00 UJ	2.00 U	1.0 UJ	1.0 U	2.0 U	2.00 UJ	2.00 UJ	2.00 U	1.0 U	1.0 U	2.0 U	2.00 UJ	2.00 U	1.0 U	1.0 U
Naphthalene	140	700	20000	100000	1.00 U	2.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	2.00 U	1.0 U	1.0 U	1.0 U	1.00 U	2.00 U	1.0 U	1.0 U
N-Butylbenzene	NE	NE	NE	NE	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U
N-Propylbenzene	NE	NE	NE	NE	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U
o-Xylene	10000	3000	5000	100000	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U
Styrene	100	100	6000	60000	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U
Tert-Butylbenzene	NE	NE	NE	NE	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U
Tertiary-Amyl Methyl Ether	NE	NE	NE	NE	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U
Tetrachloroethene	**5**	**50**	**30000**	100000	**3.48**	**11.6**	**12**	**4.9 J+**	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U
Tetrahydrofuran	NE	NE	NE	NE	2.00 U	2.00 U	2.5 U	2.5 U	**9.9**	2.00 U	2.00 U	2.00 U	R	2.5 U	**5.5**	2.00 U	2.00 U	R	2.5 U
Toluene	**1000**	50000	40000	100000	1.00 U	1.00 U	1.0 U	1.0 U	**65.6**	**1.30**	1.00 U	1.00 U	1.0 U	1.0 U	**9.5**	**15.8**	**18.4**	**8.6**	**1.1**
Trans-1,2-Dichloroethene	**100**	**80**	50000	100000	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U
Trans-1,3-Dichloropropene	NE	NE	NE	NE	0.50 U	0.50 U	0.40 U	0.40 U	0.5 UJ	0.50 U	0.50 U	0.50 U	0.40 U	0.40 U	0.5 UJ	0.50 U	0.50 U	0.40 U	0.40 U
Trichloroethene	**5**	**5**	**5000**	**50000**	**4.97**	**17.6**	**17**	**3.5**	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U
Trichlorofluoromethane	NE	NE	NE	NE	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U
Vinyl Chloride	**2**	**2**	50000	100000	1.00 U	1.00 U	1.0 U	**3.6**	1.0 U	1.00 U	1.00 U	1.00 UJ	1.0 U	1.0 U	1.0 U	1.00 U	1.00 UJ	1.0 U	1.0 U
Xylenes (Total)	10000	3000	5000	100000	2.00 U	2.00 U	1.0 U	1.0 U	2.0 U	2.00 U	2.00 U	2.00 U	1.0 U	1.0 U	2.0 U	2.00 U	2.00 U	1.0 U	1.0 U

Notes:

ft = feet

mg/l = miligrams per liter

µg/l = micrograms per liter

NE = not established

U - Non-detect at laboratory detection limit

J = Estimated Value, J+ = biased high, J- = biased low, R

Detects are bolded

Criteria exceedances are highlighted

Table 5-7
Summary of 2016 - 2020 Groundwater Analytical Results for Volatile Organic Compounds
Former GE Facility, 50 Fordham Road, Wilmington, MA

				Location Group:	Transect B (continued)														
				Location ID:	AE111R-5	AE111R-5	AE111R-5	AE111R-5	AE111R-5	AE111R-6	AE111R-6	AE111R-6	AE111R-6	AE111R-6	TRC-301R-2	TRC-301R-2	TRC-301R-2	TRC-301R-2	TRC-301R-2
				Sample ID:	6B-AE111R5-061716-	7A-AE111R5-100517-	8A-AE111R5-100218-	9A-AE111R5-092519-	0A-AE111R5-091620-	6B-AE111R6-061716-	7A-AE111R6-100517-	8A-AE111R6-100218-	9A-AE111R6-092519-	0A-AE111R6-091620-	5A-TRC301R2-062216	7A-TRC301R2-102317	8A-TRC301R2-092718	9A-TRC301R2-091719	0A-TRC301R2-091520
				Sample Date:	6/17/2016	10/5/2017	10/2/2018	9/25/2019	9/16/2020	6/17/2016	10/5/2017	10/2/2018	9/25/2019	9/16/2020	6/22/2016	10/23/2017	9/27/2018	9/17/2019	9/15/2020
				Sample Type:	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
				Depth Interval:	155 - 165 ft	155 - 165 ft	155 - 165 ft	155-165 ft	155 - 165 ft	168 - 173 ft	168 - 173 ft	168 - 173 ft	168-173 ft	168 - 173 ft	81.5 - 85.5 ft	81.5 - 85.5 ft	81.5 - 85.5 ft	81.5-85.5 ft	81.5 - 85.5 ft
Analyte	**MCP Method 1 GW-1 Stds**	**MCP Method 1 GW-2 Stds**	**MCP Method 1 GW-3 Stds**	**Upper Concentration Limit (UCL)**															
Volatile Organic Compounds (µg/l)																			
1,1,1,2-Tetrachloroethane	5	10	50000	100000	1.0 UJ	1.00 UJ	1.00 U	1.0 U	1.0 U	1.0 UJ	1.00 UJ	1.00 U	1.0 U	1.0 U	5.0 U	5.00 U	5.00 U	1.0 U	1.0 U
1,1,1-Trichloroethane	**200**	4000	20000	100000	1.0 UJ	1.00 UJ	1.00 U	1.0 U	1.0 U	1.0 UJ	1.00 UJ	1.00 U	1.0 U	1.0 U	5.0 U	5.00 U	5.00 U	1.0 U	1.0 U
1,1,2,2-Tetrachloroethane	2	9	50000	100000	0.5 U	0.50 U	0.50 U	R	0.50 U	0.5 U	0.50 U	0.50 U	R	0.50 U	2.5 U	2.50 U	2.50 U	0.50 U	0.50 U
1,1,2-Trichloroethane	5	900	50000	100000	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	5.0 U	5.00 U	5.00 U	1.0 U	1.0 U
1,1-Dichloroethane	**70**	2000	20000	100000	1.0 UJ	1.00 U	1.00 U	1.0 U	1.0 U	1.0 UJ	1.00 U	1.00 U	1.0 U	1.0 U	5.0 U	5.00 U	5.00 U	**2.9**	**3.0**
1,1-Dichloroethylene	**7**	**80**	30000	100000	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 UJ	1.0 U	1.0 U	5.0 U	5.00 U	5.00 U	**1.6**	**1.9**
1,1-Dichloropropene	NE	NE	NE	NE	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	5.0 U	5.00 UJ	5.00 U	1.0 U	1.0 U
1,2,3-Trichlorobenzene	NE	NE	NE	NE	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	5.0 U	5.00 U	5.00 U	1.0 U	1.0 U
1,2,3-Trichloropropane	NE	NE	NE	NE	1.0 U	1.00 U	1.00 U	1.0 U	0.50 U	1.0 U	1.00 U	1.00 U	1.0 U	0.50 U	5.0 U	5.00 U	5.00 U	0.50 U	0.50 U
1,2,4-Trichlorobenzene	70	200	50000	100000	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	5.0 U	5.00 U	5.00 U	1.0 U	1.0 U
1,2,4-Trimethylbenzene	NE	NE	NE	NE	1.0 UJ	1.00 U	1.00 U	1.0 U	1.0 U	1.0 UJ	1.00 U	1.00 U	1.0 U	1.0 U	5.0 U	10.0 U	5.00 U	1.0 U	1.0 U
1,2-Dibromo-3-Chloropropane (DBC	NE	NE	NE	NE	2.0 U	2.00 UJ	2.00 U	R	0.50 U	2.0 U	2.00 UJ	2.00 U	R	0.50 U	10.0 U	10.0 U	10.0 U	R	0.50 U
1,2-Dibromoethane	0.02	2	50000	100000	0.5 U	0.50 U	0.50 U	0.50 U	0.50 U	0.5 U	0.50 U	0.50 U	0.50 U	0.50 U	2.5 U	2.50 U	2.50 U	0.50 U	0.50 U
1,2-Dichlorobenzene	600	8000	2000	80000	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	5.0 U	5.00 U	5.00 U	1.0 U	1.0 U
1,2-Dichloroethane	5	5	20000	100000	1.0 U	1.00 U	1.00 U	0.60 U	0.60 U	1.0 U	1.00 U	1.00 U	0.60 U	0.60 U	5.0 U	5.00 U	5.00 U	0.60 U	0.60 U
1,2-Dichloropropane	5	3	50000	100000	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	5.0 U	5.00 U	5.00 U	1.0 U	1.0 U
1,3,5-Trimethylbenzene	NE	NE	NE	NE	1.0 UJ	1.00 U	1.00 U	1.0 U	1.0 U	1.0 UJ	1.00 U	1.00 U	1.0 U	1.0 U	5.0 U	5.00 U	5.00 U	1.0 U	1.0 U
1,3-Dichlorobenzene	100	6000	50000	100000	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	5.0 U	5.00 U	5.00 U	1.0 U	1.0 U
1,3-Dichloropropane	NE	NE	NE	NE	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	5.0 U	5.00 U	5.00 U	1.0 U	1.0 U
1,4-Dichlorobenzene	5	60	8000	80000	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	5.0 U	5.00 U	5.00 U	1.0 U	1.0 U
1,4-Dioxane	**0.3**	6000	50000	100000	20.0 U	20.0 U	20.0 U	40 U	100 U	20.0 U	20.0 U	20.0 U	40 U	100 U	100 U	100 U	100 U	40 U	100 U
2,2-Dichloropropane	NE	NE	NE	NE	1.0 UJ	1.00 U	1.00 U	1.0 U	1.0 U	1.0 UJ	1.00 U	1.00 U	1.0 U	1.0 U	5.0 U	5.00 U	5.00 U	1.0 U	1.0 U
2-Butanone	4000	50000	50000	100000	10.0 U	2.00 U	2.00 UJ	R	5.0 U	10.0 U	2.00 U	2.00 U	R	5.0 U	50.0 U	10.0 UJ	10.0 UJ	R	5.0 U
2-Chlorotoluene	NE	NE	NE	NE	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	5.0 U	5.00 U	5.00 U	1.0 U	1.0 U
2-Hexanone	NE	NE	NE	NE	10.0 U	2.00 U	2.00 UJ	R	5.0 U	10.0 U	2.00 U	2.00 U	R	5.0 U	50.0 U	10.0 U	10.0 UJ	5.0 U	5.0 U
2-Phenylbutane	NE	NE	NE	NE	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	5.0 U	5.00 U	5.00 U	1.0 U	1.0 U
4-Chlorotoluene	NE	NE	NE	NE	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	5.0 U	5.00 U	5.00 U	1.0 U	1.0 U
4-Methyl-2-Pentanone	350	50000	50000	100000	10.0 U	2.00 U	2.00 U	R	5.0 U	10.0 U	2.00 U	2.00 U	R	5.0 U	50.0 U	10.0 U	10.0 UJ	5.0 U	5.0 U
Acetone	6300	50000	50000	100000	10.0 U	10.0 U	10.0 UJ	R	25 U	10.0 U	10.0 U	10.0 U	R	25 U	50.0 U	50.0 U	50.0 UJ	R	25 U
Benzene	5	1000	10000	100000	1.0 U	1.00 U	1.00 U	0.70 U	0.70 U	1.0 U	1.00 U	1.00 U	0.70 U	0.70 U	5.0 U	5.00 U	5.00 U	0.70 U	0.70 U
Bromobenzene	NE	NE	NE	NE	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	5.0 U	5.00 U	5.00 U	1.0 U	1.0 U
Bromochloromethane	NE	NE	NE	NE	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	5.0 U	5.00 U	5.00 U	1.0 U	1.0 U
Bromodichloromethane	3	6	50000	100000	0.5 U	0.50 U	0.50 U	0.50 U	0.50 U	0.5 U	0.50 U	0.50 U	0.50 U	0.50 U	2.5 U	2.50 U	2.50 U	0.50 U	0.50 U
Bromoform	4	700	50000	100000	1.0 U	1.00 UJ	1.00 U	1.0 U	1.0 U	1.0 U	1.00 UJ	1.00 U	1.0 U	1.0 U	5.0 U	5.00 U	5.00 U	R	1.0 U
Bromomethane	10	7	800	8000	2.0 U	2.00 U	2.00 U	1.0 UJ	1.0 U	2.0 U	2.00 U	2.00 U	1.0 UJ	1.0 U	10.0 U	10.0 U	10.0 U	1.0 U	1.0 U
Carbon Disulfide	NE	NE	NE	NE	2.0 U	2.00 UJ	2.00 U	5.0 U	5.0 U	2.0 U	2.00 UJ	2.00 U	5.0 U	5.0 U	10.0 U	10.0 UJ	10.0 U	5.0 U	5.0 U
Carbon Tetrachloride	5	2	5000	50000	1.0 UJ	1.00 UJ	1.00 U	1.0 U	1.0 U	1.0 UJ	1.00 UJ	1.00 U	1.0 U	1.0 U	5.0 U	5.00 UJ	5.00 U	1.0 U	1.0 U
Chlorobenzene	100	200	1000	10000	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	5.0 U	5.00 U	5.00 U	1.0 U	1.0 U
Chloroethane	NE	NE	NE	NE	2.0 U	2.00 U	2.00 U	1.0 U	1.0 UJ	2.0 U	2.00 U	2.00 U	1.0 U	1.0 UJ	10.0 U	10.0 U	10.0 UJ	1.0 U	1.0 UJ
Chloroform	70	50	20000	100000	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	5.0 U	5.00 U	5.00 U	1.0 U	1.0 U
Chloromethane	NE	NE	NE	NE	2.0 U	2.00 U	2.00 UJ	1.0 U	1.0 U	2.0 U	2.00 U	2.00 U	1.0 U	1.0 U	10.0 UJ	10.0 U	10.0 U	1.0 U	1.0 U
cis-1,2-Dichloroethene	**70**	**20**	50000	100000	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	**22.2**	**26.0**	**18.8**	**17**	**18**
cis-1,3-Dichloropropene	NE	NE	NE	NE	0.5 UJ	0.50 U	0.50 U	0.40 U	0.40 U	0.5 UJ	0.50 U	0.50 U	0.40 U	0.40 U	2.5 U	2.50 U	2.50 U	0.40 U	0.40 U
Cymene	NE	NE	NE	NE	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	5.0 U	5.00 U	5.00 U	1.0 U	1.0 U
Dibromochloromethane	2	20	50000	100000	0.5 U	0.50 UJ	0.50 U	0.50 U	0.50 U	0.5 U	0.50 UJ	0.50 U	0.50 U	0.50 U	2.5 U	2.50 U	2.50 U	0.50 U	0.50 U
Dibromomethane	NE	NE	NE	NE	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	5.0 U	5.00 U	5.00 U	1.0 U	1.0 U
Dichlorodifluoromethane (CFC-12)	NE	NE	NE	NE	2.0 U	2.00 U	2.00 U	1.0 U	1.0 U	2.0 U	2.00 U	2.00 U	1.0 U	1.0 U	10.0 U	10.0 U	10.0 U	1.0 U	1.0 U
Diethyl Ether	NE	NE	NE	NE	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	5.0 U	5.00 U	5.00 U	1.0 U	1.0 U
Diisopropyl Ether	NE	NE	NE	NE	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	5.0 U	5.00 U	5.00 U	1.0 U	1.0 U
Ethyl Tertiary-Butyl Ether	NE	NE	NE	NE	1.0 UJ	1.00 U	1.00 UJ	1.0 U	1.0 U	1.0 UJ	1.00 U	1.00 U	1.0 U	1.0 U	5.0 UJ	5.00 U	5.00 U	1.0 U	1.0 U
Ethylbenzene	700	20000	5000	100000	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	5.0 U	5.00 U	5.00 U	1.0 U	1.0 U
Freon TF (Chlorinated fluorocarbon)	NE	NE	NE	NE	1.0 U	1.00 UJ	1.00 U	1.0 U	1.0 U	1.0 U	1.00 UJ	1.00 U	1.0 U	1.0 U	5.0 U	5.00 UJ	5.00 U	1.0 U	1.0 U
Hexachloro-1,3-Butadiene	0.6	50	3000	3000	0.5 U	0.50 U	0.50 U	0.40 U	0.40 U	0.5 U	0.50 U	0.50 U	0.40 U	0.40 U	2.5 U	2.50 UJ	2.50 U	0.40 U	0.40 U
Isopropylbenzene	NE	NE	NE	NE	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	5.0 U	5.00 U	5.00 U	1.0 U	1.0 U
M, P Xylenes	10000	3000	5000	100000	2.0 U	2.00 U	2.00 U	1.0 U	1.0 U	2.0 U	2.00 U	2.00 U	1.0 U	1.0 U	10.0 U	10.0 U	10.0 U	1.0 U	1.0 U
Methyl Tert-Butyl Ether	NE	NE	NE	100000	1.0 UJ	1.00 U	1.00 U	1.0 U	1.0 U	1.0 UJ	1.00 U	1.00 U	1.0 U	1.0 U	5.0 UJ	**6.50**	5.00 U	**5.6**	**6.1**
Methylene Chloride	5	2000	50000	100000	2.0 U	2.00 UJ	2.00 U	1.0 U	1.0 U	2.0 U	2.00 UJ	2.00 U	1.0 U	1.0 U	10.0 U	10.0 U	10.0 U	1.0 U	1.0 U
Naphthalene	140	700	20000	100000	1.0 U	1.00 U	2.00 U	1.0 U	1.0 U	1.0 U	1.00 U	2.00 U	1.0 U	1.0 U	5.0 U	10.0 U	10.0 U	1.0 U	1.0 U
N-Butylbenzene	NE	NE	NE	NE	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	5.0 U	5.00 U	5.00 U	1.0 U	1.0 U
N-Propylbenzene	NE	NE	NE	NE	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	5.0 U	5.00 U	5.00 U	1.0 U	1.0 U
o-Xylene	10000	3000	5000	100000	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	5.0 UJ	5.00 U	5.00 U	1.0 U	1.0 U
Styrene	100	100	6000	60000	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	5.0 U	5.00 U	5.00 U	1.0 U	1.0 U
Tert-Butylbenzene	NE	NE	NE	NE	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	5.0 U	5.00 U	5.00 U	1.0 U	1.0 U
Tertiary-Amyl Methyl Ether	NE	NE	NE	NE	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	5.0 U	5.00 U	5.00 U	1.0 U	1.0 U
Tetrachloroethene	**5**	**50**	**30000**	100000	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	**50.6**	**56.2 J**	**41.2**	**43**	**37**
Tetrahydrofuran	NE	NE	NE	NE	**4.6**	2.00 U	2.00 U	R	2.5 U	**4.2**	2.00 U	2.00 U	R	2.5 U	10.0 U	10.0 U	10.0 UJ	2.5 U	2.5 U
Toluene	**1000**	50000	40000	100000	**13.5**	**1.61**	**3.69**	**3.4**	1.0 U	**8.2**	1.00 U	1.00 U	**1.5**	1.0 U	5.0 U	5.00 U	5.00 U	1.0 U	1.0 U
Trans-1,2-Dichloroethene	**100**	**80**	50000	100000	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	5.0 U	5.00 U	5.00 U	1.0 U	1.0 U
Trans-1,3-Dichloropropene	NE	NE	NE	NE	0.5 UJ	0.50 U	0.50 U	0.40 U	0.40 U	0.5 UJ	0.50 U	0.50 U	0.40 U	0.40 U	2.5 UJ	2.50 U	2.50 U	0.40 U	0.40 U
Trichloroethene	**5**	**5**	**5000**	**50000**	1.0 U	**1.23**	1.00 U	1.0 U	1.0 U	1.0 U	**1.10**	1.00 U	1.0 U	1.0 U	**102**	**144**	**101**	**110**	**87**
Trichlorofluoromethane	NE	NE	NE	NE	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	5.0 U	5.00 UJ	5.00 U	1.0 U	1.0 U
Vinyl Chloride	**2**	**2**	50000	100000	1.0 U	1.00 U	1.00 UJ	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	5.0 U	5.00 U	5.00 U	**1.9**	**2.3**
Xylenes (Total)	10000	3000	5000	100000	2.0 U	2.00 U	2.00 U	1.0 U	1.0 U	2.0 U	2.00 U	2.00 U	1.0 U	1.0 U	10.0 U	10.0 U	10.0 U	1.0 U	1.0 U

Notes:

ft = feet — U - Non-detect at laboratory detection limit

mg/l = miligrams per liter — J = Estimated Value, J+ = biased high, J- = biased low, R

µg/l = micrograms per liter — **Detects are bolded**

NE = not established — Criteria exceedances are highlighted

Table 5-7
Summary of 2016 - 2020 Groundwater Analytical Results for Volatile Organic Compounds
Former GE Facility, 50 Fordham Road, Wilmington, MA

				Location Group:	Transect B (continued)					Transect B-1/2									
				Location ID:	TRC-301R-4	TRC-301R-4	TRC-301R-4	TRC-301R-4	TRC-301R-4	AE112D	AE112D	AE112D	AE112D	AE112D	AE112R-1	AE112R-1	AE112R-1	AE112R-1	AE112R-1
				Sample ID:	6A-TRC301R4-062216	7A-TRC301R4-102317	3A-TRC301R4-092718	9A-TRC301R4-091719	0A-TRC301R4-091520	16B-AE112D-062716	17A-AE112D-101717	18A-AE112D-092618	19A-AE112D-091319	20A-AE112D-091120	16B-AE112R1-062116	7A-AE112R1-101717	8A-AE112R1-092618	9A-AE112R1-091319	0A-AE112R1-091120
				Sample Date:	6/22/2016	10/23/2017	9/27/2018	9/17/2019	9/15/2020	6/27/2016	10/17/2017	9/26/2018	9/13/2019	9/11/2020	6/21/2016	10/17/2017	9/26/2018	9/13/2019	9/11/2020
				Sample Type:	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
				Depth Interval:	65.5 - 69.5 ft	65.5 - 69.5 ft	65.5 - 69.5 ft	65.5-69.5 ft	65.5 - 69.5 ft	24.5 - 29.5 ft	24.5 - 29.5 ft	24.5 - 29.5 ft	24.5-29.5 ft	24.5 - 29.5 ft	41 - 50 ft	41 - 50 ft	41 - 50 ft	41 - 50 ft	41 - 51 ft
Analyte	**MCP Method 1 GW-1 Stds**	**MCP Method 1 GW-2 Stds**	**MCP Method 1 GW-3 Stds**	**Upper Concentration Limit (UCL)**															
Volatile Organic Compounds (µg/l)																			
1,1,1,2-Tetrachloroethane	5	10	50000	100000	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U
1,1,1-Trichloroethane	**200**	4000	20000	100000	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 UJ	1.00 U	1.0 U	1.0 U	1.0 U	1.00 UJ	1.00 U	1.0 U	1.0 U
1,1,2,2-Tetrachloroethane	2	9	50000	100000	0.5 U	0.50 U	0.50 U	0.50 U	0.50 U	0.5 U	0.50 U	0.50 U	R	0.50 U	0.5 U	0.50 U	0.50 U	0.50 U	0.50 U
1,1,2-Trichloroethane	5	900	50000	100000	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U
1,1-Dichloroethane	**70**	2000	20000	100000	**1.5**	**1.56**	**1.65**	**1.2**	**1.2**	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U
1,1-Dichloroethylene	**7**	**80**	30000	100000	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 UJ	1.00 U	1.0 U	1.0 U	1.0 U	1.00 UJ	1.00 UJ	1.0 U	1.0 U
1,1-Dichloropropene	NE	NE	NE	NE	1.0 U	1.00 UJ	1.00 U	1.0 U	1.0 U	1.0 U	1.00 UJ	1.00 U	1.0 U	1.0 U	1.0 U	1.00 UJ	1.00 U	1.0 U	1.0 U
1,2,3-Trichlorobenzene	NE	NE	NE	NE	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U
1,2,3-Trichloropropane	NE	NE	NE	NE	1.0 U	1.00 U	1.00 U	0.50 U	0.50 U	1.0 U	1.00 U	1.00 U	0.50 U	0.50 U	1.0 U	1.00 U	1.00 U	0.50 U	0.50 U
1,2,4-Trichlorobenzene	70	200	50000	100000	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 UJ	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U
1,2,4-Trimethylbenzene	NE	NE	NE	NE	1.0 U	2.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U
1,2-Dibromo-3-Chloropropane (DBC	NE	NE	NE	NE	2.0 UJ	2.00 U	2.00 U	R	0.50 U	2.0 U	2.00 U	2.00 U	R	0.50 UJ	2.0 U	2.00 U	2.00 U	R	0.50 UJ
1,2-Dibromoethane	0.02	2	50000	100000	0.5 U	0.50 U	0.50 U	0.50 U	0.50 U	0.5 U	0.50 U	0.50 U	0.50 U	0.50 U	0.5 U	0.50 U	0.50 U	0.50 U	0.50 U
1,2-Dichlorobenzene	600	8000	2000	80000	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U
1,2-Dichloroethane	5	5	20000	100000	1.0 U	1.00 U	1.00 U	0.60 U	0.60 U	1.0 U	1.00 U	1.00 U	0.60 U	0.60 U	1.0 U	1.00 U	1.00 U	0.60 U	0.60 U
1,2-Dichloropropane	5	3	50000	100000	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U
1,3,5-Trimethylbenzene	NE	NE	NE	NE	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U
1,3-Dichlorobenzene	100	6000	50000	100000	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U
1,3-Dichloropropane	NE	NE	NE	NE	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U
1,4-Dichlorobenzene	5	60	8000	80000	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U
1,4-Dioxane	**0.3**	6000	50000	100000	20.0 U	20.0 U	20.0 U	40 U	100 U	20.0 U	20.0 U	20.0 U	40 U	100 U	20.0 U	20.0 U	20.0 U	40 U	100 U
2,2-Dichloropropane	NE	NE	NE	NE	1.0 UJ	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U
2-Butanone	4000	50000	50000	100000	10.0 U	2.00 UJ	2.00 UJ	R	5.0 U	10.0 U	2.00 U	2.00 UJ	R	5.0 U	10.0 U	2.00 U	2.00 U	R	5.0 U
2-Chlorotoluene	NE	NE	NE	NE	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U
2-Hexanone	NE	NE	NE	NE	10.0 UJ	2.00 U	2.00 UJ	5.0 U	5.0 U	10.0 U	2.00 U	2.00 UJ	R	5.0 U	10.0 U	2.00 U	2.00 U	5.0 U	5.0 U
2-Phenylbutane	NE	NE	NE	NE	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U
4-Chlorotoluene	NE	NE	NE	NE	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U
4-Methyl-2-Pentanone	350	50000	50000	100000	10.0 UJ	2.00 U	2.00 UJ	5.0 U	5.0 U	10.0 U	2.00 U	2.00 U	R	5.0 U	10.0 U	2.00 U	2.00 U	5.0 U	5.0 U
Acetone	6300	50000	50000	100000	10.0 U	10.0 U	10.0 UJ	R	25 U	10.0 U	10.0 U	10.0 UJ	R	R	10.0 U	10.0 U	10.0 U	R	R
Benzene	5	1000	10000	100000	1.0 U	1.00 U	1.00 U	0.70 U	0.70 U	1.0 U	1.00 U	1.00 U	0.70 U	0.70 U	1.0 U	1.00 U	1.00 U	0.70 U	0.70 U
Bromobenzene	NE	NE	NE	NE	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U
Bromochloromethane	NE	NE	NE	NE	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U
Bromodichloromethane	3	6	50000	100000	0.5 U	0.50 U	0.50 U	0.50 U	0.50 U	0.5 U	0.50 U	0.50 U	0.50 U	0.50 U	0.5 U	0.50 U	0.50 UJ	0.50 U	0.50 U
Bromoform	4	700	50000	100000	1.0 U	1.00 U	1.00 U	R	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 UJ	1.0 U	1.00 U	1.00 U	R	1.0 UJ
Bromomethane	10	7	800	8000	2.0 UJ	2.00 U	2.00 U	1.0 U	1.0 U	2.0 U	2.00 U	2.00 U	1.0 U	1.0 UJ	2.0 UJ	2.00 U	2.00 UJ	1.0 U	1.0 UJ
Carbon Disulfide	NE	NE	NE	NE	2.0 U	2.00 UJ	2.00 U	5.0 U	5.0 U	2.0 U	2.00 UJ	2.00 U	5.0 U	5.0 U	2.0 U	2.00 UJ	2.00 UJ	5.0 U	5.0 U
Carbon Tetrachloride	5	2	5000	50000	1.0 U	1.00 UJ	1.00 U	1.0 U	1.0 U	1.0 U	1.00 UJ	1.00 U	1.0 U	1.0 U	1.0 U	1.00 UJ	1.00 U	1.0 U	1.0 U
Chlorobenzene	100	200	1000	10000	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U
Chloroethane	NE	NE	NE	NE	2.0 U	2.00 U	2.00 UJ	1.0 U	1.0 UJ	2.0 UJ	2.00 U	2.00 U	1.0 U	1.0 UJ	2.0 U	2.00 U	2.00 U	1.0 U	1.0 UJ
Chloroform	70	50	20000	100000	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U
Chloromethane	NE	NE	NE	NE	2.0 UJ	2.00 U	2.00 U	1.0 U	1.0 U	2.0 UJ	2.00 U	2.00 U	1.0 U	1.0 U	2.0 U	2.00 U	2.00 U	1.0 U	1.0 U
cis-1,2-Dichloroethene	**70**	**20**	50000	100000	**17.3**	**21.7**	**19.2**	**14**	**17**	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U
cis-1,3-Dichloropropene	NE	NE	NE	NE	0.5 U	0.50 U	0.50 U	0.40 U	0.40 U	0.5 U	0.50 U	0.50 U	0.40 U	0.40 U	0.5 U	0.50 U	0.50 U	0.40 U	0.40 U
Cymene	NE	NE	NE	NE	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U
Dibromochloromethane	2	20	50000	100000	0.5 U	0.50 U	0.50 U	0.50 U	0.50 U	0.5 U	0.50 U	0.50 U	0.50 U	0.50 U	0.5 U	0.50 U	0.50 U	0.50 U	0.50 U
Dibromomethane	NE	NE	NE	NE	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U
Dichlorodifluoromethane (CFC-12)	NE	NE	NE	NE	2.0 U	2.00 U	2.00 U	1.0 U	1.0 U	2.0 U	2.00 U	2.00 U	1.0 U	1.0 U	2.0 U	2.00 U	2.00 U	1.0 U	1.0 U
Diethyl Ether	NE	NE	NE	NE	1.0 U	1.00 U	1.00 U	1.0 U	1.0 UJ	1.0 UJ	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U
Diisopropyl Ether	NE	NE	NE	NE	1.0 U	1.00 U	1.00 U	1.0 U	1.0 UJ	1.0 UJ	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U
Ethyl Tertiary-Butyl Ether	NE	NE	NE	NE	1.0 UJ	1.00 U	1.00 U	1.0 U	1.0 U	1.0 UJ	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U
Ethylbenzene	700	20000	5000	100000	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U
Freon TF (Chlorinated fluorocarbon)	NE	NE	NE	NE	1.0 U	1.00 UJ	1.00 U	1.0 U	1.0 U	1.0 U	1.00 UJ	1.00 U	1.0 U	1.0 U	1.0 U	1.00 UJ	1.00 UJ	1.0 U	1.0 U
Hexachloro-1,3-Butadiene	0.6	50	3000	3000	0.5 U	0.50 UJ	0.50 U	0.40 U	0.40 U	0.5 U	0.50 UJ	0.50 U	0.40 U	0.40 U	0.5 U	0.50 UJ	0.50 U	0.40 U	0.40 U
Isopropylbenzene	NE	NE	NE	NE	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U
M, P Xylenes	10000	3000	5000	100000	2.0 U	2.00 U	2.00 U	1.0 U	1.0 U	2.0 U	2.00 U	2.00 U	1.0 U	1.0 U	2.0 U	2.00 U	2.00 U	1.0 U	1.0 U
Methyl Tert-Butyl Ether	NE	NE	NE	100000	**4.8 J**	**5.36**	**5.10**	**5.8**	**5.7**	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U
Methylene Chloride	5	2000	50000	100000	2.0 U	2.00 U	2.00 U	1.0 U	1.0 U	2.0 U	2.00 UJ	2.00 U	1.0 U	1.0 U	2.0 U	2.00 UJ	2.00 UJ	1.0 UJ	1.0 U
Naphthalene	140	700	20000	100000	1.0 U	2.00 U	2.00 U	1.0 U	1.0 U	1.0 UJ	1.00 U	2.00 U	1.0 U	1.0 U	1.0 UJ	1.00 U	2.00 U	1.0 U	1.0 U
N-Butylbenzene	NE	NE	NE	NE	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U
N-Propylbenzene	NE	NE	NE	NE	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U
o-Xylene	10000	3000	5000	100000	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U
Styrene	100	100	6000	60000	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 UJ	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U
Tert-Butylbenzene	NE	NE	NE	NE	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U
Tertiary-Amyl Methyl Ether	NE	NE	NE	NE	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U
Tetrachloroethene	**5**	**50**	**30000**	100000	**15.6**	**12.9 J**	**14.1**	**13**	**10**	1.0 U	1.00 U	1.00 U	1.0 U	**1.5 J+**	1.0 U	1.00 U	1.00 U	1.0 U	R
Tetrahydrofuran	NE	NE	NE	NE	2.0 U	2.00 U	2.00 UJ	2.5 U	2.5 U	2.0 U	2.00 U	2.00 U	R	2.5 U	2.0 U	2.00 U	2.00 U	**6.6**	2.5 U
Toluene	**1000**	50000	40000	100000	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	**5.0**	1.00 U	1.00 U	1.0 U	1.0 U
Trans-1,2-Dichloroethene	**100**	**80**	50000	100000	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U
Trans-1,3-Dichloropropene	NE	NE	NE	NE	0.5 UJ	0.50 U	0.50 U	0.40 U	0.40 U	0.5 U	0.50 U	0.50 U	0.40 U	0.40 U	0.5 U	0.50 U	0.50 U	0.40 U	0.40 U
Trichloroethene	**5**	**5**	**5000**	**50000**	**35.1**	**35.5**	**36.3**	**27**	**27**	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U
Trichlorofluoromethane	NE	NE	NE	NE	1.0 U	1.00 UJ	1.00 U	1.0 U	1.0 U	1.0 UJ	1.00 UJ	1.00 U	1.0 U	1.0 U	1.0 U	1.00 UJ	1.00 U	1.0 U	1.0 U
Vinyl Chloride	**2**	**2**	50000	100000	**5.9**	**9.11**	**6.75**	**7.9**	**8.8**	1.0 UJ	1.00 U	1.00 U	1.0 UJ	1.0 U	1.0 UJ	1.00 U	1.00 UJ	1.0 U	1.0 U
Xylenes (Total)	10000	3000	5000	100000	2.0 U	2.00 U	2.00 U	1.0 U	1.0 U	2.0 U	2.00 U	2.00 U	1.0 U	1.0 U	2.0 U	2.00 U	2.00 U	1.0 U	1.0 U

Notes:

ft = feet

mg/l = miligrams per liter

µg/l = micrograms per liter

NE = not established

U - Non-detect at laboratory detection limit

J = Estimated Value, J+ = biased high, J- = biased low, R

Detects are bolded

Criteria exceedances are highlighted

Table 5-7
Summary of 2016 - 2020 Groundwater Analytical Results for Volatile Organic Compounds
Former GE Facility, 50 Fordham Road, Wilmington, MA

				Location Group:	Transect B-1/2 (continued)														
				Location ID:	AE112R-3	AE112R-3	AE112R-3	AE112R-3	AE112R-3	AE112R-5	AE112R-5	AE112R-5	AE112R-5	AE112R-5	AE112R-5	AE112R-6	AE112R-6	AE112R-6	AE112R-6
				Sample ID:	6B-AE112R3-062116-	7A-AE112R3-101717-	8A-AE112R3-092618-	9A-AE112R3-091319-	0A-AE112R3-091120-	6B-AE112R5-062116-	7A-AE112R5-101717-	7A-AE112R5-101717-	8A-AE112R5-092618-	9A-AE112R5-091319-	0A-AE112R5-091120-	6B-AE112R6-062116-	7A-AE112R6-101717-	8A-AE112R6-092618-	8A-AE112R6-092618-
				Sample Date:	6/21/2016	10/17/2017	9/26/2018	9/13/2019	9/11/2020	6/21/2016	10/17/2017	10/17/2017	9/26/2018	9/13/2019	9/11/2020	6/21/2016	10/17/2017	9/26/2018	9/26/2018
				Sample Type:	N	N	N	N	N	N	N	FD	N	N	N	N	N	N	FD
				Depth Interval:	91 - 101 ft	91 - 101 ft	91 - 101 ft	91-101 ft	91 - 101 ft	136 - 146 ft	136 - 146 ft	136 - 146 ft	136 - 146 ft	136-146 ft	136 - 146 ft	153 - 163 ft	153 - 163 ft	153 - 163 ft	153 - 163 ft
Analyte	**MCP Method 1 GW-1 Stds**	**MCP Method 1 GW-2 Stds**	**MCP Method 1 GW-3 Stds**	**Upper Concentration Limit (UCL)**															
Volatile Organic Compounds (µg/l)																			
1,1,1,2-Tetrachloroethane	5	10	50000	100000	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U
1,1,1-Trichloroethane	**200**	4000	20000	100000	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U
1,1,2,2-Tetrachloroethane	2	9	50000	100000	0.5 U	0.50 U	0.50 U	0.50 U	0.50 U	0.5 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.5 U	0.50 U	0.50 U	0.50 U
1,1,2-Trichloroethane	5	900	50000	100000	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U
1,1-Dichloroethane	**70**	2000	20000	100000	1.0 U	1.00 UJ	1.00 U	1.0 U	1.0 U	1.0 U	1.00 UJ	1.00 UJ	1.00 U	1.0 U	1.0 U	1.0 U	1.00 UJ	1.00 U	1.00 U
1,1-Dichloroethylene	**7**	**80**	30000	100000	1.0 U	1.00 U	1.00 UJ	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 UJ	1.0 U	1.0 U	1.0 U	1.00 U	1.00 UJ	1.00 U
1,1-Dichloropropene	NE	NE	NE	NE	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 UJ
1,2,3-Trichlorobenzene	NE	NE	NE	NE	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U
1,2,3-Trichloropropane	NE	NE	NE	NE	1.0 U	1.00 U	1.00 U	0.50 U	0.50 U	1.0 U	1.00 U	1.00 U	1.00 U	0.50 U	0.50 U	1.0 U	1.00 U	1.00 U	1.00 U
1,2,4-Trichlorobenzene	70	200	50000	100000	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U
1,2,4-Trimethylbenzene	NE	NE	NE	NE	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U
1,2-Dibromo-3-Chloropropane (DBC	NE	NE	NE	NE	2.0 U	2.00 U	2.00 U	R	0.50 UJ	2.0 U	2.00 U	2.00 U	2.00 U	R	0.50 UJ	2.0 U	2.00 U	2.00 U	2.00 U
1,2-Dibromoethane	0.02	2	50000	100000	0.5 U	0.50 U	0.50 U	0.50 U	0.50 U	0.5 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.5 U	0.50 U	0.50 U	0.50 U
1,2-Dichlorobenzene	600	8000	2000	80000	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U
1,2-Dichloroethane	5	5	20000	100000	1.0 U	1.00 UJ	1.00 U	0.60 U	0.60 U	1.0 U	1.00 UJ	1.00 UJ	1.00 U	0.60 U	0.60 U	1.0 U	1.00 UJ	1.00 U	1.00 U
1,2-Dichloropropane	5	3	50000	100000	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U
1,3,5-Trimethylbenzene	NE	NE	NE	NE	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U
1,3-Dichlorobenzene	100	6000	50000	100000	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U
1,3-Dichloropropane	NE	NE	NE	NE	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U
1,4-Dichlorobenzene	5	60	8000	80000	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U
1,4-Dioxane	**0.3**	6000	50000	100000	20.0 U	20.0 U	20.0 U	40 U	100 U	20.0 U	20.0 U	20.0 U	20.0 U	40 U	100 U	20.0 U	20.0 U	20.0 U	20.0 UJ
2,2-Dichloropropane	NE	NE	NE	NE	1.0 U	1.00 UJ	1.00 U	1.0 U	1.0 U	1.0 U	1.00 UJ	1.00 UJ	1.00 U	1.0 U	1.0 U	1.0 U	1.00 UJ	1.00 U	1.00 U
2-Butanone	4000	50000	50000	100000	10.0 U	2.00 U	2.00 U	R	5.0 U	10.0 U	2.00 U	2.00 U	2.00 U	R	5.0 U	10.0 U	**4.09**	2.00 U	**3.51 J**
2-Chlorotoluene	NE	NE	NE	NE	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 UJ
2-Hexanone	NE	NE	NE	NE	10.0 U	2.00 U	2.00 U	5.0 U	5.0 U	10.0 U	2.00 U	2.00 U	2.00 U	5.0 U	5.0 U	10.0 U	2.00 U	2.00 U	2.00 UJ
2-Phenylbutane	NE	NE	NE	NE	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U
4-Chlorotoluene	NE	NE	NE	NE	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U
4-Methyl-2-Pentanone	350	50000	50000	100000	10.0 U	2.00 U	2.00 U	5.0 U	5.0 U	10.0 U	2.00 U	2.00 U	2.00 U	5.0 U	5.0 U	10.0 U	2.00 U	2.00 U	2.00 UJ
Acetone	6300	50000	50000	100000	10.0 U	10.0 U	10.0 U	R	R	10.0 U	10.0 U	10.0 U	10.0 U	R	R	10.0 U	10.0 U	10.0 U	10.0 U
Benzene	5	1000	10000	100000	1.0 U	1.00 U	1.00 U	0.70 U	0.70 U	1.0 U	1.00 U	1.00 U	1.00 U	0.70 U	0.70 U	1.0 U	1.00 U	1.00 U	1.00 U
Bromobenzene	NE	NE	NE	NE	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 UJ
Bromochloromethane	NE	NE	NE	NE	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U
Bromodichloromethane	3	6	50000	100000	0.5 U	0.50 U	0.50 UJ	0.50 U	0.50 U	0.5 U	0.50 U	0.50 U	0.50 UJ	0.50 U	0.50 U	0.5 U	0.50 U	0.50 UJ	0.50 U
Bromoform	4	700	50000	100000	1.0 U	1.00 U	1.00 U	R	1.0 UJ	1.0 U	1.00 U	1.00 U	1.00 U	R	1.0 UJ	1.0 U	1.00 U	1.00 U	1.00 UJ
Bromomethane	10	7	800	8000	2.0 UJ	2.00 UJ	2.00 UJ	1.0 U	1.0 UJ	2.0 UJ	2.00 UJ	2.00 UJ	2.00 UJ	1.0 U	1.0 UJ	2.0 UJ	2.00 UJ	2.00 UJ	2.00 U
Carbon Disulfide	NE	NE	NE	NE	2.0 U	2.00 U	2.00 UJ	5.0 U	5.0 U	2.0 U	2.00 U	2.00 U	2.00 UJ	5.0 U	5.0 U	2.0 U	2.00 U	2.00 UJ	2.00 U
Carbon Tetrachloride	5	2	5000	50000	1.0 U	1.00 UJ	1.00 U	1.0 U	1.0 U	1.0 U	1.00 UJ	1.00 UJ	1.00 U	1.0 U	1.0 U	1.0 U	1.00 UJ	1.00 U	1.00 U
Chlorobenzene	100	200	1000	10000	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U
Chloroethane	NE	NE	NE	NE	2.0 U	2.00 U	2.00 U	1.0 U	1.0 UJ	2.0 U	2.00 U	2.00 U	2.00 U	1.0 U	1.0 UJ	2.0 U	2.00 U	2.00 U	2.00 U
Chloroform	70	50	20000	100000	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U
Chloromethane	NE	NE	NE	NE	2.0 U	2.00 UJ	2.00 U	1.0 U	1.0 U	2.0 U	2.00 UJ	2.00 UJ	2.00 U	1.0 U	1.0 U	2.0 U	2.00 UJ	2.00 U	2.00 U
cis-1,2-Dichloroethene	**70**	**20**	50000	100000	1.0 U	1.00 U	1.00 U	**1.9**	**2.3**	1.0 U	**3.57**	**3.31**	**11.6**	**14**	**13**	1.0 U	**1.96**	**7.03**	**7.00**
cis-1,3-Dichloropropene	NE	NE	NE	NE	0.5 U	0.50 U	0.50 U	0.40 U	0.40 U	0.5 U	0.50 U	0.50 U	0.50 U	0.40 U	0.40 U	0.5 U	0.50 U	0.50 U	0.50 UJ
Cymene	NE	NE	NE	NE	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U
Dibromochloromethane	2	20	50000	100000	0.5 U	0.50 U	0.50 U	0.50 U	0.50 U	0.5 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.5 U	0.50 U	0.50 U	0.50 U
Dibromomethane	NE	NE	NE	NE	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U
Dichlorodifluoromethane (CFC-12)	NE	NE	NE	NE	2.0 U	2.00 U	2.00 U	1.0 U	1.0 U	2.0 U	2.00 U	2.00 U	2.00 U	1.0 U	1.0 U	2.0 U	2.00 U	2.00 U	2.00 U
Diethyl Ether	NE	NE	NE	NE	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U
Diisopropyl Ether	NE	NE	NE	NE	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U
Ethyl Tertiary-Butyl Ether	NE	NE	NE	NE	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U
Ethylbenzene	700	20000	5000	100000	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U
Freon TF (Chlorinated fluorocarbon)	NE	NE	NE	NE	1.0 U	1.00 U	1.00 UJ	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 UJ	1.0 U	1.0 U	1.0 U	1.00 U	1.00 UJ	1.00 U
Hexachloro-1,3-Butadiene	0.6	50	3000	3000	0.5 U	0.50 U	0.50 U	0.40 U	0.40 U	0.5 U	0.50 U	0.50 U	0.50 U	0.40 U	0.40 U	0.5 U	0.50 U	0.50 U	0.50 U
Isopropylbenzene	NE	NE	NE	NE	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U
M, P Xylenes	10000	3000	5000	100000	2.0 U	2.00 U	2.00 U	1.0 U	1.0 U	2.0 U	2.00 U	2.00 U	2.00 U	1.0 U	1.0 U	2.0 U	2.00 U	2.00 U	2.00 U
Methyl Tert-Butyl Ether	NE	NE	NE	100000	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U
Methylene Chloride	5	2000	50000	100000	2.0 U	2.00 U	2.00 UJ	1.0 UJ	1.0 U	2.0 U	2.00 U	2.00 U	2.00 UJ	1.0 UJ	1.0 U	2.0 U	2.00 U	2.00 UJ	2.00 U
Naphthalene	140	700	20000	100000	1.0 UJ	1.00 U	2.00 U	1.0 U	1.0 U	1.0 UJ	1.00 U	1.00 U	2.00 U	1.0 U	1.0 U	1.0 UJ	1.00 U	2.00 U	2.00 UJ
N-Butylbenzene	NE	NE	NE	NE	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U
N-Propylbenzene	NE	NE	NE	NE	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U
o-Xylene	10000	3000	5000	100000	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U
Styrene	100	100	6000	60000	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U
Tert-Butylbenzene	NE	NE	NE	NE	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U
Tertiary-Amyl Methyl Ether	NE	NE	NE	NE	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U
Tetrachloroethene	**5**	**50**	**30000**	100000	1.0 U	1.00 U	1.00 U	1.0 U	R	**16.8**	**6.50**	**6.52**	1.00 U	1.0 U	R	**9.0**	**5.59**	1.00 U	**1.01**
Tetrahydrofuran	NE	NE	NE	NE	2.0 U	2.00 U	2.00 U	**4.4**	2.5 U	2.0 U	2.00 U	2.00 U	2.00 U	**3.5**	2.5 U	2.0 U	2.00 U	2.00 U	2.00 U
Toluene	**1000**	50000	40000	100000	**11.8**	**1.13**	**1.55**	1.0 U	1.0 U	**1.8**	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	**34.2**	**13.7**	**4.05**	**3.18**
Trans-1,2-Dichloroethene	**100**	**80**	50000	100000	1.0 U	1.00 UJ	1.00 U	1.0 U	1.0 U	1.0 U	1.00 UJ	1.00 UJ	1.00 U	1.0 U	1.0 U	1.0 U	1.00 UJ	1.00 U	1.00 U
Trans-1,3-Dichloropropene	NE	NE	NE	NE	0.5 U	0.50 U	0.50 U	0.40 U	0.40 U	0.5 U	0.50 U	0.50 U	0.50 U	0.40 U	0.40 U	0.5 U	0.50 U	0.50 U	0.50 U
Trichloroethene	**5**	**5**	**5000**	**50000**	1.0 U	1.00 U	**1.32**	**1.5**	1.0 U	**2.4**	**8.08**	**7.81**	**3.62**	**3.9**	**2.1**	**1.6**	**4.05**	**2.63**	**2.24**
Trichlorofluoromethane	NE	NE	NE	NE	1.0 U	1.00 UJ	1.00 U	1.0 U	1.0 U	1.0 U	1.00 UJ	1.00 UJ	1.00 U	1.0 U	1.0 U	1.0 U	1.00 UJ	1.00 U	1.00 U
Vinyl Chloride	**2**	**2**	50000	100000	1.0 UJ	1.00 U	1.00 UJ	1.0 U	1.0 U	1.0 UJ	1.00 U	1.00 U	1.00 UJ	1.0 U	1.0 U	1.0 UJ	1.00 U	1.00 UJ	1.00 U
Xylenes (Total)	10000	3000	5000	100000	2.0 U	2.00 U	2.00 U	1.0 U	1.0 U	2.0 U	2.00 U	2.00 U	2.00 U	1.0 U	1.0 U	2.0 U	2.00 U	2.00 U	2.00 U

Notes:

ft = feet

mg/l = miligrams per liter

µg/l = micrograms per liter

NE = not established

U - Non-detect at laboratory detection limit

J = Estimated Value, J+ = biased high, J- = biased low, R

Detects are bolded

Criteria exceedances are highlighted

Table 5-7
Summary of 2016 - 2020 Groundwater Analytical Results for Volatile Organic Compounds
Former GE Facility, 50 Fordham Road, Wilmington, MA

				Location Group:	Transect B-1/2 (continued)		Transect C											
				Location ID:	AE112R-6	AE112R-6	STM-3D	STM-3D	STM-3D	STM-3D	STM-3D	STM-8D	STM-8D	STM-8D	STM-8D	STM-8D	STM-8R	STM-8R	STM-8R
				Sample ID:	9A-AE112R6-091319-	0A-AE112R6-091120-	16A-STM3D-062716-1	17A-STM3D-101317-1	18A-STM3D-092818-1	19A-STM3D-092619-1	20A-STM3D-092420-1	16A-STM8D-063016-1	17A-STM8D-101117-1	18A-STM8D-092818-1	19A-STM8D-092619-1	20A-STM8D-092320-1	16A-STM8R-063016-1	17A-STM8R-101117-1	18A-STM8R-092818-1
				Sample Date:	9/13/2019	9/11/2020	6/27/2016	10/13/2017	9/28/2018	9/26/2019	9/24/2020	6/30/2016	10/11/2017	9/28/2018	9/26/2019	9/23/2020	6/30/2016	10/11/2017	9/28/2018
				Sample Type:	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
				Depth Interval:	153-163 ft	153 - 163 ft	49.8 - 54.8 ft	49.8 - 54.8 ft	49.8 - 54.8 ft	49.8-54.8 ft	49.8 - 54.8 ft	34.7 - 39.7 ft	34.7 - 39.7 ft	34.7 - 39.7 ft	34.7-39.7 ft	34.7 - 39.7 ft	46.5 - 51.5 ft	46.5 - 51.5 ft	46.5 - 51.5 ft
Analyte	**MCP Method 1 GW-1 Stds**	**MCP Method 1 GW-2 Stds**	**MCP Method 1 GW-3 Stds**	**Upper Concentration Limit (UCL)**															
Volatile Organic Compounds (µg/l)																			
1,1,1,2-Tetrachloroethane	5	10	50000	100000	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U
1,1,1-Trichloroethane	**200**	4000	20000	100000	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 UJ	1.00 U	1.00 U	1.0 U	1.0 U	1.0 UJ	1.00 U	1.00 U
1,1,2,2-Tetrachloroethane	2	9	50000	100000	0.50 U	0.50 U	0.5 U	0.50 U	0.50 U	R	0.50 U	0.5 U	0.50 U	0.50 UJ	R	0.50 U	0.5 U	0.50 U	0.50 U
1,1,2-Trichloroethane	5	900	50000	100000	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U
1,1-Dichloroethane	**70**	2000	20000	100000	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U
1,1-Dichloroethylene	**7**	**80**	30000	100000	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 UJ	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U
1,1-Dichloropropene	NE	NE	NE	NE	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U
1,2,3-Trichlorobenzene	NE	NE	NE	NE	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U
1,2,3-Trichloropropane	NE	NE	NE	NE	0.50 U	0.50 U	1.0 U	1.00 U	1.00 U	1.0 U	0.50 U	1.0 U	1.00 U	1.00 U	1.0 U	0.50 U	1.0 U	1.00 U	1.00 U
1,2,4-Trichlorobenzene	70	200	50000	100000	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U
1,2,4-Trimethylbenzene	NE	NE	NE	NE	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U
1,2-Dibromo-3-Chloropropane (DBC	NE	NE	NE	NE	R	0.50 UJ	2.0 U	2.00 U	2.00 U	R	0.50 U	2.0 U	2.00 U	2.00 U	R	0.50 U	2.0 U	2.00 U	2.00 U
1,2-Dibromoethane	0.02	2	50000	100000	0.50 U	0.50 U	0.5 U	0.50 U	0.50 U	0.50 U	0.50 U	0.5 U	0.50 U	0.50 U	0.50 U	0.50 U	0.5 U	0.50 U	0.50 U
1,2-Dichlorobenzene	600	8000	2000	80000	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U
1,2-Dichloroethane	5	5	20000	100000	0.60 U	0.60 U	1.0 U	1.00 U	1.00 U	0.60 U	0.60 U	1.0 U	1.00 U	1.00 U	0.60 U	0.60 U	1.0 U	1.00 U	1.00 U
1,2-Dichloropropane	5	3	50000	100000	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U
1,3,5-Trimethylbenzene	NE	NE	NE	NE	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U
1,3-Dichlorobenzene	100	6000	50000	100000	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U
1,3-Dichloropropane	NE	NE	NE	NE	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U
1,4-Dichlorobenzene	5	60	8000	80000	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U
1,4-Dioxane	**0.3**	6000	50000	100000	40 U	100 U	20.0 U	20.0 U	20.0 U	40 U	100 U	NS	20.0 U	20.0 U	40 U	NS	NS	20.0 U	20.0 U
2,2-Dichloropropane	NE	NE	NE	NE	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 UJ	1.00 U	1.00 U	1.0 U	1.0 U	1.0 UJ	1.00 U	1.00 U
2-Butanone	4000	50000	50000	100000	R	5.0 U	10.0 U	2.00 U	2.00 U	R	5.0 U	10.0 U	2.00 U	2.00 U	R	5.0 U	10.0 U	2.00 U	2.00 U
2-Chlorotoluene	NE	NE	NE	NE	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U
2-Hexanone	NE	NE	NE	NE	5.0 U	5.0 U	10.0 U	2.00 U	2.00 U	R	5.0 U	10.0 U	2.00 U	2.00 U	R	5.0 U	10.0 U	2.00 U	2.00 U
2-Phenylbutane	NE	NE	NE	NE	1.0 U	1.0 U	1.0 U	1.00 U	1.00 UJ	1.0 U	1.0 U	1.0 U	1.00 U	1.00 UJ	1.0 U	1.0 U	1.0 U	1.00 U	1.00 UJ
4-Chlorotoluene	NE	NE	NE	NE	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U
4-Methyl-2-Pentanone	350	50000	50000	100000	5.0 U	5.0 U	10.0 U	2.00 U	2.00 U	R	5.0 U	10.0 U	2.00 U	2.00 U	R	5.0 U	10.0 U	2.00 U	2.00 U
Acetone	6300	50000	50000	100000	R	R	10.0 UJ	10.0 U	10.0 UJ	R	25 U	10.0 U	10.0 U	10.0 U	R	25 U	10.0 U	10.0 U	10.0 UJ
Benzene	5	1000	10000	100000	0.70 U	0.70 U	1.0 U	1.00 U	1.00 U	0.70 U	0.70 U	1.0 U	1.00 U	1.00 U	0.70 U	0.70 U	1.0 U	1.00 U	1.00 U
Bromobenzene	NE	NE	NE	NE	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U
Bromochloromethane	NE	NE	NE	NE	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U
Bromodichloromethane	3	6	50000	100000	0.50 U	0.50 U	0.5 U	0.50 U	0.50 UJ	0.50 U	0.50 U	0.5 U	0.50 U	0.50 U	0.50 U	0.50 U	0.5 U	0.50 U	0.50 UJ
Bromoform	4	700	50000	100000	R	1.0 UJ	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U
Bromomethane	10	7	800	8000	1.0 U	1.0 UJ	2.0 U	2.00 UJ	2.00 UJ	1.0 UJ	1.0 UJ	2.0 UJ	2.00 UJ	2.00 U	1.0 UJ	1.0 U	2.0 UJ	2.00 UJ	2.00 UJ
Carbon Disulfide	NE	NE	NE	NE	5.0 U	5.0 U	2.0 U	2.00 U	2.00 U	5.0 U	5.0 U	2.0 U	2.00 U	2.00 UJ	5.0 U	5.0 U	2.0 U	2.00 U	2.00 U
Carbon Tetrachloride	5	2	5000	50000	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 UJ	1.00 U	1.00 U	1.0 U	1.0 U	1.0 UJ	1.00 U	1.00 U
Chlorobenzene	100	200	1000	10000	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U
Chloroethane	NE	NE	NE	NE	1.0 U	1.0 UJ	2.0 U	2.00 U	2.00 UJ	1.0 U	1.0 U	2.0 U	2.00 U	2.00 UJ	1.0 U	1.0 UJ	2.0 U	2.00 U	2.00 UJ
Chloroform	70	50	20000	100000	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U
Chloromethane	NE	NE	NE	NE	1.0 U	1.0 U	2.0 U	2.00 UJ	2.00 U	1.0 U	1.0 U	2.0 U	2.00 UJ	2.00 UJ	1.0 U	1.0 U	2.0 U	2.00 UJ	2.00 U
cis-1,2-Dichloroethene	**70**	**20**	50000	100000	**8.6**	**8.3**	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	**17.9**	**15.7**	**15.4**	**10**	**4.9**	**7.5**	**6.61**	**5.06**
cis-1,3-Dichloropropene	NE	NE	NE	NE	0.40 U	0.40 U	0.5 U	0.50 U	0.50 U	0.40 U	0.40 U	0.5 U	0.50 U	0.50 U	0.40 U	0.40 U	0.5 U	0.50 U	0.50 U
Cymene	NE	NE	NE	NE	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U
Dibromochloromethane	2	20	50000	100000	0.50 U	0.50 U	0.5 U	0.50 U	0.50 U	0.50 U	0.50 U	0.5 U	0.50 U	0.50 U	0.50 U	0.50 U	0.5 U	0.50 U	0.50 U
Dibromomethane	NE	NE	NE	NE	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U
Dichlorodifluoromethane (CFC-12)	NE	NE	NE	NE	1.0 U	1.0 U	2.0 U	2.00 U	2.00 U	1.0 U	1.0 U	2.0 U	2.00 U	2.00 U	1.0 U	1.0 U	2.0 U	2.00 U	2.00 U
Diethyl Ether	NE	NE	NE	NE	1.0 U	1.0 U	1.0 UJ	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U
Diisopropyl Ether	NE	NE	NE	NE	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U
Ethyl Tertiary-Butyl Ether	NE	NE	NE	NE	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U
Ethylbenzene	700	20000	5000	100000	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U
Freon TF (Chlorinated fluorocarbon)	NE	NE	NE	NE	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U
Hexachloro-1,3-Butadiene	0.6	50	3000	3000	0.40 U	0.40 U	0.5 U	0.50 U	0.50 U	0.40 U	0.40 U	0.5 U	0.50 U	0.50 U	0.40 U	0.40 U	0.5 U	0.50 U	0.50 U
Isopropylbenzene	NE	NE	NE	NE	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U
M, P Xylenes	10000	3000	5000	100000	1.0 U	1.0 U	2.0 U	2.00 U	2.00 U	1.0 U	1.0 U	2.0 U	2.00 U	2.00 U	1.0 U	1.0 U	2.0 U	2.00 U	2.00 U
Methyl Tert-Butyl Ether	NE	NE	NE	100000	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	**4.0**	**4.14**	**3.40**	**2.9**	**1.3**	**1.3**	**1.28**	1.00 U
Methylene Chloride	5	2000	50000	100000	1.0 UJ	1.0 U	2.0 UJ	2.00 U	2.00 U	1.0 U	1.0 U	2.0 U	2.00 U	2.00 U	1.0 U	1.0 U	2.0 U	2.00 U	2.00 U
Naphthalene	140	700	20000	100000	1.0 U	1.0 U	1.0 U	1.00 U	2.00 U	1.0 U	1.0 U	1.0 U	1.00 U	2.00 U	1.0 U	1.0 U	1.0 U	1.00 U	2.00 U
N-Butylbenzene	NE	NE	NE	NE	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U
N-Propylbenzene	NE	NE	NE	NE	1.0 U	1.0 U	1.0 U	1.00 U	1.00 UJ	1.0 U	1.0 U	1.0 U	1.00 U	1.00 UJ	1.0 U	1.0 U	1.0 U	1.00 U	1.00 UJ
o-Xylene	10000	3000	5000	100000	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U
Styrene	100	100	6000	60000	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U
Tert-Butylbenzene	NE	NE	NE	NE	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U
Tertiary-Amyl Methyl Ether	NE	NE	NE	NE	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U
Tetrachloroethene	**5**	**50**	**30000**	100000	1.0 U	R	1.0 U	1.00 U	1.00 U	1.0 U	R	**1.7**	**1.71**	**1.50**	**1.3**	R	**3.1**	**3.29**	1.00 U
Tetrahydrofuran	NE	NE	NE	NE	**5.3**	2.5 U	2.0 U	2.00 U	2.00 U	R	2.5 U	2.0 U	2.00 U	2.00 U	R	2.5 U	2.0 U	2.00 U	2.00 U
Toluene	**1000**	50000	40000	100000	**1.5**	**1.1**	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U
Trans-1,2-Dichloroethene	**100**	**80**	50000	100000	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U
Trans-1,3-Dichloropropene	NE	NE	NE	NE	0.40 U	0.40 U	0.5 U	0.50 U	0.50 U	0.40 U	0.40 U	0.5 U	0.50 U	0.50 U	0.40 U	0.40 U	0.5 U	0.50 U	0.50 U
Trichloroethene	**5**	**5**	**5000**	**50000**	**1.9**	**1.3**	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	**1.7**	**1.54**	**1.59**	**1.3**	1.0 U	**14.1**	**13.7**	**6.69**
Trichlorofluoromethane	NE	NE	NE	NE	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U
Vinyl Chloride	**2**	**2**	50000	100000	1.0 U	1.0 U	1.0 U	1.00 U	1.00 UJ	1.0 U	1.0 U	1.0 UJ	1.00 U	1.00 UJ	1.0 U	1.0 U	1.0 UJ	1.00 U	1.00 UJ
Xylenes (Total)	10000	3000	5000	100000	1.0 U	1.0 U	2.0 U	2.00 U	2.00 U	1.0 U	1.0 U	2.0 U	2.00 U	2.00 U	1.0 U	1.0 U	2.0 U	2.00 U	2.00 U

Notes:

ft = feet

mg/l = miligrams per liter

µg/l = micrograms per liter

NE = not established

U - Non-detect at laboratory detection limit

J = Estimated Value, J+ = biased high, J- = biased low, R

Detects are bolded

Criteria exceedances are highlighted

Table 5-7
Summary of 2016 - 2020 Groundwater Analytical Results for Volatile Organic Compounds
Former GE Facility, 50 Fordham Road, Wilmington, MA

					Location Group:	Transect C (continued)								Upgradient				
					Location ID:	STM-8R	STM-8R	STM-8R1	STM-8R1	STM-8R1	STM-8R1	STM-8R1	STM-8R1	GZA-12	GZA-12	GZA-12	GZA-12	GZA-12
					Sample ID:	19A-STM8R-092619-1	20A-STM8R-092320-1	16A-STM8R1-062816-1	17A-STM8R1-101717-1	17A-STM8R1-101717-2	18A-STM8R1-100218-1	19A-STM8R1-092619-2	20A-STM8R1-092320-1	16A-GZA12-061416-1	17A-GZA12-101017-1	18A-GZA12-100118-1	19A-GZA12-092619-1	20A-GZA12-092420-1
					Sample Date:	9/26/2019	9/23/2020	6/28/2016	10/17/2017	10/17/2017	10/2/2018	9/26/2019	9/23/2020	6/14/2016	10/10/2017	10/1/2018	9/26/2019	9/24/2020
					Sample Type:	N	N	N	N	FD	N	N	N	N	N	N	N	N
					Depth Interval:	46.5-51.5 ft	46.5 - 51.5 ft	85 - 90 ft	85 - 90 ft	85 - 90 ft	85 - 90 ft	85-90 ft	85 - 90 ft	9.5 - 24.5 ft	9.5 - 24.5 ft	9.5 - 24.5 ft	9.5-24.5 ft	9.5 - 24.5 ft
Analyte	**MCP Method 1 GW-1 Stds**	**MCP Method 1 GW-2 Stds**	**MCP Method 1 GW-3 Stds**	**Upper Concentration Limit (UCL)**														
Volatile Organic Compounds (µg/l)																		
1,1,1,2-Tetrachloroethane	5	10	50000	100000	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	7.00 U	1.0 U	1.0 U	
1,1,1-Trichloroethane	**200**	4000	20000	100000	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	7.00 U	1.0 U	1.0 U	
1,1,2,2-Tetrachloroethane	2	9	50000	100000	R	0.50 U	0.5 UJ	0.50 U	0.50 U	0.50 U	R	0.50 U	0.5 U	0.50 U	3.50 U	R	0.50 U	
1,1,2-Trichloroethane	5	900	50000	100000	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	7.00 U	1.0 U	1.0 U	
1,1-Dichloroethane	**70**	2000	20000	100000	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	7.00 U	1.0 U	1.0 U	
1,1-Dichloroethylene	**7**	**80**	30000	100000	1.0 U	1.0 U	1.0 U	1.00 UJ	1.00 UJ	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	7.00 UJ	1.0 U	1.0 U	
1,1-Dichloropropene	NE	NE	NE	NE	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	7.00 U	1.0 U	1.0 U	
1,2,3-Trichlorobenzene	NE	NE	NE	NE	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	7.00 U	1.0 U	1.0 U	
1,2,3-Trichloropropane	NE	NE	NE	NE	1.0 U	0.50 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	0.50 U	1.0 U	1.00 U	7.00 U	1.0 U	0.50 U	
1,2,4-Trichlorobenzene	70	200	50000	100000	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	7.00 U	1.0 U	1.0 U	
1,2,4-Trimethylbenzene	NE	NE	NE	NE	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	7.00 U	1.0 U	1.0 U	
1,2-Dibromo-3-Chloropropane (DBC	NE	NE	NE	NE	R	0.50 U	2.0 U	2.00 U	2.00 U	2.00 U	R	0.50 U	2.0 UJ	2.00 U	14.0 U	R	0.50 U	
1,2-Dibromoethane	0.02	2	50000	100000	0.50 U	0.50 U	0.5 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.5 U	0.50 U	3.50 U	0.50 U	0.50 U	
1,2-Dichlorobenzene	600	8000	2000	80000	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	7.00 U	1.0 U	1.0 U	
1,2-Dichloroethane	5	5	20000	100000	0.60 U	0.60 U	1.0 U	1.00 U	1.00 U	1.00 U	0.60 U	0.60 U	1.0 U	1.00 U	7.00 U	0.60 U	0.60 U	
1,2-Dichloropropane	5	3	50000	100000	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	7.00 U	1.0 U	1.0 U	
1,3,5-Trimethylbenzene	NE	NE	NE	NE	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	7.00 U	1.0 U	1.0 U	
1,3-Dichlorobenzene	100	6000	50000	100000	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	7.00 U	1.0 U	1.0 U	
1,3-Dichloropropane	NE	NE	NE	NE	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	7.00 U	1.0 U	1.0 U	
1,4-Dichlorobenzene	5	60	8000	80000	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	7.00 U	1.0 U	1.0 U	
1,4-Dioxane	**0.3**	6000	50000	100000	40 U	NS	NS	20.0 U	20.0 U	20.0 U	40 U	NS	20.0 U	20.0 U	140 U	40 U	NS	
2,2-Dichloropropane	NE	NE	NE	NE	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 UJ	7.00 U	1.0 U	1.0 U	
2-Butanone	4000	50000	50000	100000	R	5.0 U	10.0 U	2.00 U	2.00 U	2.00 UJ	R	5.0 U	10.0 U	2.00 U	14.0 U	R	5.0 U	
2-Chlorotoluene	NE	NE	NE	NE	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	7.00 U	1.0 U	1.0 U	
2-Hexanone	NE	NE	NE	NE	R	5.0 U	10.0 U	2.00 U	2.00 U	2.00 UJ	R	5.0 U	10.0 U	2.00 U	14.0 U	R	5.0 U	
2-Phenylbutane	NE	NE	NE	NE	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	7.00 U	1.0 U	1.0 U	
4-Chlorotoluene	NE	NE	NE	NE	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	7.00 U	1.0 U	1.0 U	
4-Methyl-2-Pentanone	350	50000	50000	100000	R	5.0 U	10.0 U	2.00 U	2.00 U	2.00 U	R	5.0 U	10.0 U	2.00 U	14.0 U	R	5.0 U	
Acetone	6300	50000	50000	100000	R	25 U	10.0 U	10.0 U	10.0 U	10.0 UJ	R	25 U	10.0 U	10.0 U	70.0 U	R	25 U	
Benzene	5	1000	10000	100000	0.70 U	0.70 U	1.0 U	1.00 U	1.00 U	1.00 U	0.70 U	0.70 U	1.0 U	1.00 U	7.00 U	0.70 U	0.70 U	
Bromobenzene	NE	NE	NE	NE	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	7.00 U	1.0 U	1.0 U	
Bromochloromethane	NE	NE	NE	NE	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	7.00 U	1.0 U	1.0 U	
Bromodichloromethane	3	6	50000	100000	0.50 U	0.50 U	0.5 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.5 U	0.50 U	3.50 U	0.50 U	0.50 U	
Bromoform	4	700	50000	100000	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	7.00 U	1.0 U	1.0 U	
Bromomethane	10	7	800	8000	1.0 UJ	1.0 U	2.0 U	2.00 U	2.00 U	2.00 U	1.0 UJ	1.0 UJ	2.0 U	2.00 U	14.0 UJ	1.0 UJ	1.0 UJ	
Carbon Disulfide	NE	NE	NE	NE	5.0 U	5.0 U	2.0 U	2.00 UJ	2.00 UJ	2.00 U	5.0 U	5.0 U	2.0 U	2.00 U	14.0 U	5.0 U	5.0 U	
Carbon Tetrachloride	5	2	5000	50000	1.0 U	1.0 U	1.0 U	1.00 UJ	1.00 UJ	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	7.00 U	1.0 U	1.0 U	
Chlorobenzene	100	200	1000	10000	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	7.00 U	1.0 U	1.0 U	
Chloroethane	NE	NE	NE	NE	1.0 U	1.0 UJ	2.0 U	2.00 U	2.00 U	2.00 U	1.0 U	1.0 U	2.0 U	2.00 U	14.0 U	1.0 U	1.0 U	
Chloroform	70	50	20000	100000	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	7.00 U	1.0 U	1.0 U	
Chloromethane	NE	NE	NE	NE	1.0 U	1.0 U	2.0 UJ	2.00 U	2.00 U	2.00 UJ	1.0 U	1.0 U	2.0 U	2.00 U	14.0 U	1.0 U	1.0 U	
cis-1,2-Dichloroethene	**70**	**20**	50000	100000	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	7.00 U	1.0 U	1.0 U	
cis-1,3-Dichloropropene	NE	NE	NE	NE	0.40 U	0.40 U	0.5 U	0.50 U	0.50 U	0.50 U	0.40 U	0.40 U	0.5 UJ	0.50 U	3.50 U	0.40 U	0.40 U	
Cymene	NE	NE	NE	NE	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	7.00 U	1.0 U	1.0 U	
Dibromochloromethane	2	20	50000	100000	0.50 U	0.50 U	0.5 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.5 U	0.50 U	3.50 U	0.50 U	0.50 U	
Dibromomethane	NE	NE	NE	NE	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	7.00 U	1.0 U	1.0 U	
Dichlorodifluoromethane (CFC-12)	NE	NE	NE	NE	1.0 U	1.0 U	2.0 U	2.00 U	2.00 U	2.00 U	1.0 U	1.0 U	2.0 U	2.00 U	14.0 U	1.0 U	1.0 U	
Diethyl Ether	NE	NE	NE	NE	1.0 U	1.0 U	1.0 UJ	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	7.00 U	1.0 U	1.0 U	
Diisopropyl Ether	NE	NE	NE	NE	1.0 U	1.0 U	1.0 UJ	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	7.00 U	1.0 U	1.0 U	
Ethyl Tertiary-Butyl Ether	NE	NE	NE	NE	1.0 U	1.0 U	1.0 UJ	1.00 U	1.00 U	1.00 UJ	1.0 U	1.0 U	1.0 U	1.00 U	7.00 U	1.0 U	1.0 U	
Ethylbenzene	700	20000	5000	100000	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	7.00 U	1.0 U	1.0 U	
Freon TF (Chlorinated fluorocarbon)	NE	NE	NE	NE	1.0 U	1.0 U	1.0 U	1.00 UJ	1.00 UJ	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	7.00 U	1.0 U	1.0 U	
Hexachloro-1,3-Butadiene	0.6	50	3000	3000	0.40 U	0.40 U	0.5 U	0.50 UJ	0.50 UJ	0.50 U	0.40 U	0.40 U	0.5 U	0.50 U	3.50 U	0.40 U	0.40 U	
Isopropylbenzene	NE	NE	NE	NE	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	7.00 U	1.0 U	1.0 U	
M, P Xylenes	10000	3000	5000	100000	1.0 U	1.0 U	2.0 U	2.00 U	2.00 U	2.00 U	1.0 U	1.0 U	2.0 U	2.00 U	14.0 U	1.0 U	1.0 U	
Methyl Tert-Butyl Ether	NE	NE	NE	100000	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	7.00 U	1.0 U	1.0 U	
Methylene Chloride	5	2000	50000	100000	1.0 U	1.0 U	2.0 U	2.00 UJ	2.00 UJ	2.00 U	1.0 U	1.0 U	2.0 U	2.00 U	14.0 U	1.0 U	1.0 U	
Naphthalene	140	700	20000	100000	1.0 U	1.0 U	1.0 UJ	1.00 U	1.00 U	2.00 U	1.0 U	1.0 U	1.0 UJ	1.00 U	14.0 UJ	1.0 U	1.0 U	
N-Butylbenzene	NE	NE	NE	NE	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	7.00 U	1.0 U	1.0 U	
N-Propylbenzene	NE	NE	NE	NE	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	7.00 U	1.0 U	1.0 U	
o-Xylene	10000	3000	5000	100000	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	7.00 U	1.0 U	1.0 U	
Styrene	100	100	6000	60000	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	7.00 U	1.0 U	1.0 U	
Tert-Butylbenzene	NE	NE	NE	NE	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	7.00 U	1.0 U	1.0 U	
Tertiary-Amyl Methyl Ether	NE	NE	NE	NE	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	7.00 U	1.0 U	1.0 U	
Tetrachloroethene	**5**	**50**	**30000**	100000	1.0 U	R	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	R	1.0 U	1.00 U	7.00 U	1.0 U	R	
Tetrahydrofuran	NE	NE	NE	NE	R	2.5 U	2.0 U	2.00 U	2.00 U	2.00 U	R	2.5 U	2.0 U	2.00 U	14.0 U	R	2.5 U	
Toluene	**1000**	50000	40000	100000	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	7.00 U	1.0 U	1.0 U	
Trans-1,2-Dichloroethene	**100**	**80**	50000	100000	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	7.00 U	1.0 U	1.0 U	
Trans-1,3-Dichloropropene	NE	NE	NE	NE	0.40 U	0.40 U	0.5 U	0.50 U	0.50 U	0.50 U	0.40 U	0.40 U	0.5 UJ	0.50 U	3.50 U	0.40 U	0.40 U	
Trichloroethene	**5**	**5**	**5000**	**50000**	1.0 U	1.0 U	**1.8**	**2.29**	**2.26**	**2.02**	**1.9**	**1.7**	1.0 U	1.00 U	7.00 U	1.0 U	1.0 U	
Trichlorofluoromethane	NE	NE	NE	NE	1.0 U	1.0 U	1.0 UJ	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	7.00 U	1.0 U	1.0 U	
Vinyl Chloride	**2**	**2**	50000	100000	1.0 U	1.0 U	1.0 UJ	1.00 U	1.00 U	1.00 UJ	1.0 U	1.0 U	1.0 UJ	1.00 U	7.00 U	1.0 U	1.0 U	
Xylenes (Total)	10000	3000	5000	100000	1.0 U	1.0 U	2.0 U	2.00 U	2.00 U	2.00 U	1.0 U	1.0 U	2.0 U	2.00 U	14.0 U	1.0 U	1.0 U	

Notes:

ft = feet

mg/l = miligrams per liter

µg/l = micrograms per liter

NE = not established

U - Non-detect at laboratory detection limit

J = Estimated Value, J+ = biased high, J- = biased low, R

Detects are bolded

Criteria exceedances are highlighted

Table 5-8
Groundwater Mann Kendall Trend Tests for Chlorinated Volatile Organic Compounds
Former GE Facility, Wilmington, MA

Well	Parameter	Sample Size	Number Detects	S-Statistics	Test Statistic*	80% Confidence		90% Confidence	
						Critical Value	Conclusion	Critical Value	Conclusion
AE04	Vinyl Chloride	9	3	-11	-11	10	Downward Trend	14	Not Significant
AE100R-1	cis-1,2-Dichloroethene	7	7	-3	-3	7	Not Significant	11	Not Significant
AE100R-1	Tetrachloroethene	6	4	-2	-2	7	Not Significant	9	Not Significant
AE100R-1	Toluene	7	6	-15	-15	7	Downward Trend	11	Downward Trend
AE100R-1	Trichloroethene	7	5	-4	-4	7	Not Significant	11	Not Significant
AE100R-1	Vinyl Chloride	7	5	9	9	7	Upward Trend	11	Not Significant
AE100R-3	cis-1,2-Dichloroethene	7	3	10	10	7	Upward Trend	11	Not Significant
AE100R-3	Tetrachloroethene	7	7	9	9	7	Upward Trend	11	Not Significant
AE100R-3	Trichloroethene	7	7	9	9	7	Upward Trend	11	Not Significant
AE100R-3	1,4-Dioxane	6	6	5	5	7	Not Significant	9	Not Significant
AE100R-4	cis-1,2-Dichloroethene	7	4	15	15	7	Upward Trend	11	Upward Trend
AE100R-4	Tetrachloroethene	7	7	17	17	7	Upward Trend	11	Upward Trend
AE100R-4	Trichloroethene	7	7	17	17	7	Upward Trend	11	Upward Trend
AE100R-4	1,4-Dioxane	5	5	6	6	6	Upward Trend	8	Not Significant
AE100R-5	cis-1,2-Dichloroethene	7	7	17	17	7	Upward Trend	11	Upward Trend
AE100R-5	Tetrachloroethene	7	7	7	7	7	Upward Trend	11	Not Significant
AE100R-5	Trichloroethene	7	7	7	7	7	Upward Trend	11	Not Significant
AE100R-5	Vinyl Chloride	7	3	10	10	7	Upward Trend	11	Not Significant
AE100R-6	cis-1,2-Dichloroethene	7	7	7	7	7	Upward Trend	11	Not Significant
AE100R-6	Tetrachloroethene	7	7	15	15	7	Upward Trend	11	Upward Trend
AE100R-6	Trichloroethene	7	7	15	15	7	Upward Trend	11	Upward Trend
AE100R-6	1,4-Dioxane	6	6	2	2	7	Not Significant	9	Not Significant
AE101D	cis-1,2-Dichloroethene	7	7	5	5	7	Not Significant	11	Not Significant
AE101D	Tetrachloroethene	7	5	-6	-6	7	Not Significant	11	Not Significant
AE101D	Trichloroethene	7	7	-1	-1	7	Not Significant	11	Not Significant
AE101D	Vinyl Chloride	7	3	4	4	7	Not Significant	11	Not Significant
AE101R-1	cis-1,2-Dichloroethene	7	7	7	7	7	Upward Trend	11	Not Significant
AE101R-1	Tetrachloroethene	7	7	11	11	7	Upward Trend	11	Upward Trend
AE101R-1	Trichloroethene	7	7	-5	-5	7	Not Significant	11	Not Significant
AE101R-1	Vinyl Chloride	7	4	13	13	7	Upward Trend	11	Upward Trend
AE101R-2	cis-1,2-Dichloroethene	7	7	-5	-5	7	Not Significant	11	Not Significant
AE101R-2	Tetrachloroethene	7	7	-9	-9	7	Downward Trend	11	Not Significant
AE101R-2	Trichloroethene	7	7	-3	-3	7	Not Significant	11	Not Significant
AE101R-2	Vinyl Chloride	7	5	9	9	7	Upward Trend	11	Not Significant
AE101R-2	1,4-Dioxane	6	6	1	1	7	Not Significant	9	Not Significant
AE101R-3	cis-1,2-Dichloroethene	7	7	-13	-13	7	Downward Trend	11	Downward Trend

Table 5-8
Groundwater Mann Kendall Trend Tests for Chlorinated Volatile Organic Compounds
Former GE Facility, Wilmington, MA

Well	Parameter	Sample Size	Number Detects	S-Statistics	Test Statistic*	80% Confidence		90% Confidence	
						Critical Value	Conclusion	Critical Value	Conclusion
AE101R-3	Tetrachloroethene	7	7	-19	-19	7	Downward Trend	11	Downward Trend
AE101R-3	Trichloroethene	7	7	-19	-19	7	Downward Trend	11	Downward Trend
AE101R-3	Vinyl Chloride	7	5	-1	-1	7	Not Significant	11	Not Significant
AE101R-3	1,4-Dioxane	5	5	-2	-2	6	Not Significant	8	Not Significant
AE101R-5	cis-1,2-Dichloroethene	7	7	19	19	7	Upward Trend	11	Upward Trend
AE101R-5	Tetrachloroethene	7	7	-7	-7	7	Downward Trend	11	Not Significant
AE101R-5	Trichloroethene	7	7	3	3	7	Not Significant	11	Not Significant
AE101R-5	1,4-Dioxane	5	5	-1	-1	6	Not Significant	8	Not Significant
AE101R-6	cis-1,2-Dichloroethene	7	7	19	19	7	Upward Trend	11	Upward Trend
AE101R-6	Tetrachloroethene	7	7	-17	-17	7	Downward Trend	11	Downward Trend
AE101R-6	Trichloroethene	7	7	-7	-7	7	Downward Trend	11	Not Significant
AE101R-6	Vinyl Chloride	7	4	15	15	7	Upward Trend	11	Upward Trend
AE101R-6	1,4-Dioxane	6	6	11	11	7	Upward Trend	9	Upward Trend
AE101S	cis-1,2-Dichloroethene	7	7	13	13	7	Upward Trend	11	Upward Trend
AE101S	Tetrachloroethene	7	4	4	4	7	Not Significant	11	Not Significant
AE101S	Trichloroethene	7	6	-7	-7	7	Downward Trend	11	Not Significant
AE102D	cis-1,2-Dichloroethene	7	7	-3	-3	7	Not Significant	11	Not Significant
AE102D	Tetrachloroethene	7	5	-14	-14	7	Downward Trend	11	Downward Trend
AE102D	Trichloroethene	7	7	-11	-11	7	Downward Trend	11	Downward Trend
AE102D	Vinyl Chloride	7	6	-5	-5	7	Not Significant	11	Not Significant
AE102D	1,4-Dioxane	6	6	-6	-6	7	Not Significant	9	Not Significant
AE102M	cis-1,2-Dichloroethene	7	7	-1	-1	7	Not Significant	11	Not Significant
AE102M	Tetrachloroethene	7	7	-11	-11	7	Downward Trend	11	Downward Trend
AE102M	Trichloroethene	7	7	-5	-5	7	Not Significant	11	Not Significant
AE102M	Vinyl Chloride	7	6	5	5	7	Not Significant	11	Not Significant
AE102M	1,4-Dioxane	5	4	4	4	6	Not Significant	8	Not Significant
AE102RR-2	cis-1,2-Dichloroethene	7	7	9	9	7	Upward Trend	11	Not Significant
AE102RR-2	Tetrachloroethene	7	7	-3	-3	7	Not Significant	11	Not Significant
AE102RR-2	Trichloroethene	7	7	-1	-1	7	Not Significant	11	Not Significant
AE102RR-2	Vinyl Chloride	7	4	14	14	7	Upward Trend	11	Upward Trend
AE102RR-2	1,4-Dioxane	6	6	7	7	7	Upward Trend	9	Not Significant
AE102RR-4	cis-1,2-Dichloroethene	7	7	7	7	7	Upward Trend	11	Not Significant
AE102RR-4	Tetrachloroethene	7	7	-9	-9	7	Downward Trend	11	Not Significant
AE102RR-4	Trichloroethene	7	7	-9	-9	7	Downward Trend	11	Not Significant
AE102RR-4	1,4-Dioxane	5	5	2	2	6	Not Significant	8	Not Significant
AE102RR-5	cis-1,2-Dichloroethene	7	7	11	11	7	Upward Trend	11	Upward Trend

Table 5-8
Groundwater Mann Kendall Trend Tests for Chlorinated Volatile Organic Compounds
Former GE Facility, Wilmington, MA

Well	Parameter	Sample Size	Number Detects	S-Statistics	Test Statistic*	80% Confidence		90% Confidence	
						Critical Value	Conclusion	Critical Value	Conclusion
AE102RR-5	Tetrachloroethene	7	7	8	8	7	Upward Trend	11	Not Significant
AE102RR-5	Trichloroethene	7	7	-1	-1	7	Not Significant	11	Not Significant
AE102RR-6	cis-1,2-Dichloroethene	7	6	1	1	7	Not Significant	11	Not Significant
AE102RR-6	Tetrachloroethene	7	7	5	5	7	Not Significant	11	Not Significant
AE102RR-6	Trichloroethene	7	7	-2	-2	7	Not Significant	11	Not Significant
AE102RR-6	1,4-Dioxane	6	6	11	11	7	Upward Trend	9	Upward Trend
AE103D	cis-1,2-Dichloroethene	7	7	-12	-12	7	Downward Trend	11	Downward Trend
AE103D	Tetrachloroethene	7	7	-7	-7	7	Downward Trend	11	Not Significant
AE103D	Trichloroethene	7	7	-7	-7	7	Downward Trend	11	Not Significant
AE103D	1,4-Dioxane	6	5	-6	-6	7	Not Significant	9	Not Significant
AE103R-1	cis-1,2-Dichloroethene	7	7	-5	-5	7	Not Significant	11	Not Significant
AE103R-1	Tetrachloroethene	7	7	-3	-3	7	Not Significant	11	Not Significant
AE103R-1	Trichloroethene	7	7	-17	-17	7	Downward Trend	11	Downward Trend
AE103R-1	Vinyl Chloride	7	5	-11	-11	7	Downward Trend	11	Downward Trend
AE103R-1	1,4-Dioxane	6	6	-15	-15	7	Downward Trend	9	Downward Trend
AE103R-3	cis-1,2-Dichloroethene	7	7	-9	-9	7	Downward Trend	11	Not Significant
AE103R-3	Tetrachloroethene	7	7	-9	-9	7	Downward Trend	11	Not Significant
AE103R-3	Trichloroethene	7	7	-15	-15	7	Downward Trend	11	Downward Trend
AE103R-3	Vinyl Chloride	7	5	-4	-4	7	Not Significant	11	Not Significant
AE103R-4	cis-1,2-Dichloroethene	7	7	3	3	7	Not Significant	11	Not Significant
AE103R-4	Tetrachloroethene	7	7	-9	-9	7	Downward Trend	11	Not Significant
AE103R-4	Trichloroethene	7	7	-11	-11	7	Downward Trend	11	Downward Trend
AE103R-4	1,4-Dioxane	6	6	3	3	7	Not Significant	9	Not Significant
AE103R-5	cis-1,2-Dichloroethene	7	7	15	15	7	Upward Trend	11	Upward Trend
AE103R-5	Tetrachloroethene	7	7	-1	-1	7	Not Significant	11	Not Significant
AE103R-5	Trichloroethene	7	7	-7	-7	7	Downward Trend	11	Not Significant
AE103R-5	1,4-Dioxane	6	6	7	7	7	Upward Trend	9	Not Significant
AE103R-7	cis-1,2-Dichloroethene	7	7	17	17	7	Upward Trend	11	Upward Trend
AE103R-7	Tetrachloroethene	7	7	-9	-9	7	Downward Trend	11	Not Significant
AE103R-7	Trichloroethene	7	7	-19	-19	7	Downward Trend	11	Downward Trend
AE103S	cis-1,2-Dichloroethene	7	4	-12	-12	7	Downward Trend	11	Downward Trend
AE103S	Vinyl Chloride	7	4	-12	-12	7	Downward Trend	11	Downward Trend
AE104D	cis-1,2-Dichloroethene	7	3	-13	-13	7	Downward Trend	11	Downward Trend
AE104D	Tetrachloroethene	7	5	-18	-18	7	Downward Trend	11	Downward Trend
AE104D	Trichloroethene	7	7	-19	-19	7	Downward Trend	11	Downward Trend
AE104D	1,4-Dioxane	6	5	9	9	7	Upward Trend	9	Upward Trend

Table 5-8
Groundwater Mann Kendall Trend Tests for Chlorinated Volatile Organic Compounds
Former GE Facility, Wilmington, MA

Well	Parameter	Sample Size	Number Detects	S-Statistics	Test Statistic*	80% Confidence		90% Confidence	
						Critical Value	Conclusion	Critical Value	Conclusion
AE104R-1	cis-1,2-Dichloroethene	7	7	19	19	7	Upward Trend	11	Upward Trend
AE104R-1	Tetrachloroethene	7	7	-3	-3	7	Not Significant	11	Not Significant
AE104R-1	Trichloroethene	7	7	1	1	7	Not Significant	11	Not Significant
AE104R-1	Vinyl Chloride	7	3	18	18	7	Upward Trend	11	Upward Trend
AE104R-1	1,4-Dioxane	6	6	5	5	7	Not Significant	9	Not Significant
AE104R-3	cis-1,2-Dichloroethene	7	6	-3	-3	7	Not Significant	11	Not Significant
AE104R-3	Tetrachloroethene	7	7	-17	-17	7	Downward Trend	11	Downward Trend
AE104R-3	Trichloroethene	7	7	-19	-19	7	Downward Trend	11	Downward Trend
AE104R-3	Vinyl Chloride	7	3	-8	-8	7	Downward Trend	11	Not Significant
AE104R-3	1,4-Dioxane	6	6	-6	-6	7	Not Significant	9	Not Significant
AE104R-4	cis-1,2-Dichloroethene	7	6	19	19	7	Upward Trend	11	Upward Trend
AE104R-4	Tetrachloroethene	7	7	-5	-5	7	Not Significant	11	Not Significant
AE104R-4	Trichloroethene	7	7	-11	-11	7	Downward Trend	11	Downward Trend
AE104R-4	Vinyl Chloride	7	3	0	0		No Trend		No Trend
AE104R-4	1,4-Dioxane	6	6	2	2	7	Not Significant	9	Not Significant
AE104R-5	cis-1,2-Dichloroethene	7	6	19	19	7	Upward Trend	11	Upward Trend
AE104R-5	Tetrachloroethene	7	7	-5	-5	7	Not Significant	11	Not Significant
AE104R-5	Trichloroethene	7	7	-9	-9	7	Downward Trend	11	Not Significant
AE104R-5	Vinyl Chloride	7	3	2	2	7	Not Significant	11	Not Significant
AE104R-6	cis-1,2-Dichloroethene	7	6	21	21	7	Upward Trend	11	Upward Trend
AE104R-6	Tetrachloroethene	7	7	-2	-2	7	Not Significant	11	Not Significant
AE104R-6	Trichloroethene	7	7	-3	-3	7	Not Significant	11	Not Significant
AE104R-6	Vinyl Chloride	7	3	4	4	7	Not Significant	11	Not Significant
AE104R-6	1,4-Dioxane	6	6	4	4	7	Not Significant	9	Not Significant
AE104S	cis-1,2-Dichloroethene	7	4	-16	-16	7	Downward Trend	11	Downward Trend
AE104S	Tetrachloroethene	7	4	-18	-18	7	Downward Trend	11	Downward Trend
AE104S	Trichloroethene	7	4	-18	-18	7	Downward Trend	11	Downward Trend
AE105D	cis-1,2-Dichloroethene	7	7	-7	-7	7	Downward Trend	11	Not Significant
AE105D	Trichloroethene	7	7	-9	-9	7	Downward Trend	11	Not Significant
AE105D	1,4-Dioxane	5	5	-3	-3	6	Not Significant	8	Not Significant
AE105R-1	cis-1,2-Dichloroethene	7	7	14	14	7	Upward Trend	11	Upward Trend
AE105R-1	Tetrachloroethene	7	7	4	4	7	Not Significant	11	Not Significant
AE105R-1	Trichloroethene	7	7	5	5	7	Not Significant	11	Not Significant
AE105R-2	cis-1,2-Dichloroethene	7	7	13	13	7	Upward Trend	11	Upward Trend
AE105R-2	Tetrachloroethene	7	7	3	3	7	Not Significant	11	Not Significant
AE105R-2	Trichloroethene	7	7	-2	-2	7	Not Significant	11	Not Significant

Table 5-8
Groundwater Mann Kendall Trend Tests for Chlorinated Volatile Organic Compounds
Former GE Facility, Wilmington, MA

Well	Parameter	Sample Size	Number Detects	S-Statistics	Test Statistic*	80% Confidence		90% Confidence	
						Critical Value	Conclusion	Critical Value	Conclusion
AE105R-2	1,4-Dioxane	5	5	0	0		No Trend		No Trend
AE105R-4	cis-1,2-Dichloroethene	7	7	15	15	7	Upward Trend	11	Upward Trend
AE105R-4	Tetrachloroethene	7	7	5	5	7	Not Significant	11	Not Significant
AE105R-4	Trichloroethene	7	7	1	1	7	Not Significant	11	Not Significant
AE105R-4	1,4-Dioxane	4	4	-3	-3	4	Not Significant	6	Not Significant
AE105R-5	cis-1,2-Dichloroethene	6	6	8	8	7	Upward Trend	9	Not Significant
AE105R-5	Tetrachloroethene	6	6	5	5	7	Not Significant	9	Not Significant
AE105R-5	Trichloroethene	6	6	1	1	7	Not Significant	9	Not Significant
AE105S	cis-1,2-Dichloroethene	7	7	-13	-13	7	Downward Trend	11	Downward Trend
AE106D	cis-1,2-Dichloroethene	7	5	-20	-20	7	Downward Trend	11	Downward Trend
AE106D	Tetrachloroethene	7	7	-21	-21	7	Downward Trend	11	Downward Trend
AE106D	Trichloroethene	7	7	-19	-19	7	Downward Trend	11	Downward Trend
AE106R-1	cis-1,2-Dichloroethene	7	7	9	9	7	Upward Trend	11	Not Significant
AE106R-1	Tetrachloroethene	7	7	-7	-7	7	Downward Trend	11	Not Significant
AE106R-1	Toluene	7	3	-15	-15	7	Downward Trend	11	Downward Trend
AE106R-1	Trichloroethene	7	7	-7	-7	7	Downward Trend	11	Not Significant
AE106R-3	cis-1,2-Dichloroethene	7	7	11	11	7	Upward Trend	11	Upward Trend
AE106R-3	Tetrachloroethene	7	7	-7	-7	7	Downward Trend	11	Not Significant
AE106R-3	Toluene	7	3	-11	-11	7	Downward Trend	11	Downward Trend
AE106R-3	Trichloroethene	7	7	-9	-9	7	Downward Trend	11	Not Significant
AE106R-3	Vinyl Chloride	7	7	6	6	7	Not Significant	11	Not Significant
AE106R-5	cis-1,2-Dichloroethene	6	6	15	15	7	Upward Trend	9	Upward Trend
AE106R-5	Tetrachloroethene	5	5	-4	-4	6	Not Significant	8	Not Significant
AE106R-5	Trichloroethene	6	6	-1	-1	7	Not Significant	9	Not Significant
AE106R-5	1,4-Dioxane	5	4	3	3	6	Not Significant	8	Not Significant
AE106S	cis-1,2-Dichloroethene	7	7	6	6	7	Not Significant	11	Not Significant
AE106S	Tetrachloroethene	7	7	-5	-5	7	Not Significant	11	Not Significant
AE106S	Trichloroethene	7	7	-6	-6	7	Not Significant	11	Not Significant
AE108R-1	cis-1,2-Dichloroethene	7	7	15	15	7	Upward Trend	11	Upward Trend
AE108R-1	Tetrachloroethene	6	3	-12	-12	7	Downward Trend	9	Downward Trend
AE108R-1	Toluene	7	7	-17	-17	7	Downward Trend	11	Downward Trend
AE108R-1	Trichloroethene	7	7	-11	-11	7	Downward Trend	11	Downward Trend
AE108R-3	cis-1,2-Dichloroethene	7	7	17	17	7	Upward Trend	11	Upward Trend
AE108R-3	Tetrachloroethene	7	7	17	17	7	Upward Trend	11	Upward Trend
AE108R-3	Trichloroethene	7	7	11	11	7	Upward Trend	11	Upward Trend
AE108R-5	cis-1,2-Dichloroethene	7	7	17	17	7	Upward Trend	11	Upward Trend

Table 5-8
Groundwater Mann Kendall Trend Tests for Chlorinated Volatile Organic Compounds
Former GE Facility, Wilmington, MA

Well	Parameter	Sample Size	Number Detects	S-Statistics	Test Statistic*	80% Confidence		90% Confidence	
						Critical Value	Conclusion	Critical Value	Conclusion
AE108R-5	Tetrachloroethene	7	7	13	13	7	Upward Trend	11	Upward Trend
AE108R-5	Toluene	7	3	-13	-13	7	Downward Trend	11	Downward Trend
AE108R-5	Trichloroethene	7	7	9	9	7	Upward Trend	11	Not Significant
AE109D	1,4-Dioxane	5	4	8	8	6	Upward Trend	8	Upward Trend
AE109R-1	cis-1,2-Dichloroethene	5	5	-4	-4	6	Not Significant	8	Not Significant
AE109R-1	Trichloroethene	5	5	-10	-10	6	Downward Trend	8	Downward Trend
AE109R-2	cis-1,2-Dichloroethene	5	5	10	10	6	Upward Trend	8	Upward Trend
AE109R-2	Trichloroethene	5	5	-10	-10	6	Downward Trend	8	Downward Trend
AE109R-3	cis-1,2-Dichloroethene	5	4	0	0		No Trend		No Trend
AE109R-3	Trichloroethene	5	5	-4	-4	6	Not Significant	8	Not Significant
AE109R-4	cis-1,2-Dichloroethene	5	5	-2	-2	6	Not Significant	8	Not Significant
AE109R-4	Tetrachloroethene	5	3	-8	-8	6	Downward Trend	8	Downward Trend
AE109R-4	Trichloroethene	5	5	-6	-6	6	Downward Trend	8	Not Significant
AE109R-5	cis-1,2-Dichloroethene	5	5	2	2	6	Not Significant	8	Not Significant
AE109R-5	Tetrachloroethene	5	5	-10	-10	6	Downward Trend	8	Downward Trend
AE109R-5	Trichloroethene	5	5	-6	-6	6	Downward Trend	8	Not Significant
AE109R-5	1,4-Dioxane	5	5	-8	-8	6	Downward Trend	8	Downward Trend
AE109R-6	cis-1,2-Dichloroethene	5	5	8	8	6	Upward Trend	8	Upward Trend
AE109R-6	Tetrachloroethene	5	5	-10	-10	6	Downward Trend	8	Downward Trend
AE109R-6	Trichloroethene	5	5	-8	-8	6	Downward Trend	8	Downward Trend
AE109R-7	cis-1,2-Dichloroethene	5	5	2	2	6	Not Significant	8	Not Significant
AE109R-7	Trichloroethene	5	5	-10	-10	6	Downward Trend	8	Downward Trend
AE109R-7	1,4-Dioxane	5	5	-5	-5	6	Not Significant	8	Not Significant
AE109R-8	cis-1,2-Dichloroethene	5	5	6	6	6	Upward Trend	8	Not Significant
AE109R-8	Tetrachloroethene	4	3	-6	-6	4	Downward Trend	6	Downward Trend
AE109R-8	Trichloroethene	5	5	-10	-10	6	Downward Trend	8	Downward Trend
AE110R-6	cis-1,2-Dichloroethene	5	3	4	4	6	Not Significant	8	Not Significant
AE110R-6	Toluene	5	3	-7	-7	6	Downward Trend	8	Not Significant
AE110R-6	1,4-Dioxane	5	5	-8	-8	6	Downward Trend	8	Downward Trend
AE111R-1	Toluene	6	3	-10	-10	7	Downward Trend	9	Downward Trend
AE111R-3	Toluene	6	6	-9	-9	7	Downward Trend	9	Downward Trend
AE111R-5	Toluene	6	5	-9	-9	7	Downward Trend	9	Downward Trend
AE111R-6	Toluene	6	3	-6	-6	7	Not Significant	9	Not Significant
AE112R-3	Toluene	6	4	-12	-12	7	Downward Trend	9	Downward Trend
AE112R-5	cis-1,2-Dichloroethene	6	4	12	12	7	Upward Trend	9	Upward Trend
AE112R-5	Tetrachloroethene	5	3	-7	-7	6	Downward Trend	8	Not Significant

Table 5-8
Groundwater Mann Kendall Trend Tests for Chlorinated Volatile Organic Compounds
Former GE Facility, Wilmington, MA

Well	Parameter	Sample Size	Number Detects	S-Statistics	Test Statistic*	80% Confidence		90% Confidence	
						Critical Value	Conclusion	Critical Value	Conclusion
AE112R-5	Trichloroethene	6	6	-1	-1	7	Not Significant	9	Not Significant
AE112R-6	cis-1,2-Dichloroethene	6	4	12	12	7	Upward Trend	9	Upward Trend
AE112R-6	Tetrachloroethene	5	4	-10	-10	6	Downward Trend	8	Downward Trend
AE112R-6	Toluene	6	6	-15	-15	7	Downward Trend	9	Downward Trend
AE112R-6	Trichloroethene	6	6	-3	-3	7	Not Significant	9	Not Significant
AE23R	Tetrachloroethene	9	9	14	14	10	Upward Trend	14	Upward Trend
AE23R	Toluene	9	7	13	13	10	Upward Trend	14	Not Significant
AE23R	Trichloroethene	9	9	16	16	10	Upward Trend	14	Upward Trend
AE23R	1,4-Dioxane	9	8	-5	-5	10	Not Significant	14	Not Significant
AE24	Tetrachloroethene	8	8	-2	-2	8	Not Significant	12	Not Significant
AE24	1,4-Dioxane	5	3	-1	-1	6	Not Significant	8	Not Significant
AE26R-1	cis-1,2-Dichloroethene	6	6	9	9	7	Upward Trend	9	Upward Trend
AE26R-1	Tetrachloroethene	6	6	5	5	7	Not Significant	9	Not Significant
AE26R-1	Trichloroethene	6	6	7	7	7	Upward Trend	9	Not Significant
AE26R-1	1,4-Dioxane	6	6	3	3	7	Not Significant	9	Not Significant
AE26R-2	cis-1,2-Dichloroethene	6	6	6	6	7	Not Significant	9	Not Significant
AE26R-2	Tetrachloroethene	6	5	-7	-7	7	Downward Trend	9	Not Significant
AE26R-2	Trichloroethene	6	6	-13	-13	7	Downward Trend	9	Downward Trend
AE26R-5	cis-1,2-Dichloroethene	6	6	11	11	7	Upward Trend	9	Upward Trend
AE26R-5	Tetrachloroethene	6	6	-3	-3	7	Not Significant	9	Not Significant
AE26R-5	Trichloroethene	6	6	9	9	7	Upward Trend	9	Upward Trend
AE26R-5	1,4-Dioxane	6	6	3	3	7	Not Significant	9	Not Significant
AE26S	cis-1,2-Dichloroethene	7	7	-11	-11	7	Downward Trend	11	Downward Trend
AE26S	Tetrachloroethene	7	7	-9	-9	7	Downward Trend	11	Not Significant
AE26S	Trichloroethene	7	7	-7	-7	7	Downward Trend	11	Not Significant
AE28R-1	cis-1,2-Dichloroethene	6	4	13	13	7	Upward Trend	9	Upward Trend
AE28R-1	Tetrachloroethene	6	6	-1	-1	7	Not Significant	9	Not Significant
AE28R-1	Trichloroethene	6	6	9	9	7	Upward Trend	9	Upward Trend
AE28R-2	cis-1,2-Dichloroethene	6	3	12	12	7	Upward Trend	9	Upward Trend
AE28R-2	Tetrachloroethene	6	6	-3	-3	7	Not Significant	9	Not Significant
AE28R-2	Trichloroethene	6	6	7	7	7	Upward Trend	9	Not Significant
AE28R-2	1,4-Dioxane	6	6	4	4	7	Not Significant	9	Not Significant
AE28R-3	cis-1,2-Dichloroethene	6	4	14	14	7	Upward Trend	9	Upward Trend
AE28R-3	Tetrachloroethene	6	6	-9	-9	7	Downward Trend	9	Downward Trend
AE28R-3	Trichloroethene	6	6	5	5	7	Not Significant	9	Not Significant
AE28R-3	1,4-Dioxane	4	4	3	3	4	Not Significant	6	Not Significant

Table 5-8
Groundwater Mann Kendall Trend Tests for Chlorinated Volatile Organic Compounds
Former GE Facility, Wilmington, MA

Well	Parameter	Sample Size	Number Detects	S-Statistics	Test Statistic*	80% Confidence		90% Confidence	
						Critical Value	Conclusion	Critical Value	Conclusion
AE28R-4	cis-1,2-Dichloroethene	6	5	15	15	7	Upward Trend	9	Upward Trend
AE28R-4	Tetrachloroethene	6	6	-1	-1	7	Not Significant	9	Not Significant
AE28R-4	Trichloroethene	6	6	9	9	7	Upward Trend	9	Upward Trend
AE29R-1	Trichloroethene	6	5	-7	-7	7	Downward Trend	9	Not Significant
AE29R-3	cis-1,2-Dichloroethene	6	6	0	0		No Trend		No Trend
AE29R-3	Trichloroethene	6	6	-7	-7	7	Downward Trend	9	Not Significant
AE29R-5	cis-1,2-Dichloroethene	6	6	7	7	7	Upward Trend	9	Not Significant
AE29R-5	Trichloroethene	6	6	-1	-1	7	Not Significant	9	Not Significant
AE29R-6	cis-1,2-Dichloroethene	7	7	6	6	7	Not Significant	11	Not Significant
AE29R-6	Toluene	7	4	-12	-12	7	Downward Trend	11	Downward Trend
AE29R-6	Trichloroethene	7	7	-9	-9	7	Downward Trend	11	Not Significant
AE29R-6	1,4-Dioxane	6	6	10	10	7	Upward Trend	9	Upward Trend
EMW-10D	cis-1,2-Dichloroethene	20	19	-41	-1.298	0.8416	Downward Trend	1.282	Downward Trend
EMW-10D	Tetrachloroethene	20	19	33	1.039	0.8416	Upward Trend	1.282	Not Significant
EMW-10D	Trichloroethene	20	19	2	0.03256	0.8416	Not Significant	1.282	Not Significant
EMW-10D	Vinyl Chloride	20	12	39	1.255	0.8416	Upward Trend	1.282	Not Significant
EMW-10R	cis-1,2-Dichloroethene	13	13	44	2.623	0.8416	Upward Trend	1.282	Upward Trend
EMW-10R	Tetrachloroethene	13	9	10	0.5582	0.8416	Not Significant	1.282	Not Significant
EMW-10R	Trichloroethene	13	13	14	0.7931	0.8416	Not Significant	1.282	Not Significant
EMW-10R	Vinyl Chloride	20	10	127	4.304	0.8416	Upward Trend	1.282	Upward Trend
EMW-11D	cis-1,2-Dichloroethene	18	18	-10	-0.3416	0.8416	Not Significant	1.282	Not Significant
EMW-11D	Tetrachloroethene	17	16	-10	-0.3714	0.8416	Not Significant	1.282	Not Significant
EMW-11D	Trichloroethene	18	17	-7	-0.2276	0.8416	Not Significant	1.282	Not Significant
EMW-11D	Vinyl Chloride	18	18	-27	-0.9862	0.8416	Downward Trend	1.282	Not Significant
EMW-11R1	cis-1,2-Dichloroethene	23	22	81	2.114	0.8416	Upward Trend	1.282	Upward Trend
EMW-11R1	Tetrachloroethene	23	23	82	2.140	0.8416	Upward Trend	1.282	Upward Trend
EMW-11R1	Trichloroethene	23	23	61	1.586	0.8416	Upward Trend	1.282	Upward Trend
EMW-11R1	Vinyl Chloride	23	8	9	0.2121	0.8416	Not Significant	1.282	Not Significant
EMW-11R2	cis-1,2-Dichloroethene	22	22	81	2.258	0.8416	Upward Trend	1.282	Upward Trend
EMW-11R2	Tetrachloroethene	22	19	96	2.682	0.8416	Upward Trend	1.282	Upward Trend
EMW-11R2	Trichloroethene	22	22	66	1.834	0.8416	Upward Trend	1.282	Upward Trend
EMW-11R2	Vinyl Chloride	22	18	31	0.8475	0.8416	Upward Trend	1.282	Not Significant
EMW-11R3	cis-1,2-Dichloroethene	14	13	43	2.299	0.8416	Upward Trend	1.282	Upward Trend
EMW-11R3	Tetrachloroethene	14	13	-4	-0.1645	0.8416	Not Significant	1.282	Not Significant
EMW-11R3	Trichloroethene	14	14	-11	-0.5491	0.8416	Not Significant	1.282	Not Significant
EMW-11R3	Vinyl Chloride	14	7	-3	-0.1107	0.8416	Not Significant	1.282	Not Significant

Table 5-8
Groundwater Mann Kendall Trend Tests for Chlorinated Volatile Organic Compounds
Former GE Facility, Wilmington, MA

Well	Parameter	Sample Size	Number Detects	S-Statistics	Test Statistic*	80% Confidence		90% Confidence	
						Critical Value	Conclusion	Critical Value	Conclusion
GZA-101R	cis-1,2-Dichloroethene	28	9	-31	-0.6004	0.8416	Not Significant	1.282	Not Significant
GZA-101R	Tetrachloroethene	32	32	3	0.03245	0.8416	Not Significant	1.282	Not Significant
GZA-101R	Toluene	22	8	-132	-3.731	0.8416	Downward Trend	1.282	Downward Trend
GZA-101R	Trichloroethene	32	32	-181	-2.919	0.8416	Downward Trend	1.282	Downward Trend
GZA-102S	cis-1,2-Dichloroethene	16	11	-41	-1.806	0.8416	Downward Trend	1.282	Downward Trend
GZA-102S	Tetrachloroethene	21	15	-117	-3.504	0.8416	Downward Trend	1.282	Downward Trend
GZA-102S	Trichloroethene	21	13	-106	-3.214	0.8416	Downward Trend	1.282	Downward Trend
GZA-102S	Vinyl Chloride	21	10	-105	-3.152	0.8416	Downward Trend	1.282	Downward Trend
GZA-105D	cis-1,2-Dichloroethene	24	22	-12	-0.2730	0.8416	Not Significant	1.282	Not Significant
GZA-105D	Tetrachloroethene	25	23	-38	-0.8646	0.8416	Downward Trend	1.282	Not Significant
GZA-105D	Trichloroethene	25	24	-18	-0.3973	0.8416	Not Significant	1.282	Not Significant
GZA-105D	Vinyl Chloride	25	24	-132	-3.061	0.8416	Downward Trend	1.282	Downward Trend
GZA-105D	1,4-Dioxane	7	7	-9	-9	7	Downward Trend	11	Not Significant
GZA-105R	cis-1,2-Dichloroethene	24	19	76	1.861	0.8416	Upward Trend	1.282	Upward Trend
GZA-105R	Tetrachloroethene	32	32	142	2.287	0.8416	Upward Trend	1.282	Upward Trend
GZA-105R	Toluene	31	3	-5	-0.06883	0.8416	Not Significant	1.282	Not Significant
GZA-105R	Trichloroethene	32	32	117	1.881	0.8416	Upward Trend	1.282	Upward Trend
GZA-105R	Vinyl Chloride	34	13	-30	-0.4317	0.8416	Not Significant	1.282	Not Significant
IP-01R2	cis-1,2-Dichloroethene	12	9	-19	-1.237	0.8416	Downward Trend	1.282	Not Significant
IP-01R2	Tetrachloroethene	12	12	14	0.8914	0.8416	Upward Trend	1.282	Not Significant
IP-01R2	Trichloroethene	12	12	-8	-0.4800	0.8416	Not Significant	1.282	Not Significant
MW-4	cis-1,2-Dichloroethene	10	9	-5	-5	11	Not Significant	17	Not Significant
MW-4	Vinyl Chloride	13	9	28	1.690	0.8416	Upward Trend	1.282	Upward Trend
MW-4	1,4-Dioxane	6	6	-3	-3	7	Not Significant	9	Not Significant
MW-5	cis-1,2-Dichloroethene	7	7	7	7	7	Upward Trend	11	Not Significant
MW-7	cis-1,2-Dichloroethene	8	8	10	10	8	Upward Trend	12	Not Significant
MW-7	Trichloroethene	8	8	8	8	8	Upward Trend	12	Not Significant
MW-7	Vinyl Chloride	15	7	39	1.959	0.8416	Upward Trend	1.282	Upward Trend
PS-1D	cis-1,2-Dichloroethene	16	16	-4	-0.1353	0.8416	Not Significant	1.282	Not Significant
PS-1D	Tetrachloroethene	16	16	-86	-3.835	0.8416	Downward Trend	1.282	Downward Trend
PS-1D	Trichloroethene	16	16	-110	-4.927	0.8416	Downward Trend	1.282	Downward Trend
PS-1D	Vinyl Chloride	21	8	-52	-1.590	0.8416	Downward Trend	1.282	Downward Trend
PS-1S	cis-1,2-Dichloroethene	11	10	-8	-0.5466	0.8416	Not Significant	1.282	Not Significant
PS-1S	Trichloroethene	12	10	-52	-3.497	0.8416	Downward Trend	1.282	Downward Trend
PS-1S	Vinyl Chloride	12	6	-14	-0.9014	0.8416	Downward Trend	1.282	Not Significant
PS-5D	cis-1,2-Dichloroethene	11	9	13	0.9399	0.8416	Upward Trend	1.282	Not Significant

Table 5-8
Groundwater Mann Kendall Trend Tests for Chlorinated Volatile Organic Compounds
Former GE Facility, Wilmington, MA

Well	Parameter	Sample Size	Number Detects	S-Statistics	Test Statistic*	80% Confidence		90% Confidence	
						Critical Value	Conclusion	Critical Value	Conclusion
PS-5D	Vinyl Chloride	14	8	-13	-0.6589	0.8416	Not Significant	1.282	Not Significant
STM-8D	cis-1,2-Dichloroethene	15	11	29	1.394	0.8416	Upward Trend	1.282	Upward Trend
STM-8D	Tetrachloroethene	10	10	-13	-13	11	Downward Trend	17	Not Significant
STM-8D	Trichloroethene	12	10	-35	-2.337	0.8416	Downward Trend	1.282	Downward Trend
STM-8D	1,4-Dioxane	5	5	0	0		No Trend		No Trend
STM-8R	cis-1,2-Dichloroethene	17	12	-4	-0.1243	0.8416	Not Significant	1.282	Not Significant
STM-8R	Tetrachloroethene	16	11	-41	-1.811	0.8416	Downward Trend	1.282	Downward Trend
STM-8R	Trichloroethene	17	15	-53	-2.149	0.8416	Downward Trend	1.282	Downward Trend
STM-8R	1,4-Dioxane	5	3	-5	-5	6	Not Significant	8	Not Significant
STM-8R1	Trichloroethene	7	7	-15	-15	7	Downward Trend	11	Downward Trend
STM-8R1	1,4-Dioxane	5	4	4	4	6	Not Significant	8	Not Significant
TRC-102	cis-1,2-Dichloroethene	6	4	-6	-6	7	Not Significant	9	Not Significant
TRC-201R	cis-1,2-Dichloroethene	9	9	10	10	10	Upward Trend	14	Not Significant
TRC-201R	Tetrachloroethene	8	3	-2	-2	8	Not Significant	12	Not Significant
TRC-201R	Trichloroethene	9	9	-12	-12	10	Downward Trend	14	Not Significant
TRC-201R	Vinyl Chloride	9	3	14	14	10	Upward Trend	14	Upward Trend
TRC-301R-2	cis-1,2-Dichloroethene	7	7	-5	-5	7	Not Significant	11	Not Significant
TRC-301R-2	Tetrachloroethene	7	7	3	3	7	Not Significant	11	Not Significant
TRC-301R-2	Trichloroethene	7	7	5	5	7	Not Significant	11	Not Significant
TRC-301R-2	Vinyl Chloride	7	4	-8	-8	7	Downward Trend	11	Not Significant
TRC-301R-4	cis-1,2-Dichloroethene	7	7	-9	-9	7	Downward Trend	11	Not Significant
TRC-301R-4	Tetrachloroethene	7	7	5	5	7	Not Significant	11	Not Significant
TRC-301R-4	Trichloroethene	7	7	-10	-10	7	Downward Trend	11	Not Significant
TRC-301R-4	Vinyl Chloride	7	7	-7	-7	7	Downward Trend	11	Not Significant
TRC-401R	cis-1,2-Dichloroethene	10	9	-12	-12	11	Downward Trend	17	Not Significant
TRC-401R	Tetrachloroethene	9	9	4	4	10	Not Significant	14	Not Significant
TRC-401R	Trichloroethene	9	9	-6	-6	10	Not Significant	14	Not Significant

Notes:
Datasets presented for wells that were included in the sampling program in September 2020.
Field duplicates assigned the maximum value for the purposes of the trend test.
The detection limit was used for non-detect concentrations for the purposes of the trend test.
Trend test results were interpreted using a confidence level of 80% and 90%. If the absolute value of the statistic is equal to or greater than the critical value, a significant trend concluded. The direction of the trend is determined by the sign of the statistic with positive statistics indicating an upward trend and negative statistics indicating a downward tre
* When sample size > 10, the normal approximation is used and calculated per box 4-9 in Data Quality Assessment: Statistical Methods for Practitioners, EPA QA/G-9S.
When the normal approximation is used, the critical value is the standard normal distribution.
When S is 0, no critical value is calculated and a conclusion of no trend is made.

Table 5-9
Summary of 2016 - 2020 Groundwater Analytical Results for Monitored Natural Attenuation Parameters
Former GE Facility, 50 Fordham Road, Wilmington, MA

			loc_group	**Downgradient Wetland**											
			Location ID:	**GZA-14A**	**GZA-14A**	**GZA-14A**	**GZA-14A**	**GZA-14A**	**GZA-14A**	**MW-4**	**MW-4**	**MW-4**	**MW-4**	**MW-4**
			Sample ID:	16A-GZA14A-061716-1	16A-GZA14A-061716-2	17A-GZA14A-102017-1	18A-GZA14A-092818-1	19A-GZA14A-093019-1	20A-GZA14A-091720-1	16A-MW4-062416-1	17A-MW4-101817-1	18A-MW4-100418-1	19A-MW4-091919-1	19A-MW4-091919-2
			Sample Date:	6/17/2016	6/17/2016	10/20/2017	9/28/2018	9/30/2019	9/17/2020	6/24/2016	10/18/2017	10/4/2018	9/19/2019	9/19/2019
			Sample Type:	N	FD	N	N	N	N	N	N	N	N	FD
			Depth Interval:	0 - 15 ft	0 - 15 ft	0 - 15 ft	0 - 15 ft	0-15 ft	0 - 15 ft	18 - 28 ft	18 - 28 ft	18 - 28 ft	18-28 ft	18-28 ft
Analyte	**MCP Method 1 GW-1 Standards**	**MCP Method 1 GW-2 Standards**	**MCP Method 1 GW-3 Standards**											
Conventional Parameters (ug/l)														
Chloride	NE	NE	NE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Nitrate	NE	NE	NE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Nitrite as N	NE	NE	NE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Sulfate	NE	NE	NE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Sulfide	NE	NE	NE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Total Organic Carbon	NE	NE	NE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Dissolved Gases (ug/l)														
Acetylene	NE	NE	NE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Ethane	NE	NE	NE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Ethene	NE	NE	NE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Hydrogen (nM)	NE	NE	NE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Methane	NE	NE	NE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Propane	NE	NE	NE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Dissolved Metals (ug/l)														
Iron	NE	NE	NE	**7040**	**7100**	**8150**	**4040**	**8030**	**13700**	**21900**	**25700**	**30000**	**24200**	**24100**
Manganese	NE	NE	NE	**2110**	**2080**	**2290**	**1160**	**1650**	**2970**	**1180 J**	**1330**	**1400**	**1190**	**1160**
Total Metals (ug/l)														
Iron	NE	NE	NE	**7340**	**7490**	**8100**	**4520**	**8950**	**16100**	**22900**	**25900 J**	**29000**	**24800**	**24700**
Manganese	NE	NE	NE	**2240**	**2240**	**2160**	**1300**	**1710**	**3060**	**1050 J**	**1340**	**1460**	**1230**	**1230**

U - Non-detect at laboratory detection limit
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ft = feet
mg/l = miligrams per liter
µg/l = micrograms per liter
NE = not established
NS = not sampled
Detects are bolded

Table 5-9
Summary of 2016 - 2020 Groundwater Analytical Results for Monitored Natural Attenuation Parameters
Former GE Facility, 50 Fordham Road, Wilmington, MA

			loc_group	**Downgradient Wetland (continued)**										
			Location ID:	**MW-4**	**MW-4**	**MW-4A**	**MW-4A**	**MW-4A**	**MW-4A**	**MW-4A**	**PS-8D**	**PS-8D**	**PS-8D**
			Sample ID:	20A-MW4-091820-1	20A-MW4-091820-2	16A-MW4A-062416-1	17A-MW4A-101817-1	18A-MW4A-100418-1	19A-MW4A-091919-1	20A-MW4A-091820-1	18A-PS8D-100218-1	19A-PS8D-091719-1	20A-PS8D-091520-1
			Sample Date:	9/18/2020	9/18/2020	6/24/2016	10/18/2017	10/4/2018	9/19/2019	9/18/2020	10/2/2018	9/17/2019	9/15/2020
			Sample Type:	N	FD	N	N	N	N	N	N	N	N
			Depth Interval:	18 - 28 ft	18 - 28 ft	38 - 48 ft	38 - 48 ft	38 - 48 ft	38-48 ft	38 - 48 ft	51.8 - 56.8 ft	51.8-56.8 ft	51.8 - 56.8 ft
Analyte	**MCP Method 1 GW-1 Standards**	**MCP Method 1 GW-2 Standards**	**MCP Method 1 GW-3 Standards**										
Conventional Parameters (ug/l)													
Chloride	NE	NE	NE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Nitrate	NE	NE	NE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Nitrite as N	NE	NE	NE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Sulfate	NE	NE	NE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Sulfide	NE	NE	NE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Total Organic Carbon	NE	NE	NE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Dissolved Gases (ug/l)													
Acetylene	NE	NE	NE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Ethane	NE	NE	NE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Ethene	NE	NE	NE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Hydrogen (nM)	NE	NE	NE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Methane	NE	NE	NE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Propane	NE	NE	NE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Dissolved Metals (ug/l)													
Iron	NE	NE	NE	**29000**	**29400**	**23100 J**	**34100**	**36100**	**27000**	**33100**	**1050**	**761**	**738**
Manganese	NE	NE	NE	**1490**	**1500**	**1100**	**1530**	**1420**	**1080**	**1370**	**16.2 J**	**7**	**7**
Total Metals (ug/l)													
Iron	NE	NE	NE	**34800**	**35900**	**20700 J**	**35900 J**	**34700**	**28000**	**39700**	**2390**	**5380**	**2290**
Manganese	NE	NE	NE	**1570**	**1600**	**1090**	**1590**	**1450**	**1140**	**1440**	**13.2 J**	**31**	**17**

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µg/l = micrograms per liter
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Table 5-9
Summary of 2016 - 2020 Groundwater Analytical Results for Monitored Natural Attenuation Parameters
Former GE Facility, 50 Fordham Road, Wilmington, MA

				loc_group	Building 1_TankF									
				Location ID:	**AE26R-1**	**AE26R-1**	**AE26R-1**	**AE26R-1**	**AE26R-1**	**AE26S**	**AE26S**	**AE26S**	**AE28R-2**	**AE28R-2**
				Sample ID:	16B-AE26R1-062316-1	17A-AE26R1-100417-1	18A-AE26R1-091818-1	19A-AE26R1-092319-1	20A-AE26R1-091420-1	18A-AE26S-092518-1	19A-AE26S-092319-1	20A-AE26S-091420-1	16B-AE28R2-062316-1	17A-AE28R2-100417-1
				Sample Date:	6/23/2016	10/4/2017	9/18/2018	9/23/2019	9/14/2020	9/25/2018	9/23/2019	9/14/2020	6/23/2016	10/4/2017
				Sample Type:	N	N	N	N	N	N	N	N	N	N
				Depth Interval:	50 - 56 ft	50 - 56 ft	50 - 56 ft	50-56 ft	50 - 56 ft	25 - 30 ft	25-30 ft	25 - 30 ft	75 - 85 ft	75 - 85 ft
Analyte	**MCP Method 1 GW-1 Standards**	**MCP Method 1 GW-2 Standards**	**MCP Method 1 GW-3 Standards**											
Conventional Parameters (ug/l)														
Chloride	NE	NE	NE	**121000**	**122000**	**127000**	**133000**	**126000**	NS	NS	NS	**326000**	**354000**
Nitrate	NE	NE	NE	100 U	100 U	100 U	50 U	50 U	NS	NS	NS	100 U	100 U
Nitrite as N	NE	NE	NE	100 U	100 U	100 U	4 U	20 U	NS	NS	NS	1300 U	100 U
Sulfate	NE	NE	NE	**9970**	**15300**	**15700**	**17500**	**15700**	NS	NS	NS	**33800**	**37600**
Sulfide	NE	NE	NE	100 U	100 U	100 U	**170**	**230**	NS	NS	NS	100 U	100 U
Total Organic Carbon	NE	NE	NE	**10800**	**2290**	5000 U	1000 U	1000 U	NS	NS	NS	**1600**	**1200**
Dissolved Gases (ug/l)														
Acetylene	NE	NE	NE	**0.44 J**	**0.29 J**	**0.17 J**	**0.25 J**	0.11 U	NS	NS	NS	**15**	**0.99**
Ethane	NE	NE	NE	**2.2**	**1.1**	**1.4**	**1.0**	**1.6**	NS	NS	NS	**11**	**11**
Ethene	NE	NE	NE	**3.4**	**1.6**	**1.3**	**1.3**	**1.1**	NS	NS	NS	**23**	**17**
Hydrogen (nM)	NE	NE	NE	NS	**42**	**28**	**20**	**67**	NS	NS	NS	NS	**7.3**
Methane	NE	NE	NE	**65**	**250**	**160**	**190 J-**	**160**	NS	NS	NS	**67**	**160**
Propane	NE	NE	NE	**0.23**	**0.16**	**0.19**	**0.11**	**0.18**	NS	NS	NS	**0.87**	**1.1**
Dissolved Metals (ug/l)														
Iron	NE	NE	NE	15.0 U	**131**	250 U	**58**	**106**	125 U	**11**	11 U	**1510**	**1140**
Manganese	NE	NE	NE	**16.4**	**518**	**524 J**	**636**	**772**	**426**	**440**	**1020**	**1710**	**1810**
Total Metals (ug/l)														
Iron	NE	NE	NE	**195**	**265**	250 U	**243**	**345**	125 U	**57**	**11**	**1550**	**1110**
Manganese	NE	NE	NE	**331**	**451**	**357 J**	**667**	**801**	**430**	**437**	**1050**	**1750**	**1750**

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Table 5-9
Summary of 2016 - 2020 Groundwater Analytical Results for Monitored Natural Attenuation Parameters
Former GE Facility, 50 Fordham Road, Wilmington, MA

			loc_group	**Building 1_TankF (continued)**									
			Location ID:	**AE28R-2**	**AE28R-2**	**AE28R-2**	**AE29R-6**	**AE29R-6**	**AE29R-6**	**AE29R-6**	**AE29R-6**	**GZA-101R**	**GZA-101R**
			Sample ID:	18A-AE28R2-091818-1	19A-AE28R2-092319-1	20A-AE28R2-091420-1	16B-AE29R6-062816-1	17A-AE29R6-101717-1	18A-AE29R6-091818-1	19A-AE29R6-092419-1	20A-AE29R6-092220-1	16A-GZA101R-061416-1	17A-GZA101R-101017-1
			Sample Date:	9/18/2018	9/23/2019	9/14/2020	6/28/2016	10/17/2017	9/18/2018	9/24/2019	9/22/2020	6/14/2016	10/10/2017
			Sample Type:	N	N	N	N	N	N	N	N	N	N
			Depth Interval:	75 - 85 ft	75-85 ft	75 - 85 ft	140 - 146 ft	140 - 146 ft	140 - 146 ft	140-146 ft	140 - 146 ft	36.5 - 38 ft	36.5 - 38 ft
Analyte	**MCP Method 1 GW-1 Standards**	**MCP Method 1 GW-2 Standards**	**MCP Method 1 GW-3 Standards**										
Conventional Parameters (ug/l)													
Chloride	NE	NE	NE	**373000 J-**	**422000**	**405000**	**1220000**	**442000**	**420000**	**424000**	**461000**	**907000**	**1060000**
Nitrate	NE	NE	NE	100 U	50 U	50 U	**3020**	100 U	100 U	50 U	50 U	100 U	100 U
Nitrite as N	NE	NE	NE	200 U	40 U	40 U	600 U	200 U	200 U	40 U	40 U	500 U	NS R
Sulfate	NE	NE	NE	**34500**	**39400**	**35300**	**49200**	**49200**	**45200**	**46300**	**43900**	**46300**	**49400**
Sulfide	NE	NE	NE	100 U	**300**	**650**	100 U	100 U	100 U	50 U	**70**	100 U	100 U
Total Organic Carbon	NE	NE	NE	10000 U	1000 U	1000 U	**1000**	**1490 J+**	10000 U	1000 U	**1200**	NS	NS
Dissolved Gases (ug/l)													
Acetylene	NE	NE	NE	**1.1**	**0.90**	0.11 U	0.50 U	0.50 U	0.50 U	0.50 U	0.74 U	0.50 U	0.50 U
Ethane	NE	NE	NE	**10**	**7.7**	**6.1**	**0.80**	**0.88**	**0.86**	**0.26**	**0.42 J**	**4.6**	**2.2**
Ethene	NE	NE	NE	**13**	**11**	**10**	**0.64**	**1.2**	**1.4**	**0.90**	**1.2**	**0.035 J**	**0.049 J**
Hydrogen (nM)	NE	NE	NE	**240**	**220**	**1.8 J**	NS	**320**	**100**	**180**	**15**	NS	**20**
Methane	NE	NE	NE	**200**	**190 J-**	**130**	**7.1**	**580**	**1300**	**1100 J-**	**900**	**61**	**27**
Propane	NE	NE	NE	**1.0**	**0.74**	**0.57**	**0.29**	**0.31**	**0.34**	**0.14**	**0.13**	**0.71**	**0.39**
Dissolved Metals (ug/l)													
Iron	NE	NE	NE	**931**	**823**	**876**	**1030**	**1340**	**1080**	**1280**	**1390**	**12800**	**15200**
Manganese	NE	NE	NE	**1800**	**1870**	**1750**	**4190**	**847**	**876**	**974**	**1030**	**7020**	**7390**
Total Metals (ug/l)													
Iron	NE	NE	NE	**907**	**892**	**939**	**1040**	**1370**	**1120**	**1210**	**1190**	**11600**	**14500**
Manganese	NE	NE	NE	**1800**	**1920**	**1920**	**4270**	**860**	**874**	**886**	**890**	**7040**	**7780**

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Table 5-9
Summary of 2016 - 2020 Groundwater Analytical Results for Monitored Natural Attenuation Parameters
Former GE Facility, 50 Fordham Road, Wilmington, MA

loc_group				**Building 1_TankF (continued)**			**EPL**								
Location ID:				**GZA-101R**	**GZA-101R**	**GZA-101R**	**AE03**	**AE03**	**AE03**	**AE03**	**AE03**	**AE03**	**AE03**	**AE03**	
Sample ID:				18A-GZA101R-091818-1	19A-GZA101R-092619-1	20A-GZA101R-092420-1	16A-AE03-062816-1	16A-AE03-062816-2	17A-AE03-100917-1	18A-AE03-092418-1	18A-AE03-092418-2	19A-AE03-091219-1	19A-AE03-091219-2	20A-AE3-092320-1	
Sample Date:				9/18/2018	9/26/2019	9/24/2020	6/28/2016	6/28/2016	10/9/2017	9/24/2018	9/24/2018	9/12/2019	9/12/2019	9/23/2020	
Sample Type:				N	N	N	N	FD	N	N	FD	N	FD	N	
Depth Interval:				36.5 - 38 ft	36.5-38 ft	36.5 - 38 ft	3 - 13 ft	3 - 13 ft	3 - 13 ft	3 - 13 ft	3 - 13 ft	3-13 ft	3-13 ft	3 - 13 ft	
Analyte	**MCP Method 1 GW-1 Standards**	**MCP Method 1 GW-2 Standards**	**MCP Method 1 GW-3 Standards**												
Conventional Parameters (ug/l)															
Chloride	NE	NE	NE	**1150000**	**1370000**	**1200000**	**172000**	**164000**	**260000**	NS	NS	NS	NS	NS	
Nitrate	NE	NE	NE	100 U	50 U	50 U	100 U	100 U	100 U	NS	NS	NS	NS	NS	
Nitrite as N	NE	NE	NE	500 U	100 U	4 U	100 U	100 U	100 U	NS	NS	NS	NS	NS	
Sulfate	NE	NE	NE	**50000**	**52800**	**46400**	1000 U	1000 U	1000 U	NS	NS	NS	NS	NS	
Sulfide	NE	NE	NE	100 U	50 U	50 U	100 U	100 U	100 U	NS	NS	NS	NS	NS	
Total Organic Carbon	NE	NE	NE	NS	NS	NS	**6000**	**6000**	**7180**	NS	NS	NS	NS	NS	
Dissolved Gases (ug/l)															
Acetylene	NE	NE	NE	0.50 U	0.50 U	0.74 U	0.50 U	0.50 U	0.50 U	NS	NS	NS	NS	NS	
Ethane	NE	NE	NE	**0.95**	**0.59**	**0.40 J**	**1.1**	**0.81**	**1.6**	NS	NS	NS	NS	NS	
Ethene	NE	NE	NE	**0.12**	0.10 U	1.0 U	**0.073 J**	**0.055 J**	**0.045 J**	NS	NS	NS	NS	NS	
Hydrogen (nM)	NE	NE	NE	**33**	**22**	**26**	NS	NS	**4.3**	NS	NS	NS	NS	NS	
Methane	NE	NE	NE	**15**	**11 J-**	**4.6 J**	**3200 J**	**2200 J**	**4700**	NS	NS	NS	NS	NS	
Propane	NE	NE	NE	**0.17**	**0.17**	**0.15**	**0.029 J**	0.10 U	**0.064 J**	NS	NS	NS	NS	NS	
Dissolved Metals (ug/l)															
Iron	NE	NE	NE	**17600**	**17200**	**17800**	**25600**	NS	**26700**	**15200**	**15200**	**10900**	**10800**	**8930**	
Manganese	NE	NE	NE	**8440**	**8200**	**8040**	**2300**	NS	**2630**	**1710**	**1710**	**1430**	**1430**	**1160**	
Total Metals (ug/l)															
Iron	NE	NE	NE	**17000**	**19600**	**16800**	**25700**	NS	**26600**	**15200**	**15400**	**10300**	**10400**	**9280**	
Manganese	NE	NE	NE	**8540**	**8020**	**8000**	**2140**	NS	**2590**	**1700**	**1730**	**1490**	**1470**	**1180**	

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Table 5-9
Summary of 2016 - 2020 Groundwater Analytical Results for Monitored Natural Attenuation Parameters
Former GE Facility, 50 Fordham Road, Wilmington, MA

			loc_group	**EPL (continued)**										
			Location ID:	**AE03**	**GZA-105S**	**GZA-105S**	**GZA-105S**	**GZA-105S**	**GZA-105S**	**GZA-105S**	**TRC-102**	**TRC-102**	**TRC-102**
			Sample ID:	20A-AE3-092320-2	16A-GZA105S-061516-1	17A-GZA105S-100917-1	17A-GZA105S-100917-2	18A-GZA105S-092518-1	19A-GZA105S-091819-1	20A-GZA105S-092420-1	16A-TRC102-062716-1	17A-TRC102-100217-1	18A-TRC102-092418-1
			Sample Date:	9/23/2020	6/15/2016	10/9/2017	10/9/2017	9/25/2018	9/18/2019	9/24/2020	6/27/2016	10/2/2017	9/24/2018
			Sample Type:	FD	N	N	FD	N	N	N	N	N	N
			Depth Interval:	3 - 13 ft	4 - 14 ft	4 - 14 ft	4 - 14 ft	4 - 14 ft	4-14 ft	4 - 14 ft	2.25 - 12.25 ft	2.25 - 12.25 ft	2.25 - 12.25 ft
Analyte	**MCP Method 1 GW-1 Standards**	**MCP Method 1 GW-2 Standards**	**MCP Method 1 GW-3 Standards**										
Conventional Parameters (ug/l)													
Chloride	NE	NE	NE	NS	**184000 J+**	**244000**	**247000**	NS	NS	NS	NS	NS	NS
Nitrate	NE	NE	NE	NS	100 U	100 U	100 U	NS	NS	NS	NS	NS	NS
Nitrite as N	NE	NE	NE	NS	100 U	100 U	100 U	NS	NS	NS	NS	NS	NS
Sulfate	NE	NE	NE	NS	1000 UJ	1000 U	1000 U	NS	NS	NS	NS	NS	NS
Sulfide	NE	NE	NE	NS	100 U	100 U	100 U	NS	NS	NS	NS	NS	NS
Total Organic Carbon	NE	NE	NE	NS	**6900**	**11600**	**12400**	NS	NS	NS	NS	NS	NS
Dissolved Gases (ug/l)													
Acetylene	NE	NE	NE	NS	NS	0.50 U	0.50 UJ	NS	NS	NS	NS	NS	NS
Ethane	NE	NE	NE	NS	NS	**1.8 J**	**1.2 J**	NS	NS	NS	NS	NS	NS
Ethene	NE	NE	NE	NS	NS	**0.038 J**	**0.032 J**	NS	NS	NS	NS	NS	NS
Hydrogen (nM)	NE	NE	NE	NS	NS	**5.6**	NS	NS	NS	NS	NS	NS	NS
Methane	NE	NE	NE	NS	NS	**3700 J**	**2300 J**	NS	NS	NS	NS	NS	NS
Propane	NE	NE	NE	NS	NS	**0.035 J**	**0.014 J**	NS	NS	NS	NS	NS	NS
Dissolved Metals (ug/l)													
Iron	NE	NE	NE	**8900**	**45300**	**43500**	**41400**	**29900**	**28500**	**28300**	**15000**	**19100**	**23600**
Manganese	NE	NE	NE	**1170**	**3810 J-**	**2730**	**2630**	**1690**	**1800**	**1590**	**1990**	**3870**	**3750**
Total Metals (ug/l)													
Iron	NE	NE	NE	**9440**	**45300**	**43800**	**42200**	**29800**	**28800**	**28500**	**14200**	**19500**	**24000**
Manganese	NE	NE	NE	**1190**	**3440**	**2760**	**2630**	**1670**	**1830**	**1620**	**2210**	**3920**	**3720**

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mg/l = miligrams per liter
µg/l = micrograms per liter
NE = not established
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Detects are bolded

Table 5-9
Summary of 2016 - 2020 Groundwater Analytical Results for Monitored Natural Attenuation Parameters
Former GE Facility, 50 Fordham Road, Wilmington, MA

			loc_group	**EPL (continued)**		**Tank Farm**					**Transect A**			
			Location ID:	**TRC-102**	**TRC-102**	**AE100R-5**	**AE100R-5**	**AE100R-5**	**AE100R-5**	**AE100R-5**	**AE102M**	**AE102M**	**AE102M**
			Sample ID:	19A-TRC102-092019-1	20A-TRC102-092320-1	16A-AE100R5-061516-1	17A-AE100R5-100417-1	18A-AE100R5-091918-1	19A-AE100R5-092319-1	20A-AE100R5-091020-1	16A-AE102M-061316-1	17A-AE102M-100217-1	18A-AE102M-100118-1
			Sample Date:	9/20/2019	9/23/2020	6/15/2016	10/4/2017	9/19/2018	9/23/2019	9/10/2020	6/13/2016	10/2/2017	10/1/2018
			Sample Type:	N	N	N	N	N	N	N	N	N	N
			Depth Interval:	2.25-12.25 ft	2.25 - 12.25 ft	88 - 93 ft	88 - 93 ft	88 - 93 ft	88-93 ft	88 - 93 ft	23 - 28 ft	23 - 28 ft	23 - 28 ft
Analyte	**MCP Method 1 GW-1 Standards**	**MCP Method 1 GW-2 Standards**	**MCP Method 1 GW-3 Standards**										
Conventional Parameters (ug/l)													
Chloride	NE	NE	NE	NS	NS	**269000 J+**	**316000**	**325000**	**368000**	**389000**	**499000**	**641000**	**526000**
Nitrate	NE	NE	NE	NS	NS	**191**	**402**	**464**	**680**	**690**	100 U	100 U	100 U
Nitrite as N	NE	NE	NE	NS	NS	100 U	100 U	1300 U	40 U	20 U	100 U	100 U	300 U
Sulfate	NE	NE	NE	NS	NS	**27600 J-**	**29600**	**28200**	**31000**	**29300**	**22600**	**18700**	**13400**
Sulfide	NE	NE	NE	NS	NS	100 U	100 U	100 U	50 U	50 U	100 U	100 U	100 U
Total Organic Carbon	NE	NE	NE	NS	NS	NS	NS	NS	NS	NS	**1000**	**3160**	**2730**
Dissolved Gases (ug/l)													
Acetylene	NE	NE	NE	NS	NS	0.50 U	0.50 U	0.50 U	0.50 U	0.11 U	0.50 U	0.50 U	0.50 U
Ethane	NE	NE	NE	NS	NS	**2.3**	**2.3**	**2.7**	**2.4**	**1.8**	**1.8**	**2.0**	**2.9**
Ethene	NE	NE	NE	NS	NS	**88**	**8.2**	**4.2**	**5.4**	**7.3**	**3.2**	**2.5**	**0.47**
Hydrogen (nM)	NE	NE	NE	NS	NS	NS	**2.9**	**3.8**	**2.4**	NS	NS	**2.8**	**29**
Methane	NE	NE	NE	NS	NS	**920 J**	**320**	**170**	**99 J-**	**69**	**140**	**910**	**490**
Propane	NE	NE	NE	NS	NS	**0.060 J**	**0.19**	**0.23**	**0.19**	0.014 U	**0.066 J**	**0.090 J**	**0.095 J**
Dissolved Metals (ug/l)													
Iron	NE	NE	NE	**22500**	**23700**	335 U	40.0 U	250 U	**76**	**30**	**3190**	**3550**	**824**
Manganese	NE	NE	NE	**3180**	**3120**	**1210 J-**	**120**	**720**	**675**	**656**	**11500**	**17600**	**10900**
Total Metals (ug/l)													
Iron	NE	NE	NE	**23700**	**23500**	**377**	**150**	250 U	**76**	**60**	**3340**	**3710**	**906**
Manganese	NE	NE	NE	**3260**	**3030**	**1220**	**383**	**765**	**642**	**717**	**11700**	**17900**	**10800**

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Table 5-9
Summary of 2016 - 2020 Groundwater Analytical Results for Monitored Natural Attenuation Parameters
Former GE Facility, 50 Fordham Road, Wilmington, MA

				loc_group	Transect A (continued)									
				Location ID:	AE102M	AE102M	AE102M	AE102M	AE102RR-6	AE102RR-6	AE102RR-6	AE102RR-6	AE102RR-6	AE103D
				Sample ID:	19A-AE102M-092519-1	19A-AE102M-092519-2	20A-AE102M-090920-1	20A-AE102M-090920-2	16A-AE102RR6-061416-1	7A-AE102RR6-100317-1	8A-AE102RR6-091918-1	9A-AE102RR6-092419-1	20A-AE102RR6-090920-1	16A-AE103D-061316-1
				Sample Date:	9/25/2019	9/25/2019	9/9/2020	9/9/2020	6/14/2016	10/3/2017	9/19/2018	9/24/2019	9/9/2020	6/13/2016
				Sample Type:	N	FD	N	FD	N	N	N	N	N	N
				Depth Interval:	23-28 ft	23-28 ft	23 - 28 ft	23 - 28 ft	153 - 158 ft	153 - 158 ft	153 - 158 ft	153-158 ft	153 - 158 ft	35 - 40 ft
Analyte	**MCP Method 1 GW-1 Standards**	**MCP Method 1 GW-2 Standards**	**MCP Method 1 GW-3 Standards**											
Conventional Parameters (ug/l)														
Chloride	NE	NE	NE	**530000**	**532000**	**603000**	**611000**	**115000**	**128000 J-**	**140000**	**163000**	**150000**	**818000**
Nitrate	NE	NE	NE	50 U	50 U	50 U	50 U	100 U	100 U	100 U	50 U	50 U	**3280**
Nitrite as N	NE	NE	NE	40 U	40 U	40 U	40 U	100 U	100 U	600 U	4 U	8 U	3300 U
Sulfate	NE	NE	NE	**7600**	**7500**	**5900**	**5600**	**23600**	**25900**	**24400**	**26600**	**24700**	**31600**
Sulfide	NE	NE	NE	50 U	50 U	50 U	50 U	100 U	100 U	100 U	50 U	50 U	100 U
Total Organic Carbon	NE	NE	NE	**1600**	**1600**	**2600**	**2500**	1000 U	1000 U	1000 U	1000 U	1000 U	1000 U
Dissolved Gases (ug/l)														
Acetylene	NE	NE	NE	0.50 U	0.50 U	0.11 U	0.11 U	**0.076 J**	**0.035 J**	0.50 U	**0.073 J**	0.11 U	0.50 U
Ethane	NE	NE	NE	**6.3**	**6.3**	**6.9**	**6.5**	**1.5**	**0.86**	**0.83**	**0.81**	**0.83 J**	**2.3**
Ethene	NE	NE	NE	**1.4**	**1.4**	**1.2**	**1.2**	**3.3**	**1.8**	**3.5**	**7.5**	**6.5**	**0.78**
Hydrogen (nM)	NE	NE	NE	**2.3**	NS	**2.3 J**	**1.9 J**	NS	**2.7**	**3.3**	**3.7**	0.98 U	NS
Methane	NE	NE	NE	**260 J-**	**260 J-**	**160**	**160**	**65**	**52**	**58**	**55 J-**	**51**	**150**
Propane	NE	NE	NE	**0.052 J**	**0.052 J**	**0.057 J**	**0.050 J**	**0.14**	**0.066 J**	**0.073 J**	**0.052 J**	**0.059 J**	**0.27**
Dissolved Metals (ug/l)														
Iron	NE	NE	NE	**1810**	NS	**2610**	NS	**423**	**546**	**7940 J**	**645**	**640**	**1080**
Manganese	NE	NE	NE	**10800**	NS	**11100**	NS	**453**	**546**	**576**	**636**	**612**	**3420**
Total Metals (ug/l)														
Iron	NE	NE	NE	**1870**	NS	**2930**	NS	**422**	**556**	**4490 J**	**594**	**681**	**1550**
Manganese	NE	NE	NE	**11100**	NS	**12000**	NS	**538**	**611**	**588**	**595**	**623**	**3390**

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Table 5-9
Summary of 2016 - 2020 Groundwater Analytical Results for Monitored Natural Attenuation Parameters
Former GE Facility, 50 Fordham Road, Wilmington, MA

			loc_group	**Transect A (continued)**									
			Location ID:	**AE103D**	**AE103D**	**AE103D**	**AE103D**	**AE103D**	**AE103R-1**	**AE103R-1**	**AE103R-1**	**AE103R-1**	**AE103R-1**
			Sample ID:	17A-AE103D-100317-1	18A-AE103D-092418-1	18A-AE103D-092418-2	19A-AE103D-091919-1	20A-AE103D-091020-1	16A-AE103R1-061516-1	17A-AE103R1-100217-1	18A-AE103R1-092518-1	19A-AE103R1-091819-1	20A-AE103R1-091020-1
			Sample Date:	10/3/2017	9/24/2018	9/24/2018	9/19/2019	9/10/2020	6/15/2016	10/2/2017	9/25/2018	9/18/2019	9/10/2020
			Sample Type:	N	N	FD	N	N	N	N	N	N	N
			Depth Interval:	35 - 40 ft	35 - 40 ft	35 - 40 ft	35-40 ft	35 - 40 ft	48 - 53 ft	48 - 53 ft	48 - 53 ft	48-53 ft	48 - 53 ft
Analyte	**MCP Method 1 GW-1 Standards**	**MCP Method 1 GW-2 Standards**	**MCP Method 1 GW-3 Standards**										
Conventional Parameters (ug/l)													
Chloride	NE	NE	NE	**842000 J-**	**818000**	**816000**	**42000**	**773000**	**390000 J+**	**680000**	**643000**	**667000**	**776000**
Nitrate	NE	NE	NE	**3980**	**3840**	**4250**	50 U	**3950**	**1650**	**3020 J**	**3390**	**2990**	**2960**
Nitrite as N	NE	NE	NE	100 U	3200 UJ	3200 UJ	4 U	100 U	200 U	100 U	2600 U	40 U	40 U
Sulfate	NE	NE	NE	**33400**	**30100**	**30300**	**7600**	**36300**	**28200 J-**	**28500**	**27500**	**29800**	**29700**
Sulfide	NE	NE	NE	100 U	100 U	100 U	50 U	50 U	100 U	100 U	100 U	50 U	50 U
Total Organic Carbon	NE	NE	NE	**1630**	**1750**	**1840**	**1400**	**1500**	1000 U	**1310**	**1120**	**1100**	**1400**
Dissolved Gases (ug/l)													
Acetylene	NE	NE	NE	0.50 U	0.50 U	0.50 U	0.50 U	**34**	0.50 U	0.50 U	0.50 U	0.50 U	0.11 U
Ethane	NE	NE	NE	**1.3**	**0.49**	**0.55**	**0.54**	**0.15 J**	**1.6**	**1.3**	**0.84**	**0.98**	**0.41 J**
Ethene	NE	NE	NE	**0.050 J**	**0.066 J**	**0.078 J**	**0.044 J**	0.12 U	**17**	**8.4**	**5.9**	**12**	**5.4**
Hydrogen (nM)	NE	NE	NE	**2.4**	**2.1**	NS	**2.1**	**2.7 J**	NS	**3.2**	**2.5**	**1.6**	**1.2 J**
Methane	NE	NE	NE	**130 J+**	**36**	**42**	**25**	**6.0**	**97**	**110**	**75**	**190**	**160**
Propane	NE	NE	NE	**0.16**	**0.083 J**	**0.085 J**	**0.16**	0.014 U	**0.10**	**0.098 J**	**0.075 J**	**0.15**	**0.034 J**
Dissolved Metals (ug/l)													
Iron	NE	NE	NE	**411**	125 U	125 U	11 U	11 U	**1120**	**455**	**628**	**648**	**505**
Manganese	NE	NE	NE	**3240**	**2550**	**2570**	**1990**	**2010**	**2020 J-**	**2770**	**2660**	**2480**	**2090**
Total Metals (ug/l)													
Iron	NE	NE	NE	**420**	125 U	125 U	**165**	**105**	**1200**	**461**	**660**	**786**	**625**
Manganese	NE	NE	NE	**3250**	**2520**	**2480**	**1900**	**2330**	**1970**	**2580**	**2710**	**2210**	**2230**

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Table 5-9
Summary of 2016 - 2020 Groundwater Analytical Results for Monitored Natural Attenuation Parameters
Former GE Facility, 50 Fordham Road, Wilmington, MA

			loc_group	**Transect A (continued)**										
			Location ID:	**AE103R-5**	**AE103R-5**	**AE103R-5**	**AE103R-5**	**AE103S**	**AE103S**	**AE103S**	**AE103S**	**AE103S**	**AE104R-4**
			Sample ID:	17A-AE103R5-100217-1	18A-AE103R5-092518-1	19A-AE103R5-091819-1	20A-AE103R5-091020-1	16A-AE103S-061516-1	17A-AE103S-100317-1	18A-AE103S-092418-1	19A-AE103S-091919-1	20A-AE103S-091020-1	16A-AE104R4-061416-1
			Sample Date:	10/2/2017	9/25/2018	9/18/2019	9/10/2020	6/15/2016	10/3/2017	9/24/2018	9/19/2019	9/10/2020	6/14/2016
			Sample Type:	N	N	N	N	N	N	N	N	N	N
			Depth Interval:	122 - 128 ft	122 - 128 ft	122-128 ft	122 - 128 ft	15 - 20 ft	15 - 20 ft	15 - 20 ft	15-20 ft	15 - 20 ft	128 - 133 ft
Analyte	**MCP Method 1 GW-1 Standards**	**MCP Method 1 GW-2 Standards**	**MCP Method 1 GW-3 Standards**										
Conventional Parameters (ug/l)													
Chloride	NE	NE	NE	**184000**	**201000**	**233000**	**285000**	NS	NS	NS	NS	NS	**211000**
Nitrate	NE	NE	NE	100 U	100 U	50 U	50 U	NS	NS	NS	NS	NS	100 U
Nitrite as N	NE	NE	NE	100 U	100 U	20 U	20 U	NS	NS	NS	NS	NS	100 U
Sulfate	NE	NE	NE	**36900**	**34400**	**35800**	**35600**	NS	NS	NS	NS	NS	**31000**
Sulfide	NE	NE	NE	100 U	100 U	50 U	50 U	NS	NS	NS	NS	NS	100 U
Total Organic Carbon	NE	NE	NE	1000 U	**1080**	1000 U	**1300**	NS	NS	NS	NS	NS	1000 U
Dissolved Gases (ug/l)													
Acetylene	NE	NE	NE	**0.051 J**	0.50 U	**0.057 J**	**17**	NS	NS	NS	NS	NS	**0.048 J**
Ethane	NE	NE	NE	**1.5**	**1.4**	**1.6**	**0.81 J**	NS	NS	NS	NS	NS	**0.46**
Ethene	NE	NE	NE	**39**	**67**	**120**	**150**	NS	NS	NS	NS	NS	**2.4**
Hydrogen (nM)	NE	NE	NE	**2.7**	**2.7**	**1.7**	**3.2 J**	NS	NS	NS	NS	NS	NS
Methane	NE	NE	NE	**120**	**130**	**150**	**98**	NS	NS	NS	NS	NS	**72**
Propane	NE	NE	NE	**0.095 J**	**0.077 J**	**0.13**	**0.10**	NS	NS	NS	NS	NS	**0.036 J**
Dissolved Metals (ug/l)													
Iron	NE	NE	NE	**391**	**373**	**430**	**222**	**19000 J**	**33800**	**8280**	**9080**	**13800**	**52.0**
Manganese	NE	NE	NE	**578**	**665**	**813**	**1010**	**3160**	**6300**	**1530**	**1560**	**1930**	**318**
Total Metals (ug/l)													
Iron	NE	NE	NE	**463**	**433**	**458**	**225**	**17400**	**32600**	**9960**	**9360**	**15500**	**58.8**
Manganese	NE	NE	NE	**511**	**678**	**822**	**1060**	**3110**	**6330**	**1580**	**1560**	**2060**	**345**

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Summary of 2016 - 2020 Groundwater Analytical Results for Monitored Natural Attenuation Parameters
Former GE Facility, 50 Fordham Road, Wilmington, MA

				loc_group	Transect A (continued)									
				Location ID:	AE108R-1	AE108R-1	AE108R-1	AE108R-1	AE108R-1	AE108R-1	AE109D	AE109D	AE109D	AE109R-5
				Sample ID:	16A-AE108R1-061616-1	16A-AE108R1-061616-2	17A-AE108R1-100917-1	18A-AE108R1-091918-1	19A-AE108R1-092419-1	20A-AE108R1-090920-1	18A-AE109D-092618-1	19A-AE109D-092019-1	18A-AE109D-091620-1	16A-AE109R5-061616-1
				Sample Date:	6/16/2016	6/16/2016	10/9/2017	9/19/2018	9/24/2019	9/9/2020	9/26/2018	9/20/2019	9/16/2020	6/16/2016
				Sample Type:	N	FD	N	N	N	N	N	N	N	N
				Depth Interval:	36.5 - 43.5 ft	36.5 - 43.5 ft	36.5 - 43.5 ft	36.5 - 43.5 ft	36.5-43.5 ft	36.5 - 43.5 ft	18 - 23 ft	18-23 ft	18 - 23 ft	183 - 189 ft
Analyte	**MCP Method 1 GW-1 Standards**	**MCP Method 1 GW-2 Standards**	**MCP Method 1 GW-3 Standards**											
Conventional Parameters (ug/l)														
Chloride	NE	NE	NE	**274000**	**275000**	**234000**	**929000**	**1330000**	**939000**	NS	NS	NS	**55400**
Nitrate	NE	NE	NE	100 U	100 U	100 U	**238**	**60**	50 U	NS	NS	NS	100 U
Nitrite as N	NE	NE	NE	100 U	100 U	100 U	3600 U	4 U	100 U	NS	NS	NS	100 U
Sulfate	NE	NE	NE	**11000**	**10900**	**10300**	**16200**	**11200**	**9300**	NS	NS	NS	**9360**
Sulfide	NE	NE	NE	100 U	100 U	100 U	100 U	50 U	**70**	NS	NS	NS	100 U
Total Organic Carbon	NE	NE	NE	**5000 J**	**7000 J**	**5560**	**6540**	**4600**	**4900**	NS	NS	NS	**3100 J**
Dissolved Gases (ug/l)														
Acetylene	NE	NE	NE	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.11 U	NS	NS	NS	**0.85**
Ethane	NE	NE	NE	**0.91**	**0.84**	**0.94**	**0.65**	**0.32**	**0.82 J**	NS	NS	NS	**1.2**
Ethene	NE	NE	NE	**0.21**	**0.17**	**0.11**	**0.23**	**0.48**	**1.0**	NS	NS	NS	**2.3**
Hydrogen (nM)	NE	NE	NE	NS	NS	**12**	**3.8**	**2.6**	0.98 U	NS	NS	NS	NS
Methane	NE	NE	NE	**190**	**180**	**500**	**640**	**2200 J-**	**2800**	NS	NS	NS	**7.5**
Propane	NE	NE	NE	**0.26**	**0.24**	**0.30**	**0.21**	**0.19**	**0.20**	NS	NS	NS	**0.48**
Dissolved Metals (ug/l)														
Iron	NE	NE	NE	**686 J**	**316 J**	**485**	**485**	**5300**	**7250 J**	125 U	**14**	11 U	**594 J**
Manganese	NE	NE	NE	**883 J**	**855**	**794**	**3550 J**	**2450**	**3020 J**	**839**	**1180**	**617**	**181**
Total Metals (ug/l)														
Iron	NE	NE	NE	**1020**	**1340**	**1340**	**581**	**6880**	**5050 J**	125 U	**55**	**47**	**345 J**
Manganese	NE	NE	NE	**768 J**	**875**	**860**	**2460 J**	**2910**	**2010 J**	**938**	**1830**	**1110**	**172**

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Former GE Facility, 50 Fordham Road, Wilmington, MA

loc_group				Transect A (continued)								
Location ID:				AE109R-5	AE109R-5	AE109R-5	AE109R-5	EMW-11R2	EMW-11R2	EMW-11R2	EMW-11R2	EMW-11R2
Sample ID:				17A-AE109R5-101017-1	18A-AE109R5-100218-1	19A-AE109R5-091819-1	20A-AE109R5-091620-1	16A-EMW11R2-062116-1	17A-EMW11R2-101017-1	18A-EMW11R2-092418-1	19A-EMW11R2-091719-1	20A-EMW11R2-092120-1
Sample Date:				10/10/2017	10/2/2018	9/18/2019	9/16/2020	6/21/2016	10/10/2017	9/24/2018	9/17/2019	9/21/2020
Sample Type:				N	N	N	N	N	N	N	N	N
Depth Interval:				183 - 189 ft	183 - 189 ft	183-189 ft	183 - 189 ft	104 - 114 ft	104 - 114 ft	104 - 114 ft	104-114 ft	104 - 114 ft
Analyte	**MCP Method 1 GW-1 Standards**	**MCP Method 1 GW-2 Standards**	**MCP Method 1 GW-3 Standards**									
Conventional Parameters (ug/l)												
Chloride	NE	NE	NE	**44900**	**52700**	**63400**	**33400**	**136000**	**183000**	**223000**	**225000**	**281000**
Nitrate	NE	NE	NE	100 U	100 U	50 U	50 U	100 U	100 U	100 U	50 U	50 U
Nitrite as N	NE	NE	NE	100 U	100 U	4 U	4 U	100 U	100 U	100 U	20 U	20 U
Sulfate	NE	NE	NE	**9660**	**8400**	**10100**	**7800**	**31100**	1000 U	**34700**	**36800**	**37100**
Sulfide	NE	NE	NE	100 U	100 U	50 U	**110**	100 U	100 U	100 U	50 U	50 U
Total Organic Carbon	NE	NE	NE	1000 U	1000 U	1000 U	**1100**	1000 U	**1760**	1000 U	1000 U	1000 U
Dissolved Gases (ug/l)												
Acetylene	NE	NE	NE	0.50 U	0.50 U	0.50 U	0.11 U	0.50 U	**0.12 J**	0.50 U	0.50 U	0.74 U
Ethane	NE	NE	NE	**0.93**	**0.97**	**0.70**	**0.57 J**	**9.7**	**14**	**5.7**	**7.6**	**2.9**
Ethene	NE	NE	NE	**1.9**	**1.8**	**1.6**	**1.0**	**9.9**	**12**	**28**	**35**	**42**
Hydrogen (nM)	NE	NE	NE	**2.9**	**2.3**	**1.7**	**2.6**	NS	**2.3**	**2.7**	**1.6**	**2.9**
Methane	NE	NE	NE	**140**	**520**	**480**	**530**	**1000**	**1300**	**640**	**630**	**320**
Propane	NE	NE	NE	**0.16**	**0.21**	**0.18**	**0.090 J**	**0.037 J**	**0.064 J**	0.10 U	**0.073 J**	0.10 U
Dissolved Metals (ug/l)												
Iron	NE	NE	NE	**110**	**151**	**122**	**115**	**955**	**1510**	**1290**	**914**	**718**
Manganese	NE	NE	NE	**155**	**163**	**162**	**144**	**732 J**	**704**	**682**	**626**	**715**
Total Metals (ug/l)												
Iron	NE	NE	NE	**111**	**129**	**127**	**127**	**967**	**1910**	**1650**	**1090**	**879**
Manganese	NE	NE	NE	**165**	**144**	**149**	**150**	**628 J**	**740**	**683**	**667**	**699**

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Table 5-9
Summary of 2016 - 2020 Groundwater Analytical Results for Monitored Natural Attenuation Parameters
Former GE Facility, 50 Fordham Road, Wilmington, MA

			loc_group	**Transect B**										
			Location ID:	**AE105R-2**	**AE105R-2**	**AE105R-2**	**AE105R-2**	**AE105R-2**	**AE105S**	**AE105S**	**AE105S**	**AE105S**	**AE105S**
			Sample ID:	16A-AE105R2-062016-1	17A-AE105R2-101217-1	18A-AE105R2-100318-1	19A-AE105R2-091619-1	20A-AE105R2-091720-1	16A-AE105S-061516-1	16A-AE105S-062216-1	17A-AE105S-101217-1	18A-AE105S-100318-1	19A-AE105S-091619-1
			Sample Date:	6/20/2016	10/12/2017	10/3/2018	9/16/2019	9/17/2020	6/15/2016	6/22/2016	10/12/2017	10/3/2018	9/16/2019
			Sample Type:	N	N	N	N	N	N	N	N	N	N
			Depth Interval:	98 - 103 ft	98 - 103 ft	98 - 103 ft	98-103 ft	98 - 103 ft	35 - 40 ft	35 - 40 ft	35 - 40 ft	35 - 40 ft	35-40 ft
Analyte	**MCP Method 1 GW-1 Standards**	**MCP Method 1 GW-2 Standards**	**MCP Method 1 GW-3 Standards**										
Conventional Parameters (ug/l)													
Chloride	NE	NE	NE	**41200**	**45600**	**52700 J-**	**51900**	**56900**	NS	**111000**	**167000**	**252000**	**218000**
Nitrate	NE	NE	NE	100 U	100 U	NS R	50 U	50 U	NS	100 U	100 U	100 U	50 U
Nitrite as N	NE	NE	NE	100 U	100 U	NS R	4 U	4 U	NS	100 U	100 U	100 U	4 U
Sulfate	NE	NE	NE	**14700**	**17200**	**17500**	**15300**	**15500**	NS	**15700**	**16800**	**15800**	**15300**
Sulfide	NE	NE	NE	100 U	100 U	100 U	50 U	50 U	NS	100 U	100 U	100 U	50 U
Total Organic Carbon	NE	NE	NE	1000 U	1000 U	1000 U	1000 U	1000 U	NS	**1500**	**1320**	**1100**	**1300**
Dissolved Gases (ug/l)													
Acetylene	NE	NE	NE	0.50 U	0.50 U	0.50 U	0.50 U	0.11 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U
Ethane	NE	NE	NE	**0.19**	**0.29**	**0.30**	**0.32**	**0.32 J**	**7.5**	**0.010 J**	**0.010 J**	0.10 U	**0.011 J**
Ethene	NE	NE	NE	**0.41**	**0.090 J**	**0.088 J**	**0.072 J**	**0.60 J**	**0.30**	**0.11**	**0.27**	**0.064 J**	**0.16**
Hydrogen (nM)	NE	NE	NE	NS	**6.7**	**30**	**1.0**	**2.6**	NS	NS	**2.5**	**2.4**	**1.3**
Methane	NE	NE	NE	**94**	**120**	**120**	**140**	**120**	**6400**	**97**	**130**	**63**	**92**
Propane	NE	NE	NE	**0.082 J**	**0.13**	**0.16**	**0.14**	**0.11**	0.10 U	0.10 U	**0.022 J**	**0.028 J**	**0.020 J**
Dissolved Metals (ug/l)													
Iron	NE	NE	NE	**87.6**	**48.0**	125 U	**53**	**82 J**	NS	**23200**	**27300**	**36500**	**36900**
Manganese	NE	NE	NE	**164**	**121**	**107**	**121**	**300 J**	NS	**979**	**1080**	**1210**	**1410**
Total Metals (ug/l)													
Iron	NE	NE	NE	**66.2**	**57.6**	125 U	**52**	**44 J**	NS	**25400**	**30200**	**37100**	**38300**
Manganese	NE	NE	NE	**191**	**132**	**126**	**129**	**107 J**	NS	**1010**	**1170**	**1400**	**1460**

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Table 5-9
Summary of 2016 - 2020 Groundwater Analytical Results for Monitored Natural Attenuation Parameters
Former GE Facility, 50 Fordham Road, Wilmington, MA

			loc_group	**Transect B (continued)**										
			Location ID:	**AE105S**	**AE106D**	**AE106D**	**AE106D**	**AE106D**	**AE106D**	**AE106R-3**	**AE106R-3**	**AE106R-3**	**AE106R-3**
			Sample ID:	20A-AE105S-091720-1	16A-AE106D-062016-1	17A-AE106D-101217-1	18A-AE106D-100318-1	19A-AE106D-091719-1	20A-AE106D-091720-1	16A-AE106R3-062016-1	17A-AE106R3-101217-1	18A-AE106R3-100318-1	19A-AE106R3-091619-1
			Sample Date:	9/17/2020	6/20/2016	10/12/2017	10/3/2018	9/17/2019	9/17/2020	6/20/2016	10/12/2017	10/3/2018	9/16/2019
			Sample Type:	N	N	N	N	N	N	N	N	N	N
			Depth Interval:	35 - 40 ft	34 - 39 ft	34 - 39 ft	34 - 39 ft	34-39 ft	34 - 39 ft	84 - 88 ft	84 - 88 ft	84 - 88 ft	84-88 ft
Analyte	**MCP Method 1 GW-1 Standards**	**MCP Method 1 GW-2 Standards**	**MCP Method 1 GW-3 Standards**											
Conventional Parameters (ug/l)														
Chloride	NE	NE	NE	**265000**	**580000**	**680000**	**658000**	**688000**	**579000**	**391000**	**418000**	**139000**	**112000**
Nitrate	NE	NE	NE	50 U	**2300**	**2800**	**3070**	**3380**	**2720**	**1050**	**1120**	**303**	**130**
Nitrite as N	NE	NE	NE	20 U	300 U	2700 U	2600 U	20 U	20 U	200 U	1700 U	100 U	4 U
Sulfate	NE	NE	NE	**15300**	**26300**	**25900**	**24900**	**28400**	**25100**	**23300**	**25300**	**13000**	**11900**
Sulfide	NE	NE	NE	50 U	100 U	100 U	100 U	50 U	50 U	100 U	100 U	100 U	50 U
Total Organic Carbon	NE	NE	NE	**1400**	1000 U	**1300**	**1330**	**1200**	**1600**	1000 U	**1010**	**1230**	1000 U
Dissolved Gases (ug/l)													
Acetylene	NE	NE	NE	0.11 U	0.50 U	0.50 U	0.50 U	0.50 U	0.11 U	0.50 U	0.50 U	0.50 U	0.50 U
Ethane	NE	NE	NE	0.075 U	**0.18**	**0.074 J**	**0.048 J**	**0.078 J**	0.075 U	**0.77**	**0.54**	**0.25**	**0.16**
Ethene	NE	NE	NE	**0.20 J**	**0.039 J**	**0.079 J**	**0.013 J**	**0.016 J**	0.12 U	**0.32**	**0.24**	**0.36**	**2.7**
Hydrogen (nM)	NE	NE	NE	**0.67 J**	NS	**2.2**	**3.1**	**1.6**	**0.62 J**	NS	**2.7**	**3.0**	**2.2**
Methane	NE	NE	NE	**69**	**16**	**14**	**18**	**3.1**	**7.9**	**3.1**	**50**	**400**	**560**
Propane	NE	NE	NE	**0.014 J**	0.10 U	**0.010 J**	**0.014 J**	**0.045 J**	0.014 U	**0.15**	**0.096 J**	**0.072 J**	**0.048 J**
Dissolved Metals (ug/l)													
Iron	NE	NE	NE	**35300**	20.0 U	15.0 U	125 U	11 U	**21**	20.0 U	15.0 U	125 U	**81**
Manganese	NE	NE	NE	**1430**	**2940**	**3570**	**2860**	**3290**	**2260**	**78.6**	**77.2**	**72.4**	**139**
Total Metals (ug/l)													
Iron	NE	NE	NE	**38600**	20.0 U	**18.4**	125 U	**66**	**19**	20.0 U	15.0 U	**136**	**91**
Manganese	NE	NE	NE	**1490**	**3140**	**3860**	**3090**	**3320**	**2280**	**85.5**	**79.5**	**77.3**	**147**

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Table 5-9
Summary of 2016 - 2020 Groundwater Analytical Results for Monitored Natural Attenuation Parameters
Former GE Facility, 50 Fordham Road, Wilmington, MA

loc_group				Transect B (continued)								
Location ID:				AE106R-3	TRC-301R-2	TRC-301R-2	TRC-301R-2	TRC-301R-4	TRC-301R-4	TRC-301R-4	TRC-301R-4	TRC-301R-4
Sample ID:				20A-AE106R3-091720-1	18A-TRC301R2-092718-1	19A-TRC301R2-091719-1	20A-TRC301R2-091520-1	16A-TRC301R4-062216-1	17A-TRC301R4-102317-1	18A-TRC301R4-092718-1	19A-TRC301R4-091719-1	20A-TRC301R4-091520-1
Sample Date:				9/17/2020	9/27/2018	9/17/2019	9/15/2020	6/22/2016	10/23/2017	9/27/2018	9/17/2019	9/15/2020
Sample Type:				N	N	N	N	N	N	N	N	N
Depth Interval:				84 - 88 ft	81.5 - 85.5 ft	81.5-85.5 ft	81.5 - 85.5 ft	65.5 - 69.5 ft	65.5 - 69.5 ft	65.5 - 69.5 ft	65.5-69.5 ft	65.5 - 69.5 ft
Analyte	**MCP Method 1 GW-1 Standards**	**MCP Method 1 GW-2 Standards**	**MCP Method 1 GW-3 Standards**									
Conventional Parameters (ug/l)												
Chloride	NE	NE	NE	**126000**	NS	NS	NS	**112000**	**121000**	**129000**	**137000**	**153000**
Nitrate	NE	NE	NE	**140**	NS	NS	NS	100 U	500 U	100 U	50 U	50 U
Nitrite as N	NE	NE	NE	4 U	NS	NS	NS	100 U	500 U	100 UJ	4 U	8 U
Sulfate	NE	NE	NE	**12600**	NS	NS	NS	**17100**	**17300**	**16400**	**15200**	**18600**
Sulfide	NE	NE	NE	NS	NS	NS	NS	100 U	100 U	100 U	**130**	**190**
Total Organic Carbon	NE	NE	NE	**1300**	NS	NS	NS	**1100**	**1380**	**1840**	**1300**	**1600**
Dissolved Gases (ug/l)												
Acetylene	NE	NE	NE	0.11 U	NS	NS	NS	0.50 U	0.50 U	0.50 U	0.50 U	0.11 U
Ethane	NE	NE	NE	**0.16 J**	NS	NS	NS	**0.61**	**1.0**	**1.1**	**1.3**	**1.2**
Ethene	NE	NE	NE	**3.9**	NS	NS	NS	**1.3**	**2.2**	**1.8**	**2.0**	**1.6**
Hydrogen (nM)	NE	NE	NE	**0.71 J**	NS	NS	NS	NS	**7.2**	**6.1**	**3.9**	**3.0**
Methane	NE	NE	NE	**630**	NS	NS	NS	**140**	**270**	**250**	**390**	**270**
Propane	NE	NE	NE	**0.028 J**	NS	NS	NS	**0.34**	**0.76**	**0.95**	**1.2**	**1.1**
Dissolved Metals (ug/l)												
Iron	NE	NE	NE	**95**	**401**	**431**	**386**	**4750 J**	**4280**	**5670**	**6870**	**7690**
Manganese	NE	NE	NE	**171**	**532**	**540**	**569**	**1250**	**1250**	**1500**	**1610**	**1600**
Total Metals (ug/l)												
Iron	NE	NE	NE	**106**	**431**	**490**	**412**	**4210 J**	**4330**	**5500**	**7030**	**8180**
Manganese	NE	NE	NE	**175**	**520**	**583**	**587**	**1230**	**1230**	**1440**	**1650**	**1720**

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Table 5-9
Summary of 2016 - 2020 Groundwater Analytical Results for Monitored Natural Attenuation Parameters
Former GE Facility, 50 Fordham Road, Wilmington, MA

			loc_group	**Transect B-1/2**										
			Location ID:	**AE112D**	**AE112D**	**AE112D**	**AE112D**	**AE112R-1**	**AE112R-1**	**AE112R-1**	**AE112R-6**	**AE112R-6**	**AE112R-6**
			Sample ID:	17A-AE112D-101717-1	18A-AE112D-092618-1	19A-AE112D-091319-1	20A-AE112D-091120-1	18A-AE112R1-092618-1	19A-AE112R1-091319-1	20A-AE112R1-091120-1	16B-AE112R6-062116-1	17A-AE112R6-101717-1	18A-AE112R6-092618-1
			Sample Date:	10/17/2017	9/26/2018	9/13/2019	9/11/2020	9/26/2018	9/13/2019	9/11/2020	6/21/2016	10/17/2017	9/26/2018
			Sample Type:	N	N	N	N	N	N	N	N	N	N
			Depth Interval:	24.5 - 29.5 ft	24.5 - 29.5 ft	24.5-29.5 ft	24.5 - 29.5 ft	41 - 50 ft	41-50 ft	41 - 51 ft	153 - 163 ft	153 - 163 ft	153 - 163 ft
Analyte	**MCP Method 1 GW-1 Standards**	**MCP Method 1 GW-2 Standards**	**MCP Method 1 GW-3 Standards**										
Conventional Parameters (ug/l)													
Chloride	NE	NE	NE	NS	NS	NS	NS	NS	NS	NS	**261000**	**260000**	NS
Nitrate	NE	NE	NE	NS	NS	NS	NS	NS	NS	NS	100 U	100 U	NS
Nitrite as N	NE	NE	NE	NS	NS	NS	NS	NS	NS	NS	100 U	100 U	NS
Sulfate	NE	NE	NE	NS	NS	NS	NS	NS	NS	NS	**12300**	**11500**	NS
Sulfide	NE	NE	NE	NS	NS	NS	NS	NS	NS	NS	100 U	100 U	NS
Total Organic Carbon	NE	NE	NE	NS	NS	NS	NS	NS	NS	NS	**2500**	**1740 J+**	NS
Dissolved Gases (ug/l)													
Acetylene	NE	NE	NE	NS	NS	NS	NS	NS	NS	NS	0.50 U	0.50 U	NS
Ethane	NE	NE	NE	NS	NS	NS	NS	NS	NS	NS	**1.7**	**1.4**	NS
Ethene	NE	NE	NE	NS	NS	NS	NS	NS	NS	NS	**0.21**	**0.22**	NS
Hydrogen (nM)	NE	NE	NE	NS	NS	NS	NS	NS	NS	NS	NS	**7500**	NS
Methane	NE	NE	NE	NS	NS	NS	NS	NS	NS	NS	**14**	**810**	NS
Propane	NE	NE	NE	NS	NS	NS	NS	NS	NS	NS	**0.47**	**0.48**	NS
Dissolved Metals (ug/l)													
Iron	NE	NE	NE	15.0 U	125 U	11 U	**17**	**956**	**815**	**690**	**3290**	**2940**	**3240**
Manganese	NE	NE	NE	**31.8**	**110**	**18**	**13**	**2310**	**2280**	**1970**	**1420**	**1390**	**1380**
Total Metals (ug/l)													
Iron	NE	NE	NE	**194**	**128**	**55**	**456**	**904**	**835**	**723**	**3020**	**2760**	**3340**
Manganese	NE	NE	NE	**34.4**	**137**	**45**	**73**	**2360**	**2080**	**2110**	**1400**	**1390**	**1370**

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Table 5-9
Summary of 2016 - 2020 Groundwater Analytical Results for Monitored Natural Attenuation Parameters
Former GE Facility, 50 Fordham Road, Wilmington, MA

loc_group				**Transect B-1/2 (continued)**			**Transect C**							
Location ID:				**AE112R-6**	**AE112R-6**	**AE112R-6**	**STM-8R1**	**STM-8R1**	**STM-8R1**	**STM-8R1**	**STM-8R1**	**STM-8R1**	**GZA-06**
Sample ID:				18A-AE112R6-092618-2	19A-AE112R6-091319-1	20A-AE112R6-091120-1	16A-STM8R1-062816-1	17A-STM8R1-101717-1	17A-STM8R1-101717-2	18A-STM8R1-100218-1	19A-STM8R1-092619-1	20A-STM8R1-092320-1	18A-GZA6-100118-1
Sample Date:				9/26/2018	9/13/2019	9/11/2020	6/28/2016	10/17/2017	10/17/2017	10/2/2018	9/26/2019	9/23/2020	10/1/2018
Sample Type:				FD	N	N	N	N	FD	N	N	N	N
Depth Interval:				153 - 163 ft	153-163 ft	153 - 163 ft	85 - 90 ft	85 - 90 ft	85 - 90 ft	85 - 90 ft	85-90 ft	85 - 90 ft	8 - 18 ft
Analyte	**MCP Method 1 GW-1 Standards**	**MCP Method 1 GW-2 Standards**	**MCP Method 1 GW-3 Standards**										
Conventional Parameters (ug/l)													
Chloride	NE	NE	NE	NS	NS	NS	**62100**	**68500**	**67200**	**73400**	**78600**	**79800**	NS
Nitrate	NE	NE	NE	NS	NS	NS	**138**	100 U	100 U	100 U	**180**	**70**	NS
Nitrite as N	NE	NE	NE	NS	NS	NS	100 U	100 U	100 U	100 U	4 U	4 U	NS
Sulfate	NE	NE	NE	NS	NS	NS	**49700**	**50600**	**50500**	**48600**	**40600**	**51200**	NS
Sulfide	NE	NE	NE	NS	NS	NS	100 U	100 U	100 U	100 U	50 U	50 U	NS
Total Organic Carbon	NE	NE	NE	NS	NS	NS	1000 U	1000 U	1000 U	1000 U	1000 U	1000 U	NS
Dissolved Gases (ug/l)													
Acetylene	NE	NE	NE	NS	NS	NS	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.74 U	NS
Ethane	NE	NE	NE	NS	NS	NS	**0.0099 J**	**0.014 J**	**0.013 J**	**0.0097 J**	0.10 U	1.0 U	NS
Ethene	NE	NE	NE	NS	NS	NS	**0.11**	**0.27**	**0.27**	**0.050 J**	0.10 U	1.0 U	NS
Hydrogen (nM)	NE	NE	NE	NS	NS	NS	NS	**4.7**	NS	**3.5**	**7.9**	**2.6**	NS
Methane	NE	NE	NE	NS	NS	NS	**0.74**	**0.96**	**0.96**	**0.79**	**0.51 J-**	**14**	NS
Propane	NE	NE	NE	NS	NS	NS	0.10 U	**0.012 J**	**0.013 J**	**0.019 J**	0.10 U	0.10 U	NS
Dissolved Metals (ug/l)													
Iron	NE	NE	NE	**3580**	**3690**	**3490**	15.0 U	**30.4**	**20.7**	125 U	**12**	**30**	**870**
Manganese	NE	NE	NE	**1430**	**1330**	**1290**	**314**	**259**	**258**	**187**	**140**	**138**	**71.6**
Total Metals (ug/l)													
Iron	NE	NE	NE	**3480**	**3790**	**3750**	**79.3 J+**	**153 J**	**87.2 J**	125 U	**69**	**340**	**1010**
Manganese	NE	NE	NE	**1390**	**1360**	**1380**	**314**	**355**	**338**	**205**	**156**	**182**	**86.4**

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Former GE Facility, 50 Fordham Road, Wilmington, MA

			loc_group	**Transect C (continued)**					**Upgradient**				
			Location ID:	**GZA-06**	**GZA-06**	**GZA-10**	**GZA-10**	**GZA-10**	**GZA-12**	**GZA-12**	**GZA-12**	**GZA-12**	**GZA-12**
			Sample ID:	19A-GZA6-092019-1	20A-GZA6-092120-1	18A-GZA10-100118-1	19A-GZA10-092619-1	20A-GZA10-092120-1	16A-GZA12-061416-1	17A-GZA12-101017-1	18A-GZA12-100118-1	19A-GZA12-092619-1	20A-GZA12-092420-1
			Sample Date:	9/20/2019	9/21/2020	10/1/2018	9/26/2019	9/21/2020	6/14/2016	10/10/2017	10/1/2018	9/26/2019	9/24/2020
			Sample Type:	N	N	N	N	N	N	N	N	N	N
			Depth Interval:	8 - 18 ft	8 - 18 ft	13 - 38 ft	13 - 38 ft	13 - 38 ft	9.5 - 24.5 ft	9.5 - 24.5 ft	9.5 - 24.5 ft	9.5-24.5 ft	9.5 - 24.5 ft
Analyte	**MCP Method 1 GW-1 Standards**	**MCP Method 1 GW-2 Standards**	**MCP Method 1 GW-3 Standards**										
Conventional Parameters (ug/l)													
Chloride	NE	NE	NE	NS	NS	NS	NS	NS	**1190000**	**1220000**	**1190000**	**1140000**	**1050000**
Nitrate	NE	NE	NE	NS	NS	NS	NS	NS	**9910**	**10900 J**	**10900**	**9290**	**6910**
Nitrite as N	NE	NE	NE	NS	NS	NS	NS	NS	600 U	NS R	500 U	20 U	4 U
Sulfate	NE	NE	NE	NS	NS	NS	NS	NS	**33900**	**36500**	**33200**	**36800**	**30100**
Sulfide	NE	NE	NE	NS	NS	NS	NS	NS	100 U	100 U	100 U	50 U	50 U
Total Organic Carbon	NE	NE	NE	NS	NS	NS	NS	NS	1000 U	**1080**	**1690**	**1400**	**1500**
Dissolved Gases (ug/l)													
Acetylene	NE	NE	NE	NS	NS	NS	NS	NS	0.50 U	0.50 U	0.50 U	0.50 U	0.74 U
Ethane	NE	NE	NE	NS	NS	NS	NS	NS	**0.0091 J**	**0.0065 J**	0.10 U	0.10 U	1.0 U
Ethene	NE	NE	NE	NS	NS	NS	NS	NS	**0.014 J**	**0.010 J**	**0.0071 J**	0.10 U	1.0 U
Hydrogen (nM)	NE	NE	NE	NS	NS	NS	NS	NS	NS	**4.1**	**2.8**	**1.8**	**28**
Methane	NE	NE	NE	NS	NS	NS	NS	NS	**0.69**	**0.46 J**	**0.28 J**	**0.30 J-**	5.0 U
Propane	NE	NE	NE	NS	NS	NS	NS	NS	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U
Dissolved Metals (ug/l)													
Iron	NE	NE	NE	**1500**	**1340**	**10900**	**6820**	**3570**	30.0 U	**50.8**	125 U	11 U	**19**
Manganese	NE	NE	NE	**143**	**129**	**1020**	**1170**	**1530**	**2410**	**2080**	**1540**	**1340**	**1150**
Total Metals (ug/l)													
Iron	NE	NE	NE	**1590**	**1340**	**12200**	**7000**	**3680**	**96.4**	**21.8**	125 U	**56**	**164**
Manganese	NE	NE	NE	**147**	**130**	**1090**	**1130**	**1500**	**2620**	**2170**	**1770**	**1320**	**1290**

U - Non-detect at laboratory detection limit
J = Estimated Value, J+ = biased high, J- = biased low, R = rejecte
ft = feet
mg/l = miligrams per liter
µg/l = micrograms per liter
NE = not established
NS = not sampled
Detects are bolded

Table 10-1
Post-Temporary Solution Operations, Maintenance, and Monitoring Schedule
Former GE Facility, 50 Fordham Road, Wilmington, MA

Year	2017												2018												2019												2020												2021												2022				
Month	January	February	March	April	May	June	July	August	September	October	November	December	January	February	March	April	May	June	July	August	September	October	November	December	January	February	March	April	May	June	July	August	September	October	November	December	January	February	March	April	May	June	July	August	September	October	November	December	January	February	March	April	May	June	July	August	September	October	November	December	January	February	March	April	May
Indoor Air Sampling Event																																																													
Comprehensive Groundwater Sampling Event																																																													
LNAPL Gauging and LNAPL Removal																																																													
Post-Temporary Solution Status Reports																																																													
Five-Year Review of the Temporary Solution																																																													

Completed
To be Completed

Table 10-2
Updated 2021 Post Temporary Solution Operations, Maintenance, and Monitoring Groundwater Monitoring Plan
Former GE Site, Wilmington, MA

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

Table 10-2
Updated 2021 Post Temporary Solution Operations, Maintenance, and Monitoring Groundwater Monitoring Plan
Former GE Site, Wilmington, MA

Area	Location ID	FLUTe port	Strata	Well Diameter (inch)	Screen Interval (Ft bgs)	Synoptic Water Level Reading *	Field Parameters: pH, temperature, conductivity, ORP, DO, and turbidity	VOCs (SW846 -USEPA Method 8260C)	1,4-dioxane (SW846/USEPA Method 8270D SIM) to get DL <0.3 ug/l)	VPH (MassDEP- VPH-04-1.1 Revision 1)	EPH and polycyclic aromatic hydrocarbons (PAH) (MassDEP- EPH-04-1.1 Revision 1)	Total Fe, Mn (SW846 - U SEPA Method 6010C)	Dissolved Fe, Mn (field filtered) (SW846 - USEPA Method 6010C)	Total As (SW846 - USEPA Method 6010C)	Dissolved As (field filtered) (SW846 - USEPA Method 6010C)	Chloride (USEPA 300.0)	Nitrite	Nitrate (USEPA 300.0)	Sulfate (USEPA 300.0)	Sulfide	Total organic carbon (SW- 846 9060A)	Methane, Ethane, Ethene, Acetylene and Propane (Pace-Microseeps AM20Gax)	Dissolved hydrogen (Pace - Microseeps)	CSIA: 13C/12C ratio for PCE, TCE, Cis-1,2- DCE, VC (Pace Analytical)	Microbial Analysis: Quantaray (Microbial Insights)	PIANO - Petroleum Analyses (Alpha Analytical Services)
Transect A	AE-102RR	R4	Bedrock	FLUTE	125 - 130	1	1	1	1																	
Transect A	AE-102RR	R5	Bedrock	FLUTE	141-146	1	1	1																		
Transect A	AE-102RR	R6	Bedrock	FLUTE	153-158	1	1	1	1	1	1			1	1											1
Transect A	AE-102S	--	Overburden	2	13 - 18	1	1	1																		
Transect A	AE-103D	--	Overburden	2	35 - 40	1	1	1	1			1	1	1	1	1	1	1	1	1	1	1	1	1		
Transect A	AE-103M	--	Overburden	2	25 - 30	1	1	1																		
Transect A	AE-103R	R1	Bedrock	FLUTE	48 - 53	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1			1
Transect A	AE-103R	R2	Bedrock	FLUTE	62-67	1	1	1																		
Transect A	AE-103R	R3	Bedrock	FLUTE	70 -76	1	1	1																		
Transect A	AE-103R	R4	Bedrock	FLUTE	98-105	1	1	1	1																	
Transect A	AE-103R	R5	Bedrock	FLUTE	122 - 128	1	1	1	1			1	1	1	1	1	1	1	1	1	1	1	1	1	1	
Transect A	AE-103R	R6	Bedrock	FLUTE	138-144	1	1	1																		
Transect A	AE-103R	R7	Bedrock	FLUTE	162.5-168	1	1	1																		
Transect A	AE-103S	--	Overburden	2	15 - 20	1	1	1						1	1											
Transect A	AE-104D	--	Overburden	2	35 - 40	1	1	1	1					1	1											
Transect A	AE-104M	--	Overburden	2	25 - 30	1	1	1																		
Transect A	AE-104R	R1	Bedrock	FLUTE	48 - 54	1	1	1	1																	
Transect A	AE-104R	R2	Bedrock	FLUTE	62 - 68	1	1	1																		
Transect A	AE-104R	R3	Bedrock	FLUTE	97-102	1	1	1	1																	
Transect A	AE-104R	R4	Bedrock	FLUTE	128-133	1	1	1	1	1	1															1
Transect A	AE-104R	R5	Bedrock	FLUTE	156 - 162	1	1	1																		
Transect A	AE-104R	R6	Bedrock	FLUTE	168-174	1	1	1	1																	
Transect A	AE-104S	--	Overburden	2	15 - 20	1	1	1																		
Transect A	AE-108R	R1	Bedrock	FLUTE	36.5 - 43.5	1	1	1				1	1	1	1	1	1	1	1	1	1	1	1	1	1	
Transect A	AE-108R	R2	Bedrock	FLUTE	68 - 73	1	1	1																		
Transect A	AE-108R	R3	Bedrock	FLUTE	84 - 89	1	1	1																		
Transect A	AE-108R	R4	Bedrock	FLUTE	145 - 150	1	1	1																		
Transect A	AE-108R	R5	Bedrock	FLUTE	163 - 168	1	1	1																		
Transect A	AE-109R	R1	Bedrock	FLUTE	38 - 43	1	1	1																		
Transect A	AE-109R	R2	Bedrock	FLUTE	66 - 76	1	1	1	1																	
Transect A	AE-109R	R3	Bedrock	FLUTE	126 - 136	1	1	1																		
Transect A	AE-109R	R4	Bedrock	FLUTE	174 - 180.5	1	1	1																		
Transect A	AE-109R	R5	Bedrock	FLUTE	183 - 189	1	1	1	1	1	1			1	1											1
Transect A	AE-109R	R6	Bedrock	FLUTE	196-201	1	1	1																		
Transect A	AE-109R	R7	Bedrock	FLUTE	204 - 214	1	1	1	1																	
Transect A	AE-109R	R8	Bedrock	FLUTE	245 - 250	1	1	1																		
Transect A	AE-109D	--	Overburden	2	18 - 23	1	1	1	1					1	1											
Transect A	AE-110R	R1	Bedrock	FLUTE	34 - 44	1	1	1																		
Transect A	AE-110R	R2	Bedrock	FLUTE	70 - 80	1	1	1																		
Transect A	AE-110R	R3	Bedrock	FLUTE	128 - 138	1	1	1																		
Transect A	AE-110R	R4	Bedrock	FLUTE	158 - 168	1	1	1																		
Transect A	AE-110R	R5	Bedrock	FLUTE	171 - 182	1	1	1																		
Transect A	AE-110R	R6	Bedrock	FLUTE	190 - 200	1	1	1	1																	
Transect A	AE-110R	R7	Bedrock	FLUTE	224 -234	1	1	1																		

Table 10-2
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Former GE Site, Wilmington, MA

Area	Location ID	FLUTe port	Strata	Well Diameter (inch)	Screen Interval (Ft bgs)	Synoptic Water Level Reading *	Field Parameters: pH, temperature, conductivity, ORP, DO, and turbidity	VOCs (SW846 -USEPA Method 8260C)	1,4-dioxane (SW846/USEPA Method 8270D SIM) to get DL <0.3 ug/l)	VPH (MassDEP- VPH-04-1.1 Revision 1)	EPH and polycyclic aromatic hydrocarbons (PAH) (MassDEP- EPH-04-1.1 Revision 1)	Total Fe, Mn (SW846 - U SEPA Method 6010C)	Dissolved Fe, Mn (field filtered) (SW846 - USEPA Method 6010C)	Total As (SW846 - USEPA Method 6010C)	Dissolved As (field filtered) (SW846 - USEPA Method 6010C)	Chloride (USEPA 300.0)	Nitrite	Nitrate (USEPA 300.0)	Sulfate (USEPA 300.0)	Sulfide	Total organic carbon (SW- 846 9060A)	Methane, Ethane, Ethene, Acetylene and Propane (Pace-Microseeps AM20Gax)	Dissolved hydrogen (Pace - Microseeps)	CSIA: 13C/12C ratio for PCE, TCE, Cis-1,2- DCE, VC (Pace Analytical)	Microbial Analysis: Quantaray (Microbial Insights)	PIANO - Petroleum Analyses (Alpha Analytical Services)
Transect B	AE-105D	--	Overburden	2	73 - 78	1	1	1	1																	
Transect A	AE-105M	--	Overburden	2	52 - 57	1	1	1																		
Transect B	AE-105R	R1	Bedrock	FLUTE	90.5 - 95.5	1	1	1				1	1			1	1	1	1	1	1	1	1	1		
Transect B	AE-105R	R2	Bedrock	FLUTE	98 - 103	1	1	1	1	1	1			1	1											
Transect B	AE-105R	R3	Bedrock	FLUTE	107.50 - 112.50	1	1	1																		
Transect B	AE-105R	R4	Bedrock	FLUTE	125 - 130	1	1	1	1	1	1															
Transect B	AE-105R	R5	Bedrock	FLUTE	143 - 148	1	1	1																		
Transect B	AE-105S	--	Overburden	2	35 - 40	1	1	1						1	1											
Transect B	AE-106D	--	Overburden	2	34 - 39	1	1	1				1	1	1	1	1	1	1	1	1	1	1	1	1		
Transect B	AE-106M	--	Overburden	2	22.5 - 27.5	1	1	1																		
Transect B	AE-106R	R1	Bedrock	FLUTE	47 - 52	1	1	1																		
Transect B	AE-106R	R2	Bedrock	FLUTE	69.50 - 74.50	1	1	1																		
Transect B	AE-106R	R3	Bedrock	FLUTE	84 - 88	1	1	1		1	1	1	1	1	1	1	1	1	1	1	1	1	1	1		
Transect B	AE-106R	R4	Bedrock	FLUTE	144.50 - 150.50	1	1	1																		
Transect B	AE-106R	R5	Bedrock	FLUTE	164 - 169	1	1	1	1	1	1															
Transect B	AE-106S	--	Overburden	2	12 - 17	1	1	1																		
Transect B	TRC-301R	R4	Bedrock	CMT	65.5 - 69.5	1	1	1						1	1											
Transect B	TRC-301R	R3	Bedrock	CMT	75.5 - 79.5	1	1	1				1	1			1	1	1	1	1	1	1	1	1	1	
Transect B	TRC-301R	R2	Bedrock	CMT	81.5 - 85.5	1	1	1						1	1											
Transect B	TRC-301R	R1	Bedrock	CMT	96.5 - 100.5	1	1	1																		
Transect B	AE-111R	R1	Bedrock	FLUTE	44 - 54	1	1	1																		
Transect B	AE-111R	R2	Bedrock	FLUTE	66 - 74	1	1	1																		
Transect B	AE-111R	R3	Bedrock	FLUTE	95 - 103	1	1	1																		
Transect B	AE-111R	R4	Bedrock	FLUTE	140 - 150	1	1	1																		
Transect B	AE-111R	R5	Bedrock	FLUTE	155 - 165	1	1	1																		
Transect B	AE-111R	R6	Bedrock	FLUTE	168 -173	1	1	1																		
Transect B	AE-111R	R7	Bedrock	FLUTE	181 - 191	1	1	1																		
Transect B 1/2	AE-112R	R1	Bedrock	FLUTE	41 - 51	1	1	1						1	1											
Transect B 1/2	AE-112R	R2	Bedrock	FLUTE	62 - 72	1	1	1																		
Transect B 1/2	AE-112R	R3	Bedrock	FLUTE	91 - 101	1	1	1																		
Transect B 1/2	AE-112R	R4	Bedrock	FLUTE	113 - 123	1	1	1																		
Transect B 1/2	AE-112R	R5	Bedrock	FLUTE	136 - 146	1	1	1																		
Transect B 1/2	AE-112R	R6	Bedrock	FLUTE	153 - 163	1	1	1		1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0
Transect B 1/2	AE-112R	R7	Bedrock	FLUTE	168 - 175	1	1	1																		
Transect B 1/2	AE-112D	--	Overburden	2	24.5 - 29.5	1	1	1						1	1											
Transect C - Concord Street	STM-8S	--	Overburden	0.75	1 - 11	1	1	1																		
Transect C - Concord Street	STM-8D	--	Overburden	0.75	34.7 - 39.7	1	1	1	1			1	1			1	1	1	1	1	1	1	1	1		
Transect C - Concord Street	STM-8M	--	Overburden	0.75	19.5 - 24.5	1	1	1																		
Transect C - Concord Street	STM-8R	--	Bedrock	0.75	46.5 - 51.5	1	1	1	1																	
Transect C - Concord Street	STM-8R1	--	Bedrock	2	85 - 90	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1		
Transect C - Concord Street	STM-3S	--	Overburden	0.75	5 -15	1	1	1																		
Transect C - Concord Street	STM-3D	--	Overburden	0.75	49.8 - 54.8	1	1	1																		
Transect C - Concord Street	STM-3R	--	Bedrock	0.75	66.9 - 71.9	1	1	1																		
Upgradient	GZA-12	--	Overburden	1.5	9.5 - 24.5	1	1	1	1			1	1	1	1	1	1	1	1	1	1	1	1	1		

Table 10-2
Updated 2021 Post Temporary Solution Operations, Maintenance, and Monitoring Groundwater Monitoring Plan
Former GE Site, Wilmington, MA

Area	Location ID	FLUTe port	Strata	Well Diameter (inch)	Screen Interval (Ft bgs)	Synoptic Water Level Reading *	Field Parameters: pH, temperature, conductivity, ORP, DO, and turbidity	VOCs (SW846 -USEPA Method 8260C)	1,4-dioxane (SW846/USEPA Method 8270D SIM) to get DL <0.3 ug/l)	VPH (MassDEP- VPH-04-1.1 Revision 1)	EPH and polycyclic aromatic hydrocarbons (PAH) (MassDEP- EPH-04-1.1 Revision 1)	Total Fe, Mn (SW846 - U SEPA Method 6010C)	Dissolved Fe, Mn (field filtered) (SW846 - USEPA Method 6010C)	Total As (SW846 - USEPA Method 6010C)	Dissolved As (field filtered) (SW846 - USEPA Method 6010C)	Chloride (USEPA 300.0)	Nitrite	Nitrate (USEPA 300.0)	Sulfate (USEPA 300.0)	Sulfide	Total organic carbon (SW- 846 9060A)	Methane, Ethane, Ethene, Acetylene and Propane (Pace-Microseeps AM20Gax)	Dissolved hydrogen (Pace - Microseeps)	CSIA: 13C/12C ratio for PCE, TCE, Cis-1,2- DCE, VC (Pace Analytical)	Microbial Analysis: Quantaray (Microbial Insights)	PIANO - Petroleum Analyses (Alpha Analytical Services)
EPL Area	AE-03	--	Overburden	2	3 - 13	1	1	1		1	1	1	1	1	1	1	1	1	1	1	1	1	1		1	
EPL Area	AE-04	--	Overburden	2	3 - 13	1	1	1		1	1															
EPL Area	GZA-102S	--	Overburden	1.5	1.7 - 10.7	1	1	1		1	1															
EPL Area	GZA-105D	--	Overburden	1.5	16 - 26	1	1	1	1	1	1	1	1			1	1	1	1	1	1	1	1	1	1	1
EPL Area	GZA-105R	--	Bedrock	0.5	34.5 - 36.5	1	1	1				1	1			1	1	1	1	1	1	1	1	1		1
EPL Area	GZA-105S	--	Overburden	1.5	4 - 14	1	1	1		1	1			1	1											1
EPL Area	PZ-2S	--	Overburden	4	3.55 - 8.55	1	1	1		1	1															
EPL Area	TRC-101	--	Overburden	1.25	1.5 - 10.5	1	1	1		1	1	1	1			1	1	1	1	1	1	1	1			
EPL Area	TRC-102	--	Overburden	1.25	2.25 - 12.25	1	1	1		1	1			1	1											
EPL Area	TRC-103		Overburden	1.25	1.25 - 11.25	1	1	1		1	1															
LTGMP	EMW-10D	--	Overburden	2	19 - 29	1	1	1																		
LTGMP	EMW-10R	--	Bedrock	2	42 - 52	1	1	1				1	1			1	1	1	1	1	1	1	1	1		
LTGMP	EMW-11D	--	Overburden	2	22 - 32	1	1	1																		
LTGMP	EMW-11R1	--	Bedrock	0.75	79 - 89	1	1	1																		
LTGMP	EMW-11R2	--	Bedrock	0.75	104 - 114	1	1	1		1	1	1	1	1	1	1	1	1	1	1	1	1	1	1		1
LTGMP	EMW-11R3	--	Bedrock	0.75	158 - 168	1	1	1																		
LTGMP	GZA-6	--	Overburden	2	8 - 18	1	1							1	1											
LTGMP	GZA-10	--	Overburden	1..5	13 - 38	1	1							1	1											
Source Control - Downgradient	GZA-14	--	Overburden	1.5	39 - 49	1	1	1																		
Source Control - Downgradient	GZA-14A	--	Overburden	1.5	0 - 15	1	1	1						1	1											
Source Control - Downgradient	MW-4	--	Overburden	1.5	18 - 28	1	1	1	1					1	1											
Source Control - Downgradient	MW-4A	--	Overburden	1.5	38 - 48	1	1	1						1	1											
Source Control - Downgradient	MW-5	--	Overburden	1.5	28 - 38	1	1	1																		
Source Control - Downgradient	MW-7	--	Overburden	1.5	15 - 25	1	1	1																		
Source Control - Downgradient	PS-1D	--	Overburden	0.62	49.25 - 54.25	1	1	1																		
Source Control - Downgradient	PS-1M	--	Overburden	0.62	34.25 - 39.25	1	1	1																		
Source Control - Downgradient	PS-1S	--	Overburden	0.62	12 - 17	1	1	1																		
Source Control - Downgradient	PS-2D	--	Overburden	0.62	49.1 - 54.1	1	1	1																		
Source Control - Downgradient	PS-2M	--	Overburden	0.62	34 - 39	1	1	1																		
Source Control - Downgradient	PS-2S	--	Overburden	0.62	12.5 - 17.5	1	1	1																		
Source Control - Downgradient	PS-3	--	Overburden	0.62	2.7 - 7.7	1	1	1																		
Source Control - Downgradient	PS-4	--	Overburden	0.62	12.9 - 17.9	1	1	1																		
Source Control - Downgradient	PS-5D	--	Overburden	0.62	24.1 - 29.1	1	1	1																		
Source Control - Downgradient	PS-5S	--	Overburden	0.62	13 - 18	1	1	1																		
Source Control - Downgradient	PS-8D	--	Overburden	0.62	51.8 - 56.8	1	1	1						1	1											
Source Control - Downgradient	PS-8M	--	Overburden	0.62	34.3 - 39.3	1	1	1																		
Source Control - Downgradient	PS-8S	--	Overburden	0.62	13 - 18	1	1	1																		
Source Control - Onsite	TRC-201R	--	Bedrock	6"	38 - 161	1	1	1																		
Source Control - Onsite	IP-1R2	--	Overburden	2	54 - 74	1	1	1																		
Source Control - Onsite	TRC-401R	--	Overburden	0.5	38 - 58	1	1	1																		

Notes:

* All wells measured during site-wide water level event.

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

Wells listed for MNA, CSIA, Microbial, and PIANO analyses are estimated and may be modified prior to September 2021 groundwater sampling.

Total number of samples	174	174	172	45	25	25	25	25	36	36	25	25	25	25	25	25	25	25	19	10	13
Duplicates (1 per 20)	--	0	8	2	2	2	2	2	2	2	2	2	2	2	2	2	2	0	0	0	0
Equipment blanks (1 per 20**)	--	0	8	2	1	1	1	0	1	0	1	1	1	1	1	1	1	0	0	0	0
Trip blanks (~1 per shipment)	--	0	15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	--	**174**	**203**	**49**	**28**	**28**	**28**	**27**	**39**	**38**	**28**	**28**	**28**	**28**	**28**	**28**	**28**	**25**	**19**	**10**	**13**

APPENDICES

Appendix A—Groundwater Sampling Field Records

Appendix B—LNAPL Monitoring Record Field Records

Appendix C—Waste Manifests

Appendix D—Indoor Air Sampling Field Records

Appendix E—Activity and Use Limitation

Appendix F—Laboratory Analytical and Data Validation Reports – Groundwater

Appendix G—Groundwater Concentration Trend Graphs

Appendix H—Laboratory Analytical and Data Validation Reports – Indoor Air

Appendix I—Public Notification Documentation

APPENDIX A
GROUNDWATER SAMPLING FIELD RECORDS

Water level meter: 309868

AECOM

Lockheed Martin Corporation
Former GE Site - Wilmington, MA
Water Level Measurements

Weather:_____ Recorder(s): A. Grossman, D. Potter, A. Borden, B. Maye, F. Burton, L. Zogby, M. Fitzgerald, B. Hoch, S. Haggett

Well	Date	Time	Depth to Water	TOC Ref Elev	Calc'ed Elevation	Comments
AE-100R-1 (18-24)				87.87		
AE-100R-2 (43-48)				87.95		
AE-100R-3 (50-56)				87.92		
AE-100R-4 (63-68)				87.89		
AE-100R-5 (88-93)				87.86		
AE-100R-6 (108.5-113.5)				87.84		
AE-101R-1 (30.5-35.5)				79.07		
AE-101R-2 (55-60)				79.07		
AE-101R-3 (80-85)				79.07		
AE-101R-4 (153-158)				79.07		
AE-101R-5 (175-180)				79.07		
AE-101R-6 (227-232)				79.07		
AE-101S				79.34		
AE-101D				79.37		
AE-102RR-1 (43-48)				79.83		
AE-102RR-2 (75-80)				79.84		
AE-102RR-3 (111-116)				79.89		
AE-102RR-4 (125-130)				79.84		
AE-102RR-5 (141-146)				79.82		
AE-102RR-6 (153-158)				79.83		
AE-102S				80.12		
AE-102M				80.17		
AE-102D				80.16		
AE-103R-1 (48-53)				78.99		
AE-103R-2 (62-67)				78.99		
AE-103R-3 (70-76)				79.01		
AE-103R-4 (98-105)				79.00		
AE-103R-5 (122-128)				79.08		
AE-103R-6 (138-144)				79.00		
AE-103R-7 (162.5-168)				78.99		
AE-103S				79.43		
AE-103M				79.42		
AE-103D				79.42		
AE-104R-1 (48-54)				78.90		
AE-104R-2 (62-68)				78.85		
AE-104R-3 (97-102)				78.86		
AE-104R-4 (128-133)				78.86		
AE-104R-5 (156-162)				78.86		
AE-104R-6 (168-174)				78.85		

Notes: R = replicate field measurement

Water level meter make/model/SN:

Concord pond: 1.14 ft

SG-1 - Dry. Deeper than -1.0

MW-13R	9/9/20	1631	15.23
MW-13S	9/9/20	1632	15.21
MW-[redacted]7S	9/9/20	1626	13.30
MW-15	9/9/20	1627	14.01
MW-[redacted]1R	9/9/20	1625	13.99

AECOM

Lockheed Martin Corporation
Former GE Site - Wilmington, MA
Water Level Measurements

Weather:_____ Recorder(s): A. Grossman, D. Potter, A. Borden, B. Maye, F. Burton, L. Zogby, M. Fitzgerald, B. Hoch, S. Haggett

Well	Date	Time	Depth to Water (ft)	TOC Ref Elev	Calc'ed Elevation	Comments
AE-104S				79.30		
AE-104M				79.28		
AE-104D				79.30		
AE-107S						
AE-107M						
AE-107D						
AE-108R-1 (36.5-43.5)				78.81		
AE-108R-2 (68-73)				78.85		
AE-108R-3 (84-89)				78.82		
AE-108R-4 (145-150)				78.79		
AE-108R-5 (163-168)				78.80		
AE-105R-1 (90.5-95.5)	09.08.20	16:17	4.74'	79.40		6.1 ppm
AE-105R-2 (98-103)	↓	16:18	4.79 ft	79.40		0.0 ppm
AE-105R-3 (107.5-112.5)		16:19	4.80'	79.39		0.1 ppm R=2.00
AE-105R-4 (125-130)		16:20	4.86'	79.37		0.0 ppm
AE-105R-5 (143-148)	↓	16:21	4.86'	79.36		0.0 ppm
AE-105R-6 (156-161)				79.37		— Dry Port
AE-105S	09.08.20	16:22	4.42'	79.39		8.5 ppm
AE-105M	↓	16:23	4.38'	79.35		0.8 ppm
AE-105D	↓	16:24	4.45'	79.42		6.1 ppm
AE-106R-1 (47-52)	09.08.20	16:00	4.33'	79.15		0.3 ppm,
AE-106R-2 (69.5-74.5)	↓	16:01	4.31'	79.12		0.2 ppm
AE-106R-3 (84-88)	↓	16:02	4.26'	79.13		0.4 ppm
AE-106R-4 (144.5-150.5)	↓	16:03	4.21'	79.15		0.5 ppm
AE-106R-5 (164-169)	↓	16:04	4.13'	79.14		0.4 ppm
AE-106S	↓	16:05	3.65'	78.42		SW= 3.55 ft 1.0 ppm
AE-106M	↓	16:06	3.64'	78.44		0.7 ppm
AE-106D	↓	16:07	3.67'	78.41		1.2 ppm
TRC-301R-1 (96.5-100.5)	↓	16:08	3.69'	78.57		SW= 0.0 ppm
TRC-301R-2 (81.5-85.5)	↓	16:09	3.70'	78.57		0.0 ppm
TRC-301R-3 (75.5-79.5)	↓	16:10	3.70'	78.57		0.0 ppm
TRC-301R-4 (65.5-69.5)	↓	16:11	3.65'	78.57		0.1 ppm
PZ-9S				82.17		
PZ-9D				82.16		
PZ-9R				82.27		
GZA-12				87.62		
GZA-101R				87.41		
AE-1S				86.26		
AE-1I				86.68		
AE-2R				85.23		
AE-2I				85.39		

Notes: R = replicate field measurement
Water level meter make/model/SN:

SN: 365666

AECOM

Lockheed Martin Corporation
Former GE Site - Wilmington, MA
Water Level Measurements

Weather:_____ Recorder(s): A. Grossman, D. Potter, A. Borden, B. Maye, F. Burton, L. Zogby, M. Fitzgerald, B. Hoch, S. Haggett

Well	Date	Time	Depth to Water (ft)	TOC Ref Elev	Calc'ed Elevation	Comments
AE-23S				85.62		
AE-23R				85.54		
AE-24				85.63		
AE-25S				85.49		
AE-25D				85.38		
AE-25R				85.35		
AE-26S				85.49		
AE-26D				85.25		
AE-27R				85.23		
AE-3				82.41		
AE-4				82.03		
IP-12						
IP-13						
IP-14						
IP-15						
DP-1						
DP-2						
CW-1				80.94		
CW-2				80.73		
PZ-8R				79.04		
GZA-5				79.77		
GZA-6				80.37		
GZA-10				80.29		
STM-3S				82.93		
STM-3D				82.89		
STM-3R				82.90		
STM-8S				78.91		
STM-8M				78.87		
STM-8D				78.86		
STM-8R				78.78		
STM-8R1				79.08		
STM-10S				95.70		
STM-10R1				95.79		
STM-10R2				95.79		
TRC-402 (Reading)	09.08.20	11:15	27.25'			1.1 ppm
TRC-403 (Reading)	09.08.20	11:14	27.52'			1.5 ppm

Notes: R = replicate field measurement

Water level meter make/model/SN:

AECOM

Lockheed Martin Corporation
Former GE Site - Wilmington, MA
Water Level Measurements

Weather: humid, partly cloudy 80° Recorder(s): A. Grossman, D. Foley, A. Borden, B. Maye, F. Burton, L. Zogby, M. Fitzgerald, B. Hoch, S. Haggett

Well	Date	Time	Depth to Water	TOC Ref Elev	Calc'ed Elevation	Comments
MW-1	09.08.20	~~10:05~~ (14:?)	~~4.10'~~ 3.81' LZ	78.81		—
MW-4	09.08.20	09:46	3.27'	77.23		SW= dry, 1.0 ppm } PID clogged after MW-4 reading
MW-4A	09.08.20	09:34	2.56'	76.46		SW= dry, 0.0 ppm }
MW-5				78.99		SW=
MW-7				80.33		
GZA-14				82.64		
GZA-14A				82.31		
PS-1S	09.08.20	14:02	4.43 ft	79.21		SW= 0.1 ppm
* PS-1M	"	14:01	2.28'	77.30		SW= 0.0 ppm → Broken off, 1.18'
PS-1D	"	14:00	1.64	76.51		SW= 0.6 ppm
PS-2S	"	14:57	2.55 ft	77.71		SW= 0.0 ppm
PS-2M	"	15:00	~~6.33 ft~~ 2.27 LZ	77.61		SW=
PS-2D	"	14:52	2.01 ft	76.91		SW= R=2.00
PS-3	09.08.20	10:26	2.59'	76.64		0.0 ppm
PS-4	09.08.20	10:05	4.61'	78.66		0.0 ppm
PS-5S	09.08.20	10:15	5.35'	80.49		— 0.0 ppm
PS-5D	09.08.20	10:17	5.05'	79.68		— R=5.05 0.0 ppm
PS-8S	"	16:48	8.62'	83.77		0.0 ppm
PS-8M	"	16:49	8.04'	82.53		0.0 ppm
PS-8D	"	16:50	7.81'	82.77		0.0 ppm
GZA-1 (wwtp)				78.93 ?		SW=
GZA-2 (wwtp)				79.03 ?		SW=
GZA-3 (wwtp)				79.68 ?		SW=
GZA-4 (wwtp)				83.3 ?		
STM-7 (Wilm. Masonry)				75.57		
AE-112R-1 (41-51)						
AE-112R-2 (62-72)						
AE-112R-3 (91-101)						
AE-112R-4 (113-123)						
AE-112R-5 (136-146)						
AE-112R-6 (153-163)						
AE-112R-7 (168-175)						
AE-112D						
HOW-2 (MW-2)						
HOW-3 (MW-3)						
GZA-107M						
GZA-107D						
GZA-107R						

Notes: R = replicate field measurement

Water level meter make/model/SN: Survey SW at Wilm Masonry, GZA-1, other ?

MW-4 / MW-4a: Dug down 6", no water. Firm.

PID → clogged w/ mud

AECOM

Lockheed Martin Corporation
Former GE Site - Wilmington, MA
Water Level Measurements

Weather: Sunny 68°F Recorder(s): A. Grossman, D. Potter, A. Borden, B. Maye, F. Burton, L. Zogby, M. Fitzgerald, B. Hoch, S. Haggett

Well	Date	Time	Depth to Water	TOC Ref Elev	Calc'ed Elevation	Comments
AE-100R-1 (18-24)				87.87		
AE-100R-2 (43-48)				87.95		
AE-100R-3 (50-56)				87.92		
AE-100R-4 (63-68)				87.89		
AE-100R-5 (88-93)				87.86		
AE-100R-6 (108.5-113.5)				87.84		
AE-101R-1 (30.5-35.5)				79.07		
AE-101R-2 (55-60)				79.07		
AE-101R-3 (80-85)				79.07		
AE-101R-4 (153-158)				79.07		
AE-101R-5 (175-180)				79.07		
AE-101R-6 (227-232)				79.07		
AE-101S				79.34		
AE-101D				79.37		
AE-102RR-1 (43-48)				79.83		
AE-102RR-2 (75-80)				79.84		
AE-102RR-3 (111-116)				79.89		
AE-102RR-4 (125-130)				79.84		
AE-102RR-5 (141-146)				79.82		
AE-102RR-6 (153-158)				79.83		
AE-102S				80.12		
AE-102M				80.17		
AE-102D				80.16		
AE-103R-1 (48-53)				78.99		
AE-103R-2 (62-67)				78.99		
AE-103R-3 (70-76)				79.01		
AE-103R-4 (98-105)				79.00		
AE-103R-5 (122-128)				79.08		
AE-103R-6 (138-144)				79.00		
AE-103R-7 (162.5-168)				78.99		
AE-103S				79.43		
AE-103M				79.42		
AE-103D				79.42		
AE-104R-1 (48-54)				78.90		
AE-104R-2 (62-68)				78.85		
AE-104R-3 (97-102)				78.86		
AE-104R-4 (128-133)				78.86		
AE-104R-5 (156-162)				78.86		
AE-104R-6 (168-174)				78.85		

Notes: R = replicate field measurement

Water level meter make/model/SN:

Heron SKinny Dipper 3010 – 1348

AECOM

Lockheed Martin Corporation
Former GE Site - Wilmington, MA
Water Level Measurements

Weather:_____ Recorder(s): A. Grossman, D. Potter, A. Borden, B. Maye, F. Burton, L. Zogby, M. Fitzgerald, B. Hoch, S. Haggett

Well	Date	Time	Depth to Water	TOC Ref Elev	Calc'ed Elevation	Comments
AE-104S				79.30		
AE-104M				79.28		
AE-104D				79.30		
AE-107S						
AE-107M						
AE-107D						
AE-108R-1 (36.5-43.5)				78.81		
AE-108R-2 (68-73)				78.85		
AE-108R-3 (84-89)				78.82		
AE-108R-4 (145-150)				78.79		
AE-108R-5 (163-168)				78.80		
AE-105R-1 (90.5-95.5)				79.40		
AE-105R-2 (98-103)				79.40		
AE-105R-3 (107.5-112.5)				79.39		
AE-105R-4 (125-130)				79.37		
AE-105R-5 (143-148)				79.36		
AE-105R-6 (156-161)				79.37		
AE-105S				79.39		
AE-105M				79.35		
AE-105D				79.42		
AE-106R-1 (47-52)				79.15		
AE-106R-2 (69.5-74.5)				79.12		
AE-106R-3 (84-88)				79.13		
AE-106R-4 (144.5-150.5)				79.15		
AE-106R-5 (164-169)				79.14		
AE-106S				78.42		SW=
AE-106M				78.44		
AE-106D				78.41		
TRC-301R-1 (96.5-100.5)				78.57		SW=
TRC-301R- 2 (81.5-85.5)				78.57		
TRC-301R-3 (75.5-79.5)				78.57		
TRC-301R-4 (65.5-69.5)				78.57		
PZ-9S	8-8-20	1334	6.94	82.17		0.0
PZ-9D	8-8-20	1332	6.38	82.16		0.0
PZ-9R	8-8-20	1330	6.46	82.27		0.0
GZA-12				87.62		
GZA-101R				87.41		
AE-1S				86.26		
AE-1I				86.68		
AE-2R				85.23		
AE-2I				85.39		

Notes: R = replicate field measurement
Water level meter make/model/SN:

AECOM

Lockheed Martin Corporation
Former GE Site - Wilmington, MA
Water Level Measurements

Weather:_____ Recorder(s): A. Grossman, D. Potter, A. Borden, B. Maye, F. Burton, L. Zogby, M. Fitzgerald, B. Hoch, S. Haggett

Well	Date	Time	Depth to Water *	TOC Ref Elev	Calc'ed Elevation	Comments
AE-23S				85.62		
AE-23R				85.54		
AE-24				85.63		
AE-25S				85.49		
AE-25D				85.38		
AE-25R				85.35		
AE-26S				85.49		
AE-26D				85.25		
AE-27R				85.23		
AE-3				82.41		
AE-4				82.03		
IP-12						
IP-13						
IP-14						
IP-15						
DP-1						
DP-2						
CW-1				80.94		
CW-2				80.73		
PZ-8R				79.04		
GZA-5				79.77		
GZA-6				80.37		
GZA-10				80.29		
STM-3S	8-8-20	1115	11.21	82.93		0.0
STM-3D	8-8-20	1117	2.58	82.89		0.0
STM-3R	8-8-20	1124	.03	82.90		0.0 Blanket
STM-8S	8-8-20	1141	6.42	78.91		0.0
STM-8M	8-8-20	1138	6.52	78.87		0.0
STM-8D	8-8-20	1132	6.46	78.86		0.0 6.46 BH
STM-8R	8-8-20	1135	~~8.38~~	78.78		0.0
STM-8R1	8-8-20	1152	7.58	79.08		0.0
STM-10S	8-8-20	1006	14.60 DTW	95.70		0.0
STM-10R1	8-8-20	1008	22.96	95.79		0.0
STM-10R2	8-8-20	1010	23.05	95.79		0.0
TRC-402 (Reading)						
TRC-403 (Reading)						

Notes: R = replicate field measurement

Water level meter make/model/SN:

AECOM

Lockheed Martin Corporation
Former GE Site - Wilmington, MA
Water Level Measurements

Weather:_____ Recorder(s): A. Grossman, D. Potter, A. Borden, B. Maye, F. Burton, L. Zogby, M. Fitzgerald, B. Hoch, S. Haggett

Well	Date	Time	Depth to Water	TOC Ref Elev	Calc'ed Elevation	Comments
MW-1				78.81		
MW-4				77.23		SW=
MW-4A				76.46		SW=
MW-5				78.99		SW=
MW-7				80.33		
GZA-14				82.64		
GZA-14A				82.31		
PS-1S				79.21		SW=
PS-1M				77.30		SW=
PS-1D				76.51		SW=
PS-2S				77.71		SW=
PS-2M				77.61		SW=
PS-2D				76.91		SW=
PS-3				76.64		
PS-4				78.66		
PS-5S				80.49		
PS-5D				79.68		
PS-8S				83.77		
PS-8M				82.53		
PS-8D				82.77		
GZA-1 (wwtp)				78.93 ?		SW=
GZA-2 (wwtp)				79.03 ?		SW=
GZA-3 (wwtp)				79.68 ?		SW=
GZA-4 (wwtp)				83.3 ?		
STM-? (Wilm. Masonry)	8-8-20	1350	5.23	75.57		0.0
AE-112R-1 (41-51)	8-8-20	10:22	7.28			0.1
AE-112R-2 (62-72)	8-8-20	10:24	7.04			0.1
AE-112R-3 (91-101)	8-8-20	10:26	7.15			0.0
AE-112R-4 (113-123)	8-8-20	10:28	7.31			0.0
AE-112R-5 (136-146)	8-8-20	10:30	7.29			0.0 7.29
AE-112R-6 (153-163)	8-8-20	10:32	7.24			0.2
AE-112R-7 (168-175)	8-8-20	10:35	7.24			0.0
AE-112D	8-8-20	10:38	8.83			0.8
HOW-2 (MW-2)	8-8-20	11:10	2.59			0.2
HOW-3 (MW-3)	8-8-20	10:43	9.80			0.0
GZA-107M	8-8-20	1437	5.55			0.0
GZA-107D	8-8-20	1435	5.77			0.0
GZA-107R	8-8-20	1445	5.31			0.0

Notes: R = replicate field measurement

Water level meter make/model/SN:

Survey SW at Wilm Masonry, GZA-1, other ?

AECOM

Lockheed Martin Corporation
Former GE Site - Wilmington, MA
Water Level Measurements

Weather: Sunny Recorder(s): A. Grossman, D. Potter, A. Borden, B. Maye, F. Burton, L. Zogby, M. Fitzgerald, B. Hoch, S. Haggett

Well	Date	Time	Depth to Water	TOC Ref Elev	Calc'ed Elevation	Comments
AE-26R-1 (50-56)				84.83		
AE-26R-2 (72-78)				84.83		
AE-26R-3 (81-88)				84.83		
AE-26R-4 (104-114)				84.83		
AE-26R-5 (123-132)				84.83		
AE-28R-1 (45-51)				84.81		
AE-28R-2 (75-85)				84.81		
AE-28R-3 (98-108)*				84.81		
AE-28R-4 (132-142)				84.81		
AE-29R-1 (37-44)				85.83		
AE-29R-2 (47-54)				85.83		
AE-29R-3 (70-76)				85.83		
AE-29R-4 (90-96)				85.83		
AE-29R-5 (113-119)				85.83		
AE-29R-6 (140-146)				85.83		
AE-109R-1 (38-43)	8-8-20	815	4.86			0.1
AE-109R-2 (66-76)	8-8-20	817	4.78			0.0
AE-109R-3 (126-136)	8-8-20	819	4.08			0.0
AE-109R-4 (174-180.5)	8-8-20	821	4.87			0.0
AE-109R-5 (183-189)	8-8-20	823	4.86			0.0
AE-109R-6 (196-201)	8-8-20	825	4.86			0.0
AE-109R-7 (204-214)	8-8-20	827	4.85			0.0
AE-109R-8 (245-250)	8-8-20	829	4.97			0.0
AE-109D	8-8-20	831	5.12			0.2
AE-110R-1 (34-44)	8-8-20	836	4.78			0.2 4.78 BH
AE-110R-2 (70-80)	8-8-20	840	4.74			0.0
AE-110R-3 (128-138)	8-8-20	842	4.68			0.0
AE-110R-4 (158-168)	8-8-20	844	4.65			0.0
AE-110R-5 (171-182)	8-8-20	846	4.66			0.1
AE-110R-6 (190-200)	8-8-20	848	4.66			0.2
AE-110R-7 (224-234)	8-8-20	850	4.64			0.2
AE-111R-1 (44-54)	8-8-20	904	13.44			0.0
AE-111R-2 (66-74)	8-8-20	910	13.48			0.4
AE-111R-3 (95-103)	8-8-20	915	13.85			0.3
AE-111R-4 (140-150)	8-8-20	917	13.78			0.2 13.78 BH
AE-111R-5 (155-165)	8-8-20	919	13.76			0.4
AE-111R-6 (168-173)	8-8-20	923	13.76			0.0
AE-111R-7 (181-191)	8-8-20	925	13.78			0.1

Notes: R = replicate field measurement

Water level meter make/model/SN:

Heron SKinny Dipper

AECOM

Lockheed Martin Corporation
Former GE Site - Wilmington, MA
Water Level Measurements

Weather: 9/8 SUNNY, 82°F Recorder(s): A. Grossman, D. Potter, A. Borden, B. Maye, F. Burton, L. Zogby, M. Fitzgerald, B. Hoch, S. Haggett

Well	Date	Time	Depth to Water	TOC Ref Elev	Calc'ed Elevation	Comments
AE-100R-1 (18-24)				87.87		
AE-100R-2 (43-48)				87.95		
AE-100R-3 (50-56)				87.92		
AE-100R-4 (63-68)				87.89		
AE-100R-5 (88-93)				87.86		
AE-100R-6 (108.5-113.5)				87.84		
AE-101R-1 (30.5-35.5)				79.07		
AE-101R-2 (55-60)				79.07		
AE-101R-3 (80-85)				79.07		
AE-101R-4 (153-158)				79.07		
AE-101R-5 (175-180)				79.07		
AE-101R-6 (227-232)				79.07		
AE-101S				79.34		
AE-101D				79.37		
AE-102RR-1 (43-48)				79.83		
AE-102RR-2 (75-80)				79.84		
AE-102RR-3 (111-116)				79.89		
AE-102RR-4 (125-130)				79.84		
AE-102RR-5 (141-146)				79.82		
AE-102RR-6 (153-158)				79.83		
AE-102S				80.12		
AE-102M				80.17		
AE-102D				80.16		
AE-103R-1 (48-53)				78.99		
AE-103R-2 (62-67)				78.99		
AE-103R-3 (70-76)				79.01		
AE-103R-4 (98-105)				79.00		
AE-103R-5 (122-128)				79.08		
AE-103R-6 (138-144)				79.00		
AE-103R-7 (162.5-168)				78.99		
AE-103S				79.43		
AE-103M				79.42		
AE-103D				79.42		
AE-104R-1 (48-54)				78.90		
AE-104R-2 (62-68)				78.85		
AE-104R-3 (97-102)				78.86		
AE-104R-4 (128-133)				78.86		
AE-104R-5 (156-162)				78.86		
AE-104R-6 (168-174)				78.85		

Notes: R = replicate field measurement

Water level meter make/model/SN:

LZ Refurbish pond RD 9/8/20 1917 DTW = 25.26'
Rep = 25.25'

3

AECOM

Lockheed Martin Corporation
Former GE Site - Wilmington, MA
Water Level Measurements

Weather:_____ Recorder(s): A. Grossman, D. Potter, A. Borden, B. Maye, F. Burton, L. Zogby, M. Fitzgerald, B. Hoch, S. Haggett

Well	Date	Time	Depth to Water	TOC Ref Elev	Calc'ed Elevation	Comments
AE-104S				79.30		
AE-104M				79.28		
AE-104D				79.30		
AE-107S						
AE-107M						
AE-107D						
AE-108R-1 (36.5-43.5)				78.81		
AE-108R-2 (68-73)				78.85		
AE-108R-3 (84-89)				78.82		
AE-108R-4 (145-150)				78.79		
AE-108R-5 (163-168)				78.80		
AE-105R-1 (90.5-95.5)				79.40		
AE-105R-2 (98-103)				79.40		
AE-105R-3 (107.5-112.5)				79.39		
AE-105R-4 (125-130)				79.37		
AE-105R-5 (143-148)				79.36		
AE-105R-6 (156-161)				79.37		
AE-105S				79.39		
AE-105M				79.35		
AE-105D				79.42		
AE-106R-1 (47-52)				79.15		
AE-106R-2 (69.5-74.5)				79.12		
AE-106R-3 (84-88)				79.13		
AE-106R-4 (144.5-150.5)				79.15		
AE-106R-5 (164-169)				79.14		
AE-106S				78.42		SW=
AE-106M				78.44		
AE-106D				78.41		
TRC-301R-1 (96.5-100.5)				78.57		SW=
TRC-301R- 2 (81.5-85.5)				78.57		
TRC-301R-3 (75.5-79.5)				78.57		
TRC-301R-4 (65.5-69.5)				78.57		
PZ-9S				82.17		
PZ-9D				82.16		
PZ-9R				82.27		
GZA-12	9/8	0817	11.31	87.62		1.0 ppm
GZA-101R	↓	1324	12.57	87.41		0.2 ppm
AE-1S		0822	10.06	86.26		0.8ppm
AE-1I		0820	10.49	86.68		0.7 ppm
AE-2R		0832	9.19	85.23		1.9 ppm
AE-2I	↓	0834	9.36	85.39		1.0 ppm

Notes: R = replicate field measurement

Water level meter make/model/SN:

AECOM

Lockheed Martin Corporation
Former GE Site - Wilmington, MA
Water Level Measurements

Weather:_____ Recorder(s): A. Grossman, D. Potter, A. Borden, B. Maye, F. Burton, L. Zogby, M. Fitzgerald, B. Hoch, S. Haggett

Well	Date	Time	Depth to Water	TOC Ref Elev	Calc'ed Elevation	Comments
AE-23S	9/8	1033	9.52	85.62		~~PID = 0.4ppm~~ 3.1 AKB 9/8 9.53(R)
AE-23R		1044	11.21	85.54		~~0.1 ppm~~ 3405 AKB 9/8
AE-24		1115	9.57	85.63		57.5 ppm
AE-25S		1040	9.42	85.49		0.8 ppm
AE-25D		1038	9.29	85.38		PID ~~0.0~~ 0.2 ppm
AE-25R		1042	9.23	85.35		0.2 ppm
AE-26S		1020	9.50	85.49		0.4ppm
AE-26D		1023	9.28	85.25		0.1 ppm
AE-27R		1026	10.44	85.23		0.1 ppm
AE-3		0845	7.00	82.41		25.6ppm
AE-4	✓	0853	6.56	82.03		6.1 ppm
IP-12						
IP-13						
IP-14						
IP-15						
DP-1	9/8	0901	4.22			1.5 ppm
DP-2	9/8	0905	3.82			2.7 ppm
CW-1	9/8	0841	5.55	80.94		73.4 ppm
CW-2	9/8	0843	5.40	80.73		15.2 ppm
PZ-8R				79.04		
GZA-5	9/8	0921	4.63	79.77		0.0 ppm (no plug) 4.63(R)
GZA-6	9/8	0915	5.38	80.37		0.0 ppm
GZA-10	9/8	0912	5.12	80.29		1.1 ppm
STM-3S				82.93		
STM-3D				82.89		
STM-3R				82.90		
STM-8S				78.91		
STM-8M				78.87		
STM-8D				78.86		
STM-8R				78.78		
STM-8R1				79.08		
STM-10S				95.70		
STM-10R1				95.79		
STM-10R2				95.79		
TRC-402 (Reading)						see Dylan
TRC-403 (Reading)						see Dylan

Notes: R = replicate field measurement

Water level meter make/model/SN:

AECOM

Lockheed Martin Corporation
Former GE Site - Wilmington, MA
Water Level Measurements

Weather:_____ Recorder(s): A. Grossman, D. Potter, A. Borden, B. Maye, F. Burton, L. Zogby, M. Fitzgerald, B. Hoch, S. Haggett

Well	Date	Time	Depth to Water	TOC Ref Elev	Calc'ed Elevation	Comments
MW-1				78.81		
MW-4				77.23		SW=
MW-4A				76.46		SW=
MW-5				78.99		SW=
MW-7				80.33		
GZA-14				82.64		
GZA-14A				82.31		
PS-1S				79.21		SW=
PS-1M				77.30		SW=
PS-1D				76.51		SW=
PS-2S				77.71		SW=
PS-2M				77.61		SW=
PS-2D				76.91		SW=
PS-3				76.64		
PS-4				78.66		
PS-5S				80.49		
PS-5D				79.68		
PS-8S				83.77		
PS-8M				82.53		
PS-8D				82.77		
GZA-1 (wwtp)	9/8/20	1402	6.53	78.93 ?		SW= Dry No plug, PID = 0.0
GZA-2 (wwtp)	9/8/20	1340	3.90	79.03 ?		SW= Dry No plug, Rep = 3.91'
GZA-3 (wwtp)	9/8/20	1346	4.51	79.68 ?		SW= Dry PID= 0.0 No plug
GZA-4 (wwtp)	9/8/20	1410	7.62	83.3 ?		PID= 0.0
~~STM-7~~ (Wilm. Masonry)				75.57		
AE-112R-1 (41-51)						
AE-112R-2 (62-72)						
AE-112R-3 (91-101)						
AE-112R-4 (113-123)						
AE-112R-5 (136-146)						
AE-112R-6 (153-163)						
AE-112R-7 (168-175)						
AE-112D						
HOW-2 (MW-2)						
HOW-3 (MW-3)						
GZA-107M						
GZA-107D						
GZA-107R						

Notes: R = replicate field measurement

Water level meter make/model/SN: Survey SW at Wilm Masonry, GZA-1, other ?

Solinst 200ft 237876

+2 SW?

sight glass inches

Vac Gauge Reading (ft)

AECOM

Lockheed Martin Corporation
Former GE Site - Wilmington, MA
Water Level Measurements

Weather_____ Recorder(s): A. Grossman, D. Potter, A. Borden, B. Maye, F. Burton, L. Zogby, M. Fitzgerald, B. Hoch, S. Haggett

Well	Date	Time	Depth to Water	TOC Ref Elev	Calc'ed Elevation	Comments
AE-26R-1 (50-55)	9/8	0947	2.56	84.83		12.04 ft H2O
AE-26R-2 (72-78)		0956	3.10	84.83		11.73 ft H2O
AE-26R-3 (81-86)		1003	2.80	84.83		11.75 ft H2O
AE-26R-4 (104-114)		1008	2.10	84.83		11.72 ft H2O
AE-26R-5 (123-132)		1015	3.7	84.83		11.86 ft H2O
AE-28R-1 (45-51)		1053	2.2	84.81		11.85 ft H2O
AE-28R-2 (75-85)		1057	3.7	84.81		11.90 ft H2O
AE-28R-3 (98-108)		1103	2.5	84.81		11.89 ft H2O
AE-28R-4 (132-142)		1109	4.5	84.81		12.28 ft H2O
AE-29R-1 (37-44)		1124	2.0	85.83		12.89 ft H2O
AE-29R-2 (47-54)		1128	2.6	85.83		12.96 ft H2O
AE-29R-3 (70-76)		1132	3.3	85.83		13.32 ft H2O
AE-29R-4 (90-96)		1142	4.8	85.83		13.68 ft H2O
AE-29R-5 (113-119)		1148	3.8	85.83		12.93 ft H2O
AE-29R-6 (140-146)		1154	4.4	85.83		13.13 ft H2O
AE-109R-1 (38-43)						
AE-109R-2 (68-76)						
AE-109R-3 (126-136)						
AE-109R-4 (174-180.5)						
AE-109R-5 (183-189)						
AE-109R-6 (196-201)						
AE-109R-7 (204-214)						
AE-109R-8 (245-250)						
AE-109D						
AE-110R-1 (34-44)						
AE-110R-2 (70-80)						
AE-110R-3 (128-138)						
AE-110R-4 (158-168)						
AE-110R-5 (171-182)						
AE-110R-6 (190-200)						
AE-110R-7 (224-234)						
AE-111R-1 (44-54)						
AE-111R-2 (66-74)						
AE-111R-3 (95-103)						
AE-111R-4 (140-150)						
AE-111R-5 (155-165)						
AE-111R-6 (168-173)						
AE-111R-7 (181-191)						

novel caps

Notes: R = replicate field measurement
Water level meter make/model/SN:

AECOM

Lockheed Martin Corporation
Former GE Site - Wilmington, MA
Water Level Measurements

Weather:_____ Recorder(s): A. Grossman, D. Potter, A. Borden, B. Maye, F. Burton, L. Zogby, M. Fitzgerald, B. Hoch, S. Haggett

Well	Date	Time	Depth to Water ft	TOC Ref Elev	Calc'ed Elevation	Comments Condition
~~AE-100R-1 (18-29)~~	9/8/20	8:26	3.53	87.87		Silt coating PID=0.1ppm
~~AE-100R-2 (43-48)~~	9/8/20	8:29	3.44	87.95		PID=0.2ppm
~~AE-100R-3 (50-56)~~	9/8/20	8:30	3.43	87.92		PID=0.3ppm Rep=3.43'
~~AE-100R-4 (63-68)~~	9/8/20	8:32	3.52	87.89		PID=1.6ppm
~~AE-100R-5 (88-93)~~	9/8/20	8:33	3.83	87.86		PID=3.6ppm
AE-100R-6 (108.5-113.5)	9/8/20	8:34	3.67	87.84		PID=2.7ppm
AE-101R-1 (30.5-35.5)	9/8/20	11:15	3.84	79.07		PID=0.2ppm water in road box
AE-101R-2 (55-60)	9/8/20	11:17	3.84	79.07		PID=0.2ppm, Rep=3.84'
AE-101R-3 (80-85)	9/8/20	11:18	3.82	79.07		PID=0.2ppm
AE-101R-4 (153-158)	9/8/20	11:20	3.80	79.07		PID=0.3ppm
AE-101R-5 (175-180)	9/8/20	11:21	3.81	79.07		PID=0.2ppm
AE-101R-6 (227-232)	9/8/20	11:22	3.82	79.07		PID=0.2ppm
AE-101S	9/8/20	11:09	3.98	79.34		PID=2.0ppm
AE-101D	9/8/20	11:10	4.04	79.37		PID=14.7ppm
AE-102RR-1 (43-48)	9/8/20	9:22	4.53	79.83		PID=0.3ppm Light corrosion on ports,
AE-102RR-2 (75-80)	9/8/20	9:23	4.52	79.84		PID=0.3ppm missing red cap
AE-102RR-3 (111-116)	9/8/20	9:24	4.54	79.89		PID=0.2ppm
AE-102RR-4 (125-130)	9/8/20	9:25	4.47	79.84		PID=0.5ppm
AE-102RR-5 (141-146)	9/8/20	9:26	4.47	79.82		PID=1.3ppm
AE-102RR-6 (153-158)	9/8/20	9:27	4.48	79.83		PID=1.9ppm
AE-102S	9/8/20	9:14	4.84	80.12		PID=0.7ppm, Broken gasket
AE-102M	9/8/20	9:18	~~4.65~~	~~80.17~~	4.88	PID=6.1ppm, Rep=4.88'
AE-102D	9/8/20	9:17	4.77	80.16		PID=3.0ppm on
AE-103R-1 (48-53)	9/8/20	8:43	3.73	78.99		Corrosion on ports, PID=0.1ppm
AE-103R-2 (62-67)	9/8/20	8:44	3.84	78.99		PID=0.2ppm
AE-103R-3 (70-76)	9/8/20	8:46	3.68	79.01		PID=0.2ppm
AE-103R-4 (98-105)	9/8/20	8:47	3.59	79.00		PID=0.9ppm
AE-103R-5 (122-128)	9/8/20	8:48	3.81	79.08		PID=0.4ppm
AE-103R-6 (138-144)	9/8/20	8:49	3.63	79.00		PID=1.1ppm
AE-103R-7 (162.5-168)	9/8/20	8:50	3.59	78.99		PID=0.3ppm, Rep=3.59'
AE-103S	9/8/20	8:36	4.08	79.43		Condition=Good, PID=4.9ppm
AE-103M	9/8/20	8:37	4.07	79.42		PID=0.6ppm
AE-103D	9/8/20	8:38	4.04	79.42		PID=4.0ppm
AE-104R-1 (48-54)	9/8/20	15:30	7.57	78.90		PID=0.1ppm
~~AE-104R-2~~ (62-68)	9/8/20	15:31	7.73	78.85		PID=0.1ppm
~~AE-104R-3~~ (97-102)	9/8/20	15:32	7.71	78.86		PID=0.3ppm
~~AE-104R-4~~ (128-133)	9/8/20	15:33	7.72	78.86		PID=0.3ppm
~~AE-104R-5~~ (156-162)	9/8/20	15:34	7.82	78.86		PID=.02ppm
~~AE-104R-6~~ (168-174)	9/8/20	15:35	7.78	78.85		PID=0.2ppm

Actually AE-104R

one of the bolts are broken

AE-100

Notes: R = replicate field measurement

Water level meter make/model/SN:

365666 Skinny tape

AECOM

Lockheed Martin Corporation
Former GE Site - Wilmington, MA
Water Level Measurements

Weather: _____ Recorder(s): A. Grossman, D. Potter, A. Borden, B. Maye, F. Burton, L. Zogby, M. Fitzgerald, B. Hoch, S. Haggett

Well	Date	Time	Depth to Water ft	TOC Ref Elev	Calc'ed Elevation	Comments Condition
~~AE-100R-1 (18-29)~~	9/8/20	8:26	3.53	87.87		Silt coating PID=0.1ppm
~~AE-100R-2 (43-48)~~	9/8/20	8:29	3.44	87.95		PID=0.2ppm
~~AE-100R-3 (50-56)~~	9/8/20	8:30	3.43	87.92		PID=0.3ppm Rep=3.43'
~~AE-100R-4 (63-68)~~	9/8/20	8:32	3.52	87.89		PID=1.6ppm
~~AE-100R-5 (88-93)~~	9/8/20	8:33	3.83	87.86		PID=3.6ppm
AE-100R-6 (108.5-113.5)	9/8/20	8:34	3.67	87.84		PID=2.7ppm
AE-101R-1 (30.5-35.5)	9/8/20	11:15	3.84	79.07		PID=0.2ppm
AE-101R-2 (55-60)	9/8/20	11:17	3.84	79.07		PID=0.2ppm, Rep=3.84'
AE-101R-3 (80-85)	9/8/20	11:18	3.82	79.07		PID=0.2ppm
AE-101R-4 (153-158)	9/8/20	11:20	3.80	79.07		PID=0.3ppm
AE-101R-5 (175-180)	9/8/20	11:21	3.81	79.07		PID=0.2ppm
AE-101R-6 (227-232)	9/8/20	11:22	3.82	79.07		PID=0.2ppm
AE-101S	9/8/20	11:09	3.98	79.34		PID=2.0ppm
AE-101D	9/8/20	11:10	4.04	79.37		PID=14.7ppm
AE-102RR-1 (43-48)	9/8/20	9:22	4.53	79.83		PID=0.3ppm Light corrosion on parts,
AE-102RR-2 (75-80)	9/8/20	9:23	4.52	79.84		PID=0.3ppm missing red cap
AE-102RR-3 (111-116)	9/8/20	9:24	4.54	79.89		PID=0.2ppm
AE-102RR-4 (125-130)	9/8/20	9:25	4.47	79.84		PID=0.5ppm
AE-102RR-5 (141-146)	9/8/20	9:26	4.47	79.82		PID=1.3ppm
AE-102RR-6 (153-158)	9/8/20	9:27	4.48	79.83		PID=1.9ppm
AE-102S	9/8/20	9:14	4.84	80.12		PID=0.7ppm, Broken gasket
AE-102M	9/8/20	9:18	~~4.65~~	~~80.17~~	4.88	PID=6.1ppm, Rep=4.88'
AE-102D	9/8/20	9:17	4.77	80.16		PID=3.0ppm on
AE-103R-1 (48-53)	9/8/20	8:43	3.73	78.99		Corrosion on ports, PID=0.1ppm
AE-103R-2 (62-67)	9/8/20	8:44	3.84	78.99		PID=0.2ppm
AE-103R-3 (70-76)	9/8/20	8:46	3.68	79.01		PID=0.2ppm
AE-103R-4 (98-105)	9/8/20	8:47	3.59	79.00		PID=0.9ppm
AE-103R-5 (122-128)	9/8/20	8:48	3.81	79.08		PID=0.4ppm
AE-103R-6 (138-144)	9/8/20	8:49	3.63	79.00		PID=1.1ppm
AE-103R-7 (162.5-168)	9/8/20	8:50	3.59	78.99		PID=0.3ppm, Rep=3.59'
AE-103S	9/8/20	8:36	4.08	79.43		Condition=Good, PID=4.9ppm
AE-103M	9/8/20	8:37	4.07	79.42		PID=0.6ppm
AE-103D	9/8/20	8:38	4.04	79.42		PID=4.0ppm
AE-104R-1 (48-54)	9/8/20	15:30	7.57	78.90		PID=0.1ppm
~~AE-104R-2~~ (62-68)	9/8/20	15:31	7.73	78.85		PID=0.1ppm
AE-104R-3 (97-102)	9/8/20	15:32	7.71	78.86		PID=0.3ppm
AE-104R-4 (128-133)	9/8/20	15:33	7.72	78.86		PID=0.3ppm
~~AE-104R-5~~ (156-162)	9/8/20	15:34	7.82	78.86		PID=.02ppm
~~AE-104R-6~~ (168-174)	9/8/20	15:35	7.78	78.85		PID=0.2ppm

Actually AE-104R

one of the bolts are broken AE-100

water in road box

Notes: R = replicate field measurement

Water level meter make/model/SN:

365666 Skinny tape

AECOM

Lockheed Martin Corporation
Former GE Site - Wilmington, MA
Water Level Measurements

Weather:_____ Recorder(s): A. Grossman, D. Potter, A. Borden, B. Maye, F. Burton, L. Zogby, M. Fitzgerald, B. Hoch, S. Haggett

Well	Date	Time	Depth to Water ft	TOC Ref Elev	Calc'ed Elevation	Comments
AE-104S	9/8/20	8:20	3.96	79.30		PID = 0.8 ppm Condition = Good
AE-104M	9/8/20	8:22	3.90	79.28		PID = 0.4 ppm Condition = Good
AE-104D	9/8/20	8:23	3.94	79.30		PID = 0.5ppm, Good, Rep = 3.94'
AE-107S						
AE-107M						
AE-107D						
AE-108R-1 (36.5-43.5)	9/8/20	10:56	3.52	78.81		PID = 0.4ppm
AE-108R-2 (68-73)	9/8/20	10:58	3.50	78.85		PID = 1.9 ppm
AE-108R-3 (84-89)	9/8/20	10:59	3.41	78.82		PID = 2.6ppm
AE-108R-4 (145-150)	9/8/20	11:01	3.45	78.79		PID = 0.3 ppm
AE-108R-5 (163-168)	9/8/20	11:03	3.34	78.80		PID = 1.4ppm
AE-105R-1 (90.5-95.5)				79.40		
AE-105R-2 (98-103)				79.40		
AE-105R-3 (107.5-112.5)				79.39		
AE-105R-4 (125-130)				79.37		
AE-105R-5 (143-148)				79.36		
AE-105R-6 (156-161)				79.37		
AE-105S				79.39		
AE-105M				79.35		
AE-105D				79.42		
AE-106R-1 (47-52)				79.15		
AE-106R-2 (69.5-74.5)				79.12		
AE-106R-3 (84-88)				79.13		
AE-106R-4 (144.5-150.5)				79.15		
AE-106R-5 (164-169)				79.14		
AE-106S				78.42		SW=
AE-106M				78.44		
AE-106D				78.41		
TRC-301R-1 (96.5-100.5)				78.57		SW=
TRC-301R- 2 (81.5-85.5)				78.57		
TRC-301R-3 (75.5-79.5)				78.57		
TRC-301R-4 (65.5-69.5)				78.57		
PZ-9S				82.17		
PZ-9D				82.16		
PZ-9R				82.27		
GZA-12				87.62		
GZA-101R				87.41		
AE-1S				86.26		
AE-1I				86.68		
AE-2R				85.23		
AE-2I				85.39		

Rusted casing, broken gasket
Rusted U-bolt

Notes: R = replicate field measurement
Water level meter make/model/SN:

AECOM

Lockheed Martin Corporation
Former GE Site - Wilmington, MA
Water Level Measurements

Weather:_____ Recorder(s): A. Grossman, D. Potter, A. Borden, B. Maye, F. Burton, L. Zogby, M. Fitzgerald, B. Hoch, S. Haggett

Well	Date	Time	Depth to Water	TOC Ref Elev	Calc'ed Elevation	Comments
TRC-101	9/8/20	11:32	6.82	82.18		PID=73.5ppm, DTP=ND
TRC-102	9/8/20	9:45	5.81	81.21		PID=2.3ppm
TRC-103	9/8/20	14:00	6.58	82.02		PID=10.0ppm
~~TRC-201R~~ GZA102R		See below				
TRC-202R	9/8/20	8:53	3.65			PID=0.2ppm, Condition=OK, chipped metal in well
GZA-102S	9/8/20	13:35	7.36	82.38		PID=0.3ppm OK
~~GZA-102R~~ TRC201R	9/8/20	14:48	8.92	85.18		PID=0.1 OK
PZ-2S	9/8/20	13:24	6.77	82.77		DTP-NAPL)=1.0 ppm
TRC-401R	9/8/20	9:49	6.25	82.00		PID=1.1ppm Condition=Good
GZA-105S	9/8/20	10:04	6.48	81.89		PID=733.8ppm, Rep=6.48' Stripped bolts
GZA-105D	9/8/20	9:54	6.35	81.82		PID=5.7ppm
GZA-105R	9/8/20	9:59	6.17	81.80		PID=0.3ppm
WE-105R2	9/8/20	14:28	5.48	82.05		PID=0.4ppm
~~BRW-1~~ ?						
~~BRW-1R1~~						
BRW-1R2	9/8/20	10:27	5.45			PID=1.6ppm, Rep=5.45'
BRW-1R3	9/8/20	10:30	5.20			PID=2.3ppm
BRW-1R4	9/8/20	10:32	5.28			PID=2.6ppm
EMW-10S	9/8/20	10:35	4.79	78.56		PID=0.2ppm
EMW-10D	9/8/20	10:38	5.46	78.41		PID=6.8ppm
EMD-10R	9/8/20	10:45	5.66	78.11		PID=0.5ppm
EMW-11S	9/8/20	8:56	4.60	79.25		PID=0.2ppm, Condition=Good
EMW-11D	9/8/20	9:00	5.18	79.39		PID=0.3ppm, Condition=Good
EMW-11R1	9/8/20	9:02	5.44	79.43		PID=0.4ppm,
EMW-11R2	9/8/20	9:03	5.39	79.44		PID=1.3ppm
EMW-11R3	9/8/20	9:05	5.41	79.45		PID=1.0ppm
IP-1R1	9/8/20	13:54	6.48			PID=1.6ppm
IP-1R2	9/8/20	13:55	6.41			PID=6.7ppm
IP-1R3	9/8/20	13:56	4.94			PID=19.6ppm
IP-2R1	9/8/20	11:39	6.67			PID=17.2ppm
IP-2R2	9/8/20	11:42	6.51			PID=38.5ppm
IP-2R3	9/8/20	11:44	6.44			PID=1.3ppm
IP-2R4	9/8/20	11:46	6.43			PID=179.3ppm
IP-3R1	9/8/20	9:31	5.55			PID=0.6ppm J-Plugs not on upon opening
IP-3R2	9/8/20	9:33	5.15			PID=23.3ppm, Rep=5.15'
IP-4R1	9/8/20	14:17	5.18			PID=6.2
IP-4R2	9/8/20	14:18	5.29			PID=408.0
IP-4R3	9/8/20	14:19	5.21			PID=58.2

Notes: R = replicate field measurement

Water level meter make/model/SN: Solinst. Model 102 365666

IP = Model 122 313490

- GZA 102R-1 = 9/8/20 1504 5.35 PID 0.3
- GZA 102R-2 = " 7.43 PID 0.0
- ~~GZA 102S~~

AECOM

Lockheed Martin Corporation
Former GE Site - Wilmington, MA
Water Level Measurements

Weather:_____ Recorder(s): A. Grossman, D. Potter, A. Borden, B. Maye, F. Burton, L. Zogby, M. Fitzgerald, B. Hoch, S. Haggett

Well	Date	Time	Depth to Water	TOC Ref Elev	Calc'ed Elevation	Comments
AE-23S				85.62		
AE-23R				85.54		
AE-24				85.63		
AE-25S				85.49		
AE-25D				85.38		
AE-25R				85.35		
AE-26S				85.49		
AE-26D				85.25		
AE-27R				85.23		
† AE-3	9/8/20	13:58	7.02	82.41		DTP = ND, PID = 65.3
† AE-4	9/8/20	11:28	6.66	82.03		DTP = ND, PID = 0.2 ppm
IP-12						
IP-13						
IP-14						
IP-15						
DP-1						
DP-2						
† CW-1	9/8/20	1314	5.60	80.94		PID > 342.2 DTP = ~~5.88~~ 05:58
† CW-2	9/8/20	11:55	5.35	80.73		PID = 19.1 ppm, DTP = 5.34 Sheen no free product
PZ-8R				79.04		
GZA-5				79.77		
GZA-6				80.37		
GZA-10				80.29		
STM-3S				82.93		
STM-3D				82.89		
STM-3R				82.90		
STM-8S				78.91		
STM-8M				78.87		
STM-8D				78.86		
STM-8R				78.78		
STM-8R1				79.08		
STM-10S				95.70		
STM-10R1				95.79		
STM-10R2				95.79		
TRC-402 (Reading)						
TRC-403 (Reading)						

Notes: R = replicate field measurement
Water level meter make/model/SN:

AECOM

Lockheed Martin Corporation
Former GE Site - Wilmington, MA
Water Level Measurements

Weather:_____ Recorder(s): A. Grossman, D. Potter, A. Borden, B. Maye, F. Burton, L. Zogby, M. Fitzgerald, B. Hoch, S. Haggett

Well	Date	Time	Depth to Water	TOC Ref Elev	Calc'ed Elevation	Comments
MW-1				78.81		
MW-4				77.23		SW=
MW-4A				76.46		SW=
MW-5	9/8/2020	1645	3.97	78.99		SW= PID=0.8
MW-7	9/8/2020	1615	5.28	80.33		R=5.28 PID=4.2
GZA-14	9/8/2020	1625	~~5.28~~ 7.60	82.64		PID=0.0
GZA-14A	9/8/2020	1630	~~8.15~~ 8.15	82.31		PID=0.8
PS-1S				79.21		SW=
PS-1M				77.30		SW=
PS-1D				76.51		SW=
PS-2S				77.71		SW=
PS-2M				77.61		SW=
PS-2D				76.91		SW=
PS-3				76.64		
PS-4				78.66		
PS-5S				80.49		
PS-5D				79.68		
PS-8S				83.77		
PS-8M				82.53		
PS-8D				82.77		
GZA-1 (wwtp)				78.93 ?		SW=
GZA-2 (wwtp)				79.03 ?		SW=
GZA-3 (wwtp)				79.68 ?		SW=
GZA-4 (wwtp)				83.3 ?		
STM-? (Wilm. Masonry)				75.57		
AE-112R-1 (41-51)						
AE-112R-2 (62-72)						
AE-112R-3 (91-101)						
AE-112R-4 (113-123)						
AE-112R-5 (136-146)						
AE-112R-6 (153-163)						
AE-112R-7 (168-175)						
AE-112D						
HOW-2 (MW-2)						
HOW-3 (MW-3)						
GZA-107M						
GZA-107D						
GZA-107R						

Notes: R = replicate field measurement

Water level meter make/model/SN: Survey SW at Wilm Masonry, GZA-1, other ?

N.a.p.l. gauging data 9/24/2020

Well ID	DTP	DTW	DTB	DTDNAPL	comments
AE-23R	—	12.49	23.75	—	
AE-26S	—	9.54	32.15		
AE-26D	—	9.34	39.87	—	
AE-24	—	9.63	15.31	—	

Turbidity Meter Calibration Log

AECOM

Site Name: LM Wilmington
Field Activity: GW Sampling
Fieldwork Dates: 09.09.2020
Manufacturer: Geotech
Model Number: "Turbidimeter"
Serial Number: 19062110

Instrument Number
19062110

Date	Time	Initials	Temp (°C)	Standard #1		Standard #2		Standard #3		Comments
				Value (NTU)	Reading (NTU)	Value (NTU)	Reading (NTU)	Value (NTU)	Reading (NTU)	
09.09.20	09:00	LZ	21.0	<0.10	0.16	20	19.2	100	99.7	cal
09.09.20	14:50	LZ	32.0	<0.10	0.23	20	17.1	100	93.6	check
09.10.20	0800	LZ	23.5	<0.10	0.52	20	19.8	100	98.8	cal
09.10.20	13:50	LZ	26.8	<0.10	0.28	20	16.9	100	96.9	check
09.11.20	08:15	LZ	20.8	<0.10	0.18	20	17.8	100	101	cal
09.11.20	12:50	LZ	21.5	<0.10	0.36	20	14.1	100	102	check
09.14.20	07:40	LZ	20.3	<0.10	0.25	20	19.5	100	100	cal
09.14.20	15:45	LZ	24.0	<0.10	0.02	20	16.2	100	97.6	check
09.15.20	07:45	LZ	16.0	<0.10	0.55	20	18.4	100	102	cal
09.15.20	17:45	LZ	18.0	<0.10	0.76	20	23.4	100	101	check
09.16.20	07:30	LZ	16.0	<0.10	0.40	20	18.8	100	99.7	cal
09.16.20	14:45	LZ	28.0	<0.10	0.02	20	19.1	100	97.9	check
09.17.20	07:30	LZ	17.0	<0.10	0.02	20	22.6	100	103	cal
09.17.20	1645	LZ	23.0	<0.10	~~0.07~~ 0.02	20	14.4	100	109	check
09.18.20	0800	LZ	15.0	<0.10	0.02	20	21.1	100	102	cal
09.18.20	1430	LZ	18.0	<0.10	0.02	20	14.1	100	100	check
09.21.20	8:30	LZ	12.0	<0.10	0.21	20	21.3	100	101	cal
09.21.20	16:40	LZ	17.0	<0.10	0.34	20	20.8	100	98.3	check
Acceptance Criteria				± 0.10 NTU		± 0.50 NTU		± 5.0 NTU		
09.22.20	08:00	LZ	9.0	<0.10	0.02	20	22.5	100	102	cal
09.22.20	16:00	LZ	15.0	<0.10	0.02	20	27.5 LZ	100	94.1	check ✓

- Record information for one instrument per sheet
- One sheet can be used on multiple days on the same site
- Use pen only; cross out errors with a single line

→

09.23.2020	LZ 07:30 10°C	<0.10 : 0.11	20 : 20.0	100 : 100	cal
09.23.2020	LZ 25 °C 16:00	<0.10 : 0.30	20 : 15.7	100 : 94.1	check
09.24.2020	LZ 07:30 14.1 °C	<0.10 : 0.02	20 : 15.7*	100 : 101	cal
09.24.2020	LZ 15:30 28°C	<0.10 : 0.02	20 : 24.9	100 : 95.6	check

Turbidity Meter Calibration Log

AECOM

Site Name	Wilmington MA	Manufacturer	Geotech
Field Activity	GW Sampling	Model Number:	Turbidimeter
Fieldwork Dates	9/24/2020	Serial Number	19011937

Instrument Number: 19011937

Date	Time	Initials	Temp (°C)	Standard #1		Standard #2		Standard #3		Comments
				Value (NTU)	Reading (NTU)	Value (NTU)	Reading (NTU)	Value (NTU)	Reading (NTU)	
9/24/20	0745	SH	19.0	20.0	20.9	100	102	800	793	Calibrate
9/24/20	15:30	LZ	30°C	20.0	18.5	100	96.7	800	768	post-cal
Acceptance Criteria				± 0.10 NTU		± 0.50 NTU		± 5.0 NTU		

- Record information for one instrument per sheet
- One sheet can be used on multiple days on the same site
- Use pen only; cross out errors with a single line

Turbidity Meter Calibration Log

AECOM

Site Name: Wilmington
Field Activity: GW Sampling
Fieldwork Dates: 9/9/2020 - 9/23/20
Manufacturer: Geotech
Model Number: geotech Turbidimeter
Serial Number: 19011937

Instrument Number: 19011937

Date	Time	Initials	Temp (°C)	Standard #1 Value (NTU)	Standard #1 Reading (NTU)	Standard #2 Value (NTU)	Standard #2 Reading (NTU)	Standard #3 Value (NTU)	Standard #3 Reading (NTU)	Comments
9/9/2020	0800	SH	25°C	20.0	21.1	100	99.8	800	800	Calibration
9/9/2020	1550	SH	25°C	20.0	19.3	100	98.1	800	797	Check
9/10/2020	0830	SH	25°C	20.0	19.9	100	98.4	801	801	Calibration
9/10/2020	16:10	SH	30°C	20.0	19.8	100	96.2	800	804	Check
09/11/2020	0800	SH	20°C	20.0	20.2	100	102	800	801	Calibration
9/11/2020	1145	SH	18°C	20.0	20.6	100	101	800	806	check
9/14/2020	0800	SH	20°C	20.0	20.9	100	101	800	803	Calibration
9/14/2020	1930	SH	19°C	20.0	20.0	100	100	800	795	Check
9/15/2020	0800	SH	15°C	20.0	19.6	100	99.5	800	803	Calibration
9/15/2020	1725	SH	16.9°C	20.0	19.1	100	99.0	800	804	Check
9/16/2020	0850	SH	15.2°	20.0	19.6	100	101	800	803	Calibration
09/16/20	16:30	LZ	22.0°	20.0	19.6	100	100	800	792	check
9/17/20	0750	SH	18.0°	20.0	20.0	100	100	800	800	Calibration
9/17/20	1540	SH	19.7°	20.0	17.8	100	99.9	800	780	Check
9/18/20	0750	SH	17.1°	20.0	19.3	100	100	800	803	Calibration
9/18/20	1405	SH	22.3°	20.0	17.2	100	97.9	800	798	Check
9/23/20	0800	SH	18.6°	20.0	20.3	100	100	800	801	Calibration
9/23/20	1620	SH	30.1°	20.0	19.9	100	98.1	800	799	Check
Acceptance Criteria				± 0.10 NTU		± 0.50 NTU		± 5.0 NTU		

- Record information for one instrument per sheet
- One sheet can be used on multiple days on the same site
- Use pen only; cross out errors with a single line

Water Quality Calibration Log

AECOM

Site Name / TO# / Job#: LMC Wilmington
Field Activity: GW Sampling
Fieldwork Dates: 09.24.2020
Date & Result of Last Temp. Check
Air temperature: 08:00
Solution Temperature:
Inst. Barometric Press.(mmHg):
Pressure Corrected / Source:

AM	15.0°C	14:35 PM	28	°C
AM	16.0°C	PM	30	°C
AM	759.1	PM	758.7	
AM	/	PM	/	

Manufacture/Model: YSI Pro-plus
Serial Number: 10E100125U
CALIBRATION DATE: 09.24.2020
Calibration — Initials: LZ; Time: 08:00
Calibration Check — Initials: LZ; Time: 14:35

INSTRUMENT NUMBER

10E100125U

CALIBRATION INFORMATION (*circle results outside of criteria*)

		STANDARD #1					STANDARD #2					STANDARD #3					CHECK				
Parameter	Units	Standard Value @25 °C	Solution or Air Temp °C	Standard Temp/Pres Correction	Initial Reading	Calibrated Reading	Standard Value @25 °C	Solution or Air Temp °C	Standard Temp/Pres Correction	Initial Reading	Calibrated Reading	Standard Value @25 °C	Solution or Air Temp °C	Standard Temp/Pres Correction	Initial Reading	Calibrated Reading	Standard Value @25 °C	Solution or Air Temp °C	Standard Temp/Pres Correction	Reading	Status of Check
DO	mg/L	NA	15.1	100%	92.2	92.8	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0 mg/L	16.0	NA	0.09	Cal or CK (circle)
pH	S.U.	7.00	7.93	7.04	7.92	7.00	4.00	16.5	4.00	4.84	3.94	10.00	16.7	10.0	9.04	10.09	NA	NA	NA	NA	NA
ORP*	mV	238.0	14.5	238.0	228.1	243.6	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sp. EC	µs/cm	1000	16.9	NA	999	999	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0 µs/cm	15.0	NA	12.2	Cal or CK (circle)

END OF DAY CALIBRATION CHECK (*circle results outside of criteria*)

Parameter	Units	Standard value @ 25c	Solution/Air Temperature	Standard Correction	Reading	Difference	
DO	mg/L	NA	22.5	7.12	6.99	0.13	
DO	mg/L	0	29.0	NA	12.9	12.9	
pH	S.U.	7.0	29.0	7.00	6.60	0.40	
ORP	mV	238.8	25.0	238.0	88.2	149.8	*
Sp. EC	µs/cm	1000	29.8	NA	992	8.0	
Sp. EC	µs/cm	0	28.5	NA	0.06	0.06	

CALIBRATION REQUIREMENTS

Parameter	Units	Standard	Reqmnt.	Action
DO	mg/L	O_2 Solubility	± 0.2	Change DO membrane
DO	mg/L	0.0	≤ 0.50 but ≥ 0	Change DO membrane
pH	S.U.	7/4/10 Temp. Adj.	± 0.05	Recalibrate
ORP	mV	Specified standard	± 10.0	Calibrate*
sp. Cond.	us/cm	Specified standard	± 5%	Recalibrate

* – ORP is checked ("RUN" mode) instead of calibrated. Only calibrated ("CALIBRATE" mode) when check fails criteria

END OF DAY CHECK REQUIREMENTS

Parameter	Units	Standard	Reqmnt.
DO	mg/L	100 % Saturation	± 0.5 mg/L
DO	mg/L	0.0	≤ 0.50 mg/L but ≥ 0
pH	S.U.	7.0 Temp. Adj.	± 0.3
ORP	mV	Specified standard	± 10.0
sp. Cond.	us/cm	Specified standard	± 5%

Record information for one instrument per sheet
Pen only; line-out errors, initial and date

Water Quality Calibration Log

AECOM

Site Name / TO# / Job#	Lockheed Martin Corporation/ 60552044		
Field Activity	Groundwater Sampling	**Manufacture/Model:**	YSI Pro Quatro
Fieldwork Dates	9/8/2020-9/25/2020	**Serial Number:**	18D102399
Date & Result of Last Temp. Check	9/29/2020	**CALIBRATION DATE:**	9/29/2020
Air temperature:	AM 18.0° PM 30.1°	**Calibration**	**Initials:** SH
Solution Temperature:	AM 16.0° PM 31.6°		**Time:** 0745
Inst. Barometric Press.(mmHg):	AM 757.8 PM 757.6	**Calibration Check**	**Initials:** SH
Pressure Corrected / Source:	AM 0745 / Accuweather PM / Accuweather		**Time:** 1420

INSTRUMENT NUMBER

18D102399

CALIBRATION INFORMATION (*circle results outside of criteria*)

		STANDARD #1					STANDARD #2					STANDARD #3					CHECK				
Parameter	**Units**	**Standard Value @25 °C**	**Solution or Air Temp °C**	**Standard Temp/Pres Correction**	**Initial Reading**	**Calibrated Reading**	**Standard Value @25 °C**	**Solution or Air Temp °C**	**Standard Temp/Pres Correction**	**Initial Reading**	**Calibrated Reading**	**Standard Value @25 °C**	**Solution or Air Temp °C**	**Standard Temp/Pres Correction**	**Initial Reading**	**Calibrated Reading**	**Standard Value @25 °C**	**Solution or Air Temp °C**	**Standard Temp/Pres Correction**	**Reading**	**Status of Check**
DO	mg/L	NA	18.0°	9.13	10.66	9.27	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0 mg/L	16.2°	NA	0.41	Cal or Ck (circle)
pH	S.U.	7.00	16.3°	7.04	7.04	7.04	4.00	18.8°	4.00	3.88	4.06	10.00	16.4°	10.11	10.14	10.11	NA	NA	NA	NA	NA
ORP*	mV	238.0	16.1°	242.7	194.5	242.7	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	~~223.6~~				Cal or Ck (circle)
Sp. EC	µs/cm	1000	16.2°	NA	1674	1000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0 µs/cm	16.5°	NA	19	Cal or Ck (circle)

END OF DAY CALIBRATION CHECK (*circle results outside of criteria*)

Parameter	Units	Standard value @ 25c	Solution/Air Temperature	Standard Correction	Reading	Difference
DO	mg/L	NA	30.1°	7.55	7.68	0.13
DO	mg/L	0	30.2°	NA	0.41	0.41
pH	S.U.	7.0	30.8	6.99	7.10	0.11
ORP	mV	238.0	30.1	229.0	219.4	4.6
ORP	mV	~~223.6~~				
Sp. EC	µs/cm	1000	31.0°	NA	1048	48
Sp. EC	µs/cm	0	31.0°	NA	16	16

CALIBRATION REQUIREMENTS

Parameter	Units	Standard	Reqmnt.	Action
DO	mg/L	O_2 Solubility	± 0.2	Change DO membrane
DO	mg/L	0.0	≤ 0.50 but ≥ 0	Change DO membrane
pH	S.U.	7/4/10 Temp. Adj.	± 0.05	Recalibrate
ORP	mV	Specified standard	± 10.0	Calibrate*
ORP	mV	Zobell	± 10.0	Calibrate*
sp. Cond.	us/cm	Specified standard	± 5%	Recalibrate

* – ORP is checked ("RUN" mode) instead of calibrated. Only calibrated ("CALIBRATE" mode) when check fails criteria

END OF DAY CHECK REQUIREMENTS

Parameter	Units	Standard	Reqmnt.
DO	mg/L	100 % Saturation	± 0.5 mg/L
DO	mg/L	0.0	≤ 0.50 mg/L but ≥ 0
pH	S.U.	7.0 Temp. Adj.	± 0.3
ORP	mV	Specified standard	± 10.0
ORP	mV	Zobell	± 10.0
sp. Cond.	us/cm	Specified standard	± 5%

Record information for one instrument per sheet
Pen only; line-out errors, initial and date

Turbidity:

Water Quality Calibration Log

AECOM

Site Name / TO# / Job#	Lockheed Martin Corporation/ 60552044
Field Activity	Groundwater Sampling
Fieldwork Dates	9/8/2020-9/25/2020
Date & Result of Last Temp. Check	9/23/2020
Air temperature:	AM 18° PM 26.8
Solution Temperature:	AM 13.8 PM 27.5
Inst. Barometric Press.(mmHg):	AM 753.1 PM 752.1
Pressure Corrected / Source:	AM 930 / PM 1620

Manufacture/Model:	YSI pro Quatro
Serial Number:	18D102399
CALIBRATION DATE:	9/23/2020
Calibration	Initials: SH
	Time: 0800
Calibration Check	Initials: SH
	Time: 1620

INSTRUMENT NUMBER

18D102399

CALIBRATION INFORMATION (*circle results outside of criteria*)

		STANDARD #1					STANDARD #2					STANDARD #3					CHECK				
Parameter	Units	Standard Value @25 °C	Solution or Air Temp °C	Standard Temp/Pres Correction	Initial Reading	Calibrated Reading	Standard Value @25 °C	Solution or Air Temp °C	Standard Temp/Pres Correction	Initial Reading	Calibrated Reading	Standard Value @25 °C	Solution or Air Temp °C	Standard Temp/Pres Correction	Initial Reading	Calibrated Reading	Standard Value @25 °C	Solution or Air Temp °C	Standard Temp/Pres Correction	Reading	Status of Check
DO	mg/L	NA	18.2°	9.37	8.78	9.29	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0 mg/L	16.0°	NA	0.49	Cal or Ck (circle)
pH	S.U.	7.00	14.9°	7.04	7.80	7.04	4.00	15.0°	3.99	3.99	3.99	10.00	15.0°	10.12	9.97	10.12	NA	NA	NA	NA	NA
ORP*	mV	238.0	15.3	244.0	301.0	246.1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	~~223.0~~				Cal or Ck (circle)
Sp. EC	µs/cm	1000	15.7°	NA	914	1004	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0 µs/cm	15.3°	NA	23.5	Cal or Ck (circle)

END OF DAY CALIBRATION CHECK (*circle results outside of criteria*)

Parameter	Units	Standard value @ 25c	Solution/Air Temperature	Standard Correction	Reading	Difference
DO	mg/L	NA	27.6°	7.50	7.24	0.26
DO	mg/L	0	30.1	NA	0.21	0.21
pH	S.U.	7.0	30.8	6.99	6.94	0.05
ORP	mV	238.0	~~Solution~~ 30.1	229.5	192.8	36.7
ORP	mV	~~223.0~~	~~Solution~~			
Sp. EC	µs/cm	1000	31.0°	NA	1010	10
Sp. EC	µs/cm	0	30.0°	NA	12	12

CALIBRATION REQUIREMENTS

Parameter	Units	Standard	Reqmnt.	Action
DO	mg/L	O_2 Solubility	± 0.2	Change DO membrane
DO	mg/L	0.0	≤ 0.50 but ≥ 0	Change DO membrane
pH	S.U.	7/4/10 Temp. Adj.	± 0.05	Recalibrate
ORP	mV	Specified standard	± 10.0	Calibrate*
ORP	mV	Zobell	± 10.0	Calibrate*
sp. Cond.	us/cm	Specified standard	± 5%	Recalibrate

* – ORP is checked ("RUN" mode) instead of calibrated. Only calibrated ("CALIBRATE" mode) when check fails criteria

END OF DAY CHECK REQUIREMENTS

Parameter	Units	Standard	Reqmnt.
DO	mg/L	100 % Saturation	± 0.5 mg/L
DO	mg/L	0.0	≤ 0.50 mg/L but ≥ 0
pH	S.U.	7.0 Temp. Adj.	± 0.3
ORP	mV	Specified standard	± 10.0
ORP	mV	Zobell	± 10.0
sp. Cond.	us/cm	Specified standard	± 5%

Record information for one instrument per sheet
Pen only; line-out errors, initial and date

Turbidity:

Water Quality Calibration Log

AECOM

Site Name / TO# / Job#	Lockheed Martin Corporation/ 60552044			**Manufacture/Model:**	Pro plus		
Field Activity	Groundwater Sampling			**Serial Number:**	Ysi = 10E1001254		
Fieldwork Dates	9/8/2020-9/25/2020			**CALIBRATION DATE:**	09.17.2020		
Date & Result of Last Temp. Check				**Calibration**	**Initials:** LZ		
Air temperature: 07:30	AM	17.0°C	17:00 PM 18.0		**Time:** 07:30		
Solution Temperature:	AM	17.7°C	PM 18.0				
Inst. Barometric Press.(mmHg):	AM	761.6	PM 759.6	**Calibration Check**	**Initials:** LZ		
Pressure Corrected / Source:	AM	/	PM /		**Time:** 16:45		

INSTRUMENT NUMBER

10E1001254

CALIBRATION INFORMATION (*circle results outside of criteria*)

		STANDARD #1					STANDARD #2					STANDARD #3					CHECK				
Parameter	**Units**	**Standard Value @25 °C**	**Solution or Air Temp °C**	**Standard Temp/Pres Correction**	**Initial Reading**	**Calibrated Reading**	**Standard Value @25 °C**	**Solution or Air Temp °C**	**Standard Temp/Pres Correction**	**Initial Reading**	**Calibrated Reading**	**Standard Value @25 °C**	**Solution or Air Temp °C**	**Standard Temp/Pres Correction**	**Initial Reading**	**Calibrated Reading**	**Standard Value @25 °C**	**Solution or Air Temp °C**	**Standard Temp/Pres Correction**	**Reading**	**Status of Check**
DO	mg/L	NA	17.0	9.60	9.59	9.58	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0 mg/L	18.0	NA	0.04	Cal or Ck (circle)
pH	S.U.	7.00	18.2	7.03	8.35	6.99	4.00	17.5	4.00	4.57	3.99	10.00	18.0	10.09	8.65	10.06	NA	NA	NA	NA	NA
ORP*	mV	238.0	18.1	241.1	238.4	240.1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	~~223.0~~				~~Cal or Ck (circle)~~
Sp. EC	µs/cm	1000	18.0	NA	1005	1005	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0 µs/cm	18.1	NA	8.55	Cal or Ck (circle)

END OF DAY CALIBRATION CHECK (*circle results outside of criteria*)

Parameter	Units	Standard value @ 25c	Solution/Air Temperature	Standard Correction	Reading	Difference
DO	mg/L	NA	23.1	8.76	8.75	0.01
DO	mg/L	0	21.0	NA	10.0	10.0
pH	S.U.	7.0	23.8	7.01	7.03	0.02
ORP	mV	238.0	24.9	232.3	214.1	18.2
~~ORP~~	~~mV~~	~~223.0~~				
Sp. EC	µs/cm	1000	23.8	NA	990	10
Sp. EC	µs/cm	0	18.0	NA	9.0	9.0

CALIBRATION REQUIREMENTS

Parameter	Units	Standard	Reqmnt.	Action
DO	mg/L	O_2 Solubility	± 0.2	Change DO membrane
DO	mg/L	0.0	≤ 0.50 but ≥ 0	Change DO membrane
pH	S.U.	7/4/10 Temp. Adj.	± 0.05	Recalibrate
ORP	mV	Specified standard	± 10.0	Calibrate*
ORP	mV	Zobell	± 10.0	Calibrate*
sp. Cond.	us/cm	Specified standard	± 5%	Recalibrate

* – ORP is checked ("RUN" mode) instead of calibrated. Only calibrated ("CALIBRATE" mode) when check fails criteria

END OF DAY CHECK REQUIREMENTS

Parameter	Units	Standard	Reqmnt.
DO	mg/L	100 % Saturation	± 0.5 mg/L
DO	mg/L	0.0	≤ 0.50 mg/L but ≥ 0
pH	S.U.	7.0 Temp. Adj.	± 0.3
ORP	mV	Specified standard	± 10.0
ORP	mV	Zobell	± 10.0
sp. Cond.	us/cm	Specified standard	± 5%

Record information for one instrument per sheet
Pen only; line-out errors, initial and date

Turbidity:

Water Quality Calibration Log

AECOM

Site Name / TO# / Job#	Lockheed Martin Corporation/ 60552044		
Field Activity	Groundwater Sampling	Manufacture/Model:	YSI pro-plus
Fieldwork Dates	9/8/2020-9/25/2020	Serial Number:	10E100125U
Date & Result of Last Temp. Check		CALIBRATION DATE:	09.21.2020
Air temperature: 08:00	AM 12.2 °C 16:20	PM 19.5°C	Calibration Initials: LZ
Solution Temperature:	AM 12.0°C	PM 17.0°C	Time: 08:00
Inst. Barometric Press.(mmHg):	AM 776.4	PM 773.5	Calibration Check Initials: LZ
Pressure Corrected / Source:	AM /	PM /	Time: 16:20

INSTRUMENT NUMBER

10E100125U

CALIBRATION INFORMATION (*circle results outside of criteria*)

		STANDARD #1					STANDARD #2					STANDARD #3					CHECK				
Parameter	Units	Standard Value @25 °C	Solution or Air Temp °C	Standard Temp/Pres Correction	Initial Reading	Calibrated Reading	Standard Value @25 °C	Solution or Air Temp °C	Standard Temp/Pres Correction	Initial Reading	Calibrated Reading	Standard Value @25 °C	Solution or Air Temp °C	Standard Temp/Pres Correction	Initial Reading	Calibrated Reading	Standard Value @25 °C	Solution or Air Temp °C	Standard Temp/Pres Correction	Reading	Status of Check
DO	~~mg/L~~ 100%	NA	11.8	100.8 ~~11.8~~	104.5	100.6	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0 mg/L	10.2	NA	0.26	Cal or Ck (circle)
pH	S.U.	7.00	13.0	7.05	7.54	7.10	4.00	12.4	4.06	4.14	4.05	10.00	13.1	10.15	8.89	10.18	NA	NA	NA	NA	NA
ORP*	mV	238.0	13.0	255.1	203.8	255.4	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	~~238.0~~	10.5	257.7	258.0	Cal or Ck (circle)
Sp. EC	µs/cm	1000	12.3	NA	1156	995	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0 µs/cm	9.5	NA	4.2	Cal or Ck (circle)

END OF DAY CALIBRATION CHECK (*circle results outside of criteria*)

Parameter	Units	Standard value @ 25c	Solution/Air Temperature	Standard Correction	Reading	Difference	
DO	mg/L	NA	17.5	9.27	8.80	0.47	
DO	mg/L	0	19.2	NA	0.09	0.09	
pH	S.U.	7.0	17.5	7.02	7.66	0.64	
ORP	mV	238.0	19.0	238.0	49.9	188.1	*
ORP	mV	223.0					
Sp. EC	µs/cm	1000	20.1	NA	822	178	*
Sp. EC	µs/cm	0	20.5	NA	3.8	3.8	

CALIBRATION REQUIREMENTS

Parameter	Units	Standard	Reqmnt.	Action
DO	mg/L	O_2 Solubility	± 0.2	Change DO membrane
DO	mg/L	0.0	≤ 0.50 but ≥ 0	Change DO membrane
pH	S.U.	7/4/10 Temp. Adj.	± 0.05	Recalibrate
ORP	mV	Specified standard	± 10.0	Calibrate*
ORP	mV	Zobell	± 10.0	Calibrate*
sp. Cond.	us/cm	Specified standard	± 5%	Recalibrate

* – ORP is checked ("RUN" mode) instead of calibrated. Only calibrated ("CALIBRATE" mode) when check fails criteria

END OF DAY CHECK REQUIREMENTS

Parameter	Units	Standard	Reqmnt.
DO	mg/L	100 % Saturation	± 0.5 mg/L
DO	mg/L	0.0	≤ 0.50 mg/L but ≥ 0
pH	S.U.	7.0 Temp. Adj.	± 0.3
ORP	mV	Specified standard	± 10.0
ORP	mV	Zobell	± 10.0
sp. Cond.	us/cm	Specified standard	± 5%

Record information for one instrument per sheet
Pen only; line-out errors, initial and date

Turbidity:

Water Quality Calibration Log

AECOM

Site Name / TO# / Job#	LMC Wilmington		
Field Activity	GW Sampling	Manufacture/Model:	Pro-Plu
Fieldwork Dates	09.23.2020	Serial Number:	YSI 10E100125U
Date & Result of Last Temp. Check		CALIBRATION DATE:	09.23.2020
Air temperature: 08:00	AM 15°C	PM 27.0°C	Calibration Initials: BB
Solution Temperature:	AM 16°C	PM 30.0°C	Time: 08:00
Inst. Barometric Press.(mmHg):	AM 754.6	PM 753.4	Calibration Check Initials: LZ
Pressure Corrected / Source:	AM /	PM /	Time: 15:55

INSTRUMENT NUMBER

10E100125U

CALIBRATION INFORMATION (*circle results outside of criteria*)

		STANDARD #1					STANDARD #2					STANDARD #3					CHECK				
Parameter	Units	Standard Value @25 °C	Solution or Air Temp °C	Standard Temp/Pres Correction	Initial Reading	Calibrated Reading	Standard Value @25 °C	Solution or Air Temp °C	Standard Temp/Pres Correction	Initial Reading	Calibrated Reading	Standard Value @25 °C	Solution or Air Temp °C	Standard Temp/Pres Correction	Initial Reading	Calibrated Reading	Standard Value @25 °C	Solution or Air Temp °C	Standard Temp/Pres Correction	Reading	Status of Check
DO	mg/L	NA	13.4	10.53	10.43	10.27	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0 mg/L	14.5	NA	0.08	Cal or Ck (circle)
pH	S.U.	7.00	14.0	7.00	8.53	6.97	4.00	15.3	4.00	4.19	3.91	10.00	14.8	10.00	10.13	10.03	NA	NA	NA	NA	NA
ORP*	mV	238	11.6	238.0	244.3	238.3	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sp. EC	µs/cm	1000	14.9	NA	1067	999	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0 µs/cm	14.7	NA	6.8	Cal or Ck (circle)

END OF DAY CALIBRATION CHECK (*circle results outside of criteria*)

Parameter	Units	Standard value @ 25c	Solution/Air Temperature	Standard Correction	Reading	Difference	
DO	mg/L	NA	28.0	6.57	6.50	0.07	
DO	mg/L	0	29.5	NA	0.06	0.06	
pH	S.U.	7.0	30.0	7.00	7.17	0.17	
ORP	mV	238.0	30	238.0	205.5	34.5	*
Sp. EC	µs/cm	1000	30	NA	1033	33.0	
Sp. EC	µs/cm	0	30.5	NA	10.3	10.3	

CALIBRATION REQUIREMENTS

Parameter	Units	Standard	Reqmnt.	Action
DO	mg/L	O_2 Solubility	± 0.2	Change DO membrane
DO	mg/L	0.0	≤ 0.50 but ≥ 0	Change DO membrane
pH	S.U.	7/4/10 Temp. Adj	± 0.05	Recalibrate
ORP	mV	Specified standard	± 10.0	Calibrate*
sp. Cond.	us/cm	Specified standard	± 5%	Recalibrate

* – ORP is checked ("RUN" mode) instead of calibrated. Only calibrated ("CALIBRATE" mode) when check fails criteria

END OF DAY CHECK REQUIREMENTS

Parameter	Units	Standard	Reqmnt.
DO	mg/L	100 % Saturation	± 0.5 mg/L
DO	mg/L	0.0	≤ 0.50 mg/L but ≥ 0
pH	S.U.	7.0 Temp. Adj	± 0.3
ORP	mV	Specified standard	± 10.0
sp. Cond.	us/cm	Specified standard	± 5%

Record information for one instrument per sheet
Pen only; line-out errors, initial and date

Water Quality Calibration Log

AECOM

Site Name / TO# / Job#	Lockheed Martin Corporation/ 60552044
Field Activity	Groundwater Sampling
Fieldwork Dates	9/8/2020-9/25/2020
Date & Result of Last Temp. Check	
Air temperature: 07:30	AM 8.5°C / 15:45 PM 20.0°C
Solution Temperature: ↓	AM 10.5°C / PM 15.0 °C
Inst. Barometric Press.(mmHg): ↓	AM 765.0 / PM 756.0
Pressure Corrected / Source:	AM YSI / PM YSI

Manufacture/Model:	YSI Pro PLUS
Serial Number:	10E100125U
CALIBRATION DATE:	09.22.2020
Calibration Initials:	LZ
Calibration Time:	07:30
Calibration Check Initials:	LZ
Calibration Check Time:	15:45

INSTRUMENT NUMBER

10E100125U

CALIBRATION INFORMATION (*circle results outside of criteria*)

		STANDARD #1					STANDARD #2					STANDARD #3					CHECK				
Parameter	Units	Standard Value @25 °C	Solution or Air Temp °C	Standard Temp/Pres Correction	Initial Reading	Calibrated Reading	Standard Value @25 °C	Solution or Air Temp °C	Standard Temp/Pres Correction	Initial Reading	Calibrated Reading	Standard Value @25 °C	Solution or Air Temp °C	Standard Temp/Pres Correction	Initial Reading	Calibrated Reading	Standard Value @25 °C	Solution or Air Temp °C	Standard Temp/Pres Correction	Reading	Status of Check
DO	mg/L	NA	9.5	10.2	11.47	11.43	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0 mg/L	10.2	NA	0.05	Cal or (Ck) (circle)
pH	S.U.	7.00	10.6	7.07	7.29 / 233.1	7.00	4.00	11.3	4.10	4.93	3.99	10.00	11.3	10.17	9.08	10.21	NA	NA	NA	NA	NA
ORP*	mV	238.0	7.7	255.1	~~232.0~~	256.2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	~~238.0~~ / ~~223.0~~	6.4	238.0	233.6	Cal or (Ck) (circle)
Sp. EC	µs/°cm	1000	11.4	NA	861	1001	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0 µs/°cm	9.9	NA	5.5	Cal or (Ck) (circle)

END OF DAY CALIBRATION CHECK (*circle results outside of criteria*)

Parameter	Units	Standard value @ 25c	Solution/Air Temperature	Standard Correction	Reading	Difference	
DO	mg/L	NA	15.4	9.0	9.57	0.57	
DO	mg/L	0	19.4	NA	0.09	0.09	
pH	S.U.	7.0	19.5	7.02	7.78	0.76	
ORP	mV	238.0	11.5	249.4	93.5	155.9	*
~~ORP~~	~~mV~~	~~223.0~~					
Sp. EC	µs/°cm	1000	17.1	NA	1004	4.0	
Sp. EC	µs/°cm	0	20.4	NA	4.9	4.9	

CALIBRATION REQUIREMENTS

Parameter	Units	Standard	Reqmnt.	Action
DO	mg/L	O_2 Solubility	± 0.2	Change DO membrane
DO	mg/L	0.0	≤ 0.50 but ≥ 0	Change DO membrane
pH	S.U.	7/4/10 Temp. Adj.	± 0.05	Recalibrate
ORP	mV	Specified standard	± 10.0	Calibrate*
ORP	mV	Zobell	± 10.0	Calibrate*
sp. Cond.	us/°cm	Specified standard	± 5%	Recalibrate

*– ORP is checked ("RUN" mode) instead of calibrated. Only calibrated ("CALIBRATE" mode) when check fails criteria

END OF DAY CHECK REQUIREMENTS

Parameter	Units	Standard	Reqmnt.
DO	mg/L	100 % Saturation	± 0.5 mg/L
DO	mg/L	0.0	≤ 0.50 mg/L but ≥ 0
pH	S.U.	7.0 Temp. Adj.	± 0.3
ORP	mV	Specified standard	± 10.0
ORP	mV	Zobell	± 10.0
sp. Cond.	us/°cm	Specified standard	± 5%

Record information for one instrument per sheet
Pen only; line-out errors, initial and date

Turbidity:

Water Quality Calibration Log

AECOM

Site Name / TO# / Job#	LMC Wilmington		
Field Activity	GW sampling	Manufacture/Model:	YSI-pro+
Fieldwork Dates	09.18-2020	Serial Number:	10E100125H
Date & Result of Last Temp. Check		CALIBRATION DATE:	
Air temperature: 07:45	AM 15°C PM	Calibration	Initials: LZ
Solution Temperature:	AM 15°C PM		Time: 07:45
Inst. Barometric Press.(mmHg):	AM 761.4 PM	Calibration Check	Initials: LZ
Pressure Corrected / Source:	AM / PM /		Time: 14:30

INSTRUMENT NUMBER

10E100125H

CALIBRATION INFORMATION (*circle results outside of criteria*)

		STANDARD #1					STANDARD #2					STANDARD #3					CHECK				
Parameter	Units	Standard Value @25 °C	Solution or Air Temp °C	Standard Temp/Pres Correction	Initial Reading	Calibrated Reading	Standard Value @25 °C	Solution or Air Temp °C	Standard Temp/Pres Correction	Initial Reading	Calibrated Reading	Standard Value @25 °C	Solution or Air Temp °C	Standard Temp/Pres Correction	Initial Reading	Calibrated Reading	Standard Value @25 °C	Solution or Air Temp °C	Standard Temp/Pres Correction	Reading	Status of Check
DO	mg/L	NA	15.4	12.19	11.95	12.20	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0 mg/L	15.0	NA	0.26	Cal or CK (circle)
pH	S.U.	7.00	15.0	7.03	7.73	7.02	4.00	15.2	4.00	4.09	4.02	10.00	15.5	10.01	10.40	10.00	NA	NA	NA	NA	NA
SPEC ~~ORP~~	mV	1000	15.0	1000	978	1005	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ORP ~~Sp. EC~~	µs/cm	~~1000~~ 238	15.5	242.8	245.8	246.3	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0 µs/cm	15.0	NA	5.9	Cal or CK (circle)

END OF DAY CALIBRATION CHECK (*circle results outside of criteria*)

Parameter	Units	Standard value @ 25c	Solution/Air Temperature	Standard Correction	Reading	Difference	
DO	mg/L	NA	26.2	7.54	7.64	0.10	
DO	mg/L	0	26.1	NA	4.7	4.7	
pH	S.U.	7.0	18.3	7.03	6.38	0.65	
ORP	mV	238.0	20.0	238.9	144.5	94.4	*
Sp. EC	µs/cm	1000	20.0	NA	982	18	
Sp. EC	µs/cm	0	20.0	NA	8.9	8.9	

CALIBRATION REQUIREMENTS

Parameter	Units	Standard	Reqmnt.	Action
DO	mg/L	O_2 Solubility	± 0.2	Change DO membrane
DO	mg/L	0.0	≤ 0.50 but ≥ 0	Change DO membrane
pH	S.U.	7/4/10 Temp. Adj.	± 0.05	Recalibrate
ORP	mV	Specified standard	± 10.0	Calibrate*
sp. Cond.	us/cm	Specified standard	± 5%	Recalibrate

* – ORP is checked ("RUN" mode) instead of calibrated. Only calibrated ("CALIBRATE" mode) when check fails criteria

END OF DAY CHECK REQUIREMENTS

Parameter	Units	Standard	Reqmnt.
DO	mg/L	100 % Saturation	± 0.5 mg/L
DO	mg/L	0.0	≤ 0.50 mg/L but ≥ 0
pH	S.U.	7.0 Temp. Adj.	± 0.3
ORP	mV	Specified standard	± 10.0
sp. Cond.	us/cm	Specified standard	± 5%

Record information for one instrument per sheet
Pen only; line-out errors, initial and date

Water Quality Calibration Log

AECOM

Site Name / TO# / Job#	Lockheed Martin Corporation/ 60552044		
Field Activity	Groundwater Sampling	**Manufacture/Model:**	YSI Pro Quatro
Fieldwork Dates	9/8/2020-9/25/2020	**Serial Number:**	18D102399
Date & Result of Last Temp. Check	9/18/2020	**CALIBRATION DATE:**	9/18/2020
Air temperature:	AM 17.2° PM	**Calibration**	**Initials:** SH
Solution Temperature:	AM 19.4° PM		**Time:** 0750
Inst. Barometric Press.(mmHg):	AM 760.3 PM 759.3	**Calibration Check**	**Initials:** SH
Pressure Corrected / Source:	AM 0750 / Accuweather PM 1410 / Accuweather		**Time:** 1410

INSTRUMENT NUMBER

18D102399

CALIBRATION INFORMATION (*circle results outside of criteria*)

		STANDARD #1					STANDARD #2					STANDARD #3					CHECK				
Parameter	**Units**	**Standard Value @25 °C**	**Solution or Air Temp °C**	**Standard Temp/Pres Correction**	**Initial Reading**	**Calibrated Reading**	**Standard Value @25 °C**	**Solution or Air Temp °C**	**Standard Temp/Pres Correction**	**Initial Reading**	**Calibrated Reading**	**Standard Value @25 °C**	**Solution or Air Temp °C**	**Standard Temp/Pres Correction**	**Initial Reading**	**Calibrated Reading**	**Standard Value @25 °C**	**Solution or Air Temp °C**	**Standard Temp/Pres Correction**	**Reading**	**Status of Check**
DO	mg/L	NA SH	~~17.2°~~ 19.1° 10.05	~~9.63~~	10.85	10.05	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0 mg/L	16.8	NA	0.13	Cal or Ck (circle)
pH	S.U.	7.00	17.4°	7.03	6.99	7.03	4.00	16.7°	~~7.00~~	4.02	4.00	10.00	17.1°	10.08	9.89	10.08	NA	NA	NA	NA	NA
ORP*	mV	238.0	17.1°	241.0	227.0	242.7	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	~~223.0~~				~~Cal or Ck (circle)~~
Sp. EC	µs/cm	1000	16.9°	NA	1059	~~1059~~ 1059 SH	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0 µs/cm	14.8	NA	16	Cal or Ck (circle)

END OF DAY CALIBRATION CHECK (*circle results outside of criteria*)

Parameter	Units	Standard value @ 25c	Solution/Air Temperature	Standard Correction	Reading	Difference
DO	mg/L	NA	24.7°	8.24	8.66	0.42
DO	mg/L	0	25.3°	NA	0.41	0.41
pH	S.U.	7.0	20.9°	7.02	6.54	0.48
ORP	mV	238.0	~~236~~ 136 SH	246.0	241.0	5.0
ORP	mV	~~223.0~~				
Sp. EC	µs/cm	1000	19.5°	NA	972	28
Sp. EC	µs/cm	0	25.0	NA	18	18

CALIBRATION REQUIREMENTS

Parameter	Units	Standard	Reqmnt.	Action
DO	mg/L	O_2 Solubility	± 0.2	Change DO membrane
DO	mg/L	0.0	≤ 0.50 but ≥ 0	Change DO membrane
pH	S.U.	7/4/10 Temp. Adj.	± 0.05	Recalibrate
ORP	mV	Specified standard	± 10.0	Calibrate*
ORP	mV	Zobell	± 10.0	Calibrate*
sp. Cond.	us/cm	Specified standard	± 5%	Recalibrate

* – ORP is checked ("RUN" mode) instead of calibrated. Only calibrated ("CALIBRATE" mode) when check fails criteria

END OF DAY CHECK REQUIREMENTS

Parameter	Units	Standard	Reqmnt.
DO	mg/L	100 % Saturation	± 0.5 mg/L
DO	mg/L	0.0	≤ 0.50 mg/L but ≥ 0
pH	S.U.	7.0 Temp Adj.	± 0.3
ORP	mV	Specified standard	± 10.0
ORP	mV	Zobell	± 10.0
sp. Cond.	us/cm	Specified standard	± 5%

Record information for one instrument per sheet
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Turbidity:

Water Quality Calibration Log

AECOM

Site Name / TO# / Job#	Lockheed Martin Corporation/ 60552044		
Field Activity	Groundwater Sampling	**Manufacture/Model:**	YSI Pro Plus
Fieldwork Dates	9/8/2020-9/25/2020	**Serial Number:**	19D101443
Date & Result of Last Temp. Check		**CALIBRATION DATE:**	9/17/20
Air temperature:	AM PM	**Calibration**	**Initials:** FWB
Solution Temperature:	AM PM		**Time:** 0750
Inst. Barometric Press.(mmHg):	AM PM	**Calibration Check**	**Initials:** FWB
Pressure Corrected / Source:	AM / PM /		**Time:** 1500

INSTRUMENT NUMBER

CALIBRATION INFORMATION (*circle results outside of criteria*)

		STANDARD #1					STANDARD #2					STANDARD #3					CHECK				
Parameter	**Units**	**Standard Value @25 °C**	**Solution or Air Temp °C**	**Standard Temp/Pres Correction**	**Initial Reading**	**Calibrated Reading**	**Standard Value @25 °C**	**Solution or Air Temp °C**	**Standard Temp/Pres Correction**	**Initial Reading**	**Calibrated Reading**	**Standard Value @25 °C**	**Solution or Air Temp °C**	**Standard Temp/Pres Correction**	**Initial Reading**	**Calibrated Reading**	**Standard Value @25 °C**	**Solution or Air Temp °C**	**Standard Temp/Pres Correction**	**Reading**	**Status of Check**
DO	mg/L	NA	18.4	9.3	9.07	9.31	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0 mg/L	18.0	NA	0.12	Cal or Ck (circle)
pH	S.U.	7.00	18.0	7.04	6.98	7.04	4.00	18.0	4.00	4.05	4.01	10.00	17.7	10.11	10.12	10.11	NA	NA	NA	NA	NA
ORP*	mV	238.0	18.3	235	240.1	238	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	~~223.0~~				Cal or Ck (circle)
Sp. EC	µs/°cm	1000	17.7	NA	999	1001	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0 µs/°cm	17.8	NA	2.4	Cal or Ck (circle)

END OF DAY CALIBRATION CHECK (*circle results outside of criteria*)

Parameter	Units	Standard value @ 25c	Solution/Air Temperature	Standard Correction	Reading	Difference
DO	mg/L	NA	19.0	9.4	9.37	0.06
DO	mg/L	0	18.5	NA	0.17	0.05
pH	S.U.	7.0	18.7	7.04	7.03	0.01
ORP	mV	238.0	18.7	238.0	239.4	1.4
ORP	mV	~~223.0~~	18.7			
Sp. EC	µs/°cm	1000	18.9	NA	1001	0
Sp. EC	µs/°cm	0	18.5	NA	0.9	1.5

CALIBRATION REQUIREMENTS

Parameter	Units	Standard	Reqmnt.	Action
DO	mg/L	O_2 Solubility	± 0.2	Change DO membrane
DO	mg/L	0.0	≤ 0.50 but ≥ 0	Change DO membrane
pH	S.U.	7/4/10 Temp. Adj.	± 0.05	Recalibrate
ORP	mV	Specified standard	± 10.0	Calibrate*
ORP	mV	Zobell	± 10.0	Calibrate*
sp. Cond.	us/°cm	Specified standard	± 5%	Recalibrate

* – ORP is checked ("RUN" mode) instead of calibrated. Only calibrated ("CALIBRATE" mode) when check fails criteria

END OF DAY CHECK REQUIREMENTS

Parameter	Units	Standard	Reqmnt.
DO	mg/L	100 % Saturation	± 0.5 mg/L
DO	mg/L	0.0	≤ 0.50 mg/L but ≥ 0
pH	S.U.	7.0 Temp. Adj.	± 0.3
ORP	mV	Specified standard	± 10.0
ORP	mV	Zobell	± 10.0
sp. Cond.	us/°cm	Specified standard	± 5%

Record information for one instrument per sheet
Pen only; line-out errors, initial and date

Turbidity:

Water Quality Calibration Log

AECOM

Site Name / TO# / Job#	Lockheed Martin Corporation/ 60552044		
Field Activity	Groundwater Sampling	Manufacture/Model:	YSI Pro Plus
Fieldwork Dates	9/8/2020-9/25/2020	Serial Number:	10D101443
Date & Result of Last Temp. Check		CALIBRATION DATE:	9/18/20
Air temperature:	AM PM	Calibration Initials:	ZmB
Solution Temperature:	AM PM	Time:	0845
Inst. Barometric Press.(mmHg):	AM PM	Calibration Check Initials:	ZmB
Pressure Corrected / Source:	AM / PM /	Time:	1200

INSTRUMENT NUMBER

CALIBRATION INFORMATION (*circle results outside of criteria*)

		STANDARD #1					STANDARD #2					STANDARD #3					CHECK				
Parameter	Units	Standard Value @25 °C	Solution or Air Temp °C	Standard Temp/Pres Correction	Initial Reading	Calibrated Reading	Standard Value @25 °C	Solution or Air Temp °C	Standard Temp/Pres Correction	Initial Reading	Calibrated Reading	Standard Value @25 °C	Solution or Air Temp °C	Standard Temp/Pres Correction	Initial Reading	Calibrated Reading	Standard Value @25 °C	Solution or Air Temp °C	Standard Temp/Pres Correction	Reading	Status of Check
DO	mg/L	NA	14.7	10.2	10.26	10.22	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0 mg/L	15.1	NA	0.14	Cal or Ck (circle)
pH	S.U.	7.00	15.1	7.04	7.03	7.04	4.00	15.0	4.00	4.01	4.00	10.00	15.00	10.11	10.09	10.11	NA	NA	NA	NA	NA
ORP*	mV	238.0	15.0	238	239.1	238.0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	~~223.0~~				Cal or Ck (circle)
Sp. EC	µs/cm	1000	15.1	NA	1002	1000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0 µs/cm	15.4	NA	3.9	Cal or Ck (circle)

END OF DAY CALIBRATION CHECK (*circle results outside of criteria*)

Parameter	Units	Standard value @ 25c	Solution/Air Temperature	Standard Correction	Reading	Difference
DO	mg/L	NA	15.4	10.1	10.20	0.02
DO	mg/L	0	15.6	NA	0.19	0.05
pH	S.U.	7.0	15.8	7.04	7.04	0
ORP	mV	238.0	15.4	238	238.8	0.8
~~ORP~~	mV	~~223.0~~				
Sp. EC	µs/cm	1000	15.7	NA	1004	4
Sp. EC	µs/cm	0	15.6	NA	3.7	0.2

CALIBRATION REQUIREMENTS

Parameter	Units	Standard	Reqmnt.	Action
DO	mg/L	O_2 Solubility	± 0.2	Change DO membrane
DO	mg/L	0.0	≤ 0.50 but ≥ 0	Change DO membrane
pH	S.U.	7/4/10 Temp. Adj	± 0.05	Recalibrate
ORP	mV	Specified standard	± 10.0	Calibrate*
ORP	mV	Zobell	± 10.0	Calibrate*
sp. Cond.	us/cm	Specified standard	± 5%	Recalibrate

* – ORP is checked ("RUN" mode) instead of calibrated. Only calibrated ("CALIBRATE" mode) when check fails criteria

END OF DAY CHECK REQUIREMENTS

Parameter	Units	Standard	Reqmnt.
DO	mg/L	100 % Saturation	± 0.5 mg/L
DO	mg/L	0.0	≤ 0.50 mg/L but ≥ 0
pH	S.U.	7.0 Temp. Adj.	± 0.3
ORP	mV	Specified standard	± 10.0
ORP	mV	Zobell	± 10.0
sp. Cond.	us/cm	Specified standard	± 5%

Record information for one instrument per sheet
Pen only; line-out errors, initial and date

Turbidity:

Water Quality Calibration Log

AECOM

Site Name / TO# / Job#	Lockheed Martin Corporation/ 60552044		
Field Activity	Groundwater Sampling	**Manufacture/Model:**	YSI pro Quatro
Fieldwork Dates	9/8/2020-9/25/2020	**Serial Number:**	
Date & Result of Last Temp. Check	9/17/2020 17.5 °C	**CALIBRATION DATE:**	18D102399
Air temperature:	AM 17.5°C PM 19.7°	**Calibration**	Initials: SH
Solution Temperature:	AM 17.8°C PM 20.1°		Time: 0750
Inst. Barometric Press.(mmHg):	AM 760.4 PM 758.2	**Calibration Check**	Initials: SH
Pressure Corrected / Source:	AM 0750/ Accuweather PM 1540/ Accuweather		Time: 1540

INSTRUMENT NUMBER

18D102399

CALIBRATION INFORMATION (*circle results outside of criteria*)

		STANDARD #1					STANDARD #2					STANDARD #3					CHECK				
Parameter	**Units**	**Standard Value @25 °C**	**Solution or Air Temp °C**	**Standard Temp/Pres Correction**	**Initial Reading**	**Calibrated Reading**	**Standard Value @25 °C**	**Solution or Air Temp °C**	**Standard Temp/Pres Correction**	**Initial Reading**	**Calibrated Reading**	**Standard Value @25 °C**	**Solution or Air Temp °C**	**Standard Temp/Pres Correction**	**Initial Reading**	**Calibrated Reading**	**Standard Value @25 °C**	**Solution or Air Temp °C**	**Standard Temp/Pres Correction**	**Reading**	**Status of Check**
DO	mg/L	NA	17.3°	9.63	9.89	9.57	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0 mg/L	17.6°	NA	0.49	Cal or Ck (circle)
pH	S.U.	7.00	17.8°	7.04	7.14	7.03	4.00	17.9°	4.00	4.01	4.00	10.00	17.9°	10.08	10.07	10.08	NA	NA	NA	NA	NA
ORP*	mV	238.0	18.2°	241.0	202.5	242.0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	~~223.0~~				Cal or Ck (circle)
Sp. EC	µs/cm	1000	18.3°	NA	1013	1000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0 µs/cm	17.7	NA	12	Cal or Ck (circle)

END OF DAY CALIBRATION CHECK (*circle results outside of criteria*)

Parameter	Units	Standard value @ 25c	Solution/Air Temperature	Standard Correction	Reading	Difference
DO	mg/L	NA	23.4°	8.55	8.62	0.07
DO	mg/L	0	23.8°	NA	0.18	0.18
pH	S.U.	7.0	22.3°	7.02	6.94	0.08
ORP	mV	238.0	23.2°	233.6	214.8	18.8
ORP	mV	223.0				
Sp. EC	µs/cm	1000	21.5°	NA	1017	17
Sp. EC	µs/cm	0	23.1°	NA	21.1	21.4

CALIBRATION REQUIREMENTS

Parameter	Units	Standard	Reqmnt.	Action
DO	mg/L	O_2 Solubility	± 0.2	Change DO membrane
DO	mg/L	0.0	≤ 0.50 but ≥ 0	Change DO membrane
pH	S.U.	7/4/10 Temp. Adj.	± 0.05	Recalibrate
ORP	mV	Specified standard	± 10.0	Calibrate*
ORP	mV	Zobell	± 10.0	Calibrate*
sp. Cond.	us/cm	Specified standard	± 5%	Recalibrate

* – ORP is checked ("RUN" mode) instead of calibrated. Only calibrated ("CALIBRATE" mode) when check fails criteria

END OF DAY CHECK REQUIREMENTS

Parameter	Units	Standard	Reqmnt.
DO	mg/L	100 % Saturation	± 0.5 mg/L
DO	mg/L	0.0	≤ 0.50 mg/L but ≥ 0
pH	S.U.	7.0 Temp. Adj.	± 0.3
ORP	mV	Specified standard	± 10.0
ORP	mV	Zobell	± 10.0
sp. Cond.	us/cm	Specified standard	± 5%

Record information for one instrument per sheet
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Turbidity:

Water Quality Calibration Log

AECOM

Site Name / TO# / Job#	Lockheed Martin Corporation/ 60552044		
Field Activity	Groundwater Sampling	**Manufacture/Model:**	YSI - Pro Plus
Fieldwork Dates	9/8/2020-9/25/2020	**Serial Number:**	10D
Date & Result of Last Temp. Check		**CALIBRATION DATE:**	9/16/20
Air temperature:	AM / PM	**Calibration Initials:**	ZB
Solution Temperature:	AM / PM	**Time:**	0745
Inst. Barometric Press.(mmHg):	AM / PM	**Calibration Check Initials:**	ZB
Pressure Corrected / Source:	AM / PM	**Time:**	1200

INSTRUMENT NUMBER

CALIBRATION INFORMATION (*circle results outside of criteria*)

		STANDARD #1					STANDARD #2					STANDARD #3					CHECK				
Parameter	**Units**	**Standard Value @25 °C**	**Solution or Air Temp °C**	**Standard Temp/Pres Correction**	**Initial Reading**	**Calibrated Reading**	**Standard Value @25 °C**	**Solution or Air Temp °C**	**Standard Temp/Pres Correction**	**Initial Reading**	**Calibrated Reading**	**Standard Value @25 °C**	**Solution or Air Temp °C**	**Standard Temp/Pres Correction**	**Initial Reading**	**Calibrated Reading**	**Standard Value @25 °C**	**Solution or Air Temp °C**	**Standard Temp/Pres Correction**	**Reading**	**Status of Check**
DO	mg/L	NA	14.8	10.1	10.5	10.1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0 mg/L	15.3	NA	0.14	Cal or Ck (circle)
pH	S.U.	7.00	15.3	7.04	6.93	7.03	4.00	15.3	4.00	4.00	4.08	10.00	15.3	10.11	10.13	10.12	NA	NA	NA	NA	NA
ORP*	mV	238.0	25.0	238	15.3°C 298.9	—	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	~~223.0~~				Cal or Ck (circle)
Sp. EC	µs/cm	1000	14.9	9ZC NA	1004	1000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0 µs/cm	16.0	NA	2.4	Cal or Ck (circle)

END OF DAY CALIBRATION CHECK (*circle results outside of criteria*)

Parameter	Units	Standard value @ 25c	Solution/Air Temperature	Standard Correction	Reading	Difference
DO	mg/L	NA	16.9	—	10.13	0.03
DO	mg/L	0	17.4	NA	0.16	0.02
pH	S.U.	7.0	17.8	7.04	7.05 ~~241.0~~	0.1 ~~2.1~~
ORP	mV	238.0	17.6	238	241.0	2.1
~~ORP~~	~~mV~~	~~223.0~~				
Sp. EC	µs/cm	1000	17.9	NA	1003	3
Sp. EC	µs/cm	0	17.8	NA	4.7	2.3

CALIBRATION REQUIREMENTS

Parameter	Units	Standard	Reqmnt.	Action
DO	mg/L	O_2 Solubility	± 0.2	Change DO membrane
DO	mg/L	0.0	≤ 0.50 but ≥ 0	Change DO membrane
pH	S.U.	7/4/10 Temp. Adj.	± 0.05	Recalibrate
ORP	mV	Specified standard	± 10.0	Calibrate*
ORP	mV	Zobell	± 10.0	Calibrate*
sp. Cond.	us/cm	Specified standard	± 5%	Recalibrate

* – ORP is checked ("RUN" mode) instead of calibrated. Only calibrated ("CALIBRATE" mode) when check fails criteria

END OF DAY CHECK REQUIREMENTS

Parameter	Units	Standard	Reqmnt.
DO	mg/L	100 % Saturation	± 0.5 mg/L
DO	mg/L	0.0	≤ 0.50 mg/L but ≥ 0
pH	S.U.	7.0 Temp. Adj.	± 0.3
ORP	mV	Specified standard	± 10.0
ORP	mV	Zobell	± 10.0
sp. Cond.	us/cm	Specified standard	± 5%

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Turbidity:

Water Quality Calibration Log

AECOM

Site Name / TO# / Job#	Lockheed Martin Corporation/ 60552044		
Field Activity	Groundwater Sampling	Manufacture/Model:	YSI Pro Quatro
Fieldwork Dates	9/8/2020-9/25/2020	Serial Number:	18D102399
Date & Result of Last Temp. Check	9/16/2020	CALIBRATION DATE:	9/16/2020
Air temperature:	AM 15.3° 16:00 PM 25.0 °C	Calibration	Initials: SH
Solution Temperature:	AM 16.5° PM 23.0 °C		Time: 0850
Inst. Barometric Press.(mmHg):	AM 765.7 PM 762.2	Calibration Check	Initials: LT
Pressure Corrected / Source:	AM 0850 Accuweather PM /		Time: 16:00

INSTRUMENT NUMBER

18D102399

CALIBRATION INFORMATION (*circle results outside of criteria*)

		STANDARD #1					STANDARD #2					STANDARD #3					CHECK				
Parameter	Units	Standard Value @25 °C	Solution or Air Temp °C	Standard Temp/Pres Correction	Initial Reading	Calibrated Reading	Standard Value @25 °C	Solution or Air Temp °C	Standard Temp/Pres Correction	Initial Reading	Calibrated Reading	Standard Value @25 °C	Solution or Air Temp °C	Standard Temp/Pres Correction	Initial Reading	Calibrated Reading	Standard Value @25 °C	Solution or Air Temp °C	Standard Temp/Pres Correction	Reading	Status of Check
DO	mg/L	NA	16.5°	10.16 SH	9.21	9.98 SH	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0 mg/L	15.9	NA	0.93	Cal or (Ck) (circle)
pH	S.U.	7.00	15.5°	7.05	7.07	7.05	4.00	15.2°	3.99	3.70	3.99	10.00	15.8°	10.12	10.10	10.12	NA	NA	NA	NA	NA
ORP*	mV	238.0	15.3°	244.0	295.4	299.0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	223.0				Cal or Ck (circle)
Sp. EC	µs/cm	1000	15.7°	NA	1028	1000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0 µs/cm	16.8	NA	24	Cal or (Ck) (circle)

END OF DAY CALIBRATION CHECK (*circle results outside of criteria*)

Parameter	Units	Standard value @ 25c	Solution/Air Temperature	Standard Correction	Reading	Difference	
DO	mg/L	NA	23.3	9.35	9.36	0.01	
DO	mg/L	0	26.1	NA	1.5	1.5	
pH	S.U.	7.0	22.3	7.01	7.02	0.01	
ORP	mV	238.0	22.4	238	176.1	61.9	*
~~ORP~~	~~mV~~	223.0					
Sp. EC	µs/cm	1000	22.5	NA	933	67	*
Sp. EC	µs/cm	0	23.2	NA	4.2	4.2	

CALIBRATION REQUIREMENTS

Parameter	Units	Standard	Reqmnt.	Action
DO	mg/L	O_2 Solubility	± 0.2	Change DO membrane
DO	mg/L	0.0	≤ 0.50 but ≥ 0	Change DO membrane
pH	S.U.	7/4/10 Temp. Adj.	± 0.05	Recalibrate
ORP	mV	Specified standard	± 10.0	Calibrate*
ORP	mV	Zobell	± 10.0	Calibrate*
sp. Cond.	us/cm	Specified standard	± 5%	Recalibrate

* – ORP is checked ("RUN" mode) instead of calibrated. Only calibrated ("CALIBRATE" mode) when check fails criteria

END OF DAY CHECK REQUIREMENTS

Parameter	Units	Standard	Reqmnt.
DO	mg/L	100 % Saturation	± 0.5 mg/L
DO	mg/L	0.0	≤ 0.50 mg/L but ≥ 0
pH	S.U.	7.0 Temp Adj.	± 0.3
ORP	mV	Specified standard	± 10.0
ORP	mV	Zobell	± 10.0
sp. Cond.	us/cm	Specified standard	± 5%

Record information for one instrument per sheet
Pen only; line-out errors, initial and date

Turbidity:

Water Quality Calibration Log

AECOM

Site Name / TO# / Job#	Lockheed Martin Corporation/ 60552044		
Field Activity	Groundwater Sampling	Manufacture/Model:	YSI Pro PlUS
Fieldwork Dates	9/8/2020-9/25/2020	Serial Number:	10E100125U
Date & Result of Last Temp. Check		CALIBRATION DATE:	09.16.2020
Air temperature: 09:00	AM 60°F 14:30 PM 29.8	Calibration	Initials: LZ
Solution Temperature: ↓	AM 16°C ↓ PM 21.0		Time: 09:05
Inst. Barometric Press.(mmHg): ↓	AM 766.8 ↓ PM 764.1	Calibration Check	Initials: LZ
Pressure Corrected / Source:	AM / PM /		Time: 14:30

INSTRUMENT NUMBER

10E100125U

CALIBRATION INFORMATION (*circle results outside of criteria*)

		STANDARD #1					STANDARD #2					STANDARD #3					CHECK				
Parameter	Units	Standard Value @25 °C	Solution or Air Temp °C	Standard Temp/Pres Correction	Initial Reading	Calibrated Reading	Standard Value @25 °C	Solution or Air Temp °C	Standard Temp/Pres Correction	Initial Reading	Calibrated Reading	Standard Value @25 °C	Solution or Air Temp °C	Standard Temp/Pres Correction	Initial Reading	Calibrated Reading	Standard Value @25 °C	Solution or Air Temp °C	Standard Temp/Pres Correction	Reading	Status of Check
DO	mg/L	NA	14.9	11.15	11.06	11.15	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0 mg/L	16.0	NA	0.12	Cal or Ck (circle)
pH	S.U.	7.00	16.0	7.01	7.66	7.01	4.00	16.2	4.00	4.49	3.99	10.00	16.3	10.11	9.48	10.28	NA	NA	NA	NA	NA
ORP*	mV	238.0	16.1	238	130.7	238.9	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	223.0	16.5	238	238.2	Cal or Ck (circle)
Sp. EC	µs/cm	1000	15.8	NA	999	1000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0 µs/cm	15.8	NA	11.3	Cal or Ck (circle)

END OF DAY CALIBRATION CHECK (*circle results outside of criteria*)

Parameter	Units	Standard value @ 25c	Solution/Air Temperature	Standard Correction	Reading	Difference
DO	mg/L	NA	29	7.53	6.99	0.54
DO	mg/L	0	28.5	NA	0.24	0.24
pH	S.U.	7.0	24.1	7.01	7.48	0.47
ORP	mV	238.0	28.0	238.0	244.0	6.0
~~ORP~~	~~mV~~	223.0				
Sp. EC	µs/cm	1000	28.0	NA	980	20
Sp. EC	µs/cm	0	28.7	NA	3.1	3.1

CALIBRATION REQUIREMENTS

Parameter	Units	Standard	Reqmnt.	Action
DO	mg/L	O_2 Solubility	± 0.2	Change DO membrane
DO	mg/L	0.0	≤ 0.50 but ≥ 0	Change DO membrane
pH	S.U.	7/4/10 Temp. Adj.	± 0.05	Recalibrate
ORP	mV	Specified standard	± 10.0	Calibrate*
ORP	mV	Zobell	± 10.0	Calibrate*
sp. Cond.	us/cm	Specified standard	± 5%	Recalibrate

* – ORP is checked ("RUN" mode) instead of calibrated. Only calibrated ("CALIBRATE" mode) when check fails criteria

END OF DAY CHECK REQUIREMENTS

Parameter	Units	Standard	Reqmnt.
DO	mg/L	100 % Saturation	± 0.5 mg/L
DO	mg/L	0.0	≤ 0.50 mg/L but ≥ 0
pH	S.U.	7.0 Temp. Adj.	± 0.3
ORP	mV	Specified standard	± 10.0
ORP	mV	Zobell	± 10.0
sp. Cond.	us/cm	Specified standard	± 5%

Record information for one instrument per sheet
Pen only; line-out errors, initial and date

Turbidity:

Water Quality Calibration Log

AECOM

Site Name / TO# / Job#	LMC Wilmington
Field Activity	GW Sampling
Fieldwork Dates	09.14.2020
Date & Result of Last Temp. Check	
Air temperature: 07:30 ↓	AM 70° F | 15:15 PM 73°F
Solution Temperature:	AM 20.00°C | PM 24.1
Inst. Barometric Press.(mmHg):	AM 761.1 | PM 762.2
Pressure Corrected / Source:	AM / | PM /

Manufacture/Model:	YSI-pro plus
Serial Number:	10E100254
CALIBRATION DATE:	09.14.2020
Calibration Initials:	LZ
Calibration Time:	07:30
Calibration Check Initials:	LZ
Calibration Check Time:	15:15

INSTRUMENT NUMBER

10E100254

CALIBRATION INFORMATION (*circle results outside of criteria*)

		STANDARD #1					STANDARD #2					STANDARD #3					CHECK				
Parameter	Units	Standard Value @25 °C	Solution or Air Temp °C	Standard Temp/Pres Correction	Initial Reading	Calibrated Reading	Standard Value @25 °C	Solution or Air Temp °C	Standard Temp/Pres Correction	Initial Reading	Calibrated Reading	Standard Value @25 °C	Solution or Air Temp °C	Standard Temp/Pres Correction	Initial Reading	Calibrated Reading	Standard Value @25 °C	Solution or Air Temp °C	Standard Temp/Pres Correction	Reading	Status of Check
DO	mg/L	NA	18.6	100%	160.2	99.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0 mg/L	20.6	NA	0.14	Cal or (Ok) (circle)
pH	S.U.	7.00	20.2	7.02	7.28	7.01	4.00	20.7	4.00	4.02	3.91	10.00	20.6	10.05	9.53	10.18	NA	NA	NA	NA	NA
ORP*	mV	238	20.2	238	369.5	231.9	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sp. EC	µs/cm	1000	20.7	NA	989	1000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0 µs/cm	18.1	NA	10.6	Cal or (Ok) (circle)

END OF DAY CALIBRATION CHECK (*circle results outside of criteria*)

Parameter	Units	Standard value @ 25c	Solution/Air Temperature	Standard Correction	Reading 82.7%	Difference
DO	mg/L	NA	24.0	100%	7.46	17.3%
DO	mg/L	0	24.0	NA	0.19	0.19
pH	S.U.	7.0	23.7	7.01	6.99	0.02
ORP	mV	238	24.5	238	220.7	9.3
Sp. EC	µs/cm	1000	24.0	NA	974	26
Sp. EC	µs/cm	0	24.2	NA	2.7	2.7

CALIBRATION REQUIREMENTS

Parameter	Units	Standard	Reqmnt.	Action
DO	mg/L	O_2 Solubility	± 0.2	Change DO membrane
DO	mg/L	0.0	≤ 0.50 but ≥ 0	Change DO membrane
pH	S.U.	7/4/10 Temp. Adj.	± 0.05	Recalibrate
ORP	mV	Specified standard	± 10.0	Calibrate*
sp. Cond.	us/cm	Specified standard	± 5%	Recalibrate

* – ORP is checked ("RUN" mode) instead of calibrated. Only calibrated ("CALIBRATE" mode) when check fails criteria

END OF DAY CHECK REQUIREMENTS

Parameter	Units	Standard	Reqmnt.
DO	mg/L	100 % Saturation	± 0.5 mg/L
DO	mg/L	0.0	≤ 0.50 mg/L but ≥ 0
pH	S.U.	7.0 Temp. Adj.	± 0.3
ORP	mV	Specified standard	± 10.0
sp. Cond.	us/cm	Specified standard	± 5%

Record information for one instrument per sheet
Pen only; line-out errors, initial and date

Water Quality Calibration Log

AECOM

Site Name / TO# / Job#	LMC Wilmington			Manufacture/Model:	YSI pro plus
Field Activity	Groundwater sampling			Serial Number:	10E1001254
Fieldwork Dates	09.15.2020			CALIBRATION DATE:	09.15.2020
Date & Result of Last Temp. Check				Calibration	Initials: LZ
Air temperature:	07:30 AM 14.0	17:15 PM 20.0			Time: 07:30
Solution Temperature:	AM	PM 18.0			
Inst. Barometric Press.(mmHg):	AM 769.7	PM 767.7		Calibration Check	Initials: LZ
Pressure Corrected / Source:	AM /	PM /			Time: 17:15

INSTRUMENT NUMBER

10E1001254

CALIBRATION INFORMATION (*circle results outside of criteria*)

		STANDARD #1					STANDARD #2					STANDARD #3					CHECK				
Parameter	Units	Standard Value @25 °C	Solution or Air Temp °C	Standard Temp/Pres Correction	Initial Reading	Calibrated Reading	Standard Value @25 °C	Solution or Air Temp °C	Standard Temp/Pres Correction	Initial Reading	Calibrated Reading	Standard Value @25 °C	Solution or Air Temp °C	Standard Temp/Pres Correction	Initial Reading	Calibrated Reading	Standard Value @25 °C	Solution or Air Temp °C	Standard Temp/Pres Correction	Reading	Status of Check
DO	mg/L	NA	14.2	100%	160%	107.5%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0 mg/L	15.6	NA	0.26	Cal or (Ck) (circle)
pH	S.U.	7.00	14.0	7.04	8.06	7.15	4.00	16.2	4.00	4.06	4.00	10.00	15.6	10.11	10.84	10.00	NA	NA	NA	NA	NA
ORP*	mV	238	14.8	238	262	238	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sp. EC	µs/cm	1000	~~100~~ 14.5	NA	1009	1000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0 µs/cm	14.8	NA	15	Cal or (Ck) (circle)

END OF DAY CALIBRATION CHECK (*circle results outside of criteria*)

Parameter	Units	Standard value @ 25c	Solution/Air Temperature	Standard Correction	Reading	Difference	
DO	mg/L	NA	18.0	100%	106.5%	6.5%	
DO	mg/L	0	18.0	NA	0.19	0.19	
pH	S.U.	7.0	18.0	7.03	6.82	0.21	
ORP	mV	238	18.0	241.0	129.5	111.5	*
Sp. EC	µs/cm	1000	17.8	NA	1028	28	
Sp. EC	µs/cm	0	20.0	NA	11.5	11.5	

CALIBRATION REQUIREMENTS

Parameter	Units	Standard	Reqmnt.	Action
DO	mg/L	O_2 Solubility	± 0.2	Change DO membrane
DO	mg/L	0.0	≤ 0.50 but ≥ 0	Change DO membrane
pH	S.U.	7/4/10 Temp. Adj.	± 0.05	Recalibrate
ORP	mV	Specified standard	± 10.0	Calibrate*
sp. Cond.	us/cm	Specified standard	± 5%	Recalibrate

* – ORP is checked ("RUN" mode) instead of calibrated. Only calibrated ("CALIBRATE" mode) when check fails criteria

END OF DAY CHECK REQUIREMENTS

Parameter	Units	Standard	Reqmnt.
DO	mg/L	100 % Saturation	± 0.5 mg/L
DO	mg/L	0.0	≤ 0.50 mg/L but ≥ 0
pH	S.U.	7.0 Temp Adj.	± 0.3
ORP	mV	Specified standard	± 10.0
sp. Cond.	us/cm	Specified standard	± 5%

Record information for one instrument per sheet
Pen only; line-out errors, initial and date

Water Quality Calibration Log

AECOM

Site Name / TO# / Job#	Wilmington MA		
Field Activity	GW Sampling	Manufacture/Model:	YSI Quatro
Fieldwork Dates	9/15/2020	Serial Number:	18D102399
Date & Result of Last Temp. Check	9/15/2020 - 6°C	CALIBRATION DATE:	9/15/2020
Air temperature:	AM 6°C PM	Calibration Initials:	SH
Solution Temperature:	AM 14°C PM	Time:	0750
Inst. Barometric Press.(mmHg):	AM 768.5 PM	Calibration Check Initials:	SH
Pressure Corrected / Source:	AM 0750 Accuweather PM /	Time:	1740

INSTRUMENT NUMBER

18D102399

CALIBRATION INFORMATION (*circle results outside of criteria*)

		STANDARD #1					STANDARD #2					STANDARD #3					CHECK				
Parameter	Units	Standard Value @25 °C	Solution or Air Temp °C	Standard Temp/Pres Correction	Initial Reading	Calibrated Reading	Standard Value @25 °C	Solution or Air Temp °C	Standard Temp/Pres Correction	Initial Reading	Calibrated Reading	Standard Value @25 °C	Solution or Air Temp °C	Standard Temp/Pres Correction	Initial Reading	Calibrated Reading	Standard Value @25 °C	Solution or Air Temp °C	Standard Temp/Pres Correction	Reading	Status of Check
DO	mg/L	NA	14.0°	10.41	~~10.29~~ 10.91	10.58	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0 mg/L	14.8°	NA	0.98	Cal or Ck (circle)
pH	S.U.	7.00	15.8°	7.05	7.52	7.00	4.00	16.3°	3.99	3.87	3.99	10.00	16.3°	10.15	9.98	10.13	NA	NA	NA	NA	NA
ORP*	mV	238.0 ~~[illegible]~~ 16.0		241.0	199.3	246.1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sp. EC	µs/cm	1000	15.8°	NA	958	1000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0 µs/cm	13.8°	NA	21	Cal or Ck (circle)

END OF DAY CALIBRATION CHECK (*circle results outside of criteria*)

Parameter	Units	Standard value @ 25c	Solution/Air Temperature	Standard Correction	Reading	Difference
DO	mg/L	NA	16.9°	9.69	10.14	0.83
DO	mg/L	0	17.7°	NA	0.24	0.24
pH	S.U.	7.0	18.1°	~~7.03~~	6.78	0.25
ORP	mV	238.0	12.0°	247.9	269.7	21.8
Sp. EC	µs/cm	1000	17.8°	NA	1057	57
Sp. EC	µs/cm	0	16.9°	NA	19	19

CALIBRATION REQUIREMENTS

Parameter	Units	Standard	Reqmnt.	Action
DO	mg/L	O_2 Solubility	± 0.2	Change DO membrane
DO	mg/L	0.0	≤ 0.50 but ≥ 0	Change DO membrane
pH	S.U.	7/4/10 Temp. Adj.	± 0.05	Recalibrate
ORP	mV	Specified standard	± 10.0	Calibrate*
sp. Cond.	us/cm	Specified standard	± 5%	Recalibrate

* – ORP is checked ("RUN" mode) instead of calibrated. Only calibrated ("CALIBRATE" mode) when check fails criteria

END OF DAY CHECK REQUIREMENTS

Parameter	Units	Standard	Reqmnt.
DO	mg/L	100 % Saturation	± 0.5 mg/L
DO	mg/L	0.0	≤ 0.50 mg/L but ≥ 0
pH	S.U.	7.0 Temp Adj.	± 0.3
ORP	mV	Specified standard	± 10.0
sp. Cond.	us/cm	Specified standard	± 5%

Record information for one instrument per sheet
Pen only; line-out errors, initial and date

Water Quality Calibration Log

AECOM

Site Name / TO# / Job#	Lockheed Martin Corporation/ 60552044
Field Activity	Groundwater Sampling
Fieldwork Dates	9/8/2020-9/25/2020
Date & Result of Last Temp. Check	9/11/2020
Air temperature:	AM 18°C PM 18°C
Solution Temperature:	AM 20° PM 21°C
Inst. Barometric Press.(mmHg):	AM 767.4 PM 767.4
Pressure Corrected / Source:	AM 0800 / Accuweather PM 1150 / Accuweather
Manufacture/Model:	YSI / Quatro
Serial Number:	18D102399
CALIBRATION DATE:	9/11/2020
Calibration Initials:	SH
Calibration Time:	0800
Calibration Check Initials:	SH
Calibration Check Time:	1150

INSTRUMENT NUMBER

18D102399

CALIBRATION INFORMATION (*circle results outside of criteria*)

		STANDARD #1					STANDARD #2					STANDARD #3					CHECK				
Parameter	Units	Standard Value @25 °C	Solution or Air Temp °C	Standard Temp/Pres Correction	Initial Reading	Calibrated Reading	Standard Value @25 °C	Solution or Air Temp °C	Standard Temp/Pres Correction	Initial Reading	Calibrated Reading	Standard Value @25 °C	Solution or Air Temp °C	Standard Temp/Pres Correction	Initial Reading	Calibrated Reading	Standard Value @25 °C	Solution or Air Temp °C	Standard Temp/Pres Correction	Reading	Status of Check
DO	mg/L	NA	19.1°	9.30	11.70	9.34	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0 mg/L	21.1°	NA	0.12	Cal or Ck (circle)
pH	S.U.	7.00	20.1°	7.02	7.33	7.02	4.00	19.9°	4.00	3.95	4.00	10.00	20.3°	10.06	10.05	10.06	NA	NA	NA	NA	NA
ORP*	mV	238.0	20.2°	237.5	217.3	236.9	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	223.0				Cal or Ck (circle) NA
Sp. EC	µs/cm	1000	19.3	NA	954	1002	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0 µs/cm	20.4°	NA	7	Cal or Ck (circle)

END OF DAY CALIBRATION CHECK (*circle results outside of criteria*)

Parameter	Units	Standard value @ 25c	Solution/Air Temperature	Standard Correction	Reading	Difference
DO	mg/L	NA	17.3°C	9.69	10.21	0.90
DO	mg/L	0	18.7°C	NA	0.01	0.01
pH	S.U.	7.0	18.6°	7.03	6.89	0.14
ORP	mV	238.0	16.5°C	242.7	262.6	20.1
ORP	mV	223.0				NA
Sp. EC	µs/cm	1000	18.1°	NA	1001	349.00
Sp. EC	µs/cm	0	19.7	NA	26.1	26.1

Speed for Conductance Off by ~400.

CALIBRATION REQUIREMENTS

Parameter	Units	Standard	Reqmnt.	Action
DO	mg/L	O_2 Solubility	± 0.2	Change DO membrane
DO	mg/L	0.0	≤ 0.50 but ≥ 0	Change DO membrane
pH	S.U.	7/4/10 Temp. Adj.	± 0.05	Recalibrate
ORP	mV	Specified standard	± 10.0	Calibrate*
ORP	mV	Zobell	± 10.0	Calibrate*
sp. Cond.	us/cm	Specified standard	± 5%	Recalibrate

* – ORP is checked ("RUN" mode) instead of calibrated. Only calibrated ("CALIBRATE" mode) when check fails criteria

END OF DAY CHECK REQUIREMENTS

Parameter	Units	Standard	Reqmnt.
DO	mg/L	100 % Saturation	± 0.5 mg/L
DO	mg/L	0.0	≤ 0.50 mg/L but ≥ 0
pH	S.U.	7.0 Temp. Adj.	± 0.3
ORP	mV	Specified standard	± 10.0
ORP	mV	Zobell	± 10.0
sp. Cond.	us/cm	Specified standard	± 5%

Record information for one instrument per sheet
Pen only; line-out errors, initial and date

Turbidity:

Water Quality Calibration Log

AECOM

Site Name / TO# / Job#	Lockheed Martin Corporation/ 60552044		
Field Activity	Groundwater Sampling	Manufacture/Model:	YSI pro+
Fieldwork Dates	9/8/2020-9/25/2020	Serial Number:	10E100 1254
Date & Result of Last Temp. Check	°C	CALIBRATION DATE:	09.11.2020
Air temperature:	09.11.2020 AM 21.8 09.11.2020 PM 12:45 19.4	Calibration Initials:	LZ
Solution Temperature:	AM 20°C PM 20.6	Time:	08:06
Inst. Barometric Press.(mmHg):	AM 767.5 PM 766.6	Calibration Check Initials:	LZ
Pressure Corrected / Source:	AM / PM /	Time:	12:45

INSTRUMENT NUMBER

10E100 1254

CALIBRATION INFORMATION (*circle results outside of criteria*)

		STANDARD #1					STANDARD #2					STANDARD #3					CHECK				
Parameter	Units	Standard Value @25 °C	Solution or Air Temp °C	Standard Temp/Pres Correction	Initial Reading	Calibrated Reading	Standard Value @25 °C	Solution or Air Temp °C	Standard Temp/Pres Correction	Initial Reading	Calibrated Reading	Standard Value @25 °C	Solution or Air Temp °C	Standard Temp/Pres Correction	Initial Reading	Calibrated Reading	Standard Value @25 °C	Solution or Air Temp °C	Standard Temp/Pres Correction	Reading	Status of Check
DO	mg/L	NA	20.8	14.01	14.00	14.00	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0 mg/L	21.1	NA	0.04	Cal or Ck (circle)
pH	S.U.	7.00	22.8	7.02	7.28	7.15	4.00	22.0	4.00	3.59	4.00	10.00	21.5	10.04	9.96	10.03	NA	NA	NA	NA	NA
ORP*	mV	238.0	21.0	236.9	416.5	238	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	~~220.0~~				Cal or Ck (circle)
Sp. EC	µs/cm	1000	21.6	NA	1126	1000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0 µs/cm	20.6	NA	19.7	Cal or Ck (circle)

END OF DAY CALIBRATION CHECK (*circle results outside of criteria*)

Parameter	Units	Standard value @ 25c	Solution/Air Temperature	Standard Correction	Reading	Difference
DO	mg/L	NA	18.6	6.36	7.90	1.54
DO	mg/L	0	19.5	NA	0.90	0.90
pH	S.U.	7.0	19.3	10.07	9.35	0.72
ORP	mV	238.0	19.2	239.5	25	214.5
~~ORP~~	~~mV~~	223.0				
Sp. EC	µs/cm	1000	19.1	NA	1137	137
Sp. EC	µs/cm	0	21.7	NA	25.4	25.4

CALIBRATION REQUIREMENTS

Parameter	Units	Standard	Reqmnt.	Action
DO	mg/L	O_2 Solubility	± 0.2	Change DO membrane
DO	mg/L	0.0	≤ 0.50 but ≥ 0	Change DO membrane
pH	S.U.	7/4/10 Temp. Adj.	± 0.05	Recalibrate
ORP	mV	Specified standard	± 10.0	Calibrate*
ORP	mV	Zobell	± 10.0	Calibrate*
sp. Cond.	us/cm	Specified standard	± 5%	Recalibrate

* – ORP is checked ("RUN" mode) instead of calibrated. Only calibrated ("CALIBRATE" mode) when check fails criteria

END OF DAY CHECK REQUIREMENTS

Parameter	Units	Standard	Reqmnt.
DO	mg/L	100 % Saturation	± 0.5 mg/L
DO	mg/L	0.0	≤ 0.50 mg/L but ≥ 0
pH	S.U.	7.0 Temp. Adj.	± 0.3
ORP	mV	Specified standard	± 10.0
ORP	mV	Zobell	± 10.0
sp. Cond.	us/cm	Specified standard	± 5%

Record information for one instrument per sheet
Pen only; line-out errors, initial and date

Turbidity:

Water Quality Calibration Log

AECOM

Site Name / TO# / Job#	Lockheed Martin Corporation/ 60552044		
Field Activity	Groundwater Sampling	**Manufacture/Model:**	YSI Pro Plus
Fieldwork Dates	9/8/2020-9/25/2020	**Serial Number:**	
Date & Result of Last Temp. Check		**CALIBRATION DATE:**	9/11/20
Air temperature:	AM 64°F PM	**Calibration**	**Initials:** ZnB
Solution Temperature:	AM 21.8 PM		**Time:** 1045
Inst. Barometric Press.(mmHg):	AM 765.6 PM	**Calibration Check**	**Initials:** ZnB
Pressure Corrected / Source:	AM / PM /		**Time:** 1545

INSTRUMENT NUMBER

10D100442

CALIBRATION INFORMATION (*circle results outside of criteria*)

		STANDARD #1					STANDARD #2					STANDARD #3					CHECK				
Parameter	**Units**	**Standard Value @25 °C**	**Solution or Air Temp °C**	**Standard Temp/Pres Correction**	**Initial Reading**	**Calibrated Reading**	**Standard Value @25 °C**	**Solution or Air Temp °C**	**Standard Temp/Pres Correction**	**Initial Reading**	**Calibrated Reading**	**Standard Value @25 °C**	**Solution or Air Temp °C**	**Standard Temp/Pres Correction**	**Initial Reading**	**Calibrated Reading**	**Standard Value @25 °C**	**Solution or Air Temp °C**	**Standard Temp/Pres Correction**	**Reading**	**Status of Check**
DO	mg/L	NA	18.4	9.4	8.89	9.37	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0 mg/L	19.5	NA	7	Cal or Ck (circle)
pH	S.U.	7.00	19.7	7.00	7.24	7.00	4.00	19.4	4.00	4.12	4.02	10.00	19.3	10.00	9.97	10.00	NA	NA	NA	NA	NA
ORP*	mV	238.0	18.5 [illegible]	241.5	241.8	241.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	~~223.0~~				~~Cal or Ck (circle)~~
Sp. EC	µs/cm	1000	18.8	NA	980	1000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0 µs/cm	19.8	NA	4.0	Cal or Ck (circle)

END OF DAY CALIBRATION CHECK (*circle results outside of criteria*)

Parameter	Units	Standard value @ 25c	Solution/Air Temperature	Standard Correction	Reading	Difference
DO	mg/L	NA	18.8	9.5	9.41	0.09
DO	mg/L	0	19.8	NA	6	1
pH	S.U.	7.0	19.9	7.00	7.03	0.03
ORP	mV	238.0	20.1	240.0	237.9	2.1
ORP	mV	223.0	—		—	—
Sp. EC	µs/cm	1000	19.7	NA	1006	6
Sp. EC	µs/cm	0	19.5	NA	4.9	0.9

CALIBRATION REQUIREMENTS

Parameter	Units	Standard	Reqmnt.	Action
DO	mg/L	O_2 Solubility	± 0.2	Change DO membrane
DO	mg/L	0.0	≤ 0.50 but ≥ 0	Change DO membrane
pH	S.U.	7/4/10 Temp. Adj.	± 0.05	Recalibrate
ORP	mV	Specified standard	± 10.0	Calibrate*
ORP	mV	Zobell	± 10.0	Calibrate*
sp. Cond.	us/cm	Specified standard	± 5%	Recalibrate

* – ORP is checked ("RUN" mode) instead of calibrated. Only calibrated ("CALIBRATE" mode) when check fails criteria

END OF DAY CHECK REQUIREMENTS

Parameter	Units	Standard	Reqmnt.
DO	mg/L	100 % Saturation	± 0.5 mg/L
DO	mg/L	0.0	≤ 0.50 mg/L but ≥ 0
pH	S.U.	7.0 Temp. Adj.	± 0.3
ORP	mV	Specified standard	± 10.0
ORP	mV	Zobell	± 10.0
sp. Cond.	us/cm	Specified standard	± 5%

Record information for one instrument per sheet
Pen only; line-out errors, initial and date

Turbidity:

Water Quality Calibration Log

AECOM

Site Name / TO# / Job#	Lockheed Martin Corporation/ 60552044		
Field Activity	Groundwater Sampling	Manufacture/Model:	YSI Quatro
Fieldwork Dates	9/8/2020-9/25/2020	Serial Number:	18D102399
Date & Result of Last Temp. Check	09/14/2020	CALIBRATION DATE:	09/17/2020
Air temperature:	AM 18° PM 19°	Calibration Initials:	SH
Solution Temperature:	AM 20° PM 23°	Time:	0800
Inst. Barometric Press.(mmHg):	AM 762.2 PM 760.9	Calibration Check Initials:	SH
Pressure Corrected / Source:	AM 0800/Accuweather PM 1930/Accuweather	Time:	1430

INSTRUMENT NUMBER

18D102399

CALIBRATION INFORMATION (*circle results outside of criteria*)

		STANDARD #1					STANDARD #2					STANDARD #3					CHECK				
Parameter	Units	Standard Value @25 °C	Solution or Air Temp °C	Standard Temp/Pres Correction	Initial Reading	Calibrated Reading	Standard Value @25 °C	Solution or Air Temp °C	Standard Temp/Pres Correction	Initial Reading	Calibrated Reading	Standard Value @25 °C	Solution or Air Temp °C	Standard Temp/Pres Correction	Initial Reading	Calibrated Reading	Standard Value @25 °C	Solution or Air Temp °C	Standard Temp/Pres Correction	Reading	Status of Check
DO	mg/L	NA	20.4°	9.00	12.2	8.90	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0 mg/L	20.9°	NA	0.16	Cal or CK (circle)
pH	S.U.	7.00	20.4°	7.02	7.21	7.02	4.00	20.9°	4.00	4.00	4.00	10.00	20.6°	10.06	9.99	10.06	NA	NA	NA	NA	NA
ORP*	mV	238.0	20.1°	237.0	298.7	239.1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	223.0				~~Cal or CK~~ (circle)
Sp. EC	µs/cm	1000	21.0°	NA	1036	1000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0 µs/cm	20.7	NA	9.3	Cal or CK (circle)

END OF DAY CALIBRATION CHECK (*circle results outside of criteria*)

Parameter	Units	Standard value @ 25c	Solution/Air Temperature	Standard Correction	Reading	Difference
DO	mg/L	NA	19.0	9.30	9.50	0.20
DO	mg/L	0	18.4	NA	0.51	0.51
pH	S.U.	7.0	22.1	7.01	7.21	0.20
ORP	mV	238.0	17.3	241.3	189.4	51.9
ORP	mV	~~223.0~~				
Sp. EC	µs/cm	1000	19.2°	NA	986	14
Sp. EC	µs/cm	0		NA		

CALIBRATION REQUIREMENTS

Parameter	Units	Standard	Reqmnt.	Action
DO	mg/L	O_2 Solubility	± 0.2	Change DO membrane
DO	mg/L	0.0	≤ 0.50 but ≥ 0	Change DO membrane
pH	S.U.	7/4/10 Temp. Adj.	± 0.05	Recalibrate
ORP	mV	Specified standard	± 10.0	Calibrate*
ORP	mV	Zobell	± 10.0	Calibrate*
sp. Cond.	us/cm	Specified standard	± 5%	Recalibrate

*– ORP is checked ("RUN" mode) instead of calibrated. Only calibrated ("CALIBRATE" mode) when check fails criteria

END OF DAY CHECK REQUIREMENTS

Parameter	Units	Standard	Reqmnt.
DO	mg/L	100 % Saturation	± 0.5 mg/L
DO	mg/L	0.0	≤ 0.50 mg/L but ≥ 0
pH	S.U.	7.0 Temp. Adj.	± 0.3
ORP	mV	Specified standard	± 10.0
ORP	mV	Zobell	± 10.0
sp. Cond.	us/cm	Specified standard	± 5%

Record information for one instrument per sheet
Pen only; line-out errors, initial and date

Turbidity:

* ORP off by 51.9 upon post calibration.

Water Quality Calibration Log

AECOM

Site Name / TO# / Job#	Lockheed Martin Corporation/ 60552044		
Field Activity	Groundwater Sampling	**Manufacture/Model:**	YSI ~~Eq~~ Pro Plus
Fieldwork Dates	9/8/2020-9/25/2020	**Serial Number:**	18H100703
Date & Result of Last Temp. Check		**CALIBRATION DATE:**	9/14/20
Air temperature:	AM 70's PM	**Calibration Initials:**	AG
Solution Temperature:	AM PM	**Time:**	740
Inst. Barometric Press.(mmHg):	AM 760.8 PM	**Calibration Check Initials:**	AG
Pressure Corrected / Source:	AM / PM /	**Time:**	1450

INSTRUMENT NUMBER

CALIBRATION INFORMATION (*circle results outside of criteria*)

		STANDARD #1					STANDARD #2					STANDARD #3					CHECK				
Parameter	**Units**	**Standard Value @25 °C**	**Solution or Air Temp °C**	**Standard Temp/Pres Correction**	**Initial Reading**	**Calibrated Reading**	**Standard Value @25 °C**	**Solution or Air Temp °C**	**Standard Temp/Pres Correction**	**Initial Reading**	**Calibrated Reading**	**Standard Value @25 °C**	**Solution or Air Temp °C**	**Standard Temp/Pres Correction**	**Initial Reading**	**Calibrated Reading**	**Standard Value @25 °C**	**Solution or Air Temp °C**	**Standard Temp/Pres Correction**	**Reading**	**Status of Check**
DO	mg/L	NA	24.2	8.4	~~8.51~~ 7.62	8.39	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0 mg/L	20.6	NA	0.07	Cal or Ck (circle)
pH	S.U.	7.00	20.8	7.02	7.04	7.02	4.00	20.8	4.00	4.08	4.00	10.00	20.8	10.05	10.04	10.07	NA	NA	NA	NA	NA
ORP*	mV	238.0	21.3	236.8	237.6	236.8	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	~~223.0~~				Cal or Ck (circle)
Sp. EC	µs/cm	1000	21.0	NA	996	1000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0 µs/cm	20.8	NA	7.2	Cal or Ck (circle)

END OF DAY CALIBRATION CHECK (*circle results outside of criteria*)

Parameter	Units	Standard value @ 25c	Solution/Air Temperature	Standard Correction	Reading	Difference
DO	mg/L	NA	22.8°	9.30	9.28	0.02
DO	mg/L	0	24.0°	NA	0.62	0.62
pH	S.U.	7.0	23.3	7.02	7.01	0.01
ORP	mV	238.0	17.1	240.3	289.8	49.5
ORP	mV	~~223.0~~				
Sp. EC	µs/cm	1000	23.3	NA	987	13
Sp. EC	µs/cm	0	21.8	NA	15.2	15.2

CALIBRATION REQUIREMENTS

Parameter	Units	Standard	Reqmnt.	Action
DO	mg/L	O_2 Solubility	± 0.2	Change DO membrane
DO	mg/L	0.0	≤ 0.50 but ≥ 0	Change DO membrane
pH	S.U.	7/4/10 Temp. Adj.	± 0.05	Recalibrate
ORP	mV	Specified standard	± 10.0	Calibrate*
ORP	mV	Zobell	± 10.0	Calibrate*
sp. Cond.	us/cm	Specified standard	± 5%	Recalibrate

* – ORP is checked ("RUN" mode) instead of calibrated. Only calibrated ("CALIBRATE" mode) when check fails criteria

END OF DAY CHECK REQUIREMENTS

Parameter	Units	Standard	Reqmnt.
DO	mg/L	100 % Saturation	± 0.5 mg/L
DO	mg/L	0.0	≤ 0.50 mg/L but ≥ 0
pH	S.U.	7.0 Temp. Adj.	± 0.3
ORP	mV	Specified standard	± 10.0
ORP	mV	Zobell	± 10.0
sp. Cond.	us/cm	Specified standard	± 5%

Record information for one instrument per sheet
Pen only; line-out errors, initial and date

Turbidity:

Water Quality Calibration Log

AECOM

Site Name / TO# / Job#	Lockheed Martin Corporation/ 60552044
Field Activity	Groundwater Sampling
Fieldwork Dates	9/8/2020-9/25/2020
Date & Result of Last Temp. Check	09.09.2020 / 31°C
Air temperature: 07:50	AM 23.5°C 14:30 PM 30.0
Solution Temperature:	AM 23.5°C 14:30 PM
Inst. Barometric Press.(mmHg):	AM 14:30 PM 765.6
Pressure Corrected / Source:	~~AM~~ / PM /

Manufacture/Model:	YSI- Pro+
Serial Number:	10E100125U
CALIBRATION DATE:	09.10.2020
Calibration Initials:	LZ
Calibration Time:	07:50
Calibration Check Initials:	LZ
Calibration Check Time:	14:30

INSTRUMENT NUMBER

10E100125U

CALIBRATION INFORMATION (*circle results outside of criteria*)

		STANDARD #1					STANDARD #2					STANDARD #3					CHECK				
Parameter	Units	Standard Value @25 °C	Solution or Air Temp °C	Standard Temp/Pres Correction	Initial Reading	Calibrated Reading	Standard Value @25 °C	Solution or Air Temp °C	Standard Temp/Pres Correction	Initial Reading	Calibrated Reading	Standard Value @25 °C	Solution or Air Temp °C	Standard Temp/Pres Correction	Initial Reading	Calibrated Reading	Standard Value @25 °C	Solution or Air Temp °C	Standard Temp/Pres Correction	Reading	Status of Check
DO	mg/L	NA	23.0	12.40	12.40	12.40	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0 mg/L	23.4	NA	0.23	Cal or Ck (circle)
pH	S.U.	7.00	23.5	7.01	7.35	7.30	4.00	23.8	4.01	4.09	4.07	10.00	24.0	10.05	10.52	10.01	NA	NA	NA	NA	NA
ORP*	mV	238.0	23.6	233.0	96.3	234.9	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	~~223.0~~				~~Cal or Ck (circle)~~
Sp. EC	µs/°cm	1000	23.5	NA	1235	1250	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0 µs/°cm	24.8	NA	5.16	Cal or Ck (circle)

END OF DAY CALIBRATION CHECK (*circle results outside of criteria*)

Parameter	Units	Standard value @ 25c	Solution/Air Temperature	Standard Correction	Reading	Difference
DO	mg/L	NA	27.0	11.60	11.50	0.10
DO	mg/L	0	29.8	NA	0.19	0.19
pH	S.U.	7.0	27.9	7.02	7.09	0.07
ORP	mV	238.0	31.4	223.7	223.7	15.7
~~ORP~~	~~mV~~	~~223.0~~				
Sp. EC	µs/°cm	1000	28.7	NA	1171	171
Sp. EC	µs/°cm	0	30.8	NA	39.3	39.3

CALIBRATION REQUIREMENTS

Parameter	Units	Standard	Reqmnt.	Action
DO	mg/L	O_2 Solubility	± 0.2	Change DO membrane
DO	mg/L	0.0	≤ 0.50 but ≥ 0	Change DO membrane
pH	S.U.	7/4/10 Temp. Adj.	± 0.05	Recalibrate
ORP	mV	Specified standard	± 10.0	Calibrate*
ORP	mV	Zobell	± 10.0	Calibrate*
sp. Cond.	us/°cm	Specified standard	± 5%	Recalibrate

* – ORP is checked ("RUN" mode) instead of calibrated. Only calibrated ("CALIBRATE" mode) when check fails criteria

END OF DAY CHECK REQUIREMENTS

Parameter	Units	Standard	Reqmnt.
DO	mg/L	100 % Saturation	± 0.5 mg/L
DO	mg/L	0.0	≤ 0.50 mg/L but ≥ 0
pH	S.U.	7.0 Temp. Adj.	± 0.3
ORP	mV	Specified standard	± 10.0
ORP	mV	Zobell	± 10.0
sp. Cond.	us/°cm	Specified standard	± 5%

Record information for one instrument per sheet
Pen only; line-out errors, initial and date

Turbidity:

Water Quality Calibration Log

AECOM

Site Name / TO# / Job#	Wilmington				
Field Activity	GW Sampling		Manufacture/Model:	YSI Pro Plus	
Fieldwork Dates	9/9/2020		Serial Number:	18D102399	
Date & Result of Last Temp. Check	9/9/2020		CALIBRATION DATE:	9/9/2020	
Air temperature:	AM 23.2 °C	PM 27°C	Calibration	Initials: SH	
Solution Temperature:	AM 25 °C	PM 25°C		Time: 0800	
Inst. Barometric Press.(mmHg):	AM 767.3	PM 758.2	Calibration Check	Initials:	
Pressure Corrected / Source:	AM / weather.com	PM /		Time:	

INSTRUMENT NUMBER

18D102399

CALIBRATION INFORMATION (*circle results outside of criteria*)

		STANDARD #1					STANDARD #2					STANDARD #3					CHECK				
Parameter	Units	Standard Value @25 °C	Solution or Air Temp °C	Standard Temp/Pres Correction	Initial Reading	Calibrated Reading	Standard Value @25 °C	Solution or Air Temp °C	Standard Temp/Pres Correction	Initial Reading	Calibrated Reading	Standard Value @25 °C	Solution or Air Temp °C	Standard Temp/Pres Correction	Initial Reading	Calibrated Reading	Standard Value @25 °C	Solution or Air Temp °C	Standard Temp/Pres Correction	Reading	Status of Check
DO	mg/L	NA	21.9	8.94	8.43	8.77	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0 mg/L	22.3	NA	0.62	Cal or Ck (circle)
pH	S.U.	7.00	22.1	7.01	7.23	7.01	4.00	22.2	4.00	4.19	4.00	10.00	22.3	10.03	10.15	10.03	NA	NA	NA	NA	NA
ORP*	mV	231.0	19.2	228.8	251.0	238	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sp. EC	µs/cm	1000	22.1	NA	929	999	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0 µs/cm	21.8	NA	10.2	Cal or Ck (circle)

END OF DAY CALIBRATION CHECK (*circle results outside of criteria*)

Parameter	Units	Standard value @ 25c	Solution/Air Temperature	Standard Correction	Reading	Difference
DO	mg/L	NA	25.6	7.95	8.13	0.18
DO	mg/L	0	25°C	NA	0.71	0.71
pH	S.U.	7.0	25°C	7.00	6.89	0.11
ORP	mV	231.0	25°C	241.0	241.1	10.1
Sp. EC	µs/cm	1000	25°C	NA	1084	84
Sp. EC	µs/cm	0	25°C	NA	21	21

CALIBRATION REQUIREMENTS

Parameter	Units	Standard	Reqmnt.	Action
DO	mg/L	O_2 Solubility	± 0.2	Change DO membrane
DO	mg/L	0.0	≤ 0.50 but ≥ 0	Change DO membrane
pH	S.U.	7/4/10 Temp. Adj.	± 0.05	Recalibrate
ORP	mV	Specified standard	± 10.0	Calibrate*
sp. Cond.	us/cm	Specified standard	± 5%	Recalibrate

* – ORP is checked ("RUN" mode) instead of calibrated. Only calibrated ("CALIBRATE" mode) when check fails criteria

END OF DAY CHECK REQUIREMENTS

Parameter	Units	Standard	Reqmnt.
DO	mg/L	100 % Saturation	± 0.5 mg/L
DO	mg/L	0.0	≤ 0.50 mg/L but ≥ 0
pH	S.U.	7.0 Temp. Adj.	± 0.3
ORP	mV	Specified standard	± 10.0
sp. Cond.	us/cm	Specified standard	± 5%

Record information for one instrument per sheet
Pen only; line-out errors, initial and date

Water Quality Calibration Log

AECOM

Site Name / TO# / Job#: LM Wilmington 60655440
Field Activity: GW Sampling
Fieldwork Dates: 09.09.2020
Date & Result of Last Temp. Check:
Air temperature: 08:45 AM 66°F 14:45 PM 32.0°C
Solution Temperature: AM 21.9°C PM 32.0°C
Inst. Barometric Press.(mmHg): AM 767.3 PM 768.1
Pressure Corrected / Source: AM / PM /

Manufacture/Model: YSi - Professional Plus
Serial Number: 10E100125U
CALIBRATION DATE: 09.09.2020
Calibration Initials: LZ
Calibration Time: 08:45
Calibration Check Initials: LZ
Calibration Check Time: 14:45

INSTRUMENT NUMBER

10E100125U

CALIBRATION INFORMATION (*circle results outside of criteria*)

		STANDARD #1					STANDARD #2					STANDARD #3					CHECK				
Parameter	Units	Standard Value @25 °C	Solution or Air Temp °C	Standard Temp/Pres Correction	Initial Reading	Calibrated Reading	Standard Value @25 °C	Solution or Air Temp °C	Standard Temp/Pres Correction	Initial Reading	Calibrated Reading	Standard Value @25 °C	Solution or Air Temp °C	Standard Temp/Pres Correction	Initial Reading	Calibrated Reading	Standard Value @25 °C	Solution or Air Temp °C	Standard Temp/Pres Correction	Reading	Status of Check
DO	mg/L	NA	22.5	14.31	14.09	13.84	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0 mg/L	21	NA	0.55	Cal or (Ck) (circle)
pH	S.U.	7.00	23.2	7.01	7.31	7.27	4.00	22.7	4.00	3.71	3.70	10.00	22.7	10.00	9.68	9.89	NA	NA	NA	NA	NA
ORP*	mV	238	20.2	238.8	342.9	345	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sp. EC	µs/cm	1000	22.7	NA	981	984	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0 µs/cm	21.7	NA	58.6	Cal or (Ck) (circle)

END OF DAY CALIBRATION CHECK (*circle results outside of criteria*)

Parameter	Units	Standard value @ 25c	Solution/Air Temperature	Standard Correction	Reading	Difference
DO	mg/L	NA	38.6	8.71	8.59	0.12
DO	mg/L	0	34.0	NA	0.86	0.86
pH	S.U.	7.0	34.2	6.98	7.26	0.28
ORP	mV	234.5	28.3	234.9	169.7	
Sp. EC	µs/cm	1000	33.3	NA	1224	224
Sp. EC	µs/cm	0		NA	29.9	29.9

CALIBRATION REQUIREMENTS

Parameter	Units	Standard	Reqmnt.	Action
DO	mg/L	O_2 Solubility	± 0.2	Change DO membrane
DO	mg/L	0.0	≤ 0.50 but ≥ 0	Change DO membrane
pH	S.U.	7/4/10 Temp. Adj.	± 0.05	Recalibrate
ORP	mV	Specified standard	± 10.0	Calibrate*
sp. Cond.	us/cm	Specified standard	± 5%	Recalibrate

* – ORP is checked ("RUN" mode) instead of calibrated. Only calibrated ("CALIBRATE" mode) when check fails criteria

END OF DAY CHECK REQUIREMENTS

Parameter	Units	Standard	Reqmnt.
DO	mg/L	100 % Saturation	± 0.5 mg/L
DO	mg/L	0.0	≤ 0.50 mg/L but ≥ 0
pH	S.U.	7.0 Temp. Adj.	± 0.3
ORP	mV	Specified standard	± 10.0
sp. Cond.	us/cm	Specified standard	± 5%

Record information for one instrument per sheet
Pen only; line-out errors, initial and date

Water Quality Calibration Log

AECOM

Site Name / TO# / Job#	LM Wilmington 6055440
Field Activity	GW Sampling
Fieldwork Dates	09.09.2020
Date & Result of Last Temp. Check	
Air temperature: 08:50	AM 66°F PM
Solution Temperature:	AM 21.9 °C PM
Inst. Barometric Press.(mmHg):	AM ~~767.3~~ 769.4 PM
Pressure Corrected / Source:	AM / PM /

Manufacture/Model:	YSI - pro plus
Serial Number:	10E100342
CALIBRATION DATE:	09.09.2020
Calibration Initials:	AG
Calibration Time:	930
Calibration Check Initials:	758.1
Calibration Check Time:	1736

INSTRUMENT NUMBER

10E100342

CALIBRATION INFORMATION (*circle results outside of criteria*)

		STANDARD #1					STANDARD #2					STANDARD #3					CHECK				
Parameter	Units	Standard Value @25 °C	Solution or Air Temp °C	Standard Temp/Pres Correction	Initial Reading	Calibrated Reading	Standard Value @25 °C	Solution or Air Temp °C	Standard Temp/Pres Correction	Initial Reading	Calibrated Reading	Standard Value @25 °C	Solution or Air Temp °C	Standard Temp/Pres Correction	Initial Reading	Calibrated Reading	Standard Value @25 °C	Solution or Air Temp °C	Standard Temp/Pres Correction	Reading	Status of Check
DO	mg/L	NA	~~23.0~~ 23.4	8.3	7.40	8.27	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0 mg/L	23.0	NA	0.04	Cal or Ck (circle)
pH	S.U.	7.00	23.2	7.01	7.22	7.01	4.00	23.0	4.00	3.83	4.00	10.00	22.4	10.02	10.31	10.05	NA	NA	NA	NA	NA
ORP*	mV	234	26.0	230.8	246.5	230.8	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	233 ~~NA~~	23.0 ~~NA~~	NA	~~NA~~ 24.1	NA
Sp. EC	µs/°cm	1000	22.3	NA	933	1000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0 µs/°cm	24.2	NA	8.4	Cal or Ck (circle)

END OF DAY CALIBRATION CHECK (*circle results outside of criteria*)

Parameter	Units	Standard value @ 25c	Solution/Air Temperature	Standard Correction	Reading	Difference
DO	mg/L	NA	29.2	7.68	8.20	052
DO	mg/L	0	26.5	NA	0.21	0.21
pH	S.U.	7.0	25.8	7.00	7.01	0.01
ORP	mV	236	25.2	231.0	236.1	1.9
Sp. EC	µs/°cm	1000	25.7°	NA	992	8
Sp. EC	µs/°cm	0	25.7°	NA	72	72

CALIBRATION REQUIREMENTS

Parameter	Units	Standard	Reqmnt.	Action
DO	mg/L	O_2 Solubility	± 0.2	Change DO membrane
DO	mg/L	0.0	≤ 0.50 but ≥ 0	Change DO membrane
pH	S.U.	7/4/10 Temp. Adj.	± 0.05	Recalibrate
ORP	mV	Specified standard	± 10.0	Calibrate*
sp. Cond.	us/°cm	Specified standard	± 5%	Recalibrate

* – ORP is checked ("RUN" mode) instead of calibrated. Only calibrated ("CALIBRATE" mode) when check fails criteria

END OF DAY CHECK REQUIREMENTS

Parameter	Units	Standard	Reqmnt.
DO	mg/L	100 % Saturation	± 0.5 mg/L
DO	mg/L	0.0	≤ 0.50 mg/L but ≥ 0
pH	S.U.	7.0 Temp. Adj.	± 0.3
ORP	mV	Specified standard	± 10.0
sp. Cond.	us/°cm	Specified standard	± 5%

Record information for one instrument per sheet
Pen only; line-out errors, initial and date

Water Quality Calibration Log

AECOM

Site Name / TO# / Job#	Lockheed Martin Corporation/ 60552044		
Field Activity	Groundwater Sampling	Manufacture/Model:	YSI Quatro
Fieldwork Dates	9/8/2020-9/25/2020	Serial Number:	18D10 2399
Date & Result of Last Temp. Check	9/10/2020	CALIBRATION DATE:	9/10/2020
Air temperature:	AM 21° 16:10 PM 30 °C	Calibration	Initials: SH
Solution Temperature:	AM 24° ↓ PM		Time: 0835
Inst. Barometric Press.(mmHg):	AM 767.3 ↓ PM	Calibration Check	Initials: SH
Pressure Corrected / Source:	AM / Accuweather PM /		Time: 16:10

INSTRUMENT NUMBER

18D102399

CALIBRATION INFORMATION (*circle results outside of criteria*)

		STANDARD #1					STANDARD #2					STANDARD #3					CHECK				
Parameter	Units	Standard Value @25 °C	Solution or Air Temp °C	Standard Temp/Pres Correction	Initial Reading	Calibrated Reading	Standard Value @25 °C	Solution or Air Temp °C	Standard Temp/Pres Correction	Initial Reading	Calibrated Reading	Standard Value @25 °C	Solution or Air Temp °C	Standard Temp/Pres Correction	Initial Reading	Calibrated Reading	Standard Value @25 °C	Solution or Air Temp °C	Standard Temp/Pres Correction	Reading	Status of Check
DO	mg/L	NA	24.6°	8.29	9.61	8.29	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0 mg/L	24.2°	NA	0.61	Cal or Ck (circle)
pH	S.U.	7.00	24.0°	7.01	7.04	7.01	4.00	24.6°	4.06	4.06	4.00	10.00	24.1°	10.03	9.90	10.03	NA	NA	NA	NA	NA
ORP*	mV	238.0	~~23.1°~~ 24.0°	233.6	253.5	233.6	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	223.0				Cal or Ck (circle)
Sp. EC	µs/cm	1000	23.7°	NA	1178	1000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0 µs/cm	24.5°	NA	6.8	Cal or Ck (circle)

END OF DAY CALIBRATION CHECK (*circle results outside of criteria*)

Parameter	Units	Standard value @ 25c	Solution/Air Temperature	Standard Correction	Reading	Difference
DO	mg/L	NA	28.0	9.34	9.94	0.60
DO	mg/L	0	29.7	NA	1.77	1.77
pH	S.U.	7.0	29.7	7.02	7.02	0.02
ORP	mV	238.0	30.5	224.9	220.1	4.8
~~ORP~~	~~mV~~	~~223.0~~				
Sp. EC	µs/cm	1000	765	NA	764	1.0
Sp. EC	µs/cm	0	45.0	NA	44.5	44.5

CALIBRATION REQUIREMENTS

Parameter	Units	Standard	Reqmnt.	Action
DO	mg/L	O_2 Solubility	± 0.2	Change DO membrane
DO	mg/L	0.0	≤ 0.50 but ≥ 0	Change DO membrane
pH	S.U.	7/4/10 Temp Adj.	± 0.05	Recalibrate
ORP	mV	Specified standard	± 10.0	Calibrate*
ORP	mV	Zobell	± 10.0	Calibrate*
sp. Cond.	us/cm	Specified standard	± 5%	Recalibrate

* – ORP is checked ("RUN" mode) instead of calibrated. Only calibrated ("CALIBRATE" mode) when check fails criteria

END OF DAY CHECK REQUIREMENTS

Parameter	Units	Standard	Reqmnt.
DO	mg/L	100 % Saturation	± 0.5 mg/L
DO	mg/L	0.0	≤ 0.50 mg/L but ≥ 0
pH	S.U.	7.0 Temp Adj.	± 0.3
ORP	mV	Specified standard	± 10.0
ORP	mV	Zobell	± 10.0
sp. Cond.	us/cm	Specified standard	± 5%

Record information for one instrument per sheet
Pen only; line-out errors, initial and date

Turbidity:

Water Quality Calibration Log

AECOM

Site Name / TO# / Job#	Lockheed Martin Corporation/ 60552044		
Field Activity	Groundwater Sampling	Manufacture/Model:	YSI Pro Plus
Fieldwork Dates	9/8/2020-9/25/2020	Serial Number:	10D101442
Date & Result of Last Temp. Check		CALIBRATION DATE:	9/23/20
Air temperature:	AM / PM	Calibration Initials:	JWB
Solution Temperature:	AM / PM	Time:	0830
Inst. Barometric Press.(mmHg):	AM / PM	Calibration Check Initials:	
Pressure Corrected / Source:	AM / PM	Time:	

INSTRUMENT NUMBER

CALIBRATION INFORMATION (*circle results outside of criteria*)

		STANDARD #1					STANDARD #2					STANDARD #3					CHECK				
Parameter	Units	Standard Value @25 °C	Solution or Air Temp °C	Standard Temp/Pres Correction	Initial Reading	Calibrated Reading	Standard Value @25 °C	Solution or Air Temp °C	Standard Temp/Pres Correction	Initial Reading	Calibrated Reading	Standard Value @25 °C	Solution or Air Temp °C	Standard Temp/Pres Correction	Initial Reading	Calibrated Reading	Standard Value @25 °C	Solution or Air Temp °C	Standard Temp/Pres Correction	Reading	Status of Check
DO	mg/L	NA	15.0	10.00	10.21	10.01	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0 mg/L	25	NA	0.11	Cal or Ck (circle)
pH	S.U.	7.00	15.0	7.04	7.05	7.04	4.00	15.0	4.00	3.80	4.00	10.00	15.0	10.11	10.12	10.11	NA	NA	NA	NA	NA
ORP*	mV	238.0	25	238	236.9	237.0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	~~223.0~~				Cal or Ck (circle)
Sp. EC	µs/cm	1000	15.0	NA	1017	1000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0 µs/cm	25	NA	13.5	Cal or Ck (circle)

END OF DAY CALIBRATION CHECK (*circle results outside of criteria*)

Parameter	Units	Standard value @ 25c	Solution/Air Temperature	Standard Correction	Reading	Difference
DO	mg/L	NA	15.9	10.00	10.13	0.12
DO	mg/L	0	17.0	NA	16.0	2.5
pH	S.U.	7.0	16.9	7.04	7.06	0.02
ORP	mV	238.0	16.7	238	234	4
~~ORP~~	~~mV~~	~~223.0~~				
Sp. EC	µs/cm	1000	16.5	NA	1009	9
Sp. EC	µs/cm	0	17.1	NA	0.13	0.02

CALIBRATION REQUIREMENTS

Parameter	Units	Standard	Reqmnt.	Action
DO	mg/L	O_2 Solubility	± 0.2	Change DO membrane
DO	mg/L	0.0	≤ 0.50 but ≥ 0	Change DO membrane
pH	S.U.	7/4/10 Temp. Adj.	± 0.05	Recalibrate
ORP	mV	Specified standard	± 10.0	Calibrate*
ORP	mV	Zobell	± 10.0	Calibrate*
sp. Cond.	us/cm	Specified standard	± 5%	Recalibrate

* – ORP is checked ("RUN" mode) instead of calibrated. Only calibrated ("CALIBRATE" mode) when check fails criteria

END OF DAY CHECK REQUIREMENTS

Parameter	Units	Standard	Reqmnt.
DO	mg/L	100 % Saturation	± 0.5 mg/L
DO	mg/L	0.0	≤ 0.50 mg/L but ≥ 0
pH	S.U.	7.0 Temp. Adj.	± 0.3
ORP	mV	Specified standard	± 10.0
ORP	mV	Zobell	± 10.0
sp. Cond.	us/cm	Specified standard	± 5%

Record information for one instrument per sheet
Pen only; line-out errors, initial and date

Turbidity:

Water Quality Calibration Log

AECOM

Site Name / TO# / Job#	Lockheed Martin Corporation/ 60552044		
Field Activity	Groundwater Sampling	Manufacture/Model:	YSI Pro Plus
Fieldwork Dates	9/8/2020-9/25/2020	Serial Number:	10D101442
Date & Result of Last Temp. Check		CALIBRATION DATE:	9/24/20
Air temperature:	AM PM	Calibration Initials:	JWB
Solution Temperature:	AM PM	Time:	0750
Inst. Barometric Press.(mmHg):	AM PM	Calibration Check Initials:	
Pressure Corrected / Source:	AM / PM /	Time:	

INSTRUMENT NUMBER

CALIBRATION INFORMATION (*circle results outside of criteria*)

		STANDARD #1					STANDARD #2					STANDARD #3					CHECK				
Parameter	Units	Standard Value @25 °C	Solution or Air Temp °C	Standard Temp/Pres Correction	Initial Reading	Calibrated Reading	Standard Value @25 °C	Solution or Air Temp °C	Standard Temp/Pres Correction	Initial Reading	Calibrated Reading	Standard Value @25 °C	Solution or Air Temp °C	Standard Temp/Pres Correction	Initial Reading	Calibrated Reading	Standard Value @25 °C	Solution or Air Temp °C	Standard Temp/Pres Correction	Reading	Status of Check
DO	mg/L	NA	15.3	10.0	9.85	9.99	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0 mg/L	15.4	NA	0.12	Cal or Ck (circle)
pH	S.U.	7.00	15.9	7.04	7.15	7.04	4.00	16.00	[illegible]	3.99	4.00 [illegible]	10.00	16.10	10.11	9.99	10.11	NA	NA	NA	NA	NA
ORP*	mV	238.0	15.1	238	245.1	238	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	223.0				~~Cal or Ck (circle)~~
Sp. EC	µs/cm	1000	15.8	NA	987	1001	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0 µs/cm	15.5	NA	19	Cal or Ck (circle)

END OF DAY CALIBRATION CHECK (*circle results outside of criteria*)

Parameter	Units	Standard value @ 25c	Solution/Air Temperature	Standard Correction	Reading	Difference
DO	mg/L	NA	16.9	10.0	9.92	0.07
DO	mg/L	0	16.4	NA	12	7
pH	S.U.	7.0	16.7	7.04	7.09	0.05
ORP	mV	238.0	16.8	238	241	3
~~ORP~~	~~mV~~	~~223.0~~				
Sp. EC	µs/cm	1000	16.5	NA	1006	6
Sp. EC	µs/cm	0	17.4	NA	0.15	0.03

CALIBRATION REQUIREMENTS

Parameter	Units	Standard	Reqmnt.	Action
DO	mg/L	O_2 Solubility	± 0.2	Change DO membrane
DO	mg/L	0.0	≤ 0.50 but ≥ 0	Change DO membrane
pH	S.U.	7/4/10 Temp. Adj	± 0.05	Recalibrate
ORP	mV	Specified standard	± 10.0	Calibrate*
ORP	mV	Zobell	± 10.0	Calibrate*
sp. Cond.	us/cm	Specified standard	± 5%	Recalibrate

* – ORP is checked ("RUN" mode) instead of calibrated. Only calibrated ("CALIBRATE" mode) when check fails criteria

END OF DAY CHECK REQUIREMENTS

Parameter	Units	Standard	Reqmnt.
DO	mg/L	100 % Saturation	± 0.5 mg/L
DO	mg/L	0.0	≤ 0.50 mg/L but ≥ 0
pH	S.U.	7.0 Temp Adj	± 0.3
ORP	mV	Specified standard	± 10.0
ORP	mV	Zobell	± 10.0
sp. Cond.	us/cm	Specified standard	± 5%

Record information for one instrument per sheet
Pen only; line-out errors, initial and date

Turbidity:

Water Quality Calibration Log

AECOM

Site Name / TO# / Job#	Lockheed Martin Corporation/ 60552044				
Field Activity	Groundwater Sampling		**Manufacture/Model:**	YSI Pro Plus	
Fieldwork Dates	9/8/2020-9/25/2020		**Serial Number:**	18H 100 703	
Date & Result of Last Temp. Check			**CALIBRATION DATE:**	9/17/20	
Air temperature:	AM	PM	**Calibration**	**Initials:** AG	
Solution Temperature:	AM	PM		**Time:** 745	
Inst. Barometric Press.(mmHg):	AM 761.1	PM 759.4	**Calibration Check**	**Initials:** AG	
Pressure Corrected / Source:	AM /	PM /		**Time:** 1630	

INSTRUMENT NUMBER

CALIBRATION INFORMATION (*circle results outside of criteria*)

		STANDARD #1					STANDARD #2					STANDARD #3					CHECK				
Parameter	**Units**	**Standard Value @25 °C**	**Solution or Air Temp °C**	**Standard Temp/Pres Correction**	**Initial Reading**	**Calibrated Reading**	**Standard Value @25 °C**	**Solution or Air Temp °C**	**Standard Temp/Pres Correction**	**Initial Reading**	**Calibrated Reading**	**Standard Value @25 °C**	**Solution or Air Temp °C**	**Standard Temp/Pres Correction**	**Initial Reading**	**Calibrated Reading**	**Standard Value @25 °C**	**Solution or Air Temp °C**	**Standard Temp/Pres Correction**	**Reading**	**Status of Check**
DO	mg/L	NA	17.3	9.6	9.85	9.63	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0 mg/L	17.4	NA	0.15	Cal or Ck (circle)
pH	S.U.	7.00	17.6	7.03	6.99	7.03	4.00	17.8	4.00	4.00	4.00	10.00	17.8	10.09	10.02	10.10	NA	NA	NA	NA	NA
ORP*	mV	238.0	18.5	240.4	238.4	240.4	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	~~223.0~~				Cal or Ck (circle)
Sp. EC	µs/cm	1000	17.7	NA	1002	1000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0 µs/cm	18.0	NA	3.9	Cal or Ck (circle)

END OF DAY CALIBRATION CHECK (*circle results outside of criteria*)

Parameter	**Units**	**Standard value @ 25c**	**Solution/Air Temperature**	**Standard Correction**	**Reading**	**Difference**
DO	mg/L	NA	22.9		8.32	
DO	mg/L	0	25.1	NA	0.09	
pH	S.U.	7.0	23.8	7.00	7.03	
ORP	mV	238.0	24.6		231.7	
~~ORP~~	~~mV~~	~~229.0~~				
Sp. EC	µs/cm	1000	23.6	NA	1000	996
Sp. EC	µs/cm	0	21.1	NA	7.9	

CALIBRATION REQUIREMENTS

Parameter	**Units**	**Standard**	**Reqmnt.**	**Action**
DO	mg/L	O_2 Solubility	± 0.2	Change DO membrane
DO	mg/L	0.0	≤ 0.50 but ≥ 0	Change DO membrane
pH	S.U.	7/4/10 Temp. Adj.	± 0.05	Recalibrate
ORP	mV	Specified standard	± 10.0	Calibrate*
ORP	mV	Zobell	± 10.0	Calibrate*
sp. Cond.	us/cm	Specified standard	± 5%	Recalibrate

* – ORP is checked ("RUN" mode) instead of calibrated. Only calibrated ("CALIBRATE" mode) when check fails criteria

END OF DAY CHECK REQUIREMENTS

Parameter	**Units**	**Standard**	**Reqmnt.**
DO	mg/L	100 % Saturation	± 0.5 mg/L
DO	mg/L	0.0	≤ 0.50 mg/L but ≥ 0
pH	S.U.	7.0 Temp. Adj.	± 0.3
ORP	mV	Specified standard	± 10.0
ORP	mV	Zobell	± 10.0
sp. Cond.	us/cm	Specified standard	± 5%

Record information for one instrument per sheet
Pen only; line-out errors, initial and date

Turbidity:

Water Quality Calibration Log

AECOM

Site Name / TO# / Job#	Lockheed Martin Corporation/ 60552044	Manufacture/Model:	YSI PRO PLUS
Field Activity	Groundwater Sampling	Serial Number:	18H100342
Fieldwork Dates	9/8/2020-9/25/2020	CALIBRATION DATE:	9/15/20
Date & Result of Last Temp. Check		Calibration Initials:	AG
Air temperature:	AM 61°F PM	Time:	945
Solution Temperature:	AM PM	Calibration Check Initials:	AG
Inst. Barometric Press.(mmHg):	AM 766.3 PM 763.1	Time:	1700
Pressure Corrected / Source:	AM / PM /		

INSTRUMENT NUMBER

CALIBRATION INFORMATION (*circle results outside of criteria*)

		STANDARD #1					STANDARD #2					STANDARD #3					CHECK				
Parameter	Units	Standard Value @25 °C	Solution or Air Temp °C	Standard Temp/Pres Correction	Initial Reading	Calibrated Reading	Standard Value @25 °C	Solution or Air Temp °C	Standard Temp/Pres Correction	Initial Reading	Calibrated Reading	Standard Value @25 °C	Solution or Air Temp °C	Standard Temp/Pres Correction	Initial Reading	Calibrated Reading	Standard Value @25 °C	Solution or Air Temp °C	Standard Temp/Pres Correction	Reading	Status of Check
DO	mg/L	NA	18.9	9.3	9.04	9.42	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0 mg/L	18.6	NA	0.10	Cal or Ck (circle)
pH	S.U.	7.00	18.1	7.03	7.00	7.03	4.00	14.7	4.00	4.05	4.00	10.00	20.6	10.05	10.10	10.11	NA	NA	NA	NA	NA
ORP*	mV	238.0	23.0	234.5	235.3	234.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	223.0				Cal or Ck (circle)
Sp. EC	µs/cm	1000	18.6	NA	1023	1000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0 µs/cm	14.3	NA	3.8	Cal or Ck (circle)

END OF DAY CALIBRATION CHECK (*circle results outside of criteria*)

Parameter	Units	Standard value @ 25c	Solution/Air Temperature	Standard Correction	Reading	Difference
DO	mg/L	NA	27.0	NA	0.13	
DO	mg/L	0	27.3	8.NA 8.0	8.29	8.00
pH	S.U.	7.0	23.0	7.01	6.99	
ORP	mV	238.0	23.1		230.4	
~~ORP~~	~~mV~~	~~223.0~~				
Sp. EC	µs/cm	1000	23.0	NA	998	
Sp. EC	µs/cm	0	26.2	NA	4.7	

CALIBRATION REQUIREMENTS

Parameter	Units	Standard	Reqmnt.	Action
DO	mg/L	O_2 Solubility	± 0.2	Change DO membrane
DO	mg/L	0.0	≤ 0.50 but ≥ 0	Change DO membrane
pH	S.U.	7/4/10 Temp. Adj.	± 0.05	Recalibrate
ORP	mV	Specified standard	± 10.0	Calibrate*
ORP	mV	Zobell	± 10.0	Calibrate*
sp. Cond.	us/cm	Specified standard	± 5%	Recalibrate

* – ORP is checked ("RUN" mode) instead of calibrated. Only calibrated ("CALIBRATE" mode) when check fails criteria

END OF DAY CHECK REQUIREMENTS

Parameter	Units	Standard	Reqmnt.
DO	mg/L	100 % Saturation	± 0.5 mg/L
DO	mg/L	0.0	≤ 0.50 mg/L but ≥ 0
pH	S.U.	7.0 Temp. Adj.	± 0.3
ORP	mV	Specified standard	± 10.0
ORP	mV	Zobell	± 10.0
sp. Cond.	us/cm	Specified standard	± 5%

Record information for one instrument per sheet
Pen only; line-out errors, initial and date

Turbidity:

Water Quality Calibration Log

AECOM

Site Name / TO# / Job#	Lockheed Martin Corporation/ 60552044
Field Activity	Groundwater Sampling
Fieldwork Dates	9/8/2020-9/25/2020
Date & Result of Last Temp. Check	
Air temperature: 07:30	AM 8.4°C PM
Solution Temperature:	AM 9.0 °C PM
Inst. Barometric Press.(mmHg):	AM 775.9 PM 773.4
Pressure Corrected / Source:	AM / PM /

Manufacture/Model:	YSI Pro-plus
Serial Number:	10E100342
CALIBRATION DATE:	09.21.2020
Calibration Initials:	AL
Calibration Time:	07:45
Calibration Check Initials:	AL
Calibration Check Time:	1700

INSTRUMENT NUMBER

10E100342

CALIBRATION INFORMATION (*circle results outside of criteria*)

Parameter	Units	STANDARD #1 Standard Value @25 °C	STANDARD #1 Solution or Air Temp °C	STANDARD #1 Standard Temp/Pres Correction	STANDARD #1 Initial Reading	STANDARD #1 Calibrated Reading	STANDARD #2 Standard Value @25 °C	STANDARD #2 Solution or Air Temp °C	STANDARD #2 Standard Temp/Pres Correction	STANDARD #2 Initial Reading	STANDARD #2 Calibrated Reading	STANDARD #3 Standard Value @25 °C	STANDARD #3 Solution or Air Temp °C	STANDARD #3 Standard Temp/Pres Correction	STANDARD #3 Initial Reading	STANDARD #3 Calibrated Reading	CHECK Standard Value @25 °C	CHECK Solution or Air Temp °C	CHECK Standard Temp/Pres Correction	CHECK Reading	CHECK Status of Check
DO	mg/L	NA	9.8	11.5	13.18	11.65	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0 mg/L	11.4	NA	0.48	Cal or Ck (circle)
pH	S.U.	7.00	10.7	7.07	7.00	7.07	4.00	10.3	4.00	3.91	4.00	10.00	10.6	10.18	10.02	10.17	NA	NA	NA	NA	NA
ORP*	mV	238.0	11.5	249.6	255.9	249.7	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	~~223.0~~				Cal or Ck (circle)
Sp. EC	µs/cm	1000	9.6	NA	1016	1000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0 µs/cm	11.8	NA	4.4	Cal or Ck (circle)

END OF DAY CALIBRATION CHECK (*circle results outside of criteria*)

Parameter	Units	Standard value @ 25c	Solution/Air Temperature	Standard Correction	Reading	Difference
DO	mg/L	NA	17.9	9.6	8.66	
DO	mg/L	0	20.6	NA	0.15	
pH	S.U.	7.0	19.7	7.02	~~7.07~~ 7.19	
ORP	mV	0 238.0				
ORP	mV	C ~~223.0~~ 234.0	17.8		239.2	1.0
Sp. EC	µs/cm	1000	19.9	NA	1001	
Sp. EC	µs/cm	0	18.6	NA	6.2	

0

Turbidity:

DO post cal 2nd link - 17.0 9.8 ~~9.33~~ 0 9.27

CALIBRATION REQUIREMENTS

Parameter	Units	Standard	Reqmnt.	Action
DO	mg/L	O_2 Solubility	± 0.2	Change DO membrane
DO	mg/L	0.0	≤ 0.50 but ≥ 0	Change DO membrane
pH	S.U.	7/4/10 Temp. Adj.	± 0.05	Recalibrate
ORP	mV	Specified standard	± 10.0	Calibrate*
ORP	mV	Zobell	± 10.0	Calibrate*
sp. Cond.	us/cm	Specified standard	± 5%	Recalibrate

* – ORP is checked ("RUN" mode) instead of calibrated. Only calibrated ("CALIBRATE" mode) when check fails criteria

END OF DAY CHECK REQUIREMENTS

Parameter	Units	Standard	Reqmnt.
DO	mg/L	100 % Saturation	± 0.5 mg/L
DO	mg/L	0.0	≤ 0.50 mg/L but ≥ 0
pH	S.U.	7.0 Temp. Adj.	± 0.3
ORP	mV	Specified standard	± 10.0
ORP	mV	Zobell	± 10.0
sp. Cond.	us/cm	Specified standard	± 5%

Record information for one instrument per sheet
Pen only; line-out errors, initial and date

Water Quality Calibration Log

AECOM

Site Name / TO# / Job#	Lockheed Martin Corporation/ 60552044		
Field Activity	Groundwater Sampling	**Manufacture/Model:**	YSI Pro Plus
Fieldwork Dates	9/8/2020-9/25/2020	**Serial Number:**	18H100703
Date & Result of Last Temp. Check		**CALIBRATION DATE:**	9/22/20
Air temperature:	AM	PM	**Calibration Initials:** AB
Solution Temperature:	AM 41°F	PM	**Time:** 745
Inst. Barometric Press.(mmHg):	AM 764.4	PM 775.4	**Calibration Check Initials:** DB
Pressure Corrected / Source:	AM /	PM /	**Time:** 1700

INSTRUMENT NUMBER

CALIBRATION INFORMATION (*circle results outside of criteria*)

		STANDARD #1					STANDARD #2					STANDARD #3					CHECK				
Parameter	**Units**	**Standard Value @25 °C**	**Solution or Air Temp °C**	**Standard Temp/Pres Correction**	**Initial Reading**	**Calibrated Reading**	**Standard Value @25 °C**	**Solution or Air Temp °C**	**Standard Temp/Pres Correction**	**Initial Reading**	**Calibrated Reading**	**Standard Value @25 °C**	**Solution or Air Temp °C**	**Standard Temp/Pres Correction**	**Initial Reading**	**Calibrated Reading**	**Standard Value @25 °C**	**Solution or Air Temp °C**	**Standard Temp/Pres Correction**	**Reading**	**Status of Check**
DO	mg/L	NA	9.3	11.6	11.78	11.64	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0 mg/L	11.7	NA	0.32	Cal or Ck (circle)
pH	S.U.	7.00	10.6	7.07	7.10	7.07	4.00	10.6	4.00	4.00	4.00	10.00	10.6	10.18	10.22	10.18	NA	NA	NA	NA	NA
ORP*	mV	238.0	10.8	250.5	250.4	250.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	223.0				Cal or Ck (circle)
Sp. EC	µs/cm	1000	11.1	NA	986	1000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0 µs/cm	9.4	NA	9.7	Cal or Ck (circle)

END OF DAY CALIBRATION CHECK (*circle results outside of criteria*)

Parameter	Units	Standard value @ 25c	Solution/Air Temperature	Standard Correction	Reading	Difference
DO	mg/L	NA	9.8	11.5	13.18	
DO	mg/L	0	11.4	NA	0.48	
pH	S.U.	7.0	10.7	7.07	7.00	
ORP	mV	238.0	11.5	246.6	255.9	
ORP	mV	223.0				
Sp. EC	µs/cm	1000	9.6	NA	1016	
Sp. EC	µs/cm	0	11.8	NA	4.4	

CALIBRATION REQUIREMENTS

Parameter	Units	Standard	Reqmnt.	Action
DO	mg/L	O_2 Solubility	± 0.2	Change DO membrane
DO	mg/L	0.0	≤ 0.50 but ≥ 0	Change DO membrane
pH	S.U.	7/4/10 Temp. Adj.	± 0.05	Recalibrate
ORP	mV	Specified standard	± 10.0	Calibrate*
ORP	mV	Zobell	± 10.0	Calibrate*
sp. Cond.	us/cm	Specified standard	± 5%	Recalibrate

* – ORP is checked ("RUN" mode) instead of calibrated. Only calibrated ("CALIBRATE" mode) when check fails criteria

END OF DAY CHECK REQUIREMENTS

Parameter	Units	Standard	Reqmnt.
DO	mg/L	100 % Saturation	± 0.5 mg/L
DO	mg/L	0.0	≤ 0.50 mg/L but ≥ 0
pH	S.U.	7.0 Temp. Adj.	± 0.3
ORP	mV	Specified standard	± 10.0
ORP	mV	Zobell	± 10.0
sp. Cond.	us/cm	Specified standard	± 5%

Record information for one instrument per sheet
Pen only; line-out errors, initial and date

Turbidity:

Water Quality Calibration Log

AECOM

Site Name / TO# / Job#	Lockheed Martin / 60552044			Manufacture/Model:	YSI pro Plus
Field Activity	GWS			Serial Number:	18H100763
Fieldwork Dates				CALIBRATION DATE:	9/15/20
Date & Result of Last Temp. Check				Calibration Initials:	AG
Air temperature:	AM 48°F	PM		Time:	744
Solution Temperature:	AM	PM			
Inst. Barometric Press.(mmHg):	AM 764.3	PM 767.1	Calibration Check	Initials:	AG
Pressure Corrected / Source:	AM /	PM /		Time:	1700

INSTRUMENT NUMBER

CALIBRATION INFORMATION (*circle results outside of criteria*)

		STANDARD #1					STANDARD #2					STANDARD #3					CHECK				
Parameter	Units	Standard Value @25 °C	Solution or Air Temp °C	Standard Temp/Pres Correction	Initial Reading	Calibrated Reading	Standard Value @25 °C	Solution or Air Temp °C	Standard Temp/Pres Correction	Initial Reading	Calibrated Reading	Standard Value @25 °C	Solution or Air Temp °C	Standard Temp/Pres Correction	Initial Reading	Calibrated Reading	Standard Value @25 °C	Solution or Air Temp °C	Standard Temp/Pres Correction	Reading	Status of Check
DO	mg/L	NA	13.4	10.7	12.04	10.59	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0 mg/L	15.3	NA	0.15	Cal or Ck (circle)
pH	S.U.	7.00	15.3	7.04	6.98	7.04	4.00	15.1	4.00	3.94	4.00	10.00	15.7	10.11	10.14	10.14	NA	NA	NA	NA	NA
ORP*	mV	~~14.0~~ 246.3	14.0	246.3	246.3	246.3	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sp. EC	µs/cm	1000	13.9	NA	993	1000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0 µs/cm	15.1	NA	7.4	Cal or Ck (circle)

END OF DAY CALIBRATION CHECK (*circle results outside of criteria*)

Parameter	Units	Standard value @ 25c	Solution/Air Temperature	Standard Correction	Reading	Difference
~~DO~~	~~mg/L~~	~~NA~~	~~19.1~~	~~10.5~~	~~8.34~~	~~*~~
DO	mg/L	0	19.0	NA	0.12	
pH	S.U.	7.0	18.0		7.08	
ORP	mV	234	17.9		243.1	
Sp. EC	µs/cm	1000	18.0	NA	987	
Sp. EC	µs/cm	0	19.8	NA	7.7	

CALIBRATION REQUIREMENTS

Parameter	Units	Standard	Reqmnt.	Action
DO	mg/L	O_2 Solubility	± 0.2	Change DO membrane
DO	mg/L	0.0	≤ 0.50 but ≥ 0	Change DO membrane
pH	S.U.	7/4/10 Temp. Adj.	± 0.05	Recalibrate
ORP	mV	Specified standard	± 10.0	Calibrate*
sp. Cond.	us/cm	Specified standard	± 5%	Recalibrate

*– ORP is checked ("RUN" mode) instead of calibrated. Only calibrated ("CALIBRATE" mode) when check fails criteria

END OF DAY CHECK REQUIREMENTS

Parameter	Units	Standard	Reqmnt.
DO	mg/L	100 % Saturation	± 0.5 mg/L
DO	mg/L	0.0	≤ 0.50 mg/L but ≥ 0
pH	S.U.	7.0 Temp. Adj.	± 0.3
ORP	mV	Specified standard	± 10.0
sp. Cond.	us/cm	Specified standard	± 5%

Record information for one instrument per sheet
Pen only; line-out errors, initial and date

* ~~Poly~~ th Attempt another post Cal.
17.9 4th 9.55
9.5th

PID Calibration Log

AECOM

Site Name: LM Wilmington
Job Number: 60552044
Field Activity: Gauging
Fieldwork Dates: 09.08.2020

Manufacturer: Tiger ION Science
Model Number: LT
Serial Number: T-113319
Lamp (eV): 4.5

Instrument Number: T-113319

Calibration Gas: Isobutylene
Manufacturer: Praxair
Lot Number: LBJ-X02A199CP170 8776-1

Zero Gas: Ambient
Manufacturer: —
Lot Number: —

Date	Time	Initials	Calibration or Check	Zero Reading (ppmv)	Calibration (Span) Gas		Comments
					Conc. (ppmv)	Reading (ppmv)	
09.08.20	07:45	AG	cal	0.0	100.0	100.0	
09.08.20	17:06	AG	check	0.0	100.0	56.8	

Acceptance Criteria: ± 0.50 ppmv ± 10%

- Record information for one instrument per sheet
- One sheet can be used on multiple days on the same site
- Use pen only; cross out errors with a single line, date and initial

PID Calibration Log

AECOM

Site Name: LM Wilmington
Job Number: 60552044
Field Activity: Gauging
Fieldwork Dates: 09.08.2020

Manufacturer: Mini RAE 3000
Model Number: 3000
Serial Number: SN:592-000711
Lamp (eV): 10.6

Instrument Number: 592-000711

Calibration Gas: Isobutylene
Manufacturer: ~~Minit~~ Palms
Lot Number: LOT-X02A199CP107236-1

Zero Gas: Ambient
Manufacturer: —
Lot Number: —

Date	Time	Initials	Calibration or Check	Zero Reading (ppmv)	Calibration (Span) Gas		Comments
					Conc. (ppmv)	Reading (ppmv)	
09.08.20	07:45	AG	cal	0.0	100.0	100.0	
09.08.20	17:00	AG	check	0.0	100.0	94.5	

Acceptance Criteria: ± 0.50 ppmv ± 10%

- Record information for one instrument per sheet
- One sheet can be used on multiple days on the same site
- Use pen only; cross out errors with a single line, date and initial

PID Calibration Log

AECOM

Site Name: LM Wilmington
Job Number: 60552044
Field Activity: Gauging
Fieldwork Dates: 09.08.2020

Manufacturer: MiniRAE3000
Model Number: 3000
Serial Number: SN: 592-000716
Lamp (eV): 10.6

Instrument Number: 592-000716

Calibration Gas: Isobutylene
Manufacturer: Palms
Lot Number: LBJ-X02A199CP170 P76-1

Zero Gas: Ambient
Manufacturer: —
Lot Number: —

Date	Time	Initials	Calibration or Check	Zero Reading (ppmv)	Calibration (Span) Gas		Comments
					Conc. (ppmv)	Reading (ppmv)	
09.08.20	07:45	AG	cal	0.0	100.0	100.0	
09.08.20	17:06	AG	check	0.0	100.0	89.7	

Acceptance Criteria: ± 0.50 ppmv ± 10%

- Record information for one instrument per sheet
- One sheet can be used on multiple days on the same site
- Use pen only; cross out errors with a single line, date and initial

PID Calibration Log

AECOM

Site Name:	LMC	Manufacturer:	MiniRAE 3000
Job Number:	60552044	Model Number:	3000
Field Activity:	Gauge wells	Serial Number:	542-913073
Fieldwork Dates:	9/2 9/8/20	Lamp (eV):	10.6

Instrument Number

Calibration Gas:	Isobutylene	Zero Gas:	Fresh Air
Manufacturer:	Dalms Env	Manufacturer:	—
Lot Number:	LBJ-X02AJ0 *	Lot Number:	—

Date	Time	Initials	Calibration or Check	Zero Reading (ppmv)	Calibration (Span) Gas		Comments
					Conc. (ppmv)	Reading (ppmv)	
9/8/20	745	AC	Cal	0.0	100	100.0	
9/8/20	1700	AC	Chk	0.0	100	95.3	

Acceptance Criteria: ± 0.50 ppmv ± 10%

- **Record information for one instrument per sheet**
- **One sheet can be used on multiple days on the same site**
- **Use pen only; cross out errors with a single line, date and initial**

RAC 2 SOP-011
Calibration Sheet Rev. 00
April 15, 2010

* LBJ-X02AJ 99CP170826-1

AECOM

Well ID: AE-3

Low Flow Ground Water Sample Collection Record

Client: Lockheed Martin Corp. Date: 9/23/20 Time: Start 945 am/pm
Project No: 60552044 Finish 1033 am/pm
Site Location: 50 Fordham Rd Site, Wilmington, MA
Weather Conds: 70's Sunny Collector(s): A. Grossman

1. **WELL & WATER LEVEL DATA: (measured in feet from Top of Casing unless noted)**

a. Total Well Length 13' c. Screen Length 10 (3' - 13') 2" PVC Casing
b. Water Table Depth 6.99 d. Pump Intake 8'
c. Water Column (a-b) e. Calculated System Purge Volume 1.15 L (calculation on page 2)

2. **WELL PURGE DATA**

a. Purge Method: peristaltic pump

b. Acceptance Criteria defined (see workplan)

- Temperature	3%	- D.O.	< 0.5 mg/L	-Drawdown	<0.3 ft
- pH	±1.0 unit		>0.5 mg/L within 10%	-Turbidity	<10 NTU
- Sp. Cond.	3%	- ORP	± 10mV		>10NTU within 10%

c. Field Testing Equipment used: Make YSI Model ProPlus Serial Number 18H100703

LT Geotech Turbidity meter ~~17061384~~ 65DW

Time (24hr)	Volume Removed (Liters)	Temp. (°C)	pH	Spec. Cond. (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	~~Drawdown~~ (feet)	Color/Odor
1013	0.94	22.0	6.34	1114	0.32	-82.6	0.32	188	6.99	clear / none
1018	1.88	22.1	6.35	1105	0.18	-87.2	2.70	188	6.99	clear / none
1023	2.8	22.2	6.33	1093	0.11	-89.7	2.31	194	6.98	" "
1028	3.72	22.1	6.32	1085	0.04	-92.5	2.61	164	6.44	" "
1033	4.64	22.3	6.34	1080	0.08	-95.1	1.81	164	6.48	" "

d. Acceptance criteria pass/fail

	Yes	No	N/A
Has required volume been removed	☐	☐	☐
Has required turbidity been reached	☐	☐	☐
Have parameters stabilized	☐	☐	☐

If no or N/A - Explain below.

(continued on back)

3. **SAMPLE COLLECTION:** Method: grab

Sample ID	Container Type	No.	Preservation	Analysis Req.	Time
20A-AE3-092320-1	40mL VOA	3	HCL	VOCs 8260C	1055
	40mL V	3	HCL	VPH	
	IL A	3	HCL/None	EPH	
	500mL P	1	HNO3	Total (Fe, Mn, As)	
	500mL P	1	HNO3	Diss. (Fe, Mn, As) FF	
20A-AE3-092320-2					1160

Comments

Signature Date 9/23/20

AECOM

Well ID: **AE-4**

Low Flow Ground Water Sample Collection Record

Client: Lockheed Martin Corp. Date: 9/23/20 Time: Start 1450 am/pm
Project No: 60552044 Finish 1613 am/pm
Site Location: 50 Fordham Rd Site, Wilmington, MA
Weather Conds: Collector(s): A. Grossman

1. WELL & WATER LEVEL DATA: (measured in feet from Top of Casing unless noted)

a. Total Well Length 13' c. Screen Length 10 (3' - 13') 2" PVC Casing
b. Water Table Depth 6.54 d. Pump Intake 8'
c. Water Column (a-b) e. Calculated System Purge Volume 1.15 L (calculation on page 2)

2. WELL PURGE DATA

a. Purge Method: peristaltic pump

b. Acceptance Criteria defined (see workplan)

- Temperature	3%	- D.O.	< 0.5 mg/L	-Drawdown	<0.3 ft
- pH	±1.0 unit		>0.5 mg/L within 10%	-Turbidity	<10 NTU
- Sp. Cond.	3%	- ORP	± 10mV		>10NTU within 10%

c. Field Testing Equipment used: Make / Model / Serial Number

LT — YSI ProPlus 18H100703
GeoTech Turb Meter 1706 1384

Time (24hr)	Volume Removed (Liters)	Temp. (°C)	pH	Spec. Cond. (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	~~Drawdown~~ DTW (feet)	Color/Odor
1533	0.86	23.3	5.88	1077	0.43	356	67.4	172	6.64	Mod FR/none
1538	1.72	23.4	6.06	1307	0.21	-16.3	28.0	172	6.87	" "
1543	2.42	24.1	6.16	1444	0.15	-40.9	20.3	140	6.44	LT FR/ "
1548	3.12	23.8	6.21	1470	0.13	-45.9	15.2	140	6.86	" "
1553	3.82	23.0	6.22	1491	0.11	-49.4	11.6	140	6.66	" "
1558	4.52	23.2	6.24	1506	0.10	-54.7	10.2	140	6.66	
1603	5.22	23.2	6.22	1494	0.10	-53.9	9.27	140	6.66	

d. Acceptance criteria pass/fail

	Yes	No	N/A
Has required volume been removed	☐	☐	☐
Has required turbidity been reached	☐	☐	☐
Have parameters stabilized	☐	☐	☐

If no or N/A - Explain below.

(continued on back)

3. SAMPLE COLLECTION: Method: grab

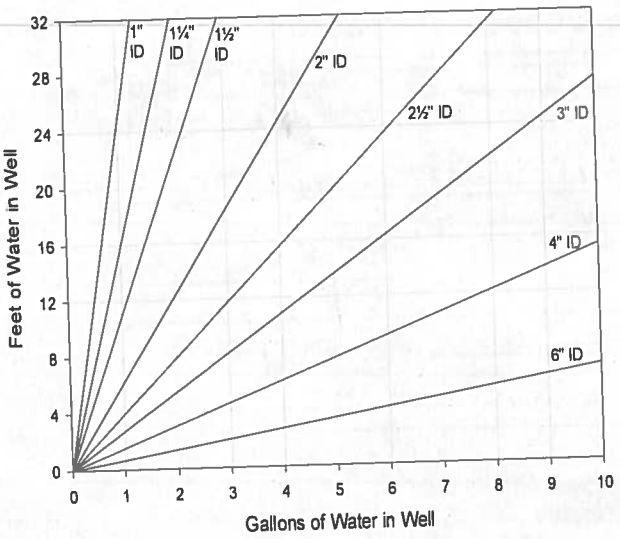
Sample ID 20A-AE4-____-I	Container Type	No.	Preservation	Analysis Req.	Time
	40mL VOA	3	HCL	VOCs 8260C	
	1L A	3	HCL/None	EPH	
	40mL V	3	HCL	VPH	

Comments mod = moderate

Signature [signature] Date 9/23/20

Well ID: AE-4

AECOM



Volume / Linear Ft. of Pipe		
ID (in)	Gallon	Liter
0.25	0.0025	0.0097
0.375	0.0057	0.0217
0.5	0.0102	0.0386
0.75	0.0229	0.0869
1	0.0408	0.1544
1.25	0.0637	0.2413
1.5	0.0918	0.3475
2	0.1632	0.6178
2.5	0.2550	0.9653
3	0.3672	1.3900
4	0.6528	2.4711
6	1.4688	5.5600

Purge Volume Calculation

[11 ft (tubing length) x 0.0097 L/ft] + 0.275 L (flow cell vol.) = 0.382 L ; 0.382 L x 3 well vol. = 1.15 L

(continued from front)

Time (24 hr)	Volume Removed (Liters)	Temp (°C)	pH	Spec. Cond (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (ft)	Color/Odor
1608	5.92	23.1	6.26	1525	0.15	-54.7	9.38	140	6.66	
1613	6.62	22.9	6.24	1523	0.10	-61.8	8.43	140	6.66	

Hydrogen Bubble Strip Sampling:

Purge rate=	Purge Duration=	Sample time=	

Inside building

AECOM

Well ID: AE-23R

Low Flow Ground Water Sample Collection Record

Client: Lockheed Martin Corp. Date: 09/14/2020 Time: Start 1415 am/pm
Project No: 60552044 Finish 1453 am/pm
Site Location: 50 Fordham Rd Site, Wilmington, MA
Weather Conds: Collector(s): A. Grossman

1. WELL & WATER LEVEL DATA: (measured in feet from Top of Casing unless noted)

a. Total Well Length 55' c. Screen Length 10 (44.7' - 54.7') 1.5" PVC Casing
b. Water Table Depth 9.22 d. Pump Intake 49'
c. Water Column (a-b) e. Calculated System Purge Volume 2.48 L (calculation on page 2)

2. WELL PURGE DATA

a. Purge Method: hydrolift to evacuate well, then peristaltic to sample after recharge

b. Acceptance Criteria defined (see workplan)

- Temperature	3%	- D.O.	< 0.5 mg/L	-Drawdown	<0.3 ft
- pH	±1.0 unit		>0.5 mg/L within 10%	-Turbidity	<10 NTU
- Sp. Cond.	3%	- ORP	± 10mV		>10NTU within 10%

c. Field Testing Equipment used:

	Make	Model	Serial Number
	YSI	Pro Plus	18H100703
LT	Turb Meter	GeoTech	1706384

Time (24hr)	Volume Removed (Liters)	Temp. (°C)	pH	Spec. Cond. (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	~~Drawdown~~ (feet)	Color/Odor
1443	.55	17.1	6.68	1465	0.44	-68.6	8.53	110	11.41	clr/strong solvent-like
1448	1.15	16.5	6.64	1439	0.23	-92.1	8.87	120	12.82	" "
1453	1.7	16.4	6.42	1434	0.14	-100.2	8.41	110	13.28	" "
~~1458~~										

d. Acceptance criteria pass/fail

	Yes	No	N/A
Has required volume been removed	☐	☐	☐
Has required turbidity been reached	☐	☐	☐
Have parameters stabilized	☐	☐	☐

If no or N/A - Explain below.

(continued on back)

3. SAMPLE COLLECTION: Method: grab

Sample ID	Container Type	No.	Preservation	Analysis Req.	Time
20A-AE23R-_____-1	40mL VOA	3	HCL	VOCs 8260C	1455
	250 mL A	1	NaHSO4	1,4-dioxane	
	40mL V	3	HCL	VPH	
	1L A	3	HCl/None	EPH	

Comments 10:20 - Purged ~4 Gallons DTW$_F$ = 45.13
1427: ~~DTW=40~~ DTW: 9.56

Signature Date 09/14/2020

AECOM

Well ID: **AE-24**

Low Flow Ground Water Sample Collection Record

Client: Lockheed Martin Corp. Date: 9/14/20 Time: Start 415 am/pm
Project No: 60552044 Finish 1006 am/pm
Site Location: 50 Fordham Rd Site, Wilmington, MA
Weather Conds: Mostly sunny, 70s Collector(s): A. Grossman

1. WELL & WATER LEVEL DATA: (measured in feet from Top of Casing unless noted)

a. Total Well Length 17.25' c. Screen Length 10 (7.25' - 17.25') 2" PVC Casing
b. Water Table Depth 9.26 d. Pump Intake 12.25'
c. Water Column (a-b) _____ e. Calculated System Purge Volume 1.41 L (calculation on page 2)

2. WELL PURGE DATA

a. Purge Method: peristaltic pump

b. Acceptance Criteria defined (see workplan)

- Temperature	3%	- D.O.	< 0.5 mg/L	-Drawdown	<0.3 ft
- pH	± 1.0 unit		>0.5 mg/L within 10%	-Turbidity	<10 NTU
- Sp. Cond.	3%	- ORP	± 10mV		>10NTU within 10%

c. Field Testing Equipment used:

	Make	Model	Serial Number
	YSI	ProPlus	19H100703
	Geotech	Turb meter	17061384

Time (24hr)	Volume Removed (Liters)	Temp. (°C)	pH	Spec. Cond. (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	~~Drawdown~~ (ft)	Color/Odor
945	0	18.2	6.07	623	5.92	226.6	14.0	200	9.32	clr/none
956	1	18.1	5.91	614	5.76	232.6	9.73	200	9.33	clr/none
1001	1.9	17.4	5.96	611	5.76	238.3	3.49	180	9.32	" "
1006	2.8	17.4	5.93	604	6.04	234.4	2.49	"	"	" "

(continued on back)

d. Acceptance criteria pass/fail

	Yes	No	N/A
Has required volume been removed	☐	☐	☐
Has required turbidity been reached	☐	☐	☐
Have parameters stabilized	☐	☐	☐

If no or N/A - Explain below.

3. SAMPLE COLLECTION: Method: grab

Sample ID	Container Type	No.	Preservation	Analysis Req.	Time
20A-AE24-091420-1	40mL VOA	3	HCL	VOCs 8260C	1010
	250 mL VOA	1	$NaHSO_4$	1,4-Dioxane	✓

Comments Bubbles coming up from well - occasional

Signature _____ Date 9/14/20

AECOM

Well ID: **AE-26R**

Low Flow Ground Water Sample Collection Record

Client: Lockheed Martin Corp. Date: 9/14/2020 Time: Start 1000 ~~am/pm~~
Project No: 60552044 Finish 1400 ~~am/pm~~
Site Location: 50 Fordham Rd Site, Wilmington, MA
Weather Conds: Sunny 80's Collector(s): Sean Haggett

1. WELL & WATER LEVEL DATA: (measured in feet from Top of Casing unless noted)

a. Total Well Length 150' b. Water Table Depth NA c. Water Column (a-b) NA
d. Depth to Water in FLUTe liner 0.94' e. Purge Pressure NA f. Sample Pressure NA

2. PORT DATA:

Port	Sampling Interval (ft BGS)	Port Depth (ft BGS)	Recommended Purge Volume (Liters)	Actual Purge Volume (Liters)	Max Flow Rate expected (mL/min)	Actual Flow Rate (mL/min)	Expected Purge Time (min)	Actual Purge Time (min)
1	50-56	49	2.2	2.26	200	200	10.66	11.30
2	72-78	71	2.4	2.70	140	150	17.10	18.00
3	81-88	80	2.8		120		22.36	
4	104-114	103	3.9		100		40.32	
5	123-132	122	3.8	3.84	80	80	46.63	~~18.90~~

a. Field Testing Equipment used:

Make	Model	Serial Number
YSI	Quatro	18D102399
Geotech	turbidimeter	19011937

Port	Time (24hrs)	Purge Time mins	pH	Temp. (°C)	Spec. Cond. (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	~~PID~~ (ppm)	Color/Odor
1	1012	11:30	10.46	16.2	655	2.65	-357.1	0.02		Clear/Strong org. odor
2	1208	18.00	8.22	16.8	589	0.64	-271.9	0.12		Clear/Strong org. odor
3										
4										
5	1358	18.00	7.69	18.0	1401	3.62	-297.8	1.63		Clear/Strong org. odor

3. SAMPLE COLLECTION:

Sample ID	Analysis	Time
20A-AE26R1-091420-1	VOCs, VPH, EPH, Total/Dissolved (As, Fe, Mn), NO3, NO2, Cl, SO4, S, TOC	1020
	Diss. H, Gases (Acety., Prop., Meth., Ethe., Etha.) 1,4-Dioxane	
20A-AE26R2-091420-1	VOCs	1210
20A-AE26R5-091420-1	VOCs, 1,4-dioxane	1400

Notes: Added 1 gallon of water to flute liner.

R1 = Hydrogen purge time and rate = Start/End: 1036-1051 Purge time: 15 mins purge rate: 215 mL/min

Signature [signature] Date 9/14/2020

AECOM

Well ID: **AE-26S**

Low Flow Ground Water Sample Collection Record

Client: Lockheed Martin Corp. Date: 9/14/20 Time: Start 1045 (am) pm
Project No: 60552044 Finish 1320 am (pm)
Site Location: 50 Fordham Rd Site, Wilmington, MA
Weather Conds: 70s, mostly (cloudy) Collector(s): A. Grossman

1. WELL & WATER LEVEL DATA: (measured in feet from Top of Casing unless noted)

a. Total Well Length 32' c. Screen Length 10 (20' - 30') 2" PVC Casing
b. Water Table Depth 4.18 d. Pump Intake 25'
c. Water Column (a-b) e. Calculated System Purge Volume 1.84 L (calculation on page 2)

2. WELL PURGE DATA

a. Purge Method: peristaltic pump

b. Acceptance Criteria defined (see workplan)

- Temperature	3%	- D.O.	< 0.5 mg/L	-Drawdown	<0.3 ft
- pH	±1.0 unit		>0.5 mg/L within 10%	-Turbidity	<10 NTU
- Sp. Cond.	3%	- ORP	± 10mV		>10NTU within 10%

c. Field Testing Equipment used:

	Make	Model	Serial Number
	YSI	Pro Plus	18H102763
	Geotech	Two meter	17061364
		bmw	

Time (24hr)	Volume Removed (Liters)	Temp. (°C)	pH	Spec. Cond. (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	~~Drawdown~~ (feet)	Color/Odor
1125	.6	17.3	5.42	191.0	0.30	217.0	0.46	120	4.22	clr/rap
1130	1.5	16.7	5.36	226.0	0.14	226.3	0.02	180	4.24	" "
1135	2.5	16.5	5.33	191.7	0.14	233.0	0.48	200	4.23	" "
1140	3.5	16.4	5.33	140.4	0.10	235.2	1.17	"	4.24	" "
1145	4.5	16.4	5.33	222.0	0.08	237.4	0.72	"	4.23	" "
1150	5.4	16.3	5.37	284.4	0.04	234.7	0.02	180	4.27	" "
1155	6.3	16.4	5.35	366.2	0.04	243.5	0.02	"	4.23	" "

(continued on back)

d. Acceptance criteria pass/fail

	Yes	No	N/A
Has required volume been removed	☐	☐	☐
Has required turbidity been reached	☐	☐	☐
Have parameters stabilized	☐	☐	☐

If no or N/A - Explain below.

3. SAMPLE COLLECTION: Method: grab

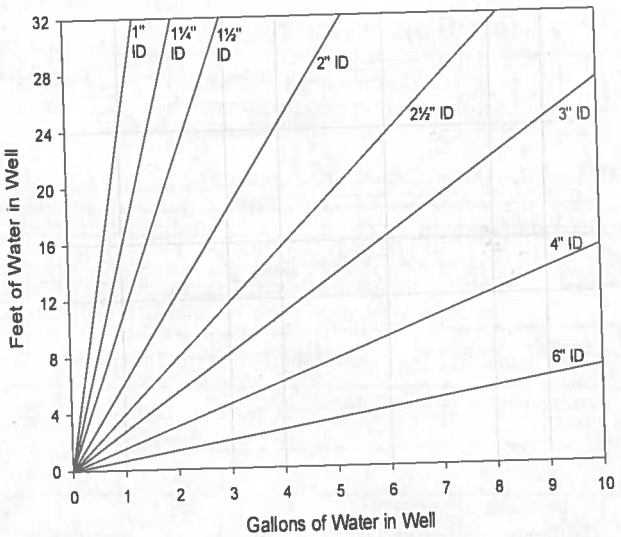
Sample ID	Container Type	No.	Preservation	Analysis Req.	Time
20A-AE26S-041420	40mL VOA	3	HCL	VOCs 8260C	1325
	500mL P	1	HNO3	Total (Fe, Mn, As)	
	500mL P	1	HNO3	Diss. (Fe, Mn, As) FF	

Comments

Signature Date 9/14/20

Well ID: AE-26S

AECOM



Volume / Linear Ft. of Pipe		
ID (in)	Gallon	Liter
0.25	0.0025	0.0097
0.375	0.0057	0.0217
0.5	0.0102	0.0386
0.75	0.0229	0.0869
1	0.0408	0.1544
1.25	0.0637	0.2413
1.5	0.0918	0.3475
2	0.1632	0.6178
2.5	0.2550	0.9653
3	0.3672	1.3900
4	0.6528	2.4711
6	1.4688	5.5600

Purge Volume Calculation

[35 ft (tubing length) x 0.0097 L/ft] + 0.275 L (flow cell vol.) = 0.615 L ; 0.615 L x 3 well vol. = 1.84 L

(continued from front)

Time (24 hr)	Volume Removed (Liters)	Temp (°C)	pH	Spec. Cond (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	~~Drawdown~~ (ft)	Color/Odor
1200	7.2	16.3	5.40	415.1	0.07	243.6	0.05	180	9.23	Clr/none
1205	8.1	16.3	5.40	464.0	0.06	242.4	0.13	180	9.23	" "
1210	9.25	16.4	5.42	505.2	0.06	241.7	0.32	185	9.23	" "
1215	10.175	16.3	5.43	551.6	0.06	241.7	0.21	185	9.23	" "
1220	11.1	16.3	5.42	607	0.06	246.9	0.13	185	9.23	" "
1225	12.625	16.3	5.43	654	0.06	247.9	0.02	185	9.23	" "
1230	12.95	16.3	5.42	707	0.06	244.2	0.02	185	9.23	" "
1235	13.875	16.2	5.43	731	0.06	250.1	0.23	"	"	" "
1240	14.8	16.2	5.43	770	0.06	244.6	0.02	"	"	" "
1245	15.725	16.3	5.43	812	0.06	244.7	0.16	"	"	" "
1250	16.65	16.3	5.44	840	0.06	247.6	0.02	"	"	" "
1255	17.575	16.3	5.46	862	0.06	245.6	0.02	"	"	" "
1300	18.5	16.3	5.44	887	0.07	243.6	0.02	"	9.24	" "
1305	19.425	16.1	5.45	914	0.06	241.4	3.45	"	9.24	" "
1310	20.35	16.2	5.44	941	0.06	240.0	0.21	"	9.24	" "
1315	21.275	16.2	5.46	983	0.06	235.6	0.17	"		" "
1320	22.2	16.3	5.47	1020	0.06	235.1	0.37	"		" "

Hydrogen Bubble Strip Sampling:

Purge rate=	Purge Duration=	Sample time=

AECOM

Well ID: **AE-28R**

Low Flow Ground Water Sample Collection Record

Client: Lockheed Martin Corp. Date: 09.14.2020 Time: Start 09:15 am/pm
Project No: 60552044 Finish 15:00 am/pm
Site Location: 50 Fordham Rd Site, Wilmington, MA
Weather Conds: 70°F, sunny (indoor sampling) Collector(s): L. Fogby

1. WELL & WATER LEVEL DATA: (measured in feet from Top of Casing unless noted)

a. Total Well Length 150' b. Water Table Depth NA c. Water Column (a-b) NA
d. Depth to Water in FLUTe liner 1.5' (after adding 10 gal) e. Purge Pressure NA f. Sample Pressure NA

2. PORT DATA:

Port	Sampling Interval (ft BGS)	Port Depth (ft BGS)	Recommended Purge Volume (Liters)	Actual Purge Volume (Liters)	Max Flow Rate expected (mL/min)	Actual Flow Rate (mL/min)	Expected Purge Time (min)	Actual Purge Time (min)
1	45-51	44	2.1	2.2	230	220	9.5	10
2	75-85	74	3.6	~~3.36~~ 3.6	130	120	26.70	~~28~~ 30 LZ
3	98-108	97	3.8	3.8	100	100	37.5	38
4	132-142	131	4.2	4.5	80	80	55.5	56

a. Field Testing Equipment used:

Make	Model	Serial Number
YSi	Professional Plus	10E100125U
Turb Meter	Geotech	19062110

Port	Time (24hrs)	Purge Time	pH	Temp. (°C)	Spec. Cond. (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	PID (ppm)	Color/Odor
LZ 2	~~1~~	10:07	30	7.49	16.6	1539	0.68	347.2	0.22	NM	NO color, rotten smell
1	~~2~~	12:10	10	7.21	16.0	1886	4.79	201.3	0.27	NM	—
3		13:40	38	7.82	16.8	1226	0.0	-350.7	0.68	NM	—
4		14:48	56	7.77	17.7	1558	0.46	-369.9	2.16	NM	—

3. SAMPLE COLLECTION:

Sample ID	Analysis	Time
20A-AE28R2-091420-1	VOC 1	~~10~~ 12:15
20A-AE28R2-091420-1	VOCs, 1,4-diox., VPH, EPH, Total/Dissolved (As, Fe, Mn), NO3, NO2, Cl, SO4, S, TOC, Diss. H, Gases (Acety., Prop., Meth., Ethe., Etha.) 2	~~10:15~~ LZ
20A-AE28R3-091420-1	VOCs, 1,4-Dioxane 3	13:45
20A-AE28R4-091420-1	VOCs 4	14:50

Notes: Port 2 and Port 1 parameter lines are switched* water has a swampy smell

Hydrogen purge time and rate = 150 mL/min, 25 min start: 11:00 end: 11:25

Signature Leah Fogby Date 09.14.2020

AECOM

Well ID: **AE-29R**

Low Flow Ground Water Sample Collection Record

Client: Lockheed Martin Corp. Date: 09.22.2020 Time: Start 09:05 am/pm
Project No: 60552044 Finish 15:20 am/pm
Site Location: 50 Fordham Rd Site, Wilmington, MA
Weather Conds: 50°F, overcast Collector(s): L. Zogby

1. WELL & WATER LEVEL DATA: (measured in feet from Top of Casing unless noted)

a. Total Well Length 150' b. Water Table Depth NA c. Water Column (a-b) NA
d. Depth to Water in FLUTe liner 3.10' e. Purge Pressure NA f. Sample Pressure NA

2. PORT DATA:

Port	Sampling Interval (ft BGS)	Port Depth (ft BGS)	Recommended Purge Volume (Liters)	Actual Purge Volume (Liters)	Max Flow Rate expected (mL/min)	Actual Flow Rate (mL/min)	Expected Purge Time (min)	Actual Purge Time (min)
1	37-44	36	2.3	2.56	320	320	7.23	8.00
2	47-54	46	2.4	not sampled	250	—	9.65	—
3	70-76	69	2.4	2.4	170	160	14.18	15.00
4	90-96	89	2.6	not sampled	130	—	19.9	—
5	113-119	112	2.8	2.8	100	100	27.36	28.00
6	140-146	139	3.1	3.5	80	~~80~~ 100 LZ	~~37.35~~ 35	35.00

a. Field Testing Equipment used:

Make	Model	Serial Number
YSI	ProPlus	10E100125U
Geotech	Turb Meter	19062110

Port	Time (24hrs)	Purge Time (min)	pH	Temp. (°C)	Spec. Cond. (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	PID (ppm)	Color/Odor
1	09:20	8	9.39	13.2	4393	2.31	220.2	5.48	NM	None
2	not sampled			—	—	—	—	—	—	—
3	~~10:25~~	15	7.15	14.7	3949	0.02	31.3	0.02	NM	None
4	not sampled			—	—	—	—	—	—	—
5	14:45	28	8.21	16.0	660	1.28	-51.3	0.80	NM	None
6	10:25	35	7.21	14.9	2457	0.61	174.2	~~0.61~~ 3.77 LZ	NM	None

3. SAMPLE COLLECTION:

Sample ID	Analysis		Time
20A-AE29R1-092220-1	VOCs		@09:25
20A-AE29R3-092220-1	VOCs	3	@15:20
20A-AE29R5-092220-1	VOCs	5	@14:50
20A-AE29R6-092220-1	VOCs, 1,4-diox, VPH, EPH, Total/Dissolved (As, Fe, Mn), NO3, NO2, Cl, SO4, S,	6	@10:35
	TOC, Diss. H, Gases (Acety., Prop., Meth., Ethe., Etha.)		Diss H @11:25-11:55

Notes: None of the tubing had covers/caps on the end. Port 6: Pump shut off at 80 mL/min, bumped to 100 mL/min.

Hydrogen purge time and rate = 100 mL/min, 30 min → [11:25 - 11:55]

Signature Leah Zogby Date 09.22.2020

AECOM

Well ID: AE-100R

Low Flow Ground Water Sample Collection Record

Client: Lockheed Martin Corp. Date: 09/10/2020 Time: Start 0835 am/pm
Project No: 60552044 Finish 1355 am/pm
Site Location: 50 Fordham Rd Site, Wilmington, MA
Weather Conds: Collector(s): A-Gomes

1. WELL & WATER LEVEL DATA: (measured in feet from Top of Casing unless noted)

a. Total Well Length 114' b. Water Table Depth NA c. Water Column (a-b) NA
d. Depth to Water in FLUTe liner e. Purge Pressure 55 psi f. Sample Pressure 38 psi

2. PORT DATA:

Port	Sampling Interval (ft BGS)	Pump Depth (ft BGS)	Purge Volume (Liters)	Sample Stroke Volume (Liters)	Min. Discard (Liters)	Initial DTW @835	Before 2nd Purge DTW @949	Before 3rd Purge DTW @1034
1	18-24	98	4.03	3.07	0.224	7.75	7.82	7.86
2	43-48	99	4.10	3.07	0.239	not sampled		
3	50-56	100	4.14	3.07	0.242	7.78	7.90	7.94
4	63-68	101	4.18	3.07	0.244	7.90	7.91	7.95
5	88-93	102	4.23	3.07	0.246	7.98	7.97	7.99
6	108.5-113.5	103	4.37	3.07	0.248	7.98	7.95	7.95

a. Field Testing Equipment used:

Make	Model	Serial Number
YSI	ProPlus	18#100703
Turb Meter	GeoTech	17061384

b. 1st Purge Time/Duration Purged on 9/4/20 c. 2nd Purge Time/Duration 841-846/5 min
d. 3rd Purge Time/Duration 957-1002/5 min e. 4th Purge Time/Duration @1034-1042-1047/5 min

Port	Time (24hrs)	Purge Time	pH	Temp. (°C)	Spec. Cond. (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	PID (ppm)	Color/Odor
1	1204	4m	6.31	15.8	2527	0.26	-80.1	0.02	NM	
2	~	—	—	~	—	—	—	—	—	—
3	1157		6.46	15.4	2311	0.17	132.5	0.02		
4	1144	5	15.4 ↔ 6.62		1428	0.13	88.1	0.02		
5	1126	~~15~~ 5	6.81	15.6	1434	0.12	81.6	0.02		
6	1143	5	7.17	15.3	787	0.24	-49.3	0.02		

5 min

3. SAMPLE COLLECTION:

Sample ID	Analysis	Time
20A-AE100R1-_____-1	VOCs, VPH, EPH	
20A-AE100R3-_____-1	VOCs, 1,4-dioxane	1355
20A-AE100R4-_____-1	VOCs, 1,4-dioxane	1345
20A-AE100R5-_____-1	VOCs, Total (As, Fe, Mn), Dissolved (As, Fe, Mn), NO3, NO2, Cl, SO4, S, Diss. H, Gases (Acety., Prop., Meth., Ethe., Etha.)	1300
20A-AE100R6-_____-1	VOCs, 1,4-dioxane	1335

Notes: Bubbles coming up from well

Hydrogen purge time and rate = 25 min

Signature [signature] Date 09/10/2020

AECOM

Well ID: **AE-101D**

Low Flow Ground Water Sample Collection Record

Client: Lockheed Martin Corp. Date: 9/18/20 Time: Start 1035 am/pm
Project No: 60552044 Finish 1120 am/pm
Site Location: 50 Fordham Rd Site, Wilmington, MA
Weather Conds: 50's clouds Collector(s): Floyd Burton

1. WELL & WATER LEVEL DATA: (measured in feet from Top of Casing unless noted)

a. Total Well Length 25.5' c. Screen Length 5 (20' - 25') 2" PVC Casing
b. Water Table Depth 3.80 d. Pump Intake 22.5'
c. Water Column (a-b) 21.70 e. Calculated System Purge Volume 1.55 L (calculation on page 2)

2. WELL PURGE DATA

a. Purge Method: peristaltic pump

b. Acceptance Criteria defined (see workplan)

- Temperature	3%	- D.O.	< 0.5 mg/L	-Drawdown	<0.3 ft
- pH	± 1.0 unit		>0.5 mg/L within 10%	-Turbidity	<10 NTU
- Sp. Cond.	3%	- ORP	± 10mV		>10NTU within 10%

c. Field Testing Equipment used:

Make	Model	Serial Number
YSI	Pro Plus	10D101443

Time (24hr)	Volume Removed (Liters)	Temp. (°C)	pH	Spec. Cond. (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (feet)	Color/Odor
1045	0	17.9	5.96	1737	0.73	-190.3	7.1	100	0	Clear/none
1050	0.5	17.0	5.91	1828	0.30	-304.2	4.6	100	0	
1055	1.0	17.0	5.91	1838	0.29	-305.1	4.3	100	0	
1100	1.5	17.0	5.91	1841	0.28	-305.8	4.2	100	0	↓

d. Acceptance criteria pass/fail

	Yes	No	N/A
Has required volume been removed	☒	☐	☐
Has required turbidity been reached	☒	☐	☐
Have parameters stabilized	☒	☐	☐

(continued on back)

If no or N/A - Explain below.

3. SAMPLE COLLECTION: Method: grab

Sample ID	Container Type	No.	Preservation	Analysis Req.	Time
20A-AE101D-091820 -1	40mL VOA	3	HCL	VOCs 8260C	1105
	250 mL Amber	1	NaHSO4	1,4-dioxane	

Comments MS/MSD

Signature FBurton JM Date 9/18/20

AECOM

Well ID: **AE-101R1**

Low Flow Ground Water Sample Collection Record

Client: Lockheed Martin Corp. Date: 09.23.2020 Time: Start 10:05 am/pm
Project No: 60552044 Finish 10:40 am/pm
Site Location: 50 Fordham Rd Site, Wilmington, MA
Weather Conds: 65°F, sunny Collector(s): L. Zogby

1. WELL & WATER LEVEL DATA: (measured in feet from Top of Casing unless noted)

a. Total Well Length 35.5' c. Screen Length 5 (30.5' - 35.5') 0.5" CMT Channel
b. Water Table Depth 3.81' d. Pump Intake 33'
c. Water Column (a-b) 31.69' e. Calculated System Purge Volume L (calculation on page 2)

2. WELL PURGE DATA

a. Purge Method: peristaltic pump

b. Acceptance Criteria defined (see workplan)

- Temperature	3%	- D.O.	< 0.5 mg/L	-Drawdown	<0.3 ft
- pH	± ~~1.0 unit~~ 0.1		>0.5 mg/L within 10%	-Turbidity	<10 NTU
- Sp. Cond.	3%	- ORP	± 10mV		>10NTU within 10%

c. Field Testing Equipment used:

Make	Model	Serial Number
YSI	Pro Plus	10E100125u
Geotech	Turb Meter	19062110

Time (24hr)	Volume Removed (Liters)	Temp. (°C)	pH	Spec. Cond. (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (feet)	Color/Odor
10:10	0.5	17.8	7.02	2260	0.67	275.2	0.85	100	NM	—
10:15	1.0	17.9	6.51	2257	0.55	268.6	0.44	100	NM	—
10:20	1.5	17.9	6.33	2245	0.41	263.2	0.90	100	NM	—
10:25	2.0	17.9	6.23	2234	0.33	257.5	0.06	100	NM	—
10:30	2.5	17.8	6.18	2225	0.26	249.5	0.02	100	NM	—

(continued on back)

d. Acceptance criteria pass/fail

	Yes	No	N/A
Has required volume been removed	☒	☐	☐
Has required turbidity been reached	☒	☐	☐
Have parameters stabilized	☒	☐	☐

If no or N/A - Explain below.
Stable @ 10:30

3. SAMPLE COLLECTION: Method: grab

Sample ID	Container Type	No.	Preservation	Analysis Req.	Time
20A-AE101R1-~~092320~~ -1	40mL VOA	3	HCL	VOCs 8260C	@10:35
20A-AE101R1-092320-2	(Dupe) 40mL VOA	3	HCl	VOCs 8260C	@10:40

Comments

Signature L. Zogby Date 09.23.2020

AECOM

Well ID: **AE-101R2**

Low Flow Ground Water Sample Collection Record

Client: Lockheed Martin Corp. Date: 09.23.2020 Time: Start 10:50 am/pm
Project No: 60552044 Finish 11:40 am/pm
Site Location: 50 Fordham Rd Site, Wilmington, MA
Weather Conds: 65°F, sunny Collector(s): L. Zogby

1. WELL & WATER LEVEL DATA: (measured in feet from Top of Casing unless noted)

a. Total Well Length 60' c. Screen Length 5 (55' - 60') 0.5" CMT Channel
b. Water Table Depth 3.82' d. Pump Intake 57.5'
c. Water Column (a-b) 56.18' e. Calculated System Purge Volume L (calculation on page 2)

2. WELL PURGE DATA

a. Purge Method: peristaltic pump

b. Acceptance Criteria defined (see workplan)

- Temperature	3%	- D.O.	< 0.5 mg/L	-Drawdown	<0.3 ft
- pH	± 1.0 unit		>0.5 mg/L within 10%	-Turbidity	<10 NTU
- Sp. Cond.	3%	- ORP	± 10mV		>10NTU within 10%

c. Field Testing Equipment used:

Make	Model	Serial Number
YSI	Pro Plus	10E100125H
Geotech	Turb Meter	19016210

Time (24hr)	Volume Removed (Liters)	Temp. (°C)	pH	Spec. Cond. (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (feet)	Color/Odor
10:55	0.5	18.2	6.72	1493	1.13	282.3	2.15	100	NM	Dark black particulates
11:00	1.0	17.9	6.97	1444	0.43	110.5	1.24	100	NM	clear
11:05	1.5	17.8	7.02	1441	0.39	69.1	0.36	100	NM	clear
11:10	2.0	18.0	7.11	1442	0.31	13.8	0.03	100	NM	clear
11:15	2.5	18.0	7.18	1440	0.33	-14.0	3.24	100	NM	clear
11:20	3.0	18.0	7.23	1439	0.32	-31.3	0.13	100	NM	clear
11:25	3.5	18.1	7.27	1442	0.31	-42.8	0.02	100	NM	clear

(continued on back) →

d. Acceptance criteria pass/fail

	Yes	No	N/A
Has required volume been removed	☒	☐	☐
Has required turbidity been reached	☒	☐	☐
Have parameters stabilized	☒	☐	☐

If no or N/A - Explain below. Stable @ 11:35

3. SAMPLE COLLECTION: Method: grab

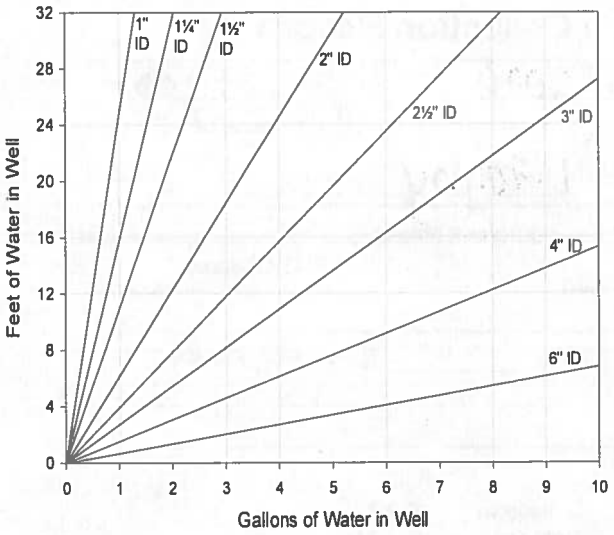
Sample ID	Container Type	No.	Preservation	Analysis Req.	Time
20A-AE101R2-092320-1	40mL VOA	3	HCL	VOCs 8260C	@11:40
	250 mL Amber	1	NaHSO4	1,4-dioxane	

Comments Dark black/grey particulates during initial purge. Purge water cloudy grey for 5 mins before YSI readings taken.

Signature Leah Zogby Date 09.23.2020

AECOM

Well ID: AE-101R2



Volume / Linear Ft. of Pipe		
ID (in)	Gallon	Liter
0.25	0.0025	0.0097
0.375	0.0057	0.0217
0.5	0.0102	0.0386
0.75	0.0229	0.0869
1	0.0408	0.1544
1.25	0.0637	0.2413
1.5	0.0918	0.3475
2	0.1632	0.6178
2.5	0.2550	0.9653
3	0.3672	1.3900
4	0.6528	2.4711
6	1.4688	5.5600

Purge Volume Calculation

[60 ft (channel length) x 0.0097 L/ft] + 0.275 L (flow cell vol.) = 1.29 L

(continued from front)

Time (24 hr)	Volume Removed (Liters)	Temp (°C)	pH	Spec. Cond (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (ft)	Color/Odor
11:30	4.0	18.2	7.28	1436	0.36	-46.6	0.43	100	NM	clear
11:35	4.5	18.1	7.30	1435	0.28	-51.1	0.02	100	NM	clear

AECOM

Well ID: **AE-101R3**

Low Flow Ground Water Sample Collection Record

Client: Lockheed Martin Corp. Date: 09.23.2020 Time: Start 12:15 am/pm
Project No: 60552044 Finish 13:05 am/pm
Site Location: 50 Fordham Rd Site, Wilmington, MA
Weather Conds: 65°F, sunny Collector(s): L. Zugby

1. WELL & WATER LEVEL DATA: (measured in feet from Top of Casing unless noted)

a. Total Well Length 85' c. Screen Length 5 (80' - 85') 0.5" CMT Channel
b. Water Table Depth 3.77' d. Pump Intake 82.5'
c. Water Column (a-b) 81.23' e. Calculated System Purge Volume L (calculation on page 2)

2. WELL PURGE DATA

a. Purge Method: peristaltic pump

b. Acceptance Criteria defined (see workplan)

- Temperature	3%	- D.O.	< 0.5 mg/L	-Drawdown	<0.3 ft
- pH	± 1.0 unit		>0.5 mg/L within 10%	-Turbidity	<10 NTU
- Sp. Cond.	3%	- ORP	± 10mV		>10NTU within 10%

c. Field Testing Equipment used:

	Make	Model	Serial Number
	YSI	Pro Plus	10E100125
	Geotech	Turbidity meter	19062110

Time (24hr)	Volume Removed (Liters) (total)	Temp. (°C)	pH	Spec. Cond. (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (feet)	Color/Odor
12:20	0.6	18.2	7.09	2283	0.48	22.0	3.66	120	NM	LZ None felt a cloudy
12:25	1.2	18.3	7.11	2299	0.45	13.2	42.3	120	NM	Dark cloudy
12:30	1.8	18.2	7.18	2334	0.41	-22.6	4.97	120	NM	clearer, some black specs
12:35	2.4	18.5	7.23	2342	0.36	-41.7	4.66	120	NM	clearer, some particulate
12:40	3.0	18.7	7.25	2344	0.40	-51.0	5.13	120	NM	clear
12:45	3.6	18.8	7.28	2337	0.30	-58.7	0.56	100	NM	clear
12:50	4.2	18.3	7.36	2344	0.24	-63.3	1.17	120	NM	clear

(continued on back) →

d. Acceptance criteria pass/fail

	Yes	No	N/A
Has required volume been removed	☒	☐	☐
Has required turbidity been reached	☒	☐	☐
Have parameters stabilized	☒	☐	☐

If no or N/A - Explain below. Stable @ 13:00

3. SAMPLE COLLECTION: Method: grab

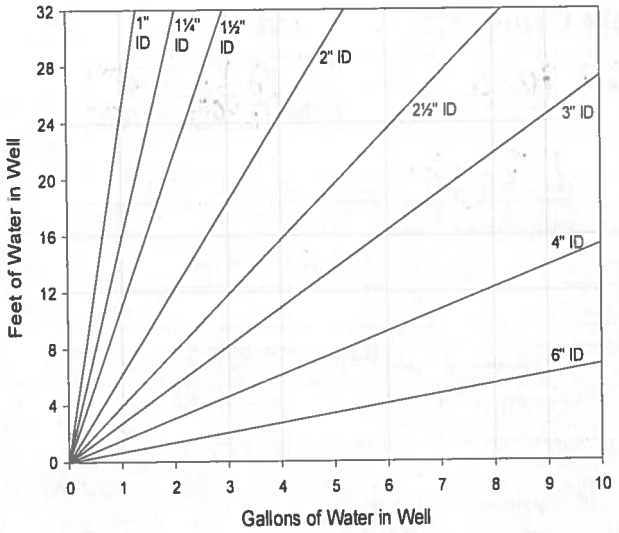
Sample ID	Container Type	No.	Preservation	Analysis Req.	Time
20A-AE101R3-092320-1	40mL VOA	3	HCL	VOCs 8260C	@ 13:05
	250 mL Amber	1	NaHSO4	1,4-dioxane	

Comments First purge (5 min) contained slightly grey cloudy water. Very dark cloudy @ 10 min purge.

Signature Leah Zugby Date 09.23.2020

AECOM

Well ID: AE-101R3



Volume / Linear Ft. of Pipe		
ID (in)	Gallon	Liter
0.25	0.0025	0.0097
0.375	0.0057	0.0217
0.5	0.0102	0.0386
0.75	0.0229	0.0869
1	0.0408	0.1544
1.25	0.0637	0.2413
1.5	0.0918	0.3475
2	0.1632	0.6178
2.5	0.2550	0.9653
3	0.3672	1.3900
4	0.6528	2.4711
6	1.4688	5.5600

Purge Volume Calculation

[85 ft (channel length) x 0.0097 L/ft] + 0.275 L (flow cell vol.) = 1.29 L

(continued from front)

Time (24 hr)	Volume Removed (Liters)	Temp (°C)	pH	Spec. Cond (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (ft)	Color/Odor
12:55	4.8	18.5	7.36	2341	0.22	-64.7	0.87	120	NM	clear
13:00	5.4	18.6	7.32	2351	0.21	-69.3	0.46	120	NM	clear
				Stable	@		13:00			

AECOM

Well ID: **AE-101R5**

Low Flow Ground Water Sample Collection Record

Client: Lockheed Martin Corp. Date: 9/24/20 Time: Start 1030 am/pm
Project No: 60552044 Finish 1115 am/pm
Site Location: 50 Fordham Rd Site, Wilmington, MA
Weather Conds: 70's Sunny Collector(s): Floyd Burton

1. WELL & WATER LEVEL DATA: (measured in feet from Top of Casing unless noted)

a. Total Well Length 180' c. Screen Length 5 (175' - 180') 0.5" CMT Channel
b. Water Table Depth 3.73 d. Pump Intake 177.5'
c. Water Column (a-b) 176.27 e. Calculated System Purge Volume L (calculation on page 2)

2. WELL PURGE DATA

a. Purge Method: peristaltic pump

b. Acceptance Criteria defined (see workplan)

- Temperature	3%	- D.O.	< 0.5 mg/L	-Drawdown	<0.3 ft
- pH	± 1.0 unit		>0.5 mg/L within 10%	-Turbidity	<10 NTU
- Sp. Cond.	3%	- ORP	± 10mV		>10NTU within 10%

c. Field Testing Equipment used:

Make	Model	Serial Number
YSI	Pro Plus	10D101442

Time (24hr)	Volume Removed (Liters)	Temp. (°C)	pH	Spec. Cond. (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (feet)	Color/Odor
1040	0	17.6	6.44	601	6.12	-141.7	0	200	NM	Clear/none
1045	1	16.3	6.52	524	1.09	-208.3	0	200	↓	↓
1050	2	16.3	6.54	524	1.06	-209.1	0	200		
1055	3	16.4	6.54	524	1.03	-209.7	0	200	↓	↓

d. Acceptance criteria pass/fail

	Yes	No	N/A
Has required volume been removed	☒	☐	☐
Has required turbidity been reached	☒	☐	☐
Have parameters stabilized	☒	☐	☐

If no or N/A - Explain below.

(continued on back)

3. SAMPLE COLLECTION: Method: grab

Sample ID	Container Type	No.	Preservation	Analysis Req.	Time
20A-AE101R5-092420-1	40mL VOA	3	HCL	VOCs 8260C	1100
	250 mL Amber	1	NaHSO4	1,4-dioxane	

Comments

Signature Floyd Burton Date 9/24/20

Well ID: **AE-101R6**

AECOM

Low Flow Ground Water Sample Collection Record

Client: Lockheed Martin Corp. Date: 9/24/20 Time: Start 1135 am/pm
Project No: 60552044 Finish 1210 am/pm
Site Location: 50 Fordham Rd Site, Wilmington, MA
Weather Conds: 70's Sunny Collector(s): Floyd Burton

1. WELL & WATER LEVEL DATA: (measured in feet from Top of Casing unless noted)

a. Total Well Length 232' c. Screen Length 5 (227' - 232') 0.5" CMT Channel
b. Water Table Depth 3.72 d. Pump Intake 229.5'
c. Water Column (a-b) 198.28 e. Calculated System Purge Volume L (calculation on page 2)

2. WELL PURGE DATA

a. Purge Method: peristaltic pump

b. Acceptance Criteria defined (see workplan)

- Temperature	3%	- D.O.	< 0.5 mg/L	-Drawdown	<0.3 ft
- pH	±1.0 unit		>0.5 mg/L within 10%	-Turbidity	<10 NTU
- Sp. Cond.	3%	- ORP	± 10mV		>10NTU within 10%

c. Field Testing Equipment used:

Make	Model	Serial Number
YSI	Pro Plus	10D101442

Time (24hr)	Volume Removed (Liters)	Temp. (°C)	pH	Spec. Cond (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (feet)	Color/Odor
1140	0	18.1	6.74	517	5.75	-132.6	0	200	NM	Clear/none
1145	1	17.6	6.49	561	5.38	-137.1	0	200	↓	↓
1150	2	17.6	6.48	561	5.27	-137.2	0	200		
1155	3	17.6	6.46	563	5.21	-138.1	0	200	↓	↓

d. Acceptance criteria pass/fail

	Yes	No	N/A
Has required volume been removed	☒	☐	☐
Has required turbidity been reached	☒	☐	☐
Have parameters stabilized	☒	☐	☐

If no or N/A - Explain below.

(continued on back)

3. SAMPLE COLLECTION: Method: grab

Sample ID	Container Type	No.	Preservation	Analysis Req.	Time
20A-AE101R6-092420-1	40mL VOA	3	HCL	VOCs 8260C	1200
	250 mL Amber	1	NaHSO4	1,4-dioxane	

Comments

Signature Floyd Burton III Date 9/24/20

AECOM

Well ID: **AE-101S**

Low Flow Ground Water Sample Collection Record

Client: Lockheed Martin Corp. Date: 9/18/20 Time: Start 0950 am/pm
Project No: 60552044 Finish 1030 am/pm
Site Location: 50 Fordham Rd Site, Wilmington, MA
Weather Conds: 50's Cloudy Collector(s): Floyd Buxton

1. WELL & WATER LEVEL DATA: (measured in feet from Top of Casing unless noted)

a. Total Well Length 17' c. Screen Length 5 (10' - 15') 2" PVC Casing
b. Water Table Depth 3.76 d. Pump Intake 12.5'
c. Water Column (a-b) 13.24 e. Calculated System Purge Volume 1.26 L (calculation on page 2)

2. WELL PURGE DATA

a. Purge Method: peristaltic pump

b. Acceptance Criteria defined (see workplan)

- Temperature	3%	- D.O.	< 0.5 mg/L	-Drawdown	<0.3 ft
- pH	± 1.0 unit		>0.5 mg/L within 10%	-Turbidity	<10 NTU
- Sp. Cond.	3%	- ORP	± 10mV		>10NTU within 10%

c. Field Testing Equipment used:

Make	Model	Serial Number
YSI	Pro Plus	10D101443

Time (24hr)	Volume Removed (Liters)	Temp. (°C)	pH 5.82	Spec. Cond. (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (feet)	Color/Odor
1000	0	19.2	[illegible]	1525	0.79	-193.1	3.9	100	0	Clear/none
1005	.5	18.6	5.94	1535	0.48	-281.3	3.4	100	0	↓
1010	1.0	18.6	5.94	1535	0.47	-284.6	3.4	100	0	
1015	1.5	18.6	5.94	1536	0.44	-286.8	3.4	100	0	

(continued on back)

d. Acceptance criteria pass/fail

	Yes	No	N/A
Has required volume been removed	☒	☐	☐
Has required turbidity been reached	☒	☐	☐
Have parameters stabilized	☒	☐	☐

If no or N/A - Explain below.

3. SAMPLE COLLECTION: Method: grab

Sample ID	Container Type	No.	Preservation	Analysis Req.	Time
20A-AE101S-091820-1	40mL VOA	3	HCL	VOCs 8260C	1026
	250 mL Amber	1	NaHSO4	1,4-dioxane	

Comments

Signature [signature] Date 9/18/20

AECOM

Well ID: **AE-102D**

Low Flow Ground Water Sample Collection Record

Client: Lockheed Martin Corp. Date: 9/9/2020 Time: Start 1435 ~~am/pm~~
Project No: 60552044 Finish _____ ~~am/pm~~
Site Location: 50 Fordham Rd Site, Wilmington, MA
Weather Conds: Overcast 70's Collector(s): Sean Haggett

1. WELL & WATER LEVEL DATA: (measured in feet from Top of Casing unless noted)

a. Total Well Length 38.5' c. Screen Length 5 (33' - 38') 2" PVC Casing
b. Water Table Depth 4.87 d. Pump Intake 35.5'
c. Water Column (a-b) 33.63 e. Calculated System Purge Volume 1.93 L (calculation on page 2)

2. WELL PURGE DATA

a. Purge Method: peristaltic pump

b. Acceptance Criteria defined (see workplan)

- Temperature	3%	- D.O.	< 0.5 mg/L	-Drawdown	<0.3 ft
- pH	± 1.0 unit		>0.5 mg/L within 10%	-Turbidity	<10 NTU
- Sp. Cond.	3%	- ORP	± 10mV		>10NTU within 10%

c. Field Testing Equipment used:

Make	Model	Serial Number
YSI	Quatro	18D102399
Geotech	turbidimeter	19011437

Time (24hr)	Volume Removed ~~mL (Liters)~~	Temp. (°C)	pH	Spec. Cond. (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (feet) PTW	Color/Odor
1440	240	19.6	6.74	995	5.27	128.3	19.0	240	5.93	clear/none
1445	1440	18.8	6.49	1660	1.68	11.0	5.58	240	5.75	clear/none
1450	2640	18.5	6.54	2074	1.07	-76.8	2.25	240	5.68	clear/none
1455	3840	18.7	6.56	2130	0.97	-87.8	1.79	240	5.80	clear/none
1500	5040	19.1	6.58	2158	0.68	-97.7	1.55	240	5.76	clear/none
1505	6240	18.8	6.60	2196	0.54	-106.4	0.97	240	5.70	clear/none
1510	7440	18.6	6.60	2201	0.53	-108.3	0.38	240	5.70	clear/none

(continued on back)

d. Acceptance criteria pass/fail

	Yes	No	N/A
Has required volume been removed	☑	☐	☐
Has required turbidity been reached	☑	☐	☐
Have parameters stabilized	☑	☐	☐

If no or N/A - Explain below.

3. SAMPLE COLLECTION: Method: grab

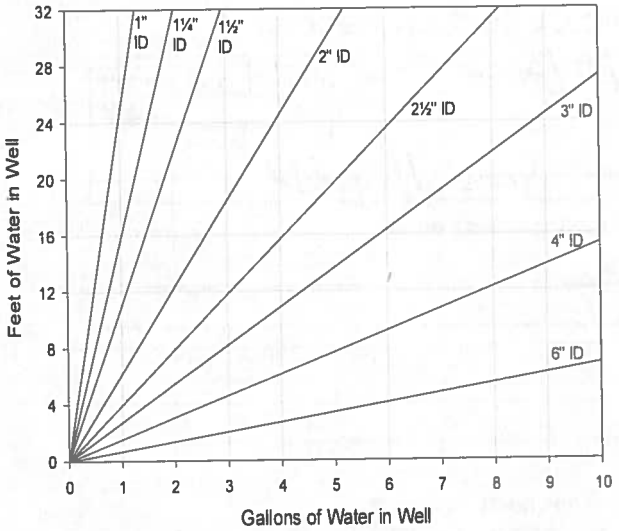
Sample ID	Container Type	No.	Preservation	Analysis Req.	Time
20A-AE102D-~~0904~~20 -1	40mL VOA	3	HCL	VOCs 8260C	1520
~~-2~~	250 mL Amber	1	NaHSO4	1,4-dioxane	1520

Comments periodically checked and adjusted flow rate to maintain 240 mL/min. ~~Pi55. Hydrogel Samples taken after 15mins of flow at 230mL/min SA~~

Signature _____ Date 9/9/2020

AECOM

Well ID: AE-102D



Volume / Linear Ft. of Pipe		
ID (in)	Gallon	Liter
0.25	0.0025	0.0097
0.375	0.0057	0.0217
0.5	0.0102	0.0386
0.75	0.0229	0.0869
1	0.0408	0.1544
1.25	0.0637	0.2413
1.5	0.0918	0.3475
2	0.1632	0.6178
2.5	0.2550	0.9653
3	0.3672	1.3900
4	0.6528	2.4711
6	1.4688	5.5600

Purge Volume Calculation

[38 ft (tubing length) x 0.0097 L/ft] + 0.275 L (flow cell vol.) = 0.6436; 0.6436 L x 3 well vol. = 1.93 L

(continued from front)

Time (24 hr)	Volume Removed (Liters)	Temp (°C)	pH	Spec. Cond (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (ft)	Color/Odor
1515	8640	18.3	6.59	2198	0.51	-111.1	0.28	240	5.69	Clear/none
~~1520~~	~~8640~~		parameters		stabilized					
1520	-	samples		collected.						

Hydrogen Bubble Strip Sampling:

Purge rate=	Purge Duration=	Sample time=

AECOM

Well ID: **AE-102M**

Low Flow Ground Water Sample Collection Record

Client: Lockheed Martin Corp. Date: 9/9/2020 Time: Start 1015 am/pm
Project No: 60552044 Finish 1240 am/pm
Site Location: 50 Fordham Rd Site, Wilmington, MA
Weather Conds: Overcast 70's Collector(s): Sean Haggett

1. WELL & WATER LEVEL DATA: (measured in feet from Top of Casing unless noted)

a. Total Well Length 30' c. Screen Length 5 (23' - 28') 2" PVC Casing
b. Water Table Depth 4.87' d. Pump Intake 25.5'
c. Water Column (a-b) 25.13' e. Calculated System Purge Volume 1.64 L (calculation on page 2)

2. WELL PURGE DATA

a. Purge Method: peristaltic pump

b. Acceptance Criteria defined (see workplan)

- Temperature	3%	- D.O.	< 0.5 mg/L	-Drawdown	<0.3 ft
- pH	± 1.0 unit		>0.5 mg/L within 10%	-Turbidity	<10 NTU
- Sp. Cond.	3%	- ORP	± 10mV		>10NTU within 10%

c. Field Testing Equipment used:

	Make	Model	Serial Number
	YSI	Quatro	18D102399
	Geotech Turbidity meter		19011937

Time (24hr)	Volume Removed (~~Milliliters~~)	Temp. (°C)	pH	Spec. Cond. (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (~~feet~~) DTW	Color/Odor
1020	240	17.8	6.40	2192	7.87	55.7	1.85	240	4.94	clear/none
1025	1440	19.1	5.98	2186	3.52	59.9	0.99	240	4.93	clear/none
1030	2640	17.2	5.91	2179	2.65	59.0	0.02	240	4.93	clear/none
1035	3840	17.2	5.89	2168	2.07	58.1	0.02	240	4.93	clear/none
1040	5040	17.1	5.88	2156	1.74	57.4	0.02	240	4.93	clear/none
1045	6240	17.05	5.88	2150	1.64	56.8	0.02	240	4.93	clear/none
1050	7440	16.9	5.88	2153	1.60	56.9	0.02	240	4.93	clear/none

(continued on back)

d. Acceptance criteria pass/fail

	Yes	No	N/A
Has required volume been removed	☑	☐	☐
Has required turbidity been reached	☑	☐	☐
Have parameters stabilized	☑	☐	☐

If no or N/A - Explain below.

3. SAMPLE COLLECTION: Method: grab

Sample ID	Container Type	No.	Preservation	Analysis Req.	Time	DUP	Diss.
20A-AE102M-090920-1	40mL VOA	3	HCL	VOCs 8260C	1110	1112	
	500 mL P	2	HNO3	Total & Diss. As, Fe, Mn	~~1117~~		~~1116~~
	500mL P	1	none	Cl, NO2, NO3, SO4	1137	1138	
	500mL P	1	zinc acetate	Sulfide	1133	1134	
	40mL V	2	H3PO4	TOC	1128	1130	
	vial	1	none	Diss. Hydrogen	1215	1215	
	250 mL Amber	1	NaHSO4	1,4-dioxane	1140	1142	
	40mL V	3	belzal.chlor.	gases (Acet, Prop, Meth, Eth, Ethan)	1117	1120	

Comments Periodically checked and adjusted flow rate to maintain 240 ml/min. Diss Hydrogen samples taken after 15mins of flow at 230 ml/min.

Signature [signature] Date 09/09/2020

AECOM

Well ID: **AE-102RR**

Low Flow Ground Water Sample Collection Record

Client: Lockheed Martin Corp. Date: 9/5 9/9/20 Time: Start 830 am/pm

Project No: 60552044 Finish 1610 am/pm

Site Location: 50 Fordham Rd Site, Wilmington, MA

Weather Conds: Overcast 70's Collector(s): A. Grossman

1. WELL & WATER LEVEL DATA: (measured in feet from Top of Casing unless noted)

a. Total Well Length 167' b. Water Table Depth NA c. Water Column (a-b) NA

d. Depth to Water in FLUTe liner 0.71 e. Purge Pressure 55 psi f. Sample Pressure 39 psi

2. PORT DATA:

Port	Sampling Interval (ft BGS)	Pump Depth (ft BGS)	Purge Volume (Liters)	Sample Stroke Volume (Liters)	Min. Discard (Liters)	Initial DTW @ 900	Before 2nd Purge DTW @ 1015	Before 3rd Purge DTW @ 1110
1	43-48	99.4	4.23	3.26	0.234	—		
2	75-80	100.4	4.30	3.26	0.250	4.56	4.61	4.64
3	111-116	101.4	4.34	3.26	0.252	—		
4	125-130	102.4	4.39	3.26	0.254	4.47	4.53	4.52
5	141-146	103.4	4.43	3.26	0.257	4.49	4.53	4.53
6	153-158	104.4	4.47	3.26	0.259	4.49	4.54	4.54

a. Field Testing Equipment used:

	Make	Model	Serial Number
	YSI	Pro Plus	18H100703
	GeoTech	Turb Meter	17061384

b. 1st Purge Time/Duration 9~~11~~ 417 Purged on 9/4/20

c. 2nd Purge Time/Duration 911-0417 / 6 min

d. 3rd Purge Time/Duration 1023-1024 / 6 min

e. 4th Purge Time/Duration 1115-1121

Port	Time (24hrs)	Purge Time	pH	Temp. (°C)	Spec. Cond. (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	PID (ppm)	Color/Odor
1	not sampled									
2	1153	5mn	7.07	14.8	413.00	0.19	-3.8	0.13	NM	
3	not sampled									
4	1150	5	7.06	14.8	328.9	0.31	-3.1	0.02		
5	1209	5	7.02	14.5	344.2	0.08	-40.5	0.02		
6	1218		7.13	14.5	725	0.06	-45.4	0.02		

12 01

3. SAMPLE COLLECTION:

Sample ID	Analysis	Time
20A-AE102RR2-090920-1	VOCs, 1,4-dioxane	1610
20A-AE102RR4-090920-1	VOCs, 1,4-dioxane MS/MSD	1545
20A-AE102RR5-|-1	VOCs	1520
20A-AE102RR6-|-1	VOCs, Total (As, Fe, Mn), Dissolved (As, Fe, Mn), NO3, NO2, Cl, SO4, S, TOC,	1245
	Diss. H, Gases (Acety., Prop., Meth., Ethe., Etha.), 1,4-dioxane, VPH, EPH	
	PIANO	

Notes: 116 e

Hydrogen purge time and rate = ~~120~~ mL/min 30 mm : 1805

Signature [signature] Date 9/9/20

AECOM

Well ID: **AE-103D**

Low Flow Ground Water Sample Collection Record

Client: Lockheed Martin Corp. Date: 09.10.2020 Time: Start 08:30 am/pm
Project No: 60552044 Finish 09:20 am/pm
Site Location: 50 Fordham Rd Site, Wilmington, MA
Weather Conds: Partly cloudy, 70°F Collector(s): L. Zogby

1. WELL & WATER LEVEL DATA: (measured in feet from Top of Casing unless noted)

a. Total Well Length 40.5' c. Screen Length 5 (35' - 40') 2" PVC Casing
b. Water Table Depth 14.13' d. Pump Intake 37.5'
c. Water Column (a-b) 26.37' e. Calculated System Purge Volume 1.99 L (calculation on page 2) = 0.526 gallons

2. WELL PURGE DATA

a. Purge Method: peristaltic pump

b. Acceptance Criteria defined (see workplan)

- Temperature	3%	- D.O.	< 0.5 mg/L	-Drawdown	<0.3 ft
- pH	± 1.0 unit		>0.5 mg/L within 10%	-Turbidity	<10 NTU
- Sp. Cond.	3%	- ORP	± 10mV		>10NTU within 10%

c. Field Testing Equipment used:

	Make	Model	Serial Number
	YSI	Professional Plus	10E100175H
Turbidity meter	Geotech		19062110

	Time (24hr)	Volume Removed (Liters) (total)	Temp. (°C)	pH	Spec. Cond. (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min) per 5 min	Drawdown (feet)	Color/Odor
0.5L	08:50	0.5	17.2	6.69	2756	1.27	212.7	0.02	100	14.15	None
1.0L	08:55	1.0	17.0	6.26	2754	1.04	213.5	0.02	100	14.13	None
1.5L	09:00	1.5	16.8	5.86	2745	0.74	214.7	0.22	100	14.13	None
	09:05	2.0	16.9	5.72	2746	0.67	214.9	0.33	100	14.13	None
	09:10	2.5	16.7	5.61	2735	0.43	214.7	0.20	100	14.13	None
		~~3.0~~									
	LT	3.5									

(continued on back)

d. Acceptance criteria pass/fail

	Yes	No	N/A
Has required volume been removed	☑	☐	☐
Has required turbidity been reached	☑	☐	☐
Have parameters stabilized	☑	☐	☐

If no or N/A - Explain below. Stabilized @ 09:10

3. SAMPLE COLLECTION: Method: grab

Sample ID	Container Type	No.	Preservation	Analysis Req.	Time
20A-AE103D-091020-1	40mL VOA	3	HCL	VOCs 8260C	09:20
	250 mL Amber	1	NaHSO4	1,4 dioxane	
	500mL P	2	HNO3	Total & Diss (As, Fe, Mn)	
	500mL P	1	none	Cl, NO2, NO3, SO4	
	500mL P	1	zinc acetate	Sulfide	
	40mL V	2	H3PO4	TOC	
	vial	3	BAK	Gases (M, Eth, Etha, Ac, Pr)	
	vial	1	none	Diss Hydrogen	

Comments
- Tubing present in well. Fairly dirty (orange/sooty colored).
- Slight evervesdence along tubing.
- Some floating particles, Not affecting turbidity reading.

Signature Leah Zogby Date 09.10.2020

Hydrogen Sample: 10:40 - 11:10, 100 mL/min, 30 min equilibration
sample time flow rate duration

AECOM

Well ID: **AE-103R**

Low Flow Ground Water Sample Collection Record

Client: Lockheed Martin Corp. Date: 9/10/2020 Time: Start 0900 ~~am/pm~~
Project No: 60552044 Finish 1650 ~~am/pm~~
Site Location: 50 Fordham Rd Site, Wilmington, MA
Weather Conds: Overcast 70's Collector(s): Sean Haggett

1. WELL & WATER LEVEL DATA: (measured in feet from Top of Casing unless noted)

a. Total Well Length 175' b. Water Table Depth NA c. Water Column (a-b) NA
d. Depth to Water in FLUTe liner 0.0' e. Purge Pressure 55 psi f. Sample Pressure 38 psi

2. PORT DATA:

Port	Sampling Interval (ft BGS)	Pump Depth (ft BGS)	Purge Volume (Liters)	Sample Stroke Volume (Liters)	Min. Discard (Liters)	Initial DTW @0805	Before 2nd Purge DTW @0910	Before 3rd Purge DTW @1040
1	48-53	98	4.15	3.23	0.232	3.55	3.65	3.66
2	62-67	99	4.22	3.23	0.250	not sampled		
3	70-76	100	4.27	3.23	0.252	3.55	3.64	3.67
4	98-105	101	4.31	3.23	0.254	3.53	3.61	3.61
5	122-128	102	4.35	3.23	0.257	3.61	3.64	3.59
6	138-144	103	4.4	3.23	0.259	not sampled		
7	162.5-168	104	4.44	3.23	0.261	3.64	3.63	3.60

a. Field Testing Equipment used:

	Make	Model	Serial Number
	YSI	Quatro	18D102399
	Geotech Turbidity meter		19D11937

b. 1st Purge Time/Duration purged on 9/4 @920 / 6 mins c. 2nd Purge Time/Duration 0824 / 6 mins
d. 3rd Purge Time/Duration 1042 / 6 mins e. 4th Purge Time/Duration

Port	Time (24hrs)	Purge Time	pH	Temp. (°C)	Spec. Cond. (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	PID N/A (ppm)	Color/Odor
1	1123	2 mins	7.91	13.9	1650	4.20	18.6	0.02		clear/none
2	not sampled									
3	1127	2mins	6.91	14.1	1497	8.70	87.0	0.02		clear/none
4	1131	2mins	6.99	14.0	678	4.85	20.7	0.02		clear/none
5	1135	2 mins	7.03	14.0	713	6.12	-20.4	0.02		clear/none
6	not sampled									
7	1139	2mins	7.26	14.0	425	7.12	-74.9	0.02		clear/none

3. SAMPLE COLLECTION:

Sample ID	Analysis	Time
20A-AE103R1-091020-1	VOCs, 1,4-dioxane, VPH, EPH, Total(As, Fe, Mn), Diss.(As, Fe, Mn), Cl, NO2, NO3, SO2, S, TOC, Gases(meth, Ethe, Etha, Acety, Prop), Diss. H	1300
	PIANO	
20A-AE103R3-091020-1	VOCs	1320
20A-AE103R4-091020-1	VOCs, 1,4-dioxane	1325
20A-AE103R5-091020-1	VOCs, 1,4-dioxane, Total(As, Fe, Mn), Diss.(As, Fe, Mn), Cl, NO2, NO3, SO2, S, TOC, Gases(meth, Ethe, Etha, Acety, Prop), Diss. H	1335
20A-AE103R7-091020-1	VOCs	1340

Notes: 20A-AE103R5-Diss hydrogen Flow rate = 200 mL/min purge time = 20 mins start/end = 1630-1650 (1600-16 SH)

20A-AE103R1 Hydrogen purge time and rate = Flow rate = 180 mL/min purge time = 20 mins start/End = 1628-1648

Signature _____ Date 09/10/20

AECOM

Well ID: **AE-103S**

Low Flow Ground Water Sample Collection Record

Client: Lockheed Martin Corp. Date: 09.10.2020 Time: Start 11:30 am/pm
Project No: 60552044 Finish 12:10 am/pm
Site Location: 50 Fordham Rd Site, Wilmington, MA
Weather Conds: Partly cloudy, 75°F, humid Collector(s): L. Zogby

1. WELL & WATER LEVEL DATA: (measured in feet from Top of Casing unless noted)

a. Total Well Length 22' c. Screen Length 5 (15' - 20') 2" PVC Casing
b. Water Table Depth 4.26 d. Pump Intake 17.5'
c. Water Column (a-b) 17.8 e. Calculated System Purge Volume 1.41 L (calculation on page 2)

2. WELL PURGE DATA

a. Purge Method: peristaltic pump

b. Acceptance Criteria defined (see workplan)

- Temperature	3%	- D.O.	< 0.5 mg/L	-Drawdown	<0.3 ft
- pH	± 1.0 unit		>0.5 mg/L within 10%	-Turbidity	<10 NTU
- Sp. Cond.	3%	- ORP	± 10mV		>10NTU within 10%

c. Field Testing Equipment used:

	Make	Model	Serial Number
	YSI	Pro-plus	10E100125U
	Turb meter	Geotech	19062110

Time (24hr)	(Total) Volume Removed (Liters)	Temp. (°C)	pH	Spec. Cond. (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min) per 5 min	Drawdown (feet)	Color/Odor
11:35	0.5	19.0	6.29	476.4	0.53	69.8	36.3	100	4.40	none
11:40	1.0	19.7	6.31	482.7	0.28	19.7	4.94	100	4.49	none
11:45	1.5	19.6	6.30	483.3	0.18	4.5	3.64	100	4.40	none
11:50	2.0	19.8	6.31	486.9	0.10	-10.3	1.50	100	4.42	none
11:55	2.5	19.8	6.31	494.5	0.07	-19.2	1.20	100	4.40	None
12:00	3.0	19.8	6.31	498.7	0.05	-22.8	0.96	100	4.40	None
12:05	3.5	19.8	6.31	506.6	0.05	-23.6	0.77	100	4.40	None

(continued on back)

d. Acceptance criteria pass/fail

	Yes	No	N/A
Has required volume been removed	☑	☐	☐
Has required turbidity been reached	☑	☐	☐
Have parameters stabilized	☑	☐	☐

If no or N/A - Explain below. Stabilized @ 12:05

3. SAMPLE COLLECTION: Method: grab

Sample ID	Container Type	No.	Preservation	Analysis Req.	Time
20A-AE103S-091020-1	40mL VOA	3	HCL	VOCs 8260C	@12:10
	500mL P	1	HNO3	total As, Fe, Mn	
	500mL P	1	HNO3	Diss. As, Fe, Mn (FF)	

Comments: • Tubing present in well. Reddish Brown residue on tubing.
• floating reddish particles in otherwise very clear water

Signature Leah Zogby Date 09.10.2020

AECOM

Well ID: **AE-104D**

Low Flow Ground Water Sample Collection Record

Client: Lockheed Martin Corp. Date: 9/16/20 Time: Start 1000 am/pm
Project No: 60552044 Finish 1040 am/pm
Site Location: 50 Fordham Rd Site, Wilmington, MA
Weather Conds: 50's Mostly Sunny Collector(s): Floyd Burton

1. WELL & WATER LEVEL DATA: (measured in feet from Top of Casing unless noted)

a. Total Well Length 40.5' c. Screen Length 5 (35' - 40') 2" PVC Casing
b. Water Table Depth 3.59 d. Pump Intake 37.5'
c. Water Column (a-b) 46.91 e. Calculated System Purge Volume 1.99 L (calculation on page 2)

2. WELL PURGE DATA

a. Purge Method: peristaltic pump

b. Acceptance Criteria defined (see workplan)

- Temperature	3%	- D.O.	< 0.5 mg/L	-Drawdown	<0.3 ft
- pH	± 1.0 unit		>0.5 mg/L within 10%	-Turbidity	<10 NTU
- Sp. Cond.	3%	- ORP	± 10mV		>10NTU within 10%

c. Field Testing Equipment used:

Make	Model	Serial Number
YSI	Pro Plus	10D101442

Time (24hr)	Volume Removed (Liters)	Temp. (°C)	pH	Spec. Cond. (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (feet)	Color/Odor
1010	0	15.5	6.05	2212	3.97	-51.9	3.61	~~1.67~~ 200	~~2.50~~	clear/none
1015	1	15.3	5.73	2283	0.83	-189.0	2.22	200	0	
1020	2	15.3	5.71	2286	0.79	-193.2	1.13	200	0	
1025	3	15.3	5.71	2287	0.83	-196.9	0.74	200	0	↓

d. Acceptance criteria pass/fail

	Yes	No	N/A
Has required volume been removed	☒	☐	☐
Has required turbidity been reached	☒	☐	☐
Have parameters stabilized	☒	☐	☐

If no or N/A - Explain below.

(continued on back)

3. SAMPLE COLLECTION: Method: grab

Sample ID	Container Type	No.	Preservation	Analysis Req.	Time
20A-AE104D-091620 -1	40mL VOA	3	HCL	VOCs 8260C	1030
	250 mL Amber	1	NaHSO4	1,4 dioxane	

Comments

Signature Floyd Burton Date 9/16/20

AECOM

Well ID: **AE-104R**

Low Flow Ground Water Sample Collection Record

Client: Lockheed Martin Corp. Date: 9/11/20 Time: Start 0820 am/pm
Project No: 60552044 Finish _____ am/pm
Site Location: 50 Fordham Rd Site, Wilmington, MA
Weather Conds: 60s cloudy Collector(s): Floyd Burton

1. WELL & WATER LEVEL DATA: (measured in feet from Top of Casing unless noted)

a. Total Well Length 175' b. Water Table Depth NA c. Water Column (a-b) NA
d. Depth to Water in FLUTe liner 0.40 e. Purge Pressure 55 psi f. Sample Pressure 39 psi

2. PORT DATA:

Port	Sampling Interval (ft BGS)	Pump Depth (ft BGS)	Purge Volume (Liters)	Sample Stroke Volume (Liters)	Min. Discard (Liters)	Initial DTW @0835	Before 2nd Purge DTW @0938	Before 3rd Purge DTW @1034
1	48-54	99	4.23	3.27	0.234	2.75	3.13	
2	62-68	100	4.30	3.27	0.250	not sampled		
3	97-102	101	4.34	3.27	0.252	2.69	2.75	3.00
4	128-133	102	4.39	3.27	0.254	2.98	2.88	3.09
5	156-162	103	4.43	3.27	0.257	2.92	3.06	3.09
6	168-174	104	4.47	3.27	0.259	3.05	3.08	3.10

a. Field Testing Equipment used:

Make	Model	Serial Number
YSI	Pro Plus	10D101442

b. 1st Purge Time/Duration Purged on 9/4
c. 2nd Purge Time/Duration 0847 / 6 Mins
d. 3rd Purge Time/Duration 0944 / 6 mins
e. 4th Purge Time/Duration 1027 / 6 Mins

Port	Time (24hrs)	Purge Time	pH	Temp. (°C)	Spec. Cond. (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	PID (ppm)	Color/Odor
1	1140	6	8.08	13.8	804	0.26	-249.6	0.0	NA	clear/none
2	not sampled									
3	1147	6	8.02	13.2	781	0.17	-303.5	0.0		
4	1154	5	7.96	13.3	911	0.16	-323.5	0.0		
5	1200	5	7.97	13.2	800	0.12	-333.4	0.0		
6	1206	5	7.95	13.9	747	0.25	-290.0	0.0		

3. SAMPLE COLLECTION:

Sample ID	Analysis	Time
20A-AE104R1-091120-1	VOCs, 1,4-dioxane	1300
	—	NA
20A-AE104R3-091120-1	VOCs, 1,4-dioxane	1305
20A-AE104R4-091120-1	VOCs, 1,4-dioxane, VPH, EPH, PIANO	1230
20A-AE104R5-091120-1	VOCs	1250
20A-AE104R6-091120-1	VOCs, 1,4-dioxane	1255

Notes: _____

Signature _____ Date 9/11/20

AECOM

Well ID: **AE-104S**

Low Flow Ground Water Sample Collection Record

Client: Lockheed Martin Corp. Date: 9/16/20 Time: Start 1045 am/pm
Project No: 60552044 Finish 1120 am/pm
Site Location: 50 Fordham Rd Site, Wilmington, MA
Weather Conds: 50's Mostly Sunny Collector(s): Floyd Burton

1. WELL & WATER LEVEL DATA: (measured in feet from Top of Casing unless noted)

a. Total Well Length 22' c. Screen Length 5 (15' - 20') 2" PVC Casing
b. Water Table Depth 3.56 d. Pump Intake 17.5'
c. Water Column (a-b) 19.44 e. Calculated System Purge Volume 1.41 L (calculation on page 2)

2. WELL PURGE DATA

a. Purge Method: peristaltic pump

b. Acceptance Criteria defined (see workplan)

- Temperature	3%	- D.O.	< 0.5 mg/L	-Drawdown	<0.3 ft
- pH	± 1.0 unit		>0.5 mg/L within 10%	-Turbidity	<10 NTU
- Sp. Cond.	3%	- ORP	± 10mV		>10NTU within 10%

c. Field Testing Equipment used:

Make	Model	Serial Number
YSI	YSI	10D101442

Time (24hr)	Volume Removed (Liters)	Temp. (°C)	pH	Spec. Cond. (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (feet)	Color/Odor
1050	0	14.9	6.43	379	2.66	-92.3	2.6	200	0	Clear/none
1055	1	15.4	6.33	313	0.28	-302.8	0.91	200	0	
1100	2	15.4	6.33	313	0.27	-304.0	0.74	200	0	
1105	3	15.3	6.33	314	0.27	-305.0	1.06	200	0	↓

(continued on back)

d. Acceptance criteria pass/fail

	Yes	No	N/A
Has required volume been removed	☒	☐	☐
Has required turbidity been reached	☒	☐	☐
Have parameters stabilized	☒	☐	☐

If no or N/A - Explain below.

3. SAMPLE COLLECTION: Method: grab

Sample ID	Container Type	No.	Preservation	Analysis Req.	Time
20A-AE104S-091620-1	40mL VOA	3	HCL	VOCs 8260C	1110

Comments

Signature [signature] Date 9/16/20

AECOM

Well ID: **AE-105D**

Low Flow Ground Water Sample Collection Record

Client: Lockheed Martin Corp. Date: 09.17.2020 Time: Start 09:50 am/pm
Project No: 60552044 Finish 10:25 am/pm
Site Location: 50 Fordham Rd Site, Wilmington, MA
Weather Conds: 60°F, Sunny Collector(s): L. Fogarty

1. WELL & WATER LEVEL DATA: (measured in feet from Top of Casing unless noted)

a. Total Well Length 78.5' c. Screen Length 5 (73' - 78') 2" PVC Casing
b. Water Table Depth 4.12' d. Pump Intake 75.5'
c. Water Column (a-b) 74.38' e. Calculated System Purge Volume 3.09 L (calculation on page 2) ✓

2. WELL PURGE DATA

a. Purge Method: peristaltic pump

b. Acceptance Criteria defined (see workplan)

- Temperature	3%	- D.O.	< 0.5 mg/L	-Drawdown	<0.3 ft
- pH	± 1.0 unit		>0.5 mg/L within 10%	-Turbidity	<10 NTU
- Sp. Cond.	3%	- ORP	± 10mV		>10NTU within 10%

c. Field Testing Equipment used:

Make	Model	Serial Number
YSI	Pro Plus	19E100125U
Geotech		19062110

Time (24hr)	Volume Removed (Liters)	Temp. (°C)	pH	Spec. Cond. (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	~~Drawdown~~ DTW (feet)	Color/Odor
09:55	0.6	13.1	9.21	1069	0.86	-79.7	0.02	120	4.15'	None
10:00	1.2	13.0	8.44	958	0.57	-68.6	0.06	120	4.15'	None
10:05	1.8	13.1	7.77	872	0.44	-74.9	0.17	120	4.15'	None
10:10	2.4	12.5	7.50	813	0.22	-82.5	0.03	120	4.15'	None
10:15	3.0	12.5	7.50	815	0.17	-87.2	0.26	120	4.15'	None
10:20	3.6	12.5	7.50	816	0.16	-87.8	0.17	120	4.15'	None

d. Acceptance criteria pass/fail

	Yes	No	N/A
Has required volume been removed	☒	☐	☐
Has required turbidity been reached	☒	☐	☐
Have parameters stabilized	☒	☐	☐

(continued on back)

If no or N/A - Explain below. Stable @ 10:20 AM

3. SAMPLE COLLECTION: Method: grab

Sample ID	Container Type	No.	Preservation	Analysis Req.	Time
20A-AE105D-091720-1	40mL VOA	3	HCL	VOCs 8260C	@10:25
	250 mL Amber	1	NaHSO4	1,4 dioxane	@

Comments

Signature Leah Fogarty Date 09.17.2020

AECOM

Well ID: **AE-105R**

Low Flow Ground Water Sample Collection Record

Client: Lockheed Martin Corp. Date: 9/17/20 Time: Start 0930 am/pm
Project No: 60552044 Finish _____ am/pm
Site Location: 50 Fordham Rd Site, Wilmington, MA
Weather Conds: 80's Partly Cloudy Collector(s): Floyd Burton

1. WELL & WATER LEVEL DATA: (measured in feet from Top of Casing unless noted)

a. Total Well Length 175' b. Water Table Depth NA c. Water Column (a-b) NA
d. Depth to Water in FLUTe liner 0.47 e. Purge Pressure 54 psi f. Sample Pressure 38 psi

2. PORT DATA:

Port	Sampling Interval (ft BGS)	Pump Depth (ft BGS)	Purge Volume (Liters)	Sample Stroke Volume (Liters)	Min. Discard (Liters)	Initial DTW @0948	Before 2nd Purge DTW @1018	Before 3rd Purge DTW @1056
1	90.5-95.5	96.7	4.23	3.29	0.234	4.39	5.28	5.45
2	98-103	97.7	4.30	3.29	0.250	4.40	5.26	5.16
3	107.5-112.5	98.7	4.34	3.29	0.252	not sampled		
4	125-130	99.7	4.39	3.29	0.254	4.39	4.79	4.65
5	143-148	100.7	4.43	3.29	0.257	4.47	4.76	4.57
6	156-161	101.7	4.47	3.29	0.259	not sampled		

a. Field Testing Equipment used:

Make	Model	Serial Number
YSI	Pro Plus	10D101443

b. 1st Purge Time/Duration 0953/6 min logged on ZB
c. 2nd Purge Time/Duration 0953/6Mins
d. 3rd Purge Time/Duration 1023/6 mins
e. 4th Purge Time/Duration 1059/6Mins

Port	Time (24hrs)	Purge Time	pH	Temp. (°C)	Spec. Cond. (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	PID (ppm)	Color/Odor
1	1131	5min	7.64	11.1	404	0.69	-227.1	0	NA	clear/none
2	1137	5min	7.47	11.0	362	0.19	-278.9	0		
3	not sampled			~~11.0~~	~~337~~	~~0.16~~	~~-321.9~~			
4	1143	5min	7.40	11.1	337	0.16	-321.9	0		
5	1149	5min	7.46	11.0	310	0.10	-327.5	0		
6	not sampled									

3. SAMPLE COLLECTION:

Sample ID	Analysis	Time
20A-AE105R1-091720-1	VOCs	1305
20A-AE105R2-091720-1	VOCs, 1,4-diox.,Total/Dissolved (As, Fe, Mn), NO3, NO2, Cl, SO4, S, TOC	1220
	VPH, EPH, Diss. H, Gases (Acety., Prop., Meth., Etha.)	
20A-AE105R4-091720-1	VOCs, 1,4-dioxane, VPH, EPH	1240
20A-AE105R5-091720-1	VOCs	1255

Notes:

Hydrogen purge time and rate = 25 mins @ 140 ml Sampled @ 1405 - 1430

Signature _____ Date 9/17/20

AECOM

Well ID: **AE-105S**

Low Flow Ground Water Sample Collection Record

Client: Lockheed Martin Corp. Date: 09.17.2020 Time: Start 10:30 am/pm
Project No: 60552044 Finish _____ am/pm
Site Location: 50 Fordham Rd Site, Wilmington, MA
Weather Conds: 65°F, Sunny Collector(s): L. Fogby

1. WELL & WATER LEVEL DATA: (measured in feet from Top of Casing unless noted)

a. Total Well Length 42' c. Screen Length 5 (35' - 40') 2" PVC Casing
b. Water Table Depth 4.10' d. Pump Intake 37.5'
c. Water Column (a-b) 37.9' e. Calculated System Purge Volume 1.99 L (calculation on page 2)

2. WELL PURGE DATA

a. Purge Method: peristaltic pump

b. Acceptance Criteria defined (see workplan)

- Temperature	3%	- D.O.	< 0.5 mg/L	-Drawdown	<0.3 ft
- pH	±1.0 unit		>0.5 mg/L within 10%	-Turbidity	<10 NTU
- Sp. Cond.	3%	- ORP	± 10mV		>10NTU within 10%

c. Field Testing Equipment used:

	Make	Model	Serial Number
	YSI	Pro-Plus	16E100125in
	GeoTech	Turb Meter	19062110

Time (24hr)	Volume Removed (Liters)	Temp. (°C)	pH	Spec. Cond. (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	~~Drawdown~~ DTW (feet)	Color/Odor
10:40	.65	17.7	7.52	6.0	8.61	—	—	130	4.02'	—
10:45	1.3	13.0	5.2	658	1.04	1.3	2.03	130	4.02'	—
10:50	1.95	13.3	6.97	990	0.34	-7.2	1.63	130	4.10'	—
10:55	2.6	13.3	7.01	1040	0.29	-24.3	0.87	130	4.10'	—
11:00	3.25	13.2	7.01	1040	0.26	-27.8	0.34	130	4.12'	—
11:05	3.9	13.5	7.01	1042	0.15	-34.6	0.45	130	4.12'	—
11:10	4.55	13.4	7.01	1045	0.13	-38.8	0.29	130	4.12	—

(continued on back)

d. Acceptance criteria pass/fail

	Yes	No	N/A
Has required volume been removed	☒	☐	☐
Has required turbidity been reached	☒	☐	☐
Have parameters stabilized	☒	☐	☐

If no or N/A - Explain below.

Stable @ 11:15 (see back)

3. SAMPLE COLLECTION: Method: grab

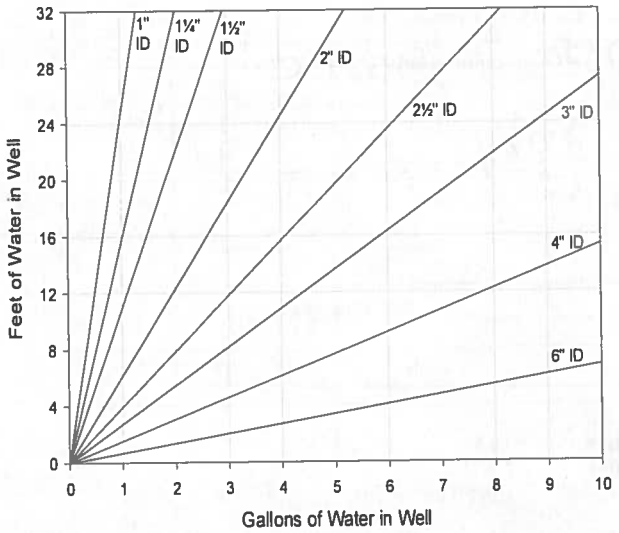
Sample ID	Container Type	No.	Preservation	Analysis Req.	Time
20A-AE105S-____-1	40mL VOA	3	HCL	VOCs 8260C	@ 11:20
	500 mL P	2	HNO3	Total & Diss. As, Fe, Mn	
	500mL P	1	none	Cl, NO2, NO3, SO4	
	500mL P	1	zinc acetate	Sulfide	
	40mL V	2	H3PO4	TOC	
	vial	1	none	diss. Hydrogen	@11:40-12:00
	40mL V	2	belzal chlor	gases (Acet, Prop, Meth, Eth, Etha)	@11:20

Comments Disregard first reading @ 10:40 (YSI not fully connected, lots of air flow).

Signature Leah Fogby Date 09.17.2020

AECOM

Well ID: AE-105S



Volume / Linear Ft. of Pipe		
ID (in)	Gallon	Liter
0.25	0.0025	0.0097
0.375	0.0057	0.0217
0.5	0.0102	0.0386
0.75	0.0229	0.0869
1	0.0408	0.1544
1.25	0.0637	0.2413
1.5	0.0918	0.3475
2	0.1632	0.6178
2.5	0.2550	0.9653
3	0.3672	1.3900
4	0.6528	2.4711
6	1.4688	5.5600

Purge Volume Calculation

[40 ft (tubing length) x 0.0097 L/ft] + 0.275 L (flow cell vol.) = 0.663; 0.663 L x 3 well vol. = 1.99 L

(continued from front)

Time (24 hr)	Volume Removed (Liters)	Temp (°C)	pH	Spec. Cond (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	~~Drawdown~~ DTW (ft)	Color/Odor
11:15	5.2	13.1	7.01	1046	0.11	-39.5	0.02	130	4.09'	—
				Stable						

Hydrogen Bubble Strip Sampling:

Flow rate: 200 mL/min Flow duration: 20 min ~~1120-1140~~ 1140-1200

AECOM

Well ID: **AE-106D**

Low Flow Ground Water Sample Collection Record

Client: Lockheed Martin Corp. Date: 9/17/2020 Time: Start 1005 ~~am/pm~~
Project No: 60552044 Finish 1200 ~~am/pm~~
Site Location: 50 Fordham Rd Site, Wilmington, MA
Weather Conds: Sunny 70's Collector(s): Sean Haggett

1. WELL & WATER LEVEL DATA: (measured in feet from Top of Casing unless noted)

a. Total Well Length 39.5' c. Screen Length 5 (35' - 39') 2" PVC Casing
b. Water Table Depth 3.33' d. Pump Intake 37.5'
c. Water Column (a-b) 36.17' e. Calculated System Purge Volume 1.96 L (calculation on page 2)

2. WELL PURGE DATA

a. Purge Method: peristaltic pump

b. Acceptance Criteria defined (see workplan)

- Temperature	3%	- D.O.	< 0.5 mg/L	-Drawdown	<0.3 ft
- pH	± 1.0 unit		>0.5 mg/L within 10%	-Turbidity	<10 NTU
- Sp. Cond.	3%	- ORP	± 10mV		>10NTU within 10%

c. Field Testing Equipment used:

	Make	Model	Serial Number
	YSI	ProQuatro	18D102399
	geotech	turbidity meter	19011937

Time (24hr)	Volume Removed (Liters)	Temp. (°C)	pH	Spec. Cond. (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	DTW Drawdown (feet)	Color/Odor
1020	200	12.5	7.81	2219	8.21	131.4	8.53	200	3.33'	Clear/none
1025	1200	12.3	6.59	2079	10.35	146.9	3.41	200	3.33	Clear/none
1030	2200	12.2	6.27	2066	10.02	177.5	2.61	200	3.33	Clear/none
1035	3200	12.2	6.13	2055	9.56	182.6	0.46	200	3.33	Clear/none
1040	4200	122	5.98	2046	8.88	189.9	0.02	200	3.33	Clear/none
1045	5200	123	5.88	2041	8.45	196.2	0.02	200	3.33	Clear/none
1050	6200	122	5.83	2044	8.02	201.1	0.02	200	3.33	Clear/none

(continued on back)

d. Acceptance criteria pass/fail

	Yes	No	N/A
Has required volume been removed	☑	☐	☐
Has required turbidity been reached	☑	☐	☐
Have parameters stabilized	☑	☐	☐

If no or N/A - Explain below.

3. SAMPLE COLLECTION: Method: grab

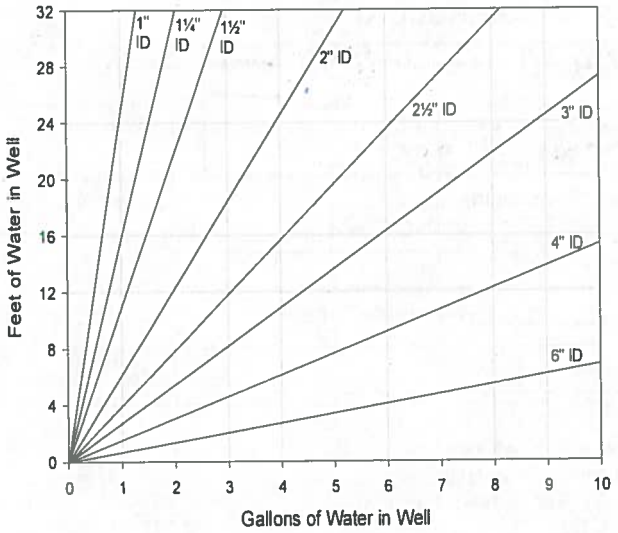
Sample ID	Container Type	No.	Preservation	Analysis Req.	Time
20A-AE106D-091720-1	40mL VOA	3	HCL	VOCs 8260C	1115
	500 mL P	2	HNO3	Total & Diss. As, Fe, Mn	
	500mL P	1	none	Cl, NO2, NO3, SO4	
	500mL P	1	zinc acetate	Sulfide	
	40mL V	2	H3PO4	TOC	
	vial	1	none	diss. Hydrogen	
	40mL V	3	belzal.chlor.	gases (Acet, Prop, Meth, Eth, Etha)	

Comments: 20A-AE106D-091720-1 Diss. Hydrogen Purge Start/end: 1137 - 1152
Purge rate: 220 mL/min
Purge time: 15 mins

Signature Sean Haggett Date 9/17/2020

AECOM

Well ID: AE-106D



Volume / Linear Ft. of Pipe		
ID (in)	Gallon	Liter
0.25	0.0025	0.0097
0.375	0.0057	0.0217
0.5	0.0102	0.0386
0.75	0.0229	0.0869
1	0.0408	0.1544
1.25	0.0637	0.2413
1.5	0.0918	0.3475
2	0.1632	0.6178
2.5	0.2550	0.9653
3	0.3672	1.3900
4	0.6528	2.4711
6	1.4688	5.5600

Purge Volume Calculation

[39 ft (tubing length) x 0.0097 L/ft] + 0.275 L (flow cell vol.) = 0.6533; 0.6533 L x 3 well vol. = 1.96 L

(continued from front)

Time (24 hr)	Volume Removed (Liters)	Temp (°C)	pH	Spec. Cond (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	~~Drawdown~~ OTW (ft)	Color/Odor
1055	7200	12.1	5.81	2042	8.40	204.3	0.02	200	3.33	clear/none
1100	8200	12.2	5.80	2042	7.84	207.4	0.02	200	3.33	↓
1105	9200	12.1	5.80	2042	7.79	208.8	0.02	200	3.33	↓
1110	10200	12.0	5.79	2042	7.73	210.1	0.02	200	3.33	↓
1115	—	Samples collected (20A-AE106D-091720-1)								

Hydrogen Bubble Strip Sampling:

AECOM

Well ID: **AE-106R**

Low Flow Ground Water Sample Collection Record

Client: Lockheed Martin Corp. Date: 4/17/20 Time: Start 940 am/pm
Project No: 60552044 Finish 1348 am/pm
Site Location: 50 Fordham Rd Site, Wilmington, MA
Weather Conds: mostly sunny, 70s Collector(s): A. Grossman

1. WELL & WATER LEVEL DATA: (measured in feet from Top of Casing unless noted)

a. Total Well Length 175' b. Water Table Depth NA c. Water Column (a-b) NA
d. Depth to Water in FLUTe liner _____ e. Purge Pressure 53 psi f. Sample Pressure 37 psi

2. PORT DATA:

Port	Sampling Interval (ft BGS)	Pump Depth (ft BGS)	Purge Volume (Liters)	Sample Stroke Volume (Liters)	Min. Discard (Liters)	Initial DTW @1023	Before 2nd Purge DTW @1112	Before 3rd Purge DTW @1151
1	47-52	96	4.31	3.34	0.237	4.01	4.09	4.12
2	69.5-74.5	97	4.38	3.34	0.250	not sampled		
3	84-88	98	4.42	3.34	0.252	3.96	4.04	4.09
4	144.5-150.5	99	4.46	3.34	0.254	not sampled		
5	164-169	100	4.51	3.34	0.257	3.91	4.00	4.02

a. Field Testing Equipment used:

	Make	Model	Serial Number
	YSI	Pro Plus	18H100703
	Geotech	Turb Meter	17061384

b. 1st Purge Time/Duration Purged on 4/4/20 1015-1121/6 min
c. 2nd Purge Time/Duration 1031-1038/7 min
d. 3rd Purge Time/Duration 1156-1232/6 min
e. 4th Purge Time/Duration

Port	Time (24hrs)	Purge Time	pH	Temp. (°C)	Spec. Cond. (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	PID (ppm)	Color/Odor
1	1250	5	7.06	11.2	1133	0.14	-78.0	2.81	NM	clr/nad
2	not sampled									
3	~~1237~~ 1243	6	7.05	11.0	588.3	0.32	-52.5	1.01		
4	not sampled									
5	1257	6	7.78	11.2	196.7	0.18	-121.5	0.02		

3. SAMPLE COLLECTION:

Sample ID	Analysis	Time
20A-AE106R1-041720-1	VOCs	1410
20A-AE106R3-041720-1	VOCs, Total (As, Fe, Mn), Dissolved (As, Fe, Mn), NO3, NO2, Cl, SO4, S, TOC, VPH, EPH, Diss. H, Gases (Acety., Prop., Meth., Etha.)	1325
20A-AE106R5-041720-1	VOCs, 1,4-dioxane, VPH, EPH	1350

Notes:

Hydrogen purge time and rate = ~~158~~ 156 mL/min 25 min 1308-1333

Signature _____ Date 4/17/20

AECOM

Well ID: **AE-106S**

Low Flow Ground Water Sample Collection Record

Client: Lockheed Martin Corp. Date: 9/17/20 Time: Start 1200 ~~am/pm~~
Project No: 60552044 Finish 1235 ~~am/pm~~
Site Location: 50 Fordham Rd Site, Wilmington, MA
Weather Conds: Sunny 70's Collector(s): Sean Haggett

1. WELL & WATER LEVEL DATA: (measured in feet from Top of Casing unless noted)

a. Total Well Length 21.30 c. Screen Length 5 (12' - 17') 2" PVC Casing
b. Water Table Depth 3.32 d. Pump Intake 14.5'
c. Water Column (a-b) 17.98' e. Calculated System Purge Volume 1.32 L (calculation on page 2)

2. WELL PURGE DATA

a. Purge Method: peristaltic pump

b. Acceptance Criteria defined (see workplan)

- Temperature	3%	- D.O.	< 0.5 mg/L	-Drawdown	<0.3 ft
- pH	± 1.0 unit		>0.5 mg/L within 10%	-Turbidity	<10 NTU
- Sp. Cond.	3%	- ORP	± 10mV		>10NTU within 10%

c. Field Testing Equipment used:

	Make	Model	Serial Number
	YSI	Pro Quatro	18D102399
	Geotech	turbidimeter	19011937

Time (24hr)	Volume Removed (Liters)	Temp. (°C)	pH	Spec. Cond. (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	~~Drawdown~~ DTW (feet)	Color/Odor
1200	200	12.5	5.79	1842	1.26	123.9	18.3	200	3.55	clear/none
1205	1200	12.5	5.78	1830	1.19	116.3	9.44	200	3.55	clear/none
1210	2200	12.7	5.74	1819	1.01	111.4	3.95	200	3.55	clear/none
1215	3200	12.5	5.74	1815	0.87	111.9	2.44	200	3.56	clear/none
1220	4200	12.6	5.74	1818	0.84	111.5	2.01	200	3.55	clear/none
1225	5200	12.3	5.73	1816	0.81	111.8	1.98	200	3.55	clear/none
1230	[illegible]	-	Samples Collected from - (20A-AE106S-091720-1)							

(continued on back)

d. Acceptance criteria pass/fail

	Yes	No	N/A
Has required volume been removed	☑	☐	☐
Has required turbidity been reached	☑	☐	☐
Have parameters stabilized	☑	☐	☐

If no or N/A - Explain below.

3. SAMPLE COLLECTION: Method: grab

Sample ID	Container Type	No.	Preservation	Analysis Req.	Time
20A-AE106S-091720-1	40mL VOA	3	HCL	VOCs 8260C	1230

Comments

Signature [signature] Date 9/17/2020

AECOM

Well ID: **AE-108R**

Low Flow Ground Water Sample Collection Record

Client: Lockheed Martin Corp. Date: 09.09.2020 Time: Start 08:20 am/pm
Project No: 60552044 Finish _____ am/pm
Site Location: 50 Fordham Rd Site, Wilmington, MA
Weather Conds: 70°, cloudy, humid, foggy Collector(s): L Fogby, A Grossman

1. WELL & WATER LEVEL DATA: (measured in feet from Top of Casing unless noted)

a. Total Well Length 168' b. Water Table Depth NA c. Water Column (a-b) NA
d. Depth to Water in FLUTe liner 0.96' e. Purge Pressure 55 psi f. Sample Pressure 39 psi

2. PORT DATA:

Port	Sampling Interval (ft BGS)	Pump Depth (ft BGS)	Purge Volume (Liters)	Sample Stroke Volume (Liters)	Min. Discard (Liters)	DTW @ 08:25 (Initial)	DTW @ 09:15 (Before 2nd Purge)	DTW @ 10:05 (Before 3rd Purge)
1	36.5-43.5	99.7	4.31	3.07	0.237	3.45'	3.42'	3.44
2	68-73	100.7	4.38	3.06	0.250	not sampled		
3	84-89	101.7	4.42	3.05	0.252	3.42'	~~3.42~~ 3.41	3.42
4	145-150	102.7	4.46	3.05	0.254	not sampled		
5	163-168	103.7	4.51	3.05	0.257	3.44'	3.45'	3.46

a. Field Testing Equipment used:

	Make	Model	Serial Number
	YSI Prot	10E100	
	GeoTech Turb	—	

b. 2nd Purge Time/Duration 08:35 / 08:40 5 min c. 3rd Purge Time/Duration 09:21 / 09:27 6 min
d. 1st Purge Time/Duration first purge on 9/4/20 e. 4th Purge Time/Duration 10:10 / 10:15 5 min

Port	Time (24hrs)	Purge Time	pH	Temp. (°C)	Spec. Cond. (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	PID (ppm)	Color/Odor
~~11:10~~ 1	~~08:35~~	11:10	9.22	14.7	2916	2.57	-278.5	0.22	NM	None
2	11:10 ↑ not sampled									
3	~~08:35~~	11:19	7.83	14.7	2847	1.16	-144.7	0.02	NM	None
4	not sampled									
5	~~08:35~~	11:25	7.67	14.4	940	0.69	-121.9	0.17	NM	None

3. SAMPLE COLLECTION:

Sample ID	Analysis	Time
20A-AE108R1-~~090920~~-1	VOCs, Total (As, Fe, Mn), Dissolved (As, Fe, Mn), NO3, NO2, Cl, SO4, S, TOC, Diss. H, Gases (Acety., Prop., Meth., Etha.) (also MS/MSD)	11:40
20A-AE108R3-~~090920~~-1	VOCs	11:50
20A-AE108R5-~~090920~~-1	VOCs	12:00

Notes: Hydrogen Gas sample flow rate = 100 mL/min @ 15:04 - 15:34

Hydrogen purge time and rate =

Signature _____ Date 09.09.2020

AECOM

Well ID: **AE-109D**

Low Flow Ground Water Sample Collection Record

Client: Lockheed Martin Corp. Date: 9/16/20 Time: Start 0850 am/pm
Project No: 60552044 Finish 0940 am/pm
Site Location: 50 Fordham Rd Site, Wilmington, MA
Weather Conds: 50s Mostly Sunny Collector(s): Floyd Burton

1. WELL & WATER LEVEL DATA: (measured in feet from Top of Casing unless noted)

a. Total Well Length 23.5' c. Screen Length 5 (18' - 23') 2" PVC Casing
b. Water Table Depth 4.85 d. Pump Intake 20.5'
c. Water Column (a-b) 18.65 e. Calculated System Purge Volume 1.52 L (calculation on page 2)

2. WELL PURGE DATA

a. Purge Method: peristaltic pump

b. Acceptance Criteria defined (see workplan)

- Temperature	3%	- D.O.	< 0.5 mg/L	-Drawdown	<0.3 ft
- pH	± 1.0 unit		>0.5 mg/L within 10%	-Turbidity	<10 NTU
- Sp. Cond.	3%	- ORP	± 10mV		>10NTU within 10%

c. Field Testing Equipment used: Make YSI Model Serial Number

Time (24hr)	Volume Removed (Liters)	Temp. (°C)	pH	Spec. Cond. (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (feet)	Color/Odor
0900	0	16.16	7.44	1304	0.28	-253.1	0	200	0	clear/none
0905	1	16.5	6.72	1273	0.36	-283.0	0	200	0	
0910	2	16.5	6.55	1245	0.57	-298.9	0	200	0	
0915	3	16.4	6.55	1231	0.59	-306.8	0	200	0	
0920	4	16.4	6.52	1225	0.59	-308.0	0	200	0	

d. Acceptance criteria pass/fail

	Yes	No	N/A
Has required volume been removed	X		
Has required turbidity been reached	X		
Have parameters stabilized	X		

If no or N/A - Explain below.

(continued on back)

3. SAMPLE COLLECTION: Method: grab

Sample ID	Container Type	No.	Preservation	Analysis Req.	Time
20A-AE109D-09162020-1	40mL VOA	3	HCL	VOCs 8260C	0925
	250mL A	2	NaH2S04	1,4-dioxane	
	500 mL P	2	HNO3	Tot & Diss. (Fe, Mn, As)	

Comments

Signature Floyd Burton Date 9/16/20

AECOM

Well ID: **AE-109R**

Low Flow Ground Water Sample Collection Record

Client: Lockheed Martin Corp. Date: 9/16/2020 Time: Start 0800 ~~am/pm~~
Project No: 60552044 Finish 1650 ~~am/pm~~
Site Location: 50 Fordham Rd Site, Wilmington, MA
Weather Conds: Overcast 60's Collector(s): Sean Haggett

1. WELL & WATER LEVEL DATA: (measured in feet from Top of Casing unless noted)

a. Total Well Length 250' b. Water Table Depth NA c. Water Column (a-b) NA
d. Depth to Water in FLUTe liner 0.54' e. Purge Pressure 55 psi f. Sample Pressure 38 psi

2. PORT DATA:

Port	Sampling Interval (ft BGS)	Pump Depth (ft BGS)	Purge Volume (Liters)	Sample Stroke Volume (Liters)	Min. Discard (Liters)	Initial DTW @ 0805	Before 2nd Purge DTW @ 0955	Before 3rd Purge DTW @ 1150
1	38-43	97.4	4.07	3.2	0.23	4.48	4.87	4.80
2	66-76	98.4	4.15	3.2	0.250	4.17	4.50	5.13
3	126-136	99.4	4.19	3.2	0.252	4.49	4.62	6.41
4	174-180.5	100.4	4.23	3.2	0.254	4.60	4.75	4.76
5	183-189	101.4	4.28	3.2	0.257	4.62	4.74	4.77
6	196-201	102.4	4.32	3.2	0.259	4.59	4.75	4.75
7	204-214	103.4	4.36	3.2	0.261	4.54	4.75	4.76
8	245-250	104.4	4.40	3.2	0.263	4.84	4.98	4.83

a. Field Testing Equipment used:

Make	Model	Serial Number
YSI pro	Quatro	18D102399
geotech	turbidimeter	19011937

b. 1st Purge Time/Duration Purged on 9/4
c. 2nd Purge Time/Duration 0830 / 6 mins
d. 3rd Purge Time/Duration 1015 / 6 mins
e. 4th Purge Time/Duration 1205 / 6 mins

Port	Time (24hrs)	Purge Time	pH	Temp. (°C)	Spec. Cond. (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	PID (ppm)	Color/Odor
1	1330	3 mins	8.03	13.8	1334	1.54	-130.9	1.07		clear/org. decay
2	1343	3 mins	7.54	13.9	1269	0.82	-154.2	0.76		clear/org. decay
3	1347	3 mins	7.64	13.9	521.0	0.62	-161.9	0.91		clear/org. decay
4	1351	3 mins	7.74	14.0	296.8	0.70	-185.9	0.02		clear/org. decay
5	1339	3 mins	8.11	14.0	276.5	1.00	-172.9	0.61		clear/org. decay
6	1354	3 mins	7.69	13.9	381.2	0.71	-167.9	2.06		clear/org. decay
7	1359	3 mins	7.70	13.9	201.3	0.61	-169.9	0.02		clear/org. decay
8	1404	3 mins	7.69	14.0	166.8	1.04	-185.9	173		clear/org. decay

3. SAMPLE COLLECTION:

Sample ID	Analysis	Time
20A-AE109R1-091520-1	VOCs	1515
20A-AE109R2-091520-1	VOCs, 1,4-Dioxane	1540
20A-AE109R3-091520-1	VOCs	1535
20A-AE109R4-091520-1	VOCs	1530
20A-AE109R5-091580-1	VOCs, Total (As, Fe, Mn), Dissolved (As, Fe, Mn), NO3, NO2, Cl, SO4, S, TOC, Diss. H, Gases (Acety., Prop., Meth., Etha.), VPH, EPH, 1,4-dioxane	1445
20A-AE109R6-091520-1	VOCs	1525
20A-AE109R7-091520-1	VOCs, 1,4-dioxane Dup	1500
20A-AE109R8-091520-1	VOCs	1520

Notes: 1308 - 1313 - finished purging all ports after YSI readings.

R5- Hydrogen purge time and rate = Purge Start/End: 1620-1645 Purge time: 25 min Purge rate: 175 mL/min

Signature _____ Date 9/15/2020

AECOM

Well ID: **AE-110R**

Low Flow Ground Water Sample Collection Record

Client: Lockheed Martin Corp. Date: 9/16/20 Time: Start 850 am/pm
Project No: 60552044 Finish 1500 am/pm
Site Location: 50 Fordham Rd Site, Wilmington, MA
Weather Conds: 60s. Mostly Sunny Collector(s): A. Grossman

1. WELL & WATER LEVEL DATA: (measured in feet from Top of Casing unless noted)

a. Total Well Length 250' b. Water Table Depth NA c. Water Column (a-b) NA
d. Depth to Water in FLUTe liner _____ e. Purge Pressure 55 psi f. Sample Pressure 38 psi

2. PORT DATA:

Port	Sampling Interval (ft BGS)	Pump Depth (ft BGS)	Purge Volume (Liters)	Sample Stroke Volume (Liters)	Min. Discard (Liters)	Initial DTW @ 904	Before 2nd Purge DTW @ 1039	Before 3rd Purge DTW @ 1200
1	34-44	98	4.15	3.23	0.232	4.30	4.47	5.49
2	70-80	99	4.22	3.23	0.250	4.34	4.94	5.18
3	128-138	100	4.27	3.23	0.252	not sampled		
4	158-168	101	4.31	3.23	0.254	4.38	4.47	4.47
5	171-182	102	4.35	3.23	0.257	not sampled		
6	190-200	103	4.4	3.23	0.259	4.44	4.51	4.49
7	224-234	104	4.44	3.23	0.261	not sampled		

a. Field Testing Equipment used: Make YSI / Geoflow Model Pro Plus / Turbidity meter Serial Number 18H100703

b. 1st Purge Time/Duration Purged on 4/4 c. 2nd Purge Time/Duration 912 - 917 / 5 min
d. 3rd Purge Time/Duration 1045 - 1050 e. 4th Purge Time/Duration 1204 - 1209 / 5 min

Port	Time (24hrs)	Purge Time	pH	Temp. (°C)	Spec. Cond. (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	PID (ppm)	Color/Odor
1	1324	4	~~7.54~~	14.0	683	0.44	-158.7	5.22		clr / biofilm-like
2	1332	4	7.33	14.1	662	~~0.44~~ 0.22	-174.5	0.44		" "
3	not sampled									
4	1344	4	7.50	14.2	462.8	0.17	-148.4	0.42		" "
5	not sampled									
6	1350	5	7.20	14.1	961	0.08	-126.8	0.30		clr / none
7	not sampled									

3. SAMPLE COLLECTION:

Sample ID	Analysis	Time
20A-AE110R1-091620-1	VOCs	~~1423~~ 1430
20A-AE110R2-091620-1	VOCs	1445
20A-AE110R4-091620-1	VOCs	1435
20A-AE110R6-091620-1	VOCs, 1,4-dioxane	1430

Notes: Port 1: ~~Silty~~ Black deposits upon initial purge
Port 6: Bad Quick Connect

Signature _____ Date 9/16/20

AECOM

Well ID: **AE-111R**

Low Flow Ground Water Sample Collection Record

Client: Lockheed Martin Corp. Date: 09.16.2020 Time: Start 08:30 (am)/pm
Project No: 60552044 Finish 12:15 am/(pm)
Site Location: 50 Fordham Rd Site, Wilmington, MA
Weather Conds: 65°F, sunny Collector(s): L. Fogby

1. WELL & WATER LEVEL DATA: (measured in feet from Top of Casing unless noted)

a. Total Well Length 200' b. Water Table Depth NA c. Water Column (a-b) NA
d. Depth to Water in FLUTe liner 0.98' (From top of pvc) e. Purge Pressure 59 psi f. Sample Pressure 42 psi

2. PORT DATA:

Port	Sampling Interval (ft BGS)	Pump Depth (ft BGS)	Purge Volume (Liters)	Sample Stroke Volume (Liters)	Min. Discard (Liters)	Initial DTW @ 08:30	Before 2nd Purge DTW @09:50	Before 3rd Purge DTW @10:30
1	44-54	108	4.15	3.15	0.232	13.75'	13.68'	13.90'
2	66-74	109	4.22	3.15	0.250	not sampled		
3	95-103	110	4.27	3.15	0.252	13.58'	13.57'	13.63'
4	140-150	111	4.31	3.15	0.254	not sampled		
5	155-165	112	4.35	3.15	0.257	13.62'	13.60'	13.71'
6	168-173	113	4.4	3.15	0.259	13.70'	13.72'	13.72'
7	181-191	114	4.44	3.15	0.261	not sampled		

a. Field Testing Equipment used:

Make	Model	Serial Number
YSI	Professional +	10E100125U
Geotech	Turbidity Meter	19060110

b. 1st Purge Time/Duration Purged Sept 4th c. 2nd Purge Time/Duration 08:48-08:55 (7 min)
d. 3rd Purge Time/Duration 09:49-09:56 (7 min) e. 4th Purge Time/Duration 10:32-1040 (8 min)

Port	Time (24hrs)	Purge Time (min)	pH	Temp. (°C)	Spec. Cond. (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	PID (ppm)	Color/Odor	DTW	
1	11:15	~7	8.94	13.6	1050	1.36	165.7	0.07	NM	None	13.82'	Port 1
2	not sampled											
3	11:28	~7	8.33	14.0	1015	0.19	145.8	0.61	NM	None	13.65'	Port 3
4	not sampled											
5	11:41	~7	8.48	13.4	408.7	0.10	91.3	0.12	NM	None	13.75'	Port 5
6	11:50	~7	8.34	13.4	~~413.6~~ 413.6	0.06	2.3	0.03	NM	None	13.79'	Port 6
7	not sampled											

3. SAMPLE COLLECTION:

Sample ID	Analysis	Time
20A-AE111R1-091620-1	VOCs	12:00
20A-AE111R3-091620-1	VOCs	12:05
20A-AE111R5-091620-1	VOCs	12:10
20A-AE111R6-091620-1	VOCs	12:15

Notes: Slight sulfury odor during first two purges. NO odor by the time taking readings. Purge water contained then dumped in woods nearby. About 30-40 min to recharge.

Signature Leah Fogby Date 09.16.20

AECOM

Well ID: AE-112D

Low Flow Ground Water Sample Collection Record

Client: Lockheed Martin Corp. Date: 09.11.2020 Time: Start 08:40 (am)/pm
Project No: 60552044 Finish _____ am/pm
Site Location: 50 Fordham Rd Site, Wilmington, MA
Weather Conds: 22°C, overcast, humid Collector(s): L. Zogby

1. WELL & WATER LEVEL DATA: (measured in feet from Top of Casing unless noted)

a. Total Well Length 30' c. Screen Length 5 (24.5' - 29.5') 2" PVC Casing
b. Water Table Depth 7.60' d. Pump Intake 27'
c. Water Column (a-b) 22.40' e. Calculated System Purge Volume 1.52 L (calculation on page 2)

2. WELL PURGE DATA

a. Purge Method: peristaltic pump

b. Acceptance Criteria defined (see workplan)

- Temperature	3% ✓	- D.O.	< 0.5 mg/L	-Drawdown	<0.3 ft ✓
- pH	± 1.0 unit ✓		>0.5 mg/L within 10% ✓	-Turbidity	<10 NTU ✓
- Sp. Cond.	3% ✓	- ORP	± 10mV ✓		>10NTU within 10%

c. Field Testing Equipment used:

	Make	Model	Serial Number
	YSI	Pro-Plus	10E100125U for 08:50
	Geotech	Turbidimeter	19062110 ~~for 08:50~~

Time (24hr)	Volume Removed (Liters)	Temp. (°C)	pH	Spec. Cond. (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (feet)	Color/Odor
08:50	0.5	15.1	7.47	0.0	3.69	215.2	9.94	100	7.60'	None
09:50	1.0	14.6	5.36	1330	2.53	259.0	7.00	100	7.60'	None → ysi 10E100342
09:55	1.5	14.6	5.26	1328	2.34	265.3	5.95	100	7.60	"
10:00	2.0	14.5	5.21	1327	2.13	278.5	4.17	100	7.60	"
10:05	2.5	14.5	5.18	1329	2.10	287.1	3.66	100	7.60	"
10:10	3.0	14.3	5.15	1322	1.99	301.4	2.68	100	7.60	"
10:15	3.5	14.3	5.15	1319	1.97	308.6	2.01	100	7.60	"

(continued on back)

d. Acceptance criteria pass/fail

	Yes	No	N/A
Has required volume been removed	☑	☐	☐
Has required turbidity been reached	☑	☐	☐
Have parameters stabilized	☑	☐	☐

If no or N/A - Explain below.
Stable @ 10:20 (see back)

3. SAMPLE COLLECTION: Method: grab

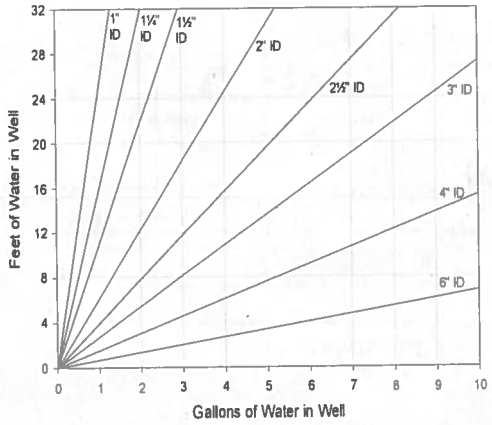
Sample ID	Container Type	No.	Preservation	Analysis Req.	Time
20A-AE112D-091120-1	40mL VOA	3	HCL	VOCs 8260C	@ 10:25
	500mL A	2	HNO3	Tot & Diss. (Fe, Mn, As)	

Comments Bump checking YSI @ 9:00. Not reading Sp. con. Stopping low flow to connect new ysi. Disregard reading @ 08:56. Begin low flow at 09:50 with YSI 10E100342.

Signature Leah Zogby Date 09.11.2020

AECOM

Well ID: AE-112D



Volume / Linear Ft. of Pipe		
ID (in)	Gallon	Liter
0.25	0.0025	0.0097
0.375	0.0057	0.0217
0.5	0.0102	0.0386
0.75	0.0229	0.0869
1	0.0408	0.1544
1.25	0.0637	0.2413
1.5	0.0918	0.3475
2	0.1632	0.6178
2.5	0.2550	0.9653
3	0.3672	1.3900
4	0.6528	2.4711
6	1.4688	5.5600

Purge Volume Calculation

[24 ft (tubing length) x 0.0097 L/ft] + 0.275 L (flow cell vol.) = 0.508 L ; 0.508 L x 3 well vol. = 1.52 L

(continued from front)

Time (24 hr)	Volume Removed (Liters)	Temp (°C)	pH	Spec. Cond (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (ft)	Color/Odor
10:20	4.0	14.3	5.15	1318	1.92	309.6	0-81	100	7.60'	None
		Stable								

Hydrogen Bubble Strip Sampling:

Purge rate=	Purge Duration=	Sample time=

AECOM

Well ID: **AE-112R**

Low Flow Ground Water Sample Collection Record

Client: Lockheed Martin Corp. Date: 4/~~10~~11/20 Time: Start 810 am/pm
Project No: 60552044 Finish 1300 am/pm
Site Location: 50 Fordham Rd Site, Wilmington, MA
Weather Conds: Collector(s): A. Grossman

1. WELL & WATER LEVEL DATA: (measured in feet from Top of Casing unless noted)

a. Total Well Length 175' b. Water Table Depth NA c. Water Column (a-b) NA
d. Depth to Water in FLUTe liner e. Purge Pressure 56 psi f. Sample Pressure 39 psi

2. PORT DATA:

Port	Sampling Interval (ft BGS)	Pump Depth (ft BGS)	Purge Volume (Liters)	Sample Stroke Volume (Liters)	Min. Discard (Liters)	DTW @ Initial 820	DTW @ Before 2nd Purge 910	DTW @ Before 3rd Purge
1	41-50	100.9	4.15	3.21	0.232	6.99	6.90	6.99
2	62-72	101.9	4.22	3.21	0.250	not sampled		
3	91-101	102.9	4.27	3.21	0.252	7.10	7.12	7.14
4	113-123	103.9	4.31	3.21	0.254	not sampled		
5	136-146	104.9	4.35	3.21	0.257	7.16	7.15	7.25
6	153-163	105.9	4.4	3.21	0.259	7.09	7.10	7.05
7	168-175	106.9	4.44	3.21	0.261	not sampled		

a. Field Testing Equipment used:

	Make	Model	Serial Number
	YSI	ProPlus	18H100703
Turb' Meter	GeoTech		1706138

b. 1st Purge Time/Duration Purged on 9/4 c. 2nd Purge Time/Duration 825-831 | 6 min
d. 3rd Purge Time/Duration 913-918 | 5 min e. 4th Purge Time/Duration ~~1046-1050~~ 1020-1025

Port	Time (24hrs)	Purge Time	pH	Temp. (°C)	Spec. Cond. (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	PID (ppm)	Color/Odor
1	1138	5	6.41	12.8	1284	0.10	-81.6	0.02	1ppm	clr/bubbly
2	not sampled									
3	1131	5	6.86	12.8	822	0.41	-72.1	0.02		
4	not sampled									
5	1124	5	6.63	12.8	1084	0.11	~~-70.3~~	0.02		
6	1120	5	~~7.62~~ 6.28	12.8	966	0.34	-29.4	0.02		clr/bubbly
7	not sampled									

DTW 7.00 | 7.14 | 7.19 orp: -70.3 | 7.12

3. SAMPLE COLLECTION: 20A-AE112R_-09120-1

Sample ID	Analysis	Time
20A-AE112R1-_____-1	VOCs, Total (As, Fe, Mn), Dissolved (As, Fe, Mn)	~~1257~~ 1300
20A-AE112R3-_____-1	VOCs	1255
20A-AE112R5-_____-1	VOCs	1225
20A-AE112R6-_____-1	VOCs, Total (As, Fe, Mn), Dissolved (As, Fe, Mn), VPH, EPH	1235

Notes:

Signature [signature] Date 9/11/20

AECOM

Well ID: **EMW-10D**

Low Flow Ground Water Sample Collection Record

Client: Lockheed Martin Corp. Date: 9/11/2020 Time: Start 1050 am/pm
Project No: 60552044 Finish 1125 am/pm
Site Location: 50 Fordham Rd Site, Wilmington, MA
Weather Conds: Overcast 60's Collector(s): Sean Haggett

1. WELL & WATER LEVEL DATA: (measured in feet from Top of Casing unless noted)

a. Total Well Length 29' c. Screen Length 10 (19' - 29') 2" PVC Casing
b. Water Table Depth 4.77' d. Pump Intake 24'
c. Water Column (a-b) 24.23' e. Calculated System Purge Volume 1.61 L (calculation on page 2)

2. WELL PURGE DATA

a. Purge Method: peristaltic pump

b. Acceptance Criteria defined (see workplan)

- Temperature	3%	- D.O.	< 0.5 mg/L	-Drawdown	<0.3 ft
- pH	± 1.0 unit		>0.5 mg/L within 10%	-Turbidity	<10 NTU
- Sp. Cond.	3%	- ORP	± 10mV		>10NTU within 10%

c. Field Testing Equipment used:

	Make	Model	Serial Number
	YSI	Quatro	18D102399
	Geotech	turbidimeter	19011437

Time (24hr)	Volume Removed (Liters)	Temp. (°C)	pH	Spec. Cond. (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (feet) DTW	Color/Odor
1050	160	16.1	6.00	1347	0.88	120.8	2.23	160	4.83	Clear/none
1055	960	15.8	5.74	1342	0.40	140.8	2.15	160	4.83	Clear/none
1100	1760	15.7	5.56	1336	0.22	159.1	0.97	160	4.84	Clear/none
1105	2560	15.8	5.47	1331	0.00	173.9	1.87	160	4.84	Clear/none
1110	3360	15.8	5.45	1330	0.00	179.2	1.79	160	4.84	Clear/none
1115	4160	15.6	5.41	1325	0.00	193.1	1.92	160	4.84	Clear/none
1120	4960	15.5	5.40	1320	0.00	202.7	1.31	160	4.84	Clear/none

d. Acceptance criteria pass/fail

	Yes	No	N/A
Has required volume been removed	☑	☐	☐
Has required turbidity been reached	☑	☐	☐
Have parameters stabilized	☑	☐	☐

If no or N/A - Explain below.

(continued on back)

3. SAMPLE COLLECTION: Method: grab

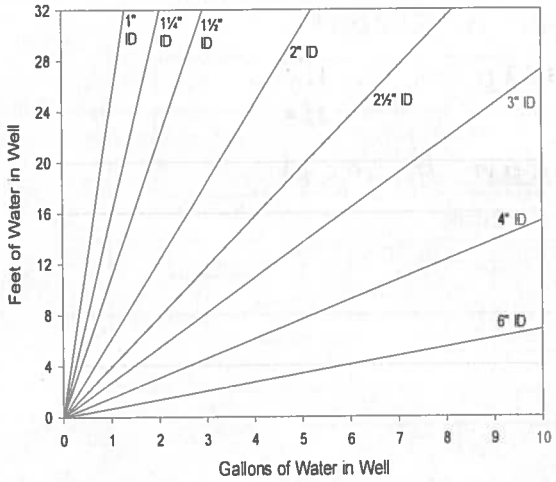
Sample ID	Container Type	No.	Preservation	Analysis Req.	Time
20A-EMW10D-091120-1	40mL VOA	3	HCL	VOCs 8260C	1135

Comments

Signature Date 09/11/2020

AECOM

Well ID: EMW-10D



Volume / Linear Ft. of Pipe		
ID (in)	Gallon	Liter
0.25	0.0025	0.0097
0.375	0.0057	0.0217
0.5	0.0102	0.0386
0.75	0.0229	0.0869
1	0.0408	0.1544
1.25	0.0637	0.2413
1.5	0.0918	0.3475
2	0.1632	0.6178
2.5	0.2550	0.9653
3	0.3672	1.3900
4	0.6528	2.4711
6	1.4688	5.5600

Purge Volume Calculation

[27 ft (tubing length) x 0.0097 L/ft] + 0.275 L (flow cell vol.) = 0.537 L ; 0.537 L x 3 well vol. = 1.61 L

(continued from front)

Time (24 hr)	Volume Removed (Liters)	Temp (°C)	pH	Spec. Cond (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (ft)	Color/Odor
1125	5760	15.5	5.39	1320	0.00	202.4	1.42	160	4.84	Clear/none
1130	6560	15.5	5.38	1319	0.00	201.6	1.39	160	4.84	Clear/none
	—	parameters			Stabilized	@1130				
1135	—	Collected			Samples	-20A-	EMW	10D-09	1120-1	—
Hydrogen Bubble Strip Sampling:										
Purge rate=				Purge Duration=			Sample time=			

AECOM

Well ID: **EMW-10R**

Low Flow Ground Water Sample Collection Record

Client: Lockheed Martin Corp. Date: 9/11/2020 Time: Start 0830 ~~am/pm~~
Project No: 60552044 Finish 1050 ~~am/pm~~
Site Location: 50 Fordham Rd Site, Wilmington, MA
Weather Conds: Overcast/rainy 60's Collector(s): Sean Hayyes

1. WELL & WATER LEVEL DATA: (measured in feet from Top of Casing unless noted)

a. Total Well Length 52' c. Screen Length 10 (42' - 52') 2" PVC Casing
b. Water Table Depth 5.11 d. Pump Intake 47'
c. Water Column (a-b) 46.89 e. Calculated System Purge Volume 2.28 L (calculation on page 2)

2. WELL PURGE DATA

a. Purge Method: peristaltic pump

b. Acceptance Criteria defined (see workplan)

- Temperature	3%	- D.O.	< 0.5 mg/L	-Drawdown	<0.3 ft
- pH	± 1.0 unit		>0.5 mg/L within 10%	-Turbidity	<10 NTU
- Sp. Cond.	3%	- ORP	± 10mV		>10NTU within 10%

c. Field Testing Equipment used:

	Make	Model	Serial Number
	YSI	Quatro	18D102399
	GeoTech	turbidimeter	19011937

Time (24hr)	Volume Removed ~~(Liters)~~ mL	Temp. (°C)	pH	Spec. Cond. (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (feet) DTW	Color/Odor
0905	200	16.0	8.19	517.6	2.86	104.5	5.84	200	6.10	Clear/none
0910	1200	15.8	9.30	516.0	2.15	79.4	5.29	200	7.60	clear/none
0915	2200	15.7	9.48	518.0	2.16	57.0	4.03	200	8.37	clear/none
0920	3200	15.6	9.55	518.0	1.28	34.5	10.1	200	9.00	clear/none
0925	4200	15.3	9.57	517.0	1.26	27.3	13.0	200	9.43	clear/none
0930	5200	15.1	9.50	519.2	0.93	13.1	16.1	200	9.87	clear/none
0935	5950	15.5	9.51	539.6	0.69	5.1	22.7	150	9.93	clear/none

d. Acceptance criteria pass/fail

	Yes	No	N/A
Has required volume been removed	☑	☐	☐
Has required turbidity been reached	☑	☐	☐
Have parameters stabilized	☑	☐	☐

If no or N/A - Explain below.

(continued on back)

3. SAMPLE COLLECTION: Method: grab

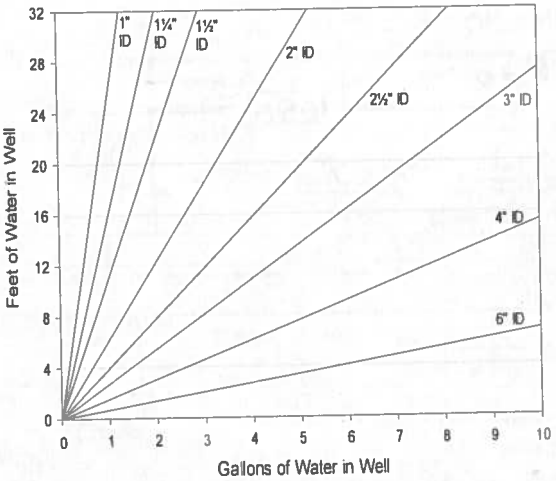
Sample ID	Container Type	No.	Preservation	Analysis Req.	Time
20A-EMW10R-09112020-1	40mL VOA	3	HCL	VOCs 8260C	1045

Comments

Signature [signature] Date 09/11/2020

AECOM

Well ID: EMW-10R



Volume / Linear Ft. of Pipe		
ID (in)	Gallon	Liter
0.25	0.0025	0.0097
0.375	0.0057	0.0217
0.5	0.0102	0.0386
0.75	0.0229	0.0869
1	0.0408	0.1544
1.25	0.0637	0.2413
1.5	0.0918	0.3475
2	0.1632	0.6178
2.5	0.2550	0.9653
3	0.3672	1.3900
4	0.6528	2.4711
6	1.4688	5.5600

Purge Volume Calculation

[50 ft (tubing length) x 0.0097 L/ft] + 0.275 L (flow cell vol.) = 0.76 L ; 0.76 L x 3 well vol. = 2.28 L

(continued from front)

checked D.O. for 100% sat w/ DI water. Confirmed accurate result

Time (24 hr)	Volume Removed ~~(Liters)~~ mL	Temp (°C)	pH	Spec. Cond (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (ft) PTW	Color/Odor
0940	6700	15.3	8.96	663	0.00	9.2	31.5	150	9.95	Clear/none
0945	7450	15.3	8.17	954	0.00	-182.9	15.5	150	9.91	clear/none
0950	8200	15.1	9.68	944	0.26	-156.8	13.7	150	9.93	Clear/none
0955	8950	15.0	8.53	919	0.00	-160.2	11.3	150	9.95	clear/none
1000	9700	15.0	7.95	826	0.00	-97.1	9.49	150	9.97	clear/none
1005	10200	15.0	7.64	808	0.00	-107.3	6.65	100	9.81	clear/none
1010	10700	15.5	7.54	803	0.00	-111.5	6.28	100	9.55	Clear/none
1015	11200	15.3	7.37	797	0.00	-110.0	4.14	100	9.31	Clear/none
1020	11700	15.3	7.29	737	0.00	-108.2	2.85	100	9.22	Clear/none
1025	12200	15.2	7.19	717	0.00	-105.5	2.63	100	9.11	Clear/none
1030	12700	15.2	7.11	705	0.00	-102.7	2.58	100	9.02	Clear/none
1035	13200	15.3	7.08	695	0.00	-101.7	2.51	100	8.98	Clear/none
1040	13700	15.3	7.06	691	0.00	-101.1	2.32	100	8.96	clear/none
	—	Parameters stabilized								
1045	—	Collected samples from EMW-10R-								

checked turb meter with stew = 0.02 still corrected calibrate results accurate

Hydrogen Bubble Strip Sampling:

Purge rate=	Purge Duration=	Sample time=

AECOM

Well ID: **EMW-11D**

Low Flow Ground Water Sample Collection Record

Client: Lockheed Martin Corp. Date: 09.11.2020 Time: Start 11:15 am/pm
Project No: 60552044 Finish 12:20 am/pm
Site Location: 50 Fordham Rd Site, Wilmington, MA
Weather Conds: 22°C, partly cloudy Collector(s): L. Fogby

1. WELL & WATER LEVEL DATA: (measured in feet from Top of Casing unless noted)

a. Total Well Length 32' c. Screen Length 10 (22' - 32') 2" PVC Casing
b. Water Table Depth 4.35' d. Pump Intake 27'
c. Water Column (a-b) 27.65' e. Calculated System Purge Volume 1.70 L (calculation on page 2)

2. WELL PURGE DATA

a. Purge Method: peristaltic pump

b. Acceptance Criteria defined (see workplan)

- Temperature	3%	- D.O.	< 0.5 mg/L	-Drawdown	<0.3 ft
- pH	±1.0 unit		>0.5 mg/L within 10%	-Turbidity	<10 NTU
- Sp. Cond.	3%	- ORP	± 10mV		>10NTU within 10%

c. Field Testing Equipment used:

	Make	Model	Serial Number
	YSI	Pro +	10E100125U → (Sp. con. fixed from previous well)
	Geotech	Turbidimeter	19

Time (24hr)	Volume Removed (Liters) (total)	Temp. (°C)	pH	Spec. Cond. (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (feet)	Color/Odor
11:20	0.5	15.2	6.19	449.9	0.47	319.4	12.5	100	4.40'	none
11:25	1.5	15.1	6.15	472.3	0.29	308.4	3.22	200	4.45'	"
11:30	2.5	15.1	6.13	517.7	0.19	297.7	3.78	200	4.45	"
11:35	3.5	15.2	6.21	439.1	0.13	274.0	2.95	200	4.45	"
11:40	4.5	14.9	6.18	897	0.06	232.6	1.57	200	4.45	"
11:45	5.5	15.3	6.38	1207	0.06	117.0	1.66	200	4.45	"
11:50	6.5	15.3	6.49	1308	0.00	42.7	1.02	200	4.45	"

d. Acceptance criteria pass/fail

	Yes	No	N/A
Has required volume been removed	☑	☐	☐
Has required turbidity been reached	☑	☐	☐
Have parameters stabilized	☑	☐	☐

(continued on back)

If no or N/A - Explain below.
Stable after new (YSI: 10E100342) @ 12:15

3. SAMPLE COLLECTION: Method: grab

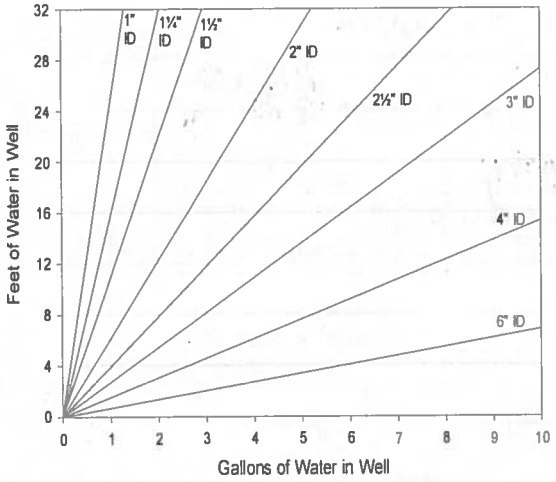
Sample ID	Container Type	No.	Preservation	Analysis Req.	Time
20A-EMW11D-091120-1	40mL VOA	3	HCL	VOCs 8260C	@ 12:20

Comments

Signature Leah Fogby Date 09.11.2020

AECOM

Well ID: EMW-11D



Volume / Linear Ft. of Pipe		
ID (in)	Gallon	Liter
0.25	0.0025	0.0097
0.375	0.0057	0.0217
0.5	0.0102	0.0386
0.75	0.0229	0.0869
1	0.0408	0.1544
1.25	0.0637	0.2413
1.5	0.0918	0.3475
2	0.1632	0.6178
2.5	0.2550	0.9653
3	0.3672	1.3900
4	0.6528	2.4711
6	1.4688	5.5600

Purge Volume Calculation

[30 ft (tubing length) x 0.0097 L/ft] + 0.275 L (flow cell vol.) = 0.566 L ; 0.566 L x 3 well vol. = 1.70 L

(continued from front)

Time (24 hr)	Volume Removed (Liters)	Temp (°C)	pH	3% Spec. Cond (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (ft)	Color/Odor
11:55	7.5	15.1	6.55	1362	-0.03	8.2	4.40	200	4.40'	None
12:05	8.5	14.7	6.75	1440	0.26	-98.6	2.84	200	4.40'	None
12:10	9.5	14.7	6.72	1450	0.19	-99.3	2.02	200	4.40'	None
12:15	10.5	14.6	6.69	1462	0.14	-99.8	1.76	200	4.40'	None
				Stable @ 12:15						

→ re sun with new YS

~~Hydrogen~~ Bubble Strip Sampling:

Purge rate=	~~Purge~~ Duration=	Sample time=

Note: YSI dysfunctional. Parameters not stable @ 11:55. Switching to new YSI. SN: ~~10E~~ LZ 10E100342 @ 12:05

AECOM

Well ID: **EMW-11R1**

Low Flow Ground Water Sample Collection Record

Client: Lockheed Martin Corp. Date: 09.21.2020 Time: Start 14:35 am/pm
Project No: 60552044 Finish ~~15:10~~ am/pm 15:55
Site Location: 50 Fordham Rd Site, Wilmington, MA
Weather Conds: 65°F, sunny Collector(s): L. Zogby

1. WELL & WATER LEVEL DATA: (measured in feet from Top of Casing unless noted)

a. Total Well Length 89 c. Screen Length 10 (79' - 89') 0.75" PVC Casing
b. Water Table Depth 5.43' d. Pump Intake 84'
c. Water Column (a-b) 83.57' e. Calculated System Purge Volume 3.36 L (calculation on page 2)

2. WELL PURGE DATA

a. Purge Method: peristaltic pump

b. Acceptance Criteria defined (see workplan)

- Temperature	3%	- D.O.	< 0.5 mg/L	-Drawdown	<0.3 ft
- pH	± 1.0 unit		>0.5 mg/L within 10%	-Turbidity	<10 NTU
- Sp. Cond.	3%	- ORP	± 10mV		>10NTU within 10% ✓

c. Field Testing Equipment used:

	Make	Model	Serial Number
	YSI	Pro Plus	10E100254
	Geotech	Turbidity meter	19062110

Time (24hr)	Volume Removed (Liters)	Temp. (°C)	pH	Spec. Cond. (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (feet)	Color/Odor
14:40	1	15.7	7.71	645	0.91	-9.3	18.2	200	5.50'	None
14:45	1.5	15.2	7.58	656	0.15	-38.5	18.8	100	6.05'	None
14:50	2.0	15.0	7.57	658	0.11	-42.3	25.6	100	5.43'	None
14:55	2.5	15.5	7.55	663	0.12	-45.7	30.7	100	5.45'	None
15:00	3.0	15.2	7.52	670	0.08	-48.4	33.0	100	5.45'	None
15:05	3.5	15.1	7.51	673	0.06	-49.4	31.8	100	5.47'	None
15:10	4.0	15.1	7.49	674	0.05	-50.2	27.9	100	5.45'	None

(continued on back) →

d. Acceptance criteria pass/fail

	Yes	No	N/A
Has required volume been removed	☒	☐	☐
Has required turbidity been reached	☒	☐	☐
Have parameters stabilized	☒	☐	☐

If no or N/A - Explain below. Stable @ ~~15:05~~ ~~15:10~~ LZ pm 15:50

3. SAMPLE COLLECTION: Method: grab

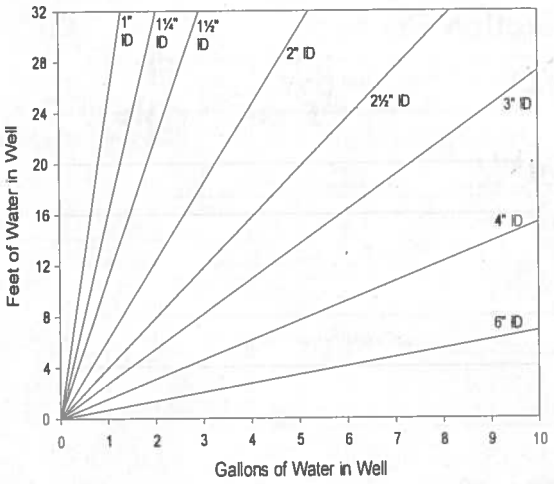
Sample ID	Container Type	No.	Preservation	Analysis Req.	Time
20A-EMW11R1-092120-1	40mL VOA	3	HCL	VOCs 8260C	@ ~~15:10~~ 15:55

Comments ~~Turbidity > 10 NTU, 3 readings within 10% (30.7, 33.0, 31.8).~~ LZ

Signature Leah Zogby Date 09. 21. 2020

AECOM

Well ID: EMW-11R1



Volume / Linear Ft. of Pipe		
ID (in)	Gallon	Liter
0.25	0.0025	0.0097
0.375	0.0057	0.0217
0.5	0.0102	0.0386
0.75	0.0229	0.0869
1	0.0408	0.1544
1.25	0.0637	0.2413
1.5	0.0918	0.3475
2	0.1632	0.6178
2.5	0.2550	0.9653
3	0.3672	1.3900
4	0.6528	2.4711
6	1.4688	5.5600

Purge Volume Calculation

[87 ft (tubing length) x 0.0097 L/ft] + 0.275 L (flow cell vol.) = 1.12 L ; 1.12 L x 3 well vol. = 3.36 L

(continued from front)

Time (24 hr)	Volume Removed (Liters)	Temp (°C)	pH	Spec. Cond (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (ft)	Color/Odor
15:15	4.5	15.3	7.47	688	0.04	-50.6	30.0	100	5.50'	None
15:20	5.0	15.5	7.46	694	0.05	-50.8	22.8	100	5.58'	None
15:25	5.5	15.5	7.45	700	0.05	-50.1	14.2	100	5.60'	None
15:30	6.0	15.5	7.44	703	0.04	-49.5	14.9	100	5.61'	None
15:35	6.5	15.6	7.43	707	0.03	-49.1	10.5	100	5.60'	None
15:40	7.0	15.5	7.43	706	0.04	-48.5	7.69	100	5.60'	None
15:45	7.5	15.5	7.41	712	0.03	-47.8	7.75	100	5.55'	None
15:50	8.0	15.6	7.40	713	0.03	-47.5	3.11	100	5.54'	None
				Stable @			15:50			

Hydrogen Bubble Strip Sampling:

Purge rate=	Purge Duration=	Sample time=

AECOM

Well ID: **EMW-11R2**

Low Flow Ground Water Sample Collection Record

Client: Lockheed Martin Corp. Date: 09.21.2020 Time: Start 09:55 (am)/pm
Project No: 60552044 Finish 12:10 am/(pm)
Site Location: 50 Fordham Rd Site, Wilmington, MA
Weather Conds: 60°F, sunny Collector(s): L. Fogby

1. WELL & WATER LEVEL DATA: (measured in feet from Top of Casing unless noted)

a. Total Well Length 114 c. Screen Length 10 (104' - 114') 0.75" PVC Casing
b. Water Table Depth 5.41' d. Pump Intake 109'
c. Water Column (a-b) 108.59' e. Calculated System Purge Volume 4.08 L (calculation on page 2)

2. WELL PURGE DATA

a. Purge Method: peristaltic pump

b. Acceptance Criteria defined (see workplan)

- Temperature	3%	- D.O.	< 0.5 mg/L	-Drawdown	<0.3 ft
- pH	± 1.0 unit		>0.5 mg/L within 10%	-Turbidity	<10 NTU
- Sp. Cond.	3%	- ORP	± 10mV		>10NTU within 10%

c. Field Testing Equipment used:

	Make	Model	Serial Number
	YSI	Pro-Plus	10E1001254
	Geotech	Turbidity Meter	19062110

Time (24hr)	Volume Removed (Liters)	Temp. (°C)	pH	Spec. Cond. (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	~~Drawdown~~ DTW (feet)	Color/Odor
10:00	0.5	14.4	9.26	756	0.17	255.3	0.71	100	5.53	None
10:05	1	14.3	8.28	746	0.06	58.9	0.64	100	5.54	None
10:10	1.5	14.4	7.93	749	0.02	3.1	0.04	100	5.54	None
10:15	2.0	14.4	7.85	750	0.04	-1.4	0.50	100	5.53	None
10:20	2.5	14.7	7.64	810	0.02	-10.3	0.28	100	5.53	None
10:25	3.0	14.7	7.62	925	0.01	-20.7	0.11	100	5.53	none
10:30	3.5	14.7	7.65	949	0.01	-28.3	0.29	100	5.53	None

(continued on back) →

d. Acceptance criteria pass/fail

	Yes	No	N/A
Has required volume been removed	☒	☐	☐
Has required turbidity been reached	☒	☐	☐
Have parameters stabilized	☒	☐	☐

If no or N/A - Explain below.
Stable @ 10:40 AM

3. SAMPLE COLLECTION: Method: grab

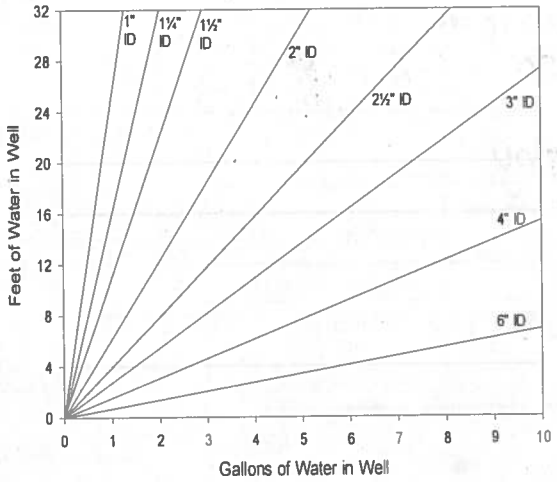
Sample ID	Container Type	No.	Preservation	Analysis Req.	Time
20A-EMW11R2-092120-1	40mL VOA	3	HCL	VOCs 8260C	
	40mL V	3	HCL	VPH	
	1L A	2	HCl/None	EPH	
	500 mL P	2	HNO3	Tot & Diss. (Fe, Mn, As)	@
	500 mL P	1	none	Cl, NO3, NO2, SO4	@ 10:45
	250mL P	1	zinc acet.	Sulfide	
	40mL V	3	BAK	Gases (M, Etha, Ethe, Ac, Pr)	
	vial	1	none	Diss. Hydrogen	
	40mL V	2	H3PO4	TOC	

Comments

Signature Leah Fogby Date 09.21.2020

AECOM

Well ID: EMW-11R2



Volume / Linear Ft. of Pipe		
ID (in)	Gallon	Liter
0.25	0.0025	0.0097
0.375	0.0057	0.0217
0.5	0.0102	0.0386
0.75	0.0229	0.0869
1	0.0408	0.1544
1.25	0.0637	0.2413
1.5	0.0918	0.3475
2	0.1632	0.6178
2.5	0.2550	0.9653
3	0.3672	1.3900
4	0.6528	2.4711
6	1.4688	5.5600

Purge Volume Calculation

[112 ft (tubing length) x 0.0097 L/ft] + 0.275 L (flow cell vol.) = 1.36 L ; 1.36 L x 3 well vol. = 4.08 L

(continued from front)

Time (24 hr)	Volume Removed (Liters)	Temp (°C)	pH	Spec. Cond (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	DTW ~~Drawdown~~ (ft)	Color/Odor
10:35	4.0	14.8	7.66	951	0.01	-30.9	6.08	100	5.54	None
10:40	4.5	14.9	7.67	958	0.00	-34.0	0.32	100	5.54	None
				Stable	@			10:40		
Hydrogen Bubble Strip Sampling:										
Purge rate= ~~210 mL/min~~ 150 mL/min				Purge Duration= 25 min				Sample time= @11:45 - 12:10		

11:45 - 12:10 @ 150 mL/min

AECOM

Well ID: **EMW-11R3**

Low Flow Ground Water Sample Collection Record

Client: Lockheed Martin Corp. Date: 09.21.2020 Time: Start ~~12:30~~ 13:30 am/pm
Project No: 60552044 Finish 14:30 am/pm
Site Location: 50 Fordham Rd Site, Wilmington, MA
Weather Conds: 65oF, sunny Collector(s): L. Zogby

1. WELL & WATER LEVEL DATA: (measured in feet from Top of Casing unless noted)

a. Total Well Length 168 c. Screen Length 10 (158' - 168') 0.75" PVC Casing
b. Water Table Depth 5.40' d. Pump Intake 163'
c. Water Column (a-b) 162.60' e. Calculated System Purge Volume 5.66 L (calculation on page 2)

2. WELL PURGE DATA

a. Purge Method: peristaltic pump

b. Acceptance Criteria defined (see workplan)

- Temperature	3%	- D.O.	< 0.5 mg/L	-Drawdown	<0.3 ft
- pH	± 1.0 unit		>0.5 mg/L within 10%	-Turbidity	<10 NTU
- Sp. Cond.	3%	- ORP	± 10mV		>10NTU within 10%

c. Field Testing Equipment used:

	Make	Model	Serial Number
	YSI	Pro-Plus	10E100125U
	Geotech	Turbidity Meter	19062110

Time (24hr)	Volume Removed (Liters)	Temp. (°C)	pH	Spec. Cond. (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	~~Drawdown~~ PTW (feet)	Color/Odor
~~12:40~~ 13:50 LZ	1	15.5	7.71	637	3.42	-12.8	9.80	200	5.70'	slightly yellow/foggy
13:55	2	15.4	7.74	635	1.33	-16.5	8.65	200	5.71'	clear
14:00	3	15.0	7.78	634	0.79	-38.6	3.30	200	5.70'	clear
14:05	4	15.0	7.60	633	0.20	-45.9	1.51	200	5.70'	clear
14:10	5	15.0	7.80	633	0.12	-57.6	0.163	200	5.70'	clear
14:15	6	14.9	7.82	632	0.09	-60.7	0.70	200	5.71'	clear
14:20	7	14.9	7.83	632	0.07	-64.5	0.61	206	5.70'	clear

(continued on back)

d. Acceptance criteria pass/fail

	Yes	No	N/A
Has required volume been removed	☒	☐	☐
Has required turbidity been reached	☒	☐	☐
Have parameters stabilized	☒	☐	☐

If no or N/A - Explain below.
Stable @ 14:20

3. SAMPLE COLLECTION: Method: grab

Sample ID	Container Type	No.	Preservation	Analysis Req.	Time
20A-EMW11R3-092120-1	40mL VOA	3	HCL	VOCs 8260C	@ 14:25

Comments

Signature Leah Zogby Date 09.21.2020

AECOM

Well ID: GZA-6

Low Flow Ground Water Sample Collection Record

Client: Lockheed Martin Corp. Date: 9/21/20 Time: Start 930 am/pm
Project No: 60552044 Finish 1045 am/pm
Site Location: 50 Fordham Rd Site, Wilmington, MA
Weather Conds: 50s, Sunny Collector(s): A Grossman

1. WELL & WATER LEVEL DATA: (measured in feet from Top of Casing unless noted)

a. Total Well Length 18' c. Screen Length 10 (8' - 18') 2" PVC
b. Water Table Depth 5.13 d. Pump Intake 13'
c. Water Column (a-b) e. Calculated System Purge Volume 1.12 L (calculation on page 2)

2. WELL PURGE DATA

a. Purge Method: peristaltic pump

b. Acceptance Criteria defined (see workplan)

- Temperature	3%	- D.O.	< 0.5 mg/L	-Drawdown	<0.3 ft
- pH	± 1.0 unit		>0.5 mg/L within 10%	-Turbidity	<10 NTU
- Sp. Cond.	3%	- ORP	± 10mV		>10NTU within 10%

c. Field Testing Equipment used:

	Make	Model	Serial Number
	YSI	Pro Plus	18A 100703
	Geotech	Turbidity meter	17206345

Time (24hr)	Volume Removed (Liters)	Temp. (°C)	pH	Spec. Cond. (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	~~Drawdown~~ (feet)	Color/Odor
1000		16.2	6.52	157.8	0.62	-1.4	0.20	195	5.17	yellow
1005		16.2	6.25	160.4	0.30	-20.5	0.02	145	5.15	" "
1010		16.3	6.19	161.0	0.25	-20.4	0.02	215	5.16	clr "
1015		16.2	6.15	159.6	0.17	-16.9	0.02	146	5.16	" "
1020		16.1	6.09	158.2	0.13	-15.9	0.09	146	5.17	" "

biological

d. Acceptance criteria pass/fail

	Yes	No	N/A
Has required volume been removed	☑	☐	☐
Has required turbidity been reached	☑	☐	☐
Have parameters stabilized	☑	☐	☐

If no or N/A - Explain below.

(continued on back)

3. SAMPLE COLLECTION: Method: grab

Sample ID	Container Type	No.	Preservation	Analysis Req.	Time
20A-GZA6-092120-1	250mL P	1	HNO3	Total (Fe, As, Mn)	1025
	250mL P	1	HNO3	Diss.(Fe, As, Mn) FF	
		x6			

Comments Replace tubing for next round - too long

Signature [signature] Date 9/21/20

AECOM

Well ID: **GZA-10**

Low Flow Ground Water Sample Collection Record

Client: Lockheed Martin Corp. Date: 9/20/20 Time: Start 1015 am/pm
Project No: 60552044 21 Finish 1300 am/pm
Site Location: 50 Fordham Rd Site, Wilmington, MA
Weather Conds: Collector(s): A. Grossman

1. WELL & WATER LEVEL DATA: (measured in feet from Top of Casing unless noted)

a. Total Well Length 38' c. Screen Length 25' (13' - 38') 1.5" PVC
b. Water Table Depth 5.51 d. Pump Intake 25.5'
c. Water Column (a-b) e. Calculated System Purge Volume 1.65 L (calculation on page 2)

2. WELL PURGE DATA

a. Purge Method: peristaltic pump

b. Acceptance Criteria defined (see workplan)

- Temperature	3%	- D.O.	< 0.5 mg/L	-Drawdown	<0.3 ft
- pH	± 1.0 unit		>0.5 mg/L within 10%	-Turbidity	<10 NTU
- Sp. Cond.	3%	- ORP	± 10mV		>10NTU within 10%

c. Field Testing Equipment used: Make YSI Model Pro Plus Serial Number 18H100703
A. Grossman Turbidity Meter 17061384

Time (24hr)	Volume Removed (Liters)	Temp. (°C)	pH	Spec. Cond. (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	~~Drawdown~~ DW (feet)	Color/Odor
1051		14.8	5.53	1648	0.44	77.0	17.0	170	5.06	FR FIOC/Y DNP
1056		14.7	5.60	1760	0.30	72.8	16.3	162	5.04	" "
1101		14.7	5.63	1755	0.21	91.0	10.2	162	5.04	" "
1106		14.8	5.64	1768	0.18	75.3	11.1	162	5.04	" "
1111		14.8	5.62	1730	0.15	93.4	5.40	162	5.04	" "
1116		14.8	5.70	1662	0.12	47.0	8.38	170	5.03	" "
1121		14.8	5.78	1443	0.10	40.9	9.53	170	5.03	" "

d. Acceptance criteria pass/fail

	Yes	No	N/A
Has required volume been removed	☐	☐	☐
Has required turbidity been reached	☐	☐	☐
Have parameters stabilized	☐	☐	☐

If no or N/A - Explain below.

(continued on back)

3. SAMPLE COLLECTION: Method: grab

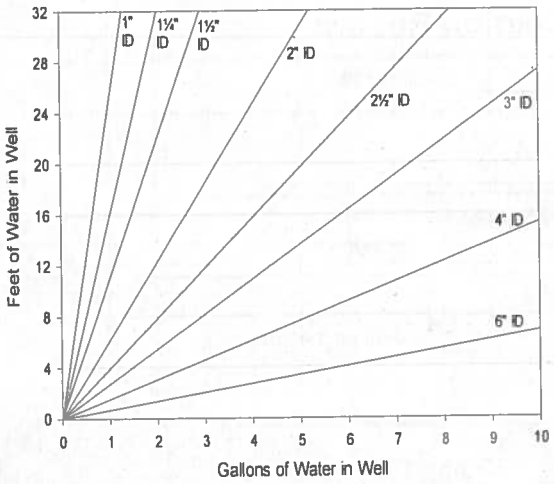
Sample ID	Container Type	No.	Preservation	Analysis Req.	Time
20A-GZA10-09202001	250mL P	1	HNO3	Total (Fe, As, Mn)	1230
	250mL P	1	HNO3	Diss.(Fe, As, Mn) FF	"
		1			

Comments

Signature Date 9/21/20

AECOM

Well ID: GZA-10



Volume / Linear Ft. of Pipe		
ID (in)	Gallon	Liter
0.25	0.0025	0.0097
0.375	0.0057	0.0217
0.5	0.0102	0.0386
0.75	0.0229	0.0869
1	0.0408	0.1544
1.25	0.0637	0.2413
1.5	0.0918	0.3475
2	0.1632	0.6178
2.5	0.2550	0.9653
3	0.3672	1.3900
4	0.6528	2.4711
6	1.4688	5.5600

Purge Volume Calculation

[28.5 ft (tubing length) x 0.0097 L/ft] + 0.275 L (flow cell vol.) = 0.551 L ; 0.551 L x 3 well vol. = 1.65 L

(continued from front)

Time (24 hr)	Volume Removed (Liters)	Temp (°C)	pH	Spec. Cond (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	DTW ~~Drawdown~~ (ft)	Color/Odor
1126		14.7	5.83	1348	0.04	73.1	10.9	170	5.03	Fe Floc/none
1131		14.8	5.84	1271	0.08	56.4	10.2	165	5.03	" "
1136		14.8	5.93	1206	0.08	41.5	10.9	165	5.03	" "
1141		14.7	5.97	1152	0.07	28.3	8.47	165	5.03	clear/none
1146		14.7	6.01	1110	0.06	21.3	7.87	165	5.03	" "
1151		14.7	6.03	1080 1090	0.07	15.4	6.27	165	5.03	" "
1156		14.7	6.04	1070	0.06	11.5	3.03	165	5.03	" "
1201		14.7	6.07	1050	0.06	4.4	3.65	165	5.03	" "
1206		14.7	6.07	1044	0.05	-1.6	2.20	165	5.03	" "
1211		14.8	6.08	1032	0.05	-6.4	2.03	165	5.03	" "
1216		14.7	6.04	1032	0.05	-17.3	1.44	165 180	5.03	" "
1221		14.7	6.10	1023	0.05	-19.2	1.23	180	5.02	" "
1226		14.7	6.10	1028	0.05	-20.3	1.60	180	5.02	" "

Hydrogen Bubble Strip Sampling:

Purge rate=	Purge Duration=	Sample time=

1230

AECOM

Well ID: **GZA-12**

Low Flow Ground Water Sample Collection Record

Client: Lockheed Martin Corp. Date: 9/24/20 Time: Start 0845 (am/pm)
Project No: 60552044 Finish 1000 (am/pm)
Site Location: 50 Fordham Rd Site, Wilmington, MA
Weather Conds: 70's Sunny Collector(s): Floyd Burton

1. WELL & WATER LEVEL DATA: (measured in feet from Top of Casing unless noted)

a. Total Well Length 24.5' c. Screen Length 15 (9.5' - 24.5') 2" PVC Casing
b. Water Table Depth 12.49 d. Pump Intake 17'
c. Water Column (a-b) 12.01 e. Calculated System Purge Volume 1.40 L (calculation on page 2)

2. WELL PURGE DATA

a. Purge Method: peristaltic pump

b. Acceptance Criteria defined (see workplan)

- Temperature	3%	- D.O.	< 0.5 mg/L	-Drawdown	<0.3 ft
- pH	± 1.0 unit		>0.5 mg/L within 10%	-Turbidity	<10 NTU
- Sp. Cond.	3%	- ORP	± 10mV		>10NTU within 10%

c. Field Testing Equipment used: Make YSI Model Pro Plus Serial Number 10D101442

Time (24hr)	Volume Removed (Liters)	Temp. (°C)	pH	Spec. Cond. (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (feet)	Color/Odor
0855	0	16.3	5.16	3557	4.10	148.1	4.7	200	0.03	Clear/none
0900	0.5	16.3	5.37	3742	0.71	-157.8	4.2	200	0.05	
0905	1.0	16.3	5.36	3746	0.75	-153.1	4.1	200	0.07	
0910	1.5	16.3	5.37	3744	0.73	-154.0	3.9	200	0.08	

d. Acceptance criteria pass/fail

	Yes	No	N/A
Has required volume been removed	☒	☐	☐
Has required turbidity been reached	☒	☐	☐
Have parameters stabilized	☒	☐	☐

If no or N/A - Explain below.

(continued on back)

3. SAMPLE COLLECTION: Method: grab

Sample ID	Container Type	No.	Preservation	Analysis Req.	Time
20A-GZA12-092420-1	40mL VOA	3	HCL	VOCs 8260C	0915
	500 mL P	2	HNO3	Total & Diss. As, Fe, Mn	
	500mL P	1	none	Cl, NO2, NO3, SO4	
	500mL P	1	zinc acetate	Sulfide	
	40mL V	2	H3PO4	TOC	
	vial	1	none	diss. Hydrogen	
	250 mL Amber	1	NaHSO4	1,4 dioxane	
	40mL V	3	belzal.chlor.	gases (Acet, Prop, Meth, Eth, Etha)	

Comments Hydrogen - 25ml @ 15ming START 0930 END 0945

Signature [signature] Date 9/24/20

AECOM

Well ID: GZA-14A

Low Flow Ground Water Sample Collection Record

Client: Lockheed Martin Corp. Date: 09.17.2020 Time: Start 14:20 am/pm
Project No: 60552044 Finish _____ am/pm
Site Location: 50 Fordham Rd Site, Wilmington, MA
Weather Conds: 79°F, Sunny Collector(s): L Fogby

1. WELL & WATER LEVEL DATA: (measured in feet from Top of Casing unless noted)

a. Total Well Length 15 c. Screen Length 15 (0' - 15') 1.5" PVC Casing
b. Water Table Depth 7.80' d. Pump Intake 7.5'
c. Water Column (a-b) 7.20' e. Calculated System Purge Volume 1.15 L (calculation on page 2)

2. WELL PURGE DATA

a. Purge Method: peristaltic pump

b. Acceptance Criteria defined (see workplan)

- Temperature	3%	- D.O.	< 0.5 mg/L	-Drawdown	<0.3 ft
- pH	±1.0 unit		>0.5 mg/L within 10%	-Turbidity	<10 NTU
- Sp. Cond.	3%	- ORP	± 10mV		>10NTU within 10%

c. Field Testing Equipment used:

	Make	Model	Serial Number
	YSI	Prof. Plus	10E100125H
	Geotech	Turbidity Meter	19062111

Time (24hr)	Volume Removed (Liters)	Temp. (°C)	pH	Spec. Cond. (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	~~Drawdown~~ DTW (feet)	Color/Odor
14:25	1	13.3	6.77	545.3	1.00	268.1	17.2	200	7.82'	yellowish, particulates, smelly
14:30	2	13.2	6.36	664	0.31	229.7	7.66	200	7.85'	"
14:35	3	13.1	6.32	661	0.35	209.4	4.92	200	7.93'	clearer
14:40	4	13.3	6.35	647	0.13	178.2	2.49	200	7.90'	clearer
14:45	5	13.2	6.36	627.7	0.06	155.4	2.85	200	7.90'	clearer
14:50	6	13.1	6.36	623.8	0.04	146.8	1.77	200	7.90'	"
14:55	7	13.8	6.35	596.3	0.06	129.8	0.96	200	7.90'	"

d. Acceptance criteria ~~pass~~/fail

	Yes	No	N/A
Has required volume been removed	☒	☐	☐
Has required turbidity been reached	☒	☐	☐
Have parameters stabilized	☒	☐	☐

(continued on back)

If no or N/A - Explain below.
Stable @ 15:10

3. SAMPLE COLLECTION: Method: grab

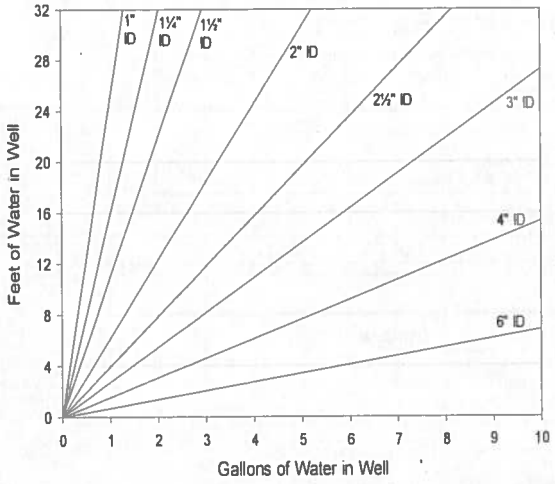
Sample ID 20A-GZA14A-091720-1	Container Type	No.	Preservation	Analysis Req.	Time
	250mL P	1	HNO3	Total (Fe, As, Mn)	@ 15:15
	250mL P	1	HNO3	Diss.(Fe, As, Mn) FF	

Comments Slight odor upon first purge, yellowish color and fine particulates. Cleared up after first YST reading (but still maintained a slight yellowish hue).

Signature Leah Fogby Date 09.17.2020

AECOM

Well ID: GZA-14A



Volume / Linear Ft. of Pipe		
ID (in)	Gallon	Liter
0.25	0.0025	0.0097
0.375	0.0057	0.0217
0.5	0.0102	0.0386
0.75	0.0229	0.0869
1	0.0408	0.1544
1.25	0.0637	0.2413
1.5	0.0918	0.3475
2	0.1632	0.6178
2.5	0.2550	0.9653
3	0.3672	1.3900
4	0.6528	2.4711
6	1.4688	5.5600

Purge Volume Calculation

[11 ft (tubing length) x 0.0097 L/ft] + 0.275 L (flow cell vol.) = 0.382 L ; 0.382 L x 3 well vol. = 1.15 L

(continued from front)

Time (24 hr)	Volume Removed (Liters)	Temp (°C)	pH	Spec. Cond (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	~~Drawdown~~ DTW (ft)	Color/Odor
15:00	8	13.4	6.35	593.7	0.0	121.7	1.35	200	7.90'	"
15:05	9	13.3	6.37	588.3	0.0	116.5	1.11	200	7.90'	"
15:10	10	13.2	6.37	583.5	0.0	113.7	0.79	200	7.90'	"
				Stable @ 15:10						

Hydrogen Bubble Strip Sampling:

Purge rate=	Purge Duration=	Sample time=

AECOM

Well ID: GZA-101R

Low Flow Ground Water Sample Collection Record

Client: Lockheed Martin Corp. Date: 09.24.2020 Time: Start 12:05 am/pm
Project No: 60552044 Finish ~~12:45~~ 13:35 am/pm LZ
Site Location: 50 Fordham Rd Site, Wilmington, MA
Weather Conds: 78°F, sunny Collector(s): L. Fogby

1. **WELL & WATER LEVEL DATA: (measured in feet from Top of Casing unless noted)**

a. Total Well Length 38' c. Screen Length 2 (36' - 38') 0.55" PVC Casing
b. Water Table Depth 11.15' d. Pump Intake 37'
c. Water Column (a-b) 26.85' e. Calculated System Purge Volume 1.90 L (calculation on page 2)

2. **WELL PURGE DATA**

a. Purge Method: peristaltic pump

b. Acceptance Criteria defined (see workplan)

- Temperature	3%	- D.O.	< 0.5 mg/L	-Drawdown	<0.3 ft
- pH	± 1.0 unit		>0.5 mg/L within 10%	-Turbidity	<10 NTU
- Sp. Cond.	3%	- ORP	± 10mV		>10NTU within 10%

c. Field Testing Equipment used:

	Make	Model	Serial Number
	YSI	Pro-Plus	10E100125U
	GeoTech	Turbidity Meter	19062110

Time (24hr)	Volume Removed (Liters)	Temp. (°C)	pH	Spec. Cond. (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (feet)	Color/Odor
12:10	0.8	15.1	6.71	3821	0.14	-24.7	5.61	160	NM	None
12:15	1.6	15.6	6.63	3933	0.06	-62.3	0.77	160		None
12:20	2.6	14.8	6.54	3983	0.01	-78.3	1.29	200		None
12:25	3.15	15.1	6.50	4003	0.00	-82.6	1.64	110		None
12:30	3.7	15.0	6.49	4002	0.00	-84.0	1.12	110		None
12:35	4.25	15.1	6.48	4005	0.00	-84.7	1.34	110		None

d. Acceptance criteria pass/fail

	Yes	No	N/A
Has required volume been removed	☒	☐	☐
Has required turbidity been reached	☒	☐	☐
Have parameters stabilized	☒	☐	☐

(continued on back)

If no or N/A - Explain below. Stable @ 12:35

LZ

3. **SAMPLE COLLECTION:** Method: grab

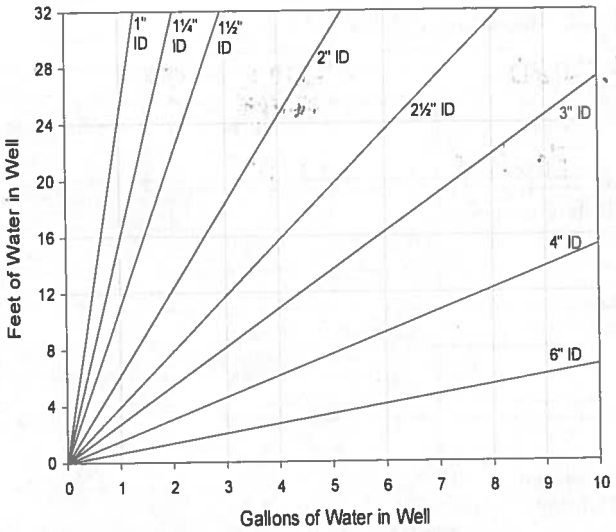
Sample ID	Container Type	No.	Preservation	Analysis Req.	Time
20A-GZA101R-092420I	40mL VOA	3	HCL	VOCs 8260C	
	500 mL P	2	HNO3	Total & Diss. As, Fe, Mn	
	500mL P	1	none	Cl, NO2, NO3, SO4	
	500mL P	1	zinc acetate	Sulfide	
	vial	1	none	diss. Hydrogen	@13:05 - 13:35 @12:45
	40 mL ✓	2	None	Gases	
	~~40 mL V~~	~~NO 3~~	TSP ✓		
	40mL V	1 ✓	~~bolzal. chlor~~	gases (Acet, Prop, Meth, Eth, Etha)	

Comments Water level meter cannot fit down ½" well alongside tubing. Tubing pulled, 45 min recharge time, water table depth gauged before purging.

Signature Leah Fogby Date 09.24.2020

AECOM

Well ID: GZA-101R



Volume / Linear Ft. of Pipe		
ID (in)	Gallon	Liter
0.25	0.0025	0.0097
0.375	0.0057	0.0217
0.5	0.0102	0.0386
0.75	0.0229	0.0869
1	0.0408	0.1544
1.25	0.0637	0.2413
1.5	0.0918	0.3475
2	0.1632	0.6178
2.5	0.2550	0.9653
3	0.3672	1.3900
4	0.6528	2.4711
6	1.4688	5.5600

Purge Volume Calculation

[37 ft (tubing length) x 0.0097 L/ft] + 0.275 L (flow cell vol.) = 0.634 L ; 0.634 L x 3 well vol. = 1.90 L

(continued from front)

Time (24 hr)	Volume Removed (Liters)	Temp (°C)	pH	Spec. Cond (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (ft)	Color/Odor

AECOM

Well ID: GZA-102S

Low Flow Ground Water Sample Collection Record

Client: Lockheed Martin Corp. Date: 9/23/20 Time: Start 1215 am/pm
Project No: 60552044 Finish 1254 am/pm
Site Location: 50 Fordham Rd Site, Wilmington, MA
Weather Conds: Cool, Sunny Collector(s): A. Grossman

1. WELL & WATER LEVEL DATA: (measured in feet from Top of Casing unless noted)

a. Total Well Length 10.7' c. Screen Length 9' (1.7' - 10.7') 1.5" PVC Casing
b. Water Table Depth 7.34 d. Pump Intake 6.2'
c. Water Column (a-b) e. Calculated System Purge Volume 1.12 L (calculation on page 2)

2. WELL PURGE DATA

a. Purge Method: peristaltic pump

b. Acceptance Criteria defined (see workplan)

- Temperature	3%	- D.O.	< 0.5 mg/L	-Drawdown	<0.3 ft
- pH	± 1.0 unit		>0.5 mg/L within 10%	-Turbidity	<10 NTU
- Sp. Cond.	3%	- ORP	± 10mV		>10NTU within 10%

c. Field Testing Equipment used:

	Make	Model	Serial Number
	YSI	Pro Plus	18J100703
LZ	Horiba	U-22XD water quality meter	170613G4

Time (24hr)	Volume Removed (Liters)	Temp. (°C)	pH	Spec. Cond. (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	~~Drawdown~~ DW (feet)	Color/Odor
1229	0.98	21.0	6.20	2355	0.36	-14.1	3.02	196	7.42	clear/none
1234	0.98	20.6	6.12	2390	0.18	-26.1	3.84	146	7.34	" "
1239	1.78	21.0	6.10	2411	0.12	-33.3	2.06	160	7.34	" "
1244	2.7	20.4	6.10	2391	0.04	-34.5	1.45	184	7.34	" "
1249	3.62	20.9	6.14	2330	0.05	-44.7	0.43	184	7.38	" "
1254	4.54	21.0	6.13	2381	0.07	-47.0	0.43	184	7.32	" "

d. Acceptance criteria pass/fail

	Yes	No	N/A
Has required volume been removed	☐	☐	☐
Has required turbidity been reached	☐	☐	☐
Have parameters stabilized	☐	☐	☐

If no or N/A - Explain below.

(continued on back)

3. SAMPLE COLLECTION: Method: grab

Sample ID	Container Type	No.	Preservation	Analysis Req.	Time
20A-GZA102S-09232021	40mL VOA	3	HCL	VOCs 8260C	
	1L A	3	HCl/None	EPH	
	40mL VOA	3	HCL	VPH	

Comments

Signature [signature] Date 9/23/20

AECOM

Well ID: **GZA-105D**

Low Flow Ground Water Sample Collection Record

Client: Lockheed Martin Corp. Date: 9/24/2020 Time: Start 0845 ~~am/pm~~
Project No: 60552044 Finish 0935 ~~am/pm~~
Site Location: 50 Fordham Rd Site, Wilmington, MA
Weather Conds: Sunny 80's Collector(s): Sean Haggett

1. WELL & WATER LEVEL DATA: (measured in feet from Top of Casing unless noted)

a. Total Well Length 26' c. Screen Length 10 (16' - 26') 1.5" PVC Casing
b. Water Table Depth 6.44' d. Pump Intake 21'
c. Water Column (a-b) 19.56' e. Calculated System Purge Volume 1.52 L (calculation on page 2)

2. WELL PURGE DATA

a. Purge Method: peristaltic pump

b. Acceptance Criteria defined (see workplan)

- Temperature	3%	- D.O.	< 0.5 mg/L	-Drawdown	<0.3 ft
- pH	± 1.0 unit		>0.5 mg/L within 10%	-Turbidity	<10 NTU
- Sp. Cond.	3%	- ORP	± 10mV		>10NTU within 10%

c. Field Testing Equipment used:

	Make	Model	Serial Number
	YSI	Pro Quatro	18D102399
	Geotech	turbidimeter	19011937

Time (24hr)	Volume Removed (Liters)	Temp. (°C)	pH	Spec. Cond. (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	~~Drawdown~~ DTB (feet)	Color/Odor
0855	1.000	17.9	~~6.89~~	2426	1.02	2.1	20.8	200	6.44	Clear/strong org. decay.
0900	2.000	17.8	6.30	2401	0.73	7.9	25.6	200	6.44	" "
0905	3.000	17.3	6.22	2391	0.62	8.6	8.57	200	6.44	" "
0910	4.000	17.8	6.17	2380	0.59	9.3	7.14	200	6.44	" "
0915	5.000	17.9	6.13	2359	0.92	9.4	6.32	200	6.44	" "
0920	6.000	17.8	6.12	2353	0.97	8.9	7.72	200	6.44	" "
0925	7.000	17.9	6.10	2325	0.10	8.6	6.65	200	6.44	" "

(continued on back)

" " = same as above

d. Acceptance criteria pass/fail

	Yes	No	N/A
Has required volume been removed	☑	☐	☐
Has required turbidity been reached	☑	☐	☐
Have parameters stabilized	☑	☐	☐

If no or N/A - Explain below.

3. SAMPLE COLLECTION: Method: grab

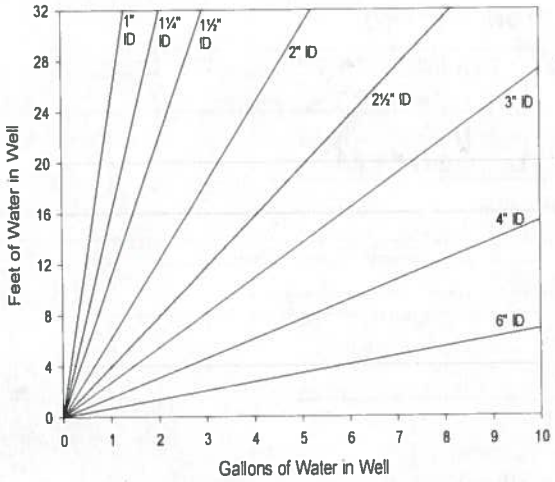
Sample ID	Container Type	No.	Preservation	Analysis Req.	Time
20A-GZA105D-092420-1	40mL VOA	3	HCL	VOCs 8260C	0935
	1L A	3	HCL/None	EPH	
	250 mL A	2	NaHSO4	1,4-dioxane	
	40mL VOA	3	HCL	VPH	

Comments

Signature Date 9/24/2020

AECOM

Well ID: GZA-105D



Volume / Linear Ft. of Pipe		
ID (in)	Gallon	Liter
0.25	0.0025	0.0097
0.375	0.0057	0.0217
0.5	0.0102	0.0386
0.75	0.0229	0.0869
1	0.0408	0.1544
1.25	0.0637	0.2413
1.5	0.0918	0.3475
2	0.1632	0.6178
2.5	0.2550	0.9653
3	0.3672	1.3900
4	0.6528	2.4711
6	1.4688	5.5600

Purge Volume Calculation

[24 ft (tubing length) x 0.0097 L/ft] + 0.275 L (flow cell vol.) = 0.508 L ; 0.508 L x 3 well vol. = 1.52 L

(continued from front)

Time (24 hr)	Volume Removed (Liters)	Temp (°C)	pH	Spec. Cond (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	~~Drawdown~~ DTB (ft)	Color/Odor
0930	8.000	17.9	6.10	2312	0.36	8.5	5.78	200	6.74	Clear / org. decay
	-	parameters			Stable					
0935	-	Samples			collected -		(20A-GZA105D-092920-1)			

Hydrogen Bubble Strip Sampling:

Purge rate=	Purge Duration=	Sample time=

AECOM

Well ID: GZA-105R

Low Flow Ground Water Sample Collection Record

Client: Lockheed Martin Corp Date: 9/24/2020 Time: Start 1150 ~~am/pm~~
Project No: 60552044 Finish 1235 ~~am/pm~~
Site Location: 50 Fordham Rd Site, Wilmington, MA
Weather Conds: Sunny 80's Collector(s): Sean Haggett

1. WELL & WATER LEVEL DATA: (measured in feet from Top of Casing unless noted)

a. Total Well Length 36.5' c. Screen Length 2 (34.5' - 36.5') 0.5" PVC Casing
b. Water Table Depth 4.44' d. Pump Intake 35.5'
c. Water Column (a-b) 32.06' e. Calculated System Purge Volume 1.93 L (calculation on page 2)

2. WELL PURGE DATA

a. Purge Method: peristaltic pump

b. Acceptance Criteria defined (see workplan)

- Temperature	3%	- D.O.	< 0.5 mg/L	-Drawdown	<0.3 ft
- pH	±1.0 unit		>0.5 mg/L within 10%	-Turbidity	<10 NTU
- Sp. Cond.	3%	- ORP	± 10mV		>10NTU within 10%

c. Field Testing Equipment used:

	Make	Model	Serial Number
	YSI	Pro Quatro	18D102399
	Geotech	turbidity	19011937

Time (24hr)	Volume Removed (Liters)	Temp. (°C)	pH	Spec. Cond. (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	~~Drawdown~~ DTB (feet)	Color/Odor
1200	1.000	18.1	6.81	866	2.25	-76.1	0.02	200	28.84	clear/org. decay
1205	2.000	19.2	6.86	901	0.71	-85.5	0.02	200	28.83	" "
1210	3.000	19.2	6.92	1015	0.46	-75.1	0.02	200	28.83	" "
1215	4.000	19.1	6.95	1037	0.41	-71.9	0.02	200	28.83	" "
1220	5.000	19.0	6.99	1070	0.48	-63.5	0.02	200	28.83	" "
1225	6.000	19.0	6.99	1072	0.47	-63.1	0.02	200	28.83	" "
1230	7.000	18.8	6.99	1076	0.44	-60.9	0.02	200	28.83	" "

(continued on back)

" "=Same as above

d. Acceptance criteria pass/fail

	Yes	No	N/A
Has required volume been removed	☑	☐	☐
Has required turbidity been reached	☑	☐	☐
Have parameters stabilized	☑	☐	☐

If no or N/A - Explain below.

3. SAMPLE COLLECTION: Method: grab

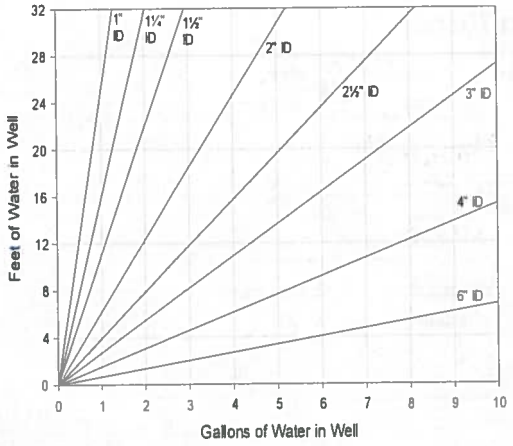
Sample ID	Container Type	No.	Preservation	Analysis Req.	Time
20A-GZA105R-092420-1	40mL VOA	3	HCL	VOCs 8260C	1235

Comments

Signature Date 9.25.2020

AECOM

Well ID: GZA-105R



Volume / Linear Ft. of Pipe		
ID (in)	Gallon	Liter
0.25	0.0025	0.0097
0.375	0.0057	0.0217
0.5	0.0102	0.0386
0.75	0.0229	0.0869
1	0.0408	0.1544
1.25	0.0637	0.2413
1.5	0.0918	0.3475
2	0.1632	0.6178
2.5	0.2550	0.9653
3	0.3672	1.3900
4	0.6528	2.4711
6	1.4688	5.5600

Purge Volume Calculation

[38 ft (tubing length) x 0.0097 L/ft] + 0.275 L (flow cell vol.) = 0.644 L ; 0.644 L x 3 well vol. = 1.93 L

(continued from front)

Time (24 hr)	Volume Removed (Liters)	Temp (°C)	pH	Spec. Cond (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (ft)	Color/Odor
	-	Parameters			Stable					
1235	-	Collected		Samples -	(201-GZA105S-092420-1)					

Hydrogen Bubble Strip Sampling:

Purge rate=	Purge Duration=	Sample time=

AECOM

Well ID: **GZA-105S**

Low Flow Ground Water Sample Collection Record

Client: Lockheed Martin Corp. Date: 9/24/2020 Time: Start 1025 ~~am/pm~~
Project No: 60552044 Finish 1100 ~~am/pm~~
Site Location: 50 Fordham Rd Site, Wilmington, MA
Weather Conds: Sunny 80's Collector(s): Sean Haggett

1. WELL & WATER LEVEL DATA: (measured in feet from Top of Casing unless noted)

a. Total Well Length 14' c. Screen Length 10 (4' - 14') 1.5" PVC Casing
b. Water Table Depth 6.52' d. Pump Intake 9'
c. Water Column (a-b) 7.48' e. Calculated System Purge Volume 1.17 L (calculation on page 2)

2. WELL PURGE DATA

a. Purge Method: peristaltic pump

b. Acceptance Criteria defined (see workplan)

- Temperature	3%	- D.O.	< 0.5 mg/L	-Drawdown	<0.3 ft
- pH	± 1.0 unit		>0.5 mg/L within 10%	-Turbidity	<10 NTU
- Sp. Cond.	3%	- ORP	± 10mV		>10NTU within 10%

c. Field Testing Equipment used:

	Make	Model	Serial Number
	YSI	Pro Quatro	18D102399
	geotech	turbidimeter	19011937

Time (24hr)	Volume Removed (Liters)	Temp. (°C)	pH	Spec. Cond. (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	~~Drawdown~~ DTB (feet)	Color/Odor
1035	1.000	22.6	6.37	1308	0.70	-86.7	0.02	200	6.67	Clear/ org. decay
1040	2.000	22.3	6.40	1367	0.25	-92.7	0.02	200	6.67	" "
1045	3.000	22.4	6.42	1389	0.19	-96.7	0.02	200	6.67	" "
1050	4.000	22.5	6.44	1388	0.18	-98.6	0.02	200	6.67	" "
1055	5.000	22.5	6.43	1381	0.17	-98.1	0.02	200	6.67	" "
	=	parameters			Stable					
1100	=	collected	samples		(20A-GZA105S-092420-1)					

(continued on back)

d. Acceptance criteria pass/fail

	Yes	No	N/A
Has required volume been removed	☑	☐	☐
Has required turbidity been reached	☑	☐	☐
Have parameters stabilized	☑	☐	☐

If no or N/A - Explain below.

" " = Same as above

3. SAMPLE COLLECTION: Method: grab

Sample ID	Container Type	No.	Preservation	Analysis Req.	Time
20A-GZA105S-092420-1	40mL VOA	3	HCL	VOCs 8260C	1100
	500mL P	1	HNO3	Total (Fe, As, Mn)	
	500mL P	1	HNO3	Diss.(Fe, As, Mn) FF	
	1L A	3	HCL/None	EPH	
	40 mL VOA	3	HCL	VPH	

Comments

Signature [signature] Date 9.24.2020

AECOM

Well ID: **IP-1R2**

Low Flow Ground Water Sample Collection Record

Client: Lockheed Martin Corp. Date: 09.24.2026 Time: Start 09:10 am/pm
Project No: 60552044 Finish 09:55 am/pm
Site Location: 50 Fordham Rd Site, Wilmington, MA
Weather Conds: 70°F, sunny Collector(s): L. Zogby

1. WELL & WATER LEVEL DATA: (measured in feet from Top of Casing unless noted)

a. Total Well Length 74' c. Screen Length 20 (54' - 74') 2" PVC Casing
b. Water Table Depth 6.23' d. Pump Intake 64'
c. Water Column (a-b) 67.77' e. Calculated System Purge Volume 2.77 L (calculation on page 2)

2. WELL PURGE DATA

a. Purge Method: peristaltic pump

b. Acceptance Criteria defined (see workplan)

- Temperature	3%	- D.O.	< 0.5 mg/L	-Drawdown	<0.3 ft
- pH	±1.0 unit		>0.5 mg/L within 10%	-Turbidity	<10 NTU
- Sp. Cond.	3%	- ORP	± 10mV		>10NTU within 10%

c. Field Testing Equipment used:

	Make	Model	Serial Number
(total) Volume	YSI	Pro-Plus	10E100125U
	Geotech	Turb Meter	19062110

X6 mm DTW

Time (24hr)	Volume Removed (Liters)	Temp. (°C)	pH	Spec. Cond. (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	~~Drawdown~~ (feet)	Color/Odor
09:20	0.55	20.3	6.67	1861	0.38	204.5	16.8	110	6.55	none
09:25	1.05	20.4	6.92	1818	0.24	10.5	9.43	100	7.05	none
09:30	1.45	20.4	7.13	1816	0.12	-117.4	5.96	80	7.55	none
09:35	1.85	20.3	7.25	1813	0.11	-134.3	7.76	80	7.56	none
09:40	2.35	20.0	7.35	1808	0.21	-141.4	4.02	100 80 17	7.65	none
09:45	2.85	19.8	7.37	1801	0.21	-142.2	1.85	100	7.78	none
09:50	3.35	20.0	7.39	1794	0.31	-143.8	3.07	100	7.85	none

(continued on back)

d. Acceptance criteria pass/fail

	Yes	No	N/A
Has required volume been removed	☒	☐	☐
Has required turbidity been reached	☒	☐	☐
Have parameters stabilized	☒	☐	☐

If no or N/A - Explain below.
Stable @ 09:50

3. SAMPLE COLLECTION: Method: grab

Sample ID	Container Type	No.	Preservation	Analysis Req.	Time
20A-IP1R2-092426-1	40mL VOA	3	HCL	VOCs 8260C	@ 09:55

Comments: Pump stops at anything under 100 mL/min. Some drawdown.

Signature: Leah Zogby Date: 09.24.2026

AECOM

Well ID: **MW-4**

Low Flow Ground Water Sample Collection Record

Client: Lockheed Martin Corp. Date: 9/18/2020 Time: Start 1110 ~~am/pm~~
Project No: 60552044 Finish _____ ~~am/pm~~
Site Location: 50 Fordham Rd Site, Wilmington, MA
Weather Conds: Overcast 70's Collector(s): S. Haggett, D. Potter

1. WELL & WATER LEVEL DATA: (measured in feet from Top of Casing unless noted)

a. Total Well Length 28' c. Screen Length 10 (18' - 28') 1.5" PVC Casing
b. Water Table Depth 2.48 d. Pump Intake 23'
c. Water Column (a-b) _____ e. Calculated System Purge Volume 1.58 L (calculation on page 2)

2. WELL PURGE DATA

a. Purge Method: peristaltic pump

b. Acceptance Criteria defined (see workplan)

- Temperature	3%	- D.O.	< 0.5 mg/L	-Drawdown	<0.3 ft
- pH	± 1.0 unit		>0.5 mg/L within 10%	-Turbidity	<10 NTU
- Sp. Cond.	3%	- ORP	± 10mV		>10NTU within 10%

c. Field Testing Equipment used:

	Make	Model	Serial Number
	YSI	Pro Quatro	18010 2399
	Geotech	turbidimeter	19011937

Time (24hr)	Volume Removed (Liters)	Temp. (°C)	pH	Spec. Cond. (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (feet)	Color/Odor
1120	1.00	10.7	6.27	699	2.93	-43.6	9.56	200	3.02	Clear/none
1125	2.00	10.7	6.27	698	1.72	-52.9	0.02	200	3.02	Clear/none
1130	3.00	10.4	6.30	697	1.44	-53.9	0.02	200	3.02	Clear/none
1135	4.00	10.4	6.38	760	1.29	-96.9	0.02	200	3.02	Clear/none
~~1140~~										
1145	5.00	10.3	6.40	760	0.92	-93.0	0.02	200	3.02	Clear/none
1150	6.00	10.3	6.40	760	0.72	-99.6	0.02	200	3.02	Clear/none

(continued on back)

d. Acceptance criteria pass/fail

	Yes	No	N/A
Has required volume been removed	☐	☐	☐
Has required turbidity been reached	☐	☐	☐
Have parameters stabilized	☐	☐	☐

If no or N/A - Explain below.

3. SAMPLE COLLECTION: Method: grab

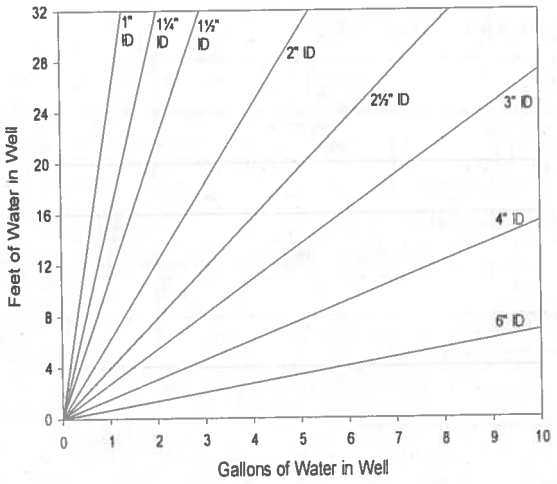
Sample ID	Container Type	No.	Preservation	Analysis Req.	Time
20A-MW4-091820	40mL VOA	3	HCL	VOCs 8260C	1210
	500mL P	1	HNO3	Total (Fe, As, Mn)	
	500mL P	1	HNO3	Diss.(Fe, As, Mn) FF	
	250 mL A	1	NaHSO4	1,4-dioxane	
20A-MW4-091820-2					1215

Comments Battery died at 1135, replaced with # 10E100125U

Signature _____ Date 9/18/2020

AECOM

Well ID: MW-4



Volume / Linear Ft. of Pipe		
ID (in)	Gallon	Liter
0.25	0.0025	0.0097
0.375	0.0057	0.0217
0.5	0.0102	0.0386
0.75	0.0229	0.0869
1	0.0408	0.1544
1.25	0.0637	0.2413
1.5	0.0918	0.3475
2	0.1632	0.6178
2.5	0.2550	0.9653
3	0.3672	1.3900
4	0.6528	2.4711
6	1.4688	5.5600

Purge Volume Calculation

[26 ft (tubing length) x 0.0097 L/ft] + 0.275 L (flow cell vol.) = 0.527 L ; 0.527 L x 3 well vol. = 1.58 L

(continued from front)

Time (24 hr)	Volume Removed (Liters)	Temp (°C)	pH	Spec. Cond (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (ft)	Color/Odor
1155	7.00	10.4	6.42	760	0.47	-101.8	0.02	200	3.02	Clear/none
1200	8.00	10.3	6.43	760	0.30	-103.9	0.02	200	3.02	Clear/none
1205	9.00	10.2	6.44	760	0.22	-104.3	0.02	200	3.02	Clear/none
1210	- Collected Samples - (20A-MW4-091820-1)									
1215	- Collected Samples - (20A-MW4-091820-2)									
Hydrogen Bubble Strip Sampling:										
Purge rate=				Purge Duration=			Sample time=			

AECOM

Well ID: **MW-4A**

Low Flow Ground Water Sample Collection Record

Client: Lockheed Martin Corp. Date: 9/18/2020 Time: Start 1000 ~~am/pm~~
Project No: 60552044 Finish _____ am/pm
Site Location: 50 Fordham Rd Site, Wilmington, MA
Weather Conds: _____ Collector(s): S. Haggett, D. Potter

1. WELL & WATER LEVEL DATA: (measured in feet from Top of Casing unless noted)

a. Total Well Length 48' c. Screen Length 10 (38' - 48') 1.5" PVC Casing
b. Water Table Depth 2.28 d. Pump Intake 43'
c. Water Column (a-b) 45.72' e. Calculated System Purge Volume 2.16 L (calculation on page 2)

2. WELL PURGE DATA

a. Purge Method: peristaltic pump

b. Acceptance Criteria defined (see workplan)

- Temperature	3%	- D.O.	< 0.5 mg/L	-Drawdown	<0.3 ft
- pH	± 1.0 unit		>0.5 mg/L within 10%	-Turbidity	<10 NTU
- Sp. Cond.	3%	- ORP	± 10mV		>10NTU within 10%

c. Field Testing Equipment used:

Make	Model	Serial Number
YSI	ProQuatro	18D102399
Geotech	In-Situ Hydrometer	19011937

Time (24hr)	Volume Removed ~~mL~~ (Liters)	Temp. (°C)	pH	Spec. Cond. (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	~~Drawdown~~ DTW (feet)	Color/Odor
1010	900	11.2	7.05	990	1.05	-40.5	0.02	180	2.30	Clear/none
1015	1800	10.9	6.62	1002	0.95	-48.9	0.02	180	2.30	Clear/none
1020	2700	10.8	6.40	1002	0.85	-51.9	0.02	180	2.30	clear/none
1025	3600	10.9	6.31	1002	0.66	-57.5	0.02	180	2.30	clear/none
1030	4500	10.7	6.28	1002	0.73	-59.5	0.02	180	2.30	clear/none
1035	5400	10.7	6.27	1002	0.50	-60.2	0.02	180	2.30	clear/none
1040	6300	10.8	6.26	1002	0.46	-62.0	0.02	180	2.30	Clear/none

(continued on back)

d. Acceptance criteria pass/fail

	Yes	No	N/A
Has required volume been removed	☑	☐	☐
Has required turbidity been reached	☑	☐	☐
Have parameters stabilized	☑	☐	☐

If no or N/A - Explain below.

_____

3. SAMPLE COLLECTION: Method: grab

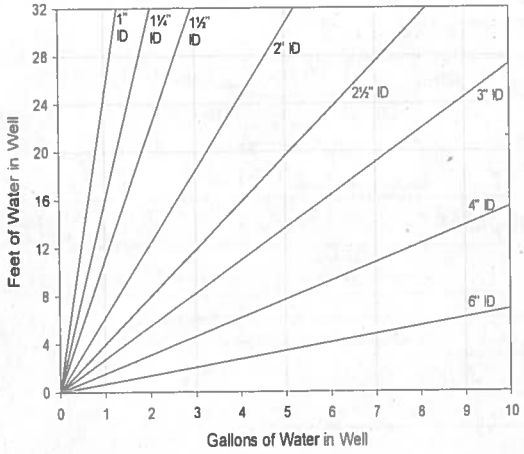
Sample ID	Container Type	No.	Preservation	Analysis Req.	Time
20A-MW4A-~~091820~~-1					1050
	500mL P	1	HNO3	Total (Fe, As, Mn)	
	500mL P	1	HNO3	Diss.(Fe, As, Mn) FF	
		1			

Comments _____

Signature _____ Date 9/18/2020

AECOM

Well ID: MW-4A



Volume / Linear Ft. of Pipe		
ID (in)	Gallon	Liter
0.25	0.0025	0.0097
0.375	0.0057	0.0217
0.5	0.0102	0.0386
0.75	0.0229	0.0869
1	0.0408	0.1544
1.25	0.0637	0.2413
1.5	0.0918	0.3475
2	0.1632	0.6178
2.5	0.2550	0.9653
3	0.3672	1.3900
4	0.6528	2.4711
6	1.4688	5.5600

Purge Volume Calculation

[46 ft (tubing length) x 0.0097 L/ft] + 0.275 L (flow cell vol.) = 0.721 L ; 0.721 L x 3 well vol. = 2.16 L

(continued from front)

Time (24 hr)	Volume Removed (Liters)	Temp (°C)	pH	Spec. Cond (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	DTW Drawdown (ft)	Color/Odor
1015	7200	10.8	6.27	1002	0.72	-63.2	0.02	180	2.30	Clear / none
1050	- Collected Samples - (2DA-MW4A-091820-1)									

Hydrogen Bubble Strip Sampling:

Purge rate=	Purge Duration=	Sample time=

AECOM

Well ID: **MW-5**

Low Flow Ground Water Sample Collection Record

Client: Lockheed Martin Corp. Date: 9/21/20 Time: Start 1415 am/pm
Project No: 60552044 Finish 1535 am/pm
Site Location: 50 Fordham Rd Site, Wilmington, MA
Weather Conds: 60's Sunny Collector(s): A. Grossman

1. WELL & WATER LEVEL DATA: (measured in feet from Top of Casing unless noted)

a. Total Well Length 38' c. Screen Length 10 (28' - 38') 1.5" PVC Casing
b. Water Table Depth 5.88 d. Pump Intake 33'
c. Water Column (a-b) e. Calculated System Purge Volume 1.87 L (calculation on page 2)

2. WELL PURGE DATA

a. Purge Method: peristaltic pump

b. Acceptance Criteria defined (see workplan)

- Temperature	3%	- D.O.	< 0.5 mg/L	-Drawdown	<0.3 ft
- pH	±1.0 unit		>0.5 mg/L within 10%	-Turbidity	<10 NTU
- Sp. Cond.	3%	- ORP	± 10mV		>10NTU within 10%

c. Field Testing Equipment used: Make YSI Model ProPlus Serial Number 18J100703
Horiba U-52 Multi-parameter Probe 706384

Time (24hr)	Volume Removed (Liters)	Temp. (°C)	pH	Spec. Cond. (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	~~Drawdown~~ (feet)	Color/Odor
1451		11.0	6.46	749	0.73	-64.5	0.13	150	5.84	Clr/nop
1456		10.7	6.45	758	0.32	-84.3	0.02	166	5.89	" "
1501		10.7	6.44	737	0.21	-85.3	0.02	166	5.89	" "
1506		10.5	6.45	712	0.16	-91.7	0.12	166	5.89	" "
1511		10.5	6.46	701	0.13	-94.2	~~0.30~~	166	5.89	" "
1516		10.5	6.42	643	0.11	-96.1	0.02	166	5.88	

turb: 0.02

d. Acceptance criteria pass/fail

	Yes	No	N/A
Has required volume been removed	☑	☐	☐
Has required turbidity been reached	☐	☐	☐
Have parameters stabilized	☑	☐	☐

If no or N/A - Explain below.

(continued on back)

3. SAMPLE COLLECTION: Method: grab

Sample ID	Container Type	No.	Preservation	Analysis Req.	Time
20A-MW5-092120	40mL VOA	3	HCL	VOCs 8260C	1520
		1			

Comments

Signature [signature] Date 9/21/20

AECOM

Well ID: **MW-7**

Low Flow Ground Water Sample Collection Record

Client: Lockheed Martin Corp. Date: 9/17/2020 Time: Start 1425 ~~am/pm~~
Project No: 60552044 Finish 1530 ~~am/pm~~
Site Location: 50 Fordham Rd Site, Wilmington, MA
Weather Conds: Sunny 70's Collector(s): Sean Haggett

1. WELL & WATER LEVEL DATA: (measured in feet from Top of Casing unless noted)

a. Total Well Length 25 c. Screen Length 10 (15' - 25') 1.5" PVC Casing
b. Water Table Depth 5.01 d. Pump Intake 17'
c. Water Column (a-b) ~~24.99~~ 19.99' e. Calculated System Purge Volume 1.49 L (calculation on page 2)

2. WELL PURGE DATA

a. Purge Method: peristaltic pump

b. Acceptance Criteria defined (see workplan)

- Temperature	3%	- D.O.	< 0.5 mg/L	-Drawdown	<0.3 ft
- pH	± 1.0 unit*		>0.5 mg/L within 10%	-Turbidity	<10 NTU
- Sp. Cond.	3%	- ORP	± 10mV		>10NTU within 10%

c. Field Testing Equipment used:

	Make	Model	Serial Number
	YSI	Pro Quatro	18D102399
	geotech	turbidmeter	19011937

Time (24hr)	Volume Removed (Liters)	Temp. (°C)	pH	Spec. Cond. (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	~~Drawdown~~ DTW (feet)	Color/Odor
1430	1.00	16.2	5.60	1995	1.22	50.4	186	200	5.07	red/orange / none
1435	2.00	15.7	5.52	1996	0.92	78.7	71.9	200	5.06	Orange / none
1440	3.00	15.5	5.50	1995	0.63	45.7	26.5	200	5.05	Clear / none
1445	4.00	15.7	5.44	1993	0.51	45.1	31.9	200	5.05	Clear none
1450	4.75	15.3	5.49	1994	0.49	43.5	30.2	150	5.05	Clear/none
1455	5.50	15.8	5.49	1996	0.44	41.9	31.1	150	5.05	Clear/none
1500	6.25	15.1	5.50	1994	0.55	40.7	20.4	150	5.04	Clear/none

d. Acceptance criteria pass/fail

	Yes	No	N/A
Has required volume been removed	☑	☐	☐
Has required turbidity been reached	☑	☐	☐
Have parameters stabilized	☑	☐	☐

If no or N/A - Explain below.

(continued on back)

3. SAMPLE COLLECTION: Method: grab

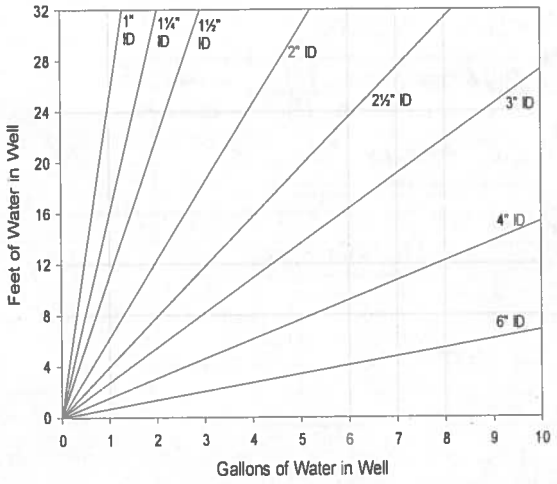
Sample ID	Container Type	No.	Preservation	Analysis Req.	Time
20A-MW7-091720	40mL VOA	3	HCL	VOCs 8260C	1525
		1			

Comments

Signature Date 9/17/2020

AECOM

Well ID: MW-7



Volume / Linear Ft. of Pipe		
ID (in)	Gallon	Liter
0.25	0.0025	0.0097
0.375	0.0057	0.0217
0.5	0.0102	0.0386
0.75	0.0229	0.0869
1	0.0408	0.1544
1.25	0.0637	0.2413
1.5	0.0918	0.3475
2	0.1632	0.6178
2.5	0.2550	0.9653
3	0.3672	1.3900
4	0.6528	2.4711
6	1.4688	5.5600

Purge Volume Calculation

[23 ft (tubing length) x 0.0097 L/ft] + 0.275 L (flow cell vol.) = 0.498 L ; 0.498 L x 3 well vol. = 1.49 L

(continued from front)

Time (24 hr)	Volume Removed (Liters)	Temp (°C)	pH	Spec. Cond (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	~~Drawdown~~ DTW (ft)	Color/Odor
1505	7.00	14.7	5.46	2000	0.40	40.1	10.5	150	5.04	Clear/none
1510	7.75	14.8	5.46	2000	0.37	39.8	8.21	150	5.04	Clear/none
1515	8.50	14.9	5.47	2000	0.36	37.5	8.49	150	5.04	Clear/none
1520	9.25	14.8	5.47	2000	0.36	37.1	8.33	150	5.04	Clear/none
1525	—	Samples collected from (20A-MW7-091720-1)								

Hydrogen Bubble Strip Sampling:

Purge rate=	Purge Duration=	Sample time=

AECOM

Well ID: PS-1D

Low Flow Ground Water Sample Collection Record

Client: Lockheed Martin Corp. Date: 9/15/2020 Time: Start 0945 ~~am/pm~~
Project No: 60552044 Finish 1215 ~~am/pm~~
Site Location: 50 Fordham Rd Site, Wilmington, MA
Weather Conds: Overcast 50's Collector(s): Sean Haggett

1. WELL & WATER LEVEL DATA: (measured in feet from Top of Casing unless noted)

a. Total Well Length 52.5' c. Screen Length 5 (49.25' - 54.25') 0.62" steel
b. Water Table Depth 1.21 d. Pump Intake 52'
c. Water Column (a-b) 51.29 e. Calculated System Purge Volume 2.43 L (calculation on page 2)

2. WELL PURGE DATA

a. Purge Method: peristaltic pump

b. Acceptance Criteria defined (see workplan)

- Temperature	3%	- D.O.	< 0.5 mg/L	-Drawdown	<0.3 ft
- pH	±1.0 unit		>0.5 mg/L within 10%	-Turbidity	<10 NTU
- Sp. Cond.	3%	- ORP	± 10mV		>10NTU within 10%

c. Field Testing Equipment used:

	Make	Model	Serial Number
	YSI	Quatro	18D102399
	geo tech	Turbidimeter	19011937

Time (24hr)	Volume Removed (Liters)	Temp. (°C)	pH	Spec. Cond. (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	~~Drawdown (feet)~~ DTW	Color/Odor
1005	100	12.2	10.00	910	10.96	-121.9	10.9	100	15.02	Clear/strong org. decay
1010	500	11.4	10.10	991	10.20	-126.8	14.5	100	21.22	clear/ strong org. decay
1015	900	11.1	9.76	936	9.76	-117.4	14.7	100	21.62	clear/ strong org. decay
1020	1600	11.3	9.72	928	9.68	-103.2	14.9	100	21.63	clear/ strong org. decay
1025	2100	11.3	9.23	921	9.27	-306.1	18.4	100	21.50	clear/ strong org. decay
1030	2600	11.5	8.37	936	8.73	-120.6	11.6	100	21.58	clear/ strong org. decay
1035	3100	11.5	8.12	934	8.58	-100.3	10.3	100	21.51	clear/ strong org. decay

(continued on back)

d. Acceptance criteria pass/fail

	Yes	No	N/A
Has required volume been removed	☑	☐	☐
Has required turbidity been reached	☑	☐	☐
Have parameters stabilized	☑	☐	☐

If no or N/A - Explain below.

3. SAMPLE COLLECTION: Method: grab

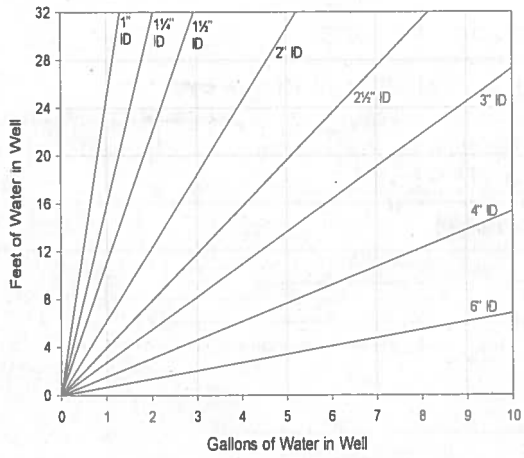
Sample ID	Container Type	No.	Preservation	Analysis Req.	Time
20A-PS1D-091520	40mL VOA	3	HCL	VOCs 8260C	1210
		1			

Comments: Peristaltic pump had issues with reverse setting actually being in forward, caused the pump car into well, increasing DO. Final D.O. was different from last year, but accurate for PS-1S. results are accurate.

Signature [signature] Date 9/15/2020

AECOM

Well ID: PS-1D



Volume / Linear Ft. of Pipe		
ID (in)	Gallon	Liter
0.25	0.0025	0.0097
0.375	0.0057	0.0217
0.5	0.0102	0.0386
0.75	0.0229	0.0869
1	0.0408	0.1544
1.25	0.0637	0.2413
1.5	0.0918	0.3475
2	0.1632	0.6178
2.5	0.2550	0.9653
3	0.3672	1.3900
4	0.6528	2.4711
6	1.4688	5.5600

Purge Volume Calculation

[55 ft (tubing length) x 0.0097 L/ft] + 0.275 L (flow cell vol.) = 0.809 L ; 0.809 L x 3 well vol. = 2.43 L

(continued from front)

Time (24 hr)	Volume Removed (Liters)	Temp (°C)	pH	Spec. Cond (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (ft) PTW	Color/Odor
1040	3600	11.5	7.76	931	8.41	-125.8	9.55	100	21.49	Clear/Strong org. decay
1045	4100	11.5	7.52	933	8.07	-61.7	8.42	100	21.50	Clear/Strong org. decay
1050	4600	11.5	7.41	931	7.98	-38.2	8.38	100	21.51	Clear/Strong org. decay
1055	5100	11.4	7.08	932	8.10	-15.9	7.32	100	21.52	Clear/Strong org. decay
1100	5600	11.5	7.03	929	7.54	-14.1	6.70	100	21.50	Clear/Strong org. decay
1105	6100	11.4	6.98	928	7.35	-11.7	6.23	100	21.49	Clear/Strong org. decay
1110	6600	11.4	6.95	927	6.93	-53.9	7.46	100	21.50	Clear/Strong org. decay
1115	7100	11.6	6.84	926	6.71	-74.0	4.97	100	21.50	Clear/Strong org. decay
1120	7600	11.6	6.82	928	6.65	-74.3	4.71	100	21.51	Clear/Strong org. decay
1125	8100	11.5	6.74	928	6.42	-83.9	3.52	100	21.50	Clear/Strong org. decay
1130	8600	11.5	6.73	927	6.12	-82.1	3.41	100	21.49	Clear/Strong org. decay
1135	9100	11.5	6.73	926	6.37	-83.3	3.39	100	21.49	Clear/Strong org. decay
1140	9600	11.5	7.02	939	6.12	-126.1	3.28	100	21.49	Clear/Strong org. decay
1145	10100	11.5	6.99	943	6.13	-123.2	3.25	100	21.49	Clear/Strong org. decay
1150	10600	11.5	6.88	929	6.02	-111.5	3.12	100	21.49	Clear/Strong org. decay
1155	11100	11.9	6.80	931	5.71	-106.1	3.01	100	21.49	Clear/Strong org. decay
1200	11600	12.0	6.79	931	5.72	-104.0	3.13	100	21.49	Clear/Strong org. decay
1205	12100	12.0	6.78	931	5.69	-104.3	3.08	100	21.49	Clear/Strong org. decay
	—	parameters			Stabilized					
1210	—	Samples			collected	= 20A-PS1D-091520-1				

Hydrogen Bubble Strip Sampling:

Purge rate=	Purge Duration=	Sample time=

AECOM

Well ID: **PS-1S**

Low Flow Ground Water Sample Collection Record

Client: Lockheed Martin Corp. Date: 9/15/2020 Time: Start ~~1415~~ 1420 ~~am/pm~~
Project No: 60552044 Finish 1500 ~~am/pm~~
Site Location: 50 Fordham Rd Site, Wilmington, MA
Weather Conds: Sunny 60's Collector(s): Sean Haggett

1. WELL & WATER LEVEL DATA: (measured in feet from Top of Casing unless noted)

a. Total Well Length 19.9' c. Screen Length 5 (12' - 17') 0.62" steel
b. Water Table Depth 4.07 d. Pump Intake 15'
c. Water Column (a-b) 15.83 e. Calculated System Purge Volume 1.35 L (calculation on page 2)

2. WELL PURGE DATA

a. Purge Method: peristaltic pump

b. Acceptance Criteria defined (see workplan)

- Temperature	3%	- D.O.	< 0.5 mg/L	-Drawdown	<0.3 ft
- pH	±1.0 unit		>0.5 mg/L within 10%	-Turbidity	<10 NTU
- Sp. Cond.	3%	- ORP	± 10mV		>10NTU within 10%

c. Field Testing Equipment used:

	Make	Model	Serial Number
	YSI	Quatro	18D102399
	geotech	turbidity meter	19011937

Time (24hr)	Volume Removed (Liters)	Temp. (°C)	pH	Spec. Cond. (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	~~Drawdown~~ DTW (feet)	Color/Odor
1425	100	16.9	7.13	505.3	5.02	-65.1	52.4	100	5.60	Clear / Strong org. decay
1430	650	12.5	6.42	539.6	1.13	-93.5	8.27	110	5.79	Clear / Strong org. decay
1435	1200	12.3	6.32	528.5	0.81	-91.8	2.91	110	5.73	↓
1440	1750	12.1	6.30	525.8	0.76	-90.7	2.63	110	5.74	↓
1445	2300	12.3	6.32	523.8	0.71	-92.2	2.51	110	5.73	↓
1450	2850	12.3	6.31	523.9	0.72	-91.1	2.19	110	5.73	↓
1456	—	Samples collected for -20A-PS1S-091620-1								

d. Acceptance criteria pass/fail

	Yes	No	N/A
Has required volume been removed	☑	☐	☐
Has required turbidity been reached	☑	☐	☐
Have parameters stabilized	☑	☐	☐

If no or N/A - Explain below.

(continued on back)

3. SAMPLE COLLECTION: Method: grab

Sample ID	Container Type	No.	Preservation	Analysis Req.	Time
20A-PS1S-091520-1	40mL VOA	3	HCL	VOCs 8260C	1455
		1			

Comments

Signature [signature] Date 09/15/2020

AECOM

Well ID: **PS-2D**

Low Flow Ground Water Sample Collection Record

Client: Lockheed Martin Corp. Date: 09.15.2020 Time: Start 10:27 am/pm
Project No: 60552044 Finish 12:00 am/pm
Site Location: 50 Fordham Rd Site, Wilmington, MA
Weather Conds: 60°F, sunny Collector(s): L. Zogby, D. Potter

1. WELL & WATER LEVEL DATA: (measured in feet from Top of Casing unless noted)

a. Total Well Length 54.1 c. Screen Length 5 (49.1' - 54.1') 0.62" steel
b. Water Table Depth 1.93 d. Pump Intake 51.6'
c. Water Column (a-b) 52.17 e. Calculated System Purge Volume 2.4 L (calculation on page 2)

2. WELL PURGE DATA

a. Purge Method: peristaltic pump

b. Acceptance Criteria defined (see workplan)

- Temperature	3%	- D.O.	< 0.5 mg/L	-Drawdown	<0.3 ft
- pH	±1.0 unit		>0.5 mg/L within 10%	-Turbidity	<10 NTU
- Sp. Cond.	3%	- ORP	± 10mV		>10 NTU within 10%

c. Field Testing Equipment used:

	Make	Model	Serial Number
	YSI	PRO-PLUS	10E10612[illegible]
Turbidity Meter	Geotech		19062110

Time (24hr)	total Volume Removed (Liters)	Temp. (°C)	pH	Spec. Cond. (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	~~Drawdown~~ DTW (feet)	Color/Odor
10:35	1.5	10.5	7.28	557.3	0.40	-233.1	13.2	300	7.33	—
10:40	3.0	11.0	7.24	548.0	0.55	-257.2	—	300	8.78	—
11:55	4.5 11.0	~~11.7~~	6.80	504.7	0.99	-185.3	65.9	300	11.91	—
12:00	6.0	11.0	6.80	502.1	1.25	-188.6	44.0	300	16.90	—

d. Acceptance criteria pass/fail

	Yes	No	N/A
Has required volume been removed	☐	☐	☐
Has required turbidity been reached	☐	☐	☐
Have parameters stabilized	☐	☒	☐

(continued on back)

If no or N/A - Explain below. Air Bubbles returned at 12:00 after filling samples

3. SAMPLE COLLECTION: Method: grab

Sample ID	Container Type	No.	Preservation	Analysis Req.	Time
20A-PS2D-091520-1	40mL VOA	3	HCL	VOCs 8260C	@ 12
		1			

Comments 10:50 tubing went dry (bubbles to air). Pulled tubing to investigate water level. Water level around 30 feet. Waiting for recharge. ~~Calling PM @ 11:00~~. Stopped pumping @ 11:00.

Signature Leah Zogby Date 09.15.2020

AECOM

Well ID: **PS-3**

Low Flow Ground Water Sample Collection Record

Client: Lockheed Martin Corp. Date: 09.18.2020 Time: Start 10:00 am/pm
Project No: 60552044 Finish 11:10 am/pm
Site Location: 50 Fordham Rd Site, Wilmington, MA
Weather Conds: Chilly, 60°F, overcast Collector(s): L Zogby, A. Grossman

1. WELL & WATER LEVEL DATA: (measured in feet from Top of Casing unless noted)

a. Total Well Length 10.14' c. Screen Length 5 (2.7' - 7.7') 0.62" steel
b. Water Table Depth ~~1.97~~ 2.20' (12) d. Pump Intake 5'
c. Water Column (a-b) 7.94' e. Calculated System Purge Volume 1.06 L (calculation on page 2)

2. WELL PURGE DATA

a. Purge Method: peristaltic pump

b. Acceptance Criteria defined (see workplan)

- Temperature	3%	- D.O.	< 0.5 mg/L	-Drawdown	<0.3 ft
- pH	±1.0 unit		>0.5 mg/L within 10%	-Turbidity	<10 NTU
- Sp. Cond.	3%	- ORP	± 10mV		>10NTU within 10%

c. Field Testing Equipment used:

	Make	Model	Serial Number
	YSI	Pro Plus	10E100125U
	Geotech	Turb Meter	19062110

Time (24hr)	Volume Removed (Liters)	Temp. (°C)	pH	Spec. Cond. (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	DTW ~~Drawdown~~ (feet)	Color/Odor
10:05	.55	14.1	6.14	692	0.50	37.7	38.0	100	7.25	cloudy
10:10	1.10	13.9	5.89	519.2	0.80	23.3	5.44	100	8.95	clear
10:15	1.60	13.8	5.90	452.7	2.21	15.0	2.95	100	8.80	clear, bubbles
10:20	2.1	13.6	5.88	1110	1.78	9.6	3.86	100	8.84	clear
10:25	2.6	13.7	5.90	583.5	1.49	-1.9	0.68	100	8.72	clear
10:30	3.1	13.6	5.92	446.0	1.44	-2.3	1.00	100	8.35	clear
10:35	3.6	13.6	5.87	427.7	1.29	-2.3	0.62	100	8.75	clear

d. Acceptance criteria pass/fail

	Yes	No	N/A
Has required volume been removed	☐	☐	☐
Has required turbidity been reached	☐	☐	☐
Have parameters stabilized	☐	☐	☐

If no or N/A - Explain below.

(continued on back)

3. SAMPLE COLLECTION: Method: grab

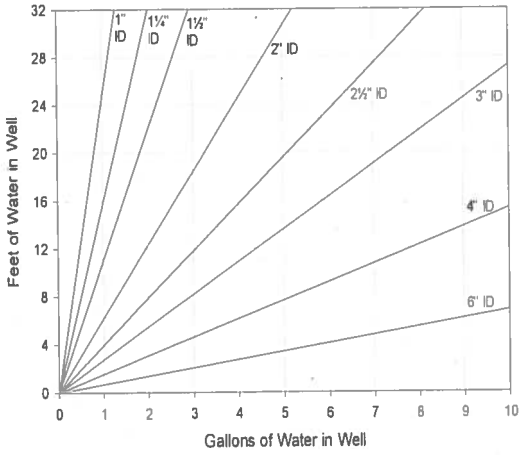
Sample ID	Container Type	No.	Preservation	Analysis Req.	Time
20A-PS3-~~0918~~-1	40mL VOA	3	HCL	VOCs 8260C	@
		1			

Comments: @ 10:40 - Tubing disconnected, silty upon restart - Let clear up before reconnecting to YSI

Signature Leah Zogby Date ~~09.21~~ 09.18.2020 (12)

AECOM

Well ID: PS-3



Volume / Linear Ft. of Pipe		
ID (in)	Gallon	Liter
0.25	0.0025	0.0097
0.375	0.0057	0.0217
0.5	0.0102	0.0386
0.75	0.0229	0.0869
1	0.0408	0.1544
1.25	0.0637	0.2413
1.5	0.0918	0.3475
2	0.1632	0.6178
2.5	0.2550	0.9653
3	0.3672	1.3900
4	0.6528	2.4711
6	1.4688	5.5600

Purge Volume Calculation

[8 ft (tubing length) x 0.0097 L/ft] + 0.275 L (flow cell vol.) = 0.353 L ; 0.353 L x 3 well vol. = 1.06 L

(continued from front)

Time (24 hr)	Volume Removed (Liters) (total)	Temp (°C)	pH	Spec. Cond (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	PTW ~~Drawdown~~ (ft)	Color/Odor
* 10:40	NM	13.6	5.74	930	1.51	1.7	NM	NM	7.95	None
LT 10:45 ~~10:47~~	5.4	13.6	5.97	399.3	0.55	-8.7	2.72	108	8.64	None
10:50	5.94	13.6	5.94	381.2	0.73	-8.0	0.75	108	8.67	None
10:55	6.44	13.6	5.92	377.9	0.85	-7.9	0.49	100	9.22	None
11:00	6.94	13.6	5.92	376.6	0.81	-8.4	1.44	100	9.14	None
11:05	7.44	13.6	5.92	375.5	0.85	-9.1	0.5	100	9.21	None

Hydrogen Bubble Strip Sampling:

Purge rate=	Purge Duration=	Sample time=

AECOM

Well ID: **PS-5D**

Low Flow Ground Water Sample Collection Record

Client: Lockheed Martin Corp. Date: 09.18.2020 Time: Start 11:20 (am)/pm
Project No: 60552044 Finish 11:35 (am)/pm
Site Location: 50 Fordham Rd Site, Wilmington, MA
Weather Conds: 60°F, overcast, hazy Collector(s): L. Zogby, A. Grossman

1. WELL & WATER LEVEL DATA: (measured in feet from Top of Casing unless noted)

a. Total Well Length 29.1' c. Screen Length 5 (24.1' - 29.1') 0.62" steel
b. Water Table Depth 24.39' d. Pump Intake 26.5'
c. Water Column (a-b) _____ e. Calculated System Purge Volume 1.67 L (calculation on page 2)

2. WELL PURGE DATA

a. Purge Method: peristaltic pump

b. Acceptance Criteria defined (see workplan)

- Temperature	3%	- D.O.	< 0.5 mg/L	-Drawdown	<0.3 ft
- pH	±1.0 unit		>0.5 mg/L within 10%	-Turbidity	<10 NTU
- Sp. Cond.	3%	- ORP	± 10mV		>10NTU within 10%

c. Field Testing Equipment used:

Make	Model	Serial Number
YSI	Professional Plus	10E100125U
GeoTech	Turbidity Meter	19062110

Time (24hr)	Volume Removed (Liters)	Temp. (°C)	pH	Spec. Cond. (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (feet)	Color/Odor
See Comments										

d. Acceptance criteria pass/fail

	Yes	No	N/A
Has required volume been removed	☐	☐	☐
Has required turbidity been reached	☐	☐	☐
Have parameters stabilized	☐	☐	☐

If no or N/A - Explain below.

(continued on back)

3. SAMPLE COLLECTION: Method: grab

Sample ID	Container Type	No.	Preservation	Analysis Req.	Time
20A-PS5D-091820-1	40mL VOA	3	HCL	VOCs 8260C	@ 11:35
		1			

Comments well dry after collecting sample. Could not take readings — water low 1.64 ft. SLF

Signature Leah Zogby Date 09.18.2020

AECOM

Well ID: **PS-8D**

Low Flow Ground Water Sample Collection Record

Client: Lockheed Martin Corp. Date: 09.15.2020 Time: Start 14:21 am/pm
Project No: 60552044 Finish _____ am/pm
Site Location: 50 Fordham Rd Site, Wilmington, MA
Weather Conds: 60°F, Sunny Collector(s): L. Zogby, D. Potter

1. WELL & WATER LEVEL DATA: (measured in feet from Top of Casing unless noted)

a. Total Well Length 56.8' c. Screen Length 5 (51.8' - 56.8') 0.62" steel
b. Water Table Depth 4.42' d. Pump Intake 57'
c. Water Column (a-b) 52.38' e. Calculated System Purge Volume 2.48 L (calculation on page 2)

2. WELL PURGE DATA

a. Purge Method: peristaltic pump

b. Acceptance Criteria defined (see workplan)

- Temperature	3%	- D.O.	< 0.5 mg/L	-Drawdown	<0.3 ft
- pH	± 1.0 unit		>0.5 mg/L within 10%	-Turbidity	<10 NTU
- Sp. Cond.	3%	- ORP	± 10mV		>10NTU within 10%

c. Field Testing Equipment used:

	Make	Model	Serial Number
	YSI	Pro-Plus	10E100125U
Turbidity Meter		Geotech	19062110

Time (24hr)	Volume Removed (Liters)	Temp. (°C)	pH	Spec. Cond. (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	~~Drawdown~~ DTW (feet)	Color/Odor
14:25	1	10.7	7.65	279.7	2.83	-211.3	8.68	200	~~4~~ 4.50	clear, black particles
14:30	2	10.5	6.64	305.5	0.63	-133.4	1.38	200	8.04'	clear
14:35	2.5	10.8	6.55	306.5	0.57	-126.6	0.51	100	6.30'	clear
14:40	3.0	11.6	6.48	308.7	0.57	-119.7	0.53	100	4.52	clear
14:45	3.4	11.1	6.43	313.4	0.46	-123.4	0.86	80	4.70	clear
14:50	3.8	11.2	6.40	308.2	0.36	-123.0	1.02	80	4.68	clear
14:55	4.2	11.2	6.40	307.7	0.41	-124.3	0.90	80	~~4~~ 4.55	clear

(continued on back)

d. Acceptance criteria pass/fail

	Yes	No	N/A
Has required volume been removed	☒	☐	☐
Has required turbidity been reached	☒	☐	☐
Have parameters stabilized	☒	☐	☐

If no or N/A - Explain below.
Stable @ 14:55

3. SAMPLE COLLECTION: Method: grab

Sample ID	Container Type	No.	Preservation	Analysis Req.	EST Time
20A-PS8D-091520-1	40mL VOA	3	HCL	VOCs 8260C	14:15:00
	500mL P	1	HNO3	Total (Fe, As, Mn)	
	500mL P	1	HNO3	Diss.(Fe, As, Mn) FF	
		1			

Comments: Some drawdown during first 10 min of purging. Slowed pump rate down significantly until recharge.

Signature: Leah Zogby Date: 09.15.2020

AECOM

Well ID: PZ-2S

Low Flow Ground Water Sample Collection Record

Client: Lockheed Martin Corp. Date: 9/24/20 Time: Start 1300 am/pm
Project No: 60552044 Finish _____ am/pm
Site Location: 50 Fordham Rd Site, Wilmington, MA
Weather Conds: sunny, 70's Collector(s): A Grossman

1. WELL & WATER LEVEL DATA: (measured in feet from Top of Casing unless noted)

a. Total Well Length 8.55' c. Screen Length 5' (3.55' - 8.55') 4" PVC Casing
b. Water Table Depth 6.47 d. Pump Intake 6'
c. Water Column (a-b) _____ e. Calculated System Purge Volume 1.12 L (calculation on page 2)

2. WELL PURGE DATA

a. Purge Method: peristaltic pump

b. Acceptance Criteria defined (see workplan)

- Temperature	3%	- D.O.	< 0.5 mg/L	-Drawdown	<0.3 ft
- pH	± 1.0 unit		>0.5 mg/L within 10%	-Turbidity	<10 NTU
- Sp. Cond.	3%	- ORP	± 10mV		>10NTU within 10%

c. Field Testing Equipment used: Make YSI Model ProPlus Serial Number 18H100703
GeoFlow Turbidity meter

Time (24hr)	Volume Removed (Liters)	Temp. (°C)	pH	Spec. Cond. (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (feet)	Color/Odor
1314		21.2	6.51	200.0	0.76	—	22.6	104	7.10	tan sed, mat [illegible]
1321		21.4	6.38	218.0	0.41	-2.6	66.6	104	7.24	" "
1326		21.1	6.35	211.2	0.30	-16.7	31.5	104	7.40	" "
1331		21.1	6.30	206.4	0.42	-11.0	27.8	130	7.67	" "
1336		21.1	6.24	207.4	0.37	-14.7	—	130	7.82	" "
1341										

d. Acceptance criteria pass/fail

	Yes	No	N/A
Has required volume been removed	☐	☐	☐
Has required turbidity been reached	☐	☐	☐
Have parameters stabilized	☐	☐	☐

If no or N/A - Explain below.

(continued on back)

3. SAMPLE COLLECTION: Method: grab

Sample ID	Container Type	No.	Preservation	Analysis Req.	Time
20A-PZ2S-092520	40mL VOA	3	HCL	VOCs 8260C	0745
	1L A	3	HCL/None	EPH	↓
	40mL VOA	3	HCL	VPH	

Comments Well dry at 1341
9/25/20 - 0740: DTW = 7.65'

Signature _____ Date 9/25/20

AECOM

Well ID: **STM-3D**

Low Flow Ground Water Sample Collection Record

Client: Lockheed Martin Corp. Date: 9/24/20 Time: Start 1024 am/pm
Project No: 60552044 Finish 1234 am/pm
Site Location: 50 Fordham Rd Site, Wilmington, MA
Weather Conds: Collector(s): A. Grossman

1. WELL & WATER LEVEL DATA: (measured in feet from Top of Casing unless noted)

a. Total Well Length 54.8' c. Screen Length 5 (49.8' - 54.8') 0.75" PVC
b. Water Table Depth 49.48 d. Pump Intake 50.8'
c. Water Column (a-b) e. Calculated System Purge Volume 2.40 L (calculation on page 2)

2. WELL PURGE DATA

a. Purge Method: peristaltic pump

b. Acceptance Criteria defined (see workplan)

- Temperature	3%	- D.O.	< 0.5 mg/L	-Drawdown	<0.3 ft
- pH	± 1.0 unit		>0.5 mg/L within 10%	-Turbidity	<10 NTU
- Sp. Cond.	3%	- ORP	± 10mV		>10NTU within 10%

c. Field Testing Equipment used: Make / Model / Serial Number

YSI Pro Plus 18H100703
Turbo Meter Geotech 1706384

LZ

Time (24hr)	Volume Removed (Liters)	Temp. (°C)	pH	Spec. Cond. (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	~~Drawdown~~ (feet)	Color/Odor
1024	.5	14.4	6.58	233.8	0.67	-103.4	101	100	10.45	hvy silt / some + sediment
1029	1.0	14.8	6.42	234.1	0.28	-106.1	247	100	15.78	
~~1034~~ 1034	1.5	20.7	6.60	493.4	0.30	-85.7	124	100	12.03	
1039	2.0	20.7	6.61	495.2	0.08	-106.0	107	100	11.42	
1044	2.50	20.3	6.62	498.7	0.12	-106.2	107	112	12.02	
1049	3.12	20.0	6.61	500.5	0.13	-105.7	102	112	12.03	
~~1053~~ 1054	3.68	14.6	6.61	500.5	0.12	-105.5	704	112	12.03	

1024 *
1044
1054
1104 Q

Dw

d. Acceptance criteria pass/fail

	Yes	No	N/A
Has required volume been removed	☐	☐	☐
Has required turbidity been reached	☐	☐	☐
Have parameters stabilized	☐	☐	☐

If no or N/A - Explain below.

(continued on back)

3. SAMPLE COLLECTION: Method: grab

Sample ID	Container Type	No.	Preservation	Analysis Req.	Time
20A-STM3D-_____-1	40mL VOA	3	HCL	VOCs 8260C	
		1			

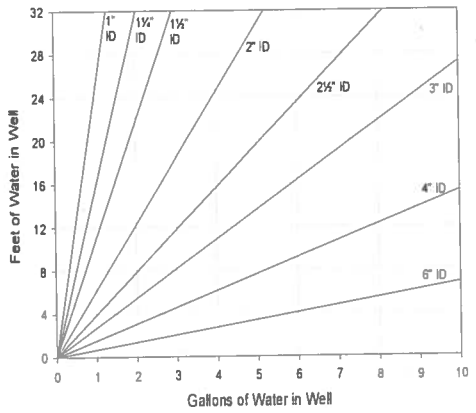
Comments: Heavy silt upon initial purge - let run for 1 min before pumping into jug. Pumping clogged - valve - pressure - heavy silt let run for 3 min before collecting

Signature Adam Date 9/24/20

Well ID: STM-3D

(Page 2 of 2)

AECOM



Volume / Linear Ft. of Pipe		
ID (in)	Gallon	Liter
0.25	0.0025	0.0097
0.375	0.0057	0.0217
0.5	0.0102	0.0386
0.75	0.0229	0.0869
1	0.0408	0.1544
1.25	0.0637	0.2413
1.5	0.0918	0.3475
2	0.1632	0.6178
2.5	0.2550	0.9653
3	0.3672	1.3900
4	0.6528	2.4711
6	1.4688	5.5600

Purge Volume Calculation

[54 ft (tubing length) x 0.0097 L/ft] + 0.275 L (flow cell vol.) = 0.799 L ; 0.799 L x 3 well vol. = 2.40 L

(continued from front)

Time (24 hr)	Volume Removed (Liters)	Temp (°C)	pH	Spec. Cond (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (ft)	Color/Odor
1104	4.305	20.0	6.62	0.72	0.11	-102.8	56.6	114 125	12.08	Lt sediment/none
1114	4.93	14.5	6.63	494.2	0.11	-95.2	44.2	~~116~~	12.13	
1119	5.51	14.6	6.65	500.8	0.10	-83.7	29.8	116	11.95	
1124	6.09	20.2	6.64	502.4	0.09	~~-89.7~~	31.8	116	12.04	
1129	6.67	20.7	6.64	499.2	0.08	-94.9	27.1	116	11.97	
1134	7.25	20.0	6.71	502.0	0.08	-96.2	26.1	116	11.95	
1139	7.83	14.8	6.70	502.8	0.07	-98.3	24.0	116	11.95	
1144	8.41	20.5	6.72	505.2	0.08	-103.3	21.0	116	~~11.98~~	12.04
1149	8.99	20.0	6.70	502.0	0.06	-103.5	21.3	116	12.06	
1154	9.57	14.5	6.64	504.3	0.06	-99.9	19.7	116	12.04	
1159	10.15	14.7	6.70	504.3	0.05	-101.6	18.0	116	12.04	
1204	10.73	14.8	6.70	505.1	0.07	-99.3	20.6	116	12.04	
1209	11.31	20.0	6.70	506.4	0.05	-99.4	15.4	116	12.04	
1214	11.89	20.5	6.70	505.6	0.07	-85.0	15.0	116	12.04	
1219	12.47	20.2	6.72	506.4	0.05	-86.9	13.8	116	12.04	
@ 1224	~~12.30~~ 13.05	14.7	6.64	504.7	0.06	-83.2	12.3	116	12.04	
1229	13.63	14.7	6.69	506.8	0.05	-87.3	9.99	116	12.04	
1234	14.21	14.6	6.71	506.4	0.06	-88.6	9.20	116	12.04	

Hydrogen Bubble Strip Sampling:

Purge rate=	Purge Duration=	Sample time=

AECOM

Well ID: **STM-8D**

Low Flow Ground Water Sample Collection Record

Client: Lockheed Martin Corp. Date: 9/23/20 Time: Start 1010 am/pm
Project No: 60552044 Finish 1040 am/pm
Site Location: 50 Fordham Rd Site, Wilmington, MA
Weather Conds: 70's Sunny Collector(s): Floyd Burton

1. WELL & WATER LEVEL DATA: (measured in feet from Top of Casing unless noted)

a. Total Well Length 39.7' c. Screen Length 5 (34.7' - 39.7') 1" PVC Casing
b. Water Table Depth 6.41 d. Pump Intake 37.2'
c. Water Column (a-b) 33.29 e. Calculated System Purge Volume 1.99 L (calculation on page 2)

2. WELL PURGE DATA

a. Purge Method: peristaltic pump

b. Acceptance Criteria defined (see workplan)

- Temperature	3%	- D.O.	< 0.5 mg/L	-Drawdown	<0.3 ft
- pH	±1.0 unit		>0.5 mg/L within 10%	-Turbidity	<10 NTU
- Sp. Cond.	3%	- ORP	± 10mV		>10NTU within 10%

c. Field Testing Equipment used:

Make	Model	Serial Number
YSI	Pro Plus	10D101442

Time (24hr)	Volume Removed (Liters)	Temp. (°C)	pH	Spec. Cond. (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (feet)	Color/Odor
1015	0	16.1	6.44	948	3.25	-310.1	0	100	0.03	clear/none
1020	.5	15.1	6.16	953	0.88	-317.6	0	100	0.05	
1025	1.0	15.1	6.14	951	0.82	-315.9	0	100	0.07	
1030	1.5	15.1	6.13	951	0.81	-313.6	0	100	0.08	↓

d. Acceptance criteria pass/fail

	Yes	No	N/A
Has required volume been removed	☒	☐	☐
Has required turbidity been reached	☒	☐	☐
Have parameters stabilized	☒	☐	☐

If no or N/A - Explain below.

(continued on back)

3. SAMPLE COLLECTION: Method: grab

Sample ID	Container Type	No.	Preservation	Analysis Req.	Time
20A-STM8D-092320-1	40mL VOA	3	HCL	VOCs 8260C	1035
	250 mL Amber	2	NaHSO4	1,4 dioxane	

Comments

Signature [signature] Date 9/23/20

AECOM

Well ID: **STM-8R**

Low Flow Ground Water Sample Collection Record

Client: Lockheed Martin Corp. Date: 9/23/20 Time: Start 1045 am/pm
Project No: 60552044 Finish 1120 am/pm
Site Location: 50 Fordham Rd Site, Wilmington, MA
Weather Conds: 70's Sunny Collector(s): Floyd Burton

1. WELL & WATER LEVEL DATA: (measured in feet from Top of Casing unless noted)

a. Total Well Length 51.5' c. Screen Length 5 (46.6' - 51.5') 1" PVC Casing
b. Water Table Depth 6.39 d. Pump Intake 49'
c. Water Column (a-b) 45.11 e. Calculated System Purge Volume 2.32 L (calculation on page 2)

2. WELL PURGE DATA

a. Purge Method: peristaltic pump

b. Acceptance Criteria defined (see workplan)

- Temperature	3%	- D.O.	< 0.5 mg/L	-Drawdown	<0.3 ft
- pH	± 1.0 unit		>0.5 mg/L within 10%	-Turbidity	<10 NTU
- Sp. Cond.	3%	- ORP	± 10mV		>10NTU within 10%

c. Field Testing Equipment used: Make YSI Model Pro Plus Serial Number 10D101442

Time (24hr)	Volume Removed (Liters)	Temp. (°C)	pH	Spec. Cond. (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (feet)	Color/Odor
1050	0	18.2	5.93	1346	1.23	-274.8	0	100	0.21	clear/none
1055	0.5	18.4	5.90	1365	0.61	-314.1	0	100	0.35	
1100	1.0	18.4	5.90	1367	0.60	-314.1	0	100	0.43	
1105	1.5	18.4	5.89	1389	0.57	-315.5	0	100	0.59	↓

d. Acceptance criteria pass/fail

	Yes	No	N/A
Has required volume been removed	☒	☐	☐
Has required turbidity been reached	☒	☐	☐
Have parameters stabilized	☒	☐	☐

If no or N/A - Explain below.

(continued on back)

3. SAMPLE COLLECTION: Method: grab

Sample ID	Container Type	No.	Preservation	Analysis Req.	Time
20A-STM8R-092320-1	40mL VOA	3	HCL	VOCs 8260C	1110
	250 mL Amber	1	NaHSO4	1,4 dioxane	

Comments

Signature F. Burton III Date 9/23/20

AECOM

Well ID: **STM8-R1**

Low Flow Ground Water Sample Collection Record

Client: Lockheed Martin Corp. Date: 9/23/20 Time: Start _____ am/pm
Project No: 60552044 Finish _____ am/pm
Site Location: 50 Fordham Rd Site, Wilmington, MA
Weather Conds: _____ Collector(s): _____

1. WELL & WATER LEVEL DATA: (measured in feet from Top of Casing unless noted)

a. Total Well Length 92' c. Screen Length 5 (85' - 90') 2" PVC Casing
b. Water Table Depth 84.02 d. Pump Intake 87.5'
c. Water Column (a-b) _____ e. Calculated System Purge Volume 3.44 L (calculation on page 2)

2. WELL PURGE DATA

a. Purge Method: peristaltic pump (purge well down to top of screen using submersible pump)

b. Acceptance Criteria defined (see workplan)

- Temperature	3%	- D.O.	< 0.5 mg/L	-Drawdown	<0.3 ft
- pH	± 1.0 unit		>0.5 mg/L within 10%	-Turbidity	<10 NTU
- Sp. Cond.	3%	- ORP	± 10mV		>10NTU within 10%

c. Field Testing Equipment used: Make YSI Model _____ Serial Number _____

Time (24hr)	Volume Removed (Liters)	Temp. (°C)	pH	Spec. Cond. (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (feet)	Color/Odor

d. Acceptance criteria pass/fail

	Yes	No	N/A
Has required volume been removed	☐	☒	☐
Has required turbidity been reached	☐	☒	☐
Have parameters stabilized	☐	☒	☐

If no or N/A - Explain below.

(continued on back)

3. SAMPLE COLLECTION: Method: grab

Sample ID	Container Type	No.	Preservation	Analysis Req.	Time
20A-STM8R1-092320-1	40mL VOA	3	HCL	VOCs 8260C	1230
	500mL P	1	none	Cl, NO2, NO3, SO4	
	500mL P	1	zinc acetate	Sulfide	
	40mL V	3	belzal chlor.	gases (Acet, Prop, Meth, Eth, Etha)	
	250 mL Amber	1	NaHSO4	1,4 dioxane	
	40mL V	3	HCL	VPH	
	1L A	3	HCL/None	EPH	
	500mL P	2	HNO3	Total & Diss. (Fe, As, Mn)	
	40mL V	2	H3PO4	TOC	
	vial	1	none	Diss. Hydrogen	

Comments: Due to excessive drawdown, purge water level down to 85 ft using pump and allow to recharge prior to collecting sample. Purged only 76.2' due to pump issues

Signature _____ Date 9/23/20

AECOM

Well ID: TRC-101

Low Flow Ground Water Sample Collection Record

Client: Lockheed Martin Corp. Date: 9/23/20 Time: Start 1515 am/pm
Project No: 60552044 Finish 1600 am/pm
Site Location: 50 Fordham Rd Site, Wilmington, MA
Weather Conds: Sunny 80's Collector(s): Sean Haggett

1. WELL & WATER LEVEL DATA: (measured in feet from Top of Casing unless noted)

a. Total Well Length 10.5' c. Screen Length 10 (1.5' - 10.5') 1.25" PVC
b. Water Table Depth 6.79 d. Pump Intake 6.5'
c. Water Column (a-b) 3.71 e. Calculated System Purge Volume 1.12 L (calculation on page 2)

2. WELL PURGE DATA

a. Purge Method: peristaltic pump

b. Acceptance Criteria defined (see workplan)

- Temperature	3%	- D.O.	< 0.5 mg/L	-Drawdown	<0.3 ft
- pH	±1.0 unit		>0.5 mg/L within 10%	-Turbidity	<10 NTU
- Sp. Cond.	3%	- ORP	± 10mV		>10NTU within 10%

c. Field Testing Equipment used:

	Make	Model	Serial Number
	YSI	ProQuatro	18D102399
	Geotech	Turbidimeter	19011937

Time (24hr)	Volume Removed (Liters)	Temp. (°C)	pH	Spec. Cond. (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	~~Drawdown~~ DTB (feet)	Color/Odor
1525	1.000	23.2	6.13	1975	1.01	-122.8	125	200	7.25	Clear / org. decay
1530	2.000	23.0	6.25	1807	0.49	-124.1	69.3	200	7.27	" "
1535	3.000	23.0	6.30	1737	0.44	-111.6	29.9	200	7.27	" "
1540	4.000	23.2	6.28	1720	0.25	-116.4	13.4	200	7.27	" "
1545	5.000	23.1	6.30	1712	0.23	-116.6	9.10	200	7.27	" "
1550	6.000	23.1	6.30	1725	0.26	-107.5	8.49	200	7.27	" "
1555	7.000	23.2	6.30	1722	0.29	-112.9	8.21	200	7.27	" "

(continued on back)

" " = Same as above

d. Acceptance criteria pass/fail

	Yes	No	N/A
Has required volume been removed	☑	☐	☐
Has required turbidity been reached	☑	☐	☐
Have parameters stabilized	☑	☐	☐

If no or N/A - Explain below.

3. SAMPLE COLLECTION: Method: grab

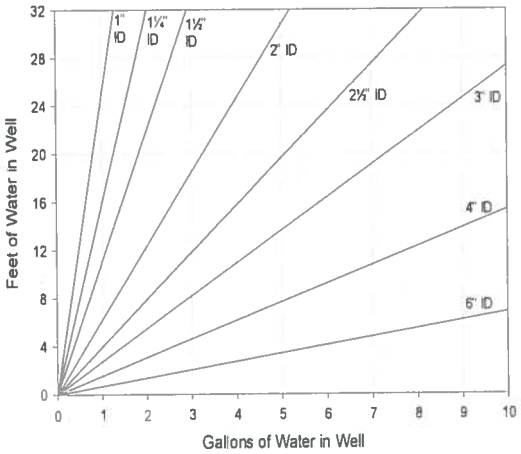
Sample ID	Container Type	No.	Preservation	Analysis Req.	Time
20A-TRC101-093320-1	40mL VOA	3	HCL	VOCs 8260C	1600
	40mL V	3	HCL	VPH	
	1L A	3	HCL/None	EPH	
		1			

Comments

Signature [signature] Date 9/23/2020

AECOM

Well ID: TRC-101



Volume / Linear Ft. of Pipe		
ID (in)	Gallon	Liter
0.25	0.0025	0.0097
0.375	0.0057	0.0217
0.5	0.0102	0.0386
0.75	0.0229	0.0869
1	0.0408	0.1544
1.25	0.0637	0.2413
1.5	0.0918	0.3475
2	0.1632	0.6178
2.5	0.2550	0.9653
3	0.3672	1.3900
4	0.6528	2.4711
6	1.4688	5.5600

Purge Volume Calculation

[10 ft (tubing length) x 0.0097 L/ft] + 0.275 L (flow cell vol.) = 0.372 L ; 0.372 L x 3 well vol. = 1.12 L

(continued from front)

Time (24 hr)	Volume Removed (Liters)	Temp (°C)	pH	Spec. Cond (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (ft)	Color/Odor
	-	parameters stable								
1600	-	collected samples from (20A-TRC101-092320-1)								

Hydrogen Bubble Strip Sampling:

Purge rate=	Purge Duration=	Sample time=

AECOM

Well ID: TRC-102

Low Flow Ground Water Sample Collection Record

Client: Lockheed Martin Corp. Date: 9/23/2020 Time: Start 1135 ~~am/pm~~
Project No: 60552044 Finish 1215 ~~am/pm~~
Site Location: 50 Fordham Rd Site, Wilmington, MA
Weather Conds: Sunny 80's Collector(s): Sean Haggett

1. WELL & WATER LEVEL DATA: (measured in feet from Top of Casing unless noted)

a. Total Well Length 12.25' c. Screen Length 10 (2.25' - 12.25') 1.25" PVC
b. Water Table Depth 5.78' d. Pump Intake 7.25'
c. Water Column (a-b) 6.48' e. Calculated System Purge Volume 1.12 L (calculation on page 2)

2. WELL PURGE DATA

a. Purge Method: peristaltic pump

b. Acceptance Criteria defined (see workplan)

- Temperature	3%	- D.O.	< 0.5 mg/L	-Drawdown	<0.3 ft
- pH	± 1.0 unit		>0.5 mg/L within 10%	-Turbidity	<10 NTU
- Sp. Cond.	3%	- ORP	± 10mV		>10NTU within 10%

c. Field Testing Equipment used:

	Make	Model	Serial Number
	YSI	Pro Quatro	18D102799
	Geotech	turbidimeter	19011937

DTW

Time (24hr)	Volume Removed (Liters)	Temp. (°C)	pH	Spec. Cond. (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	~~Drawdown~~ (feet)	Color/Odor
1140	1.000	21.9	6.03	1142	0.99	-73.5	4.02	206	5.80	Clear/Strong org. decay
1145	2.000	21.8	6.05	1232	0.99	-86.2	15.3	206	5.80	" "
1150	3.000	21.6	6.07	1332	0.87	-86.3	11.4	206	5.80	" "
1155	4.006	21.7	6.07	1307	0.76	-87.9	4.69	209	5.80	" "
1200	5.050	21.7	6.07	1329	0.75	-90.5	3.41	210	5.80	" "
1205	6.100	21.7	6.07	1343	0.76	-92.5	2.11	210	5.80	" "
1210	7.150	21.7	6.07	1344	0.72	-92.9	2.34	210	5.80	" "

(continued on back)

" " = Same as above

d. Acceptance criteria pass/fail

	Yes	No	N/A
Has required volume been removed	☑	☐	☐
Has required turbidity been reached	☑	☐	☐
Have parameters stabilized	☑	☐	☐

If no or N/A - Explain below.

3. SAMPLE COLLECTION: Method: grab

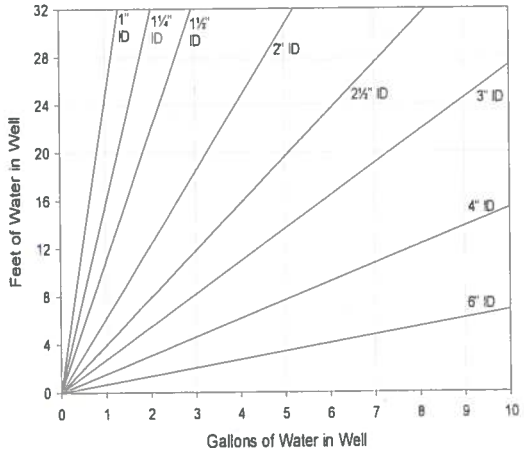
Sample ID	Container Type	No.	Preservation	Analysis Req.	Time
20A-TRC102-092320	40mL VOA	3	HCL	VOCs 8260C	1215
	40mL V	3	HCL	VPH	
	1L A	2	HCL/None	EPH	
	500mL P	1	HNO3	Total (Fe, Mn, As)	
	500mL P	1	HNO3	Diss. (Fe, Mn, As) FF	

Comments

Signature Date 9/23/20

AECOM

Well ID: TRC-102



Volume / Linear Ft. of Pipe		
ID (in)	Gallon	Liter
0.25	0.0025	0.0097
0.375	0.0057	0.0217
0.5	0.0102	0.0386
0.75	0.0229	0.0869
1	0.0408	0.1544
1.25	0.0637	0.2413
1.5	0.0918	0.3475
2	0.1632	0.6178
2.5	0.2550	0.9653
3	0.3672	1.3900
4	0.6528	2.4711
6	1.4688	5.5600

Purge Volume Calculation

[10 ft (tubing length) x 0.0097 L/ft] + 0.275 L (flow cell vol.) = 0.372 L ; 0.372 L x 3 well vol. = 1.12 L

(continued from front)

Time (24 hr)	Volume Removed (Liters)	Temp (°C)	pH	Spec. Cond (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (ft)	Color/Odor
	-	Parameters			Stable					
1215	-	Collected			Sample	from	(20A-TRC102-092320-1)			

Hydrogen Bubble Strip Sampling:

Purge rate=	Purge Duration=	Sample time=

AECOM

Well ID: TRC-103

Low Flow Ground Water Sample Collection Record

Client: Lockheed Martin Corp. Date: 9/23/2020 Time: Start 1000 ~~am/pm~~
Project No: 60552044 Finish 1110 ~~am/pm~~
Site Location: 50 Fordham Rd Site, Wilmington, MA
Weather Conds: Sunny 80's Collector(s): Sean Haggett

1. WELL & WATER LEVEL DATA: (measured in feet from Top of Casing unless noted)

a. Total Well Length 11.25' c. Screen Length 10 (1.25' - 11.25') 1.25" PVC
b. Water Table Depth 6.59' d. Pump Intake 6.25'
c. Water Column (a-b) 4.66' e. Calculated System Purge Volume 1.12 L (calculation on page 2)

2. WELL PURGE DATA

a. Purge Method: peristaltic pump

b. Acceptance Criteria defined (see workplan)

- Temperature	3%	- D.O.	< 0.5 mg/L	-Drawdown	<0.3 ft
- pH	±1.0 unit		>0.5 mg/L within 10%	-Turbidity	<10 NTU
- Sp. Cond.	3%	- ORP	± 10mV		>10NTU within 10%

c. Field Testing Equipment used:

	Make	Model	Serial Number
	YSI	Pro Quatro	18D102399
	geotech	turbidimeter	19011937

Time (24hr)	Volume Removed (Liters)	Temp. (°C)	pH	Spec. Cond. (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	~~Drawdown~~ DTB (ft)	Color/Odor
1010	1.375	22.7	6.54	953	0.72	-161.0	137	275	6.84	Clear/Strong Org. decay
1015	2.750	22.7	6.52	959	0.60	-160.9	66.7	275	6.84	" "
1020	4.125	22.7	6.52	965	0.53	-160.5	36.1	275	6.84	" "
1025	5.500	22.7	6.13	951	0.50	-151.5	35.0	275	6.81	" "
1030	6.875	22.5	6.17	973	0.78	-158.0	17.9	275	6.84	" "
1035	8.250	22.1	6.49	977	0.71	-159.0	11.4	275	6.84	" "
1040	9.625	22.5	6.17	977	0.38	-157.0	29.3	275	6.84	" "

(continued on back)

" " = Same as above

d. Acceptance criteria pass/fail

	Yes	No	N/A
Has required volume been removed	☑	☐	☐
Has required turbidity been reached	☑	☐	☐
Have parameters stabilized	☑	☐	☐

If no or N/A - Explain below.

3. SAMPLE COLLECTION: Method: grab

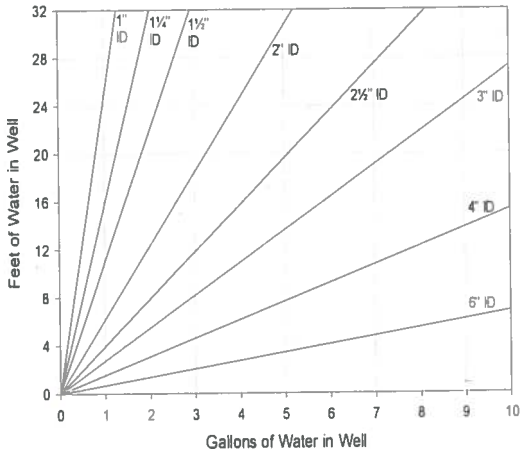
Sample ID	Container Type	No.	Preservation	Analysis Req.	Time
20A-TRC103-092320-1	40mL VOA	3	HCL	VOCs 8260C	1110
	40mL V	3	HCL	VPH	1110
	1L A	2	HCL/None	EPH	1110
		1			

Comments

Signature Date 9/23/20

AECOM

Well ID: TRC-103



Volume / Linear Ft. of Pipe		
ID (in)	Gallon	Liter
0.25	0.0025	0.0097
0.375	0.0057	0.0217
0.5	0.0102	0.0386
0.75	0.0229	0.0869
1	0.0408	0.1544
1.25	0.0637	0.2413
1.5	0.0918	0.3475
2	0.1632	0.6178
2.5	0.2550	0.9653
3	0.3672	1.3900
4	0.6528	2.4711
6	1.4688	5.5600

Purge Volume Calculation

[10 ft (tubing length) x 0.0097 L/ft] + 0.275 L (flow cell vol.) = 0.372 L ; 0.372 L x 3 well vol. = 1.12 L

(continued from front)

Time (24 hr)	Volume Removed (Liters)	Temp (°C)	pH	Spec. Cond (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	~~Drawdown~~ DTB (ft)	Color/Odor
1045	11.000	22.4	6.48	982	0.39	-158.8	38.2	275	6.84	Clear/Strong org. decay
1050	12.375	22.4	6.47	983	0.34	-159.1	19.9	275	6.84	" "
1055	13.750	22.4	6.47	988	0.18	-160.2	7.25	275	6.84	" "
1100	15.125	22.5	6.47	990	0.17	-160.3	5.58	275	6.84	" "
1105	16.506	22.4	6.47	990	0.17	-160.4	3.18	275	6.84	" "
	-	Parameters Stabilized								
1110	-	Collected Samples for - (20A-TRC103-092320-1)								

Hydrogen Bubble Strip Sampling:

Purge rate=	Purge Duration=	Sample time=

AECOM

Well ID: TRC-201R

Low Flow Ground Water Sample Collection Record

Client: Lockheed Martin Corp. Date: 9/21/20 Time: Start 940 am/pm
Project No: 60552044 Finish 1141 am/pm
Site Location: 50 Fordham Rd Site, Wilmington, MA
Weather Conds: 64-75, mostly cloudy Collector(s): A. Grossman

1. WELL & WATER LEVEL DATA: (measured in feet from Top of Casing unless noted)

a. Total Well Length 169.11 c. Screen Length open bedrock 4.75" open bedrock
b. Water Table Depth 8.92 d. Pump Intake 111.5'
c. Water Column (a-b) e. Calculated System Purge Volume 4.17 L (calculation on page 2)

2. WELL PURGE DATA

a. Purge Method: Bladder pump

b. Acceptance Criteria defined (see workplan)

- Temperature	3%	- D.O.	< 0.5 mg/L	-Drawdown	<0.3 ft
- pH	± 1.0 unit		>0.5 mg/L within 10%	-Turbidity	<10 NTU
- Sp. Cond.	3%	- ORP	± 10mV		>10NTU within 10%

c. Field Testing Equipment used:

	Make	Model	Serial Number
	YSI	Pro Plus	18H100703
	Geotech	Turbidity meter	17061384

Time (24hr)	Volume Removed (Liters)	Temp. (°C)	pH	Spec. Cond. (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (feet)	Color/Odor
1014	0.48	17.5	7.17	409	1.68	-127	21.4	136	8.84	clr/none
1019	1.5	16.9	7.33	470	0.51	-106.4	19.5	164	8.91	"
1024	2.35	16.8	7.45	474	0.34	-120.9	18.7	170	8.94	Black Particles/none
1029	3.15	16.9	7.52	474	0.33	-128.6	16.5	170	8.97	"
1034	3.95	16.8	7.55	474	0.27	-132.4	17.3	170	9.02	"
1039	4.69	16.9	7.59	473	0.22	-137.5	17.3	148	9.02	"
1044	5.43	16.9	7.63	474	0.18	-141.0	16.9		9.02	"

(continued on back)

d. Acceptance criteria pass/fail

	Yes	No	N/A
Has required volume been removed	☑	☐	☐
Has required turbidity been reached	☐	☐	☐
Have parameters stabilized	☑	☐	☐

If no or N/A - Explain below.
Turbidity > 10 but stable

3. SAMPLE COLLECTION: Method: grab

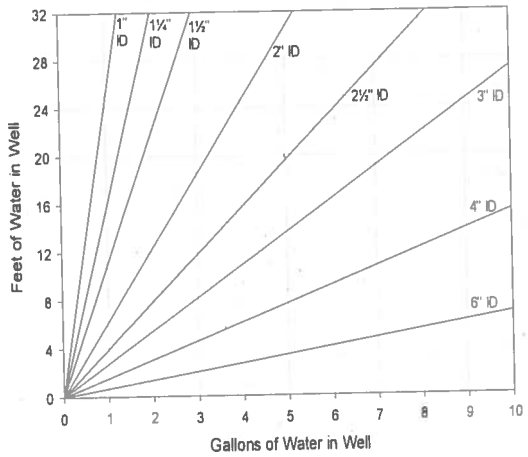
Sample ID 20A-TRC201R-____-1	Container Type 40mL VOA	No. 3	Preservation HCL	Analysis Req. VOCs 8260C	Time
		1			

Comments: Purged longer to see if turbidity would reach <10

Signature [signature] Date 9/21/20

AECOM

Well ID: TRC-201R



Volume / Linear Ft. of Pipe		
ID (in)	Gallon	Liter
0.25	0.0025	0.0097
0.375	0.0057	0.0217
0.5	0.0102	0.0386
0.75	0.0229	0.0869
1	0.0408	0.1544
1.25	0.0637	0.2413
1.5	0.0918	0.3475
2	0.1632	0.6178
2.5	0.2550	0.9653
3	0.3672	1.3900
4	0.6528	2.4711
6	1.4688	5.5600

Purge Volume Calculation

[115 ft (tubing length) x 0.0097 L/ft] + 0.275 L (flow cell vol.) = 1.39 L ; 1.39 L x 3 well vol. = 4.17 L

(continued from front)

Time (24 hr)	Volume Removed (Liters)	Temp (°C)	pH	Spec. Cond (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	~~Drawdown~~ DTW (ft)	Color/Odor
1044	6.17	16.9	7.63	974	0.15	-146.6	19.7	148	9.02	BLACK PART, 2 PSI NO ~
1054	7.02	16.2	7.64	975	0.13	-150.8	19.7	170	9.04	
1059	7.73	16.4	7.64	974	0.13	-149.2	16.4	142	9.04	9.02
1104	8.44	16.3	7.65	973	0.11	-151.4	17.5	142	9.02	
1109			7.66							*
1114	9.09	16.8	7.67	976	0.11	-154.7	19.6	130	9.04	
1116	9.74	16.6	7.66	975	0.08	-159.6	24.3	130	9.04	
1121	10.39	16.6	7.68	974	0.07	-164.1	24.9	130	9.04	
1126	11.04	16.7	7.68	970	0.05	-168.4	28.9	130	9.04	
1131	11.69	16.9	7.70	974	0.47	-171.6	31.7	130	9.04	
1136	12.34	16.9	7.71	974	0.34	-173.4	32.2	130	9.04	
1141	12.99	16.8	7.72	976	0.27	-175.4	33.7	130	9.04	

1111

Hydrogen Bubble Strip Sampling:

Purge rate=	Purge Duration=	Sample time=

* Changed tanks

AECOM

Well ID: **TRC-301R2**

Low Flow Ground Water Sample Collection Record

Client: Lockheed Martin Corp. Date: 9/15/20 Time: Start 1410 am/pm
Project No: 60552044 Finish _____ am/pm
Site Location: 50 Fordham Rd Site, Wilmington, MA
Weather Conds: Mostly Cldy, 60s Collector(s): A. Grossman

1. WELL & WATER LEVEL DATA: (measured in feet from Top of Casing unless noted)

a. Total Well Length 85.5' c. Screen Length 4 (81.5' - 85.5') 0.5" CMT Channel
b. Water Table Depth 3.29 d. Pump Intake 83.5'
c. Water Column (a-b) _____ e. Calculated System Purge Volume 1.29 L (calculation on page 2)

2. WELL PURGE DATA

a. Purge Method: peristaltic pump

b. Acceptance Criteria defined (see workplan)

- Temperature	3%	- D.O.	< 0.5 mg/L	-Drawdown	<0.3 ft
- pH	± 1.0 unit		>0.5 mg/L within 10%	-Turbidity	<10 NTU
- Sp. Cond.	3%	- ORP	± 10mV		>10NTU within 10%

c. Field Testing Equipment used:

Make	Model	Serial Number
YSI	Pro Plus	18H100703
Geotech	Turbimeter	17061384

Time (24hr)	Volume Removed (Liters)	Temp. (°C)	pH	Spec. Cond. (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (feet)	Color/Odor
1429		12.1	7.09	690	1.64	-5.6	2.34	200	NM	Clr/none
1435 1434		11.4	7.15	851	0.93	-81.1	0.31	200	NM	Clr/none
1440 1439		11.3	7.24	869	0.65	-106.6	0.02	200	NM	" "
1445 1444		11.2	7.43	930	0.55	-124.0	0.02	200	NM	" "
1450 1449		11.2	7.44	925	0.47	-124.4	0.02	200	NM	" "
1455		11.2	7.45	897	0.44	-124.8	0.02	200	NM	" "
1500		11.2	7.49	855	0.34	-131.4	0.02	210	NM	" "

(continued on back)

d. Acceptance criteria pass/fail

	Yes	No	N/A
Has required volume been removed	☑	☐	☐
Has required turbidity been reached	☑	☐	☐
Have parameters stabilized	☑	☐	☐

If no or N/A - Explain below.

3. SAMPLE COLLECTION: Method: grab

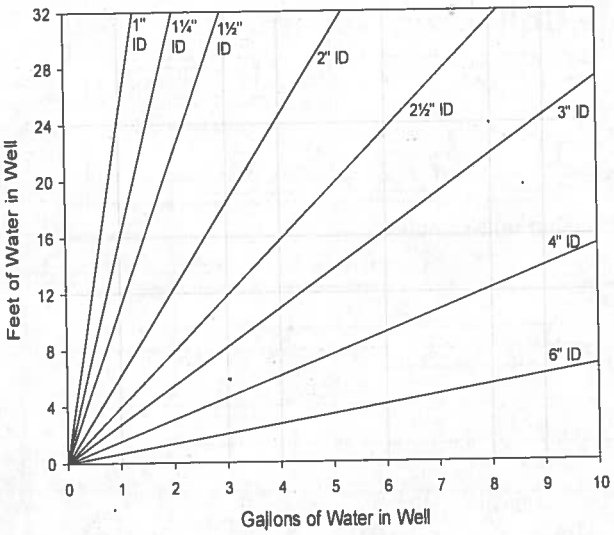
Sample ID	Container Type	No.	Preservation	Analysis Req.	Time
20A-TRC301R2-09152020-A	40mL VOA	3	HCL	VOCs 8260C	
B	500mL P	2	HNO3	Total & Diss. (Fe, As, Mn)	

Comments 1611 DTW = 4.70 4.32

Signature _____ Date 9/15/20

AECOM

Well ID: TRC-301R2



Volume / Linear Ft. of Pipe		
ID (in)	Gallon	Liter
0.25	0.0025	0.0097
0.375	0.0057	0.0217
0.5	0.0102	0.0386
0.75	0.0229	0.0869
1	0.0408	0.1544
1.25	0.0637	0.2413
1.5	0.0918	0.3475
2	0.1632	0.6178
2.5	0.2550	0.9653
3	0.3672	1.3900
4	0.6528	2.4711
6	1.4688	5.5600

Purge Volume Calculation

[105 ft (tubing length) x 0.0097 L/ft] + 0.275 L (flow cell vol.) = 1.29 L

(continued from front)

Time (24 hr)	Volume Removed (Liters)	Temp (°C)	pH	Spec. Cond (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (ft)	Color/Odor
1505		11.2	7.54	804	0.34	-132.9	0.02	146	NM	Clr/none
1510		11.1	7.57	760	0.36	-133.5	0.02	146		
1515		11.2	7.57	724	0.35	-134.1	0.02	146		
1520		11.1	7.60	698	0.33	-134.8	0.02	146		
1525		11.1	7.60	677.0	0.30	-135.8	0.02	146		
1530		11.1	7.64	658.6	0.27	-137.4	0.02	146		
1535		11.1	7.68	646.4	0.27	-134.4	0.02	146		
1540		11.1	7.70	632.8	0.26	-141.2	0.02	146		
1545		11.0	7.74	623.6	0.24	-143.3	0.02	146		
1550		11.1	7.74	617.5	0.23	-145.1	0.02	146		

AECOM

Well ID: **TRC-301R4**

Low Flow Ground Water Sample Collection Record

Client: Lockheed Martin Corp. Date: 9/15/20 Time: Start 930 am/pm
Project No: 60552044 Finish 1300 am/pm
Site Location: 50 Fordham Rd Site, Wilmington, MA
Weather Conds: 60's, Mostly Cloudy Collector(s): A. Grossman

1. WELL & WATER LEVEL DATA: (measured in feet from Top of Casing unless noted)

a. Total Well Length 69.5' c. Screen Length 4 (65.5' - 69.5') 0.5" CMT Channel
b. Water Table Depth ~~3.37~~ 3.270 d. Pump Intake 67.5'
c. Water Column (a-b) _____ e. Calculated System Purge Volume 1.29 L (calculation on page 2)

2. WELL PURGE DATA

a. Purge Method: peristaltic pump

b. Acceptance Criteria defined (see workplan)

- Temperature	3%	- D.O.	< 0.5 mg/L	-Drawdown	<0.3 ft
- pH	± 1.0 unit		>0.5 mg/L within 10%	-Turbidity	<10 NTU
- Sp. Cond.	3%	- ORP	± 10mV		>10NTU within 10%

c. Field Testing Equipment used:

	Make	Model	Serial Number
	YSI	Pro Plus	18J100703
	Geotech	Turb meter	706384

Time (24hr)	Volume Removed (Liters)	Temp. (°C)	pH	Spec. Cond. (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (feet)	Color/Odor
1018		11.7	6.86	655.8	2.06	-123.4	0.02	196	NM	Clr/Sulfur-like
1023		11.3	7.73	661.0	0.43	-212.1	0.42	11		"
1028		11.3	8.17	642.8	1.50	-217.2	0.02	140		"
1033		11.2	8.21	644.2	1.13	-211.0	0.02	"		"
1038		11.2	7.91	660.8	0.81	-196.4	0.02	"		"
1043		11.2	7.61	676.9	0.61	-184.8	0.33	"		"
1046		11.2	7.42	684	0.44	-182.6	0.02	"	↓	"

(continued on back)

d. Acceptance criteria pass/fail

	Yes	No	N/A
Has required volume been removed	☑	☐	☐
Has required turbidity been reached	☑	☐	☐
Have parameters stabilized	☑	☐	☐

If no or N/A - Explain below.

3. SAMPLE COLLECTION: Method: grab

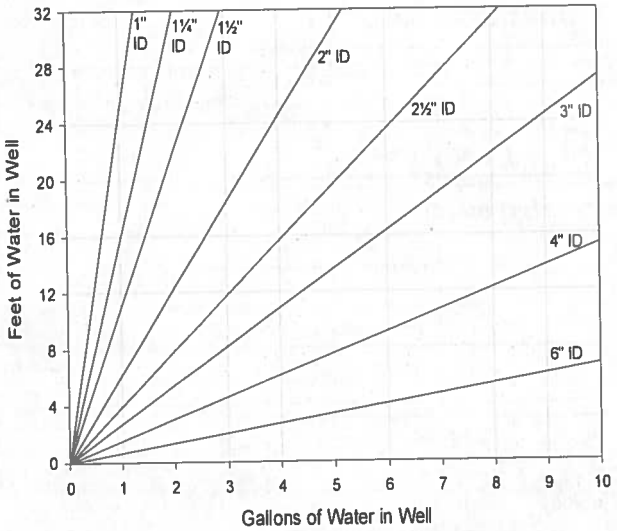
Sample ID	Container Type	No.	Preservation	Analysis Req.	Time
20A-TRC301R4-091520	40mL VOA	3	HCL	VOCs 8260C	1120
	500 mL P	2	HNO3	Total & Diss. As, Fe, Mn	
	500mL P	1	none	Cl, NO2, NO3, SO4	
	500mL P	1	zinc acetate	Sulfide	
	40mL V	2	H3PO4	TOC	
	40mL V	3	belzal.chlor.	gases (Acet, Prop, Meth, Eth, Etha)	
	vial	1	none	diss. Hydrogen	1238

Comments _____

Signature _____ Date 9/15/20

AECOM

Well ID: TRC-301R4



Volume / Linear Ft. of Pipe		
ID (in)	Gallon	Liter
0.25	0.0025	0.0097
0.375	0.0057	0.0217
0.5	0.0102	0.0386
0.75	0.0229	0.0869
1	0.0408	0.1544
1.25	0.0637	0.2413
1.5	0.0918	0.3475
2	0.1632	0.6178
2.5	0.2550	0.9653
3	0.3672	1.3900
4	0.6528	2.4711
6	1.4688	5.5600

Purge Volume Calculation

[105 ft (tubing length) x 0.0097 L/ft] + 0.275 L (flow cell vol.) = 1.29 L

(continued from front)

Time (24 hr)	Volume Removed (Liters)	Temp (°C)	pH	Spec. Cond (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (ft)	Color/Odor
1053		11.2	7.26	647	0.41	-174.6	0.26	140	NM	CLR / none
1058 @ 1058		11.2	7.16	703	0.35	-168.8	0.02	200	"	
1103 @ 1103		11.2	7.12	709	0.33	-164.3	0.02	200	"	
1108 @ 1108		11.2	7.08	712	0.32	-161.0	0.02	"	"	

Hydrogen Bubble Strip Sampling:

Purge rate= 148 mL/mn | Purge Duration= 20 mn | Sample time= 1204-1224 @ 1218-1238

AECOM

Well ID: TRC-401R

Low Flow Ground Water Sample Collection Record

Client: Lockheed Martin Corp. Date: 09.23.2020 Time: Start 10:15 am/pm
Project No: 60552044 Finish 11:15 am/pm
Site Location: 50 Fordham Rd Site, Wilmington, MA
Weather Conds: 70°F, sunny Collector(s): L. Fogby

1. WELL & WATER LEVEL DATA: (measured in feet from Top of Casing unless noted)

a. Total Well Length 58' c. Screen Length 20 (38' - 58') 0.5" PVC
b. Water Table Depth 6.23' d. Pump Intake 48'
c. Water Column (a-b) 51.77' e. Calculated System Purge Volume 2.31 L (calculation on page 2)

2. WELL PURGE DATA

a. Purge Method: peristaltic pump

b. Acceptance Criteria defined (see workplan)

- Temperature	3%	- D.O.	< 0.5 mg/L	-Drawdown	<0.3 ft
- pH	± 1.0 unit		>0.5 mg/L within 10%	-Turbidity	<10 NTU
- Sp. Cond.	3%	- ORP	± 10mV		>10NTU within 10%

c. Field Testing Equipment used:

	Make	Model	Serial Number
	YSI	Pro Plus	10E100125U
	GeoTech	Turbidity Meter	19062110

Time (24hr)	Volume Removed (Liters)	Temp. (°C)	pH	Spec. Cond. (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	~~Drawdown~~ DTW (feet)	Color/Odor
10:25	1.0	18.5	7.17	835	1.95	-59.9	124	200	6.50	smelly, cloudy
10:30	1.5	18.8	7.34	810	0.23	-142.3	122	200	6.90	"
10:35	2.2	19.5	7.27	811	0.02	-177.5	123	140	7.09	"
10:40	2.7	19.5	7.26	813	0.00	-188.9	124	100	7.19	"
10:45	3.2	19.5	7.26	813	0.00	-202.8	122	100	7.27	"
10:50	3.7	19.8	7.29	827	0.00	-218.3	126	~~126~~ 100	7.32	"
10:55	4.2	19.7	7.30	831	0.00	-222.3	124	100	7.40	"

(continued on back) →

d. Acceptance criteria pass/fail

	Yes	No	N/A
Has required volume been removed	☒	☐	☐
Has required turbidity been reached	☒	☐	☐
Have parameters stabilized	☒	☐	☐

If no or N/A - Explain below.

Stable @ 11:10

3. SAMPLE COLLECTION: Method: grab

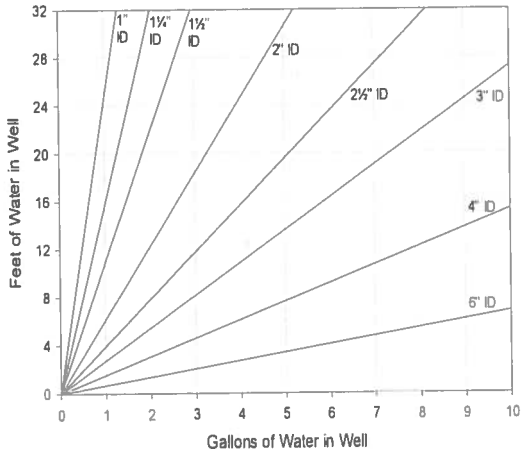
Sample ID	Container Type	No.	Preservation	Analysis Req.	Time
20A-TRC401R-_____-1	40mL VOA	3	HCL	VOCs 8260C	@11:15
		1			

Comments: Lowest pump rate @ 100 mL/min. Some draw down

Signature: Leah Fogby Date: 09.24.2020

AECOM

Well ID: TRC-401R



Volume / Linear Ft. of Pipe		
ID (in)	Gallon	Liter
0.25	0.0025	0.0097
0.375	0.0057	0.0217
0.5	0.0102	0.0386
0.75	0.0229	0.0869
1	0.0408	0.1544
1.25	0.0637	0.2413
1.5	0.0918	0.3475
2	0.1632	0.6178
2.5	0.2550	0.9653
3	0.3672	1.3900
4	0.6528	2.4711
6	1.4688	5.5600

Purge Volume Calculation

[51 ft (tubing length) x 0.0097 L/ft] + 0.275 L (flow cell vol.) = 0.770 L ; 0.770 L x 3 well vol. = ~~2.31 L~~

(continued from front)

Time (24 hr)	Volume Removed (Liters)	Temp (°C)	pH	Spec. Cond (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	~~Drawdown~~ DTW (ft)	Color/Odor
11:00	4.7	19.9	7.32	837	0.00	-227.3	122	100	7.55	Acne, clear
11:05	5.2	20.0	7.37	851	0.00	-236.5	121	100	7.61	cloudy
11:10	5.7	20.1	7.38	852	0.00	-236.6	120	100	7.70	cloudy
				Stable @						

Hydrogen Bubble Strip Sampling:

Purge rate=	Purge Duration=	Sample time=

Location Bld 1, UNC Wilmington Date 2/11/2020

Project / Client Lockheed Martin / indoor air sampling

pg 1 of 2

0735 - D. Potter on site

Task: indoor air sampling bld 1, LNAPL gauging

Weather: high 30s, light rain

0745 - outside temp: 39°F

outside barometric pressure: ~~30" Hg~~ 762 mmHg

0755 - Gary on site. Set up sample locations

indoor temp: 60°F (first floor), 63°F (second),

indoor barometric pressure: 761 mmHg

Sample	Start Time	Pressure
IA-9	0901	-30.26
AA-1	0903	-30.30
IA-4	0905	-30.21
IA-2	0906	-30.26
IA-3	0907	-30.22
IA-7	0909	-29.99
IA-8	0911	-30.21
DUP	0911	-30.23

0915 - fill out Building Air Quality Survey

1010 - Take PID measurements. See figure

1100 - PID readings complete. Conduct first rounds of gauge readings and take photos

1300 - indoor temp: 60.5°F (1st floor), 63°F (2nd floor)

indoor pressure: 757.5 mmHg

Location Bld 1, UNC Wilmington Date 2/11/2020

Project / Client Lockheed Martin / indoor air sampling

pg 2 of 2

outdoor temp: 40°F

outdoor pressure: 757.3 mmHg

1330 - Conduct LNAPL gauging. See gauging sheet for details

1700 - Collect canisters and clean up

1815 - indoor temp: 60°F (1st floor) 63°F 2nd floor

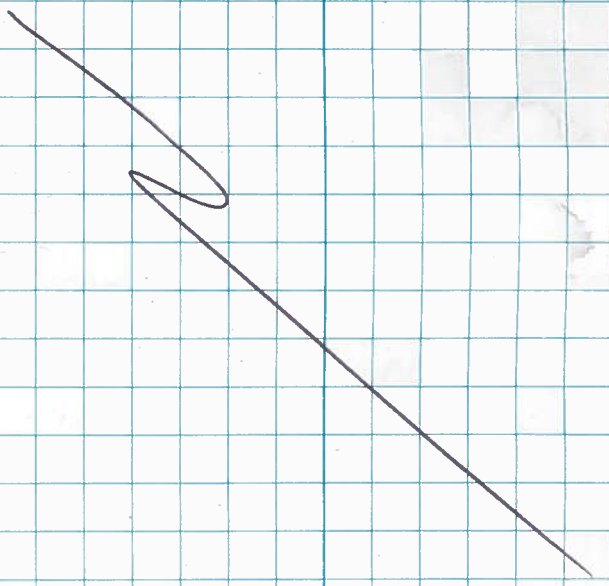
indoor pressure: 759.7 mmHg

outdoor temp:

outdoor pressure: 756.2 mmHg

1825 - Empty sump in shed

1840 - off site



Rite in the Rain.

Location LMC Wilmington Date 5/13/20

Project / Client LMC Quarterly Gauging + AUL

0910 - D. Potter on site. Core off wells and open
Weather: Sunny, 40s
Task: LNAPL gauging and AUL inspection
0945 - Begin gauging. See log for details
1005 - Gauging complete. Take photos of wells, update labels, clean up.
1025 - pump out sump in shed
1040 - Begin AUL inspection. Heard siren for bedrock blasting at 1039 across Fordham Rd. See photos
1130 - Inspection complete. Off site

Location LMC Wilmington Date 6/14/20

Project / Client 2020 GW Sampling

0900 - D. Potter on site at Strickney Access Road. Gate is locked. Call S. Olson.
0915 - Contact North Reading Water Division. Division will send someone to unlock the gate
0925 - Unable to open gate.
0930 - North Reading found code. Gate open. Begin clearing
1000 - Enter wetlands
1110 - wasps observed swarming. Leave wetlands and head back to shed to label wells
1200 - speak with Ken of UPS. Inform him that we will need access for 2 days. Ken informs DP that between 9 and 5 works best.
1210 - Update S. Olson and return to wetlands to spray wasp nest.
1310 - Path is clear to ~~106~~ AE-106. Update S. Olson

Rite in the Rain

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Location Wilmington Date 9/4/20

Project / Client LMC

800: At Grossman + ~~D Potter~~
S. Haggett on site.
Purpose: Purge 6 plus.
Weather: 80s, humid, Sunny
8° HASP meeting ~~Start~~ go over:
Covid Ack. acknowledgement form
- Daily Tailgate meeting
- THAS
815: Go over SOWs Gather materials
900 ~~930~~: Mob to AE-105R / wetlands
Lg Gauge DW manifold + flow as needed. Also record purging time
1030: Wetlands complete mob to customer ~~& business~~ property (AE-112R)
1200: Lunch
1245: Check in at YRC
1330: Mob to parking lot
Purge AE-100R, 102RR, 103R, 104R, 104RR + 110R

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Location Wilmington, MA Date 9/4/20

Project / Client LMC

ID	DW manifold	Gallons (Actual)
AE-105R	1.22	
AE-106R	1.64	
AE-112R	1.04	~~0.4~~ 1.5
AE-111R	1.26	0.2
AE-110R	0	
AE-100R	1.46	0.25
AE-104RR	0	—
AE-102RR	0.92	0.5
AE-103	0	—
AE-108R	0.44	0.25
AE-109R	0.57	

Rite in the Rain

Location Wilmington, NC Date 9/4/20

Project / Client LMC

ID	Time	Purge Duration
AE-105R	944	4:45
2		4:55
3		5:08
4		5:12
5		5:22
AE-106R	1027	5:12
2		5:14
3		5:27
4		5:34
5		5:36
AE-111R	1148	4:56
2		5:03
3		5:05
4		5:10
5		5:13
6		5:24
7		5:25

Location Wilmington, NC Date 9/4/20

Project / Client LMC

Conditions

AE-105R: Rusty U-bolts, missing red cap

AE-106R: port 1 - slight leak. no teflon tape

AE-112R: Good

AE-111R: Stripped Bolts leak either from one of the ports or 8-port manifold - hard to tell (see pg 92)

AB-112R: ports oxidized [corrosion]

AE-110R - Good

AE-109R - Good

Rite in the Rain

Location Wilmington, MA Date 9/4/20

Project / Client LMC

ID	Time	Purge Duration
AE-111R	1254	1:05
2		3:23
3		5:56
4		6:44
5		7:32
6		7:47
7		7:48
AE-110R	1340	3:22
2		4:32
3		4:30
4		4:34
5		4:33
6		4:50
7		4:55
AE-109R	1430	4:57
2		5:01
3		5:12
4		5:23
5		5:24
6		5:28
7		5:42
8		5:44

Location Wilmington, MA Date 9/4/20

Project / Client LMC

* - Changed o-ring on 8-port manifold on ports 2 to 3. Used Teflon tape on port 4 as temp fix

AE-104R: Teflon tape on ports 1 to 3 (2-port manifolds) connections

AE-102R: Picked Teflon on all ports

AE-103R: A. Corrosion on ports. Pic where leaking. Used Teflon to seal snapped bolt

AE-108 - #5 Leaking possibly o-ring

Frequent Leaking encountered possibly from manifold. Will obtain new o-rings

Rite in the rain

Location WILMINGTON, MA Date 9/4/20

Project / Client LMC

ID	Time	Duration
AE-104R1	1503	5:17
2		5:33
3		5:53
4		6:29
5		6:35
6		6:37

* First purge → troubleshoot leak — Changed tank after 1st went off

~~AE-104~~	1552	
AE-104R1	1604	6:12
2		6:14
3		6:17
4		6:21
5		6:31
6		6:56
AE-103R1	1640	6:19
2		6:24
3		6:36
4		6:44
5		6:48
6		7:09
		7:3

troubleshoot leak in between purges

Location Wilmington, MA Date 9/4/20

Project / Client LMC

AE-102R1 ~~All pass~~ 5:17

Start time: 1730 1730 Start

1 5:17

2 6:29 — change tank

3 6:52

4 7:13

5 7:40 7:53

Ignored

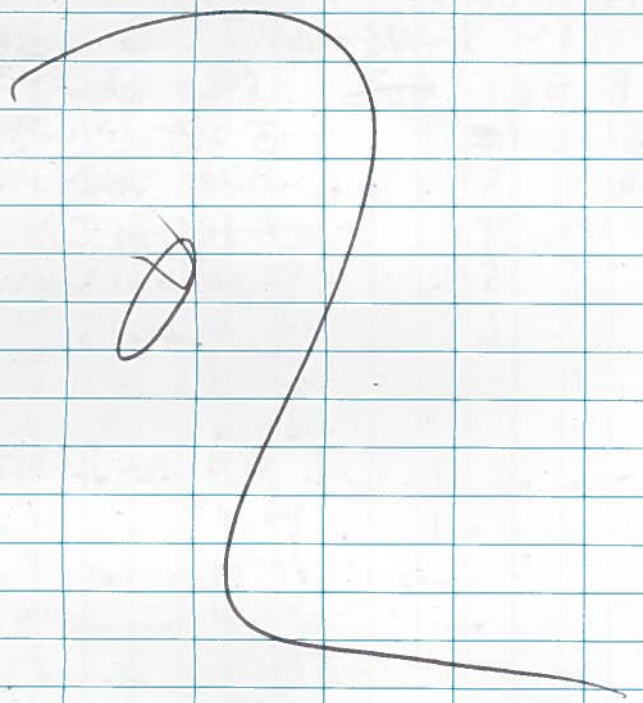
AE-102R1	~~6:08~~	5:20
2		5:27
3		5:30
4		~~5:35 5:55~~ 5:35
5		5:58
6		6:06

Rite in the rain

Location Wilmington, MA Date 9/4/20

Project / Client LMC

Drum & water from 0 parking lot wells ~~except~~ A (on site only)
1815: purge complete
One drum GW generated
1830 All offsite



Location Wilmington, MA Date 9/8/20

Project / Client LMC

0610- On site, Organize shed
0700- Crew on site. Team: D. Potter, A. Grossman, A. Borden, S. Haggett, L. Zogby, B. Mauge, B. Hoch, F. Burton, M. Fitzgerald
H&S meeting.
0740- Check water level meters and calibrate PIDs

S/N	reading at 10'	reading at 50'	reading at 100'
257876	10.00	50.00	100.00
04-0870	9.98	49.98	99.98
365666	9.97	49.97	99.96
363901	10.00	49.98	100.00
50277	10.00	49.96	~~100.00~~ 99.97

1215- lunch
1620- B. Hoch, B. Mauge, F. Burton, M. Fitzgerald off site. Rest of team finish up
1645- A. Borden off site
1700- Post cal and review gauging list
1740- DP to grab concord pond measurement and SG-1
- Concord Pond: 1.14 ft
- SG-1: Dry. Dug down 1 foot. No water
1800- off site

Rite in the Rain

Location Wilmington MA Date 9/9/20

Project / Client LMC GW Sampling 2020

pg 1 of 2

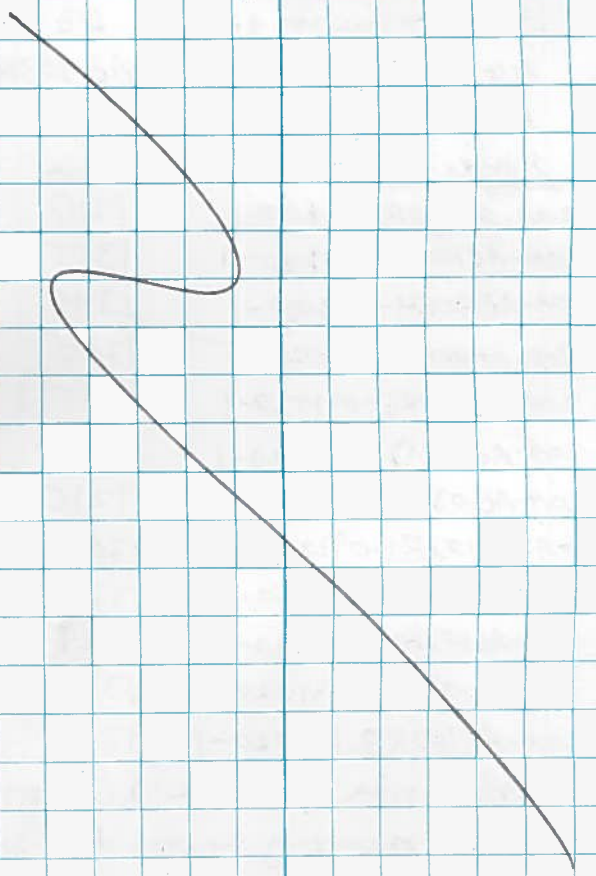
0730 - on site. Team: D. Potter, S. Haggett, A. Grossman, L. Zagby
Task: GW sampling
Weather: partly cloudy, 70s, humid
0745 - Mobilize to wells after H&S meeting. S. Haggett calibrates, AG and LZ purge FLUTes. AG at AE-102RR, LZ at AE-108R, SH to go to AE-102~~S~~M/D
1110 - SH samples AE-102~~D~~M and duplicate
1112 - Duplicate sample collection time
1140 - LZ samples AE-108R1 with MS/MSD
1150 - LZ samples AE-108R3
1200 - LZ samples AE-108R5
1245 - AG samples AE-102RR6
1320 - Lunch
1415 - Courier picks up bottles. DP sends COC to S. Olson
1520 - SH samples AE-102D. Post cal.
1625 - SH and LZ gauge YRC wells and inspect CW-1 and CW-2 for LNAPL
1700 - Update S. Olson and pack up
1810 - AG completes sampling AE-102RR:
AE-102RR2 at 1610
AE-102RR4 at 1545 with MS/MSD

Location Date 9/9/20

Project / Client

pg 2 of 2

AE-102RR5 at 1520
AE-102RR6 at 1245
1815 - SH and LZ off site
1835 - DP and AG off site



Rite in the Rain

Location Wilmington, MA Date 09/10/20

Project / Client LMC

pg 1 of 2

0730 - On site. Team: A. Grossman, S. Haggett, L. Zogby. Task: GW sampling. Weather: sunny, 70s, humid. SH and AG mobilize to wells after Tailgate meeting to purge. LZ calibrates. AG to AE-100R, SH to AE-103R, LZ to AE-103D/S

Sample ID	Time
20A-AE100R1-091020-1	1410
20A-AE100R3-091020-1	1355
20A-AE100R4-091020-1	1345
20A-AE100R5-091020-1	1300
20A-AE100R6-091020-1	1335
20A-AE103D-091020-1	0920
20A-AE103S-091020-1	1210
20A-AE103R1-091020-1	1300
20A-AE103R3-091020-1	1320
20A-AE103R4-091020-1	1325
20A-AE103R5-091020-1	1335
20A-AE103R7-091020-1	1340

1200 - DP on site. Update S. Olson and begin preparing samples for shipping and tomorrow

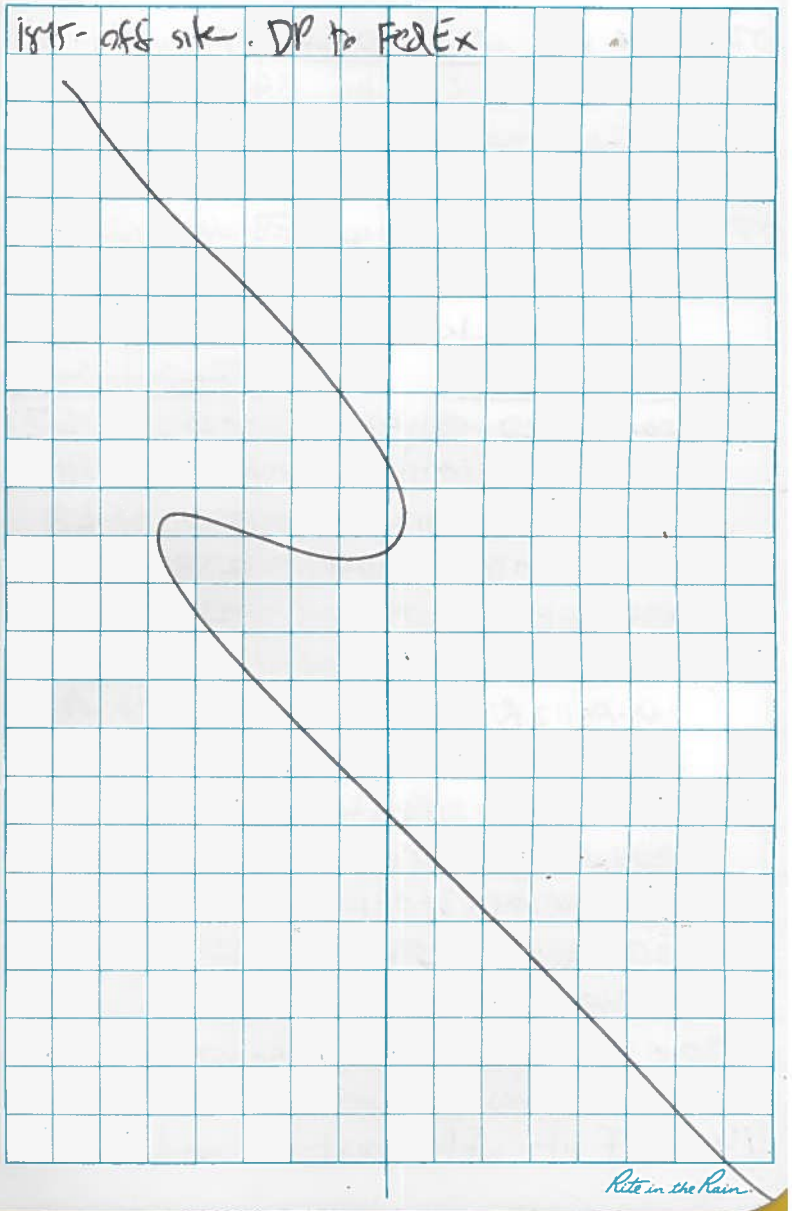
1830 - Complete 1st sampling. Clean up.

Location Wilmington, MA Date 9/10/20

Project / Client LMC

pg 2 of 2

1845 - off site. DP to FedEx



Rite in the Rain

Location Wilmington, MA Date 9/11/20

Project / Client LML

0730- On site. Team: D. Potter, F Burton, A. Grossman, L. Zogby, S. Haggett
Task: GW sampling
Weather: Cloudy, 60s

0740- Hold H+S meeting. FB and AG mobilize to wells AE-104R and AE-112R. SH and LZ calibrate

Sample ID	Time	Sampler
20A-AE112D-091120-1	1025	LZ
20A-EMW10R-091120-1	1045	SH - MS/MSD
20A-EMW11D-091120-1	1220	LZ
20A-EMW10D-091120-1	1230	SH
20A-AE104R4-091120-1	1230	FB
20A-AE112R1-091120-1	1300	AG
20A-AE112R3-091120-1	1255	AG
20A-AE112R5-091120-1	1220	AG
20A-AE112R6-091120-1	1235	AG
20A-AE104R1-091120-1	1300	FB
20A-AE104R3-091120-1	1305	FB
20A-AE104R5-091120-1	1250	FB
20A-AE104R6-091120-1	1255	FB

1420- Phoenix courier picks up samples. DP gives S. Olson update
1615- off site after post-cal and demob

Location Wilmington, MA Date 9/14/20

Project / Client LML

0720- On site. Weather: sunny, 70s. Team: D Potter, A. Grossman, S. Haggett, L. Zogby. Task: GW sampling inside Building 1
0730- Calibrate equipment and hold Tailgate meeting while waiting for UPS to leave
0900- Mobilize inside Building 1

Sample ID	Time	Sampler
20A-AE24-091420-1	1010	AG
20A-AE28R2-091420-1	1015	LZ
20A-AE26R1-091420-1	1020	SH
20A-AE26R1-091420-1	1215	LZ
20A-AE26R2-091420-1	1210	SH
20A-AE26S-091420-1	1325	AG
20A-AE26R5-091420-1	1400	SH
20A-AE28R3-091420-1	1345	LZ

1410- Phoenix courier picks up bottles

20A-28R4-091420-1	1450	LZ
20A-AE23R-091420-1	1455	AG

1500- DP investigates GW-2 and possible impacted silt. SH and LZ post-cal
1620- off site.

Rite in the Rain

Location Wilmington Date 9/15/20

Project / Client LMC

0730 – D. Potter on site. Team: DPotter, A. Grossman, L. Zogby, S. Haggett
Weather: sunny, 60s
Task: Wetland sampling
0745 – Tailgate meeting
0900 – Mobilize to wetland. AG to TRC-301RZ/RY, SH to PS-1S/D, DP and LZ to PS-2D

Sample ID	Time	Sampler
20A-PS2D-091520-1	1200	LZ
20A-PS1S-091520-1	MSS	SH
20A-PS1D-091520-1	1210	SH
20A-PS8D-091520-1	1500	LZ
20A-TRC301RY-091520-1	1120	AG
20A-TRC301RZ-091520-1	1555	AG

1420 – Samples picked up by carrier
1650 – Back at shed to post-cal and de-mob. DP preps bottles for 9/16
1800 – SH and LZ off site
1820 – AG off site
1845 – DP off site

Location LMC Wilmington, MA Date 09.16.2020

Project / Client LMC

60552044 Task 19 page 1 of

07:25 LZ and SH onsite (L. Zogby and S. Haggett). Unlock shed and begin prep work.
07:30 FB and AG arrive onsite. (Floyd Burton and Adam Grossman).
07:35 Daily Tailgate meeting and covid-19 checklists signed. Distribute tasks, wells, and sample bottles.
07:50 Begin calibration.
08:00 SH mobilizes to 109R.
08:15 LZ, AG, FB mobilize to wells/sites respectively. Return to shed to calibrate after.
08:25 AG checks in at YRC trucking office to let them know LZ will be working on site at AE-111R.
09.30 All purging at wells. 65°F, sunny, windy. Standard PPE. cones and HighVis vests at wells. Gloves, safety glasses, and hard hats.

TASK: Groundwater sampling.
Three flutes (LZ, AG, SH), one lowflow (FB).

→

Rite in the Rain

Location Wilmington, MA Date 09.16.2020

Project / Client Lockheed Martin Corp.

60552044 Task 19 page 2 of 2

Sample ID	Time	sampler
20A-AE111R1-091620-1	12:00	LZ
20A-AE111R3-091620-1	12:05	LZ
20A-AE111R5-091620-1	12:10	LZ
20A-AE111R6-091620-1	12:15	LZ
18A-AE109D-091620-1	0925	FB
20A-AE104D-091620-1	10:30	FB
20A-AE104S-091620-1	11:10	FB
20A-AE110R1-091620-1	1430	AG
20A-AE110R2-091620-1 LZ	~~1435~~ 1445	AG
20A-AE110R4-091620-1	1435	AG
20A-AE110R6-091620-1	1430	AG
20A-AE109R5-091620-1	1445	SH

13:00 FB off site.

15:20 Courier picks up samples.

17:15 All off site.

Location Wilmington, MA Date 9/17/20

Project / Client LMC

pg 1 of 2

0720- On site. Team: DPotter, FBurton, A. Grossman, S. Huggett, L. Zagby

Task GW sampling wetland wells

Weather sunny, 70s

0730- Hold Tailgate meeting and calibrate

0915- Mobilize to wetlands:

SH to AE-106S/D

AG to AE-106R

LZ to AE-105S/D

FB to AE-105R

Sample ID	Time	Sampler
20A-AE105D-091720-1	1025	LZ
20A-AE105S-091720-1	1120	LZ
20A-AE105R1-091720-1	1300	FB
20A-AE105R2-091720-1	1220	FB
20A-AE105R4-091720-1	1240	FB
20A-AE105R5-091720-1	1255	FB
20A-AE106D-091720-1	1115	SH
20A-AE106S-091720-1	1230	SH
20A-AE106R1-091720-1	1410	AG
20A-AE106R3-091720-1	1325	AG
20A-AE106R5-091720-1	1350	AG
20A-GZAMA-091720-1	1515	LZ
20A-MW7-091720-1	1525	SH

Rite in the Rain

Location Wilmington, MA Date 9/17/20

Project / Client LMC

Page 2 of 2

1200- S.Olson on site to test temp probes and investigate ~~the~~ CW-2

1525- S.Olson off site

1600- Post cal

1715- off site. DP to FedEx

Location Wilmington, MA Date 9/18/20

Project / Client LMC

0730- On site. Team: DPotter, FBurton, AGrossman, SHaggett, L.Zoyhg. Weather: cloudy, 60°F

Task: GW sampling

0845- Calibration complete. Hold H+S meeting

0935- Mobilize to wells. DP and SH to MW4 and MW4A, AG and LZ to PS-3 and PS-5D, FB to AE-101S and AE-101D

Sample ID	Time		Sampler
20A-MW4A-091820-1	1050		SH/DP
20A-MW4-091820-1	1210		SH/DP
20A-MW4-091820-2	1215		SH/DP
20A-PS3-091820-1	1110		LZ/AG
20A-PS5D-091820-1	1135		LZ/AG
20A-AE101S-091820-1	1020		FB
20A-AE101D-091820-1	1105	MS/MSD	FB

1330- Post cal

1445- Courier off site

1515- ~~Off site~~

Rite in the Rain

Location Wilmington, MA Date 9/21/20

Project / Client LMC

pg 1 of 2

0730- On site. Team: D. Potter, A. Grossman, L. Zoyby. Weather: sunny, 50s
Task: GW sampling, NSZD temp. monitoring

0830- H&S Tailgate meeting

0850- Mobilize to sampling locations

0933- Ambient temp by shed:
T1 = 54.1 T2 = 54.2

0945- Set up on GZA-12 for T measurements.

T probe	Depth on I.P. Tape
A	1.00
B	1.99
C	2.95
D	3.98
E	4.96
F	5.97
G	6.94
H	7.93
I	~~8.90~~ 8.91
J	9.90

1145- Mobilize to GZA-102R2

T Probe	Depth on Skinny Dipper Tape
A	1.00

B	1.99
C	2.96
D	3.99
E	4.98
F	6.00
G	6.98
H	7.98
I	8.91
J	9.90

1330- Carrier picks up samples

1345- Unable to get probe deeper than 18 ft at GZA-102R2. Call Scott and mobilize to GZA-105D

1515- Mobilize to TRC-102

1555- Mobilize to TRC-103

1642- Switch to interface probe attached to T-probes and mobilize to PZ-25

1733- Mobilize to AE-3

1812- Mobilize to CW-1

1915- ~~off~~ site. Samples collected by Z and AG:

20A-GZA6-092120-1
20A-GZA10-092120-1
20A-EMW1R1-092120-1
20A-EMW1R2-092120-1
20A-EMW1R3-092120-1
20A-MW5-092120-1

Rite in the Rain

Location Wilmington, MA Date 9/22/20

Project / Client LMC

pg 1 of 7

0730 - On site. Team: D. Potter, A Grossman, L. Zagby. Task: GW sampling, equip. Blanks, Soil gas screening

0830 - Tailgate meeting and mobilize to wells after completion of calibrations

Sample ID	Time	Sampler
20A-AE29R1-092220-1	0925	LZ
20A-AE29R3-092220-1	1520	LZ
20A-AE29R5-092220-1	1450	LZ
20A-AE29R6-092220-1	1035	LZ
20A-TRC201R-092220-1	1145	AG
20A-EB01-092220-1	1745	LZ/AG
20A-EB02-092220-1	1730	LZ/AG

1015 - Calibrate 4-gas meter and PID

~~GMO~~ GEM 2000

S/N GM07304

CH_4 reading 15.3%, cal'd to 15%

CO_2 reading 14.9%, cal'd to 15%

H_2S reading 23 ppm, cal'd to 25 ppm

Oxygen reading 20.9%

Calibration gas: (CH_4, N, O_2) ~~CAS 7727-37-9~~ lot # 4003184

Calibration gas (H_2S) lot # 4020301

Location Wilmington, MA Date 9/22/20

Project / Client LMC

pg 2 of 7

PID: Ion Tiger S/N 100-1474

Fresh air: 0.0 ppm

~~Isobutylene~~ Isobutylene: 100.3 ppm

Lot # 4931809

1104 - GZA-105S Temp. 61.1°F

LNAPL ND, DTW = 6.41, Deploy tubing to 5.90 ft

seconds	CH_4	CO_2	O_2	H_2S	PID
30	4.3%	13.5%	0.7%	ND	453.1
60	5.7%	13.6%	0%	ND	456.6
90	6.4	13.6	0	ND	460.4
120	7.0	13.7	0	ND	460.3
150	7.5	13.7	0	ND	459.9
180	7.7	13.7	0	ND	
210	8.4	13.8	0	ND	
240	8.6	13.6	0	ND	
270	8.9	13.6	0	ND	
300	9.3	13.7	0	ND	
330	9.4	13.6	0	ND	
360	9.5	13.6	0	ND	
390	9.4	13.7	0	ND	

Rite in the Rain

Location Wilmington, MA Date 9/22/20

Project / Client

pg 3 of 7

1135 - AE-3 Temp: 62.1, DTP=ND, DTW=6.95
Tubing deployed to 6.5 ft

seconds	CH_4 %	CO_2 %	O_2 %	H_2S ppm	PID ppm
30	28.4	20.4	0.8	ND	113.6
60	29.7	20.5	0.4	ND	119.5
90	30.2	20.4	0.4	ND	121.9
120	30.5	20.0	0.6	ND	123.0
150	30.7	20.1	0.5	ND	124.9
180	31.3	20.1	0.4	ND	125.4
210	31.3	20.0	0.5	ND	125.5
240	31.3	20.0	0.5	ND	125.9
~~270~~					
~~300~~					

1451 - TRC-101 Temp: 68.7 °F, DTP=ND,
DTW=6.71, Tubing deployed to 6.1 ft

seconds	CH_4 %	CO_2 %	O_2 %	H_2S ppm	PID
30	32.3	17.1	0.3	007	614.8
60	33.1	16.7	0.0	006	626.5
90	32.2	15.2	0.0	003	635.0
120	27.7	12.8	0.2	000	637.6
150	21.9	10.0	1.5	ND	637.5
180	19.0	7.8	3.9	ND	637.2
210	17.1	6.5	6.5	ND	
240	15.5	5.6	8.8	ND	

Location Wilmington, MA Date 9/22/20

Project / Client

pg 4 of 7

seconds	CH_4	CO_2	O_2	H_2S	PID
270~~300~~	13.7	4.8	10.5	ND	
300~~330~~	13.5	4.7	10.8	ND	
330~~360~~	12.7	4.5	11.0	ND	
360	12.4	4.3	11.2	ND	
390	12.1	4.3	11.0	ND	
420	12.0	4.3	11.5	ND	
450	11.3	4.2	11.6	ND	
480	10.9	4.1	11.7	ND	
510	10.7	4.0	11.9	ND	
540	10.4	4.0	12.0	ND	
570	10.0	4.0	12.1	ND	
600	9.9	3.9	12.1	ND	
630	9.5	3.9	12.2	ND	
660	9.2	3.8	12.4	ND	
690	9.1	3.8	12.4	ND	
720	8.8	3.8	12.6	ND	
750	8.5	3.8	12.7	ND	
780	8.5	3.7	12.9	ND	
810	8.4	3.7	12.9	ND	

1530 - Carrier picks up samples
1535 - DTP=ND, DTW=6.82, Temp: 65.2
Deploy tubing at 6.3 ft

Rite in the Rain

Location _____ Date 9/22/20

Project / Client _____

pg 5 of 7

Seconds	CH_4	CO_2	O_2	H_2S	PID
30	0.9	3.7	15.5	ND	0.0
60	0.8	3.6	15.5	ND	0.0
90	0.8	3.6	15.7	ND	0.0
120	0.7	3.5	15.8	ND	
150	0.7	3.5	15.9	ND	
180	0.6	3.4	15.9	ND	
210	0.6	3.4	15.9	ND	
240	0.6	3.4	15.9	ND	

1605- CW-1 DTP=5.69, DTW=5.70, Temp=67.0

Deploy tubing to 5.2'

~~Seconds~~	CH_4	CO_2	O_2	H_2S	PID
30	1.1	11.9	3.1	ND	1297
60	1.7	12.0	3.1	ND	1306
90	2.2	11.8	3.3	ND	~~1307~~ 1304
120	2.3	11.9	3.2	ND	1305
150	2.6	11.8	3.6	ND	
180	2.7	11.5	3.8	ND	
210	2.9	11.2	4.3	ND	
240	3.1	10.6	4.6	ND	
270	3.3	10.6	4.8	ND	
300	3.3	10.6	4.7	ND	
330	3.5	10.7	4.8	ND	

Location _____ Date 9/22/20

Project / Client _____

pg 6 of 7

1630- CW-2 DTP=5.76, DTW=5.48, T=66.6

Deploy tubing to 5.0'

Seconds	CH_4	CO_2	O_2	H_2S	PID
30	2.2	11.4	4.4	ND	1300
60	2.7	11.3	4.1	ND	1311
90	3.0	11.4	4.3	ND	1316
120	3.3	11.3	4.2	ND	1317
150	3.6	11.3	4.3	ND	1312
180	3.8	11.3	4.4	ND	1314
210	3.9	11.1	4.5	ND	
240	4.2	11.0	4.6	ND	
270	4.3	11.0	4.7	ND	
300	4.4	11.0	4.6	ND	
330	4.4	11.0	4.8	ND	
360	4.6	10.9	4.8	ND	
390	4.7	10.8	5.0	ND	
420	4.7	10.8	5.0	ND	
450	4.9	10.7	5.1	ND	
480	4.9	10.7	5.0	ND	
510					

1700- Post Cal. GMEZ000:

CH_4 - 14.6%, CO_2 - 15.3%, O_2 - 20.9%, H_2S - 22 ppm

Ion Tiger: isobutylene - 193.1 ppm

Rite in the Rain

Location _____ Date 9/22/20

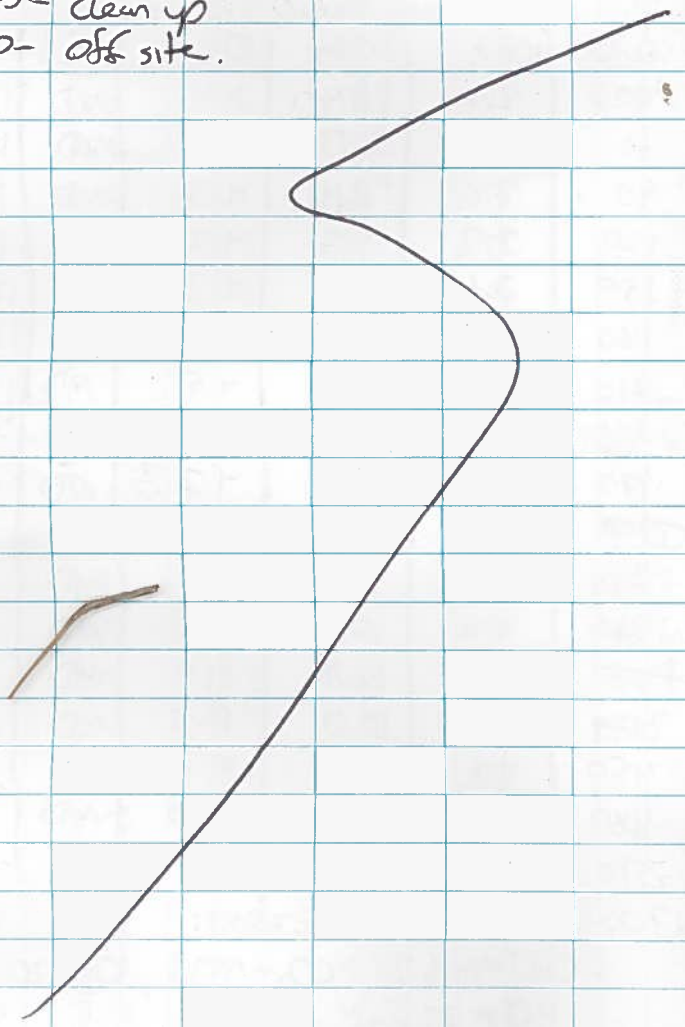
Project / Client _____

pg 7 of 7

fresh air - 0.0 ppm

1800 - clean up

1840 - off site.



Location Wilmington, MA Date 9/23/20

Project / Client _____

pg 1 of

0730 - On site. Team: D. Potter, A. Grossman, F. Burton, S. Huggett, L. Zagby

Task: GW sampling

Weather: sunny, 70s

Tailgate meeting and calibrate

0915 - Mobilize to wells

Sample ID	Time	Sampler
20A-STM4D-092320-1	1035	FB
20A-STM8R-092320-1	1100	FB
20A-STM4R1-092320-1	1230	FB
20A-AE10R1-092320-1	1035	LZ
20A-AE10R1-092320-2	1040	LZ
20A-AE10R2-092320-1	1140	LZ
20A-AE10R3-092320-1	1305	LZ
20A-~~AE~~TRC103-092320-1	1110	SH
20A-AE3-092320-1	1055	AG
20A-TRC102-092320-1	1215	SH
20A-AE3-092320-2	1100	AG
20A-TRC101-092320-1	1600	~~AG~~ SH
20A-AE4-092320-1	1630	AG
20A-AE4-092320-2	1630	AG
20A-GZA025-092320-1	1305	AG

1320 - Courier off site

1510 - Sample 4 drums for VOCs and metals

Rite in the Rain

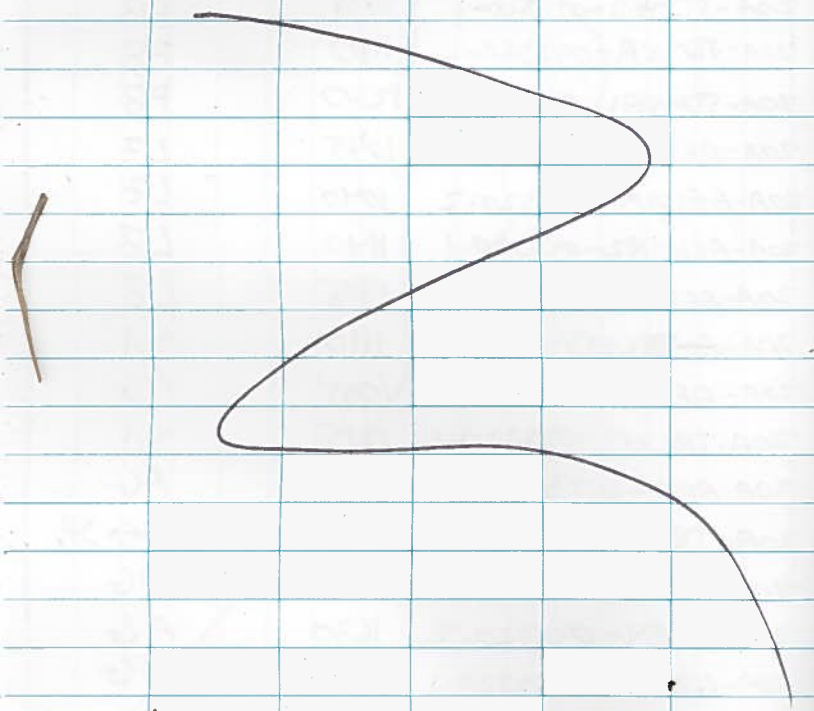
Location _____ Date _____

Project / Client _____

Sample ID	Time
20A-IDW1-092320-1	1515
20A-IDW2-092320-1	1520
20A-IDW3-092320-1	1525
20A-IDW4-092320-1	1530

1700 - Post Cal and de-mob

1840 - off site



Location Wilmington, MA Date 09/24/20

Project / Client LMC

0715 - D. Potter on site. Begin ~~prep~~ bottle prep

Team: D. Potter, F. Burton, A. Grossman, S Haggett, L. Zyjay

Task: GW sampling

Weather: sunny, 70s

0830 - Mobilize to wells

Sample ID	Time	Sampler
20A-IP1R2-092420-1	0955	LZ
20A-GZA105D-092420-1	0935	SH
20A-GZA12-092420-1	0915	FB
20A-GZA105R-092420-1	1235	SH
20A-TRC401R-092420-1	1115	LZ
20A-GZA105S-092420-1	1100	SH
20A-STM3D-092420-1	1215	AG
20A-GZA101R-092420-1	1245	LZ
20A-AE101R5-092420-1	1100	FB
20A-AE101R6-092420-1	1200	FB

1300 - Alpha courier picks up PIANO samples

1400 - Phoenix courier picks up samples.

1530 - PZ-25 not recharging. Will collect grab sample on 9/25. Post-Cal

1700 - off site. DP to FedEx.

Rite in the Rain.

Location Wilmington, MA Date 09/25/20

Project / Client LMC

0730- DiPotter on site. Set up on PZ-25
Weather: sunny, 70s
0745- sample 20A-PZ25-092520-1. Well runs dry multiple times while filling bottles. Pack truck
0950- US Env picks up equipment
1200- off site to office.
1330- Courier picks up sample at office

Location Date

Project / Client

Rite in the Rain

APPENDIX B
LNAPL MONITORING FIELD RECORDS

AECOM

Former GE Facility - Wilmington, MA

Building 3 - EPL LNAPL Gauging Record

Date: 12/7/2020

Weather: Sunny, 20s (F)

Recorder: Dylan Potter

Gauging Information

Well	Time	Depth to LNAPL (ft btoc)	Depth to Water (ft btoc)	Depth to DNAPL (ft btoc)	Depth to Bottom (ft btoc)	Confirm Product w/ Bailer (Y/N/NA)	Product Removed (Y/N/NA)	Comments
AE-3	10:38	ND	4.58	ND	12.66	NA	NA	
AE-4	10:25	ND	4.27	ND	12.25	NA	NA	
CW-1	11:12	ND	3.15	ND	8.50	NA	NA	Sheen visible in well
CW-2	11:19	ND	2.93	ND	6.75	NA	NA	Sheen visible in well
GZA-102S	10:57	ND	4.76	ND	10.94	NA	NA	
PZ-2S	11:04	ND	4.30	ND	8.12	NA	NA	
TRC-101	10:49	ND	4.35	ND	9.95	NA	NA	

Gauging device (Mnfr./Model No.): Solinst 122

Note: If LNAPL is detected at thickness > 0.1 feet, insert absorbant sock and wire basket into well and secure tightly.

(Place spent socks, if used, in 5-gallon bucket within treatment building.)

Notes:

NA = Not Applicable

ND = Not Detected

NR = Not Recorded

ft btoc = feet below top of casing

AECOM

Former GE Facility - Wilmington, MA

Building 3 - EPL LNAPL Gauging Record

Date: 2/17/2021

Weather: sunny, 20s

Recorder: Dylan Potter

Gauging Information

Well	Time	Depth to LNAPL (ft btoc)	Depth to Water (ft btoc)	Depth to DNAPL (ft btoc)	Depth to Bottom (ft btoc)	Confirm Product w/ Bailer (Y/N/NA)	Product Removed (Y/N/NA)	Comments
AE-3	10:06	ND	5.19	ND	7.52 *	N	NA	* believed to be an errant reading - will double check next site visit
AE-4	10:01	ND	4.83	ND	12.26	N	NA	
CW-1	10:17	ND	3.81	ND	8.05	N	NA	slight sheen, no product on probe
CW-2	10:22	ND	3.59	ND	6.85	N	NA	slight sheen, no product on probe
GZA-102S	10:30	ND	5.33	ND	10.96	N	NA	
PZ-2S	10:34	ND	4.85	ND	8.10	N	NA	
TRC-101	10:09	ND	4.98	ND	9.95	N	NA	

Gauging device (Mnfr./Model No.): Solinst 122 Interface Probe

Note: If LNAPL is detected at thickness > 0.1 feet, insert absorbant sock and wire basket into well and secure tightly.

(Place spent socks, if used, in 5-gallon bucket within treatment building.)

Notes:

NA = Not Applicable

ND = Not Detected

NR = Not Recorded

ft btoc = feet below top of casing

APPENDIX C
WASTE MANIFESTS

Ticket 80178

Please print or type. Generator acknowledges that no material change has occurred either in the characteristics or in the process generating the material. Form Approved. OMB No. 2050-0039

UNIFORM HAZARDOUS WASTE MANIFEST	1. Generator ID Number	2. Page 1 of	3. Emergency Response Phone	4. Manifest Tracking Number
	MAD985290873	1	(800) 483-3718	015188438 FLE

GENERATOR

5. Generator's Name and Mailing Address
Lockheed Martin Corporation
6801 Rockledge Drive MP CCT 246
Bethesda, MD 20817
Generator's Phone:

Generator's Site Address (if different than mailing address)
50 Fordham Road
Wilmington, MA 01887

6. Transporter 1 Company Name: Clean Harbors Environmental Services, Inc.
U.S. EPA ID Number: MAD039322250

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

8. Designated Facility Name and Site Address
Clean Harbors of Braintree Inc
1 Hill Avenue
Braintree, MA 02184
Facility's Phone: (781) 380-7100
U.S. EPA ID Number: MAD053452637

9a. HM	9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.	13. Waste Codes		
X	1. NA3082, HAZARDOUS WASTE, LIQUID, N.O.S., (TRICHLOROETHYLENE, TETRACHLOROETHYLENE), 9, PG III	005	DM	275	G	D039	D040	
X	2. ~~NA3082, HAZARDOUS WASTE, LIQUID, N.O.S., (TRICHLOROETHYLENE, TETRACHLOROETHYLENE), 9, PG III~~	—	—	—	—	~~D039~~	~~D040~~	) SD
	3.							
	4.							

14. Special Handling Instructions and Additional Information
1. CH1563550 ERG#171
(2. ~~CH1563560 ERG#171~~) SD

Contract retained by generator confers agency authority on initial transporter to add or substitute additional transporters on generator's behalf for purposes of transportation efficiency, convenience, or safety

15. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: Abigail Barenbaum as agent for Lockheed Martin
Signature: AB
Month: 11 Day: 20 Year: 20

INT'L

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

TRANSPORTER

17. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name: Samuel DiCicco
Signature: Samuel DiCicco
Month: 11 Day: 20 Year: 20

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

DESIGNATED FACILITY

18. Discrepancy

18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

Manifest Reference Number:

18b. Alternate Facility (or Generator)
U.S. EPA ID Number:
Facility's Phone:

18c. Signature of Alternate Facility (or Generator)
Month: Day: Year:

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)

1.	2.	3.	4.
H141	H141		

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

Printed/Typed Name: Huyen Hoang
Signature: Huyen Hoang
Month: 11 Day: 20 Year: 20

EPA Form 8700-22 (Rev. 12-17) Previous editions are obsolete.

DESIGNATED FACILITY TO EPA's e-MANIFEST SYSTEM

Clean Harbors has the appropriate permits for and will accept the waste the generator is shipping.

WO 20058369972-002 PPW

CleanHarbors
ENVIRONMENTAL SERVICES®

Land Disposal Restriction Notification Form

Printed Date :Nov 13, 2020

MANIFEST INFORMATION

Generator : Lockheed Martin Corporation

Address: 50 Fordham Road
Wilmington,MA 01887

EPA ID #: M A D 9 8 5 2 9 0 8 7 3

Manifest Tracking Info.

015188438FLE

Sales Order No: 2005836972-002

LINE ITEM INFORMATION

Line Item:	Page No:	Profile No:	Treatability Group:	LDR Disposal Category
1.	1	CH1563550	NON-WASTEWATER	2 (This is subject to LDR.)

EPA Waste Code	EPA Waste SubCategory
D039D040	NONE

LDR Chemical Data

Chemical	Underlying Hazardous Constituents	Constituents of Concern	Contaminants Subject to Treatment
1,1,1-TRICHLOROETHANE	Y	N	N
1,1,2-TRICHLORETHANE	Y	N	N
1,1-DICHLOROETHANE	Y	N	N
1,1-DICHLOROETHYLENE	Y	N	N
1,4-DIOXANE	Y	N	N
ACETONE	Y	N	N
TOLUENE	Y	N	N
TRANS-1,2-DICHLOROETHYLENE	Y	N	N
VINYL CHLORIDE	Y	N	N

LINE ITEM INFORMATION

Line Item:	Page No:	Profile No:	Treatability Group:	LDR Disposal Category
2.	1	CH1563550	NON-WASTEWATER	2 (This is subject to LDR.)

EPA Waste Code	EPA Waste SubCategory
D039D040	NONE

CleanHarbors
ENVIRONMENTAL SERVICES®

Land Disposal Restriction Notification Form

Printed Date :Nov 13, 2020

LDR Chemical Data

Chemical	Underlying Hazardous Constituents	Constituents of Concern	Contaminants Subject to Treatment
1,1,1-TRICHLOROETHANE	Y	N	N
1,1,2-TRICHLORETHANE	Y	N	N
1,1-DICHLOROETHANE	Y	N	N
1,1-DICHLOROETHYLENE	Y	N	N
1,4-DIOXANE	Y	N	N
ACETONE	Y	N	N
TOLUENE	Y	N	N
TRANS-1,2-DICHLOROETHYLENE	Y	N	N
VINYL CHLORIDE	Y	N	N

Certification	Applies to Manifest Line Items
Pursuant to 40 CFR 268.7(a), I hereby notify that this shipment contains waste restricted under 40 CFR Part 268.	1. 2.

Waste analysis data, where available, is attached.

Signature : [signature] Print Name Abigail Brakenridge as agent for Lockheed Martin

Title : Engineer Date : 11/20/20

APPENDIX D
INDOOR AIR SAMPLING FIELD RECORDS

Indoor Air Quality Building Survey

Date: ~~1/14/2021~~, ~~1/24/2021~~ 1/14/2021, 1/26/2021 (visit, sampling) RTN: 3-0518

Address: 50 Fordham Rd, Wilmington, MA

Building Contact: Gary Stanicich Phone: Tel: _____ Cell: 603-860-8808 Work: _____

Current Occupants:

INITIALS	AGE	SEX (M/F)
UPS (United Parcel Service)		
unknown # of employees		

Building Construction Characteristics: (Circle or underline appropriate responses)

Single Family	Multiple Family	School	(Commercial)
Ranch	2-Family		Bldg age 45-50 years
Raised Ranch	Duplex		
Cape	Apartment House		
Colonial	# of units ____		
Split Level	Condominium		
Colonial	# of units ____		
Mobile Home	Other _____		
Other _____			

General Description of Building Construction Materials:

Wood (Brick) Stone (Metal) Other_____

How many occupied stories does the building have? 2

Has the building been weatherized with any of the following?

(Insulation) Storm Windows Energy-Efficient Windows Other _____

assume insulation present; Exterior of second floor was wrapped in 2018

Indoor Air Quality Building Survey, continued

What type of basement does the building have?

Full basement Crawlspace (Slab-on-Grade) Other _____

What are the characteristics of the basement? Finished Unfinished Other N/A

Basement Floor:	Foundation Walls:	Moisture:
Concrete	Poured Concrete	Wet
Dirt	Block	Damp
	Stone	Dry

Is a basement sump present? (Y/N) N/A

Does the basement have any of the following characteristics (i.e., preferential pathways into the building) that might permit soil vapor entry?

Cracks Pipes/Utility Conduits Foundation/slab drainage

Sump pumps Other N/A

Heating and Ventilation System(s):

What type(s) of heating system are used in this building?

(Hot Air Circulation) Heat Pump Wood Stove

Hot Air Radiation Unvented Kerosene Heater Electric Baseboard

Forced Hot Water Steam Radiation Other _____

What type(s) of fuel are used in this building?

(Natural Gas) (Electric) Coal Other _____

Fuel Oil Wood Solar

What type(s) of mechanical ventilation system are present and/or currently operating in this building? 2 cambridge units on the High Bay roof for fresh air
4 smaller units recirculating indoor air

Central Air Conditioning Mechanical Fan Bathroom Ventilation Fan

Kitchen Range Hood Open Window Individual Air Conditioning Unit

Air-to-Air Heat Exchange Other _____

Indoor temps (1/26)
1st Floor - 60°F
2nd floor - 64°F

Indoor Air Quality Building Survey, continued

Sources of Chemical Contaminants:

Potential VOC Source	Check if present in building prior to sampling	Location of Source	Removed 48 hours prior to sampling? (Yes/No/NA)
Paints or paint thinners		see photo log	
Gas-powered equipment		Indoor operations similar to 2020, but	
Gasoline storage cans		no longer seasonal as of Aug 2020 –	
Cleaning solvents		Full time currently	
Air fresheners			
Oven cleaners			
Carpet/upholstery cleaners			
Hairspray			
Nail polish/polish remover			
Bathroom cleaner			
Appliance cleaner			
Furniture/floor polish			
Moth balls			
Fuel tank			
Wood stove			
Fireplace			
Perfume/colognes			
Hobby supplies (e.g., solvents, paints, lacquers, glues, photographic darkroom chemicals)			
Scented trees, wreaths, potpourri, etc.			
Other			
Other			

☐ YES ☐ NO — Do one or more smokers occupy this building on a regular basis?
UPS workers observed smoking outside east entrance on 1/26

☐ YES ☐ NO — Has anybody smoked in the building in the last 48 hours?

☐ YES ☐ NO — Does the building have an attached garage?
Building High Bay area houses UPS trucks

☐ YES ☐ NO — If so, is the garage used for parking cars
Trucks are in high bay area - loaded in morning, leave before 9AM and return ~5 pm

Indoor Air Quality Building Survey, continued

☐ YES ☐ NO Do the occupants of the building frequently have their clothes dry-cleaned?
unknown

☑ YES ☐ NO Was there any recent remodeling or painting done in the building?
new walls being erected in SW room - currently insulation only

☑ YES ☐ NO Are there any new pressed wood products in the building (e.g., hardwood plywood, wall paneling, particleboard, fiberboard)?
~~unknown - Did not observe~~ plywood on 2nd floor, but old

☑ YES ☐ NO Are there any new upholstery, drapes or other textiles in the building?
cubicle walls in office area as of Aug 2020

☐ YES ☐ NO unk. Has the building interior been treated with any insecticides/pesticides?

If yes, what chemicals are used and how often are they applied?

Outdoor Sources of Contamination/Conditions:

Do any of the occupants apply pesticides/herbicides in the yard or garden? If yes, what chemicals are used and how often are they applied?
WRT has TruGreen treat lawn areas in a 5 step process during the spring and summer

Is there any stationary emission source in the vicinity of the building?
2 generators in Building 1, and a 2nd floor electrical substation area

Are there any mobile emission sources (e.g., highway, bus stop, high-traffic area) in the vicinity of the building?
High traffic of UPS trucks leaving (9AM) and entering (5PM) the building

Type of ground cover (e.g., grass, pavement, etc.) outside the building: grass and asphalt

Other Information:

Is there other information about the structural features of the building, habits of its occupants or potential sources of contaminants to the indoor air that may be of significance to the evaluation of the indoor air quality of the building?

Weather Conditions during Sampling:

Outside Temperature (°F): 20-30°F

Prevailing wind direction and approximate wind speed: <5mph, SW

Describe the general weather conditions (e.g., sunny, cloudy, rain): cloudy, possible snow in PM

Was there significant precipitation (≥ 0.1 inches) within 12 hours preceding the sampling? N

AECOM

Indoor/Ambient Air Sample Log Sheet

Client: Lockheed Martin Corporation

Project Name: Former GE Facility 50 Fordham Rd Wilmington, MA

Project Number: 60552044 Task 24

Date: 1/26/2021

Sampler: Dylan Potter

Weather: sunny, 20s

Sample Location: AA-1

Sample ID: 21A-AA1-1

SUMMA Canister No.: 3478

Summar Canister Vol. (L): 6 L

Regulator No.: 01629

Sample Duration (Circle one): Instant 1hr 2hr 4hr (8hr) Other: _____ hrs

	Time (24 hr)	Pressure (units _____)
Sample Start:	0916	-31.47
Check:	1042	-24.95
Check:	1201	-19.03
Check:	1346	-11.77
Check:	1517	-7.29
Sample Finish :	1622	-4.97

PID Reading (ppm) at sample location: 37 ppb Time (24 hr): 1245

Comments:

AECOM

Indoor/Ambient Air Sample Log Sheet

Client: Lockheed Martin Corporation

Project Name: Former GE Facility 50 Fordham Rd Wilmington, MA

Project Number: 60552044 Task 24

Date: 1/26/2021

Sampler: Dylan Potter

Weather: Indoors

Sample Location: IA-2

Sample ID: 21A-IA2-1

SUMMA Canister No.: 3277

Summar Canister Vol. (L): 6 L

Regulator No.: 01464

Sample Duration (Circle one): Instant 1hr 2hr 4hr (8hr) Other: _____ hrs

	Time (24 hr)	Pressure (units _____)
Sample Start:	0928	-30.62
Check:	1031	-27.39
Check:	1156	-23.01
Check:	1352	-17.18
Check:	1524	-12.65
Sample Finish :	1654	-8.53

PID Reading (ppm) at sample location: 374 ppb Time (24 hr): 1226

Comments:

AECOM

Indoor/Ambient Air Sample Log Sheet

Client: Lockheed Martin Corporation

Project Name: Former GE Facility 50 Fordham Rd Wilmington, MA

Project Number: 60552044 Task 24

Date: 1/26/2021

Sampler: Dylan Potter

Weather: Indoors

Sample Location: ~~21A-IA3-1~~ IA-3

Sample ID: 21A-IA3-1

SUMMA Canister No.: 2802

Summar Canister Vol. (L): 6L

Regulator No.: 0083

Sample Duration (Circle one): Instant 1hr 2hr 4hr (8hr) Other: _____ hrs

	Time (24 hr)	Pressure (units _____)
Sample Start:	0926	-29.82
Check:	1029	-26.77
Check:	1155	-22.67
Check:	1350	-17.33
Check:	1523	-13.22
Sample Finish :	~~1656~~ 1700	~~-8.63~~ -9.15

PID Reading (ppm) at sample location: 320 ppb **Time (24 hr):** 1215

Comments:

AECOM

Indoor/Ambient Air Sample Log Sheet

Client: Lockheed Martin Corporation

Project Name: Former GE Facility 50 Fordham Rd Wilmington, MA

Project Number: 60552044 Task 24

Date: 1/26/2021

Sampler: Dylan Potter

Weather: indoors

Sample Location: IA-4

Sample ID: 2A-IA4-1

SUMMA Canister No.: 3468

Summar Canister Vol. (L): 6L

Regulator No.: 01650

Sample Duration (Circle one): Instant 1hr 2hr 4hr (8hr) Other: _____ hrs

	Time (24 hr)	Pressure (units _____)
Sample Start:	0925	-30.56
Check:	1028	-27.03
Check:	1154	-22.44
Check:	~~16~~ 1349	-16.32
Check:	1522	-11.56
Sample Finish :	16.58	-7.11

PID Reading (ppm) at sample location: 285 ppb **Time (24 hr):** 1214

Comments:

AECOM

Indoor/Ambient Air Sample Log Sheet

Client: Lockheed Martin Corporation

Project Name: Former GE Facility 50 Fordham Rd Wilmington, MA

Project Number: 60552044 Task 24

Date: 1/26/2021

Sampler: Dylan Potter

Weather: Indoors

Sample Location: IA-7

Sample ID: 2A-IA7-1

SUMMA Canister No.: 3372

Summar Canister Vol. (L): 6L

Regulator No.: 0790

Sample Duration (Circle one): Instant 1hr 2hr 4hr (8hr) Other: _____ hrs

	Time (24 hr)	Pressure (units _____)
Sample Start:	0930	-30.91
Check:	1030	-27.79
Check:	1157	-23.24
Check:	1351	-17.33
Check:	1524	-12.68
Sample Finish :	1656	-8.63

PID Reading (ppm) at sample location: 289 ppb Time (24 hr): 1223

Comments:

AECOM

Indoor/Ambient Air Sample Log Sheet

Client: Lockheed Martin Corporation

Project Name: Former GE Facility 50 Fordham Rd Wilmington, MA

Project Number: 60552044 Task 24

Date: 1/26/2021

Sampler: Dylan Potter

Weather: Indoors

Sample Location: IA-8

Sample ID: 21A-IA8-2

SUMMA Canister No.: 2049

Summar Canister Vol. (L): 6 L

Regulator No.: 01652

Sample Duration (Circle one): Instant 1hr 2hr 4hr (8hr) Other: _____ hrs

	Time (24 hr)	Pressure (units _____)
Sample Start:	0922	-30.30
Check:	1032	-26.67
Check:	1159	-22.27
Check:	1354	~~-16.34~~ -16.24
Check:	1526	-11.59
Sample Finish :	1702	-7.22

PID Reading (ppm) at sample location: 271 ppb **Time (24 hr):** 1232

Comments:

AECOM

Indoor/Ambient Air Sample Log Sheet

Client: Lockheed Martin Corporation

Project Name: Former GE Facility 50 Fordham Rd Wilmington, MA

Project Number: 60552044 Task 24

Date: 1/26/2021

Sampler: Dylan Potter

Weather: Indoors

Sample Location: IA-8

Sample ID: ~~21A-IA8~~ 21A-IA8-1

SUMMA Canister No.: 950

Summar Canister Vol. (L): 6L

Regulator No.: 0909

Sample Duration (Circle one): Instant 1hr 2hr 4hr (8hr) Other: _____ hrs

	Time (24 hr)	Pressure (units _____)
Sample Start:	0922	-30.34
Check:	1032	-26.64
Check:	1159	-22.24
Check:	1354	-16.38
Check:	1526	-11.77
Sample Finish :	~~1656~~ 1702 (DD)	~~-8.63~~ -7.29 (DD)

PID Reading (ppm) at sample location: 271 ~~ppm~~ ppb Time (24 hr): 1232

Comments:

AECOM

Indoor/Ambient Air Sample Log Sheet

Client: Lockheed Martin Corporation

Project Name: Former GE Facility 50 Fordham Rd Wilmington, MA

Project Number: 60552044 Task 24

Date: 1/26/2021

Sampler: Dylan Potter

Weather: indoors

Sample Location: IA-9

Sample ID: 21A-IA9-1

SUMMA Canister No.: 1564

Summar Canister Vol. (L): 6 L

Regulator No.: 0622

Sample Duration (Circle one): Instant 1hr 2hr 4hr (8hr) Other: _____ hrs

	Time (24 hr)	Pressure (units _____)
Sample Start:	0918	-30.45
Check:	1035	-26.62
Check:	~~1201~~ 1203	~~-19.03~~ -22.30
Check:	1347	-17.18
Check:	1518	-12.81
Sample Finish :	1705	-7.84

PID Reading (ppm) at sample location: 291 ppb Time (24 hr): 1250

Comments:

AIR ANALYSIS

PAGE 1 OF 1

CHAIN OF CUSTODY

ALPHA ANALYTICAL
320 Forbes Blvd, Mansfield, MA 02048
TEL: 508-822-9300 FAX: 508-822-3288

Date Rec'd in Lab:

ALPHA Job #:

Client Information

Client: AECOM
Address: 250 Apollo Drive
Chelmsford, MA 01824
Phone: 978-905-2100
Fax: 978-905-2101
Email: lori.Herberich@aecom.com

☐ These samples have been previously analyzed by Alpha

Project Information

Project Name: Lockheed Martin
Project Location: Wilmington, MA
Project #: 60552044.24
Project Manager: Scott Olson
ALPHA Quote #: 2017-2022

Turn-Around Time

☐ Standard ☐ RUSH (only confirmed if pre-approved!)

Date Due: Time:

Report Information - Data Deliverables

☐ FAX
☐ ADEx
Criteria Checker:
(Default based on Regulatory Criteria Indicated)
Other Formats:
☒ EMAIL (standard pdf report)
☐ Additional Deliverables:

Report to: (if different than Project Manager)
Lori Herberich &
Scott Olson

Billing Information

☐ Same as Client info PO #: 131560

Regulatory Requirements/Report Limits

State/Fed	Program	Res / Comm
Mass DEP	CAM	

Other Project Specific Requirements/Comments: TO-15 SIM: RLs must meet thresholds in AECOM Project QAPP (2017)

Project-Specific Target Compound List: ☐

Call Lori Herberich with questions 978-302-2174

All Columns Below Must Be Filled Out

ALPHA Lab ID (Lab Use Only)	Sample ID	COLLECTION End Date	Start Time	End Time	Initial Vacuum	Final Vacuum	Sample Matrix*	Sampler's Initials	Can Size	I D Can	I D - Flow Controller	ANALYSIS TO-15	TO-15 SIM + freon 113	APH Subtract Non-petroleum HCs ☐	Fixed Gases	Sulfides & Mercaptans by TO-15		Sample Comments (i.e. PID)
	21A-AA1-1	1/26/21	0916	1622	-31.47	-4.97	AA	DP	6L	3478	01629		X					
	~~21A-A~~ 21A-IA2-1	1/26/21	0928	1654	-30.62	-8.53	AA	DP	6L	3277	01464		X					
	21A-IA3-1	1/26/21	0926	1700	-29.82	-9.15	AA	DP	6L	2802	0083		X					
	21A-IA4-1	1/26/21	0925	1658	-30.56	-7.11	AA	DP	6L	3168	01650		X					
	21A-IA7-1	1/26/21	0930	1656	-30.91	-8.63	AA	DP	6L	3372	0740		X					
	21A-IA8-1	1/26/21	0922	1702	-30.34	-7.29	AA	DP	6L	950	0909		X					
	21A-IA8-2	1/26/21	0922	17.02	-30.30	-7.22	AA	DP	6L	2049	01652		X					
	21A-IA9-1	1/26/21	0918	1705	-30.45	-7.84	AA	DP	6L	1564	0622		X					

*SAMPLE MATRIX CODES
AA = Ambient Air (Indoor/Outdoor)
SV = Soil Vapor/Landfill Gas/SVE
Other = Please Specify

Container Type: CS

Please print clearly, legibly and completely. Samples can not be logged in and turnaround time clock will not start until any ambiguities are resolved. All samples submitted are subject to Alpha's Terms and Conditions. See reverse side.

Relinquished By:	Date/Time	Received By:	Date/Time:
[signature]	1/26 1823	AECOM Chelmsford	1/26 1823

Form No: 101-02 Rev: (25-Sep-15)

LEGEND

- ● INDOOR AIR SAMPLE LOCATION
- × AMBIENT AIR SAMPLE; LOCATION VARIED 2009–2017; IA-1 (TRC 2009–2011) AA-1 (AECOM 2012–2017)
- ◆ MONITORING WELL LOCATION
- ● SUB-SLAB VAPOR POINT

NOTES:

1.) INDOOR AIR LOCATIONS CO-LOCATED WITH PRIOR INDOOR AIR LOCATIONS FROM 2009–2016.

2) SUB-SLAB VAPOR POINTS INSTALLED BY TRC IN 2009–2010. POINTS ABANDONED IN DECEMBER 2012 EXCEPT SG-13 REMOVED IN 2017. POINTS SG-10,11,12 REMOVED WHEN BUILDING 3 WAS RAZED IN JULY 2011.

3.) R – DENOTES VAPOR PIN LOCATIONS INSTALLED IN FEBRUARY 2013. AND ABANDONED IN FEBRUARY 2014. "R" LOCATIONS WERE WITHIN ~5 FT OF ORIGINAL POINTS.

4.) IA-6 NOT SAMPLED 2011 OR 2014–2017.

5.) ADDED LOCATIONS IA-11 AND IA-12 APRIL 2017.

6.) ADDED LOCATIONS IA-13 AND IA-14 JUNE 2017.

AECOM

INDOOR AND AMBIENT AIR AND SUB-SLAB VAPOR SAMPLE LOCATIONS - BUILDINGS 1, 3, GUARD SHACK

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

60478638 2017-08-07

FIGURE: 1a

25 0 50

GRAPHIC SCALE IN FEET

LEGEND

● INDOOR AIR SAMPLE LOCATION

BUILDING 1

NOTES:

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

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

3.) DEMOLITION & RENOVATIONS STILL IN PROGRESS AS OF APRIL 28, 2017.

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

INDOOR AIR SAMPLE LOCATIONS
BUILDING 1 SECOND FLOIOR

AECOM

60478638 2016-10-28 FIGURE: 1b

124

Location LMC Wilmington Date 1/26/21

Project / Client VI 2021

pg 1 of 2

0740 -	D. Potter	on site	and begins to set up		
	sampling locations. Check in with				
	Ken.				
0845 -	Locations prepared for sampling				
0850 -	trucks begin to leave Bld				
0905 -	Trucks gone. Wait 10 minutes before				
	turning on canisters				
Sample ID		Start time	Start pressure	End time	End pressure
	AA-1	0916	-31.47	1622	-4.97
	IA-2	0928	-30.62	1654	-8.53
	IA-3	0926	-29.82	1700	-9.15
	IA-4	0925	-30.56	1658	-7.11
	IA-7	0930	-30.91	1656	-8.63
	IA-8	0922	-30.34	1702	-7.29
	DUP	0922	-30.30	1702	-7.22
	IA-9	0918	-30.45	1705	-7.84
0922 -	One truck leaves late				
0925 -	Two trucks (pick-up trucks) pull in.				
	Contractors working on new offices				
	in southwest corner				
0940 -	UPS truck pulls into building				
0950 -	Bay door closed.				
0954 -	UPS truck returns				

Location LMC Wilmington Date 1/26/2021

Project / Client VI 2021

1015- Pickup truck leaves and box truck enters bld

1025- UPS truck leaves building

1030- 2 trucks enter. Both bay doors open

1045- UPS truck enters

1130- Worker is cleaning floor with electric ride-on Zamboni

1150- finish floor cleaning

1200- Take rounds with ppb rae. See calibration records. Truck departs building

1230- ppb readings complete. Take temperature measurements with AMPROBE TMD-50 thermometer

1520- Truck departs building

1615- Truck enters building

1625- Trucks start to return Begin collecting canisters

1715- Canisters collected. S. Olson on site. Note floor joints have ppb readings less than 100 ppb

1750- off site. S.O. takes samples to Chelmsford

Photograph Log
Vapor Intrusion Monitoring

Former GE Facility
50 Fordham Rd – Wilmington, MA
Building 1 (UPS)

January 26, 2021

AECOM - Chelmsford, MA



1st Floor High Bay IMG_5292



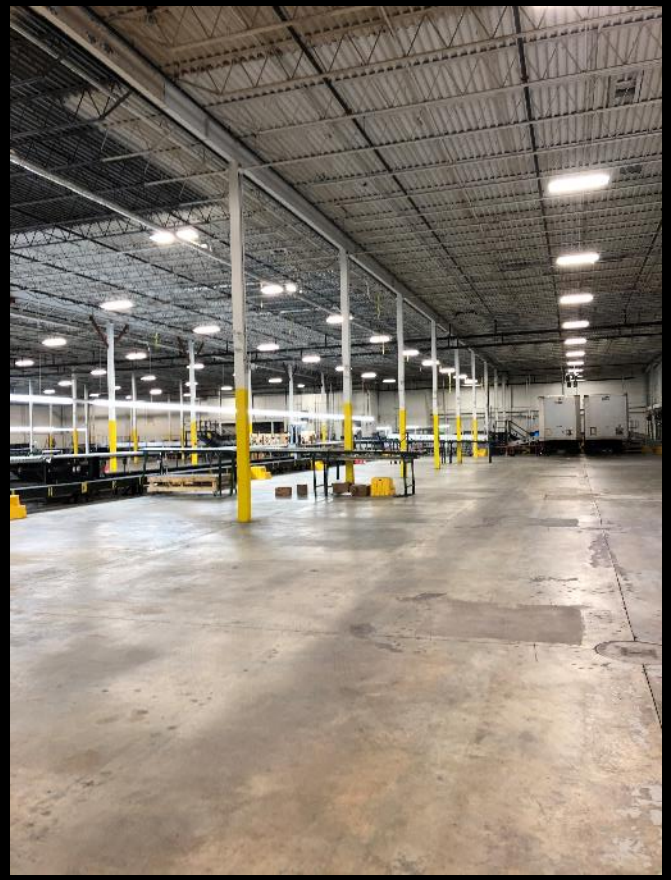
1st Floor High Bay IMG_5290



1st Floor High Bay IMG_5291



1st Floor High Bay IMG_5293



1st Floor High Bay IMG_7265



1st Floor High Bay IMG_7266



1st Floor High Bay IMG_7267



1st Floor High Bay IMG_7352



1st Floor High Bay IMG_7353



1st Floor High Bay IMG_7363



1st Floor High Bay IMG_7364



1st Floor High Bay IMG_7365



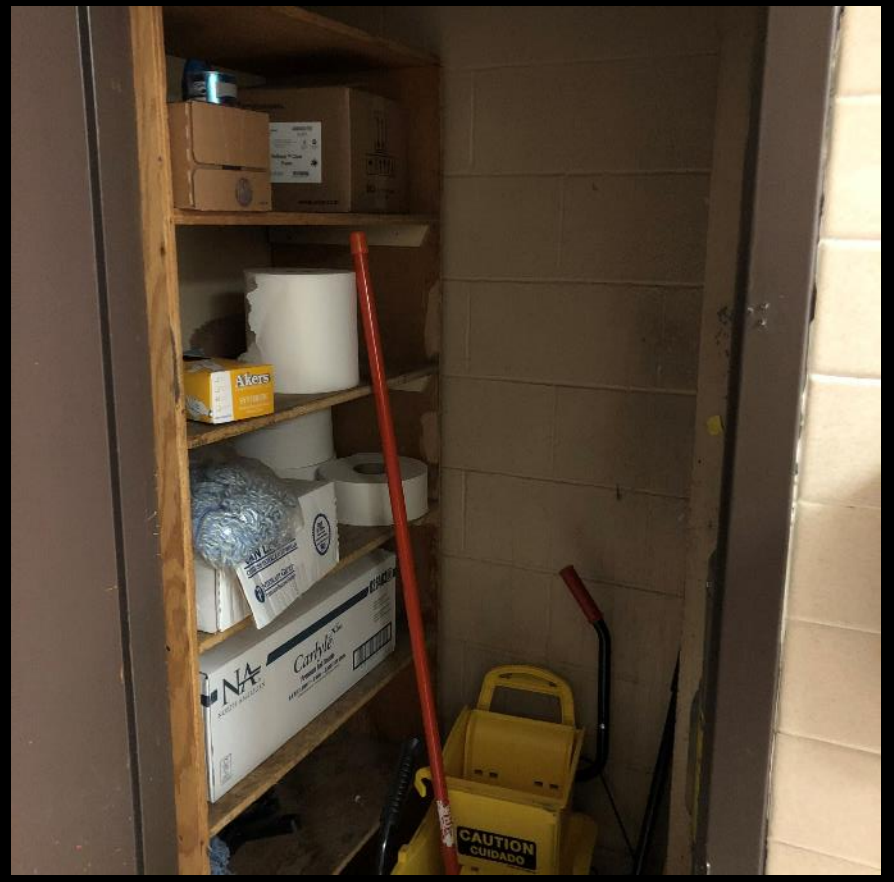
1st Floor High Bay IMG_7366



1st Floor High Bay IMG_7370



1st Floor High Bay IMG_7371



1st Floor North Bathrooms IMG_7368



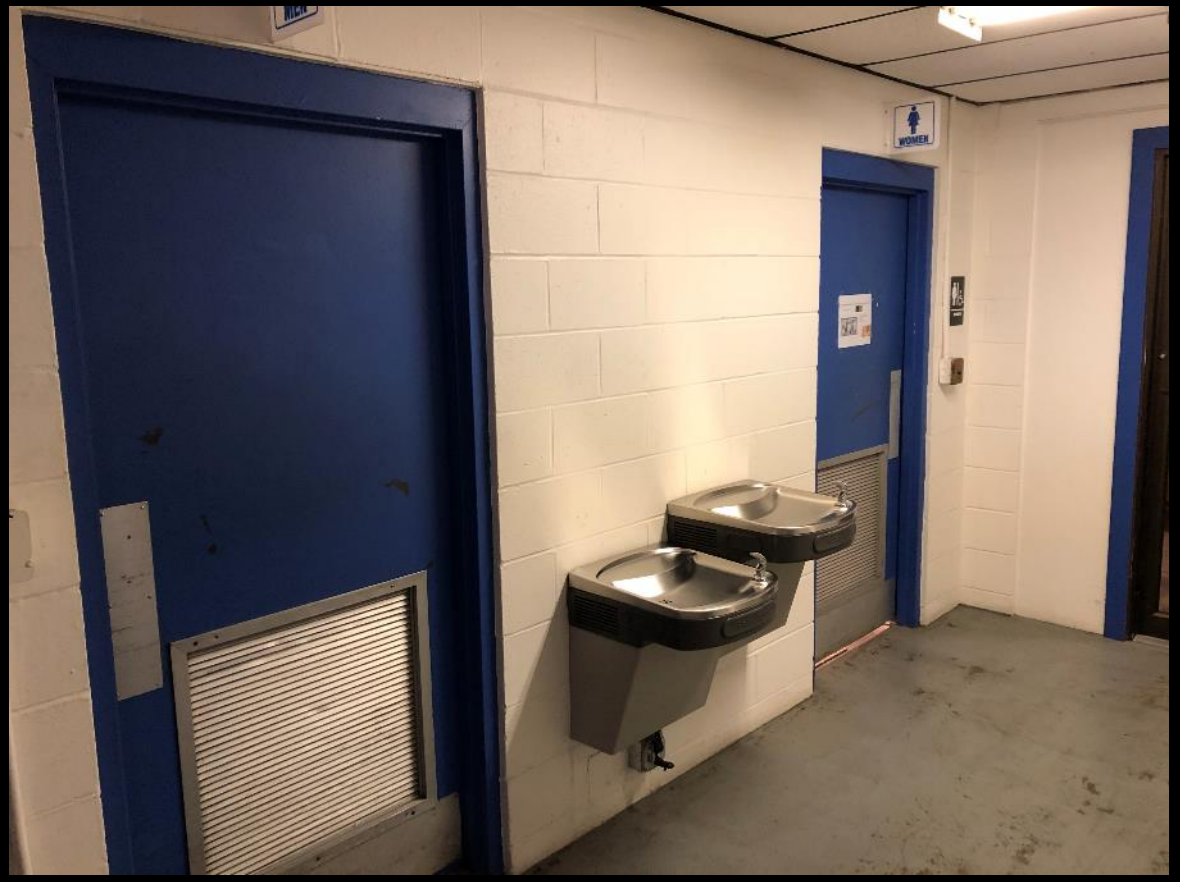
1st Floor North Bathrooms IMG_7369



1st Floor South Bathrooms IMG_7322



1st Floor South Bathrooms IMG_7323



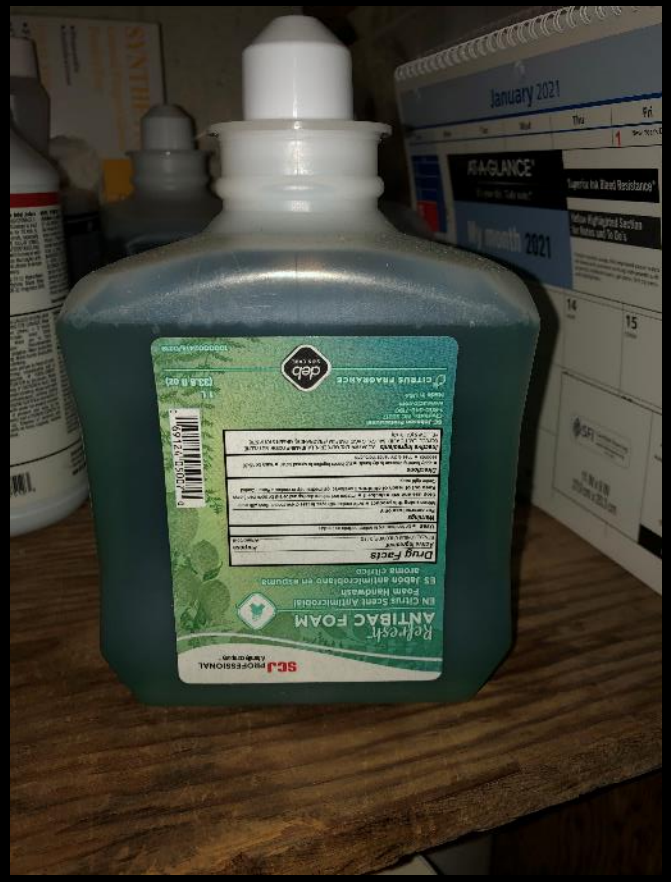
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1st Floor South Bathrooms IMG_7325



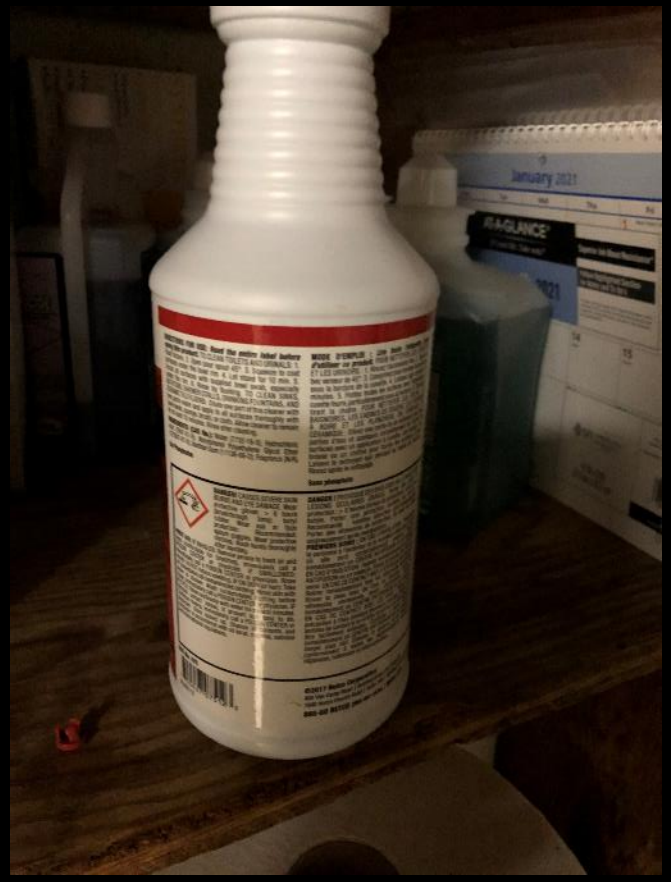
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1st Floor South Bathrooms IMG_7327



1st Floor South Bathrooms IMG_7328



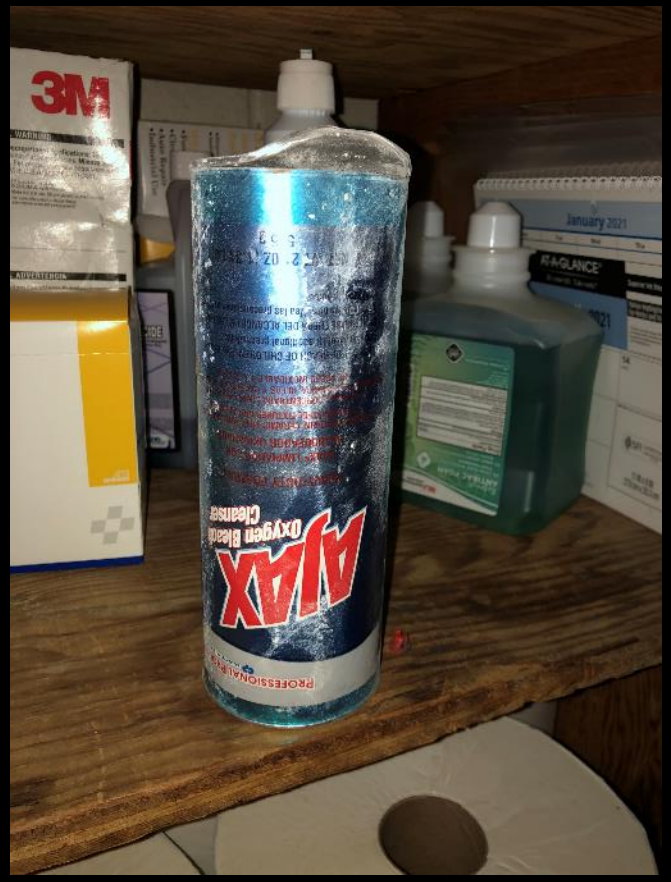
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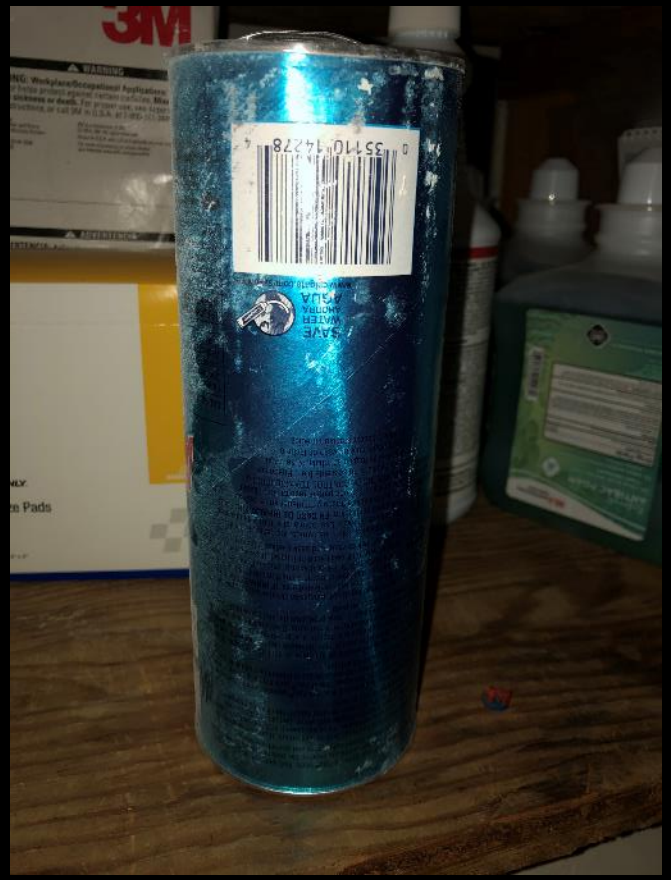
1st Floor South bathrooms IMG_7330



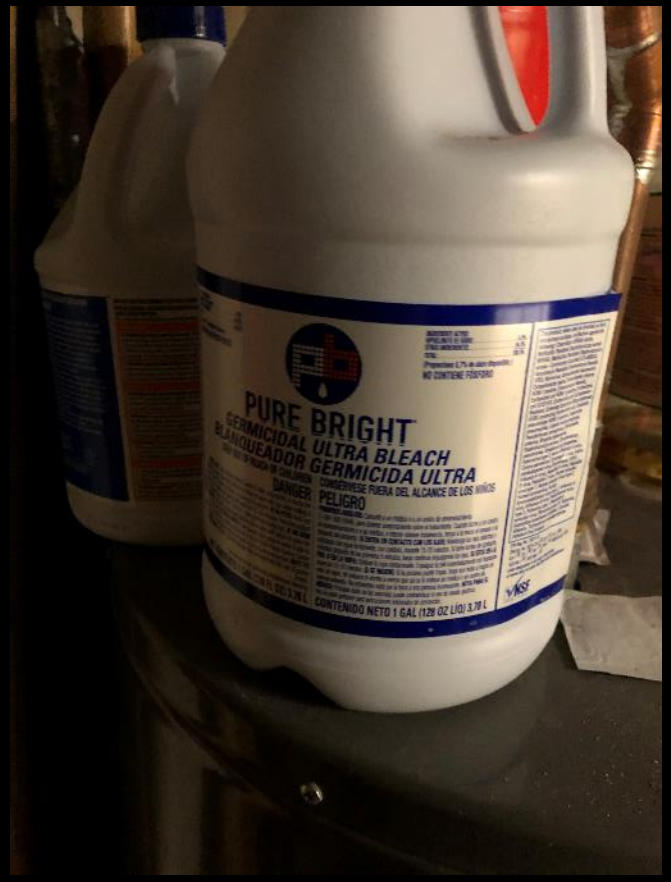
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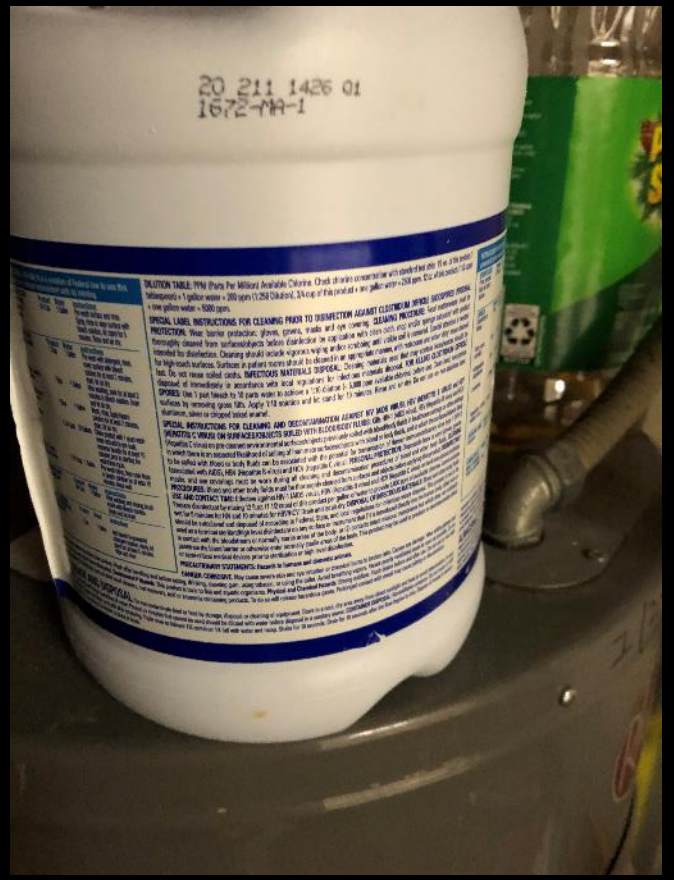
1st Floor South Bathrooms IMG_7332



1st Floor South Bathrooms IMG_7333



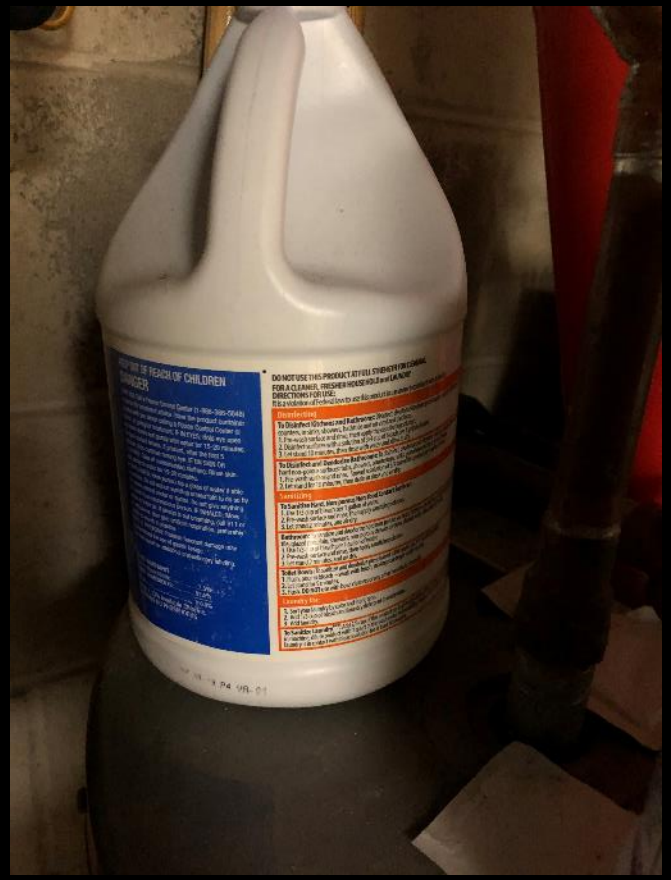
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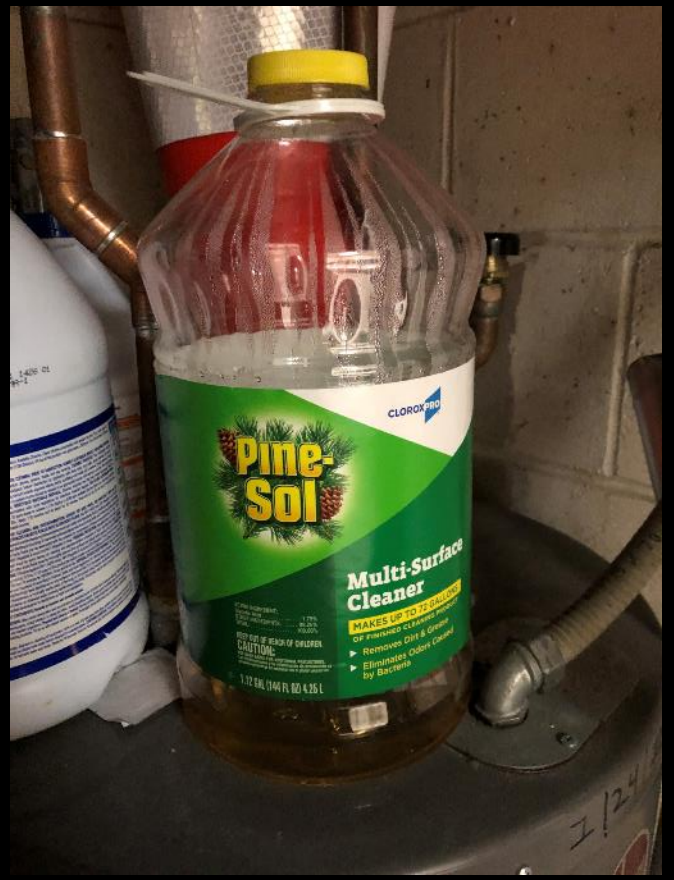
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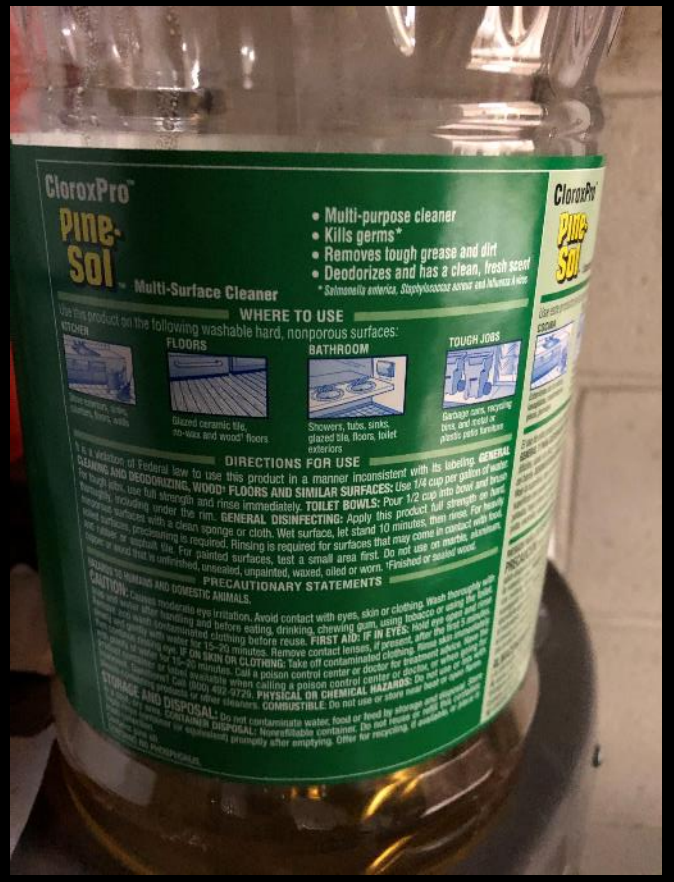
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1st Floor South Bathrooms IMG_7337



1st Floor South Bathrooms IMG_7338



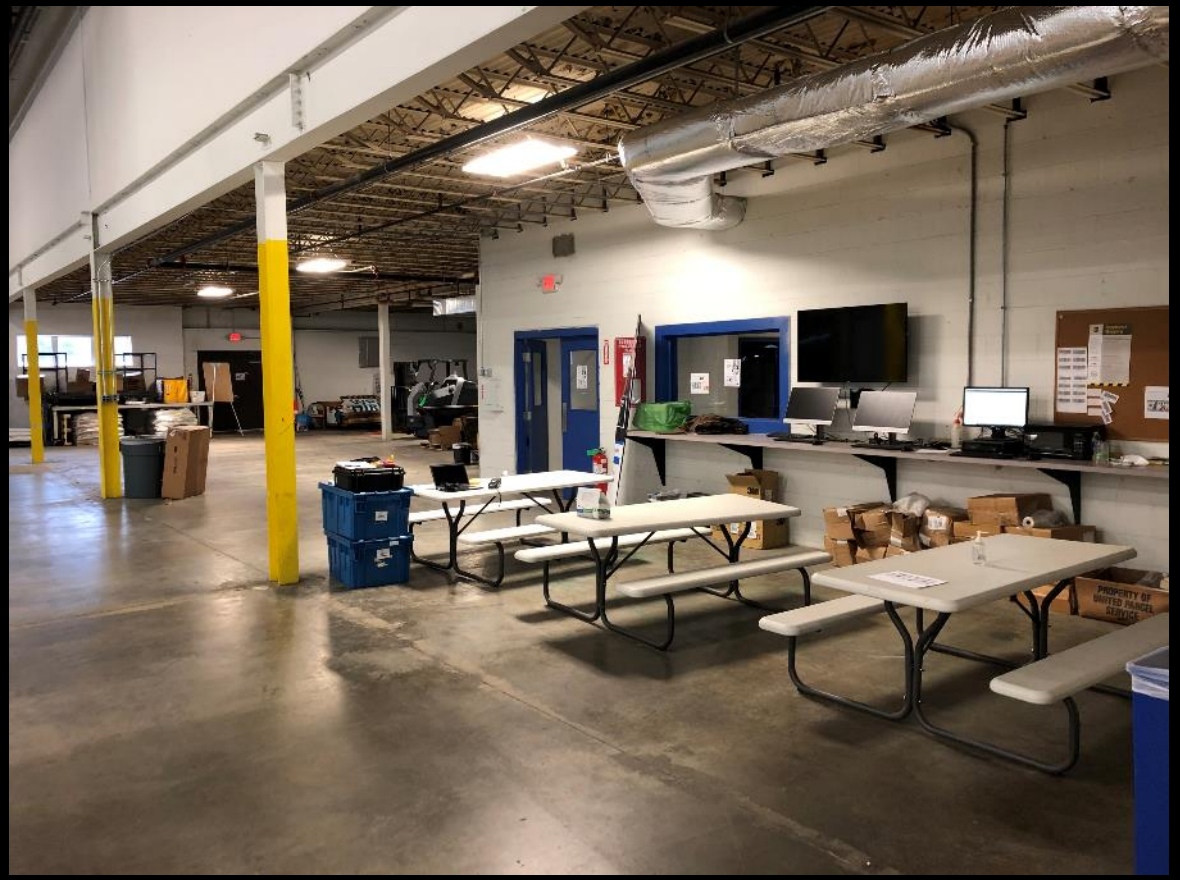
1st Floor South Bathrooms IMG_7339



1st Floor South Bathrooms IMG_7340



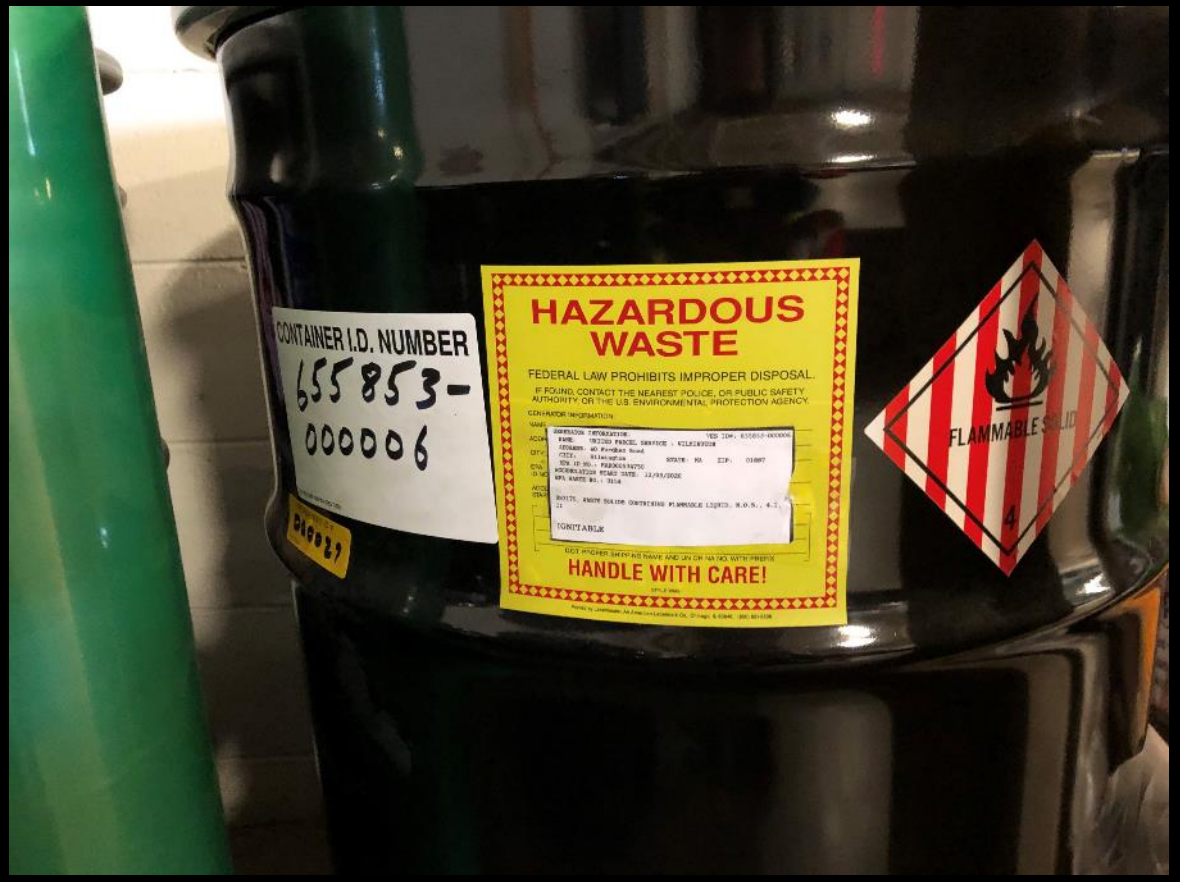
1st Floor South Bathrooms IMG_7341



1st Floor South Bathrooms IMG_7342



1st Floor Southeast Corner IMG_7263



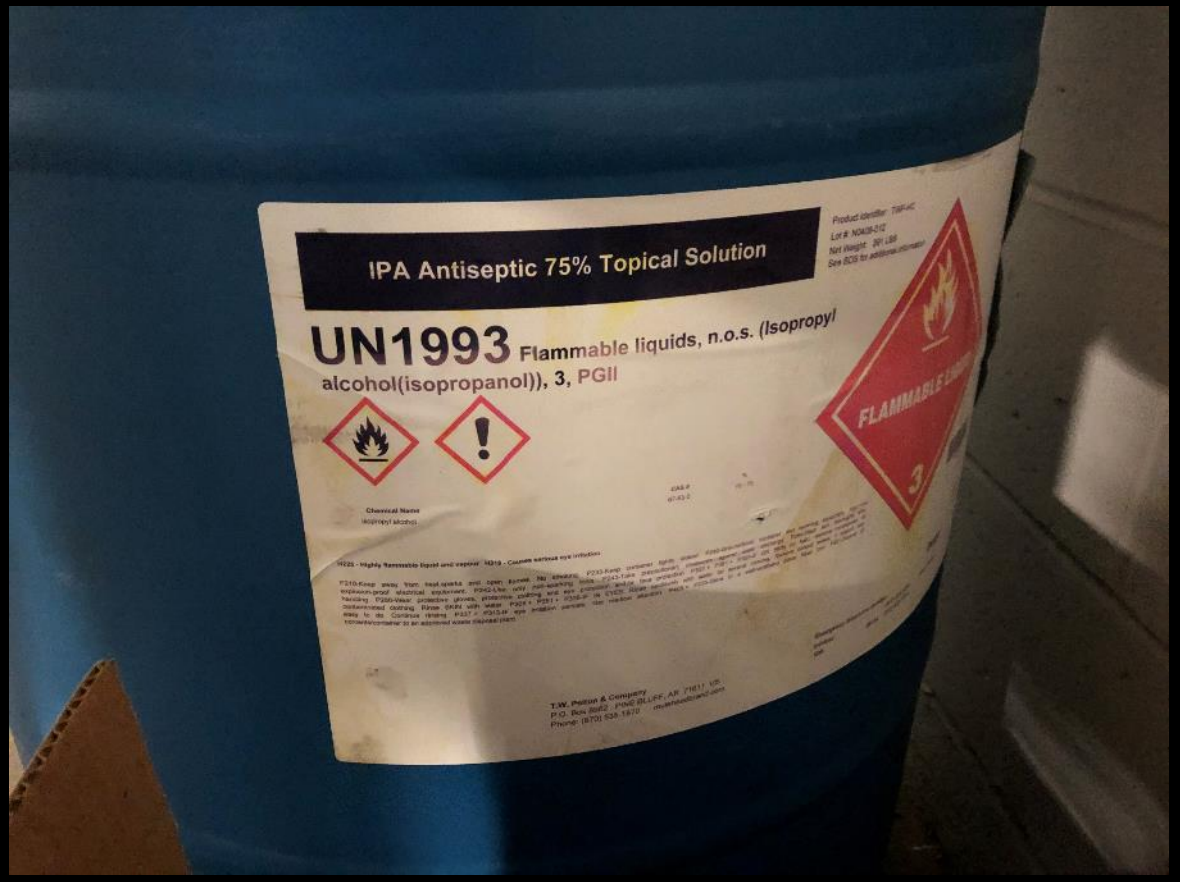
1st Floor Southeast Corner IMG_7264



1st Floor Southeast Corner IMG_7344



1st Floor Southeast Corner IMG_7345



1st Floor Southeast Corner IMG_7346



1st Floor Southeast Corner IMG_7347



1st Floor Southeast Corner IMG_7348



1st Floor Southeast Corner IMG_7349



1st Floor Southeast Corner IMG_7350



1st Floor Southeast Corner IMG_7351



1st Floor Southwest Corner IMG_7354



1st Floor Southwest Corner IMG_7355



1st Floor Southwest Corner IMG_7356



1st Floor Southwest Corner IMG_7357



1st Floor Southwest Corner IMG_7358



1st Floor Southwest Corner IMG_7359



1st Floor Southwest Corner IMG_7360



1st Floor Southwest Corner IMG_7361



1st Floor Southwest Corner IMG_7362



2nd Floor IMG_5313



2nd floor IMG_5314



2nd floor IMG_5315



2nd floor IMG_7293



2nd floor IMG_7294



2nd floor IMG_7295



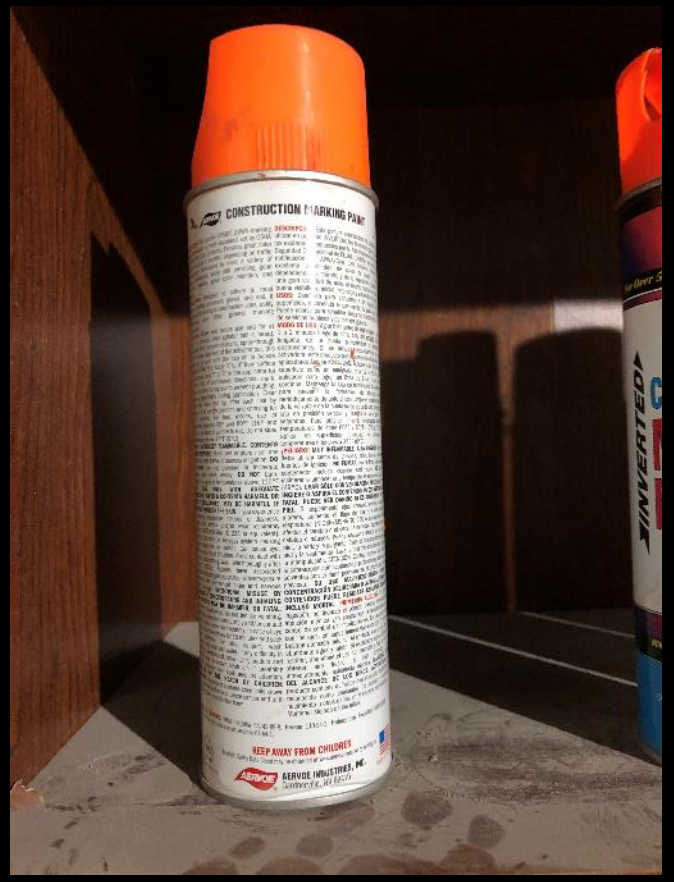
2nd floor IMG_7296



2nd floor IMG_7297



2nd floor IMG_7298



2nd floor IMG_7299



2nd floor IMG_7300



2nd floor IMG_7301



2nd floor IMG_7302



2nd floor IMG_7303



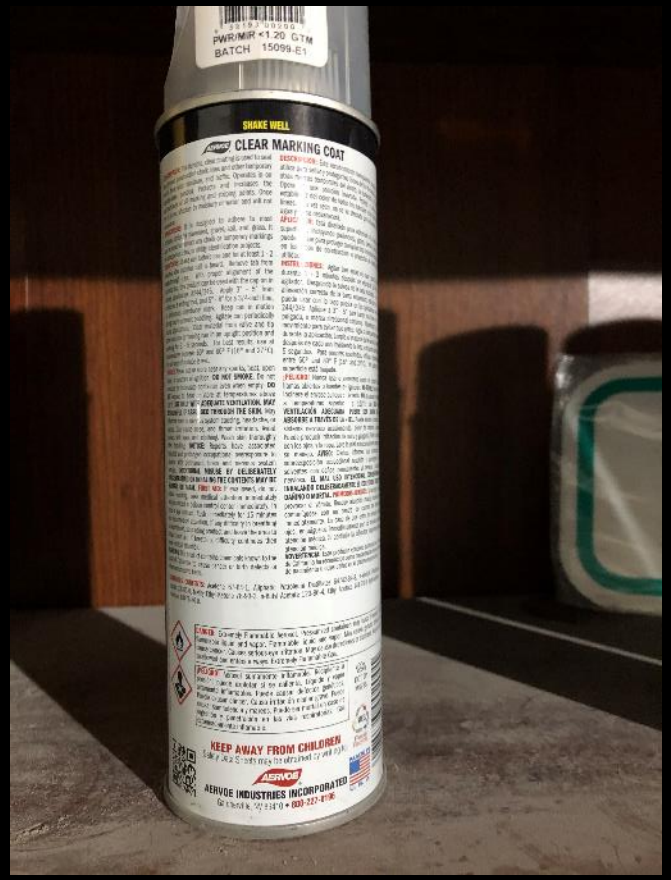
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2nd floor IMG_7305



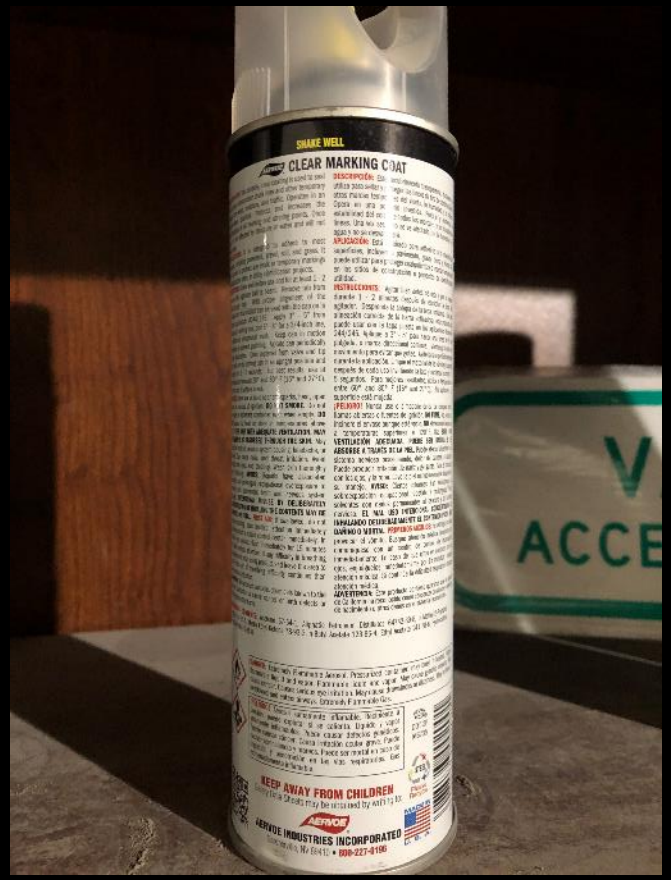
2nd floor IMG_7306



2nd floor IMG_7307



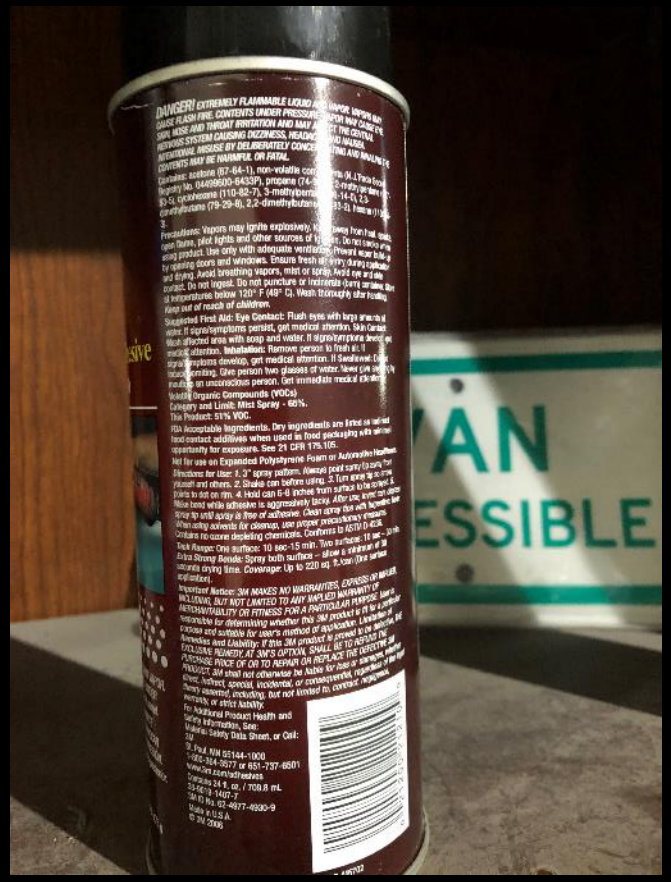
2nd floor IMG_7308



2nd floor IMG_7309



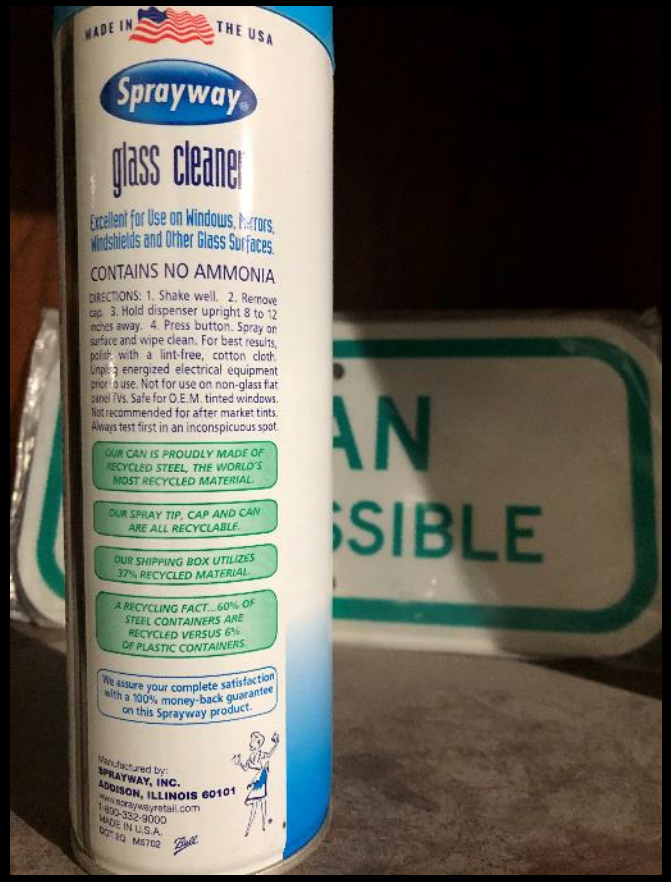
2nd floor IMG_7310



2nd floor IMG_7311



2nd floor IMG_7312



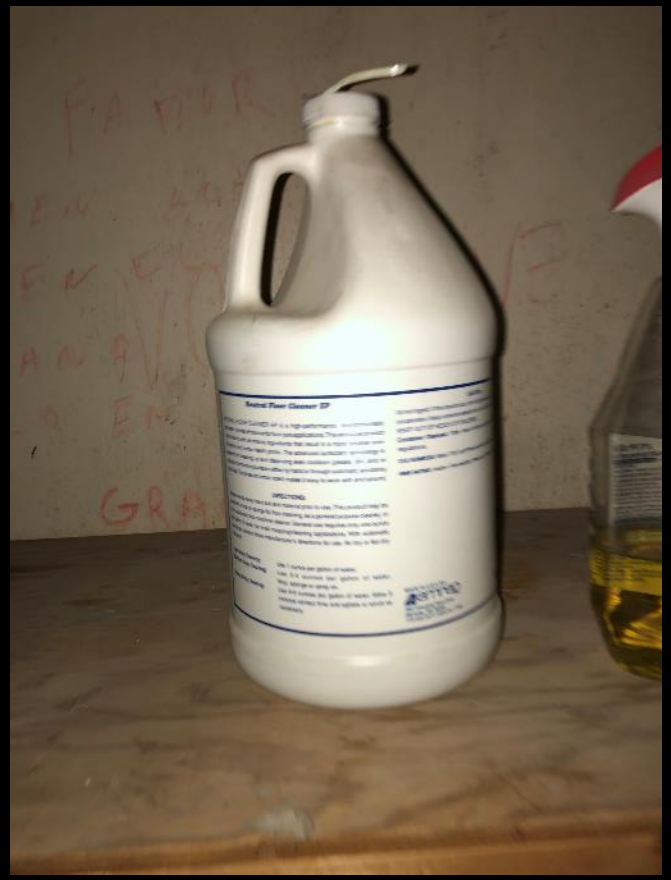
2nd floor IMG_7313



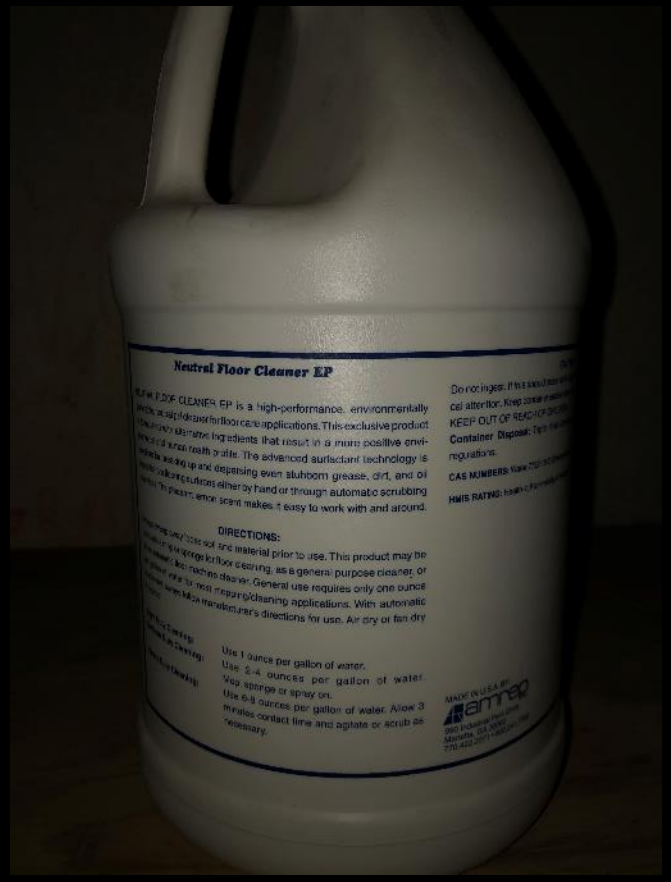
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2nd floor IMG_7316



2nd floor IMG_7317



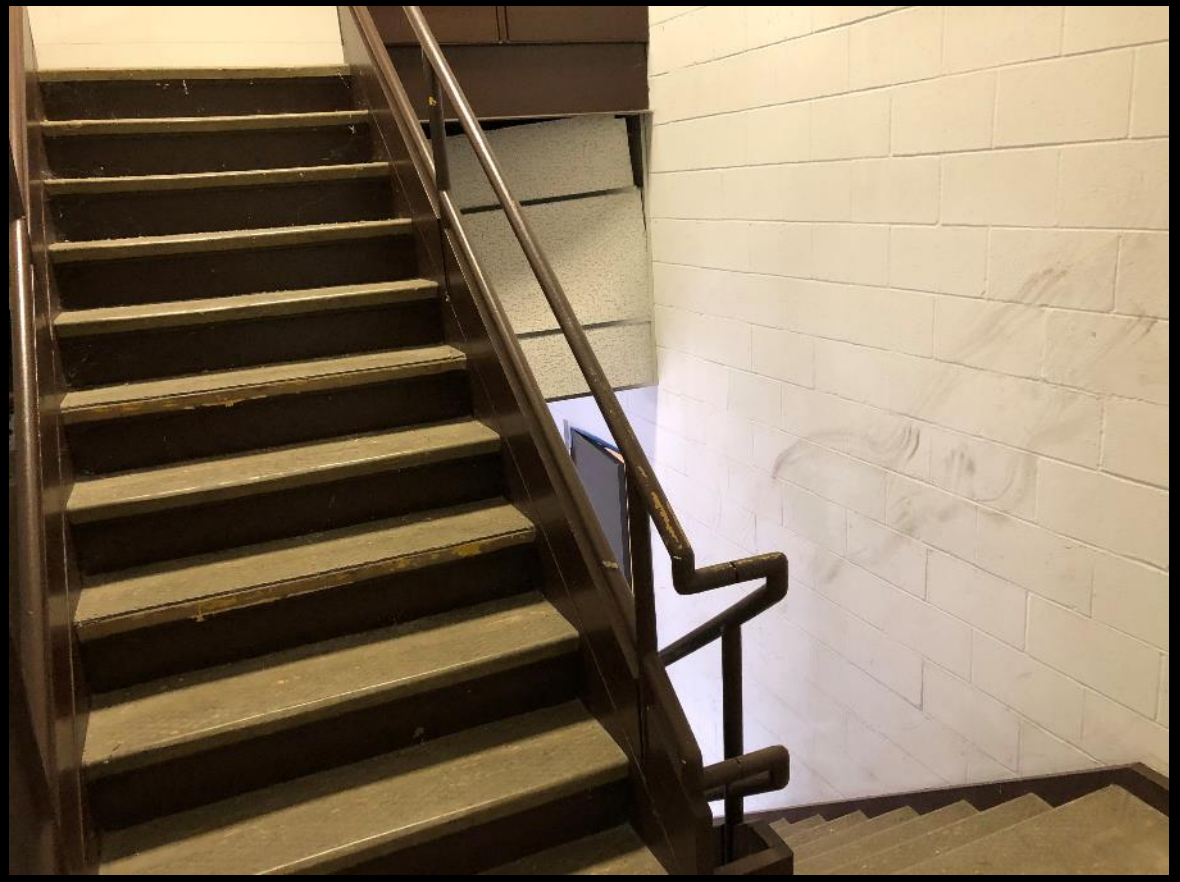
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2nd floor IMG_7319



2nd floor IMG_7320



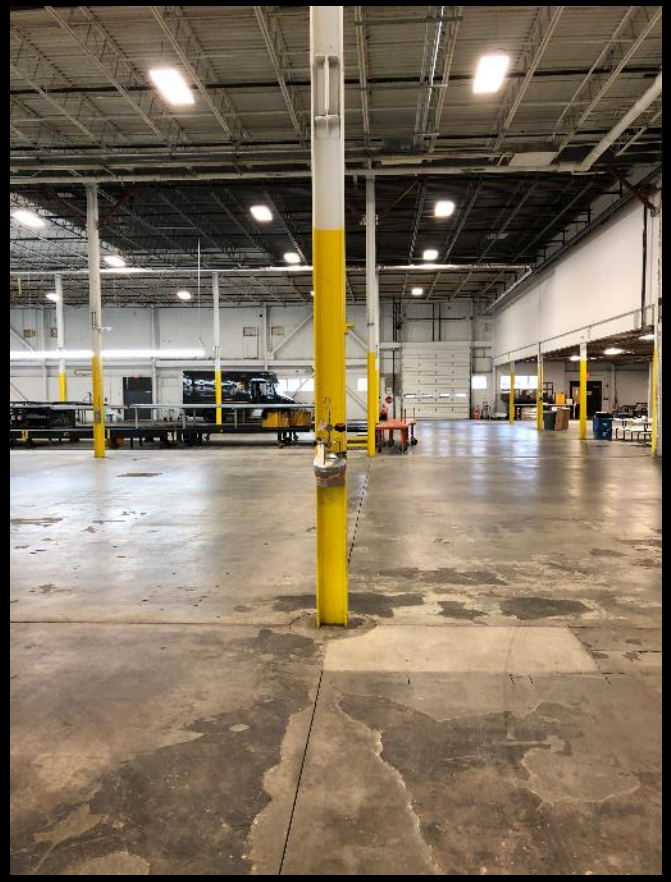
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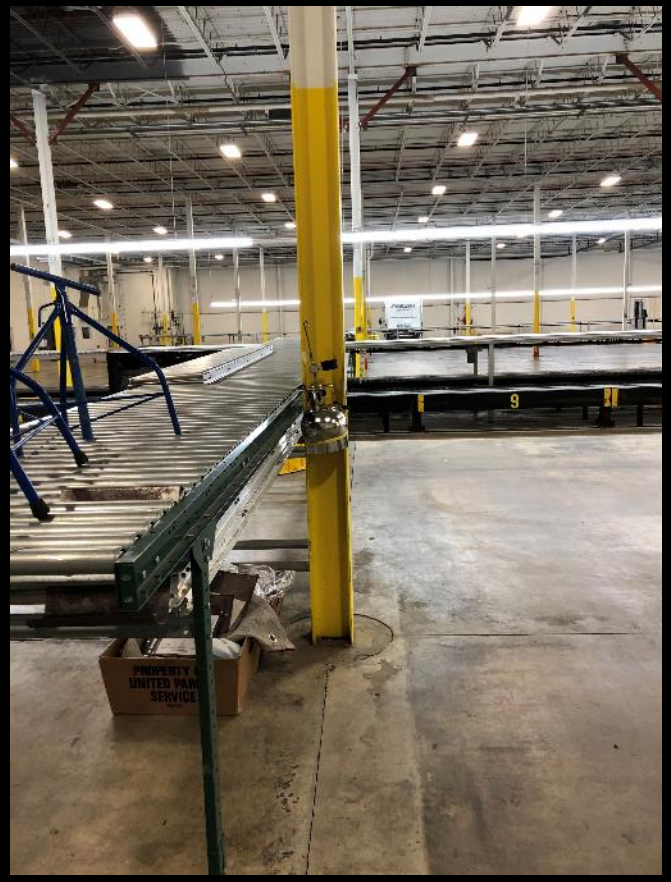
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IA-2_IMG_7287



IA-3_IMG_7288



IA-4_IMG_7289



IA-7_IMG_7290



IA-8_IMG_7291



IA-9_IMG_7292

APPENDIX E
ACTIVITY AND USE LIMITATION

NOTICE OF ACTIVITY AND USE LIMITATION
M.G.L. c. 21E, §6 and 310 CMR 40.0000

Note: Pursuant to 310 CMR 40.1074(5), upon transfer of any interest in or a right to use the property or a portion thereof that is subject to this Notice of Activity and Use Limitation, the Notice of Activity and Use Limitation shall be incorporated either in full or by reference into all future deeds, easements, mortgages, leases, licenses, occupancy agreements or any other instrument of transfer. Within 30 days of so incorporating the Notice of Activity and Use Limitation in a deed that is recorded or registered, a copy of such deed shall be submitted to the Department of Environmental Protection.

Disposal Site Name: 50 Fordham Road
DEP Release Tracking No.: 3-0000518

This Notice of Activity and Use Limitation ("Notice") is made as of this ____ day of _____, 2015, by Rosemarie Stanieich, Victoria J. Miyara, and Annette Maria Given as Trustees of the Wilmington Realty Trust, established by Declaration of Trust dated September 7, 1973, registered in the Middlesex North Registry District of the Land Court as Document No. 63541 and noted on Certificate of Title No. 19837 and registered further in the Middlesex South Registry of the Land Court as Document No. 515729 and noted on Certificate of Title No. 142138, together with their successors and assigns (collectively "Owner").

W I T N E S S E T H:

WHEREAS, the Wilmington Realty Trust, of Wilmington, Middlesex County, Massachusetts is the owner in fee simple of those certain parcels of land located at 40 and 50 Fordham Road in Wilmington, Middlesex County, Massachusetts, with the buildings and improvements thereon;

WHEREAS, said parcels of land, which are more particularly bounded and described in Exhibit A, attached hereto and made a part hereof ("Property"), are subject to this Notice of Activity and Use Limitation. The Property is shown on plans registered in the Middlesex County North Registry District of the Land Court as Land Court Plan Nos. 31713-C, 34588-B, 34588-E, and 36899-B, and in the Middlesex County South Registry District of the Land Court as Land Court Plan No. 31713-D;

WHEREAS, a portion of the Property ("Portion of the Property") is more specifically subject to this Notice of Activity and Use Limitation. This Portion of the Property is more particularly bounded and described in Exhibit A-1, attached hereto and made a part hereof. The Portion of the Property is shown on a sketch plan attached hereto and filed herewith for registration;

WHEREAS, the Portion of the Property comprises part of a disposal site as the result of a release of oil and/or hazardous materials. Exhibit B is a sketch plan showing the relationship of the Portion of the Property subject to this Notice of Activity and Use Limitation to the boundaries of said disposal site existing within the limits of the Property and to the extent such boundaries have been established. Exhibit B is attached hereto and made a part hereof; and

WHEREAS, one or more response actions have been selected for the Portion of the Disposal Site in accordance with M.G.L. c.21E ("Chapter 21E") and the Massachusetts Contingency Plan, 310 CMR 40.0000 ("MCP"). Said response actions are based upon (a) the restriction of human access to and contact with oil and/or hazardous material in soil and/or groundwater, and (b) the restriction of certain activities occurring in, on, through, over or under the Portion of the Property. A description of the basis for such restrictions, and the oil and/or hazardous material release event(s) or site history that resulted in the contaminated media subject to the Notice of Activity and Use Limitation is attached hereto as Exhibit C and made part hereof.

NOW, THEREFORE, Notice is hereby given that the activity and use limitations set forth in this Notice of Activity and Use Limitation are as follows:

1. Activities and Uses Consistent with Maintaining No Substantial Hazard Conditions. The following Activities and Uses are consistent with maintaining a condition of No Substantial Hazard and, as such, may occur on the Portion of the Property pursuant to 310 CMR 40.0000:

i. Industrial and commercial uses;

ii. Such other activities which, in the Opinion of a Licensed Site Professional, shall present no greater risk of harm to health, safety public welfare or the environment than the activities and uses set forth in this Paragraph; and

iii. Such other activities and uses not identified in Paragraph 2 as being Activities and Uses inconsistent with maintaining No Substantial Hazard Conditions.

2. Activities and Uses Inconsistent with Maintaining No Substantial Hazard. The following Activities and Uses are inconsistent with maintaining a condition of No Substantial Hazard pursuant to 310 CMR 40.0000, and, as such, may not occur on the Portion of the Property:

i. Residential, school, playground, park, or daycare use; and

ii. In the area as defined by the Activity and Use Limitation ("AUL") boundary presented in Figure 1 of the Activity and Use Limitation Opinion annexed hereto as Exhibit C, activities that would result in exposure to or the disturbance of potentially contaminated soils, bedrock, groundwater, and indoor air, unless appropriate precautions to prevent human exposure are taken as described in paragraph 3 below.

3. Obligations and Conditions. The following obligations or conditions are necessary and shall be undertaken and/or maintained at the Portion of the Property to maintain a condition of No Substantial Hazard:

i. The concrete floors within the footprint of the AUL boundary, if present, must be maintained in a condition that will prevent potential exposure to potentially contaminated soil, groundwater, and soil gas. Interior building floors will be inspected annually with repairs made to seal cracks larger than one-fourth (1/4) inch in width. The penetration of and the subsequent repairs made to the concrete floor of any buildings within the AUL boundary will be evaluated by a Licensed Site Professional to maintain the safety of construction and on-site workers.

ii. Excavated soil and bedrock removed from the AUL area must be managed in accordance with the Soil Management Procedures pursuant to 310 CMR 40.0030.

a. If the soils and bedrock are suspected or are pre-determined by a Licensed Site Professional to be Remediation Waste as defined under 310 CMR 40.0006, then the soils and bedrock will be managed under a Release Abatement Measure ("RAM") set forth by the MCP at 310 CMR 40.0440, as determined by a Licensed Site Professional.

b. If the excavated soils and bedrock from the AUL area are determined not to be Remediation Waste, then they will be managed under a RAM or in accordance with the Similar Soils Provisions Guidance, WSC#-13-500, as determined by a Licensed Site Professional.

iii. If groundwater dewatering activities are required within the AUL area, then the groundwater will be managed appropriately as described here:

a. If the groundwater is determined to be a Remediation Waste, then it will be managed under a Release Abatement Measure ("RAM") set forth by the MCP at 310 CMR 40.0440, as determined by a Licensed Site Professional.

b. If the groundwater removed from the AUL area is not determined to be a Remediation Waste, then other appropriate options may be used to manage the water as determined by a Licensed Site Professional.

iv. Activities that could result in exposure to or the disturbance of soils, bedrock or groundwater in the AUL area, must be conducted in accordance with the performance standards for RAMs set forth by the MCP at 310 CMR 40.0440, the Soil Management Procedures pursuant to 310 CMR 40.0030, the Similar Soils Provisions Guidance (WSC#-13-500), Construction of Buildings in Contaminated Areas (Policy WSC#-00-425) and applicable Health and Safety

procedures outlined in 310 CMR 40.0018, as determined by a Licensed Site Professional.

4. Proposed Changes in Activities and Uses. Any proposed changes in activities and uses at the Portion of the Property which may result in higher levels of exposure to oil and/or hazardous material than currently exist shall be evaluated by a Licensed Site Professional who shall render an Opinion, in accordance with 310 CMR 40.1080 *et seq.*, as to whether the proposed changes are inconsistent with maintaining a condition of No Substantial Hazard. Any and all requirements set forth in the Opinion to meet the objective of this Notice shall be satisfied before any such activity or use is commenced.

5. Violation of the AUL. The activities, uses and/or exposures upon which this Notice is based shall not change at any time to cause a significant risk of harm to health, safety, public welfare, or the environment or to create substantial hazards due to exposure to oil and/or hazardous material without the prior evaluation by a Licensed Site Professional in accordance with 310 CMR 40.1080, and without additional response actions, if necessary, to maintain a condition of No Substantial Hazard.

If the activities, uses, and/or exposures upon which this Notice is based change without the prior evaluation and additional response actions determined to be necessary by a Licensed Site Professional in accordance with 310 CMR 40.1080, the owner or operator of the Portion of the Property subject to this Notice at the time the activities, uses and/or exposures change, shall comply with the requirements set forth in 310 CMR 40.0020.

6. Incorporation Into Deeds, Mortgages, Leases, and Instruments of Transfer. This Notice shall be incorporated either in full or by reference into all future deeds, easements, mortgages, leases, licenses, occupancy agreements or any other instrument of transfer, whereby an interest in and/or a right to use the Property or a portion thereof is conveyed in accordance with 310 CMR 40.1074(5).

Owner herby authorizes and consents to the filing and recordation and/or registration of this Notice, said Notice to become effective when executed under seal by the undersigned Licensed Site Professional, and recorded and/or registered with the appropriate Registry(ies) of Deeds and/or Land Registration Office(s).

[Remainder of Page Intentionally Left Blank]

WITNESS the execution hereof under seal this 13th day of July, 2015.

Owner
Rosemarie Stanieich, as
Trustee of the Wilmington Realty Trust

COMMONWEALTH OF MASSACHUSETTS

Middlesex, ss July 13, 2015

On this 13th day of July, 2015, before me, the undersigned notary public, personally appeared Rosemarie Stanieich (name of document signer), proved to me through satisfactory evidence of identification, which were a Driver's License, to be the person whose name is signed on the preceding or attached document, and acknowledged to me that she signed it voluntarily for its stated purpose as trustee for Wilmington Realty Trust.

Notary Public:
My Commission Expires: 12-26-2019

ALEXANDRA DANILOV
Notary Public
COMMONWEALTH OF MASSACHUSETTS
My Commission Expires
December 26, 2019

WITNESS the execution hereof under seal this 14th day of July, 2015

Owner
Victoria J. Miyara, as
Trustee of the Wilmington Realty Trust

~~COMMONWEALTH OF MASSACHUSETTS~~
State of New Hampshire

Merrimack, ss July 14, 2015

On this 14th day of July, 2015 before me, the undersigned notary public, personally appeared Victoria J. Miyara (name of document signer), proved to me through satisfactory evidence of identification, which were Florida Drivers Lic to be the person whose name is signed on the preceding or attached document, and acknowledged to me that she signed it voluntarily for its stated purpose as trustee for Wilmington Realty Trust

Notary Public:
My Commission Expires: 8-22-17

RHONDA L. ROLLINS
STATE OF
MY
COMMISSION
EXPIRES
AUGUST 22,
2017
NEW HAMPSHIRE
NOTARY PUBLIC

WITNESS the execution hereof under seal this 13th day of July, 2015

Owner
Annette Maria Given, as
Trustee of the Wilmington Realty Trust

COMMONWEALTH OF MASSACHUSETTS

Middlesex, ss July 13, 2015

On this 13th day of July, 2015 before me, the undersigned notary public, personally appeared Annette Maria Given (name of document signer), proved to me through satisfactory evidence of identification, which were Drivers License, to be the person whose name is signed on the preceding or attached document, and acknowledged to me that she signed it voluntarily for its stated purpose as trustee for Wilmington Realty Trust

Notary Public:
My Commission Expires: 12-26-19

ALEXANDRA DANILOV
Notary Public
COMMONWEALTH OF MASSACHUSETTS
My Commission Expires
December 26, 2019

The undersigned Licensed Site Professional hereby certifies that in his Opinion this Notice of Activity and Use Limitation is consistent with maintaining a condition of No Substantial Hazard.

Date: _____

_____
Daniel W. Folan, PhD, PG, LSP, LEP
Licensed Site Professional Seal

COMMONWEALTH OF MASSACHUSETTS

_____,ss _____, 2015

On this ____ day of _____, 20__, before me, the undersigned notary public, personally appeared _____ (name of document signer), proved to me through satisfactory evidence of identification, which were _____, to be the person whose name is signed on the preceding or attached document, and acknowledged to me that he signed it voluntarily for its stated purpose.

_____
Notary Public:
My Commission Expires:

Upon recording, return to:

Ronald Dardeno, Esq.
Law Offices of Frank N. Dardeno LLP
424 Broadway
Somerville, MA 02145-2619

and

Beth M. Kramer, Esq.
Associate General Counsel -- Energy,
Environment, Safety & Health
Lockheed Martin Corporation
6801 Rockledge Drive
Bethesda, MD 20817

EXHIBIT A

DESCRIPTION OF PROPERTY SUBJECT TO THE AUL

LEGAL DESCRIPTION

LOT 4 and LOT 6

Two (2) certain parcels of land located in the Town of Wilmington, County of Middlesex, Massachusetts; said two (2) parcels of land located easterly of Fordham Road, in Wilmington, Massachusetts; and said two (2) parcels of land shown as Lot 4 and Lot 6 on "Plan of land in Wilmington, Mass." dated February 28, 1978, Dana F. Perkins & Assoc., Inc., Civil Engineers and Surveyors, Reading-Lowell, Massachusetts; which plan is filed in Middlesex North Registry District of the Land Court, as Plan No. 36899-B.

The said two (2) parcels of land are bounded and described as follows:

LOT 4 as shown on said plan.

NORTHWESTERLY:	by land now or formerly of Carl Realty, Inc., seven hundred thirty-one and 40/100 (731.40) feet;
NORTHEASTERLY:	by Lot 6 as shown on said plan, two hundred seventy-five and 02/100 (275.02) feet;
EASTERLY:	by Lot 3 as shown on said plan, ninety-two and 44/100 (92.44) feet; and
SOUTHEASTERLY:	by land now or formerly of George E. Dunn, along the Town Line dividing Wilmington and North Reading, seven hundred fifty-five and 87/100 (755.87) feet; and
SOUTHWESTERLY:	by land now or formerly of South Mass. Land Developers, Inc., two hundred thirty and 27/100 (230.27) feet.

LOT 6 as shown on said plan.

NORTHWESTERLY:	by land now or formerly of Carl Realty, Inc., two hundred ninety-seven and 00/100 (297) feet;
SOUTHEASTERLY:	by Lot 5 as shown on said plan, four hundred thirty-five and 67/100 (435.67) feet; and
NORTHEASTERLY:	by Lot 4 as shown on said plan, two hundred seventy-five and 02/100 (275.02) feet.

For title of Trustees of THE WILMINGTON REALTY TRUST to said Lot 4 and Lot 6, see Middlesex North Registry District of the Land Court, Certificate of Title No. 19842, recorded in Registration Book 102, Page 83.

LOT 7

A certain parcel of land, located in the Town of Wilmington, County of Middlesex, Commonwealth of Massachusetts, said parcel shown as Lot 7 upon a plan entitled "Plan of Land in NORTH READING & WILMINGTON, MASS.", dated September 21, 1983, DANA F. PERKINS and Assoc., Inc., Civil Engineers and Surveyors, and filed with the Engineering Division of the Land Court of Massachusetts as Plan 31713^{C} and Plan 31713^{D} bounded and described as follows:

NORTHWESTERLY	by the Northeasterly line of Fordham Road, eighty-four and 60/100 (84.60) feet;
NORTHWESTERLY	by a radius 1081.41 along the Northeasterly line of Fordham Road, six hundred fifty-nine and 84/100 (659.84) feet;
NORTHERLY	by the Northeasterly line of Fordham Road, two hundred (200) feet;
NORTHEASTERLY	by lands shown on said Plan as "Lot 30", six hundred twenty-one and 74/100 (621.74) feet;
NORTHERLY	by lands shown on said Plan as "Lot 30", ninety-two and 55/100 (92.55) feet;
NORTHEASTERLY	by lands shown on said Plan as "Lot 30", two hundred thirty and 29/100 (230.29) feet;
SOUTHWESTERLY	by the Town Line between Wilmington and North Reading, as shown on said plan, nine hundred seven and 9/100 (907.9) feet;
WESTERLY	by Lot 8, as shown on said Plan, eighty-eight and 69/100 (88.69) feet;
SOUTHEASTERLY	by Lot 8, as shown on said Plan, eighty (80) feet; and
SOUTHWESTERLY	by Lot 8 as shown on said Plan, two hundred fifty-five (255) feet.

Said Lot 7, all within the Town of Wilmington, comprises 12.63 acres, more or less, (549,973 square feet of land, more or less), as shown on said plan.

Said Lot 7 is a subdivision of certain lots, title to which is registered in the Land Registration Office, North Registry District of Middlesex County, and as follows:

- of Lot 31, as shown on Plan No. 34588-C (Certificate of Title No. 19837); Book 102-73

- ~~of Lot 35, as shown on Plan No. 34588-A (Certificate of Title No. 19841);~~ and

- of ~~Lots 4~~ 2 & 4, as shown on Plan No. 31713-A (Certificate of Title No. 19838), Book 102-75

For

LOT 10

A certain parcel of land, located in the Town of North Reading, County of Middlesex, Commonwealth of Massachusetts, said parcel shown as Lot 10 upon a plan entitled "Plan of Land in NORTH READING & WILMINGTON, MASS.", dated September 21, 1983, DANA F. PERKINS and Assoc., Inc., Civil Engineers and Surveyors, and filed with the Engineering Division of the Land Court of Massachusetts as Plan 31713C and Plan 31713D bounded and described as follows:

NORTHERLY	by the Town Line between North Reading and Wilmington, as shown on said Plan, nine hundred seven and 09/100 (907.09) feet;
NORTHWESTERLY	by land shown on said Plan as "Town of North Reading", ninety-eight and 43/100 (98.43) feet;
SOUTHEASTERLY	by Lot 9, as shown on said Plan, four hundred twenty-three and 16/100 (423.16) feet;
SOUTHWESTERLY	by Lot 9, as shown on said Plan, one hundred ten and 41/100 (110.41) feet;
SOUTHEASTERLY	by Lot 9, as shown on said Plan, three hundred ninety and 49/100 (390.49) feet; and
SOUTHWESTELRY	by Lot 9, as shown on said Plan, two hundred forty-eight and 36/100 (248.36) feet.

Said Lot 10, all within the town of North Reading, comprises 3.91 acres of land, more or less (170,477) square feet of land, more or less), as shown on said Plan.

Said Lot 10 is a subdivision of certain lots, title to which is registered in the Land Registration Office, South Registry District of Middlesex County, and as follows:

~~- of Lot 26, as shown on Plan No. 31508-A (Certificate of Title No. 142137)~~; and

Ø of Lot 6, as shown on Plan No. 31713-B (Certificate of Title No. 142138), Bk. 840-188

LOT 30

That certain parcel of land situate in Wilmington, County of Middlesex, Commonwealth of Massachusetts bounded and described as follows:

SOUTHWESTERLY	by the Northeasterly line of Fordham Road, two hundred fifty (250) feet;
NORTHWESTERLY	by land now or formerly of Carl Realty, Inc., six hundred seventy-two and 36/100 (672.36) feet;
EASTERLY	by land now or formerly of So. Mass. Land Developers, Inc., two hundred fifty-five and 07/100 (255.07) feet; and
SOUTHEASTERLY	by land now or formerly of Carl Realty, Inc., six hundred twenty-one and 74/100 (621.74) feet.

All of said boundaries are determined by the Land Court to be located as shown on subdivision plan 34588-B, drawn by Dana F. Perkins & Sons, Inc., Surveyors, dated April 9, 1968, as approved by the Court, filed in the Land Registration Office, a copy of a portion of which is filed with Certificate of title 16261, and said land is shown as Lot thirty (30) on said plan.

Being the same premises evidenced by Certificate of Title No. 19839 (Middlesex North Registry District). Bk. 702-77

LOT 33

That certain parcel of land situate in Wilmington, in the County of Middlesex Commonwealth of Massachusetts, bounded and described as follows:

WESTERLY	by the Easterly line of Fordham Rd. by several lines measuring together, eleven hundred eighty-seven and 97/100 (1,187.97) feet;
NORTHEASTERLY	by land now or formerly of Carl Realty, Inc., five hundred thirty-two and 01/100 (532.01) feet;
NORTHEASTERLY	again by land now or formerly of Max Siegel et al, two hundred ninety-seven (297) feet;
EASTERLY	by land now or formerly of So. Mass. Land Developers, Inc., five hundred ninety-nine and 28/100 (599.28) feet; and
SOUTHEASTERLY	by Lot 30, six hundred seventy-two and 36/100 (672.36) feet.

All of said boundaries are determined by the Land Court to be located as shown on subdivision plan 34588-E, drawn by Dana F. Perkins and Sons, Inc., Surveyors, dated January 27, 1969, as approved by the Court, filed in the Land Registration Office, a copy of a portion of which is filed with Certificate of Title 16620, and said land is shown as Lot thirty-three (33) on said plan.

Being the same premises evidenced by Certificate of Title No. 19840 (Middlesex North Registry District). Bk. 702-77

THE ABOVE DESCRIPTIONS ARE TAKEN FROM LAND COURT RECORD DOCUMENT NUMBER 172247 NORTH MIDDLESEX COUNTY

Raymond P. Shea
Massachusetts PLS No. 33192
Holden Engineering & Surveying, Inc.

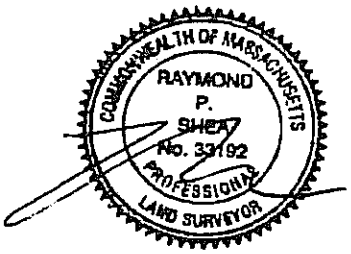


EXHIBIT A-1

LEGAL DESCRIPTION OF PORTION OF PROPERTY SUBJECT TO AUL

AUL BOUNDARY LEGAL DESCRIPTION

Beginning at a stone bound on the easterly sideline of Fordham Road at the northwest corner of lot ID 91-131 Lot 7 and the southwest corner of lot ID 91-131A Lot 30 and the point of beginning of the AUL Boundary, thence along the easterly sideline of Fordham Road North 11° 54' 17" West 285.10 feet past the northwest corner of lot ID 91-131 Lot 30 to lot ID 91-131A Lot 33, thence over lot ID 91-131A Lot 33 North 81° 02' 45" East 443.90 feet, thence over lot ID 91-131A Lot 33, North 16° 31' 27" West 142.97 feet, thence over lot ID 91-131A Lot 33, North 75° 45' 44" East 108.12 feet, thence over lot ID 91-131A Lot 33, North 01° 02' 35" West 85.99 feet, thence over lot ID 91-131A Lot 33, and lot ID 99-1 Lot 4 North 78° 32' 00" East 334.19 feet, thence over lot ID 99-1 Lot 4 South 07° 25' 18" East 335.96 feet, thence over lot ID 99-1 Lot 4 and lot ID 213-212 Lot 10 and along lot ID 213-2-11 South 12° 48' 00" East 847.35 feet, to the southeast corner of the AUL Boundary and southeast corner of lot ID 91-131 Lot 7 at land of lot ID 213-2-11 thence along lot ID 213-2-11 South 72° 23' 59" West 293.36 feet, thence along lot ID 213-2-11 South 63° 19' 49" West 26.31 feet, thence along lot ID 213-2-11 South 63° 19' 49" West 88.69 feet, thence along lot ID 213-2-11 South 25° 37' 41" East 80.00 feet, thence along lot ID 213-2-11 South 64° 22' 25" West 255.00 feet to the southwesterly corner of the AUL Boundary and southwesterly corner of lot ID 91-131 Lot 7 at the easterly sideline of Fordham Road, thence along the easterly sideline of Fordham Road North 48° 17' 49" West 84.60 feet to a point of curvature, thence along the easterly sideline of Fordham Road having a curve to the right having a Radius of 1081.41 feet and a length of 659.84 feet and a chord bearing of North 29° 23' 07" West 649.65 feet to the point of tangency, thence along the easterly sideline of Fordham Road North 11° 54' 17" West 200.00 feet to the point of beginning.

Containing 970,499 Square Feet or 22.280 Acres

Raymond P. Shea
Massachusetts PLS No. 33192
Holden Engineering & Surveying, Inc.

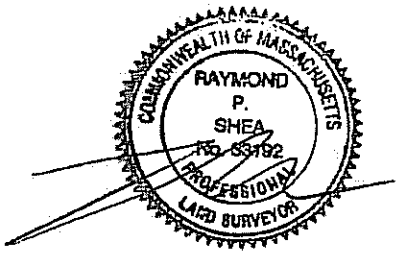
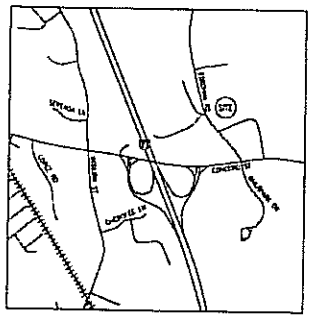


EXHIBIT A-2

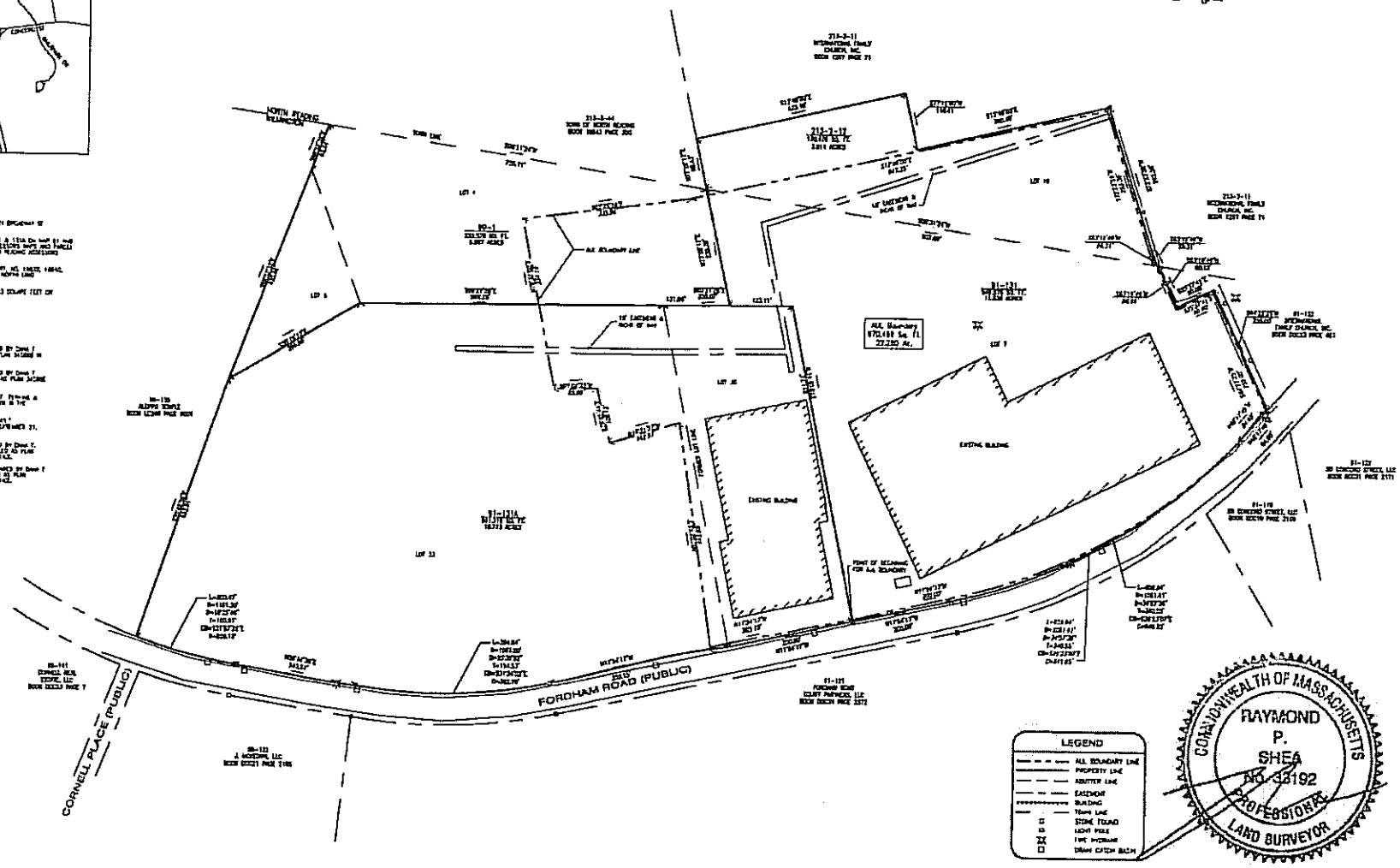
PLAN OF THE PORTION OF THE PROPERTY SPECIFICALLY SUBJECT TO THE AUL PREPARED BY REGISTERED LAND SURVEYOR



VICINITY MAP

NOTES:

PLAN REFERENCES:



HOLDEN ENGINEERING & SURVEYING, Inc.

AUL BOUNDARY PLAN
ROSEMARIE STANIEICH
NORTH READING/WILMINGTON, MA

Date	Revisions	By	Ck
5/21/15	CLIENT COMMENTS	PV	RV
5/27/15	CLIENT COMMENTS	PV	RV

Book | Page

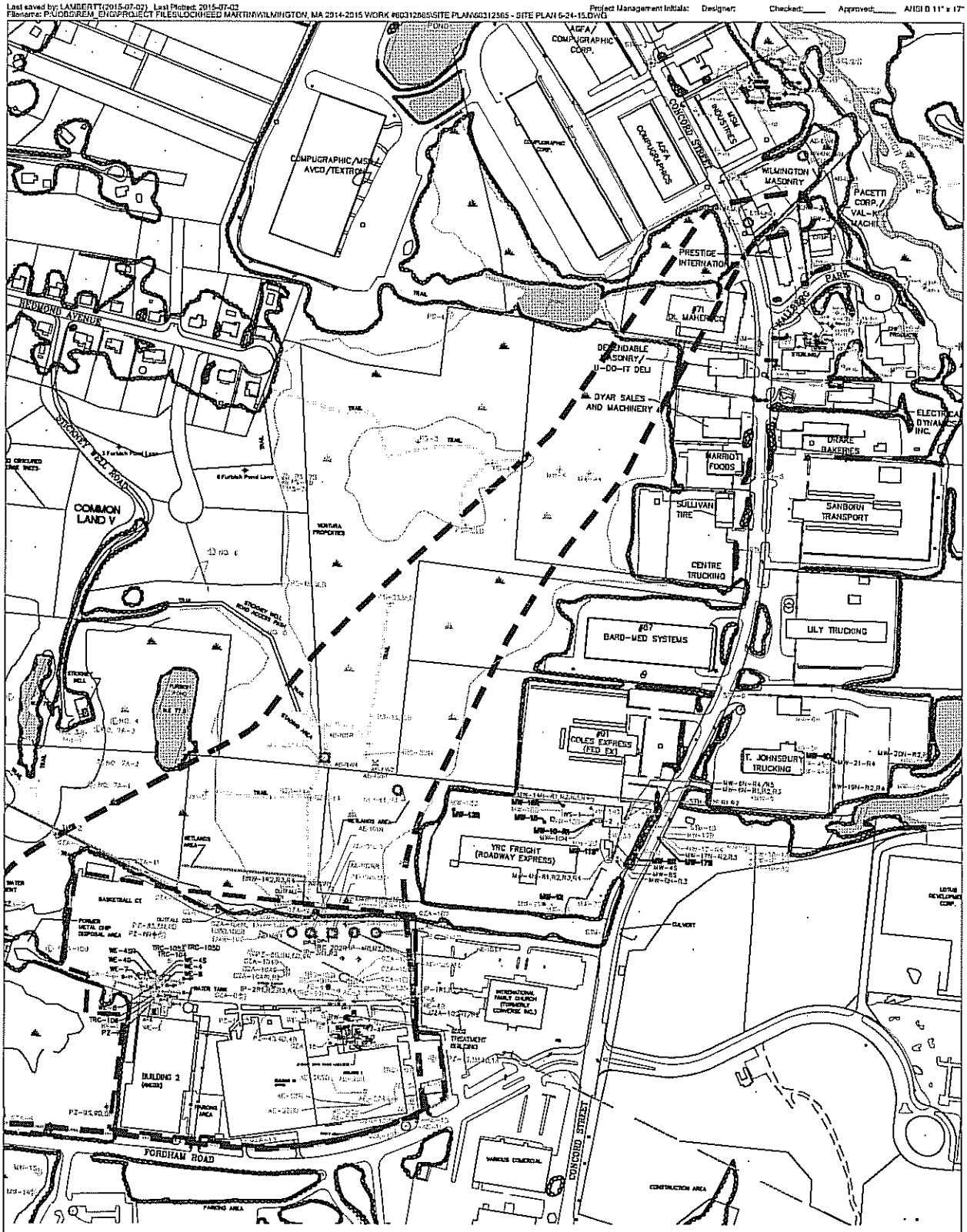
Date: 05/04/2015
Scale: 1" = 100'
Dr. By: SPG By: DJ
Job No. 1320358
Sheet no 1 of 1

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EXHIBIT B

RELATIONSHIP OF THE PORTION OF THE PROPERTY SUBJECT TO THE AUL TO THE BOUNDARIES OF THE DISPOSAL SITE (Sketch Plan)

Last saved by: LAMBERTT(2015-07-02) Last Plotted: 2015-07-02 Project Management Initials: Designed: Checked:____ Approved:____ ANSI B 11" x 17"
Filename: P:\JOBS\REM_ENG\PROJECT FILES\LOCKHEED MARTIN\WILMINGTON, MA 2014-2015 WORK #60312865\SITE PLAN\60312565 - SITE PLAN 6-24-15.DWG



WORKPLAN
#50 FORDHAM ROAD, WILMINGTON, MA
Lockheed Martin
60312865 2015-07-01

SKETCH PLAN

AECOM

EXHIBIT B

EXHIBIT C

ACTIVITY AND USE LIMITATION OPINION

EXHIBIT C - ACTIVITY AND USE LIMITATION OPINION

Purpose of the AUL

This Notice of Activity and Use Limitation ("AUL") provides notice to current and future interest holders of the property commonly known as 50 Fordham Road (including the addresses of 40 and 50 Fordham Road), Wilmington, Massachusetts (the "Property") of residual contamination remaining at the Property. It should be noted that this AUL is being used voluntarily, in accordance with Section 40.1012(3)(h) of the Massachusetts Contingency Plan (MCP), 310 CMR 40.0000, and is not required by the MCP, to confirm certain assumptions regarding future uses at the Property for purposes of Risk Characterization of human health and ecological risks at the Disposal Site. This AUL describes certain restrictions upon the use of the Property to promote the ongoing protection of human health and the environment.

This AUL will serve as a notification, concerning appropriate health and safety measures to be taken during any future construction-related or other activities that disturb the subsurface, including (but not limited to) penetration of concrete building slabs, subsurface soil or bedrock excavations and groundwater dewatering activities. It will also be protective of human health and the environment by requiring that any contaminated media generated during construction activities be managed in accordance with Massachusetts Contingency Plan (MCP) Soil Management procedures as described in 310 CMR 40.0030 and the Massachusetts Department of Environmental Protection (MassDEP) guidance documents, including Construction of Buildings in Contaminated Areas (Policy WSC#-00-425) and the Similar Soils Provisions Guidance (WSC#-13-500), as determined by a Licensed Site Professional ("LSP").

Relevant Property History

Contamination of the Stickney Well, a currently inactive public supply well for the town of North Reading, was discovered in the late 1970s. Subsequent investigations of multiple surrounding properties, including the Property (formerly owned and operated by GE Aerospace (sometimes referred to as "GE" herein)), began in the early 1980s. The Property has been subject to remedial investigations and cleanup since 1986, when the MassDEP (then the Department of Environmental Quality Engineering or DEQE) issued GE a Notice of Responsibility. In 1987, the MassDEP

classified the former GE facility as a Priority Disposal Site,[1] and in 1994 the MassDEP assigned Release Tracking Number (RTN) RTN-3-0518 to the site.[2]

The Property has had a history of manufacturing processes that have contributed to releases of fuels, oils, solvents, and metals to the environment. Analytical data have shown that six primary types of organic and inorganic compounds are associated with RTN 3-0518. These include chlorinated volatile organic compounds (CVOCs); total petroleum hydrocarbons (TPH); benzene, toluene, ethyl benzene and xylenes (BTEX) compounds; methyl tertiary butyl ether (MTBE); several metals; and light non-aqueous phase liquids (LNAPL) identified as Stoddard fuel (solvent). Known impacted areas of the Property include four separate operating units (OU), as well as the Tank F and Building 1 Areas, and are summarized in the following table and shown on the attached Figure 1. These areas are designated "Restricted Areas."

Restricted Areas	Description	Affected Media	Compounds of Concern	Regulatory Status
OU-1	Former Tank Farm source area and adjacent Eastern Parking Lot (EPL). Tank Farm had 4 underground storage tanks (USTs) removed in 1987.	Vadose zone soils, and shallow groundwater	Stoddard Solvent LNAPL in groundwater and extractable petroleum hydrocarbons (EPH)-volatile petroleum hydrocarbons (VPH) in both soils and groundwater; associated arsenic	Open
OU-2	Former Tank Farm source area and down-gradient plume on- and off-property	Groundwater	CVOCs and 1,4-dioxane	Open
OU-3	Storm water/Waste water Outfalls 001 and 002	Sediment	Metals and petroleum hydrocarbons	Closed, Partial Class A-2 Response Action Outcome (RAO) (Submitted 2004)

[1] Under 310 CMR 40.0006 (1)(b), the term "Disposal Site" is used to refer to a place or area where an uncontrolled release of oil and/or hazardous material from or at a site or vessel has come to be located.

[2] Martin Marietta acquired GE Aerospace in 1993 and subsequently Martin Marietta and Lockheed merged to form Lockheed Martin Corporation.

Restricted Areas	Description	Affected Media	Compounds of Concern	Regulatory Status
OU-4	Former Tank K source area and immediately down-gradient of plume.	Vadose zone soils and shallow groundwater	Gasoline related petroleum hydrocarbons (VOCs) from former gasoline UST. UST was removed in 1986.	Closed, Partial Class A-2 RAO (Submitted 2010)
Tank F/Building 1 Area	Former Tank F area and area below concrete slab of Building 1	Vadose zone soils and groundwater	CVOCs and petroleum hydrocarbons	Open

OU-1 Area

The Response Actions taken at the Tank Farm/EPL Petroleum Area (OU-1) have included LNAPL recovery, removal of Building 3 and the Oil House/drum storage, and excavation and off-site disposal of petroleum contaminated soil. Since 2011, LNAPL gauging has indicated the absence of measurable LNAPL in any wells that have been gauged. Soil impacts in the OU-1 appear to be consistent with current MCP Industrial/Commercial standards; however, the deeper groundwater and down-gradient plume is impacted with the CVOCs emanating from the former Tank Farm OU-2 Area (see below).

OU-2 Area

The Response Actions taken at the Tank Farm CVOC Source Area (OU-2) have been extensive and included:

- Removal in 1987 of four Underground Storage Tanks ("USTs") at the Tank Farm (Tank D, a 10,000-gal "waste fuel" tank that received waste fuel and oil, thinners, and solvents; Tank G, a 10,000-gal tank used for storing jet fuel and oil; Tank H, a 1,000- gal tank used for storing JP-4 jet fuel; and Tank I, a 500-gal tank used for storing methanol).
- Groundwater pump and treat at the Tank Farm Area between 1993 and 2002. During operation, approximately 1.9 million gallons of groundwater were treated, and approximately 31 pounds of VOCs were removed from the groundwater.
- Groundwater pump and treat in a bedrock well (TRC-202R) located down-gradient of the Tank Farm Area between 2003 and 2008. During operation, approximately 4.3 million gallons of groundwater were treated, and approximately 159 pounds of VOCs were

removed from the groundwater. Groundwater data trends did not indicate significant reductions in contaminant concentrations. The system remains shut down at the present time.

- Addition of a remedial treatment solution known as Emulsified Zero Valent Iron (EZVI) in 2005 through 2006. EZVI was injected directly into bedrock fractures and into the overburden-bedrock interface within the Tank Farm Area. The EZVI treatment was not considered successful.

- Analysis of monitored natural attenuation (MNA) geochemical and microbiological parameters in 2012 for groundwater, indicating conditions supportive of limited enhanced reductive dechlorination. A review of plume geometry and other trends indicate that the off-site CVOC impacts appear to be stable or shrinking.

- Additional groundwater investigation activities from 2012 through 2014 in the Tank Farm, the EPL and off-site in the adjacent wetland areas. This work is on-going and the data will be evaluated and presented in a Supplemental Phase II report in the future.

OU-3 and OU-4 Areas

Areas within OU-3 and OU-4 have been remediated and closed under the MCP in 2004 and 2010, respectively. Response Actions taken at OU-3 included excavation of metal-impacted sediments and wetland restoration. Response Actions taken at OU-4 have included UST removal, soil excavation, and biosparge/soil vapor extraction. Although these areas have been closed under the MCP, it should be noted that contaminated media were cleaned up to Industrial/Commercial standards and that low level impacts may remain. That is, the soil, sediments and groundwater have not been cleaned up to conditions such that these locations would be suitable for Residential, Institutional, or park/playground land use without first completing further response actions.

Tank F and Building 1 Areas

Tank F, formerly located on the southwest side of Building 1 on the former GE facility property, which received acid and caustic wastes plus other degreasing solvent and fuel wastes through floor drains from Building 1, was removed from the Property in 1990. No obvious impacts were

observed during its removal or from samples obtained from soils and other liquids associated with the tank prior to its removal. No remedial efforts have been associated with this tank area.

Investigation results suggest CVOC impacts in the southwestern area of Building 1 and/or the former Tank F area. Shallow groundwater in the overburden does not exhibit elevated CVOC concentrations; however, bedrock wells in this area exhibited much higher concentrations of both PCE and TCE. In June 1987, a small tank was removed adjacent to Tank F and field screening levels of VOCs ranging from 100 to 200 parts per million (ppm) were encountered near the bottom of the excavation. In addition, sampling of sediment from within the chase troughs in Building 1 exhibited petroleum hydrocarbon and CVOC impacts. Soils within the top foot under the metals finishing floor sumps indicated low levels of CVOCs.

Sub-slab and indoor air sampling has been conducted within Building 1 between 2009 through 2014. Elevated levels of petroleum hydrocarbons and CVOCs have been detected below the concrete slab of Building 1. Low levels of CVOCs have also been detected in indoor air samples, however, they have consistently been below MassDEP available MA Commercial/Industrial (C/I) Threshold Values and do not pose a risk to industrial/ commercial workers. It is therefore the opinion of the LSP that industrial and commercial use is a permissible use under the AUL.

In 2013 and 2014, additional soil and groundwater investigation activities have been performed underneath Building 1. This work is on-going and the data will be evaluated and presented in a Supplemental Phase II report in the future.

Nature and Extent of Contamination

The lateral extent of the MCP Disposal Site encompasses a large portion of the Property as shown on the attached **Figure 1**. Within this site boundary, residual levels of contaminants are likely present within soil or groundwater or both. Higher concentrations are expected within the Operable Units and the Tank F/Building 1 Areas than in areas outside of these designated areas. However, low level residual contamination above applicable MCP standards may be present in areas outside of these areas within the Disposal Site boundary. The AUL boundary has been set to encompass a large portion of the Property, including the Restricted Areas, but exclusive of the

northern wetland areas where future construction-related activities are considered to be highly unlikely, and exclusive of the areas beneath and between Buildings 1A and 2.

Recommendations

It is the opinion of the LSP that the restrictions on Activities and Uses of the Property and the Obligations and Conditions contained in the AUL are appropriate, based on the foregoing.

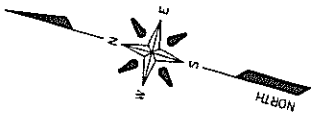
File: J:\Rem_Eng\Project Files\Lockheed Martin\Wilmington, MA 2012 #60267214\Project Implementation files\CADD\ROS_2013-04\AUL Site Plan 2.dwg Layout: _ACM-0 (3) User: barryk Plotted: Oct 13, 2014 - 2:04pm Xref's:

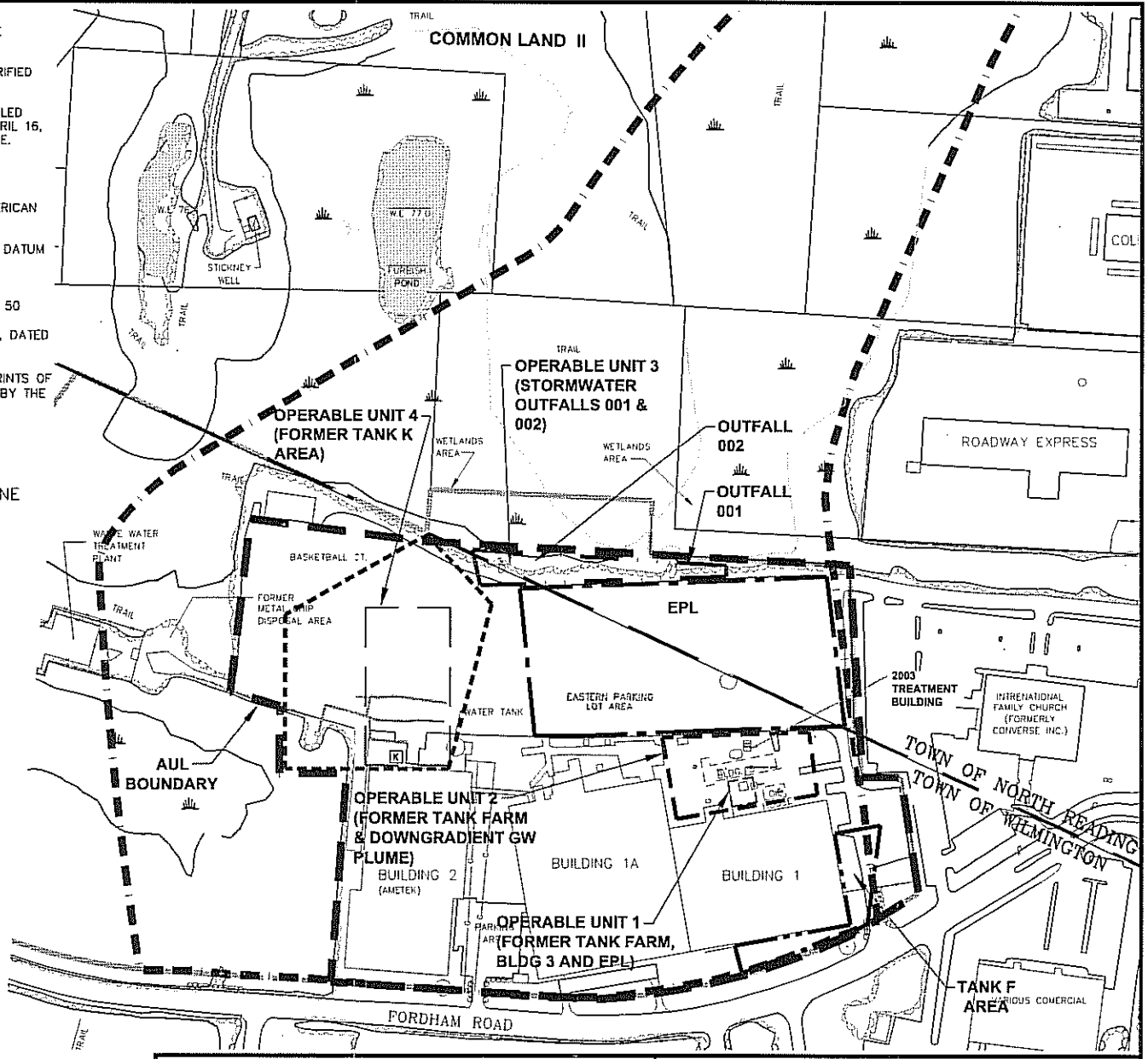
NOTES:

1. SOURCE: "BASE MAP" (TRC ENVIRONMENTAL CORP., 2003). THE ACCURACY OF THE SURVEY INFORMATION PRESENTED HEREIN, INCLUDING THE HORIZONTAL COORDINATE SYSTEM AND THE HORIZONTAL AND VERTICAL DATUMS HAVE BEEN PARTIALLY VERIFIED BY AECOM.
2. TOPOGRAPHIC AND PLANIMETRIC FEATURES SHOWN WERE COMPILED PHOTOGRAMMETRICALLY FROM AERIAL PHOTOGRAPHY DATED APRIL 16, 1992 BY EAST COAST MAPPING INC., CONCORD, NEW HAMPSHIRE. MAPPING GROUND CONTROL ESTABLISHED BY FIELD SURVEYS CONDUCTED IN APRIL 1992.
3. THE GRID SYSTEM DEPICTED ON THIS PLAN IS BASED ON THE MASSACHUSETTS STATE PLAN COORDINATE SYSTEM NORTH AMERICAN DATUM OF 1929.
4. ELEVATIONS ARE BASED ON THE NATIONAL GEODETIC VERTICAL DATUM OF 1929.
5. PROPERTY AND TOWN LINE BOUNDARIES WERE ADAPTED FROM:
   A) "REGIONAL EXPLORATION PLAN", GENERAL ELECTRIC COMPANY, 50 FORDHAM ROAD PROPERTY, WILMINGTON/NORTH READING, MASSACHUSETTS, BY GOLDBERG – ZOINO & ASSOCIATES, INC., DATED APRIL 1990;
   B) MODIFIED PER NORTH READING GIS DATA, JUNE 2002; AND
   C) DIGITIZED BY MASSGIS FROM A SET OF STABLE BASED FILM PRINTS OF THE 125:000 7.5' QUADRANGLES PURCHASED FROM THE USGS BY THE MASSACHUSETTS DEPARTMENT OF PUBLIC WORKS.

LEGEND

- APPROXIMATE PROPERTY LINE
- APPROXIMATE TOWN LINE
- MCP SITE BOUNDARY
- AUL BOUNDARY





0' 150' 300' 600'

APPROXIMATE SCALE IN FEET
1"=300'

AECOM

FORMER GE FACILITY 50 FORDHAM ROAD WILMINGTON, MA			AUL SITE PLAN
DATE: 10/14	DRWN: K.P.B.		FIGURE 1

EXHIBIT D

TRUSTEE CERTIFICATE

WILMINGTON REALTY TRUST
TRUSTEES' CERTIFICATE

The undersigned, Rosemarie Stanieich, Victoria J. Maiyara, and Annette Maria Given, as Trustees of Wilmington Realty Trust under Declaration of Trust dated September 7, 1973, registered in the Middlesex North Registry District of the Land Court as Document No. 63541 and noted on Certificate of Title No. 19837 and registered further in the Middlesex South Registry of the Land Court as Document No. 515729 and noted on Certificate of Title No. 142138 (the "Trust"), hereby certify as follows:

1. That they are all of the current Trustees of the Trust;

2. That the Trust is in full force and effect and has not been revoked, terminated or rescinded in whole or in part;

3. That the undersigned Trustees have been duly authorized and specifically directed by all of the beneficiaries of the Trust to execute, acknowledge and deliver that certain Activity and Use Limitation with respect to the property owned by the Trust and having an address of 50 Fordham Road in Wilmington, Massachusetts, and:

4. No beneficiary of the Trust is a minor, a Massachusetts corporation selling all or substantially of all its Massachusetts assets, or a personal representative of an estate subject to an estate tax lien, deceased, or under any other legal incapacity.

EXECUTED as a sealed instrument this 13th day of July, 2015

WILMINGTON REALTY TRUST

Rosemarie Stanieich, as Trustee and not individually

Victoria J. Maiyara, as Trustee and not individually

Annette Maria Given, as Trustee and not individually

THE COMMONWEALTH OF MASSACHUSETTS

County of Middlesex, ss.

On this 13th day of July, 2015 before me, the undersigned notary public, personally appeared Rosemarie Stanieich, proved to me through satisfactory evidence of identification, which was [✓] photographic identification with signature issued by a federal or state government agency, [ ] oath or affirmation of a credible witness, or [ ] personal knowledge of the undersigned, to be the person whose name is signed on the preceding document as Trustee of Wilmington Realty Trust as aforesaid and acknowledged to me that she signed it voluntarily, for its stated purpose.

Notary Public
Name: Alexandra Danilov
My Commission Expires: 12-26-19

Rhonda L. Rollins
7-14-15

RHONDA L. ROLLINS NOTARY PUBLIC STATE OF NEW HAMPSHIRE - MY COMMISSION EXPIRES AUGUST 22, 2017

ALEXANDRA DANILOV
Notary Public
COMMONWEALTH OF MASSACHUSETTS
My Commission Expires
December 26, 2019

~~THE COMMONWEALTH OF MASSACHUSETTS~~
THE STATE OF NEW HAMPSHIRE

Merrimack
County of ~~Middlesex~~, ss.

On this 14th day of July, 2015 before me, the undersigned notary public, personally appeared Victoria J. Maiyara proved to me through satisfactory evidence of identification, which was [x] photographic identification with signature issued by a federal or state government agency, [ ] oath or affirmation of a credible witness, or [ ] personal knowledge of the undersigned, to be the person whose name is signed on the preceding document as Trustee of Wilmington Realty Trust as aforesaid and acknowledged to me that she signed it voluntarily, for its stated purpose.

RHONDA L. ROLLINS STATE OF - MY - COMMISSION EXPIRES AUGUST 22, 2017 NEW HAMPSHIRE NOTARY PUBLIC

Rhonda L. Rollins
Notary Public
Name: Rhonda L. Rollins
My Commission Expires: 8/22/17

THE COMMONWEALTH OF MASSACHUSETTS

County of Middlesex, ss.

On this 13th day of July, 2015 before me, the undersigned notary public, personally appeared Annette Maria Given proved to me through satisfactory evidence of identification, which was [X] photographic identification with signature issued by a federal or state government agency, [ ] oath or affirmation of a credible witness, or [ ] personal knowledge of the undersigned, to be the person whose name is signed on the preceding document as Trustee of Wilmington Realty Trust as aforesaid and acknowledged to me that she signed it voluntarily, for its stated purpose.

Alexandra Danilov
Notary Public
Name: Alexandra Danilov
My Commission Expires:
12.26.19

ALEXANDRA DANILOV
Notary Public
COMMONWEALTH OF MASSACHUSETTS
My Commission Expires
December 26, 2019

APPENDIX F
LABORATORY ANALYTICAL AND DATA VALIDATION REPORTS – GROUNDWATER

PHOENIX
Environmental Laboratories, Inc.

Friday, September 25, 2020

Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Project ID: LOCKHEED WILMINGTON MA 60552044.19
SDG ID: GCG73379
Sample ID#s: CG73379 - CG73385

This laboratory is in compliance with the NELAC requirements of procedures used except where indicated.

This report contains results for the parameters tested, under the sampling conditions described on the Chain Of Custody, as received by the laboratory. This report is incomplete unless all pages indicated in the pagination at the bottom of the page are included.

A scanned version of the COC form accompanies the analytical report and is an exact duplicate of the original.

Enclosed are revised Analysis Report pages. Please replace and discard the original pages. If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200. The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.

Sincerely yours,

Phyllis Shiller
Laboratory Director

NELAC - #NY11301
CT Lab Registration #PH-0618
MA Lab Registration #M-CT007
ME Lab Registration #CT-007
NH Lab Registration #213693-A,B
NJ Lab Registration #CT-003
NY Lab Registration #11301
PA Lab Registration #68-03530
RI Lab Registration #63
UT Lab Registration #CT00007
VT Lab Registration #VT11301

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

ACCREDITED IN ACCORDANCE WITH nelac NY # 11301

SDG Comments

September 25, 2020

SDG I.D.: GCG73379

Phoenix reporting levels may exceed those referenced in the CAM protocol. Please refer to criteria sheet for comparisons to requested MCP standards.

Rev. 2
Report revised to answer question 4a. on the MA CAM form.

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Sample Id Cross Reference

September 25, 2020

SDG I.D.: GCG73379

Project ID: LOCKHEED WILMINGTON MA 60552044.19

Client Id	Lab Id	Matrix
20A-AE108R1-090920-1	CG73379	GROUND WATER
20A-AE108R3-090920-1	CG73380	GROUND WATER
20A-AE108R5-090920-1	CG73381	GROUND WATER
20A-AE102M-090920-1	CG73382	GROUND WATER
20A-AE102M-090920-2	CG73383	GROUND WATER
20A-AE102RR6-090920-1	CG73384	GROUND WATER
20A-TB01-090920-1	CG73385	GROUND WATER

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

September 25, 2020

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:	127680	09/09/20	11:40
Location Code:	AECOM-WILMINGTN	Received by:	CP	09/09/20	16:00
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	127680				

Laboratory Data

SDG ID: GCG73379
Phoenix ID: CG73379

Project ID: LOCKHEED WILMINGTON MA 60552044.19
Client ID: 20A-AE108R1-090920-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Arsenic	< 0.004	0.004	mg/L	1	09/10/20	TH	SW6010D
Arsenic (Dissolved)	< 0.004	0.004	mg/L	1	09/11/20	TH	SW6010D
Iron (Dissolved)	7.25	0.011	mg/L	1	09/11/20	TH	SW6010D
Manganese (Dissolved)	3.02	0.011	mg/L	10	09/14/20	EK	SW6010D
Iron	5.05	0.010	mg/L	1	09/10/20	TH	SW6010D
Manganese	2.01	0.010	mg/L	10	09/12/20	CPP	SW6010D
Chloride	939	75.0	mg/L	25	09/10/20	BS/GD	E300.0
Nitrite as Nitrogen	< 0.100	0.100	mg/L	25	09/10/20 21:02	BS/GD	E300.0
Nitrate as Nitrogen	< 0.05	0.05	mg/L	1	09/10/20 02:12	BS/GD	E300.0
Sulfate	9.3	3.0	mg/L	1	09/10/20	BS/GD	E300.0
Sulfide	0.07	0.05	mg/L	1	09/14/20	GD	SM4500S-D-11
Total Organic Carbon	4.9	1.0	mg/L	1	09/10/20	BJA	SM5310B-11
Dissolved Metals Preparation	Completed				09/10/20	AG	SW3005A
Total Metals Digestion	Completed				09/09/20	AG/BF	
Volatiles							
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
1,1,1-Trichloroethane	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L	1	09/14/20	MH	SW8260C
1,1,2-Trichloroethane	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
1,1-Dichloroethane	1.2	1.0	ug/L	1	09/14/20	MH	SW8260C
1,1-Dichloroethene	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
1,1-Dichloropropene	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
1,2,3-Trichlorobenzene	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
1,2,3-Trichloropropane	ND	0.50	ug/L	1	09/14/20	MH	SW8260C
1,2,4-Trichlorobenzene	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
1,2,4-Trimethylbenzene	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	0.50	ug/L	1	09/14/20	MH	SW8260C

Ver 2

Project ID: LOCKHEED WILMINGTON MA 60552044.19 Phoenix I.D.: CG73379

Client ID: 20A-AE108R1-090920-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	
1,2-Dibromoethane	ND	0.50	ug/L	1	09/14/20	MH	SW8260C
1,2-Dichlorobenzene	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
1,2-Dichloroethane	ND	0.60	ug/L	1	09/14/20	MH	SW8260C
1,2-Dichloropropane	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
1,3,5-Trimethylbenzene	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
1,3-Dichlorobenzene	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
1,3-Dichloropropane	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
1,4-Dichlorobenzene	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
2,2-Dichloropropane	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
2-Chlorotoluene	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
2-Hexanone	ND	5.0	ug/L	1	09/14/20	MH	SW8260C
4-Chlorotoluene	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
4-Methyl-2-pentanone	ND	5.0	ug/L	1	09/14/20	MH	SW8260C
Acetone	ND	25	ug/L	1	09/14/20	MH	SW8260C
Benzene	ND	0.70	ug/L	1	09/14/20	MH	SW8260C
Bromobenzene	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
Bromochloromethane	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
Bromodichloromethane	ND	0.50	ug/L	1	09/14/20	MH	SW8260C
Bromoform	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
Bromomethane	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
Carbon Disulfide	ND	5.0	ug/L	1	09/14/20	MH	SW8260C
Carbon tetrachloride	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
Chlorobenzene	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
Chloroethane	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
Chloroform	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
Chloromethane	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
cis-1,2-Dichloroethene	23	1.0	ug/L	1	09/14/20	MH	SW8260C
cis-1,3-Dichloropropene	ND	0.40	ug/L	1	09/14/20	MH	SW8260C
Dibromochloromethane	ND	0.50	ug/L	1	09/14/20	MH	SW8260C
Dibromomethane	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
Dichlorodifluoromethane	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
Ethylbenzene	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
Hexachlorobutadiene	ND	0.40	ug/L	1	09/14/20	MH	SW8260C
Isopropylbenzene	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
m&p-Xylene	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
Methyl ethyl ketone	ND	5.0	ug/L	1	09/14/20	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
Methylene chloride	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
Naphthalene	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
n-Butylbenzene	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
n-Propylbenzene	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
o-Xylene	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
p-Isopropyltoluene	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
sec-Butylbenzene	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
Styrene	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
tert-Butylbenzene	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
Tetrachloroethene	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
Tetrahydrofuran (THF)	ND	2.5	ug/L	1	09/14/20	MH	SW8260C
Toluene	1.2	1.0	ug/L	1	09/14/20	MH	SW8260C

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	
trans-1,2-Dichloroethene	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
trans-1,3-Dichloropropene	ND	0.40	ug/L	1	09/14/20	MH	SW8260C
Trichloroethene	4.4	1.0	ug/L	1	09/14/20	MH	SW8260C
Trichlorofluoromethane	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
Trichlorotrifluoroethane	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
Vinyl chloride	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	100		%	1	09/14/20	MH	70 - 130 %
% Bromofluorobenzene	96		%	1	09/14/20	MH	70 - 130 %
% Dibromofluoromethane	101		%	1	09/14/20	MH	70 - 130 %
% Toluene-d8	103		%	1	09/14/20	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	100	ug/L	1	09/14/20	MH	SW8260C (OXY)
Diethyl ether	ND	1.0	ug/L	1	09/14/20	MH	SW8260C (OXY)
Di-isopropyl ether	ND	1.0	ug/L	1	09/14/20	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	1.0	ug/L	1	09/14/20	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	1.0	ug/L	1	09/14/20	MH	SW8260C (OXY)
Client MS/MSD	Completed				09/14/20		

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.

Phyllis Shiller, Laboratory Director
September 25, 2020
Reviewed and Released by: Phyllis Shiller, Laboratory Director

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

September 25, 2020

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:	127680	09/09/20	11:50
Location Code:	AECOM-WILMINGTN	Received by:	CP	09/09/20	16:00
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	127680				

Laboratory Data

SDG ID: GCG73379
Phoenix ID: CG73380

Project ID: LOCKHEED WILMINGTON MA 60552044.19
Client ID: 20A-AE108R3-090920-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Volatiles							
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
1,1,1-Trichloroethane	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L	1	09/14/20	MH	SW8260C
1,1,2-Trichloroethane	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
1,1-Dichloroethane	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
1,1-Dichloroethene	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
1,1-Dichloropropene	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
1,2,3-Trichlorobenzene	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
1,2,3-Trichloropropane	ND	0.50	ug/L	1	09/14/20	MH	SW8260C
1,2,4-Trichlorobenzene	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
1,2,4-Trimethylbenzene	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	0.50	ug/L	1	09/14/20	MH	SW8260C
1,2-Dibromoethane	ND	0.50	ug/L	1	09/14/20	MH	SW8260C
1,2-Dichlorobenzene	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
1,2-Dichloroethane	ND	0.60	ug/L	1	09/14/20	MH	SW8260C
1,2-Dichloropropane	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
1,3,5-Trimethylbenzene	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
1,3-Dichlorobenzene	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
1,3-Dichloropropane	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
1,4-Dichlorobenzene	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
2,2-Dichloropropane	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
2-Chlorotoluene	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
2-Hexanone	ND	5.0	ug/L	1	09/14/20	MH	SW8260C
4-Chlorotoluene	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
4-Methyl-2-pentanone	ND	5.0	ug/L	1	09/14/20	MH	SW8260C
Acetone	ND	25	ug/L	1	09/14/20	MH	SW8260C

Project ID: LOCKHEED WILMINGTON MA 60552044.19 Phoenix I.D.: CG73380

Client ID: 20A-AE108R3-090920-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	
Benzene	ND	0.70	ug/L	1	09/14/20	MH	SW8260C
Bromobenzene	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
Bromochloromethane	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
Bromodichloromethane	ND	0.50	ug/L	1	09/14/20	MH	SW8260C
Bromoform	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
Bromomethane	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
Carbon Disulfide	ND	5.0	ug/L	1	09/14/20	MH	SW8260C
Carbon tetrachloride	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
Chlorobenzene	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
Chloroethane	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
Chloroform	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
Chloromethane	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
cis-1,2-Dichloroethene	9.4	1.0	ug/L	1	09/14/20	MH	SW8260C
cis-1,3-Dichloropropene	ND	0.40	ug/L	1	09/14/20	MH	SW8260C
Dibromochloromethane	ND	0.50	ug/L	1	09/14/20	MH	SW8260C
Dibromomethane	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
Dichlorodifluoromethane	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
Ethylbenzene	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
Hexachlorobutadiene	ND	0.40	ug/L	1	09/14/20	MH	SW8260C
Isopropylbenzene	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
m&p-Xylene	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
Methyl ethyl ketone	ND	5.0	ug/L	1	09/14/20	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
Methylene chloride	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
Naphthalene	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
n-Butylbenzene	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
n-Propylbenzene	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
o-Xylene	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
p-Isopropyltoluene	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
sec-Butylbenzene	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
Styrene	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
tert-Butylbenzene	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
Tetrachloroethene	49	1.0	ug/L	1	09/14/20	MH	SW8260C
Tetrahydrofuran (THF)	ND	2.5	ug/L	1	09/14/20	MH	SW8260C
Toluene	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
trans-1,2-Dichloroethene	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
trans-1,3-Dichloropropene	ND	0.40	ug/L	1	09/14/20	MH	SW8260C
Trichloroethene	30	1.0	ug/L	1	09/14/20	MH	SW8260C
Trichlorofluoromethane	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
Trichlorotrifluoroethane	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
Vinyl chloride	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	99		%	1	09/14/20	MH	70 - 130 %
% Bromofluorobenzene	95		%	1	09/14/20	MH	70 - 130 %
% Dibromofluoromethane	97		%	1	09/14/20	MH	70 - 130 %
% Toluene-d8	100		%	1	09/14/20	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	100	ug/L	1	09/14/20	MH	SW8260C (OXY)
Diethyl ether	ND	1.0	ug/L	1	09/14/20	MH	SW8260C (OXY)

Ver 2

Project ID: LOCKHEED WILMINGTON MA 60552044.19 Phoenix I.D.: CG73380

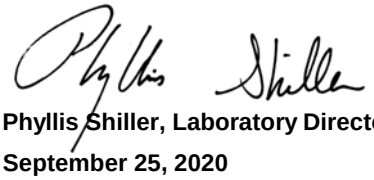
Client ID: 20A-AE108R3-090920-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	
Di-isopropyl ether	ND	1.0	ug/L	1	09/14/20	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	1.0	ug/L	1	09/14/20	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	1.0	ug/L	1	09/14/20	MH	SW8260C (OXY)

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

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Phyllis Shiller, Laboratory Director

September 25, 2020

Reviewed and Released by: Phyllis Shiller, Laboratory Director

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

September 25, 2020

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:	127680	09/09/20	12:00
Location Code:	AECOM-WILMINGTN	Received by:	CP	09/09/20	16:00
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	127680				

Laboratory Data

SDG ID: GCG73379
Phoenix ID: CG73381

Project ID: LOCKHEED WILMINGTON MA 60552044.19
Client ID: 20A-AE108R5-090920-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Volatiles							
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
1,1,1-Trichloroethane	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L	1	09/14/20	MH	SW8260C
1,1,2-Trichloroethane	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
1,1-Dichloroethane	2.7	1.0	ug/L	1	09/14/20	MH	SW8260C
1,1-Dichloroethene	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
1,1-Dichloropropene	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
1,2,3-Trichlorobenzene	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
1,2,3-Trichloropropane	ND	0.50	ug/L	1	09/14/20	MH	SW8260C
1,2,4-Trichlorobenzene	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
1,2,4-Trimethylbenzene	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	0.50	ug/L	1	09/14/20	MH	SW8260C
1,2-Dibromoethane	ND	0.50	ug/L	1	09/14/20	MH	SW8260C
1,2-Dichlorobenzene	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
1,2-Dichloroethane	ND	0.60	ug/L	1	09/14/20	MH	SW8260C
1,2-Dichloropropane	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
1,3,5-Trimethylbenzene	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
1,3-Dichlorobenzene	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
1,3-Dichloropropane	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
1,4-Dichlorobenzene	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
2,2-Dichloropropane	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
2-Chlorotoluene	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
2-Hexanone	ND	5.0	ug/L	1	09/14/20	MH	SW8260C
4-Chlorotoluene	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
4-Methyl-2-pentanone	ND	5.0	ug/L	1	09/14/20	MH	SW8260C
Acetone	ND	25	ug/L	1	09/14/20	MH	SW8260C

Project ID: LOCKHEED WILMINGTON MA 60552044.19 Phoenix I.D.: CG73381

Client ID: 20A-AE108R5-090920-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	
Benzene	ND	0.70	ug/L	1	09/14/20	MH	SW8260C
Bromobenzene	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
Bromochloromethane	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
Bromodichloromethane	ND	0.50	ug/L	1	09/14/20	MH	SW8260C
Bromoform	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
Bromomethane	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
Carbon Disulfide	ND	5.0	ug/L	1	09/14/20	MH	SW8260C
Carbon tetrachloride	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
Chlorobenzene	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
Chloroethane	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
Chloroform	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
Chloromethane	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
cis-1,2-Dichloroethene	27	1.0	ug/L	1	09/14/20	MH	SW8260C
cis-1,3-Dichloropropene	ND	0.40	ug/L	1	09/14/20	MH	SW8260C
Dibromochloromethane	ND	0.50	ug/L	1	09/14/20	MH	SW8260C
Dibromomethane	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
Dichlorodifluoromethane	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
Ethylbenzene	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
Hexachlorobutadiene	ND	0.40	ug/L	1	09/14/20	MH	SW8260C
Isopropylbenzene	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
m&p-Xylene	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
Methyl ethyl ketone	ND	5.0	ug/L	1	09/14/20	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
Methylene chloride	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
Naphthalene	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
n-Butylbenzene	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
n-Propylbenzene	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
o-Xylene	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
p-Isopropyltoluene	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
sec-Butylbenzene	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
Styrene	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
tert-Butylbenzene	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
Tetrachloroethene	19	1.0	ug/L	1	09/14/20	MH	SW8260C
Tetrahydrofuran (THF)	ND	2.5	ug/L	1	09/14/20	MH	SW8260C
Toluene	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
trans-1,2-Dichloroethene	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
trans-1,3-Dichloropropene	ND	0.40	ug/L	1	09/14/20	MH	SW8260C
Trichloroethene	51	1.0	ug/L	1	09/14/20	MH	SW8260C
Trichlorofluoromethane	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
Trichlorotrifluoroethane	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
Vinyl chloride	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	99		%	1	09/14/20	MH	70 - 130 %
% Bromofluorobenzene	95		%	1	09/14/20	MH	70 - 130 %
% Dibromofluoromethane	99		%	1	09/14/20	MH	70 - 130 %
% Toluene-d8	98		%	1	09/14/20	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	100	ug/L	1	09/14/20	MH	SW8260C (OXY)
Diethyl ether	ND	1.0	ug/L	1	09/14/20	MH	SW8260C (OXY)

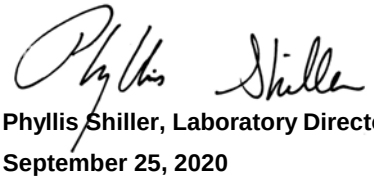
Ver 2

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	
Di-isopropyl ether	ND	1.0	ug/L	1	09/14/20	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	1.0	ug/L	1	09/14/20	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	1.0	ug/L	1	09/14/20	MH	SW8260C (OXY)

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

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Phyllis Shiller, Laboratory Director
September 25, 2020
Reviewed and Released by: Phyllis Shiller, Laboratory Director

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

September 25, 2020

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:	127680	09/09/20	11:10
Location Code:	AECOM-WILMINGTN	Received by:	CP	09/09/20	16:00
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	127680				

Laboratory Data

SDG ID: GCG73379
Phoenix ID: CG73382

Project ID: LOCKHEED WILMINGTON MA 60552044.19
Client ID: 20A-AE102M-090920-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Arsenic	0.010	0.004	mg/L	1	09/10/20	TH	SW6010D
Arsenic (Dissolved)	0.010	0.004	mg/L	1	09/11/20	TH	SW6010D
Iron (Dissolved)	2.61	0.011	mg/L	1	09/11/20	TH	SW6010D
Manganese (Dissolved)	11.1	0.011	mg/L	10	09/12/20	CPP	SW6010D
Iron	2.93	0.010	mg/L	1	09/10/20	TH	SW6010D
Manganese	12.0	0.010	mg/L	10	09/12/20	CPP	SW6010D
Chloride	603	30.0	mg/L	10	09/10/20	BS/GD	E300.0
Nitrite as Nitrogen	< 0.040	0.040	mg/L	10	09/10/20 21:14	BS/GD	E300.0
Nitrate as Nitrogen	< 0.05	0.05	mg/L	1	09/10/20 02:23	BS/GD	E300.0
Sulfate	5.9	3.0	mg/L	1	09/10/20	BS/GD	E300.0
Sulfide	< 0.05	0.05	mg/L	1	09/14/20	GD	SM4500S-D-11
Total Organic Carbon	2.6	1.0	mg/L	1	09/10/20	BJA	SM5310B-11
Dissolved Metals Preparation	Completed				09/10/20	AG	SW3005A
Total Metals Digestion	Completed				09/09/20	AG/BF	
Volatiles							
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
1,1,1-Trichloroethane	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L	1	09/14/20	MH	SW8260C
1,1,2-Trichloroethane	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
1,1-Dichloroethane	2.2	1.0	ug/L	1	09/14/20	MH	SW8260C
1,1-Dichloroethene	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
1,1-Dichloropropene	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
1,2,3-Trichlorobenzene	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
1,2,3-Trichloropropane	ND	0.50	ug/L	1	09/14/20	MH	SW8260C
1,2,4-Trichlorobenzene	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
1,2,4-Trimethylbenzene	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	0.50	ug/L	1	09/14/20	MH	SW8260C

Ver 2

Project ID: LOCKHEED WILMINGTON MA 60552044.19 Phoenix I.D.: CG73382

Client ID: 20A-AE102M-090920-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	
1,2-Dibromoethane	ND	0.50	ug/L	1	09/14/20	MH	SW8260C
1,2-Dichlorobenzene	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
1,2-Dichloroethane	ND	0.60	ug/L	1	09/14/20	MH	SW8260C
1,2-Dichloropropane	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
1,3,5-Trimethylbenzene	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
1,3-Dichlorobenzene	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
1,3-Dichloropropane	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
1,4-Dichlorobenzene	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
2,2-Dichloropropane	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
2-Chlorotoluene	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
2-Hexanone	ND	5.0	ug/L	1	09/14/20	MH	SW8260C
4-Chlorotoluene	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
4-Methyl-2-pentanone	ND	5.0	ug/L	1	09/14/20	MH	SW8260C
Acetone	ND	25	ug/L	1	09/14/20	MH	SW8260C
Benzene	ND	0.70	ug/L	1	09/14/20	MH	SW8260C
Bromobenzene	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
Bromochloromethane	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
Bromodichloromethane	ND	0.50	ug/L	1	09/14/20	MH	SW8260C
Bromoform	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
Bromomethane	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
Carbon Disulfide	ND	5.0	ug/L	1	09/14/20	MH	SW8260C
Carbon tetrachloride	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
Chlorobenzene	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
Chloroethane	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
Chloroform	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
Chloromethane	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
cis-1,2-Dichloroethene	36	1.0	ug/L	1	09/14/20	MH	SW8260C
cis-1,3-Dichloropropene	ND	0.40	ug/L	1	09/14/20	MH	SW8260C
Dibromochloromethane	ND	0.50	ug/L	1	09/14/20	MH	SW8260C
Dibromomethane	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
Dichlorodifluoromethane	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
Ethylbenzene	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
Hexachlorobutadiene	ND	0.40	ug/L	1	09/14/20	MH	SW8260C
Isopropylbenzene	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
m&p-Xylene	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
Methyl ethyl ketone	ND	5.0	ug/L	1	09/14/20	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
Methylene chloride	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
Naphthalene	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
n-Butylbenzene	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
n-Propylbenzene	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
o-Xylene	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
p-Isopropyltoluene	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
sec-Butylbenzene	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
Styrene	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
tert-Butylbenzene	3.2	1.0	ug/L	1	09/14/20	MH	SW8260C
Tetrachloroethene	6.7	1.0	ug/L	1	09/14/20	MH	SW8260C
Tetrahydrofuran (THF)	ND	2.5	ug/L	1	09/14/20	MH	SW8260C
Toluene	ND	1.0	ug/L	1	09/14/20	MH	SW8260C

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	
trans-1,2-Dichloroethene	1.2	1.0	ug/L	1	09/14/20	MH	SW8260C
trans-1,3-Dichloropropene	ND	0.40	ug/L	1	09/14/20	MH	SW8260C
Trichloroethene	18	1.0	ug/L	1	09/14/20	MH	SW8260C
Trichlorofluoromethane	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
Trichlorotrifluoroethane	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
Vinyl chloride	13	1.0	ug/L	1	09/14/20	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	99		%	1	09/14/20	MH	70 - 130 %
% Bromofluorobenzene	94		%	1	09/14/20	MH	70 - 130 %
% Dibromofluoromethane	97		%	1	09/14/20	MH	70 - 130 %
% Toluene-d8	101		%	1	09/14/20	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	100	ug/L	1	09/14/20	MH	SW8260C (OXY)
Diethyl ether	ND	1.0	ug/L	1	09/14/20	MH	SW8260C (OXY)
Di-isopropyl ether	ND	1.0	ug/L	1	09/14/20	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	1.0	ug/L	1	09/14/20	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	1.0	ug/L	1	09/14/20	MH	SW8260C (OXY)
1,4-dioxane							
1,4-dioxane	0.62	0.20	ug/l	1	09/11/20	AW	SW8270DSIM
QA/QC Surrogates							
% 1,4-dioxane-d8	92		%	1	09/11/20	AW	40 - 140 %
Extraction for 1,4-Dioxane	Completed				09/10/20	S/S	

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.



Phyllis Shiller, Laboratory Director
September 25, 2020
Reviewed and Released by: Phyllis Shiller, Laboratory Director

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

September 25, 2020

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:	127680	09/09/20	11:12
Location Code:	AECOM-WILMINGTN	Received by:	CP	09/09/20	16:00
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	127680				

Laboratory Data

SDG ID: GCG73379
Phoenix ID: CG73383

Project ID: LOCKHEED WILMINGTON MA 60552044.19
Client ID: 20A-AE102M-090920-2

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Chloride	611	30.0	mg/L	10	09/10/20	BS/GD	E300.0
Nitrite as Nitrogen	< 0.040	0.040	mg/L	10	09/10/20 21:25	BS/GD	E300.0
Nitrate as Nitrogen	< 0.05	0.05	mg/L	1	09/10/20 02:34	BS/GD	E300.0
Sulfate	5.6	3.0	mg/L	1	09/10/20	BS/GD	E300.0
Sulfide	< 0.05	0.05	mg/L	1	09/14/20	GD	SM4500S-D-11
Total Organic Carbon	2.5	1.0	mg/L	1	09/10/20	BJA	SM5310B-11
Volatiles							
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
1,1,1-Trichloroethane	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L	1	09/14/20	MH	SW8260C
1,1,2-Trichloroethane	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
1,1-Dichloroethane	2.4	1.0	ug/L	1	09/14/20	MH	SW8260C
1,1-Dichloroethene	1.1	1.0	ug/L	1	09/14/20	MH	SW8260C
1,1-Dichloropropene	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
1,2,3-Trichlorobenzene	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
1,2,3-Trichloropropane	ND	0.50	ug/L	1	09/14/20	MH	SW8260C
1,2,4-Trichlorobenzene	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
1,2,4-Trimethylbenzene	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	0.50	ug/L	1	09/14/20	MH	SW8260C
1,2-Dibromoethane	ND	0.50	ug/L	1	09/14/20	MH	SW8260C
1,2-Dichlorobenzene	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
1,2-Dichloroethane	ND	0.60	ug/L	1	09/14/20	MH	SW8260C
1,2-Dichloropropane	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
1,3,5-Trimethylbenzene	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
1,3-Dichlorobenzene	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
1,3-Dichloropropane	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
1,4-Dichlorobenzene	ND	1.0	ug/L	1	09/14/20	MH	SW8260C

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	
2,2-Dichloropropane	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
2-Chlorotoluene	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
2-Hexanone	ND	5.0	ug/L	1	09/14/20	MH	SW8260C
4-Chlorotoluene	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
4-Methyl-2-pentanone	ND	5.0	ug/L	1	09/14/20	MH	SW8260C
Acetone	ND	25	ug/L	1	09/14/20	MH	SW8260C
Benzene	ND	0.70	ug/L	1	09/14/20	MH	SW8260C
Bromobenzene	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
Bromochloromethane	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
Bromodichloromethane	ND	0.50	ug/L	1	09/14/20	MH	SW8260C
Bromoform	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
Bromomethane	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
Carbon Disulfide	ND	5.0	ug/L	1	09/14/20	MH	SW8260C
Carbon tetrachloride	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
Chlorobenzene	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
Chloroethane	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
Chloroform	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
Chloromethane	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
cis-1,2-Dichloroethene	39	1.0	ug/L	1	09/14/20	MH	SW8260C
cis-1,3-Dichloropropene	ND	0.40	ug/L	1	09/14/20	MH	SW8260C
Dibromochloromethane	ND	0.50	ug/L	1	09/14/20	MH	SW8260C
Dibromomethane	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
Dichlorodifluoromethane	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
Ethylbenzene	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
Hexachlorobutadiene	ND	0.40	ug/L	1	09/14/20	MH	SW8260C
Isopropylbenzene	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
m&p-Xylene	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
Methyl ethyl ketone	ND	5.0	ug/L	1	09/14/20	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
Methylene chloride	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
Naphthalene	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
n-Butylbenzene	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
n-Propylbenzene	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
o-Xylene	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
p-Isopropyltoluene	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
sec-Butylbenzene	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
Styrene	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
tert-Butylbenzene	3.2	1.0	ug/L	1	09/14/20	MH	SW8260C
Tetrachloroethene	6.8	1.0	ug/L	1	09/14/20	MH	SW8260C
Tetrahydrofuran (THF)	ND	2.5	ug/L	1	09/14/20	MH	SW8260C
Toluene	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
trans-1,2-Dichloroethene	1.4	1.0	ug/L	1	09/14/20	MH	SW8260C
trans-1,3-Dichloropropene	ND	0.40	ug/L	1	09/14/20	MH	SW8260C
Trichloroethene	19	1.0	ug/L	1	09/14/20	MH	SW8260C
Trichlorofluoromethane	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
Trichlorotrifluoroethane	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
Vinyl chloride	13	1.0	ug/L	1	09/14/20	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	99		%	1	09/14/20	MH	70 - 130 %

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	
% Bromofluorobenzene	97		%	1	09/14/20	MH	70 - 130 %
% Dibromofluoromethane	99		%	1	09/14/20	MH	70 - 130 %
% Toluene-d8	101		%	1	09/14/20	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	100	ug/L	1	09/14/20	MH	SW8260C (OXY)
Diethyl ether	ND	1.0	ug/L	1	09/14/20	MH	SW8260C (OXY)
Di-isopropyl ether	ND	1.0	ug/L	1	09/14/20	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	1.0	ug/L	1	09/14/20	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	1.0	ug/L	1	09/14/20	MH	SW8260C (OXY)
1,4-dioxane							
1,4-dioxane	0.58	0.20	ug/l	1	09/11/20	AW	SW8270DSIM
QA/QC Surrogates							
% 1,4-dioxane-d8	95		%	1	09/11/20	AW	40 - 140 %
Extraction for 1,4-Dioxane	Completed				09/10/20	S/S	

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.

Phyllis Shiller, Laboratory Director
September 25, 2020
Reviewed and Released by: Phyllis Shiller, Laboratory Director

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

September 25, 2020

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:	127680	09/09/20	12:45
Location Code:	AECOM-WILMINGTN	Received by:	CP	09/09/20	16:00
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	127680				

Laboratory Data

SDG ID: GCG73379
Phoenix ID: CG73384

Project ID: LOCKHEED WILMINGTON MA 60552044.19
Client ID: 20A-AE102RR6-090920-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Chloride	150	15.0	mg/L	5	09/12/20	BS/GD	E300.0
Nitrite as Nitrogen	< 0.008	0.008	mg/L	2	09/10/20 21:36	BS/GD	E300.0
Nitrate as Nitrogen	< 0.05	0.05	mg/L	1	09/10/20 02:45	BS/GD	E300.0
Sulfate	24.7	3.0	mg/L	1	09/10/20	BS/GD	E300.0
Sulfide	< 0.05	0.05	mg/L	1	09/14/20	GD	SM4500S-D-11
EPH Extraction	Completed				09/11/20	JS/JS	SW3510C
MA Petroleum Hydrocarbon (EPH)	Completed				09/09/20		MADEP EPH-04
Semi-Volatile Extraction	Completed				09/11/20	AT/D	SW3520C
Semivolatiles by SIM, PAH							
2-Methylnaphthalene	ND	0.47	ug/L	1	09/14/20	WB	SW8270D (SIM)
Acenaphthene	ND	0.47	ug/L	1	09/14/20	WB	SW8270D (SIM)
Acenaphthylene	ND	0.09	ug/L	1	09/14/20	WB	SW8270D (SIM)
Anthracene	ND	0.09	ug/L	1	09/14/20	WB	SW8270D (SIM)
Benz(a)anthracene	ND	0.09	ug/L	1	09/14/20	WB	SW8270D (SIM)
Benzo(a)pyrene	ND	0.19	ug/L	1	09/14/20	WB	SW8270D (SIM)
Benzo(b)fluoranthene	ND	0.09	ug/L	1	09/14/20	WB	SW8270D (SIM)
Benzo(ghi)perylene	ND	0.02	ug/L	1	09/14/20	WB	SW8270D (SIM)
Benzo(k)fluoranthene	ND	0.09	ug/L	1	09/14/20	WB	SW8270D (SIM)
Chrysene	ND	0.05	ug/L	1	09/14/20	WB	SW8270D (SIM)
Dibenz(a,h)anthracene	ND	0.02	ug/L	1	09/14/20	WB	SW8270D (SIM)
Fluoranthene	ND	0.47	ug/L	1	09/14/20	WB	SW8270D (SIM)
Fluorene	ND	0.09	ug/L	1	09/14/20	WB	SW8270D (SIM)
Indeno(1,2,3-cd)pyrene	ND	0.09	ug/L	1	09/14/20	WB	SW8270D (SIM)
Naphthalene	ND	0.47	ug/L	1	09/14/20	WB	SW8270D (SIM)
Phenanthrene	ND	0.47	ug/L	1	09/14/20	WB	SW8270D (SIM)
Pyrene	ND	0.07	ug/L	1	09/14/20	WB	SW8270D (SIM)
QA/QC Surrogates							

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By		
% 2-Fluorobiphenyl	46		%	1	09/14/20	WB	40 - 140 %	
% Nitrobenzene-d5	39		%	1	09/14/20	WB	40 - 140 %	3
% Terphenyl-d14	73		%	1	09/14/20	WB	40 - 140 %	

MA EPH Aliphatic/Aromatic Ranges

C11-C22 Aromatic Hydrocarbons 1,2*	ND	200	ug/L	1	09/11/20	AW	MAEPH 5/2004
C11-C22 Aromatic Hydrocarbons Unadj	ND	200	ug/L	1	09/11/20	AW	MAEPH 5/2004
C19-C36 Aliphatic Hydrocarbons 1*	ND	200	ug/L	1	09/11/20	AW	MAEPH 5/2004
C9-C18 Aliphatic Hydrocarbons 1*	ND	200	ug/L	1	09/11/20	AW	MAEPH 5/2004
Total TPH 1,2*	ND	200	ug/L	1	09/11/20	AW	MAEPH 5/2004
QA/QC Surrogates							
% 1-chlorooctadecane (aliphatic)	68		%	1	09/11/20	AW	40 - 140 %
% 2-Bromonaphthalene (Fractionation)	111		%	1	09/11/20	AW	40 - 140 %
% 2-Fluorobiphenyl (Fractionation)	117		%	1	09/11/20	AW	40 - 140 %
% o-terphenyl (aromatic)	89		%	1	09/11/20	AW	40 - 140 %

3 = This parameter exceeds laboratory specified limits.

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

MAEPH:
1* Hydrocarbon range data exclude concentrations of any surrogate(s) and/or internal standards eluting in that range.
2* C11-C12 Aromatic Hydrocarbons exclude the concentration of Target PAH analytes eluting in that range.

Semi-Volatile Comment:
Poor surrogate recovery was observed for one acid and/or one base surrogate. The other surrogates associated with this sample were within QA/QC criteria. No significant bias suspected.

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.

Phyllis Shiller, Laboratory Director
September 25, 2020
Reviewed and Released by: Phyllis Shiller, Laboratory Director

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

September 25, 2020

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:	127680	09/09/20	8:00
Location Code:	AECOM-WILMINGTN	Received by:	CP	09/09/20	16:00
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	127680				

Laboratory Data

SDG ID: GCG73379
Phoenix ID: CG73385

Project ID: LOCKHEED WILMINGTON MA 60552044.19
Client ID: 20A-TB01-090920-1

Parameter	Result		RL/ PQL	Units	Dilution	Date/Time	By	Reference
Volatiles								
1,1,1,2-Tetrachloroethane	ND		1.0	ug/L	1	09/14/20	MH	SW8260C
1,1,1-Trichloroethane	ND		1.0	ug/L	1	09/14/20	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND		0.50	ug/L	1	09/14/20	MH	SW8260C
1,1,2-Trichloroethane	ND		1.0	ug/L	1	09/14/20	MH	SW8260C
1,1-Dichloroethane	ND		1.0	ug/L	1	09/14/20	MH	SW8260C
1,1-Dichloroethene	ND		1.0	ug/L	1	09/14/20	MH	SW8260C
1,1-Dichloropropene	ND		1.0	ug/L	1	09/14/20	MH	SW8260C
1,2,3-Trichlorobenzene	ND		1.0	ug/L	1	09/14/20	MH	SW8260C
1,2,3-Trichloropropane	ND		0.50	ug/L	1	09/14/20	MH	SW8260C
1,2,4-Trichlorobenzene	ND		1.0	ug/L	1	09/14/20	MH	SW8260C
1,2,4-Trimethylbenzene	ND		1.0	ug/L	1	09/14/20	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND		0.50	ug/L	1	09/14/20	MH	SW8260C
1,2-Dibromoethane	ND		0.50	ug/L	1	09/14/20	MH	SW8260C
1,2-Dichlorobenzene	ND		1.0	ug/L	1	09/14/20	MH	SW8260C
1,2-Dichloroethane	ND		0.60	ug/L	1	09/14/20	MH	SW8260C
1,2-Dichloropropane	ND		1.0	ug/L	1	09/14/20	MH	SW8260C
1,3,5-Trimethylbenzene	ND		1.0	ug/L	1	09/14/20	MH	SW8260C
1,3-Dichlorobenzene	ND		1.0	ug/L	1	09/14/20	MH	SW8260C
1,3-Dichloropropane	ND		1.0	ug/L	1	09/14/20	MH	SW8260C
1,4-Dichlorobenzene	ND		1.0	ug/L	1	09/14/20	MH	SW8260C
2,2-Dichloropropane	ND		1.0	ug/L	1	09/14/20	MH	SW8260C
2-Chlorotoluene	ND		1.0	ug/L	1	09/14/20	MH	SW8260C
2-Hexanone	ND		5.0	ug/L	1	09/14/20	MH	SW8260C
4-Chlorotoluene	ND		1.0	ug/L	1	09/14/20	MH	SW8260C
4-Methyl-2-pentanone	ND		5.0	ug/L	1	09/14/20	MH	SW8260C
Acetone	62	S	25	ug/L	1	09/14/20	MH	SW8260C

Ver 2

Project ID: LOCKHEED WILMINGTON MA 60552044.19 Phoenix I.D.: CG73385

Client ID: 20A-TB01-090920-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	
Benzene	ND	0.70	ug/L	1	09/14/20	MH	SW8260C
Bromobenzene	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
Bromochloromethane	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
Bromodichloromethane	ND	0.50	ug/L	1	09/14/20	MH	SW8260C
Bromoform	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
Bromomethane	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
Carbon Disulfide	ND	5.0	ug/L	1	09/14/20	MH	SW8260C
Carbon tetrachloride	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
Chlorobenzene	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
Chloroethane	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
Chloroform	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
Chloromethane	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
cis-1,2-Dichloroethene	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
cis-1,3-Dichloropropene	ND	0.40	ug/L	1	09/14/20	MH	SW8260C
Dibromochloromethane	ND	0.50	ug/L	1	09/14/20	MH	SW8260C
Dibromomethane	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
Dichlorodifluoromethane	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
Ethylbenzene	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
Hexachlorobutadiene	ND	0.40	ug/L	1	09/14/20	MH	SW8260C
Isopropylbenzene	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
m&p-Xylene	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
Methyl ethyl ketone	ND	5.0	ug/L	1	09/14/20	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
Methylene chloride	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
Naphthalene	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
n-Butylbenzene	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
n-Propylbenzene	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
o-Xylene	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
p-Isopropyltoluene	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
sec-Butylbenzene	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
Styrene	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
tert-Butylbenzene	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
Tetrachloroethene	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
Tetrahydrofuran (THF)	ND	2.5	ug/L	1	09/14/20	MH	SW8260C
Toluene	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
trans-1,2-Dichloroethene	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
trans-1,3-Dichloropropene	ND	0.40	ug/L	1	09/14/20	MH	SW8260C
Trichloroethene	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
Trichlorofluoromethane	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
Trichlorotrifluoroethane	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
Vinyl chloride	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	99		%	1	09/14/20	MH	70 - 130 %
% Bromofluorobenzene	96		%	1	09/14/20	MH	70 - 130 %
% Dibromofluoromethane	99		%	1	09/14/20	MH	70 - 130 %
% Toluene-d8	103		%	1	09/14/20	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	100	ug/L	1	09/14/20	MH	SW8260C (OXY)
Diethyl ether	ND	1.0	ug/L	1	09/14/20	MH	SW8260C (OXY)

Ver 2

Project ID: LOCKHEED WILMINGTON MA 60552044.19 Phoenix I.D.: CG73385

Client ID: 20A-TB01-090920-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	
Di-isopropyl ether	ND	1.0	ug/L	1	09/14/20	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	1.0	ug/L	1	09/14/20	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	1.0	ug/L	1	09/14/20	MH	SW8260C (OXY)

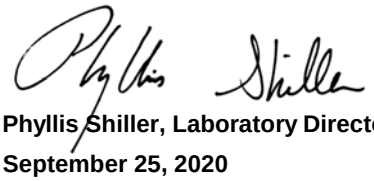
RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

TRIP BLANK INCLUDED.

S - Laboratory solvent, contamination is possible.

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
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Phyllis Shiller, Laboratory Director

September 25, 2020

Reviewed and Released by: Phyllis Shiller, Laboratory Director

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

QA/QC Report

September 25, 2020

QA/QC Data

SDG I.D.: GCG73379

Parameter	Blank	Blk RL	Sample Result	Dup Result	Dup RPD	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits
QA/QC Batch 544700 (mg/L), QC Sample No: CG73379 (CG73379, CG73382)													
ICP Metals - Aqueous													
Arsenic	BRL	0.004	<0.004	<0.004	NC	99.6	101	1.4	105	106	0.9	80 - 120	20
Iron	BRL	0.010	5.05	5.00	1.00	100	102	2.0	NC	NC	NC	80 - 120	20
Manganese	BRL	0.001	2.01	2.00	0.50	101	103	2.0	93.9	98.5	4.8	80 - 120	20
Comment:													
Additional: LCS acceptance range is 80-120% MS acceptance range 75-125%.													
QA/QC Batch 544873 (mg/L), QC Sample No: CG73379 (CG73379, CG73382)													
ICP Metals - Dissolved													
Arsenic	BRL	0.004	<0.004	<0.004	NC	86.6	83.3	3.9	87.9	90.8	3.2	80 - 120	20
Iron	BRL	0.011	7.25	7.19	0.80	87.6	83.8	4.4	NC	NC	NC	80 - 120	20
Manganese	BRL	0.001	3.02	2.90	4.10	87.5	83.9	4.2	83.3	85.6	2.7	80 - 120	20
Comment:													
Additional: LCS acceptance range is 80-120% MS acceptance range 75-125%.													

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QA/QC Report

September 25, 2020

QA/QC Data

SDG I.D.: GCG73379

Parameter	Blank	Blk RL	Sample Result	Dup Result	Dup RPD	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits	
QA/QC Batch 545270 (mg/L), QC Sample No: CG73379 (CG73379, CG73382, CG73383, CG73384)														
Sulfide	BRL	0.05	0.07	0.08	NC	94.4			81.0			90 - 110	20	
QA/QC Batch 544964 (mg/L), QC Sample No: CG73379 (CG73379, CG73382, CG73383)														
Total Organic Carbon	BRL	1.0	4.9	4.8	NC	97.0			104			85 - 115	20	
Comment:														
Additional: LCS acceptance range is 85-115% MS acceptance range 75-125%.														
QA/QC Batch 544896 (mg/L), QC Sample No: CG72660 (CG73379, CG73382, CG73383, CG73384)														
Chloride	BRL	3.0	28.6	29.1	1.70	90.3			101			90 - 110	20	
Nitrate as Nitrogen	BRL	0.05	8.48	8.66	2.10	94.2			109			90 - 110	20	
Nitrite as Nitrogen	BRL	0.004	<0.004	<0.004	NC	94.4			97.6			90 - 110	20	
Sulfate	BRL	3.0	14.7	14.9	NC	91.9			101			90 - 110	20	
QA/QC Batch 545069 (mg/L), QC Sample No: CG73379 (CG73379)														
Chloride	BRL	3.0	939	935	0.40	99.2			92.1			90 - 110	20	
Nitrate as Nitrogen	BRL	0.05	<0.05	<1.25	NC	98.1			99.8			90 - 110	20	
Nitrite as Nitrogen	BRL	0.01	<0.100	<0.25	NC	100			96.0			90 - 110	20	
Sulfate	BRL	3.0	9.3	<75.0	NC	99.7			93.2			90 - 110	20	
QA/QC Batch 545070 (mg/L), QC Sample No: CG73601 (CG73379, CG73382, CG73383, CG73384)														
Chloride	BRL	3.0	345	346	0.30	93.1			94.4			90 - 110	20	
Nitrate as Nitrogen	BRL	0.05	1.52	1.53	0.70	92.1			97.9			90 - 110	20	
Nitrite as Nitrogen	BRL	0.004	<0.020	<0.020	NC	96.3			98.4			90 - 110	20	
Sulfate	BRL	3.0	18.7	18.7	0	93.4			93.5			90 - 110	20	
QA/QC Batch 545398 (mg/L), QC Sample No: CG74296 (CG73384)														
Chloride	BRL	3.0	172	153	11.7	103			91.1			90 - 110	20	
Sulfate	BRL	3.0	16.1	<15.0	NC	90.9			92.8			90 - 110	20	
QA/QC Batch 545398 (mg/L), QC Sample No: CG74296 (CG73384)														
Nitrate as Nitrogen	BRL	0.05	1.34	1.08	21.5	90.5			94.7			90 - 110	20	r

r = This parameter is outside laboratory RPD specified recovery limits.

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QA/QC Report

September 25, 2020

QA/QC Data

SDG I.D.: GCG73379

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits	
QA/QC Batch 544984 (ug/L), QC Sample No: CG73356 (CG73384)											
MAEPH - Ground Water											
C9-C18 Aliphatic Hydrocarbons 1*	ND	100	50	40	22.2				40 - 140	25	
C19-C36 Aliphatic Hydrocarbons 1*	ND	100	84	71	16.8				40 - 140	25	
C11-C22 Aromatic Hydrocarbons 1	ND	100	68	86	23.4				40 - 140	25	
C11-C22 Aromatic Hydrocarbons U	ND	100							40 - 140	25	
Total TPH 1,2*	ND	100	70	56	22.2				40 - 140	25	
C9 - Nonane	ND	10	26	13	66.7				40 - 140	25	I,r
C-10 Decane	ND	10	36	19	61.8				40 - 140	25	I,r
C12 - Dodecane	ND	10	43	24	56.7				40 - 140	25	I,r
C14 - Tetradecane	ND	10	47	38	21.2				40 - 140	25	I
C16 - Hexadecane	ND	10	64	54	16.9				40 - 140	25	
C18 - Octadecane	ND	10	83	69	18.4				40 - 140	25	
C19 - Nonadecane	ND	10	78	66	16.7				40 - 140	25	
C20 - Eicosane	ND	10	82	69	17.2				40 - 140	25	
C22 - Docosane	ND	10	81	69	16.0				40 - 140	25	
C24 - Tetracosane	ND	10	83	71	15.6				40 - 140	25	
C26 - Hexacosane	ND	10	88	74	17.3				40 - 140	25	
C28 - Octacosane	ND	10	87	73	17.5				40 - 140	25	
C30 - Tricotane	ND	10	87	73	17.5				40 - 140	25	
C36 - Hexatriacontane	ND	10	88	70	22.8				40 - 140	25	
% 1-chlorooctadecane (aliphatic)	68	%	70	54	25.8				40 - 140	25	r
% o-terphenyl (aromatic)	83	%	78	97	21.7				40 - 140	25	
% 2-Fluorobiphenyl (Fractionation)	82	%	128	126	1.6				40 - 140	25	
% 2-Bromonaphthalene (Fractionati	49	%	102	97	5.0				40 - 140	25	
% 2-Methylnaphthalene BT		%	0	0	NC				0 - 5		
% Naphthalene BT		%	0	0	NC				0 - 5		
Comment:											
Additional EPH fractionation criteria: Breakthrough criteria (BT) is 0 to 5%											
QA/QC Batch 544907 (ug/l), QC Sample No: CG67772 (CG73382, CG73383)											
1,4dioxane - Ground Water											
1,4-dioxane	ND	0.20	93	91	2.2	90			40 - 140	30	
% 1,4-dioxane-d8	88	%	91	85	6.8	86			40 - 140	30	
QA/QC Batch 545036 (ug/L), QC Sample No: CG73047 (CG73384)											
Semivolatiles by SIM, PAH - Ground Water											
2-Methylnaphthalene	ND	0.50	60	73	19.5				40 - 140	20	
Acenaphthene	ND	0.50	71	74	4.1				40 - 140	20	
Acenaphthylene	ND	0.10	66	64	3.1				40 - 140	20	
Anthracene	ND	0.10	70	71	1.4				40 - 140	20	
Benz(a)anthracene	ND	0.02	71	80	11.9				40 - 140	20	
Benzo(a)pyrene	ND	0.02	66	70	5.9				40 - 140	20	
Benzo(b)fluoranthene	ND	0.02	84	94	11.2				40 - 140	20	

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits	
Benzo(ghi)perylene	ND	0.02	62	73	16.3				40 - 140	20	
Benzo(k)fluoranthene	ND	0.02	49	63	25.0				40 - 140	20	r
Chrysene	ND	0.02	67	72	7.2				40 - 140	20	
Dibenz(a,h)anthracene	ND	0.02	66	86	26.3				40 - 140	20	r
Fluoranthene	ND	0.50	72	72	0.0				40 - 140	20	
Fluorene	ND	0.10	71	73	2.8				40 - 140	20	
Indeno(1,2,3-cd)pyrene	ND	0.02	60	72	18.2				40 - 140	20	
Naphthalene	ND	1.0	59	77	26.5				40 - 140	20	r
Phenanthrene	ND	0.06	78	79	1.3				40 - 140	20	
Pyrene	ND	0.07	74	75	1.3				40 - 140	20	
% 2-Fluorobiphenyl	63	%	61	64	4.8				40 - 140	20	
% Nitrobenzene-d5	62	%	60	67	11.0				40 - 140	20	
% Terphenyl-d14	88	%	82	86	4.8				40 - 140	20	

Comment:

A LCS and LCS Duplicate were performed instead of a matrix spike and matrix spike duplicate.

Additional 8270 criteria: 10% of compounds can be outside of acceptance criteria as long as recovery is at least 10%. (Acid surrogates acceptance range for aqueous samples: 10-110%, for soils 30-130%)

QA/QC Batch 545403 (ug/L), QC Sample No: CG73379 (CG73379, CG73380, CG73381, CG73382, CG73383, CG73385)

Volatiles - Ground Water

1,1,1,2-Tetrachloroethane	ND	1.0	104	108	3.8	99	111	11.4	70 - 130	30	
1,1,1-Trichloroethane	ND	1.0	97	100	3.0	103	113	9.3	70 - 130	30	
1,1,2,2-Tetrachloroethane	ND	0.50	112	112	0.0	107	114	6.3	70 - 130	30	
1,1,2-Trichloroethane	ND	1.0	99	99	0.0	94	103	9.1	70 - 130	30	
1,1-Dichloroethane	ND	1.0	94	97	3.1	99	106	6.8	70 - 130	30	
1,1-Dichloroethene	ND	1.0	100	101	1.0	120	133	10.3	70 - 130	30	m
1,1-Dichloropropene	ND	1.0	92	93	1.1	98	108	9.7	70 - 130	30	
1,2,3-Trichlorobenzene	ND	1.0	96	97	1.0	93	102	9.2	70 - 130	30	
1,2,3-Trichloropropane	ND	1.0	102	103	1.0	96	104	8.0	70 - 130	30	
1,2,4-Trichlorobenzene	ND	1.0	92	93	1.1	91	99	8.4	70 - 130	30	
1,2,4-Trimethylbenzene	ND	1.0	96	98	2.1	98	106	7.8	70 - 130	30	
1,2-Dibromo-3-chloropropane	ND	1.0	133	133	0.0	112	122	8.5	70 - 130	30	l
1,2-Dibromoethane	ND	1.0	101	102	1.0	96	103	7.0	70 - 130	30	
1,2-Dichlorobenzene	ND	1.0	93	94	1.1	92	101	9.3	70 - 130	30	
1,2-Dichloroethane	ND	1.0	91	93	2.2	88	94	6.6	70 - 130	30	
1,2-Dichloropropane	ND	1.0	91	93	2.2	93	103	10.2	70 - 130	30	
1,3,5-Trimethylbenzene	ND	1.0	97	100	3.0	100	109	8.6	70 - 130	30	
1,3-Dichlorobenzene	ND	1.0	92	95	3.2	92	100	8.3	70 - 130	30	
1,3-Dichloropropane	ND	1.0	98	100	2.0	97	103	6.0	70 - 130	30	
1,4-Dichlorobenzene	ND	1.0	92	93	1.1	90	98	8.5	70 - 130	30	
1,4-dioxane	ND	100	96	92	4.3	97	100	3.0	40 - 160	30	
2,2-Dichloropropane	ND	1.0	99	100	1.0	71	87	20.3	70 - 130	30	
2-Chlorotoluene	ND	1.0	94	97	3.1	94	101	7.2	70 - 130	30	
2-Hexanone	ND	5.0	100	102	2.0	92	100	8.3	40 - 160	30	
4-Chlorotoluene	ND	1.0	94	95	1.1	93	100	7.3	70 - 130	30	
4-Methyl-2-pentanone	ND	5.0	100	100	0.0	93	104	11.2	40 - 160	30	
Acetone	ND	5.0	102	100	2.0	120	133	10.3	40 - 160	30	
Benzene	ND	0.70	93	95	2.1	98	106	7.8	70 - 130	30	
Bromobenzene	ND	1.0	91	91	0.0	88	94	6.6	70 - 130	30	
Bromochloromethane	ND	1.0	95	98	3.1	96	105	9.0	70 - 130	30	
Bromodichloromethane	ND	0.50	100	101	1.0	96	107	10.8	70 - 130	30	
Bromoform	ND	1.0	109	107	1.9	96	103	7.0	70 - 130	30	
Bromomethane	ND	1.0	110	108	1.8	100	122	19.8	40 - 160	30	

QA/QC Data

SDG I.D.: GCG73379

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits	
Carbon Disulfide	ND	1.0	99	101	2.0	119	132	10.4	70 - 130	30	m
Carbon tetrachloride	ND	1.0	98	102	4.0	102	112	9.3	70 - 130	30	
Chlorobenzene	ND	1.0	93	96	3.2	96	103	7.0	70 - 130	30	
Chloroethane	ND	1.0	91	97	6.4	110	130	16.7	70 - 130	30	
Chloroform	ND	1.0	94	98	4.2	99	107	7.8	70 - 130	30	
Chloromethane	ND	1.0	90	92	2.2	102	120	16.2	40 - 160	30	
cis-1,2-Dichloroethene	ND	1.0	89	91	2.2	116	104	10.9	70 - 130	30	
cis-1,3-Dichloropropene	ND	0.40	97	96	1.0	85	95	11.1	70 - 130	30	
Dibromochloromethane	ND	0.50	110	111	0.9	101	110	8.5	70 - 130	30	
Dibromomethane	ND	1.0	96	96	0.0	92	99	7.3	70 - 130	30	
Dichlorodifluoromethane	ND	1.0	96	101	5.1	110	124	12.0	40 - 160	30	
Di-isopropyl ether	ND	1.0	94	96	2.1	93	102	9.2	70 - 130	30	
Ethyl ether	ND	1.0	99	105	5.9	108	121	11.4	70 - 130	30	
Ethyl tert-butyl ether	ND	1.0	95	99	4.1	92	103	11.3	70 - 130	30	
Ethylbenzene	ND	1.0	92	96	4.3	99	107	7.8	70 - 130	30	
Hexachlorobutadiene	ND	0.40	94	95	1.1	97	107	9.8	70 - 130	30	
Isopropylbenzene	ND	1.0	95	101	6.1	100	108	7.7	70 - 130	30	
m&p-Xylene	ND	1.0	95	99	4.1	100	109	8.6	70 - 130	30	
Methyl ethyl ketone	ND	5.0	106	105	0.9	99	104	4.9	40 - 160	30	
Methyl t-butyl ether (MTBE)	ND	1.0	106	107	0.9	107	116	8.1	70 - 130	30	
Methylene chloride	ND	1.0	91	94	3.2	110	118	7.0	70 - 130	30	
Naphthalene	ND	1.0	110	110	0.0	103	113	9.3	70 - 130	30	
n-Butylbenzene	ND	1.0	101	102	1.0	106	116	9.0	70 - 130	30	
n-Propylbenzene	ND	1.0	93	98	5.2	96	106	9.9	70 - 130	30	
o-Xylene	ND	1.0	94	97	3.1	98	106	7.8	70 - 130	30	
p-Isopropyltoluene	ND	1.0	99	102	3.0	103	112	8.4	70 - 130	30	
sec-Butylbenzene	ND	1.0	105	109	3.7	113	123	8.5	70 - 130	30	
Styrene	ND	1.0	96	97	1.0	97	98	1.0	70 - 130	30	
tert-amyl methyl ether	ND	1.0	96	98	2.1	91	100	9.4	70 - 130	30	
tert-Butylbenzene	ND	1.0	97	99	2.0	100	110	9.5	70 - 130	30	
Tetrachloroethene	ND	1.0	87	89	2.3	92	101	9.3	70 - 130	30	
Tetrahydrofuran (THF)	ND	2.5	101	101	0.0	94	102	8.2	70 - 130	30	
Toluene	ND	1.0	94	96	2.1	96	104	8.0	70 - 130	30	
trans-1,2-Dichloroethene	ND	1.0	104	103	1.0	124	133	7.0	70 - 130	30	m
trans-1,3-Dichloropropene	ND	0.40	98	98	0.0	84	94	11.2	70 - 130	30	
Trichloroethene	ND	1.0	91	92	1.1	98	101	3.0	70 - 130	30	
Trichlorofluoromethane	ND	1.0	115	119	3.4	145	155	6.7	70 - 130	30	m
Trichlorotrifluoroethane	ND	1.0	108	110	1.8	127	137	7.6	70 - 130	30	m
Vinyl chloride	ND	1.0	101	106	4.8	115	128	10.7	70 - 130	30	
% 1,2-dichlorobenzene-d4	99	%	101	101	0.0	102	101	1.0	70 - 130	30	
% Bromofluorobenzene	95	%	99	100	1.0	98	101	3.0	70 - 130	30	
% Dibromofluoromethane	100	%	98	99	1.0	97	99	2.0	70 - 130	30	
% Toluene-d8	102	%	102	101	1.0	100	101	1.0	70 - 130	30	

Comment:

Additional 8260 criteria: 10% of compounds can be outside of acceptance criteria as long as recovery is 10%.

l = This parameter is outside laboratory LCS/LCSD specified recovery limits.
m = This parameter is outside laboratory MS/MSD specified recovery limits.
r = This parameter is outside laboratory RPD specified recovery limits.

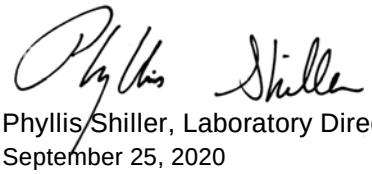
QA/QC Data

SDG I.D.: GCG73379

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits

If there are any questions regarding this data, please call Phoenix Client Services at extension 200.

RPD - Relative Percent Difference
LCS - Laboratory Control Sample
LCSD - Laboratory Control Sample Duplicate
MS - Matrix Spike
MS Dup - Matrix Spike Duplicate
NC - No Criteria
Intf - Interference



Phyllis Shiller, Laboratory Director
September 25, 2020

Friday, September 25, 2020

Criteria: MA: GW1, GW2, GW3

State: MA

Sample Criteria Exceedances Report

GCG73379 - AECOM-WILMINGTN

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units
CG73379	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.00033	0.00033	ug/L
CG73379	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.0075	0.0075	ug/L
CG73379	$8260GWR-WI	cis-1,2-Dichloroethene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	23	1.0	20	20	ug/L
CG73379	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.00075	0.00075	ug/L
CG73379	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	0.50	0.02	0.02	ug/L
CG73379	$8260GWR-WI	cis-1,2-Dichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	23	1.0	20	20	ug/L
CG73379	$8260GWR-WI	cis-1,2-Dichloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	23	1.0	20	20	ug/L
CG73379	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	0.50	0.02	0.02	ug/L
CG73379	$8260GWR-WI	cis-1,2-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-2	23	1.0	20	20	ug/L
CG73379	$MCPADD-WM	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	100	0.3	0.3	ug/L
CG73379	$MCPADD-WM	1,4-dioxane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	100	3	3	ug/L
CG73379	$MCPADD-WM	1,4-dioxane	MA / GROUNDWATER STANDARDS / GW-1	ND	100	0.3	0.3	ug/L
CG73379	D-MN	Manganese (Dissolved)	MA / Client Specified Criteria / LOCKHEED WILMINGTO	3.02	0.011	0.43	0.43	mg/L
CG73379	MN-WM	Manganese	MA / Client Specified Criteria / LOCKHEED WILMINGTO	2.01	0.010	0.43	0.43	mg/L
CG73380	$8260GWR-WI	Trichloroethene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	30	1.0	5	5	ug/L
CG73380	$8260GWR-WI	Tetrachloroethene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	49	1.0	5	5	ug/L
CG73380	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.0075	0.0075	ug/L
CG73380	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.00075	0.00075	ug/L
CG73380	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.00033	0.00033	ug/L
CG73380	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	0.50	0.02	0.02	ug/L
CG73380	$8260GWR-WI	Tetrachloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	49	1.0	5	5	ug/L
CG73380	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	30	1.0	5	5	ug/L
CG73380	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	30	1.0	5	5	ug/L
CG73380	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	0.50	0.02	0.02	ug/L
CG73380	$8260GWR-WI	Tetrachloroethene	MA / GROUNDWATER STANDARDS / GW-1	49	1.0	5	5	ug/L
CG73380	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-1	30	1.0	5	5	ug/L
CG73380	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-2	30	1.0	5	5	ug/L
CG73380	$MCPADD-WM	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	100	0.3	0.3	ug/L
CG73380	$MCPADD-WM	1,4-dioxane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	100	3	3	ug/L
CG73380	$MCPADD-WM	1,4-dioxane	MA / GROUNDWATER STANDARDS / GW-1	ND	100	0.3	0.3	ug/L
CG73381	$8260GWR-WI	Trichloroethene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	51	1.0	5	5	ug/L
CG73381	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.00075	0.00075	ug/L
CG73381	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.00033	0.00033	ug/L
CG73381	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.0075	0.0075	ug/L
CG73381	$8260GWR-WI	cis-1,2-Dichloroethene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	27	1.0	20	20	ug/L
CG73381	$8260GWR-WI	Tetrachloroethene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	19	1.0	5	5	ug/L
CG73381	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	51	1.0	5	5	ug/L
CG73381	$8260GWR-WI	Tetrachloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	19	1.0	5	5	ug/L
CG73381	$8260GWR-WI	cis-1,2-Dichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	27	1.0	20	20	ug/L
CG73381	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	0.50	0.02	0.02	ug/L

Friday, September 25, 2020

Criteria: MA: GW1, GW2, GW3

State: MA

Sample Criteria Exceedances Report

GCG73379 - AECOM-WILMINGTN

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units
CG73381	$8260GWR-WI	cis-1,2-Dichloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	27	1.0	20	20	ug/L
CG73381	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	51	1.0	5	5	ug/L
CG73381	$8260GWR-WI	Tetrachloroethene	MA / GROUNDWATER STANDARDS / GW-1	19	1.0	5	5	ug/L
CG73381	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	0.50	0.02	0.02	ug/L
CG73381	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-1	51	1.0	5	5	ug/L
CG73381	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-2	51	1.0	5	5	ug/L
CG73381	$8260GWR-WI	cis-1,2-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-2	27	1.0	20	20	ug/L
CG73381	$MCPADD-WM	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	100	0.3	0.3	ug/L
CG73381	$MCPADD-WM	1,4-dioxane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	100	3	3	ug/L
CG73381	$MCPADD-WM	1,4-dioxane	MA / GROUNDWATER STANDARDS / GW-1	ND	100	0.3	0.3	ug/L
CG73382	$8260GWR-WI	Vinyl chloride	MA / Client Specified Criteria / LOCKHEED WILMINGTO	13	1.0	2	2	ug/L
CG73382	$8260GWR-WI	cis-1,2-Dichloroethene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	36	1.0	20	20	ug/L
CG73382	$8260GWR-WI	Trichloroethene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	18	1.0	5	5	ug/L
CG73382	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.00075	0.00075	ug/L
CG73382	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.00033	0.00033	ug/L
CG73382	$8260GWR-WI	Tetrachloroethene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	6.7	1.0	5	5	ug/L
CG73382	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.0075	0.0075	ug/L
CG73382	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	0.50	0.02	0.02	ug/L
CG73382	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-1 (mg/l)	13	1.0	2	2	ug/L
CG73382	$8260GWR-WI	Tetrachloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	6.7	1.0	5	5	ug/L
CG73382	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	18	1.0	5	5	ug/L
CG73382	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-1 (mg/l)	13	1.0	2	2	ug/L
CG73382	$8260GWR-WI	cis-1,2-Dichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	36	1.0	20	20	ug/L
CG73382	$8260GWR-WI	cis-1,2-Dichloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	36	1.0	20	20	ug/L
CG73382	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-2 (mg/l)	13	1.0	2	2	ug/L
CG73382	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-2 (mg/l)	13	1.0	2	2	ug/L
CG73382	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	18	1.0	5	5	ug/L
CG73382	$8260GWR-WI	Vinyl chloride	MA / GROUNDWATER STANDARDS / GW-1	13	1.0	2	2	ug/L
CG73382	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-1	18	1.0	5	5	ug/L
CG73382	$8260GWR-WI	Tetrachloroethene	MA / GROUNDWATER STANDARDS / GW-1	6.7	1.0	5	5	ug/L
CG73382	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	0.50	0.02	0.02	ug/L
CG73382	$8260GWR-WI	cis-1,2-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-2	36	1.0	20	20	ug/L
CG73382	$8260GWR-WI	Vinyl chloride	MA / GROUNDWATER STANDARDS / GW-2	13	1.0	2	2	ug/L
CG73382	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-2	18	1.0	5	5	ug/L
CG73382	$DIOX_LDL	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	0.62	0.20	0.3	0.3	ug/l
CG73382	$DIOX_LDL	1,4-dioxane	MA / GROUNDWATER STANDARDS / GW-1	0.62	0.20	0.3	0.3	ug/l
CG73382	$MCPADD-WM	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	100	0.3	0.3	ug/L
CG73382	D-MN	Manganese (Dissolved)	MA / Client Specified Criteria / LOCKHEED WILMINGTO	11.1	0.011	0.43	0.43	mg/L
CG73382	MN-WM	Manganese	MA / Client Specified Criteria / LOCKHEED WILMINGTO	12.0	0.010	0.43	0.43	mg/L
CG73383	$8260GWR-WI	cis-1,2-Dichloroethene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	39	1.0	20	20	ug/L

Friday, September 25, 2020

Criteria: MA: GW1, GW2, GW3

State: MA

Sample Criteria Exceedances Report

GCG73379 - AECOM-WILMINGTN

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units
CG73383	$8260GWR-WI	Vinyl chloride	MA / Client Specified Criteria / LOCKHEED WILMINGTO	13	1.0	2	2	ug/L
CG73383	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.00075	0.00075	ug/L
CG73383	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.00033	0.00033	ug/L
CG73383	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.0075	0.0075	ug/L
CG73383	$8260GWR-WI	Trichloroethene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	19	1.0	5	5	ug/L
CG73383	$8260GWR-WI	Tetrachloroethene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	6.8	1.0	5	5	ug/L
CG73383	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	19	1.0	5	5	ug/L
CG73383	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-1 (mg/l)	13	1.0	2	2	ug/L
CG73383	$8260GWR-WI	Tetrachloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	6.8	1.0	5	5	ug/L
CG73383	$8260GWR-WI	cis-1,2-Dichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	39	1.0	20	20	ug/L
CG73383	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	0.50	0.02	0.02	ug/L
CG73383	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-1 (mg/l)	13	1.0	2	2	ug/L
CG73383	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-2 (mg/l)	13	1.0	2	2	ug/L
CG73383	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-2 (mg/l)	13	1.0	2	2	ug/L
CG73383	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	19	1.0	5	5	ug/L
CG73383	$8260GWR-WI	cis-1,2-Dichloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	39	1.0	20	20	ug/L
CG73383	$8260GWR-WI	Tetrachloroethene	MA / GROUNDWATER STANDARDS / GW-1	6.8	1.0	5	5	ug/L
CG73383	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	0.50	0.02	0.02	ug/L
CG73383	$8260GWR-WI	Vinyl chloride	MA / GROUNDWATER STANDARDS / GW-1	13	1.0	2	2	ug/L
CG73383	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-1	19	1.0	5	5	ug/L
CG73383	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-2	19	1.0	5	5	ug/L
CG73383	$8260GWR-WI	cis-1,2-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-2	39	1.0	20	20	ug/L
CG73383	$8260GWR-WI	Vinyl chloride	MA / GROUNDWATER STANDARDS / GW-2	13	1.0	2	2	ug/L
CG73383	$DIOX_LDL	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	0.58	0.20	0.3	0.3	ug/l
CG73383	$DIOX_LDL	1,4-dioxane	MA / GROUNDWATER STANDARDS / GW-1	0.58	0.20	0.3	0.3	ug/l
CG73383	$MCPADD-WM	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	100	0.3	0.3	ug/L
CG73385	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.00075	0.00075	ug/L
CG73385	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.00033	0.00033	ug/L
CG73385	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.0075	0.0075	ug/L
CG73385	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	0.50	0.02	0.02	ug/L
CG73385	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	0.50	0.02	0.02	ug/L
CG73385	$MCPADD-WM	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	100	0.3	0.3	ug/L
CG73385	$MCPADD-WM	1,4-dioxane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	100	3	3	ug/L
CG73385	$MCPADD-WM	1,4-dioxane	MA / GROUNDWATER STANDARDS / GW-1	ND	100	0.3	0.3	ug/L

Phoenix Laboratories does not assume responsibility for the data contained in this exceedance report. It is provided as an additional tool to identify requested criteria exceedences. All efforts are made to ensure the accuracy of the data (obtained from appropriate agencies). A lack of exceedence information does not necessarily suggest conformance to the criteria. It is ultimately the site professional's responsibility to determine appropriate compliance.

MassDEP Analytical Protocol Certification Form

Laboratory Name: Phoenix Environmental Laboratories, Inc. **Project #:**

Project Location: LOCKHEED WILMINGTON MA 6055204 **RTN:**

This Form provides certifications for the following data set: [list Laboratory Sample ID Number(s)]

CG73379, CG73380, CG73381, CG73382, CG73383, CG73384, CG73385

Matrices: ☑ Groundwater/Surface Water ☐ Soil/Sediment ☐ Drinking Water ☐ Air ☐ Other:

CAM Protocol (check all that apply below)

8260 VOC CAM II A ☑	7470/7471 Hg CAM III B ☐	MassDEP VPH CAM IV A ☐	8081 Pesticides CAM V B ☐	7196 Hex Cr CAM VI B ☐	MassDEP APH CAM IX A ☐
8270 SVOC CAM II B ☑	7010 Metals CAM III C ☐	MassDEP EPH CAM IV B ☑	8151 Herbicides CAM V C ☐	8330 Explosives CAM VIII A ☐	TO-15 VOC CAM IX B ☐
6010 Metals CAM III A ☑	6020 Metals CAM III D ☐	8082 PCB CAM V A ☐	9012 Total Cyanide/PAC CAM V1 A ☐	6860 Perchlorate CAM VIII B ☐	

Affirmative responses to questions A through F are required for "Presumptive Certainty" status

A	Were all samples received in a condition consistent with those described on the Chain-of-Custody, properly preserved (including temperature*) in the field or laboratory, and prepared/analyzed with method holding times? (* see narrative)	☑ Yes ☐ No
B	Were the analytical method(s) and all associated QC requirements specified in the selected CAM protocol(s) followed?	☑ Yes ☐ No
C	Were all required corrective actions and analytical response actions specified in the selected CAM protocol(s) implemented for all identified performance standard non-conformances?	☑ Yes ☐ No
D	Does the laboratory report comply with all the reporting requirements speified in CAM VII A, "Quality Assurance and Quality Control Guidelines for the Acquisition and Reporting of Analytical Data"?	☑ Yes ☐ No
E	a. VPH, EPH, and APH Methods only: Was each method conducted without significant modification(s)? (refer to the individual method(s) for a list of significant modifications). b. APH and TO-15 methods only: Was the complete analyte list reported for each method?	☑ Yes ☐ No ☐ Yes ☐ No
F	Were all applicable CAM protocol QC and performance standard non-conformances identified and evaluated in a laboratory narrative (including all "No" responses to Questions A through E)?	☑ Yes ☐ No

Responses to questions G, H and I below is required for "Presumptive Certainty" status

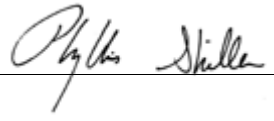
G	Were the reporting limits at or below all CAM reporting limits specified in the selected CAM protocol(s)?	☐ Yes ☑ No

Data User Note: Data that achieve "Presumptive Certainty" status may not necessarily meet the data usability and representativeness requirements described in 310 CMR 40. 1056(2)(k) and WSC-07-350

H	Were all QC performance standards specified in the CAM protocol(s) achieved? See Sections: EPH, LACHAT, SVOASIM, VOA Narrations .	☐ Yes ☑ No
I	Were results reported for the complete analyte list specified in the selected CAM protocol(s)?	☐ Yes ☑ No

All negative responses must be addressed in an attached laboratory narrative.

I, the undersigned, attest under the pains and penalties of perjury that, based upon my personal inquiry of those responsible for obtaining the information, the material contained in this analytical report is, to the best of my knowledge and belief, accurate and complete.

Authorized Signature: 

Date: Friday, September 25, 2020

Printed Name: Phyllis Shiller

Position: Laboratory Director

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

ACCREDITED IN ACCORDANCE WITH nelac NY # 11301

MCP Certification Report

September 25, 2020

SDG I.D.: GCG73379

SDG Comments

CG73379 - The following analytes from the 6010 Metals list were not reported: Antimony, Barium, Beryllium, Cadmium, Chromium, Lead, Nickel, Selenium, Silver, Thallium, Vanadium, Zinc.

CG73382 - The following analytes from the 6010 Metals list were not reported: Antimony, Barium, Beryllium, Cadmium, Chromium, Lead, Nickel, Selenium, Silver, Thallium, Vanadium, Zinc.

EPH Narration

Were all QA/QC performance criteria specified in the MADEP document CAM achieved? No.

QC Batch 544984 (Samples: CG73384): -----

One or more analytes is below the method criteria. A low bias for these analytes is possible. (C-10 Decane, C9 - Nonane)

The LCS and/or the LCSD recovery is below the method criteria. All of the other QC is acceptable, therefore no significant bias is suspected. (C12 - Dodecane, C14 - Tetradecane)

The LCS/LCSD RPD exceeds the method criteria for one or more analytes, but these analytes were not reported in the sample(s) so no variability is suspected. (C-10 Decane, C12 - Dodecane, C9 - Nonane)

The LCS/LCSD RPD exceeds the method criteria for one or more surrogates, therefore there may be variability in the reported result. (% 1-chlorooctadecane (aliphatic))

Instrument:

AU-FID4 09/10/20-1 Adam Werner, Chemist 09/10/20

CG73384 (1X)

The initial calibration (AL709BI) RSD for the compound list was less than 25% except for the following compounds: None.
The continuing calibration %D for the compound list was less than 25% except for the following compounds:None.

QC (Batch Specific):

Batch 544984 (CG73356)

CG73384

All LCS recoveries were within 40 - 140 with the following exceptions: C-10 Decane(36%), C9 - Nonane(26%)
All LCSD recoveries were within 40 - 140 with the following exceptions: C-10 Decane(19%), C12 - Dodecane(24%), C14 - Tetradecane(38%), C9 - Nonane(13%)
All LCS/LCSD RPDs were less than 25% with the following exceptions: % 1-chlorooctadecane (aliphatic)(25.8%), C-10 Decane(61.8%), C12 - Dodecane(56.7%), C9 - Nonane(66.7%)
Additional EPH fractionation criteria: Breakthrough criteria (BT) is 0 to 5%

I attest under the pains and penalties of perjury that, based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.

Wet Chemistry Analysis

Were all QA/QC performance criteria specified in the MADEP document CAM achieved? Yes.

Instrument:

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September 25, 2020

SDG I.D.: GCG73379

Wet Chemistry Analysis

BECKMAN DU720 09/14/20-1 Greg Danielewski, Chemist 09/14/20

CG73379 , CG73382 , CG73383 , CG73384

The initial calibration met all criteria including a standard run at the reporting level.
All method verification standards and blanks met criteria.

QC (Site Specific):

Batch 544964 (CG73379)

CG73379, CG73382, CG73383

All LCS recoveries were within 85 - 115 with the following exceptions: None.
All MS recoveries were within 75 - 125 with the following exceptions: None.
Additional: LCS acceptance range is 85-115% MS acceptance range 75-125%.

Batch 545270 (CG73379)

CG73379, CG73382, CG73383, CG73384

All LCS recoveries were within 85 - 115 with the following exceptions: None.
All MS recoveries were within 75 - 125 with the following exceptions: None.
Additional: LCS acceptance range is 85-115% MS acceptance range 75-125%.

I attest under the pains and penalties of perjury that, based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.

IC

Were all QA/QC performance criteria specified in the MADEP document CAM achieved? Yes.

Instrument:

IC 09/09/20-2 Brian Sheriden, Greg Danielewski, Chemist 09/09/20

CG73379 , CG73382 , CG73383 , CG73384

The initial calibration met all criteria including a standard run at the reporting level.
All method verification standards and blanks met criteria.

IC 09/10/20-1 Brian Sheriden, Greg Danielewski, Chemist 09/10/20

CG73379 , CG73382 , CG73383 , CG73384

The initial calibration met all criteria including a standard run at the reporting level.
All method verification standards and blanks met criteria.

IC 09/11/20-2 Brian Sheriden, Greg Danielewski, Chemist 09/11/20

CG73384

The initial calibration met all criteria including a standard run at the reporting level.
All method verification standards and blanks met criteria.

QC (Batch Specific):

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MCP Certification Report

September 25, 2020

SDG I.D.: GCG73379

IC

Batch 544896 (CG72660)

CG73379, CG73382, CG73383, CG73384

All LCS recoveries were within 90 - 110 with the following exceptions: None.

Batch 545070 (CG73601)

CG73379, CG73382, CG73383, CG73384

All LCS recoveries were within 90 - 110 with the following exceptions: None.

Batch 545398 (CG74296)

CG73384

All LCS recoveries were within 90 - 110 with the following exceptions: None.

QC (Site Specific):

Batch 545069 (CG73379)

CG73379

All LCS recoveries were within 90 - 110 with the following exceptions: None.
All MS recoveries were within 90 - 110 with the following exceptions: None.

I attest under the pains and penalties of perjury that, based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.

ICP Metals Narration

Were all QA/QC performance criteria specified in the analytical method achieved? Yes.

Instrument:

BLUE 09/10/20 09:02 Cindy Pearce, Emily Kolominskaya, Tina Hall, Chemist 09/10/

CG73379, CG73382

The initial calibration met criteria.
The continuing calibration standards met criteria for all the elements reported. The linear range is defined daily by the calibration range.
The continuing calibration blanks were less than the reporting level for the elements reported.
The ICSA and ICSAB were analyzed at the beginning and end of the run and were within criteria.The linear range is defined daily by the calibration range.
The following Initial Calibration Verification (ICV) compounds did not meet criteria: None.
The following Continuing Calibration Verification (CCV) compounds did not meet criteria: None.
The following ICP Interference Check (ICSAB) compounds did not meet criteria: None.

BLUE 09/11/20 08:19 Cindy Pearce, Emily Kolominskaya, Tina Hall, Chemist 09/11/

CG73379, CG73382

The initial calibration met criteria.
The continuing calibration standards met criteria for all the elements reported. The linear range is defined daily by the calibration range.
The continuing calibration blanks were less than the reporting level for the elements reported.
The ICSA and ICSAB were analyzed at the beginning and end of the run and were within criteria.The linear range is defined daily by the calibration range.

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Certification Report

September 25, 2020

SDG I.D.: GCG73379

ICP Metals Narration

The following Initial Calibration Verification (ICV) compounds did not meet criteria: None.
The following Continuing Calibration Verification (CCV) compounds did not meet criteria: None.
The following ICP Interference Check (ICSAB) compounds did not meet criteria: None.

BLUE 09/14/20 07:53 Cindy Pearce, Emily Kolominskaya, Tina Hall, Chemist 09/14/

CG73379

The initial calibration met criteria.
The continuing calibration standards met criteria for all the elements reported. The linear range is defined daily by the calibration range.
The continuing calibration blanks were less than the reporting level for the elements reported.
The ICSA and ICSAB were analyzed at the beginning and end of the run and were within criteria.The linear range is defined daily by the calibration range.
The following Initial Calibration Verification (ICV) compounds did not meet criteria: None.
The following Continuing Calibration Verification (CCV) compounds did not meet criteria: None.
The following ICP Interference Check (ICSAB) compounds did not meet criteria: None.

QC (Site Specific):

Batch 544700 (CG73379)

CG73379, CG73382

All LCS recoveries were within 80 - 120 with the following exceptions: None.
All LCSD recoveries were within 80 - 120 with the following exceptions: None.
All LCS/LCSD RPDs were less than 20% with the following exceptions: None.
All MS recoveries were within 75 - 125 with the following exceptions: None.
All MSD recoveries were within 75 - 125 with the following exceptions: None.
All MS/MSD RPDs were less than 20% with the following exceptions: None.
Additional: LCS acceptance range is 80-120% MS acceptance range 75-125%.

Batch 544873 (CG73379)

CG73379, CG73382

All LCS recoveries were within 80 - 120 with the following exceptions: None.
All LCSD recoveries were within 80 - 120 with the following exceptions: None.
All LCS/LCSD RPDs were less than 20% with the following exceptions: None.
All MS recoveries were within 75 - 125 with the following exceptions: None.
All MSD recoveries were within 75 - 125 with the following exceptions: None.
All MS/MSD RPDs were less than 20% with the following exceptions: None.
Additional: LCS acceptance range is 80-120% MS acceptance range 75-125%.

SVOA-Dioxane

Were all QA/QC performance criteria specified in the MADEP document CAM achieved? Yes.

Instrument:

CHEM22 09/11/20-1 Adam Werner, Chemist 09/11/20

CG73382 (1X), CG73383 (1X)

Initial Calibration Evaluation (CHEM22/DIOX_0818):
100% of target compounds met criteria.
The following compounds had %RSDs >20%: None.
The following compounds did not meet recommended response factors: None.

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MCP Certification Report

September 25, 2020

SDG I.D.: GCG73379

SVOA-Dioxane

The following compounds did not meet a minimum response factors: None.

Continuing Calibration Verification (CHEM22/0911_15-DIOX_0818) (MCP Compliance):
Internal standard areas were within 50 to 200% of the initial calibration with the following exceptions: None.
100% of target compounds met criteria.
The following compounds did not meet % deviation criteria: None.
The following compounds did not meet maximum % deviations: None.
The following compounds did not meet recommended response factors: None.
The following compounds did not meet minimum response factors: None.

QC (Batch Specific):

Batch 544907 (CG67772)

CG73382, CG73383

All LCS recoveries were within 40 - 140 with the following exceptions: None.
All LCSD recoveries were within 40 - 140 with the following exceptions: None.
All LCS/LCSD RPDs were less than 30% with the following exceptions: None.

I attest under the pains and penalties of perjury that, based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.

SVOASIM Narration

Were all QA/QC performance criteria specified in the MADEP document CAM achieved? No.

QC Batch 545036 (Samples: CG73384): -----

The LCS/LCSD RPD exceeds the method criteria for one or more analytes, but these analytes were not reported in the sample(s) so no variability is suspected. (Benzo(k)fluoranthene, Dibenz(a,h)anthracene, Naphthalene)

Instrument:

CHEM27 09/13/20-1 Matt Richard, Chemist 09/13/20

CG73384 (1X)

For 8270 BN list, benzidine peak tailing was evaluated in the DFTPP tune and was found to be in control.

Initial Calibration Evaluation (CHEM27/27_BNSIM18_0909):
100% of target compounds met criteria.
The following compounds had %RSDs >20%: None.
The following compounds did not meet recommended response factors: None.
The following compounds did not meet a minimum response factors: None.

Continuing Calibration Verification (CHEM27/0913_03-27_BNSIM18_0909) (MCP Compliance):
Internal standard areas were within 50 to 200% of the initial calibration with the following exceptions: None.
100% of target compounds met criteria.
The following compounds did not meet % deviation criteria: None.
The following compounds did not meet maximum % deviations: None.
The following compounds did not meet recommended response factors: None.
The following compounds did not meet minimum response factors: None.

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MCP Certification Report

September 25, 2020

SDG I.D.: GCG73379

SVOASIM Narration

QC (Batch Specific):

Batch 545036 (CG73047)

CG73384

All LCS recoveries were within 40 - 140 with the following exceptions: None.
All LCSD recoveries were within 40 - 140 with the following exceptions: None.
All LCS/LCSD RPDs were less than 20% with the following exceptions: Benzo(k)fluoranthene(25.0%), Dibenz(a,h)anthracene(26.3%), Naphthalene(26.5%)
A LCS and LCS Duplicate were performed instead of a matrix spike and matrix spike duplicate.
Additional 8270 criteria: 10% of compounds can be outside of acceptance criteria as long as recovery is at least 10%. (Acid surrogates acceptance range for aqueous samples: 10-110%, for soils 30-130%)

I attest under the pains and penalties of perjury that, based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.

VOA Narration

Were all QA/QC performance criteria specified in the MADEP document CAM achieved? No.

QC Batch 545403 (Samples: CG73379, CG73380, CG73381, CG73382, CG73383, CG73385): -----

The LCS and/or the LCSD recovery is above the upper range for one or more analytes that were not reported in the sample(s), therefore no significant bias is suspected. (1,2-Dibromo-3-chloropropane)

The MS and/or the MSD recovery is above the upper range for one or more analytes that were not reported in the sample(s), therefore no significant bias is suspected. (Carbon Disulfide, Trichlorofluoromethane, Trichlorotrifluoroethane)

The MS and/or the MSD recovery is above the upper range, therefore a slight high bias is possible. (1,1-Dichloroethene, trans-1,2-Dichloroethene)

Instrument:

CHEM23 09/14/20-1 Michael Hahn, Chemist 09/14/20

CG73379 (1X), CG73380 (1X), CG73381 (1X), CG73382 (1X), CG73383 (1X), CG73385 (1X)

Initial Calibration Evaluation (CHEM23/VOA23_091120):
92% of target compounds met criteria.
The following compounds had %RSDs >20%: 1,2-Dibromo-3-chloropropane 25% (20%), Bromoform 24% (20%), Bromomethane 22% (20%), Chloroethane 29% (20%)
The following compounds did not meet Table 4 recommended minimum response factors: Acetone 0.088 (0.1)
The following compounds did not meet the minimum response factor of 0.05: None.

Continuing Calibration Verification (CHEM23/0914_02-VOA23_091120) (MCP Compliance):
Internal standard areas were within 50 to 200% of the initial calibration with the following exceptions: None.
98% of target compounds met criteria.
The following compounds did not meet % deviation criteria: None.
The following compounds did not meet maximum % deviations: None.
The following compounds did not meet Table 4 recommended minimum response factors: Acetone 0.093 (0.1), Tetrachloroethene 0.197 (0.2)
The following compounds did not meet the minimum MCP response factor of 0.05: None.

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MCP Certification Report

September 25, 2020

SDG I.D.: GCG73379

VOA Narration

QC (Site Specific):

Batch 545403 (CG73379) CHEM23 9/14/2020-1

CG73379(1X), CG73380(1X), CG73381(1X), CG73382(1X), CG73383(1X), CG73385(1X)

All LCS recoveries were within 70 - 130 with the following exceptions: 1,2-Dibromo-3-chloropropane(133%)
All LCSD recoveries were within 70 - 130 with the following exceptions: 1,2-Dibromo-3-chloropropane(133%)
All LCS/LCSD RPDs were less than 30% with the following exceptions: None.
All MS recoveries were within 70 - 130 with the following exceptions: Trichlorofluoromethane(145%)
All MSD recoveries were within 70 - 130 with the following exceptions: 1,1-Dichloroethene(133%), Carbon Disulfide(132%), trans-1,2-Dichloroethene(133%), Trichlorofluoromethane(155%), Trichlorotrifluoroethane(137%)
All MS/MSD RPDs were less than 30% with the following exceptions: None.
A matrix effect is suspected when a MS/MSD recovery is outside of criteria. No further action is required if LCS/LCSD compounds are within criteria.
Additional 8260 criteria: 10% of compounds can be outside of acceptance criteria as long as recovery is 10%.

I attest under the pains and penalties of perjury that, based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.

Cooler: Yes ☑ No ☐
Coolant: IPK ☑ ICE ☐ No ☐

Temp 6 °C Pg of

PHOENIX
Environmental Laboratories, Inc.

CHAIN OF CUSTODY RECORD

587 East Middle Turnpike, P.O. Box 370, Manchester, CT 06040
Email: info@phoenixlabs.com Fax (860) 645-0823
Client Services (860) 645-8726

Data Delivery/Contact EMails:
lori.herberich@aecom.com
scott.olson@aecom.com

Customer: AECOM
Address: 250 Apollo Drive
Chelmsford, MA 01824 - (978) 905-2100
Contacts: Lori Herberich (Chemist) 978-302-0089 Scott Olson (PM) 978-846-5238

Project: Lockheed - Wilmington MA 60552044.19
Report to: Lori Herberich - Scott Olson - Nicole Callahan
Invoice to: Scott Olson & Lori Herberich
QUOTE # August 2019 (for 2017-2022)

2020 Project PO: 127680

This section MUST be completed with Bottle Quantities.

Client Sample - Information - Identification

Sampler's Signature: [signature] Date: 9/9/20

Matrix Code:
DW=Drinking Water GW=Ground Water SW=Surface Water WW=Waste Water L=Liquid
RW=Raw Water SE=Sediment SL=Sludge S=Soil SD=Solid W=Wipe OIL=Oil B=Bulk

PHOENIX USE ONLY SAMPLE #	Customer Sample Identification	Sample Matrix	Date Sampled	Time Sampled	# of VOA Vials	# of Amber Glass	# of Clear Glass	# of Plastic				VOCs (8260) - HCL + Freon 113	1,4-Dioxane (8270D SIM) - NaHSO4 for DL <0.3 ug/L	VPH - HCL (MassDEP VPH-04-1.1 Rev 1)	EPH + PAHs - HCL & UNP (MassDEP- EPH-04-1.1 Rev 1)	Total As, Fe, Mn (6010C) - HNO3 [FF]	Dissolved As, Fe, Mn (6010C) - HNO3	Chloride, Nitrate, Nitrite, Sulfate (300) - UNP	Sulfide - Zn-Acetate + NaOH	Total Organic Carbon (9060A) - H3PO4	Comments
73379	20A-AE108R1-090920-1	GW	9/9/20	1140	9	3		12				X				X	X	X	X	X	MS/MSD
73380	20A-AE108R3-090920-1	GW	9/9/20	1150	3							X									
73381	20A-AE108R5-090920-1	GW	9/9/20	1200	3							X									
73382	20A-AE102M-090920-1	GW	9/9/20	1110	3	2		4				X	X			X	X	X	X	X	
73383	20A-AE102M-090920-2	GW	9/9/20	1112	3	2		2				X	X					X	X	X	
73384	20A-AE102RR6-090920-1	GW	9/9/20	1245		4		2							X			X	X		
73385	20A-TB01-090920-1	GW	9/9/20	0800	2							X									

Relinquished by:	Accepted by:	Date:	Time:
[signature]	[signature]	9-9-20	14:45
[signature]	[signature]	9/9	1600

Comments, Special Requirements or Regulations:

Turnaround:
10 - 15 days

RI
☐ Direct Exposure (Residential)
☐ GW
☐ Other

CT
☐ RCP Cert
☐ GW Protection
☐ SW Protection
☐ GA Mobility
☐ GB Mobility
☐ Residential DEC
☐ I/C DEC
☐ Other

MA
X MCP (CAM Rpt)
X GW-1
X GW-2
X GW-3
☐ S-1
☐ S-2
☐ S-3
☐ MWRA eSMART
☐ Other

State where samples were collected: MA

Data Format
x PDF
x AECOM EQuIS 4-File EDD format

Data Package
☐ Tier II Checklist
☐ Full Data Package*
☐ Phoenix Std Report
☐ Other

* SURCHARGE APPLIES

PHOENIX
Environmental Laboratories, Inc.

Wednesday, October 21, 2020

Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Project ID: **LOCKHEED WILMINGTON MA 60552044.19**
SDG ID: **GCG76015**
Sample ID#s: CG76015 - CG76045

This laboratory is in compliance with the NELAC requirements of procedures used except where indicated.

This report contains results for the parameters tested, under the sampling conditions described on the Chain Of Custody, as received by the laboratory. This report is incomplete unless all pages indicated in the pagination at the bottom of the page are included.

A scanned version of the COC form accompanies the analytical report and is an exact duplicate of the original.

Enclosed are revised Analysis Report pages. Please replace and discard the original pages. If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200. The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.

Sincerely yours,



Phyllis Shiller
Laboratory Director

NELAC - #NY11301
CT Lab Registration #PH-0618
MA Lab Registration #M-CT007
ME Lab Registration #CT-007
NH Lab Registration #213693-A,B
NJ Lab Registration #CT-003
NY Lab Registration #11301
PA Lab Registration #68-03530
RI Lab Registration #63
UT Lab Registration #CT00007
VT Lab Registration #VT11301

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

NY # 11301

SDG Comments

October 21, 2020

SDG I.D.: GCG76015

Phoenix reporting levels may exceed those referenced in the CAM protocol. Please refer to criteria sheet for comparisons to requested MCP standards.

Ver. 2:

This report has been revised to correct MS/MSD %Recoveries in batch 545550 for VPH analysis.

Ver. 3:

This report has been revised to include a narrative for 1,4-Dioxane MS/MSD %Recoveries in batch 545444 and analyst comments for Nitrite dilutions.

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Sample Id Cross Reference

October 21, 2020

SDG I.D.: GCG76015

Project ID: LOCKHEED WILMINGTON MA 60552044.19

Client Id	Lab Id	Matrix
20A-TB02-090920-1	CG76015	GROUND WATER
20A-AE102RR6-090920-1	CG76016	GROUND WATER
20A-AE102RR5-090920-1	CG76017	GROUND WATER
20A-AE102RR4-090920-1	CG76018	GROUND WATER
20A-AE102RR2-090920-1	CG76019	GROUND WATER
20A-AE102D-090920-1	CG76020	GROUND WATER
20A-AE103D-091020-1	CG76021	GROUND WATER
20A-AE103S-091020-1	CG76022	GROUND WATER
20A-AE100R5-091020-1	CG76023	GROUND WATER
20A-AE100R6-091020-1	CG76024	GROUND WATER
20A-AE100R4-091020-1	CG76025	GROUND WATER
20A-AE100R3-091020-1	CG76026	GROUND WATER
20A-AE100R1-091020-1	CG76027	GROUND WATER
20A-AE103R1-091020-1	CG76028	GROUND WATER
20A-AE103R3-091020-1	CG76029	GROUND WATER
20A-AE103R4-091020-1	CG76030	GROUND WATER
20A-AE103R5-091020-1	CG76031	GROUND WATER
20A-AE103R7-091020-1	CG76032	GROUND WATER
20A-AE112D-091120-1	CG76033	GROUND WATER
20A-EMW10R-091120-1	CG76034	GROUND WATER
20A-EMW11D-091120-1	CG76035	GROUND WATER
20A-EMW10D-091120-1	CG76036	GROUND WATER
20A-AE104R4-091120-1	CG76037	GROUND WATER
20A-AE112R1-091120-1	CG76038	GROUND WATER
20A-AE112R3-091120-1	CG76039	GROUND WATER
20A-AE112R5-091120-1	CG76040	GROUND WATER
20A-AE112R6-091120-1	CG76041	GROUND WATER
20A-AE104R3-091120-1	CG76042	GROUND WATER
20A-AE104R1-091120-1	CG76043	GROUND WATER
20A-AE104R5-091120-1	CG76044	GROUND WATER

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Tel. (860) 645-1102 Fax (860) 645-0823

Sample Id Cross Reference

October 21, 2020

SDG I.D.: GCG76015

Project ID: LOCKHEED WILMINGTON MA 60552044.19

Client Id	Lab Id	Matrix
20A-AE104R6-091120-1	CG76045	GROUND WATER

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

October 21, 2020

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		09/09/20	12:00
Location Code:	AECOM-WILMINGTN	Received by:	CP	09/11/20	16:31
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	127680				

Laboratory Data

SDG ID: GCG76015
Phoenix ID: CG76015

Project ID: LOCKHEED WILMINGTON MA 60552044.19
Client ID: 20A-TB02-090920-1

Parameter	Result		RL/ PQL	Units	Dilution	Date/Time	By	Reference
Volatiles								
1,1,1,2-Tetrachloroethane	ND		1.0	ug/L	1	09/14/20	MH	SW8260C
1,1,1-Trichloroethane	ND		1.0	ug/L	1	09/14/20	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND		0.50	ug/L	1	09/14/20	MH	SW8260C
1,1,2-Trichloroethane	ND		1.0	ug/L	1	09/14/20	MH	SW8260C
1,1-Dichloroethane	ND		1.0	ug/L	1	09/14/20	MH	SW8260C
1,1-Dichloroethene	ND		1.0	ug/L	1	09/14/20	MH	SW8260C
1,1-Dichloropropene	ND		1.0	ug/L	1	09/14/20	MH	SW8260C
1,2,3-Trichlorobenzene	ND		1.0	ug/L	1	09/14/20	MH	SW8260C
1,2,3-Trichloropropane	ND		0.50	ug/L	1	09/14/20	MH	SW8260C
1,2,4-Trichlorobenzene	ND		1.0	ug/L	1	09/14/20	MH	SW8260C
1,2,4-Trimethylbenzene	ND		1.0	ug/L	1	09/14/20	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND		0.50	ug/L	1	09/14/20	MH	SW8260C
1,2-Dibromoethane	ND		0.50	ug/L	1	09/14/20	MH	SW8260C
1,2-Dichlorobenzene	ND		1.0	ug/L	1	09/14/20	MH	SW8260C
1,2-Dichloroethane	ND		0.60	ug/L	1	09/14/20	MH	SW8260C
1,2-Dichloropropane	ND		1.0	ug/L	1	09/14/20	MH	SW8260C
1,3,5-Trimethylbenzene	ND		1.0	ug/L	1	09/14/20	MH	SW8260C
1,3-Dichlorobenzene	ND		1.0	ug/L	1	09/14/20	MH	SW8260C
1,3-Dichloropropane	ND		1.0	ug/L	1	09/14/20	MH	SW8260C
1,4-Dichlorobenzene	ND		1.0	ug/L	1	09/14/20	MH	SW8260C
2,2-Dichloropropane	ND		1.0	ug/L	1	09/14/20	MH	SW8260C
2-Chlorotoluene	ND		1.0	ug/L	1	09/14/20	MH	SW8260C
2-Hexanone	ND		5.0	ug/L	1	09/14/20	MH	SW8260C
4-Chlorotoluene	ND		1.0	ug/L	1	09/14/20	MH	SW8260C
4-Methyl-2-pentanone	ND		5.0	ug/L	1	09/14/20	MH	SW8260C
Acetone	66	S	25	ug/L	1	09/14/20	MH	SW8260C

Project ID: LOCKHEED WILMINGTON MA 60552044.19 Phoenix I.D.: CG76015

Client ID: 20A-TB02-090920-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	
Benzene	ND	0.70	ug/L	1	09/14/20	MH	SW8260C
Bromobenzene	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
Bromochloromethane	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
Bromodichloromethane	ND	0.50	ug/L	1	09/14/20	MH	SW8260C
Bromoform	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
Bromomethane	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
Carbon Disulfide	ND	5.0	ug/L	1	09/14/20	MH	SW8260C
Carbon tetrachloride	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
Chlorobenzene	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
Chloroethane	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
Chloroform	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
Chloromethane	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
cis-1,2-Dichloroethene	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
cis-1,3-Dichloropropene	ND	0.40	ug/L	1	09/14/20	MH	SW8260C
Dibromochloromethane	ND	0.50	ug/L	1	09/14/20	MH	SW8260C
Dibromomethane	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
Dichlorodifluoromethane	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
Ethylbenzene	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
Hexachlorobutadiene	ND	0.40	ug/L	1	09/14/20	MH	SW8260C
Isopropylbenzene	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
m&p-Xylene	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
Methyl ethyl ketone	ND	5.0	ug/L	1	09/14/20	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
Methylene chloride	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
Naphthalene	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
n-Butylbenzene	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
n-Propylbenzene	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
o-Xylene	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
p-Isopropyltoluene	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
sec-Butylbenzene	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
Styrene	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
tert-Butylbenzene	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
Tetrachloroethene	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
Tetrahydrofuran (THF)	ND	2.5	ug/L	1	09/14/20	MH	SW8260C
Toluene	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
trans-1,2-Dichloroethene	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
trans-1,3-Dichloropropene	ND	0.40	ug/L	1	09/14/20	MH	SW8260C
Trichloroethene	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
Trichlorofluoromethane	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
Trichlorotrifluoroethane	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
Vinyl chloride	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	99		%	1	09/14/20	MH	70 - 130 %
% Bromofluorobenzene	96		%	1	09/14/20	MH	70 - 130 %
% Dibromofluoromethane	95		%	1	09/14/20	MH	70 - 130 %
% Toluene-d8	104		%	1	09/14/20	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	100	ug/L	1	09/14/20	MH	SW8260C (OXY)
Diethyl ether	ND	1.0	ug/L	1	09/14/20	MH	SW8260C (OXY)

Ver 3

Project ID: LOCKHEED WILMINGTON MA 60552044.19 Phoenix I.D.: CG76015

Client ID: 20A-TB02-090920-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	
Di-isopropyl ether	ND	1.0	ug/L	1	09/14/20	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	1.0	ug/L	1	09/14/20	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	1.0	ug/L	1	09/14/20	MH	SW8260C (OXY)

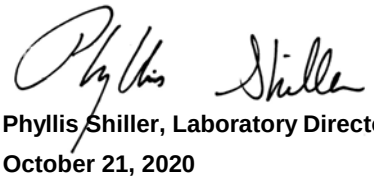
RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

TRIP BLANK INCLUDED.

S - Laboratory solvent, contamination is possible.

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.



Phyllis Shiller, Laboratory Director

October 21, 2020

Reviewed and Released by: Greg Lawrence, Assistant Lab Director

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

October 21, 2020

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		09/09/20	12:45
Location Code:	AECOM-WILMINGTN	Received by:	CP	09/11/20	16:31
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	127680				

Laboratory Data

SDG ID: GCG76015
Phoenix ID: CG76016

Project ID: LOCKHEED WILMINGTON MA 60552044.19
Client ID: 20A-AE102RR6-090920-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Arsenic	0.004	0.004	mg/L	1	09/15/20	TH	SW6010D
Arsenic (Dissolved)	0.004	0.004	mg/L	1	09/15/20	CPP	SW6010D
Iron (Dissolved)	0.640	0.011	mg/L	1	09/15/20	CPP	SW6010D
Manganese (Dissolved)	0.612	0.001	mg/L	1	09/15/20	CPP	SW6010D
Iron	0.681	0.010	mg/L	1	09/15/20	TH	SW6010D
Manganese	0.623	0.001	mg/L	1	09/15/20	TH	SW6010D
Total Organic Carbon	< 1.0	1.0	mg/L	1	09/15/20	ARG/BJA	SM5310B-11
Dissolved Metals Preparation	Completed				09/14/20	AG	SW3005A
Total Metals Digestion	Completed				09/14/20	AG	
MA Petroleum Hydrocarbon (VPH)	Completed				09/15/20	RM	MADEP VPH04
Volatiles							
1,1,1,2-Tetrachloroethane	ND	10	ug/L	20	09/16/20	MH	SW8260C
1,1,1-Trichloroethane	ND	20	ug/L	20	09/16/20	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	10	ug/L	20	09/16/20	MH	SW8260C
1,1,2-Trichloroethane	ND	10	ug/L	20	09/16/20	MH	SW8260C
1,1-Dichloroethane	61	20	ug/L	20	09/16/20	MH	SW8260C
1,1-Dichloroethene	19	10	ug/L	20	09/16/20	MH	SW8260C
1,1-Dichloropropene	ND	20	ug/L	20	09/16/20	MH	SW8260C
1,2,3-Trichlorobenzene	ND	10	ug/L	20	09/16/20	MH	SW8260C
1,2,3-Trichloropropane	ND	10	ug/L	20	09/16/20	MH	SW8260C
1,2,4-Trichlorobenzene	ND	20	ug/L	20	09/16/20	MH	SW8260C
1,2,4-Trimethylbenzene	ND	20	ug/L	20	09/16/20	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	10	ug/L	20	09/16/20	MH	SW8260C
1,2-Dibromoethane	ND	10	ug/L	20	09/16/20	MH	SW8260C
1,2-Dichlorobenzene	ND	20	ug/L	20	09/16/20	MH	SW8260C
1,2-Dichloroethane	ND	10	ug/L	20	09/16/20	MH	SW8260C
1,2-Dichloropropane	ND	10	ug/L	20	09/16/20	MH	SW8260C

Project ID: LOCKHEED WILMINGTON MA 60552044.19 Phoenix I.D.: CG76016

Client ID: 20A-AE102RR6-090920-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	
1,3,5-Trimethylbenzene	ND	20	ug/L	20	09/16/20	MH	SW8260C
1,3-Dichlorobenzene	ND	20	ug/L	20	09/16/20	MH	SW8260C
1,3-Dichloropropane	ND	20	ug/L	20	09/16/20	MH	SW8260C
1,4-Dichlorobenzene	ND	10	ug/L	20	09/16/20	MH	SW8260C
2,2-Dichloropropane	ND	20	ug/L	20	09/16/20	MH	SW8260C
2-Chlorotoluene	ND	20	ug/L	20	09/16/20	MH	SW8260C
2-Hexanone	ND	100	ug/L	20	09/16/20	MH	SW8260C
4-Chlorotoluene	ND	20	ug/L	20	09/16/20	MH	SW8260C
4-Methyl-2-pentanone	ND	100	ug/L	20	09/16/20	MH	SW8260C
Acetone	ND	500	ug/L	20	09/16/20	MH	SW8260C
Benzene	ND	10	ug/L	20	09/16/20	MH	SW8260C
Bromobenzene	ND	20	ug/L	20	09/16/20	MH	SW8260C
Bromochloromethane	ND	20	ug/L	20	09/16/20	MH	SW8260C
Bromodichloromethane	ND	10	ug/L	20	09/16/20	MH	SW8260C
Bromoform	ND	10	ug/L	20	09/16/20	MH	SW8260C
Bromomethane	ND	10	ug/L	20	09/16/20	MH	SW8260C
Carbon Disulfide	ND	100	ug/L	20	09/16/20	MH	SW8260C
Carbon tetrachloride	ND	10	ug/L	20	09/16/20	MH	SW8260C
Chlorobenzene	ND	20	ug/L	20	09/16/20	MH	SW8260C
Chloroethane	ND	20	ug/L	20	09/16/20	MH	SW8260C
Chloroform	ND	20	ug/L	20	09/16/20	MH	SW8260C
Chloromethane	ND	20	ug/L	20	09/16/20	MH	SW8260C
cis-1,2-Dichloroethene	120	20	ug/L	20	09/16/20	MH	SW8260C
cis-1,3-Dichloropropene	ND	10	ug/L	20	09/16/20	MH	SW8260C
Dibromochloromethane	ND	10	ug/L	20	09/16/20	MH	SW8260C
Dibromomethane	ND	10	ug/L	20	09/16/20	MH	SW8260C
Dichlorodifluoromethane	ND	20	ug/L	20	09/16/20	MH	SW8260C
Ethylbenzene	ND	20	ug/L	20	09/16/20	MH	SW8260C
Hexachlorobutadiene	ND	10	ug/L	20	09/16/20	MH	SW8260C
Isopropylbenzene	ND	20	ug/L	20	09/16/20	MH	SW8260C
m&p-Xylene	ND	20	ug/L	20	09/16/20	MH	SW8260C
Methyl ethyl ketone	ND	100	ug/L	20	09/16/20	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	20	ug/L	20	09/16/20	MH	SW8260C
Methylene chloride	ND	20	ug/L	20	09/16/20	MH	SW8260C
Naphthalene	ND	20	ug/L	20	09/16/20	MH	SW8260C
n-Butylbenzene	ND	20	ug/L	20	09/16/20	MH	SW8260C
n-Propylbenzene	ND	20	ug/L	20	09/16/20	MH	SW8260C
o-Xylene	ND	20	ug/L	20	09/16/20	MH	SW8260C
p-Isopropyltoluene	ND	20	ug/L	20	09/16/20	MH	SW8260C
sec-Butylbenzene	ND	20	ug/L	20	09/16/20	MH	SW8260C
Styrene	ND	20	ug/L	20	09/16/20	MH	SW8260C
tert-Butylbenzene	ND	20	ug/L	20	09/16/20	MH	SW8260C
Tetrachloroethene	3600	100	ug/L	100	09/18/20	MH	SW8260C
Tetrahydrofuran (THF)	ND	50	ug/L	20	09/16/20	MH	SW8260C
Toluene	ND	20	ug/L	20	09/16/20	MH	SW8260C
trans-1,2-Dichloroethene	ND	20	ug/L	20	09/16/20	MH	SW8260C
trans-1,3-Dichloropropene	ND	10	ug/L	20	09/16/20	MH	SW8260C
Trichloroethene	4600	100	ug/L	100	09/18/20	MH	SW8260C
Trichlorofluoromethane	ND	20	ug/L	20	09/16/20	MH	SW8260C

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	
Trichlorotrifluoroethane	ND	20	ug/L	20	09/16/20	MH	SW8260C
Vinyl chloride	ND	10	ug/L	20	09/16/20	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4 (20x)	100		%	20	09/16/20	MH	70 - 130 %
% Bromofluorobenzene (20x)	99		%	20	09/16/20	MH	70 - 130 %
% Dibromofluoromethane (20x)	100		%	20	09/16/20	MH	70 - 130 %
% Toluene-d8 (20x)	93		%	20	09/16/20	MH	70 - 130 %
% 1,2-dichlorobenzene-d4 (100x)	100		%	100	09/18/20	MH	70 - 130 %
% Bromofluorobenzene (100x)	103		%	100	09/18/20	MH	70 - 130 %
% Dibromofluoromethane (100x)	101		%	100	09/18/20	MH	70 - 130 %
% Toluene-d8 (100x)	104		%	100	09/18/20	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	2000	ug/L	20	09/16/20	MH	SW8260C (OXY)
Diethyl ether	ND	20	ug/L	20	09/16/20	MH	SW8260C (OXY)
Di-isopropyl ether	ND	20	ug/L	20	09/16/20	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	20	ug/L	20	09/16/20	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	20	ug/L	20	09/16/20	MH	SW8260C (OXY)
1,4-dioxane							
1,4-dioxane	25	0.20	ug/l	1	09/16/20	AW	SW8270DSIM
QA/QC Surrogates							
% 1,4-dioxane-d8	101		%	1	09/16/20	AW	40 - 140 %
Extraction for 1,4-Dioxane	Completed				09/15/20	S/S	
MA Volatile Petroleum Hydrocarbons (VPH)							
Unadjusted C5-C8 Aliphatics (*1)	1900	500	ug/L	5	09/15/20	RM	MA VPH 5/2004
Unadjusted C9-C12 Aliphatics (*1)	ND	500	ug/L	5	09/15/20	RM	MA VPH 5/2004
C5-C8 Aliphatic Hydrocarbons *1,2	1900	500	ug/L	5	09/15/20	RM	MA VPH 5/2004
C9-C12 Aliphatic Hydrocarbons *1,3	ND	500	ug/L	5	09/15/20	RM	MA VPH 5/2004
C9-C10 Aromatic Hydrocarbons *1	ND	500	ug/L	5	09/15/20	RM	MA VPH 5/2004
Benzene	ND	5.0	ug/L	5	09/15/20	RM	MA VPH 5/2004
Ethyl Benzene	ND	5.0	ug/L	5	09/15/20	RM	MA VPH 5/2004
MTBE	ND	5.0	ug/L	5	09/15/20	RM	MA VPH 5/2004
Naphthalene	ND	25	ug/L	5	09/15/20	RM	MA VPH 5/2004
Toluene	ND	5.0	ug/L	5	09/15/20	RM	MA VPH 5/2004
m,p-Xylenes	ND	10	ug/L	5	09/15/20	RM	MA VPH 5/2004
o-Xylene	ND	5.0	ug/L	5	09/15/20	RM	MA VPH 5/2004
QA/QC Surrogates							
% 2,5-Dibromotoluene (FID)	112		%	5	09/15/20	RM	70 - 130 %
% 2,5-Dibromotoluene (PID)	99		%	5	09/15/20	RM	70 - 130 %

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

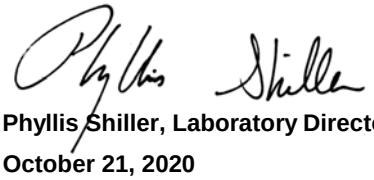
Comments:

VPH:
*1 Range data exclude conc.s of any surrogate(s) and/or Int. std.s eluting in that range.
*2 C5-C8 and C9-C12 Aliphatic exclude the conc. of Target Analytes in that range.
*3 C9-C12 Aliphatic also exclude C9-C10 Aromatic Hydrocarbon

VPH diluted run
Elevated reporting limits for VPH due to the presence of target and/or non-target compounds.

Volatile Comment:
Elevated reporting limits for volatiles due to the presence of target and/or non-target compounds.

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.



Phyllis Shiller, Laboratory Director
October 21, 2020
Reviewed and Released by: Greg Lawrence, Assistant Lab Director

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

October 21, 2020

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		09/09/20	15:20
Location Code:	AECOM-WILMINGTN	Received by:	CP	09/11/20	16:31
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	127680				

Laboratory Data

SDG ID: GCG76015
Phoenix ID: CG76017

Project ID: LOCKHEED WILMINGTON MA 60552044.19
Client ID: 20A-AE102RR5-090920-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Volatiles							
1,1,1,2-Tetrachloroethane	ND	10	ug/L	20	09/16/20	MH	SW8260C
1,1,1-Trichloroethane	ND	20	ug/L	20	09/16/20	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	10	ug/L	20	09/16/20	MH	SW8260C
1,1,2-Trichloroethane	ND	10	ug/L	20	09/16/20	MH	SW8260C
1,1-Dichloroethane	38	20	ug/L	20	09/16/20	MH	SW8260C
1,1-Dichloroethene	11	10	ug/L	20	09/16/20	MH	SW8260C
1,1-Dichloropropene	ND	20	ug/L	20	09/16/20	MH	SW8260C
1,2,3-Trichlorobenzene	ND	10	ug/L	20	09/16/20	MH	SW8260C
1,2,3-Trichloropropane	ND	10	ug/L	20	09/16/20	MH	SW8260C
1,2,4-Trichlorobenzene	ND	20	ug/L	20	09/16/20	MH	SW8260C
1,2,4-Trimethylbenzene	ND	20	ug/L	20	09/16/20	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	10	ug/L	20	09/16/20	MH	SW8260C
1,2-Dibromoethane	ND	10	ug/L	20	09/16/20	MH	SW8260C
1,2-Dichlorobenzene	ND	20	ug/L	20	09/16/20	MH	SW8260C
1,2-Dichloroethane	ND	10	ug/L	20	09/16/20	MH	SW8260C
1,2-Dichloropropane	ND	10	ug/L	20	09/16/20	MH	SW8260C
1,3,5-Trimethylbenzene	ND	20	ug/L	20	09/16/20	MH	SW8260C
1,3-Dichlorobenzene	ND	20	ug/L	20	09/16/20	MH	SW8260C
1,3-Dichloropropane	ND	20	ug/L	20	09/16/20	MH	SW8260C
1,4-Dichlorobenzene	ND	10	ug/L	20	09/16/20	MH	SW8260C
2,2-Dichloropropane	ND	20	ug/L	20	09/16/20	MH	SW8260C
2-Chlorotoluene	ND	20	ug/L	20	09/16/20	MH	SW8260C
2-Hexanone	ND	100	ug/L	20	09/16/20	MH	SW8260C
4-Chlorotoluene	ND	20	ug/L	20	09/16/20	MH	SW8260C
4-Methyl-2-pentanone	ND	100	ug/L	20	09/16/20	MH	SW8260C
Acetone	ND	500	ug/L	20	09/16/20	MH	SW8260C

Project ID: LOCKHEED WILMINGTON MA 60552044.19 Phoenix I.D.: CG76017

Client ID: 20A-AE102RR5-090920-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	
Benzene	ND	10	ug/L	20	09/16/20	MH	SW8260C
Bromobenzene	ND	20	ug/L	20	09/16/20	MH	SW8260C
Bromochloromethane	ND	20	ug/L	20	09/16/20	MH	SW8260C
Bromodichloromethane	ND	10	ug/L	20	09/16/20	MH	SW8260C
Bromoform	ND	10	ug/L	20	09/16/20	MH	SW8260C
Bromomethane	ND	10	ug/L	20	09/16/20	MH	SW8260C
Carbon Disulfide	ND	100	ug/L	20	09/16/20	MH	SW8260C
Carbon tetrachloride	ND	10	ug/L	20	09/16/20	MH	SW8260C
Chlorobenzene	ND	20	ug/L	20	09/16/20	MH	SW8260C
Chloroethane	ND	20	ug/L	20	09/16/20	MH	SW8260C
Chloroform	ND	20	ug/L	20	09/16/20	MH	SW8260C
Chloromethane	ND	20	ug/L	20	09/16/20	MH	SW8260C
cis-1,2-Dichloroethene	130	20	ug/L	20	09/16/20	MH	SW8260C
cis-1,3-Dichloropropene	ND	10	ug/L	20	09/16/20	MH	SW8260C
Dibromochloromethane	ND	10	ug/L	20	09/16/20	MH	SW8260C
Dibromomethane	ND	10	ug/L	20	09/16/20	MH	SW8260C
Dichlorodifluoromethane	ND	20	ug/L	20	09/16/20	MH	SW8260C
Ethylbenzene	ND	20	ug/L	20	09/16/20	MH	SW8260C
Hexachlorobutadiene	ND	10	ug/L	20	09/16/20	MH	SW8260C
Isopropylbenzene	ND	20	ug/L	20	09/16/20	MH	SW8260C
m&p-Xylene	ND	20	ug/L	20	09/16/20	MH	SW8260C
Methyl ethyl ketone	ND	100	ug/L	20	09/16/20	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	20	ug/L	20	09/16/20	MH	SW8260C
Methylene chloride	ND	20	ug/L	20	09/16/20	MH	SW8260C
Naphthalene	ND	20	ug/L	20	09/16/20	MH	SW8260C
n-Butylbenzene	ND	20	ug/L	20	09/16/20	MH	SW8260C
n-Propylbenzene	ND	20	ug/L	20	09/16/20	MH	SW8260C
o-Xylene	ND	20	ug/L	20	09/16/20	MH	SW8260C
p-Isopropyltoluene	ND	20	ug/L	20	09/16/20	MH	SW8260C
sec-Butylbenzene	ND	20	ug/L	20	09/16/20	MH	SW8260C
Styrene	ND	20	ug/L	20	09/16/20	MH	SW8260C
tert-Butylbenzene	ND	20	ug/L	20	09/16/20	MH	SW8260C
Tetrachloroethene	1400	20	ug/L	20	09/16/20	MH	SW8260C
Tetrahydrofuran (THF)	ND	50	ug/L	20	09/16/20	MH	SW8260C
Toluene	ND	20	ug/L	20	09/16/20	MH	SW8260C
trans-1,2-Dichloroethene	ND	20	ug/L	20	09/16/20	MH	SW8260C
trans-1,3-Dichloropropene	ND	10	ug/L	20	09/16/20	MH	SW8260C
Trichloroethene	1800	100	ug/L	100	09/18/20	MH	SW8260C
Trichlorofluoromethane	ND	20	ug/L	20	09/16/20	MH	SW8260C
Trichlorotrifluoroethane	ND	20	ug/L	20	09/16/20	MH	SW8260C
Vinyl chloride	ND	10	ug/L	20	09/16/20	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4 (20x)	97		%	20	09/16/20	MH	70 - 130 %
% Bromofluorobenzene (20x)	100		%	20	09/16/20	MH	70 - 130 %
% Dibromofluoromethane (20x)	99		%	20	09/16/20	MH	70 - 130 %
% Toluene-d8 (20x)	97		%	20	09/16/20	MH	70 - 130 %
% 1,2-dichlorobenzene-d4 (100x)	100		%	100	09/18/20	MH	70 - 130 %
% Bromofluorobenzene (100x)	102		%	100	09/18/20	MH	70 - 130 %
% Dibromofluoromethane (100x)	107		%	100	09/18/20	MH	70 - 130 %

Project ID: LOCKHEED WILMINGTON MA 60552044.19 Phoenix I.D.: CG76017
Client ID: 20A-AE102RR5-090920-1

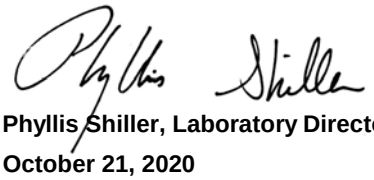
Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	
% Toluene-d8 (100x)	105		%	100	09/18/20	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	2000	ug/L	20	09/16/20	MH	SW8260C (OXY)
Diethyl ether	ND	20	ug/L	20	09/16/20	MH	SW8260C (OXY)
Di-isopropyl ether	ND	20	ug/L	20	09/16/20	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	20	ug/L	20	09/16/20	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	20	ug/L	20	09/16/20	MH	SW8260C (OXY)

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

Volatile Comment:
Elevated reporting limits for volatiles due to the presence of target and/or non-target compounds.

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
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Phyllis Shiller, Laboratory Director
October 21, 2020
Reviewed and Released by: Greg Lawrence, Assistant Lab Director

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

October 21, 2020

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		09/09/20	15:45
Location Code:	AECOM-WILMINGTN	Received by:	CP	09/11/20	16:31
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	127680				

Laboratory Data

SDG ID: GCG76015
Phoenix ID: CG76018

Project ID: LOCKHEED WILMINGTON MA 60552044.19
Client ID: 20A-AE102RR4-090920-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Volatiles							
1,1,1,2-Tetrachloroethane	ND	5.0	ug/L	5	09/18/20	MH	SW8260C
1,1,1-Trichloroethane	ND	5.0	ug/L	5	09/18/20	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	2.5	ug/L	5	09/18/20	MH	SW8260C
1,1,2-Trichloroethane	ND	5.0	ug/L	5	09/18/20	MH	SW8260C
1,1-Dichloroethane	12	5.0	ug/L	5	09/18/20	MH	SW8260C
1,1-Dichloroethene	ND	5.0	ug/L	5	09/18/20	MH	SW8260C
1,1-Dichloropropene	ND	5.0	ug/L	5	09/18/20	MH	SW8260C
1,2,3-Trichlorobenzene	ND	5.0	ug/L	5	09/18/20	MH	SW8260C
1,2,3-Trichloropropane	ND	2.5	ug/L	5	09/18/20	MH	SW8260C
1,2,4-Trichlorobenzene	ND	5.0	ug/L	5	09/18/20	MH	SW8260C
1,2,4-Trimethylbenzene	ND	5.0	ug/L	5	09/18/20	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	2.5	ug/L	5	09/18/20	MH	SW8260C
1,2-Dibromoethane	ND	2.5	ug/L	5	09/18/20	MH	SW8260C
1,2-Dichlorobenzene	ND	5.0	ug/L	5	09/18/20	MH	SW8260C
1,2-Dichloroethane	ND	3.0	ug/L	5	09/18/20	MH	SW8260C
1,2-Dichloropropane	ND	3.0	ug/L	5	09/18/20	MH	SW8260C
1,3,5-Trimethylbenzene	ND	5.0	ug/L	5	09/18/20	MH	SW8260C
1,3-Dichlorobenzene	ND	5.0	ug/L	5	09/18/20	MH	SW8260C
1,3-Dichloropropane	ND	5.0	ug/L	5	09/18/20	MH	SW8260C
1,4-Dichlorobenzene	ND	5.0	ug/L	5	09/18/20	MH	SW8260C
2,2-Dichloropropane	ND	5.0	ug/L	5	09/18/20	MH	SW8260C
2-Chlorotoluene	ND	5.0	ug/L	5	09/18/20	MH	SW8260C
2-Hexanone	ND	25	ug/L	5	09/18/20	MH	SW8260C
4-Chlorotoluene	ND	5.0	ug/L	5	09/18/20	MH	SW8260C
4-Methyl-2-pentanone	ND	25	ug/L	5	09/18/20	MH	SW8260C
Acetone	ND	130	ug/L	5	09/18/20	MH	SW8260C

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	
Benzene	ND	3.5	ug/L	5	09/18/20	MH	SW8260C
Bromobenzene	ND	5.0	ug/L	5	09/18/20	MH	SW8260C
Bromochloromethane	ND	5.0	ug/L	5	09/18/20	MH	SW8260C
Bromodichloromethane	ND	2.5	ug/L	5	09/18/20	MH	SW8260C
Bromoform	ND	4.0	ug/L	5	09/18/20	MH	SW8260C
Bromomethane	ND	5.0	ug/L	5	09/18/20	MH	SW8260C
Carbon Disulfide	ND	25	ug/L	5	09/18/20	MH	SW8260C
Carbon tetrachloride	ND	2.5	ug/L	5	09/18/20	MH	SW8260C
Chlorobenzene	ND	5.0	ug/L	5	09/18/20	MH	SW8260C
Chloroethane	ND	5.0	ug/L	5	09/18/20	MH	SW8260C
Chloroform	ND	5.0	ug/L	5	09/18/20	MH	SW8260C
Chloromethane	ND	5.0	ug/L	5	09/18/20	MH	SW8260C
cis-1,2-Dichloroethene	61	5.0	ug/L	5	09/18/20	MH	SW8260C
cis-1,3-Dichloropropene	ND	2.5	ug/L	5	09/18/20	MH	SW8260C
Dibromochloromethane	ND	2.5	ug/L	5	09/18/20	MH	SW8260C
Dibromomethane	ND	5.0	ug/L	5	09/18/20	MH	SW8260C
Dichlorodifluoromethane	ND	5.0	ug/L	5	09/18/20	MH	SW8260C
Ethylbenzene	ND	5.0	ug/L	5	09/18/20	MH	SW8260C
Hexachlorobutadiene	ND	2.5	ug/L	5	09/18/20	MH	SW8260C
Isopropylbenzene	ND	5.0	ug/L	5	09/18/20	MH	SW8260C
m&p-Xylene	ND	5.0	ug/L	5	09/18/20	MH	SW8260C
Methyl ethyl ketone	ND	25	ug/L	5	09/18/20	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	5.0	ug/L	5	09/18/20	MH	SW8260C
Methylene chloride	ND	5.0	ug/L	5	09/18/20	MH	SW8260C
Naphthalene	ND	5.0	ug/L	5	09/18/20	MH	SW8260C
n-Butylbenzene	ND	5.0	ug/L	5	09/18/20	MH	SW8260C
n-Propylbenzene	ND	5.0	ug/L	5	09/18/20	MH	SW8260C
o-Xylene	ND	5.0	ug/L	5	09/18/20	MH	SW8260C
p-Isopropyltoluene	ND	5.0	ug/L	5	09/18/20	MH	SW8260C
sec-Butylbenzene	ND	5.0	ug/L	5	09/18/20	MH	SW8260C
Styrene	ND	5.0	ug/L	5	09/18/20	MH	SW8260C
tert-Butylbenzene	ND	5.0	ug/L	5	09/18/20	MH	SW8260C
Tetrachloroethene	310	5.0	ug/L	5	09/18/20	MH	SW8260C
Tetrahydrofuran (THF)	ND	13	ug/L	5	09/18/20	MH	SW8260C
Toluene	ND	5.0	ug/L	5	09/18/20	MH	SW8260C
trans-1,2-Dichloroethene	ND	5.0	ug/L	5	09/18/20	MH	SW8260C
trans-1,3-Dichloropropene	ND	2.5	ug/L	5	09/18/20	MH	SW8260C
Trichloroethene	490	5.0	ug/L	5	09/18/20	MH	SW8260C
Trichlorofluoromethane	ND	5.0	ug/L	5	09/18/20	MH	SW8260C
Trichlorotrifluoroethane	ND	5.0	ug/L	5	09/18/20	MH	SW8260C
Vinyl chloride	ND	2.5	ug/L	5	09/18/20	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4 (5x)	100		%	5	09/18/20	MH	70 - 130 %
% Bromofluorobenzene (5x)	104		%	5	09/18/20	MH	70 - 130 %
% Dibromofluoromethane (5x)	103		%	5	09/18/20	MH	70 - 130 %
% Toluene-d8 (5x)	99		%	5	09/18/20	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	500	ug/L	5	09/18/20	MH	SW8260C (OXY)
Diethyl ether	ND	5.0	ug/L	5	09/18/20	MH	SW8260C (OXY)

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	
Di-isopropyl ether	ND	5.0	ug/L	5	09/18/20	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	5.0	ug/L	5	09/18/20	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	5.0	ug/L	5	09/18/20	MH	SW8260C (OXY)
Client MS/MSD	Completed				09/18/20		
1,4-dioxane							
1,4-dioxane	5.2	0.20	ug/l	1	09/16/20	AW	SW8270DSIM
QA/QC Surrogates							
% 1,4-dioxane-d8	95		%	1	09/16/20	AW	40 - 140 %
Extraction for 1,4-Dioxane	Completed				09/15/20	S/S	

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.

Phyllis Shiller, Laboratory Director
October 21, 2020
Reviewed and Released by: Greg Lawrence, Assistant Lab Director

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

October 21, 2020

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		09/09/20	16:10
Location Code:	AECOM-WILMINGTN	Received by:	CP	09/11/20	16:31
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	127680				

Laboratory Data

SDG ID: GCG76015
Phoenix ID: CG76019

Project ID: LOCKHEED WILMINGTON MA 60552044.19
Client ID: 20A-AE102RR2-090920-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Volatiles							
1,1,1,2-Tetrachloroethane	ND	5.0	ug/L	5	09/18/20	MH	SW8260C
1,1,1-Trichloroethane	ND	5.0	ug/L	5	09/18/20	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	2.5	ug/L	5	09/18/20	MH	SW8260C
1,1,2-Trichloroethane	ND	5.0	ug/L	5	09/18/20	MH	SW8260C
1,1-Dichloroethane	11	5.0	ug/L	5	09/18/20	MH	SW8260C
1,1-Dichloroethene	ND	5.0	ug/L	5	09/18/20	MH	SW8260C
1,1-Dichloropropene	ND	5.0	ug/L	5	09/18/20	MH	SW8260C
1,2,3-Trichlorobenzene	ND	5.0	ug/L	5	09/18/20	MH	SW8260C
1,2,3-Trichloropropane	ND	2.5	ug/L	5	09/18/20	MH	SW8260C
1,2,4-Trichlorobenzene	ND	5.0	ug/L	5	09/18/20	MH	SW8260C
1,2,4-Trimethylbenzene	ND	5.0	ug/L	5	09/18/20	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	2.5	ug/L	5	09/18/20	MH	SW8260C
1,2-Dibromoethane	ND	2.5	ug/L	5	09/18/20	MH	SW8260C
1,2-Dichlorobenzene	ND	5.0	ug/L	5	09/18/20	MH	SW8260C
1,2-Dichloroethane	ND	3.0	ug/L	5	09/18/20	MH	SW8260C
1,2-Dichloropropane	ND	3.0	ug/L	5	09/18/20	MH	SW8260C
1,3,5-Trimethylbenzene	ND	5.0	ug/L	5	09/18/20	MH	SW8260C
1,3-Dichlorobenzene	ND	5.0	ug/L	5	09/18/20	MH	SW8260C
1,3-Dichloropropane	ND	5.0	ug/L	5	09/18/20	MH	SW8260C
1,4-Dichlorobenzene	ND	5.0	ug/L	5	09/18/20	MH	SW8260C
2,2-Dichloropropane	ND	5.0	ug/L	5	09/18/20	MH	SW8260C
2-Chlorotoluene	ND	5.0	ug/L	5	09/18/20	MH	SW8260C
2-Hexanone	ND	25	ug/L	5	09/18/20	MH	SW8260C
4-Chlorotoluene	ND	5.0	ug/L	5	09/18/20	MH	SW8260C
4-Methyl-2-pentanone	ND	25	ug/L	5	09/18/20	MH	SW8260C
Acetone	ND	130	ug/L	5	09/18/20	MH	SW8260C

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	
Benzene	ND	3.5	ug/L	5	09/18/20	MH	SW8260C
Bromobenzene	ND	5.0	ug/L	5	09/18/20	MH	SW8260C
Bromochloromethane	ND	5.0	ug/L	5	09/18/20	MH	SW8260C
Bromodichloromethane	ND	2.5	ug/L	5	09/18/20	MH	SW8260C
Bromoform	ND	4.0	ug/L	5	09/18/20	MH	SW8260C
Bromomethane	ND	5.0	ug/L	5	09/18/20	MH	SW8260C
Carbon Disulfide	ND	25	ug/L	5	09/18/20	MH	SW8260C
Carbon tetrachloride	ND	2.5	ug/L	5	09/18/20	MH	SW8260C
Chlorobenzene	ND	5.0	ug/L	5	09/18/20	MH	SW8260C
Chloroethane	ND	5.0	ug/L	5	09/18/20	MH	SW8260C
Chloroform	ND	5.0	ug/L	5	09/18/20	MH	SW8260C
Chloromethane	ND	5.0	ug/L	5	09/18/20	MH	SW8260C
cis-1,2-Dichloroethene	170	5.0	ug/L	5	09/18/20	MH	SW8260C
cis-1,3-Dichloropropene	ND	2.5	ug/L	5	09/18/20	MH	SW8260C
Dibromochloromethane	ND	2.5	ug/L	5	09/18/20	MH	SW8260C
Dibromomethane	ND	5.0	ug/L	5	09/18/20	MH	SW8260C
Dichlorodifluoromethane	ND	5.0	ug/L	5	09/18/20	MH	SW8260C
Ethylbenzene	ND	5.0	ug/L	5	09/18/20	MH	SW8260C
Hexachlorobutadiene	ND	2.5	ug/L	5	09/18/20	MH	SW8260C
Isopropylbenzene	ND	5.0	ug/L	5	09/18/20	MH	SW8260C
m&p-Xylene	ND	5.0	ug/L	5	09/18/20	MH	SW8260C
Methyl ethyl ketone	ND	25	ug/L	5	09/18/20	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	5.0	ug/L	5	09/18/20	MH	SW8260C
Methylene chloride	ND	5.0	ug/L	5	09/18/20	MH	SW8260C
Naphthalene	ND	5.0	ug/L	5	09/18/20	MH	SW8260C
n-Butylbenzene	ND	5.0	ug/L	5	09/18/20	MH	SW8260C
n-Propylbenzene	ND	5.0	ug/L	5	09/18/20	MH	SW8260C
o-Xylene	ND	5.0	ug/L	5	09/18/20	MH	SW8260C
p-Isopropyltoluene	ND	5.0	ug/L	5	09/18/20	MH	SW8260C
sec-Butylbenzene	ND	5.0	ug/L	5	09/18/20	MH	SW8260C
Styrene	ND	5.0	ug/L	5	09/18/20	MH	SW8260C
tert-Butylbenzene	ND	5.0	ug/L	5	09/18/20	MH	SW8260C
Tetrachloroethene	93	5.0	ug/L	5	09/18/20	MH	SW8260C
Tetrahydrofuran (THF)	ND	13	ug/L	5	09/18/20	MH	SW8260C
Toluene	ND	5.0	ug/L	5	09/18/20	MH	SW8260C
trans-1,2-Dichloroethene	ND	5.0	ug/L	5	09/18/20	MH	SW8260C
trans-1,3-Dichloropropene	ND	2.5	ug/L	5	09/18/20	MH	SW8260C
Trichloroethene	370	5.0	ug/L	5	09/18/20	MH	SW8260C
Trichlorofluoromethane	ND	5.0	ug/L	5	09/18/20	MH	SW8260C
Trichlorotrifluoroethane	ND	5.0	ug/L	5	09/18/20	MH	SW8260C
Vinyl chloride	12	5.0	ug/L	5	09/18/20	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4 (5x)	99		%	5	09/18/20	MH	70 - 130 %
% Bromofluorobenzene (5x)	102		%	5	09/18/20	MH	70 - 130 %
% Dibromofluoromethane (5x)	106		%	5	09/18/20	MH	70 - 130 %
% Toluene-d8 (5x)	102		%	5	09/18/20	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	500	ug/L	5	09/18/20	MH	SW8260C (OXY)
Diethyl ether	ND	5.0	ug/L	5	09/18/20	MH	SW8260C (OXY)

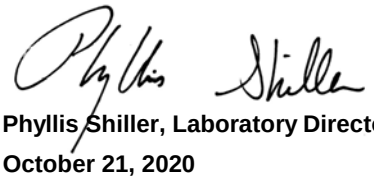
Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	
Di-isopropyl ether	ND	5.0	ug/L	5	09/18/20	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	5.0	ug/L	5	09/18/20	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	5.0	ug/L	5	09/18/20	MH	SW8260C (OXY)
1,4-dioxane							
1,4-dioxane	6.2	0.20	ug/l	1	09/16/20	AW	SW8270DSIM
QA/QC Surrogates							
% 1,4-dioxane-d8	95		%	1	09/16/20	AW	40 - 140 %
Extraction for 1,4-Dioxane	Completed				09/15/20	S/S	

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

Volatile Comment:
Elevated reporting limits for volatiles due to the presence of target and/or non-target compounds.

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
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Phyllis Shiller, Laboratory Director
October 21, 2020
Reviewed and Released by: Greg Lawrence, Assistant Lab Director

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

October 21, 2020

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		09/09/20	15:20
Location Code:	AECOM-WILMINGTN	Received by:	CP	09/11/20	16:31
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	127680				

Laboratory Data

SDG ID: GCG76015
Phoenix ID: CG76020

Project ID: LOCKHEED WILMINGTON MA 60552044.19
Client ID: 20A-AE102D-090920-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Volatiles							
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
1,1,1-Trichloroethane	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L	1	09/14/20	MH	SW8260C
1,1,2-Trichloroethane	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
1,1-Dichloroethane	7.1	1.0	ug/L	1	09/14/20	MH	SW8260C
1,1-Dichloroethene	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
1,1-Dichloropropene	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
1,2,3-Trichlorobenzene	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
1,2,3-Trichloropropane	ND	0.50	ug/L	1	09/14/20	MH	SW8260C
1,2,4-Trichlorobenzene	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
1,2,4-Trimethylbenzene	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	0.50	ug/L	1	09/14/20	MH	SW8260C
1,2-Dibromoethane	ND	0.50	ug/L	1	09/14/20	MH	SW8260C
1,2-Dichlorobenzene	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
1,2-Dichloroethane	ND	0.60	ug/L	1	09/14/20	MH	SW8260C
1,2-Dichloropropane	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
1,3,5-Trimethylbenzene	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
1,3-Dichlorobenzene	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
1,3-Dichloropropane	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
1,4-Dichlorobenzene	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
2,2-Dichloropropane	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
2-Chlorotoluene	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
2-Hexanone	ND	5.0	ug/L	1	09/14/20	MH	SW8260C
4-Chlorotoluene	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
4-Methyl-2-pentanone	ND	5.0	ug/L	1	09/14/20	MH	SW8260C
Acetone	ND	25	ug/L	1	09/14/20	MH	SW8260C

Project ID: LOCKHEED WILMINGTON MA 60552044.19 Phoenix I.D.: CG76020

Client ID: 20A-AE102D-090920-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	
Benzene	ND	0.70	ug/L	1	09/14/20	MH	SW8260C
Bromobenzene	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
Bromochloromethane	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
Bromodichloromethane	ND	0.50	ug/L	1	09/14/20	MH	SW8260C
Bromoform	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
Bromomethane	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
Carbon Disulfide	ND	5.0	ug/L	1	09/14/20	MH	SW8260C
Carbon tetrachloride	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
Chlorobenzene	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
Chloroethane	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
Chloroform	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
Chloromethane	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
cis-1,2-Dichloroethene	30	1.0	ug/L	1	09/14/20	MH	SW8260C
cis-1,3-Dichloropropene	ND	0.40	ug/L	1	09/14/20	MH	SW8260C
Dibromochloromethane	ND	0.50	ug/L	1	09/14/20	MH	SW8260C
Dibromomethane	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
Dichlorodifluoromethane	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
Ethylbenzene	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
Hexachlorobutadiene	ND	0.40	ug/L	1	09/14/20	MH	SW8260C
Isopropylbenzene	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
m&p-Xylene	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
Methyl ethyl ketone	ND	5.0	ug/L	1	09/14/20	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
Methylene chloride	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
Naphthalene	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
n-Butylbenzene	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
n-Propylbenzene	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
o-Xylene	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
p-Isopropyltoluene	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
sec-Butylbenzene	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
Styrene	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
tert-Butylbenzene	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
Tetrachloroethene	7.0	1.0	ug/L	1	09/14/20	MH	SW8260C
Tetrahydrofuran (THF)	ND	2.5	ug/L	1	09/14/20	MH	SW8260C
Toluene	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
trans-1,2-Dichloroethene	2.6	1.0	ug/L	1	09/14/20	MH	SW8260C
trans-1,3-Dichloropropene	ND	0.40	ug/L	1	09/14/20	MH	SW8260C
Trichloroethene	27	1.0	ug/L	1	09/14/20	MH	SW8260C
Trichlorofluoromethane	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
Trichlorotrifluoroethane	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
Vinyl chloride	11	1.0	ug/L	1	09/14/20	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	101		%	1	09/14/20	MH	70 - 130 %
% Bromofluorobenzene	96		%	1	09/14/20	MH	70 - 130 %
% Dibromofluoromethane	97		%	1	09/14/20	MH	70 - 130 %
% Toluene-d8	103		%	1	09/14/20	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	100	ug/L	1	09/14/20	MH	SW8260C (OXY)
Diethyl ether	ND	1.0	ug/L	1	09/14/20	MH	SW8260C (OXY)

Ver 3

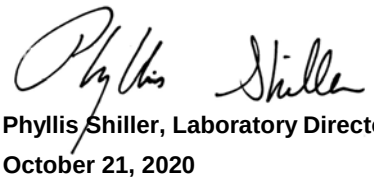
Project ID: LOCKHEED WILMINGTON MA 60552044.19 Phoenix I.D.: CG76020
Client ID: 20A-AE102D-090920-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	
Di-isopropyl ether	ND	1.0	ug/L	1	09/14/20	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	1.0	ug/L	1	09/14/20	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	1.0	ug/L	1	09/14/20	MH	SW8260C (OXY)
1,4-dioxane							
1,4-dioxane	4.7	0.20	ug/l	1	09/16/20	AW	SW8270DSIM
QA/QC Surrogates							
% 1,4-dioxane-d8	89		%	1	09/16/20	AW	40 - 140 %
Extraction for 1,4-Dioxane	Completed				09/15/20	S/S	

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

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Phyllis Shiller, Laboratory Director
October 21, 2020
Reviewed and Released by: Greg Lawrence, Assistant Lab Director

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

October 21, 2020

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		09/10/20	9:20
Location Code:	AECOM-WILMINGTN	Received by:	CP	09/11/20	16:31
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	127680				

Laboratory Data

SDG ID: GCG76015
Phoenix ID: CG76021

Project ID: LOCKHEED WILMINGTON MA 60552044.19
Client ID: 20A-AE103D-091020-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Arsenic	< 0.004	0.004	mg/L	1	09/15/20	TH	SW6010D
Arsenic (Dissolved)	< 0.004	0.004	mg/L	1	09/15/20	CPP	SW6010D
Iron (Dissolved)	< 0.011	0.011	mg/L	1	09/15/20	CPP	SW6010D
Manganese (Dissolved)	2.01	0.001	mg/L	1	09/15/20	CPP	SW6010D
Iron	0.105	0.010	mg/L	1	09/15/20	TH	SW6010D
Manganese	2.33	0.010	mg/L	10	09/17/20	TH	SW6010D
Chloride	773	75.0	mg/L	25	09/12/20	BS/GD	E300.0
Nitrite as Nitrogen	< 0.100	0.100	mg/L	25	09/12/20 01:20	BS/GD	E300.0
Nitrate as Nitrogen	3.95	0.10	mg/L	2	09/12/20 01:09	BS/GD	E300.0
Sulfate	36.3	3.0	mg/L	1	09/11/20	BS/GD	E300.0
Sulfide	< 0.05	0.05	mg/L	1	09/16/20	GD	SM4500S-D-11
Total Organic Carbon	1.5	1.0	mg/L	1	09/15/20	ARG/BJA	SM5310B-11
Dissolved Metals Preparation	Completed				09/14/20	AG	SW3005A
Total Metals Digestion	Completed				09/14/20	AG	
Volatiles							
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	1	09/18/20	MH	SW8260C
1,1,1-Trichloroethane	ND	1.0	ug/L	1	09/18/20	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L	1	09/18/20	MH	SW8260C
1,1,2-Trichloroethane	ND	1.0	ug/L	1	09/18/20	MH	SW8260C
1,1-Dichloroethane	1.9	1.0	ug/L	1	09/18/20	MH	SW8260C
1,1-Dichloroethene	ND	1.0	ug/L	1	09/18/20	MH	SW8260C
1,1-Dichloropropene	ND	1.0	ug/L	1	09/18/20	MH	SW8260C
1,2,3-Trichlorobenzene	ND	1.0	ug/L	1	09/18/20	MH	SW8260C
1,2,3-Trichloropropane	ND	0.50	ug/L	1	09/18/20	MH	SW8260C
1,2,4-Trichlorobenzene	ND	1.0	ug/L	1	09/18/20	MH	SW8260C
1,2,4-Trimethylbenzene	ND	1.0	ug/L	1	09/18/20	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	0.50	ug/L	1	09/18/20	MH	SW8260C

Project ID: LOCKHEED WILMINGTON MA 60552044.19 Phoenix I.D.: CG76021

Client ID: 20A-AE103D-091020-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	
1,2-Dibromoethane	ND	0.50	ug/L	1	09/18/20	MH	SW8260C
1,2-Dichlorobenzene	ND	1.0	ug/L	1	09/18/20	MH	SW8260C
1,2-Dichloroethane	ND	0.60	ug/L	1	09/18/20	MH	SW8260C
1,2-Dichloropropane	ND	1.0	ug/L	1	09/18/20	MH	SW8260C
1,3,5-Trimethylbenzene	ND	1.0	ug/L	1	09/18/20	MH	SW8260C
1,3-Dichlorobenzene	ND	1.0	ug/L	1	09/18/20	MH	SW8260C
1,3-Dichloropropane	ND	1.0	ug/L	1	09/18/20	MH	SW8260C
1,4-Dichlorobenzene	ND	1.0	ug/L	1	09/18/20	MH	SW8260C
2,2-Dichloropropane	ND	1.0	ug/L	1	09/18/20	MH	SW8260C
2-Chlorotoluene	ND	1.0	ug/L	1	09/18/20	MH	SW8260C
2-Hexanone	ND	5.0	ug/L	1	09/18/20	MH	SW8260C
4-Chlorotoluene	ND	1.0	ug/L	1	09/18/20	MH	SW8260C
4-Methyl-2-pentanone	ND	5.0	ug/L	1	09/18/20	MH	SW8260C
Acetone	ND	25	ug/L	1	09/18/20	MH	SW8260C
Benzene	ND	0.70	ug/L	1	09/18/20	MH	SW8260C
Bromobenzene	ND	1.0	ug/L	1	09/18/20	MH	SW8260C
Bromochloromethane	ND	1.0	ug/L	1	09/18/20	MH	SW8260C
Bromodichloromethane	ND	0.50	ug/L	1	09/18/20	MH	SW8260C
Bromoform	ND	1.0	ug/L	1	09/18/20	MH	SW8260C
Bromomethane	ND	1.0	ug/L	1	09/18/20	MH	SW8260C
Carbon Disulfide	ND	5.0	ug/L	1	09/18/20	MH	SW8260C
Carbon tetrachloride	ND	1.0	ug/L	1	09/18/20	MH	SW8260C
Chlorobenzene	ND	1.0	ug/L	1	09/18/20	MH	SW8260C
Chloroethane	ND	1.0	ug/L	1	09/18/20	MH	SW8260C
Chloroform	ND	1.0	ug/L	1	09/18/20	MH	SW8260C
Chloromethane	ND	1.0	ug/L	1	09/18/20	MH	SW8260C
cis-1,2-Dichloroethene	3.2	1.0	ug/L	1	09/18/20	MH	SW8260C
cis-1,3-Dichloropropene	ND	0.40	ug/L	1	09/18/20	MH	SW8260C
Dibromochloromethane	ND	0.50	ug/L	1	09/18/20	MH	SW8260C
Dibromomethane	ND	1.0	ug/L	1	09/18/20	MH	SW8260C
Dichlorodifluoromethane	ND	1.0	ug/L	1	09/18/20	MH	SW8260C
Ethylbenzene	ND	1.0	ug/L	1	09/18/20	MH	SW8260C
Hexachlorobutadiene	ND	0.40	ug/L	1	09/18/20	MH	SW8260C
Isopropylbenzene	ND	1.0	ug/L	1	09/18/20	MH	SW8260C
m&p-Xylene	ND	1.0	ug/L	1	09/18/20	MH	SW8260C
Methyl ethyl ketone	ND	5.0	ug/L	1	09/18/20	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	1.0	ug/L	1	09/18/20	MH	SW8260C
Methylene chloride	ND	1.0	ug/L	1	09/18/20	MH	SW8260C
Naphthalene	ND	1.0	ug/L	1	09/18/20	MH	SW8260C
n-Butylbenzene	ND	1.0	ug/L	1	09/18/20	MH	SW8260C
n-Propylbenzene	ND	1.0	ug/L	1	09/18/20	MH	SW8260C
o-Xylene	ND	1.0	ug/L	1	09/18/20	MH	SW8260C
p-Isopropyltoluene	ND	1.0	ug/L	1	09/18/20	MH	SW8260C
sec-Butylbenzene	ND	1.0	ug/L	1	09/18/20	MH	SW8260C
Styrene	ND	1.0	ug/L	1	09/18/20	MH	SW8260C
tert-Butylbenzene	ND	1.0	ug/L	1	09/18/20	MH	SW8260C
Tetrachloroethene	42	1.0	ug/L	1	09/18/20	MH	SW8260C
Tetrahydrofuran (THF)	ND	2.5	ug/L	1	09/18/20	MH	SW8260C
Toluene	ND	1.0	ug/L	1	09/18/20	MH	SW8260C

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	
trans-1,2-Dichloroethene	ND	1.0	ug/L	1	09/18/20	MH	SW8260C
trans-1,3-Dichloropropene	ND	0.40	ug/L	1	09/18/20	MH	SW8260C
Trichloroethene	75	1.0	ug/L	1	09/18/20	MH	SW8260C
Trichlorofluoromethane	ND	1.0	ug/L	1	09/18/20	MH	SW8260C
Trichlorotrifluoroethane	ND	1.0	ug/L	1	09/18/20	MH	SW8260C
Vinyl chloride	ND	1.0	ug/L	1	09/18/20	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	99		%	1	09/18/20	MH	70 - 130 %
% Bromofluorobenzene	102		%	1	09/18/20	MH	70 - 130 %
% Dibromofluoromethane	107		%	1	09/18/20	MH	70 - 130 %
% Toluene-d8	102		%	1	09/18/20	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	100	ug/L	1	09/18/20	MH	SW8260C (OXY)
Diethyl ether	ND	1.0	ug/L	1	09/18/20	MH	SW8260C (OXY)
Di-isopropyl ether	ND	1.0	ug/L	1	09/18/20	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	1.0	ug/L	1	09/18/20	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	1.0	ug/L	1	09/18/20	MH	SW8260C (OXY)
1,4-dioxane							
1,4-dioxane	0.78	0.20	ug/l	1	09/16/20	AW	SW8270DSIM
QA/QC Surrogates							
% 1,4-dioxane-d8	91		%	1	09/16/20	AW	40 - 140 %
Extraction for 1,4-Dioxane	Completed				09/15/20	S/S	

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

Nitrite Analysis comment:
Due to interference from a large amount of chloride in the sample, a dilution was required causing the reporting level to be elevated.

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
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Phyllis Shiller, Laboratory Director
October 21, 2020
Reviewed and Released by: Greg Lawrence, Assistant Lab Director

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

October 21, 2020

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		09/10/20	12:10
Location Code:	AECOM-WILMINGTN	Received by:	CP	09/11/20	16:31
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	127680				

Laboratory Data

SDG ID: GCG76015
Phoenix ID: CG76022

Project ID: LOCKHEED WILMINGTON MA 60552044.19
Client ID: 20A-AE103S-091020-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Arsenic	0.172	0.004	mg/L	1	09/16/20	TH	SW6010D
Arsenic (Dissolved)	0.160	0.004	mg/L	1	09/15/20	CPP	SW6010D
Iron (Dissolved)	13.8	0.011	mg/L	1	09/15/20	CPP	SW6010D
Manganese (Dissolved)	1.93	0.001	mg/L	1	09/15/20	CPP	SW6010D
Iron	15.5	0.010	mg/L	1	09/16/20	TH	SW6010D
Manganese	2.06	0.010	mg/L	10	09/18/20	EK	SW6010D
Dissolved Metals Preparation	Completed				09/14/20	AG	SW3005A
Total Metals Digestion	Completed				09/15/20	AG	
Volatiles							
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
1,1,1-Trichloroethane	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L	1	09/14/20	MH	SW8260C
1,1,2-Trichloroethane	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
1,1-Dichloroethane	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
1,1-Dichloroethene	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
1,1-Dichloropropene	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
1,2,3-Trichlorobenzene	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
1,2,3-Trichloropropane	ND	0.50	ug/L	1	09/14/20	MH	SW8260C
1,2,4-Trichlorobenzene	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
1,2,4-Trimethylbenzene	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	0.50	ug/L	1	09/14/20	MH	SW8260C
1,2-Dibromoethane	ND	0.50	ug/L	1	09/14/20	MH	SW8260C
1,2-Dichlorobenzene	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
1,2-Dichloroethane	ND	0.60	ug/L	1	09/14/20	MH	SW8260C
1,2-Dichloropropane	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
1,3,5-Trimethylbenzene	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
1,3-Dichlorobenzene	ND	1.0	ug/L	1	09/14/20	MH	SW8260C

Project ID: LOCKHEED WILMINGTON MA 60552044.19 Phoenix I.D.: CG76022

Client ID: 20A-AE103S-091020-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	
1,3-Dichloropropane	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
1,4-Dichlorobenzene	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
2,2-Dichloropropane	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
2-Chlorotoluene	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
2-Hexanone	ND	5.0	ug/L	1	09/14/20	MH	SW8260C
4-Chlorotoluene	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
4-Methyl-2-pentanone	ND	5.0	ug/L	1	09/14/20	MH	SW8260C
Acetone	ND	25	ug/L	1	09/14/20	MH	SW8260C
Benzene	ND	0.70	ug/L	1	09/14/20	MH	SW8260C
Bromobenzene	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
Bromochloromethane	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
Bromodichloromethane	ND	0.50	ug/L	1	09/14/20	MH	SW8260C
Bromoform	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
Bromomethane	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
Carbon Disulfide	ND	5.0	ug/L	1	09/14/20	MH	SW8260C
Carbon tetrachloride	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
Chlorobenzene	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
Chloroethane	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
Chloroform	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
Chloromethane	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
cis-1,2-Dichloroethene	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
cis-1,3-Dichloropropene	ND	0.40	ug/L	1	09/14/20	MH	SW8260C
Dibromochloromethane	ND	0.50	ug/L	1	09/14/20	MH	SW8260C
Dibromomethane	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
Dichlorodifluoromethane	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
Ethylbenzene	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
Hexachlorobutadiene	ND	0.40	ug/L	1	09/14/20	MH	SW8260C
Isopropylbenzene	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
m&p-Xylene	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
Methyl ethyl ketone	ND	5.0	ug/L	1	09/14/20	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
Methylene chloride	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
Naphthalene	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
n-Butylbenzene	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
n-Propylbenzene	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
o-Xylene	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
p-Isopropyltoluene	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
sec-Butylbenzene	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
Styrene	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
tert-Butylbenzene	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
Tetrachloroethene	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
Tetrahydrofuran (THF)	ND	2.5	ug/L	1	09/14/20	MH	SW8260C
Toluene	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
trans-1,2-Dichloroethene	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
trans-1,3-Dichloropropene	ND	0.40	ug/L	1	09/14/20	MH	SW8260C
Trichloroethene	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
Trichlorofluoromethane	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
Trichlorotrifluoroethane	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
Vinyl chloride	ND	1.0	ug/L	1	09/14/20	MH	SW8260C

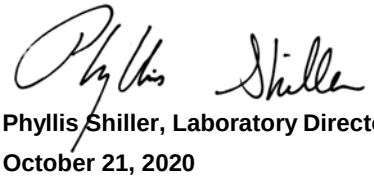
Project ID: LOCKHEED WILMINGTON MA 60552044.19 Phoenix I.D.: CG76022
Client ID: 20A-AE103S-091020-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	101		%	1	09/14/20	MH	70 - 130 %
% Bromofluorobenzene	96		%	1	09/14/20	MH	70 - 130 %
% Dibromofluoromethane	102		%	1	09/14/20	MH	70 - 130 %
% Toluene-d8	103		%	1	09/14/20	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	100	ug/L	1	09/14/20	MH	SW8260C (OXY)
Diethyl ether	ND	1.0	ug/L	1	09/14/20	MH	SW8260C (OXY)
Di-isopropyl ether	ND	1.0	ug/L	1	09/14/20	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	1.0	ug/L	1	09/14/20	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	1.0	ug/L	1	09/14/20	MH	SW8260C (OXY)

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

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Phyllis Shiller, Laboratory Director
October 21, 2020
Reviewed and Released by: Greg Lawrence, Assistant Lab Director

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

October 21, 2020

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		09/10/20	13:00
Location Code:	AECOM-WILMINGTN	Received by:	CP	09/11/20	16:31
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	127680				

Laboratory Data

SDG ID: GCG76015
Phoenix ID: CG76023

Project ID: LOCKHEED WILMINGTON MA 60552044.19
Client ID: 20A-AE100R5-091020-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Arsenic	< 0.004	0.004	mg/L	1	09/16/20	TH	SW6010D
Arsenic (Dissolved)	< 0.004	0.004	mg/L	1	09/15/20	CPP	SW6010D
Iron (Dissolved)	0.030	0.011	mg/L	1	09/15/20	CPP	SW6010D
Manganese (Dissolved)	0.656	0.001	mg/L	1	09/15/20	CPP	SW6010D
Iron	0.060	0.010	mg/L	1	09/16/20	TH	SW6010D
Manganese	0.717	0.001	mg/L	1	09/16/20	TH	SW6010D
Chloride	389	15.0	mg/L	5	09/12/20	BS/GD	E300.0
Nitrite as Nitrogen	< 0.020	0.020	mg/L	5	09/12/20 01:31	BS/GD	E300.0
Nitrate as Nitrogen	0.69	0.05	mg/L	1	09/11/20 22:27	BS/GD	E300.0
Sulfate	29.3	3.0	mg/L	1	09/11/20	BS/GD	E300.0
Sulfide	< 0.05	0.05	mg/L	1	09/16/20	GD	SM4500S-D-11
Dissolved Metals Preparation	Completed				09/14/20	AG	SW3005A
Total Metals Digestion	Completed				09/15/20	AG	
Volatiles							
1,1,1,2-Tetrachloroethane	ND	10	ug/L	20	09/18/20	MH	SW8260C
1,1,1-Trichloroethane	ND	20	ug/L	20	09/18/20	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	10	ug/L	20	09/18/20	MH	SW8260C
1,1,2-Trichloroethane	ND	10	ug/L	20	09/18/20	MH	SW8260C
1,1-Dichloroethane	36	20	ug/L	20	09/18/20	MH	SW8260C
1,1-Dichloroethene	10	10	ug/L	20	09/18/20	MH	SW8260C
1,1-Dichloropropene	ND	20	ug/L	20	09/18/20	MH	SW8260C
1,2,3-Trichlorobenzene	ND	10	ug/L	20	09/18/20	MH	SW8260C
1,2,3-Trichloropropane	ND	10	ug/L	20	09/18/20	MH	SW8260C
1,2,4-Trichlorobenzene	ND	20	ug/L	20	09/18/20	MH	SW8260C
1,2,4-Trimethylbenzene	ND	20	ug/L	20	09/18/20	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	10	ug/L	20	09/18/20	MH	SW8260C
1,2-Dibromoethane	ND	10	ug/L	20	09/18/20	MH	SW8260C

Project ID: LOCKHEED WILMINGTON MA 60552044.19 Phoenix I.D.: CG76023

Client ID: 20A-AE100R5-091020-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	
1,2-Dichlorobenzene	ND	20	ug/L	20	09/18/20	MH	SW8260C
1,2-Dichloroethane	ND	10	ug/L	20	09/18/20	MH	SW8260C
1,2-Dichloropropane	ND	10	ug/L	20	09/18/20	MH	SW8260C
1,3,5-Trimethylbenzene	ND	20	ug/L	20	09/18/20	MH	SW8260C
1,3-Dichlorobenzene	ND	20	ug/L	20	09/18/20	MH	SW8260C
1,3-Dichloropropane	ND	20	ug/L	20	09/18/20	MH	SW8260C
1,4-Dichlorobenzene	ND	10	ug/L	20	09/18/20	MH	SW8260C
2,2-Dichloropropane	ND	20	ug/L	20	09/18/20	MH	SW8260C
2-Chlorotoluene	ND	20	ug/L	20	09/18/20	MH	SW8260C
2-Hexanone	ND	100	ug/L	20	09/18/20	MH	SW8260C
4-Chlorotoluene	ND	20	ug/L	20	09/18/20	MH	SW8260C
4-Methyl-2-pentanone	ND	100	ug/L	20	09/18/20	MH	SW8260C
Acetone	ND	500	ug/L	20	09/18/20	MH	SW8260C
Benzene	ND	10	ug/L	20	09/18/20	MH	SW8260C
Bromobenzene	ND	20	ug/L	20	09/18/20	MH	SW8260C
Bromochloromethane	ND	20	ug/L	20	09/18/20	MH	SW8260C
Bromodichloromethane	ND	10	ug/L	20	09/18/20	MH	SW8260C
Bromoform	ND	10	ug/L	20	09/18/20	MH	SW8260C
Bromomethane	ND	10	ug/L	20	09/18/20	MH	SW8260C
Carbon Disulfide	ND	100	ug/L	20	09/18/20	MH	SW8260C
Carbon tetrachloride	ND	10	ug/L	20	09/18/20	MH	SW8260C
Chlorobenzene	ND	20	ug/L	20	09/18/20	MH	SW8260C
Chloroethane	ND	20	ug/L	20	09/18/20	MH	SW8260C
Chloroform	ND	20	ug/L	20	09/18/20	MH	SW8260C
Chloromethane	ND	20	ug/L	20	09/18/20	MH	SW8260C
cis-1,2-Dichloroethene	400	20	ug/L	20	09/18/20	MH	SW8260C
cis-1,3-Dichloropropene	ND	10	ug/L	20	09/18/20	MH	SW8260C
Dibromochloromethane	ND	10	ug/L	20	09/18/20	MH	SW8260C
Dibromomethane	ND	10	ug/L	20	09/18/20	MH	SW8260C
Dichlorodifluoromethane	ND	20	ug/L	20	09/18/20	MH	SW8260C
Ethylbenzene	ND	20	ug/L	20	09/18/20	MH	SW8260C
Hexachlorobutadiene	ND	10	ug/L	20	09/18/20	MH	SW8260C
Isopropylbenzene	ND	20	ug/L	20	09/18/20	MH	SW8260C
m&p-Xylene	ND	20	ug/L	20	09/18/20	MH	SW8260C
Methyl ethyl ketone	ND	100	ug/L	20	09/18/20	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	20	ug/L	20	09/18/20	MH	SW8260C
Methylene chloride	ND	20	ug/L	20	09/18/20	MH	SW8260C
Naphthalene	ND	20	ug/L	20	09/18/20	MH	SW8260C
n-Butylbenzene	ND	20	ug/L	20	09/18/20	MH	SW8260C
n-Propylbenzene	ND	20	ug/L	20	09/18/20	MH	SW8260C
o-Xylene	ND	20	ug/L	20	09/18/20	MH	SW8260C
p-Isopropyltoluene	ND	20	ug/L	20	09/18/20	MH	SW8260C
sec-Butylbenzene	ND	20	ug/L	20	09/18/20	MH	SW8260C
Styrene	ND	20	ug/L	20	09/18/20	MH	SW8260C
tert-Butylbenzene	ND	20	ug/L	20	09/18/20	MH	SW8260C
Tetrachloroethene	1100	20	ug/L	20	09/18/20	MH	SW8260C
Tetrahydrofuran (THF)	ND	50	ug/L	20	09/18/20	MH	SW8260C
Toluene	ND	20	ug/L	20	09/18/20	MH	SW8260C
trans-1,2-Dichloroethene	ND	20	ug/L	20	09/18/20	MH	SW8260C

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	
trans-1,3-Dichloropropene	ND	10	ug/L	20	09/18/20	MH	SW8260C
Trichloroethene	2200	50	ug/L	50	09/17/20	MH	SW8260C
Trichlorofluoromethane	ND	20	ug/L	20	09/18/20	MH	SW8260C
Trichlorotrifluoroethane	ND	20	ug/L	20	09/18/20	MH	SW8260C
Vinyl chloride	38	20	ug/L	20	09/18/20	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4 (20x)	101		%	20	09/18/20	MH	70 - 130 %
% Bromofluorobenzene (20x)	103		%	20	09/18/20	MH	70 - 130 %
% Dibromofluoromethane (20x)	105		%	20	09/18/20	MH	70 - 130 %
% Toluene-d8 (20x)	100		%	20	09/18/20	MH	70 - 130 %
% 1,2-dichlorobenzene-d4 (50x)	99		%	50	09/17/20	MH	70 - 130 %
% Bromofluorobenzene (50x)	101		%	50	09/17/20	MH	70 - 130 %
% Dibromofluoromethane (50x)	105		%	50	09/17/20	MH	70 - 130 %
% Toluene-d8 (50x)	102		%	50	09/17/20	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	2000	ug/L	20	09/18/20	MH	SW8260C (OXY)
Diethyl ether	ND	20	ug/L	20	09/18/20	MH	SW8260C (OXY)
Di-isopropyl ether	ND	20	ug/L	20	09/18/20	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	20	ug/L	20	09/18/20	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	20	ug/L	20	09/18/20	MH	SW8260C (OXY)

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

Volatile Comment:
Elevated reporting limits for volatiles due to the presence of target and/or non-target compounds.

Nitrite Analysis comment:
Due to interference from a large amount of chloride in the sample, a dilution was required causing the reporting level to be elevated.

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.

Phyllis Shiller, Laboratory Director
October 21, 2020
Reviewed and Released by: Greg Lawrence, Assistant Lab Director

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

October 21, 2020

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		09/10/20	13:35
Location Code:	AECOM-WILMINGTN	Received by:	CP	09/11/20	16:31
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	127680				

Laboratory Data

SDG ID: GCG76015
Phoenix ID: CG76024

Project ID: LOCKHEED WILMINGTON MA 60552044.19
Client ID: 20A-AE100R6-091020-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Volatiles							
1,1,1,2-Tetrachloroethane	ND	5.0	ug/L	10	09/18/20	MH	SW8260C
1,1,1-Trichloroethane	ND	10	ug/L	10	09/18/20	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	5.0	ug/L	10	09/18/20	MH	SW8260C
1,1,2-Trichloroethane	ND	5.0	ug/L	10	09/18/20	MH	SW8260C
1,1-Dichloroethane	28	10	ug/L	10	09/18/20	MH	SW8260C
1,1-Dichloroethene	7.3	7.0	ug/L	10	09/18/20	MH	SW8260C
1,1-Dichloropropene	ND	10	ug/L	10	09/18/20	MH	SW8260C
1,2,3-Trichlorobenzene	ND	7.0	ug/L	10	09/18/20	MH	SW8260C
1,2,3-Trichloropropane	ND	5.0	ug/L	10	09/18/20	MH	SW8260C
1,2,4-Trichlorobenzene	ND	10	ug/L	10	09/18/20	MH	SW8260C
1,2,4-Trimethylbenzene	ND	10	ug/L	10	09/18/20	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	5.0	ug/L	10	09/18/20	MH	SW8260C
1,2-Dibromoethane	ND	5.0	ug/L	10	09/18/20	MH	SW8260C
1,2-Dichlorobenzene	ND	10	ug/L	10	09/18/20	MH	SW8260C
1,2-Dichloroethane	ND	5.0	ug/L	10	09/18/20	MH	SW8260C
1,2-Dichloropropane	ND	5.0	ug/L	10	09/18/20	MH	SW8260C
1,3,5-Trimethylbenzene	ND	10	ug/L	10	09/18/20	MH	SW8260C
1,3-Dichlorobenzene	ND	10	ug/L	10	09/18/20	MH	SW8260C
1,3-Dichloropropane	ND	10	ug/L	10	09/18/20	MH	SW8260C
1,4-Dichlorobenzene	ND	5.0	ug/L	10	09/18/20	MH	SW8260C
2,2-Dichloropropane	ND	10	ug/L	10	09/18/20	MH	SW8260C
2-Chlorotoluene	ND	10	ug/L	10	09/18/20	MH	SW8260C
2-Hexanone	ND	50	ug/L	10	09/18/20	MH	SW8260C
4-Chlorotoluene	ND	10	ug/L	10	09/18/20	MH	SW8260C
4-Methyl-2-pentanone	ND	50	ug/L	10	09/18/20	MH	SW8260C
Acetone	ND	250	ug/L	10	09/18/20	MH	SW8260C

Project ID: LOCKHEED WILMINGTON MA 60552044.19 Phoenix I.D.: CG76024

Client ID: 20A-AE100R6-091020-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	
Benzene	ND	5.0	ug/L	10	09/18/20	MH	SW8260C
Bromobenzene	ND	10	ug/L	10	09/18/20	MH	SW8260C
Bromochloromethane	ND	10	ug/L	10	09/18/20	MH	SW8260C
Bromodichloromethane	ND	5.0	ug/L	10	09/18/20	MH	SW8260C
Bromoform	ND	5.0	ug/L	10	09/18/20	MH	SW8260C
Bromomethane	ND	7.0	ug/L	10	09/18/20	MH	SW8260C
Carbon Disulfide	ND	50	ug/L	10	09/18/20	MH	SW8260C
Carbon tetrachloride	ND	5.0	ug/L	10	09/18/20	MH	SW8260C
Chlorobenzene	ND	10	ug/L	10	09/18/20	MH	SW8260C
Chloroethane	ND	10	ug/L	10	09/18/20	MH	SW8260C
Chloroform	ND	10	ug/L	10	09/18/20	MH	SW8260C
Chloromethane	ND	10	ug/L	10	09/18/20	MH	SW8260C
cis-1,2-Dichloroethene	140	10	ug/L	10	09/18/20	MH	SW8260C
cis-1,3-Dichloropropene	ND	5.0	ug/L	10	09/18/20	MH	SW8260C
Dibromochloromethane	ND	5.0	ug/L	10	09/18/20	MH	SW8260C
Dibromomethane	ND	8.3	ug/L	10	09/18/20	MH	SW8260C
Dichlorodifluoromethane	ND	10	ug/L	10	09/18/20	MH	SW8260C
Ethylbenzene	ND	10	ug/L	10	09/18/20	MH	SW8260C
Hexachlorobutadiene	ND	5.0	ug/L	10	09/18/20	MH	SW8260C
Isopropylbenzene	ND	10	ug/L	10	09/18/20	MH	SW8260C
m&p-Xylene	ND	10	ug/L	10	09/18/20	MH	SW8260C
Methyl ethyl ketone	ND	50	ug/L	10	09/18/20	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	10	ug/L	10	09/18/20	MH	SW8260C
Methylene chloride	ND	10	ug/L	10	09/18/20	MH	SW8260C
Naphthalene	ND	10	ug/L	10	09/18/20	MH	SW8260C
n-Butylbenzene	ND	10	ug/L	10	09/18/20	MH	SW8260C
n-Propylbenzene	ND	10	ug/L	10	09/18/20	MH	SW8260C
o-Xylene	ND	10	ug/L	10	09/18/20	MH	SW8260C
p-Isopropyltoluene	ND	10	ug/L	10	09/18/20	MH	SW8260C
sec-Butylbenzene	ND	10	ug/L	10	09/18/20	MH	SW8260C
Styrene	ND	10	ug/L	10	09/18/20	MH	SW8260C
tert-Butylbenzene	ND	10	ug/L	10	09/18/20	MH	SW8260C
Tetrachloroethene	900	10	ug/L	10	09/18/20	MH	SW8260C
Tetrahydrofuran (THF)	ND	25	ug/L	10	09/18/20	MH	SW8260C
Toluene	ND	10	ug/L	10	09/18/20	MH	SW8260C
trans-1,2-Dichloroethene	ND	10	ug/L	10	09/18/20	MH	SW8260C
trans-1,3-Dichloropropene	ND	5.0	ug/L	10	09/18/20	MH	SW8260C
Trichloroethene	1300	50	ug/L	50	09/17/20	MH	SW8260C
Trichlorofluoromethane	ND	10	ug/L	10	09/18/20	MH	SW8260C
Trichlorotrifluoroethane	ND	10	ug/L	10	09/18/20	MH	SW8260C
Vinyl chloride	7.0	5.0	ug/L	10	09/18/20	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4 (10x)	100		%	10	09/18/20	MH	70 - 130 %
% Bromofluorobenzene (10x)	103		%	10	09/18/20	MH	70 - 130 %
% Dibromofluoromethane (10x)	104		%	10	09/18/20	MH	70 - 130 %
% Toluene-d8 (10x)	99		%	10	09/18/20	MH	70 - 130 %
% 1,2-dichlorobenzene-d4 (50x)	98		%	50	09/17/20	MH	70 - 130 %
% Bromofluorobenzene (50x)	102		%	50	09/17/20	MH	70 - 130 %
% Dibromofluoromethane (50x)	101		%	50	09/17/20	MH	70 - 130 %

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	
% Toluene-d8 (50x)	103		%	50	09/17/20	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	1000	ug/L	10	09/18/20	MH	SW8260C (OXY)
Diethyl ether	ND	10	ug/L	10	09/18/20	MH	SW8260C (OXY)
Di-isopropyl ether	ND	10	ug/L	10	09/18/20	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	10	ug/L	10	09/18/20	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	10	ug/L	10	09/18/20	MH	SW8260C (OXY)
1,4-dioxane							
1,4-dioxane	10	0.20	ug/l	1	09/16/20	AW	SW8270DSIM
QA/QC Surrogates							
% 1,4-dioxane-d8	95		%	1	09/16/20	AW	40 - 140 %
Extraction for 1,4-Dioxane	Completed				09/15/20	S/S	

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

Volatile Comment:
Elevated reporting limits for volatiles due to the presence of target and/or non-target compounds.

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.

Phyllis Shiller, Laboratory Director
October 21, 2020
Reviewed and Released by: Greg Lawrence, Assistant Lab Director

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

October 21, 2020

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		09/10/20	13:45
Location Code:	AECOM-WILMINGTN	Received by:	CP	09/11/20	16:31
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	127680				

Laboratory Data

SDG ID: GCG76015
Phoenix ID: CG76025

Project ID: LOCKHEED WILMINGTON MA 60552044.19
Client ID: 20A-AE100R4-091020-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Volatiles							
1,1,1,2-Tetrachloroethane	ND	25	ug/L	50	09/17/20	MH	SW8260C
1,1,1-Trichloroethane	ND	50	ug/L	50	09/17/20	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	25	ug/L	50	09/17/20	MH	SW8260C
1,1,2-Trichloroethane	ND	25	ug/L	50	09/17/20	MH	SW8260C
1,1-Dichloroethane	53	50	ug/L	50	09/17/20	MH	SW8260C
1,1-Dichloroethene	ND	25	ug/L	50	09/17/20	MH	SW8260C
1,1-Dichloropropene	ND	50	ug/L	50	09/17/20	MH	SW8260C
1,2,3-Trichlorobenzene	ND	25	ug/L	50	09/17/20	MH	SW8260C
1,2,3-Trichloropropane	ND	25	ug/L	50	09/17/20	MH	SW8260C
1,2,4-Trichlorobenzene	ND	50	ug/L	50	09/17/20	MH	SW8260C
1,2,4-Trimethylbenzene	ND	50	ug/L	50	09/17/20	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	25	ug/L	50	09/17/20	MH	SW8260C
1,2-Dibromoethane	ND	25	ug/L	50	09/17/20	MH	SW8260C
1,2-Dichlorobenzene	ND	50	ug/L	50	09/17/20	MH	SW8260C
1,2-Dichloroethane	ND	25	ug/L	50	09/17/20	MH	SW8260C
1,2-Dichloropropane	ND	25	ug/L	50	09/17/20	MH	SW8260C
1,3,5-Trimethylbenzene	ND	50	ug/L	50	09/17/20	MH	SW8260C
1,3-Dichlorobenzene	ND	40	ug/L	50	09/17/20	MH	SW8260C
1,3-Dichloropropane	ND	50	ug/L	50	09/17/20	MH	SW8260C
1,4-Dichlorobenzene	ND	25	ug/L	50	09/17/20	MH	SW8260C
2,2-Dichloropropane	ND	50	ug/L	50	09/17/20	MH	SW8260C
2-Chlorotoluene	ND	50	ug/L	50	09/17/20	MH	SW8260C
2-Hexanone	ND	250	ug/L	50	09/17/20	MH	SW8260C
4-Chlorotoluene	ND	50	ug/L	50	09/17/20	MH	SW8260C
4-Methyl-2-pentanone	ND	250	ug/L	50	09/17/20	MH	SW8260C
Acetone	ND	1300	ug/L	50	09/17/20	MH	SW8260C

Project ID: LOCKHEED WILMINGTON MA 60552044.19 Phoenix I.D.: CG76025

Client ID: 20A-AE100R4-091020-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	
Benzene	ND	25	ug/L	50	09/17/20	MH	SW8260C
Bromobenzene	ND	50	ug/L	50	09/17/20	MH	SW8260C
Bromochloromethane	ND	50	ug/L	50	09/17/20	MH	SW8260C
Bromodichloromethane	ND	25	ug/L	50	09/17/20	MH	SW8260C
Bromoform	ND	25	ug/L	50	09/17/20	MH	SW8260C
Bromomethane	ND	25	ug/L	50	09/17/20	MH	SW8260C
Carbon Disulfide	ND	250	ug/L	50	09/17/20	MH	SW8260C
Carbon tetrachloride	ND	25	ug/L	50	09/17/20	MH	SW8260C
Chlorobenzene	ND	50	ug/L	50	09/17/20	MH	SW8260C
Chloroethane	ND	50	ug/L	50	09/17/20	MH	SW8260C
Chloroform	ND	50	ug/L	50	09/17/20	MH	SW8260C
Chloromethane	ND	50	ug/L	50	09/17/20	MH	SW8260C
cis-1,2-Dichloroethene	92	50	ug/L	50	09/17/20	MH	SW8260C
cis-1,3-Dichloropropene	ND	25	ug/L	50	09/17/20	MH	SW8260C
Dibromochloromethane	ND	25	ug/L	50	09/17/20	MH	SW8260C
Dibromomethane	ND	25	ug/L	50	09/17/20	MH	SW8260C
Dichlorodifluoromethane	ND	50	ug/L	50	09/17/20	MH	SW8260C
Ethylbenzene	ND	50	ug/L	50	09/17/20	MH	SW8260C
Hexachlorobutadiene	ND	25	ug/L	50	09/17/20	MH	SW8260C
Isopropylbenzene	ND	50	ug/L	50	09/17/20	MH	SW8260C
m&p-Xylene	ND	50	ug/L	50	09/17/20	MH	SW8260C
Methyl ethyl ketone	ND	250	ug/L	50	09/17/20	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	50	ug/L	50	09/17/20	MH	SW8260C
Methylene chloride	ND	50	ug/L	50	09/17/20	MH	SW8260C
Naphthalene	ND	50	ug/L	50	09/17/20	MH	SW8260C
n-Butylbenzene	ND	50	ug/L	50	09/17/20	MH	SW8260C
n-Propylbenzene	ND	50	ug/L	50	09/17/20	MH	SW8260C
o-Xylene	ND	50	ug/L	50	09/17/20	MH	SW8260C
p-Isopropyltoluene	ND	50	ug/L	50	09/17/20	MH	SW8260C
sec-Butylbenzene	ND	50	ug/L	50	09/17/20	MH	SW8260C
Styrene	ND	50	ug/L	50	09/17/20	MH	SW8260C
tert-Butylbenzene	ND	50	ug/L	50	09/17/20	MH	SW8260C
Tetrachloroethene	3400	50	ug/L	50	09/17/20	MH	SW8260C
Tetrahydrofuran (THF)	ND	130	ug/L	50	09/17/20	MH	SW8260C
Toluene	ND	50	ug/L	50	09/17/20	MH	SW8260C
trans-1,2-Dichloroethene	ND	50	ug/L	50	09/17/20	MH	SW8260C
trans-1,3-Dichloropropene	ND	25	ug/L	50	09/17/20	MH	SW8260C
Trichloroethene	4700	50	ug/L	50	09/17/20	MH	SW8260C
Trichlorofluoromethane	ND	50	ug/L	50	09/17/20	MH	SW8260C
Trichlorotrifluoroethane	ND	50	ug/L	50	09/17/20	MH	SW8260C
Vinyl chloride	ND	25	ug/L	50	09/17/20	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4 (50x)	100		%	50	09/17/20	MH	70 - 130 %
% Bromofluorobenzene (50x)	102		%	50	09/17/20	MH	70 - 130 %
% Dibromofluoromethane (50x)	104		%	50	09/17/20	MH	70 - 130 %
% Toluene-d8 (50x)	100		%	50	09/17/20	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	5000	ug/L	50	09/17/20	MH	SW8260C (OXY)
Diethyl ether	ND	50	ug/L	50	09/17/20	MH	SW8260C (OXY)

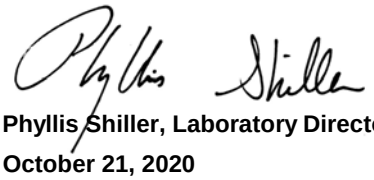
Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	
Di-isopropyl ether	ND	50	ug/L	50	09/17/20	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	50	ug/L	50	09/17/20	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	50	ug/L	50	09/17/20	MH	SW8260C (OXY)
1,4-dioxane							
1,4-dioxane	10	0.20	ug/l	1	09/16/20	AW	SW8270DSIM
QA/QC Surrogates							
% 1,4-dioxane-d8	92		%	1	09/16/20	AW	40 - 140 %
Extraction for 1,4-Dioxane	Completed				09/15/20	S/S	

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

Volatile Comment:
Elevated reporting limits for volatiles due to the presence of target and/or non-target compounds.

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.



Phyllis Shiller, Laboratory Director
October 21, 2020
Reviewed and Released by: Greg Lawrence, Assistant Lab Director

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

October 21, 2020

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		09/10/20	13:55
Location Code:	AECOM-WILMINGTN	Received by:	CP	09/11/20	16:31
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	127680				

Laboratory Data

SDG ID: GCG76015
Phoenix ID: CG76026

Project ID: LOCKHEED WILMINGTON MA 60552044.19
Client ID: 20A-AE100R3-091020-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Volatiles							
1,1,1,2-Tetrachloroethane	ND	25	ug/L	50	09/17/20	MH	SW8260C
1,1,1-Trichloroethane	ND	50	ug/L	50	09/17/20	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	25	ug/L	50	09/17/20	MH	SW8260C
1,1,2-Trichloroethane	ND	25	ug/L	50	09/17/20	MH	SW8260C
1,1-Dichloroethane	52	50	ug/L	50	09/17/20	MH	SW8260C
1,1-Dichloroethene	ND	25	ug/L	50	09/17/20	MH	SW8260C
1,1-Dichloropropene	ND	50	ug/L	50	09/17/20	MH	SW8260C
1,2,3-Trichlorobenzene	ND	25	ug/L	50	09/17/20	MH	SW8260C
1,2,3-Trichloropropane	ND	25	ug/L	50	09/17/20	MH	SW8260C
1,2,4-Trichlorobenzene	ND	50	ug/L	50	09/17/20	MH	SW8260C
1,2,4-Trimethylbenzene	ND	50	ug/L	50	09/17/20	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	25	ug/L	50	09/17/20	MH	SW8260C
1,2-Dibromoethane	ND	25	ug/L	50	09/17/20	MH	SW8260C
1,2-Dichlorobenzene	ND	50	ug/L	50	09/17/20	MH	SW8260C
1,2-Dichloroethane	ND	25	ug/L	50	09/17/20	MH	SW8260C
1,2-Dichloropropane	ND	25	ug/L	50	09/17/20	MH	SW8260C
1,3,5-Trimethylbenzene	ND	50	ug/L	50	09/17/20	MH	SW8260C
1,3-Dichlorobenzene	ND	40	ug/L	50	09/17/20	MH	SW8260C
1,3-Dichloropropane	ND	50	ug/L	50	09/17/20	MH	SW8260C
1,4-Dichlorobenzene	ND	25	ug/L	50	09/17/20	MH	SW8260C
2,2-Dichloropropane	ND	50	ug/L	50	09/17/20	MH	SW8260C
2-Chlorotoluene	ND	50	ug/L	50	09/17/20	MH	SW8260C
2-Hexanone	ND	250	ug/L	50	09/17/20	MH	SW8260C
4-Chlorotoluene	ND	50	ug/L	50	09/17/20	MH	SW8260C
4-Methyl-2-pentanone	ND	250	ug/L	50	09/17/20	MH	SW8260C
Acetone	ND	1300	ug/L	50	09/17/20	MH	SW8260C

Project ID: LOCKHEED WILMINGTON MA 60552044.19 Phoenix I.D.: CG76026

Client ID: 20A-AE100R3-091020-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	
Benzene	ND	25	ug/L	50	09/17/20	MH	SW8260C
Bromobenzene	ND	50	ug/L	50	09/17/20	MH	SW8260C
Bromochloromethane	ND	50	ug/L	50	09/17/20	MH	SW8260C
Bromodichloromethane	ND	25	ug/L	50	09/17/20	MH	SW8260C
Bromoform	ND	25	ug/L	50	09/17/20	MH	SW8260C
Bromomethane	ND	25	ug/L	50	09/17/20	MH	SW8260C
Carbon Disulfide	ND	250	ug/L	50	09/17/20	MH	SW8260C
Carbon tetrachloride	ND	25	ug/L	50	09/17/20	MH	SW8260C
Chlorobenzene	ND	50	ug/L	50	09/17/20	MH	SW8260C
Chloroethane	ND	50	ug/L	50	09/17/20	MH	SW8260C
Chloroform	ND	50	ug/L	50	09/17/20	MH	SW8260C
Chloromethane	ND	50	ug/L	50	09/17/20	MH	SW8260C
cis-1,2-Dichloroethene	52	50	ug/L	50	09/17/20	MH	SW8260C
cis-1,3-Dichloropropene	ND	25	ug/L	50	09/17/20	MH	SW8260C
Dibromochloromethane	ND	25	ug/L	50	09/17/20	MH	SW8260C
Dibromomethane	ND	25	ug/L	50	09/17/20	MH	SW8260C
Dichlorodifluoromethane	ND	50	ug/L	50	09/17/20	MH	SW8260C
Ethylbenzene	ND	50	ug/L	50	09/17/20	MH	SW8260C
Hexachlorobutadiene	ND	25	ug/L	50	09/17/20	MH	SW8260C
Isopropylbenzene	ND	50	ug/L	50	09/17/20	MH	SW8260C
m&p-Xylene	ND	50	ug/L	50	09/17/20	MH	SW8260C
Methyl ethyl ketone	ND	250	ug/L	50	09/17/20	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	50	ug/L	50	09/17/20	MH	SW8260C
Methylene chloride	ND	50	ug/L	50	09/17/20	MH	SW8260C
Naphthalene	ND	50	ug/L	50	09/17/20	MH	SW8260C
n-Butylbenzene	ND	50	ug/L	50	09/17/20	MH	SW8260C
n-Propylbenzene	ND	50	ug/L	50	09/17/20	MH	SW8260C
o-Xylene	ND	50	ug/L	50	09/17/20	MH	SW8260C
p-Isopropyltoluene	ND	50	ug/L	50	09/17/20	MH	SW8260C
sec-Butylbenzene	ND	50	ug/L	50	09/17/20	MH	SW8260C
Styrene	ND	50	ug/L	50	09/17/20	MH	SW8260C
tert-Butylbenzene	ND	50	ug/L	50	09/17/20	MH	SW8260C
Tetrachloroethene	4000	50	ug/L	50	09/17/20	MH	SW8260C
Tetrahydrofuran (THF)	ND	130	ug/L	50	09/17/20	MH	SW8260C
Toluene	ND	50	ug/L	50	09/17/20	MH	SW8260C
trans-1,2-Dichloroethene	ND	50	ug/L	50	09/17/20	MH	SW8260C
trans-1,3-Dichloropropene	ND	25	ug/L	50	09/17/20	MH	SW8260C
Trichloroethene	4900	100	ug/L	100	09/18/20	MH	SW8260C
Trichlorofluoromethane	ND	50	ug/L	50	09/17/20	MH	SW8260C
Trichlorotrifluoroethane	ND	50	ug/L	50	09/17/20	MH	SW8260C
Vinyl chloride	ND	25	ug/L	50	09/17/20	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4 (50x)	99		%	50	09/17/20	MH	70 - 130 %
% Bromofluorobenzene (50x)	103		%	50	09/17/20	MH	70 - 130 %
% Dibromofluoromethane (50x)	104		%	50	09/17/20	MH	70 - 130 %
% Toluene-d8 (50x)	99		%	50	09/17/20	MH	70 - 130 %
% 1,2-dichlorobenzene-d4 (100x)	101		%	100	09/18/20	MH	70 - 130 %
% Bromofluorobenzene (100x)	103		%	100	09/18/20	MH	70 - 130 %
% Dibromofluoromethane (100x)	103		%	100	09/18/20	MH	70 - 130 %

Project ID: LOCKHEED WILMINGTON MA 60552044.19 Phoenix I.D.: CG76026
Client ID: 20A-AE100R3-091020-1

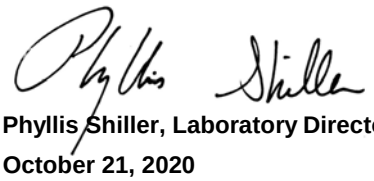
Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	
% Toluene-d8 (100x)	103		%	100	09/18/20	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	5000	ug/L	50	09/17/20	MH	SW8260C (OXY)
Diethyl ether	ND	50	ug/L	50	09/17/20	MH	SW8260C (OXY)
Di-isopropyl ether	ND	50	ug/L	50	09/17/20	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	50	ug/L	50	09/17/20	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	50	ug/L	50	09/17/20	MH	SW8260C (OXY)
1,4-dioxane							
1,4-dioxane	9.2	0.20	ug/l	1	09/16/20	AW	SW8270DSIM
QA/QC Surrogates							
% 1,4-dioxane-d8	94		%	1	09/16/20	AW	40 - 140 %
Extraction for 1,4-Dioxane	Completed				09/15/20	S/S	

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

Volatile Comment:
Elevated reporting limits for volatiles due to the presence of target and/or non-target compounds.

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
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Phyllis Shiller, Laboratory Director
October 21, 2020
Reviewed and Released by: Greg Lawrence, Assistant Lab Director

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

October 21, 2020

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		09/10/20	14:10
Location Code:	AECOM-WILMINGTN	Received by:	CP	09/11/20	16:31
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	127680				

Laboratory Data

SDG ID: GCG76015
Phoenix ID: CG76027

Project ID: LOCKHEED WILMINGTON MA 60552044.19
Client ID: 20A-AE100R1-091020-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
EPH Extraction	Completed				09/15/20	JS/JS	SW3510C
MA Petroleum Hydrocarbon (EPH)	Completed				09/11/20		MADEP EPH-04
Semi-Volatile Extraction	Completed				09/16/20	P/CG/D	SW3520C
MA Petroleum Hydrocarbon (VPH)	Completed				09/15/20	RM	MADEP VPH04
Volatiles							
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
1,1,1-Trichloroethane	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L	1	09/14/20	MH	SW8260C
1,1,2-Trichloroethane	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
1,1-Dichloroethane	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
1,1-Dichloroethene	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
1,1-Dichloropropene	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
1,2,3-Trichlorobenzene	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
1,2,3-Trichloropropane	ND	0.50	ug/L	1	09/14/20	MH	SW8260C
1,2,4-Trichlorobenzene	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
1,2,4-Trimethylbenzene	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	0.50	ug/L	1	09/14/20	MH	SW8260C
1,2-Dibromoethane	ND	0.50	ug/L	1	09/14/20	MH	SW8260C
1,2-Dichlorobenzene	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
1,2-Dichloroethane	ND	0.60	ug/L	1	09/14/20	MH	SW8260C
1,2-Dichloropropane	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
1,3,5-Trimethylbenzene	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
1,3-Dichlorobenzene	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
1,3-Dichloropropane	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
1,4-Dichlorobenzene	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
2,2-Dichloropropane	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
2-Chlorotoluene	ND	1.0	ug/L	1	09/14/20	MH	SW8260C

Project ID: LOCKHEED WILMINGTON MA 60552044.19 Phoenix I.D.: CG76027

Client ID: 20A-AE100R1-091020-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	
2-Hexanone	ND	5.0	ug/L	1	09/14/20	MH	SW8260C
4-Chlorotoluene	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
4-Methyl-2-pentanone	ND	5.0	ug/L	1	09/14/20	MH	SW8260C
Acetone	ND	25	ug/L	1	09/14/20	MH	SW8260C
Benzene	ND	0.70	ug/L	1	09/14/20	MH	SW8260C
Bromobenzene	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
Bromochloromethane	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
Bromodichloromethane	ND	0.50	ug/L	1	09/14/20	MH	SW8260C
Bromoform	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
Bromomethane	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
Carbon Disulfide	ND	5.0	ug/L	1	09/14/20	MH	SW8260C
Carbon tetrachloride	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
Chlorobenzene	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
Chloroethane	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
Chloroform	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
Chloromethane	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
cis-1,2-Dichloroethene	6.5	1.0	ug/L	1	09/14/20	MH	SW8260C
cis-1,3-Dichloropropene	ND	0.40	ug/L	1	09/14/20	MH	SW8260C
Dibromochloromethane	ND	0.50	ug/L	1	09/14/20	MH	SW8260C
Dibromomethane	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
Dichlorodifluoromethane	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
Ethylbenzene	2.7	1.0	ug/L	1	09/14/20	MH	SW8260C
Hexachlorobutadiene	ND	0.40	ug/L	1	09/14/20	MH	SW8260C
Isopropylbenzene	2.6	1.0	ug/L	1	09/14/20	MH	SW8260C
m&p-Xylene	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
Methyl ethyl ketone	ND	5.0	ug/L	1	09/14/20	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
Methylene chloride	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
Naphthalene	1.4	1.0	ug/L	1	09/14/20	MH	SW8260C
n-Butylbenzene	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
n-Propylbenzene	5.3	1.0	ug/L	1	09/14/20	MH	SW8260C
o-Xylene	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
p-Isopropyltoluene	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
sec-Butylbenzene	2.0	1.0	ug/L	1	09/14/20	MH	SW8260C
Styrene	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
tert-Butylbenzene	6.7	1.0	ug/L	1	09/14/20	MH	SW8260C
Tetrachloroethene	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
Tetrahydrofuran (THF)	ND	2.5	ug/L	1	09/14/20	MH	SW8260C
Toluene	1.9	1.0	ug/L	1	09/14/20	MH	SW8260C
trans-1,2-Dichloroethene	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
trans-1,3-Dichloropropene	ND	0.40	ug/L	1	09/14/20	MH	SW8260C
Trichloroethene	2.5	1.0	ug/L	1	09/14/20	MH	SW8260C
Trichlorofluoromethane	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
Trichlorotrifluoroethane	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
Vinyl chloride	4.1	1.0	ug/L	1	09/14/20	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	101		%	1	09/14/20	MH	70 - 130 %
% Bromofluorobenzene	95		%	1	09/14/20	MH	70 - 130 %
% Dibromofluoromethane	97		%	1	09/14/20	MH	70 - 130 %

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	
% Toluene-d8	103		%	1	09/14/20	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	100	ug/L	1	09/14/20	MH	SW8260C (OXY)
Diethyl ether	ND	1.0	ug/L	1	09/14/20	MH	SW8260C (OXY)
Di-isopropyl ether	ND	1.0	ug/L	1	09/14/20	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	1.0	ug/L	1	09/14/20	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	1.0	ug/L	1	09/14/20	MH	SW8260C (OXY)
Semivolatiles by SIM, PAH							
2-Methylnaphthalene	ND	0.47	ug/L	1	09/17/20	WB	SW8270D (SIM)
Acenaphthene	ND	0.47	ug/L	1	09/17/20	WB	SW8270D (SIM)
Acenaphthylene	ND	0.09	ug/L	1	09/17/20	WB	SW8270D (SIM)
Anthracene	ND	0.09	ug/L	1	09/17/20	WB	SW8270D (SIM)
Benz(a)anthracene	ND	0.09	ug/L	1	09/17/20	WB	SW8270D (SIM)
Benzo(a)pyrene	ND	0.19	ug/L	1	09/17/20	WB	SW8270D (SIM)
Benzo(b)fluoranthene	ND	0.09	ug/L	1	09/17/20	WB	SW8270D (SIM)
Benzo(ghi)perylene	ND	0.02	ug/L	1	09/17/20	WB	SW8270D (SIM)
Benzo(k)fluoranthene	ND	0.09	ug/L	1	09/17/20	WB	SW8270D (SIM)
Chrysene	ND	0.05	ug/L	1	09/17/20	WB	SW8270D (SIM)
Dibenz(a,h)anthracene	ND	0.02	ug/L	1	09/17/20	WB	SW8270D (SIM)
Fluoranthene	ND	0.47	ug/L	1	09/17/20	WB	SW8270D (SIM)
Fluorene	ND	0.09	ug/L	1	09/17/20	WB	SW8270D (SIM)
Indeno(1,2,3-cd)pyrene	ND	0.09	ug/L	1	09/17/20	WB	SW8270D (SIM)
Naphthalene	0.76	0.47	ug/L	1	09/17/20	WB	SW8270D (SIM)
Phenanthrene	ND	0.47	ug/L	1	09/17/20	WB	SW8270D (SIM)
Pyrene	ND	0.07	ug/L	1	09/17/20	WB	SW8270D (SIM)
QA/QC Surrogates							
% 2-Fluorobiphenyl	59		%	1	09/17/20	WB	40 - 140 %
% Nitrobenzene-d5	70		%	1	09/17/20	WB	40 - 140 %
% Terphenyl-d14	82		%	1	09/17/20	WB	40 - 140 %
MA EPH Aliphatic/Aromatic Ranges							
C11-C22 Aromatic Hydrocarbons 1,2*	ND	200	ug/L	1	09/17/20	AW	MAEPH 5/2004
C11-C22 Aromatic Hydrocarbons Unadj	ND	200	ug/L	1	09/17/20	AW	MAEPH 5/2004
C19-C36 Aliphatic Hydrocarbons 1*	ND	200	ug/L	1	09/17/20	AW	MAEPH 5/2004
C9-C18 Aliphatic Hydrocarbons 1*	ND	200	ug/L	1	09/17/20	AW	MAEPH 5/2004
Total TPH 1,2*	ND	200	ug/L	1	09/17/20	AW	MAEPH 5/2004
QA/QC Surrogates							
% 1-chlorooctadecane (aliphatic)	60		%	1	09/17/20	AW	40 - 140 %
% 2-Bromonaphthalene (Fractionation)	90		%	1	09/17/20	AW	40 - 140 %
% 2-Fluorobiphenyl (Fractionation)	98		%	1	09/17/20	AW	40 - 140 %
% o-terphenyl (aromatic)	84		%	1	09/17/20	AW	40 - 140 %
MA Volatile Petroleum Hydrocarbons (VPH)							
Unadjusted C5-C8 Aliphatics (*1)	ND	100	ug/L	1	09/15/20	RM	MA VPH 5/2004
Unadjusted C9-C12 Aliphatics (*1)	170	100	ug/L	1	09/15/20	RM	MA VPH 5/2004
C5-C8 Aliphatic Hydrocarbons *1,2	ND	100	ug/L	1	09/15/20	RM	MA VPH 5/2004
C9-C12 Aliphatic Hydrocarbons *1,3	ND	100	ug/L	1	09/15/20	RM	MA VPH 5/2004
C9-C10 Aromatic Hydrocarbons *1	ND	100	ug/L	1	09/15/20	RM	MA VPH 5/2004

Project ID: LOCKHEED WILMINGTON MA 60552044.19 Phoenix I.D.: CG76027

Client ID: 20A-AE100R1-091020-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	
Benzene	ND	1.0	ug/L	1	09/15/20	RM	MA VPH 5/2004
Ethyl Benzene	2.8	1.0	ug/L	1	09/15/20	RM	MA VPH 5/2004
MTBE	ND	1.0	ug/L	1	09/15/20	RM	MA VPH 5/2004
Naphthalene	ND	5.0	ug/L	1	09/15/20	RM	MA VPH 5/2004
Toluene	2.4	1.0	ug/L	1	09/15/20	RM	MA VPH 5/2004
m,p-Xylenes	ND	2.0	ug/L	1	09/15/20	RM	MA VPH 5/2004
o-Xylene	ND	1.0	ug/L	1	09/15/20	RM	MA VPH 5/2004
QA/QC Surrogates							
% 2,5-Dibromotoluene (FID)	106		%	1	09/15/20	RM	70 - 130 %
% 2,5-Dibromotoluene (PID)	101		%	1	09/15/20	RM	70 - 130 %

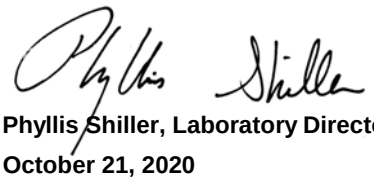
RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

MAEPH:
1* Hydrocarbon range data exclude concentrations of any surrogate(s) and/or internal standards eluting in that range.
2* C11-C12 Aromatic Hydrocarbons exclude the concentration of Target PAH analytes eluting in that range.

VPH:
*1 Range data exclude conc.s of any surrogate(s) and/or Int. std.s eluting in that range.
*2 C5-C8 and C9-C12 Aliphatic exclude the conc. of Target Analytes in that range.
*3 C9-C12 Aliphatic also exclude C9-C10 Aromatic Hydrocarbon

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.



Phyllis Shiller, Laboratory Director

October 21, 2020

Reviewed and Released by: Greg Lawrence, Assistant Lab Director

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

October 21, 2020

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		09/10/20	13:00
Location Code:	AECOM-WILMINGTN	Received by:	CP	09/11/20	16:31
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	127680				

Laboratory Data

SDG ID: GCG76015
Phoenix ID: CG76028

Project ID: LOCKHEED WILMINGTON MA 60552044.19
Client ID: 20A-AE103R1-091020-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Arsenic	< 0.004	0.004	mg/L	1	09/16/20	TH	SW6010D
Arsenic (Dissolved)	< 0.004	0.004	mg/L	1	09/15/20	CPP	SW6010D
Iron (Dissolved)	0.505	0.011	mg/L	1	09/15/20	CPP	SW6010D
Manganese (Dissolved)	2.09	0.001	mg/L	1	09/15/20	CPP	SW6010D
Iron	0.625	0.010	mg/L	1	09/16/20	TH	SW6010D
Manganese	2.23	0.010	mg/L	10	09/17/20	TH	SW6010D
Chloride	776	30.0	mg/L	10	09/12/20	BS/GD	E300.0
Nitrite as Nitrogen	< 0.040	0.040	mg/L	10	09/12/20 01:42	BS/GD	E300.0
Nitrate as Nitrogen	2.96	0.05	mg/L	1	09/11/20 22:38	BS/GD	E300.0
Sulfate	29.7	3.0	mg/L	1	09/11/20	BS/GD	E300.0
Sulfide	< 0.05	0.05	mg/L	1	09/16/20	GD	SM4500S-D-11
Total Organic Carbon	1.4	1.0	mg/L	1	09/15/20	ARG/BJA	SM5310B-11
EPH Extraction	Completed				09/15/20	JS/JS	SW3510C
MA Petroleum Hydrocarbon (EPH)	Completed				09/11/20		MADEP EPH-04
Semi-Volatile Extraction	Completed				09/16/20	P/CG/D	SW3520C
Dissolved Metals Preparation	Completed				09/14/20	AG	SW3005A
Total Metals Digestion	Completed				09/15/20	AG	
MA Petroleum Hydrocarbon (VPH)	Completed				09/15/20	RM	MADEP VPH04
Volatiles							
1,1,1,2-Tetrachloroethane	ND	5.0	ug/L	10	09/18/20	MH	SW8260C
1,1,1-Trichloroethane	ND	10	ug/L	10	09/18/20	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	5.0	ug/L	10	09/18/20	MH	SW8260C
1,1,2-Trichloroethane	ND	5.0	ug/L	10	09/18/20	MH	SW8260C
1,1-Dichloroethane	21	10	ug/L	10	09/18/20	MH	SW8260C
1,1-Dichloroethene	ND	7.0	ug/L	10	09/18/20	MH	SW8260C
1,1-Dichloropropene	ND	10	ug/L	10	09/18/20	MH	SW8260C
1,2,3-Trichlorobenzene	ND	7.0	ug/L	10	09/18/20	MH	SW8260C

Project ID: LOCKHEED WILMINGTON MA 60552044.19 Phoenix I.D.: CG76028

Client ID: 20A-AE103R1-091020-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	
1,2,3-Trichloropropane	ND	5.0	ug/L	10	09/18/20	MH	SW8260C
1,2,4-Trichlorobenzene	ND	10	ug/L	10	09/18/20	MH	SW8260C
1,2,4-Trimethylbenzene	ND	10	ug/L	10	09/18/20	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	5.0	ug/L	10	09/18/20	MH	SW8260C
1,2-Dibromoethane	ND	5.0	ug/L	10	09/18/20	MH	SW8260C
1,2-Dichlorobenzene	ND	10	ug/L	10	09/18/20	MH	SW8260C
1,2-Dichloroethane	ND	5.0	ug/L	10	09/18/20	MH	SW8260C
1,2-Dichloropropane	ND	5.0	ug/L	10	09/18/20	MH	SW8260C
1,3,5-Trimethylbenzene	ND	10	ug/L	10	09/18/20	MH	SW8260C
1,3-Dichlorobenzene	ND	10	ug/L	10	09/18/20	MH	SW8260C
1,3-Dichloropropane	ND	10	ug/L	10	09/18/20	MH	SW8260C
1,4-Dichlorobenzene	ND	5.0	ug/L	10	09/18/20	MH	SW8260C
2,2-Dichloropropane	ND	10	ug/L	10	09/18/20	MH	SW8260C
2-Chlorotoluene	ND	10	ug/L	10	09/18/20	MH	SW8260C
2-Hexanone	ND	50	ug/L	10	09/18/20	MH	SW8260C
4-Chlorotoluene	ND	10	ug/L	10	09/18/20	MH	SW8260C
4-Methyl-2-pentanone	ND	50	ug/L	10	09/18/20	MH	SW8260C
Acetone	ND	250	ug/L	10	09/18/20	MH	SW8260C
Benzene	ND	5.0	ug/L	10	09/18/20	MH	SW8260C
Bromobenzene	ND	10	ug/L	10	09/18/20	MH	SW8260C
Bromochloromethane	ND	10	ug/L	10	09/18/20	MH	SW8260C
Bromodichloromethane	ND	5.0	ug/L	10	09/18/20	MH	SW8260C
Bromoform	ND	5.0	ug/L	10	09/18/20	MH	SW8260C
Bromomethane	ND	7.0	ug/L	10	09/18/20	MH	SW8260C
Carbon Disulfide	ND	50	ug/L	10	09/18/20	MH	SW8260C
Carbon tetrachloride	ND	5.0	ug/L	10	09/18/20	MH	SW8260C
Chlorobenzene	ND	10	ug/L	10	09/18/20	MH	SW8260C
Chloroethane	ND	10	ug/L	10	09/18/20	MH	SW8260C
Chloroform	ND	10	ug/L	10	09/18/20	MH	SW8260C
Chloromethane	ND	10	ug/L	10	09/18/20	MH	SW8260C
cis-1,2-Dichloroethene	340	10	ug/L	10	09/18/20	MH	SW8260C
cis-1,3-Dichloropropene	ND	5.0	ug/L	10	09/18/20	MH	SW8260C
Dibromochloromethane	ND	5.0	ug/L	10	09/18/20	MH	SW8260C
Dibromomethane	ND	8.3	ug/L	10	09/18/20	MH	SW8260C
Dichlorodifluoromethane	ND	10	ug/L	10	09/18/20	MH	SW8260C
Ethylbenzene	ND	10	ug/L	10	09/18/20	MH	SW8260C
Hexachlorobutadiene	ND	5.0	ug/L	10	09/18/20	MH	SW8260C
Isopropylbenzene	ND	10	ug/L	10	09/18/20	MH	SW8260C
m&p-Xylene	ND	10	ug/L	10	09/18/20	MH	SW8260C
Methyl ethyl ketone	ND	50	ug/L	10	09/18/20	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	10	ug/L	10	09/18/20	MH	SW8260C
Methylene chloride	ND	10	ug/L	10	09/18/20	MH	SW8260C
Naphthalene	ND	10	ug/L	10	09/18/20	MH	SW8260C
n-Butylbenzene	ND	10	ug/L	10	09/18/20	MH	SW8260C
n-Propylbenzene	ND	10	ug/L	10	09/18/20	MH	SW8260C
o-Xylene	ND	10	ug/L	10	09/18/20	MH	SW8260C
p-Isopropyltoluene	ND	10	ug/L	10	09/18/20	MH	SW8260C
sec-Butylbenzene	ND	10	ug/L	10	09/18/20	MH	SW8260C
Styrene	ND	10	ug/L	10	09/18/20	MH	SW8260C

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	
tert-Butylbenzene	ND	10	ug/L	10	09/18/20	MH	SW8260C
Tetrachloroethene	980	10	ug/L	10	09/18/20	MH	SW8260C
Tetrahydrofuran (THF)	ND	25	ug/L	10	09/18/20	MH	SW8260C
Toluene	ND	10	ug/L	10	09/18/20	MH	SW8260C
trans-1,2-Dichloroethene	ND	10	ug/L	10	09/18/20	MH	SW8260C
trans-1,3-Dichloropropene	ND	5.0	ug/L	10	09/18/20	MH	SW8260C
Trichloroethene	1200	20	ug/L	20	09/16/20	MH	SW8260C
Trichlorofluoromethane	ND	10	ug/L	10	09/18/20	MH	SW8260C
Trichlorotrifluoroethane	ND	10	ug/L	10	09/18/20	MH	SW8260C
Vinyl chloride	23	10	ug/L	10	09/18/20	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4 (10x)	100		%	10	09/18/20	MH	70 - 130 %
% Bromofluorobenzene (10x)	102		%	10	09/18/20	MH	70 - 130 %
% Dibromofluoromethane (10x)	107		%	10	09/18/20	MH	70 - 130 %
% Toluene-d8 (10x)	100		%	10	09/18/20	MH	70 - 130 %
% 1,2-dichlorobenzene-d4 (20x)	99		%	20	09/16/20	MH	70 - 130 %
% Bromofluorobenzene (20x)	97		%	20	09/16/20	MH	70 - 130 %
% Dibromofluoromethane (20x)	103		%	20	09/16/20	MH	70 - 130 %
% Toluene-d8 (20x)	99		%	20	09/16/20	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	1000	ug/L	10	09/18/20	MH	SW8260C (OXY)
Diethyl ether	ND	10	ug/L	10	09/18/20	MH	SW8260C (OXY)
Di-isopropyl ether	ND	10	ug/L	10	09/18/20	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	10	ug/L	10	09/18/20	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	10	ug/L	10	09/18/20	MH	SW8260C (OXY)
Semivolatiles by SIM, PAH							
2-Methylnaphthalene	ND	0.48	ug/L	1	09/17/20	WB	SW8270D (SIM)
Acenaphthene	ND	0.48	ug/L	1	09/17/20	WB	SW8270D (SIM)
Acenaphthylene	ND	0.10	ug/L	1	09/17/20	WB	SW8270D (SIM)
Anthracene	ND	0.09	ug/L	1	09/17/20	WB	SW8270D (SIM)
Benz(a)anthracene	ND	0.10	ug/L	1	09/17/20	WB	SW8270D (SIM)
Benzo(a)pyrene	ND	0.19	ug/L	1	09/17/20	WB	SW8270D (SIM)
Benzo(b)fluoranthene	ND	0.10	ug/L	1	09/17/20	WB	SW8270D (SIM)
Benzo(ghi)perylene	ND	0.02	ug/L	1	09/17/20	WB	SW8270D (SIM)
Benzo(k)fluoranthene	ND	0.10	ug/L	1	09/17/20	WB	SW8270D (SIM)
Chrysene	ND	0.05	ug/L	1	09/17/20	WB	SW8270D (SIM)
Dibenz(a,h)anthracene	ND	0.02	ug/L	1	09/17/20	WB	SW8270D (SIM)
Fluoranthene	ND	0.48	ug/L	1	09/17/20	WB	SW8270D (SIM)
Fluorene	ND	0.10	ug/L	1	09/17/20	WB	SW8270D (SIM)
Indeno(1,2,3-cd)pyrene	ND	0.10	ug/L	1	09/17/20	WB	SW8270D (SIM)
Naphthalene	ND	0.48	ug/L	1	09/17/20	WB	SW8270D (SIM)
Phenanthrene	ND	0.48	ug/L	1	09/17/20	WB	SW8270D (SIM)
Pyrene	ND	0.07	ug/L	1	09/17/20	WB	SW8270D (SIM)
QA/QC Surrogates							
% 2-Fluorobiphenyl	58		%	1	09/17/20	WB	40 - 140 %
% Nitrobenzene-d5	85		%	1	09/17/20	WB	40 - 140 %
% Terphenyl-d14	77		%	1	09/17/20	WB	40 - 140 %

Project ID: LOCKHEED WILMINGTON MA 60552044.19 Phoenix I.D.: CG76028
Client ID: 20A-AE103R1-091020-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	
1,4-dioxane							
1,4-dioxane	4.2	0.20	ug/l	1	09/16/20	AW	SW8270DSIM
QA/QC Surrogates							
% 1,4-dioxane-d8	89		%	1	09/16/20	AW	40 - 140 %
Extraction for 1,4-Dioxane	Completed				09/15/20	S/S	
MA EPH Aliphatic/Aromatic Ranges							
C11-C22 Aromatic Hydrocarbons 1,2*	ND	200	ug/L	1	09/17/20	AW	MAEPH 5/2004
C11-C22 Aromatic Hydrocarbons Unadj	ND	200	ug/L	1	09/17/20	AW	MAEPH 5/2004
C19-C36 Aliphatic Hydrocarbons 1*	ND	200	ug/L	1	09/17/20	AW	MAEPH 5/2004
C9-C18 Aliphatic Hydrocarbons 1*	ND	200	ug/L	1	09/17/20	AW	MAEPH 5/2004
Total TPH 1,2*	ND	200	ug/L	1	09/17/20	AW	MAEPH 5/2004
QA/QC Surrogates							
% 1-chlorooctadecane (aliphatic)	58		%	1	09/17/20	AW	40 - 140 %
% 2-Bromonaphthalene (Fractionation)	62		%	1	09/17/20	AW	40 - 140 %
% 2-Fluorobiphenyl (Fractionation)	94		%	1	09/17/20	AW	40 - 140 %
% o-terphenyl (aromatic)	81		%	1	09/17/20	AW	40 - 140 %
MA Volatile Petroleum Hydrocarbons (VPH)							
Unadjusted C5-C8 Aliphatics (*1)	640	500	ug/L	5	09/15/20	RM	MA VPH 5/2004
Unadjusted C9-C12 Aliphatics (*1)	ND	500	ug/L	5	09/15/20	RM	MA VPH 5/2004
C5-C8 Aliphatic Hydrocarbons *1,2	640	500	ug/L	5	09/15/20	RM	MA VPH 5/2004
C9-C12 Aliphatic Hydrocarbons *1,3	ND	500	ug/L	5	09/15/20	RM	MA VPH 5/2004
C9-C10 Aromatic Hydrocarbons *1	ND	500	ug/L	5	09/15/20	RM	MA VPH 5/2004
Benzene	ND	5.0	ug/L	5	09/15/20	RM	MA VPH 5/2004
Ethyl Benzene	ND	5.0	ug/L	5	09/15/20	RM	MA VPH 5/2004
MTBE	ND	5.0	ug/L	5	09/15/20	RM	MA VPH 5/2004
Naphthalene	ND	25	ug/L	5	09/15/20	RM	MA VPH 5/2004
Toluene	ND	5.0	ug/L	5	09/15/20	RM	MA VPH 5/2004
m,p-Xylenes	ND	10	ug/L	5	09/15/20	RM	MA VPH 5/2004
o-Xylene	ND	5.0	ug/L	5	09/15/20	RM	MA VPH 5/2004
QA/QC Surrogates							
% 2,5-Dibromotoluene (FID)	106		%	5	09/15/20	RM	70 - 130 %
% 2,5-Dibromotoluene (PID)	104		%	5	09/15/20	RM	70 - 130 %

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

MAEPH:
1* Hydrocarbon range data exclude concentrations of any surrogate(s) and/or internal standards eluting in that range.
2* C11-C12 Aromatic Hydrocarbons exclude the concentration of Target PAH analytes eluting in that range.

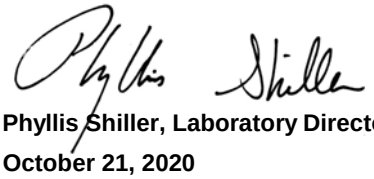
VPH:
*1 Range data exclude conc.s of any surrogate(s) and/or Int. std.s eluting in that range.
*2 C5-C8 and C9-C12 Aliphatic exclude the conc. of Target Analytes in that range.
*3 C9-C12 Aliphatic also exclude C9-C10 Aromatic Hydrocarbon

VPH diluted run
Elevated reporting limits for VPH due to the presence of target and/or non-target compounds.

Volatile Comment:
Elevated reporting limits for volatiles due to the presence of target and/or non-target compounds.

Nitrite Analysis comment:
Due to interference from a large amount of chloride in the sample, a dilution was required causing the reporting level to be elevated.

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.



Phyllis Shiller, Laboratory Director
October 21, 2020
Reviewed and Released by: Greg Lawrence, Assistant Lab Director

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

October 21, 2020

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		09/10/20	13:20
Location Code:	AECOM-WILMINGTN	Received by:	CP	09/11/20	16:31
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	127680				

Laboratory Data

SDG ID: GCG76015
Phoenix ID: CG76029

Project ID: LOCKHEED WILMINGTON MA 60552044.19
Client ID: 20A-AE103R3-091020-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Volatiles							
1,1,1,2-Tetrachloroethane	ND	5.0	ug/L	10	09/18/20	MH	SW8260C
1,1,1-Trichloroethane	ND	10	ug/L	10	09/18/20	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	5.0	ug/L	10	09/18/20	MH	SW8260C
1,1,2-Trichloroethane	ND	5.0	ug/L	10	09/18/20	MH	SW8260C
1,1-Dichloroethane	32	10	ug/L	10	09/18/20	MH	SW8260C
1,1-Dichloroethene	7.3	7.0	ug/L	10	09/18/20	MH	SW8260C
1,1-Dichloropropene	ND	10	ug/L	10	09/18/20	MH	SW8260C
1,2,3-Trichlorobenzene	ND	7.0	ug/L	10	09/18/20	MH	SW8260C
1,2,3-Trichloropropane	ND	5.0	ug/L	10	09/18/20	MH	SW8260C
1,2,4-Trichlorobenzene	ND	10	ug/L	10	09/18/20	MH	SW8260C
1,2,4-Trimethylbenzene	ND	10	ug/L	10	09/18/20	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	5.0	ug/L	10	09/18/20	MH	SW8260C
1,2-Dibromoethane	ND	5.0	ug/L	10	09/18/20	MH	SW8260C
1,2-Dichlorobenzene	ND	10	ug/L	10	09/18/20	MH	SW8260C
1,2-Dichloroethane	ND	5.0	ug/L	10	09/18/20	MH	SW8260C
1,2-Dichloropropane	ND	5.0	ug/L	10	09/18/20	MH	SW8260C
1,3,5-Trimethylbenzene	ND	10	ug/L	10	09/18/20	MH	SW8260C
1,3-Dichlorobenzene	ND	10	ug/L	10	09/18/20	MH	SW8260C
1,3-Dichloropropane	ND	10	ug/L	10	09/18/20	MH	SW8260C
1,4-Dichlorobenzene	ND	5.0	ug/L	10	09/18/20	MH	SW8260C
2,2-Dichloropropane	ND	10	ug/L	10	09/18/20	MH	SW8260C
2-Chlorotoluene	ND	10	ug/L	10	09/18/20	MH	SW8260C
2-Hexanone	ND	50	ug/L	10	09/18/20	MH	SW8260C
4-Chlorotoluene	ND	10	ug/L	10	09/18/20	MH	SW8260C
4-Methyl-2-pentanone	ND	50	ug/L	10	09/18/20	MH	SW8260C
Acetone	ND	250	ug/L	10	09/18/20	MH	SW8260C

Project ID: LOCKHEED WILMINGTON MA 60552044.19 Phoenix I.D.: CG76029

Client ID: 20A-AE103R3-091020-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	
Benzene	ND	5.0	ug/L	10	09/18/20	MH	SW8260C
Bromobenzene	ND	10	ug/L	10	09/18/20	MH	SW8260C
Bromochloromethane	ND	10	ug/L	10	09/18/20	MH	SW8260C
Bromodichloromethane	ND	5.0	ug/L	10	09/18/20	MH	SW8260C
Bromoform	ND	5.0	ug/L	10	09/18/20	MH	SW8260C
Bromomethane	ND	7.0	ug/L	10	09/18/20	MH	SW8260C
Carbon Disulfide	ND	50	ug/L	10	09/18/20	MH	SW8260C
Carbon tetrachloride	ND	5.0	ug/L	10	09/18/20	MH	SW8260C
Chlorobenzene	ND	10	ug/L	10	09/18/20	MH	SW8260C
Chloroethane	ND	10	ug/L	10	09/18/20	MH	SW8260C
Chloroform	ND	10	ug/L	10	09/18/20	MH	SW8260C
Chloromethane	ND	10	ug/L	10	09/18/20	MH	SW8260C
cis-1,2-Dichloroethene	140	10	ug/L	10	09/18/20	MH	SW8260C
cis-1,3-Dichloropropene	ND	5.0	ug/L	10	09/18/20	MH	SW8260C
Dibromochloromethane	ND	5.0	ug/L	10	09/18/20	MH	SW8260C
Dibromomethane	ND	8.3	ug/L	10	09/18/20	MH	SW8260C
Dichlorodifluoromethane	ND	10	ug/L	10	09/18/20	MH	SW8260C
Ethylbenzene	ND	10	ug/L	10	09/18/20	MH	SW8260C
Hexachlorobutadiene	ND	5.0	ug/L	10	09/18/20	MH	SW8260C
Isopropylbenzene	ND	10	ug/L	10	09/18/20	MH	SW8260C
m&p-Xylene	ND	10	ug/L	10	09/18/20	MH	SW8260C
Methyl ethyl ketone	ND	50	ug/L	10	09/18/20	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	10	ug/L	10	09/18/20	MH	SW8260C
Methylene chloride	ND	10	ug/L	10	09/18/20	MH	SW8260C
Naphthalene	ND	10	ug/L	10	09/18/20	MH	SW8260C
n-Butylbenzene	ND	10	ug/L	10	09/18/20	MH	SW8260C
n-Propylbenzene	ND	10	ug/L	10	09/18/20	MH	SW8260C
o-Xylene	ND	10	ug/L	10	09/18/20	MH	SW8260C
p-Isopropyltoluene	ND	10	ug/L	10	09/18/20	MH	SW8260C
sec-Butylbenzene	ND	10	ug/L	10	09/18/20	MH	SW8260C
Styrene	ND	10	ug/L	10	09/18/20	MH	SW8260C
tert-Butylbenzene	ND	10	ug/L	10	09/18/20	MH	SW8260C
Tetrachloroethene	950	20	ug/L	20	09/16/20	MH	SW8260C
Tetrahydrofuran (THF)	ND	25	ug/L	10	09/18/20	MH	SW8260C
Toluene	ND	10	ug/L	10	09/18/20	MH	SW8260C
trans-1,2-Dichloroethene	ND	10	ug/L	10	09/18/20	MH	SW8260C
trans-1,3-Dichloropropene	ND	5.0	ug/L	10	09/18/20	MH	SW8260C
Trichloroethene	1300	20	ug/L	20	09/16/20	MH	SW8260C
Trichlorofluoromethane	ND	10	ug/L	10	09/18/20	MH	SW8260C
Trichlorotrifluoroethane	ND	10	ug/L	10	09/18/20	MH	SW8260C
Vinyl chloride	36	10	ug/L	10	09/18/20	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4 (10x)	99		%	10	09/18/20	MH	70 - 130 %
% Bromofluorobenzene (10x)	102		%	10	09/18/20	MH	70 - 130 %
% Dibromofluoromethane (10x)	106		%	10	09/18/20	MH	70 - 130 %
% Toluene-d8 (10x)	99		%	10	09/18/20	MH	70 - 130 %
% 1,2-dichlorobenzene-d4 (20x)	99		%	20	09/16/20	MH	70 - 130 %
% Bromofluorobenzene (20x)	99		%	20	09/16/20	MH	70 - 130 %
% Dibromofluoromethane (20x)	102		%	20	09/16/20	MH	70 - 130 %

Project ID: LOCKHEED WILMINGTON MA 60552044.19 Phoenix I.D.: CG76029
Client ID: 20A-AE103R3-091020-1

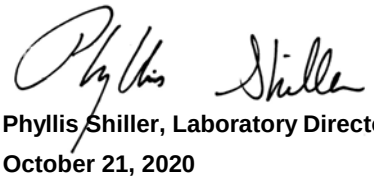
Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	
% Toluene-d8 (20x)	101		%	20	09/16/20	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	1000	ug/L	10	09/18/20	MH	SW8260C (OXY)
Diethyl ether	ND	10	ug/L	10	09/18/20	MH	SW8260C (OXY)
Di-isopropyl ether	ND	10	ug/L	10	09/18/20	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	10	ug/L	10	09/18/20	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	10	ug/L	10	09/18/20	MH	SW8260C (OXY)

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

Volatile Comment:
Elevated reporting limits for volatiles due to the presence of target and/or non-target compounds.

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.



Phyllis Shiller, Laboratory Director
October 21, 2020
Reviewed and Released by: Greg Lawrence, Assistant Lab Director

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

October 21, 2020

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		09/10/20	13:25
Location Code:	AECOM-WILMINGTN	Received by:	CP	09/11/20	16:31
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	127680				

Laboratory Data

SDG ID: GCG76015
Phoenix ID: CG76030

Project ID: LOCKHEED WILMINGTON MA 60552044.19
Client ID: 20A-AE103R4-091020-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Volatiles							
1,1,1,2-Tetrachloroethane	ND	50	ug/L	100	09/21/20	MH	SW8260C
1,1,1-Trichloroethane	ND	100	ug/L	100	09/21/20	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	50	ug/L	100	09/21/20	MH	SW8260C
1,1,2-Trichloroethane	ND	50	ug/L	100	09/21/20	MH	SW8260C
1,1-Dichloroethane	100	100	ug/L	100	09/21/20	MH	SW8260C
1,1-Dichloroethene	ND	50	ug/L	100	09/21/20	MH	SW8260C
1,1-Dichloropropene	ND	100	ug/L	100	09/21/20	MH	SW8260C
1,2,3-Trichlorobenzene	ND	50	ug/L	100	09/21/20	MH	SW8260C
1,2,3-Trichloropropane	ND	50	ug/L	100	09/21/20	MH	SW8260C
1,2,4-Trichlorobenzene	ND	70	ug/L	100	09/21/20	MH	SW8260C
1,2,4-Trimethylbenzene	ND	56	ug/L	100	09/21/20	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	50	ug/L	100	09/21/20	MH	SW8260C
1,2-Dibromoethane	ND	50	ug/L	100	09/21/20	MH	SW8260C
1,2-Dichlorobenzene	ND	100	ug/L	100	09/21/20	MH	SW8260C
1,2-Dichloroethane	ND	50	ug/L	100	09/21/20	MH	SW8260C
1,2-Dichloropropane	ND	50	ug/L	100	09/21/20	MH	SW8260C
1,3,5-Trimethylbenzene	ND	60	ug/L	100	09/21/20	MH	SW8260C
1,3-Dichlorobenzene	ND	50	ug/L	100	09/21/20	MH	SW8260C
1,3-Dichloropropane	ND	100	ug/L	100	09/21/20	MH	SW8260C
1,4-Dichlorobenzene	ND	50	ug/L	100	09/21/20	MH	SW8260C
2,2-Dichloropropane	ND	100	ug/L	100	09/21/20	MH	SW8260C
2-Chlorotoluene	ND	100	ug/L	100	09/21/20	MH	SW8260C
2-Hexanone	ND	500	ug/L	100	09/21/20	MH	SW8260C
4-Chlorotoluene	ND	100	ug/L	100	09/21/20	MH	SW8260C
4-Methyl-2-pentanone	ND	500	ug/L	100	09/21/20	MH	SW8260C
Acetone	ND	2500	ug/L	100	09/21/20	MH	SW8260C

Ver 3

Project ID: LOCKHEED WILMINGTON MA 60552044.19 Phoenix I.D.: CG76030

Client ID: 20A-AE103R4-091020-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	
Benzene	ND	50	ug/L	100	09/21/20	MH	SW8260C
Bromobenzene	ND	62	ug/L	100	09/21/20	MH	SW8260C
Bromochloromethane	ND	83	ug/L	100	09/21/20	MH	SW8260C
Bromodichloromethane	ND	50	ug/L	100	09/21/20	MH	SW8260C
Bromoform	ND	50	ug/L	100	09/21/20	MH	SW8260C
Bromomethane	ND	50	ug/L	100	09/21/20	MH	SW8260C
Carbon Disulfide	ND	500	ug/L	100	09/21/20	MH	SW8260C
Carbon tetrachloride	ND	50	ug/L	100	09/21/20	MH	SW8260C
Chlorobenzene	ND	100	ug/L	100	09/21/20	MH	SW8260C
Chloroethane	ND	100	ug/L	100	09/21/20	MH	SW8260C
Chloroform	ND	50	ug/L	100	09/21/20	MH	SW8260C
Chloromethane	ND	100	ug/L	100	09/21/20	MH	SW8260C
cis-1,2-Dichloroethene	690	100	ug/L	100	09/21/20	MH	SW8260C
cis-1,3-Dichloropropene	ND	50	ug/L	100	09/21/20	MH	SW8260C
Dibromochloromethane	ND	50	ug/L	100	09/21/20	MH	SW8260C
Dibromomethane	ND	50	ug/L	100	09/21/20	MH	SW8260C
Dichlorodifluoromethane	ND	100	ug/L	100	09/21/20	MH	SW8260C
Ethylbenzene	ND	100	ug/L	100	09/21/20	MH	SW8260C
Hexachlorobutadiene	ND	50	ug/L	100	09/21/20	MH	SW8260C
Isopropylbenzene	ND	100	ug/L	100	09/21/20	MH	SW8260C
m&p-Xylene	ND	100	ug/L	100	09/21/20	MH	SW8260C
Methyl ethyl ketone	ND	500	ug/L	100	09/21/20	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	70	ug/L	100	09/21/20	MH	SW8260C
Methylene chloride	ND	100	ug/L	100	09/21/20	MH	SW8260C
Naphthalene	ND	100	ug/L	100	09/21/20	MH	SW8260C
n-Butylbenzene	ND	100	ug/L	100	09/21/20	MH	SW8260C
n-Propylbenzene	ND	100	ug/L	100	09/21/20	MH	SW8260C
o-Xylene	ND	100	ug/L	100	09/21/20	MH	SW8260C
p-Isopropyltoluene	ND	100	ug/L	100	09/21/20	MH	SW8260C
sec-Butylbenzene	ND	100	ug/L	100	09/21/20	MH	SW8260C
Styrene	ND	100	ug/L	100	09/21/20	MH	SW8260C
tert-Butylbenzene	ND	100	ug/L	100	09/21/20	MH	SW8260C
Tetrachloroethene	3200	100	ug/L	100	09/21/20	MH	SW8260C
Tetrahydrofuran (THF)	ND	250	ug/L	100	09/21/20	MH	SW8260C
Toluene	ND	100	ug/L	100	09/21/20	MH	SW8260C
trans-1,2-Dichloroethene	ND	80	ug/L	100	09/21/20	MH	SW8260C
trans-1,3-Dichloropropene	ND	50	ug/L	100	09/21/20	MH	SW8260C
Trichloroethene	6000	100	ug/L	100	09/21/20	MH	SW8260C
Trichlorofluoromethane	ND	100	ug/L	100	09/21/20	MH	SW8260C
Trichlorotrifluoroethane	ND	100	ug/L	100	09/21/20	MH	SW8260C
Vinyl chloride	150	100	ug/L	100	09/21/20	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4 (100x)	100		%	100	09/21/20	MH	70 - 130 %
% Bromofluorobenzene (100x)	95		%	100	09/21/20	MH	70 - 130 %
% Dibromofluoromethane (100x)	96		%	100	09/21/20	MH	70 - 130 %
% Toluene-d8 (100x)	98		%	100	09/21/20	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	10000	ug/L	100	09/21/20	MH	SW8260C (OXY)
Diethyl ether	ND	100	ug/L	100	09/21/20	MH	SW8260C (OXY)

Ver 3

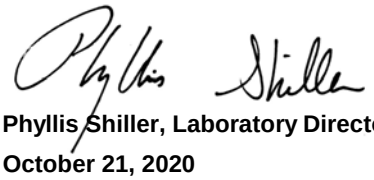
Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	
Di-isopropyl ether	ND	100	ug/L	100	09/21/20	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	100	ug/L	100	09/21/20	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	100	ug/L	100	09/21/20	MH	SW8260C (OXY)
1,4-dioxane							
1,4-dioxane	38	0.20	ug/l	1	09/16/20	AW	SW8270DSIM
QA/QC Surrogates							
% 1,4-dioxane-d8	95		%	1	09/16/20	AW	40 - 140 %
Extraction for 1,4-Dioxane	Completed				09/15/20	S/S	

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

Volatile Comment:
Elevated reporting limits for volatiles due to the presence of target and/or non-target compounds.

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.



Phyllis Shiller, Laboratory Director
October 21, 2020
Reviewed and Released by: Greg Lawrence, Assistant Lab Director

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

October 21, 2020

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		09/10/20	13:35
Location Code:	AECOM-WILMINGTN	Received by:	CP	09/11/20	16:31
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	127680				

Laboratory Data

SDG ID: GCG76015
Phoenix ID: CG76031

Project ID: LOCKHEED WILMINGTON MA 60552044.19
Client ID: 20A-AE103R5-091020-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Arsenic	< 0.004	0.004	mg/L	1	09/16/20	TH	SW6010D
Arsenic (Dissolved)	< 0.004	0.004	mg/L	1	09/15/20	CPP	SW6010D
Iron (Dissolved)	0.222	0.011	mg/L	1	09/15/20	CPP	SW6010D
Manganese (Dissolved)	1.01	0.001	mg/L	1	09/15/20	CPP	SW6010D
Iron	0.225	0.010	mg/L	1	09/16/20	TH	SW6010D
Manganese	1.06	0.001	mg/L	1	09/16/20	TH	SW6010D
Chloride	285	15.0	mg/L	5	09/12/20	BS/GD	E300.0
Nitrite as Nitrogen	< 0.020	0.020	mg/L	5	09/12/20 01:53	BS/GD	E300.0
Nitrate as Nitrogen	< 0.05	0.05	mg/L	1	09/11/20 22:49	BS/GD	E300.0
Sulfate	35.6	3.0	mg/L	1	09/11/20	BS/GD	E300.0
Sulfide	< 0.05	0.05	mg/L	1	09/16/20	GD	SM4500S-D-11
Total Organic Carbon	1.3	1.0	mg/L	1	09/15/20	ARG/BJA	SM5310B-11
Dissolved Metals Preparation	Completed				09/14/20	AG	SW3005A
Total Metals Digestion	Completed				09/15/20	AG	
Volatiles							
1,1,1,2-Tetrachloroethane	ND	50	ug/L	100	09/21/20	MH	SW8260C
1,1,1-Trichloroethane	ND	100	ug/L	100	09/21/20	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	50	ug/L	100	09/21/20	MH	SW8260C
1,1,2-Trichloroethane	ND	50	ug/L	100	09/21/20	MH	SW8260C
1,1-Dichloroethane	110	100	ug/L	100	09/21/20	MH	SW8260C
1,1-Dichloroethene	ND	50	ug/L	100	09/21/20	MH	SW8260C
1,1-Dichloropropene	ND	100	ug/L	100	09/21/20	MH	SW8260C
1,2,3-Trichlorobenzene	ND	50	ug/L	100	09/21/20	MH	SW8260C
1,2,3-Trichloropropane	ND	50	ug/L	100	09/21/20	MH	SW8260C
1,2,4-Trichlorobenzene	ND	70	ug/L	100	09/21/20	MH	SW8260C
1,2,4-Trimethylbenzene	ND	56	ug/L	100	09/21/20	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	50	ug/L	100	09/21/20	MH	SW8260C

Ver 3

Project ID: LOCKHEED WILMINGTON MA 60552044.19 Phoenix I.D.: CG76031

Client ID: 20A-AE103R5-091020-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	
1,2-Dibromoethane	ND	50	ug/L	100	09/21/20	MH	SW8260C
1,2-Dichlorobenzene	ND	100	ug/L	100	09/21/20	MH	SW8260C
1,2-Dichloroethane	ND	50	ug/L	100	09/21/20	MH	SW8260C
1,2-Dichloropropane	ND	50	ug/L	100	09/21/20	MH	SW8260C
1,3,5-Trimethylbenzene	ND	60	ug/L	100	09/21/20	MH	SW8260C
1,3-Dichlorobenzene	ND	50	ug/L	100	09/21/20	MH	SW8260C
1,3-Dichloropropane	ND	100	ug/L	100	09/21/20	MH	SW8260C
1,4-Dichlorobenzene	ND	50	ug/L	100	09/21/20	MH	SW8260C
2,2-Dichloropropane	ND	100	ug/L	100	09/21/20	MH	SW8260C
2-Chlorotoluene	ND	100	ug/L	100	09/21/20	MH	SW8260C
2-Hexanone	ND	500	ug/L	100	09/21/20	MH	SW8260C
4-Chlorotoluene	ND	100	ug/L	100	09/21/20	MH	SW8260C
4-Methyl-2-pentanone	ND	500	ug/L	100	09/21/20	MH	SW8260C
Acetone	ND	2500	ug/L	100	09/21/20	MH	SW8260C
Benzene	ND	50	ug/L	100	09/21/20	MH	SW8260C
Bromobenzene	ND	62	ug/L	100	09/21/20	MH	SW8260C
Bromochloromethane	ND	83	ug/L	100	09/21/20	MH	SW8260C
Bromodichloromethane	ND	50	ug/L	100	09/21/20	MH	SW8260C
Bromoform	ND	50	ug/L	100	09/21/20	MH	SW8260C
Bromomethane	ND	50	ug/L	100	09/21/20	MH	SW8260C
Carbon Disulfide	ND	500	ug/L	100	09/21/20	MH	SW8260C
Carbon tetrachloride	ND	50	ug/L	100	09/21/20	MH	SW8260C
Chlorobenzene	ND	100	ug/L	100	09/21/20	MH	SW8260C
Chloroethane	ND	100	ug/L	100	09/21/20	MH	SW8260C
Chloroform	ND	50	ug/L	100	09/21/20	MH	SW8260C
Chloromethane	ND	100	ug/L	100	09/21/20	MH	SW8260C
cis-1,2-Dichloroethene	1000	100	ug/L	100	09/21/20	MH	SW8260C
cis-1,3-Dichloropropene	ND	50	ug/L	100	09/21/20	MH	SW8260C
Dibromochloromethane	ND	50	ug/L	100	09/21/20	MH	SW8260C
Dibromomethane	ND	50	ug/L	100	09/21/20	MH	SW8260C
Dichlorodifluoromethane	ND	100	ug/L	100	09/21/20	MH	SW8260C
Ethylbenzene	ND	100	ug/L	100	09/21/20	MH	SW8260C
Hexachlorobutadiene	ND	50	ug/L	100	09/21/20	MH	SW8260C
Isopropylbenzene	ND	100	ug/L	100	09/21/20	MH	SW8260C
m&p-Xylene	ND	100	ug/L	100	09/21/20	MH	SW8260C
Methyl ethyl ketone	ND	500	ug/L	100	09/21/20	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	70	ug/L	100	09/21/20	MH	SW8260C
Methylene chloride	ND	100	ug/L	100	09/21/20	MH	SW8260C
Naphthalene	ND	100	ug/L	100	09/21/20	MH	SW8260C
n-Butylbenzene	ND	100	ug/L	100	09/21/20	MH	SW8260C
n-Propylbenzene	ND	100	ug/L	100	09/21/20	MH	SW8260C
o-Xylene	ND	100	ug/L	100	09/21/20	MH	SW8260C
p-Isopropyltoluene	ND	100	ug/L	100	09/21/20	MH	SW8260C
sec-Butylbenzene	ND	100	ug/L	100	09/21/20	MH	SW8260C
Styrene	ND	100	ug/L	100	09/21/20	MH	SW8260C
tert-Butylbenzene	ND	100	ug/L	100	09/21/20	MH	SW8260C
Tetrachloroethene	4700	100	ug/L	100	09/21/20	MH	SW8260C
Tetrahydrofuran (THF)	ND	250	ug/L	100	09/21/20	MH	SW8260C
Toluene	ND	100	ug/L	100	09/21/20	MH	SW8260C

Project ID: LOCKHEED WILMINGTON MA 60552044.19 Phoenix I.D.: CG76031
Client ID: 20A-AE103R5-091020-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	
trans-1,2-Dichloroethene	ND	80	ug/L	100	09/21/20	MH	SW8260C
trans-1,3-Dichloropropene	ND	50	ug/L	100	09/21/20	MH	SW8260C
Trichloroethene	7600	100	ug/L	100	09/21/20	MH	SW8260C
Trichlorofluoromethane	ND	100	ug/L	100	09/21/20	MH	SW8260C
Trichlorotrifluoroethane	ND	100	ug/L	100	09/21/20	MH	SW8260C
Vinyl chloride	270	100	ug/L	100	09/21/20	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4 (100x)	98		%	100	09/21/20	MH	70 - 130 %
% Bromofluorobenzene (100x)	95		%	100	09/21/20	MH	70 - 130 %
% Dibromofluoromethane (100x)	93		%	100	09/21/20	MH	70 - 130 %
% Toluene-d8 (100x)	97		%	100	09/21/20	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	10000	ug/L	100	09/21/20	MH	SW8260C (OXY)
Diethyl ether	ND	100	ug/L	100	09/21/20	MH	SW8260C (OXY)
Di-isopropyl ether	ND	100	ug/L	100	09/21/20	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	100	ug/L	100	09/21/20	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	100	ug/L	100	09/21/20	MH	SW8260C (OXY)
1,4-dioxane							
1,4-dioxane	37	0.20	ug/l	1	09/16/20	AW	SW8270DSIM
QA/QC Surrogates							
% 1,4-dioxane-d8	101		%	1	09/16/20	AW	40 - 140 %
Extraction for 1,4-Dioxane	Completed				09/15/20	S/S	

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

Volatile Comment:
Elevated reporting limits for volatiles due to the presence of target and/or non-target compounds.

Nitrite Analysis comment:
Due to interference from a large amount of chloride in the sample, a dilution was required causing the reporting level to be elevated.

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.



Phyllis Shiller, Laboratory Director
October 21, 2020
Reviewed and Released by: Greg Lawrence, Assistant Lab Director

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

October 21, 2020

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		09/10/20	13:40
Location Code:	AECOM-WILMINGTN	Received by:	CP	09/11/20	16:31
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	127680				

Laboratory Data

SDG ID: GCG76015
Phoenix ID: CG76032

Project ID: LOCKHEED WILMINGTON MA 60552044.19
Client ID: 20A-AE103R7-091020-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Volatiles							
1,1,1,2-Tetrachloroethane	ND	10	ug/L	20	09/16/20	MH	SW8260C
1,1,1-Trichloroethane	ND	20	ug/L	20	09/16/20	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	10	ug/L	20	09/16/20	MH	SW8260C
1,1,2-Trichloroethane	ND	10	ug/L	20	09/16/20	MH	SW8260C
1,1-Dichloroethane	50	20	ug/L	20	09/16/20	MH	SW8260C
1,1-Dichloroethene	10	10	ug/L	20	09/16/20	MH	SW8260C
1,1-Dichloropropene	ND	20	ug/L	20	09/16/20	MH	SW8260C
1,2,3-Trichlorobenzene	ND	10	ug/L	20	09/16/20	MH	SW8260C
1,2,3-Trichloropropane	ND	10	ug/L	20	09/16/20	MH	SW8260C
1,2,4-Trichlorobenzene	ND	20	ug/L	20	09/16/20	MH	SW8260C
1,2,4-Trimethylbenzene	ND	20	ug/L	20	09/16/20	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	10	ug/L	20	09/16/20	MH	SW8260C
1,2-Dibromoethane	ND	10	ug/L	20	09/16/20	MH	SW8260C
1,2-Dichlorobenzene	ND	20	ug/L	20	09/16/20	MH	SW8260C
1,2-Dichloroethane	ND	10	ug/L	20	09/16/20	MH	SW8260C
1,2-Dichloropropane	ND	10	ug/L	20	09/16/20	MH	SW8260C
1,3,5-Trimethylbenzene	ND	20	ug/L	20	09/16/20	MH	SW8260C
1,3-Dichlorobenzene	ND	20	ug/L	20	09/16/20	MH	SW8260C
1,3-Dichloropropane	ND	20	ug/L	20	09/16/20	MH	SW8260C
1,4-Dichlorobenzene	ND	10	ug/L	20	09/16/20	MH	SW8260C
2,2-Dichloropropane	ND	20	ug/L	20	09/16/20	MH	SW8260C
2-Chlorotoluene	ND	20	ug/L	20	09/16/20	MH	SW8260C
2-Hexanone	ND	100	ug/L	20	09/16/20	MH	SW8260C
4-Chlorotoluene	ND	20	ug/L	20	09/16/20	MH	SW8260C
4-Methyl-2-pentanone	ND	100	ug/L	20	09/16/20	MH	SW8260C
Acetone	ND	500	ug/L	20	09/16/20	MH	SW8260C

Project ID: LOCKHEED WILMINGTON MA 60552044.19 Phoenix I.D.: CG76032

Client ID: 20A-AE103R7-091020-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	
Benzene	ND	10	ug/L	20	09/16/20	MH	SW8260C
Bromobenzene	ND	20	ug/L	20	09/16/20	MH	SW8260C
Bromochloromethane	ND	20	ug/L	20	09/16/20	MH	SW8260C
Bromodichloromethane	ND	10	ug/L	20	09/16/20	MH	SW8260C
Bromoform	ND	10	ug/L	20	09/16/20	MH	SW8260C
Bromomethane	ND	10	ug/L	20	09/16/20	MH	SW8260C
Carbon Disulfide	ND	100	ug/L	20	09/16/20	MH	SW8260C
Carbon tetrachloride	ND	10	ug/L	20	09/16/20	MH	SW8260C
Chlorobenzene	ND	20	ug/L	20	09/16/20	MH	SW8260C
Chloroethane	ND	20	ug/L	20	09/16/20	MH	SW8260C
Chloroform	ND	20	ug/L	20	09/16/20	MH	SW8260C
Chloromethane	ND	20	ug/L	20	09/16/20	MH	SW8260C
cis-1,2-Dichloroethene	400	20	ug/L	20	09/16/20	MH	SW8260C
cis-1,3-Dichloropropene	ND	10	ug/L	20	09/16/20	MH	SW8260C
Dibromochloromethane	ND	10	ug/L	20	09/16/20	MH	SW8260C
Dibromomethane	ND	10	ug/L	20	09/16/20	MH	SW8260C
Dichlorodifluoromethane	ND	20	ug/L	20	09/16/20	MH	SW8260C
Ethylbenzene	ND	20	ug/L	20	09/16/20	MH	SW8260C
Hexachlorobutadiene	ND	10	ug/L	20	09/16/20	MH	SW8260C
Isopropylbenzene	ND	20	ug/L	20	09/16/20	MH	SW8260C
m&p-Xylene	ND	20	ug/L	20	09/16/20	MH	SW8260C
Methyl ethyl ketone	ND	100	ug/L	20	09/16/20	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	20	ug/L	20	09/16/20	MH	SW8260C
Methylene chloride	ND	20	ug/L	20	09/16/20	MH	SW8260C
Naphthalene	ND	20	ug/L	20	09/16/20	MH	SW8260C
n-Butylbenzene	ND	20	ug/L	20	09/16/20	MH	SW8260C
n-Propylbenzene	ND	20	ug/L	20	09/16/20	MH	SW8260C
o-Xylene	ND	20	ug/L	20	09/16/20	MH	SW8260C
p-Isopropyltoluene	ND	20	ug/L	20	09/16/20	MH	SW8260C
sec-Butylbenzene	ND	20	ug/L	20	09/16/20	MH	SW8260C
Styrene	ND	20	ug/L	20	09/16/20	MH	SW8260C
tert-Butylbenzene	ND	20	ug/L	20	09/16/20	MH	SW8260C
Tetrachloroethene	2000	100	ug/L	100	09/21/20	MH	SW8260C
Tetrahydrofuran (THF)	ND	50	ug/L	20	09/16/20	MH	SW8260C
Toluene	ND	20	ug/L	20	09/16/20	MH	SW8260C
trans-1,2-Dichloroethene	20	20	ug/L	20	09/16/20	MH	SW8260C
trans-1,3-Dichloropropene	ND	10	ug/L	20	09/16/20	MH	SW8260C
Trichloroethene	3200	100	ug/L	100	09/21/20	MH	SW8260C
Trichlorofluoromethane	ND	20	ug/L	20	09/16/20	MH	SW8260C
Trichlorotrifluoroethane	ND	20	ug/L	20	09/16/20	MH	SW8260C
Vinyl chloride	68	20	ug/L	20	09/16/20	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4 (20x)	99		%	20	09/16/20	MH	70 - 130 %
% Bromofluorobenzene (20x)	98		%	20	09/16/20	MH	70 - 130 %
% Dibromofluoromethane (20x)	100		%	20	09/16/20	MH	70 - 130 %
% Toluene-d8 (20x)	95		%	20	09/16/20	MH	70 - 130 %
% 1,2-dichlorobenzene-d4 (100x)	98		%	100	09/21/20	MH	70 - 130 %
% Bromofluorobenzene (100x)	96		%	100	09/21/20	MH	70 - 130 %
% Dibromofluoromethane (100x)	94		%	100	09/21/20	MH	70 - 130 %

Project ID: LOCKHEED WILMINGTON MA 60552044.19 Phoenix I.D.: CG76032
Client ID: 20A-AE103R7-091020-1

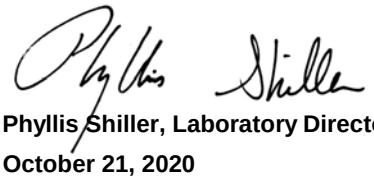
Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	
% Toluene-d8 (100x)	98		%	100	09/21/20	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	2000	ug/L	20	09/16/20	MH	SW8260C (OXY)
Diethyl ether	ND	20	ug/L	20	09/16/20	MH	SW8260C (OXY)
Di-isopropyl ether	ND	20	ug/L	20	09/16/20	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	20	ug/L	20	09/16/20	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	20	ug/L	20	09/16/20	MH	SW8260C (OXY)

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

Volatile Comment:
Elevated reporting limits for volatiles due to the presence of target and/or non-target compounds.

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.



Phyllis Shiller, Laboratory Director
October 21, 2020
Reviewed and Released by: Greg Lawrence, Assistant Lab Director

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

October 21, 2020

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		09/11/20	10:25
Location Code:	AECOM-WILMINGTN	Received by:	CP	09/11/20	16:31
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	127680				

Laboratory Data

SDG ID: GCG76015
Phoenix ID: CG76033

Project ID: LOCKHEED WILMINGTON MA 60552044.19
Client ID: 20A-AE112D-091120-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Arsenic	< 0.004	0.004	mg/L	1	09/16/20	TH	SW6010D
Arsenic (Dissolved)	< 0.004	0.004	mg/L	1	09/15/20	CPP	SW6010D
Iron (Dissolved)	0.017	0.011	mg/L	1	09/15/20	CPP	SW6010D
Manganese (Dissolved)	0.013	0.001	mg/L	1	09/15/20	CPP	SW6010D
Iron	0.456	0.010	mg/L	1	09/16/20	TH	SW6010D
Manganese	0.073	0.001	mg/L	1	09/16/20	TH	SW6010D
Dissolved Metals Preparation	Completed				09/14/20	AG	SW3005A
Total Metals Digestion	Completed				09/15/20	AG	
Volatiles							
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
1,1,1-Trichloroethane	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L	1	09/14/20	MH	SW8260C
1,1,2-Trichloroethane	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
1,1-Dichloroethane	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
1,1-Dichloroethene	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
1,1-Dichloropropene	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
1,2,3-Trichlorobenzene	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
1,2,3-Trichloropropane	ND	0.50	ug/L	1	09/14/20	MH	SW8260C
1,2,4-Trichlorobenzene	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
1,2,4-Trimethylbenzene	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	0.50	ug/L	1	09/14/20	MH	SW8260C
1,2-Dibromoethane	ND	0.50	ug/L	1	09/14/20	MH	SW8260C
1,2-Dichlorobenzene	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
1,2-Dichloroethane	ND	0.60	ug/L	1	09/14/20	MH	SW8260C
1,2-Dichloropropane	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
1,3,5-Trimethylbenzene	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
1,3-Dichlorobenzene	ND	1.0	ug/L	1	09/14/20	MH	SW8260C

Project ID: LOCKHEED WILMINGTON MA 60552044.19 Phoenix I.D.: CG76033

Client ID: 20A-AE112D-091120-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	
1,3-Dichloropropane	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
1,4-Dichlorobenzene	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
2,2-Dichloropropane	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
2-Chlorotoluene	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
2-Hexanone	ND	5.0	ug/L	1	09/14/20	MH	SW8260C
4-Chlorotoluene	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
4-Methyl-2-pentanone	ND	5.0	ug/L	1	09/14/20	MH	SW8260C
Acetone	ND	25	ug/L	1	09/14/20	MH	SW8260C
Benzene	ND	0.70	ug/L	1	09/14/20	MH	SW8260C
Bromobenzene	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
Bromochloromethane	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
Bromodichloromethane	ND	0.50	ug/L	1	09/14/20	MH	SW8260C
Bromoform	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
Bromomethane	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
Carbon Disulfide	ND	5.0	ug/L	1	09/14/20	MH	SW8260C
Carbon tetrachloride	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
Chlorobenzene	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
Chloroethane	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
Chloroform	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
Chloromethane	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
cis-1,2-Dichloroethene	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
cis-1,3-Dichloropropene	ND	0.40	ug/L	1	09/14/20	MH	SW8260C
Dibromochloromethane	ND	0.50	ug/L	1	09/14/20	MH	SW8260C
Dibromomethane	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
Dichlorodifluoromethane	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
Ethylbenzene	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
Hexachlorobutadiene	ND	0.40	ug/L	1	09/14/20	MH	SW8260C
Isopropylbenzene	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
m&p-Xylene	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
Methyl ethyl ketone	ND	5.0	ug/L	1	09/14/20	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
Methylene chloride	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
Naphthalene	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
n-Butylbenzene	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
n-Propylbenzene	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
o-Xylene	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
p-Isopropyltoluene	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
sec-Butylbenzene	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
Styrene	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
tert-Butylbenzene	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
Tetrachloroethene	1.5	1.0	ug/L	1	09/14/20	MH	SW8260C
Tetrahydrofuran (THF)	ND	2.5	ug/L	1	09/14/20	MH	SW8260C
Toluene	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
trans-1,2-Dichloroethene	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
trans-1,3-Dichloropropene	ND	0.40	ug/L	1	09/14/20	MH	SW8260C
Trichloroethene	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
Trichlorofluoromethane	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
Trichlorotrifluoroethane	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
Vinyl chloride	ND	1.0	ug/L	1	09/14/20	MH	SW8260C

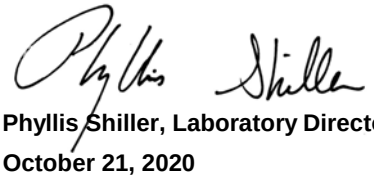
Project ID: LOCKHEED WILMINGTON MA 60552044.19 Phoenix I.D.: CG76033
Client ID: 20A-AE112D-091120-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	100		%	1	09/14/20	MH	70 - 130 %
% Bromofluorobenzene	95		%	1	09/14/20	MH	70 - 130 %
% Dibromofluoromethane	100		%	1	09/14/20	MH	70 - 130 %
% Toluene-d8	102		%	1	09/14/20	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	100	ug/L	1	09/14/20	MH	SW8260C (OXY)
Diethyl ether	ND	1.0	ug/L	1	09/14/20	MH	SW8260C (OXY)
Di-isopropyl ether	ND	1.0	ug/L	1	09/14/20	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	1.0	ug/L	1	09/14/20	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	1.0	ug/L	1	09/14/20	MH	SW8260C (OXY)

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.



Phyllis Shiller, Laboratory Director
October 21, 2020
Reviewed and Released by: Greg Lawrence, Assistant Lab Director

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

October 21, 2020

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		09/11/20	10:45
Location Code:	AECOM-WILMINGTN	Received by:	CP	09/11/20	16:31
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	127680				

Laboratory Data

SDG ID: GCG76015
Phoenix ID: CG76034

Project ID: LOCKHEED WILMINGTON MA 60552044.19
Client ID: 20A-EMW10R-091120-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Volatiles							
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	1	09/16/20	MH	SW8260C
1,1,1-Trichloroethane	ND	1.0	ug/L	1	09/16/20	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L	1	09/16/20	MH	SW8260C
1,1,2-Trichloroethane	ND	1.0	ug/L	1	09/16/20	MH	SW8260C
1,1-Dichloroethane	8.5	1.0	ug/L	1	09/16/20	MH	SW8260C
1,1-Dichloroethene	ND	1.0	ug/L	1	09/16/20	MH	SW8260C
1,1-Dichloropropene	ND	1.0	ug/L	1	09/16/20	MH	SW8260C
1,2,3-Trichlorobenzene	ND	1.0	ug/L	1	09/16/20	MH	SW8260C
1,2,3-Trichloropropane	ND	0.50	ug/L	1	09/16/20	MH	SW8260C
1,2,4-Trichlorobenzene	ND	1.0	ug/L	1	09/16/20	MH	SW8260C
1,2,4-Trimethylbenzene	ND	1.0	ug/L	1	09/16/20	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	0.50	ug/L	1	09/16/20	MH	SW8260C
1,2-Dibromoethane	ND	0.50	ug/L	1	09/16/20	MH	SW8260C
1,2-Dichlorobenzene	ND	1.0	ug/L	1	09/16/20	MH	SW8260C
1,2-Dichloroethane	ND	0.60	ug/L	1	09/16/20	MH	SW8260C
1,2-Dichloropropane	ND	1.0	ug/L	1	09/16/20	MH	SW8260C
1,3,5-Trimethylbenzene	ND	1.0	ug/L	1	09/16/20	MH	SW8260C
1,3-Dichlorobenzene	ND	1.0	ug/L	1	09/16/20	MH	SW8260C
1,3-Dichloropropane	ND	1.0	ug/L	1	09/16/20	MH	SW8260C
1,4-Dichlorobenzene	ND	1.0	ug/L	1	09/16/20	MH	SW8260C
2,2-Dichloropropane	ND	1.0	ug/L	1	09/16/20	MH	SW8260C
2-Chlorotoluene	ND	1.0	ug/L	1	09/16/20	MH	SW8260C
2-Hexanone	ND	5.0	ug/L	1	09/16/20	MH	SW8260C
4-Chlorotoluene	ND	1.0	ug/L	1	09/16/20	MH	SW8260C
4-Methyl-2-pentanone	ND	5.0	ug/L	1	09/16/20	MH	SW8260C
Acetone	ND	25	ug/L	1	09/16/20	MH	SW8260C

Project ID: LOCKHEED WILMINGTON MA 60552044.19 Phoenix I.D.: CG76034

Client ID: 20A-EMW10R-091120-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	
Benzene	ND	0.70	ug/L	1	09/16/20	MH	SW8260C
Bromobenzene	ND	1.0	ug/L	1	09/16/20	MH	SW8260C
Bromochloromethane	ND	1.0	ug/L	1	09/16/20	MH	SW8260C
Bromodichloromethane	ND	0.50	ug/L	1	09/16/20	MH	SW8260C
Bromoform	ND	1.0	ug/L	1	09/16/20	MH	SW8260C
Bromomethane	ND	1.0	ug/L	1	09/16/20	MH	SW8260C
Carbon Disulfide	ND	5.0	ug/L	1	09/16/20	MH	SW8260C
Carbon tetrachloride	ND	1.0	ug/L	1	09/16/20	MH	SW8260C
Chlorobenzene	ND	1.0	ug/L	1	09/16/20	MH	SW8260C
Chloroethane	ND	1.0	ug/L	1	09/16/20	MH	SW8260C
Chloroform	ND	1.0	ug/L	1	09/16/20	MH	SW8260C
Chloromethane	ND	1.0	ug/L	1	09/16/20	MH	SW8260C
cis-1,2-Dichloroethene	56	1.0	ug/L	1	09/16/20	MH	SW8260C
cis-1,3-Dichloropropene	ND	0.40	ug/L	1	09/16/20	MH	SW8260C
Dibromochloromethane	ND	0.50	ug/L	1	09/16/20	MH	SW8260C
Dibromomethane	ND	1.0	ug/L	1	09/16/20	MH	SW8260C
Dichlorodifluoromethane	ND	1.0	ug/L	1	09/16/20	MH	SW8260C
Ethylbenzene	ND	1.0	ug/L	1	09/16/20	MH	SW8260C
Hexachlorobutadiene	ND	0.40	ug/L	1	09/16/20	MH	SW8260C
Isopropylbenzene	ND	1.0	ug/L	1	09/16/20	MH	SW8260C
m&p-Xylene	ND	1.0	ug/L	1	09/16/20	MH	SW8260C
Methyl ethyl ketone	ND	5.0	ug/L	1	09/16/20	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	1.0	ug/L	1	09/16/20	MH	SW8260C
Methylene chloride	ND	1.0	ug/L	1	09/16/20	MH	SW8260C
Naphthalene	ND	1.0	ug/L	1	09/16/20	MH	SW8260C
n-Butylbenzene	ND	1.0	ug/L	1	09/16/20	MH	SW8260C
n-Propylbenzene	ND	1.0	ug/L	1	09/16/20	MH	SW8260C
o-Xylene	ND	1.0	ug/L	1	09/16/20	MH	SW8260C
p-Isopropyltoluene	ND	1.0	ug/L	1	09/16/20	MH	SW8260C
sec-Butylbenzene	ND	1.0	ug/L	1	09/16/20	MH	SW8260C
Styrene	ND	1.0	ug/L	1	09/16/20	MH	SW8260C
tert-Butylbenzene	ND	1.0	ug/L	1	09/16/20	MH	SW8260C
Tetrachloroethene	34	1.0	ug/L	1	09/16/20	MH	SW8260C
Tetrahydrofuran (THF)	ND	2.5	ug/L	1	09/16/20	MH	SW8260C
Toluene	ND	1.0	ug/L	1	09/16/20	MH	SW8260C
trans-1,2-Dichloroethene	ND	1.0	ug/L	1	09/16/20	MH	SW8260C
trans-1,3-Dichloropropene	ND	0.40	ug/L	1	09/16/20	MH	SW8260C
Trichloroethene	81	1.0	ug/L	1	09/16/20	MH	SW8260C
Trichlorofluoromethane	ND	1.0	ug/L	1	09/16/20	MH	SW8260C
Trichlorotrifluoroethane	ND	1.0	ug/L	1	09/16/20	MH	SW8260C
Vinyl chloride	11	1.0	ug/L	1	09/16/20	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	98		%	1	09/16/20	MH	70 - 130 %
% Bromofluorobenzene	99		%	1	09/16/20	MH	70 - 130 %
% Dibromofluoromethane	100		%	1	09/16/20	MH	70 - 130 %
% Toluene-d8	99		%	1	09/16/20	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	100	ug/L	1	09/16/20	MH	SW8260C (OXY)
Diethyl ether	ND	1.0	ug/L	1	09/16/20	MH	SW8260C (OXY)

Ver 3

Project ID: LOCKHEED WILMINGTON MA 60552044.19 Phoenix I.D.: CG76034

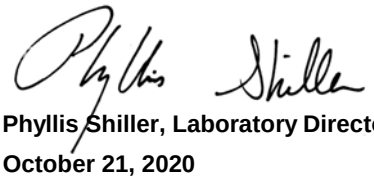
Client ID: 20A-EMW10R-091120-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	
Di-isopropyl ether	ND	1.0	ug/L	1	09/16/20	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	1.0	ug/L	1	09/16/20	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	1.0	ug/L	1	09/16/20	MH	SW8260C (OXY)
Client MS/MSD	Completed				09/16/20		

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

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Phyllis Shiller, Laboratory Director

October 21, 2020

Reviewed and Released by: Greg Lawrence, Assistant Lab Director

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

October 21, 2020

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		09/11/20	12:20
Location Code:	AECOM-WILMINGTN	Received by:	CP	09/11/20	16:31
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	127680				

Laboratory Data

SDG ID: GCG76015
Phoenix ID: CG76035

Project ID: LOCKHEED WILMINGTON MA 60552044.19
Client ID: 20A-EMW11D-091120-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Volatiles							
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
1,1,1-Trichloroethane	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L	1	09/14/20	MH	SW8260C
1,1,2-Trichloroethane	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
1,1-Dichloroethane	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
1,1-Dichloroethene	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
1,1-Dichloropropene	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
1,2,3-Trichlorobenzene	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
1,2,3-Trichloropropane	ND	0.50	ug/L	1	09/14/20	MH	SW8260C
1,2,4-Trichlorobenzene	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
1,2,4-Trimethylbenzene	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	0.50	ug/L	1	09/14/20	MH	SW8260C
1,2-Dibromoethane	ND	0.50	ug/L	1	09/14/20	MH	SW8260C
1,2-Dichlorobenzene	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
1,2-Dichloroethane	ND	0.60	ug/L	1	09/14/20	MH	SW8260C
1,2-Dichloropropane	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
1,3,5-Trimethylbenzene	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
1,3-Dichlorobenzene	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
1,3-Dichloropropane	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
1,4-Dichlorobenzene	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
2,2-Dichloropropane	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
2-Chlorotoluene	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
2-Hexanone	ND	5.0	ug/L	1	09/14/20	MH	SW8260C
4-Chlorotoluene	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
4-Methyl-2-pentanone	ND	5.0	ug/L	1	09/14/20	MH	SW8260C
Acetone	ND	25	ug/L	1	09/14/20	MH	SW8260C

Project ID: LOCKHEED WILMINGTON MA 60552044.19 Phoenix I.D.: CG76035

Client ID: 20A-EMW11D-091120-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	
Benzene	ND	0.70	ug/L	1	09/14/20	MH	SW8260C
Bromobenzene	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
Bromochloromethane	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
Bromodichloromethane	ND	0.50	ug/L	1	09/14/20	MH	SW8260C
Bromoform	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
Bromomethane	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
Carbon Disulfide	ND	5.0	ug/L	1	09/14/20	MH	SW8260C
Carbon tetrachloride	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
Chlorobenzene	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
Chloroethane	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
Chloroform	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
Chloromethane	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
cis-1,2-Dichloroethene	5.3	1.0	ug/L	1	09/14/20	MH	SW8260C
cis-1,3-Dichloropropene	ND	0.40	ug/L	1	09/14/20	MH	SW8260C
Dibromochloromethane	ND	0.50	ug/L	1	09/14/20	MH	SW8260C
Dibromomethane	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
Dichlorodifluoromethane	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
Ethylbenzene	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
Hexachlorobutadiene	ND	0.40	ug/L	1	09/14/20	MH	SW8260C
Isopropylbenzene	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
m&p-Xylene	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
Methyl ethyl ketone	ND	5.0	ug/L	1	09/14/20	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
Methylene chloride	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
Naphthalene	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
n-Butylbenzene	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
n-Propylbenzene	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
o-Xylene	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
p-Isopropyltoluene	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
sec-Butylbenzene	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
Styrene	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
tert-Butylbenzene	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
Tetrachloroethene	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
Tetrahydrofuran (THF)	ND	2.5	ug/L	1	09/14/20	MH	SW8260C
Toluene	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
trans-1,2-Dichloroethene	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
trans-1,3-Dichloropropene	ND	0.40	ug/L	1	09/14/20	MH	SW8260C
Trichloroethene	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
Trichlorofluoromethane	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
Trichlorotrifluoroethane	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
Vinyl chloride	2.3	1.0	ug/L	1	09/14/20	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	99		%	1	09/14/20	MH	70 - 130 %
% Bromofluorobenzene	96		%	1	09/14/20	MH	70 - 130 %
% Dibromofluoromethane	101		%	1	09/14/20	MH	70 - 130 %
% Toluene-d8	103		%	1	09/14/20	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	100	ug/L	1	09/14/20	MH	SW8260C (OXY)
Diethyl ether	ND	1.0	ug/L	1	09/14/20	MH	SW8260C (OXY)

Ver 3

Project ID: LOCKHEED WILMINGTON MA 60552044.19 Phoenix I.D.: CG76035

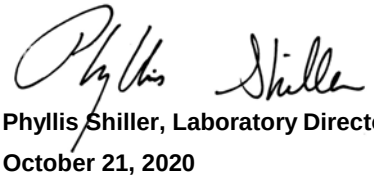
Client ID: 20A-EMW11D-091120-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	
Di-isopropyl ether	ND	1.0	ug/L	1	09/14/20	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	1.0	ug/L	1	09/14/20	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	1.0	ug/L	1	09/14/20	MH	SW8260C (OXY)

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

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Phyllis Shiller, Laboratory Director

October 21, 2020

Reviewed and Released by: Greg Lawrence, Assistant Lab Director

Environmental Laboratories, Inc.
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Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

October 21, 2020

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		09/11/20	11:35
Location Code:	AECOM-WILMINGTN	Received by:	CP	09/11/20	16:31
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	127680				

Laboratory Data

SDG ID: GCG76015
Phoenix ID: CG76036

Project ID: LOCKHEED WILMINGTON MA 60552044.19
Client ID: 20A-EMW10D-091120-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Volatiles							
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
1,1,1-Trichloroethane	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L	1	09/14/20	MH	SW8260C
1,1,2-Trichloroethane	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
1,1-Dichloroethane	1.4	1.0	ug/L	1	09/14/20	MH	SW8260C
1,1-Dichloroethene	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
1,1-Dichloropropene	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
1,2,3-Trichlorobenzene	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
1,2,3-Trichloropropane	ND	0.50	ug/L	1	09/14/20	MH	SW8260C
1,2,4-Trichlorobenzene	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
1,2,4-Trimethylbenzene	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	0.50	ug/L	1	09/14/20	MH	SW8260C
1,2-Dibromoethane	ND	0.50	ug/L	1	09/14/20	MH	SW8260C
1,2-Dichlorobenzene	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
1,2-Dichloroethane	ND	0.60	ug/L	1	09/14/20	MH	SW8260C
1,2-Dichloropropane	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
1,3,5-Trimethylbenzene	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
1,3-Dichlorobenzene	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
1,3-Dichloropropane	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
1,4-Dichlorobenzene	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
2,2-Dichloropropane	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
2-Chlorotoluene	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
2-Hexanone	ND	5.0	ug/L	1	09/14/20	MH	SW8260C
4-Chlorotoluene	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
4-Methyl-2-pentanone	ND	5.0	ug/L	1	09/14/20	MH	SW8260C
Acetone	ND	25	ug/L	1	09/14/20	MH	SW8260C

Project ID: LOCKHEED WILMINGTON MA 60552044.19 Phoenix I.D.: CG76036

Client ID: 20A-EMW10D-091120-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	
Benzene	ND	0.70	ug/L	1	09/14/20	MH	SW8260C
Bromobenzene	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
Bromochloromethane	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
Bromodichloromethane	ND	0.50	ug/L	1	09/14/20	MH	SW8260C
Bromoform	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
Bromomethane	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
Carbon Disulfide	ND	5.0	ug/L	1	09/14/20	MH	SW8260C
Carbon tetrachloride	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
Chlorobenzene	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
Chloroethane	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
Chloroform	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
Chloromethane	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
cis-1,2-Dichloroethene	21	1.0	ug/L	1	09/14/20	MH	SW8260C
cis-1,3-Dichloropropene	ND	0.40	ug/L	1	09/14/20	MH	SW8260C
Dibromochloromethane	ND	0.50	ug/L	1	09/14/20	MH	SW8260C
Dibromomethane	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
Dichlorodifluoromethane	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
Ethylbenzene	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
Hexachlorobutadiene	ND	0.40	ug/L	1	09/14/20	MH	SW8260C
Isopropylbenzene	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
m&p-Xylene	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
Methyl ethyl ketone	ND	5.0	ug/L	1	09/14/20	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
Methylene chloride	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
Naphthalene	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
n-Butylbenzene	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
n-Propylbenzene	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
o-Xylene	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
p-Isopropyltoluene	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
sec-Butylbenzene	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
Styrene	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
tert-Butylbenzene	1.1	1.0	ug/L	1	09/14/20	MH	SW8260C
Tetrachloroethene	110	10	ug/L	10	09/16/20	MH	SW8260C
Tetrahydrofuran (THF)	ND	2.5	ug/L	1	09/14/20	MH	SW8260C
Toluene	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
trans-1,2-Dichloroethene	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
trans-1,3-Dichloropropene	ND	0.40	ug/L	1	09/14/20	MH	SW8260C
Trichloroethene	36	1.0	ug/L	1	09/14/20	MH	SW8260C
Trichlorofluoromethane	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
Trichlorotrifluoroethane	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
Vinyl chloride	5.7	1.0	ug/L	1	09/14/20	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	102		%	1	09/14/20	MH	70 - 130 %
% Bromofluorobenzene	96		%	1	09/14/20	MH	70 - 130 %
% Dibromofluoromethane	99		%	1	09/14/20	MH	70 - 130 %
% Toluene-d8	100		%	1	09/14/20	MH	70 - 130 %
% 1,2-dichlorobenzene-d4 (10x)	98		%	10	09/16/20	MH	70 - 130 %
% Bromofluorobenzene (10x)	100		%	10	09/16/20	MH	70 - 130 %
% Dibromofluoromethane (10x)	102		%	10	09/16/20	MH	70 - 130 %

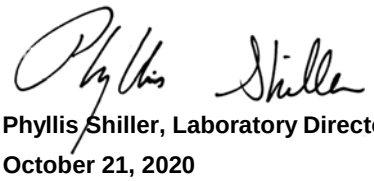
Project ID: LOCKHEED WILMINGTON MA 60552044.19 Phoenix I.D.: CG76036
Client ID: 20A-EMW10D-091120-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	
% Toluene-d8 (10x)	102		%	10	09/16/20	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	100	ug/L	1	09/14/20	MH	SW8260C (OXY)
Diethyl ether	ND	1.0	ug/L	1	09/14/20	MH	SW8260C (OXY)
Di-isopropyl ether	ND	1.0	ug/L	1	09/14/20	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	1.0	ug/L	1	09/14/20	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	1.0	ug/L	1	09/14/20	MH	SW8260C (OXY)

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.



Phyllis Shiller, Laboratory Director
October 21, 2020
Reviewed and Released by: Greg Lawrence, Assistant Lab Director

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

October 21, 2020

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		09/11/20	12:30
Location Code:	AECOM-WILMINGTN	Received by:	CP	09/11/20	16:31
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	127680				

Laboratory Data

SDG ID: GCG76015
Phoenix ID: CG76037

Project ID: LOCKHEED WILMINGTON MA 60552044.19
Client ID: 20A-AE104R4-091120-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
EPH Extraction	Completed				09/15/20	JS/JS	SW3510C
MA Petroleum Hydrocarbon (EPH)	Completed				09/11/20		MADEP EPH-04
Semi-Volatile Extraction	Completed				09/17/20	P/CG	SW3520C
MA Petroleum Hydrocarbon (VPH)	Completed				09/15/20	RM	MADEP VPH04
Volatiles							
1,1,1,2-Tetrachloroethane	ND	10	ug/L	20	09/16/20	MH	SW8260C
1,1,1-Trichloroethane	ND	20	ug/L	20	09/16/20	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	10	ug/L	20	09/16/20	MH	SW8260C
1,1,2-Trichloroethane	ND	10	ug/L	20	09/16/20	MH	SW8260C
1,1-Dichloroethane	57	20	ug/L	20	09/16/20	MH	SW8260C
1,1-Dichloroethene	14	10	ug/L	20	09/16/20	MH	SW8260C
1,1-Dichloropropene	ND	20	ug/L	20	09/16/20	MH	SW8260C
1,2,3-Trichlorobenzene	ND	10	ug/L	20	09/16/20	MH	SW8260C
1,2,3-Trichloropropane	ND	10	ug/L	20	09/16/20	MH	SW8260C
1,2,4-Trichlorobenzene	ND	20	ug/L	20	09/16/20	MH	SW8260C
1,2,4-Trimethylbenzene	ND	20	ug/L	20	09/16/20	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	10	ug/L	20	09/16/20	MH	SW8260C
1,2-Dibromoethane	ND	10	ug/L	20	09/16/20	MH	SW8260C
1,2-Dichlorobenzene	ND	20	ug/L	20	09/16/20	MH	SW8260C
1,2-Dichloroethane	ND	10	ug/L	20	09/16/20	MH	SW8260C
1,2-Dichloropropane	ND	10	ug/L	20	09/16/20	MH	SW8260C
1,3,5-Trimethylbenzene	ND	20	ug/L	20	09/16/20	MH	SW8260C
1,3-Dichlorobenzene	ND	20	ug/L	20	09/16/20	MH	SW8260C
1,3-Dichloropropane	ND	20	ug/L	20	09/16/20	MH	SW8260C
1,4-Dichlorobenzene	ND	10	ug/L	20	09/16/20	MH	SW8260C
2,2-Dichloropropane	ND	20	ug/L	20	09/16/20	MH	SW8260C
2-Chlorotoluene	ND	20	ug/L	20	09/16/20	MH	SW8260C

Project ID: LOCKHEED WILMINGTON MA 60552044.19 Phoenix I.D.: CG76037

Client ID: 20A-AE104R4-091120-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	
2-Hexanone	ND	100	ug/L	20	09/16/20	MH	SW8260C
4-Chlorotoluene	ND	20	ug/L	20	09/16/20	MH	SW8260C
4-Methyl-2-pentanone	ND	100	ug/L	20	09/16/20	MH	SW8260C
Acetone	ND	500	ug/L	20	09/16/20	MH	SW8260C
Benzene	ND	10	ug/L	20	09/16/20	MH	SW8260C
Bromobenzene	ND	20	ug/L	20	09/16/20	MH	SW8260C
Bromochloromethane	ND	20	ug/L	20	09/16/20	MH	SW8260C
Bromodichloromethane	ND	10	ug/L	20	09/16/20	MH	SW8260C
Bromoform	ND	10	ug/L	20	09/16/20	MH	SW8260C
Bromomethane	ND	10	ug/L	20	09/16/20	MH	SW8260C
Carbon Disulfide	ND	100	ug/L	20	09/16/20	MH	SW8260C
Carbon tetrachloride	ND	10	ug/L	20	09/16/20	MH	SW8260C
Chlorobenzene	ND	20	ug/L	20	09/16/20	MH	SW8260C
Chloroethane	ND	20	ug/L	20	09/16/20	MH	SW8260C
Chloroform	ND	20	ug/L	20	09/16/20	MH	SW8260C
Chloromethane	ND	20	ug/L	20	09/16/20	MH	SW8260C
cis-1,2-Dichloroethene	550	20	ug/L	20	09/16/20	MH	SW8260C
cis-1,3-Dichloropropene	ND	10	ug/L	20	09/16/20	MH	SW8260C
Dibromochloromethane	ND	10	ug/L	20	09/16/20	MH	SW8260C
Dibromomethane	ND	10	ug/L	20	09/16/20	MH	SW8260C
Dichlorodifluoromethane	ND	20	ug/L	20	09/16/20	MH	SW8260C
Ethylbenzene	ND	20	ug/L	20	09/16/20	MH	SW8260C
Hexachlorobutadiene	ND	10	ug/L	20	09/16/20	MH	SW8260C
Isopropylbenzene	ND	20	ug/L	20	09/16/20	MH	SW8260C
m&p-Xylene	ND	20	ug/L	20	09/16/20	MH	SW8260C
Methyl ethyl ketone	ND	100	ug/L	20	09/16/20	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	20	ug/L	20	09/16/20	MH	SW8260C
Methylene chloride	ND	20	ug/L	20	09/16/20	MH	SW8260C
Naphthalene	ND	20	ug/L	20	09/16/20	MH	SW8260C
n-Butylbenzene	ND	20	ug/L	20	09/16/20	MH	SW8260C
n-Propylbenzene	ND	20	ug/L	20	09/16/20	MH	SW8260C
o-Xylene	ND	20	ug/L	20	09/16/20	MH	SW8260C
p-Isopropyltoluene	ND	20	ug/L	20	09/16/20	MH	SW8260C
sec-Butylbenzene	ND	20	ug/L	20	09/16/20	MH	SW8260C
Styrene	ND	20	ug/L	20	09/16/20	MH	SW8260C
tert-Butylbenzene	ND	20	ug/L	20	09/16/20	MH	SW8260C
Tetrachloroethene	1400	20	ug/L	20	09/16/20	MH	SW8260C
Tetrahydrofuran (THF)	ND	50	ug/L	20	09/16/20	MH	SW8260C
Toluene	ND	20	ug/L	20	09/16/20	MH	SW8260C
trans-1,2-Dichloroethene	ND	20	ug/L	20	09/16/20	MH	SW8260C
trans-1,3-Dichloropropene	ND	10	ug/L	20	09/16/20	MH	SW8260C
Trichloroethene	3100	100	ug/L	100	09/21/20	MH	SW8260C
Trichlorofluoromethane	ND	20	ug/L	20	09/16/20	MH	SW8260C
Trichlorotrifluoroethane	ND	20	ug/L	20	09/16/20	MH	SW8260C
Vinyl chloride	63	20	ug/L	20	09/16/20	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4 (20x)	100		%	20	09/16/20	MH	70 - 130 %
% Bromofluorobenzene (20x)	98		%	20	09/16/20	MH	70 - 130 %
% Dibromofluoromethane (20x)	102		%	20	09/16/20	MH	70 - 130 %

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	
% Toluene-d8 (20x)	95		%	20	09/16/20	MH	70 - 130 %
% 1,2-dichlorobenzene-d4 (100x)	98		%	100	09/21/20	MH	70 - 130 %
% Bromofluorobenzene (100x)	96		%	100	09/21/20	MH	70 - 130 %
% Dibromofluoromethane (100x)	96		%	100	09/21/20	MH	70 - 130 %
% Toluene-d8 (100x)	98		%	100	09/21/20	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	2000	ug/L	20	09/16/20	MH	SW8260C (OXY)
Diethyl ether	ND	20	ug/L	20	09/16/20	MH	SW8260C (OXY)
Di-isopropyl ether	ND	20	ug/L	20	09/16/20	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	20	ug/L	20	09/16/20	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	20	ug/L	20	09/16/20	MH	SW8260C (OXY)
Semivolatiles by SIM, PAH							
2-Methylnaphthalene	ND	0.47	ug/L	1	09/18/20	WB	SW8270D (SIM)
Acenaphthene	ND	0.47	ug/L	1	09/18/20	WB	SW8270D (SIM)
Acenaphthylene	ND	0.09	ug/L	1	09/18/20	WB	SW8270D (SIM)
Anthracene	ND	0.09	ug/L	1	09/18/20	WB	SW8270D (SIM)
Benz(a)anthracene	ND	0.09	ug/L	1	09/18/20	WB	SW8270D (SIM)
Benzo(a)pyrene	ND	0.19	ug/L	1	09/18/20	WB	SW8270D (SIM)
Benzo(b)fluoranthene	ND	0.09	ug/L	1	09/18/20	WB	SW8270D (SIM)
Benzo(ghi)perylene	ND	0.02	ug/L	1	09/18/20	WB	SW8270D (SIM)
Benzo(k)fluoranthene	ND	0.09	ug/L	1	09/18/20	WB	SW8270D (SIM)
Chrysene	ND	0.05	ug/L	1	09/18/20	WB	SW8270D (SIM)
Dibenz(a,h)anthracene	ND	0.02	ug/L	1	09/18/20	WB	SW8270D (SIM)
Fluoranthene	ND	0.47	ug/L	1	09/18/20	WB	SW8270D (SIM)
Fluorene	ND	0.09	ug/L	1	09/18/20	WB	SW8270D (SIM)
Indeno(1,2,3-cd)pyrene	ND	0.09	ug/L	1	09/18/20	WB	SW8270D (SIM)
Naphthalene	ND	0.47	ug/L	1	09/18/20	WB	SW8270D (SIM)
Phenanthrene	ND	0.47	ug/L	1	09/18/20	WB	SW8270D (SIM)
Pyrene	ND	0.07	ug/L	1	09/18/20	WB	SW8270D (SIM)
QA/QC Surrogates							
% 2-Fluorobiphenyl	56		%	1	09/18/20	WB	40 - 140 %
% Nitrobenzene-d5	82		%	1	09/18/20	WB	40 - 140 %
% Terphenyl-d14	75		%	1	09/18/20	WB	40 - 140 %
1,4-dioxane							
1,4-dioxane	17	0.20	ug/l	1	09/16/20	AW	SW8270DSIM
QA/QC Surrogates							
% 1,4-dioxane-d8	95		%	1	09/16/20	AW	40 - 140 %
Extraction for 1,4-Dioxane	Completed				09/15/20	S/S	
MA EPH Aliphatic/Aromatic Ranges							
C11-C22 Aromatic Hydrocarbons 1,2*	ND	200	ug/L	1	09/17/20	AW	MAEPH 5/2004
C11-C22 Aromatic Hydrocarbons Unadj	ND	200	ug/L	1	09/17/20	AW	MAEPH 5/2004
C19-C36 Aliphatic Hydrocarbons 1*	ND	200	ug/L	1	09/17/20	AW	MAEPH 5/2004
C9-C18 Aliphatic Hydrocarbons 1*	ND	200	ug/L	1	09/17/20	AW	MAEPH 5/2004
Total TPH 1,2*	ND	200	ug/L	1	09/17/20	AW	MAEPH 5/2004
QA/QC Surrogates							
% 1-chlorooctadecane (aliphatic)	57		%	1	09/17/20	AW	40 - 140 %

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	
% 2-Bromonaphthalene (Fractionation)	81		%	1	09/17/20	AW	40 - 140 %
% 2-Fluorobiphenyl (Fractionation)	103		%	1	09/17/20	AW	40 - 140 %
% o-terphenyl (aromatic)	72		%	1	09/17/20	AW	40 - 140 %

MA Volatile Petroleum Hydrocarbons (VPH)

Unadjusted C5-C8 Aliphatics (*1)	1500	500	ug/L	5	09/15/20	RM	MA VPH 5/2004
Unadjusted C9-C12 Aliphatics (*1)	ND	500	ug/L	5	09/15/20	RM	MA VPH 5/2004
C5-C8 Aliphatic Hydrocarbons *1,2	1500	500	ug/L	5	09/15/20	RM	MA VPH 5/2004
C9-C12 Aliphatic Hydrocarbons *1,3	ND	500	ug/L	5	09/15/20	RM	MA VPH 5/2004
C9-C10 Aromatic Hydrocarbons *1	ND	500	ug/L	5	09/15/20	RM	MA VPH 5/2004
Benzene	ND	5.0	ug/L	5	09/15/20	RM	MA VPH 5/2004
Ethyl Benzene	ND	5.0	ug/L	5	09/15/20	RM	MA VPH 5/2004
MTBE	ND	5.0	ug/L	5	09/15/20	RM	MA VPH 5/2004
Naphthalene	ND	25	ug/L	5	09/15/20	RM	MA VPH 5/2004
Toluene	ND	5.0	ug/L	5	09/15/20	RM	MA VPH 5/2004
m,p-Xylenes	ND	10	ug/L	5	09/15/20	RM	MA VPH 5/2004
o-Xylene	ND	5.0	ug/L	5	09/15/20	RM	MA VPH 5/2004
QA/QC Surrogates							
% 2,5-Dibromotoluene (FID)	97		%	5	09/15/20	RM	70 - 130 %
% 2,5-Dibromotoluene (PID)	100		%	5	09/15/20	RM	70 - 130 %

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

MAEPH:
1* Hydrocarbon range data exclude concentrations of any surrogate(s) and/or internal standards eluting in that range.
2* C11-C12 Aromatic Hydrocarbons exclude the concentration of Target PAH analytes eluting in that range.

VPH:
*1 Range data exclude conc.s of any surrogate(s) and/or Int. std.s eluting in that range.
*2 C5-C8 and C9-C12 Aliphatic exclude the conc. of Target Analytes in that range.
*3 C9-C12 Aliphatic also exclude C9-C10 Aromatic Hydrocarbon

VPH diluted run
Elevated reporting limits for VPH due to the presence of target and/or non-target compounds.

Volatile Comment:
Elevated reporting limits for volatiles due to the presence of target and/or non-target compounds.

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.



Phyllis Shiller, Laboratory Director
October 21, 2020
Reviewed and Released by: Greg Lawrence, Assistant Lab Director

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

October 21, 2020

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		09/11/20	13:00
Location Code:	AECOM-WILMINGTN	Received by:	CP	09/11/20	16:31
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	127680				

Laboratory Data

SDG ID: GCG76015
Phoenix ID: CG76038

Project ID: LOCKHEED WILMINGTON MA 60552044.19
Client ID: 20A-AE112R1-091120-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Arsenic	0.005	0.004	mg/L	1	09/16/20	TH	SW6010D
Arsenic (Dissolved)	0.005	0.004	mg/L	1	09/15/20	CPP	SW6010D
Iron (Dissolved)	0.690	0.011	mg/L	1	09/15/20	CPP	SW6010D
Manganese (Dissolved)	1.97	0.001	mg/L	1	09/15/20	CPP	SW6010D
Iron	0.723	0.010	mg/L	1	09/16/20	TH	SW6010D
Manganese	2.11	0.010	mg/L	10	09/17/20	TH	SW6010D
Dissolved Metals Preparation	Completed				09/14/20	AG	SW3005A
Total Metals Digestion	Completed				09/15/20	AG	
Volatiles							
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
1,1,1-Trichloroethane	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L	1	09/14/20	MH	SW8260C
1,1,2-Trichloroethane	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
1,1-Dichloroethane	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
1,1-Dichloroethene	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
1,1-Dichloropropene	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
1,2,3-Trichlorobenzene	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
1,2,3-Trichloropropane	ND	0.50	ug/L	1	09/14/20	MH	SW8260C
1,2,4-Trichlorobenzene	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
1,2,4-Trimethylbenzene	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	0.50	ug/L	1	09/14/20	MH	SW8260C
1,2-Dibromoethane	ND	0.50	ug/L	1	09/14/20	MH	SW8260C
1,2-Dichlorobenzene	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
1,2-Dichloroethane	ND	0.60	ug/L	1	09/14/20	MH	SW8260C
1,2-Dichloropropane	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
1,3,5-Trimethylbenzene	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
1,3-Dichlorobenzene	ND	1.0	ug/L	1	09/14/20	MH	SW8260C

Project ID: LOCKHEED WILMINGTON MA 60552044.19 Phoenix I.D.: CG76038

Client ID: 20A-AE112R1-091120-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	
1,3-Dichloropropane	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
1,4-Dichlorobenzene	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
2,2-Dichloropropane	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
2-Chlorotoluene	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
2-Hexanone	ND	5.0	ug/L	1	09/14/20	MH	SW8260C
4-Chlorotoluene	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
4-Methyl-2-pentanone	ND	5.0	ug/L	1	09/14/20	MH	SW8260C
Acetone	ND	25	ug/L	1	09/14/20	MH	SW8260C
Benzene	ND	0.70	ug/L	1	09/14/20	MH	SW8260C
Bromobenzene	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
Bromochloromethane	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
Bromodichloromethane	ND	0.50	ug/L	1	09/14/20	MH	SW8260C
Bromoform	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
Bromomethane	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
Carbon Disulfide	ND	5.0	ug/L	1	09/14/20	MH	SW8260C
Carbon tetrachloride	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
Chlorobenzene	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
Chloroethane	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
Chloroform	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
Chloromethane	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
cis-1,2-Dichloroethene	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
cis-1,3-Dichloropropene	ND	0.40	ug/L	1	09/14/20	MH	SW8260C
Dibromochloromethane	ND	0.50	ug/L	1	09/14/20	MH	SW8260C
Dibromomethane	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
Dichlorodifluoromethane	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
Ethylbenzene	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
Hexachlorobutadiene	ND	0.40	ug/L	1	09/14/20	MH	SW8260C
Isopropylbenzene	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
m&p-Xylene	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
Methyl ethyl ketone	ND	5.0	ug/L	1	09/14/20	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
Methylene chloride	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
Naphthalene	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
n-Butylbenzene	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
n-Propylbenzene	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
o-Xylene	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
p-Isopropyltoluene	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
sec-Butylbenzene	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
Styrene	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
tert-Butylbenzene	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
Tetrachloroethene	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
Tetrahydrofuran (THF)	ND	2.5	ug/L	1	09/14/20	MH	SW8260C
Toluene	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
trans-1,2-Dichloroethene	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
trans-1,3-Dichloropropene	ND	0.40	ug/L	1	09/14/20	MH	SW8260C
Trichloroethene	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
Trichlorofluoromethane	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
Trichlorotrifluoroethane	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
Vinyl chloride	ND	1.0	ug/L	1	09/14/20	MH	SW8260C

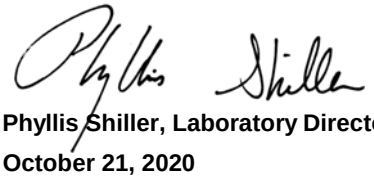
Project ID: LOCKHEED WILMINGTON MA 60552044.19 Phoenix I.D.: CG76038
Client ID: 20A-AE112R1-091120-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	100		%	1	09/14/20	MH	70 - 130 %
% Bromofluorobenzene	95		%	1	09/14/20	MH	70 - 130 %
% Dibromofluoromethane	98		%	1	09/14/20	MH	70 - 130 %
% Toluene-d8	103		%	1	09/14/20	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	100	ug/L	1	09/14/20	MH	SW8260C (OXY)
Diethyl ether	ND	1.0	ug/L	1	09/14/20	MH	SW8260C (OXY)
Di-isopropyl ether	ND	1.0	ug/L	1	09/14/20	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	1.0	ug/L	1	09/14/20	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	1.0	ug/L	1	09/14/20	MH	SW8260C (OXY)

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.



Phyllis Shiller, Laboratory Director
October 21, 2020
Reviewed and Released by: Greg Lawrence, Assistant Lab Director

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

October 21, 2020

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		09/11/20	12:55
Location Code:	AECOM-WILMINGTN	Received by:	CP	09/11/20	16:31
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	127680				

Laboratory Data

SDG ID: GCG76015
Phoenix ID: CG76039

Project ID: LOCKHEED WILMINGTON MA 60552044.19
Client ID: 20A-AE112R3-091120-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Volatiles							
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
1,1,1-Trichloroethane	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L	1	09/14/20	MH	SW8260C
1,1,2-Trichloroethane	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
1,1-Dichloroethane	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
1,1-Dichloroethene	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
1,1-Dichloropropene	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
1,2,3-Trichlorobenzene	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
1,2,3-Trichloropropane	ND	0.50	ug/L	1	09/14/20	MH	SW8260C
1,2,4-Trichlorobenzene	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
1,2,4-Trimethylbenzene	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	0.50	ug/L	1	09/14/20	MH	SW8260C
1,2-Dibromoethane	ND	0.50	ug/L	1	09/14/20	MH	SW8260C
1,2-Dichlorobenzene	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
1,2-Dichloroethane	ND	0.60	ug/L	1	09/14/20	MH	SW8260C
1,2-Dichloropropane	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
1,3,5-Trimethylbenzene	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
1,3-Dichlorobenzene	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
1,3-Dichloropropane	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
1,4-Dichlorobenzene	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
2,2-Dichloropropane	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
2-Chlorotoluene	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
2-Hexanone	ND	5.0	ug/L	1	09/14/20	MH	SW8260C
4-Chlorotoluene	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
4-Methyl-2-pentanone	ND	5.0	ug/L	1	09/14/20	MH	SW8260C
Acetone	ND	25	ug/L	1	09/14/20	MH	SW8260C

Project ID: LOCKHEED WILMINGTON MA 60552044.19 Phoenix I.D.: CG76039
Client ID: 20A-AE112R3-091120-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	
Benzene	ND	0.70	ug/L	1	09/14/20	MH	SW8260C
Bromobenzene	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
Bromochloromethane	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
Bromodichloromethane	ND	0.50	ug/L	1	09/14/20	MH	SW8260C
Bromoform	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
Bromomethane	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
Carbon Disulfide	ND	5.0	ug/L	1	09/14/20	MH	SW8260C
Carbon tetrachloride	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
Chlorobenzene	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
Chloroethane	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
Chloroform	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
Chloromethane	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
cis-1,2-Dichloroethene	2.3	1.0	ug/L	1	09/14/20	MH	SW8260C
cis-1,3-Dichloropropene	ND	0.40	ug/L	1	09/14/20	MH	SW8260C
Dibromochloromethane	ND	0.50	ug/L	1	09/14/20	MH	SW8260C
Dibromomethane	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
Dichlorodifluoromethane	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
Ethylbenzene	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
Hexachlorobutadiene	ND	0.40	ug/L	1	09/14/20	MH	SW8260C
Isopropylbenzene	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
m&p-Xylene	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
Methyl ethyl ketone	ND	5.0	ug/L	1	09/14/20	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
Methylene chloride	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
Naphthalene	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
n-Butylbenzene	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
n-Propylbenzene	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
o-Xylene	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
p-Isopropyltoluene	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
sec-Butylbenzene	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
Styrene	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
tert-Butylbenzene	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
Tetrachloroethene	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
Tetrahydrofuran (THF)	ND	2.5	ug/L	1	09/14/20	MH	SW8260C
Toluene	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
trans-1,2-Dichloroethene	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
trans-1,3-Dichloropropene	ND	0.40	ug/L	1	09/14/20	MH	SW8260C
Trichloroethene	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
Trichlorofluoromethane	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
Trichlorotrifluoroethane	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
Vinyl chloride	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	99		%	1	09/14/20	MH	70 - 130 %
% Bromofluorobenzene	95		%	1	09/14/20	MH	70 - 130 %
% Dibromofluoromethane	97		%	1	09/14/20	MH	70 - 130 %
% Toluene-d8	103		%	1	09/14/20	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	100	ug/L	1	09/14/20	MH	SW8260C (OXY)
Diethyl ether	ND	1.0	ug/L	1	09/14/20	MH	SW8260C (OXY)

Ver 3

Project ID: LOCKHEED WILMINGTON MA 60552044.19 Phoenix I.D.: CG76039

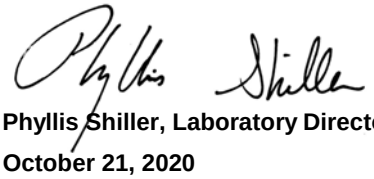
Client ID: 20A-AE112R3-091120-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	
Di-isopropyl ether	ND	1.0	ug/L	1	09/14/20	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	1.0	ug/L	1	09/14/20	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	1.0	ug/L	1	09/14/20	MH	SW8260C (OXY)

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.



Phyllis Shiller, Laboratory Director

October 21, 2020

Reviewed and Released by: Greg Lawrence, Assistant Lab Director

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

October 21, 2020

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		09/11/20	12:20
Location Code:	AECOM-WILMINGTN	Received by:	CP	09/11/20	16:31
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	127680				

Laboratory Data

SDG ID: GCG76015
Phoenix ID: CG76040

Project ID: LOCKHEED WILMINGTON MA 60552044.19
Client ID: 20A-AE112R5-091120-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Volatiles							
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
1,1,1-Trichloroethane	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L	1	09/14/20	MH	SW8260C
1,1,2-Trichloroethane	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
1,1-Dichloroethane	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
1,1-Dichloroethene	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
1,1-Dichloropropene	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
1,2,3-Trichlorobenzene	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
1,2,3-Trichloropropane	ND	0.50	ug/L	1	09/14/20	MH	SW8260C
1,2,4-Trichlorobenzene	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
1,2,4-Trimethylbenzene	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	0.50	ug/L	1	09/14/20	MH	SW8260C
1,2-Dibromoethane	ND	0.50	ug/L	1	09/14/20	MH	SW8260C
1,2-Dichlorobenzene	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
1,2-Dichloroethane	ND	0.60	ug/L	1	09/14/20	MH	SW8260C
1,2-Dichloropropane	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
1,3,5-Trimethylbenzene	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
1,3-Dichlorobenzene	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
1,3-Dichloropropane	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
1,4-Dichlorobenzene	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
2,2-Dichloropropane	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
2-Chlorotoluene	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
2-Hexanone	ND	5.0	ug/L	1	09/14/20	MH	SW8260C
4-Chlorotoluene	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
4-Methyl-2-pentanone	ND	5.0	ug/L	1	09/14/20	MH	SW8260C
Acetone	ND	25	ug/L	1	09/14/20	MH	SW8260C

Project ID: LOCKHEED WILMINGTON MA 60552044.19 Phoenix I.D.: CG76040

Client ID: 20A-AE112R5-091120-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	
Benzene	ND	0.70	ug/L	1	09/14/20	MH	SW8260C
Bromobenzene	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
Bromochloromethane	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
Bromodichloromethane	ND	0.50	ug/L	1	09/14/20	MH	SW8260C
Bromoform	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
Bromomethane	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
Carbon Disulfide	ND	5.0	ug/L	1	09/14/20	MH	SW8260C
Carbon tetrachloride	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
Chlorobenzene	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
Chloroethane	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
Chloroform	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
Chloromethane	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
cis-1,2-Dichloroethene	13	1.0	ug/L	1	09/14/20	MH	SW8260C
cis-1,3-Dichloropropene	ND	0.40	ug/L	1	09/14/20	MH	SW8260C
Dibromochloromethane	ND	0.50	ug/L	1	09/14/20	MH	SW8260C
Dibromomethane	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
Dichlorodifluoromethane	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
Ethylbenzene	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
Hexachlorobutadiene	ND	0.40	ug/L	1	09/14/20	MH	SW8260C
Isopropylbenzene	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
m&p-Xylene	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
Methyl ethyl ketone	ND	5.0	ug/L	1	09/14/20	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
Methylene chloride	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
Naphthalene	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
n-Butylbenzene	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
n-Propylbenzene	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
o-Xylene	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
p-Isopropyltoluene	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
sec-Butylbenzene	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
Styrene	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
tert-Butylbenzene	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
Tetrachloroethene	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
Tetrahydrofuran (THF)	ND	2.5	ug/L	1	09/14/20	MH	SW8260C
Toluene	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
trans-1,2-Dichloroethene	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
trans-1,3-Dichloropropene	ND	0.40	ug/L	1	09/14/20	MH	SW8260C
Trichloroethene	2.1	1.0	ug/L	1	09/14/20	MH	SW8260C
Trichlorofluoromethane	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
Trichlorotrifluoroethane	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
Vinyl chloride	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	102		%	1	09/14/20	MH	70 - 130 %
% Bromofluorobenzene	95		%	1	09/14/20	MH	70 - 130 %
% Dibromofluoromethane	100		%	1	09/14/20	MH	70 - 130 %
% Toluene-d8	105		%	1	09/14/20	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	100	ug/L	1	09/14/20	MH	SW8260C (OXY)
Diethyl ether	ND	1.0	ug/L	1	09/14/20	MH	SW8260C (OXY)

Ver 3

Project ID: LOCKHEED WILMINGTON MA 60552044.19 Phoenix I.D.: CG76040

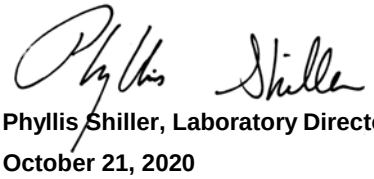
Client ID: 20A-AE112R5-091120-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	
Di-isopropyl ether	ND	1.0	ug/L	1	09/14/20	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	1.0	ug/L	1	09/14/20	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	1.0	ug/L	1	09/14/20	MH	SW8260C (OXY)

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.



Phyllis Shiller, Laboratory Director

October 21, 2020

Reviewed and Released by: Greg Lawrence, Assistant Lab Director

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

October 21, 2020

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		09/11/20	12:35
Location Code:	AECOM-WILMINGTN	Received by:	CP	09/11/20	16:31
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	127680				

Laboratory Data

SDG ID: GCG76015
Phoenix ID: CG76041

Project ID: LOCKHEED WILMINGTON MA 60552044.19
Client ID: 20A-AE112R6-091120-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Arsenic	< 0.004	0.004	mg/L	1	09/16/20	TH	SW6010D
Arsenic (Dissolved)	< 0.004	0.004	mg/L	1	09/15/20	CPP	SW6010D
Iron (Dissolved)	3.49	0.011	mg/L	1	09/15/20	CPP	SW6010D
Manganese (Dissolved)	1.29	0.001	mg/L	1	09/15/20	CPP	SW6010D
Iron	3.75	0.010	mg/L	1	09/16/20	TH	SW6010D
Manganese	1.38	0.001	mg/L	1	09/16/20	TH	SW6010D
EPH Extraction	Completed				09/15/20	JS/JS	SW3510C
MA Petroleum Hydrocarbon (EPH)	Completed				09/11/20		MADEP EPH-04
Semi-Volatile Extraction	Completed				09/17/20	P/CG	SW3520C
Dissolved Metals Preparation	Completed				09/14/20	AG	SW3005A
Total Metals Digestion	Completed				09/15/20	AG	
MA Petroleum Hydrocarbon (VPH)	Completed				09/15/20	RM	MADEP VPH04
Volatiles							
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
1,1,1-Trichloroethane	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L	1	09/14/20	MH	SW8260C
1,1,2-Trichloroethane	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
1,1-Dichloroethane	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
1,1-Dichloroethene	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
1,1-Dichloropropene	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
1,2,3-Trichlorobenzene	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
1,2,3-Trichloropropane	ND	0.50	ug/L	1	09/14/20	MH	SW8260C
1,2,4-Trichlorobenzene	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
1,2,4-Trimethylbenzene	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	0.50	ug/L	1	09/14/20	MH	SW8260C
1,2-Dibromoethane	ND	0.50	ug/L	1	09/14/20	MH	SW8260C
1,2-Dichlorobenzene	ND	1.0	ug/L	1	09/14/20	MH	SW8260C

Project ID: LOCKHEED WILMINGTON MA 60552044.19 Phoenix I.D.: CG76041

Client ID: 20A-AE112R6-091120-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	
1,2-Dichloroethane	ND	0.60	ug/L	1	09/14/20	MH	SW8260C
1,2-Dichloropropane	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
1,3,5-Trimethylbenzene	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
1,3-Dichlorobenzene	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
1,3-Dichloropropane	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
1,4-Dichlorobenzene	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
2,2-Dichloropropane	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
2-Chlorotoluene	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
2-Hexanone	ND	5.0	ug/L	1	09/14/20	MH	SW8260C
4-Chlorotoluene	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
4-Methyl-2-pentanone	ND	5.0	ug/L	1	09/14/20	MH	SW8260C
Acetone	ND	25	ug/L	1	09/14/20	MH	SW8260C
Benzene	ND	0.70	ug/L	1	09/14/20	MH	SW8260C
Bromobenzene	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
Bromochloromethane	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
Bromodichloromethane	ND	0.50	ug/L	1	09/14/20	MH	SW8260C
Bromoform	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
Bromomethane	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
Carbon Disulfide	ND	5.0	ug/L	1	09/14/20	MH	SW8260C
Carbon tetrachloride	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
Chlorobenzene	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
Chloroethane	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
Chloroform	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
Chloromethane	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
cis-1,2-Dichloroethene	8.3	1.0	ug/L	1	09/14/20	MH	SW8260C
cis-1,3-Dichloropropene	ND	0.40	ug/L	1	09/14/20	MH	SW8260C
Dibromochloromethane	ND	0.50	ug/L	1	09/14/20	MH	SW8260C
Dibromomethane	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
Dichlorodifluoromethane	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
Ethylbenzene	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
Hexachlorobutadiene	ND	0.40	ug/L	1	09/14/20	MH	SW8260C
Isopropylbenzene	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
m&p-Xylene	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
Methyl ethyl ketone	ND	5.0	ug/L	1	09/14/20	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
Methylene chloride	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
Naphthalene	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
n-Butylbenzene	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
n-Propylbenzene	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
o-Xylene	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
p-Isopropyltoluene	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
sec-Butylbenzene	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
Styrene	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
tert-Butylbenzene	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
Tetrachloroethene	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
Tetrahydrofuran (THF)	ND	2.5	ug/L	1	09/14/20	MH	SW8260C
Toluene	1.1	1.0	ug/L	1	09/14/20	MH	SW8260C
trans-1,2-Dichloroethene	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
trans-1,3-Dichloropropene	ND	0.40	ug/L	1	09/14/20	MH	SW8260C

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	
Trichloroethene	1.3	1.0	ug/L	1	09/14/20	MH	SW8260C
Trichlorofluoromethane	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
Trichlorotrifluoroethane	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
Vinyl chloride	ND	1.0	ug/L	1	09/14/20	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	100		%	1	09/14/20	MH	70 - 130 %
% Bromofluorobenzene	96		%	1	09/14/20	MH	70 - 130 %
% Dibromofluoromethane	97		%	1	09/14/20	MH	70 - 130 %
% Toluene-d8	103		%	1	09/14/20	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	100	ug/L	1	09/14/20	MH	SW8260C (OXY)
Diethyl ether	ND	1.0	ug/L	1	09/14/20	MH	SW8260C (OXY)
Di-isopropyl ether	ND	1.0	ug/L	1	09/14/20	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	1.0	ug/L	1	09/14/20	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	1.0	ug/L	1	09/14/20	MH	SW8260C (OXY)
Semivolatiles by SIM, PAH							
2-Methylnaphthalene	ND	0.47	ug/L	1	09/18/20	WB	SW8270D (SIM)
Acenaphthene	ND	0.47	ug/L	1	09/18/20	WB	SW8270D (SIM)
Acenaphthylene	ND	0.09	ug/L	1	09/18/20	WB	SW8270D (SIM)
Anthracene	ND	0.09	ug/L	1	09/18/20	WB	SW8270D (SIM)
Benz(a)anthracene	ND	0.09	ug/L	1	09/18/20	WB	SW8270D (SIM)
Benzo(a)pyrene	ND	0.19	ug/L	1	09/18/20	WB	SW8270D (SIM)
Benzo(b)fluoranthene	ND	0.09	ug/L	1	09/18/20	WB	SW8270D (SIM)
Benzo(ghi)perylene	ND	0.02	ug/L	1	09/18/20	WB	SW8270D (SIM)
Benzo(k)fluoranthene	ND	0.09	ug/L	1	09/18/20	WB	SW8270D (SIM)
Chrysene	ND	0.05	ug/L	1	09/18/20	WB	SW8270D (SIM)
Dibenz(a,h)anthracene	ND	0.02	ug/L	1	09/18/20	WB	SW8270D (SIM)
Fluoranthene	ND	0.47	ug/L	1	09/18/20	WB	SW8270D (SIM)
Fluorene	ND	0.09	ug/L	1	09/18/20	WB	SW8270D (SIM)
Indeno(1,2,3-cd)pyrene	ND	0.09	ug/L	1	09/18/20	WB	SW8270D (SIM)
Naphthalene	ND	0.47	ug/L	1	09/18/20	WB	SW8270D (SIM)
Phenanthrene	ND	0.47	ug/L	1	09/18/20	WB	SW8270D (SIM)
Pyrene	ND	0.07	ug/L	1	09/18/20	WB	SW8270D (SIM)
QA/QC Surrogates							
% 2-Fluorobiphenyl	61		%	1	09/18/20	WB	40 - 140 %
% Nitrobenzene-d5	86		%	1	09/18/20	WB	40 - 140 %
% Terphenyl-d14	72		%	1	09/18/20	WB	40 - 140 %
MA EPH Aliphatic/Aromatic Ranges							
C11-C22 Aromatic Hydrocarbons 1,2*	ND	200	ug/L	1	09/17/20	AW	MAEPH 5/2004
C11-C22 Aromatic Hydrocarbons Unadj	ND	200	ug/L	1	09/17/20	AW	MAEPH 5/2004
C19-C36 Aliphatic Hydrocarbons 1*	ND	200	ug/L	1	09/17/20	AW	MAEPH 5/2004
C9-C18 Aliphatic Hydrocarbons 1*	ND	200	ug/L	1	09/17/20	AW	MAEPH 5/2004
Total TPH 1,2*	ND	200	ug/L	1	09/17/20	AW	MAEPH 5/2004
QA/QC Surrogates							
% 1-chlorooctadecane (aliphatic)	63		%	1	09/17/20	AW	40 - 140 %
% 2-Bromonaphthalene (Fractionation)	68		%	1	09/17/20	AW	40 - 140 %
% 2-Fluorobiphenyl (Fractionation)	108		%	1	09/17/20	AW	40 - 140 %

Project ID: LOCKHEED WILMINGTON MA 60552044.19 Phoenix I.D.: CG76041
Client ID: 20A-AE112R6-091120-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	
% o-terphenyl (aromatic)	88		%	1	09/17/20	AW	40 - 140 %

MA Volatile Petroleum Hydrocarbons (VPH)

Unadjusted C5-C8 Aliphatics (*1)	ND	100	ug/L	1	09/15/20	RM	MA VPH 5/2004
Unadjusted C9-C12 Aliphatics (*1)	ND	100	ug/L	1	09/15/20	RM	MA VPH 5/2004
C5-C8 Aliphatic Hydrocarbons *1,2	ND	100	ug/L	1	09/15/20	RM	MA VPH 5/2004
C9-C12 Aliphatic Hydrocarbons *1,3	ND	100	ug/L	1	09/15/20	RM	MA VPH 5/2004
C9-C10 Aromatic Hydrocarbons *1	ND	100	ug/L	1	09/15/20	RM	MA VPH 5/2004
Benzene	ND	1.0	ug/L	1	09/15/20	RM	MA VPH 5/2004
Ethyl Benzene	ND	1.0	ug/L	1	09/15/20	RM	MA VPH 5/2004
MTBE	ND	1.0	ug/L	1	09/15/20	RM	MA VPH 5/2004
Naphthalene	ND	5.0	ug/L	1	09/15/20	RM	MA VPH 5/2004
Toluene	ND	1.0	ug/L	1	09/15/20	RM	MA VPH 5/2004
m,p-Xylenes	ND	2.0	ug/L	1	09/15/20	RM	MA VPH 5/2004
o-Xylene	ND	1.0	ug/L	1	09/15/20	RM	MA VPH 5/2004
QA/QC Surrogates							
% 2,5-Dibromotoluene (FID)	108		%	1	09/15/20	RM	70 - 130 %
% 2,5-Dibromotoluene (PID)	97		%	1	09/15/20	RM	70 - 130 %

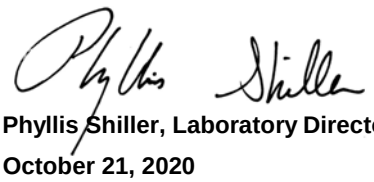
RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

MAEPH:
1* Hydrocarbon range data exclude concentrations of any surrogate(s) and/or internal standards eluting in that range.
2* C11-C12 Aromatic Hydrocarbons exclude the concentration of Target PAH analytes eluting in that range.

VPH:
*1 Range data exclude conc.s of any surrogate(s) and/or Int. std.s eluting in that range.
*2 C5-C8 and C9-C12 Aliphatic exclude the conc. of Target Analytes in that range.
*3 C9-C12 Aliphatic also exclude C9-C10 Aromatic Hydrocarbon

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.



Phyllis Shiller, Laboratory Director
October 21, 2020
Reviewed and Released by: Greg Lawrence, Assistant Lab Director

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

October 21, 2020

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		09/11/20	13:05
Location Code:	AECOM-WILMINGTN	Received by:	CP	09/11/20	16:31
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	127680				

Laboratory Data

SDG ID: GCG76015
Phoenix ID: CG76042

Project ID: LOCKHEED WILMINGTON MA 60552044.19
Client ID: 20A-AE104R3-091120-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Volatiles							
1,1,1,2-Tetrachloroethane	ND	5.0	ug/L	5	09/23/20	MH	SW8260C
1,1,1-Trichloroethane	ND	5.0	ug/L	5	09/23/20	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	2.5	ug/L	5	09/23/20	MH	SW8260C
1,1,2-Trichloroethane	ND	5.0	ug/L	5	09/23/20	MH	SW8260C
1,1-Dichloroethane	45	5.0	ug/L	5	09/23/20	MH	SW8260C
1,1-Dichloroethene	12	5.0	ug/L	5	09/23/20	MH	SW8260C
1,1-Dichloropropene	ND	5.0	ug/L	5	09/23/20	MH	SW8260C
1,2,3-Trichlorobenzene	ND	5.0	ug/L	5	09/23/20	MH	SW8260C
1,2,3-Trichloropropane	ND	2.5	ug/L	5	09/23/20	MH	SW8260C
1,2,4-Trichlorobenzene	ND	5.0	ug/L	5	09/23/20	MH	SW8260C
1,2,4-Trimethylbenzene	ND	5.0	ug/L	5	09/23/20	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	2.5	ug/L	5	09/23/20	MH	SW8260C
1,2-Dibromoethane	ND	2.5	ug/L	5	09/23/20	MH	SW8260C
1,2-Dichlorobenzene	ND	5.0	ug/L	5	09/23/20	MH	SW8260C
1,2-Dichloroethane	ND	3.0	ug/L	5	09/23/20	MH	SW8260C
1,2-Dichloropropane	ND	3.0	ug/L	5	09/23/20	MH	SW8260C
1,3,5-Trimethylbenzene	ND	5.0	ug/L	5	09/23/20	MH	SW8260C
1,3-Dichlorobenzene	ND	5.0	ug/L	5	09/23/20	MH	SW8260C
1,3-Dichloropropane	ND	5.0	ug/L	5	09/23/20	MH	SW8260C
1,4-Dichlorobenzene	ND	5.0	ug/L	5	09/23/20	MH	SW8260C
2,2-Dichloropropane	ND	5.0	ug/L	5	09/23/20	MH	SW8260C
2-Chlorotoluene	ND	5.0	ug/L	5	09/23/20	MH	SW8260C
2-Hexanone	ND	25	ug/L	5	09/23/20	MH	SW8260C
4-Chlorotoluene	ND	5.0	ug/L	5	09/23/20	MH	SW8260C
4-Methyl-2-pentanone	ND	25	ug/L	5	09/23/20	MH	SW8260C
Acetone	ND	130	ug/L	5	09/23/20	MH	SW8260C

Project ID: LOCKHEED WILMINGTON MA 60552044.19 Phoenix I.D.: CG76042

Client ID: 20A-AE104R3-091120-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	
Benzene	ND	3.5	ug/L	5	09/23/20	MH	SW8260C
Bromobenzene	ND	5.0	ug/L	5	09/23/20	MH	SW8260C
Bromochloromethane	ND	5.0	ug/L	5	09/23/20	MH	SW8260C
Bromodichloromethane	ND	2.5	ug/L	5	09/23/20	MH	SW8260C
Bromoform	ND	4.0	ug/L	5	09/23/20	MH	SW8260C
Bromomethane	ND	5.0	ug/L	5	09/23/20	MH	SW8260C
Carbon Disulfide	ND	25	ug/L	5	09/23/20	MH	SW8260C
Carbon tetrachloride	ND	2.5	ug/L	5	09/23/20	MH	SW8260C
Chlorobenzene	ND	5.0	ug/L	5	09/23/20	MH	SW8260C
Chloroethane	ND	5.0	ug/L	5	09/23/20	MH	SW8260C
Chloroform	ND	5.0	ug/L	5	09/23/20	MH	SW8260C
Chloromethane	ND	5.0	ug/L	5	09/23/20	MH	SW8260C
cis-1,2-Dichloroethene	140	5.0	ug/L	5	09/23/20	MH	SW8260C
cis-1,3-Dichloropropene	ND	2.5	ug/L	5	09/23/20	MH	SW8260C
Dibromochloromethane	ND	2.5	ug/L	5	09/23/20	MH	SW8260C
Dibromomethane	ND	5.0	ug/L	5	09/23/20	MH	SW8260C
Dichlorodifluoromethane	ND	5.0	ug/L	5	09/23/20	MH	SW8260C
Ethylbenzene	ND	5.0	ug/L	5	09/23/20	MH	SW8260C
Hexachlorobutadiene	ND	2.5	ug/L	5	09/23/20	MH	SW8260C
Isopropylbenzene	ND	5.0	ug/L	5	09/23/20	MH	SW8260C
m&p-Xylene	ND	5.0	ug/L	5	09/23/20	MH	SW8260C
Methyl ethyl ketone	ND	25	ug/L	5	09/23/20	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	5.0	ug/L	5	09/23/20	MH	SW8260C
Methylene chloride	ND	5.0	ug/L	5	09/23/20	MH	SW8260C
Naphthalene	ND	5.0	ug/L	5	09/23/20	MH	SW8260C
n-Butylbenzene	ND	5.0	ug/L	5	09/23/20	MH	SW8260C
n-Propylbenzene	ND	5.0	ug/L	5	09/23/20	MH	SW8260C
o-Xylene	ND	5.0	ug/L	5	09/23/20	MH	SW8260C
p-Isopropyltoluene	ND	5.0	ug/L	5	09/23/20	MH	SW8260C
sec-Butylbenzene	ND	5.0	ug/L	5	09/23/20	MH	SW8260C
Styrene	ND	5.0	ug/L	5	09/23/20	MH	SW8260C
tert-Butylbenzene	ND	5.0	ug/L	5	09/23/20	MH	SW8260C
Tetrachloroethene	1300	20	ug/L	20	09/23/20	MH	SW8260C
Tetrahydrofuran (THF)	ND	13	ug/L	5	09/23/20	MH	SW8260C
Toluene	ND	5.0	ug/L	5	09/23/20	MH	SW8260C
trans-1,2-Dichloroethene	ND	5.0	ug/L	5	09/23/20	MH	SW8260C
trans-1,3-Dichloropropene	ND	2.5	ug/L	5	09/23/20	MH	SW8260C
Trichloroethene	2200	50	ug/L	50	09/24/20	MH	SW8260C
Trichlorofluoromethane	ND	5.0	ug/L	5	09/23/20	MH	SW8260C
Trichlorotrifluoroethane	ND	5.0	ug/L	5	09/23/20	MH	SW8260C
Vinyl chloride	11	5.0	ug/L	5	09/23/20	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4 (5x)	100		%	5	09/23/20	MH	70 - 130 %
% Bromofluorobenzene (5x)	101		%	5	09/23/20	MH	70 - 130 %
% Dibromofluoromethane (5x)	98		%	5	09/23/20	MH	70 - 130 %
% Toluene-d8 (5x)	88		%	5	09/23/20	MH	70 - 130 %
% 1,2-dichlorobenzene-d4 (20x)	100		%	20	09/23/20	MH	70 - 130 %
% Bromofluorobenzene (20x)	100		%	20	09/23/20	MH	70 - 130 %
% Dibromofluoromethane (20x)	96		%	20	09/23/20	MH	70 - 130 %

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	
% Toluene-d8 (20x)	98		%	20	09/23/20	MH	70 - 130 %
% 1,2-dichlorobenzene-d4 (50x)	101		%	50	09/24/20	MH	70 - 130 %
% Bromofluorobenzene (50x)	100		%	50	09/24/20	MH	70 - 130 %
% Dibromofluoromethane (50x)	98		%	50	09/24/20	MH	70 - 130 %
% Toluene-d8 (50x)	101		%	50	09/24/20	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	500	ug/L	5	09/23/20	MH	SW8260C (OXY)
Diethyl ether	ND	5.0	ug/L	5	09/23/20	MH	SW8260C (OXY)
Di-isopropyl ether	ND	5.0	ug/L	5	09/23/20	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	5.0	ug/L	5	09/23/20	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	5.0	ug/L	5	09/23/20	MH	SW8260C (OXY)
1,4-dioxane							
1,4-dioxane	11	0.20	ug/l	1	09/16/20	AW	SW8270DSIM
QA/QC Surrogates							
% 1,4-dioxane-d8	92		%	1	09/16/20	AW	40 - 140 %
Extraction for 1,4-Dioxane	Completed				09/15/20	S/S	

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

Volatile Comment:
Elevated reporting limits for volatiles due to the presence of target and/or non-target compounds.

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.

Phyllis Shiller, Laboratory Director
October 21, 2020
Reviewed and Released by: Greg Lawrence, Assistant Lab Director

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

October 21, 2020

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		09/11/20	13:00
Location Code:	AECOM-WILMINGTN	Received by:	CP	09/11/20	16:31
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	127680				

Laboratory Data

SDG ID: GCG76015
Phoenix ID: CG76043

Project ID: LOCKHEED WILMINGTON MA 60552044.19
Client ID: 20A-AE104R1-091120-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Volatiles							
1,1,1,2-Tetrachloroethane	ND	5.0	ug/L	5	09/21/20	MH	SW8260C
1,1,1-Trichloroethane	ND	5.0	ug/L	5	09/21/20	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	2.5	ug/L	5	09/21/20	MH	SW8260C
1,1,2-Trichloroethane	ND	5.0	ug/L	5	09/21/20	MH	SW8260C
1,1-Dichloroethane	27	5.0	ug/L	5	09/21/20	MH	SW8260C
1,1-Dichloroethene	5.1	5.0	ug/L	5	09/21/20	MH	SW8260C
1,1-Dichloropropene	ND	5.0	ug/L	5	09/21/20	MH	SW8260C
1,2,3-Trichlorobenzene	ND	5.0	ug/L	5	09/21/20	MH	SW8260C
1,2,3-Trichloropropane	ND	2.5	ug/L	5	09/21/20	MH	SW8260C
1,2,4-Trichlorobenzene	ND	5.0	ug/L	5	09/21/20	MH	SW8260C
1,2,4-Trimethylbenzene	ND	5.0	ug/L	5	09/21/20	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	2.5	ug/L	5	09/21/20	MH	SW8260C
1,2-Dibromoethane	ND	2.5	ug/L	5	09/21/20	MH	SW8260C
1,2-Dichlorobenzene	ND	5.0	ug/L	5	09/21/20	MH	SW8260C
1,2-Dichloroethane	ND	3.0	ug/L	5	09/21/20	MH	SW8260C
1,2-Dichloropropane	ND	3.0	ug/L	5	09/21/20	MH	SW8260C
1,3,5-Trimethylbenzene	ND	5.0	ug/L	5	09/21/20	MH	SW8260C
1,3-Dichlorobenzene	ND	5.0	ug/L	5	09/21/20	MH	SW8260C
1,3-Dichloropropane	ND	5.0	ug/L	5	09/21/20	MH	SW8260C
1,4-Dichlorobenzene	ND	5.0	ug/L	5	09/21/20	MH	SW8260C
2,2-Dichloropropane	ND	5.0	ug/L	5	09/21/20	MH	SW8260C
2-Chlorotoluene	ND	5.0	ug/L	5	09/21/20	MH	SW8260C
2-Hexanone	ND	25	ug/L	5	09/21/20	MH	SW8260C
4-Chlorotoluene	ND	5.0	ug/L	5	09/21/20	MH	SW8260C
4-Methyl-2-pentanone	ND	25	ug/L	5	09/21/20	MH	SW8260C
Acetone	ND	130	ug/L	5	09/21/20	MH	SW8260C

Project ID: LOCKHEED WILMINGTON MA 60552044.19 Phoenix I.D.: CG76043

Client ID: 20A-AE104R1-091120-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	
Benzene	ND	3.5	ug/L	5	09/21/20	MH	SW8260C
Bromobenzene	ND	5.0	ug/L	5	09/21/20	MH	SW8260C
Bromochloromethane	ND	5.0	ug/L	5	09/21/20	MH	SW8260C
Bromodichloromethane	ND	2.5	ug/L	5	09/21/20	MH	SW8260C
Bromoform	ND	4.0	ug/L	5	09/21/20	MH	SW8260C
Bromomethane	ND	5.0	ug/L	5	09/21/20	MH	SW8260C
Carbon Disulfide	ND	25	ug/L	5	09/21/20	MH	SW8260C
Carbon tetrachloride	ND	2.5	ug/L	5	09/21/20	MH	SW8260C
Chlorobenzene	ND	5.0	ug/L	5	09/21/20	MH	SW8260C
Chloroethane	ND	5.0	ug/L	5	09/21/20	MH	SW8260C
Chloroform	ND	5.0	ug/L	5	09/21/20	MH	SW8260C
Chloromethane	ND	5.0	ug/L	5	09/21/20	MH	SW8260C
cis-1,2-Dichloroethene	220	5.0	ug/L	5	09/21/20	MH	SW8260C
cis-1,3-Dichloropropene	ND	2.5	ug/L	5	09/21/20	MH	SW8260C
Dibromochloromethane	ND	2.5	ug/L	5	09/21/20	MH	SW8260C
Dibromomethane	ND	5.0	ug/L	5	09/21/20	MH	SW8260C
Dichlorodifluoromethane	ND	5.0	ug/L	5	09/21/20	MH	SW8260C
Ethylbenzene	ND	5.0	ug/L	5	09/21/20	MH	SW8260C
Hexachlorobutadiene	ND	2.5	ug/L	5	09/21/20	MH	SW8260C
Isopropylbenzene	ND	5.0	ug/L	5	09/21/20	MH	SW8260C
m&p-Xylene	ND	5.0	ug/L	5	09/21/20	MH	SW8260C
Methyl ethyl ketone	ND	25	ug/L	5	09/21/20	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	5.0	ug/L	5	09/21/20	MH	SW8260C
Methylene chloride	ND	5.0	ug/L	5	09/21/20	MH	SW8260C
Naphthalene	ND	5.0	ug/L	5	09/21/20	MH	SW8260C
n-Butylbenzene	ND	5.0	ug/L	5	09/21/20	MH	SW8260C
n-Propylbenzene	ND	5.0	ug/L	5	09/21/20	MH	SW8260C
o-Xylene	ND	5.0	ug/L	5	09/21/20	MH	SW8260C
p-Isopropyltoluene	ND	5.0	ug/L	5	09/21/20	MH	SW8260C
sec-Butylbenzene	ND	5.0	ug/L	5	09/21/20	MH	SW8260C
Styrene	ND	5.0	ug/L	5	09/21/20	MH	SW8260C
tert-Butylbenzene	ND	5.0	ug/L	5	09/21/20	MH	SW8260C
Tetrachloroethene	220	5.0	ug/L	5	09/21/20	MH	SW8260C
Tetrahydrofuran (THF)	ND	13	ug/L	5	09/21/20	MH	SW8260C
Toluene	ND	5.0	ug/L	5	09/21/20	MH	SW8260C
trans-1,2-Dichloroethene	6.0	5.0	ug/L	5	09/21/20	MH	SW8260C
trans-1,3-Dichloropropene	ND	2.5	ug/L	5	09/21/20	MH	SW8260C
Trichloroethene	700	20	ug/L	20	09/16/20	MH	SW8260C
Trichlorofluoromethane	ND	5.0	ug/L	5	09/21/20	MH	SW8260C
Trichlorotrifluoroethane	ND	5.0	ug/L	5	09/21/20	MH	SW8260C
Vinyl chloride	34	5.0	ug/L	5	09/21/20	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4 (5x)	99		%	5	09/21/20	MH	70 - 130 %
% Bromofluorobenzene (5x)	97		%	5	09/21/20	MH	70 - 130 %
% Dibromofluoromethane (5x)	94		%	5	09/21/20	MH	70 - 130 %
% Toluene-d8 (5x)	95		%	5	09/21/20	MH	70 - 130 %
% 1,2-dichlorobenzene-d4 (20x)	98		%	20	09/16/20	MH	70 - 130 %
% Bromofluorobenzene (20x)	98		%	20	09/16/20	MH	70 - 130 %
% Dibromofluoromethane (20x)	101		%	20	09/16/20	MH	70 - 130 %

Project ID: LOCKHEED WILMINGTON MA 60552044.19 Phoenix I.D.: CG76043
Client ID: 20A-AE104R1-091120-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	
% Toluene-d8 (20x)	102		%	20	09/16/20	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	500	ug/L	5	09/21/20	MH	SW8260C (OXY)
Diethyl ether	ND	5.0	ug/L	5	09/21/20	MH	SW8260C (OXY)
Di-isopropyl ether	ND	5.0	ug/L	5	09/21/20	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	5.0	ug/L	5	09/21/20	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	5.0	ug/L	5	09/21/20	MH	SW8260C (OXY)
1,4-dioxane							
1,4-dioxane	10	0.20	ug/l	1	09/16/20	AW	SW8270DSIM
QA/QC Surrogates							
% 1,4-dioxane-d8	93		%	1	09/16/20	AW	40 - 140 %
Extraction for 1,4-Dioxane	Completed				09/15/20	S/S	

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

Volatile Comment:
Elevated reporting limits for volatiles due to the presence of target and/or non-target compounds.

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.

Phyllis Shiller, Laboratory Director
October 21, 2020
Reviewed and Released by: Greg Lawrence, Assistant Lab Director

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

October 21, 2020

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		09/11/20	12:50
Location Code:	AECOM-WILMINGTN	Received by:	CP	09/11/20	16:31
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	127680				

Laboratory Data

SDG ID: GCG76015
Phoenix ID: CG76044

Project ID: LOCKHEED WILMINGTON MA 60552044.19
Client ID: 20A-AE104R5-091120-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Volatiles							
1,1,1,2-Tetrachloroethane	ND	10	ug/L	20	09/16/20	MH	SW8260C
1,1,1-Trichloroethane	ND	20	ug/L	20	09/16/20	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	10	ug/L	20	09/16/20	MH	SW8260C
1,1,2-Trichloroethane	ND	10	ug/L	20	09/16/20	MH	SW8260C
1,1-Dichloroethane	63	20	ug/L	20	09/16/20	MH	SW8260C
1,1-Dichloroethene	17	10	ug/L	20	09/16/20	MH	SW8260C
1,1-Dichloropropene	ND	20	ug/L	20	09/16/20	MH	SW8260C
1,2,3-Trichlorobenzene	ND	10	ug/L	20	09/16/20	MH	SW8260C
1,2,3-Trichloropropane	ND	10	ug/L	20	09/16/20	MH	SW8260C
1,2,4-Trichlorobenzene	ND	20	ug/L	20	09/16/20	MH	SW8260C
1,2,4-Trimethylbenzene	ND	20	ug/L	20	09/16/20	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	10	ug/L	20	09/16/20	MH	SW8260C
1,2-Dibromoethane	ND	10	ug/L	20	09/16/20	MH	SW8260C
1,2-Dichlorobenzene	ND	20	ug/L	20	09/16/20	MH	SW8260C
1,2-Dichloroethane	ND	10	ug/L	20	09/16/20	MH	SW8260C
1,2-Dichloropropane	ND	10	ug/L	20	09/16/20	MH	SW8260C
1,3,5-Trimethylbenzene	ND	20	ug/L	20	09/16/20	MH	SW8260C
1,3-Dichlorobenzene	ND	20	ug/L	20	09/16/20	MH	SW8260C
1,3-Dichloropropane	ND	20	ug/L	20	09/16/20	MH	SW8260C
1,4-Dichlorobenzene	ND	10	ug/L	20	09/16/20	MH	SW8260C
2,2-Dichloropropane	ND	20	ug/L	20	09/16/20	MH	SW8260C
2-Chlorotoluene	ND	20	ug/L	20	09/16/20	MH	SW8260C
2-Hexanone	ND	100	ug/L	20	09/16/20	MH	SW8260C
4-Chlorotoluene	ND	20	ug/L	20	09/16/20	MH	SW8260C
4-Methyl-2-pentanone	ND	100	ug/L	20	09/16/20	MH	SW8260C
Acetone	ND	500	ug/L	20	09/16/20	MH	SW8260C

Project ID: LOCKHEED WILMINGTON MA 60552044.19 Phoenix I.D.: CG76044

Client ID: 20A-AE104R5-091120-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	
Benzene	ND	10	ug/L	20	09/16/20	MH	SW8260C
Bromobenzene	ND	20	ug/L	20	09/16/20	MH	SW8260C
Bromochloromethane	ND	20	ug/L	20	09/16/20	MH	SW8260C
Bromodichloromethane	ND	10	ug/L	20	09/16/20	MH	SW8260C
Bromoform	ND	10	ug/L	20	09/16/20	MH	SW8260C
Bromomethane	ND	10	ug/L	20	09/16/20	MH	SW8260C
Carbon Disulfide	ND	100	ug/L	20	09/16/20	MH	SW8260C
Carbon tetrachloride	ND	10	ug/L	20	09/16/20	MH	SW8260C
Chlorobenzene	ND	20	ug/L	20	09/16/20	MH	SW8260C
Chloroethane	ND	20	ug/L	20	09/16/20	MH	SW8260C
Chloroform	ND	20	ug/L	20	09/16/20	MH	SW8260C
Chloromethane	ND	20	ug/L	20	09/16/20	MH	SW8260C
cis-1,2-Dichloroethene	590	20	ug/L	20	09/16/20	MH	SW8260C
cis-1,3-Dichloropropene	ND	10	ug/L	20	09/16/20	MH	SW8260C
Dibromochloromethane	ND	10	ug/L	20	09/16/20	MH	SW8260C
Dibromomethane	ND	10	ug/L	20	09/16/20	MH	SW8260C
Dichlorodifluoromethane	ND	20	ug/L	20	09/16/20	MH	SW8260C
Ethylbenzene	ND	20	ug/L	20	09/16/20	MH	SW8260C
Hexachlorobutadiene	ND	10	ug/L	20	09/16/20	MH	SW8260C
Isopropylbenzene	ND	20	ug/L	20	09/16/20	MH	SW8260C
m&p-Xylene	ND	20	ug/L	20	09/16/20	MH	SW8260C
Methyl ethyl ketone	ND	100	ug/L	20	09/16/20	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	20	ug/L	20	09/16/20	MH	SW8260C
Methylene chloride	ND	20	ug/L	20	09/16/20	MH	SW8260C
Naphthalene	ND	20	ug/L	20	09/16/20	MH	SW8260C
n-Butylbenzene	ND	20	ug/L	20	09/16/20	MH	SW8260C
n-Propylbenzene	ND	20	ug/L	20	09/16/20	MH	SW8260C
o-Xylene	ND	20	ug/L	20	09/16/20	MH	SW8260C
p-Isopropyltoluene	ND	20	ug/L	20	09/16/20	MH	SW8260C
sec-Butylbenzene	ND	20	ug/L	20	09/16/20	MH	SW8260C
Styrene	ND	20	ug/L	20	09/16/20	MH	SW8260C
tert-Butylbenzene	ND	20	ug/L	20	09/16/20	MH	SW8260C
Tetrachloroethene	2100	100	ug/L	100	09/21/20	MH	SW8260C
Tetrahydrofuran (THF)	ND	50	ug/L	20	09/16/20	MH	SW8260C
Toluene	ND	20	ug/L	20	09/16/20	MH	SW8260C
trans-1,2-Dichloroethene	28	20	ug/L	20	09/16/20	MH	SW8260C
trans-1,3-Dichloropropene	ND	10	ug/L	20	09/16/20	MH	SW8260C
Trichloroethene	4200	100	ug/L	100	09/21/20	MH	SW8260C
Trichlorofluoromethane	ND	20	ug/L	20	09/16/20	MH	SW8260C
Trichlorotrifluoroethane	ND	20	ug/L	20	09/16/20	MH	SW8260C
Vinyl chloride	91	20	ug/L	20	09/16/20	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4 (20x)	98		%	20	09/16/20	MH	70 - 130 %
% Bromofluorobenzene (20x)	99		%	20	09/16/20	MH	70 - 130 %
% Dibromofluoromethane (20x)	100		%	20	09/16/20	MH	70 - 130 %
% Toluene-d8 (20x)	93		%	20	09/16/20	MH	70 - 130 %
% 1,2-dichlorobenzene-d4 (100x)	99		%	100	09/21/20	MH	70 - 130 %
% Bromofluorobenzene (100x)	95		%	100	09/21/20	MH	70 - 130 %
% Dibromofluoromethane (100x)	94		%	100	09/21/20	MH	70 - 130 %

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	
% Toluene-d8 (100x)	99		%	100	09/21/20	MH	70 - 130 %

Oxygenates& Dioxane

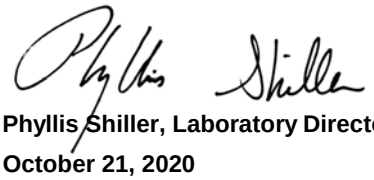
1,4-dioxane	ND	2000	ug/L	20	09/16/20	MH	SW8260C (OXY)
Diethyl ether	ND	20	ug/L	20	09/16/20	MH	SW8260C (OXY)
Di-isopropyl ether	ND	20	ug/L	20	09/16/20	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	20	ug/L	20	09/16/20	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	20	ug/L	20	09/16/20	MH	SW8260C (OXY)

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

Volatile Comment:
Elevated reporting limits for volatiles due to the presence of target and/or non-target compounds.

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.



Phyllis Shiller, Laboratory Director
October 21, 2020
Reviewed and Released by: Greg Lawrence, Assistant Lab Director

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

October 21, 2020

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		09/11/20	12:55
Location Code:	AECOM-WILMINGTN	Received by:	CP	09/11/20	16:31
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	127680				

Laboratory Data

SDG ID: GCG76015
Phoenix ID: CG76045

Project ID: LOCKHEED WILMINGTON MA 60552044.19
Client ID: 20A-AE104R6-091120-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Volatiles							
1,1,1,2-Tetrachloroethane	ND	10	ug/L	20	09/16/20	MH	SW8260C
1,1,1-Trichloroethane	ND	20	ug/L	20	09/16/20	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	10	ug/L	20	09/16/20	MH	SW8260C
1,1,2-Trichloroethane	ND	10	ug/L	20	09/16/20	MH	SW8260C
1,1-Dichloroethane	71	20	ug/L	20	09/16/20	MH	SW8260C
1,1-Dichloroethene	19	10	ug/L	20	09/16/20	MH	SW8260C
1,1-Dichloropropene	ND	20	ug/L	20	09/16/20	MH	SW8260C
1,2,3-Trichlorobenzene	ND	10	ug/L	20	09/16/20	MH	SW8260C
1,2,3-Trichloropropane	ND	10	ug/L	20	09/16/20	MH	SW8260C
1,2,4-Trichlorobenzene	ND	20	ug/L	20	09/16/20	MH	SW8260C
1,2,4-Trimethylbenzene	ND	20	ug/L	20	09/16/20	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	10	ug/L	20	09/16/20	MH	SW8260C
1,2-Dibromoethane	ND	10	ug/L	20	09/16/20	MH	SW8260C
1,2-Dichlorobenzene	ND	20	ug/L	20	09/16/20	MH	SW8260C
1,2-Dichloroethane	ND	10	ug/L	20	09/16/20	MH	SW8260C
1,2-Dichloropropane	ND	10	ug/L	20	09/16/20	MH	SW8260C
1,3,5-Trimethylbenzene	ND	20	ug/L	20	09/16/20	MH	SW8260C
1,3-Dichlorobenzene	ND	20	ug/L	20	09/16/20	MH	SW8260C
1,3-Dichloropropane	ND	20	ug/L	20	09/16/20	MH	SW8260C
1,4-Dichlorobenzene	ND	10	ug/L	20	09/16/20	MH	SW8260C
2,2-Dichloropropane	ND	20	ug/L	20	09/16/20	MH	SW8260C
2-Chlorotoluene	ND	20	ug/L	20	09/16/20	MH	SW8260C
2-Hexanone	ND	100	ug/L	20	09/16/20	MH	SW8260C
4-Chlorotoluene	ND	20	ug/L	20	09/16/20	MH	SW8260C
4-Methyl-2-pentanone	ND	100	ug/L	20	09/16/20	MH	SW8260C
Acetone	ND	500	ug/L	20	09/16/20	MH	SW8260C

Ver 3

Project ID: LOCKHEED WILMINGTON MA 60552044.19 Phoenix I.D.: CG76045

Client ID: 20A-AE104R6-091120-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	
Benzene	ND	10	ug/L	20	09/16/20	MH	SW8260C
Bromobenzene	ND	20	ug/L	20	09/16/20	MH	SW8260C
Bromochloromethane	ND	20	ug/L	20	09/16/20	MH	SW8260C
Bromodichloromethane	ND	10	ug/L	20	09/16/20	MH	SW8260C
Bromoform	ND	10	ug/L	20	09/16/20	MH	SW8260C
Bromomethane	ND	10	ug/L	20	09/16/20	MH	SW8260C
Carbon Disulfide	ND	100	ug/L	20	09/16/20	MH	SW8260C
Carbon tetrachloride	ND	10	ug/L	20	09/16/20	MH	SW8260C
Chlorobenzene	ND	20	ug/L	20	09/16/20	MH	SW8260C
Chloroethane	ND	20	ug/L	20	09/16/20	MH	SW8260C
Chloroform	ND	20	ug/L	20	09/16/20	MH	SW8260C
Chloromethane	ND	20	ug/L	20	09/16/20	MH	SW8260C
cis-1,2-Dichloroethene	520	20	ug/L	20	09/16/20	MH	SW8260C
cis-1,3-Dichloropropene	ND	10	ug/L	20	09/16/20	MH	SW8260C
Dibromochloromethane	ND	10	ug/L	20	09/16/20	MH	SW8260C
Dibromomethane	ND	10	ug/L	20	09/16/20	MH	SW8260C
Dichlorodifluoromethane	ND	20	ug/L	20	09/16/20	MH	SW8260C
Ethylbenzene	ND	20	ug/L	20	09/16/20	MH	SW8260C
Hexachlorobutadiene	ND	10	ug/L	20	09/16/20	MH	SW8260C
Isopropylbenzene	ND	20	ug/L	20	09/16/20	MH	SW8260C
m&p-Xylene	ND	20	ug/L	20	09/16/20	MH	SW8260C
Methyl ethyl ketone	ND	100	ug/L	20	09/16/20	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	20	ug/L	20	09/16/20	MH	SW8260C
Methylene chloride	ND	20	ug/L	20	09/16/20	MH	SW8260C
Naphthalene	ND	20	ug/L	20	09/16/20	MH	SW8260C
n-Butylbenzene	ND	20	ug/L	20	09/16/20	MH	SW8260C
n-Propylbenzene	ND	20	ug/L	20	09/16/20	MH	SW8260C
o-Xylene	ND	20	ug/L	20	09/16/20	MH	SW8260C
p-Isopropyltoluene	ND	20	ug/L	20	09/16/20	MH	SW8260C
sec-Butylbenzene	ND	20	ug/L	20	09/16/20	MH	SW8260C
Styrene	ND	20	ug/L	20	09/16/20	MH	SW8260C
tert-Butylbenzene	ND	20	ug/L	20	09/16/20	MH	SW8260C
Tetrachloroethene	2400	100	ug/L	100	09/21/20	MH	SW8260C
Tetrahydrofuran (THF)	ND	50	ug/L	20	09/16/20	MH	SW8260C
Toluene	ND	20	ug/L	20	09/16/20	MH	SW8260C
trans-1,2-Dichloroethene	41	20	ug/L	20	09/16/20	MH	SW8260C
trans-1,3-Dichloropropene	ND	10	ug/L	20	09/16/20	MH	SW8260C
Trichloroethene	4900	100	ug/L	100	09/21/20	MH	SW8260C
Trichlorofluoromethane	ND	20	ug/L	20	09/16/20	MH	SW8260C
Trichlorotrifluoroethane	ND	20	ug/L	20	09/16/20	MH	SW8260C
Vinyl chloride	75	20	ug/L	20	09/16/20	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4 (20x)	100		%	20	09/16/20	MH	70 - 130 %
% Bromofluorobenzene (20x)	100		%	20	09/16/20	MH	70 - 130 %
% Dibromofluoromethane (20x)	103		%	20	09/16/20	MH	70 - 130 %
% Toluene-d8 (20x)	91		%	20	09/16/20	MH	70 - 130 %
% 1,2-dichlorobenzene-d4 (100x)	100		%	100	09/21/20	MH	70 - 130 %
% Bromofluorobenzene (100x)	95		%	100	09/21/20	MH	70 - 130 %
% Dibromofluoromethane (100x)	95		%	100	09/21/20	MH	70 - 130 %

Project ID: LOCKHEED WILMINGTON MA 60552044.19 Phoenix I.D.: CG76045
Client ID: 20A-AE104R6-091120-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	
% Toluene-d8 (100x)	99		%	100	09/21/20	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	2000	ug/L	20	09/16/20	MH	SW8260C (OXY)
Diethyl ether	ND	20	ug/L	20	09/16/20	MH	SW8260C (OXY)
Di-isopropyl ether	ND	20	ug/L	20	09/16/20	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	20	ug/L	20	09/16/20	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	20	ug/L	20	09/16/20	MH	SW8260C (OXY)
1,4-dioxane							
1,4-dioxane	21	0.20	ug/l	1	09/16/20	AW	SW8270DSIM
QA/QC Surrogates							
% 1,4-dioxane-d8	101		%	1	09/16/20	AW	40 - 140 %
Extraction for 1,4-Dioxane	Completed				09/15/20	S/S	

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

Volatile Comment:
Elevated reporting limits for volatiles due to the presence of target and/or non-target compounds.

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
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Phyllis Shiller, Laboratory Director
October 21, 2020
Reviewed and Released by: Greg Lawrence, Assistant Lab Director

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

QA/QC Report

October 21, 2020

QA/QC Data

SDG I.D.: GCG76015

Parameter	Blank	Blk RL	Sample Result	Dup Result	Dup RPD	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits
QA/QC Batch 545274 (mg/L), QC Sample No: CG76016 (CG76016, CG76021, CG76022, CG76023, CG76028, CG76031, CG76033, CG76041)													
ICP Metals - Dissolved													
Arsenic	BRL	0.004	0.004	<0.004	NC	89.9	92.9	3.3	91.9			80 - 120	20
Iron	BRL	0.011	0.640	0.641	0.20	86.0	90.2	4.8	88.5			80 - 120	20
Manganese	BRL	0.001	0.612	0.614	0.30	87.2	90.5	3.7	87.2			80 - 120	20
Comment:													
Additional: LCS acceptance range is 80-120% MS acceptance range 75-125%.													
QA/QC Batch 545293 (mg/L), QC Sample No: CG76021 (CG76016, CG76021)													
ICP Metals - Aqueous													
Arsenic	BRL	0.004	<0.004	<0.004	NC	101	102	1.0	102			80 - 120	20
Iron	BRL	0.010	0.105	0.110	4.70	99.7	101	1.3	98.3			80 - 120	20
Manganese	BRL	0.001	2.33	2.39	2.50	99.3	99.4	0.1	96.9			80 - 120	20
Comment:													
Additional: LCS acceptance range is 80-120% MS acceptance range 75-125%.													
QA/QC Batch 545326 (mg/L), QC Sample No: CG76038 (CG76038)													
ICP Metals - Dissolved													
Arsenic	BRL	0.004	0.005	<0.004	NC	91.7	90.5	1.3	90.7			80 - 120	20
Iron	BRL	0.011	0.690	0.652	5.70	88.2	86.2	2.3	85.1			80 - 120	20
Manganese	BRL	0.001	1.97	1.81	8.50	89.4	87.4	2.3	79.0			80 - 120	20
Comment:													
Additional: LCS acceptance range is 80-120% MS acceptance range 75-125%.													
QA/QC Batch 545441 (mg/L), QC Sample No: CG76785 (CG76022, CG76023, CG76028, CG76031, CG76033, CG76038, CG76041)													
ICP Metals - Aqueous													
Arsenic	BRL	0.004	<0.004	<0.004	NC	101	101	0.0	100			80 - 120	20
Iron	BRL	0.010	0.034	0.032	NC	104	104	0.0	100			80 - 120	20
Manganese	BRL	0.001	0.028	0.028	0	102	101	1.0	96.3			80 - 120	20
Comment:													
Additional: LCS acceptance range is 80-120% MS acceptance range 75-125%.													

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QA/QC Report

October 21, 2020

QA/QC Data

SDG I.D.: GCG76015

Parameter	Blank	Blk RL	Sample Result	Dup Result	Dup RPD	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits
QA/QC Batch 545589 (mg/L), QC Sample No: CG76021 (CG76021, CG76023, CG76028, CG76031)													
Sulfide	BRL	0.05	<0.05	<0.05	NC	96.5			79.3			90 - 110	20
QA/QC Batch 545540 (mg/L), QC Sample No: CG76153 (CG76016, CG76021, CG76028, CG76031)													
Total Organic Carbon	BRL	1.0	<1.0	<1.0	NC	92.0			103			85 - 115	20
Comment:													
Additional: LCS acceptance range is 85-115% MS acceptance range 75-125%.													
QA/QC Batch 545308 (mg/L), QC Sample No: CG75771 (CG76021, CG76023, CG76028, CG76031)													
Chloride	BRL	3.0	9.4	9.3	NC	95.7			92.4			90 - 110	20
Nitrate as Nitrogen	BRL	0.05	0.08	0.10	NC	92.9			95.0			90 - 110	20
Nitrite as Nitrogen	BRL	0.004	<0.004	<0.004	NC	103			92.5			90 - 110	20
Sulfate	BRL	3.0	3.2	3.0	NC	93.1			91.7			90 - 110	20
QA/QC Batch 545309 (mg/L), QC Sample No: CG75775 (CG76021, CG76023, CG76028, CG76031)													
Chloride	BRL	3.0	9.3	9.5	NC	93.9			96.8			90 - 110	20
Nitrate as Nitrogen	BRL	0.05	0.08	0.08	NC	90.3			94.5			90 - 110	20
Nitrite as Nitrogen	BRL	0.004	<0.004	<0.004	NC	92.1			95.2			90 - 110	20
Sulfate	BRL	3.0	<3.0	3.1	NC	91.6			103			90 - 110	20

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QA/QC Report

October 21, 2020

QA/QC Data

SDG I.D.: GCG76015

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits	
QA/QC Batch 545363 (ug/L), QC Sample No: CG75672 (CG76027, CG76028, CG76037, CG76041)											
MAEPH - Ground Water											
C9-C18 Aliphatic Hydrocarbons 1*	ND	100	46	48	4.3				40 - 140	25	
C19-C36 Aliphatic Hydrocarbons 1*	ND	100	71	72	1.4				40 - 140	25	
C11-C22 Aromatic Hydrocarbons 1	ND	100	80	79	1.3				40 - 140	25	
C11-C22 Aromatic Hydrocarbons U	ND	100							40 - 140	25	
Total TPH 1,2*	ND	100	60	62	3.3				40 - 140	25	
C9 - Nonane	ND	10	19	25	27.3				40 - 140	25	I,r
C-10 Decane	ND	10	23	31	29.6				40 - 140	25	I,r
C12 - Dodecane	ND	10	32	36	11.8				40 - 140	25	I
C14 - Tetradecane	ND	10	51	46	10.3				40 - 140	25	
C16 - Hexadecane	ND	10	67	65	3.0				40 - 140	25	
C18 - Octadecane	ND	10	86	86	0.0				40 - 140	25	
C19 - Nonadecane	ND	10	75	76	1.3				40 - 140	25	
C20 - Eicosane	ND	10	78	79	1.3				40 - 140	25	
C22 - Docosane	ND	10	77	78	1.3				40 - 140	25	
C24 - Tetracosane	ND	10	75	77	2.6				40 - 140	25	
C26 - Hexacosane	ND	10	74	76	2.7				40 - 140	25	
C28 - Octacosane	ND	10	68	71	4.3				40 - 140	25	
C30 - Tricotane	ND	10	64	66	3.1				40 - 140	25	
C36 - Hexatriacontane	ND	10	54	54	0.0				40 - 140	25	
% 1-chlorooctadecane (aliphatic)	41	%	61	59	3.3				40 - 140	25	
% o-terphenyl (aromatic)	92	%	92	91	1.1				40 - 140	25	
% 2-Fluorobiphenyl (Fractionation)	110	%	114	119	4.3				40 - 140	25	
% 2-Bromonaphthalene (Fractionati	116	%	102	108	5.7				40 - 140	25	
% 2-Methylnaphthalene BT		%	0	0	NC				0 - 5		
% Naphthalene BT		%	0	0	NC				0 - 5		
Comment:											
Additional EPH fractionation criteria: Breakthrough criteria (BT) is 0 to 5%											
QA/QC Batch 545444 (ug/l), QC Sample No: CG76018 (CG76016, CG76018, CG76019, CG76020, CG76021, CG76024, CG76025, CG76026, CG76028, CG76030, CG76031, CG76037, CG76042, CG76043, CG76045)											
1,4dioxane - Ground Water											
1,4-dioxane	ND	0.20	93	90	3.3				40 - 140	30	
% 1,4-dioxane-d8	87	%	92	88	4.4				40 - 140	30	
Comment:											
Due to the concentration in the unspiked sample relative to the spike concentration, the MS/MSD could not be reported.											
QA/QC Batch 545853 (ug/L), QC Sample No: CG75644 (CG76037, CG76041)											
Semivolatiles by SIM, PAH - Ground Water											
2-Methylnaphthalene	ND	0.50	83	82	1.2				40 - 140	20	
Acenaphthene	ND	0.50	79	77	2.6				40 - 140	20	
Acenaphthylene	ND	0.10	76	74	2.7				40 - 140	20	
Anthracene	ND	0.10	80	81	1.2				40 - 140	20	

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits	
Benz(a)anthracene	ND	0.02	88	91	3.4				40 - 140	20	
Benzo(a)pyrene	ND	0.02	89	97	8.6				40 - 140	20	
Benzo(b)fluoranthene	ND	0.02	109	117	7.1				40 - 140	20	
Benzo(ghi)perylene	ND	0.02	92	104	12.2				40 - 140	20	
Benzo(k)fluoranthene	ND	0.02	69	77	11.0				40 - 140	20	
Chrysene	ND	0.02	83	87	4.7				40 - 140	20	
Dibenz(a,h)anthracene	ND	0.02	71	81	13.2				40 - 140	20	
Fluoranthene	ND	0.50	70	71	1.4				40 - 140	20	
Fluorene	ND	0.10	83	80	3.7				40 - 140	20	
Indeno(1,2,3-cd)pyrene	ND	0.02	70	80	13.3				40 - 140	20	
Naphthalene	ND	0.50	85	82	3.6				40 - 140	20	
Phenanthrene	ND	0.06	76	76	0.0				40 - 140	20	
Pyrene	ND	0.07	87	87	0.0				40 - 140	20	
% 2-Fluorobiphenyl	69	%	73	69	5.6				40 - 140	20	
% Nitrobenzene-d5	96	%	106	103	2.9				40 - 140	20	
% Terphenyl-d14	91	%	92	94	2.2				40 - 140	20	

Comment:

Additional 8270 criteria: 10% of compounds can be outside of acceptance criteria as long as recovery is at least 10%. (Acid surrogates acceptance range for aqueous samples: 10-110%, for soils 30-130%)

QA/QC Batch 545626 (ug/L), QC Sample No: CG76027 (CG76027, CG76028)

Semivolatiles by SIM, PAH - Ground Water

2-Methylnaphthalene	ND	0.50	72	67	7.2				40 - 140	20	
Acenaphthene	ND	0.50	78	77	1.3				40 - 140	20	
Acenaphthylene	ND	0.10	80	78	2.5				40 - 140	20	
Anthracene	ND	0.10	81	80	1.2				40 - 140	20	
Benz(a)anthracene	ND	0.05	99	105	5.9				40 - 140	20	
Benzo(a)pyrene	ND	0.20	69	78	12.2				40 - 140	20	
Benzo(b)fluoranthene	ND	0.07	82	91	10.4				40 - 140	20	
Benzo(ghi)perylene	ND	0.02	60	75	22.2				40 - 140	20	r
Benzo(k)fluoranthene	ND	0.10	53	62	15.7				40 - 140	20	
Chrysene	ND	0.05	80	86	7.2				40 - 140	20	
Dibenz(a,h)anthracene	ND	0.02	65	79	19.4				40 - 140	20	
Fluoranthene	ND	0.50	81	84	3.6				40 - 140	20	
Fluorene	ND	0.10	82	82	0.0				40 - 140	20	
Indeno(1,2,3-cd)pyrene	ND	0.10	67	81	18.9				40 - 140	20	
Naphthalene	ND	0.50	68	62	9.2				40 - 140	20	
Phenanthrene	ND	0.06	86	85	1.2				40 - 140	20	
Pyrene	ND	0.07	76	79	3.9				40 - 140	20	
% 2-Fluorobiphenyl	60	%	67	64	4.6				40 - 140	20	
% Nitrobenzene-d5	82	%	95	87	8.8				40 - 140	20	
% Terphenyl-d14	80	%	73	80	9.2				40 - 140	20	

Comment:

Additional 8270 criteria: 10% of compounds can be outside of acceptance criteria as long as recovery is at least 10%. (Acid surrogates acceptance range for aqueous samples: 10-110%, for soils 30-130%)

QA/QC Batch 545403 (ug/L), QC Sample No: CG73379 (CG76015, CG76020, CG76022, CG76027, CG76033, CG76035, CG76036, CG76038, CG76039, CG76040, CG76041)

Volatiles - Ground Water

1,1,1,2-Tetrachloroethane	ND	1.0	104	108	3.8	99	111	11.4	70 - 130	20	
1,1,1-Trichloroethane	ND	1.0	97	100	3.0	103	113	9.3	70 - 130	20	
1,1,2,2-Tetrachloroethane	ND	0.50	112	112	0.0	107	114	6.3	70 - 130	20	
1,1,2-Trichloroethane	ND	1.0	99	99	0.0	94	103	9.1	70 - 130	20	
1,1-Dichloroethane	ND	1.0	94	97	3.1	99	106	6.8	70 - 130	20	

QA/QC Data

SDG I.D.: GCG76015

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits	
1,1-Dichloroethene	ND	1.0	100	101	1.0	120	133	10.3	70 - 130	20	m
1,1-Dichloropropene	ND	1.0	92	93	1.1	98	108	9.7	70 - 130	20	
1,2,3-Trichlorobenzene	ND	1.0	96	97	1.0	93	102	9.2	70 - 130	20	
1,2,3-Trichloropropane	ND	1.0	102	103	1.0	96	104	8.0	70 - 130	20	
1,2,4-Trichlorobenzene	ND	1.0	92	93	1.1	91	99	8.4	70 - 130	20	
1,2,4-Trimethylbenzene	ND	1.0	96	98	2.1	98	106	7.8	70 - 130	20	
1,2-Dibromo-3-chloropropane	ND	1.0	133	133	0.0	112	122	8.5	70 - 130	20	l
1,2-Dibromoethane	ND	1.0	101	102	1.0	96	103	7.0	70 - 130	20	
1,2-Dichlorobenzene	ND	1.0	93	94	1.1	92	101	9.3	70 - 130	20	
1,2-Dichloroethane	ND	1.0	91	93	2.2	88	94	6.6	70 - 130	20	
1,2-Dichloropropane	ND	1.0	91	93	2.2	93	103	10.2	70 - 130	20	
1,3,5-Trimethylbenzene	ND	1.0	97	100	3.0	100	109	8.6	70 - 130	20	
1,3-Dichlorobenzene	ND	1.0	92	95	3.2	92	100	8.3	70 - 130	20	
1,3-Dichloropropane	ND	1.0	98	100	2.0	97	103	6.0	70 - 130	20	
1,4-Dichlorobenzene	ND	1.0	92	93	1.1	90	98	8.5	70 - 130	20	
1,4-dioxane	ND	100	96	92	4.3	97	100	3.0	40 - 160	30	
2,2-Dichloropropane	ND	1.0	99	100	1.0	71	87	20.3	70 - 130	20	
2-Chlorotoluene	ND	1.0	94	97	3.1	94	101	7.2	70 - 130	20	
2-Hexanone	ND	5.0	100	102	2.0	92	100	8.3	40 - 160	30	
4-Chlorotoluene	ND	1.0	94	95	1.1	93	100	7.3	70 - 130	20	
4-Methyl-2-pentanone	ND	5.0	100	100	0.0	93	104	11.2	40 - 160	30	
Acetone	ND	5.0	102	100	2.0	120	133	10.3	40 - 160	30	
Benzene	ND	0.70	93	95	2.1	98	106	7.8	70 - 130	20	
Bromobenzene	ND	1.0	91	91	0.0	88	94	6.6	70 - 130	20	
Bromochloromethane	ND	1.0	95	98	3.1	96	105	9.0	70 - 130	20	
Bromodichloromethane	ND	0.50	100	101	1.0	96	107	10.8	70 - 130	20	
Bromoform	ND	1.0	109	107	1.9	96	103	7.0	70 - 130	20	
Bromomethane	ND	1.0	110	108	1.8	100	122	19.8	40 - 160	30	
Carbon Disulfide	ND	1.0	99	101	2.0	119	132	10.4	70 - 130	20	m
Carbon tetrachloride	ND	1.0	98	102	4.0	102	112	9.3	70 - 130	20	
Chlorobenzene	ND	1.0	93	96	3.2	96	103	7.0	70 - 130	20	
Chloroethane	ND	1.0	91	97	6.4	110	130	16.7	70 - 130	20	
Chloroform	ND	1.0	94	98	4.2	99	107	7.8	70 - 130	20	
Chloromethane	ND	1.0	90	92	2.2	102	120	16.2	40 - 160	30	
cis-1,2-Dichloroethene	ND	1.0	89	91	2.2	116	104	10.9	70 - 130	20	
cis-1,3-Dichloropropene	ND	0.40	97	96	1.0	85	95	11.1	70 - 130	20	
Dibromochloromethane	ND	0.50	110	111	0.9	101	110	8.5	70 - 130	20	
Dibromomethane	ND	1.0	96	96	0.0	92	99	7.3	70 - 130	20	
Dichlorodifluoromethane	ND	1.0	96	101	5.1	110	124	12.0	40 - 160	30	
Di-isopropyl ether	ND	1.0	94	96	2.1	93	102	9.2	70 - 130	20	
Ethyl ether	ND	1.0	99	105	5.9	108	121	11.4	70 - 130	20	
Ethyl tert-butyl ether	ND	1.0	95	99	4.1	92	103	11.3	70 - 130	20	
Ethylbenzene	ND	1.0	92	96	4.3	99	107	7.8	70 - 130	20	
Hexachlorobutadiene	ND	0.40	94	95	1.1	97	107	9.8	70 - 130	20	
Isopropylbenzene	ND	1.0	95	101	6.1	100	108	7.7	70 - 130	20	
m&p-Xylene	ND	1.0	95	99	4.1	100	109	8.6	70 - 130	20	
Methyl ethyl ketone	ND	5.0	106	105	0.9	99	104	4.9	40 - 160	30	
Methyl t-butyl ether (MTBE)	ND	1.0	106	107	0.9	107	116	8.1	70 - 130	20	
Methylene chloride	ND	1.0	91	94	3.2	110	118	7.0	70 - 130	20	
Naphthalene	ND	1.0	110	110	0.0	103	113	9.3	70 - 130	20	
n-Butylbenzene	ND	1.0	101	102	1.0	106	116	9.0	70 - 130	20	
n-Propylbenzene	ND	1.0	93	98	5.2	96	106	9.9	70 - 130	20	
o-Xylene	ND	1.0	94	97	3.1	98	106	7.8	70 - 130	20	

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits	
p-Isopropyltoluene	ND	1.0	99	102	3.0	103	112	8.4	70 - 130	20	
sec-Butylbenzene	ND	1.0	105	109	3.7	113	123	8.5	70 - 130	20	
Styrene	ND	1.0	96	97	1.0	97	98	1.0	70 - 130	20	
tert-amyl methyl ether	ND	1.0	96	98	2.1	91	100	9.4	70 - 130	20	
tert-Butylbenzene	ND	1.0	97	99	2.0	100	110	9.5	70 - 130	20	
Tetrachloroethene	ND	1.0	87	89	2.3	92	101	9.3	70 - 130	20	
Tetrahydrofuran (THF)	ND	2.5	101	101	0.0	94	102	8.2	70 - 130	20	
Toluene	ND	1.0	94	96	2.1	96	104	8.0	70 - 130	20	
trans-1,2-Dichloroethene	ND	1.0	104	103	1.0	124	133	7.0	70 - 130	20	m
trans-1,3-Dichloropropene	ND	0.40	98	98	0.0	84	94	11.2	70 - 130	20	
Trichloroethene	ND	1.0	91	92	1.1	98	101	3.0	70 - 130	20	
Trichlorofluoromethane	ND	1.0	115	119	3.4	145	155	6.7	70 - 130	20	m
Trichlorotrifluoroethane	ND	1.0	108	110	1.8	127	137	7.6	70 - 130	20	m
Vinyl chloride	ND	1.0	101	106	4.8	115	128	10.7	70 - 130	20	
% 1,2-dichlorobenzene-d4	99	%	101	101	0.0	102	101	1.0	70 - 130	20	
% Bromofluorobenzene	95	%	99	100	1.0	98	101	3.0	70 - 130	20	
% Dibromofluoromethane	100	%	98	99	1.0	97	99	2.0	70 - 130	20	
% Toluene-d8	102	%	102	101	1.0	100	101	1.0	70 - 130	20	

Comment:

Additional 8260 criteria: 10% of compounds can be outside of acceptance criteria as long as recovery is 10%.
The RPD criteria for the LCS/LCSD is 20%,
The MS/MSD RPD criteria is listed above.

QA/QC Batch 546217 (ug/L), QC Sample No: CG76018 (CG76016 (100X) , CG76017 (100X) , CG76018 (5X) , CG76019 (5X) , CG76021, CG76023 (20X) , CG76024 (10X) , CG76026 (100X) , CG76028 (10X) , CG76029 (10X))

Volatiles - Ground Water

1,1,1,2-Tetrachloroethane	ND	1.0	102	100	2.0	93	109	15.8	70 - 130	20	
1,1,1-Trichloroethane	ND	1.0	105	100	4.9	104	116	10.9	70 - 130	20	
1,1,2,2-Tetrachloroethane	ND	0.50	102	100	2.0	94	102	8.2	70 - 130	20	
1,1,2-Trichloroethane	ND	1.0	99	100	1.0	87	97	10.9	70 - 130	20	
1,1-Dichloroethane	ND	1.0	102	99	3.0	99	112	12.3	70 - 130	20	
1,1-Dichloroethene	ND	1.0	96	94	2.1	103	110	6.6	70 - 130	20	
1,1-Dichloropropene	ND	1.0	100	98	2.0	95	107	11.9	70 - 130	20	
1,2,3-Trichlorobenzene	ND	1.0	99	98	1.0	89	98	9.6	70 - 130	20	
1,2,3-Trichloropropane	ND	1.0	97	96	1.0	87	96	9.8	70 - 130	20	
1,2,4-Trichlorobenzene	ND	1.0	97	95	2.1	85	97	13.2	70 - 130	20	
1,2,4-Trimethylbenzene	ND	1.0	99	98	1.0	95	106	10.9	70 - 130	20	
1,2-Dibromo-3-chloropropane	ND	1.0	113	118	4.3	97	107	9.8	70 - 130	20	
1,2-Dibromoethane	ND	1.0	99	99	0.0	86	100	15.1	70 - 130	20	
1,2-Dichlorobenzene	ND	1.0	97	96	1.0	90	100	10.5	70 - 130	20	
1,2-Dichloroethane	ND	1.0	100	102	2.0	88	101	13.8	70 - 130	20	
1,2-Dichloropropane	ND	1.0	104	104	0.0	93	107	14.0	70 - 130	20	
1,3,5-Trimethylbenzene	ND	1.0	100	98	2.0	96	106	9.9	70 - 130	20	
1,3-Dichlorobenzene	ND	1.0	95	93	2.1	88	99	11.8	70 - 130	20	
1,3-Dichloropropane	ND	1.0	99	99	0.0	91	102	11.4	70 - 130	20	
1,4-Dichlorobenzene	ND	1.0	95	95	0.0	88	98	10.8	70 - 130	20	
1,4-dioxane	ND	100	94	103	9.1	86	98	13.0	40 - 160	30	
2,2-Dichloropropane	ND	1.0	127	125	1.6	95	105	10.0	70 - 130	20	
2-Chlorotoluene	ND	1.0	96	94	2.1	88	102	14.7	70 - 130	20	
2-Hexanone	ND	5.0	101	103	2.0	87	95	8.8	40 - 160	30	
4-Chlorotoluene	ND	1.0	95	94	1.1	89	98	9.6	70 - 130	20	
4-Methyl-2-pentanone	ND	5.0	105	105	0.0	91	100	9.4	40 - 160	30	
Acetone	ND	5.0	79	77	2.6	85	90	5.7	40 - 160	30	
Benzene	ND	0.70	102	100	2.0	95	106	10.9	70 - 130	20	

QA/QC Data

SDG I.D.: GCG76015

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits	
Bromobenzene	ND	1.0	92	90	2.2	83	94	12.4	70 - 130	20	
Bromochloromethane	ND	1.0	99	99	0.0	92	102	10.3	70 - 130	20	
Bromodichloromethane	ND	0.50	105	104	1.0	94	106	12.0	70 - 130	20	
Bromoform	ND	1.0	107	106	0.9	90	103	13.5	70 - 130	20	
Bromomethane	ND	1.0	83	84	1.2	72	89	21.1	40 - 160	30	
Carbon Disulfide	ND	1.0	97	93	4.2	104	109	4.7	70 - 130	20	
Carbon tetrachloride	ND	1.0	130	127	2.3	134	150	11.3	70 - 130	20	m
Chlorobenzene	ND	1.0	97	97	0.0	90	102	12.5	70 - 130	20	
Chloroethane	ND	1.0	86	78	9.8	94	101	7.2	70 - 130	20	
Chloroform	ND	1.0	100	99	1.0	97	110	12.6	70 - 130	20	
Chloromethane	ND	1.0	97	94	3.1	100	117	15.7	40 - 160	30	
cis-1,2-Dichloroethene	ND	1.0	93	92	1.1	89	102	13.6	70 - 130	20	
cis-1,3-Dichloropropene	ND	0.40	108	106	1.9	86	100	15.1	70 - 130	20	
Dibromochloromethane	ND	0.50	105	104	1.0	92	105	13.2	70 - 130	20	
Dibromomethane	ND	1.0	97	96	1.0	86	97	12.0	70 - 130	20	
Dichlorodifluoromethane	ND	1.0	107	106	0.9	114	132	14.6	40 - 160	30	
Di-isopropyl ether	ND	1.0	104	103	1.0	97	110	12.6	70 - 130	20	
Ethyl ether	ND	1.0	91	94	3.2	90	94	4.3	70 - 130	20	
Ethyl tert-butyl ether	ND	1.0	112	111	0.9	104	117	11.8	70 - 130	20	
Ethylbenzene	ND	1.0	101	99	2.0	94	108	13.9	70 - 130	20	
Hexachlorobutadiene	ND	0.40	98	96	2.1	96	107	10.8	70 - 130	20	
Isopropylbenzene	ND	1.0	96	94	2.1	91	102	11.4	70 - 130	20	
m&p-Xylene	ND	1.0	101	100	1.0	95	109	13.7	70 - 130	20	
Methyl ethyl ketone	ND	5.0	106	107	0.9	95	107	11.9	40 - 160	30	
Methyl t-butyl ether (MTBE)	ND	1.0	92	92	0.0	90	97	7.5	70 - 130	20	
Methylene chloride	ND	1.0	89	88	1.1	90	95	5.4	70 - 130	20	
Naphthalene	ND	1.0	104	105	1.0	91	101	10.4	70 - 130	20	
n-Butylbenzene	ND	1.0	106	102	3.8	102	114	11.1	70 - 130	20	
n-Propylbenzene	ND	1.0	97	93	4.2	92	103	11.3	70 - 130	20	
o-Xylene	ND	1.0	104	103	1.0	95	111	15.5	70 - 130	20	
p-Isopropyltoluene	ND	1.0	100	98	2.0	97	109	11.7	70 - 130	20	
sec-Butylbenzene	ND	1.0	107	105	1.9	106	118	10.7	70 - 130	20	
Styrene	ND	1.0	106	104	1.9	95	108	12.8	70 - 130	20	
tert-amyl methyl ether	ND	1.0	110	110	0.0	96	108	11.8	70 - 130	20	
tert-Butylbenzene	ND	1.0	101	99	2.0	97	108	10.7	70 - 130	20	
Tetrachloroethene	ND	1.0	95	94	1.1	NC	NC	NC	70 - 130	20	
Tetrahydrofuran (THF)	ND	2.5	107	108	0.9	96	106	9.9	70 - 130	20	
Toluene	ND	1.0	101	99	2.0	93	105	12.1	70 - 130	20	
trans-1,2-Dichloroethene	ND	1.0	98	97	1.0	102	111	8.5	70 - 130	20	
trans-1,3-Dichloropropene	ND	0.40	114	114	0.0	94	108	13.9	70 - 130	20	
Trichloroethene	ND	1.0	97	95	2.1	84	116	32.0	70 - 130	20	r
Trichlorofluoromethane	ND	1.0	111	106	4.6	125	136	8.4	70 - 130	20	m
Trichlorotrifluoroethane	ND	1.0	104	101	2.9	106	120	12.4	70 - 130	20	
Vinyl chloride	ND	1.0	105	101	3.9	110	123	11.2	70 - 130	20	
% 1,2-dichlorobenzene-d4	100	%	102	101	1.0	102	101	1.0	70 - 130	20	
% Bromofluorobenzene	102	%	106	107	0.9	107	109	1.9	70 - 130	20	
% Dibromofluoromethane	106	%	102	100	2.0	101	101	0.0	70 - 130	20	
% Toluene-d8	107	%	103	102	1.0	100	100	0.0	70 - 130	20	

Comment:

Additional 8260 criteria: 10% of compounds can be outside of acceptance criteria as long as recovery is 10%.
The RPD criteria for the LCS/LCSD is 20%,
The MS/MSD RPD criteria is listed above.

QA/QC Data

SDG I.D.: GCG76015

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits
QA/QC Batch 545781 (ug/L), QC Sample No: CG76034 (CG76016 (20X) , CG76017 (20X) , CG76028 (20X) , CG76029 (20X) , CG76032 (20X) , CG76034, CG76036 (10X) , CG76037 (20X) , CG76043 (20X) , CG76044 (20X) , CG76045 (20X))										
Volatiles - Ground Water										
1,1,1,2-Tetrachloroethane	ND	1.0	93	106	13.1	102	96	6.1	70 - 130	20
1,1,1-Trichloroethane	ND	1.0	89	99	10.6	110	103	6.6	70 - 130	20
1,1,2,2-Tetrachloroethane	ND	0.50	92	102	10.3	102	94	8.2	70 - 130	20
1,1,2-Trichloroethane	ND	1.0	88	100	12.8	94	89	5.5	70 - 130	20
1,1-Dichloroethane	ND	1.0	88	98	10.8	109	101	7.6	70 - 130	20
1,1-Dichloroethene	ND	1.0	85	93	9.0	122	109	11.3	70 - 130	20
1,1-Dichloropropene	ND	1.0	89	99	10.6	107	99	7.8	70 - 130	20
1,2,3-Trichlorobenzene	ND	1.0	90	102	12.5	99	92	7.3	70 - 130	20
1,2,3-Trichloropropane	ND	1.0	89	98	9.6	102	93	9.2	70 - 130	20
1,2,4-Trichlorobenzene	ND	1.0	89	99	10.6	97	90	7.5	70 - 130	20
1,2,4-Trimethylbenzene	ND	1.0	91	102	11.4	106	97	8.9	70 - 130	20
1,2-Dibromo-3-chloropropane	ND	1.0	100	115	14.0	100	98	2.0	70 - 130	20
1,2-Dibromoethane	ND	1.0	91	102	11.4	98	92	6.3	70 - 130	20
1,2-Dichlorobenzene	ND	1.0	89	100	11.6	100	92	8.3	70 - 130	20
1,2-Dichloroethane	ND	1.0	91	102	11.4	100	91	9.4	70 - 130	20
1,2-Dichloropropane	ND	1.0	92	104	12.2	103	96	7.0	70 - 130	20
1,3,5-Trimethylbenzene	ND	1.0	92	103	11.3	107	99	7.8	70 - 130	20
1,3-Dichlorobenzene	ND	1.0	89	98	9.6	100	92	8.3	70 - 130	20
1,3-Dichloropropane	ND	1.0	91	102	11.4	99	95	4.1	70 - 130	20
1,4-Dichlorobenzene	ND	1.0	87	99	12.9	99	92	7.3	70 - 130	20
1,4-dioxane	ND	100	87	103	16.8	105	94	11.1	40 - 160	30
2,2-Dichloropropane	ND	1.0	108	120	10.5	101	97	4.0	70 - 130	20
2-Chlorotoluene	ND	1.0	91	104	13.3	104	98	5.9	70 - 130	20
2-Hexanone	ND	5.0	92	103	11.3	94	90	4.3	40 - 160	30
4-Chlorotoluene	ND	1.0	89	99	10.6	100	93	7.3	70 - 130	20
4-Methyl-2-pentanone	ND	5.0	91	104	13.3	98	89	9.6	40 - 160	30
Acetone	ND	5.0	68	68	0.0	89	79	11.9	40 - 160	30
Benzene	ND	0.70	91	101	10.4	105	98	6.9	70 - 130	20
Bromobenzene	ND	1.0	88	98	10.8	97	89	8.6	70 - 130	20
Bromochloromethane	ND	1.0	89	98	9.6	100	93	7.3	70 - 130	20
Bromodichloromethane	ND	0.50	93	104	11.2	103	96	7.0	70 - 130	20
Bromoform	ND	1.0	95	108	12.8	98	91	7.4	70 - 130	20
Bromomethane	ND	1.0	74	83	11.5	98	93	5.2	40 - 160	30
Carbon Disulfide	ND	1.0	90	98	8.5	126	110	13.6	70 - 130	20
Carbon tetrachloride	ND	1.0	109	122	11.3	114	109	4.5	70 - 130	20
Chlorobenzene	ND	1.0	89	99	10.6	102	95	7.1	70 - 130	20
Chloroethane	ND	1.0	79	87	9.6	113	104	8.3	70 - 130	20
Chloroform	ND	1.0	86	96	11.0	104	96	8.0	70 - 130	20
Chloromethane	ND	1.0	82	92	11.5	102	105	2.9	40 - 160	30
cis-1,2-Dichloroethene	ND	1.0	79	89	11.9	NC	NC	NC	70 - 130	20
cis-1,3-Dichloropropene	ND	0.40	96	106	9.9	96	89	7.6	70 - 130	20
Dibromochloromethane	ND	0.50	95	106	10.9	101	94	7.2	70 - 130	20
Dibromomethane	ND	1.0	87	96	9.8	93	87	6.7	70 - 130	20
Dichlorodifluoromethane	ND	1.0	105	114	8.2	142	140	1.4	40 - 160	30
Ethyl ether	ND	1.0	79	88	10.8	102	90	12.5	70 - 130	20
Ethylbenzene	ND	1.0	91	103	12.4	107	99	7.8	70 - 130	20
Hexachlorobutadiene	ND	0.40	91	101	10.4	105	99	5.9	70 - 130	20
Isopropylbenzene	ND	1.0	90	102	12.5	107	100	6.8	70 - 130	20
m&p-Xylene	ND	1.0	92	103	11.3	107	100	6.8	70 - 130	20

QA/QC Data

SDG I.D.: GCG76015

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits	
Methyl ethyl ketone	ND	5.0	91	98	7.4	100	92	8.3	40 - 160	30	
Methyl t-butyl ether (MTBE)	ND	1.0	84	90	6.9	101	91	10.4	70 - 130	20	
Methylene chloride	ND	1.0	79	83	4.9	100	87	13.9	70 - 130	20	
Naphthalene	ND	1.0	96	108	11.8	98	95	3.1	70 - 130	20	
n-Butylbenzene	ND	1.0	93	104	11.2	112	105	6.5	70 - 130	20	
n-Propylbenzene	ND	1.0	92	102	10.3	106	101	4.8	70 - 130	20	
o-Xylene	ND	1.0	94	106	12.0	108	100	7.7	70 - 130	20	
p-Isopropyltoluene	ND	1.0	93	105	12.1	111	103	7.5	70 - 130	20	
sec-Butylbenzene	ND	1.0	98	111	12.4	121	112	7.7	70 - 130	20	
Styrene	ND	1.0	93	103	10.2	106	98	7.8	70 - 130	20	
tert-Butylbenzene	ND	1.0	94	104	10.1	111	103	7.5	70 - 130	20	
Tetrachloroethene	ND	1.0	88	99	11.8	NC	NC	NC	70 - 130	20	
Tetrahydrofuran (THF)	ND	2.5	90	101	11.5	98	93	5.2	70 - 130	20	
Toluene	ND	1.0	90	102	12.5	103	96	7.0	70 - 130	20	
trans-1,2-Dichloroethene	ND	1.0	88	94	6.6	120	102	16.2	70 - 130	20	
trans-1,3-Dichloropropene	ND	0.40	100	115	14.0	100	94	6.2	70 - 130	20	
Trichloroethene	ND	1.0	90	101	11.5	NC	NC	NC	70 - 130	20	
Trichlorofluoromethane	ND	1.0	88	96	8.7	135	122	10.1	70 - 130	20	m
Trichlorotrifluoroethane	ND	1.0	89	97	8.6	126	117	7.4	70 - 130	20	
Vinyl chloride	ND	1.0	89	100	11.6	124	123	0.8	70 - 130	20	
% 1,2-dichlorobenzene-d4	98	%	99	99	0.0	100	98	2.0	70 - 130	20	
% Bromofluorobenzene	99	%	102	103	1.0	102	102	0.0	70 - 130	20	
% Dibromofluoromethane	101	%	98	98	0.0	101	101	0.0	70 - 130	20	
% Toluene-d8	103	%	100	101	1.0	99	99	0.0	70 - 130	20	

Comment:

Additional 8260 criteria: 10% of compounds can be outside of acceptance criteria as long as recovery is 10%.
The RPD criteria for the LCS/LCSD is 20%,
The MS/MSD RPD criteria is listed above.

QA/QC Batch 545972 (ug/L), QC Sample No: CG76580 (CG76023 (50X) , CG76024 (50X) , CG76025 (50X) , CG76026 (50X))

Volatiles - Ground Water

1,1,1,2-Tetrachloroethane	ND	1.0	99	100	1.0				70 - 130	20	
1,1,1-Trichloroethane	ND	1.0	96	95	1.0				70 - 130	20	
1,1,2,2-Tetrachloroethane	ND	0.50	96	98	2.1				70 - 130	20	
1,1,2-Trichloroethane	ND	1.0	92	95	3.2				70 - 130	20	
1,1-Dichloroethane	ND	1.0	94	94	0.0				70 - 130	20	
1,1-Dichloroethene	ND	1.0	86	85	1.2				70 - 130	20	
1,1-Dichloropropene	ND	1.0	93	96	3.2				70 - 130	20	
1,2,3-Trichlorobenzene	ND	1.0	96	99	3.1				70 - 130	20	
1,2,3-Trichloropropane	ND	1.0	94	95	1.1				70 - 130	20	
1,2,4-Trichlorobenzene	ND	1.0	95	95	0.0				70 - 130	20	
1,2,4-Trimethylbenzene	ND	1.0	96	97	1.0				70 - 130	20	
1,2-Dibromo-3-chloropropane	ND	1.0	109	118	7.9				70 - 130	20	
1,2-Dibromoethane	ND	1.0	95	97	2.1				70 - 130	20	
1,2-Dichlorobenzene	ND	1.0	94	94	0.0				70 - 130	20	
1,2-Dichloroethane	ND	1.0	98	96	2.1				70 - 130	20	
1,2-Dichloropropane	ND	1.0	100	95	5.1				70 - 130	20	
1,3,5-Trimethylbenzene	ND	1.0	96	96	0.0				70 - 130	20	
1,3-Dichlorobenzene	ND	1.0	93	95	2.1				70 - 130	20	
1,3-Dichloropropane	ND	1.0	94	95	1.1				70 - 130	20	
1,4-Dichlorobenzene	ND	1.0	93	92	1.1				70 - 130	20	
1,4-dioxane	ND	100	99	99	0.0				40 - 160	30	
2,2-Dichloropropane	ND	1.0	121	117	3.4				70 - 130	20	

QA/QC Data

SDG I.D.: GCG76015

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits
2-Chlorotoluene	ND	1.0	94	97	3.1				70 - 130	20
2-Hexanone	ND	5.0	94	99	5.2				40 - 160	30
4-Chlorotoluene	ND	1.0	93	93	0.0				70 - 130	20
4-Methyl-2-pentanone	ND	5.0	97	99	2.0				40 - 160	30
Acetone	ND	5.0	66	69	4.4				40 - 160	30
Benzene	ND	0.70	97	97	0.0				70 - 130	20
Bromobenzene	ND	1.0	90	91	1.1				70 - 130	20
Bromochloromethane	ND	1.0	94	93	1.1				70 - 130	20
Bromodichloromethane	ND	0.50	102	98	4.0				70 - 130	20
Bromoform	ND	1.0	104	105	1.0				70 - 130	20
Bromomethane	ND	1.0	78	79	1.3				40 - 160	30
Carbon Disulfide	ND	1.0	89	88	1.1				70 - 130	20
Carbon tetrachloride	ND	1.0	101	103	2.0				70 - 130	20
Chlorobenzene	ND	1.0	93	93	0.0				70 - 130	20
Chloroethane	ND	1.0	71	66	7.3				70 - 130	20
Chloroform	ND	1.0	92	92	0.0				70 - 130	20
Chloromethane	ND	1.0	82	83	1.2				40 - 160	30
cis-1,2-Dichloroethene	ND	1.0	87	87	0.0				70 - 130	20
cis-1,3-Dichloropropene	ND	0.40	102	102	0.0				70 - 130	20
Dibromochloromethane	ND	0.50	101	102	1.0				70 - 130	20
Dibromomethane	ND	1.0	94	92	2.2				70 - 130	20
Dichlorodifluoromethane	ND	1.0	93	92	1.1				40 - 160	30
Ethyl ether	ND	1.0	79	79	0.0				70 - 130	20
Ethylbenzene	ND	1.0	98	100	2.0				70 - 130	20
Hexachlorobutadiene	ND	0.40	101	102	1.0				70 - 130	20
Isopropylbenzene	ND	1.0	94	96	2.1				70 - 130	20
m&p-Xylene	ND	1.0	98	100	2.0				70 - 130	20
Methyl ethyl ketone	ND	5.0	95	99	4.1				40 - 160	30
Methyl t-butyl ether (MTBE)	ND	1.0	83	84	1.2				70 - 130	20
Methylene chloride	ND	1.0	79	74	6.5				70 - 130	20
Naphthalene	ND	1.0	100	104	3.9				70 - 130	20
n-Butylbenzene	ND	1.0	98	100	2.0				70 - 130	20
n-Propylbenzene	ND	1.0	95	95	0.0				70 - 130	20
o-Xylene	ND	1.0	101	103	2.0				70 - 130	20
p-Isopropyltoluene	ND	1.0	99	100	1.0				70 - 130	20
sec-Butylbenzene	ND	1.0	103	105	1.9				70 - 130	20
Styrene	ND	1.0	98	98	0.0				70 - 130	20
tert-Butylbenzene	ND	1.0	99	99	0.0				70 - 130	20
Tetrachloroethene	ND	1.0	93	94	1.1				70 - 130	20
Tetrahydrofuran (THF)	ND	2.5	95	101	6.1				70 - 130	20
Toluene	ND	1.0	98	97	1.0				70 - 130	20
trans-1,2-Dichloroethene	ND	1.0	87	86	1.2				70 - 130	20
trans-1,3-Dichloropropene	ND	0.40	111	109	1.8				70 - 130	20
Trichloroethene	ND	1.0	96	95	1.0				70 - 130	20
Trichlorofluoromethane	ND	1.0	89	89	0.0				70 - 130	20
Trichlorotrifluoroethane	ND	1.0	90	89	1.1				70 - 130	20
Vinyl chloride	ND	1.0	89	89	0.0				70 - 130	20
% 1,2-dichlorobenzene-d4	100	%	100	101	1.0				70 - 130	20
% Bromofluorobenzene	102	%	104	105	1.0				70 - 130	20
% Dibromofluoromethane	104	%	100	102	2.0				70 - 130	20
% Toluene-d8	102	%	102	101	1.0				70 - 130	20

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits

Comment:

A LCS and LCS Duplicate were performed instead of a matrix spike and matrix spike duplicate.

Additional 8260 criteria: 10% of compounds can be outside of acceptance criteria as long as recovery is 10%.
The RPD criteria for the LCS/LCSD is 20%,
The MS/MSD RPD criteria is listed above.

QA/QC Batch 546288 (ug/L), QC Sample No: CG77564 (CG76032 (100X) , CG76037 (100X) , CG76043 (5X) , CG76044 (100X) , CG76045 (100X))

Volatiles - Ground Water

1,1,1,2-Tetrachloroethane	ND	1.0	92	91	1.1				70 - 130	20
1,1,1-Trichloroethane	ND	1.0	84	82	2.4				70 - 130	20
1,1,2,2-Tetrachloroethane	ND	0.50	89	93	4.4				70 - 130	20
1,1,2-Trichloroethane	ND	1.0	86	86	0.0				70 - 130	20
1,1-Dichloroethane	ND	1.0	87	83	4.7				70 - 130	20
1,1-Dichloroethene	ND	1.0	93	81	13.8				70 - 130	20
1,1-Dichloropropene	ND	1.0	91	88	3.4				70 - 130	20
1,2,3-Trichlorobenzene	ND	1.0	92	92	0.0				70 - 130	20
1,2,3-Trichloropropane	ND	1.0	82	85	3.6				70 - 130	20
1,2,4-Trichlorobenzene	ND	1.0	92	92	0.0				70 - 130	20
1,2,4-Trimethylbenzene	ND	1.0	93	90	3.3				70 - 130	20
1,2-Dibromo-3-chloropropane	ND	1.0	88	93	5.5				70 - 130	20
1,2-Dibromoethane	ND	1.0	89	91	2.2				70 - 130	20
1,2-Dichlorobenzene	ND	1.0	91	89	2.2				70 - 130	20
1,2-Dichloroethane	ND	1.0	87	87	0.0				70 - 130	20
1,2-Dichloropropane	ND	1.0	90	87	3.4				70 - 130	20
1,3,5-Trimethylbenzene	ND	1.0	94	92	2.2				70 - 130	20
1,3-Dichlorobenzene	ND	1.0	92	89	3.3				70 - 130	20
1,3-Dichloropropane	ND	1.0	88	88	0.0				70 - 130	20
1,4-Dichlorobenzene	ND	1.0	91	91	0.0				70 - 130	20
1,4-dioxane	ND	100	92	96	4.3				40 - 160	30
2,2-Dichloropropane	ND	1.0	89	85	4.6				70 - 130	20
2-Chlorotoluene	ND	1.0	92	90	2.2				70 - 130	20
2-Hexanone	ND	5.0	85	90	5.7				40 - 160	30
4-Chlorotoluene	ND	1.0	91	90	1.1				70 - 130	20
4-Methyl-2-pentanone	ND	5.0	84	89	5.8				40 - 160	30
Acetone	ND	5.0	83	84	1.2				40 - 160	30
Benzene	ND	0.70	88	86	2.3				70 - 130	20
Bromobenzene	ND	1.0	89	87	2.3				70 - 130	20
Bromochloromethane	ND	1.0	83	83	0.0				70 - 130	20
Bromodichloromethane	ND	0.50	90	88	2.2				70 - 130	20
Bromoform	ND	1.0	92	92	0.0				70 - 130	20
Bromomethane	ND	1.0	94	87	7.7				40 - 160	30
Carbon Disulfide	ND	1.0	94	79	17.3				70 - 130	20
Carbon tetrachloride	ND	1.0	98	82	17.8				70 - 130	20
Chlorobenzene	ND	1.0	90	88	2.2				70 - 130	20
Chloroethane	ND	1.0	93	80	15.0				70 - 130	20
Chloroform	ND	1.0	82	80	2.5				70 - 130	20
Chloromethane	ND	1.0	89	85	4.6				40 - 160	30
cis-1,2-Dichloroethene	ND	1.0	81	77	5.1				70 - 130	20
cis-1,3-Dichloropropene	ND	0.40	91	90	1.1				70 - 130	20
Dibromochloromethane	ND	0.50	95	94	1.1				70 - 130	20
Dibromomethane	ND	1.0	83	83	0.0				70 - 130	20
Dichlorodifluoromethane	ND	1.0	108	106	1.9				40 - 160	30

QA/QC Data

SDG I.D.: GCG76015

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits	
Di-isopropyl ether	ND	1.0	68	86	23.4				70 - 130	20	l,r
Ethyl ether	ND	1.0	90	80	11.8				70 - 130	20	
Ethyl tert-butyl ether	ND	1.0	88	88	0.0				70 - 130	20	
Ethylbenzene	ND	1.0	89	87	2.3				70 - 130	20	
Hexachlorobutadiene	ND	0.40	94	92	2.2				70 - 130	20	
Isopropylbenzene	ND	1.0	93	90	3.3				70 - 130	20	
m&p-Xylene	ND	1.0	91	88	3.4				70 - 130	20	
Methyl ethyl ketone	ND	5.0	77	87	12.2				40 - 160	30	
Methyl t-butyl ether (MTBE)	ND	1.0	82	79	3.7				70 - 130	20	
Methylene chloride	ND	1.0	91	79	14.1				70 - 130	20	
Naphthalene	ND	1.0	92	98	6.3				70 - 130	20	
n-Butylbenzene	ND	1.0	97	94	3.1				70 - 130	20	
n-Propylbenzene	ND	1.0	94	91	3.2				70 - 130	20	
o-Xylene	ND	1.0	93	89	4.4				70 - 130	20	
p-Isopropyltoluene	ND	1.0	98	95	3.1				70 - 130	20	
sec-Butylbenzene	ND	1.0	103	100	3.0				70 - 130	20	
Styrene	ND	1.0	93	90	3.3				70 - 130	20	
tert-amyl methyl ether	ND	1.0	92	91	1.1				70 - 130	20	
tert-Butylbenzene	ND	1.0	96	92	4.3				70 - 130	20	
Tetrachloroethene	ND	1.0	89	84	5.8				70 - 130	20	
Tetrahydrofuran (THF)	ND	2.5	77	85	9.9				70 - 130	20	
Toluene	ND	1.0	88	86	2.3				70 - 130	20	
trans-1,2-Dichloroethene	ND	1.0	97	87	10.9				70 - 130	20	
trans-1,3-Dichloropropene	ND	0.40	90	89	1.1				70 - 130	20	
Trichloroethene	ND	1.0	88	86	2.3				70 - 130	20	
Trichlorofluoromethane	ND	1.0	93	86	7.8				70 - 130	20	
Trichlorotrifluoroethane	ND	1.0	90	85	5.7				70 - 130	20	
Vinyl chloride	ND	1.0	98	92	6.3				70 - 130	20	
% 1,2-dichlorobenzene-d4	97	%	98	99	1.0				70 - 130	20	
% Bromofluorobenzene	96	%	101	100	1.0				70 - 130	20	
% Dibromofluoromethane	93	%	93	93	0.0				70 - 130	20	
% Toluene-d8	102	%	100	99	1.0				70 - 130	20	

Comment:

A LCS and LCS Duplicate were performed instead of a matrix spike and matrix spike duplicate.

Additional 8260 criteria: 10% of compounds can be outside of acceptance criteria as long as recovery is 10%.
The RPD criteria for the LCS/LCSD is 20%,
The MS/MSD RPD criteria is listed above.

QA/QC Batch 546396 (ug/L), QC Sample No: CG79150 (CG76030 (100X) , CG76031 (100X))

Volatiles - Ground Water

1,1,1,2-Tetrachloroethane	ND	1.0	93	96	3.2				70 - 130	20	
1,1,1-Trichloroethane	ND	1.0	90	92	2.2				70 - 130	20	
1,1,2,2-Tetrachloroethane	ND	0.50	105	107	1.9				70 - 130	20	
1,1,2-Trichloroethane	ND	1.0	91	92	1.1				70 - 130	20	
1,1-Dichloroethane	ND	1.0	89	92	3.3				70 - 130	20	
1,1-Dichloroethene	ND	1.0	91	92	1.1				70 - 130	20	
1,1-Dichloropropene	ND	1.0	95	98	3.1				70 - 130	20	
1,2,3-Trichlorobenzene	ND	1.0	98	101	3.0				70 - 130	20	
1,2,3-Trichloropropane	ND	1.0	96	98	2.1				70 - 130	20	
1,2,4-Trichlorobenzene	ND	1.0	96	98	2.1				70 - 130	20	
1,2,4-Trimethylbenzene	ND	1.0	96	100	4.1				70 - 130	20	
1,2-Dibromo-3-chloropropane	ND	1.0	105	109	3.7				70 - 130	20	
1,2-Dibromoethane	ND	1.0	98	99	1.0				70 - 130	20	

QA/QC Data

SDG I.D.: GCG76015

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits
1,2-Dichlorobenzene	ND	1.0	93	98	5.2				70 - 130	20
1,2-Dichloroethane	ND	1.0	93	95	2.1				70 - 130	20
1,2-Dichloropropane	ND	1.0	91	94	3.2				70 - 130	20
1,3,5-Trimethylbenzene	ND	1.0	98	101	3.0				70 - 130	20
1,3-Dichlorobenzene	ND	1.0	94	98	4.2				70 - 130	20
1,3-Dichloropropane	ND	1.0	97	99	2.0				70 - 130	20
1,4-Dichlorobenzene	ND	1.0	95	96	1.0				70 - 130	20
1,4-dioxane	ND	100	98	98	0.0				40 - 160	30
2,2-Dichloropropane	ND	1.0	85	86	1.2				70 - 130	20
2-Chlorotoluene	ND	1.0	94	98	4.2				70 - 130	20
2-Hexanone	ND	5.0	105	106	0.9				40 - 160	30
4-Chlorotoluene	ND	1.0	95	98	3.1				70 - 130	20
4-Methyl-2-pentanone	ND	5.0	103	102	1.0				40 - 160	30
Acetone	ND	5.0	97	96	1.0				40 - 160	30
Benzene	ND	0.70	92	93	1.1				70 - 130	20
Bromobenzene	ND	1.0	91	95	4.3				70 - 130	20
Bromochloromethane	ND	1.0	86	91	5.6				70 - 130	20
Bromodichloromethane	ND	0.50	93	95	2.1				70 - 130	20
Bromoform	ND	1.0	98	98	0.0				70 - 130	20
Bromomethane	ND	1.0	92	96	4.3				40 - 160	30
Carbon Disulfide	ND	1.0	85	86	1.2				70 - 130	20
Carbon tetrachloride	ND	1.0	102	105	2.9				70 - 130	20
Chlorobenzene	ND	1.0	93	95	2.1				70 - 130	20
Chloroethane	ND	1.0	88	91	3.4				70 - 130	20
Chloroform	ND	1.0	86	88	2.3				70 - 130	20
Chloromethane	ND	1.0	91	92	1.1				40 - 160	30
cis-1,2-Dichloroethene	ND	1.0	85	86	1.2				70 - 130	20
cis-1,3-Dichloropropene	ND	0.40	93	92	1.1				70 - 130	20
Dibromochloromethane	ND	0.50	100	101	1.0				70 - 130	20
Dibromomethane	ND	1.0	88	90	2.2				70 - 130	20
Dichlorodifluoromethane	ND	1.0	106	107	0.9				40 - 160	30
Di-isopropyl ether	ND	1.0	94	97	3.1				70 - 130	20
Ethyl ether	ND	1.0	91	93	2.2				70 - 130	20
Ethyl tert-butyl ether	ND	1.0	95	97	2.1				70 - 130	20
Ethylbenzene	ND	1.0	92	94	2.2				70 - 130	20
Hexachlorobutadiene	ND	0.40	96	100	4.1				70 - 130	20
Isopropylbenzene	ND	1.0	96	101	5.1				70 - 130	20
m&p-Xylene	ND	1.0	94	95	1.1				70 - 130	20
Methyl ethyl ketone	ND	5.0	104	103	1.0				40 - 160	30
Methyl t-butyl ether (MTBE)	ND	1.0	86	87	1.2				70 - 130	20
Methylene chloride	ND	1.0	82	83	1.2				70 - 130	20
Naphthalene	ND	1.0	109	109	0.0				70 - 130	20
n-Butylbenzene	ND	1.0	101	105	3.9				70 - 130	20
n-Propylbenzene	ND	1.0	96	101	5.1				70 - 130	20
o-Xylene	ND	1.0	95	96	1.0				70 - 130	20
p-Isopropyltoluene	ND	1.0	101	104	2.9				70 - 130	20
sec-Butylbenzene	ND	1.0	108	111	2.7				70 - 130	20
Styrene	ND	1.0	98	97	1.0				70 - 130	20
tert-amyl methyl ether	ND	1.0	96	98	2.1				70 - 130	20
tert-Butylbenzene	ND	1.0	98	103	5.0				70 - 130	20
Tetrachloroethene	ND	1.0	89	89	0.0				70 - 130	20
Tetrahydrofuran (THF)	ND	2.5	101	101	0.0				70 - 130	20
Toluene	ND	1.0	90	91	1.1				70 - 130	20

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits
trans-1,2-Dichloroethene	ND	1.0	90	90	0.0				70 - 130	20
trans-1,3-Dichloropropene	ND	0.40	93	93	0.0				70 - 130	20
Trichloroethene	ND	1.0	90	93	3.3				70 - 130	20
Trichlorofluoromethane	ND	1.0	100	102	2.0				70 - 130	20
Trichlorotrifluoroethane	ND	1.0	100	101	1.0				70 - 130	20
Vinyl chloride	ND	1.0	99	100	1.0				70 - 130	20
% 1,2-dichlorobenzene-d4	99	%	99	101	2.0				70 - 130	20
% Bromofluorobenzene	95	%	99	100	1.0				70 - 130	20
% Dibromofluoromethane	94	%	95	96	1.0				70 - 130	20
% Toluene-d8	101	%	100	99	1.0				70 - 130	20

Comment:

A LCS and LCS Duplicate were performed instead of a matrix spike and matrix spike duplicate.

Additional 8260 criteria: 10% of compounds can be outside of acceptance criteria as long as recovery is 10%.
The RPD criteria for the LCS/LCSD is 20%,
The MS/MSD RPD criteria is listed above.

QA/QC Batch 546836 (ug/L), QC Sample No: CG80056 (CG76042 (50X))

Volatiles - Ground Water

Trichloroethene	ND	1.0	88	86	2.3				70 - 130	20
% 1,2-dichlorobenzene-d4	101	%	99	99	0.0				70 - 130	20
% Bromofluorobenzene	100	%	104	105	1.0				70 - 130	20
% Dibromofluoromethane	96	%	96	93	3.2				70 - 130	20
% Toluene-d8	104	%	101	100	1.0				70 - 130	20

Comment:

A LCS and LCS Duplicate were performed instead of a matrix spike and matrix spike duplicate.

Additional 8260 criteria: 10% of compounds can be outside of acceptance criteria as long as recovery is 10%.
The RPD criteria for the LCS/LCSD is 20%,
The MS/MSD RPD criteria is listed above.

QA/QC Batch 546771 (ug/L), QC Sample No: CG81125 (CG76042 (5X, 20X))

Volatiles - Ground Water

1,1,1,2-Tetrachloroethane	ND	1.0	91	92	1.1	96	87	9.8	70 - 130	20
1,1,1-Trichloroethane	ND	1.0	87	91	4.5	101	94	7.2	70 - 130	20
1,1,2,2-Tetrachloroethane	ND	0.50	104	105	1.0	104	93	11.2	70 - 130	20
1,1,2-Trichloroethane	ND	1.0	92	93	1.1	93	86	7.8	70 - 130	20
1,1-Dichloroethane	ND	1.0	88	92	4.4	100	87	13.9	70 - 130	20
1,1-Dichloroethene	ND	1.0	84	87	3.5	101	101	0.0	70 - 130	20
1,1-Dichloropropene	ND	1.0	95	96	1.0	103	96	7.0	70 - 130	20
1,2,3-Trichlorobenzene	ND	1.0	95	95	0.0	98	90	8.5	70 - 130	20
1,2,3-Trichloropropane	ND	1.0	93	102	9.2	94	89	5.5	70 - 130	20
1,2,4-Trichlorobenzene	ND	1.0	91	92	1.1	97	89	8.6	70 - 130	20
1,2,4-Trimethylbenzene	ND	1.0	93	96	3.2	101	91	10.4	70 - 130	20
1,2-Dibromo-3-chloropropane	ND	1.0	100	100	0.0	96	84	13.3	70 - 130	20
1,2-Dibromoethane	ND	1.0	95	98	3.1	94	87	7.7	70 - 130	20
1,2-Dichlorobenzene	ND	1.0	88	90	2.2	93	86	7.8	70 - 130	20
1,2-Dichloroethane	ND	1.0	94	97	3.1	99	92	7.3	70 - 130	20
1,2-Dichloropropane	ND	1.0	94	96	2.1	100	92	8.3	70 - 130	20
1,3,5-Trimethylbenzene	ND	1.0	93	96	3.2	100	93	7.3	70 - 130	20
1,3-Dichlorobenzene	ND	1.0	90	92	2.2	94	87	7.7	70 - 130	20
1,3-Dichloropropane	ND	1.0	97	99	2.0	100	92	8.3	70 - 130	20
1,4-Dichlorobenzene	ND	1.0	89	91	2.2	94	87	7.7	70 - 130	20
1,4-dioxane	ND	100	99	101	2.0	103	97	6.0	40 - 160	30
2,2-Dichloropropane	ND	1.0	89	90	1.1	88	76	14.6	70 - 130	20

QA/QC Data

SDG I.D.: GCG76015

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits	
2-Chlorotoluene	ND	1.0	91	92	1.1	93	87	6.7	70 - 130	20	
2-Hexanone	ND	5.0	101	103	2.0	97	93	4.2	40 - 160	30	
4-Chlorotoluene	ND	1.0	91	92	1.1	92	86	6.7	70 - 130	20	
4-Methyl-2-pentanone	ND	5.0	100	104	3.9	99	91	8.4	40 - 160	30	
Acetone	ND	5.0	95	89	6.5	107	104	2.8	40 - 160	30	
Benzene	ND	0.70	92	95	3.2	100	91	9.4	70 - 130	20	
Bromobenzene	ND	1.0	88	90	2.2	88	82	7.1	70 - 130	20	
Bromochloromethane	ND	1.0	84	85	1.2	88	80	9.5	70 - 130	20	
Bromodichloromethane	ND	0.50	93	96	3.2	98	91	7.4	70 - 130	20	
Bromoform	ND	1.0	91	93	2.2	91	86	5.6	70 - 130	20	
Bromomethane	ND	1.0	91	91	0.0	82	91	10.4	40 - 160	30	
Carbon Disulfide	ND	1.0	81	80	1.2	95	99	4.1	70 - 130	20	
Carbon tetrachloride	ND	1.0	85	88	3.5	118	94	22.6	70 - 130	20	r
Chlorobenzene	ND	1.0	90	92	2.2	95	89	6.5	70 - 130	20	
Chloroethane	ND	1.0	94	95	1.1	113	114	0.9	70 - 130	20	
Chloroform	ND	1.0	86	90	4.5	98	88	10.8	70 - 130	20	
Chloromethane	ND	1.0	97	98	1.0	109	107	1.9	40 - 160	30	
cis-1,2-Dichloroethene	ND	1.0	82	84	2.4	NC	NC	NC	70 - 130	20	
cis-1,3-Dichloropropene	ND	0.40	95	96	1.0	92	85	7.9	70 - 130	20	
Dibromochloromethane	ND	0.50	95	97	2.1	94	90	4.3	70 - 130	20	
Dibromomethane	ND	1.0	90	89	1.1	91	83	9.2	70 - 130	20	
Dichlorodifluoromethane	ND	1.0	121	124	2.4	129	138	6.7	40 - 160	30	
Di-isopropyl ether	ND	1.0	91	96	5.3	97	71	31.0	70 - 130	20	r
Ethyl ether	ND	1.0	86	87	1.2	93	97	4.2	70 - 130	20	
Ethyl tert-butyl ether	ND	1.0	92	97	5.3	97	87	10.9	70 - 130	20	
Ethylbenzene	ND	1.0	91	90	1.1	96	90	6.5	70 - 130	20	
Hexachlorobutadiene	ND	0.40	95	95	0.0	105	97	7.9	70 - 130	20	
Isopropylbenzene	ND	1.0	92	92	0.0	94	89	5.5	70 - 130	20	
m&p-Xylene	ND	1.0	90	92	2.2	96	89	7.6	70 - 130	20	
Methyl ethyl ketone	ND	5.0	100	103	3.0	100	91	9.4	40 - 160	30	
Methyl t-butyl ether (MTBE)	ND	1.0	87	88	1.1	94	93	1.1	70 - 130	20	
Methylene chloride	ND	1.0	80	77	3.8	89	92	3.3	70 - 130	20	
Naphthalene	ND	1.0	102	102	0.0	100	92	8.3	70 - 130	20	
n-Butylbenzene	ND	1.0	99	101	2.0	110	100	9.5	70 - 130	20	
n-Propylbenzene	ND	1.0	93	93	0.0	96	90	6.5	70 - 130	20	
o-Xylene	ND	1.0	91	93	2.2	96	90	6.5	70 - 130	20	
p-Isopropyltoluene	ND	1.0	96	97	1.0	104	96	8.0	70 - 130	20	
sec-Butylbenzene	ND	1.0	102	104	1.9	112	105	6.5	70 - 130	20	
Styrene	ND	1.0	92	94	2.2	98	91	7.4	70 - 130	20	
tert-amyl methyl ether	ND	1.0	97	100	3.0	96	88	8.7	70 - 130	20	
tert-Butylbenzene	ND	1.0	93	95	2.1	101	94	7.2	70 - 130	20	
Tetrachloroethene	ND	1.0	86	85	1.2	97	90	7.5	70 - 130	20	
Tetrahydrofuran (THF)	ND	2.5	99	99	0.0	97	88	9.7	70 - 130	20	
Toluene	ND	1.0	89	91	2.2	96	89	7.6	70 - 130	20	
trans-1,2-Dichloroethene	ND	1.0	86	89	3.4	100	104	3.9	70 - 130	20	
trans-1,3-Dichloropropene	ND	0.40	95	96	1.0	93	86	7.8	70 - 130	20	
Trichlorofluoromethane	ND	1.0	99	101	2.0	131	122	7.1	70 - 130	20	m
Trichlorotrifluoroethane	ND	1.0	91	94	3.2	113	106	6.4	70 - 130	20	
Vinyl chloride	ND	1.0	95	97	2.1	111	114	2.7	70 - 130	20	
% 1,2-dichlorobenzene-d4	98	%	100	99	1.0	101	101	0.0	70 - 130	20	
% Bromofluorobenzene	101	%	103	104	1.0	107	105	1.9	70 - 130	20	
% Dibromofluoromethane	94	%	92	96	4.3	94	93	1.1	70 - 130	20	
% Toluene-d8	105	%	103	103	0.0	104	102	1.9	70 - 130	20	

QA/QC Data

SDG I.D.: GCG76015

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits
Comment:										
Additional 8260 criteria: 10% of compounds can be outside of acceptance criteria as long as recovery is 10%. The RPD criteria for the LCS/LCSD is 20%, The MS/MSD RPD criteria is listed above.										
QA/QC Batch 545550 (ug/L), QC Sample No: CG76041 (CG76016 (5X) , CG76027, CG76028 (5X) , CG76037 (5X) , CG76041)										
Volatile Petroleum Hydrocarbons - Ground Water										
Unadjusted C5-C8 Aliphatics (*1)	ND	100	87	89	2.3				70 - 130	25
Unadjusted C9-C12 Aliphatics (*1)	ND	100	91	97	6.4				70 - 130	25
C5-C8 Aliphatic Hydrocarbons *1,2	ND	100	87	89	2.3				70 - 130	25
C9-C12 Aliphatic Hydrocarbons *1,	ND	100	91	97	6.4				70 - 130	25
C9-C10 Aromatic Hydrocarbons *1	ND	100	96	98	2.1				70 - 130	25
Benzene	ND	1.0	87	89	2.3				70 - 130	25
Ethyl Benzene	ND	1.0	89	91	2.2				70 - 130	25
MTBE	ND	1.0	98	95	3.1				70 - 130	25
Naphthalene	ND	5.0	93	94	1.1				70 - 130	25
Toluene	ND	1.0	91	92	1.1				70 - 130	25
m,p-Xylenes	ND	2.0	92	93	1.1				70 - 130	25
o-Xylene	ND	1.0	88	90	2.2				70 - 130	25
Comment:										
A blank MS/MSD was analyzed with this batch.										

l = This parameter is outside laboratory LCS/LCSD specified recovery limits.
m = This parameter is outside laboratory MS/MSD specified recovery limits.
r = This parameter is outside laboratory RPD specified recovery limits.

If there are any questions regarding this data, please call Phoenix Client Services at extension 200.

RPD - Relative Percent Difference
LCS - Laboratory Control Sample
LCSD - Laboratory Control Sample Duplicate
MS - Matrix Spike
MS Dup - Matrix Spike Duplicate
NC - No Criteria
Intf - Interference

Phyllis Shiller, Laboratory Director
October 21, 2020

Wednesday, October 21, 2020

Criteria: MA: GW1, GW2, GW3

State: MA

Sample Criteria Exceedances Report

GCG76015 - AECOM-WILMINGTN

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units
CG76015	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.00033	0.00033	ug/L
CG76015	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.0075	0.0075	ug/L
CG76015	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.00075	0.00075	ug/L
CG76015	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	0.50	0.02	0.02	ug/L
CG76015	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	0.50	0.02	0.02	ug/L
CG76015	$MCPADD-WM	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	100	0.3	0.3	ug/L
CG76015	$MCPADD-WM	1,4-dioxane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	100	3	3	ug/L
CG76015	$MCPADD-WM	1,4-dioxane	MA / GROUNDWATER STANDARDS / GW-1	ND	100	0.3	0.3	ug/L
CG76016	$8260GWR-WI	Bromoform	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	10	4	4	ug/L
CG76016	$8260GWR-WI	trans-1,3-Dichloropropene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	10	0.47	0.47	ug/L
CG76016	$8260GWR-WI	Bromodichloromethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	10	3	3	ug/L
CG76016	$8260GWR-WI	Benzene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	10	5	5	ug/L
CG76016	$8260GWR-WI	2-Hexanone	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	100	38	38	ug/L
CG76016	$8260GWR-WI	Bromomethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	10	7	7	ug/L
CG76016	$8260GWR-WI	1,2-Dichloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	10	3	3	ug/L
CG76016	$8260GWR-WI	Dibromochloromethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	10	2	2	ug/L
CG76016	$8260GWR-WI	1,4-Dichlorobenzene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	10	5	5	ug/L
CG76016	$8260GWR-WI	Carbon tetrachloride	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	10	2	2	ug/L
CG76016	$8260GWR-WI	Tetrachloroethene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	3600	100	5	5	ug/L
CG76016	$8260GWR-WI	cis-1,2-Dichloroethene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	120	20	20	20	ug/L
CG76016	$8260GWR-WI	1,2-Dichloroethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	10	5	5	ug/L
CG76016	$8260GWR-WI	cis-1,3-Dichloropropene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	10	0.47	0.47	ug/L
CG76016	$8260GWR-WI	Trichloroethene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	4600	100	5	5	ug/L
CG76016	$8260GWR-WI	Methyl ethyl ketone	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	100	38	38	ug/L
CG76016	$8260GWR-WI	Dibromomethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	10	8.3	8.3	ug/L
CG76016	$8260GWR-WI	Hexachlorobutadiene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	10	0.6	0.6	ug/L
CG76016	$8260GWR-WI	Methylene chloride	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	20	5	5	ug/L
CG76016	$8260GWR-WI	1,1,2-Trichloroethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	10	5	5	ug/L
CG76016	$8260GWR-WI	Vinyl chloride	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	10	2	2	ug/L
CG76016	$8260GWR-WI	1,2,3-Trichlorobenzene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	10	7	7	ug/L
CG76016	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	10	0.00075	0.00075	ug/L
CG76016	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	10	0.00033	0.00033	ug/L
CG76016	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	10	0.0075	0.0075	ug/L
CG76016	$8260GWR-WI	1,1,2,2-Tetrachloroethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	10	2	2	ug/L
CG76016	$8260GWR-WI	1,1,1,2-Tetrachloroethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	10	5	5	ug/L
CG76016	$8260GWR-WI	Hexachlorobutadiene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	0.6	0.6	ug/L
CG76016	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	2	2	ug/L
CG76016	$8260GWR-WI	Bromomethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	7	7	ug/L
CG76016	$8260GWR-WI	1,1,1,2-Tetrachloroethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	5	5	ug/L
CG76016	$8260GWR-WI	Carbon tetrachloride	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	2	2	ug/L
CG76016	$8260GWR-WI	1,1,2-Trichloroethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	5	5	ug/L

Wednesday, October 21, 2020

Criteria: MA: GW1, GW2, GW3

State: MA

Sample Criteria Exceedances Report

GCG76015 - AECOM-WILMINGTN

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units
CG76016	$8260GWR-WI	1,1,2,2-Tetrachloroethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	2	2	ug/L
CG76016	$8260GWR-WI	1,1-Dichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	19	10	7	7	ug/L
CG76016	$8260GWR-WI	Dibromochloromethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	2	2	ug/L
CG76016	$8260GWR-WI	Bromoform	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	4	4	ug/L
CG76016	$8260GWR-WI	cis-1,2-Dichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	120	20	20	20	ug/L
CG76016	$8260GWR-WI	Methylene chloride	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	20	5	5	ug/L
CG76016	$8260GWR-WI	cis-1,3-Dichloropropene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	0.5	0.5	ug/L
CG76016	$8260GWR-WI	Tetrachloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	3600	100	5	5	ug/L
CG76016	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	2	2	ug/L
CG76016	$8260GWR-WI	1,2-Dichloroethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	5	5	ug/L
CG76016	$8260GWR-WI	Bromodichloromethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	3	3	ug/L
CG76016	$8260GWR-WI	trans-1,3-Dichloropropene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	0.5	0.5	ug/L
CG76016	$8260GWR-WI	1,4-Dichlorobenzene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	5	5	ug/L
CG76016	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	4600	100	5	5	ug/L
CG76016	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	0.02	0.02	ug/L
CG76016	$8260GWR-WI	1,2-Dichloropropane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	3	3	ug/L
CG76016	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	10	2	2	ug/L
CG76016	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	10	2	2	ug/L
CG76016	$8260GWR-WI	1,2-Dichloroethane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	10	5	5	ug/L
CG76016	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	4600	100	5	5	ug/L
CG76016	$8260GWR-WI	cis-1,3-Dichloropropene	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	10	5	5	ug/L
CG76016	$8260GWR-WI	1,1,2,2-Tetrachloroethane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	10	9	9	ug/L
CG76016	$8260GWR-WI	Tetrachloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	3600	100	50	50	ug/L
CG76016	$8260GWR-WI	1,2-Dichloropropane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	10	3	3	ug/L
CG76016	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	10	2	2	ug/L
CG76016	$8260GWR-WI	Carbon tetrachloride	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	10	2	2	ug/L
CG76016	$8260GWR-WI	Hexachlorobutadiene	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	10	1	1	ug/L
CG76016	$8260GWR-WI	Bromomethane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	10	7	7	ug/L
CG76016	$8260GWR-WI	trans-1,3-Dichloropropene	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	10	5	5	ug/L
CG76016	$8260GWR-WI	Bromodichloromethane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	10	6	6	ug/L
CG76016	$8260GWR-WI	cis-1,2-Dichloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	120	20	20	20	ug/L
CG76016	$8260GWR-WI	Vinyl chloride	MA / GROUNDWATER STANDARDS / GW-1	ND	10	2	2	ug/L
CG76016	$8260GWR-WI	Tetrachloroethene	MA / GROUNDWATER STANDARDS / GW-1	3600	100	5	5	ug/L
CG76016	$8260GWR-WI	Methylene chloride	MA / GROUNDWATER STANDARDS / GW-1	ND	20	5	5	ug/L
CG76016	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-1	4600	100	5	5	ug/L
CG76016	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	10	0.02	0.02	ug/L
CG76016	$8260GWR-WI	Hexachlorobutadiene	MA / GROUNDWATER STANDARDS / GW-1	ND	10	0.6	0.6	ug/L
CG76016	$8260GWR-WI	1,1,2,2-Tetrachloroethane	MA / GROUNDWATER STANDARDS / GW-1	ND	10	2	2	ug/L
CG76016	$8260GWR-WI	1,1,2-Trichloroethane	MA / GROUNDWATER STANDARDS / GW-1	ND	10	5	5	ug/L
CG76016	$8260GWR-WI	1,1,1,2-Tetrachloroethane	MA / GROUNDWATER STANDARDS / GW-1	ND	10	5	5	ug/L
CG76016	$8260GWR-WI	1,1-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-1	19	10	7	7	ug/L
CG76016	$8260GWR-WI	1,2-Dichloroethane	MA / GROUNDWATER STANDARDS / GW-1	ND	10	5	5	ug/L

Wednesday, October 21, 2020

Criteria: MA: GW1, GW2, GW3

State: MA

Sample Criteria Exceedances Report

GCG76015 - AECOM-WILMINGTN

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units
CG76016	$8260GWR-WI	1,2-Dichloropropane	MA / GROUNDWATER STANDARDS / GW-1	ND	10	5	5	ug/L
CG76016	$8260GWR-WI	1,4-Dichlorobenzene	MA / GROUNDWATER STANDARDS / GW-1	ND	10	5	5	ug/L
CG76016	$8260GWR-WI	Bromodichloromethane	MA / GROUNDWATER STANDARDS / GW-1	ND	10	3	3	ug/L
CG76016	$8260GWR-WI	Dibromochloromethane	MA / GROUNDWATER STANDARDS / GW-1	ND	10	2	2	ug/L
CG76016	$8260GWR-WI	Bromoform	MA / GROUNDWATER STANDARDS / GW-1	ND	10	4	4	ug/L
CG76016	$8260GWR-WI	cis-1,2-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-1	120	20	70	70	ug/L
CG76016	$8260GWR-WI	Carbon tetrachloride	MA / GROUNDWATER STANDARDS / GW-1	ND	10	5	5	ug/L
CG76016	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-2	4600	100	5	5	ug/L
CG76016	$8260GWR-WI	Vinyl chloride	MA / GROUNDWATER STANDARDS / GW-2	ND	10	2	2	ug/L
CG76016	$8260GWR-WI	Tetrachloroethene	MA / GROUNDWATER STANDARDS / GW-2	3600	100	50	50	ug/L
CG76016	$8260GWR-WI	1,1,2,2-Tetrachloroethane	MA / GROUNDWATER STANDARDS / GW-2	ND	10	9	9	ug/L
CG76016	$8260GWR-WI	Carbon tetrachloride	MA / GROUNDWATER STANDARDS / GW-2	ND	10	2	2	ug/L
CG76016	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-2	ND	10	2	2	ug/L
CG76016	$8260GWR-WI	Bromomethane	MA / GROUNDWATER STANDARDS / GW-2	ND	10	7	7	ug/L
CG76016	$8260GWR-WI	1,2-Dichloroethane	MA / GROUNDWATER STANDARDS / GW-2	ND	10	5	5	ug/L
CG76016	$8260GWR-WI	1,2-Dichloropropane	MA / GROUNDWATER STANDARDS / GW-2	ND	10	3	3	ug/L
CG76016	$8260GWR-WI	Bromodichloromethane	MA / GROUNDWATER STANDARDS / GW-2	ND	10	6	6	ug/L
CG76016	$8260GWR-WI	cis-1,2-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-2	120	20	20	20	ug/L
CG76016	$DIOX_LDL	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	25	0.20	0.3	0.3	ug/l
CG76016	$DIOX_LDL	1,4-dioxane	MA / CMR 310.40.1600 / GW-1 (mg/l)	25	0.20	3	3	ug/l
CG76016	$DIOX_LDL	1,4-dioxane	MA / GROUNDWATER STANDARDS / GW-1	25	0.20	0.3	0.3	ug/l
CG76016	$MCPADD-WM	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	2000	0.3	0.3	ug/L
CG76016	$VPHRANGE-	C5-C8 Aliphatic Hydrocarbons *1,2	MA / Client Specified Criteria / LOCKHEED WILMINGTO	1900	500	300	300	ug/L
CG76016	$VPHRANGE-	C5-C8 Aliphatic Hydrocarbons *1,2	MA / CMR 310.40.1600 / GW-1 (mg/l)	1900	500	300	300	ug/L
CG76016	$VPHRANGE-	C5-C8 Aliphatic Hydrocarbons *1,2	MA / GROUNDWATER STANDARDS / GW-1	1900	500	300	300	ug/L
CG76016	$VPHRANGE-	C9-C10 Aromatic Hydrocarbons *1	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	500	200	200	ug/L
CG76016	$VPHRANGE-	C9-C10 Aromatic Hydrocarbons *1	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	500	200	200	ug/L
CG76016	$VPHRANGE-	C9-C10 Aromatic Hydrocarbons *1	MA / GROUNDWATER STANDARDS / GW-1	ND	500	200	200	ug/L
CG76016	D-MN	Manganese (Dissolved)	MA / Client Specified Criteria / LOCKHEED WILMINGTO	0.612	0.001	0.43	0.43	mg/L
CG76016	MN-WM	Manganese	MA / Client Specified Criteria / LOCKHEED WILMINGTO	0.623	0.001	0.43	0.43	mg/L
CG76017	$8260GWR-WI	1,2-Dichloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	10	3	3	ug/L
CG76017	$8260GWR-WI	Tetrachloroethene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	1400	20	5	5	ug/L
CG76017	$8260GWR-WI	1,1,1,2-Tetrachloroethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	10	5	5	ug/L
CG76017	$8260GWR-WI	Bromoform	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	10	4	4	ug/L
CG76017	$8260GWR-WI	Methylene chloride	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	20	5	5	ug/L
CG76017	$8260GWR-WI	1,2-Dichloroethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	10	5	5	ug/L
CG76017	$8260GWR-WI	Trichloroethene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	1800	100	5	5	ug/L
CG76017	$8260GWR-WI	Vinyl chloride	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	10	2	2	ug/L
CG76017	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	10	0.0075	0.0075	ug/L
CG76017	$8260GWR-WI	Dibromochloromethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	10	2	2	ug/L
CG76017	$8260GWR-WI	Bromodichloromethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	10	3	3	ug/L

Wednesday, October 21, 2020

Criteria: MA: GW1, GW2, GW3

State: MA

Sample Criteria Exceedances Report

GCG76015 - AECOM-WILMINGTN

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units
CG76017	$8260GWR-WI	Hexachlorobutadiene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	10	0.6	0.6	ug/L
CG76017	$8260GWR-WI	1,4-Dichlorobenzene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	10	5	5	ug/L
CG76017	$8260GWR-WI	Dibromomethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	10	8.3	8.3	ug/L
CG76017	$8260GWR-WI	2-Hexanone	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	100	38	38	ug/L
CG76017	$8260GWR-WI	Methyl ethyl ketone	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	100	38	38	ug/L
CG76017	$8260GWR-WI	1,1,2-Trichloroethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	10	5	5	ug/L
CG76017	$8260GWR-WI	Benzene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	10	5	5	ug/L
CG76017	$8260GWR-WI	1,1,2,2-Tetrachloroethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	10	2	2	ug/L
CG76017	$8260GWR-WI	Carbon tetrachloride	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	10	2	2	ug/L
CG76017	$8260GWR-WI	trans-1,3-Dichloropropene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	10	0.47	0.47	ug/L
CG76017	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	10	0.00033	0.00033	ug/L
CG76017	$8260GWR-WI	cis-1,3-Dichloropropene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	10	0.47	0.47	ug/L
CG76017	$8260GWR-WI	cis-1,2-Dichloroethene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	130	20	20	20	ug/L
CG76017	$8260GWR-WI	Bromomethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	10	7	7	ug/L
CG76017	$8260GWR-WI	1,2,3-Trichlorobenzene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	10	7	7	ug/L
CG76017	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	10	0.00075	0.00075	ug/L
CG76017	$8260GWR-WI	Bromomethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	7	7	ug/L
CG76017	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	2	2	ug/L
CG76017	$8260GWR-WI	Bromoform	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	4	4	ug/L
CG76017	$8260GWR-WI	Bromodichloromethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	3	3	ug/L
CG76017	$8260GWR-WI	cis-1,3-Dichloropropene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	0.5	0.5	ug/L
CG76017	$8260GWR-WI	Carbon tetrachloride	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	2	2	ug/L
CG76017	$8260GWR-WI	Dibromochloromethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	2	2	ug/L
CG76017	$8260GWR-WI	cis-1,2-Dichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	130	20	20	20	ug/L
CG76017	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	2	2	ug/L
CG76017	$8260GWR-WI	Tetrachloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	1400	20	5	5	ug/L
CG76017	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	1800	100	5	5	ug/L
CG76017	$8260GWR-WI	1,1,1,2-Tetrachloroethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	5	5	ug/L
CG76017	$8260GWR-WI	1,1,2,2-Tetrachloroethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	2	2	ug/L
CG76017	$8260GWR-WI	trans-1,3-Dichloropropene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	0.5	0.5	ug/L
CG76017	$8260GWR-WI	1,1-Dichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	11	10	7	7	ug/L
CG76017	$8260GWR-WI	Benzene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	5	5	ug/L
CG76017	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	0.02	0.02	ug/L
CG76017	$8260GWR-WI	Methylene chloride	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	20	5	5	ug/L
CG76017	$8260GWR-WI	1,2-Dichloroethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	5	5	ug/L
CG76017	$8260GWR-WI	1,2-Dichloropropane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	3	3	ug/L
CG76017	$8260GWR-WI	Hexachlorobutadiene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	0.6	0.6	ug/L
CG76017	$8260GWR-WI	1,4-Dichlorobenzene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	5	5	ug/L
CG76017	$8260GWR-WI	1,1,2-Trichloroethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	5	5	ug/L
CG76017	$8260GWR-WI	cis-1,3-Dichloropropene	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	10	5	5	ug/L
CG76017	$8260GWR-WI	Tetrachloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	1400	20	50	50	ug/L
CG76017	$8260GWR-WI	1,2-Dichloroethane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	10	5	5	ug/L

Wednesday, October 21, 2020

Criteria: MA: GW1, GW2, GW3

State: MA

Sample Criteria Exceedances Report

GCG76015 - AECOM-WILMINGTN

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units
CG76017	$8260GWR-WI	Hexachlorobutadiene	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	10	1	1	ug/L
CG76017	$8260GWR-WI	trans-1,3-Dichloropropene	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	10	5	5	ug/L
CG76017	$8260GWR-WI	cis-1,2-Dichloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	130	20	20	20	ug/L
CG76017	$8260GWR-WI	Bromodichloromethane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	10	6	6	ug/L
CG76017	$8260GWR-WI	Carbon tetrachloride	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	10	2	2	ug/L
CG76017	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	10	2	2	ug/L
CG76017	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	1800	100	5	5	ug/L
CG76017	$8260GWR-WI	Bromomethane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	10	7	7	ug/L
CG76017	$8260GWR-WI	1,1,2,2-Tetrachloroethane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	10	9	9	ug/L
CG76017	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	10	2	2	ug/L
CG76017	$8260GWR-WI	1,2-Dichloropropane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	10	3	3	ug/L
CG76017	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	10	2	2	ug/L
CG76017	$8260GWR-WI	1,1-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-1	11	10	7	7	ug/L
CG76017	$8260GWR-WI	1,1,2-Trichloroethane	MA / GROUNDWATER STANDARDS / GW-1	ND	10	5	5	ug/L
CG76017	$8260GWR-WI	Tetrachloroethene	MA / GROUNDWATER STANDARDS / GW-1	1400	20	5	5	ug/L
CG76017	$8260GWR-WI	Methylene chloride	MA / GROUNDWATER STANDARDS / GW-1	ND	20	5	5	ug/L
CG76017	$8260GWR-WI	1,1,2,2-Tetrachloroethane	MA / GROUNDWATER STANDARDS / GW-1	ND	10	2	2	ug/L
CG76017	$8260GWR-WI	1,1,1,2-Tetrachloroethane	MA / GROUNDWATER STANDARDS / GW-1	ND	10	5	5	ug/L
CG76017	$8260GWR-WI	Vinyl chloride	MA / GROUNDWATER STANDARDS / GW-1	ND	10	2	2	ug/L
CG76017	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-1	1800	100	5	5	ug/L
CG76017	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	10	0.02	0.02	ug/L
CG76017	$8260GWR-WI	1,2-Dichloroethane	MA / GROUNDWATER STANDARDS / GW-1	ND	10	5	5	ug/L
CG76017	$8260GWR-WI	Hexachlorobutadiene	MA / GROUNDWATER STANDARDS / GW-1	ND	10	0.6	0.6	ug/L
CG76017	$8260GWR-WI	Carbon tetrachloride	MA / GROUNDWATER STANDARDS / GW-1	ND	10	5	5	ug/L
CG76017	$8260GWR-WI	1,2-Dichloropropane	MA / GROUNDWATER STANDARDS / GW-1	ND	10	5	5	ug/L
CG76017	$8260GWR-WI	1,4-Dichlorobenzene	MA / GROUNDWATER STANDARDS / GW-1	ND	10	5	5	ug/L
CG76017	$8260GWR-WI	Dibromochloromethane	MA / GROUNDWATER STANDARDS / GW-1	ND	10	2	2	ug/L
CG76017	$8260GWR-WI	Benzene	MA / GROUNDWATER STANDARDS / GW-1	ND	10	5	5	ug/L
CG76017	$8260GWR-WI	Bromodichloromethane	MA / GROUNDWATER STANDARDS / GW-1	ND	10	3	3	ug/L
CG76017	$8260GWR-WI	Bromoform	MA / GROUNDWATER STANDARDS / GW-1	ND	10	4	4	ug/L
CG76017	$8260GWR-WI	cis-1,2-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-1	130	20	70	70	ug/L
CG76017	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-2	1800	100	5	5	ug/L
CG76017	$8260GWR-WI	Vinyl chloride	MA / GROUNDWATER STANDARDS / GW-2	ND	10	2	2	ug/L
CG76017	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-2	ND	10	2	2	ug/L
CG76017	$8260GWR-WI	cis-1,2-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-2	130	20	20	20	ug/L
CG76017	$8260GWR-WI	Carbon tetrachloride	MA / GROUNDWATER STANDARDS / GW-2	ND	10	2	2	ug/L
CG76017	$8260GWR-WI	Bromomethane	MA / GROUNDWATER STANDARDS / GW-2	ND	10	7	7	ug/L
CG76017	$8260GWR-WI	Bromodichloromethane	MA / GROUNDWATER STANDARDS / GW-2	ND	10	6	6	ug/L
CG76017	$8260GWR-WI	1,2-Dichloropropane	MA / GROUNDWATER STANDARDS / GW-2	ND	10	3	3	ug/L
CG76017	$8260GWR-WI	1,2-Dichloroethane	MA / GROUNDWATER STANDARDS / GW-2	ND	10	5	5	ug/L
CG76017	$8260GWR-WI	1,1,2,2-Tetrachloroethane	MA / GROUNDWATER STANDARDS / GW-2	ND	10	9	9	ug/L
CG76017	$8260GWR-WI	Tetrachloroethene	MA / GROUNDWATER STANDARDS / GW-2	1400	20	50	50	ug/L

Wednesday, October 21, 2020

Criteria: MA: GW1, GW2, GW3

State: MA

Sample Criteria Exceedances Report

GCG76015 - AECOM-WILMINGTN

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units
CG76017	$MCPADD-WM	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	2000	0.3	0.3	ug/L
CG76017	$MCPADD-WM	1,4-dioxane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	2000	3	3	ug/L
CG76017	$MCPADD-WM	1,4-dioxane	MA / GROUNDWATER STANDARDS / GW-1	ND	2000	0.3	0.3	ug/L
CG76018	$8260GWR-WI	trans-1,3-Dichloropropene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	2.5	0.47	0.47	ug/L
CG76018	$8260GWR-WI	Dibromochloromethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	2.5	2	2	ug/L
CG76018	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	2.5	0.00075	0.00075	ug/L
CG76018	$8260GWR-WI	Hexachlorobutadiene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	2.5	0.6	0.6	ug/L
CG76018	$8260GWR-WI	cis-1,2-Dichloroethene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	61	5.0	20	20	ug/L
CG76018	$8260GWR-WI	Tetrachloroethene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	310	5.0	5	5	ug/L
CG76018	$8260GWR-WI	Carbon tetrachloride	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	2.5	2	2	ug/L
CG76018	$8260GWR-WI	Trichloroethene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	490	5.0	5	5	ug/L
CG76018	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	2.5	0.0075	0.0075	ug/L
CG76018	$8260GWR-WI	cis-1,3-Dichloropropene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	2.5	0.47	0.47	ug/L
CG76018	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	2.5	0.00033	0.00033	ug/L
CG76018	$8260GWR-WI	Vinyl chloride	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	2.5	2	2	ug/L
CG76018	$8260GWR-WI	1,1,2,2-Tetrachloroethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	2.5	2	2	ug/L
CG76018	$8260GWR-WI	trans-1,3-Dichloropropene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	2.5	0.5	0.5	ug/L
CG76018	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	490	5.0	5	5	ug/L
CG76018	$8260GWR-WI	Tetrachloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	310	5.0	5	5	ug/L
CG76018	$8260GWR-WI	Hexachlorobutadiene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	2.5	0.6	0.6	ug/L
CG76018	$8260GWR-WI	Dibromochloromethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	2.5	2	2	ug/L
CG76018	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	2.5	2	2	ug/L
CG76018	$8260GWR-WI	cis-1,3-Dichloropropene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	2.5	0.5	0.5	ug/L
CG76018	$8260GWR-WI	1,1,2,2-Tetrachloroethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	2.5	2	2	ug/L
CG76018	$8260GWR-WI	cis-1,2-Dichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	61	5.0	20	20	ug/L
CG76018	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	2.5	2	2	ug/L
CG76018	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	2.5	0.02	0.02	ug/L
CG76018	$8260GWR-WI	Carbon tetrachloride	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	2.5	2	2	ug/L
CG76018	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	2.5	2	2	ug/L
CG76018	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	490	5.0	5	5	ug/L
CG76018	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	2.5	2	2	ug/L
CG76018	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	2.5	2	2	ug/L
CG76018	$8260GWR-WI	Tetrachloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	310	5.0	50	50	ug/L
CG76018	$8260GWR-WI	Carbon tetrachloride	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	2.5	2	2	ug/L
CG76018	$8260GWR-WI	Hexachlorobutadiene	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	2.5	1	1	ug/L
CG76018	$8260GWR-WI	cis-1,2-Dichloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	61	5.0	20	20	ug/L
CG76018	$8260GWR-WI	1,1,2,2-Tetrachloroethane	MA / GROUNDWATER STANDARDS / GW-1	ND	2.5	2	2	ug/L
CG76018	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	2.5	0.02	0.02	ug/L
CG76018	$8260GWR-WI	Hexachlorobutadiene	MA / GROUNDWATER STANDARDS / GW-1	ND	2.5	0.6	0.6	ug/L
CG76018	$8260GWR-WI	Dibromochloromethane	MA / GROUNDWATER STANDARDS / GW-1	ND	2.5	2	2	ug/L
CG76018	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-1	490	5.0	5	5	ug/L

Wednesday, October 21, 2020

Criteria: MA: GW1, GW2, GW3

State: MA

Sample Criteria Exceedances Report

GCG76015 - AECOM-WILMINGTN

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units
CG76018	$8260GWR-WI	Vinyl chloride	MA / GROUNDWATER STANDARDS / GW-1	ND	2.5	2	2	ug/L
CG76018	$8260GWR-WI	Tetrachloroethene	MA / GROUNDWATER STANDARDS / GW-1	310	5.0	5	5	ug/L
CG76018	$8260GWR-WI	Vinyl chloride	MA / GROUNDWATER STANDARDS / GW-2	ND	2.5	2	2	ug/L
CG76018	$8260GWR-WI	cis-1,2-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-2	61	5.0	20	20	ug/L
CG76018	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-2	490	5.0	5	5	ug/L
CG76018	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-2	ND	2.5	2	2	ug/L
CG76018	$8260GWR-WI	Carbon tetrachloride	MA / GROUNDWATER STANDARDS / GW-2	ND	2.5	2	2	ug/L
CG76018	$8260GWR-WI	Tetrachloroethene	MA / GROUNDWATER STANDARDS / GW-2	310	5.0	50	50	ug/L
CG76018	$DIOX_LDL	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	5.2	0.20	0.3	0.3	ug/l
CG76018	$DIOX_LDL	1,4-dioxane	MA / CMR 310.40.1600 / GW-1 (mg/l)	5.2	0.20	3	3	ug/l
CG76018	$DIOX_LDL	1,4-dioxane	MA / GROUNDWATER STANDARDS / GW-1	5.2	0.20	0.3	0.3	ug/l
CG76018	$MCPADD-WM	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	500	0.3	0.3	ug/L
CG76019	$8260GWR-WI	cis-1,2-Dichloroethene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	170	5.0	20	20	ug/L
CG76019	$8260GWR-WI	cis-1,3-Dichloropropene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	2.5	0.47	0.47	ug/L
CG76019	$8260GWR-WI	Dibromochloromethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	2.5	2	2	ug/L
CG76019	$8260GWR-WI	Hexachlorobutadiene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	2.5	0.6	0.6	ug/L
CG76019	$8260GWR-WI	Vinyl chloride	MA / Client Specified Criteria / LOCKHEED WILMINGTO	12	5.0	2	2	ug/L
CG76019	$8260GWR-WI	trans-1,3-Dichloropropene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	2.5	0.47	0.47	ug/L
CG76019	$8260GWR-WI	Trichloroethene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	370	5.0	5	5	ug/L
CG76019	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	2.5	0.00033	0.00033	ug/L
CG76019	$8260GWR-WI	Carbon tetrachloride	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	2.5	2	2	ug/L
CG76019	$8260GWR-WI	Tetrachloroethene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	93	5.0	5	5	ug/L
CG76019	$8260GWR-WI	1,1,2,2-Tetrachloroethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	2.5	2	2	ug/L
CG76019	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	2.5	0.00075	0.00075	ug/L
CG76019	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	2.5	0.0075	0.0075	ug/L
CG76019	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	370	5.0	5	5	ug/L
CG76019	$8260GWR-WI	cis-1,2-Dichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	170	5.0	20	20	ug/L
CG76019	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-1 (mg/l)	12	5.0	2	2	ug/L
CG76019	$8260GWR-WI	trans-1,3-Dichloropropene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	2.5	0.5	0.5	ug/L
CG76019	$8260GWR-WI	Hexachlorobutadiene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	2.5	0.6	0.6	ug/L
CG76019	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-1 (mg/l)	12	5.0	2	2	ug/L
CG76019	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	2.5	0.02	0.02	ug/L
CG76019	$8260GWR-WI	Carbon tetrachloride	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	2.5	2	2	ug/L
CG76019	$8260GWR-WI	Dibromochloromethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	2.5	2	2	ug/L
CG76019	$8260GWR-WI	Tetrachloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	93	5.0	5	5	ug/L
CG76019	$8260GWR-WI	1,1,2,2-Tetrachloroethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	2.5	2	2	ug/L
CG76019	$8260GWR-WI	cis-1,3-Dichloropropene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	2.5	0.5	0.5	ug/L
CG76019	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	370	5.0	5	5	ug/L
CG76019	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-2 (mg/l)	12	5.0	2	2	ug/L
CG76019	$8260GWR-WI	Tetrachloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	93	5.0	50	50	ug/L
CG76019	$8260GWR-WI	Hexachlorobutadiene	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	2.5	1	1	ug/L

Wednesday, October 21, 2020

Criteria: MA: GW1, GW2, GW3

State: MA

Sample Criteria Exceedances Report

GCG76015 - AECOM-WILMINGTN

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units
CG76019	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-2 (mg/l)	12	5.0	2	2	ug/L
CG76019	$8260GWR-WI	cis-1,2-Dichloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	170	5.0	20	20	ug/L
CG76019	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	2.5	2	2	ug/L
CG76019	$8260GWR-WI	Carbon tetrachloride	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	2.5	2	2	ug/L
CG76019	$8260GWR-WI	1,1,2,2-Tetrachloroethane	MA / GROUNDWATER STANDARDS / GW-1	ND	2.5	2	2	ug/L
CG76019	$8260GWR-WI	Tetrachloroethene	MA / GROUNDWATER STANDARDS / GW-1	93	5.0	5	5	ug/L
CG76019	$8260GWR-WI	Dibromochloromethane	MA / GROUNDWATER STANDARDS / GW-1	ND	2.5	2	2	ug/L
CG76019	$8260GWR-WI	cis-1,2-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-1	170	5.0	70	70	ug/L
CG76019	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	2.5	0.02	0.02	ug/L
CG76019	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-1	370	5.0	5	5	ug/L
CG76019	$8260GWR-WI	Vinyl chloride	MA / GROUNDWATER STANDARDS / GW-1	12	5.0	2	2	ug/L
CG76019	$8260GWR-WI	Hexachlorobutadiene	MA / GROUNDWATER STANDARDS / GW-1	ND	2.5	0.6	0.6	ug/L
CG76019	$8260GWR-WI	Vinyl chloride	MA / GROUNDWATER STANDARDS / GW-2	12	5.0	2	2	ug/L
CG76019	$8260GWR-WI	Tetrachloroethene	MA / GROUNDWATER STANDARDS / GW-2	93	5.0	50	50	ug/L
CG76019	$8260GWR-WI	cis-1,2-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-2	170	5.0	20	20	ug/L
CG76019	$8260GWR-WI	Carbon tetrachloride	MA / GROUNDWATER STANDARDS / GW-2	ND	2.5	2	2	ug/L
CG76019	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-2	ND	2.5	2	2	ug/L
CG76019	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-2	370	5.0	5	5	ug/L
CG76019	$DIOX_LDL	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	6.2	0.20	0.3	0.3	ug/l
CG76019	$DIOX_LDL	1,4-dioxane	MA / CMR 310.40.1600 / GW-1 (mg/l)	6.2	0.20	3	3	ug/l
CG76019	$DIOX_LDL	1,4-dioxane	MA / GROUNDWATER STANDARDS / GW-1	6.2	0.20	0.3	0.3	ug/l
CG76019	$MCPADD-WM	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	500	0.3	0.3	ug/L
CG76020	$8260GWR-WI	Trichloroethene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	27	1.0	5	5	ug/L
CG76020	$8260GWR-WI	Vinyl chloride	MA / Client Specified Criteria / LOCKHEED WILMINGTO	11	1.0	2	2	ug/L
CG76020	$8260GWR-WI	cis-1,2-Dichloroethene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	30	1.0	20	20	ug/L
CG76020	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.0075	0.0075	ug/L
CG76020	$8260GWR-WI	Tetrachloroethene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	7.0	1.0	5	5	ug/L
CG76020	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.00075	0.00075	ug/L
CG76020	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.00033	0.00033	ug/L
CG76020	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-1 (mg/l)	11	1.0	2	2	ug/L
CG76020	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	27	1.0	5	5	ug/L
CG76020	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-1 (mg/l)	11	1.0	2	2	ug/L
CG76020	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	0.50	0.02	0.02	ug/L
CG76020	$8260GWR-WI	Tetrachloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	7.0	1.0	5	5	ug/L
CG76020	$8260GWR-WI	cis-1,2-Dichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	30	1.0	20	20	ug/L
CG76020	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-2 (mg/l)	11	1.0	2	2	ug/L
CG76020	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-2 (mg/l)	11	1.0	2	2	ug/L
CG76020	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	27	1.0	5	5	ug/L
CG76020	$8260GWR-WI	cis-1,2-Dichloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	30	1.0	20	20	ug/L
CG76020	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-1	27	1.0	5	5	ug/L
CG76020	$8260GWR-WI	Vinyl chloride	MA / GROUNDWATER STANDARDS / GW-1	11	1.0	2	2	ug/L

Wednesday, October 21, 2020

Criteria: MA: GW1, GW2, GW3

State: MA

Sample Criteria Exceedances Report

GCG76015 - AECOM-WILMINGTN

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units
CG76020	$8260GWR-WI	Tetrachloroethene	MA / GROUNDWATER STANDARDS / GW-1	7.0	1.0	5	5	ug/L
CG76020	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	0.50	0.02	0.02	ug/L
CG76020	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-2	27	1.0	5	5	ug/L
CG76020	$8260GWR-WI	cis-1,2-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-2	30	1.0	20	20	ug/L
CG76020	$8260GWR-WI	Vinyl chloride	MA / GROUNDWATER STANDARDS / GW-2	11	1.0	2	2	ug/L
CG76020	$DIOX_LDL	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	4.7	0.20	0.3	0.3	ug/l
CG76020	$DIOX_LDL	1,4-dioxane	MA / CMR 310.40.1600 / GW-1 (mg/l)	4.7	0.20	3	3	ug/l
CG76020	$DIOX_LDL	1,4-dioxane	MA / GROUNDWATER STANDARDS / GW-1	4.7	0.20	0.3	0.3	ug/l
CG76020	$MCPADD-WM	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	100	0.3	0.3	ug/L
CG76021	$8260GWR-WI	Trichloroethene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	75	1.0	5	5	ug/L
CG76021	$8260GWR-WI	Tetrachloroethene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	42	1.0	5	5	ug/L
CG76021	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.00033	0.00033	ug/L
CG76021	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.00075	0.00075	ug/L
CG76021	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.0075	0.0075	ug/L
CG76021	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	75	1.0	5	5	ug/L
CG76021	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	0.50	0.02	0.02	ug/L
CG76021	$8260GWR-WI	Tetrachloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	42	1.0	5	5	ug/L
CG76021	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	75	1.0	5	5	ug/L
CG76021	$8260GWR-WI	Tetrachloroethene	MA / GROUNDWATER STANDARDS / GW-1	42	1.0	5	5	ug/L
CG76021	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	0.50	0.02	0.02	ug/L
CG76021	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-1	75	1.0	5	5	ug/L
CG76021	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-2	75	1.0	5	5	ug/L
CG76021	$DIOX_LDL	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	0.78	0.20	0.3	0.3	ug/l
CG76021	$DIOX_LDL	1,4-dioxane	MA / GROUNDWATER STANDARDS / GW-1	0.78	0.20	0.3	0.3	ug/l
CG76021	$MCPADD-WM	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	100	0.3	0.3	ug/L
CG76021	D-MN	Manganese (Dissolved)	MA / Client Specified Criteria / LOCKHEED WILMINGTO	2.01	0.001	0.43	0.43	mg/L
CG76021	MN-WM	Manganese	MA / Client Specified Criteria / LOCKHEED WILMINGTO	2.33	0.010	0.43	0.43	mg/L
CG76022	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.00075	0.00075	ug/L
CG76022	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.00033	0.00033	ug/L
CG76022	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.0075	0.0075	ug/L
CG76022	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	0.50	0.02	0.02	ug/L
CG76022	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	0.50	0.02	0.02	ug/L
CG76022	$MCPADD-WM	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	100	0.3	0.3	ug/L
CG76022	$MCPADD-WM	1,4-dioxane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	100	3	3	ug/L
CG76022	$MCPADD-WM	1,4-dioxane	MA / GROUNDWATER STANDARDS / GW-1	ND	100	0.3	0.3	ug/L
CG76022	AS-WM	Arsenic	MA / Client Specified Criteria / LOCKHEED WILMINGTO	0.172	0.004	0.01	0.01	mg/L
CG76022	AS-WM	Arsenic	MA / CMR 310.40.1600 / GW-1 (mg/l)	0.172	0.004	0.01	0.01	mg/L
CG76022	AS-WM	Arsenic	MA / GROUNDWATER STANDARDS / GW-1	0.172	0.004	0.01	0.01	mg/L
CG76022	D-AS	Arsenic (Dissolved)	MA / Client Specified Criteria / LOCKHEED WILMINGTO	0.160	0.004	0.01	0.01	mg/L
CG76022	D-AS	Arsenic (Dissolved)	MA / CMR 310.40.1600 / GW-1 (mg/l)	0.160	0.004	0.01	0.01	mg/L

Wednesday, October 21, 2020

Criteria: MA: GW1, GW2, GW3

State: MA

Sample Criteria Exceedances Report

GCG76015 - AECOM-WILMINGTN

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units
CG76022	D-AS	Arsenic (Dissolved)	MA / GROUNDWATER STANDARDS / GW-1	0.160	0.004	0.01	0.01	mg/L
CG76022	D-MN	Manganese (Dissolved)	MA / Client Specified Criteria / LOCKHEED WILMINGTO	1.93	0.001	0.43	0.43	mg/L
CG76022	FE-WM	Iron	MA / Client Specified Criteria / LOCKHEED WILMINGTO	15.5	0.010	14	14	mg/L
CG76022	MN-WM	Manganese	MA / Client Specified Criteria / LOCKHEED WILMINGTO	2.06	0.010	0.43	0.43	mg/L
CG76023	$8260GWR-WI	1,2-Dichloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	10	3	3	ug/L
CG76023	$8260GWR-WI	Methyl ethyl ketone	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	100	38	38	ug/L
CG76023	$8260GWR-WI	Methylene chloride	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	20	5	5	ug/L
CG76023	$8260GWR-WI	1,2-Dichloroethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	10	5	5	ug/L
CG76023	$8260GWR-WI	Hexachlorobutadiene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	10	0.6	0.6	ug/L
CG76023	$8260GWR-WI	Dibromomethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	10	8.3	8.3	ug/L
CG76023	$8260GWR-WI	cis-1,3-Dichloropropene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	10	0.47	0.47	ug/L
CG76023	$8260GWR-WI	cis-1,2-Dichloroethene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	400	20	20	20	ug/L
CG76023	$8260GWR-WI	1,4-Dichlorobenzene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	10	5	5	ug/L
CG76023	$8260GWR-WI	Carbon tetrachloride	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	10	2	2	ug/L
CG76023	$8260GWR-WI	2-Hexanone	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	100	38	38	ug/L
CG76023	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	10	0.0075	0.0075	ug/L
CG76023	$8260GWR-WI	Bromomethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	10	7	7	ug/L
CG76023	$8260GWR-WI	Tetrachloroethene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	1100	20	5	5	ug/L
CG76023	$8260GWR-WI	Bromodichloromethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	10	3	3	ug/L
CG76023	$8260GWR-WI	Benzene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	10	5	5	ug/L
CG76023	$8260GWR-WI	Vinyl chloride	MA / Client Specified Criteria / LOCKHEED WILMINGTO	38	20	2	2	ug/L
CG76023	$8260GWR-WI	Bromoform	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	10	4	4	ug/L
CG76023	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	10	0.00075	0.00075	ug/L
CG76023	$8260GWR-WI	1,2,3-Trichlorobenzene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	10	7	7	ug/L
CG76023	$8260GWR-WI	trans-1,3-Dichloropropene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	10	0.47	0.47	ug/L
CG76023	$8260GWR-WI	1,1,1,2-Tetrachloroethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	10	5	5	ug/L
CG76023	$8260GWR-WI	1,1,2-Trichloroethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	10	5	5	ug/L
CG76023	$8260GWR-WI	Dibromochloromethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	10	2	2	ug/L
CG76023	$8260GWR-WI	Trichloroethene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	2200	50	5	5	ug/L
CG76023	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	10	0.00033	0.00033	ug/L
CG76023	$8260GWR-WI	1,1,2,2-Tetrachloroethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	10	2	2	ug/L
CG76023	$8260GWR-WI	Bromoform	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	4	4	ug/L
CG76023	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-1 (mg/l)	38	20	2	2	ug/L
CG76023	$8260GWR-WI	Bromomethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	7	7	ug/L
CG76023	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-1 (mg/l)	38	20	2	2	ug/L
CG76023	$8260GWR-WI	Carbon tetrachloride	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	2	2	ug/L
CG76023	$8260GWR-WI	Tetrachloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	1100	20	5	5	ug/L
CG76023	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	2200	50	5	5	ug/L
CG76023	$8260GWR-WI	cis-1,3-Dichloropropene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	0.5	0.5	ug/L
CG76023	$8260GWR-WI	Dibromochloromethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	2	2	ug/L
CG76023	$8260GWR-WI	trans-1,3-Dichloropropene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	0.5	0.5	ug/L

Wednesday, October 21, 2020

Criteria: MA: GW1, GW2, GW3

State: MA

Sample Criteria Exceedances Report

GCG76015 - AECOM-WILMINGTN

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units
CG76023	$8260GWR-WI	Hexachlorobutadiene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	0.6	0.6	ug/L
CG76023	$8260GWR-WI	Methylene chloride	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	20	5	5	ug/L
CG76023	$8260GWR-WI	cis-1,2-Dichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	400	20	20	20	ug/L
CG76023	$8260GWR-WI	1,4-Dichlorobenzene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	5	5	ug/L
CG76023	$8260GWR-WI	1,1,2,2-Tetrachloroethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	2	2	ug/L
CG76023	$8260GWR-WI	1,1,2-Trichloroethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	5	5	ug/L
CG76023	$8260GWR-WI	Bromodichloromethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	3	3	ug/L
CG76023	$8260GWR-WI	1,1-Dichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	10	10	7	7	ug/L
CG76023	$8260GWR-WI	Benzene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	5	5	ug/L
CG76023	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	0.02	0.02	ug/L
CG76023	$8260GWR-WI	1,1,1,2-Tetrachloroethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	5	5	ug/L
CG76023	$8260GWR-WI	1,2-Dichloropropane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	3	3	ug/L
CG76023	$8260GWR-WI	1,2-Dichloroethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	5	5	ug/L
CG76023	$8260GWR-WI	cis-1,3-Dichloropropene	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	10	5	5	ug/L
CG76023	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	2200	50	5	5	ug/L
CG76023	$8260GWR-WI	1,2-Dichloroethane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	10	5	5	ug/L
CG76023	$8260GWR-WI	1,1,2,2-Tetrachloroethane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	10	9	9	ug/L
CG76023	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	10	2	2	ug/L
CG76023	$8260GWR-WI	Tetrachloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	1100	20	50	50	ug/L
CG76023	$8260GWR-WI	trans-1,3-Dichloropropene	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	10	5	5	ug/L
CG76023	$8260GWR-WI	Hexachlorobutadiene	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	10	1	1	ug/L
CG76023	$8260GWR-WI	Bromodichloromethane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	10	6	6	ug/L
CG76023	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-2 (mg/l)	38	20	2	2	ug/L
CG76023	$8260GWR-WI	Carbon tetrachloride	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	10	2	2	ug/L
CG76023	$8260GWR-WI	Bromomethane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	10	7	7	ug/L
CG76023	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-2 (mg/l)	38	20	2	2	ug/L
CG76023	$8260GWR-WI	1,2-Dichloropropane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	10	3	3	ug/L
CG76023	$8260GWR-WI	cis-1,2-Dichloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	400	20	20	20	ug/L
CG76023	$8260GWR-WI	Bromodichloromethane	MA / GROUNDWATER STANDARDS / GW-1	ND	10	3	3	ug/L
CG76023	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-1	2200	50	5	5	ug/L
CG76023	$8260GWR-WI	Methylene chloride	MA / GROUNDWATER STANDARDS / GW-1	ND	20	5	5	ug/L
CG76023	$8260GWR-WI	1,1,2,2-Tetrachloroethane	MA / GROUNDWATER STANDARDS / GW-1	ND	10	2	2	ug/L
CG76023	$8260GWR-WI	Tetrachloroethene	MA / GROUNDWATER STANDARDS / GW-1	1100	20	5	5	ug/L
CG76023	$8260GWR-WI	Benzene	MA / GROUNDWATER STANDARDS / GW-1	ND	10	5	5	ug/L
CG76023	$8260GWR-WI	Bromoform	MA / GROUNDWATER STANDARDS / GW-1	ND	10	4	4	ug/L
CG76023	$8260GWR-WI	1,1-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-1	10	10	7	7	ug/L
CG76023	$8260GWR-WI	1,1,2-Trichloroethane	MA / GROUNDWATER STANDARDS / GW-1	ND	10	5	5	ug/L
CG76023	$8260GWR-WI	1,2-Dichloroethane	MA / GROUNDWATER STANDARDS / GW-1	ND	10	5	5	ug/L
CG76023	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	10	0.02	0.02	ug/L
CG76023	$8260GWR-WI	cis-1,2-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-1	400	20	70	70	ug/L
CG76023	$8260GWR-WI	Hexachlorobutadiene	MA / GROUNDWATER STANDARDS / GW-1	ND	10	0.6	0.6	ug/L
CG76023	$8260GWR-WI	Carbon tetrachloride	MA / GROUNDWATER STANDARDS / GW-1	ND	10	5	5	ug/L

Wednesday, October 21, 2020

Criteria: MA: GW1, GW2, GW3

State: MA

Sample Criteria Exceedances Report

GCG76015 - AECOM-WILMINGTN

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units
CG76023	$8260GWR-WI	Dibromochloromethane	MA / GROUNDWATER STANDARDS / GW-1	ND	10	2	2	ug/L
CG76023	$8260GWR-WI	1,2-Dichloropropane	MA / GROUNDWATER STANDARDS / GW-1	ND	10	5	5	ug/L
CG76023	$8260GWR-WI	Vinyl chloride	MA / GROUNDWATER STANDARDS / GW-1	38	20	2	2	ug/L
CG76023	$8260GWR-WI	1,1,1,2-Tetrachloroethane	MA / GROUNDWATER STANDARDS / GW-1	ND	10	5	5	ug/L
CG76023	$8260GWR-WI	1,4-Dichlorobenzene	MA / GROUNDWATER STANDARDS / GW-1	ND	10	5	5	ug/L
CG76023	$8260GWR-WI	Vinyl chloride	MA / GROUNDWATER STANDARDS / GW-2	38	20	2	2	ug/L
CG76023	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-2	2200	50	5	5	ug/L
CG76023	$8260GWR-WI	Bromomethane	MA / GROUNDWATER STANDARDS / GW-2	ND	10	7	7	ug/L
CG76023	$8260GWR-WI	Tetrachloroethene	MA / GROUNDWATER STANDARDS / GW-2	1100	20	50	50	ug/L
CG76023	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-2	ND	10	2	2	ug/L
CG76023	$8260GWR-WI	1,2-Dichloroethane	MA / GROUNDWATER STANDARDS / GW-2	ND	10	5	5	ug/L
CG76023	$8260GWR-WI	cis-1,2-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-2	400	20	20	20	ug/L
CG76023	$8260GWR-WI	Carbon tetrachloride	MA / GROUNDWATER STANDARDS / GW-2	ND	10	2	2	ug/L
CG76023	$8260GWR-WI	1,2-Dichloropropane	MA / GROUNDWATER STANDARDS / GW-2	ND	10	3	3	ug/L
CG76023	$8260GWR-WI	Bromodichloromethane	MA / GROUNDWATER STANDARDS / GW-2	ND	10	6	6	ug/L
CG76023	$8260GWR-WI	1,1,2,2-Tetrachloroethane	MA / GROUNDWATER STANDARDS / GW-2	ND	10	9	9	ug/L
CG76023	$MCPADD-WM	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	2000	0.3	0.3	ug/L
CG76023	$MCPADD-WM	1,4-dioxane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	2000	3	3	ug/L
CG76023	$MCPADD-WM	1,4-dioxane	MA / GROUNDWATER STANDARDS / GW-1	ND	2000	0.3	0.3	ug/L
CG76023	D-MN	Manganese (Dissolved)	MA / Client Specified Criteria / LOCKHEED WILMINGTO	0.656	0.001	0.43	0.43	mg/L
CG76023	MN-WM	Manganese	MA / Client Specified Criteria / LOCKHEED WILMINGTO	0.717	0.001	0.43	0.43	mg/L
CG76024	$8260GWR-WI	cis-1,2-Dichloroethene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	140	10	20	20	ug/L
CG76024	$8260GWR-WI	Vinyl chloride	MA / Client Specified Criteria / LOCKHEED WILMINGTO	7.0	5.0	2	2	ug/L
CG76024	$8260GWR-WI	Bromoform	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	5.0	4	4	ug/L
CG76024	$8260GWR-WI	Bromodichloromethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	5.0	3	3	ug/L
CG76024	$8260GWR-WI	Carbon tetrachloride	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	5.0	2	2	ug/L
CG76024	$8260GWR-WI	Trichloroethene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	1300	50	5	5	ug/L
CG76024	$8260GWR-WI	cis-1,3-Dichloropropene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	5.0	0.47	0.47	ug/L
CG76024	$8260GWR-WI	Dibromochloromethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	5.0	2	2	ug/L
CG76024	$8260GWR-WI	Hexachlorobutadiene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	5.0	0.6	0.6	ug/L
CG76024	$8260GWR-WI	Methyl ethyl ketone	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	50	38	38	ug/L
CG76024	$8260GWR-WI	2-Hexanone	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	50	38	38	ug/L
CG76024	$8260GWR-WI	Methylene chloride	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	10	5	5	ug/L
CG76024	$8260GWR-WI	Tetrachloroethene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	900	10	5	5	ug/L
CG76024	$8260GWR-WI	trans-1,3-Dichloropropene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	5.0	0.47	0.47	ug/L
CG76024	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	5.0	0.00075	0.00075	ug/L
CG76024	$8260GWR-WI	1,2-Dichloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	5.0	3	3	ug/L
CG76024	$8260GWR-WI	1,1,2,2-Tetrachloroethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	5.0	2	2	ug/L
CG76024	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	5.0	0.0075	0.0075	ug/L
CG76024	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	5.0	0.00033	0.00033	ug/L
CG76024	$8260GWR-WI	Tetrachloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	900	10	5	5	ug/L

Wednesday, October 21, 2020

Criteria: MA: GW1, GW2, GW3

State: MA

Sample Criteria Exceedances Report

GCG76015 - AECOM-WILMINGTN

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units
CG76024	$8260GWR-WI	Methylene chloride	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	5	5	ug/L
CG76024	$8260GWR-WI	1,1,2,2-Tetrachloroethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	5.0	2	2	ug/L
CG76024	$8260GWR-WI	Hexachlorobutadiene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	5.0	0.6	0.6	ug/L
CG76024	$8260GWR-WI	trans-1,3-Dichloropropene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	5.0	0.5	0.5	ug/L
CG76024	$8260GWR-WI	Dibromochloromethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	5.0	2	2	ug/L
CG76024	$8260GWR-WI	1,1-Dichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	7.3	7.0	7	7	ug/L
CG76024	$8260GWR-WI	cis-1,3-Dichloropropene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	5.0	0.5	0.5	ug/L
CG76024	$8260GWR-WI	Bromodichloromethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	5.0	3	3	ug/L
CG76024	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	1300	50	5	5	ug/L
CG76024	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-1 (mg/l)	7.0	5.0	2	2	ug/L
CG76024	$8260GWR-WI	cis-1,2-Dichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	140	10	20	20	ug/L
CG76024	$8260GWR-WI	1,2-Dichloropropane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	5.0	3	3	ug/L
CG76024	$8260GWR-WI	Carbon tetrachloride	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	5.0	2	2	ug/L
CG76024	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	5.0	0.02	0.02	ug/L
CG76024	$8260GWR-WI	Bromoform	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	5.0	4	4	ug/L
CG76024	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-1 (mg/l)	7.0	5.0	2	2	ug/L
CG76024	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	5.0	2	2	ug/L
CG76024	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	1300	50	5	5	ug/L
CG76024	$8260GWR-WI	Tetrachloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	900	10	50	50	ug/L
CG76024	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-2 (mg/l)	7.0	5.0	2	2	ug/L
CG76024	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-2 (mg/l)	7.0	5.0	2	2	ug/L
CG76024	$8260GWR-WI	Hexachlorobutadiene	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	5.0	1	1	ug/L
CG76024	$8260GWR-WI	cis-1,2-Dichloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	140	10	20	20	ug/L
CG76024	$8260GWR-WI	Carbon tetrachloride	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	5.0	2	2	ug/L
CG76024	$8260GWR-WI	1,2-Dichloropropane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	5.0	3	3	ug/L
CG76024	$8260GWR-WI	Tetrachloroethene	MA / GROUNDWATER STANDARDS / GW-1	900	10	5	5	ug/L
CG76024	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-1	1300	50	5	5	ug/L
CG76024	$8260GWR-WI	Vinyl chloride	MA / GROUNDWATER STANDARDS / GW-1	7.0	5.0	2	2	ug/L
CG76024	$8260GWR-WI	Bromoform	MA / GROUNDWATER STANDARDS / GW-1	ND	5.0	4	4	ug/L
CG76024	$8260GWR-WI	1,1,2,2-Tetrachloroethane	MA / GROUNDWATER STANDARDS / GW-1	ND	5.0	2	2	ug/L
CG76024	$8260GWR-WI	1,1-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-1	7.3	7.0	7	7	ug/L
CG76024	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	5.0	0.02	0.02	ug/L
CG76024	$8260GWR-WI	Methylene chloride	MA / GROUNDWATER STANDARDS / GW-1	ND	10	5	5	ug/L
CG76024	$8260GWR-WI	Bromodichloromethane	MA / GROUNDWATER STANDARDS / GW-1	ND	5.0	3	3	ug/L
CG76024	$8260GWR-WI	cis-1,2-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-1	140	10	70	70	ug/L
CG76024	$8260GWR-WI	Dibromochloromethane	MA / GROUNDWATER STANDARDS / GW-1	ND	5.0	2	2	ug/L
CG76024	$8260GWR-WI	Hexachlorobutadiene	MA / GROUNDWATER STANDARDS / GW-1	ND	5.0	0.6	0.6	ug/L
CG76024	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-2	1300	50	5	5	ug/L
CG76024	$8260GWR-WI	Carbon tetrachloride	MA / GROUNDWATER STANDARDS / GW-2	ND	5.0	2	2	ug/L
CG76024	$8260GWR-WI	cis-1,2-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-2	140	10	20	20	ug/L
CG76024	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-2	ND	5.0	2	2	ug/L
CG76024	$8260GWR-WI	Tetrachloroethene	MA / GROUNDWATER STANDARDS / GW-2	900	10	50	50	ug/L

Wednesday, October 21, 2020

Criteria: MA: GW1, GW2, GW3

State: MA

Sample Criteria Exceedances Report

GCG76015 - AECOM-WILMINGTN

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units
CG76024	$8260GWR-WI	Vinyl chloride	MA / GROUNDWATER STANDARDS / GW-2	7.0	5.0	2	2	ug/L
CG76024	$8260GWR-WI	1,2-Dichloropropane	MA / GROUNDWATER STANDARDS / GW-2	ND	5.0	3	3	ug/L
CG76024	$DIOX_LDL	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	10	0.20	0.3	0.3	ug/l
CG76024	$DIOX_LDL	1,4-dioxane	MA / CMR 310.40.1600 / GW-1 (mg/l)	10	0.20	3	3	ug/l
CG76024	$DIOX_LDL	1,4-dioxane	MA / GROUNDWATER STANDARDS / GW-1	10	0.20	0.3	0.3	ug/l
CG76024	$MCPADD-WM	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	1000	0.3	0.3	ug/L
CG76025	$8260GWR-WI	1,2-Dichloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	25	3	3	ug/L
CG76025	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	25	0.0075	0.0075	ug/L
CG76025	$8260GWR-WI	Hexachlorobutadiene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	25	0.6	0.6	ug/L
CG76025	$8260GWR-WI	Dibromomethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	25	8.3	8.3	ug/L
CG76025	$8260GWR-WI	Tetrachloroethene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	3400	50	5	5	ug/L
CG76025	$8260GWR-WI	Dibromochloromethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	25	2	2	ug/L
CG76025	$8260GWR-WI	1,2-Dichloroethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	25	5	5	ug/L
CG76025	$8260GWR-WI	cis-1,2-Dichloroethene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	92	50	20	20	ug/L
CG76025	$8260GWR-WI	Carbon tetrachloride	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	25	2	2	ug/L
CG76025	$8260GWR-WI	Bromomethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	25	7	7	ug/L
CG76025	$8260GWR-WI	1,4-Dichlorobenzene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	25	5	5	ug/L
CG76025	$8260GWR-WI	Bromoform	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	25	4	4	ug/L
CG76025	$8260GWR-WI	2-Hexanone	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	250	38	38	ug/L
CG76025	$8260GWR-WI	Benzene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	25	5	5	ug/L
CG76025	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	25	0.00033	0.00033	ug/L
CG76025	$8260GWR-WI	cis-1,3-Dichloropropene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	25	0.47	0.47	ug/L
CG76025	$8260GWR-WI	Bromodichloromethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	25	3	3	ug/L
CG76025	$8260GWR-WI	1,1,2,2-Tetrachloroethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	25	2	2	ug/L
CG76025	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	25	0.00075	0.00075	ug/L
CG76025	$8260GWR-WI	Vinyl chloride	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	25	2	2	ug/L
CG76025	$8260GWR-WI	Trichloroethene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	4700	50	5	5	ug/L
CG76025	$8260GWR-WI	1,1,1,2-Tetrachloroethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	25	5	5	ug/L
CG76025	$8260GWR-WI	trans-1,3-Dichloropropene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	25	0.47	0.47	ug/L
CG76025	$8260GWR-WI	1,1,2-Trichloroethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	25	5	5	ug/L
CG76025	$8260GWR-WI	Methylene chloride	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	50	5	5	ug/L
CG76025	$8260GWR-WI	Methyl ethyl ketone	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	250	38	38	ug/L
CG76025	$8260GWR-WI	1,2,3-Trichlorobenzene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	25	7	7	ug/L
CG76025	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	25	2	2	ug/L
CG76025	$8260GWR-WI	Bromodichloromethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	25	3	3	ug/L
CG76025	$8260GWR-WI	Bromoform	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	25	4	4	ug/L
CG76025	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	4700	50	5	5	ug/L
CG76025	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	25	2	2	ug/L
CG76025	$8260GWR-WI	Bromomethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	25	7	7	ug/L
CG76025	$8260GWR-WI	Methylene chloride	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	50	5	5	ug/L
CG76025	$8260GWR-WI	trans-1,3-Dichloropropene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	25	0.5	0.5	ug/L

Wednesday, October 21, 2020

Criteria: MA: GW1, GW2, GW3

State: MA

Sample Criteria Exceedances Report

GCG76015 - AECOM-WILMINGTN

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units
CG76025	$8260GWR-WI	cis-1,2-Dichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	92	50	20	20	ug/L
CG76025	$8260GWR-WI	Tetrachloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	3400	50	5	5	ug/L
CG76025	$8260GWR-WI	cis-1,3-Dichloropropene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	25	0.5	0.5	ug/L
CG76025	$8260GWR-WI	Dibromochloromethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	25	2	2	ug/L
CG76025	$8260GWR-WI	Hexachlorobutadiene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	25	0.6	0.6	ug/L
CG76025	$8260GWR-WI	Carbon tetrachloride	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	25	2	2	ug/L
CG76025	$8260GWR-WI	1,1,2-Trichloroethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	25	5	5	ug/L
CG76025	$8260GWR-WI	Benzene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	25	5	5	ug/L
CG76025	$8260GWR-WI	1,2-Dichloroethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	25	5	5	ug/L
CG76025	$8260GWR-WI	1,1,1,2-Tetrachloroethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	25	5	5	ug/L
CG76025	$8260GWR-WI	1,4-Dichlorobenzene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	25	5	5	ug/L
CG76025	$8260GWR-WI	1,1,2,2-Tetrachloroethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	25	2	2	ug/L
CG76025	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	25	0.02	0.02	ug/L
CG76025	$8260GWR-WI	1,1-Dichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	25	7	7	ug/L
CG76025	$8260GWR-WI	1,2-Dichloropropane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	25	3	3	ug/L
CG76025	$8260GWR-WI	cis-1,3-Dichloropropene	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	25	5	5	ug/L
CG76025	$8260GWR-WI	Dibromochloromethane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	25	20	20	ug/L
CG76025	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	25	2	2	ug/L
CG76025	$8260GWR-WI	Bromodichloromethane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	25	6	6	ug/L
CG76025	$8260GWR-WI	Hexachlorobutadiene	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	25	1	1	ug/L
CG76025	$8260GWR-WI	1,2-Dichloroethane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	25	5	5	ug/L
CG76025	$8260GWR-WI	1,1,2,2-Tetrachloroethane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	25	9	9	ug/L
CG76025	$8260GWR-WI	trans-1,3-Dichloropropene	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	25	5	5	ug/L
CG76025	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	4700	50	5	5	ug/L
CG76025	$8260GWR-WI	1,1,1,2-Tetrachloroethane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	25	10	10	ug/L
CG76025	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	25	2	2	ug/L
CG76025	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	25	2	2	ug/L
CG76025	$8260GWR-WI	Tetrachloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	3400	50	50	50	ug/L
CG76025	$8260GWR-WI	Carbon tetrachloride	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	25	2	2	ug/L
CG76025	$8260GWR-WI	cis-1,2-Dichloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	92	50	20	20	ug/L
CG76025	$8260GWR-WI	Bromomethane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	25	7	7	ug/L
CG76025	$8260GWR-WI	1,2-Dichloropropane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	25	3	3	ug/L
CG76025	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-1	4700	50	5	5	ug/L
CG76025	$8260GWR-WI	1,2-Dichloropropane	MA / GROUNDWATER STANDARDS / GW-1	ND	25	5	5	ug/L
CG76025	$8260GWR-WI	Bromomethane	MA / GROUNDWATER STANDARDS / GW-1	ND	25	10	10	ug/L
CG76025	$8260GWR-WI	1,1-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-1	ND	25	7	7	ug/L
CG76025	$8260GWR-WI	Bromoform	MA / GROUNDWATER STANDARDS / GW-1	ND	25	4	4	ug/L
CG76025	$8260GWR-WI	1,1,2,2-Tetrachloroethane	MA / GROUNDWATER STANDARDS / GW-1	ND	25	2	2	ug/L
CG76025	$8260GWR-WI	1,4-Dichlorobenzene	MA / GROUNDWATER STANDARDS / GW-1	ND	25	5	5	ug/L
CG76025	$8260GWR-WI	Methylene chloride	MA / GROUNDWATER STANDARDS / GW-1	ND	50	5	5	ug/L
CG76025	$8260GWR-WI	1,1,1,2-Tetrachloroethane	MA / GROUNDWATER STANDARDS / GW-1	ND	25	5	5	ug/L
CG76025	$8260GWR-WI	Hexachlorobutadiene	MA / GROUNDWATER STANDARDS / GW-1	ND	25	0.6	0.6	ug/L

Wednesday, October 21, 2020

Criteria: MA: GW1, GW2, GW3

State: MA

Sample Criteria Exceedances Report

GCG76015 - AECOM-WILMINGTN

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units
CG76025	$8260GWR-WI	Tetrachloroethene	MA / GROUNDWATER STANDARDS / GW-1	3400	50	5	5	ug/L
CG76025	$8260GWR-WI	Carbon tetrachloride	MA / GROUNDWATER STANDARDS / GW-1	ND	25	5	5	ug/L
CG76025	$8260GWR-WI	Bromodichloromethane	MA / GROUNDWATER STANDARDS / GW-1	ND	25	3	3	ug/L
CG76025	$8260GWR-WI	Benzene	MA / GROUNDWATER STANDARDS / GW-1	ND	25	5	5	ug/L
CG76025	$8260GWR-WI	Vinyl chloride	MA / GROUNDWATER STANDARDS / GW-1	ND	25	2	2	ug/L
CG76025	$8260GWR-WI	Dibromochloromethane	MA / GROUNDWATER STANDARDS / GW-1	ND	25	2	2	ug/L
CG76025	$8260GWR-WI	1,2-Dichloroethane	MA / GROUNDWATER STANDARDS / GW-1	ND	25	5	5	ug/L
CG76025	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	25	0.02	0.02	ug/L
CG76025	$8260GWR-WI	cis-1,2-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-1	92	50	70	70	ug/L
CG76025	$8260GWR-WI	1,1,2-Trichloroethane	MA / GROUNDWATER STANDARDS / GW-1	ND	25	5	5	ug/L
CG76025	$8260GWR-WI	Bromodichloromethane	MA / GROUNDWATER STANDARDS / GW-2	ND	25	6	6	ug/L
CG76025	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-2	4700	50	5	5	ug/L
CG76025	$8260GWR-WI	Vinyl chloride	MA / GROUNDWATER STANDARDS / GW-2	ND	25	2	2	ug/L
CG76025	$8260GWR-WI	1,2-Dichloropropane	MA / GROUNDWATER STANDARDS / GW-2	ND	25	3	3	ug/L
CG76025	$8260GWR-WI	1,1,1,2-Tetrachloroethane	MA / GROUNDWATER STANDARDS / GW-2	ND	25	10	10	ug/L
CG76025	$8260GWR-WI	Bromomethane	MA / GROUNDWATER STANDARDS / GW-2	ND	25	7	7	ug/L
CG76025	$8260GWR-WI	cis-1,2-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-2	92	50	20	20	ug/L
CG76025	$8260GWR-WI	1,1,2,2-Tetrachloroethane	MA / GROUNDWATER STANDARDS / GW-2	ND	25	9	9	ug/L
CG76025	$8260GWR-WI	Carbon tetrachloride	MA / GROUNDWATER STANDARDS / GW-2	ND	25	2	2	ug/L
CG76025	$8260GWR-WI	1,2-Dichloroethane	MA / GROUNDWATER STANDARDS / GW-2	ND	25	5	5	ug/L
CG76025	$8260GWR-WI	Dibromochloromethane	MA / GROUNDWATER STANDARDS / GW-2	ND	25	20	20	ug/L
CG76025	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-2	ND	25	2	2	ug/L
CG76025	$8260GWR-WI	Tetrachloroethene	MA / GROUNDWATER STANDARDS / GW-2	3400	50	50	50	ug/L
CG76025	$DIOX_LDL	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	10	0.20	0.3	0.3	ug/l
CG76025	$DIOX_LDL	1,4-dioxane	MA / CMR 310.40.1600 / GW-1 (mg/l)	10	0.20	3	3	ug/l
CG76025	$DIOX_LDL	1,4-dioxane	MA / GROUNDWATER STANDARDS / GW-1	10	0.20	0.3	0.3	ug/l
CG76025	$MCPADD-WM	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	5000	0.3	0.3	ug/L
CG76026	$8260GWR-WI	Bromomethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	25	7	7	ug/L
CG76026	$8260GWR-WI	Trichloroethene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	4900	100	5	5	ug/L
CG76026	$8260GWR-WI	1,2-Dichloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	25	3	3	ug/L
CG76026	$8260GWR-WI	1,4-Dichlorobenzene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	25	5	5	ug/L
CG76026	$8260GWR-WI	2-Hexanone	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	250	38	38	ug/L
CG76026	$8260GWR-WI	Hexachlorobutadiene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	25	0.6	0.6	ug/L
CG76026	$8260GWR-WI	Benzene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	25	5	5	ug/L
CG76026	$8260GWR-WI	Bromodichloromethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	25	3	3	ug/L
CG76026	$8260GWR-WI	1,2-Dichloroethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	25	5	5	ug/L
CG76026	$8260GWR-WI	Tetrachloroethene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	4000	50	5	5	ug/L
CG76026	$8260GWR-WI	trans-1,3-Dichloropropene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	25	0.47	0.47	ug/L
CG76026	$8260GWR-WI	Carbon tetrachloride	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	25	2	2	ug/L
CG76026	$8260GWR-WI	Methylene chloride	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	50	5	5	ug/L
CG76026	$8260GWR-WI	Methyl ethyl ketone	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	250	38	38	ug/L

Wednesday, October 21, 2020

Criteria: MA: GW1, GW2, GW3

State: MA

Sample Criteria Exceedances Report

GCG76015 - AECOM-WILMINGTN

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units
CG76026	$8260GWR-WI	cis-1,2-Dichloroethene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	52	50	20	20	ug/L
CG76026	$8260GWR-WI	cis-1,3-Dichloropropene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	25	0.47	0.47	ug/L
CG76026	$8260GWR-WI	Dibromochloromethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	25	2	2	ug/L
CG76026	$8260GWR-WI	Dibromomethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	25	8.3	8.3	ug/L
CG76026	$8260GWR-WI	Bromoform	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	25	4	4	ug/L
CG76026	$8260GWR-WI	1,1,2,2-Tetrachloroethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	25	2	2	ug/L
CG76026	$8260GWR-WI	1,1,1,2-Tetrachloroethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	25	5	5	ug/L
CG76026	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	25	0.0075	0.0075	ug/L
CG76026	$8260GWR-WI	Vinyl chloride	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	25	2	2	ug/L
CG76026	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	25	0.00033	0.00033	ug/L
CG76026	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	25	0.00075	0.00075	ug/L
CG76026	$8260GWR-WI	1,1,2-Trichloroethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	25	5	5	ug/L
CG76026	$8260GWR-WI	1,2,3-Trichlorobenzene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	25	7	7	ug/L
CG76026	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	25	0.02	0.02	ug/L
CG76026	$8260GWR-WI	Tetrachloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	4000	50	5	5	ug/L
CG76026	$8260GWR-WI	1,4-Dichlorobenzene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	25	5	5	ug/L
CG76026	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	25	2	2	ug/L
CG76026	$8260GWR-WI	Bromomethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	25	7	7	ug/L
CG76026	$8260GWR-WI	Methylene chloride	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	50	5	5	ug/L
CG76026	$8260GWR-WI	Bromodichloromethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	25	3	3	ug/L
CG76026	$8260GWR-WI	1,1,2,2-Tetrachloroethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	25	2	2	ug/L
CG76026	$8260GWR-WI	cis-1,2-Dichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	52	50	20	20	ug/L
CG76026	$8260GWR-WI	cis-1,3-Dichloropropene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	25	0.5	0.5	ug/L
CG76026	$8260GWR-WI	1,1,1,2-Tetrachloroethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	25	5	5	ug/L
CG76026	$8260GWR-WI	Dibromochloromethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	25	2	2	ug/L
CG76026	$8260GWR-WI	Hexachlorobutadiene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	25	0.6	0.6	ug/L
CG76026	$8260GWR-WI	Carbon tetrachloride	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	25	2	2	ug/L
CG76026	$8260GWR-WI	1,2-Dichloroethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	25	5	5	ug/L
CG76026	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	4900	100	5	5	ug/L
CG76026	$8260GWR-WI	1,1,2-Trichloroethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	25	5	5	ug/L
CG76026	$8260GWR-WI	Benzene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	25	5	5	ug/L
CG76026	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	25	2	2	ug/L
CG76026	$8260GWR-WI	1,1-Dichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	25	7	7	ug/L
CG76026	$8260GWR-WI	1,2-Dichloropropane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	25	3	3	ug/L
CG76026	$8260GWR-WI	Bromoform	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	25	4	4	ug/L
CG76026	$8260GWR-WI	trans-1,3-Dichloropropene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	25	0.5	0.5	ug/L
CG76026	$8260GWR-WI	cis-1,2-Dichloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	52	50	20	20	ug/L
CG76026	$8260GWR-WI	1,1,1,2-Tetrachloroethane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	25	10	10	ug/L
CG76026	$8260GWR-WI	1,2-Dichloroethane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	25	5	5	ug/L
CG76026	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	4900	100	5	5	ug/L
CG76026	$8260GWR-WI	Dibromochloromethane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	25	20	20	ug/L
CG76026	$8260GWR-WI	Hexachlorobutadiene	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	25	1	1	ug/L

Wednesday, October 21, 2020

Criteria: MA: GW1, GW2, GW3

State: MA

Sample Criteria Exceedances Report

GCG76015 - AECOM-WILMINGTN

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units
CG76026	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	25	2	2	ug/L
CG76026	$8260GWR-WI	cis-1,3-Dichloropropene	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	25	5	5	ug/L
CG76026	$8260GWR-WI	1,2-Dichloropropane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	25	3	3	ug/L
CG76026	$8260GWR-WI	trans-1,3-Dichloropropene	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	25	5	5	ug/L
CG76026	$8260GWR-WI	1,1,2,2-Tetrachloroethane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	25	9	9	ug/L
CG76026	$8260GWR-WI	Bromomethane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	25	7	7	ug/L
CG76026	$8260GWR-WI	Carbon tetrachloride	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	25	2	2	ug/L
CG76026	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	25	2	2	ug/L
CG76026	$8260GWR-WI	Tetrachloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	4000	50	50	50	ug/L
CG76026	$8260GWR-WI	Bromodichloromethane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	25	6	6	ug/L
CG76026	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	25	2	2	ug/L
CG76026	$8260GWR-WI	Vinyl chloride	MA / GROUNDWATER STANDARDS / GW-1	ND	25	2	2	ug/L
CG76026	$8260GWR-WI	Hexachlorobutadiene	MA / GROUNDWATER STANDARDS / GW-1	ND	25	0.6	0.6	ug/L
CG76026	$8260GWR-WI	Methylene chloride	MA / GROUNDWATER STANDARDS / GW-1	ND	50	5	5	ug/L
CG76026	$8260GWR-WI	Tetrachloroethene	MA / GROUNDWATER STANDARDS / GW-1	4000	50	5	5	ug/L
CG76026	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-1	4900	100	5	5	ug/L
CG76026	$8260GWR-WI	1,1-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-1	ND	25	7	7	ug/L
CG76026	$8260GWR-WI	1,1,1,2-Tetrachloroethane	MA / GROUNDWATER STANDARDS / GW-1	ND	25	5	5	ug/L
CG76026	$8260GWR-WI	1,1,2,2-Tetrachloroethane	MA / GROUNDWATER STANDARDS / GW-1	ND	25	2	2	ug/L
CG76026	$8260GWR-WI	1,1,2-Trichloroethane	MA / GROUNDWATER STANDARDS / GW-1	ND	25	5	5	ug/L
CG76026	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	25	0.02	0.02	ug/L
CG76026	$8260GWR-WI	1,2-Dichloroethane	MA / GROUNDWATER STANDARDS / GW-1	ND	25	5	5	ug/L
CG76026	$8260GWR-WI	1,2-Dichloropropane	MA / GROUNDWATER STANDARDS / GW-1	ND	25	5	5	ug/L
CG76026	$8260GWR-WI	1,4-Dichlorobenzene	MA / GROUNDWATER STANDARDS / GW-1	ND	25	5	5	ug/L
CG76026	$8260GWR-WI	Benzene	MA / GROUNDWATER STANDARDS / GW-1	ND	25	5	5	ug/L
CG76026	$8260GWR-WI	Dibromochloromethane	MA / GROUNDWATER STANDARDS / GW-1	ND	25	2	2	ug/L
CG76026	$8260GWR-WI	Bromoform	MA / GROUNDWATER STANDARDS / GW-1	ND	25	4	4	ug/L
CG76026	$8260GWR-WI	Bromodichloromethane	MA / GROUNDWATER STANDARDS / GW-1	ND	25	3	3	ug/L
CG76026	$8260GWR-WI	Bromomethane	MA / GROUNDWATER STANDARDS / GW-1	ND	25	10	10	ug/L
CG76026	$8260GWR-WI	Carbon tetrachloride	MA / GROUNDWATER STANDARDS / GW-1	ND	25	5	5	ug/L
CG76026	$8260GWR-WI	1,1,2,2-Tetrachloroethane	MA / GROUNDWATER STANDARDS / GW-2	ND	25	9	9	ug/L
CG76026	$8260GWR-WI	1,1,1,2-Tetrachloroethane	MA / GROUNDWATER STANDARDS / GW-2	ND	25	10	10	ug/L
CG76026	$8260GWR-WI	cis-1,2-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-2	52	50	20	20	ug/L
CG76026	$8260GWR-WI	Carbon tetrachloride	MA / GROUNDWATER STANDARDS / GW-2	ND	25	2	2	ug/L
CG76026	$8260GWR-WI	Dibromochloromethane	MA / GROUNDWATER STANDARDS / GW-2	ND	25	20	20	ug/L
CG76026	$8260GWR-WI	Vinyl chloride	MA / GROUNDWATER STANDARDS / GW-2	ND	25	2	2	ug/L
CG76026	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-2	ND	25	2	2	ug/L
CG76026	$8260GWR-WI	Bromomethane	MA / GROUNDWATER STANDARDS / GW-2	ND	25	7	7	ug/L
CG76026	$8260GWR-WI	1,2-Dichloroethane	MA / GROUNDWATER STANDARDS / GW-2	ND	25	5	5	ug/L
CG76026	$8260GWR-WI	1,2-Dichloropropane	MA / GROUNDWATER STANDARDS / GW-2	ND	25	3	3	ug/L
CG76026	$8260GWR-WI	Tetrachloroethene	MA / GROUNDWATER STANDARDS / GW-2	4000	50	50	50	ug/L
CG76026	$8260GWR-WI	Bromodichloromethane	MA / GROUNDWATER STANDARDS / GW-2	ND	25	6	6	ug/L

Wednesday, October 21, 2020

Criteria: MA: GW1, GW2, GW3

State: MA

Sample Criteria Exceedances Report

GCG76015 - AECOM-WILMINGTN

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units
CG76026	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-2	4900	100	5	5	ug/L
CG76026	$DIOX_LDL	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	9.2	0.20	0.3	0.3	ug/l
CG76026	$DIOX_LDL	1,4-dioxane	MA / CMR 310.40.1600 / GW-1 (mg/l)	9.2	0.20	3	3	ug/l
CG76026	$DIOX_LDL	1,4-dioxane	MA / GROUNDWATER STANDARDS / GW-1	9.2	0.20	0.3	0.3	ug/l
CG76026	$MCPADD-WM	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	5000	0.3	0.3	ug/L
CG76027	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.00033	0.00033	ug/L
CG76027	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.0075	0.0075	ug/L
CG76027	$8260GWR-WI	Vinyl chloride	MA / Client Specified Criteria / LOCKHEED WILMINGTO	4.1	1.0	2	2	ug/L
CG76027	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.00075	0.00075	ug/L
CG76027	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	0.50	0.02	0.02	ug/L
CG76027	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-1 (mg/l)	4.1	1.0	2	2	ug/L
CG76027	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-1 (mg/l)	4.1	1.0	2	2	ug/L
CG76027	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-2 (mg/l)	4.1	1.0	2	2	ug/L
CG76027	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-2 (mg/l)	4.1	1.0	2	2	ug/L
CG76027	$8260GWR-WI	Vinyl chloride	MA / GROUNDWATER STANDARDS / GW-1	4.1	1.0	2	2	ug/L
CG76027	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	0.50	0.02	0.02	ug/L
CG76027	$8260GWR-WI	Vinyl chloride	MA / GROUNDWATER STANDARDS / GW-2	4.1	1.0	2	2	ug/L
CG76027	$MCPADD-WM	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	100	0.3	0.3	ug/L
CG76027	$MCPADD-WM	1,4-dioxane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	100	3	3	ug/L
CG76027	$MCPADD-WM	1,4-dioxane	MA / GROUNDWATER STANDARDS / GW-1	ND	100	0.3	0.3	ug/L
CG76028	$8260GWR-WI	1,2-Dichloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	5.0	3	3	ug/L
CG76028	$8260GWR-WI	cis-1,3-Dichloropropene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	5.0	0.47	0.47	ug/L
CG76028	$8260GWR-WI	Vinyl chloride	MA / Client Specified Criteria / LOCKHEED WILMINGTO	23	10	2	2	ug/L
CG76028	$8260GWR-WI	Dibromochloromethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	5.0	2	2	ug/L
CG76028	$8260GWR-WI	Bromoform	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	5.0	4	4	ug/L
CG76028	$8260GWR-WI	Bromodichloromethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	5.0	3	3	ug/L
CG76028	$8260GWR-WI	2-Hexanone	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	50	38	38	ug/L
CG76028	$8260GWR-WI	Trichloroethene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	1200	20	5	5	ug/L
CG76028	$8260GWR-WI	cis-1,2-Dichloroethene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	340	10	20	20	ug/L
CG76028	$8260GWR-WI	Hexachlorobutadiene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	5.0	0.6	0.6	ug/L
CG76028	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	5.0	0.00033	0.00033	ug/L
CG76028	$8260GWR-WI	1,1,2,2-Tetrachloroethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	5.0	2	2	ug/L
CG76028	$8260GWR-WI	Tetrachloroethene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	980	10	5	5	ug/L
CG76028	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	5.0	0.00075	0.00075	ug/L
CG76028	$8260GWR-WI	Carbon tetrachloride	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	5.0	2	2	ug/L
CG76028	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	5.0	0.0075	0.0075	ug/L
CG76028	$8260GWR-WI	Methylene chloride	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	10	5	5	ug/L
CG76028	$8260GWR-WI	Methyl ethyl ketone	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	50	38	38	ug/L
CG76028	$8260GWR-WI	trans-1,3-Dichloropropene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	5.0	0.47	0.47	ug/L
CG76028	$8260GWR-WI	Dibromochloromethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	5.0	2	2	ug/L

Wednesday, October 21, 2020

Criteria: MA: GW1, GW2, GW3

State: MA

Sample Criteria Exceedances Report

GCG76015 - AECOM-WILMINGTN

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units
CG76028	$8260GWR-WI	Methylene chloride	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	5	5	ug/L
CG76028	$8260GWR-WI	Hexachlorobutadiene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	5.0	0.6	0.6	ug/L
CG76028	$8260GWR-WI	cis-1,3-Dichloropropene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	5.0	0.5	0.5	ug/L
CG76028	$8260GWR-WI	trans-1,3-Dichloropropene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	5.0	0.5	0.5	ug/L
CG76028	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	1200	20	5	5	ug/L
CG76028	$8260GWR-WI	Tetrachloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	980	10	5	5	ug/L
CG76028	$8260GWR-WI	1,2-Dichloropropane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	5.0	3	3	ug/L
CG76028	$8260GWR-WI	1,1,2,2-Tetrachloroethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	5.0	2	2	ug/L
CG76028	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	5.0	0.02	0.02	ug/L
CG76028	$8260GWR-WI	Carbon tetrachloride	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	5.0	2	2	ug/L
CG76028	$8260GWR-WI	Bromoform	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	5.0	4	4	ug/L
CG76028	$8260GWR-WI	Bromodichloromethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	5.0	3	3	ug/L
CG76028	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-1 (mg/l)	23	10	2	2	ug/L
CG76028	$8260GWR-WI	cis-1,2-Dichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	340	10	20	20	ug/L
CG76028	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-1 (mg/l)	23	10	2	2	ug/L
CG76028	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-2 (mg/l)	23	10	2	2	ug/L
CG76028	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	5.0	2	2	ug/L
CG76028	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-2 (mg/l)	23	10	2	2	ug/L
CG76028	$8260GWR-WI	1,2-Dichloropropane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	5.0	3	3	ug/L
CG76028	$8260GWR-WI	Tetrachloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	980	10	50	50	ug/L
CG76028	$8260GWR-WI	Carbon tetrachloride	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	5.0	2	2	ug/L
CG76028	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	1200	20	5	5	ug/L
CG76028	$8260GWR-WI	cis-1,2-Dichloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	340	10	20	20	ug/L
CG76028	$8260GWR-WI	Hexachlorobutadiene	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	5.0	1	1	ug/L
CG76028	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-1	1200	20	5	5	ug/L
CG76028	$8260GWR-WI	Vinyl chloride	MA / GROUNDWATER STANDARDS / GW-1	23	10	2	2	ug/L
CG76028	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	5.0	0.02	0.02	ug/L
CG76028	$8260GWR-WI	Tetrachloroethene	MA / GROUNDWATER STANDARDS / GW-1	980	10	5	5	ug/L
CG76028	$8260GWR-WI	1,1,2,2-Tetrachloroethane	MA / GROUNDWATER STANDARDS / GW-1	ND	5.0	2	2	ug/L
CG76028	$8260GWR-WI	Bromodichloromethane	MA / GROUNDWATER STANDARDS / GW-1	ND	5.0	3	3	ug/L
CG76028	$8260GWR-WI	Bromoform	MA / GROUNDWATER STANDARDS / GW-1	ND	5.0	4	4	ug/L
CG76028	$8260GWR-WI	cis-1,2-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-1	340	10	70	70	ug/L
CG76028	$8260GWR-WI	Dibromochloromethane	MA / GROUNDWATER STANDARDS / GW-1	ND	5.0	2	2	ug/L
CG76028	$8260GWR-WI	Hexachlorobutadiene	MA / GROUNDWATER STANDARDS / GW-1	ND	5.0	0.6	0.6	ug/L
CG76028	$8260GWR-WI	Methylene chloride	MA / GROUNDWATER STANDARDS / GW-1	ND	10	5	5	ug/L
CG76028	$8260GWR-WI	Vinyl chloride	MA / GROUNDWATER STANDARDS / GW-2	23	10	2	2	ug/L
CG76028	$8260GWR-WI	Carbon tetrachloride	MA / GROUNDWATER STANDARDS / GW-2	ND	5.0	2	2	ug/L
CG76028	$8260GWR-WI	1,2-Dichloropropane	MA / GROUNDWATER STANDARDS / GW-2	ND	5.0	3	3	ug/L
CG76028	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-2	ND	5.0	2	2	ug/L
CG76028	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-2	1200	20	5	5	ug/L
CG76028	$8260GWR-WI	Tetrachloroethene	MA / GROUNDWATER STANDARDS / GW-2	980	10	50	50	ug/L
CG76028	$8260GWR-WI	cis-1,2-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-2	340	10	20	20	ug/L

Wednesday, October 21, 2020

Criteria: MA: GW1, GW2, GW3

State: MA

Sample Criteria Exceedances Report

GCG76015 - AECOM-WILMINGTN

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units
CG76028	$DIOX_LDL	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	4.2	0.20	0.3	0.3	ug/l
CG76028	$DIOX_LDL	1,4-dioxane	MA / CMR 310.40.1600 / GW-1 (mg/l)	4.2	0.20	3	3	ug/l
CG76028	$DIOX_LDL	1,4-dioxane	MA / GROUNDWATER STANDARDS / GW-1	4.2	0.20	0.3	0.3	ug/l
CG76028	$MCPADD-WM	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	1000	0.3	0.3	ug/L
CG76028	$VPHRANGE-	C5-C8 Aliphatic Hydrocarbons *1,2	MA / Client Specified Criteria / LOCKHEED WILMINGTO	640	500	300	300	ug/L
CG76028	$VPHRANGE-	C5-C8 Aliphatic Hydrocarbons *1,2	MA / CMR 310.40.1600 / GW-1 (mg/l)	640	500	300	300	ug/L
CG76028	$VPHRANGE-	C5-C8 Aliphatic Hydrocarbons *1,2	MA / GROUNDWATER STANDARDS / GW-1	640	500	300	300	ug/L
CG76028	$VPHRANGE-	C9-C10 Aromatic Hydrocarbons *1	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	500	200	200	ug/L
CG76028	$VPHRANGE-	C9-C10 Aromatic Hydrocarbons *1	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	500	200	200	ug/L
CG76028	$VPHRANGE-	C9-C10 Aromatic Hydrocarbons *1	MA / GROUNDWATER STANDARDS / GW-1	ND	500	200	200	ug/L
CG76028	D-MN	Manganese (Dissolved)	MA / Client Specified Criteria / LOCKHEED WILMINGTO	2.09	0.001	0.43	0.43	mg/L
CG76028	MN-WM	Manganese	MA / Client Specified Criteria / LOCKHEED WILMINGTO	2.23	0.010	0.43	0.43	mg/L
CG76029	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	5.0	0.00075	0.00075	ug/L
CG76029	$8260GWR-WI	Hexachlorobutadiene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	5.0	0.6	0.6	ug/L
CG76029	$8260GWR-WI	1,2-Dichloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	5.0	3	3	ug/L
CG76029	$8260GWR-WI	cis-1,3-Dichloropropene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	5.0	0.47	0.47	ug/L
CG76029	$8260GWR-WI	Methyl ethyl ketone	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	50	38	38	ug/L
CG76029	$8260GWR-WI	Methylene chloride	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	10	5	5	ug/L
CG76029	$8260GWR-WI	2-Hexanone	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	50	38	38	ug/L
CG76029	$8260GWR-WI	Bromodichloromethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	5.0	3	3	ug/L
CG76029	$8260GWR-WI	Tetrachloroethene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	950	20	5	5	ug/L
CG76029	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	5.0	0.00033	0.00033	ug/L
CG76029	$8260GWR-WI	trans-1,3-Dichloropropene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	5.0	0.47	0.47	ug/L
CG76029	$8260GWR-WI	cis-1,2-Dichloroethene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	140	10	20	20	ug/L
CG76029	$8260GWR-WI	Trichloroethene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	1300	20	5	5	ug/L
CG76029	$8260GWR-WI	Carbon tetrachloride	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	5.0	2	2	ug/L
CG76029	$8260GWR-WI	1,1,2,2-Tetrachloroethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	5.0	2	2	ug/L
CG76029	$8260GWR-WI	Vinyl chloride	MA / Client Specified Criteria / LOCKHEED WILMINGTO	36	10	2	2	ug/L
CG76029	$8260GWR-WI	Bromoform	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	5.0	4	4	ug/L
CG76029	$8260GWR-WI	Dibromochloromethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	5.0	2	2	ug/L
CG76029	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	5.0	0.0075	0.0075	ug/L
CG76029	$8260GWR-WI	cis-1,2-Dichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	140	10	20	20	ug/L
CG76029	$8260GWR-WI	Bromodichloromethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	5.0	3	3	ug/L
CG76029	$8260GWR-WI	1,1,2,2-Tetrachloroethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	5.0	2	2	ug/L
CG76029	$8260GWR-WI	Carbon tetrachloride	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	5.0	2	2	ug/L
CG76029	$8260GWR-WI	cis-1,3-Dichloropropene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	5.0	0.5	0.5	ug/L
CG76029	$8260GWR-WI	Dibromochloromethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	5.0	2	2	ug/L
CG76029	$8260GWR-WI	1,2-Dichloropropane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	5.0	3	3	ug/L
CG76029	$8260GWR-WI	Hexachlorobutadiene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	5.0	0.6	0.6	ug/L
CG76029	$8260GWR-WI	Methylene chloride	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	5	5	ug/L
CG76029	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	5.0	0.02	0.02	ug/L

Wednesday, October 21, 2020

Criteria: MA: GW1, GW2, GW3

State: MA

Sample Criteria Exceedances Report

GCG76015 - AECOM-WILMINGTN

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units
CG76029	$8260GWR-WI	Tetrachloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	950	20	5	5	ug/L
CG76029	$8260GWR-WI	trans-1,3-Dichloropropene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	5.0	0.5	0.5	ug/L
CG76029	$8260GWR-WI	1,1-Dichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	7.3	7.0	7	7	ug/L
CG76029	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-1 (mg/l)	36	10	2	2	ug/L
CG76029	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-1 (mg/l)	36	10	2	2	ug/L
CG76029	$8260GWR-WI	Bromoform	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	5.0	4	4	ug/L
CG76029	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	1300	20	5	5	ug/L
CG76029	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	5.0	2	2	ug/L
CG76029	$8260GWR-WI	1,2-Dichloropropane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	5.0	3	3	ug/L
CG76029	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-2 (mg/l)	36	10	2	2	ug/L
CG76029	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-2 (mg/l)	36	10	2	2	ug/L
CG76029	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	1300	20	5	5	ug/L
CG76029	$8260GWR-WI	Tetrachloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	950	20	50	50	ug/L
CG76029	$8260GWR-WI	Hexachlorobutadiene	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	5.0	1	1	ug/L
CG76029	$8260GWR-WI	Carbon tetrachloride	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	5.0	2	2	ug/L
CG76029	$8260GWR-WI	cis-1,2-Dichloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	140	10	20	20	ug/L
CG76029	$8260GWR-WI	Tetrachloroethene	MA / GROUNDWATER STANDARDS / GW-1	950	20	5	5	ug/L
CG76029	$8260GWR-WI	cis-1,2-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-1	140	10	70	70	ug/L
CG76029	$8260GWR-WI	Dibromochloromethane	MA / GROUNDWATER STANDARDS / GW-1	ND	5.0	2	2	ug/L
CG76029	$8260GWR-WI	Bromoform	MA / GROUNDWATER STANDARDS / GW-1	ND	5.0	4	4	ug/L
CG76029	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	5.0	0.02	0.02	ug/L
CG76029	$8260GWR-WI	Hexachlorobutadiene	MA / GROUNDWATER STANDARDS / GW-1	ND	5.0	0.6	0.6	ug/L
CG76029	$8260GWR-WI	Methylene chloride	MA / GROUNDWATER STANDARDS / GW-1	ND	10	5	5	ug/L
CG76029	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-1	1300	20	5	5	ug/L
CG76029	$8260GWR-WI	Vinyl chloride	MA / GROUNDWATER STANDARDS / GW-1	36	10	2	2	ug/L
CG76029	$8260GWR-WI	1,1-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-1	7.3	7.0	7	7	ug/L
CG76029	$8260GWR-WI	Bromodichloromethane	MA / GROUNDWATER STANDARDS / GW-1	ND	5.0	3	3	ug/L
CG76029	$8260GWR-WI	1,1,2,2-Tetrachloroethane	MA / GROUNDWATER STANDARDS / GW-1	ND	5.0	2	2	ug/L
CG76029	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-2	1300	20	5	5	ug/L
CG76029	$8260GWR-WI	Carbon tetrachloride	MA / GROUNDWATER STANDARDS / GW-2	ND	5.0	2	2	ug/L
CG76029	$8260GWR-WI	Vinyl chloride	MA / GROUNDWATER STANDARDS / GW-2	36	10	2	2	ug/L
CG76029	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-2	ND	5.0	2	2	ug/L
CG76029	$8260GWR-WI	cis-1,2-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-2	140	10	20	20	ug/L
CG76029	$8260GWR-WI	1,2-Dichloropropane	MA / GROUNDWATER STANDARDS / GW-2	ND	5.0	3	3	ug/L
CG76029	$8260GWR-WI	Tetrachloroethene	MA / GROUNDWATER STANDARDS / GW-2	950	20	50	50	ug/L
CG76029	$MCPADD-WM	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	1000	0.3	0.3	ug/L
CG76029	$MCPADD-WM	1,4-dioxane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	1000	3	3	ug/L
CG76029	$MCPADD-WM	1,4-dioxane	MA / GROUNDWATER STANDARDS / GW-1	ND	1000	0.3	0.3	ug/L
CG76030	$8260GWR-WI	Benzene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	50	5	5	ug/L
CG76030	$8260GWR-WI	1,2,3-Trichlorobenzene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	50	7	7	ug/L
CG76030	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	50	0.00075	0.00075	ug/L

Wednesday, October 21, 2020

Criteria: MA: GW1, GW2, GW3

State: MA

Sample Criteria Exceedances Report

GCG76015 - AECOM-WILMINGTN

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units
CG76030	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	50	0.00033	0.00033	ug/L
CG76030	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	50	0.0075	0.0075	ug/L
CG76030	$8260GWR-WI	cis-1,3-Dichloropropene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	50	0.47	0.47	ug/L
CG76030	$8260GWR-WI	Hexachlorobutadiene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	50	0.6	0.6	ug/L
CG76030	$8260GWR-WI	Dibromomethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	50	8.3	8.3	ug/L
CG76030	$8260GWR-WI	Vinyl chloride	MA / Client Specified Criteria / LOCKHEED WILMINGTO	150	100	2	2	ug/L
CG76030	$8260GWR-WI	Bromodichloromethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	50	3	3	ug/L
CG76030	$8260GWR-WI	Trichloroethene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	6000	100	5	5	ug/L
CG76030	$8260GWR-WI	1,2-Dichloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	50	3	3	ug/L
CG76030	$8260GWR-WI	cis-1,2-Dichloroethene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	690	100	20	20	ug/L
CG76030	$8260GWR-WI	4-Methyl-2-pentanone	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	500	350	350	ug/L
CG76030	$8260GWR-WI	2-Hexanone	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	500	38	38	ug/L
CG76030	$8260GWR-WI	trans-1,3-Dichloropropene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	50	0.47	0.47	ug/L
CG76030	$8260GWR-WI	1,2-Dichloroethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	50	5	5	ug/L
CG76030	$8260GWR-WI	Dibromochloromethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	50	2	2	ug/L
CG76030	$8260GWR-WI	Methyl ethyl ketone	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	500	38	38	ug/L
CG76030	$8260GWR-WI	1,1,1,2-Tetrachloroethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	50	5	5	ug/L
CG76030	$8260GWR-WI	1,1-Dichloroethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	100	100	70	70	ug/L
CG76030	$8260GWR-WI	Tetrachloroethene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	3200	100	5	5	ug/L
CG76030	$8260GWR-WI	Bromoform	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	50	4	4	ug/L
CG76030	$8260GWR-WI	1,1,2-Trichloroethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	50	5	5	ug/L
CG76030	$8260GWR-WI	Carbon tetrachloride	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	50	2	2	ug/L
CG76030	$8260GWR-WI	Methylene chloride	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	100	5	5	ug/L
CG76030	$8260GWR-WI	Bromomethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	50	7	7	ug/L
CG76030	$8260GWR-WI	1,4-Dichlorobenzene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	50	5	5	ug/L
CG76030	$8260GWR-WI	1,1,2,2-Tetrachloroethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	50	2	2	ug/L
CG76030	$8260GWR-WI	Methylene chloride	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	100	5	5	ug/L
CG76030	$8260GWR-WI	4-Methyl-2-pentanone	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	500	350	350	ug/L
CG76030	$8260GWR-WI	1,1-Dichloroethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	100	100	70	70	ug/L
CG76030	$8260GWR-WI	Bromomethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	50	7	7	ug/L
CG76030	$8260GWR-WI	Carbon tetrachloride	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	50	2	2	ug/L
CG76030	$8260GWR-WI	Bromoform	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	50	4	4	ug/L
CG76030	$8260GWR-WI	Bromodichloromethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	50	3	3	ug/L
CG76030	$8260GWR-WI	Tetrachloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	3200	100	5	5	ug/L
CG76030	$8260GWR-WI	Benzene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	50	5	5	ug/L
CG76030	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	50	0.02	0.02	ug/L
CG76030	$8260GWR-WI	1,1,1,2-Tetrachloroethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	50	5	5	ug/L
CG76030	$8260GWR-WI	Dibromochloromethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	50	2	2	ug/L
CG76030	$8260GWR-WI	1,1,2,2-Tetrachloroethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	50	2	2	ug/L
CG76030	$8260GWR-WI	cis-1,3-Dichloropropene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	50	0.5	0.5	ug/L
CG76030	$8260GWR-WI	1,1,2-Trichloroethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	50	5	5	ug/L
CG76030	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-1 (mg/l)	150	100	2	2	ug/L

Wednesday, October 21, 2020

Criteria: MA: GW1, GW2, GW3

State: MA

Sample Criteria Exceedances Report

GCG76015 - AECOM-WILMINGTN

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units
CG76030	$8260GWR-WI	1,1-Dichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	50	7	7	ug/L
CG76030	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-1 (mg/l)	150	100	2	2	ug/L
CG76030	$8260GWR-WI	1,4-Dichlorobenzene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	50	5	5	ug/L
CG76030	$8260GWR-WI	1,2-Dichloroethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	50	5	5	ug/L
CG76030	$8260GWR-WI	Hexachlorobutadiene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	50	0.6	0.6	ug/L
CG76030	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	6000	100	5	5	ug/L
CG76030	$8260GWR-WI	1,2-Dichloropropane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	50	3	3	ug/L
CG76030	$8260GWR-WI	cis-1,2-Dichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	690	100	20	20	ug/L
CG76030	$8260GWR-WI	trans-1,3-Dichloropropene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	50	0.5	0.5	ug/L
CG76030	$8260GWR-WI	1,3-Dichlorobenzene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	50	40	40	ug/L
CG76030	$8260GWR-WI	Hexachlorobutadiene	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	50	1	1	ug/L
CG76030	$8260GWR-WI	cis-1,2-Dichloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	690	100	20	20	ug/L
CG76030	$8260GWR-WI	cis-1,3-Dichloropropene	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	50	5	5	ug/L
CG76030	$8260GWR-WI	Dibromochloromethane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	50	20	20	ug/L
CG76030	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	50	2	2	ug/L
CG76030	$8260GWR-WI	1,2-Dichloropropane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	50	3	3	ug/L
CG76030	$8260GWR-WI	1,1,1,2-Tetrachloroethane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	50	10	10	ug/L
CG76030	$8260GWR-WI	1,1,2,2-Tetrachloroethane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	50	9	9	ug/L
CG76030	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-2 (mg/l)	150	100	2	2	ug/L
CG76030	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-2 (mg/l)	150	100	2	2	ug/L
CG76030	$8260GWR-WI	Carbon tetrachloride	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	50	2	2	ug/L
CG76030	$8260GWR-WI	1,2-Dichloroethane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	50	5	5	ug/L
CG76030	$8260GWR-WI	Bromomethane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	50	7	7	ug/L
CG76030	$8260GWR-WI	trans-1,3-Dichloropropene	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	50	5	5	ug/L
CG76030	$8260GWR-WI	Tetrachloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	3200	100	50	50	ug/L
CG76030	$8260GWR-WI	Bromodichloromethane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	50	6	6	ug/L
CG76030	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	6000	100	5	5	ug/L
CG76030	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-1	6000	100	5	5	ug/L
CG76030	$8260GWR-WI	Tetrachloroethene	MA / GROUNDWATER STANDARDS / GW-1	3200	100	5	5	ug/L
CG76030	$8260GWR-WI	Hexachlorobutadiene	MA / GROUNDWATER STANDARDS / GW-1	ND	50	0.6	0.6	ug/L
CG76030	$8260GWR-WI	Vinyl chloride	MA / GROUNDWATER STANDARDS / GW-1	150	100	2	2	ug/L
CG76030	$8260GWR-WI	Methylene chloride	MA / GROUNDWATER STANDARDS / GW-1	ND	100	5	5	ug/L
CG76030	$8260GWR-WI	1,1-Dichloroethane	MA / GROUNDWATER STANDARDS / GW-1	100	100	70	70	ug/L
CG76030	$8260GWR-WI	1,1,1,2-Tetrachloroethane	MA / GROUNDWATER STANDARDS / GW-1	ND	50	5	5	ug/L
CG76030	$8260GWR-WI	1,1,2,2-Tetrachloroethane	MA / GROUNDWATER STANDARDS / GW-1	ND	50	2	2	ug/L
CG76030	$8260GWR-WI	1,1,2-Trichloroethane	MA / GROUNDWATER STANDARDS / GW-1	ND	50	5	5	ug/L
CG76030	$8260GWR-WI	1,1-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-1	ND	50	7	7	ug/L
CG76030	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	50	0.02	0.02	ug/L
CG76030	$8260GWR-WI	1,2-Dichloroethane	MA / GROUNDWATER STANDARDS / GW-1	ND	50	5	5	ug/L
CG76030	$8260GWR-WI	1,2-Dichloropropane	MA / GROUNDWATER STANDARDS / GW-1	ND	50	5	5	ug/L
CG76030	$8260GWR-WI	1,4-Dichlorobenzene	MA / GROUNDWATER STANDARDS / GW-1	ND	50	5	5	ug/L
CG76030	$8260GWR-WI	4-Methyl-2-pentanone	MA / GROUNDWATER STANDARDS / GW-1	ND	500	350	350	ug/L

Wednesday, October 21, 2020

Criteria: MA: GW1, GW2, GW3

State: MA

Sample Criteria Exceedances Report

GCG76015 - AECOM-WILMINGTN

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units
CG76030	$8260GWR-WI	Benzene	MA / GROUNDWATER STANDARDS / GW-1	ND	50	5	5	ug/L
CG76030	$8260GWR-WI	Carbon tetrachloride	MA / GROUNDWATER STANDARDS / GW-1	ND	50	5	5	ug/L
CG76030	$8260GWR-WI	Bromoform	MA / GROUNDWATER STANDARDS / GW-1	ND	50	4	4	ug/L
CG76030	$8260GWR-WI	Bromomethane	MA / GROUNDWATER STANDARDS / GW-1	ND	50	10	10	ug/L
CG76030	$8260GWR-WI	cis-1,2-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-1	690	100	70	70	ug/L
CG76030	$8260GWR-WI	Dibromochloromethane	MA / GROUNDWATER STANDARDS / GW-1	ND	50	2	2	ug/L
CG76030	$8260GWR-WI	Bromodichloromethane	MA / GROUNDWATER STANDARDS / GW-1	ND	50	3	3	ug/L
CG76030	$8260GWR-WI	1,1,1,2-Tetrachloroethane	MA / GROUNDWATER STANDARDS / GW-2	ND	50	10	10	ug/L
CG76030	$8260GWR-WI	cis-1,2-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-2	690	100	20	20	ug/L
CG76030	$8260GWR-WI	1,1,2,2-Tetrachloroethane	MA / GROUNDWATER STANDARDS / GW-2	ND	50	9	9	ug/L
CG76030	$8260GWR-WI	Dibromochloromethane	MA / GROUNDWATER STANDARDS / GW-2	ND	50	20	20	ug/L
CG76030	$8260GWR-WI	Carbon tetrachloride	MA / GROUNDWATER STANDARDS / GW-2	ND	50	2	2	ug/L
CG76030	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-2	ND	50	2	2	ug/L
CG76030	$8260GWR-WI	Vinyl chloride	MA / GROUNDWATER STANDARDS / GW-2	150	100	2	2	ug/L
CG76030	$8260GWR-WI	1,2-Dichloroethane	MA / GROUNDWATER STANDARDS / GW-2	ND	50	5	5	ug/L
CG76030	$8260GWR-WI	Bromomethane	MA / GROUNDWATER STANDARDS / GW-2	ND	50	7	7	ug/L
CG76030	$8260GWR-WI	1,2-Dichloropropane	MA / GROUNDWATER STANDARDS / GW-2	ND	50	3	3	ug/L
CG76030	$8260GWR-WI	Tetrachloroethene	MA / GROUNDWATER STANDARDS / GW-2	3200	100	50	50	ug/L
CG76030	$8260GWR-WI	Bromodichloromethane	MA / GROUNDWATER STANDARDS / GW-2	ND	50	6	6	ug/L
CG76030	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-2	6000	100	5	5	ug/L
CG76030	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-3	6000	100	5000	5000	ug/L
CG76030	$DIOX_LDL	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	38	0.20	0.3	0.3	ug/l
CG76030	$DIOX_LDL	1,4-dioxane	MA / CMR 310.40.1600 / GW-1 (mg/l)	38	0.20	3	3	ug/l
CG76030	$DIOX_LDL	1,4-dioxane	MA / GROUNDWATER STANDARDS / GW-1	38	0.20	0.3	0.3	ug/l
CG76030	$MCPADD-WM	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	10000	0.3	0.3	ug/L
CG76031	$8260GWR-WI	4-Methyl-2-pentanone	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	500	350	350	ug/L
CG76031	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	50	0.00075	0.00075	ug/L
CG76031	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	50	0.00033	0.00033	ug/L
CG76031	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	50	0.0075	0.0075	ug/L
CG76031	$8260GWR-WI	Dibromomethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	50	8.3	8.3	ug/L
CG76031	$8260GWR-WI	2-Hexanone	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	500	38	38	ug/L
CG76031	$8260GWR-WI	1,2-Dichloroethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	50	5	5	ug/L
CG76031	$8260GWR-WI	cis-1,3-Dichloropropene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	50	0.47	0.47	ug/L
CG76031	$8260GWR-WI	cis-1,2-Dichloroethene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	1000	100	20	20	ug/L
CG76031	$8260GWR-WI	Carbon tetrachloride	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	50	2	2	ug/L
CG76031	$8260GWR-WI	Bromomethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	50	7	7	ug/L
CG76031	$8260GWR-WI	Vinyl chloride	MA / Client Specified Criteria / LOCKHEED WILMINGTO	270	100	2	2	ug/L
CG76031	$8260GWR-WI	Bromoform	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	50	4	4	ug/L
CG76031	$8260GWR-WI	1,4-Dichlorobenzene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	50	5	5	ug/L
CG76031	$8260GWR-WI	Bromodichloromethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	50	3	3	ug/L
CG76031	$8260GWR-WI	1,2,3-Trichlorobenzene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	50	7	7	ug/L

Wednesday, October 21, 2020

Criteria: MA: GW1, GW2, GW3

State: MA

Sample Criteria Exceedances Report

GCG76015 - AECOM-WILMINGTN

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units
CG76031	$8260GWR-WI	1,2-Dichloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	50	3	3	ug/L
CG76031	$8260GWR-WI	Dibromochloromethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	50	2	2	ug/L
CG76031	$8260GWR-WI	Trichloroethene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	7600	100	5	5	ug/L
CG76031	$8260GWR-WI	Hexachlorobutadiene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	50	0.6	0.6	ug/L
CG76031	$8260GWR-WI	1,1,2,2-Tetrachloroethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	50	2	2	ug/L
CG76031	$8260GWR-WI	1,1,1,2-Tetrachloroethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	50	5	5	ug/L
CG76031	$8260GWR-WI	trans-1,3-Dichloropropene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	50	0.47	0.47	ug/L
CG76031	$8260GWR-WI	Tetrachloroethene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	4700	100	5	5	ug/L
CG76031	$8260GWR-WI	Benzene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	50	5	5	ug/L
CG76031	$8260GWR-WI	1,1-Dichloroethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	110	100	70	70	ug/L
CG76031	$8260GWR-WI	Methylene chloride	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	100	5	5	ug/L
CG76031	$8260GWR-WI	Methyl ethyl ketone	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	500	38	38	ug/L
CG76031	$8260GWR-WI	1,1,2-Trichloroethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	50	5	5	ug/L
CG76031	$8260GWR-WI	Bromodichloromethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	50	3	3	ug/L
CG76031	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-1 (mg/l)	270	100	2	2	ug/L
CG76031	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-1 (mg/l)	270	100	2	2	ug/L
CG76031	$8260GWR-WI	Bromoform	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	50	4	4	ug/L
CG76031	$8260GWR-WI	Benzene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	50	5	5	ug/L
CG76031	$8260GWR-WI	Bromomethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	50	7	7	ug/L
CG76031	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	7600	100	5	5	ug/L
CG76031	$8260GWR-WI	Carbon tetrachloride	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	50	2	2	ug/L
CG76031	$8260GWR-WI	cis-1,2-Dichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	1000	100	20	20	ug/L
CG76031	$8260GWR-WI	Tetrachloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	4700	100	5	5	ug/L
CG76031	$8260GWR-WI	cis-1,3-Dichloropropene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	50	0.5	0.5	ug/L
CG76031	$8260GWR-WI	Dibromochloromethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	50	2	2	ug/L
CG76031	$8260GWR-WI	Methylene chloride	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	100	5	5	ug/L
CG76031	$8260GWR-WI	Hexachlorobutadiene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	50	0.6	0.6	ug/L
CG76031	$8260GWR-WI	trans-1,3-Dichloropropene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	50	0.5	0.5	ug/L
CG76031	$8260GWR-WI	1,1,1,2-Tetrachloroethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	50	5	5	ug/L
CG76031	$8260GWR-WI	1,1,2-Trichloroethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	50	5	5	ug/L
CG76031	$8260GWR-WI	1,1-Dichloroethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	110	100	70	70	ug/L
CG76031	$8260GWR-WI	1,1-Dichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	50	7	7	ug/L
CG76031	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	50	0.02	0.02	ug/L
CG76031	$8260GWR-WI	1,1,2,2-Tetrachloroethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	50	2	2	ug/L
CG76031	$8260GWR-WI	1,2-Dichloroethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	50	5	5	ug/L
CG76031	$8260GWR-WI	1,2-Dichloropropane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	50	3	3	ug/L
CG76031	$8260GWR-WI	1,4-Dichlorobenzene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	50	5	5	ug/L
CG76031	$8260GWR-WI	1,3-Dichlorobenzene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	50	40	40	ug/L
CG76031	$8260GWR-WI	4-Methyl-2-pentanone	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	500	350	350	ug/L
CG76031	$8260GWR-WI	1,2-Dichloroethane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	50	5	5	ug/L
CG76031	$8260GWR-WI	1,1,1,2-Tetrachloroethane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	50	10	10	ug/L
CG76031	$8260GWR-WI	cis-1,3-Dichloropropene	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	50	5	5	ug/L

Wednesday, October 21, 2020

Criteria: MA: GW1, GW2, GW3

State: MA

Sample Criteria Exceedances Report

GCG76015 - AECOM-WILMINGTN

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units
CG76031	$8260GWR-WI	Bromodichloromethane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	50	6	6	ug/L
CG76031	$8260GWR-WI	Hexachlorobutadiene	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	50	1	1	ug/L
CG76031	$8260GWR-WI	cis-1,2-Dichloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	1000	100	20	20	ug/L
CG76031	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	50	2	2	ug/L
CG76031	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-2 (mg/l)	270	100	2	2	ug/L
CG76031	$8260GWR-WI	Bromomethane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	50	7	7	ug/L
CG76031	$8260GWR-WI	trans-1,3-Dichloropropene	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	50	5	5	ug/L
CG76031	$8260GWR-WI	1,1,2,2-Tetrachloroethane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	50	9	9	ug/L
CG76031	$8260GWR-WI	1,2-Dichloropropane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	50	3	3	ug/L
CG76031	$8260GWR-WI	Tetrachloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	4700	100	50	50	ug/L
CG76031	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	7600	100	5	5	ug/L
CG76031	$8260GWR-WI	Dibromochloromethane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	50	20	20	ug/L
CG76031	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-2 (mg/l)	270	100	2	2	ug/L
CG76031	$8260GWR-WI	Carbon tetrachloride	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	50	2	2	ug/L
CG76031	$8260GWR-WI	Methylene chloride	MA / GROUNDWATER STANDARDS / GW-1	ND	100	5	5	ug/L
CG76031	$8260GWR-WI	Tetrachloroethene	MA / GROUNDWATER STANDARDS / GW-1	4700	100	5	5	ug/L
CG76031	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-1	7600	100	5	5	ug/L
CG76031	$8260GWR-WI	1,1,2,2-Tetrachloroethane	MA / GROUNDWATER STANDARDS / GW-1	ND	50	2	2	ug/L
CG76031	$8260GWR-WI	Benzene	MA / GROUNDWATER STANDARDS / GW-1	ND	50	5	5	ug/L
CG76031	$8260GWR-WI	1,1-Dichloroethane	MA / GROUNDWATER STANDARDS / GW-1	110	100	70	70	ug/L
CG76031	$8260GWR-WI	Hexachlorobutadiene	MA / GROUNDWATER STANDARDS / GW-1	ND	50	0.6	0.6	ug/L
CG76031	$8260GWR-WI	1,1,2-Trichloroethane	MA / GROUNDWATER STANDARDS / GW-1	ND	50	5	5	ug/L
CG76031	$8260GWR-WI	cis-1,2-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-1	1000	100	70	70	ug/L
CG76031	$8260GWR-WI	4-Methyl-2-pentanone	MA / GROUNDWATER STANDARDS / GW-1	ND	500	350	350	ug/L
CG76031	$8260GWR-WI	Bromoform	MA / GROUNDWATER STANDARDS / GW-1	ND	50	4	4	ug/L
CG76031	$8260GWR-WI	1,2-Dichloropropane	MA / GROUNDWATER STANDARDS / GW-1	ND	50	5	5	ug/L
CG76031	$8260GWR-WI	Bromomethane	MA / GROUNDWATER STANDARDS / GW-1	ND	50	10	10	ug/L
CG76031	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	50	0.02	0.02	ug/L
CG76031	$8260GWR-WI	1,2-Dichloroethane	MA / GROUNDWATER STANDARDS / GW-1	ND	50	5	5	ug/L
CG76031	$8260GWR-WI	1,4-Dichlorobenzene	MA / GROUNDWATER STANDARDS / GW-1	ND	50	5	5	ug/L
CG76031	$8260GWR-WI	Vinyl chloride	MA / GROUNDWATER STANDARDS / GW-1	270	100	2	2	ug/L
CG76031	$8260GWR-WI	Bromodichloromethane	MA / GROUNDWATER STANDARDS / GW-1	ND	50	3	3	ug/L
CG76031	$8260GWR-WI	1,1,1,2-Tetrachloroethane	MA / GROUNDWATER STANDARDS / GW-1	ND	50	5	5	ug/L
CG76031	$8260GWR-WI	Dibromochloromethane	MA / GROUNDWATER STANDARDS / GW-1	ND	50	2	2	ug/L
CG76031	$8260GWR-WI	1,1-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-1	ND	50	7	7	ug/L
CG76031	$8260GWR-WI	Carbon tetrachloride	MA / GROUNDWATER STANDARDS / GW-1	ND	50	5	5	ug/L
CG76031	$8260GWR-WI	Vinyl chloride	MA / GROUNDWATER STANDARDS / GW-2	270	100	2	2	ug/L
CG76031	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-2	7600	100	5	5	ug/L
CG76031	$8260GWR-WI	cis-1,2-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-2	1000	100	20	20	ug/L
CG76031	$8260GWR-WI	Bromodichloromethane	MA / GROUNDWATER STANDARDS / GW-2	ND	50	6	6	ug/L
CG76031	$8260GWR-WI	Bromomethane	MA / GROUNDWATER STANDARDS / GW-2	ND	50	7	7	ug/L
CG76031	$8260GWR-WI	1,2-Dichloropropane	MA / GROUNDWATER STANDARDS / GW-2	ND	50	3	3	ug/L

Wednesday, October 21, 2020

Criteria: MA: GW1, GW2, GW3

State: MA

Sample Criteria Exceedances Report

GCG76015 - AECOM-WILMINGTN

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units
CG76031	$8260GWR-WI	Carbon tetrachloride	MA / GROUNDWATER STANDARDS / GW-2	ND	50	2	2	ug/L
CG76031	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-2	ND	50	2	2	ug/L
CG76031	$8260GWR-WI	1,1,1,2-Tetrachloroethane	MA / GROUNDWATER STANDARDS / GW-2	ND	50	10	10	ug/L
CG76031	$8260GWR-WI	Dibromochloromethane	MA / GROUNDWATER STANDARDS / GW-2	ND	50	20	20	ug/L
CG76031	$8260GWR-WI	1,1,2,2-Tetrachloroethane	MA / GROUNDWATER STANDARDS / GW-2	ND	50	9	9	ug/L
CG76031	$8260GWR-WI	Tetrachloroethene	MA / GROUNDWATER STANDARDS / GW-2	4700	100	50	50	ug/L
CG76031	$8260GWR-WI	1,2-Dichloroethane	MA / GROUNDWATER STANDARDS / GW-2	ND	50	5	5	ug/L
CG76031	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-3	7600	100	5000	5000	ug/L
CG76031	$DIOX_LDL	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	37	0.20	0.3	0.3	ug/l
CG76031	$DIOX_LDL	1,4-dioxane	MA / CMR 310.40.1600 / GW-1 (mg/l)	37	0.20	3	3	ug/l
CG76031	$DIOX_LDL	1,4-dioxane	MA / GROUNDWATER STANDARDS / GW-1	37	0.20	0.3	0.3	ug/l
CG76031	$MCPADD-WM	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	10000	0.3	0.3	ug/L
CG76031	D-MN	Manganese (Dissolved)	MA / Client Specified Criteria / LOCKHEED WILMINGTO	1.01	0.001	0.43	0.43	mg/L
CG76031	MN-WM	Manganese	MA / Client Specified Criteria / LOCKHEED WILMINGTO	1.06	0.001	0.43	0.43	mg/L
CG76032	$8260GWR-WI	Bromodichloromethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	10	3	3	ug/L
CG76032	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	10	0.0075	0.0075	ug/L
CG76032	$8260GWR-WI	Dibromomethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	10	8.3	8.3	ug/L
CG76032	$8260GWR-WI	2-Hexanone	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	100	38	38	ug/L
CG76032	$8260GWR-WI	Hexachlorobutadiene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	10	0.6	0.6	ug/L
CG76032	$8260GWR-WI	1,4-Dichlorobenzene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	10	5	5	ug/L
CG76032	$8260GWR-WI	trans-1,3-Dichloropropene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	10	0.47	0.47	ug/L
CG76032	$8260GWR-WI	1,2-Dichloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	10	3	3	ug/L
CG76032	$8260GWR-WI	Tetrachloroethene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	2000	100	5	5	ug/L
CG76032	$8260GWR-WI	Vinyl chloride	MA / Client Specified Criteria / LOCKHEED WILMINGTO	68	20	2	2	ug/L
CG76032	$8260GWR-WI	Benzene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	10	5	5	ug/L
CG76032	$8260GWR-WI	Methylene chloride	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	20	5	5	ug/L
CG76032	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	10	0.00033	0.00033	ug/L
CG76032	$8260GWR-WI	1,2-Dichloroethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	10	5	5	ug/L
CG76032	$8260GWR-WI	Dibromochloromethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	10	2	2	ug/L
CG76032	$8260GWR-WI	1,2,3-Trichlorobenzene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	10	7	7	ug/L
CG76032	$8260GWR-WI	Bromoform	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	10	4	4	ug/L
CG76032	$8260GWR-WI	cis-1,2-Dichloroethene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	400	20	20	20	ug/L
CG76032	$8260GWR-WI	cis-1,3-Dichloropropene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	10	0.47	0.47	ug/L
CG76032	$8260GWR-WI	Methyl ethyl ketone	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	100	38	38	ug/L
CG76032	$8260GWR-WI	1,1,2-Trichloroethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	10	5	5	ug/L
CG76032	$8260GWR-WI	Trichloroethene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	3200	100	5	5	ug/L
CG76032	$8260GWR-WI	1,1,1,2-Tetrachloroethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	10	5	5	ug/L
CG76032	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	10	0.00075	0.00075	ug/L
CG76032	$8260GWR-WI	Bromomethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	10	7	7	ug/L
CG76032	$8260GWR-WI	Carbon tetrachloride	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	10	2	2	ug/L
CG76032	$8260GWR-WI	1,1,2,2-Tetrachloroethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	10	2	2	ug/L

Wednesday, October 21, 2020

Criteria: MA: GW1, GW2, GW3

State: MA

Sample Criteria Exceedances Report

GCG76015 - AECOM-WILMINGTN

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units
CG76032	$8260GWR-WI	cis-1,3-Dichloropropene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	0.5	0.5	ug/L
CG76032	$8260GWR-WI	Benzene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	5	5	ug/L
CG76032	$8260GWR-WI	Bromomethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	7	7	ug/L
CG76032	$8260GWR-WI	Hexachlorobutadiene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	0.6	0.6	ug/L
CG76032	$8260GWR-WI	Dibromochloromethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	2	2	ug/L
CG76032	$8260GWR-WI	Bromoform	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	4	4	ug/L
CG76032	$8260GWR-WI	Bromodichloromethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	3	3	ug/L
CG76032	$8260GWR-WI	1,1-Dichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	10	10	7	7	ug/L
CG76032	$8260GWR-WI	Carbon tetrachloride	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	2	2	ug/L
CG76032	$8260GWR-WI	cis-1,2-Dichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	400	20	20	20	ug/L
CG76032	$8260GWR-WI	1,1,1,2-Tetrachloroethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	5	5	ug/L
CG76032	$8260GWR-WI	1,1,2,2-Tetrachloroethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	2	2	ug/L
CG76032	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-1 (mg/l)	68	20	2	2	ug/L
CG76032	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-1 (mg/l)	68	20	2	2	ug/L
CG76032	$8260GWR-WI	1,1,2-Trichloroethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	5	5	ug/L
CG76032	$8260GWR-WI	1,4-Dichlorobenzene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	5	5	ug/L
CG76032	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	3200	100	5	5	ug/L
CG76032	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	0.02	0.02	ug/L
CG76032	$8260GWR-WI	trans-1,3-Dichloropropene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	0.5	0.5	ug/L
CG76032	$8260GWR-WI	1,2-Dichloroethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	5	5	ug/L
CG76032	$8260GWR-WI	Tetrachloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	2000	100	5	5	ug/L
CG76032	$8260GWR-WI	1,2-Dichloropropane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	3	3	ug/L
CG76032	$8260GWR-WI	Methylene chloride	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	20	5	5	ug/L
CG76032	$8260GWR-WI	trans-1,3-Dichloropropene	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	10	5	5	ug/L
CG76032	$8260GWR-WI	Tetrachloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	2000	100	50	50	ug/L
CG76032	$8260GWR-WI	cis-1,3-Dichloropropene	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	10	5	5	ug/L
CG76032	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-2 (mg/l)	68	20	2	2	ug/L
CG76032	$8260GWR-WI	Hexachlorobutadiene	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	10	1	1	ug/L
CG76032	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-2 (mg/l)	68	20	2	2	ug/L
CG76032	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	3200	100	5	5	ug/L
CG76032	$8260GWR-WI	cis-1,2-Dichloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	400	20	20	20	ug/L
CG76032	$8260GWR-WI	1,2-Dichloroethane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	10	5	5	ug/L
CG76032	$8260GWR-WI	Carbon tetrachloride	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	10	2	2	ug/L
CG76032	$8260GWR-WI	1,1,2,2-Tetrachloroethane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	10	9	9	ug/L
CG76032	$8260GWR-WI	Bromomethane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	10	7	7	ug/L
CG76032	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	10	2	2	ug/L
CG76032	$8260GWR-WI	Bromodichloromethane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	10	6	6	ug/L
CG76032	$8260GWR-WI	1,2-Dichloropropane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	10	3	3	ug/L
CG76032	$8260GWR-WI	1,2-Dichloroethane	MA / GROUNDWATER STANDARDS / GW-1	ND	10	5	5	ug/L
CG76032	$8260GWR-WI	Tetrachloroethene	MA / GROUNDWATER STANDARDS / GW-1	2000	100	5	5	ug/L
CG76032	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	10	0.02	0.02	ug/L
CG76032	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-1	3200	100	5	5	ug/L

Wednesday, October 21, 2020

Criteria: MA: GW1, GW2, GW3

State: MA

Sample Criteria Exceedances Report

GCG76015 - AECOM-WILMINGTN

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units
CG76032	$8260GWR-WI	1,1,2-Trichloroethane	MA / GROUNDWATER STANDARDS / GW-1	ND	10	5	5	ug/L
CG76032	$8260GWR-WI	1,1,2,2-Tetrachloroethane	MA / GROUNDWATER STANDARDS / GW-1	ND	10	2	2	ug/L
CG76032	$8260GWR-WI	1,1,1,2-Tetrachloroethane	MA / GROUNDWATER STANDARDS / GW-1	ND	10	5	5	ug/L
CG76032	$8260GWR-WI	Vinyl chloride	MA / GROUNDWATER STANDARDS / GW-1	68	20	2	2	ug/L
CG76032	$8260GWR-WI	Carbon tetrachloride	MA / GROUNDWATER STANDARDS / GW-1	ND	10	5	5	ug/L
CG76032	$8260GWR-WI	1,1-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-1	10	10	7	7	ug/L
CG76032	$8260GWR-WI	Bromodichloromethane	MA / GROUNDWATER STANDARDS / GW-1	ND	10	3	3	ug/L
CG76032	$8260GWR-WI	Bromoform	MA / GROUNDWATER STANDARDS / GW-1	ND	10	4	4	ug/L
CG76032	$8260GWR-WI	Dibromochloromethane	MA / GROUNDWATER STANDARDS / GW-1	ND	10	2	2	ug/L
CG76032	$8260GWR-WI	Methylene chloride	MA / GROUNDWATER STANDARDS / GW-1	ND	20	5	5	ug/L
CG76032	$8260GWR-WI	cis-1,2-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-1	400	20	70	70	ug/L
CG76032	$8260GWR-WI	Benzene	MA / GROUNDWATER STANDARDS / GW-1	ND	10	5	5	ug/L
CG76032	$8260GWR-WI	Hexachlorobutadiene	MA / GROUNDWATER STANDARDS / GW-1	ND	10	0.6	0.6	ug/L
CG76032	$8260GWR-WI	1,4-Dichlorobenzene	MA / GROUNDWATER STANDARDS / GW-1	ND	10	5	5	ug/L
CG76032	$8260GWR-WI	1,2-Dichloropropane	MA / GROUNDWATER STANDARDS / GW-1	ND	10	5	5	ug/L
CG76032	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-2	ND	10	2	2	ug/L
CG76032	$8260GWR-WI	Vinyl chloride	MA / GROUNDWATER STANDARDS / GW-2	68	20	2	2	ug/L
CG76032	$8260GWR-WI	Tetrachloroethene	MA / GROUNDWATER STANDARDS / GW-2	2000	100	50	50	ug/L
CG76032	$8260GWR-WI	1,2-Dichloropropane	MA / GROUNDWATER STANDARDS / GW-2	ND	10	3	3	ug/L
CG76032	$8260GWR-WI	1,1,2,2-Tetrachloroethane	MA / GROUNDWATER STANDARDS / GW-2	ND	10	9	9	ug/L
CG76032	$8260GWR-WI	1,2-Dichloroethane	MA / GROUNDWATER STANDARDS / GW-2	ND	10	5	5	ug/L
CG76032	$8260GWR-WI	Bromomethane	MA / GROUNDWATER STANDARDS / GW-2	ND	10	7	7	ug/L
CG76032	$8260GWR-WI	Carbon tetrachloride	MA / GROUNDWATER STANDARDS / GW-2	ND	10	2	2	ug/L
CG76032	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-2	3200	100	5	5	ug/L
CG76032	$8260GWR-WI	cis-1,2-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-2	400	20	20	20	ug/L
CG76032	$8260GWR-WI	Bromodichloromethane	MA / GROUNDWATER STANDARDS / GW-2	ND	10	6	6	ug/L
CG76032	$MCPADD-WM	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	2000	0.3	0.3	ug/L
CG76032	$MCPADD-WM	1,4-dioxane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	2000	3	3	ug/L
CG76032	$MCPADD-WM	1,4-dioxane	MA / GROUNDWATER STANDARDS / GW-1	ND	2000	0.3	0.3	ug/L
CG76033	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.00075	0.00075	ug/L
CG76033	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.00033	0.00033	ug/L
CG76033	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.0075	0.0075	ug/L
CG76033	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	0.50	0.02	0.02	ug/L
CG76033	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	0.50	0.02	0.02	ug/L
CG76033	$MCPADD-WM	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	100	0.3	0.3	ug/L
CG76033	$MCPADD-WM	1,4-dioxane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	100	3	3	ug/L
CG76033	$MCPADD-WM	1,4-dioxane	MA / GROUNDWATER STANDARDS / GW-1	ND	100	0.3	0.3	ug/L
CG76034	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.00033	0.00033	ug/L
CG76034	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.0075	0.0075	ug/L
CG76034	$8260GWR-WI	Vinyl chloride	MA / Client Specified Criteria / LOCKHEED WILMINGTO	11	1.0	2	2	ug/L

Wednesday, October 21, 2020

Criteria: MA: GW1, GW2, GW3

State: MA

Sample Criteria Exceedances Report

GCG76015 - AECOM-WILMINGTN

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units
CG76034	$8260GWR-WI	cis-1,2-Dichloroethene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	56	1.0	20	20	ug/L
CG76034	$8260GWR-WI	Trichloroethene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	81	1.0	5	5	ug/L
CG76034	$8260GWR-WI	Tetrachloroethene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	34	1.0	5	5	ug/L
CG76034	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.00075	0.00075	ug/L
CG76034	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-1 (mg/l)	11	1.0	2	2	ug/L
CG76034	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-1 (mg/l)	11	1.0	2	2	ug/L
CG76034	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	81	1.0	5	5	ug/L
CG76034	$8260GWR-WI	cis-1,2-Dichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	56	1.0	20	20	ug/L
CG76034	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	0.50	0.02	0.02	ug/L
CG76034	$8260GWR-WI	Tetrachloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	34	1.0	5	5	ug/L
CG76034	$8260GWR-WI	cis-1,2-Dichloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	56	1.0	20	20	ug/L
CG76034	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	81	1.0	5	5	ug/L
CG76034	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-2 (mg/l)	11	1.0	2	2	ug/L
CG76034	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-2 (mg/l)	11	1.0	2	2	ug/L
CG76034	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-1	81	1.0	5	5	ug/L
CG76034	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	0.50	0.02	0.02	ug/L
CG76034	$8260GWR-WI	Tetrachloroethene	MA / GROUNDWATER STANDARDS / GW-1	34	1.0	5	5	ug/L
CG76034	$8260GWR-WI	Vinyl chloride	MA / GROUNDWATER STANDARDS / GW-1	11	1.0	2	2	ug/L
CG76034	$8260GWR-WI	Vinyl chloride	MA / GROUNDWATER STANDARDS / GW-2	11	1.0	2	2	ug/L
CG76034	$8260GWR-WI	cis-1,2-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-2	56	1.0	20	20	ug/L
CG76034	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-2	81	1.0	5	5	ug/L
CG76034	$MCPADD-WM	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	100	0.3	0.3	ug/L
CG76034	$MCPADD-WM	1,4-dioxane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	100	3	3	ug/L
CG76034	$MCPADD-WM	1,4-dioxane	MA / GROUNDWATER STANDARDS / GW-1	ND	100	0.3	0.3	ug/L
CG76035	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.00075	0.00075	ug/L
CG76035	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.00033	0.00033	ug/L
CG76035	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.0075	0.0075	ug/L
CG76035	$8260GWR-WI	Vinyl chloride	MA / Client Specified Criteria / LOCKHEED WILMINGTO	2.3	1.0	2	2	ug/L
CG76035	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	0.50	0.02	0.02	ug/L
CG76035	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-1 (mg/l)	2.3	1.0	2	2	ug/L
CG76035	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-1 (mg/l)	2.3	1.0	2	2	ug/L
CG76035	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-2 (mg/l)	2.3	1.0	2	2	ug/L
CG76035	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-2 (mg/l)	2.3	1.0	2	2	ug/L
CG76035	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	0.50	0.02	0.02	ug/L
CG76035	$8260GWR-WI	Vinyl chloride	MA / GROUNDWATER STANDARDS / GW-1	2.3	1.0	2	2	ug/L
CG76035	$8260GWR-WI	Vinyl chloride	MA / GROUNDWATER STANDARDS / GW-2	2.3	1.0	2	2	ug/L
CG76035	$MCPADD-WM	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	100	0.3	0.3	ug/L
CG76035	$MCPADD-WM	1,4-dioxane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	100	3	3	ug/L
CG76035	$MCPADD-WM	1,4-dioxane	MA / GROUNDWATER STANDARDS / GW-1	ND	100	0.3	0.3	ug/L
CG76036	$8260GWR-WI	cis-1,2-Dichloroethene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	21	1.0	20	20	ug/L

Wednesday, October 21, 2020

Criteria: MA: GW1, GW2, GW3

State: MA

Sample Criteria Exceedances Report

GCG76015 - AECOM-WILMINGTN

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units
CG76036	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.00075	0.00075	ug/L
CG76036	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.00033	0.00033	ug/L
CG76036	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.0075	0.0075	ug/L
CG76036	$8260GWR-WI	Tetrachloroethene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	110	10	5	5	ug/L
CG76036	$8260GWR-WI	Vinyl chloride	MA / Client Specified Criteria / LOCKHEED WILMINGTO	5.7	1.0	2	2	ug/L
CG76036	$8260GWR-WI	Trichloroethene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	36	1.0	5	5	ug/L
CG76036	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-1 (mg/l)	5.7	1.0	2	2	ug/L
CG76036	$8260GWR-WI	Tetrachloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	110	10	5	5	ug/L
CG76036	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	36	1.0	5	5	ug/L
CG76036	$8260GWR-WI	cis-1,2-Dichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	21	1.0	20	20	ug/L
CG76036	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	0.50	0.02	0.02	ug/L
CG76036	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-1 (mg/l)	5.7	1.0	2	2	ug/L
CG76036	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	36	1.0	5	5	ug/L
CG76036	$8260GWR-WI	cis-1,2-Dichloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	21	1.0	20	20	ug/L
CG76036	$8260GWR-WI	Tetrachloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	110	10	50	50	ug/L
CG76036	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-2 (mg/l)	5.7	1.0	2	2	ug/L
CG76036	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-2 (mg/l)	5.7	1.0	2	2	ug/L
CG76036	$8260GWR-WI	Vinyl chloride	MA / GROUNDWATER STANDARDS / GW-1	5.7	1.0	2	2	ug/L
CG76036	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-1	36	1.0	5	5	ug/L
CG76036	$8260GWR-WI	Tetrachloroethene	MA / GROUNDWATER STANDARDS / GW-1	110	10	5	5	ug/L
CG76036	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	0.50	0.02	0.02	ug/L
CG76036	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-2	36	1.0	5	5	ug/L
CG76036	$8260GWR-WI	cis-1,2-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-2	21	1.0	20	20	ug/L
CG76036	$8260GWR-WI	Vinyl chloride	MA / GROUNDWATER STANDARDS / GW-2	5.7	1.0	2	2	ug/L
CG76036	$8260GWR-WI	Tetrachloroethene	MA / GROUNDWATER STANDARDS / GW-2	110	10	50	50	ug/L
CG76036	$MCPADD-WM	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	100	0.3	0.3	ug/L
CG76036	$MCPADD-WM	1,4-dioxane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	100	3	3	ug/L
CG76036	$MCPADD-WM	1,4-dioxane	MA / GROUNDWATER STANDARDS / GW-1	ND	100	0.3	0.3	ug/L
CG76037	$8260GWR-WI	Tetrachloroethene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	1400	20	5	5	ug/L
CG76037	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	10	0.00033	0.00033	ug/L
CG76037	$8260GWR-WI	2-Hexanone	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	100	38	38	ug/L
CG76037	$8260GWR-WI	Bromoform	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	10	4	4	ug/L
CG76037	$8260GWR-WI	Bromodichloromethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	10	3	3	ug/L
CG76037	$8260GWR-WI	cis-1,2-Dichloroethene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	550	20	20	20	ug/L
CG76037	$8260GWR-WI	Bromomethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	10	7	7	ug/L
CG76037	$8260GWR-WI	1,2-Dichloroethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	10	5	5	ug/L
CG76037	$8260GWR-WI	Methylene chloride	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	20	5	5	ug/L
CG76037	$8260GWR-WI	1,4-Dichlorobenzene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	10	5	5	ug/L
CG76037	$8260GWR-WI	Trichloroethene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	3100	100	5	5	ug/L
CG76037	$8260GWR-WI	Carbon tetrachloride	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	10	2	2	ug/L
CG76037	$8260GWR-WI	1,2-Dichloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	10	3	3	ug/L

Wednesday, October 21, 2020

Criteria: MA: GW1, GW2, GW3

State: MA

Sample Criteria Exceedances Report

GCG76015 - AECOM-WILMINGTN

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units
CG76037	$8260GWR-WI	Vinyl chloride	MA / Client Specified Criteria / LOCKHEED WILMINGTO	63	20	2	2	ug/L
CG76037	$8260GWR-WI	1,2,3-Trichlorobenzene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	10	7	7	ug/L
CG76037	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	10	0.0075	0.0075	ug/L
CG76037	$8260GWR-WI	cis-1,3-Dichloropropene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	10	0.47	0.47	ug/L
CG76037	$8260GWR-WI	trans-1,3-Dichloropropene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	10	0.47	0.47	ug/L
CG76037	$8260GWR-WI	Dibromochloromethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	10	2	2	ug/L
CG76037	$8260GWR-WI	1,1,2-Trichloroethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	10	5	5	ug/L
CG76037	$8260GWR-WI	Methyl ethyl ketone	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	100	38	38	ug/L
CG76037	$8260GWR-WI	Dibromomethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	10	8.3	8.3	ug/L
CG76037	$8260GWR-WI	Hexachlorobutadiene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	10	0.6	0.6	ug/L
CG76037	$8260GWR-WI	1,1,2,2-Tetrachloroethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	10	2	2	ug/L
CG76037	$8260GWR-WI	Benzene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	10	5	5	ug/L
CG76037	$8260GWR-WI	1,1,1,2-Tetrachloroethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	10	5	5	ug/L
CG76037	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	10	0.00075	0.00075	ug/L
CG76037	$8260GWR-WI	trans-1,3-Dichloropropene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	0.5	0.5	ug/L
CG76037	$8260GWR-WI	Bromoform	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	4	4	ug/L
CG76037	$8260GWR-WI	Bromomethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	7	7	ug/L
CG76037	$8260GWR-WI	Carbon tetrachloride	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	2	2	ug/L
CG76037	$8260GWR-WI	Tetrachloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	1400	20	5	5	ug/L
CG76037	$8260GWR-WI	Methylene chloride	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	20	5	5	ug/L
CG76037	$8260GWR-WI	cis-1,3-Dichloropropene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	0.5	0.5	ug/L
CG76037	$8260GWR-WI	Dibromochloromethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	2	2	ug/L
CG76037	$8260GWR-WI	Hexachlorobutadiene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	0.6	0.6	ug/L
CG76037	$8260GWR-WI	cis-1,2-Dichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	550	20	20	20	ug/L
CG76037	$8260GWR-WI	1,2-Dichloroethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	5	5	ug/L
CG76037	$8260GWR-WI	1,1,1,2-Tetrachloroethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	5	5	ug/L
CG76037	$8260GWR-WI	1,1,2,2-Tetrachloroethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	2	2	ug/L
CG76037	$8260GWR-WI	1,1,2-Trichloroethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	5	5	ug/L
CG76037	$8260GWR-WI	1,1-Dichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	14	10	7	7	ug/L
CG76037	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-1 (mg/l)	63	20	2	2	ug/L
CG76037	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	0.02	0.02	ug/L
CG76037	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-1 (mg/l)	63	20	2	2	ug/L
CG76037	$8260GWR-WI	Bromodichloromethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	3	3	ug/L
CG76037	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	3100	100	5	5	ug/L
CG76037	$8260GWR-WI	1,2-Dichloropropane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	3	3	ug/L
CG76037	$8260GWR-WI	1,4-Dichlorobenzene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	5	5	ug/L
CG76037	$8260GWR-WI	Bromodichloromethane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	10	6	6	ug/L
CG76037	$8260GWR-WI	Hexachlorobutadiene	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	10	1	1	ug/L
CG76037	$8260GWR-WI	1,1,2,2-Tetrachloroethane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	10	9	9	ug/L
CG76037	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-2 (mg/l)	63	20	2	2	ug/L
CG76037	$8260GWR-WI	cis-1,3-Dichloropropene	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	10	5	5	ug/L
CG76037	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-2 (mg/l)	63	20	2	2	ug/L

Wednesday, October 21, 2020

Criteria: MA: GW1, GW2, GW3

State: MA

Sample Criteria Exceedances Report

GCG76015 - AECOM-WILMINGTN

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units
CG76037	$8260GWR-WI	Carbon tetrachloride	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	10	2	2	ug/L
CG76037	$8260GWR-WI	Bromomethane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	10	7	7	ug/L
CG76037	$8260GWR-WI	cis-1,2-Dichloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	550	20	20	20	ug/L
CG76037	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	10	2	2	ug/L
CG76037	$8260GWR-WI	trans-1,3-Dichloropropene	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	10	5	5	ug/L
CG76037	$8260GWR-WI	1,2-Dichloropropane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	10	3	3	ug/L
CG76037	$8260GWR-WI	1,2-Dichloroethane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	10	5	5	ug/L
CG76037	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	3100	100	5	5	ug/L
CG76037	$8260GWR-WI	Tetrachloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	1400	20	50	50	ug/L
CG76037	$8260GWR-WI	Methylene chloride	MA / GROUNDWATER STANDARDS / GW-1	ND	20	5	5	ug/L
CG76037	$8260GWR-WI	Vinyl chloride	MA / GROUNDWATER STANDARDS / GW-1	63	20	2	2	ug/L
CG76037	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-1	3100	100	5	5	ug/L
CG76037	$8260GWR-WI	Tetrachloroethene	MA / GROUNDWATER STANDARDS / GW-1	1400	20	5	5	ug/L
CG76037	$8260GWR-WI	Bromoform	MA / GROUNDWATER STANDARDS / GW-1	ND	10	4	4	ug/L
CG76037	$8260GWR-WI	1,2-Dichloroethane	MA / GROUNDWATER STANDARDS / GW-1	ND	10	5	5	ug/L
CG76037	$8260GWR-WI	1,2-Dichloropropane	MA / GROUNDWATER STANDARDS / GW-1	ND	10	5	5	ug/L
CG76037	$8260GWR-WI	1,4-Dichlorobenzene	MA / GROUNDWATER STANDARDS / GW-1	ND	10	5	5	ug/L
CG76037	$8260GWR-WI	Bromodichloromethane	MA / GROUNDWATER STANDARDS / GW-1	ND	10	3	3	ug/L
CG76037	$8260GWR-WI	Hexachlorobutadiene	MA / GROUNDWATER STANDARDS / GW-1	ND	10	0.6	0.6	ug/L
CG76037	$8260GWR-WI	1,1,2-Trichloroethane	MA / GROUNDWATER STANDARDS / GW-1	ND	10	5	5	ug/L
CG76037	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	10	0.02	0.02	ug/L
CG76037	$8260GWR-WI	1,1,2,2-Tetrachloroethane	MA / GROUNDWATER STANDARDS / GW-1	ND	10	2	2	ug/L
CG76037	$8260GWR-WI	Carbon tetrachloride	MA / GROUNDWATER STANDARDS / GW-1	ND	10	5	5	ug/L
CG76037	$8260GWR-WI	cis-1,2-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-1	550	20	70	70	ug/L
CG76037	$8260GWR-WI	1,1,1,2-Tetrachloroethane	MA / GROUNDWATER STANDARDS / GW-1	ND	10	5	5	ug/L
CG76037	$8260GWR-WI	Dibromochloromethane	MA / GROUNDWATER STANDARDS / GW-1	ND	10	2	2	ug/L
CG76037	$8260GWR-WI	1,1-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-1	14	10	7	7	ug/L
CG76037	$8260GWR-WI	1,1,2,2-Tetrachloroethane	MA / GROUNDWATER STANDARDS / GW-2	ND	10	9	9	ug/L
CG76037	$8260GWR-WI	Vinyl chloride	MA / GROUNDWATER STANDARDS / GW-2	63	20	2	2	ug/L
CG76037	$8260GWR-WI	Carbon tetrachloride	MA / GROUNDWATER STANDARDS / GW-2	ND	10	2	2	ug/L
CG76037	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-2	3100	100	5	5	ug/L
CG76037	$8260GWR-WI	1,2-Dichloropropane	MA / GROUNDWATER STANDARDS / GW-2	ND	10	3	3	ug/L
CG76037	$8260GWR-WI	Bromodichloromethane	MA / GROUNDWATER STANDARDS / GW-2	ND	10	6	6	ug/L
CG76037	$8260GWR-WI	Tetrachloroethene	MA / GROUNDWATER STANDARDS / GW-2	1400	20	50	50	ug/L
CG76037	$8260GWR-WI	Bromomethane	MA / GROUNDWATER STANDARDS / GW-2	ND	10	7	7	ug/L
CG76037	$8260GWR-WI	cis-1,2-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-2	550	20	20	20	ug/L
CG76037	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-2	ND	10	2	2	ug/L
CG76037	$8260GWR-WI	1,2-Dichloroethane	MA / GROUNDWATER STANDARDS / GW-2	ND	10	5	5	ug/L
CG76037	$DIOX_LDL	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	17	0.20	0.3	0.3	ug/l
CG76037	$DIOX_LDL	1,4-dioxane	MA / CMR 310.40.1600 / GW-1 (mg/l)	17	0.20	3	3	ug/l
CG76037	$DIOX_LDL	1,4-dioxane	MA / GROUNDWATER STANDARDS / GW-1	17	0.20	0.3	0.3	ug/l
CG76037	$MCPADD-WM	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	2000	0.3	0.3	ug/L

Wednesday, October 21, 2020

Criteria: MA: GW1, GW2, GW3

State: MA

Sample Criteria Exceedances Report

GCG76015 - AECOM-WILMINGTN

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units
CG76037	$VPHRANGE-	C5-C8 Aliphatic Hydrocarbons *1,2	MA / Client Specified Criteria / LOCKHEED WILMINGTO	1500	500	300	300	ug/L
CG76037	$VPHRANGE-	C5-C8 Aliphatic Hydrocarbons *1,2	MA / CMR 310.40.1600 / GW-1 (mg/l)	1500	500	300	300	ug/L
CG76037	$VPHRANGE-	C5-C8 Aliphatic Hydrocarbons *1,2	MA / GROUNDWATER STANDARDS / GW-1	1500	500	300	300	ug/L
CG76037	$VPHRANGE-	C9-C10 Aromatic Hydrocarbons *1	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	500	200	200	ug/L
CG76037	$VPHRANGE-	C9-C10 Aromatic Hydrocarbons *1	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	500	200	200	ug/L
CG76037	$VPHRANGE-	C9-C10 Aromatic Hydrocarbons *1	MA / GROUNDWATER STANDARDS / GW-1	ND	500	200	200	ug/L
CG76038	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.0075	0.0075	ug/L
CG76038	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.00033	0.00033	ug/L
CG76038	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.00075	0.00075	ug/L
CG76038	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	0.50	0.02	0.02	ug/L
CG76038	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	0.50	0.02	0.02	ug/L
CG76038	$MCPADD-WM	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	100	0.3	0.3	ug/L
CG76038	$MCPADD-WM	1,4-dioxane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	100	3	3	ug/L
CG76038	$MCPADD-WM	1,4-dioxane	MA / GROUNDWATER STANDARDS / GW-1	ND	100	0.3	0.3	ug/L
CG76038	D-MN	Manganese (Dissolved)	MA / Client Specified Criteria / LOCKHEED WILMINGTO	1.97	0.001	0.43	0.43	mg/L
CG76038	MN-WM	Manganese	MA / Client Specified Criteria / LOCKHEED WILMINGTO	2.11	0.010	0.43	0.43	mg/L
CG76039	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.00075	0.00075	ug/L
CG76039	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.00033	0.00033	ug/L
CG76039	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.0075	0.0075	ug/L
CG76039	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	0.50	0.02	0.02	ug/L
CG76039	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	0.50	0.02	0.02	ug/L
CG76039	$MCPADD-WM	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	100	0.3	0.3	ug/L
CG76039	$MCPADD-WM	1,4-dioxane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	100	3	3	ug/L
CG76039	$MCPADD-WM	1,4-dioxane	MA / GROUNDWATER STANDARDS / GW-1	ND	100	0.3	0.3	ug/L
CG76040	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.00075	0.00075	ug/L
CG76040	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.00033	0.00033	ug/L
CG76040	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.0075	0.0075	ug/L
CG76040	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	0.50	0.02	0.02	ug/L
CG76040	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	0.50	0.02	0.02	ug/L
CG76040	$MCPADD-WM	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	100	0.3	0.3	ug/L
CG76040	$MCPADD-WM	1,4-dioxane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	100	3	3	ug/L
CG76040	$MCPADD-WM	1,4-dioxane	MA / GROUNDWATER STANDARDS / GW-1	ND	100	0.3	0.3	ug/L
CG76041	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.0075	0.0075	ug/L
CG76041	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.00033	0.00033	ug/L
CG76041	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.00075	0.00075	ug/L
CG76041	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	0.50	0.02	0.02	ug/L
CG76041	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	0.50	0.02	0.02	ug/L
CG76041	$MCPADD-WM	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	100	0.3	0.3	ug/L
CG76041	$MCPADD-WM	1,4-dioxane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	100	3	3	ug/L

Wednesday, October 21, 2020

Criteria: MA: GW1, GW2, GW3

State: MA

Sample Criteria Exceedances Report

GCG76015 - AECOM-WILMINGTN

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units
CG76041	$MCPADD-WM	1,4-dioxane	MA / GROUNDWATER STANDARDS / GW-1	ND	100	0.3	0.3	ug/L
CG76041	D-MN	Manganese (Dissolved)	MA / Client Specified Criteria / LOCKHEED WILMINGTO	1.29	0.001	0.43	0.43	mg/L
CG76041	MN-WM	Manganese	MA / Client Specified Criteria / LOCKHEED WILMINGTO	1.38	0.001	0.43	0.43	mg/L
CG76042	$8260GWR-WI	Tetrachloroethene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	1300	20	5	5	ug/L
CG76042	$8260GWR-WI	cis-1,2-Dichloroethene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	140	5.0	20	20	ug/L
CG76042	$8260GWR-WI	cis-1,3-Dichloropropene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	2.5	0.47	0.47	ug/L
CG76042	$8260GWR-WI	Dibromochloromethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	2.5	2	2	ug/L
CG76042	$8260GWR-WI	Carbon tetrachloride	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	2.5	2	2	ug/L
CG76042	$8260GWR-WI	Hexachlorobutadiene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	2.5	0.6	0.6	ug/L
CG76042	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	2.5	0.0075	0.0075	ug/L
CG76042	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	2.5	0.00075	0.00075	ug/L
CG76042	$8260GWR-WI	1,1,2,2-Tetrachloroethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	2.5	2	2	ug/L
CG76042	$8260GWR-WI	trans-1,3-Dichloropropene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	2.5	0.47	0.47	ug/L
CG76042	$8260GWR-WI	Trichloroethene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	2200	50	5	5	ug/L
CG76042	$8260GWR-WI	Vinyl chloride	MA / Client Specified Criteria / LOCKHEED WILMINGTO	11	5.0	2	2	ug/L
CG76042	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	2.5	0.00033	0.00033	ug/L
CG76042	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	2200	50	5	5	ug/L
CG76042	$8260GWR-WI	Hexachlorobutadiene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	2.5	0.6	0.6	ug/L
CG76042	$8260GWR-WI	Dibromochloromethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	2.5	2	2	ug/L
CG76042	$8260GWR-WI	Tetrachloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	1300	20	5	5	ug/L
CG76042	$8260GWR-WI	cis-1,3-Dichloropropene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	2.5	0.5	0.5	ug/L
CG76042	$8260GWR-WI	trans-1,3-Dichloropropene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	2.5	0.5	0.5	ug/L
CG76042	$8260GWR-WI	cis-1,2-Dichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	140	5.0	20	20	ug/L
CG76042	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-1 (mg/l)	11	5.0	2	2	ug/L
CG76042	$8260GWR-WI	Carbon tetrachloride	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	2.5	2	2	ug/L
CG76042	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-1 (mg/l)	11	5.0	2	2	ug/L
CG76042	$8260GWR-WI	1,1,2,2-Tetrachloroethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	2.5	2	2	ug/L
CG76042	$8260GWR-WI	1,1-Dichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	12	5.0	7	7	ug/L
CG76042	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	2.5	0.02	0.02	ug/L
CG76042	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-2 (mg/l)	11	5.0	2	2	ug/L
CG76042	$8260GWR-WI	cis-1,2-Dichloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	140	5.0	20	20	ug/L
CG76042	$8260GWR-WI	Tetrachloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	1300	20	50	50	ug/L
CG76042	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-2 (mg/l)	11	5.0	2	2	ug/L
CG76042	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	2.5	2	2	ug/L
CG76042	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	2200	50	5	5	ug/L
CG76042	$8260GWR-WI	Carbon tetrachloride	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	2.5	2	2	ug/L
CG76042	$8260GWR-WI	Hexachlorobutadiene	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	2.5	1	1	ug/L
CG76042	$8260GWR-WI	Vinyl chloride	MA / GROUNDWATER STANDARDS / GW-1	11	5.0	2	2	ug/L
CG76042	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-1	2200	50	5	5	ug/L
CG76042	$8260GWR-WI	1,1,2,2-Tetrachloroethane	MA / GROUNDWATER STANDARDS / GW-1	ND	2.5	2	2	ug/L
CG76042	$8260GWR-WI	Tetrachloroethene	MA / GROUNDWATER STANDARDS / GW-1	1300	20	5	5	ug/L

Wednesday, October 21, 2020

Criteria: MA: GW1, GW2, GW3

State: MA

Sample Criteria Exceedances Report

GCG76015 - AECOM-WILMINGTN

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units
CG76042	$8260GWR-WI	Hexachlorobutadiene	MA / GROUNDWATER STANDARDS / GW-1	ND	2.5	0.6	0.6	ug/L
CG76042	$8260GWR-WI	Dibromochloromethane	MA / GROUNDWATER STANDARDS / GW-1	ND	2.5	2	2	ug/L
CG76042	$8260GWR-WI	cis-1,2-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-1	140	5.0	70	70	ug/L
CG76042	$8260GWR-WI	1,1-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-1	12	5.0	7	7	ug/L
CG76042	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	2.5	0.02	0.02	ug/L
CG76042	$8260GWR-WI	cis-1,2-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-2	140	5.0	20	20	ug/L
CG76042	$8260GWR-WI	Tetrachloroethene	MA / GROUNDWATER STANDARDS / GW-2	1300	20	50	50	ug/L
CG76042	$8260GWR-WI	Vinyl chloride	MA / GROUNDWATER STANDARDS / GW-2	11	5.0	2	2	ug/L
CG76042	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-2	ND	2.5	2	2	ug/L
CG76042	$8260GWR-WI	Carbon tetrachloride	MA / GROUNDWATER STANDARDS / GW-2	ND	2.5	2	2	ug/L
CG76042	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-2	2200	50	5	5	ug/L
CG76042	$DIOX_LDL	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	11	0.20	0.3	0.3	ug/l
CG76042	$DIOX_LDL	1,4-dioxane	MA / CMR 310.40.1600 / GW-1 (mg/l)	11	0.20	3	3	ug/l
CG76042	$DIOX_LDL	1,4-dioxane	MA / GROUNDWATER STANDARDS / GW-1	11	0.20	0.3	0.3	ug/l
CG76042	$MCPADD-WM	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	500	0.3	0.3	ug/L
CG76043	$8260GWR-WI	1,1,2,2-Tetrachloroethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	2.5	2	2	ug/L
CG76043	$8260GWR-WI	trans-1,3-Dichloropropene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	2.5	0.47	0.47	ug/L
CG76043	$8260GWR-WI	cis-1,3-Dichloropropene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	2.5	0.47	0.47	ug/L
CG76043	$8260GWR-WI	Hexachlorobutadiene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	2.5	0.6	0.6	ug/L
CG76043	$8260GWR-WI	cis-1,2-Dichloroethene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	220	5.0	20	20	ug/L
CG76043	$8260GWR-WI	Tetrachloroethene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	220	5.0	5	5	ug/L
CG76043	$8260GWR-WI	Carbon tetrachloride	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	2.5	2	2	ug/L
CG76043	$8260GWR-WI	Trichloroethene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	700	20	5	5	ug/L
CG76043	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	2.5	0.0075	0.0075	ug/L
CG76043	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	2.5	0.00033	0.00033	ug/L
CG76043	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	2.5	0.00075	0.00075	ug/L
CG76043	$8260GWR-WI	Vinyl chloride	MA / Client Specified Criteria / LOCKHEED WILMINGTO	34	5.0	2	2	ug/L
CG76043	$8260GWR-WI	Dibromochloromethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	2.5	2	2	ug/L
CG76043	$8260GWR-WI	trans-1,3-Dichloropropene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	2.5	0.5	0.5	ug/L
CG76043	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	700	20	5	5	ug/L
CG76043	$8260GWR-WI	Tetrachloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	220	5.0	5	5	ug/L
CG76043	$8260GWR-WI	Hexachlorobutadiene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	2.5	0.6	0.6	ug/L
CG76043	$8260GWR-WI	cis-1,3-Dichloropropene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	2.5	0.5	0.5	ug/L
CG76043	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-1 (mg/l)	34	5.0	2	2	ug/L
CG76043	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-1 (mg/l)	34	5.0	2	2	ug/L
CG76043	$8260GWR-WI	1,1,2,2-Tetrachloroethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	2.5	2	2	ug/L
CG76043	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	2.5	0.02	0.02	ug/L
CG76043	$8260GWR-WI	Carbon tetrachloride	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	2.5	2	2	ug/L
CG76043	$8260GWR-WI	cis-1,2-Dichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	220	5.0	20	20	ug/L
CG76043	$8260GWR-WI	Dibromochloromethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	2.5	2	2	ug/L
CG76043	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-2 (mg/l)	34	5.0	2	2	ug/L

Wednesday, October 21, 2020

Criteria: MA: GW1, GW2, GW3

State: MA

Sample Criteria Exceedances Report

GCG76015 - AECOM-WILMINGTN

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units
CG76043	$8260GWR-WI	Hexachlorobutadiene	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	2.5	1	1	ug/L
CG76043	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-2 (mg/l)	34	5.0	2	2	ug/L
CG76043	$8260GWR-WI	cis-1,2-Dichloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	220	5.0	20	20	ug/L
CG76043	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	2.5	2	2	ug/L
CG76043	$8260GWR-WI	Tetrachloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	220	5.0	50	50	ug/L
CG76043	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	700	20	5	5	ug/L
CG76043	$8260GWR-WI	Carbon tetrachloride	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	2.5	2	2	ug/L
CG76043	$8260GWR-WI	Vinyl chloride	MA / GROUNDWATER STANDARDS / GW-1	34	5.0	2	2	ug/L
CG76043	$8260GWR-WI	1,1,2,2-Tetrachloroethane	MA / GROUNDWATER STANDARDS / GW-1	ND	2.5	2	2	ug/L
CG76043	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-1	700	20	5	5	ug/L
CG76043	$8260GWR-WI	Tetrachloroethene	MA / GROUNDWATER STANDARDS / GW-1	220	5.0	5	5	ug/L
CG76043	$8260GWR-WI	Hexachlorobutadiene	MA / GROUNDWATER STANDARDS / GW-1	ND	2.5	0.6	0.6	ug/L
CG76043	$8260GWR-WI	cis-1,2-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-1	220	5.0	70	70	ug/L
CG76043	$8260GWR-WI	Dibromochloromethane	MA / GROUNDWATER STANDARDS / GW-1	ND	2.5	2	2	ug/L
CG76043	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	2.5	0.02	0.02	ug/L
CG76043	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-2	ND	2.5	2	2	ug/L
CG76043	$8260GWR-WI	Tetrachloroethene	MA / GROUNDWATER STANDARDS / GW-2	220	5.0	50	50	ug/L
CG76043	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-2	700	20	5	5	ug/L
CG76043	$8260GWR-WI	Vinyl chloride	MA / GROUNDWATER STANDARDS / GW-2	34	5.0	2	2	ug/L
CG76043	$8260GWR-WI	Carbon tetrachloride	MA / GROUNDWATER STANDARDS / GW-2	ND	2.5	2	2	ug/L
CG76043	$8260GWR-WI	cis-1,2-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-2	220	5.0	20	20	ug/L
CG76043	$DIOX_LDL	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	10	0.20	0.3	0.3	ug/l
CG76043	$DIOX_LDL	1,4-dioxane	MA / CMR 310.40.1600 / GW-1 (mg/l)	10	0.20	3	3	ug/l
CG76043	$DIOX_LDL	1,4-dioxane	MA / GROUNDWATER STANDARDS / GW-1	10	0.20	0.3	0.3	ug/l
CG76043	$MCPADD-WM	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	500	0.3	0.3	ug/L
CG76044	$8260GWR-WI	Benzene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	10	5	5	ug/L
CG76044	$8260GWR-WI	Carbon tetrachloride	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	10	2	2	ug/L
CG76044	$8260GWR-WI	Tetrachloroethene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	2100	100	5	5	ug/L
CG76044	$8260GWR-WI	trans-1,3-Dichloropropene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	10	0.47	0.47	ug/L
CG76044	$8260GWR-WI	1,4-Dichlorobenzene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	10	5	5	ug/L
CG76044	$8260GWR-WI	Methylene chloride	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	20	5	5	ug/L
CG76044	$8260GWR-WI	2-Hexanone	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	100	38	38	ug/L
CG76044	$8260GWR-WI	1,2-Dichloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	10	3	3	ug/L
CG76044	$8260GWR-WI	Methyl ethyl ketone	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	100	38	38	ug/L
CG76044	$8260GWR-WI	Bromodichloromethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	10	3	3	ug/L
CG76044	$8260GWR-WI	Hexachlorobutadiene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	10	0.6	0.6	ug/L
CG76044	$8260GWR-WI	Bromoform	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	10	4	4	ug/L
CG76044	$8260GWR-WI	Dibromomethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	10	8.3	8.3	ug/L
CG76044	$8260GWR-WI	Dibromochloromethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	10	2	2	ug/L
CG76044	$8260GWR-WI	cis-1,3-Dichloropropene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	10	0.47	0.47	ug/L
CG76044	$8260GWR-WI	1,2-Dichloroethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	10	5	5	ug/L

Wednesday, October 21, 2020

Criteria: MA: GW1, GW2, GW3

State: MA

Sample Criteria Exceedances Report

GCG76015 - AECOM-WILMINGTN

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units
CG76044	$8260GWR-WI	1,2,3-Trichlorobenzene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	10	7	7	ug/L
CG76044	$8260GWR-WI	cis-1,2-Dichloroethene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	590	20	20	20	ug/L
CG76044	$8260GWR-WI	Bromomethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	10	7	7	ug/L
CG76044	$8260GWR-WI	1,1,2-Trichloroethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	10	5	5	ug/L
CG76044	$8260GWR-WI	1,1,1,2-Tetrachloroethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	10	5	5	ug/L
CG76044	$8260GWR-WI	1,1,2,2-Tetrachloroethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	10	2	2	ug/L
CG76044	$8260GWR-WI	Vinyl chloride	MA / Client Specified Criteria / LOCKHEED WILMINGTO	91	20	2	2	ug/L
CG76044	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	10	0.00075	0.00075	ug/L
CG76044	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	10	0.00033	0.00033	ug/L
CG76044	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	10	0.0075	0.0075	ug/L
CG76044	$8260GWR-WI	Trichloroethene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	4200	100	5	5	ug/L
CG76044	$8260GWR-WI	Hexachlorobutadiene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	0.6	0.6	ug/L
CG76044	$8260GWR-WI	trans-1,3-Dichloropropene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	0.5	0.5	ug/L
CG76044	$8260GWR-WI	cis-1,3-Dichloropropene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	0.5	0.5	ug/L
CG76044	$8260GWR-WI	Carbon tetrachloride	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	2	2	ug/L
CG76044	$8260GWR-WI	1,1,1,2-Tetrachloroethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	5	5	ug/L
CG76044	$8260GWR-WI	Dibromochloromethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	2	2	ug/L
CG76044	$8260GWR-WI	Bromomethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	7	7	ug/L
CG76044	$8260GWR-WI	1,1,2,2-Tetrachloroethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	2	2	ug/L
CG76044	$8260GWR-WI	Bromoform	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	4	4	ug/L
CG76044	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-1 (mg/l)	91	20	2	2	ug/L
CG76044	$8260GWR-WI	Bromodichloromethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	3	3	ug/L
CG76044	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-1 (mg/l)	91	20	2	2	ug/L
CG76044	$8260GWR-WI	1,4-Dichlorobenzene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	5	5	ug/L
CG76044	$8260GWR-WI	1,2-Dichloropropane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	3	3	ug/L
CG76044	$8260GWR-WI	cis-1,2-Dichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	590	20	20	20	ug/L
CG76044	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	0.02	0.02	ug/L
CG76044	$8260GWR-WI	Methylene chloride	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	20	5	5	ug/L
CG76044	$8260GWR-WI	Tetrachloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	2100	100	5	5	ug/L
CG76044	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	4200	100	5	5	ug/L
CG76044	$8260GWR-WI	1,1-Dichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	17	10	7	7	ug/L
CG76044	$8260GWR-WI	1,1,2-Trichloroethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	5	5	ug/L
CG76044	$8260GWR-WI	Benzene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	5	5	ug/L
CG76044	$8260GWR-WI	1,2-Dichloroethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	5	5	ug/L
CG76044	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	4200	100	5	5	ug/L
CG76044	$8260GWR-WI	Hexachlorobutadiene	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	10	1	1	ug/L
CG76044	$8260GWR-WI	trans-1,3-Dichloropropene	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	10	5	5	ug/L
CG76044	$8260GWR-WI	cis-1,3-Dichloropropene	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	10	5	5	ug/L
CG76044	$8260GWR-WI	Tetrachloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	2100	100	50	50	ug/L
CG76044	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-2 (mg/l)	91	20	2	2	ug/L
CG76044	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-2 (mg/l)	91	20	2	2	ug/L
CG76044	$8260GWR-WI	cis-1,2-Dichloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	590	20	20	20	ug/L

Wednesday, October 21, 2020

Criteria: MA: GW1, GW2, GW3

State: MA

Sample Criteria Exceedances Report

GCG76015 - AECOM-WILMINGTN

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units
CG76044	$8260GWR-WI	1,2-Dichloroethane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	10	5	5	ug/L
CG76044	$8260GWR-WI	1,1,2,2-Tetrachloroethane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	10	9	9	ug/L
CG76044	$8260GWR-WI	Carbon tetrachloride	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	10	2	2	ug/L
CG76044	$8260GWR-WI	Bromomethane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	10	7	7	ug/L
CG76044	$8260GWR-WI	1,2-Dichloropropane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	10	3	3	ug/L
CG76044	$8260GWR-WI	Bromodichloromethane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	10	6	6	ug/L
CG76044	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	10	2	2	ug/L
CG76044	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-1	4200	100	5	5	ug/L
CG76044	$8260GWR-WI	1,2-Dichloroethane	MA / GROUNDWATER STANDARDS / GW-1	ND	10	5	5	ug/L
CG76044	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	10	0.02	0.02	ug/L
CG76044	$8260GWR-WI	1,2-Dichloropropane	MA / GROUNDWATER STANDARDS / GW-1	ND	10	5	5	ug/L
CG76044	$8260GWR-WI	1,1,2-Trichloroethane	MA / GROUNDWATER STANDARDS / GW-1	ND	10	5	5	ug/L
CG76044	$8260GWR-WI	1,1,2,2-Tetrachloroethane	MA / GROUNDWATER STANDARDS / GW-1	ND	10	2	2	ug/L
CG76044	$8260GWR-WI	1,1,1,2-Tetrachloroethane	MA / GROUNDWATER STANDARDS / GW-1	ND	10	5	5	ug/L
CG76044	$8260GWR-WI	Tetrachloroethene	MA / GROUNDWATER STANDARDS / GW-1	2100	100	5	5	ug/L
CG76044	$8260GWR-WI	Vinyl chloride	MA / GROUNDWATER STANDARDS / GW-1	91	20	2	2	ug/L
CG76044	$8260GWR-WI	1,1-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-1	17	10	7	7	ug/L
CG76044	$8260GWR-WI	Bromoform	MA / GROUNDWATER STANDARDS / GW-1	ND	10	4	4	ug/L
CG76044	$8260GWR-WI	cis-1,2-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-1	590	20	70	70	ug/L
CG76044	$8260GWR-WI	Carbon tetrachloride	MA / GROUNDWATER STANDARDS / GW-1	ND	10	5	5	ug/L
CG76044	$8260GWR-WI	Dibromochloromethane	MA / GROUNDWATER STANDARDS / GW-1	ND	10	2	2	ug/L
CG76044	$8260GWR-WI	Bromodichloromethane	MA / GROUNDWATER STANDARDS / GW-1	ND	10	3	3	ug/L
CG76044	$8260GWR-WI	Hexachlorobutadiene	MA / GROUNDWATER STANDARDS / GW-1	ND	10	0.6	0.6	ug/L
CG76044	$8260GWR-WI	Benzene	MA / GROUNDWATER STANDARDS / GW-1	ND	10	5	5	ug/L
CG76044	$8260GWR-WI	1,4-Dichlorobenzene	MA / GROUNDWATER STANDARDS / GW-1	ND	10	5	5	ug/L
CG76044	$8260GWR-WI	Methylene chloride	MA / GROUNDWATER STANDARDS / GW-1	ND	20	5	5	ug/L
CG76044	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-2	ND	10	2	2	ug/L
CG76044	$8260GWR-WI	Tetrachloroethene	MA / GROUNDWATER STANDARDS / GW-2	2100	100	50	50	ug/L
CG76044	$8260GWR-WI	Vinyl chloride	MA / GROUNDWATER STANDARDS / GW-2	91	20	2	2	ug/L
CG76044	$8260GWR-WI	1,2-Dichloroethane	MA / GROUNDWATER STANDARDS / GW-2	ND	10	5	5	ug/L
CG76044	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-2	4200	100	5	5	ug/L
CG76044	$8260GWR-WI	1,1,2,2-Tetrachloroethane	MA / GROUNDWATER STANDARDS / GW-2	ND	10	9	9	ug/L
CG76044	$8260GWR-WI	Bromomethane	MA / GROUNDWATER STANDARDS / GW-2	ND	10	7	7	ug/L
CG76044	$8260GWR-WI	1,2-Dichloropropane	MA / GROUNDWATER STANDARDS / GW-2	ND	10	3	3	ug/L
CG76044	$8260GWR-WI	Carbon tetrachloride	MA / GROUNDWATER STANDARDS / GW-2	ND	10	2	2	ug/L
CG76044	$8260GWR-WI	cis-1,2-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-2	590	20	20	20	ug/L
CG76044	$8260GWR-WI	Bromodichloromethane	MA / GROUNDWATER STANDARDS / GW-2	ND	10	6	6	ug/L
CG76044	$MCPADD-WM	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	2000	0.3	0.3	ug/L
CG76044	$MCPADD-WM	1,4-dioxane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	2000	3	3	ug/L
CG76044	$MCPADD-WM	1,4-dioxane	MA / GROUNDWATER STANDARDS / GW-1	ND	2000	0.3	0.3	ug/L
CG76045	$8260GWR-WI	Tetrachloroethene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	2400	100	5	5	ug/L

Wednesday, October 21, 2020

Criteria: MA: GW1, GW2, GW3

State: MA

Sample Criteria Exceedances Report

GCG76015 - AECOM-WILMINGTN

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units
CG76045	$8260GWR-WI	1,2,3-Trichlorobenzene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	10	7	7	ug/L
CG76045	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	10	0.00033	0.00033	ug/L
CG76045	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	10	0.0075	0.0075	ug/L
CG76045	$8260GWR-WI	Bromoform	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	10	4	4	ug/L
CG76045	$8260GWR-WI	1,1-Dichloroethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	71	20	70	70	ug/L
CG76045	$8260GWR-WI	Bromodichloromethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	10	3	3	ug/L
CG76045	$8260GWR-WI	Hexachlorobutadiene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	10	0.6	0.6	ug/L
CG76045	$8260GWR-WI	1,2-Dichloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	10	3	3	ug/L
CG76045	$8260GWR-WI	Benzene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	10	5	5	ug/L
CG76045	$8260GWR-WI	2-Hexanone	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	100	38	38	ug/L
CG76045	$8260GWR-WI	Methyl ethyl ketone	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	100	38	38	ug/L
CG76045	$8260GWR-WI	Methylene chloride	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	20	5	5	ug/L
CG76045	$8260GWR-WI	cis-1,3-Dichloropropene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	10	0.47	0.47	ug/L
CG76045	$8260GWR-WI	1,4-Dichlorobenzene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	10	5	5	ug/L
CG76045	$8260GWR-WI	Dibromomethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	10	8.3	8.3	ug/L
CG76045	$8260GWR-WI	1,2-Dichloroethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	10	5	5	ug/L
CG76045	$8260GWR-WI	trans-1,3-Dichloropropene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	10	0.47	0.47	ug/L
CG76045	$8260GWR-WI	Carbon tetrachloride	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	10	2	2	ug/L
CG76045	$8260GWR-WI	1,1,1,2-Tetrachloroethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	10	5	5	ug/L
CG76045	$8260GWR-WI	1,1,2-Trichloroethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	10	5	5	ug/L
CG76045	$8260GWR-WI	Dibromochloromethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	10	2	2	ug/L
CG76045	$8260GWR-WI	Bromomethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	10	7	7	ug/L
CG76045	$8260GWR-WI	Trichloroethene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	4900	100	5	5	ug/L
CG76045	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	10	0.00075	0.00075	ug/L
CG76045	$8260GWR-WI	cis-1,2-Dichloroethene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	520	20	20	20	ug/L
CG76045	$8260GWR-WI	1,1,2,2-Tetrachloroethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	10	2	2	ug/L
CG76045	$8260GWR-WI	Vinyl chloride	MA / Client Specified Criteria / LOCKHEED WILMINGTO	75	20	2	2	ug/L
CG76045	$8260GWR-WI	Hexachlorobutadiene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	0.6	0.6	ug/L
CG76045	$8260GWR-WI	Benzene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	5	5	ug/L
CG76045	$8260GWR-WI	cis-1,2-Dichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	520	20	20	20	ug/L
CG76045	$8260GWR-WI	Dibromochloromethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	2	2	ug/L
CG76045	$8260GWR-WI	Carbon tetrachloride	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	2	2	ug/L
CG76045	$8260GWR-WI	Bromoform	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	4	4	ug/L
CG76045	$8260GWR-WI	Bromomethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	7	7	ug/L
CG76045	$8260GWR-WI	Bromodichloromethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	3	3	ug/L
CG76045	$8260GWR-WI	1,1-Dichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	19	10	7	7	ug/L
CG76045	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	4900	100	5	5	ug/L
CG76045	$8260GWR-WI	1,1,1,2-Tetrachloroethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	5	5	ug/L
CG76045	$8260GWR-WI	1,1,2,2-Tetrachloroethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	2	2	ug/L
CG76045	$8260GWR-WI	trans-1,3-Dichloropropene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	0.5	0.5	ug/L
CG76045	$8260GWR-WI	1,1,2-Trichloroethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	5	5	ug/L
CG76045	$8260GWR-WI	1,1-Dichloroethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	71	20	70	70	ug/L

Wednesday, October 21, 2020

Criteria: MA: GW1, GW2, GW3

State: MA

Sample Criteria Exceedances Report

GCG76015 - AECOM-WILMINGTN

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units
CG76045	$8260GWR-WI	cis-1,3-Dichloropropene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	0.5	0.5	ug/L
CG76045	$8260GWR-WI	1,4-Dichlorobenzene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	5	5	ug/L
CG76045	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	0.02	0.02	ug/L
CG76045	$8260GWR-WI	Tetrachloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	2400	100	5	5	ug/L
CG76045	$8260GWR-WI	1,2-Dichloropropane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	3	3	ug/L
CG76045	$8260GWR-WI	1,2-Dichloroethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	5	5	ug/L
CG76045	$8260GWR-WI	Methylene chloride	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	20	5	5	ug/L
CG76045	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-1 (mg/l)	75	20	2	2	ug/L
CG76045	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-1 (mg/l)	75	20	2	2	ug/L
CG76045	$8260GWR-WI	1,1,2,2-Tetrachloroethane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	10	9	9	ug/L
CG76045	$8260GWR-WI	trans-1,3-Dichloropropene	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	10	5	5	ug/L
CG76045	$8260GWR-WI	Bromomethane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	10	7	7	ug/L
CG76045	$8260GWR-WI	1,2-Dichloropropane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	10	3	3	ug/L
CG76045	$8260GWR-WI	cis-1,2-Dichloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	520	20	20	20	ug/L
CG76045	$8260GWR-WI	1,2-Dichloroethane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	10	5	5	ug/L
CG76045	$8260GWR-WI	Carbon tetrachloride	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	10	2	2	ug/L
CG76045	$8260GWR-WI	Bromodichloromethane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	10	6	6	ug/L
CG76045	$8260GWR-WI	Tetrachloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	2400	100	50	50	ug/L
CG76045	$8260GWR-WI	Hexachlorobutadiene	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	10	1	1	ug/L
CG76045	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	10	2	2	ug/L
CG76045	$8260GWR-WI	cis-1,3-Dichloropropene	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	10	5	5	ug/L
CG76045	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-2 (mg/l)	75	20	2	2	ug/L
CG76045	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-2 (mg/l)	75	20	2	2	ug/L
CG76045	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	4900	100	5	5	ug/L
CG76045	$8260GWR-WI	Methylene chloride	MA / GROUNDWATER STANDARDS / GW-1	ND	20	5	5	ug/L
CG76045	$8260GWR-WI	Hexachlorobutadiene	MA / GROUNDWATER STANDARDS / GW-1	ND	10	0.6	0.6	ug/L
CG76045	$8260GWR-WI	Tetrachloroethene	MA / GROUNDWATER STANDARDS / GW-1	2400	100	5	5	ug/L
CG76045	$8260GWR-WI	Dibromochloromethane	MA / GROUNDWATER STANDARDS / GW-1	ND	10	2	2	ug/L
CG76045	$8260GWR-WI	Bromodichloromethane	MA / GROUNDWATER STANDARDS / GW-1	ND	10	3	3	ug/L
CG76045	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	10	0.02	0.02	ug/L
CG76045	$8260GWR-WI	1,2-Dichloroethane	MA / GROUNDWATER STANDARDS / GW-1	ND	10	5	5	ug/L
CG76045	$8260GWR-WI	1,1-Dichloroethane	MA / GROUNDWATER STANDARDS / GW-1	71	20	70	70	ug/L
CG76045	$8260GWR-WI	1,1,2-Trichloroethane	MA / GROUNDWATER STANDARDS / GW-1	ND	10	5	5	ug/L
CG76045	$8260GWR-WI	1,1-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-1	19	10	7	7	ug/L
CG76045	$8260GWR-WI	Benzene	MA / GROUNDWATER STANDARDS / GW-1	ND	10	5	5	ug/L
CG76045	$8260GWR-WI	1,2-Dichloropropane	MA / GROUNDWATER STANDARDS / GW-1	ND	10	5	5	ug/L
CG76045	$8260GWR-WI	Bromoform	MA / GROUNDWATER STANDARDS / GW-1	ND	10	4	4	ug/L
CG76045	$8260GWR-WI	1,1,2,2-Tetrachloroethane	MA / GROUNDWATER STANDARDS / GW-1	ND	10	2	2	ug/L
CG76045	$8260GWR-WI	Carbon tetrachloride	MA / GROUNDWATER STANDARDS / GW-1	ND	10	5	5	ug/L
CG76045	$8260GWR-WI	1,1,1,2-Tetrachloroethane	MA / GROUNDWATER STANDARDS / GW-1	ND	10	5	5	ug/L
CG76045	$8260GWR-WI	cis-1,2-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-1	520	20	70	70	ug/L
CG76045	$8260GWR-WI	1,4-Dichlorobenzene	MA / GROUNDWATER STANDARDS / GW-1	ND	10	5	5	ug/L

Wednesday, October 21, 2020

Criteria: MA: GW1, GW2, GW3

State: MA

Sample Criteria Exceedances Report

GCG76015 - AECOM-WILMINGTN

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units
CG76045	$8260GWR-WI	Vinyl chloride	MA / GROUNDWATER STANDARDS / GW-1	75	20	2	2	ug/L
CG76045	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-1	4900	100	5	5	ug/L
CG76045	$8260GWR-WI	1,1,2,2-Tetrachloroethane	MA / GROUNDWATER STANDARDS / GW-2	ND	10	9	9	ug/L
CG76045	$8260GWR-WI	Tetrachloroethene	MA / GROUNDWATER STANDARDS / GW-2	2400	100	50	50	ug/L
CG76045	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-2	ND	10	2	2	ug/L
CG76045	$8260GWR-WI	1,2-Dichloropropane	MA / GROUNDWATER STANDARDS / GW-2	ND	10	3	3	ug/L
CG76045	$8260GWR-WI	cis-1,2-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-2	520	20	20	20	ug/L
CG76045	$8260GWR-WI	Bromodichloromethane	MA / GROUNDWATER STANDARDS / GW-2	ND	10	6	6	ug/L
CG76045	$8260GWR-WI	Bromomethane	MA / GROUNDWATER STANDARDS / GW-2	ND	10	7	7	ug/L
CG76045	$8260GWR-WI	Carbon tetrachloride	MA / GROUNDWATER STANDARDS / GW-2	ND	10	2	2	ug/L
CG76045	$8260GWR-WI	1,2-Dichloroethane	MA / GROUNDWATER STANDARDS / GW-2	ND	10	5	5	ug/L
CG76045	$8260GWR-WI	Vinyl chloride	MA / GROUNDWATER STANDARDS / GW-2	75	20	2	2	ug/L
CG76045	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-2	4900	100	5	5	ug/L
CG76045	$DIOX_LDL	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	21	0.20	0.3	0.3	ug/l
CG76045	$DIOX_LDL	1,4-dioxane	MA / CMR 310.40.1600 / GW-1 (mg/l)	21	0.20	3	3	ug/l
CG76045	$DIOX_LDL	1,4-dioxane	MA / GROUNDWATER STANDARDS / GW-1	21	0.20	0.3	0.3	ug/l
CG76045	$MCPADD-WM	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	2000	0.3	0.3	ug/L

Phoenix Laboratories does not assume responsibility for the data contained in this exceedance report. It is provided as an additional tool to identify requested criteria exceedences. All efforts are made to ensure the accuracy of the data (obtained from appropriate agencies). A lack of exceedence information does not necessarily suggest conformance to the criteria. It is ultimately the site professional's responsibility to determine appropriate compliance.

MassDEP Analytical Protocol Certification Form

Laboratory Name: Phoenix Environmental Laboratories, Inc. **Project #:**

Project Location: LOCKHEED WILMINGTON MA 6055204 **RTN:**

This Form provides certifications for the following data set: [list Laboratory Sample ID Number(s)]

CG76015, CG76016, CG76017, CG76018, CG76019, CG76020, CG76021, CG76022, CG76023, CG76024, CG76025, CG76026, CG76027, CG76028, CG76029, CG76030, CG76031, CG76032, CG76033, CG76034, CG76035, CG76036, CG76037, CG76038, CG76039, CG76040, CG76041, CG76042, CG76043, CG76044, CG76045

Matrices: ☑ Groundwater/Surface Water ☐ Soil/Sediment ☐ Drinking Water ☐ Air ☐ Other:

CAM Protocol (check all that apply below)

8260 VOC CAM II A ☑	7470/7471 Hg CAM III B ☐	MassDEP VPH CAM IV A ☑	8081 Pesticides CAM V B ☐	7196 Hex Cr CAM VI B ☐	MassDEP APH CAM IX A ☐
8270 SVOC CAM II B ☑	7010 Metals CAM III C ☐	MassDEP EPH CAM IV B ☑	8151 Herbicides CAM V C ☐	8330 Explosives CAM VIII A ☐	TO-15 VOC CAM IX B ☐
6010 Metals CAM III A ☑	6020 Metals CAM III D ☐	8082 PCB CAM V A ☐	9012 Total Cyanide/PAC CAM V1 A ☐	6860 Perchlorate CAM VIII B ☐	

Affirmative responses to questions A through F are required for "Presumptive Certainty" status

A	Were all samples received in a condition consistent with those described on the Chain-of-Custody, properly preserved (including temperature*) in the field or laboratory, and prepared/analyzed with method holding times? (* see narrative)	☑ Yes ☐ No
B	Were the analytical method(s) and all associated QC requirements specified in the selected CAM protocol(s) followed?	☑ Yes ☐ No
C	Were all required corrective actions and analytical response actions specified in the selected CAM protocol(s) implemented for all identified performance standard non-conformances?	☑ Yes ☐ No
D	Does the laboratory report comply with all the reporting requirements speified in CAM VII A, "Quality Assurance and Quality Control Guidelines for the Acquisition and Reporting of Analytical Data"?	☑ Yes ☐ No
E	a. VPH, EPH, and APH Methods only: Was each method conducted without significant modification(s)? (refer to the individual method(s) for a list of significant modifications). b. APH and TO-15 methods only: Was the complete analyte list reported for each method?	☑ Yes ☐ No ☐ Yes ☐ No
F	Were all applicable CAM protocol QC and performance standard non-conformances identified and evaluated in a laboratory narrative (including all "No" responses to Questions A through E)?	☑ Yes ☐ No

Responses to questions G, H and I below is required for "Presumptive Certainty" status

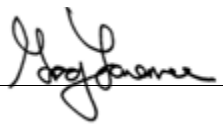
G	Were the reporting limits at or below all CAM reporting limits specified in the selected CAM protocol(s)?	☐ Yes ☑ No

Data User Note: Data that achieve "Presumptive Certainty" status may not necessarily meet the data usability and representativeness requirements described in 310 CMR 40. 1056(2)(k) and WSC-07-350

H	Were all QC performance standards specified in the CAM protocol(s) achieved? See Sections: EPH, SVOASIM, VOA Narrations .	☐ Yes ☑ No
I	Were results reported for the complete analyte list specified in the selected CAM protocol(s)?	☐ Yes ☑ No

All negative responses must be addressed in an attached laboratory narrative.

I, the undersigned, attest under the pains and penalties of perjury that, based upon my personal inquiry of those responsible for obtaining the information, the material contained in this analytical report is, to the best of my knowledge and belief, accurate and complete.

Authorized Signature: 

Date: Wednesday, October 21, 2020

Printed Name: Greg Lawrence

Position: Assistant Lab Director

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

NY # 11301

MCP Certification Report

October 21, 2020

SDG I.D.: GCG76015

SDG Comments

Metals Analysis:
The client requested a shorter list of elements than the 6010 MCP list. The following analytes from the 6010 Metals list were not reported: Antimony, Barium, Beryllium, Cadmium, Chromium, Lead, Nickel, Selenium, Silver, Thallium, Vanadium, Zinc.

Not all requested reporting levels were achieved. Please refer to the Sample Criteria Exceedances section of this report.

EPH Narration

Were all QA/QC performance criteria specified in the MADEP document CAM achieved? No.

QC Batch 545363 (Samples: CG76027, CG76028, CG76037, CG76041): -----

One or more analytes is below the method criteria. A low bias for these analytes is possible. (C-10 Decane, C12 - Dodecane, C9 - Nonane)

The LCS/LCSD RPD exceeds the method criteria for one or more analytes. A slight variability is possible. (C-10 Decane, C9 - Nonane)

Instrument:

AU-FID3 09/16/20-1 Adam Werner, Chemist 09/16/20

CG76027 (1X), CG76028 (1X), CG76037 (1X), CG76041 (1X)

No significant modifications were made to the EPH method, as specified in Section 11.3 of the method.

The initial calibration (AR708BI) RSD for the compound list was less than 25% except for the following compounds: None.
The continuing calibration %D for the compound list was less than 25% except for the following compounds:None.

AU-FID4 09/16/20-1 Adam Werner, Chemist 09/16/20

CG76027 (1X), CG76028 (1X), CG76037 (1X), CG76041 (1X)

The initial calibration (AL709BI) RSD for the compound list was less than 25% except for the following compounds: None.
The continuing calibration %D for the compound list was less than 25% except for the following compounds:None.

QC (Batch Specific):

Batch 545363 (CG75672)

CG76027, CG76028, CG76037, CG76041

All LCS recoveries were within 40 - 140 with the following exceptions: C-10 Decane(23%), C12 - Dodecane(32%), C9 - Nonane(19%)
All LCSD recoveries were within 40 - 140 with the following exceptions: C-10 Decane(31%), C12 - Dodecane(36%), C9 - Nonane(25%)
All LCS/LCSD RPDs were less than 25% with the following exceptions: C-10 Decane(29.6%), C9 - Nonane(27.3%)
Additional EPH fractionation criteria: Breakthrough criteria (BT) is 0 to 5%

I attest under the pains and penalties of perjury that, based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.

Wet Chemistry Analysis

Were all QA/QC performance criteria specified in the MADEP document CAM achieved? Yes.

Instrument:

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

ACCREDITED IN ACCORDANCE WITH nelac NY # 11301

MCP Certification Report

October 21, 2020

SDG I.D.: GCG76015

Wet Chemistry Analysis

BECKMAN DU720 09/16/20-1 Greg Danielewski, Chemist 09/16/20

CG76021 , CG76023 , CG76028 , CG76031

The initial calibration met all criteria including a standard run at the reporting level.
All method verification standards and blanks met criteria.

QC (Batch Specific):

Batch 545540 (CG76153)

CG76016, CG76021, CG76028, CG76031

All LCS recoveries were within 85 - 115 with the following exceptions: None.
Additional: LCS acceptance range is 85-115% MS acceptance range 75-125%.

Batch 545589 (CG76021)

CG76021, CG76023, CG76028, CG76031

All LCS recoveries were within 85 - 115 with the following exceptions: None.
Additional: LCS acceptance range is 85-115% MS acceptance range 75-125%.

I attest under the pains and penalties of perjury that, based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.

IC

Were all QA/QC performance criteria specified in the MADEP document CAM achieved? Yes.

Instrument:

IC 09/11/20-1 Brian Sheriden, Greg Danielewski, Chemist 09/11/20

CG76021 , CG76023 , CG76028 , CG76031

The initial calibration met all criteria including a standard run at the reporting level.
All method verification standards and blanks met criteria.

QC (Batch Specific):

Batch 545308 (CG75771)

CG76021, CG76023, CG76028, CG76031

All LCS recoveries were within 90 - 110 with the following exceptions: None.

Batch 545309 (CG75775)

CG76021, CG76023, CG76028, CG76031

All LCS recoveries were within 90 - 110 with the following exceptions: None.

I attest under the pains and penalties of perjury that, based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.

ICP Metals Narration

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ICP Metals Narration

Were all QA/QC performance criteria specified in the analytical method achieved? Yes.

Instrument:

ARCOS-2 09/16/20 08:08 Tina Hall, Chemist 09/16/20

CG76022, CG76023, CG76028, CG76031, CG76033, CG76038, CG76041

The linear range is defined daily by the calibration range.
The following Initial Calibration Verification (ICV) compounds did not meet criteria: None.
The following Continuing Calibration Verification (CCV) compounds did not meet criteria: None.
The following ICP Interference Check (ICSAB) compounds did not meet criteria: None.

BLUE 09/15/20 07:54 Cindy Pearce, Emily Kolominskaya, Tina Hall, Chemist 09/15/

CG76016, CG76021, CG76022, CG76023, CG76028, CG76031, CG76033, CG76038, CG76041

The initial calibration met criteria.
The continuing calibration standards met criteria for all the elements reported. The linear range is defined daily by the calibration range.
The continuing calibration blanks were less than the reporting level for the elements reported.
The ICSA and ICSAB were analyzed at the beginning and end of the run and were within criteria.The linear range is defined daily by the calibration range.
The following Initial Calibration Verification (ICV) compounds did not meet criteria: None.
The following Continuing Calibration Verification (CCV) compounds did not meet criteria: None.
The following ICP Interference Check (ICSAB) compounds did not meet criteria: None.

BLUE 09/17/20 11:41 Cindy Pearce, Emily Kolominskaya, Tina Hall, Chemist 09/17/

CG76021, CG76022, CG76028, CG76038

The initial calibration met criteria.
The continuing calibration standards met criteria for all the elements reported. The linear range is defined daily by the calibration range.
The continuing calibration blanks were less than the reporting level for the elements reported.
The ICSA and ICSAB were analyzed at the beginning and end of the run and were within criteria.The linear range is defined daily by the calibration range.
The following Initial Calibration Verification (ICV) compounds did not meet criteria: None.
The following Continuing Calibration Verification (CCV) compounds did not meet criteria: None.
The following ICP Interference Check (ICSAB) compounds did not meet criteria: None.

QC (Batch Specific):

Batch 545274 (CG76016)

CG76016, CG76021, CG76022, CG76023, CG76028, CG76031, CG76033, CG76041

All LCS recoveries were within 80 - 120 with the following exceptions: None.
All LCSD recoveries were within 80 - 120 with the following exceptions: None.
All LCS/LCSD RPDs were less than 20% with the following exceptions: None.
Additional: LCS acceptance range is 80-120% MS acceptance range 75-125%.

Batch 545293 (CG76021)

CG76016, CG76021

All LCS recoveries were within 80 - 120 with the following exceptions: None.
All LCSD recoveries were within 80 - 120 with the following exceptions: None.
All LCS/LCSD RPDs were less than 20% with the following exceptions: None.
Additional: LCS acceptance range is 80-120% MS acceptance range 75-125%.

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ICP Metals Narration

Batch 545326 (CG76038)

CG76038

All LCS recoveries were within 80 - 120 with the following exceptions: None.
All LCSD recoveries were within 80 - 120 with the following exceptions: None.
All LCS/LCSD RPDs were less than 20% with the following exceptions: None.
Additional: LCS acceptance range is 80-120% MS acceptance range 75-125%.

Batch 545441 (CG76785)

CG76022, CG76023, CG76028, CG76031, CG76033, CG76038, CG76041

All LCS recoveries were within 80 - 120 with the following exceptions: None.
All LCSD recoveries were within 80 - 120 with the following exceptions: None.
All LCS/LCSD RPDs were less than 20% with the following exceptions: None.
Additional: LCS acceptance range is 80-120% MS acceptance range 75-125%.

SVOA-Dioxane

Were all QA/QC performance criteria specified in the MADEP document CAM achieved? Yes.

Instrument:

CHEM22 09/16/20-1 Adam Werner, Chemist 09/16/20

CG76016 (1X), CG76018 (1X), CG76019 (1X), CG76020 (1X), CG76021 (1X), CG76024 (1X), CG76025 (1X), CG76026 (1X), CG76028 (1X), CG76030 (1X), CG76031 (1X), CG76037 (1X), CG76042 (1X), CG76043 (1X), CG76045 (1X)

Initial Calibration Evaluation (CHEM22/DIOX_0818):
100% of target compounds met criteria.
The following compounds had %RSDs >20%: None.
The following compounds did not meet recommended response factors: None.
The following compounds did not meet a minimum response factors: None.

Continuing Calibration Verification (CHEM22/0916_06-DIOX_0818) (MCP Compliance):
Internal standard areas were within 50 to 200% of the initial calibration with the following exceptions: None.
100% of target compounds met criteria.
The following compounds did not meet % deviation criteria: None.
The following compounds did not meet maximum % deviations: None.
The following compounds did not meet recommended response factors: None.
The following compounds did not meet minimum response factors: None.

QC (Site Specific):

Batch 545444 (CG76018)

CG76016, CG76018, CG76019, CG76020, CG76021, CG76024, CG76025, CG76026, CG76028, CG76030, CG76031, CG76037, CG76042, CG76043, CG76045

All LCS recoveries were within 40 - 140 with the following exceptions: None.
All LCSD recoveries were within 40 - 140 with the following exceptions: None.
All LCS/LCSD RPDs were less than 30% with the following exceptions: None.
Due to the concentration in the unspiked sample relative to the spike concentration, the MS/MSD could not be reported.

I attest under the pains and penalties of perjury that, based upon my inquiry of those individuals immediately responsible for

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SVOA-Dioxane

obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.

SVOASIM Narration

Were all QA/QC performance criteria specified in the MADEP document CAM achieved? No.

QC Batch 545626 (Samples: CG76027, CG76028): -----

The LCS/LCSD RPD exceeds the method criteria for one analyte. This analyte was not reported in the sample(s). No significant variability is suspected. (Benzo(ghi)perylene)

Instrument:

CHEM25 09/18/20-1 Wes Bryon, Chemist 09/18/20

CG76037 (1X), CG76041 (1X)

For 8270 BN list, benzidine peak tailing was evaluated in the DFTPP tune and was found to be in control.

Initial Calibration Evaluation (CHEM25/25_BNSIM18_0805):
100% of target compounds met criteria.
The following compounds had %RSDs >20%: None.
The following compounds did not meet recommended response factors: None.
The following compounds did not meet a minimum response factors: None.

Continuing Calibration Verification (CHEM25/0918_06-25_BNSIM18_0805) (MCP Compliance):
Internal standard areas were within 50 to 200% of the initial calibration with the following exceptions: None.
90% of target compounds met criteria.
The following compounds did not meet % deviation criteria: None.
The following compounds did not meet maximum % deviations: None.
The following compounds did not meet recommended response factors: None.
The following compounds did not meet minimum response factors: None.

CHEM33 09/17/20-1 Wes Bryon, Chemist 09/17/20

CG76027 (1X), CG76028 (1X)

Initial Calibration Evaluation (CHEM33/33_PAHSIM_0910):
100% of target compounds met criteria.
The following compounds had %RSDs >20%: None.
The following compounds did not meet recommended response factors: None.
The following compounds did not meet a minimum response factors: None.

Continuing Calibration Verification (CHEM33/0917_03-33_PAHSIM_0910) (MCP Compliance):
Internal standard areas were within 50 to 200% of the initial calibration with the following exceptions: None.
100% of target compounds met criteria.
The following compounds did not meet % deviation criteria: None.
The following compounds did not meet maximum % deviations: None.
The following compounds did not meet recommended response factors: None.
The following compounds did not meet minimum response factors: None.

QC (Batch Specific):

Batch 545626 (CG76027)

CG76027, CG76028

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SVOASIM Narration

All LCS recoveries were within 40 - 140 with the following exceptions: None.
All LCSD recoveries were within 40 - 140 with the following exceptions: None.
All LCS/LCSD RPDs were less than 20% with the following exceptions: Benzo(ghi)perylene(22.2%)
Additional 8270 criteria: 10% of compounds can be outside of acceptance criteria as long as recovery is at least 10%. (Acid surrogates acceptance range for aqueous samples: 10-110%, for soils 30-130%)

Batch 545853 (CG75644)

CG76037, CG76041

All LCS recoveries were within 40 - 140 with the following exceptions: None.
All LCSD recoveries were within 40 - 140 with the following exceptions: None.
All LCS/LCSD RPDs were less than 20% with the following exceptions: None.
Additional 8270 criteria: 10% of compounds can be outside of acceptance criteria as long as recovery is at least 10%. (Acid surrogates acceptance range for aqueous samples: 10-110%, for soils 30-130%)

I attest under the pains and penalties of perjury that, based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.

VOA Narration

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VOA Narration

Were all QA/QC performance criteria specified in the MADEP document CAM achieved? No.

QC Batch 545403 (Samples: CG76015, CG76020, CG76022, CG76027, CG76033, CG76035, CG76036, CG76038, CG76039, CG76040, CG76041): -----

The LCS/LCSD recovery is above the upper range for one analyte that was not reported in the sample(s), therefore no significant bias is suspected. (1,2-Dibromo-3-chloropropane)

QC Batch 545781 (Samples: CG76016, CG76017, CG76028, CG76029, CG76032, CG76034, CG76036, CG76037, CG76043, CG76044, CG76045): -----

The MS recovery is above the upper range for one analyte that was not reported in the sample(s), therefore no significant bias is suspected. (Trichlorofluoromethane)

QC Batch 545972 (Samples: CG76023, CG76024, CG76025, CG76026): -----

The LCSD recovery is below the method criteria. The LCS is acceptable, therefore no significant bias is suspected. (Chloroethane)

QC Batch 546217 (Samples: CG76016, CG76017, CG76018, CG76019, CG76021, CG76023, CG76024, CG76026, CG76028, CG76029): -----

The MS and/or the MSD recovery is above the upper range for one or more analytes that were not reported in the sample(s), therefore no significant bias is suspected. (Carbon tetrachloride, Trichlorofluoromethane)

The MS/MSD RPD exceeds the method criteria for one analyte, therefore there may be variability in the reported result. (Trichloroethene)

QC Batch 546288 (Samples: CG76032, CG76037, CG76043, CG76044, CG76045): -----

The LCS recovery is below the method criteria. The LCSD is acceptable, therefore no significant bias is suspected. (Di-isopropyl ether)

Instrument:

CHEM23 09/14/20-1 Michael Hahn, Chemist 09/14/20

CG76015 (1X), CG76020 (1X), CG76022 (1X), CG76027 (1X), CG76033 (1X), CG76035 (1X), CG76036 (1X), CG76038 (1X), CG76039 (1X), CG76040 (1X), CG76041 (1X)

Initial Calibration Evaluation (CHEM23/VOA23_091120):
92% of target compounds met criteria.
The following compounds had %RSDs >20%: 1,2-Dibromo-3-chloropropane 25% (20%), Bromoform 24% (20%), Bromomethane 22% (20%), Chloroethane 29% (20%)
The following compounds did not meet Table 4 recommended minimum response factors: Acetone 0.088 (0.1)
The following compounds did not meet the minimum response factor of 0.05: None.

Continuing Calibration Verification (CHEM23/0914_02-VOA23_091120) (MCP Compliance):
Internal standard areas were within 50 to 200% of the initial calibration with the following exceptions: None.
98% of target compounds met criteria.
The following compounds did not meet % deviation criteria: None.

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The following compounds did not meet maximum % deviations: None.
The following compounds did not meet Table 4 recommended minimum response factors: Acetone 0.093 (0.1), Tetrachloroethene 0.197 (0.2)
The following compounds did not meet the minimum MCP response factor of 0.05: None.

CHEM23 09/16/20-1 Michael Hahn, Chemist 09/16/20

CG76016 (20X), CG76017 (20X), CG76028 (20X), CG76029 (20X), CG76032 (20X), CG76034 (1X), CG76036 (10X), CG76037 (20X), CG76043 (20X), CG76044 (20X), CG76045 (20X)

Initial Calibration Evaluation (CHEM23/VOA23_091520):
94% of target compounds met criteria.
The following compounds had %RSDs >20%: 1,2-Dibromo-3-chloropropane 28% (20%), Acetone 21% (20%), Bromomethane 24% (20%), Chloroethane 21% (20%), Methylene chloride 23% (20%)
The following compounds did not meet Table 4 recommended minimum response factors: None.
The following compounds did not meet the minimum response factor of 0.05: None.

Continuing Calibration Verification (CHEM23/0916_02-VOA23_091520) (MCP Compliance):
Internal standard areas were within 50 to 200% of the initial calibration with the following exceptions: None.
98% of target compounds met criteria.
The following compounds did not meet % deviation criteria: None.
The following compounds did not meet maximum % deviations: None.
The following compounds did not meet Table 4 recommended minimum response factors: Tetrachloroethene 0.192 (0.2)
The following compounds did not meet the minimum MCP response factor of 0.05: None.

CHEM23 09/17/20-1 Michael Hahn, Chemist 09/17/20

CG76023 (50X), CG76024 (50X), CG76025 (50X), CG76026 (50X)

Initial Calibration Evaluation (CHEM23/VOA23_091520):
94% of target compounds met criteria.
The following compounds had %RSDs >20%: 1,2-Dibromo-3-chloropropane 28% (20%), Acetone 21% (20%), Bromomethane 24% (20%), Chloroethane 21% (20%), Methylene chloride 23% (20%)
The following compounds did not meet Table 4 recommended minimum response factors: None.
The following compounds did not meet the minimum response factor of 0.05: None.

Continuing Calibration Verification (CHEM23/0917_02-VOA23_091520) (MCP Compliance):
Internal standard areas were within 50 to 200% of the initial calibration with the following exceptions: None.
87% of target compounds met criteria.
The following compounds did not meet % deviation criteria: None.
The following compounds did not meet maximum % deviations: None.
The following compounds did not meet Table 4 recommended minimum response factors: Tetrachloroethene 0.198 (0.2)
The following compounds did not meet the minimum MCP response factor of 0.05: None.

CHEM23 09/18/20-1 Michael Hahn, Chemist 09/18/20

CG76016 (100X), CG76017 (100X), CG76018 (1X, 5X), CG76019 (5X), CG76021 (1X), CG76023 (20X), CG76024 (10X), CG76026 (100X), CG76028 (10X), CG76029 (10X)

Initial Calibration Evaluation (CHEM23/VOA23_091520):
94% of target compounds met criteria.
The following compounds had %RSDs >20%: 1,2-Dibromo-3-chloropropane 28% (20%), Acetone 21% (20%), Bromomethane 24% (20%), Chloroethane 21% (20%), Methylene chloride 23% (20%)
The following compounds did not meet Table 4 recommended minimum response factors: None.
The following compounds did not meet the minimum response factor of 0.05: None.

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Continuing Calibration Verification (CHEM23/0918_03-VOA23_091520) (MCP Compliance):
Internal standard areas were within 50 to 200% of the initial calibration with the following exceptions: None.
94% of target compounds met criteria.
The following compounds did not meet % deviation criteria: None.
The following compounds did not meet maximum % deviations: None.
The following compounds did not meet Table 4 recommended minimum response factors: Tetrachloroethene 0.190 (0.2)
The following compounds did not meet the minimum MCP response factor of 0.05: None.

CHEM23 09/21/20-1 Michael Hahn, Chemist 09/21/20

CG76032 (100X), CG76037 (100X), CG76043 (5X), CG76044 (100X), CG76045 (100X)

Initial Calibration Evaluation (CHEM23/VOA23_092020):
99% of target compounds met criteria.
The following compounds had %RSDs >20%: Chloroethane 22% (20%)
The following compounds did not meet Table 4 recommended minimum response factors: None.
The following compounds did not meet the minimum response factor of 0.05: None.

Continuing Calibration Verification (CHEM23/0921_03-VOA23_092020) (MCP Compliance):
Internal standard areas were within 50 to 200% of the initial calibration with the following exceptions: None.
98% of target compounds met criteria.
The following compounds did not meet % deviation criteria: None.
The following compounds did not meet maximum % deviations: None.
The following compounds did not meet Table 4 recommended minimum response factors: None.
The following compounds did not meet the minimum MCP response factor of 0.05: None.

CHEM23 09/21/20-2 Michael Hahn, Chemist 09/21/20

CG76030 (100X), CG76031 (100X)

Initial Calibration Evaluation (CHEM23/VOA23_092020):
99% of target compounds met criteria.
The following compounds had %RSDs >20%: Chloroethane 22% (20%)
The following compounds did not meet Table 4 recommended minimum response factors: None.
The following compounds did not meet the minimum response factor of 0.05: None.

Continuing Calibration Verification (CHEM23/0921_33-VOA23_092020) (MCP Compliance):
Internal standard areas were within 50 to 200% of the initial calibration with the following exceptions: None.
99% of target compounds met criteria.
The following compounds did not meet % deviation criteria: None.
The following compounds did not meet maximum % deviations: None.
The following compounds did not meet Table 4 recommended minimum response factors: None.
The following compounds did not meet the minimum MCP response factor of 0.05: None.

CHEM23 09/23/20-1 Michael Hahn, Chemist 09/23/20

CG76042 (5X, 20X)

Initial Calibration Evaluation (CHEM23/VOA23_092020):
99% of target compounds met criteria.
The following compounds had %RSDs >20%: Chloroethane 22% (20%)
The following compounds did not meet Table 4 recommended minimum response factors: None.
The following compounds did not meet the minimum response factor of 0.05: None.

Continuing Calibration Verification (CHEM23/0923_02-VOA23_092020) (MCP Compliance):
Internal standard areas were within 50 to 200% of the initial calibration with the following exceptions: None.

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98% of target compounds met criteria.
The following compounds did not meet % deviation criteria: None.
The following compounds did not meet maximum % deviations: None.
The following compounds did not meet Table 4 recommended minimum response factors: Tetrachloroethene 0.189 (0.2)
The following compounds did not meet the minimum MCP response factor of 0.05: None.

CHEM23 09/24/20-1 Michael Hahn, Chemist 09/24/20

CG76042 (50X)

Initial Calibration Evaluation (CHEM23/VOA23_092020):
99% of target compounds met criteria.
The following compounds had %RSDs >20%: None.
The following compounds did not meet Table 4 recommended minimum response factors: None.
The following compounds did not meet the minimum response factor of 0.05: None.

Continuing Calibration Verification (CHEM23/0924_02-VOA23_092020) (MCP Compliance):
Internal standard areas were within 50 to 200% of the initial calibration with the following exceptions: None.
98% of target compounds met criteria.
The following compounds did not meet % deviation criteria: None.
The following compounds did not meet maximum % deviations: None.
The following compounds did not meet Table 4 recommended minimum response factors: None.
The following compounds did not meet the minimum MCP response factor of 0.05: None.

QC (Batch Specific):

Batch 545403 (CG73379) CHEM23 9/14/2020-1

CG76015(1X), CG76020(1X), CG76022(1X), CG76027(1X), CG76033(1X), CG76035(1X), CG76036(1X), CG76038(1X), CG76039(1X), CG76040(1X), CG76041(1X)

All LCS recoveries were within 70 - 130 with the following exceptions: 1,2-Dibromo-3-chloropropane(133%)
All LCSD recoveries were within 70 - 130 with the following exceptions: 1,2-Dibromo-3-chloropropane(133%)
All LCS/LCSD RPDs were less than 20% with the following exceptions: None.
Additional 8260 criteria: 10% of compounds can be outside of acceptance criteria as long as recovery is 10%.
The RPD criteria for the LCS/LCSD is 20%,
The MS/MSD RPD criteria is listed above.

Batch 545972 (CG76580) CHEM23 9/17/2020-1

CG76023(50X), CG76024(50X), CG76025(50X), CG76026(50X)

All LCS recoveries were within 70 - 130 with the following exceptions: None.
All LCSD recoveries were within 70 - 130 with the following exceptions: Chloroethane(66%)
All LCS/LCSD RPDs were less than 20% with the following exceptions: None.
A LCS and LCS Duplicate were performed instead of a matrix spike and matrix spike duplicate.
Additional 8260 criteria: 10% of compounds can be outside of acceptance criteria as long as recovery is 10%.
The RPD criteria for the LCS/LCSD is 20%,
The MS/MSD RPD criteria is listed above.

Batch 546288 (CG77564) CHEM23 9/21/2020-1

CG76032(100X), CG76037(100X), CG76043(5X), CG76044(100X), CG76045(100X)

All LCS recoveries were within 70 - 130 with the following exceptions: Di-isopropyl ether(68%)
All LCSD recoveries were within 70 - 130 with the following exceptions: None.
All LCS/LCSD RPDs were less than 20% with the following exceptions: Di-isopropyl ether(23.4%)

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A LCS and LCS Duplicate were performed instead of a matrix spike and matrix spike duplicate.
Additional 8260 criteria: 10% of compounds can be outside of acceptance criteria as long as recovery is 10%.
The RPD criteria for the LCS/LCSD is 20%,
The MS/MSD RPD criteria is listed above.

Batch 546396 (CG79150) CHEM23 9/21/2020-2

CG76030(100X), CG76031(100X)

All LCS recoveries were within 70 - 130 with the following exceptions: None.
All LCSD recoveries were within 70 - 130 with the following exceptions: None.
All LCS/LCSD RPDs were less than 20% with the following exceptions: None.
A LCS and LCS Duplicate were performed instead of a matrix spike and matrix spike duplicate.
Additional 8260 criteria: 10% of compounds can be outside of acceptance criteria as long as recovery is 10%.
The RPD criteria for the LCS/LCSD is 20%,
The MS/MSD RPD criteria is listed above.

Batch 546771 (CG81125) CHEM23 9/23/2020-1

CG76042(5X, 20X)

All LCS recoveries were within 70 - 130 with the following exceptions: None.
All LCSD recoveries were within 70 - 130 with the following exceptions: None.
All LCS/LCSD RPDs were less than 20% with the following exceptions: None.
Additional 8260 criteria: 10% of compounds can be outside of acceptance criteria as long as recovery is 10%.
The RPD criteria for the LCS/LCSD is 20%,
The MS/MSD RPD criteria is listed above.

Batch 546836 (CG80056) CHEM23 9/24/2020-1

CG76042(50X)

All LCS recoveries were within 70 - 130 with the following exceptions: None.
All LCSD recoveries were within 70 - 130 with the following exceptions: None.
All LCS/LCSD RPDs were less than 20% with the following exceptions: None.
A LCS and LCS Duplicate were performed instead of a matrix spike and matrix spike duplicate.
Additional 8260 criteria: 10% of compounds can be outside of acceptance criteria as long as recovery is 10%.
The RPD criteria for the LCS/LCSD is 20%,
The MS/MSD RPD criteria is listed above.

QC (Site Specific):

Batch 545781 (CG76034) CHEM23 9/16/2020-1

CG76016(20X), CG76017(20X), CG76028(20X), CG76029(20X), CG76032(20X), CG76034(1X), CG76036(10X), CG76037(20X), CG76043(20X), CG76044(20X), CG76045(20X)

All LCS recoveries were within 70 - 130 with the following exceptions: None.
All LCSD recoveries were within 70 - 130 with the following exceptions: None.
All LCS/LCSD RPDs were less than 20% with the following exceptions: None.
All MS recoveries were within 70 - 130 with the following exceptions: Trichlorofluoromethane(135%)
All MSD recoveries were within 70 - 130 with the following exceptions: None.
All MS/MSD RPDs were less than 20% with the following exceptions: None.
A matrix effect is suspected when a MS/MSD recovery is outside of criteria. No further action is required if LCS/LCSD compounds are within criteria.
Additional 8260 criteria: 10% of compounds can be outside of acceptance criteria as long as recovery is 10%.
The RPD criteria for the LCS/LCSD is 20%,

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The MS/MSD RPD criteria is listed above.

Batch 546217 (CG76018) CHEM23 9/18/2020-1

CG76016(100X), CG76017(100X), CG76018(5X), CG76019(5X), CG76021(1X), CG76023(20X), CG76024(10X), CG76026(100X), CG76028(10X), CG76029(10X)

All LCS recoveries were within 70 - 130 with the following exceptions: None.
All LCSD recoveries were within 70 - 130 with the following exceptions: None.
All LCS/LCSD RPDs were less than 20% with the following exceptions: None.
All MS recoveries were within 70 - 130 with the following exceptions: Carbon tetrachloride(134%)
All MSD recoveries were within 70 - 130 with the following exceptions: Carbon tetrachloride(150%), Trichlorofluoromethane(136%)
All MS/MSD RPDs were less than 20% with the following exceptions: Trichloroethene(32.0%)
A matrix effect is suspected when a MS/MSD recovery is outside of criteria. No further action is required if LCS/LCSD compounds are within criteria.
Additional 8260 criteria: 10% of compounds can be outside of acceptance criteria as long as recovery is 10%.
The RPD criteria for the LCS/LCSD is 20%,
The MS/MSD RPD criteria is listed above.

We attest under the pains and penalties of perjury that, based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.

VPH Narration

Were all QA/QC performance criteria specified in the MADEP document CAM achieved? Yes.

Instrument:

PIDFID 09/15/20-1 Raman Makol, Chemist 09/15/20

CG76016 (5X), CG76027 (1X), CG76028 (5X), CG76037 (5X), CG76041 (1X)

QC (Batch Specific):

Batch 545550 (CG76041)

CG76016(5X), CG76027(1X), CG76028(5X), CG76037(5X), CG76041(1X)

All LCS recoveries were within 70 - 130 with the following exceptions: None.
All LCSD recoveries were within 70 - 130 with the following exceptions: None.
All LCS/LCSD RPDs were less than 25% with the following exceptions: None.
A blank MS/MSD was analyzed with this batch.

I attest under the pains and penalties of perjury that, based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.

Cooler: Yes / No
Coolant: IPK / ICE / No
Temp 1.5 °C Pg of

CHAIN OF CUSTODY RECORD

PHOENIX Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O. Box 370, Manchester, CT 06040
Email: info@phoenixlabs.com Fax (860) 645-0823
Client Services (860) 645-8726

Data Delivery/Contact EMails:
lori.herberich@aecom.com
scott.olson@aecom.com

Customer: AECOM
Address: 250 Apollo Drive
Chelmsford, MA 01824 - (978) 905-2100
Contacts: Lori Herberich (Chemist) 978-302-0089 Scott Olson (PM) 978-846-5238

Project: Lockheed - Wilmington MA 60552044.19
Report to: Lori Herberich - Scott Olson - Nicole Callahan
Invoice to: Scott Olson & Lori Herberich
QUOTE # August 2019 (for 2017-2022)

2020 Project PO: 127680

This section MUST be completed with Bottle Quantities.

Sampler's Signature: [signature] Date: 9/9/20

Matrix Code:
DW=Drinking Water GW=Ground Water SW=Surface Water WW=Waste Water L=Liquid
RW=Raw Water SE=Sediment SL=Sludge S=Soil SD=Solid W=Wipe OIL=Oil B=Bulk

PHOENIX USE ONLY SAMPLE #	Client Sample - Information - Identification: Customer Sample Identification	Sample Matrix	Date Sampled	Time Sampled	# of VOA Vials	# of Amber Glass	# of Clear Glass	# of Plastic				VOCs (8260) - HCL + Freon 113	1,4-Dioxane (8270D SIM) - NaHSO4 for DL <0.3 ug/L	VPH - HCL (MassDEP VPH-04-1.1 Rev 1)	EPH + PAHs - HCL & UNP (MassDEP EPH-04-1.1 Rev 1)	Total As, Fe, Mn (6010C) - HNO3 [FF]	Dissolved As, Fe, Mn (6010C) - HNO3	Chloride, Nitrate, Nitrite, Sulfate (300) - UNP	Sulfide - Zn-Acetate + NaOH	Total Organic Carbon (9060A) - H3PO4	Comments
76015	20A-TB02-090920-1	GW	9/9/20	1200	2							X									
76016	20A-AE102RR6-090920-1	GW	9/9/20	1245	5	2		2				X	X	X		X	X			X	
76017	20A-AE102RR5-090920-1	GW	9/9/20	1520	3							X									
76018	20A-AE102RR4-090920-1	GW	9/9/20	1545	9	3						X	X								MS/MSD
76019	20A-AE102RR2-090920-1	GW	9/9/20	1610	3	1						X	X								
76020	20A-AE102D-090920-1	GW	9/9/20	1520	3	1						X	X								
76021	20A-AE103D-091020-1	GW	9/10/20	0920	3	2		4				X	X			X	X	X	X	X	
76022	20A-AE103S-091020-1	GW	9/10/20	1210	3			2				X									
76023	20A-AE100RS-091020-1	GW	9/10/20	1300	3			4				X				X	X	X	X		
76024	20A-AE100R6-091020-1	GW	9/10/20	1335	3	1						X	X								
76025	20A-AE100R4-091020-1	GW	9/10/20	1345	3	1						X	X								
76026	20A-AE100R3-091020-1	GW	9/10/20	1355	3	1						X	X								

Relinquished by:	Accepted by:	Date:	Time:
[signature]	[signature]	9-11-20	14:30
[signature]	[signature]	9/11	1631

Comments, Special Requirements or Regulations:

Turnaround:
10 - 15 days

RI
- ☐ Direct Exposure (Residential)
- ☐ GW
- ☐ Other

CT
- ☐ RCP Cert
- ☐ GW Protection
- ☐ SW Protection
- ☐ GA Mobility
- ☐ GB Mobility
- ☐ Residential DEC
- ☐ I/C DEC
- ☐ Other

MA
- X MCP (CAM Rpt)
- X GW-1
- X GW-2
- X GW-3
- ☐ S-1
- ☐ S-2
- ☐ S-3
- ☐ MWRA eSMART
- ☐ Other

State where samples were collected: MA

Data Format
- x PDF
- x AECOM EQuIS 4-File EDD format

Data Package
- ☐ Tier II Checklist
- ☐ Full Data Package*
- ☐ Phoenix Std Report
- ☐ Other

* SURCHARGE APPLIES

GCG 76007 (82) 76015

Shannon Wilhelm

Subject: FW: Bottle Pickup 9-11-20

From: "Potter, Dylan (Chelmsford)" <Dylan.Potter2@aecom.com>
Date: September 11, 2020 at 3:09:53 PM EDT
To: Rebecca Merz <Rebeccam@phoenixlabs.com>
Cc: Greg Lawrence <greg@phoenixlabs.com>
Subject: Bottle Pickup 9-11-20

Hi Rebecca,

One bottle didn't make it with the pickup today. It's the total metals bottle for sample 20A-AE112R1-091120-1. I will keep the bottle on ice and it will be ready for the pickup on Monday.

Thank you,

Dylan Potter
Environmental Scientist
AECOM
250 Apollo Drive
Chelmsford, MA 01824
O: 978-995-2231
C: 508-333-2316

Cooler: Yes ☑ No ☐
Coolant: IPK ☐ ICE ☑ No ☐

PHOENIX
Environmental Laboratories, Inc.

CHAIN OF CUSTODY RECORD

Temp 1.5° C Pg of

587 East Middle Turnpike, P.O. Box 370, Manchester, CT 06040
Email: info@phoenixlabs.com Fax (860) 645-0823
Client Services (860) 645-8726

Data Delivery/Contact EMails:
lon.herberich@aecom.com
scott.olson@aecom.com

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Address: 250 Apollo Drive
Chelmsford, MA 01824 - (978) 905-2100
Contacts: Lori Herberich (Chemist) 978-302-0089 Scott Olson (PM) 978-846-5236

Project: Lockheed - Wilmington MA 60552044.19
Report to: Lori Herberich - Scott Olson - Nicole Callahan
Invoice to: Scott Olson & Lori Herberich
QUOTE # August 2019 (for 2017-2022)

2020 Project PO: 127680

This section MUST be completed with Bottle Quantities.

Sampler's Signature: [signature] Date: 9/10/20

Client Sample Information - Identification

Matrix Code:
DW=Drinking Water GW=Ground Water SW=Surface Water WW=Waste Water L=Liquid
RW=Raw Water SE=Sediment SL=Sludge S=Soil SD=Solid W=Wipe OIL=Oil B=Bulk

PHOENIX USE ONLY SAMPLE #	Customer Sample Identification	Sample Matrix	Date Sampled	Time Sampled	# of VOA Vials	# of Amber Glass	# of Clear Glass	# of Plastic				VOCs (8260) - HCL + Freon 113	1,4-Dioxane (8270D SIM) - NaHSO4 for DL <0.3 ug/L	VPH - HCL (MassDEP: VPH-04.1.1 Rev f)	EPH + PAHs - HCL & UNP (MassDEP: EPH-04-1.1 Rev 1)	Total As, Fe, Mn (6010C) - HNO3 (FF)	Dissolved As, Fe, Mn (6010C) - HNO3	Chloride, Nitrate, Nitrite, Sulfate (300) - UNP	Sulfide - Zn-Acetate + NaOH	Total Organic Carbon (9060A) - H3PO4	Comments
76027	20A-AE100R1-091020-1	GW	9/10/20	1410	5	3						X		X	X						
76028	20A-AE103R1-091020-1	GW	9/10/20	1300	5	5		4				X	X	X	X	X	X	X	X	X	
76029	20A-AE103R3-091020-1	GW	9/10/20	1320	3							X									
76030	20A-AE103R4-091020-1	GW	9/10/20	1325	3	1						X	X								
76031	20A-AE103R5-091020-1	GW	9/10/20	1335	3	2		4				X	X			X	X	X	X	X	
76032	20A-AE103R7-091020-1	GW	9/10/20	1340	3							X					X	X	X	(NP)	
76033	20A-AE112D-091120-1	GW	9/11/20	1025	3			2				X				X	X				
76034	20A-~~AE~~EMW10R-091120-1	GW	9/11/20	1045	9							X									MS/MSD
76035	20A-EMW11D-091120-1	GW	9/11/20	1220	3							X									
76036	20A-EMW10D-091120-1	GW	9/11/20	1135	3							X									
76037	20A-AE104R4-091120-1	GW	9/11/20	1230	5	4						X	X	X	X						
* 76038	20A-AE112R1-091120-1	GW	9/11/20	1300	3			2				X				X	X				

Relinquished by:	Accepted by:	Date:	Time:
[signature]	[signature]	9-11-20	14:30
[signature]	[signature]	9/11	1631

Comments, Special Requirements or Regulations:
* Metals bottle not ~~recvd~~ received. Will be submitted on Monday (SW)

Turnaround:
10 - 15 days

RI
☐ Direct Exposure (Residential)
☐ GW
☐ Other

CT
☐ RCP Cert
☐ GW Protection
☐ SW Protection
☐ GA Mobility
☐ GB Mobility
☐ Residential DEC
☐ I/C DEC
☐ Other

MA
X MCP (CAM Rpt)
X GW-1
X GW-2
X GW-3
☐ S-1
☐ S-2
☐ S-3
☐ MWRA eSMART
☐ Other

State where samples were collected: MA

Data Format
x PDF
x AECOM EQuIS 4-File EDD format

Data Package
☐ Tier II Checklist
☐ Full Data Package*
☐ Phoenix Std Report
☐ Other

* SURCHARGE APPLIES

Cooler: Yes ☐ No ☐
Coolant: IPK ☑ ICE ☐ No ☐

CHAIN OF CUSTODY RECORD

Temp 1.5 °C Pg of

PHOENIX
Environmental Laboratories, Inc.

587 East Middle Turnpike, P.O. Box 370, Manchester, CT 06040
Email: info@phoenixlabs.com Fax (860) 645-0823
Client Services (860) 645-8726

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lori.herberich@aecom.com
scott.olson@aecom.com

Customer: AECOM
Address: 250 Apollo Drive
Chelmsford, MA 01824 - (978) 905-2100
Contacts: Lori Herbierich (Chemist) 978-302-0089 Scott Olson (PM) 978-846-5238

Project: Lockheed - Wilmington MA 60552044.19
Report to: Lori Herberich - Scott Olson - Nicole Callahan
Invoice to: Scott Olson & Lori Herberich
QUOTE # August 2019 (for 2017-2022)

2020 Project PO: 127680

This section MUST be completed with Bottle Quantities.

Sampler's Signature: [signature] Date: 9/11/20

Client Sample - Information - Identification

Matrix Code:
DW=Drinking Water GW=Ground Water SW=Surface Water WW=Waste Water L=Liquid
RW=Raw Water SE=Sediment SL=Sludge S=Soil SD=Solid W=Wipe OIL=Oil B=Bulk

PHOENIX USE ONLY SAMPLE #	Customer Sample Identification	Sample Matrix	Date Sampled	Time Sampled	# of VOA Vials	# of Amber Glass	# of Clear Glass	# of Plastic				VOCs (8260) - HCL + Freon 113	1,4-Dioxane (8270D SIM) - NaHSO4 for DL <0.3 ug/L	VPH - HCL (MassDEP VPH 04 1.1 Rev 1)	EPH + PAHs - HCL & UNP (MassDEP EPH-04-1.1 Rev 1)	Total As, Fe, Mn (6010C) - HNO3 [FF]	Dissolved As, Fe, Mn (6010C) - HNO3	Chloride, Nitrate, Nitrite, Sulfate (300) - UNP	Sulfide - Zn-Acetate + NaOH	Total Organic Carbon (9060A) - H3PO4	Comments
76039	20A-AE112R3-091120-1	GW	9/11/20	1255	3							X									
76040	20A-AE112R5-091120-1	GW	9/11/20	1220	3							X									
76041	20A-AE112R6-091120-1	GW	9/11/20	1235	5	3		2				X		X	X	X	X				
76042	20A-AE104R3-091120-1	GW	9/11/20	1305	3	1						X	X								
76043	20A-AE104R1-091120-1	GW	9/11/20	1300	3	1						X	X								
76044	20A-AE104R5-091120-1	GW	9/11/20	1250	3							X									
76045	20A-AE104R6-091120-1	GW	9/11/20	1255	3	1						X	X								

Relinquished by:	Accepted by:	Date:	Time:
[signature]	[signature]	9-11-20	14:35
	[signature]	9/11	1631

Comments, Special Requirements or Regulations:

Turnaround:
10 - 15 days

RI
☐ Direct Exposure (Residential)
☐ GW
☐ Other

CT
☐ RCP Cert
☐ GW Protection
☐ SW Protection
☐ GA Mobility
☐ GB Mobility
☐ Residential DEC
☐ I/C DEC
☐ Other

MA
X MCP (CAM Rpt)
X GW-1
X GW-2
X GW-3
☐ S-1
☐ S-2
☐ S-3
☐ MWRA eSMART
☐ Other

State where samples were collected: MA

Data Format
x PDF
x AECOM EQuIS 4-File EDD format

Data Package
☐ Tier II Checklist
☐ Full Data Package*
☐ Phoenix Std Report
☐ Other

* SURCHARGE APPLIES

Cooler: Yes ☐ No ☐
Coolant: IPK ☐ ICE ☑ No ☐
Temp 1.5 °C Pg of

CHAIN OF CUSTODY RECORD

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Project: Lockheed - Wilmington MA 60552044.19
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2020 Project PO: 127680

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Sampler's Signature: [signature] Date: 9/9/20

Matrix Code:
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RW=Raw Water SE=Sediment SL=Sludge S=Soil SD=Solid W=Wipe OIL=Oil B=Bulk

PHOENIX USE ONLY SAMPLE #	Client Sample - Information - Identification: Customer Sample Identification	Sample Matrix	Date Sampled	Time Sampled	# of VOA Vials	# of Amber Glass	# of Clear Glass	# of Plastic				VOCs (8260) - HCL + Freon 113	1,4 Dioxane (8270D SIM) - NaHSO4 for DL <0.3 ug/L	VPH - HCL (MassDEP VPH 04-1.1 Rev 1)	EPH + PAHs - HCL & UNP (MassDEP EPH 04-1.1 Rev 1)	Total As, Fe, Mn (6010C) - HNO3 [FF]	Dissolved As, Fe, Mn (6010C) - HNO3	Chloride, Nitrate, Nitrite, Sulfate (300) - UNP	Sulfide - Zn-Acetate + NaOH	Total Organic Carbon (9060A) - H3PO4	Comments
76015	20A-TB02-090920-1	GW	9/9/20	1200	2							X									
76016	20A-AE102RR6-090920-1	GW	9/9/20	1245	5	2		2				X	X	X		X	X			X	
76017	20A-AE102RR5-090920-1	GW	9/9/20	1520	3							X									
76018	20A-AE102RR4-090920-1	GW	9/9/20	1545	9	3						X	X								MS/MSD
76019	20A-AE102RR2-090920-1	GW	9/9/20	1610	3	1						X	X								
76020	20A-AE102D-090920-1	GW	9/9/20	1520	3	1						X	X								
76021	20A-AE103D-091020-1	GW	9/10/20	0920	3	2		4				X	X			X	X	X	X	X	
76022	20A-AE103S-091020-1	GW	9/10/20	1210	3			2				X				X	X	–S.Olson-AECOM 9-14-2020			
76023	20A-AE100R5-091020-1	GW	9/10/20	1300	3			4				X				X	X	X	X		
76024	20A-AE100R6-091020-1	GW	9/10/20	1335	3	1						X	X								
76025	20A-AE100R4-091020-1	GW	9/10/20	1345	3	1						X	X								
76026	20A-AE100R3-091020-1	GW	9/10/20	1355	3	1						X	X								

Relinquished by:	Accepted by:	Date:	Time:
[signature]	[signature]	9-11-20	14:30
	[signature]	9/11	1631

Comments, Special Requirements or Regulations:

Turnaround:
10 - 15 days

RI
☐ Direct Exposure (Residential)
☐ GW
☐ Other

CT
☐ RCP Cert
☐ GW Protection
☐ SW Protection
☐ GA Mobility
☐ GB Mobility
☐ Residential DEC
☐ I/C DEC
☐ Other

MA
X MCP (CAM Rpt)
X GW-1
X GW-2
X GW-3
☐ S-1
☐ S-2
☐ S-3
☐ MWRA eSMART
☐ Other

State where samples were collected: MA

Data Format
x PDF
x AECOM EQuIS 4-File EDD format

Data Package
☐ Tier II Checklist
☐ Full Data Package*
☐ Phoenix Std Report
☐ Other

* SURCHARGE APPLIES

PHOENIX
Environmental Laboratories, Inc.

Thursday, October 15, 2020

Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Project ID: **LOCKHEED-WILMINGTON MA 60552044.19**
SDG ID: **GCG76574**
Sample ID#s: CG76574 - CG76582

This laboratory is in compliance with the NELAC requirements of procedures used except where indicated.

This report contains results for the parameters tested, under the sampling conditions described on the Chain Of Custody, as received by the laboratory. This report is incomplete unless all pages indicated in the pagination at the bottom of the page are included.

A scanned version of the COC form accompanies the analytical report and is an exact duplicate of the original.

Enclosed are revised Analysis Report pages. Please replace and discard the original pages. If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200. The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.

Sincerely yours,

Phyllis Shiller
Laboratory Director

NELAC - #NY11301
CT Lab Registration #PH-0618
MA Lab Registration #M-CT007
ME Lab Registration #CT-007
NH Lab Registration #213693-A,B
NJ Lab Registration #CT-003
NY Lab Registration #11301
PA Lab Registration #68-03530
RI Lab Registration #63
UT Lab Registration #CT00007
VT Lab Registration #VT11301

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

NY # 11301

SDG Comments

October 15, 2020

SDG I.D.: GCG76574

Phoenix reporting levels may exceed those referenced in the CAM protocol. Please refer to criteria sheet for comparisons to requested MCP standards.

Ver.2
This report has been revised to correct MS/MSD %Recoveries in batch 545550 and 546134 for VPH analysis.

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Sample Id Cross Reference

October 15, 2020

SDG I.D.: GCG76574

Project ID: LOCKHEED-WILMINGTON MA 60552044.19

Client Id	Lab Id	Matrix
20A-AE24-091420-1	CG76574	GROUND WATER
20A-AE26R1-091420-1	CG76575	GROUND WATER
20A-AE28R2-091420-1	CG76576	GROUND WATER
20A-AE26S-091420-1	CG76577	GROUND WATER
20A-AE28R1-091420-1	CG76578	GROUND WATER
20A-AE26R2-091420-1	CG76579	GROUND WATER
20A-TB01-091420-1	CG76580	GROUND WATER
20A-AE26R5-091420-1	CG76581	GROUND WATER
20A-AE28R3-091420-1	CG76582	GROUND WATER

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

October 15, 2020

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		09/14/20	10:10
Location Code:	AECOM-WILMINGTN	Received by:	SW	09/14/20	15:48
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	127680				

Laboratory Data

SDG ID: GCG76574
Phoenix ID: CG76574

Project ID: LOCKHEED-WILMINGTON MA 60552044.19
Client ID: 20A-AE24-091420-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Volatiles							
1,1,1,2-Tetrachloroethane	ND	5.0	ug/L	5	09/22/20	MH	SW8260C
1,1,1-Trichloroethane	ND	5.0	ug/L	5	09/22/20	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	2.5	ug/L	5	09/22/20	MH	SW8260C
1,1,2-Trichloroethane	ND	5.0	ug/L	5	09/22/20	MH	SW8260C
1,1-Dichloroethane	ND	5.0	ug/L	5	09/22/20	MH	SW8260C
1,1-Dichloroethene	ND	5.0	ug/L	5	09/22/20	MH	SW8260C
1,1-Dichloropropene	ND	5.0	ug/L	5	09/22/20	MH	SW8260C
1,2,3-Trichlorobenzene	ND	5.0	ug/L	5	09/22/20	MH	SW8260C
1,2,3-Trichloropropane	ND	2.5	ug/L	5	09/22/20	MH	SW8260C
1,2,4-Trichlorobenzene	ND	5.0	ug/L	5	09/22/20	MH	SW8260C
1,2,4-Trimethylbenzene	ND	5.0	ug/L	5	09/22/20	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	2.5	ug/L	5	09/22/20	MH	SW8260C
1,2-Dibromoethane	ND	2.5	ug/L	5	09/22/20	MH	SW8260C
1,2-Dichlorobenzene	ND	5.0	ug/L	5	09/22/20	MH	SW8260C
1,2-Dichloroethane	ND	3.0	ug/L	5	09/22/20	MH	SW8260C
1,2-Dichloropropane	ND	3.0	ug/L	5	09/22/20	MH	SW8260C
1,3,5-Trimethylbenzene	ND	5.0	ug/L	5	09/22/20	MH	SW8260C
1,3-Dichlorobenzene	ND	5.0	ug/L	5	09/22/20	MH	SW8260C
1,3-Dichloropropane	ND	5.0	ug/L	5	09/22/20	MH	SW8260C
1,4-Dichlorobenzene	ND	5.0	ug/L	5	09/22/20	MH	SW8260C
2,2-Dichloropropane	ND	5.0	ug/L	5	09/22/20	MH	SW8260C
2-Chlorotoluene	ND	5.0	ug/L	5	09/22/20	MH	SW8260C
2-Hexanone	ND	25	ug/L	5	09/22/20	MH	SW8260C
4-Chlorotoluene	ND	5.0	ug/L	5	09/22/20	MH	SW8260C
4-Methyl-2-pentanone	ND	25	ug/L	5	09/22/20	MH	SW8260C
Acetone	ND	130	ug/L	5	09/22/20	MH	SW8260C

Project ID: LOCKHEED-WILMINGTON MA 60552044.19 Phoenix I.D.: CG76574

Client ID: 20A-AE24-091420-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	
Benzene	ND	3.5	ug/L	5	09/22/20	MH	SW8260C
Bromobenzene	ND	5.0	ug/L	5	09/22/20	MH	SW8260C
Bromochloromethane	ND	5.0	ug/L	5	09/22/20	MH	SW8260C
Bromodichloromethane	ND	2.5	ug/L	5	09/22/20	MH	SW8260C
Bromoform	ND	4.0	ug/L	5	09/22/20	MH	SW8260C
Bromomethane	ND	5.0	ug/L	5	09/22/20	MH	SW8260C
Carbon Disulfide	ND	25	ug/L	5	09/22/20	MH	SW8260C
Carbon tetrachloride	ND	2.5	ug/L	5	09/22/20	MH	SW8260C
Chlorobenzene	ND	5.0	ug/L	5	09/22/20	MH	SW8260C
Chloroethane	ND	5.0	ug/L	5	09/22/20	MH	SW8260C
Chloroform	ND	5.0	ug/L	5	09/22/20	MH	SW8260C
Chloromethane	ND	5.0	ug/L	5	09/22/20	MH	SW8260C
cis-1,2-Dichloroethene	ND	5.0	ug/L	5	09/22/20	MH	SW8260C
cis-1,3-Dichloropropene	ND	2.5	ug/L	5	09/22/20	MH	SW8260C
Dibromochloromethane	ND	2.5	ug/L	5	09/22/20	MH	SW8260C
Dibromomethane	ND	5.0	ug/L	5	09/22/20	MH	SW8260C
Dichlorodifluoromethane	ND	5.0	ug/L	5	09/22/20	MH	SW8260C
Ethylbenzene	ND	5.0	ug/L	5	09/22/20	MH	SW8260C
Hexachlorobutadiene	ND	2.5	ug/L	5	09/22/20	MH	SW8260C
Isopropylbenzene	ND	5.0	ug/L	5	09/22/20	MH	SW8260C
m&p-Xylene	ND	5.0	ug/L	5	09/22/20	MH	SW8260C
Methyl ethyl ketone	ND	25	ug/L	5	09/22/20	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	5.0	ug/L	5	09/22/20	MH	SW8260C
Methylene chloride	ND	5.0	ug/L	5	09/22/20	MH	SW8260C
Naphthalene	ND	5.0	ug/L	5	09/22/20	MH	SW8260C
n-Butylbenzene	ND	5.0	ug/L	5	09/22/20	MH	SW8260C
n-Propylbenzene	ND	5.0	ug/L	5	09/22/20	MH	SW8260C
o-Xylene	ND	5.0	ug/L	5	09/22/20	MH	SW8260C
p-Isopropyltoluene	ND	5.0	ug/L	5	09/22/20	MH	SW8260C
sec-Butylbenzene	ND	5.0	ug/L	5	09/22/20	MH	SW8260C
Styrene	ND	5.0	ug/L	5	09/22/20	MH	SW8260C
tert-Butylbenzene	ND	5.0	ug/L	5	09/22/20	MH	SW8260C
Tetrachloroethene	680	10	ug/L	10	09/21/20	MH	SW8260C
Tetrahydrofuran (THF)	ND	13	ug/L	5	09/22/20	MH	SW8260C
Toluene	ND	5.0	ug/L	5	09/22/20	MH	SW8260C
trans-1,2-Dichloroethene	ND	5.0	ug/L	5	09/22/20	MH	SW8260C
trans-1,3-Dichloropropene	ND	2.5	ug/L	5	09/22/20	MH	SW8260C
Trichloroethene	ND	5.0	ug/L	5	09/22/20	MH	SW8260C
Trichlorofluoromethane	ND	5.0	ug/L	5	09/22/20	MH	SW8260C
Trichlorotrifluoroethane	ND	5.0	ug/L	5	09/22/20	MH	SW8260C
Vinyl chloride	ND	2.5	ug/L	5	09/22/20	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4 (5x)	99		%	5	09/22/20	MH	70 - 130 %
% Bromofluorobenzene (5x)	96		%	5	09/22/20	MH	70 - 130 %
% Dibromofluoromethane (5x)	96		%	5	09/22/20	MH	70 - 130 %
% Toluene-d8 (5x)	102		%	5	09/22/20	MH	70 - 130 %
% 1,2-dichlorobenzene-d4 (10x)	100		%	10	09/21/20	MH	70 - 130 %
% Bromofluorobenzene (10x)	95		%	10	09/21/20	MH	70 - 130 %
% Dibromofluoromethane (10x)	96		%	10	09/21/20	MH	70 - 130 %

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	
% Toluene-d8 (10x)	100		%	10	09/21/20	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	500	ug/L	5	09/22/20	MH	SW8260C (OXY)
Diethyl ether	ND	5.0	ug/L	5	09/22/20	MH	SW8260C (OXY)
Di-isopropyl ether	ND	5.0	ug/L	5	09/22/20	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	5.0	ug/L	5	09/22/20	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	5.0	ug/L	5	09/22/20	MH	SW8260C (OXY)
1,4-dioxane							
1,4-dioxane	ND	0.20	ug/l	1	09/18/20	AW	SW8270DSIM
QA/QC Surrogates							
% 1,4-dioxane-d8	92		%	1	09/18/20	AW	40 - 140 %
Extraction for 1,4-Dioxane	Completed				09/17/20	S/S	

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.



Phyllis Shiller, Laboratory Director
October 15, 2020
Reviewed and Released by: Greg Lawrence, Assistant Lab Director

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

October 15, 2020

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		09/14/20	10:20
Location Code:	AECOM-WILMINGTN	Received by:	SW	09/14/20	15:48
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	127680				

Laboratory Data

SDG ID: GCG76574
Phoenix ID: CG76575

Project ID: LOCKHEED-WILMINGTON MA 60552044.19
Client ID: 20A-AE26R1-091420-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Arsenic	0.006	0.004	mg/L	1	09/16/20	TH	SW6010D
Arsenic (Dissolved)	0.006	0.004	mg/L	1	09/15/20	CPP	SW6010D
Iron (Dissolved)	0.106	0.011	mg/L	1	09/15/20	CPP	SW6010D
Manganese (Dissolved)	0.772	0.001	mg/L	1	09/15/20	CPP	SW6010D
Iron	0.345	0.010	mg/L	1	09/16/20	TH	SW6010D
Manganese	0.801	0.001	mg/L	1	09/16/20	TH	SW6010D
Chloride	126	15.0	mg/L	5	09/15/20	BS/GD	E300.0
Nitrite as Nitrogen	< 0.020	0.020	mg/L	5	09/15/20 21:53	BS/GD	E300.0
Nitrate as Nitrogen	< 0.05	0.05	mg/L	1	09/15/20 01:21	BS/GD	E300.0
Sulfate	15.7	3.0	mg/L	1	09/15/20	BS/GD	E300.0
Sulfide	0.23	0.05	mg/L	1	09/16/20	GD	SM4500S-D-11
Total Organic Carbon	< 1.0	1.0	mg/L	1	09/16/20	BJA	SM5310B-11
EPH Extraction	Completed				09/15/20	JS/JS	SW3510C
MA Petroleum Hydrocarbon (EPH)	Completed				09/14/20		MADEP EPH-04
Semi-Volatile Extraction	Completed				09/17/20	P/CG	SW3520C
Dissolved Metals Preparation	Completed				09/14/20	AG	SW3005A
Total Metals Digestion	Completed				09/15/20	AG	
MA Petroleum Hydrocarbon (VPH)	Completed				09/18/20	RM	MADEP VPH04
Volatiles							
1,1,1,2-Tetrachloroethane	ND	5.0	ug/L	5	09/17/20	MH	SW8260C
1,1,1-Trichloroethane	ND	5.0	ug/L	5	09/17/20	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	2.5	ug/L	5	09/17/20	MH	SW8260C
1,1,2-Trichloroethane	ND	5.0	ug/L	5	09/17/20	MH	SW8260C
1,1-Dichloroethane	36	5.0	ug/L	5	09/17/20	MH	SW8260C
1,1-Dichloroethene	6.7	5.0	ug/L	5	09/17/20	MH	SW8260C
1,1-Dichloropropene	ND	5.0	ug/L	5	09/17/20	MH	SW8260C
1,2,3-Trichlorobenzene	ND	5.0	ug/L	5	09/17/20	MH	SW8260C

Project ID: LOCKHEED-WILMINGTON MA 60552044.19 Phoenix I.D.: CG76575

Client ID: 20A-AE26R1-091420-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	
1,2,3-Trichloropropane	ND	2.5	ug/L	5	09/17/20	MH	SW8260C
1,2,4-Trichlorobenzene	ND	5.0	ug/L	5	09/17/20	MH	SW8260C
1,2,4-Trimethylbenzene	ND	5.0	ug/L	5	09/17/20	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	2.5	ug/L	5	09/17/20	MH	SW8260C
1,2-Dibromoethane	ND	2.5	ug/L	5	09/17/20	MH	SW8260C
1,2-Dichlorobenzene	ND	5.0	ug/L	5	09/17/20	MH	SW8260C
1,2-Dichloroethane	ND	3.0	ug/L	5	09/17/20	MH	SW8260C
1,2-Dichloropropane	ND	3.0	ug/L	5	09/17/20	MH	SW8260C
1,3,5-Trimethylbenzene	ND	5.0	ug/L	5	09/17/20	MH	SW8260C
1,3-Dichlorobenzene	ND	5.0	ug/L	5	09/17/20	MH	SW8260C
1,3-Dichloropropane	ND	5.0	ug/L	5	09/17/20	MH	SW8260C
1,4-Dichlorobenzene	ND	5.0	ug/L	5	09/17/20	MH	SW8260C
2,2-Dichloropropane	ND	5.0	ug/L	5	09/17/20	MH	SW8260C
2-Chlorotoluene	ND	5.0	ug/L	5	09/17/20	MH	SW8260C
2-Hexanone	ND	25	ug/L	5	09/17/20	MH	SW8260C
4-Chlorotoluene	ND	5.0	ug/L	5	09/17/20	MH	SW8260C
4-Methyl-2-pentanone	ND	25	ug/L	5	09/17/20	MH	SW8260C
Acetone	ND	130	ug/L	5	09/17/20	MH	SW8260C
Benzene	ND	3.5	ug/L	5	09/17/20	MH	SW8260C
Bromobenzene	ND	5.0	ug/L	5	09/17/20	MH	SW8260C
Bromochloromethane	ND	5.0	ug/L	5	09/17/20	MH	SW8260C
Bromodichloromethane	ND	2.5	ug/L	5	09/17/20	MH	SW8260C
Bromoform	ND	4.0	ug/L	5	09/17/20	MH	SW8260C
Bromomethane	ND	5.0	ug/L	5	09/17/20	MH	SW8260C
Carbon Disulfide	ND	25	ug/L	5	09/17/20	MH	SW8260C
Carbon tetrachloride	ND	2.5	ug/L	5	09/17/20	MH	SW8260C
Chlorobenzene	ND	5.0	ug/L	5	09/17/20	MH	SW8260C
Chloroethane	ND	5.0	ug/L	5	09/17/20	MH	SW8260C
Chloroform	ND	5.0	ug/L	5	09/17/20	MH	SW8260C
Chloromethane	ND	5.0	ug/L	5	09/17/20	MH	SW8260C
cis-1,2-Dichloroethene	230	5.0	ug/L	5	09/17/20	MH	SW8260C
cis-1,3-Dichloropropene	ND	2.5	ug/L	5	09/17/20	MH	SW8260C
Dibromochloromethane	ND	2.5	ug/L	5	09/17/20	MH	SW8260C
Dibromomethane	ND	5.0	ug/L	5	09/17/20	MH	SW8260C
Dichlorodifluoromethane	ND	5.0	ug/L	5	09/17/20	MH	SW8260C
Ethylbenzene	ND	5.0	ug/L	5	09/17/20	MH	SW8260C
Hexachlorobutadiene	ND	2.5	ug/L	5	09/17/20	MH	SW8260C
Isopropylbenzene	ND	5.0	ug/L	5	09/17/20	MH	SW8260C
m&p-Xylene	ND	5.0	ug/L	5	09/17/20	MH	SW8260C
Methyl ethyl ketone	ND	25	ug/L	5	09/17/20	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	5.0	ug/L	5	09/17/20	MH	SW8260C
Methylene chloride	ND	5.0	ug/L	5	09/17/20	MH	SW8260C
Naphthalene	ND	5.0	ug/L	5	09/17/20	MH	SW8260C
n-Butylbenzene	ND	5.0	ug/L	5	09/17/20	MH	SW8260C
n-Propylbenzene	ND	5.0	ug/L	5	09/17/20	MH	SW8260C
o-Xylene	ND	5.0	ug/L	5	09/17/20	MH	SW8260C
p-Isopropyltoluene	ND	5.0	ug/L	5	09/17/20	MH	SW8260C
sec-Butylbenzene	ND	5.0	ug/L	5	09/17/20	MH	SW8260C
Styrene	ND	5.0	ug/L	5	09/17/20	MH	SW8260C

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	
tert-Butylbenzene	ND	5.0	ug/L	5	09/17/20	MH	SW8260C
Tetrachloroethene	870	20	ug/L	20	09/21/20	MH	SW8260C
Tetrahydrofuran (THF)	ND	13	ug/L	5	09/17/20	MH	SW8260C
Toluene	ND	5.0	ug/L	5	09/17/20	MH	SW8260C
trans-1,2-Dichloroethene	21	5.0	ug/L	5	09/17/20	MH	SW8260C
trans-1,3-Dichloropropene	ND	2.5	ug/L	5	09/17/20	MH	SW8260C
Trichloroethene	1400	20	ug/L	20	09/21/20	MH	SW8260C
Trichlorofluoromethane	ND	5.0	ug/L	5	09/17/20	MH	SW8260C
Trichlorotrifluoroethane	ND	5.0	ug/L	5	09/17/20	MH	SW8260C
Vinyl chloride	2.5	2.5	ug/L	5	09/17/20	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4 (5x)	100		%	5	09/17/20	MH	70 - 130 %
% Bromofluorobenzene (5x)	103		%	5	09/17/20	MH	70 - 130 %
% Dibromofluoromethane (5x)	107		%	5	09/17/20	MH	70 - 130 %
% Toluene-d8 (5x)	92		%	5	09/17/20	MH	70 - 130 %
% 1,2-dichlorobenzene-d4 (20x)	98		%	20	09/21/20	MH	70 - 130 %
% Bromofluorobenzene (20x)	96		%	20	09/21/20	MH	70 - 130 %
% Dibromofluoromethane (20x)	94		%	20	09/21/20	MH	70 - 130 %
% Toluene-d8 (20x)	97		%	20	09/21/20	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	500	ug/L	5	09/17/20	MH	SW8260C (OXY)
Diethyl ether	ND	5.0	ug/L	5	09/17/20	MH	SW8260C (OXY)
Di-isopropyl ether	ND	5.0	ug/L	5	09/17/20	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	5.0	ug/L	5	09/17/20	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	5.0	ug/L	5	09/17/20	MH	SW8260C (OXY)
Semivolatiles by SIM, PAH							
2-Methylnaphthalene	ND	0.47	ug/L	1	09/19/20	WB	SW8270D (SIM)
Acenaphthene	ND	0.47	ug/L	1	09/19/20	WB	SW8270D (SIM)
Acenaphthylene	ND	0.09	ug/L	1	09/19/20	WB	SW8270D (SIM)
Anthracene	ND	0.09	ug/L	1	09/19/20	WB	SW8270D (SIM)
Benz(a)anthracene	ND	0.09	ug/L	1	09/19/20	WB	SW8270D (SIM)
Benzo(a)pyrene	ND	0.19	ug/L	1	09/19/20	WB	SW8270D (SIM)
Benzo(b)fluoranthene	ND	0.09	ug/L	1	09/19/20	WB	SW8270D (SIM)
Benzo(ghi)perylene	ND	0.02	ug/L	1	09/19/20	WB	SW8270D (SIM)
Benzo(k)fluoranthene	ND	0.09	ug/L	1	09/19/20	WB	SW8270D (SIM)
Chrysene	ND	0.05	ug/L	1	09/19/20	WB	SW8270D (SIM)
Dibenz(a,h)anthracene	ND	0.02	ug/L	1	09/19/20	WB	SW8270D (SIM)
Fluoranthene	ND	0.47	ug/L	1	09/19/20	WB	SW8270D (SIM)
Fluorene	ND	0.09	ug/L	1	09/19/20	WB	SW8270D (SIM)
Indeno(1,2,3-cd)pyrene	ND	0.09	ug/L	1	09/19/20	WB	SW8270D (SIM)
Naphthalene	ND	0.47	ug/L	1	09/19/20	WB	SW8270D (SIM)
Phenanthrene	ND	0.47	ug/L	1	09/19/20	WB	SW8270D (SIM)
Pyrene	ND	0.07	ug/L	1	09/19/20	WB	SW8270D (SIM)
QA/QC Surrogates							
% 2-Fluorobiphenyl	66		%	1	09/19/20	WB	40 - 140 %
% Nitrobenzene-d5	97		%	1	09/19/20	WB	40 - 140 %
% Terphenyl-d14	83		%	1	09/19/20	WB	40 - 140 %

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	
1,4-dioxane							
1,4-dioxane	21	0.20	ug/l	1	09/18/20	AW	SW8270DSIM
QA/QC Surrogates							
% 1,4-dioxane-d8	90		%	1	09/18/20	AW	40 - 140 %
Extraction for 1,4-Dioxane	Completed				09/17/20	S/S	
MA EPH Aliphatic/Aromatic Ranges							
C11-C22 Aromatic Hydrocarbons 1,2*	ND	190	ug/L	1	09/15/20	AW	MAEPH 5/2004
C11-C22 Aromatic Hydrocarbons Unadj	ND	190	ug/L	1	09/15/20	AW	MAEPH 5/2004
C19-C36 Aliphatic Hydrocarbons 1*	ND	190	ug/L	1	09/15/20	AW	MAEPH 5/2004
C9-C18 Aliphatic Hydrocarbons 1*	ND	190	ug/L	1	09/15/20	AW	MAEPH 5/2004
Total TPH 1,2*	ND	190	ug/L	1	09/15/20	AW	MAEPH 5/2004
QA/QC Surrogates							
% 1-chlorooctadecane (aliphatic)	53		%	1	09/15/20	AW	40 - 140 %
% 2-Bromonaphthalene (Fractionation)	79		%	1	09/15/20	AW	40 - 140 %
% 2-Fluorobiphenyl (Fractionation)	100		%	1	09/15/20	AW	40 - 140 %
% o-terphenyl (aromatic)	76		%	1	09/15/20	AW	40 - 140 %
MA Volatile Petroleum Hydrocarbons (VPH)							
Unadjusted C5-C8 Aliphatics (*1)	740	500	ug/L	5	09/18/20	RM	MA VPH 5/2004
Unadjusted C9-C12 Aliphatics (*1)	ND	500	ug/L	5	09/18/20	RM	MA VPH 5/2004
C5-C8 Aliphatic Hydrocarbons *1,2	740	500	ug/L	5	09/18/20	RM	MA VPH 5/2004
C9-C12 Aliphatic Hydrocarbons *1,3	ND	500	ug/L	5	09/18/20	RM	MA VPH 5/2004
C9-C10 Aromatic Hydrocarbons *1	ND	500	ug/L	5	09/18/20	RM	MA VPH 5/2004
Benzene	ND	5.0	ug/L	5	09/18/20	RM	MA VPH 5/2004
Ethyl Benzene	ND	5.0	ug/L	5	09/18/20	RM	MA VPH 5/2004
MTBE	ND	5.0	ug/L	5	09/18/20	RM	MA VPH 5/2004
Naphthalene	ND	25	ug/L	5	09/18/20	RM	MA VPH 5/2004
Toluene	ND	5.0	ug/L	5	09/18/20	RM	MA VPH 5/2004
m,p-Xylenes	ND	10	ug/L	5	09/18/20	RM	MA VPH 5/2004
o-Xylene	ND	5.0	ug/L	5	09/18/20	RM	MA VPH 5/2004
QA/QC Surrogates							
% 2,5-Dibromotoluene (FID)	88		%	5	09/18/20	RM	70 - 130 %
% 2,5-Dibromotoluene (PID)	82		%	5	09/18/20	RM	70 - 130 %

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

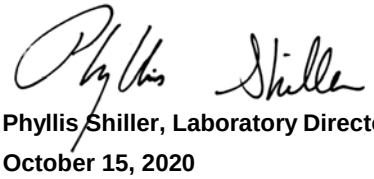
MAEPH:
1* Hydrocarbon range data exclude concentrations of any surrogate(s) and/or internal standards eluting in that range.
2* C11-C12 Aromatic Hydrocarbons exclude the concentration of Target PAH analytes eluting in that range.

VPH:
*1 Range data exclude conc.s of any surrogate(s) and/or Int. std.s eluting in that range.
*2 C5-C8 and C9-C12 Aliphatic exclude the conc. of Target Analytes in that range.
*3 C9-C12 Aliphatic also exclude C9-C10 Aromatic Hydrocarbon

Volatile Comment:
Elevated reporting limits for volatiles due to the presence of target and/or non-target compounds.

VPH diluted run
Elevated reporting limits for VPH due to the presence of target and/or non-target compounds.

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.



Phyllis Shiller, Laboratory Director
October 15, 2020
Reviewed and Released by: Greg Lawrence, Assistant Lab Director

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

October 15, 2020

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		09/14/20	10:15
Location Code:	AECOM-WILMINGTN	Received by:	SW	09/14/20	15:48
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	127680				

Laboratory Data

SDG ID: GCG76574
Phoenix ID: CG76576

Project ID: LOCKHEED-WILMINGTON MA 60552044.19
Client ID: 20A-AE28R2-091420-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Arsenic	< 0.004	0.004	mg/L	1	09/16/20	TH	SW6010D
Arsenic (Dissolved)	< 0.004	0.004	mg/L	1	09/16/20	CPP	SW6010D
Iron (Dissolved)	0.876	0.011	mg/L	1	09/16/20	CPP	SW6010D
Manganese (Dissolved)	1.75	0.001	mg/L	1	09/16/20	CPP	SW6010D
Iron	0.939	0.010	mg/L	1	09/16/20	TH	SW6010D
Manganese	1.92	0.001	mg/L	1	09/16/20	TH	SW6010D
Chloride	405	30.0	mg/L	10	09/15/20	BS/GD	E300.0
Nitrite as Nitrogen	< 0.040	0.040	mg/L	10	09/15/20 22:04	BS/GD	E300.0
Nitrate as Nitrogen	< 0.05	0.05	mg/L	1	09/15/20 01:32	BS/GD	E300.0
Sulfate	35.3	3.0	mg/L	1	09/15/20	BS/GD	E300.0
Sulfide	0.65	0.13	mg/L	2.5	09/16/20	GD	SM4500S-D-11
Total Organic Carbon	< 1.0	1.0	mg/L	1	09/16/20	BJA	SM5310B-11
EPH Extraction	Completed				09/15/20	JS/JS	SW3510C
MA Petroleum Hydrocarbon (EPH)	Completed				09/14/20		MADEP EPH-04
Semi-Volatile Extraction	Completed				09/17/20	P/CG	SW3520C
Dissolved Metals Preparation	Completed				09/15/20	AG	SW3005A
Total Metals Digestion	Completed				09/15/20	AG	
MA Petroleum Hydrocarbon (VPH)	Completed				09/15/20	RM	MADEP VPH04
Volatiles							
1,1,1,2-Tetrachloroethane	ND	50	ug/L	100	09/22/20	MH	SW8260C
1,1,1-Trichloroethane	ND	100	ug/L	100	09/22/20	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	50	ug/L	100	09/22/20	MH	SW8260C
1,1,2-Trichloroethane	ND	50	ug/L	100	09/22/20	MH	SW8260C
1,1-Dichloroethane	140	100	ug/L	100	09/22/20	MH	SW8260C
1,1-Dichloroethene	ND	50	ug/L	100	09/22/20	MH	SW8260C
1,1-Dichloropropene	ND	100	ug/L	100	09/22/20	MH	SW8260C
1,2,3-Trichlorobenzene	ND	50	ug/L	100	09/22/20	MH	SW8260C

Project ID: LOCKHEED-WILMINGTON MA 60552044.19 Phoenix I.D.: CG76576

Client ID: 20A-AE28R2-091420-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	
1,2,3-Trichloropropane	ND	50	ug/L	100	09/22/20	MH	SW8260C
1,2,4-Trichlorobenzene	ND	70	ug/L	100	09/22/20	MH	SW8260C
1,2,4-Trimethylbenzene	ND	56	ug/L	100	09/22/20	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	50	ug/L	100	09/22/20	MH	SW8260C
1,2-Dibromoethane	ND	50	ug/L	100	09/22/20	MH	SW8260C
1,2-Dichlorobenzene	ND	100	ug/L	100	09/22/20	MH	SW8260C
1,2-Dichloroethane	ND	50	ug/L	100	09/22/20	MH	SW8260C
1,2-Dichloropropane	ND	50	ug/L	100	09/22/20	MH	SW8260C
1,3,5-Trimethylbenzene	ND	60	ug/L	100	09/22/20	MH	SW8260C
1,3-Dichlorobenzene	ND	50	ug/L	100	09/22/20	MH	SW8260C
1,3-Dichloropropane	ND	100	ug/L	100	09/22/20	MH	SW8260C
1,4-Dichlorobenzene	ND	50	ug/L	100	09/22/20	MH	SW8260C
2,2-Dichloropropane	ND	100	ug/L	100	09/22/20	MH	SW8260C
2-Chlorotoluene	ND	100	ug/L	100	09/22/20	MH	SW8260C
2-Hexanone	ND	500	ug/L	100	09/22/20	MH	SW8260C
4-Chlorotoluene	ND	100	ug/L	100	09/22/20	MH	SW8260C
4-Methyl-2-pentanone	ND	500	ug/L	100	09/22/20	MH	SW8260C
Acetone	ND	2500	ug/L	100	09/22/20	MH	SW8260C
Benzene	ND	50	ug/L	100	09/22/20	MH	SW8260C
Bromobenzene	ND	62	ug/L	100	09/22/20	MH	SW8260C
Bromochloromethane	ND	83	ug/L	100	09/22/20	MH	SW8260C
Bromodichloromethane	ND	50	ug/L	100	09/22/20	MH	SW8260C
Bromoform	ND	50	ug/L	100	09/22/20	MH	SW8260C
Bromomethane	ND	50	ug/L	100	09/22/20	MH	SW8260C
Carbon Disulfide	ND	500	ug/L	100	09/22/20	MH	SW8260C
Carbon tetrachloride	ND	50	ug/L	100	09/22/20	MH	SW8260C
Chlorobenzene	ND	100	ug/L	100	09/22/20	MH	SW8260C
Chloroethane	ND	100	ug/L	100	09/22/20	MH	SW8260C
Chloroform	ND	50	ug/L	100	09/22/20	MH	SW8260C
Chloromethane	ND	100	ug/L	100	09/22/20	MH	SW8260C
cis-1,2-Dichloroethene	1100	100	ug/L	100	09/22/20	MH	SW8260C
cis-1,3-Dichloropropene	ND	50	ug/L	100	09/22/20	MH	SW8260C
Dibromochloromethane	ND	50	ug/L	100	09/22/20	MH	SW8260C
Dibromomethane	ND	50	ug/L	100	09/22/20	MH	SW8260C
Dichlorodifluoromethane	ND	100	ug/L	100	09/22/20	MH	SW8260C
Ethylbenzene	ND	100	ug/L	100	09/22/20	MH	SW8260C
Hexachlorobutadiene	ND	50	ug/L	100	09/22/20	MH	SW8260C
Isopropylbenzene	ND	100	ug/L	100	09/22/20	MH	SW8260C
m&p-Xylene	ND	100	ug/L	100	09/22/20	MH	SW8260C
Methyl ethyl ketone	ND	500	ug/L	100	09/22/20	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	70	ug/L	100	09/22/20	MH	SW8260C
Methylene chloride	ND	100	ug/L	100	09/22/20	MH	SW8260C
Naphthalene	ND	100	ug/L	100	09/22/20	MH	SW8260C
n-Butylbenzene	ND	100	ug/L	100	09/22/20	MH	SW8260C
n-Propylbenzene	ND	100	ug/L	100	09/22/20	MH	SW8260C
o-Xylene	ND	100	ug/L	100	09/22/20	MH	SW8260C
p-Isopropyltoluene	ND	100	ug/L	100	09/22/20	MH	SW8260C
sec-Butylbenzene	ND	100	ug/L	100	09/22/20	MH	SW8260C
Styrene	ND	100	ug/L	100	09/22/20	MH	SW8260C

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	
tert-Butylbenzene	ND	100	ug/L	100	09/22/20	MH	SW8260C
Tetrachloroethene	15000	500	ug/L	500	09/22/20	MH	SW8260C
Tetrahydrofuran (THF)	ND	250	ug/L	100	09/22/20	MH	SW8260C
Toluene	ND	100	ug/L	100	09/22/20	MH	SW8260C
trans-1,2-Dichloroethene	260	100	ug/L	100	09/22/20	MH	SW8260C
trans-1,3-Dichloropropene	ND	50	ug/L	100	09/22/20	MH	SW8260C
Trichloroethene	16000	500	ug/L	500	09/22/20	MH	SW8260C
Trichlorofluoromethane	ND	100	ug/L	100	09/22/20	MH	SW8260C
Trichlorotrifluoroethane	ND	100	ug/L	100	09/22/20	MH	SW8260C
Vinyl chloride	370	100	ug/L	100	09/22/20	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4 (100x)	99		%	100	09/22/20	MH	70 - 130 %
% Bromofluorobenzene (100x)	96		%	100	09/22/20	MH	70 - 130 %
% Dibromofluoromethane (100x)	97		%	100	09/22/20	MH	70 - 130 %
% Toluene-d8 (100x)	93		%	100	09/22/20	MH	70 - 130 %
% 1,2-dichlorobenzene-d4 (500x)	98		%	500	09/22/20	MH	70 - 130 %
% Bromofluorobenzene (500x)	97		%	500	09/22/20	MH	70 - 130 %
% Dibromofluoromethane (500x)	95		%	500	09/22/20	MH	70 - 130 %
% Toluene-d8 (500x)	101		%	500	09/22/20	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	10000	ug/L	100	09/22/20	MH	SW8260C (OXY)
Diethyl ether	ND	100	ug/L	100	09/22/20	MH	SW8260C (OXY)
Di-isopropyl ether	ND	100	ug/L	100	09/22/20	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	100	ug/L	100	09/22/20	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	100	ug/L	100	09/22/20	MH	SW8260C (OXY)
Semivolatiles by SIM, PAH							
2-Methylnaphthalene	ND	0.47	ug/L	1	09/19/20	WB	SW8270D (SIM)
Acenaphthene	ND	0.47	ug/L	1	09/19/20	WB	SW8270D (SIM)
Acenaphthylene	ND	0.09	ug/L	1	09/19/20	WB	SW8270D (SIM)
Anthracene	ND	0.09	ug/L	1	09/19/20	WB	SW8270D (SIM)
Benz(a)anthracene	ND	0.09	ug/L	1	09/19/20	WB	SW8270D (SIM)
Benzo(a)pyrene	ND	0.19	ug/L	1	09/19/20	WB	SW8270D (SIM)
Benzo(b)fluoranthene	ND	0.09	ug/L	1	09/19/20	WB	SW8270D (SIM)
Benzo(ghi)perylene	ND	0.02	ug/L	1	09/19/20	WB	SW8270D (SIM)
Benzo(k)fluoranthene	ND	0.09	ug/L	1	09/19/20	WB	SW8270D (SIM)
Chrysene	ND	0.05	ug/L	1	09/19/20	WB	SW8270D (SIM)
Dibenz(a,h)anthracene	ND	0.02	ug/L	1	09/19/20	WB	SW8270D (SIM)
Fluoranthene	ND	0.47	ug/L	1	09/19/20	WB	SW8270D (SIM)
Fluorene	ND	0.09	ug/L	1	09/19/20	WB	SW8270D (SIM)
Indeno(1,2,3-cd)pyrene	ND	0.09	ug/L	1	09/19/20	WB	SW8270D (SIM)
Naphthalene	0.65	0.47	ug/L	1	09/19/20	WB	SW8270D (SIM)
Phenanthrene	ND	0.47	ug/L	1	09/19/20	WB	SW8270D (SIM)
Pyrene	ND	0.07	ug/L	1	09/19/20	WB	SW8270D (SIM)
QA/QC Surrogates							
% 2-Fluorobiphenyl	64		%	1	09/19/20	WB	40 - 140 %
% Nitrobenzene-d5	97		%	1	09/19/20	WB	40 - 140 %
% Terphenyl-d14	81		%	1	09/19/20	WB	40 - 140 %

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	
1,4-dioxane							
1,4-dioxane	48	0.20	ug/l	1	09/18/20	AW	SW8270DSIM
QA/QC Surrogates							
% 1,4-dioxane-d8	100		%	1	09/18/20	AW	40 - 140 %
Extraction for 1,4-Dioxane	Completed				09/17/20	S/S	
MA EPH Aliphatic/Aromatic Ranges							
C11-C22 Aromatic Hydrocarbons 1,2*	ND	200	ug/L	1	09/15/20	AW	MAEPH 5/2004
C11-C22 Aromatic Hydrocarbons Unadj	ND	200	ug/L	1	09/15/20	AW	MAEPH 5/2004
C19-C36 Aliphatic Hydrocarbons 1*	ND	200	ug/L	1	09/15/20	AW	MAEPH 5/2004
C9-C18 Aliphatic Hydrocarbons 1*	ND	200	ug/L	1	09/15/20	AW	MAEPH 5/2004
Total TPH 1,2*	ND	200	ug/L	1	09/15/20	AW	MAEPH 5/2004
QA/QC Surrogates							
% 1-chlorooctadecane (aliphatic)	69		%	1	09/15/20	AW	40 - 140 %
% 2-Bromonaphthalene (Fractionation)	88		%	1	09/15/20	AW	40 - 140 %
% 2-Fluorobiphenyl (Fractionation)	102		%	1	09/15/20	AW	40 - 140 %
% o-terphenyl (aromatic)	82		%	1	09/15/20	AW	40 - 140 %
MA Volatile Petroleum Hydrocarbons (VPH)							
Unadjusted C5-C8 Aliphatics (*1)	9500	2000	ug/L	20	09/15/20	RM	MA VPH 5/2004
Unadjusted C9-C12 Aliphatics (*1)	ND	2000	ug/L	20	09/15/20	RM	MA VPH 5/2004
C5-C8 Aliphatic Hydrocarbons *1,2	9500	2000	ug/L	20	09/15/20	RM	MA VPH 5/2004
C9-C12 Aliphatic Hydrocarbons *1,3	ND	2000	ug/L	20	09/15/20	RM	MA VPH 5/2004
C9-C10 Aromatic Hydrocarbons *1	ND	2000	ug/L	20	09/15/20	RM	MA VPH 5/2004
Benzene	ND	20	ug/L	20	09/15/20	RM	MA VPH 5/2004
Ethyl Benzene	ND	20	ug/L	20	09/15/20	RM	MA VPH 5/2004
MTBE	ND	20	ug/L	20	09/15/20	RM	MA VPH 5/2004
Naphthalene	ND	100	ug/L	20	09/15/20	RM	MA VPH 5/2004
Toluene	ND	20	ug/L	20	09/15/20	RM	MA VPH 5/2004
m,p-Xylenes	ND	40	ug/L	20	09/15/20	RM	MA VPH 5/2004
o-Xylene	ND	20	ug/L	20	09/15/20	RM	MA VPH 5/2004
QA/QC Surrogates							
% 2,5-Dibromotoluene (FID)	108		%	20	09/15/20	RM	70 - 130 %
% 2,5-Dibromotoluene (PID)	101		%	20	09/15/20	RM	70 - 130 %

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

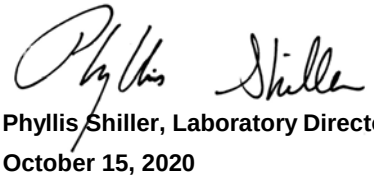
MAEPH:
1* Hydrocarbon range data exclude concentrations of any surrogate(s) and/or internal standards eluting in that range.
2* C11-C12 Aromatic Hydrocarbons exclude the concentration of Target PAH analytes eluting in that range.

VPH:
*1 Range data exclude conc.s of any surrogate(s) and/or Int. std.s eluting in that range.
*2 C5-C8 and C9-C12 Aliphatic exclude the conc. of Target Analytes in that range.
*3 C9-C12 Aliphatic also exclude C9-C10 Aromatic Hydrocarbon

VPH diluted run
Elevated reporting limits for VPH due to the presence of target and/or non-target compounds.

Volatile Comment:
Elevated reporting limits for volatiles due to the presence of target and/or non-target compounds.

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.



Phyllis Shiller, Laboratory Director
October 15, 2020
Reviewed and Released by: Greg Lawrence, Assistant Lab Director

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

October 15, 2020

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		09/14/20	13:25
Location Code:	AECOM-WILMINGTN	Received by:	SW	09/14/20	15:48
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	127680				

Laboratory Data

SDG ID: GCG76574
Phoenix ID: CG76577

Project ID: LOCKHEED-WILMINGTON MA 60552044.19
Client ID: 20A-AE26S-091420-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Arsenic	< 0.004	0.004	mg/L	1	09/16/20	TH	SW6010D
Arsenic (Dissolved)	< 0.004	0.004	mg/L	1	09/16/20	CPP	SW6010D
Iron (Dissolved)	< 0.011	0.011	mg/L	1	09/16/20	CPP	SW6010D
Manganese (Dissolved)	1.02	0.001	mg/L	1	09/16/20	CPP	SW6010D
Iron	0.011	0.010	mg/L	1	09/16/20	TH	SW6010D
Manganese	1.05	0.001	mg/L	1	09/16/20	TH	SW6010D
Dissolved Metals Preparation	Completed				09/15/20	AG	SW3005A
Total Metals Digestion	Completed				09/15/20	AG	
Volatiles							
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	1	09/17/20	MH	SW8260C
1,1,1-Trichloroethane	ND	1.0	ug/L	1	09/17/20	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L	1	09/17/20	MH	SW8260C
1,1,2-Trichloroethane	ND	1.0	ug/L	1	09/17/20	MH	SW8260C
1,1-Dichloroethane	ND	1.0	ug/L	1	09/17/20	MH	SW8260C
1,1-Dichloroethene	ND	1.0	ug/L	1	09/17/20	MH	SW8260C
1,1-Dichloropropene	ND	1.0	ug/L	1	09/17/20	MH	SW8260C
1,2,3-Trichlorobenzene	ND	1.0	ug/L	1	09/17/20	MH	SW8260C
1,2,3-Trichloropropane	ND	0.50	ug/L	1	09/17/20	MH	SW8260C
1,2,4-Trichlorobenzene	ND	1.0	ug/L	1	09/17/20	MH	SW8260C
1,2,4-Trimethylbenzene	ND	1.0	ug/L	1	09/17/20	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	0.50	ug/L	1	09/17/20	MH	SW8260C
1,2-Dibromoethane	ND	0.50	ug/L	1	09/17/20	MH	SW8260C
1,2-Dichlorobenzene	ND	1.0	ug/L	1	09/17/20	MH	SW8260C
1,2-Dichloroethane	ND	0.60	ug/L	1	09/17/20	MH	SW8260C
1,2-Dichloropropane	ND	1.0	ug/L	1	09/17/20	MH	SW8260C
1,3,5-Trimethylbenzene	ND	1.0	ug/L	1	09/17/20	MH	SW8260C
1,3-Dichlorobenzene	ND	1.0	ug/L	1	09/17/20	MH	SW8260C

Project ID: LOCKHEED-WILMINGTON MA 60552044.19 Phoenix I.D.: CG76577

Client ID: 20A-AE26S-091420-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	
1,3-Dichloropropane	ND	1.0	ug/L	1	09/17/20	MH	SW8260C
1,4-Dichlorobenzene	ND	1.0	ug/L	1	09/17/20	MH	SW8260C
2,2-Dichloropropane	ND	1.0	ug/L	1	09/17/20	MH	SW8260C
2-Chlorotoluene	ND	1.0	ug/L	1	09/17/20	MH	SW8260C
2-Hexanone	ND	5.0	ug/L	1	09/17/20	MH	SW8260C
4-Chlorotoluene	ND	1.0	ug/L	1	09/17/20	MH	SW8260C
4-Methyl-2-pentanone	ND	5.0	ug/L	1	09/17/20	MH	SW8260C
Acetone	ND	25	ug/L	1	09/17/20	MH	SW8260C
Benzene	ND	0.70	ug/L	1	09/17/20	MH	SW8260C
Bromobenzene	ND	1.0	ug/L	1	09/17/20	MH	SW8260C
Bromochloromethane	ND	1.0	ug/L	1	09/17/20	MH	SW8260C
Bromodichloromethane	ND	0.50	ug/L	1	09/17/20	MH	SW8260C
Bromoform	ND	1.0	ug/L	1	09/17/20	MH	SW8260C
Bromomethane	ND	1.0	ug/L	1	09/17/20	MH	SW8260C
Carbon Disulfide	ND	5.0	ug/L	1	09/17/20	MH	SW8260C
Carbon tetrachloride	ND	1.0	ug/L	1	09/17/20	MH	SW8260C
Chlorobenzene	ND	1.0	ug/L	1	09/17/20	MH	SW8260C
Chloroethane	ND	1.0	ug/L	1	09/17/20	MH	SW8260C
Chloroform	ND	1.0	ug/L	1	09/17/20	MH	SW8260C
Chloromethane	ND	1.0	ug/L	1	09/17/20	MH	SW8260C
cis-1,2-Dichloroethene	34	1.0	ug/L	1	09/17/20	MH	SW8260C
cis-1,3-Dichloropropene	ND	0.40	ug/L	1	09/17/20	MH	SW8260C
Dibromochloromethane	ND	0.50	ug/L	1	09/17/20	MH	SW8260C
Dibromomethane	ND	1.0	ug/L	1	09/17/20	MH	SW8260C
Dichlorodifluoromethane	ND	1.0	ug/L	1	09/17/20	MH	SW8260C
Ethylbenzene	ND	1.0	ug/L	1	09/17/20	MH	SW8260C
Hexachlorobutadiene	ND	0.40	ug/L	1	09/17/20	MH	SW8260C
Isopropylbenzene	ND	1.0	ug/L	1	09/17/20	MH	SW8260C
m&p-Xylene	ND	1.0	ug/L	1	09/17/20	MH	SW8260C
Methyl ethyl ketone	ND	5.0	ug/L	1	09/17/20	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	1.0	ug/L	1	09/17/20	MH	SW8260C
Methylene chloride	ND	1.0	ug/L	1	09/17/20	MH	SW8260C
Naphthalene	ND	1.0	ug/L	1	09/17/20	MH	SW8260C
n-Butylbenzene	ND	1.0	ug/L	1	09/17/20	MH	SW8260C
n-Propylbenzene	ND	1.0	ug/L	1	09/17/20	MH	SW8260C
o-Xylene	ND	1.0	ug/L	1	09/17/20	MH	SW8260C
p-Isopropyltoluene	ND	1.0	ug/L	1	09/17/20	MH	SW8260C
sec-Butylbenzene	ND	1.0	ug/L	1	09/17/20	MH	SW8260C
Styrene	ND	1.0	ug/L	1	09/17/20	MH	SW8260C
tert-Butylbenzene	ND	1.0	ug/L	1	09/17/20	MH	SW8260C
Tetrachloroethene	24	1.0	ug/L	1	09/17/20	MH	SW8260C
Tetrahydrofuran (THF)	ND	2.5	ug/L	1	09/17/20	MH	SW8260C
Toluene	ND	1.0	ug/L	1	09/17/20	MH	SW8260C
trans-1,2-Dichloroethene	1.4	1.0	ug/L	1	09/17/20	MH	SW8260C
trans-1,3-Dichloropropene	ND	0.40	ug/L	1	09/17/20	MH	SW8260C
Trichloroethene	13	1.0	ug/L	1	09/17/20	MH	SW8260C
Trichlorofluoromethane	ND	1.0	ug/L	1	09/17/20	MH	SW8260C
Trichlorotrifluoroethane	1.4	1.0	ug/L	1	09/17/20	MH	SW8260C
Vinyl chloride	ND	1.0	ug/L	1	09/17/20	MH	SW8260C

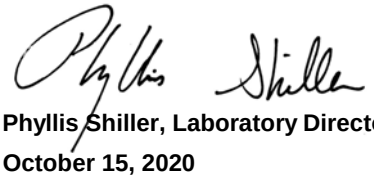
Project ID: LOCKHEED-WILMINGTON MA 60552044.19 Phoenix I.D.: CG76577
Client ID: 20A-AE26S-091420-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	99		%	1	09/17/20	MH	70 - 130 %
% Bromofluorobenzene	102		%	1	09/17/20	MH	70 - 130 %
% Dibromofluoromethane	106		%	1	09/17/20	MH	70 - 130 %
% Toluene-d8	106		%	1	09/17/20	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	100	ug/L	1	09/17/20	MH	SW8260C (OXY)
Diethyl ether	ND	1.0	ug/L	1	09/17/20	MH	SW8260C (OXY)
Di-isopropyl ether	ND	1.0	ug/L	1	09/17/20	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	1.0	ug/L	1	09/17/20	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	1.0	ug/L	1	09/17/20	MH	SW8260C (OXY)

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.



Phyllis Shiller, Laboratory Director
October 15, 2020
Reviewed and Released by: Greg Lawrence, Assistant Lab Director

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

October 15, 2020

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		09/14/20	12:15
Location Code:	AECOM-WILMINGTN	Received by:	SW	09/14/20	15:48
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	127680				

Laboratory Data

SDG ID: GCG76574
Phoenix ID: CG76578

Project ID: LOCKHEED-WILMINGTON MA 60552044.19
Client ID: 20A-AE28R1-091420-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Volatiles							
1,1,1,2-Tetrachloroethane	ND	50	ug/L	100	09/24/20	MH	SW8260C
1,1,1-Trichloroethane	ND	100	ug/L	100	09/24/20	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	50	ug/L	100	09/24/20	MH	SW8260C
1,1,2-Trichloroethane	ND	50	ug/L	100	09/24/20	MH	SW8260C
1,1-Dichloroethane	98	70	ug/L	100	09/24/20	MH	SW8260C
1,1-Dichloroethene	ND	50	ug/L	100	09/24/20	MH	SW8260C
1,1-Dichloropropene	ND	100	ug/L	100	09/24/20	MH	SW8260C
1,2,3-Trichlorobenzene	ND	50	ug/L	100	09/24/20	MH	SW8260C
1,2,3-Trichloropropane	ND	50	ug/L	100	09/24/20	MH	SW8260C
1,2,4-Trichlorobenzene	ND	70	ug/L	100	09/24/20	MH	SW8260C
1,2,4-Trimethylbenzene	ND	56	ug/L	100	09/24/20	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	50	ug/L	100	09/24/20	MH	SW8260C
1,2-Dibromoethane	ND	50	ug/L	100	09/24/20	MH	SW8260C
1,2-Dichlorobenzene	ND	100	ug/L	100	09/24/20	MH	SW8260C
1,2-Dichloroethane	ND	50	ug/L	100	09/24/20	MH	SW8260C
1,2-Dichloropropane	ND	50	ug/L	100	09/24/20	MH	SW8260C
1,3,5-Trimethylbenzene	ND	60	ug/L	100	09/24/20	MH	SW8260C
1,3-Dichlorobenzene	ND	50	ug/L	100	09/24/20	MH	SW8260C
1,3-Dichloropropane	ND	100	ug/L	100	09/24/20	MH	SW8260C
1,4-Dichlorobenzene	ND	50	ug/L	100	09/24/20	MH	SW8260C
2,2-Dichloropropane	ND	100	ug/L	100	09/24/20	MH	SW8260C
2-Chlorotoluene	ND	100	ug/L	100	09/24/20	MH	SW8260C
2-Hexanone	ND	500	ug/L	100	09/24/20	MH	SW8260C
4-Chlorotoluene	ND	100	ug/L	100	09/24/20	MH	SW8260C
4-Methyl-2-pentanone	ND	500	ug/L	100	09/24/20	MH	SW8260C
Acetone	ND	2500	ug/L	100	09/24/20	MH	SW8260C

Ver 2

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	
Benzene	ND	50	ug/L	100	09/24/20	MH	SW8260C
Bromobenzene	ND	62	ug/L	100	09/24/20	MH	SW8260C
Bromochloromethane	ND	83	ug/L	100	09/24/20	MH	SW8260C
Bromodichloromethane	ND	50	ug/L	100	09/24/20	MH	SW8260C
Bromoform	ND	50	ug/L	100	09/24/20	MH	SW8260C
Bromomethane	ND	50	ug/L	100	09/24/20	MH	SW8260C
Carbon Disulfide	ND	500	ug/L	100	09/24/20	MH	SW8260C
Carbon tetrachloride	ND	50	ug/L	100	09/24/20	MH	SW8260C
Chlorobenzene	ND	100	ug/L	100	09/24/20	MH	SW8260C
Chloroethane	ND	100	ug/L	100	09/24/20	MH	SW8260C
Chloroform	ND	50	ug/L	100	09/24/20	MH	SW8260C
Chloromethane	ND	100	ug/L	100	09/24/20	MH	SW8260C
cis-1,2-Dichloroethene	2200	100	ug/L	100	09/24/20	MH	SW8260C
cis-1,3-Dichloropropene	ND	50	ug/L	100	09/24/20	MH	SW8260C
Dibromochloromethane	ND	50	ug/L	100	09/24/20	MH	SW8260C
Dibromomethane	ND	50	ug/L	100	09/24/20	MH	SW8260C
Dichlorodifluoromethane	ND	100	ug/L	100	09/24/20	MH	SW8260C
Ethylbenzene	ND	100	ug/L	100	09/24/20	MH	SW8260C
Hexachlorobutadiene	ND	50	ug/L	100	09/24/20	MH	SW8260C
Isopropylbenzene	ND	100	ug/L	100	09/24/20	MH	SW8260C
m&p-Xylene	ND	100	ug/L	100	09/24/20	MH	SW8260C
Methyl ethyl ketone	ND	500	ug/L	100	09/24/20	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	70	ug/L	100	09/24/20	MH	SW8260C
Methylene chloride	ND	100	ug/L	100	09/24/20	MH	SW8260C
Naphthalene	ND	100	ug/L	100	09/24/20	MH	SW8260C
n-Butylbenzene	ND	100	ug/L	100	09/24/20	MH	SW8260C
n-Propylbenzene	ND	100	ug/L	100	09/24/20	MH	SW8260C
o-Xylene	ND	100	ug/L	100	09/24/20	MH	SW8260C
p-Isopropyltoluene	ND	100	ug/L	100	09/24/20	MH	SW8260C
sec-Butylbenzene	ND	100	ug/L	100	09/24/20	MH	SW8260C
Styrene	ND	100	ug/L	100	09/24/20	MH	SW8260C
tert-Butylbenzene	ND	100	ug/L	100	09/24/20	MH	SW8260C
Tetrachloroethene	4300	100	ug/L	100	09/24/20	MH	SW8260C
Tetrahydrofuran (THF)	ND	250	ug/L	100	09/24/20	MH	SW8260C
Toluene	ND	100	ug/L	100	09/24/20	MH	SW8260C
trans-1,2-Dichloroethene	310	100	ug/L	100	09/24/20	MH	SW8260C
trans-1,3-Dichloropropene	ND	50	ug/L	100	09/24/20	MH	SW8260C
Trichloroethene	11000	500	ug/L	500	09/24/20	MH	SW8260C
Trichlorofluoromethane	ND	100	ug/L	100	09/24/20	MH	SW8260C
Trichlorotrifluoroethane	ND	100	ug/L	100	09/24/20	MH	SW8260C
Vinyl chloride	540	100	ug/L	100	09/24/20	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4 (100x)	101		%	100	09/24/20	MH	70 - 130 %
% Bromofluorobenzene (100x)	100		%	100	09/24/20	MH	70 - 130 %
% Dibromofluoromethane (100x)	98		%	100	09/24/20	MH	70 - 130 %
% Toluene-d8 (100x)	99		%	100	09/24/20	MH	70 - 130 %
% 1,2-dichlorobenzene-d4 (500x)	99		%	500	09/24/20	MH	70 - 130 %
% Bromofluorobenzene (500x)	100		%	500	09/24/20	MH	70 - 130 %
% Dibromofluoromethane (500x)	97		%	500	09/24/20	MH	70 - 130 %

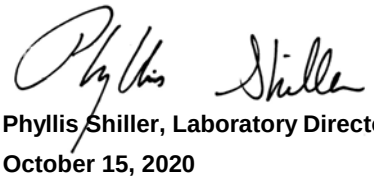
Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	
% Toluene-d8 (500x)	101		%	500	09/24/20	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	10000	ug/L	100	09/24/20	MH	SW8260C (OXY)
Diethyl ether	ND	100	ug/L	100	09/24/20	MH	SW8260C (OXY)
Di-isopropyl ether	ND	100	ug/L	100	09/24/20	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	100	ug/L	100	09/24/20	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	100	ug/L	100	09/24/20	MH	SW8260C (OXY)

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

Volatile Comment:
Elevated reporting limits for volatiles due to the presence of target and/or non-target compounds.

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.



Phyllis Shiller, Laboratory Director
October 15, 2020
Reviewed and Released by: Greg Lawrence, Assistant Lab Director

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

October 15, 2020

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		09/14/20	12:10
Location Code:	AECOM-WILMINGTN	Received by:	SW	09/14/20	15:48
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	127680				

Laboratory Data

SDG ID: GCG76574
Phoenix ID: CG76579

Project ID: LOCKHEED-WILMINGTON MA 60552044.19
Client ID: 20A-AE26R2-091420-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Volatiles							
1,1,1,2-Tetrachloroethane	ND	2.0	ug/L	2	09/17/20	MH	SW8260C
1,1,1-Trichloroethane	ND	2.0	ug/L	2	09/17/20	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	2	09/17/20	MH	SW8260C
1,1,2-Trichloroethane	ND	2.0	ug/L	2	09/17/20	MH	SW8260C
1,1-Dichloroethane	24	2.0	ug/L	2	09/17/20	MH	SW8260C
1,1-Dichloroethene	3.1	2.0	ug/L	2	09/17/20	MH	SW8260C
1,1-Dichloropropene	ND	2.0	ug/L	2	09/17/20	MH	SW8260C
1,2,3-Trichlorobenzene	ND	2.0	ug/L	2	09/17/20	MH	SW8260C
1,2,3-Trichloropropane	ND	1.0	ug/L	2	09/17/20	MH	SW8260C
1,2,4-Trichlorobenzene	ND	2.0	ug/L	2	09/17/20	MH	SW8260C
1,2,4-Trimethylbenzene	ND	2.0	ug/L	2	09/17/20	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	1.0	ug/L	2	09/17/20	MH	SW8260C
1,2-Dibromoethane	ND	1.0	ug/L	2	09/17/20	MH	SW8260C
1,2-Dichlorobenzene	ND	2.0	ug/L	2	09/17/20	MH	SW8260C
1,2-Dichloroethane	ND	1.2	ug/L	2	09/17/20	MH	SW8260C
1,2-Dichloropropane	ND	2.0	ug/L	2	09/17/20	MH	SW8260C
1,3,5-Trimethylbenzene	ND	2.0	ug/L	2	09/17/20	MH	SW8260C
1,3-Dichlorobenzene	ND	2.0	ug/L	2	09/17/20	MH	SW8260C
1,3-Dichloropropane	ND	2.0	ug/L	2	09/17/20	MH	SW8260C
1,4-Dichlorobenzene	ND	2.0	ug/L	2	09/17/20	MH	SW8260C
2,2-Dichloropropane	ND	2.0	ug/L	2	09/17/20	MH	SW8260C
2-Chlorotoluene	ND	2.0	ug/L	2	09/17/20	MH	SW8260C
2-Hexanone	ND	10	ug/L	2	09/17/20	MH	SW8260C
4-Chlorotoluene	ND	2.0	ug/L	2	09/17/20	MH	SW8260C
4-Methyl-2-pentanone	ND	10	ug/L	2	09/17/20	MH	SW8260C
Acetone	ND	50	ug/L	2	09/17/20	MH	SW8260C

Ver 2

Project ID: LOCKHEED-WILMINGTON MA 60552044.19 Phoenix I.D.: CG76579

Client ID: 20A-AE26R2-091420-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	
Benzene	ND	1.4	ug/L	2	09/17/20	MH	SW8260C
Bromobenzene	ND	2.0	ug/L	2	09/17/20	MH	SW8260C
Bromochloromethane	ND	2.0	ug/L	2	09/17/20	MH	SW8260C
Bromodichloromethane	ND	1.0	ug/L	2	09/17/20	MH	SW8260C
Bromoform	ND	2.0	ug/L	2	09/17/20	MH	SW8260C
Bromomethane	ND	2.0	ug/L	2	09/17/20	MH	SW8260C
Carbon Disulfide	ND	10	ug/L	2	09/17/20	MH	SW8260C
Carbon tetrachloride	ND	2.0	ug/L	2	09/17/20	MH	SW8260C
Chlorobenzene	ND	2.0	ug/L	2	09/17/20	MH	SW8260C
Chloroethane	ND	2.0	ug/L	2	09/17/20	MH	SW8260C
Chloroform	ND	2.0	ug/L	2	09/17/20	MH	SW8260C
Chloromethane	ND	2.0	ug/L	2	09/17/20	MH	SW8260C
cis-1,2-Dichloroethene	130	2.0	ug/L	2	09/17/20	MH	SW8260C
cis-1,3-Dichloropropene	ND	1.0	ug/L	2	09/17/20	MH	SW8260C
Dibromochloromethane	ND	1.0	ug/L	2	09/17/20	MH	SW8260C
Dibromomethane	ND	2.0	ug/L	2	09/17/20	MH	SW8260C
Dichlorodifluoromethane	ND	2.0	ug/L	2	09/17/20	MH	SW8260C
Ethylbenzene	ND	2.0	ug/L	2	09/17/20	MH	SW8260C
Hexachlorobutadiene	ND	1.0	ug/L	2	09/17/20	MH	SW8260C
Isopropylbenzene	ND	2.0	ug/L	2	09/17/20	MH	SW8260C
m&p-Xylene	ND	2.0	ug/L	2	09/17/20	MH	SW8260C
Methyl ethyl ketone	ND	10	ug/L	2	09/17/20	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	2.0	ug/L	2	09/17/20	MH	SW8260C
Methylene chloride	ND	2.0	ug/L	2	09/17/20	MH	SW8260C
Naphthalene	ND	2.0	ug/L	2	09/17/20	MH	SW8260C
n-Butylbenzene	ND	2.0	ug/L	2	09/17/20	MH	SW8260C
n-Propylbenzene	ND	2.0	ug/L	2	09/17/20	MH	SW8260C
o-Xylene	ND	2.0	ug/L	2	09/17/20	MH	SW8260C
p-Isopropyltoluene	ND	2.0	ug/L	2	09/17/20	MH	SW8260C
sec-Butylbenzene	ND	2.0	ug/L	2	09/17/20	MH	SW8260C
Styrene	ND	2.0	ug/L	2	09/17/20	MH	SW8260C
tert-Butylbenzene	ND	2.0	ug/L	2	09/17/20	MH	SW8260C
Tetrachloroethene	7.0	2.0	ug/L	2	09/17/20	MH	SW8260C
Tetrahydrofuran (THF)	ND	5.0	ug/L	2	09/17/20	MH	SW8260C
Toluene	ND	2.0	ug/L	2	09/17/20	MH	SW8260C
trans-1,2-Dichloroethene	11	2.0	ug/L	2	09/17/20	MH	SW8260C
trans-1,3-Dichloropropene	ND	1.0	ug/L	2	09/17/20	MH	SW8260C
Trichloroethene	60	2.0	ug/L	2	09/17/20	MH	SW8260C
Trichlorofluoromethane	ND	2.0	ug/L	2	09/17/20	MH	SW8260C
Trichlorotrifluoroethane	ND	2.0	ug/L	2	09/17/20	MH	SW8260C
Vinyl chloride	ND	2.0	ug/L	2	09/17/20	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4 (2x)	99		%	2	09/17/20	MH	70 - 130 %
% Bromofluorobenzene (2x)	102		%	2	09/17/20	MH	70 - 130 %
% Dibromofluoromethane (2x)	107		%	2	09/17/20	MH	70 - 130 %
% Toluene-d8 (2x)	103		%	2	09/17/20	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	200	ug/L	2	09/17/20	MH	SW8260C (OXY)
Diethyl ether	ND	2.0	ug/L	2	09/17/20	MH	SW8260C (OXY)

Project ID: LOCKHEED-WILMINGTON MA 60552044.19 Phoenix I.D.: CG76579

Client ID: 20A-AE26R2-091420-1

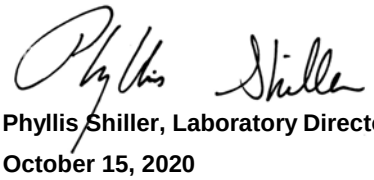
Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	
Di-isopropyl ether	ND	2.0	ug/L	2	09/17/20	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	2.0	ug/L	2	09/17/20	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	2.0	ug/L	2	09/17/20	MH	SW8260C (OXY)

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

Volatile Comment:
Elevated reporting limits for volatiles due to the presence of target and/or non-target compounds.

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.



Phyllis Shiller, Laboratory Director

October 15, 2020

Reviewed and Released by: Greg Lawrence, Assistant Lab Director

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

October 15, 2020

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		09/14/20	10:00
Location Code:	AECOM-WILMINGTN	Received by:	SW	09/14/20	15:48
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	127680				

Laboratory Data

SDG ID: GCG76574
Phoenix ID: CG76580

Project ID: LOCKHEED-WILMINGTON MA 60552044.19
Client ID: 20A-TB01-091420-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Volatiles							
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	1	09/17/20	MH	SW8260C
1,1,1-Trichloroethane	ND	1.0	ug/L	1	09/17/20	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L	1	09/17/20	MH	SW8260C
1,1,2-Trichloroethane	ND	1.0	ug/L	1	09/17/20	MH	SW8260C
1,1-Dichloroethane	ND	1.0	ug/L	1	09/17/20	MH	SW8260C
1,1-Dichloroethene	ND	1.0	ug/L	1	09/17/20	MH	SW8260C
1,1-Dichloropropene	ND	1.0	ug/L	1	09/17/20	MH	SW8260C
1,2,3-Trichlorobenzene	ND	1.0	ug/L	1	09/17/20	MH	SW8260C
1,2,3-Trichloropropane	ND	0.50	ug/L	1	09/17/20	MH	SW8260C
1,2,4-Trichlorobenzene	ND	1.0	ug/L	1	09/17/20	MH	SW8260C
1,2,4-Trimethylbenzene	ND	1.0	ug/L	1	09/17/20	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	0.50	ug/L	1	09/17/20	MH	SW8260C
1,2-Dibromoethane	ND	0.50	ug/L	1	09/17/20	MH	SW8260C
1,2-Dichlorobenzene	ND	1.0	ug/L	1	09/17/20	MH	SW8260C
1,2-Dichloroethane	ND	0.60	ug/L	1	09/17/20	MH	SW8260C
1,2-Dichloropropane	ND	1.0	ug/L	1	09/17/20	MH	SW8260C
1,3,5-Trimethylbenzene	ND	1.0	ug/L	1	09/17/20	MH	SW8260C
1,3-Dichlorobenzene	ND	1.0	ug/L	1	09/17/20	MH	SW8260C
1,3-Dichloropropane	ND	1.0	ug/L	1	09/17/20	MH	SW8260C
1,4-Dichlorobenzene	ND	1.0	ug/L	1	09/17/20	MH	SW8260C
2,2-Dichloropropane	ND	1.0	ug/L	1	09/17/20	MH	SW8260C
2-Chlorotoluene	ND	1.0	ug/L	1	09/17/20	MH	SW8260C
2-Hexanone	ND	5.0	ug/L	1	09/17/20	MH	SW8260C
4-Chlorotoluene	ND	1.0	ug/L	1	09/17/20	MH	SW8260C
4-Methyl-2-pentanone	ND	5.0	ug/L	1	09/17/20	MH	SW8260C
Acetone	ND	25	ug/L	1	09/17/20	MH	SW8260C

Project ID: LOCKHEED-WILMINGTON MA 60552044.19 Phoenix I.D.: CG76580

Client ID: 20A-TB01-091420-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	
Benzene	ND	0.70	ug/L	1	09/17/20	MH	SW8260C
Bromobenzene	ND	1.0	ug/L	1	09/17/20	MH	SW8260C
Bromochloromethane	ND	1.0	ug/L	1	09/17/20	MH	SW8260C
Bromodichloromethane	ND	0.50	ug/L	1	09/17/20	MH	SW8260C
Bromoform	ND	1.0	ug/L	1	09/17/20	MH	SW8260C
Bromomethane	ND	1.0	ug/L	1	09/17/20	MH	SW8260C
Carbon Disulfide	ND	5.0	ug/L	1	09/17/20	MH	SW8260C
Carbon tetrachloride	ND	1.0	ug/L	1	09/17/20	MH	SW8260C
Chlorobenzene	ND	1.0	ug/L	1	09/17/20	MH	SW8260C
Chloroethane	ND	1.0	ug/L	1	09/17/20	MH	SW8260C
Chloroform	ND	1.0	ug/L	1	09/17/20	MH	SW8260C
Chloromethane	ND	1.0	ug/L	1	09/17/20	MH	SW8260C
cis-1,2-Dichloroethene	ND	1.0	ug/L	1	09/17/20	MH	SW8260C
cis-1,3-Dichloropropene	ND	0.40	ug/L	1	09/17/20	MH	SW8260C
Dibromochloromethane	ND	0.50	ug/L	1	09/17/20	MH	SW8260C
Dibromomethane	ND	1.0	ug/L	1	09/17/20	MH	SW8260C
Dichlorodifluoromethane	ND	1.0	ug/L	1	09/17/20	MH	SW8260C
Ethylbenzene	ND	1.0	ug/L	1	09/17/20	MH	SW8260C
Hexachlorobutadiene	ND	0.40	ug/L	1	09/17/20	MH	SW8260C
Isopropylbenzene	ND	1.0	ug/L	1	09/17/20	MH	SW8260C
m&p-Xylene	ND	1.0	ug/L	1	09/17/20	MH	SW8260C
Methyl ethyl ketone	ND	5.0	ug/L	1	09/17/20	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	1.0	ug/L	1	09/17/20	MH	SW8260C
Methylene chloride	ND	1.0	ug/L	1	09/17/20	MH	SW8260C
Naphthalene	ND	1.0	ug/L	1	09/17/20	MH	SW8260C
n-Butylbenzene	ND	1.0	ug/L	1	09/17/20	MH	SW8260C
n-Propylbenzene	ND	1.0	ug/L	1	09/17/20	MH	SW8260C
o-Xylene	ND	1.0	ug/L	1	09/17/20	MH	SW8260C
p-Isopropyltoluene	ND	1.0	ug/L	1	09/17/20	MH	SW8260C
sec-Butylbenzene	ND	1.0	ug/L	1	09/17/20	MH	SW8260C
Styrene	ND	1.0	ug/L	1	09/17/20	MH	SW8260C
tert-Butylbenzene	ND	1.0	ug/L	1	09/17/20	MH	SW8260C
Tetrachloroethene	ND	1.0	ug/L	1	09/17/20	MH	SW8260C
Tetrahydrofuran (THF)	ND	2.5	ug/L	1	09/17/20	MH	SW8260C
Toluene	ND	1.0	ug/L	1	09/17/20	MH	SW8260C
trans-1,2-Dichloroethene	ND	1.0	ug/L	1	09/17/20	MH	SW8260C
trans-1,3-Dichloropropene	ND	0.40	ug/L	1	09/17/20	MH	SW8260C
Trichloroethene	ND	1.0	ug/L	1	09/17/20	MH	SW8260C
Trichlorofluoromethane	ND	1.0	ug/L	1	09/17/20	MH	SW8260C
Trichlorotrifluoroethane	ND	1.0	ug/L	1	09/17/20	MH	SW8260C
Vinyl chloride	ND	1.0	ug/L	1	09/17/20	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	99		%	1	09/17/20	MH	70 - 130 %
% Bromofluorobenzene	100		%	1	09/17/20	MH	70 - 130 %
% Dibromofluoromethane	104		%	1	09/17/20	MH	70 - 130 %
% Toluene-d8	106		%	1	09/17/20	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	100	ug/L	1	09/17/20	MH	SW8260C (OXY)
Diethyl ether	ND	1.0	ug/L	1	09/17/20	MH	SW8260C (OXY)

Ver 2

Project ID: LOCKHEED-WILMINGTON MA 60552044.19 Phoenix I.D.: CG76580

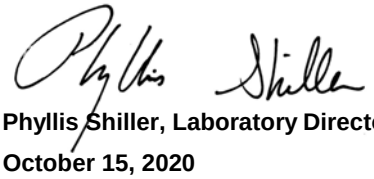
Client ID: 20A-TB01-091420-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	
Di-isopropyl ether	ND	1.0	ug/L	1	09/17/20	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	1.0	ug/L	1	09/17/20	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	1.0	ug/L	1	09/17/20	MH	SW8260C (OXY)

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

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Phyllis Shiller, Laboratory Director

October 15, 2020

Reviewed and Released by: Greg Lawrence, Assistant Lab Director

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

October 15, 2020

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		09/14/20	14:00
Location Code:	AECOM-WILMINGTN	Received by:	SW	09/14/20	15:48
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	127680				

Laboratory Data

SDG ID: GCG76574
Phoenix ID: CG76581

Project ID: LOCKHEED-WILMINGTON MA 60552044.19
Client ID: 20A-AE26R5-091420-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Volatiles							
1,1,1,2-Tetrachloroethane	ND	10	ug/L	20	09/17/20	MH	SW8260C
1,1,1-Trichloroethane	ND	20	ug/L	20	09/17/20	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	10	ug/L	20	09/17/20	MH	SW8260C
1,1,2-Trichloroethane	ND	10	ug/L	20	09/17/20	MH	SW8260C
1,1-Dichloroethane	42	20	ug/L	20	09/17/20	MH	SW8260C
1,1-Dichloroethene	14	10	ug/L	20	09/17/20	MH	SW8260C
1,1-Dichloropropene	ND	20	ug/L	20	09/17/20	MH	SW8260C
1,2,3-Trichlorobenzene	ND	10	ug/L	20	09/17/20	MH	SW8260C
1,2,3-Trichloropropane	ND	10	ug/L	20	09/17/20	MH	SW8260C
1,2,4-Trichlorobenzene	ND	20	ug/L	20	09/17/20	MH	SW8260C
1,2,4-Trimethylbenzene	ND	20	ug/L	20	09/17/20	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	10	ug/L	20	09/17/20	MH	SW8260C
1,2-Dibromoethane	ND	10	ug/L	20	09/17/20	MH	SW8260C
1,2-Dichlorobenzene	ND	20	ug/L	20	09/17/20	MH	SW8260C
1,2-Dichloroethane	ND	10	ug/L	20	09/17/20	MH	SW8260C
1,2-Dichloropropane	ND	10	ug/L	20	09/17/20	MH	SW8260C
1,3,5-Trimethylbenzene	ND	20	ug/L	20	09/17/20	MH	SW8260C
1,3-Dichlorobenzene	ND	20	ug/L	20	09/17/20	MH	SW8260C
1,3-Dichloropropane	ND	20	ug/L	20	09/17/20	MH	SW8260C
1,4-Dichlorobenzene	ND	10	ug/L	20	09/17/20	MH	SW8260C
2,2-Dichloropropane	ND	20	ug/L	20	09/17/20	MH	SW8260C
2-Chlorotoluene	ND	20	ug/L	20	09/17/20	MH	SW8260C
2-Hexanone	ND	100	ug/L	20	09/17/20	MH	SW8260C
4-Chlorotoluene	ND	20	ug/L	20	09/17/20	MH	SW8260C
4-Methyl-2-pentanone	ND	100	ug/L	20	09/17/20	MH	SW8260C
Acetone	ND	500	ug/L	20	09/17/20	MH	SW8260C

Ver 2

Project ID: LOCKHEED-WILMINGTON MA 60552044.19 Phoenix I.D.: CG76581

Client ID: 20A-AE26R5-091420-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	
Benzene	ND	10	ug/L	20	09/17/20	MH	SW8260C
Bromobenzene	ND	20	ug/L	20	09/17/20	MH	SW8260C
Bromochloromethane	ND	20	ug/L	20	09/17/20	MH	SW8260C
Bromodichloromethane	ND	10	ug/L	20	09/17/20	MH	SW8260C
Bromoform	ND	10	ug/L	20	09/17/20	MH	SW8260C
Bromomethane	ND	10	ug/L	20	09/17/20	MH	SW8260C
Carbon Disulfide	ND	100	ug/L	20	09/17/20	MH	SW8260C
Carbon tetrachloride	ND	10	ug/L	20	09/17/20	MH	SW8260C
Chlorobenzene	ND	20	ug/L	20	09/17/20	MH	SW8260C
Chloroethane	ND	20	ug/L	20	09/17/20	MH	SW8260C
Chloroform	ND	20	ug/L	20	09/17/20	MH	SW8260C
Chloromethane	ND	20	ug/L	20	09/17/20	MH	SW8260C
cis-1,2-Dichloroethene	390	20	ug/L	20	09/17/20	MH	SW8260C
cis-1,3-Dichloropropene	ND	10	ug/L	20	09/17/20	MH	SW8260C
Dibromochloromethane	ND	10	ug/L	20	09/17/20	MH	SW8260C
Dibromomethane	ND	10	ug/L	20	09/17/20	MH	SW8260C
Dichlorodifluoromethane	ND	20	ug/L	20	09/17/20	MH	SW8260C
Ethylbenzene	ND	20	ug/L	20	09/17/20	MH	SW8260C
Hexachlorobutadiene	ND	10	ug/L	20	09/17/20	MH	SW8260C
Isopropylbenzene	ND	20	ug/L	20	09/17/20	MH	SW8260C
m&p-Xylene	ND	20	ug/L	20	09/17/20	MH	SW8260C
Methyl ethyl ketone	ND	100	ug/L	20	09/17/20	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	20	ug/L	20	09/17/20	MH	SW8260C
Methylene chloride	ND	20	ug/L	20	09/17/20	MH	SW8260C
Naphthalene	ND	20	ug/L	20	09/17/20	MH	SW8260C
n-Butylbenzene	ND	20	ug/L	20	09/17/20	MH	SW8260C
n-Propylbenzene	ND	20	ug/L	20	09/17/20	MH	SW8260C
o-Xylene	ND	20	ug/L	20	09/17/20	MH	SW8260C
p-Isopropyltoluene	ND	20	ug/L	20	09/17/20	MH	SW8260C
sec-Butylbenzene	ND	20	ug/L	20	09/17/20	MH	SW8260C
Styrene	ND	20	ug/L	20	09/17/20	MH	SW8260C
tert-Butylbenzene	ND	20	ug/L	20	09/17/20	MH	SW8260C
Tetrachloroethene	1300	20	ug/L	20	09/17/20	MH	SW8260C
Tetrahydrofuran (THF)	ND	50	ug/L	20	09/17/20	MH	SW8260C
Toluene	ND	20	ug/L	20	09/17/20	MH	SW8260C
trans-1,2-Dichloroethene	30	20	ug/L	20	09/17/20	MH	SW8260C
trans-1,3-Dichloropropene	ND	10	ug/L	20	09/17/20	MH	SW8260C
Trichloroethene	2100	50	ug/L	50	09/21/20	MH	SW8260C
Trichlorofluoromethane	ND	20	ug/L	20	09/17/20	MH	SW8260C
Trichlorotrifluoroethane	ND	20	ug/L	20	09/17/20	MH	SW8260C
Vinyl chloride	ND	10	ug/L	20	09/17/20	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4 (20x)	100		%	20	09/17/20	MH	70 - 130 %
% Bromofluorobenzene (20x)	102		%	20	09/17/20	MH	70 - 130 %
% Dibromofluoromethane (20x)	100		%	20	09/17/20	MH	70 - 130 %
% Toluene-d8 (20x)	98		%	20	09/17/20	MH	70 - 130 %
% 1,2-dichlorobenzene-d4 (50x)	99		%	50	09/21/20	MH	70 - 130 %
% Bromofluorobenzene (50x)	96		%	50	09/21/20	MH	70 - 130 %
% Dibromofluoromethane (50x)	96		%	50	09/21/20	MH	70 - 130 %

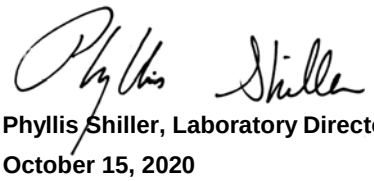
Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	
% Toluene-d8 (50x)	99		%	50	09/21/20	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	2000	ug/L	20	09/17/20	MH	SW8260C (OXY)
Diethyl ether	ND	20	ug/L	20	09/17/20	MH	SW8260C (OXY)
Di-isopropyl ether	ND	20	ug/L	20	09/17/20	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	20	ug/L	20	09/17/20	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	20	ug/L	20	09/17/20	MH	SW8260C (OXY)
1,4-dioxane							
1,4-dioxane	27	0.20	ug/l	1	09/18/20	AW	SW8270DSIM
QA/QC Surrogates							
% 1,4-dioxane-d8	97		%	1	09/18/20	AW	40 - 140 %
Extraction for 1,4-Dioxane	Completed				09/17/20	S/S	

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

Volatile Comment:
Elevated reporting limits for volatiles due to the presence of target and/or non-target compounds.

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
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Phyllis Shiller, Laboratory Director
October 15, 2020
Reviewed and Released by: Greg Lawrence, Assistant Lab Director

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

October 15, 2020

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		09/14/20	13:45
Location Code:	AECOM-WILMINGTN	Received by:	SW	09/14/20	15:48
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	127680				

Laboratory Data

SDG ID: GCG76574
Phoenix ID: CG76582

Project ID: LOCKHEED-WILMINGTON MA 60552044.19
Client ID: 20A-AE28R3-091420-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Volatiles							
1,1,1,2-Tetrachloroethane	ND	50	ug/L	100	09/17/20	MH	SW8260C
1,1,1-Trichloroethane	ND	100	ug/L	100	09/17/20	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	50	ug/L	100	09/17/20	MH	SW8260C
1,1,2-Trichloroethane	ND	50	ug/L	100	09/17/20	MH	SW8260C
1,1-Dichloroethane	140	100	ug/L	100	09/17/20	MH	SW8260C
1,1-Dichloroethene	ND	50	ug/L	100	09/17/20	MH	SW8260C
1,1-Dichloropropene	ND	100	ug/L	100	09/17/20	MH	SW8260C
1,2,3-Trichlorobenzene	ND	50	ug/L	100	09/17/20	MH	SW8260C
1,2,3-Trichloropropane	ND	50	ug/L	100	09/17/20	MH	SW8260C
1,2,4-Trichlorobenzene	ND	70	ug/L	100	09/17/20	MH	SW8260C
1,2,4-Trimethylbenzene	ND	56	ug/L	100	09/17/20	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	50	ug/L	100	09/17/20	MH	SW8260C
1,2-Dibromoethane	ND	50	ug/L	100	09/17/20	MH	SW8260C
1,2-Dichlorobenzene	ND	100	ug/L	100	09/17/20	MH	SW8260C
1,2-Dichloroethane	ND	50	ug/L	100	09/17/20	MH	SW8260C
1,2-Dichloropropane	ND	50	ug/L	100	09/17/20	MH	SW8260C
1,3,5-Trimethylbenzene	ND	60	ug/L	100	09/17/20	MH	SW8260C
1,3-Dichlorobenzene	ND	50	ug/L	100	09/17/20	MH	SW8260C
1,3-Dichloropropane	ND	100	ug/L	100	09/17/20	MH	SW8260C
1,4-Dichlorobenzene	ND	50	ug/L	100	09/17/20	MH	SW8260C
2,2-Dichloropropane	ND	100	ug/L	100	09/17/20	MH	SW8260C
2-Chlorotoluene	ND	100	ug/L	100	09/17/20	MH	SW8260C
2-Hexanone	ND	500	ug/L	100	09/17/20	MH	SW8260C
4-Chlorotoluene	ND	100	ug/L	100	09/17/20	MH	SW8260C
4-Methyl-2-pentanone	ND	500	ug/L	100	09/17/20	MH	SW8260C
Acetone	ND	2500	ug/L	100	09/17/20	MH	SW8260C

Ver 2

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	
Benzene	ND	50	ug/L	100	09/17/20	MH	SW8260C
Bromobenzene	ND	62	ug/L	100	09/17/20	MH	SW8260C
Bromochloromethane	ND	83	ug/L	100	09/17/20	MH	SW8260C
Bromodichloromethane	ND	50	ug/L	100	09/17/20	MH	SW8260C
Bromoform	ND	50	ug/L	100	09/17/20	MH	SW8260C
Bromomethane	ND	50	ug/L	100	09/17/20	MH	SW8260C
Carbon Disulfide	ND	500	ug/L	100	09/17/20	MH	SW8260C
Carbon tetrachloride	ND	50	ug/L	100	09/17/20	MH	SW8260C
Chlorobenzene	ND	100	ug/L	100	09/17/20	MH	SW8260C
Chloroethane	ND	100	ug/L	100	09/17/20	MH	SW8260C
Chloroform	ND	50	ug/L	100	09/17/20	MH	SW8260C
Chloromethane	ND	100	ug/L	100	09/17/20	MH	SW8260C
cis-1,2-Dichloroethene	1500	100	ug/L	100	09/17/20	MH	SW8260C
cis-1,3-Dichloropropene	ND	50	ug/L	100	09/17/20	MH	SW8260C
Dibromochloromethane	ND	50	ug/L	100	09/17/20	MH	SW8260C
Dibromomethane	ND	50	ug/L	100	09/17/20	MH	SW8260C
Dichlorodifluoromethane	ND	100	ug/L	100	09/17/20	MH	SW8260C
Ethylbenzene	ND	100	ug/L	100	09/17/20	MH	SW8260C
Hexachlorobutadiene	ND	50	ug/L	100	09/17/20	MH	SW8260C
Isopropylbenzene	ND	100	ug/L	100	09/17/20	MH	SW8260C
m&p-Xylene	ND	100	ug/L	100	09/17/20	MH	SW8260C
Methyl ethyl ketone	ND	500	ug/L	100	09/17/20	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	70	ug/L	100	09/17/20	MH	SW8260C
Methylene chloride	ND	100	ug/L	100	09/17/20	MH	SW8260C
Naphthalene	ND	100	ug/L	100	09/17/20	MH	SW8260C
n-Butylbenzene	ND	100	ug/L	100	09/17/20	MH	SW8260C
n-Propylbenzene	ND	100	ug/L	100	09/17/20	MH	SW8260C
o-Xylene	ND	100	ug/L	100	09/17/20	MH	SW8260C
p-Isopropyltoluene	ND	100	ug/L	100	09/17/20	MH	SW8260C
sec-Butylbenzene	ND	100	ug/L	100	09/17/20	MH	SW8260C
Styrene	ND	100	ug/L	100	09/17/20	MH	SW8260C
tert-Butylbenzene	ND	100	ug/L	100	09/17/20	MH	SW8260C
Tetrachloroethene	6900	100	ug/L	100	09/17/20	MH	SW8260C
Tetrahydrofuran (THF)	ND	250	ug/L	100	09/17/20	MH	SW8260C
Toluene	ND	100	ug/L	100	09/17/20	MH	SW8260C
trans-1,2-Dichloroethene	280	100	ug/L	100	09/17/20	MH	SW8260C
trans-1,3-Dichloropropene	ND	50	ug/L	100	09/17/20	MH	SW8260C
Trichloroethene	9000	100	ug/L	100	09/17/20	MH	SW8260C
Trichlorofluoromethane	ND	100	ug/L	100	09/17/20	MH	SW8260C
Trichlorotrifluoroethane	ND	100	ug/L	100	09/17/20	MH	SW8260C
Vinyl chloride	290	100	ug/L	100	09/17/20	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4 (100x)	100		%	100	09/17/20	MH	70 - 130 %
% Bromofluorobenzene (100x)	102		%	100	09/17/20	MH	70 - 130 %
% Dibromofluoromethane (100x)	108		%	100	09/17/20	MH	70 - 130 %
% Toluene-d8 (100x)	101		%	100	09/17/20	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	10000	ug/L	100	09/17/20	MH	SW8260C (OXY)
Diethyl ether	ND	100	ug/L	100	09/17/20	MH	SW8260C (OXY)

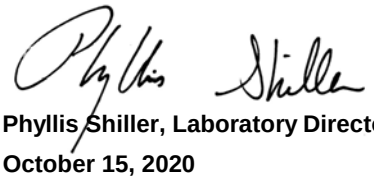
Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	
Di-isopropyl ether	ND	100	ug/L	100	09/17/20	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	100	ug/L	100	09/17/20	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	100	ug/L	100	09/17/20	MH	SW8260C (OXY)
1,4-dioxane							
1,4-dioxane	39	0.20	ug/l	1	09/18/20	AW	SW8270DSIM
QA/QC Surrogates							
% 1,4-dioxane-d8	93		%	1	09/18/20	AW	40 - 140 %
Extraction for 1,4-Dioxane	Completed				09/17/20	S/S	

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

Volatile Comment:
Elevated reporting limits for volatiles due to the presence of target and/or non-target compounds.

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.



Phyllis Shiller, Laboratory Director
October 15, 2020
Reviewed and Released by: Greg Lawrence, Assistant Lab Director

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

QA/QC Report

October 15, 2020

QA/QC Data

SDG I.D.: GCG76574

Parameter	Blank	Blk RL	Sample Result	Dup Result	Dup RPD	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits
QA/QC Batch 545326 (mg/L), QC Sample No: CG76038 (CG76575)													
ICP Metals - Dissolved													
Arsenic	BRL	0.004	0.005	<0.004	NC	91.7	90.5	1.3	90.7			80 - 120	20
Iron	BRL	0.011	0.690	0.652	5.70	88.2	86.2	2.3	85.1			80 - 120	20
Manganese	BRL	0.001	1.97	1.81	8.50	89.4	87.4	2.3	79.0			80 - 120	20
Comment:													
Additional: LCS acceptance range is 80-120% MS acceptance range 75-125%.													
QA/QC Batch 545436 (mg/L), QC Sample No: CG76576 (CG76576, CG76577)													
ICP Metals - Dissolved													
Arsenic	BRL	0.003	<0.004	<0.004	NC	83.1	84.0	1.1	86.5			80 - 120	20
Iron	BRL	0.006	0.876	0.873	0.30	86.1	86.8	0.8	87.0			80 - 120	20
Manganese	BRL	0.001	1.75	1.75	0	86.3	86.3	0.0	85.8			80 - 120	20
Comment:													
Additional: LCS acceptance range is 80-120% MS acceptance range 75-125%.													
QA/QC Batch 545441 (mg/L), QC Sample No: CG76785 (CG76575, CG76576, CG76577)													
ICP Metals - Aqueous													
Arsenic	BRL	0.004	<0.004	<0.004	NC	101	101	0.0	100			80 - 120	20
Iron	BRL	0.010	0.034	0.032	NC	104	104	0.0	100			80 - 120	20
Manganese	BRL	0.001	0.028	0.028	0	102	101	1.0	96.3			80 - 120	20
Comment:													
Additional: LCS acceptance range is 80-120% MS acceptance range 75-125%.													

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QA/QC Report

October 15, 2020

QA/QC Data

SDG I.D.: GCG76574

Parameter	Blank	Blk RL	Sample Result	Dup Result	Dup RPD	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits
QA/QC Batch 545589 (mg/L), QC Sample No: CG76021 (CG76575, CG76576)													
Sulfide	BRL	0.05	<0.05	<0.05	NC	96.5			79.3			90 - 110	20
QA/QC Batch 545591 (mg/L), QC Sample No: CG76954 (CG76575, CG76576)													
Total Organic Carbon	BRL	1.0	<1.0	<1.0	NC	103			106			85 - 115	20
Comment:													
Additional: LCS acceptance range is 85-115% MS acceptance range 75-125%.													
QA/QC Batch 545448 (mg/L), QC Sample No: CG75840 (CG76575, CG76576)													
Chloride	BRL	3.0	44.4	44.4	0	99.6			103			90 - 110	20
Sulfate	BRL	3.0	15.5	15.3	1.30	108			102			90 - 110	20
QA/QC Batch 545653 (mg/L), QC Sample No: CG77433 (CG76575, CG76576)													
Chloride	BRL	3.0	9.8	9.9	NC	95.4			97.3			90 - 110	20
Nitrate as Nitrogen	BRL	0.05	0.07	0.07	NC	97.5			102			90 - 110	20
Nitrite as Nitrogen	BRL	0.004	<0.004	<0.004	NC	96.0			96.6			90 - 110	20
Sulfate	BRL	3.0	3.0	<3.0	NC	94.6			94.1			90 - 110	20
QA/QC Batch 545448 (mg/L), QC Sample No: CG75840 (CG76575, CG76576)													
Nitrate as Nitrogen	BRL	0.05	1.02	1.01	1.00	93.6			101			90 - 110	20
Nitrite as Nitrogen	BRL	0.01	<0.01	<0.01	NC	96.8			98.7			90 - 110	20

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QA/QC Report

October 15, 2020

QA/QC Data

SDG I.D.: GCG76574

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits	
QA/QC Batch 545363 (ug/L), QC Sample No: CG75672 (CG76575, CG76576)											
MAEPH - Ground Water											
C9-C18 Aliphatic Hydrocarbons 1*	ND	100	46	48	4.3				40 - 140	25	
C19-C36 Aliphatic Hydrocarbons 1*	ND	100	71	72	1.4				40 - 140	25	
C11-C22 Aromatic Hydrocarbons 1	ND	100	80	79	1.3				40 - 140	25	
C11-C22 Aromatic Hydrocarbons U	ND	100							40 - 140	25	
Total TPH 1,2*	ND	100	60	62	3.3				40 - 140	25	
C9 - Nonane	ND	10	19	25	27.3				40 - 140	25	l,r
C-10 Decane	ND	10	23	31	29.6				40 - 140	25	l,r
C12 - Dodecane	ND	10	32	36	11.8				40 - 140	25	l
C14 - Tetradecane	ND	10	51	46	10.3				40 - 140	25	
C16 - Hexadecane	ND	10	67	65	3.0				40 - 140	25	
C18 - Octadecane	ND	10	86	86	0.0				40 - 140	25	
C19 - Nonadecane	ND	10	75	76	1.3				40 - 140	25	
C20 - Eicosane	ND	10	78	79	1.3				40 - 140	25	
C22 - Docosane	ND	10	77	78	1.3				40 - 140	25	
C24 - Tetracosane	ND	10	75	77	2.6				40 - 140	25	
C26 - Hexacosane	ND	10	74	76	2.7				40 - 140	25	
C28 - Octacosane	ND	10	68	71	4.3				40 - 140	25	
C30 - Tricotane	ND	10	64	66	3.1				40 - 140	25	
C36 - Hexatriacontane	ND	10	54	54	0.0				40 - 140	25	
% 1-chlorooctadecane (aliphatic)	41	%	61	59	3.3				40 - 140	25	
% o-terphenyl (aromatic)	92	%	92	91	1.1				40 - 140	25	
% 2-Fluorobiphenyl (Fractionation)	110	%	114	119	4.3				40 - 140	25	
% 2-Bromonaphthalene (Fractionati	116	%	102	108	5.7				40 - 140	25	
% 2-Methylnaphthalene BT		%	0	0	NC				0 - 5		
% Naphthalene BT		%	0	0	NC				0 - 5		
Comment:											
Additional EPH fractionation criteria: Breakthrough criteria (BT) is 0 to 5%											
QA/QC Batch 545870 (ug/l), QC Sample No: CG79328 (CG76574, CG76575, CG76576, CG76581, CG76582)											
1,4dioxane - Ground Water											
1,4-dioxane	ND	0.20	95	96	1.0	96			40 - 140	30	
% 1,4-dioxane-d8	97	%	93	99	6.3	91			40 - 140	30	
QA/QC Batch 545860 (ug/L), QC Sample No: CG76660 (CG76575, CG76576)											
Semivolatiles by SIM, PAH - Ground Water											
2-Methylnaphthalene	ND	0.50	69	83	18.4				40 - 140	20	
Acenaphthene	ND	0.50	66	65	1.5				40 - 140	20	
Acenaphthylene	ND	0.10	63	47	29.1				40 - 140	20	r
Anthracene	ND	0.10	70	67	4.4				40 - 140	20	
Benz(a)anthracene	ND	0.05	83	70	17.0				40 - 140	20	
Benzo(a)pyrene	ND	0.20	87	66	27.5				40 - 140	20	r
Benzo(b)fluoranthene	ND	0.07	106	88	18.6				40 - 140	20	

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits	
Benzo(ghi)perylene	ND	0.02	92	72	24.4				40 - 140	20	r
Benzo(k)fluoranthene	ND	0.10	71	57	21.9				40 - 140	20	r
Chrysene	ND	0.05	81	68	17.4				40 - 140	20	
Dibenz(a,h)anthracene	ND	0.02	73	58	22.9				40 - 140	20	r
Fluoranthene	ND	0.50	64	60	6.5				40 - 140	20	
Fluorene	ND	0.10	71	68	4.3				40 - 140	20	
Indeno(1,2,3-cd)pyrene	ND	0.10	71	58	20.2				40 - 140	20	
Naphthalene	ND	0.50	64	86	29.3				40 - 140	20	r
Phenanthrene	ND	0.06	65	64	1.6				40 - 140	20	
Pyrene	ND	0.07	77	70	9.5				40 - 140	20	
% 2-Fluorobiphenyl	66	%	57	56	1.8				40 - 140	20	
% Nitrobenzene-d5	95	%	79	82	3.7				40 - 140	20	
% Terphenyl-d14	87	%	80	69	14.8				40 - 140	20	

Comment:

Additional 8270 criteria: 10% of compounds can be outside of acceptance criteria as long as recovery is at least 10%. (Acid surrogates acceptance range for aqueous samples: 10-110%, for soils 30-130%)

QA/QC Batch 545972 (ug/L), QC Sample No: CG76580 (CG76575 (5X) , CG76577, CG76579 (2X) , CG76580, CG76581 (20X) , CG76582 (100X))

Volatiles - Ground Water

1,1,1,2-Tetrachloroethane	ND	1.0	99	100	1.0				70 - 130	30	
1,1,1-Trichloroethane	ND	1.0	96	95	1.0				70 - 130	30	
1,1,2,2-Tetrachloroethane	ND	0.50	96	98	2.1				70 - 130	30	
1,1,2-Trichloroethane	ND	1.0	92	95	3.2				70 - 130	30	
1,1-Dichloroethane	ND	1.0	94	94	0.0				70 - 130	30	
1,1-Dichloroethene	ND	1.0	86	85	1.2				70 - 130	30	
1,1-Dichloropropene	ND	1.0	93	96	3.2				70 - 130	30	
1,2,3-Trichlorobenzene	ND	1.0	96	99	3.1				70 - 130	30	
1,2,3-Trichloropropane	ND	1.0	94	95	1.1				70 - 130	30	
1,2,4-Trichlorobenzene	ND	1.0	95	95	0.0				70 - 130	30	
1,2,4-Trimethylbenzene	ND	1.0	96	97	1.0				70 - 130	30	
1,2-Dibromo-3-chloropropane	ND	1.0	109	118	7.9				70 - 130	30	
1,2-Dibromoethane	ND	1.0	95	97	2.1				70 - 130	30	
1,2-Dichlorobenzene	ND	1.0	94	94	0.0				70 - 130	30	
1,2-Dichloroethane	ND	1.0	98	96	2.1				70 - 130	30	
1,2-Dichloropropane	ND	1.0	100	95	5.1				70 - 130	30	
1,3,5-Trimethylbenzene	ND	1.0	96	96	0.0				70 - 130	30	
1,3-Dichlorobenzene	ND	1.0	93	95	2.1				70 - 130	30	
1,3-Dichloropropane	ND	1.0	94	95	1.1				70 - 130	30	
1,4-Dichlorobenzene	ND	1.0	93	92	1.1				70 - 130	30	
1,4-dioxane	ND	100	99	99	0.0				40 - 160	30	
2,2-Dichloropropane	ND	1.0	121	117	3.4				70 - 130	30	
2-Chlorotoluene	ND	1.0	94	97	3.1				70 - 130	30	
2-Hexanone	ND	5.0	94	99	5.2				40 - 160	30	
4-Chlorotoluene	ND	1.0	93	93	0.0				70 - 130	30	
4-Methyl-2-pentanone	ND	5.0	97	99	2.0				40 - 160	30	
Acetone	ND	5.0	66	69	4.4				40 - 160	30	
Benzene	ND	0.70	97	97	0.0				70 - 130	30	
Bromobenzene	ND	1.0	90	91	1.1				70 - 130	30	
Bromochloromethane	ND	1.0	94	93	1.1				70 - 130	30	
Bromodichloromethane	ND	0.50	102	98	4.0				70 - 130	30	
Bromoform	ND	1.0	104	105	1.0				70 - 130	30	
Bromomethane	ND	1.0	78	79	1.3				40 - 160	30	

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits
Carbon Disulfide	ND	1.0	89	88	1.1				70 - 130	30
Carbon tetrachloride	ND	1.0	101	103	2.0				70 - 130	30
Chlorobenzene	ND	1.0	93	93	0.0				70 - 130	30
Chloroethane	ND	1.0	71	66	7.3				70 - 130	30
Chloroform	ND	1.0	92	92	0.0				70 - 130	30
Chloromethane	ND	1.0	82	83	1.2				40 - 160	30
cis-1,2-Dichloroethene	ND	1.0	87	87	0.0				70 - 130	30
cis-1,3-Dichloropropene	ND	0.40	102	102	0.0				70 - 130	30
Dibromochloromethane	ND	0.50	101	102	1.0				70 - 130	30
Dibromomethane	ND	1.0	94	92	2.2				70 - 130	30
Dichlorodifluoromethane	ND	1.0	93	92	1.1				40 - 160	30
Ethyl ether	ND	1.0	79	79	0.0				70 - 130	30
Ethylbenzene	ND	1.0	98	100	2.0				70 - 130	30
Hexachlorobutadiene	ND	0.40	101	102	1.0				70 - 130	30
Isopropylbenzene	ND	1.0	94	96	2.1				70 - 130	30
m&p-Xylene	ND	1.0	98	100	2.0				70 - 130	30
Methyl ethyl ketone	ND	5.0	95	99	4.1				40 - 160	30
Methyl t-butyl ether (MTBE)	ND	1.0	83	84	1.2				70 - 130	30
Methylene chloride	ND	1.0	79	74	6.5				70 - 130	30
Naphthalene	ND	1.0	100	104	3.9				70 - 130	30
n-Butylbenzene	ND	1.0	98	100	2.0				70 - 130	30
n-Propylbenzene	ND	1.0	95	95	0.0				70 - 130	30
o-Xylene	ND	1.0	101	103	2.0				70 - 130	30
p-Isopropyltoluene	ND	1.0	99	100	1.0				70 - 130	30
sec-Butylbenzene	ND	1.0	103	105	1.9				70 - 130	30
Styrene	ND	1.0	98	98	0.0				70 - 130	30
tert-Butylbenzene	ND	1.0	99	99	0.0				70 - 130	30
Tetrachloroethene	ND	1.0	93	94	1.1				70 - 130	30
Tetrahydrofuran (THF)	ND	2.5	95	101	6.1				70 - 130	30
Toluene	ND	1.0	98	97	1.0				70 - 130	30
trans-1,2-Dichloroethene	ND	1.0	87	86	1.2				70 - 130	30
trans-1,3-Dichloropropene	ND	0.40	111	109	1.8				70 - 130	30
Trichloroethene	ND	1.0	96	95	1.0				70 - 130	30
Trichlorofluoromethane	ND	1.0	89	89	0.0				70 - 130	30
Trichlorotrifluoroethane	ND	1.0	90	89	1.1				70 - 130	30
Vinyl chloride	ND	1.0	89	89	0.0				70 - 130	30
% 1,2-dichlorobenzene-d4	100	%	100	101	1.0				70 - 130	30
% Bromofluorobenzene	102	%	104	105	1.0				70 - 130	30
% Dibromofluoromethane	104	%	100	102	2.0				70 - 130	30
% Toluene-d8	102	%	102	101	1.0				70 - 130	30

Comment:

A LCS and LCS Duplicate were performed instead of a matrix spike and matrix spike duplicate.

Additional 8260 criteria: 10% of compounds can be outside of acceptance criteria as long as recovery is 10%.

QA/QC Batch 546288 (ug/L), QC Sample No: CG77564 (CG76574 (10X) , CG76575 (20X) , CG76581 (50X))

Volatiles - Ground Water

Tetrachloroethene	ND	1.0	89	84	5.8				70 - 130	30
Trichloroethene	ND	1.0	88	86	2.3				70 - 130	30
% 1,2-dichlorobenzene-d4	97	%	98	99	1.0				70 - 130	30
% Bromofluorobenzene	96	%	101	100	1.0				70 - 130	30
% Dibromofluoromethane	93	%	93	93	0.0				70 - 130	30
% Toluene-d8	102	%	100	99	1.0				70 - 130	30

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits

Comment:

A LCS and LCS Duplicate were performed instead of a matrix spike and matrix spike duplicate.

Additional 8260 criteria: 10% of compounds can be outside of acceptance criteria as long as recovery is 10%.

QA/QC Batch 546836 (ug/L), QC Sample No: CG80056 (CG76578 (100X, 500X))

Volatiles - Ground Water

1,1,1,2-Tetrachloroethane	ND	1.0	94	95	1.1				70 - 130	30
1,1,1-Trichloroethane	ND	1.0	90	92	2.2				70 - 130	30
1,1,2,2-Tetrachloroethane	ND	0.50	103	104	1.0				70 - 130	30
1,1,2-Trichloroethane	ND	1.0	90	90	0.0				70 - 130	30
1,1-Dichloroethane	ND	1.0	89	91	2.2				70 - 130	30
1,1-Dichloroethene	ND	1.0	83	85	2.4				70 - 130	30
1,1-Dichloropropene	ND	1.0	95	95	0.0				70 - 130	30
1,2,3-Trichlorobenzene	ND	1.0	97	98	1.0				70 - 130	30
1,2,3-Trichloropropane	ND	1.0	95	98	3.1				70 - 130	30
1,2,4-Trichlorobenzene	ND	1.0	94	95	1.1				70 - 130	30
1,2,4-Trimethylbenzene	ND	1.0	94	95	1.1				70 - 130	30
1,2-Dibromo-3-chloropropane	ND	1.0	102	103	1.0				70 - 130	30
1,2-Dibromoethane	ND	1.0	98	97	1.0				70 - 130	30
1,2-Dichlorobenzene	ND	1.0	90	90	0.0				70 - 130	30
1,2-Dichloroethane	ND	1.0	97	97	0.0				70 - 130	30
1,2-Dichloropropane	ND	1.0	93	95	2.1				70 - 130	30
1,3,5-Trimethylbenzene	ND	1.0	95	95	0.0				70 - 130	30
1,3-Dichlorobenzene	ND	1.0	90	91	1.1				70 - 130	30
1,3-Dichloropropane	ND	1.0	98	99	1.0				70 - 130	30
1,4-Dichlorobenzene	ND	1.0	90	91	1.1				70 - 130	30
1,4-dioxane	ND	100	104	103	1.0				40 - 160	30
2,2-Dichloropropane	ND	1.0	94	92	2.2				70 - 130	30
2-Chlorotoluene	ND	1.0	91	91	0.0				70 - 130	30
2-Hexanone	ND	5.0	103	105	1.9				40 - 160	30
4-Chlorotoluene	ND	1.0	90	91	1.1				70 - 130	30
4-Methyl-2-pentanone	ND	5.0	102	102	0.0				40 - 160	30
Acetone	ND	5.0	94	95	1.1				40 - 160	30
Benzene	ND	0.70	92	93	1.1				70 - 130	30
Bromobenzene	ND	1.0	88	91	3.4				70 - 130	30
Bromochloromethane	ND	1.0	82	85	3.6				70 - 130	30
Bromodichloromethane	ND	0.50	94	95	1.1				70 - 130	30
Bromoform	ND	1.0	96	96	0.0				70 - 130	30
Bromomethane	ND	1.0	85	88	3.5				40 - 160	30
Carbon Disulfide	ND	1.0	79	81	2.5				70 - 130	30
Carbon tetrachloride	ND	1.0	105	94	11.1				70 - 130	30
Chlorobenzene	ND	1.0	89	90	1.1				70 - 130	30
Chloroethane	ND	1.0	92	88	4.4				70 - 130	30
Chloroform	ND	1.0	88	89	1.1				70 - 130	30
Chloromethane	ND	1.0	96	94	2.1				40 - 160	30
cis-1,2-Dichloroethene	ND	1.0	83	83	0.0				70 - 130	30
cis-1,3-Dichloropropene	ND	0.40	96	95	1.0				70 - 130	30
Dibromochloromethane	ND	0.50	97	99	2.0				70 - 130	30
Dibromomethane	ND	1.0	90	89	1.1				70 - 130	30
Dichlorodifluoromethane	ND	1.0	130	133	2.3				40 - 160	30
Di-isopropyl ether	ND	1.0	91	93	2.2				70 - 130	30
Ethyl ether	ND	1.0	82	85	3.6				70 - 130	30

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits
Ethyl tert-butyl ether	ND	1.0	94	95	1.1				70 - 130	30
Ethylbenzene	ND	1.0	89	90	1.1				70 - 130	30
Hexachlorobutadiene	ND	0.40	98	99	1.0				70 - 130	30
Isopropylbenzene	ND	1.0	91	91	0.0				70 - 130	30
m&p-Xylene	ND	1.0	91	91	0.0				70 - 130	30
Methyl ethyl ketone	ND	5.0	105	110	4.7				40 - 160	30
Methyl t-butyl ether (MTBE)	ND	1.0	87	88	1.1				70 - 130	30
Methylene chloride	ND	1.0	82	82	0.0				70 - 130	30
Naphthalene	ND	1.0	102	104	1.9				70 - 130	30
n-Butylbenzene	ND	1.0	100	100	0.0				70 - 130	30
n-Propylbenzene	ND	1.0	91	92	1.1				70 - 130	30
o-Xylene	ND	1.0	92	93	1.1				70 - 130	30
p-Isopropyltoluene	ND	1.0	96	98	2.1				70 - 130	30
sec-Butylbenzene	ND	1.0	104	104	0.0				70 - 130	30
Styrene	ND	1.0	93	96	3.2				70 - 130	30
tert-amyl methyl ether	ND	1.0	98	98	0.0				70 - 130	30
tert-Butylbenzene	ND	1.0	94	94	0.0				70 - 130	30
Tetrachloroethene	ND	1.0	88	88	0.0				70 - 130	30
Tetrahydrofuran (THF)	ND	2.5	99	101	2.0				70 - 130	30
Toluene	ND	1.0	90	88	2.2				70 - 130	30
trans-1,2-Dichloroethene	ND	1.0	89	88	1.1				70 - 130	30
trans-1,3-Dichloropropene	ND	0.40	96	97	1.0				70 - 130	30
Trichloroethene	ND	1.0	88	86	2.3				70 - 130	30
Trichlorofluoromethane	ND	1.0	100	98	2.0				70 - 130	30
Trichlorotrifluoroethane	ND	1.0	95	94	1.1				70 - 130	30
Vinyl chloride	ND	1.0	94	94	0.0				70 - 130	30
% 1,2-dichlorobenzene-d4	101	%	99	99	0.0				70 - 130	30
% Bromofluorobenzene	100	%	104	105	1.0				70 - 130	30
% Dibromofluoromethane	96	%	96	93	3.2				70 - 130	30
% Toluene-d8	104	%	101	100	1.0				70 - 130	30

Comment:

A LCS and LCS Duplicate were performed instead of a matrix spike and matrix spike duplicate.

Additional 8260 criteria: 10% of compounds can be outside of acceptance criteria as long as recovery is 10%.

QA/QC Batch 546448 (ug/L), QC Sample No: CG80060 (CG76574 (5X) , CG76576 (100X, 500X))

Volatiles - Ground Water

1,1,1,2-Tetrachloroethane	ND	1.0	90	90	0.0				70 - 130	30
1,1,1-Trichloroethane	ND	1.0	83	85	2.4				70 - 130	30
1,1,2,2-Tetrachloroethane	ND	0.50	103	107	3.8				70 - 130	30
1,1,2-Trichloroethane	ND	1.0	88	88	0.0				70 - 130	30
1,1-Dichloroethane	ND	1.0	84	81	3.6				70 - 130	30
1,1-Dichloroethene	ND	1.0	83	101	19.6				70 - 130	30
1,1-Dichloropropene	ND	1.0	89	89	0.0				70 - 130	30
1,2,3-Trichlorobenzene	ND	1.0	95	96	1.0				70 - 130	30
1,2,3-Trichloropropane	ND	1.0	97	97	0.0				70 - 130	30
1,2,4-Trichlorobenzene	ND	1.0	92	93	1.1				70 - 130	30
1,2,4-Trimethylbenzene	ND	1.0	91	93	2.2				70 - 130	30
1,2-Dibromo-3-chloropropane	ND	1.0	106	111	4.6				70 - 130	30
1,2-Dibromoethane	ND	1.0	95	97	2.1				70 - 130	30
1,2-Dichlorobenzene	ND	1.0	88	90	2.2				70 - 130	30
1,2-Dichloroethane	ND	1.0	89	90	1.1				70 - 130	30
1,2-Dichloropropane	ND	1.0	89	89	0.0				70 - 130	30

QA/QC Data

SDG I.D.: GCG76574

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits
1,3,5-Trimethylbenzene	ND	1.0	92	94	2.2				70 - 130	30
1,3-Dichlorobenzene	ND	1.0	90	91	1.1				70 - 130	30
1,3-Dichloropropane	ND	1.0	94	95	1.1				70 - 130	30
1,4-Dichlorobenzene	ND	1.0	89	91	2.2				70 - 130	30
1,4-dioxane	ND	100	99	94	5.2				40 - 160	30
2,2-Dichloropropane	ND	1.0	85	86	1.2				70 - 130	30
2-Chlorotoluene	ND	1.0	90	91	1.1				70 - 130	30
2-Hexanone	ND	5.0	107	111	3.7				40 - 160	30
4-Chlorotoluene	ND	1.0	89	92	3.3				70 - 130	30
4-Methyl-2-pentanone	ND	5.0	105	106	0.9				40 - 160	30
Acetone	ND	5.0	95	117	20.8				40 - 160	30
Benzene	ND	0.70	87	88	1.1				70 - 130	30
Bromobenzene	ND	1.0	85	88	3.5				70 - 130	30
Bromochloromethane	ND	1.0	83	84	1.2				70 - 130	30
Bromodichloromethane	ND	0.50	86	88	2.3				70 - 130	30
Bromoform	ND	1.0	93	94	1.1				70 - 130	30
Bromomethane	ND	1.0	86	90	4.5				40 - 160	30
Carbon Disulfide	ND	1.0	80	105	27.0				70 - 130	30
Carbon tetrachloride	ND	1.0	95	97	2.1				70 - 130	30
Chlorobenzene	ND	1.0	89	89	0.0				70 - 130	30
Chloroethane	ND	1.0	75	94	22.5				70 - 130	30
Chloroform	ND	1.0	81	83	2.4				70 - 130	30
Chloromethane	ND	1.0	97	102	5.0				40 - 160	30
cis-1,2-Dichloroethene	ND	1.0	76	82	7.6				70 - 130	30
cis-1,3-Dichloropropene	ND	0.40	88	89	1.1				70 - 130	30
Dibromochloromethane	ND	0.50	95	95	0.0				70 - 130	30
Dibromomethane	ND	1.0	86	86	0.0				70 - 130	30
Dichlorodifluoromethane	ND	1.0	133	137	3.0				40 - 160	30
Di-isopropyl ether	ND	1.0	90	72	22.2				70 - 130	30
Ethyl ether	ND	1.0	86	108	22.7				70 - 130	30
Ethyl tert-butyl ether	ND	1.0	91	94	3.2				70 - 130	30
Ethylbenzene	ND	1.0	88	89	1.1				70 - 130	30
Hexachlorobutadiene	ND	0.40	92	94	2.2				70 - 130	30
Isopropylbenzene	ND	1.0	89	92	3.3				70 - 130	30
m&p-Xylene	ND	1.0	90	90	0.0				70 - 130	30
Methyl ethyl ketone	ND	5.0	107	110	2.8				40 - 160	30
Methyl t-butyl ether (MTBE)	ND	1.0	87	102	15.9				70 - 130	30
Methylene chloride	ND	1.0	78	99	23.7				70 - 130	30
Naphthalene	ND	1.0	107	108	0.9				70 - 130	30
n-Butylbenzene	ND	1.0	97	99	2.0				70 - 130	30
n-Propylbenzene	ND	1.0	90	93	3.3				70 - 130	30
o-Xylene	ND	1.0	91	91	0.0				70 - 130	30
p-Isopropyltoluene	ND	1.0	94	97	3.1				70 - 130	30
sec-Butylbenzene	ND	1.0	100	102	2.0				70 - 130	30
Styrene	ND	1.0	92	93	1.1				70 - 130	30
tert-amyl methyl ether	ND	1.0	94	95	1.1				70 - 130	30
tert-Butylbenzene	ND	1.0	92	94	2.2				70 - 130	30
Tetrachloroethene	ND	1.0	85	86	1.2				70 - 130	30
Tetrahydrofuran (THF)	ND	2.5	104	105	1.0				70 - 130	30
Toluene	ND	1.0	86	86	0.0				70 - 130	30
trans-1,2-Dichloroethene	ND	1.0	85	106	22.0				70 - 130	30
trans-1,3-Dichloropropene	ND	0.40	89	90	1.1				70 - 130	30
Trichloroethene	ND	1.0	84	85	1.2				70 - 130	30

QA/QC Data

SDG I.D.: GCG76574

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits
Trichlorofluoromethane	ND	1.0	96	106	9.9				70 - 130	30
Trichlorotrifluoroethane	ND	1.0	92	95	3.2				70 - 130	30
Vinyl chloride	ND	1.0	99	107	7.8				70 - 130	30
% 1,2-dichlorobenzene-d4	98	%	100	100	0.0				70 - 130	30
% Bromofluorobenzene	96	%	100	101	1.0				70 - 130	30
% Dibromofluoromethane	96	%	94	93	1.1				70 - 130	30
% Toluene-d8	104	%	100	99	1.0				70 - 130	30

Comment:

A LCS and LCS Duplicate were performed instead of a matrix spike and matrix spike duplicate.

Additional 8260 criteria: 10% of compounds can be outside of acceptance criteria as long as recovery is 10%.

QA/QC Batch 545550 (ug/L), QC Sample No: CG76041 (CG76576 (20X))

Volatile Petroleum Hydrocarbons - Ground Water

Unadjusted C5-C8 Aliphatics (*1)	ND	100	87	89	2.3	92	94	2.2	70 - 130	25
Unadjusted C9-C12 Aliphatics (*1)	ND	100	91	97	6.4	102	99	3.0	70 - 130	25
C5-C8 Aliphatic Hydrocarbons *1,2	ND	100	87	89	2.3	92	94	2.2	70 - 130	25
C9-C12 Aliphatic Hydrocarbons *1,	ND	100	91	97	6.4	102	99	3.0	70 - 130	25
C9-C10 Aromatic Hydrocarbons *1	ND	100	96	98	2.1	97	99	2.0	70 - 130	25
Benzene	ND	1.0	87	89	2.3	88	90	2.2	70 - 130	25
Ethyl Benzene	ND	1.0	89	91	2.2	92	93	1.1	70 - 130	25
MTBE	ND	1.0	98	95	3.1	86	93	7.8	70 - 130	25
Naphthalene	ND	5.0	93	94	1.1	94	93	1.1	70 - 130	25
Toluene	ND	1.0	91	92	1.1	93	94	1.1	70 - 130	25
m,p-Xylenes	ND	2.0	92	93	1.1	94	95	1.1	70 - 130	25
o-Xylene	ND	1.0	88	90	2.2	89	91	2.2	70 - 130	25

Comment:

A blank MS/MSD was analyzed with this batch.

QA/QC Batch 546134 (ug/L), QC Sample No: CG76575 (CG76575 (5X))

Volatile Petroleum Hydrocarbons - Ground Water

Unadjusted C5-C8 Aliphatics (*1)	ND	100	97	99	2.0	96	96	0.0	70 - 130	25
Unadjusted C9-C12 Aliphatics (*1)	ND	100	94	89	5.5	91	93	2.2	70 - 130	25
C5-C8 Aliphatic Hydrocarbons *1,2	ND	100	97	99	2.0	96	96	0.0	70 - 130	25
C9-C12 Aliphatic Hydrocarbons *1,	ND	100	94	89	5.5	91	93	2.2	70 - 130	25
C9-C10 Aromatic Hydrocarbons *1	ND	100	98	98	0.0	97	100	3.0	70 - 130	25
Benzene	ND	1.0	95	96	1.0	94	96	2.1	70 - 130	25
Ethyl Benzene	ND	1.0	94	95	1.1	93	95	2.1	70 - 130	25
MTBE	ND	1.0	90	79	13.0	83	73	12.8	70 - 130	25
Naphthalene	ND	5.0	88	89	1.1	89	94	5.5	70 - 130	25
Toluene	ND	1.0	95	96	1.0	94	96	2.1	70 - 130	25
m,p-Xylenes	ND	2.0	95	96	1.0	94	96	2.1	70 - 130	25
o-Xylene	ND	1.0	92	93	1.1	91	93	2.2	70 - 130	25

Comment:

A blank MS/MSD was analyzed with this batch.

l = This parameter is outside laboratory LCS/LCSD specified recovery limits.
r = This parameter is outside laboratory RPD specified recovery limits.

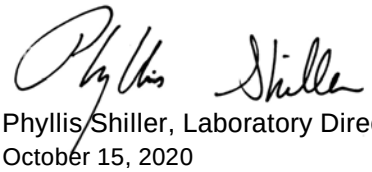
QA/QC Data

SDG I.D.: GCG76574

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits

If there are any questions regarding this data, please call Phoenix Client Services at extension 200.

RPD - Relative Percent Difference
LCS - Laboratory Control Sample
LCSD - Laboratory Control Sample Duplicate
MS - Matrix Spike
MS Dup - Matrix Spike Duplicate
NC - No Criteria
Intf - Interference



Phyllis Shiller, Laboratory Director
October 15, 2020

Thursday, October 15, 2020

Criteria: MA: GW1, GW2, GW3

State: MA

Sample Criteria Exceedances Report

GCG76574 - AECOM-WILMINGTN

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units
CG76574	$8260GWR-WI	trans-1,3-Dichloropropene	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	2.5	0.47	0.47	ug/L
CG76574	$8260GWR-WI	1,1,2,2-Tetrachloroethane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	2.5	2	2	ug/L
CG76574	$8260GWR-WI	Vinyl chloride	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	2.5	2	2	ug/L
CG76574	$8260GWR-WI	Tetrachloroethene	MA / Client Specified Criteria / LOCKHEED-WILMINGT	680	10	5	5	ug/L
CG76574	$8260GWR-WI	Hexachlorobutadiene	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	2.5	0.6	0.6	ug/L
CG76574	$8260GWR-WI	Dibromochloromethane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	2.5	2	2	ug/L
CG76574	$8260GWR-WI	cis-1,3-Dichloropropene	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	2.5	0.47	0.47	ug/L
CG76574	$8260GWR-WI	Carbon tetrachloride	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	2.5	2	2	ug/L
CG76574	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	2.5	0.0075	0.0075	ug/L
CG76574	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	2.5	0.00033	0.00033	ug/L
CG76574	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	2.5	0.00075	0.00075	ug/L
CG76574	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	2.5	2	2	ug/L
CG76574	$8260GWR-WI	1,1,2,2-Tetrachloroethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	2.5	2	2	ug/L
CG76574	$8260GWR-WI	trans-1,3-Dichloropropene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	2.5	0.5	0.5	ug/L
CG76574	$8260GWR-WI	Carbon tetrachloride	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	2.5	2	2	ug/L
CG76574	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	2.5	2	2	ug/L
CG76574	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	2.5	0.02	0.02	ug/L
CG76574	$8260GWR-WI	cis-1,3-Dichloropropene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	2.5	0.5	0.5	ug/L
CG76574	$8260GWR-WI	Dibromochloromethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	2.5	2	2	ug/L
CG76574	$8260GWR-WI	Hexachlorobutadiene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	2.5	0.6	0.6	ug/L
CG76574	$8260GWR-WI	Tetrachloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	680	10	5	5	ug/L
CG76574	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	2.5	2	2	ug/L
CG76574	$8260GWR-WI	Tetrachloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	680	10	50	50	ug/L
CG76574	$8260GWR-WI	Carbon tetrachloride	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	2.5	2	2	ug/L
CG76574	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	2.5	2	2	ug/L
CG76574	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	2.5	2	2	ug/L
CG76574	$8260GWR-WI	Hexachlorobutadiene	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	2.5	1	1	ug/L
CG76574	$8260GWR-WI	Dibromochloromethane	MA / GROUNDWATER STANDARDS / GW-1	ND	2.5	2	2	ug/L
CG76574	$8260GWR-WI	Hexachlorobutadiene	MA / GROUNDWATER STANDARDS / GW-1	ND	2.5	0.6	0.6	ug/L
CG76574	$8260GWR-WI	1,1,2,2-Tetrachloroethane	MA / GROUNDWATER STANDARDS / GW-1	ND	2.5	2	2	ug/L
CG76574	$8260GWR-WI	Vinyl chloride	MA / GROUNDWATER STANDARDS / GW-1	ND	2.5	2	2	ug/L
CG76574	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	2.5	0.02	0.02	ug/L
CG76574	$8260GWR-WI	Tetrachloroethene	MA / GROUNDWATER STANDARDS / GW-1	680	10	5	5	ug/L
CG76574	$8260GWR-WI	Vinyl chloride	MA / GROUNDWATER STANDARDS / GW-2	ND	2.5	2	2	ug/L
CG76574	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-2	ND	2.5	2	2	ug/L
CG76574	$8260GWR-WI	Carbon tetrachloride	MA / GROUNDWATER STANDARDS / GW-2	ND	2.5	2	2	ug/L
CG76574	$8260GWR-WI	Tetrachloroethene	MA / GROUNDWATER STANDARDS / GW-2	680	10	50	50	ug/L
CG76574	$MCPADD-WM	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	500	0.3	0.3	ug/L
CG76575	$8260GWR-WI	Hexachlorobutadiene	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	2.5	0.6	0.6	ug/L
CG76575	$8260GWR-WI	cis-1,2-Dichloroethene	MA / Client Specified Criteria / LOCKHEED-WILMINGT	230	5.0	20	20	ug/L
CG76575	$8260GWR-WI	Dibromochloromethane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	2.5	2	2	ug/L

Thursday, October 15, 2020

Criteria: MA: GW1, GW2, GW3

State: MA

Sample Criteria Exceedances Report

GCG76574 - AECOM-WILMINGTN

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units
CG76575	$8260GWR-WI	Tetrachloroethene	MA / Client Specified Criteria / LOCKHEED-WILMINGT	870	20	5	5	ug/L
CG76575	$8260GWR-WI	Carbon tetrachloride	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	2.5	2	2	ug/L
CG76575	$8260GWR-WI	Trichloroethene	MA / Client Specified Criteria / LOCKHEED-WILMINGT	1400	20	5	5	ug/L
CG76575	$8260GWR-WI	Vinyl chloride	MA / Client Specified Criteria / LOCKHEED-WILMINGT	2.5	2.5	2	2	ug/L
CG76575	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	2.5	0.0075	0.0075	ug/L
CG76575	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	2.5	0.00033	0.00033	ug/L
CG76575	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	2.5	0.00075	0.00075	ug/L
CG76575	$8260GWR-WI	1,1,2,2-Tetrachloroethane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	2.5	2	2	ug/L
CG76575	$8260GWR-WI	cis-1,3-Dichloropropene	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	2.5	0.47	0.47	ug/L
CG76575	$8260GWR-WI	trans-1,3-Dichloropropene	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	2.5	0.47	0.47	ug/L
CG76575	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-1 (mg/l)	2.5	2.5	2	2	ug/L
CG76575	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	1400	20	5	5	ug/L
CG76575	$8260GWR-WI	trans-1,3-Dichloropropene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	2.5	0.5	0.5	ug/L
CG76575	$8260GWR-WI	Tetrachloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	870	20	5	5	ug/L
CG76575	$8260GWR-WI	Hexachlorobutadiene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	2.5	0.6	0.6	ug/L
CG76575	$8260GWR-WI	Dibromochloromethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	2.5	2	2	ug/L
CG76575	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-1 (mg/l)	2.5	2.5	2	2	ug/L
CG76575	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	2.5	0.02	0.02	ug/L
CG76575	$8260GWR-WI	cis-1,3-Dichloropropene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	2.5	0.5	0.5	ug/L
CG76575	$8260GWR-WI	Carbon tetrachloride	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	2.5	2	2	ug/L
CG76575	$8260GWR-WI	1,1,2,2-Tetrachloroethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	2.5	2	2	ug/L
CG76575	$8260GWR-WI	cis-1,2-Dichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	230	5.0	20	20	ug/L
CG76575	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	2.5	2	2	ug/L
CG76575	$8260GWR-WI	Tetrachloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	870	20	50	50	ug/L
CG76575	$8260GWR-WI	Carbon tetrachloride	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	2.5	2	2	ug/L
CG76575	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	1400	20	5	5	ug/L
CG76575	$8260GWR-WI	Hexachlorobutadiene	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	2.5	1	1	ug/L
CG76575	$8260GWR-WI	cis-1,2-Dichloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	230	5.0	20	20	ug/L
CG76575	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-2 (mg/l)	2.5	2.5	2	2	ug/L
CG76575	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-2 (mg/l)	2.5	2.5	2	2	ug/L
CG76575	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-1	1400	20	5	5	ug/L
CG76575	$8260GWR-WI	Vinyl chloride	MA / GROUNDWATER STANDARDS / GW-1	2.5	2.5	2	2	ug/L
CG76575	$8260GWR-WI	1,1,2,2-Tetrachloroethane	MA / GROUNDWATER STANDARDS / GW-1	ND	2.5	2	2	ug/L
CG76575	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	2.5	0.02	0.02	ug/L
CG76575	$8260GWR-WI	Tetrachloroethene	MA / GROUNDWATER STANDARDS / GW-1	870	20	5	5	ug/L
CG76575	$8260GWR-WI	cis-1,2-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-1	230	5.0	70	70	ug/L
CG76575	$8260GWR-WI	Hexachlorobutadiene	MA / GROUNDWATER STANDARDS / GW-1	ND	2.5	0.6	0.6	ug/L
CG76575	$8260GWR-WI	Dibromochloromethane	MA / GROUNDWATER STANDARDS / GW-1	ND	2.5	2	2	ug/L
CG76575	$8260GWR-WI	cis-1,2-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-2	230	5.0	20	20	ug/L
CG76575	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-2	1400	20	5	5	ug/L
CG76575	$8260GWR-WI	Vinyl chloride	MA / GROUNDWATER STANDARDS / GW-2	2.5	2.5	2	2	ug/L
CG76575	$8260GWR-WI	Carbon tetrachloride	MA / GROUNDWATER STANDARDS / GW-2	ND	2.5	2	2	ug/L

Thursday, October 15, 2020

Criteria: MA: GW1, GW2, GW3

State: MA

Sample Criteria Exceedances Report

GCG76574 - AECOM-WILMINGTN

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units
CG76575	$8260GWR-WI	Tetrachloroethene	MA / GROUNDWATER STANDARDS / GW-2	870	20	50	50	ug/L
CG76575	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-2	ND	2.5	2	2	ug/L
CG76575	$DIOX_LDL	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	21	0.20	0.3	0.3	ug/l
CG76575	$DIOX_LDL	1,4-dioxane	MA / CMR 310.40.1600 / GW-1 (mg/l)	21	0.20	3	3	ug/l
CG76575	$DIOX_LDL	1,4-dioxane	MA / GROUNDWATER STANDARDS / GW-1	21	0.20	0.3	0.3	ug/l
CG76575	$MCPADD-WM	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	500	0.3	0.3	ug/L
CG76575	$VPHRANGE-	C5-C8 Aliphatic Hydrocarbons *1,2	MA / Client Specified Criteria / LOCKHEED-WILMINGT	740	500	300	300	ug/L
CG76575	$VPHRANGE-	C5-C8 Aliphatic Hydrocarbons *1,2	MA / CMR 310.40.1600 / GW-1 (mg/l)	740	500	300	300	ug/L
CG76575	$VPHRANGE-	C5-C8 Aliphatic Hydrocarbons *1,2	MA / GROUNDWATER STANDARDS / GW-1	740	500	300	300	ug/L
CG76575	$VPHRANGE-	C9-C10 Aromatic Hydrocarbons *1	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	500	200	200	ug/L
CG76575	$VPHRANGE-	C9-C10 Aromatic Hydrocarbons *1	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	500	200	200	ug/L
CG76575	$VPHRANGE-	C9-C10 Aromatic Hydrocarbons *1	MA / GROUNDWATER STANDARDS / GW-1	ND	500	200	200	ug/L
CG76575	D-MN	Manganese (Dissolved)	MA / Client Specified Criteria / LOCKHEED-WILMINGT	0.772	0.001	0.43	0.43	mg/L
CG76575	MN-WM	Manganese	MA / Client Specified Criteria / LOCKHEED-WILMINGT	0.801	0.001	0.43	0.43	mg/L
CG76576	$8260GWR-WI	Hexachlorobutadiene	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	50	0.6	0.6	ug/L
CG76576	$8260GWR-WI	Methylene chloride	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	100	5	5	ug/L
CG76576	$8260GWR-WI	1,2,3-Trichlorobenzene	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	50	7	7	ug/L
CG76576	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	50	0.00075	0.00075	ug/L
CG76576	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	50	0.00033	0.00033	ug/L
CG76576	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	50	0.0075	0.0075	ug/L
CG76576	$8260GWR-WI	1,4-Dichlorobenzene	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	50	5	5	ug/L
CG76576	$8260GWR-WI	Bromoform	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	50	4	4	ug/L
CG76576	$8260GWR-WI	Dibromomethane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	50	8.3	8.3	ug/L
CG76576	$8260GWR-WI	1,2-Dichloroethane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	50	5	5	ug/L
CG76576	$8260GWR-WI	Bromomethane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	50	7	7	ug/L
CG76576	$8260GWR-WI	Dibromochloromethane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	50	2	2	ug/L
CG76576	$8260GWR-WI	Carbon tetrachloride	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	50	2	2	ug/L
CG76576	$8260GWR-WI	1,2-Dichloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	50	3	3	ug/L
CG76576	$8260GWR-WI	Methyl ethyl ketone	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	500	38	38	ug/L
CG76576	$8260GWR-WI	1,1,2,2-Tetrachloroethane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	50	2	2	ug/L
CG76576	$8260GWR-WI	cis-1,2-Dichloroethene	MA / Client Specified Criteria / LOCKHEED-WILMINGT	1100	100	20	20	ug/L
CG76576	$8260GWR-WI	1,1,1,2-Tetrachloroethane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	50	5	5	ug/L
CG76576	$8260GWR-WI	Vinyl chloride	MA / Client Specified Criteria / LOCKHEED-WILMINGT	370	100	2	2	ug/L
CG76576	$8260GWR-WI	Benzene	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	50	5	5	ug/L
CG76576	$8260GWR-WI	Bromodichloromethane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	50	3	3	ug/L
CG76576	$8260GWR-WI	cis-1,3-Dichloropropene	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	50	0.47	0.47	ug/L
CG76576	$8260GWR-WI	Tetrachloroethene	MA / Client Specified Criteria / LOCKHEED-WILMINGT	15000	500	5	5	ug/L
CG76576	$8260GWR-WI	Trichloroethene	MA / Client Specified Criteria / LOCKHEED-WILMINGT	16000	500	5	5	ug/L
CG76576	$8260GWR-WI	4-Methyl-2-pentanone	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	500	350	350	ug/L
CG76576	$8260GWR-WI	trans-1,3-Dichloropropene	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	50	0.47	0.47	ug/L
CG76576	$8260GWR-WI	1,1,2-Trichloroethane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	50	5	5	ug/L

Thursday, October 15, 2020

Criteria: MA: GW1, GW2, GW3

State: MA

Sample Criteria Exceedances Report

GCG76574 - AECOM-WILMINGTN

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units
CG76576	$8260GWR-WI	2-Hexanone	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	500	38	38	ug/L
CG76576	$8260GWR-WI	trans-1,2-Dichloroethene	MA / Client Specified Criteria / LOCKHEED-WILMINGT	260	100	80	80	ug/L
CG76576	$8260GWR-WI	1,1-Dichloroethane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	140	100	70	70	ug/L
CG76576	$8260GWR-WI	Bromoform	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	50	4	4	ug/L
CG76576	$8260GWR-WI	Bromomethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	50	7	7	ug/L
CG76576	$8260GWR-WI	Bromodichloromethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	50	3	3	ug/L
CG76576	$8260GWR-WI	Carbon tetrachloride	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	50	2	2	ug/L
CG76576	$8260GWR-WI	cis-1,2-Dichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	1100	100	20	20	ug/L
CG76576	$8260GWR-WI	cis-1,3-Dichloropropene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	50	0.5	0.5	ug/L
CG76576	$8260GWR-WI	Dibromochloromethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	50	2	2	ug/L
CG76576	$8260GWR-WI	Hexachlorobutadiene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	50	0.6	0.6	ug/L
CG76576	$8260GWR-WI	Methylene chloride	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	100	5	5	ug/L
CG76576	$8260GWR-WI	Tetrachloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	15000	500	5	5	ug/L
CG76576	$8260GWR-WI	trans-1,2-Dichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	260	100	80	80	ug/L
CG76576	$8260GWR-WI	trans-1,3-Dichloropropene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	50	0.5	0.5	ug/L
CG76576	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	16000	500	5	5	ug/L
CG76576	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-1 (mg/l)	370	100	2	2	ug/L
CG76576	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-1 (mg/l)	370	100	2	2	ug/L
CG76576	$8260GWR-WI	1,1,2,2-Tetrachloroethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	50	2	2	ug/L
CG76576	$8260GWR-WI	1,1-Dichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	50	7	7	ug/L
CG76576	$8260GWR-WI	1,1-Dichloroethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	140	100	70	70	ug/L
CG76576	$8260GWR-WI	1,1,1,2-Tetrachloroethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	50	5	5	ug/L
CG76576	$8260GWR-WI	1,1,2-Trichloroethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	50	5	5	ug/L
CG76576	$8260GWR-WI	1,3-Dichlorobenzene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	50	40	40	ug/L
CG76576	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	50	0.02	0.02	ug/L
CG76576	$8260GWR-WI	1,4-Dichlorobenzene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	50	5	5	ug/L
CG76576	$8260GWR-WI	1,2-Dichloropropane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	50	3	3	ug/L
CG76576	$8260GWR-WI	1,2-Dichloroethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	50	5	5	ug/L
CG76576	$8260GWR-WI	4-Methyl-2-pentanone	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	500	350	350	ug/L
CG76576	$8260GWR-WI	Benzene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	50	5	5	ug/L
CG76576	$8260GWR-WI	trans-1,3-Dichloropropene	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	50	5	5	ug/L
CG76576	$8260GWR-WI	1,2-Dichloroethane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	50	5	5	ug/L
CG76576	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	50	2	2	ug/L
CG76576	$8260GWR-WI	cis-1,3-Dichloropropene	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	50	5	5	ug/L
CG76576	$8260GWR-WI	Dibromochloromethane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	50	20	20	ug/L
CG76576	$8260GWR-WI	Hexachlorobutadiene	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	50	1	1	ug/L
CG76576	$8260GWR-WI	trans-1,2-Dichloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	260	100	80	80	ug/L
CG76576	$8260GWR-WI	1,1,2,2-Tetrachloroethane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	50	9	9	ug/L
CG76576	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	16000	500	5	5	ug/L
CG76576	$8260GWR-WI	1,1,1,2-Tetrachloroethane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	50	10	10	ug/L
CG76576	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-2 (mg/l)	370	100	2	2	ug/L
CG76576	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-2 (mg/l)	370	100	2	2	ug/L

Thursday, October 15, 2020

Criteria: MA: GW1, GW2, GW3

State: MA

Sample Criteria Exceedances Report

GCG76574 - AECOM-WILMINGTN

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units
CG76576	$8260GWR-WI	Tetrachloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	15000	500	50	50	ug/L
CG76576	$8260GWR-WI	cis-1,2-Dichloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	1100	100	20	20	ug/L
CG76576	$8260GWR-WI	Bromomethane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	50	7	7	ug/L
CG76576	$8260GWR-WI	Bromodichloromethane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	50	6	6	ug/L
CG76576	$8260GWR-WI	1,2-Dichloropropane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	50	3	3	ug/L
CG76576	$8260GWR-WI	Carbon tetrachloride	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	50	2	2	ug/L
CG76576	$8260GWR-WI	1,2-Dichloroethane	MA / GROUNDWATER STANDARDS / GW-1	ND	50	5	5	ug/L
CG76576	$8260GWR-WI	Tetrachloroethene	MA / GROUNDWATER STANDARDS / GW-1	15000	500	5	5	ug/L
CG76576	$8260GWR-WI	1,1,2-Trichloroethane	MA / GROUNDWATER STANDARDS / GW-1	ND	50	5	5	ug/L
CG76576	$8260GWR-WI	1,1,2,2-Tetrachloroethane	MA / GROUNDWATER STANDARDS / GW-1	ND	50	2	2	ug/L
CG76576	$8260GWR-WI	Bromoform	MA / GROUNDWATER STANDARDS / GW-1	ND	50	4	4	ug/L
CG76576	$8260GWR-WI	Bromomethane	MA / GROUNDWATER STANDARDS / GW-1	ND	50	10	10	ug/L
CG76576	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-1	16000	500	5	5	ug/L
CG76576	$8260GWR-WI	1,1,1,2-Tetrachloroethane	MA / GROUNDWATER STANDARDS / GW-1	ND	50	5	5	ug/L
CG76576	$8260GWR-WI	Bromodichloromethane	MA / GROUNDWATER STANDARDS / GW-1	ND	50	3	3	ug/L
CG76576	$8260GWR-WI	trans-1,2-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-1	260	100	100	100	ug/L
CG76576	$8260GWR-WI	4-Methyl-2-pentanone	MA / GROUNDWATER STANDARDS / GW-1	ND	500	350	350	ug/L
CG76576	$8260GWR-WI	Vinyl chloride	MA / GROUNDWATER STANDARDS / GW-1	370	100	2	2	ug/L
CG76576	$8260GWR-WI	Benzene	MA / GROUNDWATER STANDARDS / GW-1	ND	50	5	5	ug/L
CG76576	$8260GWR-WI	1,4-Dichlorobenzene	MA / GROUNDWATER STANDARDS / GW-1	ND	50	5	5	ug/L
CG76576	$8260GWR-WI	Carbon tetrachloride	MA / GROUNDWATER STANDARDS / GW-1	ND	50	5	5	ug/L
CG76576	$8260GWR-WI	cis-1,2-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-1	1100	100	70	70	ug/L
CG76576	$8260GWR-WI	Dibromochloromethane	MA / GROUNDWATER STANDARDS / GW-1	ND	50	2	2	ug/L
CG76576	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	50	0.02	0.02	ug/L
CG76576	$8260GWR-WI	Hexachlorobutadiene	MA / GROUNDWATER STANDARDS / GW-1	ND	50	0.6	0.6	ug/L
CG76576	$8260GWR-WI	1,1-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-1	ND	50	7	7	ug/L
CG76576	$8260GWR-WI	1,1-Dichloroethane	MA / GROUNDWATER STANDARDS / GW-1	140	100	70	70	ug/L
CG76576	$8260GWR-WI	1,2-Dichloropropane	MA / GROUNDWATER STANDARDS / GW-1	ND	50	5	5	ug/L
CG76576	$8260GWR-WI	Methylene chloride	MA / GROUNDWATER STANDARDS / GW-1	ND	100	5	5	ug/L
CG76576	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-2	16000	500	5	5	ug/L
CG76576	$8260GWR-WI	Vinyl chloride	MA / GROUNDWATER STANDARDS / GW-2	370	100	2	2	ug/L
CG76576	$8260GWR-WI	1,2-Dichloroethane	MA / GROUNDWATER STANDARDS / GW-2	ND	50	5	5	ug/L
CG76576	$8260GWR-WI	Carbon tetrachloride	MA / GROUNDWATER STANDARDS / GW-2	ND	50	2	2	ug/L
CG76576	$8260GWR-WI	Tetrachloroethene	MA / GROUNDWATER STANDARDS / GW-2	15000	500	50	50	ug/L
CG76576	$8260GWR-WI	Dibromochloromethane	MA / GROUNDWATER STANDARDS / GW-2	ND	50	20	20	ug/L
CG76576	$8260GWR-WI	Bromodichloromethane	MA / GROUNDWATER STANDARDS / GW-2	ND	50	6	6	ug/L
CG76576	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-2	ND	50	2	2	ug/L
CG76576	$8260GWR-WI	1,1,1,2-Tetrachloroethane	MA / GROUNDWATER STANDARDS / GW-2	ND	50	10	10	ug/L
CG76576	$8260GWR-WI	Bromomethane	MA / GROUNDWATER STANDARDS / GW-2	ND	50	7	7	ug/L
CG76576	$8260GWR-WI	cis-1,2-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-2	1100	100	20	20	ug/L
CG76576	$8260GWR-WI	1,2-Dichloropropane	MA / GROUNDWATER STANDARDS / GW-2	ND	50	3	3	ug/L
CG76576	$8260GWR-WI	1,1,2,2-Tetrachloroethane	MA / GROUNDWATER STANDARDS / GW-2	ND	50	9	9	ug/L

Thursday, October 15, 2020

Criteria: MA: GW1, GW2, GW3

State: MA

Sample Criteria Exceedances Report

GCG76574 - AECOM-WILMINGTN

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units
CG76576	$8260GWR-WI	trans-1,2-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-2	260	100	80	80	ug/L
CG76576	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-3	16000	500	5000	5000	ug/L
CG76576	$DIOX_LDL	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	48	0.20	0.3	0.3	ug/l
CG76576	$DIOX_LDL	1,4-dioxane	MA / CMR 310.40.1600 / GW-1 (mg/l)	48	0.20	3	3	ug/l
CG76576	$DIOX_LDL	1,4-dioxane	MA / GROUNDWATER STANDARDS / GW-1	48	0.20	0.3	0.3	ug/l
CG76576	$MCPADD-WM	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	10000	0.3	0.3	ug/L
CG76576	$VPHRANGE-	C9-C12 Aliphatic Hydrocarbons *1,3	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	2000	700	700	ug/L
CG76576	$VPHRANGE-	C5-C8 Aliphatic Hydrocarbons *1,2	MA / Client Specified Criteria / LOCKHEED-WILMINGT	9500	2000	300	300	ug/L
CG76576	$VPHRANGE-	C9-C12 Aliphatic Hydrocarbons *1,3	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	2000	700	700	ug/L
CG76576	$VPHRANGE-	C5-C8 Aliphatic Hydrocarbons *1,2	MA / CMR 310.40.1600 / GW-1 (mg/l)	9500	2000	300	300	ug/L
CG76576	$VPHRANGE-	C5-C8 Aliphatic Hydrocarbons *1,2	MA / CMR 310.40.1600 / GW-2 (mg/l)	9500	2000	3000	3000	ug/L
CG76576	$VPHRANGE-	C9-C12 Aliphatic Hydrocarbons *1,3	MA / GROUNDWATER STANDARDS / GW-1	ND	2000	700	700	ug/L
CG76576	$VPHRANGE-	C5-C8 Aliphatic Hydrocarbons *1,2	MA / GROUNDWATER STANDARDS / GW-1	9500	2000	300	300	ug/L
CG76576	$VPHRANGE-	C5-C8 Aliphatic Hydrocarbons *1,2	MA / GROUNDWATER STANDARDS / GW-2	9500	2000	3000	3000	ug/L
CG76576	$VPHRANGE-	C9-C10 Aromatic Hydrocarbons *1	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	2000	200	200	ug/L
CG76576	$VPHRANGE-	Benzene	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	20	5	5	ug/L
CG76576	$VPHRANGE-	C9-C10 Aromatic Hydrocarbons *1	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	2000	200	200	ug/L
CG76576	$VPHRANGE-	Benzene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	20	5	5	ug/L
CG76576	$VPHRANGE-	C9-C10 Aromatic Hydrocarbons *1	MA / GROUNDWATER STANDARDS / GW-1	ND	2000	200	200	ug/L
CG76576	$VPHRANGE-	Benzene	MA / GROUNDWATER STANDARDS / GW-1	ND	20	5	5	ug/L
CG76576	D-MN	Manganese (Dissolved)	MA / Client Specified Criteria / LOCKHEED-WILMINGT	1.75	0.001	0.43	0.43	mg/L
CG76576	MN-WM	Manganese	MA / Client Specified Criteria / LOCKHEED-WILMINGT	1.92	0.001	0.43	0.43	mg/L
CG76577	$8260GWR-WI	Tetrachloroethene	MA / Client Specified Criteria / LOCKHEED-WILMINGT	24	1.0	5	5	ug/L
CG76577	$8260GWR-WI	Trichloroethene	MA / Client Specified Criteria / LOCKHEED-WILMINGT	13	1.0	5	5	ug/L
CG76577	$8260GWR-WI	cis-1,2-Dichloroethene	MA / Client Specified Criteria / LOCKHEED-WILMINGT	34	1.0	20	20	ug/L
CG76577	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	0.50	0.0075	0.0075	ug/L
CG76577	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	0.50	0.00075	0.00075	ug/L
CG76577	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	0.50	0.00033	0.00033	ug/L
CG76577	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	0.50	0.02	0.02	ug/L
CG76577	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	13	1.0	5	5	ug/L
CG76577	$8260GWR-WI	cis-1,2-Dichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	34	1.0	20	20	ug/L
CG76577	$8260GWR-WI	Tetrachloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	24	1.0	5	5	ug/L
CG76577	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	13	1.0	5	5	ug/L
CG76577	$8260GWR-WI	cis-1,2-Dichloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	34	1.0	20	20	ug/L
CG76577	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	0.50	0.02	0.02	ug/L
CG76577	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-1	13	1.0	5	5	ug/L
CG76577	$8260GWR-WI	Tetrachloroethene	MA / GROUNDWATER STANDARDS / GW-1	24	1.0	5	5	ug/L
CG76577	$8260GWR-WI	cis-1,2-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-2	34	1.0	20	20	ug/L
CG76577	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-2	13	1.0	5	5	ug/L
CG76577	$MCPADD-WM	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	100	0.3	0.3	ug/L
CG76577	$MCPADD-WM	1,4-dioxane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	100	3	3	ug/L

Thursday, October 15, 2020

Criteria: MA: GW1, GW2, GW3

State: MA

Sample Criteria Exceedances Report

GCG76574 - AECOM-WILMINGTN

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units
CG76577	$MCPADD-WM	1,4-dioxane	MA / GROUNDWATER STANDARDS / GW-1	ND	100	0.3	0.3	ug/L
CG76577	D-MN	Manganese (Dissolved)	MA / Client Specified Criteria / LOCKHEED-WILMINGT	1.02	0.001	0.43	0.43	mg/L
CG76577	MN-WM	Manganese	MA / Client Specified Criteria / LOCKHEED-WILMINGT	1.05	0.001	0.43	0.43	mg/L
CG76578	$8260GWR-WI	Dibromomethane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	50	8.3	8.3	ug/L
CG76578	$8260GWR-WI	Bromodichloromethane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	50	3	3	ug/L
CG76578	$8260GWR-WI	Tetrachloroethene	MA / Client Specified Criteria / LOCKHEED-WILMINGT	4300	100	5	5	ug/L
CG76578	$8260GWR-WI	Methylene chloride	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	100	5	5	ug/L
CG76578	$8260GWR-WI	Methyl ethyl ketone	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	500	38	38	ug/L
CG76578	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	50	0.00033	0.00033	ug/L
CG76578	$8260GWR-WI	trans-1,2-Dichloroethene	MA / Client Specified Criteria / LOCKHEED-WILMINGT	310	100	80	80	ug/L
CG76578	$8260GWR-WI	Hexachlorobutadiene	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	50	0.6	0.6	ug/L
CG76578	$8260GWR-WI	1,2-Dichloroethane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	50	5	5	ug/L
CG76578	$8260GWR-WI	1,2,3-Trichlorobenzene	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	50	7	7	ug/L
CG76578	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	50	0.00075	0.00075	ug/L
CG76578	$8260GWR-WI	Dibromochloromethane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	50	2	2	ug/L
CG76578	$8260GWR-WI	1,1-Dichloroethane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	98	70	70	70	ug/L
CG76578	$8260GWR-WI	cis-1,3-Dichloropropene	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	50	0.47	0.47	ug/L
CG76578	$8260GWR-WI	1,2-Dichloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	50	3	3	ug/L
CG76578	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	50	0.0075	0.0075	ug/L
CG76578	$8260GWR-WI	cis-1,2-Dichloroethene	MA / Client Specified Criteria / LOCKHEED-WILMINGT	2200	100	20	20	ug/L
CG76578	$8260GWR-WI	Bromomethane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	50	7	7	ug/L
CG76578	$8260GWR-WI	Carbon tetrachloride	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	50	2	2	ug/L
CG76578	$8260GWR-WI	Bromoform	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	50	4	4	ug/L
CG76578	$8260GWR-WI	4-Methyl-2-pentanone	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	500	350	350	ug/L
CG76578	$8260GWR-WI	1,1,1,2-Tetrachloroethane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	50	5	5	ug/L
CG76578	$8260GWR-WI	1,4-Dichlorobenzene	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	50	5	5	ug/L
CG76578	$8260GWR-WI	1,1,2,2-Tetrachloroethane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	50	2	2	ug/L
CG76578	$8260GWR-WI	2-Hexanone	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	500	38	38	ug/L
CG76578	$8260GWR-WI	trans-1,3-Dichloropropene	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	50	0.47	0.47	ug/L
CG76578	$8260GWR-WI	Vinyl chloride	MA / Client Specified Criteria / LOCKHEED-WILMINGT	540	100	2	2	ug/L
CG76578	$8260GWR-WI	1,1,2-Trichloroethane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	50	5	5	ug/L
CG76578	$8260GWR-WI	Benzene	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	50	5	5	ug/L
CG76578	$8260GWR-WI	Trichloroethene	MA / Client Specified Criteria / LOCKHEED-WILMINGT	11000	500	5	5	ug/L
CG76578	$8260GWR-WI	1,1,1,2-Tetrachloroethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	50	5	5	ug/L
CG76578	$8260GWR-WI	cis-1,3-Dichloropropene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	50	0.5	0.5	ug/L
CG76578	$8260GWR-WI	Hexachlorobutadiene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	50	0.6	0.6	ug/L
CG76578	$8260GWR-WI	1,4-Dichlorobenzene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	50	5	5	ug/L
CG76578	$8260GWR-WI	trans-1,3-Dichloropropene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	50	0.5	0.5	ug/L
CG76578	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-1 (mg/l)	540	100	2	2	ug/L
CG76578	$8260GWR-WI	cis-1,2-Dichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	2200	100	20	20	ug/L
CG76578	$8260GWR-WI	Dibromochloromethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	50	2	2	ug/L

Thursday, October 15, 2020

Criteria: MA: GW1, GW2, GW3

State: MA

Sample Criteria Exceedances Report

GCG76574 - AECOM-WILMINGTN

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units
CG76578	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	50	0.02	0.02	ug/L
CG76578	$8260GWR-WI	1,2-Dichloroethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	50	5	5	ug/L
CG76578	$8260GWR-WI	Benzene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	50	5	5	ug/L
CG76578	$8260GWR-WI	Carbon tetrachloride	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	50	2	2	ug/L
CG76578	$8260GWR-WI	1,3-Dichlorobenzene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	50	40	40	ug/L
CG76578	$8260GWR-WI	Bromomethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	50	7	7	ug/L
CG76578	$8260GWR-WI	Bromoform	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	50	4	4	ug/L
CG76578	$8260GWR-WI	1,1,2,2-Tetrachloroethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	50	2	2	ug/L
CG76578	$8260GWR-WI	Bromodichloromethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	50	3	3	ug/L
CG76578	$8260GWR-WI	trans-1,2-Dichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	310	100	80	80	ug/L
CG76578	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-1 (mg/l)	540	100	2	2	ug/L
CG76578	$8260GWR-WI	1,1-Dichloroethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	98	70	70	70	ug/L
CG76578	$8260GWR-WI	4-Methyl-2-pentanone	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	500	350	350	ug/L
CG76578	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	11000	500	5	5	ug/L
CG76578	$8260GWR-WI	1,1,2-Trichloroethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	50	5	5	ug/L
CG76578	$8260GWR-WI	Methylene chloride	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	100	5	5	ug/L
CG76578	$8260GWR-WI	1,1-Dichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	50	7	7	ug/L
CG76578	$8260GWR-WI	1,2-Dichloropropane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	50	3	3	ug/L
CG76578	$8260GWR-WI	Tetrachloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	4300	100	5	5	ug/L
CG76578	$8260GWR-WI	1,2-Dichloroethane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	50	5	5	ug/L
CG76578	$8260GWR-WI	Bromodichloromethane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	50	6	6	ug/L
CG76578	$8260GWR-WI	1,2-Dichloropropane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	50	3	3	ug/L
CG76578	$8260GWR-WI	1,1,1,2-Tetrachloroethane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	50	10	10	ug/L
CG76578	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-2 (mg/l)	540	100	2	2	ug/L
CG76578	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	11000	500	5	5	ug/L
CG76578	$8260GWR-WI	trans-1,3-Dichloropropene	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	50	5	5	ug/L
CG76578	$8260GWR-WI	1,1,2,2-Tetrachloroethane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	50	9	9	ug/L
CG76578	$8260GWR-WI	Bromomethane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	50	7	7	ug/L
CG76578	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-2 (mg/l)	540	100	2	2	ug/L
CG76578	$8260GWR-WI	Hexachlorobutadiene	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	50	1	1	ug/L
CG76578	$8260GWR-WI	trans-1,2-Dichloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	310	100	80	80	ug/L
CG76578	$8260GWR-WI	Dibromochloromethane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	50	20	20	ug/L
CG76578	$8260GWR-WI	cis-1,3-Dichloropropene	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	50	5	5	ug/L
CG76578	$8260GWR-WI	cis-1,2-Dichloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	2200	100	20	20	ug/L
CG76578	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	50	2	2	ug/L
CG76578	$8260GWR-WI	Carbon tetrachloride	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	50	2	2	ug/L
CG76578	$8260GWR-WI	Tetrachloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	4300	100	50	50	ug/L
CG76578	$8260GWR-WI	1,1,1,2-Tetrachloroethane	MA / GROUNDWATER STANDARDS / GW-1	ND	50	5	5	ug/L
CG76578	$8260GWR-WI	1,2-Dichloropropane	MA / GROUNDWATER STANDARDS / GW-1	ND	50	5	5	ug/L
CG76578	$8260GWR-WI	1,1,2,2-Tetrachloroethane	MA / GROUNDWATER STANDARDS / GW-1	ND	50	2	2	ug/L
CG76578	$8260GWR-WI	1,1-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-1	ND	50	7	7	ug/L
CG76578	$8260GWR-WI	1,1-Dichloroethane	MA / GROUNDWATER STANDARDS / GW-1	98	70	70	70	ug/L

Thursday, October 15, 2020

Criteria: MA: GW1, GW2, GW3

State: MA

Sample Criteria Exceedances Report

GCG76574 - AECOM-WILMINGTN

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units
CG76578	$8260GWR-WI	1,2-Dichloroethane	MA / GROUNDWATER STANDARDS / GW-1	ND	50	5	5	ug/L
CG76578	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	50	0.02	0.02	ug/L
CG76578	$8260GWR-WI	1,1,2-Trichloroethane	MA / GROUNDWATER STANDARDS / GW-1	ND	50	5	5	ug/L
CG76578	$8260GWR-WI	Vinyl chloride	MA / GROUNDWATER STANDARDS / GW-1	540	100	2	2	ug/L
CG76578	$8260GWR-WI	Methylene chloride	MA / GROUNDWATER STANDARDS / GW-1	ND	100	5	5	ug/L
CG76578	$8260GWR-WI	Hexachlorobutadiene	MA / GROUNDWATER STANDARDS / GW-1	ND	50	0.6	0.6	ug/L
CG76578	$8260GWR-WI	trans-1,2-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-1	310	100	100	100	ug/L
CG76578	$8260GWR-WI	Dibromochloromethane	MA / GROUNDWATER STANDARDS / GW-1	ND	50	2	2	ug/L
CG76578	$8260GWR-WI	cis-1,2-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-1	2200	100	70	70	ug/L
CG76578	$8260GWR-WI	Tetrachloroethene	MA / GROUNDWATER STANDARDS / GW-1	4300	100	5	5	ug/L
CG76578	$8260GWR-WI	Carbon tetrachloride	MA / GROUNDWATER STANDARDS / GW-1	ND	50	5	5	ug/L
CG76578	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-1	11000	500	5	5	ug/L
CG76578	$8260GWR-WI	Bromomethane	MA / GROUNDWATER STANDARDS / GW-1	ND	50	10	10	ug/L
CG76578	$8260GWR-WI	Bromoform	MA / GROUNDWATER STANDARDS / GW-1	ND	50	4	4	ug/L
CG76578	$8260GWR-WI	Bromodichloromethane	MA / GROUNDWATER STANDARDS / GW-1	ND	50	3	3	ug/L
CG76578	$8260GWR-WI	Benzene	MA / GROUNDWATER STANDARDS / GW-1	ND	50	5	5	ug/L
CG76578	$8260GWR-WI	4-Methyl-2-pentanone	MA / GROUNDWATER STANDARDS / GW-1	ND	500	350	350	ug/L
CG76578	$8260GWR-WI	1,4-Dichlorobenzene	MA / GROUNDWATER STANDARDS / GW-1	ND	50	5	5	ug/L
CG76578	$8260GWR-WI	1,1,1,2-Tetrachloroethane	MA / GROUNDWATER STANDARDS / GW-2	ND	50	10	10	ug/L
CG76578	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-2	11000	500	5	5	ug/L
CG76578	$8260GWR-WI	trans-1,2-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-2	310	100	80	80	ug/L
CG76578	$8260GWR-WI	Bromomethane	MA / GROUNDWATER STANDARDS / GW-2	ND	50	7	7	ug/L
CG76578	$8260GWR-WI	Vinyl chloride	MA / GROUNDWATER STANDARDS / GW-2	540	100	2	2	ug/L
CG76578	$8260GWR-WI	Dibromochloromethane	MA / GROUNDWATER STANDARDS / GW-2	ND	50	20	20	ug/L
CG76578	$8260GWR-WI	cis-1,2-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-2	2200	100	20	20	ug/L
CG76578	$8260GWR-WI	1,2-Dichloroethane	MA / GROUNDWATER STANDARDS / GW-2	ND	50	5	5	ug/L
CG76578	$8260GWR-WI	Carbon tetrachloride	MA / GROUNDWATER STANDARDS / GW-2	ND	50	2	2	ug/L
CG76578	$8260GWR-WI	1,1,2,2-Tetrachloroethane	MA / GROUNDWATER STANDARDS / GW-2	ND	50	9	9	ug/L
CG76578	$8260GWR-WI	1,2-Dichloropropane	MA / GROUNDWATER STANDARDS / GW-2	ND	50	3	3	ug/L
CG76578	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-2	ND	50	2	2	ug/L
CG76578	$8260GWR-WI	Bromodichloromethane	MA / GROUNDWATER STANDARDS / GW-2	ND	50	6	6	ug/L
CG76578	$8260GWR-WI	Tetrachloroethene	MA / GROUNDWATER STANDARDS / GW-2	4300	100	50	50	ug/L
CG76578	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-3	11000	500	5000	5000	ug/L
CG76578	$MCPADD-WM	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	10000	0.3	0.3	ug/L
CG76578	$MCPADD-WM	1,4-dioxane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10000	3	3	ug/L
CG76578	$MCPADD-WM	1,4-dioxane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	10000	6000	6000	ug/L
CG76578	$MCPADD-WM	1,4-dioxane	MA / GROUNDWATER STANDARDS / GW-1	ND	10000	0.3	0.3	ug/L
CG76578	$MCPADD-WM	1,4-dioxane	MA / GROUNDWATER STANDARDS / GW-2	ND	10000	6000	6000	ug/L
CG76579	$8260GWR-WI	Hexachlorobutadiene	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	1.0	0.6	0.6	ug/L
CG76579	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	1.0	0.00033	0.00033	ug/L
CG76579	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	1.0	0.0075	0.0075	ug/L

Thursday, October 15, 2020

Criteria: MA: GW1, GW2, GW3

State: MA

Sample Criteria Exceedances Report

GCG76574 - AECOM-WILMINGTN

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units
CG76579	$8260GWR-WI	cis-1,3-Dichloropropene	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	1.0	0.47	0.47	ug/L
CG76579	$8260GWR-WI	cis-1,2-Dichloroethene	MA / Client Specified Criteria / LOCKHEED-WILMINGT	130	2.0	20	20	ug/L
CG76579	$8260GWR-WI	Trichloroethene	MA / Client Specified Criteria / LOCKHEED-WILMINGT	60	2.0	5	5	ug/L
CG76579	$8260GWR-WI	trans-1,3-Dichloropropene	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	1.0	0.47	0.47	ug/L
CG76579	$8260GWR-WI	Tetrachloroethene	MA / Client Specified Criteria / LOCKHEED-WILMINGT	7.0	2.0	5	5	ug/L
CG76579	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	1.0	0.00075	0.00075	ug/L
CG76579	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	60	2.0	5	5	ug/L
CG76579	$8260GWR-WI	trans-1,3-Dichloropropene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	1.0	0.5	0.5	ug/L
CG76579	$8260GWR-WI	Tetrachloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	7.0	2.0	5	5	ug/L
CG76579	$8260GWR-WI	Hexachlorobutadiene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	1.0	0.6	0.6	ug/L
CG76579	$8260GWR-WI	cis-1,3-Dichloropropene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	1.0	0.5	0.5	ug/L
CG76579	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	1.0	0.02	0.02	ug/L
CG76579	$8260GWR-WI	cis-1,2-Dichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	130	2.0	20	20	ug/L
CG76579	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	60	2.0	5	5	ug/L
CG76579	$8260GWR-WI	cis-1,2-Dichloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	130	2.0	20	20	ug/L
CG76579	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-1	60	2.0	5	5	ug/L
CG76579	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	1.0	0.02	0.02	ug/L
CG76579	$8260GWR-WI	cis-1,2-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-1	130	2.0	70	70	ug/L
CG76579	$8260GWR-WI	Tetrachloroethene	MA / GROUNDWATER STANDARDS / GW-1	7.0	2.0	5	5	ug/L
CG76579	$8260GWR-WI	Hexachlorobutadiene	MA / GROUNDWATER STANDARDS / GW-1	ND	1.0	0.6	0.6	ug/L
CG76579	$8260GWR-WI	cis-1,2-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-2	130	2.0	20	20	ug/L
CG76579	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-2	60	2.0	5	5	ug/L
CG76579	$MCPADD-WM	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	200	0.3	0.3	ug/L
CG76579	$MCPADD-WM	1,4-dioxane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	200	3	3	ug/L
CG76579	$MCPADD-WM	1,4-dioxane	MA / GROUNDWATER STANDARDS / GW-1	ND	200	0.3	0.3	ug/L
CG76580	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	0.50	0.00075	0.00075	ug/L
CG76580	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	0.50	0.00033	0.00033	ug/L
CG76580	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	0.50	0.0075	0.0075	ug/L
CG76580	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	0.50	0.02	0.02	ug/L
CG76580	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	0.50	0.02	0.02	ug/L
CG76580	$MCPADD-WM	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	100	0.3	0.3	ug/L
CG76580	$MCPADD-WM	1,4-dioxane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	100	3	3	ug/L
CG76580	$MCPADD-WM	1,4-dioxane	MA / GROUNDWATER STANDARDS / GW-1	ND	100	0.3	0.3	ug/L
CG76581	$8260GWR-WI	Dibromochloromethane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	10	2	2	ug/L
CG76581	$8260GWR-WI	1,2-Dichloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	10	3	3	ug/L
CG76581	$8260GWR-WI	1,4-Dichlorobenzene	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	10	5	5	ug/L
CG76581	$8260GWR-WI	2-Hexanone	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	100	38	38	ug/L
CG76581	$8260GWR-WI	Benzene	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	10	5	5	ug/L
CG76581	$8260GWR-WI	Bromodichloromethane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	10	3	3	ug/L
CG76581	$8260GWR-WI	Bromoform	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	10	4	4	ug/L

Thursday, October 15, 2020

Criteria: MA: GW1, GW2, GW3

State: MA

Sample Criteria Exceedances Report

GCG76574 - AECOM-WILMINGTN

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units
CG76581	$8260GWR-WI	Bromomethane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	10	7	7	ug/L
CG76581	$8260GWR-WI	Carbon tetrachloride	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	10	2	2	ug/L
CG76581	$8260GWR-WI	cis-1,3-Dichloropropene	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	10	0.47	0.47	ug/L
CG76581	$8260GWR-WI	Dibromomethane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	10	8.3	8.3	ug/L
CG76581	$8260GWR-WI	Hexachlorobutadiene	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	10	0.6	0.6	ug/L
CG76581	$8260GWR-WI	Vinyl chloride	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	10	2	2	ug/L
CG76581	$8260GWR-WI	Methylene chloride	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	20	5	5	ug/L
CG76581	$8260GWR-WI	Methyl ethyl ketone	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	100	38	38	ug/L
CG76581	$8260GWR-WI	Tetrachloroethene	MA / Client Specified Criteria / LOCKHEED-WILMINGT	1300	20	5	5	ug/L
CG76581	$8260GWR-WI	trans-1,3-Dichloropropene	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	10	0.47	0.47	ug/L
CG76581	$8260GWR-WI	Trichloroethene	MA / Client Specified Criteria / LOCKHEED-WILMINGT	2100	50	5	5	ug/L
CG76581	$8260GWR-WI	1,2-Dichloroethane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	10	5	5	ug/L
CG76581	$8260GWR-WI	cis-1,2-Dichloroethene	MA / Client Specified Criteria / LOCKHEED-WILMINGT	390	20	20	20	ug/L
CG76581	$8260GWR-WI	1,1,2,2-Tetrachloroethane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	10	2	2	ug/L
CG76581	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	10	0.00033	0.00033	ug/L
CG76581	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	10	0.0075	0.0075	ug/L
CG76581	$8260GWR-WI	1,2,3-Trichlorobenzene	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	10	7	7	ug/L
CG76581	$8260GWR-WI	1,1,1,2-Tetrachloroethane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	10	5	5	ug/L
CG76581	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	10	0.00075	0.00075	ug/L
CG76581	$8260GWR-WI	1,1,2-Trichloroethane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	10	5	5	ug/L
CG76581	$8260GWR-WI	1,1-Dichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	14	10	7	7	ug/L
CG76581	$8260GWR-WI	Hexachlorobutadiene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	0.6	0.6	ug/L
CG76581	$8260GWR-WI	Carbon tetrachloride	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	2	2	ug/L
CG76581	$8260GWR-WI	Dibromochloromethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	2	2	ug/L
CG76581	$8260GWR-WI	Bromodichloromethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	3	3	ug/L
CG76581	$8260GWR-WI	Bromoform	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	4	4	ug/L
CG76581	$8260GWR-WI	Tetrachloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	1300	20	5	5	ug/L
CG76581	$8260GWR-WI	cis-1,3-Dichloropropene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	0.5	0.5	ug/L
CG76581	$8260GWR-WI	cis-1,2-Dichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	390	20	20	20	ug/L
CG76581	$8260GWR-WI	1,1,2-Trichloroethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	5	5	ug/L
CG76581	$8260GWR-WI	Bromomethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	7	7	ug/L
CG76581	$8260GWR-WI	1,2-Dichloropropane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	3	3	ug/L
CG76581	$8260GWR-WI	trans-1,3-Dichloropropene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	0.5	0.5	ug/L
CG76581	$8260GWR-WI	Benzene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	5	5	ug/L
CG76581	$8260GWR-WI	Methylene chloride	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	20	5	5	ug/L
CG76581	$8260GWR-WI	1,2-Dichloroethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	5	5	ug/L
CG76581	$8260GWR-WI	1,4-Dichlorobenzene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	5	5	ug/L
CG76581	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	0.02	0.02	ug/L
CG76581	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	2100	50	5	5	ug/L
CG76581	$8260GWR-WI	1,1,2,2-Tetrachloroethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	2	2	ug/L
CG76581	$8260GWR-WI	1,1,1,2-Tetrachloroethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	5	5	ug/L
CG76581	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	2	2	ug/L

Thursday, October 15, 2020

Criteria: MA: GW1, GW2, GW3

State: MA

Sample Criteria Exceedances Report

GCG76574 - AECOM-WILMINGTN

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units
CG76581	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	2	2	ug/L
CG76581	$8260GWR-WI	cis-1,3-Dichloropropene	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	10	5	5	ug/L
CG76581	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	10	2	2	ug/L
CG76581	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	10	2	2	ug/L
CG76581	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	2100	50	5	5	ug/L
CG76581	$8260GWR-WI	1,1,2,2-Tetrachloroethane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	10	9	9	ug/L
CG76581	$8260GWR-WI	trans-1,3-Dichloropropene	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	10	5	5	ug/L
CG76581	$8260GWR-WI	Tetrachloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	1300	20	50	50	ug/L
CG76581	$8260GWR-WI	Hexachlorobutadiene	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	10	1	1	ug/L
CG76581	$8260GWR-WI	1,2-Dichloropropane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	10	3	3	ug/L
CG76581	$8260GWR-WI	cis-1,2-Dichloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	390	20	20	20	ug/L
CG76581	$8260GWR-WI	Bromodichloromethane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	10	6	6	ug/L
CG76581	$8260GWR-WI	1,2-Dichloroethane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	10	5	5	ug/L
CG76581	$8260GWR-WI	Carbon tetrachloride	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	10	2	2	ug/L
CG76581	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	10	2	2	ug/L
CG76581	$8260GWR-WI	Bromomethane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	10	7	7	ug/L
CG76581	$8260GWR-WI	Tetrachloroethene	MA / GROUNDWATER STANDARDS / GW-1	1300	20	5	5	ug/L
CG76581	$8260GWR-WI	Benzene	MA / GROUNDWATER STANDARDS / GW-1	ND	10	5	5	ug/L
CG76581	$8260GWR-WI	1,4-Dichlorobenzene	MA / GROUNDWATER STANDARDS / GW-1	ND	10	5	5	ug/L
CG76581	$8260GWR-WI	1,2-Dichloropropane	MA / GROUNDWATER STANDARDS / GW-1	ND	10	5	5	ug/L
CG76581	$8260GWR-WI	Bromodichloromethane	MA / GROUNDWATER STANDARDS / GW-1	ND	10	3	3	ug/L
CG76581	$8260GWR-WI	cis-1,2-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-1	390	20	70	70	ug/L
CG76581	$8260GWR-WI	1,2-Dichloroethane	MA / GROUNDWATER STANDARDS / GW-1	ND	10	5	5	ug/L
CG76581	$8260GWR-WI	Hexachlorobutadiene	MA / GROUNDWATER STANDARDS / GW-1	ND	10	0.6	0.6	ug/L
CG76581	$8260GWR-WI	Vinyl chloride	MA / GROUNDWATER STANDARDS / GW-1	ND	10	2	2	ug/L
CG76581	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	10	0.02	0.02	ug/L
CG76581	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-1	2100	50	5	5	ug/L
CG76581	$8260GWR-WI	Carbon tetrachloride	MA / GROUNDWATER STANDARDS / GW-1	ND	10	5	5	ug/L
CG76581	$8260GWR-WI	1,1,2-Trichloroethane	MA / GROUNDWATER STANDARDS / GW-1	ND	10	5	5	ug/L
CG76581	$8260GWR-WI	Dibromochloromethane	MA / GROUNDWATER STANDARDS / GW-1	ND	10	2	2	ug/L
CG76581	$8260GWR-WI	1,1,2,2-Tetrachloroethane	MA / GROUNDWATER STANDARDS / GW-1	ND	10	2	2	ug/L
CG76581	$8260GWR-WI	1,1-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-1	14	10	7	7	ug/L
CG76581	$8260GWR-WI	Bromoform	MA / GROUNDWATER STANDARDS / GW-1	ND	10	4	4	ug/L
CG76581	$8260GWR-WI	Methylene chloride	MA / GROUNDWATER STANDARDS / GW-1	ND	20	5	5	ug/L
CG76581	$8260GWR-WI	1,1,1,2-Tetrachloroethane	MA / GROUNDWATER STANDARDS / GW-1	ND	10	5	5	ug/L
CG76581	$8260GWR-WI	Vinyl chloride	MA / GROUNDWATER STANDARDS / GW-2	ND	10	2	2	ug/L
CG76581	$8260GWR-WI	1,2-Dichloropropane	MA / GROUNDWATER STANDARDS / GW-2	ND	10	3	3	ug/L
CG76581	$8260GWR-WI	cis-1,2-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-2	390	20	20	20	ug/L
CG76581	$8260GWR-WI	Bromomethane	MA / GROUNDWATER STANDARDS / GW-2	ND	10	7	7	ug/L
CG76581	$8260GWR-WI	Tetrachloroethene	MA / GROUNDWATER STANDARDS / GW-2	1300	20	50	50	ug/L
CG76581	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-2	2100	50	5	5	ug/L
CG76581	$8260GWR-WI	1,2-Dichloroethane	MA / GROUNDWATER STANDARDS / GW-2	ND	10	5	5	ug/L

Thursday, October 15, 2020

Criteria: MA: GW1, GW2, GW3

State: MA

Sample Criteria Exceedances Report

GCG76574 - AECOM-WILMINGTN

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units
CG76581	$8260GWR-WI	1,1,2,2-Tetrachloroethane	MA / GROUNDWATER STANDARDS / GW-2	ND	10	9	9	ug/L
CG76581	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-2	ND	10	2	2	ug/L
CG76581	$8260GWR-WI	Bromodichloromethane	MA / GROUNDWATER STANDARDS / GW-2	ND	10	6	6	ug/L
CG76581	$8260GWR-WI	Carbon tetrachloride	MA / GROUNDWATER STANDARDS / GW-2	ND	10	2	2	ug/L
CG76581	$DIOX_LDL	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	27	0.20	0.3	0.3	ug/l
CG76581	$DIOX_LDL	1,4-dioxane	MA / CMR 310.40.1600 / GW-1 (mg/l)	27	0.20	3	3	ug/l
CG76581	$DIOX_LDL	1,4-dioxane	MA / GROUNDWATER STANDARDS / GW-1	27	0.20	0.3	0.3	ug/l
CG76581	$MCPADD-WM	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	2000	0.3	0.3	ug/L
CG76582	$8260GWR-WI	1,2-Dichloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	50	3	3	ug/L
CG76582	$8260GWR-WI	cis-1,2-Dichloroethene	MA / Client Specified Criteria / LOCKHEED-WILMINGT	1500	100	20	20	ug/L
CG76582	$8260GWR-WI	1,4-Dichlorobenzene	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	50	5	5	ug/L
CG76582	$8260GWR-WI	2-Hexanone	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	500	38	38	ug/L
CG76582	$8260GWR-WI	4-Methyl-2-pentanone	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	500	350	350	ug/L
CG76582	$8260GWR-WI	Benzene	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	50	5	5	ug/L
CG76582	$8260GWR-WI	Bromodichloromethane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	50	3	3	ug/L
CG76582	$8260GWR-WI	Bromoform	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	50	4	4	ug/L
CG76582	$8260GWR-WI	Bromomethane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	50	7	7	ug/L
CG76582	$8260GWR-WI	Carbon tetrachloride	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	50	2	2	ug/L
CG76582	$8260GWR-WI	cis-1,3-Dichloropropene	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	50	0.47	0.47	ug/L
CG76582	$8260GWR-WI	Dibromochloromethane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	50	2	2	ug/L
CG76582	$8260GWR-WI	Dibromomethane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	50	8.3	8.3	ug/L
CG76582	$8260GWR-WI	Hexachlorobutadiene	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	50	0.6	0.6	ug/L
CG76582	$8260GWR-WI	Methyl ethyl ketone	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	500	38	38	ug/L
CG76582	$8260GWR-WI	Methylene chloride	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	100	5	5	ug/L
CG76582	$8260GWR-WI	Tetrachloroethene	MA / Client Specified Criteria / LOCKHEED-WILMINGT	6900	100	5	5	ug/L
CG76582	$8260GWR-WI	trans-1,2-Dichloroethene	MA / Client Specified Criteria / LOCKHEED-WILMINGT	280	100	80	80	ug/L
CG76582	$8260GWR-WI	Trichloroethene	MA / Client Specified Criteria / LOCKHEED-WILMINGT	9000	100	5	5	ug/L
CG76582	$8260GWR-WI	Vinyl chloride	MA / Client Specified Criteria / LOCKHEED-WILMINGT	290	100	2	2	ug/L
CG76582	$8260GWR-WI	1,2,3-Trichlorobenzene	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	50	7	7	ug/L
CG76582	$8260GWR-WI	1,2-Dichloroethane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	50	5	5	ug/L
CG76582	$8260GWR-WI	trans-1,3-Dichloropropene	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	50	0.47	0.47	ug/L
CG76582	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	50	0.00033	0.00033	ug/L
CG76582	$8260GWR-WI	1,1-Dichloroethane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	140	100	70	70	ug/L
CG76582	$8260GWR-WI	1,1,1,2-Tetrachloroethane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	50	5	5	ug/L
CG76582	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	50	0.0075	0.0075	ug/L
CG76582	$8260GWR-WI	1,1,2,2-Tetrachloroethane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	50	2	2	ug/L
CG76582	$8260GWR-WI	1,1,2-Trichloroethane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	50	5	5	ug/L
CG76582	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	50	0.00075	0.00075	ug/L
CG76582	$8260GWR-WI	Bromoform	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	50	4	4	ug/L
CG76582	$8260GWR-WI	Bromomethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	50	7	7	ug/L
CG76582	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-1 (mg/l)	290	100	2	2	ug/L

Thursday, October 15, 2020

Criteria: MA: GW1, GW2, GW3

State: MA

Sample Criteria Exceedances Report

GCG76574 - AECOM-WILMINGTN

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units
CG76582	$8260GWR-WI	cis-1,3-Dichloropropene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	50	0.5	0.5	ug/L
CG76582	$8260GWR-WI	Carbon tetrachloride	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	50	2	2	ug/L
CG76582	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-1 (mg/l)	290	100	2	2	ug/L
CG76582	$8260GWR-WI	cis-1,2-Dichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	1500	100	20	20	ug/L
CG76582	$8260GWR-WI	Bromodichloromethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	50	3	3	ug/L
CG76582	$8260GWR-WI	1,1,2,2-Tetrachloroethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	50	2	2	ug/L
CG76582	$8260GWR-WI	1,1,2-Trichloroethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	50	5	5	ug/L
CG76582	$8260GWR-WI	Hexachlorobutadiene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	50	0.6	0.6	ug/L
CG76582	$8260GWR-WI	Methylene chloride	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	100	5	5	ug/L
CG76582	$8260GWR-WI	Tetrachloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	6900	100	5	5	ug/L
CG76582	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	9000	100	5	5	ug/L
CG76582	$8260GWR-WI	trans-1,2-Dichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	280	100	80	80	ug/L
CG76582	$8260GWR-WI	1,1,1,2-Tetrachloroethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	50	5	5	ug/L
CG76582	$8260GWR-WI	trans-1,3-Dichloropropene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	50	0.5	0.5	ug/L
CG76582	$8260GWR-WI	Dibromochloromethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	50	2	2	ug/L
CG76582	$8260GWR-WI	1,2-Dichloropropane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	50	3	3	ug/L
CG76582	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	50	0.02	0.02	ug/L
CG76582	$8260GWR-WI	1,2-Dichloroethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	50	5	5	ug/L
CG76582	$8260GWR-WI	1,4-Dichlorobenzene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	50	5	5	ug/L
CG76582	$8260GWR-WI	Benzene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	50	5	5	ug/L
CG76582	$8260GWR-WI	1,1-Dichloroethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	140	100	70	70	ug/L
CG76582	$8260GWR-WI	1,1-Dichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	50	7	7	ug/L
CG76582	$8260GWR-WI	1,3-Dichlorobenzene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	50	40	40	ug/L
CG76582	$8260GWR-WI	4-Methyl-2-pentanone	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	500	350	350	ug/L
CG76582	$8260GWR-WI	cis-1,3-Dichloropropene	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	50	5	5	ug/L
CG76582	$8260GWR-WI	Dibromochloromethane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	50	20	20	ug/L
CG76582	$8260GWR-WI	Carbon tetrachloride	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	50	2	2	ug/L
CG76582	$8260GWR-WI	1,1,2,2-Tetrachloroethane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	50	9	9	ug/L
CG76582	$8260GWR-WI	Hexachlorobutadiene	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	50	1	1	ug/L
CG76582	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-2 (mg/l)	290	100	2	2	ug/L
CG76582	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	9000	100	5	5	ug/L
CG76582	$8260GWR-WI	Tetrachloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	6900	100	50	50	ug/L
CG76582	$8260GWR-WI	1,2-Dichloroethane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	50	5	5	ug/L
CG76582	$8260GWR-WI	1,1,1,2-Tetrachloroethane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	50	10	10	ug/L
CG76582	$8260GWR-WI	trans-1,2-Dichloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	280	100	80	80	ug/L
CG76582	$8260GWR-WI	1,2-Dichloropropane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	50	3	3	ug/L
CG76582	$8260GWR-WI	trans-1,3-Dichloropropene	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	50	5	5	ug/L
CG76582	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	50	2	2	ug/L
CG76582	$8260GWR-WI	Bromodichloromethane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	50	6	6	ug/L
CG76582	$8260GWR-WI	cis-1,2-Dichloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	1500	100	20	20	ug/L
CG76582	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-2 (mg/l)	290	100	2	2	ug/L
CG76582	$8260GWR-WI	Bromomethane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	50	7	7	ug/L

Thursday, October 15, 2020

Criteria: MA: GW1, GW2, GW3

State: MA

Sample Criteria Exceedances Report

GCG76574 - AECOM-WILMINGTN

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units
CG76582	$8260GWR-WI	1,1,1,2-Tetrachloroethane	MA / GROUNDWATER STANDARDS / GW-1	ND	50	5	5	ug/L
CG76582	$8260GWR-WI	1,2-Dichloroethane	MA / GROUNDWATER STANDARDS / GW-1	ND	50	5	5	ug/L
CG76582	$8260GWR-WI	1,1,2-Trichloroethane	MA / GROUNDWATER STANDARDS / GW-1	ND	50	5	5	ug/L
CG76582	$8260GWR-WI	Tetrachloroethene	MA / GROUNDWATER STANDARDS / GW-1	6900	100	5	5	ug/L
CG76582	$8260GWR-WI	Methylene chloride	MA / GROUNDWATER STANDARDS / GW-1	ND	100	5	5	ug/L
CG76582	$8260GWR-WI	Benzene	MA / GROUNDWATER STANDARDS / GW-1	ND	50	5	5	ug/L
CG76582	$8260GWR-WI	Bromodichloromethane	MA / GROUNDWATER STANDARDS / GW-1	ND	50	3	3	ug/L
CG76582	$8260GWR-WI	trans-1,2-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-1	280	100	100	100	ug/L
CG76582	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	50	0.02	0.02	ug/L
CG76582	$8260GWR-WI	Bromoform	MA / GROUNDWATER STANDARDS / GW-1	ND	50	4	4	ug/L
CG76582	$8260GWR-WI	1,1,2,2-Tetrachloroethane	MA / GROUNDWATER STANDARDS / GW-1	ND	50	2	2	ug/L
CG76582	$8260GWR-WI	1,1-Dichloroethane	MA / GROUNDWATER STANDARDS / GW-1	140	100	70	70	ug/L
CG76582	$8260GWR-WI	Hexachlorobutadiene	MA / GROUNDWATER STANDARDS / GW-1	ND	50	0.6	0.6	ug/L
CG76582	$8260GWR-WI	Bromomethane	MA / GROUNDWATER STANDARDS / GW-1	ND	50	10	10	ug/L
CG76582	$8260GWR-WI	4-Methyl-2-pentanone	MA / GROUNDWATER STANDARDS / GW-1	ND	500	350	350	ug/L
CG76582	$8260GWR-WI	1,2-Dichloropropane	MA / GROUNDWATER STANDARDS / GW-1	ND	50	5	5	ug/L
CG76582	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-1	9000	100	5	5	ug/L
CG76582	$8260GWR-WI	Dibromochloromethane	MA / GROUNDWATER STANDARDS / GW-1	ND	50	2	2	ug/L
CG76582	$8260GWR-WI	Carbon tetrachloride	MA / GROUNDWATER STANDARDS / GW-1	ND	50	5	5	ug/L
CG76582	$8260GWR-WI	1,1-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-1	ND	50	7	7	ug/L
CG76582	$8260GWR-WI	1,4-Dichlorobenzene	MA / GROUNDWATER STANDARDS / GW-1	ND	50	5	5	ug/L
CG76582	$8260GWR-WI	cis-1,2-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-1	1500	100	70	70	ug/L
CG76582	$8260GWR-WI	Vinyl chloride	MA / GROUNDWATER STANDARDS / GW-1	290	100	2	2	ug/L
CG76582	$8260GWR-WI	Vinyl chloride	MA / GROUNDWATER STANDARDS / GW-2	290	100	2	2	ug/L
CG76582	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-2	9000	100	5	5	ug/L
CG76582	$8260GWR-WI	Carbon tetrachloride	MA / GROUNDWATER STANDARDS / GW-2	ND	50	2	2	ug/L
CG76582	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-2	ND	50	2	2	ug/L
CG76582	$8260GWR-WI	1,2-Dichloroethane	MA / GROUNDWATER STANDARDS / GW-2	ND	50	5	5	ug/L
CG76582	$8260GWR-WI	1,2-Dichloropropane	MA / GROUNDWATER STANDARDS / GW-2	ND	50	3	3	ug/L
CG76582	$8260GWR-WI	1,1,2,2-Tetrachloroethane	MA / GROUNDWATER STANDARDS / GW-2	ND	50	9	9	ug/L
CG76582	$8260GWR-WI	Bromomethane	MA / GROUNDWATER STANDARDS / GW-2	ND	50	7	7	ug/L
CG76582	$8260GWR-WI	trans-1,2-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-2	280	100	80	80	ug/L
CG76582	$8260GWR-WI	cis-1,2-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-2	1500	100	20	20	ug/L
CG76582	$8260GWR-WI	Dibromochloromethane	MA / GROUNDWATER STANDARDS / GW-2	ND	50	20	20	ug/L
CG76582	$8260GWR-WI	1,1,1,2-Tetrachloroethane	MA / GROUNDWATER STANDARDS / GW-2	ND	50	10	10	ug/L
CG76582	$8260GWR-WI	Tetrachloroethene	MA / GROUNDWATER STANDARDS / GW-2	6900	100	50	50	ug/L
CG76582	$8260GWR-WI	Bromodichloromethane	MA / GROUNDWATER STANDARDS / GW-2	ND	50	6	6	ug/L
CG76582	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-3	9000	100	5000	5000	ug/L
CG76582	$DIOX_LDL	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	39	0.20	0.3	0.3	ug/l
CG76582	$DIOX_LDL	1,4-dioxane	MA / CMR 310.40.1600 / GW-1 (mg/l)	39	0.20	3	3	ug/l
CG76582	$DIOX_LDL	1,4-dioxane	MA / GROUNDWATER STANDARDS / GW-1	39	0.20	0.3	0.3	ug/l
CG76582	$MCPADD-WM	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED-WILMINGT	ND	10000	0.3	0.3	ug/L

Thursday, October 15, 2020

Criteria: MA: GW1, GW2, GW3

State: MA

Sample Criteria Exceedances Report

GCG76574 - AECOM-WILMINGTN

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units

Phoenix Laboratories does not assume responsibility for the data contained in this exceedance report. It is provided as an additional tool to identify requested criteria exceedences. All efforts are made to ensure the accuracy of the data (obtained from appropriate agencies). A lack of exceedence information does not necessarily suggest conformance to the criteria. It is ultimately the site professional's responsibility to determine appropriate compliance.

MassDEP Analytical Protocol Certification Form

Laboratory Name: Phoenix Environmental Laboratories, Inc. **Project #:**

Project Location: LOCKHEED-WILMINGTON MA 6055204 **RTN:**

This Form provides certifications for the following data set: [list Laboratory Sample ID Number(s)]

CG76574, CG76575, CG76576, CG76577, CG76578, CG76579, CG76580, CG76581, CG76582

Matrices: ☑ Groundwater/Surface Water ☐ Soil/Sediment ☐ Drinking Water ☐ Air ☐ Other:

CAM Protocol (check all that apply below)

8260 VOC CAM II A ☑	7470/7471 Hg CAM III B ☐	MassDEP VPH CAM IV A ☑	8081 Pesticides CAM V B ☐	7196 Hex Cr CAM VI B ☐	MassDEP APH CAM IX A ☐
8270 SVOC CAM II B ☑	7010 Metals CAM III C ☐	MassDEP EPH CAM IV B ☑	8151 Herbicides CAM V C ☐	8330 Explosives CAM VIII A ☐	TO-15 VOC CAM IX B ☐
6010 Metals CAM III A ☑	6020 Metals CAM III D ☐	8082 PCB CAM V A ☐	9012 Total Cyanide/PAC CAM V1 A ☐	6860 Perchlorate CAM VIII B ☐	

Affirmative responses to questions A through F are required for "Presumptive Certainty" status

A	Were all samples received in a condition consistent with those described on the Chain-of-Custody, properly preserved (including temperature*) in the field or laboratory, and prepared/analyzed with method holding times? (* see narrative)	☑ Yes ☐ No
B	Were the analytical method(s) and all associated QC requirements specified in the selected CAM protocol(s) followed?	☑ Yes ☐ No
C	Were all required corrective actions and analytical response actions specified in the selected CAM protocol(s) implemented for all identified performance standard non-conformances?	☑ Yes ☐ No
D	Does the laboratory report comply with all the reporting requirements speified in CAM VII A, "Quality Assurance and Quality Control Guidelines for the Acquisition and Reporting of Analytical Data"?	☑ Yes ☐ No
E	a. VPH, EPH, and APH Methods only: Was each method conducted without significant modification(s)? (refer to the individual method(s) for a list of significant modifications). b. APH and TO-15 methods only: Was the complete analyte list reported for each method?	☑ Yes ☐ No ☐ Yes ☐ No
F	Were all applicable CAM protocol QC and performance standard non-conformances identified and evaluated in a laboratory narrative (including all "No" responses to Questions A through E)?	☑ Yes ☐ No

Responses to questions G, H and I below is required for "Presumptive Certainty" status

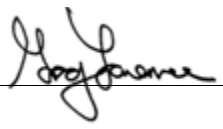
G	Were the reporting limits at or below all CAM reporting limits specified in the selected CAM protocol(s)?	☐ Yes ☑ No

Data User Note: Data that achieve "Presumptive Certainty" status may not necessarily meet the data usability and representativeness requirements described in 310 CMR 40. 1056(2)(k) and WSC-07-350

H	Were all QC performance standards specified in the CAM protocol(s) achieved? See Sections: EPH, SVOASIM, VOA Narrations .	☐ Yes ☑ No
I	Were results reported for the complete analyte list specified in the selected CAM protocol(s)?	☐ Yes ☑ No

All negative responses must be addressed in an attached laboratory narrative.

I, the undersigned, attest under the pains and penalties of perjury that, based upon my personal inquiry of those responsible for obtaining the information, the material contained in this analytical report is, to the best of my knowledge and belief, accurate and complete.

Authorized Signature: 

Date: Thursday, October 15, 2020

Printed Name: Greg Lawrence

Position: Assistant Lab Director

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

ACCREDITED IN ACCORDANCE WITH nelac NY # 11301

MCP Certification Report

October 15, 2020

SDG I.D.: GCG76574

SDG Comments

Metals Analysis:
The client requested a shorter list of elements than the 6010 MCP list. The following analytes from the 6010 Metals list were not reported: Antimony, Barium, Beryllium, Cadmium, Chromium, Lead, Nickel, Selenium, Silver, Thallium, Vanadium, Zinc.

Not all requested reporting levels were achieved. Please refer to the Sample Criteria Exceedances section of this report.

EPH Narration

Were all QA/QC performance criteria specified in the MADEP document CAM achieved? No.

QC Batch 545363 (Samples: CG76575, CG76576): -----

The LCS/LCSD recovery is below the method criteria. A low bias for these analytes is possible. (C-10 Decane, C12 - Dodecane, C9 - Nonane)

The LCS/LCSD RPD exceeds the method criteria for one or more analytes. These analytes were not reported in the sample(s). No significant variability is suspected. (C-10 Decane, C9 - Nonane)

Instrument:

AU-FID4 09/14/20-1 Adam Werner, Chemist 09/14/20

CG76575 (1X), CG76576 (1X)

The initial calibration (AL709BI) RSD for the compound list was less than 25% except for the following compounds: None.
The continuing calibration %D for the compound list was less than 25% except for the following compounds:None.

QC (Batch Specific):

Batch 545363 (CG75672)

CG76575, CG76576

All LCS recoveries were within 40 - 140 with the following exceptions: C-10 Decane(23%), C12 - Dodecane(32%), C9 - Nonane(19%)
All LCSD recoveries were within 40 - 140 with the following exceptions: C-10 Decane(31%), C12 - Dodecane(36%), C9 - Nonane(25%)
All LCS/LCSD RPDs were less than 25% with the following exceptions: C-10 Decane(29.6%), C9 - Nonane(27.3%)
Additional EPH fractionation criteria: Breakthrough criteria (BT) is 0 to 5%

I attest under the pains and penalties of perjury that, based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.

Wet Chemistry Analysis

Were all QA/QC performance criteria specified in the MADEP document CAM achieved? Yes.

Instrument:

BECKMAN DU720 09/16/20-1 Greg Danielewski, Chemist 09/16/20

CG76575 , CG76576

The initial calibration met all criteria including a standard run at the reporting level.
All method verification standards and blanks met criteria.

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MCP Certification Report

October 15, 2020

SDG I.D.: GCG76574

Wet Chemistry Analysis

QC (Batch Specific):

Batch 545589 (CG76021)

CG76575, CG76576

All LCS recoveries were within 85 - 115 with the following exceptions: None.
Additional: LCS acceptance range is 85-115% MS acceptance range 75-125%.

Batch 545591 (CG76954)

CG76575, CG76576

All LCS recoveries were within 85 - 115 with the following exceptions: None.
Additional: LCS acceptance range is 85-115% MS acceptance range 75-125%.

I attest under the pains and penalties of perjury that, based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.

IC

Were all QA/QC performance criteria specified in the MADEP document CAM achieved? Yes.

Instrument:

IC 09/14/20-1 Brian Sheriden, Greg Danielewski, Chemist 09/14/20

CG76575 , CG76576

The initial calibration met all criteria including a standard run at the reporting level.
All method verification standards and blanks met criteria.

IC 09/15/20-1 Brian Sheriden, Greg Danielewski, Chemist 09/15/20

CG76575 , CG76576

The initial calibration met all criteria including a standard run at the reporting level.
All method verification standards and blanks met criteria.

QC (Batch Specific):

Batch 545448 (CG75840)

CG76575, CG76576

All LCS recoveries were within 90 - 110 with the following exceptions: None.

Batch 545653 (CG77433)

CG76575, CG76576

All LCS recoveries were within 90 - 110 with the following exceptions: None.

I attest under the pains and penalties of perjury that, based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.

ICP Metals Narration

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Tel. (860) 645-1102 Fax (860) 645-0823

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Certification Report

October 15, 2020

SDG I.D.: GCG76574

ICP Metals Narration

Were all QA/QC performance criteria specified in the analytical method achieved? Yes.

Instrument:

ARCOS-2 09/16/20 08:08 Tina Hall, Chemist 09/16/20

CG76575, CG76576, CG76577

The linear range is defined daily by the calibration range.
The following Initial Calibration Verification (ICV) compounds did not meet criteria: None.
The following Continuing Calibration Verification (CCV) compounds did not meet criteria: None.
The following ICP Interference Check (ICSAB) compounds did not meet criteria: None.

BLUE 09/15/20 07:54 Cindy Pearce, Chemist 09/15/20

CG76575

The initial calibration met criteria.
The continuing calibration standards met criteria for all the elements reported. The linear range is defined daily by the calibration range.
The continuing calibration blanks were less than the reporting level for the elements reported.
The ICSA and ICSAB were analyzed at the beginning and end of the run and were within criteria.The linear range is defined daily by the calibration range.
The following Initial Calibration Verification (ICV) compounds did not meet criteria: None.
The following Continuing Calibration Verification (CCV) compounds did not meet criteria: None.
The following ICP Interference Check (ICSAB) compounds did not meet criteria: None.

BLUE 09/16/20 08:07 Cindy Pearce, Chemist 09/16/20

CG76576, CG76577

The initial calibration met criteria.
The continuing calibration standards met criteria for all the elements reported. The linear range is defined daily by the calibration range.
The continuing calibration blanks were less than the reporting level for the elements reported.
The ICSA and ICSAB were analyzed at the beginning and end of the run and were within criteria.The linear range is defined daily by the calibration range.
The following Initial Calibration Verification (ICV) compounds did not meet criteria: None.
The following Continuing Calibration Verification (CCV) compounds did not meet criteria: None.
The following ICP Interference Check (ICSAB) compounds did not meet criteria: None.

QC (Batch Specific):

Batch 545326 (CG76038)

CG76575

All LCS recoveries were within 80 - 120 with the following exceptions: None.
All LCSD recoveries were within 80 - 120 with the following exceptions: None.
All LCS/LCSD RPDs were less than 20% with the following exceptions: None.
Additional: LCS acceptance range is 80-120% MS acceptance range 75-125%.

Batch 545436 (CG76576)

CG76576, CG76577

All LCS recoveries were within 80 - 120 with the following exceptions: None.
All LCSD recoveries were within 80 - 120 with the following exceptions: None.
All LCS/LCSD RPDs were less than 20% with the following exceptions: None.
Additional: LCS acceptance range is 80-120% MS acceptance range 75-125%.

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Certification Report

October 15, 2020

SDG I.D.: GCG76574

ICP Metals Narration

Batch 545441 (CG76785)

CG76575, CG76576, CG76577

All LCS recoveries were within 80 - 120 with the following exceptions: None.
All LCSD recoveries were within 80 - 120 with the following exceptions: None.
All LCS/LCSD RPDs were less than 20% with the following exceptions: None.
Additional: LCS acceptance range is 80-120% MS acceptance range 75-125%.

SVOA-Dioxane

Were all QA/QC performance criteria specified in the MADEP document CAM achieved? Yes.

Instrument:

CHEM22 09/18/20-1 Adam Werner, Chemist 09/18/20

CG76574 (1X), CG76575 (1X), CG76576 (1X), CG76581 (1X), CG76582 (1X)

Initial Calibration Evaluation (CHEM22/DIOX_0818):
100% of target compounds met criteria.
The following compounds had %RSDs >20%: None.
The following compounds did not meet recommended response factors: None.
The following compounds did not meet a minimum response factors: None.

Continuing Calibration Verification (CHEM22/0918_06-DIOX_0818) (MCP Compliance):
Internal standard areas were within 50 to 200% of the initial calibration with the following exceptions: None.
100% of target compounds met criteria.
The following compounds did not meet % deviation criteria: None.
The following compounds did not meet maximum % deviations: None.
The following compounds did not meet recommended response factors: None.
The following compounds did not meet minimum response factors: None.

QC (Batch Specific):

Batch 545870 (CG79328)

CG76574, CG76575, CG76576, CG76581, CG76582

All LCS recoveries were within 40 - 140 with the following exceptions: None.
All LCSD recoveries were within 40 - 140 with the following exceptions: None.
All LCS/LCSD RPDs were less than 30% with the following exceptions: None.

I attest under the pains and penalties of perjury that, based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.

SVOASIM Narration

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MCP Certification Report

October 15, 2020

SDG I.D.: GCG76574

SVOASIM Narration

Were all QA/QC performance criteria specified in the MADEP document CAM achieved? No.

QC Batch 545860 (Samples: CG76575, CG76576): -----

The LCS/LCSD RPD exceeds the method criteria for one or more analytes. These analytes were not reported in the sample(s). No significant variability is suspected. (Acenaphthylene, Benzo(a)pyrene, Benzo(ghi)perylene, Benzo(k)fluoranthene, Dibenz(a,h)anthracene)

The LCS/LCSD RPD exceeds the method criteria for one analyte, therefore there may be variability in the reported result. (Naphthalene)

Instrument:

CHEM25 09/18/20-2 Wes Bryon, Chemist 09/18/20

CG76575 (1X), CG76576 (1X)

For 8270 BN list, benzidine peak tailing was evaluated in the DFTPP tune and was found to be in control.

Initial Calibration Evaluation (CHEM25/25_BNSIM18_0805):
100% of target compounds met criteria.
The following compounds had %RSDs >20%: None.
The following compounds did not meet recommended response factors: None.
The following compounds did not meet a minimum response factors: None.

Continuing Calibration Verification (CHEM25/0918_35-25_BNSIM18_0805) (MCP Compliance):
Internal standard areas were within 50 to 200% of the initial calibration with the following exceptions: None.
95% of target compounds met criteria.
The following compounds did not meet % deviation criteria: None.
The following compounds did not meet maximum % deviations: None.
The following compounds did not meet recommended response factors: None.
The following compounds did not meet minimum response factors: None.

QC (Batch Specific):

Batch 545860 (CG76660)

CG76575, CG76576

All LCS recoveries were within 40 - 140 with the following exceptions: None.
All LCSD recoveries were within 40 - 140 with the following exceptions: None.
All LCS/LCSD RPDs were less than 20% with the following exceptions: Acenaphthylene(29.1%), Benzo(a)pyrene(27.5%), Benzo(ghi)perylene(24.4%), Benzo(k)fluoranthene(21.9%), Dibenz(a,h)anthracene(22.9%), Naphthalene(29.3%)
Additional 8270 criteria: 10% of compounds can be outside of acceptance criteria as long as recovery is at least 10%. (Acid surrogates acceptance range for aqueous samples: 10-110%, for soils 30-130%)

I attest under the pains and penalties of perjury that, based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.

VOA Narration

PHOENIX

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Tel. (860) 645-1102 Fax (860) 645-0823

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MCP Certification Report

October 15, 2020

SDG I.D.: GCG76574

VOA Narration

Were all QA/QC performance criteria specified in the MADEP document CAM achieved? No.

QC Batch 545972 (Samples: CG76575, CG76577, CG76579, CG76580, CG76581, CG76582): -----

The LCSD recovery is below the method criteria. The LCS is acceptable. No significant bias is suspected. (Chloroethane)

Instrument:

CHEM23 09/17/20-1 Michael Hahn, Chemist 09/17/20

CG76575 (5X), CG76577 (1X), CG76579 (2X), CG76580 (1X), CG76581 (20X), CG76582 (100X)

Initial Calibration Evaluation (CHEM23/VOA23_091520):
94% of target compounds met criteria.
The following compounds had %RSDs >20%: 1,2-Dibromo-3-chloropropane 28% (20%), Acetone 21% (20%), Bromomethane 24% (20%), Chloroethane 21% (20%), Methylene chloride 23% (20%)
The following compounds did not meet Table 4 recommended minimum response factors: None.
The following compounds did not meet the minimum response factor of 0.05: None.

Continuing Calibration Verification (CHEM23/0917_02-VOA23_091520) (MCP Compliance):
Internal standard areas were within 50 to 200% of the initial calibration with the following exceptions: None.
87% of target compounds met criteria.
The following compounds did not meet % deviation criteria: None.
The following compounds did not meet maximum % deviations: None.
The following compounds did not meet Table 4 recommended minimum response factors: Tetrachloroethene 0.198 (0.2)
The following compounds did not meet the minimum MCP response factor of 0.05: None.

CHEM23 09/21/20-1 Michael Hahn, Chemist 09/21/20

CG76574 (10X), CG76575 (20X), CG76581 (50X)

Initial Calibration Evaluation (CHEM23/VOA23_092020):
99% of target compounds met criteria.
The following compounds had %RSDs >20%: None.
The following compounds did not meet Table 4 recommended minimum response factors: None.
The following compounds did not meet the minimum response factor of 0.05: None.

Continuing Calibration Verification (CHEM23/0921_03-VOA23_092020) (MCP Compliance):
Internal standard areas were within 50 to 200% of the initial calibration with the following exceptions: None.
98% of target compounds met criteria.
The following compounds did not meet % deviation criteria: None.
The following compounds did not meet maximum % deviations: None.
The following compounds did not meet Table 4 recommended minimum response factors: None.
The following compounds did not meet the minimum MCP response factor of 0.05: None.

CHEM23 09/22/20-1 Michael Hahn, Chemist 09/22/20

CG76574 (5X), CG76576 (100X, 500X)

Initial Calibration Evaluation (CHEM23/VOA23_092020):
99% of target compounds met criteria.
The following compounds had %RSDs >20%: Chloroethane 22% (20%)
The following compounds did not meet Table 4 recommended minimum response factors: None.
The following compounds did not meet the minimum response factor of 0.05: None.

Continuing Calibration Verification (CHEM23/0922_02-VOA23_092020) (MCP Compliance):
Internal standard areas were within 50 to 200% of the initial calibration with the following exceptions: None.

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
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NY # 11301

MCP Certification Report

October 15, 2020

SDG I.D.: GCG76574

VOA Narration

98% of target compounds met criteria.
The following compounds did not meet % deviation criteria: None.
The following compounds did not meet maximum % deviations: None.
The following compounds did not meet Table 4 recommended minimum response factors: Tetrachloroethene 0.183 (0.2)
The following compounds did not meet the minimum MCP response factor of 0.05: None.

CHEM23 09/24/20-1 Michael Hahn, Chemist 09/24/20

CG76578 (100X, 500X)

Initial Calibration Evaluation (CHEM23/VOA23_092020):
99% of target compounds met criteria.
The following compounds had %RSDs >20%: Chloroethane 22% (20%)
The following compounds did not meet Table 4 recommended minimum response factors: None.
The following compounds did not meet the minimum response factor of 0.05: None.

Continuing Calibration Verification (CHEM23/0924_02-VOA23_092020) (MCP Compliance):
Internal standard areas were within 50 to 200% of the initial calibration with the following exceptions: None.
98% of target compounds met criteria.
The following compounds did not meet % deviation criteria: None.
The following compounds did not meet maximum % deviations: None.
The following compounds did not meet Table 4 recommended minimum response factors: Tetrachloroethene 0.188 (0.2)
The following compounds did not meet the minimum MCP response factor of 0.05: None.

QC (Batch Specific):

Batch 545972 (CG76580) CHEM23 9/17/2020-1

CG76575(5X), CG76577(1X), CG76579(2X), CG76580(1X), CG76581(20X), CG76582(100X)

All LCS recoveries were within 70 - 130 with the following exceptions: None.
All LCSD recoveries were within 70 - 130 with the following exceptions: Chloroethane(66%)
All LCS/LCSD RPDs were less than 30% with the following exceptions: None.
A LCS and LCS Duplicate were performed instead of a matrix spike and matrix spike duplicate.
Additional 8260 criteria: 10% of compounds can be outside of acceptance criteria as long as recovery is 10%.

Batch 546288 (CG77564) CHEM23 9/21/2020-1

CG76574(10X), CG76575(20X), CG76581(50X)

All LCS recoveries were within 70 - 130 with the following exceptions: None.
All LCSD recoveries were within 70 - 130 with the following exceptions: None.
All LCS/LCSD RPDs were less than 30% with the following exceptions: None.
A LCS and LCS Duplicate were performed instead of a matrix spike and matrix spike duplicate.
Additional 8260 criteria: 10% of compounds can be outside of acceptance criteria as long as recovery is 10%.

Batch 546448 (CG80060) CHEM23 9/22/2020-1

CG76574(5X), CG76576(100X, 500X)

All LCS recoveries were within 70 - 130 with the following exceptions: None.
All LCSD recoveries were within 70 - 130 with the following exceptions: None.
All LCS/LCSD RPDs were less than 30% with the following exceptions: None.
A LCS and LCS Duplicate were performed instead of a matrix spike and matrix spike duplicate.
Additional 8260 criteria: 10% of compounds can be outside of acceptance criteria as long as recovery is 10%.

Batch 546836 (CG80056) CHEM23 9/24/2020-1

CG76578(100X, 500X)

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Tel. (860) 645-1102 Fax (860) 645-0823

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MCP Certification Report

October 15, 2020

SDG I.D.: GCG76574

VOA Narration

All LCS recoveries were within 70 - 130 with the following exceptions: None.
All LCSD recoveries were within 70 - 130 with the following exceptions: None.
All LCS/LCSD RPDs were less than 30% with the following exceptions: None.
A LCS and LCS Duplicate were performed instead of a matrix spike and matrix spike duplicate.
Additional 8260 criteria: 10% of compounds can be outside of acceptance criteria as long as recovery is 10%.

We attest under the pains and penalties of perjury that, based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.

VPH Narration

Were all QA/QC performance criteria specified in the MADEP document CAM achieved? Yes.

Instrument:

PIDFID 09/15/20-1 Raman Makol, Chemist 09/15/20
CG76576 (20X)

PIDFID 09/18/20-1 Raman Makol, Chemist 09/18/20
CG76575 (1X, 5X)

QC (Batch Specific):

Batch 545550 (CG76041)

CG76576(20X)

All LCS recoveries were within 70 - 130 with the following exceptions: None.
All LCSD recoveries were within 70 - 130 with the following exceptions: None.
All LCS/LCSD RPDs were less than 25% with the following exceptions: None.
A blank MS/MSD was analyzed with this batch.

Batch 546134 (CG76575)

CG76575(5X)

All LCS recoveries were within 70 - 130 with the following exceptions: None.
All LCSD recoveries were within 70 - 130 with the following exceptions: None.
All LCS/LCSD RPDs were less than 25% with the following exceptions: None.
A blank MS/MSD was analyzed with this batch.

We attest under the pains and penalties of perjury that, based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.

Cooler: Yes ☐ No ☐
Coolant: IPK ☐ ICE ☐ No ☐

PHOENIX
Environmental Laboratories, Inc.

CHAIN OF CUSTODY RECORD

Temp 1.2 °C Pg of

587 East Middle Turnpike, P.O. Box 370, Manchester, CT 06040
Email: info@phoenixlabs.com Fax (860) 645-0823
Client Services (860) 645-8726

Data Delivery/Contact EMails:
lori.herberich@aecom.com
scott.olson@aecom.com

Customer: AECOM
Address: 250 Apollo Drive
Chelmsford, MA 01824 - (978) 905-2100
Contacts: Lori Herberich (Chemist) 978-302-0089 Scott Olson (PM) 978-846-5238

Project: Lockheed - Wilmington MA 60552044.19
Report to: Lori Herberich - Scott Olson - Nicole Callahan
Invoice to: Scott Olson & Lori Herberich
QUOTE # August 2019 (for 2017-2022)

2020 Project PO: 127680

This section MUST be completed with Bottle Quantities.

Sampler's Signature: [signature] Date: 9/14/20

Client Sample - Information - Identification

Matrix Code:
DW=Drinking Water GW=Ground Water SW=Surface Water WW=Waste Water L=Liquid
RW=Raw Water SE=Sediment SL=Sludge S=Soil SD=Solid W=Wipe OIL=Oil B=Bulk

PHOENIX USE ONLY SAMPLE #	Customer Sample Identification	Sample Matrix	Date Sampled	Time Sampled	# of VOA Vials	# of Amber Glass	# of Clear Glass	# of Plastic				VOCs (8260) - HCL + Freon 113	1,4-Dioxane (8270D SIM) - NaHSO4 for CL <0.3 ug/L	VPH - HCL (MassDEP VPH-04-1.1 Rev 1)	EPH + PAHs - HCL & UNP (MassDEP EPH-04-1.1 Rev 1)	Total As, Fe, Mn (6010C) - HNO3 (FF)	Dissolved As, Fe, Mn (6010C) - HNO3	Chloride, Nitrate, Nitrite, Sulfate (300) - UNP	Sulfide - Zn-Acetate + NaOH	Total Organic Carbon (9060A) - H3PO4	Comments
76574	20A-AE24-091420-1	GW	9/14/20	1010	3	1						X	X								
76575	20A-AE26R1-091420-1	GW	9/14/20	1020	5	5		4				X	X	X	X	X	X	X	X	X	
76576	20A-AE28R2-091420-1	GW	9/14/20	1015	5	5		4				X	X	X	X	X	X	X	X	X	
76577	20A-AE26S-091420-1	GW	9/14/20	1325	3			2				X				X	X				
76578	20A-AE28R1-091420-1	GW	9/14/20	1215	3							X									
76579	20A-AE26R2-091420-1	GW	9/14/20	1210	3							X									
(MD) ~~76580~~	~~20A-AE28R5-091420-1~~	~~GW~~	~~9/14/20~~	~~—~~ (D)																	
76580	20A-TB01-091420-1	GW	9/14/20	1000	2							X									
(MD) ~~76582~~	~~20A-AE26R5-091420-1~~	GW	9/14/20	1400	3	1						X	X			76581					
(MD) 76583	20A-AE28R3-091420-1	GW	9/14/20	1345	3	1						X	X			76582					

Relinquished by:	Accepted by:	Date:	Time:
[signature]	[signature]	9-14-20	14:10
[signature]	[signature]	9/14/20	15:48

Comments, Special Requirements or Regulations:

Turnaround:
10 - 15 days

RI
☐ Direct Exposure (Residential)
☐ GW
☐ Other

CT
☐ RCP Cert
☐ GW Protection
☐ SW Protection
☐ GA Mobility
☐ GB Mobility
☐ Residential DEC
☐ I/C DEC
☐ Other

MA
X MCP (CAM Rpt)
X GW-1
X GW-2
X GW-3
☐ S-1
☐ S-2
☐ S-3
☐ MWRA eSMART
☐ Other

State where samples were collected: MA

Data Format
x PDF
x AECOM EQuIS 4-File EDD format

Data Package
☐ Tier II Checklist
☐ Full Data Package*
☐ Phoenix Std Report
☐ Other

* SURCHARGE APPLIES

PHOENIX
Environmental Laboratories, Inc.

Wednesday, September 23, 2020

Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Project ID: **LOCKHEED WILMINGTON 60552044.19**
SDG ID: **GCG77564**
Sample ID#s: CG77564 - CG77569

This laboratory is in compliance with the NELAC requirements of procedures used except where indicated.

This report contains results for the parameters tested, under the sampling conditions described on the Chain Of Custody, as received by the laboratory. This report is incomplete unless all pages indicated in the pagination at the bottom of the page are included.

A scanned version of the COC form accompanies the analytical report and is an exact duplicate of the original.

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200. The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.

Sincerely yours,

Phyllis Shiller
Laboratory Director

NELAC - #NY11301
CT Lab Registration #PH-0618
MA Lab Registration #M-CT007
ME Lab Registration #CT-007
NH Lab Registration #213693-A,B
NJ Lab Registration #CT-003
NY Lab Registration #11301
PA Lab Registration #68-03530
RI Lab Registration #63
UT Lab Registration #CT00007
VT Lab Registration #VT11301

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

ACCREDITED IN ACCORDANCE WITH nelac NY # 11301

SDG Comments

September 23, 2020

SDG I.D.: GCG77564

Phoenix reporting levels may exceed those referenced in the CAM protocol. Please refer to criteria sheet for comparisons to requested MCP standards.

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Sample Id Cross Reference

September 23, 2020

SDG I.D.: GCG77564

Project ID: LOCKHEED WILMINGTON 60552044.19

Client Id	Lab Id	Matrix
20A-TB02-091420-1	CG77564	GROUND WATER
20A-AE28R4-091420-1	CG77565	GROUND WATER
20A-AE23R-091420-1	CG77566	GROUND WATER
20A-PS1D-091520-1	CG77567	GROUND WATER
20A-PS2D-091520-1	CG77568	GROUND WATER
20A-TRC301R4-091520-1	CG77569	GROUND WATER

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

September 23, 2020

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		09/14/20	12:00
Location Code:	AECOM-WILMINGTN	Received by:	B	09/15/20	16:02
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	127680				

Laboratory Data

SDG ID: GCG77564
Phoenix ID: CG77564

Project ID: LOCKHEED WILMINGTON 60552044.19
Client ID: 20A-TB02-091420-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Volatiles							
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
1,1,1-Trichloroethane	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L	1	09/21/20	MH	SW8260C
1,1,2-Trichloroethane	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
1,1-Dichloroethane	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
1,1-Dichloroethene	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
1,1-Dichloropropene	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
1,2,3-Trichlorobenzene	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
1,2,3-Trichloropropane	ND	0.50	ug/L	1	09/21/20	MH	SW8260C
1,2,4-Trichlorobenzene	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
1,2,4-Trimethylbenzene	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	0.50	ug/L	1	09/21/20	MH	SW8260C
1,2-Dibromoethane	ND	0.50	ug/L	1	09/21/20	MH	SW8260C
1,2-Dichlorobenzene	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
1,2-Dichloroethane	ND	0.60	ug/L	1	09/21/20	MH	SW8260C
1,2-Dichloropropane	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
1,3,5-Trimethylbenzene	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
1,3-Dichlorobenzene	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
1,3-Dichloropropane	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
1,4-Dichlorobenzene	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
2,2-Dichloropropane	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
2-Chlorotoluene	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
2-Hexanone	ND	5.0	ug/L	1	09/21/20	MH	SW8260C
4-Chlorotoluene	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
4-Methyl-2-pentanone	ND	5.0	ug/L	1	09/21/20	MH	SW8260C
Acetone	ND	25	ug/L	1	09/21/20	MH	SW8260C

Project ID: LOCKHEED WILMINGTON 60552044.19 Phoenix I.D.: CG77564

Client ID: 20A-TB02-091420-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	
Benzene	ND	0.70	ug/L	1	09/21/20	MH	SW8260C
Bromobenzene	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
Bromochloromethane	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
Bromodichloromethane	ND	0.50	ug/L	1	09/21/20	MH	SW8260C
Bromoform	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
Bromomethane	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
Carbon Disulfide	ND	5.0	ug/L	1	09/21/20	MH	SW8260C
Carbon tetrachloride	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
Chlorobenzene	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
Chloroethane	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
Chloroform	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
Chloromethane	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
cis-1,2-Dichloroethene	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
cis-1,3-Dichloropropene	ND	0.40	ug/L	1	09/21/20	MH	SW8260C
Dibromochloromethane	ND	0.50	ug/L	1	09/21/20	MH	SW8260C
Dibromomethane	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
Dichlorodifluoromethane	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
Ethylbenzene	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
Hexachlorobutadiene	ND	0.40	ug/L	1	09/21/20	MH	SW8260C
Isopropylbenzene	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
m&p-Xylene	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
Methyl ethyl ketone	ND	5.0	ug/L	1	09/21/20	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
Methylene chloride	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
Naphthalene	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
n-Butylbenzene	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
n-Propylbenzene	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
o-Xylene	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
p-Isopropyltoluene	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
sec-Butylbenzene	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
Styrene	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
tert-Butylbenzene	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
Tetrachloroethene	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
Tetrahydrofuran (THF)	ND	2.5	ug/L	1	09/21/20	MH	SW8260C
Toluene	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
trans-1,2-Dichloroethene	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
trans-1,3-Dichloropropene	ND	0.40	ug/L	1	09/21/20	MH	SW8260C
Trichloroethene	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
Trichlorofluoromethane	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
Trichlorotrifluoroethane	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
Vinyl chloride	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	98		%	1	09/21/20	MH	70 - 130 %
% Bromofluorobenzene	95		%	1	09/21/20	MH	70 - 130 %
% Dibromofluoromethane	91		%	1	09/21/20	MH	70 - 130 %
% Toluene-d8	100		%	1	09/21/20	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	100	ug/L	1	09/21/20	MH	SW8260C (OXY)
Diethyl ether	ND	1.0	ug/L	1	09/21/20	MH	SW8260C (OXY)

Ver 1

Project ID: LOCKHEED WILMINGTON 60552044.19 Phoenix I.D.: CG77564

Client ID: 20A-TB02-091420-1

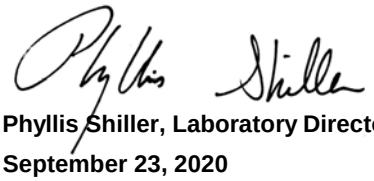
Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	
Di-isopropyl ether	ND	1.0	ug/L	1	09/21/20	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	1.0	ug/L	1	09/21/20	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	1.0	ug/L	1	09/21/20	MH	SW8260C (OXY)

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

TRIP BLANK INCLUDED.

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.



Phyllis Shiller, Laboratory Director

September 23, 2020

Reviewed and Released by: Greg Lawrence, Assistant Lab Director

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

September 23, 2020

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		09/14/20	14:50
Location Code:	AECOM-WILMINGTN	Received by:	B	09/15/20	16:02
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	127680				

Laboratory Data

SDG ID: GCG77564
Phoenix ID: CG77565

Project ID: LOCKHEED WILMINGTON 60552044.19
Client ID: 20A-AE28R4-091420-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Volatiles							
1,1,1,2-Tetrachloroethane	ND	50	ug/L	100	09/21/20	MH	SW8260C
1,1,1-Trichloroethane	ND	100	ug/L	100	09/21/20	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	50	ug/L	100	09/21/20	MH	SW8260C
1,1,2-Trichloroethane	ND	50	ug/L	100	09/21/20	MH	SW8260C
1,1-Dichloroethane	78	70	ug/L	100	09/21/20	MH	SW8260C
1,1-Dichloroethene	ND	50	ug/L	100	09/21/20	MH	SW8260C
1,1-Dichloropropene	ND	100	ug/L	100	09/21/20	MH	SW8260C
1,2,3-Trichlorobenzene	ND	50	ug/L	100	09/21/20	MH	SW8260C
1,2,3-Trichloropropane	ND	50	ug/L	100	09/21/20	MH	SW8260C
1,2,4-Trichlorobenzene	ND	70	ug/L	100	09/21/20	MH	SW8260C
1,2,4-Trimethylbenzene	ND	56	ug/L	100	09/21/20	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	50	ug/L	100	09/21/20	MH	SW8260C
1,2-Dibromoethane	ND	50	ug/L	100	09/21/20	MH	SW8260C
1,2-Dichlorobenzene	ND	100	ug/L	100	09/21/20	MH	SW8260C
1,2-Dichloroethane	ND	50	ug/L	100	09/21/20	MH	SW8260C
1,2-Dichloropropane	ND	50	ug/L	100	09/21/20	MH	SW8260C
1,3,5-Trimethylbenzene	ND	60	ug/L	100	09/21/20	MH	SW8260C
1,3-Dichlorobenzene	ND	50	ug/L	100	09/21/20	MH	SW8260C
1,3-Dichloropropane	ND	100	ug/L	100	09/21/20	MH	SW8260C
1,4-Dichlorobenzene	ND	50	ug/L	100	09/21/20	MH	SW8260C
2,2-Dichloropropane	ND	100	ug/L	100	09/21/20	MH	SW8260C
2-Chlorotoluene	ND	100	ug/L	100	09/21/20	MH	SW8260C
2-Hexanone	ND	500	ug/L	100	09/21/20	MH	SW8260C
4-Chlorotoluene	ND	100	ug/L	100	09/21/20	MH	SW8260C
4-Methyl-2-pentanone	ND	500	ug/L	100	09/21/20	MH	SW8260C
Acetone	ND	2500	ug/L	100	09/21/20	MH	SW8260C

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	
Benzene	ND	50	ug/L	100	09/21/20	MH	SW8260C
Bromobenzene	ND	62	ug/L	100	09/21/20	MH	SW8260C
Bromochloromethane	ND	83	ug/L	100	09/21/20	MH	SW8260C
Bromodichloromethane	ND	50	ug/L	100	09/21/20	MH	SW8260C
Bromoform	ND	50	ug/L	100	09/21/20	MH	SW8260C
Bromomethane	ND	50	ug/L	100	09/21/20	MH	SW8260C
Carbon Disulfide	ND	500	ug/L	100	09/21/20	MH	SW8260C
Carbon tetrachloride	ND	50	ug/L	100	09/21/20	MH	SW8260C
Chlorobenzene	ND	100	ug/L	100	09/21/20	MH	SW8260C
Chloroethane	ND	100	ug/L	100	09/21/20	MH	SW8260C
Chloroform	ND	50	ug/L	100	09/21/20	MH	SW8260C
Chloromethane	ND	100	ug/L	100	09/21/20	MH	SW8260C
cis-1,2-Dichloroethene	640	100	ug/L	100	09/21/20	MH	SW8260C
cis-1,3-Dichloropropene	ND	50	ug/L	100	09/21/20	MH	SW8260C
Dibromochloromethane	ND	50	ug/L	100	09/21/20	MH	SW8260C
Dibromomethane	ND	50	ug/L	100	09/21/20	MH	SW8260C
Dichlorodifluoromethane	ND	100	ug/L	100	09/21/20	MH	SW8260C
Ethylbenzene	ND	100	ug/L	100	09/21/20	MH	SW8260C
Hexachlorobutadiene	ND	50	ug/L	100	09/21/20	MH	SW8260C
Isopropylbenzene	ND	100	ug/L	100	09/21/20	MH	SW8260C
m&p-Xylene	ND	100	ug/L	100	09/21/20	MH	SW8260C
Methyl ethyl ketone	ND	500	ug/L	100	09/21/20	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	70	ug/L	100	09/21/20	MH	SW8260C
Methylene chloride	ND	100	ug/L	100	09/21/20	MH	SW8260C
Naphthalene	ND	100	ug/L	100	09/21/20	MH	SW8260C
n-Butylbenzene	ND	100	ug/L	100	09/21/20	MH	SW8260C
n-Propylbenzene	ND	100	ug/L	100	09/21/20	MH	SW8260C
o-Xylene	ND	100	ug/L	100	09/21/20	MH	SW8260C
p-Isopropyltoluene	ND	100	ug/L	100	09/21/20	MH	SW8260C
sec-Butylbenzene	ND	100	ug/L	100	09/21/20	MH	SW8260C
Styrene	ND	100	ug/L	100	09/21/20	MH	SW8260C
tert-Butylbenzene	ND	100	ug/L	100	09/21/20	MH	SW8260C
Tetrachloroethene	5900	100	ug/L	100	09/21/20	MH	SW8260C
Tetrahydrofuran (THF)	ND	250	ug/L	100	09/21/20	MH	SW8260C
Toluene	ND	100	ug/L	100	09/21/20	MH	SW8260C
trans-1,2-Dichloroethene	120	100	ug/L	100	09/21/20	MH	SW8260C
trans-1,3-Dichloropropene	ND	50	ug/L	100	09/21/20	MH	SW8260C
Trichloroethene	6500	100	ug/L	100	09/21/20	MH	SW8260C
Trichlorofluoromethane	ND	100	ug/L	100	09/21/20	MH	SW8260C
Trichlorotrifluoroethane	ND	100	ug/L	100	09/21/20	MH	SW8260C
Vinyl chloride	76	50	ug/L	100	09/21/20	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4 (100x)	100		%	100	09/21/20	MH	70 - 130 %
% Bromofluorobenzene (100x)	96		%	100	09/21/20	MH	70 - 130 %
% Dibromofluoromethane (100x)	97		%	100	09/21/20	MH	70 - 130 %
% Toluene-d8 (100x)	97		%	100	09/21/20	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	10000	ug/L	100	09/21/20	MH	SW8260C (OXY)
Diethyl ether	ND	100	ug/L	100	09/21/20	MH	SW8260C (OXY)

Project ID: LOCKHEED WILMINGTON 60552044.19 Phoenix I.D.: CG77565

Client ID: 20A-AE28R4-091420-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	
Di-isopropyl ether	ND	100	ug/L	100	09/21/20	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	100	ug/L	100	09/21/20	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	100	ug/L	100	09/21/20	MH	SW8260C (OXY)

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

Volatile Comment:
Elevated reporting limits for volatiles due to the presence of target and/or non-target compounds.

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.



Phyllis Shiller, Laboratory Director

September 23, 2020

Reviewed and Released by: Greg Lawrence, Assistant Lab Director

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

September 23, 2020

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		09/14/20	14:55
Location Code:	AECOM-WILMINGTN	Received by:	B	09/15/20	16:02
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	127680				

Laboratory Data

SDG ID: GCG77564
Phoenix ID: CG77566

Project ID: LOCKHEED WILMINGTON 60552044.19
Client ID: 20A-AE23R-091420-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
EPH Extraction	Completed				09/17/20	JS/JS	SW3510C
MA Petroleum Hydrocarbon (EPH)	Completed				09/15/20		MADEP EPH-04
Semi-Volatile Extraction	Completed				09/18/20	P/CG	SW3520C
MA Petroleum Hydrocarbon (VPH)	Completed				09/21/20	RM	MADEP VPH04
Volatiles							
1,1,1,2-Tetrachloroethane	ND	500	ug/L	1000	09/21/20	MH	SW8260C
1,1,1-Trichloroethane	1000	1000	ug/L	1000	09/21/20	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	500	ug/L	1000	09/21/20	MH	SW8260C
1,1,2-Trichloroethane	ND	500	ug/L	1000	09/21/20	MH	SW8260C
1,1-Dichloroethane	730	500	ug/L	1000	09/21/20	MH	SW8260C
1,1-Dichloroethene	640	500	ug/L	1000	09/21/20	MH	SW8260C
1,1-Dichloropropene	ND	1000	ug/L	1000	09/21/20	MH	SW8260C
1,2,3-Trichlorobenzene	ND	500	ug/L	1000	09/21/20	MH	SW8260C
1,2,3-Trichloropropane	ND	500	ug/L	1000	09/21/20	MH	SW8260C
1,2,4-Trichlorobenzene	ND	500	ug/L	1000	09/21/20	MH	SW8260C
1,2,4-Trimethylbenzene	ND	500	ug/L	1000	09/21/20	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	500	ug/L	1000	09/21/20	MH	SW8260C
1,2-Dibromoethane	ND	500	ug/L	1000	09/21/20	MH	SW8260C
1,2-Dichlorobenzene	ND	600	ug/L	1000	09/21/20	MH	SW8260C
1,2-Dichloroethane	ND	500	ug/L	1000	09/21/20	MH	SW8260C
1,2-Dichloropropane	ND	500	ug/L	1000	09/21/20	MH	SW8260C
1,3,5-Trimethylbenzene	ND	500	ug/L	1000	09/21/20	MH	SW8260C
1,3-Dichlorobenzene	ND	500	ug/L	1000	09/21/20	MH	SW8260C
1,3-Dichloropropane	ND	500	ug/L	1000	09/21/20	MH	SW8260C
1,4-Dichlorobenzene	ND	500	ug/L	1000	09/21/20	MH	SW8260C
2,2-Dichloropropane	ND	1000	ug/L	1000	09/21/20	MH	SW8260C
2-Chlorotoluene	ND	500	ug/L	1000	09/21/20	MH	SW8260C

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	
2-Hexanone	ND	5000	ug/L	1000	09/21/20	MH	SW8260C
4-Chlorotoluene	ND	500	ug/L	1000	09/21/20	MH	SW8260C
4-Methyl-2-pentanone	ND	5000	ug/L	1000	09/21/20	MH	SW8260C
Acetone	ND	6300	ug/L	1000	09/21/20	MH	SW8260C
Benzene	ND	500	ug/L	1000	09/21/20	MH	SW8260C
Bromobenzene	ND	500	ug/L	1000	09/21/20	MH	SW8260C
Bromochloromethane	ND	500	ug/L	1000	09/21/20	MH	SW8260C
Bromodichloromethane	ND	500	ug/L	1000	09/21/20	MH	SW8260C
Bromoform	ND	500	ug/L	1000	09/21/20	MH	SW8260C
Bromomethane	ND	500	ug/L	1000	09/21/20	MH	SW8260C
Carbon Disulfide	ND	810	ug/L	1000	09/21/20	MH	SW8260C
Carbon tetrachloride	ND	500	ug/L	1000	09/21/20	MH	SW8260C
Chlorobenzene	ND	500	ug/L	1000	09/21/20	MH	SW8260C
Chloroethane	ND	1000	ug/L	1000	09/21/20	MH	SW8260C
Chloroform	ND	500	ug/L	1000	09/21/20	MH	SW8260C
Chloromethane	ND	500	ug/L	1000	09/21/20	MH	SW8260C
cis-1,2-Dichloroethene	ND	500	ug/L	1000	09/21/20	MH	SW8260C
cis-1,3-Dichloropropene	ND	500	ug/L	1000	09/21/20	MH	SW8260C
Dibromochloromethane	ND	500	ug/L	1000	09/21/20	MH	SW8260C
Dibromomethane	ND	500	ug/L	1000	09/21/20	MH	SW8260C
Dichlorodifluoromethane	ND	500	ug/L	1000	09/21/20	MH	SW8260C
Ethylbenzene	ND	700	ug/L	1000	09/21/20	MH	SW8260C
Hexachlorobutadiene	ND	500	ug/L	1000	09/21/20	MH	SW8260C
Isopropylbenzene	ND	500	ug/L	1000	09/21/20	MH	SW8260C
m&p-Xylene	ND	1000	ug/L	1000	09/21/20	MH	SW8260C
Methyl ethyl ketone	ND	5000	ug/L	1000	09/21/20	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	500	ug/L	1000	09/21/20	MH	SW8260C
Methylene chloride	ND	1000	ug/L	1000	09/21/20	MH	SW8260C
Naphthalene	ND	1000	ug/L	1000	09/21/20	MH	SW8260C
n-Butylbenzene	ND	1000	ug/L	1000	09/21/20	MH	SW8260C
n-Propylbenzene	ND	660	ug/L	1000	09/21/20	MH	SW8260C
o-Xylene	ND	1000	ug/L	1000	09/21/20	MH	SW8260C
p-Isopropyltoluene	ND	1000	ug/L	1000	09/21/20	MH	SW8260C
sec-Butylbenzene	ND	1000	ug/L	1000	09/21/20	MH	SW8260C
Styrene	ND	500	ug/L	1000	09/21/20	MH	SW8260C
tert-Butylbenzene	ND	690	ug/L	1000	09/21/20	MH	SW8260C
Tetrachloroethene	54000	1000	ug/L	1000	09/21/20	MH	SW8260C
Tetrahydrofuran (THF)	ND	2500	ug/L	1000	09/21/20	MH	SW8260C
Toluene	3300	1000	ug/L	1000	09/21/20	MH	SW8260C
trans-1,2-Dichloroethene	ND	500	ug/L	1000	09/21/20	MH	SW8260C
trans-1,3-Dichloropropene	ND	500	ug/L	1000	09/21/20	MH	SW8260C
Trichloroethene	130000	5000	ug/L	5000	09/22/20	MH	SW8260C
Trichlorofluoromethane	ND	1000	ug/L	1000	09/21/20	MH	SW8260C
Trichlorotrifluoroethane	ND	1000	ug/L	1000	09/21/20	MH	SW8260C
Vinyl chloride	ND	500	ug/L	1000	09/21/20	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4 (1000x)	100		%	1000	09/21/20	MH	70 - 130 %
% Bromofluorobenzene (1000x)	95		%	1000	09/21/20	MH	70 - 130 %
% Dibromofluoromethane (1000x)	97		%	1000	09/21/20	MH	70 - 130 %

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	
% Toluene-d8 (1000x)	95		%	1000	09/21/20	MH	70 - 130 %
% 1,2-dichlorobenzene-d4 (5000x)	99		%	5000	09/22/20	MH	70 - 130 %
% Bromofluorobenzene (5000x)	96		%	5000	09/22/20	MH	70 - 130 %
% Dibromofluoromethane (5000x)	95		%	5000	09/22/20	MH	70 - 130 %
% Toluene-d8 (5000x)	101		%	5000	09/22/20	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	100000	ug/L	1000	09/21/20	MH	SW8260C (OXY)
Diethyl ether	ND	1000	ug/L	1000	09/21/20	MH	SW8260C (OXY)
Di-isopropyl ether	ND	1000	ug/L	1000	09/21/20	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	1000	ug/L	1000	09/21/20	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	1000	ug/L	1000	09/21/20	MH	SW8260C (OXY)
Semivolatiles by SIM, PAH							
2-Methylnaphthalene	ND	0.47	ug/L	1	09/21/20	WB	SW8270D (SIM)
Acenaphthene	ND	0.47	ug/L	1	09/21/20	WB	SW8270D (SIM)
Acenaphthylene	ND	0.09	ug/L	1	09/21/20	WB	SW8270D (SIM)
Anthracene	ND	0.09	ug/L	1	09/21/20	WB	SW8270D (SIM)
Benz(a)anthracene	ND	0.09	ug/L	1	09/21/20	WB	SW8270D (SIM)
Benzo(a)pyrene	ND	0.19	ug/L	1	09/21/20	WB	SW8270D (SIM)
Benzo(b)fluoranthene	ND	0.09	ug/L	1	09/21/20	WB	SW8270D (SIM)
Benzo(ghi)perylene	ND	0.02	ug/L	1	09/21/20	WB	SW8270D (SIM)
Benzo(k)fluoranthene	ND	0.09	ug/L	1	09/21/20	WB	SW8270D (SIM)
Chrysene	ND	0.05	ug/L	1	09/21/20	WB	SW8270D (SIM)
Dibenz(a,h)anthracene	ND	0.02	ug/L	1	09/21/20	WB	SW8270D (SIM)
Fluoranthene	ND	0.47	ug/L	1	09/21/20	WB	SW8270D (SIM)
Fluorene	ND	0.09	ug/L	1	09/21/20	WB	SW8270D (SIM)
Indeno(1,2,3-cd)pyrene	ND	0.09	ug/L	1	09/21/20	WB	SW8270D (SIM)
Naphthalene	0.71	0.47	ug/L	1	09/21/20	WB	SW8270D (SIM)
Phenanthrene	ND	0.47	ug/L	1	09/21/20	WB	SW8270D (SIM)
Pyrene	ND	0.07	ug/L	1	09/21/20	WB	SW8270D (SIM)
QA/QC Surrogates							
% 2-Fluorobiphenyl	50		%	1	09/21/20	WB	40 - 140 %
% Nitrobenzene-d5	73		%	1	09/21/20	WB	40 - 140 %
% Terphenyl-d14	70		%	1	09/21/20	WB	40 - 140 %
1,4-dioxane							
1,4-dioxane	ND	0.20	ug/l	1	09/18/20	AW	SW8270DSIM
QA/QC Surrogates							
% 1,4-dioxane-d8	74		%	1	09/18/20	AW	40 - 140 %
Extraction for 1,4-Dioxane	Completed				09/17/20	S/S	
MA EPH Aliphatic/Aromatic Ranges							
C11-C22 Aromatic Hydrocarbons 1,2*	ND	200	ug/L	1	09/18/20	AW	MAEPH 5/2004
C11-C22 Aromatic Hydrocarbons Unadj	ND	200	ug/L	1	09/18/20	AW	MAEPH 5/2004
C19-C36 Aliphatic Hydrocarbons 1*	ND	200	ug/L	1	09/18/20	AW	MAEPH 5/2004
C9-C18 Aliphatic Hydrocarbons 1*	ND	200	ug/L	1	09/18/20	AW	MAEPH 5/2004
Total TPH 1,2*	ND	200	ug/L	1	09/18/20	AW	MAEPH 5/2004
QA/QC Surrogates							
% 1-chlorooctadecane (aliphatic)	86		%	1	09/18/20	AW	40 - 140 %

Ver 1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	
% 2-Bromonaphthalene (Fractionation)	91		%	1	09/18/20	AW	40 - 140 %
% 2-Fluorobiphenyl (Fractionation)	105		%	1	09/18/20	AW	40 - 140 %
% o-terphenyl (aromatic)	88		%	1	09/18/20	AW	40 - 140 %

MA Volatile Petroleum Hydrocarbons (VPH)

Unadjusted C5-C8 Aliphatics (*1)	61000	2000	ug/L	20	09/21/20	RM	MA VPH 5/2004
Unadjusted C9-C12 Aliphatics (*1)	ND	2000	ug/L	20	09/21/20	RM	MA VPH 5/2004
C5-C8 Aliphatic Hydrocarbons *1,2	57000	2000	ug/L	20	09/18/20	RM	MA VPH 5/2004
C9-C12 Aliphatic Hydrocarbons *1,3	ND	2000	ug/L	20	09/21/20	RM	MA VPH 5/2004
C9-C10 Aromatic Hydrocarbons *1	ND	2000	ug/L	20	09/21/20	RM	MA VPH 5/2004
Benzene	ND	20	ug/L	20	09/21/20	RM	MA VPH 5/2004
Ethyl Benzene	37	20	ug/L	20	09/21/20	RM	MA VPH 5/2004
MTBE	ND	20	ug/L	20	09/21/20	RM	MA VPH 5/2004
Naphthalene	ND	100	ug/L	20	09/21/20	RM	MA VPH 5/2004
Toluene	3900	400	ug/L	400	09/18/20	RM	MA VPH 5/2004
m,p-Xylenes	ND	40	ug/L	20	09/21/20	RM	MA VPH 5/2004
o-Xylene	ND	20	ug/L	20	09/21/20	RM	MA VPH 5/2004
QA/QC Surrogates							
% 2,5-Dibromotoluene (FID)	101		%	20	09/21/20	RM	70 - 130 %
% 2,5-Dibromotoluene (PID)	98		%	20	09/21/20	RM	70 - 130 %

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

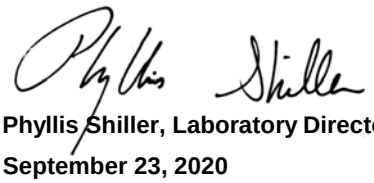
Comments:

MAEPH:
1* Hydrocarbon range data exclude concentrations of any surrogate(s) and/or internal standards eluting in that range.
2* C11-C12 Aromatic Hydrocarbons exclude the concentration of Target PAH analytes eluting in that range.

VPH:
*1 Range data exclude conc.s of any surrogate(s) and/or Int. std.s eluting in that range.
*2 C5-C8 and C9-C12 Aliphatic exclude the conc. of Target Analytes in that range.
*3 C9-C12 Aliphatic also exclude C9-C10 Aromatic Hydrocarbon

Volatile Comment:
Elevated reporting limits for volatiles due to the presence of target and/or non-target compounds.

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.



Phyllis Shiller, Laboratory Director
September 23, 2020
Reviewed and Released by: Greg Lawrence, Assistant Lab Director

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

September 23, 2020

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		09/15/20	12:10
Location Code:	AECOM-WILMINGTN	Received by:	B	09/15/20	16:02
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	127680				

Laboratory Data

SDG ID: GCG77564
Phoenix ID: CG77567

Project ID: LOCKHEED WILMINGTON 60552044.19
Client ID: 20A-PS1D-091520-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Volatiles							
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
1,1,1-Trichloroethane	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L	1	09/22/20	MH	SW8260C
1,1,2-Trichloroethane	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
1,1-Dichloroethane	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
1,1-Dichloroethene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
1,1-Dichloropropene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
1,2,3-Trichlorobenzene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
1,2,3-Trichloropropane	ND	0.50	ug/L	1	09/22/20	MH	SW8260C
1,2,4-Trichlorobenzene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
1,2,4-Trimethylbenzene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	0.50	ug/L	1	09/22/20	MH	SW8260C
1,2-Dibromoethane	ND	0.50	ug/L	1	09/22/20	MH	SW8260C
1,2-Dichlorobenzene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
1,2-Dichloroethane	ND	0.60	ug/L	1	09/22/20	MH	SW8260C
1,2-Dichloropropane	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
1,3,5-Trimethylbenzene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
1,3-Dichlorobenzene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
1,3-Dichloropropane	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
1,4-Dichlorobenzene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
2,2-Dichloropropane	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
2-Chlorotoluene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
2-Hexanone	ND	5.0	ug/L	1	09/22/20	MH	SW8260C
4-Chlorotoluene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
4-Methyl-2-pentanone	ND	5.0	ug/L	1	09/22/20	MH	SW8260C
Acetone	ND	25	ug/L	1	09/22/20	MH	SW8260C

Project ID: LOCKHEED WILMINGTON 60552044.19 Phoenix I.D.: CG77567

Client ID: 20A-PS1D-091520-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	
Benzene	ND	0.70	ug/L	1	09/22/20	MH	SW8260C
Bromobenzene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
Bromochloromethane	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
Bromodichloromethane	ND	0.50	ug/L	1	09/22/20	MH	SW8260C
Bromoform	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
Bromomethane	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
Carbon Disulfide	ND	5.0	ug/L	1	09/22/20	MH	SW8260C
Carbon tetrachloride	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
Chlorobenzene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
Chloroethane	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
Chloroform	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
Chloromethane	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
cis-1,2-Dichloroethene	7.4	1.0	ug/L	1	09/22/20	MH	SW8260C
cis-1,3-Dichloropropene	ND	0.40	ug/L	1	09/22/20	MH	SW8260C
Dibromochloromethane	ND	0.50	ug/L	1	09/22/20	MH	SW8260C
Dibromomethane	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
Dichlorodifluoromethane	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
Ethylbenzene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
Hexachlorobutadiene	ND	0.40	ug/L	1	09/22/20	MH	SW8260C
Isopropylbenzene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
m&p-Xylene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
Methyl ethyl ketone	ND	5.0	ug/L	1	09/22/20	MH	SW8260C
Methyl t-butyl ether (MTBE)	2.5	1.0	ug/L	1	09/22/20	MH	SW8260C
Methylene chloride	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
Naphthalene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
n-Butylbenzene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
n-Propylbenzene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
o-Xylene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
p-Isopropyltoluene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
sec-Butylbenzene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
Styrene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
tert-Butylbenzene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
Tetrachloroethene	3.0	1.0	ug/L	1	09/22/20	MH	SW8260C
Tetrahydrofuran (THF)	ND	2.5	ug/L	1	09/22/20	MH	SW8260C
Toluene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
trans-1,2-Dichloroethene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
trans-1,3-Dichloropropene	ND	0.40	ug/L	1	09/22/20	MH	SW8260C
Trichloroethene	13	1.0	ug/L	1	09/22/20	MH	SW8260C
Trichlorofluoromethane	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
Trichlorotrifluoroethane	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
Vinyl chloride	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	98		%	1	09/22/20	MH	70 - 130 %
% Bromofluorobenzene	96		%	1	09/22/20	MH	70 - 130 %
% Dibromofluoromethane	96		%	1	09/22/20	MH	70 - 130 %
% Toluene-d8	102		%	1	09/22/20	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	100	ug/L	1	09/22/20	MH	SW8260C (OXY)
Diethyl ether	ND	1.0	ug/L	1	09/22/20	MH	SW8260C (OXY)

Ver 1

Project ID: LOCKHEED WILMINGTON 60552044.19 Phoenix I.D.: CG77567

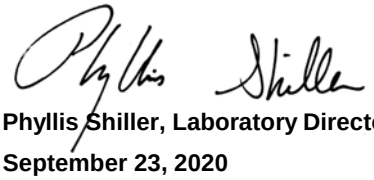
Client ID: 20A-PS1D-091520-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	
Di-isopropyl ether	ND	1.0	ug/L	1	09/22/20	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	1.0	ug/L	1	09/22/20	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	1.0	ug/L	1	09/22/20	MH	SW8260C (OXY)

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.



Phyllis Shiller, Laboratory Director

September 23, 2020

Reviewed and Released by: Greg Lawrence, Assistant Lab Director

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

September 23, 2020

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		09/15/20	12:00
Location Code:	AECOM-WILMINGTN	Received by:	B	09/15/20	16:02
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	127680				

Laboratory Data

SDG ID: GCG77564
Phoenix ID: CG77568

Project ID: LOCKHEED WILMINGTON 60552044.19
Client ID: 20A-PS2D-091520-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Volatiles							
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
1,1,1-Trichloroethane	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L	1	09/21/20	MH	SW8260C
1,1,2-Trichloroethane	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
1,1-Dichloroethane	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
1,1-Dichloroethene	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
1,1-Dichloropropene	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
1,2,3-Trichlorobenzene	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
1,2,3-Trichloropropane	ND	0.50	ug/L	1	09/21/20	MH	SW8260C
1,2,4-Trichlorobenzene	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
1,2,4-Trimethylbenzene	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	0.50	ug/L	1	09/21/20	MH	SW8260C
1,2-Dibromoethane	ND	0.50	ug/L	1	09/21/20	MH	SW8260C
1,2-Dichlorobenzene	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
1,2-Dichloroethane	ND	0.60	ug/L	1	09/21/20	MH	SW8260C
1,2-Dichloropropane	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
1,3,5-Trimethylbenzene	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
1,3-Dichlorobenzene	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
1,3-Dichloropropane	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
1,4-Dichlorobenzene	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
2,2-Dichloropropane	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
2-Chlorotoluene	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
2-Hexanone	ND	5.0	ug/L	1	09/21/20	MH	SW8260C
4-Chlorotoluene	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
4-Methyl-2-pentanone	ND	5.0	ug/L	1	09/21/20	MH	SW8260C
Acetone	ND	25	ug/L	1	09/21/20	MH	SW8260C

Project ID: LOCKHEED WILMINGTON 60552044.19 Phoenix I.D.: CG77568

Client ID: 20A-PS2D-091520-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	
Benzene	ND	0.70	ug/L	1	09/21/20	MH	SW8260C
Bromobenzene	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
Bromochloromethane	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
Bromodichloromethane	ND	0.50	ug/L	1	09/21/20	MH	SW8260C
Bromoform	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
Bromomethane	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
Carbon Disulfide	ND	5.0	ug/L	1	09/21/20	MH	SW8260C
Carbon tetrachloride	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
Chlorobenzene	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
Chloroethane	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
Chloroform	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
Chloromethane	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
cis-1,2-Dichloroethene	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
cis-1,3-Dichloropropene	ND	0.40	ug/L	1	09/21/20	MH	SW8260C
Dibromochloromethane	ND	0.50	ug/L	1	09/21/20	MH	SW8260C
Dibromomethane	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
Dichlorodifluoromethane	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
Ethylbenzene	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
Hexachlorobutadiene	ND	0.40	ug/L	1	09/21/20	MH	SW8260C
Isopropylbenzene	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
m&p-Xylene	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
Methyl ethyl ketone	ND	5.0	ug/L	1	09/21/20	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
Methylene chloride	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
Naphthalene	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
n-Butylbenzene	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
n-Propylbenzene	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
o-Xylene	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
p-Isopropyltoluene	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
sec-Butylbenzene	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
Styrene	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
tert-Butylbenzene	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
Tetrachloroethene	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
Tetrahydrofuran (THF)	ND	2.5	ug/L	1	09/21/20	MH	SW8260C
Toluene	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
trans-1,2-Dichloroethene	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
trans-1,3-Dichloropropene	ND	0.40	ug/L	1	09/21/20	MH	SW8260C
Trichloroethene	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
Trichlorofluoromethane	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
Trichlorotrifluoroethane	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
Vinyl chloride	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	99		%	1	09/21/20	MH	70 - 130 %
% Bromofluorobenzene	97		%	1	09/21/20	MH	70 - 130 %
% Dibromofluoromethane	96		%	1	09/21/20	MH	70 - 130 %
% Toluene-d8	102		%	1	09/21/20	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	100	ug/L	1	09/21/20	MH	SW8260C (OXY)
Diethyl ether	ND	1.0	ug/L	1	09/21/20	MH	SW8260C (OXY)

Ver 1

Project ID: LOCKHEED WILMINGTON 60552044.19 Phoenix I.D.: CG77568

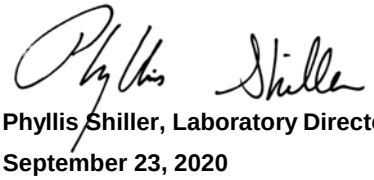
Client ID: 20A-PS2D-091520-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	
Di-isopropyl ether	ND	1.0	ug/L	1	09/21/20	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	1.0	ug/L	1	09/21/20	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	1.0	ug/L	1	09/21/20	MH	SW8260C (OXY)

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

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Phyllis Shiller, Laboratory Director

September 23, 2020

Reviewed and Released by: Greg Lawrence, Assistant Lab Director

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

September 23, 2020

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		09/15/20	11:20
Location Code:	AECOM-WILMINGTN	Received by:	B	09/15/20	16:02
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	127680				

Laboratory Data

SDG ID: GCG77564
Phoenix ID: CG77569

Project ID: LOCKHEED WILMINGTON 60552044.19
Client ID: 20A-TRC301R4-091520-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Arsenic	0.023	0.004	mg/L	1	09/17/20	TH	SW6010D
Arsenic (Dissolved)	0.019	0.004	mg/L	1	09/16/20	CPP	SW6010D
Iron (Dissolved)	7.69	0.011	mg/L	1	09/16/20	CPP	SW6010D
Manganese (Dissolved)	1.60	0.001	mg/L	1	09/16/20	CPP	SW6010D
Iron	8.18	0.010	mg/L	1	09/17/20	TH	SW6010D
Manganese	1.72	0.001	mg/L	1	09/17/20	TH	SW6010D
Chloride	153	6.0	mg/L	2	09/16/20	BS/GD	E300.0
Nitrite as Nitrogen	< 0.008	0.008	mg/L	2	09/16/20 22:31	BS/GD	E300.0
Nitrate as Nitrogen	< 0.05	0.05	mg/L	1	09/16/20 07:36	BS/GD	E300.0
Sulfate	18.6	3.0	mg/L	1	09/16/20	BS/GD	E300.0
Sulfide	0.19	0.05	mg/L	1	09/16/20	GD	SM4500S-D-11
Total Organic Carbon	1.6	1.0	mg/L	1	09/16/20	ARG/BJA	SM5310B-11
Dissolved Metals Preparation	Completed				09/15/20	AG	SW3005A
Total Metals Digestion	Completed				09/16/20	AG	
Volatiles							
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
1,1,1-Trichloroethane	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L	1	09/21/20	MH	SW8260C
1,1,2-Trichloroethane	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
1,1-Dichloroethane	1.2	1.0	ug/L	1	09/21/20	MH	SW8260C
1,1-Dichloroethene	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
1,1-Dichloropropene	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
1,2,3-Trichlorobenzene	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
1,2,3-Trichloropropane	ND	0.50	ug/L	1	09/21/20	MH	SW8260C
1,2,4-Trichlorobenzene	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
1,2,4-Trimethylbenzene	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	0.50	ug/L	1	09/21/20	MH	SW8260C

Project ID: LOCKHEED WILMINGTON 60552044.19 Phoenix I.D.: CG77569

Client ID: 20A-TRC301R4-091520-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	
1,2-Dibromoethane	ND	0.50	ug/L	1	09/21/20	MH	SW8260C
1,2-Dichlorobenzene	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
1,2-Dichloroethane	ND	0.60	ug/L	1	09/21/20	MH	SW8260C
1,2-Dichloropropane	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
1,3,5-Trimethylbenzene	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
1,3-Dichlorobenzene	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
1,3-Dichloropropane	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
1,4-Dichlorobenzene	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
2,2-Dichloropropane	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
2-Chlorotoluene	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
2-Hexanone	ND	5.0	ug/L	1	09/21/20	MH	SW8260C
4-Chlorotoluene	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
4-Methyl-2-pentanone	ND	5.0	ug/L	1	09/21/20	MH	SW8260C
Acetone	ND	25	ug/L	1	09/21/20	MH	SW8260C
Benzene	ND	0.70	ug/L	1	09/21/20	MH	SW8260C
Bromobenzene	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
Bromochloromethane	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
Bromodichloromethane	ND	0.50	ug/L	1	09/21/20	MH	SW8260C
Bromoform	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
Bromomethane	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
Carbon Disulfide	ND	5.0	ug/L	1	09/21/20	MH	SW8260C
Carbon tetrachloride	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
Chlorobenzene	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
Chloroethane	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
Chloroform	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
Chloromethane	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
cis-1,2-Dichloroethene	17	1.0	ug/L	1	09/21/20	MH	SW8260C
cis-1,3-Dichloropropene	ND	0.40	ug/L	1	09/21/20	MH	SW8260C
Dibromochloromethane	ND	0.50	ug/L	1	09/21/20	MH	SW8260C
Dibromomethane	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
Dichlorodifluoromethane	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
Ethylbenzene	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
Hexachlorobutadiene	ND	0.40	ug/L	1	09/21/20	MH	SW8260C
Isopropylbenzene	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
m&p-Xylene	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
Methyl ethyl ketone	ND	5.0	ug/L	1	09/21/20	MH	SW8260C
Methyl t-butyl ether (MTBE)	5.7	1.0	ug/L	1	09/21/20	MH	SW8260C
Methylene chloride	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
Naphthalene	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
n-Butylbenzene	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
n-Propylbenzene	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
o-Xylene	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
p-Isopropyltoluene	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
sec-Butylbenzene	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
Styrene	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
tert-Butylbenzene	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
Tetrachloroethene	10	1.0	ug/L	1	09/21/20	MH	SW8260C
Tetrahydrofuran (THF)	ND	2.5	ug/L	1	09/21/20	MH	SW8260C
Toluene	ND	1.0	ug/L	1	09/21/20	MH	SW8260C

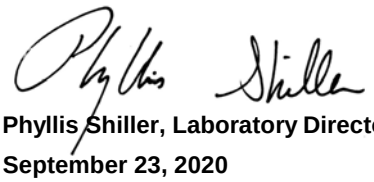
Project ID: LOCKHEED WILMINGTON 60552044.19 Phoenix I.D.: CG77569
Client ID: 20A-TRC301R4-091520-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	
trans-1,2-Dichloroethene	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
trans-1,3-Dichloropropene	ND	0.40	ug/L	1	09/21/20	MH	SW8260C
Trichloroethene	27	1.0	ug/L	1	09/21/20	MH	SW8260C
Trichlorofluoromethane	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
Trichlorotrifluoroethane	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
Vinyl chloride	8.8	1.0	ug/L	1	09/21/20	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	98		%	1	09/21/20	MH	70 - 130 %
% Bromofluorobenzene	96		%	1	09/21/20	MH	70 - 130 %
% Dibromofluoromethane	96		%	1	09/21/20	MH	70 - 130 %
% Toluene-d8	100		%	1	09/21/20	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	100	ug/L	1	09/21/20	MH	SW8260C (OXY)
Diethyl ether	ND	1.0	ug/L	1	09/21/20	MH	SW8260C (OXY)
Di-isopropyl ether	ND	1.0	ug/L	1	09/21/20	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	1.0	ug/L	1	09/21/20	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	1.0	ug/L	1	09/21/20	MH	SW8260C (OXY)

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

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Phyllis Shiller, Laboratory Director
September 23, 2020
Reviewed and Released by: Greg Lawrence, Assistant Lab Director

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

QA/QC Report

September 23, 2020

QA/QC Data

SDG I.D.: GCG77564

Parameter	Blank	Blk RL	Sample Result	Dup Result	Dup RPD	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits
QA/QC Batch 545618 (mg/L), QC Sample No: CG73922 (CG77569)													
ICP Metals - Aqueous													
Arsenic	BRL	0.004	<0.004	<0.004	NC	102	103	1.0	105			80 - 120	20
Iron	BRL	0.010	0.542	0.537	0.90	101	104	2.9	103			80 - 120	20
Manganese	BRL	0.001	0.025	0.024	4.10	102	103	1.0	102			80 - 120	20
Comment:													
Additional: LCS acceptance range is 80-120% MS acceptance range 75-125%.													
QA/QC Batch 545436 (mg/L), QC Sample No: CG76576 (CG77569)													
ICP Metals - Dissolved													
Arsenic	BRL	0.003	<0.004	<0.004	NC	83.1	84.0	1.1	86.5			80 - 120	20
Iron	BRL	0.006	0.876	0.873	0.30	86.1	86.8	0.8	87.0			80 - 120	20
Manganese	BRL	0.001	1.75	1.75	0	86.3	86.3	0.0	85.8			80 - 120	20
Comment:													
Additional: LCS acceptance range is 80-120% MS acceptance range 75-125%.													

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

QA/QC Report

September 23, 2020

QA/QC Data

SDG I.D.: GCG77564

Parameter	Blank	Blk RL	Sample Result	Dup Result	Dup RPD	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits
QA/QC Batch 545589 (mg/L), QC Sample No: CG76021 (CG77569)													
Sulfide	BRL	0.05	<0.05	<0.05	NC	96.5			79.3			90 - 110	20
QA/QC Batch 545736 (mg/L), QC Sample No: CG77828 (CG77569)													
Total Organic Carbon	BRL	1.0	1.1	1.1	NC	103			105			85 - 115	20
Comment:													
Additional: LCS acceptance range is 85-115% MS acceptance range 75-125%.													
QA/QC Batch 545652 (mg/L), QC Sample No: CG77233 (CG77569)													
Chloride	BRL	3.0	53.8	54.5	1.30	95.4			102			90 - 110	20
Nitrate as Nitrogen	BRL	0.05	0.32	0.35	9.00	95.9			109			90 - 110	20
Nitrite as Nitrogen	BRL	0.004	<0.004	<0.004	NC	93.3			103			90 - 110	20
Sulfate	BRL	3.0	7.8	7.8	NC	96.4			96.7			90 - 110	20
QA/QC Batch 545862 (mg/L), QC Sample No: CG78031 (CG77569)													
Chloride	BRL	3.0	193	195	1.00	94.8			101			90 - 110	20
Nitrate as Nitrogen	BRL	0.05	0.22	0.24	NC	97.6			105			90 - 110	20
Nitrite as Nitrogen	BRL	0.004	<0.020	<0.020	NC	92.8			97.2			90 - 110	20
Sulfate	BRL	3.0	24.4	24.2	0.80	93.6			97.2			90 - 110	20

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Tel. (860) 645-1102 Fax (860) 645-0823

QA/QC Report

September 23, 2020

QA/QC Data

SDG I.D.: GCG77564

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits	
QA/QC Batch 545752 (ug/L), QC Sample No: CG77566 (CG77566)											
MAEPH - Ground Water											
C9-C18 Aliphatic Hydrocarbons 1*	ND	100	43	59	31.4				40 - 140	25	r
C19-C36 Aliphatic Hydrocarbons 1*	ND	100	67	85	23.7				40 - 140	25	
C11-C22 Aromatic Hydrocarbons 1	ND	100	65	80	20.7				40 - 140	25	
C11-C22 Aromatic Hydrocarbons U	ND	100							40 - 140	25	
Total TPH 1,2*	ND	100	57	74	26.0				40 - 140	25	r
C9 - Nonane	ND	10	25	39	43.8				40 - 140	25	l,r
C-10 Decane	ND	10	32	49	42.0				40 - 140	25	l,r
C12 - Dodecane	ND	10	38	56	38.3				40 - 140	25	l,r
C14 - Tetradecane	ND	10	41	57	32.7				40 - 140	25	r
C16 - Hexadecane	ND	10	52	69	28.1				40 - 140	25	r
C18 - Octadecane	ND	10	68	86	23.4				40 - 140	25	
C19 - Nonadecane	ND	10	61	78	24.5				40 - 140	25	
C20 - Eicosane	ND	10	65	82	23.1				40 - 140	25	
C22 - Docosane	ND	10	66	82	21.6				40 - 140	25	
C24 - Tetracosane	ND	10	68	86	23.4				40 - 140	25	
C26 - Hexacosane	ND	10	72	90	22.2				40 - 140	25	
C28 - Octacosane	ND	10	71	89	22.5				40 - 140	25	
C30 - Tricotane	ND	10	71	90	23.6				40 - 140	25	
C36 - Hexatriacontane	ND	10	66	86	26.3				40 - 140	25	r
% 1-chlorooctadecane (aliphatic)	68	%	60	78	26.1				40 - 140	25	r
% o-terphenyl (aromatic)	89	%	73	89	19.8				40 - 140	25	
% 2-Fluorobiphenyl (Fractionation)	94	%	101	105	3.9				40 - 140	25	
% 2-Bromonaphthalene (Fractionati	87	%	82	87	5.9				40 - 140	25	
% 2-Methylnaphthalene BT		%	0	0	NC				0 - 5		
% Naphthalene BT		%	0	0	NC				0 - 5		

Comment:

A LCS and LCS Duplicate were performed instead of a matrix spike and matrix spike duplicate.

Additional EPH fractionation criteria: Breakthrough criteria (BT) is 0 to 5%

QA/QC Batch 545870 (ug/l), QC Sample No: CG79328 (CG77566)											
1,4dioxane - Ground Water											
1,4-dioxane	ND	0.20	95	96	1.0	96			40 - 140	30	
% 1,4-dioxane-d8	97	%	93	99	6.3	91			40 - 140	30	
QA/QC Batch 546057 (ug/L), QC Sample No: CG77566 (CG77566)											
Semivolatiles by SIM, PAH - Ground Water											
2-Methylnaphthalene	ND	0.50	51	76	39.4				40 - 140	20	r
Acenaphthene	ND	0.50	59	69	15.6				40 - 140	20	
Acenaphthylene	ND	0.10	57	61	6.8				40 - 140	20	
Anthracene	ND	0.10	64	72	11.8				40 - 140	20	
Benz(a)anthracene	ND	0.02	73	81	10.4				40 - 140	20	

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits	
Benzo(a)pyrene	ND	0.02	78	79	1.3				40 - 140	20	
Benzo(b)fluoranthene	ND	0.02	93	106	13.1				40 - 140	20	
Benzo(ghi)perylene	ND	0.02	81	89	9.4				40 - 140	20	
Benzo(k)fluoranthene	ND	0.02	62	69	10.7				40 - 140	20	
Chrysene	ND	0.02	70	78	10.8				40 - 140	20	
Dibenz(a,h)anthracene	ND	0.02	64	72	11.8				40 - 140	20	
Fluoranthene	ND	0.50	60	66	9.5				40 - 140	20	
Fluorene	ND	0.10	52	59	12.6				40 - 140	20	
Indeno(1,2,3-cd)pyrene	ND	0.02	64	69	7.5				40 - 140	20	
Naphthalene	ND	0.50	50	87	54.0				40 - 140	20	r
Phenanthrene	ND	0.06	59	68	14.2				40 - 140	20	
Pyrene	ND	0.07	68	76	11.1				40 - 140	20	
% 2-Fluorobiphenyl	50	%	50	59	16.5				40 - 140	20	
% Nitrobenzene-d5	58	%	58	78	29.4				40 - 140	20	r
% Terphenyl-d14	69	%	67	78	15.2				40 - 140	20	

Comment:

Additional 8270 criteria: 10% of compounds can be outside of acceptance criteria as long as recovery is at least 10%. (Acid surrogates acceptance range for aqueous samples: 10-110%, for soils 30-130%)

QA/QC Batch 546288 (ug/L), QC Sample No: CG77564 (CG77564, CG77565 (100X) , CG77566 (1000X) , CG77568, CG77569)

Volatiles - Ground Water

1,1,1,2-Tetrachloroethane	ND	1.0	92	91	1.1				70 - 130	30	
1,1,1-Trichloroethane	ND	1.0	84	82	2.4				70 - 130	30	
1,1,2,2-Tetrachloroethane	ND	0.50	89	93	4.4				70 - 130	30	
1,1,2-Trichloroethane	ND	1.0	86	86	0.0				70 - 130	30	
1,1-Dichloroethane	ND	1.0	87	83	4.7				70 - 130	30	
1,1-Dichloroethene	ND	1.0	93	81	13.8				70 - 130	30	
1,1-Dichloropropene	ND	1.0	91	88	3.4				70 - 130	30	
1,2,3-Trichlorobenzene	ND	1.0	92	92	0.0				70 - 130	30	
1,2,3-Trichloropropane	ND	1.0	82	85	3.6				70 - 130	30	
1,2,4-Trichlorobenzene	ND	1.0	92	92	0.0				70 - 130	30	
1,2,4-Trimethylbenzene	ND	1.0	93	90	3.3				70 - 130	30	
1,2-Dibromo-3-chloropropane	ND	1.0	88	93	5.5				70 - 130	30	
1,2-Dibromoethane	ND	1.0	89	91	2.2				70 - 130	30	
1,2-Dichlorobenzene	ND	1.0	91	89	2.2				70 - 130	30	
1,2-Dichloroethane	ND	1.0	87	87	0.0				70 - 130	30	
1,2-Dichloropropane	ND	1.0	90	87	3.4				70 - 130	30	
1,3,5-Trimethylbenzene	ND	1.0	94	92	2.2				70 - 130	30	
1,3-Dichlorobenzene	ND	1.0	92	89	3.3				70 - 130	30	
1,3-Dichloropropane	ND	1.0	88	88	0.0				70 - 130	30	
1,4-Dichlorobenzene	ND	1.0	91	91	0.0				70 - 130	30	
1,4-dioxane	ND	100	92	96	4.3				40 - 160	30	
2,2-Dichloropropane	ND	1.0	89	85	4.6				70 - 130	30	
2-Chlorotoluene	ND	1.0	92	90	2.2				70 - 130	30	
2-Hexanone	ND	5.0	85	90	5.7				40 - 160	30	
4-Chlorotoluene	ND	1.0	91	90	1.1				70 - 130	30	
4-Methyl-2-pentanone	ND	5.0	84	89	5.8				40 - 160	30	
Acetone	ND	5.0	83	84	1.2				40 - 160	30	
Benzene	ND	0.70	88	86	2.3				70 - 130	30	
Bromobenzene	ND	1.0	89	87	2.3				70 - 130	30	
Bromochloromethane	ND	1.0	83	83	0.0				70 - 130	30	
Bromodichloromethane	ND	0.50	90	88	2.2				70 - 130	30	
Bromoform	ND	1.0	92	92	0.0				70 - 130	30	

QA/QC Data

SDG I.D.: GCG77564

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits
Bromomethane	ND	1.0	94	87	7.7				40 - 160	30
Carbon Disulfide	ND	1.0	94	79	17.3				70 - 130	30
Carbon tetrachloride	ND	1.0	98	82	17.8				70 - 130	30
Chlorobenzene	ND	1.0	90	88	2.2				70 - 130	30
Chloroethane	ND	1.0	93	80	15.0				70 - 130	30
Chloroform	ND	1.0	82	80	2.5				70 - 130	30
Chloromethane	ND	1.0	89	85	4.6				40 - 160	30
cis-1,2-Dichloroethene	ND	1.0	81	77	5.1				70 - 130	30
cis-1,3-Dichloropropene	ND	0.40	91	90	1.1				70 - 130	30
Dibromochloromethane	ND	0.50	95	94	1.1				70 - 130	30
Dibromomethane	ND	1.0	83	83	0.0				70 - 130	30
Dichlorodifluoromethane	ND	1.0	108	106	1.9				40 - 160	30
Di-isopropyl ether	ND	1.0	68	86	23.4				70 - 130	30
Ethyl ether	ND	1.0	90	80	11.8				70 - 130	30
Ethyl tert-butyl ether	ND	1.0	88	88	0.0				70 - 130	30
Ethylbenzene	ND	1.0	89	87	2.3				70 - 130	30
Hexachlorobutadiene	ND	0.40	94	92	2.2				70 - 130	30
Isopropylbenzene	ND	1.0	93	90	3.3				70 - 130	30
m&p-Xylene	ND	1.0	91	88	3.4				70 - 130	30
Methyl ethyl ketone	ND	5.0	77	87	12.2				40 - 160	30
Methyl t-butyl ether (MTBE)	ND	1.0	82	79	3.7				70 - 130	30
Methylene chloride	ND	1.0	91	79	14.1				70 - 130	30
Naphthalene	ND	1.0	92	98	6.3				70 - 130	30
n-Butylbenzene	ND	1.0	97	94	3.1				70 - 130	30
n-Propylbenzene	ND	1.0	94	91	3.2				70 - 130	30
o-Xylene	ND	1.0	93	89	4.4				70 - 130	30
p-Isopropyltoluene	ND	1.0	98	95	3.1				70 - 130	30
sec-Butylbenzene	ND	1.0	103	100	3.0				70 - 130	30
Styrene	ND	1.0	93	90	3.3				70 - 130	30
tert-amyl methyl ether	ND	1.0	92	91	1.1				70 - 130	30
tert-Butylbenzene	ND	1.0	96	92	4.3				70 - 130	30
Tetrachloroethene	ND	1.0	89	84	5.8				70 - 130	30
Tetrahydrofuran (THF)	ND	2.5	77	85	9.9				70 - 130	30
Toluene	ND	1.0	88	86	2.3				70 - 130	30
trans-1,2-Dichloroethene	ND	1.0	97	87	10.9				70 - 130	30
trans-1,3-Dichloropropene	ND	0.40	90	89	1.1				70 - 130	30
Trichloroethene	ND	1.0	88	86	2.3				70 - 130	30
Trichlorofluoromethane	ND	1.0	93	86	7.8				70 - 130	30
Trichlorotrifluoroethane	ND	1.0	90	85	5.7				70 - 130	30
Vinyl chloride	ND	1.0	98	92	6.3				70 - 130	30
% 1,2-dichlorobenzene-d4	97	%	98	99	1.0				70 - 130	30
% Bromofluorobenzene	96	%	101	100	1.0				70 - 130	30
% Dibromofluoromethane	93	%	93	93	0.0				70 - 130	30
% Toluene-d8	102	%	100	99	1.0				70 - 130	30

Comment:

A LCS and LCS Duplicate were performed instead of a matrix spike and matrix spike duplicate.

Additional 8260 criteria: 10% of compounds can be outside of acceptance criteria as long as recovery is 10%.

QA/QC Batch 546448 (ug/L), QC Sample No: CG80060 (CG77567)

Volatiles - Ground Water

1,1,1,2-Tetrachloroethane	ND	1.0	90	90	0.0				70 - 130	30
1,1,1-Trichloroethane	ND	1.0	83	85	2.4				70 - 130	30

QA/QC Data

SDG I.D.: GCG77564

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits
1,1,2,2-Tetrachloroethane	ND	0.50	103	107	3.8				70 - 130	30
1,1,2-Trichloroethane	ND	1.0	88	88	0.0				70 - 130	30
1,1-Dichloroethane	ND	1.0	84	81	3.6				70 - 130	30
1,1-Dichloroethene	ND	1.0	83	101	19.6				70 - 130	30
1,1-Dichloropropene	ND	1.0	89	89	0.0				70 - 130	30
1,2,3-Trichlorobenzene	ND	1.0	95	96	1.0				70 - 130	30
1,2,3-Trichloropropane	ND	1.0	97	97	0.0				70 - 130	30
1,2,4-Trichlorobenzene	ND	1.0	92	93	1.1				70 - 130	30
1,2,4-Trimethylbenzene	ND	1.0	91	93	2.2				70 - 130	30
1,2-Dibromo-3-chloropropane	ND	1.0	106	111	4.6				70 - 130	30
1,2-Dibromoethane	ND	1.0	95	97	2.1				70 - 130	30
1,2-Dichlorobenzene	ND	1.0	88	90	2.2				70 - 130	30
1,2-Dichloroethane	ND	1.0	89	90	1.1				70 - 130	30
1,2-Dichloropropane	ND	1.0	89	89	0.0				70 - 130	30
1,3,5-Trimethylbenzene	ND	1.0	92	94	2.2				70 - 130	30
1,3-Dichlorobenzene	ND	1.0	90	91	1.1				70 - 130	30
1,3-Dichloropropane	ND	1.0	94	95	1.1				70 - 130	30
1,4-Dichlorobenzene	ND	1.0	89	91	2.2				70 - 130	30
1,4-dioxane	ND	100	99	94	5.2				40 - 160	30
2,2-Dichloropropane	ND	1.0	85	86	1.2				70 - 130	30
2-Chlorotoluene	ND	1.0	90	91	1.1				70 - 130	30
2-Hexanone	ND	5.0	107	111	3.7				40 - 160	30
4-Chlorotoluene	ND	1.0	89	92	3.3				70 - 130	30
4-Methyl-2-pentanone	ND	5.0	105	106	0.9				40 - 160	30
Acetone	ND	5.0	95	117	20.8				40 - 160	30
Benzene	ND	0.70	87	88	1.1				70 - 130	30
Bromobenzene	ND	1.0	85	88	3.5				70 - 130	30
Bromochloromethane	ND	1.0	83	84	1.2				70 - 130	30
Bromodichloromethane	ND	0.50	86	88	2.3				70 - 130	30
Bromoform	ND	1.0	93	94	1.1				70 - 130	30
Bromomethane	ND	1.0	86	90	4.5				40 - 160	30
Carbon Disulfide	ND	1.0	80	105	27.0				70 - 130	30
Carbon tetrachloride	ND	1.0	95	97	2.1				70 - 130	30
Chlorobenzene	ND	1.0	89	89	0.0				70 - 130	30
Chloroethane	ND	1.0	75	94	22.5				70 - 130	30
Chloroform	ND	1.0	81	83	2.4				70 - 130	30
Chloromethane	ND	1.0	97	102	5.0				40 - 160	30
cis-1,2-Dichloroethene	ND	1.0	76	82	7.6				70 - 130	30
cis-1,3-Dichloropropene	ND	0.40	88	89	1.1				70 - 130	30
Dibromochloromethane	ND	0.50	95	95	0.0				70 - 130	30
Dibromomethane	ND	1.0	86	86	0.0				70 - 130	30
Dichlorodifluoromethane	ND	1.0	133	137	3.0				40 - 160	30
Di-isopropyl ether	ND	1.0	90	72	22.2				70 - 130	30
Ethyl ether	ND	1.0	86	108	22.7				70 - 130	30
Ethyl tert-butyl ether	ND	1.0	91	94	3.2				70 - 130	30
Ethylbenzene	ND	1.0	88	89	1.1				70 - 130	30
Hexachlorobutadiene	ND	0.40	92	94	2.2				70 - 130	30
Isopropylbenzene	ND	1.0	89	92	3.3				70 - 130	30
m&p-Xylene	ND	1.0	90	90	0.0				70 - 130	30
Methyl ethyl ketone	ND	5.0	107	110	2.8				40 - 160	30
Methyl t-butyl ether (MTBE)	ND	1.0	87	102	15.9				70 - 130	30
Methylene chloride	ND	1.0	78	99	23.7				70 - 130	30
Naphthalene	ND	1.0	107	108	0.9				70 - 130	30

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits	
n-Butylbenzene	ND	1.0	97	99	2.0				70 - 130	30	
n-Propylbenzene	ND	1.0	90	93	3.3				70 - 130	30	
o-Xylene	ND	1.0	91	91	0.0				70 - 130	30	
p-Isopropyltoluene	ND	1.0	94	97	3.1				70 - 130	30	
sec-Butylbenzene	ND	1.0	100	102	2.0				70 - 130	30	
Styrene	ND	1.0	92	93	1.1				70 - 130	30	
tert-amyl methyl ether	ND	1.0	94	95	1.1				70 - 130	30	
tert-Butylbenzene	ND	1.0	92	94	2.2				70 - 130	30	
Tetrachloroethene	ND	1.0	85	86	1.2				70 - 130	30	
Tetrahydrofuran (THF)	ND	2.5	104	105	1.0				70 - 130	30	
Toluene	ND	1.0	86	86	0.0				70 - 130	30	
trans-1,2-Dichloroethene	ND	1.0	85	106	22.0				70 - 130	30	
trans-1,3-Dichloropropene	ND	0.40	89	90	1.1				70 - 130	30	
Trichloroethene	ND	1.0	84	85	1.2				70 - 130	30	
Trichlorofluoromethane	ND	1.0	96	106	9.9				70 - 130	30	
Trichlorotrifluoroethane	ND	1.0	92	95	3.2				70 - 130	30	
Vinyl chloride	ND	1.0	99	107	7.8				70 - 130	30	
% 1,2-dichlorobenzene-d4	98	%	100	100	0.0				70 - 130	30	
% Bromofluorobenzene	96	%	100	101	1.0				70 - 130	30	
% Dibromofluoromethane	96	%	94	93	1.1				70 - 130	30	
% Toluene-d8	104	%	100	99	1.0				70 - 130	30	

Comment:

A LCS and LCS Duplicate were performed instead of a matrix spike and matrix spike duplicate.

Additional 8260 criteria: 10% of compounds can be outside of acceptance criteria as long as recovery is 10%.

QA/QC Batch 546580 (ug/L), QC Sample No: CG81121 (CG77566 (5000X))

Volatiles - Ground Water

Trichloroethene	ND	1.0	90	93	3.3				70 - 130	30	
% 1,2-dichlorobenzene-d4	97	%	99	99	0.0				70 - 130	30	
% Bromofluorobenzene	96	%	100	99	1.0				70 - 130	30	
% Dibromofluoromethane	99	%	92	94	2.2				70 - 130	30	
% Toluene-d8	103	%	100	99	1.0				70 - 130	30	

Comment:

A LCS and LCS Duplicate were performed instead of a matrix spike and matrix spike duplicate.

Additional 8260 criteria: 10% of compounds can be outside of acceptance criteria as long as recovery is 10%.

QA/QC Batch 546134 (ug/L), QC Sample No: CG76575 (CG77566 (400X))

Volatile Petroleum Hydrocarbons - Ground Water

Toluene	ND	1.0	95	96	1.0	94	96	2.1	70 - 130	20	

Comment:

A blank MS/MSD was analyzed with this batch.

QA/QC Batch 546208 (mg/Kg), QC Sample No: CG80941 (CG77566 (20X))

Volatile Petroleum Hydrocarbons

Benzene	ND	0.25	96	94	2.1	96	96	0.0	70 - 130	30	
C5-C8 Aliphatic Hydrocarbons *1,2	ND	5.0	96	94	2.1	91	92	1.1	70 - 130	30	
C9-C10 Aromatic Hydrocarbons *1	ND	1.7	103	101	2.0	102	102	0.0	70 - 130	30	
C9-C12 Aliphatic Hydrocarbons *1,	ND	5.0	97	98	1.0	96	95	1.0	70 - 130	30	
Ethyl Benzene	ND	0.25	97	95	2.1	97	97	0.0	70 - 130	30	
m,p-Xylenes	ND	0.25	98	96	2.1	97	97	0.0	70 - 130	30	
MTBE	ND	0.050	95	91	4.3	174	193	10.4	70 - 130	30	m
Naphthalene	ND	0.25	99	97	2.0	95	94	1.1	70 - 130	30	
o-Xylene	ND	0.25	96	94	2.1	96	95	1.0	70 - 130	30	

QA/QC Data

SDG I.D.: GCG77564

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits
Unadjusted C5-C8 Aliphatics (*1)	ND	5.0	96	94	2.1	91	92	1.1	70 - 130	30
Unadjusted C9-C12 Aliphatics (*1)	ND	5.0	97	98	1.0	96	95	1.0	70 - 130	30

Comment:

A blank MS/MSD was analyzed with this batch.

l = This parameter is outside laboratory LCS/LCSD specified recovery limits.
m = This parameter is outside laboratory MS/MSD specified recovery limits.
r = This parameter is outside laboratory RPD specified recovery limits.

If there are any questions regarding this data, please call Phoenix Client Services at extension 200.

RPD - Relative Percent Difference
LCS - Laboratory Control Sample
LCSD - Laboratory Control Sample Duplicate
MS - Matrix Spike
MS Dup - Matrix Spike Duplicate
NC - No Criteria
Intf - Interference

Phyllis Shiller, Laboratory Director
September 23, 2020

Wednesday, September 23, 2020

Criteria: MA: GW1, GW2, GW3

State: MA

Sample Criteria Exceedances Report

GCG77564 - AECOM-WILMINGTN

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units
CG77564	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.00033	0.00033	ug/L
CG77564	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.0075	0.0075	ug/L
CG77564	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.00075	0.00075	ug/L
CG77564	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	0.50	0.02	0.02	ug/L
CG77564	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	0.50	0.02	0.02	ug/L
CG77564	$MCPADD-WM	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	100	0.3	0.3	ug/L
CG77564	$MCPADD-WM	1,4-dioxane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	100	3	3	ug/L
CG77564	$MCPADD-WM	1,4-dioxane	MA / GROUNDWATER STANDARDS / GW-1	ND	100	0.3	0.3	ug/L
CG77565	$8260GWR-WI	Methyl ethyl ketone	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	500	38	38	ug/L
CG77565	$8260GWR-WI	cis-1,3-Dichloropropene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	50	0.47	0.47	ug/L
CG77565	$8260GWR-WI	Vinyl chloride	MA / Client Specified Criteria / LOCKHEED WILMINGTO	76	50	2	2	ug/L
CG77565	$8260GWR-WI	1,2-Dichloroethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	50	5	5	ug/L
CG77565	$8260GWR-WI	Dibromochloromethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	50	2	2	ug/L
CG77565	$8260GWR-WI	1,2-Dichloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	50	3	3	ug/L
CG77565	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	50	0.00033	0.00033	ug/L
CG77565	$8260GWR-WI	1,4-Dichlorobenzene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	50	5	5	ug/L
CG77565	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	50	0.0075	0.0075	ug/L
CG77565	$8260GWR-WI	cis-1,2-Dichloroethene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	640	100	20	20	ug/L
CG77565	$8260GWR-WI	Benzene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	50	5	5	ug/L
CG77565	$8260GWR-WI	trans-1,2-Dichloroethene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	120	100	80	80	ug/L
CG77565	$8260GWR-WI	1,2,3-Trichlorobenzene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	50	7	7	ug/L
CG77565	$8260GWR-WI	Bromoform	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	50	4	4	ug/L
CG77565	$8260GWR-WI	2-Hexanone	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	500	38	38	ug/L
CG77565	$8260GWR-WI	4-Methyl-2-pentanone	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	500	350	350	ug/L
CG77565	$8260GWR-WI	Bromodichloromethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	50	3	3	ug/L
CG77565	$8260GWR-WI	Carbon tetrachloride	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	50	2	2	ug/L
CG77565	$8260GWR-WI	1,1-Dichloroethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	78	70	70	70	ug/L
CG77565	$8260GWR-WI	Methylene chloride	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	100	5	5	ug/L
CG77565	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	50	0.00075	0.00075	ug/L
CG77565	$8260GWR-WI	1,1,2-Trichloroethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	50	5	5	ug/L
CG77565	$8260GWR-WI	1,1,2,2-Tetrachloroethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	50	2	2	ug/L
CG77565	$8260GWR-WI	Hexachlorobutadiene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	50	0.6	0.6	ug/L
CG77565	$8260GWR-WI	trans-1,3-Dichloropropene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	50	0.47	0.47	ug/L
CG77565	$8260GWR-WI	Dibromomethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	50	8.3	8.3	ug/L
CG77565	$8260GWR-WI	1,1,1,2-Tetrachloroethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	50	5	5	ug/L
CG77565	$8260GWR-WI	Trichloroethene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	6500	100	5	5	ug/L
CG77565	$8260GWR-WI	Bromomethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	50	7	7	ug/L
CG77565	$8260GWR-WI	Tetrachloroethene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	5900	100	5	5	ug/L
CG77565	$8260GWR-WI	Tetrachloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	5900	100	5	5	ug/L
CG77565	$8260GWR-WI	trans-1,2-Dichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	120	100	80	80	ug/L
CG77565	$8260GWR-WI	Bromodichloromethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	50	3	3	ug/L

Wednesday, September 23, 2020

Criteria: MA: GW1, GW2, GW3

State: MA

Sample Criteria Exceedances Report

GCG77564 - AECOM-WILMINGTN

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units
CG77565	$8260GWR-WI	Bromoform	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	50	4	4	ug/L
CG77565	$8260GWR-WI	Methylene chloride	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	100	5	5	ug/L
CG77565	$8260GWR-WI	Bromomethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	50	7	7	ug/L
CG77565	$8260GWR-WI	Carbon tetrachloride	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	50	2	2	ug/L
CG77565	$8260GWR-WI	Dibromochloromethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	50	2	2	ug/L
CG77565	$8260GWR-WI	cis-1,2-Dichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	640	100	20	20	ug/L
CG77565	$8260GWR-WI	trans-1,3-Dichloropropene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	50	0.5	0.5	ug/L
CG77565	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-1 (mg/l)	76	50	2	2	ug/L
CG77565	$8260GWR-WI	cis-1,3-Dichloropropene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	50	0.5	0.5	ug/L
CG77565	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	6500	100	5	5	ug/L
CG77565	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-1 (mg/l)	76	50	2	2	ug/L
CG77565	$8260GWR-WI	Hexachlorobutadiene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	50	0.6	0.6	ug/L
CG77565	$8260GWR-WI	1,1,2-Trichloroethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	50	5	5	ug/L
CG77565	$8260GWR-WI	1,2-Dichloroethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	50	5	5	ug/L
CG77565	$8260GWR-WI	1,2-Dichloropropane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	50	3	3	ug/L
CG77565	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	50	0.02	0.02	ug/L
CG77565	$8260GWR-WI	Benzene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	50	5	5	ug/L
CG77565	$8260GWR-WI	1,1-Dichloroethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	78	70	70	70	ug/L
CG77565	$8260GWR-WI	1,1-Dichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	50	7	7	ug/L
CG77565	$8260GWR-WI	1,3-Dichlorobenzene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	50	40	40	ug/L
CG77565	$8260GWR-WI	1,1,1,2-Tetrachloroethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	50	5	5	ug/L
CG77565	$8260GWR-WI	1,1,2,2-Tetrachloroethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	50	2	2	ug/L
CG77565	$8260GWR-WI	4-Methyl-2-pentanone	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	500	350	350	ug/L
CG77565	$8260GWR-WI	1,4-Dichlorobenzene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	50	5	5	ug/L
CG77565	$8260GWR-WI	Bromomethane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	50	7	7	ug/L
CG77565	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	6500	100	5	5	ug/L
CG77565	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	50	2	2	ug/L
CG77565	$8260GWR-WI	cis-1,3-Dichloropropene	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	50	5	5	ug/L
CG77565	$8260GWR-WI	Tetrachloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	5900	100	50	50	ug/L
CG77565	$8260GWR-WI	Hexachlorobutadiene	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	50	1	1	ug/L
CG77565	$8260GWR-WI	Dibromochloromethane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	50	20	20	ug/L
CG77565	$8260GWR-WI	trans-1,3-Dichloropropene	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	50	5	5	ug/L
CG77565	$8260GWR-WI	1,2-Dichloroethane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	50	5	5	ug/L
CG77565	$8260GWR-WI	trans-1,2-Dichloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	120	100	80	80	ug/L
CG77565	$8260GWR-WI	1,1,2,2-Tetrachloroethane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	50	9	9	ug/L
CG77565	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-2 (mg/l)	76	50	2	2	ug/L
CG77565	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-2 (mg/l)	76	50	2	2	ug/L
CG77565	$8260GWR-WI	1,1,1,2-Tetrachloroethane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	50	10	10	ug/L
CG77565	$8260GWR-WI	Bromodichloromethane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	50	6	6	ug/L
CG77565	$8260GWR-WI	1,2-Dichloropropane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	50	3	3	ug/L
CG77565	$8260GWR-WI	Carbon tetrachloride	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	50	2	2	ug/L
CG77565	$8260GWR-WI	cis-1,2-Dichloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	640	100	20	20	ug/L

Wednesday, September 23, 2020

Criteria: MA: GW1, GW2, GW3

State: MA

Sample Criteria Exceedances Report

GCG77564 - AECOM-WILMINGTN

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units
CG77565	$8260GWR-WI	Bromodichloromethane	MA / GROUNDWATER STANDARDS / GW-1	ND	50	3	3	ug/L
CG77565	$8260GWR-WI	1,1,2,2-Tetrachloroethane	MA / GROUNDWATER STANDARDS / GW-1	ND	50	2	2	ug/L
CG77565	$8260GWR-WI	cis-1,2-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-1	640	100	70	70	ug/L
CG77565	$8260GWR-WI	Hexachlorobutadiene	MA / GROUNDWATER STANDARDS / GW-1	ND	50	0.6	0.6	ug/L
CG77565	$8260GWR-WI	1,1-Dichloroethane	MA / GROUNDWATER STANDARDS / GW-1	78	70	70	70	ug/L
CG77565	$8260GWR-WI	Bromoform	MA / GROUNDWATER STANDARDS / GW-1	ND	50	4	4	ug/L
CG77565	$8260GWR-WI	Bromomethane	MA / GROUNDWATER STANDARDS / GW-1	ND	50	10	10	ug/L
CG77565	$8260GWR-WI	trans-1,2-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-1	120	100	100	100	ug/L
CG77565	$8260GWR-WI	Vinyl chloride	MA / GROUNDWATER STANDARDS / GW-1	76	50	2	2	ug/L
CG77565	$8260GWR-WI	Methylene chloride	MA / GROUNDWATER STANDARDS / GW-1	ND	100	5	5	ug/L
CG77565	$8260GWR-WI	1,1,1,2-Tetrachloroethane	MA / GROUNDWATER STANDARDS / GW-1	ND	50	5	5	ug/L
CG77565	$8260GWR-WI	4-Methyl-2-pentanone	MA / GROUNDWATER STANDARDS / GW-1	ND	500	350	350	ug/L
CG77565	$8260GWR-WI	Benzene	MA / GROUNDWATER STANDARDS / GW-1	ND	50	5	5	ug/L
CG77565	$8260GWR-WI	Tetrachloroethene	MA / GROUNDWATER STANDARDS / GW-1	5900	100	5	5	ug/L
CG77565	$8260GWR-WI	1,4-Dichlorobenzene	MA / GROUNDWATER STANDARDS / GW-1	ND	50	5	5	ug/L
CG77565	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-1	6500	100	5	5	ug/L
CG77565	$8260GWR-WI	Dibromochloromethane	MA / GROUNDWATER STANDARDS / GW-1	ND	50	2	2	ug/L
CG77565	$8260GWR-WI	1,2-Dichloropropane	MA / GROUNDWATER STANDARDS / GW-1	ND	50	5	5	ug/L
CG77565	$8260GWR-WI	Carbon tetrachloride	MA / GROUNDWATER STANDARDS / GW-1	ND	50	5	5	ug/L
CG77565	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	50	0.02	0.02	ug/L
CG77565	$8260GWR-WI	1,1-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-1	ND	50	7	7	ug/L
CG77565	$8260GWR-WI	1,2-Dichloroethane	MA / GROUNDWATER STANDARDS / GW-1	ND	50	5	5	ug/L
CG77565	$8260GWR-WI	1,1,2-Trichloroethane	MA / GROUNDWATER STANDARDS / GW-1	ND	50	5	5	ug/L
CG77565	$8260GWR-WI	1,1,1,2-Tetrachloroethane	MA / GROUNDWATER STANDARDS / GW-2	ND	50	10	10	ug/L
CG77565	$8260GWR-WI	Tetrachloroethene	MA / GROUNDWATER STANDARDS / GW-2	5900	100	50	50	ug/L
CG77565	$8260GWR-WI	cis-1,2-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-2	640	100	20	20	ug/L
CG77565	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-2	6500	100	5	5	ug/L
CG77565	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-2	ND	50	2	2	ug/L
CG77565	$8260GWR-WI	Vinyl chloride	MA / GROUNDWATER STANDARDS / GW-2	76	50	2	2	ug/L
CG77565	$8260GWR-WI	1,2-Dichloroethane	MA / GROUNDWATER STANDARDS / GW-2	ND	50	5	5	ug/L
CG77565	$8260GWR-WI	1,2-Dichloropropane	MA / GROUNDWATER STANDARDS / GW-2	ND	50	3	3	ug/L
CG77565	$8260GWR-WI	Bromomethane	MA / GROUNDWATER STANDARDS / GW-2	ND	50	7	7	ug/L
CG77565	$8260GWR-WI	1,1,2,2-Tetrachloroethane	MA / GROUNDWATER STANDARDS / GW-2	ND	50	9	9	ug/L
CG77565	$8260GWR-WI	Bromodichloromethane	MA / GROUNDWATER STANDARDS / GW-2	ND	50	6	6	ug/L
CG77565	$8260GWR-WI	trans-1,2-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-2	120	100	80	80	ug/L
CG77565	$8260GWR-WI	Carbon tetrachloride	MA / GROUNDWATER STANDARDS / GW-2	ND	50	2	2	ug/L
CG77565	$8260GWR-WI	Dibromochloromethane	MA / GROUNDWATER STANDARDS / GW-2	ND	50	20	20	ug/L
CG77565	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-3	6500	100	5000	5000	ug/L
CG77565	$MCPADD-WM	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	10000	0.3	0.3	ug/L
CG77565	$MCPADD-WM	1,4-dioxane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10000	3	3	ug/L
CG77565	$MCPADD-WM	1,4-dioxane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	10000	6000	6000	ug/L
CG77565	$MCPADD-WM	1,4-dioxane	MA / GROUNDWATER STANDARDS / GW-1	ND	10000	0.3	0.3	ug/L

Wednesday, September 23, 2020

Criteria: MA: GW1, GW2, GW3

State: MA

Sample Criteria Exceedances Report

GCG77564 - AECOM-WILMINGTN

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units
CG77565	$MCPADD-WM	1,4-dioxane	MA / GROUNDWATER STANDARDS / GW-2	ND	10000	6000	6000	ug/L
CG77566	$8260GWR-WI	Bromodichloromethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	500	3	3	ug/L
CG77566	$8260GWR-WI	Bromoform	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	500	4	4	ug/L
CG77566	$8260GWR-WI	Bromomethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	500	7	7	ug/L
CG77566	$8260GWR-WI	1,3,5-Trimethylbenzene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	500	60	60	ug/L
CG77566	$8260GWR-WI	1,2,3-Trichlorobenzene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	500	7	7	ug/L
CG77566	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	500	0.00075	0.00075	ug/L
CG77566	$8260GWR-WI	Carbon tetrachloride	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	500	2	2	ug/L
CG77566	$8260GWR-WI	1,1-Dichloroethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	730	500	70	70	ug/L
CG77566	$8260GWR-WI	1,2,4-Trimethylbenzene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	500	56	56	ug/L
CG77566	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	500	0.00033	0.00033	ug/L
CG77566	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	500	0.0075	0.0075	ug/L
CG77566	$8260GWR-WI	1,1,2-Trichloroethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	500	5	5	ug/L
CG77566	$8260GWR-WI	1,2-Dichloroethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	500	5	5	ug/L
CG77566	$8260GWR-WI	1,1,2,2-Tetrachloroethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	500	2	2	ug/L
CG77566	$8260GWR-WI	1,2,4-Trichlorobenzene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	500	70	70	ug/L
CG77566	$8260GWR-WI	1,1,1-Trichloroethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	1000	1000	200	200	ug/L
CG77566	$8260GWR-WI	Bromochloromethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	500	83	83	ug/L
CG77566	$8260GWR-WI	1,3-Dichlorobenzene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	500	100	100	ug/L
CG77566	$8260GWR-WI	1,1,1,2-Tetrachloroethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	500	5	5	ug/L
CG77566	$8260GWR-WI	1,3-Dichloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	500	370	370	ug/L
CG77566	$8260GWR-WI	1,4-Dichlorobenzene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	500	5	5	ug/L
CG77566	$8260GWR-WI	2-Chlorotoluene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	500	240	240	ug/L
CG77566	$8260GWR-WI	2-Hexanone	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	5000	38	38	ug/L
CG77566	$8260GWR-WI	4-Chlorotoluene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	500	250	250	ug/L
CG77566	$8260GWR-WI	4-Methyl-2-pentanone	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	5000	350	350	ug/L
CG77566	$8260GWR-WI	Benzene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	500	5	5	ug/L
CG77566	$8260GWR-WI	Bromobenzene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	500	62	62	ug/L
CG77566	$8260GWR-WI	1,2-Dichloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	500	3	3	ug/L
CG77566	$8260GWR-WI	Naphthalene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	1000	140	140	ug/L
CG77566	$8260GWR-WI	Vinyl chloride	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	500	2	2	ug/L
CG77566	$8260GWR-WI	Trichloroethene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	130000	5000	5	5	ug/L
CG77566	$8260GWR-WI	trans-1,3-Dichloropropene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	500	0.47	0.47	ug/L
CG77566	$8260GWR-WI	trans-1,2-Dichloroethene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	500	80	80	ug/L
CG77566	$8260GWR-WI	Toluene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	3300	1000	1000	1000	ug/L
CG77566	$8260GWR-WI	Tetrachloroethene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	54000	1000	5	5	ug/L
CG77566	$8260GWR-WI	Styrene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	500	100	100	ug/L
CG77566	$8260GWR-WI	Methylene chloride	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	1000	5	5	ug/L
CG77566	$8260GWR-WI	Methyl t-butyl ether (MTBE)	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	500	70	70	ug/L
CG77566	$8260GWR-WI	Methyl ethyl ketone	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	5000	38	38	ug/L
CG77566	$8260GWR-WI	Isopropylbenzene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	500	450	450	ug/L

Wednesday, September 23, 2020

Criteria: MA: GW1, GW2, GW3

State: MA

Sample Criteria Exceedances Report

GCG77564 - AECOM-WILMINGTN

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units
CG77566	$8260GWR-WI	Hexachlorobutadiene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	500	0.6	0.6	ug/L
CG77566	$8260GWR-WI	Dichlorodifluoromethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	500	200	200	ug/L
CG77566	$8260GWR-WI	Dibromomethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	500	8.3	8.3	ug/L
CG77566	$8260GWR-WI	Chloroform	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	500	50	50	ug/L
CG77566	$8260GWR-WI	Dibromochloromethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	500	2	2	ug/L
CG77566	$8260GWR-WI	Chlorobenzene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	500	100	100	ug/L
CG77566	$8260GWR-WI	Chloromethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	500	190	190	ug/L
CG77566	$8260GWR-WI	cis-1,3-Dichloropropene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	500	0.47	0.47	ug/L
CG77566	$8260GWR-WI	cis-1,2-Dichloroethene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	500	20	20	ug/L
CG77566	$8260GWR-WI	1,1,1-Trichloroethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	1000	1000	200	200	ug/L
CG77566	$8260GWR-WI	Toluene	MA / CMR 310.40.1600 / GW-1 (mg/l)	3300	1000	1000	1000	ug/L
CG77566	$8260GWR-WI	1,1,2,2-Tetrachloroethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	500	2	2	ug/L
CG77566	$8260GWR-WI	1,2-Dichloroethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	500	5	5	ug/L
CG77566	$8260GWR-WI	Bromomethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	500	7	7	ug/L
CG77566	$8260GWR-WI	trans-1,2-Dichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	500	80	80	ug/L
CG77566	$8260GWR-WI	1,1,2-Trichloroethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	500	5	5	ug/L
CG77566	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	500	0.02	0.02	ug/L
CG77566	$8260GWR-WI	Chloroform	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	500	50	50	ug/L
CG77566	$8260GWR-WI	trans-1,3-Dichloropropene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	500	0.5	0.5	ug/L
CG77566	$8260GWR-WI	Tetrachloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	54000	1000	5	5	ug/L
CG77566	$8260GWR-WI	Chlorobenzene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	500	100	100	ug/L
CG77566	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	130000	5000	5	5	ug/L
CG77566	$8260GWR-WI	1,1-Dichloroethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	730	500	70	70	ug/L
CG77566	$8260GWR-WI	1,1-Dichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	640	500	7	7	ug/L
CG77566	$8260GWR-WI	1,2,4-Trichlorobenzene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	500	70	70	ug/L
CG77566	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	500	2	2	ug/L
CG77566	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	500	2	2	ug/L
CG77566	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	500	100	100	ug/L
CG77566	$8260GWR-WI	Carbon tetrachloride	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	500	2	2	ug/L
CG77566	$8260GWR-WI	Benzene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	500	5	5	ug/L
CG77566	$8260GWR-WI	Bromodichloromethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	500	3	3	ug/L
CG77566	$8260GWR-WI	Hexachlorobutadiene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	500	0.6	0.6	ug/L
CG77566	$8260GWR-WI	4-Methyl-2-pentanone	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	5000	350	350	ug/L
CG77566	$8260GWR-WI	cis-1,3-Dichloropropene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	500	0.5	0.5	ug/L
CG77566	$8260GWR-WI	2-Hexanone	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	5000	1000	1000	ug/L
CG77566	$8260GWR-WI	Methyl ethyl ketone	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	5000	500	500	ug/L
CG77566	$8260GWR-WI	Methyl ethyl ketone	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	5000	4000	4000	ug/L
CG77566	$8260GWR-WI	cis-1,2-Dichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	500	20	20	ug/L
CG77566	$8260GWR-WI	Methyl t-butyl ether (MTBE)	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	500	70	70	ug/L
CG77566	$8260GWR-WI	1,4-Dichlorobenzene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	500	5	5	ug/L
CG77566	$8260GWR-WI	Bromoform	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	500	4	4	ug/L
CG77566	$8260GWR-WI	Methylene chloride	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	1000	5	5	ug/L

Wednesday, September 23, 2020

Criteria: MA: GW1, GW2, GW3

State: MA

Sample Criteria Exceedances Report

GCG77564 - AECOM-WILMINGTN

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units
CG77566	$8260GWR-WI	1,3-Dichlorobenzene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	500	40	40	ug/L
CG77566	$8260GWR-WI	Styrene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	500	100	100	ug/L
CG77566	$8260GWR-WI	1,3,5-Trimethylbenzene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	500	100	100	ug/L
CG77566	$8260GWR-WI	1,1,1,2-Tetrachloroethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	500	5	5	ug/L
CG77566	$8260GWR-WI	Dibromochloromethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	500	2	2	ug/L
CG77566	$8260GWR-WI	1,2-Dichloropropane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	500	3	3	ug/L
CG77566	$8260GWR-WI	1,1,1,2-Tetrachloroethane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	500	10	10	ug/L
CG77566	$8260GWR-WI	1,1,2,2-Tetrachloroethane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	500	9	9	ug/L
CG77566	$8260GWR-WI	1,1-Dichloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	640	500	80	80	ug/L
CG77566	$8260GWR-WI	Hexachlorobutadiene	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	500	1	1	ug/L
CG77566	$8260GWR-WI	Bromodichloromethane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	500	6	6	ug/L
CG77566	$8260GWR-WI	Bromomethane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	500	7	7	ug/L
CG77566	$8260GWR-WI	Carbon tetrachloride	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	500	2	2	ug/L
CG77566	$8260GWR-WI	Chlorobenzene	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	500	200	200	ug/L
CG77566	$8260GWR-WI	Chloroform	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	500	50	50	ug/L
CG77566	$8260GWR-WI	cis-1,2-Dichloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	500	20	20	ug/L
CG77566	$8260GWR-WI	1,4-Dichlorobenzene	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	500	200	200	ug/L
CG77566	$8260GWR-WI	Dibromochloromethane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	500	20	20	ug/L
CG77566	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	500	2	2	ug/L
CG77566	$8260GWR-WI	Hexachlorobutadiene	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	500	50	50	ug/L
CG77566	$8260GWR-WI	Styrene	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	500	100	100	ug/L
CG77566	$8260GWR-WI	Tetrachloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	54000	1000	50	50	ug/L
CG77566	$8260GWR-WI	trans-1,2-Dichloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	500	80	80	ug/L
CG77566	$8260GWR-WI	trans-1,3-Dichloropropene	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	500	5	5	ug/L
CG77566	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	130000	5000	5	5	ug/L
CG77566	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	500	2	2	ug/L
CG77566	$8260GWR-WI	cis-1,3-Dichloropropene	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	500	5	5	ug/L
CG77566	$8260GWR-WI	1,2-Dichloroethane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	500	5	5	ug/L
CG77566	$8260GWR-WI	1,2,4-Trichlorobenzene	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	500	200	200	ug/L
CG77566	$8260GWR-WI	1,2-Dichloropropane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	500	3	3	ug/L
CG77566	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	500	2	2	ug/L
CG77566	$8260GWR-WI	Tetrachloroethene	MA / GROUNDWATER STANDARDS / GW-1	54000	1000	5	5	ug/L
CG77566	$8260GWR-WI	1,1,2,2-Tetrachloroethane	MA / GROUNDWATER STANDARDS / GW-1	ND	500	2	2	ug/L
CG77566	$8260GWR-WI	Dibromochloromethane	MA / GROUNDWATER STANDARDS / GW-1	ND	500	2	2	ug/L
CG77566	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	500	0.02	0.02	ug/L
CG77566	$8260GWR-WI	1,1,1,2-Tetrachloroethane	MA / GROUNDWATER STANDARDS / GW-1	ND	500	5	5	ug/L
CG77566	$8260GWR-WI	Hexachlorobutadiene	MA / GROUNDWATER STANDARDS / GW-1	ND	500	0.6	0.6	ug/L
CG77566	$8260GWR-WI	Methyl ethyl ketone	MA / GROUNDWATER STANDARDS / GW-1	ND	5000	4000	4000	ug/L
CG77566	$8260GWR-WI	Methyl t-butyl ether (MTBE)	MA / GROUNDWATER STANDARDS / GW-1	ND	500	70	70	ug/L
CG77566	$8260GWR-WI	Methylene chloride	MA / GROUNDWATER STANDARDS / GW-1	ND	1000	5	5	ug/L
CG77566	$8260GWR-WI	cis-1,2-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-1	ND	500	70	70	ug/L
CG77566	$8260GWR-WI	Styrene	MA / GROUNDWATER STANDARDS / GW-1	ND	500	100	100	ug/L

Wednesday, September 23, 2020

Criteria: MA: GW1, GW2, GW3

State: MA

Sample Criteria Exceedances Report

GCG77564 - AECOM-WILMINGTN

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units
CG77566	$8260GWR-WI	Toluene	MA / GROUNDWATER STANDARDS / GW-1	3300	1000	1000	1000	ug/L
CG77566	$8260GWR-WI	1,2,4-Trichlorobenzene	MA / GROUNDWATER STANDARDS / GW-1	ND	500	70	70	ug/L
CG77566	$8260GWR-WI	trans-1,2-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-1	ND	500	100	100	ug/L
CG77566	$8260GWR-WI	1,1-Dichloroethane	MA / GROUNDWATER STANDARDS / GW-1	730	500	70	70	ug/L
CG77566	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-1	130000	5000	5	5	ug/L
CG77566	$8260GWR-WI	1,1-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-1	640	500	7	7	ug/L
CG77566	$8260GWR-WI	1,4-Dichlorobenzene	MA / GROUNDWATER STANDARDS / GW-1	ND	500	5	5	ug/L
CG77566	$8260GWR-WI	Vinyl chloride	MA / GROUNDWATER STANDARDS / GW-1	ND	500	2	2	ug/L
CG77566	$8260GWR-WI	1,1,2-Trichloroethane	MA / GROUNDWATER STANDARDS / GW-1	ND	500	5	5	ug/L
CG77566	$8260GWR-WI	Carbon tetrachloride	MA / GROUNDWATER STANDARDS / GW-1	ND	500	5	5	ug/L
CG77566	$8260GWR-WI	1,2-Dichloropropane	MA / GROUNDWATER STANDARDS / GW-1	ND	500	5	5	ug/L
CG77566	$8260GWR-WI	Chloroform	MA / GROUNDWATER STANDARDS / GW-1	ND	500	70	70	ug/L
CG77566	$8260GWR-WI	Bromodichloromethane	MA / GROUNDWATER STANDARDS / GW-1	ND	500	3	3	ug/L
CG77566	$8260GWR-WI	Benzene	MA / GROUNDWATER STANDARDS / GW-1	ND	500	5	5	ug/L
CG77566	$8260GWR-WI	4-Methyl-2-pentanone	MA / GROUNDWATER STANDARDS / GW-1	ND	5000	350	350	ug/L
CG77566	$8260GWR-WI	Chlorobenzene	MA / GROUNDWATER STANDARDS / GW-1	ND	500	100	100	ug/L
CG77566	$8260GWR-WI	1,3-Dichlorobenzene	MA / GROUNDWATER STANDARDS / GW-1	ND	500	100	100	ug/L
CG77566	$8260GWR-WI	1,2-Dichloroethane	MA / GROUNDWATER STANDARDS / GW-1	ND	500	5	5	ug/L
CG77566	$8260GWR-WI	Bromoform	MA / GROUNDWATER STANDARDS / GW-1	ND	500	4	4	ug/L
CG77566	$8260GWR-WI	Bromomethane	MA / GROUNDWATER STANDARDS / GW-1	ND	500	10	10	ug/L
CG77566	$8260GWR-WI	1,1,1-Trichloroethane	MA / GROUNDWATER STANDARDS / GW-1	1000	1000	200	200	ug/L
CG77566	$8260GWR-WI	trans-1,2-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-2	ND	500	80	80	ug/L
CG77566	$8260GWR-WI	1,4-Dichlorobenzene	MA / GROUNDWATER STANDARDS / GW-2	ND	500	60	60	ug/L
CG77566	$8260GWR-WI	Dibromochloromethane	MA / GROUNDWATER STANDARDS / GW-2	ND	500	20	20	ug/L
CG77566	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-2	130000	5000	5	5	ug/L
CG77566	$8260GWR-WI	Bromodichloromethane	MA / GROUNDWATER STANDARDS / GW-2	ND	500	6	6	ug/L
CG77566	$8260GWR-WI	1,1-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-2	640	500	80	80	ug/L
CG77566	$8260GWR-WI	1,2-Dichloropropane	MA / GROUNDWATER STANDARDS / GW-2	ND	500	3	3	ug/L
CG77566	$8260GWR-WI	Vinyl chloride	MA / GROUNDWATER STANDARDS / GW-2	ND	500	2	2	ug/L
CG77566	$8260GWR-WI	1,1,1,2-Tetrachloroethane	MA / GROUNDWATER STANDARDS / GW-2	ND	500	10	10	ug/L
CG77566	$8260GWR-WI	1,1,2,2-Tetrachloroethane	MA / GROUNDWATER STANDARDS / GW-2	ND	500	9	9	ug/L
CG77566	$8260GWR-WI	Chloroform	MA / GROUNDWATER STANDARDS / GW-2	ND	500	50	50	ug/L
CG77566	$8260GWR-WI	1,2,4-Trichlorobenzene	MA / GROUNDWATER STANDARDS / GW-2	ND	500	200	200	ug/L
CG77566	$8260GWR-WI	Styrene	MA / GROUNDWATER STANDARDS / GW-2	ND	500	100	100	ug/L
CG77566	$8260GWR-WI	1,2-Dichloroethane	MA / GROUNDWATER STANDARDS / GW-2	ND	500	5	5	ug/L
CG77566	$8260GWR-WI	Bromomethane	MA / GROUNDWATER STANDARDS / GW-2	ND	500	7	7	ug/L
CG77566	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-2	ND	500	2	2	ug/L
CG77566	$8260GWR-WI	Hexachlorobutadiene	MA / GROUNDWATER STANDARDS / GW-2	ND	500	50	50	ug/L
CG77566	$8260GWR-WI	Carbon tetrachloride	MA / GROUNDWATER STANDARDS / GW-2	ND	500	2	2	ug/L
CG77566	$8260GWR-WI	Tetrachloroethene	MA / GROUNDWATER STANDARDS / GW-2	54000	1000	50	50	ug/L
CG77566	$8260GWR-WI	cis-1,2-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-2	ND	500	20	20	ug/L
CG77566	$8260GWR-WI	Chlorobenzene	MA / GROUNDWATER STANDARDS / GW-2	ND	500	200	200	ug/L

Wednesday, September 23, 2020

Criteria: MA: GW1, GW2, GW3

State: MA

Sample Criteria Exceedances Report

GCG77564 - AECOM-WILMINGTN

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units
CG77566	$8260GWR-WI	Tetrachloroethene	MA / GROUNDWATER STANDARDS / GW-3	54000	1000	30000	30000	ug/L
CG77566	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-3	130000	5000	5000	5000	ug/L
CG77566	$MCPADD-WM	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	100000	0.3	0.3	ug/L
CG77566	$VPHRANGE-	C9-C12 Aliphatic Hydrocarbons *1,3	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	2000	700	700	ug/L
CG77566	$VPHRANGE-	C5-C8 Aliphatic Hydrocarbons *1,2	MA / Client Specified Criteria / LOCKHEED WILMINGTO	57000	2000	300	300	ug/L
CG77566	$VPHRANGE-	C9-C12 Aliphatic Hydrocarbons *1,3	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	2000	700	700	ug/L
CG77566	$VPHRANGE-	C5-C8 Aliphatic Hydrocarbons *1,2	MA / CMR 310.40.1600 / GW-1 (mg/l)	57000	2000	300	300	ug/L
CG77566	$VPHRANGE-	C5-C8 Aliphatic Hydrocarbons *1,2	MA / CMR 310.40.1600 / GW-2 (mg/l)	57000	2000	3000	3000	ug/L
CG77566	$VPHRANGE-	C5-C8 Aliphatic Hydrocarbons *1,2	MA / GROUNDWATER STANDARDS / GW-1	57000	2000	300	300	ug/L
CG77566	$VPHRANGE-	C9-C12 Aliphatic Hydrocarbons *1,3	MA / GROUNDWATER STANDARDS / GW-1	ND	2000	700	700	ug/L
CG77566	$VPHRANGE-	C5-C8 Aliphatic Hydrocarbons *1,2	MA / GROUNDWATER STANDARDS / GW-2	57000	2000	3000	3000	ug/L
CG77566	$VPHRANGE-	C5-C8 Aliphatic Hydrocarbons *1,2	MA / GROUNDWATER STANDARDS / GW-3	57000	2000	50000	50000	ug/L
CG77566	$VPHRANGE-	C9-C10 Aromatic Hydrocarbons *1	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	2000	200	200	ug/L
CG77566	$VPHRANGE-	Toluene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	3900	400	1000	1000	ug/L
CG77566	$VPHRANGE-	Benzene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	20	5	5	ug/L
CG77566	$VPHRANGE-	Benzene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	20	5	5	ug/L
CG77566	$VPHRANGE-	Toluene	MA / CMR 310.40.1600 / GW-1 (mg/l)	3900	400	1000	1000	ug/L
CG77566	$VPHRANGE-	C9-C10 Aromatic Hydrocarbons *1	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	2000	200	200	ug/L
CG77566	$VPHRANGE-	C9-C10 Aromatic Hydrocarbons *1	MA / GROUNDWATER STANDARDS / GW-1	ND	2000	200	200	ug/L
CG77566	$VPHRANGE-	Toluene	MA / GROUNDWATER STANDARDS / GW-1	3900	400	1000	1000	ug/L
CG77566	$VPHRANGE-	Benzene	MA / GROUNDWATER STANDARDS / GW-1	ND	20	5	5	ug/L
CG77567	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.0075	0.0075	ug/L
CG77567	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.00075	0.00075	ug/L
CG77567	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.00033	0.00033	ug/L
CG77567	$8260GWR-WI	Trichloroethene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	13	1.0	5	5	ug/L
CG77567	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	13	1.0	5	5	ug/L
CG77567	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	0.50	0.02	0.02	ug/L
CG77567	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	13	1.0	5	5	ug/L
CG77567	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-1	13	1.0	5	5	ug/L
CG77567	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	0.50	0.02	0.02	ug/L
CG77567	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-2	13	1.0	5	5	ug/L
CG77567	$MCPADD-WM	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	100	0.3	0.3	ug/L
CG77567	$MCPADD-WM	1,4-dioxane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	100	3	3	ug/L
CG77567	$MCPADD-WM	1,4-dioxane	MA / GROUNDWATER STANDARDS / GW-1	ND	100	0.3	0.3	ug/L
CG77568	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.00075	0.00075	ug/L
CG77568	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.00033	0.00033	ug/L
CG77568	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.0075	0.0075	ug/L
CG77568	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	0.50	0.02	0.02	ug/L
CG77568	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	0.50	0.02	0.02	ug/L
CG77568	$MCPADD-WM	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	100	0.3	0.3	ug/L

Wednesday, September 23, 2020

Criteria: MA: GW1, GW2, GW3

State: MA

Sample Criteria Exceedances Report

GCG77564 - AECOM-WILMINGTN

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units
CG77568	$MCPADD-WM	1,4-dioxane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	100	3	3	ug/L
CG77568	$MCPADD-WM	1,4-dioxane	MA / GROUNDWATER STANDARDS / GW-1	ND	100	0.3	0.3	ug/L
CG77569	$8260GWR-WI	Vinyl chloride	MA / Client Specified Criteria / LOCKHEED WILMINGTO	8.8	1.0	2	2	ug/L
CG77569	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.00075	0.00075	ug/L
CG77569	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.00033	0.00033	ug/L
CG77569	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.0075	0.0075	ug/L
CG77569	$8260GWR-WI	Tetrachloroethene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	10	1.0	5	5	ug/L
CG77569	$8260GWR-WI	Trichloroethene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	27	1.0	5	5	ug/L
CG77569	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-1 (mg/l)	8.8	1.0	2	2	ug/L
CG77569	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	27	1.0	5	5	ug/L
CG77569	$8260GWR-WI	Tetrachloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	10	1.0	5	5	ug/L
CG77569	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-1 (mg/l)	8.8	1.0	2	2	ug/L
CG77569	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	0.50	0.02	0.02	ug/L
CG77569	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	27	1.0	5	5	ug/L
CG77569	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-2 (mg/l)	8.8	1.0	2	2	ug/L
CG77569	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-2 (mg/l)	8.8	1.0	2	2	ug/L
CG77569	$8260GWR-WI	Vinyl chloride	MA / GROUNDWATER STANDARDS / GW-1	8.8	1.0	2	2	ug/L
CG77569	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-1	27	1.0	5	5	ug/L
CG77569	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	0.50	0.02	0.02	ug/L
CG77569	$8260GWR-WI	Tetrachloroethene	MA / GROUNDWATER STANDARDS / GW-1	10	1.0	5	5	ug/L
CG77569	$8260GWR-WI	Vinyl chloride	MA / GROUNDWATER STANDARDS / GW-2	8.8	1.0	2	2	ug/L
CG77569	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-2	27	1.0	5	5	ug/L
CG77569	$MCPADD-WM	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	100	0.3	0.3	ug/L
CG77569	$MCPADD-WM	1,4-dioxane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	100	3	3	ug/L
CG77569	$MCPADD-WM	1,4-dioxane	MA / GROUNDWATER STANDARDS / GW-1	ND	100	0.3	0.3	ug/L
CG77569	AS-WM	Arsenic	MA / Client Specified Criteria / LOCKHEED WILMINGTO	0.023	0.004	0.01	0.01	mg/L
CG77569	AS-WM	Arsenic	MA / CMR 310.40.1600 / GW-1 (mg/l)	0.023	0.004	0.01	0.01	mg/L
CG77569	AS-WM	Arsenic	MA / GROUNDWATER STANDARDS / GW-1	0.023	0.004	0.01	0.01	mg/L
CG77569	D-AS	Arsenic (Dissolved)	MA / Client Specified Criteria / LOCKHEED WILMINGTO	0.019	0.004	0.01	0.01	mg/L
CG77569	D-AS	Arsenic (Dissolved)	MA / CMR 310.40.1600 / GW-1 (mg/l)	0.019	0.004	0.01	0.01	mg/L
CG77569	D-AS	Arsenic (Dissolved)	MA / GROUNDWATER STANDARDS / GW-1	0.019	0.004	0.01	0.01	mg/L
CG77569	D-MN	Manganese (Dissolved)	MA / Client Specified Criteria / LOCKHEED WILMINGTO	1.60	0.001	0.43	0.43	mg/L
CG77569	MN-WM	Manganese	MA / Client Specified Criteria / LOCKHEED WILMINGTO	1.72	0.001	0.43	0.43	mg/L

Phoenix Laboratories does not assume responsibility for the data contained in this exceedance report. It is provided as an additional tool to identify requested criteria exceedences. All efforts are made to ensure the accuracy of the data (obtained from appropriate agencies). A lack of exceedence information does not necessarily suggest conformance to the criteria. It is ultimately the site professional's responsibility to determine appropriate compliance.

MassDEP Analytical Protocol Certification Form

Laboratory Name: Phoenix Environmental Laboratories, Inc. **Project #:**

Project Location: LOCKHEED WILMINGTON 60552044.19 **RTN:**

This Form provides certifications for the following data set: [list Laboratory Sample ID Number(s)]

CG77564, CG77565, CG77566, CG77567, CG77568, CG77569

Matrices: ☑ Groundwater/Surface Water ☐ Soil/Sediment ☐ Drinking Water ☐ Air ☐ Other:

CAM Protocol (check all that apply below)

8260 VOC CAM II A ☑	7470/7471 Hg CAM III B ☐	MassDEP VPH CAM IV A ☑	8081 Pesticides CAM V B ☐	7196 Hex Cr CAM VI B ☐	MassDEP APH CAM IX A ☐
8270 SVOC CAM II B ☑	7010 Metals CAM III C ☐	MassDEP EPH CAM IV B ☑	8151 Herbicides CAM V C ☐	8330 Explosives CAM VIII A ☐	TO-15 VOC CAM IX B ☐
6010 Metals CAM III A ☑	6020 Metals CAM III D ☐	8082 PCB CAM V A ☐	9012 Total Cyanide/PAC CAM V1 A ☐	6860 Perchlorate CAM VIII B ☐	

Affirmative responses to questions A through F are required for "Presumptive Certainty" status

A	Were all samples received in a condition consistent with those described on the Chain-of-Custody, properly preserved (including temperature*) in the field or laboratory, and prepared/analyzed with method holding times? (* see narrative)	☑ Yes ☐ No
B	Were the analytical method(s) and all associated QC requirements specified in the selected CAM protocol(s) followed?	☑ Yes ☐ No
C	Were all required corrective actions and analytical response actions specified in the selected CAM protocol(s) implemented for all identified performance standard non-conformances?	☑ Yes ☐ No
D	Does the laboratory report comply with all the reporting requirements speified in CAM VII A, "Quality Assurance and Quality Control Guidelines for the Acquisition and Reporting of Analytical Data"?	☑ Yes ☐ No
E	a. VPH, EPH, and APH Methods only: Was each method conducted without significant modification(s)? (refer to the individual method(s) for a list of significant modifications). b. APH and TO-15 methods only: Was the complete analyte list reported for each method?	☑ Yes ☐ No ☐ Yes ☐ No
F	Were all applicable CAM protocol QC and performance standard non-conformances identified and evaluated in a laboratory narrative (including all "No" responses to Questions A through E)?	☑ Yes ☐ No

Responses to questions G, H and I below is required for "Presumptive Certainty" status

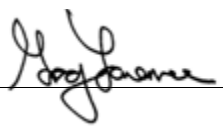
G	Were the reporting limits at or below all CAM reporting limits specified in the selected CAM protocol(s)?	☐ Yes ☑ No

Data User Note: Data that achieve "Presumptive Certainty" status may not necessarily meet the data usability and representativeness requirements described in 310 CMR 40. 1056(2)(k) and WSC-07-350

H	Were all QC performance standards specified in the CAM protocol(s) achieved? See Sections: EPH, SVOASIM, VOA Narrations .	☐ Yes ☑ No
I	Were results reported for the complete analyte list specified in the selected CAM protocol(s)?	☐ Yes ☑ No

All negative responses must be addressed in an attached laboratory narrative.

I, the undersigned, attest under the pains and penalties of perjury that, based upon my personal inquiry of those responsible for obtaining the information, the material contained in this analytical report is, to the best of my knowledge and belief, accurate and complete.

Authorized Signature: 

Date: Wednesday, September 23, 2020

Printed Name: Greg Lawrence

Position: Assistant Lab Director

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

NY # 11301

MCP Certification Report

September 23, 2020

SDG I.D.: GCG77564

SDG Comments

CG77569 - The following analytes from the 6010 Metals list were not reported: Antimony, Barium, Beryllium, Cadmium, Chromium, Lead, Nickel, Selenium, Silver, Thallium, Vanadium, Zinc.

EPH Narration

Were all QA/QC performance criteria specified in the MADEP document CAM achieved? No.

QC Batch 545752 (Samples: CG77566): -----

The LCS/LCSD is below the method criteria. A low bias is possible. (C9 - Nonane)

The LCS recovery is below the method criteria. The LCSD is acceptable. A slight low bias is possible. (C-10 Decane, C12 - Dodecane)

The LCS/LCSD RPD exceeds the method criteria for several analytes and a surrogate. These analyte were not reported in the sample(s). No significant variability is suspected. (C-10 Decane, C12 - Dodecane, C14 - Tetradecane, C16 - Hexadecane, C36 - Hexatriacontane, C9 - Nonane, C9-C18 Aliphatic Hydrocarbons 1*, Total TPH 1,2*, % 1-chlorooctadecane (aliphatic))

Instrument:

AU-FID4 09/16/20-1 Adam Werner, Chemist 09/16/20

CG77566 (1X)

The initial calibration (AL709BI) RSD for the compound list was less than 25% except for the following compounds: None.
The continuing calibration %D for the compound list was less than 25% except for the following compounds:None.

QC (Batch Specific):

Batch 545752 (CG77566)

CG77566

All LCS recoveries were within 40 - 140 with the following exceptions: C-10 Decane(32%), C12 - Dodecane(38%), C9 - Nonane(25%)
All LCSD recoveries were within 40 - 140 with the following exceptions: C9 - Nonane(39%)
All LCS/LCSD RPDs were less than 25% with the following exceptions: % 1-chlorooctadecane (aliphatic)(26.1%), C-10 Decane(42.0%), C12 - Dodecane(38.3%), C14 - Tetradecane(32.7%), C16 - Hexadecane(28.1%), C36 - Hexatriacontane(26.3%), C9 - Nonane(43.8%), C9-C18 Aliphatic Hydrocarbons 1*(31.4%), Total TPH 1,2*(26.0%)
A LCS and LCS Duplicate were performed instead of a matrix spike and matrix spike duplicate.
Additional EPH fractionation criteria: Breakthrough criteria (BT) is 0 to 5%

I attest under the pains and penalties of perjury that, based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.

Wet Chemistry Analysis

Were all QA/QC performance criteria specified in the MADEP document CAM achieved? Yes.

Instrument:

BECKMAN DU720 09/16/20-1 Greg Danielewski, Chemist 09/16/20

CG77569

The initial calibration met all criteria including a standard run at the reporting level.

Environmental Laboratories, Inc.
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ACCREDITED IN ACCORDANCE WITH nelac NY # 11301

MCP Certification Report

September 23, 2020

SDG I.D.: GCG77564

Wet Chemistry Analysis

All method verification standards and blanks met criteria.

QC (Batch Specific):

Batch 545589 (CG76021)

CG77569

All LCS recoveries were within 85 - 115 with the following exceptions: None.
Additional: LCS acceptance range is 85-115% MS acceptance range 75-125%.

Batch 545736 (CG77828)

CG77569

All LCS recoveries were within 85 - 115 with the following exceptions: None.
Additional: LCS acceptance range is 85-115% MS acceptance range 75-125%.

I attest under the pains and penalties of perjury that, based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.

IC

Were all QA/QC performance criteria specified in the MADEP document CAM achieved? Yes.

Instrument:

IC 09/15/20-1 Brian Sheriden, Greg Danielewski, Chemist 09/15/20

CG77569

The initial calibration met all criteria including a standard run at the reporting level.
All method verification standards and blanks met criteria.

IC 09/16/20-2 Brian Sheriden, Greg Danielewski, Chemist 09/16/20

CG77569

The initial calibration met all criteria including a standard run at the reporting level.
All method verification standards and blanks met criteria.

QC (Batch Specific):

Batch 545652 (CG77233)

CG77569

All LCS recoveries were within 90 - 110 with the following exceptions: None.

Batch 545862 (CG78031)

CG77569

All LCS recoveries were within 90 - 110 with the following exceptions: None.

I attest under the pains and penalties of perjury that, based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.

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MCP Certification Report

September 23, 2020

SDG I.D.: GCG77564

IC

ICP Metals Narration

Were all QA/QC performance criteria specified in the analytical method achieved? Yes.

Instrument:

BLUE 09/16/20 08:07 Cindy Pearce, Tina Hall, Chemist 09/16/20

CG77569

The initial calibration met criteria.
The continuing calibration standards met criteria for all the elements reported. The linear range is defined daily by the calibration range.
The continuing calibration blanks were less than the reporting level for the elements reported.
The ICSA and ICSAB were analyzed at the beginning and end of the run and were within criteria.The linear range is defined daily by the calibration range.
The following Initial Calibration Verification (ICV) compounds did not meet criteria: None.
The following Continuing Calibration Verification (CCV) compounds did not meet criteria: None.
The following ICP Interference Check (ICSAB) compounds did not meet criteria: None.

BLUE 09/17/20 11:41 Cindy Pearce, Tina Hall, Chemist 09/17/20

CG77569

The initial calibration met criteria.
The continuing calibration standards met criteria for all the elements reported. The linear range is defined daily by the calibration range.
The continuing calibration blanks were less than the reporting level for the elements reported.
The ICSA and ICSAB were analyzed at the beginning and end of the run and were within criteria.The linear range is defined daily by the calibration range.
The following Initial Calibration Verification (ICV) compounds did not meet criteria: None.
The following Continuing Calibration Verification (CCV) compounds did not meet criteria: None.
The following ICP Interference Check (ICSAB) compounds did not meet criteria: None.

QC (Batch Specific):

Batch 545436 (CG76576)

CG77569

All LCS recoveries were within 80 - 120 with the following exceptions: None.
All LCSD recoveries were within 80 - 120 with the following exceptions: None.
All LCS/LCSD RPDs were less than 20% with the following exceptions: None.
Additional: LCS acceptance range is 80-120% MS acceptance range 75-125%.

Batch 545618 (CG73922)

CG77569

All LCS recoveries were within 80 - 120 with the following exceptions: None.
All LCSD recoveries were within 80 - 120 with the following exceptions: None.
All LCS/LCSD RPDs were less than 20% with the following exceptions: None.
Additional: LCS acceptance range is 80-120% MS acceptance range 75-125%.

SVOA-Dioxane

Were all QA/QC performance criteria specified in the MADEP document CAM achieved? Yes.

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ACCREDITED IN ACCORDANCE WITH nelac NY # 11301

MCP Certification Report

September 23, 2020

SDG I.D.: GCG77564

SVOA-Dioxane

Instrument:

CHEM22 09/18/20-1 Adam Werner, Chemist 09/18/20

CG77566 (1X)

Initial Calibration Evaluation (CHEM22/DIOX_0818):
100% of target compounds met criteria.
The following compounds had %RSDs >20%: None.
The following compounds did not meet recommended response factors: None.
The following compounds did not meet a minimum response factors: None.

Continuing Calibration Verification (CHEM22/0918_06-DIOX_0818) (MCP Compliance):
Internal standard areas were within 50 to 200% of the initial calibration with the following exceptions: None.
100% of target compounds met criteria.
The following compounds did not meet % deviation criteria: None.
The following compounds did not meet maximum % deviations: None.
The following compounds did not meet recommended response factors: None.
The following compounds did not meet minimum response factors: None.

QC (Batch Specific):

Batch 545870 (CG79328)

CG77566

All LCS recoveries were within 40 - 140 with the following exceptions: None.
All LCSD recoveries were within 40 - 140 with the following exceptions: None.
All LCS/LCSD RPDs were less than 30% with the following exceptions: None.

I attest under the pains and penalties of perjury that, based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.

SVOASIM Narration

Were all QA/QC performance criteria specified in the MADEP document CAM achieved? No.

QC Batch 546057 (Samples: CG77566): -----

The LCS/LCSD RPD exceeds the method criteria for one analyte. This analyte was not reported in the sample(s). No significant variability is suspected. (2-Methylnaphthalene)

The LCS/LCSD RPD exceeds the method criteria for one analyte and a surrogate, therefore there may be variability in the reported result. (Naphthalene, % Nitrobenzene-d5)

Instrument:

CHEM25 09/20/20-1 Matt Richard, Chemist 09/20/20

CG77566 (1X)

For 8270 BN list, benzidine peak tailing was evaluated in the DFTPP tune and was found to be in control.

Initial Calibration Evaluation (CHEM25/25_BNSIM18_0805):
100% of target compounds met criteria.
The following compounds had %RSDs >20%: None.

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

ACCREDITED IN ACCORDANCE WITH nelac NY # 11301

MCP Certification Report

September 23, 2020

SDG I.D.: GCG77564

SVOASIM Narration

The following compounds did not meet recommended response factors: None.
The following compounds did not meet a minimum response factors: None.

Continuing Calibration Verification (CHEM25/0920_03-25_BNSIM18_0805) (MCP Compliance):
Internal standard areas were within 50 to 200% of the initial calibration with the following exceptions: None.
90% of target compounds met criteria.
The following compounds did not meet % deviation criteria: None.
The following compounds did not meet maximum % deviations: None.
The following compounds did not meet recommended response factors: None.
The following compounds did not meet minimum response factors: None.

QC (Batch Specific):

Batch 546057 (CG77566)

CG77566

All LCS recoveries were within 40 - 140 with the following exceptions: None.
All LCSD recoveries were within 40 - 140 with the following exceptions: None.
All LCS/LCSD RPDs were less than 20% with the following exceptions: % Nitrobenzene-d5(29.4%), 2-Methylnaphthalene(39.4%), Naphthalene(54.0%)
Additional 8270 criteria: 10% of compounds can be outside of acceptance criteria as long as recovery is at least 10%. (Acid surrogates acceptance range for aqueous samples: 10-110%, for soils 30-130%)

I attest under the pains and penalties of perjury that, based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.

VOA Narration

Were all QA/QC performance criteria specified in the MADEP document CAM achieved? No.

QC Batch 546288 (Samples: CG77564, CG77565, CG77566, CG77568, CG77569): -----

The LCS recovery is below the lower range. The LCSD is acceptable, therefore no significant bias is suspected. (Di-isopropyl ether)

Instrument:

CHEM23 09/21/20-1 Michael Hahn, Chemist 09/21/20

CG77564 (1X), CG77565 (100X), CG77566 (1000X), CG77568 (1X), CG77569 (1X)

Initial Calibration Evaluation (CHEM23/VOA23_092020):
99% of target compounds met criteria.
The following compounds had %RSDs >20%: Chloroethane 22% (20%)
The following compounds did not meet Table 4 recommended minimum response factors: None.
The following compounds did not meet the minimum response factor of 0.05: None.

Continuing Calibration Verification (CHEM23/0921_03-VOA23_092020) (MCP Compliance):
Internal standard areas were within 50 to 200% of the initial calibration with the following exceptions: None.
98% of target compounds met criteria.
The following compounds did not meet % deviation criteria: None.
The following compounds did not meet maximum % deviations: None.
The following compounds did not meet Table 4 recommended minimum response factors: None.

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MCP Certification Report

September 23, 2020

SDG I.D.: GCG77564

VOA Narration

The following compounds did not meet the minimum MCP response factor of 0.05: None.

CHEM23 09/22/20-1 Michael Hahn, Chemist 09/22/20

CG77567 (1X)

Initial Calibration Evaluation (CHEM23/VOA23_092020):
99% of target compounds met criteria.
The following compounds had %RSDs >20%: Chloroethane 22% (20%)
The following compounds did not meet Table 4 recommended minimum response factors: None.
The following compounds did not meet the minimum response factor of 0.05: None.

Continuing Calibration Verification (CHEM23/0922_02-VOA23_092020) (MCP Compliance):
Internal standard areas were within 50 to 200% of the initial calibration with the following exceptions: None.
98% of target compounds met criteria.
The following compounds did not meet % deviation criteria: None.
The following compounds did not meet maximum % deviations: None.
The following compounds did not meet Table 4 recommended minimum response factors: Tetrachloroethene 0.183 (0.2)
The following compounds did not meet the minimum MCP response factor of 0.05: None.

CHEM23 09/22/20-2 Michael Hahn, Chemist 09/22/20

CG77566 (5000X)

Initial Calibration Evaluation (CHEM23/VOA23_092020):
99% of target compounds met criteria.
The following compounds had %RSDs >20%: None.
The following compounds did not meet Table 4 recommended minimum response factors: None.
The following compounds did not meet the minimum response factor of 0.05: None.

Continuing Calibration Verification (CHEM23/0922_34-VOA23_092020) (MCP Compliance):
Internal standard areas were within 50 to 200% of the initial calibration with the following exceptions: None.
98% of target compounds met criteria.
The following compounds did not meet % deviation criteria: None.
The following compounds did not meet maximum % deviations: None.
The following compounds did not meet Table 4 recommended minimum response factors: None.
The following compounds did not meet the minimum MCP response factor of 0.05: None.

QC (Batch Specific):

Batch 546288 (CG77564) CHEM23 9/21/2020-1

CG77564(1X), CG77565(100X), CG77566(1000X), CG77568(1X), CG77569(1X)

All LCS recoveries were within 70 - 130 with the following exceptions: Di-isopropyl ether(68%)
All LCSD recoveries were within 70 - 130 with the following exceptions: None.
All LCS/LCSD RPDs were less than 30% with the following exceptions: None.
A LCS and LCS Duplicate were performed instead of a matrix spike and matrix spike duplicate.
Additional 8260 criteria: 10% of compounds can be outside of acceptance criteria as long as recovery is 10%.

Batch 546448 (CG80060) CHEM23 9/22/2020-1

CG77567(1X)

All LCS recoveries were within 70 - 130 with the following exceptions: None.
All LCSD recoveries were within 70 - 130 with the following exceptions: None.
All LCS/LCSD RPDs were less than 30% with the following exceptions: None.

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MCP Certification Report

September 23, 2020

SDG I.D.: GCG77564

VOA Narration

A LCS and LCS Duplicate were performed instead of a matrix spike and matrix spike duplicate.
Additional 8260 criteria: 10% of compounds can be outside of acceptance criteria as long as recovery is 10%.

Batch 546580 (CG81121) CHEM23 9/22/2020-2

CG77566(5000X)

All LCS recoveries were within 70 - 130 with the following exceptions: None.
All LCSD recoveries were within 70 - 130 with the following exceptions: None.
All LCS/LCSD RPDs were less than 30% with the following exceptions: None.
A LCS and LCS Duplicate were performed instead of a matrix spike and matrix spike duplicate.
Additional 8260 criteria: 10% of compounds can be outside of acceptance criteria as long as recovery is 10%.

We attest under the pains and penalties of perjury that, based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.

VPH Narration

Were all QA/QC performance criteria specified in the MADEP document CAM achieved? Yes.

Instrument:

PIDFID 09/18/20-1 Raman Makol, Chemist 09/18/20

CG77566 (400X)

PIDFID 09/20/20-1 Raman Makol, Chemist 09/20/20

CG77566 (20X)

Initial Calibration Evaluation (PIDFID/VPH_092020_T):
The following compounds exceeded %RSD criteria: None.

QC (Batch Specific):

Batch 546134 (CG76575)

CG77566(400X)

All LCS recoveries were within 70 - 130 with the following exceptions: None.
All LCSD recoveries were within 70 - 130 with the following exceptions: None.
All LCS/LCSD RPDs were less than 20% with the following exceptions: None.
A blank MS/MSD was analyzed with this batch.

Batch 546208 (CG80941)

CG77566(20X)

All LCS recoveries were within 70 - 130 with the following exceptions: None.
All LCSD recoveries were within 70 - 130 with the following exceptions: None.
All LCS/LCSD RPDs were less than 30% with the following exceptions: None.
A blank MS/MSD was analyzed with this batch.

We attest under the pains and penalties of perjury that, based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.

Cooler: Yes ☐ No ☐
Coolant: IPK ☐ ICE ☑ No ☐
Temp 8°C Pg of

CHAIN OF CUSTODY RECORD

PHOENIX *Environmental Laboratories, Inc.*

587 East Middle Turnpike, P.O. Box 370, Manchester, CT 06040
Email: info@phoenixlabs.com Fax (860) 645-0823
Client Services (860) 645-8726

Data Delivery/Contact EMails:
lori.herberich@aecom.com
scott.olson@aecom.com

Customer: AECOM
Address: 250 Apollo Drive
Chelmsford, MA 01824 - (978) 905-2100
Contacts: Lori Herblerich (Chemist) 978-302-0089 Scott Olson (PM) 978-846-5238

Project: Lockheed - Wilmington MA 60552044.19
Report to: Lori Herberich - Scott Olson - Nicole Callahan
Invoice to: Scott Olson & Lori Herberich
QUOTE # August 2019 (for 2017-2022)

2020 Project PO: 127680

This section MUST be completed with Bottle Quantities.

Client Sample - Information - Identification

Sampler's Signature: [signature] Date: 9/14/20

Matrix Code:
DW=Drinking Water GW=Ground Water SW=Surface Water WW=Waste Water L=Liquid
RW=Raw Water SE=Sediment SL=Sludge S=Soil SD=Solid W=Wipe OIL=Oil B=Bulk

PHOENIX USE ONLY SAMPLE #	Customer Sample Identification	Sample Matrix	Date Sampled	Time Sampled	# of VOA Vials	# of Amber Glass	# of Clear Glass	# of Plastic				VOCs (8260) - HCL + Freon 113	1,4-Dioxane (8270D SIM) - NaHSO4 for DL <0.3 ug/L	VPH - HCL (MassDEP- VPH-04-1.1 Rev 1)	EPH + PAHs - HCL & UNP (MassDEP- EPH-04-1.1 Rev 1)	Total As, Fe, Mn (6010C) - HNO3 [FF]	Dissolved As, Fe, Mn (6010C) - HNO3	Chloride, Nitrate, Nitrite, Sulfate (300) - UNP	Sulfide - Zn-Acetate + NaOH	Total Organic Carbon (9060A) - H3PO4	Comments
77564	20A-TB02-091420-1	GW	9/14/20	1200	2							X									
77565	20A-AE28R-091420-1	GW	9/14/20	1450	3							X									
77566	20AE23R-091420-1	GW	9/14/20	1455	3	4						X	X	X	X						
77567	20A-PS1D-091520-1	GW	9/15/20	1210	3							X									
77568	20A-PS2D-091520-1	GW	9/15/20	1200	3							X									
77569	20A-TRC30IR1-091520-1	GW	9/15/20	1120	3	1		4				X				X	X	X	X	X	

Relinquished by:	Accepted by:	Date:	Time:
[signature]	[signature]	9-15-20	14:20
[signature]	[signature]	9/15	1602

Comments, Special Requirements or Regulations:

Turnaround:
10 - 15 days

RI
☐ Direct Exposure (Residential)
☐ GW
☐ Other

CT
☐ RCP Cert
☐ GW Protection
☐ SW Protection
☐ GA Mobility
☐ GB Mobility
☐ Residential DEC
☐ I/C DEC
☐ Other

MA
X MCP (CAM Rpt)
X GW-1
X GW-2
X GW-3
☐ S-1
☐ S-2
☐ S-3
☐ MWRA eSMART
☐ Other

State where samples were collected: MA

Data Format
x PDF
x AECOM EQuIS 4-File EDD format

Data Package
☐ Tier II Checklist
☐ Full Data Package*
☐ Phoenix Std Report
☐ Other

* SURCHARGE APPLIES

PHOENIX
Environmental Laboratories, Inc.

Thursday, September 24, 2020

Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Project ID: **LOCKHEED WILMINGTON MA 60552044.19**
SDG ID: **GCG79150**
Sample ID#s: CG79150 - CG79165

This laboratory is in compliance with the NELAC requirements of procedures used except where indicated.

This report contains results for the parameters tested, under the sampling conditions described on the Chain Of Custody, as received by the laboratory. This report is incomplete unless all pages indicated in the pagination at the bottom of the page are included.

A scanned version of the COC form accompanies the analytical report and is an exact duplicate of the original.

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200. The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.

Sincerely yours,

Phyllis Shiller
Laboratory Director

NELAC - #NY11301
CT Lab Registration #PH-0618
MA Lab Registration #M-CT007
ME Lab Registration #CT-007
NH Lab Registration #213693-A,B
NJ Lab Registration #CT-003
NY Lab Registration #11301
PA Lab Registration #68-03530
RI Lab Registration #63
UT Lab Registration #CT00007
VT Lab Registration #VT11301

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Sample Id Cross Reference

September 24, 2020

SDG I.D.: GCG79150

Project ID: LOCKHEED WILMINGTON MA 60552044.19

Client Id	Lab Id	Matrix
20A-TB01-091520-1	CG79150	GROUND WATER
20A-PS1S-091520-1	CG79151	GROUND WATER
20A-PS8D-091520-1	CG79152	GROUND WATER
20A-TRC301R2-091520-1	CG79153	GROUND WATER
18A-AE109D-091620-1	CG79154	GROUND WATER
20A-AE104D-091620-1	CG79155	GROUND WATER
20A-AE104S-091620-1	CG79156	GROUND WATER
20A-AE111R1-091620-1	CG79157	GROUND WATER
20A-AE111R3-091620-1	CG79158	GROUND WATER
20A-AE111R5-091620-1	CG79159	GROUND WATER
20A-AE111R6-091620-1	CG79160	GROUND WATER
20A-AE110R1-091620-1	CG79161	GROUND WATER
20A-AE110R2-091620-1	CG79162	GROUND WATER
20A-AE110R4-091620-1	CG79163	GROUND WATER
20A-AE110R6-091620-1	CG79164	GROUND WATER
20A-AE109R5-091620-1	CG79165	GROUND WATER

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

September 24, 2020

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		09/15/20	12:00
Location Code:	AECOM-WILMINGTN	Received by:	B	09/16/20	16:56
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	127680				

Laboratory Data

SDG ID: GCG79150
Phoenix ID: CG79150

Project ID: LOCKHEED WILMINGTON MA 60552044.19
Client ID: 20A-TB01-091520-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Volatiles							
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
1,1,1-Trichloroethane	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L	1	09/21/20	MH	SW8260C
1,1,2-Trichloroethane	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
1,1-Dichloroethane	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
1,1-Dichloroethene	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
1,1-Dichloropropene	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
1,2,3-Trichlorobenzene	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
1,2,3-Trichloropropane	ND	0.50	ug/L	1	09/21/20	MH	SW8260C
1,2,4-Trichlorobenzene	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
1,2,4-Trimethylbenzene	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	0.50	ug/L	1	09/21/20	MH	SW8260C
1,2-Dibromoethane	ND	0.50	ug/L	1	09/21/20	MH	SW8260C
1,2-Dichlorobenzene	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
1,2-Dichloroethane	ND	0.60	ug/L	1	09/21/20	MH	SW8260C
1,2-Dichloropropane	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
1,3,5-Trimethylbenzene	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
1,3-Dichlorobenzene	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
1,3-Dichloropropane	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
1,4-Dichlorobenzene	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
2,2-Dichloropropane	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
2-Chlorotoluene	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
2-Hexanone	ND	5.0	ug/L	1	09/21/20	MH	SW8260C
4-Chlorotoluene	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
4-Methyl-2-pentanone	ND	5.0	ug/L	1	09/21/20	MH	SW8260C
Acetone	ND	25	ug/L	1	09/21/20	MH	SW8260C

Project ID: LOCKHEED WILMINGTON MA 60552044.19 Phoenix I.D.: CG79150

Client ID: 20A-TB01-091520-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	
Benzene	ND	0.70	ug/L	1	09/21/20	MH	SW8260C
Bromobenzene	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
Bromochloromethane	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
Bromodichloromethane	ND	0.50	ug/L	1	09/21/20	MH	SW8260C
Bromoform	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
Bromomethane	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
Carbon Disulfide	ND	5.0	ug/L	1	09/21/20	MH	SW8260C
Carbon tetrachloride	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
Chlorobenzene	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
Chloroethane	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
Chloroform	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
Chloromethane	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
cis-1,2-Dichloroethene	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
cis-1,3-Dichloropropene	ND	0.40	ug/L	1	09/21/20	MH	SW8260C
Dibromochloromethane	ND	0.50	ug/L	1	09/21/20	MH	SW8260C
Dibromomethane	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
Dichlorodifluoromethane	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
Ethylbenzene	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
Hexachlorobutadiene	ND	0.40	ug/L	1	09/21/20	MH	SW8260C
Isopropylbenzene	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
m&p-Xylene	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
Methyl ethyl ketone	ND	5.0	ug/L	1	09/21/20	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
Methylene chloride	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
Naphthalene	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
n-Butylbenzene	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
n-Propylbenzene	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
o-Xylene	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
p-Isopropyltoluene	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
sec-Butylbenzene	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
Styrene	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
tert-Butylbenzene	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
Tetrachloroethene	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
Tetrahydrofuran (THF)	ND	2.5	ug/L	1	09/21/20	MH	SW8260C
Toluene	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
trans-1,2-Dichloroethene	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
trans-1,3-Dichloropropene	ND	0.40	ug/L	1	09/21/20	MH	SW8260C
Trichloroethene	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
Trichlorofluoromethane	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
Trichlorotrifluoroethane	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
Vinyl chloride	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	98		%	1	09/21/20	MH	70 - 130 %
% Bromofluorobenzene	95		%	1	09/21/20	MH	70 - 130 %
% Dibromofluoromethane	93		%	1	09/21/20	MH	70 - 130 %
% Toluene-d8	101		%	1	09/21/20	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	100	ug/L	1	09/21/20	MH	SW8260C (OXY)
Diethyl ether	ND	1.0	ug/L	1	09/21/20	MH	SW8260C (OXY)

Ver 1

Project ID: LOCKHEED WILMINGTON MA 60552044.19 Phoenix I.D.: CG79150

Client ID: 20A-TB01-091520-1

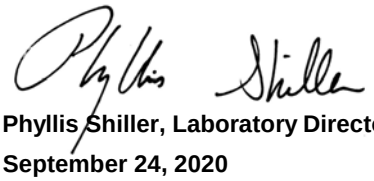
Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	
Di-isopropyl ether	ND	1.0	ug/L	1	09/21/20	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	1.0	ug/L	1	09/21/20	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	1.0	ug/L	1	09/21/20	MH	SW8260C (OXY)

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

TRIP BLANK INCLUDED.

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.



Phyllis Shiller, Laboratory Director

September 24, 2020

Reviewed and Released by: Greg Lawrence, Assistant Lab Director

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

September 24, 2020

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		09/15/20	14:55
Location Code:	AECOM-WILMINGTN	Received by:	B	09/16/20	16:56
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	127680				

Laboratory Data

SDG ID: GCG79150
Phoenix ID: CG79151

Project ID: LOCKHEED WILMINGTON MA 60552044.19
Client ID: 20A-PS1S-091520-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Volatiles							
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
1,1,1-Trichloroethane	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L	1	09/21/20	MH	SW8260C
1,1,2-Trichloroethane	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
1,1-Dichloroethane	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
1,1-Dichloroethene	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
1,1-Dichloropropene	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
1,2,3-Trichlorobenzene	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
1,2,3-Trichloropropane	ND	0.50	ug/L	1	09/21/20	MH	SW8260C
1,2,4-Trichlorobenzene	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
1,2,4-Trimethylbenzene	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	0.50	ug/L	1	09/21/20	MH	SW8260C
1,2-Dibromoethane	ND	0.50	ug/L	1	09/21/20	MH	SW8260C
1,2-Dichlorobenzene	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
1,2-Dichloroethane	ND	0.60	ug/L	1	09/21/20	MH	SW8260C
1,2-Dichloropropane	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
1,3,5-Trimethylbenzene	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
1,3-Dichlorobenzene	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
1,3-Dichloropropane	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
1,4-Dichlorobenzene	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
2,2-Dichloropropane	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
2-Chlorotoluene	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
2-Hexanone	ND	5.0	ug/L	1	09/21/20	MH	SW8260C
4-Chlorotoluene	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
4-Methyl-2-pentanone	ND	5.0	ug/L	1	09/21/20	MH	SW8260C
Acetone	ND	25	ug/L	1	09/21/20	MH	SW8260C

Project ID: LOCKHEED WILMINGTON MA 60552044.19 Phoenix I.D.: CG79151

Client ID: 20A-PS1S-091520-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	
Benzene	ND	0.70	ug/L	1	09/21/20	MH	SW8260C
Bromobenzene	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
Bromochloromethane	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
Bromodichloromethane	ND	0.50	ug/L	1	09/21/20	MH	SW8260C
Bromoform	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
Bromomethane	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
Carbon Disulfide	ND	5.0	ug/L	1	09/21/20	MH	SW8260C
Carbon tetrachloride	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
Chlorobenzene	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
Chloroethane	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
Chloroform	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
Chloromethane	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
cis-1,2-Dichloroethene	6.6	1.0	ug/L	1	09/21/20	MH	SW8260C
cis-1,3-Dichloropropene	ND	0.40	ug/L	1	09/21/20	MH	SW8260C
Dibromochloromethane	ND	0.50	ug/L	1	09/21/20	MH	SW8260C
Dibromomethane	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
Dichlorodifluoromethane	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
Ethylbenzene	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
Hexachlorobutadiene	ND	0.40	ug/L	1	09/21/20	MH	SW8260C
Isopropylbenzene	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
m&p-Xylene	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
Methyl ethyl ketone	ND	5.0	ug/L	1	09/21/20	MH	SW8260C
Methyl t-butyl ether (MTBE)	22	1.0	ug/L	1	09/21/20	MH	SW8260C
Methylene chloride	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
Naphthalene	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
n-Butylbenzene	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
n-Propylbenzene	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
o-Xylene	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
p-Isopropyltoluene	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
sec-Butylbenzene	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
Styrene	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
tert-Butylbenzene	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
Tetrachloroethene	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
Tetrahydrofuran (THF)	ND	2.5	ug/L	1	09/21/20	MH	SW8260C
Toluene	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
trans-1,2-Dichloroethene	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
trans-1,3-Dichloropropene	ND	0.40	ug/L	1	09/21/20	MH	SW8260C
Trichloroethene	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
Trichlorofluoromethane	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
Trichlorotrifluoroethane	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
Vinyl chloride	1.7	1.0	ug/L	1	09/21/20	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	97		%	1	09/21/20	MH	70 - 130 %
% Bromofluorobenzene	95		%	1	09/21/20	MH	70 - 130 %
% Dibromofluoromethane	97		%	1	09/21/20	MH	70 - 130 %
% Toluene-d8	102		%	1	09/21/20	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	100	ug/L	1	09/21/20	MH	SW8260C (OXY)
Diethyl ether	ND	1.0	ug/L	1	09/21/20	MH	SW8260C (OXY)

Ver 1

Project ID: LOCKHEED WILMINGTON MA 60552044.19 Phoenix I.D.: CG79151

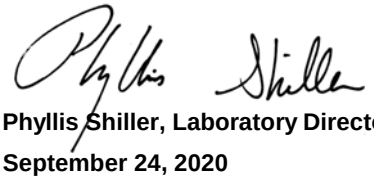
Client ID: 20A-PS1S-091520-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	
Di-isopropyl ether	3.3	1.0	ug/L	1	09/21/20	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	1.0	ug/L	1	09/21/20	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	1.0	ug/L	1	09/21/20	MH	SW8260C (OXY)

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.



Phyllis Shiller, Laboratory Director

September 24, 2020

Reviewed and Released by: Greg Lawrence, Assistant Lab Director

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

September 24, 2020

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		09/15/20	15:00
Location Code:	AECOM-WILMINGTN	Received by:	B	09/16/20	16:56
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	127680				

Laboratory Data

SDG ID: GCG79150
Phoenix ID: CG79152

Project ID: LOCKHEED WILMINGTON MA 60552044.19
Client ID: 20A-PS8D-091520-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Arsenic	< 0.004	0.004	mg/L	1	09/21/20	TH	SW6010D
Arsenic (Dissolved)	< 0.004	0.004	mg/L	1	09/21/20	CPP	SW6010D
Iron (Dissolved)	0.738	0.011	mg/L	1	09/21/20	CPP	SW6010D
Manganese (Dissolved)	0.007	0.001	mg/L	1	09/21/20	CPP	SW6010D
Iron	2.29	0.010	mg/L	1	09/21/20	EK	SW6010D
Manganese	0.017	0.001	mg/L	1	09/21/20	TH	SW6010D
Dissolved Metals Preparation	Completed				09/17/20	AG	SW3005A
Total Metals Digestion	Completed				09/18/20	AG	
Volatiles							
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
1,1,1-Trichloroethane	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L	1	09/21/20	MH	SW8260C
1,1,2-Trichloroethane	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
1,1-Dichloroethane	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
1,1-Dichloroethene	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
1,1-Dichloropropene	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
1,2,3-Trichlorobenzene	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
1,2,3-Trichloropropane	ND	0.50	ug/L	1	09/21/20	MH	SW8260C
1,2,4-Trichlorobenzene	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
1,2,4-Trimethylbenzene	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	0.50	ug/L	1	09/21/20	MH	SW8260C
1,2-Dibromoethane	ND	0.50	ug/L	1	09/21/20	MH	SW8260C
1,2-Dichlorobenzene	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
1,2-Dichloroethane	ND	0.60	ug/L	1	09/21/20	MH	SW8260C
1,2-Dichloropropane	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
1,3,5-Trimethylbenzene	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
1,3-Dichlorobenzene	ND	1.0	ug/L	1	09/21/20	MH	SW8260C

Project ID: LOCKHEED WILMINGTON MA 60552044.19 Phoenix I.D.: CG79152

Client ID: 20A-PS8D-091520-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	
1,3-Dichloropropane	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
1,4-Dichlorobenzene	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
2,2-Dichloropropane	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
2-Chlorotoluene	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
2-Hexanone	ND	5.0	ug/L	1	09/21/20	MH	SW8260C
4-Chlorotoluene	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
4-Methyl-2-pentanone	ND	5.0	ug/L	1	09/21/20	MH	SW8260C
Acetone	ND	25	ug/L	1	09/21/20	MH	SW8260C
Benzene	ND	0.70	ug/L	1	09/21/20	MH	SW8260C
Bromobenzene	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
Bromochloromethane	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
Bromodichloromethane	ND	0.50	ug/L	1	09/21/20	MH	SW8260C
Bromoform	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
Bromomethane	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
Carbon Disulfide	ND	5.0	ug/L	1	09/21/20	MH	SW8260C
Carbon tetrachloride	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
Chlorobenzene	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
Chloroethane	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
Chloroform	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
Chloromethane	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
cis-1,2-Dichloroethene	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
cis-1,3-Dichloropropene	ND	0.40	ug/L	1	09/21/20	MH	SW8260C
Dibromochloromethane	ND	0.50	ug/L	1	09/21/20	MH	SW8260C
Dibromomethane	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
Dichlorodifluoromethane	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
Ethylbenzene	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
Hexachlorobutadiene	ND	0.40	ug/L	1	09/21/20	MH	SW8260C
Isopropylbenzene	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
m&p-Xylene	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
Methyl ethyl ketone	ND	5.0	ug/L	1	09/21/20	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
Methylene chloride	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
Naphthalene	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
n-Butylbenzene	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
n-Propylbenzene	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
o-Xylene	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
p-Isopropyltoluene	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
sec-Butylbenzene	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
Styrene	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
tert-Butylbenzene	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
Tetrachloroethene	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
Tetrahydrofuran (THF)	ND	2.5	ug/L	1	09/21/20	MH	SW8260C
Toluene	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
trans-1,2-Dichloroethene	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
trans-1,3-Dichloropropene	ND	0.40	ug/L	1	09/21/20	MH	SW8260C
Trichloroethene	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
Trichlorofluoromethane	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
Trichlorotrifluoroethane	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
Vinyl chloride	ND	1.0	ug/L	1	09/21/20	MH	SW8260C

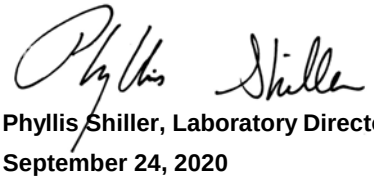
Project ID: LOCKHEED WILMINGTON MA 60552044.19 Phoenix I.D.: CG79152
Client ID: 20A-PS8D-091520-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	99		%	1	09/21/20	MH	70 - 130 %
% Bromofluorobenzene	95		%	1	09/21/20	MH	70 - 130 %
% Dibromofluoromethane	96		%	1	09/21/20	MH	70 - 130 %
% Toluene-d8	103		%	1	09/21/20	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	100	ug/L	1	09/21/20	MH	SW8260C (OXY)
Diethyl ether	ND	1.0	ug/L	1	09/21/20	MH	SW8260C (OXY)
Di-isopropyl ether	ND	1.0	ug/L	1	09/21/20	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	1.0	ug/L	1	09/21/20	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	1.0	ug/L	1	09/21/20	MH	SW8260C (OXY)

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
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Phyllis Shiller, Laboratory Director
September 24, 2020
Reviewed and Released by: Greg Lawrence, Assistant Lab Director

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

September 24, 2020

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		09/15/20	15:55
Location Code:	AECOM-WILMINGTN	Received by:	B	09/16/20	16:56
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	127680				

Laboratory Data

SDG ID: GCG79150
Phoenix ID: CG79153

Project ID: LOCKHEED WILMINGTON MA 60552044.19
Client ID: 20A-TRC301R2-091520-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Arsenic	< 0.004	0.004	mg/L	1	09/21/20	TH	SW6010D
Arsenic (Dissolved)	< 0.004	0.004	mg/L	1	09/21/20	CPP	SW6010D
Iron (Dissolved)	0.386	0.011	mg/L	1	09/21/20	CPP	SW6010D
Manganese (Dissolved)	0.569	0.001	mg/L	1	09/21/20	CPP	SW6010D
Iron	0.412	0.010	mg/L	1	09/21/20	EK	SW6010D
Manganese	0.587	0.001	mg/L	1	09/21/20	TH	SW6010D
Dissolved Metals Preparation	Completed				09/17/20	AG	SW3005A
Total Metals Digestion	Completed				09/18/20	AG	
Volatiles							
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
1,1,1-Trichloroethane	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L	1	09/22/20	MH	SW8260C
1,1,2-Trichloroethane	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
1,1-Dichloroethane	3.0	1.0	ug/L	1	09/22/20	MH	SW8260C
1,1-Dichloroethene	1.9	1.0	ug/L	1	09/22/20	MH	SW8260C
1,1-Dichloropropene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
1,2,3-Trichlorobenzene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
1,2,3-Trichloropropane	ND	0.50	ug/L	1	09/22/20	MH	SW8260C
1,2,4-Trichlorobenzene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
1,2,4-Trimethylbenzene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	0.50	ug/L	1	09/22/20	MH	SW8260C
1,2-Dibromoethane	ND	0.50	ug/L	1	09/22/20	MH	SW8260C
1,2-Dichlorobenzene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
1,2-Dichloroethane	ND	0.60	ug/L	1	09/22/20	MH	SW8260C
1,2-Dichloropropane	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
1,3,5-Trimethylbenzene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
1,3-Dichlorobenzene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C

Project ID: LOCKHEED WILMINGTON MA 60552044.19 Phoenix I.D.: CG79153

Client ID: 20A-TRC301R2-091520-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	
1,3-Dichloropropane	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
1,4-Dichlorobenzene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
2,2-Dichloropropane	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
2-Chlorotoluene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
2-Hexanone	ND	5.0	ug/L	1	09/22/20	MH	SW8260C
4-Chlorotoluene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
4-Methyl-2-pentanone	ND	5.0	ug/L	1	09/22/20	MH	SW8260C
Acetone	ND	25	ug/L	1	09/22/20	MH	SW8260C
Benzene	ND	0.70	ug/L	1	09/22/20	MH	SW8260C
Bromobenzene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
Bromochloromethane	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
Bromodichloromethane	ND	0.50	ug/L	1	09/22/20	MH	SW8260C
Bromoform	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
Bromomethane	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
Carbon Disulfide	ND	5.0	ug/L	1	09/22/20	MH	SW8260C
Carbon tetrachloride	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
Chlorobenzene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
Chloroethane	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
Chloroform	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
Chloromethane	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
cis-1,2-Dichloroethene	18	1.0	ug/L	1	09/22/20	MH	SW8260C
cis-1,3-Dichloropropene	ND	0.40	ug/L	1	09/22/20	MH	SW8260C
Dibromochloromethane	ND	0.50	ug/L	1	09/22/20	MH	SW8260C
Dibromomethane	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
Dichlorodifluoromethane	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
Ethylbenzene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
Hexachlorobutadiene	ND	0.40	ug/L	1	09/22/20	MH	SW8260C
Isopropylbenzene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
m&p-Xylene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
Methyl ethyl ketone	ND	5.0	ug/L	1	09/22/20	MH	SW8260C
Methyl t-butyl ether (MTBE)	6.1	1.0	ug/L	1	09/22/20	MH	SW8260C
Methylene chloride	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
Naphthalene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
n-Butylbenzene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
n-Propylbenzene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
o-Xylene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
p-Isopropyltoluene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
sec-Butylbenzene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
Styrene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
tert-Butylbenzene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
Tetrachloroethene	37	1.0	ug/L	1	09/22/20	MH	SW8260C
Tetrahydrofuran (THF)	ND	2.5	ug/L	1	09/22/20	MH	SW8260C
Toluene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
trans-1,2-Dichloroethene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
trans-1,3-Dichloropropene	ND	0.40	ug/L	1	09/22/20	MH	SW8260C
Trichloroethene	87	10	ug/L	10	09/22/20	MH	SW8260C
Trichlorofluoromethane	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
Trichlorotrifluoroethane	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
Vinyl chloride	2.3	1.0	ug/L	1	09/22/20	MH	SW8260C

Ver 1

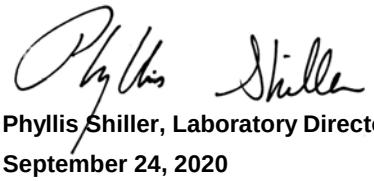
Project ID: LOCKHEED WILMINGTON MA 60552044.19 Phoenix I.D.: CG79153
Client ID: 20A-TRC301R2-091520-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	98		%	1	09/22/20	MH	70 - 130 %
% Bromofluorobenzene	95		%	1	09/22/20	MH	70 - 130 %
% Dibromofluoromethane	99		%	1	09/22/20	MH	70 - 130 %
% Toluene-d8	96		%	1	09/22/20	MH	70 - 130 %
% 1,2-dichlorobenzene-d4 (10x)	97		%	10	09/22/20	MH	70 - 130 %
% Bromofluorobenzene (10x)	96		%	10	09/22/20	MH	70 - 130 %
% Dibromofluoromethane (10x)	96		%	10	09/22/20	MH	70 - 130 %
% Toluene-d8 (10x)	103		%	10	09/22/20	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	100	ug/L	1	09/22/20	MH	SW8260C (OXY)
Diethyl ether	ND	1.0	ug/L	1	09/22/20	MH	SW8260C (OXY)
Di-isopropyl ether	ND	1.0	ug/L	1	09/22/20	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	1.0	ug/L	1	09/22/20	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	1.0	ug/L	1	09/22/20	MH	SW8260C (OXY)

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.



Phyllis Shiller, Laboratory Director
September 24, 2020
Reviewed and Released by: Greg Lawrence, Assistant Lab Director

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

September 24, 2020

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		09/16/20	9:25
Location Code:	AECOM-WILMINGTN	Received by:	B	09/16/20	16:56
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	127680				

Laboratory Data

SDG ID: GCG79150
Phoenix ID: CG79154

Project ID: LOCKHEED WILMINGTON MA 60552044.19
Client ID: 18A-AE109D-091620-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Arsenic	< 0.004	0.004	mg/L	1	09/21/20	TH	SW6010D
Arsenic (Dissolved)	< 0.004	0.004	mg/L	1	09/21/20	CPP	SW6010D
Iron (Dissolved)	< 0.011	0.011	mg/L	1	09/21/20	CPP	SW6010D
Manganese (Dissolved)	0.617	0.001	mg/L	1	09/21/20	CPP	SW6010D
Iron	0.047	0.010	mg/L	1	09/21/20	TH	SW6010D
Manganese	1.11	0.001	mg/L	1	09/21/20	TH	SW6010D
Dissolved Metals Preparation	Completed				09/17/20	AG	SW3005A
Total Metals Digestion	Completed				09/18/20	AG	
Volatiles							
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
1,1,1-Trichloroethane	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L	1	09/21/20	MH	SW8260C
1,1,2-Trichloroethane	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
1,1-Dichloroethane	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
1,1-Dichloroethene	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
1,1-Dichloropropene	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
1,2,3-Trichlorobenzene	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
1,2,3-Trichloropropane	ND	0.50	ug/L	1	09/21/20	MH	SW8260C
1,2,4-Trichlorobenzene	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
1,2,4-Trimethylbenzene	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	0.50	ug/L	1	09/21/20	MH	SW8260C
1,2-Dibromoethane	ND	0.50	ug/L	1	09/21/20	MH	SW8260C
1,2-Dichlorobenzene	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
1,2-Dichloroethane	ND	0.60	ug/L	1	09/21/20	MH	SW8260C
1,2-Dichloropropane	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
1,3,5-Trimethylbenzene	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
1,3-Dichlorobenzene	ND	1.0	ug/L	1	09/21/20	MH	SW8260C

Project ID: LOCKHEED WILMINGTON MA 60552044.19 Phoenix I.D.: CG79154

Client ID: 18A-AE109D-091620-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	
1,3-Dichloropropane	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
1,4-Dichlorobenzene	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
2,2-Dichloropropane	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
2-Chlorotoluene	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
2-Hexanone	ND	5.0	ug/L	1	09/21/20	MH	SW8260C
4-Chlorotoluene	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
4-Methyl-2-pentanone	ND	5.0	ug/L	1	09/21/20	MH	SW8260C
Acetone	ND	25	ug/L	1	09/21/20	MH	SW8260C
Benzene	ND	0.70	ug/L	1	09/21/20	MH	SW8260C
Bromobenzene	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
Bromochloromethane	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
Bromodichloromethane	ND	0.50	ug/L	1	09/21/20	MH	SW8260C
Bromoform	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
Bromomethane	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
Carbon Disulfide	ND	5.0	ug/L	1	09/21/20	MH	SW8260C
Carbon tetrachloride	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
Chlorobenzene	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
Chloroethane	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
Chloroform	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
Chloromethane	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
cis-1,2-Dichloroethene	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
cis-1,3-Dichloropropene	ND	0.40	ug/L	1	09/21/20	MH	SW8260C
Dibromochloromethane	ND	0.50	ug/L	1	09/21/20	MH	SW8260C
Dibromomethane	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
Dichlorodifluoromethane	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
Ethylbenzene	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
Hexachlorobutadiene	ND	0.40	ug/L	1	09/21/20	MH	SW8260C
Isopropylbenzene	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
m&p-Xylene	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
Methyl ethyl ketone	ND	5.0	ug/L	1	09/21/20	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
Methylene chloride	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
Naphthalene	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
n-Butylbenzene	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
n-Propylbenzene	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
o-Xylene	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
p-Isopropyltoluene	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
sec-Butylbenzene	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
Styrene	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
tert-Butylbenzene	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
Tetrachloroethene	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
Tetrahydrofuran (THF)	ND	2.5	ug/L	1	09/21/20	MH	SW8260C
Toluene	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
trans-1,2-Dichloroethene	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
trans-1,3-Dichloropropene	ND	0.40	ug/L	1	09/21/20	MH	SW8260C
Trichloroethene	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
Trichlorofluoromethane	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
Trichlorotrifluoroethane	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
Vinyl chloride	ND	1.0	ug/L	1	09/21/20	MH	SW8260C

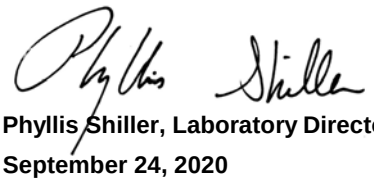
Project ID: LOCKHEED WILMINGTON MA 60552044.19 Phoenix I.D.: CG79154
Client ID: 18A-AE109D-091620-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	100		%	1	09/21/20	MH	70 - 130 %
% Bromofluorobenzene	97		%	1	09/21/20	MH	70 - 130 %
% Dibromofluoromethane	95		%	1	09/21/20	MH	70 - 130 %
% Toluene-d8	103		%	1	09/21/20	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	100	ug/L	1	09/21/20	MH	SW8260C (OXY)
Diethyl ether	ND	1.0	ug/L	1	09/21/20	MH	SW8260C (OXY)
Di-isopropyl ether	ND	1.0	ug/L	1	09/21/20	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	1.0	ug/L	1	09/21/20	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	1.0	ug/L	1	09/21/20	MH	SW8260C (OXY)
1,4-dioxane							
1,4-dioxane	0.42	0.20	ug/l	1	09/18/20	AW	SW8270DSIM
QA/QC Surrogates							
% 1,4-dioxane-d8	83		%	1	09/18/20	AW	40 - 140 %
Extraction for 1,4-Dioxane	Completed				09/17/20	S/S	

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

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Phyllis Shiller, Laboratory Director
September 24, 2020
Reviewed and Released by: Greg Lawrence, Assistant Lab Director

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

September 24, 2020

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		09/16/20	10:30
Location Code:	AECOM-WILMINGTN	Received by:	B	09/16/20	16:56
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	127680				

Laboratory Data

SDG ID: GCG79150
Phoenix ID: CG79155

Project ID: LOCKHEED WILMINGTON MA 60552044.19
Client ID: 20A-AE104D-091620-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Volatiles							
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
1,1,1-Trichloroethane	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L	1	09/21/20	MH	SW8260C
1,1,2-Trichloroethane	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
1,1-Dichloroethane	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
1,1-Dichloroethene	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
1,1-Dichloropropene	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
1,2,3-Trichlorobenzene	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
1,2,3-Trichloropropane	ND	0.50	ug/L	1	09/21/20	MH	SW8260C
1,2,4-Trichlorobenzene	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
1,2,4-Trimethylbenzene	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	0.50	ug/L	1	09/21/20	MH	SW8260C
1,2-Dibromoethane	ND	0.50	ug/L	1	09/21/20	MH	SW8260C
1,2-Dichlorobenzene	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
1,2-Dichloroethane	ND	0.60	ug/L	1	09/21/20	MH	SW8260C
1,2-Dichloropropane	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
1,3,5-Trimethylbenzene	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
1,3-Dichlorobenzene	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
1,3-Dichloropropane	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
1,4-Dichlorobenzene	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
2,2-Dichloropropane	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
2-Chlorotoluene	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
2-Hexanone	ND	5.0	ug/L	1	09/21/20	MH	SW8260C
4-Chlorotoluene	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
4-Methyl-2-pentanone	ND	5.0	ug/L	1	09/21/20	MH	SW8260C
Acetone	ND	25	ug/L	1	09/21/20	MH	SW8260C

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	
Benzene	ND	0.70	ug/L	1	09/21/20	MH	SW8260C
Bromobenzene	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
Bromochloromethane	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
Bromodichloromethane	ND	0.50	ug/L	1	09/21/20	MH	SW8260C
Bromoform	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
Bromomethane	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
Carbon Disulfide	ND	5.0	ug/L	1	09/21/20	MH	SW8260C
Carbon tetrachloride	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
Chlorobenzene	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
Chloroethane	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
Chloroform	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
Chloromethane	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
cis-1,2-Dichloroethene	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
cis-1,3-Dichloropropene	ND	0.40	ug/L	1	09/21/20	MH	SW8260C
Dibromochloromethane	ND	0.50	ug/L	1	09/21/20	MH	SW8260C
Dibromomethane	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
Dichlorodifluoromethane	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
Ethylbenzene	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
Hexachlorobutadiene	ND	0.40	ug/L	1	09/21/20	MH	SW8260C
Isopropylbenzene	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
m&p-Xylene	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
Methyl ethyl ketone	ND	5.0	ug/L	1	09/21/20	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
Methylene chloride	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
Naphthalene	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
n-Butylbenzene	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
n-Propylbenzene	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
o-Xylene	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
p-Isopropyltoluene	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
sec-Butylbenzene	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
Styrene	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
tert-Butylbenzene	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
Tetrachloroethene	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
Tetrahydrofuran (THF)	ND	2.5	ug/L	1	09/21/20	MH	SW8260C
Toluene	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
trans-1,2-Dichloroethene	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
trans-1,3-Dichloropropene	ND	0.40	ug/L	1	09/21/20	MH	SW8260C
Trichloroethene	1.4	1.0	ug/L	1	09/21/20	MH	SW8260C
Trichlorofluoromethane	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
Trichlorotrifluoroethane	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
Vinyl chloride	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	97		%	1	09/21/20	MH	70 - 130 %
% Bromofluorobenzene	94		%	1	09/21/20	MH	70 - 130 %
% Dibromofluoromethane	95		%	1	09/21/20	MH	70 - 130 %
% Toluene-d8	102		%	1	09/21/20	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	100	ug/L	1	09/21/20	MH	SW8260C (OXY)
Diethyl ether	ND	1.0	ug/L	1	09/21/20	MH	SW8260C (OXY)

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	
Di-isopropyl ether	ND	1.0	ug/L	1	09/21/20	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	1.0	ug/L	1	09/21/20	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	1.0	ug/L	1	09/21/20	MH	SW8260C (OXY)
1,4-dioxane							
1,4-dioxane	0.34	0.20	ug/l	1	09/18/20	AW	SW8270DSIM
QA/QC Surrogates							
% 1,4-dioxane-d8	92		%	1	09/18/20	AW	40 - 140 %
Extraction for 1,4-Dioxane	Completed				09/17/20	S/S	

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.

Phyllis Shiller, Laboratory Director
September 24, 2020
Reviewed and Released by: Greg Lawrence, Assistant Lab Director

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

September 24, 2020

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		09/16/20	11:10
Location Code:	AECOM-WILMINGTN	Received by:	B	09/16/20	16:56
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	127680				

Laboratory Data

SDG ID: GCG79150
Phoenix ID: CG79156

Project ID: LOCKHEED WILMINGTON MA 60552044.19
Client ID: 20A-AE104S-091620-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Volatiles							
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
1,1,1-Trichloroethane	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L	1	09/21/20	MH	SW8260C
1,1,2-Trichloroethane	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
1,1-Dichloroethane	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
1,1-Dichloroethene	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
1,1-Dichloropropene	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
1,2,3-Trichlorobenzene	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
1,2,3-Trichloropropane	ND	0.50	ug/L	1	09/21/20	MH	SW8260C
1,2,4-Trichlorobenzene	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
1,2,4-Trimethylbenzene	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	0.50	ug/L	1	09/21/20	MH	SW8260C
1,2-Dibromoethane	ND	0.50	ug/L	1	09/21/20	MH	SW8260C
1,2-Dichlorobenzene	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
1,2-Dichloroethane	ND	0.60	ug/L	1	09/21/20	MH	SW8260C
1,2-Dichloropropane	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
1,3,5-Trimethylbenzene	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
1,3-Dichlorobenzene	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
1,3-Dichloropropane	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
1,4-Dichlorobenzene	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
2,2-Dichloropropane	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
2-Chlorotoluene	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
2-Hexanone	ND	5.0	ug/L	1	09/21/20	MH	SW8260C
4-Chlorotoluene	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
4-Methyl-2-pentanone	ND	5.0	ug/L	1	09/21/20	MH	SW8260C
Acetone	ND	25	ug/L	1	09/21/20	MH	SW8260C

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	
Benzene	ND	0.70	ug/L	1	09/21/20	MH	SW8260C
Bromobenzene	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
Bromochloromethane	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
Bromodichloromethane	ND	0.50	ug/L	1	09/21/20	MH	SW8260C
Bromoform	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
Bromomethane	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
Carbon Disulfide	ND	5.0	ug/L	1	09/21/20	MH	SW8260C
Carbon tetrachloride	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
Chlorobenzene	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
Chloroethane	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
Chloroform	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
Chloromethane	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
cis-1,2-Dichloroethene	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
cis-1,3-Dichloropropene	ND	0.40	ug/L	1	09/21/20	MH	SW8260C
Dibromochloromethane	ND	0.50	ug/L	1	09/21/20	MH	SW8260C
Dibromomethane	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
Dichlorodifluoromethane	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
Ethylbenzene	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
Hexachlorobutadiene	ND	0.40	ug/L	1	09/21/20	MH	SW8260C
Isopropylbenzene	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
m&p-Xylene	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
Methyl ethyl ketone	ND	5.0	ug/L	1	09/21/20	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
Methylene chloride	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
Naphthalene	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
n-Butylbenzene	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
n-Propylbenzene	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
o-Xylene	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
p-Isopropyltoluene	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
sec-Butylbenzene	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
Styrene	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
tert-Butylbenzene	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
Tetrachloroethene	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
Tetrahydrofuran (THF)	ND	2.5	ug/L	1	09/21/20	MH	SW8260C
Toluene	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
trans-1,2-Dichloroethene	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
trans-1,3-Dichloropropene	ND	0.40	ug/L	1	09/21/20	MH	SW8260C
Trichloroethene	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
Trichlorofluoromethane	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
Trichlorotrifluoroethane	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
Vinyl chloride	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	99		%	1	09/21/20	MH	70 - 130 %
% Bromofluorobenzene	96		%	1	09/21/20	MH	70 - 130 %
% Dibromofluoromethane	94		%	1	09/21/20	MH	70 - 130 %
% Toluene-d8	102		%	1	09/21/20	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	100	ug/L	1	09/21/20	MH	SW8260C (OXY)
Diethyl ether	ND	1.0	ug/L	1	09/21/20	MH	SW8260C (OXY)

Project ID: LOCKHEED WILMINGTON MA 60552044.19 Phoenix I.D.: CG79156

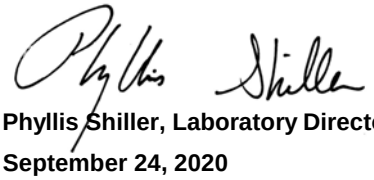
Client ID: 20A-AE104S-091620-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	
Di-isopropyl ether	ND	1.0	ug/L	1	09/21/20	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	1.0	ug/L	1	09/21/20	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	1.0	ug/L	1	09/21/20	MH	SW8260C (OXY)

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

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Phyllis Shiller, Laboratory Director

September 24, 2020

Reviewed and Released by: Greg Lawrence, Assistant Lab Director

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

September 24, 2020

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		09/16/20	12:00
Location Code:	AECOM-WILMINGTN	Received by:	B	09/16/20	16:56
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	127680				

Laboratory Data

SDG ID: GCG79150
Phoenix ID: CG79157

Project ID: LOCKHEED WILMINGTON MA 60552044.19
Client ID: 20A-AE111R1-091620-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Volatiles							
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
1,1,1-Trichloroethane	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L	1	09/21/20	MH	SW8260C
1,1,2-Trichloroethane	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
1,1-Dichloroethane	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
1,1-Dichloroethene	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
1,1-Dichloropropene	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
1,2,3-Trichlorobenzene	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
1,2,3-Trichloropropane	ND	0.50	ug/L	1	09/21/20	MH	SW8260C
1,2,4-Trichlorobenzene	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
1,2,4-Trimethylbenzene	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	0.50	ug/L	1	09/21/20	MH	SW8260C
1,2-Dibromoethane	ND	0.50	ug/L	1	09/21/20	MH	SW8260C
1,2-Dichlorobenzene	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
1,2-Dichloroethane	ND	0.60	ug/L	1	09/21/20	MH	SW8260C
1,2-Dichloropropane	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
1,3,5-Trimethylbenzene	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
1,3-Dichlorobenzene	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
1,3-Dichloropropane	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
1,4-Dichlorobenzene	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
2,2-Dichloropropane	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
2-Chlorotoluene	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
2-Hexanone	ND	5.0	ug/L	1	09/21/20	MH	SW8260C
4-Chlorotoluene	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
4-Methyl-2-pentanone	ND	5.0	ug/L	1	09/21/20	MH	SW8260C
Acetone	ND	25	ug/L	1	09/21/20	MH	SW8260C

Project ID: LOCKHEED WILMINGTON MA 60552044.19 Phoenix I.D.: CG79157
Client ID: 20A-AE111R1-091620-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	
Benzene	ND	0.70	ug/L	1	09/21/20	MH	SW8260C
Bromobenzene	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
Bromochloromethane	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
Bromodichloromethane	ND	0.50	ug/L	1	09/21/20	MH	SW8260C
Bromoform	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
Bromomethane	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
Carbon Disulfide	ND	5.0	ug/L	1	09/21/20	MH	SW8260C
Carbon tetrachloride	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
Chlorobenzene	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
Chloroethane	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
Chloroform	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
Chloromethane	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
cis-1,2-Dichloroethene	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
cis-1,3-Dichloropropene	ND	0.40	ug/L	1	09/21/20	MH	SW8260C
Dibromochloromethane	ND	0.50	ug/L	1	09/21/20	MH	SW8260C
Dibromomethane	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
Dichlorodifluoromethane	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
Ethylbenzene	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
Hexachlorobutadiene	ND	0.40	ug/L	1	09/21/20	MH	SW8260C
Isopropylbenzene	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
m&p-Xylene	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
Methyl ethyl ketone	ND	5.0	ug/L	1	09/21/20	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
Methylene chloride	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
Naphthalene	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
n-Butylbenzene	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
n-Propylbenzene	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
o-Xylene	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
p-Isopropyltoluene	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
sec-Butylbenzene	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
Styrene	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
tert-Butylbenzene	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
Tetrachloroethene	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
Tetrahydrofuran (THF)	ND	2.5	ug/L	1	09/21/20	MH	SW8260C
Toluene	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
trans-1,2-Dichloroethene	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
trans-1,3-Dichloropropene	ND	0.40	ug/L	1	09/21/20	MH	SW8260C
Trichloroethene	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
Trichlorofluoromethane	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
Trichlorotrifluoroethane	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
Vinyl chloride	ND	1.0	ug/L	1	09/21/20	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	98		%	1	09/21/20	MH	70 - 130 %
% Bromofluorobenzene	94		%	1	09/21/20	MH	70 - 130 %
% Dibromofluoromethane	95		%	1	09/21/20	MH	70 - 130 %
% Toluene-d8	102		%	1	09/21/20	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	100	ug/L	1	09/21/20	MH	SW8260C (OXY)
Diethyl ether	ND	1.0	ug/L	1	09/21/20	MH	SW8260C (OXY)

Ver 1

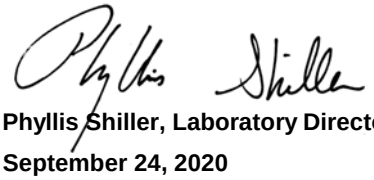
Project ID: LOCKHEED WILMINGTON MA 60552044.19 Phoenix I.D.: CG79157
Client ID: 20A-AE111R1-091620-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	
Di-isopropyl ether	ND	1.0	ug/L	1	09/21/20	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	1.0	ug/L	1	09/21/20	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	1.0	ug/L	1	09/21/20	MH	SW8260C (OXY)

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

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Phyllis Shiller, Laboratory Director
September 24, 2020
Reviewed and Released by: Greg Lawrence, Assistant Lab Director

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

September 24, 2020

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		09/16/20	12:05
Location Code:	AECOM-WILMINGTN	Received by:	B	09/16/20	16:56
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	127680				

Laboratory Data

SDG ID: GCG79150
Phoenix ID: CG79158

Project ID: LOCKHEED WILMINGTON MA 60552044.19
Client ID: 20A-AE111R3-091620-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Volatiles							
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
1,1,1-Trichloroethane	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L	1	09/22/20	MH	SW8260C
1,1,2-Trichloroethane	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
1,1-Dichloroethane	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
1,1-Dichloroethene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
1,1-Dichloropropene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
1,2,3-Trichlorobenzene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
1,2,3-Trichloropropane	ND	0.50	ug/L	1	09/22/20	MH	SW8260C
1,2,4-Trichlorobenzene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
1,2,4-Trimethylbenzene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	0.50	ug/L	1	09/22/20	MH	SW8260C
1,2-Dibromoethane	ND	0.50	ug/L	1	09/22/20	MH	SW8260C
1,2-Dichlorobenzene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
1,2-Dichloroethane	ND	0.60	ug/L	1	09/22/20	MH	SW8260C
1,2-Dichloropropane	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
1,3,5-Trimethylbenzene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
1,3-Dichlorobenzene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
1,3-Dichloropropane	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
1,4-Dichlorobenzene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
2,2-Dichloropropane	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
2-Chlorotoluene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
2-Hexanone	ND	5.0	ug/L	1	09/22/20	MH	SW8260C
4-Chlorotoluene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
4-Methyl-2-pentanone	ND	5.0	ug/L	1	09/22/20	MH	SW8260C
Acetone	ND	25	ug/L	1	09/22/20	MH	SW8260C

Project ID: LOCKHEED WILMINGTON MA 60552044.19 Phoenix I.D.: CG79158
Client ID: 20A-AE111R3-091620-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	
Benzene	ND	0.70	ug/L	1	09/22/20	MH	SW8260C
Bromobenzene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
Bromochloromethane	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
Bromodichloromethane	ND	0.50	ug/L	1	09/22/20	MH	SW8260C
Bromoform	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
Bromomethane	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
Carbon Disulfide	ND	5.0	ug/L	1	09/22/20	MH	SW8260C
Carbon tetrachloride	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
Chlorobenzene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
Chloroethane	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
Chloroform	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
Chloromethane	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
cis-1,2-Dichloroethene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
cis-1,3-Dichloropropene	ND	0.40	ug/L	1	09/22/20	MH	SW8260C
Dibromochloromethane	ND	0.50	ug/L	1	09/22/20	MH	SW8260C
Dibromomethane	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
Dichlorodifluoromethane	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
Ethylbenzene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
Hexachlorobutadiene	ND	0.40	ug/L	1	09/22/20	MH	SW8260C
Isopropylbenzene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
m&p-Xylene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
Methyl ethyl ketone	ND	5.0	ug/L	1	09/22/20	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
Methylene chloride	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
Naphthalene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
n-Butylbenzene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
n-Propylbenzene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
o-Xylene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
p-Isopropyltoluene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
sec-Butylbenzene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
Styrene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
tert-Butylbenzene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
Tetrachloroethene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
Tetrahydrofuran (THF)	ND	2.5	ug/L	1	09/22/20	MH	SW8260C
Toluene	1.1	1.0	ug/L	1	09/22/20	MH	SW8260C
trans-1,2-Dichloroethene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
trans-1,3-Dichloropropene	ND	0.40	ug/L	1	09/22/20	MH	SW8260C
Trichloroethene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
Trichlorofluoromethane	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
Trichlorotrifluoroethane	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
Vinyl chloride	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	98		%	1	09/22/20	MH	70 - 130 %
% Bromofluorobenzene	96		%	1	09/22/20	MH	70 - 130 %
% Dibromofluoromethane	99		%	1	09/22/20	MH	70 - 130 %
% Toluene-d8	102		%	1	09/22/20	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	100	ug/L	1	09/22/20	MH	SW8260C (OXY)
Diethyl ether	ND	1.0	ug/L	1	09/22/20	MH	SW8260C (OXY)

Ver 1

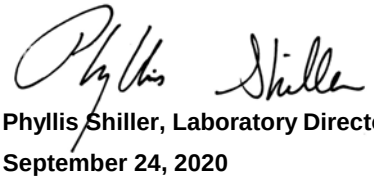
Project ID: LOCKHEED WILMINGTON MA 60552044.19 Phoenix I.D.: CG79158
Client ID: 20A-AE111R3-091620-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	
Di-isopropyl ether	ND	1.0	ug/L	1	09/22/20	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	1.0	ug/L	1	09/22/20	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	1.0	ug/L	1	09/22/20	MH	SW8260C (OXY)

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.



Phyllis Shiller, Laboratory Director
September 24, 2020
Reviewed and Released by: Greg Lawrence, Assistant Lab Director

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

September 24, 2020

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		09/16/20	12:10
Location Code:	AECOM-WILMINGTN	Received by:	B	09/16/20	16:56
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	127680				

Laboratory Data

SDG ID: GCG79150
Phoenix ID: CG79159

Project ID: LOCKHEED WILMINGTON MA 60552044.19
Client ID: 20A-AE111R5-091620-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Volatiles							
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
1,1,1-Trichloroethane	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L	1	09/22/20	MH	SW8260C
1,1,2-Trichloroethane	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
1,1-Dichloroethane	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
1,1-Dichloroethene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
1,1-Dichloropropene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
1,2,3-Trichlorobenzene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
1,2,3-Trichloropropane	ND	0.50	ug/L	1	09/22/20	MH	SW8260C
1,2,4-Trichlorobenzene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
1,2,4-Trimethylbenzene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	0.50	ug/L	1	09/22/20	MH	SW8260C
1,2-Dibromoethane	ND	0.50	ug/L	1	09/22/20	MH	SW8260C
1,2-Dichlorobenzene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
1,2-Dichloroethane	ND	0.60	ug/L	1	09/22/20	MH	SW8260C
1,2-Dichloropropane	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
1,3,5-Trimethylbenzene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
1,3-Dichlorobenzene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
1,3-Dichloropropane	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
1,4-Dichlorobenzene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
2,2-Dichloropropane	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
2-Chlorotoluene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
2-Hexanone	ND	5.0	ug/L	1	09/22/20	MH	SW8260C
4-Chlorotoluene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
4-Methyl-2-pentanone	ND	5.0	ug/L	1	09/22/20	MH	SW8260C
Acetone	ND	25	ug/L	1	09/22/20	MH	SW8260C

Project ID: LOCKHEED WILMINGTON MA 60552044.19 Phoenix I.D.: CG79159
Client ID: 20A-AE111R5-091620-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	
Benzene	ND	0.70	ug/L	1	09/22/20	MH	SW8260C
Bromobenzene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
Bromochloromethane	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
Bromodichloromethane	ND	0.50	ug/L	1	09/22/20	MH	SW8260C
Bromoform	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
Bromomethane	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
Carbon Disulfide	ND	5.0	ug/L	1	09/22/20	MH	SW8260C
Carbon tetrachloride	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
Chlorobenzene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
Chloroethane	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
Chloroform	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
Chloromethane	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
cis-1,2-Dichloroethene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
cis-1,3-Dichloropropene	ND	0.40	ug/L	1	09/22/20	MH	SW8260C
Dibromochloromethane	ND	0.50	ug/L	1	09/22/20	MH	SW8260C
Dibromomethane	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
Dichlorodifluoromethane	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
Ethylbenzene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
Hexachlorobutadiene	ND	0.40	ug/L	1	09/22/20	MH	SW8260C
Isopropylbenzene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
m&p-Xylene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
Methyl ethyl ketone	ND	5.0	ug/L	1	09/22/20	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
Methylene chloride	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
Naphthalene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
n-Butylbenzene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
n-Propylbenzene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
o-Xylene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
p-Isopropyltoluene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
sec-Butylbenzene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
Styrene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
tert-Butylbenzene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
Tetrachloroethene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
Tetrahydrofuran (THF)	ND	2.5	ug/L	1	09/22/20	MH	SW8260C
Toluene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
trans-1,2-Dichloroethene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
trans-1,3-Dichloropropene	ND	0.40	ug/L	1	09/22/20	MH	SW8260C
Trichloroethene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
Trichlorofluoromethane	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
Trichlorotrifluoroethane	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
Vinyl chloride	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	98		%	1	09/22/20	MH	70 - 130 %
% Bromofluorobenzene	94		%	1	09/22/20	MH	70 - 130 %
% Dibromofluoromethane	97		%	1	09/22/20	MH	70 - 130 %
% Toluene-d8	103		%	1	09/22/20	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	100	ug/L	1	09/22/20	MH	SW8260C (OXY)
Diethyl ether	ND	1.0	ug/L	1	09/22/20	MH	SW8260C (OXY)

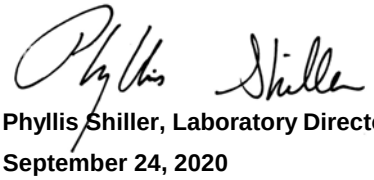
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Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	
Di-isopropyl ether	ND	1.0	ug/L	1	09/22/20	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	1.0	ug/L	1	09/22/20	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	1.0	ug/L	1	09/22/20	MH	SW8260C (OXY)

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

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Phyllis Shiller, Laboratory Director
September 24, 2020
Reviewed and Released by: Greg Lawrence, Assistant Lab Director

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

September 24, 2020

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		09/16/20	12:15
Location Code:	AECOM-WILMINGTN	Received by:	B	09/16/20	16:56
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	127680				

Laboratory Data

SDG ID: GCG79150
Phoenix ID: CG79160

Project ID: LOCKHEED WILMINGTON MA 60552044.19
Client ID: 20A-AE111R6-091620-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Volatiles							
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
1,1,1-Trichloroethane	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L	1	09/22/20	MH	SW8260C
1,1,2-Trichloroethane	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
1,1-Dichloroethane	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
1,1-Dichloroethene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
1,1-Dichloropropene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
1,2,3-Trichlorobenzene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
1,2,3-Trichloropropane	ND	0.50	ug/L	1	09/22/20	MH	SW8260C
1,2,4-Trichlorobenzene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
1,2,4-Trimethylbenzene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	0.50	ug/L	1	09/22/20	MH	SW8260C
1,2-Dibromoethane	ND	0.50	ug/L	1	09/22/20	MH	SW8260C
1,2-Dichlorobenzene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
1,2-Dichloroethane	ND	0.60	ug/L	1	09/22/20	MH	SW8260C
1,2-Dichloropropane	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
1,3,5-Trimethylbenzene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
1,3-Dichlorobenzene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
1,3-Dichloropropane	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
1,4-Dichlorobenzene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
2,2-Dichloropropane	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
2-Chlorotoluene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
2-Hexanone	ND	5.0	ug/L	1	09/22/20	MH	SW8260C
4-Chlorotoluene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
4-Methyl-2-pentanone	ND	5.0	ug/L	1	09/22/20	MH	SW8260C
Acetone	ND	25	ug/L	1	09/22/20	MH	SW8260C

Project ID: LOCKHEED WILMINGTON MA 60552044.19 Phoenix I.D.: CG79160
Client ID: 20A-AE111R6-091620-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	
Benzene	ND	0.70	ug/L	1	09/22/20	MH	SW8260C
Bromobenzene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
Bromochloromethane	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
Bromodichloromethane	ND	0.50	ug/L	1	09/22/20	MH	SW8260C
Bromoform	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
Bromomethane	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
Carbon Disulfide	ND	5.0	ug/L	1	09/22/20	MH	SW8260C
Carbon tetrachloride	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
Chlorobenzene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
Chloroethane	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
Chloroform	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
Chloromethane	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
cis-1,2-Dichloroethene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
cis-1,3-Dichloropropene	ND	0.40	ug/L	1	09/22/20	MH	SW8260C
Dibromochloromethane	ND	0.50	ug/L	1	09/22/20	MH	SW8260C
Dibromomethane	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
Dichlorodifluoromethane	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
Ethylbenzene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
Hexachlorobutadiene	ND	0.40	ug/L	1	09/22/20	MH	SW8260C
Isopropylbenzene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
m&p-Xylene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
Methyl ethyl ketone	ND	5.0	ug/L	1	09/22/20	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
Methylene chloride	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
Naphthalene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
n-Butylbenzene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
n-Propylbenzene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
o-Xylene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
p-Isopropyltoluene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
sec-Butylbenzene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
Styrene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
tert-Butylbenzene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
Tetrachloroethene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
Tetrahydrofuran (THF)	ND	2.5	ug/L	1	09/22/20	MH	SW8260C
Toluene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
trans-1,2-Dichloroethene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
trans-1,3-Dichloropropene	ND	0.40	ug/L	1	09/22/20	MH	SW8260C
Trichloroethene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
Trichlorofluoromethane	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
Trichlorotrifluoroethane	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
Vinyl chloride	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	99		%	1	09/22/20	MH	70 - 130 %
% Bromofluorobenzene	96		%	1	09/22/20	MH	70 - 130 %
% Dibromofluoromethane	95		%	1	09/22/20	MH	70 - 130 %
% Toluene-d8	103		%	1	09/22/20	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	100	ug/L	1	09/22/20	MH	SW8260C (OXY)
Diethyl ether	ND	1.0	ug/L	1	09/22/20	MH	SW8260C (OXY)

Ver 1

Project ID: LOCKHEED WILMINGTON MA 60552044.19 Phoenix I.D.: CG79160

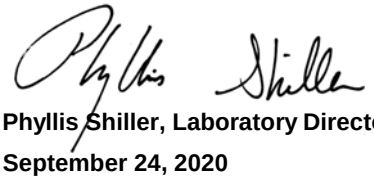
Client ID: 20A-AE111R6-091620-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	
Di-isopropyl ether	ND	1.0	ug/L	1	09/22/20	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	1.0	ug/L	1	09/22/20	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	1.0	ug/L	1	09/22/20	MH	SW8260C (OXY)

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.



Phyllis Shiller, Laboratory Director

September 24, 2020

Reviewed and Released by: Greg Lawrence, Assistant Lab Director

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

September 24, 2020

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		09/16/20	14:30
Location Code:	AECOM-WILMINGTN	Received by:	B	09/16/20	16:56
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	127680				

Laboratory Data

SDG ID: GCG79150
Phoenix ID: CG79161

Project ID: LOCKHEED WILMINGTON MA 60552044.19
Client ID: 20A-AE110R1-091620-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Volatiles							
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
1,1,1-Trichloroethane	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L	1	09/22/20	MH	SW8260C
1,1,2-Trichloroethane	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
1,1-Dichloroethane	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
1,1-Dichloroethene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
1,1-Dichloropropene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
1,2,3-Trichlorobenzene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
1,2,3-Trichloropropane	ND	0.50	ug/L	1	09/22/20	MH	SW8260C
1,2,4-Trichlorobenzene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
1,2,4-Trimethylbenzene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	0.50	ug/L	1	09/22/20	MH	SW8260C
1,2-Dibromoethane	ND	0.50	ug/L	1	09/22/20	MH	SW8260C
1,2-Dichlorobenzene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
1,2-Dichloroethane	ND	0.60	ug/L	1	09/22/20	MH	SW8260C
1,2-Dichloropropane	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
1,3,5-Trimethylbenzene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
1,3-Dichlorobenzene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
1,3-Dichloropropane	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
1,4-Dichlorobenzene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
2,2-Dichloropropane	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
2-Chlorotoluene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
2-Hexanone	ND	5.0	ug/L	1	09/22/20	MH	SW8260C
4-Chlorotoluene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
4-Methyl-2-pentanone	ND	5.0	ug/L	1	09/22/20	MH	SW8260C
Acetone	ND	25	ug/L	1	09/22/20	MH	SW8260C

Project ID: LOCKHEED WILMINGTON MA 60552044.19 Phoenix I.D.: CG79161

Client ID: 20A-AE110R1-091620-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	
Benzene	ND	0.70	ug/L	1	09/22/20	MH	SW8260C
Bromobenzene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
Bromochloromethane	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
Bromodichloromethane	ND	0.50	ug/L	1	09/22/20	MH	SW8260C
Bromoform	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
Bromomethane	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
Carbon Disulfide	ND	5.0	ug/L	1	09/22/20	MH	SW8260C
Carbon tetrachloride	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
Chlorobenzene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
Chloroethane	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
Chloroform	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
Chloromethane	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
cis-1,2-Dichloroethene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
cis-1,3-Dichloropropene	ND	0.40	ug/L	1	09/22/20	MH	SW8260C
Dibromochloromethane	ND	0.50	ug/L	1	09/22/20	MH	SW8260C
Dibromomethane	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
Dichlorodifluoromethane	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
Ethylbenzene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
Hexachlorobutadiene	ND	0.40	ug/L	1	09/22/20	MH	SW8260C
Isopropylbenzene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
m&p-Xylene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
Methyl ethyl ketone	ND	5.0	ug/L	1	09/22/20	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
Methylene chloride	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
Naphthalene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
n-Butylbenzene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
n-Propylbenzene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
o-Xylene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
p-Isopropyltoluene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
sec-Butylbenzene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
Styrene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
tert-Butylbenzene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
Tetrachloroethene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
Tetrahydrofuran (THF)	ND	2.5	ug/L	1	09/22/20	MH	SW8260C
Toluene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
trans-1,2-Dichloroethene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
trans-1,3-Dichloropropene	ND	0.40	ug/L	1	09/22/20	MH	SW8260C
Trichloroethene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
Trichlorofluoromethane	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
Trichlorotrifluoroethane	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
Vinyl chloride	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	98		%	1	09/22/20	MH	70 - 130 %
% Bromofluorobenzene	95		%	1	09/22/20	MH	70 - 130 %
% Dibromofluoromethane	96		%	1	09/22/20	MH	70 - 130 %
% Toluene-d8	102		%	1	09/22/20	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	100	ug/L	1	09/22/20	MH	SW8260C (OXY)
Diethyl ether	ND	1.0	ug/L	1	09/22/20	MH	SW8260C (OXY)

Ver 1

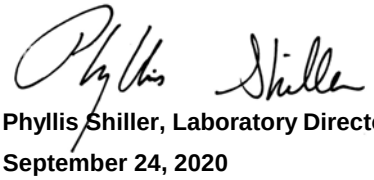
Project ID: LOCKHEED WILMINGTON MA 60552044.19 Phoenix I.D.: CG79161
Client ID: 20A-AE110R1-091620-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	
Di-isopropyl ether	ND	1.0	ug/L	1	09/22/20	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	1.0	ug/L	1	09/22/20	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	1.0	ug/L	1	09/22/20	MH	SW8260C (OXY)

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

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Phyllis Shiller, Laboratory Director
September 24, 2020
Reviewed and Released by: Greg Lawrence, Assistant Lab Director

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

September 24, 2020

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		09/16/20	14:45
Location Code:	AECOM-WILMINGTN	Received by:	B	09/16/20	16:56
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	127680				

Laboratory Data

SDG ID: GCG79150
Phoenix ID: CG79162

Project ID: LOCKHEED WILMINGTON MA 60552044.19
Client ID: 20A-AE110R2-091620-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Volatiles							
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
1,1,1-Trichloroethane	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L	1	09/22/20	MH	SW8260C
1,1,2-Trichloroethane	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
1,1-Dichloroethane	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
1,1-Dichloroethene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
1,1-Dichloropropene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
1,2,3-Trichlorobenzene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
1,2,3-Trichloropropane	ND	0.50	ug/L	1	09/22/20	MH	SW8260C
1,2,4-Trichlorobenzene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
1,2,4-Trimethylbenzene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	0.50	ug/L	1	09/22/20	MH	SW8260C
1,2-Dibromoethane	ND	0.50	ug/L	1	09/22/20	MH	SW8260C
1,2-Dichlorobenzene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
1,2-Dichloroethane	ND	0.60	ug/L	1	09/22/20	MH	SW8260C
1,2-Dichloropropane	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
1,3,5-Trimethylbenzene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
1,3-Dichlorobenzene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
1,3-Dichloropropane	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
1,4-Dichlorobenzene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
2,2-Dichloropropane	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
2-Chlorotoluene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
2-Hexanone	ND	5.0	ug/L	1	09/22/20	MH	SW8260C
4-Chlorotoluene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
4-Methyl-2-pentanone	ND	5.0	ug/L	1	09/22/20	MH	SW8260C
Acetone	ND	25	ug/L	1	09/22/20	MH	SW8260C

Project ID: LOCKHEED WILMINGTON MA 60552044.19 Phoenix I.D.: CG79162
Client ID: 20A-AE110R2-091620-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	
Benzene	ND	0.70	ug/L	1	09/22/20	MH	SW8260C
Bromobenzene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
Bromochloromethane	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
Bromodichloromethane	ND	0.50	ug/L	1	09/22/20	MH	SW8260C
Bromoform	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
Bromomethane	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
Carbon Disulfide	ND	5.0	ug/L	1	09/22/20	MH	SW8260C
Carbon tetrachloride	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
Chlorobenzene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
Chloroethane	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
Chloroform	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
Chloromethane	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
cis-1,2-Dichloroethene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
cis-1,3-Dichloropropene	ND	0.40	ug/L	1	09/22/20	MH	SW8260C
Dibromochloromethane	ND	0.50	ug/L	1	09/22/20	MH	SW8260C
Dibromomethane	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
Dichlorodifluoromethane	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
Ethylbenzene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
Hexachlorobutadiene	ND	0.40	ug/L	1	09/22/20	MH	SW8260C
Isopropylbenzene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
m&p-Xylene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
Methyl ethyl ketone	ND	5.0	ug/L	1	09/22/20	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
Methylene chloride	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
Naphthalene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
n-Butylbenzene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
n-Propylbenzene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
o-Xylene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
p-Isopropyltoluene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
sec-Butylbenzene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
Styrene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
tert-Butylbenzene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
Tetrachloroethene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
Tetrahydrofuran (THF)	ND	2.5	ug/L	1	09/22/20	MH	SW8260C
Toluene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
trans-1,2-Dichloroethene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
trans-1,3-Dichloropropene	ND	0.40	ug/L	1	09/22/20	MH	SW8260C
Trichloroethene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
Trichlorofluoromethane	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
Trichlorotrifluoroethane	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
Vinyl chloride	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	99		%	1	09/22/20	MH	70 - 130 %
% Bromofluorobenzene	96		%	1	09/22/20	MH	70 - 130 %
% Dibromofluoromethane	95		%	1	09/22/20	MH	70 - 130 %
% Toluene-d8	102		%	1	09/22/20	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	100	ug/L	1	09/22/20	MH	SW8260C (OXY)
Diethyl ether	ND	1.0	ug/L	1	09/22/20	MH	SW8260C (OXY)

Ver 1

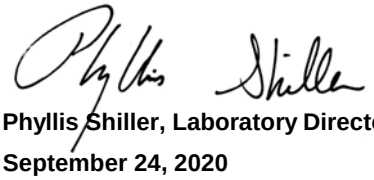
Project ID: LOCKHEED WILMINGTON MA 60552044.19 Phoenix I.D.: CG79162
Client ID: 20A-AE110R2-091620-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	
Di-isopropyl ether	ND	1.0	ug/L	1	09/22/20	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	1.0	ug/L	1	09/22/20	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	1.0	ug/L	1	09/22/20	MH	SW8260C (OXY)

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

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Phyllis Shiller, Laboratory Director
September 24, 2020
Reviewed and Released by: Greg Lawrence, Assistant Lab Director

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

September 24, 2020

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		09/16/20	14:35
Location Code:	AECOM-WILMINGTN	Received by:	B	09/16/20	16:56
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	127680				

Laboratory Data

SDG ID: GCG79150
Phoenix ID: CG79163

Project ID: LOCKHEED WILMINGTON MA 60552044.19
Client ID: 20A-AE110R4-091620-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Volatiles							
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
1,1,1-Trichloroethane	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L	1	09/22/20	MH	SW8260C
1,1,2-Trichloroethane	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
1,1-Dichloroethane	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
1,1-Dichloroethene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
1,1-Dichloropropene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
1,2,3-Trichlorobenzene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
1,2,3-Trichloropropane	ND	0.50	ug/L	1	09/22/20	MH	SW8260C
1,2,4-Trichlorobenzene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
1,2,4-Trimethylbenzene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	0.50	ug/L	1	09/22/20	MH	SW8260C
1,2-Dibromoethane	ND	0.50	ug/L	1	09/22/20	MH	SW8260C
1,2-Dichlorobenzene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
1,2-Dichloroethane	ND	0.60	ug/L	1	09/22/20	MH	SW8260C
1,2-Dichloropropane	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
1,3,5-Trimethylbenzene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
1,3-Dichlorobenzene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
1,3-Dichloropropane	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
1,4-Dichlorobenzene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
2,2-Dichloropropane	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
2-Chlorotoluene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
2-Hexanone	ND	5.0	ug/L	1	09/22/20	MH	SW8260C
4-Chlorotoluene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
4-Methyl-2-pentanone	ND	5.0	ug/L	1	09/22/20	MH	SW8260C
Acetone	ND	25	ug/L	1	09/22/20	MH	SW8260C

Project ID: LOCKHEED WILMINGTON MA 60552044.19 Phoenix I.D.: CG79163
Client ID: 20A-AE110R4-091620-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	
Benzene	ND	0.70	ug/L	1	09/22/20	MH	SW8260C
Bromobenzene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
Bromochloromethane	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
Bromodichloromethane	ND	0.50	ug/L	1	09/22/20	MH	SW8260C
Bromoform	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
Bromomethane	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
Carbon Disulfide	ND	5.0	ug/L	1	09/22/20	MH	SW8260C
Carbon tetrachloride	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
Chlorobenzene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
Chloroethane	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
Chloroform	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
Chloromethane	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
cis-1,2-Dichloroethene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
cis-1,3-Dichloropropene	ND	0.40	ug/L	1	09/22/20	MH	SW8260C
Dibromochloromethane	ND	0.50	ug/L	1	09/22/20	MH	SW8260C
Dibromomethane	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
Dichlorodifluoromethane	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
Ethylbenzene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
Hexachlorobutadiene	ND	0.40	ug/L	1	09/22/20	MH	SW8260C
Isopropylbenzene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
m&p-Xylene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
Methyl ethyl ketone	ND	5.0	ug/L	1	09/22/20	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
Methylene chloride	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
Naphthalene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
n-Butylbenzene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
n-Propylbenzene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
o-Xylene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
p-Isopropyltoluene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
sec-Butylbenzene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
Styrene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
tert-Butylbenzene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
Tetrachloroethene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
Tetrahydrofuran (THF)	ND	2.5	ug/L	1	09/22/20	MH	SW8260C
Toluene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
trans-1,2-Dichloroethene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
trans-1,3-Dichloropropene	ND	0.40	ug/L	1	09/22/20	MH	SW8260C
Trichloroethene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
Trichlorofluoromethane	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
Trichlorotrifluoroethane	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
Vinyl chloride	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	98		%	1	09/22/20	MH	70 - 130 %
% Bromofluorobenzene	97		%	1	09/22/20	MH	70 - 130 %
% Dibromofluoromethane	98		%	1	09/22/20	MH	70 - 130 %
% Toluene-d8	102		%	1	09/22/20	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	100	ug/L	1	09/22/20	MH	SW8260C (OXY)
Diethyl ether	ND	1.0	ug/L	1	09/22/20	MH	SW8260C (OXY)

Ver 1

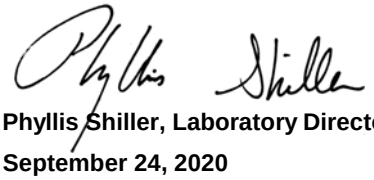
Project ID: LOCKHEED WILMINGTON MA 60552044.19 Phoenix I.D.: CG79163
Client ID: 20A-AE110R4-091620-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	
Di-isopropyl ether	ND	1.0	ug/L	1	09/22/20	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	1.0	ug/L	1	09/22/20	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	1.0	ug/L	1	09/22/20	MH	SW8260C (OXY)

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

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Phyllis Shiller, Laboratory Director
September 24, 2020
Reviewed and Released by: Greg Lawrence, Assistant Lab Director

Environmental Laboratories, Inc.
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Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

September 24, 2020

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		09/16/20	14:30
Location Code:	AECOM-WILMINGTN	Received by:	B	09/16/20	16:56
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	127680				

Laboratory Data

SDG ID: GCG79150
Phoenix ID: CG79164

Project ID: LOCKHEED WILMINGTON MA 60552044.19
Client ID: 20A-AE110R6-091620-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Volatiles							
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
1,1,1-Trichloroethane	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L	1	09/22/20	MH	SW8260C
1,1,2-Trichloroethane	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
1,1-Dichloroethane	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
1,1-Dichloroethene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
1,1-Dichloropropene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
1,2,3-Trichlorobenzene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
1,2,3-Trichloropropane	ND	0.50	ug/L	1	09/22/20	MH	SW8260C
1,2,4-Trichlorobenzene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
1,2,4-Trimethylbenzene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	0.50	ug/L	1	09/22/20	MH	SW8260C
1,2-Dibromoethane	ND	0.50	ug/L	1	09/22/20	MH	SW8260C
1,2-Dichlorobenzene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
1,2-Dichloroethane	ND	0.60	ug/L	1	09/22/20	MH	SW8260C
1,2-Dichloropropane	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
1,3,5-Trimethylbenzene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
1,3-Dichlorobenzene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
1,3-Dichloropropane	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
1,4-Dichlorobenzene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
2,2-Dichloropropane	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
2-Chlorotoluene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
2-Hexanone	ND	5.0	ug/L	1	09/22/20	MH	SW8260C
4-Chlorotoluene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
4-Methyl-2-pentanone	ND	5.0	ug/L	1	09/22/20	MH	SW8260C
Acetone	ND	25	ug/L	1	09/22/20	MH	SW8260C

Project ID: LOCKHEED WILMINGTON MA 60552044.19 Phoenix I.D.: CG79164

Client ID: 20A-AE110R6-091620-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	
Benzene	ND	0.70	ug/L	1	09/22/20	MH	SW8260C
Bromobenzene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
Bromochloromethane	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
Bromodichloromethane	ND	0.50	ug/L	1	09/22/20	MH	SW8260C
Bromoform	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
Bromomethane	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
Carbon Disulfide	ND	5.0	ug/L	1	09/22/20	MH	SW8260C
Carbon tetrachloride	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
Chlorobenzene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
Chloroethane	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
Chloroform	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
Chloromethane	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
cis-1,2-Dichloroethene	1.5	1.0	ug/L	1	09/22/20	MH	SW8260C
cis-1,3-Dichloropropene	ND	0.40	ug/L	1	09/22/20	MH	SW8260C
Dibromochloromethane	ND	0.50	ug/L	1	09/22/20	MH	SW8260C
Dibromomethane	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
Dichlorodifluoromethane	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
Ethylbenzene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
Hexachlorobutadiene	ND	0.40	ug/L	1	09/22/20	MH	SW8260C
Isopropylbenzene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
m&p-Xylene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
Methyl ethyl ketone	ND	5.0	ug/L	1	09/22/20	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
Methylene chloride	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
Naphthalene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
n-Butylbenzene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
n-Propylbenzene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
o-Xylene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
p-Isopropyltoluene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
sec-Butylbenzene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
Styrene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
tert-Butylbenzene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
Tetrachloroethene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
Tetrahydrofuran (THF)	ND	2.5	ug/L	1	09/22/20	MH	SW8260C
Toluene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
trans-1,2-Dichloroethene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
trans-1,3-Dichloropropene	ND	0.40	ug/L	1	09/22/20	MH	SW8260C
Trichloroethene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
Trichlorofluoromethane	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
Trichlorotrifluoroethane	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
Vinyl chloride	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	101		%	1	09/22/20	MH	70 - 130 %
% Bromofluorobenzene	96		%	1	09/22/20	MH	70 - 130 %
% Dibromofluoromethane	99		%	1	09/22/20	MH	70 - 130 %
% Toluene-d8	103		%	1	09/22/20	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	100	ug/L	1	09/22/20	MH	SW8260C (OXY)
Diethyl ether	ND	1.0	ug/L	1	09/22/20	MH	SW8260C (OXY)

Ver 1

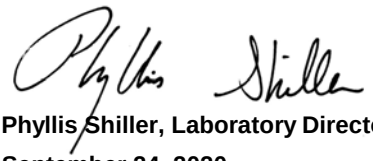
Project ID: LOCKHEED WILMINGTON MA 60552044.19 Phoenix I.D.: CG79164
Client ID: 20A-AE110R6-091620-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	
Di-isopropyl ether	ND	1.0	ug/L	1	09/22/20	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	1.0	ug/L	1	09/22/20	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	1.0	ug/L	1	09/22/20	MH	SW8260C (OXY)
1,4-dioxane							
1,4-dioxane	1.3	0.20	ug/l	1	09/18/20	AW	SW8270DSIM
QA/QC Surrogates							
% 1,4-dioxane-d8	91		%	1	09/18/20	AW	40 - 140 %
Extraction for 1,4-Dioxane	Completed				09/17/20	S/S	

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

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Phyllis Shiller, Laboratory Director
September 24, 2020
Reviewed and Released by: Greg Lawrence, Assistant Lab Director

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

September 24, 2020

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		09/16/20	14:45
Location Code:	AECOM-WILMINGTN	Received by:	B	09/16/20	16:56
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	127680				

Laboratory Data

SDG ID: GCG79150
Phoenix ID: CG79165

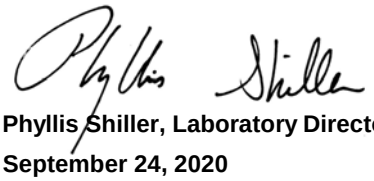
Project ID: LOCKHEED WILMINGTON MA 60552044.19
Client ID: 20A-AE109R5-091620-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Chloride	33.4	3.0	mg/L	1	09/17/20	BS/GD	E300.0
Nitrite as Nitrogen	< 0.004	0.004	mg/L	1	09/17/20 07:46	BS/GD	E300.0
Nitrate as Nitrogen	< 0.05	0.05	mg/L	1	09/17/20 07:46	BS/GD	E300.0
Sulfate	7.8	3.0	mg/L	1	09/17/20	BS/GD	E300.0

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September 24, 2020
Reviewed and Released by: Greg Lawrence, Assistant Lab Director

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Tel. (860) 645-1102 Fax (860) 645-0823

QA/QC Report

September 24, 2020

QA/QC Data

SDG I.D.: GCG79150

Parameter	Blank	Blk RL	Sample Result	Dup Result	Dup RPD	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits
QA/QC Batch 545883 (mg/L), QC Sample No: CG79152 (CG79152, CG79153, CG79154)													
ICP Metals - Dissolved													
Arsenic	BRL	0.004	<0.004	<0.004	NC	90.2	91.0	0.9	89.5			80 - 120	20
Iron	BRL	0.011	0.738	0.733	0.70	90.0	90.7	0.8	87.8			80 - 120	20
Manganese	BRL	0.001	0.007	0.007	0	90.3	91.8	1.6	88.8			80 - 120	20
Comment:													
Additional: LCS acceptance range is 80-120% MS acceptance range 75-125%.													
QA/QC Batch 546026 (mg/L), QC Sample No: CG79723 (CG79152, CG79153, CG79154)													
ICP Metals - Aqueous													
Arsenic	BRL	0.004	<0.004	<0.004	NC	103	100	3.0	104	106	1.9	80 - 120	20
Iron	BRL	0.010	0.653	0.732	11.4	105	102	2.9	102	104	1.9	80 - 120	20
Manganese	BRL	0.001	2.07	2.01	2.90	104	101	2.9	104	108	3.8	80 - 120	20
Comment:													
Additional: LCS acceptance range is 80-120% MS acceptance range 75-125%.													

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

QA/QC Report

September 24, 2020

QA/QC Data

SDG I.D.: GCG79150

Parameter	Blank	Blk RL	Sample Result	Dup Result	Dup RPD	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits
QA/QC Batch 545861 (mg/L), QC Sample No: CG77711 (CG79165)													
Chloride	BRL	3.0	6.1	6.1	NC	95.6			97.9			90 - 110	20
Sulfate	BRL	3.0	15.3	15.3	0	94.2			98.8			90 - 110	20
QA/QC Batch 545861 (mg/L), QC Sample No: CG77711 (CG79165)													
Nitrate as Nitrogen	BRL	0.05	<0.05	<0.05	NC	97.7			104			90 - 110	20
Nitrite as Nitrogen	BRL	0.01	<0.01	<0.01	NC	98.5			93.7			90 - 110	20

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QA/QC Report

September 24, 2020

QA/QC Data

SDG I.D.: GCG79150

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits
QA/QC Batch 545870 (ug/l), QC Sample No: CG79328 (CG79154, CG79155, CG79164)										
1,4dioxane - Ground Water										
1,4-dioxane	ND	0.20	95	96	1.0	96			40 - 140	30
% 1,4-dioxane-d8	97	%	93	99	6.3	91			40 - 140	30
QA/QC Batch 546288 (ug/L), QC Sample No: CG77564 (CG79151, CG79152)										
Volatiles - Ground Water										
1,1,1,2-Tetrachloroethane	ND	1.0	92	91	1.1				70 - 130	30
1,1,1-Trichloroethane	ND	1.0	84	82	2.4				70 - 130	30
1,1,2,2-Tetrachloroethane	ND	0.50	89	93	4.4				70 - 130	30
1,1,2-Trichloroethane	ND	1.0	86	86	0.0				70 - 130	30
1,1-Dichloroethane	ND	1.0	87	83	4.7				70 - 130	30
1,1-Dichloroethene	ND	1.0	93	81	13.8				70 - 130	30
1,1-Dichloropropene	ND	1.0	91	88	3.4				70 - 130	30
1,2,3-Trichlorobenzene	ND	1.0	92	92	0.0				70 - 130	30
1,2,3-Trichloropropane	ND	1.0	82	85	3.6				70 - 130	30
1,2,4-Trichlorobenzene	ND	1.0	92	92	0.0				70 - 130	30
1,2,4-Trimethylbenzene	ND	1.0	93	90	3.3				70 - 130	30
1,2-Dibromo-3-chloropropane	ND	1.0	88	93	5.5				70 - 130	30
1,2-Dibromoethane	ND	1.0	89	91	2.2				70 - 130	30
1,2-Dichlorobenzene	ND	1.0	91	89	2.2				70 - 130	30
1,2-Dichloroethane	ND	1.0	87	87	0.0				70 - 130	30
1,2-Dichloropropane	ND	1.0	90	87	3.4				70 - 130	30
1,3,5-Trimethylbenzene	ND	1.0	94	92	2.2				70 - 130	30
1,3-Dichlorobenzene	ND	1.0	92	89	3.3				70 - 130	30
1,3-Dichloropropane	ND	1.0	88	88	0.0				70 - 130	30
1,4-Dichlorobenzene	ND	1.0	91	91	0.0				70 - 130	30
1,4-dioxane	ND	100	92	96	4.3				40 - 160	30
2,2-Dichloropropane	ND	1.0	89	85	4.6				70 - 130	30
2-Chlorotoluene	ND	1.0	92	90	2.2				70 - 130	30
2-Hexanone	ND	5.0	85	90	5.7				40 - 160	30
4-Chlorotoluene	ND	1.0	91	90	1.1				70 - 130	30
4-Methyl-2-pentanone	ND	5.0	84	89	5.8				40 - 160	30
Acetone	ND	5.0	83	84	1.2				40 - 160	30
Benzene	ND	0.70	88	86	2.3				70 - 130	30
Bromobenzene	ND	1.0	89	87	2.3				70 - 130	30
Bromochloromethane	ND	1.0	83	83	0.0				70 - 130	30
Bromodichloromethane	ND	0.50	90	88	2.2				70 - 130	30
Bromoform	ND	1.0	92	92	0.0				70 - 130	30
Bromomethane	ND	1.0	94	87	7.7				40 - 160	30
Carbon Disulfide	ND	1.0	94	79	17.3				70 - 130	30
Carbon tetrachloride	ND	1.0	98	82	17.8				70 - 130	30
Chlorobenzene	ND	1.0	90	88	2.2				70 - 130	30
Chloroethane	ND	1.0	93	80	15.0				70 - 130	30

QA/QC Data

SDG I.D.: GCG79150

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits
Chloroform	ND	1.0	82	80	2.5				70 - 130	30
Chloromethane	ND	1.0	89	85	4.6				40 - 160	30
cis-1,2-Dichloroethene	ND	1.0	81	77	5.1				70 - 130	30
cis-1,3-Dichloropropene	ND	0.40	91	90	1.1				70 - 130	30
Dibromochloromethane	ND	0.50	95	94	1.1				70 - 130	30
Dibromomethane	ND	1.0	83	83	0.0				70 - 130	30
Dichlorodifluoromethane	ND	1.0	108	106	1.9				40 - 160	30
Di-isopropyl ether	ND	1.0	68	86	23.4				70 - 130	30
Ethyl ether	ND	1.0	90	80	11.8				70 - 130	30
Ethyl tert-butyl ether	ND	1.0	88	88	0.0				70 - 130	30
Ethylbenzene	ND	1.0	89	87	2.3				70 - 130	30
Hexachlorobutadiene	ND	0.40	94	92	2.2				70 - 130	30
Isopropylbenzene	ND	1.0	93	90	3.3				70 - 130	30
m&p-Xylene	ND	1.0	91	88	3.4				70 - 130	30
Methyl ethyl ketone	ND	5.0	77	87	12.2				40 - 160	30
Methyl t-butyl ether (MTBE)	ND	1.0	82	79	3.7				70 - 130	30
Methylene chloride	ND	1.0	91	79	14.1				70 - 130	30
Naphthalene	ND	1.0	92	98	6.3				70 - 130	30
n-Butylbenzene	ND	1.0	97	94	3.1				70 - 130	30
n-Propylbenzene	ND	1.0	94	91	3.2				70 - 130	30
o-Xylene	ND	1.0	93	89	4.4				70 - 130	30
p-Isopropyltoluene	ND	1.0	98	95	3.1				70 - 130	30
sec-Butylbenzene	ND	1.0	103	100	3.0				70 - 130	30
Styrene	ND	1.0	93	90	3.3				70 - 130	30
tert-amyl methyl ether	ND	1.0	92	91	1.1				70 - 130	30
tert-Butylbenzene	ND	1.0	96	92	4.3				70 - 130	30
Tetrachloroethene	ND	1.0	89	84	5.8				70 - 130	30
Tetrahydrofuran (THF)	ND	2.5	77	85	9.9				70 - 130	30
Toluene	ND	1.0	88	86	2.3				70 - 130	30
trans-1,2-Dichloroethene	ND	1.0	97	87	10.9				70 - 130	30
trans-1,3-Dichloropropene	ND	0.40	90	89	1.1				70 - 130	30
Trichloroethene	ND	1.0	88	86	2.3				70 - 130	30
Trichlorofluoromethane	ND	1.0	93	86	7.8				70 - 130	30
Trichlorotrifluoroethane	ND	1.0	90	85	5.7				70 - 130	30
Vinyl chloride	ND	1.0	98	92	6.3				70 - 130	30
% 1,2-dichlorobenzene-d4	97	%	98	99	1.0				70 - 130	30
% Bromofluorobenzene	96	%	101	100	1.0				70 - 130	30
% Dibromofluoromethane	93	%	93	93	0.0				70 - 130	30
% Toluene-d8	102	%	100	99	1.0				70 - 130	30

Comment:

A LCS and LCS Duplicate were performed instead of a matrix spike and matrix spike duplicate.

Additional 8260 criteria: 10% of compounds can be outside of acceptance criteria as long as recovery is 10%.

QA/QC Batch 546396 (ug/L), QC Sample No: CG79150 (CG79150, CG79153, CG79154, CG79155, CG79156, CG79157, CG79158, CG79159, CG79160, CG79161, CG79162, CG79163, CG79164)

Volatiles - Ground Water

1,1,1,2-Tetrachloroethane	ND	1.0	93	96	3.2				70 - 130	30
1,1,1-Trichloroethane	ND	1.0	90	92	2.2				70 - 130	30
1,1,2,2-Tetrachloroethane	ND	0.50	105	107	1.9				70 - 130	30
1,1,2-Trichloroethane	ND	1.0	91	92	1.1				70 - 130	30
1,1-Dichloroethane	ND	1.0	89	92	3.3				70 - 130	30
1,1-Dichloroethene	ND	1.0	91	92	1.1				70 - 130	30
1,1-Dichloropropene	ND	1.0	95	98	3.1				70 - 130	30

QA/QC Data

SDG I.D.: GCG79150

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits
1,2,3-Trichlorobenzene	ND	1.0	98	101	3.0				70 - 130	30
1,2,3-Trichloropropane	ND	1.0	96	98	2.1				70 - 130	30
1,2,4-Trichlorobenzene	ND	1.0	96	98	2.1				70 - 130	30
1,2,4-Trimethylbenzene	ND	1.0	96	100	4.1				70 - 130	30
1,2-Dibromo-3-chloropropane	ND	1.0	105	109	3.7				70 - 130	30
1,2-Dibromoethane	ND	1.0	98	99	1.0				70 - 130	30
1,2-Dichlorobenzene	ND	1.0	93	98	5.2				70 - 130	30
1,2-Dichloroethane	ND	1.0	93	95	2.1				70 - 130	30
1,2-Dichloropropane	ND	1.0	91	94	3.2				70 - 130	30
1,3,5-Trimethylbenzene	ND	1.0	98	101	3.0				70 - 130	30
1,3-Dichlorobenzene	ND	1.0	94	98	4.2				70 - 130	30
1,3-Dichloropropane	ND	1.0	97	99	2.0				70 - 130	30
1,4-Dichlorobenzene	ND	1.0	95	96	1.0				70 - 130	30
1,4-dioxane	ND	100	98	98	0.0				40 - 160	30
2,2-Dichloropropane	ND	1.0	85	86	1.2				70 - 130	30
2-Chlorotoluene	ND	1.0	94	98	4.2				70 - 130	30
2-Hexanone	ND	5.0	105	106	0.9				40 - 160	30
4-Chlorotoluene	ND	1.0	95	98	3.1				70 - 130	30
4-Methyl-2-pentanone	ND	5.0	103	102	1.0				40 - 160	30
Acetone	ND	5.0	97	96	1.0				40 - 160	30
Benzene	ND	0.70	92	93	1.1				70 - 130	30
Bromobenzene	ND	1.0	91	95	4.3				70 - 130	30
Bromochloromethane	ND	1.0	86	91	5.6				70 - 130	30
Bromodichloromethane	ND	0.50	93	95	2.1				70 - 130	30
Bromoform	ND	1.0	98	98	0.0				70 - 130	30
Bromomethane	ND	1.0	92	96	4.3				40 - 160	30
Carbon Disulfide	ND	1.0	85	86	1.2				70 - 130	30
Carbon tetrachloride	ND	1.0	102	105	2.9				70 - 130	30
Chlorobenzene	ND	1.0	93	95	2.1				70 - 130	30
Chloroethane	ND	1.0	88	91	3.4				70 - 130	30
Chloroform	ND	1.0	86	88	2.3				70 - 130	30
Chloromethane	ND	1.0	91	92	1.1				40 - 160	30
cis-1,2-Dichloroethene	ND	1.0	85	86	1.2				70 - 130	30
cis-1,3-Dichloropropene	ND	0.40	93	92	1.1				70 - 130	30
Dibromochloromethane	ND	0.50	100	101	1.0				70 - 130	30
Dibromomethane	ND	1.0	88	90	2.2				70 - 130	30
Dichlorodifluoromethane	ND	1.0	106	107	0.9				40 - 160	30
Di-isopropyl ether	ND	1.0	94	97	3.1				70 - 130	30
Ethyl ether	ND	1.0	91	93	2.2				70 - 130	30
Ethyl tert-butyl ether	ND	1.0	95	97	2.1				70 - 130	30
Ethylbenzene	ND	1.0	92	94	2.2				70 - 130	30
Hexachlorobutadiene	ND	0.40	96	100	4.1				70 - 130	30
Isopropylbenzene	ND	1.0	96	101	5.1				70 - 130	30
m&p-Xylene	ND	1.0	94	95	1.1				70 - 130	30
Methyl ethyl ketone	ND	5.0	104	103	1.0				40 - 160	30
Methyl t-butyl ether (MTBE)	ND	1.0	86	87	1.2				70 - 130	30
Methylene chloride	ND	1.0	82	83	1.2				70 - 130	30
Naphthalene	ND	1.0	109	109	0.0				70 - 130	30
n-Butylbenzene	ND	1.0	101	105	3.9				70 - 130	30
n-Propylbenzene	ND	1.0	96	101	5.1				70 - 130	30
o-Xylene	ND	1.0	95	96	1.0				70 - 130	30
p-Isopropyltoluene	ND	1.0	101	104	2.9				70 - 130	30
sec-Butylbenzene	ND	1.0	108	111	2.7				70 - 130	30

QA/QC Data

SDG I.D.: GCG79150

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits
Styrene	ND	1.0	98	97	1.0				70 - 130	30
tert-amyl methyl ether	ND	1.0	96	98	2.1				70 - 130	30
tert-Butylbenzene	ND	1.0	98	103	5.0				70 - 130	30
Tetrachloroethene	ND	1.0	89	89	0.0				70 - 130	30
Tetrahydrofuran (THF)	ND	2.5	101	101	0.0				70 - 130	30
Toluene	ND	1.0	90	91	1.1				70 - 130	30
trans-1,2-Dichloroethene	ND	1.0	90	90	0.0				70 - 130	30
trans-1,3-Dichloropropene	ND	0.40	93	93	0.0				70 - 130	30
Trichloroethene	ND	1.0	90	93	3.3				70 - 130	30
Trichlorofluoromethane	ND	1.0	100	102	2.0				70 - 130	30
Trichlorotrifluoroethane	ND	1.0	100	101	1.0				70 - 130	30
Vinyl chloride	ND	1.0	99	100	1.0				70 - 130	30
% 1,2-dichlorobenzene-d4	99	%	99	101	2.0				70 - 130	30
% Bromofluorobenzene	95	%	99	100	1.0				70 - 130	30
% Dibromofluoromethane	94	%	95	96	1.0				70 - 130	30
% Toluene-d8	101	%	100	99	1.0				70 - 130	30

Comment:

A LCS and LCS Duplicate were performed instead of a matrix spike and matrix spike duplicate.

Additional 8260 criteria: 10% of compounds can be outside of acceptance criteria as long as recovery is 10%.

QA/QC Batch 546448 (ug/L), QC Sample No: CG80060 (CG79153 (10X))

Volatiles - Ground Water

Trichloroethene	ND	1.0	84	85	1.2				70 - 130	30
% 1,2-dichlorobenzene-d4	98	%	100	100	0.0				70 - 130	30
% Bromofluorobenzene	96	%	100	101	1.0				70 - 130	30
% Dibromofluoromethane	96	%	94	93	1.1				70 - 130	30
% Toluene-d8	104	%	100	99	1.0				70 - 130	30

Comment:

A LCS and LCS Duplicate were performed instead of a matrix spike and matrix spike duplicate.

Additional 8260 criteria: 10% of compounds can be outside of acceptance criteria as long as recovery is 10%.

I = This parameter is outside laboratory LCS/LCSD specified recovery limits.

If there are any questions regarding this data, please call Phoenix Client Services at extension 200.

RPD - Relative Percent Difference
LCS - Laboratory Control Sample
LCSD - Laboratory Control Sample Duplicate
MS - Matrix Spike
MS Dup - Matrix Spike Duplicate
NC - No Criteria
Intf - Interference

Phyllis Shiller, Laboratory Director
September 24, 2020

Thursday, September 24, 2020

Criteria: MA: GW1, GW2, GW3

State: MA

Sample Criteria Exceedances Report

GCG79150 - AECOM-WILMINGTN

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units
CG79150	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.00033	0.00033	ug/L
CG79150	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.0075	0.0075	ug/L
CG79150	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.00075	0.00075	ug/L
CG79150	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	0.50	0.02	0.02	ug/L
CG79150	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	0.50	0.02	0.02	ug/L
CG79150	$MCPADD-WM	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	100	0.3	0.3	ug/L
CG79150	$MCPADD-WM	1,4-dioxane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	100	3	3	ug/L
CG79150	$MCPADD-WM	1,4-dioxane	MA / GROUNDWATER STANDARDS / GW-1	ND	100	0.3	0.3	ug/L
CG79151	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.00075	0.00075	ug/L
CG79151	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.00033	0.00033	ug/L
CG79151	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.0075	0.0075	ug/L
CG79151	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	0.50	0.02	0.02	ug/L
CG79151	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	0.50	0.02	0.02	ug/L
CG79151	$MCPADD-WM	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	100	0.3	0.3	ug/L
CG79151	$MCPADD-WM	1,4-dioxane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	100	3	3	ug/L
CG79151	$MCPADD-WM	1,4-dioxane	MA / GROUNDWATER STANDARDS / GW-1	ND	100	0.3	0.3	ug/L
CG79152	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.0075	0.0075	ug/L
CG79152	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.00033	0.00033	ug/L
CG79152	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.00075	0.00075	ug/L
CG79152	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	0.50	0.02	0.02	ug/L
CG79152	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	0.50	0.02	0.02	ug/L
CG79152	$MCPADD-WM	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	100	0.3	0.3	ug/L
CG79152	$MCPADD-WM	1,4-dioxane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	100	3	3	ug/L
CG79152	$MCPADD-WM	1,4-dioxane	MA / GROUNDWATER STANDARDS / GW-1	ND	100	0.3	0.3	ug/L
CG79153	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.0075	0.0075	ug/L
CG79153	$8260GWR-WI	Vinyl chloride	MA / Client Specified Criteria / LOCKHEED WILMINGTO	2.3	1.0	2	2	ug/L
CG79153	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.00075	0.00075	ug/L
CG79153	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.00033	0.00033	ug/L
CG79153	$8260GWR-WI	Tetrachloroethene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	37	1.0	5	5	ug/L
CG79153	$8260GWR-WI	Trichloroethene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	87	10	5	5	ug/L
CG79153	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-1 (mg/l)	2.3	1.0	2	2	ug/L
CG79153	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-1 (mg/l)	2.3	1.0	2	2	ug/L
CG79153	$8260GWR-WI	Tetrachloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	37	1.0	5	5	ug/L
CG79153	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	0.50	0.02	0.02	ug/L
CG79153	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	87	10	5	5	ug/L
CG79153	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-2 (mg/l)	2.3	1.0	2	2	ug/L
CG79153	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-2 (mg/l)	2.3	1.0	2	2	ug/L
CG79153	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	87	10	5	5	ug/L
CG79153	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-1	87	10	5	5	ug/L
CG79153	$8260GWR-WI	Tetrachloroethene	MA / GROUNDWATER STANDARDS / GW-1	37	1.0	5	5	ug/L

Thursday, September 24, 2020

Criteria: MA: GW1, GW2, GW3

State: MA

Sample Criteria Exceedances Report

GCG79150 - AECOM-WILMINGTN

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units
CG79153	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	0.50	0.02	0.02	ug/L
CG79153	$8260GWR-WI	Vinyl chloride	MA / GROUNDWATER STANDARDS / GW-1	2.3	1.0	2	2	ug/L
CG79153	$8260GWR-WI	Vinyl chloride	MA / GROUNDWATER STANDARDS / GW-2	2.3	1.0	2	2	ug/L
CG79153	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-2	87	10	5	5	ug/L
CG79153	$MCPADD-WM	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	100	0.3	0.3	ug/L
CG79153	$MCPADD-WM	1,4-dioxane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	100	3	3	ug/L
CG79153	$MCPADD-WM	1,4-dioxane	MA / GROUNDWATER STANDARDS / GW-1	ND	100	0.3	0.3	ug/L
CG79153	D-MN	Manganese (Dissolved)	MA / Client Specified Criteria / LOCKHEED WILMINGTO	0.569	0.001	0.43	0.43	mg/L
CG79153	MN-WM	Manganese	MA / Client Specified Criteria / LOCKHEED WILMINGTO	0.587	0.001	0.43	0.43	mg/L
CG79154	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.00075	0.00075	ug/L
CG79154	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.00033	0.00033	ug/L
CG79154	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.0075	0.0075	ug/L
CG79154	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	0.50	0.02	0.02	ug/L
CG79154	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	0.50	0.02	0.02	ug/L
CG79154	$DIOX_LDL	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	0.42	0.20	0.3	0.3	ug/l
CG79154	$DIOX_LDL	1,4-dioxane	MA / GROUNDWATER STANDARDS / GW-1	0.42	0.20	0.3	0.3	ug/l
CG79154	$MCPADD-WM	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	100	0.3	0.3	ug/L
CG79154	D-MN	Manganese (Dissolved)	MA / Client Specified Criteria / LOCKHEED WILMINGTO	0.617	0.001	0.43	0.43	mg/L
CG79154	MN-WM	Manganese	MA / Client Specified Criteria / LOCKHEED WILMINGTO	1.11	0.001	0.43	0.43	mg/L
CG79155	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.00033	0.00033	ug/L
CG79155	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.0075	0.0075	ug/L
CG79155	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.00075	0.00075	ug/L
CG79155	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	0.50	0.02	0.02	ug/L
CG79155	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	0.50	0.02	0.02	ug/L
CG79155	$DIOX_LDL	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	0.34	0.20	0.3	0.3	ug/l
CG79155	$DIOX_LDL	1,4-dioxane	MA / GROUNDWATER STANDARDS / GW-1	0.34	0.20	0.3	0.3	ug/l
CG79155	$MCPADD-WM	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	100	0.3	0.3	ug/L
CG79156	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.0075	0.0075	ug/L
CG79156	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.00075	0.00075	ug/L
CG79156	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.00033	0.00033	ug/L
CG79156	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	0.50	0.02	0.02	ug/L
CG79156	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	0.50	0.02	0.02	ug/L
CG79156	$MCPADD-WM	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	100	0.3	0.3	ug/L
CG79156	$MCPADD-WM	1,4-dioxane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	100	3	3	ug/L
CG79156	$MCPADD-WM	1,4-dioxane	MA / GROUNDWATER STANDARDS / GW-1	ND	100	0.3	0.3	ug/L
CG79157	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.00033	0.00033	ug/L
CG79157	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.0075	0.0075	ug/L
CG79157	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.00075	0.00075	ug/L
CG79157	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	0.50	0.02	0.02	ug/L

Thursday, September 24, 2020

Criteria: MA: GW1, GW2, GW3

State: MA

Sample Criteria Exceedances Report

GCG79150 - AECOM-WILMINGTN

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units
CG79157	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	0.50	0.02	0.02	ug/L
CG79157	$MCPADD-WM	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	100	0.3	0.3	ug/L
CG79157	$MCPADD-WM	1,4-dioxane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	100	3	3	ug/L
CG79157	$MCPADD-WM	1,4-dioxane	MA / GROUNDWATER STANDARDS / GW-1	ND	100	0.3	0.3	ug/L
CG79158	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.0075	0.0075	ug/L
CG79158	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.00075	0.00075	ug/L
CG79158	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.00033	0.00033	ug/L
CG79158	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	0.50	0.02	0.02	ug/L
CG79158	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	0.50	0.02	0.02	ug/L
CG79158	$MCPADD-WM	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	100	0.3	0.3	ug/L
CG79158	$MCPADD-WM	1,4-dioxane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	100	3	3	ug/L
CG79158	$MCPADD-WM	1,4-dioxane	MA / GROUNDWATER STANDARDS / GW-1	ND	100	0.3	0.3	ug/L
CG79159	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.00075	0.00075	ug/L
CG79159	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.00033	0.00033	ug/L
CG79159	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.0075	0.0075	ug/L
CG79159	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	0.50	0.02	0.02	ug/L
CG79159	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	0.50	0.02	0.02	ug/L
CG79159	$MCPADD-WM	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	100	0.3	0.3	ug/L
CG79159	$MCPADD-WM	1,4-dioxane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	100	3	3	ug/L
CG79159	$MCPADD-WM	1,4-dioxane	MA / GROUNDWATER STANDARDS / GW-1	ND	100	0.3	0.3	ug/L
CG79160	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.00075	0.00075	ug/L
CG79160	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.00033	0.00033	ug/L
CG79160	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.0075	0.0075	ug/L
CG79160	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	0.50	0.02	0.02	ug/L
CG79160	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	0.50	0.02	0.02	ug/L
CG79160	$MCPADD-WM	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	100	0.3	0.3	ug/L
CG79160	$MCPADD-WM	1,4-dioxane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	100	3	3	ug/L
CG79160	$MCPADD-WM	1,4-dioxane	MA / GROUNDWATER STANDARDS / GW-1	ND	100	0.3	0.3	ug/L
CG79161	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.00075	0.00075	ug/L
CG79161	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.00033	0.00033	ug/L
CG79161	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.0075	0.0075	ug/L
CG79161	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	0.50	0.02	0.02	ug/L
CG79161	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	0.50	0.02	0.02	ug/L
CG79161	$MCPADD-WM	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	100	0.3	0.3	ug/L
CG79161	$MCPADD-WM	1,4-dioxane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	100	3	3	ug/L
CG79161	$MCPADD-WM	1,4-dioxane	MA / GROUNDWATER STANDARDS / GW-1	ND	100	0.3	0.3	ug/L
CG79162	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.00075	0.00075	ug/L
CG79162	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.00033	0.00033	ug/L

Thursday, September 24, 2020

Criteria: MA: GW1, GW2, GW3

State: MA

Sample Criteria Exceedances Report

GCG79150 - AECOM-WILMINGTN

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units
CG79162	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.0075	0.0075	ug/L
CG79162	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	0.50	0.02	0.02	ug/L
CG79162	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	0.50	0.02	0.02	ug/L
CG79162	$MCPADD-WM	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	100	0.3	0.3	ug/L
CG79162	$MCPADD-WM	1,4-dioxane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	100	3	3	ug/L
CG79162	$MCPADD-WM	1,4-dioxane	MA / GROUNDWATER STANDARDS / GW-1	ND	100	0.3	0.3	ug/L
CG79163	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.00075	0.00075	ug/L
CG79163	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.00033	0.00033	ug/L
CG79163	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.0075	0.0075	ug/L
CG79163	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	0.50	0.02	0.02	ug/L
CG79163	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	0.50	0.02	0.02	ug/L
CG79163	$MCPADD-WM	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	100	0.3	0.3	ug/L
CG79163	$MCPADD-WM	1,4-dioxane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	100	3	3	ug/L
CG79163	$MCPADD-WM	1,4-dioxane	MA / GROUNDWATER STANDARDS / GW-1	ND	100	0.3	0.3	ug/L
CG79164	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.00033	0.00033	ug/L
CG79164	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.0075	0.0075	ug/L
CG79164	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.00075	0.00075	ug/L
CG79164	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	0.50	0.02	0.02	ug/L
CG79164	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	0.50	0.02	0.02	ug/L
CG79164	$DIOX_LDL	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	1.3	0.20	0.3	0.3	ug/l
CG79164	$DIOX_LDL	1,4-dioxane	MA / GROUNDWATER STANDARDS / GW-1	1.3	0.20	0.3	0.3	ug/l
CG79164	$MCPADD-WM	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	100	0.3	0.3	ug/L

Phoenix Laboratories does not assume responsibility for the data contained in this exceedance report. It is provided as an additional tool to identify requested criteria exceedences. All efforts are made to ensure the accuracy of the data (obtained from appropriate agencies). A lack of exceedence information does not necessarily suggest conformance to the criteria. It is ultimately the site professional's responsibility to determine appropriate compliance.

MassDEP Analytical Protocol Certification Form

Laboratory Name: Phoenix Environmental Laboratories, Inc. **Project #:**

Project Location: LOCKHEED WILMINGTON MA 6055204 **RTN:**

This Form provides certifications for the following data set: [list Laboratory Sample ID Number(s)]

CG79150, CG79151, CG79152, CG79153, CG79154, CG79155, CG79156, CG79157, CG79158, CG79159, CG79160, CG79161, CG79162, CG79163, CG79164, CG79165

Matrices: ☑ Groundwater/Surface Water ☐ Soil/Sediment ☐ Drinking Water ☐ Air ☐ Other:

CAM Protocol (check all that apply below)

8260 VOC CAM II A ☑	7470/7471 Hg CAM III B ☐	MassDEP VPH CAM IV A ☐	8081 Pesticides CAM V B ☐	7196 Hex Cr CAM VI B ☐	MassDEP APH CAM IX A ☐
8270 SVOC CAM II B ☑	7010 Metals CAM III C ☐	MassDEP EPH CAM IV B ☐	8151 Herbicides CAM V C ☐	8330 Explosives CAM VIII A ☐	TO-15 VOC CAM IX B ☐
6010 Metals CAM III A ☑	6020 Metals CAM III D ☐	8082 PCB CAM V A ☐	9012 Total Cyanide/PAC CAM V1 A ☐	6860 Perchlorate CAM VIII B ☐	

Affirmative responses to questions A through F are required for "Presumptive Certainty" status

A	Were all samples received in a condition consistent with those described on the Chain-of-Custody, properly preserved (including temperature*) in the field or laboratory, and prepared/analyzed with method holding times? (* see narrative)	☑ Yes ☐ No
B	Were the analytical method(s) and all associated QC requirements specified in the selected CAM protocol(s) followed?	☑ Yes ☐ No
C	Were all required corrective actions and analytical response actions specified in the selected CAM protocol(s) implemented for all identified performance standard non-conformances?	☑ Yes ☐ No
D	Does the laboratory report comply with all the reporting requirements speified in CAM VII A, "Quality Assurance and Quality Control Guidelines for the Acquisition and Reporting of Analytical Data"?	☑ Yes ☐ No
E	a. VPH, EPH, and APH Methods only: Was each method conducted without significant modification(s)? (refer to the individual method(s) for a list of significant modifications). b. APH and TO-15 methods only: Was the complete analyte list reported for each method?	☐ Yes ☐ No ☐ Yes ☐ No
F	Were all applicable CAM protocol QC and performance standard non-conformances identified and evaluated in a laboratory narrative (including all "No" responses to Questions A through E)?	☑ Yes ☐ No

Responses to questions G, H and I below is required for "Presumptive Certainty" status

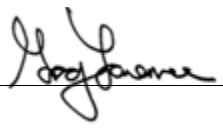
G	Were the reporting limits at or below all CAM reporting limits specified in the selected CAM protocol(s)?	☐ Yes ☑ No

Data User Note: Data that achieve "Presumptive Certainty" status may not necessarily meet the data usability and representativeness requirements described in 310 CMR 40. 1056(2)(k) and WSC-07-350

H	Were all QC performance standards specified in the CAM protocol(s) achieved? See Section: VOA Narration .	☐ Yes ☑ No
I	Were results reported for the complete analyte list specified in the selected CAM protocol(s)?	☐ Yes ☑ No

All negative responses must be addressed in an attached laboratory narrative.

I, the undersigned, attest under the pains and penalties of perjury that, based upon my personal inquiry of those responsible for obtaining the information, the material contained in this analytical report is, to the best of my knowledge and belief, accurate and complete.

Authorized Signature: 

Date: Thursday, September 24, 2020

Printed Name: Greg Lawrence

Position: Assistant Lab Director

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

ACCREDITED IN ACCORDANCE WITH nelac NY # 11301

MCP Certification Report

September 24, 2020

SDG I.D.: GCG79150

SDG Comments

Metals Analysis:
The client requested a shorter list of elements than the 6010 MCP list. The following analytes from the 6010 Metals list were not reported: Antimony, Barium, Beryllium, Cadmium, Chromium, Lead, Nickel, Selenium, Silver, Thallium, Vanadium, Zinc.

Not all requested reporting levels were achieved. Please refer to the Sample Criteria Exceedances section of this report.

IC

Were all QA/QC performance criteria specified in the MADEP document CAM achieved? Yes.

Instrument:

IC 09/16/20-2 Brian Sheriden, Greg Danielewski, Chemist 09/16/20

CG79165

The initial calibration met all criteria including a standard run at the reporting level.
All method verification standards and blanks met criteria.

QC (Batch Specific):

Batch 545861 (CG77711)

CG79165

All LCS recoveries were within 90 - 110 with the following exceptions: None.

I attest under the pains and penalties of perjury that, based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.

ICP Metals Narration

Were all QA/QC performance criteria specified in the analytical method achieved? Yes.

Instrument:

BLUE 09/21/20 15:32 Cindy Pearce, Emily Kolominskaya, Tina Hall, Chemist 09/21/

CG79152, CG79153, CG79154

The initial calibration met criteria.
The continuing calibration standards met criteria for all the elements reported. The linear range is defined daily by the calibration range.
The continuing calibration blanks were less than the reporting level for the elements reported.
The ICSA and ICSAB were analyzed at the beginning and end of the run and were within criteria.The linear range is defined daily by the calibration range.
The following Initial Calibration Verification (ICV) compounds did not meet criteria: None.
The following Continuing Calibration Verification (CCV) compounds did not meet criteria: None.
The following ICP Interference Check (ICSAB) compounds did not meet criteria: None.

QC (Batch Specific):

Batch 545883 (CG79152)

CG79152, CG79153, CG79154

All LCS recoveries were within 80 - 120 with the following exceptions: None.

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

ACCREDITED IN ACCORDANCE WITH nelac NY # 11301

Certification Report

September 24, 2020

SDG I.D.: GCG79150

ICP Metals Narration

All LCSD recoveries were within 80 - 120 with the following exceptions: None.
All LCS/LCSD RPDs were less than 20% with the following exceptions: None.
Additional: LCS acceptance range is 80-120% MS acceptance range 75-125%.

Batch 546026 (CG79723)

CG79152, CG79153, CG79154

All LCS recoveries were within 80 - 120 with the following exceptions: None.
All LCSD recoveries were within 80 - 120 with the following exceptions: None.
All LCS/LCSD RPDs were less than 20% with the following exceptions: None.
Additional: LCS acceptance range is 80-120% MS acceptance range 75-125%.

SVOA-Dioxane

Were all QA/QC performance criteria specified in the MADEP document CAM achieved? Yes.

Instrument:

CHEM22 09/18/20-1 Adam Werner, Chemist 09/18/20

CG79154 (1X), CG79155 (1X), CG79164 (1X)

Initial Calibration Evaluation (CHEM22/DIOX_0818):
100% of target compounds met criteria.
The following compounds had %RSDs >20%: None.
The following compounds did not meet recommended response factors: None.
The following compounds did not meet a minimum response factors: None.

Continuing Calibration Verification (CHEM22/0918_06-DIOX_0818) (MCP Compliance):
Internal standard areas were within 50 to 200% of the initial calibration with the following exceptions: None.
100% of target compounds met criteria.
The following compounds did not meet % deviation criteria: None.
The following compounds did not meet maximum % deviations: None.
The following compounds did not meet recommended response factors: None.
The following compounds did not meet minimum response factors: None.

QC (Batch Specific):

Batch 545870 (CG79328)

CG79154, CG79155, CG79164

All LCS recoveries were within 40 - 140 with the following exceptions: None.
All LCSD recoveries were within 40 - 140 with the following exceptions: None.
All LCS/LCSD RPDs were less than 30% with the following exceptions: None.

I attest under the pains and penalties of perjury that, based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.

VOA Narration

Environmental Laboratories, Inc.
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ACCREDITED IN ACCORDANCE WITH nelac NY # 11301

MCP Certification Report

September 24, 2020

SDG I.D.: GCG79150

VOA Narration

Were all QA/QC performance criteria specified in the MADEP document CAM achieved? No.

QC Batch 546288 (Samples: CG79151, CG79152): -----

The LCS recovery is below the lower range. The LCSD is acceptable, therefore no significant bias is suspected. (Di-isopropyl ether)

Instrument:

CHEM23 09/21/20-1 Michael Hahn, Chemist 09/21/20

CG79151 (1X), CG79152 (1X)

Initial Calibration Evaluation (CHEM23/VOA23_092020):
99% of target compounds met criteria.
The following compounds had %RSDs >20%: Chloroethane 22% (20%)
The following compounds did not meet Table 4 recommended minimum response factors: None.
The following compounds did not meet the minimum response factor of 0.05: None.

Continuing Calibration Verification (CHEM23/0921_03-VOA23_092020) (MCP Compliance):
Internal standard areas were within 50 to 200% of the initial calibration with the following exceptions: None.
98% of target compounds met criteria.
The following compounds did not meet % deviation criteria: None.
The following compounds did not meet maximum % deviations: None.
The following compounds did not meet Table 4 recommended minimum response factors: None.
The following compounds did not meet the minimum MCP response factor of 0.05: None.

CHEM23 09/21/20-2 Michael Hahn, Chemist 09/21/20

CG79150 (1X), CG79153 (1X), CG79154 (1X), CG79155 (1X), CG79156 (1X), CG79157 (1X), CG79158 (1X), CG79159 (1X), CG79160 (1X), CG79161 (1X), CG79162 (1X), CG79163 (1X), CG79164 (1X)

Initial Calibration Evaluation (CHEM23/VOA23_092020):
99% of target compounds met criteria.
The following compounds had %RSDs >20%: Chloroethane 22% (20%)
The following compounds did not meet Table 4 recommended minimum response factors: None.
The following compounds did not meet the minimum response factor of 0.05: None.

Continuing Calibration Verification (CHEM23/0921_33-VOA23_092020) (MCP Compliance):
Internal standard areas were within 50 to 200% of the initial calibration with the following exceptions: None.
99% of target compounds met criteria.
The following compounds did not meet % deviation criteria: None.
The following compounds did not meet maximum % deviations: None.
The following compounds did not meet Table 4 recommended minimum response factors: None.
The following compounds did not meet the minimum MCP response factor of 0.05: None.

CHEM23 09/22/20-1 Michael Hahn, Chemist 09/22/20

CG79153 (10X)

Initial Calibration Evaluation (CHEM23/VOA23_092020):
99% of target compounds met criteria.
The following compounds had %RSDs >20%: None.
The following compounds did not meet Table 4 recommended minimum response factors: None.
The following compounds did not meet the minimum response factor of 0.05: None.

Continuing Calibration Verification (CHEM23/0922_02-VOA23_092020) (MCP Compliance):

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ACCREDITED IN ACCORDANCE WITH nelac NY # 11301

MCP Certification Report

September 24, 2020

SDG I.D.: GCG79150

VOA Narration

Internal standard areas were within 50 to 200% of the initial calibration with the following exceptions: None.
98% of target compounds met criteria.
The following compounds did not meet % deviation criteria: None.
The following compounds did not meet maximum % deviations: None.
The following compounds did not meet Table 4 recommended minimum response factors: None.
The following compounds did not meet the minimum MCP response factor of 0.05: None.

QC (Batch Specific):

Batch 546288 (CG77564) CHEM23 9/21/2020-1

CG79151(1X), CG79152(1X)

All LCS recoveries were within 70 - 130 with the following exceptions: Di-isopropyl ether(68%)
All LCSD recoveries were within 70 - 130 with the following exceptions: None.
All LCS/LCSD RPDs were less than 30% with the following exceptions: None.
A LCS and LCS Duplicate were performed instead of a matrix spike and matrix spike duplicate.
Additional 8260 criteria: 10% of compounds can be outside of acceptance criteria as long as recovery is 10%.

Batch 546396 (CG79150) CHEM23 9/21/2020-2

CG79150(1X), CG79153(1X), CG79154(1X), CG79155(1X), CG79156(1X), CG79157(1X), CG79158(1X), CG79159(1X), CG79160(1X), CG79161(1X), CG79162(1X), CG79163(1X), CG79164(1X)

All LCS recoveries were within 70 - 130 with the following exceptions: None.
All LCSD recoveries were within 70 - 130 with the following exceptions: None.
All LCS/LCSD RPDs were less than 30% with the following exceptions: None.
A LCS and LCS Duplicate were performed instead of a matrix spike and matrix spike duplicate.
Additional 8260 criteria: 10% of compounds can be outside of acceptance criteria as long as recovery is 10%.

Batch 546448 (CG80060) CHEM23 9/22/2020-1

CG79153(10X)

All LCS recoveries were within 70 - 130 with the following exceptions: None.
All LCSD recoveries were within 70 - 130 with the following exceptions: None.
All LCS/LCSD RPDs were less than 30% with the following exceptions: None.
A LCS and LCS Duplicate were performed instead of a matrix spike and matrix spike duplicate.
Additional 8260 criteria: 10% of compounds can be outside of acceptance criteria as long as recovery is 10%.

We attest under the pains and penalties of perjury that, based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.

Cooler: Yes ☑ No ☐
Coolant: IPK ☑ ICE ☐ No ☐
Temp 4.8 C Pg of

PHOENIX
Environmental Laboratories, Inc.

CHAIN OF CUSTODY RECORD

587 East Middle Turnpike, P.O. Box 370, Manchester, CT 06040
Email: info@phoenixlabs.com Fax (860) 645-0823
Client Services (860) 645-8726

Data Delivery/Contact EMails:
lori.herberich@aecom.com
scott.olson@aecom.com

Customer: AECOM
Address: 250 Apollo Drive
Chelmsford, MA 01824 - (978) 905-2100
Contacts: Lori Herblerich (Chemist) 978-302-0089 Scott Olson (PM) 978-846-5238

Project: Lockheed - Wilmington MA 60552044.19
Report to: Lori Herberich - Scott Olson - Nicole Callahan
Invoice to: Scott Olson & Lori Herberich
QUOTE # August 2019 (for 2017-2022)

2020 Project PO: 127680

This section MUST be completed with Bottle Quantities.

Sampler's Signature: Leah Zegarra Date: 09-16-20

Client Sample - Information - Identification

Matrix Code:
DW=Drinking Water GW=Ground Water SW=Surface Water WW=Waste Water L=Liquid
RW=Raw Water SE=Sediment SL=Sludge S=Soil SD=Solid W=Wipe OIL=Oil B=Bulk

PHOENIX USE ONLY SAMPLE #	Customer Sample Identification	Sample Matrix	Date Sampled	Time Sampled	# of VOA Vials	# of Amber Glass	# of Clear Glass	# of Plastic				VOCs (8260) - HCL + Freon 113	1,4-Dioxane (8270D SIM) - NaHSO4 for DL <0.3 ug/L	VPH - HCL (MassDEP: VPH-04 1.1 Rev 1)	EPH + PAHs - HCL & UNP (MassDEP: EPH-04-11 Rev 1)	Total As, Fe, Mn (6010C) - HNO3 [FF]	Dissolved As, Fe, Mn (6010C) - HNO3	Chloride, Nitrate, Nitrite, Sulfate (300) - UNP	Sulfide - Zn-Acetate + NaOH	Total Organic Carbon (9060A) - H3PO4	Comments
79150	20A-TB01-091520-1	GW	9/15/20	1200	2							X									
79151	20A-PS1S-091520-1	GW	9/15/20	1455	3							X									
79152	20A-PS8D-091520-1	GW	9/15/20	1500	3			2				X				X	X				
79153	20A-TRG301R2-091520-1	GW	9/15/20	1555	3			2				X				X	X				
79154	18A-AE109D-091620-1	GW	09/16/20	0925	3	1		2				X	X			X	X				
79155	20A-AE104D-091620-1	GW	09/16/20	1030	3	1						X	X								
79156	20A-AE104S-091620-1	GW	09/16/20	1110	3							X									
79157	20A-AE111R1-091620-1	GW	09/16/20	1200	3							X									
79158	20A-AE111R3-091620-1	GW	09/16/20	1205	3							X									
79159	20A-AE111R5-091620-1	GW	09/16/20	1210	3							X									
79160	20A-AE111R6-091620-1	GW	09/16/20	1215	3							X									
79161	20A-AE110R1-091620-1	GW	09/16/20	1430	3							X									

Relinquished by:	Accepted by:	Date:	Time:
Leah Zegarra		9-16-20	15:28
		9/16	1656

Comments, Special Requirements or Regulations:

Turnaround:
10 - 15 days

RI
☐ Direct Exposure (Residential)
☐ GW
☐ Other

CT
☐ RCP Cert
☐ GW Protection
☐ SW Protection
☐ GA Mobility
☐ GB Mobility
☐ Residential DEC
☐ I/C DEC
☐ Other

MA
X MCP (CAM Rpt)
X GW-1
X GW-2
X GW-3
☐ S-1
☐ S-2
☐ S-3
☐ MWRA eSMART
☐ Other

State where samples were collected: MA

Data Format
x PDF
x AECOM EQuIS 4-File EDD format

Data Package
☐ Tier II Checklist
☐ Full Data Package*
☐ Phoenix Std Report
☐ Other

* SURCHARGE APPLIES

Cooler: Yes ☑ No ☐
Coolant: IPK ☑ ICE ☐ No ☐
Temp) 3° C Pg of

PHOENIX
Environmental Laboratories, Inc.

CHAIN OF CUSTODY RECORD

587 East Middle Turnpike, P.O. Box 370, Manchester, CT 06040
Email: info@phoenixlabs.com Fax (860) 645-0823
Client Services (860) 645-8726

Data Delivery/Contact EMails:
lori.herberich@aecom.com
scott.olson@aecom.com

Customer: AECOM
Address: 250 Apollo Drive
Chelmsford, MA 01824 - (978) 905-2100
Contacts: Lori Herberich (Chemist) 978-302-0089 Scott Olson (PM) 978-846-5238

Project: Lockheed - Wilmington MA 60552044.19
Report to: Lori Herberich - Scott Olson - Nicole Callahan
Invoice to: Scott Olson & Lori Herberich
QUOTE # August 2019 (for 2017-2022)

2020 Project PO: 127680

This section MUST be completed with Bottle Quantities.

Sampler's Signature: Leah Zagby Date: 09.16.20

Client Sample - Information - Identification

Matrix Codes:
DW=Drinking Water GW=Ground Water SW=Surface Water WW=Waste Water L=Liquid
RW=Raw Water SE=Sediment SL=Sludge S=Soil SD=Solid W=Wipe OIL=Oil B=Bulk

PHOENIX USE ONLY SAMPLE #	Customer Sample Identification	Sample Matrix	Date Sampled	Time Sampled	# of VOA Vials	# of Amber Glass	# of Clear Glass	# of Plastic				VOCs (8260) - HCL + Freon 113	1,4-Dioxane (8270D SIM) - NaHSO4 for DL <0.3 ug/L	VPH - HCL (MassDEP VPH-04-1.1 Rev 1)	EPH + PAHs - HCL & UNP (MassDEP EPH-04-1.1 Rev 1)	Total As, Fe, Mn (6010C) - HNO3 [FF]	Dissolved As, Fe, Mn (6010C) - HNO3	Chloride, Nitrate, Nitrite, Sulfate (300) - UNP	Sulfide - Zn-Acetate + NaOH	Total Organic Carbon (9060A) - H3PO4	Comments
791102	20A-AE110R2-091620-1	GW	09/16/20	1445	3							X									
791103	20A-AE110R3-091620-1	GW	09/16/20	1435	3							X									
791104	20A-AE110R6-091620-1	GW	09/16/20	1430	3	1						X	X								
791105	20A-AE109R5-091620-1	GW	09/16/20	1445				1										X			

Relinquished by:	Accepted by:	Date:	Time:
Leah Zagby		9-16-20	15:20
		9/16	1656

Comments, Special Requirements or Regulations:

Turnaround:
10 - 15 days

RI
☐ Direct Exposure (Residential)
☐ GW
☐ Other

CT
☐ RCP Cert
☐ GW Protection
☐ SW Protection
☐ GA Mobility
☐ GB Mobility
☐ Residential DEC
☐ I/C DEC
☐ Other

MA
X MCP (CAM Rpt)
X GW-1
X GW-2
X GW-3
☐ S-1
☐ S-2
☐ S-3
☐ MWRA eSMART
☐ Other

State where samples were collected: MA

Data Format
x PDF
x AECOM EQuIS 4-File EDD format

Data Package
☐ Tier II Checklist
☐ Full Data Package*
☐ Phoenix Std Report
☐ Other

* SURCHARGE APPLIES

PHOENIX
Environmental Laboratories, Inc.

Monday, October 26, 2020

Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Project ID: **LOCKHEED WILMINGTON MA 60552004.19**
SDG ID: **GCG80050**
Sample ID#s: CG80050 - CG80068

This laboratory is in compliance with the NELAC requirements of procedures used except where indicated.

This report contains results for the parameters tested, under the sampling conditions described on the Chain Of Custody, as received by the laboratory. This report is incomplete unless all pages indicated in the pagination at the bottom of the page are included.

A scanned version of the COC form accompanies the analytical report and is an exact duplicate of the original.

Enclosed are revised Analysis Report pages. Please replace and discard the original pages. If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200. The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.

Sincerely yours,

Phyllis Shiller
Laboratory Director

NELAC - #NY11301
CT Lab Registration #PH-0618
MA Lab Registration #M-CT007
ME Lab Registration #CT-007
NH Lab Registration #213693-A,B
NJ Lab Registration #CT-003
NY Lab Registration #11301
PA Lab Registration #68-03530
RI Lab Registration #63
UT Lab Registration #CT00007
VT Lab Registration #VT11301

Environmental Laboratories, Inc.
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NY # 11301

SDG Comments

October 26, 2020

SDG I.D.: GCG80050

Phoenix reporting levels may exceed those referenced in the CAM protocol. Please refer to criteria sheet for comparisons to requested MCP standards.

Ver. 2: This report has been revised to correct MS/MSD %Recoveries in batch 546747 for VPH analysis.

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Sample Id Cross Reference

October 26, 2020

SDG I.D.: GCG80050

Project ID: LOCKHEED WILMINGTON MA 60552004.19

Client Id	Lab Id	Matrix
20A-AE109R1-091620-1	CG80050	GROUND WATER
20A-AE109R2-091620-1	CG80051	GROUND WATER
20A-AE109R3-091620-1	CG80052	GROUND WATER
20A-AE109R4-091620-1	CG80053	GROUND WATER
20A-AE109R5-091620-1	CG80054	GROUND WATER
20A-AE109R6-091620-1	CG80055	GROUND WATER
20A-AE109R7-091620-1	CG80056	GROUND WATER
20A-AE109R7-091620-2	CG80057	GROUND WATER
20A-AE109R8-091620-1	CG80058	GROUND WATER
20A-AE105D-091720-1	CG80059	GROUND WATER
20A-TB01-091620-1	CG80060	GROUND WATER
20A-AE105S-091720-1	CG80061	GROUND WATER
20A-AE106D-091720-1	CG80062	GROUND WATER
20A-AE106S-091720-1	CG80063	GROUND WATER
20A-AE105R1-091720-1	CG80064	GROUND WATER
20A-AE105R2-091720-1	CG80065	GROUND WATER
20A-AE105R4-091720-1	CG80066	GROUND WATER
20A-AE105R5-091720-1	CG80067	GROUND WATER
20A-AE106R3-091720-1	CG80068	GROUND WATER

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

October 26, 2020

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		09/16/20	15:15
Location Code:	AECOM-WILMINGTN	Received by:	B	09/17/20	16:30
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	127680				

Laboratory Data

SDG ID: GCG80050
Phoenix ID: CG80050

Project ID: LOCKHEED WILMINGTON MA 60552004.19
Client ID: 20A-AE109R1-091620-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Volatiles							
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
1,1,1-Trichloroethane	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L	1	09/22/20	MH	SW8260C
1,1,2-Trichloroethane	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
1,1-Dichloroethane	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
1,1-Dichloroethene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
1,1-Dichloropropene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
1,2,3-Trichlorobenzene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
1,2,3-Trichloropropane	ND	0.50	ug/L	1	09/22/20	MH	SW8260C
1,2,4-Trichlorobenzene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
1,2,4-Trimethylbenzene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	0.50	ug/L	1	09/22/20	MH	SW8260C
1,2-Dibromoethane	ND	0.50	ug/L	1	09/22/20	MH	SW8260C
1,2-Dichlorobenzene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
1,2-Dichloroethane	ND	0.60	ug/L	1	09/22/20	MH	SW8260C
1,2-Dichloropropane	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
1,3,5-Trimethylbenzene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
1,3-Dichlorobenzene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
1,3-Dichloropropane	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
1,4-Dichlorobenzene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
2,2-Dichloropropane	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
2-Chlorotoluene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
2-Hexanone	ND	5.0	ug/L	1	09/22/20	MH	SW8260C
4-Chlorotoluene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
4-Methyl-2-pentanone	ND	5.0	ug/L	1	09/22/20	MH	SW8260C
Acetone	ND	25	ug/L	1	09/22/20	MH	SW8260C

Project ID: LOCKHEED WILMINGTON MA 60552004.19 Phoenix I.D.: CG80050

Client ID: 20A-AE109R1-091620-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	
Benzene	ND	0.70	ug/L	1	09/22/20	MH	SW8260C
Bromobenzene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
Bromochloromethane	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
Bromodichloromethane	ND	0.50	ug/L	1	09/22/20	MH	SW8260C
Bromoform	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
Bromomethane	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
Carbon Disulfide	ND	5.0	ug/L	1	09/22/20	MH	SW8260C
Carbon tetrachloride	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
Chlorobenzene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
Chloroethane	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
Chloroform	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
Chloromethane	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
cis-1,2-Dichloroethene	2.6	1.0	ug/L	1	09/22/20	MH	SW8260C
cis-1,3-Dichloropropene	ND	0.40	ug/L	1	09/22/20	MH	SW8260C
Dibromochloromethane	ND	0.50	ug/L	1	09/22/20	MH	SW8260C
Dibromomethane	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
Dichlorodifluoromethane	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
Ethylbenzene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
Hexachlorobutadiene	ND	0.40	ug/L	1	09/22/20	MH	SW8260C
Isopropylbenzene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
m&p-Xylene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
Methyl ethyl ketone	ND	5.0	ug/L	1	09/22/20	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
Methylene chloride	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
Naphthalene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
n-Butylbenzene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
n-Propylbenzene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
o-Xylene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
p-Isopropyltoluene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
sec-Butylbenzene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
Styrene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
tert-Butylbenzene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
Tetrachloroethene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
Tetrahydrofuran (THF)	ND	2.5	ug/L	1	09/22/20	MH	SW8260C
Toluene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
trans-1,2-Dichloroethene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
trans-1,3-Dichloropropene	ND	0.40	ug/L	1	09/22/20	MH	SW8260C
Trichloroethene	1.2	1.0	ug/L	1	09/22/20	MH	SW8260C
Trichlorofluoromethane	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
Trichlorotrifluoroethane	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
Vinyl chloride	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	97		%	1	09/22/20	MH	70 - 130 %
% Bromofluorobenzene	97		%	1	09/22/20	MH	70 - 130 %
% Dibromofluoromethane	97		%	1	09/22/20	MH	70 - 130 %
% Toluene-d8	102		%	1	09/22/20	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	100	ug/L	1	09/22/20	MH	SW8260C (OXY)
Diethyl ether	ND	1.0	ug/L	1	09/22/20	MH	SW8260C (OXY)

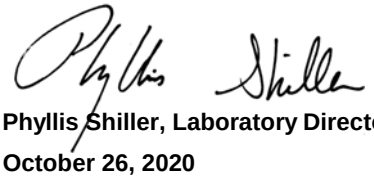
Ver 2

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	
Di-isopropyl ether	ND	1.0	ug/L	1	09/22/20	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	1.0	ug/L	1	09/22/20	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	1.0	ug/L	1	09/22/20	MH	SW8260C (OXY)

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

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The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.



Phyllis Shiller, Laboratory Director
October 26, 2020
Reviewed and Released by: Greg Lawrence, Assistant Lab Director

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

October 26, 2020

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		09/16/20	15:40
Location Code:	AECOM-WILMINGTN	Received by:	B	09/17/20	16:30
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	127680				

Laboratory Data

SDG ID: GCG80050
Phoenix ID: CG80051

Project ID: LOCKHEED WILMINGTON MA 60552004.19
Client ID: 20A-AE109R2-091620-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Volatiles							
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
1,1,1-Trichloroethane	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L	1	09/22/20	MH	SW8260C
1,1,2-Trichloroethane	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
1,1-Dichloroethane	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
1,1-Dichloroethene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
1,1-Dichloropropene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
1,2,3-Trichlorobenzene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
1,2,3-Trichloropropane	ND	0.50	ug/L	1	09/22/20	MH	SW8260C
1,2,4-Trichlorobenzene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
1,2,4-Trimethylbenzene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	0.50	ug/L	1	09/22/20	MH	SW8260C
1,2-Dibromoethane	ND	0.50	ug/L	1	09/22/20	MH	SW8260C
1,2-Dichlorobenzene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
1,2-Dichloroethane	ND	0.60	ug/L	1	09/22/20	MH	SW8260C
1,2-Dichloropropane	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
1,3,5-Trimethylbenzene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
1,3-Dichlorobenzene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
1,3-Dichloropropane	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
1,4-Dichlorobenzene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
2,2-Dichloropropane	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
2-Chlorotoluene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
2-Hexanone	ND	5.0	ug/L	1	09/22/20	MH	SW8260C
4-Chlorotoluene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
4-Methyl-2-pentanone	ND	5.0	ug/L	1	09/22/20	MH	SW8260C
Acetone	ND	25	ug/L	1	09/22/20	MH	SW8260C

Project ID: LOCKHEED WILMINGTON MA 60552004.19 Phoenix I.D.: CG80051

Client ID: 20A-AE109R2-091620-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	
Benzene	ND	0.70	ug/L	1	09/22/20	MH	SW8260C
Bromobenzene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
Bromochloromethane	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
Bromodichloromethane	ND	0.50	ug/L	1	09/22/20	MH	SW8260C
Bromoform	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
Bromomethane	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
Carbon Disulfide	ND	5.0	ug/L	1	09/22/20	MH	SW8260C
Carbon tetrachloride	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
Chlorobenzene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
Chloroethane	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
Chloroform	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
Chloromethane	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
cis-1,2-Dichloroethene	2.7	1.0	ug/L	1	09/22/20	MH	SW8260C
cis-1,3-Dichloropropene	ND	0.40	ug/L	1	09/22/20	MH	SW8260C
Dibromochloromethane	ND	0.50	ug/L	1	09/22/20	MH	SW8260C
Dibromomethane	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
Dichlorodifluoromethane	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
Ethylbenzene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
Hexachlorobutadiene	ND	0.40	ug/L	1	09/22/20	MH	SW8260C
Isopropylbenzene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
m&p-Xylene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
Methyl ethyl ketone	ND	5.0	ug/L	1	09/22/20	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
Methylene chloride	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
Naphthalene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
n-Butylbenzene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
n-Propylbenzene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
o-Xylene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
p-Isopropyltoluene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
sec-Butylbenzene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
Styrene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
tert-Butylbenzene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
Tetrachloroethene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
Tetrahydrofuran (THF)	ND	2.5	ug/L	1	09/22/20	MH	SW8260C
Toluene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
trans-1,2-Dichloroethene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
trans-1,3-Dichloropropene	ND	0.40	ug/L	1	09/22/20	MH	SW8260C
Trichloroethene	1.2	1.0	ug/L	1	09/22/20	MH	SW8260C
Trichlorofluoromethane	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
Trichlorotrifluoroethane	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
Vinyl chloride	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	98		%	1	09/22/20	MH	70 - 130 %
% Bromofluorobenzene	95		%	1	09/22/20	MH	70 - 130 %
% Dibromofluoromethane	95		%	1	09/22/20	MH	70 - 130 %
% Toluene-d8	102		%	1	09/22/20	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	100	ug/L	1	09/22/20	MH	SW8260C (OXY)
Diethyl ether	ND	1.0	ug/L	1	09/22/20	MH	SW8260C (OXY)

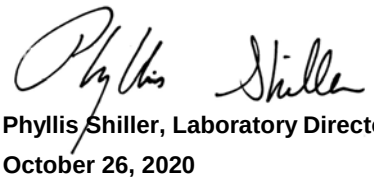
Ver 2

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	
Di-isopropyl ether	ND	1.0	ug/L	1	09/22/20	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	1.0	ug/L	1	09/22/20	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	1.0	ug/L	1	09/22/20	MH	SW8260C (OXY)
1,4-dioxane							
1,4-dioxane	5.6	0.20	ug/l	1	09/22/20	AW	SW8270DSIM
QA/QC Surrogates							
% 1,4-dioxane-d8	95		%	1	09/22/20	AW	40 - 140 %
Extraction for 1,4-Dioxane	Completed				09/21/20	S/S	

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

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Phyllis Shiller, Laboratory Director
October 26, 2020
Reviewed and Released by: Greg Lawrence, Assistant Lab Director

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

October 26, 2020

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		09/16/20	15:35
Location Code:	AECOM-WILMINGTN	Received by:	B	09/17/20	16:30
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	127680				

Laboratory Data

SDG ID: GCG80050
Phoenix ID: CG80052

Project ID: LOCKHEED WILMINGTON MA 60552004.19
Client ID: 20A-AE109R3-091620-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Volatiles							
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
1,1,1-Trichloroethane	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L	1	09/22/20	MH	SW8260C
1,1,2-Trichloroethane	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
1,1-Dichloroethane	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
1,1-Dichloroethene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
1,1-Dichloropropene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
1,2,3-Trichlorobenzene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
1,2,3-Trichloropropane	ND	0.50	ug/L	1	09/22/20	MH	SW8260C
1,2,4-Trichlorobenzene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
1,2,4-Trimethylbenzene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	0.50	ug/L	1	09/22/20	MH	SW8260C
1,2-Dibromoethane	ND	0.50	ug/L	1	09/22/20	MH	SW8260C
1,2-Dichlorobenzene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
1,2-Dichloroethane	ND	0.60	ug/L	1	09/22/20	MH	SW8260C
1,2-Dichloropropane	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
1,3,5-Trimethylbenzene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
1,3-Dichlorobenzene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
1,3-Dichloropropane	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
1,4-Dichlorobenzene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
2,2-Dichloropropane	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
2-Chlorotoluene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
2-Hexanone	ND	5.0	ug/L	1	09/22/20	MH	SW8260C
4-Chlorotoluene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
4-Methyl-2-pentanone	ND	5.0	ug/L	1	09/22/20	MH	SW8260C
Acetone	ND	25	ug/L	1	09/22/20	MH	SW8260C

Project ID: LOCKHEED WILMINGTON MA 60552004.19 Phoenix I.D.: CG80052

Client ID: 20A-AE109R3-091620-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	
Benzene	ND	0.70	ug/L	1	09/22/20	MH	SW8260C
Bromobenzene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
Bromochloromethane	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
Bromodichloromethane	ND	0.50	ug/L	1	09/22/20	MH	SW8260C
Bromoform	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
Bromomethane	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
Carbon Disulfide	ND	5.0	ug/L	1	09/22/20	MH	SW8260C
Carbon tetrachloride	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
Chlorobenzene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
Chloroethane	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
Chloroform	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
Chloromethane	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
cis-1,2-Dichloroethene	17	1.0	ug/L	1	09/22/20	MH	SW8260C
cis-1,3-Dichloropropene	ND	0.40	ug/L	1	09/22/20	MH	SW8260C
Dibromochloromethane	ND	0.50	ug/L	1	09/22/20	MH	SW8260C
Dibromomethane	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
Dichlorodifluoromethane	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
Ethylbenzene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
Hexachlorobutadiene	ND	0.40	ug/L	1	09/22/20	MH	SW8260C
Isopropylbenzene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
m&p-Xylene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
Methyl ethyl ketone	ND	5.0	ug/L	1	09/22/20	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
Methylene chloride	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
Naphthalene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
n-Butylbenzene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
n-Propylbenzene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
o-Xylene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
p-Isopropyltoluene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
sec-Butylbenzene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
Styrene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
tert-Butylbenzene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
Tetrachloroethene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
Tetrahydrofuran (THF)	ND	2.5	ug/L	1	09/22/20	MH	SW8260C
Toluene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
trans-1,2-Dichloroethene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
trans-1,3-Dichloropropene	ND	0.40	ug/L	1	09/22/20	MH	SW8260C
Trichloroethene	5.3	1.0	ug/L	1	09/22/20	MH	SW8260C
Trichlorofluoromethane	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
Trichlorotrifluoroethane	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
Vinyl chloride	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	99		%	1	09/22/20	MH	70 - 130 %
% Bromofluorobenzene	96		%	1	09/22/20	MH	70 - 130 %
% Dibromofluoromethane	96		%	1	09/22/20	MH	70 - 130 %
% Toluene-d8	103		%	1	09/22/20	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	100	ug/L	1	09/22/20	MH	SW8260C (OXY)
Diethyl ether	ND	1.0	ug/L	1	09/22/20	MH	SW8260C (OXY)

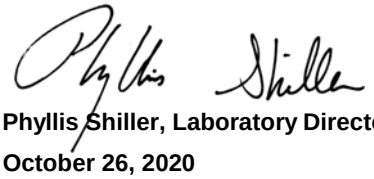
Ver 2

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	
Di-isopropyl ether	ND	1.0	ug/L	1	09/22/20	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	1.0	ug/L	1	09/22/20	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	1.0	ug/L	1	09/22/20	MH	SW8260C (OXY)

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

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Phyllis Shiller, Laboratory Director
October 26, 2020
Reviewed and Released by: Greg Lawrence, Assistant Lab Director

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
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Analysis Report

October 26, 2020

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		09/16/20	15:30
Location Code:	AECOM-WILMINGTN	Received by:	B	09/17/20	16:30
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	127680				

Laboratory Data

SDG ID: GCG80050
Phoenix ID: CG80053

Project ID: LOCKHEED WILMINGTON MA 60552004.19
Client ID: 20A-AE109R4-091620-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Volatiles							
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
1,1,1-Trichloroethane	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L	1	09/22/20	MH	SW8260C
1,1,2-Trichloroethane	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
1,1-Dichloroethane	3.3	1.0	ug/L	1	09/22/20	MH	SW8260C
1,1-Dichloroethene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
1,1-Dichloropropene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
1,2,3-Trichlorobenzene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
1,2,3-Trichloropropane	ND	0.50	ug/L	1	09/22/20	MH	SW8260C
1,2,4-Trichlorobenzene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
1,2,4-Trimethylbenzene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	0.50	ug/L	1	09/22/20	MH	SW8260C
1,2-Dibromoethane	ND	0.50	ug/L	1	09/22/20	MH	SW8260C
1,2-Dichlorobenzene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
1,2-Dichloroethane	ND	0.60	ug/L	1	09/22/20	MH	SW8260C
1,2-Dichloropropane	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
1,3,5-Trimethylbenzene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
1,3-Dichlorobenzene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
1,3-Dichloropropane	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
1,4-Dichlorobenzene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
2,2-Dichloropropane	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
2-Chlorotoluene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
2-Hexanone	ND	5.0	ug/L	1	09/22/20	MH	SW8260C
4-Chlorotoluene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
4-Methyl-2-pentanone	ND	5.0	ug/L	1	09/22/20	MH	SW8260C
Acetone	ND	25	ug/L	1	09/22/20	MH	SW8260C

Project ID: LOCKHEED WILMINGTON MA 60552004.19 Phoenix I.D.: CG80053

Client ID: 20A-AE109R4-091620-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	
Benzene	ND	0.70	ug/L	1	09/22/20	MH	SW8260C
Bromobenzene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
Bromochloromethane	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
Bromodichloromethane	ND	0.50	ug/L	1	09/22/20	MH	SW8260C
Bromoform	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
Bromomethane	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
Carbon Disulfide	ND	5.0	ug/L	1	09/22/20	MH	SW8260C
Carbon tetrachloride	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
Chlorobenzene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
Chloroethane	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
Chloroform	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
Chloromethane	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
cis-1,2-Dichloroethene	170	5.0	ug/L	5	09/23/20	MH	SW8260C
cis-1,3-Dichloropropene	ND	0.40	ug/L	1	09/22/20	MH	SW8260C
Dibromochloromethane	ND	0.50	ug/L	1	09/22/20	MH	SW8260C
Dibromomethane	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
Dichlorodifluoromethane	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
Ethylbenzene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
Hexachlorobutadiene	ND	0.40	ug/L	1	09/22/20	MH	SW8260C
Isopropylbenzene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
m&p-Xylene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
Methyl ethyl ketone	ND	5.0	ug/L	1	09/22/20	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
Methylene chloride	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
Naphthalene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
n-Butylbenzene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
n-Propylbenzene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
o-Xylene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
p-Isopropyltoluene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
sec-Butylbenzene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
Styrene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
tert-Butylbenzene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
Tetrachloroethene	2.1	1.0	ug/L	1	09/22/20	MH	SW8260C
Tetrahydrofuran (THF)	ND	2.5	ug/L	1	09/22/20	MH	SW8260C
Toluene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
trans-1,2-Dichloroethene	3.6	1.0	ug/L	1	09/22/20	MH	SW8260C
trans-1,3-Dichloropropene	ND	0.40	ug/L	1	09/22/20	MH	SW8260C
Trichloroethene	21	1.0	ug/L	1	09/22/20	MH	SW8260C
Trichlorofluoromethane	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
Trichlorotrifluoroethane	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
Vinyl chloride	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	99		%	1	09/22/20	MH	70 - 130 %
% Bromofluorobenzene	95		%	1	09/22/20	MH	70 - 130 %
% Dibromofluoromethane	96		%	1	09/22/20	MH	70 - 130 %
% Toluene-d8	102		%	1	09/22/20	MH	70 - 130 %
% 1,2-dichlorobenzene-d4 (5x)	99		%	5	09/23/20	MH	70 - 130 %
% Bromofluorobenzene (5x)	99		%	5	09/23/20	MH	70 - 130 %
% Dibromofluoromethane (5x)	99		%	5	09/23/20	MH	70 - 130 %

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	
% Toluene-d8 (5x)	104		%	5	09/23/20	MH	70 - 130 %

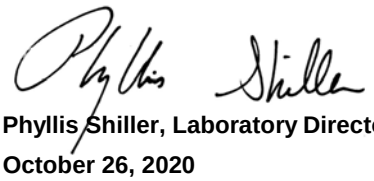
Oxygenates& Dioxane

1,4-dioxane	ND	100	ug/L	1	09/22/20	MH	SW8260C (OXY)
Diethyl ether	ND	1.0	ug/L	1	09/22/20	MH	SW8260C (OXY)
Di-isopropyl ether	ND	1.0	ug/L	1	09/22/20	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	1.0	ug/L	1	09/22/20	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	1.0	ug/L	1	09/22/20	MH	SW8260C (OXY)

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.



Phyllis Shiller, Laboratory Director
October 26, 2020
Reviewed and Released by: Greg Lawrence, Assistant Lab Director

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

October 26, 2020

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		09/16/20	14:45
Location Code:	AECOM-WILMINGTN	Received by:	B	09/17/20	16:30
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	127680				

Laboratory Data

SDG ID: GCG80050
Phoenix ID: CG80054

Project ID: LOCKHEED WILMINGTON MA 60552004.19
Client ID: 20A-AE109R5-091620-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Arsenic	< 0.004	0.004	mg/L	1	09/22/20	EK	SW6010D
Arsenic (Dissolved)	< 0.004	0.004	mg/L	1	09/21/20	CPP	SW6010D
Iron (Dissolved)	0.115	0.011	mg/L	1	09/21/20	CPP	SW6010D
Manganese (Dissolved)	0.144	0.001	mg/L	1	09/21/20	CPP	SW6010D
Iron	0.127	0.010	mg/L	1	09/22/20	EK	SW6010D
Manganese	0.150	0.001	mg/L	1	09/22/20	EK	SW6010D
Sulfide	0.11	0.05	mg/L	1	09/22/20	GD	SM4500S-D-11
Total Organic Carbon	1.1	1.0	mg/L	1	09/22/20	BJA	SM5310B-11
EPH Extraction	Completed				09/23/20	JS/D	SW3510C
MA Petroleum Hydrocarbon (EPH)	Completed				09/22/20		MADEP EPH-04
Semi-Volatile Extraction	Completed				09/22/20	P/CG	SW3520C
Dissolved Metals Preparation	Completed				09/17/20	AG	SW3005A
Total Metals Digestion	Completed				09/21/20	AG	
MA Petroleum Hydrocarbon (VPH)	Completed				09/23/20	RM	MADEP VPH04
Volatiles							
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
1,1,1-Trichloroethane	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L	1	09/23/20	MH	SW8260C
1,1,2-Trichloroethane	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
1,1-Dichloroethane	9.8	1.0	ug/L	1	09/23/20	MH	SW8260C
1,1-Dichloroethene	2.3	1.0	ug/L	1	09/23/20	MH	SW8260C
1,1-Dichloropropene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
1,2,3-Trichlorobenzene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
1,2,3-Trichloropropane	ND	0.50	ug/L	1	09/23/20	MH	SW8260C
1,2,4-Trichlorobenzene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
1,2,4-Trimethylbenzene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	0.50	ug/L	1	09/23/20	MH	SW8260C

Project ID: LOCKHEED WILMINGTON MA 60552004.19 Phoenix I.D.: CG80054

Client ID: 20A-AE109R5-091620-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	
1,2-Dibromoethane	ND	0.50	ug/L	1	09/23/20	MH	SW8260C
1,2-Dichlorobenzene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
1,2-Dichloroethane	ND	0.60	ug/L	1	09/23/20	MH	SW8260C
1,2-Dichloropropane	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
1,3,5-Trimethylbenzene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
1,3-Dichlorobenzene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
1,3-Dichloropropane	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
1,4-Dichlorobenzene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
2,2-Dichloropropane	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
2-Chlorotoluene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
2-Hexanone	ND	5.0	ug/L	1	09/23/20	MH	SW8260C
4-Chlorotoluene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
4-Methyl-2-pentanone	ND	5.0	ug/L	1	09/23/20	MH	SW8260C
Acetone	ND	25	ug/L	1	09/23/20	MH	SW8260C
Benzene	ND	0.70	ug/L	1	09/23/20	MH	SW8260C
Bromobenzene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
Bromochloromethane	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
Bromodichloromethane	ND	0.50	ug/L	1	09/23/20	MH	SW8260C
Bromoform	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
Bromomethane	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
Carbon Disulfide	ND	5.0	ug/L	1	09/23/20	MH	SW8260C
Carbon tetrachloride	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
Chlorobenzene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
Chloroethane	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
Chloroform	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
Chloromethane	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
cis-1,2-Dichloroethene	220	40	ug/L	40	09/23/20	MH	SW8260C
cis-1,3-Dichloropropene	ND	0.40	ug/L	1	09/23/20	MH	SW8260C
Dibromochloromethane	ND	0.50	ug/L	1	09/23/20	MH	SW8260C
Dibromomethane	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
Dichlorodifluoromethane	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
Ethylbenzene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
Hexachlorobutadiene	ND	0.40	ug/L	1	09/23/20	MH	SW8260C
Isopropylbenzene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
m&p-Xylene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
Methyl ethyl ketone	ND	5.0	ug/L	1	09/23/20	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
Methylene chloride	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
Naphthalene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
n-Butylbenzene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
n-Propylbenzene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
o-Xylene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
p-Isopropyltoluene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
sec-Butylbenzene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
Styrene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
tert-Butylbenzene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
Tetrachloroethene	71	1.0	ug/L	1	09/23/20	MH	SW8260C
Tetrahydrofuran (THF)	ND	2.5	ug/L	1	09/23/20	MH	SW8260C
Toluene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	
trans-1,2-Dichloroethene	4.5	1.0	ug/L	1	09/23/20	MH	SW8260C
trans-1,3-Dichloropropene	ND	0.40	ug/L	1	09/23/20	MH	SW8260C
Trichloroethene	390	40	ug/L	40	09/23/20	MH	SW8260C
Trichlorofluoromethane	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
Trichlorotrifluoroethane	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
Vinyl chloride	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	98		%	1	09/23/20	MH	70 - 130 %
% Bromofluorobenzene	97		%	1	09/23/20	MH	70 - 130 %
% Dibromofluoromethane	96		%	1	09/23/20	MH	70 - 130 %
% Toluene-d8	89		%	1	09/23/20	MH	70 - 130 %
% 1,2-dichlorobenzene-d4 (40x)	99		%	40	09/23/20	MH	70 - 130 %
% Bromofluorobenzene (40x)	101		%	40	09/23/20	MH	70 - 130 %
% Dibromofluoromethane (40x)	94		%	40	09/23/20	MH	70 - 130 %
% Toluene-d8 (40x)	103		%	40	09/23/20	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	100	ug/L	1	09/23/20	MH	SW8260C (OXY)
Diethyl ether	ND	1.0	ug/L	1	09/23/20	MH	SW8260C (OXY)
Di-isopropyl ether	ND	1.0	ug/L	1	09/23/20	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	1.0	ug/L	1	09/23/20	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	1.0	ug/L	1	09/23/20	MH	SW8260C (OXY)
Semivolatiles by SIM, PAH							
2-Methylnaphthalene	ND	0.47	ug/L	1	09/23/20	WB	SW8270D (SIM)
Acenaphthene	ND	0.47	ug/L	1	09/23/20	WB	SW8270D (SIM)
Acenaphthylene	ND	0.09	ug/L	1	09/23/20	WB	SW8270D (SIM)
Anthracene	ND	0.09	ug/L	1	09/23/20	WB	SW8270D (SIM)
Benz(a)anthracene	ND	0.09	ug/L	1	09/23/20	WB	SW8270D (SIM)
Benzo(a)pyrene	ND	0.19	ug/L	1	09/23/20	WB	SW8270D (SIM)
Benzo(b)fluoranthene	ND	0.09	ug/L	1	09/23/20	WB	SW8270D (SIM)
Benzo(ghi)perylene	ND	0.02	ug/L	1	09/23/20	WB	SW8270D (SIM)
Benzo(k)fluoranthene	ND	0.09	ug/L	1	09/23/20	WB	SW8270D (SIM)
Chrysene	ND	0.05	ug/L	1	09/23/20	WB	SW8270D (SIM)
Dibenz(a,h)anthracene	ND	0.02	ug/L	1	09/23/20	WB	SW8270D (SIM)
Fluoranthene	ND	0.47	ug/L	1	09/23/20	WB	SW8270D (SIM)
Fluorene	ND	0.09	ug/L	1	09/23/20	WB	SW8270D (SIM)
Indeno(1,2,3-cd)pyrene	ND	0.09	ug/L	1	09/23/20	WB	SW8270D (SIM)
Naphthalene	ND	0.47	ug/L	1	09/23/20	WB	SW8270D (SIM)
Phenanthrene	ND	0.47	ug/L	1	09/23/20	WB	SW8270D (SIM)
Pyrene	ND	0.07	ug/L	1	09/23/20	WB	SW8270D (SIM)
QA/QC Surrogates							
% 2-Fluorobiphenyl	55		%	1	09/23/20	WB	40 - 140 %
% Nitrobenzene-d5	69		%	1	09/23/20	WB	40 - 140 %
% Terphenyl-d14	72		%	1	09/23/20	WB	40 - 140 %
1,4-dioxane							
1,4-dioxane	1.7	0.20	ug/l	1	09/22/20	AW	SW8270DSIM
QA/QC Surrogates							
% 1,4-dioxane-d8	93		%	1	09/22/20	AW	40 - 140 %

Project ID: LOCKHEED WILMINGTON MA 60552004.19 Phoenix I.D.: CG80054
Client ID: 20A-AE109R5-091620-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	
Extraction for 1,4-Dioxane	Completed				09/21/20	S/S	
MA EPH Aliphatic/Aromatic Ranges							
C11-C22 Aromatic Hydrocarbons 1,2*	ND	200	ug/L	1	09/24/20	AW	MAEPH 5/2004
C11-C22 Aromatic Hydrocarbons Unadj	ND	200	ug/L	1	09/24/20	AW	MAEPH 5/2004
C19-C36 Aliphatic Hydrocarbons 1*	ND	200	ug/L	1	09/24/20	AW	MAEPH 5/2004
C9-C18 Aliphatic Hydrocarbons 1*	ND	200	ug/L	1	09/24/20	AW	MAEPH 5/2004
Total TPH 1,2*	ND	200	ug/L	1	09/24/20	AW	MAEPH 5/2004
QA/QC Surrogates							
% 1-chlorooctadecane (aliphatic)	69		%	1	09/24/20	AW	40 - 140 %
% 2-Bromonaphthalene (Fractionation)	111		%	1	09/24/20	AW	40 - 140 %
% 2-Fluorobiphenyl (Fractionation)	117		%	1	09/24/20	AW	40 - 140 %
% o-terphenyl (aromatic)	89		%	1	09/24/20	AW	40 - 140 %
MA Volatile Petroleum Hydrocarbons (VPH)							
Unadjusted C5-C8 Aliphatics (*1)	250	100	ug/L	1	09/23/20	RM	MA VPH 5/2004
Unadjusted C9-C12 Aliphatics (*1)	ND	100	ug/L	1	09/23/20	RM	MA VPH 5/2004
C5-C8 Aliphatic Hydrocarbons *1,2	250	100	ug/L	1	09/23/20	RM	MA VPH 5/2004
C9-C12 Aliphatic Hydrocarbons *1,3	ND	100	ug/L	1	09/23/20	RM	MA VPH 5/2004
C9-C10 Aromatic Hydrocarbons *1	ND	100	ug/L	1	09/23/20	RM	MA VPH 5/2004
Benzene	ND	1.0	ug/L	1	09/23/20	RM	MA VPH 5/2004
Ethyl Benzene	ND	1.0	ug/L	1	09/23/20	RM	MA VPH 5/2004
MTBE	ND	1.0	ug/L	1	09/23/20	RM	MA VPH 5/2004
Naphthalene	ND	5.0	ug/L	1	09/23/20	RM	MA VPH 5/2004
Toluene	ND	1.0	ug/L	1	09/23/20	RM	MA VPH 5/2004
m,p-Xylenes	ND	2.0	ug/L	1	09/23/20	RM	MA VPH 5/2004
o-Xylene	ND	1.0	ug/L	1	09/23/20	RM	MA VPH 5/2004
QA/QC Surrogates							
% 2,5-Dibromotoluene (FID)	99		%	1	09/23/20	RM	70 - 130 %
% 2,5-Dibromotoluene (PID)	99		%	1	09/23/20	RM	70 - 130 %

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By

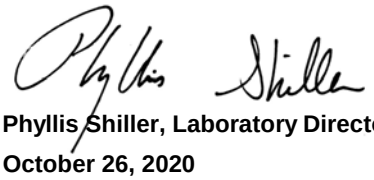
RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

VPH:
*1 Range data exclude conc.s of any surrogate(s) and/or Int. std.s eluting in that range.
*2 C5-C8 and C9-C12 Aliphatic exclude the conc. of Target Analytes in that range.
*3 C9-C12 Aliphatic also exclude C9-C10 Aromatic Hydrocarbon

MAEPH:
1* Hydrocarbon range data exclude concentrations of any surrogate(s) and/or internal standards eluting in that range.
2* C11-C12 Aromatic Hydrocarbons exclude the concentration of Target PAH analytes eluting in that range.

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.



Phyllis Shiller, Laboratory Director
October 26, 2020
Reviewed and Released by: Greg Lawrence, Assistant Lab Director

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

October 26, 2020

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		09/16/20	15:25
Location Code:	AECOM-WILMINGTN	Received by:	B	09/17/20	16:30
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	127680				

Laboratory Data

SDG ID: GCG80050
Phoenix ID: CG80055

Project ID: LOCKHEED WILMINGTON MA 60552004.19
Client ID: 20A-AE109R6-091620-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Volatiles							
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
1,1,1-Trichloroethane	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L	1	09/23/20	MH	SW8260C
1,1,2-Trichloroethane	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
1,1-Dichloroethane	6.7	1.0	ug/L	1	09/23/20	MH	SW8260C
1,1-Dichloroethene	1.6	1.0	ug/L	1	09/23/20	MH	SW8260C
1,1-Dichloropropene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
1,2,3-Trichlorobenzene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
1,2,3-Trichloropropane	ND	0.50	ug/L	1	09/23/20	MH	SW8260C
1,2,4-Trichlorobenzene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
1,2,4-Trimethylbenzene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	0.50	ug/L	1	09/23/20	MH	SW8260C
1,2-Dibromoethane	ND	0.50	ug/L	1	09/23/20	MH	SW8260C
1,2-Dichlorobenzene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
1,2-Dichloroethane	ND	0.60	ug/L	1	09/23/20	MH	SW8260C
1,2-Dichloropropane	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
1,3,5-Trimethylbenzene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
1,3-Dichlorobenzene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
1,3-Dichloropropane	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
1,4-Dichlorobenzene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
2,2-Dichloropropane	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
2-Chlorotoluene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
2-Hexanone	ND	5.0	ug/L	1	09/23/20	MH	SW8260C
4-Chlorotoluene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
4-Methyl-2-pentanone	ND	5.0	ug/L	1	09/23/20	MH	SW8260C
Acetone	ND	25	ug/L	1	09/23/20	MH	SW8260C

Project ID: LOCKHEED WILMINGTON MA 60552004.19 Phoenix I.D.: CG80055

Client ID: 20A-AE109R6-091620-1

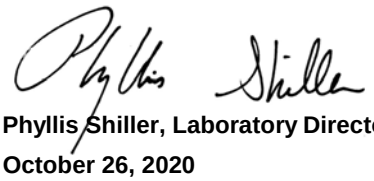
Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	
Benzene	ND	0.70	ug/L	1	09/23/20	MH	SW8260C
Bromobenzene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
Bromochloromethane	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
Bromodichloromethane	ND	0.50	ug/L	1	09/23/20	MH	SW8260C
Bromoform	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
Bromomethane	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
Carbon Disulfide	ND	5.0	ug/L	1	09/23/20	MH	SW8260C
Carbon tetrachloride	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
Chlorobenzene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
Chloroethane	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
Chloroform	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
Chloromethane	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
cis-1,2-Dichloroethene	170	20	ug/L	20	09/23/20	MH	SW8260C
cis-1,3-Dichloropropene	ND	0.40	ug/L	1	09/23/20	MH	SW8260C
Dibromochloromethane	ND	0.50	ug/L	1	09/23/20	MH	SW8260C
Dibromomethane	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
Dichlorodifluoromethane	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
Ethylbenzene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
Hexachlorobutadiene	ND	0.40	ug/L	1	09/23/20	MH	SW8260C
Isopropylbenzene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
m&p-Xylene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
Methyl ethyl ketone	ND	5.0	ug/L	1	09/23/20	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
Methylene chloride	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
Naphthalene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
n-Butylbenzene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
n-Propylbenzene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
o-Xylene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
p-Isopropyltoluene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
sec-Butylbenzene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
Styrene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
tert-Butylbenzene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
Tetrachloroethene	12	1.0	ug/L	1	09/23/20	MH	SW8260C
Tetrahydrofuran (THF)	ND	2.5	ug/L	1	09/23/20	MH	SW8260C
Toluene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
trans-1,2-Dichloroethene	3.4	1.0	ug/L	1	09/23/20	MH	SW8260C
trans-1,3-Dichloropropene	ND	0.40	ug/L	1	09/23/20	MH	SW8260C
Trichloroethene	180	20	ug/L	20	09/23/20	MH	SW8260C
Trichlorofluoromethane	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
Trichlorotrifluoroethane	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
Vinyl chloride	3.7	1.0	ug/L	1	09/23/20	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	101		%	1	09/23/20	MH	70 - 130 %
% Bromofluorobenzene	98		%	1	09/23/20	MH	70 - 130 %
% Dibromofluoromethane	95		%	1	09/23/20	MH	70 - 130 %
% Toluene-d8	96		%	1	09/23/20	MH	70 - 130 %
% 1,2-dichlorobenzene-d4 (20x)	98		%	20	09/23/20	MH	70 - 130 %
% Bromofluorobenzene (20x)	99		%	20	09/23/20	MH	70 - 130 %
% Dibromofluoromethane (20x)	92		%	20	09/23/20	MH	70 - 130 %

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	
% Toluene-d8 (20x)	105		%	20	09/23/20	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	100	ug/L	1	09/23/20	MH	SW8260C (OXY)
Diethyl ether	ND	1.0	ug/L	1	09/23/20	MH	SW8260C (OXY)
Di-isopropyl ether	ND	1.0	ug/L	1	09/23/20	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	1.0	ug/L	1	09/23/20	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	1.0	ug/L	1	09/23/20	MH	SW8260C (OXY)

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

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Phyllis Shiller, Laboratory Director
October 26, 2020
Reviewed and Released by: Greg Lawrence, Assistant Lab Director

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

October 26, 2020

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		09/16/20	15:00
Location Code:	AECOM-WILMINGTN	Received by:	B	09/17/20	16:30
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	127680				

Laboratory Data

SDG ID: GCG80050
Phoenix ID: CG80056

Project ID: LOCKHEED WILMINGTON MA 60552004.19
Client ID: 20A-AE109R7-091620-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Volatiles							
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
1,1,1-Trichloroethane	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L	1	09/22/20	MH	SW8260C
1,1,2-Trichloroethane	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
1,1-Dichloroethane	2.4	1.0	ug/L	1	09/22/20	MH	SW8260C
1,1-Dichloroethene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
1,1-Dichloropropene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
1,2,3-Trichlorobenzene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
1,2,3-Trichloropropane	ND	0.50	ug/L	1	09/22/20	MH	SW8260C
1,2,4-Trichlorobenzene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
1,2,4-Trimethylbenzene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	0.50	ug/L	1	09/22/20	MH	SW8260C
1,2-Dibromoethane	ND	0.50	ug/L	1	09/22/20	MH	SW8260C
1,2-Dichlorobenzene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
1,2-Dichloroethane	ND	0.60	ug/L	1	09/22/20	MH	SW8260C
1,2-Dichloropropane	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
1,3,5-Trimethylbenzene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
1,3-Dichlorobenzene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
1,3-Dichloropropane	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
1,4-Dichlorobenzene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
2,2-Dichloropropane	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
2-Chlorotoluene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
2-Hexanone	ND	5.0	ug/L	1	09/22/20	MH	SW8260C
4-Chlorotoluene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
4-Methyl-2-pentanone	ND	5.0	ug/L	1	09/22/20	MH	SW8260C
Acetone	ND	25	ug/L	1	09/22/20	MH	SW8260C

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	
Benzene	ND	0.70	ug/L	1	09/22/20	MH	SW8260C
Bromobenzene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
Bromochloromethane	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
Bromodichloromethane	ND	0.50	ug/L	1	09/22/20	MH	SW8260C
Bromoform	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
Bromomethane	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
Carbon Disulfide	ND	5.0	ug/L	1	09/22/20	MH	SW8260C
Carbon tetrachloride	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
Chlorobenzene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
Chloroethane	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
Chloroform	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
Chloromethane	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
cis-1,2-Dichloroethene	89	5.0	ug/L	5	09/24/20	MH	SW8260C
cis-1,3-Dichloropropene	ND	0.40	ug/L	1	09/22/20	MH	SW8260C
Dibromochloromethane	ND	0.50	ug/L	1	09/22/20	MH	SW8260C
Dibromomethane	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
Dichlorodifluoromethane	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
Ethylbenzene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
Hexachlorobutadiene	ND	0.40	ug/L	1	09/22/20	MH	SW8260C
Isopropylbenzene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
m&p-Xylene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
Methyl ethyl ketone	ND	5.0	ug/L	1	09/22/20	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
Methylene chloride	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
Naphthalene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
n-Butylbenzene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
n-Propylbenzene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
o-Xylene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
p-Isopropyltoluene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
sec-Butylbenzene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
Styrene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
tert-Butylbenzene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
Tetrachloroethene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
Tetrahydrofuran (THF)	ND	2.5	ug/L	1	09/22/20	MH	SW8260C
Toluene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
trans-1,2-Dichloroethene	1.9	1.0	ug/L	1	09/22/20	MH	SW8260C
trans-1,3-Dichloropropene	ND	0.40	ug/L	1	09/22/20	MH	SW8260C
Trichloroethene	9.2	1.0	ug/L	1	09/22/20	MH	SW8260C
Trichlorofluoromethane	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
Trichlorotrifluoroethane	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
Vinyl chloride	11	1.0	ug/L	1	09/22/20	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	99		%	1	09/22/20	MH	70 - 130 %
% Bromofluorobenzene	96		%	1	09/22/20	MH	70 - 130 %
% Dibromofluoromethane	95		%	1	09/22/20	MH	70 - 130 %
% Toluene-d8	103		%	1	09/22/20	MH	70 - 130 %
% 1,2-dichlorobenzene-d4 (5x)	99		%	5	09/24/20	MH	70 - 130 %
% Bromofluorobenzene (5x)	101		%	5	09/24/20	MH	70 - 130 %
% Dibromofluoromethane (5x)	101		%	5	09/24/20	MH	70 - 130 %

Project ID: LOCKHEED WILMINGTON MA 60552004.19 Phoenix I.D.: CG80056
Client ID: 20A-AE109R7-091620-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	
% Toluene-d8 (5x)	106		%	5	09/24/20	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	100	ug/L	1	09/22/20	MH	SW8260C (OXY)
Diethyl ether	ND	1.0	ug/L	1	09/22/20	MH	SW8260C (OXY)
Di-isopropyl ether	ND	1.0	ug/L	1	09/22/20	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	1.0	ug/L	1	09/22/20	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	1.0	ug/L	1	09/22/20	MH	SW8260C (OXY)
1,4-dioxane							
1,4-dioxane	1.5	0.20	ug/l	1	09/22/20	AW	SW8270DSIM
QA/QC Surrogates							
% 1,4-dioxane-d8	91		%	1	09/22/20	AW	40 - 140 %
Extraction for 1,4-Dioxane	Completed				09/21/20	S/S	

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

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Phyllis Shiller, Laboratory Director
October 26, 2020
Reviewed and Released by: Greg Lawrence, Assistant Lab Director

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

October 26, 2020

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		09/16/20	15:00
Location Code:	AECOM-WILMINGTN	Received by:	B	09/17/20	16:30
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	127680				

Laboratory Data

SDG ID: GCG80050
Phoenix ID: CG80057

Project ID: LOCKHEED WILMINGTON MA 60552004.19
Client ID: 20A-AE109R7-091620-2

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Volatiles							
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
1,1,1-Trichloroethane	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L	1	09/22/20	MH	SW8260C
1,1,2-Trichloroethane	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
1,1-Dichloroethane	2.4	1.0	ug/L	1	09/22/20	MH	SW8260C
1,1-Dichloroethene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
1,1-Dichloropropene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
1,2,3-Trichlorobenzene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
1,2,3-Trichloropropane	ND	0.50	ug/L	1	09/22/20	MH	SW8260C
1,2,4-Trichlorobenzene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
1,2,4-Trimethylbenzene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	0.50	ug/L	1	09/22/20	MH	SW8260C
1,2-Dibromoethane	ND	0.50	ug/L	1	09/22/20	MH	SW8260C
1,2-Dichlorobenzene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
1,2-Dichloroethane	ND	0.60	ug/L	1	09/22/20	MH	SW8260C
1,2-Dichloropropane	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
1,3,5-Trimethylbenzene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
1,3-Dichlorobenzene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
1,3-Dichloropropane	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
1,4-Dichlorobenzene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
2,2-Dichloropropane	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
2-Chlorotoluene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
2-Hexanone	ND	5.0	ug/L	1	09/22/20	MH	SW8260C
4-Chlorotoluene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
4-Methyl-2-pentanone	ND	5.0	ug/L	1	09/22/20	MH	SW8260C
Acetone	ND	25	ug/L	1	09/22/20	MH	SW8260C

Project ID: LOCKHEED WILMINGTON MA 60552004.19 Phoenix I.D.: CG80057

Client ID: 20A-AE109R7-091620-2

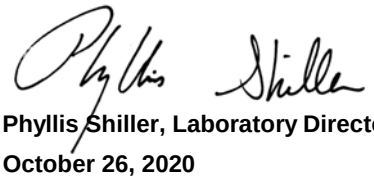
Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	
Benzene	ND	0.70	ug/L	1	09/22/20	MH	SW8260C
Bromobenzene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
Bromochloromethane	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
Bromodichloromethane	ND	0.50	ug/L	1	09/22/20	MH	SW8260C
Bromoform	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
Bromomethane	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
Carbon Disulfide	ND	5.0	ug/L	1	09/22/20	MH	SW8260C
Carbon tetrachloride	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
Chlorobenzene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
Chloroethane	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
Chloroform	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
Chloromethane	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
cis-1,2-Dichloroethene	92	5.0	ug/L	5	09/24/20	MH	SW8260C
cis-1,3-Dichloropropene	ND	0.40	ug/L	1	09/22/20	MH	SW8260C
Dibromochloromethane	ND	0.50	ug/L	1	09/22/20	MH	SW8260C
Dibromomethane	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
Dichlorodifluoromethane	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
Ethylbenzene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
Hexachlorobutadiene	ND	0.40	ug/L	1	09/22/20	MH	SW8260C
Isopropylbenzene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
m&p-Xylene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
Methyl ethyl ketone	ND	5.0	ug/L	1	09/22/20	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
Methylene chloride	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
Naphthalene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
n-Butylbenzene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
n-Propylbenzene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
o-Xylene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
p-Isopropyltoluene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
sec-Butylbenzene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
Styrene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
tert-Butylbenzene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
Tetrachloroethene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
Tetrahydrofuran (THF)	ND	2.5	ug/L	1	09/22/20	MH	SW8260C
Toluene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
trans-1,2-Dichloroethene	1.8	1.0	ug/L	1	09/22/20	MH	SW8260C
trans-1,3-Dichloropropene	ND	0.40	ug/L	1	09/22/20	MH	SW8260C
Trichloroethene	10	1.0	ug/L	1	09/22/20	MH	SW8260C
Trichlorofluoromethane	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
Trichlorotrifluoroethane	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
Vinyl chloride	11	1.0	ug/L	1	09/22/20	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	97		%	1	09/22/20	MH	70 - 130 %
% Bromofluorobenzene	96		%	1	09/22/20	MH	70 - 130 %
% Dibromofluoromethane	98		%	1	09/22/20	MH	70 - 130 %
% Toluene-d8	103		%	1	09/22/20	MH	70 - 130 %
% 1,2-dichlorobenzene-d4 (5x)	97		%	5	09/24/20	MH	70 - 130 %
% Bromofluorobenzene (5x)	101		%	5	09/24/20	MH	70 - 130 %
% Dibromofluoromethane (5x)	97		%	5	09/24/20	MH	70 - 130 %

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	
% Toluene-d8 (5x)	105		%	5	09/24/20	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	100	ug/L	1	09/22/20	MH	SW8260C (OXY)
Diethyl ether	ND	1.0	ug/L	1	09/22/20	MH	SW8260C (OXY)
Di-isopropyl ether	ND	1.0	ug/L	1	09/22/20	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	1.0	ug/L	1	09/22/20	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	1.0	ug/L	1	09/22/20	MH	SW8260C (OXY)
1,4-dioxane							
1,4-dioxane	1.4	0.20	ug/l	1	09/22/20	AW	SW8270DSIM
QA/QC Surrogates							
% 1,4-dioxane-d8	93		%	1	09/22/20	AW	40 - 140 %
Extraction for 1,4-Dioxane	Completed				09/21/20	S/S	

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.



Phyllis Shiller, Laboratory Director
October 26, 2020
Reviewed and Released by: Greg Lawrence, Assistant Lab Director

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

October 26, 2020

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		09/16/20	15:20
Location Code:	AECOM-WILMINGTN	Received by:	B	09/17/20	16:30
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	127680				

Laboratory Data

SDG ID: GCG80050
Phoenix ID: CG80058

Project ID: LOCKHEED WILMINGTON MA 60552004.19
Client ID: 20A-AE109R8-091620-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Volatiles							
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
1,1,1-Trichloroethane	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L	1	09/22/20	MH	SW8260C
1,1,2-Trichloroethane	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
1,1-Dichloroethane	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
1,1-Dichloroethene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
1,1-Dichloropropene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
1,2,3-Trichlorobenzene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
1,2,3-Trichloropropane	ND	0.50	ug/L	1	09/22/20	MH	SW8260C
1,2,4-Trichlorobenzene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
1,2,4-Trimethylbenzene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	0.50	ug/L	1	09/22/20	MH	SW8260C
1,2-Dibromoethane	ND	0.50	ug/L	1	09/22/20	MH	SW8260C
1,2-Dichlorobenzene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
1,2-Dichloroethane	ND	0.60	ug/L	1	09/22/20	MH	SW8260C
1,2-Dichloropropane	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
1,3,5-Trimethylbenzene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
1,3-Dichlorobenzene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
1,3-Dichloropropane	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
1,4-Dichlorobenzene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
2,2-Dichloropropane	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
2-Chlorotoluene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
2-Hexanone	ND	5.0	ug/L	1	09/22/20	MH	SW8260C
4-Chlorotoluene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
4-Methyl-2-pentanone	ND	5.0	ug/L	1	09/22/20	MH	SW8260C
Acetone	ND	25	ug/L	1	09/22/20	MH	SW8260C

Project ID: LOCKHEED WILMINGTON MA 60552004.19 Phoenix I.D.: CG80058

Client ID: 20A-AE109R8-091620-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	
Benzene	ND	0.70	ug/L	1	09/22/20	MH	SW8260C
Bromobenzene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
Bromochloromethane	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
Bromodichloromethane	ND	0.50	ug/L	1	09/22/20	MH	SW8260C
Bromoform	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
Bromomethane	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
Carbon Disulfide	ND	5.0	ug/L	1	09/22/20	MH	SW8260C
Carbon tetrachloride	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
Chlorobenzene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
Chloroethane	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
Chloroform	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
Chloromethane	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
cis-1,2-Dichloroethene	4.6	1.0	ug/L	1	09/22/20	MH	SW8260C
cis-1,3-Dichloropropene	ND	0.40	ug/L	1	09/22/20	MH	SW8260C
Dibromochloromethane	ND	0.50	ug/L	1	09/22/20	MH	SW8260C
Dibromomethane	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
Dichlorodifluoromethane	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
Ethylbenzene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
Hexachlorobutadiene	ND	0.40	ug/L	1	09/22/20	MH	SW8260C
Isopropylbenzene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
m&p-Xylene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
Methyl ethyl ketone	ND	5.0	ug/L	1	09/22/20	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
Methylene chloride	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
Naphthalene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
n-Butylbenzene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
n-Propylbenzene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
o-Xylene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
p-Isopropyltoluene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
sec-Butylbenzene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
Styrene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
tert-Butylbenzene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
Tetrachloroethene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
Tetrahydrofuran (THF)	ND	2.5	ug/L	1	09/22/20	MH	SW8260C
Toluene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
trans-1,2-Dichloroethene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
trans-1,3-Dichloropropene	ND	0.40	ug/L	1	09/22/20	MH	SW8260C
Trichloroethene	2.9	1.0	ug/L	1	09/22/20	MH	SW8260C
Trichlorofluoromethane	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
Trichlorotrifluoroethane	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
Vinyl chloride	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	100		%	1	09/22/20	MH	70 - 130 %
% Bromofluorobenzene	95		%	1	09/22/20	MH	70 - 130 %
% Dibromofluoromethane	96		%	1	09/22/20	MH	70 - 130 %
% Toluene-d8	103		%	1	09/22/20	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	100	ug/L	1	09/22/20	MH	SW8260C (OXY)
Diethyl ether	ND	1.0	ug/L	1	09/22/20	MH	SW8260C (OXY)

Ver 2

Project ID: LOCKHEED WILMINGTON MA 60552004.19 Phoenix I.D.: CG80058

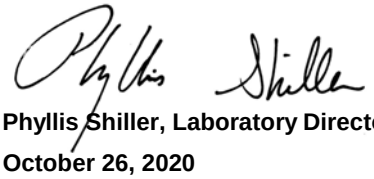
Client ID: 20A-AE109R8-091620-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	
Di-isopropyl ether	ND	1.0	ug/L	1	09/22/20	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	1.0	ug/L	1	09/22/20	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	1.0	ug/L	1	09/22/20	MH	SW8260C (OXY)

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
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Phyllis Shiller, Laboratory Director

October 26, 2020

Reviewed and Released by: Greg Lawrence, Assistant Lab Director

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

October 26, 2020

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		09/17/20	10:25
Location Code:	AECOM-WILMINGTN	Received by:	B	09/17/20	16:30
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	127680				

Laboratory Data

SDG ID: GCG80050
Phoenix ID: CG80059

Project ID: LOCKHEED WILMINGTON MA 60552004.19
Client ID: 20A-AE105D-091720-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Volatiles							
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
1,1,1-Trichloroethane	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L	1	09/22/20	MH	SW8260C
1,1,2-Trichloroethane	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
1,1-Dichloroethane	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
1,1-Dichloroethene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
1,1-Dichloropropene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
1,2,3-Trichlorobenzene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
1,2,3-Trichloropropane	ND	0.50	ug/L	1	09/22/20	MH	SW8260C
1,2,4-Trichlorobenzene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
1,2,4-Trimethylbenzene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	0.50	ug/L	1	09/22/20	MH	SW8260C
1,2-Dibromoethane	ND	0.50	ug/L	1	09/22/20	MH	SW8260C
1,2-Dichlorobenzene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
1,2-Dichloroethane	ND	0.60	ug/L	1	09/22/20	MH	SW8260C
1,2-Dichloropropane	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
1,3,5-Trimethylbenzene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
1,3-Dichlorobenzene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
1,3-Dichloropropane	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
1,4-Dichlorobenzene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
2,2-Dichloropropane	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
2-Chlorotoluene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
2-Hexanone	ND	5.0	ug/L	1	09/22/20	MH	SW8260C
4-Chlorotoluene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
4-Methyl-2-pentanone	ND	5.0	ug/L	1	09/22/20	MH	SW8260C
Acetone	ND	25	ug/L	1	09/22/20	MH	SW8260C

Project ID: LOCKHEED WILMINGTON MA 60552004.19 Phoenix I.D.: CG80059
Client ID: 20A-AE105D-091720-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	
Benzene	ND	0.70	ug/L	1	09/22/20	MH	SW8260C
Bromobenzene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
Bromochloromethane	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
Bromodichloromethane	ND	0.50	ug/L	1	09/22/20	MH	SW8260C
Bromoform	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
Bromomethane	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
Carbon Disulfide	ND	5.0	ug/L	1	09/22/20	MH	SW8260C
Carbon tetrachloride	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
Chlorobenzene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
Chloroethane	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
Chloroform	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
Chloromethane	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
cis-1,2-Dichloroethene	18	1.0	ug/L	1	09/22/20	MH	SW8260C
cis-1,3-Dichloropropene	ND	0.40	ug/L	1	09/22/20	MH	SW8260C
Dibromochloromethane	ND	0.50	ug/L	1	09/22/20	MH	SW8260C
Dibromomethane	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
Dichlorodifluoromethane	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
Ethylbenzene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
Hexachlorobutadiene	ND	0.40	ug/L	1	09/22/20	MH	SW8260C
Isopropylbenzene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
m&p-Xylene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
Methyl ethyl ketone	ND	5.0	ug/L	1	09/22/20	MH	SW8260C
Methyl t-butyl ether (MTBE)	2.4	1.0	ug/L	1	09/22/20	MH	SW8260C
Methylene chloride	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
Naphthalene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
n-Butylbenzene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
n-Propylbenzene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
o-Xylene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
p-Isopropyltoluene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
sec-Butylbenzene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
Styrene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
tert-Butylbenzene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
Tetrachloroethene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
Tetrahydrofuran (THF)	ND	2.5	ug/L	1	09/22/20	MH	SW8260C
Toluene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
trans-1,2-Dichloroethene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
trans-1,3-Dichloropropene	ND	0.40	ug/L	1	09/22/20	MH	SW8260C
Trichloroethene	6.8	1.0	ug/L	1	09/22/20	MH	SW8260C
Trichlorofluoromethane	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
Trichlorotrifluoroethane	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
Vinyl chloride	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	98		%	1	09/22/20	MH	70 - 130 %
% Bromofluorobenzene	97		%	1	09/22/20	MH	70 - 130 %
% Dibromofluoromethane	96		%	1	09/22/20	MH	70 - 130 %
% Toluene-d8	104		%	1	09/22/20	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	100	ug/L	1	09/22/20	MH	SW8260C (OXY)
Diethyl ether	ND	1.0	ug/L	1	09/22/20	MH	SW8260C (OXY)

Ver 2

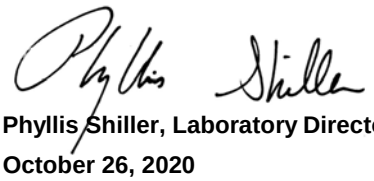
Project ID: LOCKHEED WILMINGTON MA 60552004.19 Phoenix I.D.: CG80059
Client ID: 20A-AE105D-091720-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	
Di-isopropyl ether	ND	1.0	ug/L	1	09/22/20	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	1.0	ug/L	1	09/22/20	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	1.0	ug/L	1	09/22/20	MH	SW8260C (OXY)
1,4-dioxane							
1,4-dioxane	0.82	0.20	ug/l	1	09/22/20	AW	SW8270DSIM
QA/QC Surrogates							
% 1,4-dioxane-d8	67		%	1	09/22/20	AW	40 - 140 %
Extraction for 1,4-Dioxane	Completed				09/21/20	S/S	

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.



Phyllis Shiller, Laboratory Director
October 26, 2020
Reviewed and Released by: Greg Lawrence, Assistant Lab Director

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

October 26, 2020

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		09/17/20	14:30
Location Code:	AECOM-WILMINGTN	Received by:	B	09/17/20	16:30
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	127680				

Laboratory Data

SDG ID: GCG80050
Phoenix ID: CG80060

Project ID: LOCKHEED WILMINGTON MA 60552004.19
Client ID: 20A-TB01-091620-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Volatiles							
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
1,1,1-Trichloroethane	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L	1	09/22/20	MH	SW8260C
1,1,2-Trichloroethane	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
1,1-Dichloroethane	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
1,1-Dichloroethene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
1,1-Dichloropropene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
1,2,3-Trichlorobenzene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
1,2,3-Trichloropropane	ND	0.50	ug/L	1	09/22/20	MH	SW8260C
1,2,4-Trichlorobenzene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
1,2,4-Trimethylbenzene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	0.50	ug/L	1	09/22/20	MH	SW8260C
1,2-Dibromoethane	ND	0.50	ug/L	1	09/22/20	MH	SW8260C
1,2-Dichlorobenzene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
1,2-Dichloroethane	ND	0.60	ug/L	1	09/22/20	MH	SW8260C
1,2-Dichloropropane	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
1,3,5-Trimethylbenzene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
1,3-Dichlorobenzene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
1,3-Dichloropropane	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
1,4-Dichlorobenzene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
2,2-Dichloropropane	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
2-Chlorotoluene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
2-Hexanone	ND	5.0	ug/L	1	09/22/20	MH	SW8260C
4-Chlorotoluene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
4-Methyl-2-pentanone	ND	5.0	ug/L	1	09/22/20	MH	SW8260C
Acetone	ND	25	ug/L	1	09/22/20	MH	SW8260C

Project ID: LOCKHEED WILMINGTON MA 60552004.19 Phoenix I.D.: CG80060

Client ID: 20A-TB01-091620-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	
Benzene	ND	0.70	ug/L	1	09/22/20	MH	SW8260C
Bromobenzene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
Bromochloromethane	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
Bromodichloromethane	ND	0.50	ug/L	1	09/22/20	MH	SW8260C
Bromoform	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
Bromomethane	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
Carbon Disulfide	ND	5.0	ug/L	1	09/22/20	MH	SW8260C
Carbon tetrachloride	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
Chlorobenzene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
Chloroethane	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
Chloroform	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
Chloromethane	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
cis-1,2-Dichloroethene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
cis-1,3-Dichloropropene	ND	0.40	ug/L	1	09/22/20	MH	SW8260C
Dibromochloromethane	ND	0.50	ug/L	1	09/22/20	MH	SW8260C
Dibromomethane	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
Dichlorodifluoromethane	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
Ethylbenzene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
Hexachlorobutadiene	ND	0.40	ug/L	1	09/22/20	MH	SW8260C
Isopropylbenzene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
m&p-Xylene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
Methyl ethyl ketone	ND	5.0	ug/L	1	09/22/20	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
Methylene chloride	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
Naphthalene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
n-Butylbenzene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
n-Propylbenzene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
o-Xylene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
p-Isopropyltoluene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
sec-Butylbenzene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
Styrene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
tert-Butylbenzene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
Tetrachloroethene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
Tetrahydrofuran (THF)	ND	2.5	ug/L	1	09/22/20	MH	SW8260C
Toluene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
trans-1,2-Dichloroethene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
trans-1,3-Dichloropropene	ND	0.40	ug/L	1	09/22/20	MH	SW8260C
Trichloroethene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
Trichlorofluoromethane	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
Trichlorotrifluoroethane	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
Vinyl chloride	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	97		%	1	09/22/20	MH	70 - 130 %
% Bromofluorobenzene	96		%	1	09/22/20	MH	70 - 130 %
% Dibromofluoromethane	96		%	1	09/22/20	MH	70 - 130 %
% Toluene-d8	102		%	1	09/22/20	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	100	ug/L	1	09/22/20	MH	SW8260C (OXY)
Diethyl ether	ND	1.0	ug/L	1	09/22/20	MH	SW8260C (OXY)

Ver 2

Project ID: LOCKHEED WILMINGTON MA 60552004.19 Phoenix I.D.: CG80060

Client ID: 20A-TB01-091620-1

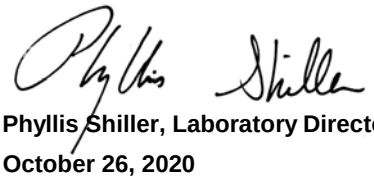
Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	
Di-isopropyl ether	ND	1.0	ug/L	1	09/22/20	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	1.0	ug/L	1	09/22/20	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	1.0	ug/L	1	09/22/20	MH	SW8260C (OXY)

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

TRIP BLANK INCLUDED.

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
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Phyllis Shiller, Laboratory Director

October 26, 2020

Reviewed and Released by: Greg Lawrence, Assistant Lab Director

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

October 26, 2020

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		09/17/20	11:20
Location Code:	AECOM-WILMINGTN	Received by:	B	09/17/20	16:30
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	127680				

Laboratory Data

SDG ID: GCG80050
Phoenix ID: CG80061

Project ID: LOCKHEED WILMINGTON MA 60552004.19
Client ID: 20A-AE105S-091720-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Arsenic	0.017	0.004	mg/L	1	09/19/20	CPP	SW6010D
Arsenic (Dissolved)	0.016	0.004	mg/L	1	09/19/20	CPP	SW6010D
Iron (Dissolved)	35.3	0.011	mg/L	1	09/19/20	CPP	SW6010D
Manganese (Dissolved)	1.43	0.001	mg/L	1	09/19/20	CPP	SW6010D
Iron	38.6	0.010	mg/L	1	09/19/20	CPP	SW6010D
Manganese	1.49	0.001	mg/L	1	09/19/20	CPP	SW6010D
Chloride	265	15.0	mg/L	5	09/19/20	BS/EG	E300.0
Nitrite as Nitrogen	< 0.020	0.020	mg/L	5	09/19/20 05:23	BS/EG	E300.0
Nitrate as Nitrogen	< 0.05	0.05	mg/L	1	09/18/20 07:06	BS/GD/EG	E300.0
Sulfate	15.3	15.0	mg/L	5	09/19/20	BS/EG	E300.0
Sulfide	< 0.05	0.05	mg/L	1	09/22/20	GD	SM4500S-D-11
Total Organic Carbon	1.4	1.0	mg/L	1	09/22/20	BJA	SM5310B-11
Dissolved Metals Preparation	Completed				09/18/20	AG	SW3005A
Total Metals Digestion	Completed				09/18/20	AG	
Volatiles							
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
1,1,1-Trichloroethane	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L	1	09/22/20	MH	SW8260C
1,1,2-Trichloroethane	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
1,1-Dichloroethane	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
1,1-Dichloroethene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
1,1-Dichloropropene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
1,2,3-Trichlorobenzene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
1,2,3-Trichloropropane	ND	0.50	ug/L	1	09/22/20	MH	SW8260C
1,2,4-Trichlorobenzene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
1,2,4-Trimethylbenzene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	0.50	ug/L	1	09/22/20	MH	SW8260C

Project ID: LOCKHEED WILMINGTON MA 60552004.19 Phoenix I.D.: CG80061

Client ID: 20A-AE105S-091720-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	
1,2-Dibromoethane	ND	0.50	ug/L	1	09/22/20	MH	SW8260C
1,2-Dichlorobenzene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
1,2-Dichloroethane	ND	0.60	ug/L	1	09/22/20	MH	SW8260C
1,2-Dichloropropane	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
1,3,5-Trimethylbenzene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
1,3-Dichlorobenzene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
1,3-Dichloropropane	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
1,4-Dichlorobenzene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
2,2-Dichloropropane	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
2-Chlorotoluene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
2-Hexanone	ND	5.0	ug/L	1	09/22/20	MH	SW8260C
4-Chlorotoluene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
4-Methyl-2-pentanone	ND	5.0	ug/L	1	09/22/20	MH	SW8260C
Acetone	ND	25	ug/L	1	09/22/20	MH	SW8260C
Benzene	ND	0.70	ug/L	1	09/22/20	MH	SW8260C
Bromobenzene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
Bromochloromethane	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
Bromodichloromethane	ND	0.50	ug/L	1	09/22/20	MH	SW8260C
Bromoform	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
Bromomethane	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
Carbon Disulfide	ND	5.0	ug/L	1	09/22/20	MH	SW8260C
Carbon tetrachloride	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
Chlorobenzene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
Chloroethane	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
Chloroform	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
Chloromethane	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
cis-1,2-Dichloroethene	8.7	1.0	ug/L	1	09/22/20	MH	SW8260C
cis-1,3-Dichloropropene	ND	0.40	ug/L	1	09/22/20	MH	SW8260C
Dibromochloromethane	ND	0.50	ug/L	1	09/22/20	MH	SW8260C
Dibromomethane	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
Dichlorodifluoromethane	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
Ethylbenzene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
Hexachlorobutadiene	ND	0.40	ug/L	1	09/22/20	MH	SW8260C
Isopropylbenzene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
m&p-Xylene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
Methyl ethyl ketone	ND	5.0	ug/L	1	09/22/20	MH	SW8260C
Methyl t-butyl ether (MTBE)	2.2	1.0	ug/L	1	09/22/20	MH	SW8260C
Methylene chloride	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
Naphthalene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
n-Butylbenzene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
n-Propylbenzene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
o-Xylene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
p-Isopropyltoluene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
sec-Butylbenzene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
Styrene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
tert-Butylbenzene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
Tetrachloroethene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
Tetrahydrofuran (THF)	ND	2.5	ug/L	1	09/22/20	MH	SW8260C
Toluene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C

Project ID: LOCKHEED WILMINGTON MA 60552004.19 Phoenix I.D.: CG80061
Client ID: 20A-AE105S-091720-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	
trans-1,2-Dichloroethene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
trans-1,3-Dichloropropene	ND	0.40	ug/L	1	09/22/20	MH	SW8260C
Trichloroethene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
Trichlorofluoromethane	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
Trichlorotrifluoroethane	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
Vinyl chloride	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	99		%	1	09/22/20	MH	70 - 130 %
% Bromofluorobenzene	96		%	1	09/22/20	MH	70 - 130 %
% Dibromofluoromethane	96		%	1	09/22/20	MH	70 - 130 %
% Toluene-d8	103		%	1	09/22/20	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	100	ug/L	1	09/22/20	MH	SW8260C (OXY)
Diethyl ether	ND	1.0	ug/L	1	09/22/20	MH	SW8260C (OXY)
Di-isopropyl ether	ND	1.0	ug/L	1	09/22/20	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	1.0	ug/L	1	09/22/20	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	1.0	ug/L	1	09/22/20	MH	SW8260C (OXY)

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

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Phyllis Shiller, Laboratory Director
October 26, 2020
Reviewed and Released by: Greg Lawrence, Assistant Lab Director

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

October 26, 2020

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		09/17/20	11:15
Location Code:	AECOM-WILMINGTN	Received by:	B	09/17/20	16:30
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	127680				

Laboratory Data

SDG ID: GCG80050
Phoenix ID: CG80062

Project ID: LOCKHEED WILMINGTON MA 60552004.19
Client ID: 20A-AE106D-091720-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Arsenic	< 0.004	0.004	mg/L	1	09/22/20	EK	SW6010D
Arsenic (Dissolved)	< 0.004	0.004	mg/L	1	09/19/20	CPP	SW6010D
Iron (Dissolved)	0.021	0.011	mg/L	1	09/19/20	CPP	SW6010D
Manganese (Dissolved)	2.26	0.011	mg/L	10	09/22/20	EK	SW6010D
Iron	0.019	0.010	mg/L	1	09/22/20	EK	SW6010D
Manganese	2.28	0.010	mg/L	10	09/23/20	TH	SW6010D
Chloride	579	30.0	mg/L	10	09/19/20	BS/EG	E300.0
Nitrite as Nitrogen	< 0.020	0.020	mg/L	5	09/19/20 05:33	BS/EG	E300.0
Nitrate as Nitrogen	2.72	0.25	mg/L	5	09/19/20 05:33	BS/EG	E300.0
Sulfate	25.1	15.0	mg/L	5	09/19/20	BS/EG	E300.0
Sulfide	< 0.05	0.05	mg/L	1	09/22/20	GD	SM4500S-D-11
Total Organic Carbon	1.6	1.0	mg/L	1	09/22/20	BJA	SM5310B-11
Dissolved Metals Preparation	Completed				09/18/20	AG	SW3005A
Total Metals Digestion	Completed				09/21/20	AG	
Volatiles							
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
1,1,1-Trichloroethane	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L	1	09/22/20	MH	SW8260C
1,1,2-Trichloroethane	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
1,1-Dichloroethane	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
1,1-Dichloroethene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
1,1-Dichloropropene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
1,2,3-Trichlorobenzene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
1,2,3-Trichloropropane	ND	0.50	ug/L	1	09/22/20	MH	SW8260C
1,2,4-Trichlorobenzene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
1,2,4-Trimethylbenzene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	0.50	ug/L	1	09/22/20	MH	SW8260C

Project ID: LOCKHEED WILMINGTON MA 60552004.19 Phoenix I.D.: CG80062

Client ID: 20A-AE106D-091720-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	
1,2-Dibromoethane	ND	0.50	ug/L	1	09/22/20	MH	SW8260C
1,2-Dichlorobenzene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
1,2-Dichloroethane	ND	0.60	ug/L	1	09/22/20	MH	SW8260C
1,2-Dichloropropane	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
1,3,5-Trimethylbenzene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
1,3-Dichlorobenzene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
1,3-Dichloropropane	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
1,4-Dichlorobenzene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
2,2-Dichloropropane	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
2-Chlorotoluene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
2-Hexanone	ND	5.0	ug/L	1	09/22/20	MH	SW8260C
4-Chlorotoluene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
4-Methyl-2-pentanone	ND	5.0	ug/L	1	09/22/20	MH	SW8260C
Acetone	ND	25	ug/L	1	09/22/20	MH	SW8260C
Benzene	ND	0.70	ug/L	1	09/22/20	MH	SW8260C
Bromobenzene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
Bromochloromethane	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
Bromodichloromethane	ND	0.50	ug/L	1	09/22/20	MH	SW8260C
Bromoform	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
Bromomethane	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
Carbon Disulfide	ND	5.0	ug/L	1	09/22/20	MH	SW8260C
Carbon tetrachloride	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
Chlorobenzene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
Chloroethane	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
Chloroform	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
Chloromethane	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
cis-1,2-Dichloroethene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
cis-1,3-Dichloropropene	ND	0.40	ug/L	1	09/22/20	MH	SW8260C
Dibromochloromethane	ND	0.50	ug/L	1	09/22/20	MH	SW8260C
Dibromomethane	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
Dichlorodifluoromethane	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
Ethylbenzene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
Hexachlorobutadiene	ND	0.40	ug/L	1	09/22/20	MH	SW8260C
Isopropylbenzene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
m&p-Xylene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
Methyl ethyl ketone	ND	5.0	ug/L	1	09/22/20	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
Methylene chloride	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
Naphthalene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
n-Butylbenzene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
n-Propylbenzene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
o-Xylene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
p-Isopropyltoluene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
sec-Butylbenzene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
Styrene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
tert-Butylbenzene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
Tetrachloroethene	2.3	1.0	ug/L	1	09/22/20	MH	SW8260C
Tetrahydrofuran (THF)	ND	2.5	ug/L	1	09/22/20	MH	SW8260C
Toluene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C

Project ID: LOCKHEED WILMINGTON MA 60552004.19 Phoenix I.D.: CG80062
Client ID: 20A-AE106D-091720-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	
trans-1,2-Dichloroethene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
trans-1,3-Dichloropropene	ND	0.40	ug/L	1	09/22/20	MH	SW8260C
Trichloroethene	3.9	1.0	ug/L	1	09/22/20	MH	SW8260C
Trichlorofluoromethane	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
Trichlorotrifluoroethane	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
Vinyl chloride	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	99		%	1	09/22/20	MH	70 - 130 %
% Bromofluorobenzene	95		%	1	09/22/20	MH	70 - 130 %
% Dibromofluoromethane	95		%	1	09/22/20	MH	70 - 130 %
% Toluene-d8	102		%	1	09/22/20	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	100	ug/L	1	09/22/20	MH	SW8260C (OXY)
Diethyl ether	ND	1.0	ug/L	1	09/22/20	MH	SW8260C (OXY)
Di-isopropyl ether	ND	1.0	ug/L	1	09/22/20	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	1.0	ug/L	1	09/22/20	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	1.0	ug/L	1	09/22/20	MH	SW8260C (OXY)

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

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Phyllis Shiller, Laboratory Director
October 26, 2020
Reviewed and Released by: Greg Lawrence, Assistant Lab Director

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

October 26, 2020

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		09/17/20	12:30
Location Code:	AECOM-WILMINGTN	Received by:	B	09/17/20	16:30
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	127680				

Laboratory Data

SDG ID: GCG80050
Phoenix ID: CG80063

Project ID: LOCKHEED WILMINGTON MA 60552004.19
Client ID: 20A-AE106S-091720-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Volatiles							
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
1,1,1-Trichloroethane	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L	1	09/22/20	MH	SW8260C
1,1,2-Trichloroethane	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
1,1-Dichloroethane	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
1,1-Dichloroethene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
1,1-Dichloropropene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
1,2,3-Trichlorobenzene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
1,2,3-Trichloropropane	ND	0.50	ug/L	1	09/22/20	MH	SW8260C
1,2,4-Trichlorobenzene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
1,2,4-Trimethylbenzene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	0.50	ug/L	1	09/22/20	MH	SW8260C
1,2-Dibromoethane	ND	0.50	ug/L	1	09/22/20	MH	SW8260C
1,2-Dichlorobenzene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
1,2-Dichloroethane	ND	0.60	ug/L	1	09/22/20	MH	SW8260C
1,2-Dichloropropane	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
1,3,5-Trimethylbenzene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
1,3-Dichlorobenzene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
1,3-Dichloropropane	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
1,4-Dichlorobenzene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
2,2-Dichloropropane	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
2-Chlorotoluene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
2-Hexanone	ND	5.0	ug/L	1	09/22/20	MH	SW8260C
4-Chlorotoluene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
4-Methyl-2-pentanone	ND	5.0	ug/L	1	09/22/20	MH	SW8260C
Acetone	ND	25	ug/L	1	09/22/20	MH	SW8260C

Project ID: LOCKHEED WILMINGTON MA 60552004.19 Phoenix I.D.: CG80063

Client ID: 20A-AE106S-091720-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	
Benzene	ND	0.70	ug/L	1	09/22/20	MH	SW8260C
Bromobenzene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
Bromochloromethane	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
Bromodichloromethane	ND	0.50	ug/L	1	09/22/20	MH	SW8260C
Bromoform	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
Bromomethane	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
Carbon Disulfide	ND	5.0	ug/L	1	09/22/20	MH	SW8260C
Carbon tetrachloride	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
Chlorobenzene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
Chloroethane	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
Chloroform	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
Chloromethane	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
cis-1,2-Dichloroethene	25	1.0	ug/L	1	09/22/20	MH	SW8260C
cis-1,3-Dichloropropene	ND	0.40	ug/L	1	09/22/20	MH	SW8260C
Dibromochloromethane	ND	0.50	ug/L	1	09/22/20	MH	SW8260C
Dibromomethane	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
Dichlorodifluoromethane	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
Ethylbenzene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
Hexachlorobutadiene	ND	0.40	ug/L	1	09/22/20	MH	SW8260C
Isopropylbenzene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
m&p-Xylene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
Methyl ethyl ketone	ND	5.0	ug/L	1	09/22/20	MH	SW8260C
Methyl t-butyl ether (MTBE)	2.0	1.0	ug/L	1	09/22/20	MH	SW8260C
Methylene chloride	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
Naphthalene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
n-Butylbenzene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
n-Propylbenzene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
o-Xylene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
p-Isopropyltoluene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
sec-Butylbenzene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
Styrene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
tert-Butylbenzene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
Tetrachloroethene	4.9	1.0	ug/L	1	09/22/20	MH	SW8260C
Tetrahydrofuran (THF)	ND	2.5	ug/L	1	09/22/20	MH	SW8260C
Toluene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
trans-1,2-Dichloroethene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
trans-1,3-Dichloropropene	ND	0.40	ug/L	1	09/22/20	MH	SW8260C
Trichloroethene	3.5	1.0	ug/L	1	09/22/20	MH	SW8260C
Trichlorofluoromethane	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
Trichlorotrifluoroethane	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
Vinyl chloride	3.6	1.0	ug/L	1	09/22/20	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	99		%	1	09/22/20	MH	70 - 130 %
% Bromofluorobenzene	95		%	1	09/22/20	MH	70 - 130 %
% Dibromofluoromethane	95		%	1	09/22/20	MH	70 - 130 %
% Toluene-d8	103		%	1	09/22/20	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	100	ug/L	1	09/22/20	MH	SW8260C (OXY)
Diethyl ether	ND	1.0	ug/L	1	09/22/20	MH	SW8260C (OXY)

Ver 2

Project ID: LOCKHEED WILMINGTON MA 60552004.19 Phoenix I.D.: CG80063

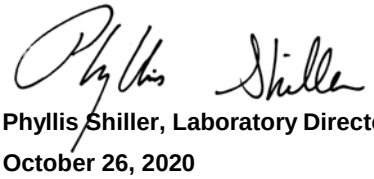
Client ID: 20A-AE106S-091720-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	
Di-isopropyl ether	ND	1.0	ug/L	1	09/22/20	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	1.0	ug/L	1	09/22/20	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	1.0	ug/L	1	09/22/20	MH	SW8260C (OXY)

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

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Phyllis Shiller, Laboratory Director

October 26, 2020

Reviewed and Released by: Greg Lawrence, Assistant Lab Director

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

October 26, 2020

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		09/17/20	13:05
Location Code:	AECOM-WILMINGTN	Received by:	B	09/17/20	16:30
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	127680				

Laboratory Data

SDG ID: GCG80050
Phoenix ID: CG80064

Project ID: LOCKHEED WILMINGTON MA 60552004.19
Client ID: 20A-AE105R1-091720-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Volatiles							
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
1,1,1-Trichloroethane	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L	1	09/23/20	MH	SW8260C
1,1,2-Trichloroethane	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
1,1-Dichloroethane	3.2	1.0	ug/L	1	09/23/20	MH	SW8260C
1,1-Dichloroethene	2.4	1.0	ug/L	1	09/23/20	MH	SW8260C
1,1-Dichloropropene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
1,2,3-Trichlorobenzene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
1,2,3-Trichloropropane	ND	0.50	ug/L	1	09/23/20	MH	SW8260C
1,2,4-Trichlorobenzene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
1,2,4-Trimethylbenzene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	0.50	ug/L	1	09/23/20	MH	SW8260C
1,2-Dibromoethane	ND	0.50	ug/L	1	09/23/20	MH	SW8260C
1,2-Dichlorobenzene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
1,2-Dichloroethane	ND	0.60	ug/L	1	09/23/20	MH	SW8260C
1,2-Dichloropropane	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
1,3,5-Trimethylbenzene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
1,3-Dichlorobenzene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
1,3-Dichloropropane	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
1,4-Dichlorobenzene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
2,2-Dichloropropane	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
2-Chlorotoluene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
2-Hexanone	ND	5.0	ug/L	1	09/23/20	MH	SW8260C
4-Chlorotoluene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
4-Methyl-2-pentanone	ND	5.0	ug/L	1	09/23/20	MH	SW8260C
Acetone	ND	25	ug/L	1	09/23/20	MH	SW8260C

Project ID: LOCKHEED WILMINGTON MA 60552004.19 Phoenix I.D.: CG80064

Client ID: 20A-AE105R1-091720-1

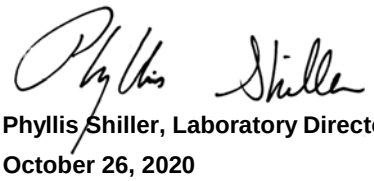
Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	
Benzene	ND	0.70	ug/L	1	09/23/20	MH	SW8260C
Bromobenzene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
Bromochloromethane	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
Bromodichloromethane	ND	0.50	ug/L	1	09/23/20	MH	SW8260C
Bromoform	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
Bromomethane	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
Carbon Disulfide	ND	5.0	ug/L	1	09/23/20	MH	SW8260C
Carbon tetrachloride	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
Chlorobenzene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
Chloroethane	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
Chloroform	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
Chloromethane	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
cis-1,2-Dichloroethene	26	1.0	ug/L	1	09/23/20	MH	SW8260C
cis-1,3-Dichloropropene	ND	0.40	ug/L	1	09/23/20	MH	SW8260C
Dibromochloromethane	ND	0.50	ug/L	1	09/23/20	MH	SW8260C
Dibromomethane	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
Dichlorodifluoromethane	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
Ethylbenzene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
Hexachlorobutadiene	ND	0.40	ug/L	1	09/23/20	MH	SW8260C
Isopropylbenzene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
m&p-Xylene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
Methyl ethyl ketone	ND	5.0	ug/L	1	09/23/20	MH	SW8260C
Methyl t-butyl ether (MTBE)	1.8	1.0	ug/L	1	09/23/20	MH	SW8260C
Methylene chloride	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
Naphthalene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
n-Butylbenzene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
n-Propylbenzene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
o-Xylene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
p-Isopropyltoluene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
sec-Butylbenzene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
Styrene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
tert-Butylbenzene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
Tetrachloroethene	31	1.0	ug/L	1	09/23/20	MH	SW8260C
Tetrahydrofuran (THF)	ND	2.5	ug/L	1	09/23/20	MH	SW8260C
Toluene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
trans-1,2-Dichloroethene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
trans-1,3-Dichloropropene	ND	0.40	ug/L	1	09/23/20	MH	SW8260C
Trichloroethene	110	10	ug/L	10	09/23/20	MH	SW8260C
Trichlorofluoromethane	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
Trichlorotrifluoroethane	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
Vinyl chloride	1.1	1.0	ug/L	1	09/23/20	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	97		%	1	09/23/20	MH	70 - 130 %
% Bromofluorobenzene	100		%	1	09/23/20	MH	70 - 130 %
% Dibromofluoromethane	94		%	1	09/23/20	MH	70 - 130 %
% Toluene-d8	98		%	1	09/23/20	MH	70 - 130 %
% 1,2-dichlorobenzene-d4 (10x)	100		%	10	09/23/20	MH	70 - 130 %
% Bromofluorobenzene (10x)	100		%	10	09/23/20	MH	70 - 130 %
% Dibromofluoromethane (10x)	96		%	10	09/23/20	MH	70 - 130 %

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	
% Toluene-d8 (10x)	104		%	10	09/23/20	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	100	ug/L	1	09/23/20	MH	SW8260C (OXY)
Diethyl ether	ND	1.0	ug/L	1	09/23/20	MH	SW8260C (OXY)
Di-isopropyl ether	ND	1.0	ug/L	1	09/23/20	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	1.0	ug/L	1	09/23/20	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	1.0	ug/L	1	09/23/20	MH	SW8260C (OXY)

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.



Phyllis Shiller, Laboratory Director
October 26, 2020
Reviewed and Released by: Greg Lawrence, Assistant Lab Director

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

October 26, 2020

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		09/17/20	12:20
Location Code:	AECOM-WILMINGTN	Received by:	B	09/17/20	16:30
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	127680				

Laboratory Data

SDG ID: GCG80050
Phoenix ID: CG80065

Project ID: LOCKHEED WILMINGTON MA 60552004.19
Client ID: 20A-AE105R2-091720-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Arsenic	< 0.004	0.004	mg/L	1	09/22/20	EK	SW6010D
Arsenic (Dissolved)	< 0.004	0.004	mg/L	1	09/19/20	CPP	SW6010D
Iron (Dissolved)	0.082	0.011	mg/L	1	09/19/20	CPP	SW6010D
Manganese (Dissolved)	0.300	0.001	mg/L	1	09/19/20	CPP	SW6010D
Iron	0.044	0.010	mg/L	1	09/22/20	EK	SW6010D
Manganese	0.107	0.001	mg/L	1	09/22/20	EK	SW6010D
Chloride	56.9	3.0	mg/L	1	09/18/20	BS/GD/EG	E300.0
Nitrite as Nitrogen	< 0.004	0.004	mg/L	1	09/18/20 07:28	BS/GD/EG	E300.0
Nitrate as Nitrogen	< 0.05	0.05	mg/L	1	09/18/20 07:28	BS/GD/EG	E300.0
Sulfate	15.5	3.0	mg/L	1	09/18/20	BS/GD/EG	E300.0
Sulfide	< 0.05	0.05	mg/L	1	09/22/20	GD	SM4500S-D-11
Total Organic Carbon	< 1.0	1.0	mg/L	1	09/22/20	BJA	SM5310B-11
EPH Extraction	Completed				09/23/20	JS/D	SW3510C
MA Petroleum Hydrocarbon (EPH)	Completed				09/17/20		MADEP EPH-04
Semi-Volatile Extraction	Completed				09/22/20	P/CG	SW3520C
Dissolved Metals Preparation	Completed				09/18/20	AG	SW3005A
Total Metals Digestion	Completed				09/21/20	AG	
MA Petroleum Hydrocarbon (VPH)	Completed				09/21/20	RM	MADEP VPH04
Volatiles							
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
1,1,1-Trichloroethane	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L	1	09/23/20	MH	SW8260C
1,1,2-Trichloroethane	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
1,1-Dichloroethane	3.7	1.0	ug/L	1	09/23/20	MH	SW8260C
1,1-Dichloroethene	2.7	1.0	ug/L	1	09/23/20	MH	SW8260C
1,1-Dichloropropene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
1,2,3-Trichlorobenzene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C

Project ID: LOCKHEED WILMINGTON MA 60552004.19 Phoenix I.D.: CG80065

Client ID: 20A-AE105R2-091720-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	
1,2,3-Trichloropropane	ND	0.50	ug/L	1	09/23/20	MH	SW8260C
1,2,4-Trichlorobenzene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
1,2,4-Trimethylbenzene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	0.50	ug/L	1	09/23/20	MH	SW8260C
1,2-Dibromoethane	ND	0.50	ug/L	1	09/23/20	MH	SW8260C
1,2-Dichlorobenzene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
1,2-Dichloroethane	ND	0.60	ug/L	1	09/23/20	MH	SW8260C
1,2-Dichloropropane	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
1,3,5-Trimethylbenzene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
1,3-Dichlorobenzene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
1,3-Dichloropropane	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
1,4-Dichlorobenzene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
2,2-Dichloropropane	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
2-Chlorotoluene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
2-Hexanone	ND	5.0	ug/L	1	09/23/20	MH	SW8260C
4-Chlorotoluene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
4-Methyl-2-pentanone	ND	5.0	ug/L	1	09/23/20	MH	SW8260C
Acetone	ND	25	ug/L	1	09/23/20	MH	SW8260C
Benzene	ND	0.70	ug/L	1	09/23/20	MH	SW8260C
Bromobenzene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
Bromochloromethane	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
Bromodichloromethane	ND	0.50	ug/L	1	09/23/20	MH	SW8260C
Bromoform	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
Bromomethane	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
Carbon Disulfide	ND	5.0	ug/L	1	09/23/20	MH	SW8260C
Carbon tetrachloride	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
Chlorobenzene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
Chloroethane	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
Chloroform	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
Chloromethane	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
cis-1,2-Dichloroethene	28	1.0	ug/L	1	09/23/20	MH	SW8260C
cis-1,3-Dichloropropene	ND	0.40	ug/L	1	09/23/20	MH	SW8260C
Dibromochloromethane	ND	0.50	ug/L	1	09/23/20	MH	SW8260C
Dibromomethane	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
Dichlorodifluoromethane	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
Ethylbenzene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
Hexachlorobutadiene	ND	0.40	ug/L	1	09/23/20	MH	SW8260C
Isopropylbenzene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
m&p-Xylene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
Methyl ethyl ketone	ND	5.0	ug/L	1	09/23/20	MH	SW8260C
Methyl t-butyl ether (MTBE)	2.4	1.0	ug/L	1	09/23/20	MH	SW8260C
Methylene chloride	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
Naphthalene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
n-Butylbenzene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
n-Propylbenzene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
o-Xylene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
p-Isopropyltoluene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
sec-Butylbenzene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
Styrene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	
tert-Butylbenzene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
Tetrachloroethene	41	1.0	ug/L	1	09/23/20	MH	SW8260C
Tetrahydrofuran (THF)	ND	2.5	ug/L	1	09/23/20	MH	SW8260C
Toluene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
trans-1,2-Dichloroethene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
trans-1,3-Dichloropropene	ND	0.40	ug/L	1	09/23/20	MH	SW8260C
Trichloroethene	130	10	ug/L	10	09/23/20	MH	SW8260C
Trichlorofluoromethane	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
Trichlorotrifluoroethane	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
Vinyl chloride	1.4	1.0	ug/L	1	09/23/20	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	99		%	1	09/23/20	MH	70 - 130 %
% Bromofluorobenzene	97		%	1	09/23/20	MH	70 - 130 %
% Dibromofluoromethane	94		%	1	09/23/20	MH	70 - 130 %
% Toluene-d8	96		%	1	09/23/20	MH	70 - 130 %
% 1,2-dichlorobenzene-d4 (10x)	99		%	10	09/23/20	MH	70 - 130 %
% Bromofluorobenzene (10x)	98		%	10	09/23/20	MH	70 - 130 %
% Dibromofluoromethane (10x)	99		%	10	09/23/20	MH	70 - 130 %
% Toluene-d8 (10x)	104		%	10	09/23/20	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	100	ug/L	1	09/23/20	MH	SW8260C (OXY)
Diethyl ether	ND	1.0	ug/L	1	09/23/20	MH	SW8260C (OXY)
Di-isopropyl ether	ND	1.0	ug/L	1	09/23/20	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	1.0	ug/L	1	09/23/20	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	1.0	ug/L	1	09/23/20	MH	SW8260C (OXY)
Semivolatiles by SIM, PAH							
2-Methylnaphthalene	ND	0.47	ug/L	1	09/23/20	WB	SW8270D (SIM)
Acenaphthene	ND	0.47	ug/L	1	09/23/20	WB	SW8270D (SIM)
Acenaphthylene	ND	0.09	ug/L	1	09/23/20	WB	SW8270D (SIM)
Anthracene	ND	0.09	ug/L	1	09/23/20	WB	SW8270D (SIM)
Benz(a)anthracene	ND	0.09	ug/L	1	09/23/20	WB	SW8270D (SIM)
Benzo(a)pyrene	ND	0.19	ug/L	1	09/23/20	WB	SW8270D (SIM)
Benzo(b)fluoranthene	ND	0.09	ug/L	1	09/23/20	WB	SW8270D (SIM)
Benzo(ghi)perylene	ND	0.02	ug/L	1	09/23/20	WB	SW8270D (SIM)
Benzo(k)fluoranthene	ND	0.09	ug/L	1	09/23/20	WB	SW8270D (SIM)
Chrysene	ND	0.05	ug/L	1	09/23/20	WB	SW8270D (SIM)
Dibenz(a,h)anthracene	ND	0.02	ug/L	1	09/23/20	WB	SW8270D (SIM)
Fluoranthene	ND	0.47	ug/L	1	09/23/20	WB	SW8270D (SIM)
Fluorene	ND	0.09	ug/L	1	09/23/20	WB	SW8270D (SIM)
Indeno(1,2,3-cd)pyrene	ND	0.09	ug/L	1	09/23/20	WB	SW8270D (SIM)
Naphthalene	ND	0.47	ug/L	1	09/23/20	WB	SW8270D (SIM)
Phenanthrene	ND	0.47	ug/L	1	09/23/20	WB	SW8270D (SIM)
Pyrene	ND	0.07	ug/L	1	09/23/20	WB	SW8270D (SIM)
QA/QC Surrogates							
% 2-Fluorobiphenyl	48		%	1	09/23/20	WB	40 - 140 %
% Nitrobenzene-d5	68		%	1	09/23/20	WB	40 - 140 %
% Terphenyl-d14	64		%	1	09/23/20	WB	40 - 140 %

Project ID: LOCKHEED WILMINGTON MA 60552004.19 Phoenix I.D.: CG80065
Client ID: 20A-AE105R2-091720-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	
1,4-dioxane							
1,4-dioxane	5.1	0.20	ug/l	1	09/22/20	AW	SW8270DSIM
QA/QC Surrogates							
% 1,4-dioxane-d8	88		%	1	09/22/20	AW	40 - 140 %
Extraction for 1,4-Dioxane	Completed				09/21/20	S/S	
MA EPH Aliphatic/Aromatic Ranges							
C11-C22 Aromatic Hydrocarbons 1,2*	ND	200	ug/L	1	09/24/20	AW	MAEPH 5/2004
C11-C22 Aromatic Hydrocarbons Unadj	ND	200	ug/L	1	09/24/20	AW	MAEPH 5/2004
C19-C36 Aliphatic Hydrocarbons 1*	ND	200	ug/L	1	09/24/20	AW	MAEPH 5/2004
C9-C18 Aliphatic Hydrocarbons 1*	ND	200	ug/L	1	09/24/20	AW	MAEPH 5/2004
Total TPH 1,2*	ND	200	ug/L	1	09/24/20	AW	MAEPH 5/2004
QA/QC Surrogates							
% 1-chlorooctadecane (aliphatic)	92		%	1	09/24/20	AW	40 - 140 %
% 2-Bromonaphthalene (Fractionation)	115		%	1	09/24/20	AW	40 - 140 %
% 2-Fluorobiphenyl (Fractionation)	112		%	1	09/24/20	AW	40 - 140 %
% o-terphenyl (aromatic)	92		%	1	09/24/20	AW	40 - 140 %
MA Volatile Petroleum Hydrocarbons (VPH)							
Unadjusted C5-C8 Aliphatics (*1)	ND	100	ug/L	1	09/21/20	RM	MA VPH 5/2004
Unadjusted C9-C12 Aliphatics (*1)	ND	100	ug/L	1	09/21/20	RM	MA VPH 5/2004
C5-C8 Aliphatic Hydrocarbons *1,2	ND	100	ug/L	1	09/21/20	RM	MA VPH 5/2004
C9-C12 Aliphatic Hydrocarbons *1,3	ND	100	ug/L	1	09/21/20	RM	MA VPH 5/2004
C9-C10 Aromatic Hydrocarbons *1	ND	100	ug/L	1	09/21/20	RM	MA VPH 5/2004
Benzene	ND	1.0	ug/L	1	09/21/20	RM	MA VPH 5/2004
Ethyl Benzene	ND	1.0	ug/L	1	09/21/20	RM	MA VPH 5/2004
MTBE	3.0	1.0	ug/L	1	09/21/20	RM	MA VPH 5/2004
Naphthalene	ND	5.0	ug/L	1	09/21/20	RM	MA VPH 5/2004
Toluene	ND	1.0	ug/L	1	09/21/20	RM	MA VPH 5/2004
m,p-Xylenes	ND	2.0	ug/L	1	09/21/20	RM	MA VPH 5/2004
o-Xylene	ND	1.0	ug/L	1	09/21/20	RM	MA VPH 5/2004
QA/QC Surrogates							
% 2,5-Dibromotoluene (FID)	101		%	1	09/21/20	RM	70 - 130 %
% 2,5-Dibromotoluene (PID)	97		%	1	09/21/20	RM	70 - 130 %

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By

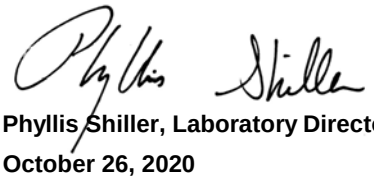
RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

MAEPH:
1* Hydrocarbon range data exclude concentrations of any surrogate(s) and/or internal standards eluting in that range.
2* C11-C12 Aromatic Hydrocarbons exclude the concentration of Target PAH analytes eluting in that range.

VPH:
*1 Range data exclude conc.s of any surrogate(s) and/or Int. std.s eluting in that range.
*2 C5-C8 and C9-C12 Aliphatic exclude the conc. of Target Analytes in that range.
*3 C9-C12 Aliphatic also exclude C9-C10 Aromatic Hydrocarbon

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.



Phyllis Shiller, Laboratory Director
October 26, 2020
Reviewed and Released by: Greg Lawrence, Assistant Lab Director

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

October 26, 2020

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		09/17/20	12:40
Location Code:	AECOM-WILMINGTN	Received by:	B	09/17/20	16:30
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	127680				

Laboratory Data

SDG ID: GCG80050
Phoenix ID: CG80066

Project ID: LOCKHEED WILMINGTON MA 60552004.19
Client ID: 20A-AE105R4-091720-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
EPH Extraction	Completed				09/23/20	JS/D	SW3510C
MA Petroleum Hydrocarbon (EPH)	Completed				09/17/20		MADEP EPH-04
Semi-Volatile Extraction	Completed				09/22/20	P/CG	SW3520C
MA Petroleum Hydrocarbon (VPH)	Completed				09/21/20	RM	MADEP VPH04
Volatiles							
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
1,1,1-Trichloroethane	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L	1	09/23/20	MH	SW8260C
1,1,2-Trichloroethane	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
1,1-Dichloroethane	3.9	1.0	ug/L	1	09/23/20	MH	SW8260C
1,1-Dichloroethene	3.2	1.0	ug/L	1	09/23/20	MH	SW8260C
1,1-Dichloropropene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
1,2,3-Trichlorobenzene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
1,2,3-Trichloropropane	ND	0.50	ug/L	1	09/23/20	MH	SW8260C
1,2,4-Trichlorobenzene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
1,2,4-Trimethylbenzene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	0.50	ug/L	1	09/23/20	MH	SW8260C
1,2-Dibromoethane	ND	0.50	ug/L	1	09/23/20	MH	SW8260C
1,2-Dichlorobenzene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
1,2-Dichloroethane	ND	0.60	ug/L	1	09/23/20	MH	SW8260C
1,2-Dichloropropane	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
1,3,5-Trimethylbenzene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
1,3-Dichlorobenzene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
1,3-Dichloropropane	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
1,4-Dichlorobenzene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
2,2-Dichloropropane	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
2-Chlorotoluene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C

Project ID: LOCKHEED WILMINGTON MA 60552004.19 Phoenix I.D.: CG80066

Client ID: 20A-AE105R4-091720-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	
2-Hexanone	ND	5.0	ug/L	1	09/23/20	MH	SW8260C
4-Chlorotoluene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
4-Methyl-2-pentanone	ND	5.0	ug/L	1	09/23/20	MH	SW8260C
Acetone	ND	25	ug/L	1	09/23/20	MH	SW8260C
Benzene	ND	0.70	ug/L	1	09/23/20	MH	SW8260C
Bromobenzene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
Bromochloromethane	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
Bromodichloromethane	ND	0.50	ug/L	1	09/23/20	MH	SW8260C
Bromoform	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
Bromomethane	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
Carbon Disulfide	ND	5.0	ug/L	1	09/23/20	MH	SW8260C
Carbon tetrachloride	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
Chlorobenzene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
Chloroethane	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
Chloroform	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
Chloromethane	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
cis-1,2-Dichloroethene	36	1.0	ug/L	1	09/23/20	MH	SW8260C
cis-1,3-Dichloropropene	ND	0.40	ug/L	1	09/23/20	MH	SW8260C
Dibromochloromethane	ND	0.50	ug/L	1	09/23/20	MH	SW8260C
Dibromomethane	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
Dichlorodifluoromethane	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
Ethylbenzene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
Hexachlorobutadiene	ND	0.40	ug/L	1	09/23/20	MH	SW8260C
Isopropylbenzene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
m&p-Xylene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
Methyl ethyl ketone	ND	5.0	ug/L	1	09/23/20	MH	SW8260C
Methyl t-butyl ether (MTBE)	2.4	1.0	ug/L	1	09/23/20	MH	SW8260C
Methylene chloride	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
Naphthalene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
n-Butylbenzene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
n-Propylbenzene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
o-Xylene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
p-Isopropyltoluene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
sec-Butylbenzene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
Styrene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
tert-Butylbenzene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
Tetrachloroethene	52	1.0	ug/L	1	09/23/20	MH	SW8260C
Tetrahydrofuran (THF)	ND	2.5	ug/L	1	09/23/20	MH	SW8260C
Toluene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
trans-1,2-Dichloroethene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
trans-1,3-Dichloropropene	ND	0.40	ug/L	1	09/23/20	MH	SW8260C
Trichloroethene	150	20	ug/L	20	09/23/20	MH	SW8260C
Trichlorofluoromethane	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
Trichlorotrifluoroethane	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
Vinyl chloride	1.2	1.0	ug/L	1	09/23/20	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	98		%	1	09/23/20	MH	70 - 130 %
% Bromofluorobenzene	97		%	1	09/23/20	MH	70 - 130 %
% Dibromofluoromethane	97		%	1	09/23/20	MH	70 - 130 %

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	
% Toluene-d8	94		%	1	09/23/20	MH	70 - 130 %
% 1,2-dichlorobenzene-d4 (20x)	98		%	20	09/23/20	MH	70 - 130 %
% Bromofluorobenzene (20x)	99		%	20	09/23/20	MH	70 - 130 %
% Dibromofluoromethane (20x)	96		%	20	09/23/20	MH	70 - 130 %
% Toluene-d8 (20x)	104		%	20	09/23/20	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	100	ug/L	1	09/23/20	MH	SW8260C (OXY)
Diethyl ether	ND	1.0	ug/L	1	09/23/20	MH	SW8260C (OXY)
Di-isopropyl ether	ND	1.0	ug/L	1	09/23/20	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	1.0	ug/L	1	09/23/20	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	1.0	ug/L	1	09/23/20	MH	SW8260C (OXY)
Semivolatiles by SIM, PAH							
2-Methylnaphthalene	ND	0.47	ug/L	1	09/23/20	WB	SW8270D (SIM)
Acenaphthene	ND	0.47	ug/L	1	09/23/20	WB	SW8270D (SIM)
Acenaphthylene	ND	0.09	ug/L	1	09/23/20	WB	SW8270D (SIM)
Anthracene	ND	0.09	ug/L	1	09/23/20	WB	SW8270D (SIM)
Benz(a)anthracene	ND	0.09	ug/L	1	09/23/20	WB	SW8270D (SIM)
Benzo(a)pyrene	ND	0.19	ug/L	1	09/23/20	WB	SW8270D (SIM)
Benzo(b)fluoranthene	ND	0.09	ug/L	1	09/23/20	WB	SW8270D (SIM)
Benzo(ghi)perylene	ND	0.02	ug/L	1	09/23/20	WB	SW8270D (SIM)
Benzo(k)fluoranthene	ND	0.09	ug/L	1	09/23/20	WB	SW8270D (SIM)
Chrysene	ND	0.05	ug/L	1	09/23/20	WB	SW8270D (SIM)
Dibenz(a,h)anthracene	ND	0.02	ug/L	1	09/23/20	WB	SW8270D (SIM)
Fluoranthene	ND	0.47	ug/L	1	09/23/20	WB	SW8270D (SIM)
Fluorene	ND	0.09	ug/L	1	09/23/20	WB	SW8270D (SIM)
Indeno(1,2,3-cd)pyrene	ND	0.09	ug/L	1	09/23/20	WB	SW8270D (SIM)
Naphthalene	ND	0.47	ug/L	1	09/23/20	WB	SW8270D (SIM)
Phenanthrene	ND	0.47	ug/L	1	09/23/20	WB	SW8270D (SIM)
Pyrene	ND	0.07	ug/L	1	09/23/20	WB	SW8270D (SIM)
QA/QC Surrogates							
% 2-Fluorobiphenyl	60		%	1	09/23/20	WB	40 - 140 %
% Nitrobenzene-d5	85		%	1	09/23/20	WB	40 - 140 %
% Terphenyl-d14	73		%	1	09/23/20	WB	40 - 140 %
1,4-dioxane							
1,4-dioxane	5.3	0.20	ug/l	1	09/22/20	AW	SW8270DSIM
QA/QC Surrogates							
% 1,4-dioxane-d8	91		%	1	09/22/20	AW	40 - 140 %
Extraction for 1,4-Dioxane	Completed				09/21/20	S/S	
MA EPH Aliphatic/Aromatic Ranges							
C11-C22 Aromatic Hydrocarbons 1,2*	ND	200	ug/L	1	09/24/20	AW	MAEPH 5/2004
C11-C22 Aromatic Hydrocarbons Unadj	ND	200	ug/L	1	09/24/20	AW	MAEPH 5/2004
C19-C36 Aliphatic Hydrocarbons 1*	ND	200	ug/L	1	09/24/20	AW	MAEPH 5/2004
C9-C18 Aliphatic Hydrocarbons 1*	ND	200	ug/L	1	09/24/20	AW	MAEPH 5/2004
Total TPH 1,2*	ND	200	ug/L	1	09/24/20	AW	MAEPH 5/2004
QA/QC Surrogates							
% 1-chlorooctadecane (aliphatic)	54		%	1	09/24/20	AW	40 - 140 %

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	
% 2-Bromonaphthalene (Fractionation)	97		%	1	09/24/20	AW	40 - 140 %
% 2-Fluorobiphenyl (Fractionation)	101		%	1	09/24/20	AW	40 - 140 %
% o-terphenyl (aromatic)	83		%	1	09/24/20	AW	40 - 140 %

MA Volatile Petroleum Hydrocarbons (VPH)

Unadjusted C5-C8 Aliphatics (*1)	ND	100	ug/L	1	09/21/20	RM	MA VPH 5/2004
Unadjusted C9-C12 Aliphatics (*1)	ND	100	ug/L	1	09/21/20	RM	MA VPH 5/2004
C5-C8 Aliphatic Hydrocarbons *1,2	ND	100	ug/L	1	09/21/20	RM	MA VPH 5/2004
C9-C12 Aliphatic Hydrocarbons *1,3	ND	100	ug/L	1	09/21/20	RM	MA VPH 5/2004
C9-C10 Aromatic Hydrocarbons *1	ND	100	ug/L	1	09/21/20	RM	MA VPH 5/2004
Benzene	ND	1.0	ug/L	1	09/21/20	RM	MA VPH 5/2004
Ethyl Benzene	ND	1.0	ug/L	1	09/21/20	RM	MA VPH 5/2004
MTBE	3.4	1.0	ug/L	1	09/21/20	RM	MA VPH 5/2004
Naphthalene	ND	5.0	ug/L	1	09/21/20	RM	MA VPH 5/2004
Toluene	ND	1.0	ug/L	1	09/21/20	RM	MA VPH 5/2004
m,p-Xylenes	ND	2.0	ug/L	1	09/21/20	RM	MA VPH 5/2004
o-Xylene	ND	1.0	ug/L	1	09/21/20	RM	MA VPH 5/2004
QA/QC Surrogates							
% 2,5-Dibromotoluene (FID)	101		%	1	09/21/20	RM	70 - 130 %
% 2,5-Dibromotoluene (PID)	97		%	1	09/21/20	RM	70 - 130 %

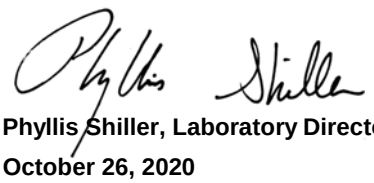
RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

MAEPH:
1* Hydrocarbon range data exclude concentrations of any surrogate(s) and/or internal standards eluting in that range.
2* C11-C12 Aromatic Hydrocarbons exclude the concentration of Target PAH analytes eluting in that range.

VPH:
*1 Range data exclude conc.s of any surrogate(s) and/or Int. std.s eluting in that range.
*2 C5-C8 and C9-C12 Aliphatic exclude the conc. of Target Analytes in that range.
*3 C9-C12 Aliphatic also exclude C9-C10 Aromatic Hydrocarbon

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
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Phyllis Shiller, Laboratory Director
October 26, 2020
Reviewed and Released by: Greg Lawrence, Assistant Lab Director

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

October 26, 2020

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		09/17/20	12:55
Location Code:	AECOM-WILMINGTN	Received by:	B	09/17/20	16:30
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	127680				

Laboratory Data

SDG ID: GCG80050
Phoenix ID: CG80067

Project ID: LOCKHEED WILMINGTON MA 60552004.19
Client ID: 20A-AE105R5-091720-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Volatiles							
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
1,1,1-Trichloroethane	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L	1	09/23/20	MH	SW8260C
1,1,2-Trichloroethane	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
1,1-Dichloroethane	3.5	1.0	ug/L	1	09/23/20	MH	SW8260C
1,1-Dichloroethene	2.7	1.0	ug/L	1	09/23/20	MH	SW8260C
1,1-Dichloropropene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
1,2,3-Trichlorobenzene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
1,2,3-Trichloropropane	ND	0.50	ug/L	1	09/23/20	MH	SW8260C
1,2,4-Trichlorobenzene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
1,2,4-Trimethylbenzene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	0.50	ug/L	1	09/23/20	MH	SW8260C
1,2-Dibromoethane	ND	0.50	ug/L	1	09/23/20	MH	SW8260C
1,2-Dichlorobenzene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
1,2-Dichloroethane	ND	0.60	ug/L	1	09/23/20	MH	SW8260C
1,2-Dichloropropane	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
1,3,5-Trimethylbenzene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
1,3-Dichlorobenzene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
1,3-Dichloropropane	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
1,4-Dichlorobenzene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
2,2-Dichloropropane	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
2-Chlorotoluene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
2-Hexanone	ND	5.0	ug/L	1	09/23/20	MH	SW8260C
4-Chlorotoluene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
4-Methyl-2-pentanone	ND	5.0	ug/L	1	09/23/20	MH	SW8260C
Acetone	ND	25	ug/L	1	09/23/20	MH	SW8260C

Project ID: LOCKHEED WILMINGTON MA 60552004.19 Phoenix I.D.: CG80067

Client ID: 20A-AE105R5-091720-1

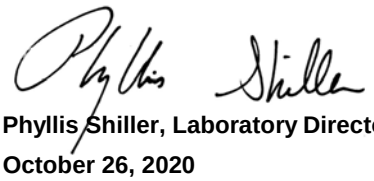
Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	
Benzene	ND	0.70	ug/L	1	09/23/20	MH	SW8260C
Bromobenzene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
Bromochloromethane	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
Bromodichloromethane	ND	0.50	ug/L	1	09/23/20	MH	SW8260C
Bromoform	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
Bromomethane	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
Carbon Disulfide	ND	5.0	ug/L	1	09/23/20	MH	SW8260C
Carbon tetrachloride	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
Chlorobenzene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
Chloroethane	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
Chloroform	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
Chloromethane	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
cis-1,2-Dichloroethene	37	10	ug/L	10	09/23/20	MH	SW8260C
cis-1,3-Dichloropropene	ND	0.40	ug/L	1	09/23/20	MH	SW8260C
Dibromochloromethane	ND	0.50	ug/L	1	09/23/20	MH	SW8260C
Dibromomethane	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
Dichlorodifluoromethane	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
Ethylbenzene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
Hexachlorobutadiene	ND	0.40	ug/L	1	09/23/20	MH	SW8260C
Isopropylbenzene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
m&p-Xylene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
Methyl ethyl ketone	ND	5.0	ug/L	1	09/23/20	MH	SW8260C
Methyl t-butyl ether (MTBE)	1.7	1.0	ug/L	1	09/23/20	MH	SW8260C
Methylene chloride	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
Naphthalene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
n-Butylbenzene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
n-Propylbenzene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
o-Xylene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
p-Isopropyltoluene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
sec-Butylbenzene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
Styrene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
tert-Butylbenzene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
Tetrachloroethene	43	1.0	ug/L	1	09/23/20	MH	SW8260C
Tetrahydrofuran (THF)	ND	2.5	ug/L	1	09/23/20	MH	SW8260C
Toluene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
trans-1,2-Dichloroethene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
trans-1,3-Dichloropropene	ND	0.40	ug/L	1	09/23/20	MH	SW8260C
Trichloroethene	120	10	ug/L	10	09/23/20	MH	SW8260C
Trichlorofluoromethane	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
Trichlorotrifluoroethane	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
Vinyl chloride	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	100		%	1	09/23/20	MH	70 - 130 %
% Bromofluorobenzene	99		%	1	09/23/20	MH	70 - 130 %
% Dibromofluoromethane	98		%	1	09/23/20	MH	70 - 130 %
% Toluene-d8	97		%	1	09/23/20	MH	70 - 130 %
% 1,2-dichlorobenzene-d4 (10x)	99		%	10	09/23/20	MH	70 - 130 %
% Bromofluorobenzene (10x)	100		%	10	09/23/20	MH	70 - 130 %
% Dibromofluoromethane (10x)	100		%	10	09/23/20	MH	70 - 130 %

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	
% Toluene-d8 (10x)	105		%	10	09/23/20	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	100	ug/L	1	09/23/20	MH	SW8260C (OXY)
Diethyl ether	ND	1.0	ug/L	1	09/23/20	MH	SW8260C (OXY)
Di-isopropyl ether	ND	1.0	ug/L	1	09/23/20	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	1.0	ug/L	1	09/23/20	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	1.0	ug/L	1	09/23/20	MH	SW8260C (OXY)

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.



Phyllis Shiller, Laboratory Director
October 26, 2020
Reviewed and Released by: Greg Lawrence, Assistant Lab Director

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

October 26, 2020

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		09/17/20	13:25
Location Code:	AECOM-WILMINGTN	Received by:	B	09/17/20	16:30
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	127680				

Laboratory Data

SDG ID: GCG80050
Phoenix ID: CG80068

Project ID: LOCKHEED WILMINGTON MA 60552004.19
Client ID: 20A-AE106R3-091720-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Chloride	126	6.0	mg/L	2	09/22/20	BS/EG	E300.0
Nitrite as Nitrogen	< 0.004	0.004	mg/L	1	09/18/20 07:38	BS/GD/EG	E300.0
Nitrate as Nitrogen	0.14	0.05	mg/L	1	09/18/20 07:38	BS/GD/EG	E300.0
Sulfate	12.6	3.0	mg/L	1	09/18/20	BS/GD/EG	E300.0

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level

Comments:

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
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Phyllis Shiller, Laboratory Director
October 26, 2020
Reviewed and Released by: Greg Lawrence, Assistant Lab Director

Ver 2

Environmental Laboratories, Inc.
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QA/QC Report

October 26, 2020

QA/QC Data

SDG I.D.: GCG80050

Parameter	Blank	Blk RL	Sample Result	Dup Result	Dup RPD	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits
QA/QC Batch 545883 (mg/L), QC Sample No: CG79152 (CG80054)													
ICP Metals - Dissolved													
Arsenic	BRL	0.004	<0.004	<0.004	NC	90.2	91.0	0.9	89.5			80 - 120	20
Iron	BRL	0.011	0.738	0.733	0.70	90.0	90.7	0.8	87.8			80 - 120	20
Manganese	BRL	0.001	0.007	0.007	0	90.3	91.8	1.6	88.8			80 - 120	20
Comment:													
Additional: LCS acceptance range is 80-120% MS acceptance range 75-125%.													
QA/QC Batch 546259 (mg/L), QC Sample No: CG79676 (CG80054, CG80062, CG80065)													
ICP Metals - Aqueous													
Arsenic	BRL	0.004	<0.004	<0.004	NC	93.9	101	7.3	91.8			80 - 120	20
Iron	BRL	0.010	0.051	0.053	3.80	97.2	103	5.8	96.0			80 - 120	20
Manganese	BRL	0.001	0.004	0.004	NC	97.8	102	4.2	96.3			80 - 120	20
Comment:													
Additional: LCS acceptance range is 80-120% MS acceptance range 75-125%.													
QA/QC Batch 546027 (mg/L), QC Sample No: CG80061 (CG80061)													
ICP Metals - Aqueous													
Arsenic	BRL	0.004	0.017	0.018	NC	99.9	99.5	0.4	102			80 - 120	20
Iron	BRL	0.010	38.6	40.0	3.60	102	102	0.0	NC			80 - 120	20
Manganese	BRL	0.001	1.49	1.54	3.30	102	102	0.0	107			80 - 120	20
Comment:													
Additional: LCS acceptance range is 80-120% MS acceptance range 75-125%.													
QA/QC Batch 546028 (mg/L), QC Sample No: CG80061 (CG80061, CG80062, CG80065)													
ICP Metals - Dissolved													
Arsenic	BRL	0.004	0.016	0.016	NC	83.6	80.5	3.8	85.2			80 - 120	20
Iron	BRL	0.011	35.3	35.8	1.40	87.5	85.6	2.2	NC			80 - 120	20
Manganese	BRL	0.001	1.43	1.45	1.40	88.2	85.4	3.2	86.2			80 - 120	20
Comment:													
Additional: LCS acceptance range is 80-120% MS acceptance range 75-125%.													

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QA/QC Report

October 26, 2020

QA/QC Data

SDG I.D.: GCG80050

Parameter	Blank	Blk RL	Sample Result	Dup Result	Dup RPD	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits	
QA/QC Batch 546523 (mg/L), QC Sample No: CG80548 (CG80054, CG80061, CG80062, CG80065)														
Total Organic Carbon	BRL	1.0	<1.0	<1.0	NC	105			106			85 - 115	20	
Comment:														
Additional: LCS acceptance range is 85-115% MS acceptance range 75-125%.														
QA/QC Batch 546404 (mg/L), QC Sample No: CG81919 (CG80054, CG80061, CG80062, CG80065)														
Sulfide	BRL	0.05	<0.05	<0.05	NC	99.4			78.6			90 - 110	20	
QA/QC Batch 546588 (mg/L), QC Sample No: CG80203 (CG80068)														
Chloride	BRL	3.0	35.8	35.7	0.30	98.8			98.0			90 - 110	20	
Sulfate	BRL	3.0	3.8	3.6	NC	96.6			94.2			90 - 110	20	
QA/QC Batch 546261 (mg/L), QC Sample No: CG80324 (CG80061, CG80065, CG80068)														
Chloride	BRL	3.0	<3.0	<3.0	NC	94.9			98.6			90 - 110	20	
Nitrate as Nitrogen	BRL	0.05	0.29	0.29	0	96.6			99.3			90 - 110	20	
Nitrite as Nitrogen	BRL	0.004	<0.004	<0.004	NC	95.8			96.1			90 - 110	20	
Sulfate	BRL	3.0	24.3	24.2	0.40	94.9			100			90 - 110	20	
QA/QC Batch 546262 (mg/L), QC Sample No: CG80324 (CG80061, CG80065, CG80068)														
Chloride	BRL	3.0	<3.0	<3.0	NC	94.9			98.6			90 - 110	20	
Nitrate as Nitrogen	BRL	0.05	0.29	0.29	0	96.6			99.3			90 - 110	20	
Nitrite as Nitrogen	BRL	0.004	<0.004	<0.004	NC	95.8			96.1			90 - 110	20	
Sulfate	BRL	3.0	24.3	24.2	0.40	94.9			100			90 - 110	20	
QA/QC Batch 546240 (mg/L), QC Sample No: CG81280 (CG80061, CG80062)														
Chloride	BRL	3.0	9.9	9.7	NC	95.2			98.0			90 - 110	20	
Nitrate as Nitrogen	BRL	0.05	0.09	0.09	NC	99.8			106			90 - 110	20	
Nitrite as Nitrogen	BRL	0.004	<0.004	<0.004	NC	102			89.4			90 - 110	20	m
Sulfate	BRL	3.0	3.1	3.0	NC	99.8			98.1			90 - 110	20	
QA/QC Batch 546588 (mg/L), QC Sample No: CG80203 (CG80068)														
Nitrate as Nitrogen	BRL	0.05	0.03	<0.05	NC	106			104			90 - 110	20	

m = This parameter is outside laboratory MS/MSD specified recovery limits.

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QA/QC Report

October 26, 2020

QA/QC Data

SDG I.D.: GCG80050

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits
QA/QC Batch 546542 (ug/L), QC Sample No: CG80054 (CG80054, CG80065, CG80066)										
MAEPH - Ground Water										
C9-C18 Aliphatic Hydrocarbons 1*	ND	100	57	53	7.3				40 - 140	25
C19-C36 Aliphatic Hydrocarbons 1*	ND	100	85	86	1.2				40 - 140	25
C11-C22 Aromatic Hydrocarbons 1	ND	100	82	78	5.0				40 - 140	25
C11-C22 Aromatic Hydrocarbons U	ND	100							40 - 140	25
Total TPH 1,2*	ND	100	73	72	1.4				40 - 140	25
C9 - Nonane	ND	10	32	30	6.5				40 - 140	25
C-10 Decane	ND	10	39	36	8.0				40 - 140	25
C12 - Dodecane	ND	10	46	43	6.7				40 - 140	25
C14 - Tetradecane	ND	10	60	56	6.9				40 - 140	25
C16 - Hexadecane	ND	10	75	69	8.3				40 - 140	25
C18 - Octadecane	ND	10	87	82	5.9				40 - 140	25
C19 - Nonadecane	ND	10	86	82	4.8				40 - 140	25
C20 - Eicosane	ND	10	87	84	3.5				40 - 140	25
C22 - Docosane	ND	10	86	84	2.4				40 - 140	25
C24 - Tetracosane	ND	10	86	84	2.4				40 - 140	25
C26 - Hexacosane	ND	10	86	84	2.4				40 - 140	25
C28 - Octacosane	ND	10	85	83	2.4				40 - 140	25
C30 - Tricotane	ND	10	83	82	1.2				40 - 140	25
C36 - Hexatriacontane	ND	10	82	106	25.5				40 - 140	25
% 1-chlorooctadecane (aliphatic)	65	%	75	72	4.1				40 - 140	25
% o-terphenyl (aromatic)	64	%	79	74	6.5				40 - 140	25
% 2-Fluorobiphenyl (Fractionation)	96	%	103	101	2.0				40 - 140	25
% 2-Bromonaphthalene (Fractionati	95	%	110	118	7.0				40 - 140	25
% 2-Methylnaphthalene BT		%	0	0	NC				0 - 5	
% Naphthalene BT		%	0	0	NC				0 - 5	

Comment:

A LCS and LCS Duplicate were performed instead of a matrix spike and matrix spike duplicate.

Additional EPH fractionation criteria: Breakthrough criteria (BT) is 0 to 5%

QA/QC Batch 546270 (ug/l), QC Sample No: CG81125 (CG80051, CG80054, CG80056, CG80057, CG80059, CG80065, CG80066)										
1,4dioxane - Ground Water										
1,4-dioxane	ND	0.20	96	100	4.1	94	93	1.1	40 - 140	30
% 1,4-dioxane-d8	92	%	95	94	1.1	99	91	8.4	40 - 140	30
QA/QC Batch 546445 (ug/L), QC Sample No: CG79762 (CG80054, CG80065, CG80066)										
Semivolatiles by SIM, PAH - Ground Water										
2-Methylnaphthalene	ND	0.50	63	65	3.1				40 - 140	20
Acenaphthene	ND	0.50	76	74	2.7				40 - 140	20
Acenaphthylene	ND	0.10	75	74	1.3				40 - 140	20
Anthracene	ND	0.10	77	76	1.3				40 - 140	20
Benz(a)anthracene	ND	0.02	98	99	1.0				40 - 140	20

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits
Benzo(a)pyrene	ND	0.02	78	78	0.0				40 - 140	20
Benzo(b)fluoranthene	ND	0.02	93	93	0.0				40 - 140	20
Benzo(ghi)perylene	ND	0.02	72	76	5.4				40 - 140	20
Benzo(k)fluoranthene	ND	0.02	64	63	1.6				40 - 140	20
Chrysene	ND	0.02	84	84	0.0				40 - 140	20
Dibenz(a,h)anthracene	ND	0.02	71	76	6.8				40 - 140	20
Fluoranthene	ND	0.50	80	78	2.5				40 - 140	20
Fluorene	ND	0.10	80	78	2.5				40 - 140	20
Indeno(1,2,3-cd)pyrene	ND	0.02	73	78	6.6				40 - 140	20
Naphthalene	ND	0.50	60	61	1.7				40 - 140	20
Phenanthrene	ND	0.06	83	82	1.2				40 - 140	20
Pyrene	ND	0.07	76	73	4.0				40 - 140	20
% 2-Fluorobiphenyl	50	%	61	62	1.6				40 - 140	20
% Nitrobenzene-d5	69	%	76	81	6.4				40 - 140	20
% Terphenyl-d14	62	%	72	70	2.8				40 - 140	20

Comment:

Additional 8270 criteria: 10% of compounds can be outside of acceptance criteria as long as recovery is at least 10%. (Acid surrogates acceptance range for aqueous samples: 10-110%, for soils 30-130%)

QA/QC Batch 546836 (ug/L), QC Sample No: CG80056 (CG80056 (5X) , CG80057 (5X))

Volatiles - Ground Water

cis-1,2-Dichloroethene	ND	1.0	83	83	0.0				70 - 130	20
% 1,2-dichlorobenzene-d4	101	%	99	99	0.0				70 - 130	20
% Bromofluorobenzene	100	%	104	105	1.0				70 - 130	20
% Dibromofluoromethane	96	%	96	93	3.2				70 - 130	20
% Toluene-d8	104	%	101	100	1.0				70 - 130	20

Comment:

A LCS and LCS Duplicate were performed instead of a matrix spike and matrix spike duplicate.

Additional 8260 criteria: 10% of compounds can be outside of acceptance criteria as long as recovery is 10%.
The RPD criteria for the LCS/LCSD is 20%,
The MS/MSD RPD criteria is listed above.

QA/QC Batch 546448 (ug/L), QC Sample No: CG80060 (CG80050, CG80051, CG80052, CG80053, CG80056, CG80057, CG80058, CG80060, CG80061, CG80062, CG80063)

Volatiles - Ground Water

1,1,1,2-Tetrachloroethane	ND	1.0	90	90	0.0				70 - 130	20
1,1,1-Trichloroethane	ND	1.0	83	85	2.4				70 - 130	20
1,1,2,2-Tetrachloroethane	ND	0.50	103	107	3.8				70 - 130	20
1,1,2-Trichloroethane	ND	1.0	88	88	0.0				70 - 130	20
1,1-Dichloroethane	ND	1.0	84	81	3.6				70 - 130	20
1,1-Dichloroethene	ND	1.0	83	101	19.6				70 - 130	20
1,1-Dichloropropene	ND	1.0	89	89	0.0				70 - 130	20
1,2,3-Trichlorobenzene	ND	1.0	95	96	1.0				70 - 130	20
1,2,3-Trichloropropane	ND	1.0	97	97	0.0				70 - 130	20
1,2,4-Trichlorobenzene	ND	1.0	92	93	1.1				70 - 130	20
1,2,4-Trimethylbenzene	ND	1.0	91	93	2.2				70 - 130	20
1,2-Dibromo-3-chloropropane	ND	1.0	106	111	4.6				70 - 130	20
1,2-Dibromoethane	ND	1.0	95	97	2.1				70 - 130	20
1,2-Dichlorobenzene	ND	1.0	88	90	2.2				70 - 130	20
1,2-Dichloroethane	ND	1.0	89	90	1.1				70 - 130	20
1,2-Dichloropropane	ND	1.0	89	89	0.0				70 - 130	20
1,3,5-Trimethylbenzene	ND	1.0	92	94	2.2				70 - 130	20
1,3-Dichlorobenzene	ND	1.0	90	91	1.1				70 - 130	20
1,3-Dichloropropane	ND	1.0	94	95	1.1				70 - 130	20

QA/QC Data

SDG I.D.: GCG80050

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits	
1,4-Dichlorobenzene	ND	1.0	89	91	2.2				70 - 130	20	
1,4-dioxane	ND	100	99	94	5.2				40 - 160	30	
2,2-Dichloropropane	ND	1.0	85	86	1.2				70 - 130	20	
2-Chlorotoluene	ND	1.0	90	91	1.1				70 - 130	20	
2-Hexanone	ND	5.0	107	111	3.7				40 - 160	30	
4-Chlorotoluene	ND	1.0	89	92	3.3				70 - 130	20	
4-Methyl-2-pentanone	ND	5.0	105	106	0.9				40 - 160	30	
Acetone	ND	5.0	95	117	20.8				40 - 160	30	
Benzene	ND	0.70	87	88	1.1				70 - 130	20	
Bromobenzene	ND	1.0	85	88	3.5				70 - 130	20	
Bromochloromethane	ND	1.0	83	84	1.2				70 - 130	20	
Bromodichloromethane	ND	0.50	86	88	2.3				70 - 130	20	
Bromoform	ND	1.0	93	94	1.1				70 - 130	20	
Bromomethane	ND	1.0	86	90	4.5				40 - 160	30	
Carbon Disulfide	ND	1.0	80	105	27.0				70 - 130	20	r
Carbon tetrachloride	ND	1.0	95	97	2.1				70 - 130	20	
Chlorobenzene	ND	1.0	89	89	0.0				70 - 130	20	
Chloroethane	ND	1.0	75	94	22.5				70 - 130	20	r
Chloroform	ND	1.0	81	83	2.4				70 - 130	20	
Chloromethane	ND	1.0	97	102	5.0				40 - 160	30	
cis-1,2-Dichloroethene	ND	1.0	76	82	7.6				70 - 130	20	
cis-1,3-Dichloropropene	ND	0.40	88	89	1.1				70 - 130	20	
Dibromochloromethane	ND	0.50	95	95	0.0				70 - 130	20	
Dibromomethane	ND	1.0	86	86	0.0				70 - 130	20	
Dichlorodifluoromethane	ND	1.0	133	137	3.0				40 - 160	30	
Di-isopropyl ether	ND	1.0	90	72	22.2				70 - 130	20	r
Ethyl ether	ND	1.0	86	108	22.7				70 - 130	20	r
Ethyl tert-butyl ether	ND	1.0	91	94	3.2				70 - 130	20	
Ethylbenzene	ND	1.0	88	89	1.1				70 - 130	20	
Hexachlorobutadiene	ND	0.40	92	94	2.2				70 - 130	20	
Isopropylbenzene	ND	1.0	89	92	3.3				70 - 130	20	
m&p-Xylene	ND	1.0	90	90	0.0				70 - 130	20	
Methyl ethyl ketone	ND	5.0	107	110	2.8				40 - 160	30	
Methyl t-butyl ether (MTBE)	ND	1.0	87	102	15.9				70 - 130	20	
Methylene chloride	ND	1.0	78	99	23.7				70 - 130	20	r
Naphthalene	ND	1.0	107	108	0.9				70 - 130	20	
n-Butylbenzene	ND	1.0	97	99	2.0				70 - 130	20	
n-Propylbenzene	ND	1.0	90	93	3.3				70 - 130	20	
o-Xylene	ND	1.0	91	91	0.0				70 - 130	20	
p-Isopropyltoluene	ND	1.0	94	97	3.1				70 - 130	20	
sec-Butylbenzene	ND	1.0	100	102	2.0				70 - 130	20	
Styrene	ND	1.0	92	93	1.1				70 - 130	20	
tert-amyl methyl ether	ND	1.0	94	95	1.1				70 - 130	20	
tert-Butylbenzene	ND	1.0	92	94	2.2				70 - 130	20	
Tetrachloroethene	ND	1.0	85	86	1.2				70 - 130	20	
Tetrahydrofuran (THF)	ND	2.5	104	105	1.0				70 - 130	20	
Toluene	ND	1.0	86	86	0.0				70 - 130	20	
trans-1,2-Dichloroethene	ND	1.0	85	106	22.0				70 - 130	20	r
trans-1,3-Dichloropropene	ND	0.40	89	90	1.1				70 - 130	20	
Trichloroethene	ND	1.0	84	85	1.2				70 - 130	20	
Trichlorofluoromethane	ND	1.0	96	106	9.9				70 - 130	20	
Trichlorotrifluoroethane	ND	1.0	92	95	3.2				70 - 130	20	
Vinyl chloride	ND	1.0	99	107	7.8				70 - 130	20	

QA/QC Data

SDG I.D.: GCG80050

Parameter	Blank	Blk RL		LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits
% 1,2-dichlorobenzene-d4	98	%		100	100	0.0				70 - 130	20
% Bromofluorobenzene	96	%		100	101	1.0				70 - 130	20
% Dibromofluoromethane	96	%		94	93	1.1				70 - 130	20
% Toluene-d8	104	%		100	99	1.0				70 - 130	20

Comment:

A LCS and LCS Duplicate were performed instead of a matrix spike and matrix spike duplicate.

Additional 8260 criteria: 10% of compounds can be outside of acceptance criteria as long as recovery is 10%.
The RPD criteria for the LCS/LCSD is 20%,
The MS/MSD RPD criteria is listed above.

QA/QC Batch 546580 (ug/L), QC Sample No: CG81121 (CG80054, CG80055, CG80059, CG80064, CG80065, CG80066, CG80067)

Volatiles - Ground Water

1,1,1,2-Tetrachloroethane	ND	1.0		95	97	2.1				70 - 130	20
1,1,1-Trichloroethane	ND	1.0		89	91	2.2				70 - 130	20
1,1,2,2-Tetrachloroethane	ND	0.50		105	110	4.7				70 - 130	20
1,1,2-Trichloroethane	ND	1.0		94	93	1.1				70 - 130	20
1,1-Dichloroethane	ND	1.0		90	91	1.1				70 - 130	20
1,1-Dichloroethene	ND	1.0		98	97	1.0				70 - 130	20
1,1-Dichloropropene	ND	1.0		95	97	2.1				70 - 130	20
1,2,3-Trichlorobenzene	ND	1.0		100	100	0.0				70 - 130	20
1,2,3-Trichloropropane	ND	1.0		102	105	2.9				70 - 130	20
1,2,4-Trichlorobenzene	ND	1.0		94	96	2.1				70 - 130	20
1,2,4-Trimethylbenzene	ND	1.0		96	98	2.1				70 - 130	20
1,2-Dibromo-3-chloropropane	ND	1.0		99	107	7.8				70 - 130	20
1,2-Dibromoethane	ND	1.0		100	102	2.0				70 - 130	20
1,2-Dichlorobenzene	ND	1.0		95	94	1.1				70 - 130	20
1,2-Dichloroethane	ND	1.0		96	95	1.0				70 - 130	20
1,2-Dichloropropane	ND	1.0		94	94	0.0				70 - 130	20
1,3,5-Trimethylbenzene	ND	1.0		97	100	3.0				70 - 130	20
1,3-Dichlorobenzene	ND	1.0		94	95	1.1				70 - 130	20
1,3-Dichloropropane	ND	1.0		99	100	1.0				70 - 130	20
1,4-Dichlorobenzene	ND	1.0		94	96	2.1				70 - 130	20
1,4-dioxane	ND	100		105	102	2.9				40 - 160	30
2,2-Dichloropropane	ND	1.0		63	62	1.6				70 - 130	20
2-Chlorotoluene	ND	1.0		93	97	4.2				70 - 130	20
2-Hexanone	ND	5.0		105	111	5.6				40 - 160	30
4-Chlorotoluene	ND	1.0		93	95	2.1				70 - 130	20
4-Methyl-2-pentanone	ND	5.0		104	111	6.5				40 - 160	30
Acetone	ND	5.0		112	116	3.5				40 - 160	30
Benzene	ND	0.70		94	96	2.1				70 - 130	20
Bromobenzene	ND	1.0		94	93	1.1				70 - 130	20
Bromochloromethane	ND	1.0		91	90	1.1				70 - 130	20
Bromodichloromethane	ND	0.50		95	93	2.1				70 - 130	20
Bromoform	ND	1.0		95	96	1.0				70 - 130	20
Bromomethane	ND	1.0		96	97	1.0				40 - 160	30
Carbon Disulfide	ND	1.0		92	93	1.1				70 - 130	20
Carbon tetrachloride	ND	1.0		88	90	2.2				70 - 130	20
Chlorobenzene	ND	1.0		94	96	2.1				70 - 130	20
Chloroethane	ND	1.0		103	98	5.0				70 - 130	20
Chloroform	ND	1.0		90	88	2.2				70 - 130	20
Chloromethane	ND	1.0		110	109	0.9				40 - 160	30
cis-1,2-Dichloroethene	ND	1.0		85	85	0.0				70 - 130	20
cis-1,3-Dichloropropene	ND	0.40		90	90	0.0				70 - 130	20

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits
Dibromochloromethane	ND	0.50	99	101	2.0				70 - 130	20
Dibromomethane	ND	1.0	90	91	1.1				70 - 130	20
Dichlorodifluoromethane	ND	1.0	142	141	0.7				40 - 160	30
Di-isopropyl ether	ND	1.0	94	95	1.1				70 - 130	20
Ethyl ether	ND	1.0	100	95	5.1				70 - 130	20
Ethyl tert-butyl ether	ND	1.0	95	96	1.0				70 - 130	20
Ethylbenzene	ND	1.0	92	94	2.2				70 - 130	20
Hexachlorobutadiene	ND	0.40	90	93	3.3				70 - 130	20
Isopropylbenzene	ND	1.0	94	97	3.1				70 - 130	20
m&p-Xylene	ND	1.0	95	96	1.0				70 - 130	20
Methyl ethyl ketone	ND	5.0	105	109	3.7				40 - 160	30
Methyl t-butyl ether (MTBE)	ND	1.0	97	99	2.0				70 - 130	20
Methylene chloride	ND	1.0	90	90	0.0				70 - 130	20
Naphthalene	ND	1.0	107	112	4.6				70 - 130	20
n-Butylbenzene	ND	1.0	99	101	2.0				70 - 130	20
n-Propylbenzene	ND	1.0	95	97	2.1				70 - 130	20
o-Xylene	ND	1.0	96	96	0.0				70 - 130	20
p-Isopropyltoluene	ND	1.0	99	102	3.0				70 - 130	20
sec-Butylbenzene	ND	1.0	105	109	3.7				70 - 130	20
Styrene	ND	1.0	97	98	1.0				70 - 130	20
tert-amyl methyl ether	ND	1.0	98	99	1.0				70 - 130	20
tert-Butylbenzene	ND	1.0	97	100	3.0				70 - 130	20
Tetrachloroethene	ND	1.0	88	91	3.4				70 - 130	20
Tetrahydrofuran (THF)	ND	2.5	102	108	5.7				70 - 130	20
Toluene	ND	1.0	92	92	0.0				70 - 130	20
trans-1,2-Dichloroethene	ND	1.0	96	101	5.1				70 - 130	20
trans-1,3-Dichloropropene	ND	0.40	91	89	2.2				70 - 130	20
Trichloroethene	ND	1.0	90	93	3.3				70 - 130	20
Trichlorofluoromethane	ND	1.0	109	109	0.0				70 - 130	20
Trichlorotrifluoroethane	ND	1.0	103	102	1.0				70 - 130	20
Vinyl chloride	ND	1.0	113	113	0.0				70 - 130	20
% 1,2-dichlorobenzene-d4	97	%	99	99	0.0				70 - 130	20
% Bromofluorobenzene	96	%	100	99	1.0				70 - 130	20
% Dibromofluoromethane	99	%	92	94	2.2				70 - 130	20
% Toluene-d8	103	%	100	99	1.0				70 - 130	20

Comment:

A LCS and LCS Duplicate were performed instead of a matrix spike and matrix spike duplicate.

Additional 8260 criteria: 10% of compounds can be outside of acceptance criteria as long as recovery is 10%.
The RPD criteria for the LCS/LCSD is 20%,
The MS/MSD RPD criteria is listed above.

QA/QC Batch 546771 (ug/L), QC Sample No: CG81125 (CG80054 (40X) , CG80055 (20X) , CG80064 (10X) , CG80065 (10X) , CG80066 (20X) , CG80067 (10X))

Volatiles - Ground Water

cis-1,2-Dichloroethene	ND	1.0	82	84	2.4	NC	NC	NC	70 - 130	20
Trichloroethene	ND	1.0	84	89	5.8	92	85	7.9	70 - 130	20
% 1,2-dichlorobenzene-d4	98	%	100	99	1.0	101	101	0.0	70 - 130	20
% Bromofluorobenzene	101	%	103	104	1.0	107	105	1.9	70 - 130	20
% Dibromofluoromethane	94	%	92	96	4.3	94	93	1.1	70 - 130	20
% Toluene-d8	105	%	103	103	0.0	104	102	1.9	70 - 130	20

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits	
Comment:											
Additional 8260 criteria: 10% of compounds can be outside of acceptance criteria as long as recovery is 10%. The RPD criteria for the LCS/LCSD is 20%, The MS/MSD RPD criteria is listed above.											
QA/QC Batch 546776 (ug/L), QC Sample No: CG83495 (CG80053 (5X))											
Volatiles - Ground Water											
cis-1,2-Dichloroethene	ND	1.0	85	85	0.0				70 - 130	20	
% 1,2-dichlorobenzene-d4	99	%	100	99	1.0				70 - 130	20	
% Bromofluorobenzene	99	%	104	103	1.0				70 - 130	20	
% Dibromofluoromethane	95	%	94	98	4.2				70 - 130	20	
% Toluene-d8	104	%	102	102	0.0				70 - 130	20	
Comment:											
A LCS and LCS Duplicate were performed instead of a matrix spike and matrix spike duplicate.											
Additional 8260 criteria: 10% of compounds can be outside of acceptance criteria as long as recovery is 10%. The RPD criteria for the LCS/LCSD is 20%, The MS/MSD RPD criteria is listed above.											
QA/QC Batch 546357 (ug/L), QC Sample No: CG79233 (CG80065, CG80066)											
Volatile Petroleum Hydrocarbons - Ground Water											
Unadjusted C5-C8 Aliphatics (*1)	ND	100	95	96	1.0	92	93	1.1	70 - 130	25	
Unadjusted C9-C12 Aliphatics (*1)	ND	100	93	96	3.2	95	98	3.1	70 - 130	25	
C5-C8 Aliphatic Hydrocarbons *1,2	ND	100	95	96	1.0	92	93	1.1	70 - 130	25	
C9-C12 Aliphatic Hydrocarbons *1,	ND	100	93	96	3.2	95	98	3.1	70 - 130	25	
C9-C10 Aromatic Hydrocarbons *1	ND	100	98	99	1.0	98	99	1.0	70 - 130	25	
Benzene	ND	1.0	92	92	0.0	92	93	1.1	70 - 130	25	
Ethyl Benzene	ND	1.0	93	93	0.0	94	94	0.0	70 - 130	25	
MTBE	ND	1.0	114	108	5.4	104	135	25.9	70 - 130	25	m,r
Naphthalene	ND	5.0	103	102	1.0	103	102	1.0	70 - 130	25	
Toluene	ND	1.0	93	93	0.0	93	95	2.1	70 - 130	25	
m,p-Xylenes	ND	2.0	94	94	0.0	94	95	1.1	70 - 130	25	
o-Xylene	ND	1.0	92	92	0.0	92	93	1.1	70 - 130	25	
Comment:											
A blank MS/MSD was analyzed with this batch.											
QA/QC Batch 546747 (ug/L), QC Sample No: CG80054 (CG80054)											
Volatile Petroleum Hydrocarbons - Ground Water											
Unadjusted C5-C8 Aliphatics (*1)	ND	100	98	101	3.0	94	96	2.1	70 - 130	25	
Unadjusted C9-C12 Aliphatics (*1)	ND	100	105	112	6.5	100	99	1.0	70 - 130	25	
C5-C8 Aliphatic Hydrocarbons *1,2	ND	100	98	101	3.0	94	96	2.1	70 - 130	25	
C9-C12 Aliphatic Hydrocarbons *1,	ND	100	105	112	6.5	100	99	1.0	70 - 130	25	
C9-C10 Aromatic Hydrocarbons *1	ND	100	98	100	2.0	101	100	1.0	70 - 130	25	
Benzene	ND	1.0	94	97	3.1	96	97	1.0	70 - 130	25	
Ethyl Benzene	ND	1.0	95	97	2.1	96	97	1.0	70 - 130	25	
MTBE	ND	1.0	104	102	1.9	107	111	3.7	70 - 130	25	
Naphthalene	ND	5.0	106	104	1.9	108	106	1.9	70 - 130	25	
Toluene	ND	1.0	95	98	3.1	97	98	1.0	70 - 130	25	
m,p-Xylenes	ND	2.0	97	99	2.0	98	99	1.0	70 - 130	25	
o-Xylene	ND	1.0	94	96	2.1	95	96	1.0	70 - 130	25	
Comment:											
A blank MS/MSD was analyzed with this batch.											

l = This parameter is outside laboratory LCS/LCSD specified recovery limits.
m = This parameter is outside laboratory MS/MSD specified recovery limits.
r = This parameter is outside laboratory RPD specified recovery limits.

QA/QC Data

SDG I.D.: GCG80050

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits

If there are any questions regarding this data, please call Phoenix Client Services at extension 200.

RPD - Relative Percent Difference
LCS - Laboratory Control Sample
LCSD - Laboratory Control Sample Duplicate
MS - Matrix Spike
MS Dup - Matrix Spike Duplicate
NC - No Criteria
Intf - Interference

Phyllis Shiller, Laboratory Director
October 26, 2020

Monday, October 26, 2020

Criteria: MA: GW1, GW2, GW3

State: MA

Sample Criteria Exceedances Report

GCG80050 - AECOM-WILMINGTN

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units
CG80050	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.00033	0.00033	ug/L
CG80050	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.0075	0.0075	ug/L
CG80050	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.00075	0.00075	ug/L
CG80050	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	0.50	0.02	0.02	ug/L
CG80050	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	0.50	0.02	0.02	ug/L
CG80050	$MCPADD-WM	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	100	0.3	0.3	ug/L
CG80050	$MCPADD-WM	1,4-dioxane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	100	3	3	ug/L
CG80050	$MCPADD-WM	1,4-dioxane	MA / GROUNDWATER STANDARDS / GW-1	ND	100	0.3	0.3	ug/L
CG80051	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.00075	0.00075	ug/L
CG80051	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.00033	0.00033	ug/L
CG80051	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.0075	0.0075	ug/L
CG80051	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	0.50	0.02	0.02	ug/L
CG80051	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	0.50	0.02	0.02	ug/L
CG80051	$DIOX_LDL	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	5.6	0.20	0.3	0.3	ug/l
CG80051	$DIOX_LDL	1,4-dioxane	MA / CMR 310.40.1600 / GW-1 (mg/l)	5.6	0.20	3	3	ug/l
CG80051	$DIOX_LDL	1,4-dioxane	MA / GROUNDWATER STANDARDS / GW-1	5.6	0.20	0.3	0.3	ug/l
CG80051	$MCPADD-WM	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	100	0.3	0.3	ug/L
CG80052	$8260GWR-WI	Trichloroethene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	5.3	1.0	5	5	ug/L
CG80052	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.00075	0.00075	ug/L
CG80052	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.00033	0.00033	ug/L
CG80052	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.0075	0.0075	ug/L
CG80052	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	0.50	0.02	0.02	ug/L
CG80052	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	5.3	1.0	5	5	ug/L
CG80052	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	5.3	1.0	5	5	ug/L
CG80052	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	0.50	0.02	0.02	ug/L
CG80052	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-1	5.3	1.0	5	5	ug/L
CG80052	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-2	5.3	1.0	5	5	ug/L
CG80052	$MCPADD-WM	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	100	0.3	0.3	ug/L
CG80052	$MCPADD-WM	1,4-dioxane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	100	3	3	ug/L
CG80052	$MCPADD-WM	1,4-dioxane	MA / GROUNDWATER STANDARDS / GW-1	ND	100	0.3	0.3	ug/L
CG80053	$8260GWR-WI	cis-1,2-Dichloroethene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	170	5.0	20	20	ug/L
CG80053	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.00075	0.00075	ug/L
CG80053	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.00033	0.00033	ug/L
CG80053	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.0075	0.0075	ug/L
CG80053	$8260GWR-WI	Trichloroethene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	21	1.0	5	5	ug/L
CG80053	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	21	1.0	5	5	ug/L
CG80053	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	0.50	0.02	0.02	ug/L
CG80053	$8260GWR-WI	cis-1,2-Dichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	170	5.0	20	20	ug/L
CG80053	$8260GWR-WI	cis-1,2-Dichloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	170	5.0	20	20	ug/L
CG80053	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	21	1.0	5	5	ug/L

Monday, October 26, 2020

Criteria: MA: GW1, GW2, GW3

State: MA

Sample Criteria Exceedances Report

GCG80050 - AECOM-WILMINGTN

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units
CG80053	$8260GWR-WI	cis-1,2-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-1	170	5.0	70	70	ug/L
CG80053	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	0.50	0.02	0.02	ug/L
CG80053	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-1	21	1.0	5	5	ug/L
CG80053	$8260GWR-WI	cis-1,2-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-2	170	5.0	20	20	ug/L
CG80053	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-2	21	1.0	5	5	ug/L
CG80053	$MCPADD-WM	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	100	0.3	0.3	ug/L
CG80053	$MCPADD-WM	1,4-dioxane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	100	3	3	ug/L
CG80053	$MCPADD-WM	1,4-dioxane	MA / GROUNDWATER STANDARDS / GW-1	ND	100	0.3	0.3	ug/L
CG80054	$8260GWR-WI	Tetrachloroethene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	71	1.0	5	5	ug/L
CG80054	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.00075	0.00075	ug/L
CG80054	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.00033	0.00033	ug/L
CG80054	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.0075	0.0075	ug/L
CG80054	$8260GWR-WI	Trichloroethene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	390	40	5	5	ug/L
CG80054	$8260GWR-WI	cis-1,2-Dichloroethene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	220	40	20	20	ug/L
CG80054	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	390	40	5	5	ug/L
CG80054	$8260GWR-WI	Tetrachloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	71	1.0	5	5	ug/L
CG80054	$8260GWR-WI	cis-1,2-Dichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	220	40	20	20	ug/L
CG80054	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	0.50	0.02	0.02	ug/L
CG80054	$8260GWR-WI	cis-1,2-Dichloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	220	40	20	20	ug/L
CG80054	$8260GWR-WI	Tetrachloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	71	1.0	50	50	ug/L
CG80054	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	390	40	5	5	ug/L
CG80054	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	0.50	0.02	0.02	ug/L
CG80054	$8260GWR-WI	Tetrachloroethene	MA / GROUNDWATER STANDARDS / GW-1	71	1.0	5	5	ug/L
CG80054	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-1	390	40	5	5	ug/L
CG80054	$8260GWR-WI	cis-1,2-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-1	220	40	70	70	ug/L
CG80054	$8260GWR-WI	cis-1,2-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-2	220	40	20	20	ug/L
CG80054	$8260GWR-WI	Tetrachloroethene	MA / GROUNDWATER STANDARDS / GW-2	71	1.0	50	50	ug/L
CG80054	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-2	390	40	5	5	ug/L
CG80054	$DIOX_LDL	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	1.7	0.20	0.3	0.3	ug/l
CG80054	$DIOX_LDL	1,4-dioxane	MA / GROUNDWATER STANDARDS / GW-1	1.7	0.20	0.3	0.3	ug/l
CG80054	$MCPADD-WM	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	100	0.3	0.3	ug/L
CG80055	$8260GWR-WI	Tetrachloroethene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	12	1.0	5	5	ug/L
CG80055	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.00075	0.00075	ug/L
CG80055	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.00033	0.00033	ug/L
CG80055	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.0075	0.0075	ug/L
CG80055	$8260GWR-WI	Vinyl chloride	MA / Client Specified Criteria / LOCKHEED WILMINGTO	3.7	1.0	2	2	ug/L
CG80055	$8260GWR-WI	cis-1,2-Dichloroethene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	170	20	20	20	ug/L
CG80055	$8260GWR-WI	Trichloroethene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	180	20	5	5	ug/L
CG80055	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-1 (mg/l)	3.7	1.0	2	2	ug/L
CG80055	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-1 (mg/l)	3.7	1.0	2	2	ug/L

Monday, October 26, 2020

Criteria: MA: GW1, GW2, GW3

State: MA

Sample Criteria Exceedances Report

GCG80050 - AECOM-WILMINGTN

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units
CG80055	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	180	20	5	5	ug/L
CG80055	$8260GWR-WI	Tetrachloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	12	1.0	5	5	ug/L
CG80055	$8260GWR-WI	cis-1,2-Dichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	170	20	20	20	ug/L
CG80055	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	0.50	0.02	0.02	ug/L
CG80055	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	180	20	5	5	ug/L
CG80055	$8260GWR-WI	cis-1,2-Dichloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	170	20	20	20	ug/L
CG80055	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-2 (mg/l)	3.7	1.0	2	2	ug/L
CG80055	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-2 (mg/l)	3.7	1.0	2	2	ug/L
CG80055	$8260GWR-WI	Tetrachloroethene	MA / GROUNDWATER STANDARDS / GW-1	12	1.0	5	5	ug/L
CG80055	$8260GWR-WI	cis-1,2-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-1	170	20	70	70	ug/L
CG80055	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-1	180	20	5	5	ug/L
CG80055	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	0.50	0.02	0.02	ug/L
CG80055	$8260GWR-WI	Vinyl chloride	MA / GROUNDWATER STANDARDS / GW-1	3.7	1.0	2	2	ug/L
CG80055	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-2	180	20	5	5	ug/L
CG80055	$8260GWR-WI	Vinyl chloride	MA / GROUNDWATER STANDARDS / GW-2	3.7	1.0	2	2	ug/L
CG80055	$8260GWR-WI	cis-1,2-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-2	170	20	20	20	ug/L
CG80055	$MCPADD-WM	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	100	0.3	0.3	ug/L
CG80055	$MCPADD-WM	1,4-dioxane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	100	3	3	ug/L
CG80055	$MCPADD-WM	1,4-dioxane	MA / GROUNDWATER STANDARDS / GW-1	ND	100	0.3	0.3	ug/L
CG80056	$8260GWR-WI	Vinyl chloride	MA / Client Specified Criteria / LOCKHEED WILMINGTO	11	1.0	2	2	ug/L
CG80056	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.00075	0.00075	ug/L
CG80056	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.00033	0.00033	ug/L
CG80056	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.0075	0.0075	ug/L
CG80056	$8260GWR-WI	cis-1,2-Dichloroethene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	89	5.0	20	20	ug/L
CG80056	$8260GWR-WI	Trichloroethene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	9.2	1.0	5	5	ug/L
CG80056	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	0.50	0.02	0.02	ug/L
CG80056	$8260GWR-WI	cis-1,2-Dichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	89	5.0	20	20	ug/L
CG80056	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-1 (mg/l)	11	1.0	2	2	ug/L
CG80056	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-1 (mg/l)	11	1.0	2	2	ug/L
CG80056	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	9.2	1.0	5	5	ug/L
CG80056	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-2 (mg/l)	11	1.0	2	2	ug/L
CG80056	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-2 (mg/l)	11	1.0	2	2	ug/L
CG80056	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	9.2	1.0	5	5	ug/L
CG80056	$8260GWR-WI	cis-1,2-Dichloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	89	5.0	20	20	ug/L
CG80056	$8260GWR-WI	cis-1,2-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-1	89	5.0	70	70	ug/L
CG80056	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	0.50	0.02	0.02	ug/L
CG80056	$8260GWR-WI	Vinyl chloride	MA / GROUNDWATER STANDARDS / GW-1	11	1.0	2	2	ug/L
CG80056	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-1	9.2	1.0	5	5	ug/L
CG80056	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-2	9.2	1.0	5	5	ug/L
CG80056	$8260GWR-WI	cis-1,2-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-2	89	5.0	20	20	ug/L
CG80056	$8260GWR-WI	Vinyl chloride	MA / GROUNDWATER STANDARDS / GW-2	11	1.0	2	2	ug/L

Monday, October 26, 2020

Criteria: MA: GW1, GW2, GW3

State: MA

Sample Criteria Exceedances Report

GCG80050 - AECOM-WILMINGTN

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units
CG80056	$DIOX_LDL	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	1.5	0.20	0.3	0.3	ug/l
CG80056	$DIOX_LDL	1,4-dioxane	MA / GROUNDWATER STANDARDS / GW-1	1.5	0.20	0.3	0.3	ug/l
CG80056	$MCPADD-WM	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	100	0.3	0.3	ug/L
CG80057	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.00033	0.00033	ug/L
CG80057	$8260GWR-WI	cis-1,2-Dichloroethene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	92	5.0	20	20	ug/L
CG80057	$8260GWR-WI	Vinyl chloride	MA / Client Specified Criteria / LOCKHEED WILMINGTO	11	1.0	2	2	ug/L
CG80057	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.0075	0.0075	ug/L
CG80057	$8260GWR-WI	Trichloroethene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	10	1.0	5	5	ug/L
CG80057	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.00075	0.00075	ug/L
CG80057	$8260GWR-WI	cis-1,2-Dichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	92	5.0	20	20	ug/L
CG80057	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	10	1.0	5	5	ug/L
CG80057	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-1 (mg/l)	11	1.0	2	2	ug/L
CG80057	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-1 (mg/l)	11	1.0	2	2	ug/L
CG80057	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	0.50	0.02	0.02	ug/L
CG80057	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-2 (mg/l)	11	1.0	2	2	ug/L
CG80057	$8260GWR-WI	cis-1,2-Dichloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	92	5.0	20	20	ug/L
CG80057	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-2 (mg/l)	11	1.0	2	2	ug/L
CG80057	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	10	1.0	5	5	ug/L
CG80057	$8260GWR-WI	Vinyl chloride	MA / GROUNDWATER STANDARDS / GW-1	11	1.0	2	2	ug/L
CG80057	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-1	10	1.0	5	5	ug/L
CG80057	$8260GWR-WI	cis-1,2-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-1	92	5.0	70	70	ug/L
CG80057	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	0.50	0.02	0.02	ug/L
CG80057	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-2	10	1.0	5	5	ug/L
CG80057	$8260GWR-WI	Vinyl chloride	MA / GROUNDWATER STANDARDS / GW-2	11	1.0	2	2	ug/L
CG80057	$8260GWR-WI	cis-1,2-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-2	92	5.0	20	20	ug/L
CG80057	$DIOX_LDL	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	1.4	0.20	0.3	0.3	ug/l
CG80057	$DIOX_LDL	1,4-dioxane	MA / GROUNDWATER STANDARDS / GW-1	1.4	0.20	0.3	0.3	ug/l
CG80057	$MCPADD-WM	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	100	0.3	0.3	ug/L
CG80058	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.00075	0.00075	ug/L
CG80058	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.00033	0.00033	ug/L
CG80058	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.0075	0.0075	ug/L
CG80058	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	0.50	0.02	0.02	ug/L
CG80058	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	0.50	0.02	0.02	ug/L
CG80058	$MCPADD-WM	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	100	0.3	0.3	ug/L
CG80058	$MCPADD-WM	1,4-dioxane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	100	3	3	ug/L
CG80058	$MCPADD-WM	1,4-dioxane	MA / GROUNDWATER STANDARDS / GW-1	ND	100	0.3	0.3	ug/L
CG80059	$8260GWR-WI	Trichloroethene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	6.8	1.0	5	5	ug/L
CG80059	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.00075	0.00075	ug/L
CG80059	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.00033	0.00033	ug/L
CG80059	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.0075	0.0075	ug/L

Monday, October 26, 2020

Criteria: MA: GW1, GW2, GW3

State: MA

Sample Criteria Exceedances Report

GCG80050 - AECOM-WILMINGTN

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units
CG80059	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	6.8	1.0	5	5	ug/L
CG80059	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	0.50	0.02	0.02	ug/L
CG80059	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	6.8	1.0	5	5	ug/L
CG80059	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	0.50	0.02	0.02	ug/L
CG80059	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-1	6.8	1.0	5	5	ug/L
CG80059	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-2	6.8	1.0	5	5	ug/L
CG80059	$DIOX_LDL	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	0.82	0.20	0.3	0.3	ug/l
CG80059	$DIOX_LDL	1,4-dioxane	MA / GROUNDWATER STANDARDS / GW-1	0.82	0.20	0.3	0.3	ug/l
CG80059	$MCPADD-WM	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	100	0.3	0.3	ug/L
CG80060	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.0075	0.0075	ug/L
CG80060	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.00075	0.00075	ug/L
CG80060	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.00033	0.00033	ug/L
CG80060	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	0.50	0.02	0.02	ug/L
CG80060	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	0.50	0.02	0.02	ug/L
CG80060	$MCPADD-WM	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	100	0.3	0.3	ug/L
CG80060	$MCPADD-WM	1,4-dioxane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	100	3	3	ug/L
CG80060	$MCPADD-WM	1,4-dioxane	MA / GROUNDWATER STANDARDS / GW-1	ND	100	0.3	0.3	ug/L
CG80061	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.00075	0.00075	ug/L
CG80061	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.00033	0.00033	ug/L
CG80061	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.0075	0.0075	ug/L
CG80061	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	0.50	0.02	0.02	ug/L
CG80061	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	0.50	0.02	0.02	ug/L
CG80061	$MCPADD-WM	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	100	0.3	0.3	ug/L
CG80061	$MCPADD-WM	1,4-dioxane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	100	3	3	ug/L
CG80061	$MCPADD-WM	1,4-dioxane	MA / GROUNDWATER STANDARDS / GW-1	ND	100	0.3	0.3	ug/L
CG80061	AS-WM	Arsenic	MA / Client Specified Criteria / LOCKHEED WILMINGTO	0.017	0.004	0.01	0.01	mg/L
CG80061	AS-WM	Arsenic	MA / CMR 310.40.1600 / GW-1 (mg/l)	0.017	0.004	0.01	0.01	mg/L
CG80061	AS-WM	Arsenic	MA / GROUNDWATER STANDARDS / GW-1	0.017	0.004	0.01	0.01	mg/L
CG80061	D-AS	Arsenic (Dissolved)	MA / Client Specified Criteria / LOCKHEED WILMINGTO	0.016	0.004	0.01	0.01	mg/L
CG80061	D-AS	Arsenic (Dissolved)	MA / CMR 310.40.1600 / GW-1 (mg/l)	0.016	0.004	0.01	0.01	mg/L
CG80061	D-AS	Arsenic (Dissolved)	MA / GROUNDWATER STANDARDS / GW-1	0.016	0.004	0.01	0.01	mg/L
CG80061	D-FE	Iron (Dissolved)	MA / Client Specified Criteria / LOCKHEED WILMINGTO	35.3	0.011	14	14	mg/L
CG80061	D-MN	Manganese (Dissolved)	MA / Client Specified Criteria / LOCKHEED WILMINGTO	1.43	0.001	0.43	0.43	mg/L
CG80061	FE-WM	Iron	MA / Client Specified Criteria / LOCKHEED WILMINGTO	38.6	0.010	14	14	mg/L
CG80061	MN-WM	Manganese	MA / Client Specified Criteria / LOCKHEED WILMINGTO	1.49	0.001	0.43	0.43	mg/L
CG80062	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.00075	0.00075	ug/L
CG80062	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.00033	0.00033	ug/L
CG80062	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.0075	0.0075	ug/L
CG80062	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	0.50	0.02	0.02	ug/L
CG80062	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	0.50	0.02	0.02	ug/L

Monday, October 26, 2020

Criteria: MA: GW1, GW2, GW3

State: MA

Sample Criteria Exceedances Report

GCG80050 - AECOM-WILMINGTN

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units
CG80062	$MCPADD-WM	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	100	0.3	0.3	ug/L
CG80062	$MCPADD-WM	1,4-dioxane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	100	3	3	ug/L
CG80062	$MCPADD-WM	1,4-dioxane	MA / GROUNDWATER STANDARDS / GW-1	ND	100	0.3	0.3	ug/L
CG80062	D-MN	Manganese (Dissolved)	MA / Client Specified Criteria / LOCKHEED WILMINGTO	2.26	0.011	0.43	0.43	mg/L
CG80062	MN-WM	Manganese	MA / Client Specified Criteria / LOCKHEED WILMINGTO	2.28	0.010	0.43	0.43	mg/L
CG80063	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.00033	0.00033	ug/L
CG80063	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.0075	0.0075	ug/L
CG80063	$8260GWR-WI	cis-1,2-Dichloroethene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	25	1.0	20	20	ug/L
CG80063	$8260GWR-WI	Vinyl chloride	MA / Client Specified Criteria / LOCKHEED WILMINGTO	3.6	1.0	2	2	ug/L
CG80063	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.00075	0.00075	ug/L
CG80063	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-1 (mg/l)	3.6	1.0	2	2	ug/L
CG80063	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	0.50	0.02	0.02	ug/L
CG80063	$8260GWR-WI	cis-1,2-Dichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	25	1.0	20	20	ug/L
CG80063	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-1 (mg/l)	3.6	1.0	2	2	ug/L
CG80063	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-2 (mg/l)	3.6	1.0	2	2	ug/L
CG80063	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-2 (mg/l)	3.6	1.0	2	2	ug/L
CG80063	$8260GWR-WI	cis-1,2-Dichloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	25	1.0	20	20	ug/L
CG80063	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	0.50	0.02	0.02	ug/L
CG80063	$8260GWR-WI	Vinyl chloride	MA / GROUNDWATER STANDARDS / GW-1	3.6	1.0	2	2	ug/L
CG80063	$8260GWR-WI	Vinyl chloride	MA / GROUNDWATER STANDARDS / GW-2	3.6	1.0	2	2	ug/L
CG80063	$8260GWR-WI	cis-1,2-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-2	25	1.0	20	20	ug/L
CG80063	$MCPADD-WM	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	100	0.3	0.3	ug/L
CG80063	$MCPADD-WM	1,4-dioxane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	100	3	3	ug/L
CG80063	$MCPADD-WM	1,4-dioxane	MA / GROUNDWATER STANDARDS / GW-1	ND	100	0.3	0.3	ug/L
CG80064	$8260GWR-WI	Tetrachloroethene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	31	1.0	5	5	ug/L
CG80064	$8260GWR-WI	Trichloroethene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	110	10	5	5	ug/L
CG80064	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.0075	0.0075	ug/L
CG80064	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.00075	0.00075	ug/L
CG80064	$8260GWR-WI	cis-1,2-Dichloroethene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	26	1.0	20	20	ug/L
CG80064	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.00033	0.00033	ug/L
CG80064	$8260GWR-WI	Tetrachloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	31	1.0	5	5	ug/L
CG80064	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	110	10	5	5	ug/L
CG80064	$8260GWR-WI	cis-1,2-Dichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	26	1.0	20	20	ug/L
CG80064	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	0.50	0.02	0.02	ug/L
CG80064	$8260GWR-WI	cis-1,2-Dichloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	26	1.0	20	20	ug/L
CG80064	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	110	10	5	5	ug/L
CG80064	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	0.50	0.02	0.02	ug/L
CG80064	$8260GWR-WI	Tetrachloroethene	MA / GROUNDWATER STANDARDS / GW-1	31	1.0	5	5	ug/L
CG80064	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-1	110	10	5	5	ug/L
CG80064	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-2	110	10	5	5	ug/L

Monday, October 26, 2020

Criteria: MA: GW1, GW2, GW3

State: MA

Sample Criteria Exceedances Report

GCG80050 - AECOM-WILMINGTN

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units
CG80064	$8260GWR-WI	cis-1,2-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-2	26	1.0	20	20	ug/L
CG80064	$MCPADD-WM	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	100	0.3	0.3	ug/L
CG80064	$MCPADD-WM	1,4-dioxane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	100	3	3	ug/L
CG80064	$MCPADD-WM	1,4-dioxane	MA / GROUNDWATER STANDARDS / GW-1	ND	100	0.3	0.3	ug/L
CG80065	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.00033	0.00033	ug/L
CG80065	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.0075	0.0075	ug/L
CG80065	$8260GWR-WI	Tetrachloroethene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	41	1.0	5	5	ug/L
CG80065	$8260GWR-WI	cis-1,2-Dichloroethene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	28	1.0	20	20	ug/L
CG80065	$8260GWR-WI	Trichloroethene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	130	10	5	5	ug/L
CG80065	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.00075	0.00075	ug/L
CG80065	$8260GWR-WI	Tetrachloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	41	1.0	5	5	ug/L
CG80065	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	0.50	0.02	0.02	ug/L
CG80065	$8260GWR-WI	cis-1,2-Dichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	28	1.0	20	20	ug/L
CG80065	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	130	10	5	5	ug/L
CG80065	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	130	10	5	5	ug/L
CG80065	$8260GWR-WI	cis-1,2-Dichloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	28	1.0	20	20	ug/L
CG80065	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	0.50	0.02	0.02	ug/L
CG80065	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-1	130	10	5	5	ug/L
CG80065	$8260GWR-WI	Tetrachloroethene	MA / GROUNDWATER STANDARDS / GW-1	41	1.0	5	5	ug/L
CG80065	$8260GWR-WI	cis-1,2-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-2	28	1.0	20	20	ug/L
CG80065	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-2	130	10	5	5	ug/L
CG80065	$DIOX_LDL	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	5.1	0.20	0.3	0.3	ug/l
CG80065	$DIOX_LDL	1,4-dioxane	MA / CMR 310.40.1600 / GW-1 (mg/l)	5.1	0.20	3	3	ug/l
CG80065	$DIOX_LDL	1,4-dioxane	MA / GROUNDWATER STANDARDS / GW-1	5.1	0.20	0.3	0.3	ug/l
CG80065	$MCPADD-WM	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	100	0.3	0.3	ug/L
CG80066	$8260GWR-WI	cis-1,2-Dichloroethene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	36	1.0	20	20	ug/L
CG80066	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.00033	0.00033	ug/L
CG80066	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.0075	0.0075	ug/L
CG80066	$8260GWR-WI	Trichloroethene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	150	20	5	5	ug/L
CG80066	$8260GWR-WI	Tetrachloroethene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	52	1.0	5	5	ug/L
CG80066	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.00075	0.00075	ug/L
CG80066	$8260GWR-WI	Tetrachloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	52	1.0	5	5	ug/L
CG80066	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	150	20	5	5	ug/L
CG80066	$8260GWR-WI	cis-1,2-Dichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	36	1.0	20	20	ug/L
CG80066	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	0.50	0.02	0.02	ug/L
CG80066	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	150	20	5	5	ug/L
CG80066	$8260GWR-WI	cis-1,2-Dichloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	36	1.0	20	20	ug/L
CG80066	$8260GWR-WI	Tetrachloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	52	1.0	50	50	ug/L
CG80066	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	0.50	0.02	0.02	ug/L
CG80066	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-1	150	20	5	5	ug/L

Monday, October 26, 2020

Criteria: MA: GW1, GW2, GW3

State: MA

Sample Criteria Exceedances Report

GCG80050 - AECOM-WILMINGTN

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units
CG80066	$8260GWR-WI	Tetrachloroethene	MA / GROUNDWATER STANDARDS / GW-1	52	1.0	5	5	ug/L
CG80066	$8260GWR-WI	Tetrachloroethene	MA / GROUNDWATER STANDARDS / GW-2	52	1.0	50	50	ug/L
CG80066	$8260GWR-WI	cis-1,2-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-2	36	1.0	20	20	ug/L
CG80066	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-2	150	20	5	5	ug/L
CG80066	$DIOX_LDL	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	5.3	0.20	0.3	0.3	ug/l
CG80066	$DIOX_LDL	1,4-dioxane	MA / CMR 310.40.1600 / GW-1 (mg/l)	5.3	0.20	3	3	ug/l
CG80066	$DIOX_LDL	1,4-dioxane	MA / GROUNDWATER STANDARDS / GW-1	5.3	0.20	0.3	0.3	ug/l
CG80066	$MCPADD-WM	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	100	0.3	0.3	ug/L
CG80067	$8260GWR-WI	Trichloroethene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	120	10	5	5	ug/L
CG80067	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.00033	0.00033	ug/L
CG80067	$8260GWR-WI	Tetrachloroethene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	43	1.0	5	5	ug/L
CG80067	$8260GWR-WI	cis-1,2-Dichloroethene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	37	10	20	20	ug/L
CG80067	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.0075	0.0075	ug/L
CG80067	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.00075	0.00075	ug/L
CG80067	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	120	10	5	5	ug/L
CG80067	$8260GWR-WI	cis-1,2-Dichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	37	10	20	20	ug/L
CG80067	$8260GWR-WI	Tetrachloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	43	1.0	5	5	ug/L
CG80067	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	0.50	0.02	0.02	ug/L
CG80067	$8260GWR-WI	cis-1,2-Dichloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	37	10	20	20	ug/L
CG80067	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	120	10	5	5	ug/L
CG80067	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-1	120	10	5	5	ug/L
CG80067	$8260GWR-WI	Tetrachloroethene	MA / GROUNDWATER STANDARDS / GW-1	43	1.0	5	5	ug/L
CG80067	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	0.50	0.02	0.02	ug/L
CG80067	$8260GWR-WI	cis-1,2-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-2	37	10	20	20	ug/L
CG80067	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-2	120	10	5	5	ug/L
CG80067	$MCPADD-WM	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	100	0.3	0.3	ug/L
CG80067	$MCPADD-WM	1,4-dioxane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	100	3	3	ug/L
CG80067	$MCPADD-WM	1,4-dioxane	MA / GROUNDWATER STANDARDS / GW-1	ND	100	0.3	0.3	ug/L

Phoenix Laboratories does not assume responsibility for the data contained in this exceedance report. It is provided as an additional tool to identify requested criteria exceedences. All efforts are made to ensure the accuracy of the data (obtained from appropriate agencies). A lack of exceedence information does not necessarily suggest conformance to the criteria. It is ultimately the site professional's responsibility to determine appropriate compliance.

MassDEP Analytical Protocol Certification Form

Laboratory Name: Phoenix Environmental Laboratories, Inc. **Project #:**

Project Location: LOCKHEED WILMINGTON MA 6055200 **RTN:**

This Form provides certifications for the following data set: [list Laboratory Sample ID Number(s)]

CG80050, CG80051, CG80052, CG80053, CG80054, CG80055, CG80056, CG80057, CG80058, CG80059, CG80060, CG80061, CG80062, CG80063, CG80064, CG80065, CG80066, CG80067, CG80068

Matrices: ☑ Groundwater/Surface Water ☐ Soil/Sediment ☐ Drinking Water ☐ Air ☐ Other:

CAM Protocol (check all that apply below)

8260 VOC CAM II A ☑	7470/7471 Hg CAM III B ☐	MassDEP VPH CAM IV A ☑	8081 Pesticides CAM V B ☐	7196 Hex Cr CAM VI B ☐	MassDEP APH CAM IX A ☐
8270 SVOC CAM II B ☑	7010 Metals CAM III C ☐	MassDEP EPH CAM IV B ☑	8151 Herbicides CAM V C ☐	8330 Explosives CAM VIII A ☐	TO-15 VOC CAM IX B ☐
6010 Metals CAM III A ☑	6020 Metals CAM III D ☐	8082 PCB CAM V A ☐	9012 Total Cyanide/PAC CAM V1 A ☐	6860 Perchlorate CAM VIII B ☐	

Affirmative responses to questions A through F are required for "Presumptive Certainty" status

A	Were all samples received in a condition consistent with those described on the Chain-of-Custody, properly preserved (including temperature*) in the field or laboratory, and prepared/analyzed with method holding times? (* see narrative)	☑ Yes ☐ No
B	Were the analytical method(s) and all associated QC requirements specified in the selected CAM protocol(s) followed?	☑ Yes ☐ No
C	Were all required corrective actions and analytical response actions specified in the selected CAM protocol(s) implemented for all identified performance standard non-conformances?	☑ Yes ☐ No
D	Does the laboratory report comply with all the reporting requirements speified in CAM VII A, "Quality Assurance and Quality Control Guidelines for the Acquisition and Reporting of Analytical Data"?	☑ Yes ☐ No
E	a. VPH, EPH, and APH Methods only: Was each method conducted without significant modification(s)? (refer to the individual method(s) for a list of significant modifications). b. APH and TO-15 methods only: Was the complete analyte list reported for each method?	☑ Yes ☐ No ☐ Yes ☐ No
F	Were all applicable CAM protocol QC and performance standard non-conformances identified and evaluated in a laboratory narrative (including all "No" responses to Questions A through E)?	☑ Yes ☐ No

Responses to questions G, H and I below is required for "Presumptive Certainty" status

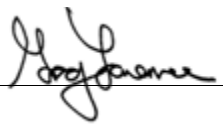
G	Were the reporting limits at or below all CAM reporting limits specified in the selected CAM protocol(s)?	☐ Yes ☑ No

Data User Note: Data that achieve "Presumptive Certainty" status may not necessarily meet the data usability and representativeness requirements described in 310 CMR 40. 1056(2)(k) and WSC-07-350

H	Were all QC performance standards specified in the CAM protocol(s) achieved? See Sections: EPH, VOA Narrations .	☐ Yes ☑ No
I	Were results reported for the complete analyte list specified in the selected CAM protocol(s)?	☐ Yes ☑ No

All negative responses must be addressed in an attached laboratory narrative.

I, the undersigned, attest under the pains and penalties of perjury that, based upon my personal inquiry of those responsible for obtaining the information, the material contained in this analytical report is, to the best of my knowledge and belief, accurate and complete.

Authorized Signature: 

Date: Monday, October 26, 2020

Printed Name: Greg Lawrence

Position: Assistant Lab Director

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

ACCREDITED IN ACCORDANCE WITH nelac NY # 11301

MCP Certification Report

October 26, 2020

SDG I.D.: GCG80050

SDG Comments

Phoenix reporting levels may exceed those referenced in the CAM protocol. Please refer to criteria sheet for comparisons to requested MCP standards.

Metals Analysis: CG80054, CG80061, CG80062, CG80065
The client requested a shorter list of elements than the 6010 MCP list. The following analytes from the 6010 Metals list were not reported: Antimony, Barium, Beryllium, Cadmium, Chromium, Lead, Nickel, Selenium, Silver, Thallium, Vanadium, Zinc.

Volatile 8260 analysis:
1,2-Dibromoethane and 1,2-Dibromo-3-chloropropane do not meet the GWP these compounds are analyzed by GC/ECD to achieve this criteria.

EPH Narration

Were all QA/QC performance criteria specified in the MADEP document CAM achieved? No.

QC Batch 546542 (Samples: CG80054, CG80065, CG80066): -----

The LCS/LCSD recovery is below the method criteria. A low bias for these analytes is possible. (C-10 Decane)

Instrument:

AU-FID3 09/24/20-1 Adam Werner, Chemist 09/24/20

CG80054 (1X), CG80066 (1X)

No significant modifications were made to the EPH method, as specified in Section 11.3 of the method.

The initial calibration (AR0923BI) RSD for the compound list was less than 25% except for the following compounds: None.
The continuing calibration %D for the compound list was less than 25% except for the following compounds:None.

AU-FID4 09/23/20-1 Adam Werner, Chemist 09/23/20

CG80054 (1X), CG80065 (1X), CG80066 (1X)

The initial calibration (AL0923BI) RSD for the compound list was less than 25% except for the following compounds: None.
The continuing calibration %D for the compound list was less than 25% except for the following compounds:None.

QC (Batch Specific):

Batch 546542 (CG80054)

CG80054, CG80065, CG80066

All LCS recoveries were within 40 - 140 with the following exceptions: C-10 Decane(39%), C9 - Nonane(32%)
All LCSD recoveries were within 40 - 140 with the following exceptions: C-10 Decane(36%), C9 - Nonane(30%)
All LCS/LCSD RPDs were less than 25% with the following exceptions: None.
A LCS and LCS Duplicate were performed instead of a matrix spike and matrix spike duplicate.
Additional EPH fractionation criteria: Breakthrough criteria (BT) is 0 to 5%

I attest under the pains and penalties of perjury that, based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.

Wet Chemistry Analysis

Were all QA/QC performance criteria specified in the MADEP document CAM achieved? Yes.

Instrument:

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SDG I.D.: GCG80050

Wet Chemistry Analysis

BECKMAN DU720 09/22/20-1 Greg Danielewski, Chemist 09/22/20

CG80054 , CG80061 , CG80062 , CG80065

The initial calibration met all criteria including a standard run at the reporting level.
All method verification standards and blanks met criteria.

QC (Batch Specific):

Batch 546404 (CG81919)

CG80054, CG80061, CG80062, CG80065

All LCS recoveries were within 85 - 115 with the following exceptions: None.
Additional: LCS acceptance range is 85-115% MS acceptance range 75-125%.

Batch 546523 (CG80548)

CG80054, CG80061, CG80062, CG80065

All LCS recoveries were within 85 - 115 with the following exceptions: None.
Additional: LCS acceptance range is 85-115% MS acceptance range 75-125%.

I attest under the pains and penalties of perjury that, based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.

IC

Were all QA/QC performance criteria specified in the MADEP document CAM achieved? Yes.

Instrument:

IC 09/17/20-1 Brian Sheriden, Greg Danielewski, Chemist 09/17/20

CG80061 , CG80065 , CG80068

The initial calibration met all criteria including a standard run at the reporting level.
All method verification standards and blanks met criteria.

IC 09/18/20-3 Brian Sheriden, Eric Geyer, Chemist 09/18/20

CG80061 , CG80062

The initial calibration met all criteria including a standard run at the reporting level.
All method verification standards and blanks met criteria.

IC 09/21/20-2 Brian Sheriden, Eric Geyer, Chemist 09/21/20

CG80068

The initial calibration met all criteria including a standard run at the reporting level.
All method verification standards and blanks met criteria.

QC (Batch Specific):

Batch 546240 (CG81280)

CG80061, CG80062

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SDG I.D.: GCG80050

IC

All LCS recoveries were within 90 - 110 with the following exceptions: None.

Batch 546261 (CG80324)

CG80061, CG80065, CG80068

All LCS recoveries were within 90 - 110 with the following exceptions: None.

Batch 546262 (CG80324)

CG80061, CG80065, CG80068

All LCS recoveries were within 90 - 110 with the following exceptions: None.

Batch 546588 (CG80203)

CG80068

All LCS recoveries were within 90 - 110 with the following exceptions: None.

I attest under the pains and penalties of perjury that, based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.

ICP Metals Narration

Were all QA/QC performance criteria specified in the analytical method achieved? Yes.

Instrument:

BLUE 09/18/20 07:42 Cindy Pearce, Emily Kolominskaya, Tina Hall, Chemist 09/18/

CG80061, CG80062, CG80065

The initial calibration met criteria.
The continuing calibration standards met criteria for all the elements reported. The linear range is defined daily by the calibration range.
The continuing calibration blanks were less than the reporting level for the elements reported.
The ICSA and ICSAB were analyzed at the beginning and end of the run and were within criteria.The linear range is defined daily by the calibration range.
The following Initial Calibration Verification (ICV) compounds did not meet criteria: None.
The following Continuing Calibration Verification (CCV) compounds did not meet criteria: None.
The following ICP Interference Check (ICSAB) compounds did not meet criteria: None.

BLUE 09/19/20 09:03 Cindy Pearce, Chemist 09/19/20

CG80061

The initial calibration met criteria.
The continuing calibration standards met criteria for all the elements reported. The linear range is defined daily by the calibration range.
The continuing calibration blanks were less than the reporting level for the elements reported.
The ICSA and ICSAB were analyzed at the beginning and end of the run and were within criteria.The linear range is defined daily by the calibration range.
The following Initial Calibration Verification (ICV) compounds did not meet criteria: None.
The following Continuing Calibration Verification (CCV) compounds did not meet criteria: None.
The following ICP Interference Check (ICSAB) compounds did not meet criteria: None.

BLUE 09/21/20 15:32 Cindy Pearce, Emily Kolominskaya, Tina Hall, Chemist 09/21/

CG80054, CG80062, CG80065

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SDG I.D.: GCG80050

ICP Metals Narration

The initial calibration met criteria.
The continuing calibration standards met criteria for all the elements reported. The linear range is defined daily by the calibration range.
The continuing calibration blanks were less than the reporting level for the elements reported.
The ICSA and ICSAB were analyzed at the beginning and end of the run and were within criteria.The linear range is defined daily by the calibration range.
The following Initial Calibration Verification (ICV) compounds did not meet criteria: None.
The following Continuing Calibration Verification (CCV) compounds did not meet criteria: None.
The following ICP Interference Check (ICSAB) compounds did not meet criteria: None.

BLUE 09/22/20 08:45 Cindy Pearce, Emily Kolominskaya, Tina Hall, Chemist 09/22/

CG80062

The initial calibration met criteria.
The continuing calibration standards met criteria for all the elements reported. The linear range is defined daily by the calibration range.
The continuing calibration blanks were less than the reporting level for the elements reported.
The ICSA and ICSAB were analyzed at the beginning and end of the run and were within criteria.The linear range is defined daily by the calibration range.
The following Initial Calibration Verification (ICV) compounds did not meet criteria: None.
The following Continuing Calibration Verification (CCV) compounds did not meet criteria: None.
The following ICP Interference Check (ICSAB) compounds did not meet criteria: None.

QC (Batch Specific):

Batch 545883 (CG79152)

CG80054

All LCS recoveries were within 80 - 120 with the following exceptions: None.
All LCSD recoveries were within 80 - 120 with the following exceptions: None.
All LCS/LCSD RPDs were less than 20% with the following exceptions: None.
Additional: LCS acceptance range is 80-120% MS acceptance range 75-125%.

Batch 546027 (CG80061)

CG80061

All LCS recoveries were within 80 - 120 with the following exceptions: None.
All LCSD recoveries were within 80 - 120 with the following exceptions: None.
All LCS/LCSD RPDs were less than 20% with the following exceptions: None.
Additional: LCS acceptance range is 80-120% MS acceptance range 75-125%.

Batch 546028 (CG80061)

CG80061, CG80062, CG80065

All LCS recoveries were within 80 - 120 with the following exceptions: None.
All LCSD recoveries were within 80 - 120 with the following exceptions: None.
All LCS/LCSD RPDs were less than 20% with the following exceptions: None.
Additional: LCS acceptance range is 80-120% MS acceptance range 75-125%.

Batch 546259 (CG79676)

CG80054, CG80062, CG80065

All LCS recoveries were within 80 - 120 with the following exceptions: None.
All LCSD recoveries were within 80 - 120 with the following exceptions: None.

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SDG I.D.: GCG80050

ICP Metals Narration

All LCS/LCSD RPDs were less than 20% with the following exceptions: None.
Additional: LCS acceptance range is 80-120% MS acceptance range 75-125%.

SVOA-Dioxane

Were all QA/QC performance criteria specified in the MADEP document CAM achieved? Yes.

Instrument:

CHEM22 09/22/20-1 Adam Werner, Chemist 09/22/20

CG80051 (1X), CG80054 (1X), CG80056 (1X), CG80057 (1X), CG80059 (1X), CG80065 (1X), CG80066 (1X)

Initial Calibration Evaluation (CHEM22/DIOX_0818):
100% of target compounds met criteria.
The following compounds had %RSDs >20%: None.
The following compounds did not meet recommended response factors: None.
The following compounds did not meet a minimum response factors: None.

Continuing Calibration Verification (CHEM22/0922_06-DIOX_0818) (MCP Compliance):
Internal standard areas were within 50 to 200% of the initial calibration with the following exceptions: None.
100% of target compounds met criteria.
The following compounds did not meet % deviation criteria: None.
The following compounds did not meet maximum % deviations: None.
The following compounds did not meet recommended response factors: None.
The following compounds did not meet minimum response factors: None.

QC (Batch Specific):

Batch 546270 (CG81125)

CG80051, CG80054, CG80056, CG80057, CG80059, CG80065, CG80066

All LCS recoveries were within 40 - 140 with the following exceptions: None.
All LCSD recoveries were within 40 - 140 with the following exceptions: None.
All LCS/LCSD RPDs were less than 30% with the following exceptions: None.

I attest under the pains and penalties of perjury that, based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.

SVOASIM Narration

Were all QA/QC performance criteria specified in the MADEP document CAM achieved? Yes.

Instrument:

CHEM25 09/23/20-1 Wes Bryon, Chemist 09/23/20

CG80065 (1X), CG80066 (1X)

For 8270 BN list, benzidine peak tailing was evaluated in the DFTPP tune and was found to be in control.

Initial Calibration Evaluation (CHEM25/25_SIM18_0805):
100% of target compounds met criteria.
The following compounds had %RSDs >20%: None.
The following compounds did not meet recommended response factors: None.

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SDG I.D.: GCG80050

SVOASIM Narration

The following compounds did not meet a minimum response factors: None.

Continuing Calibration Verification (CHEM25/0923_03-25_SIM18_0805) (MCP Compliance):
Internal standard areas were within 50 to 200% of the initial calibration with the following exceptions: None.
94% of target compounds met criteria.
The following compounds did not meet % deviation criteria: None.
The following compounds did not meet maximum % deviations: None.
The following compounds did not meet recommended response factors: None.
The following compounds did not meet minimum response factors: None.

CHEM33 09/23/20-1 Wes Bryon, Chemist 09/23/20

CG80054 (1X)

Initial Calibration Evaluation (CHEM33/33_PAHSIM_0910):
100% of target compounds met criteria.
The following compounds had %RSDs >20%: None.
The following compounds did not meet recommended response factors: None.
The following compounds did not meet a minimum response factors: None.

Continuing Calibration Verification (CHEM33/0923_03-33_PAHSIM_0910) (MCP Compliance):
Internal standard areas were within 50 to 200% of the initial calibration with the following exceptions: None.
95% of target compounds met criteria.
The following compounds did not meet % deviation criteria: None.
The following compounds did not meet maximum % deviations: None.
The following compounds did not meet recommended response factors: None.
The following compounds did not meet minimum response factors: None.

QC (Batch Specific):

Batch 546445 (CG79762)

CG80054, CG80065, CG80066

All LCS recoveries were within 40 - 140 with the following exceptions: None.
All LCSD recoveries were within 40 - 140 with the following exceptions: None.
All LCS/LCSD RPDs were less than 20% with the following exceptions: None.
Additional 8270 criteria: 10% of compounds can be outside of acceptance criteria as long as recovery is at least 10%. (Acid surrogates acceptance range for aqueous samples: 10-110%, for soils 30-130%)

I attest under the pains and penalties of perjury that, based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.

VOA Narration

Were all QA/QC performance criteria specified in the MADEP document CAM achieved? No.

QC Batch 546580 (Samples: CG80054, CG80055, CG80059, CG80064, CG80065, CG80066, CG80067): -----

The LCS/LCSD is below the method criteria. A slight low bias is possible. (2,2-Dichloropropane)

Instrument:

CHEM23 09/22/20-1 Michael Hahn, Chemist 09/22/20

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SDG I.D.: GCG80050

VOA Narration

CG80050 (1X), CG80051 (1X), CG80052 (1X), CG80053 (1X), CG80056 (1X), CG80057 (1X), CG80058 (1X), CG80060 (1X), CG80061 (1X), CG80062 (1X), CG80063 (1X)

Initial Calibration Evaluation (CHEM23/VOA23_092020):
99% of target compounds met criteria.
The following compounds had %RSDs >20%: Chloroethane 22% (20%)
The following compounds did not meet Table 4 recommended minimum response factors: None.
The following compounds did not meet the minimum response factor of 0.05: None.

Continuing Calibration Verification (CHEM23/0922_02-VOA23_092020) (MCP Compliance):
Internal standard areas were within 50 to 200% of the initial calibration with the following exceptions: None.
98% of target compounds met criteria.
The following compounds did not meet % deviation criteria: None.
The following compounds did not meet maximum % deviations: None.
The following compounds did not meet Table 4 recommended minimum response factors: Tetrachloroethene 0.183 (0.2)
The following compounds did not meet the minimum MCP response factor of 0.05: None.

CHEM23 09/22/20-2 Michael Hahn, Chemist 09/22/20

CG80054 (1X), CG80055 (1X), CG80059 (1X), CG80064 (1X), CG80065 (1X), CG80066 (1X), CG80067 (1X)

Initial Calibration Evaluation (CHEM23/VOA23_092020):
99% of target compounds met criteria.
The following compounds had %RSDs >20%: Chloroethane 22% (20%)
The following compounds did not meet Table 4 recommended minimum response factors: None.
The following compounds did not meet the minimum response factor of 0.05: None.

Continuing Calibration Verification (CHEM23/0922_34-VOA23_092020) (MCP Compliance):
Internal standard areas were within 50 to 200% of the initial calibration with the following exceptions: None.
98% of target compounds met criteria.
The following compounds did not meet % deviation criteria: None.
The following compounds did not meet maximum % deviations: None.
The following compounds did not meet Table 4 recommended minimum response factors: Tetrachloroethene 0.190 (0.2)
The following compounds did not meet the minimum MCP response factor of 0.05: None.

CHEM23 09/23/20-1 Michael Hahn, Chemist 09/23/20

CG80054 (40X), CG80055 (20X), CG80064 (10X), CG80065 (10X), CG80066 (20X), CG80067 (10X)

Initial Calibration Evaluation (CHEM23/VOA23_092020):
99% of target compounds met criteria.
The following compounds had %RSDs >20%: None.
The following compounds did not meet Table 4 recommended minimum response factors: None.
The following compounds did not meet the minimum response factor of 0.05: None.

Continuing Calibration Verification (CHEM23/0923_02-VOA23_092020) (MCP Compliance):
Internal standard areas were within 50 to 200% of the initial calibration with the following exceptions: None.
98% of target compounds met criteria.
The following compounds did not meet % deviation criteria: None.
The following compounds did not meet maximum % deviations: None.
The following compounds did not meet Table 4 recommended minimum response factors: None.
The following compounds did not meet the minimum MCP response factor of 0.05: None.

CHEM23 09/23/20-2 Michael Hahn, Chemist 09/23/20

CG80053 (5X)

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SDG I.D.: GCG80050

VOA Narration

Initial Calibration Evaluation (CHEM23/VOA23_092020):
99% of target compounds met criteria.
The following compounds had %RSDs >20%: None.
The following compounds did not meet Table 4 recommended minimum response factors: None.
The following compounds did not meet the minimum response factor of 0.05: None.

Continuing Calibration Verification (CHEM23/0923_34-VOA23_092020) (MCP Compliance):
Internal standard areas were within 50 to 200% of the initial calibration with the following exceptions: None.
95% of target compounds met criteria.
The following compounds did not meet % deviation criteria: None.
The following compounds did not meet maximum % deviations: None.
The following compounds did not meet Table 4 recommended minimum response factors: None.
The following compounds did not meet the minimum MCP response factor of 0.05: None.

CHEM23 09/24/20-1 Michael Hahn, Chemist 09/24/20

CG80056 (1X, 5X), CG80057 (5X)

Initial Calibration Evaluation (CHEM23/VOA23_092020):
99% of target compounds met criteria.
The following compounds had %RSDs >20%: None.
The following compounds did not meet Table 4 recommended minimum response factors: None.
The following compounds did not meet the minimum response factor of 0.05: None.

Continuing Calibration Verification (CHEM23/0924_02-VOA23_092020) (MCP Compliance):
Internal standard areas were within 50 to 200% of the initial calibration with the following exceptions: None.
98% of target compounds met criteria.
The following compounds did not meet % deviation criteria: None.
The following compounds did not meet maximum % deviations: None.
The following compounds did not meet Table 4 recommended minimum response factors: None.
The following compounds did not meet the minimum MCP response factor of 0.05: None.

QC (Batch Specific):

Batch 546448 (CG80060) CHEM23 9/22/2020-1

CG80050(1X), CG80051(1X), CG80052(1X), CG80053(1X), CG80056(1X), CG80057(1X), CG80058(1X), CG80060(1X), CG80061(1X), CG80062(1X), CG80063(1X)

All LCS recoveries were within 70 - 130 with the following exceptions: None.
All LCSD recoveries were within 70 - 130 with the following exceptions: None.
All LCS/LCSD RPDs were less than 20% with the following exceptions: Carbon Disulfide(27.0%), Chloroethane(22.5%), Di-isopropyl ether(22.2%), Ethyl ether(22.7%), Methylene chloride(23.7%), trans-1,2-Dichloroethene(22.0%)
A LCS and LCS Duplicate were performed instead of a matrix spike and matrix spike duplicate.
Additional 8260 criteria: 10% of compounds can be outside of acceptance criteria as long as recovery is 10%.
The RPD criteria for the LCS/LCSD is 20%,
The MS/MSD RPD criteria is listed above.

Batch 546580 (CG81121) CHEM23 9/22/2020-2

CG80054(1X), CG80055(1X), CG80059(1X), CG80064(1X), CG80065(1X), CG80066(1X), CG80067(1X)

All LCS recoveries were within 70 - 130 with the following exceptions: 2,2-Dichloropropane(63%)
All LCSD recoveries were within 70 - 130 with the following exceptions: 2,2-Dichloropropane(62%)
All LCS/LCSD RPDs were less than 20% with the following exceptions: None.

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VOA Narration

A LCS and LCS Duplicate were performed instead of a matrix spike and matrix spike duplicate.
Additional 8260 criteria: 10% of compounds can be outside of acceptance criteria as long as recovery is 10%.
The RPD criteria for the LCS/LCSD is 20%,
The MS/MSD RPD criteria is listed above.

Batch 546771 (CG81125) CHEM23 9/23/2020-1

CG80054(40X), CG80055(20X), CG80064(10X), CG80065(10X), CG80066(20X), CG80067(10X)

All LCS recoveries were within 70 - 130 with the following exceptions: None.
All LCSD recoveries were within 70 - 130 with the following exceptions: None.
All LCS/LCSD RPDs were less than 20% with the following exceptions: None.
Additional 8260 criteria: 10% of compounds can be outside of acceptance criteria as long as recovery is 10%.
The RPD criteria for the LCS/LCSD is 20%,
The MS/MSD RPD criteria is listed above.

Batch 546776 (CG83495) CHEM23 9/23/2020-2

CG80053(5X)

All LCS recoveries were within 70 - 130 with the following exceptions: None.
All LCSD recoveries were within 70 - 130 with the following exceptions: None.
All LCS/LCSD RPDs were less than 20% with the following exceptions: None.
A LCS and LCS Duplicate were performed instead of a matrix spike and matrix spike duplicate.
Additional 8260 criteria: 10% of compounds can be outside of acceptance criteria as long as recovery is 10%.
The RPD criteria for the LCS/LCSD is 20%,
The MS/MSD RPD criteria is listed above.

Batch 546836 (CG80056) CHEM23 9/24/2020-1

CG80056(5X), CG80057(5X)

All LCS recoveries were within 70 - 130 with the following exceptions: None.
All LCSD recoveries were within 70 - 130 with the following exceptions: None.
All LCS/LCSD RPDs were less than 20% with the following exceptions: None.
A LCS and LCS Duplicate were performed instead of a matrix spike and matrix spike duplicate.
Additional 8260 criteria: 10% of compounds can be outside of acceptance criteria as long as recovery is 10%.
The RPD criteria for the LCS/LCSD is 20%,
The MS/MSD RPD criteria is listed above.

We attest under the pains and penalties of perjury that, based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.

VPH Narration

Were all QA/QC performance criteria specified in the MADEP document CAM achieved? Yes.

Instrument:

PIDFID 09/21/20-2 Caleb Githinji, Chemist 09/21/20

CG80065 (1X), CG80066 (1X)

PIDFID 09/23/20-1 Raman Makol, Chemist 09/23/20

CG80054 (1X)

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SDG I.D.: GCG80050

VPH Narration

Initial Calibration Evaluation (PIDFID/VPH_092320_T):
The following compounds exceeded %RSD criteria: None.

QC (Batch Specific):

Batch 546357 (CG79233)

CG80065(1X), CG80066(1X)

All LCS recoveries were within 70 - 130 with the following exceptions: None.
All LCSD recoveries were within 70 - 130 with the following exceptions: None.
All LCS/LCSD RPDs were less than 25% with the following exceptions: None.
A blank MS/MSD was analyzed with this batch.

Batch 546747 (CG80054)

CG80054(1X)

All LCS recoveries were within 70 - 130 with the following exceptions: None.
All LCSD recoveries were within 70 - 130 with the following exceptions: None.
All LCS/LCSD RPDs were less than 25% with the following exceptions: None.
A blank MS/MSD was analyzed with this batch.

We attest under the pains and penalties of perjury that, based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.

Cooler: Yes ☑ No ☐
Coolant: IPK ☑ ICE ☐ No ☐

Temp 2.4°C Pg of

PHOENIX
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CHAIN OF CUSTODY RECORD

587 East Middle Turnpike, P.O. Box 370, Manchester, CT 06040
Email: info@phoenixlabs.com Fax (860) 645-0823
Client Services (860) 645-8726

Data Delivery/Contact EMails:
lori.herberich@aecom.com
scott.olson@aecom.com

Customer: AECOM
Address: 250 Apollo Drive
Chelmsford, MA 01824 - (978) 905-2100
Contacts: Lori Herberich (Chemist) 978-302-0089 Scott Olson (PM) 978-846-5238

Project: Lockheed - Wilmington MA 60552044.19
Report to: Lori Herberich - Scott Olson - Nicole Callahan
Invoice to: Scott Olson & Lori Herberich
QUOTE # August 2019 (for 2017-2022)

2020 Project PO: 127680

This section MUST be completed with Bottle Quantities.

Samplers Signature: [signature] Date: 9/17/20

Client Sample - Information - Identification

Matrix Code:
DW=Drinking Water GW=Ground Water SW=Surface Water WW=Waste Water L=Liquid
RW=Raw Water SE=Sediment SL=Sludge S=Soil SD=Solid W=Wipe OIL=Oil B=Bulk

	PHOENIX USE ONLY SAMPLE #	Customer Sample Identification	Sample Matrix	Date Sampled	Time Sampled	# of VOA Vials	# of Amber Glass	# of Clear Glass	# of Plastic	# of VOA Vials		VOCs (8260) - HCL + Freon 113	1,4-Dioxane (8270D SIM) - NaHSO4 for DL <0.3 ug/L	VPH - HCL (MassDEP- VPH-04-1.1 Rev 1)	EPH + PAHs - HCL & UNP (MassDEP- EPH-04-1.1 Rev 1)	Total As, Fe, Mn (6010C) - HNO3 [FF]	Dissolved As, Fe, Mn (6010C) - HNO3	Chloride, Nitrate, Nitrite, Sulfate (300) - UNP	Sulfide - Zn-Acetate + NaOH	Total Organic Carbon (9060A) - H3PO4	Comments
	80050	20A-AE109R1-091620-1	GW	9/16/20	1515	3						X									
	80051	20A-AE109R2-091620-1	GW	9/16/20	1540	3	1					X	X								
	80052	20A-AE109R3-091620-1	GW	9/16/20	1535	3						X									
	80053	20A-AE109R4-091620-1	GW	9/16/20	1530	3						X									
*	80054	20A-AE109R5-091620-1	GW	9/16/20	1445	2 3	2		3	5		X	X			X	X		X	X	
	80055	20A-AE109R6-091620-1	GW	9/16/20	1525	3						X									
	80056	20A-AE109R7-091620-1	GW	9/16/20	1500	3	1					X	X								
	80057	20A-AE109R7-091620-2	GW	9/16/20	1500	3	1					X	X								
	80058	20A-AE109R8-091620-1	GW	9/16/20	1520	3						X									
	80059	20A-AE105D-091720-1	GW	9/17/20	1025	3	1					X	X								
	80060	20A-TB01-091620-1	GW	9/16/20	1430	2						X									
	80061	20A-AE105S-091720-1	GW	9/17/20	1120	3	1		4			X				X	X	X	X	X	

Relinquished by:	Accepted by:	Date:	Time:
[signature]	[signature]	9-17-20	14:45
[signature]	[signature]	9/17	1630

Comments, Special Requirements or Regulations:
* Rcvd - 5 voas 2 802 amber
2 HNO3 3 32 oz ambers
1 NAOH

Turnaround:
10 - 15 days

RI
☐ Direct Exposure (Residential)
☐ GW
☐ Other

CT
☐ RCP Cert
☐ GW Protection
☐ SW Protection
☐ GA Mobility
☐ GB Mobility
☐ Residential DEC
☐ I/C DEC
☐ Other

MA
X MCP (CAM Rpt)
X GW-1
X GW-2
X GW-3
☐ S-1
☐ S-2
☐ S-3
☐ MWRA eSMART
☐ Other

State where samples were collected: MA

Data Format
x PDF
x AECOM EQuIS 4-File EDD format

Data Package
☐ Tier II Checklist
☐ Full Data Package*
☐ Phoenix Std Report
☐ Other

* SURCHARGE APPLIES

Cooler: Yes ☑ No ☐
Coolant: IPK ☐ ICE ☑ No ☐

PHOENIX Environmental Laboratories, Inc.

CHAIN OF CUSTODY RECORD

Temp 2.4°C Pg of

587 East Middle Turnpike, P.O. Box 370, Manchester, CT 06040
Email: info@phoenixlabs.com Fax (860) 645-0823
Client Services (860) 645-8726

Data Delivery/Contact EMails:
lori.herberich@aecom.com
scott.olson@aecom.com

Customer: AECOM
Address: 250 Apollo Drive
Chelmsford, MA 01824 - (978) 905-2100
Contacts: Lori Herberich (Chemist) 978-302-0089 Scott Olson (PM) 978-846-5238

Project: Lockheed - Wilmington MA 60552044.19
Report to: Lori Herberich - Scott Olson - Nicole Callahan
Invoice to: Scott Olson & Lori Herberich
QUOTE # August 2019 (for 2017-2022)

2020 Project PO: 127680

This section MUST be completed with Bottle Quantities.

Client Sample - Information - Identification

Sampler's Signature: [signature] Date: 9/17/20

Matrix Code:
DW=Drinking Water GW=Ground Water SW=Surface Water WW=Waste Water L=Liquid
RW=Raw Water SE=Sediment SL=Sludge S=Soil SD=Solid W=Wipe OIL=Oil B=Bulk

PHOENIX USE ONLY SAMPLE #	Customer Sample Identification	Sample Matrix	Date Sampled	Time Sampled	# of VOA Vials	# of Amber Glass	# of Clear Glass	# of Plastic	NaOH	HNO3		VOCs (8260) - HCL + Freon 113	1,4-Dioxane (8270D SIM) - NaHSO4 for DL <0.3 ug/L	VPH - HCL (MassDEP- VPH-04-1.1 Rev 1)	EPH + PAHs - HCL & UNP (MassDEP- EPH-04-1.1 Rev 1)	Total As, Fe, Mn (6010C) - HNO3 (FF)	Dissolved As, Fe, Mn (6010C) - HNO3	Chloride, Nitrate, Nitrite, Sulfate (300) - UNP	Sulfide - Zn-Acetate + NaOH	Total Organic Carbon (9060A) - H3PO4	Comments
80062	20A-AE106D-091720-1	GW	9/17/20	1115	3	1		4				X				X	X	X	X	X	
80063	20A-AE106S-091720-1	GW	9/17/20	1230	3							X									
80064	20A-AE105R1-091720-1	GW	9/17/20	1305	3							X									
80065	20A-AE105R2-091720-1	GW	9/17/20	1220	5	5		1	1	2		X	X	X	X	X	X	X	X	X	
80066	20A-AE105R4-091720-1	GW	9/17/20	1240	5	4						X	X	X	X						
80067	20A-AE105R5-091720-1	GW	9/17/20	1255	3							X									
80068	20A-AE106R3-091720-1	GW	9/17/20	1325				1										X			

Relinquished by:	Accepted by:	Date:	Time:
[signature]	[signature]	9-17-20	14:45
[signature]	[signature]	9/17	1630

Comments, Special Requirements or Regulations:

Turnaround:
10 - 15 days

RI
☐ Direct Exposure (Residential)
☐ GW
☐ Other

CT
☐ RCP Cert
☐ GW Protection
☐ SW Protection
☐ GA Mobility
☐ GB Mobility
☐ Residential DEC
☐ I/C DEC
☐ Other

MA
X MCP (CAM Rpt)
X GW-1
X GW-2
X GW-3
☐ S-1
☐ S-2
☐ S-3
☐ MWRA eSMART
☐ Other

State where samples were collected: MA

Data Format
x PDF
x AECOM EQuIS 4-File EDD format

Data Package
☐ Tier II Checklist
☐ Full Data Package*
☐ Phoenix Std Report
☐ Other

* SURCHARGE APPLIES

Cooler: Yes ☑ No ☐
Coolant: IPK ☐ ICE ☑ No ☐

PHOENIX
Environmental Laboratories, Inc.

CHAIN OF CUSTODY RECORD

Temp 2.4 °C Pg of

587 East Middle Turnpike, P.O. Box 370, Manchester, CT 06040
Email: info@phoenixlabs.com Fax (860) 645-0823
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lori.herberich@aecom.com
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Customer: AECOM
Address: 250 Apollo Drive
Chelmsford, MA 01824 - (978) 905-2100
Contacts: Lori Herberich (Chemist) 978-302-0089 Scott Olson (PM) 978-846-5238

Project: Lockheed - Wilmington MA 60552044.19
Report to: Lori Herberich - Scott Olson - Nicole Callahan
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QUOTE #: August 2019 (for 2017-2022)

2020 Project PO: 127680

This section MUST be completed with Bottle Quantities.

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	80050	20A-AE109R1-091620-1	GW	9/16/20	1515	3						X									
	80051	20A-AE109R2-091620-1	GW	9/16/20	1540	3	1					X	X								
	80052	20A-AE109R3-091620-1	GW	9/16/20	1535	3						X									
	80053	20A-AE109R4-091620-1	GW	9/16/20	1530	3						X									
*	80054	20A-AE109R5-091620-1	GW	9/16/20	1445	2	2		3	5		X	X	X	X	X	X		X	X	Added EPH/VPH
	80055	20A-AE109R6-091620-1	GW	9/16/20	1525	3						X									9/21/20 RM
	80056	20A-AE109R7-091620-1	GW	9/16/20	1500	3	1					X	X								
	80057	20A-AE109R7-091620-2	GW	9/16/20	1500	3	1					X	X								
	80058	20A-AE109R8-091620-1	GW	9/16/20	1520	3						X									
	80059	20A-AE105D-091720-1	GW	9/17/20	1025	3	1					X	X								
	80060	20A-TB01-091620-1	GW	9/16/20	1430	2						X									
	80061	20A-AE105S-091720-1	GW	9/17/20	1120	3	1		4			X				X	X	X	X	X	

Relinquished by:	Accepted by:	Date:	Time:
[signature]	[signature]	9-17-20	14:45
	[signature]	9/17	1630

Comments, Special Requirements or Regulations:
* Rcvd - 5 VOAs 2 8oz amber
2 HNO3 3 32oz ambers
1 NAOH

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☐ RCP Cert
☐ GW Protection
☐ SW Protection
☐ GA Mobility
☐ GB Mobility
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☐ I/C DEC
☐ Other

MA
X MCP (CAM Rpt)
X GW-1
X GW-2
X GW-3
☐ S-1
☐ S-2
☐ S-3
☐ MWRA eSMART
☐ Other

Data Format
x PDF
x AECOM EQuIS 4-File EDD format

Data Package
☐ Tier II Checklist
☐ Full Data Package*
☐ Phoenix Std Report
☐ Other

State where samples were collected: MA

* SURCHARGE APPLIES

PHOENIX
Environmental Laboratories, Inc.

Wednesday, September 30, 2020

Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Project ID: **LOCKHEED WILMINGTON MA 60552044.19**
SDG ID: **GCG81121**
Sample ID#s: CG81121 - CG81133

This laboratory is in compliance with the NELAC requirements of procedures used except where indicated.

This report contains results for the parameters tested, under the sampling conditions described on the Chain Of Custody, as received by the laboratory. This report is incomplete unless all pages indicated in the pagination at the bottom of the page are included.

A scanned version of the COC form accompanies the analytical report and is an exact duplicate of the original.

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200. The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.

Sincerely yours,

Phyllis Shiller
Laboratory Director

NELAC - #NY11301
CT Lab Registration #PH-0618
MA Lab Registration #M-CT007
ME Lab Registration #CT-007
NH Lab Registration #213693-A,B
NJ Lab Registration #CT-003
NY Lab Registration #11301
PA Lab Registration #68-03530
RI Lab Registration #63
UT Lab Registration #CT00007
VT Lab Registration #VT11301

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

NY # 11301

SDG Comments

September 30, 2020

SDG I.D.: GCG81121

Phoenix reporting levels may exceed those referenced in the CAM protocol. Please refer to criteria sheet for comparisons to requested MCP standards.

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Sample Id Cross Reference

September 30, 2020

SDG I.D.: GCG81121

Project ID: LOCKHEED WILMINGTON MA 60552044.19

Client Id	Lab Id	Matrix
20A-TB01-091720-1	CG81121	GROUND WATER
20A-AE106R3-091720-1	CG81122	GROUND WATER
20A-AE106R5-091720-1	CG81123	GROUND WATER
20A-AE101S-091820-1	CG81124	GROUND WATER
20A-AE101D-091820-1	CG81125	GROUND WATER
20A-GZA14A-091720-1	CG81126	GROUND WATER
20A-MW4-091820-1	CG81127	GROUND WATER
20A-MW4-091820-2	CG81128	GROUND WATER
20A-MW4A-091820-1	CG81129	GROUND WATER
20A-AE106R1-091720-1	CG81130	GROUND WATER
20A-MW7-091720-1	CG81131	GROUND WATER
20A-PS3-091820-1	CG81132	GROUND WATER
20A-PS5D-091820-1	CG81133	GROUND WATER

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

September 30, 2020

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		09/17/20	12:00
Location Code:	AECOM-WILMINGTN	Received by:	B	09/18/20	16:20
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	127680				

Laboratory Data

SDG ID: GCG81121
Phoenix ID: CG81121

Project ID: LOCKHEED WILMINGTON MA 60552044.19
Client ID: 20A-TB01-091720-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Volatiles							
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
1,1,1-Trichloroethane	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L	1	09/22/20	MH	SW8260C
1,1,2-Trichloroethane	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
1,1-Dichloroethane	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
1,1-Dichloroethene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
1,1-Dichloropropene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
1,2,3-Trichlorobenzene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
1,2,3-Trichloropropane	ND	0.50	ug/L	1	09/22/20	MH	SW8260C
1,2,4-Trichlorobenzene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
1,2,4-Trimethylbenzene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	0.50	ug/L	1	09/22/20	MH	SW8260C
1,2-Dibromoethane	ND	0.50	ug/L	1	09/22/20	MH	SW8260C
1,2-Dichlorobenzene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
1,2-Dichloroethane	ND	0.60	ug/L	1	09/22/20	MH	SW8260C
1,2-Dichloropropane	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
1,3,5-Trimethylbenzene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
1,3-Dichlorobenzene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
1,3-Dichloropropane	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
1,4-Dichlorobenzene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
2,2-Dichloropropane	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
2-Chlorotoluene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
2-Hexanone	ND	5.0	ug/L	1	09/22/20	MH	SW8260C
4-Chlorotoluene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
4-Methyl-2-pentanone	ND	5.0	ug/L	1	09/22/20	MH	SW8260C
Acetone	ND	25	ug/L	1	09/22/20	MH	SW8260C

Project ID: LOCKHEED WILMINGTON MA 60552044.19 Phoenix I.D.: CG81121

Client ID: 20A-TB01-091720-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	
Benzene	ND	0.70	ug/L	1	09/22/20	MH	SW8260C
Bromobenzene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
Bromochloromethane	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
Bromodichloromethane	ND	0.50	ug/L	1	09/22/20	MH	SW8260C
Bromoform	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
Bromomethane	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
Carbon Disulfide	ND	5.0	ug/L	1	09/22/20	MH	SW8260C
Carbon tetrachloride	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
Chlorobenzene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
Chloroethane	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
Chloroform	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
Chloromethane	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
cis-1,2-Dichloroethene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
cis-1,3-Dichloropropene	ND	0.40	ug/L	1	09/22/20	MH	SW8260C
Dibromochloromethane	ND	0.50	ug/L	1	09/22/20	MH	SW8260C
Dibromomethane	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
Dichlorodifluoromethane	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
Ethylbenzene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
Hexachlorobutadiene	ND	0.40	ug/L	1	09/22/20	MH	SW8260C
Isopropylbenzene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
m&p-Xylene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
Methyl ethyl ketone	ND	5.0	ug/L	1	09/22/20	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
Methylene chloride	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
Naphthalene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
n-Butylbenzene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
n-Propylbenzene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
o-Xylene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
p-Isopropyltoluene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
sec-Butylbenzene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
Styrene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
tert-Butylbenzene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
Tetrachloroethene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
Tetrahydrofuran (THF)	ND	2.5	ug/L	1	09/22/20	MH	SW8260C
Toluene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
trans-1,2-Dichloroethene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
trans-1,3-Dichloropropene	ND	0.40	ug/L	1	09/22/20	MH	SW8260C
Trichloroethene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
Trichlorofluoromethane	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
Trichlorotrifluoroethane	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
Vinyl chloride	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	98		%	1	09/22/20	MH	70 - 130 %
% Bromofluorobenzene	95		%	1	09/22/20	MH	70 - 130 %
% Dibromofluoromethane	96		%	1	09/22/20	MH	70 - 130 %
% Toluene-d8	104		%	1	09/22/20	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	100	ug/L	1	09/22/20	MH	SW8260C (OXY)
Diethyl ether	ND	1.0	ug/L	1	09/22/20	MH	SW8260C (OXY)

Ver 1

Project ID: LOCKHEED WILMINGTON MA 60552044.19 Phoenix I.D.: CG81121

Client ID: 20A-TB01-091720-1

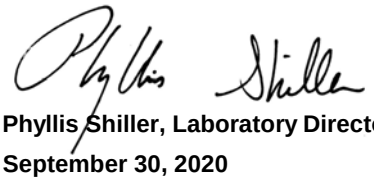
Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	
Di-isopropyl ether	ND	1.0	ug/L	1	09/22/20	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	1.0	ug/L	1	09/22/20	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	1.0	ug/L	1	09/22/20	MH	SW8260C (OXY)

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

TRIP BLANK INCLUDED.

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Phyllis Shiller, Laboratory Director

September 30, 2020

Reviewed and Released by: Greg Lawrence, Assistant Lab Director

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

September 30, 2020

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		09/17/20	13:25
Location Code:	AECOM-WILMINGTN	Received by:	B	09/18/20	16:20
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	127680				

Laboratory Data

SDG ID: GCG81121
Phoenix ID: CG81122

Project ID: LOCKHEED WILMINGTON MA 60552044.19
Client ID: 20A-AE106R3-091720-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Arsenic	< 0.004	0.004	mg/L	1	09/23/20	TH	SW6010D
Arsenic (Dissolved)	< 0.004	0.004	mg/L	1	09/22/20	TH	SW6010D
Iron (Dissolved)	0.095	0.011	mg/L	1	09/22/20	TH	SW6010D
Manganese (Dissolved)	0.171	0.001	mg/L	1	09/22/20	TH	SW6010D
Iron	0.106	0.010	mg/L	1	09/23/20	TH	SW6010D
Manganese	0.175	0.001	mg/L	1	09/23/20	TH	SW6010D
Total Organic Carbon	1.3	1.0	mg/L	1	09/22/20	BJA	SM5310B-11
EPH Extraction	Completed				09/23/20	JS/D	SW3510C
MA Petroleum Hydrocarbon (EPH)	Completed				09/18/20		MADEP EPH-04
Semi-Volatile Extraction	Completed				09/23/20	P/CG	SW3520C
Dissolved Metals Preparation	Completed				09/21/20	AG	SW3005A
Total Metals Digestion	Completed				09/22/20	AG	
MA Petroleum Hydrocarbon (VPH)	Completed				09/22/20	RM	MADEP VPH04
Volatiles							
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
1,1,1-Trichloroethane	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L	1	09/23/20	MH	SW8260C
1,1,2-Trichloroethane	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
1,1-Dichloroethane	1.3	1.0	ug/L	1	09/23/20	MH	SW8260C
1,1-Dichloroethene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
1,1-Dichloropropene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
1,2,3-Trichlorobenzene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
1,2,3-Trichloropropane	ND	0.50	ug/L	1	09/23/20	MH	SW8260C
1,2,4-Trichlorobenzene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
1,2,4-Trimethylbenzene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	0.50	ug/L	1	09/23/20	MH	SW8260C
1,2-Dibromoethane	ND	0.50	ug/L	1	09/23/20	MH	SW8260C

Project ID: LOCKHEED WILMINGTON MA 60552044.19 Phoenix I.D.: CG81122

Client ID: 20A-AE106R3-091720-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	
1,2-Dichlorobenzene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
1,2-Dichloroethane	ND	0.60	ug/L	1	09/23/20	MH	SW8260C
1,2-Dichloropropane	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
1,3,5-Trimethylbenzene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
1,3-Dichlorobenzene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
1,3-Dichloropropane	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
1,4-Dichlorobenzene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
2,2-Dichloropropane	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
2-Chlorotoluene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
2-Hexanone	ND	5.0	ug/L	1	09/23/20	MH	SW8260C
4-Chlorotoluene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
4-Methyl-2-pentanone	ND	5.0	ug/L	1	09/23/20	MH	SW8260C
Acetone	ND	25	ug/L	1	09/23/20	MH	SW8260C
Benzene	ND	0.70	ug/L	1	09/23/20	MH	SW8260C
Bromobenzene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
Bromochloromethane	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
Bromodichloromethane	ND	0.50	ug/L	1	09/23/20	MH	SW8260C
Bromoform	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
Bromomethane	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
Carbon Disulfide	ND	5.0	ug/L	1	09/23/20	MH	SW8260C
Carbon tetrachloride	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
Chlorobenzene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
Chloroethane	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
Chloroform	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
Chloromethane	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
cis-1,2-Dichloroethene	19	1.0	ug/L	1	09/23/20	MH	SW8260C
cis-1,3-Dichloropropene	ND	0.40	ug/L	1	09/23/20	MH	SW8260C
Dibromochloromethane	ND	0.50	ug/L	1	09/23/20	MH	SW8260C
Dibromomethane	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
Dichlorodifluoromethane	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
Ethylbenzene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
Hexachlorobutadiene	ND	0.40	ug/L	1	09/23/20	MH	SW8260C
Isopropylbenzene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
m&p-Xylene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
Methyl ethyl ketone	ND	5.0	ug/L	1	09/23/20	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
Methylene chloride	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
Naphthalene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
n-Butylbenzene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
n-Propylbenzene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
o-Xylene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
p-Isopropyltoluene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
sec-Butylbenzene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
Styrene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
tert-Butylbenzene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
Tetrachloroethene	2.5	1.0	ug/L	1	09/23/20	MH	SW8260C
Tetrahydrofuran (THF)	ND	2.5	ug/L	1	09/23/20	MH	SW8260C
Toluene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
trans-1,2-Dichloroethene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	
trans-1,3-Dichloropropene	ND	0.40	ug/L	1	09/23/20	MH	SW8260C
Trichloroethene	5.5	1.0	ug/L	1	09/23/20	MH	SW8260C
Trichlorofluoromethane	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
Trichlorotrifluoroethane	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
Vinyl chloride	1.6	1.0	ug/L	1	09/23/20	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	98		%	1	09/23/20	MH	70 - 130 %
% Bromofluorobenzene	99		%	1	09/23/20	MH	70 - 130 %
% Dibromofluoromethane	96		%	1	09/23/20	MH	70 - 130 %
% Toluene-d8	103		%	1	09/23/20	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	100	ug/L	1	09/23/20	MH	SW8260C (OXY)
Diethyl ether	ND	1.0	ug/L	1	09/23/20	MH	SW8260C (OXY)
Di-isopropyl ether	ND	1.0	ug/L	1	09/23/20	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	1.0	ug/L	1	09/23/20	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	1.0	ug/L	1	09/23/20	MH	SW8260C (OXY)
Semivolatiles by SIM, PAH							
2-Methylnaphthalene	ND	0.47	ug/L	1	09/24/20	WB	SW8270D (SIM)
Acenaphthene	ND	0.47	ug/L	1	09/24/20	WB	SW8270D (SIM)
Acenaphthylene	ND	0.09	ug/L	1	09/24/20	WB	SW8270D (SIM)
Anthracene	ND	0.09	ug/L	1	09/24/20	WB	SW8270D (SIM)
Benz(a)anthracene	ND	0.09	ug/L	1	09/24/20	WB	SW8270D (SIM)
Benzo(a)pyrene	ND	0.19	ug/L	1	09/24/20	WB	SW8270D (SIM)
Benzo(b)fluoranthene	ND	0.09	ug/L	1	09/24/20	WB	SW8270D (SIM)
Benzo(ghi)perylene	ND	0.02	ug/L	1	09/24/20	WB	SW8270D (SIM)
Benzo(k)fluoranthene	ND	0.09	ug/L	1	09/24/20	WB	SW8270D (SIM)
Chrysene	ND	0.05	ug/L	1	09/24/20	WB	SW8270D (SIM)
Dibenz(a,h)anthracene	ND	0.02	ug/L	1	09/24/20	WB	SW8270D (SIM)
Fluoranthene	ND	0.47	ug/L	1	09/24/20	WB	SW8270D (SIM)
Fluorene	ND	0.09	ug/L	1	09/24/20	WB	SW8270D (SIM)
Indeno(1,2,3-cd)pyrene	ND	0.09	ug/L	1	09/24/20	WB	SW8270D (SIM)
Naphthalene	ND	0.47	ug/L	1	09/24/20	WB	SW8270D (SIM)
Phenanthrene	ND	0.47	ug/L	1	09/24/20	WB	SW8270D (SIM)
Pyrene	ND	0.07	ug/L	1	09/24/20	WB	SW8270D (SIM)
QA/QC Surrogates							
% 2-Fluorobiphenyl	54		%	1	09/24/20	WB	40 - 140 %
% Nitrobenzene-d5	82		%	1	09/24/20	WB	40 - 140 %
% Terphenyl-d14	70		%	1	09/24/20	WB	40 - 140 %
MA EPH Aliphatic/Aromatic Ranges							
C11-C22 Aromatic Hydrocarbons 1,2*	ND	200	ug/L	1	09/24/20	AW	MAEPH 5/2004
C11-C22 Aromatic Hydrocarbons Unadj	ND	200	ug/L	1	09/24/20	AW	MAEPH 5/2004
C19-C36 Aliphatic Hydrocarbons 1*	ND	200	ug/L	1	09/24/20	AW	MAEPH 5/2004
C9-C18 Aliphatic Hydrocarbons 1*	ND	200	ug/L	1	09/24/20	AW	MAEPH 5/2004
Total TPH 1,2*	ND	200	ug/L	1	09/24/20	AW	MAEPH 5/2004
QA/QC Surrogates							
% 1-chlorooctadecane (aliphatic)	41		%	1	09/24/20	AW	40 - 140 %
% 2-Bromonaphthalene (Fractionation)	113		%	1	09/24/20	AW	40 - 140 %

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	
% 2-Fluorobiphenyl (Fractionation)	110		%	1	09/24/20	AW	40 - 140 %
% o-terphenyl (aromatic)	92		%	1	09/24/20	AW	40 - 140 %

MA Volatile Petroleum Hydrocarbons (VPH)

Unadjusted C5-C8 Aliphatics (*1)	ND	100	ug/L	1	09/22/20	RM	MA VPH 5/2004
Unadjusted C9-C12 Aliphatics (*1)	ND	100	ug/L	1	09/22/20	RM	MA VPH 5/2004
C5-C8 Aliphatic Hydrocarbons *1,2	ND	100	ug/L	1	09/22/20	RM	MA VPH 5/2004
C9-C12 Aliphatic Hydrocarbons *1,3	ND	100	ug/L	1	09/22/20	RM	MA VPH 5/2004
C9-C10 Aromatic Hydrocarbons *1	ND	100	ug/L	1	09/22/20	RM	MA VPH 5/2004
Benzene	ND	1.0	ug/L	1	09/22/20	RM	MA VPH 5/2004
Ethyl Benzene	ND	1.0	ug/L	1	09/22/20	RM	MA VPH 5/2004
MTBE	ND	1.0	ug/L	1	09/22/20	RM	MA VPH 5/2004
Naphthalene	ND	5.0	ug/L	1	09/22/20	RM	MA VPH 5/2004
Toluene	ND	1.0	ug/L	1	09/22/20	RM	MA VPH 5/2004
m,p-Xylenes	ND	2.0	ug/L	1	09/22/20	RM	MA VPH 5/2004
o-Xylene	ND	1.0	ug/L	1	09/22/20	RM	MA VPH 5/2004
QA/QC Surrogates							
% 2,5-Dibromotoluene (FID)	98		%	1	09/22/20	RM	70 - 130 %
% 2,5-Dibromotoluene (PID)	93		%	1	09/22/20	RM	70 - 130 %

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

MAEPH:
1* Hydrocarbon range data exclude concentrations of any surrogate(s) and/or internal standards eluting in that range.
2* C11-C12 Aromatic Hydrocarbons exclude the concentration of Target PAH analytes eluting in that range.

VPH:
*1 Range data exclude conc.s of any surrogate(s) and/or Int. std.s eluting in that range.
*2 C5-C8 and C9-C12 Aliphatic exclude the conc. of Target Analytes in that range.
*3 C9-C12 Aliphatic also exclude C9-C10 Aromatic Hydrocarbon

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.



Phyllis Shiller, Laboratory Director

September 30, 2020

Reviewed and Released by: Greg Lawrence, Assistant Lab Director

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

September 30, 2020

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		09/17/20	13:50
Location Code:	AECOM-WILMINGTN	Received by:	B	09/18/20	16:20
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	127680				

Laboratory Data

SDG ID: GCG81121
Phoenix ID: CG81123

Project ID: LOCKHEED WILMINGTON MA 60552044.19
Client ID: 20A-AE106R5-091720-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
EPH Extraction	Completed				09/23/20	JS/D	SW3510C
MA Petroleum Hydrocarbon (EPH)	Completed				09/18/20		MADEP EPH-04
Semi-Volatile Extraction	Completed				09/23/20	P/CG	SW3520C
MA Petroleum Hydrocarbon (VPH)	Completed				09/22/20	RM	MADEP VPH04
Volatiles							
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
1,1,1-Trichloroethane	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L	1	09/23/20	MH	SW8260C
1,1,2-Trichloroethane	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
1,1-Dichloroethane	1.3	1.0	ug/L	1	09/23/20	MH	SW8260C
1,1-Dichloroethene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
1,1-Dichloropropene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
1,2,3-Trichlorobenzene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
1,2,3-Trichloropropane	ND	0.50	ug/L	1	09/23/20	MH	SW8260C
1,2,4-Trichlorobenzene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
1,2,4-Trimethylbenzene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	0.50	ug/L	1	09/23/20	MH	SW8260C
1,2-Dibromoethane	ND	0.50	ug/L	1	09/23/20	MH	SW8260C
1,2-Dichlorobenzene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
1,2-Dichloroethane	ND	0.60	ug/L	1	09/23/20	MH	SW8260C
1,2-Dichloropropane	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
1,3,5-Trimethylbenzene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
1,3-Dichlorobenzene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
1,3-Dichloropropane	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
1,4-Dichlorobenzene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
2,2-Dichloropropane	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
2-Chlorotoluene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C

Project ID: LOCKHEED WILMINGTON MA 60552044.19 Phoenix I.D.: CG81123

Client ID: 20A-AE106R5-091720-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	
2-Hexanone	ND	5.0	ug/L	1	09/23/20	MH	SW8260C
4-Chlorotoluene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
4-Methyl-2-pentanone	ND	5.0	ug/L	1	09/23/20	MH	SW8260C
Acetone	ND	25	ug/L	1	09/23/20	MH	SW8260C
Benzene	ND	0.70	ug/L	1	09/23/20	MH	SW8260C
Bromobenzene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
Bromochloromethane	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
Bromodichloromethane	ND	0.50	ug/L	1	09/23/20	MH	SW8260C
Bromoform	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
Bromomethane	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
Carbon Disulfide	ND	5.0	ug/L	1	09/23/20	MH	SW8260C
Carbon tetrachloride	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
Chlorobenzene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
Chloroethane	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
Chloroform	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
Chloromethane	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
cis-1,2-Dichloroethene	17	1.0	ug/L	1	09/23/20	MH	SW8260C
cis-1,3-Dichloropropene	ND	0.40	ug/L	1	09/23/20	MH	SW8260C
Dibromochloromethane	ND	0.50	ug/L	1	09/23/20	MH	SW8260C
Dibromomethane	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
Dichlorodifluoromethane	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
Ethylbenzene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
Hexachlorobutadiene	ND	0.40	ug/L	1	09/23/20	MH	SW8260C
Isopropylbenzene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
m&p-Xylene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
Methyl ethyl ketone	ND	5.0	ug/L	1	09/23/20	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
Methylene chloride	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
Naphthalene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
n-Butylbenzene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
n-Propylbenzene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
o-Xylene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
p-Isopropyltoluene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
sec-Butylbenzene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
Styrene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
tert-Butylbenzene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
Tetrachloroethene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
Tetrahydrofuran (THF)	ND	2.5	ug/L	1	09/23/20	MH	SW8260C
Toluene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
trans-1,2-Dichloroethene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
trans-1,3-Dichloropropene	ND	0.40	ug/L	1	09/23/20	MH	SW8260C
Trichloroethene	26	1.0	ug/L	1	09/23/20	MH	SW8260C
Trichlorofluoromethane	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
Trichlorotrifluoroethane	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
Vinyl chloride	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	98		%	1	09/23/20	MH	70 - 130 %
% Bromofluorobenzene	99		%	1	09/23/20	MH	70 - 130 %
% Dibromofluoromethane	97		%	1	09/23/20	MH	70 - 130 %

Ver 1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	
% Toluene-d8	104		%	1	09/23/20	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	100	ug/L	1	09/23/20	MH	SW8260C (OXY)
Diethyl ether	ND	1.0	ug/L	1	09/23/20	MH	SW8260C (OXY)
Di-isopropyl ether	ND	1.0	ug/L	1	09/23/20	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	1.0	ug/L	1	09/23/20	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	1.0	ug/L	1	09/23/20	MH	SW8260C (OXY)
Semivolatiles by SIM, PAH							
2-Methylnaphthalene	ND	0.47	ug/L	1	09/24/20	WB	SW8270D (SIM)
Acenaphthene	ND	0.47	ug/L	1	09/24/20	WB	SW8270D (SIM)
Acenaphthylene	ND	0.09	ug/L	1	09/24/20	WB	SW8270D (SIM)
Anthracene	ND	0.09	ug/L	1	09/24/20	WB	SW8270D (SIM)
Benz(a)anthracene	ND	0.09	ug/L	1	09/24/20	WB	SW8270D (SIM)
Benzo(a)pyrene	ND	0.19	ug/L	1	09/24/20	WB	SW8270D (SIM)
Benzo(b)fluoranthene	ND	0.09	ug/L	1	09/24/20	WB	SW8270D (SIM)
Benzo(ghi)perylene	ND	0.02	ug/L	1	09/24/20	WB	SW8270D (SIM)
Benzo(k)fluoranthene	ND	0.09	ug/L	1	09/24/20	WB	SW8270D (SIM)
Chrysene	ND	0.05	ug/L	1	09/24/20	WB	SW8270D (SIM)
Dibenz(a,h)anthracene	ND	0.02	ug/L	1	09/24/20	WB	SW8270D (SIM)
Fluoranthene	ND	0.47	ug/L	1	09/24/20	WB	SW8270D (SIM)
Fluorene	ND	0.09	ug/L	1	09/24/20	WB	SW8270D (SIM)
Indeno(1,2,3-cd)pyrene	ND	0.09	ug/L	1	09/24/20	WB	SW8270D (SIM)
Naphthalene	ND	0.47	ug/L	1	09/24/20	WB	SW8270D (SIM)
Phenanthrene	ND	0.47	ug/L	1	09/24/20	WB	SW8270D (SIM)
Pyrene	ND	0.07	ug/L	1	09/24/20	WB	SW8270D (SIM)
QA/QC Surrogates							
% 2-Fluorobiphenyl	54		%	1	09/24/20	WB	40 - 140 %
% Nitrobenzene-d5	84		%	1	09/24/20	WB	40 - 140 %
% Terphenyl-d14	67		%	1	09/24/20	WB	40 - 140 %
1,4-dioxane							
1,4-dioxane	0.40	0.20	ug/l	1	09/28/20	AW	SW8270DSIM
QA/QC Surrogates							
% 1,4-dioxane-d8	92		%	1	09/28/20	AW	40 - 140 %
Extraction for 1,4-Dioxane	Completed				09/25/20	S/S	
MA EPH Aliphatic/Aromatic Ranges							
C11-C22 Aromatic Hydrocarbons 1,2*	ND	200	ug/L	1	09/24/20	AW	MAEPH 5/2004
C11-C22 Aromatic Hydrocarbons Unadj	ND	200	ug/L	1	09/24/20	AW	MAEPH 5/2004
C19-C36 Aliphatic Hydrocarbons 1*	ND	200	ug/L	1	09/24/20	AW	MAEPH 5/2004
C9-C18 Aliphatic Hydrocarbons 1*	ND	200	ug/L	1	09/24/20	AW	MAEPH 5/2004
Total TPH 1,2*	ND	200	ug/L	1	09/24/20	AW	MAEPH 5/2004
QA/QC Surrogates							
% 1-chlorooctadecane (aliphatic)	78		%	1	09/24/20	AW	40 - 140 %
% 2-Bromonaphthalene (Fractionation)	113		%	1	09/24/20	AW	40 - 140 %
% 2-Fluorobiphenyl (Fractionation)	112		%	1	09/24/20	AW	40 - 140 %
% o-terphenyl (aromatic)	88		%	1	09/24/20	AW	40 - 140 %

Project ID: LOCKHEED WILMINGTON MA 60552044.19 Phoenix I.D.: CG81123
Client ID: 20A-AE106R5-091720-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	
MA Volatile Petroleum Hydrocarbons (VPH)							
Unadjusted C5-C8 Aliphatics (*1)	ND	100	ug/L	1	09/22/20	RM	MA VPH 5/2004
Unadjusted C9-C12 Aliphatics (*1)	ND	100	ug/L	1	09/22/20	RM	MA VPH 5/2004
C5-C8 Aliphatic Hydrocarbons *1,2	ND	100	ug/L	1	09/22/20	RM	MA VPH 5/2004
C9-C12 Aliphatic Hydrocarbons *1,3	ND	100	ug/L	1	09/22/20	RM	MA VPH 5/2004
C9-C10 Aromatic Hydrocarbons *1	ND	100	ug/L	1	09/22/20	RM	MA VPH 5/2004
Benzene	ND	1.0	ug/L	1	09/22/20	RM	MA VPH 5/2004
Ethyl Benzene	ND	1.0	ug/L	1	09/22/20	RM	MA VPH 5/2004
MTBE	ND	1.0	ug/L	1	09/22/20	RM	MA VPH 5/2004
Naphthalene	ND	5.0	ug/L	1	09/22/20	RM	MA VPH 5/2004
Toluene	ND	1.0	ug/L	1	09/22/20	RM	MA VPH 5/2004
m,p-Xylenes	ND	2.0	ug/L	1	09/22/20	RM	MA VPH 5/2004
o-Xylene	ND	1.0	ug/L	1	09/22/20	RM	MA VPH 5/2004
QA/QC Surrogates							
% 2,5-Dibromotoluene (FID)	110		%	1	09/22/20	RM	70 - 130 %
% 2,5-Dibromotoluene (PID)	96		%	1	09/22/20	RM	70 - 130 %

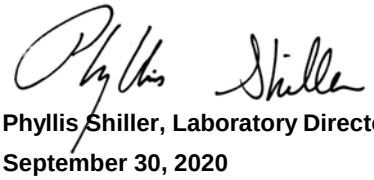
RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

MAEPH:
1* Hydrocarbon range data exclude concentrations of any surrogate(s) and/or internal standards eluting in that range.
2* C11-C12 Aromatic Hydrocarbons exclude the concentration of Target PAH analytes eluting in that range.

VPH:
*1 Range data exclude conc.s of any surrogate(s) and/or Int. std.s eluting in that range.
*2 C5-C8 and C9-C12 Aliphatic exclude the conc. of Target Analytes in that range.
*3 C9-C12 Aliphatic also exclude C9-C10 Aromatic Hydrocarbon

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.



Phyllis Shiller, Laboratory Director
September 30, 2020
Reviewed and Released by: Greg Lawrence, Assistant Lab Director

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

September 30, 2020

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		09/18/20	10:20
Location Code:	AECOM-WILMINGTN	Received by:	B	09/18/20	16:20
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	127680				

Laboratory Data

SDG ID: GCG81121
Phoenix ID: CG81124

Project ID: LOCKHEED WILMINGTON MA 60552044.19
Client ID: 20A-AE101S-091820-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Volatiles							
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
1,1,1-Trichloroethane	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L	1	09/23/20	MH	SW8260C
1,1,2-Trichloroethane	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
1,1-Dichloroethane	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
1,1-Dichloroethene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
1,1-Dichloropropene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
1,2,3-Trichlorobenzene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
1,2,3-Trichloropropane	ND	0.50	ug/L	1	09/23/20	MH	SW8260C
1,2,4-Trichlorobenzene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
1,2,4-Trimethylbenzene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	0.50	ug/L	1	09/23/20	MH	SW8260C
1,2-Dibromoethane	ND	0.50	ug/L	1	09/23/20	MH	SW8260C
1,2-Dichlorobenzene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
1,2-Dichloroethane	ND	0.60	ug/L	1	09/23/20	MH	SW8260C
1,2-Dichloropropane	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
1,3,5-Trimethylbenzene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
1,3-Dichlorobenzene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
1,3-Dichloropropane	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
1,4-Dichlorobenzene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
2,2-Dichloropropane	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
2-Chlorotoluene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
2-Hexanone	ND	5.0	ug/L	1	09/23/20	MH	SW8260C
4-Chlorotoluene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
4-Methyl-2-pentanone	ND	5.0	ug/L	1	09/23/20	MH	SW8260C
Acetone	ND	25	ug/L	1	09/23/20	MH	SW8260C

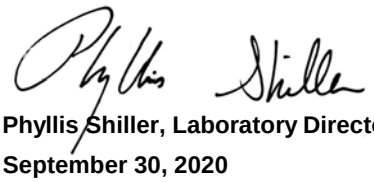
Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	
Benzene	ND	0.70	ug/L	1	09/23/20	MH	SW8260C
Bromobenzene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
Bromochloromethane	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
Bromodichloromethane	ND	0.50	ug/L	1	09/23/20	MH	SW8260C
Bromoform	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
Bromomethane	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
Carbon Disulfide	ND	5.0	ug/L	1	09/23/20	MH	SW8260C
Carbon tetrachloride	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
Chlorobenzene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
Chloroethane	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
Chloroform	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
Chloromethane	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
cis-1,2-Dichloroethene	39	1.0	ug/L	1	09/23/20	MH	SW8260C
cis-1,3-Dichloropropene	ND	0.40	ug/L	1	09/23/20	MH	SW8260C
Dibromochloromethane	ND	0.50	ug/L	1	09/23/20	MH	SW8260C
Dibromomethane	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
Dichlorodifluoromethane	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
Ethylbenzene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
Hexachlorobutadiene	ND	0.40	ug/L	1	09/23/20	MH	SW8260C
Isopropylbenzene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
m&p-Xylene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
Methyl ethyl ketone	ND	5.0	ug/L	1	09/23/20	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
Methylene chloride	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
Naphthalene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
n-Butylbenzene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
n-Propylbenzene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
o-Xylene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
p-Isopropyltoluene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
sec-Butylbenzene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
Styrene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
tert-Butylbenzene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
Tetrachloroethene	4.4	1.0	ug/L	1	09/23/20	MH	SW8260C
Tetrahydrofuran (THF)	ND	2.5	ug/L	1	09/23/20	MH	SW8260C
Toluene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
trans-1,2-Dichloroethene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
trans-1,3-Dichloropropene	ND	0.40	ug/L	1	09/23/20	MH	SW8260C
Trichloroethene	3.9	1.0	ug/L	1	09/23/20	MH	SW8260C
Trichlorofluoromethane	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
Trichlorotrifluoroethane	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
Vinyl chloride	1.2	1.0	ug/L	1	09/23/20	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	99		%	1	09/23/20	MH	70 - 130 %
% Bromofluorobenzene	99		%	1	09/23/20	MH	70 - 130 %
% Dibromofluoromethane	95		%	1	09/23/20	MH	70 - 130 %
% Toluene-d8	106		%	1	09/23/20	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	100	ug/L	1	09/23/20	MH	SW8260C (OXY)
Diethyl ether	ND	1.0	ug/L	1	09/23/20	MH	SW8260C (OXY)

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	
Di-isopropyl ether	ND	1.0	ug/L	1	09/23/20	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	1.0	ug/L	1	09/23/20	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	1.0	ug/L	1	09/23/20	MH	SW8260C (OXY)
1,4-dioxane							
1,4-dioxane	0.23	0.20	ug/l	1	09/28/20	AW	SW8270DSIM
QA/QC Surrogates							
% 1,4-dioxane-d8	84		%	1	09/28/20	AW	40 - 140 %
Extraction for 1,4-Dioxane	Completed				09/25/20	S/S	

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
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Phyllis Shiller, Laboratory Director
September 30, 2020
Reviewed and Released by: Greg Lawrence, Assistant Lab Director

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

September 30, 2020

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		09/18/20	11:05
Location Code:	AECOM-WILMINGTN	Received by:	B	09/18/20	16:20
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	127680				

Laboratory Data

SDG ID: GCG81121
Phoenix ID: CG81125

Project ID: LOCKHEED WILMINGTON MA 60552044.19
Client ID: 20A-AE101D-091820-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Volatiles							
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
1,1,1-Trichloroethane	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L	1	09/23/20	MH	SW8260C
1,1,2-Trichloroethane	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
1,1-Dichloroethane	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
1,1-Dichloroethene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
1,1-Dichloropropene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
1,2,3-Trichlorobenzene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
1,2,3-Trichloropropane	ND	0.50	ug/L	1	09/23/20	MH	SW8260C
1,2,4-Trichlorobenzene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
1,2,4-Trimethylbenzene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	0.50	ug/L	1	09/23/20	MH	SW8260C
1,2-Dibromoethane	ND	0.50	ug/L	1	09/23/20	MH	SW8260C
1,2-Dichlorobenzene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
1,2-Dichloroethane	ND	0.60	ug/L	1	09/23/20	MH	SW8260C
1,2-Dichloropropane	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
1,3,5-Trimethylbenzene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
1,3-Dichlorobenzene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
1,3-Dichloropropane	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
1,4-Dichlorobenzene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
2,2-Dichloropropane	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
2-Chlorotoluene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
2-Hexanone	ND	5.0	ug/L	1	09/23/20	MH	SW8260C
4-Chlorotoluene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
4-Methyl-2-pentanone	ND	5.0	ug/L	1	09/23/20	MH	SW8260C
Acetone	ND	25	ug/L	1	09/23/20	MH	SW8260C

Project ID: LOCKHEED WILMINGTON MA 60552044.19 Phoenix I.D.: CG81125

Client ID: 20A-AE101D-091820-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	
Benzene	ND	0.70	ug/L	1	09/23/20	MH	SW8260C
Bromobenzene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
Bromochloromethane	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
Bromodichloromethane	ND	0.50	ug/L	1	09/23/20	MH	SW8260C
Bromoform	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
Bromomethane	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
Carbon Disulfide	ND	5.0	ug/L	1	09/23/20	MH	SW8260C
Carbon tetrachloride	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
Chlorobenzene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
Chloroethane	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
Chloroform	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
Chloromethane	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
cis-1,2-Dichloroethene	64	1.0	ug/L	1	09/23/20	MH	SW8260C
cis-1,3-Dichloropropene	ND	0.40	ug/L	1	09/23/20	MH	SW8260C
Dibromochloromethane	ND	0.50	ug/L	1	09/23/20	MH	SW8260C
Dibromomethane	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
Dichlorodifluoromethane	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
Ethylbenzene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
Hexachlorobutadiene	ND	0.40	ug/L	1	09/23/20	MH	SW8260C
Isopropylbenzene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
m&p-Xylene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
Methyl ethyl ketone	ND	5.0	ug/L	1	09/23/20	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
Methylene chloride	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
Naphthalene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
n-Butylbenzene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
n-Propylbenzene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
o-Xylene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
p-Isopropyltoluene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
sec-Butylbenzene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
Styrene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
tert-Butylbenzene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
Tetrachloroethene	2.3	1.0	ug/L	1	09/23/20	MH	SW8260C
Tetrahydrofuran (THF)	ND	2.5	ug/L	1	09/23/20	MH	SW8260C
Toluene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
trans-1,2-Dichloroethene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
trans-1,3-Dichloropropene	ND	0.40	ug/L	1	09/23/20	MH	SW8260C
Trichloroethene	14	1.0	ug/L	1	09/23/20	MH	SW8260C
Trichlorofluoromethane	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
Trichlorotrifluoroethane	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
Vinyl chloride	2.3	1.0	ug/L	1	09/23/20	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	100		%	1	09/23/20	MH	70 - 130 %
% Bromofluorobenzene	101		%	1	09/23/20	MH	70 - 130 %
% Dibromofluoromethane	97		%	1	09/23/20	MH	70 - 130 %
% Toluene-d8	104		%	1	09/23/20	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	100	ug/L	1	09/23/20	MH	SW8260C (OXY)
Diethyl ether	ND	1.0	ug/L	1	09/23/20	MH	SW8260C (OXY)

Ver 1

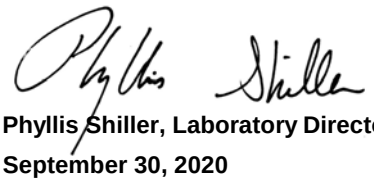
Project ID: LOCKHEED WILMINGTON MA 60552044.19 Phoenix I.D.: CG81125
Client ID: 20A-AE101D-091820-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	
Di-isopropyl ether	ND	1.0	ug/L	1	09/23/20	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	1.0	ug/L	1	09/23/20	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	1.0	ug/L	1	09/23/20	MH	SW8260C (OXY)
Client MS/MSD	Completed				09/23/20		
1,4-dioxane							
1,4-dioxane	0.31	0.20	ug/l	1	09/22/20	AW	SW8270DSIM
QA/QC Surrogates							
% 1,4-dioxane-d8	95		%	1	09/22/20	AW	40 - 140 %
Extraction for 1,4-Dioxane	Completed				09/21/20	S/S	

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

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Phyllis Shiller, Laboratory Director
September 30, 2020
Reviewed and Released by: Greg Lawrence, Assistant Lab Director

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

September 30, 2020

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		09/17/20	15:15
Location Code:	AECOM-WILMINGTN	Received by:	B	09/18/20	16:20
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	127680				

Laboratory Data

SDG ID: GCG81121
Phoenix ID: CG81126

Project ID: LOCKHEED WILMINGTON MA 60552044.19
Client ID: 20A-GZA14A-091720-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Arsenic	0.014	0.004	mg/L	1	09/23/20	TH	SW6010D
Arsenic (Dissolved)	0.012	0.004	mg/L	1	09/19/20	CPP	SW6010D
Iron (Dissolved)	13.7	0.011	mg/L	1	09/19/20	CPP	SW6010D
Manganese (Dissolved)	2.97	0.011	mg/L	10	09/22/20	EK	SW6010D
Iron	16.1	0.010	mg/L	1	09/23/20	TH	SW6010D
Manganese	3.06	0.010	mg/L	10	09/25/20	EK	SW6010D
Dissolved Metals Preparation	Completed				09/18/20	AG	SW3005A
Total Metals Digestion	Completed				09/22/20	AG	

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level

Comments:

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Phyllis Shiller, Laboratory Director
September 30, 2020
Reviewed and Released by: Greg Lawrence, Assistant Lab Director

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

September 30, 2020

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		09/18/20	12:10
Location Code:	AECOM-WILMINGTN	Received by:	B	09/18/20	16:20
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	127680				

Laboratory Data

SDG ID: GCG81121
Phoenix ID: CG81127

Project ID: LOCKHEED WILMINGTON MA 60552044.19
Client ID: 20A-MW4-091820-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Arsenic	< 0.004	0.004	mg/L	1	09/23/20	TH	SW6010D
Arsenic (Dissolved)	< 0.004	0.004	mg/L	1	09/19/20	CPP	SW6010D
Iron (Dissolved)	29.0	0.011	mg/L	1	09/19/20	CPP	SW6010D
Manganese (Dissolved)	1.49	0.001	mg/L	1	09/19/20	CPP	SW6010D
Iron	34.8	0.010	mg/L	1	09/23/20	TH	SW6010D
Manganese	1.57	0.001	mg/L	1	09/23/20	TH	SW6010D
Dissolved Metals Preparation	Completed				09/18/20	AG	SW3005A
Total Metals Digestion	Completed				09/22/20	AG	
Volatiles							
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
1,1,1-Trichloroethane	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L	1	09/23/20	MH	SW8260C
1,1,2-Trichloroethane	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
1,1-Dichloroethane	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
1,1-Dichloroethene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
1,1-Dichloropropene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
1,2,3-Trichlorobenzene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
1,2,3-Trichloropropane	ND	0.50	ug/L	1	09/23/20	MH	SW8260C
1,2,4-Trichlorobenzene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
1,2,4-Trimethylbenzene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	0.50	ug/L	1	09/23/20	MH	SW8260C
1,2-Dibromoethane	ND	0.50	ug/L	1	09/23/20	MH	SW8260C
1,2-Dichlorobenzene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
1,2-Dichloroethane	ND	0.60	ug/L	1	09/23/20	MH	SW8260C
1,2-Dichloropropane	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
1,3,5-Trimethylbenzene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
1,3-Dichlorobenzene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C

Project ID: LOCKHEED WILMINGTON MA 60552044.19 Phoenix I.D.: CG81127

Client ID: 20A-MW4-091820-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	
1,3-Dichloropropane	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
1,4-Dichlorobenzene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
2,2-Dichloropropane	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
2-Chlorotoluene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
2-Hexanone	ND	5.0	ug/L	1	09/23/20	MH	SW8260C
4-Chlorotoluene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
4-Methyl-2-pentanone	ND	5.0	ug/L	1	09/23/20	MH	SW8260C
Acetone	ND	25	ug/L	1	09/23/20	MH	SW8260C
Benzene	ND	0.70	ug/L	1	09/23/20	MH	SW8260C
Bromobenzene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
Bromochloromethane	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
Bromodichloromethane	ND	0.50	ug/L	1	09/23/20	MH	SW8260C
Bromoform	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
Bromomethane	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
Carbon Disulfide	ND	5.0	ug/L	1	09/23/20	MH	SW8260C
Carbon tetrachloride	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
Chlorobenzene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
Chloroethane	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
Chloroform	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
Chloromethane	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
cis-1,2-Dichloroethene	26	1.0	ug/L	1	09/23/20	MH	SW8260C
cis-1,3-Dichloropropene	ND	0.40	ug/L	1	09/23/20	MH	SW8260C
Dibromochloromethane	ND	0.50	ug/L	1	09/23/20	MH	SW8260C
Dibromomethane	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
Dichlorodifluoromethane	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
Ethylbenzene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
Hexachlorobutadiene	ND	0.40	ug/L	1	09/23/20	MH	SW8260C
Isopropylbenzene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
m&p-Xylene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
Methyl ethyl ketone	ND	5.0	ug/L	1	09/23/20	MH	SW8260C
Methyl t-butyl ether (MTBE)	6.5	1.0	ug/L	1	09/23/20	MH	SW8260C
Methylene chloride	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
Naphthalene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
n-Butylbenzene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
n-Propylbenzene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
o-Xylene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
p-Isopropyltoluene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
sec-Butylbenzene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
Styrene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
tert-Butylbenzene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
Tetrachloroethene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
Tetrahydrofuran (THF)	ND	2.5	ug/L	1	09/23/20	MH	SW8260C
Toluene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
trans-1,2-Dichloroethene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
trans-1,3-Dichloropropene	ND	0.40	ug/L	1	09/23/20	MH	SW8260C
Trichloroethene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
Trichlorofluoromethane	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
Trichlorotrifluoroethane	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
Vinyl chloride	1.5	1.0	ug/L	1	09/23/20	MH	SW8260C

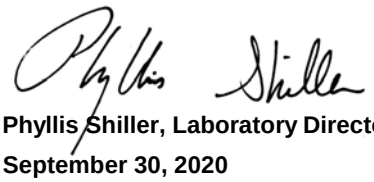
Project ID: LOCKHEED WILMINGTON MA 60552044.19 Phoenix I.D.: CG81127
Client ID: 20A-MW4-091820-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	100		%	1	09/23/20	MH	70 - 130 %
% Bromofluorobenzene	99		%	1	09/23/20	MH	70 - 130 %
% Dibromofluoromethane	94		%	1	09/23/20	MH	70 - 130 %
% Toluene-d8	106		%	1	09/23/20	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	100	ug/L	1	09/23/20	MH	SW8260C (OXY)
Diethyl ether	ND	1.0	ug/L	1	09/23/20	MH	SW8260C (OXY)
Di-isopropyl ether	1.0	1.0	ug/L	1	09/23/20	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	1.0	ug/L	1	09/23/20	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	1.0	ug/L	1	09/23/20	MH	SW8260C (OXY)
1,4-dioxane							
1,4-dioxane	0.84	0.20	ug/l	1	09/28/20	AW	SW8270DSIM
QA/QC Surrogates							
% 1,4-dioxane-d8	90		%	1	09/28/20	AW	40 - 140 %
Extraction for 1,4-Dioxane	Completed				09/25/20	S/S	

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

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Phyllis Shiller, Laboratory Director
September 30, 2020
Reviewed and Released by: Greg Lawrence, Assistant Lab Director

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

September 30, 2020

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		09/18/20	12:15
Location Code:	AECOM-WILMINGTN	Received by:	B	09/18/20	16:20
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	127680				

Laboratory Data

SDG ID: GCG81121
Phoenix ID: CG81128

Project ID: LOCKHEED WILMINGTON MA 60552044.19
Client ID: 20A-MW4-091820-2

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Arsenic	< 0.004	0.004	mg/L	1	09/23/20	TH	SW6010D
Arsenic (Dissolved)	< 0.004	0.004	mg/L	1	09/19/20	CPP	SW6010D
Iron (Dissolved)	29.4	0.011	mg/L	1	09/19/20	CPP	SW6010D
Manganese (Dissolved)	1.50	0.001	mg/L	1	09/19/20	CPP	SW6010D
Iron	35.9	0.010	mg/L	1	09/23/20	TH	SW6010D
Manganese	1.60	0.001	mg/L	1	09/23/20	TH	SW6010D
Dissolved Metals Preparation	Completed				09/18/20	AG	SW3005A
Total Metals Digestion	Completed				09/22/20	AG	
Volatiles							
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
1,1,1-Trichloroethane	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L	1	09/23/20	MH	SW8260C
1,1,2-Trichloroethane	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
1,1-Dichloroethane	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
1,1-Dichloroethene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
1,1-Dichloropropene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
1,2,3-Trichlorobenzene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
1,2,3-Trichloropropane	ND	0.50	ug/L	1	09/23/20	MH	SW8260C
1,2,4-Trichlorobenzene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
1,2,4-Trimethylbenzene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	0.50	ug/L	1	09/23/20	MH	SW8260C
1,2-Dibromoethane	ND	0.50	ug/L	1	09/23/20	MH	SW8260C
1,2-Dichlorobenzene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
1,2-Dichloroethane	ND	0.60	ug/L	1	09/23/20	MH	SW8260C
1,2-Dichloropropane	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
1,3,5-Trimethylbenzene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
1,3-Dichlorobenzene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C

Project ID: LOCKHEED WILMINGTON MA 60552044.19 Phoenix I.D.: CG81128

Client ID: 20A-MW4-091820-2

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	
1,3-Dichloropropane	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
1,4-Dichlorobenzene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
2,2-Dichloropropane	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
2-Chlorotoluene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
2-Hexanone	ND	5.0	ug/L	1	09/23/20	MH	SW8260C
4-Chlorotoluene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
4-Methyl-2-pentanone	ND	5.0	ug/L	1	09/23/20	MH	SW8260C
Acetone	ND	25	ug/L	1	09/23/20	MH	SW8260C
Benzene	ND	0.70	ug/L	1	09/23/20	MH	SW8260C
Bromobenzene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
Bromochloromethane	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
Bromodichloromethane	ND	0.50	ug/L	1	09/23/20	MH	SW8260C
Bromoform	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
Bromomethane	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
Carbon Disulfide	ND	5.0	ug/L	1	09/23/20	MH	SW8260C
Carbon tetrachloride	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
Chlorobenzene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
Chloroethane	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
Chloroform	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
Chloromethane	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
cis-1,2-Dichloroethene	27	1.0	ug/L	1	09/23/20	MH	SW8260C
cis-1,3-Dichloropropene	ND	0.40	ug/L	1	09/23/20	MH	SW8260C
Dibromochloromethane	ND	0.50	ug/L	1	09/23/20	MH	SW8260C
Dibromomethane	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
Dichlorodifluoromethane	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
Ethylbenzene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
Hexachlorobutadiene	ND	0.40	ug/L	1	09/23/20	MH	SW8260C
Isopropylbenzene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
m&p-Xylene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
Methyl ethyl ketone	ND	5.0	ug/L	1	09/23/20	MH	SW8260C
Methyl t-butyl ether (MTBE)	6.4	1.0	ug/L	1	09/23/20	MH	SW8260C
Methylene chloride	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
Naphthalene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
n-Butylbenzene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
n-Propylbenzene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
o-Xylene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
p-Isopropyltoluene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
sec-Butylbenzene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
Styrene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
tert-Butylbenzene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
Tetrachloroethene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
Tetrahydrofuran (THF)	ND	2.5	ug/L	1	09/23/20	MH	SW8260C
Toluene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
trans-1,2-Dichloroethene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
trans-1,3-Dichloropropene	ND	0.40	ug/L	1	09/23/20	MH	SW8260C
Trichloroethene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
Trichlorofluoromethane	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
Trichlorotrifluoroethane	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
Vinyl chloride	1.6	1.0	ug/L	1	09/23/20	MH	SW8260C

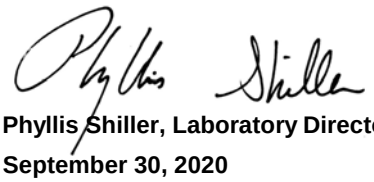
Project ID: LOCKHEED WILMINGTON MA 60552044.19 Phoenix I.D.: CG81128
Client ID: 20A-MW4-091820-2

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	99		%	1	09/23/20	MH	70 - 130 %
% Bromofluorobenzene	99		%	1	09/23/20	MH	70 - 130 %
% Dibromofluoromethane	93		%	1	09/23/20	MH	70 - 130 %
% Toluene-d8	105		%	1	09/23/20	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	100	ug/L	1	09/23/20	MH	SW8260C (OXY)
Diethyl ether	ND	1.0	ug/L	1	09/23/20	MH	SW8260C (OXY)
Di-isopropyl ether	1.0	1.0	ug/L	1	09/23/20	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	1.0	ug/L	1	09/23/20	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	1.0	ug/L	1	09/23/20	MH	SW8260C (OXY)
1,4-dioxane							
1,4-dioxane	0.83	0.20	ug/l	1	09/28/20	AW	SW8270DSIM
QA/QC Surrogates							
% 1,4-dioxane-d8	89		%	1	09/28/20	AW	40 - 140 %
Extraction for 1,4-Dioxane	Completed				09/25/20	S/S	

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
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Phyllis Shiller, Laboratory Director
September 30, 2020
Reviewed and Released by: Greg Lawrence, Assistant Lab Director

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

September 30, 2020

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		09/18/20	10:50
Location Code:	AECOM-WILMINGTN	Received by:	B	09/18/20	16:20
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	127680				

Laboratory Data

SDG ID: GCG81121
Phoenix ID: CG81129

Project ID: LOCKHEED WILMINGTON MA 60552044.19
Client ID: 20A-MW4A-091820-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Arsenic	0.009	0.004	mg/L	1	09/23/20	TH	SW6010D
Arsenic (Dissolved)	0.008	0.004	mg/L	1	09/19/20	CPP	SW6010D
Iron (Dissolved)	33.1	0.011	mg/L	1	09/19/20	CPP	SW6010D
Manganese (Dissolved)	1.37	0.001	mg/L	1	09/19/20	CPP	SW6010D
Iron	39.7	0.010	mg/L	1	09/23/20	TH	SW6010D
Manganese	1.44	0.001	mg/L	1	09/23/20	TH	SW6010D
Dissolved Metals Preparation	Completed				09/18/20	AG	SW3005A
Total Metals Digestion	Completed				09/22/20	AG	

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level

Comments:

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Phyllis Shiller, Laboratory Director
September 30, 2020
Reviewed and Released by: Greg Lawrence, Assistant Lab Director

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

September 30, 2020

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		09/17/20	14:10
Location Code:	AECOM-WILMINGTN	Received by:	B	09/18/20	16:20
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	127680				

Laboratory Data

SDG ID: GCG81121
Phoenix ID: CG81130

Project ID: LOCKHEED WILMINGTON MA 60552044.19
Client ID: 20A-AE106R1-091720-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Volatiles							
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
1,1,1-Trichloroethane	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L	1	09/23/20	MH	SW8260C
1,1,2-Trichloroethane	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
1,1-Dichloroethane	1.1	1.0	ug/L	1	09/23/20	MH	SW8260C
1,1-Dichloroethene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
1,1-Dichloropropene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
1,2,3-Trichlorobenzene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
1,2,3-Trichloropropane	ND	0.50	ug/L	1	09/23/20	MH	SW8260C
1,2,4-Trichlorobenzene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
1,2,4-Trimethylbenzene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	0.50	ug/L	1	09/23/20	MH	SW8260C
1,2-Dibromoethane	ND	0.50	ug/L	1	09/23/20	MH	SW8260C
1,2-Dichlorobenzene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
1,2-Dichloroethane	ND	0.60	ug/L	1	09/23/20	MH	SW8260C
1,2-Dichloropropane	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
1,3,5-Trimethylbenzene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
1,3-Dichlorobenzene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
1,3-Dichloropropane	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
1,4-Dichlorobenzene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
2,2-Dichloropropane	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
2-Chlorotoluene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
2-Hexanone	ND	5.0	ug/L	1	09/23/20	MH	SW8260C
4-Chlorotoluene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
4-Methyl-2-pentanone	ND	5.0	ug/L	1	09/23/20	MH	SW8260C
Acetone	ND	25	ug/L	1	09/23/20	MH	SW8260C

Project ID: LOCKHEED WILMINGTON MA 60552044.19 Phoenix I.D.: CG81130

Client ID: 20A-AE106R1-091720-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	
Benzene	ND	0.70	ug/L	1	09/23/20	MH	SW8260C
Bromobenzene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
Bromochloromethane	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
Bromodichloromethane	ND	0.50	ug/L	1	09/23/20	MH	SW8260C
Bromoform	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
Bromomethane	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
Carbon Disulfide	ND	5.0	ug/L	1	09/23/20	MH	SW8260C
Carbon tetrachloride	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
Chlorobenzene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
Chloroethane	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
Chloroform	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
Chloromethane	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
cis-1,2-Dichloroethene	14	1.0	ug/L	1	09/23/20	MH	SW8260C
cis-1,3-Dichloropropene	ND	0.40	ug/L	1	09/23/20	MH	SW8260C
Dibromochloromethane	ND	0.50	ug/L	1	09/23/20	MH	SW8260C
Dibromomethane	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
Dichlorodifluoromethane	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
Ethylbenzene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
Hexachlorobutadiene	ND	0.40	ug/L	1	09/23/20	MH	SW8260C
Isopropylbenzene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
m&p-Xylene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
Methyl ethyl ketone	ND	5.0	ug/L	1	09/23/20	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
Methylene chloride	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
Naphthalene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
n-Butylbenzene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
n-Propylbenzene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
o-Xylene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
p-Isopropyltoluene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
sec-Butylbenzene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
Styrene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
tert-Butylbenzene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
Tetrachloroethene	2.3	1.0	ug/L	1	09/23/20	MH	SW8260C
Tetrahydrofuran (THF)	ND	2.5	ug/L	1	09/23/20	MH	SW8260C
Toluene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
trans-1,2-Dichloroethene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
trans-1,3-Dichloropropene	ND	0.40	ug/L	1	09/23/20	MH	SW8260C
Trichloroethene	4.9	1.0	ug/L	1	09/23/20	MH	SW8260C
Trichlorofluoromethane	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
Trichlorotrifluoroethane	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
Vinyl chloride	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	99		%	1	09/23/20	MH	70 - 130 %
% Bromofluorobenzene	100		%	1	09/23/20	MH	70 - 130 %
% Dibromofluoromethane	95		%	1	09/23/20	MH	70 - 130 %
% Toluene-d8	103		%	1	09/23/20	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	100	ug/L	1	09/23/20	MH	SW8260C (OXY)
Diethyl ether	ND	1.0	ug/L	1	09/23/20	MH	SW8260C (OXY)

Ver 1

Project ID: LOCKHEED WILMINGTON MA 60552044.19 Phoenix I.D.: CG81130

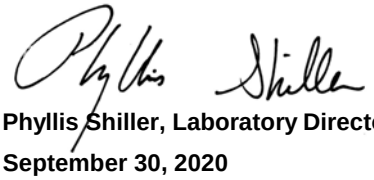
Client ID: 20A-AE106R1-091720-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	
Di-isopropyl ether	ND	1.0	ug/L	1	09/23/20	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	1.0	ug/L	1	09/23/20	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	1.0	ug/L	1	09/23/20	MH	SW8260C (OXY)

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

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Phyllis Shiller, Laboratory Director

September 30, 2020

Reviewed and Released by: Greg Lawrence, Assistant Lab Director

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

September 30, 2020

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		09/17/20	15:25
Location Code:	AECOM-WILMINGTN	Received by:	B	09/18/20	16:20
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	127680				

Laboratory Data

SDG ID: GCG81121
Phoenix ID: CG81131

Project ID: LOCKHEED WILMINGTON MA 60552044.19
Client ID: 20A-MW7-091720-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Volatiles							
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
1,1,1-Trichloroethane	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L	1	09/23/20	MH	SW8260C
1,1,2-Trichloroethane	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
1,1-Dichloroethane	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
1,1-Dichloroethene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
1,1-Dichloropropene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
1,2,3-Trichlorobenzene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
1,2,3-Trichloropropane	ND	0.50	ug/L	1	09/23/20	MH	SW8260C
1,2,4-Trichlorobenzene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
1,2,4-Trimethylbenzene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	0.50	ug/L	1	09/23/20	MH	SW8260C
1,2-Dibromoethane	ND	0.50	ug/L	1	09/23/20	MH	SW8260C
1,2-Dichlorobenzene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
1,2-Dichloroethane	ND	0.60	ug/L	1	09/23/20	MH	SW8260C
1,2-Dichloropropane	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
1,3,5-Trimethylbenzene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
1,3-Dichlorobenzene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
1,3-Dichloropropane	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
1,4-Dichlorobenzene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
2,2-Dichloropropane	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
2-Chlorotoluene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
2-Hexanone	ND	5.0	ug/L	1	09/23/20	MH	SW8260C
4-Chlorotoluene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
4-Methyl-2-pentanone	ND	5.0	ug/L	1	09/23/20	MH	SW8260C
Acetone	ND	25	ug/L	1	09/23/20	MH	SW8260C

Project ID: LOCKHEED WILMINGTON MA 60552044.19 Phoenix I.D.: CG81131

Client ID: 20A-MW7-091720-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	
Benzene	ND	0.70	ug/L	1	09/23/20	MH	SW8260C
Bromobenzene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
Bromochloromethane	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
Bromodichloromethane	ND	0.50	ug/L	1	09/23/20	MH	SW8260C
Bromoform	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
Bromomethane	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
Carbon Disulfide	ND	5.0	ug/L	1	09/23/20	MH	SW8260C
Carbon tetrachloride	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
Chlorobenzene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
Chloroethane	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
Chloroform	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
Chloromethane	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
cis-1,2-Dichloroethene	35	1.0	ug/L	1	09/23/20	MH	SW8260C
cis-1,3-Dichloropropene	ND	0.40	ug/L	1	09/23/20	MH	SW8260C
Dibromochloromethane	ND	0.50	ug/L	1	09/23/20	MH	SW8260C
Dibromomethane	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
Dichlorodifluoromethane	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
Ethylbenzene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
Hexachlorobutadiene	ND	0.40	ug/L	1	09/23/20	MH	SW8260C
Isopropylbenzene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
m&p-Xylene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
Methyl ethyl ketone	ND	5.0	ug/L	1	09/23/20	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
Methylene chloride	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
Naphthalene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
n-Butylbenzene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
n-Propylbenzene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
o-Xylene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
p-Isopropyltoluene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
sec-Butylbenzene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
Styrene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
tert-Butylbenzene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
Tetrachloroethene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
Tetrahydrofuran (THF)	ND	2.5	ug/L	1	09/23/20	MH	SW8260C
Toluene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
trans-1,2-Dichloroethene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
trans-1,3-Dichloropropene	ND	0.40	ug/L	1	09/23/20	MH	SW8260C
Trichloroethene	17	1.0	ug/L	1	09/23/20	MH	SW8260C
Trichlorofluoromethane	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
Trichlorotrifluoroethane	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
Vinyl chloride	2.8	1.0	ug/L	1	09/23/20	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	98		%	1	09/23/20	MH	70 - 130 %
% Bromofluorobenzene	99		%	1	09/23/20	MH	70 - 130 %
% Dibromofluoromethane	97		%	1	09/23/20	MH	70 - 130 %
% Toluene-d8	104		%	1	09/23/20	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	100	ug/L	1	09/23/20	MH	SW8260C (OXY)
Diethyl ether	ND	1.0	ug/L	1	09/23/20	MH	SW8260C (OXY)

Ver 1

Project ID: LOCKHEED WILMINGTON MA 60552044.19 Phoenix I.D.: CG81131

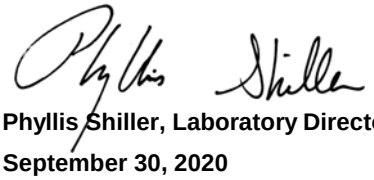
Client ID: 20A-MW7-091720-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	
Di-isopropyl ether	ND	1.0	ug/L	1	09/23/20	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	1.0	ug/L	1	09/23/20	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	1.0	ug/L	1	09/23/20	MH	SW8260C (OXY)

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.



Phyllis Shiller, Laboratory Director

September 30, 2020

Reviewed and Released by: Greg Lawrence, Assistant Lab Director

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

September 30, 2020

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		09/18/20	11:10
Location Code:	AECOM-WILMINGTN	Received by:	B	09/18/20	16:20
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	127680				

Laboratory Data

SDG ID: GCG81121
Phoenix ID: CG81132

Project ID: LOCKHEED WILMINGTON MA 60552044.19
Client ID: 20A-PS3-091820-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Volatiles							
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
1,1,1-Trichloroethane	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L	1	09/23/20	MH	SW8260C
1,1,2-Trichloroethane	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
1,1-Dichloroethane	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
1,1-Dichloroethene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
1,1-Dichloropropene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
1,2,3-Trichlorobenzene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
1,2,3-Trichloropropane	ND	0.50	ug/L	1	09/23/20	MH	SW8260C
1,2,4-Trichlorobenzene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
1,2,4-Trimethylbenzene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	0.50	ug/L	1	09/23/20	MH	SW8260C
1,2-Dibromoethane	ND	0.50	ug/L	1	09/23/20	MH	SW8260C
1,2-Dichlorobenzene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
1,2-Dichloroethane	ND	0.60	ug/L	1	09/23/20	MH	SW8260C
1,2-Dichloropropane	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
1,3,5-Trimethylbenzene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
1,3-Dichlorobenzene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
1,3-Dichloropropane	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
1,4-Dichlorobenzene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
2,2-Dichloropropane	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
2-Chlorotoluene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
2-Hexanone	ND	5.0	ug/L	1	09/23/20	MH	SW8260C
4-Chlorotoluene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
4-Methyl-2-pentanone	ND	5.0	ug/L	1	09/23/20	MH	SW8260C
Acetone	ND	25	ug/L	1	09/23/20	MH	SW8260C

Project ID: LOCKHEED WILMINGTON MA 60552044.19 Phoenix I.D.: CG81132

Client ID: 20A-PS3-091820-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	
Benzene	ND	0.70	ug/L	1	09/23/20	MH	SW8260C
Bromobenzene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
Bromochloromethane	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
Bromodichloromethane	ND	0.50	ug/L	1	09/23/20	MH	SW8260C
Bromoform	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
Bromomethane	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
Carbon Disulfide	ND	5.0	ug/L	1	09/23/20	MH	SW8260C
Carbon tetrachloride	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
Chlorobenzene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
Chloroethane	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
Chloroform	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
Chloromethane	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
cis-1,2-Dichloroethene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
cis-1,3-Dichloropropene	ND	0.40	ug/L	1	09/23/20	MH	SW8260C
Dibromochloromethane	ND	0.50	ug/L	1	09/23/20	MH	SW8260C
Dibromomethane	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
Dichlorodifluoromethane	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
Ethylbenzene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
Hexachlorobutadiene	ND	0.40	ug/L	1	09/23/20	MH	SW8260C
Isopropylbenzene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
m&p-Xylene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
Methyl ethyl ketone	ND	5.0	ug/L	1	09/23/20	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
Methylene chloride	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
Naphthalene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
n-Butylbenzene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
n-Propylbenzene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
o-Xylene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
p-Isopropyltoluene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
sec-Butylbenzene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
Styrene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
tert-Butylbenzene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
Tetrachloroethene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
Tetrahydrofuran (THF)	ND	2.5	ug/L	1	09/23/20	MH	SW8260C
Toluene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
trans-1,2-Dichloroethene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
trans-1,3-Dichloropropene	ND	0.40	ug/L	1	09/23/20	MH	SW8260C
Trichloroethene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
Trichlorofluoromethane	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
Trichlorotrifluoroethane	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
Vinyl chloride	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	99		%	1	09/23/20	MH	70 - 130 %
% Bromofluorobenzene	101		%	1	09/23/20	MH	70 - 130 %
% Dibromofluoromethane	93		%	1	09/23/20	MH	70 - 130 %
% Toluene-d8	107		%	1	09/23/20	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	100	ug/L	1	09/23/20	MH	SW8260C (OXY)
Diethyl ether	ND	1.0	ug/L	1	09/23/20	MH	SW8260C (OXY)

Ver 1

Project ID: LOCKHEED WILMINGTON MA 60552044.19 Phoenix I.D.: CG81132

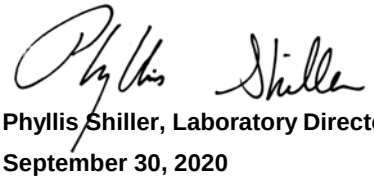
Client ID: 20A-PS3-091820-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	
Di-isopropyl ether	ND	1.0	ug/L	1	09/23/20	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	1.0	ug/L	1	09/23/20	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	1.0	ug/L	1	09/23/20	MH	SW8260C (OXY)

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

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Phyllis Shiller, Laboratory Director

September 30, 2020

Reviewed and Released by: Greg Lawrence, Assistant Lab Director

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

September 30, 2020

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		09/18/20	11:35
Location Code:	AECOM-WILMINGTN	Received by:	B	09/18/20	16:20
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	127680				

Laboratory Data

SDG ID: GCG81121
Phoenix ID: CG81133

Project ID: LOCKHEED WILMINGTON MA 60552044.19
Client ID: 20A-PS5D-091820-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Volatiles							
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
1,1,1-Trichloroethane	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L	1	09/23/20	MH	SW8260C
1,1,2-Trichloroethane	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
1,1-Dichloroethane	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
1,1-Dichloroethene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
1,1-Dichloropropene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
1,2,3-Trichlorobenzene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
1,2,3-Trichloropropane	ND	0.50	ug/L	1	09/23/20	MH	SW8260C
1,2,4-Trichlorobenzene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
1,2,4-Trimethylbenzene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	0.50	ug/L	1	09/23/20	MH	SW8260C
1,2-Dibromoethane	ND	0.50	ug/L	1	09/23/20	MH	SW8260C
1,2-Dichlorobenzene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
1,2-Dichloroethane	ND	0.60	ug/L	1	09/23/20	MH	SW8260C
1,2-Dichloropropane	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
1,3,5-Trimethylbenzene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
1,3-Dichlorobenzene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
1,3-Dichloropropane	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
1,4-Dichlorobenzene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
2,2-Dichloropropane	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
2-Chlorotoluene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
2-Hexanone	ND	5.0	ug/L	1	09/23/20	MH	SW8260C
4-Chlorotoluene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
4-Methyl-2-pentanone	ND	5.0	ug/L	1	09/23/20	MH	SW8260C
Acetone	ND	25	ug/L	1	09/23/20	MH	SW8260C

Project ID: LOCKHEED WILMINGTON MA 60552044.19 Phoenix I.D.: CG81133

Client ID: 20A-PS5D-091820-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	
Benzene	ND	0.70	ug/L	1	09/23/20	MH	SW8260C
Bromobenzene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
Bromochloromethane	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
Bromodichloromethane	ND	0.50	ug/L	1	09/23/20	MH	SW8260C
Bromoform	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
Bromomethane	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
Carbon Disulfide	ND	5.0	ug/L	1	09/23/20	MH	SW8260C
Carbon tetrachloride	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
Chlorobenzene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
Chloroethane	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
Chloroform	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
Chloromethane	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
cis-1,2-Dichloroethene	13	1.0	ug/L	1	09/23/20	MH	SW8260C
cis-1,3-Dichloropropene	ND	0.40	ug/L	1	09/23/20	MH	SW8260C
Dibromochloromethane	ND	0.50	ug/L	1	09/23/20	MH	SW8260C
Dibromomethane	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
Dichlorodifluoromethane	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
Ethylbenzene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
Hexachlorobutadiene	ND	0.40	ug/L	1	09/23/20	MH	SW8260C
Isopropylbenzene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
m&p-Xylene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
Methyl ethyl ketone	ND	5.0	ug/L	1	09/23/20	MH	SW8260C
Methyl t-butyl ether (MTBE)	1.5	1.0	ug/L	1	09/23/20	MH	SW8260C
Methylene chloride	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
Naphthalene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
n-Butylbenzene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
n-Propylbenzene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
o-Xylene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
p-Isopropyltoluene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
sec-Butylbenzene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
Styrene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
tert-Butylbenzene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
Tetrachloroethene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
Tetrahydrofuran (THF)	ND	2.5	ug/L	1	09/23/20	MH	SW8260C
Toluene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
trans-1,2-Dichloroethene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
trans-1,3-Dichloropropene	ND	0.40	ug/L	1	09/23/20	MH	SW8260C
Trichloroethene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
Trichlorofluoromethane	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
Trichlorotrifluoroethane	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
Vinyl chloride	2.3	1.0	ug/L	1	09/23/20	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	100		%	1	09/23/20	MH	70 - 130 %
% Bromofluorobenzene	98		%	1	09/23/20	MH	70 - 130 %
% Dibromofluoromethane	95		%	1	09/23/20	MH	70 - 130 %
% Toluene-d8	104		%	1	09/23/20	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	100	ug/L	1	09/23/20	MH	SW8260C (OXY)
Diethyl ether	ND	1.0	ug/L	1	09/23/20	MH	SW8260C (OXY)

Ver 1

Project ID: LOCKHEED WILMINGTON MA 60552044.19 Phoenix I.D.: CG81133

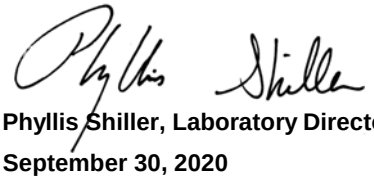
Client ID: 20A-PS5D-091820-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	
Di-isopropyl ether	ND	1.0	ug/L	1	09/23/20	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	1.0	ug/L	1	09/23/20	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	1.0	ug/L	1	09/23/20	MH	SW8260C (OXY)

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

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Phyllis Shiller, Laboratory Director

September 30, 2020

Reviewed and Released by: Greg Lawrence, Assistant Lab Director

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

QA/QC Report

September 30, 2020

QA/QC Data

SDG I.D.: GCG81121

Parameter	Blank	Blk RL	Sample Result	Dup Result	Dup RPD	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits
QA/QC Batch 546028 (mg/L), QC Sample No: CG80061 (CG81126, CG81127, CG81128, CG81129)													
ICP Metals - Dissolved													
Arsenic	BRL	0.004	0.016	0.016	NC	83.6	80.5	3.8	85.2			80 - 120	20
Iron	BRL	0.011	35.3	35.8	1.40	87.5	85.6	2.2	NC			80 - 120	20
Manganese	BRL	0.001	1.43	1.45	1.40	88.2	85.4	3.2	86.2			80 - 120	20
Comment:													
Additional: LCS acceptance range is 80-120% MS acceptance range 75-125%.													
QA/QC Batch 546428 (mg/L), QC Sample No: CG80986 (CG81122, CG81126, CG81127, CG81128, CG81129)													
ICP Metals - Aqueous													
Arsenic	BRL	0.004	<0.004	<0.004	NC	96.6	99.5	3.0	99.8			80 - 120	20
Iron	BRL	0.010	0.782	0.773	1.20	97.8	101	3.2	98.2			80 - 120	20
Manganese	BRL	0.001	0.009	0.009	0	98.0	101	3.0	99.7			80 - 120	20
Comment:													
Additional: LCS acceptance range is 80-120% MS acceptance range 75-125%.													
QA/QC Batch 546309 (mg/L), QC Sample No: CG81122 (CG81122)													
ICP Metals - Dissolved													
Arsenic	BRL	0.004	<0.004	<0.004	NC	93.1	96.3	3.4	95.4			80 - 120	20
Iron	BRL	0.011	0.095	0.092	3.20	90.7	94.5	4.1	91.0			80 - 120	20
Manganese	BRL	0.001	0.171	0.166	3.00	91.6	94.5	3.1	91.3			80 - 120	20
Comment:													
Additional: LCS acceptance range is 80-120% MS acceptance range 75-125%.													

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QA/QC Report

September 30, 2020

QA/QC Data

SDG I.D.: GCG81121

Parameter	Blank	Blk RL	Sample Result	Dup Result	Dup RPD	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits
QA/QC Batch 546523 (mg/L), QC Sample No: CG80548 (CG81122)													
Total Organic Carbon	BRL	1.0	<1.0	<1.0	NC	105			106			85 - 115	20

Comment:

Additional: LCS acceptance range is 85-115% MS acceptance range 75-125%.

Environmental Laboratories, Inc.
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QA/QC Report

September 30, 2020

QA/QC Data

SDG I.D.: GCG81121

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits	
QA/QC Batch 546542 (ug/L), QC Sample No: CG80054 (CG81122, CG81123)											
MAEPH - Ground Water											
C9-C18 Aliphatic Hydrocarbons 1*	ND	100	57	53	7.3				40 - 140	25	
C19-C36 Aliphatic Hydrocarbons 1*	ND	100	85	86	1.2				40 - 140	25	
C11-C22 Aromatic Hydrocarbons 1	ND	100	82	78	5.0				40 - 140	25	
C11-C22 Aromatic Hydrocarbons U	ND	100							40 - 140	25	
Total TPH 1,2*	ND	100	73	72	1.4				40 - 140	25	
C9 - Nonane	ND	10	32	30	6.5				30 - 140	25	
C-10 Decane	ND	10	39	36	8.0				40 - 140	25	I
C12 - Dodecane	ND	10	46	43	6.7				40 - 140	25	
C14 - Tetradecane	ND	10	60	56	6.9				40 - 140	25	
C16 - Hexadecane	ND	10	75	69	8.3				40 - 140	25	
C18 - Octadecane	ND	10	87	82	5.9				40 - 140	25	
C19 - Nonadecane	ND	10	86	82	4.8				40 - 140	25	
C20 - Eicosane	ND	10	87	84	3.5				40 - 140	25	
C22 - Docosane	ND	10	86	84	2.4				40 - 140	25	
C24 - Tetracosane	ND	10	86	84	2.4				40 - 140	25	
C26 - Hexacosane	ND	10	86	84	2.4				40 - 140	25	
C28 - Octacosane	ND	10	85	83	2.4				40 - 140	25	
C30 - Tricotane	ND	10	83	82	1.2				40 - 140	25	
C36 - Hexatriacontane	ND	10	82	106	25.5				40 - 140	25	
% 1-chlorooctadecane (aliphatic)	65	%	75	72	4.1				40 - 140	25	
% o-terphenyl (aromatic)	64	%	79	74	6.5				40 - 140	25	
% 2-Fluorobiphenyl (Fractionation)	96	%	103	101	2.0				40 - 140	25	
% 2-Bromonaphthalene (Fractionati	95	%	110	118	7.0				40 - 140	25	
% 2-Methylnaphthalene BT		%	0	0	NC				0 - 5		
% Naphthalene BT		%	0	0	NC				0 - 5		

Comment:

A LCS and LCS Duplicate were performed instead of a matrix spike and matrix spike duplicate.

Additional EPH fractionation criteria: Breakthrough criteria (BT) is 0 to 5%

QA/QC Batch 546270 (ug/l), QC Sample No: CG81125 (CG81125)											
1,4dioxane - Ground Water											
1,4-dioxane	ND	0.20	96	100	4.1	94	93	1.1	40 - 140	30	
% 1,4-dioxane-d8	92	%	95	94	1.1	99	91	8.4	40 - 140	30	
QA/QC Batch 546802 (ug/l), QC Sample No: CG84822 (CG81123, CG81124, CG81127, CG81128)											
1,4dioxane - Ground Water											
1,4-dioxane	ND	0.20	87	85	2.3	NC	NC	NC	40 - 140	30	
% 1,4-dioxane-d8	30	%	92	85	7.9	93	87	6.7	40 - 140	30	s
QA/QC Batch 546642 (ug/L), QC Sample No: CG80971 (CG81122, CG81123)											
Semivolatiles by SIM, PAH - Ground Water											
2-Methylnaphthalene	ND	0.50	61	52	15.9				40 - 140	20	

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits	
Acenaphthene	ND	0.50	66	55	18.2				40 - 140	20	
Acenaphthylene	ND	0.10	67	57	16.1				40 - 140	20	
Anthracene	ND	0.10	66	56	16.4				40 - 140	20	
Benz(a)anthracene	ND	0.05	88	73	18.6				40 - 140	20	
Benzo(a)pyrene	ND	0.20	67	60	11.0				40 - 140	20	
Benzo(b)fluoranthene	ND	0.07	80	70	13.3				40 - 140	20	
Benzo(ghi)perylene	ND	0.02	62	53	15.7				40 - 140	20	
Benzo(k)fluoranthene	ND	0.10	54	46	16.0				40 - 140	20	
Chrysene	ND	0.05	73	62	16.3				40 - 140	20	
Dibenz(a,h)anthracene	ND	0.02	62	54	13.8				40 - 140	20	
Fluoranthene	ND	0.50	67	58	14.4				40 - 140	20	
Fluorene	ND	0.10	69	59	15.6				40 - 140	20	
Indeno(1,2,3-cd)pyrene	ND	0.10	66	57	14.6				40 - 140	20	
Naphthalene	ND	0.50	59	49	18.5				40 - 140	20	
Phenanthrene	ND	0.06	72	59	19.8				40 - 140	20	
Pyrene	ND	0.07	62	53	15.7				40 - 140	20	
% 2-Fluorobiphenyl	49	%	56	45	21.8				40 - 140	20	r
% Nitrobenzene-d5	70	%	76	66	14.1				40 - 140	20	
% Terphenyl-d14	55	%	61	52	15.9				40 - 140	20	

Comment:

Additional 8270 criteria: 10% of compounds can be outside of acceptance criteria as long as recovery is at least 10%. (Acid surrogates acceptance range for aqueous samples: 10-110%, for soils 30-130%)

QA/QC Batch 546580 (ug/L), QC Sample No: CG81121 (CG81121, CG81124, CG81127, CG81128, CG81132)

Volatiles - Ground Water

1,1,1,2-Tetrachloroethane	ND	1.0	95	97	2.1				70 - 130	30	
1,1,1-Trichloroethane	ND	1.0	89	91	2.2				70 - 130	30	
1,1,2,2-Tetrachloroethane	ND	0.50	105	110	4.7				70 - 130	30	
1,1,2-Trichloroethane	ND	1.0	94	93	1.1				70 - 130	30	
1,1-Dichloroethane	ND	1.0	90	91	1.1				70 - 130	30	
1,1-Dichloroethene	ND	1.0	98	97	1.0				70 - 130	30	
1,1-Dichloropropene	ND	1.0	95	97	2.1				70 - 130	30	
1,2,3-Trichlorobenzene	ND	1.0	100	100	0.0				70 - 130	30	
1,2,3-Trichloropropane	ND	1.0	102	105	2.9				70 - 130	30	
1,2,4-Trichlorobenzene	ND	1.0	94	96	2.1				70 - 130	30	
1,2,4-Trimethylbenzene	ND	1.0	96	98	2.1				70 - 130	30	
1,2-Dibromo-3-chloropropane	ND	1.0	99	107	7.8				70 - 130	30	
1,2-Dibromoethane	ND	1.0	100	102	2.0				70 - 130	30	
1,2-Dichlorobenzene	ND	1.0	95	94	1.1				70 - 130	30	
1,2-Dichloroethane	ND	1.0	96	95	1.0				70 - 130	30	
1,2-Dichloropropane	ND	1.0	94	94	0.0				70 - 130	30	
1,3,5-Trimethylbenzene	ND	1.0	97	100	3.0				70 - 130	30	
1,3-Dichlorobenzene	ND	1.0	94	95	1.1				70 - 130	30	
1,3-Dichloropropane	ND	1.0	99	100	1.0				70 - 130	30	
1,4-Dichlorobenzene	ND	1.0	94	96	2.1				70 - 130	30	
1,4-dioxane	ND	100	105	102	2.9				40 - 160	30	
2,2-Dichloropropane	ND	1.0	63	62	1.6				70 - 130	30	l
2-Chlorotoluene	ND	1.0	93	97	4.2				70 - 130	30	
2-Hexanone	ND	5.0	105	111	5.6				40 - 160	30	
4-Chlorotoluene	ND	1.0	93	95	2.1				70 - 130	30	
4-Methyl-2-pentanone	ND	5.0	104	111	6.5				40 - 160	30	
Acetone	ND	5.0	112	116	3.5				40 - 160	30	
Benzene	ND	0.70	94	96	2.1				70 - 130	30	

QA/QC Data

SDG I.D.: GCG81121

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits
Bromobenzene	ND	1.0	94	93	1.1				70 - 130	30
Bromochloromethane	ND	1.0	91	90	1.1				70 - 130	30
Bromodichloromethane	ND	0.50	95	93	2.1				70 - 130	30
Bromoform	ND	1.0	95	96	1.0				70 - 130	30
Bromomethane	ND	1.0	96	97	1.0				40 - 160	30
Carbon Disulfide	ND	1.0	92	93	1.1				70 - 130	30
Carbon tetrachloride	ND	1.0	88	90	2.2				70 - 130	30
Chlorobenzene	ND	1.0	94	96	2.1				70 - 130	30
Chloroethane	ND	1.0	103	98	5.0				70 - 130	30
Chloroform	ND	1.0	90	88	2.2				70 - 130	30
Chloromethane	ND	1.0	110	109	0.9				40 - 160	30
cis-1,2-Dichloroethene	ND	1.0	85	85	0.0				70 - 130	30
cis-1,3-Dichloropropene	ND	0.40	90	90	0.0				70 - 130	30
Dibromochloromethane	ND	0.50	99	101	2.0				70 - 130	30
Dibromomethane	ND	1.0	90	91	1.1				70 - 130	30
Dichlorodifluoromethane	ND	1.0	142	141	0.7				40 - 160	30
Di-isopropyl ether	ND	1.0	94	95	1.1				70 - 130	30
Ethyl ether	ND	1.0	100	95	5.1				70 - 130	30
Ethyl tert-butyl ether	ND	1.0	95	96	1.0				70 - 130	30
Ethylbenzene	ND	1.0	92	94	2.2				70 - 130	30
Hexachlorobutadiene	ND	0.40	90	93	3.3				70 - 130	30
Isopropylbenzene	ND	1.0	94	97	3.1				70 - 130	30
m&p-Xylene	ND	1.0	95	96	1.0				70 - 130	30
Methyl ethyl ketone	ND	5.0	105	109	3.7				40 - 160	30
Methyl t-butyl ether (MTBE)	ND	1.0	97	99	2.0				70 - 130	30
Methylene chloride	ND	1.0	90	90	0.0				70 - 130	30
Naphthalene	ND	1.0	107	112	4.6				70 - 130	30
n-Butylbenzene	ND	1.0	99	101	2.0				70 - 130	30
n-Propylbenzene	ND	1.0	95	97	2.1				70 - 130	30
o-Xylene	ND	1.0	96	96	0.0				70 - 130	30
p-Isopropyltoluene	ND	1.0	99	102	3.0				70 - 130	30
sec-Butylbenzene	ND	1.0	105	109	3.7				70 - 130	30
Styrene	ND	1.0	97	98	1.0				70 - 130	30
tert-amyl methyl ether	ND	1.0	98	99	1.0				70 - 130	30
tert-Butylbenzene	ND	1.0	97	100	3.0				70 - 130	30
Tetrachloroethene	ND	1.0	88	91	3.4				70 - 130	30
Tetrahydrofuran (THF)	ND	2.5	102	108	5.7				70 - 130	30
Toluene	ND	1.0	92	92	0.0				70 - 130	30
trans-1,2-Dichloroethene	ND	1.0	96	101	5.1				70 - 130	30
trans-1,3-Dichloropropene	ND	0.40	91	89	2.2				70 - 130	30
Trichloroethene	ND	1.0	90	93	3.3				70 - 130	30
Trichlorofluoromethane	ND	1.0	109	109	0.0				70 - 130	30
Trichlorotrifluoroethane	ND	1.0	103	102	1.0				70 - 130	30
Vinyl chloride	ND	1.0	113	113	0.0				70 - 130	30
% 1,2-dichlorobenzene-d4	97	%	99	99	0.0				70 - 130	30
% Bromofluorobenzene	96	%	100	99	1.0				70 - 130	30
% Dibromofluoromethane	99	%	92	94	2.2				70 - 130	30
% Toluene-d8	103	%	100	99	1.0				70 - 130	30

Comment:

A LCS and LCS Duplicate were performed instead of a matrix spike and matrix spike duplicate.

Additional 8260 criteria: 10% of compounds can be outside of acceptance criteria as long as recovery is 10%.

QA/QC Data

SDG I.D.: GCG81121

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits	
QA/QC Batch 546771 (ug/L), QC Sample No: CG81125 (CG81122, CG81123, CG81125, CG81130, CG81131, CG81133)											
Volatiles - Ground Water											
1,1,1,2-Tetrachloroethane	ND	1.0	91	92	1.1	96	87	9.8	70 - 130	30	
1,1,1-Trichloroethane	ND	1.0	87	91	4.5	101	94	7.2	70 - 130	30	
1,1,2,2-Tetrachloroethane	ND	0.50	104	105	1.0	104	93	11.2	70 - 130	30	
1,1,2-Trichloroethane	ND	1.0	92	93	1.1	93	86	7.8	70 - 130	30	
1,1-Dichloroethane	ND	1.0	88	92	4.4	100	87	13.9	70 - 130	30	
1,1-Dichloroethene	ND	1.0	84	87	3.5	101	101	0.0	70 - 130	30	
1,1-Dichloropropene	ND	1.0	95	96	1.0	103	96	7.0	70 - 130	30	
1,2,3-Trichlorobenzene	ND	1.0	95	95	0.0	98	90	8.5	70 - 130	30	
1,2,3-Trichloropropane	ND	1.0	93	102	9.2	94	89	5.5	70 - 130	30	
1,2,4-Trichlorobenzene	ND	1.0	91	92	1.1	97	89	8.6	70 - 130	30	
1,2,4-Trimethylbenzene	ND	1.0	93	96	3.2	101	91	10.4	70 - 130	30	
1,2-Dibromo-3-chloropropane	ND	1.0	100	100	0.0	96	84	13.3	70 - 130	30	
1,2-Dibromoethane	ND	1.0	95	98	3.1	94	87	7.7	70 - 130	30	
1,2-Dichlorobenzene	ND	1.0	88	90	2.2	93	86	7.8	70 - 130	30	
1,2-Dichloroethane	ND	1.0	94	97	3.1	99	92	7.3	70 - 130	30	
1,2-Dichloropropane	ND	1.0	94	96	2.1	100	92	8.3	70 - 130	30	
1,3,5-Trimethylbenzene	ND	1.0	93	96	3.2	100	93	7.3	70 - 130	30	
1,3-Dichlorobenzene	ND	1.0	90	92	2.2	94	87	7.7	70 - 130	30	
1,3-Dichloropropane	ND	1.0	97	99	2.0	100	92	8.3	70 - 130	30	
1,4-Dichlorobenzene	ND	1.0	89	91	2.2	94	87	7.7	70 - 130	30	
1,4-dioxane	ND	100	99	101	2.0	103	97	6.0	40 - 160	30	
2,2-Dichloropropane	ND	1.0	89	90	1.1	88	76	14.6	70 - 130	30	
2-Chlorotoluene	ND	1.0	91	92	1.1	93	87	6.7	70 - 130	30	
2-Hexanone	ND	5.0	101	103	2.0	97	93	4.2	40 - 160	30	
4-Chlorotoluene	ND	1.0	91	92	1.1	92	86	6.7	70 - 130	30	
4-Methyl-2-pentanone	ND	5.0	100	104	3.9	99	91	8.4	40 - 160	30	
Acetone	ND	5.0	95	89	6.5	107	104	2.8	40 - 160	30	
Benzene	ND	0.70	92	95	3.2	100	91	9.4	70 - 130	30	
Bromobenzene	ND	1.0	88	90	2.2	88	82	7.1	70 - 130	30	
Bromochloromethane	ND	1.0	84	85	1.2	88	80	9.5	70 - 130	30	
Bromodichloromethane	ND	0.50	93	96	3.2	98	91	7.4	70 - 130	30	
Bromoform	ND	1.0	91	93	2.2	91	86	5.6	70 - 130	30	
Bromomethane	ND	1.0	91	91	0.0	82	91	10.4	40 - 160	30	
Carbon Disulfide	ND	1.0	81	80	1.2	95	99	4.1	70 - 130	30	
Carbon tetrachloride	ND	1.0	85	88	3.5	118	94	22.6	70 - 130	30	
Chlorobenzene	ND	1.0	90	92	2.2	95	89	6.5	70 - 130	30	
Chloroethane	ND	1.0	94	95	1.1	113	114	0.9	70 - 130	30	
Chloroform	ND	1.0	86	90	4.5	98	88	10.8	70 - 130	30	
Chloromethane	ND	1.0	97	98	1.0	109	107	1.9	40 - 160	30	
cis-1,2-Dichloroethene	ND	1.0	82	84	2.4	NC	NC	NC	70 - 130	30	
cis-1,3-Dichloropropene	ND	0.40	95	96	1.0	92	85	7.9	70 - 130	30	
Dibromochloromethane	ND	0.50	95	97	2.1	94	90	4.3	70 - 130	30	
Dibromomethane	ND	1.0	90	89	1.1	91	83	9.2	70 - 130	30	
Dichlorodifluoromethane	ND	1.0	121	124	2.4	129	138	6.7	40 - 160	30	
Di-isopropyl ether	ND	1.0	91	96	5.3	97	71	31.0	70 - 130	30	r
Ethyl ether	ND	1.0	86	87	1.2	93	97	4.2	70 - 130	30	
Ethyl tert-butyl ether	ND	1.0	92	97	5.3	97	87	10.9	70 - 130	30	
Ethylbenzene	ND	1.0	91	90	1.1	96	90	6.5	70 - 130	30	
Hexachlorobutadiene	ND	0.40	95	95	0.0	105	97	7.9	70 - 130	30	
Isopropylbenzene	ND	1.0	92	92	0.0	94	89	5.5	70 - 130	30	

QA/QC Data

SDG I.D.: GCG81121

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits	
m&p-Xylene	ND	1.0	90	92	2.2	96	89	7.6	70 - 130	30	
Methyl ethyl ketone	ND	5.0	100	103	3.0	100	91	9.4	40 - 160	30	
Methyl t-butyl ether (MTBE)	ND	1.0	87	88	1.1	94	93	1.1	70 - 130	30	
Methylene chloride	ND	1.0	80	77	3.8	89	92	3.3	70 - 130	30	
Naphthalene	ND	1.0	102	102	0.0	100	92	8.3	70 - 130	30	
n-Butylbenzene	ND	1.0	99	101	2.0	110	100	9.5	70 - 130	30	
n-Propylbenzene	ND	1.0	93	93	0.0	96	90	6.5	70 - 130	30	
o-Xylene	ND	1.0	91	93	2.2	96	90	6.5	70 - 130	30	
p-Isopropyltoluene	ND	1.0	96	97	1.0	104	96	8.0	70 - 130	30	
sec-Butylbenzene	ND	1.0	102	104	1.9	112	105	6.5	70 - 130	30	
Styrene	ND	1.0	92	94	2.2	98	91	7.4	70 - 130	30	
tert-amyl methyl ether	ND	1.0	97	100	3.0	96	88	8.7	70 - 130	30	
tert-Butylbenzene	ND	1.0	93	95	2.1	101	94	7.2	70 - 130	30	
Tetrachloroethene	ND	1.0	86	85	1.2	97	90	7.5	70 - 130	30	
Tetrahydrofuran (THF)	ND	2.5	99	99	0.0	97	88	9.7	70 - 130	30	
Toluene	ND	1.0	89	91	2.2	96	89	7.6	70 - 130	30	
trans-1,2-Dichloroethene	ND	1.0	86	89	3.4	100	104	3.9	70 - 130	30	
trans-1,3-Dichloropropene	ND	0.40	95	96	1.0	93	86	7.8	70 - 130	30	
Trichloroethene	ND	1.0	84	89	5.8	92	85	7.9	70 - 130	30	
Trichlorofluoromethane	ND	1.0	99	101	2.0	131	122	7.1	70 - 130	30	m
Trichlorotrifluoroethane	ND	1.0	91	94	3.2	113	106	6.4	70 - 130	30	
Vinyl chloride	ND	1.0	95	97	2.1	111	114	2.7	70 - 130	30	
% 1,2-dichlorobenzene-d4	98	%	100	99	1.0	101	101	0.0	70 - 130	30	
% Bromofluorobenzene	101	%	103	104	1.0	107	105	1.9	70 - 130	30	
% Dibromofluoromethane	94	%	92	96	4.3	94	93	1.1	70 - 130	30	
% Toluene-d8	105	%	103	103	0.0	104	102	1.9	70 - 130	30	

Comment:

Additional 8260 criteria: 10% of compounds can be outside of acceptance criteria as long as recovery is 10%.

QA/QC Batch 546538 (ug/L), QC Sample No: CG81101 (CG81122, CG81123)

Volatile Petroleum Hydrocarbons - Ground Water

Unadjusted C5-C8 Aliphatics (*1)	ND	100	102	101	1.0	94	94	0.0	70 - 130	25	
Unadjusted C9-C12 Aliphatics (*1)	ND	100	103	99	4.0	98	95	3.1	70 - 130	25	
C5-C8 Aliphatic Hydrocarbons *1,2	ND	100	102	101	1.0	94	94	0.0	70 - 130	25	
C9-C12 Aliphatic Hydrocarbons *1,	ND	100	103	99	4.0	98	95	3.1	70 - 130	25	
C9-C10 Aromatic Hydrocarbons *1	ND	100	99	100	1.0	NC	NC	NC	70 - 130	25	
Benzene	ND	1.0	91	92	1.1	90	90	0.0	70 - 130	25	
Ethyl Benzene	ND	1.0	91	92	1.1	90	90	0.0	70 - 130	25	
MTBE	ND	1.0	109	114	4.5	118	121	2.5	70 - 130	25	
Naphthalene	ND	5.0	103	105	1.9	102	103	1.0	70 - 130	25	
Toluene	ND	1.0	91	92	1.1	91	91	0.0	70 - 130	25	
m,p-Xylenes	ND	2.0	92	93	1.1	92	91	1.1	70 - 130	25	
o-Xylene	ND	1.0	90	91	1.1	89	89	0.0	70 - 130	25	

Comment:

A blank MS/MSD was analyzed with this batch.

l = This parameter is outside laboratory LCS/LCSD specified recovery limits.
m = This parameter is outside laboratory MS/MSD specified recovery limits.
r = This parameter is outside laboratory RPD specified recovery limits.
s = This parameter is outside laboratory Blank Surrogate specified recovery limits.

QA/QC Data

SDG I.D.: GCG81121

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits

If there are any questions regarding this data, please call Phoenix Client Services at extension 200.

RPD - Relative Percent Difference
LCS - Laboratory Control Sample
LCSD - Laboratory Control Sample Duplicate
MS - Matrix Spike
MS Dup - Matrix Spike Duplicate
NC - No Criteria
Intf - Interference

Phyllis Shiller, Laboratory Director
September 30, 2020

Wednesday, September 30, 2020

Criteria: MA: CAM, GW1, GW2, GW3

State: MA

Sample Criteria Exceedances Report

GCG81121 - AECOM-WILMINGTN

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units
CG81121	$8260GWR-WI	Acetone	MA / CAM Protocol / VOA AQ RL	ND	25		10	ug/L
CG81121	$8260GWR-WI	Carbon Disulfide	MA / CAM Protocol / VOA AQ RL	ND	5.0		2	ug/L
CG81121	$8260GWR-WI	Tetrahydrofuran (THF)	MA / CAM Protocol / VOA AQ RL	ND	2.5		2	ug/L
CG81121	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.00033	0.00033	ug/L
CG81121	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.0075	0.0075	ug/L
CG81121	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.00075	0.00075	ug/L
CG81121	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	0.50	0.02	0.02	ug/L
CG81121	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	0.50	0.02	0.02	ug/L
CG81121	$MCPADD-WM	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	100	0.3	0.3	ug/L
CG81121	$MCPADD-WM	1,4-dioxane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	100	3	3	ug/L
CG81121	$MCPADD-WM	1,4-dioxane	MA / GROUNDWATER STANDARDS / GW-1	ND	100	0.3	0.3	ug/L
CG81122	$8260GWR-WI	Tetrahydrofuran (THF)	MA / CAM Protocol / VOA AQ RL	ND	2.5		2	ug/L
CG81122	$8260GWR-WI	Carbon Disulfide	MA / CAM Protocol / VOA AQ RL	ND	5.0		2	ug/L
CG81122	$8260GWR-WI	Acetone	MA / CAM Protocol / VOA AQ RL	ND	25		10	ug/L
CG81122	$8260GWR-WI	Trichloroethene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	5.5	1.0	5	5	ug/L
CG81122	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.0075	0.0075	ug/L
CG81122	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.00075	0.00075	ug/L
CG81122	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.00033	0.00033	ug/L
CG81122	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	0.50	0.02	0.02	ug/L
CG81122	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	5.5	1.0	5	5	ug/L
CG81122	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	5.5	1.0	5	5	ug/L
CG81122	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	0.50	0.02	0.02	ug/L
CG81122	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-1	5.5	1.0	5	5	ug/L
CG81122	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-2	5.5	1.0	5	5	ug/L
CG81122	$MCPADD-WM	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	100	0.3	0.3	ug/L
CG81122	$MCPADD-WM	1,4-dioxane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	100	3	3	ug/L
CG81122	$MCPADD-WM	1,4-dioxane	MA / GROUNDWATER STANDARDS / GW-1	ND	100	0.3	0.3	ug/L
CG81123	$8260GWR-WI	Tetrahydrofuran (THF)	MA / CAM Protocol / VOA AQ RL	ND	2.5		2	ug/L
CG81123	$8260GWR-WI	Carbon Disulfide	MA / CAM Protocol / VOA AQ RL	ND	5.0		2	ug/L
CG81123	$8260GWR-WI	Acetone	MA / CAM Protocol / VOA AQ RL	ND	25		10	ug/L
CG81123	$8260GWR-WI	Trichloroethene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	26	1.0	5	5	ug/L
CG81123	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.0075	0.0075	ug/L
CG81123	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.00033	0.00033	ug/L
CG81123	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.00075	0.00075	ug/L
CG81123	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	0.50	0.02	0.02	ug/L
CG81123	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	26	1.0	5	5	ug/L
CG81123	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	26	1.0	5	5	ug/L
CG81123	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-1	26	1.0	5	5	ug/L
CG81123	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	0.50	0.02	0.02	ug/L
CG81123	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-2	26	1.0	5	5	ug/L

Wednesday, September 30, 2020

Criteria: MA: CAM, GW1, GW2, GW3

State: MA

Sample Criteria Exceedances Report

GCG81121 - AECOM-WILMINGTN

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units
CG81123	$DIOX_LDL	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	0.40	0.20	0.3	0.3	ug/l
CG81123	$DIOX_LDL	1,4-dioxane	MA / GROUNDWATER STANDARDS / GW-1	0.40	0.20	0.3	0.3	ug/l
CG81123	$MCPADD-WM	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	100	0.3	0.3	ug/L
CG81124	$8260GWR-WI	Acetone	MA / CAM Protocol / VOA AQ RL	ND	25		10	ug/L
CG81124	$8260GWR-WI	Tetrahydrofuran (THF)	MA / CAM Protocol / VOA AQ RL	ND	2.5		2	ug/L
CG81124	$8260GWR-WI	Carbon Disulfide	MA / CAM Protocol / VOA AQ RL	ND	5.0		2	ug/L
CG81124	$8260GWR-WI	cis-1,2-Dichloroethene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	39	1.0	20	20	ug/L
CG81124	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.0075	0.0075	ug/L
CG81124	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.00033	0.00033	ug/L
CG81124	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.00075	0.00075	ug/L
CG81124	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	0.50	0.02	0.02	ug/L
CG81124	$8260GWR-WI	cis-1,2-Dichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	39	1.0	20	20	ug/L
CG81124	$8260GWR-WI	cis-1,2-Dichloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	39	1.0	20	20	ug/L
CG81124	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	0.50	0.02	0.02	ug/L
CG81124	$8260GWR-WI	cis-1,2-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-2	39	1.0	20	20	ug/L
CG81124	$MCPADD-WM	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	100	0.3	0.3	ug/L
CG81125	$8260GWR-WI	Tetrahydrofuran (THF)	MA / CAM Protocol / VOA AQ RL	ND	2.5		2	ug/L
CG81125	$8260GWR-WI	Carbon Disulfide	MA / CAM Protocol / VOA AQ RL	ND	5.0		2	ug/L
CG81125	$8260GWR-WI	Acetone	MA / CAM Protocol / VOA AQ RL	ND	25		10	ug/L
CG81125	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.00075	0.00075	ug/L
CG81125	$8260GWR-WI	Trichloroethene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	14	1.0	5	5	ug/L
CG81125	$8260GWR-WI	cis-1,2-Dichloroethene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	64	1.0	20	20	ug/L
CG81125	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.00033	0.00033	ug/L
CG81125	$8260GWR-WI	Vinyl chloride	MA / Client Specified Criteria / LOCKHEED WILMINGTO	2.3	1.0	2	2	ug/L
CG81125	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.0075	0.0075	ug/L
CG81125	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-1 (mg/l)	2.3	1.0	2	2	ug/L
CG81125	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	14	1.0	5	5	ug/L
CG81125	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-1 (mg/l)	2.3	1.0	2	2	ug/L
CG81125	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	0.50	0.02	0.02	ug/L
CG81125	$8260GWR-WI	cis-1,2-Dichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	64	1.0	20	20	ug/L
CG81125	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-2 (mg/l)	2.3	1.0	2	2	ug/L
CG81125	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-2 (mg/l)	2.3	1.0	2	2	ug/L
CG81125	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	14	1.0	5	5	ug/L
CG81125	$8260GWR-WI	cis-1,2-Dichloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	64	1.0	20	20	ug/L
CG81125	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-1	14	1.0	5	5	ug/L
CG81125	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	0.50	0.02	0.02	ug/L
CG81125	$8260GWR-WI	Vinyl chloride	MA / GROUNDWATER STANDARDS / GW-1	2.3	1.0	2	2	ug/L
CG81125	$8260GWR-WI	cis-1,2-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-2	64	1.0	20	20	ug/L
CG81125	$8260GWR-WI	Vinyl chloride	MA / GROUNDWATER STANDARDS / GW-2	2.3	1.0	2	2	ug/L
CG81125	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-2	14	1.0	5	5	ug/L

Wednesday, September 30, 2020

Criteria: MA: CAM, GW1, GW2, GW3

State: MA

Sample Criteria Exceedances Report

GCG81121 - AECOM-WILMINGTN

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units
CG81125	$DIOX_LDL	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	0.31	0.20	0.3	0.3	ug/l
CG81125	$DIOX_LDL	1,4-dioxane	MA / GROUNDWATER STANDARDS / GW-1	0.31	0.20	0.3	0.3	ug/l
CG81125	$MCPADD-WM	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	100	0.3	0.3	ug/L
CG81126	AS-WM	Arsenic	MA / Client Specified Criteria / LOCKHEED WILMINGTO	0.014	0.004	0.01	0.01	mg/L
CG81126	AS-WM	Arsenic	MA / CMR 310.40.1600 / GW-1 (mg/l)	0.014	0.004	0.01	0.01	mg/L
CG81126	AS-WM	Arsenic	MA / GROUNDWATER STANDARDS / GW-1	0.014	0.004	0.01	0.01	mg/L
CG81126	D-AS	Arsenic (Dissolved)	MA / Client Specified Criteria / LOCKHEED WILMINGTO	0.012	0.004	0.01	0.01	mg/L
CG81126	D-AS	Arsenic (Dissolved)	MA / CMR 310.40.1600 / GW-1 (mg/l)	0.012	0.004	0.01	0.01	mg/L
CG81126	D-AS	Arsenic (Dissolved)	MA / GROUNDWATER STANDARDS / GW-1	0.012	0.004	0.01	0.01	mg/L
CG81126	D-MN	Manganese (Dissolved)	MA / Client Specified Criteria / LOCKHEED WILMINGTO	2.97	0.011	0.43	0.43	mg/L
CG81126	FE-WM	Iron	MA / Client Specified Criteria / LOCKHEED WILMINGTO	16.1	0.010	14	14	mg/L
CG81126	MN-WM	Manganese	MA / Client Specified Criteria / LOCKHEED WILMINGTO	3.06	0.010	0.43	0.43	mg/L
CG81127	$8260GWR-WI	Carbon Disulfide	MA / CAM Protocol / VOA AQ RL	ND	5.0		2	ug/L
CG81127	$8260GWR-WI	Tetrahydrofuran (THF)	MA / CAM Protocol / VOA AQ RL	ND	2.5		2	ug/L
CG81127	$8260GWR-WI	Acetone	MA / CAM Protocol / VOA AQ RL	ND	25		10	ug/L
CG81127	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.0075	0.0075	ug/L
CG81127	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.00075	0.00075	ug/L
CG81127	$8260GWR-WI	cis-1,2-Dichloroethene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	26	1.0	20	20	ug/L
CG81127	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.00033	0.00033	ug/L
CG81127	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	0.50	0.02	0.02	ug/L
CG81127	$8260GWR-WI	cis-1,2-Dichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	26	1.0	20	20	ug/L
CG81127	$8260GWR-WI	cis-1,2-Dichloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	26	1.0	20	20	ug/L
CG81127	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	0.50	0.02	0.02	ug/L
CG81127	$8260GWR-WI	cis-1,2-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-2	26	1.0	20	20	ug/L
CG81127	$DIOX_LDL	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	0.84	0.20	0.3	0.3	ug/l
CG81127	$DIOX_LDL	1,4-dioxane	MA / GROUNDWATER STANDARDS / GW-1	0.84	0.20	0.3	0.3	ug/l
CG81127	$MCPADD-WM	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	100	0.3	0.3	ug/L
CG81127	D-FE	Iron (Dissolved)	MA / Client Specified Criteria / LOCKHEED WILMINGTO	29.0	0.011	14	14	mg/L
CG81127	D-MN	Manganese (Dissolved)	MA / Client Specified Criteria / LOCKHEED WILMINGTO	1.49	0.001	0.43	0.43	mg/L
CG81127	FE-WM	Iron	MA / Client Specified Criteria / LOCKHEED WILMINGTO	34.8	0.010	14	14	mg/L
CG81127	MN-WM	Manganese	MA / Client Specified Criteria / LOCKHEED WILMINGTO	1.57	0.001	0.43	0.43	mg/L
CG81128	$8260GWR-WI	Acetone	MA / CAM Protocol / VOA AQ RL	ND	25		10	ug/L
CG81128	$8260GWR-WI	Tetrahydrofuran (THF)	MA / CAM Protocol / VOA AQ RL	ND	2.5		2	ug/L
CG81128	$8260GWR-WI	Carbon Disulfide	MA / CAM Protocol / VOA AQ RL	ND	5.0		2	ug/L
CG81128	$8260GWR-WI	cis-1,2-Dichloroethene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	27	1.0	20	20	ug/L
CG81128	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.00075	0.00075	ug/L
CG81128	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.00033	0.00033	ug/L
CG81128	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.0075	0.0075	ug/L
CG81128	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	0.50	0.02	0.02	ug/L
CG81128	$8260GWR-WI	cis-1,2-Dichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	27	1.0	20	20	ug/L

Wednesday, September 30, 2020

Criteria: MA: CAM, GW1, GW2, GW3

State: MA

Sample Criteria Exceedances Report

GCG81121 - AECOM-WILMINGTN

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units
CG81128	$8260GWR-WI	cis-1,2-Dichloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	27	1.0	20	20	ug/L
CG81128	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	0.50	0.02	0.02	ug/L
CG81128	$8260GWR-WI	cis-1,2-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-2	27	1.0	20	20	ug/L
CG81128	$DIOX_LDL	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	0.83	0.20	0.3	0.3	ug/l
CG81128	$DIOX_LDL	1,4-dioxane	MA / GROUNDWATER STANDARDS / GW-1	0.83	0.20	0.3	0.3	ug/l
CG81128	$MCPADD-WM	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	100	0.3	0.3	ug/L
CG81128	D-FE	Iron (Dissolved)	MA / Client Specified Criteria / LOCKHEED WILMINGTO	29.4	0.011	14	14	mg/L
CG81128	D-MN	Manganese (Dissolved)	MA / Client Specified Criteria / LOCKHEED WILMINGTO	1.50	0.001	0.43	0.43	mg/L
CG81128	FE-WM	Iron	MA / Client Specified Criteria / LOCKHEED WILMINGTO	35.9	0.010	14	14	mg/L
CG81128	MN-WM	Manganese	MA / Client Specified Criteria / LOCKHEED WILMINGTO	1.60	0.001	0.43	0.43	mg/L
CG81129	D-FE	Iron (Dissolved)	MA / Client Specified Criteria / LOCKHEED WILMINGTO	33.1	0.011	14	14	mg/L
CG81129	D-MN	Manganese (Dissolved)	MA / Client Specified Criteria / LOCKHEED WILMINGTO	1.37	0.001	0.43	0.43	mg/L
CG81129	FE-WM	Iron	MA / Client Specified Criteria / LOCKHEED WILMINGTO	39.7	0.010	14	14	mg/L
CG81129	MN-WM	Manganese	MA / Client Specified Criteria / LOCKHEED WILMINGTO	1.44	0.001	0.43	0.43	mg/L
CG81130	$8260GWR-WI	Tetrahydrofuran (THF)	MA / CAM Protocol / VOA AQ RL	ND	2.5		2	ug/L
CG81130	$8260GWR-WI	Carbon Disulfide	MA / CAM Protocol / VOA AQ RL	ND	5.0		2	ug/L
CG81130	$8260GWR-WI	Acetone	MA / CAM Protocol / VOA AQ RL	ND	25		10	ug/L
CG81130	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.00033	0.00033	ug/L
CG81130	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.0075	0.0075	ug/L
CG81130	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.00075	0.00075	ug/L
CG81130	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	0.50	0.02	0.02	ug/L
CG81130	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	0.50	0.02	0.02	ug/L
CG81130	$MCPADD-WM	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	100	0.3	0.3	ug/L
CG81130	$MCPADD-WM	1,4-dioxane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	100	3	3	ug/L
CG81130	$MCPADD-WM	1,4-dioxane	MA / GROUNDWATER STANDARDS / GW-1	ND	100	0.3	0.3	ug/L
CG81131	$8260GWR-WI	Acetone	MA / CAM Protocol / VOA AQ RL	ND	25		10	ug/L
CG81131	$8260GWR-WI	Tetrahydrofuran (THF)	MA / CAM Protocol / VOA AQ RL	ND	2.5		2	ug/L
CG81131	$8260GWR-WI	Carbon Disulfide	MA / CAM Protocol / VOA AQ RL	ND	5.0		2	ug/L
CG81131	$8260GWR-WI	Vinyl chloride	MA / Client Specified Criteria / LOCKHEED WILMINGTO	2.8	1.0	2	2	ug/L
CG81131	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.0075	0.0075	ug/L
CG81131	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.00033	0.00033	ug/L
CG81131	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.00075	0.00075	ug/L
CG81131	$8260GWR-WI	cis-1,2-Dichloroethene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	35	1.0	20	20	ug/L
CG81131	$8260GWR-WI	Trichloroethene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	17	1.0	5	5	ug/L
CG81131	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	0.50	0.02	0.02	ug/L
CG81131	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-1 (mg/l)	2.8	1.0	2	2	ug/L
CG81131	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-1 (mg/l)	2.8	1.0	2	2	ug/L
CG81131	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	17	1.0	5	5	ug/L
CG81131	$8260GWR-WI	cis-1,2-Dichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	35	1.0	20	20	ug/L
CG81131	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-2 (mg/l)	2.8	1.0	2	2	ug/L

Wednesday, September 30, 2020

Criteria: MA: CAM, GW1, GW2, GW3

State: MA

Sample Criteria Exceedances Report

GCG81121 - AECOM-WILMINGTN

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units
CG81131	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	17	1.0	5	5	ug/L
CG81131	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-2 (mg/l)	2.8	1.0	2	2	ug/L
CG81131	$8260GWR-WI	cis-1,2-Dichloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	35	1.0	20	20	ug/L
CG81131	$8260GWR-WI	Vinyl chloride	MA / GROUNDWATER STANDARDS / GW-1	2.8	1.0	2	2	ug/L
CG81131	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	0.50	0.02	0.02	ug/L
CG81131	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-1	17	1.0	5	5	ug/L
CG81131	$8260GWR-WI	cis-1,2-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-2	35	1.0	20	20	ug/L
CG81131	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-2	17	1.0	5	5	ug/L
CG81131	$8260GWR-WI	Vinyl chloride	MA / GROUNDWATER STANDARDS / GW-2	2.8	1.0	2	2	ug/L
CG81131	$MCPADD-WM	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	100	0.3	0.3	ug/L
CG81131	$MCPADD-WM	1,4-dioxane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	100	3	3	ug/L
CG81131	$MCPADD-WM	1,4-dioxane	MA / GROUNDWATER STANDARDS / GW-1	ND	100	0.3	0.3	ug/L
CG81132	$8260GWR-WI	Tetrahydrofuran (THF)	MA / CAM Protocol / VOA AQ RL	ND	2.5		2	ug/L
CG81132	$8260GWR-WI	Carbon Disulfide	MA / CAM Protocol / VOA AQ RL	ND	5.0		2	ug/L
CG81132	$8260GWR-WI	Acetone	MA / CAM Protocol / VOA AQ RL	ND	25		10	ug/L
CG81132	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.00033	0.00033	ug/L
CG81132	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.0075	0.0075	ug/L
CG81132	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.00075	0.00075	ug/L
CG81132	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	0.50	0.02	0.02	ug/L
CG81132	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	0.50	0.02	0.02	ug/L
CG81132	$MCPADD-WM	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	100	0.3	0.3	ug/L
CG81132	$MCPADD-WM	1,4-dioxane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	100	3	3	ug/L
CG81132	$MCPADD-WM	1,4-dioxane	MA / GROUNDWATER STANDARDS / GW-1	ND	100	0.3	0.3	ug/L
CG81133	$8260GWR-WI	Acetone	MA / CAM Protocol / VOA AQ RL	ND	25		10	ug/L
CG81133	$8260GWR-WI	Tetrahydrofuran (THF)	MA / CAM Protocol / VOA AQ RL	ND	2.5		2	ug/L
CG81133	$8260GWR-WI	Carbon Disulfide	MA / CAM Protocol / VOA AQ RL	ND	5.0		2	ug/L
CG81133	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.0075	0.0075	ug/L
CG81133	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.00033	0.00033	ug/L
CG81133	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.00075	0.00075	ug/L
CG81133	$8260GWR-WI	Vinyl chloride	MA / Client Specified Criteria / LOCKHEED WILMINGTO	2.3	1.0	2	2	ug/L
CG81133	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	0.50	0.02	0.02	ug/L
CG81133	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-1 (mg/l)	2.3	1.0	2	2	ug/L
CG81133	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-1 (mg/l)	2.3	1.0	2	2	ug/L
CG81133	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-2 (mg/l)	2.3	1.0	2	2	ug/L
CG81133	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-2 (mg/l)	2.3	1.0	2	2	ug/L
CG81133	$8260GWR-WI	Vinyl chloride	MA / GROUNDWATER STANDARDS / GW-1	2.3	1.0	2	2	ug/L
CG81133	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	0.50	0.02	0.02	ug/L
CG81133	$8260GWR-WI	Vinyl chloride	MA / GROUNDWATER STANDARDS / GW-2	2.3	1.0	2	2	ug/L
CG81133	$MCPADD-WM	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	100	0.3	0.3	ug/L
CG81133	$MCPADD-WM	1,4-dioxane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	100	3	3	ug/L

Wednesday, September 30, 2020

Criteria: MA: CAM, GW1, GW2, GW3

State: MA

Sample Criteria Exceedances Report

GCG81121 - AECOM-WILMINGTN

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units
CG81133	$MCPADD-WM	1,4-dioxane	MA / GROUNDWATER STANDARDS / GW-1	ND	100	0.3	0.3	ug/L

Phoenix Laboratories does not assume responsibility for the data contained in this exceedance report. It is provided as an additional tool to identify requested criteria exceedences. All efforts are made to ensure the accuracy of the data (obtained from appropriate agencies). A lack of exceedence information does not necessarily suggest conformance to the criteria. It is ultimately the site professional's responsibility to determine appropriate compliance.

MassDEP Analytical Protocol Certification Form

Laboratory Name: Phoenix Environmental Laboratories, Inc. **Project #:**

Project Location: LOCKHEED WILMINGTON MA 6055204 **RTN:**

This Form provides certifications for the following data set: [list Laboratory Sample ID Number(s)]

CG81121, CG81122, CG81123, CG81124, CG81125, CG81126, CG81127, CG81128, CG81129, CG81130, CG81131, CG81132, CG81133

Matrices: ☑ Groundwater/Surface Water ☐ Soil/Sediment ☐ Drinking Water ☐ Air ☐ Other:

CAM Protocol (check all that apply below)

8260 VOC CAM II A ☑	7470/7471 Hg CAM III B ☐	MassDEP VPH CAM IV A ☑	8081 Pesticides CAM V B ☐	7196 Hex Cr CAM VI B ☐	MassDEP APH CAM IX A ☐
8270 SVOC CAM II B ☑	7010 Metals CAM III C ☐	MassDEP EPH CAM IV B ☑	8151 Herbicides CAM V C ☐	8330 Explosives CAM VIII A ☐	TO-15 VOC CAM IX B ☐
6010 Metals CAM III A ☑	6020 Metals CAM III D ☐	8082 PCB CAM V A ☐	9012 Total Cyanide/PAC CAM V1 A ☐	6860 Perchlorate CAM VIII B ☐	

Affirmative responses to questions A through F are required for "Presumptive Certainty" status

A	Were all samples received in a condition consistent with those described on the Chain-of-Custody, properly preserved (including temperature*) in the field or laboratory, and prepared/analyzed with method holding times? (* see narrative)	☑ Yes ☐ No
B	Were the analytical method(s) and all associated QC requirements specified in the selected CAM protocol(s) followed?	☑ Yes ☐ No
C	Were all required corrective actions and analytical response actions specified in the selected CAM protocol(s) implemented for all identified performance standard non-conformances?	☑ Yes ☐ No
D	Does the laboratory report comply with all the reporting requirements speified in CAM VII A, "Quality Assurance and Quality Control Guidelines for the Acquisition and Reporting of Analytical Data"?	☑ Yes ☐ No
E	a. VPH, EPH, and APH Methods only: Was each method conducted without significant modification(s)? (refer to the individual method(s) for a list of significant modifications). b. APH and TO-15 methods only: Was the complete analyte list reported for each method?	☑ Yes ☐ No ☐ Yes ☐ No
F	Were all applicable CAM protocol QC and performance standard non-conformances identified and evaluated in a laboratory narrative (including all "No" responses to Questions A through E)?	☑ Yes ☐ No

Responses to questions G, H and I below is required for "Presumptive Certainty" status

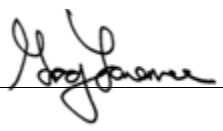
G	Were the reporting limits at or below all CAM reporting limits specified in the selected CAM protocol(s)?	☐ Yes ☑ No

Data User Note: Data that achieve "Presumptive Certainty" status may not necessarily meet the data usability and representativeness requirements described in 310 CMR 40. 1056(2)(k) and WSC-07-350

H	Were all QC performance standards specified in the CAM protocol(s) achieved? See Sections: EPH, SVOA-Dioxane, SVOASIM, VOA Narrations .	☐ Yes ☑ No
I	Were results reported for the complete analyte list specified in the selected CAM protocol(s)?	☐ Yes ☑ No

All negative responses must be addressed in an attached laboratory narrative.

I, the undersigned, attest under the pains and penalties of perjury that, based upon my personal inquiry of those responsible for obtaining the information, the material contained in this analytical report is, to the best of my knowledge and belief, accurate and complete.

Authorized Signature: 

Date: Wednesday, September 30, 2020

Printed Name: Greg Lawrence

Position: Assistant Lab Director

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

ACCREDITED IN ACCORDANCE WITH nelac NY # 11301

MCP Certification Report

September 30, 2020

SDG I.D.: GCG81121

SDG Comments

Metals Analysis:
The client requested a shorter list of elements than the 6010 MCP list. The following analytes from the 6010 Metals list were not reported: Antimony, Barium, Beryllium, Cadmium, Chromium, Lead, Nickel, Selenium, Silver, Thallium, Vanadium, Zinc.

Not all requested reporting levels were achieved. Please refer to the Sample Criteria Exceedances section of this report.

EPH Narration

Were all QA/QC performance criteria specified in the MADEP document CAM achieved? No.

QC Batch 546542 (Samples: CG81122, CG81123): -----

One analyte is below the method criteria. A low bias is possible. (C-10 Decane)

Instrument:

AU-FID3 09/24/20-1 Adam Werner, Chemist 09/24/20

CG81122 (1X)

No significant modifications were made to the EPH method, as specified in Section 11.3 of the method.

The initial calibration (AR0923BI) RSD for the compound list was less than 25% except for the following compounds: None.
The continuing calibration %D for the compound list was less than 25% except for the following compounds:None.

AU-FID4 09/23/20-1 Adam Werner, Chemist 09/23/20

CG81122 (1X), CG81123 (1X)

The initial calibration (AL0923BI) RSD for the compound list was less than 25% except for the following compounds: None.
The continuing calibration %D for the compound list was less than 25% except for the following compounds:None.

QC (Batch Specific):

Batch 546542 (CG80054)

CG81122, CG81123

All LCS recoveries were within 40 - 140 with the following exceptions: C-10 Decane(39%)
All LCSD recoveries were within 40 - 140 with the following exceptions: C-10 Decane(36%)
All LCS/LCSD RPDs were less than 25% with the following exceptions: None.
A LCS and LCS Duplicate were performed instead of a matrix spike and matrix spike duplicate.
Additional EPH fractionation criteria: Breakthrough criteria (BT) is 0 to 5%

I attest under the pains and penalties of perjury that, based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.

ICP Metals Narration

Were all QA/QC performance criteria specified in the analytical method achieved? Yes.

Instrument:

BLUE 09/18/20 07:42 Cindy Pearce, Emily Kolominskaya, Tina Hall, Chemist 09/18/

CG81126, CG81127, CG81128, CG81129

The initial calibration met criteria.
The continuing calibration standards met criteria for all the elements reported. The linear range is defined daily by the calibration

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Certification Report

September 30, 2020

SDG I.D.: GCG81121

ICP Metals Narration

range.
The continuing calibration blanks were less than the reporting level for the elements reported.
The ICSA and ICSAB were analyzed at the beginning and end of the run and were within criteria.The linear range is defined daily by the calibration range.
The following Initial Calibration Verification (ICV) compounds did not meet criteria: None.
The following Continuing Calibration Verification (CCV) compounds did not meet criteria: None.
The following ICP Interference Check (ICSAB) compounds did not meet criteria: None.

BLUE 09/21/20 15:32 Cindy Pearce, Emily Kolominskaya, Tina Hall, Chemist 09/21/

CG81126

The initial calibration met criteria.
The continuing calibration standards met criteria for all the elements reported. The linear range is defined daily by the calibration range.
The continuing calibration blanks were less than the reporting level for the elements reported.
The ICSA and ICSAB were analyzed at the beginning and end of the run and were within criteria.The linear range is defined daily by the calibration range.
The following Initial Calibration Verification (ICV) compounds did not meet criteria: None.
The following Continuing Calibration Verification (CCV) compounds did not meet criteria: None.
The following ICP Interference Check (ICSAB) compounds did not meet criteria: None.

BLUE 09/22/20 08:45 Tina Hall, Chemist 09/22/20

CG81122

The initial calibration met criteria.
The continuing calibration standards met criteria for all the elements reported. The linear range is defined daily by the calibration range.
The continuing calibration blanks were less than the reporting level for the elements reported.
The ICSA and ICSAB were analyzed at the beginning and end of the run and were within criteria.The linear range is defined daily by the calibration range.
The following Initial Calibration Verification (ICV) compounds did not meet criteria: None.
The following Continuing Calibration Verification (CCV) compounds did not meet criteria: None.
The following ICP Interference Check (ICSAB) compounds did not meet criteria: None.

BLUE 09/23/20 09:40 Cindy Pearce, Emily Kolominskaya, Tina Hall, Chemist 09/23/

CG81122, CG81126, CG81127, CG81128, CG81129

The initial calibration met criteria.
The continuing calibration standards met criteria for all the elements reported. The linear range is defined daily by the calibration range.
The continuing calibration blanks were less than the reporting level for the elements reported.
The ICSA and ICSAB were analyzed at the beginning and end of the run and were within criteria.The linear range is defined daily by the calibration range.
The following Initial Calibration Verification (ICV) compounds did not meet criteria: None.
The following Continuing Calibration Verification (CCV) compounds did not meet criteria: None.
The following ICP Interference Check (ICSAB) compounds did not meet criteria: None.

BLUE 09/24/20 09:49 Cindy Pearce, Emily Kolominskaya, Tina Hall, Chemist 09/24/

CG81126

The initial calibration met criteria.
The continuing calibration standards met criteria for all the elements reported. The linear range is defined daily by the calibration range.
The continuing calibration blanks were less than the reporting level for the elements reported.

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NY # 11301

Certification Report

September 30, 2020

SDG I.D.: GCG81121

ICP Metals Narration

The ICSA and ICSAB were analyzed at the beginning and end of the run and were within criteria.The linear range is defined daily by the calibration range.
The following Initial Calibration Verification (ICV) compounds did not meet criteria: None.
The following Continuing Calibration Verification (CCV) compounds did not meet criteria: None.
The following ICP Interference Check (ICSAB) compounds did not meet criteria: None.

QC (Batch Specific):

Batch 546028 (CG80061)

CG81126, CG81127, CG81128, CG81129

All LCS recoveries were within 80 - 120 with the following exceptions: None.
All LCSD recoveries were within 80 - 120 with the following exceptions: None.
All LCS/LCSD RPDs were less than 20% with the following exceptions: None.
Additional: LCS acceptance range is 80-120% MS acceptance range 75-125%.

Batch 546309 (CG81122)

CG81122

All LCS recoveries were within 80 - 120 with the following exceptions: None.
All LCSD recoveries were within 80 - 120 with the following exceptions: None.
All LCS/LCSD RPDs were less than 20% with the following exceptions: None.
Additional: LCS acceptance range is 80-120% MS acceptance range 75-125%.

Batch 546428 (CG80986)

CG81122, CG81126, CG81127, CG81128, CG81129

All LCS recoveries were within 80 - 120 with the following exceptions: None.
All LCSD recoveries were within 80 - 120 with the following exceptions: None.
All LCS/LCSD RPDs were less than 20% with the following exceptions: None.
Additional: LCS acceptance range is 80-120% MS acceptance range 75-125%.

SVOA-Dioxane

Were all QA/QC performance criteria specified in the MADEP document CAM achieved? No.

QC Batch 546802 (Samples: CG81123, CG81124, CG81127, CG81128): -----

The blank surrogate was below criteria. A low bias is possible in the blank. (% 1,4-dioxane-d8(CG84822))

Instrument:

CHEM22 09/22/20-1 Adam Werner, Chemist 09/22/20

CG81125 (1X)

Initial Calibration Evaluation (CHEM22/DIOX_0818):
100% of target compounds met criteria.
The following compounds had %RSDs >20%: None.
The following compounds did not meet recommended response factors: None.
The following compounds did not meet a minimum response factors: None.

Continuing Calibration Verification (CHEM22/0922_06-DIOX_0818) (MCP Compliance):
Internal standard areas were within 50 to 200% of the initial calibration with the following exceptions: None.
100% of target compounds met criteria.

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MCP Certification Report

September 30, 2020

SDG I.D.: GCG81121

SVOA-Dioxane

The following compounds did not meet % deviation criteria: None.
The following compounds did not meet maximum % deviations: None.
The following compounds did not meet recommended response factors: None.
The following compounds did not meet minimum response factors: None.

CHEM22 09/28/20-1 Adam Werner, Chemist 09/28/20

CG81123 (1X), CG81124 (1X), CG81127 (1X), CG81128 (1X)

Initial Calibration Evaluation (CHEM22/DIOX_0818):
100% of target compounds met criteria.
The following compounds had %RSDs >20%: None.
The following compounds did not meet recommended response factors: None.
The following compounds did not meet a minimum response factors: None.

Continuing Calibration Verification (CHEM22/0928_06-DIOX_0818) (MCP Compliance):
Internal standard areas were within 50 to 200% of the initial calibration with the following exceptions: None.
100% of target compounds met criteria.
The following compounds did not meet % deviation criteria: None.
The following compounds did not meet maximum % deviations: None.
The following compounds did not meet recommended response factors: None.
The following compounds did not meet minimum response factors: None.

QC (Batch Specific):

Batch 546802 (CG84822)

CG81123, CG81124, CG81127, CG81128

All LCS recoveries were within 40 - 140 with the following exceptions: None.
All LCSD recoveries were within 40 - 140 with the following exceptions: None.
All LCS/LCSD RPDs were less than 30% with the following exceptions: None.

QC (Site Specific):

Batch 546270 (CG81125)

CG81125

All LCS recoveries were within 40 - 140 with the following exceptions: None.
All LCSD recoveries were within 40 - 140 with the following exceptions: None.
All LCS/LCSD RPDs were less than 30% with the following exceptions: None.
All MS recoveries were within 30 - 140 with the following exceptions: None.
All MSD recoveries were within 30 - 140 with the following exceptions: None.
All MS/MSD RPDs were less than 30% with the following exceptions: None.

I attest under the pains and penalties of perjury that, based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.

SVOASIM Narration

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

ACCREDITED IN ACCORDANCE WITH nelac NY # 11301

MCP Certification Report

September 30, 2020

SDG I.D.: GCG81121

SVOASIM Narration

Were all QA/QC performance criteria specified in the MADEP document CAM achieved? No.

QC Batch 546642 (Samples: CG81122, CG81123): -----

The LCS/LCSD RPD exceeds the method criteria for one surrogate. The RPD for the other surrogates and the target analytes is acceptable. No significant variability is suspected. (% 2-Fluorobiphenyl)

Instrument:

CHEM33 09/24/20-1 Wes Bryon, Chemist 09/24/20

CG81122 (1X), CG81123 (1X)

Initial Calibration Evaluation (CHEM33/33_PAHSIM_0910):
100% of target compounds met criteria.
The following compounds had %RSDs >20%: None.
The following compounds did not meet recommended response factors: None.
The following compounds did not meet a minimum response factors: None.

Continuing Calibration Verification (CHEM33/0924_03-33_PAHSIM_0910) (MCP Compliance):
Internal standard areas were within 50 to 200% of the initial calibration with the following exceptions: None.
95% of target compounds met criteria.
The following compounds did not meet % deviation criteria: None.
The following compounds did not meet maximum % deviations: None.
The following compounds did not meet recommended response factors: None.
The following compounds did not meet minimum response factors: None.

QC (Batch Specific):

Batch 546642 (CG80971)

CG81122, CG81123

All LCS recoveries were within 40 - 140 with the following exceptions: None.
All LCSD recoveries were within 40 - 140 with the following exceptions: None.
All LCS/LCSD RPDs were less than 20% with the following exceptions: % 2-Fluorobiphenyl(21.8%)
Additional 8270 criteria: 10% of compounds can be outside of acceptance criteria as long as recovery is at least 10%. (Acid surrogates acceptance range for aqueous samples: 10-110%, for soils 30-130%)

I attest under the pains and penalties of perjury that, based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.

VOA Narration

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

ACCREDITED IN ACCORDANCE WITH nelac NY # 11301

MCP Certification Report

September 30, 2020

SDG I.D.: GCG81121

VOA Narration

Were all QA/QC performance criteria specified in the MADEP document CAM achieved? No.

QC Batch 546580 (Samples: CG81121, CG81124, CG81127, CG81128, CG81132): -----

The LCS/LCSD recovery is below the lower range. A slight low bias is possible. (2,2-Dichloropropane)

QC Batch 546771 (Samples: CG81122, CG81123, CG81125, CG81130, CG81131, CG81133): -----

The MS recovery is above the upper range for one analyte that was not reported in the sample(s), therefore no significant bias is suspected. (Trichlorofluoromethane)

The MS/MSD RPD exceeds the method criteria for one analyte, therefore there may be variability in the reported result. (Di-isopropyl ether)

Instrument:

CHEM23 09/22/20-2 Michael Hahn, Chemist 09/22/20

CG81121 (1X), CG81124 (1X), CG81127 (1X), CG81128 (1X), CG81132 (1X)

Initial Calibration Evaluation (CHEM23/VOA23_092020):
99% of target compounds met criteria.
The following compounds had %RSDs >20%: Chloroethane 22% (20%)
The following compounds did not meet Table 4 recommended minimum response factors: None.
The following compounds did not meet the minimum response factor of 0.05: None.

Continuing Calibration Verification (CHEM23/0922_34-VOA23_092020) (MCP Compliance):
Internal standard areas were within 50 to 200% of the initial calibration with the following exceptions: None.
98% of target compounds met criteria.
The following compounds did not meet % deviation criteria: None.
The following compounds did not meet maximum % deviations: None.
The following compounds did not meet Table 4 recommended minimum response factors: Tetrachloroethene 0.190 (0.2)
The following compounds did not meet the minimum MCP response factor of 0.05: None.

CHEM23 09/23/20-1 Michael Hahn, Chemist 09/23/20

CG81122 (1X), CG81123 (1X), CG81125 (1X), CG81130 (1X), CG81131 (1X), CG81133 (1X)

Initial Calibration Evaluation (CHEM23/VOA23_092020):
99% of target compounds met criteria.
The following compounds had %RSDs >20%: Chloroethane 22% (20%)
The following compounds did not meet Table 4 recommended minimum response factors: None.
The following compounds did not meet the minimum response factor of 0.05: None.

Continuing Calibration Verification (CHEM23/0923_02-VOA23_092020) (MCP Compliance):
Internal standard areas were within 50 to 200% of the initial calibration with the following exceptions: None.
98% of target compounds met criteria.
The following compounds did not meet % deviation criteria: None.
The following compounds did not meet maximum % deviations: None.
The following compounds did not meet Table 4 recommended minimum response factors: Tetrachloroethene 0.189 (0.2)
The following compounds did not meet the minimum MCP response factor of 0.05: None.

QC (Batch Specific):

Batch 546580 (CG81121) CHEM23 9/22/2020-2

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

ACCREDITED IN ACCORDANCE WITH nelac NY # 11301

MCP Certification Report

September 30, 2020

SDG I.D.: GCG81121

VOA Narration

CG81121(1X), CG81124(1X), CG81127(1X), CG81128(1X), CG81132(1X)

All LCS recoveries were within 70 - 130 with the following exceptions: 2,2-Dichloropropane(63%)
All LCSD recoveries were within 70 - 130 with the following exceptions: 2,2-Dichloropropane(62%)
All LCS/LCSD RPDs were less than 30% with the following exceptions: None.
A LCS and LCS Duplicate were performed instead of a matrix spike and matrix spike duplicate.
Additional 8260 criteria: 10% of compounds can be outside of acceptance criteria as long as recovery is 10%.

QC (Site Specific):

Batch 546771 (CG81125) CHEM23 9/23/2020-1

CG81122(1X), CG81123(1X), CG81125(1X), CG81130(1X), CG81131(1X), CG81133(1X)

All LCS recoveries were within 70 - 130 with the following exceptions: None.
All LCSD recoveries were within 70 - 130 with the following exceptions: None.
All LCS/LCSD RPDs were less than 30% with the following exceptions: None.
All MS recoveries were within 70 - 130 with the following exceptions: Trichlorofluoromethane(131%)
All MSD recoveries were within 70 - 130 with the following exceptions: None.
All MS/MSD RPDs were less than 30% with the following exceptions: Di-isopropyl ether(31.0%)
A matrix effect is suspected when a MS/MSD recovery is outside of criteria. No further action is required if LCS/LCSD compounds are within criteria.
Additional 8260 criteria: 10% of compounds can be outside of acceptance criteria as long as recovery is 10%.

I attest under the pains and penalties of perjury that, based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.

VPH Narration

Were all QA/QC performance criteria specified in the MADEP document CAM achieved? Yes.

Instrument:

PIDFID 09/22/20-1 Raman Makol, Chemist 09/22/20

CG81122 (1X), CG81123 (1X)

Initial Calibration Evaluation (PIDFID/VPH_092220_T):
The following compounds exceeded %RSD criteria: None.

QC (Batch Specific):

Batch 546538 (CG81101)

CG81122(1X), CG81123(1X)

All LCS recoveries were within 70 - 130 with the following exceptions: None.
All LCSD recoveries were within 70 - 130 with the following exceptions: None.
All LCS/LCSD RPDs were less than 25% with the following exceptions: None.
A blank MS/MSD was analyzed with this batch.

I attest under the pains and penalties of perjury that, based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.

Cooler: Yes ☐ No ☐
Coolant: IPK ☑ ICE ☐ No ☐
Temp 1.7 °C Pg of

PHOENIX
Environmental Laboratories, Inc.

CHAIN OF CUSTODY RECORD

587 East Middle Turnpike, P.O. Box 370, Manchester, CT 06040
Email: info@phoenixlabs.com Fax (860) 645-0823
Client Services (860) 645-8726

Data Delivery/Contact EMails:
lori.herberich@aecom.com
scott.olson@aecom.com

Customer: AECOM
Address: 250 Apollo Drive
Chelmsford, MA 01824 - (978) 905-2100
Contacts: Lori Herberich (Chemist) 978-302-0089 Scott Olson (PM) 978-846-5238

Project: Lockheed - Wilmington MA 60552044.19
Report to: Lori Herberich - Scott Olson - Nicole Callahan
Invoice to: Scott Olson & Lori Herberich
QUOTE # August 2019 (for 2017-2022)

2020 Project PO: 127680

This section MUST be completed with Bottle Quantities.

Sampler's Signature: [signature] Date: 9/18/20

Matrix Code:
DW=Drinking Water GW=Ground Water SW=Surface Water WW=Waste Water L=Liquid
RW=Raw Water SE=Sediment SL=Sludge S=Soil SD=Solid W=Wipe OIL=Oil B=Bulk

PHOENIX USE ONLY SAMPLE #	Customer Sample Identification	Sample Matrix	Date Sampled	Time Sampled	# of VOA Vials	# of Amber Glass	# of Clear Glass	# of Plastic				VOCs (8260) - HCL + Freon 113	1,4-Dioxane (8270D SIM) - NaHSO4 for DL <0.3 ug/L	VPH - HCL (MassDEP- VPH-04-1.1 Rev 1)	EPH + PAHs - HCL & UNP (MassDEP- EPH-04-1.1 Rev 1)	Total As, Fe, Mn (6010C) - HNO3 [FF]	Dissolved As, Fe, Mn (6010C) - HNO3	Chloride, Nitrate, Nitrite, Sulfate (300) - UNP	Sulfide - Zn-Acetate + NaOH	Total Organic Carbon (9060A) - H3PO4	Comments
81121	20A-TB01-091720-1	GW	9/17/20	1200	2							X									
81122	20A-AE106R3-091720-1	GW	9/17/20	1325	5	4		3				X		X	X					X	
81123	20A-AE106R5-091720-1	GW	9/17/20	1350	5	4						X	X	X	X						
81124	20A-AE101S-091820-1	GW	9/18/20	1020	3	1						X	X								
81125	20A-AE101D-091820-1	GW	9/18/20	1105	9	3						X	X								MS/MSD
81126	20A-GZA14A-091720-1	GW	9/17/20	1515				2								X	X				
81127	20A-MW4-091820-1	GW	9/18/20	1210	3	1		2				X	X			X	X				
81128	20A-MW4-091820-2	GW	9/18/20	1215	3	1		2				X	X			X	X				
81129	20A-MW4A-091820-1	GW	9/18/20	1050				2								X	X				
81130	20A-AE106R1-091720-1	GW	9/17/20	1410	3							X									
81131	20A-MW7-091720-1	GW	9/17/20	1525	3							X									
81132	20A-PS3-091820-1	GW	9/18/20	1110	3							X									

Relinquished by:	Accepted by:	Date:	Time:
[signature]	[signature]	9-18-20	14:40
[signature]	[signature]	9/18	1620

Comments, Special Requirements or Regulations:

Turnaround:
10 - 15 days

RI
☐ Direct Exposure (Residential)
☐ GW
☐ Other

CT
☐ RCP Cert
☐ GW Protection
☐ SW Protection
☐ GA Mobility
☐ GB Mobility
☐ Residential DEC
☐ I/C DEC
☐ Other

MA
X MCP (CAM Rpt)
X GW-1
X GW-2
X GW-3
☐ S-1
☐ S-2
☐ S-3
☐ MWRA eSMART
☐ Other

State where samples were collected: MA

Data Format
x PDF
x AECOM EQuIS 4-File EDD format

Data Package
☐ Tier II Checklist
☐ Full Data Package*
☐ Phoenix Std Report
☐ Other

* SURCHARGE APPLIES

Cooler: Yes ☑ No ☐
Coolant: IPK ☑ ICE ☐ No ☐
Temp 1.7 °C Pg of

PHOENIX
Environmental Laboratories, Inc.

CHAIN OF CUSTODY RECORD

587 East Middle Turnpike, P.O. Box 370, Manchester, CT 06040
Email: info@phoenixlabs.com Fax (860) 645-0823
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Contacts: Lori Herbierich (Chemist) 978-302-0089 Scott Olson (PM) 978-846-5238

Project: Lockheed - Wilmington MA 60552044.19
Report to: Lori Herberich - Scott Olson - Nicole Callahan
Invoice to: Scott Olson & Lori Herberich
QUOTE # August 2019 (for 2017-2022)

2020 Project PO: 127680

This section MUST be completed with Bottle Quantities.

Client Sample - Information - Identification

Samplers Signature: [signature] Date: 9/18/20

Matrix Code:
DW=Drinking Water GW=Ground Water SW=Surface Water WW=Waste Water L=Liquid
RW=Raw Water SE=Sediment SL=Sludge S=Soil SD=Solid W=Wipe OIL=Oil B=Bulk

PHOENIX USE ONLY SAMPLE #	Customer Sample Identification	Sample Matrix	Date Sampled	Time Sampled	# of VOA Vials	# of Amber Glass	# of Clear Glass	# of Plastic				VOCs (8260) - HCL + Freon 113	1,4-Dioxane (8270D SIM) - NaHSO4 for DL <0.3 ug/L	VPH - HCL (MassDEP: VPH-04-1.1 Rev 1)	EPH + PAHs - HCL & UNP (MassDEP: EPH-04-1.1 Rev 1)	Total As, Fe, Mn (6010C) - HNO3 (FF)	Dissolved As, Fe, Mn (6010C) - HNO3	Chloride, Nitrate, Nitrite, Sulfate (300) - UNP	Sulfide - Zn-Acetate + NaOH	Total Organic Carbon (9060A) - H3PO4	Comments
81133	20A-P55D-091820-1	GW	9/18/20	1135	3							X									

Relinquished by:	Accepted by:	Date:	Time:
[signature]	[signature]	9-18-20	1740
[signature]	[signature]	9/18	1620

Comments, Special Requirements or Regulations:

Turnaround:
10 - 15 days

RI
- ☐ Direct Exposure (Residential)
- ☐ GW
- ☐ Other

CT
- ☐ RCP Cert
- ☐ GW Protection
- ☐ SW Protection
- ☐ GA Mobility
- ☐ GB Mobility
- ☐ Residential DEC
- ☐ I/C DEC
- ☐ Other

MA
- X MCP (CAM Rpt)
- X GW-1
- X GW-2
- X GW-3
- ☐ S-1
- ☐ S-2
- ☐ S-3
- ☐ MWRA eSMART
- ☐ Other

State where samples were collected: MA

Data Format
- x PDF
- x AECOM EQuIS 4-File EDD format

Data Package
- ☐ Tier II Checklist
- ☐ Full Data Package*
- ☐ Phoenix Std Report
- ☐ Other

* SURCHARGE APPLIES

Cooler: Yes ☐ No ☑
Coolant: IPK ☑ ICE ☐ No ☐

Temp. 7 °C Pg of

PHOENIX
Environmental Laboratories, Inc.

CHAIN OF CUSTODY RECORD

587 East Middle Turnpike, P.O. Box 370, Manchester, CT 06040
Email: info@phoenixlabs.com Fax (860) 645-0823
Client Services (860) 645-8726

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lori.herberich@aecom.com
scott.olson@aecom.com

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Contacts: Lori Herberich (Chemist) 978-302-0089 Scott Olson (PM) 978-846-5238

Project: Lockheed - Wilmington MA 60552044.19
Report to: Lori Herberich - Scott Olson - Nicole Callahan
Invoice to: Scott Olson & Lori Herberich
QUOTE # August 2019 (for 2017-2022)

2020 Project PO: 127680

This section MUST be completed with Bottle Quantities.

Sampler's Signature: [signature] Date: 9/18/20

Client Sample - Information - Identification

Matrix Code:
DW=Drinking Water GW=Ground Water SW=Surface Water WW=Waste Water L=Liquid
RW=Raw Water SE=Sediment SL=Sludge S=Soil SD=Solid W=Wipe OIL=Oil B=Bulk

PHOENIX USE ONLY SAMPLE #	Customer Sample Identification	Sample Matrix	Date Sampled	Time Sampled	# of VOA Vials	# of Amber Glass	# of Clear Glass	# of Plastic				VOCs (8260) - HCL + Freon 113	1,4-Dioxane (8270D SIM) - NaHSO4 for DL <0.3 ug/L	VPH - HCL (MassDEP, VPH-04-1.1 Rev 1)	EPH + PAHs - HCL & UNP (MassDEP, EPH-04-1.1 Rev 1)	Total As, Fe, Mn (6010C) - HNO3 (FF)	Dissolved As, Fe, Mn (6010C) - HNO3	Chloride, Nitrate, Nitrite, Sulfate (300) - UNP	Sulfide - Zn-Acetate + NaOH	Total Organic Carbon (9060A) - H3PO4	Comments
81121	20A-TB01-091720-1	GW	9/17/20	1200	2							X									
81122	20A-AE106R3-091720-1	GW	9/17/20	1325	5	4		3				X		X	X	X	X			X	
81123	20A-AE106R5-091720-1	GW	9/17/20	1350	5	4						X	X	X	X						
81124	20A-AE101S-091820-1	GW	9/18/20	1020	3	1						X	X								
81125	20A-AE101D-091820-1	GW	9/18/20	1105	9	3						X	X								MS/MSD
81126	20A-GZA14A-091720-1	GW	9/17/20	1515				2								X	X				
81127	20A-MW4-091820-1	GW	9/18/20	1210	3	1		2				X	X			X	X				
81128	20A-MW4-091820-2	GW	9/18/20	1215	3	1		2				X	X			X	X				
81129	20A-MW4A-091820-1	GW	9/18/20	1050				2								X	X				
81130	20A-AE106R1-091720-1	GW	9/17/20	1410	3							X									
81131	20A-MW7-091720-1	GW	9/17/20	1525	3							X									
81132	20A-PS3-091820-1	GW	9/18/20	1110	3							X									

Relinquished by:	Accepted by:	Date:	Time:
[signature]	[signature]	9-18-20	14:40
[signature]	[signature]	9/18	1620

Comments, Special Requirements or Regulations:
9/21/20 added total and dissolved metals to 20A-AE106R3-091720-1 per client.

Turnaround:
10 - 15 days

RI
☐ Direct Exposure (Residential)
☐ GW
☐ Other

CT
☐ RCP Cert
☐ GW Protection
☐ SW Protection
☐ GA Mobility
☐ GB Mobility
☐ Residential DEC
☐ I/C DEC
☐ Other

MA
X MCP (CAM Rpt)
X GW-1
X GW-2
X GW-3
☐ S-1
☐ S-2
☐ S-3
☐ MWRA eSMART
☐ Other

State where samples were collected: MA

Data Format
x PDF
x AECOM EQuIS 4-File EDD format

Data Package
☐ Tier II Checklist
☐ Full Data Package*
☐ Phoenix Std Report
☐ Other

* SURCHARGE APPLIES

Cooler: Yes ☑ No ☐
Coolant: IPK ☑ ICE ☐ No ☐

PHOENIX
Environmental Laboratories, Inc.

CHAIN OF CUSTODY RECORD

Temp 7 °C Pg of

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Project: Lockheed - Wilmington MA 60552044.19
Report to: Lori Herberich - Scott Olson - Nicole Callahan
Invoice to: Scott Olson & Lori Herberich
QUOTE # August 2019 (for 2017-2022)

2020 Project PO: 127680

This section MUST be completed with Bottle Quantities.

Samplers Signature: [signature] Date 9/18/20

Matrix Code:
DW=Drinking Water GW=Ground Water SW=Surface Water WW=Waste Water L=Liquid
RW=Raw Water SE=Sediment SL=Sludge S=Soil SD=Solid W=Wipe OIL=Oil B=Bulk

PHOENIX USE ONLY SAMPLE #	Client Sample - Information - Identification: Customer Sample Identification	Sample Matrix	Date Sampled	Time Sampled	# of VOA Vials	# of Amber Glass	# of Clear Glass	# of Plastic				VOCs (8260) - HCL + Freon 113	1,4-Dioxane (8270D SIM) - NaHSO4 for DL <0.3 ug/L	VPH - HCL (MassDEP VPH 04 1.1 Rev 1)	EPH + PAHs - HCL & UNP (MassDEP EPH 04 1.1 Rev 1)	Total As, Fe, Mn (6010C) - HNO3 (FF)	Dissolved As, Fe, Mn (6010C) - HNO3	Chloride, Nitrate, Nitrite, Sulfate (300) - UNP	Sulfide - Zn-Acetate + NaOH	Total Organic Carbon (9060A) - H3PO4	Comments
81133	20A-PSSD-091820-1	GW	9/18/20	1135	3							X									

Relinquished by:	Accepted by:	Date:	Time:
[signature]	[signature]	9-18-20	14:40
[signature]	[signature]	9/18	1620

Comments, Special Requirements or Regulations:

Turnaround:
10 - 15 days

RI
☐ Direct Exposure (Residential)
☐ GW
☐ Other

CT
☐ RCP Cert
☐ GW Protection
☐ SW Protection
☐ GA Mobility
☐ GB Mobility
☐ Residential DEC
☐ I/C DEC
☐ Other

MA
X MCP (CAM Rpt)
X GW-1
X GW-2
X GW-3
☐ S-1
☐ S-2
☐ S-3
☐ MWRA eSMART
☐ Other

Data Format
x PDF
x AECOM EQuIS 4-File EDD format

Data Package
☐ Tier II Checklist
☐ Full Data Package*
☐ Phoenix Std Report
☐ Other

* SURCHARGE APPLIES

State where samples were collected: MA

PHOENIX
Environmental Laboratories, Inc.

Monday, October 26, 2020

Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Project ID: **LOCKHEED WILMINGTON MA 60552044.19**
SDG ID: **GCG81919**
Sample ID#s: CG81919 - CG81922

This laboratory is in compliance with the NELAC requirements of procedures used except where indicated.

This report contains results for the parameters tested, under the sampling conditions described on the Chain Of Custody, as received by the laboratory. This report is incomplete unless all pages indicated in the pagination at the bottom of the page are included.

A scanned version of the COC form accompanies the analytical report and is an exact duplicate of the original.

Enclosed are revised Analysis Report pages. Please replace and discard the original pages. If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200. The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.

Sincerely yours,

Phyllis Shiller
Laboratory Director

NELAC - #NY11301
CT Lab Registration #PH-0618
MA Lab Registration #M-CT007
ME Lab Registration #CT-007
NH Lab Registration #213693-A,B
NJ Lab Registration #CT-003
NY Lab Registration #11301
PA Lab Registration #68-03530
RI Lab Registration #63
UT Lab Registration #CT00007
VT Lab Registration #VT11301

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

ACCREDITED IN ACCORDANCE WITH nelac NY # 11301

SDG Comments

October 26, 2020

SDG I.D.: GCG81919

Ver. 2: This report has been revised to correct MS/MSD %Recoveries in batch 546747 for VPH analysis.

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Sample Id Cross Reference

October 26, 2020

SDG I.D.: GCG81919

Project ID: LOCKHEED WILMINGTON MA 60552044.19

Client Id	Lab Id	Matrix
20A-EMW11R2-092120-1	CG81919	GROUND WATER
20A-GZA6-092120-1	CG81920	GROUND WATER
20A-GZA10-092120-1	CG81921	GROUND WATER
20A-TB01-092120-1	CG81922	GROUND WATER

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

October 26, 2020

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		09/21/20	10:45
Location Code:	AECOM-WILMINGTN	Received by:	B	09/21/20	15:26
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	127680				

Laboratory Data

SDG ID: GCG81919
Phoenix ID: CG81919

Project ID: LOCKHEED WILMINGTON MA 60552044.19
Client ID: 20A-EMW11R2-092120-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Arsenic	0.004	0.004	mg/L	1	09/23/20	TH	SW6010D
Arsenic (Dissolved)	0.005	0.004	mg/L	1	09/22/20	TH	SW6010D
Iron (Dissolved)	0.718	0.011	mg/L	1	09/22/20	TH	SW6010D
Manganese (Dissolved)	0.715	0.001	mg/L	1	09/22/20	TH	SW6010D
Iron	0.879	0.010	mg/L	1	09/23/20	TH	SW6010D
Manganese	0.699	0.001	mg/L	1	09/23/20	TH	SW6010D
Chloride	281	15.0	mg/L	5	09/23/20	BS/EG	E300.0
Nitrite as Nitrogen	< 0.020	0.020	mg/L	5	09/23/20 00:25	BS/EG	E300.0
Nitrate as Nitrogen	< 0.05	0.05	mg/L	1	09/22/20 10:11	BS/EG	E300.0
Sulfate	37.1	3.0	mg/L	1	09/22/20	BS/EG	E300.0
Sulfide	< 0.05	0.05	mg/L	1	09/22/20	GD	SM4500S-D-11
Total Organic Carbon	< 1.0	1.0	mg/L	1	09/23/20	ARG	SM5310B-11
EPH Extraction	Completed				09/23/20	JS/D	SW3510C
MA Petroleum Hydrocarbon (EPH)	Completed				09/21/20		MADEP EPH-04
Semi-Volatile Extraction	Completed				09/25/20	P/AT/CG	SW3520C
Dissolved Metals Preparation	Completed				09/21/20	AG	SW3005A
Total Metals Digestion	Completed				09/22/20	AG	
MA Petroleum Hydrocarbon (VPH)	Completed				09/23/20	RM	MADEP VPH04
Volatiles							
1,1,1,2-Tetrachloroethane	ND	50	ug/L	100	09/22/20	MH	SW8260C
1,1,1-Trichloroethane	ND	100	ug/L	100	09/22/20	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	50	ug/L	100	09/22/20	MH	SW8260C
1,1,2-Trichloroethane	ND	50	ug/L	100	09/22/20	MH	SW8260C
1,1-Dichloroethane	100	100	ug/L	100	09/22/20	MH	SW8260C
1,1-Dichloroethene	ND	50	ug/L	100	09/22/20	MH	SW8260C
1,1-Dichloropropene	ND	100	ug/L	100	09/22/20	MH	SW8260C
1,2,3-Trichlorobenzene	ND	50	ug/L	100	09/22/20	MH	SW8260C

Ver 2

Project ID: LOCKHEED WILMINGTON MA 60552044.19 Phoenix I.D.: CG81919

Client ID: 20A-EMW11R2-092120-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	
1,2,3-Trichloropropane	ND	50	ug/L	100	09/22/20	MH	SW8260C
1,2,4-Trichlorobenzene	ND	70	ug/L	100	09/22/20	MH	SW8260C
1,2,4-Trimethylbenzene	ND	56	ug/L	100	09/22/20	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	50	ug/L	100	09/22/20	MH	SW8260C
1,2-Dibromoethane	ND	50	ug/L	100	09/22/20	MH	SW8260C
1,2-Dichlorobenzene	ND	100	ug/L	100	09/22/20	MH	SW8260C
1,2-Dichloroethane	ND	50	ug/L	100	09/22/20	MH	SW8260C
1,2-Dichloropropane	ND	50	ug/L	100	09/22/20	MH	SW8260C
1,3,5-Trimethylbenzene	ND	60	ug/L	100	09/22/20	MH	SW8260C
1,3-Dichlorobenzene	ND	50	ug/L	100	09/22/20	MH	SW8260C
1,3-Dichloropropane	ND	100	ug/L	100	09/22/20	MH	SW8260C
1,4-Dichlorobenzene	ND	50	ug/L	100	09/22/20	MH	SW8260C
2,2-Dichloropropane	ND	100	ug/L	100	09/22/20	MH	SW8260C
2-Chlorotoluene	ND	100	ug/L	100	09/22/20	MH	SW8260C
2-Hexanone	ND	500	ug/L	100	09/22/20	MH	SW8260C
4-Chlorotoluene	ND	100	ug/L	100	09/22/20	MH	SW8260C
4-Methyl-2-pentanone	ND	500	ug/L	100	09/22/20	MH	SW8260C
Acetone	ND	2500	ug/L	100	09/22/20	MH	SW8260C
Benzene	ND	50	ug/L	100	09/22/20	MH	SW8260C
Bromobenzene	ND	62	ug/L	100	09/22/20	MH	SW8260C
Bromochloromethane	ND	83	ug/L	100	09/22/20	MH	SW8260C
Bromodichloromethane	ND	50	ug/L	100	09/22/20	MH	SW8260C
Bromoform	ND	50	ug/L	100	09/22/20	MH	SW8260C
Bromomethane	ND	50	ug/L	100	09/22/20	MH	SW8260C
Carbon Disulfide	ND	500	ug/L	100	09/22/20	MH	SW8260C
Carbon tetrachloride	ND	50	ug/L	100	09/22/20	MH	SW8260C
Chlorobenzene	ND	100	ug/L	100	09/22/20	MH	SW8260C
Chloroethane	ND	100	ug/L	100	09/22/20	MH	SW8260C
Chloroform	ND	50	ug/L	100	09/22/20	MH	SW8260C
Chloromethane	ND	100	ug/L	100	09/22/20	MH	SW8260C
cis-1,2-Dichloroethene	750	100	ug/L	100	09/22/20	MH	SW8260C
cis-1,3-Dichloropropene	ND	50	ug/L	100	09/22/20	MH	SW8260C
Dibromochloromethane	ND	50	ug/L	100	09/22/20	MH	SW8260C
Dibromomethane	ND	50	ug/L	100	09/22/20	MH	SW8260C
Dichlorodifluoromethane	ND	100	ug/L	100	09/22/20	MH	SW8260C
Ethylbenzene	ND	100	ug/L	100	09/22/20	MH	SW8260C
Hexachlorobutadiene	ND	50	ug/L	100	09/22/20	MH	SW8260C
Isopropylbenzene	ND	100	ug/L	100	09/22/20	MH	SW8260C
m&p-Xylene	ND	100	ug/L	100	09/22/20	MH	SW8260C
Methyl ethyl ketone	ND	500	ug/L	100	09/22/20	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	70	ug/L	100	09/22/20	MH	SW8260C
Methylene chloride	ND	100	ug/L	100	09/22/20	MH	SW8260C
Naphthalene	ND	100	ug/L	100	09/22/20	MH	SW8260C
n-Butylbenzene	ND	100	ug/L	100	09/22/20	MH	SW8260C
n-Propylbenzene	ND	100	ug/L	100	09/22/20	MH	SW8260C
o-Xylene	ND	100	ug/L	100	09/22/20	MH	SW8260C
p-Isopropyltoluene	ND	100	ug/L	100	09/22/20	MH	SW8260C
sec-Butylbenzene	ND	100	ug/L	100	09/22/20	MH	SW8260C
Styrene	ND	100	ug/L	100	09/22/20	MH	SW8260C

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By		
tert-Butylbenzene	ND	100	ug/L	100	09/22/20	MH	SW8260C	
Tetrachloroethene	3600	100	ug/L	100	09/22/20	MH	SW8260C	
Tetrahydrofuran (THF)	ND	250	ug/L	100	09/22/20	MH	SW8260C	
Toluene	ND	100	ug/L	100	09/22/20	MH	SW8260C	
trans-1,2-Dichloroethene	ND	80	ug/L	100	09/22/20	MH	SW8260C	
trans-1,3-Dichloropropene	ND	50	ug/L	100	09/22/20	MH	SW8260C	
Trichloroethene	7100	100	ug/L	100	09/22/20	MH	SW8260C	
Trichlorofluoromethane	ND	100	ug/L	100	09/22/20	MH	SW8260C	
Trichlorotrifluoroethane	ND	100	ug/L	100	09/22/20	MH	SW8260C	
Vinyl chloride	120	100	ug/L	100	09/22/20	MH	SW8260C	
QA/QC Surrogates								
% 1,2-dichlorobenzene-d4 (100x)	99		%	100	09/22/20	MH	70 - 130 %	
% Bromofluorobenzene (100x)	96		%	100	09/22/20	MH	70 - 130 %	
% Dibromofluoromethane (100x)	110		%	100	09/22/20	MH	70 - 130 %	
% Toluene-d8 (100x)	99		%	100	09/22/20	MH	70 - 130 %	
Oxygenates& Dioxane								
1,4-dioxane	ND	10000	ug/L	100	09/22/20	MH	SW8260C (OXY)	
Diethyl ether	ND	100	ug/L	100	09/22/20	MH	SW8260C (OXY)	
Di-isopropyl ether	ND	100	ug/L	100	09/22/20	MH	SW8260C (OXY)	
Ethyl tert-butyl ether	ND	100	ug/L	100	09/22/20	MH	SW8260C (OXY)	
tert-amyl methyl ether	ND	100	ug/L	100	09/22/20	MH	SW8260C (OXY)	
Semivolatiles by SIM, PAH								
2-Methylnaphthalene	ND	0.47	ug/L	1	09/28/20	WB	SW8270D (SIM)	
Acenaphthene	ND	0.47	ug/L	1	09/28/20	WB	SW8270D (SIM)	
Acenaphthylene	ND	0.09	ug/L	1	09/28/20	WB	SW8270D (SIM)	
Anthracene	ND	0.09	ug/L	1	09/28/20	WB	SW8270D (SIM)	
Benz(a)anthracene	ND	0.09	ug/L	1	09/28/20	WB	SW8270D (SIM)	
Benzo(a)pyrene	ND	0.19	ug/L	1	09/28/20	WB	SW8270D (SIM)	
Benzo(b)fluoranthene	ND	0.09	ug/L	1	09/28/20	WB	SW8270D (SIM)	
Benzo(ghi)perylene	ND	0.02	ug/L	1	09/28/20	WB	SW8270D (SIM)	
Benzo(k)fluoranthene	ND	0.09	ug/L	1	09/28/20	WB	SW8270D (SIM)	
Chrysene	ND	0.05	ug/L	1	09/28/20	WB	SW8270D (SIM)	
Dibenz(a,h)anthracene	ND	0.02	ug/L	1	09/28/20	WB	SW8270D (SIM)	
Fluoranthene	ND	0.47	ug/L	1	09/28/20	WB	SW8270D (SIM)	
Fluorene	ND	0.09	ug/L	1	09/28/20	WB	SW8270D (SIM)	
Indeno(1,2,3-cd)pyrene	ND	0.09	ug/L	1	09/28/20	WB	SW8270D (SIM)	
Naphthalene	ND	0.47	ug/L	1	09/28/20	WB	SW8270D (SIM)	
Phenanthrene	ND	0.47	ug/L	1	09/28/20	WB	SW8270D (SIM)	
Pyrene	ND	0.07	ug/L	1	09/28/20	WB	SW8270D (SIM)	
QA/QC Surrogates								
% 2-Fluorobiphenyl	39		%	1	09/28/20	WB	40 - 140 %	3
% Nitrobenzene-d5	64		%	1	09/28/20	WB	40 - 140 %	
% Terphenyl-d14	45		%	1	09/28/20	WB	40 - 140 %	
MA EPH Aliphatic/Aromatic Ranges								
C11-C22 Aromatic Hydrocarbons 1,2*	ND	200	ug/L	1	09/24/20	AW	MAEPH 5/2004	
C11-C22 Aromatic Hydrocarbons Unadj	ND	200	ug/L	1	09/24/20	AW	MAEPH 5/2004	
C19-C36 Aliphatic Hydrocarbons 1*	ND	200	ug/L	1	09/24/20	AW	MAEPH 5/2004	

Project ID: LOCKHEED WILMINGTON MA 60552044.19 Phoenix I.D.: CG81919
Client ID: 20A-EMW11R2-092120-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	
C9-C18 Aliphatic Hydrocarbons 1*	ND	200	ug/L	1	09/24/20	AW	MAEPH 5/2004
Total TPH 1,2*	ND	200	ug/L	1	09/24/20	AW	MAEPH 5/2004
QA/QC Surrogates							
% 1-chlorooctadecane (aliphatic)	84		%	1	09/24/20	AW	40 - 140 %
% 2-Bromonaphthalene (Fractionation)	107		%	1	09/24/20	AW	40 - 140 %
% 2-Fluorobiphenyl (Fractionation)	104		%	1	09/24/20	AW	40 - 140 %
% o-terphenyl (aromatic)	83		%	1	09/24/20	AW	40 - 140 %

MA Volatile Petroleum Hydrocarbons (VPH)

Unadjusted C5-C8 Aliphatics (*1)	3600	100	ug/L	1	09/23/20	RM	MA VPH 5/2004
Unadjusted C9-C12 Aliphatics (*1)	ND	100	ug/L	1	09/23/20	RM	MA VPH 5/2004
C5-C8 Aliphatic Hydrocarbons *1,2	3600	100	ug/L	1	09/23/20	RM	MA VPH 5/2004
C9-C12 Aliphatic Hydrocarbons *1,3	ND	100	ug/L	1	09/23/20	RM	MA VPH 5/2004
C9-C10 Aromatic Hydrocarbons *1	ND	100	ug/L	1	09/23/20	RM	MA VPH 5/2004
Benzene	ND	1.0	ug/L	1	09/23/20	RM	MA VPH 5/2004
Ethyl Benzene	2.1	1.0	ug/L	1	09/23/20	RM	MA VPH 5/2004
MTBE	ND	1.0	ug/L	1	09/23/20	RM	MA VPH 5/2004
Naphthalene	ND	5.0	ug/L	1	09/23/20	RM	MA VPH 5/2004
Toluene	ND	1.0	ug/L	1	09/23/20	RM	MA VPH 5/2004
m,p-Xylenes	ND	2.0	ug/L	1	09/23/20	RM	MA VPH 5/2004
o-Xylene	ND	1.0	ug/L	1	09/23/20	RM	MA VPH 5/2004
QA/QC Surrogates							
% 2,5-Dibromotoluene (FID)	101		%	1	09/23/20	RM	70 - 130 %
% 2,5-Dibromotoluene (PID)	99		%	1	09/23/20	RM	70 - 130 %

3 = This parameter exceeds laboratory specified limits.

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

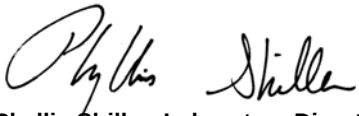
Comments:

MAEPH:
1* Hydrocarbon range data exclude concentrations of any surrogate(s) and/or internal standards eluting in that range.
2* C11-C12 Aromatic Hydrocarbons exclude the concentration of Target PAH analytes eluting in that range.

VPH:
*1 Range data exclude conc.s of any surrogate(s) and/or Int. std.s eluting in that range.
*2 C5-C8 and C9-C12 Aliphatic exclude the conc. of Target Analytes in that range.
*3 C9-C12 Aliphatic also exclude C9-C10 Aromatic Hydrocarbon

Volatile Comment:
Elevated reporting limits for volatiles due to the presence of target and/or non-target compounds.

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.



Phyllis Shiller, Laboratory Director

October 26, 2020

Reviewed and Released by: Greg Lawrence, Assistant Lab Director

Ver 2

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

October 26, 2020

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		09/21/20	10:25
Location Code:	AECOM-WILMINGTN	Received by:	B	09/21/20	15:26
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	127680				

Laboratory Data

SDG ID: GCG81919
Phoenix ID: CG81920

Project ID: LOCKHEED WILMINGTON MA 60552044.19
Client ID: 20A-GZA6-092120-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Arsenic	0.009	0.004	mg/L	1	09/23/20	TH	SW6010D
Arsenic (Dissolved)	0.010	0.004	mg/L	1	09/22/20	TH	SW6010D
Iron (Dissolved)	1.34	0.011	mg/L	1	09/22/20	TH	SW6010D
Manganese (Dissolved)	0.129	0.001	mg/L	1	09/22/20	TH	SW6010D
Iron	1.34	0.010	mg/L	1	09/23/20	TH	SW6010D
Manganese	0.130	0.001	mg/L	1	09/23/20	TH	SW6010D
Dissolved Metals Preparation	Completed				09/21/20	AG	SW3005A
Total Metals Digestion	Completed				09/22/20	AG	

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level

Comments:

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Phyllis Shiller, Laboratory Director
October 26, 2020
Reviewed and Released by: Greg Lawrence, Assistant Lab Director

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

October 26, 2020

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		09/21/20	13:20
Location Code:	AECOM-WILMINGTN	Received by:	B	09/21/20	15:26
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	127680				

Laboratory Data

SDG ID: GCG81919
Phoenix ID: CG81921

Project ID: LOCKHEED WILMINGTON MA 60552044.19
Client ID: 20A-GZA10-092120-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Arsenic	0.077	0.004	mg/L	1	09/23/20	TH	SW6010D
Arsenic (Dissolved)	0.078	0.004	mg/L	1	09/22/20	TH	SW6010D
Iron (Dissolved)	3.57	0.011	mg/L	1	09/22/20	TH	SW6010D
Manganese (Dissolved)	1.53	0.001	mg/L	1	09/22/20	TH	SW6010D
Iron	3.68	0.010	mg/L	1	09/23/20	TH	SW6010D
Manganese	1.50	0.001	mg/L	1	09/23/20	TH	SW6010D
Dissolved Metals Preparation	Completed				09/21/20	AG	SW3005A
Total Metals Digestion	Completed				09/22/20	AG	

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level

Comments:

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Phyllis Shiller, Laboratory Director
October 26, 2020
Reviewed and Released by: Greg Lawrence, Assistant Lab Director

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

October 26, 2020

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		09/21/20	8:00
Location Code:	AECOM-WILMINGTN	Received by:	B	09/21/20	15:26
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	127680				

Laboratory Data

SDG ID: GCG81919
Phoenix ID: CG81922

Project ID: LOCKHEED WILMINGTON MA 60552044.19
Client ID: 20A-TB01-092120-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Volatiles							
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
1,1,1-Trichloroethane	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L	1	09/22/20	MH	SW8260C
1,1,2-Trichloroethane	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
1,1-Dichloroethane	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
1,1-Dichloroethene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
1,1-Dichloropropene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
1,2,3-Trichlorobenzene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
1,2,3-Trichloropropane	ND	0.50	ug/L	1	09/22/20	MH	SW8260C
1,2,4-Trichlorobenzene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
1,2,4-Trimethylbenzene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	0.50	ug/L	1	09/22/20	MH	SW8260C
1,2-Dibromoethane	ND	0.50	ug/L	1	09/22/20	MH	SW8260C
1,2-Dichlorobenzene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
1,2-Dichloroethane	ND	0.60	ug/L	1	09/22/20	MH	SW8260C
1,2-Dichloropropane	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
1,3,5-Trimethylbenzene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
1,3-Dichlorobenzene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
1,3-Dichloropropane	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
1,4-Dichlorobenzene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
2,2-Dichloropropane	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
2-Chlorotoluene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
2-Hexanone	ND	5.0	ug/L	1	09/22/20	MH	SW8260C
4-Chlorotoluene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
4-Methyl-2-pentanone	ND	5.0	ug/L	1	09/22/20	MH	SW8260C
Acetone	ND	25	ug/L	1	09/22/20	MH	SW8260C

Project ID: LOCKHEED WILMINGTON MA 60552044.19 Phoenix I.D.: CG81922

Client ID: 20A-TB01-092120-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	
Benzene	ND	0.70	ug/L	1	09/22/20	MH	SW8260C
Bromobenzene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
Bromochloromethane	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
Bromodichloromethane	ND	0.50	ug/L	1	09/22/20	MH	SW8260C
Bromoform	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
Bromomethane	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
Carbon Disulfide	ND	5.0	ug/L	1	09/22/20	MH	SW8260C
Carbon tetrachloride	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
Chlorobenzene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
Chloroethane	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
Chloroform	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
Chloromethane	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
cis-1,2-Dichloroethene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
cis-1,3-Dichloropropene	ND	0.40	ug/L	1	09/22/20	MH	SW8260C
Dibromochloromethane	ND	0.50	ug/L	1	09/22/20	MH	SW8260C
Dibromomethane	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
Dichlorodifluoromethane	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
Ethylbenzene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
Hexachlorobutadiene	ND	0.40	ug/L	1	09/22/20	MH	SW8260C
Isopropylbenzene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
m&p-Xylene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
Methyl ethyl ketone	ND	5.0	ug/L	1	09/22/20	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
Methylene chloride	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
Naphthalene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
n-Butylbenzene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
n-Propylbenzene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
o-Xylene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
p-Isopropyltoluene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
sec-Butylbenzene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
Styrene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
tert-Butylbenzene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
Tetrachloroethene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
Tetrahydrofuran (THF)	ND	2.5	ug/L	1	09/22/20	MH	SW8260C
Toluene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
trans-1,2-Dichloroethene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
trans-1,3-Dichloropropene	ND	0.40	ug/L	1	09/22/20	MH	SW8260C
Trichloroethene	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
Trichlorofluoromethane	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
Trichlorotrifluoroethane	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
Vinyl chloride	ND	1.0	ug/L	1	09/22/20	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	98		%	1	09/22/20	MH	70 - 130 %
% Bromofluorobenzene	96		%	1	09/22/20	MH	70 - 130 %
% Dibromofluoromethane	96		%	1	09/22/20	MH	70 - 130 %
% Toluene-d8	103		%	1	09/22/20	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	100	ug/L	1	09/22/20	MH	SW8260C (OXY)
Diethyl ether	ND	1.0	ug/L	1	09/22/20	MH	SW8260C (OXY)

Ver 2

Project ID: LOCKHEED WILMINGTON MA 60552044.19 Phoenix I.D.: CG81922

Client ID: 20A-TB01-092120-1

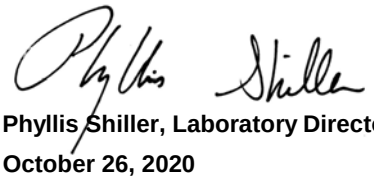
Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	
Di-isopropyl ether	ND	1.0	ug/L	1	09/22/20	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	1.0	ug/L	1	09/22/20	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	1.0	ug/L	1	09/22/20	MH	SW8260C (OXY)

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

TRIP BLANK INCLUDED.

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.



Phyllis Shiller, Laboratory Director

October 26, 2020

Reviewed and Released by: Greg Lawrence, Assistant Lab Director

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

QA/QC Report

October 26, 2020

QA/QC Data

SDG I.D.: GCG81919

Parameter	Blank	Blk RL	Sample Result	Dup Result	Dup RPD	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits
QA/QC Batch 546428 (mg/L), QC Sample No: CG80986 (CG81919, CG81920, CG81921)													
ICP Metals - Aqueous													
Arsenic	BRL	0.004	<0.004	<0.004	NC	96.6	99.5	3.0	99.8			80 - 120	20
Iron	BRL	0.010	0.782	0.773	1.20	97.8	101	3.2	98.2			80 - 120	20
Manganese	BRL	0.001	0.009	0.009	0	98.0	101	3.0	99.7			80 - 120	20
Comment:													
Additional: LCS acceptance range is 80-120% MS acceptance range 75-125%.													
QA/QC Batch 546309 (mg/L), QC Sample No: CG81122 (CG81919, CG81920, CG81921)													
ICP Metals - Dissolved													
Arsenic	BRL	0.004	<0.004	<0.004	NC	93.1	96.3	3.4	95.4			80 - 120	20
Iron	BRL	0.011	0.095	0.092	3.20	90.7	94.5	4.1	91.0			80 - 120	20
Manganese	BRL	0.001	0.171	0.166	3.00	91.6	94.5	3.1	91.3			80 - 120	20
Comment:													
Additional: LCS acceptance range is 80-120% MS acceptance range 75-125%.													

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QA/QC Report

October 26, 2020

QA/QC Data

SDG I.D.: GCG81919

Parameter	Blank	Blk RL	Sample Result	Dup Result	Dup RPD	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits
QA/QC Batch 546404 (mg/L), QC Sample No: CG81919 (CG81919)													
Sulfide	BRL	0.05	<0.05	<0.05	NC	99.4			78.6			90 - 110	20
QA/QC Batch 546744 (mg/L), QC Sample No: CG82252 (CG81919)													
Total Organic Carbon	BRL	1.0	3.7	3.6	NC	104			91.0			85 - 115	20
Comment:													
Additional: LCS acceptance range is 85-115% MS acceptance range 75-125%.													
QA/QC Batch 546437 (mg/L), QC Sample No: CG81979 (CG81919)													
Chloride	BRL	3.0	49.1	49.6	1.00	105			106			90 - 110	20
Nitrate as Nitrogen	BRL	0.05	0.07	0.07	NC	104			104			90 - 110	20
Nitrite as Nitrogen	BRL	0.004	<0.004	<0.004	NC	101			102			90 - 110	20
Sulfate	BRL	3.0	11.4	11.4	NC	99.0			100			90 - 110	20
QA/QC Batch 546609 (mg/L), QC Sample No: CG82704 (CG81919)													
Chloride	BRL	3.0	39.9	39.5	1.00	98.9			106			90 - 110	20
Nitrate as Nitrogen	BRL	0.05	0.05	<0.05	NC	104			97.6			90 - 110	20
Nitrite as Nitrogen	BRL	0.004	<0.004	<0.004	NC	102			100			90 - 110	20
Sulfate	BRL	3.0	31.0	31.1	0.30	101			104			90 - 110	20

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QA/QC Report

October 26, 2020

QA/QC Data

SDG I.D.: GCG81919

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits
QA/QC Batch 546542 (ug/L), QC Sample No: CG80054 (CG81919)										
MAEPH - Ground Water										
C9-C18 Aliphatic Hydrocarbons 1*	ND	100	57	53	7.3				40 - 140	25
C19-C36 Aliphatic Hydrocarbons 1*	ND	100	85	86	1.2				40 - 140	25
C11-C22 Aromatic Hydrocarbons 1	ND	100	82	78	5.0				40 - 140	25
C11-C22 Aromatic Hydrocarbons U	ND	100							40 - 140	25
Total TPH 1,2*	ND	100	73	72	1.4				40 - 140	25
C9 - Nonane	ND	10	32	30	6.5				40 - 140	25
C-10 Decane	ND	10	39	36	8.0				40 - 140	25
C12 - Dodecane	ND	10	46	43	6.7				40 - 140	25
C14 - Tetradecane	ND	10	60	56	6.9				40 - 140	25
C16 - Hexadecane	ND	10	75	69	8.3				40 - 140	25
C18 - Octadecane	ND	10	87	82	5.9				40 - 140	25
C19 - Nonadecane	ND	10	86	82	4.8				40 - 140	25
C20 - Eicosane	ND	10	87	84	3.5				40 - 140	25
C22 - Docosane	ND	10	86	84	2.4				40 - 140	25
C24 - Tetracosane	ND	10	86	84	2.4				40 - 140	25
C26 - Hexacosane	ND	10	86	84	2.4				40 - 140	25
C28 - Octacosane	ND	10	85	83	2.4				40 - 140	25
C30 - Tricotane	ND	10	83	82	1.2				40 - 140	25
C36 - Hexatriacontane	ND	10	82	106	25.5				40 - 140	25
% 1-chlorooctadecane (aliphatic)	65	%	75	72	4.1				40 - 140	25
% o-terphenyl (aromatic)	64	%	79	74	6.5				40 - 140	25
% 2-Fluorobiphenyl (Fractionation)	96	%	103	101	2.0				40 - 140	25
% 2-Bromonaphthalene (Fractionati	95	%	110	118	7.0				40 - 140	25
% 2-Methylnaphthalene BT		%	0	0	NC				0 - 5	
% Naphthalene BT		%	0	0	NC				0 - 5	

Comment:

A LCS and LCS Duplicate were performed instead of a matrix spike and matrix spike duplicate.

Additional EPH fractionation criteria: Breakthrough criteria (BT) is 0 to 5%

QA/QC Batch 547021 (ug/L), QC Sample No: CG83400 (CG81919)										
Semivolatiles by SIM, PAH - Ground Water										
2-Methylnaphthalene	ND	0.50	63	63	0.0				40 - 140	20
Acenaphthene	ND	0.50	49	52	5.9				40 - 140	20
Acenaphthylene	ND	0.10	45	50	10.5				40 - 140	20
Anthracene	ND	0.10	51	54	5.7				40 - 140	20
Benz(a)anthracene	ND	0.02	56	61	8.5				40 - 140	20
Benzo(a)pyrene	ND	0.02	56	66	16.4				40 - 140	20
Benzo(b)fluoranthene	ND	0.02	68	75	9.8				40 - 140	20
Benzo(ghi)perylene	ND	0.02	61	68	10.9				40 - 140	20
Benzo(k)fluoranthene	ND	0.02	45	48	6.5				40 - 140	20
Chrysene	ND	0.02	53	58	9.0				40 - 140	20

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits
Dibenz(a,h)anthracene	ND	0.02	52	57	9.2				40 - 140	20
Fluoranthene	ND	0.50	43	50	15.1				40 - 140	20
Fluorene	ND	0.10	51	54	5.7				40 - 140	20
Indeno(1,2,3-cd)pyrene	ND	0.02	53	58	9.0				40 - 140	20
Naphthalene	ND	0.50	60	59	1.7				40 - 140	20
Phenanthrene	ND	0.06	46	50	8.3				40 - 140	20
Pyrene	ND	0.07	54	58	7.1				40 - 140	20
% 2-Fluorobiphenyl	45	%	45	46	2.2				40 - 140	20
% Nitrobenzene-d5	62	%	63	63	0.0				40 - 140	20
% Terphenyl-d14	59	%	58	62	6.7				40 - 140	20

Comment:

Additional 8270 criteria: 10% of compounds can be outside of acceptance criteria as long as recovery is at least 10%. (Acid surrogates acceptance range for aqueous samples: 10-110%, for soils 30-130%)

QA/QC Batch 546580 (ug/L), QC Sample No: CG81121 (CG81919 (100X) , CG81922)

Volatiles - Ground Water

1,1,1,2-Tetrachloroethane	ND	1.0	95	97	2.1				70 - 130	20
1,1,1-Trichloroethane	ND	1.0	89	91	2.2				70 - 130	20
1,1,2,2-Tetrachloroethane	ND	0.50	105	110	4.7				70 - 130	20
1,1,2-Trichloroethane	ND	1.0	94	93	1.1				70 - 130	20
1,1-Dichloroethane	ND	1.0	90	91	1.1				70 - 130	20
1,1-Dichloroethene	ND	1.0	98	97	1.0				70 - 130	20
1,1-Dichloropropene	ND	1.0	95	97	2.1				70 - 130	20
1,2,3-Trichlorobenzene	ND	1.0	100	100	0.0				70 - 130	20
1,2,3-Trichloropropane	ND	1.0	102	105	2.9				70 - 130	20
1,2,4-Trichlorobenzene	ND	1.0	94	96	2.1				70 - 130	20
1,2,4-Trimethylbenzene	ND	1.0	96	98	2.1				70 - 130	20
1,2-Dibromo-3-chloropropane	ND	1.0	99	107	7.8				70 - 130	20
1,2-Dibromoethane	ND	1.0	100	102	2.0				70 - 130	20
1,2-Dichlorobenzene	ND	1.0	95	94	1.1				70 - 130	20
1,2-Dichloroethane	ND	1.0	96	95	1.0				70 - 130	20
1,2-Dichloropropane	ND	1.0	94	94	0.0				70 - 130	20
1,3,5-Trimethylbenzene	ND	1.0	97	100	3.0				70 - 130	20
1,3-Dichlorobenzene	ND	1.0	94	95	1.1				70 - 130	20
1,3-Dichloropropane	ND	1.0	99	100	1.0				70 - 130	20
1,4-Dichlorobenzene	ND	1.0	94	96	2.1				70 - 130	20
1,4-dioxane	ND	100	105	102	2.9				40 - 160	30
2,2-Dichloropropane	ND	1.0	63	62	1.6				70 - 130	20
2-Chlorotoluene	ND	1.0	93	97	4.2				70 - 130	20
2-Hexanone	ND	5.0	105	111	5.6				40 - 160	30
4-Chlorotoluene	ND	1.0	93	95	2.1				70 - 130	20
4-Methyl-2-pentanone	ND	5.0	104	111	6.5				40 - 160	30
Acetone	ND	5.0	112	116	3.5				40 - 160	30
Benzene	ND	0.70	94	96	2.1				70 - 130	20
Bromobenzene	ND	1.0	94	93	1.1				70 - 130	20
Bromochloromethane	ND	1.0	91	90	1.1				70 - 130	20
Bromodichloromethane	ND	0.50	95	93	2.1				70 - 130	20
Bromoform	ND	1.0	95	96	1.0				70 - 130	20
Bromomethane	ND	1.0	96	97	1.0				40 - 160	30
Carbon Disulfide	ND	1.0	92	93	1.1				70 - 130	20
Carbon tetrachloride	ND	1.0	88	90	2.2				70 - 130	20
Chlorobenzene	ND	1.0	94	96	2.1				70 - 130	20
Chloroethane	ND	1.0	103	98	5.0				70 - 130	20

QA/QC Data

SDG I.D.: GCG81919

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits
Chloroform	ND	1.0	90	88	2.2				70 - 130	20
Chloromethane	ND	1.0	110	109	0.9				40 - 160	30
cis-1,2-Dichloroethene	ND	1.0	85	85	0.0				70 - 130	20
cis-1,3-Dichloropropene	ND	0.40	90	90	0.0				70 - 130	20
Dibromochloromethane	ND	0.50	99	101	2.0				70 - 130	20
Dibromomethane	ND	1.0	90	91	1.1				70 - 130	20
Dichlorodifluoromethane	ND	1.0	142	141	0.7				40 - 160	30
Di-isopropyl ether	ND	1.0	94	95	1.1				70 - 130	20
Ethyl ether	ND	1.0	100	95	5.1				70 - 130	20
Ethyl tert-butyl ether	ND	1.0	95	96	1.0				70 - 130	20
Ethylbenzene	ND	1.0	92	94	2.2				70 - 130	20
Hexachlorobutadiene	ND	0.40	90	93	3.3				70 - 130	20
Isopropylbenzene	ND	1.0	94	97	3.1				70 - 130	20
m&p-Xylene	ND	1.0	95	96	1.0				70 - 130	20
Methyl ethyl ketone	ND	5.0	105	109	3.7				40 - 160	30
Methyl t-butyl ether (MTBE)	ND	1.0	97	99	2.0				70 - 130	20
Methylene chloride	ND	1.0	90	90	0.0				70 - 130	20
Naphthalene	ND	1.0	107	112	4.6				70 - 130	20
n-Butylbenzene	ND	1.0	99	101	2.0				70 - 130	20
n-Propylbenzene	ND	1.0	95	97	2.1				70 - 130	20
o-Xylene	ND	1.0	96	96	0.0				70 - 130	20
p-Isopropyltoluene	ND	1.0	99	102	3.0				70 - 130	20
sec-Butylbenzene	ND	1.0	105	109	3.7				70 - 130	20
Styrene	ND	1.0	97	98	1.0				70 - 130	20
tert-amyl methyl ether	ND	1.0	98	99	1.0				70 - 130	20
tert-Butylbenzene	ND	1.0	97	100	3.0				70 - 130	20
Tetrachloroethene	ND	1.0	88	91	3.4				70 - 130	20
Tetrahydrofuran (THF)	ND	2.5	102	108	5.7				70 - 130	20
Toluene	ND	1.0	92	92	0.0				70 - 130	20
trans-1,2-Dichloroethene	ND	1.0	96	101	5.1				70 - 130	20
trans-1,3-Dichloropropene	ND	0.40	91	89	2.2				70 - 130	20
Trichloroethene	ND	1.0	90	93	3.3				70 - 130	20
Trichlorofluoromethane	ND	1.0	109	109	0.0				70 - 130	20
Trichlorotrifluoroethane	ND	1.0	103	102	1.0				70 - 130	20
Vinyl chloride	ND	1.0	113	113	0.0				70 - 130	20
% 1,2-dichlorobenzene-d4	97	%	99	99	0.0				70 - 130	20
% Bromofluorobenzene	96	%	100	99	1.0				70 - 130	20
% Dibromofluoromethane	99	%	92	94	2.2				70 - 130	20
% Toluene-d8	103	%	100	99	1.0				70 - 130	20

Comment:

A LCS and LCS Duplicate were performed instead of a matrix spike and matrix spike duplicate.

Additional 8260 criteria: 10% of compounds can be outside of acceptance criteria as long as recovery is 10%.
The RPD criteria for the LCS/LCSD is 20%,
The MS/MSD RPD criteria is listed above.

QA/QC Batch 546747 (ug/L), QC Sample No: CG80054 (CG81919)

Volatile Petroleum Hydrocarbons - Ground Water

Unadjusted C5-C8 Aliphatics (*1)	ND	100	98	101	3.0	94	96	2.1	70 - 130	25
Unadjusted C9-C12 Aliphatics (*1)	ND	100	105	112	6.5	100	99	1.0	70 - 130	25
C5-C8 Aliphatic Hydrocarbons *1,2	ND	100	98	101	3.0	94	96	2.1	70 - 130	25
C9-C12 Aliphatic Hydrocarbons *1,	ND	100	105	112	6.5	100	99	1.0	70 - 130	25
C9-C10 Aromatic Hydrocarbons *1	ND	100	98	100	2.0	101	100	1.0	70 - 130	25
Benzene	ND	1.0	94	97	3.1	96	97	1.0	70 - 130	25

QA/QC Data

SDG I.D.: GCG81919

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits
Ethyl Benzene	ND	1.0	95	97	2.1	96	97	1.0	70 - 130	25
MTBE	ND	1.0	104	102	1.9	107	111	3.7	70 - 130	25
Naphthalene	ND	5.0	106	104	1.9	108	106	1.9	70 - 130	25
Toluene	ND	1.0	95	98	3.1	97	98	1.0	70 - 130	25
m,p-Xylenes	ND	2.0	97	99	2.0	98	99	1.0	70 - 130	25
o-Xylene	ND	1.0	94	96	2.1	95	96	1.0	70 - 130	25

Comment:

A blank MS/MSD was analyzed with this batch.

I = This parameter is outside laboratory LCS/LCSD specified recovery limits.

If there are any questions regarding this data, please call Phoenix Client Services at extension 200.

RPD - Relative Percent Difference
LCS - Laboratory Control Sample
LCSD - Laboratory Control Sample Duplicate
MS - Matrix Spike
MS Dup - Matrix Spike Duplicate
NC - No Criteria
Intf - Interference

Phyllis Shiller, Laboratory Director
October 26, 2020

Monday, October 26, 2020

Criteria: MA: GW1, GW2, GW3

State: MA

Sample Criteria Exceedances Report

GCG81919 - AECOM-WILMINGTN

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units
CG81919	$8260GWR-WI	Methyl ethyl ketone	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	500	38	38	ug/L
CG81919	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	50	0.00033	0.00033	ug/L
CG81919	$8260GWR-WI	Trichloroethene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	7100	100	5	5	ug/L
CG81919	$8260GWR-WI	Dibromochloromethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	50	2	2	ug/L
CG81919	$8260GWR-WI	1,2-Dichloroethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	50	5	5	ug/L
CG81919	$8260GWR-WI	Dibromomethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	50	8.3	8.3	ug/L
CG81919	$8260GWR-WI	Hexachlorobutadiene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	50	0.6	0.6	ug/L
CG81919	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	50	0.00075	0.00075	ug/L
CG81919	$8260GWR-WI	4-Methyl-2-pentanone	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	500	350	350	ug/L
CG81919	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	50	0.0075	0.0075	ug/L
CG81919	$8260GWR-WI	Methylene chloride	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	100	5	5	ug/L
CG81919	$8260GWR-WI	2-Hexanone	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	500	38	38	ug/L
CG81919	$8260GWR-WI	Vinyl chloride	MA / Client Specified Criteria / LOCKHEED WILMINGTO	120	100	2	2	ug/L
CG81919	$8260GWR-WI	Tetrachloroethene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	3600	100	5	5	ug/L
CG81919	$8260GWR-WI	1,4-Dichlorobenzene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	50	5	5	ug/L
CG81919	$8260GWR-WI	trans-1,3-Dichloropropene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	50	0.47	0.47	ug/L
CG81919	$8260GWR-WI	1,2-Dichloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	50	3	3	ug/L
CG81919	$8260GWR-WI	1,1,2-Trichloroethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	50	5	5	ug/L
CG81919	$8260GWR-WI	cis-1,3-Dichloropropene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	50	0.47	0.47	ug/L
CG81919	$8260GWR-WI	Benzene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	50	5	5	ug/L
CG81919	$8260GWR-WI	Bromodichloromethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	50	3	3	ug/L
CG81919	$8260GWR-WI	Bromomethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	50	7	7	ug/L
CG81919	$8260GWR-WI	1,1,1,2-Tetrachloroethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	50	5	5	ug/L
CG81919	$8260GWR-WI	1,1-Dichloroethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	100	100	70	70	ug/L
CG81919	$8260GWR-WI	cis-1,2-Dichloroethene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	750	100	20	20	ug/L
CG81919	$8260GWR-WI	1,2,3-Trichlorobenzene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	50	7	7	ug/L
CG81919	$8260GWR-WI	Bromoform	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	50	4	4	ug/L
CG81919	$8260GWR-WI	1,1,2,2-Tetrachloroethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	50	2	2	ug/L
CG81919	$8260GWR-WI	Carbon tetrachloride	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	50	2	2	ug/L
CG81919	$8260GWR-WI	1,4-Dichlorobenzene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	50	5	5	ug/L
CG81919	$8260GWR-WI	Bromomethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	50	7	7	ug/L
CG81919	$8260GWR-WI	Tetrachloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	3600	100	5	5	ug/L
CG81919	$8260GWR-WI	Methylene chloride	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	100	5	5	ug/L
CG81919	$8260GWR-WI	Carbon tetrachloride	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	50	2	2	ug/L
CG81919	$8260GWR-WI	cis-1,3-Dichloropropene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	50	0.5	0.5	ug/L
CG81919	$8260GWR-WI	Hexachlorobutadiene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	50	0.6	0.6	ug/L
CG81919	$8260GWR-WI	cis-1,2-Dichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	750	100	20	20	ug/L
CG81919	$8260GWR-WI	4-Methyl-2-pentanone	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	500	350	350	ug/L
CG81919	$8260GWR-WI	Dibromochloromethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	50	2	2	ug/L
CG81919	$8260GWR-WI	Bromoform	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	50	4	4	ug/L
CG81919	$8260GWR-WI	Bromodichloromethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	50	3	3	ug/L
CG81919	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-1 (mg/l)	120	100	2	2	ug/L

Monday, October 26, 2020

Criteria: MA: GW1, GW2, GW3

State: MA

Sample Criteria Exceedances Report

GCG81919 - AECOM-WILMINGTN

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units
CG81919	$8260GWR-WI	1,1,1,2-Tetrachloroethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	50	5	5	ug/L
CG81919	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	7100	100	5	5	ug/L
CG81919	$8260GWR-WI	trans-1,3-Dichloropropene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	50	0.5	0.5	ug/L
CG81919	$8260GWR-WI	1,1,2,2-Tetrachloroethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	50	2	2	ug/L
CG81919	$8260GWR-WI	1,3-Dichlorobenzene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	50	40	40	ug/L
CG81919	$8260GWR-WI	1,2-Dichloroethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	50	5	5	ug/L
CG81919	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-1 (mg/l)	120	100	2	2	ug/L
CG81919	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	50	0.02	0.02	ug/L
CG81919	$8260GWR-WI	1,1-Dichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	50	7	7	ug/L
CG81919	$8260GWR-WI	1,2-Dichloropropane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	50	3	3	ug/L
CG81919	$8260GWR-WI	1,1,2-Trichloroethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	50	5	5	ug/L
CG81919	$8260GWR-WI	1,1-Dichloroethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	100	100	70	70	ug/L
CG81919	$8260GWR-WI	cis-1,3-Dichloropropene	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	50	5	5	ug/L
CG81919	$8260GWR-WI	trans-1,3-Dichloropropene	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	50	5	5	ug/L
CG81919	$8260GWR-WI	Carbon tetrachloride	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	50	2	2	ug/L
CG81919	$8260GWR-WI	Dibromochloromethane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	50	20	20	ug/L
CG81919	$8260GWR-WI	1,1,2,2-Tetrachloroethane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	50	9	9	ug/L
CG81919	$8260GWR-WI	Bromomethane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	50	7	7	ug/L
CG81919	$8260GWR-WI	1,1,1,2-Tetrachloroethane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	50	10	10	ug/L
CG81919	$8260GWR-WI	Bromodichloromethane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	50	6	6	ug/L
CG81919	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-2 (mg/l)	120	100	2	2	ug/L
CG81919	$8260GWR-WI	cis-1,2-Dichloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	750	100	20	20	ug/L
CG81919	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	7100	100	5	5	ug/L
CG81919	$8260GWR-WI	Tetrachloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	3600	100	50	50	ug/L
CG81919	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-2 (mg/l)	120	100	2	2	ug/L
CG81919	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	50	2	2	ug/L
CG81919	$8260GWR-WI	1,2-Dichloropropane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	50	3	3	ug/L
CG81919	$8260GWR-WI	Hexachlorobutadiene	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	50	1	1	ug/L
CG81919	$8260GWR-WI	1,2-Dichloroethane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	50	5	5	ug/L
CG81919	$8260GWR-WI	1,1,2-Trichloroethane	MA / GROUNDWATER STANDARDS / GW-1	ND	50	5	5	ug/L
CG81919	$8260GWR-WI	1,1-Dichloroethane	MA / GROUNDWATER STANDARDS / GW-1	100	100	70	70	ug/L
CG81919	$8260GWR-WI	1,2-Dichloroethane	MA / GROUNDWATER STANDARDS / GW-1	ND	50	5	5	ug/L
CG81919	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	50	0.02	0.02	ug/L
CG81919	$8260GWR-WI	1,2-Dichloropropane	MA / GROUNDWATER STANDARDS / GW-1	ND	50	5	5	ug/L
CG81919	$8260GWR-WI	1,1-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-1	ND	50	7	7	ug/L
CG81919	$8260GWR-WI	Bromodichloromethane	MA / GROUNDWATER STANDARDS / GW-1	ND	50	3	3	ug/L
CG81919	$8260GWR-WI	1,1,1,2-Tetrachloroethane	MA / GROUNDWATER STANDARDS / GW-1	ND	50	5	5	ug/L
CG81919	$8260GWR-WI	1,4-Dichlorobenzene	MA / GROUNDWATER STANDARDS / GW-1	ND	50	5	5	ug/L
CG81919	$8260GWR-WI	4-Methyl-2-pentanone	MA / GROUNDWATER STANDARDS / GW-1	ND	500	350	350	ug/L
CG81919	$8260GWR-WI	1,1,2,2-Tetrachloroethane	MA / GROUNDWATER STANDARDS / GW-1	ND	50	2	2	ug/L
CG81919	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-1	7100	100	5	5	ug/L
CG81919	$8260GWR-WI	Bromomethane	MA / GROUNDWATER STANDARDS / GW-1	ND	50	10	10	ug/L

Monday, October 26, 2020

Criteria: MA: GW1, GW2, GW3

State: MA

Sample Criteria Exceedances Report

GCG81919 - AECOM-WILMINGTN

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units
CG81919	$8260GWR-WI	Bromoform	MA / GROUNDWATER STANDARDS / GW-1	ND	50	4	4	ug/L
CG81919	$8260GWR-WI	Carbon tetrachloride	MA / GROUNDWATER STANDARDS / GW-1	ND	50	5	5	ug/L
CG81919	$8260GWR-WI	cis-1,2-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-1	750	100	70	70	ug/L
CG81919	$8260GWR-WI	Dibromochloromethane	MA / GROUNDWATER STANDARDS / GW-1	ND	50	2	2	ug/L
CG81919	$8260GWR-WI	Vinyl chloride	MA / GROUNDWATER STANDARDS / GW-1	120	100	2	2	ug/L
CG81919	$8260GWR-WI	Hexachlorobutadiene	MA / GROUNDWATER STANDARDS / GW-1	ND	50	0.6	0.6	ug/L
CG81919	$8260GWR-WI	Methylene chloride	MA / GROUNDWATER STANDARDS / GW-1	ND	100	5	5	ug/L
CG81919	$8260GWR-WI	Tetrachloroethene	MA / GROUNDWATER STANDARDS / GW-1	3600	100	5	5	ug/L
CG81919	$8260GWR-WI	1,1,2,2-Tetrachloroethane	MA / GROUNDWATER STANDARDS / GW-2	ND	50	9	9	ug/L
CG81919	$8260GWR-WI	1,2-Dichloroethane	MA / GROUNDWATER STANDARDS / GW-2	ND	50	5	5	ug/L
CG81919	$8260GWR-WI	Vinyl chloride	MA / GROUNDWATER STANDARDS / GW-2	120	100	2	2	ug/L
CG81919	$8260GWR-WI	1,2-Dichloropropane	MA / GROUNDWATER STANDARDS / GW-2	ND	50	3	3	ug/L
CG81919	$8260GWR-WI	cis-1,2-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-2	750	100	20	20	ug/L
CG81919	$8260GWR-WI	Tetrachloroethene	MA / GROUNDWATER STANDARDS / GW-2	3600	100	50	50	ug/L
CG81919	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-2	ND	50	2	2	ug/L
CG81919	$8260GWR-WI	Dibromochloromethane	MA / GROUNDWATER STANDARDS / GW-2	ND	50	20	20	ug/L
CG81919	$8260GWR-WI	1,1,1,2-Tetrachloroethane	MA / GROUNDWATER STANDARDS / GW-2	ND	50	10	10	ug/L
CG81919	$8260GWR-WI	Carbon tetrachloride	MA / GROUNDWATER STANDARDS / GW-2	ND	50	2	2	ug/L
CG81919	$8260GWR-WI	Bromomethane	MA / GROUNDWATER STANDARDS / GW-2	ND	50	7	7	ug/L
CG81919	$8260GWR-WI	Bromodichloromethane	MA / GROUNDWATER STANDARDS / GW-2	ND	50	6	6	ug/L
CG81919	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-2	7100	100	5	5	ug/L
CG81919	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-3	7100	100	5000	5000	ug/L
CG81919	$MCPADD-WM	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	10000	0.3	0.3	ug/L
CG81919	$MCPADD-WM	1,4-dioxane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10000	3	3	ug/L
CG81919	$MCPADD-WM	1,4-dioxane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	10000	6000	6000	ug/L
CG81919	$MCPADD-WM	1,4-dioxane	MA / GROUNDWATER STANDARDS / GW-1	ND	10000	0.3	0.3	ug/L
CG81919	$MCPADD-WM	1,4-dioxane	MA / GROUNDWATER STANDARDS / GW-2	ND	10000	6000	6000	ug/L
CG81919	$VPHRANGE-	C5-C8 Aliphatic Hydrocarbons *1,2	MA / Client Specified Criteria / LOCKHEED WILMINGTO	3600	100	300	300	ug/L
CG81919	$VPHRANGE-	C5-C8 Aliphatic Hydrocarbons *1,2	MA / CMR 310.40.1600 / GW-1 (mg/l)	3600	100	300	300	ug/L
CG81919	$VPHRANGE-	C5-C8 Aliphatic Hydrocarbons *1,2	MA / CMR 310.40.1600 / GW-2 (mg/l)	3600	100	3000	3000	ug/L
CG81919	$VPHRANGE-	C5-C8 Aliphatic Hydrocarbons *1,2	MA / GROUNDWATER STANDARDS / GW-1	3600	100	300	300	ug/L
CG81919	$VPHRANGE-	C5-C8 Aliphatic Hydrocarbons *1,2	MA / GROUNDWATER STANDARDS / GW-2	3600	100	3000	3000	ug/L
CG81919	D-MN	Manganese (Dissolved)	MA / Client Specified Criteria / LOCKHEED WILMINGTO	0.715	0.001	0.43	0.43	mg/L
CG81919	MN-WM	Manganese	MA / Client Specified Criteria / LOCKHEED WILMINGTO	0.699	0.001	0.43	0.43	mg/L
CG81921	AS-WM	Arsenic	MA / Client Specified Criteria / LOCKHEED WILMINGTO	0.077	0.004	0.01	0.01	mg/L
CG81921	AS-WM	Arsenic	MA / CMR 310.40.1600 / GW-1 (mg/l)	0.077	0.004	0.01	0.01	mg/L
CG81921	AS-WM	Arsenic	MA / GROUNDWATER STANDARDS / GW-1	0.077	0.004	0.01	0.01	mg/L
CG81921	D-AS	Arsenic (Dissolved)	MA / Client Specified Criteria / LOCKHEED WILMINGTO	0.078	0.004	0.01	0.01	mg/L
CG81921	D-AS	Arsenic (Dissolved)	MA / CMR 310.40.1600 / GW-1 (mg/l)	0.078	0.004	0.01	0.01	mg/L
CG81921	D-AS	Arsenic (Dissolved)	MA / GROUNDWATER STANDARDS / GW-1	0.078	0.004	0.01	0.01	mg/L
CG81921	D-MN	Manganese (Dissolved)	MA / Client Specified Criteria / LOCKHEED WILMINGTO	1.53	0.001	0.43	0.43	mg/L

Monday, October 26, 2020

Criteria: MA: GW1, GW2, GW3

State: MA

Sample Criteria Exceedances Report

GCG81919 - AECOM-WILMINGTN

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units
CG81921	MN-WM	Manganese	MA / Client Specified Criteria / LOCKHEED WILMINGTO	1.50	0.001	0.43	0.43	mg/L
CG81922	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.00075	0.00075	ug/L
CG81922	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.00033	0.00033	ug/L
CG81922	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.0075	0.0075	ug/L
CG81922	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	0.50	0.02	0.02	ug/L
CG81922	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	0.50	0.02	0.02	ug/L
CG81922	$MCPADD-WM	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	100	0.3	0.3	ug/L
CG81922	$MCPADD-WM	1,4-dioxane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	100	3	3	ug/L
CG81922	$MCPADD-WM	1,4-dioxane	MA / GROUNDWATER STANDARDS / GW-1	ND	100	0.3	0.3	ug/L

Phoenix Laboratories does not assume responsibility for the data contained in this exceedance report. It is provided as an additional tool to identify requested criteria exceedences. All efforts are made to ensure the accuracy of the data (obtained from appropriate agencies). A lack of exceedence information does not necessarily suggest conformance to the criteria. It is ultimately the site professional's responsibility to determine appropriate compliance.

MassDEP Analytical Protocol Certification Form

Laboratory Name: Phoenix Environmental Laboratories, Inc. **Project #:**

Project Location: LOCKHEED WILMINGTON MA 6055204 **RTN:**

This Form provides certifications for the following data set: [list Laboratory Sample ID Number(s)]

CG81919, CG81920, CG81921, CG81922

Matrices: ☑ Groundwater/Surface Water ☐ Soil/Sediment ☐ Drinking Water ☐ Air ☐ Other:

CAM Protocol (check all that apply below)

8260 VOC CAM II A ☑	7470/7471 Hg CAM III B ☐	MassDEP VPH CAM IV A ☑	8081 Pesticides CAM V B ☐	7196 Hex Cr CAM VI B ☐	MassDEP APH CAM IX A ☐
8270 SVOC CAM II B ☑	7010 Metals CAM III C ☐	MassDEP EPH CAM IV B ☑	8151 Herbicides CAM V C ☐	8330 Explosives CAM VIII A ☐	TO-15 VOC CAM IX B ☐
6010 Metals CAM III A ☑	6020 Metals CAM III D ☐	8082 PCB CAM V A ☐	9012 Total Cyanide/PAC CAM V1 A ☐	6860 Perchlorate CAM VIII B ☐	

Affirmative responses to questions A through F are required for "Presumptive Certainty" status

A	Were all samples received in a condition consistent with those described on the Chain-of-Custody, properly preserved (including temperature*) in the field or laboratory, and prepared/analyzed with method holding times? (* see narrative)	☑ Yes ☐ No
B	Were the analytical method(s) and all associated QC requirements specified in the selected CAM protocol(s) followed?	☑ Yes ☐ No
C	Were all required corrective actions and analytical response actions specified in the selected CAM protocol(s) implemented for all identified performance standard non-conformances?	☑ Yes ☐ No
D	Does the laboratory report comply with all the reporting requirements speified in CAM VII A, "Quality Assurance and Quality Control Guidelines for the Acquisition and Reporting of Analytical Data"?	☑ Yes ☐ No
E	a. VPH, EPH, and APH Methods only: Was each method conducted without significant modification(s)? (refer to the individual method(s) for a list of significant modifications). b. APH and TO-15 methods only: Was the complete analyte list reported for each method?	☑ Yes ☐ No ☐ Yes ☐ No
F	Were all applicable CAM protocol QC and performance standard non-conformances identified and evaluated in a laboratory narrative (including all "No" responses to Questions A through E)?	☑ Yes ☐ No

Responses to questions G, H and I below is required for "Presumptive Certainty" status

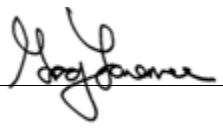
G	Were the reporting limits at or below all CAM reporting limits specified in the selected CAM protocol(s)?	☐ Yes ☑ No

Data User Note: Data that achieve "Presumptive Certainty" status may not necessarily meet the data usability and representativeness requirements described in 310 CMR 40. 1056(2)(k) and WSC-07-350

H	Were all QC performance standards specified in the CAM protocol(s) achieved? See Sections: EPH, SVOASIM, VOA Narrations .	☐ Yes ☑ No
I	Were results reported for the complete analyte list specified in the selected CAM protocol(s)?	☐ Yes ☑ No

All negative responses must be addressed in an attached laboratory narrative.

I, the undersigned, attest under the pains and penalties of perjury that, based upon my personal inquiry of those responsible for obtaining the information, the material contained in this analytical report is, to the best of my knowledge and belief, accurate and complete.

Authorized Signature: 

Date: Monday, October 26, 2020

Printed Name: Greg Lawrence

Position: Assistant Lab Director

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

ACCREDITED IN ACCORDANCE WITH nelac NY # 11301

MCP Certification Report

October 26, 2020

SDG I.D.: GCG81919

SDG Comments

Metals Analysis:
The client requested a shorter list of elements than the 6010 MCP list. The following analytes from the 6010 Metals list were not reported: Antimony, Barium, Beryllium, Cadmium, Chromium, Lead, Nickel, Selenium, Silver, Thallium, Vanadium, Zinc.

Not all requested reporting levels were achieved due to the presence of target and non target compounds. Please refer to the Sample Criteria Exceedances section of this report.

EPH Narration

Were all QA/QC performance criteria specified in the MADEP document CAM achieved? No.

QC Batch 546542 (Samples: CG81919): -----

The LCS/LCSD recovery for one analytes is below the method criteria. A low bias is possible. (C-10 Decane)

Instrument:

AU-FID4 09/23/20-1 Adam Werner, Chemist 09/23/20

CG81919 (1X)

The initial calibration (AL0923BI) RSD for the compound list was less than 25% except for the following compounds: None.
The continuing calibration %D for the compound list was less than 25% except for the following compounds:None.

QC (Batch Specific):

Batch 546542 (CG80054)

CG81919

All LCS recoveries were within 40 - 140 with the following exceptions: C-10 Decane(39%), C9 - Nonane(32%)
All LCSD recoveries were within 40 - 140 with the following exceptions: C-10 Decane(36%), C9 - Nonane(30%)
All LCS/LCSD RPDs were less than 25% with the following exceptions: None.
A LCS and LCS Duplicate were performed instead of a matrix spike and matrix spike duplicate.
Additional EPH fractionation criteria: Breakthrough criteria (BT) is 0 to 5%

I attest under the pains and penalties of perjury that, based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.

Wet Chemistry Analysis

Were all QA/QC performance criteria specified in the MADEP document CAM achieved? Yes.

Instrument:

BECKMAN DU720 09/22/20-1 Greg Danielewski, Chemist 09/22/20

CG81919

The initial calibration met all criteria including a standard run at the reporting level.
All method verification standards and blanks met criteria.

QC (Batch Specific):

Batch 546404 (CG81919)

CG81919

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

ACCREDITED IN ACCORDANCE WITH nelac NY # 11301

MCP Certification Report

October 26, 2020

SDG I.D.: GCG81919

Wet Chemistry Analysis

All LCS recoveries were within 85 - 115 with the following exceptions: None.
Additional: LCS acceptance range is 85-115% MS acceptance range 75-125%.

Batch 546744 (CG82252)

CG81919

All LCS recoveries were within 85 - 115 with the following exceptions: None.
Additional: LCS acceptance range is 85-115% MS acceptance range 75-125%.

I attest under the pains and penalties of perjury that, based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.

IC

Were all QA/QC performance criteria specified in the MADEP document CAM achieved? Yes.

Instrument:

IC 09/21/20-1 Brian Sheriden, Eric Geyer, Chemist 09/21/20

CG81919

The initial calibration met all criteria including a standard run at the reporting level.
All method verification standards and blanks met criteria.

IC 09/22/20-1 Brian Sheriden, Eric Geyer, Chemist 09/22/20

CG81919

The initial calibration met all criteria including a standard run at the reporting level.
All method verification standards and blanks met criteria.

QC (Batch Specific):

Batch 546437 (CG81979)

CG81919

All LCS recoveries were within 90 - 110 with the following exceptions: None.

Batch 546609 (CG82704)

CG81919

All LCS recoveries were within 90 - 110 with the following exceptions: None.

I attest under the pains and penalties of perjury that, based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.

ICP Metals Narration

Were all QA/QC performance criteria specified in the analytical method achieved? Yes.

Instrument:

BLUE 09/22/20 08:45 Tina Hall, Chemist 09/22/20

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Certification Report

October 26, 2020

SDG I.D.: GCG81919

ICP Metals Narration

CG81919, CG81920, CG81921

The initial calibration met criteria.
The continuing calibration standards met criteria for all the elements reported. The linear range is defined daily by the calibration range.
The continuing calibration blanks were less than the reporting level for the elements reported.
The ICSA and ICSAB were analyzed at the beginning and end of the run and were within criteria.The linear range is defined daily by the calibration range.
The following Initial Calibration Verification (ICV) compounds did not meet criteria: None.
The following Continuing Calibration Verification (CCV) compounds did not meet criteria: None.
The following ICP Interference Check (ICSAB) compounds did not meet criteria: None.

BLUE 09/23/20 09:40 Tina Hall, Chemist 09/23/20

CG81919, CG81920, CG81921

The initial calibration met criteria.
The continuing calibration standards met criteria for all the elements reported. The linear range is defined daily by the calibration range.
The continuing calibration blanks were less than the reporting level for the elements reported.
The ICSA and ICSAB were analyzed at the beginning and end of the run and were within criteria.The linear range is defined daily by the calibration range.
The following Initial Calibration Verification (ICV) compounds did not meet criteria: None.
The following Continuing Calibration Verification (CCV) compounds did not meet criteria: None.
The following ICP Interference Check (ICSAB) compounds did not meet criteria: None.

QC (Batch Specific):

Batch 546309 (CG81122)

CG81919, CG81920, CG81921

All LCS recoveries were within 80 - 120 with the following exceptions: None.
All LCSD recoveries were within 80 - 120 with the following exceptions: None.
All LCS/LCSD RPDs were less than 20% with the following exceptions: None.
Additional: LCS acceptance range is 80-120% MS acceptance range 75-125%.

Batch 546428 (CG80986)

CG81919, CG81920, CG81921

All LCS recoveries were within 80 - 120 with the following exceptions: None.
All LCSD recoveries were within 80 - 120 with the following exceptions: None.
All LCS/LCSD RPDs were less than 20% with the following exceptions: None.
Additional: LCS acceptance range is 80-120% MS acceptance range 75-125%.

SVOASIM Narration

Were all QA/QC performance criteria specified in the MADEP document CAM achieved? No.

Sample ID CG81919

One of the surrogate recoveries was below the lower range. A slight low bias is possible. (2-Fluorobiphenyl)

Instrument:

CHEM33 09/27/20-2 Wes Bryon, Chemist 09/27/20

CG81919 (1X)

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MCP Certification Report

October 26, 2020

SDG I.D.: GCG81919

SVOASIM Narration

Initial Calibration Evaluation (CHEM33/33_PAHSIM_0910):
100% of target compounds met criteria.
The following compounds had %RSDs >20%: None.
The following compounds did not meet recommended response factors: None.
The following compounds did not meet a minimum response factors: None.

Continuing Calibration Verification (CHEM33/0927_23-33_PAHSIM_0910) (MCP Compliance):
Internal standard areas were within 50 to 200% of the initial calibration with the following exceptions: None.
95% of target compounds met criteria.
The following compounds did not meet % deviation criteria: None.
The following compounds did not meet maximum % deviations: None.
The following compounds did not meet recommended response factors: None.
The following compounds did not meet minimum response factors: None.

QC (Batch Specific):

Batch 547021 (CG83400)

CG81919

All LCS recoveries were within 40 - 140 with the following exceptions: None.
All LCSD recoveries were within 40 - 140 with the following exceptions: None.
All LCS/LCSD RPDs were less than 20% with the following exceptions: None.
Additional 8270 criteria: 10% of compounds can be outside of acceptance criteria as long as recovery is at least 10%. (Acid surrogates acceptance range for aqueous samples: 10-110%, for soils 30-130%)

I attest under the pains and penalties of perjury that, based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.

VOA Narration

Were all QA/QC performance criteria specified in the MADEP document CAM achieved? No.

QC Batch 546580 (Samples: CG81919, CG81922): -----

The LCS/LCSD recovery is below the method criteria. A low bias is possible. (2,2-Dichloropropane)

Instrument:

CHEM23 09/22/20-2 Michael Hahn, Chemist 09/22/20

CG81919 (100X), CG81922 (1X)

Initial Calibration Evaluation (CHEM23/VOA23_092020):
99% of target compounds met criteria.
The following compounds had %RSDs >20%: Chloroethane 22% (20%)
The following compounds did not meet Table 4 recommended minimum response factors: None.
The following compounds did not meet the minimum response factor of 0.05: None.

Continuing Calibration Verification (CHEM23/0922_34-VOA23_092020) (MCP Compliance):
Internal standard areas were within 50 to 200% of the initial calibration with the following exceptions: None.
98% of target compounds met criteria.
The following compounds did not meet % deviation criteria: None.
The following compounds did not meet maximum % deviations: None.

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MCP Certification Report

October 26, 2020

SDG I.D.: GCG81919

VOA Narration

The following compounds did not meet Table 4 recommended minimum response factors: Tetrachloroethene 0.190 (0.2)
The following compounds did not meet the minimum MCP response factor of 0.05: None.

QC (Batch Specific):

Batch 546580 (CG81121) CHEM23 9/22/2020-2

CG81919(100X), CG81922(1X)

All LCS recoveries were within 70 - 130 with the following exceptions: 2,2-Dichloropropane(63%)
All LCSD recoveries were within 70 - 130 with the following exceptions: 2,2-Dichloropropane(62%)
All LCS/LCSD RPDs were less than 20% with the following exceptions: None.
A LCS and LCS Duplicate were performed instead of a matrix spike and matrix spike duplicate.
Additional 8260 criteria: 10% of compounds can be outside of acceptance criteria as long as recovery is 10%.
The RPD criteria for the LCS/LCSD is 20%,
The MS/MSD RPD criteria is listed above.

I attest under the pains and penalties of perjury that, based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.

VPH Narration

Were all QA/QC performance criteria specified in the MADEP document CAM achieved? Yes.

Instrument:

PIDFID 09/23/20-1 Raman Makol, Chemist 09/23/20

CG81919 (1X)

Initial Calibration Evaluation (PIDFID/VPH_092320_T):
The following compounds exceeded %RSD criteria: None.

QC (Batch Specific):

Batch 546747 (CG80054)

CG81919(1X)

All LCS recoveries were within 70 - 130 with the following exceptions: None.
All LCSD recoveries were within 70 - 130 with the following exceptions: None.
All LCS/LCSD RPDs were less than 25% with the following exceptions: None.
A blank MS/MSD was analyzed with this batch.

I attest under the pains and penalties of perjury that, based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.

Cooler: Yes [X] No [ ]
Coolant: IPK [X] ICE [ ] No [ ]
Temp 3.6 °C Pg of

PHOENIX
Environmental Laboratories, Inc.

CHAIN OF CUSTODY RECORD

587 East Middle Turnpike, P.O. Box 370, Manchester, CT 06040
Email: info@phoenixlabs.com Fax (860) 645-0823
Client Services (860) 645-8726

Data Delivery/Contact EMails:
lori.herberich@aecom.com
scott.olson@aecom.com

Customer: AECOM
Address: 250 Apollo Drive
Chelmsford, MA 01824 - (978) 905-2100
Contacts: Lori Herberich (Chemist) 978-302-0089 Scott Olson (PM) 978-846-5238

Project: Lockheed - Wilmington MA 60552044.19
Report to: Lori Herberich - Scott Olson - Nicole Callahan
Invoice to: Scott Olson & Lori Herberich
QUOTE # August 2019 (for 2017-2022)

2020 Project PO: 127680

This section MUST be completed with Bottle Quantities.

Client Sample - Information - Identification

Sampler's Signature: [signature] Date: 9/21/20

Matrix Code:
DW=Drinking Water GW=Ground Water SW=Surface Water WW=Waste Water L=Liquid
RW=Raw Water SE=Sediment SL=Sludge S=Soil SD=Solid W=Wipe OIL=Oil B=Bulk

PHOENIX USE ONLY SAMPLE #	Customer Sample Identification	Sample Matrix	Date Sampled	Time Sampled	# of VOA Vials	# of Amber Glass	# of Clear Glass	# of Plastic				VOCs (8260) - HCL + Freon 113	1,4-Dioxane (8270D SIM) - NaHSO4 for DL <0.3 ug/L	VPH - HCL (MassDEP- VPH-04 1.1 Rev 1)	EPH + PAHs - HCL & UNP (MassDEP- EPH-04-1.1 Rev 1)	Total As, Fe, Mn (6010C) - HNO3 [FF]	Dissolved As, Fe, Mn (6010C) - HNO3	Chloride, Nitrate, Nitrite Sulfate (300) - UNP	Sulfide - Zn-Acetate + NaOH	Total Organic Carbon (9060A) - H3PO4	Comments
81919	20A-EMW11R2-092120-1	GW	9/21/20	1045	5	4		4				X		X	X	X	X	X	X	X	
81920	20A-GZA6-092120-1	GW	9/21/20	1025				2								X	X				
81921	20A-GZA10-092120-1	GW	9/21/20	1230				2								X	X				
81922	20A-TB01-092120-1	GW	9/21/20	0800	2							X									

Relinquished by:	Accepted by:	Date:	Time:
[signature]	[signature]	9-21-20	13:35
		9/21/20	15:20

Comments, Special Requirements or Regulations:

Turnaround:
10 - 15 days

RI
- [ ] Direct Exposure (Residential)
- [ ] GW
- [ ] Other

CT
- [ ] RCP Cert
- [ ] GW Protection
- [ ] SW Protection
- [ ] GA Mobility
- [ ] GB Mobility
- [ ] Residential DEC
- [ ] I/C DEC
- [ ] Other

MA
- [X] MCP (CAM Rpt)
- [X] GW-1
- [X] GW-2
- [X] GW-3
- [ ] S-1
- [ ] S-2
- [ ] S-3
- [ ] MWRA eSMART
- [ ] Other

State where samples were collected: MA

Data Format
- [X] PDF
- [X] AECOM EQuIS 4-File EDD format

Data Package
- [ ] Tier II Checklist
- [ ] Full Data Package*
- [ ] Phoenix Std Report
- [ ] Other

* SURCHARGE APPLIES

PHOENIX
Environmental Laboratories, Inc.

Tuesday, October 06, 2020

Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Project ID: **LOCKHEED WILMINGTON MA 60552044.19**
SDG ID: **GCG83141**
Sample ID#s: CG83141 - CG83149

This laboratory is in compliance with the NELAC requirements of procedures used except where indicated.

This report contains results for the parameters tested, under the sampling conditions described on the Chain Of Custody, as received by the laboratory. This report is incomplete unless all pages indicated in the pagination at the bottom of the page are included.

A scanned version of the COC form accompanies the analytical report and is an exact duplicate of the original.

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200. The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.

Sincerely yours,

Phyllis Shiller
Laboratory Director

NELAC - #NY11301
CT Lab Registration #PH-0618
MA Lab Registration #M-CT007
ME Lab Registration #CT-007
NH Lab Registration #213693-A,B
NJ Lab Registration #CT-003
NY Lab Registration #11301
PA Lab Registration #68-03530
RI Lab Registration #63
UT Lab Registration #CT00007
VT Lab Registration #VT11301

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

NY # 11301

SDG Comments

October 06, 2020

SDG I.D.: GCG83141

Phoenix reporting levels may exceed those referenced in the CAM protocol. Please refer to criteria sheet for comparisons to requested MCP standards.

Environmental Laboratories, Inc.
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Tel. (860) 645-1102 Fax (860) 645-0823

Sample Id Cross Reference

October 06, 2020

SDG I.D.: GCG83141

Project ID: LOCKHEED WILMINGTON MA 60552044.19

Client Id	Lab Id	Matrix
20A-EMW11R3-092120-1	CG83141	GROUND WATER
20A-MW5-092120-1	CG83142	GROUND WATER
20A-EMW11R1-092120-1	CG83143	GROUND WATER
20A-TB02-092120-1	CG83144	GROUND WATER
20A-AE29R1-092220-1	CG83145	GROUND WATER
20A-TRC201R-092220-1	CG83146	GROUND WATER
20A-AE29R6-092220-1	CG83147	GROUND WATER
20A-AE29R5-092220-1	CG83148	GROUND WATER
20A-AE29R3-092220-1	CG83149	GROUND WATER

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

October 06, 2020

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		09/21/20	14:25
Location Code:	AECOM-WILMINGTN	Received by:	B	09/22/20	17:13
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	127680				

Laboratory Data

SDG ID: GCG83141
Phoenix ID: CG83141

Project ID: LOCKHEED WILMINGTON MA 60552044.19
Client ID: 20A-EMW11R3-092120-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Volatiles							
1,1,1,2-Tetrachloroethane	ND	20	ug/L	40	09/24/20	MH	SW8260C
1,1,1-Trichloroethane	ND	40	ug/L	40	09/24/20	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	20	ug/L	40	09/24/20	MH	SW8260C
1,1,2-Trichloroethane	ND	20	ug/L	40	09/24/20	MH	SW8260C
1,1-Dichloroethane	67	40	ug/L	40	09/24/20	MH	SW8260C
1,1-Dichloroethene	ND	20	ug/L	40	09/24/20	MH	SW8260C
1,1-Dichloropropene	ND	40	ug/L	40	09/24/20	MH	SW8260C
1,2,3-Trichlorobenzene	ND	20	ug/L	40	09/24/20	MH	SW8260C
1,2,3-Trichloropropane	ND	20	ug/L	40	09/24/20	MH	SW8260C
1,2,4-Trichlorobenzene	ND	40	ug/L	40	09/24/20	MH	SW8260C
1,2,4-Trimethylbenzene	ND	40	ug/L	40	09/24/20	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	20	ug/L	40	09/24/20	MH	SW8260C
1,2-Dibromoethane	ND	20	ug/L	40	09/24/20	MH	SW8260C
1,2-Dichlorobenzene	ND	40	ug/L	40	09/24/20	MH	SW8260C
1,2-Dichloroethane	ND	20	ug/L	40	09/24/20	MH	SW8260C
1,2-Dichloropropane	ND	20	ug/L	40	09/24/20	MH	SW8260C
1,3,5-Trimethylbenzene	ND	40	ug/L	40	09/24/20	MH	SW8260C
1,3-Dichlorobenzene	ND	40	ug/L	40	09/24/20	MH	SW8260C
1,3-Dichloropropane	ND	40	ug/L	40	09/24/20	MH	SW8260C
1,4-Dichlorobenzene	ND	20	ug/L	40	09/24/20	MH	SW8260C
2,2-Dichloropropane	ND	40	ug/L	40	09/24/20	MH	SW8260C
2-Chlorotoluene	ND	40	ug/L	40	09/24/20	MH	SW8260C
2-Hexanone	ND	200	ug/L	40	09/24/20	MH	SW8260C
4-Chlorotoluene	ND	40	ug/L	40	09/24/20	MH	SW8260C
4-Methyl-2-pentanone	ND	200	ug/L	40	09/24/20	MH	SW8260C
Acetone	ND	1000	ug/L	40	09/24/20	MH	SW8260C

Project ID: LOCKHEED WILMINGTON MA 60552044.19 Phoenix I.D.: CG83141

Client ID: 20A-EMW11R3-092120-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	
Benzene	ND	20	ug/L	40	09/24/20	MH	SW8260C
Bromobenzene	ND	40	ug/L	40	09/24/20	MH	SW8260C
Bromochloromethane	ND	40	ug/L	40	09/24/20	MH	SW8260C
Bromodichloromethane	ND	20	ug/L	40	09/24/20	MH	SW8260C
Bromoform	ND	20	ug/L	40	09/24/20	MH	SW8260C
Bromomethane	ND	20	ug/L	40	09/24/20	MH	SW8260C
Carbon Disulfide	ND	200	ug/L	40	09/24/20	MH	SW8260C
Carbon tetrachloride	ND	20	ug/L	40	09/24/20	MH	SW8260C
Chlorobenzene	ND	40	ug/L	40	09/24/20	MH	SW8260C
Chloroethane	ND	40	ug/L	40	09/24/20	MH	SW8260C
Chloroform	ND	40	ug/L	40	09/24/20	MH	SW8260C
Chloromethane	ND	40	ug/L	40	09/24/20	MH	SW8260C
cis-1,2-Dichloroethene	600	40	ug/L	40	09/24/20	MH	SW8260C
cis-1,3-Dichloropropene	ND	20	ug/L	40	09/24/20	MH	SW8260C
Dibromochloromethane	ND	20	ug/L	40	09/24/20	MH	SW8260C
Dibromomethane	ND	20	ug/L	40	09/24/20	MH	SW8260C
Dichlorodifluoromethane	ND	40	ug/L	40	09/24/20	MH	SW8260C
Ethylbenzene	ND	40	ug/L	40	09/24/20	MH	SW8260C
Hexachlorobutadiene	ND	20	ug/L	40	09/24/20	MH	SW8260C
Isopropylbenzene	ND	40	ug/L	40	09/24/20	MH	SW8260C
m&p-Xylene	ND	40	ug/L	40	09/24/20	MH	SW8260C
Methyl ethyl ketone	ND	200	ug/L	40	09/24/20	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	40	ug/L	40	09/24/20	MH	SW8260C
Methylene chloride	ND	40	ug/L	40	09/24/20	MH	SW8260C
Naphthalene	ND	40	ug/L	40	09/24/20	MH	SW8260C
n-Butylbenzene	ND	40	ug/L	40	09/24/20	MH	SW8260C
n-Propylbenzene	ND	40	ug/L	40	09/24/20	MH	SW8260C
o-Xylene	ND	40	ug/L	40	09/24/20	MH	SW8260C
p-Isopropyltoluene	ND	40	ug/L	40	09/24/20	MH	SW8260C
sec-Butylbenzene	ND	40	ug/L	40	09/24/20	MH	SW8260C
Styrene	ND	40	ug/L	40	09/24/20	MH	SW8260C
tert-Butylbenzene	ND	40	ug/L	40	09/24/20	MH	SW8260C
Tetrachloroethene	2300	40	ug/L	40	09/24/20	MH	SW8260C
Tetrahydrofuran (THF)	ND	100	ug/L	40	09/24/20	MH	SW8260C
Toluene	ND	40	ug/L	40	09/24/20	MH	SW8260C
trans-1,2-Dichloroethene	ND	40	ug/L	40	09/24/20	MH	SW8260C
trans-1,3-Dichloropropene	ND	20	ug/L	40	09/24/20	MH	SW8260C
Trichloroethene	3700	400	ug/L	400	09/24/20	MH	SW8260C
Trichlorofluoromethane	ND	40	ug/L	40	09/24/20	MH	SW8260C
Trichlorotrifluoroethane	ND	40	ug/L	40	09/24/20	MH	SW8260C
Vinyl chloride	ND	20	ug/L	40	09/24/20	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4 (40x)	100		%	40	09/24/20	MH	70 - 130 %
% Bromofluorobenzene (40x)	100		%	40	09/24/20	MH	70 - 130 %
% Dibromofluoromethane (40x)	98		%	40	09/24/20	MH	70 - 130 %
% Toluene-d8 (40x)	99		%	40	09/24/20	MH	70 - 130 %
% 1,2-dichlorobenzene-d4 (400x)	99		%	400	09/24/20	MH	70 - 130 %
% Bromofluorobenzene (400x)	100		%	400	09/24/20	MH	70 - 130 %
% Dibromofluoromethane (400x)	96		%	400	09/24/20	MH	70 - 130 %

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	
% Toluene-d8 (400x)	103		%	400	09/24/20	MH	70 - 130 %

Oxygenates& Dioxane

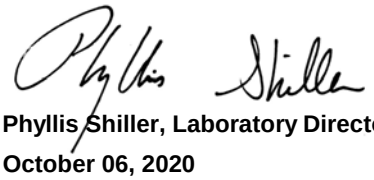
1,4-dioxane	ND	4000	ug/L	40	09/24/20	MH	SW8260C (OXY)
Diethyl ether	ND	40	ug/L	40	09/24/20	MH	SW8260C (OXY)
Di-isopropyl ether	ND	40	ug/L	40	09/24/20	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	40	ug/L	40	09/24/20	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	40	ug/L	40	09/24/20	MH	SW8260C (OXY)

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

Volatile Comment:
Elevated reporting limits for volatiles due to the presence of target and/or non-target compounds.

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.



Phyllis Shiller, Laboratory Director
October 06, 2020
Reviewed and Released by: Phyllis Shiller, Laboratory Director

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

October 06, 2020

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		09/21/20	15:20
Location Code:	AECOM-WILMINGTN	Received by:	B	09/22/20	17:13
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	127680				

Laboratory Data

SDG ID: GCG83141
Phoenix ID: CG83142

Project ID: LOCKHEED WILMINGTON MA 60552044.19
Client ID: 20A-MW5-092120-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Volatiles							
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
1,1,1-Trichloroethane	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L	1	09/24/20	MH	SW8260C
1,1,2-Trichloroethane	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
1,1-Dichloroethane	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
1,1-Dichloroethene	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
1,1-Dichloropropene	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
1,2,3-Trichlorobenzene	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
1,2,3-Trichloropropane	ND	0.50	ug/L	1	09/24/20	MH	SW8260C
1,2,4-Trichlorobenzene	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
1,2,4-Trimethylbenzene	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	0.50	ug/L	1	09/24/20	MH	SW8260C
1,2-Dibromoethane	ND	0.50	ug/L	1	09/24/20	MH	SW8260C
1,2-Dichlorobenzene	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
1,2-Dichloroethane	ND	0.60	ug/L	1	09/24/20	MH	SW8260C
1,2-Dichloropropane	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
1,3,5-Trimethylbenzene	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
1,3-Dichlorobenzene	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
1,3-Dichloropropane	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
1,4-Dichlorobenzene	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
2,2-Dichloropropane	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
2-Chlorotoluene	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
2-Hexanone	ND	5.0	ug/L	1	09/24/20	MH	SW8260C
4-Chlorotoluene	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
4-Methyl-2-pentanone	ND	5.0	ug/L	1	09/24/20	MH	SW8260C
Acetone	ND	25	ug/L	1	09/24/20	MH	SW8260C

Project ID: LOCKHEED WILMINGTON MA 60552044.19 Phoenix I.D.: CG83142

Client ID: 20A-MW5-092120-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	
Benzene	ND	0.70	ug/L	1	09/24/20	MH	SW8260C
Bromobenzene	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
Bromochloromethane	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
Bromodichloromethane	ND	0.50	ug/L	1	09/24/20	MH	SW8260C
Bromoform	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
Bromomethane	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
Carbon Disulfide	ND	5.0	ug/L	1	09/24/20	MH	SW8260C
Carbon tetrachloride	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
Chlorobenzene	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
Chloroethane	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
Chloroform	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
Chloromethane	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
cis-1,2-Dichloroethene	10	1.0	ug/L	1	09/24/20	MH	SW8260C
cis-1,3-Dichloropropene	ND	0.40	ug/L	1	09/24/20	MH	SW8260C
Dibromochloromethane	ND	0.50	ug/L	1	09/24/20	MH	SW8260C
Dibromomethane	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
Dichlorodifluoromethane	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
Ethylbenzene	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
Hexachlorobutadiene	ND	0.40	ug/L	1	09/24/20	MH	SW8260C
Isopropylbenzene	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
m&p-Xylene	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
Methyl ethyl ketone	ND	5.0	ug/L	1	09/24/20	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
Methylene chloride	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
Naphthalene	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
n-Butylbenzene	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
n-Propylbenzene	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
o-Xylene	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
p-Isopropyltoluene	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
sec-Butylbenzene	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
Styrene	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
tert-Butylbenzene	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
Tetrachloroethene	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
Tetrahydrofuran (THF)	ND	2.5	ug/L	1	09/24/20	MH	SW8260C
Toluene	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
trans-1,2-Dichloroethene	1.1	1.0	ug/L	1	09/24/20	MH	SW8260C
trans-1,3-Dichloropropene	ND	0.40	ug/L	1	09/24/20	MH	SW8260C
Trichloroethene	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
Trichlorofluoromethane	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
Trichlorotrifluoroethane	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
Vinyl chloride	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	100		%	1	09/24/20	MH	70 - 130 %
% Bromofluorobenzene	99		%	1	09/24/20	MH	70 - 130 %
% Dibromofluoromethane	96		%	1	09/24/20	MH	70 - 130 %
% Toluene-d8	106		%	1	09/24/20	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	100	ug/L	1	09/24/20	MH	SW8260C (OXY)
Diethyl ether	ND	1.0	ug/L	1	09/24/20	MH	SW8260C (OXY)

Ver 1

Project ID: LOCKHEED WILMINGTON MA 60552044.19 Phoenix I.D.: CG83142

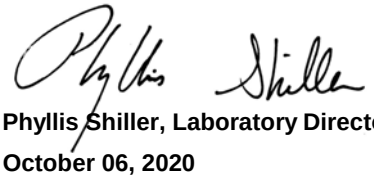
Client ID: 20A-MW5-092120-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	
Di-isopropyl ether	ND	1.0	ug/L	1	09/24/20	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	1.0	ug/L	1	09/24/20	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	1.0	ug/L	1	09/24/20	MH	SW8260C (OXY)

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

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Phyllis Shiller, Laboratory Director

October 06, 2020

Reviewed and Released by: Phyllis Shiller, Laboratory Director

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

October 06, 2020

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		09/21/20	15:55
Location Code:	AECOM-WILMINGTN	Received by:	B	09/22/20	17:13
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	127680				

Laboratory Data

SDG ID: GCG83141
Phoenix ID: CG83143

Project ID: LOCKHEED WILMINGTON MA 60552044.19
Client ID: 20A-EMW11R1-092120-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Volatiles							
1,1,1,2-Tetrachloroethane	ND	10	ug/L	20	09/24/20	MH	SW8260C
1,1,1-Trichloroethane	ND	20	ug/L	20	09/24/20	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	10	ug/L	20	09/24/20	MH	SW8260C
1,1,2-Trichloroethane	ND	10	ug/L	20	09/24/20	MH	SW8260C
1,1-Dichloroethane	70	20	ug/L	20	09/24/20	MH	SW8260C
1,1-Dichloroethene	20	20	ug/L	20	09/24/20	MH	SW8260C
1,1-Dichloropropene	ND	20	ug/L	20	09/24/20	MH	SW8260C
1,2,3-Trichlorobenzene	ND	10	ug/L	20	09/24/20	MH	SW8260C
1,2,3-Trichloropropane	ND	10	ug/L	20	09/24/20	MH	SW8260C
1,2,4-Trichlorobenzene	ND	20	ug/L	20	09/24/20	MH	SW8260C
1,2,4-Trimethylbenzene	ND	20	ug/L	20	09/24/20	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	10	ug/L	20	09/24/20	MH	SW8260C
1,2-Dibromoethane	ND	10	ug/L	20	09/24/20	MH	SW8260C
1,2-Dichlorobenzene	ND	20	ug/L	20	09/24/20	MH	SW8260C
1,2-Dichloroethane	ND	10	ug/L	20	09/24/20	MH	SW8260C
1,2-Dichloropropane	ND	10	ug/L	20	09/24/20	MH	SW8260C
1,3,5-Trimethylbenzene	ND	20	ug/L	20	09/24/20	MH	SW8260C
1,3-Dichlorobenzene	ND	20	ug/L	20	09/24/20	MH	SW8260C
1,3-Dichloropropane	ND	20	ug/L	20	09/24/20	MH	SW8260C
1,4-Dichlorobenzene	ND	10	ug/L	20	09/24/20	MH	SW8260C
2,2-Dichloropropane	ND	20	ug/L	20	09/24/20	MH	SW8260C
2-Chlorotoluene	ND	20	ug/L	20	09/24/20	MH	SW8260C
2-Hexanone	ND	100	ug/L	20	09/24/20	MH	SW8260C
4-Chlorotoluene	ND	20	ug/L	20	09/24/20	MH	SW8260C
4-Methyl-2-pentanone	ND	100	ug/L	20	09/24/20	MH	SW8260C
Acetone	ND	500	ug/L	20	09/24/20	MH	SW8260C

Ver 1

Project ID: LOCKHEED WILMINGTON MA 60552044.19 Phoenix I.D.: CG83143

Client ID: 20A-EMW11R1-092120-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	
Benzene	ND	10	ug/L	20	09/24/20	MH	SW8260C
Bromobenzene	ND	20	ug/L	20	09/24/20	MH	SW8260C
Bromochloromethane	ND	20	ug/L	20	09/24/20	MH	SW8260C
Bromodichloromethane	ND	10	ug/L	20	09/24/20	MH	SW8260C
Bromoform	ND	10	ug/L	20	09/24/20	MH	SW8260C
Bromomethane	ND	10	ug/L	20	09/24/20	MH	SW8260C
Carbon Disulfide	ND	100	ug/L	20	09/24/20	MH	SW8260C
Carbon tetrachloride	ND	10	ug/L	20	09/24/20	MH	SW8260C
Chlorobenzene	ND	20	ug/L	20	09/24/20	MH	SW8260C
Chloroethane	ND	20	ug/L	20	09/24/20	MH	SW8260C
Chloroform	ND	20	ug/L	20	09/24/20	MH	SW8260C
Chloromethane	ND	20	ug/L	20	09/24/20	MH	SW8260C
cis-1,2-Dichloroethene	300	20	ug/L	20	09/24/20	MH	SW8260C
cis-1,3-Dichloropropene	ND	10	ug/L	20	09/24/20	MH	SW8260C
Dibromochloromethane	ND	10	ug/L	20	09/24/20	MH	SW8260C
Dibromomethane	ND	10	ug/L	20	09/24/20	MH	SW8260C
Dichlorodifluoromethane	ND	20	ug/L	20	09/24/20	MH	SW8260C
Ethylbenzene	ND	20	ug/L	20	09/24/20	MH	SW8260C
Hexachlorobutadiene	ND	10	ug/L	20	09/24/20	MH	SW8260C
Isopropylbenzene	ND	20	ug/L	20	09/24/20	MH	SW8260C
m&p-Xylene	ND	20	ug/L	20	09/24/20	MH	SW8260C
Methyl ethyl ketone	ND	100	ug/L	20	09/24/20	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	20	ug/L	20	09/24/20	MH	SW8260C
Methylene chloride	ND	20	ug/L	20	09/24/20	MH	SW8260C
Naphthalene	ND	20	ug/L	20	09/24/20	MH	SW8260C
n-Butylbenzene	ND	20	ug/L	20	09/24/20	MH	SW8260C
n-Propylbenzene	ND	20	ug/L	20	09/24/20	MH	SW8260C
o-Xylene	ND	20	ug/L	20	09/24/20	MH	SW8260C
p-Isopropyltoluene	ND	20	ug/L	20	09/24/20	MH	SW8260C
sec-Butylbenzene	ND	20	ug/L	20	09/24/20	MH	SW8260C
Styrene	ND	20	ug/L	20	09/24/20	MH	SW8260C
tert-Butylbenzene	ND	20	ug/L	20	09/24/20	MH	SW8260C
Tetrachloroethene	2100	400	ug/L	400	09/24/20	MH	SW8260C
Tetrahydrofuran (THF)	ND	50	ug/L	20	09/24/20	MH	SW8260C
Toluene	ND	20	ug/L	20	09/24/20	MH	SW8260C
trans-1,2-Dichloroethene	ND	20	ug/L	20	09/24/20	MH	SW8260C
trans-1,3-Dichloropropene	ND	10	ug/L	20	09/24/20	MH	SW8260C
Trichloroethene	4000	400	ug/L	400	09/24/20	MH	SW8260C
Trichlorofluoromethane	ND	20	ug/L	20	09/24/20	MH	SW8260C
Trichlorotrifluoroethane	ND	20	ug/L	20	09/24/20	MH	SW8260C
Vinyl chloride	50	20	ug/L	20	09/24/20	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4 (20x)	100		%	20	09/24/20	MH	70 - 130 %
% Bromofluorobenzene (20x)	101		%	20	09/24/20	MH	70 - 130 %
% Dibromofluoromethane (20x)	97		%	20	09/24/20	MH	70 - 130 %
% Toluene-d8 (20x)	97		%	20	09/24/20	MH	70 - 130 %
% 1,2-dichlorobenzene-d4 (400x)	100		%	400	09/24/20	MH	70 - 130 %
% Bromofluorobenzene (400x)	99		%	400	09/24/20	MH	70 - 130 %
% Dibromofluoromethane (400x)	96		%	400	09/24/20	MH	70 - 130 %

Project ID: LOCKHEED WILMINGTON MA 60552044.19 Phoenix I.D.: CG83143
Client ID: 20A-EMW11R1-092120-1

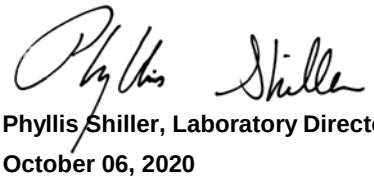
Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	
% Toluene-d8 (400x)	102		%	400	09/24/20	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	2000	ug/L	20	09/24/20	MH	SW8260C (OXY)
Diethyl ether	ND	20	ug/L	20	09/24/20	MH	SW8260C (OXY)
Di-isopropyl ether	ND	20	ug/L	20	09/24/20	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	20	ug/L	20	09/24/20	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	20	ug/L	20	09/24/20	MH	SW8260C (OXY)

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

Volatile Comment:
Elevated reporting limits for volatiles due to the presence of target and/or non-target compounds.

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
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Phyllis Shiller, Laboratory Director
October 06, 2020
Reviewed and Released by: Phyllis Shiller, Laboratory Director

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

October 06, 2020

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		09/21/20	14:00
Location Code:	AECOM-WILMINGTN	Received by:	B	09/22/20	17:13
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	127680				

Laboratory Data

SDG ID: GCG83141
Phoenix ID: CG83144

Project ID: LOCKHEED WILMINGTON MA 60552044.19
Client ID: 20A-TB02-092120-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Volatiles							
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
1,1,1-Trichloroethane	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L	1	09/23/20	MH	SW8260C
1,1,2-Trichloroethane	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
1,1-Dichloroethane	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
1,1-Dichloroethene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
1,1-Dichloropropene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
1,2,3-Trichlorobenzene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
1,2,3-Trichloropropane	ND	0.50	ug/L	1	09/23/20	MH	SW8260C
1,2,4-Trichlorobenzene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
1,2,4-Trimethylbenzene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	0.50	ug/L	1	09/23/20	MH	SW8260C
1,2-Dibromoethane	ND	0.50	ug/L	1	09/23/20	MH	SW8260C
1,2-Dichlorobenzene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
1,2-Dichloroethane	ND	0.60	ug/L	1	09/23/20	MH	SW8260C
1,2-Dichloropropane	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
1,3,5-Trimethylbenzene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
1,3-Dichlorobenzene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
1,3-Dichloropropane	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
1,4-Dichlorobenzene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
2,2-Dichloropropane	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
2-Chlorotoluene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
2-Hexanone	ND	5.0	ug/L	1	09/23/20	MH	SW8260C
4-Chlorotoluene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
4-Methyl-2-pentanone	ND	5.0	ug/L	1	09/23/20	MH	SW8260C
Acetone	ND	25	ug/L	1	09/23/20	MH	SW8260C

Project ID: LOCKHEED WILMINGTON MA 60552044.19 Phoenix I.D.: CG83144

Client ID: 20A-TB02-092120-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	
Benzene	ND	0.70	ug/L	1	09/23/20	MH	SW8260C
Bromobenzene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
Bromochloromethane	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
Bromodichloromethane	ND	0.50	ug/L	1	09/23/20	MH	SW8260C
Bromoform	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
Bromomethane	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
Carbon Disulfide	ND	5.0	ug/L	1	09/23/20	MH	SW8260C
Carbon tetrachloride	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
Chlorobenzene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
Chloroethane	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
Chloroform	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
Chloromethane	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
cis-1,2-Dichloroethene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
cis-1,3-Dichloropropene	ND	0.40	ug/L	1	09/23/20	MH	SW8260C
Dibromochloromethane	ND	0.50	ug/L	1	09/23/20	MH	SW8260C
Dibromomethane	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
Dichlorodifluoromethane	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
Ethylbenzene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
Hexachlorobutadiene	ND	0.40	ug/L	1	09/23/20	MH	SW8260C
Isopropylbenzene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
m&p-Xylene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
Methyl ethyl ketone	ND	5.0	ug/L	1	09/23/20	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
Methylene chloride	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
Naphthalene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
n-Butylbenzene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
n-Propylbenzene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
o-Xylene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
p-Isopropyltoluene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
sec-Butylbenzene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
Styrene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
tert-Butylbenzene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
Tetrachloroethene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
Tetrahydrofuran (THF)	ND	2.5	ug/L	1	09/23/20	MH	SW8260C
Toluene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
trans-1,2-Dichloroethene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
trans-1,3-Dichloropropene	ND	0.40	ug/L	1	09/23/20	MH	SW8260C
Trichloroethene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
Trichlorofluoromethane	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
Trichlorotrifluoroethane	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
Vinyl chloride	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	97		%	1	09/23/20	MH	70 - 130 %
% Bromofluorobenzene	98		%	1	09/23/20	MH	70 - 130 %
% Dibromofluoromethane	97		%	1	09/23/20	MH	70 - 130 %
% Toluene-d8	103		%	1	09/23/20	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	100	ug/L	1	09/23/20	MH	SW8260C (OXY)
Diethyl ether	ND	1.0	ug/L	1	09/23/20	MH	SW8260C (OXY)

Ver 1

Project ID: LOCKHEED WILMINGTON MA 60552044.19 Phoenix I.D.: CG83144

Client ID: 20A-TB02-092120-1

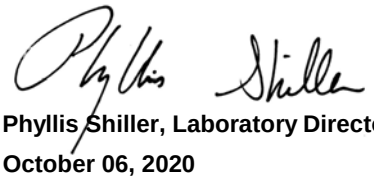
Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	
Di-isopropyl ether	ND	1.0	ug/L	1	09/23/20	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	1.0	ug/L	1	09/23/20	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	1.0	ug/L	1	09/23/20	MH	SW8260C (OXY)

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

TRIP BLANK INCLUDED.

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.



Phyllis Shiller, Laboratory Director

October 06, 2020

Reviewed and Released by: Phyllis Shiller, Laboratory Director

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

October 06, 2020

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		09/22/20	9:25
Location Code:	AECOM-WILMINGTN	Received by:	B	09/22/20	17:13
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	127680				

Laboratory Data

SDG ID: GCG83141
Phoenix ID: CG83145

Project ID: LOCKHEED WILMINGTON MA 60552044.19
Client ID: 20A-AE29R1-092220-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Volatiles							
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
1,1,1-Trichloroethane	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L	1	09/23/20	MH	SW8260C
1,1,2-Trichloroethane	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
1,1-Dichloroethane	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
1,1-Dichloroethene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
1,1-Dichloropropene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
1,2,3-Trichlorobenzene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
1,2,3-Trichloropropane	ND	0.50	ug/L	1	09/23/20	MH	SW8260C
1,2,4-Trichlorobenzene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
1,2,4-Trimethylbenzene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	0.50	ug/L	1	09/23/20	MH	SW8260C
1,2-Dibromoethane	ND	0.50	ug/L	1	09/23/20	MH	SW8260C
1,2-Dichlorobenzene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
1,2-Dichloroethane	ND	0.60	ug/L	1	09/23/20	MH	SW8260C
1,2-Dichloropropane	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
1,3,5-Trimethylbenzene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
1,3-Dichlorobenzene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
1,3-Dichloropropane	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
1,4-Dichlorobenzene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
2,2-Dichloropropane	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
2-Chlorotoluene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
2-Hexanone	ND	5.0	ug/L	1	09/23/20	MH	SW8260C
4-Chlorotoluene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
4-Methyl-2-pentanone	ND	5.0	ug/L	1	09/23/20	MH	SW8260C
Acetone	ND	25	ug/L	1	09/23/20	MH	SW8260C

Project ID: LOCKHEED WILMINGTON MA 60552044.19 Phoenix I.D.: CG83145
Client ID: 20A-AE29R1-092220-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	
Benzene	ND	0.70	ug/L	1	09/23/20	MH	SW8260C
Bromobenzene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
Bromochloromethane	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
Bromodichloromethane	ND	0.50	ug/L	1	09/23/20	MH	SW8260C
Bromoform	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
Bromomethane	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
Carbon Disulfide	ND	5.0	ug/L	1	09/23/20	MH	SW8260C
Carbon tetrachloride	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
Chlorobenzene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
Chloroethane	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
Chloroform	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
Chloromethane	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
cis-1,2-Dichloroethene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
cis-1,3-Dichloropropene	ND	0.40	ug/L	1	09/23/20	MH	SW8260C
Dibromochloromethane	ND	0.50	ug/L	1	09/23/20	MH	SW8260C
Dibromomethane	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
Dichlorodifluoromethane	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
Ethylbenzene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
Hexachlorobutadiene	ND	0.40	ug/L	1	09/23/20	MH	SW8260C
Isopropylbenzene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
m&p-Xylene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
Methyl ethyl ketone	ND	5.0	ug/L	1	09/23/20	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
Methylene chloride	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
Naphthalene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
n-Butylbenzene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
n-Propylbenzene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
o-Xylene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
p-Isopropyltoluene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
sec-Butylbenzene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
Styrene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
tert-Butylbenzene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
Tetrachloroethene	3.6	1.0	ug/L	1	09/23/20	MH	SW8260C
Tetrahydrofuran (THF)	ND	2.5	ug/L	1	09/23/20	MH	SW8260C
Toluene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
trans-1,2-Dichloroethene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
trans-1,3-Dichloropropene	ND	0.40	ug/L	1	09/23/20	MH	SW8260C
Trichloroethene	4.0	1.0	ug/L	1	09/23/20	MH	SW8260C
Trichlorofluoromethane	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
Trichlorotrifluoroethane	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
Vinyl chloride	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	99		%	1	09/23/20	MH	70 - 130 %
% Bromofluorobenzene	98		%	1	09/23/20	MH	70 - 130 %
% Dibromofluoromethane	94		%	1	09/23/20	MH	70 - 130 %
% Toluene-d8	104		%	1	09/23/20	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	100	ug/L	1	09/23/20	MH	SW8260C (OXY)
Diethyl ether	ND	1.0	ug/L	1	09/23/20	MH	SW8260C (OXY)

Ver 1

Project ID: LOCKHEED WILMINGTON MA 60552044.19 Phoenix I.D.: CG83145

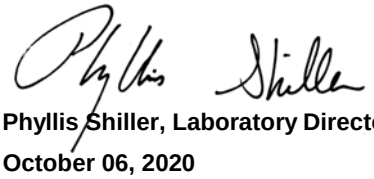
Client ID: 20A-AE29R1-092220-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	
Di-isopropyl ether	ND	1.0	ug/L	1	09/23/20	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	1.0	ug/L	1	09/23/20	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	1.0	ug/L	1	09/23/20	MH	SW8260C (OXY)

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

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Phyllis Shiller, Laboratory Director

October 06, 2020

Reviewed and Released by: Phyllis Shiller, Laboratory Director

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

October 06, 2020

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		09/22/20	11:45
Location Code:	AECOM-WILMINGTN	Received by:	B	09/22/20	17:13
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	127680				

Laboratory Data

SDG ID: GCG83141
Phoenix ID: CG83146

Project ID: LOCKHEED WILMINGTON MA 60552044.19
Client ID: 20A-TRC201R-092220-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Volatiles							
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
1,1,1-Trichloroethane	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L	1	09/24/20	MH	SW8260C
1,1,2-Trichloroethane	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
1,1-Dichloroethane	73	1.0	ug/L	1	09/24/20	MH	SW8260C
1,1-Dichloroethene	17	1.0	ug/L	1	09/24/20	MH	SW8260C
1,1-Dichloropropene	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
1,2,3-Trichlorobenzene	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
1,2,3-Trichloropropane	ND	0.50	ug/L	1	09/24/20	MH	SW8260C
1,2,4-Trichlorobenzene	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
1,2,4-Trimethylbenzene	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	0.50	ug/L	1	09/24/20	MH	SW8260C
1,2-Dibromoethane	ND	0.50	ug/L	1	09/24/20	MH	SW8260C
1,2-Dichlorobenzene	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
1,2-Dichloroethane	ND	0.60	ug/L	1	09/24/20	MH	SW8260C
1,2-Dichloropropane	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
1,3,5-Trimethylbenzene	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
1,3-Dichlorobenzene	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
1,3-Dichloropropane	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
1,4-Dichlorobenzene	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
2,2-Dichloropropane	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
2-Chlorotoluene	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
2-Hexanone	ND	5.0	ug/L	1	09/24/20	MH	SW8260C
4-Chlorotoluene	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
4-Methyl-2-pentanone	ND	5.0	ug/L	1	09/24/20	MH	SW8260C
Acetone	ND	25	ug/L	1	09/24/20	MH	SW8260C

Project ID: LOCKHEED WILMINGTON MA 60552044.19 Phoenix I.D.: CG83146

Client ID: 20A-TRC201R-092220-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	
Benzene	ND	0.70	ug/L	1	09/24/20	MH	SW8260C
Bromobenzene	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
Bromochloromethane	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
Bromodichloromethane	ND	0.50	ug/L	1	09/24/20	MH	SW8260C
Bromoform	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
Bromomethane	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
Carbon Disulfide	ND	5.0	ug/L	1	09/24/20	MH	SW8260C
Carbon tetrachloride	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
Chlorobenzene	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
Chloroethane	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
Chloroform	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
Chloromethane	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
cis-1,2-Dichloroethene	140	20	ug/L	20	09/24/20	MH	SW8260C
cis-1,3-Dichloropropene	ND	0.40	ug/L	1	09/24/20	MH	SW8260C
Dibromochloromethane	ND	0.50	ug/L	1	09/24/20	MH	SW8260C
Dibromomethane	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
Dichlorodifluoromethane	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
Ethylbenzene	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
Hexachlorobutadiene	ND	0.40	ug/L	1	09/24/20	MH	SW8260C
Isopropylbenzene	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
m&p-Xylene	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
Methyl ethyl ketone	ND	5.0	ug/L	1	09/24/20	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
Methylene chloride	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
Naphthalene	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
n-Butylbenzene	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
n-Propylbenzene	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
o-Xylene	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
p-Isopropyltoluene	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
sec-Butylbenzene	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
Styrene	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
tert-Butylbenzene	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
Tetrachloroethene	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
Tetrahydrofuran (THF)	ND	2.5	ug/L	1	09/24/20	MH	SW8260C
Toluene	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
trans-1,2-Dichloroethene	29	1.0	ug/L	1	09/24/20	MH	SW8260C
trans-1,3-Dichloropropene	ND	0.40	ug/L	1	09/24/20	MH	SW8260C
Trichloroethene	40	1.0	ug/L	1	09/24/20	MH	SW8260C
Trichlorofluoromethane	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
Trichlorotrifluoroethane	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
Vinyl chloride	2.3	1.0	ug/L	1	09/24/20	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	99		%	1	09/24/20	MH	70 - 130 %
% Bromofluorobenzene	100		%	1	09/24/20	MH	70 - 130 %
% Dibromofluoromethane	97		%	1	09/24/20	MH	70 - 130 %
% Toluene-d8	103		%	1	09/24/20	MH	70 - 130 %
% 1,2-dichlorobenzene-d4 (20x)	98		%	20	09/24/20	MH	70 - 130 %
% Bromofluorobenzene (20x)	100		%	20	09/24/20	MH	70 - 130 %
% Dibromofluoromethane (20x)	98		%	20	09/24/20	MH	70 - 130 %

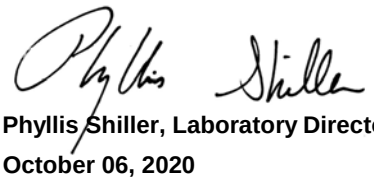
Project ID: LOCKHEED WILMINGTON MA 60552044.19 Phoenix I.D.: CG83146
Client ID: 20A-TRC201R-092220-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	
% Toluene-d8 (20x)	105		%	20	09/24/20	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	100	ug/L	1	09/24/20	MH	SW8260C (OXY)
Diethyl ether	ND	1.0	ug/L	1	09/24/20	MH	SW8260C (OXY)
Di-isopropyl ether	ND	1.0	ug/L	1	09/24/20	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	1.0	ug/L	1	09/24/20	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	1.0	ug/L	1	09/24/20	MH	SW8260C (OXY)

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.



Phyllis Shiller, Laboratory Director
October 06, 2020
Reviewed and Released by: Phyllis Shiller, Laboratory Director

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

October 06, 2020

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		09/22/20	10:35
Location Code:	AECOM-WILMINGTN	Received by:	B	09/22/20	17:13
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	127680				

Laboratory Data

SDG ID: GCG83141
Phoenix ID: CG83147

Project ID: LOCKHEED WILMINGTON MA 60552044.19
Client ID: 20A-AE29R6-092220-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Arsenic	< 0.004	0.004	mg/L	1	09/25/20	CPP	SW6010D
Arsenic (Dissolved)	0.006	0.004	mg/L	1	09/23/20	CPP	SW6010D
Iron (Dissolved)	1.39	0.011	mg/L	1	09/23/20	CPP	SW6010D
Manganese (Dissolved)	1.03	0.001	mg/L	1	09/23/20	CPP	SW6010D
Iron	1.19	0.010	mg/L	1	09/25/20	CPP	SW6010D
Manganese	0.890	0.001	mg/L	1	09/25/20	CPP	SW6010D
Chloride	461	30.0	mg/L	10	09/23/20	BS/EG	E300.0
Nitrite as Nitrogen	< 0.040	0.040	mg/L	10	09/23/20 23:08	BS/EG	E300.0
Nitrate as Nitrogen	< 0.05	0.05	mg/L	1	09/23/20 07:38	BS/EG	E300.0
Sulfate	43.9	3.0	mg/L	1	09/23/20	BS/EG	E300.0
Sulfide	0.07	0.05	mg/L	1	09/24/20	GD	SM4500S-D-11
Total Organic Carbon	1.2	1.0	mg/L	1	09/24/20	BJA	SM5310B-11
EPH Extraction	Completed				09/23/20	D/D	SW3510C
MA Petroleum Hydrocarbon (EPH)	Completed				09/22/20		MADEP EPH-04
Semi-Volatile Extraction	Completed				09/29/20	P/CG	SW3520C
Dissolved Metals Preparation	Completed				09/22/20	AG	SW3005A
Total Metals Digestion	Completed				09/24/20	AG	
MA Petroleum Hydrocarbon (VPH)	Completed				09/25/20	RM	MADEP VPH04
Volatiles							
1,1,1,2-Tetrachloroethane	ND	2.0	ug/L	2	09/25/20	MH	SW8260C
1,1,1-Trichloroethane	ND	2.0	ug/L	2	09/25/20	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	2	09/25/20	MH	SW8260C
1,1,2-Trichloroethane	ND	2.0	ug/L	2	09/25/20	MH	SW8260C
1,1-Dichloroethane	47	2.0	ug/L	2	09/25/20	MH	SW8260C
1,1-Dichloroethene	12	2.0	ug/L	2	09/25/20	MH	SW8260C
1,1-Dichloropropene	ND	2.0	ug/L	2	09/25/20	MH	SW8260C
1,2,3-Trichlorobenzene	ND	2.0	ug/L	2	09/25/20	MH	SW8260C

Project ID: LOCKHEED WILMINGTON MA 60552044.19 Phoenix I.D.: CG83147

Client ID: 20A-AE29R6-092220-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	
1,2,3-Trichloropropane	ND	1.0	ug/L	2	09/25/20	MH	SW8260C
1,2,4-Trichlorobenzene	ND	2.0	ug/L	2	09/25/20	MH	SW8260C
1,2,4-Trimethylbenzene	ND	2.0	ug/L	2	09/25/20	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	1.0	ug/L	2	09/25/20	MH	SW8260C
1,2-Dibromoethane	ND	1.0	ug/L	2	09/25/20	MH	SW8260C
1,2-Dichlorobenzene	ND	2.0	ug/L	2	09/25/20	MH	SW8260C
1,2-Dichloroethane	ND	1.2	ug/L	2	09/25/20	MH	SW8260C
1,2-Dichloropropane	ND	2.0	ug/L	2	09/25/20	MH	SW8260C
1,3,5-Trimethylbenzene	ND	2.0	ug/L	2	09/25/20	MH	SW8260C
1,3-Dichlorobenzene	ND	2.0	ug/L	2	09/25/20	MH	SW8260C
1,3-Dichloropropane	ND	2.0	ug/L	2	09/25/20	MH	SW8260C
1,4-Dichlorobenzene	ND	2.0	ug/L	2	09/25/20	MH	SW8260C
2,2-Dichloropropane	ND	2.0	ug/L	2	09/25/20	MH	SW8260C
2-Chlorotoluene	ND	2.0	ug/L	2	09/25/20	MH	SW8260C
2-Hexanone	ND	10	ug/L	2	09/25/20	MH	SW8260C
4-Chlorotoluene	ND	2.0	ug/L	2	09/25/20	MH	SW8260C
4-Methyl-2-pentanone	ND	10	ug/L	2	09/25/20	MH	SW8260C
Acetone	ND	50	ug/L	2	09/25/20	MH	SW8260C
Benzene	ND	1.4	ug/L	2	09/25/20	MH	SW8260C
Bromobenzene	ND	2.0	ug/L	2	09/25/20	MH	SW8260C
Bromochloromethane	ND	2.0	ug/L	2	09/25/20	MH	SW8260C
Bromodichloromethane	ND	1.0	ug/L	2	09/25/20	MH	SW8260C
Bromoform	ND	2.0	ug/L	2	09/25/20	MH	SW8260C
Bromomethane	ND	2.0	ug/L	2	09/25/20	MH	SW8260C
Carbon Disulfide	ND	10	ug/L	2	09/25/20	MH	SW8260C
Carbon tetrachloride	ND	2.0	ug/L	2	09/25/20	MH	SW8260C
Chlorobenzene	ND	2.0	ug/L	2	09/25/20	MH	SW8260C
Chloroethane	ND	2.0	ug/L	2	09/25/20	MH	SW8260C
Chloroform	ND	2.0	ug/L	2	09/25/20	MH	SW8260C
Chloromethane	ND	2.0	ug/L	2	09/25/20	MH	SW8260C
cis-1,2-Dichloroethene	320	5.0	ug/L	5	09/24/20	MH	SW8260C
cis-1,3-Dichloropropene	ND	1.0	ug/L	2	09/25/20	MH	SW8260C
Dibromochloromethane	ND	1.0	ug/L	2	09/25/20	MH	SW8260C
Dibromomethane	ND	2.0	ug/L	2	09/25/20	MH	SW8260C
Dichlorodifluoromethane	ND	2.0	ug/L	2	09/25/20	MH	SW8260C
Ethylbenzene	ND	2.0	ug/L	2	09/25/20	MH	SW8260C
Hexachlorobutadiene	ND	1.0	ug/L	2	09/25/20	MH	SW8260C
Isopropylbenzene	ND	2.0	ug/L	2	09/25/20	MH	SW8260C
m&p-Xylene	ND	2.0	ug/L	2	09/25/20	MH	SW8260C
Methyl ethyl ketone	ND	10	ug/L	2	09/25/20	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	2.0	ug/L	2	09/25/20	MH	SW8260C
Methylene chloride	ND	2.0	ug/L	2	09/25/20	MH	SW8260C
Naphthalene	ND	2.0	ug/L	2	09/25/20	MH	SW8260C
n-Butylbenzene	ND	2.0	ug/L	2	09/25/20	MH	SW8260C
n-Propylbenzene	ND	2.0	ug/L	2	09/25/20	MH	SW8260C
o-Xylene	ND	2.0	ug/L	2	09/25/20	MH	SW8260C
p-Isopropyltoluene	ND	2.0	ug/L	2	09/25/20	MH	SW8260C
sec-Butylbenzene	ND	2.0	ug/L	2	09/25/20	MH	SW8260C
Styrene	ND	2.0	ug/L	2	09/25/20	MH	SW8260C

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	
tert-Butylbenzene	ND	2.0	ug/L	2	09/25/20	MH	SW8260C
Tetrachloroethene	ND	2.0	ug/L	2	09/25/20	MH	SW8260C
Tetrahydrofuran (THF)	ND	5.0	ug/L	2	09/25/20	MH	SW8260C
Toluene	ND	2.0	ug/L	2	09/25/20	MH	SW8260C
trans-1,2-Dichloroethene	19	2.0	ug/L	2	09/25/20	MH	SW8260C
trans-1,3-Dichloropropene	ND	1.0	ug/L	2	09/25/20	MH	SW8260C
Trichloroethene	120	2.0	ug/L	2	09/25/20	MH	SW8260C
Trichlorofluoromethane	ND	2.0	ug/L	2	09/25/20	MH	SW8260C
Trichlorotrifluoroethane	ND	2.0	ug/L	2	09/25/20	MH	SW8260C
Vinyl chloride	ND	2.0	ug/L	2	09/25/20	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4 (2x)	100		%	2	09/25/20	MH	70 - 130 %
% Bromofluorobenzene (2x)	93		%	2	09/25/20	MH	70 - 130 %
% Dibromofluoromethane (2x)	98		%	2	09/25/20	MH	70 - 130 %
% Toluene-d8 (2x)	95		%	2	09/25/20	MH	70 - 130 %
% 1,2-dichlorobenzene-d4 (5x)	100		%	5	09/24/20	MH	70 - 130 %
% Bromofluorobenzene (5x)	98		%	5	09/24/20	MH	70 - 130 %
% Dibromofluoromethane (5x)	97		%	5	09/24/20	MH	70 - 130 %
% Toluene-d8 (5x)	105		%	5	09/24/20	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	200	ug/L	2	09/25/20	MH	SW8260C (OXY)
Diethyl ether	ND	2.0	ug/L	2	09/25/20	MH	SW8260C (OXY)
Di-isopropyl ether	ND	2.0	ug/L	2	09/25/20	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	2.0	ug/L	2	09/25/20	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	2.0	ug/L	2	09/25/20	MH	SW8260C (OXY)
Semivolatiles by SIM, PAH							
2-Methylnaphthalene	ND	0.47	ug/L	1	09/30/20	WB	SW8270D (SIM)
Acenaphthene	ND	0.47	ug/L	1	09/30/20	WB	SW8270D (SIM)
Acenaphthylene	ND	0.09	ug/L	1	09/30/20	WB	SW8270D (SIM)
Anthracene	ND	0.09	ug/L	1	09/30/20	WB	SW8270D (SIM)
Benz(a)anthracene	ND	0.09	ug/L	1	09/30/20	WB	SW8270D (SIM)
Benzo(a)pyrene	ND	0.19	ug/L	1	09/30/20	WB	SW8270D (SIM)
Benzo(b)fluoranthene	ND	0.09	ug/L	1	09/30/20	WB	SW8270D (SIM)
Benzo(ghi)perylene	ND	0.02	ug/L	1	09/30/20	WB	SW8270D (SIM)
Benzo(k)fluoranthene	ND	0.09	ug/L	1	09/30/20	WB	SW8270D (SIM)
Chrysene	ND	0.05	ug/L	1	09/30/20	WB	SW8270D (SIM)
Dibenz(a,h)anthracene	ND	0.02	ug/L	1	09/30/20	WB	SW8270D (SIM)
Fluoranthene	ND	0.47	ug/L	1	09/30/20	WB	SW8270D (SIM)
Fluorene	ND	0.09	ug/L	1	09/30/20	WB	SW8270D (SIM)
Indeno(1,2,3-cd)pyrene	ND	0.09	ug/L	1	09/30/20	WB	SW8270D (SIM)
Naphthalene	ND	0.47	ug/L	1	09/30/20	WB	SW8270D (SIM)
Phenanthrene	ND	0.47	ug/L	1	09/30/20	WB	SW8270D (SIM)
Pyrene	ND	0.07	ug/L	1	09/30/20	WB	SW8270D (SIM)
QA/QC Surrogates							
% 2-Fluorobiphenyl	53		%	1	09/30/20	WB	40 - 140 %
% Nitrobenzene-d5	74		%	1	09/30/20	WB	40 - 140 %
% Terphenyl-d14	54		%	1	09/30/20	WB	40 - 140 %

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	
1,4-dioxane							
1,4-dioxane	43	0.20	ug/l	1	09/29/20	AW	SW8270DSIM
QA/QC Surrogates							
% 1,4-dioxane-d8	87		%	1	09/29/20	AW	40 - 140 %
Extraction for 1,4-Dioxane	Completed				09/28/20	S/S	
MA EPH Aliphatic/Aromatic Ranges							
C11-C22 Aromatic Hydrocarbons 1,2*	ND	200	ug/L	1	09/24/20	AW	MAEPH 5/2004
C11-C22 Aromatic Hydrocarbons Unadj	ND	200	ug/L	1	09/24/20	AW	MAEPH 5/2004
C19-C36 Aliphatic Hydrocarbons 1*	ND	200	ug/L	1	09/24/20	AW	MAEPH 5/2004
C9-C18 Aliphatic Hydrocarbons 1*	ND	200	ug/L	1	09/24/20	AW	MAEPH 5/2004
Total TPH 1,2*	ND	200	ug/L	1	09/24/20	AW	MAEPH 5/2004
QA/QC Surrogates							
% 1-chlorooctadecane (aliphatic)	78		%	1	09/24/20	AW	40 - 140 %
% 2-Bromonaphthalene (Fractionation)	117		%	1	09/24/20	AW	40 - 140 %
% 2-Fluorobiphenyl (Fractionation)	110		%	1	09/24/20	AW	40 - 140 %
% o-terphenyl (aromatic)	90		%	1	09/24/20	AW	40 - 140 %
MA Volatile Petroleum Hydrocarbons (VPH)							
Unadjusted C5-C8 Aliphatics (*1)	200	100	ug/L	1	09/25/20	RM	MA VPH 5/2004
Unadjusted C9-C12 Aliphatics (*1)	ND	100	ug/L	1	09/25/20	RM	MA VPH 5/2004
C5-C8 Aliphatic Hydrocarbons *1,2	200	100	ug/L	1	09/25/20	RM	MA VPH 5/2004
C9-C12 Aliphatic Hydrocarbons *1,3	ND	100	ug/L	1	09/25/20	RM	MA VPH 5/2004
C9-C10 Aromatic Hydrocarbons *1	ND	100	ug/L	1	09/25/20	RM	MA VPH 5/2004
Benzene	ND	1.0	ug/L	1	09/25/20	RM	MA VPH 5/2004
Ethyl Benzene	ND	1.0	ug/L	1	09/25/20	RM	MA VPH 5/2004
MTBE	ND	1.0	ug/L	1	09/25/20	RM	MA VPH 5/2004
Naphthalene	ND	5.0	ug/L	1	09/25/20	RM	MA VPH 5/2004
Toluene	ND	1.0	ug/L	1	09/25/20	RM	MA VPH 5/2004
m,p-Xylenes	ND	2.0	ug/L	1	09/25/20	RM	MA VPH 5/2004
o-Xylene	ND	1.0	ug/L	1	09/25/20	RM	MA VPH 5/2004
QA/QC Surrogates							
% 2,5-Dibromotoluene (FID)	93		%	1	09/25/20	RM	70 - 130 %
% 2,5-Dibromotoluene (PID)	96		%	1	09/25/20	RM	70 - 130 %

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

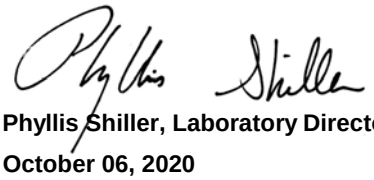
Comments:

MAEPH:
1* Hydrocarbon range data exclude concentrations of any surrogate(s) and/or internal standards eluting in that range.
2* C11-C12 Aromatic Hydrocarbons exclude the concentration of Target PAH analytes eluting in that range.

VPH:
*1 Range data exclude conc.s of any surrogate(s) and/or Int. std.s eluting in that range.
*2 C5-C8 and C9-C12 Aliphatic exclude the conc. of Target Analytes in that range.
*3 C9-C12 Aliphatic also exclude C9-C10 Aromatic Hydrocarbon

Volatile Comment:
Elevated reporting limits for volatiles due to the presence of target and/or non-target compounds.

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.



Phyllis Shiller, Laboratory Director

October 06, 2020

Reviewed and Released by: Phyllis Shiller, Laboratory Director

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

October 06, 2020

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		09/22/20	14:50
Location Code:	AECOM-WILMINGTN	Received by:	B	09/22/20	17:13
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	127680				

Laboratory Data

SDG ID: GCG83141
Phoenix ID: CG83148

Project ID: LOCKHEED WILMINGTON MA 60552044.19
Client ID: 20A-AE29R5-092220-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Volatiles							
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
1,1,1-Trichloroethane	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L	1	09/24/20	MH	SW8260C
1,1,2-Trichloroethane	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
1,1-Dichloroethane	36	1.0	ug/L	1	09/24/20	MH	SW8260C
1,1-Dichloroethene	7.5	1.0	ug/L	1	09/24/20	MH	SW8260C
1,1-Dichloropropene	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
1,2,3-Trichlorobenzene	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
1,2,3-Trichloropropane	ND	0.50	ug/L	1	09/24/20	MH	SW8260C
1,2,4-Trichlorobenzene	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
1,2,4-Trimethylbenzene	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	0.50	ug/L	1	09/24/20	MH	SW8260C
1,2-Dibromoethane	ND	0.50	ug/L	1	09/24/20	MH	SW8260C
1,2-Dichlorobenzene	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
1,2-Dichloroethane	ND	0.60	ug/L	1	09/24/20	MH	SW8260C
1,2-Dichloropropane	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
1,3,5-Trimethylbenzene	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
1,3-Dichlorobenzene	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
1,3-Dichloropropane	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
1,4-Dichlorobenzene	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
2,2-Dichloropropane	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
2-Chlorotoluene	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
2-Hexanone	ND	5.0	ug/L	1	09/24/20	MH	SW8260C
4-Chlorotoluene	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
4-Methyl-2-pentanone	ND	5.0	ug/L	1	09/24/20	MH	SW8260C
Acetone	ND	25	ug/L	1	09/24/20	MH	SW8260C

Project ID: LOCKHEED WILMINGTON MA 60552044.19 Phoenix I.D.: CG83148

Client ID: 20A-AE29R5-092220-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	
Benzene	ND	0.70	ug/L	1	09/24/20	MH	SW8260C
Bromobenzene	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
Bromochloromethane	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
Bromodichloromethane	ND	0.50	ug/L	1	09/24/20	MH	SW8260C
Bromoform	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
Bromomethane	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
Carbon Disulfide	ND	5.0	ug/L	1	09/24/20	MH	SW8260C
Carbon tetrachloride	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
Chlorobenzene	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
Chloroethane	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
Chloroform	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
Chloromethane	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
cis-1,2-Dichloroethene	220	20	ug/L	20	09/24/20	MH	SW8260C
cis-1,3-Dichloropropene	ND	0.40	ug/L	1	09/24/20	MH	SW8260C
Dibromochloromethane	ND	0.50	ug/L	1	09/24/20	MH	SW8260C
Dibromomethane	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
Dichlorodifluoromethane	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
Ethylbenzene	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
Hexachlorobutadiene	ND	0.40	ug/L	1	09/24/20	MH	SW8260C
Isopropylbenzene	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
m&p-Xylene	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
Methyl ethyl ketone	ND	5.0	ug/L	1	09/24/20	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
Methylene chloride	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
Naphthalene	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
n-Butylbenzene	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
n-Propylbenzene	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
o-Xylene	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
p-Isopropyltoluene	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
sec-Butylbenzene	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
Styrene	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
tert-Butylbenzene	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
Tetrachloroethene	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
Tetrahydrofuran (THF)	ND	2.5	ug/L	1	09/24/20	MH	SW8260C
Toluene	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
trans-1,2-Dichloroethene	6.5	1.0	ug/L	1	09/24/20	MH	SW8260C
trans-1,3-Dichloropropene	ND	0.40	ug/L	1	09/24/20	MH	SW8260C
Trichloroethene	33	1.0	ug/L	1	09/24/20	MH	SW8260C
Trichlorofluoromethane	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
Trichlorotrifluoroethane	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
Vinyl chloride	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	99		%	1	09/24/20	MH	70 - 130 %
% Bromofluorobenzene	102		%	1	09/24/20	MH	70 - 130 %
% Dibromofluoromethane	97		%	1	09/24/20	MH	70 - 130 %
% Toluene-d8	103		%	1	09/24/20	MH	70 - 130 %
% 1,2-dichlorobenzene-d4 (20x)	99		%	20	09/24/20	MH	70 - 130 %
% Bromofluorobenzene (20x)	101		%	20	09/24/20	MH	70 - 130 %
% Dibromofluoromethane (20x)	96		%	20	09/24/20	MH	70 - 130 %

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	
% Toluene-d8 (20x)	105		%	20	09/24/20	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	100	ug/L	1	09/24/20	MH	SW8260C (OXY)
Diethyl ether	ND	1.0	ug/L	1	09/24/20	MH	SW8260C (OXY)
Di-isopropyl ether	ND	1.0	ug/L	1	09/24/20	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	1.0	ug/L	1	09/24/20	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	1.0	ug/L	1	09/24/20	MH	SW8260C (OXY)

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.

Phyllis Shiller, Laboratory Director
October 06, 2020
Reviewed and Released by: Phyllis Shiller, Laboratory Director

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

October 06, 2020

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		09/22/20	15:20
Location Code:	AECOM-WILMINGTN	Received by:	B	09/22/20	17:13
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	127680				

Laboratory Data

SDG ID: GCG83141
Phoenix ID: CG83149

Project ID: LOCKHEED WILMINGTON MA 60552044.19
Client ID: 20A-AE29R3-092220-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Volatiles							
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
1,1,1-Trichloroethane	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L	1	09/24/20	MH	SW8260C
1,1,2-Trichloroethane	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
1,1-Dichloroethane	5.2	1.0	ug/L	1	09/24/20	MH	SW8260C
1,1-Dichloroethene	1.2	1.0	ug/L	1	09/24/20	MH	SW8260C
1,1-Dichloropropene	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
1,2,3-Trichlorobenzene	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
1,2,3-Trichloropropane	ND	0.50	ug/L	1	09/24/20	MH	SW8260C
1,2,4-Trichlorobenzene	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
1,2,4-Trimethylbenzene	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	0.50	ug/L	1	09/24/20	MH	SW8260C
1,2-Dibromoethane	ND	0.50	ug/L	1	09/24/20	MH	SW8260C
1,2-Dichlorobenzene	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
1,2-Dichloroethane	ND	0.60	ug/L	1	09/24/20	MH	SW8260C
1,2-Dichloropropane	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
1,3,5-Trimethylbenzene	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
1,3-Dichlorobenzene	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
1,3-Dichloropropane	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
1,4-Dichlorobenzene	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
2,2-Dichloropropane	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
2-Chlorotoluene	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
2-Hexanone	ND	5.0	ug/L	1	09/24/20	MH	SW8260C
4-Chlorotoluene	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
4-Methyl-2-pentanone	ND	5.0	ug/L	1	09/24/20	MH	SW8260C
Acetone	ND	25	ug/L	1	09/24/20	MH	SW8260C

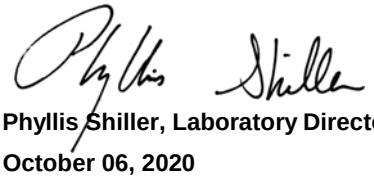
Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	
Benzene	ND	0.70	ug/L	1	09/24/20	MH	SW8260C
Bromobenzene	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
Bromochloromethane	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
Bromodichloromethane	ND	0.50	ug/L	1	09/24/20	MH	SW8260C
Bromoform	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
Bromomethane	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
Carbon Disulfide	ND	5.0	ug/L	1	09/24/20	MH	SW8260C
Carbon tetrachloride	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
Chlorobenzene	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
Chloroethane	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
Chloroform	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
Chloromethane	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
cis-1,2-Dichloroethene	31	1.0	ug/L	1	09/24/20	MH	SW8260C
cis-1,3-Dichloropropene	ND	0.40	ug/L	1	09/24/20	MH	SW8260C
Dibromochloromethane	ND	0.50	ug/L	1	09/24/20	MH	SW8260C
Dibromomethane	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
Dichlorodifluoromethane	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
Ethylbenzene	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
Hexachlorobutadiene	ND	0.40	ug/L	1	09/24/20	MH	SW8260C
Isopropylbenzene	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
m&p-Xylene	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
Methyl ethyl ketone	ND	5.0	ug/L	1	09/24/20	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
Methylene chloride	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
Naphthalene	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
n-Butylbenzene	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
n-Propylbenzene	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
o-Xylene	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
p-Isopropyltoluene	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
sec-Butylbenzene	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
Styrene	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
tert-Butylbenzene	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
Tetrachloroethene	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
Tetrahydrofuran (THF)	ND	2.5	ug/L	1	09/24/20	MH	SW8260C
Toluene	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
trans-1,2-Dichloroethene	1.0	1.0	ug/L	1	09/24/20	MH	SW8260C
trans-1,3-Dichloropropene	ND	0.40	ug/L	1	09/24/20	MH	SW8260C
Trichloroethene	8.8	1.0	ug/L	1	09/24/20	MH	SW8260C
Trichlorofluoromethane	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
Trichlorotrifluoroethane	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
Vinyl chloride	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	98		%	1	09/24/20	MH	70 - 130 %
% Bromofluorobenzene	100		%	1	09/24/20	MH	70 - 130 %
% Dibromofluoromethane	98		%	1	09/24/20	MH	70 - 130 %
% Toluene-d8	105		%	1	09/24/20	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	100	ug/L	1	09/24/20	MH	SW8260C (OXY)
Diethyl ether	ND	1.0	ug/L	1	09/24/20	MH	SW8260C (OXY)

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	
Di-isopropyl ether	ND	1.0	ug/L	1	09/24/20	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	1.0	ug/L	1	09/24/20	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	1.0	ug/L	1	09/24/20	MH	SW8260C (OXY)

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

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Phyllis Shiller, Laboratory Director
October 06, 2020
Reviewed and Released by: Phyllis Shiller, Laboratory Director

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

QA/QC Report

October 06, 2020

QA/QC Data

SDG I.D.: GCG83141

Parameter	Blank	Blk RL	Sample Result	Dup Result	Dup RPD	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits
QA/QC Batch 546812 (mg/L), QC Sample No: CG79357 (CG83147)													
ICP Metals - Aqueous													
Arsenic	BRL	0.004	<0.004	<0.004	NC	99.0	99.7	0.7	97.8			80 - 120	20
Iron	BRL	0.010	5.47	5.60	2.30	99.0	100	1.0	NC			80 - 120	20
Manganese	BRL	0.001	0.178	0.182	2.20	100	102	2.0	97.5			80 - 120	20
Comment:													
Additional: LCS acceptance range is 80-120% MS acceptance range 75-125%.													
QA/QC Batch 546429 (mg/L), QC Sample No: CG83147 (CG83147)													
ICP Metals - Dissolved													
Arsenic	BRL	0.003	0.006	0.006	NC	115	111	3.5	78.4			80 - 120	20
Iron	BRL	0.006	1.39	1.37	1.40	107	104	2.8	123			80 - 120	20
Manganese	BRL	0.001	1.03	1.01	2.00	109	105	3.7	104			80 - 120	20
Comment:													
Additional: LCS acceptance range is 80-120% MS acceptance range 75-125%.													

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QA/QC Report

October 06, 2020

QA/QC Data

SDG I.D.: GCG83141

Parameter	Blank	Blk RL	Sample Result	Dup Result	Dup RPD	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits
QA/QC Batch 546943 (mg/L), QC Sample No: CG83092 (CG83147)													
Total Organic Carbon	BRL	1.0		3.0		99.0			92.0			85 - 115	20
Comment:													
Additional: LCS acceptance range is 85-115% MS acceptance range 75-125%.													
QA/QC Batch 546805 (mg/L), QC Sample No: CG83147 (CG83147)													
Sulfide	BRL	0.05	0.07	0.07	NC	95.1			86.0			90 - 110	20
QA/QC Batch 546609 (mg/L), QC Sample No: CG82704 (CG83147)													
Chloride	BRL	3.0	39.9	39.5	1.00	98.9			106			90 - 110	20
Nitrate as Nitrogen	BRL	0.05	0.05	<0.05	NC	104			97.6			90 - 110	20
Nitrite as Nitrogen	BRL	0.004	<0.004	<0.004	NC	102			100			90 - 110	20
Sulfate	BRL	3.0	31.0	31.1	0.30	101			104			90 - 110	20
QA/QC Batch 546811 (mg/L), QC Sample No: CG83510 (CG83147)													
Chloride	BRL	3.0	10.8	11.1	NC	102			102			90 - 110	20
Nitrate as Nitrogen	BRL	0.05	0.08	0.09	NC	104			104			90 - 110	20
Nitrite as Nitrogen	BRL	0.004	<0.004	<0.004	NC	98.6			97.4			90 - 110	20
Sulfate	BRL	3.0	3.6	3.2	NC	100			98.9			90 - 110	20

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QA/QC Report

October 06, 2020

QA/QC Data

SDG I.D.: GCG83141

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits	
QA/QC Batch 546542 (ug/L), QC Sample No: CG80054 (CG83147)											
MAEPH - Ground Water											
C9-C18 Aliphatic Hydrocarbons 1*	ND	100	57	53	7.3				40 - 140	25	
C19-C36 Aliphatic Hydrocarbons 1*	ND	100	85	86	1.2				40 - 140	25	
C11-C22 Aromatic Hydrocarbons 1	ND	100	82	78	5.0				40 - 140	25	
C11-C22 Aromatic Hydrocarbons U	ND	100							40 - 140	25	
Total TPH 1,2*	ND	100	73	72	1.4				40 - 140	25	
C9 - Nonane	ND	10	32	30	6.5				30 - 140	25	
C-10 Decane	ND	10	39	36	8.0				40 - 140	25	I
C12 - Dodecane	ND	10	46	43	6.7				40 - 140	25	
C14 - Tetradecane	ND	10	60	56	6.9				40 - 140	25	
C16 - Hexadecane	ND	10	75	69	8.3				40 - 140	25	
C18 - Octadecane	ND	10	87	82	5.9				40 - 140	25	
C19 - Nonadecane	ND	10	86	82	4.8				40 - 140	25	
C20 - Eicosane	ND	10	87	84	3.5				40 - 140	25	
C22 - Docosane	ND	10	86	84	2.4				40 - 140	25	
C24 - Tetracosane	ND	10	86	84	2.4				40 - 140	25	
C26 - Hexacosane	ND	10	86	84	2.4				40 - 140	25	
C28 - Octacosane	ND	10	85	83	2.4				40 - 140	25	
C30 - Tricotane	ND	10	83	82	1.2				40 - 140	25	
C36 - Hexatriacontane	ND	10	82	106	25.5				40 - 140	25	
% 1-chlorooctadecane (aliphatic)	65	%	75	72	4.1				40 - 140	25	
% o-terphenyl (aromatic)	64	%	79	74	6.5				40 - 140	25	
% 2-Fluorobiphenyl (Fractionation)	96	%	103	101	2.0				40 - 140	25	
% 2-Bromonaphthalene (Fractionati	95	%	110	118	7.0				40 - 140	25	
% 2-Methylnaphthalene BT		%	0	0	NC				0 - 5		
% Naphthalene BT		%	0	0	NC				0 - 5		

Comment:

A LCS and LCS Duplicate were performed instead of a matrix spike and matrix spike duplicate.

Additional EPH fractionation criteria: Breakthrough criteria (BT) is 0 to 5%

QA/QC Batch 547240 (ug/l), QC Sample No: CG85194 (CG83147)											
1,4dioxane - Ground Water											
1,4-dioxane	ND	0.20	89	79	11.9	83			40 - 140	30	
% 1,4-dioxane-d8	94	%	88	86	2.3	83			40 - 140	30	
QA/QC Batch 547385 (ug/L), QC Sample No: CG86390 (CG83147)											
Semivolatiles by SIM, PAH - Ground Water											
2-Methylnaphthalene	ND	0.50	60	59	1.7				40 - 140	20	
Acenaphthene	ND	0.50	61	61	0.0				40 - 140	20	
Acenaphthylene	ND	0.10	61	48	23.9				40 - 140	20	r
Anthracene	ND	0.10	62	55	12.0				40 - 140	20	
Benz(a)anthracene	ND	0.02	86	84	2.4				40 - 140	20	

QA/QC Data

SDG I.D.: GCG83141

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits	
Benzo(a)pyrene	ND	0.02	65	36	57.4				40 - 140	20	l,r
Benzo(b)fluoranthene	ND	0.02	80	66	19.2				40 - 140	20	
Benzo(ghi)perylene	ND	0.02	62	41	40.8				40 - 140	20	r
Benzo(k)fluoranthene	ND	0.02	51	45	12.5				40 - 140	20	
Chrysene	ND	0.02	70	74	5.6				40 - 140	20	
Dibenz(a,h)anthracene	ND	0.02	68	61	10.9				40 - 140	20	
Fluoranthene	ND	0.50	58	53	9.0				40 - 140	20	
Fluorene	ND	0.10	58	61	5.0				40 - 140	20	
Indeno(1,2,3-cd)pyrene	ND	0.02	72	37	64.2				40 - 140	20	l,r
Naphthalene	ND	0.50	58	59	1.7				40 - 140	20	
Phenanthrene	ND	0.06	66	62	6.3				40 - 140	20	
Pyrene	ND	0.07	53	42	23.2				40 - 140	20	r
% 2-Fluorobiphenyl	50	%	58	59	1.7				40 - 140	20	
% Nitrobenzene-d5	64	%	73	64	13.1				40 - 140	20	
% Terphenyl-d14	49	%	53	48	9.9				40 - 140	20	

Comment:

Additional 8270 criteria: 10% of compounds can be outside of acceptance criteria as long as recovery is at least 10%. (Acid surrogates acceptance range for aqueous samples: 10-110%, for soils 30-130%)

QA/QC Batch 546836 (ug/L), QC Sample No: CG80056 (CG83141 (400X) , CG83143 (400X) , CG83146 (20X) , CG83148 (20X))

Volatiles - Ground Water

cis-1,2-Dichloroethene	ND	1.0	83	83	0.0				70 - 130	30	
Tetrachloroethene	ND	1.0	88	88	0.0				70 - 130	30	
Trichloroethene	ND	1.0	88	86	2.3				70 - 130	30	
% 1,2-dichlorobenzene-d4	101	%	99	99	0.0				70 - 130	30	
% Bromofluorobenzene	100	%	104	105	1.0				70 - 130	30	
% Dibromofluoromethane	96	%	96	93	3.2				70 - 130	30	
% Toluene-d8	104	%	101	100	1.0				70 - 130	30	

Comment:

A LCS and LCS Duplicate were performed instead of a matrix spike and matrix spike duplicate.

Additional 8260 criteria: 10% of compounds can be outside of acceptance criteria as long as recovery is 10%.

QA/QC Batch 546771 (ug/L), QC Sample No: CG81125 (CG83144)

Volatiles - Ground Water

1,1,1,2-Tetrachloroethane	ND	1.0	91	92	1.1	96	87	9.8	70 - 130	30	
1,1,1-Trichloroethane	ND	1.0	87	91	4.5	101	94	7.2	70 - 130	30	
1,1,2,2-Tetrachloroethane	ND	0.50	104	105	1.0	104	93	11.2	70 - 130	30	
1,1,2-Trichloroethane	ND	1.0	92	93	1.1	93	86	7.8	70 - 130	30	
1,1-Dichloroethane	ND	1.0	88	92	4.4	100	87	13.9	70 - 130	30	
1,1-Dichloroethene	ND	1.0	84	87	3.5	101	101	0.0	70 - 130	30	
1,1-Dichloropropene	ND	1.0	95	96	1.0	103	96	7.0	70 - 130	30	
1,2,3-Trichlorobenzene	ND	1.0	95	95	0.0	98	90	8.5	70 - 130	30	
1,2,3-Trichloropropane	ND	1.0	93	102	9.2	94	89	5.5	70 - 130	30	
1,2,4-Trichlorobenzene	ND	1.0	91	92	1.1	97	89	8.6	70 - 130	30	
1,2,4-Trimethylbenzene	ND	1.0	93	96	3.2	101	91	10.4	70 - 130	30	
1,2-Dibromo-3-chloropropane	ND	1.0	100	100	0.0	96	84	13.3	70 - 130	30	
1,2-Dibromoethane	ND	1.0	95	98	3.1	94	87	7.7	70 - 130	30	
1,2-Dichlorobenzene	ND	1.0	88	90	2.2	93	86	7.8	70 - 130	30	
1,2-Dichloroethane	ND	1.0	94	97	3.1	99	92	7.3	70 - 130	30	
1,2-Dichloropropane	ND	1.0	94	96	2.1	100	92	8.3	70 - 130	30	
1,3,5-Trimethylbenzene	ND	1.0	93	96	3.2	100	93	7.3	70 - 130	30	
1,3-Dichlorobenzene	ND	1.0	90	92	2.2	94	87	7.7	70 - 130	30	
1,3-Dichloropropane	ND	1.0	97	99	2.0	100	92	8.3	70 - 130	30	

QA/QC Data

SDG I.D.: GCG83141

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits	
1,4-Dichlorobenzene	ND	1.0	89	91	2.2	94	87	7.7	70 - 130	30	
1,4-dioxane	ND	100	99	101	2.0	103	97	6.0	40 - 160	30	
2,2-Dichloropropane	ND	1.0	89	90	1.1	88	76	14.6	70 - 130	30	
2-Chlorotoluene	ND	1.0	91	92	1.1	93	87	6.7	70 - 130	30	
2-Hexanone	ND	5.0	101	103	2.0	97	93	4.2	40 - 160	30	
4-Chlorotoluene	ND	1.0	91	92	1.1	92	86	6.7	70 - 130	30	
4-Methyl-2-pentanone	ND	5.0	100	104	3.9	99	91	8.4	40 - 160	30	
Acetone	ND	5.0	95	89	6.5	107	104	2.8	40 - 160	30	
Benzene	ND	0.70	92	95	3.2	100	91	9.4	70 - 130	30	
Bromobenzene	ND	1.0	88	90	2.2	88	82	7.1	70 - 130	30	
Bromochloromethane	ND	1.0	84	85	1.2	88	80	9.5	70 - 130	30	
Bromodichloromethane	ND	0.50	93	96	3.2	98	91	7.4	70 - 130	30	
Bromoform	ND	1.0	91	93	2.2	91	86	5.6	70 - 130	30	
Bromomethane	ND	1.0	91	91	0.0	82	91	10.4	40 - 160	30	
Carbon Disulfide	ND	1.0	81	80	1.2	95	99	4.1	70 - 130	30	
Carbon tetrachloride	ND	1.0	85	88	3.5	118	94	22.6	70 - 130	30	
Chlorobenzene	ND	1.0	90	92	2.2	95	89	6.5	70 - 130	30	
Chloroethane	ND	1.0	94	95	1.1	113	114	0.9	70 - 130	30	
Chloroform	ND	1.0	86	90	4.5	98	88	10.8	70 - 130	30	
Chloromethane	ND	1.0	97	98	1.0	109	107	1.9	40 - 160	30	
cis-1,2-Dichloroethene	ND	1.0	82	84	2.4	NC	NC	NC	70 - 130	30	
cis-1,3-Dichloropropene	ND	0.40	95	96	1.0	92	85	7.9	70 - 130	30	
Dibromochloromethane	ND	0.50	95	97	2.1	94	90	4.3	70 - 130	30	
Dibromomethane	ND	1.0	90	89	1.1	91	83	9.2	70 - 130	30	
Dichlorodifluoromethane	ND	1.0	121	124	2.4	129	138	6.7	40 - 160	30	
Di-isopropyl ether	ND	1.0	91	96	5.3	97	71	31.0	70 - 130	30	r
Ethyl ether	ND	1.0	86	87	1.2	93	97	4.2	70 - 130	30	
Ethyl tert-butyl ether	ND	1.0	92	97	5.3	97	87	10.9	70 - 130	30	
Ethylbenzene	ND	1.0	91	90	1.1	96	90	6.5	70 - 130	30	
Hexachlorobutadiene	ND	0.40	95	95	0.0	105	97	7.9	70 - 130	30	
Isopropylbenzene	ND	1.0	92	92	0.0	94	89	5.5	70 - 130	30	
m&p-Xylene	ND	1.0	90	92	2.2	96	89	7.6	70 - 130	30	
Methyl ethyl ketone	ND	5.0	100	103	3.0	100	91	9.4	40 - 160	30	
Methyl t-butyl ether (MTBE)	ND	1.0	87	88	1.1	94	93	1.1	70 - 130	30	
Methylene chloride	ND	1.0	80	77	3.8	89	92	3.3	70 - 130	30	
Naphthalene	ND	1.0	102	102	0.0	100	92	8.3	70 - 130	30	
n-Butylbenzene	ND	1.0	99	101	2.0	110	100	9.5	70 - 130	30	
n-Propylbenzene	ND	1.0	93	93	0.0	96	90	6.5	70 - 130	30	
o-Xylene	ND	1.0	91	93	2.2	96	90	6.5	70 - 130	30	
p-Isopropyltoluene	ND	1.0	96	97	1.0	104	96	8.0	70 - 130	30	
sec-Butylbenzene	ND	1.0	102	104	1.9	112	105	6.5	70 - 130	30	
Styrene	ND	1.0	92	94	2.2	98	91	7.4	70 - 130	30	
tert-amyl methyl ether	ND	1.0	97	100	3.0	96	88	8.7	70 - 130	30	
tert-Butylbenzene	ND	1.0	93	95	2.1	101	94	7.2	70 - 130	30	
Tetrachloroethene	ND	1.0	86	85	1.2	97	90	7.5	70 - 130	30	
Tetrahydrofuran (THF)	ND	2.5	99	99	0.0	97	88	9.7	70 - 130	30	
Toluene	ND	1.0	89	91	2.2	96	89	7.6	70 - 130	30	
trans-1,2-Dichloroethene	ND	1.0	86	89	3.4	100	104	3.9	70 - 130	30	
trans-1,3-Dichloropropene	ND	0.40	95	96	1.0	93	86	7.8	70 - 130	30	
Trichloroethene	ND	1.0	84	89	5.8	92	85	7.9	70 - 130	30	
Trichlorofluoromethane	ND	1.0	99	101	2.0	131	122	7.1	70 - 130	30	m
Trichlorotrifluoroethane	ND	1.0	91	94	3.2	113	106	6.4	70 - 130	30	
Vinyl chloride	ND	1.0	95	97	2.1	111	114	2.7	70 - 130	30	

QA/QC Data

SDG I.D.: GCG83141

Parameter	Blank	Blk RL		LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits
% 1,2-dichlorobenzene-d4	98	%		100	99	1.0	101	101	0.0	70 - 130	30
% Bromofluorobenzene	101	%		103	104	1.0	107	105	1.9	70 - 130	30
% Dibromofluoromethane	94	%		92	96	4.3	94	93	1.1	70 - 130	30
% Toluene-d8	105	%		103	103	0.0	104	102	1.9	70 - 130	30

Comment:

Additional 8260 criteria: 10% of compounds can be outside of acceptance criteria as long as recovery is 10%.

QA/QC Batch 546776 (ug/L), QC Sample No: CG83495 (CG83141 (40X) , CG83142, CG83143 (20X) , CG83145, CG83146, CG83147 (5X) , CG83148, CG83149)

Volatiles - Ground Water

1,1,1,2-Tetrachloroethane	ND	1.0		92	93	1.1				70 - 130	30
1,1,1-Trichloroethane	ND	1.0		90	91	1.1				70 - 130	30
1,1,2,2-Tetrachloroethane	ND	0.50		102	97	5.0				70 - 130	30
1,1,2-Trichloroethane	ND	1.0		90	90	0.0				70 - 130	30
1,1-Dichloroethane	ND	1.0		82	89	8.2				70 - 130	30
1,1-Dichloroethene	ND	1.0		95	90	5.4				70 - 130	30
1,1-Dichloropropene	ND	1.0		94	96	2.1				70 - 130	30
1,2,3-Trichlorobenzene	ND	1.0		94	94	0.0				70 - 130	30
1,2,3-Trichloropropane	ND	1.0		99	97	2.0				70 - 130	30
1,2,4-Trichlorobenzene	ND	1.0		90	93	3.3				70 - 130	30
1,2,4-Trimethylbenzene	ND	1.0		93	95	2.1				70 - 130	30
1,2-Dibromo-3-chloropropane	ND	1.0		99	91	8.4				70 - 130	30
1,2-Dibromoethane	ND	1.0		95	96	1.0				70 - 130	30
1,2-Dichlorobenzene	ND	1.0		89	90	1.1				70 - 130	30
1,2-Dichloroethane	ND	1.0		95	96	1.0				70 - 130	30
1,2-Dichloropropane	ND	1.0		95	96	1.0				70 - 130	30
1,3,5-Trimethylbenzene	ND	1.0		94	96	2.1				70 - 130	30
1,3-Dichlorobenzene	ND	1.0		89	91	2.2				70 - 130	30
1,3-Dichloropropane	ND	1.0		98	98	0.0				70 - 130	30
1,4-Dichlorobenzene	ND	1.0		89	92	3.3				70 - 130	30
1,4-dioxane	ND	100		98	105	6.9				40 - 160	30
2,2-Dichloropropane	ND	1.0		73	86	16.4				70 - 130	30
2-Chlorotoluene	ND	1.0		90	92	2.2				70 - 130	30
2-Hexanone	ND	5.0		103	96	7.0				40 - 160	30
4-Chlorotoluene	ND	1.0		89	91	2.2				70 - 130	30
4-Methyl-2-pentanone	ND	5.0		103	95	8.1				40 - 160	30
Acetone	ND	5.0		114	94	19.2				40 - 160	30
Benzene	ND	0.70		93	92	1.1				70 - 130	30
Bromobenzene	ND	1.0		87	89	2.3				70 - 130	30
Bromochloromethane	ND	1.0		85	87	2.3				70 - 130	30
Bromodichloromethane	ND	0.50		95	95	0.0				70 - 130	30
Bromoform	ND	1.0		93	91	2.2				70 - 130	30
Bromomethane	ND	1.0		96	93	3.2				40 - 160	30
Carbon Disulfide	ND	1.0		92	86	6.7				70 - 130	30
Carbon tetrachloride	ND	1.0		104	92	12.2				70 - 130	30
Chlorobenzene	ND	1.0		90	91	1.1				70 - 130	30
Chloroethane	ND	1.0		98	99	1.0				70 - 130	30
Chloroform	ND	1.0		89	90	1.1				70 - 130	30
Chloromethane	ND	1.0		100	100	0.0				40 - 160	30
cis-1,2-Dichloroethene	ND	1.0		85	85	0.0				70 - 130	30
cis-1,3-Dichloropropene	ND	0.40		92	94	2.2				70 - 130	30
Dibromochloromethane	ND	0.50		97	96	1.0				70 - 130	30
Dibromomethane	ND	1.0		89	88	1.1				70 - 130	30

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits
Dichlorodifluoromethane	ND	1.0	123	145	16.4				40 - 160	30
Di-isopropyl ether	ND	1.0	72	93	25.5				70 - 130	30
Ethyl ether	ND	1.0	102	87	15.9				70 - 130	30
Ethyl tert-butyl ether	ND	1.0	96	94	2.1				70 - 130	30
Ethylbenzene	ND	1.0	89	90	1.1				70 - 130	30
Hexachlorobutadiene	ND	0.40	92	95	3.2				70 - 130	30
Isopropylbenzene	ND	1.0	89	91	2.2				70 - 130	30
m&p-Xylene	ND	1.0	90	91	1.1				70 - 130	30
Methyl ethyl ketone	ND	5.0	107	95	11.9				40 - 160	30
Methyl t-butyl ether (MTBE)	ND	1.0	96	86	11.0				70 - 130	30
Methylene chloride	ND	1.0	93	81	13.8				70 - 130	30
Naphthalene	ND	1.0	101	97	4.0				70 - 130	30
n-Butylbenzene	ND	1.0	96	100	4.1				70 - 130	30
n-Propylbenzene	ND	1.0	90	92	2.2				70 - 130	30
o-Xylene	ND	1.0	92	93	1.1				70 - 130	30
p-Isopropyltoluene	ND	1.0	95	98	3.1				70 - 130	30
sec-Butylbenzene	ND	1.0	101	104	2.9				70 - 130	30
Styrene	ND	1.0	94	93	1.1				70 - 130	30
tert-amyl methyl ether	ND	1.0	97	97	0.0				70 - 130	30
tert-Butylbenzene	ND	1.0	92	95	3.2				70 - 130	30
Tetrachloroethene	ND	1.0	85	86	1.2				70 - 130	30
Tetrahydrofuran (THF)	ND	2.5	98	93	5.2				70 - 130	30
Toluene	ND	1.0	89	91	2.2				70 - 130	30
trans-1,2-Dichloroethene	ND	1.0	102	89	13.6				70 - 130	30
trans-1,3-Dichloropropene	ND	0.40	91	95	4.3				70 - 130	30
Trichloroethene	ND	1.0	86	88	2.3				70 - 130	30
Trichlorofluoromethane	ND	1.0	105	107	1.9				70 - 130	30
Trichlorotrifluoroethane	ND	1.0	93	99	6.3				70 - 130	30
Vinyl chloride	ND	1.0	101	101	0.0				70 - 130	30
% 1,2-dichlorobenzene-d4	99	%	100	99	1.0				70 - 130	30
% Bromofluorobenzene	99	%	104	103	1.0				70 - 130	30
% Dibromofluoromethane	95	%	94	98	4.2				70 - 130	30
% Toluene-d8	104	%	102	102	0.0				70 - 130	30

Comment:

A LCS and LCS Duplicate were performed instead of a matrix spike and matrix spike duplicate.

Additional 8260 criteria: 10% of compounds can be outside of acceptance criteria as long as recovery is 10%.

QA/QC Batch 547174 (ug/L), QC Sample No: CG85567 (CG83147 (2X))

Volatiles - Ground Water

1,1,1,2-Tetrachloroethane	ND	5.0	100	96	4.1				70 - 130	30
1,1,1-Trichloroethane	ND	5.0	97	94	3.1				70 - 130	30
1,1,2,2-Tetrachloroethane	ND	5.0	100	96	4.1				70 - 130	30
1,1,2-Trichloroethane	ND	5.0	97	95	2.1				70 - 130	30
1,1-Dichloroethane	ND	5.0	101	96	5.1				70 - 130	30
1,1-Dichloroethene	ND	5.0	102	98	4.0				70 - 130	30
1,1-Dichloropropene	ND	5.0	103	98	5.0				70 - 130	30
1,2,3-Trichlorobenzene	ND	1.0	95	95	0.0				70 - 130	30
1,2,3-Trichloropropane	ND	5.0	101	98	3.0				70 - 130	30
1,2,4-Trichlorobenzene	ND	5.0	96	96	0.0				70 - 130	30
1,2,4-Trimethylbenzene	ND	1.0	96	95	1.0				70 - 130	30
1,2-Dibromo-3-chloropropane	ND	5.0	100	96	4.1				70 - 130	30
1,2-Dibromoethane	ND	5.0	97	95	2.1				70 - 130	30

QA/QC Data

SDG I.D.: GCG83141

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits
1,2-Dichlorobenzene	ND	1.0	96	94	2.1				70 - 130	30
1,2-Dichloroethane	ND	0.60	98	94	4.2				70 - 130	30
1,2-Dichloropropane	ND	5.0	97	94	3.1				70 - 130	30
1,3,5-Trimethylbenzene	ND	1.0	101	98	3.0				70 - 130	30
1,3-Dichlorobenzene	ND	1.0	98	95	3.1				70 - 130	30
1,3-Dichloropropane	ND	5.0	98	95	3.1				70 - 130	30
1,4-Dichlorobenzene	ND	1.0	96	95	1.0				70 - 130	30
1,4-dioxane	ND	100	101	96	5.1				40 - 160	30
2,2-Dichloropropane	ND	5.0	82	94	13.6				70 - 130	30
2-Chlorotoluene	ND	5.0	99	97	2.0				70 - 130	30
2-Hexanone	ND	5.0	102	99	3.0				40 - 160	30
4-Chlorotoluene	ND	5.0	97	95	2.1				70 - 130	30
4-Methyl-2-pentanone	ND	5.0	102	101	1.0				40 - 160	30
Acetone	ND	10	97	92	5.3				40 - 160	30
Benzene	ND	0.70	97	95	2.1				70 - 130	30
Bromobenzene	ND	5.0	98	94	4.2				70 - 130	30
Bromochloromethane	ND	5.0	96	94	2.1				70 - 130	30
Bromodichloromethane	ND	5.0	101	97	4.0				70 - 130	30
Bromoform	ND	5.0	99	97	2.0				70 - 130	30
Bromomethane	ND	5.0	95	91	4.3				40 - 160	30
Carbon Disulfide	ND	5.0	107	101	5.8				70 - 130	30
Carbon tetrachloride	ND	5.0	103	84	20.3				70 - 130	30
Chlorobenzene	ND	1.0	98	94	4.2				70 - 130	30
Chloroethane	ND	5.0	102	98	4.0				70 - 130	30
Chloroform	ND	5.0	95	91	4.3				70 - 130	30
Chloromethane	ND	5.0	95	89	6.5				40 - 160	30
cis-1,3-Dichloropropene	ND	5.0	94	95	1.1				70 - 130	30
Dibromochloromethane	ND	5.0	104	100	3.9				70 - 130	30
Dibromomethane	ND	5.0	95	91	4.3				70 - 130	30
Dichlorodifluoromethane	ND	5.0	113	102	10.2				40 - 160	30
Ethyl ether	ND	5.0	92	86	6.7				70 - 130	30
Ethylbenzene	ND	1.0	97	96	1.0				70 - 130	30
Hexachlorobutadiene	ND	5.0	98	98	0.0				70 - 130	30
Isopropylbenzene	ND	1.0	101	99	2.0				70 - 130	30
m&p-Xylene	ND	1.0	99	97	2.0				70 - 130	30
Methyl ethyl ketone	ND	5.0	104	103	1.0				40 - 160	30
Methyl t-butyl ether (MTBE)	ND	1.0	96	91	5.3				70 - 130	30
Methylene chloride	ND	5.0	91	86	5.6				70 - 130	30
Naphthalene	ND	1.0	102	101	1.0				70 - 130	30
n-Butylbenzene	ND	1.0	101	100	1.0				70 - 130	30
n-Propylbenzene	ND	1.0	103	101	2.0				70 - 130	30
o-Xylene	ND	1.0	100	97	3.0				70 - 130	30
p-Isopropyltoluene	ND	1.0	103	101	2.0				70 - 130	30
sec-Butylbenzene	ND	1.0	110	108	1.8				70 - 130	30
Styrene	ND	1.0	99	97	2.0				70 - 130	30
tert-Butylbenzene	ND	1.0	102	98	4.0				70 - 130	30
Tetrachloroethene	ND	1.0	99	98	1.0				70 - 130	30
Tetrahydrofuran (THF)	ND	5.0	98	94	4.2				70 - 130	30
Toluene	ND	1.0	95	94	1.1				70 - 130	30
trans-1,2-Dichloroethene	ND	5.0	104	100	3.9				70 - 130	30
trans-1,3-Dichloropropene	ND	5.0	96	98	2.1				70 - 130	30
Trichloroethene	ND	5.0	98	98	0.0				70 - 130	30
Trichlorofluoromethane	ND	5.0	99	92	7.3				70 - 130	30

QA/QC Data

SDG I.D.: GCG83141

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits
Trichlorotrifluoroethane	ND	5.0	101	97	4.0				70 - 130	30
Vinyl chloride	ND	5.0	104	97	7.0				70 - 130	30
% 1,2-dichlorobenzene-d4	100	%	100	100	0.0				70 - 130	30
% Bromofluorobenzene	99	%	99	99	0.0				70 - 130	30
% Dibromofluoromethane	101	%	102	100	2.0				70 - 130	30
% Toluene-d8	102	%	98	99	1.0				70 - 130	30

Comment:

A LCS and LCS Duplicate were performed instead of a matrix spike and matrix spike duplicate.

Additional 8260 criteria: 10% of compounds can be outside of acceptance criteria as long as recovery is 10%.

QA/QC Batch 546964 (ug/L), QC Sample No: CG83124 (CG83147)

Volatile Petroleum Hydrocarbons - Ground Water

Unadjusted C5-C8 Aliphatics (*1)	ND	100	99	101	2.0	93	97	4.2	70 - 130	25
Unadjusted C9-C12 Aliphatics (*1)	ND	100	101	99	2.0	94	105	11.1	70 - 130	25
C5-C8 Aliphatic Hydrocarbons *1,2	ND	100	99	101	2.0	93	97	4.2	70 - 130	25
C9-C12 Aliphatic Hydrocarbons *1,	ND	100	101	99	2.0	94	105	11.1	70 - 130	25
C9-C10 Aromatic Hydrocarbons *1	ND	100	96	96	0.0	NC	NC	NC	70 - 130	25
Benzene	ND	1.0	84	85	1.2	84	86	2.4	70 - 130	25
Ethyl Benzene	ND	1.0	87	88	1.1	87	88	1.1	70 - 130	25
MTBE	ND	1.0	96	98	2.1	97	98	1.0	70 - 130	25
Naphthalene	ND	5.0	101	100	1.0	103	102	1.0	70 - 130	25
Toluene	ND	1.0	89	90	1.1	89	91	2.2	70 - 130	25
m,p-Xylenes	ND	2.0	90	90	0.0	90	91	1.1	70 - 130	25
o-Xylene	ND	1.0	86	86	0.0	86	87	1.2	70 - 130	25

Comment:

A blank MS/MSD was analyzed with this batch.

l = This parameter is outside laboratory LCS/LCSD specified recovery limits.
m = This parameter is outside laboratory MS/MSD specified recovery limits.
r = This parameter is outside laboratory RPD specified recovery limits.

If there are any questions regarding this data, please call Phoenix Client Services at extension 200.

RPD - Relative Percent Difference
LCS - Laboratory Control Sample
LCSD - Laboratory Control Sample Duplicate
MS - Matrix Spike
MS Dup - Matrix Spike Duplicate
NC - No Criteria
Intf - Interference



Phyllis Shiller, Laboratory Director
October 06, 2020

Tuesday, October 06, 2020

Criteria: MA: GW1, GW2, GW3

State: MA

Sample Criteria Exceedances Report

GCG83141 - AECOM-WILMINGTN

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units
CG83141	$8260GWR-WI	Dibromochloromethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	20	2	2	ug/L
CG83141	$8260GWR-WI	1,2-Dichloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	20	3	3	ug/L
CG83141	$8260GWR-WI	1,4-Dichlorobenzene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	20	5	5	ug/L
CG83141	$8260GWR-WI	2-Hexanone	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	200	38	38	ug/L
CG83141	$8260GWR-WI	Benzene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	20	5	5	ug/L
CG83141	$8260GWR-WI	Bromodichloromethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	20	3	3	ug/L
CG83141	$8260GWR-WI	Bromoform	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	20	4	4	ug/L
CG83141	$8260GWR-WI	Bromomethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	20	7	7	ug/L
CG83141	$8260GWR-WI	Carbon tetrachloride	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	20	2	2	ug/L
CG83141	$8260GWR-WI	1,2-Dichloroethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	20	5	5	ug/L
CG83141	$8260GWR-WI	cis-1,3-Dichloropropene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	20	0.47	0.47	ug/L
CG83141	$8260GWR-WI	Methyl ethyl ketone	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	200	38	38	ug/L
CG83141	$8260GWR-WI	Dibromomethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	20	8.3	8.3	ug/L
CG83141	$8260GWR-WI	Hexachlorobutadiene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	20	0.6	0.6	ug/L
CG83141	$8260GWR-WI	Methylene chloride	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	40	5	5	ug/L
CG83141	$8260GWR-WI	Tetrachloroethene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	2300	40	5	5	ug/L
CG83141	$8260GWR-WI	trans-1,3-Dichloropropene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	20	0.47	0.47	ug/L
CG83141	$8260GWR-WI	Trichloroethene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	3700	400	5	5	ug/L
CG83141	$8260GWR-WI	Vinyl chloride	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	20	2	2	ug/L
CG83141	$8260GWR-WI	1,1,1,2-Tetrachloroethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	20	5	5	ug/L
CG83141	$8260GWR-WI	cis-1,2-Dichloroethene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	600	40	20	20	ug/L
CG83141	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	20	0.00075	0.00075	ug/L
CG83141	$8260GWR-WI	1,1,2-Trichloroethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	20	5	5	ug/L
CG83141	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	20	0.00033	0.00033	ug/L
CG83141	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	20	0.0075	0.0075	ug/L
CG83141	$8260GWR-WI	1,1,2,2-Tetrachloroethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	20	2	2	ug/L
CG83141	$8260GWR-WI	1,2,3-Trichlorobenzene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	20	7	7	ug/L
CG83141	$8260GWR-WI	1,1-Dichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	20	7	7	ug/L
CG83141	$8260GWR-WI	cis-1,2-Dichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	600	40	20	20	ug/L
CG83141	$8260GWR-WI	Tetrachloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	2300	40	5	5	ug/L
CG83141	$8260GWR-WI	Bromodichloromethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	20	3	3	ug/L
CG83141	$8260GWR-WI	Bromoform	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	20	4	4	ug/L
CG83141	$8260GWR-WI	Bromomethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	20	7	7	ug/L
CG83141	$8260GWR-WI	Hexachlorobutadiene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	20	0.6	0.6	ug/L
CG83141	$8260GWR-WI	Dibromochloromethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	20	2	2	ug/L
CG83141	$8260GWR-WI	Carbon tetrachloride	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	20	2	2	ug/L
CG83141	$8260GWR-WI	cis-1,3-Dichloropropene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	20	0.5	0.5	ug/L
CG83141	$8260GWR-WI	1,1,2-Trichloroethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	20	5	5	ug/L
CG83141	$8260GWR-WI	1,1,2,2-Tetrachloroethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	20	2	2	ug/L
CG83141	$8260GWR-WI	1,2-Dichloropropane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	20	3	3	ug/L
CG83141	$8260GWR-WI	1,1,1,2-Tetrachloroethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	20	5	5	ug/L
CG83141	$8260GWR-WI	1,2-Dichloroethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	20	5	5	ug/L

Tuesday, October 06, 2020

Criteria: MA: GW1, GW2, GW3

State: MA

Sample Criteria Exceedances Report

GCG83141 - AECOM-WILMINGTN

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units
CG83141	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	20	2	2	ug/L
CG83141	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	20	0.02	0.02	ug/L
CG83141	$8260GWR-WI	trans-1,3-Dichloropropene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	20	0.5	0.5	ug/L
CG83141	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	3700	400	5	5	ug/L
CG83141	$8260GWR-WI	1,4-Dichlorobenzene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	20	5	5	ug/L
CG83141	$8260GWR-WI	Methylene chloride	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	40	5	5	ug/L
CG83141	$8260GWR-WI	Benzene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	20	5	5	ug/L
CG83141	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	20	2	2	ug/L
CG83141	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	3700	400	5	5	ug/L
CG83141	$8260GWR-WI	1,1,1,2-Tetrachloroethane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	20	10	10	ug/L
CG83141	$8260GWR-WI	Hexachlorobutadiene	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	20	1	1	ug/L
CG83141	$8260GWR-WI	trans-1,3-Dichloropropene	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	20	5	5	ug/L
CG83141	$8260GWR-WI	1,1,2,2-Tetrachloroethane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	20	9	9	ug/L
CG83141	$8260GWR-WI	Tetrachloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	2300	40	50	50	ug/L
CG83141	$8260GWR-WI	cis-1,3-Dichloropropene	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	20	5	5	ug/L
CG83141	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	20	2	2	ug/L
CG83141	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	20	2	2	ug/L
CG83141	$8260GWR-WI	cis-1,2-Dichloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	600	40	20	20	ug/L
CG83141	$8260GWR-WI	1,2-Dichloroethane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	20	5	5	ug/L
CG83141	$8260GWR-WI	Carbon tetrachloride	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	20	2	2	ug/L
CG83141	$8260GWR-WI	1,2-Dichloropropane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	20	3	3	ug/L
CG83141	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	20	2	2	ug/L
CG83141	$8260GWR-WI	Bromodichloromethane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	20	6	6	ug/L
CG83141	$8260GWR-WI	Bromomethane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	20	7	7	ug/L
CG83141	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-1	3700	400	5	5	ug/L
CG83141	$8260GWR-WI	1,4-Dichlorobenzene	MA / GROUNDWATER STANDARDS / GW-1	ND	20	5	5	ug/L
CG83141	$8260GWR-WI	Benzene	MA / GROUNDWATER STANDARDS / GW-1	ND	20	5	5	ug/L
CG83141	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	20	0.02	0.02	ug/L
CG83141	$8260GWR-WI	Bromodichloromethane	MA / GROUNDWATER STANDARDS / GW-1	ND	20	3	3	ug/L
CG83141	$8260GWR-WI	1,2-Dichloroethane	MA / GROUNDWATER STANDARDS / GW-1	ND	20	5	5	ug/L
CG83141	$8260GWR-WI	Methylene chloride	MA / GROUNDWATER STANDARDS / GW-1	ND	40	5	5	ug/L
CG83141	$8260GWR-WI	1,1,1,2-Tetrachloroethane	MA / GROUNDWATER STANDARDS / GW-1	ND	20	5	5	ug/L
CG83141	$8260GWR-WI	1,2-Dichloropropane	MA / GROUNDWATER STANDARDS / GW-1	ND	20	5	5	ug/L
CG83141	$8260GWR-WI	Hexachlorobutadiene	MA / GROUNDWATER STANDARDS / GW-1	ND	20	0.6	0.6	ug/L
CG83141	$8260GWR-WI	Tetrachloroethene	MA / GROUNDWATER STANDARDS / GW-1	2300	40	5	5	ug/L
CG83141	$8260GWR-WI	Bromoform	MA / GROUNDWATER STANDARDS / GW-1	ND	20	4	4	ug/L
CG83141	$8260GWR-WI	Bromomethane	MA / GROUNDWATER STANDARDS / GW-1	ND	20	10	10	ug/L
CG83141	$8260GWR-WI	1,1,2,2-Tetrachloroethane	MA / GROUNDWATER STANDARDS / GW-1	ND	20	2	2	ug/L
CG83141	$8260GWR-WI	Dibromochloromethane	MA / GROUNDWATER STANDARDS / GW-1	ND	20	2	2	ug/L
CG83141	$8260GWR-WI	Vinyl chloride	MA / GROUNDWATER STANDARDS / GW-1	ND	20	2	2	ug/L
CG83141	$8260GWR-WI	1,1,2-Trichloroethane	MA / GROUNDWATER STANDARDS / GW-1	ND	20	5	5	ug/L
CG83141	$8260GWR-WI	Carbon tetrachloride	MA / GROUNDWATER STANDARDS / GW-1	ND	20	5	5	ug/L

Tuesday, October 06, 2020

Criteria: MA: GW1, GW2, GW3

State: MA

Sample Criteria Exceedances Report

GCG83141 - AECOM-WILMINGTN

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units
CG83141	$8260GWR-WI	cis-1,2-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-1	600	40	70	70	ug/L
CG83141	$8260GWR-WI	1,1-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-1	ND	20	7	7	ug/L
CG83141	$8260GWR-WI	1,2-Dichloroethane	MA / GROUNDWATER STANDARDS / GW-2	ND	20	5	5	ug/L
CG83141	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-2	3700	400	5	5	ug/L
CG83141	$8260GWR-WI	Vinyl chloride	MA / GROUNDWATER STANDARDS / GW-2	ND	20	2	2	ug/L
CG83141	$8260GWR-WI	1,1,2,2-Tetrachloroethane	MA / GROUNDWATER STANDARDS / GW-2	ND	20	9	9	ug/L
CG83141	$8260GWR-WI	1,1,1,2-Tetrachloroethane	MA / GROUNDWATER STANDARDS / GW-2	ND	20	10	10	ug/L
CG83141	$8260GWR-WI	cis-1,2-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-2	600	40	20	20	ug/L
CG83141	$8260GWR-WI	1,2-Dichloropropane	MA / GROUNDWATER STANDARDS / GW-2	ND	20	3	3	ug/L
CG83141	$8260GWR-WI	Bromomethane	MA / GROUNDWATER STANDARDS / GW-2	ND	20	7	7	ug/L
CG83141	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-2	ND	20	2	2	ug/L
CG83141	$8260GWR-WI	Bromodichloromethane	MA / GROUNDWATER STANDARDS / GW-2	ND	20	6	6	ug/L
CG83141	$8260GWR-WI	Tetrachloroethene	MA / GROUNDWATER STANDARDS / GW-2	2300	40	50	50	ug/L
CG83141	$8260GWR-WI	Carbon tetrachloride	MA / GROUNDWATER STANDARDS / GW-2	ND	20	2	2	ug/L
CG83141	$MCPADD-WM	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	4000	0.3	0.3	ug/L
CG83141	$MCPADD-WM	1,4-dioxane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	4000	3	3	ug/L
CG83141	$MCPADD-WM	1,4-dioxane	MA / GROUNDWATER STANDARDS / GW-1	ND	4000	0.3	0.3	ug/L
CG83142	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.00075	0.00075	ug/L
CG83142	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.00033	0.00033	ug/L
CG83142	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.0075	0.0075	ug/L
CG83142	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	0.50	0.02	0.02	ug/L
CG83142	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	0.50	0.02	0.02	ug/L
CG83142	$MCPADD-WM	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	100	0.3	0.3	ug/L
CG83142	$MCPADD-WM	1,4-dioxane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	100	3	3	ug/L
CG83142	$MCPADD-WM	1,4-dioxane	MA / GROUNDWATER STANDARDS / GW-1	ND	100	0.3	0.3	ug/L
CG83143	$8260GWR-WI	Methyl ethyl ketone	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	100	38	38	ug/L
CG83143	$8260GWR-WI	Trichloroethene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	4000	400	5	5	ug/L
CG83143	$8260GWR-WI	2-Hexanone	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	100	38	38	ug/L
CG83143	$8260GWR-WI	trans-1,3-Dichloropropene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	10	0.47	0.47	ug/L
CG83143	$8260GWR-WI	Benzene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	10	5	5	ug/L
CG83143	$8260GWR-WI	Bromodichloromethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	10	3	3	ug/L
CG83143	$8260GWR-WI	Tetrachloroethene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	2100	400	5	5	ug/L
CG83143	$8260GWR-WI	Methylene chloride	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	20	5	5	ug/L
CG83143	$8260GWR-WI	1,4-Dichlorobenzene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	10	5	5	ug/L
CG83143	$8260GWR-WI	Bromomethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	10	7	7	ug/L
CG83143	$8260GWR-WI	Carbon tetrachloride	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	10	2	2	ug/L
CG83143	$8260GWR-WI	Hexachlorobutadiene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	10	0.6	0.6	ug/L
CG83143	$8260GWR-WI	Dibromomethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	10	8.3	8.3	ug/L
CG83143	$8260GWR-WI	cis-1,2-Dichloroethene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	300	20	20	20	ug/L
CG83143	$8260GWR-WI	Dibromochloromethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	10	2	2	ug/L

Tuesday, October 06, 2020

Criteria: MA: GW1, GW2, GW3

State: MA

Sample Criteria Exceedances Report

GCG83141 - AECOM-WILMINGTN

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units
CG83143	$8260GWR-WI	Bromoform	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	10	4	4	ug/L
CG83143	$8260GWR-WI	1,1,1,2-Tetrachloroethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	10	5	5	ug/L
CG83143	$8260GWR-WI	1,1,2,2-Tetrachloroethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	10	2	2	ug/L
CG83143	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	10	0.00075	0.00075	ug/L
CG83143	$8260GWR-WI	1,1,2-Trichloroethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	10	5	5	ug/L
CG83143	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	10	0.00033	0.00033	ug/L
CG83143	$8260GWR-WI	1,2,3-Trichlorobenzene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	10	7	7	ug/L
CG83143	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	10	0.0075	0.0075	ug/L
CG83143	$8260GWR-WI	cis-1,3-Dichloropropene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	10	0.47	0.47	ug/L
CG83143	$8260GWR-WI	1,2-Dichloroethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	10	5	5	ug/L
CG83143	$8260GWR-WI	Vinyl chloride	MA / Client Specified Criteria / LOCKHEED WILMINGTO	50	20	2	2	ug/L
CG83143	$8260GWR-WI	1,2-Dichloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	10	3	3	ug/L
CG83143	$8260GWR-WI	cis-1,2-Dichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	300	20	20	20	ug/L
CG83143	$8260GWR-WI	1,1,1,2-Tetrachloroethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	5	5	ug/L
CG83143	$8260GWR-WI	1,1,2,2-Tetrachloroethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	2	2	ug/L
CG83143	$8260GWR-WI	Bromomethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	7	7	ug/L
CG83143	$8260GWR-WI	Carbon tetrachloride	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	2	2	ug/L
CG83143	$8260GWR-WI	1,1,2-Trichloroethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	5	5	ug/L
CG83143	$8260GWR-WI	1,4-Dichlorobenzene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	5	5	ug/L
CG83143	$8260GWR-WI	Bromoform	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	4	4	ug/L
CG83143	$8260GWR-WI	1,2-Dichloropropane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	3	3	ug/L
CG83143	$8260GWR-WI	Bromodichloromethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	3	3	ug/L
CG83143	$8260GWR-WI	Benzene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	5	5	ug/L
CG83143	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	0.02	0.02	ug/L
CG83143	$8260GWR-WI	1,2-Dichloroethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	5	5	ug/L
CG83143	$8260GWR-WI	1,1-Dichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	20	20	7	7	ug/L
CG83143	$8260GWR-WI	cis-1,3-Dichloropropene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	0.5	0.5	ug/L
CG83143	$8260GWR-WI	Tetrachloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	2100	400	5	5	ug/L
CG83143	$8260GWR-WI	Methylene chloride	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	20	5	5	ug/L
CG83143	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-1 (mg/l)	50	20	2	2	ug/L
CG83143	$8260GWR-WI	Dibromochloromethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	2	2	ug/L
CG83143	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-1 (mg/l)	50	20	2	2	ug/L
CG83143	$8260GWR-WI	trans-1,3-Dichloropropene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	0.5	0.5	ug/L
CG83143	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	4000	400	5	5	ug/L
CG83143	$8260GWR-WI	Hexachlorobutadiene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	0.6	0.6	ug/L
CG83143	$8260GWR-WI	1,2-Dichloroethane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	10	5	5	ug/L
CG83143	$8260GWR-WI	Tetrachloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	2100	400	50	50	ug/L
CG83143	$8260GWR-WI	trans-1,3-Dichloropropene	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	10	5	5	ug/L
CG83143	$8260GWR-WI	Bromodichloromethane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	10	6	6	ug/L
CG83143	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	4000	400	5	5	ug/L
CG83143	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-2 (mg/l)	50	20	2	2	ug/L
CG83143	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	10	2	2	ug/L

Tuesday, October 06, 2020

Criteria: MA: GW1, GW2, GW3

State: MA

Sample Criteria Exceedances Report

GCG83141 - AECOM-WILMINGTN

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units
CG83143	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-2 (mg/l)	50	20	2	2	ug/L
CG83143	$8260GWR-WI	1,1,2,2-Tetrachloroethane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	10	9	9	ug/L
CG83143	$8260GWR-WI	1,2-Dichloropropane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	10	3	3	ug/L
CG83143	$8260GWR-WI	cis-1,2-Dichloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	300	20	20	20	ug/L
CG83143	$8260GWR-WI	cis-1,3-Dichloropropene	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	10	5	5	ug/L
CG83143	$8260GWR-WI	Hexachlorobutadiene	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	10	1	1	ug/L
CG83143	$8260GWR-WI	Bromomethane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	10	7	7	ug/L
CG83143	$8260GWR-WI	Carbon tetrachloride	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	10	2	2	ug/L
CG83143	$8260GWR-WI	1,1,2,2-Tetrachloroethane	MA / GROUNDWATER STANDARDS / GW-1	ND	10	2	2	ug/L
CG83143	$8260GWR-WI	1,1,1,2-Tetrachloroethane	MA / GROUNDWATER STANDARDS / GW-1	ND	10	5	5	ug/L
CG83143	$8260GWR-WI	Vinyl chloride	MA / GROUNDWATER STANDARDS / GW-1	50	20	2	2	ug/L
CG83143	$8260GWR-WI	cis-1,2-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-1	300	20	70	70	ug/L
CG83143	$8260GWR-WI	Bromodichloromethane	MA / GROUNDWATER STANDARDS / GW-1	ND	10	3	3	ug/L
CG83143	$8260GWR-WI	1,1,2-Trichloroethane	MA / GROUNDWATER STANDARDS / GW-1	ND	10	5	5	ug/L
CG83143	$8260GWR-WI	1,1-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-1	20	20	7	7	ug/L
CG83143	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	10	0.02	0.02	ug/L
CG83143	$8260GWR-WI	Carbon tetrachloride	MA / GROUNDWATER STANDARDS / GW-1	ND	10	5	5	ug/L
CG83143	$8260GWR-WI	1,2-Dichloroethane	MA / GROUNDWATER STANDARDS / GW-1	ND	10	5	5	ug/L
CG83143	$8260GWR-WI	Methylene chloride	MA / GROUNDWATER STANDARDS / GW-1	ND	20	5	5	ug/L
CG83143	$8260GWR-WI	Dibromochloromethane	MA / GROUNDWATER STANDARDS / GW-1	ND	10	2	2	ug/L
CG83143	$8260GWR-WI	Bromoform	MA / GROUNDWATER STANDARDS / GW-1	ND	10	4	4	ug/L
CG83143	$8260GWR-WI	1,2-Dichloropropane	MA / GROUNDWATER STANDARDS / GW-1	ND	10	5	5	ug/L
CG83143	$8260GWR-WI	Benzene	MA / GROUNDWATER STANDARDS / GW-1	ND	10	5	5	ug/L
CG83143	$8260GWR-WI	Tetrachloroethene	MA / GROUNDWATER STANDARDS / GW-1	2100	400	5	5	ug/L
CG83143	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-1	4000	400	5	5	ug/L
CG83143	$8260GWR-WI	1,4-Dichlorobenzene	MA / GROUNDWATER STANDARDS / GW-1	ND	10	5	5	ug/L
CG83143	$8260GWR-WI	Hexachlorobutadiene	MA / GROUNDWATER STANDARDS / GW-1	ND	10	0.6	0.6	ug/L
CG83143	$8260GWR-WI	Vinyl chloride	MA / GROUNDWATER STANDARDS / GW-2	50	20	2	2	ug/L
CG83143	$8260GWR-WI	Bromodichloromethane	MA / GROUNDWATER STANDARDS / GW-2	ND	10	6	6	ug/L
CG83143	$8260GWR-WI	Tetrachloroethene	MA / GROUNDWATER STANDARDS / GW-2	2100	400	50	50	ug/L
CG83143	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-2	ND	10	2	2	ug/L
CG83143	$8260GWR-WI	1,2-Dichloroethane	MA / GROUNDWATER STANDARDS / GW-2	ND	10	5	5	ug/L
CG83143	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-2	4000	400	5	5	ug/L
CG83143	$8260GWR-WI	1,1,2,2-Tetrachloroethane	MA / GROUNDWATER STANDARDS / GW-2	ND	10	9	9	ug/L
CG83143	$8260GWR-WI	1,2-Dichloropropane	MA / GROUNDWATER STANDARDS / GW-2	ND	10	3	3	ug/L
CG83143	$8260GWR-WI	Carbon tetrachloride	MA / GROUNDWATER STANDARDS / GW-2	ND	10	2	2	ug/L
CG83143	$8260GWR-WI	cis-1,2-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-2	300	20	20	20	ug/L
CG83143	$8260GWR-WI	Bromomethane	MA / GROUNDWATER STANDARDS / GW-2	ND	10	7	7	ug/L
CG83143	$MCPADD-WM	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	2000	0.3	0.3	ug/L
CG83143	$MCPADD-WM	1,4-dioxane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	2000	3	3	ug/L
CG83143	$MCPADD-WM	1,4-dioxane	MA / GROUNDWATER STANDARDS / GW-1	ND	2000	0.3	0.3	ug/L

Tuesday, October 06, 2020

Criteria: MA: GW1, GW2, GW3

State: MA

Sample Criteria Exceedances Report

GCG83141 - AECOM-WILMINGTN

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units
CG83144	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.00075	0.00075	ug/L
CG83144	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.00033	0.00033	ug/L
CG83144	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.0075	0.0075	ug/L
CG83144	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	0.50	0.02	0.02	ug/L
CG83144	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	0.50	0.02	0.02	ug/L
CG83144	$MCPADD-WM	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	100	0.3	0.3	ug/L
CG83144	$MCPADD-WM	1,4-dioxane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	100	3	3	ug/L
CG83144	$MCPADD-WM	1,4-dioxane	MA / GROUNDWATER STANDARDS / GW-1	ND	100	0.3	0.3	ug/L
CG83145	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.00075	0.00075	ug/L
CG83145	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.00033	0.00033	ug/L
CG83145	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.0075	0.0075	ug/L
CG83145	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	0.50	0.02	0.02	ug/L
CG83145	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	0.50	0.02	0.02	ug/L
CG83145	$MCPADD-WM	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	100	0.3	0.3	ug/L
CG83145	$MCPADD-WM	1,4-dioxane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	100	3	3	ug/L
CG83145	$MCPADD-WM	1,4-dioxane	MA / GROUNDWATER STANDARDS / GW-1	ND	100	0.3	0.3	ug/L
CG83146	$8260GWR-WI	cis-1,2-Dichloroethene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	140	20	20	20	ug/L
CG83146	$8260GWR-WI	Vinyl chloride	MA / Client Specified Criteria / LOCKHEED WILMINGTO	2.3	1.0	2	2	ug/L
CG83146	$8260GWR-WI	Trichloroethene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	40	1.0	5	5	ug/L
CG83146	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.00075	0.00075	ug/L
CG83146	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.00033	0.00033	ug/L
CG83146	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.0075	0.0075	ug/L
CG83146	$8260GWR-WI	1,1-Dichloroethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	73	1.0	70	70	ug/L
CG83146	$8260GWR-WI	1,1-Dichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	17	1.0	7	7	ug/L
CG83146	$8260GWR-WI	cis-1,2-Dichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	140	20	20	20	ug/L
CG83146	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-1 (mg/l)	2.3	1.0	2	2	ug/L
CG83146	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	0.50	0.02	0.02	ug/L
CG83146	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-1 (mg/l)	2.3	1.0	2	2	ug/L
CG83146	$8260GWR-WI	1,1-Dichloroethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	73	1.0	70	70	ug/L
CG83146	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	40	1.0	5	5	ug/L
CG83146	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-2 (mg/l)	2.3	1.0	2	2	ug/L
CG83146	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	40	1.0	5	5	ug/L
CG83146	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-2 (mg/l)	2.3	1.0	2	2	ug/L
CG83146	$8260GWR-WI	cis-1,2-Dichloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	140	20	20	20	ug/L
CG83146	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-1	40	1.0	5	5	ug/L
CG83146	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	0.50	0.02	0.02	ug/L
CG83146	$8260GWR-WI	1,1-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-1	17	1.0	7	7	ug/L
CG83146	$8260GWR-WI	1,1-Dichloroethane	MA / GROUNDWATER STANDARDS / GW-1	73	1.0	70	70	ug/L
CG83146	$8260GWR-WI	cis-1,2-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-1	140	20	70	70	ug/L
CG83146	$8260GWR-WI	Vinyl chloride	MA / GROUNDWATER STANDARDS / GW-1	2.3	1.0	2	2	ug/L

Tuesday, October 06, 2020

Criteria: MA: GW1, GW2, GW3

State: MA

Sample Criteria Exceedances Report

GCG83141 - AECOM-WILMINGTN

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units
CG83146	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-2	40	1.0	5	5	ug/L
CG83146	$8260GWR-WI	Vinyl chloride	MA / GROUNDWATER STANDARDS / GW-2	2.3	1.0	2	2	ug/L
CG83146	$8260GWR-WI	cis-1,2-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-2	140	20	20	20	ug/L
CG83146	$MCPADD-WM	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	100	0.3	0.3	ug/L
CG83146	$MCPADD-WM	1,4-dioxane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	100	3	3	ug/L
CG83146	$MCPADD-WM	1,4-dioxane	MA / GROUNDWATER STANDARDS / GW-1	ND	100	0.3	0.3	ug/L
CG83147	$8260GWR-WI	cis-1,3-Dichloropropene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	1.0	0.47	0.47	ug/L
CG83147	$8260GWR-WI	Trichloroethene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	120	2.0	5	5	ug/L
CG83147	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	1.0	0.00075	0.00075	ug/L
CG83147	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	1.0	0.00033	0.00033	ug/L
CG83147	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	1.0	0.0075	0.0075	ug/L
CG83147	$8260GWR-WI	trans-1,3-Dichloropropene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	1.0	0.47	0.47	ug/L
CG83147	$8260GWR-WI	cis-1,2-Dichloroethene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	320	5.0	20	20	ug/L
CG83147	$8260GWR-WI	Hexachlorobutadiene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	1.0	0.6	0.6	ug/L
CG83147	$8260GWR-WI	trans-1,3-Dichloropropene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	1.0	0.5	0.5	ug/L
CG83147	$8260GWR-WI	Hexachlorobutadiene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	1.0	0.6	0.6	ug/L
CG83147	$8260GWR-WI	cis-1,3-Dichloropropene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	1.0	0.5	0.5	ug/L
CG83147	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	120	2.0	5	5	ug/L
CG83147	$8260GWR-WI	cis-1,2-Dichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	320	5.0	20	20	ug/L
CG83147	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	1.0	0.02	0.02	ug/L
CG83147	$8260GWR-WI	1,1-Dichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	12	2.0	7	7	ug/L
CG83147	$8260GWR-WI	cis-1,2-Dichloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	320	5.0	20	20	ug/L
CG83147	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	120	2.0	5	5	ug/L
CG83147	$8260GWR-WI	cis-1,2-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-1	320	5.0	70	70	ug/L
CG83147	$8260GWR-WI	Hexachlorobutadiene	MA / GROUNDWATER STANDARDS / GW-1	ND	1.0	0.6	0.6	ug/L
CG83147	$8260GWR-WI	1,1-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-1	12	2.0	7	7	ug/L
CG83147	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-1	120	2.0	5	5	ug/L
CG83147	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	1.0	0.02	0.02	ug/L
CG83147	$8260GWR-WI	cis-1,2-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-2	320	5.0	20	20	ug/L
CG83147	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-2	120	2.0	5	5	ug/L
CG83147	$DIOX_LDL	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	43	0.20	0.3	0.3	ug/l
CG83147	$DIOX_LDL	1,4-dioxane	MA / CMR 310.40.1600 / GW-1 (mg/l)	43	0.20	3	3	ug/l
CG83147	$DIOX_LDL	1,4-dioxane	MA / GROUNDWATER STANDARDS / GW-1	43	0.20	0.3	0.3	ug/l
CG83147	$MCPADD-WM	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	200	0.3	0.3	ug/L
CG83147	D-MN	Manganese (Dissolved)	MA / Client Specified Criteria / LOCKHEED WILMINGTO	1.03	0.001	0.43	0.43	mg/L
CG83147	MN-WM	Manganese	MA / Client Specified Criteria / LOCKHEED WILMINGTO	0.890	0.001	0.43	0.43	mg/L
CG83148	$8260GWR-WI	cis-1,2-Dichloroethene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	220	20	20	20	ug/L
CG83148	$8260GWR-WI	Trichloroethene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	33	1.0	5	5	ug/L
CG83148	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.00075	0.00075	ug/L
CG83148	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.00033	0.00033	ug/L

Tuesday, October 06, 2020

Criteria: MA: GW1, GW2, GW3

State: MA

Sample Criteria Exceedances Report

GCG83141 - AECOM-WILMINGTN

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units
CG83148	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.0075	0.0075	ug/L
CG83148	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	33	1.0	5	5	ug/L
CG83148	$8260GWR-WI	cis-1,2-Dichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	220	20	20	20	ug/L
CG83148	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	0.50	0.02	0.02	ug/L
CG83148	$8260GWR-WI	1,1-Dichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	7.5	1.0	7	7	ug/L
CG83148	$8260GWR-WI	cis-1,2-Dichloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	220	20	20	20	ug/L
CG83148	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	33	1.0	5	5	ug/L
CG83148	$8260GWR-WI	cis-1,2-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-1	220	20	70	70	ug/L
CG83148	$8260GWR-WI	1,1-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-1	7.5	1.0	7	7	ug/L
CG83148	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-1	33	1.0	5	5	ug/L
CG83148	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	0.50	0.02	0.02	ug/L
CG83148	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-2	33	1.0	5	5	ug/L
CG83148	$8260GWR-WI	cis-1,2-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-2	220	20	20	20	ug/L
CG83148	$MCPADD-WM	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	100	0.3	0.3	ug/L
CG83148	$MCPADD-WM	1,4-dioxane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	100	3	3	ug/L
CG83148	$MCPADD-WM	1,4-dioxane	MA / GROUNDWATER STANDARDS / GW-1	ND	100	0.3	0.3	ug/L
CG83149	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.00075	0.00075	ug/L
CG83149	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.00033	0.00033	ug/L
CG83149	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.0075	0.0075	ug/L
CG83149	$8260GWR-WI	cis-1,2-Dichloroethene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	31	1.0	20	20	ug/L
CG83149	$8260GWR-WI	Trichloroethene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	8.8	1.0	5	5	ug/L
CG83149	$8260GWR-WI	cis-1,2-Dichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	31	1.0	20	20	ug/L
CG83149	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	0.50	0.02	0.02	ug/L
CG83149	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	8.8	1.0	5	5	ug/L
CG83149	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	8.8	1.0	5	5	ug/L
CG83149	$8260GWR-WI	cis-1,2-Dichloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	31	1.0	20	20	ug/L
CG83149	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	0.50	0.02	0.02	ug/L
CG83149	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-1	8.8	1.0	5	5	ug/L
CG83149	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-2	8.8	1.0	5	5	ug/L
CG83149	$8260GWR-WI	cis-1,2-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-2	31	1.0	20	20	ug/L
CG83149	$MCPADD-WM	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	100	0.3	0.3	ug/L
CG83149	$MCPADD-WM	1,4-dioxane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	100	3	3	ug/L
CG83149	$MCPADD-WM	1,4-dioxane	MA / GROUNDWATER STANDARDS / GW-1	ND	100	0.3	0.3	ug/L

Phoenix Laboratories does not assume responsibility for the data contained in this exceedance report. It is provided as an additional tool to identify requested criteria exceedences. All efforts are made to ensure the accuracy of the data (obtained from appropriate agencies). A lack of exceedence information does not necessarily suggest conformance to the criteria. It is ultimately the site professional's responsibility to determine appropriate compliance.

MassDEP Analytical Protocol Certification Form

Laboratory Name: Phoenix Environmental Laboratories, Inc. **Project #:**

Project Location: LOCKHEED WILMINGTON MA 6055204 **RTN:**

This Form provides certifications for the following data set: [list Laboratory Sample ID Number(s)]

CG83141, CG83142, CG83143, CG83144, CG83145, CG83146, CG83147, CG83148, CG83149

Matrices: ☑ Groundwater/Surface Water ☐ Soil/Sediment ☐ Drinking Water ☐ Air ☐ Other:

CAM Protocol (check all that apply below)

8260 VOC CAM II A ☑	7470/7471 Hg CAM III B ☐	MassDEP VPH CAM IV A ☑	8081 Pesticides CAM V B ☐	7196 Hex Cr CAM VI B ☐	MassDEP APH CAM IX A ☐
8270 SVOC CAM II B ☑	7010 Metals CAM III C ☐	MassDEP EPH CAM IV B ☑	8151 Herbicides CAM V C ☐	8330 Explosives CAM VIII A ☐	TO-15 VOC CAM IX B ☐
6010 Metals CAM III A ☑	6020 Metals CAM III D ☐	8082 PCB CAM V A ☐	9012 Total Cyanide/PAC CAM V1 A ☐	6860 Perchlorate CAM VIII B ☐	

Affirmative responses to questions A through F are required for "Presumptive Certainty" status

A	Were all samples received in a condition consistent with those described on the Chain-of-Custody, properly preserved (including temperature*) in the field or laboratory, and prepared/analyzed with method holding times? (* see narrative)	☑ Yes ☐ No
B	Were the analytical method(s) and all associated QC requirements specified in the selected CAM protocol(s) followed?	☑ Yes ☐ No
C	Were all required corrective actions and analytical response actions specified in the selected CAM protocol(s) implemented for all identified performance standard non-conformances?	☑ Yes ☐ No
D	Does the laboratory report comply with all the reporting requirements speified in CAM VII A, "Quality Assurance and Quality Control Guidelines for the Acquisition and Reporting of Analytical Data"?	☑ Yes ☐ No
E	a. VPH, EPH, and APH Methods only: Was each method conducted without significant modification(s)? (refer to the individual method(s) for a list of significant modifications). b. APH and TO-15 methods only: Was the complete analyte list reported for each method?	☑ Yes ☐ No ☐ Yes ☐ No
F	Were all applicable CAM protocol QC and performance standard non-conformances identified and evaluated in a laboratory narrative (including all "No" responses to Questions A through E)?	☑ Yes ☐ No

Responses to questions G, H and I below is required for "Presumptive Certainty" status

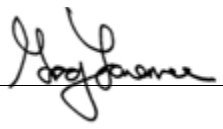
G	Were the reporting limits at or below all CAM reporting limits specified in the selected CAM protocol(s)?	☐ Yes ☑ No

Data User Note: Data that achieve "Presumptive Certainty" status may not necessarily meet the data usability and representativeness requirements described in 310 CMR 40. 1056(2)(k) and WSC-07-350

H	Were all QC performance standards specified in the CAM protocol(s) achieved? See Sections: EPH, SVOASIM Narrations .	☐ Yes ☑ No
I	Were results reported for the complete analyte list specified in the selected CAM protocol(s)?	☐ Yes ☑ No

All negative responses must be addressed in an attached laboratory narrative.

I, the undersigned, attest under the pains and penalties of perjury that, based upon my personal inquiry of those responsible for obtaining the information, the material contained in this analytical report is, to the best of my knowledge and belief, accurate and complete.

Authorized Signature: 

Date: Tuesday, October 06, 2020

Printed Name: Greg Lawrence

Position: Assistant Lab Director

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

ACCREDITED IN ACCORDANCE WITH nelac NY # 11301

MCP Certification Report

October 06, 2020

SDG I.D.: GCG83141

SDG Comments

Metals Analysis: CG83147
The client requested a shorter list of elements than the 6010 MCP list. The following analytes from the 6010 Metals list were not reported: Antimony, Barium, Beryllium, Cadmium, Chromium, Lead, Nickel, Selenium, Silver, Thallium, Vanadium, Zinc.

Not all requested reporting levels were achieved. Please refer to the Sample Criteria Exceedances section of this report.

EPH Narration

Were all QA/QC performance criteria specified in the MADEP document CAM achieved? No.

QC Batch 546542 (Samples: CG83147): -----

The LCS/LCSD recovery is below the method criteria. A low bias is possible. (C-10 Decane)

Instrument:

AU-FID4 09/23/20-1 Adam Werner, Chemist 09/23/20

CG83147 (1X)

The initial calibration (AL0923BI) RSD for the compound list was less than 25% except for the following compounds: None.
The continuing calibration %D for the compound list was less than 25% except for the following compounds:None.

QC (Batch Specific):

Batch 546542 (CG80054)

CG83147

All LCS recoveries were within 40 - 140 with the following exceptions: C-10 Decane(39%)
All LCSD recoveries were within 40 - 140 with the following exceptions: C-10 Decane(36%)
All LCS/LCSD RPDs were less than 25% with the following exceptions: None.
A LCS and LCS Duplicate were performed instead of a matrix spike and matrix spike duplicate.
Additional EPH fractionation criteria: Breakthrough criteria (BT) is 0 to 5%

I attest under the pains and penalties of perjury that, based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.

Wet Chemistry Analysis

Were all QA/QC performance criteria specified in the MADEP document CAM achieved? Yes.

Instrument:

BECKMAN DU720 09/24/20-1 Greg Danielewski, Chemist 09/24/20

CG83147

The initial calibration met all criteria including a standard run at the reporting level.
All method verification standards and blanks met criteria.

QC (Batch Specific):

Batch 546805 (CG83147)

CG83147

All LCS recoveries were within 85 - 115 with the following exceptions: None.

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MCP Certification Report

October 06, 2020

SDG I.D.: GCG83141

Wet Chemistry Analysis

Additional: LCS acceptance range is 85-115% MS acceptance range 75-125%.

Batch 546943 (CG83092)

CG83147

All LCS recoveries were within 85 - 115 with the following exceptions: None.
Additional: LCS acceptance range is 85-115% MS acceptance range 75-125%.

I attest under the pains and penalties of perjury that, based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.

IC

Were all QA/QC performance criteria specified in the MADEP document CAM achieved? Yes.

Instrument:

IC 09/22/20-1 Brian Sheriden, Eric Geyer, Chemist 09/22/20

CG83147

The initial calibration met all criteria including a standard run at the reporting level.
All method verification standards and blanks met criteria.

IC 09/23/20-1 Brian Sheriden, Eric Geyer, Chemist 09/23/20

CG83147

The initial calibration met all criteria including a standard run at the reporting level.
All method verification standards and blanks met criteria.

QC (Batch Specific):

Batch 546609 (CG82704)

CG83147

All LCS recoveries were within 90 - 110 with the following exceptions: None.

Batch 546811 (CG83510)

CG83147

All LCS recoveries were within 90 - 110 with the following exceptions: None.

I attest under the pains and penalties of perjury that, based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.

ICP Metals Narration

Were all QA/QC performance criteria specified in the analytical method achieved? Yes.

Instrument:

BLUE 09/23/20 09:40 Cindy Pearce, Chemist 09/23/20

CG83147

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Certification Report

October 06, 2020

SDG I.D.: GCG83141

ICP Metals Narration

The initial calibration met criteria.
The continuing calibration standards met criteria for all the elements reported. The linear range is defined daily by the calibration range.
The continuing calibration blanks were less than the reporting level for the elements reported.
The ICSA and ICSAB were analyzed at the beginning and end of the run and were within criteria.The linear range is defined daily by the calibration range.
The following Initial Calibration Verification (ICV) compounds did not meet criteria: None.
The following Continuing Calibration Verification (CCV) compounds did not meet criteria: None.
The following ICP Interference Check (ICSAB) compounds did not meet criteria: None.

BLUE 09/25/20 12:40 Cindy Pearce, Chemist 09/25/20

CG83147

The initial calibration met criteria.
The continuing calibration standards met criteria for all the elements reported. The linear range is defined daily by the calibration range.
The continuing calibration blanks were less than the reporting level for the elements reported.
The ICSA and ICSAB were analyzed at the beginning and end of the run and were within criteria.The linear range is defined daily by the calibration range.
The following Initial Calibration Verification (ICV) compounds did not meet criteria: None.
The following Continuing Calibration Verification (CCV) compounds did not meet criteria: None.
The following ICP Interference Check (ICSAB) compounds did not meet criteria: None.

QC (Batch Specific):

Batch 546429 (CG83147)

CG83147

All LCS recoveries were within 80 - 120 with the following exceptions: None.
All LCSD recoveries were within 80 - 120 with the following exceptions: None.
All LCS/LCSD RPDs were less than 20% with the following exceptions: None.
Additional: LCS acceptance range is 80-120% MS acceptance range 75-125%.

Batch 546812 (CG79357)

CG83147

All LCS recoveries were within 80 - 120 with the following exceptions: None.
All LCSD recoveries were within 80 - 120 with the following exceptions: None.
All LCS/LCSD RPDs were less than 20% with the following exceptions: None.
Additional: LCS acceptance range is 80-120% MS acceptance range 75-125%.

SVOA-Dioxane

Were all QA/QC performance criteria specified in the MADEP document CAM achieved? Yes.

Instrument:

CHEM22 09/29/20-1 Adam Werner, Chemist 09/29/20

CG83147 (1X)

Initial Calibration Evaluation (CHEM22/DIOX_0818):
100% of target compounds met criteria.
The following compounds had %RSDs >20%: None.
The following compounds did not meet recommended response factors: None.

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MCP Certification Report

October 06, 2020

SDG I.D.: GCG83141

SVOA-Dioxane

The following compounds did not meet a minimum response factors: None.

Continuing Calibration Verification (CHEM22/0929_06-DIOX_0818) (MCP Compliance):
Internal standard areas were within 50 to 200% of the initial calibration with the following exceptions: None.
100% of target compounds met criteria.
The following compounds did not meet % deviation criteria: None.
The following compounds did not meet maximum % deviations: None.
The following compounds did not meet recommended response factors: None.
The following compounds did not meet minimum response factors: None.

QC (Batch Specific):

Batch 547240 (CG85194)

CG83147

All LCS recoveries were within 40 - 140 with the following exceptions: None.
All LCSD recoveries were within 40 - 140 with the following exceptions: None.
All LCS/LCSD RPDs were less than 30% with the following exceptions: None.

I attest under the pains and penalties of perjury that, based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.

SVOASIM Narration

Were all QA/QC performance criteria specified in the MADEP document CAM achieved? No.

QC Batch 547385 (Samples: CG83147): -----

The LCSD recovery is below the method criteria. The LCS is acceptable. A low bias is possible. (Benzo(a)pyrene, Indeno(1,2,3-cd)pyrene)

The LCS/LCSD RPD exceeds the method criteria for one or more analytes, but these analytes were not reported in the sample(s) so no variability is suspected. (Acenaphthylene, Benzo(a)pyrene, Benzo(ghi)perylene, Indeno(1,2,3-cd)pyrene, Pyrene)

Instrument:

CHEM33 09/30/20-1 Wes Bryon, Chemist 09/30/20

CG83147 (1X)

Initial Calibration Evaluation (CHEM33/33_PAHSIM_0910):
100% of target compounds met criteria.
The following compounds had %RSDs >20%: None.
The following compounds did not meet recommended response factors: None.
The following compounds did not meet a minimum response factors: None.

Continuing Calibration Verification (CHEM33/0930_03-33_PAHSIM_0910) (MCP Compliance):
Internal standard areas were within 50 to 200% of the initial calibration with the following exceptions: None.
90% of target compounds met criteria.
The following compounds did not meet % deviation criteria: None.
The following compounds did not meet maximum % deviations: None.
The following compounds did not meet recommended response factors: None.

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MCP Certification Report

October 06, 2020

SDG I.D.: GCG83141

SVOASIM Narration

The following compounds did not meet minimum response factors: None.

QC (Batch Specific):

Batch 547385 (CG86390)

CG83147

All LCS recoveries were within 40 - 140 with the following exceptions: None.
All LCSD recoveries were within 40 - 140 with the following exceptions: Benzo(a)pyrene(36%), Indeno(1,2,3-cd)pyrene(37%)
All LCS/LCSD RPDs were less than 20% with the following exceptions: Acenaphthylene(23.9%), Benzo(a)pyrene(57.4%), Benzo(ghi)perylene(40.8%), Indeno(1,2,3-cd)pyrene(64.2%), Pyrene(23.2%)
Additional 8270 criteria: 10% of compounds can be outside of acceptance criteria as long as recovery is at least 10%. (Acid surrogates acceptance range for aqueous samples: 10-110%, for soils 30-130%)

I attest under the pains and penalties of perjury that, based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.

VOA Narration

Were all QA/QC performance criteria specified in the MADEP document CAM achieved? Yes.

Instrument:

CHEM23 09/23/20-1 Michael Hahn, Chemist 09/23/20

CG83144 (1X)

Initial Calibration Evaluation (CHEM23/VOA23_092020):
99% of target compounds met criteria.
The following compounds had %RSDs >20%: Chloroethane 22% (20%)
The following compounds did not meet Table 4 recommended minimum response factors: None.
The following compounds did not meet the minimum response factor of 0.05: None.

Continuing Calibration Verification (CHEM23/0923_02-VOA23_092020) (MCP Compliance):
Internal standard areas were within 50 to 200% of the initial calibration with the following exceptions: None.
98% of target compounds met criteria.
The following compounds did not meet % deviation criteria: None.
The following compounds did not meet maximum % deviations: None.
The following compounds did not meet Table 4 recommended minimum response factors: Tetrachloroethene 0.189 (0.2)
The following compounds did not meet the minimum MCP response factor of 0.05: None.

CHEM23 09/23/20-2 Michael Hahn, Chemist 09/23/20

CG83141 (40X), CG83142 (1X), CG83143 (20X), CG83145 (1X), CG83146 (1X), CG83147 (5X), CG83148 (1X), CG83149 (1X)

Initial Calibration Evaluation (CHEM23/VOA23_092020):
99% of target compounds met criteria.
The following compounds had %RSDs >20%: Chloroethane 22% (20%)
The following compounds did not meet Table 4 recommended minimum response factors: None.
The following compounds did not meet the minimum response factor of 0.05: None.

Continuing Calibration Verification (CHEM23/0923_34-VOA23_092020) (MCP Compliance):
Internal standard areas were within 50 to 200% of the initial calibration with the following exceptions: None.
95% of target compounds met criteria.

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MCP Certification Report

October 06, 2020

SDG I.D.: GCG83141

VOA Narration

The following compounds did not meet % deviation criteria: None.
The following compounds did not meet maximum % deviations: None.
The following compounds did not meet Table 4 recommended minimum response factors: Tetrachloroethene 0.182 (0.2)
The following compounds did not meet the minimum MCP response factor of 0.05: None.

CHEM23 09/24/20-1 Michael Hahn, Chemist 09/24/20

CG83141 (400X), CG83143 (400X), CG83146 (20X), CG83148 (20X)

Initial Calibration Evaluation (CHEM23/VOA23_092020):
99% of target compounds met criteria.
The following compounds had %RSDs >20%: None.
The following compounds did not meet Table 4 recommended minimum response factors: None.
The following compounds did not meet the minimum response factor of 0.05: None.

Continuing Calibration Verification (CHEM23/0924_02-VOA23_092020) (MCP Compliance):
Internal standard areas were within 50 to 200% of the initial calibration with the following exceptions: None.
98% of target compounds met criteria.
The following compounds did not meet % deviation criteria: None.
The following compounds did not meet maximum % deviations: None.
The following compounds did not meet Table 4 recommended minimum response factors: Tetrachloroethene 0.188 (0.2)
The following compounds did not meet the minimum MCP response factor of 0.05: None.

CHEM23 09/25/20-2 Michael Hahn, Chemist 09/25/20

CG83147 (2X)

Initial Calibration Evaluation (CHEM23/VOA23_092520):
94% of target compounds met criteria.
The following compounds had %RSDs >20%: Dichlorodifluoromethane 27% (20%), Trichlorofluoromethane 22% (20%), Trichlorotrifluoroethane 22% (20%)
The following compounds did not meet Table 4 recommended minimum response factors: Tetrachloroethene 0.186 (0.2)
The following compounds did not meet the minimum response factor of 0.05: None.

Continuing Calibration Verification (CHEM23/0925_16-VOA23_092520) (MCP Compliance):
Internal standard areas were within 50 to 200% of the initial calibration with the following exceptions: None.
99% of target compounds met criteria.
The following compounds did not meet % deviation criteria: None.
The following compounds did not meet maximum % deviations: None.
The following compounds did not meet Table 4 recommended minimum response factors: Tetrachloroethene 0.192 (0.2)
The following compounds did not meet the minimum MCP response factor of 0.05: None.

QC (Batch Specific):

Batch 546771 (CG81125) CHEM23 9/23/2020-1

CG83144(1X)

All LCS recoveries were within 70 - 130 with the following exceptions: None.
All LCSD recoveries were within 70 - 130 with the following exceptions: None.
All LCS/LCSD RPDs were less than 30% with the following exceptions: None.
Additional 8260 criteria: 10% of compounds can be outside of acceptance criteria as long as recovery is 10%.

Batch 546776 (CG83495) CHEM23 9/23/2020-2

CG83141(40X), CG83142(1X), CG83143(20X), CG83145(1X), CG83146(1X), CG83147(5X), CG83148(1X), CG83149(1X)

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

ACCREDITED IN ACCORDANCE WITH nelac NY # 11301

MCP Certification Report

October 06, 2020

SDG I.D.: GCG83141

VOA Narration

All LCS recoveries were within 70 - 130 with the following exceptions: None.
All LCSD recoveries were within 70 - 130 with the following exceptions: None.
All LCS/LCSD RPDs were less than 30% with the following exceptions: None.
A LCS and LCS Duplicate were performed instead of a matrix spike and matrix spike duplicate.
Additional 8260 criteria: 10% of compounds can be outside of acceptance criteria as long as recovery is 10%.

Batch 546836 (CG80056) CHEM23 9/24/2020-1

CG83141(400X), CG83143(400X), CG83146(20X), CG83148(20X)

All LCS recoveries were within 70 - 130 with the following exceptions: None.
All LCSD recoveries were within 70 - 130 with the following exceptions: None.
All LCS/LCSD RPDs were less than 30% with the following exceptions: None.
A LCS and LCS Duplicate were performed instead of a matrix spike and matrix spike duplicate.
Additional 8260 criteria: 10% of compounds can be outside of acceptance criteria as long as recovery is 10%.

Batch 547174 (CG85567) CHEM23 9/25/2020-2

CG83147(2X)

All LCS recoveries were within 70 - 130 with the following exceptions: None.
All LCSD recoveries were within 70 - 130 with the following exceptions: None.
All LCS/LCSD RPDs were less than 30% with the following exceptions: None.
A LCS and LCS Duplicate were performed instead of a matrix spike and matrix spike duplicate.
Additional 8260 criteria: 10% of compounds can be outside of acceptance criteria as long as recovery is 10%.

We attest under the pains and penalties of perjury that, based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.

VPH Narration

Were all QA/QC performance criteria specified in the MADEP document CAM achieved? Yes.

Instrument:

PIDFID 09/24/20-1 Raman Makol, Chemist 09/24/20

CG83147 (1X)

Initial Calibration Evaluation (PIDFID/VPH_092420_T):
The following compounds exceeded %RSD criteria: None.

QC (Batch Specific):

Batch 546964 (CG83124)

CG83147(1X)

All LCS recoveries were within 70 - 130 with the following exceptions: None.
All LCSD recoveries were within 70 - 130 with the following exceptions: None.
All LCS/LCSD RPDs were less than 25% with the following exceptions: None.
A blank MS/MSD was analyzed with this batch.

I attest under the pains and penalties of perjury that, based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.

Cooler: Yes ✓ No
Coolant: IPK ✓ ICE No
Temp 1.8° C Pg of

PHOENIX
Environmental Laboratories, Inc.

CHAIN OF CUSTODY RECORD

587 East Middle Turnpike, P.O. Box 370, Manchester, CT 06040
Email: info@phoenixlabs.com Fax (860) 645-0823
Client Services (860) 645-8726

Data Delivery/Contact EMails:
lori.herberich@aecom.com
scott.olson@aecom.com

Customer: AECOM
Address: 250 Apollo Drive
Chelmsford, MA 01824 - (978) 905-2100
Contacts: Lori Herberich (Chemist) 978-302-0089 Scott Olson (PM) 978-846-5238

Project: Lockheed - Wilmington MA 60552044.19
Report to: Lori Herberich - Scott Olson - Nicole Callahan
Invoice to: Scott Olson & Lori Herberich
QUOTE # August 2019 (for 2017-2022)

2020 Project PO: 127680

This section MUST be completed with Bottle Quantities.

Sampler's Signature: [signature] Date: 9/22/20

Matrix Code:
DW=Drinking Water GW=Ground Water SW=Surface Water WW=Waste Water L=Liquid
RW=Raw Water SE=Sediment SL=Sludge S=Soil SD=Solid W=Wipe OIL=Oil B=Bulk

PHOENIX USE ONLY SAMPLE #	Customer Sample Identification	Sample Matrix	Date Sampled	Time Sampled	# of VOA Vials	# of Amber Glass	# of Clear Glass	# of Plastic				VOCs (8260) - HCL + Freon 113	1,4-Dioxane (8270D SIM) - NaHSO4 for DL <0.3 ug/L	VPH - HCL (MassDEP- VPH-04-1.1 Rev 1)	EPH + PAHs - HCL & UNP (MassDEP- EPH-04-1.1 Rev 1)	Total As, Fe, Mn (6010C) - HNO3 [FF]	Dissolved As, Fe, Mn (6010C) - HNO3	Chloride, Nitrate, Nitrite, Sulfate (300) - UNP	Sulfide - Zn-Acetate + NaOH	Total Organic Carbon (9060A) - H3PO4	Comments
83141	20A-EMW11R3-092120-1	GW	9/21/20	1425	3							X									
83142	20A-MW5-092120-1	GW	9/21/20	1520	3							X									
83143	20A-EMW11R1-092120-1	GW	9/21/20	1555	3							X									
83144	20A-TB02-092120-1	GW	9/21/20	1400	2							X									
83145	20A-AE29R1-092220-1	GW	9/22/20	0925	3							X									
83146	20A-TRC20R-092220-1	GW	9/22/20	1145	3							X									
83147	20A-AE29R6-092220-1	GW	9/22/20	1035	5	5	4/8	4				X	X	X	X	X	X	X	X	X	
83148	20A-AE29R5-092220-1	GW	9/22/20	1450	3							X									
83149	20A-AE29R3-092220-1	GW	9/22/20	1520	3							X									

Relinquished by:	Accepted by:	Date:	Time:
[signature]	[signature]	9-22-20	15:35
[signature]	[signature]	9/22	1713

Comments, Special Requirements or Regulations:

Turnaround:
10 - 15 days

RI
- ☐ Direct Exposure (Residential)
- ☐ GW
- ☐ Other

CT
- ☐ RCP Cert
- ☐ GW Protection
- ☐ SW Protection
- ☐ GA Mobility
- ☐ GB Mobility
- ☐ Residential DEC
- ☐ I/C DEC
- ☐ Other

MA
- X MCP (CAM Rpt)
- X GW-1
- X GW-2
- X GW-3
- ☐ S-1
- ☐ S-2
- ☐ S-3
- ☐ MWRA eSMART
- ☐ Other

State where samples were collected: MA

Data Format
- x PDF
- x AECOM EQuIS 4-File EDD format

Data Package
- ☐ Tier II Checklist
- ☐ Full Data Package*
- ☐ Phoenix Std Report
- ☐ Other

* SURCHARGE APPLIES

PHOENIX
Environmental Laboratories, Inc.

Monday, October 05, 2020

Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Project ID: **LOCKHEED WILMINGTON MA 60552044.19**
SDG ID: **GCG83495**
Sample ID#s: CG83495 - CG83506

This laboratory is in compliance with the NELAC requirements of procedures used except where indicated.

This report contains results for the parameters tested, under the sampling conditions described on the Chain Of Custody, as received by the laboratory. This report is incomplete unless all pages indicated in the pagination at the bottom of the page are included.

A scanned version of the COC form accompanies the analytical report and is an exact duplicate of the original.

Enclosed are revised Analysis Report pages. Please replace and discard the original pages. If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200. The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.

Sincerely yours,

Phyllis Shiller
Laboratory Director

NELAC - #NY11301
CT Lab Registration #PH-0618
MA Lab Registration #M-CT007
ME Lab Registration #CT-007
NH Lab Registration #213693-A,B
NJ Lab Registration #CT-003
NY Lab Registration #11301
PA Lab Registration #68-03530
RI Lab Registration #63
UT Lab Registration #CT00007
VT Lab Registration #VT11301

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

NY # 11301

SDG Comments

October 05, 2020

SDG I.D.: GCG83495

Rev. 2

This report has been revised to modify the MCP CAM form by answering question Ea.

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Sample Id Cross Reference

October 05, 2020

SDG I.D.: GCG83495

Project ID: LOCKHEED WILMINGTON MA 60552044.19

Client Id	Lab Id	Matrix
20A-TB01-092220-1	CG83495	GROUND WATER
20A-EB01-092220-1	CG83496	GROUND WATER
20A-EB02-092220-1	CG83497	GROUND WATER
20A-STM8D-092320-1	CG83498	GROUND WATER
20A-STM8R-092320-1	CG83499	GROUND WATER
20A-AE101R1-092320-1	CG83500	GROUND WATER
20A-AE101R1-092320-2	CG83501	GROUND WATER
20A-AE101R2-092320-1	CG83502	GROUND WATER
20A-AE3-092320-1	CG83503	GROUND WATER
20A-AE3-092320-2	CG83504	GROUND WATER
20A-TRC103-092320-1	CG83505	GROUND WATER
20A-AE101R3-092320-1	CG83506	GROUND WATER

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

October 05, 2020

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		09/22/20	17:00
Location Code:	AECOM-WILMINGTN	Received by:	B	09/23/20	14:56
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	127680				

Laboratory Data

SDG ID: GCG83495
Phoenix ID: CG83495

Project ID: LOCKHEED WILMINGTON MA 60552044.19
Client ID: 20A-TB01-092220-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Volatiles							
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
1,1,1-Trichloroethane	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L	1	09/23/20	MH	SW8260C
1,1,2-Trichloroethane	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
1,1-Dichloroethane	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
1,1-Dichloroethene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
1,1-Dichloropropene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
1,2,3-Trichlorobenzene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
1,2,3-Trichloropropane	ND	0.50	ug/L	1	09/23/20	MH	SW8260C
1,2,4-Trichlorobenzene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
1,2,4-Trimethylbenzene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	0.50	ug/L	1	09/23/20	MH	SW8260C
1,2-Dibromoethane	ND	0.50	ug/L	1	09/23/20	MH	SW8260C
1,2-Dichlorobenzene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
1,2-Dichloroethane	ND	0.60	ug/L	1	09/23/20	MH	SW8260C
1,2-Dichloropropane	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
1,3,5-Trimethylbenzene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
1,3-Dichlorobenzene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
1,3-Dichloropropane	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
1,4-Dichlorobenzene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
2,2-Dichloropropane	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
2-Chlorotoluene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
2-Hexanone	ND	5.0	ug/L	1	09/23/20	MH	SW8260C
4-Chlorotoluene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
4-Methyl-2-pentanone	ND	5.0	ug/L	1	09/23/20	MH	SW8260C
Acetone	ND	25	ug/L	1	09/23/20	MH	SW8260C

Project ID: LOCKHEED WILMINGTON MA 60552044.19 Phoenix I.D.: CG83495

Client ID: 20A-TB01-092220-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	
Benzene	ND	0.70	ug/L	1	09/23/20	MH	SW8260C
Bromobenzene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
Bromochloromethane	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
Bromodichloromethane	ND	0.50	ug/L	1	09/23/20	MH	SW8260C
Bromoform	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
Bromomethane	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
Carbon Disulfide	ND	5.0	ug/L	1	09/23/20	MH	SW8260C
Carbon tetrachloride	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
Chlorobenzene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
Chloroethane	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
Chloroform	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
Chloromethane	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
cis-1,2-Dichloroethene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
cis-1,3-Dichloropropene	ND	0.40	ug/L	1	09/23/20	MH	SW8260C
Dibromochloromethane	ND	0.50	ug/L	1	09/23/20	MH	SW8260C
Dibromomethane	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
Dichlorodifluoromethane	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
Ethylbenzene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
Hexachlorobutadiene	ND	0.40	ug/L	1	09/23/20	MH	SW8260C
Isopropylbenzene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
m&p-Xylene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
Methyl ethyl ketone	ND	5.0	ug/L	1	09/23/20	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
Methylene chloride	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
Naphthalene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
n-Butylbenzene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
n-Propylbenzene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
o-Xylene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
p-Isopropyltoluene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
sec-Butylbenzene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
Styrene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
tert-Butylbenzene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
Tetrachloroethene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
Tetrahydrofuran (THF)	ND	2.5	ug/L	1	09/23/20	MH	SW8260C
Toluene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
trans-1,2-Dichloroethene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
trans-1,3-Dichloropropene	ND	0.40	ug/L	1	09/23/20	MH	SW8260C
Trichloroethene	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
Trichlorofluoromethane	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
Trichlorotrifluoroethane	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
Vinyl chloride	ND	1.0	ug/L	1	09/23/20	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	101		%	1	09/23/20	MH	70 - 130 %
% Bromofluorobenzene	99		%	1	09/23/20	MH	70 - 130 %
% Dibromofluoromethane	97		%	1	09/23/20	MH	70 - 130 %
% Toluene-d8	104		%	1	09/23/20	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	100	ug/L	1	09/23/20	MH	SW8260C (OXY)
Diethyl ether	ND	1.0	ug/L	1	09/23/20	MH	SW8260C (OXY)

Ver 2

Project ID: LOCKHEED WILMINGTON MA 60552044.19 Phoenix I.D.: CG83495

Client ID: 20A-TB01-092220-1

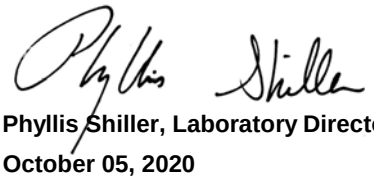
Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	
Di-isopropyl ether	ND	1.0	ug/L	1	09/23/20	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	1.0	ug/L	1	09/23/20	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	1.0	ug/L	1	09/23/20	MH	SW8260C (OXY)

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

TRIP BLANK INCLUDED.

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.



Phyllis Shiller, Laboratory Director

October 05, 2020

Reviewed and Released by: Greg Lawrence, Assistant Lab Director

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

October 05, 2020

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		09/22/20	17:45
Location Code:	AECOM-WILMINGTN	Received by:	B	09/23/20	14:56
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	127680				

Laboratory Data

SDG ID: GCG83495
Phoenix ID: CG83496

Project ID: LOCKHEED WILMINGTON MA 60552044.19
Client ID: 20A-EB01-092220-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Arsenic	< 0.004	0.004	mg/L	1	09/24/20	TH	SW6010D
Arsenic (Dissolved)	< 0.004	0.004	mg/L	1	09/24/20	CPP	SW6010D
Iron (Dissolved)	< 0.011	0.011	mg/L	1	09/24/20	CPP	SW6010D
Manganese (Dissolved)	< 0.001	0.001	mg/L	1	09/24/20	CPP	SW6010D
Iron	0.111	0.010	mg/L	1	09/24/20	TH	SW6010D
Manganese	0.001	0.001	mg/L	1	09/24/20	TH	SW6010D
Chloride	< 3.0	3.0	mg/L	1	09/23/20	BS/EG	E300.0
Nitrite as Nitrogen	< 0.004	0.004	mg/L	1	09/23/20 23:57	BS/EG	E300.0
Nitrate as Nitrogen	< 0.05	0.05	mg/L	1	09/23/20 23:57	BS/EG	E300.0
Sulfate	8.2	3.0	mg/L	1	09/23/20	BS/EG	E300.0
Sulfide	< 0.05	0.05	mg/L	1	09/24/20	GD	SM4500S-D-11
Total Organic Carbon	< 1.0	1.0	mg/L	1	09/25/20	ARG	SM5310B-11
EPH Extraction	Completed				09/25/20	JS/KL/KL	SW3510C
MA Petroleum Hydrocarbon (EPH)	Completed				09/23/20		MADEP EPH-04
Semi-Volatile Extraction	Completed				09/27/20	P/CG	SW3520C
Dissolved Metals Preparation	Completed				09/23/20	AG	SW3005A
Total Metals Digestion	Completed				09/23/20	AG/BF	
MA Petroleum Hydrocarbon (VPH)	Completed				09/25/20	RM	MADEP VPH04
Volatiles							
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
1,1,1-Trichloroethane	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L	1	09/24/20	MH	SW8260C
1,1,2-Trichloroethane	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
1,1-Dichloroethane	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
1,1-Dichloroethene	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
1,1-Dichloropropene	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
1,2,3-Trichlorobenzene	ND	1.0	ug/L	1	09/24/20	MH	SW8260C

Project ID: LOCKHEED WILMINGTON MA 60552044.19 Phoenix I.D.: CG83496

Client ID: 20A-EB01-092220-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	
1,2,3-Trichloropropane	ND	0.50	ug/L	1	09/24/20	MH	SW8260C
1,2,4-Trichlorobenzene	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
1,2,4-Trimethylbenzene	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	0.50	ug/L	1	09/24/20	MH	SW8260C
1,2-Dibromoethane	ND	0.50	ug/L	1	09/24/20	MH	SW8260C
1,2-Dichlorobenzene	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
1,2-Dichloroethane	ND	0.60	ug/L	1	09/24/20	MH	SW8260C
1,2-Dichloropropane	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
1,3,5-Trimethylbenzene	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
1,3-Dichlorobenzene	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
1,3-Dichloropropane	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
1,4-Dichlorobenzene	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
2,2-Dichloropropane	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
2-Chlorotoluene	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
2-Hexanone	ND	5.0	ug/L	1	09/24/20	MH	SW8260C
4-Chlorotoluene	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
4-Methyl-2-pentanone	ND	5.0	ug/L	1	09/24/20	MH	SW8260C
Acetone	ND	25	ug/L	1	09/24/20	MH	SW8260C
Benzene	ND	0.70	ug/L	1	09/24/20	MH	SW8260C
Bromobenzene	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
Bromochloromethane	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
Bromodichloromethane	ND	0.50	ug/L	1	09/24/20	MH	SW8260C
Bromoform	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
Bromomethane	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
Carbon Disulfide	ND	5.0	ug/L	1	09/24/20	MH	SW8260C
Carbon tetrachloride	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
Chlorobenzene	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
Chloroethane	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
Chloroform	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
Chloromethane	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
cis-1,2-Dichloroethene	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
cis-1,3-Dichloropropene	ND	0.40	ug/L	1	09/24/20	MH	SW8260C
Dibromochloromethane	ND	0.50	ug/L	1	09/24/20	MH	SW8260C
Dibromomethane	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
Dichlorodifluoromethane	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
Ethylbenzene	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
Hexachlorobutadiene	ND	0.40	ug/L	1	09/24/20	MH	SW8260C
Isopropylbenzene	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
m&p-Xylene	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
Methyl ethyl ketone	ND	5.0	ug/L	1	09/24/20	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
Methylene chloride	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
Naphthalene	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
n-Butylbenzene	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
n-Propylbenzene	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
o-Xylene	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
p-Isopropyltoluene	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
sec-Butylbenzene	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
Styrene	ND	1.0	ug/L	1	09/24/20	MH	SW8260C

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	
tert-Butylbenzene	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
Tetrachloroethene	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
Tetrahydrofuran (THF)	ND	2.5	ug/L	1	09/24/20	MH	SW8260C
Toluene	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
trans-1,2-Dichloroethene	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
trans-1,3-Dichloropropene	ND	0.40	ug/L	1	09/24/20	MH	SW8260C
Trichloroethene	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
Trichlorofluoromethane	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
Trichlorotrifluoroethane	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
Vinyl chloride	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	100		%	1	09/24/20	MH	70 - 130 %
% Bromofluorobenzene	102		%	1	09/24/20	MH	70 - 130 %
% Dibromofluoromethane	97		%	1	09/24/20	MH	70 - 130 %
% Toluene-d8	106		%	1	09/24/20	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	100	ug/L	1	09/24/20	MH	SW8260C (OXY)
Diethyl ether	ND	1.0	ug/L	1	09/24/20	MH	SW8260C (OXY)
Di-isopropyl ether	ND	1.0	ug/L	1	09/24/20	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	1.0	ug/L	1	09/24/20	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	1.0	ug/L	1	09/24/20	MH	SW8260C (OXY)
Semivolatiles by SIM, PAH							
2-Methylnaphthalene	ND	0.47	ug/L	1	09/29/20	WB	SW8270D (SIM)
Acenaphthene	ND	0.47	ug/L	1	09/29/20	WB	SW8270D (SIM)
Acenaphthylene	ND	0.09	ug/L	1	09/29/20	WB	SW8270D (SIM)
Anthracene	ND	0.09	ug/L	1	09/29/20	WB	SW8270D (SIM)
Benz(a)anthracene	ND	0.09	ug/L	1	09/29/20	WB	SW8270D (SIM)
Benzo(a)pyrene	ND	0.19	ug/L	1	09/29/20	WB	SW8270D (SIM)
Benzo(b)fluoranthene	ND	0.09	ug/L	1	09/29/20	WB	SW8270D (SIM)
Benzo(ghi)perylene	ND	0.02	ug/L	1	09/29/20	WB	SW8270D (SIM)
Benzo(k)fluoranthene	ND	0.09	ug/L	1	09/29/20	WB	SW8270D (SIM)
Chrysene	ND	0.05	ug/L	1	09/29/20	WB	SW8270D (SIM)
Dibenz(a,h)anthracene	ND	0.02	ug/L	1	09/29/20	WB	SW8270D (SIM)
Fluoranthene	ND	0.47	ug/L	1	09/29/20	WB	SW8270D (SIM)
Fluorene	ND	0.09	ug/L	1	09/29/20	WB	SW8270D (SIM)
Indeno(1,2,3-cd)pyrene	ND	0.09	ug/L	1	09/29/20	WB	SW8270D (SIM)
Naphthalene	ND	0.47	ug/L	1	09/29/20	WB	SW8270D (SIM)
Phenanthrene	ND	0.47	ug/L	1	09/29/20	WB	SW8270D (SIM)
Pyrene	ND	0.07	ug/L	1	09/29/20	WB	SW8270D (SIM)
QA/QC Surrogates							
% 2-Fluorobiphenyl	58		%	1	09/29/20	WB	40 - 140 %
% Nitrobenzene-d5	62		%	1	09/29/20	WB	40 - 140 %
% Terphenyl-d14	70		%	1	09/29/20	WB	40 - 140 %
1,4-dioxane							
1,4-dioxane	ND	0.20	ug/l	1	09/29/20	AW	SW8270DSIM
QA/QC Surrogates							
% 1,4-dioxane-d8	85		%	1	09/29/20	AW	40 - 140 %

Project ID: LOCKHEED WILMINGTON MA 60552044.19 Phoenix I.D.: CG83496
Client ID: 20A-EB01-092220-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	
Extraction for 1,4-Dioxane	Completed				09/28/20	S/S	
MA EPH Aliphatic/Aromatic Ranges							
C11-C22 Aromatic Hydrocarbons 1,2*	ND	190	ug/L	1	09/26/20	AW	MAEPH 5/2004
C11-C22 Aromatic Hydrocarbons Unadj	ND	190	ug/L	1	09/26/20	AW	MAEPH 5/2004
C19-C36 Aliphatic Hydrocarbons 1*	ND	190	ug/L	1	09/26/20	AW	MAEPH 5/2004
C9-C18 Aliphatic Hydrocarbons 1*	ND	190	ug/L	1	09/26/20	AW	MAEPH 5/2004
Total TPH 1,2*	ND	190	ug/L	1	09/26/20	AW	MAEPH 5/2004
QA/QC Surrogates							
% 1-chlorooctadecane (aliphatic)	83		%	1	09/26/20	AW	40 - 140 %
% 2-Bromonaphthalene (Fractionation)	99		%	1	09/26/20	AW	40 - 140 %
% 2-Fluorobiphenyl (Fractionation)	115		%	1	09/26/20	AW	40 - 140 %
% o-terphenyl (aromatic)	89		%	1	09/26/20	AW	40 - 140 %
MA Volatile Petroleum Hydrocarbons (VPH)							
Unadjusted C5-C8 Aliphatics (*1)	ND	100	ug/L	1	09/25/20	RM	MA VPH 5/2004
Unadjusted C9-C12 Aliphatics (*1)	ND	100	ug/L	1	09/25/20	RM	MA VPH 5/2004
C5-C8 Aliphatic Hydrocarbons *1,2	ND	100	ug/L	1	09/25/20	RM	MA VPH 5/2004
C9-C12 Aliphatic Hydrocarbons *1,3	ND	100	ug/L	1	09/25/20	RM	MA VPH 5/2004
C9-C10 Aromatic Hydrocarbons *1	ND	100	ug/L	1	09/25/20	RM	MA VPH 5/2004
Benzene	ND	1.0	ug/L	1	09/25/20	RM	MA VPH 5/2004
Ethyl Benzene	ND	1.0	ug/L	1	09/25/20	RM	MA VPH 5/2004
MTBE	ND	1.0	ug/L	1	09/25/20	RM	MA VPH 5/2004
Naphthalene	ND	5.0	ug/L	1	09/25/20	RM	MA VPH 5/2004
Toluene	ND	1.0	ug/L	1	09/25/20	RM	MA VPH 5/2004
m,p-Xylenes	ND	2.0	ug/L	1	09/25/20	RM	MA VPH 5/2004
o-Xylene	ND	1.0	ug/L	1	09/25/20	RM	MA VPH 5/2004
QA/QC Surrogates							
% 2,5-Dibromotoluene (FID)	102		%	1	09/25/20	RM	70 - 130 %
% 2,5-Dibromotoluene (PID)	89		%	1	09/25/20	RM	70 - 130 %

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By

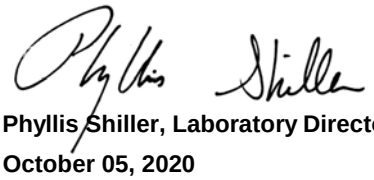
RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

MAEPH:
1* Hydrocarbon range data exclude concentrations of any surrogate(s) and/or internal standards eluting in that range.
2* C11-C12 Aromatic Hydrocarbons exclude the concentration of Target PAH analytes eluting in that range.

VPH:
*1 Range data exclude conc.s of any surrogate(s) and/or Int. std.s eluting in that range.
*2 C5-C8 and C9-C12 Aliphatic exclude the conc. of Target Analytes in that range.
*3 C9-C12 Aliphatic also exclude C9-C10 Aromatic Hydrocarbon

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.



Phyllis Shiller, Laboratory Director
October 05, 2020
Reviewed and Released by: Greg Lawrence, Assistant Lab Director

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

October 05, 2020

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		09/22/20	17:30
Location Code:	AECOM-WILMINGTN	Received by:	B	09/23/20	14:56
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	127680				

Laboratory Data

SDG ID: GCG83495
Phoenix ID: CG83497

Project ID: LOCKHEED WILMINGTON MA 60552044.19
Client ID: 20A-EB02-092220-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Volatiles							
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
1,1,1-Trichloroethane	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L	1	09/24/20	MH	SW8260C
1,1,2-Trichloroethane	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
1,1-Dichloroethane	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
1,1-Dichloroethene	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
1,1-Dichloropropene	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
1,2,3-Trichlorobenzene	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
1,2,3-Trichloropropane	ND	0.50	ug/L	1	09/24/20	MH	SW8260C
1,2,4-Trichlorobenzene	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
1,2,4-Trimethylbenzene	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	0.50	ug/L	1	09/24/20	MH	SW8260C
1,2-Dibromoethane	ND	0.50	ug/L	1	09/24/20	MH	SW8260C
1,2-Dichlorobenzene	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
1,2-Dichloroethane	ND	0.60	ug/L	1	09/24/20	MH	SW8260C
1,2-Dichloropropane	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
1,3,5-Trimethylbenzene	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
1,3-Dichlorobenzene	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
1,3-Dichloropropane	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
1,4-Dichlorobenzene	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
2,2-Dichloropropane	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
2-Chlorotoluene	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
2-Hexanone	ND	5.0	ug/L	1	09/24/20	MH	SW8260C
4-Chlorotoluene	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
4-Methyl-2-pentanone	ND	5.0	ug/L	1	09/24/20	MH	SW8260C
Acetone	ND	25	ug/L	1	09/24/20	MH	SW8260C

Project ID: LOCKHEED WILMINGTON MA 60552044.19 Phoenix I.D.: CG83497

Client ID: 20A-EB02-092220-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	
Benzene	ND	0.70	ug/L	1	09/24/20	MH	SW8260C
Bromobenzene	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
Bromochloromethane	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
Bromodichloromethane	ND	0.50	ug/L	1	09/24/20	MH	SW8260C
Bromoform	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
Bromomethane	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
Carbon Disulfide	ND	5.0	ug/L	1	09/24/20	MH	SW8260C
Carbon tetrachloride	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
Chlorobenzene	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
Chloroethane	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
Chloroform	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
Chloromethane	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
cis-1,2-Dichloroethene	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
cis-1,3-Dichloropropene	ND	0.40	ug/L	1	09/24/20	MH	SW8260C
Dibromochloromethane	ND	0.50	ug/L	1	09/24/20	MH	SW8260C
Dibromomethane	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
Dichlorodifluoromethane	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
Ethylbenzene	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
Hexachlorobutadiene	ND	0.40	ug/L	1	09/24/20	MH	SW8260C
Isopropylbenzene	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
m&p-Xylene	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
Methyl ethyl ketone	ND	5.0	ug/L	1	09/24/20	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
Methylene chloride	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
Naphthalene	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
n-Butylbenzene	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
n-Propylbenzene	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
o-Xylene	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
p-Isopropyltoluene	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
sec-Butylbenzene	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
Styrene	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
tert-Butylbenzene	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
Tetrachloroethene	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
Tetrahydrofuran (THF)	ND	2.5	ug/L	1	09/24/20	MH	SW8260C
Toluene	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
trans-1,2-Dichloroethene	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
trans-1,3-Dichloropropene	ND	0.40	ug/L	1	09/24/20	MH	SW8260C
Trichloroethene	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
Trichlorofluoromethane	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
Trichlorotrifluoroethane	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
Vinyl chloride	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	100		%	1	09/24/20	MH	70 - 130 %
% Bromofluorobenzene	102		%	1	09/24/20	MH	70 - 130 %
% Dibromofluoromethane	100		%	1	09/24/20	MH	70 - 130 %
% Toluene-d8	107		%	1	09/24/20	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	100	ug/L	1	09/24/20	MH	SW8260C (OXY)
Diethyl ether	ND	1.0	ug/L	1	09/24/20	MH	SW8260C (OXY)

Ver 2

Project ID: LOCKHEED WILMINGTON MA 60552044.19 Phoenix I.D.: CG83497

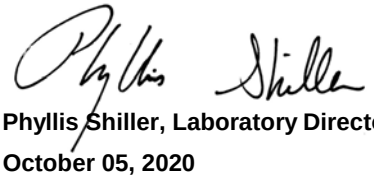
Client ID: 20A-EB02-092220-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	
Di-isopropyl ether	ND	1.0	ug/L	1	09/24/20	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	1.0	ug/L	1	09/24/20	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	1.0	ug/L	1	09/24/20	MH	SW8260C (OXY)

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
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Phyllis Shiller, Laboratory Director

October 05, 2020

Reviewed and Released by: Greg Lawrence, Assistant Lab Director

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

October 05, 2020

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		09/23/20	10:35
Location Code:	AECOM-WILMINGTN	Received by:	B	09/23/20	14:56
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	127680				

Laboratory Data

SDG ID: GCG83495
Phoenix ID: CG83498

Project ID: LOCKHEED WILMINGTON MA 60552044.19
Client ID: 20A-STM8D-092320-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Volatiles							
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
1,1,1-Trichloroethane	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L	1	09/24/20	MH	SW8260C
1,1,2-Trichloroethane	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
1,1-Dichloroethane	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
1,1-Dichloroethene	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
1,1-Dichloropropene	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
1,2,3-Trichlorobenzene	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
1,2,3-Trichloropropane	ND	0.50	ug/L	1	09/24/20	MH	SW8260C
1,2,4-Trichlorobenzene	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
1,2,4-Trimethylbenzene	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	0.50	ug/L	1	09/24/20	MH	SW8260C
1,2-Dibromoethane	ND	0.50	ug/L	1	09/24/20	MH	SW8260C
1,2-Dichlorobenzene	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
1,2-Dichloroethane	ND	0.60	ug/L	1	09/24/20	MH	SW8260C
1,2-Dichloropropane	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
1,3,5-Trimethylbenzene	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
1,3-Dichlorobenzene	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
1,3-Dichloropropane	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
1,4-Dichlorobenzene	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
2,2-Dichloropropane	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
2-Chlorotoluene	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
2-Hexanone	ND	5.0	ug/L	1	09/24/20	MH	SW8260C
4-Chlorotoluene	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
4-Methyl-2-pentanone	ND	5.0	ug/L	1	09/24/20	MH	SW8260C
Acetone	ND	25	ug/L	1	09/24/20	MH	SW8260C

Project ID: LOCKHEED WILMINGTON MA 60552044.19 Phoenix I.D.: CG83498
Client ID: 20A-STM8D-092320-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	
Benzene	ND	0.70	ug/L	1	09/24/20	MH	SW8260C
Bromobenzene	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
Bromochloromethane	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
Bromodichloromethane	ND	0.50	ug/L	1	09/24/20	MH	SW8260C
Bromoform	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
Bromomethane	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
Carbon Disulfide	ND	5.0	ug/L	1	09/24/20	MH	SW8260C
Carbon tetrachloride	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
Chlorobenzene	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
Chloroethane	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
Chloroform	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
Chloromethane	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
cis-1,2-Dichloroethene	4.9	1.0	ug/L	1	09/24/20	MH	SW8260C
cis-1,3-Dichloropropene	ND	0.40	ug/L	1	09/24/20	MH	SW8260C
Dibromochloromethane	ND	0.50	ug/L	1	09/24/20	MH	SW8260C
Dibromomethane	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
Dichlorodifluoromethane	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
Ethylbenzene	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
Hexachlorobutadiene	ND	0.40	ug/L	1	09/24/20	MH	SW8260C
Isopropylbenzene	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
m&p-Xylene	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
Methyl ethyl ketone	ND	5.0	ug/L	1	09/24/20	MH	SW8260C
Methyl t-butyl ether (MTBE)	1.3	1.0	ug/L	1	09/24/20	MH	SW8260C
Methylene chloride	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
Naphthalene	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
n-Butylbenzene	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
n-Propylbenzene	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
o-Xylene	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
p-Isopropyltoluene	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
sec-Butylbenzene	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
Styrene	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
tert-Butylbenzene	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
Tetrachloroethene	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
Tetrahydrofuran (THF)	ND	2.5	ug/L	1	09/24/20	MH	SW8260C
Toluene	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
trans-1,2-Dichloroethene	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
trans-1,3-Dichloropropene	ND	0.40	ug/L	1	09/24/20	MH	SW8260C
Trichloroethene	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
Trichlorofluoromethane	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
Trichlorotrifluoroethane	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
Vinyl chloride	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	99		%	1	09/24/20	MH	70 - 130 %
% Bromofluorobenzene	102		%	1	09/24/20	MH	70 - 130 %
% Dibromofluoromethane	95		%	1	09/24/20	MH	70 - 130 %
% Toluene-d8	105		%	1	09/24/20	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	100	ug/L	1	09/24/20	MH	SW8260C (OXY)
Diethyl ether	ND	1.0	ug/L	1	09/24/20	MH	SW8260C (OXY)

Ver 2

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	
Di-isopropyl ether	ND	1.0	ug/L	1	09/24/20	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	1.0	ug/L	1	09/24/20	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	1.0	ug/L	1	09/24/20	MH	SW8260C (OXY)
1,4-dioxane							
1,4-dioxane	0.45	0.20	ug/l	1	09/29/20	AW	SW8270DSIM
QA/QC Surrogates							
% 1,4-dioxane-d8	89		%	1	09/29/20	AW	40 - 140 %
Extraction for 1,4-Dioxane	Completed				09/28/20	S/S	

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.

Phyllis Shiller, Laboratory Director
October 05, 2020
Reviewed and Released by: Greg Lawrence, Assistant Lab Director

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

October 05, 2020

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		09/23/20	11:10
Location Code:	AECOM-WILMINGTN	Received by:	B	09/23/20	14:56
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	127680				

Laboratory Data

SDG ID: GCG83495
Phoenix ID: CG83499

Project ID: LOCKHEED WILMINGTON MA 60552044.19
Client ID: 20A-STM8R-092320-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Volatiles							
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
1,1,1-Trichloroethane	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L	1	09/24/20	MH	SW8260C
1,1,2-Trichloroethane	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
1,1-Dichloroethane	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
1,1-Dichloroethene	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
1,1-Dichloropropene	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
1,2,3-Trichlorobenzene	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
1,2,3-Trichloropropane	ND	0.50	ug/L	1	09/24/20	MH	SW8260C
1,2,4-Trichlorobenzene	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
1,2,4-Trimethylbenzene	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	0.50	ug/L	1	09/24/20	MH	SW8260C
1,2-Dibromoethane	ND	0.50	ug/L	1	09/24/20	MH	SW8260C
1,2-Dichlorobenzene	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
1,2-Dichloroethane	ND	0.60	ug/L	1	09/24/20	MH	SW8260C
1,2-Dichloropropane	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
1,3,5-Trimethylbenzene	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
1,3-Dichlorobenzene	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
1,3-Dichloropropane	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
1,4-Dichlorobenzene	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
2,2-Dichloropropane	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
2-Chlorotoluene	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
2-Hexanone	ND	5.0	ug/L	1	09/24/20	MH	SW8260C
4-Chlorotoluene	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
4-Methyl-2-pentanone	ND	5.0	ug/L	1	09/24/20	MH	SW8260C
Acetone	ND	25	ug/L	1	09/24/20	MH	SW8260C

Project ID: LOCKHEED WILMINGTON MA 60552044.19 Phoenix I.D.: CG83499
Client ID: 20A-STM8R-092320-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	
Benzene	ND	0.70	ug/L	1	09/24/20	MH	SW8260C
Bromobenzene	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
Bromochloromethane	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
Bromodichloromethane	ND	0.50	ug/L	1	09/24/20	MH	SW8260C
Bromoform	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
Bromomethane	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
Carbon Disulfide	ND	5.0	ug/L	1	09/24/20	MH	SW8260C
Carbon tetrachloride	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
Chlorobenzene	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
Chloroethane	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
Chloroform	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
Chloromethane	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
cis-1,2-Dichloroethene	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
cis-1,3-Dichloropropene	ND	0.40	ug/L	1	09/24/20	MH	SW8260C
Dibromochloromethane	ND	0.50	ug/L	1	09/24/20	MH	SW8260C
Dibromomethane	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
Dichlorodifluoromethane	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
Ethylbenzene	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
Hexachlorobutadiene	ND	0.40	ug/L	1	09/24/20	MH	SW8260C
Isopropylbenzene	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
m&p-Xylene	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
Methyl ethyl ketone	ND	5.0	ug/L	1	09/24/20	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
Methylene chloride	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
Naphthalene	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
n-Butylbenzene	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
n-Propylbenzene	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
o-Xylene	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
p-Isopropyltoluene	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
sec-Butylbenzene	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
Styrene	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
tert-Butylbenzene	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
Tetrachloroethene	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
Tetrahydrofuran (THF)	ND	2.5	ug/L	1	09/24/20	MH	SW8260C
Toluene	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
trans-1,2-Dichloroethene	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
trans-1,3-Dichloropropene	ND	0.40	ug/L	1	09/24/20	MH	SW8260C
Trichloroethene	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
Trichlorofluoromethane	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
Trichlorotrifluoroethane	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
Vinyl chloride	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	100		%	1	09/24/20	MH	70 - 130 %
% Bromofluorobenzene	101		%	1	09/24/20	MH	70 - 130 %
% Dibromofluoromethane	97		%	1	09/24/20	MH	70 - 130 %
% Toluene-d8	105		%	1	09/24/20	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	100	ug/L	1	09/24/20	MH	SW8260C (OXY)
Diethyl ether	ND	1.0	ug/L	1	09/24/20	MH	SW8260C (OXY)

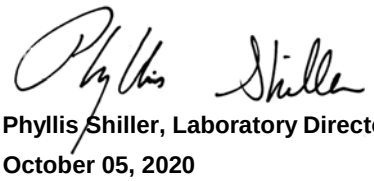
Ver 2

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	
Di-isopropyl ether	ND	1.0	ug/L	1	09/24/20	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	1.0	ug/L	1	09/24/20	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	1.0	ug/L	1	09/24/20	MH	SW8260C (OXY)
1,4-dioxane							
1,4-dioxane	ND	0.20	ug/l	1	09/29/20	AW	SW8270DSIM
QA/QC Surrogates							
% 1,4-dioxane-d8	94		%	1	09/29/20	AW	40 - 140 %
Extraction for 1,4-Dioxane	Completed				09/28/20	S/S	

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

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Phyllis Shiller, Laboratory Director
October 05, 2020
Reviewed and Released by: Greg Lawrence, Assistant Lab Director

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

October 05, 2020

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		09/23/20	10:35
Location Code:	AECOM-WILMINGTN	Received by:	B	09/23/20	14:56
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	127680				

Laboratory Data

SDG ID: GCG83495
Phoenix ID: CG83500

Project ID: LOCKHEED WILMINGTON MA 60552044.19
Client ID: 20A-AE101R1-092320-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Volatiles							
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
1,1,1-Trichloroethane	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L	1	09/24/20	MH	SW8260C
1,1,2-Trichloroethane	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
1,1-Dichloroethane	1.7	1.0	ug/L	1	09/24/20	MH	SW8260C
1,1-Dichloroethene	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
1,1-Dichloropropene	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
1,2,3-Trichlorobenzene	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
1,2,3-Trichloropropane	ND	0.50	ug/L	1	09/24/20	MH	SW8260C
1,2,4-Trichlorobenzene	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
1,2,4-Trimethylbenzene	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	0.50	ug/L	1	09/24/20	MH	SW8260C
1,2-Dibromoethane	ND	0.50	ug/L	1	09/24/20	MH	SW8260C
1,2-Dichlorobenzene	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
1,2-Dichloroethane	ND	0.60	ug/L	1	09/24/20	MH	SW8260C
1,2-Dichloropropane	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
1,3,5-Trimethylbenzene	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
1,3-Dichlorobenzene	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
1,3-Dichloropropane	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
1,4-Dichlorobenzene	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
2,2-Dichloropropane	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
2-Chlorotoluene	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
2-Hexanone	ND	5.0	ug/L	1	09/24/20	MH	SW8260C
4-Chlorotoluene	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
4-Methyl-2-pentanone	ND	5.0	ug/L	1	09/24/20	MH	SW8260C
Acetone	ND	25	ug/L	1	09/24/20	MH	SW8260C

Project ID: LOCKHEED WILMINGTON MA 60552044.19 Phoenix I.D.: CG83500

Client ID: 20A-AE101R1-092320-1

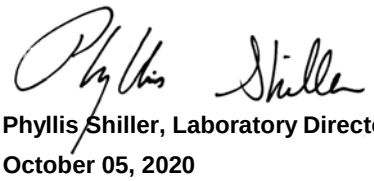
Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	
Benzene	ND	0.70	ug/L	1	09/24/20	MH	SW8260C
Bromobenzene	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
Bromochloromethane	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
Bromodichloromethane	ND	0.50	ug/L	1	09/24/20	MH	SW8260C
Bromoform	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
Bromomethane	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
Carbon Disulfide	ND	5.0	ug/L	1	09/24/20	MH	SW8260C
Carbon tetrachloride	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
Chlorobenzene	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
Chloroethane	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
Chloroform	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
Chloromethane	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
cis-1,2-Dichloroethene	27	1.0	ug/L	1	09/24/20	MH	SW8260C
cis-1,3-Dichloropropene	ND	0.40	ug/L	1	09/24/20	MH	SW8260C
Dibromochloromethane	ND	0.50	ug/L	1	09/24/20	MH	SW8260C
Dibromomethane	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
Dichlorodifluoromethane	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
Ethylbenzene	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
Hexachlorobutadiene	ND	0.40	ug/L	1	09/24/20	MH	SW8260C
Isopropylbenzene	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
m&p-Xylene	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
Methyl ethyl ketone	ND	5.0	ug/L	1	09/24/20	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
Methylene chloride	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
Naphthalene	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
n-Butylbenzene	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
n-Propylbenzene	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
o-Xylene	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
p-Isopropyltoluene	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
sec-Butylbenzene	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
Styrene	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
tert-Butylbenzene	1.4	1.0	ug/L	1	09/24/20	MH	SW8260C
Tetrachloroethene	160	5.0	ug/L	5	09/26/20	MH	SW8260C
Tetrahydrofuran (THF)	ND	2.5	ug/L	1	09/24/20	MH	SW8260C
Toluene	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
trans-1,2-Dichloroethene	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
trans-1,3-Dichloropropene	ND	0.40	ug/L	1	09/24/20	MH	SW8260C
Trichloroethene	33	1.0	ug/L	1	09/24/20	MH	SW8260C
Trichlorofluoromethane	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
Trichlorotrifluoroethane	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
Vinyl chloride	7.5	1.0	ug/L	1	09/24/20	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	97		%	1	09/24/20	MH	70 - 130 %
% Bromofluorobenzene	101		%	1	09/24/20	MH	70 - 130 %
% Dibromofluoromethane	97		%	1	09/24/20	MH	70 - 130 %
% Toluene-d8	100		%	1	09/24/20	MH	70 - 130 %
% 1,2-dichlorobenzene-d4 (5x)	99		%	5	09/26/20	MH	70 - 130 %
% Bromofluorobenzene (5x)	94		%	5	09/26/20	MH	70 - 130 %
% Dibromofluoromethane (5x)	100		%	5	09/26/20	MH	70 - 130 %

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	
% Toluene-d8 (5x)	95		%	5	09/26/20	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	100	ug/L	1	09/24/20	MH	SW8260C (OXY)
Diethyl ether	ND	1.0	ug/L	1	09/24/20	MH	SW8260C (OXY)
Di-isopropyl ether	ND	1.0	ug/L	1	09/24/20	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	1.0	ug/L	1	09/24/20	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	1.0	ug/L	1	09/24/20	MH	SW8260C (OXY)

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.



Phyllis Shiller, Laboratory Director
October 05, 2020
Reviewed and Released by: Greg Lawrence, Assistant Lab Director

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

October 05, 2020

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		09/23/20	10:40
Location Code:	AECOM-WILMINGTN	Received by:	B	09/23/20	14:56
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	127680				

Laboratory Data

SDG ID: GCG83495
Phoenix ID: CG83501

Project ID: LOCKHEED WILMINGTON MA 60552044.19
Client ID: 20A-AE101R1-092320-2

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Volatiles							
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	1	09/26/20	MH	SW8260C
1,1,1-Trichloroethane	ND	1.0	ug/L	1	09/26/20	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L	1	09/26/20	MH	SW8260C
1,1,2-Trichloroethane	ND	1.0	ug/L	1	09/26/20	MH	SW8260C
1,1-Dichloroethane	1.8	1.0	ug/L	1	09/26/20	MH	SW8260C
1,1-Dichloroethene	ND	1.0	ug/L	1	09/26/20	MH	SW8260C
1,1-Dichloropropene	ND	1.0	ug/L	1	09/26/20	MH	SW8260C
1,2,3-Trichlorobenzene	ND	1.0	ug/L	1	09/26/20	MH	SW8260C
1,2,3-Trichloropropane	ND	0.50	ug/L	1	09/26/20	MH	SW8260C
1,2,4-Trichlorobenzene	ND	1.0	ug/L	1	09/26/20	MH	SW8260C
1,2,4-Trimethylbenzene	ND	1.0	ug/L	1	09/26/20	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	0.50	ug/L	1	09/26/20	MH	SW8260C
1,2-Dibromoethane	ND	0.50	ug/L	1	09/26/20	MH	SW8260C
1,2-Dichlorobenzene	ND	1.0	ug/L	1	09/26/20	MH	SW8260C
1,2-Dichloroethane	ND	0.60	ug/L	1	09/26/20	MH	SW8260C
1,2-Dichloropropane	ND	1.0	ug/L	1	09/26/20	MH	SW8260C
1,3,5-Trimethylbenzene	ND	1.0	ug/L	1	09/26/20	MH	SW8260C
1,3-Dichlorobenzene	ND	1.0	ug/L	1	09/26/20	MH	SW8260C
1,3-Dichloropropane	ND	1.0	ug/L	1	09/26/20	MH	SW8260C
1,4-Dichlorobenzene	ND	1.0	ug/L	1	09/26/20	MH	SW8260C
2,2-Dichloropropane	ND	1.0	ug/L	1	09/26/20	MH	SW8260C
2-Chlorotoluene	ND	1.0	ug/L	1	09/26/20	MH	SW8260C
2-Hexanone	ND	5.0	ug/L	1	09/26/20	MH	SW8260C
4-Chlorotoluene	ND	1.0	ug/L	1	09/26/20	MH	SW8260C
4-Methyl-2-pentanone	ND	5.0	ug/L	1	09/26/20	MH	SW8260C
Acetone	ND	25	ug/L	1	09/26/20	MH	SW8260C

Project ID: LOCKHEED WILMINGTON MA 60552044.19 Phoenix I.D.: CG83501

Client ID: 20A-AE101R1-092320-2

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	
Benzene	ND	0.70	ug/L	1	09/26/20	MH	SW8260C
Bromobenzene	ND	1.0	ug/L	1	09/26/20	MH	SW8260C
Bromochloromethane	ND	1.0	ug/L	1	09/26/20	MH	SW8260C
Bromodichloromethane	ND	0.50	ug/L	1	09/26/20	MH	SW8260C
Bromoform	ND	1.0	ug/L	1	09/26/20	MH	SW8260C
Bromomethane	ND	1.0	ug/L	1	09/26/20	MH	SW8260C
Carbon Disulfide	ND	5.0	ug/L	1	09/26/20	MH	SW8260C
Carbon tetrachloride	ND	1.0	ug/L	1	09/26/20	MH	SW8260C
Chlorobenzene	ND	1.0	ug/L	1	09/26/20	MH	SW8260C
Chloroethane	ND	1.0	ug/L	1	09/26/20	MH	SW8260C
Chloroform	ND	1.0	ug/L	1	09/26/20	MH	SW8260C
Chloromethane	ND	1.0	ug/L	1	09/26/20	MH	SW8260C
cis-1,2-Dichloroethene	29	1.0	ug/L	1	09/26/20	MH	SW8260C
cis-1,3-Dichloropropene	ND	0.40	ug/L	1	09/26/20	MH	SW8260C
Dibromochloromethane	ND	0.50	ug/L	1	09/26/20	MH	SW8260C
Dibromomethane	ND	1.0	ug/L	1	09/26/20	MH	SW8260C
Dichlorodifluoromethane	ND	1.0	ug/L	1	09/26/20	MH	SW8260C
Ethylbenzene	ND	1.0	ug/L	1	09/26/20	MH	SW8260C
Hexachlorobutadiene	ND	0.40	ug/L	1	09/26/20	MH	SW8260C
Isopropylbenzene	ND	1.0	ug/L	1	09/26/20	MH	SW8260C
m&p-Xylene	ND	1.0	ug/L	1	09/26/20	MH	SW8260C
Methyl ethyl ketone	ND	5.0	ug/L	1	09/26/20	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	1.0	ug/L	1	09/26/20	MH	SW8260C
Methylene chloride	ND	1.0	ug/L	1	09/26/20	MH	SW8260C
Naphthalene	ND	1.0	ug/L	1	09/26/20	MH	SW8260C
n-Butylbenzene	ND	1.0	ug/L	1	09/26/20	MH	SW8260C
n-Propylbenzene	ND	1.0	ug/L	1	09/26/20	MH	SW8260C
o-Xylene	ND	1.0	ug/L	1	09/26/20	MH	SW8260C
p-Isopropyltoluene	ND	1.0	ug/L	1	09/26/20	MH	SW8260C
sec-Butylbenzene	ND	1.0	ug/L	1	09/26/20	MH	SW8260C
Styrene	ND	1.0	ug/L	1	09/26/20	MH	SW8260C
tert-Butylbenzene	1.7	1.0	ug/L	1	09/26/20	MH	SW8260C
Tetrachloroethene	130	20	ug/L	20	09/24/20	MH	SW8260C
Tetrahydrofuran (THF)	ND	2.5	ug/L	1	09/26/20	MH	SW8260C
Toluene	ND	1.0	ug/L	1	09/26/20	MH	SW8260C
trans-1,2-Dichloroethene	ND	1.0	ug/L	1	09/26/20	MH	SW8260C
trans-1,3-Dichloropropene	ND	0.40	ug/L	1	09/26/20	MH	SW8260C
Trichloroethene	44	1.0	ug/L	1	09/26/20	MH	SW8260C
Trichlorofluoromethane	ND	1.0	ug/L	1	09/26/20	MH	SW8260C
Trichlorotrifluoroethane	ND	1.0	ug/L	1	09/26/20	MH	SW8260C
Vinyl chloride	7.6	1.0	ug/L	1	09/26/20	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	98		%	1	09/26/20	MH	70 - 130 %
% Bromofluorobenzene	94		%	1	09/26/20	MH	70 - 130 %
% Dibromofluoromethane	100		%	1	09/26/20	MH	70 - 130 %
% Toluene-d8	94		%	1	09/26/20	MH	70 - 130 %
% 1,2-dichlorobenzene-d4 (20x)	98		%	20	09/24/20	MH	70 - 130 %
% Bromofluorobenzene (20x)	100		%	20	09/24/20	MH	70 - 130 %
% Dibromofluoromethane (20x)	94		%	20	09/24/20	MH	70 - 130 %

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	
% Toluene-d8 (20x)	105		%	20	09/24/20	MH	70 - 130 %

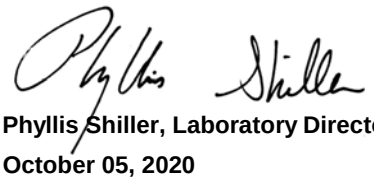
Oxygenates& Dioxane

1,4-dioxane	ND	100	ug/L	1	09/26/20	MH	SW8260C (OXY)
Diethyl ether	ND	1.0	ug/L	1	09/26/20	MH	SW8260C (OXY)
Di-isopropyl ether	ND	1.0	ug/L	1	09/26/20	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	1.0	ug/L	1	09/26/20	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	1.0	ug/L	1	09/26/20	MH	SW8260C (OXY)

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
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Phyllis Shiller, Laboratory Director
October 05, 2020
Reviewed and Released by: Greg Lawrence, Assistant Lab Director

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

October 05, 2020

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		09/23/20	11:40
Location Code:	AECOM-WILMINGTN	Received by:	B	09/23/20	14:56
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	127680				

Laboratory Data

SDG ID: GCG83495
Phoenix ID: CG83502

Project ID: LOCKHEED WILMINGTON MA 60552044.19
Client ID: 20A-AE101R2-092320-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Volatiles							
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
1,1,1-Trichloroethane	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L	1	09/24/20	MH	SW8260C
1,1,2-Trichloroethane	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
1,1-Dichloroethane	7.2	1.0	ug/L	1	09/24/20	MH	SW8260C
1,1-Dichloroethene	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
1,1-Dichloropropene	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
1,2,3-Trichlorobenzene	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
1,2,3-Trichloropropane	ND	0.50	ug/L	1	09/24/20	MH	SW8260C
1,2,4-Trichlorobenzene	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
1,2,4-Trimethylbenzene	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	0.50	ug/L	1	09/24/20	MH	SW8260C
1,2-Dibromoethane	ND	0.50	ug/L	1	09/24/20	MH	SW8260C
1,2-Dichlorobenzene	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
1,2-Dichloroethane	ND	0.60	ug/L	1	09/24/20	MH	SW8260C
1,2-Dichloropropane	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
1,3,5-Trimethylbenzene	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
1,3-Dichlorobenzene	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
1,3-Dichloropropane	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
1,4-Dichlorobenzene	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
2,2-Dichloropropane	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
2-Chlorotoluene	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
2-Hexanone	ND	5.0	ug/L	1	09/24/20	MH	SW8260C
4-Chlorotoluene	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
4-Methyl-2-pentanone	ND	5.0	ug/L	1	09/24/20	MH	SW8260C
Acetone	ND	25	ug/L	1	09/24/20	MH	SW8260C

Project ID: LOCKHEED WILMINGTON MA 60552044.19 Phoenix I.D.: CG83502
Client ID: 20A-AE101R2-092320-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	
Benzene	ND	0.70	ug/L	1	09/24/20	MH	SW8260C
Bromobenzene	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
Bromochloromethane	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
Bromodichloromethane	ND	0.50	ug/L	1	09/24/20	MH	SW8260C
Bromoform	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
Bromomethane	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
Carbon Disulfide	ND	5.0	ug/L	1	09/24/20	MH	SW8260C
Carbon tetrachloride	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
Chlorobenzene	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
Chloroethane	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
Chloroform	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
Chloromethane	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
cis-1,2-Dichloroethene	71	1.0	ug/L	1	09/24/20	MH	SW8260C
cis-1,3-Dichloropropene	ND	0.40	ug/L	1	09/24/20	MH	SW8260C
Dibromochloromethane	ND	0.50	ug/L	1	09/24/20	MH	SW8260C
Dibromomethane	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
Dichlorodifluoromethane	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
Ethylbenzene	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
Hexachlorobutadiene	ND	0.40	ug/L	1	09/24/20	MH	SW8260C
Isopropylbenzene	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
m&p-Xylene	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
Methyl ethyl ketone	ND	5.0	ug/L	1	09/24/20	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
Methylene chloride	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
Naphthalene	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
n-Butylbenzene	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
n-Propylbenzene	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
o-Xylene	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
p-Isopropyltoluene	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
sec-Butylbenzene	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
Styrene	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
tert-Butylbenzene	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
Tetrachloroethene	8.2	1.0	ug/L	1	09/24/20	MH	SW8260C
Tetrahydrofuran (THF)	ND	2.5	ug/L	1	09/24/20	MH	SW8260C
Toluene	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
trans-1,2-Dichloroethene	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
trans-1,3-Dichloropropene	ND	0.40	ug/L	1	09/24/20	MH	SW8260C
Trichloroethene	46	1.0	ug/L	1	09/24/20	MH	SW8260C
Trichlorofluoromethane	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
Trichlorotrifluoroethane	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
Vinyl chloride	18	1.0	ug/L	1	09/24/20	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	98		%	1	09/24/20	MH	70 - 130 %
% Bromofluorobenzene	101		%	1	09/24/20	MH	70 - 130 %
% Dibromofluoromethane	97		%	1	09/24/20	MH	70 - 130 %
% Toluene-d8	101		%	1	09/24/20	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	100	ug/L	1	09/24/20	MH	SW8260C (OXY)
Diethyl ether	ND	1.0	ug/L	1	09/24/20	MH	SW8260C (OXY)

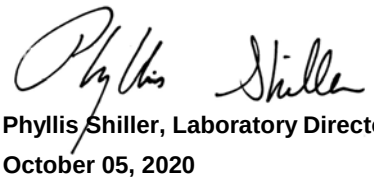
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Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	
Di-isopropyl ether	ND	1.0	ug/L	1	09/24/20	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	1.0	ug/L	1	09/24/20	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	1.0	ug/L	1	09/24/20	MH	SW8260C (OXY)
1,4-dioxane							
1,4-dioxane	5.8	0.20	ug/l	1	09/29/20	AW	SW8270DSIM
QA/QC Surrogates							
% 1,4-dioxane-d8	87		%	1	09/29/20	AW	40 - 140 %
Extraction for 1,4-Dioxane	Completed				09/28/20	S/S	

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.



Phyllis Shiller, Laboratory Director
October 05, 2020
Reviewed and Released by: Greg Lawrence, Assistant Lab Director

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

October 05, 2020

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		09/23/20	10:55
Location Code:	AECOM-WILMINGTN	Received by:	B	09/23/20	14:56
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	127680				

Laboratory Data

SDG ID: GCG83495
Phoenix ID: CG83503

Project ID: LOCKHEED WILMINGTON MA 60552044.19
Client ID: 20A-AE3-092320-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Arsenic	0.043	0.004	mg/L	1	09/24/20	TH	SW6010D
Arsenic (Dissolved)	0.044	0.004	mg/L	1	09/24/20	CPP	SW6010D
Iron (Dissolved)	8.93	0.011	mg/L	1	09/24/20	CPP	SW6010D
Manganese (Dissolved)	1.16	0.001	mg/L	1	09/24/20	CPP	SW6010D
Iron	9.28	0.010	mg/L	1	09/24/20	TH	SW6010D
Manganese	1.18	0.001	mg/L	1	09/24/20	TH	SW6010D
EPH Extraction	Completed				09/25/20	JS/KL/KL	SW3510C
MA Petroleum Hydrocarbon (EPH)	Completed				09/23/20		MADEP EPH-04
Semi-Volatile Extraction	Completed				09/27/20	P/CG	SW3520C
Dissolved Metals Preparation	Completed				09/23/20	AG	SW3005A
Total Metals Digestion	Completed				09/23/20	AG/BF	
MA Petroleum Hydrocarbon (VPH)	Completed				09/25/20	RM	MADEP VPH04
Volatiles							
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
1,1,1-Trichloroethane	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L	1	09/24/20	MH	SW8260C
1,1,2-Trichloroethane	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
1,1-Dichloroethane	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
1,1-Dichloroethene	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
1,1-Dichloropropene	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
1,2,3-Trichlorobenzene	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
1,2,3-Trichloropropane	ND	0.50	ug/L	1	09/24/20	MH	SW8260C
1,2,4-Trichlorobenzene	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
1,2,4-Trimethylbenzene	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	0.50	ug/L	1	09/24/20	MH	SW8260C
1,2-Dibromoethane	ND	0.50	ug/L	1	09/24/20	MH	SW8260C
1,2-Dichlorobenzene	ND	1.0	ug/L	1	09/24/20	MH	SW8260C

Project ID: LOCKHEED WILMINGTON MA 60552044.19 Phoenix I.D.: CG83503

Client ID: 20A-AE3-092320-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	
1,2-Dichloroethane	ND	0.60	ug/L	1	09/24/20	MH	SW8260C
1,2-Dichloropropane	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
1,3,5-Trimethylbenzene	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
1,3-Dichlorobenzene	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
1,3-Dichloropropane	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
1,4-Dichlorobenzene	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
2,2-Dichloropropane	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
2-Chlorotoluene	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
2-Hexanone	ND	5.0	ug/L	1	09/24/20	MH	SW8260C
4-Chlorotoluene	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
4-Methyl-2-pentanone	ND	5.0	ug/L	1	09/24/20	MH	SW8260C
Acetone	ND	25	ug/L	1	09/24/20	MH	SW8260C
Benzene	ND	0.70	ug/L	1	09/24/20	MH	SW8260C
Bromobenzene	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
Bromochloromethane	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
Bromodichloromethane	ND	0.50	ug/L	1	09/24/20	MH	SW8260C
Bromoform	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
Bromomethane	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
Carbon Disulfide	ND	5.0	ug/L	1	09/24/20	MH	SW8260C
Carbon tetrachloride	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
Chlorobenzene	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
Chloroethane	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
Chloroform	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
Chloromethane	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
cis-1,2-Dichloroethene	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
cis-1,3-Dichloropropene	ND	0.40	ug/L	1	09/24/20	MH	SW8260C
Dibromochloromethane	ND	0.50	ug/L	1	09/24/20	MH	SW8260C
Dibromomethane	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
Dichlorodifluoromethane	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
Ethylbenzene	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
Hexachlorobutadiene	ND	0.40	ug/L	1	09/24/20	MH	SW8260C
Isopropylbenzene	4.3	1.0	ug/L	1	09/24/20	MH	SW8260C
m&p-Xylene	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
Methyl ethyl ketone	ND	5.0	ug/L	1	09/24/20	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
Methylene chloride	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
Naphthalene	8.2	1.0	ug/L	1	09/24/20	MH	SW8260C
n-Butylbenzene	6.3	1.0	ug/L	1	09/24/20	MH	SW8260C
n-Propylbenzene	12	1.0	ug/L	1	09/24/20	MH	SW8260C
o-Xylene	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
p-Isopropyltoluene	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
sec-Butylbenzene	8.2	1.0	ug/L	1	09/24/20	MH	SW8260C
Styrene	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
tert-Butylbenzene	6.1	1.0	ug/L	1	09/24/20	MH	SW8260C
Tetrachloroethene	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
Tetrahydrofuran (THF)	ND	2.5	ug/L	1	09/24/20	MH	SW8260C
Toluene	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
trans-1,2-Dichloroethene	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
trans-1,3-Dichloropropene	ND	0.40	ug/L	1	09/24/20	MH	SW8260C

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	
Trichloroethene	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
Trichlorofluoromethane	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
Trichlorotrifluoroethane	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
Vinyl chloride	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	102		%	1	09/24/20	MH	70 - 130 %
% Bromofluorobenzene	107		%	1	09/24/20	MH	70 - 130 %
% Dibromofluoromethane	98		%	1	09/24/20	MH	70 - 130 %
% Toluene-d8	106		%	1	09/24/20	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	100	ug/L	1	09/24/20	MH	SW8260C (OXY)
Diethyl ether	ND	1.0	ug/L	1	09/24/20	MH	SW8260C (OXY)
Di-isopropyl ether	ND	1.0	ug/L	1	09/24/20	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	1.0	ug/L	1	09/24/20	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	1.0	ug/L	1	09/24/20	MH	SW8260C (OXY)
Semivolatiles by SIM, PAH							
2-Methylnaphthalene	3.5	0.47	ug/L	1	09/29/20	WB	SW8270D (SIM)
Acenaphthene	ND	0.47	ug/L	1	09/29/20	WB	SW8270D (SIM)
Acenaphthylene	ND	0.09	ug/L	1	09/29/20	WB	SW8270D (SIM)
Anthracene	ND	0.09	ug/L	1	09/29/20	WB	SW8270D (SIM)
Benz(a)anthracene	ND	0.09	ug/L	1	09/29/20	WB	SW8270D (SIM)
Benzo(a)pyrene	ND	0.19	ug/L	1	09/29/20	WB	SW8270D (SIM)
Benzo(b)fluoranthene	ND	0.09	ug/L	1	09/29/20	WB	SW8270D (SIM)
Benzo(ghi)perylene	ND	0.02	ug/L	1	09/29/20	WB	SW8270D (SIM)
Benzo(k)fluoranthene	ND	0.09	ug/L	1	09/29/20	WB	SW8270D (SIM)
Chrysene	ND	0.05	ug/L	1	09/29/20	WB	SW8270D (SIM)
Dibenz(a,h)anthracene	ND	0.02	ug/L	1	09/29/20	WB	SW8270D (SIM)
Fluoranthene	ND	0.47	ug/L	1	09/29/20	WB	SW8270D (SIM)
Fluorene	ND	0.09	ug/L	1	09/29/20	WB	SW8270D (SIM)
Indeno(1,2,3-cd)pyrene	ND	0.09	ug/L	1	09/29/20	WB	SW8270D (SIM)
Naphthalene	5.8	0.47	ug/L	1	09/29/20	WB	SW8270D (SIM)
Phenanthrene	ND	0.47	ug/L	1	09/29/20	WB	SW8270D (SIM)
Pyrene	ND	0.07	ug/L	1	09/29/20	WB	SW8270D (SIM)
QA/QC Surrogates							
% 2-Fluorobiphenyl	66		%	1	09/29/20	WB	40 - 140 %
% Nitrobenzene-d5	75		%	1	09/29/20	WB	40 - 140 %
% Terphenyl-d14	69		%	1	09/29/20	WB	40 - 140 %
MA EPH Aliphatic/Aromatic Ranges							
C11-C22 Aromatic Hydrocarbons 1,2*	ND	190	ug/L	1	09/28/20	AW	MAEPH 5/2004
C11-C22 Aromatic Hydrocarbons Unadj	ND	190	ug/L	1	09/28/20	AW	MAEPH 5/2004
C19-C36 Aliphatic Hydrocarbons 1*	ND	190	ug/L	1	09/28/20	AW	MAEPH 5/2004
C9-C18 Aliphatic Hydrocarbons 1*	ND	190	ug/L	1	09/28/20	AW	MAEPH 5/2004
Total TPH 1,2*	ND	190	ug/L	1	09/28/20	AW	MAEPH 5/2004
QA/QC Surrogates							
% 1-chlorooctadecane (aliphatic)	64		%	1	09/28/20	AW	40 - 140 %
% 2-Bromonaphthalene (Fractionation)	86		%	1	09/28/20	AW	40 - 140 %
% 2-Fluorobiphenyl (Fractionation)	90		%	1	09/28/20	AW	40 - 140 %

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	
% o-terphenyl (aromatic)	71		%	1	09/28/20	AW	40 - 140 %

MA Volatile Petroleum Hydrocarbons (VPH)

Unadjusted C5-C8 Aliphatics (*1)	ND	100	ug/L	1	09/25/20	RM	MA VPH 5/2004
Unadjusted C9-C12 Aliphatics (*1)	820	100	ug/L	1	09/25/20	RM	MA VPH 5/2004
C5-C8 Aliphatic Hydrocarbons *1,2	ND	100	ug/L	1	09/25/20	RM	MA VPH 5/2004
C9-C12 Aliphatic Hydrocarbons *1,3	540	100	ug/L	1	09/25/20	RM	MA VPH 5/2004
C9-C10 Aromatic Hydrocarbons *1	280	100	ug/L	1	09/25/20	RM	MA VPH 5/2004
Benzene	ND	1.0	ug/L	1	09/25/20	RM	MA VPH 5/2004
Ethyl Benzene	ND	1.0	ug/L	1	09/25/20	RM	MA VPH 5/2004
MTBE	ND	1.0	ug/L	1	09/25/20	RM	MA VPH 5/2004
Naphthalene	7.2	5.0	ug/L	1	09/25/20	RM	MA VPH 5/2004
Toluene	ND	1.0	ug/L	1	09/25/20	RM	MA VPH 5/2004
m,p-Xylenes	ND	2.0	ug/L	1	09/25/20	RM	MA VPH 5/2004
o-Xylene	2.1	1.0	ug/L	1	09/25/20	RM	MA VPH 5/2004
QA/QC Surrogates							
% 2,5-Dibromotoluene (FID)	85		%	1	09/25/20	RM	70 - 130 %
% 2,5-Dibromotoluene (PID)	95		%	1	09/25/20	RM	70 - 130 %

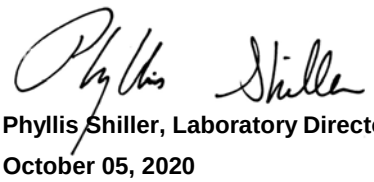
RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

MAEPH:
1* Hydrocarbon range data exclude concentrations of any surrogate(s) and/or internal standards eluting in that range.
2* C11-C12 Aromatic Hydrocarbons exclude the concentration of Target PAH analytes eluting in that range.

VPH:
*1 Range data exclude conc.s of any surrogate(s) and/or Int. std.s eluting in that range.
*2 C5-C8 and C9-C12 Aliphatic exclude the conc. of Target Analytes in that range.
*3 C9-C12 Aliphatic also exclude C9-C10 Aromatic Hydrocarbon

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.



Phyllis Shiller, Laboratory Director
October 05, 2020
Reviewed and Released by: Greg Lawrence, Assistant Lab Director

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

October 05, 2020

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		09/23/20	11:00
Location Code:	AECOM-WILMINGTN	Received by:	B	09/23/20	14:56
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	127680				

Laboratory Data

SDG ID: GCG83495
Phoenix ID: CG83504

Project ID: LOCKHEED WILMINGTON MA 60552044.19
Client ID: 20A-AE3-092320-2

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Arsenic	0.045	0.004	mg/L	1	09/24/20	TH	SW6010D
Arsenic (Dissolved)	0.045	0.004	mg/L	1	09/24/20	CPP	SW6010D
Iron (Dissolved)	8.90	0.011	mg/L	1	09/24/20	CPP	SW6010D
Manganese (Dissolved)	1.17	0.001	mg/L	1	09/24/20	CPP	SW6010D
Iron	9.44	0.010	mg/L	1	09/24/20	TH	SW6010D
Manganese	1.19	0.001	mg/L	1	09/24/20	TH	SW6010D
EPH Extraction	Completed				09/25/20	JS/KL/KL	SW3510C
MA Petroleum Hydrocarbon (EPH)	Completed				09/23/20		MADEP EPH-04
Semi-Volatile Extraction	Completed				09/27/20	P/CG	SW3520C
Dissolved Metals Preparation	Completed				09/23/20	AG	SW3005A
Total Metals Digestion	Completed				09/23/20	AG/BF	
MA Petroleum Hydrocarbon (VPH)	Completed				09/25/20	RM	MADEP VPH04
Volatiles							
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
1,1,1-Trichloroethane	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L	1	09/24/20	MH	SW8260C
1,1,2-Trichloroethane	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
1,1-Dichloroethane	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
1,1-Dichloroethene	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
1,1-Dichloropropene	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
1,2,3-Trichlorobenzene	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
1,2,3-Trichloropropane	ND	0.50	ug/L	1	09/24/20	MH	SW8260C
1,2,4-Trichlorobenzene	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
1,2,4-Trimethylbenzene	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	0.50	ug/L	1	09/24/20	MH	SW8260C
1,2-Dibromoethane	ND	0.50	ug/L	1	09/24/20	MH	SW8260C
1,2-Dichlorobenzene	ND	1.0	ug/L	1	09/24/20	MH	SW8260C

Project ID: LOCKHEED WILMINGTON MA 60552044.19 Phoenix I.D.: CG83504

Client ID: 20A-AE3-092320-2

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	
1,2-Dichloroethane	ND	0.60	ug/L	1	09/24/20	MH	SW8260C
1,2-Dichloropropane	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
1,3,5-Trimethylbenzene	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
1,3-Dichlorobenzene	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
1,3-Dichloropropane	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
1,4-Dichlorobenzene	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
2,2-Dichloropropane	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
2-Chlorotoluene	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
2-Hexanone	ND	5.0	ug/L	1	09/24/20	MH	SW8260C
4-Chlorotoluene	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
4-Methyl-2-pentanone	ND	5.0	ug/L	1	09/24/20	MH	SW8260C
Acetone	ND	25	ug/L	1	09/24/20	MH	SW8260C
Benzene	ND	0.70	ug/L	1	09/24/20	MH	SW8260C
Bromobenzene	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
Bromochloromethane	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
Bromodichloromethane	ND	0.50	ug/L	1	09/24/20	MH	SW8260C
Bromoform	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
Bromomethane	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
Carbon Disulfide	ND	5.0	ug/L	1	09/24/20	MH	SW8260C
Carbon tetrachloride	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
Chlorobenzene	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
Chloroethane	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
Chloroform	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
Chloromethane	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
cis-1,2-Dichloroethene	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
cis-1,3-Dichloropropene	ND	0.40	ug/L	1	09/24/20	MH	SW8260C
Dibromochloromethane	ND	0.50	ug/L	1	09/24/20	MH	SW8260C
Dibromomethane	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
Dichlorodifluoromethane	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
Ethylbenzene	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
Hexachlorobutadiene	ND	0.40	ug/L	1	09/24/20	MH	SW8260C
Isopropylbenzene	4.5	1.0	ug/L	1	09/24/20	MH	SW8260C
m&p-Xylene	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
Methyl ethyl ketone	ND	5.0	ug/L	1	09/24/20	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
Methylene chloride	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
Naphthalene	7.8	1.0	ug/L	1	09/24/20	MH	SW8260C
n-Butylbenzene	6.2	1.0	ug/L	1	09/24/20	MH	SW8260C
n-Propylbenzene	12	1.0	ug/L	1	09/24/20	MH	SW8260C
o-Xylene	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
p-Isopropyltoluene	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
sec-Butylbenzene	8.2	1.0	ug/L	1	09/24/20	MH	SW8260C
Styrene	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
tert-Butylbenzene	6.4	1.0	ug/L	1	09/24/20	MH	SW8260C
Tetrachloroethene	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
Tetrahydrofuran (THF)	ND	2.5	ug/L	1	09/24/20	MH	SW8260C
Toluene	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
trans-1,2-Dichloroethene	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
trans-1,3-Dichloropropene	ND	0.40	ug/L	1	09/24/20	MH	SW8260C

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	
Trichloroethene	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
Trichlorofluoromethane	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
Trichlorotrifluoroethane	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
Vinyl chloride	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	98		%	1	09/24/20	MH	70 - 130 %
% Bromofluorobenzene	102		%	1	09/24/20	MH	70 - 130 %
% Dibromofluoromethane	98		%	1	09/24/20	MH	70 - 130 %
% Toluene-d8	103		%	1	09/24/20	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	100	ug/L	1	09/24/20	MH	SW8260C (OXY)
Diethyl ether	ND	1.0	ug/L	1	09/24/20	MH	SW8260C (OXY)
Di-isopropyl ether	ND	1.0	ug/L	1	09/24/20	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	1.0	ug/L	1	09/24/20	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	1.0	ug/L	1	09/24/20	MH	SW8260C (OXY)
Semivolatiles by SIM, PAH							
2-Methylnaphthalene	3.2	0.47	ug/L	1	09/29/20	WB	SW8270D (SIM)
Acenaphthene	ND	0.47	ug/L	1	09/29/20	WB	SW8270D (SIM)
Acenaphthylene	ND	0.09	ug/L	1	09/29/20	WB	SW8270D (SIM)
Anthracene	ND	0.09	ug/L	1	09/29/20	WB	SW8270D (SIM)
Benz(a)anthracene	ND	0.09	ug/L	1	09/29/20	WB	SW8270D (SIM)
Benzo(a)pyrene	ND	0.19	ug/L	1	09/29/20	WB	SW8270D (SIM)
Benzo(b)fluoranthene	ND	0.09	ug/L	1	09/29/20	WB	SW8270D (SIM)
Benzo(ghi)perylene	ND	0.02	ug/L	1	09/29/20	WB	SW8270D (SIM)
Benzo(k)fluoranthene	ND	0.09	ug/L	1	09/29/20	WB	SW8270D (SIM)
Chrysene	ND	0.05	ug/L	1	09/29/20	WB	SW8270D (SIM)
Dibenz(a,h)anthracene	ND	0.02	ug/L	1	09/29/20	WB	SW8270D (SIM)
Fluoranthene	ND	0.47	ug/L	1	09/29/20	WB	SW8270D (SIM)
Fluorene	ND	0.09	ug/L	1	09/29/20	WB	SW8270D (SIM)
Indeno(1,2,3-cd)pyrene	ND	0.09	ug/L	1	09/29/20	WB	SW8270D (SIM)
Naphthalene	5.4	0.47	ug/L	1	09/29/20	WB	SW8270D (SIM)
Phenanthrene	ND	0.47	ug/L	1	09/29/20	WB	SW8270D (SIM)
Pyrene	ND	0.07	ug/L	1	09/29/20	WB	SW8270D (SIM)
QA/QC Surrogates							
% 2-Fluorobiphenyl	59		%	1	09/29/20	WB	40 - 140 %
% Nitrobenzene-d5	71		%	1	09/29/20	WB	40 - 140 %
% Terphenyl-d14	57		%	1	09/29/20	WB	40 - 140 %
MA EPH Aliphatic/Aromatic Ranges							
C11-C22 Aromatic Hydrocarbons 1,2*	ND	190	ug/L	1	09/28/20	AW	MAEPH 5/2004
C11-C22 Aromatic Hydrocarbons Unadj	ND	190	ug/L	1	09/28/20	AW	MAEPH 5/2004
C19-C36 Aliphatic Hydrocarbons 1*	ND	190	ug/L	1	09/28/20	AW	MAEPH 5/2004
C9-C18 Aliphatic Hydrocarbons 1*	ND	190	ug/L	1	09/28/20	AW	MAEPH 5/2004
Total TPH 1,2*	ND	190	ug/L	1	09/28/20	AW	MAEPH 5/2004
QA/QC Surrogates							
% 1-chlorooctadecane (aliphatic)	66		%	1	09/28/20	AW	40 - 140 %
% 2-Bromonaphthalene (Fractionation)	86		%	1	09/28/20	AW	40 - 140 %
% 2-Fluorobiphenyl (Fractionation)	88		%	1	09/28/20	AW	40 - 140 %

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	
% o-terphenyl (aromatic)	73		%	1	09/28/20	AW	40 - 140 %

MA Volatile Petroleum Hydrocarbons (VPH)

Unadjusted C5-C8 Aliphatics (*1)	ND	100	ug/L	1	09/25/20	RM	MA VPH 5/2004
Unadjusted C9-C12 Aliphatics (*1)	900	100	ug/L	1	09/25/20	RM	MA VPH 5/2004
C5-C8 Aliphatic Hydrocarbons *1,2	ND	100	ug/L	1	09/25/20	RM	MA VPH 5/2004
C9-C12 Aliphatic Hydrocarbons *1,3	630	100	ug/L	1	09/25/20	RM	MA VPH 5/2004
C9-C10 Aromatic Hydrocarbons *1	260	100	ug/L	1	09/25/20	RM	MA VPH 5/2004
Benzene	ND	1.0	ug/L	1	09/25/20	RM	MA VPH 5/2004
Ethyl Benzene	ND	1.0	ug/L	1	09/25/20	RM	MA VPH 5/2004
MTBE	ND	1.0	ug/L	1	09/25/20	RM	MA VPH 5/2004
Naphthalene	9.4	5.0	ug/L	1	09/25/20	RM	MA VPH 5/2004
Toluene	ND	1.0	ug/L	1	09/25/20	RM	MA VPH 5/2004
m,p-Xylenes	ND	2.0	ug/L	1	09/25/20	RM	MA VPH 5/2004
o-Xylene	2.1	1.0	ug/L	1	09/25/20	RM	MA VPH 5/2004
QA/QC Surrogates							
% 2,5-Dibromotoluene (FID)	90		%	1	09/25/20	RM	70 - 130 %
% 2,5-Dibromotoluene (PID)	89		%	1	09/25/20	RM	70 - 130 %

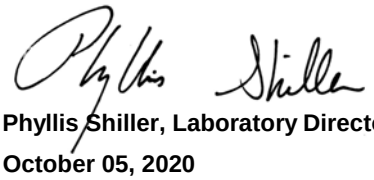
RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

MAEPH:
1* Hydrocarbon range data exclude concentrations of any surrogate(s) and/or internal standards eluting in that range.
2* C11-C12 Aromatic Hydrocarbons exclude the concentration of Target PAH analytes eluting in that range.

VPH:
*1 Range data exclude conc.s of any surrogate(s) and/or Int. std.s eluting in that range.
*2 C5-C8 and C9-C12 Aliphatic exclude the conc. of Target Analytes in that range.
*3 C9-C12 Aliphatic also exclude C9-C10 Aromatic Hydrocarbon

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.



Phyllis Shiller, Laboratory Director
October 05, 2020
Reviewed and Released by: Greg Lawrence, Assistant Lab Director

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

October 05, 2020

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		09/23/20	11:10
Location Code:	AECOM-WILMINGTN	Received by:	B	09/23/20	14:56
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	127680				

Laboratory Data

SDG ID: GCG83495
Phoenix ID: CG83505

Project ID: LOCKHEED WILMINGTON MA 60552044.19
Client ID: 20A-TRC103-092320-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
EPH Extraction	Completed				09/25/20	JS/KL/KL	SW3510C
MA Petroleum Hydrocarbon (EPH)	Completed				09/23/20		MADEP EPH-04
Semi-Volatile Extraction	Completed				09/27/20	S/P/CG/KT	SW3520C
MA Petroleum Hydrocarbon (VPH)	Completed				09/25/20	RM	MADEP VPH04
Volatiles							
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
1,1,1-Trichloroethane	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L	1	09/24/20	MH	SW8260C
1,1,2-Trichloroethane	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
1,1-Dichloroethane	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
1,1-Dichloroethene	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
1,1-Dichloropropene	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
1,2,3-Trichlorobenzene	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
1,2,3-Trichloropropane	ND	0.50	ug/L	1	09/24/20	MH	SW8260C
1,2,4-Trichlorobenzene	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
1,2,4-Trimethylbenzene	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	0.50	ug/L	1	09/24/20	MH	SW8260C
1,2-Dibromoethane	ND	0.50	ug/L	1	09/24/20	MH	SW8260C
1,2-Dichlorobenzene	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
1,2-Dichloroethane	ND	0.60	ug/L	1	09/24/20	MH	SW8260C
1,2-Dichloropropane	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
1,3,5-Trimethylbenzene	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
1,3-Dichlorobenzene	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
1,3-Dichloropropane	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
1,4-Dichlorobenzene	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
2,2-Dichloropropane	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
2-Chlorotoluene	ND	1.0	ug/L	1	09/24/20	MH	SW8260C

Project ID: LOCKHEED WILMINGTON MA 60552044.19 Phoenix I.D.: CG83505

Client ID: 20A-TRC103-092320-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	
2-Hexanone	ND	5.0	ug/L	1	09/24/20	MH	SW8260C
4-Chlorotoluene	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
4-Methyl-2-pentanone	ND	5.0	ug/L	1	09/24/20	MH	SW8260C
Acetone	ND	25	ug/L	1	09/24/20	MH	SW8260C
Benzene	ND	0.70	ug/L	1	09/24/20	MH	SW8260C
Bromobenzene	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
Bromochloromethane	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
Bromodichloromethane	ND	0.50	ug/L	1	09/24/20	MH	SW8260C
Bromoform	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
Bromomethane	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
Carbon Disulfide	ND	5.0	ug/L	1	09/24/20	MH	SW8260C
Carbon tetrachloride	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
Chlorobenzene	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
Chloroethane	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
Chloroform	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
Chloromethane	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
cis-1,2-Dichloroethene	2.1	1.0	ug/L	1	09/24/20	MH	SW8260C
cis-1,3-Dichloropropene	ND	0.40	ug/L	1	09/24/20	MH	SW8260C
Dibromochloromethane	ND	0.50	ug/L	1	09/24/20	MH	SW8260C
Dibromomethane	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
Dichlorodifluoromethane	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
Ethylbenzene	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
Hexachlorobutadiene	ND	0.40	ug/L	1	09/24/20	MH	SW8260C
Isopropylbenzene	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
m&p-Xylene	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
Methyl ethyl ketone	ND	5.0	ug/L	1	09/24/20	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
Methylene chloride	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
Naphthalene	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
n-Butylbenzene	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
n-Propylbenzene	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
o-Xylene	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
p-Isopropyltoluene	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
sec-Butylbenzene	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
Styrene	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
tert-Butylbenzene	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
Tetrachloroethene	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
Tetrahydrofuran (THF)	ND	2.5	ug/L	1	09/24/20	MH	SW8260C
Toluene	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
trans-1,2-Dichloroethene	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
trans-1,3-Dichloropropene	ND	0.40	ug/L	1	09/24/20	MH	SW8260C
Trichloroethene	1.1	1.0	ug/L	1	09/24/20	MH	SW8260C
Trichlorofluoromethane	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
Trichlorotrifluoroethane	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
Vinyl chloride	1.0	1.0	ug/L	1	09/24/20	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	99		%	1	09/24/20	MH	70 - 130 %
% Bromofluorobenzene	103		%	1	09/24/20	MH	70 - 130 %
% Dibromofluoromethane	98		%	1	09/24/20	MH	70 - 130 %

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	
% Toluene-d8	101		%	1	09/24/20	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	100	ug/L	1	09/24/20	MH	SW8260C (OXY)
Diethyl ether	ND	1.0	ug/L	1	09/24/20	MH	SW8260C (OXY)
Di-isopropyl ether	ND	1.0	ug/L	1	09/24/20	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	1.0	ug/L	1	09/24/20	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	1.0	ug/L	1	09/24/20	MH	SW8260C (OXY)
Semivolatiles by SIM, PAH							
2-Methylnaphthalene	ND	0.47	ug/L	1	09/29/20	WB	SW8270D (SIM)
Acenaphthene	ND	0.47	ug/L	1	09/29/20	WB	SW8270D (SIM)
Acenaphthylene	ND	0.09	ug/L	1	09/29/20	WB	SW8270D (SIM)
Anthracene	ND	0.09	ug/L	1	09/29/20	WB	SW8270D (SIM)
Benz(a)anthracene	ND	0.09	ug/L	1	09/29/20	WB	SW8270D (SIM)
Benzo(a)pyrene	ND	0.19	ug/L	1	09/29/20	WB	SW8270D (SIM)
Benzo(b)fluoranthene	ND	0.09	ug/L	1	09/29/20	WB	SW8270D (SIM)
Benzo(ghi)perylene	ND	0.02	ug/L	1	09/29/20	WB	SW8270D (SIM)
Benzo(k)fluoranthene	ND	0.09	ug/L	1	09/29/20	WB	SW8270D (SIM)
Chrysene	ND	0.05	ug/L	1	09/29/20	WB	SW8270D (SIM)
Dibenz(a,h)anthracene	ND	0.02	ug/L	1	09/29/20	WB	SW8270D (SIM)
Fluoranthene	ND	0.47	ug/L	1	09/29/20	WB	SW8270D (SIM)
Fluorene	ND	0.09	ug/L	1	09/29/20	WB	SW8270D (SIM)
Indeno(1,2,3-cd)pyrene	ND	0.09	ug/L	1	09/29/20	WB	SW8270D (SIM)
Naphthalene	ND	0.47	ug/L	1	09/29/20	WB	SW8270D (SIM)
Phenanthrene	ND	0.47	ug/L	1	09/29/20	WB	SW8270D (SIM)
Pyrene	ND	0.07	ug/L	1	09/29/20	WB	SW8270D (SIM)
QA/QC Surrogates							
% 2-Fluorobiphenyl	53		%	1	09/29/20	WB	40 - 140 %
% Nitrobenzene-d5	69		%	1	09/29/20	WB	40 - 140 %
% Terphenyl-d14	64		%	1	09/29/20	WB	40 - 140 %
MA EPH Aliphatic/Aromatic Ranges							
C11-C22 Aromatic Hydrocarbons 1,2*	ND	200	ug/L	1	09/26/20	AW	MAEPH 5/2004
C11-C22 Aromatic Hydrocarbons Unadj	ND	200	ug/L	1	09/26/20	AW	MAEPH 5/2004
C19-C36 Aliphatic Hydrocarbons 1*	ND	200	ug/L	1	09/26/20	AW	MAEPH 5/2004
C9-C18 Aliphatic Hydrocarbons 1*	ND	200	ug/L	1	09/26/20	AW	MAEPH 5/2004
Total TPH 1,2*	ND	200	ug/L	1	09/26/20	AW	MAEPH 5/2004
QA/QC Surrogates							
% 1-chlorooctadecane (aliphatic)	82		%	1	09/26/20	AW	40 - 140 %
% 2-Bromonaphthalene (Fractionation)	102		%	1	09/26/20	AW	40 - 140 %
% 2-Fluorobiphenyl (Fractionation)	115		%	1	09/26/20	AW	40 - 140 %
% o-terphenyl (aromatic)	89		%	1	09/26/20	AW	40 - 140 %
MA Volatile Petroleum Hydrocarbons (VPH)							
Unadjusted C5-C8 Aliphatics (*1)	ND	100	ug/L	1	09/25/20	RM	MA VPH 5/2004
Unadjusted C9-C12 Aliphatics (*1)	ND	100	ug/L	1	09/25/20	RM	MA VPH 5/2004
C5-C8 Aliphatic Hydrocarbons *1,2	ND	100	ug/L	1	09/25/20	RM	MA VPH 5/2004
C9-C12 Aliphatic Hydrocarbons *1,3	ND	100	ug/L	1	09/25/20	RM	MA VPH 5/2004
C9-C10 Aromatic Hydrocarbons *1	ND	100	ug/L	1	09/25/20	RM	MA VPH 5/2004

Project ID: LOCKHEED WILMINGTON MA 60552044.19 Phoenix I.D.: CG83505

Client ID: 20A-TRC103-092320-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	
Benzene	ND	1.0	ug/L	1	09/25/20	RM	MA VPH 5/2004
Ethyl Benzene	1.9	1.0	ug/L	1	09/25/20	RM	MA VPH 5/2004
MTBE	ND	1.0	ug/L	1	09/25/20	RM	MA VPH 5/2004
Naphthalene	ND	5.0	ug/L	1	09/25/20	RM	MA VPH 5/2004
Toluene	ND	1.0	ug/L	1	09/25/20	RM	MA VPH 5/2004
m,p-Xylenes	ND	2.0	ug/L	1	09/25/20	RM	MA VPH 5/2004
o-Xylene	2.7	1.0	ug/L	1	09/25/20	RM	MA VPH 5/2004
QA/QC Surrogates							
% 2,5-Dibromotoluene (FID)	94		%	1	09/25/20	RM	70 - 130 %
% 2,5-Dibromotoluene (PID)	93		%	1	09/25/20	RM	70 - 130 %

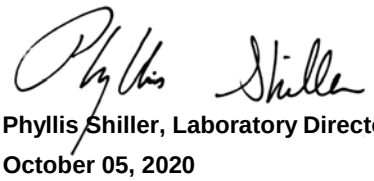
RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

MAEPH:
1* Hydrocarbon range data exclude concentrations of any surrogate(s) and/or internal standards eluting in that range.
2* C11-C12 Aromatic Hydrocarbons exclude the concentration of Target PAH analytes eluting in that range.

VPH:
*1 Range data exclude conc.s of any surrogate(s) and/or Int. std.s eluting in that range.
*2 C5-C8 and C9-C12 Aliphatic exclude the conc. of Target Analytes in that range.
*3 C9-C12 Aliphatic also exclude C9-C10 Aromatic Hydrocarbon

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.



Phyllis Shiller, Laboratory Director

October 05, 2020

Reviewed and Released by: Greg Lawrence, Assistant Lab Director

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

October 05, 2020

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		09/23/20	13:05
Location Code:	AECOM-WILMINGTN	Received by:	B	09/23/20	14:56
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	127680				

Laboratory Data

SDG ID: GCG83495
Phoenix ID: CG83506

Project ID: LOCKHEED WILMINGTON MA 60552044.19
Client ID: 20A-AE101R3-092320-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Volatiles							
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
1,1,1-Trichloroethane	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L	1	09/24/20	MH	SW8260C
1,1,2-Trichloroethane	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
1,1-Dichloroethane	2.5	1.0	ug/L	1	09/24/20	MH	SW8260C
1,1-Dichloroethene	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
1,1-Dichloropropene	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
1,2,3-Trichlorobenzene	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
1,2,3-Trichloropropane	ND	0.50	ug/L	1	09/24/20	MH	SW8260C
1,2,4-Trichlorobenzene	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
1,2,4-Trimethylbenzene	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	0.50	ug/L	1	09/24/20	MH	SW8260C
1,2-Dibromoethane	ND	0.50	ug/L	1	09/24/20	MH	SW8260C
1,2-Dichlorobenzene	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
1,2-Dichloroethane	ND	0.60	ug/L	1	09/24/20	MH	SW8260C
1,2-Dichloropropane	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
1,3,5-Trimethylbenzene	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
1,3-Dichlorobenzene	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
1,3-Dichloropropane	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
1,4-Dichlorobenzene	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
2,2-Dichloropropane	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
2-Chlorotoluene	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
2-Hexanone	ND	5.0	ug/L	1	09/24/20	MH	SW8260C
4-Chlorotoluene	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
4-Methyl-2-pentanone	ND	5.0	ug/L	1	09/24/20	MH	SW8260C
Acetone	ND	25	ug/L	1	09/24/20	MH	SW8260C

Project ID: LOCKHEED WILMINGTON MA 60552044.19 Phoenix I.D.: CG83506
Client ID: 20A-AE101R3-092320-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	
Benzene	ND	0.70	ug/L	1	09/24/20	MH	SW8260C
Bromobenzene	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
Bromochloromethane	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
Bromodichloromethane	ND	0.50	ug/L	1	09/24/20	MH	SW8260C
Bromoform	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
Bromomethane	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
Carbon Disulfide	ND	5.0	ug/L	1	09/24/20	MH	SW8260C
Carbon tetrachloride	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
Chlorobenzene	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
Chloroethane	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
Chloroform	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
Chloromethane	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
cis-1,2-Dichloroethene	9.6	1.0	ug/L	1	09/24/20	MH	SW8260C
cis-1,3-Dichloropropene	ND	0.40	ug/L	1	09/24/20	MH	SW8260C
Dibromochloromethane	ND	0.50	ug/L	1	09/24/20	MH	SW8260C
Dibromomethane	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
Dichlorodifluoromethane	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
Ethylbenzene	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
Hexachlorobutadiene	ND	0.40	ug/L	1	09/24/20	MH	SW8260C
Isopropylbenzene	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
m&p-Xylene	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
Methyl ethyl ketone	ND	5.0	ug/L	1	09/24/20	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
Methylene chloride	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
Naphthalene	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
n-Butylbenzene	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
n-Propylbenzene	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
o-Xylene	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
p-Isopropyltoluene	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
sec-Butylbenzene	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
Styrene	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
tert-Butylbenzene	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
Tetrachloroethene	2.1	1.0	ug/L	1	09/24/20	MH	SW8260C
Tetrahydrofuran (THF)	ND	2.5	ug/L	1	09/24/20	MH	SW8260C
Toluene	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
trans-1,2-Dichloroethene	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
trans-1,3-Dichloropropene	ND	0.40	ug/L	1	09/24/20	MH	SW8260C
Trichloroethene	7.3	1.0	ug/L	1	09/24/20	MH	SW8260C
Trichlorofluoromethane	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
Trichlorotrifluoroethane	ND	1.0	ug/L	1	09/24/20	MH	SW8260C
Vinyl chloride	3.6	1.0	ug/L	1	09/24/20	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	99		%	1	09/24/20	MH	70 - 130 %
% Bromofluorobenzene	99		%	1	09/24/20	MH	70 - 130 %
% Dibromofluoromethane	95		%	1	09/24/20	MH	70 - 130 %
% Toluene-d8	102		%	1	09/24/20	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	100	ug/L	1	09/24/20	MH	SW8260C (OXY)
Diethyl ether	ND	1.0	ug/L	1	09/24/20	MH	SW8260C (OXY)

Ver 2

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	
Di-isopropyl ether	ND	1.0	ug/L	1	09/24/20	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	1.0	ug/L	1	09/24/20	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	1.0	ug/L	1	09/24/20	MH	SW8260C (OXY)
1,4-dioxane							
1,4-dioxane	2.7	0.20	ug/l	1	09/29/20	AW	SW8270DSIM
QA/QC Surrogates							
% 1,4-dioxane-d8	85		%	1	09/29/20	AW	40 - 140 %
Extraction for 1,4-Dioxane	Completed				09/28/20	S/S	

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

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Phyllis Shiller, Laboratory Director
October 05, 2020
Reviewed and Released by: Greg Lawrence, Assistant Lab Director

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

QA/QC Report

October 05, 2020

QA/QC Data

SDG I.D.: GCG83495

Parameter	Blank	Blk RL	Sample Result	Dup Result	Dup RPD	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits
QA/QC Batch 546613 (mg/L), QC Sample No: CG83504 (CG83496, CG83503, CG83504)													
ICP Metals - Dissolved													
Arsenic	BRL	0.003	0.045	0.044	2.20	89.4	89.8	0.4	92.5			80 - 120	20
Iron	BRL	0.006	8.90	8.77	1.50	90.6	91.4	0.9	NC			80 - 120	20
Manganese	BRL	0.001	1.17	1.16	0.90	91.7	92.1	0.4	90.5			80 - 120	20
Comment:													
Additional: LCS acceptance range is 80-120% MS acceptance range 75-125%.													
QA/QC Batch 546661 (mg/L), QC Sample No: CG83857 (CG83496, CG83503, CG83504)													
ICP Metals - Aqueous													
Arsenic	BRL	0.004	0.005	<0.004	NC	99.9	101	1.1	101			80 - 120	20
Iron	BRL	0.010	1.18	1.14	3.40	102	107	4.8	108			80 - 120	20
Manganese	BRL	0.001	0.114	0.115	0.90	103	104	1.0	104			80 - 120	20
Comment:													
Additional: LCS acceptance range is 80-120% MS acceptance range 75-125%.													

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QA/QC Report

October 05, 2020

QA/QC Data

SDG I.D.: GCG83495

Parameter	Blank	Blk RL	Sample Result	Dup Result	Dup RPD	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits
QA/QC Batch 546805 (mg/L), QC Sample No: CG83147 (CG83496)													
Sulfide	BRL	0.05	0.07	0.07	NC	95.1			86.0			90 - 110	20
QA/QC Batch 547068 (mg/L), QC Sample No: CG84991 (CG83496)													
Total Organic Carbon	BRL	1.0	<1.0	<1.0	NC	95.0			88.0			85 - 115	20
Comment:													
Additional: LCS acceptance range is 85-115% MS acceptance range 75-125%.													
QA/QC Batch 546811 (mg/L), QC Sample No: CG83510 (CG83496)													
Chloride	BRL	3.0	10.8	11.1	NC	102			102			90 - 110	20
Nitrate as Nitrogen	BRL	0.05	0.08	0.09	NC	104			104			90 - 110	20
Nitrite as Nitrogen	BRL	0.004	<0.004	<0.004	NC	98.6			97.4			90 - 110	20
Sulfate	BRL	3.0	3.6	3.2	NC	100			98.9			90 - 110	20

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QA/QC Report

October 05, 2020

QA/QC Data

SDG I.D.: GCG83495

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits
QA/QC Batch 546937 (ug/L), QC Sample No: CG84812 (CG83496, CG83503, CG83504, CG83505)										
MAEPH - Ground Water										
C9-C18 Aliphatic Hydrocarbons 1*	ND	100	54	49	9.7	66	61	7.9	40 - 140	25
C19-C36 Aliphatic Hydrocarbons 1*	ND	100	80	78	2.5	94	83	12.4	40 - 140	25
C11-C22 Aromatic Hydrocarbons 1	ND	100	73	62	16.3	81	75	7.7	40 - 140	25
C11-C22 Aromatic Hydrocarbons U	ND	100							40 - 140	25
Total TPH 1,2*	ND	100	69	66	4.4	82	73	11.6	40 - 140	25
C9 - Nonane	ND	10	35	31	12.1	48	46	4.3	30 - 140	25
C-10 Decane	ND	10	40	37	7.8	55	51	7.5	40 - 140	25
C12 - Dodecane	ND	10	44	40	9.5	58	54	7.1	40 - 140	25
C14 - Tetradecane	ND	10	58	53	9.0	71	64	10.4	40 - 140	25
C16 - Hexadecane	ND	10	68	62	9.2	77	70	9.5	40 - 140	25
C18 - Octadecane	ND	10	76	70	8.2	86	78	9.8	40 - 140	25
C19 - Nonadecane	ND	10	77	72	6.7	89	80	10.7	40 - 140	25
C20 - Eicosane	ND	10	77	73	5.3	90	80	11.8	40 - 140	25
C22 - Docosane	ND	10	77	73	5.3	90	80	11.8	40 - 140	25
C24 - Tetracosane	ND	10	78	74	5.3	91	81	11.6	40 - 140	25
C26 - Hexacosane	ND	10	78	74	5.3	92	81	12.7	40 - 140	25
C28 - Octacosane	ND	10	77	74	4.0	91	80	12.9	40 - 140	25
C30 - Tricotane	ND	10	75	74	1.3	90	79	13.0	40 - 140	25
C36 - Hexatriacontane	ND	10	99	110	10.5	119	100	17.4	40 - 140	25
% 1-chlorooctadecane (aliphatic)	65	%	68	73	7.1	68	56	19.4	40 - 140	25
% o-terphenyl (aromatic)	78	%	73	64	13.1	80	72	10.5	40 - 140	25
% 2-Fluorobiphenyl (Fractionation)	93	%	90	103	13.5	98	91	7.4	40 - 140	25
% 2-Bromonaphthalene (Fractionati	87	%	101	105	3.9	112	102	9.3	40 - 140	25
% 2-Methylnaphthalene BT		%	0	0	NC				0 - 5	
% Naphthalene BT		%	0	0	NC				0 - 5	

Comment:

A LCS and LCS Duplicate were performed instead of a matrix spike and matrix spike duplicate.

Additional EPH fractionation criteria: Breakthrough criteria (BT) is 0 to 5%

QA/QC Batch 547240 (ug/l), QC Sample No: CG85194 (CG83496, CG83498, CG83499, CG83502, CG83506)										
1,4dioxane - Ground Water										
1,4-dioxane	ND	0.20	89	79	11.9	83			40 - 140	30
% 1,4-dioxane-d8	94	%	88	86	2.3	83			40 - 140	30
QA/QC Batch 547131 (ug/L), QC Sample No: CG84812 (CG83496, CG83503, CG83504)										
Semivolatiles by SIM, PAH - Ground Water										
2-Methylnaphthalene	ND	0.50	68	81	17.4	66			40 - 140	20
Acenaphthene	ND	0.50	84	85	1.2	78			40 - 140	20
Acenaphthylene	ND	0.10	74	77	4.0	69			40 - 140	20
Anthracene	ND	0.10	69	74	7.0	66			40 - 140	20
Benz(a)anthracene	ND	0.02	93	95	2.1	71			40 - 140	20

QA/QC Data

SDG I.D.: GCG83495

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits	
Benzo(a)pyrene	ND	0.02	81	79	2.5	48			40 - 140	20	
Benzo(b)fluoranthene	ND	0.02	93	97	4.2	57			40 - 140	20	
Benzo(ghi)perylene	ND	0.02	79	80	1.3	40			40 - 140	20	
Benzo(k)fluoranthene	ND	0.02	59	61	3.3	33			40 - 140	20	m
Chrysene	ND	0.02	72	73	1.4	52			40 - 140	20	
Dibenz(a,h)anthracene	ND	0.02	93	95	2.1	42			40 - 140	20	
Fluoranthene	ND	0.50	74	80	7.8	69			40 - 140	20	
Fluorene	ND	0.10	75	79	5.2	71			40 - 140	20	
Indeno(1,2,3-cd)pyrene	ND	0.02	80	81	1.2	40			40 - 140	20	
Naphthalene	ND	0.50	68	83	19.9	69			40 - 140	20	
Phenanthrene	ND	0.06	72	79	9.3	70			40 - 140	20	
Pyrene	ND	0.07	77	82	6.3	72			40 - 140	20	
% 2-Fluorobiphenyl	74	%	73	74	1.4	67			40 - 140	20	
% Nitrobenzene-d5	82	%	79	75	5.2	71			40 - 140	20	
% Terphenyl-d14	100	%	85	89	4.6	66			40 - 140	20	

Comment:

This batch consists of a Blank, LCS, LCSD, and MS.

Additional 8270 criteria: 10% of compounds can be outside of acceptance criteria as long as recovery is at least 10%. (Acid surrogates acceptance range for aqueous samples: 10-110%, for soils 30-130%)

QA/QC Batch 547132 (ug/L), QC Sample No: CG84820 (CG83505)

Semivolatiles by SIM, PAH - Ground Water

2-Methylnaphthalene	ND	0.50	87	70	21.7	73	65	11.6	40 - 140	20	r
Acenaphthene	ND	0.50	69	65	6.0	73	65	11.6	40 - 140	20	
Acenaphthylene	ND	0.10	63	61	3.2	68	62	9.2	40 - 140	20	
Anthracene	ND	0.10	77	70	9.5	80	74	7.8	40 - 140	20	
Benz(a)anthracene	ND	0.02	85	79	7.3	88	80	9.5	40 - 140	20	
Benzo(a)pyrene	ND	0.02	75	78	3.9	88	78	12.0	40 - 140	20	
Benzo(b)fluoranthene	ND	0.02	113	106	6.4	115	101	13.0	40 - 140	20	
Benzo(ghi)perylene	ND	0.02	98	94	4.2	105	91	14.3	40 - 140	20	
Benzo(k)fluoranthene	ND	0.02	74	67	9.9	74	65	12.9	40 - 140	20	
Chrysene	ND	0.02	83	78	6.2	86	77	11.0	40 - 140	20	
Dibenz(a,h)anthracene	ND	0.02	79	75	5.2	82	71	14.4	40 - 140	20	
Fluoranthene	ND	0.50	72	67	7.2	72	71	1.4	40 - 140	20	
Fluorene	ND	0.10	54	50	7.7	55	51	7.5	40 - 140	20	
Indeno(1,2,3-cd)pyrene	ND	0.02	77	75	2.6	81	72	11.8	40 - 140	20	
Naphthalene	ND	0.50	76	61	21.9	67	59	12.7	40 - 140	20	r
Phenanthrene	ND	0.06	69	64	7.5	72	67	7.2	40 - 140	20	
Pyrene	ND	0.07	82	78	5.0	85	80	6.1	40 - 140	20	
% 2-Fluorobiphenyl	43	%	61	57	6.8	60	54	10.5	40 - 140	20	
% Nitrobenzene-d5	50	%	74	70	5.6	84	70	18.2	40 - 140	20	
% Terphenyl-d14	71	%	89	82	8.2	93	81	13.8	40 - 140	20	

Comment:

Additional 8270 criteria: 10% of compounds can be outside of acceptance criteria as long as recovery is at least 10%. (Acid surrogates acceptance range for aqueous samples: 10-110%, for soils 30-130%)

QA/QC Batch 546836 (ug/L), QC Sample No: CG80056 (CG83496, CG83497, CG83498, CG83499, CG83500, CG83501 (20X) , CG83502, CG83503, CG83504, CG83505, CG83506)

Volatiles - Ground Water

1,1,1,2-Tetrachloroethane	ND	1.0	94	95	1.1				70 - 130	30	
1,1,1-Trichloroethane	ND	1.0	90	92	2.2				70 - 130	30	
1,1,2,2-Tetrachloroethane	ND	0.50	103	104	1.0				70 - 130	30	
1,1,2-Trichloroethane	ND	1.0	90	90	0.0				70 - 130	30	

QA/QC Data

SDG I.D.: GCG83495

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits
1,1-Dichloroethane	ND	1.0	89	91	2.2				70 - 130	30
1,1-Dichloroethene	ND	1.0	83	85	2.4				70 - 130	30
1,1-Dichloropropene	ND	1.0	95	95	0.0				70 - 130	30
1,2,3-Trichlorobenzene	ND	1.0	97	98	1.0				70 - 130	30
1,2,3-Trichloropropane	ND	1.0	95	98	3.1				70 - 130	30
1,2,4-Trichlorobenzene	ND	1.0	94	95	1.1				70 - 130	30
1,2,4-Trimethylbenzene	ND	1.0	94	95	1.1				70 - 130	30
1,2-Dibromo-3-chloropropane	ND	1.0	102	103	1.0				70 - 130	30
1,2-Dibromoethane	ND	1.0	98	97	1.0				70 - 130	30
1,2-Dichlorobenzene	ND	1.0	90	90	0.0				70 - 130	30
1,2-Dichloroethane	ND	1.0	97	97	0.0				70 - 130	30
1,2-Dichloropropane	ND	1.0	93	95	2.1				70 - 130	30
1,3,5-Trimethylbenzene	ND	1.0	95	95	0.0				70 - 130	30
1,3-Dichlorobenzene	ND	1.0	90	91	1.1				70 - 130	30
1,3-Dichloropropane	ND	1.0	98	99	1.0				70 - 130	30
1,4-Dichlorobenzene	ND	1.0	90	91	1.1				70 - 130	30
1,4-dioxane	ND	100	104	103	1.0				40 - 160	30
2,2-Dichloropropane	ND	1.0	94	92	2.2				70 - 130	30
2-Chlorotoluene	ND	1.0	91	91	0.0				70 - 130	30
2-Hexanone	ND	5.0	103	105	1.9				40 - 160	30
4-Chlorotoluene	ND	1.0	90	91	1.1				70 - 130	30
4-Methyl-2-pentanone	ND	5.0	102	102	0.0				40 - 160	30
Acetone	ND	5.0	94	95	1.1				40 - 160	30
Benzene	ND	0.70	92	93	1.1				70 - 130	30
Bromobenzene	ND	1.0	88	91	3.4				70 - 130	30
Bromochloromethane	ND	1.0	82	85	3.6				70 - 130	30
Bromodichloromethane	ND	0.50	94	95	1.1				70 - 130	30
Bromoform	ND	1.0	96	96	0.0				70 - 130	30
Bromomethane	ND	1.0	85	88	3.5				40 - 160	30
Carbon Disulfide	ND	1.0	79	81	2.5				70 - 130	30
Carbon tetrachloride	ND	1.0	105	94	11.1				70 - 130	30
Chlorobenzene	ND	1.0	89	90	1.1				70 - 130	30
Chloroethane	ND	1.0	92	88	4.4				70 - 130	30
Chloroform	ND	1.0	88	89	1.1				70 - 130	30
Chloromethane	ND	1.0	96	94	2.1				40 - 160	30
cis-1,2-Dichloroethene	ND	1.0	83	83	0.0				70 - 130	30
cis-1,3-Dichloropropene	ND	0.40	96	95	1.0				70 - 130	30
Dibromochloromethane	ND	0.50	97	99	2.0				70 - 130	30
Dibromomethane	ND	1.0	90	89	1.1				70 - 130	30
Dichlorodifluoromethane	ND	1.0	130	133	2.3				40 - 160	30
Di-isopropyl ether	ND	1.0	91	93	2.2				70 - 130	30
Ethyl ether	ND	1.0	82	85	3.6				70 - 130	30
Ethyl tert-butyl ether	ND	1.0	94	95	1.1				70 - 130	30
Ethylbenzene	ND	1.0	89	90	1.1				70 - 130	30
Hexachlorobutadiene	ND	0.40	98	99	1.0				70 - 130	30
Isopropylbenzene	ND	1.0	91	91	0.0				70 - 130	30
m&p-Xylene	ND	1.0	91	91	0.0				70 - 130	30
Methyl ethyl ketone	ND	5.0	105	110	4.7				40 - 160	30
Methyl t-butyl ether (MTBE)	ND	1.0	87	88	1.1				70 - 130	30
Methylene chloride	ND	1.0	82	82	0.0				70 - 130	30
Naphthalene	ND	1.0	102	104	1.9				70 - 130	30
n-Butylbenzene	ND	1.0	100	100	0.0				70 - 130	30
n-Propylbenzene	ND	1.0	91	92	1.1				70 - 130	30

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits
o-Xylene	ND	1.0	92	93	1.1				70 - 130	30
p-Isopropyltoluene	ND	1.0	96	98	2.1				70 - 130	30
sec-Butylbenzene	ND	1.0	104	104	0.0				70 - 130	30
Styrene	ND	1.0	93	96	3.2				70 - 130	30
tert-amyl methyl ether	ND	1.0	98	98	0.0				70 - 130	30
tert-Butylbenzene	ND	1.0	94	94	0.0				70 - 130	30
Tetrachloroethene	ND	1.0	88	88	0.0				70 - 130	30
Tetrahydrofuran (THF)	ND	2.5	99	101	2.0				70 - 130	30
Toluene	ND	1.0	90	88	2.2				70 - 130	30
trans-1,2-Dichloroethene	ND	1.0	89	88	1.1				70 - 130	30
trans-1,3-Dichloropropene	ND	0.40	96	97	1.0				70 - 130	30
Trichloroethene	ND	1.0	88	86	2.3				70 - 130	30
Trichlorofluoromethane	ND	1.0	100	98	2.0				70 - 130	30
Trichlorotrifluoroethane	ND	1.0	95	94	1.1				70 - 130	30
Vinyl chloride	ND	1.0	94	94	0.0				70 - 130	30
% 1,2-dichlorobenzene-d4	101	%	99	99	0.0				70 - 130	30
% Bromofluorobenzene	100	%	104	105	1.0				70 - 130	30
% Dibromofluoromethane	96	%	96	93	3.2				70 - 130	30
% Toluene-d8	104	%	101	100	1.0				70 - 130	30

Comment:

A LCS and LCS Duplicate were performed instead of a matrix spike and matrix spike duplicate.

Additional 8260 criteria: 10% of compounds can be outside of acceptance criteria as long as recovery is 10%.

QA/QC Batch 546776 (ug/L), QC Sample No: CG83495 (CG83495)

Volatiles - Ground Water

1,1,1,2-Tetrachloroethane	ND	1.0	92	93	1.1				70 - 130	30
1,1,1-Trichloroethane	ND	1.0	90	91	1.1				70 - 130	30
1,1,2,2-Tetrachloroethane	ND	0.50	102	97	5.0				70 - 130	30
1,1,2-Trichloroethane	ND	1.0	90	90	0.0				70 - 130	30
1,1-Dichloroethane	ND	1.0	82	89	8.2				70 - 130	30
1,1-Dichloroethene	ND	1.0	95	90	5.4				70 - 130	30
1,1-Dichloropropene	ND	1.0	94	96	2.1				70 - 130	30
1,2,3-Trichlorobenzene	ND	1.0	94	94	0.0				70 - 130	30
1,2,3-Trichloropropane	ND	1.0	99	97	2.0				70 - 130	30
1,2,4-Trichlorobenzene	ND	1.0	90	93	3.3				70 - 130	30
1,2,4-Trimethylbenzene	ND	1.0	93	95	2.1				70 - 130	30
1,2-Dibromo-3-chloropropane	ND	1.0	99	91	8.4				70 - 130	30
1,2-Dibromoethane	ND	1.0	95	96	1.0				70 - 130	30
1,2-Dichlorobenzene	ND	1.0	89	90	1.1				70 - 130	30
1,2-Dichloroethane	ND	1.0	95	96	1.0				70 - 130	30
1,2-Dichloropropane	ND	1.0	95	96	1.0				70 - 130	30
1,3,5-Trimethylbenzene	ND	1.0	94	96	2.1				70 - 130	30
1,3-Dichlorobenzene	ND	1.0	89	91	2.2				70 - 130	30
1,3-Dichloropropane	ND	1.0	98	98	0.0				70 - 130	30
1,4-Dichlorobenzene	ND	1.0	89	92	3.3				70 - 130	30
1,4-dioxane	ND	100	98	105	6.9				40 - 160	30
2,2-Dichloropropane	ND	1.0	73	86	16.4				70 - 130	30
2-Chlorotoluene	ND	1.0	90	92	2.2				70 - 130	30
2-Hexanone	ND	5.0	103	96	7.0				40 - 160	30
4-Chlorotoluene	ND	1.0	89	91	2.2				70 - 130	30
4-Methyl-2-pentanone	ND	5.0	103	95	8.1				40 - 160	30
Acetone	ND	5.0	114	94	19.2				40 - 160	30

QA/QC Data

SDG I.D.: GCG83495

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits
Benzene	ND	0.70	93	92	1.1				70 - 130	30
Bromobenzene	ND	1.0	87	89	2.3				70 - 130	30
Bromochloromethane	ND	1.0	85	87	2.3				70 - 130	30
Bromodichloromethane	ND	0.50	95	95	0.0				70 - 130	30
Bromoform	ND	1.0	93	91	2.2				70 - 130	30
Bromomethane	ND	1.0	96	93	3.2				40 - 160	30
Carbon Disulfide	ND	1.0	92	86	6.7				70 - 130	30
Carbon tetrachloride	ND	1.0	104	92	12.2				70 - 130	30
Chlorobenzene	ND	1.0	90	91	1.1				70 - 130	30
Chloroethane	ND	1.0	98	99	1.0				70 - 130	30
Chloroform	ND	1.0	89	90	1.1				70 - 130	30
Chloromethane	ND	1.0	100	100	0.0				40 - 160	30
cis-1,2-Dichloroethene	ND	1.0	85	85	0.0				70 - 130	30
cis-1,3-Dichloropropene	ND	0.40	92	94	2.2				70 - 130	30
Dibromochloromethane	ND	0.50	97	96	1.0				70 - 130	30
Dibromomethane	ND	1.0	89	88	1.1				70 - 130	30
Dichlorodifluoromethane	ND	1.0	123	145	16.4				40 - 160	30
Di-isopropyl ether	ND	1.0	72	93	25.5				70 - 130	30
Ethyl ether	ND	1.0	102	87	15.9				70 - 130	30
Ethyl tert-butyl ether	ND	1.0	96	94	2.1				70 - 130	30
Ethylbenzene	ND	1.0	89	90	1.1				70 - 130	30
Hexachlorobutadiene	ND	0.40	92	95	3.2				70 - 130	30
Isopropylbenzene	ND	1.0	89	91	2.2				70 - 130	30
m&p-Xylene	ND	1.0	90	91	1.1				70 - 130	30
Methyl ethyl ketone	ND	5.0	107	95	11.9				40 - 160	30
Methyl t-butyl ether (MTBE)	ND	1.0	96	86	11.0				70 - 130	30
Methylene chloride	ND	1.0	93	81	13.8				70 - 130	30
Naphthalene	ND	1.0	101	97	4.0				70 - 130	30
n-Butylbenzene	ND	1.0	96	100	4.1				70 - 130	30
n-Propylbenzene	ND	1.0	90	92	2.2				70 - 130	30
o-Xylene	ND	1.0	92	93	1.1				70 - 130	30
p-Isopropyltoluene	ND	1.0	95	98	3.1				70 - 130	30
sec-Butylbenzene	ND	1.0	101	104	2.9				70 - 130	30
Styrene	ND	1.0	94	93	1.1				70 - 130	30
tert-amyl methyl ether	ND	1.0	97	97	0.0				70 - 130	30
tert-Butylbenzene	ND	1.0	92	95	3.2				70 - 130	30
Tetrachloroethene	ND	1.0	85	86	1.2				70 - 130	30
Tetrahydrofuran (THF)	ND	2.5	98	93	5.2				70 - 130	30
Toluene	ND	1.0	89	91	2.2				70 - 130	30
trans-1,2-Dichloroethene	ND	1.0	102	89	13.6				70 - 130	30
trans-1,3-Dichloropropene	ND	0.40	91	95	4.3				70 - 130	30
Trichloroethene	ND	1.0	86	88	2.3				70 - 130	30
Trichlorofluoromethane	ND	1.0	105	107	1.9				70 - 130	30
Trichlorotrifluoroethane	ND	1.0	93	99	6.3				70 - 130	30
Vinyl chloride	ND	1.0	101	101	0.0				70 - 130	30
% 1,2-dichlorobenzene-d4	99	%	100	99	1.0				70 - 130	30
% Bromofluorobenzene	99	%	104	103	1.0				70 - 130	30
% Dibromofluoromethane	95	%	94	98	4.2				70 - 130	30
% Toluene-d8	104	%	102	102	0.0				70 - 130	30

Comment:

A LCS and LCS Duplicate were performed instead of a matrix spike and matrix spike duplicate.

Additional 8260 criteria: 10% of compounds can be outside of acceptance criteria as long as recovery is 10%.

QA/QC Data

SDG I.D.: GCG83495

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits
QA/QC Batch 547174 (ug/L), QC Sample No: CG85567 (CG83500 (5X) , CG83501)										
Volatiles - Ground Water										
1,1,1,2-Tetrachloroethane	ND	5.0	100	96	4.1				70 - 130	30
1,1,1-Trichloroethane	ND	5.0	97	94	3.1				70 - 130	30
1,1,2,2-Tetrachloroethane	ND	5.0	100	96	4.1				70 - 130	30
1,1,2-Trichloroethane	ND	5.0	97	95	2.1				70 - 130	30
1,1-Dichloroethane	ND	5.0	101	96	5.1				70 - 130	30
1,1-Dichloroethene	ND	5.0	102	98	4.0				70 - 130	30
1,1-Dichloropropene	ND	5.0	103	98	5.0				70 - 130	30
1,2,3-Trichlorobenzene	ND	1.0	95	95	0.0				70 - 130	30
1,2,3-Trichloropropane	ND	5.0	101	98	3.0				70 - 130	30
1,2,4-Trichlorobenzene	ND	5.0	96	96	0.0				70 - 130	30
1,2,4-Trimethylbenzene	ND	1.0	96	95	1.0				70 - 130	30
1,2-Dibromo-3-chloropropane	ND	5.0	100	96	4.1				70 - 130	30
1,2-Dibromoethane	ND	5.0	97	95	2.1				70 - 130	30
1,2-Dichlorobenzene	ND	1.0	96	94	2.1				70 - 130	30
1,2-Dichloroethane	ND	0.60	98	94	4.2				70 - 130	30
1,2-Dichloropropane	ND	5.0	97	94	3.1				70 - 130	30
1,3,5-Trimethylbenzene	ND	1.0	101	98	3.0				70 - 130	30
1,3-Dichlorobenzene	ND	1.0	98	95	3.1				70 - 130	30
1,3-Dichloropropane	ND	5.0	98	95	3.1				70 - 130	30
1,4-Dichlorobenzene	ND	1.0	96	95	1.0				70 - 130	30
1,4-dioxane	ND	100	101	96	5.1				40 - 160	30
2,2-Dichloropropane	ND	5.0	82	94	13.6				70 - 130	30
2-Chlorotoluene	ND	5.0	99	97	2.0				70 - 130	30
2-Hexanone	ND	5.0	102	99	3.0				40 - 160	30
4-Chlorotoluene	ND	5.0	97	95	2.1				70 - 130	30
4-Methyl-2-pentanone	ND	5.0	102	101	1.0				40 - 160	30
Acetone	ND	10	97	92	5.3				40 - 160	30
Benzene	ND	0.70	97	95	2.1				70 - 130	30
Bromobenzene	ND	5.0	98	94	4.2				70 - 130	30
Bromochloromethane	ND	5.0	96	94	2.1				70 - 130	30
Bromodichloromethane	ND	5.0	101	97	4.0				70 - 130	30
Bromoform	ND	5.0	99	97	2.0				70 - 130	30
Bromomethane	ND	5.0	95	91	4.3				40 - 160	30
Carbon Disulfide	ND	5.0	107	101	5.8				70 - 130	30
Carbon tetrachloride	ND	5.0	103	84	20.3				70 - 130	30
Chlorobenzene	ND	1.0	98	94	4.2				70 - 130	30
Chloroethane	ND	5.0	102	98	4.0				70 - 130	30
Chloroform	ND	5.0	95	91	4.3				70 - 130	30
Chloromethane	ND	5.0	95	89	6.5				40 - 160	30
cis-1,2-Dichloroethene	ND	5.0	89	88	1.1				70 - 130	30
cis-1,3-Dichloropropene	ND	5.0	94	95	1.1				70 - 130	30
Dibromochloromethane	ND	5.0	104	100	3.9				70 - 130	30
Dibromomethane	ND	5.0	95	91	4.3				70 - 130	30
Dichlorodifluoromethane	ND	5.0	113	102	10.2				40 - 160	30
Ethyl ether	ND	5.0	92	86	6.7				70 - 130	30
Ethylbenzene	ND	1.0	97	96	1.0				70 - 130	30
Hexachlorobutadiene	ND	5.0	98	98	0.0				70 - 130	30
Isopropylbenzene	ND	1.0	101	99	2.0				70 - 130	30
m&p-Xylene	ND	1.0	99	97	2.0				70 - 130	30
Methyl ethyl ketone	ND	5.0	104	103	1.0				40 - 160	30

QA/QC Data

SDG I.D.: GCG83495

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits
Methyl t-butyl ether (MTBE)	ND	1.0	96	91	5.3				70 - 130	30
Methylene chloride	ND	5.0	91	86	5.6				70 - 130	30
Naphthalene	ND	1.0	102	101	1.0				70 - 130	30
n-Butylbenzene	ND	1.0	101	100	1.0				70 - 130	30
n-Propylbenzene	ND	1.0	103	101	2.0				70 - 130	30
o-Xylene	ND	1.0	100	97	3.0				70 - 130	30
p-Isopropyltoluene	ND	1.0	103	101	2.0				70 - 130	30
sec-Butylbenzene	ND	1.0	110	108	1.8				70 - 130	30
Styrene	ND	1.0	99	97	2.0				70 - 130	30
tert-Butylbenzene	ND	1.0	102	98	4.0				70 - 130	30
Tetrachloroethene	ND	1.0	99	98	1.0				70 - 130	30
Tetrahydrofuran (THF)	ND	5.0	98	94	4.2				70 - 130	30
Toluene	ND	1.0	95	94	1.1				70 - 130	30
trans-1,2-Dichloroethene	ND	5.0	104	100	3.9				70 - 130	30
trans-1,3-Dichloropropene	ND	5.0	96	98	2.1				70 - 130	30
Trichloroethene	ND	5.0	98	98	0.0				70 - 130	30
Trichlorofluoromethane	ND	5.0	99	92	7.3				70 - 130	30
Trichlorotrifluoroethane	ND	5.0	101	97	4.0				70 - 130	30
Vinyl chloride	ND	5.0	104	97	7.0				70 - 130	30
% 1,2-dichlorobenzene-d4	100	%	100	100	0.0				70 - 130	30
% Bromofluorobenzene	99	%	99	99	0.0				70 - 130	30
% Dibromofluoromethane	101	%	102	100	2.0				70 - 130	30
% Toluene-d8	102	%	98	99	1.0				70 - 130	30

Comment:

A LCS and LCS Duplicate were performed instead of a matrix spike and matrix spike duplicate.

Additional 8260 criteria: 10% of compounds can be outside of acceptance criteria as long as recovery is 10%.

QA/QC Batch 546964 (ug/L), QC Sample No: CG83124 (CG83496, CG83503, CG83504, CG83505)

Volatile Petroleum Hydrocarbons - Ground Water

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits
Unadjusted C5-C8 Aliphatics (*1)	ND	100	99	101	2.0	93	97	4.2	70 - 130	25
Unadjusted C9-C12 Aliphatics (*1)	ND	100	101	99	2.0	94	105	11.1	70 - 130	25
C5-C8 Aliphatic Hydrocarbons *1,2	ND	100	99	101	2.0	93	97	4.2	70 - 130	25
C9-C12 Aliphatic Hydrocarbons *1,	ND	100	101	99	2.0	94	105	11.1	70 - 130	25
C9-C10 Aromatic Hydrocarbons *1	ND	100	96	96	0.0	NC	NC	NC	70 - 130	25
Benzene	ND	1.0	84	85	1.2	84	86	2.4	70 - 130	25
Ethyl Benzene	ND	1.0	87	88	1.1	87	88	1.1	70 - 130	25
MTBE	ND	1.0	96	98	2.1	97	98	1.0	70 - 130	25
Naphthalene	ND	5.0	101	100	1.0	103	102	1.0	70 - 130	25
Toluene	ND	1.0	89	90	1.1	89	91	2.2	70 - 130	25
m,p-Xylenes	ND	2.0	90	90	0.0	90	91	1.1	70 - 130	25
o-Xylene	ND	1.0	86	86	0.0	86	87	1.2	70 - 130	25

Comment:

A blank MS/MSD was analyzed with this batch.

l = This parameter is outside laboratory LCS/LCSD specified recovery limits.
m = This parameter is outside laboratory MS/MSD specified recovery limits.
r = This parameter is outside laboratory RPD specified recovery limits.

QA/QC Data

SDG I.D.: GCG83495

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits

If there are any questions regarding this data, please call Phoenix Client Services at extension 200.

RPD - Relative Percent Difference
LCS - Laboratory Control Sample
LCSD - Laboratory Control Sample Duplicate
MS - Matrix Spike
MS Dup - Matrix Spike Duplicate
NC - No Criteria
Intf - Interference

Phyllis Shiller, Laboratory Director
October 05, 2020

Monday, October 05, 2020

Criteria: MA: GW1, GW2, GW3

State: MA

Sample Criteria Exceedances Report

GCG83495 - AECOM-WILMINGTN

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units
CG83495	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.00033	0.00033	ug/L
CG83495	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.0075	0.0075	ug/L
CG83495	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.00075	0.00075	ug/L
CG83495	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	0.50	0.02	0.02	ug/L
CG83495	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	0.50	0.02	0.02	ug/L
CG83495	$MCPADD-WM	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	100	0.3	0.3	ug/L
CG83495	$MCPADD-WM	1,4-dioxane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	100	3	3	ug/L
CG83495	$MCPADD-WM	1,4-dioxane	MA / GROUNDWATER STANDARDS / GW-1	ND	100	0.3	0.3	ug/L
CG83496	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.00075	0.00075	ug/L
CG83496	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.00033	0.00033	ug/L
CG83496	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.0075	0.0075	ug/L
CG83496	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	0.50	0.02	0.02	ug/L
CG83496	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	0.50	0.02	0.02	ug/L
CG83496	$MCPADD-WM	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	100	0.3	0.3	ug/L
CG83497	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.00033	0.00033	ug/L
CG83497	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.0075	0.0075	ug/L
CG83497	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.00075	0.00075	ug/L
CG83497	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	0.50	0.02	0.02	ug/L
CG83497	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	0.50	0.02	0.02	ug/L
CG83497	$MCPADD-WM	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	100	0.3	0.3	ug/L
CG83497	$MCPADD-WM	1,4-dioxane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	100	3	3	ug/L
CG83497	$MCPADD-WM	1,4-dioxane	MA / GROUNDWATER STANDARDS / GW-1	ND	100	0.3	0.3	ug/L
CG83498	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.00075	0.00075	ug/L
CG83498	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.00033	0.00033	ug/L
CG83498	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.0075	0.0075	ug/L
CG83498	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	0.50	0.02	0.02	ug/L
CG83498	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	0.50	0.02	0.02	ug/L
CG83498	$DIOX_LDL	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	0.45	0.20	0.3	0.3	ug/l
CG83498	$DIOX_LDL	1,4-dioxane	MA / GROUNDWATER STANDARDS / GW-1	0.45	0.20	0.3	0.3	ug/l
CG83498	$MCPADD-WM	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	100	0.3	0.3	ug/L
CG83499	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.00075	0.00075	ug/L
CG83499	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.00033	0.00033	ug/L
CG83499	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.0075	0.0075	ug/L
CG83499	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	0.50	0.02	0.02	ug/L
CG83499	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	0.50	0.02	0.02	ug/L
CG83499	$MCPADD-WM	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	100	0.3	0.3	ug/L
CG83500	$8260GWR-WI	Tetrachloroethene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	160	5.0	5	5	ug/L
CG83500	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.00033	0.00033	ug/L

Monday, October 05, 2020

Criteria: MA: GW1, GW2, GW3

State: MA

Sample Criteria Exceedances Report

GCG83495 - AECOM-WILMINGTN

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units
CG83500	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.0075	0.0075	ug/L
CG83500	$8260GWR-WI	Trichloroethene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	33	1.0	5	5	ug/L
CG83500	$8260GWR-WI	cis-1,2-Dichloroethene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	27	1.0	20	20	ug/L
CG83500	$8260GWR-WI	Vinyl chloride	MA / Client Specified Criteria / LOCKHEED WILMINGTO	7.5	1.0	2	2	ug/L
CG83500	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.00075	0.00075	ug/L
CG83500	$8260GWR-WI	Tetrachloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	160	5.0	5	5	ug/L
CG83500	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-1 (mg/l)	7.5	1.0	2	2	ug/L
CG83500	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-1 (mg/l)	7.5	1.0	2	2	ug/L
CG83500	$8260GWR-WI	cis-1,2-Dichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	27	1.0	20	20	ug/L
CG83500	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	0.50	0.02	0.02	ug/L
CG83500	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	33	1.0	5	5	ug/L
CG83500	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-2 (mg/l)	7.5	1.0	2	2	ug/L
CG83500	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	33	1.0	5	5	ug/L
CG83500	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-2 (mg/l)	7.5	1.0	2	2	ug/L
CG83500	$8260GWR-WI	Tetrachloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	160	5.0	50	50	ug/L
CG83500	$8260GWR-WI	cis-1,2-Dichloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	27	1.0	20	20	ug/L
CG83500	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	0.50	0.02	0.02	ug/L
CG83500	$8260GWR-WI	Tetrachloroethene	MA / GROUNDWATER STANDARDS / GW-1	160	5.0	5	5	ug/L
CG83500	$8260GWR-WI	Vinyl chloride	MA / GROUNDWATER STANDARDS / GW-1	7.5	1.0	2	2	ug/L
CG83500	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-1	33	1.0	5	5	ug/L
CG83500	$8260GWR-WI	cis-1,2-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-2	27	1.0	20	20	ug/L
CG83500	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-2	33	1.0	5	5	ug/L
CG83500	$8260GWR-WI	Tetrachloroethene	MA / GROUNDWATER STANDARDS / GW-2	160	5.0	50	50	ug/L
CG83500	$8260GWR-WI	Vinyl chloride	MA / GROUNDWATER STANDARDS / GW-2	7.5	1.0	2	2	ug/L
CG83500	$MCPADD-WM	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	100	0.3	0.3	ug/L
CG83500	$MCPADD-WM	1,4-dioxane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	100	3	3	ug/L
CG83500	$MCPADD-WM	1,4-dioxane	MA / GROUNDWATER STANDARDS / GW-1	ND	100	0.3	0.3	ug/L
CG83501	$8260GWR-WI	Trichloroethene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	44	1.0	5	5	ug/L
CG83501	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.00075	0.00075	ug/L
CG83501	$8260GWR-WI	cis-1,2-Dichloroethene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	29	1.0	20	20	ug/L
CG83501	$8260GWR-WI	Vinyl chloride	MA / Client Specified Criteria / LOCKHEED WILMINGTO	7.6	1.0	2	2	ug/L
CG83501	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.00033	0.00033	ug/L
CG83501	$8260GWR-WI	Tetrachloroethene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	130	20	5	5	ug/L
CG83501	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.0075	0.0075	ug/L
CG83501	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	0.50	0.02	0.02	ug/L
CG83501	$8260GWR-WI	cis-1,2-Dichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	29	1.0	20	20	ug/L
CG83501	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	44	1.0	5	5	ug/L
CG83501	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-1 (mg/l)	7.6	1.0	2	2	ug/L
CG83501	$8260GWR-WI	Tetrachloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	130	20	5	5	ug/L
CG83501	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-1 (mg/l)	7.6	1.0	2	2	ug/L
CG83501	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-2 (mg/l)	7.6	1.0	2	2	ug/L

Monday, October 05, 2020

Criteria: MA: GW1, GW2, GW3

State: MA

Sample Criteria Exceedances Report

GCG83495 - AECOM-WILMINGTN

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units
CG83501	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	44	1.0	5	5	ug/L
CG83501	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-2 (mg/l)	7.6	1.0	2	2	ug/L
CG83501	$8260GWR-WI	Tetrachloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	130	20	50	50	ug/L
CG83501	$8260GWR-WI	cis-1,2-Dichloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	29	1.0	20	20	ug/L
CG83501	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-1	44	1.0	5	5	ug/L
CG83501	$8260GWR-WI	Tetrachloroethene	MA / GROUNDWATER STANDARDS / GW-1	130	20	5	5	ug/L
CG83501	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	0.50	0.02	0.02	ug/L
CG83501	$8260GWR-WI	Vinyl chloride	MA / GROUNDWATER STANDARDS / GW-1	7.6	1.0	2	2	ug/L
CG83501	$8260GWR-WI	Tetrachloroethene	MA / GROUNDWATER STANDARDS / GW-2	130	20	50	50	ug/L
CG83501	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-2	44	1.0	5	5	ug/L
CG83501	$8260GWR-WI	Vinyl chloride	MA / GROUNDWATER STANDARDS / GW-2	7.6	1.0	2	2	ug/L
CG83501	$8260GWR-WI	cis-1,2-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-2	29	1.0	20	20	ug/L
CG83501	$MCPADD-WM	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	100	0.3	0.3	ug/L
CG83501	$MCPADD-WM	1,4-dioxane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	100	3	3	ug/L
CG83501	$MCPADD-WM	1,4-dioxane	MA / GROUNDWATER STANDARDS / GW-1	ND	100	0.3	0.3	ug/L
CG83502	$8260GWR-WI	Tetrachloroethene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	8.2	1.0	5	5	ug/L
CG83502	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.00075	0.00075	ug/L
CG83502	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.0075	0.0075	ug/L
CG83502	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.00033	0.00033	ug/L
CG83502	$8260GWR-WI	cis-1,2-Dichloroethene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	71	1.0	20	20	ug/L
CG83502	$8260GWR-WI	Vinyl chloride	MA / Client Specified Criteria / LOCKHEED WILMINGTO	18	1.0	2	2	ug/L
CG83502	$8260GWR-WI	Trichloroethene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	46	1.0	5	5	ug/L
CG83502	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	0.50	0.02	0.02	ug/L
CG83502	$8260GWR-WI	cis-1,2-Dichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	71	1.0	20	20	ug/L
CG83502	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-1 (mg/l)	18	1.0	2	2	ug/L
CG83502	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	46	1.0	5	5	ug/L
CG83502	$8260GWR-WI	Tetrachloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	8.2	1.0	5	5	ug/L
CG83502	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-1 (mg/l)	18	1.0	2	2	ug/L
CG83502	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	46	1.0	5	5	ug/L
CG83502	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-2 (mg/l)	18	1.0	2	2	ug/L
CG83502	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-2 (mg/l)	18	1.0	2	2	ug/L
CG83502	$8260GWR-WI	cis-1,2-Dichloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	71	1.0	20	20	ug/L
CG83502	$8260GWR-WI	Vinyl chloride	MA / GROUNDWATER STANDARDS / GW-1	18	1.0	2	2	ug/L
CG83502	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-1	46	1.0	5	5	ug/L
CG83502	$8260GWR-WI	Tetrachloroethene	MA / GROUNDWATER STANDARDS / GW-1	8.2	1.0	5	5	ug/L
CG83502	$8260GWR-WI	cis-1,2-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-1	71	1.0	70	70	ug/L
CG83502	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	0.50	0.02	0.02	ug/L
CG83502	$8260GWR-WI	cis-1,2-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-2	71	1.0	20	20	ug/L
CG83502	$8260GWR-WI	Vinyl chloride	MA / GROUNDWATER STANDARDS / GW-2	18	1.0	2	2	ug/L
CG83502	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-2	46	1.0	5	5	ug/L
CG83502	$DIOX_LDL	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	5.8	0.20	0.3	0.3	ug/l

Monday, October 05, 2020

Criteria: MA: GW1, GW2, GW3

State: MA

Sample Criteria Exceedances Report

GCG83495 - AECOM-WILMINGTN

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units
CG83502	$DIOX_LDL	1,4-dioxane	MA / CMR 310.40.1600 / GW-1 (mg/l)	5.8	0.20	3	3	ug/l
CG83502	$DIOX_LDL	1,4-dioxane	MA / GROUNDWATER STANDARDS / GW-1	5.8	0.20	0.3	0.3	ug/l
CG83502	$MCPADD-WM	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	100	0.3	0.3	ug/L
CG83503	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.0075	0.0075	ug/L
CG83503	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.00075	0.00075	ug/L
CG83503	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.00033	0.00033	ug/L
CG83503	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	0.50	0.02	0.02	ug/L
CG83503	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	0.50	0.02	0.02	ug/L
CG83503	$MCPADD-WM	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	100	0.3	0.3	ug/L
CG83503	$MCPADD-WM	1,4-dioxane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	100	3	3	ug/L
CG83503	$MCPADD-WM	1,4-dioxane	MA / GROUNDWATER STANDARDS / GW-1	ND	100	0.3	0.3	ug/L
CG83503	$VPHRANGE-	C9-C10 Aromatic Hydrocarbons *1	MA / Client Specified Criteria / LOCKHEED WILMINGTO	280	100	200	200	ug/L
CG83503	$VPHRANGE-	C9-C10 Aromatic Hydrocarbons *1	MA / CMR 310.40.1600 / GW-1 (mg/l)	280	100	200	200	ug/L
CG83503	$VPHRANGE-	C9-C10 Aromatic Hydrocarbons *1	MA / GROUNDWATER STANDARDS / GW-1	280	100	200	200	ug/L
CG83503	AS-WM	Arsenic	MA / Client Specified Criteria / LOCKHEED WILMINGTO	0.043	0.004	0.01	0.01	mg/L
CG83503	AS-WM	Arsenic	MA / CMR 310.40.1600 / GW-1 (mg/l)	0.043	0.004	0.01	0.01	mg/L
CG83503	AS-WM	Arsenic	MA / GROUNDWATER STANDARDS / GW-1	0.043	0.004	0.01	0.01	mg/L
CG83503	D-AS	Arsenic (Dissolved)	MA / Client Specified Criteria / LOCKHEED WILMINGTO	0.044	0.004	0.01	0.01	mg/L
CG83503	D-AS	Arsenic (Dissolved)	MA / CMR 310.40.1600 / GW-1 (mg/l)	0.044	0.004	0.01	0.01	mg/L
CG83503	D-AS	Arsenic (Dissolved)	MA / GROUNDWATER STANDARDS / GW-1	0.044	0.004	0.01	0.01	mg/L
CG83503	D-MN	Manganese (Dissolved)	MA / Client Specified Criteria / LOCKHEED WILMINGTO	1.16	0.001	0.43	0.43	mg/L
CG83503	MN-WM	Manganese	MA / Client Specified Criteria / LOCKHEED WILMINGTO	1.18	0.001	0.43	0.43	mg/L
CG83504	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.00075	0.00075	ug/L
CG83504	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.00033	0.00033	ug/L
CG83504	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.0075	0.0075	ug/L
CG83504	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	0.50	0.02	0.02	ug/L
CG83504	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	0.50	0.02	0.02	ug/L
CG83504	$MCPADD-WM	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	100	0.3	0.3	ug/L
CG83504	$MCPADD-WM	1,4-dioxane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	100	3	3	ug/L
CG83504	$MCPADD-WM	1,4-dioxane	MA / GROUNDWATER STANDARDS / GW-1	ND	100	0.3	0.3	ug/L
CG83504	$VPHRANGE-	C9-C10 Aromatic Hydrocarbons *1	MA / Client Specified Criteria / LOCKHEED WILMINGTO	260	100	200	200	ug/L
CG83504	$VPHRANGE-	C9-C10 Aromatic Hydrocarbons *1	MA / CMR 310.40.1600 / GW-1 (mg/l)	260	100	200	200	ug/L
CG83504	$VPHRANGE-	C9-C10 Aromatic Hydrocarbons *1	MA / GROUNDWATER STANDARDS / GW-1	260	100	200	200	ug/L
CG83504	AS-WM	Arsenic	MA / Client Specified Criteria / LOCKHEED WILMINGTO	0.045	0.004	0.01	0.01	mg/L
CG83504	AS-WM	Arsenic	MA / CMR 310.40.1600 / GW-1 (mg/l)	0.045	0.004	0.01	0.01	mg/L
CG83504	AS-WM	Arsenic	MA / GROUNDWATER STANDARDS / GW-1	0.045	0.004	0.01	0.01	mg/L
CG83504	D-AS	Arsenic (Dissolved)	MA / Client Specified Criteria / LOCKHEED WILMINGTO	0.045	0.004	0.01	0.01	mg/L
CG83504	D-AS	Arsenic (Dissolved)	MA / CMR 310.40.1600 / GW-1 (mg/l)	0.045	0.004	0.01	0.01	mg/L
CG83504	D-AS	Arsenic (Dissolved)	MA / GROUNDWATER STANDARDS / GW-1	0.045	0.004	0.01	0.01	mg/L
CG83504	D-MN	Manganese (Dissolved)	MA / Client Specified Criteria / LOCKHEED WILMINGTO	1.17	0.001	0.43	0.43	mg/L

Monday, October 05, 2020

Criteria: MA: GW1, GW2, GW3

State: MA

Sample Criteria Exceedances Report

GCG83495 - AECOM-WILMINGTN

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units
CG83504	MN-WM	Manganese	MA / Client Specified Criteria / LOCKHEED WILMINGTO	1.19	0.001	0.43	0.43	mg/L
CG83505	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.00075	0.00075	ug/L
CG83505	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.00033	0.00033	ug/L
CG83505	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.0075	0.0075	ug/L
CG83505	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	0.50	0.02	0.02	ug/L
CG83505	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	0.50	0.02	0.02	ug/L
CG83505	$MCPADD-WM	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	100	0.3	0.3	ug/L
CG83505	$MCPADD-WM	1,4-dioxane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	100	3	3	ug/L
CG83505	$MCPADD-WM	1,4-dioxane	MA / GROUNDWATER STANDARDS / GW-1	ND	100	0.3	0.3	ug/L
CG83506	$8260GWR-WI	Trichloroethene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	7.3	1.0	5	5	ug/L
CG83506	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.00075	0.00075	ug/L
CG83506	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.00033	0.00033	ug/L
CG83506	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.0075	0.0075	ug/L
CG83506	$8260GWR-WI	Vinyl chloride	MA / Client Specified Criteria / LOCKHEED WILMINGTO	3.6	1.0	2	2	ug/L
CG83506	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-1 (mg/l)	3.6	1.0	2	2	ug/L
CG83506	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	7.3	1.0	5	5	ug/L
CG83506	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-1 (mg/l)	3.6	1.0	2	2	ug/L
CG83506	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	0.50	0.02	0.02	ug/L
CG83506	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-2 (mg/l)	3.6	1.0	2	2	ug/L
CG83506	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	7.3	1.0	5	5	ug/L
CG83506	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-2 (mg/l)	3.6	1.0	2	2	ug/L
CG83506	$8260GWR-WI	Vinyl chloride	MA / GROUNDWATER STANDARDS / GW-1	3.6	1.0	2	2	ug/L
CG83506	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-1	7.3	1.0	5	5	ug/L
CG83506	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	0.50	0.02	0.02	ug/L
CG83506	$8260GWR-WI	Vinyl chloride	MA / GROUNDWATER STANDARDS / GW-2	3.6	1.0	2	2	ug/L
CG83506	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-2	7.3	1.0	5	5	ug/L
CG83506	$DIOX_LDL	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	2.7	0.20	0.3	0.3	ug/l
CG83506	$DIOX_LDL	1,4-dioxane	MA / GROUNDWATER STANDARDS / GW-1	2.7	0.20	0.3	0.3	ug/l
CG83506	$MCPADD-WM	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	100	0.3	0.3	ug/L

Phoenix Laboratories does not assume responsibility for the data contained in this exceedance report. It is provided as an additional tool to identify requested criteria exceedences. All efforts are made to ensure the accuracy of the data (obtained from appropriate agencies). A lack of exceedence information does not necessarily suggest conformance to the criteria. It is ultimately the site professional's responsibility to determine appropriate compliance.

MassDEP Analytical Protocol Certification Form

Laboratory Name: Phoenix Environmental Laboratories, Inc. **Project #:**

Project Location: LOCKHEED WILMINGTON MA 6055204 **RTN:**

This Form provides certifications for the following data set: [list Laboratory Sample ID Number(s)]

CG83495, CG83496, CG83497, CG83498, CG83499, CG83500, CG83501, CG83502, CG83503, CG83504, CG83505, CG83506

Matrices: ☑ Groundwater/Surface Water ☐ Soil/Sediment ☐ Drinking Water ☐ Air ☐ Other:

CAM Protocol (check all that apply below)

8260 VOC CAM II A ☑	7470/7471 Hg CAM III B ☐	MassDEP VPH CAM IV A ☑	8081 Pesticides CAM V B ☐	7196 Hex Cr CAM VI B ☐	MassDEP APH CAM IX A ☐
8270 SVOC CAM II B ☑	7010 Metals CAM III C ☐	MassDEP EPH CAM IV B ☑	8151 Herbicides CAM V C ☐	8330 Explosives CAM VIII A ☐	TO-15 VOC CAM IX B ☐
6010 Metals CAM III A ☑	6020 Metals CAM III D ☐	8082 PCB CAM V A ☐	9012 Total Cyanide/PAC CAM V1 A ☐	6860 Perchlorate CAM VIII B ☐	

Affirmative responses to questions A through F are required for "Presumptive Certainty" status

A	Were all samples received in a condition consistent with those described on the Chain-of-Custody, properly preserved (including temperature*) in the field or laboratory, and prepared/analyzed with method holding times? (* see narrative)	☑ Yes ☐ No
B	Were the analytical method(s) and all associated QC requirements specified in the selected CAM protocol(s) followed?	☑ Yes ☐ No
C	Were all required corrective actions and analytical response actions specified in the selected CAM protocol(s) implemented for all identified performance standard non-conformances?	☑ Yes ☐ No
D	Does the laboratory report comply with all the reporting requirements speified in CAM VII A, "Quality Assurance and Quality Control Guidelines for the Acquisition and Reporting of Analytical Data"?	☑ Yes ☐ No
E	a. VPH, EPH, and APH Methods only: Was each method conducted without significant modification(s)? (refer to the individual method(s) for a list of significant modifications). b. APH and TO-15 methods only: Was the complete analyte list reported for each method?	☑ Yes ☐ No ☐ Yes ☐ No
F	Were all applicable CAM protocol QC and performance standard non-conformances identified and evaluated in a laboratory narrative (including all "No" responses to Questions A through E)?	☑ Yes ☐ No

Responses to questions G, H and I below is required for "Presumptive Certainty" status

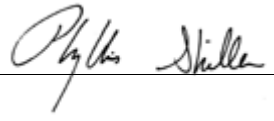
G	Were the reporting limits at or below all CAM reporting limits specified in the selected CAM protocol(s)?	☑ Yes ☐ No

Data User Note: Data that achieve "Presumptive Certainty" status may not necessarily meet the data usability and representativeness requirements described in 310 CMR 40. 1056(2)(k) and WSC-07-350

H	Were all QC performance standards specified in the CAM protocol(s) achieved? See Sections: EPH, SVOASIM Narrations .	☐ Yes ☑ No
I	Were results reported for the complete analyte list specified in the selected CAM protocol(s)?	☐ Yes ☑ No

All negative responses must be addressed in an attached laboratory narrative.

I, the undersigned, attest under the pains and penalties of perjury that, based upon my personal inquiry of those responsible for obtaining the information, the material contained in this analytical report is, to the best of my knowledge and belief, accurate and complete.

Authorized Signature: 

Date: Monday, October 05, 2020

Printed Name: Phyllis Shiller

Position: Laboratory Director

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

NY # 11301

MCP Certification Report

October 05, 2020

SDG I.D.: GCG83495

SDG Comments

Metals Analysis:
The client requested a shorter list of elements than the 6010 MCP list. The following analytes from the 6010 Metals list were not reported: Antimony, Barium, Beryllium, Cadmium, Chromium, Lead, Nickel, Selenium, Silver, Thallium, Vanadium, Zinc.

Not all requested reporting levels were achieved. Please refer to the Sample Criteria Exceedances section of this report.

Volatile 8260 analysis:
1,4-Dioxane does not meet the GWP. This compound is analyzed by method 522 or 8270SIM to achieve this criteria.

EPH Narration

Were all QA/QC performance criteria specified in the MADEP document CAM achieved? No.

QC Batch 546937 (Samples: CG83496, CG83503, CG83504, CG83505): -----

The LCS and/or the LCSD recovery is below the method criteria. All of the other QC is acceptable, therefore no significant bias is suspected. (C-10 Decane)

Instrument:

AU-FID3 09/28/20-1 Adam Werner, Chemist 09/28/20

CG83503 (1X), CG83504 (1X)

No significant modifications were made to the EPH method, as specified in Section 11.3 of the method.

The initial calibration (AR0923BI) RSD for the compound list was less than 25% except for the following compounds: None.
The continuing calibration %D for the compound list was less than 25% except for the following compounds:None.

AU-FID4 09/25/20-1 Adam Werner, Chemist 09/25/20

CG83496 (1X), CG83505 (1X)

The initial calibration (AL0923BI) RSD for the compound list was less than 25% except for the following compounds: None.
The continuing calibration %D for the compound list was less than 25% except for the following compounds:None.

AU-FID4 09/28/20-1 Adam Werner, Chemist 09/28/20

CG83503 (1X), CG83504 (1X)

The initial calibration (AL0923BI) RSD for the compound list was less than 25% except for the following compounds: None.
The continuing calibration %D for the compound list was less than 25% except for the following compounds:None.

QC (Batch Specific):

Batch 546937 (CG84812)

CG83496, CG83503, CG83504, CG83505

All LCS recoveries were within 40 - 140 with the following exceptions: None.
All LCSD recoveries were within 40 - 140 with the following exceptions: C-10 Decane(37%)
All LCS/LCSD RPDs were less than 25% with the following exceptions: None.
A LCS and LCS Duplicate were performed instead of a matrix spike and matrix spike duplicate.
Additional EPH fractionation criteria: Breakthrough criteria (BT) is 0 to 5%

I attest under the pains and penalties of perjury that, based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.

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MCP Certification Report

October 05, 2020

SDG I.D.: GCG83495

Wet Chemistry Analysis

Were all QA/QC performance criteria specified in the MADEP document CAM achieved? Yes.

Instrument:

BECKMAN DU720 09/24/20-1 Greg Danielewski, Chemist 09/24/20

CG83496

The initial calibration met all criteria including a standard run at the reporting level.
All method verification standards and blanks met criteria.

QC (Batch Specific):

Batch 546805 (CG83147)

CG83496

All LCS recoveries were within 85 - 115 with the following exceptions: None.
Additional: LCS acceptance range is 85-115% MS acceptance range 75-125%.

Batch 547068 (CG84991)

CG83496

All LCS recoveries were within 85 - 115 with the following exceptions: None.
Additional: LCS acceptance range is 85-115% MS acceptance range 75-125%.

I attest under the pains and penalties of perjury that, based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.

IC

Were all QA/QC performance criteria specified in the MADEP document CAM achieved? Yes.

Instrument:

IC 09/23/20-1 Brian Sheriden, Eric Geyer, Chemist 09/23/20

CG83496

The initial calibration met all criteria including a standard run at the reporting level.
All method verification standards and blanks met criteria.

QC (Batch Specific):

Batch 546811 (CG83510)

CG83496

All LCS recoveries were within 90 - 110 with the following exceptions: None.

I attest under the pains and penalties of perjury that, based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.

ICP Metals Narration

Were all QA/QC performance criteria specified in the analytical method achieved? Yes.

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NY # 11301

Certification Report

October 05, 2020

SDG I.D.: GCG83495

ICP Metals Narration

Instrument:

BLUE 09/24/20 09:49 Cindy Pearce, Tina Hall, Chemist 09/24/20

CG83496, CG83503, CG83504

The initial calibration met criteria.
The continuing calibration standards met criteria for all the elements reported. The linear range is defined daily by the calibration range.
The continuing calibration blanks were less than the reporting level for the elements reported.
The ICSA and ICSAB were analyzed at the beginning and end of the run and were within criteria.The linear range is defined daily by the calibration range.
The following Initial Calibration Verification (ICV) compounds did not meet criteria: None.
The following Continuing Calibration Verification (CCV) compounds did not meet criteria: None.
The following ICP Interference Check (ICSAB) compounds did not meet criteria: None.

QC (Batch Specific):

Batch 546613 (CG83504)

CG83496, CG83503, CG83504

All LCS recoveries were within 80 - 120 with the following exceptions: None.
All LCSD recoveries were within 80 - 120 with the following exceptions: None.
All LCS/LCSD RPDs were less than 20% with the following exceptions: None.
Additional: LCS acceptance range is 80-120% MS acceptance range 75-125%.

Batch 546661 (CG83857)

CG83496, CG83503, CG83504

All LCS recoveries were within 80 - 120 with the following exceptions: None.
All LCSD recoveries were within 80 - 120 with the following exceptions: None.
All LCS/LCSD RPDs were less than 20% with the following exceptions: None.
Additional: LCS acceptance range is 80-120% MS acceptance range 75-125%.

SVOA-Dioxane

Were all QA/QC performance criteria specified in the MADEP document CAM achieved? Yes.

Instrument:

CHEM22 09/29/20-1 Adam Werner, Chemist 09/29/20

CG83496 (1X), CG83498 (1X), CG83499 (1X), CG83502 (1X), CG83506 (1X)

Initial Calibration Evaluation (CHEM22/DIOX_0818):
100% of target compounds met criteria.
The following compounds had %RSDs >20%: None.
The following compounds did not meet recommended response factors: None.
The following compounds did not meet a minimum response factors: None.

Continuing Calibration Verification (CHEM22/0929_06-DIOX_0818) (MCP Compliance):
Internal standard areas were within 50 to 200% of the initial calibration with the following exceptions: None.
100% of target compounds met criteria.
The following compounds did not meet % deviation criteria: None.
The following compounds did not meet maximum % deviations: None.
The following compounds did not meet recommended response factors: None.

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MCP Certification Report

October 05, 2020

SDG I.D.: GCG83495

SVOA-Dioxane

The following compounds did not meet minimum response factors: None.

QC (Batch Specific):

Batch 547240 (CG85194)

CG83496, CG83498, CG83499, CG83502, CG83506

All LCS recoveries were within 40 - 140 with the following exceptions: None.
All LCSD recoveries were within 40 - 140 with the following exceptions: None.
All LCS/LCSD RPDs were less than 30% with the following exceptions: None.

I attest under the pains and penalties of perjury that, based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.

SVOASIM Narration

Were all QA/QC performance criteria specified in the MADEP document CAM achieved? No.

QC Batch 547132 (Samples: CG83505): -----

The LCS/LCSD RPD exceeds the method criteria for one or more analytes, but these analytes were not reported in the sample(s) so no variability is suspected. (2-Methylnaphthalene, Naphthalene)

Instrument:

CHEM25 09/28/20-2 Matt Richard, Chemist 09/28/20

CG83505 (1X)

For 8270 BN list, benzidine peak tailing was evaluated in the DFTPP tune and was found to be in control.

Initial Calibration Evaluation (CHEM25/25_BNSIM18_0805):
100% of target compounds met criteria.
The following compounds had %RSDs >20%: None.
The following compounds did not meet recommended response factors: None.
The following compounds did not meet a minimum response factors: None.

Continuing Calibration Verification (CHEM25/0928_07-25_BNSIM18_0805) (MCP Compliance):
Internal standard areas were within 50 to 200% of the initial calibration with the following exceptions: None.
85% of target compounds met criteria.
The following compounds did not meet % deviation criteria: None.
The following compounds did not meet maximum % deviations: None.
The following compounds did not meet recommended response factors: None.
The following compounds did not meet minimum response factors: None.

CHEM27 09/28/20-3 Wes Bryon, Chemist 09/28/20

CG83496 (1X), CG83503 (1X), CG83504 (1X)

For 8270 BN list, benzidine peak tailing was evaluated in the DFTPP tune and was found to be in control.

Initial Calibration Evaluation (CHEM27/27_BNSIM18_0928):
100% of target compounds met criteria.
The following compounds had %RSDs >20%: None.

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MCP Certification Report

October 05, 2020

SDG I.D.: GCG83495

SVOASIM Narration

The following compounds did not meet recommended response factors: None.
The following compounds did not meet a minimum response factors: None.

Continuing Calibration Verification (CHEM27/0928_44-27_BNSIM18_0928) (MCP Compliance):
Internal standard areas were within 50 to 200% of the initial calibration with the following exceptions: None.
100% of target compounds met criteria.
The following compounds did not meet % deviation criteria: None.
The following compounds did not meet maximum % deviations: None.
The following compounds did not meet recommended response factors: None.
The following compounds did not meet minimum response factors: None.

QC (Batch Specific):

Batch 547131 (CG84812)

CG83496, CG83503, CG83504

All LCS recoveries were within 40 - 140 with the following exceptions: None.
All LCSD recoveries were within 40 - 140 with the following exceptions: None.
All LCS/LCSD RPDs were less than 20% with the following exceptions: None.
This batch consists of a Blank, LCS, LCSD, and MS.
Additional 8270 criteria: 10% of compounds can be outside of acceptance criteria as long as recovery is at least 10%. (Acid surrogates acceptance range for aqueous samples: 10-110%, for soils 30-130%)

Batch 547132 (CG84820)

CG83505

All LCS recoveries were within 40 - 140 with the following exceptions: None.
All LCSD recoveries were within 40 - 140 with the following exceptions: None.
All LCS/LCSD RPDs were less than 20% with the following exceptions: 2-Methylnaphthalene(21.7%), Naphthalene(21.9%)
Additional 8270 criteria: 10% of compounds can be outside of acceptance criteria as long as recovery is at least 10%. (Acid surrogates acceptance range for aqueous samples: 10-110%, for soils 30-130%)

I attest under the pains and penalties of perjury that, based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.

VOA Narration

Were all QA/QC performance criteria specified in the MADEP document CAM achieved? Yes.

Instrument:

CHEM23 09/23/20-2 Michael Hahn, Chemist 09/23/20

CG83495 (1X)

Initial Calibration Evaluation (CHEM23/VOA23_092020):
99% of target compounds met criteria.
The following compounds had %RSDs >20%: Chloroethane 22% (20%)
The following compounds did not meet Table 4 recommended minimum response factors: None.
The following compounds did not meet the minimum response factor of 0.05: None.

Continuing Calibration Verification (CHEM23/0923_34-VOA23_092020) (MCP Compliance):
Internal standard areas were within 50 to 200% of the initial calibration with the following exceptions: None.

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ACCREDITED IN ACCORDANCE WITH nelac NY # 11301

MCP Certification Report

October 05, 2020

SDG I.D.: GCG83495

VOA Narration

95% of target compounds met criteria.
The following compounds did not meet % deviation criteria: None.
The following compounds did not meet maximum % deviations: None.
The following compounds did not meet Table 4 recommended minimum response factors: Tetrachloroethene 0.182 (0.2)
The following compounds did not meet the minimum MCP response factor of 0.05: None.

CHEM23 09/24/20-1 Michael Hahn, Chemist 09/24/20

CG83496 (1X), CG83497 (1X), CG83498 (1X), CG83499 (1X), CG83500 (1X), CG83501 (20X), CG83502 (1X), CG83503 (1X), CG83504 (1X), CG83505 (1X), CG83506 (1X)

Initial Calibration Evaluation (CHEM23/VOA23_092020):
99% of target compounds met criteria.
The following compounds had %RSDs >20%: Chloroethane 22% (20%)
The following compounds did not meet Table 4 recommended minimum response factors: None.
The following compounds did not meet the minimum response factor of 0.05: None.

Continuing Calibration Verification (CHEM23/0924_02-VOA23_092020) (MCP Compliance):
Internal standard areas were within 50 to 200% of the initial calibration with the following exceptions: None.
98% of target compounds met criteria.
The following compounds did not meet % deviation criteria: None.
The following compounds did not meet maximum % deviations: None.
The following compounds did not meet Table 4 recommended minimum response factors: Tetrachloroethene 0.188 (0.2)
The following compounds did not meet the minimum MCP response factor of 0.05: None.

CHEM23 09/25/20-2 Michael Hahn, Chemist 09/25/20

CG83500 (5X), CG83501 (1X)

Initial Calibration Evaluation (CHEM23/VOA23_092520):
94% of target compounds met criteria.
The following compounds had %RSDs >20%: Dichlorodifluoromethane 27% (20%), Trichlorofluoromethane 22% (20%), Trichlorotrifluoroethane 22% (20%)
The following compounds did not meet Table 4 recommended minimum response factors: Tetrachloroethene 0.186 (0.2)
The following compounds did not meet the minimum response factor of 0.05: None.

Continuing Calibration Verification (CHEM23/0925_16-VOA23_092520) (MCP Compliance):
Internal standard areas were within 50 to 200% of the initial calibration with the following exceptions: None.
99% of target compounds met criteria.
The following compounds did not meet % deviation criteria: None.
The following compounds did not meet maximum % deviations: None.
The following compounds did not meet Table 4 recommended minimum response factors: Tetrachloroethene 0.192 (0.2)
The following compounds did not meet the minimum MCP response factor of 0.05: None.

QC (Batch Specific):

Batch 546776 (CG83495) CHEM23 9/23/2020-2

CG83495(1X)

All LCS recoveries were within 70 - 130 with the following exceptions: None.
All LCSD recoveries were within 70 - 130 with the following exceptions: None.
All LCS/LCSD RPDs were less than 30% with the following exceptions: None.
A LCS and LCS Duplicate were performed instead of a matrix spike and matrix spike duplicate.
Additional 8260 criteria: 10% of compounds can be outside of acceptance criteria as long as recovery is 10%.

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

ACCREDITED IN ACCORDANCE WITH nelac NY # 11301

MCP Certification Report

October 05, 2020

SDG I.D.: GCG83495

VOA Narration

Batch 546836 (CG80056) CHEM23 9/24/2020-1

CG83496(1X), CG83497(1X), CG83498(1X), CG83499(1X), CG83500(1X), CG83501(20X), CG83502(1X), CG83503(1X), CG83504(1X), CG83505(1X), CG83506(1X)

All LCS recoveries were within 70 - 130 with the following exceptions: None.
All LCSD recoveries were within 70 - 130 with the following exceptions: None.
All LCS/LCSD RPDs were less than 30% with the following exceptions: None.
A LCS and LCS Duplicate were performed instead of a matrix spike and matrix spike duplicate.
Additional 8260 criteria: 10% of compounds can be outside of acceptance criteria as long as recovery is 10%.

Batch 547174 (CG85567) CHEM23 9/25/2020-2

CG83500(5X), CG83501(1X)

All LCS recoveries were within 70 - 130 with the following exceptions: None.
All LCSD recoveries were within 70 - 130 with the following exceptions: None.
All LCS/LCSD RPDs were less than 30% with the following exceptions: None.
A LCS and LCS Duplicate were performed instead of a matrix spike and matrix spike duplicate.
Additional 8260 criteria: 10% of compounds can be outside of acceptance criteria as long as recovery is 10%.

We attest under the pains and penalties of perjury that, based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.

VPH Narration

Were all QA/QC performance criteria specified in the MADEP document CAM achieved? Yes.

Instrument:

PIDFID 09/24/20-1 Raman Makol, Chemist 09/24/20

CG83496 (1X), CG83503 (1X), CG83504 (1X), CG83505 (1X)

Initial Calibration Evaluation (PIDFID/VPH_092420_T):
The following compounds exceeded %RSD criteria: None.

QC (Batch Specific):

Batch 546964 (CG83124)

CG83496(1X), CG83503(1X), CG83504(1X), CG83505(1X)

All LCS recoveries were within 70 - 130 with the following exceptions: None.
All LCSD recoveries were within 70 - 130 with the following exceptions: None.
All LCS/LCSD RPDs were less than 25% with the following exceptions: None.
A blank MS/MSD was analyzed with this batch.

I attest under the pains and penalties of perjury that, based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.

Cooler: Yes [X] No [ ]
Coolant: IPK [X] ICE [ ] No [ ]
Temp 1.1°C Pg of

CHAIN OF CUSTODY RECORD

PHOENIX *Environmental Laboratories, Inc.*

587 East Middle Turnpike, P.O. Box 370, Manchester, CT 06040
Email: info@phoenixlabs.com Fax (860) 645-0823
Client Services (860) 645-8726

Data Delivery/Contact EMails:
lori.herberich@aecom.com
scott.olson@aecom.com

Customer: AECOM
Address: 250 Apollo Drive
Chelmsford, MA 01824 - (978) 905-2100
Contacts: Lori Herberich (Chemist) 978-302-0089 Scott Olson (PM) 978-846-5238

Project: Lockheed - Wilmington MA 60552044.19
Report to: Lori Herberich - Scott Olson - Nicole Callahan
Invoice to: Scott Olson & Lori Herberich
QUOTE # August 2019 (for 2017-2022)

2020 Project PO: 127680

This section MUST be completed with Bottle Quantities.

Samplers Signature: [signature] Date: 9/23/20

Client Sample - Information - Identification

Matrix Code:
DW=Drinking Water GW=Ground Water SW=Surface Water WW=Waste Water L=Liquid
RW=Raw Water SE=Sediment SL=Sludge S=Soil SD=Solid W=Wipe OIL=Oil B=Bulk

PHOENIX USE ONLY SAMPLE #	Customer Sample Identification	Sample Matrix	Date Sampled	Time Sampled	# of VOA Vials	# of Amber Glass	# of Clear Glass	# of Plastic				VOCs (8260) - HCL + Freon 113	1,4-Dioxane (8270D SIM) - NaHSO4 for DL <0.3 ug/L	VPH - HCL (MassDEP- VPH-04-1.1 Rev 1)	EPH + PAHs - HCL & UNP (MassDEP- EPH-04-1.1 Rev 1)	Total As, Fe, Mn (6010C) - HNO3 [FF]	Dissolved As, Fe, Mn (6010C) - HNO3	Chloride, Nitrate, Nitrite, Sulfate (300) - UNP	Sulfide - Zn-Acetate + NaOH	Total Organic Carbon (9060A) - H3PO4	Comments
83495	20A-TB01-092220-1	GW	9/22/20	1700	2							X									
83496	20A-EB01-092220-1	GW	9/22/20	1745	5	5		4				X	X	X	X	X	X	X	X	X	
83497	20A-EB02-092220-1	GW	9/22/20	1730	3							X									
83498	20A-STM8D-092320-1	GW	9/23/20	1035	3	1						X	X								
83499	20A-STM8R-092320-1	GW	9/23/20	1110	3	1						X	X								
83500	20A-AE101R1-092320-1	GW	9/23/20	1035	3							X									
83501	20A-AE101R1-092320-2	GW	9/23/20	1040	3							X									
83502	20A-AE101R2-092320-1	GW	9/23/20	1140	3	1						X	X								
83503	20A-AE3-092320-1	GW	9/23/20	1055	5	3		2				X		X	X	X	X				
83504	20A-AE3-092320-2	GW	9/23/20	1100	5	3		2				X		X	X	X	X				
83505	20A-TRC103-092320-1	GW	9/23/20	1110	3	3						X		X	X						
83506	20A-AE101R3-092320-1	GW	9/23/20	1305	3	1						X	X								

Relinquished by:	Accepted by:	Date:	Time:
[signature]	[signature]	9-23-20	13:15
[signature]	[signature]	9/23/20	14:50

Comments, Special Requirements or Regulations:

Turnaround:
10 - 15 days

RI
- [ ] Direct Exposure (Residential)
- [ ] GW
- [ ] Other

CT
- [ ] RCP Cert
- [ ] GW Protection
- [ ] SW Protection
- [ ] GA Mobility
- [ ] GB Mobility
- [ ] Residential DEC
- [ ] I/C DEC
- [ ] Other

MA
- [X] MCP (CAM Rpt)
- [X] GW-1
- [X] GW-2
- [X] GW-3
- [ ] S-1
- [ ] S-2
- [ ] S-3
- [ ] MWRA eSMART
- [ ] Other

State where samples were collected: MA

Data Format
- [X] PDF
- [X] AECOM EQuIS 4-File EDD format

Data Package
- [ ] Tier II Checklist
- [ ] Full Data Package*
- [ ] Phoenix Std Report
- [ ] Other

* SURCHARGE APPLIES

PHOENIX
Environmental Laboratories, Inc.

Wednesday, October 28, 2020

Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Project ID: **LOCKHEED WILMINGTON MA 60552044.19**
SDG ID: **GCG84811**
Sample ID#s: CG84811 - CG84822

This laboratory is in compliance with the NELAC requirements of procedures used except where indicated.

This report contains results for the parameters tested, under the sampling conditions described on the Chain Of Custody, as received by the laboratory. This report is incomplete unless all pages indicated in the pagination at the bottom of the page are included.

A scanned version of the COC form accompanies the analytical report and is an exact duplicate of the original.

Enclosed are revised Analysis Report pages. Please replace and discard the original pages. If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200. The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.

Sincerely yours,



Phyllis Shiller
Laboratory Director

NELAC - #NY11301
CT Lab Registration #PH-0618
MA Lab Registration #M-CT007
ME Lab Registration #CT-007
NH Lab Registration #213693-A,B
NJ Lab Registration #CT-003
NY Lab Registration #11301
PA Lab Registration #68-03530
RI Lab Registration #63
UT Lab Registration #CT00007
VT Lab Registration #VT11301

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

NY # 11301

SDG Comments

October 28, 2020

SDG I.D.: GCG84811

Phoenix reporting levels may exceed those referenced in the CAM protocol. Please refer to criteria sheet for comparisons to requested MCP standards.

Ver 2: This report has been revised to include data for sample CG84820 (GZA-105D), 1,4-Dioxane. Per client request this analysis has been run past hold.

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Sample Id Cross Reference

October 28, 2020

SDG I.D.: GCG84811

Project ID: LOCKHEED WILMINGTON MA 60552044.19

Client Id	Lab Id	Matrix
20A-TB01-092320-1	CG84811	GROUND WATER
20A-TRC102-092320-1	CG84812	GROUND WATER
20A-GZA102S-092320-1	CG84813	GROUND WATER
20A-STM8R1-092320-1	CG84814	GROUND WATER
20A-TRC101-092320-1	CG84815	GROUND WATER
20A-AE4-092320-1	CG84816	GROUND WATER
20A-AE4-092320-2	CG84817	GROUND WATER
20A-GZA12-092420-1	CG84818	GROUND WATER
20A-IP1R2-092420-1	CG84819	GROUND WATER
20A-GZA105D-092420-1	CG84820	GROUND WATER
20A-TRC401R-092420-1	CG84821	GROUND WATER
20A-AE101R5-092420-1	CG84822	GROUND WATER

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

October 28, 2020

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		09/23/20	12:00
Location Code:	AECOM-WILMINGTN	Received by:	B	09/24/20	15:48
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	127680				

Laboratory Data

SDG ID: GCG84811
Phoenix ID: CG84811

Project ID: LOCKHEED WILMINGTON MA 60552044.19
Client ID: 20A-TB01-092320-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Volatiles							
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	1	09/29/20	MH	SW8260C
1,1,1-Trichloroethane	ND	1.0	ug/L	1	09/29/20	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L	1	09/29/20	MH	SW8260C
1,1,2-Trichloroethane	ND	1.0	ug/L	1	09/29/20	MH	SW8260C
1,1-Dichloroethane	ND	1.0	ug/L	1	09/29/20	MH	SW8260C
1,1-Dichloroethene	ND	1.0	ug/L	1	09/29/20	MH	SW8260C
1,1-Dichloropropene	ND	1.0	ug/L	1	09/29/20	MH	SW8260C
1,2,3-Trichlorobenzene	ND	1.0	ug/L	1	09/29/20	MH	SW8260C
1,2,3-Trichloropropane	ND	0.50	ug/L	1	09/29/20	MH	SW8260C
1,2,4-Trichlorobenzene	ND	1.0	ug/L	1	09/29/20	MH	SW8260C
1,2,4-Trimethylbenzene	ND	1.0	ug/L	1	09/29/20	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	0.50	ug/L	1	09/29/20	MH	SW8260C
1,2-Dibromoethane	ND	0.50	ug/L	1	09/29/20	MH	SW8260C
1,2-Dichlorobenzene	ND	1.0	ug/L	1	09/29/20	MH	SW8260C
1,2-Dichloroethane	ND	0.60	ug/L	1	09/29/20	MH	SW8260C
1,2-Dichloropropane	ND	1.0	ug/L	1	09/29/20	MH	SW8260C
1,3,5-Trimethylbenzene	ND	1.0	ug/L	1	09/29/20	MH	SW8260C
1,3-Dichlorobenzene	ND	1.0	ug/L	1	09/29/20	MH	SW8260C
1,3-Dichloropropane	ND	1.0	ug/L	1	09/29/20	MH	SW8260C
1,4-Dichlorobenzene	ND	1.0	ug/L	1	09/29/20	MH	SW8260C
2,2-Dichloropropane	ND	1.0	ug/L	1	09/29/20	MH	SW8260C
2-Chlorotoluene	ND	1.0	ug/L	1	09/29/20	MH	SW8260C
2-Hexanone	ND	5.0	ug/L	1	09/29/20	MH	SW8260C
4-Chlorotoluene	ND	1.0	ug/L	1	09/29/20	MH	SW8260C
4-Methyl-2-pentanone	ND	5.0	ug/L	1	09/29/20	MH	SW8260C
Acetone	ND	25	ug/L	1	09/29/20	MH	SW8260C

Project ID: LOCKHEED WILMINGTON MA 60552044.19 Phoenix I.D.: CG84811

Client ID: 20A-TB01-092320-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	
Benzene	ND	0.70	ug/L	1	09/29/20	MH	SW8260C
Bromobenzene	ND	1.0	ug/L	1	09/29/20	MH	SW8260C
Bromochloromethane	ND	1.0	ug/L	1	09/29/20	MH	SW8260C
Bromodichloromethane	ND	0.50	ug/L	1	09/29/20	MH	SW8260C
Bromoform	ND	1.0	ug/L	1	09/29/20	MH	SW8260C
Bromomethane	ND	1.0	ug/L	1	09/29/20	MH	SW8260C
Carbon Disulfide	ND	5.0	ug/L	1	09/29/20	MH	SW8260C
Carbon tetrachloride	ND	1.0	ug/L	1	09/29/20	MH	SW8260C
Chlorobenzene	ND	1.0	ug/L	1	09/29/20	MH	SW8260C
Chloroethane	ND	1.0	ug/L	1	09/29/20	MH	SW8260C
Chloroform	ND	1.0	ug/L	1	09/29/20	MH	SW8260C
Chloromethane	ND	1.0	ug/L	1	09/29/20	MH	SW8260C
cis-1,2-Dichloroethene	ND	1.0	ug/L	1	09/29/20	MH	SW8260C
cis-1,3-Dichloropropene	ND	0.40	ug/L	1	09/29/20	MH	SW8260C
Dibromochloromethane	ND	0.50	ug/L	1	09/29/20	MH	SW8260C
Dibromomethane	ND	1.0	ug/L	1	09/29/20	MH	SW8260C
Dichlorodifluoromethane	ND	1.0	ug/L	1	09/29/20	MH	SW8260C
Ethylbenzene	ND	1.0	ug/L	1	09/29/20	MH	SW8260C
Hexachlorobutadiene	ND	0.40	ug/L	1	09/29/20	MH	SW8260C
Isopropylbenzene	ND	1.0	ug/L	1	09/29/20	MH	SW8260C
m&p-Xylene	ND	1.0	ug/L	1	09/29/20	MH	SW8260C
Methyl ethyl ketone	ND	5.0	ug/L	1	09/29/20	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	1.0	ug/L	1	09/29/20	MH	SW8260C
Methylene chloride	ND	1.0	ug/L	1	09/29/20	MH	SW8260C
Naphthalene	ND	1.0	ug/L	1	09/29/20	MH	SW8260C
n-Butylbenzene	ND	1.0	ug/L	1	09/29/20	MH	SW8260C
n-Propylbenzene	ND	1.0	ug/L	1	09/29/20	MH	SW8260C
o-Xylene	ND	1.0	ug/L	1	09/29/20	MH	SW8260C
p-Isopropyltoluene	ND	1.0	ug/L	1	09/29/20	MH	SW8260C
sec-Butylbenzene	ND	1.0	ug/L	1	09/29/20	MH	SW8260C
Styrene	ND	1.0	ug/L	1	09/29/20	MH	SW8260C
tert-Butylbenzene	ND	1.0	ug/L	1	09/29/20	MH	SW8260C
Tetrachloroethene	ND	1.0	ug/L	1	09/29/20	MH	SW8260C
Tetrahydrofuran (THF)	ND	2.5	ug/L	1	09/29/20	MH	SW8260C
Toluene	ND	1.0	ug/L	1	09/29/20	MH	SW8260C
trans-1,2-Dichloroethene	ND	1.0	ug/L	1	09/29/20	MH	SW8260C
trans-1,3-Dichloropropene	ND	0.40	ug/L	1	09/29/20	MH	SW8260C
Trichloroethene	ND	1.0	ug/L	1	09/29/20	MH	SW8260C
Trichlorofluoromethane	ND	1.0	ug/L	1	09/29/20	MH	SW8260C
Trichlorotrifluoroethane	ND	1.0	ug/L	1	09/29/20	MH	SW8260C
Vinyl chloride	ND	1.0	ug/L	1	09/29/20	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	101		%	1	09/29/20	MH	70 - 130 %
% Bromofluorobenzene	97		%	1	09/29/20	MH	70 - 130 %
% Dibromofluoromethane	99		%	1	09/29/20	MH	70 - 130 %
% Toluene-d8	102		%	1	09/29/20	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	100	ug/L	1	09/29/20	MH	SW8260C (OXY)
Diethyl ether	ND	1.0	ug/L	1	09/29/20	MH	SW8260C (OXY)

Ver 2

Project ID: LOCKHEED WILMINGTON MA 60552044.19 Phoenix I.D.: CG84811

Client ID: 20A-TB01-092320-1

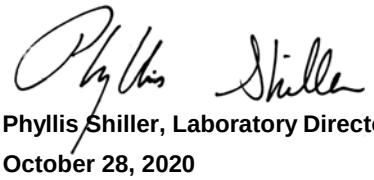
Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	
Di-isopropyl ether	ND	1.0	ug/L	1	09/29/20	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	1.0	ug/L	1	09/29/20	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	1.0	ug/L	1	09/29/20	MH	SW8260C (OXY)

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

TRIP BLANK INCLUDED.

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.



Phyllis Shiller, Laboratory Director

October 28, 2020

Reviewed and Released by: Greg Lawrence, Assistant Lab Director

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

October 28, 2020

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		09/23/20	12:15
Location Code:	AECOM-WILMINGTN	Received by:	B	09/24/20	15:48
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	127680				

Laboratory Data

SDG ID: GCG84811
Phoenix ID: CG84812

Project ID: LOCKHEED WILMINGTON MA 60552044.19
Client ID: 20A-TRC102-092320-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Arsenic	0.056	0.004	mg/L	1	09/26/20	CPP	SW6010D
Arsenic (Dissolved)	0.057	0.021	mg/L	5	09/30/20	EK	SW6010D
Iron (Dissolved)	23.7	0.053	mg/L	5	09/30/20	EK	SW6010D
Manganese (Dissolved)	3.12	0.005	mg/L	5	09/30/20	EK	SW6010D
Iron	23.5	0.010	mg/L	1	09/26/20	CPP	SW6010D
Manganese	3.03	0.010	mg/L	10	09/30/20	EK	SW6010D
EPH Extraction	Completed				09/25/20	JS/KL/KL	SW3510C
MA Petroleum Hydrocarbon (EPH)	Completed				09/24/20		MADEP EPH-04
Semi-Volatile Extraction	Completed				09/27/20	P/CG	SW3520C
Dissolved Metals Preparation	Completed				09/25/20	AG	SW3005A
Total Metals Digestion	Completed				09/24/20	AG	
MA Petroleum Hydrocarbon (VPH)	Completed				09/27/20	RM	MADEP VPH04
Volatiles							
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	1	09/29/20	MH	SW8260C
1,1,1-Trichloroethane	ND	1.0	ug/L	1	09/29/20	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L	1	09/29/20	MH	SW8260C
1,1,2-Trichloroethane	ND	1.0	ug/L	1	09/29/20	MH	SW8260C
1,1-Dichloroethane	ND	1.0	ug/L	1	09/29/20	MH	SW8260C
1,1-Dichloroethene	ND	1.0	ug/L	1	09/29/20	MH	SW8260C
1,1-Dichloropropene	ND	1.0	ug/L	1	09/29/20	MH	SW8260C
1,2,3-Trichlorobenzene	ND	1.0	ug/L	1	09/29/20	MH	SW8260C
1,2,3-Trichloropropane	ND	0.50	ug/L	1	09/29/20	MH	SW8260C
1,2,4-Trichlorobenzene	ND	1.0	ug/L	1	09/29/20	MH	SW8260C
1,2,4-Trimethylbenzene	ND	1.0	ug/L	1	09/29/20	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	0.50	ug/L	1	09/29/20	MH	SW8260C
1,2-Dibromoethane	ND	0.50	ug/L	1	09/29/20	MH	SW8260C
1,2-Dichlorobenzene	ND	1.0	ug/L	1	09/29/20	MH	SW8260C

Project ID: LOCKHEED WILMINGTON MA 60552044.19 Phoenix I.D.: CG84812

Client ID: 20A-TRC102-092320-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	
1,2-Dichloroethane	ND	0.60	ug/L	1	09/29/20	MH	SW8260C
1,2-Dichloropropane	ND	1.0	ug/L	1	09/29/20	MH	SW8260C
1,3,5-Trimethylbenzene	ND	1.0	ug/L	1	09/29/20	MH	SW8260C
1,3-Dichlorobenzene	ND	1.0	ug/L	1	09/29/20	MH	SW8260C
1,3-Dichloropropane	ND	1.0	ug/L	1	09/29/20	MH	SW8260C
1,4-Dichlorobenzene	ND	1.0	ug/L	1	09/29/20	MH	SW8260C
2,2-Dichloropropane	ND	1.0	ug/L	1	09/29/20	MH	SW8260C
2-Chlorotoluene	ND	1.0	ug/L	1	09/29/20	MH	SW8260C
2-Hexanone	ND	5.0	ug/L	1	09/29/20	MH	SW8260C
4-Chlorotoluene	ND	1.0	ug/L	1	09/29/20	MH	SW8260C
4-Methyl-2-pentanone	ND	5.0	ug/L	1	09/29/20	MH	SW8260C
Acetone	ND	25	ug/L	1	09/29/20	MH	SW8260C
Benzene	ND	0.70	ug/L	1	09/29/20	MH	SW8260C
Bromobenzene	ND	1.0	ug/L	1	09/29/20	MH	SW8260C
Bromochloromethane	ND	1.0	ug/L	1	09/29/20	MH	SW8260C
Bromodichloromethane	ND	0.50	ug/L	1	09/29/20	MH	SW8260C
Bromoform	ND	1.0	ug/L	1	09/29/20	MH	SW8260C
Bromomethane	ND	1.0	ug/L	1	09/29/20	MH	SW8260C
Carbon Disulfide	ND	5.0	ug/L	1	09/29/20	MH	SW8260C
Carbon tetrachloride	ND	1.0	ug/L	1	09/29/20	MH	SW8260C
Chlorobenzene	ND	1.0	ug/L	1	09/29/20	MH	SW8260C
Chloroethane	ND	1.0	ug/L	1	09/29/20	MH	SW8260C
Chloroform	ND	1.0	ug/L	1	09/29/20	MH	SW8260C
Chloromethane	ND	1.0	ug/L	1	09/29/20	MH	SW8260C
cis-1,2-Dichloroethene	ND	1.0	ug/L	1	09/29/20	MH	SW8260C
cis-1,3-Dichloropropene	ND	0.40	ug/L	1	09/29/20	MH	SW8260C
Dibromochloromethane	ND	0.50	ug/L	1	09/29/20	MH	SW8260C
Dibromomethane	ND	1.0	ug/L	1	09/29/20	MH	SW8260C
Dichlorodifluoromethane	ND	1.0	ug/L	1	09/29/20	MH	SW8260C
Ethylbenzene	ND	1.0	ug/L	1	09/29/20	MH	SW8260C
Hexachlorobutadiene	ND	0.40	ug/L	1	09/29/20	MH	SW8260C
Isopropylbenzene	ND	1.0	ug/L	1	09/29/20	MH	SW8260C
m&p-Xylene	ND	1.0	ug/L	1	09/29/20	MH	SW8260C
Methyl ethyl ketone	ND	5.0	ug/L	1	09/29/20	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	1.0	ug/L	1	09/29/20	MH	SW8260C
Methylene chloride	ND	1.0	ug/L	1	09/29/20	MH	SW8260C
Naphthalene	ND	1.0	ug/L	1	09/29/20	MH	SW8260C
n-Butylbenzene	ND	1.0	ug/L	1	09/29/20	MH	SW8260C
n-Propylbenzene	ND	1.0	ug/L	1	09/29/20	MH	SW8260C
o-Xylene	ND	1.0	ug/L	1	09/29/20	MH	SW8260C
p-Isopropyltoluene	ND	1.0	ug/L	1	09/29/20	MH	SW8260C
sec-Butylbenzene	ND	1.0	ug/L	1	09/29/20	MH	SW8260C
Styrene	ND	1.0	ug/L	1	09/29/20	MH	SW8260C
tert-Butylbenzene	6.7	1.0	ug/L	1	09/29/20	MH	SW8260C
Tetrachloroethene	ND	1.0	ug/L	1	09/29/20	MH	SW8260C
Tetrahydrofuran (THF)	ND	2.5	ug/L	1	09/29/20	MH	SW8260C
Toluene	ND	1.0	ug/L	1	09/29/20	MH	SW8260C
trans-1,2-Dichloroethene	ND	1.0	ug/L	1	09/29/20	MH	SW8260C
trans-1,3-Dichloropropene	ND	0.40	ug/L	1	09/29/20	MH	SW8260C

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	
Trichloroethene	ND	1.0	ug/L	1	09/29/20	MH	SW8260C
Trichlorofluoromethane	ND	1.0	ug/L	1	09/29/20	MH	SW8260C
Trichlorotrifluoroethane	ND	1.0	ug/L	1	09/29/20	MH	SW8260C
Vinyl chloride	ND	1.0	ug/L	1	09/29/20	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	102		%	1	09/29/20	MH	70 - 130 %
% Bromofluorobenzene	99		%	1	09/29/20	MH	70 - 130 %
% Dibromofluoromethane	104		%	1	09/29/20	MH	70 - 130 %
% Toluene-d8	102		%	1	09/29/20	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	100	ug/L	1	09/29/20	MH	SW8260C (OXY)
Diethyl ether	ND	1.0	ug/L	1	09/29/20	MH	SW8260C (OXY)
Di-isopropyl ether	ND	1.0	ug/L	1	09/29/20	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	1.0	ug/L	1	09/29/20	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	1.0	ug/L	1	09/29/20	MH	SW8260C (OXY)
Client MS/MSD	Completed				09/29/20		
Semivolatiles by SIM, PAH							
2-Methylnaphthalene	ND	0.47	ug/L	1	09/29/20	WB	SW8270D (SIM)
Acenaphthene	ND	0.47	ug/L	1	09/29/20	WB	SW8270D (SIM)
Acenaphthylene	ND	0.09	ug/L	1	09/29/20	WB	SW8270D (SIM)
Anthracene	ND	0.09	ug/L	1	09/29/20	WB	SW8270D (SIM)
Benz(a)anthracene	ND	0.09	ug/L	1	09/29/20	WB	SW8270D (SIM)
Benzo(a)pyrene	ND	0.19	ug/L	1	09/29/20	WB	SW8270D (SIM)
Benzo(b)fluoranthene	ND	0.09	ug/L	1	09/29/20	WB	SW8270D (SIM)
Benzo(ghi)perylene	ND	0.02	ug/L	1	09/29/20	WB	SW8270D (SIM)
Benzo(k)fluoranthene	ND	0.09	ug/L	1	09/29/20	WB	SW8270D (SIM)
Chrysene	ND	0.05	ug/L	1	09/29/20	WB	SW8270D (SIM)
Dibenz(a,h)anthracene	ND	0.02	ug/L	1	09/29/20	WB	SW8270D (SIM)
Fluoranthene	ND	0.47	ug/L	1	09/29/20	WB	SW8270D (SIM)
Fluorene	ND	0.09	ug/L	1	09/29/20	WB	SW8270D (SIM)
Indeno(1,2,3-cd)pyrene	ND	0.09	ug/L	1	09/29/20	WB	SW8270D (SIM)
Naphthalene	ND	0.47	ug/L	1	09/29/20	WB	SW8270D (SIM)
Phenanthrene	ND	0.47	ug/L	1	09/29/20	WB	SW8270D (SIM)
Pyrene	ND	0.07	ug/L	1	09/29/20	WB	SW8270D (SIM)
QA/QC Surrogates							
% 2-Fluorobiphenyl	52		%	1	09/29/20	WB	40 - 140 %
% Nitrobenzene-d5	59		%	1	09/29/20	WB	40 - 140 %
% Terphenyl-d14	55		%	1	09/29/20	WB	40 - 140 %
MA EPH Aliphatic/Aromatic Ranges							
C11-C22 Aromatic Hydrocarbons 1,2*	ND	190	ug/L	1	09/26/20	AW	MAEPH 5/2004
C11-C22 Aromatic Hydrocarbons Unadj	ND	190	ug/L	1	09/26/20	AW	MAEPH 5/2004
C19-C36 Aliphatic Hydrocarbons 1*	ND	190	ug/L	1	09/26/20	AW	MAEPH 5/2004
C9-C18 Aliphatic Hydrocarbons 1*	ND	190	ug/L	1	09/26/20	AW	MAEPH 5/2004
Total TPH 1,2*	ND	190	ug/L	1	09/26/20	AW	MAEPH 5/2004
QA/QC Surrogates							
% 1-chlorooctadecane (aliphatic)	78		%	1	09/26/20	AW	40 - 140 %
% 2-Bromonaphthalene (Fractionation)	97		%	1	09/26/20	AW	40 - 140 %

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	
% 2-Fluorobiphenyl (Fractionation)	114		%	1	09/26/20	AW	40 - 140 %
% o-terphenyl (aromatic)	85		%	1	09/26/20	AW	40 - 140 %

MA Volatile Petroleum Hydrocarbons (VPH)

Unadjusted C5-C8 Aliphatics (*1)	ND	100	ug/L	1	09/27/20	RM	MA VPH 5/2004
Unadjusted C9-C12 Aliphatics (*1)	140	100	ug/L	1	09/27/20	RM	MA VPH 5/2004
C5-C8 Aliphatic Hydrocarbons *1,2	ND	100	ug/L	1	09/27/20	RM	MA VPH 5/2004
C9-C12 Aliphatic Hydrocarbons *1,3	ND	100	ug/L	1	09/27/20	RM	MA VPH 5/2004
C9-C10 Aromatic Hydrocarbons *1	ND	100	ug/L	1	09/27/20	RM	MA VPH 5/2004
Benzene	ND	1.0	ug/L	1	09/27/20	RM	MA VPH 5/2004
Ethyl Benzene	1.5	1.0	ug/L	1	09/27/20	RM	MA VPH 5/2004
MTBE	ND	1.0	ug/L	1	09/27/20	RM	MA VPH 5/2004
Naphthalene	ND	5.0	ug/L	1	09/27/20	RM	MA VPH 5/2004
Toluene	ND	1.0	ug/L	1	09/27/20	RM	MA VPH 5/2004
m,p-Xylenes	ND	2.0	ug/L	1	09/27/20	RM	MA VPH 5/2004
o-Xylene	2.7	1.0	ug/L	1	09/27/20	RM	MA VPH 5/2004
QA/QC Surrogates							
% 2,5-Dibromotoluene (FID)	91		%	1	09/27/20	RM	70 - 130 %
% 2,5-Dibromotoluene (PID)	95		%	1	09/27/20	RM	70 - 130 %

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

MAEPH:
1* Hydrocarbon range data exclude concentrations of any surrogate(s) and/or internal standards eluting in that range.
2* C11-C12 Aromatic Hydrocarbons exclude the concentration of Target PAH analytes eluting in that range.

VPH:
*1 Range data exclude conc.s of any surrogate(s) and/or Int. std.s eluting in that range.
*2 C5-C8 and C9-C12 Aliphatic exclude the conc. of Target Analytes in that range.
*3 C9-C12 Aliphatic also exclude C9-C10 Aromatic Hydrocarbon

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.



Phyllis Shiller, Laboratory Director

October 28, 2020

Reviewed and Released by: Greg Lawrence, Assistant Lab Director

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

October 28, 2020

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		09/23/20	13:05
Location Code:	AECOM-WILMINGTN	Received by:	B	09/24/20	15:48
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	127680				

Laboratory Data

SDG ID: GCG84811
Phoenix ID: CG84813

Project ID: LOCKHEED WILMINGTON MA 60552044.19
Client ID: 20A-GZA102S-092320-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
EPH Extraction	Completed				09/25/20	JS/KL/KL	SW3510C
MA Petroleum Hydrocarbon (EPH)	Completed				09/24/20		MADEP EPH-04
Semi-Volatile Extraction	Completed				09/27/20	P/CG	SW3520C
MA Petroleum Hydrocarbon (VPH)	Completed				09/27/20	RM	MADEP VPH04
Volatiles							
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	1	09/29/20	MH	SW8260C
1,1,1-Trichloroethane	ND	1.0	ug/L	1	09/29/20	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L	1	09/29/20	MH	SW8260C
1,1,2-Trichloroethane	ND	1.0	ug/L	1	09/29/20	MH	SW8260C
1,1-Dichloroethane	ND	1.0	ug/L	1	09/29/20	MH	SW8260C
1,1-Dichloroethene	ND	1.0	ug/L	1	09/29/20	MH	SW8260C
1,1-Dichloropropene	ND	1.0	ug/L	1	09/29/20	MH	SW8260C
1,2,3-Trichlorobenzene	ND	1.0	ug/L	1	09/29/20	MH	SW8260C
1,2,3-Trichloropropane	ND	0.50	ug/L	1	09/29/20	MH	SW8260C
1,2,4-Trichlorobenzene	ND	1.0	ug/L	1	09/29/20	MH	SW8260C
1,2,4-Trimethylbenzene	ND	1.0	ug/L	1	09/29/20	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	0.50	ug/L	1	09/29/20	MH	SW8260C
1,2-Dibromoethane	ND	0.50	ug/L	1	09/29/20	MH	SW8260C
1,2-Dichlorobenzene	ND	1.0	ug/L	1	09/29/20	MH	SW8260C
1,2-Dichloroethane	ND	0.60	ug/L	1	09/29/20	MH	SW8260C
1,2-Dichloropropane	ND	1.0	ug/L	1	09/29/20	MH	SW8260C
1,3,5-Trimethylbenzene	ND	1.0	ug/L	1	09/29/20	MH	SW8260C
1,3-Dichlorobenzene	ND	1.0	ug/L	1	09/29/20	MH	SW8260C
1,3-Dichloropropane	ND	1.0	ug/L	1	09/29/20	MH	SW8260C
1,4-Dichlorobenzene	ND	1.0	ug/L	1	09/29/20	MH	SW8260C
2,2-Dichloropropane	ND	1.0	ug/L	1	09/29/20	MH	SW8260C
2-Chlorotoluene	ND	1.0	ug/L	1	09/29/20	MH	SW8260C

Project ID: LOCKHEED WILMINGTON MA 60552044.19 Phoenix I.D.: CG84813

Client ID: 20A-GZA102S-092320-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	
2-Hexanone	ND	5.0	ug/L	1	09/29/20	MH	SW8260C
4-Chlorotoluene	ND	1.0	ug/L	1	09/29/20	MH	SW8260C
4-Methyl-2-pentanone	ND	5.0	ug/L	1	09/29/20	MH	SW8260C
Acetone	ND	25	ug/L	1	09/29/20	MH	SW8260C
Benzene	ND	0.70	ug/L	1	09/29/20	MH	SW8260C
Bromobenzene	ND	1.0	ug/L	1	09/29/20	MH	SW8260C
Bromochloromethane	ND	1.0	ug/L	1	09/29/20	MH	SW8260C
Bromodichloromethane	ND	0.50	ug/L	1	09/29/20	MH	SW8260C
Bromoform	ND	1.0	ug/L	1	09/29/20	MH	SW8260C
Bromomethane	ND	1.0	ug/L	1	09/29/20	MH	SW8260C
Carbon Disulfide	ND	5.0	ug/L	1	09/29/20	MH	SW8260C
Carbon tetrachloride	ND	1.0	ug/L	1	09/29/20	MH	SW8260C
Chlorobenzene	ND	1.0	ug/L	1	09/29/20	MH	SW8260C
Chloroethane	ND	1.0	ug/L	1	09/29/20	MH	SW8260C
Chloroform	ND	1.0	ug/L	1	09/29/20	MH	SW8260C
Chloromethane	ND	1.0	ug/L	1	09/29/20	MH	SW8260C
cis-1,2-Dichloroethene	2.5	1.0	ug/L	1	09/29/20	MH	SW8260C
cis-1,3-Dichloropropene	ND	0.40	ug/L	1	09/29/20	MH	SW8260C
Dibromochloromethane	ND	0.50	ug/L	1	09/29/20	MH	SW8260C
Dibromomethane	ND	1.0	ug/L	1	09/29/20	MH	SW8260C
Dichlorodifluoromethane	ND	1.0	ug/L	1	09/29/20	MH	SW8260C
Ethylbenzene	ND	1.0	ug/L	1	09/29/20	MH	SW8260C
Hexachlorobutadiene	ND	0.40	ug/L	1	09/29/20	MH	SW8260C
Isopropylbenzene	ND	1.0	ug/L	1	09/29/20	MH	SW8260C
m&p-Xylene	ND	1.0	ug/L	1	09/29/20	MH	SW8260C
Methyl ethyl ketone	ND	5.0	ug/L	1	09/29/20	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	1.0	ug/L	1	09/29/20	MH	SW8260C
Methylene chloride	ND	1.0	ug/L	1	09/29/20	MH	SW8260C
Naphthalene	ND	1.0	ug/L	1	09/29/20	MH	SW8260C
n-Butylbenzene	ND	1.0	ug/L	1	09/29/20	MH	SW8260C
n-Propylbenzene	ND	1.0	ug/L	1	09/29/20	MH	SW8260C
o-Xylene	ND	1.0	ug/L	1	09/29/20	MH	SW8260C
p-Isopropyltoluene	ND	1.0	ug/L	1	09/29/20	MH	SW8260C
sec-Butylbenzene	ND	1.0	ug/L	1	09/29/20	MH	SW8260C
Styrene	ND	1.0	ug/L	1	09/29/20	MH	SW8260C
tert-Butylbenzene	ND	1.0	ug/L	1	09/29/20	MH	SW8260C
Tetrachloroethene	1.3	1.0	ug/L	1	09/29/20	MH	SW8260C
Tetrahydrofuran (THF)	ND	2.5	ug/L	1	09/29/20	MH	SW8260C
Toluene	ND	1.0	ug/L	1	09/29/20	MH	SW8260C
trans-1,2-Dichloroethene	ND	1.0	ug/L	1	09/29/20	MH	SW8260C
trans-1,3-Dichloropropene	ND	0.40	ug/L	1	09/29/20	MH	SW8260C
Trichloroethene	2.5	1.0	ug/L	1	09/29/20	MH	SW8260C
Trichlorofluoromethane	ND	1.0	ug/L	1	09/29/20	MH	SW8260C
Trichlorotrifluoroethane	ND	1.0	ug/L	1	09/29/20	MH	SW8260C
Vinyl chloride	1.2	1.0	ug/L	1	09/29/20	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	100		%	1	09/29/20	MH	70 - 130 %
% Bromofluorobenzene	97		%	1	09/29/20	MH	70 - 130 %
% Dibromofluoromethane	102		%	1	09/29/20	MH	70 - 130 %

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	
% Toluene-d8	104		%	1	09/29/20	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	100	ug/L	1	09/29/20	MH	SW8260C (OXY)
Diethyl ether	ND	1.0	ug/L	1	09/29/20	MH	SW8260C (OXY)
Di-isopropyl ether	ND	1.0	ug/L	1	09/29/20	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	1.0	ug/L	1	09/29/20	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	1.0	ug/L	1	09/29/20	MH	SW8260C (OXY)
Semivolatiles by SIM, PAH							
2-Methylnaphthalene	ND	0.47	ug/L	1	09/29/20	WB	SW8270D (SIM)
Acenaphthene	ND	0.47	ug/L	1	09/29/20	WB	SW8270D (SIM)
Acenaphthylene	ND	0.09	ug/L	1	09/29/20	WB	SW8270D (SIM)
Anthracene	ND	0.09	ug/L	1	09/29/20	WB	SW8270D (SIM)
Benz(a)anthracene	ND	0.09	ug/L	1	09/29/20	WB	SW8270D (SIM)
Benzo(a)pyrene	ND	0.19	ug/L	1	09/29/20	WB	SW8270D (SIM)
Benzo(b)fluoranthene	ND	0.09	ug/L	1	09/29/20	WB	SW8270D (SIM)
Benzo(ghi)perylene	ND	0.02	ug/L	1	09/29/20	WB	SW8270D (SIM)
Benzo(k)fluoranthene	ND	0.09	ug/L	1	09/29/20	WB	SW8270D (SIM)
Chrysene	ND	0.05	ug/L	1	09/29/20	WB	SW8270D (SIM)
Dibenz(a,h)anthracene	ND	0.02	ug/L	1	09/29/20	WB	SW8270D (SIM)
Fluoranthene	ND	0.47	ug/L	1	09/29/20	WB	SW8270D (SIM)
Fluorene	ND	0.09	ug/L	1	09/29/20	WB	SW8270D (SIM)
Indeno(1,2,3-cd)pyrene	ND	0.09	ug/L	1	09/29/20	WB	SW8270D (SIM)
Naphthalene	ND	0.47	ug/L	1	09/29/20	WB	SW8270D (SIM)
Phenanthrene	ND	0.47	ug/L	1	09/29/20	WB	SW8270D (SIM)
Pyrene	ND	0.07	ug/L	1	09/29/20	WB	SW8270D (SIM)
QA/QC Surrogates							
% 2-Fluorobiphenyl	65		%	1	09/29/20	WB	40 - 140 %
% Nitrobenzene-d5	75		%	1	09/29/20	WB	40 - 140 %
% Terphenyl-d14	76		%	1	09/29/20	WB	40 - 140 %
MA EPH Aliphatic/Aromatic Ranges							
C11-C22 Aromatic Hydrocarbons 1,2*	ND	190	ug/L	1	09/26/20	AW	MAEPH 5/2004
C11-C22 Aromatic Hydrocarbons Unadj	ND	190	ug/L	1	09/26/20	AW	MAEPH 5/2004
C19-C36 Aliphatic Hydrocarbons 1*	ND	190	ug/L	1	09/26/20	AW	MAEPH 5/2004
C9-C18 Aliphatic Hydrocarbons 1*	ND	190	ug/L	1	09/26/20	AW	MAEPH 5/2004
Total TPH 1,2*	ND	190	ug/L	1	09/26/20	AW	MAEPH 5/2004
QA/QC Surrogates							
% 1-chlorooctadecane (aliphatic)	85		%	1	09/26/20	AW	40 - 140 %
% 2-Bromonaphthalene (Fractionation)	113		%	1	09/26/20	AW	40 - 140 %
% 2-Fluorobiphenyl (Fractionation)	127		%	1	09/26/20	AW	40 - 140 %
% o-terphenyl (aromatic)	89		%	1	09/26/20	AW	40 - 140 %
MA Volatile Petroleum Hydrocarbons (VPH)							
Unadjusted C5-C8 Aliphatics (*1)	ND	100	ug/L	1	09/27/20	RM	MA VPH 5/2004
Unadjusted C9-C12 Aliphatics (*1)	ND	100	ug/L	1	09/27/20	RM	MA VPH 5/2004
C5-C8 Aliphatic Hydrocarbons *1,2	ND	100	ug/L	1	09/27/20	RM	MA VPH 5/2004
C9-C12 Aliphatic Hydrocarbons *1,3	ND	100	ug/L	1	09/27/20	RM	MA VPH 5/2004
C9-C10 Aromatic Hydrocarbons *1	ND	100	ug/L	1	09/27/20	RM	MA VPH 5/2004

Project ID: LOCKHEED WILMINGTON MA 60552044.19 Phoenix I.D.: CG84813
Client ID: 20A-GZA102S-092320-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	
Benzene	ND	1.0	ug/L	1	09/27/20	RM	MA VPH 5/2004
Ethyl Benzene	ND	1.0	ug/L	1	09/27/20	RM	MA VPH 5/2004
MTBE	ND	1.0	ug/L	1	09/27/20	RM	MA VPH 5/2004
Naphthalene	ND	5.0	ug/L	1	09/27/20	RM	MA VPH 5/2004
Toluene	ND	1.0	ug/L	1	09/27/20	RM	MA VPH 5/2004
m,p-Xylenes	ND	2.0	ug/L	1	09/27/20	RM	MA VPH 5/2004
o-Xylene	ND	1.0	ug/L	1	09/27/20	RM	MA VPH 5/2004
QA/QC Surrogates							
% 2,5-Dibromotoluene (FID)	93		%	1	09/27/20	RM	70 - 130 %
% 2,5-Dibromotoluene (PID)	93		%	1	09/27/20	RM	70 - 130 %

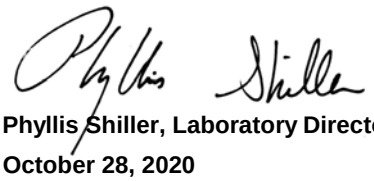
RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

MAEPH:
1* Hydrocarbon range data exclude concentrations of any surrogate(s) and/or internal standards eluting in that range.
2* C11-C12 Aromatic Hydrocarbons exclude the concentration of Target PAH analytes eluting in that range.

VPH:
*1 Range data exclude conc.s of any surrogate(s) and/or Int. std.s eluting in that range.
*2 C5-C8 and C9-C12 Aliphatic exclude the conc. of Target Analytes in that range.
*3 C9-C12 Aliphatic also exclude C9-C10 Aromatic Hydrocarbon

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.



Phyllis Shiller, Laboratory Director
October 28, 2020
Reviewed and Released by: Greg Lawrence, Assistant Lab Director

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

October 28, 2020

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		09/23/20	12:30
Location Code:	AECOM-WILMINGTN	Received by:	B	09/24/20	15:48
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	127680				

Laboratory Data

SDG ID: GCG84811
Phoenix ID: CG84814

Project ID: LOCKHEED WILMINGTON MA 60552044.19
Client ID: 20A-STM8R1-092320-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Arsenic	0.018	0.004	mg/L	1	09/26/20	CPP	SW6010D
Arsenic (Dissolved)	0.011	0.004	mg/L	1	09/26/20	CPP	SW6010D
Iron (Dissolved)	0.030	0.011	mg/L	1	09/26/20	CPP	SW6010D
Manganese (Dissolved)	0.138	0.001	mg/L	1	09/26/20	EK	SW6010D
Iron	0.340	0.010	mg/L	1	09/26/20	CPP	SW6010D
Manganese	0.182	0.001	mg/L	1	09/26/20	EK	SW6010D
Chloride	79.8	3.0	mg/L	1	09/25/20	BS/EG	E300.0
Nitrite as Nitrogen	< 0.004	0.004	mg/L	1	09/25/20 01:47	BS/EG	E300.0
Nitrate as Nitrogen	0.07	0.05	mg/L	1	09/25/20 01:47	BS/EG	E300.0
Sulfate	51.2	3.0	mg/L	1	09/25/20	BS/EG	E300.0
Sulfide	< 0.05	0.05	mg/L	1	09/30/20	GD	SM4500S-D-11
Total Organic Carbon	< 1.0	1.0	mg/L	1	09/25/20	ARG	SM5310B-11
EPH Extraction	Completed				09/25/20	JS/KL/KL	SW3510C
MA Petroleum Hydrocarbon (EPH)	Completed				09/24/20		MADEP EPH-04
Semi-Volatile Extraction	Completed				09/27/20	P/CG	SW3520C
Dissolved Metals Preparation	Completed				09/25/20	AG	SW3005A
Total Metals Digestion	Completed				09/24/20	AG	
MA Petroleum Hydrocarbon (VPH)	Completed				09/27/20	RM	MADEP VPH04
Volatiles							
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	1	09/29/20	MH	SW8260C
1,1,1-Trichloroethane	ND	1.0	ug/L	1	09/29/20	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L	1	09/29/20	MH	SW8260C
1,1,2-Trichloroethane	ND	1.0	ug/L	1	09/29/20	MH	SW8260C
1,1-Dichloroethane	ND	1.0	ug/L	1	09/29/20	MH	SW8260C
1,1-Dichloroethene	ND	1.0	ug/L	1	09/29/20	MH	SW8260C
1,1-Dichloropropene	ND	1.0	ug/L	1	09/29/20	MH	SW8260C
1,2,3-Trichlorobenzene	ND	1.0	ug/L	1	09/29/20	MH	SW8260C

Project ID: LOCKHEED WILMINGTON MA 60552044.19 Phoenix I.D.: CG84814

Client ID: 20A-STM8R1-092320-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	
1,2,3-Trichloropropane	ND	0.50	ug/L	1	09/29/20	MH	SW8260C
1,2,4-Trichlorobenzene	ND	1.0	ug/L	1	09/29/20	MH	SW8260C
1,2,4-Trimethylbenzene	ND	1.0	ug/L	1	09/29/20	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	0.50	ug/L	1	09/29/20	MH	SW8260C
1,2-Dibromoethane	ND	0.50	ug/L	1	09/29/20	MH	SW8260C
1,2-Dichlorobenzene	ND	1.0	ug/L	1	09/29/20	MH	SW8260C
1,2-Dichloroethane	ND	0.60	ug/L	1	09/29/20	MH	SW8260C
1,2-Dichloropropane	ND	1.0	ug/L	1	09/29/20	MH	SW8260C
1,3,5-Trimethylbenzene	ND	1.0	ug/L	1	09/29/20	MH	SW8260C
1,3-Dichlorobenzene	ND	1.0	ug/L	1	09/29/20	MH	SW8260C
1,3-Dichloropropane	ND	1.0	ug/L	1	09/29/20	MH	SW8260C
1,4-Dichlorobenzene	ND	1.0	ug/L	1	09/29/20	MH	SW8260C
2,2-Dichloropropane	ND	1.0	ug/L	1	09/29/20	MH	SW8260C
2-Chlorotoluene	ND	1.0	ug/L	1	09/29/20	MH	SW8260C
2-Hexanone	ND	5.0	ug/L	1	09/29/20	MH	SW8260C
4-Chlorotoluene	ND	1.0	ug/L	1	09/29/20	MH	SW8260C
4-Methyl-2-pentanone	ND	5.0	ug/L	1	09/29/20	MH	SW8260C
Acetone	ND	25	ug/L	1	09/29/20	MH	SW8260C
Benzene	ND	0.70	ug/L	1	09/29/20	MH	SW8260C
Bromobenzene	ND	1.0	ug/L	1	09/29/20	MH	SW8260C
Bromochloromethane	ND	1.0	ug/L	1	09/29/20	MH	SW8260C
Bromodichloromethane	ND	0.50	ug/L	1	09/29/20	MH	SW8260C
Bromoform	ND	1.0	ug/L	1	09/29/20	MH	SW8260C
Bromomethane	ND	1.0	ug/L	1	09/29/20	MH	SW8260C
Carbon Disulfide	ND	5.0	ug/L	1	09/29/20	MH	SW8260C
Carbon tetrachloride	ND	1.0	ug/L	1	09/29/20	MH	SW8260C
Chlorobenzene	ND	1.0	ug/L	1	09/29/20	MH	SW8260C
Chloroethane	ND	1.0	ug/L	1	09/29/20	MH	SW8260C
Chloroform	ND	1.0	ug/L	1	09/29/20	MH	SW8260C
Chloromethane	ND	1.0	ug/L	1	09/29/20	MH	SW8260C
cis-1,2-Dichloroethene	ND	1.0	ug/L	1	09/29/20	MH	SW8260C
cis-1,3-Dichloropropene	ND	0.40	ug/L	1	09/29/20	MH	SW8260C
Dibromochloromethane	ND	0.50	ug/L	1	09/29/20	MH	SW8260C
Dibromomethane	ND	1.0	ug/L	1	09/29/20	MH	SW8260C
Dichlorodifluoromethane	ND	1.0	ug/L	1	09/29/20	MH	SW8260C
Ethylbenzene	ND	1.0	ug/L	1	09/29/20	MH	SW8260C
Hexachlorobutadiene	ND	0.40	ug/L	1	09/29/20	MH	SW8260C
Isopropylbenzene	ND	1.0	ug/L	1	09/29/20	MH	SW8260C
m&p-Xylene	ND	1.0	ug/L	1	09/29/20	MH	SW8260C
Methyl ethyl ketone	ND	5.0	ug/L	1	09/29/20	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	1.0	ug/L	1	09/29/20	MH	SW8260C
Methylene chloride	ND	1.0	ug/L	1	09/29/20	MH	SW8260C
Naphthalene	ND	1.0	ug/L	1	09/29/20	MH	SW8260C
n-Butylbenzene	ND	1.0	ug/L	1	09/29/20	MH	SW8260C
n-Propylbenzene	ND	1.0	ug/L	1	09/29/20	MH	SW8260C
o-Xylene	ND	1.0	ug/L	1	09/29/20	MH	SW8260C
p-Isopropyltoluene	ND	1.0	ug/L	1	09/29/20	MH	SW8260C
sec-Butylbenzene	ND	1.0	ug/L	1	09/29/20	MH	SW8260C
Styrene	ND	1.0	ug/L	1	09/29/20	MH	SW8260C

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	
tert-Butylbenzene	ND	1.0	ug/L	1	09/29/20	MH	SW8260C
Tetrachloroethene	ND	1.0	ug/L	1	09/29/20	MH	SW8260C
Tetrahydrofuran (THF)	ND	2.5	ug/L	1	09/29/20	MH	SW8260C
Toluene	ND	1.0	ug/L	1	09/29/20	MH	SW8260C
trans-1,2-Dichloroethene	ND	1.0	ug/L	1	09/29/20	MH	SW8260C
trans-1,3-Dichloropropene	ND	0.40	ug/L	1	09/29/20	MH	SW8260C
Trichloroethene	1.7	1.0	ug/L	1	09/29/20	MH	SW8260C
Trichlorofluoromethane	ND	1.0	ug/L	1	09/29/20	MH	SW8260C
Trichlorotrifluoroethane	ND	1.0	ug/L	1	09/29/20	MH	SW8260C
Vinyl chloride	ND	1.0	ug/L	1	09/29/20	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	102		%	1	09/29/20	MH	70 - 130 %
% Bromofluorobenzene	97		%	1	09/29/20	MH	70 - 130 %
% Dibromofluoromethane	100		%	1	09/29/20	MH	70 - 130 %
% Toluene-d8	104		%	1	09/29/20	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	100	ug/L	1	09/29/20	MH	SW8260C (OXY)
Diethyl ether	ND	1.0	ug/L	1	09/29/20	MH	SW8260C (OXY)
Di-isopropyl ether	ND	1.0	ug/L	1	09/29/20	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	1.0	ug/L	1	09/29/20	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	1.0	ug/L	1	09/29/20	MH	SW8260C (OXY)
Semivolatiles by SIM, PAH							
2-Methylnaphthalene	ND	0.49	ug/L	1	09/29/20	WB	SW8270D (SIM)
Acenaphthene	ND	0.49	ug/L	1	09/29/20	WB	SW8270D (SIM)
Acenaphthylene	ND	0.10	ug/L	1	09/29/20	WB	SW8270D (SIM)
Anthracene	ND	0.09	ug/L	1	09/29/20	WB	SW8270D (SIM)
Benz(a)anthracene	ND	0.10	ug/L	1	09/29/20	WB	SW8270D (SIM)
Benzo(a)pyrene	ND	0.19	ug/L	1	09/29/20	WB	SW8270D (SIM)
Benzo(b)fluoranthene	ND	0.10	ug/L	1	09/29/20	WB	SW8270D (SIM)
Benzo(ghi)perylene	ND	0.02	ug/L	1	09/29/20	WB	SW8270D (SIM)
Benzo(k)fluoranthene	ND	0.10	ug/L	1	09/29/20	WB	SW8270D (SIM)
Chrysene	ND	0.05	ug/L	1	09/29/20	WB	SW8270D (SIM)
Dibenz(a,h)anthracene	ND	0.02	ug/L	1	09/29/20	WB	SW8270D (SIM)
Fluoranthene	ND	0.49	ug/L	1	09/29/20	WB	SW8270D (SIM)
Fluorene	ND	0.10	ug/L	1	09/29/20	WB	SW8270D (SIM)
Indeno(1,2,3-cd)pyrene	ND	0.10	ug/L	1	09/29/20	WB	SW8270D (SIM)
Naphthalene	ND	0.49	ug/L	1	09/29/20	WB	SW8270D (SIM)
Phenanthrene	ND	0.49	ug/L	1	09/29/20	WB	SW8270D (SIM)
Pyrene	ND	0.07	ug/L	1	09/29/20	WB	SW8270D (SIM)
QA/QC Surrogates							
% 2-Fluorobiphenyl	48		%	1	09/29/20	WB	40 - 140 %
% Nitrobenzene-d5	49		%	1	09/29/20	WB	40 - 140 %
% Terphenyl-d14	50		%	1	09/29/20	WB	40 - 140 %
1,4-dioxane							
1,4-dioxane	0.32	0.20	ug/l	1	09/29/20	AW	SW8270DSIM
QA/QC Surrogates							
% 1,4-dioxane-d8	84		%	1	09/29/20	AW	40 - 140 %

Project ID: LOCKHEED WILMINGTON MA 60552044.19 Phoenix I.D.: CG84814
Client ID: 20A-STM8R1-092320-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	
Extraction for 1,4-Dioxane	Completed				09/28/20	S/S	
MA EPH Aliphatic/Aromatic Ranges							
C11-C22 Aromatic Hydrocarbons 1,2*	ND	190	ug/L	1	09/26/20	AW	MAEPH 5/2004
C11-C22 Aromatic Hydrocarbons Unadj	ND	190	ug/L	1	09/26/20	AW	MAEPH 5/2004
C19-C36 Aliphatic Hydrocarbons 1*	ND	190	ug/L	1	09/26/20	AW	MAEPH 5/2004
C9-C18 Aliphatic Hydrocarbons 1*	ND	190	ug/L	1	09/26/20	AW	MAEPH 5/2004
Total TPH 1,2*	ND	190	ug/L	1	09/26/20	AW	MAEPH 5/2004
QA/QC Surrogates							
% 1-chlorooctadecane (aliphatic)	73		%	1	09/26/20	AW	40 - 140 %
% 2-Bromonaphthalene (Fractionation)	107		%	1	09/26/20	AW	40 - 140 %
% 2-Fluorobiphenyl (Fractionation)	121		%	1	09/26/20	AW	40 - 140 %
% o-terphenyl (aromatic)	88		%	1	09/26/20	AW	40 - 140 %
MA Volatile Petroleum Hydrocarbons (VPH)							
Unadjusted C5-C8 Aliphatics (*1)	ND	100	ug/L	1	09/27/20	RM	MA VPH 5/2004
Unadjusted C9-C12 Aliphatics (*1)	ND	100	ug/L	1	09/27/20	RM	MA VPH 5/2004
C5-C8 Aliphatic Hydrocarbons *1,2	ND	100	ug/L	1	09/27/20	RM	MA VPH 5/2004
C9-C12 Aliphatic Hydrocarbons *1,3	ND	100	ug/L	1	09/27/20	RM	MA VPH 5/2004
C9-C10 Aromatic Hydrocarbons *1	ND	100	ug/L	1	09/27/20	RM	MA VPH 5/2004
Benzene	ND	1.0	ug/L	1	09/27/20	RM	MA VPH 5/2004
Ethyl Benzene	ND	1.0	ug/L	1	09/27/20	RM	MA VPH 5/2004
MTBE	ND	1.0	ug/L	1	09/27/20	RM	MA VPH 5/2004
Naphthalene	ND	5.0	ug/L	1	09/27/20	RM	MA VPH 5/2004
Toluene	ND	1.0	ug/L	1	09/27/20	RM	MA VPH 5/2004
m,p-Xylenes	ND	2.0	ug/L	1	09/27/20	RM	MA VPH 5/2004
o-Xylene	ND	1.0	ug/L	1	09/27/20	RM	MA VPH 5/2004
QA/QC Surrogates							
% 2,5-Dibromotoluene (FID)	94		%	1	09/27/20	RM	70 - 130 %
% 2,5-Dibromotoluene (PID)	95		%	1	09/27/20	RM	70 - 130 %

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By

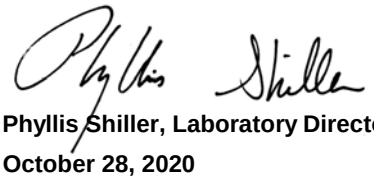
RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

MAEPH:
1* Hydrocarbon range data exclude concentrations of any surrogate(s) and/or internal standards eluting in that range.
2* C11-C12 Aromatic Hydrocarbons exclude the concentration of Target PAH analytes eluting in that range.

VPH:
*1 Range data exclude conc.s of any surrogate(s) and/or Int. std.s eluting in that range.
*2 C5-C8 and C9-C12 Aliphatic exclude the conc. of Target Analytes in that range.
*3 C9-C12 Aliphatic also exclude C9-C10 Aromatic Hydrocarbon

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.



Phyllis Shiller, Laboratory Director
October 28, 2020
Reviewed and Released by: Greg Lawrence, Assistant Lab Director

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

October 28, 2020

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		09/23/20	16:00
Location Code:	AECOM-WILMINGTN	Received by:	B	09/24/20	15:48
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	127680				

Laboratory Data

SDG ID: GCG84811
Phoenix ID: CG84815

Project ID: LOCKHEED WILMINGTON MA 60552044.19
Client ID: 20A-TRC101-092320-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
EPH Extraction	Completed				09/25/20	JS/KL/KL	SW3510C
MA Petroleum Hydrocarbon (EPH)	Completed				09/24/20		MADEP EPH-04
Semi-Volatile Extraction	Completed				09/27/20	P/CG	SW3520C
MA Petroleum Hydrocarbon (VPH)	Completed				09/27/20	RM	MADEP VPH04
Volatiles							
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	1	09/29/20	MH	SW8260C
1,1,1-Trichloroethane	ND	1.0	ug/L	1	09/29/20	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L	1	09/29/20	MH	SW8260C
1,1,2-Trichloroethane	ND	1.0	ug/L	1	09/29/20	MH	SW8260C
1,1-Dichloroethane	ND	1.0	ug/L	1	09/29/20	MH	SW8260C
1,1-Dichloroethene	ND	1.0	ug/L	1	09/29/20	MH	SW8260C
1,1-Dichloropropene	ND	1.0	ug/L	1	09/29/20	MH	SW8260C
1,2,3-Trichlorobenzene	ND	1.0	ug/L	1	09/29/20	MH	SW8260C
1,2,3-Trichloropropane	ND	0.50	ug/L	1	09/29/20	MH	SW8260C
1,2,4-Trichlorobenzene	ND	1.0	ug/L	1	09/29/20	MH	SW8260C
1,2,4-Trimethylbenzene	ND	1.0	ug/L	1	09/29/20	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	0.50	ug/L	1	09/29/20	MH	SW8260C
1,2-Dibromoethane	ND	0.50	ug/L	1	09/29/20	MH	SW8260C
1,2-Dichlorobenzene	ND	1.0	ug/L	1	09/29/20	MH	SW8260C
1,2-Dichloroethane	ND	0.60	ug/L	1	09/29/20	MH	SW8260C
1,2-Dichloropropane	ND	1.0	ug/L	1	09/29/20	MH	SW8260C
1,3,5-Trimethylbenzene	ND	1.0	ug/L	1	09/29/20	MH	SW8260C
1,3-Dichlorobenzene	ND	1.0	ug/L	1	09/29/20	MH	SW8260C
1,3-Dichloropropane	ND	1.0	ug/L	1	09/29/20	MH	SW8260C
1,4-Dichlorobenzene	ND	1.0	ug/L	1	09/29/20	MH	SW8260C
2,2-Dichloropropane	ND	1.0	ug/L	1	09/29/20	MH	SW8260C
2-Chlorotoluene	ND	1.0	ug/L	1	09/29/20	MH	SW8260C

Project ID: LOCKHEED WILMINGTON MA 60552044.19 Phoenix I.D.: CG84815

Client ID: 20A-TRC101-092320-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	
2-Hexanone	ND	5.0	ug/L	1	09/29/20	MH	SW8260C
4-Chlorotoluene	ND	1.0	ug/L	1	09/29/20	MH	SW8260C
4-Methyl-2-pentanone	ND	5.0	ug/L	1	09/29/20	MH	SW8260C
Acetone	ND	25	ug/L	1	09/29/20	MH	SW8260C
Benzene	ND	0.70	ug/L	1	09/29/20	MH	SW8260C
Bromobenzene	ND	1.0	ug/L	1	09/29/20	MH	SW8260C
Bromochloromethane	ND	1.0	ug/L	1	09/29/20	MH	SW8260C
Bromodichloromethane	ND	0.50	ug/L	1	09/29/20	MH	SW8260C
Bromoform	ND	1.0	ug/L	1	09/29/20	MH	SW8260C
Bromomethane	ND	1.0	ug/L	1	09/29/20	MH	SW8260C
Carbon Disulfide	ND	5.0	ug/L	1	09/29/20	MH	SW8260C
Carbon tetrachloride	ND	1.0	ug/L	1	09/29/20	MH	SW8260C
Chlorobenzene	ND	1.0	ug/L	1	09/29/20	MH	SW8260C
Chloroethane	ND	1.0	ug/L	1	09/29/20	MH	SW8260C
Chloroform	ND	1.0	ug/L	1	09/29/20	MH	SW8260C
Chloromethane	ND	1.0	ug/L	1	09/29/20	MH	SW8260C
cis-1,2-Dichloroethene	ND	1.0	ug/L	1	09/29/20	MH	SW8260C
cis-1,3-Dichloropropene	ND	0.40	ug/L	1	09/29/20	MH	SW8260C
Dibromochloromethane	ND	0.50	ug/L	1	09/29/20	MH	SW8260C
Dibromomethane	ND	1.0	ug/L	1	09/29/20	MH	SW8260C
Dichlorodifluoromethane	ND	1.0	ug/L	1	09/29/20	MH	SW8260C
Ethylbenzene	ND	1.0	ug/L	1	09/29/20	MH	SW8260C
Hexachlorobutadiene	ND	0.40	ug/L	1	09/29/20	MH	SW8260C
Isopropylbenzene	3.2	1.0	ug/L	1	09/29/20	MH	SW8260C
m&p-Xylene	ND	1.0	ug/L	1	09/29/20	MH	SW8260C
Methyl ethyl ketone	ND	5.0	ug/L	1	09/29/20	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	1.0	ug/L	1	09/29/20	MH	SW8260C
Methylene chloride	ND	1.0	ug/L	1	09/29/20	MH	SW8260C
Naphthalene	ND	1.0	ug/L	1	09/29/20	MH	SW8260C
n-Butylbenzene	5.7	1.0	ug/L	1	09/29/20	MH	SW8260C
n-Propylbenzene	12	1.0	ug/L	1	09/29/20	MH	SW8260C
o-Xylene	ND	1.0	ug/L	1	09/29/20	MH	SW8260C
p-Isopropyltoluene	ND	1.0	ug/L	1	09/29/20	MH	SW8260C
sec-Butylbenzene	7.9	1.0	ug/L	1	09/29/20	MH	SW8260C
Styrene	ND	1.0	ug/L	1	09/29/20	MH	SW8260C
tert-Butylbenzene	12	1.0	ug/L	1	09/29/20	MH	SW8260C
Tetrachloroethene	ND	1.0	ug/L	1	09/29/20	MH	SW8260C
Tetrahydrofuran (THF)	ND	2.5	ug/L	1	09/29/20	MH	SW8260C
Toluene	ND	1.0	ug/L	1	09/29/20	MH	SW8260C
trans-1,2-Dichloroethene	ND	1.0	ug/L	1	09/29/20	MH	SW8260C
trans-1,3-Dichloropropene	ND	0.40	ug/L	1	09/29/20	MH	SW8260C
Trichloroethene	ND	1.0	ug/L	1	09/29/20	MH	SW8260C
Trichlorofluoromethane	ND	1.0	ug/L	1	09/29/20	MH	SW8260C
Trichlorotrifluoroethane	ND	1.0	ug/L	1	09/29/20	MH	SW8260C
Vinyl chloride	ND	1.0	ug/L	1	09/29/20	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	102		%	1	09/29/20	MH	70 - 130 %
% Bromofluorobenzene	100		%	1	09/29/20	MH	70 - 130 %
% Dibromofluoromethane	97		%	1	09/29/20	MH	70 - 130 %

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	
% Toluene-d8	103		%	1	09/29/20	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	100	ug/L	1	09/29/20	MH	SW8260C (OXY)
Diethyl ether	ND	1.0	ug/L	1	09/29/20	MH	SW8260C (OXY)
Di-isopropyl ether	ND	1.0	ug/L	1	09/29/20	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	1.0	ug/L	1	09/29/20	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	1.0	ug/L	1	09/29/20	MH	SW8260C (OXY)
Semivolatiles by SIM, PAH							
2-Methylnaphthalene	0.52	0.48	ug/L	1	09/29/20	WB	SW8270D (SIM)
Acenaphthene	ND	0.48	ug/L	1	09/29/20	WB	SW8270D (SIM)
Acenaphthylene	ND	0.10	ug/L	1	09/29/20	WB	SW8270D (SIM)
Anthracene	ND	0.09	ug/L	1	09/29/20	WB	SW8270D (SIM)
Benz(a)anthracene	0.10	0.10	ug/L	1	09/29/20	WB	SW8270D (SIM)
Benzo(a)pyrene	ND	0.19	ug/L	1	09/29/20	WB	SW8270D (SIM)
Benzo(b)fluoranthene	0.20	0.10	ug/L	1	09/29/20	WB	SW8270D (SIM)
Benzo(ghi)perylene	0.16	0.02	ug/L	1	09/29/20	WB	SW8270D (SIM)
Benzo(k)fluoranthene	0.13	0.10	ug/L	1	09/29/20	WB	SW8270D (SIM)
Chrysene	0.16	0.05	ug/L	1	09/29/20	WB	SW8270D (SIM)
Dibenz(a,h)anthracene	0.03	0.02	ug/L	1	09/29/20	WB	SW8270D (SIM)
Fluoranthene	ND	0.48	ug/L	1	09/29/20	WB	SW8270D (SIM)
Fluorene	ND	0.10	ug/L	1	09/29/20	WB	SW8270D (SIM)
Indeno(1,2,3-cd)pyrene	0.17	0.10	ug/L	1	09/29/20	WB	SW8270D (SIM)
Naphthalene	ND	0.48	ug/L	1	09/29/20	WB	SW8270D (SIM)
Phenanthrene	ND	0.48	ug/L	1	09/29/20	WB	SW8270D (SIM)
Pyrene	0.26	0.07	ug/L	1	09/29/20	WB	SW8270D (SIM)
QA/QC Surrogates							
% 2-Fluorobiphenyl	54		%	1	09/29/20	WB	40 - 140 %
% Nitrobenzene-d5	108		%	1	09/29/20	WB	40 - 140 %
% Terphenyl-d14	52		%	1	09/29/20	WB	40 - 140 %
MA EPH Aliphatic/Aromatic Ranges							
C11-C22 Aromatic Hydrocarbons 1,2*	ND	200	ug/L	1	09/28/20	AW	MAEPH 5/2004
C11-C22 Aromatic Hydrocarbons Unadj	ND	200	ug/L	1	09/28/20	AW	MAEPH 5/2004
C19-C36 Aliphatic Hydrocarbons 1*	ND	200	ug/L	1	09/28/20	AW	MAEPH 5/2004
C9-C18 Aliphatic Hydrocarbons 1*	1100	200	ug/L	1	09/28/20	AW	MAEPH 5/2004
Total TPH 1,2*	1100	200	ug/L	1	09/28/20	AW	MAEPH 5/2004
QA/QC Surrogates							
% 1-chlorooctadecane (aliphatic)	58		%	1	09/28/20	AW	40 - 140 %
% 2-Bromonaphthalene (Fractionation)	84		%	1	09/28/20	AW	40 - 140 %
% 2-Fluorobiphenyl (Fractionation)	86		%	1	09/28/20	AW	40 - 140 %
% o-terphenyl (aromatic)	69		%	1	09/28/20	AW	40 - 140 %
MA Volatile Petroleum Hydrocarbons (VPH)							
Unadjusted C5-C8 Aliphatics (*1)	ND	100	ug/L	1	09/27/20	RM	MA VPH 5/2004
Unadjusted C9-C12 Aliphatics (*1)	630	100	ug/L	1	09/27/20	RM	MA VPH 5/2004
C5-C8 Aliphatic Hydrocarbons *1,2	ND	100	ug/L	1	09/27/20	RM	MA VPH 5/2004
C9-C12 Aliphatic Hydrocarbons *1,3	420	100	ug/L	1	09/27/20	RM	MA VPH 5/2004
C9-C10 Aromatic Hydrocarbons *1	210	100	ug/L	1	09/27/20	RM	MA VPH 5/2004

Project ID: LOCKHEED WILMINGTON MA 60552044.19 Phoenix I.D.: CG84815

Client ID: 20A-TRC101-092320-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	
Benzene	ND	1.0	ug/L	1	09/27/20	RM	MA VPH 5/2004
Ethyl Benzene	ND	1.0	ug/L	1	09/27/20	RM	MA VPH 5/2004
MTBE	ND	1.0	ug/L	1	09/27/20	RM	MA VPH 5/2004
Naphthalene	ND	5.0	ug/L	1	09/27/20	RM	MA VPH 5/2004
Toluene	ND	1.0	ug/L	1	09/27/20	RM	MA VPH 5/2004
m,p-Xylenes	ND	2.0	ug/L	1	09/27/20	RM	MA VPH 5/2004
o-Xylene	1.4	1.0	ug/L	1	09/27/20	RM	MA VPH 5/2004
QA/QC Surrogates							
% 2,5-Dibromotoluene (FID)	94		%	1	09/27/20	RM	70 - 130 %
% 2,5-Dibromotoluene (PID)	92		%	1	09/27/20	RM	70 - 130 %

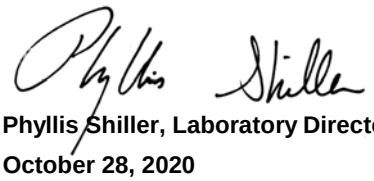
RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

MAEPH:
1* Hydrocarbon range data exclude concentrations of any surrogate(s) and/or internal standards eluting in that range.
2* C11-C12 Aromatic Hydrocarbons exclude the concentration of Target PAH analytes eluting in that range.

VPH:
*1 Range data exclude conc.s of any surrogate(s) and/or Int. std.s eluting in that range.
*2 C5-C8 and C9-C12 Aliphatic exclude the conc. of Target Analytes in that range.
*3 C9-C12 Aliphatic also exclude C9-C10 Aromatic Hydrocarbon

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.



Phyllis Shiller, Laboratory Director

October 28, 2020

Reviewed and Released by: Greg Lawrence, Assistant Lab Director

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

October 28, 2020

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		09/23/20	16:30
Location Code:	AECOM-WILMINGTN	Received by:	B	09/24/20	15:48
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	127680				

Laboratory Data

SDG ID: GCG84811
Phoenix ID: CG84816

Project ID: LOCKHEED WILMINGTON MA 60552044.19
Client ID: 20A-AE4-092320-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
EPH Extraction	Completed				09/25/20	JS/KL/KL	SW3510C
MA Petroleum Hydrocarbon (EPH)	Completed				09/24/20		MADEP EPH-04
Semi-Volatile Extraction	Completed				09/27/20	P/CG	SW3520C
MA Petroleum Hydrocarbon (VPH)	Completed				09/27/20	RM	MADEP VPH04
Volatiles							
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	1	09/29/20	MH	SW8260C
1,1,1-Trichloroethane	ND	1.0	ug/L	1	09/29/20	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L	1	09/29/20	MH	SW8260C
1,1,2-Trichloroethane	ND	1.0	ug/L	1	09/29/20	MH	SW8260C
1,1-Dichloroethane	ND	1.0	ug/L	1	09/29/20	MH	SW8260C
1,1-Dichloroethene	ND	1.0	ug/L	1	09/29/20	MH	SW8260C
1,1-Dichloropropene	ND	1.0	ug/L	1	09/29/20	MH	SW8260C
1,2,3-Trichlorobenzene	ND	1.0	ug/L	1	09/29/20	MH	SW8260C
1,2,3-Trichloropropane	ND	0.50	ug/L	1	09/29/20	MH	SW8260C
1,2,4-Trichlorobenzene	ND	1.0	ug/L	1	09/29/20	MH	SW8260C
1,2,4-Trimethylbenzene	ND	1.0	ug/L	1	09/29/20	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	0.50	ug/L	1	09/29/20	MH	SW8260C
1,2-Dibromoethane	ND	0.50	ug/L	1	09/29/20	MH	SW8260C
1,2-Dichlorobenzene	ND	1.0	ug/L	1	09/29/20	MH	SW8260C
1,2-Dichloroethane	ND	0.60	ug/L	1	09/29/20	MH	SW8260C
1,2-Dichloropropane	ND	1.0	ug/L	1	09/29/20	MH	SW8260C
1,3,5-Trimethylbenzene	ND	1.0	ug/L	1	09/29/20	MH	SW8260C
1,3-Dichlorobenzene	ND	1.0	ug/L	1	09/29/20	MH	SW8260C
1,3-Dichloropropane	ND	1.0	ug/L	1	09/29/20	MH	SW8260C
1,4-Dichlorobenzene	ND	1.0	ug/L	1	09/29/20	MH	SW8260C
2,2-Dichloropropane	ND	1.0	ug/L	1	09/29/20	MH	SW8260C
2-Chlorotoluene	ND	1.0	ug/L	1	09/29/20	MH	SW8260C

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	
2-Hexanone	ND	5.0	ug/L	1	09/29/20	MH	SW8260C
4-Chlorotoluene	ND	1.0	ug/L	1	09/29/20	MH	SW8260C
4-Methyl-2-pentanone	ND	5.0	ug/L	1	09/29/20	MH	SW8260C
Acetone	ND	25	ug/L	1	09/29/20	MH	SW8260C
Benzene	ND	0.70	ug/L	1	09/29/20	MH	SW8260C
Bromobenzene	ND	1.0	ug/L	1	09/29/20	MH	SW8260C
Bromochloromethane	ND	1.0	ug/L	1	09/29/20	MH	SW8260C
Bromodichloromethane	ND	0.50	ug/L	1	09/29/20	MH	SW8260C
Bromoform	ND	1.0	ug/L	1	09/29/20	MH	SW8260C
Bromomethane	ND	1.0	ug/L	1	09/29/20	MH	SW8260C
Carbon Disulfide	ND	5.0	ug/L	1	09/29/20	MH	SW8260C
Carbon tetrachloride	ND	1.0	ug/L	1	09/29/20	MH	SW8260C
Chlorobenzene	ND	1.0	ug/L	1	09/29/20	MH	SW8260C
Chloroethane	ND	1.0	ug/L	1	09/29/20	MH	SW8260C
Chloroform	ND	1.0	ug/L	1	09/29/20	MH	SW8260C
Chloromethane	ND	1.0	ug/L	1	09/29/20	MH	SW8260C
cis-1,2-Dichloroethene	ND	1.0	ug/L	1	09/29/20	MH	SW8260C
cis-1,3-Dichloropropene	ND	0.40	ug/L	1	09/29/20	MH	SW8260C
Dibromochloromethane	ND	0.50	ug/L	1	09/29/20	MH	SW8260C
Dibromomethane	ND	1.0	ug/L	1	09/29/20	MH	SW8260C
Dichlorodifluoromethane	ND	1.0	ug/L	1	09/29/20	MH	SW8260C
Ethylbenzene	ND	1.0	ug/L	1	09/29/20	MH	SW8260C
Hexachlorobutadiene	ND	0.40	ug/L	1	09/29/20	MH	SW8260C
Isopropylbenzene	2.0	1.0	ug/L	1	09/29/20	MH	SW8260C
m&p-Xylene	ND	1.0	ug/L	1	09/29/20	MH	SW8260C
Methyl ethyl ketone	ND	5.0	ug/L	1	09/29/20	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	1.0	ug/L	1	09/29/20	MH	SW8260C
Methylene chloride	ND	1.0	ug/L	1	09/29/20	MH	SW8260C
Naphthalene	ND	1.0	ug/L	1	09/29/20	MH	SW8260C
n-Butylbenzene	ND	1.0	ug/L	1	09/29/20	MH	SW8260C
n-Propylbenzene	3.8	1.0	ug/L	1	09/29/20	MH	SW8260C
o-Xylene	ND	1.0	ug/L	1	09/29/20	MH	SW8260C
p-Isopropyltoluene	ND	1.0	ug/L	1	09/29/20	MH	SW8260C
sec-Butylbenzene	2.4	1.0	ug/L	1	09/29/20	MH	SW8260C
Styrene	ND	1.0	ug/L	1	09/29/20	MH	SW8260C
tert-Butylbenzene	8.8	1.0	ug/L	1	09/29/20	MH	SW8260C
Tetrachloroethene	ND	1.0	ug/L	1	09/29/20	MH	SW8260C
Tetrahydrofuran (THF)	ND	2.5	ug/L	1	09/29/20	MH	SW8260C
Toluene	ND	1.0	ug/L	1	09/29/20	MH	SW8260C
trans-1,2-Dichloroethene	ND	1.0	ug/L	1	09/29/20	MH	SW8260C
trans-1,3-Dichloropropene	ND	0.40	ug/L	1	09/29/20	MH	SW8260C
Trichloroethene	ND	1.0	ug/L	1	09/29/20	MH	SW8260C
Trichlorofluoromethane	ND	1.0	ug/L	1	09/29/20	MH	SW8260C
Trichlorotrifluoroethane	ND	1.0	ug/L	1	09/29/20	MH	SW8260C
Vinyl chloride	ND	1.0	ug/L	1	09/29/20	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	101		%	1	09/29/20	MH	70 - 130 %
% Bromofluorobenzene	98		%	1	09/29/20	MH	70 - 130 %
% Dibromofluoromethane	98		%	1	09/29/20	MH	70 - 130 %

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	
% Toluene-d8	101		%	1	09/29/20	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	100	ug/L	1	09/29/20	MH	SW8260C (OXY)
Diethyl ether	ND	1.0	ug/L	1	09/29/20	MH	SW8260C (OXY)
Di-isopropyl ether	ND	1.0	ug/L	1	09/29/20	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	1.0	ug/L	1	09/29/20	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	1.0	ug/L	1	09/29/20	MH	SW8260C (OXY)
Semivolatiles by SIM, PAH							
2-Methylnaphthalene	ND	0.47	ug/L	1	09/29/20	WB	SW8270D (SIM)
Acenaphthene	ND	0.47	ug/L	1	09/29/20	WB	SW8270D (SIM)
Acenaphthylene	ND	0.09	ug/L	1	09/29/20	WB	SW8270D (SIM)
Anthracene	ND	0.09	ug/L	1	09/29/20	WB	SW8270D (SIM)
Benz(a)anthracene	ND	0.09	ug/L	1	09/29/20	WB	SW8270D (SIM)
Benzo(a)pyrene	ND	0.19	ug/L	1	09/29/20	WB	SW8270D (SIM)
Benzo(b)fluoranthene	ND	0.09	ug/L	1	09/29/20	WB	SW8270D (SIM)
Benzo(ghi)perylene	ND	0.02	ug/L	1	09/29/20	WB	SW8270D (SIM)
Benzo(k)fluoranthene	ND	0.09	ug/L	1	09/29/20	WB	SW8270D (SIM)
Chrysene	ND	0.05	ug/L	1	09/29/20	WB	SW8270D (SIM)
Dibenz(a,h)anthracene	ND	0.02	ug/L	1	09/29/20	WB	SW8270D (SIM)
Fluoranthene	ND	0.47	ug/L	1	09/29/20	WB	SW8270D (SIM)
Fluorene	ND	0.09	ug/L	1	09/29/20	WB	SW8270D (SIM)
Indeno(1,2,3-cd)pyrene	ND	0.09	ug/L	1	09/29/20	WB	SW8270D (SIM)
Naphthalene	ND	0.47	ug/L	1	09/29/20	WB	SW8270D (SIM)
Phenanthrene	ND	0.47	ug/L	1	09/29/20	WB	SW8270D (SIM)
Pyrene	ND	0.07	ug/L	1	09/29/20	WB	SW8270D (SIM)
QA/QC Surrogates							
% 2-Fluorobiphenyl	66		%	1	09/29/20	WB	40 - 140 %
% Nitrobenzene-d5	77		%	1	09/29/20	WB	40 - 140 %
% Terphenyl-d14	74		%	1	09/29/20	WB	40 - 140 %
MA EPH Aliphatic/Aromatic Ranges							
C11-C22 Aromatic Hydrocarbons 1,2*	ND	200	ug/L	1	09/26/20	AW	MAEPH 5/2004
C11-C22 Aromatic Hydrocarbons Unadj	ND	200	ug/L	1	09/26/20	AW	MAEPH 5/2004
C19-C36 Aliphatic Hydrocarbons 1*	ND	200	ug/L	1	09/26/20	AW	MAEPH 5/2004
C9-C18 Aliphatic Hydrocarbons 1*	ND	200	ug/L	1	09/26/20	AW	MAEPH 5/2004
Total TPH 1,2*	ND	200	ug/L	1	09/26/20	AW	MAEPH 5/2004
QA/QC Surrogates							
% 1-chlorooctadecane (aliphatic)	67		%	1	09/26/20	AW	40 - 140 %
% 2-Bromonaphthalene (Fractionation)	100		%	1	09/26/20	AW	40 - 140 %
% 2-Fluorobiphenyl (Fractionation)	117		%	1	09/26/20	AW	40 - 140 %
% o-terphenyl (aromatic)	75		%	1	09/26/20	AW	40 - 140 %
MA Volatile Petroleum Hydrocarbons (VPH)							
Unadjusted C5-C8 Aliphatics (*1)	ND	100	ug/L	1	09/27/20	RM	MA VPH 5/2004
Unadjusted C9-C12 Aliphatics (*1)	220	100	ug/L	1	09/27/20	RM	MA VPH 5/2004
C5-C8 Aliphatic Hydrocarbons *1,2	ND	100	ug/L	1	09/27/20	RM	MA VPH 5/2004
C9-C12 Aliphatic Hydrocarbons *1,3	130	100	ug/L	1	09/27/20	RM	MA VPH 5/2004
C9-C10 Aromatic Hydrocarbons *1	ND	100	ug/L	1	09/27/20	RM	MA VPH 5/2004

Project ID: LOCKHEED WILMINGTON MA 60552044.19 Phoenix I.D.: CG84816
Client ID: 20A-AE4-092320-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	
Benzene	ND	1.0	ug/L	1	09/27/20	RM	MA VPH 5/2004
Ethyl Benzene	ND	1.0	ug/L	1	09/27/20	RM	MA VPH 5/2004
MTBE	ND	1.0	ug/L	1	09/27/20	RM	MA VPH 5/2004
Naphthalene	ND	5.0	ug/L	1	09/27/20	RM	MA VPH 5/2004
Toluene	ND	1.0	ug/L	1	09/27/20	RM	MA VPH 5/2004
m,p-Xylenes	ND	2.0	ug/L	1	09/27/20	RM	MA VPH 5/2004
o-Xylene	ND	1.0	ug/L	1	09/27/20	RM	MA VPH 5/2004
QA/QC Surrogates							
% 2,5-Dibromotoluene (FID)	88		%	1	09/27/20	RM	70 - 130 %
% 2,5-Dibromotoluene (PID)	94		%	1	09/27/20	RM	70 - 130 %

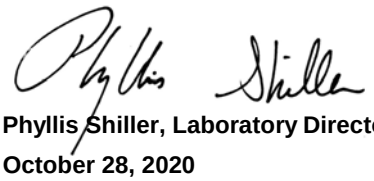
RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

MAEPH:
1* Hydrocarbon range data exclude concentrations of any surrogate(s) and/or internal standards eluting in that range.
2* C11-C12 Aromatic Hydrocarbons exclude the concentration of Target PAH analytes eluting in that range.

VPH:
*1 Range data exclude conc.s of any surrogate(s) and/or Int. std.s eluting in that range.
*2 C5-C8 and C9-C12 Aliphatic exclude the conc. of Target Analytes in that range.
*3 C9-C12 Aliphatic also exclude C9-C10 Aromatic Hydrocarbon

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.



Phyllis Shiller, Laboratory Director
October 28, 2020
Reviewed and Released by: Greg Lawrence, Assistant Lab Director

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

October 28, 2020

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		09/23/20	16:30
Location Code:	AECOM-WILMINGTN	Received by:	B	09/24/20	15:48
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	127680				

Laboratory Data

SDG ID: GCG84811
Phoenix ID: CG84817

Project ID: LOCKHEED WILMINGTON MA 60552044.19
Client ID: 20A-AE4-092320-2

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
EPH Extraction	Completed				09/29/20	JS/JS	SW3510C
MA Petroleum Hydrocarbon (EPH)	Completed				09/24/20		MADEP EPH-04
Semi-Volatile Extraction	Completed				09/27/20	P/CG	SW3520C
MA Petroleum Hydrocarbon (VPH)	Completed				09/27/20	RM	MADEP VPH04
Volatiles							
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	1	09/29/20	MH	SW8260C
1,1,1-Trichloroethane	ND	1.0	ug/L	1	09/29/20	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L	1	09/29/20	MH	SW8260C
1,1,2-Trichloroethane	ND	1.0	ug/L	1	09/29/20	MH	SW8260C
1,1-Dichloroethane	ND	1.0	ug/L	1	09/29/20	MH	SW8260C
1,1-Dichloroethene	ND	1.0	ug/L	1	09/29/20	MH	SW8260C
1,1-Dichloropropene	ND	1.0	ug/L	1	09/29/20	MH	SW8260C
1,2,3-Trichlorobenzene	ND	1.0	ug/L	1	09/29/20	MH	SW8260C
1,2,3-Trichloropropane	ND	0.50	ug/L	1	09/29/20	MH	SW8260C
1,2,4-Trichlorobenzene	ND	1.0	ug/L	1	09/29/20	MH	SW8260C
1,2,4-Trimethylbenzene	ND	1.0	ug/L	1	09/29/20	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	0.50	ug/L	1	09/29/20	MH	SW8260C
1,2-Dibromoethane	ND	0.50	ug/L	1	09/29/20	MH	SW8260C
1,2-Dichlorobenzene	ND	1.0	ug/L	1	09/29/20	MH	SW8260C
1,2-Dichloroethane	ND	0.60	ug/L	1	09/29/20	MH	SW8260C
1,2-Dichloropropane	ND	1.0	ug/L	1	09/29/20	MH	SW8260C
1,3,5-Trimethylbenzene	ND	1.0	ug/L	1	09/29/20	MH	SW8260C
1,3-Dichlorobenzene	ND	1.0	ug/L	1	09/29/20	MH	SW8260C
1,3-Dichloropropane	ND	1.0	ug/L	1	09/29/20	MH	SW8260C
1,4-Dichlorobenzene	ND	1.0	ug/L	1	09/29/20	MH	SW8260C
2,2-Dichloropropane	ND	1.0	ug/L	1	09/29/20	MH	SW8260C
2-Chlorotoluene	ND	1.0	ug/L	1	09/29/20	MH	SW8260C

Project ID: LOCKHEED WILMINGTON MA 60552044.19 Phoenix I.D.: CG84817

Client ID: 20A-AE4-092320-2

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	
2-Hexanone	ND	5.0	ug/L	1	09/29/20	MH	SW8260C
4-Chlorotoluene	ND	1.0	ug/L	1	09/29/20	MH	SW8260C
4-Methyl-2-pentanone	ND	5.0	ug/L	1	09/29/20	MH	SW8260C
Acetone	ND	25	ug/L	1	09/29/20	MH	SW8260C
Benzene	ND	0.70	ug/L	1	09/29/20	MH	SW8260C
Bromobenzene	ND	1.0	ug/L	1	09/29/20	MH	SW8260C
Bromochloromethane	ND	1.0	ug/L	1	09/29/20	MH	SW8260C
Bromodichloromethane	ND	0.50	ug/L	1	09/29/20	MH	SW8260C
Bromoform	ND	1.0	ug/L	1	09/29/20	MH	SW8260C
Bromomethane	ND	1.0	ug/L	1	09/29/20	MH	SW8260C
Carbon Disulfide	ND	5.0	ug/L	1	09/29/20	MH	SW8260C
Carbon tetrachloride	ND	1.0	ug/L	1	09/29/20	MH	SW8260C
Chlorobenzene	ND	1.0	ug/L	1	09/29/20	MH	SW8260C
Chloroethane	ND	1.0	ug/L	1	09/29/20	MH	SW8260C
Chloroform	ND	1.0	ug/L	1	09/29/20	MH	SW8260C
Chloromethane	ND	1.0	ug/L	1	09/29/20	MH	SW8260C
cis-1,2-Dichloroethene	ND	1.0	ug/L	1	09/29/20	MH	SW8260C
cis-1,3-Dichloropropene	ND	0.40	ug/L	1	09/29/20	MH	SW8260C
Dibromochloromethane	ND	0.50	ug/L	1	09/29/20	MH	SW8260C
Dibromomethane	ND	1.0	ug/L	1	09/29/20	MH	SW8260C
Dichlorodifluoromethane	ND	1.0	ug/L	1	09/29/20	MH	SW8260C
Ethylbenzene	ND	1.0	ug/L	1	09/29/20	MH	SW8260C
Hexachlorobutadiene	ND	0.40	ug/L	1	09/29/20	MH	SW8260C
Isopropylbenzene	2.1	1.0	ug/L	1	09/29/20	MH	SW8260C
m&p-Xylene	ND	1.0	ug/L	1	09/29/20	MH	SW8260C
Methyl ethyl ketone	ND	5.0	ug/L	1	09/29/20	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	1.0	ug/L	1	09/29/20	MH	SW8260C
Methylene chloride	ND	1.0	ug/L	1	09/29/20	MH	SW8260C
Naphthalene	ND	1.0	ug/L	1	09/29/20	MH	SW8260C
n-Butylbenzene	1.0	1.0	ug/L	1	09/29/20	MH	SW8260C
n-Propylbenzene	4.0	1.0	ug/L	1	09/29/20	MH	SW8260C
o-Xylene	ND	1.0	ug/L	1	09/29/20	MH	SW8260C
p-Isopropyltoluene	ND	1.0	ug/L	1	09/29/20	MH	SW8260C
sec-Butylbenzene	2.5	1.0	ug/L	1	09/29/20	MH	SW8260C
Styrene	ND	1.0	ug/L	1	09/29/20	MH	SW8260C
tert-Butylbenzene	9.0	1.0	ug/L	1	09/29/20	MH	SW8260C
Tetrachloroethene	ND	1.0	ug/L	1	09/29/20	MH	SW8260C
Tetrahydrofuran (THF)	ND	2.5	ug/L	1	09/29/20	MH	SW8260C
Toluene	ND	1.0	ug/L	1	09/29/20	MH	SW8260C
trans-1,2-Dichloroethene	ND	1.0	ug/L	1	09/29/20	MH	SW8260C
trans-1,3-Dichloropropene	ND	0.40	ug/L	1	09/29/20	MH	SW8260C
Trichloroethene	ND	1.0	ug/L	1	09/29/20	MH	SW8260C
Trichlorofluoromethane	ND	1.0	ug/L	1	09/29/20	MH	SW8260C
Trichlorotrifluoroethane	ND	1.0	ug/L	1	09/29/20	MH	SW8260C
Vinyl chloride	ND	1.0	ug/L	1	09/29/20	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	102		%	1	09/29/20	MH	70 - 130 %
% Bromofluorobenzene	97		%	1	09/29/20	MH	70 - 130 %
% Dibromofluoromethane	103		%	1	09/29/20	MH	70 - 130 %

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	
% Toluene-d8	102		%	1	09/29/20	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	100	ug/L	1	09/29/20	MH	SW8260C (OXY)
Diethyl ether	ND	1.0	ug/L	1	09/29/20	MH	SW8260C (OXY)
Di-isopropyl ether	ND	1.0	ug/L	1	09/29/20	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	1.0	ug/L	1	09/29/20	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	1.0	ug/L	1	09/29/20	MH	SW8260C (OXY)
Semivolatiles by SIM, PAH							
2-Methylnaphthalene	ND	0.47	ug/L	1	09/29/20	WB	SW8270D (SIM)
Acenaphthene	ND	0.47	ug/L	1	09/29/20	WB	SW8270D (SIM)
Acenaphthylene	ND	0.09	ug/L	1	09/29/20	WB	SW8270D (SIM)
Anthracene	ND	0.09	ug/L	1	09/29/20	WB	SW8270D (SIM)
Benz(a)anthracene	ND	0.09	ug/L	1	09/29/20	WB	SW8270D (SIM)
Benzo(a)pyrene	ND	0.19	ug/L	1	09/29/20	WB	SW8270D (SIM)
Benzo(b)fluoranthene	ND	0.09	ug/L	1	09/29/20	WB	SW8270D (SIM)
Benzo(ghi)perylene	ND	0.02	ug/L	1	09/29/20	WB	SW8270D (SIM)
Benzo(k)fluoranthene	ND	0.09	ug/L	1	09/29/20	WB	SW8270D (SIM)
Chrysene	ND	0.05	ug/L	1	09/29/20	WB	SW8270D (SIM)
Dibenz(a,h)anthracene	ND	0.02	ug/L	1	09/29/20	WB	SW8270D (SIM)
Fluoranthene	ND	0.47	ug/L	1	09/29/20	WB	SW8270D (SIM)
Fluorene	ND	0.09	ug/L	1	09/29/20	WB	SW8270D (SIM)
Indeno(1,2,3-cd)pyrene	ND	0.09	ug/L	1	09/29/20	WB	SW8270D (SIM)
Naphthalene	ND	0.47	ug/L	1	09/29/20	WB	SW8270D (SIM)
Phenanthrene	ND	0.47	ug/L	1	09/29/20	WB	SW8270D (SIM)
Pyrene	ND	0.07	ug/L	1	09/29/20	WB	SW8270D (SIM)
QA/QC Surrogates							
% 2-Fluorobiphenyl	66		%	1	09/29/20	WB	40 - 140 %
% Nitrobenzene-d5	80		%	1	09/29/20	WB	40 - 140 %
% Terphenyl-d14	53		%	1	09/29/20	WB	40 - 140 %
MA EPH Aliphatic/Aromatic Ranges							
C11-C22 Aromatic Hydrocarbons 1,2*	ND	200	ug/L	1	09/29/20	AW	MAEPH 5/2004
C11-C22 Aromatic Hydrocarbons Unadj	ND	200	ug/L	1	09/29/20	AW	MAEPH 5/2004
C19-C36 Aliphatic Hydrocarbons 1*	ND	200	ug/L	1	09/29/20	AW	MAEPH 5/2004
C9-C18 Aliphatic Hydrocarbons 1*	ND	200	ug/L	1	09/29/20	AW	MAEPH 5/2004
Total TPH 1,2*	ND	200	ug/L	1	09/29/20	AW	MAEPH 5/2004
QA/QC Surrogates							
% 1-chlorooctadecane (aliphatic)	63		%	1	09/29/20	AW	40 - 140 %
% 2-Bromonaphthalene (Fractionation)	128		%	1	09/29/20	AW	40 - 140 %
% 2-Fluorobiphenyl (Fractionation)	129		%	1	09/29/20	AW	40 - 140 %
% o-terphenyl (aromatic)	77		%	1	09/29/20	AW	40 - 140 %
MA Volatile Petroleum Hydrocarbons (VPH)							
Unadjusted C5-C8 Aliphatics (*1)	ND	100	ug/L	1	09/27/20	RM	MA VPH 5/2004
Unadjusted C9-C12 Aliphatics (*1)	220	100	ug/L	1	09/27/20	RM	MA VPH 5/2004
C5-C8 Aliphatic Hydrocarbons *1,2	ND	100	ug/L	1	09/27/20	RM	MA VPH 5/2004
C9-C12 Aliphatic Hydrocarbons *1,3	130	100	ug/L	1	09/27/20	RM	MA VPH 5/2004
C9-C10 Aromatic Hydrocarbons *1	ND	100	ug/L	1	09/27/20	RM	MA VPH 5/2004

Project ID: LOCKHEED WILMINGTON MA 60552044.19 Phoenix I.D.: CG84817

Client ID: 20A-AE4-092320-2

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	
Benzene	ND	1.0	ug/L	1	09/27/20	RM	MA VPH 5/2004
Ethyl Benzene	2.2	1.0	ug/L	1	09/27/20	RM	MA VPH 5/2004
MTBE	ND	1.0	ug/L	1	09/27/20	RM	MA VPH 5/2004
Naphthalene	ND	5.0	ug/L	1	09/27/20	RM	MA VPH 5/2004
Toluene	ND	1.0	ug/L	1	09/27/20	RM	MA VPH 5/2004
m,p-Xylenes	ND	2.0	ug/L	1	09/27/20	RM	MA VPH 5/2004
o-Xylene	ND	1.0	ug/L	1	09/27/20	RM	MA VPH 5/2004
QA/QC Surrogates							
% 2,5-Dibromotoluene (FID)	96		%	1	09/27/20	RM	70 - 130 %
% 2,5-Dibromotoluene (PID)	96		%	1	09/27/20	RM	70 - 130 %

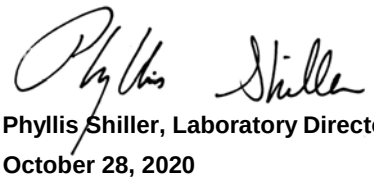
RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

MAEPH:
1* Hydrocarbon range data exclude concentrations of any surrogate(s) and/or internal standards eluting in that range.
2* C11-C12 Aromatic Hydrocarbons exclude the concentration of Target PAH analytes eluting in that range.

VPH:
*1 Range data exclude conc.s of any surrogate(s) and/or Int. std.s eluting in that range.
*2 C5-C8 and C9-C12 Aliphatic exclude the conc. of Target Analytes in that range.
*3 C9-C12 Aliphatic also exclude C9-C10 Aromatic Hydrocarbon

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Phyllis Shiller, Laboratory Director

October 28, 2020

Reviewed and Released by: Greg Lawrence, Assistant Lab Director

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

October 28, 2020

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		09/24/20	9:15
Location Code:	AECOM-WILMINGTN	Received by:	B	09/24/20	15:48
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	127680				

Laboratory Data

SDG ID: GCG84811
Phoenix ID: CG84818

Project ID: LOCKHEED WILMINGTON MA 60552044.19
Client ID: 20A-GZA12-092420-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Arsenic	< 0.004	0.004	mg/L	1	09/26/20	CPP	SW6010D
Arsenic (Dissolved)	< 0.004	0.004	mg/L	1	09/26/20	CPP	SW6010D
Iron (Dissolved)	0.019	0.011	mg/L	1	09/26/20	CPP	SW6010D
Manganese (Dissolved)	1.15	0.001	mg/L	1	09/26/20	EK	SW6010D
Iron	0.164	0.010	mg/L	1	09/26/20	CPP	SW6010D
Manganese	1.29	0.001	mg/L	1	09/26/20	EK	SW6010D
Chloride	1050	75.0	mg/L	25	09/26/20	BS/EG	E300.0
Nitrite as Nitrogen	< 0.004	0.004	mg/L	1	09/25/20 13:55	BS/EG	E300.0
Nitrate as Nitrogen	6.91	0.50	mg/L	10	09/26/20 01:49	BS/EG	E300.0
Sulfate	30.1	30.0	mg/L	10	09/26/20	BS/EG	E300.0
Sulfide	< 0.05	0.05	mg/L	1	10/01/20	GD	SM4500S-D-11
Total Organic Carbon	1.5	1.0	mg/L	1	09/25/20	ARG	SM5310B-11
Dissolved Metals Preparation	Completed				09/25/20	AG	SW3005A
Total Metals Digestion	Completed				09/24/20	AG	
Volatiles							
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	1	09/29/20	MH	SW8260C
1,1,1-Trichloroethane	ND	1.0	ug/L	1	09/29/20	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L	1	09/29/20	MH	SW8260C
1,1,2-Trichloroethane	ND	1.0	ug/L	1	09/29/20	MH	SW8260C
1,1-Dichloroethane	ND	1.0	ug/L	1	09/29/20	MH	SW8260C
1,1-Dichloroethene	ND	1.0	ug/L	1	09/29/20	MH	SW8260C
1,1-Dichloropropene	ND	1.0	ug/L	1	09/29/20	MH	SW8260C
1,2,3-Trichlorobenzene	ND	1.0	ug/L	1	09/29/20	MH	SW8260C
1,2,3-Trichloropropane	ND	0.50	ug/L	1	09/29/20	MH	SW8260C
1,2,4-Trichlorobenzene	ND	1.0	ug/L	1	09/29/20	MH	SW8260C
1,2,4-Trimethylbenzene	ND	1.0	ug/L	1	09/29/20	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	0.50	ug/L	1	09/29/20	MH	SW8260C

Project ID: LOCKHEED WILMINGTON MA 60552044.19 Phoenix I.D.: CG84818

Client ID: 20A-GZA12-092420-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	
1,2-Dibromoethane	ND	0.50	ug/L	1	09/29/20	MH	SW8260C
1,2-Dichlorobenzene	ND	1.0	ug/L	1	09/29/20	MH	SW8260C
1,2-Dichloroethane	ND	0.60	ug/L	1	09/29/20	MH	SW8260C
1,2-Dichloropropane	ND	1.0	ug/L	1	09/29/20	MH	SW8260C
1,3,5-Trimethylbenzene	ND	1.0	ug/L	1	09/29/20	MH	SW8260C
1,3-Dichlorobenzene	ND	1.0	ug/L	1	09/29/20	MH	SW8260C
1,3-Dichloropropane	ND	1.0	ug/L	1	09/29/20	MH	SW8260C
1,4-Dichlorobenzene	ND	1.0	ug/L	1	09/29/20	MH	SW8260C
2,2-Dichloropropane	ND	1.0	ug/L	1	09/29/20	MH	SW8260C
2-Chlorotoluene	ND	1.0	ug/L	1	09/29/20	MH	SW8260C
2-Hexanone	ND	5.0	ug/L	1	09/29/20	MH	SW8260C
4-Chlorotoluene	ND	1.0	ug/L	1	09/29/20	MH	SW8260C
4-Methyl-2-pentanone	ND	5.0	ug/L	1	09/29/20	MH	SW8260C
Acetone	ND	25	ug/L	1	09/29/20	MH	SW8260C
Benzene	ND	0.70	ug/L	1	09/29/20	MH	SW8260C
Bromobenzene	ND	1.0	ug/L	1	09/29/20	MH	SW8260C
Bromochloromethane	ND	1.0	ug/L	1	09/29/20	MH	SW8260C
Bromodichloromethane	ND	0.50	ug/L	1	09/29/20	MH	SW8260C
Bromoform	ND	1.0	ug/L	1	09/29/20	MH	SW8260C
Bromomethane	ND	1.0	ug/L	1	09/29/20	MH	SW8260C
Carbon Disulfide	ND	5.0	ug/L	1	09/29/20	MH	SW8260C
Carbon tetrachloride	ND	1.0	ug/L	1	09/29/20	MH	SW8260C
Chlorobenzene	ND	1.0	ug/L	1	09/29/20	MH	SW8260C
Chloroethane	ND	1.0	ug/L	1	09/29/20	MH	SW8260C
Chloroform	ND	1.0	ug/L	1	09/29/20	MH	SW8260C
Chloromethane	ND	1.0	ug/L	1	09/29/20	MH	SW8260C
cis-1,2-Dichloroethene	ND	1.0	ug/L	1	09/29/20	MH	SW8260C
cis-1,3-Dichloropropene	ND	0.40	ug/L	1	09/29/20	MH	SW8260C
Dibromochloromethane	ND	0.50	ug/L	1	09/29/20	MH	SW8260C
Dibromomethane	ND	1.0	ug/L	1	09/29/20	MH	SW8260C
Dichlorodifluoromethane	ND	1.0	ug/L	1	09/29/20	MH	SW8260C
Ethylbenzene	ND	1.0	ug/L	1	09/29/20	MH	SW8260C
Hexachlorobutadiene	ND	0.40	ug/L	1	09/29/20	MH	SW8260C
Isopropylbenzene	ND	1.0	ug/L	1	09/29/20	MH	SW8260C
m&p-Xylene	ND	1.0	ug/L	1	09/29/20	MH	SW8260C
Methyl ethyl ketone	ND	5.0	ug/L	1	09/29/20	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	1.0	ug/L	1	09/29/20	MH	SW8260C
Methylene chloride	ND	1.0	ug/L	1	09/29/20	MH	SW8260C
Naphthalene	ND	1.0	ug/L	1	09/29/20	MH	SW8260C
n-Butylbenzene	ND	1.0	ug/L	1	09/29/20	MH	SW8260C
n-Propylbenzene	ND	1.0	ug/L	1	09/29/20	MH	SW8260C
o-Xylene	ND	1.0	ug/L	1	09/29/20	MH	SW8260C
p-Isopropyltoluene	ND	1.0	ug/L	1	09/29/20	MH	SW8260C
sec-Butylbenzene	ND	1.0	ug/L	1	09/29/20	MH	SW8260C
Styrene	ND	1.0	ug/L	1	09/29/20	MH	SW8260C
tert-Butylbenzene	ND	1.0	ug/L	1	09/29/20	MH	SW8260C
Tetrachloroethene	ND	1.0	ug/L	1	09/29/20	MH	SW8260C
Tetrahydrofuran (THF)	ND	2.5	ug/L	1	09/29/20	MH	SW8260C
Toluene	ND	1.0	ug/L	1	09/29/20	MH	SW8260C

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	
trans-1,2-Dichloroethene	ND	1.0	ug/L	1	09/29/20	MH	SW8260C
trans-1,3-Dichloropropene	ND	0.40	ug/L	1	09/29/20	MH	SW8260C
Trichloroethene	ND	1.0	ug/L	1	09/29/20	MH	SW8260C
Trichlorofluoromethane	ND	1.0	ug/L	1	09/29/20	MH	SW8260C
Trichlorotrifluoroethane	ND	1.0	ug/L	1	09/29/20	MH	SW8260C
Vinyl chloride	ND	1.0	ug/L	1	09/29/20	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	100		%	1	09/29/20	MH	70 - 130 %
% Bromofluorobenzene	97		%	1	09/29/20	MH	70 - 130 %
% Dibromofluoromethane	101		%	1	09/29/20	MH	70 - 130 %
% Toluene-d8	102		%	1	09/29/20	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	100	ug/L	1	09/29/20	MH	SW8260C (OXY)
Diethyl ether	ND	1.0	ug/L	1	09/29/20	MH	SW8260C (OXY)
Di-isopropyl ether	ND	1.0	ug/L	1	09/29/20	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	1.0	ug/L	1	09/29/20	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	1.0	ug/L	1	09/29/20	MH	SW8260C (OXY)
1,4-dioxane							
1,4-dioxane	ND	0.20	ug/l	1	09/29/20	AW	SW8270DSIM
QA/QC Surrogates							
% 1,4-dioxane-d8	87		%	1	09/29/20	AW	40 - 140 %
Extraction for 1,4-Dioxane	Completed				09/28/20	S/S	

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.

Phyllis Shiller, Laboratory Director
October 28, 2020
Reviewed and Released by: Greg Lawrence, Assistant Lab Director

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

October 28, 2020

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		09/24/20	9:55
Location Code:	AECOM-WILMINGTN	Received by:	B	09/24/20	15:48
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	127680				

Laboratory Data

SDG ID: GCG84811
Phoenix ID: CG84819

Project ID: LOCKHEED WILMINGTON MA 60552044.19
Client ID: 20A-IP1R2-092420-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Volatiles							
1,1,1,2-Tetrachloroethane	ND	10	ug/L	20	09/30/20	MH	SW8260C
1,1,1-Trichloroethane	ND	20	ug/L	20	09/30/20	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	10	ug/L	20	09/30/20	MH	SW8260C
1,1,2-Trichloroethane	ND	10	ug/L	20	09/30/20	MH	SW8260C
1,1-Dichloroethane	86	20	ug/L	20	09/30/20	MH	SW8260C
1,1-Dichloroethene	24	20	ug/L	20	09/30/20	MH	SW8260C
1,1-Dichloropropene	ND	20	ug/L	20	09/30/20	MH	SW8260C
1,2,3-Trichlorobenzene	ND	10	ug/L	20	09/30/20	MH	SW8260C
1,2,3-Trichloropropane	ND	10	ug/L	20	09/30/20	MH	SW8260C
1,2,4-Trichlorobenzene	ND	20	ug/L	20	09/30/20	MH	SW8260C
1,2,4-Trimethylbenzene	ND	20	ug/L	20	09/30/20	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	10	ug/L	20	09/30/20	MH	SW8260C
1,2-Dibromoethane	ND	10	ug/L	20	09/30/20	MH	SW8260C
1,2-Dichlorobenzene	ND	20	ug/L	20	09/30/20	MH	SW8260C
1,2-Dichloroethane	ND	10	ug/L	20	09/30/20	MH	SW8260C
1,2-Dichloropropane	ND	10	ug/L	20	09/30/20	MH	SW8260C
1,3,5-Trimethylbenzene	ND	20	ug/L	20	09/30/20	MH	SW8260C
1,3-Dichlorobenzene	ND	20	ug/L	20	09/30/20	MH	SW8260C
1,3-Dichloropropane	ND	20	ug/L	20	09/30/20	MH	SW8260C
1,4-Dichlorobenzene	ND	10	ug/L	20	09/30/20	MH	SW8260C
2,2-Dichloropropane	ND	20	ug/L	20	09/30/20	MH	SW8260C
2-Chlorotoluene	ND	20	ug/L	20	09/30/20	MH	SW8260C
2-Hexanone	ND	100	ug/L	20	09/30/20	MH	SW8260C
4-Chlorotoluene	ND	20	ug/L	20	09/30/20	MH	SW8260C
4-Methyl-2-pentanone	ND	100	ug/L	20	09/30/20	MH	SW8260C
Acetone	ND	500	ug/L	20	09/30/20	MH	SW8260C

Ver 2

Project ID: LOCKHEED WILMINGTON MA 60552044.19 Phoenix I.D.: CG84819

Client ID: 20A-IP1R2-092420-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	
Benzene	ND	10	ug/L	20	09/30/20	MH	SW8260C
Bromobenzene	ND	20	ug/L	20	09/30/20	MH	SW8260C
Bromochloromethane	ND	20	ug/L	20	09/30/20	MH	SW8260C
Bromodichloromethane	ND	10	ug/L	20	09/30/20	MH	SW8260C
Bromoform	ND	10	ug/L	20	09/30/20	MH	SW8260C
Bromomethane	ND	10	ug/L	20	09/30/20	MH	SW8260C
Carbon Disulfide	ND	100	ug/L	20	09/30/20	MH	SW8260C
Carbon tetrachloride	ND	10	ug/L	20	09/30/20	MH	SW8260C
Chlorobenzene	ND	20	ug/L	20	09/30/20	MH	SW8260C
Chloroethane	ND	20	ug/L	20	09/30/20	MH	SW8260C
Chloroform	ND	20	ug/L	20	09/30/20	MH	SW8260C
Chloromethane	ND	20	ug/L	20	09/30/20	MH	SW8260C
cis-1,2-Dichloroethene	87	20	ug/L	20	09/30/20	MH	SW8260C
cis-1,3-Dichloropropene	ND	10	ug/L	20	09/30/20	MH	SW8260C
Dibromochloromethane	ND	10	ug/L	20	09/30/20	MH	SW8260C
Dibromomethane	ND	10	ug/L	20	09/30/20	MH	SW8260C
Dichlorodifluoromethane	ND	20	ug/L	20	09/30/20	MH	SW8260C
Ethylbenzene	ND	20	ug/L	20	09/30/20	MH	SW8260C
Hexachlorobutadiene	ND	10	ug/L	20	09/30/20	MH	SW8260C
Isopropylbenzene	ND	20	ug/L	20	09/30/20	MH	SW8260C
m&p-Xylene	ND	20	ug/L	20	09/30/20	MH	SW8260C
Methyl ethyl ketone	ND	100	ug/L	20	09/30/20	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	20	ug/L	20	09/30/20	MH	SW8260C
Methylene chloride	ND	20	ug/L	20	09/30/20	MH	SW8260C
Naphthalene	ND	20	ug/L	20	09/30/20	MH	SW8260C
n-Butylbenzene	ND	20	ug/L	20	09/30/20	MH	SW8260C
n-Propylbenzene	ND	20	ug/L	20	09/30/20	MH	SW8260C
o-Xylene	ND	20	ug/L	20	09/30/20	MH	SW8260C
p-Isopropyltoluene	ND	20	ug/L	20	09/30/20	MH	SW8260C
sec-Butylbenzene	ND	20	ug/L	20	09/30/20	MH	SW8260C
Styrene	ND	20	ug/L	20	09/30/20	MH	SW8260C
tert-Butylbenzene	ND	20	ug/L	20	09/30/20	MH	SW8260C
Tetrachloroethene	2900	100	ug/L	100	10/01/20	MH	SW8260C
Tetrahydrofuran (THF)	ND	50	ug/L	20	09/30/20	MH	SW8260C
Toluene	ND	20	ug/L	20	09/30/20	MH	SW8260C
trans-1,2-Dichloroethene	ND	20	ug/L	20	09/30/20	MH	SW8260C
trans-1,3-Dichloropropene	ND	10	ug/L	20	09/30/20	MH	SW8260C
Trichloroethene	6600	100	ug/L	100	10/01/20	MH	SW8260C
Trichlorofluoromethane	ND	20	ug/L	20	09/30/20	MH	SW8260C
Trichlorotrifluoroethane	ND	20	ug/L	20	09/30/20	MH	SW8260C
Vinyl chloride	ND	10	ug/L	20	09/30/20	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4 (20x)	100		%	20	09/30/20	MH	70 - 130 %
% Bromofluorobenzene (20x)	92		%	20	09/30/20	MH	70 - 130 %
% Dibromofluoromethane (20x)	102		%	20	09/30/20	MH	70 - 130 %
% Toluene-d8 (20x)	90		%	20	09/30/20	MH	70 - 130 %
% 1,2-dichlorobenzene-d4 (100x)	100		%	100	10/01/20	MH	70 - 130 %
% Bromofluorobenzene (100x)	92		%	100	10/01/20	MH	70 - 130 %
% Dibromofluoromethane (100x)	104		%	100	10/01/20	MH	70 - 130 %

Project ID: LOCKHEED WILMINGTON MA 60552044.19 Phoenix I.D.: CG84819
Client ID: 20A-IP1R2-092420-1

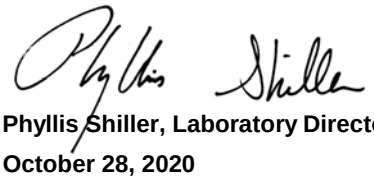
Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	
% Toluene-d8 (100x)	98		%	100	10/01/20	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	2000	ug/L	20	09/30/20	MH	SW8260C (OXY)
Diethyl ether	ND	20	ug/L	20	09/30/20	MH	SW8260C (OXY)
Di-isopropyl ether	ND	20	ug/L	20	09/30/20	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	20	ug/L	20	09/30/20	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	20	ug/L	20	09/30/20	MH	SW8260C (OXY)

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

Volatile Comment:
Elevated reporting limits for volatiles due to the presence of target and/or non-target compounds.

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
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Phyllis Shiller, Laboratory Director
October 28, 2020
Reviewed and Released by: Greg Lawrence, Assistant Lab Director

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

October 28, 2020

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		09/24/20	9:35
Location Code:	AECOM-WILMINGTN	Received by:	B	09/24/20	15:48
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	127680				

Laboratory Data

SDG ID: GCG84811
Phoenix ID: CG84820

Project ID: LOCKHEED WILMINGTON MA 60552044.19
Client ID: 20A-GZA105D-092420-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
EPH Extraction	Completed				09/29/20	JS/JS	SW3510C
MA Petroleum Hydrocarbon (EPH)	Completed				09/24/20		MADEP EPH-04
Semi-Volatile Extraction	Completed				09/27/20	S/P/CG/KT	SW3520C
MA Petroleum Hydrocarbon (VPH)	Completed				09/27/20	RM	MADEP VPH04
Volatiles							
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	1	09/29/20	MH	SW8260C
1,1,1-Trichloroethane	ND	1.0	ug/L	1	09/29/20	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L	1	09/29/20	MH	SW8260C
1,1,2-Trichloroethane	ND	1.0	ug/L	1	09/29/20	MH	SW8260C
1,1-Dichloroethane	1.8	1.0	ug/L	1	09/29/20	MH	SW8260C
1,1-Dichloroethene	1.3	1.0	ug/L	1	09/29/20	MH	SW8260C
1,1-Dichloropropene	ND	1.0	ug/L	1	09/29/20	MH	SW8260C
1,2,3-Trichlorobenzene	ND	1.0	ug/L	1	09/29/20	MH	SW8260C
1,2,3-Trichloropropane	ND	0.50	ug/L	1	09/29/20	MH	SW8260C
1,2,4-Trichlorobenzene	ND	1.0	ug/L	1	09/29/20	MH	SW8260C
1,2,4-Trimethylbenzene	ND	1.0	ug/L	1	09/29/20	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	0.50	ug/L	1	09/29/20	MH	SW8260C
1,2-Dibromoethane	ND	0.50	ug/L	1	09/29/20	MH	SW8260C
1,2-Dichlorobenzene	ND	1.0	ug/L	1	09/29/20	MH	SW8260C
1,2-Dichloroethane	ND	0.60	ug/L	1	09/29/20	MH	SW8260C
1,2-Dichloropropane	ND	1.0	ug/L	1	09/29/20	MH	SW8260C
1,3,5-Trimethylbenzene	ND	1.0	ug/L	1	09/29/20	MH	SW8260C
1,3-Dichlorobenzene	ND	1.0	ug/L	1	09/29/20	MH	SW8260C
1,3-Dichloropropane	ND	1.0	ug/L	1	09/29/20	MH	SW8260C
1,4-Dichlorobenzene	ND	1.0	ug/L	1	09/29/20	MH	SW8260C
2,2-Dichloropropane	ND	1.0	ug/L	1	09/29/20	MH	SW8260C
2-Chlorotoluene	ND	1.0	ug/L	1	09/29/20	MH	SW8260C

Project ID: LOCKHEED WILMINGTON MA 60552044.19 Phoenix I.D.: CG84820

Client ID: 20A-GZA105D-092420-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	
2-Hexanone	ND	5.0	ug/L	1	09/29/20	MH	SW8260C
4-Chlorotoluene	ND	1.0	ug/L	1	09/29/20	MH	SW8260C
4-Methyl-2-pentanone	ND	5.0	ug/L	1	09/29/20	MH	SW8260C
Acetone	ND	25	ug/L	1	09/29/20	MH	SW8260C
Benzene	ND	0.70	ug/L	1	09/29/20	MH	SW8260C
Bromobenzene	ND	1.0	ug/L	1	09/29/20	MH	SW8260C
Bromochloromethane	ND	1.0	ug/L	1	09/29/20	MH	SW8260C
Bromodichloromethane	ND	0.50	ug/L	1	09/29/20	MH	SW8260C
Bromoform	ND	1.0	ug/L	1	09/29/20	MH	SW8260C
Bromomethane	ND	1.0	ug/L	1	09/29/20	MH	SW8260C
Carbon Disulfide	ND	5.0	ug/L	1	09/29/20	MH	SW8260C
Carbon tetrachloride	ND	1.0	ug/L	1	09/29/20	MH	SW8260C
Chlorobenzene	ND	1.0	ug/L	1	09/29/20	MH	SW8260C
Chloroethane	ND	1.0	ug/L	1	09/29/20	MH	SW8260C
Chloroform	ND	1.0	ug/L	1	09/29/20	MH	SW8260C
Chloromethane	ND	1.0	ug/L	1	09/29/20	MH	SW8260C
cis-1,2-Dichloroethene	54	1.0	ug/L	1	09/29/20	MH	SW8260C
cis-1,3-Dichloropropene	ND	0.40	ug/L	1	09/29/20	MH	SW8260C
Dibromochloromethane	ND	0.50	ug/L	1	09/29/20	MH	SW8260C
Dibromomethane	ND	1.0	ug/L	1	09/29/20	MH	SW8260C
Dichlorodifluoromethane	ND	1.0	ug/L	1	09/29/20	MH	SW8260C
Ethylbenzene	ND	1.0	ug/L	1	09/29/20	MH	SW8260C
Hexachlorobutadiene	ND	0.40	ug/L	1	09/29/20	MH	SW8260C
Isopropylbenzene	ND	1.0	ug/L	1	09/29/20	MH	SW8260C
m&p-Xylene	ND	1.0	ug/L	1	09/29/20	MH	SW8260C
Methyl ethyl ketone	ND	5.0	ug/L	1	09/29/20	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	1.0	ug/L	1	09/29/20	MH	SW8260C
Methylene chloride	ND	1.0	ug/L	1	09/29/20	MH	SW8260C
Naphthalene	ND	1.0	ug/L	1	09/29/20	MH	SW8260C
n-Butylbenzene	ND	1.0	ug/L	1	09/29/20	MH	SW8260C
n-Propylbenzene	ND	1.0	ug/L	1	09/29/20	MH	SW8260C
o-Xylene	ND	1.0	ug/L	1	09/29/20	MH	SW8260C
p-Isopropyltoluene	ND	1.0	ug/L	1	09/29/20	MH	SW8260C
sec-Butylbenzene	ND	1.0	ug/L	1	09/29/20	MH	SW8260C
Styrene	ND	1.0	ug/L	1	09/29/20	MH	SW8260C
tert-Butylbenzene	ND	1.0	ug/L	1	09/29/20	MH	SW8260C
Tetrachloroethene	5.9	1.0	ug/L	1	09/29/20	MH	SW8260C
Tetrahydrofuran (THF)	ND	2.5	ug/L	1	09/29/20	MH	SW8260C
Toluene	ND	1.0	ug/L	1	09/29/20	MH	SW8260C
trans-1,2-Dichloroethene	ND	1.0	ug/L	1	09/29/20	MH	SW8260C
trans-1,3-Dichloropropene	ND	0.40	ug/L	1	09/29/20	MH	SW8260C
Trichloroethene	23	1.0	ug/L	1	09/29/20	MH	SW8260C
Trichlorofluoromethane	ND	1.0	ug/L	1	09/29/20	MH	SW8260C
Trichlorotrifluoroethane	ND	1.0	ug/L	1	09/29/20	MH	SW8260C
Vinyl chloride	16	1.0	ug/L	1	09/29/20	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	99		%	1	09/29/20	MH	70 - 130 %
% Bromofluorobenzene	99		%	1	09/29/20	MH	70 - 130 %
% Dibromofluoromethane	99		%	1	09/29/20	MH	70 - 130 %

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	
% Toluene-d8	100		%	1	09/29/20	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	100	ug/L	1	09/29/20	MH	SW8260C (OXY)
Diethyl ether	ND	1.0	ug/L	1	09/29/20	MH	SW8260C (OXY)
Di-isopropyl ether	ND	1.0	ug/L	1	09/29/20	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	1.0	ug/L	1	09/29/20	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	1.0	ug/L	1	09/29/20	MH	SW8260C (OXY)
Client MS/MSD	Completed				10/27/20		
Semivolatiles by SIM, PAH							
2-Methylnaphthalene	ND	0.47	ug/L	1	09/29/20	WB	SW8270D (SIM)
Acenaphthene	ND	0.47	ug/L	1	09/29/20	WB	SW8270D (SIM)
Acenaphthylene	ND	0.09	ug/L	1	09/29/20	WB	SW8270D (SIM)
Anthracene	ND	0.09	ug/L	1	09/29/20	WB	SW8270D (SIM)
Benz(a)anthracene	ND	0.09	ug/L	1	09/29/20	WB	SW8270D (SIM)
Benzo(a)pyrene	ND	0.19	ug/L	1	09/29/20	WB	SW8270D (SIM)
Benzo(b)fluoranthene	ND	0.09	ug/L	1	09/29/20	WB	SW8270D (SIM)
Benzo(ghi)perylene	ND	0.02	ug/L	1	09/29/20	WB	SW8270D (SIM)
Benzo(k)fluoranthene	ND	0.09	ug/L	1	09/29/20	WB	SW8270D (SIM)
Chrysene	ND	0.05	ug/L	1	09/29/20	WB	SW8270D (SIM)
Dibenz(a,h)anthracene	ND	0.02	ug/L	1	09/29/20	WB	SW8270D (SIM)
Fluoranthene	ND	0.47	ug/L	1	09/29/20	WB	SW8270D (SIM)
Fluorene	ND	0.09	ug/L	1	09/29/20	WB	SW8270D (SIM)
Indeno(1,2,3-cd)pyrene	ND	0.09	ug/L	1	09/29/20	WB	SW8270D (SIM)
Naphthalene	ND	0.47	ug/L	1	09/29/20	WB	SW8270D (SIM)
Phenanthrene	ND	0.47	ug/L	1	09/29/20	WB	SW8270D (SIM)
Pyrene	ND	0.07	ug/L	1	09/29/20	WB	SW8270D (SIM)
QA/QC Surrogates							
% 2-Fluorobiphenyl	57		%	1	09/29/20	WB	40 - 140 %
% Nitrobenzene-d5	83		%	1	09/29/20	WB	40 - 140 %
% Terphenyl-d14	76		%	1	09/29/20	WB	40 - 140 %
1,4-dioxane							
1,4-dioxane	0.68	0.20	ug/l	1	10/27/20	AW	SW8270DSIM
QA/QC Surrogates							
% 1,4-dioxane-d8	96		%	1	10/27/20	AW	40 - 140 %
Extraction for 1,4-Dioxane	Completed				10/26/20	G/G	
MA EPH Aliphatic/Aromatic Ranges							
C11-C22 Aromatic Hydrocarbons 1,2*	ND	200	ug/L	1	09/30/20	AW	MAEPH 5/2004
C11-C22 Aromatic Hydrocarbons Unadj	ND	200	ug/L	1	09/30/20	AW	MAEPH 5/2004
C19-C36 Aliphatic Hydrocarbons 1*	ND	200	ug/L	1	09/30/20	AW	MAEPH 5/2004
C9-C18 Aliphatic Hydrocarbons 1*	ND	200	ug/L	1	09/30/20	AW	MAEPH 5/2004
Total TPH 1,2*	ND	200	ug/L	1	09/30/20	AW	MAEPH 5/2004
QA/QC Surrogates							
% 1-chlorooctadecane (aliphatic)	85		%	1	09/30/20	AW	40 - 140 %
% 2-Bromonaphthalene (Fractionation)	121		%	1	09/30/20	AW	40 - 140 %
% 2-Fluorobiphenyl (Fractionation)	121		%	1	09/30/20	AW	40 - 140 %
% o-terphenyl (aromatic)	90		%	1	09/30/20	AW	40 - 140 %

Project ID: LOCKHEED WILMINGTON MA 60552044.19 Phoenix I.D.: CG84820
Client ID: 20A-GZA105D-092420-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	
MA Volatile Petroleum Hydrocarbons (VPH)							
Unadjusted C5-C8 Aliphatics (*1)	ND	100	ug/L	1	09/27/20	RM	MA VPH 5/2004
Unadjusted C9-C12 Aliphatics (*1)	ND	100	ug/L	1	09/27/20	RM	MA VPH 5/2004
C5-C8 Aliphatic Hydrocarbons *1,2	ND	100	ug/L	1	09/27/20	RM	MA VPH 5/2004
C9-C12 Aliphatic Hydrocarbons *1,3	ND	100	ug/L	1	09/27/20	RM	MA VPH 5/2004
C9-C10 Aromatic Hydrocarbons *1	ND	100	ug/L	1	09/27/20	RM	MA VPH 5/2004
Benzene	ND	1.0	ug/L	1	09/27/20	RM	MA VPH 5/2004
Ethyl Benzene	ND	1.0	ug/L	1	09/27/20	RM	MA VPH 5/2004
MTBE	ND	1.0	ug/L	1	09/27/20	RM	MA VPH 5/2004
Naphthalene	ND	5.0	ug/L	1	09/27/20	RM	MA VPH 5/2004
Toluene	ND	1.0	ug/L	1	09/27/20	RM	MA VPH 5/2004
m,p-Xylenes	ND	2.0	ug/L	1	09/27/20	RM	MA VPH 5/2004
o-Xylene	ND	1.0	ug/L	1	09/27/20	RM	MA VPH 5/2004
QA/QC Surrogates							
% 2,5-Dibromotoluene (FID)	103		%	1	09/27/20	RM	70 - 130 %
% 2,5-Dibromotoluene (PID)	95		%	1	09/27/20	RM	70 - 130 %

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

MAEPH:
1* Hydrocarbon range data exclude concentrations of any surrogate(s) and/or internal standards eluting in that range.
2* C11-C12 Aromatic Hydrocarbons exclude the concentration of Target PAH analytes eluting in that range.

VPH:
*1 Range data exclude conc.s of any surrogate(s) and/or Int. std.s eluting in that range.
*2 C5-C8 and C9-C12 Aliphatic exclude the conc. of Target Analytes in that range.
*3 C9-C12 Aliphatic also exclude C9-C10 Aromatic Hydrocarbon

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.



Phyllis Shiller, Laboratory Director
October 28, 2020
Reviewed and Released by: Greg Lawrence, Assistant Lab Director

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

October 28, 2020

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		09/24/20	11:15
Location Code:	AECOM-WILMINGTN	Received by:	B	09/24/20	15:48
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	127680				

Laboratory Data

SDG ID: GCG84811
Phoenix ID: CG84821

Project ID: LOCKHEED WILMINGTON MA 60552044.19
Client ID: 20A-TRC401R-092420-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Volatiles							
1,1,1,2-Tetrachloroethane	ND	10	ug/L	20	09/29/20	MH	SW8260C
1,1,1-Trichloroethane	ND	20	ug/L	20	09/29/20	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	10	ug/L	20	09/29/20	MH	SW8260C
1,1,2-Trichloroethane	ND	10	ug/L	20	09/29/20	MH	SW8260C
1,1-Dichloroethane	86	20	ug/L	20	09/29/20	MH	SW8260C
1,1-Dichloroethene	16	10	ug/L	20	09/29/20	MH	SW8260C
1,1-Dichloropropene	ND	20	ug/L	20	09/29/20	MH	SW8260C
1,2,3-Trichlorobenzene	ND	10	ug/L	20	09/29/20	MH	SW8260C
1,2,3-Trichloropropane	ND	10	ug/L	20	09/29/20	MH	SW8260C
1,2,4-Trichlorobenzene	ND	20	ug/L	20	09/29/20	MH	SW8260C
1,2,4-Trimethylbenzene	ND	20	ug/L	20	09/29/20	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	10	ug/L	20	09/29/20	MH	SW8260C
1,2-Dibromoethane	ND	10	ug/L	20	09/29/20	MH	SW8260C
1,2-Dichlorobenzene	ND	20	ug/L	20	09/29/20	MH	SW8260C
1,2-Dichloroethane	ND	10	ug/L	20	09/29/20	MH	SW8260C
1,2-Dichloropropane	ND	10	ug/L	20	09/29/20	MH	SW8260C
1,3,5-Trimethylbenzene	ND	20	ug/L	20	09/29/20	MH	SW8260C
1,3-Dichlorobenzene	ND	20	ug/L	20	09/29/20	MH	SW8260C
1,3-Dichloropropane	ND	20	ug/L	20	09/29/20	MH	SW8260C
1,4-Dichlorobenzene	ND	10	ug/L	20	09/29/20	MH	SW8260C
2,2-Dichloropropane	ND	20	ug/L	20	09/29/20	MH	SW8260C
2-Chlorotoluene	ND	20	ug/L	20	09/29/20	MH	SW8260C
2-Hexanone	ND	100	ug/L	20	09/29/20	MH	SW8260C
4-Chlorotoluene	ND	20	ug/L	20	09/29/20	MH	SW8260C
4-Methyl-2-pentanone	ND	100	ug/L	20	09/29/20	MH	SW8260C
Acetone	ND	500	ug/L	20	09/29/20	MH	SW8260C

Ver 2

Project ID: LOCKHEED WILMINGTON MA 60552044.19 Phoenix I.D.: CG84821

Client ID: 20A-TRC401R-092420-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	
Benzene	ND	10	ug/L	20	09/29/20	MH	SW8260C
Bromobenzene	ND	20	ug/L	20	09/29/20	MH	SW8260C
Bromochloromethane	ND	20	ug/L	20	09/29/20	MH	SW8260C
Bromodichloromethane	ND	10	ug/L	20	09/29/20	MH	SW8260C
Bromoform	ND	10	ug/L	20	09/29/20	MH	SW8260C
Bromomethane	ND	10	ug/L	20	09/29/20	MH	SW8260C
Carbon Disulfide	ND	100	ug/L	20	09/29/20	MH	SW8260C
Carbon tetrachloride	ND	10	ug/L	20	09/29/20	MH	SW8260C
Chlorobenzene	ND	20	ug/L	20	09/29/20	MH	SW8260C
Chloroethane	ND	20	ug/L	20	09/29/20	MH	SW8260C
Chloroform	ND	20	ug/L	20	09/29/20	MH	SW8260C
Chloromethane	ND	20	ug/L	20	09/29/20	MH	SW8260C
cis-1,2-Dichloroethene	90	20	ug/L	20	09/29/20	MH	SW8260C
cis-1,3-Dichloropropene	ND	10	ug/L	20	09/29/20	MH	SW8260C
Dibromochloromethane	ND	10	ug/L	20	09/29/20	MH	SW8260C
Dibromomethane	ND	10	ug/L	20	09/29/20	MH	SW8260C
Dichlorodifluoromethane	ND	20	ug/L	20	09/29/20	MH	SW8260C
Ethylbenzene	ND	20	ug/L	20	09/29/20	MH	SW8260C
Hexachlorobutadiene	ND	10	ug/L	20	09/29/20	MH	SW8260C
Isopropylbenzene	ND	20	ug/L	20	09/29/20	MH	SW8260C
m&p-Xylene	ND	20	ug/L	20	09/29/20	MH	SW8260C
Methyl ethyl ketone	ND	100	ug/L	20	09/29/20	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	20	ug/L	20	09/29/20	MH	SW8260C
Methylene chloride	ND	20	ug/L	20	09/29/20	MH	SW8260C
Naphthalene	ND	20	ug/L	20	09/29/20	MH	SW8260C
n-Butylbenzene	ND	20	ug/L	20	09/29/20	MH	SW8260C
n-Propylbenzene	ND	20	ug/L	20	09/29/20	MH	SW8260C
o-Xylene	ND	20	ug/L	20	09/29/20	MH	SW8260C
p-Isopropyltoluene	ND	20	ug/L	20	09/29/20	MH	SW8260C
sec-Butylbenzene	ND	20	ug/L	20	09/29/20	MH	SW8260C
Styrene	ND	20	ug/L	20	09/29/20	MH	SW8260C
tert-Butylbenzene	ND	20	ug/L	20	09/29/20	MH	SW8260C
Tetrachloroethene	1800	20	ug/L	20	09/29/20	MH	SW8260C
Tetrahydrofuran (THF)	ND	50	ug/L	20	09/29/20	MH	SW8260C
Toluene	ND	20	ug/L	20	09/29/20	MH	SW8260C
trans-1,2-Dichloroethene	ND	20	ug/L	20	09/29/20	MH	SW8260C
trans-1,3-Dichloropropene	ND	10	ug/L	20	09/29/20	MH	SW8260C
Trichloroethene	3600	200	ug/L	200	09/30/20	MH	SW8260C
Trichlorofluoromethane	ND	20	ug/L	20	09/29/20	MH	SW8260C
Trichlorotrifluoroethane	ND	20	ug/L	20	09/29/20	MH	SW8260C
Vinyl chloride	ND	10	ug/L	20	09/29/20	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4 (20x)	101		%	20	09/29/20	MH	70 - 130 %
% Bromofluorobenzene (20x)	95		%	20	09/29/20	MH	70 - 130 %
% Dibromofluoromethane (20x)	102		%	20	09/29/20	MH	70 - 130 %
% Toluene-d8 (20x)	95		%	20	09/29/20	MH	70 - 130 %
% 1,2-dichlorobenzene-d4 (200x)	100		%	200	09/30/20	MH	70 - 130 %
% Bromofluorobenzene (200x)	94		%	200	09/30/20	MH	70 - 130 %
% Dibromofluoromethane (200x)	98		%	200	09/30/20	MH	70 - 130 %

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	
% Toluene-d8 (200x)	99		%	200	09/30/20	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	2000	ug/L	20	09/29/20	MH	SW8260C (OXY)
Diethyl ether	ND	20	ug/L	20	09/29/20	MH	SW8260C (OXY)
Di-isopropyl ether	ND	20	ug/L	20	09/29/20	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	20	ug/L	20	09/29/20	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	20	ug/L	20	09/29/20	MH	SW8260C (OXY)

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

Volatile Comment:
Elevated reporting limits for volatiles due to the presence of target and/or non-target compounds.

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.

Phyllis Shiller, Laboratory Director
October 28, 2020
Reviewed and Released by: Greg Lawrence, Assistant Lab Director

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

October 28, 2020

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		09/24/20	11:10
Location Code:	AECOM-WILMINGTN	Received by:	B	09/24/20	15:48
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	127680				

Laboratory Data

SDG ID: GCG84811
Phoenix ID: CG84822

Project ID: LOCKHEED WILMINGTON MA 60552044.19
Client ID: 20A-AE101R5-092420-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Volatiles							
1,1,1,2-Tetrachloroethane	ND	10	ug/L	20	09/30/20	MH	SW8260C
1,1,1-Trichloroethane	ND	20	ug/L	20	09/30/20	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	10	ug/L	20	09/30/20	MH	SW8260C
1,1,2-Trichloroethane	ND	10	ug/L	20	09/30/20	MH	SW8260C
1,1-Dichloroethane	45	20	ug/L	20	09/30/20	MH	SW8260C
1,1-Dichloroethene	12	10	ug/L	20	09/30/20	MH	SW8260C
1,1-Dichloropropene	ND	20	ug/L	20	09/30/20	MH	SW8260C
1,2,3-Trichlorobenzene	ND	10	ug/L	20	09/30/20	MH	SW8260C
1,2,3-Trichloropropane	ND	10	ug/L	20	09/30/20	MH	SW8260C
1,2,4-Trichlorobenzene	ND	20	ug/L	20	09/30/20	MH	SW8260C
1,2,4-Trimethylbenzene	ND	20	ug/L	20	09/30/20	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	10	ug/L	20	09/30/20	MH	SW8260C
1,2-Dibromoethane	ND	10	ug/L	20	09/30/20	MH	SW8260C
1,2-Dichlorobenzene	ND	20	ug/L	20	09/30/20	MH	SW8260C
1,2-Dichloroethane	ND	10	ug/L	20	09/30/20	MH	SW8260C
1,2-Dichloropropane	ND	10	ug/L	20	09/30/20	MH	SW8260C
1,3,5-Trimethylbenzene	ND	20	ug/L	20	09/30/20	MH	SW8260C
1,3-Dichlorobenzene	ND	20	ug/L	20	09/30/20	MH	SW8260C
1,3-Dichloropropane	ND	20	ug/L	20	09/30/20	MH	SW8260C
1,4-Dichlorobenzene	ND	10	ug/L	20	09/30/20	MH	SW8260C
2,2-Dichloropropane	ND	20	ug/L	20	09/30/20	MH	SW8260C
2-Chlorotoluene	ND	20	ug/L	20	09/30/20	MH	SW8260C
2-Hexanone	ND	100	ug/L	20	09/30/20	MH	SW8260C
4-Chlorotoluene	ND	20	ug/L	20	09/30/20	MH	SW8260C
4-Methyl-2-pentanone	ND	100	ug/L	20	09/30/20	MH	SW8260C
Acetone	ND	500	ug/L	20	09/30/20	MH	SW8260C

Ver 2

Project ID: LOCKHEED WILMINGTON MA 60552044.19 Phoenix I.D.: CG84822

Client ID: 20A-AE101R5-092420-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	
Benzene	ND	10	ug/L	20	09/30/20	MH	SW8260C
Bromobenzene	ND	20	ug/L	20	09/30/20	MH	SW8260C
Bromochloromethane	ND	20	ug/L	20	09/30/20	MH	SW8260C
Bromodichloromethane	ND	10	ug/L	20	09/30/20	MH	SW8260C
Bromoform	ND	10	ug/L	20	09/30/20	MH	SW8260C
Bromomethane	ND	10	ug/L	20	09/30/20	MH	SW8260C
Carbon Disulfide	ND	100	ug/L	20	09/30/20	MH	SW8260C
Carbon tetrachloride	ND	10	ug/L	20	09/30/20	MH	SW8260C
Chlorobenzene	ND	20	ug/L	20	09/30/20	MH	SW8260C
Chloroethane	ND	20	ug/L	20	09/30/20	MH	SW8260C
Chloroform	ND	20	ug/L	20	09/30/20	MH	SW8260C
Chloromethane	ND	20	ug/L	20	09/30/20	MH	SW8260C
cis-1,2-Dichloroethene	1300	20	ug/L	20	09/30/20	MH	SW8260C
cis-1,3-Dichloropropene	ND	10	ug/L	20	09/30/20	MH	SW8260C
Dibromochloromethane	ND	10	ug/L	20	09/30/20	MH	SW8260C
Dibromomethane	ND	10	ug/L	20	09/30/20	MH	SW8260C
Dichlorodifluoromethane	ND	20	ug/L	20	09/30/20	MH	SW8260C
Ethylbenzene	ND	20	ug/L	20	09/30/20	MH	SW8260C
Hexachlorobutadiene	ND	10	ug/L	20	09/30/20	MH	SW8260C
Isopropylbenzene	ND	20	ug/L	20	09/30/20	MH	SW8260C
m&p-Xylene	ND	20	ug/L	20	09/30/20	MH	SW8260C
Methyl ethyl ketone	ND	100	ug/L	20	09/30/20	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	20	ug/L	20	09/30/20	MH	SW8260C
Methylene chloride	ND	20	ug/L	20	09/30/20	MH	SW8260C
Naphthalene	ND	20	ug/L	20	09/30/20	MH	SW8260C
n-Butylbenzene	ND	20	ug/L	20	09/30/20	MH	SW8260C
n-Propylbenzene	ND	20	ug/L	20	09/30/20	MH	SW8260C
o-Xylene	ND	20	ug/L	20	09/30/20	MH	SW8260C
p-Isopropyltoluene	ND	20	ug/L	20	09/30/20	MH	SW8260C
sec-Butylbenzene	ND	20	ug/L	20	09/30/20	MH	SW8260C
Styrene	ND	20	ug/L	20	09/30/20	MH	SW8260C
tert-Butylbenzene	ND	20	ug/L	20	09/30/20	MH	SW8260C
Tetrachloroethene	480	20	ug/L	20	09/30/20	MH	SW8260C
Tetrahydrofuran (THF)	ND	50	ug/L	20	09/30/20	MH	SW8260C
Toluene	ND	20	ug/L	20	09/30/20	MH	SW8260C
trans-1,2-Dichloroethene	22	20	ug/L	20	09/30/20	MH	SW8260C
trans-1,3-Dichloropropene	ND	10	ug/L	20	09/30/20	MH	SW8260C
Trichloroethene	2300	50	ug/L	50	10/01/20	MH	SW8260C
Trichlorofluoromethane	ND	20	ug/L	20	09/30/20	MH	SW8260C
Trichlorotrifluoroethane	ND	20	ug/L	20	09/30/20	MH	SW8260C
Vinyl chloride	16	10	ug/L	20	09/30/20	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4 (20x)	100		%	20	09/30/20	MH	70 - 130 %
% Bromofluorobenzene (20x)	95		%	20	09/30/20	MH	70 - 130 %
% Dibromofluoromethane (20x)	101		%	20	09/30/20	MH	70 - 130 %
% Toluene-d8 (20x)	97		%	20	09/30/20	MH	70 - 130 %
% 1,2-dichlorobenzene-d4 (50x)	103		%	50	10/01/20	MH	70 - 130 %
% Bromofluorobenzene (50x)	93		%	50	10/01/20	MH	70 - 130 %
% Dibromofluoromethane (50x)	103		%	50	10/01/20	MH	70 - 130 %

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	
% Toluene-d8 (50x)	98		%	50	10/01/20	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	2000	ug/L	20	09/30/20	MH	SW8260C (OXY)
Diethyl ether	ND	20	ug/L	20	09/30/20	MH	SW8260C (OXY)
Di-isopropyl ether	ND	20	ug/L	20	09/30/20	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	20	ug/L	20	09/30/20	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	20	ug/L	20	09/30/20	MH	SW8260C (OXY)
Client MS/MSD	Completed				09/30/20		
1,4-dioxane							
1,4-dioxane	15	0.20	ug/l	1	09/28/20	AW	SW8270DSIM
QA/QC Surrogates							
% 1,4-dioxane-d8	89		%	1	09/28/20	AW	40 - 140 %
Extraction for 1,4-Dioxane	Completed				09/25/20	S/S	

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

Volatile Comment:
Elevated reporting limits for volatiles due to the presence of target and/or non-target compounds.

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.

Phyllis Shiller, Laboratory Director
October 28, 2020
Reviewed and Released by: Greg Lawrence, Assistant Lab Director

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

QA/QC Report

October 28, 2020

QA/QC Data

SDG I.D.: GCG84811

Parameter	Blank	Blk RL	Sample Result	Dup Result	Dup RPD	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits
QA/QC Batch 546834 (mg/L), QC Sample No: CG84812 (CG84812, CG84814, CG84818)													
ICP Metals - Aqueous													
Arsenic	BRL	0.004	0.056	0.056	0	103	106	2.9	107	106	0.9	80 - 120	20
Iron	BRL	0.010	23.5	22.9	2.60	99.7	107	7.1	NC	NC	NC	80 - 120	20
Manganese	BRL	0.001	3.03	3.13	3.20	101	109	7.6	107	117	8.9	80 - 120	20
Comment:													
Additional: LCS acceptance range is 80-120% MS acceptance range 75-125%.													
QA/QC Batch 547005 (mg/L), QC Sample No: CG84812 (CG84812, CG84814, CG84818)													
ICP Metals - Dissolved													
Arsenic	BRL	0.004	0.057	0.051	11.1	84.4	82.9	1.8	86.6	89.0	2.7	80 - 120	20
Iron	BRL	0.011	23.7	22.6	4.80	84.5	83.3	1.4	NC	NC	NC	80 - 120	20
Manganese	BRL	0.001	3.12	3.11	0.30	86.9	85.7	1.4	80.2	90.5	12.1	80 - 120	20
Comment:													
Additional: LCS acceptance range is 80-120% MS acceptance range 75-125%.													

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October 28, 2020

QA/QC Data

SDG I.D.: GCG84811

Parameter	Blank	Blk RL	Sample Result	Dup Result	Dup RPD	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits
QA/QC Batch 547456 (mg/L), QC Sample No: CG84814 (CG84814)													
Sulfide	BRL	0.05	<0.05	<0.05	NC	107			88.6			90 - 110	20
QA/QC Batch 547575 (mg/L), QC Sample No: CG84818 (CG84818)													
Sulfide	BRL	0.05	<0.05	<0.05	NC	93.7			91.5			90 - 110	20
QA/QC Batch 547069 (mg/L), QC Sample No: CG85175 (CG84814, CG84818)													
Total Organic Carbon	BRL	1.0	1.8	1.7	NC	100			101			85 - 115	20
Comment:													
Additional: LCS acceptance range is 85-115% MS acceptance range 75-125%.													
QA/QC Batch 546994 (mg/L), QC Sample No: CG84689 (CG84814)													
Chloride	BRL	3.0	33.8	34.9	3.20	94.6			98.8			90 - 110	20
Nitrate as Nitrogen	BRL	0.05	0.02	<0.05	NC	91.6			104			90 - 110	20
Sulfate	BRL	3.0	19.2	19.4	1.00	95.8			99.4			90 - 110	20
QA/QC Batch 547016 (mg/L), QC Sample No: CG84973 (CG84818)													
Chloride	BRL	3.0	<3.0	<3.0	NC	95.0			94.8			90 - 110	20
Sulfate	BRL	3.0	<3.0	<3.0	NC	94.7			99.1			90 - 110	20
QA/QC Batch 547226 (mg/L), QC Sample No: CG85802 (CG84818)													
Chloride	BRL	3.0	<3.0	<3.0	NC	95.6			94.6			90 - 110	20
Nitrate as Nitrogen	BRL	0.05	0.33	0.33	0	92.0			101			90 - 110	20
Sulfate	BRL	3.0	6.9	6.8	NC	95.6			94.8			90 - 110	20
QA/QC Batch 546994 (mg/L), QC Sample No: CG84689 (CG84814)													
Nitrite as Nitrogen	BRL	0.01	<0.01	<0.01	NC	102			89.6			90 - 110	20
QA/QC Batch 547016 (mg/L), QC Sample No: CG84973 (CG84818)													
Nitrate as Nitrogen	BRL	0.05	1.00	0.98	2.00	93.7			103			90 - 110	20
Nitrite as Nitrogen	BRL	0.01	<0.01	<0.01	NC	93.1			98.4			90 - 110	20

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QA/QC Report

October 28, 2020

QA/QC Data

SDG I.D.: GCG84811

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits	
QA/QC Batch 546937 (ug/L), QC Sample No: CG84812 (CG84812, CG84813, CG84814, CG84815, CG84816)											
MAEPH - Ground Water											
C9-C18 Aliphatic Hydrocarbons 1*	ND	100	54	49	9.7	66	61	7.9	40 - 140	25	
C19-C36 Aliphatic Hydrocarbons 1*	ND	100	80	78	2.5	94	83	12.4	40 - 140	25	
C11-C22 Aromatic Hydrocarbons 1	ND	100	73	62	16.3	81	75	7.7	40 - 140	25	
C11-C22 Aromatic Hydrocarbons U	ND	100							40 - 140	25	
Total TPH 1,2*	ND	100	69	66	4.4	82	73	11.6	40 - 140	25	
C9 - Nonane	ND	10	35	31	12.1	48	46	4.3	40 - 140	25	I
C-10 Decane	ND	10	40	37	7.8	55	51	7.5	40 - 140	25	I
C12 - Dodecane	ND	10	44	40	9.5	58	54	7.1	40 - 140	25	
C14 - Tetradecane	ND	10	58	53	9.0	71	64	10.4	40 - 140	25	
C16 - Hexadecane	ND	10	68	62	9.2	77	70	9.5	40 - 140	25	
C18 - Octadecane	ND	10	76	70	8.2	86	78	9.8	40 - 140	25	
C19 - Nonadecane	ND	10	77	72	6.7	89	80	10.7	40 - 140	25	
C20 - Eicosane	ND	10	77	73	5.3	90	80	11.8	40 - 140	25	
C22 - Docosane	ND	10	77	73	5.3	90	80	11.8	40 - 140	25	
C24 - Tetracosane	ND	10	78	74	5.3	91	81	11.6	40 - 140	25	
C26 - Hexacosane	ND	10	78	74	5.3	92	81	12.7	40 - 140	25	
C28 - Octacosane	ND	10	77	74	4.0	91	80	12.9	40 - 140	25	
C30 - Tricotane	ND	10	75	74	1.3	90	79	13.0	40 - 140	25	
C36 - Hexatriacontane	ND	10	99	110	10.5	119	100	17.4	40 - 140	25	
% 1-chlorooctadecane (aliphatic)	65	%	68	73	7.1	68	56	19.4	40 - 140	25	
% o-terphenyl (aromatic)	78	%	73	64	13.1	80	72	10.5	40 - 140	25	
% 2-Fluorobiphenyl (Fractionation)	93	%	90	103	13.5	98	91	7.4	40 - 140	25	
% 2-Bromonaphthalene (Fractionati	87	%	101	105	3.9	112	102	9.3	40 - 140	25	
% 2-Methylnaphthalene BT		%	0	0	NC				0 - 5		
% Naphthalene BT		%	0	0	NC				0 - 5		

Comment:

A LCS and LCS Duplicate were performed instead of a matrix spike and matrix spike duplicate.

Additional EPH fractionation criteria: Breakthrough criteria (BT) is 0 to 5%

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits	
QA/QC Batch 547303 (ug/L), QC Sample No: CG84820 (CG84817, CG84820)											
MAEPH - Ground Water											
C9-C18 Aliphatic Hydrocarbons 1*	ND	100	45	49	8.5	53	54	1.9	40 - 140	25	
C19-C36 Aliphatic Hydrocarbons 1*	ND	100	80	85	6.1	82	84	2.4	40 - 140	25	
C11-C22 Aromatic Hydrocarbons 1	ND	100	69	69	0.0	69	77	11.0	40 - 140	25	
C11-C22 Aromatic Hydrocarbons U	ND	100							40 - 140	25	
Total TPH 1,2*	ND	100	65	70	7.4	70	71	1.4	40 - 140	25	
C9 - Nonane	ND	10	24	26	8.0	32	30	6.5	40 - 140	25	I,m
C-10 Decane	ND	10	32	35	9.0	42	40	4.9	40 - 140	25	I
C12 - Dodecane	ND	10	37	42	12.7	49	47	4.2	40 - 140	25	I
C14 - Tetradecane	ND	10	44	49	10.8	57	58	1.7	40 - 140	25	
C16 - Hexadecane	ND	10	59	63	6.6	67	72	7.2	40 - 140	25	

QA/QC Data

SDG I.D.: GCG84811

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits	
C18 - Octadecane	ND	10	73	77	5.3	74	78	5.3	40 - 140	25	
C19 - Nonadecane	ND	10	74	79	6.5	75	78	3.9	40 - 140	25	
C20 - Eicosane	ND	10	76	81	6.4	78	80	2.5	40 - 140	25	
C22 - Docosane	ND	10	77	82	6.3	79	80	1.3	40 - 140	25	
C24 - Tetracosane	ND	10	77	82	6.3	80	81	1.2	40 - 140	25	
C26 - Hexacosane	ND	10	77	82	6.3	80	81	1.2	40 - 140	25	
C28 - Octacosane	ND	10	77	82	6.3	80	81	1.2	40 - 140	25	
C30 - Tricotane	ND	10	77	81	5.1	79	81	2.5	40 - 140	25	
C36 - Hexatriacontane	ND	10	102	110	7.5	105	106	0.9	40 - 140	25	
% 1-chlorooctadecane (aliphatic)	62	%	68	76	11.1	74	69	7.0	40 - 140	25	
% o-terphenyl (aromatic)	73	%	74	74	0.0	72	83	14.2	40 - 140	25	
% 2-Fluorobiphenyl (Fractionation)	116	%	109	112	2.7	103	113	9.3	40 - 140	25	
% 2-Bromonaphthalene (Fractionati	110	%	113	105	7.3	112	116	3.5	40 - 140	25	
% 2-Methylnaphthalene BT		%	0	0	NC				0 - 5		
% Naphthalene BT		%	0	0	NC				0 - 5		

Comment:

Additional EPH fractionation criteria: Breakthrough criteria (BT) is 0 to 5%

QA/QC Batch 550910 (ug/l), QC Sample No: CG84820 (CG84820)

1,4dioxane - Ground Water

1,4-dioxane	ND	0.20	108			96	94	2.1	40 - 140	30	
% 1,4-dioxane-d8	86	%	95			81	93	13.8	40 - 140	30	

Comment:

This batch consists of a Blank, LCS,MS and MSD

QA/QC Batch 546802 (ug/l), QC Sample No: CG84822 (CG84822)

1,4dioxane - Ground Water

1,4-dioxane	ND	0.20	87	85	2.3	NC	NC	NC	40 - 140	30	
% 1,4-dioxane-d8	80	%	92	85	7.9	93	87	6.7	40 - 140	30	

Comment:

This batch consists of a Blank, LCS, MS and MSD.

QA/QC Batch 547240 (ug/l), QC Sample No: CG85194 (CG84814, CG84818)

1,4dioxane - Ground Water

1,4-dioxane	ND	0.20	89	79	11.9	83			40 - 140	30	
% 1,4-dioxane-d8	94	%	88	86	2.3	83			40 - 140	30	

QA/QC Batch 547131 (ug/L), QC Sample No: CG84812 (CG84812, CG84813, CG84814, CG84815, CG84816, CG84817)

Semivolatiles by SIM, PAH - Ground Water

2-Methylnaphthalene	ND	0.50	68	81	17.4	66			40 - 140	20	
Acenaphthene	ND	0.50	84	85	1.2	78			40 - 140	20	
Acenaphthylene	ND	0.10	74	77	4.0	69			40 - 140	20	
Anthracene	ND	0.10	69	74	7.0	66			40 - 140	20	
Benz(a)anthracene	ND	0.02	93	95	2.1	71			40 - 140	20	
Benzo(a)pyrene	ND	0.02	81	79	2.5	48			40 - 140	20	
Benzo(b)fluoranthene	ND	0.02	93	97	4.2	57			40 - 140	20	
Benzo(ghi)perylene	ND	0.02	79	80	1.3	40			40 - 140	20	
Benzo(k)fluoranthene	ND	0.02	59	61	3.3	33			40 - 140	20	m
Chrysene	ND	0.02	72	73	1.4	52			40 - 140	20	
Dibenz(a,h)anthracene	ND	0.02	93	95	2.1	42			40 - 140	20	
Fluoranthene	ND	0.50	74	80	7.8	69			40 - 140	20	
Fluorene	ND	0.10	75	79	5.2	71			40 - 140	20	
Indeno(1,2,3-cd)pyrene	ND	0.02	80	81	1.2	40			40 - 140	20	
Naphthalene	ND	0.50	68	83	19.9	69			40 - 140	20	

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits	
Phenanthrene	ND	0.06	72	79	9.3	70			40 - 140	20	
Pyrene	ND	0.07	77	82	6.3	72			40 - 140	20	
% 2-Fluorobiphenyl	74	%	73	74	1.4	67			40 - 140	20	
% Nitrobenzene-d5	82	%	79	75	5.2	71			40 - 140	20	
% Terphenyl-d14	100	%	85	89	4.6	66			40 - 140	20	

Comment:

This batch consists of a Blank, LCS, LCSD, and MS.

Additional 8270 criteria: 10% of compounds can be outside of acceptance criteria as long as recovery is at least 10%. (Acid surrogates acceptance range for aqueous samples: 10-110%, for soils 30-130%)

QA/QC Batch 547132 (ug/L), QC Sample No: CG84820 (CG84820)

Semivolatiles by SIM, PAH - Ground Water

2-Methylnaphthalene	ND	0.50	87	70	21.7	73	65	11.6	40 - 140	20	r
Acenaphthene	ND	0.50	69	65	6.0	73	65	11.6	40 - 140	20	
Acenaphthylene	ND	0.10	63	61	3.2	68	62	9.2	40 - 140	20	
Anthracene	ND	0.10	77	70	9.5	80	74	7.8	40 - 140	20	
Benz(a)anthracene	ND	0.02	85	79	7.3	88	80	9.5	40 - 140	20	
Benzo(a)pyrene	ND	0.02	75	78	3.9	88	78	12.0	40 - 140	20	
Benzo(b)fluoranthene	ND	0.02	113	106	6.4	115	101	13.0	40 - 140	20	
Benzo(ghi)perylene	ND	0.02	98	94	4.2	105	91	14.3	40 - 140	20	
Benzo(k)fluoranthene	ND	0.02	74	67	9.9	74	65	12.9	40 - 140	20	
Chrysene	ND	0.02	83	78	6.2	86	77	11.0	40 - 140	20	
Dibenz(a,h)anthracene	ND	0.02	79	75	5.2	82	71	14.4	40 - 140	20	
Fluoranthene	ND	0.50	72	67	7.2	72	71	1.4	40 - 140	20	
Fluorene	ND	0.10	54	50	7.7	55	51	7.5	40 - 140	20	
Indeno(1,2,3-cd)pyrene	ND	0.02	77	75	2.6	81	72	11.8	40 - 140	20	
Naphthalene	ND	0.50	76	61	21.9	67	59	12.7	40 - 140	20	r
Phenanthrene	ND	0.06	69	64	7.5	72	67	7.2	40 - 140	20	
Pyrene	ND	0.07	82	78	5.0	85	80	6.1	40 - 140	20	
% 2-Fluorobiphenyl	43	%	61	57	6.8	60	54	10.5	40 - 140	20	
% Nitrobenzene-d5	50	%	74	70	5.6	84	70	18.2	40 - 140	20	
% Terphenyl-d14	71	%	89	82	8.2	93	81	13.8	40 - 140	20	

Comment:

Additional 8270 criteria: 10% of compounds can be outside of acceptance criteria as long as recovery is at least 10%. (Acid surrogates acceptance range for aqueous samples: 10-110%, for soils 30-130%)

QA/QC Batch 547525 (ug/L), QC Sample No: CG84812 (CG84811, CG84812, CG84813, CG84814, CG84815, CG84816, CG84817, CG84818, CG84821 (20X))

Volatiles - Ground Water

1,1,1,2-Tetrachloroethane	ND	1.0	103	101	2.0	92	101	9.3	70 - 130	20
1,1,1-Trichloroethane	ND	1.0	97	95	2.1	95	100	5.1	70 - 130	20
1,1,2,2-Tetrachloroethane	ND	0.50	106	104	1.9	98	102	4.0	70 - 130	20
1,1,2-Trichloroethane	ND	1.0	104	102	1.9	96	102	6.1	70 - 130	20
1,1-Dichloroethane	ND	1.0	99	95	4.1	92	97	5.3	70 - 130	20
1,1-Dichloroethene	ND	1.0	98	96	2.1	100	101	1.0	70 - 130	20
1,1-Dichloropropene	ND	1.0	100	99	1.0	98	106	7.8	70 - 130	20
1,2,3-Trichlorobenzene	ND	1.0	108	108	0.0	103	108	4.7	70 - 130	20
1,2,3-Trichloropropane	ND	1.0	100	98	2.0	98	100	2.0	70 - 130	20
1,2,4-Trichlorobenzene	ND	1.0	106	105	0.9	101	109	7.6	70 - 130	20
1,2,4-Trimethylbenzene	ND	1.0	105	100	4.9	97	104	7.0	70 - 130	20
1,2-Dibromo-3-chloropropane	ND	1.0	112	111	0.9	103	111	7.5	70 - 130	20
1,2-Dibromoethane	ND	1.0	107	102	4.8	93	101	8.2	70 - 130	20
1,2-Dichlorobenzene	ND	1.0	102	101	1.0	95	102	7.1	70 - 130	20

QA/QC Data

SDG I.D.: GCG84811

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits	
1,2-Dichloroethane	ND	1.0	100	99	1.0	93	99	6.3	70 - 130	20	
1,2-Dichloropropane	ND	1.0	103	101	2.0	95	101	6.1	70 - 130	20	
1,3,5-Trimethylbenzene	ND	1.0	105	101	3.9	99	105	5.9	70 - 130	20	
1,3-Dichlorobenzene	ND	1.0	104	102	1.9	96	104	8.0	70 - 130	20	
1,3-Dichloropropane	ND	1.0	104	103	1.0	94	100	6.2	70 - 130	20	
1,4-Dichlorobenzene	ND	1.0	103	101	2.0	93	100	7.3	70 - 130	20	
1,4-dioxane	ND	100	98	93	5.2	89	92	3.3	40 - 160	30	
2,2-Dichloropropane	ND	1.0	101	99	2.0	85	92	7.9	70 - 130	20	
2-Chlorotoluene	ND	1.0	104	101	2.9	97	106	8.9	70 - 130	20	
2-Hexanone	ND	5.0	100	101	1.0	93	96	3.2	40 - 160	30	
4-Chlorotoluene	ND	1.0	106	102	3.8	96	105	9.0	70 - 130	20	
4-Methyl-2-pentanone	ND	5.0	102	98	4.0	93	97	4.2	40 - 160	30	
Acetone	ND	5.0	92	90	2.2	93	96	3.2	40 - 160	30	
Benzene	ND	0.70	102	99	3.0	98	104	5.9	70 - 130	20	
Bromobenzene	ND	1.0	102	99	3.0	92	98	6.3	70 - 130	20	
Bromochloromethane	ND	1.0	104	103	1.0	97	103	6.0	70 - 130	20	
Bromodichloromethane	ND	0.50	107	102	4.8	97	101	4.0	70 - 130	20	
Bromoform	ND	1.0	106	106	0.0	89	92	3.3	70 - 130	20	
Bromomethane	ND	1.0	90	88	2.2	81	89	9.4	40 - 160	30	
Carbon Disulfide	ND	1.0	101	98	3.0	100	104	3.9	70 - 130	20	
Carbon tetrachloride	ND	1.0	98	110	11.5	93	117	22.9	70 - 130	20	r
Chlorobenzene	ND	1.0	103	102	1.0	95	103	8.1	70 - 130	20	
Chloroethane	ND	1.0	91	88	3.4	92	94	2.2	70 - 130	20	
Chloroform	ND	1.0	98	98	0.0	93	100	7.3	70 - 130	20	
Chloromethane	ND	1.0	96	96	0.0	98	105	6.9	40 - 160	30	
cis-1,2-Dichloroethene	ND	1.0	97	94	3.1	90	98	8.5	70 - 130	20	
cis-1,3-Dichloropropene	ND	0.40	107	101	5.8	88	95	7.7	70 - 130	20	
Dibromochloromethane	ND	0.50	110	107	2.8	96	103	7.0	70 - 130	20	
Dibromomethane	ND	1.0	100	98	2.0	93	98	5.2	70 - 130	20	
Dichlorodifluoromethane	ND	1.0	107	108	0.9	108	113	4.5	40 - 160	30	
Di-isopropyl ether	ND	1.0	97	93	4.2	90	96	6.5	70 - 130	20	
Ethyl ether	ND	1.0	84	80	4.9	76	81	6.4	70 - 130	20	
Ethyl tert-butyl ether	ND	1.0	101	100	1.0	92	98	6.3	70 - 130	20	
Ethylbenzene	ND	1.0	104	103	1.0	99	103	4.0	70 - 130	20	
Hexachlorobutadiene	ND	0.40	109	103	5.7	100	110	9.5	70 - 130	20	
Isopropylbenzene	ND	1.0	104	102	1.9	100	108	7.7	70 - 130	20	
m&p-Xylene	ND	1.0	106	102	3.8	99	105	5.9	70 - 130	20	
Methyl ethyl ketone	ND	5.0	99	101	2.0	89	93	4.4	40 - 160	30	
Methyl t-butyl ether (MTBE)	ND	1.0	90	92	2.2	87	90	3.4	70 - 130	20	
Methylene chloride	ND	1.0	88	87	1.1	84	90	6.9	70 - 130	20	
Naphthalene	ND	1.0	113	114	0.9	112	119	6.1	70 - 130	20	
n-Butylbenzene	ND	1.0	106	102	3.8	100	107	6.8	70 - 130	20	
n-Propylbenzene	ND	1.0	104	101	2.9	97	105	7.9	70 - 130	20	
o-Xylene	ND	1.0	108	106	1.9	100	109	8.6	70 - 130	20	
p-Isopropyltoluene	ND	1.0	110	105	4.7	104	111	6.5	70 - 130	20	
sec-Butylbenzene	ND	1.0	113	110	2.7	109	116	6.2	70 - 130	20	
Styrene	ND	1.0	108	105	2.8	97	104	7.0	70 - 130	20	
tert-amyl methyl ether	ND	1.0	100	98	2.0	89	95	6.5	70 - 130	20	
tert-Butylbenzene	ND	1.0	107	104	2.8	102	112	9.3	70 - 130	20	
Tetrachloroethene	ND	1.0	101	97	4.0	93	105	12.1	70 - 130	20	
Tetrahydrofuran (THF)	ND	2.5	102	102	0.0	93	95	2.1	70 - 130	20	
Toluene	ND	1.0	103	100	3.0	98	104	5.9	70 - 130	20	
trans-1,2-Dichloroethene	ND	1.0	98	101	3.0	100	102	2.0	70 - 130	20	

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits
trans-1,3-Dichloropropene	ND	0.40	105	102	2.9	87	95	8.8	70 - 130	20
Trichloroethene	ND	1.0	102	100	2.0	96	106	9.9	70 - 130	20
Trichlorofluoromethane	ND	1.0	93	94	1.1	97	98	1.0	70 - 130	20
Trichlorotrifluoroethane	ND	1.0	104	105	1.0	107	112	4.6	70 - 130	20
Vinyl chloride	ND	1.0	100	99	1.0	100	104	3.9	70 - 130	20
% 1,2-dichlorobenzene-d4	100	%	101	99	2.0	100	101	1.0	70 - 130	20
% Bromofluorobenzene	95	%	100	99	1.0	100	100	0.0	70 - 130	20
% Dibromofluoromethane	99	%	101	103	2.0	102	103	1.0	70 - 130	20
% Toluene-d8	100	%	100	98	2.0	99	99	0.0	70 - 130	20

Comment:

Additional 8260 criteria: 10% of compounds can be outside of acceptance criteria as long as recovery is 10%.
The RPD criteria for the LCS/LCSD is 20%,
The MS/MSD RPD criteria is listed above.

QA/QC Batch 547527 (ug/L), QC Sample No: CG84820 (CG84820)

Volatiles - Ground Water

1,1,1,2-Tetrachloroethane	ND	1.0	103	101	2.0	104	102	1.9	70 - 130	20
1,1,1-Trichloroethane	ND	1.0	97	95	2.1	102	99	3.0	70 - 130	20
1,1,2,2-Tetrachloroethane	ND	0.50	106	104	1.9	105	109	3.7	70 - 130	20
1,1,2-Trichloroethane	ND	1.0	104	102	1.9	103	102	1.0	70 - 130	20
1,1-Dichloroethane	ND	1.0	98	95	3.1	98	95	3.1	70 - 130	20
1,1-Dichloroethene	ND	1.0	98	96	2.1	103	99	4.0	70 - 130	20
1,1-Dichloropropene	ND	1.0	100	99	1.0	106	104	1.9	70 - 130	20
1,2,3-Trichlorobenzene	ND	1.0	108	108	0.0	110	112	1.8	70 - 130	20
1,2,3-Trichloropropane	ND	1.0	100	98	2.0	104	108	3.8	70 - 130	20
1,2,4-Trichlorobenzene	ND	1.0	106	105	0.9	108	110	1.8	70 - 130	20
1,2,4-Trimethylbenzene	ND	1.0	105	100	4.9	105	105	0.0	70 - 130	20
1,2-Dibromo-3-chloropropane	ND	1.0	112	111	0.9	114	120	5.1	70 - 130	20
1,2-Dibromoethane	ND	1.0	107	102	4.8	105	104	1.0	70 - 130	20
1,2-Dichlorobenzene	ND	1.0	102	101	1.0	104	104	0.0	70 - 130	20
1,2-Dichloroethane	ND	1.0	100	99	1.0	100	95	5.1	70 - 130	20
1,2-Dichloropropane	ND	1.0	103	101	2.0	104	100	3.9	70 - 130	20
1,3,5-Trimethylbenzene	ND	1.0	105	101	3.9	108	108	0.0	70 - 130	20
1,3-Dichlorobenzene	ND	1.0	104	102	1.9	106	106	0.0	70 - 130	20
1,3-Dichloropropane	ND	1.0	104	103	1.0	102	102	0.0	70 - 130	20
1,4-Dichlorobenzene	ND	1.0	103	101	2.0	103	103	0.0	70 - 130	20
1,4-dioxane	ND	100	98	93	5.2	91	96	5.3	40 - 160	30
2,2-Dichloropropane	ND	1.0	101	99	2.0	91	86	5.6	70 - 130	20
2-Chlorotoluene	ND	1.0	104	101	2.9	109	107	1.9	70 - 130	20
2-Hexanone	ND	5.0	100	101	1.0	99	102	3.0	40 - 160	30
4-Chlorotoluene	ND	1.0	106	102	3.8	110	107	2.8	70 - 130	20
4-Methyl-2-pentanone	ND	5.0	102	98	4.0	101	100	1.0	40 - 160	30
Acetone	ND	5.0	92	90	2.2	90	92	2.2	40 - 160	30
Benzene	ND	0.70	102	99	3.0	106	101	4.8	70 - 130	20
Bromobenzene	ND	1.0	102	99	3.0	103	104	1.0	70 - 130	20
Bromochloromethane	ND	1.0	104	103	1.0	108	105	2.8	70 - 130	20
Bromodichloromethane	ND	0.50	106	102	3.8	106	101	4.8	70 - 130	20
Bromoform	ND	1.0	106	106	0.0	101	105	3.9	70 - 130	20
Bromomethane	ND	1.0	90	88	2.2	84	82	2.4	40 - 160	30
Carbon Disulfide	ND	1.0	101	99	2.0	104	100	3.9	70 - 130	20
Carbon tetrachloride	ND	1.0	97	110	12.6	101	101	0.0	70 - 130	20
Chlorobenzene	ND	1.0	103	102	1.0	106	104	1.9	70 - 130	20
Chloroethane	ND	1.0	91	88	3.4	90	84	6.9	70 - 130	20

QA/QC Data

SDG I.D.: GCG84811

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits
Chloroform	ND	1.0	98	98	0.0	99	95	4.1	70 - 130	20
Chloromethane	ND	1.0	96	96	0.0	101	99	2.0	40 - 160	30
cis-1,2-Dichloroethene	ND	1.0	96	94	2.1	NC	NC	NC	70 - 130	20
cis-1,3-Dichloropropene	ND	0.40	107	101	5.8	99	95	4.1	70 - 130	20
Dibromochloromethane	ND	0.50	110	107	2.8	108	109	0.9	70 - 130	20
Dibromomethane	ND	1.0	100	98	2.0	101	98	3.0	70 - 130	20
Dichlorodifluoromethane	ND	1.0	107	108	0.9	113	110	2.7	40 - 160	30
Di-isopropyl ether	ND	1.0	97	93	4.2	95	92	3.2	70 - 130	20
Ethyl ether	ND	1.0	84	80	4.9	81	76	6.4	70 - 130	20
Ethyl tert-butyl ether	ND	1.0	101	100	1.0	98	96	2.1	70 - 130	20
Ethylbenzene	ND	1.0	104	103	1.0	109	108	0.9	70 - 130	20
Hexachlorobutadiene	ND	0.40	109	103	5.7	111	116	4.4	70 - 130	20
Isopropylbenzene	ND	1.0	104	102	1.9	112	112	0.0	70 - 130	20
m&p-Xylene	ND	1.0	106	102	3.8	109	107	1.9	70 - 130	20
Methyl ethyl ketone	ND	5.0	99	101	2.0	98	100	2.0	40 - 160	30
Methyl t-butyl ether (MTBE)	ND	1.0	90	92	2.2	87	84	3.5	70 - 130	20
Methylene chloride	ND	1.0	88	87	1.1	86	83	3.6	70 - 130	20
Naphthalene	ND	1.0	113	114	0.9	116	122	5.0	70 - 130	20
n-Butylbenzene	ND	1.0	106	102	3.8	108	110	1.8	70 - 130	20
n-Propylbenzene	ND	1.0	104	101	2.9	110	109	0.9	70 - 130	20
o-Xylene	ND	1.0	108	106	1.9	110	109	0.9	70 - 130	20
p-Isopropyltoluene	ND	1.0	110	105	4.7	113	113	0.0	70 - 130	20
sec-Butylbenzene	ND	1.0	113	110	2.7	118	119	0.8	70 - 130	20
Styrene	ND	1.0	108	105	2.8	107	107	0.0	70 - 130	20
tert-amyl methyl ether	ND	1.0	100	98	2.0	98	95	3.1	70 - 130	20
tert-Butylbenzene	ND	1.0	107	104	2.8	113	113	0.0	70 - 130	20
Tetrachloroethene	ND	1.0	101	97	4.0	110	110	0.0	70 - 130	20
Tetrahydrofuran (THF)	ND	2.5	102	102	0.0	98	102	4.0	70 - 130	20
Toluene	ND	1.0	103	100	3.0	107	104	2.8	70 - 130	20
trans-1,2-Dichloroethene	ND	1.0	98	101	3.0	104	97	7.0	70 - 130	20
trans-1,3-Dichloropropene	ND	0.40	105	102	2.9	98	94	4.2	70 - 130	20
Trichloroethene	ND	1.0	102	100	2.0	122	117	4.2	70 - 130	20
Trichlorofluoromethane	ND	1.0	93	94	1.1	96	93	3.2	70 - 130	20
Trichlorotrifluoroethane	ND	1.0	104	105	1.0	114	109	4.5	70 - 130	20
Vinyl chloride	ND	1.0	100	99	1.0	94	91	3.2	70 - 130	20
% 1,2-dichlorobenzene-d4	100	%	101	99	2.0	99	100	1.0	70 - 130	20
% Bromofluorobenzene	95	%	100	99	1.0	98	98	0.0	70 - 130	20
% Dibromofluoromethane	99	%	101	103	2.0	101	99	2.0	70 - 130	20
% Toluene-d8	100	%	100	98	2.0	98	97	1.0	70 - 130	20

Comment:

Additional 8260 criteria: 10% of compounds can be outside of acceptance criteria as long as recovery is 10%.
The RPD criteria for the LCS/LCSD is 20%,
The MS/MSD RPD criteria is listed above.

QA/QC Batch 547726 (ug/L), QC Sample No: CG84822 (CG84819 (20X) , CG84821 (200X) , CG84822 (20X))

Volatiles - Ground Water

1,1,1,2-Tetrachloroethane	ND	1.0	97	101	4.0	112	107	4.6	70 - 130	20
1,1,1-Trichloroethane	ND	1.0	91	91	0.0	110	108	1.8	70 - 130	20
1,1,2,2-Tetrachloroethane	ND	0.50	101	106	4.8	120	110	8.7	70 - 130	20
1,1,2-Trichloroethane	ND	1.0	97	99	2.0	107	103	3.8	70 - 130	20
1,1-Dichloroethane	ND	1.0	92	93	1.1	111	109	1.8	70 - 130	20
1,1-Dichloroethene	ND	1.0	92	91	1.1	125	121	3.3	70 - 130	20
1,1-Dichloropropene	ND	1.0	94	94	0.0	112	110	1.8	70 - 130	20

QA/QC Data

SDG I.D.: GCG84811

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits
1,2,3-Trichlorobenzene	ND	1.0	102	107	4.8	114	107	6.3	70 - 130	20
1,2,3-Trichloropropane	ND	1.0	97	101	4.0	114	107	6.3	70 - 130	20
1,2,4-Trichlorobenzene	ND	1.0	100	104	3.9	113	105	7.3	70 - 130	20
1,2,4-Trimethylbenzene	ND	1.0	99	100	1.0	115	110	4.4	70 - 130	20
1,2-Dibromo-3-chloropropane	ND	1.0	102	113	10.2	114	107	6.3	70 - 130	20
1,2-Dibromoethane	ND	1.0	99	102	3.0	114	106	7.3	70 - 130	20
1,2-Dichlorobenzene	ND	1.0	99	101	2.0	114	108	5.4	70 - 130	20
1,2-Dichloroethane	ND	1.0	95	96	1.0	105	99	5.9	70 - 130	20
1,2-Dichloropropane	ND	1.0	98	98	0.0	112	108	3.6	70 - 130	20
1,3,5-Trimethylbenzene	ND	1.0	99	100	1.0	117	113	3.5	70 - 130	20
1,3-Dichlorobenzene	ND	1.0	99	100	1.0	114	107	6.3	70 - 130	20
1,3-Dichloropropane	ND	1.0	99	103	4.0	114	107	6.3	70 - 130	20
1,4-Dichlorobenzene	ND	1.0	97	98	1.0	114	108	5.4	70 - 130	20
1,4-dioxane	ND	100	96	97	1.0	111	103	7.5	40 - 160	30
2,2-Dichloropropane	ND	1.0	98	97	1.0	105	100	4.9	70 - 130	20
2-Chlorotoluene	ND	1.0	98	100	2.0	116	111	4.4	70 - 130	20
2-Hexanone	ND	5.0	93	100	7.3	109	102	6.6	40 - 160	30
4-Chlorotoluene	ND	1.0	99	102	3.0	118	111	6.1	70 - 130	20
4-Methyl-2-pentanone	ND	5.0	95	101	6.1	105	99	5.9	40 - 160	30
Acetone	ND	5.0	84	89	5.8	112	104	7.4	40 - 160	30
Benzene	ND	0.70	96	98	2.1	113	109	3.6	70 - 130	20
Bromobenzene	ND	1.0	95	96	1.0	108	105	2.8	70 - 130	20
Bromochloromethane	ND	1.0	98	101	3.0	113	111	1.8	70 - 130	20
Bromodichloromethane	ND	0.50	98	100	2.0	111	106	4.6	70 - 130	20
Bromoform	ND	1.0	98	102	4.0	112	104	7.4	70 - 130	20
Bromomethane	ND	1.0	86	86	0.0	108	107	0.9	40 - 160	30
Carbon Disulfide	ND	1.0	94	92	2.2	123	120	2.5	70 - 130	20
Carbon tetrachloride	ND	1.0	91	106	15.2	127	124	2.4	70 - 130	20
Chlorobenzene	ND	1.0	99	100	1.0	113	109	3.6	70 - 130	20
Chloroethane	ND	1.0	86	86	0.0	117	111	5.3	70 - 130	20
Chloroform	ND	1.0	93	96	3.2	111	107	3.7	70 - 130	20
Chloromethane	ND	1.0	90	88	2.2	106	104	1.9	40 - 160	30
cis-1,2-Dichloroethene	ND	1.0	91	93	2.2	NC	NC	NC	70 - 130	20
cis-1,3-Dichloropropene	ND	0.40	98	98	0.0	105	101	3.9	70 - 130	20
Dibromochloromethane	ND	0.50	103	105	1.9	117	111	5.3	70 - 130	20
Dibromomethane	ND	1.0	95	97	2.1	107	100	6.8	70 - 130	20
Dichlorodifluoromethane	ND	1.0	84	84	0.0	95	95	0.0	40 - 160	30
Di-isopropyl ether	ND	1.0	90	93	3.3	109	105	3.7	70 - 130	20
Ethyl ether	ND	1.0	78	80	2.5	102	92	10.3	70 - 130	20
Ethyl tert-butyl ether	ND	1.0	94	96	2.1	111	107	3.7	70 - 130	20
Ethylbenzene	ND	1.0	99	101	2.0	117	114	2.6	70 - 130	20
Hexachlorobutadiene	ND	0.40	98	104	5.9	117	110	6.2	70 - 130	20
Isopropylbenzene	ND	1.0	98	101	3.0	118	114	3.4	70 - 130	20
m&p-Xylene	ND	1.0	101	103	2.0	117	114	2.6	70 - 130	20
Methyl ethyl ketone	ND	5.0	95	102	7.1	116	106	9.0	40 - 160	30
Methyl t-butyl ether (MTBE)	ND	1.0	86	87	1.2	105	99	5.9	70 - 130	20
Methylene chloride	ND	1.0	93	95	2.1	108	106	1.9	70 - 130	20
Naphthalene	ND	1.0	106	114	7.3	123	111	10.3	70 - 130	20
n-Butylbenzene	ND	1.0	101	102	1.0	122	115	5.9	70 - 130	20
n-Propylbenzene	ND	1.0	97	100	3.0	119	113	5.2	70 - 130	20
o-Xylene	ND	1.0	102	104	1.9	119	114	4.3	70 - 130	20
p-Isopropyltoluene	ND	1.0	103	103	0.0	122	116	5.0	70 - 130	20
sec-Butylbenzene	ND	1.0	106	109	2.8	130	125	3.9	70 - 130	20

QA/QC Data

SDG I.D.: GCG84811

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits
Styrene	ND	1.0	101	104	2.9	117	111	5.3	70 - 130	20
tert-amyl methyl ether	ND	1.0	93	97	4.2	104	99	4.9	70 - 130	20
tert-Butylbenzene	ND	1.0	102	101	1.0	120	116	3.4	70 - 130	20
Tetrachloroethene	ND	1.0	94	96	2.1	108	109	0.9	70 - 130	20
Tetrahydrofuran (THF)	ND	2.5	99	104	4.9	116	108	7.1	70 - 130	20
Toluene	ND	1.0	98	100	2.0	112	108	3.6	70 - 130	20
trans-1,2-Dichloroethene	ND	1.0	97	95	2.1	126	123	2.4	70 - 130	20
trans-1,3-Dichloropropene	ND	0.40	97	102	5.0	107	102	4.8	70 - 130	20
Trichloroethene	ND	1.0	96	98	2.1	104	122	15.9	70 - 130	20
Trichlorofluoromethane	ND	1.0	87	85	2.3	115	110	4.4	70 - 130	20
Trichlorotrifluoroethane	ND	1.0	100	99	1.0	129	127	1.6	70 - 130	20
Vinyl chloride	ND	1.0	89	92	3.3	117	115	1.7	70 - 130	20
% 1,2-dichlorobenzene-d4	99	%	100	100	0.0	100	101	1.0	70 - 130	20
% Bromofluorobenzene	93	%	98	99	1.0	98	99	1.0	70 - 130	20
% Dibromofluoromethane	102	%	100	99	1.0	101	100	1.0	70 - 130	20
% Toluene-d8	100	%	97	99	2.0	97	96	1.0	70 - 130	20

Comment:

Additional 8260 criteria: 10% of compounds can be outside of acceptance criteria as long as recovery is 10%.
The RPD criteria for the LCS/LCSD is 20%,
The MS/MSD RPD criteria is listed above.

QA/QC Batch 547922 (ug/L), QC Sample No: CG84830 (CG84819 (100X) , CG84822 (50X))

Volatiles - Ground Water

Tetrachloroethene	ND	1.0	92	89	3.3				70 - 130	20
Trichloroethene	ND	1.0	99	95	4.1				70 - 130	20
% 1,2-dichlorobenzene-d4	99	%	101	100	1.0				70 - 130	20
% Bromofluorobenzene	92	%	98	98	0.0				70 - 130	20
% Dibromofluoromethane	102	%	98	99	1.0				70 - 130	20
% Toluene-d8	100	%	98	100	2.0				70 - 130	20

Comment:

A LCS and LCS Duplicate were performed instead of a matrix spike and matrix spike duplicate.

Additional 8260 criteria: 10% of compounds can be outside of acceptance criteria as long as recovery is 10%.
The RPD criteria for the LCS/LCSD is 20%,
The MS/MSD RPD criteria is listed above.

QA/QC Batch 547175 (ug/L), QC Sample No: CG84812 (CG84812, CG84813, CG84814, CG84815, CG84816, CG84817, CG84820)

Volatile Petroleum Hydrocarbons - Ground Water

Unadjusted C5-C8 Aliphatics (*1)	ND	100	99	102	3.0	NC	NC	NC	70 - 130	25
Unadjusted C9-C12 Aliphatics (*1)	ND	100	97	98	1.0	NC	NC	NC	70 - 130	25
C5-C8 Aliphatic Hydrocarbons *1,2	ND	100	99	102	3.0	NC	NC	NC	70 - 130	25
C9-C12 Aliphatic Hydrocarbons *1,	ND	100	97	98	1.0	NC	NC	NC	70 - 130	25
C9-C10 Aromatic Hydrocarbons *1	ND	100	94	94	0.0	NC	NC	NC	70 - 130	25
Benzene	ND	1.0	85	85	0.0	88	95	7.7	70 - 130	25
Ethyl Benzene	ND	1.0	88	88	0.0	90	97	7.5	70 - 130	25
MTBE	ND	1.0	94	93	1.1	90	98	8.5	70 - 130	25
Naphthalene	ND	5.0	85	86	1.2	83	90	8.1	70 - 130	25
Toluene	ND	1.0	90	90	0.0	93	100	7.3	70 - 130	25
m,p-Xylenes	ND	2.0	90	90	0.0	93	100	7.3	70 - 130	25
o-Xylene	ND	1.0	86	86	0.0	83	90	8.1	70 - 130	25

l = This parameter is outside laboratory LCS/LCSD specified recovery limits.
m = This parameter is outside laboratory MS/MSD specified recovery limits.
r = This parameter is outside laboratory RPD specified recovery limits.

QA/QC Data

SDG I.D.: GCG84811

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits

If there are any questions regarding this data, please call Phoenix Client Services at extension 200.

RPD - Relative Percent Difference
LCS - Laboratory Control Sample
LCSD - Laboratory Control Sample Duplicate
MS - Matrix Spike
MS Dup - Matrix Spike Duplicate
NC - No Criteria
Intf - Interference

Phyllis Shiller, Laboratory Director
October 28, 2020

Wednesday, October 28, 2020

Criteria: MA: CAM, GW1, GW2, GW3

State: MA

Sample Criteria Exceedances Report

GCG84811 - AECOM-WILMINGTN

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units
CG84811	$8260GWR-WI	Acetone	MA / CAM Protocol / VOA AQ RL	ND	25		10	ug/L
CG84811	$8260GWR-WI	Carbon Disulfide	MA / CAM Protocol / VOA AQ RL	ND	5.0		2	ug/L
CG84811	$8260GWR-WI	Tetrahydrofuran (THF)	MA / CAM Protocol / VOA AQ RL	ND	2.5		2	ug/L
CG84811	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.00033	0.00033	ug/L
CG84811	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.0075	0.0075	ug/L
CG84811	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.00075	0.00075	ug/L
CG84811	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	0.50	0.02	0.02	ug/L
CG84811	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	0.50	0.02	0.02	ug/L
CG84811	$MCPADD-WM	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	100	0.3	0.3	ug/L
CG84811	$MCPADD-WM	1,4-dioxane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	100	3	3	ug/L
CG84811	$MCPADD-WM	1,4-dioxane	MA / GROUNDWATER STANDARDS / GW-1	ND	100	0.3	0.3	ug/L
CG84812	$8260GWR-WI	Tetrahydrofuran (THF)	MA / CAM Protocol / VOA AQ RL	ND	2.5		2	ug/L
CG84812	$8260GWR-WI	Carbon Disulfide	MA / CAM Protocol / VOA AQ RL	ND	5.0		2	ug/L
CG84812	$8260GWR-WI	Acetone	MA / CAM Protocol / VOA AQ RL	ND	25		10	ug/L
CG84812	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.00075	0.00075	ug/L
CG84812	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.00033	0.00033	ug/L
CG84812	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.0075	0.0075	ug/L
CG84812	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	0.50	0.02	0.02	ug/L
CG84812	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	0.50	0.02	0.02	ug/L
CG84812	$MCPADD-WM	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	100	0.3	0.3	ug/L
CG84812	$MCPADD-WM	1,4-dioxane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	100	3	3	ug/L
CG84812	$MCPADD-WM	1,4-dioxane	MA / GROUNDWATER STANDARDS / GW-1	ND	100	0.3	0.3	ug/L
CG84812	AS-WM	Arsenic	MA / Client Specified Criteria / LOCKHEED WILMINGTO	0.056	0.004	0.01	0.01	mg/L
CG84812	AS-WM	Arsenic	MA / CMR 310.40.1600 / GW-1 (mg/l)	0.056	0.004	0.01	0.01	mg/L
CG84812	AS-WM	Arsenic	MA / GROUNDWATER STANDARDS / GW-1	0.056	0.004	0.01	0.01	mg/L
CG84812	D-AS	Arsenic (Dissolved)	MA / Client Specified Criteria / LOCKHEED WILMINGTO	0.057	0.021	0.01	0.01	mg/L
CG84812	D-AS	Arsenic (Dissolved)	MA / CMR 310.40.1600 / GW-1 (mg/l)	0.057	0.021	0.01	0.01	mg/L
CG84812	D-AS	Arsenic (Dissolved)	MA / GROUNDWATER STANDARDS / GW-1	0.057	0.021	0.01	0.01	mg/L
CG84812	D-FE	Iron (Dissolved)	MA / Client Specified Criteria / LOCKHEED WILMINGTO	23.7	0.053	14	14	mg/L
CG84812	D-MN	Manganese (Dissolved)	MA / Client Specified Criteria / LOCKHEED WILMINGTO	3.12	0.005	0.43	0.43	mg/L
CG84812	FE-WM	Iron	MA / Client Specified Criteria / LOCKHEED WILMINGTO	23.5	0.010	14	14	mg/L
CG84812	MN-WM	Manganese	MA / Client Specified Criteria / LOCKHEED WILMINGTO	3.03	0.010	0.43	0.43	mg/L
CG84813	$8260GWR-WI	Acetone	MA / CAM Protocol / VOA AQ RL	ND	25		10	ug/L
CG84813	$8260GWR-WI	Tetrahydrofuran (THF)	MA / CAM Protocol / VOA AQ RL	ND	2.5		2	ug/L
CG84813	$8260GWR-WI	Carbon Disulfide	MA / CAM Protocol / VOA AQ RL	ND	5.0		2	ug/L
CG84813	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.00075	0.00075	ug/L
CG84813	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.00033	0.00033	ug/L
CG84813	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.0075	0.0075	ug/L
CG84813	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	0.50	0.02	0.02	ug/L
CG84813	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	0.50	0.02	0.02	ug/L

Wednesday, October 28, 2020

Criteria: MA: CAM, GW1, GW2, GW3

State: MA

Sample Criteria Exceedances Report

GCG84811 - AECOM-WILMINGTN

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units
CG84813	$MCPADD-WM	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	100	0.3	0.3	ug/L
CG84813	$MCPADD-WM	1,4-dioxane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	100	3	3	ug/L
CG84813	$MCPADD-WM	1,4-dioxane	MA / GROUNDWATER STANDARDS / GW-1	ND	100	0.3	0.3	ug/L
CG84814	$8260GWR-WI	Acetone	MA / CAM Protocol / VOA AQ RL	ND	25		10	ug/L
CG84814	$8260GWR-WI	Tetrahydrofuran (THF)	MA / CAM Protocol / VOA AQ RL	ND	2.5		2	ug/L
CG84814	$8260GWR-WI	Carbon Disulfide	MA / CAM Protocol / VOA AQ RL	ND	5.0		2	ug/L
CG84814	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.00075	0.00075	ug/L
CG84814	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.00033	0.00033	ug/L
CG84814	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.0075	0.0075	ug/L
CG84814	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	0.50	0.02	0.02	ug/L
CG84814	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	0.50	0.02	0.02	ug/L
CG84814	$DIOX_LDL	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	0.32	0.20	0.3	0.3	ug/l
CG84814	$DIOX_LDL	1,4-dioxane	MA / GROUNDWATER STANDARDS / GW-1	0.32	0.20	0.3	0.3	ug/l
CG84814	$MCPADD-WM	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	100	0.3	0.3	ug/L
CG84814	AS-WM	Arsenic	MA / Client Specified Criteria / LOCKHEED WILMINGTO	0.018	0.004	0.01	0.01	mg/L
CG84814	AS-WM	Arsenic	MA / CMR 310.40.1600 / GW-1 (mg/l)	0.018	0.004	0.01	0.01	mg/L
CG84814	AS-WM	Arsenic	MA / GROUNDWATER STANDARDS / GW-1	0.018	0.004	0.01	0.01	mg/L
CG84814	D-AS	Arsenic (Dissolved)	MA / Client Specified Criteria / LOCKHEED WILMINGTO	0.011	0.004	0.01	0.01	mg/L
CG84814	D-AS	Arsenic (Dissolved)	MA / CMR 310.40.1600 / GW-1 (mg/l)	0.011	0.004	0.01	0.01	mg/L
CG84814	D-AS	Arsenic (Dissolved)	MA / GROUNDWATER STANDARDS / GW-1	0.011	0.004	0.01	0.01	mg/L
CG84815	$8260GWR-WI	Tetrahydrofuran (THF)	MA / CAM Protocol / VOA AQ RL	ND	2.5		2	ug/L
CG84815	$8260GWR-WI	Carbon Disulfide	MA / CAM Protocol / VOA AQ RL	ND	5.0		2	ug/L
CG84815	$8260GWR-WI	Acetone	MA / CAM Protocol / VOA AQ RL	ND	25		10	ug/L
CG84815	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.0075	0.0075	ug/L
CG84815	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.00075	0.00075	ug/L
CG84815	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.00033	0.00033	ug/L
CG84815	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	0.50	0.02	0.02	ug/L
CG84815	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	0.50	0.02	0.02	ug/L
CG84815	$EPHRANGE-	C9-C18 Aliphatic Hydrocarbons 1*	MA / CMR 310.40.1600 / GW-1 (mg/l)	1100	200	700	700	ug/L
CG84815	$EPHRANGE-	C9-C18 Aliphatic Hydrocarbons 1*	MA / GROUNDWATER STANDARDS / GW-1	1100	200	700	700	ug/L
CG84815	$MCPADD-WM	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	100	0.3	0.3	ug/L
CG84815	$MCPADD-WM	1,4-dioxane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	100	3	3	ug/L
CG84815	$MCPADD-WM	1,4-dioxane	MA / GROUNDWATER STANDARDS / GW-1	ND	100	0.3	0.3	ug/L
CG84815	$VPHRANGE-	C9-C10 Aromatic Hydrocarbons *1	MA / Client Specified Criteria / LOCKHEED WILMINGTO	210	100	200	200	ug/L
CG84815	$VPHRANGE-	C9-C10 Aromatic Hydrocarbons *1	MA / CMR 310.40.1600 / GW-1 (mg/l)	210	100	200	200	ug/L
CG84815	$VPHRANGE-	C9-C10 Aromatic Hydrocarbons *1	MA / GROUNDWATER STANDARDS / GW-1	210	100	200	200	ug/L
CG84816	$8260GWR-WI	Acetone	MA / CAM Protocol / VOA AQ RL	ND	25		10	ug/L
CG84816	$8260GWR-WI	Carbon Disulfide	MA / CAM Protocol / VOA AQ RL	ND	5.0		2	ug/L
CG84816	$8260GWR-WI	Tetrahydrofuran (THF)	MA / CAM Protocol / VOA AQ RL	ND	2.5		2	ug/L
CG84816	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.0075	0.0075	ug/L

Wednesday, October 28, 2020

Criteria: MA: CAM, GW1, GW2, GW3

State: MA

Sample Criteria Exceedances Report

GCG84811 - AECOM-WILMINGTN

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units
CG84816	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.00033	0.00033	ug/L
CG84816	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.00075	0.00075	ug/L
CG84816	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	0.50	0.02	0.02	ug/L
CG84816	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	0.50	0.02	0.02	ug/L
CG84816	$MCPADD-WM	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	100	0.3	0.3	ug/L
CG84816	$MCPADD-WM	1,4-dioxane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	100	3	3	ug/L
CG84816	$MCPADD-WM	1,4-dioxane	MA / GROUNDWATER STANDARDS / GW-1	ND	100	0.3	0.3	ug/L
CG84817	$8260GWR-WI	Acetone	MA / CAM Protocol / VOA AQ RL	ND	25		10	ug/L
CG84817	$8260GWR-WI	Tetrahydrofuran (THF)	MA / CAM Protocol / VOA AQ RL	ND	2.5		2	ug/L
CG84817	$8260GWR-WI	Carbon Disulfide	MA / CAM Protocol / VOA AQ RL	ND	5.0		2	ug/L
CG84817	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.00075	0.00075	ug/L
CG84817	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.00033	0.00033	ug/L
CG84817	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.0075	0.0075	ug/L
CG84817	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	0.50	0.02	0.02	ug/L
CG84817	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	0.50	0.02	0.02	ug/L
CG84817	$MCPADD-WM	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	100	0.3	0.3	ug/L
CG84817	$MCPADD-WM	1,4-dioxane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	100	3	3	ug/L
CG84817	$MCPADD-WM	1,4-dioxane	MA / GROUNDWATER STANDARDS / GW-1	ND	100	0.3	0.3	ug/L
CG84818	$8260GWR-WI	Acetone	MA / CAM Protocol / VOA AQ RL	ND	25		10	ug/L
CG84818	$8260GWR-WI	Tetrahydrofuran (THF)	MA / CAM Protocol / VOA AQ RL	ND	2.5		2	ug/L
CG84818	$8260GWR-WI	Carbon Disulfide	MA / CAM Protocol / VOA AQ RL	ND	5.0		2	ug/L
CG84818	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.00075	0.00075	ug/L
CG84818	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.00033	0.00033	ug/L
CG84818	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.0075	0.0075	ug/L
CG84818	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	0.50	0.02	0.02	ug/L
CG84818	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	0.50	0.02	0.02	ug/L
CG84818	$MCPADD-WM	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	100	0.3	0.3	ug/L
CG84818	D-MN	Manganese (Dissolved)	MA / Client Specified Criteria / LOCKHEED WILMINGTO	1.15	0.001	0.43	0.43	mg/L
CG84818	MN-WM	Manganese	MA / Client Specified Criteria / LOCKHEED WILMINGTO	1.29	0.001	0.43	0.43	mg/L
CG84819	$8260GWR-WI	1,3-Dichlorobenzene	MA / CAM Protocol / SVOA AQ RL	ND	20		10	ug/L
CG84819	$8260GWR-WI	Naphthalene	MA / CAM Protocol / SVOA AQ RL	ND	20		10	ug/L
CG84819	$8260GWR-WI	1,2,4-Trichlorobenzene	MA / CAM Protocol / SVOA AQ RL	ND	20		10	ug/L
CG84819	$8260GWR-WI	1,2-Dichlorobenzene	MA / CAM Protocol / SVOA AQ RL	ND	20		10	ug/L
CG84819	$8260GWR-WI	Methylene chloride	MA / CAM Protocol / VOA AQ RL	ND	20		2	ug/L
CG84819	$8260GWR-WI	1,2-Dichloroethane	MA / CAM Protocol / VOA AQ RL	ND	10		2	ug/L
CG84819	$8260GWR-WI	cis-1,3-Dichloropropene	MA / CAM Protocol / VOA AQ RL	ND	10		2	ug/L
CG84819	$8260GWR-WI	1,1,2,2-Tetrachloroethane	MA / CAM Protocol / VOA AQ RL	ND	10		2	ug/L
CG84819	$8260GWR-WI	1,2-Dichloropropane	MA / CAM Protocol / VOA AQ RL	ND	10		2	ug/L
CG84819	$8260GWR-WI	1,3-Dichloropropane	MA / CAM Protocol / VOA AQ RL	ND	20		2	ug/L
CG84819	$8260GWR-WI	Tetrahydrofuran (THF)	MA / CAM Protocol / VOA AQ RL	ND	50		2	ug/L

Wednesday, October 28, 2020

Criteria: MA: CAM, GW1, GW2, GW3

State: MA

Sample Criteria Exceedances Report

GCG84811 - AECOM-WILMINGTN

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units
CG84819	$8260GWR-WI	n-Butylbenzene	MA / CAM Protocol / VOA AQ RL	ND	20		2	ug/L
CG84819	$8260GWR-WI	n-Propylbenzene	MA / CAM Protocol / VOA AQ RL	ND	20		2	ug/L
CG84819	$8260GWR-WI	1,3,5-Trimethylbenzene	MA / CAM Protocol / VOA AQ RL	ND	20		2	ug/L
CG84819	$8260GWR-WI	Trichlorotrifluoroethane	MA / CAM Protocol / VOA AQ RL	ND	20		2	ug/L
CG84819	$8260GWR-WI	1,3-Dichlorobenzene	MA / CAM Protocol / VOA AQ RL	ND	20		2	ug/L
CG84819	$8260GWR-WI	1,2-Dichlorobenzene	MA / CAM Protocol / VOA AQ RL	ND	20		2	ug/L
CG84819	$8260GWR-WI	1,2,4-Trimethylbenzene	MA / CAM Protocol / VOA AQ RL	ND	20		2	ug/L
CG84819	$8260GWR-WI	Chloroform	MA / CAM Protocol / VOA AQ RL	ND	20		2	ug/L
CG84819	$8260GWR-WI	Chloroethane	MA / CAM Protocol / VOA AQ RL	ND	20		2	ug/L
CG84819	$8260GWR-WI	Chlorobenzene	MA / CAM Protocol / VOA AQ RL	ND	20		2	ug/L
CG84819	$8260GWR-WI	Bromoform	MA / CAM Protocol / VOA AQ RL	ND	10		2	ug/L
CG84819	$8260GWR-WI	2,2-Dichloropropane	MA / CAM Protocol / VOA AQ RL	ND	20		2	ug/L
CG84819	$8260GWR-WI	tert-Butylbenzene	MA / CAM Protocol / VOA AQ RL	ND	20		2	ug/L
CG84819	$8260GWR-WI	2-Chlorotoluene	MA / CAM Protocol / VOA AQ RL	ND	20		2	ug/L
CG84819	$8260GWR-WI	Vinyl chloride	MA / CAM Protocol / VOA AQ RL	ND	10		2	ug/L
CG84819	$8260GWR-WI	1,4-Dichlorobenzene	MA / CAM Protocol / VOA AQ RL	ND	10		2	ug/L
CG84819	$8260GWR-WI	Trichlorofluoromethane	MA / CAM Protocol / VOA AQ RL	ND	20		2	ug/L
CG84819	$8260GWR-WI	Toluene	MA / CAM Protocol / VOA AQ RL	ND	20		2	ug/L
CG84819	$8260GWR-WI	2-Hexanone	MA / CAM Protocol / VOA AQ RL	ND	100		10	ug/L
CG84819	$8260GWR-WI	sec-Butylbenzene	MA / CAM Protocol / VOA AQ RL	ND	20		2	ug/L
CG84819	$8260GWR-WI	Carbon tetrachloride	MA / CAM Protocol / VOA AQ RL	ND	10		2	ug/L
CG84819	$8260GWR-WI	p-Isopropyltoluene	MA / CAM Protocol / VOA AQ RL	ND	20		2	ug/L
CG84819	$8260GWR-WI	o-Xylene	MA / CAM Protocol / VOA AQ RL	ND	20		2	ug/L
CG84819	$8260GWR-WI	Styrene	MA / CAM Protocol / VOA AQ RL	ND	20		2	ug/L
CG84819	$8260GWR-WI	Acetone	MA / CAM Protocol / VOA AQ RL	ND	500		10	ug/L
CG84819	$8260GWR-WI	Methyl ethyl ketone	MA / CAM Protocol / VOA AQ RL	ND	100		10	ug/L
CG84819	$8260GWR-WI	Methyl t-butyl ether (MTBE)	MA / CAM Protocol / VOA AQ RL	ND	20		2	ug/L
CG84819	$8260GWR-WI	trans-1,3-Dichloropropene	MA / CAM Protocol / VOA AQ RL	ND	10		2	ug/L
CG84819	$8260GWR-WI	4-Methyl-2-pentanone	MA / CAM Protocol / VOA AQ RL	ND	100		10	ug/L
CG84819	$8260GWR-WI	Carbon Disulfide	MA / CAM Protocol / VOA AQ RL	ND	100		2	ug/L
CG84819	$8260GWR-WI	1,1,2-Trichloroethane	MA / CAM Protocol / VOA AQ RL	ND	10		2	ug/L
CG84819	$8260GWR-WI	Bromodichloromethane	MA / CAM Protocol / VOA AQ RL	ND	10		2	ug/L
CG84819	$8260GWR-WI	Dibromomethane	MA / CAM Protocol / VOA AQ RL	ND	10		2	ug/L
CG84819	$8260GWR-WI	Bromobenzene	MA / CAM Protocol / VOA AQ RL	ND	20		2	ug/L
CG84819	$8260GWR-WI	Benzene	MA / CAM Protocol / VOA AQ RL	ND	10		2	ug/L
CG84819	$8260GWR-WI	1,1,1-Trichloroethane	MA / CAM Protocol / VOA AQ RL	ND	20		2	ug/L
CG84819	$8260GWR-WI	Dichlorodifluoromethane	MA / CAM Protocol / VOA AQ RL	ND	20		2	ug/L
CG84819	$8260GWR-WI	Ethylbenzene	MA / CAM Protocol / VOA AQ RL	ND	20		2	ug/L
CG84819	$8260GWR-WI	Hexachlorobutadiene	MA / CAM Protocol / VOA AQ RL	ND	10		2	ug/L
CG84819	$8260GWR-WI	1,1,1,2-Tetrachloroethane	MA / CAM Protocol / VOA AQ RL	ND	10		2	ug/L
CG84819	$8260GWR-WI	Bromomethane	MA / CAM Protocol / VOA AQ RL	ND	10		2	ug/L
CG84819	$8260GWR-WI	1,1-Dichloropropene	MA / CAM Protocol / VOA AQ RL	ND	20		2	ug/L

Wednesday, October 28, 2020

Criteria: MA: CAM, GW1, GW2, GW3

State: MA

Sample Criteria Exceedances Report

GCG84811 - AECOM-WILMINGTN

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units
CG84819	$8260GWR-WI	1,2,3-Trichlorobenzene	MA / CAM Protocol / VOA AQ RL	ND	10		2	ug/L
CG84819	$8260GWR-WI	trans-1,2-Dichloroethene	MA / CAM Protocol / VOA AQ RL	ND	20		2	ug/L
CG84819	$8260GWR-WI	1,2,3-Trichloropropane	MA / CAM Protocol / VOA AQ RL	ND	10		2	ug/L
CG84819	$8260GWR-WI	4-Chlorotoluene	MA / CAM Protocol / VOA AQ RL	ND	20		2	ug/L
CG84819	$8260GWR-WI	Bromochloromethane	MA / CAM Protocol / VOA AQ RL	ND	20		2	ug/L
CG84819	$8260GWR-WI	1,2,4-Trichlorobenzene	MA / CAM Protocol / VOA AQ RL	ND	20		2	ug/L
CG84819	$8260GWR-WI	Dibromochloromethane	MA / CAM Protocol / VOA AQ RL	ND	10		2	ug/L
CG84819	$8260GWR-WI	1,2-Dibromoethane	MA / CAM Protocol / VOA AQ RL	ND	10		2	ug/L
CG84819	$8260GWR-WI	Isopropylbenzene	MA / CAM Protocol / VOA AQ RL	ND	20		2	ug/L
CG84819	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / CAM Protocol / VOA AQ RL	ND	10		2	ug/L
CG84819	$8260GWR-WI	Chloromethane	MA / CAM Protocol / VOA AQ RL	ND	20		2	ug/L
CG84819	$8260GWR-WI	Hexachlorobutadiene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	10	0.6	0.6	ug/L
CG84819	$8260GWR-WI	cis-1,3-Dichloropropene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	10	0.47	0.47	ug/L
CG84819	$8260GWR-WI	Methylene chloride	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	20	5	5	ug/L
CG84819	$8260GWR-WI	2-Hexanone	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	100	38	38	ug/L
CG84819	$8260GWR-WI	Bromodichloromethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	10	3	3	ug/L
CG84819	$8260GWR-WI	Methyl ethyl ketone	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	100	38	38	ug/L
CG84819	$8260GWR-WI	Dibromochloromethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	10	2	2	ug/L
CG84819	$8260GWR-WI	Dibromomethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	10	8.3	8.3	ug/L
CG84819	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	10	0.0075	0.0075	ug/L
CG84819	$8260GWR-WI	1,1,1,2-Tetrachloroethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	10	5	5	ug/L
CG84819	$8260GWR-WI	Bromomethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	10	7	7	ug/L
CG84819	$8260GWR-WI	1,1,2,2-Tetrachloroethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	10	2	2	ug/L
CG84819	$8260GWR-WI	Benzene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	10	5	5	ug/L
CG84819	$8260GWR-WI	trans-1,3-Dichloropropene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	10	0.47	0.47	ug/L
CG84819	$8260GWR-WI	1,1,2-Trichloroethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	10	5	5	ug/L
CG84819	$8260GWR-WI	1,1-Dichloroethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	86	20	70	70	ug/L
CG84819	$8260GWR-WI	Trichloroethene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	6600	100	5	5	ug/L
CG84819	$8260GWR-WI	1,2,3-Trichlorobenzene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	10	7	7	ug/L
CG84819	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	10	0.00075	0.00075	ug/L
CG84819	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	10	0.00033	0.00033	ug/L
CG84819	$8260GWR-WI	cis-1,2-Dichloroethene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	87	20	20	20	ug/L
CG84819	$8260GWR-WI	1,2-Dichloroethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	10	5	5	ug/L
CG84819	$8260GWR-WI	1,2-Dichloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	10	3	3	ug/L
CG84819	$8260GWR-WI	Tetrachloroethene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	2900	100	5	5	ug/L
CG84819	$8260GWR-WI	Bromoform	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	10	4	4	ug/L
CG84819	$8260GWR-WI	Carbon tetrachloride	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	10	2	2	ug/L
CG84819	$8260GWR-WI	Vinyl chloride	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	10	2	2	ug/L
CG84819	$8260GWR-WI	1,4-Dichlorobenzene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	10	5	5	ug/L
CG84819	$8260GWR-WI	1,2-Dichloropropane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	3	3	ug/L
CG84819	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	2	2	ug/L
CG84819	$8260GWR-WI	Benzene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	5	5	ug/L

Wednesday, October 28, 2020

Criteria: MA: CAM, GW1, GW2, GW3

State: MA

Sample Criteria Exceedances Report

GCG84811 - AECOM-WILMINGTN

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units
CG84819	$8260GWR-WI	1,1,1,2-Tetrachloroethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	5	5	ug/L
CG84819	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	2	2	ug/L
CG84819	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	0.02	0.02	ug/L
CG84819	$8260GWR-WI	trans-1,3-Dichloropropene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	0.5	0.5	ug/L
CG84819	$8260GWR-WI	Tetrachloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	2900	100	5	5	ug/L
CG84819	$8260GWR-WI	Carbon tetrachloride	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	2	2	ug/L
CG84819	$8260GWR-WI	Dibromochloromethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	2	2	ug/L
CG84819	$8260GWR-WI	Hexachlorobutadiene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	0.6	0.6	ug/L
CG84819	$8260GWR-WI	1,1,2-Trichloroethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	5	5	ug/L
CG84819	$8260GWR-WI	1,1,2,2-Tetrachloroethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	2	2	ug/L
CG84819	$8260GWR-WI	Bromoform	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	4	4	ug/L
CG84819	$8260GWR-WI	Methylene chloride	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	20	5	5	ug/L
CG84819	$8260GWR-WI	1,1-Dichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	24	20	7	7	ug/L
CG84819	$8260GWR-WI	Bromomethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	7	7	ug/L
CG84819	$8260GWR-WI	1,4-Dichlorobenzene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	5	5	ug/L
CG84819	$8260GWR-WI	cis-1,3-Dichloropropene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	0.5	0.5	ug/L
CG84819	$8260GWR-WI	1,1-Dichloroethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	86	20	70	70	ug/L
CG84819	$8260GWR-WI	cis-1,2-Dichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	87	20	20	20	ug/L
CG84819	$8260GWR-WI	Bromodichloromethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	3	3	ug/L
CG84819	$8260GWR-WI	1,2-Dichloroethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	5	5	ug/L
CG84819	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	6600	100	5	5	ug/L
CG84819	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	6600	100	5	5	ug/L
CG84819	$8260GWR-WI	Bromodichloromethane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	10	6	6	ug/L
CG84819	$8260GWR-WI	Hexachlorobutadiene	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	10	1	1	ug/L
CG84819	$8260GWR-WI	Tetrachloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	2900	100	50	50	ug/L
CG84819	$8260GWR-WI	Bromomethane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	10	7	7	ug/L
CG84819	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	10	2	2	ug/L
CG84819	$8260GWR-WI	1,2-Dichloroethane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	10	5	5	ug/L
CG84819	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	10	2	2	ug/L
CG84819	$8260GWR-WI	1,1,2,2-Tetrachloroethane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	10	9	9	ug/L
CG84819	$8260GWR-WI	1,2-Dichloropropane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	10	3	3	ug/L
CG84819	$8260GWR-WI	trans-1,3-Dichloropropene	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	10	5	5	ug/L
CG84819	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	10	2	2	ug/L
CG84819	$8260GWR-WI	Carbon tetrachloride	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	10	2	2	ug/L
CG84819	$8260GWR-WI	cis-1,3-Dichloropropene	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	10	5	5	ug/L
CG84819	$8260GWR-WI	cis-1,2-Dichloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	87	20	20	20	ug/L
CG84819	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	10	0.02	0.02	ug/L
CG84819	$8260GWR-WI	1,2-Dichloropropane	MA / GROUNDWATER STANDARDS / GW-1	ND	10	5	5	ug/L
CG84819	$8260GWR-WI	1,1,2,2-Tetrachloroethane	MA / GROUNDWATER STANDARDS / GW-1	ND	10	2	2	ug/L
CG84819	$8260GWR-WI	Bromodichloromethane	MA / GROUNDWATER STANDARDS / GW-1	ND	10	3	3	ug/L
CG84819	$8260GWR-WI	cis-1,2-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-1	87	20	70	70	ug/L
CG84819	$8260GWR-WI	Methylene chloride	MA / GROUNDWATER STANDARDS / GW-1	ND	20	5	5	ug/L

Wednesday, October 28, 2020

Criteria: MA: CAM, GW1, GW2, GW3

State: MA

Sample Criteria Exceedances Report

GCG84811 - AECOM-WILMINGTN

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units
CG84819	$8260GWR-WI	Carbon tetrachloride	MA / GROUNDWATER STANDARDS / GW-1	ND	10	5	5	ug/L
CG84819	$8260GWR-WI	Vinyl chloride	MA / GROUNDWATER STANDARDS / GW-1	ND	10	2	2	ug/L
CG84819	$8260GWR-WI	1,1,2-Trichloroethane	MA / GROUNDWATER STANDARDS / GW-1	ND	10	5	5	ug/L
CG84819	$8260GWR-WI	Bromoform	MA / GROUNDWATER STANDARDS / GW-1	ND	10	4	4	ug/L
CG84819	$8260GWR-WI	Tetrachloroethene	MA / GROUNDWATER STANDARDS / GW-1	2900	100	5	5	ug/L
CG84819	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-1	6600	100	5	5	ug/L
CG84819	$8260GWR-WI	1,1-Dichloroethane	MA / GROUNDWATER STANDARDS / GW-1	86	20	70	70	ug/L
CG84819	$8260GWR-WI	1,2-Dichloroethane	MA / GROUNDWATER STANDARDS / GW-1	ND	10	5	5	ug/L
CG84819	$8260GWR-WI	1,1-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-1	24	20	7	7	ug/L
CG84819	$8260GWR-WI	1,4-Dichlorobenzene	MA / GROUNDWATER STANDARDS / GW-1	ND	10	5	5	ug/L
CG84819	$8260GWR-WI	Benzene	MA / GROUNDWATER STANDARDS / GW-1	ND	10	5	5	ug/L
CG84819	$8260GWR-WI	1,1,1,2-Tetrachloroethane	MA / GROUNDWATER STANDARDS / GW-1	ND	10	5	5	ug/L
CG84819	$8260GWR-WI	Hexachlorobutadiene	MA / GROUNDWATER STANDARDS / GW-1	ND	10	0.6	0.6	ug/L
CG84819	$8260GWR-WI	Dibromochloromethane	MA / GROUNDWATER STANDARDS / GW-1	ND	10	2	2	ug/L
CG84819	$8260GWR-WI	1,2-Dichloroethane	MA / GROUNDWATER STANDARDS / GW-2	ND	10	5	5	ug/L
CG84819	$8260GWR-WI	Vinyl chloride	MA / GROUNDWATER STANDARDS / GW-2	ND	10	2	2	ug/L
CG84819	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-2	ND	10	2	2	ug/L
CG84819	$8260GWR-WI	cis-1,2-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-2	87	20	20	20	ug/L
CG84819	$8260GWR-WI	Bromomethane	MA / GROUNDWATER STANDARDS / GW-2	ND	10	7	7	ug/L
CG84819	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-2	6600	100	5	5	ug/L
CG84819	$8260GWR-WI	Bromodichloromethane	MA / GROUNDWATER STANDARDS / GW-2	ND	10	6	6	ug/L
CG84819	$8260GWR-WI	Carbon tetrachloride	MA / GROUNDWATER STANDARDS / GW-2	ND	10	2	2	ug/L
CG84819	$8260GWR-WI	1,1,2,2-Tetrachloroethane	MA / GROUNDWATER STANDARDS / GW-2	ND	10	9	9	ug/L
CG84819	$8260GWR-WI	1,2-Dichloropropane	MA / GROUNDWATER STANDARDS / GW-2	ND	10	3	3	ug/L
CG84819	$8260GWR-WI	Tetrachloroethene	MA / GROUNDWATER STANDARDS / GW-2	2900	100	50	50	ug/L
CG84819	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-3	6600	100	5000	5000	ug/L
CG84819	$MCPADD-WM	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	2000	0.3	0.3	ug/L
CG84819	$MCPADD-WM	1,4-dioxane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	2000	3	3	ug/L
CG84819	$MCPADD-WM	1,4-dioxane	MA / GROUNDWATER STANDARDS / GW-1	ND	2000	0.3	0.3	ug/L
CG84820	$8260GWR-WI	Carbon Disulfide	MA / CAM Protocol / VOA AQ RL	ND	5.0		2	ug/L
CG84820	$8260GWR-WI	Tetrahydrofuran (THF)	MA / CAM Protocol / VOA AQ RL	ND	2.5		2	ug/L
CG84820	$8260GWR-WI	Acetone	MA / CAM Protocol / VOA AQ RL	ND	25		10	ug/L
CG84820	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.00033	0.00033	ug/L
CG84820	$8260GWR-WI	Trichloroethene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	23	1.0	5	5	ug/L
CG84820	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.0075	0.0075	ug/L
CG84820	$8260GWR-WI	cis-1,2-Dichloroethene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	54	1.0	20	20	ug/L
CG84820	$8260GWR-WI	Vinyl chloride	MA / Client Specified Criteria / LOCKHEED WILMINGTO	16	1.0	2	2	ug/L
CG84820	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.00075	0.00075	ug/L
CG84820	$8260GWR-WI	Tetrachloroethene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	5.9	1.0	5	5	ug/L
CG84820	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	0.50	0.02	0.02	ug/L
CG84820	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-1 (mg/l)	16	1.0	2	2	ug/L

Wednesday, October 28, 2020

Criteria: MA: CAM, GW1, GW2, GW3

State: MA

Sample Criteria Exceedances Report

GCG84811 - AECOM-WILMINGTN

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units
CG84820	$8260GWR-WI	cis-1,2-Dichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	54	1.0	20	20	ug/L
CG84820	$8260GWR-WI	Tetrachloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	5.9	1.0	5	5	ug/L
CG84820	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-1 (mg/l)	16	1.0	2	2	ug/L
CG84820	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	23	1.0	5	5	ug/L
CG84820	$8260GWR-WI	cis-1,2-Dichloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	54	1.0	20	20	ug/L
CG84820	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	23	1.0	5	5	ug/L
CG84820	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-2 (mg/l)	16	1.0	2	2	ug/L
CG84820	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-2 (mg/l)	16	1.0	2	2	ug/L
CG84820	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-1	23	1.0	5	5	ug/L
CG84820	$8260GWR-WI	Vinyl chloride	MA / GROUNDWATER STANDARDS / GW-1	16	1.0	2	2	ug/L
CG84820	$8260GWR-WI	Tetrachloroethene	MA / GROUNDWATER STANDARDS / GW-1	5.9	1.0	5	5	ug/L
CG84820	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	0.50	0.02	0.02	ug/L
CG84820	$8260GWR-WI	Vinyl chloride	MA / GROUNDWATER STANDARDS / GW-2	16	1.0	2	2	ug/L
CG84820	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-2	23	1.0	5	5	ug/L
CG84820	$8260GWR-WI	cis-1,2-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-2	54	1.0	20	20	ug/L
CG84820	$DIOX_LDL	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	0.68	0.20	0.3	0.3	ug/l
CG84820	$DIOX_LDL	1,4-dioxane	MA / GROUNDWATER STANDARDS / GW-1	0.68	0.20	0.3	0.3	ug/l
CG84820	$MCPADD-WM	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	100	0.3	0.3	ug/L
CG84821	$8260GWR-WI	1,2,4-Trichlorobenzene	MA / CAM Protocol / SVOA AQ RL	ND	20		10	ug/L
CG84821	$8260GWR-WI	1,2-Dichlorobenzene	MA / CAM Protocol / SVOA AQ RL	ND	20		10	ug/L
CG84821	$8260GWR-WI	1,3-Dichlorobenzene	MA / CAM Protocol / SVOA AQ RL	ND	20		10	ug/L
CG84821	$8260GWR-WI	Naphthalene	MA / CAM Protocol / SVOA AQ RL	ND	20		10	ug/L
CG84821	$8260GWR-WI	trans-1,2-Dichloroethene	MA / CAM Protocol / VOA AQ RL	ND	20		2	ug/L
CG84821	$8260GWR-WI	1,1,2,2-Tetrachloroethane	MA / CAM Protocol / VOA AQ RL	ND	10		2	ug/L
CG84821	$8260GWR-WI	1,1,1-Trichloroethane	MA / CAM Protocol / VOA AQ RL	ND	20		2	ug/L
CG84821	$8260GWR-WI	1,1,1,2-Tetrachloroethane	MA / CAM Protocol / VOA AQ RL	ND	10		2	ug/L
CG84821	$8260GWR-WI	n-Butylbenzene	MA / CAM Protocol / VOA AQ RL	ND	20		2	ug/L
CG84821	$8260GWR-WI	Tetrahydrofuran (THF)	MA / CAM Protocol / VOA AQ RL	ND	50		2	ug/L
CG84821	$8260GWR-WI	Chloroform	MA / CAM Protocol / VOA AQ RL	ND	20		2	ug/L
CG84821	$8260GWR-WI	Chloromethane	MA / CAM Protocol / VOA AQ RL	ND	20		2	ug/L
CG84821	$8260GWR-WI	cis-1,3-Dichloropropene	MA / CAM Protocol / VOA AQ RL	ND	10		2	ug/L
CG84821	$8260GWR-WI	1,1,2-Trichloroethane	MA / CAM Protocol / VOA AQ RL	ND	10		2	ug/L
CG84821	$8260GWR-WI	Dibromomethane	MA / CAM Protocol / VOA AQ RL	ND	10		2	ug/L
CG84821	$8260GWR-WI	Dichlorodifluoromethane	MA / CAM Protocol / VOA AQ RL	ND	20		2	ug/L
CG84821	$8260GWR-WI	Ethylbenzene	MA / CAM Protocol / VOA AQ RL	ND	20		2	ug/L
CG84821	$8260GWR-WI	Hexachlorobutadiene	MA / CAM Protocol / VOA AQ RL	ND	10		2	ug/L
CG84821	$8260GWR-WI	Isopropylbenzene	MA / CAM Protocol / VOA AQ RL	ND	20		2	ug/L
CG84821	$8260GWR-WI	Methyl ethyl ketone	MA / CAM Protocol / VOA AQ RL	ND	100		10	ug/L
CG84821	$8260GWR-WI	Chlorobenzene	MA / CAM Protocol / VOA AQ RL	ND	20		2	ug/L
CG84821	$8260GWR-WI	Methylene chloride	MA / CAM Protocol / VOA AQ RL	ND	20		2	ug/L
CG84821	$8260GWR-WI	Carbon tetrachloride	MA / CAM Protocol / VOA AQ RL	ND	10		2	ug/L

Wednesday, October 28, 2020

Criteria: MA: CAM, GW1, GW2, GW3

State: MA

Sample Criteria Exceedances Report

GCG84811 - AECOM-WILMINGTN

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units
CG84821	$8260GWR-WI	n-Propylbenzene	MA / CAM Protocol / VOA AQ RL	ND	20		2	ug/L
CG84821	$8260GWR-WI	o-Xylene	MA / CAM Protocol / VOA AQ RL	ND	20		2	ug/L
CG84821	$8260GWR-WI	p-Isopropyltoluene	MA / CAM Protocol / VOA AQ RL	ND	20		2	ug/L
CG84821	$8260GWR-WI	sec-Butylbenzene	MA / CAM Protocol / VOA AQ RL	ND	20		2	ug/L
CG84821	$8260GWR-WI	Styrene	MA / CAM Protocol / VOA AQ RL	ND	20		2	ug/L
CG84821	$8260GWR-WI	tert-Butylbenzene	MA / CAM Protocol / VOA AQ RL	ND	20		2	ug/L
CG84821	$8260GWR-WI	Toluene	MA / CAM Protocol / VOA AQ RL	ND	20		2	ug/L
CG84821	$8260GWR-WI	Dibromochloromethane	MA / CAM Protocol / VOA AQ RL	ND	10		2	ug/L
CG84821	$8260GWR-WI	trans-1,3-Dichloropropene	MA / CAM Protocol / VOA AQ RL	ND	10		2	ug/L
CG84821	$8260GWR-WI	Trichlorofluoromethane	MA / CAM Protocol / VOA AQ RL	ND	20		2	ug/L
CG84821	$8260GWR-WI	Trichlorotrifluoroethane	MA / CAM Protocol / VOA AQ RL	ND	20		2	ug/L
CG84821	$8260GWR-WI	Vinyl chloride	MA / CAM Protocol / VOA AQ RL	ND	10		2	ug/L
CG84821	$8260GWR-WI	Methyl t-butyl ether (MTBE)	MA / CAM Protocol / VOA AQ RL	ND	20		2	ug/L
CG84821	$8260GWR-WI	2,2-Dichloropropane	MA / CAM Protocol / VOA AQ RL	ND	20		2	ug/L
CG84821	$8260GWR-WI	1,2,3-Trichlorobenzene	MA / CAM Protocol / VOA AQ RL	ND	10		2	ug/L
CG84821	$8260GWR-WI	1,2,3-Trichloropropane	MA / CAM Protocol / VOA AQ RL	ND	10		2	ug/L
CG84821	$8260GWR-WI	1,2,4-Trichlorobenzene	MA / CAM Protocol / VOA AQ RL	ND	20		2	ug/L
CG84821	$8260GWR-WI	1,2,4-Trimethylbenzene	MA / CAM Protocol / VOA AQ RL	ND	20		2	ug/L
CG84821	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / CAM Protocol / VOA AQ RL	ND	10		2	ug/L
CG84821	$8260GWR-WI	1,2-Dibromoethane	MA / CAM Protocol / VOA AQ RL	ND	10		2	ug/L
CG84821	$8260GWR-WI	1,2-Dichlorobenzene	MA / CAM Protocol / VOA AQ RL	ND	20		2	ug/L
CG84821	$8260GWR-WI	1,2-Dichloroethane	MA / CAM Protocol / VOA AQ RL	ND	10		2	ug/L
CG84821	$8260GWR-WI	1,2-Dichloropropane	MA / CAM Protocol / VOA AQ RL	ND	10		2	ug/L
CG84821	$8260GWR-WI	1,3,5-Trimethylbenzene	MA / CAM Protocol / VOA AQ RL	ND	20		2	ug/L
CG84821	$8260GWR-WI	1,3-Dichlorobenzene	MA / CAM Protocol / VOA AQ RL	ND	20		2	ug/L
CG84821	$8260GWR-WI	Chloroethane	MA / CAM Protocol / VOA AQ RL	ND	20		2	ug/L
CG84821	$8260GWR-WI	1,4-Dichlorobenzene	MA / CAM Protocol / VOA AQ RL	ND	10		2	ug/L
CG84821	$8260GWR-WI	1,1-Dichloropropene	MA / CAM Protocol / VOA AQ RL	ND	20		2	ug/L
CG84821	$8260GWR-WI	2-Chlorotoluene	MA / CAM Protocol / VOA AQ RL	ND	20		2	ug/L
CG84821	$8260GWR-WI	2-Hexanone	MA / CAM Protocol / VOA AQ RL	ND	100		10	ug/L
CG84821	$8260GWR-WI	4-Chlorotoluene	MA / CAM Protocol / VOA AQ RL	ND	20		2	ug/L
CG84821	$8260GWR-WI	4-Methyl-2-pentanone	MA / CAM Protocol / VOA AQ RL	ND	100		10	ug/L
CG84821	$8260GWR-WI	Acetone	MA / CAM Protocol / VOA AQ RL	ND	500		10	ug/L
CG84821	$8260GWR-WI	Benzene	MA / CAM Protocol / VOA AQ RL	ND	10		2	ug/L
CG84821	$8260GWR-WI	Bromobenzene	MA / CAM Protocol / VOA AQ RL	ND	20		2	ug/L
CG84821	$8260GWR-WI	Bromochloromethane	MA / CAM Protocol / VOA AQ RL	ND	20		2	ug/L
CG84821	$8260GWR-WI	Bromodichloromethane	MA / CAM Protocol / VOA AQ RL	ND	10		2	ug/L
CG84821	$8260GWR-WI	Bromoform	MA / CAM Protocol / VOA AQ RL	ND	10		2	ug/L
CG84821	$8260GWR-WI	Bromomethane	MA / CAM Protocol / VOA AQ RL	ND	10		2	ug/L
CG84821	$8260GWR-WI	Carbon Disulfide	MA / CAM Protocol / VOA AQ RL	ND	100		2	ug/L
CG84821	$8260GWR-WI	1,3-Dichloropropane	MA / CAM Protocol / VOA AQ RL	ND	20		2	ug/L
CG84821	$8260GWR-WI	Bromodichloromethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	10	3	3	ug/L

Wednesday, October 28, 2020

Criteria: MA: CAM, GW1, GW2, GW3

State: MA

Sample Criteria Exceedances Report

GCG84811 - AECOM-WILMINGTN

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units
CG84821	$8260GWR-WI	1,2-Dichloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	10	3	3	ug/L
CG84821	$8260GWR-WI	cis-1,2-Dichloroethene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	90	20	20	20	ug/L
CG84821	$8260GWR-WI	Methylene chloride	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	20	5	5	ug/L
CG84821	$8260GWR-WI	Methyl ethyl ketone	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	100	38	38	ug/L
CG84821	$8260GWR-WI	1,4-Dichlorobenzene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	10	5	5	ug/L
CG84821	$8260GWR-WI	2-Hexanone	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	100	38	38	ug/L
CG84821	$8260GWR-WI	Bromomethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	10	7	7	ug/L
CG84821	$8260GWR-WI	Hexachlorobutadiene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	10	0.6	0.6	ug/L
CG84821	$8260GWR-WI	Tetrachloroethene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	1800	20	5	5	ug/L
CG84821	$8260GWR-WI	Dibromomethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	10	8.3	8.3	ug/L
CG84821	$8260GWR-WI	Dibromochloromethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	10	2	2	ug/L
CG84821	$8260GWR-WI	Bromoform	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	10	4	4	ug/L
CG84821	$8260GWR-WI	1,1,1,2-Tetrachloroethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	10	5	5	ug/L
CG84821	$8260GWR-WI	cis-1,3-Dichloropropene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	10	0.47	0.47	ug/L
CG84821	$8260GWR-WI	Carbon tetrachloride	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	10	2	2	ug/L
CG84821	$8260GWR-WI	Benzene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	10	5	5	ug/L
CG84821	$8260GWR-WI	Trichloroethene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	3600	200	5	5	ug/L
CG84821	$8260GWR-WI	1,1,2,2-Tetrachloroethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	10	2	2	ug/L
CG84821	$8260GWR-WI	Vinyl chloride	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	10	2	2	ug/L
CG84821	$8260GWR-WI	1,1,2-Trichloroethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	10	5	5	ug/L
CG84821	$8260GWR-WI	1,1-Dichloroethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	86	20	70	70	ug/L
CG84821	$8260GWR-WI	1,2-Dichloroethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	10	5	5	ug/L
CG84821	$8260GWR-WI	1,2,3-Trichlorobenzene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	10	7	7	ug/L
CG84821	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	10	0.00075	0.00075	ug/L
CG84821	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	10	0.00033	0.00033	ug/L
CG84821	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	10	0.0075	0.0075	ug/L
CG84821	$8260GWR-WI	trans-1,3-Dichloropropene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	10	0.47	0.47	ug/L
CG84821	$8260GWR-WI	Hexachlorobutadiene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	0.6	0.6	ug/L
CG84821	$8260GWR-WI	trans-1,3-Dichloropropene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	0.5	0.5	ug/L
CG84821	$8260GWR-WI	Methylene chloride	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	20	5	5	ug/L
CG84821	$8260GWR-WI	cis-1,3-Dichloropropene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	0.5	0.5	ug/L
CG84821	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	2	2	ug/L
CG84821	$8260GWR-WI	Tetrachloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	1800	20	5	5	ug/L
CG84821	$8260GWR-WI	cis-1,2-Dichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	90	20	20	20	ug/L
CG84821	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	2	2	ug/L
CG84821	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	3600	200	5	5	ug/L
CG84821	$8260GWR-WI	Benzene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	5	5	ug/L
CG84821	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	0.02	0.02	ug/L
CG84821	$8260GWR-WI	1,1-Dichloroethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	86	20	70	70	ug/L
CG84821	$8260GWR-WI	1,1,2-Trichloroethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	5	5	ug/L
CG84821	$8260GWR-WI	1,2-Dichloropropane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	3	3	ug/L
CG84821	$8260GWR-WI	1,1-Dichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	16	10	7	7	ug/L

Wednesday, October 28, 2020

Criteria: MA: CAM, GW1, GW2, GW3

State: MA

Sample Criteria Exceedances Report

GCG84811 - AECOM-WILMINGTN

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units
CG84821	$8260GWR-WI	1,4-Dichlorobenzene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	5	5	ug/L
CG84821	$8260GWR-WI	1,2-Dichloroethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	5	5	ug/L
CG84821	$8260GWR-WI	Bromodichloromethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	3	3	ug/L
CG84821	$8260GWR-WI	1,1,1,2-Tetrachloroethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	5	5	ug/L
CG84821	$8260GWR-WI	Bromoform	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	4	4	ug/L
CG84821	$8260GWR-WI	Bromomethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	7	7	ug/L
CG84821	$8260GWR-WI	Dibromochloromethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	2	2	ug/L
CG84821	$8260GWR-WI	Carbon tetrachloride	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	2	2	ug/L
CG84821	$8260GWR-WI	1,1,2,2-Tetrachloroethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	2	2	ug/L
CG84821	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	10	2	2	ug/L
CG84821	$8260GWR-WI	1,1,2,2-Tetrachloroethane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	10	9	9	ug/L
CG84821	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	3600	200	5	5	ug/L
CG84821	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	10	2	2	ug/L
CG84821	$8260GWR-WI	trans-1,3-Dichloropropene	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	10	5	5	ug/L
CG84821	$8260GWR-WI	Tetrachloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	1800	20	50	50	ug/L
CG84821	$8260GWR-WI	Bromomethane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	10	7	7	ug/L
CG84821	$8260GWR-WI	1,2-Dichloroethane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	10	5	5	ug/L
CG84821	$8260GWR-WI	Carbon tetrachloride	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	10	2	2	ug/L
CG84821	$8260GWR-WI	1,2-Dichloropropane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	10	3	3	ug/L
CG84821	$8260GWR-WI	Hexachlorobutadiene	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	10	1	1	ug/L
CG84821	$8260GWR-WI	Bromodichloromethane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	10	6	6	ug/L
CG84821	$8260GWR-WI	cis-1,3-Dichloropropene	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	10	5	5	ug/L
CG84821	$8260GWR-WI	cis-1,2-Dichloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	90	20	20	20	ug/L
CG84821	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	10	2	2	ug/L
CG84821	$8260GWR-WI	Methylene chloride	MA / GROUNDWATER STANDARDS / GW-1	ND	20	5	5	ug/L
CG84821	$8260GWR-WI	1,1,1,2-Tetrachloroethane	MA / GROUNDWATER STANDARDS / GW-1	ND	10	5	5	ug/L
CG84821	$8260GWR-WI	Vinyl chloride	MA / GROUNDWATER STANDARDS / GW-1	ND	10	2	2	ug/L
CG84821	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-1	3600	200	5	5	ug/L
CG84821	$8260GWR-WI	Tetrachloroethene	MA / GROUNDWATER STANDARDS / GW-1	1800	20	5	5	ug/L
CG84821	$8260GWR-WI	Hexachlorobutadiene	MA / GROUNDWATER STANDARDS / GW-1	ND	10	0.6	0.6	ug/L
CG84821	$8260GWR-WI	Dibromochloromethane	MA / GROUNDWATER STANDARDS / GW-1	ND	10	2	2	ug/L
CG84821	$8260GWR-WI	cis-1,2-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-1	90	20	70	70	ug/L
CG84821	$8260GWR-WI	Carbon tetrachloride	MA / GROUNDWATER STANDARDS / GW-1	ND	10	5	5	ug/L
CG84821	$8260GWR-WI	Bromoform	MA / GROUNDWATER STANDARDS / GW-1	ND	10	4	4	ug/L
CG84821	$8260GWR-WI	Bromodichloromethane	MA / GROUNDWATER STANDARDS / GW-1	ND	10	3	3	ug/L
CG84821	$8260GWR-WI	Benzene	MA / GROUNDWATER STANDARDS / GW-1	ND	10	5	5	ug/L
CG84821	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	10	0.02	0.02	ug/L
CG84821	$8260GWR-WI	1,2-Dichloropropane	MA / GROUNDWATER STANDARDS / GW-1	ND	10	5	5	ug/L
CG84821	$8260GWR-WI	1,1,2-Trichloroethane	MA / GROUNDWATER STANDARDS / GW-1	ND	10	5	5	ug/L
CG84821	$8260GWR-WI	1,2-Dichloroethane	MA / GROUNDWATER STANDARDS / GW-1	ND	10	5	5	ug/L
CG84821	$8260GWR-WI	1,1-Dichloroethane	MA / GROUNDWATER STANDARDS / GW-1	86	20	70	70	ug/L
CG84821	$8260GWR-WI	1,1,2,2-Tetrachloroethane	MA / GROUNDWATER STANDARDS / GW-1	ND	10	2	2	ug/L

Wednesday, October 28, 2020

Criteria: MA: CAM, GW1, GW2, GW3

State: MA

Sample Criteria Exceedances Report

GCG84811 - AECOM-WILMINGTN

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units
CG84821	$8260GWR-WI	1,1-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-1	16	10	7	7	ug/L
CG84821	$8260GWR-WI	1,4-Dichlorobenzene	MA / GROUNDWATER STANDARDS / GW-1	ND	10	5	5	ug/L
CG84821	$8260GWR-WI	Tetrachloroethene	MA / GROUNDWATER STANDARDS / GW-2	1800	20	50	50	ug/L
CG84821	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-2	3600	200	5	5	ug/L
CG84821	$8260GWR-WI	1,1,2,2-Tetrachloroethane	MA / GROUNDWATER STANDARDS / GW-2	ND	10	9	9	ug/L
CG84821	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-2	ND	10	2	2	ug/L
CG84821	$8260GWR-WI	Vinyl chloride	MA / GROUNDWATER STANDARDS / GW-2	ND	10	2	2	ug/L
CG84821	$8260GWR-WI	Carbon tetrachloride	MA / GROUNDWATER STANDARDS / GW-2	ND	10	2	2	ug/L
CG84821	$8260GWR-WI	Bromomethane	MA / GROUNDWATER STANDARDS / GW-2	ND	10	7	7	ug/L
CG84821	$8260GWR-WI	1,2-Dichloroethane	MA / GROUNDWATER STANDARDS / GW-2	ND	10	5	5	ug/L
CG84821	$8260GWR-WI	Bromodichloromethane	MA / GROUNDWATER STANDARDS / GW-2	ND	10	6	6	ug/L
CG84821	$8260GWR-WI	1,2-Dichloropropane	MA / GROUNDWATER STANDARDS / GW-2	ND	10	3	3	ug/L
CG84821	$8260GWR-WI	cis-1,2-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-2	90	20	20	20	ug/L
CG84821	$MCPADD-WM	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	2000	0.3	0.3	ug/L
CG84821	$MCPADD-WM	1,4-dioxane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	2000	3	3	ug/L
CG84821	$MCPADD-WM	1,4-dioxane	MA / GROUNDWATER STANDARDS / GW-1	ND	2000	0.3	0.3	ug/L
CG84822	$8260GWR-WI	1,2-Dichlorobenzene	MA / CAM Protocol / SVOA AQ RL	ND	20		10	ug/L
CG84822	$8260GWR-WI	1,3-Dichlorobenzene	MA / CAM Protocol / SVOA AQ RL	ND	20		10	ug/L
CG84822	$8260GWR-WI	1,2,4-Trichlorobenzene	MA / CAM Protocol / SVOA AQ RL	ND	20		10	ug/L
CG84822	$8260GWR-WI	Naphthalene	MA / CAM Protocol / SVOA AQ RL	ND	20		10	ug/L
CG84822	$8260GWR-WI	1,4-Dichlorobenzene	MA / CAM Protocol / VOA AQ RL	ND	10		2	ug/L
CG84822	$8260GWR-WI	1,3-Dichloropropane	MA / CAM Protocol / VOA AQ RL	ND	20		2	ug/L
CG84822	$8260GWR-WI	1,3-Dichlorobenzene	MA / CAM Protocol / VOA AQ RL	ND	20		2	ug/L
CG84822	$8260GWR-WI	1,3,5-Trimethylbenzene	MA / CAM Protocol / VOA AQ RL	ND	20		2	ug/L
CG84822	$8260GWR-WI	Dibromochloromethane	MA / CAM Protocol / VOA AQ RL	ND	10		2	ug/L
CG84822	$8260GWR-WI	cis-1,3-Dichloropropene	MA / CAM Protocol / VOA AQ RL	ND	10		2	ug/L
CG84822	$8260GWR-WI	1,2-Dichloropropane	MA / CAM Protocol / VOA AQ RL	ND	10		2	ug/L
CG84822	$8260GWR-WI	Dichlorodifluoromethane	MA / CAM Protocol / VOA AQ RL	ND	20		2	ug/L
CG84822	$8260GWR-WI	Ethylbenzene	MA / CAM Protocol / VOA AQ RL	ND	20		2	ug/L
CG84822	$8260GWR-WI	Hexachlorobutadiene	MA / CAM Protocol / VOA AQ RL	ND	10		2	ug/L
CG84822	$8260GWR-WI	Isopropylbenzene	MA / CAM Protocol / VOA AQ RL	ND	20		2	ug/L
CG84822	$8260GWR-WI	1,2-Dichloroethane	MA / CAM Protocol / VOA AQ RL	ND	10		2	ug/L
CG84822	$8260GWR-WI	Dibromomethane	MA / CAM Protocol / VOA AQ RL	ND	10		2	ug/L
CG84822	$8260GWR-WI	Acetone	MA / CAM Protocol / VOA AQ RL	ND	500		10	ug/L
CG84822	$8260GWR-WI	Bromomethane	MA / CAM Protocol / VOA AQ RL	ND	10		2	ug/L
CG84822	$8260GWR-WI	n-Propylbenzene	MA / CAM Protocol / VOA AQ RL	ND	20		2	ug/L
CG84822	$8260GWR-WI	Carbon Disulfide	MA / CAM Protocol / VOA AQ RL	ND	100		2	ug/L
CG84822	$8260GWR-WI	Bromodichloromethane	MA / CAM Protocol / VOA AQ RL	ND	10		2	ug/L
CG84822	$8260GWR-WI	Bromochloromethane	MA / CAM Protocol / VOA AQ RL	ND	20		2	ug/L
CG84822	$8260GWR-WI	Bromobenzene	MA / CAM Protocol / VOA AQ RL	ND	20		2	ug/L
CG84822	$8260GWR-WI	Carbon tetrachloride	MA / CAM Protocol / VOA AQ RL	ND	10		2	ug/L

Wednesday, October 28, 2020

Criteria: MA: CAM, GW1, GW2, GW3

State: MA

Sample Criteria Exceedances Report

GCG84811 - AECOM-WILMINGTN

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units
CG84822	$8260GWR-WI	Chloroethane	MA / CAM Protocol / VOA AQ RL	ND	20		2	ug/L
CG84822	$8260GWR-WI	Chloromethane	MA / CAM Protocol / VOA AQ RL	ND	20		2	ug/L
CG84822	$8260GWR-WI	4-Methyl-2-pentanone	MA / CAM Protocol / VOA AQ RL	ND	100		10	ug/L
CG84822	$8260GWR-WI	4-Chlorotoluene	MA / CAM Protocol / VOA AQ RL	ND	20		2	ug/L
CG84822	$8260GWR-WI	Chloroform	MA / CAM Protocol / VOA AQ RL	ND	20		2	ug/L
CG84822	$8260GWR-WI	2-Hexanone	MA / CAM Protocol / VOA AQ RL	ND	100		10	ug/L
CG84822	$8260GWR-WI	2-Chlorotoluene	MA / CAM Protocol / VOA AQ RL	ND	20		2	ug/L
CG84822	$8260GWR-WI	2,2-Dichloropropane	MA / CAM Protocol / VOA AQ RL	ND	20		2	ug/L
CG84822	$8260GWR-WI	Chlorobenzene	MA / CAM Protocol / VOA AQ RL	ND	20		2	ug/L
CG84822	$8260GWR-WI	Toluene	MA / CAM Protocol / VOA AQ RL	ND	20		2	ug/L
CG84822	$8260GWR-WI	1,2-Dichlorobenzene	MA / CAM Protocol / VOA AQ RL	ND	20		2	ug/L
CG84822	$8260GWR-WI	p-Isopropyltoluene	MA / CAM Protocol / VOA AQ RL	ND	20		2	ug/L
CG84822	$8260GWR-WI	n-Butylbenzene	MA / CAM Protocol / VOA AQ RL	ND	20		2	ug/L
CG84822	$8260GWR-WI	sec-Butylbenzene	MA / CAM Protocol / VOA AQ RL	ND	20		2	ug/L
CG84822	$8260GWR-WI	Styrene	MA / CAM Protocol / VOA AQ RL	ND	20		2	ug/L
CG84822	$8260GWR-WI	tert-Butylbenzene	MA / CAM Protocol / VOA AQ RL	ND	20		2	ug/L
CG84822	$8260GWR-WI	1,1-Dichloropropene	MA / CAM Protocol / VOA AQ RL	ND	20		2	ug/L
CG84822	$8260GWR-WI	Tetrahydrofuran (THF)	MA / CAM Protocol / VOA AQ RL	ND	50		2	ug/L
CG84822	$8260GWR-WI	o-Xylene	MA / CAM Protocol / VOA AQ RL	ND	20		2	ug/L
CG84822	$8260GWR-WI	trans-1,3-Dichloropropene	MA / CAM Protocol / VOA AQ RL	ND	10		2	ug/L
CG84822	$8260GWR-WI	1,1,2,2-Tetrachloroethane	MA / CAM Protocol / VOA AQ RL	ND	10		2	ug/L
CG84822	$8260GWR-WI	1,1,1-Trichloroethane	MA / CAM Protocol / VOA AQ RL	ND	20		2	ug/L
CG84822	$8260GWR-WI	Trichlorofluoromethane	MA / CAM Protocol / VOA AQ RL	ND	20		2	ug/L
CG84822	$8260GWR-WI	Trichlorotrifluoroethane	MA / CAM Protocol / VOA AQ RL	ND	20		2	ug/L
CG84822	$8260GWR-WI	1,1,1,2-Tetrachloroethane	MA / CAM Protocol / VOA AQ RL	ND	10		2	ug/L
CG84822	$8260GWR-WI	1,1,2-Trichloroethane	MA / CAM Protocol / VOA AQ RL	ND	10		2	ug/L
CG84822	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / CAM Protocol / VOA AQ RL	ND	10		2	ug/L
CG84822	$8260GWR-WI	Methylene chloride	MA / CAM Protocol / VOA AQ RL	ND	20		2	ug/L
CG84822	$8260GWR-WI	1,2,3-Trichlorobenzene	MA / CAM Protocol / VOA AQ RL	ND	10		2	ug/L
CG84822	$8260GWR-WI	Methyl t-butyl ether (MTBE)	MA / CAM Protocol / VOA AQ RL	ND	20		2	ug/L
CG84822	$8260GWR-WI	Methyl ethyl ketone	MA / CAM Protocol / VOA AQ RL	ND	100		10	ug/L
CG84822	$8260GWR-WI	1,2-Dibromoethane	MA / CAM Protocol / VOA AQ RL	ND	10		2	ug/L
CG84822	$8260GWR-WI	1,2,4-Trimethylbenzene	MA / CAM Protocol / VOA AQ RL	ND	20		2	ug/L
CG84822	$8260GWR-WI	1,2,4-Trichlorobenzene	MA / CAM Protocol / VOA AQ RL	ND	20		2	ug/L
CG84822	$8260GWR-WI	Bromoform	MA / CAM Protocol / VOA AQ RL	ND	10		2	ug/L
CG84822	$8260GWR-WI	1,2,3-Trichloropropane	MA / CAM Protocol / VOA AQ RL	ND	10		2	ug/L
CG84822	$8260GWR-WI	Benzene	MA / CAM Protocol / VOA AQ RL	ND	10		2	ug/L
CG84822	$8260GWR-WI	Vinyl chloride	MA / Client Specified Criteria / LOCKHEED WILMINGTO	16	10	2	2	ug/L
CG84822	$8260GWR-WI	Methyl ethyl ketone	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	100	38	38	ug/L
CG84822	$8260GWR-WI	Carbon tetrachloride	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	10	2	2	ug/L
CG84822	$8260GWR-WI	Hexachlorobutadiene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	10	0.6	0.6	ug/L
CG84822	$8260GWR-WI	Bromomethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	10	7	7	ug/L

Wednesday, October 28, 2020

Criteria: MA: CAM, GW1, GW2, GW3

State: MA

Sample Criteria Exceedances Report

GCG84811 - AECOM-WILMINGTN

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units
CG84822	$8260GWR-WI	Trichloroethene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	2300	50	5	5	ug/L
CG84822	$8260GWR-WI	cis-1,2-Dichloroethene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	1300	20	20	20	ug/L
CG84822	$8260GWR-WI	Methylene chloride	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	20	5	5	ug/L
CG84822	$8260GWR-WI	Dibromomethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	10	8.3	8.3	ug/L
CG84822	$8260GWR-WI	Tetrachloroethene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	480	20	5	5	ug/L
CG84822	$8260GWR-WI	Dibromochloromethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	10	2	2	ug/L
CG84822	$8260GWR-WI	cis-1,3-Dichloropropene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	10	0.47	0.47	ug/L
CG84822	$8260GWR-WI	trans-1,3-Dichloropropene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	10	0.47	0.47	ug/L
CG84822	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	10	0.00075	0.00075	ug/L
CG84822	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	10	0.0075	0.0075	ug/L
CG84822	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	10	0.00033	0.00033	ug/L
CG84822	$8260GWR-WI	2-Hexanone	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	100	38	38	ug/L
CG84822	$8260GWR-WI	Benzene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	10	5	5	ug/L
CG84822	$8260GWR-WI	Bromoform	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	10	4	4	ug/L
CG84822	$8260GWR-WI	1,1,1,2-Tetrachloroethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	10	5	5	ug/L
CG84822	$8260GWR-WI	1,4-Dichlorobenzene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	10	5	5	ug/L
CG84822	$8260GWR-WI	1,1,2-Trichloroethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	10	5	5	ug/L
CG84822	$8260GWR-WI	Bromodichloromethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	10	3	3	ug/L
CG84822	$8260GWR-WI	1,2,3-Trichlorobenzene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	10	7	7	ug/L
CG84822	$8260GWR-WI	1,2-Dichloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	10	3	3	ug/L
CG84822	$8260GWR-WI	1,1,2,2-Tetrachloroethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	10	2	2	ug/L
CG84822	$8260GWR-WI	1,2-Dichloroethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	10	5	5	ug/L
CG84822	$8260GWR-WI	trans-1,3-Dichloropropene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	0.5	0.5	ug/L
CG84822	$8260GWR-WI	1,4-Dichlorobenzene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	5	5	ug/L
CG84822	$8260GWR-WI	1,2-Dichloropropane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	3	3	ug/L
CG84822	$8260GWR-WI	1,1,2,2-Tetrachloroethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	2	2	ug/L
CG84822	$8260GWR-WI	1,2-Dichloroethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	5	5	ug/L
CG84822	$8260GWR-WI	Benzene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	5	5	ug/L
CG84822	$8260GWR-WI	cis-1,3-Dichloropropene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	0.5	0.5	ug/L
CG84822	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	0.02	0.02	ug/L
CG84822	$8260GWR-WI	Hexachlorobutadiene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	0.6	0.6	ug/L
CG84822	$8260GWR-WI	Dibromochloromethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	2	2	ug/L
CG84822	$8260GWR-WI	Bromodichloromethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	3	3	ug/L
CG84822	$8260GWR-WI	Bromoform	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	4	4	ug/L
CG84822	$8260GWR-WI	1,1,2-Trichloroethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	5	5	ug/L
CG84822	$8260GWR-WI	Tetrachloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	480	20	5	5	ug/L
CG84822	$8260GWR-WI	1,1-Dichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	12	10	7	7	ug/L
CG84822	$8260GWR-WI	Bromomethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	7	7	ug/L
CG84822	$8260GWR-WI	Methylene chloride	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	20	5	5	ug/L
CG84822	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-1 (mg/l)	16	10	2	2	ug/L
CG84822	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	2300	50	5	5	ug/L
CG84822	$8260GWR-WI	Carbon tetrachloride	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	2	2	ug/L

Wednesday, October 28, 2020

Criteria: MA: CAM, GW1, GW2, GW3

State: MA

Sample Criteria Exceedances Report

GCG84811 - AECOM-WILMINGTN

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units
CG84822	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-1 (mg/l)	16	10	2	2	ug/L
CG84822	$8260GWR-WI	1,1,1,2-Tetrachloroethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	5	5	ug/L
CG84822	$8260GWR-WI	cis-1,2-Dichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	1300	20	20	20	ug/L
CG84822	$8260GWR-WI	cis-1,3-Dichloropropene	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	10	5	5	ug/L
CG84822	$8260GWR-WI	1,1,2,2-Tetrachloroethane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	10	9	9	ug/L
CG84822	$8260GWR-WI	Tetrachloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	480	20	50	50	ug/L
CG84822	$8260GWR-WI	cis-1,2-Dichloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	1300	20	20	20	ug/L
CG84822	$8260GWR-WI	1,2-Dichloroethane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	10	5	5	ug/L
CG84822	$8260GWR-WI	trans-1,3-Dichloropropene	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	10	5	5	ug/L
CG84822	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	10	2	2	ug/L
CG84822	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-2 (mg/l)	16	10	2	2	ug/L
CG84822	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	2300	50	5	5	ug/L
CG84822	$8260GWR-WI	Hexachlorobutadiene	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	10	1	1	ug/L
CG84822	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-2 (mg/l)	16	10	2	2	ug/L
CG84822	$8260GWR-WI	1,2-Dichloropropane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	10	3	3	ug/L
CG84822	$8260GWR-WI	Carbon tetrachloride	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	10	2	2	ug/L
CG84822	$8260GWR-WI	Bromodichloromethane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	10	6	6	ug/L
CG84822	$8260GWR-WI	Bromomethane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	10	7	7	ug/L
CG84822	$8260GWR-WI	Vinyl chloride	MA / GROUNDWATER STANDARDS / GW-1	16	10	2	2	ug/L
CG84822	$8260GWR-WI	Tetrachloroethene	MA / GROUNDWATER STANDARDS / GW-1	480	20	5	5	ug/L
CG84822	$8260GWR-WI	1,1,1,2-Tetrachloroethane	MA / GROUNDWATER STANDARDS / GW-1	ND	10	5	5	ug/L
CG84822	$8260GWR-WI	1,1,2,2-Tetrachloroethane	MA / GROUNDWATER STANDARDS / GW-1	ND	10	2	2	ug/L
CG84822	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-1	2300	50	5	5	ug/L
CG84822	$8260GWR-WI	cis-1,2-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-1	1300	20	70	70	ug/L
CG84822	$8260GWR-WI	Bromoform	MA / GROUNDWATER STANDARDS / GW-1	ND	10	4	4	ug/L
CG84822	$8260GWR-WI	Bromodichloromethane	MA / GROUNDWATER STANDARDS / GW-1	ND	10	3	3	ug/L
CG84822	$8260GWR-WI	Carbon tetrachloride	MA / GROUNDWATER STANDARDS / GW-1	ND	10	5	5	ug/L
CG84822	$8260GWR-WI	Benzene	MA / GROUNDWATER STANDARDS / GW-1	ND	10	5	5	ug/L
CG84822	$8260GWR-WI	1,4-Dichlorobenzene	MA / GROUNDWATER STANDARDS / GW-1	ND	10	5	5	ug/L
CG84822	$8260GWR-WI	1,2-Dichloropropane	MA / GROUNDWATER STANDARDS / GW-1	ND	10	5	5	ug/L
CG84822	$8260GWR-WI	Dibromochloromethane	MA / GROUNDWATER STANDARDS / GW-1	ND	10	2	2	ug/L
CG84822	$8260GWR-WI	Methylene chloride	MA / GROUNDWATER STANDARDS / GW-1	ND	20	5	5	ug/L
CG84822	$8260GWR-WI	1,2-Dichloroethane	MA / GROUNDWATER STANDARDS / GW-1	ND	10	5	5	ug/L
CG84822	$8260GWR-WI	Hexachlorobutadiene	MA / GROUNDWATER STANDARDS / GW-1	ND	10	0.6	0.6	ug/L
CG84822	$8260GWR-WI	1,1,2-Trichloroethane	MA / GROUNDWATER STANDARDS / GW-1	ND	10	5	5	ug/L
CG84822	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	10	0.02	0.02	ug/L
CG84822	$8260GWR-WI	1,1-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-1	12	10	7	7	ug/L
CG84822	$8260GWR-WI	Vinyl chloride	MA / GROUNDWATER STANDARDS / GW-2	16	10	2	2	ug/L
CG84822	$8260GWR-WI	Bromodichloromethane	MA / GROUNDWATER STANDARDS / GW-2	ND	10	6	6	ug/L
CG84822	$8260GWR-WI	Bromomethane	MA / GROUNDWATER STANDARDS / GW-2	ND	10	7	7	ug/L
CG84822	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-2	2300	50	5	5	ug/L
CG84822	$8260GWR-WI	Carbon tetrachloride	MA / GROUNDWATER STANDARDS / GW-2	ND	10	2	2	ug/L

Wednesday, October 28, 2020

Criteria: MA: CAM, GW1, GW2, GW3

State: MA

Sample Criteria Exceedances Report

GCG84811 - AECOM-WILMINGTN

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units
CG84822	$8260GWR-WI	1,2-Dichloroethane	MA / GROUNDWATER STANDARDS / GW-2	ND	10	5	5	ug/L
CG84822	$8260GWR-WI	Tetrachloroethene	MA / GROUNDWATER STANDARDS / GW-2	480	20	50	50	ug/L
CG84822	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-2	ND	10	2	2	ug/L
CG84822	$8260GWR-WI	1,1,2,2-Tetrachloroethane	MA / GROUNDWATER STANDARDS / GW-2	ND	10	9	9	ug/L
CG84822	$8260GWR-WI	cis-1,2-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-2	1300	20	20	20	ug/L
CG84822	$8260GWR-WI	1,2-Dichloropropane	MA / GROUNDWATER STANDARDS / GW-2	ND	10	3	3	ug/L
CG84822	$DIOX_LDL	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	15	0.20	0.3	0.3	ug/l
CG84822	$DIOX_LDL	1,4-dioxane	MA / CMR 310.40.1600 / GW-1 (mg/l)	15	0.20	3	3	ug/l
CG84822	$DIOX_LDL	1,4-dioxane	MA / GROUNDWATER STANDARDS / GW-1	15	0.20	0.3	0.3	ug/l
CG84822	$MCPADD-WM	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	2000	0.3	0.3	ug/L

Phoenix Laboratories does not assume responsibility for the data contained in this exceedance report. It is provided as an additional tool to identify requested criteria exceedences. All efforts are made to ensure the accuracy of the data (obtained from appropriate agencies). A lack of exceedence information does not necessarily suggest conformance to the criteria. It is ultimately the site professional's responsibility to determine appropriate compliance.

MassDEP Analytical Protocol Certification Form

Laboratory Name: Phoenix Environmental Laboratories, Inc. **Project #:**

Project Location: LOCKHEED WILMINGTON MA 6055204 **RTN:**

This Form provides certifications for the following data set: [list Laboratory Sample ID Number(s)]

CG84811, CG84812, CG84813, CG84814, CG84815, CG84816, CG84817, CG84818, CG84819, CG84820, CG84821, CG84822

Matrices: ☑ Groundwater/Surface Water ☐ Soil/Sediment ☐ Drinking Water ☐ Air ☐ Other:

CAM Protocol (check all that apply below)

8260 VOC CAM II A ☑	7470/7471 Hg CAM III B ☐	MassDEP VPH CAM IV A ☑	8081 Pesticides CAM V B ☐	7196 Hex Cr CAM VI B ☐	MassDEP APH CAM IX A ☐
8270 SVOC CAM II B ☑	7010 Metals CAM III C ☐	MassDEP EPH CAM IV B ☑	8151 Herbicides CAM V C ☐	8330 Explosives CAM VIII A ☐	TO-15 VOC CAM IX B ☐
6010 Metals CAM III A ☑	6020 Metals CAM III D ☐	8082 PCB CAM V A ☐	9012 Total Cyanide/PAC CAM V1 A ☐	6860 Perchlorate CAM VIII B ☐	

Affirmative responses to questions A through F are required for "Presumptive Certainty" status

A	Were all samples received in a condition consistent with those described on the Chain-of-Custody, properly preserved (including temperature*) in the field or laboratory, and prepared/analyzed with method holding times? (* see narrative)	☐ Yes ☑ No
B	Were the analytical method(s) and all associated QC requirements specified in the selected CAM protocol(s) followed?	☑ Yes ☐ No
C	Were all required corrective actions and analytical response actions specified in the selected CAM protocol(s) implemented for all identified performance standard non-conformances?	☑ Yes ☐ No
D	Does the laboratory report comply with all the reporting requirements speified in CAM VII A, "Quality Assurance and Quality Control Guidelines for the Acquisition and Reporting of Analytical Data"?	☑ Yes ☐ No
E	a. VPH, EPH, and APH Methods only: Was each method conducted without significant modification(s)? (refer to the individual method(s) for a list of significant modifications). b. APH and TO-15 methods only: Was the complete analyte list reported for each method?	☑ Yes ☐ No ☐ Yes ☐ No
F	Were all applicable CAM protocol QC and performance standard non-conformances identified and evaluated in a laboratory narrative (including all "No" responses to Questions A through E)?	☑ Yes ☐ No

Responses to questions G, H and I below is required for "Presumptive Certainty" status

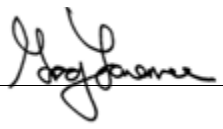
G	Were the reporting limits at or below all CAM reporting limits specified in the selected CAM protocol(s)?	☐ Yes ☑ No

Data User Note: Data that achieve "Presumptive Certainty" status may not necessarily meet the data usability and representativeness requirements described in 310 CMR 40. 1056(2)(k) and WSC-07-350

H	Were all QC performance standards specified in the CAM protocol(s) achieved? See Sections: EPH, SVOA-Dioxane, SVOASIM Narrations .	☐ Yes ☑ No
I	Were results reported for the complete analyte list specified in the selected CAM protocol(s)?	☐ Yes ☑ No

All negative responses must be addressed in an attached laboratory narrative.

I, the undersigned, attest under the pains and penalties of perjury that, based upon my personal inquiry of those responsible for obtaining the information, the material contained in this analytical report is, to the best of my knowledge and belief, accurate and complete.

Authorized Signature: 

Date: Wednesday, October 28, 2020

Printed Name: Greg Lawrence

Position: Assistant Lab Director

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

NY # 11301

MCP Certification Report

October 28, 2020

SDG I.D.: GCG84811

SDG Comments

Metals Analysis:
The client requested a shorter list of elements than the 6010 MCP list. The following analytes from the 6010 Metals list were not reported: Antimony, Barium, Beryllium, Cadmium, Chromium, Lead, Nickel, Selenium, Silver, Thallium, Vanadium, Zinc.

Not all requested reporting levels were achieved due to the presence of target and non target compounds. Please refer to the Sample Criteria Exceedances section of this report.

EPH Narration

Were all QA/QC performance criteria specified in the MADEP document CAM achieved? No.

QC Batch 546937 (Samples: CG84812, CG84813, CG84814, CG84815, CG84816): -----

The LCSD recovery is below the method criteria. All of the other QC is acceptable, therefore no significant bias is suspected. (C-10 Decane)

QC Batch 547303 (Samples: CG84817, CG84820): -----

The LCS/LCSD recovery is below the method criteria. The site specific MS/MSD recovery is acceptable. A low bias for these analytes is possible. (C-10 Decane, C9 - Nonane)

The LCS recovery is below the method criteria. All of the other QC is acceptable, therefore no significant bias is suspected. (C12 - Dodecane)

Instrument:

AU-FID3 09/28/20-1 Adam Werner, Chemist 09/28/20

CG84815 (1X)

No significant modifications were made to the EPH method, as specified in Section 11.3 of the method.

The initial calibration (AR0923BI) RSD for the compound list was less than 25% except for the following compounds: None.
The continuing calibration %D for the compound list was less than 25% except for the following compounds:None.

AU-FID4 09/25/20-1 Adam Werner, Chemist 09/25/20

CG84812 (1X), CG84813 (1X), CG84814 (1X), CG84816 (1X)

The initial calibration (AL0923BI) RSD for the compound list was less than 25% except for the following compounds: None.
The continuing calibration %D for the compound list was less than 25% except for the following compounds:None.

AU-FID4 09/28/20-1 Adam Werner, Chemist 09/28/20

CG84815 (1X)

The initial calibration (AL0923BI) RSD for the compound list was less than 25% except for the following compounds: None.
The continuing calibration %D for the compound list was less than 25% except for the following compounds:None.

AU-FID4 09/29/20-1 Adam Werner, Chemist 09/29/20

CG84817 (1X), CG84820 (1X)

The initial calibration (AL0929BI) RSD for the compound list was less than 25% except for the following compounds: None.
The continuing calibration %D for the compound list was less than 25% except for the following compounds:None.

QC (Site Specific):

Batch 546937 (CG84812)

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MCP Certification Report

October 28, 2020

SDG I.D.: GCG84811

EPH Narration

CG84812, CG84813, CG84814, CG84815, CG84816

All LCS recoveries were within 40 - 140 with the following exceptions: C9 - Nonane(35%)
All LCSD recoveries were within 40 - 140 with the following exceptions: C-10 Decane(37%), C9 - Nonane(31%)
All LCS/LCSD RPDs were less than 25% with the following exceptions: None.
All MS recoveries were within 40 - 140 with the following exceptions: None.
All MSD recoveries were within 40 - 140 with the following exceptions: None.
All MS/MSD RPDs were less than 25% with the following exceptions: None.
A LCS and LCS Duplicate were performed instead of a matrix spike and matrix spike duplicate.
Additional EPH fractionation criteria: Breakthrough criteria (BT) is 0 to 5%

Batch 547303 (CG84820)

CG84817, CG84820

All LCS recoveries were within 40 - 140 with the following exceptions: C-10 Decane(32%), C12 - Dodecane(37%), C9 - Nonane(24%)
All LCSD recoveries were within 40 - 140 with the following exceptions: C-10 Decane(35%), C9 - Nonane(26%)
All LCS/LCSD RPDs were less than 25% with the following exceptions: None.
All MS recoveries were within 40 - 140 with the following exceptions: C9 - Nonane(32%)
All MSD recoveries were within 40 - 140 with the following exceptions: C9 - Nonane(30%)
All MS/MSD RPDs were less than 25% with the following exceptions: None.
A matrix effect is suspected when a MS/MSD recovery is outside of criteria. No further action is required if LCS/LCSD compounds are within criteria.
Additional EPH fractionation criteria: Breakthrough criteria (BT) is 0 to 5%

I attest under the pains and penalties of perjury that, based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.

Wet Chemistry Analysis

Were all QA/QC performance criteria specified in the MADEP document CAM achieved? Yes.

Instrument:

BECKMAN DU720 09/30/20-1 Greg Danielewski, Chemist 09/30/20

CG84814

The initial calibration met all criteria including a standard run at the reporting level.
All method verification standards and blanks met criteria.

BECKMAN DU720 10/01/20-1 Greg Danielewski, Chemist 10/01/20

CG84818

The initial calibration met all criteria including a standard run at the reporting level.
All method verification standards and blanks met criteria.

QC (Batch Specific):

Batch 547069 (CG85175)

CG84814, CG84818

All LCS recoveries were within 85 - 115 with the following exceptions: None.

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MCP Certification Report

October 28, 2020

SDG I.D.: GCG84811

Wet Chemistry Analysis

Additional: LCS acceptance range is 85-115% MS acceptance range 75-125%.

Batch 547456 (CG84814)

CG84814

All LCS recoveries were within 85 - 115 with the following exceptions: None.
Additional: LCS acceptance range is 85-115% MS acceptance range 75-125%.

Batch 547575 (CG84818)

CG84818

All LCS recoveries were within 85 - 115 with the following exceptions: None.
Additional: LCS acceptance range is 85-115% MS acceptance range 75-125%.

I attest under the pains and penalties of perjury that, based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.

IC

Were all QA/QC performance criteria specified in the MADEP document CAM achieved? Yes.

Instrument:

IC 09/24/20-1 Brian Sheriden, Eric Geyer, Chemist 09/24/20

CG84814

The initial calibration met all criteria including a standard run at the reporting level.
All method verification standards and blanks met criteria.

IC 09/24/20-2 Brian Sheriden, Eric Geyer, Chemist 09/24/20

CG84818

The initial calibration met all criteria including a standard run at the reporting level.
All method verification standards and blanks met criteria.

IC 09/25/20-2 Brian Sheriden, Eric Geyer, Chemist 09/25/20

CG84818

The initial calibration met all criteria including a standard run at the reporting level.
All method verification standards and blanks met criteria.

QC (Batch Specific):

Batch 546994 (CG84689)

CG84814

All LCS recoveries were within 90 - 110 with the following exceptions: None.

Batch 547016 (CG84973)

CG84818

All LCS recoveries were within 90 - 110 with the following exceptions: None.

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MCP Certification Report

October 28, 2020

SDG I.D.: GCG84811

IC

Batch 547226 (CG85802)

CG84818

All LCS recoveries were within 90 - 110 with the following exceptions: None.

I attest under the pains and penalties of perjury that, based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.

ICP Metals Narration

Were all QA/QC performance criteria specified in the analytical method achieved? Yes.

Instrument:

ARCOS 09/25/20 10:40 Cindy Pearce, Emily Kolominskaya, Chemist 09/25/20

CG84812, CG84814, CG84818

Additional criteria for CCV and ICSAB:
Sodium and Potassium are poor performing elements, the laboratory's in-house limits are 85-115% (CCV) and 70-130% (ICSAB).The linear range is defined daily by the calibration range.
The following Initial Calibration Verification (ICV) compounds did not meet criteria: None.
The following Continuing Calibration Verification (CCV) compounds did not meet criteria: None.
The following ICP Interference Check (ICSAB) compounds did not meet criteria: None.

BLUE 09/26/20 09:16 Cindy Pearce, Emily Kolominskaya, Chemist 09/26/20

CG84814, CG84818

The initial calibration met criteria.
The continuing calibration standards met criteria for all the elements reported. The linear range is defined daily by the calibration range.
The continuing calibration blanks were less than the reporting level for the elements reported.
The ICSA and ICSAB were analyzed at the beginning and end of the run and were within criteria.The linear range is defined daily by the calibration range.
The following Initial Calibration Verification (ICV) compounds did not meet criteria: None.
The following Continuing Calibration Verification (CCV) compounds did not meet criteria: None.
The following ICP Interference Check (ICSAB) compounds did not meet criteria: None.

BLUE 09/29/20 09:46 Emily Kolominskaya, Chemist 09/29/20

CG84812

The initial calibration met criteria.
The continuing calibration standards met criteria for all the elements reported. The linear range is defined daily by the calibration range.
The continuing calibration blanks were less than the reporting level for the elements reported.
The ICSA and ICSAB were analyzed at the beginning and end of the run and were within criteria.The linear range is defined daily by the calibration range.
The following Initial Calibration Verification (ICV) compounds did not meet criteria: None.
The following Continuing Calibration Verification (CCV) compounds did not meet criteria: None.
The following ICP Interference Check (ICSAB) compounds did not meet criteria: None.

QC (Site Specific):

Batch 546834 (CG84812)

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Certification Report

October 28, 2020

SDG I.D.: GCG84811

ICP Metals Narration

CG84812, CG84814, CG84818

All LCS recoveries were within 80 - 120 with the following exceptions: None.
All LCSD recoveries were within 80 - 120 with the following exceptions: None.
All LCS/LCSD RPDs were less than 20% with the following exceptions: None.
All MS recoveries were within 75 - 125 with the following exceptions: None.
All MSD recoveries were within 75 - 125 with the following exceptions: None.
All MS/MSD RPDs were less than 20% with the following exceptions: None.
Additional: LCS acceptance range is 80-120% MS acceptance range 75-125%.

Batch 547005 (CG84812)

CG84812, CG84814, CG84818

All LCS recoveries were within 80 - 120 with the following exceptions: None.
All LCSD recoveries were within 80 - 120 with the following exceptions: None.
All LCS/LCSD RPDs were less than 20% with the following exceptions: None.
All MS recoveries were within 75 - 125 with the following exceptions: None.
All MSD recoveries were within 75 - 125 with the following exceptions: None.
All MS/MSD RPDs were less than 20% with the following exceptions: None.
Additional: LCS acceptance range is 80-120% MS acceptance range 75-125%.

SVOA-Dioxane

Were all QA/QC performance criteria specified in the MADEP document CAM achieved? No.

Sample CG84820 was analyzed outside of the recommended hold time.

Instrument:

CHEM22 09/28/20-1 Adam Werner, Chemist 09/28/20

CG84822 (1X)

Initial Calibration Evaluation (CHEM22/DIOX_0818):
100% of target compounds met criteria.
The following compounds had %RSDs >20%: None.
The following compounds did not meet recommended response factors: None.
The following compounds did not meet a minimum response factors: None.

Continuing Calibration Verification (CHEM22/0928_06-DIOX_0818) (MCP Compliance):
Internal standard areas were within 50 to 200% of the initial calibration with the following exceptions: None.
100% of target compounds met criteria.
The following compounds did not meet % deviation criteria: None.
The following compounds did not meet maximum % deviations: None.
The following compounds did not meet recommended response factors: None.
The following compounds did not meet minimum response factors: None.

CHEM22 09/29/20-1 Adam Werner, Chemist 09/29/20

CG84814 (1X), CG84818 (1X)

Initial Calibration Evaluation (CHEM22/DIOX_0818):
100% of target compounds met criteria.
The following compounds had %RSDs >20%: None.
The following compounds did not meet recommended response factors: None.
The following compounds did not meet a minimum response factors: None.

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MCP Certification Report

October 28, 2020

SDG I.D.: GCG84811

SVOA-Dioxane

Continuing Calibration Verification (CHEM22/0929_06-DIOX_0818) (MCP Compliance):
Internal standard areas were within 50 to 200% of the initial calibration with the following exceptions: None.
100% of target compounds met criteria.
The following compounds did not meet % deviation criteria: None.
The following compounds did not meet maximum % deviations: None.
The following compounds did not meet recommended response factors: None.
The following compounds did not meet minimum response factors: None.

CHEM22 10/27/20-1 Adam Werner, Chemist 10/27/20

CG84820 (1X)

Initial Calibration Evaluation (CHEM22/DIOX_0818):
100% of target compounds met criteria.
The following compounds had %RSDs >20%: None.
The following compounds did not meet recommended response factors: None.
The following compounds did not meet a minimum response factors: None.

Continuing Calibration Verification (CHEM22/1027_06-DIOX_0818) (MCP Compliance):
Internal standard areas were within 50 to 200% of the initial calibration with the following exceptions: None.
100% of target compounds met criteria.
The following compounds did not meet % deviation criteria: None.
The following compounds did not meet maximum % deviations: None.
The following compounds did not meet recommended response factors: None.
The following compounds did not meet minimum response factors: None.

QC (Batch Specific):

Batch 547240 (CG85194)

CG84814, CG84818

All LCS recoveries were within 40 - 140 with the following exceptions: None.
All LCSD recoveries were within 40 - 140 with the following exceptions: None.
All LCS/LCSD RPDs were less than 30% with the following exceptions: None.

QC (Site Specific):

Batch 546802 (CG84822)

CG84822

All LCS recoveries were within 40 - 140 with the following exceptions: None.
All LCSD recoveries were within 40 - 140 with the following exceptions: None.
All LCS/LCSD RPDs were less than 30% with the following exceptions: None.
All MS recoveries were within 30 - 140 with the following exceptions: None.
All MSD recoveries were within 30 - 140 with the following exceptions: None.
All MS/MSD RPDs were less than 30% with the following exceptions: None.
This batch consists of a Blank, LCS, MS and MSD.

Batch 550910 (CG84820)

CG84820

All LCS recoveries were within 40 - 140 with the following exceptions: None.
All MS recoveries were within 30 - 140 with the following exceptions: None.
All MSD recoveries were within 30 - 140 with the following exceptions: None.

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

ACCREDITED IN ACCORDANCE WITH nelac NY # 11301

MCP Certification Report

October 28, 2020

SDG I.D.: GCG84811

SVOA-Dioxane

All MS/MSD RPDs were less than 30% with the following exceptions: None.
This batch consists of a Blank, LCS,MS and MSD

We attest under the pains and penalties of perjury that, based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.

SVOASIM Narration

Were all QA/QC performance criteria specified in the MADEP document CAM achieved? No.

QC Batch 547131 (Samples: CG84812, CG84813, CG84814, CG84815, CG84816, CG84817): -----

The LCS/LCSD recovery is acceptable. One analyte in the site specific matrix spike recovery is below the method criteria, therefore a low bias is possible. (Benzo(k)fluoranthene). MSD not included in the report due to an extraction error.

QC Batch 547132 (Samples: CG84820): -----

The LCS/LCSD RPD exceeds the method criteria for one or more analytes. The site MS/MSD RPD is acceptable. These analytes were not reported in the sample(s). No variability is suspected. (2-Methylnaphthalene, Naphthalene)

Instrument:

CHEM25 09/28/20-2 Matt Richard, Chemist 09/28/20

CG84820 (1X)

For 8270 BN list, benzidine peak tailing was evaluated in the DFTPP tune and was found to be in control.

Initial Calibration Evaluation (CHEM25/25_BNSIM18_0805):
100% of target compounds met criteria.
The following compounds had %RSDs >20%: None.
The following compounds did not meet recommended response factors: None.
The following compounds did not meet a minimum response factors: None.

Continuing Calibration Verification (CHEM25/0928_07-25_BNSIM18_0805) (MCP Compliance):
Internal standard areas were within 50 to 200% of the initial calibration with the following exceptions: None.
85% of target compounds met criteria.
The following compounds did not meet % deviation criteria: None.
The following compounds did not meet maximum % deviations: None.
The following compounds did not meet recommended response factors: None.
The following compounds did not meet minimum response factors: None.

CHEM27 09/28/20-3 Wes Bryon, Chemist 09/28/20

CG84812 (1X), CG84813 (1X), CG84814 (1X), CG84815 (1X), CG84816 (1X), CG84817 (1X)

For 8270 BN list, benzidine peak tailing was evaluated in the DFTPP tune and was found to be in control.

Initial Calibration Evaluation (CHEM27/27_BNSIM18_0928):
100% of target compounds met criteria.
The following compounds had %RSDs >20%: None.
The following compounds did not meet recommended response factors: None.
The following compounds did not meet a minimum response factors: None.

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MCP Certification Report

October 28, 2020

SDG I.D.: GCG84811

SVOASIM Narration

Continuing Calibration Verification (CHEM27/0928_44-27_BNSIM18_0928) (MCP Compliance):
Internal standard areas were within 50 to 200% of the initial calibration with the following exceptions: None.
100% of target compounds met criteria.
The following compounds did not meet % deviation criteria: None.
The following compounds did not meet maximum % deviations: None.
The following compounds did not meet recommended response factors: None.
The following compounds did not meet minimum response factors: None.

QC (Site Specific):

Batch 547131 (CG84812)

CG84812, CG84813, CG84814, CG84815, CG84816, CG84817

All LCS recoveries were within 40 - 140 with the following exceptions: None.
All LCSD recoveries were within 40 - 140 with the following exceptions: None.
All LCS/LCSD RPDs were less than 20% with the following exceptions: None.
All MS recoveries were within 40 - 140 with the following exceptions: Benzo(k)fluoranthene(33%)
A matrix effect is suspected when a MS/MSD recovery is outside of criteria. No further action is required if LCS/LCSD compounds are within criteria.
This batch consists of a Blank, LCS, LCSD, and MS.
Additional 8270 criteria: 10% of compounds can be outside of acceptance criteria as long as recovery is at least 10%. (Acid surrogates acceptance range for aqueous samples: 10-110%, for soils 30-130%)

Batch 547132 (CG84820)

CG84820

All LCS recoveries were within 40 - 140 with the following exceptions: None.
All LCSD recoveries were within 40 - 140 with the following exceptions: None.
All LCS/LCSD RPDs were less than 20% with the following exceptions: 2-Methylnaphthalene(21.7%), Naphthalene(21.9%)
All MS recoveries were within 40 - 140 with the following exceptions: None.
All MSD recoveries were within 40 - 140 with the following exceptions: None.
All MS/MSD RPDs were less than 20% with the following exceptions: None.
Additional 8270 criteria: 10% of compounds can be outside of acceptance criteria as long as recovery is at least 10%. (Acid surrogates acceptance range for aqueous samples: 10-110%, for soils 30-130%)

I attest under the pains and penalties of perjury that, based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.

VOA Narration

Were all QA/QC performance criteria specified in the MADEP document CAM achieved? Yes.

Instrument:

CHEM23 09/29/20-1 Michael Hahn, Chemist 09/29/20

CG84811 (1X), CG84812 (1X), CG84813 (1X), CG84814 (1X), CG84815 (1X), CG84816 (1X), CG84817 (1X), CG84818 (1X), CG84820 , CG84821 (20X)

Initial Calibration Evaluation (CHEM23/VOA23_092820):
99% of target compounds met criteria.
The following compounds had %RSDs >20%: Bromomethane 28% (20%)
The following compounds did not meet Table 4 recommended minimum response factors: None.

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MCP Certification Report

October 28, 2020

SDG I.D.: GCG84811

VOA Narration

The following compounds did not meet the minimum response factor of 0.05: None.

Continuing Calibration Verification (CHEM23/0929_02-VOA23_092820) (MCP Compliance):
Internal standard areas were within 50 to 200% of the initial calibration with the following exceptions: None.
99% of target compounds met criteria.
The following compounds did not meet % deviation criteria: None.
The following compounds did not meet maximum % deviations: None.
The following compounds did not meet Table 4 recommended minimum response factors: Tetrachloroethene 0.198 (0.2)
The following compounds did not meet the minimum MCP response factor of 0.05: None.

CHEM23 09/29/20-2 Michael Hahn, Chemist 09/29/20

CG84820 (1X)

Initial Calibration Evaluation (CHEM23/VOA23_092820):
99% of target compounds met criteria.
The following compounds had %RSDs >20%: Bromomethane 28% (20%)
The following compounds did not meet Table 4 recommended minimum response factors: None.
The following compounds did not meet the minimum response factor of 0.05: None.

Continuing Calibration Verification (CHEM23/0929_02-VOA23_092820) (MCP Compliance):
Internal standard areas were within 50 to 200% of the initial calibration with the following exceptions: None.
99% of target compounds met criteria.
The following compounds did not meet % deviation criteria: None.
The following compounds did not meet maximum % deviations: None.
The following compounds did not meet Table 4 recommended minimum response factors: Tetrachloroethene 0.198 (0.2)
The following compounds did not meet the minimum MCP response factor of 0.05: None.

CHEM23 09/30/20-1 Michael Hahn, Chemist 09/30/20

CG84819 (20X), CG84821 (200X), CG84822 (1X, 20X)

Initial Calibration Evaluation (CHEM23/VOA23_092820):
99% of target compounds met criteria.
The following compounds had %RSDs >20%: Bromomethane 28% (20%)
The following compounds did not meet Table 4 recommended minimum response factors: None.
The following compounds did not meet the minimum response factor of 0.05: None.

Continuing Calibration Verification (CHEM23/0930_02-VOA23_092820) (MCP Compliance):
Internal standard areas were within 50 to 200% of the initial calibration with the following exceptions: None.
98% of target compounds met criteria.
The following compounds did not meet % deviation criteria: None.
The following compounds did not meet maximum % deviations: None.
The following compounds did not meet Table 4 recommended minimum response factors: None.
The following compounds did not meet the minimum MCP response factor of 0.05: None.

CHEM23 10/01/20-1 Michael Hahn, Chemist 10/01/20

CG84819 (100X), CG84822 (50X)

Initial Calibration Evaluation (CHEM23/VOA23_092820):
99% of target compounds met criteria.
The following compounds had %RSDs >20%: None.
The following compounds did not meet Table 4 recommended minimum response factors: None.
The following compounds did not meet the minimum response factor of 0.05: None.

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MCP Certification Report

October 28, 2020

SDG I.D.: GCG84811

VOA Narration

Continuing Calibration Verification (CHEM23/1001_03-VOA23_092820) (MCP Compliance):
Internal standard areas were within 50 to 200% of the initial calibration with the following exceptions: None.
99% of target compounds met criteria.
The following compounds did not meet % deviation criteria: None.
The following compounds did not meet maximum % deviations: None.
The following compounds did not meet Table 4 recommended minimum response factors: Tetrachloroethene 0.188 (0.2)
The following compounds did not meet the minimum MCP response factor of 0.05: None.

QC (Batch Specific):

Batch 547922 (CG84830) CHEM23 10/1/2020-1

CG84819(100X), CG84822(50X)

All LCS recoveries were within 70 - 130 with the following exceptions: None.
All LCSD recoveries were within 70 - 130 with the following exceptions: None.
All LCS/LCSD RPDs were less than 20% with the following exceptions: None.
A LCS and LCS Duplicate were performed instead of a matrix spike and matrix spike duplicate.
Additional 8260 criteria: 10% of compounds can be outside of acceptance criteria as long as recovery is 10%.
The RPD criteria for the LCS/LCSD is 20%,
The MS/MSD RPD criteria is listed above.

QC (Site Specific):

Batch 547525 (CG84812) CHEM23 9/29/2020-1

CG84811(1X), CG84812(1X), CG84813(1X), CG84814(1X), CG84815(1X), CG84816(1X), CG84817(1X), CG84818(1X), CG84821(20X)

All LCS recoveries were within 70 - 130 with the following exceptions: None.
All LCSD recoveries were within 70 - 130 with the following exceptions: None.
All LCS/LCSD RPDs were less than 20% with the following exceptions: None.
All MS recoveries were within 70 - 130 with the following exceptions: None.
All MSD recoveries were within 70 - 130 with the following exceptions: None.
All MS/MSD RPDs were less than 20% with the following exceptions: Carbon tetrachloride(22.9%)
Additional 8260 criteria: 10% of compounds can be outside of acceptance criteria as long as recovery is 10%.
The RPD criteria for the LCS/LCSD is 20%,
The MS/MSD RPD criteria is listed above.

Batch 547527 (CG84820) CHEM23 9/29/2020-2

CG84820(1X)

All LCS recoveries were within 70 - 130 with the following exceptions: None.
All LCSD recoveries were within 70 - 130 with the following exceptions: None.
All LCS/LCSD RPDs were less than 20% with the following exceptions: None.
All MS recoveries were within 70 - 130 with the following exceptions: None.
All MSD recoveries were within 70 - 130 with the following exceptions: None.
All MS/MSD RPDs were less than 20% with the following exceptions: None.
Additional 8260 criteria: 10% of compounds can be outside of acceptance criteria as long as recovery is 10%.
The RPD criteria for the LCS/LCSD is 20%,
The MS/MSD RPD criteria is listed above.

Batch 547726 (CG84822) CHEM23 9/30/2020-1

CG84819(20X), CG84821(200X), CG84822(20X)

All LCS recoveries were within 70 - 130 with the following exceptions: None.

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MCP Certification Report

October 28, 2020

SDG I.D.: GCG84811

VOA Narration

All LCSD recoveries were within 70 - 130 with the following exceptions: None.
All LCS/LCSD RPDs were less than 20% with the following exceptions: None.
All MS recoveries were within 70 - 130 with the following exceptions: None.
All MSD recoveries were within 70 - 130 with the following exceptions: None.
All MS/MSD RPDs were less than 20% with the following exceptions: None.
Additional 8260 criteria: 10% of compounds can be outside of acceptance criteria as long as recovery is 10%.
The RPD criteria for the LCS/LCSD is 20%,
The MS/MSD RPD criteria is listed above.

I attest under the pains and penalties of perjury that, based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.

VPH Narration

Were all QA/QC performance criteria specified in the MADEP document CAM achieved? Yes.

Instrument:

PIDFID 09/26/20-3 Raman Makol, Chemist 09/26/20

CG84812 (1X), CG84813 (1X), CG84814 (1X), CG84815 (1X), CG84816 (1X), CG84817 (1X), CG84820 (1X)

QC (Site Specific):

Batch 547175 (CG84812)

CG84812(1X), CG84813(1X), CG84814(1X), CG84815(1X), CG84816(1X), CG84817(1X), CG84820(1X)

All LCS recoveries were within 70 - 130 with the following exceptions: None.
All LCSD recoveries were within 70 - 130 with the following exceptions: None.
All LCS/LCSD RPDs were less than 25% with the following exceptions: None.
All MS recoveries were within 70 - 130 with the following exceptions: None.
All MSD recoveries were within 70 - 130 with the following exceptions: None.
All MS/MSD RPDs were less than 25% with the following exceptions: None.

I attest under the pains and penalties of perjury that, based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.

Rebecca Merz

From: Olson, Scott (Chelmsford) <scott.olson@aecom.com>
Sent: Thursday, September 24, 2020 8:44 PM
To: Rebecca Merz; Greg Lawrence
Cc: Potter, Dylan (Chelmsford)
Subject: RE: Phoenix Labs - GCG84811, LOCKHEED WILMINGTON MA 60552044.19 - COC Acknowledgement

Rebecca, Greg,

For this login confirmation, I think everything looks good, except GZA-105D should also be logged in for 1,4-dioxane. The MS/MSD is for VOCs and EPH/VPH, but not 1,4-D.

I am off tomorrow, so please clarify with Dylan via email, if needed.

Thank you.
Scott

From: clientservices@phoenixlabs.com <clientservices@phoenixlabs.com>
Sent: Thursday, September 24, 2020 7:49 PM
To: Olson, Scott (Chelmsford) <scott.olson@aecom.com>
Subject: [EXTERNAL] Phoenix Labs - GCG84811, LOCKHEED WILMINGTON MA 60552044.19 - COC Acknowledgement

This is an automated sample acknowledgement.

If you were issued a Phoenix Price Quote # for this SDG and it was not listed on the chain, please email client services with the quote number so we can ensure proper invoicing. If no quote was issued, no further action is required.

Purchase Order#:127680

GCG84811 Criteria:
GROUND WATER(12): MA CAM, MA GW1 (GW-1), MA GW2 (GW-2), MA GW3 (GW-3)

Please email client services only if you require criteria different than what is listed.

Delivery group GCG84811 (LOCKHEED WILMINGTON MA 60552044.19) has been logged in for the following samples:

Phoenix Id	Client Id
CG84811	20A-TB01-202320-1
CG84812	20A-TRC102-202320-1
CG84813	20A-GZA102S-202320-1
CG84814	20A-STM8R1-202320-1
CG84815	20A-TRC101-202320-1
CG84816	20A-AE4-202320-1
CG84817	20A-AE4-202320-2

CG84818	20A-GZA12-202420-1
CG84819	20A-IPIR2-202420-1
CG84820	20A-GZA105D-202420-1
CG84821	20A-TRC401R-202420-1
CG84822	20A-AE101R5-202420-1

The samples in this delivery group were received at 1.4°C. (Note acceptance criteria for relevant matrices is above freezing up to 6°C)

If there are any questions regarding this submittal, please call Phoenix Client Services at extension 200.

Thank you for your business,

Phoenix Environmental Laboratories, Inc.
587 East Middle Turnpike
P.O. Box 370
Manchester, CT 06374
Tel. (860) 645-1102
Fax. (860) 645-0823
www.phoenixlabs.com

Please do not reply to this email.
cc'd:rebeccam@phoenixlabs.com;Nicole.Callahan@aecom.com;Lori.Herberich@aecom.com;Scott.Olson@aecom.com

Cooler: Yes ☐ No ☐
Coolant: IPK ☐ ICE ☐ No ☐

Temp 1.4 °C Pg of

PHOENIX
Environmental Laboratories, Inc.

CHAIN OF CUSTODY RECORD

587 East Middle Turnpike, P.O. Box 370, Manchester, CT 06040
Email: info@phoenixlabs.com Fax (860) 645-0823
Client Services (860) 645-8726

Data Delivery/Contact EMails:
lori.herberich@aecom.com
scott.olson@aecom.com

Customer: AECOM
Address: 250 Apollo Drive
Chelmsford, MA 01824 - (978) 905-2100
Contacts: Lori Herbierich (Chemist) 978-302-0089 Scott Olson (PM) 978-846-5238

Project: Lockheed - Wilmington MA 60552044.19
Report to: Lori Herberich - Scott Olson - Nicole Callahan
Invoice to: Scott Olson & Lori Herberich
QUOTE # August 2019 (for 2017-2022)

2020 Project PO: 127680

This section MUST be completed with Bottle Quantities.

Client Sample - Information - Identification

Sampler's Signature: [signature] Date: 9/24/20

Matrix Code:
DW=Drinking Water GW=Ground Water SW=Surface Water WW=Waste Water L=Liquid
RW=Raw Water SE=Sediment SL=Sludge S=Soil SD=Solid W=Wipe OIL=Oil B=Bulk

PHOENIX USE ONLY SAMPLE #	Customer Sample Identification	Sample Matrix	Date Sampled	Time Sampled	# of VOA Vials	# of Amber Glass	# of Clear Glass	# of Plastic				VOCs (8260) - HCL + Freon 113	1,4-Dioxane (8270D SIM) - NaHSO4 for DL <0.3 ug/L	VPH - HCL (MassDEP- VPH-04-1.1 Rev 1)	EPH + PAHs - HCL & UNP (MassDEP- EPH-04-1.1 Rev 1)	Total As, Fe, Mn (6010C) - HNO3 [FF]	Dissolved As, Fe, Mn (6010C) - HNO3	Chloride, Nitrate, Nitrite, Sulfate (300) - UNP	Sulfide - Zn-Acetate + NaOH	Total Organic Carbon (9060A) - H3PO4	Comments
84811	~~84829~~ KD 20A-TB01-092320-1	GW	9/23/20	1200	2							X									
84812	~~84830~~ KD 20A-TRC102-092320-1	GW	9/23/20	1215	15	9		6				X		X	X	X	X				MS/MSD
84813	~~84831~~ KD 20A-GZA102S-092320-1	GW	9/23/20	1305	5	3						X		X	X						
84814	~~84832~~ KD 20A-STM8R1-092320-1	GW	9/23/20	1230	5	5		4				X	X	X	X	X	X	X	X	X	
84815	~~84833~~ KD 20A-TRC101-092320-1	GW	9/23/20	1600	6	3						X		X	X						
84816	20A-AE4-092320-1	GW	9/23/20	1630	5	3						X		X	X						
84817	20A-AE4-092320-2	GW	9/23/20	1630	5	3						X		X	X						
84818	20A-GZA12-092420-1	GW	9/24/20	0915	3	2		4				X	X			X	X	X	X	X	
* 84819	20A-IP1R2-092420-1	GW	9/24/20	0955	3							X									
84820	20A-GZA105D-092420-1	GW	9/24/20	0935	15	10															MS/MSD on VOC, VPH, EPH
84821	20A-TRC401R-092420-1	GW	9/24/20	1115	3							X									
84822	20A-AE101RS-092420-1	GW	9/24/20	1100	9	3						X	X								MS/MSD

Relinquished by:	Accepted by:	Date:	Time:
[signature]	[signature]	9-24-20	14:03
[signature]	[signature]	9/24	1548

Comments, Special Requirements or Regulations:
* 1 VOA labeled "TRC401R-092420-1" However date/time match sample "IP1R2-092420-1" and all of qcg 84814 accounted for (SL)

Turnaround:
10 - 15 days

RI
☐ Direct Exposure (Residential)
☐ GW
☐ Other

CT
☐ RCP Cert
☐ GW Protection
☐ SW Protection
☐ GA Mobility
☐ GB Mobility
☐ Residential DEC
☐ I/C DEC
☐ Other

MA
X MCP (CAM Rpt)
X GW-1
X GW-2
X GW-3
☐ S-1
☐ S-2
☐ S-3
☐ MWRA eSMART
☐ Other

State where samples were collected: MA

Data Format
x PDF
x AECOM EQuIS 4-File EDD format

Data Package
☐ Tier II Checklist
☐ Full Data Package*
☐ Phoenix Std Report
☐ Other

* SURCHARGE APPLIES

PHOENIX
Environmental Laboratories, Inc.

Friday, October 02, 2020

Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Project ID: **LOCKHEED WILMINGTON MA 60552044.19**
SDG ID: **GCG84823**
Sample ID#s: CG84823 - CG84828

This laboratory is in compliance with the NELAC requirements of procedures used except where indicated.

This report contains results for the parameters tested, under the sampling conditions described on the Chain Of Custody, as received by the laboratory. This report is incomplete unless all pages indicated in the pagination at the bottom of the page are included.

A scanned version of the COC form accompanies the analytical report and is an exact duplicate of the original.

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200. The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.

Sincerely yours,

Phyllis Shiller
Laboratory Director

NELAC - #NY11301
CT Lab Registration #PH-0618
MA Lab Registration #M-CT007
ME Lab Registration #CT-007
NH Lab Registration #213693-A,B
NJ Lab Registration #CT-003
NY Lab Registration #11301
PA Lab Registration #68-03530
RI Lab Registration #63
UT Lab Registration #CT00007
VT Lab Registration #VT11301

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

NY # 11301

SDG Comments

October 02, 2020

SDG I.D.: GCG84823

Phoenix reporting levels may exceed those referenced in the CAM protocol. Please refer to criteria sheet for comparisons to requested MCP standards.

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Sample Id Cross Reference

October 02, 2020

SDG I.D.: GCG84823

Project ID: LOCKHEED WILMINGTON MA 60552044.19

Client Id	Lab Id	Matrix
20A-TB02-092320-1	CG84823	GROUND WATER
20A-IDW1-092320-1	CG84824	GROUND WATER
20A-IDW2-092320-1	CG84825	GROUND WATER
20A-IDW3-092320-1	CG84826	GROUND WATER
20A-IDW4-092320-1	CG84827	GROUND WATER
20A-IDW5-092420-1	CG84828	GROUND WATER

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

October 02, 2020

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		09/23/20	15:00
Location Code:	AECOM-WILMINGTN	Received by:	B	09/24/20	15:48
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	127680				

Laboratory Data

SDG ID: GCG84823
Phoenix ID: CG84823

Project ID: LOCKHEED WILMINGTON MA 60552044.19
Client ID: 20A-TB02-092320-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Volatiles							
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	1	09/28/20	MH	SW8260C
1,1,1-Trichloroethane	ND	1.0	ug/L	1	09/28/20	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L	1	09/28/20	MH	SW8260C
1,1,2-Trichloroethane	ND	1.0	ug/L	1	09/28/20	MH	SW8260C
1,1-Dichloroethane	ND	1.0	ug/L	1	09/28/20	MH	SW8260C
1,1-Dichloroethene	ND	1.0	ug/L	1	09/28/20	MH	SW8260C
1,1-Dichloropropene	ND	1.0	ug/L	1	09/28/20	MH	SW8260C
1,2,3-Trichlorobenzene	ND	1.0	ug/L	1	09/28/20	MH	SW8260C
1,2,3-Trichloropropane	ND	0.50	ug/L	1	09/28/20	MH	SW8260C
1,2,4-Trichlorobenzene	ND	1.0	ug/L	1	09/28/20	MH	SW8260C
1,2,4-Trimethylbenzene	ND	1.0	ug/L	1	09/28/20	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	0.50	ug/L	1	09/28/20	MH	SW8260C
1,2-Dibromoethane	ND	0.50	ug/L	1	09/28/20	MH	SW8260C
1,2-Dichlorobenzene	ND	1.0	ug/L	1	09/28/20	MH	SW8260C
1,2-Dichloroethane	ND	0.60	ug/L	1	09/28/20	MH	SW8260C
1,2-Dichloropropane	ND	1.0	ug/L	1	09/28/20	MH	SW8260C
1,3,5-Trimethylbenzene	ND	1.0	ug/L	1	09/28/20	MH	SW8260C
1,3-Dichlorobenzene	ND	1.0	ug/L	1	09/28/20	MH	SW8260C
1,3-Dichloropropane	ND	1.0	ug/L	1	09/28/20	MH	SW8260C
1,4-Dichlorobenzene	ND	1.0	ug/L	1	09/28/20	MH	SW8260C
2,2-Dichloropropane	ND	1.0	ug/L	1	09/28/20	MH	SW8260C
2-Chlorotoluene	ND	1.0	ug/L	1	09/28/20	MH	SW8260C
2-Hexanone	ND	5.0	ug/L	1	09/28/20	MH	SW8260C
4-Chlorotoluene	ND	1.0	ug/L	1	09/28/20	MH	SW8260C
4-Methyl-2-pentanone	ND	5.0	ug/L	1	09/28/20	MH	SW8260C
Acetone	ND	25	ug/L	1	09/28/20	MH	SW8260C

Project ID: LOCKHEED WILMINGTON MA 60552044.19 Phoenix I.D.: CG84823

Client ID: 20A-TB02-092320-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	
Benzene	ND	0.70	ug/L	1	09/28/20	MH	SW8260C
Bromobenzene	ND	1.0	ug/L	1	09/28/20	MH	SW8260C
Bromochloromethane	ND	1.0	ug/L	1	09/28/20	MH	SW8260C
Bromodichloromethane	ND	0.50	ug/L	1	09/28/20	MH	SW8260C
Bromoform	ND	1.0	ug/L	1	09/28/20	MH	SW8260C
Bromomethane	ND	1.0	ug/L	1	09/28/20	MH	SW8260C
Carbon Disulfide	ND	5.0	ug/L	1	09/28/20	MH	SW8260C
Carbon tetrachloride	ND	1.0	ug/L	1	09/28/20	MH	SW8260C
Chlorobenzene	ND	1.0	ug/L	1	09/28/20	MH	SW8260C
Chloroethane	ND	1.0	ug/L	1	09/28/20	MH	SW8260C
Chloroform	ND	1.0	ug/L	1	09/28/20	MH	SW8260C
Chloromethane	ND	1.0	ug/L	1	09/28/20	MH	SW8260C
cis-1,2-Dichloroethene	ND	1.0	ug/L	1	09/28/20	MH	SW8260C
cis-1,3-Dichloropropene	ND	0.40	ug/L	1	09/28/20	MH	SW8260C
Dibromochloromethane	ND	0.50	ug/L	1	09/28/20	MH	SW8260C
Dibromomethane	ND	1.0	ug/L	1	09/28/20	MH	SW8260C
Dichlorodifluoromethane	ND	1.0	ug/L	1	09/28/20	MH	SW8260C
Ethylbenzene	ND	1.0	ug/L	1	09/28/20	MH	SW8260C
Hexachlorobutadiene	ND	0.40	ug/L	1	09/28/20	MH	SW8260C
Isopropylbenzene	ND	1.0	ug/L	1	09/28/20	MH	SW8260C
m&p-Xylene	ND	1.0	ug/L	1	09/28/20	MH	SW8260C
Methyl ethyl ketone	ND	5.0	ug/L	1	09/28/20	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	1.0	ug/L	1	09/28/20	MH	SW8260C
Methylene chloride	ND	1.0	ug/L	1	09/28/20	MH	SW8260C
Naphthalene	ND	1.0	ug/L	1	09/28/20	MH	SW8260C
n-Butylbenzene	ND	1.0	ug/L	1	09/28/20	MH	SW8260C
n-Propylbenzene	ND	1.0	ug/L	1	09/28/20	MH	SW8260C
o-Xylene	ND	1.0	ug/L	1	09/28/20	MH	SW8260C
p-Isopropyltoluene	ND	1.0	ug/L	1	09/28/20	MH	SW8260C
sec-Butylbenzene	ND	1.0	ug/L	1	09/28/20	MH	SW8260C
Styrene	ND	1.0	ug/L	1	09/28/20	MH	SW8260C
tert-Butylbenzene	ND	1.0	ug/L	1	09/28/20	MH	SW8260C
Tetrachloroethene	ND	1.0	ug/L	1	09/28/20	MH	SW8260C
Tetrahydrofuran (THF)	ND	2.5	ug/L	1	09/28/20	MH	SW8260C
Toluene	ND	1.0	ug/L	1	09/28/20	MH	SW8260C
trans-1,2-Dichloroethene	ND	1.0	ug/L	1	09/28/20	MH	SW8260C
trans-1,3-Dichloropropene	ND	0.40	ug/L	1	09/28/20	MH	SW8260C
Trichloroethene	ND	1.0	ug/L	1	09/28/20	MH	SW8260C
Trichlorofluoromethane	ND	1.0	ug/L	1	09/28/20	MH	SW8260C
Trichlorotrifluoroethane	ND	1.0	ug/L	1	09/28/20	MH	SW8260C
Vinyl chloride	ND	1.0	ug/L	1	09/28/20	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	99		%	1	09/28/20	MH	70 - 130 %
% Bromofluorobenzene	98		%	1	09/28/20	MH	70 - 130 %
% Dibromofluoromethane	102		%	1	09/28/20	MH	70 - 130 %
% Toluene-d8	99		%	1	09/28/20	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	100	ug/L	1	09/28/20	MH	SW8260C (OXY)
Diethyl ether	ND	1.0	ug/L	1	09/28/20	MH	SW8260C (OXY)

Ver 1

Project ID: LOCKHEED WILMINGTON MA 60552044.19 Phoenix I.D.: CG84823

Client ID: 20A-TB02-092320-1

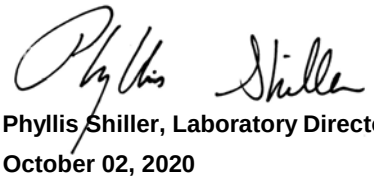
Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	
Di-isopropyl ether	ND	1.0	ug/L	1	09/28/20	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	1.0	ug/L	1	09/28/20	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	1.0	ug/L	1	09/28/20	MH	SW8260C (OXY)

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

TRIP BLANK INCLUDED.

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.



Phyllis Shiller, Laboratory Director

October 02, 2020

Reviewed and Released by: Greg Lawrence, Assistant Lab Director

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

October 02, 2020

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		09/23/20	15:15
Location Code:	AECOM-WILMINGTN	Received by:	B	09/24/20	15:48
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	127680				

Laboratory Data

SDG ID: GCG84823
Phoenix ID: CG84824

Project ID: LOCKHEED WILMINGTON MA 60552044.19
Client ID: 20A-IDW1-092320-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Volatiles							
1,1,1,2-Tetrachloroethane	ND	5.0	ug/L	5	09/30/20	MH	SW8260C
1,1,1-Trichloroethane	ND	5.0	ug/L	5	09/30/20	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	2.5	ug/L	5	09/30/20	MH	SW8260C
1,1,2-Trichloroethane	ND	5.0	ug/L	5	09/30/20	MH	SW8260C
1,1-Dichloroethane	18	5.0	ug/L	5	09/30/20	MH	SW8260C
1,1-Dichloroethene	ND	5.0	ug/L	5	09/30/20	MH	SW8260C
1,1-Dichloropropene	ND	5.0	ug/L	5	09/30/20	MH	SW8260C
1,2,3-Trichlorobenzene	ND	5.0	ug/L	5	09/30/20	MH	SW8260C
1,2,3-Trichloropropane	ND	2.5	ug/L	5	09/30/20	MH	SW8260C
1,2,4-Trichlorobenzene	ND	5.0	ug/L	5	09/30/20	MH	SW8260C
1,2,4-Trimethylbenzene	ND	5.0	ug/L	5	09/30/20	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	2.5	ug/L	5	09/30/20	MH	SW8260C
1,2-Dibromoethane	ND	2.5	ug/L	5	09/30/20	MH	SW8260C
1,2-Dichlorobenzene	ND	5.0	ug/L	5	09/30/20	MH	SW8260C
1,2-Dichloroethane	ND	3.0	ug/L	5	09/30/20	MH	SW8260C
1,2-Dichloropropane	ND	3.0	ug/L	5	09/30/20	MH	SW8260C
1,3,5-Trimethylbenzene	ND	5.0	ug/L	5	09/30/20	MH	SW8260C
1,3-Dichlorobenzene	ND	5.0	ug/L	5	09/30/20	MH	SW8260C
1,3-Dichloropropane	ND	5.0	ug/L	5	09/30/20	MH	SW8260C
1,4-Dichlorobenzene	ND	5.0	ug/L	5	09/30/20	MH	SW8260C
2,2-Dichloropropane	ND	5.0	ug/L	5	09/30/20	MH	SW8260C
2-Chlorotoluene	ND	5.0	ug/L	5	09/30/20	MH	SW8260C
2-Hexanone	ND	25	ug/L	5	09/30/20	MH	SW8260C
4-Chlorotoluene	ND	5.0	ug/L	5	09/30/20	MH	SW8260C
4-Methyl-2-pentanone	ND	25	ug/L	5	09/30/20	MH	SW8260C
Acetone	ND	130	ug/L	5	09/30/20	MH	SW8260C

Project ID: LOCKHEED WILMINGTON MA 60552044.19 Phoenix I.D.: CG84824

Client ID: 20A-IDW1-092320-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	
Benzene	ND	3.5	ug/L	5	09/30/20	MH	SW8260C
Bromobenzene	ND	5.0	ug/L	5	09/30/20	MH	SW8260C
Bromochloromethane	ND	5.0	ug/L	5	09/30/20	MH	SW8260C
Bromodichloromethane	ND	2.5	ug/L	5	09/30/20	MH	SW8260C
Bromoform	ND	4.0	ug/L	5	09/30/20	MH	SW8260C
Bromomethane	ND	5.0	ug/L	5	09/30/20	MH	SW8260C
Carbon Disulfide	ND	25	ug/L	5	09/30/20	MH	SW8260C
Carbon tetrachloride	ND	2.5	ug/L	5	09/30/20	MH	SW8260C
Chlorobenzene	ND	5.0	ug/L	5	09/30/20	MH	SW8260C
Chloroethane	ND	5.0	ug/L	5	09/30/20	MH	SW8260C
Chloroform	ND	5.0	ug/L	5	09/30/20	MH	SW8260C
Chloromethane	ND	5.0	ug/L	5	09/30/20	MH	SW8260C
cis-1,2-Dichloroethene	570	20	ug/L	20	09/28/20	MH	SW8260C
cis-1,3-Dichloropropene	ND	2.5	ug/L	5	09/30/20	MH	SW8260C
Dibromochloromethane	ND	2.5	ug/L	5	09/30/20	MH	SW8260C
Dibromomethane	ND	5.0	ug/L	5	09/30/20	MH	SW8260C
Dichlorodifluoromethane	ND	5.0	ug/L	5	09/30/20	MH	SW8260C
Ethylbenzene	ND	5.0	ug/L	5	09/30/20	MH	SW8260C
Hexachlorobutadiene	ND	2.5	ug/L	5	09/30/20	MH	SW8260C
Isopropylbenzene	ND	5.0	ug/L	5	09/30/20	MH	SW8260C
m&p-Xylene	ND	5.0	ug/L	5	09/30/20	MH	SW8260C
Methyl ethyl ketone	ND	25	ug/L	5	09/30/20	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	5.0	ug/L	5	09/30/20	MH	SW8260C
Methylene chloride	ND	5.0	ug/L	5	09/30/20	MH	SW8260C
Naphthalene	ND	5.0	ug/L	5	09/30/20	MH	SW8260C
n-Butylbenzene	ND	5.0	ug/L	5	09/30/20	MH	SW8260C
n-Propylbenzene	ND	5.0	ug/L	5	09/30/20	MH	SW8260C
o-Xylene	ND	5.0	ug/L	5	09/30/20	MH	SW8260C
p-Isopropyltoluene	ND	5.0	ug/L	5	09/30/20	MH	SW8260C
sec-Butylbenzene	ND	5.0	ug/L	5	09/30/20	MH	SW8260C
Styrene	ND	5.0	ug/L	5	09/30/20	MH	SW8260C
tert-Butylbenzene	ND	5.0	ug/L	5	09/30/20	MH	SW8260C
Tetrachloroethene	100	5.0	ug/L	5	09/30/20	MH	SW8260C
Tetrahydrofuran (THF)	ND	13	ug/L	5	09/30/20	MH	SW8260C
Toluene	46	5.0	ug/L	5	09/30/20	MH	SW8260C
trans-1,2-Dichloroethene	8.1	5.0	ug/L	5	09/30/20	MH	SW8260C
trans-1,3-Dichloropropene	ND	2.5	ug/L	5	09/30/20	MH	SW8260C
Trichloroethene	480	5.0	ug/L	5	09/30/20	MH	SW8260C
Trichlorofluoromethane	ND	5.0	ug/L	5	09/30/20	MH	SW8260C
Trichlorotrifluoroethane	ND	5.0	ug/L	5	09/30/20	MH	SW8260C
Vinyl chloride	20	5.0	ug/L	5	09/30/20	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4 (5x)	99		%	5	09/30/20	MH	70 - 130 %
% Bromofluorobenzene (5x)	93		%	5	09/30/20	MH	70 - 130 %
% Dibromofluoromethane (5x)	100		%	5	09/30/20	MH	70 - 130 %
% Toluene-d8 (5x)	96		%	5	09/30/20	MH	70 - 130 %
% 1,2-dichlorobenzene-d4 (20x)	99		%	20	09/28/20	MH	70 - 130 %
% Bromofluorobenzene (20x)	100		%	20	09/28/20	MH	70 - 130 %
% Dibromofluoromethane (20x)	100		%	20	09/28/20	MH	70 - 130 %

Project ID: LOCKHEED WILMINGTON MA 60552044.19 Phoenix I.D.: CG84824
Client ID: 20A-IDW1-092320-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	
% Toluene-d8 (20x)	100		%	20	09/28/20	MH	70 - 130 %

Oxygenates& Dioxane

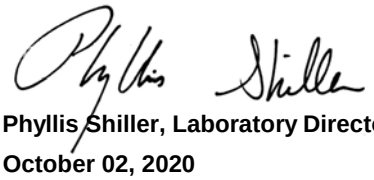
1,4-dioxane	ND	500	ug/L	5	09/30/20	MH	SW8260C (OXY)
Diethyl ether	ND	5.0	ug/L	5	09/30/20	MH	SW8260C (OXY)
Di-isopropyl ether	ND	5.0	ug/L	5	09/30/20	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	5.0	ug/L	5	09/30/20	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	5.0	ug/L	5	09/30/20	MH	SW8260C (OXY)

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

Volatile Comment:
Elevated reporting limits for volatiles due to the presence of target and/or non-target compounds.

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
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Phyllis Shiller, Laboratory Director
October 02, 2020
Reviewed and Released by: Greg Lawrence, Assistant Lab Director

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

October 02, 2020

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		09/23/20	15:20
Location Code:	AECOM-WILMINGTN	Received by:	B	09/24/20	15:48
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	127680				

Laboratory Data

SDG ID: GCG84823
Phoenix ID: CG84825

Project ID: LOCKHEED WILMINGTON MA 60552044.19
Client ID: 20A-IDW2-092320-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Volatiles							
1,1,1,2-Tetrachloroethane	ND	5.0	ug/L	5	09/30/20	MH	SW8260C
1,1,1-Trichloroethane	ND	5.0	ug/L	5	09/30/20	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	2.5	ug/L	5	09/30/20	MH	SW8260C
1,1,2-Trichloroethane	ND	5.0	ug/L	5	09/30/20	MH	SW8260C
1,1-Dichloroethane	12	5.0	ug/L	5	09/30/20	MH	SW8260C
1,1-Dichloroethene	ND	5.0	ug/L	5	09/30/20	MH	SW8260C
1,1-Dichloropropene	ND	5.0	ug/L	5	09/30/20	MH	SW8260C
1,2,3-Trichlorobenzene	ND	5.0	ug/L	5	09/30/20	MH	SW8260C
1,2,3-Trichloropropane	ND	2.5	ug/L	5	09/30/20	MH	SW8260C
1,2,4-Trichlorobenzene	ND	5.0	ug/L	5	09/30/20	MH	SW8260C
1,2,4-Trimethylbenzene	ND	5.0	ug/L	5	09/30/20	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	2.5	ug/L	5	09/30/20	MH	SW8260C
1,2-Dibromoethane	ND	2.5	ug/L	5	09/30/20	MH	SW8260C
1,2-Dichlorobenzene	ND	5.0	ug/L	5	09/30/20	MH	SW8260C
1,2-Dichloroethane	ND	3.0	ug/L	5	09/30/20	MH	SW8260C
1,2-Dichloropropane	ND	3.0	ug/L	5	09/30/20	MH	SW8260C
1,3,5-Trimethylbenzene	ND	5.0	ug/L	5	09/30/20	MH	SW8260C
1,3-Dichlorobenzene	ND	5.0	ug/L	5	09/30/20	MH	SW8260C
1,3-Dichloropropane	ND	5.0	ug/L	5	09/30/20	MH	SW8260C
1,4-Dichlorobenzene	ND	5.0	ug/L	5	09/30/20	MH	SW8260C
2,2-Dichloropropane	ND	5.0	ug/L	5	09/30/20	MH	SW8260C
2-Chlorotoluene	ND	5.0	ug/L	5	09/30/20	MH	SW8260C
2-Hexanone	ND	25	ug/L	5	09/30/20	MH	SW8260C
4-Chlorotoluene	ND	5.0	ug/L	5	09/30/20	MH	SW8260C
4-Methyl-2-pentanone	ND	25	ug/L	5	09/30/20	MH	SW8260C
Acetone	ND	130	ug/L	5	09/30/20	MH	SW8260C

Project ID: LOCKHEED WILMINGTON MA 60552044.19 Phoenix I.D.: CG84825

Client ID: 20A-IDW2-092320-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	
Benzene	ND	3.5	ug/L	5	09/30/20	MH	SW8260C
Bromobenzene	ND	5.0	ug/L	5	09/30/20	MH	SW8260C
Bromochloromethane	ND	5.0	ug/L	5	09/30/20	MH	SW8260C
Bromodichloromethane	ND	2.5	ug/L	5	09/30/20	MH	SW8260C
Bromoform	ND	4.0	ug/L	5	09/30/20	MH	SW8260C
Bromomethane	ND	5.0	ug/L	5	09/30/20	MH	SW8260C
Carbon Disulfide	ND	25	ug/L	5	09/30/20	MH	SW8260C
Carbon tetrachloride	ND	2.5	ug/L	5	09/30/20	MH	SW8260C
Chlorobenzene	ND	5.0	ug/L	5	09/30/20	MH	SW8260C
Chloroethane	ND	5.0	ug/L	5	09/30/20	MH	SW8260C
Chloroform	ND	5.0	ug/L	5	09/30/20	MH	SW8260C
Chloromethane	ND	5.0	ug/L	5	09/30/20	MH	SW8260C
cis-1,2-Dichloroethene	91	5.0	ug/L	5	09/30/20	MH	SW8260C
cis-1,3-Dichloropropene	ND	2.5	ug/L	5	09/30/20	MH	SW8260C
Dibromochloromethane	ND	2.5	ug/L	5	09/30/20	MH	SW8260C
Dibromomethane	ND	5.0	ug/L	5	09/30/20	MH	SW8260C
Dichlorodifluoromethane	ND	5.0	ug/L	5	09/30/20	MH	SW8260C
Ethylbenzene	ND	5.0	ug/L	5	09/30/20	MH	SW8260C
Hexachlorobutadiene	ND	2.5	ug/L	5	09/30/20	MH	SW8260C
Isopropylbenzene	ND	5.0	ug/L	5	09/30/20	MH	SW8260C
m&p-Xylene	ND	5.0	ug/L	5	09/30/20	MH	SW8260C
Methyl ethyl ketone	ND	25	ug/L	5	09/30/20	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	5.0	ug/L	5	09/30/20	MH	SW8260C
Methylene chloride	ND	5.0	ug/L	5	09/30/20	MH	SW8260C
Naphthalene	ND	5.0	ug/L	5	09/30/20	MH	SW8260C
n-Butylbenzene	ND	5.0	ug/L	5	09/30/20	MH	SW8260C
n-Propylbenzene	ND	5.0	ug/L	5	09/30/20	MH	SW8260C
o-Xylene	ND	5.0	ug/L	5	09/30/20	MH	SW8260C
p-Isopropyltoluene	ND	5.0	ug/L	5	09/30/20	MH	SW8260C
sec-Butylbenzene	ND	5.0	ug/L	5	09/30/20	MH	SW8260C
Styrene	ND	5.0	ug/L	5	09/30/20	MH	SW8260C
tert-Butylbenzene	ND	5.0	ug/L	5	09/30/20	MH	SW8260C
Tetrachloroethene	230	5.0	ug/L	5	09/30/20	MH	SW8260C
Tetrahydrofuran (THF)	ND	13	ug/L	5	09/30/20	MH	SW8260C
Toluene	60	5.0	ug/L	5	09/30/20	MH	SW8260C
trans-1,2-Dichloroethene	ND	5.0	ug/L	5	09/30/20	MH	SW8260C
trans-1,3-Dichloropropene	ND	2.5	ug/L	5	09/30/20	MH	SW8260C
Trichloroethene	530	20	ug/L	20	09/28/20	MH	SW8260C
Trichlorofluoromethane	ND	5.0	ug/L	5	09/30/20	MH	SW8260C
Trichlorotrifluoroethane	ND	5.0	ug/L	5	09/30/20	MH	SW8260C
Vinyl chloride	5.4	5.0	ug/L	5	09/30/20	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4 (5x)	100		%	5	09/30/20	MH	70 - 130 %
% Bromofluorobenzene (5x)	94		%	5	09/30/20	MH	70 - 130 %
% Dibromofluoromethane (5x)	99		%	5	09/30/20	MH	70 - 130 %
% Toluene-d8 (5x)	96		%	5	09/30/20	MH	70 - 130 %
% 1,2-dichlorobenzene-d4 (20x)	99		%	20	09/28/20	MH	70 - 130 %
% Bromofluorobenzene (20x)	100		%	20	09/28/20	MH	70 - 130 %
% Dibromofluoromethane (20x)	97		%	20	09/28/20	MH	70 - 130 %

Project ID: LOCKHEED WILMINGTON MA 60552044.19 Phoenix I.D.: CG84825
Client ID: 20A-IDW2-092320-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	
% Toluene-d8 (20x)	100		%	20	09/28/20	MH	70 - 130 %

Oxygenates& Dioxane

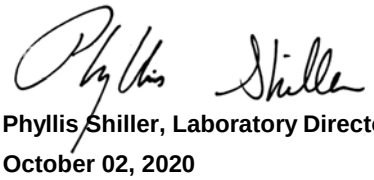
1,4-dioxane	ND	500	ug/L	5	09/30/20	MH	SW8260C (OXY)
Diethyl ether	ND	5.0	ug/L	5	09/30/20	MH	SW8260C (OXY)
Di-isopropyl ether	ND	5.0	ug/L	5	09/30/20	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	5.0	ug/L	5	09/30/20	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	5.0	ug/L	5	09/30/20	MH	SW8260C (OXY)

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

Volatile Comment:
Elevated reporting limits for volatiles due to the presence of target and/or non-target compounds.

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.



Phyllis Shiller, Laboratory Director
October 02, 2020
Reviewed and Released by: Greg Lawrence, Assistant Lab Director

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

October 02, 2020

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		09/23/20	15:25
Location Code:	AECOM-WILMINGTN	Received by:	B	09/24/20	15:48
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	127680				

Laboratory Data

SDG ID: GCG84823
Phoenix ID: CG84826

Project ID: LOCKHEED WILMINGTON MA 60552044.19
Client ID: 20A-IDW3-092320-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Volatiles							
1,1,1,2-Tetrachloroethane	ND	5.0	ug/L	10	09/30/20	MH	SW8260C
1,1,1-Trichloroethane	ND	10	ug/L	10	09/30/20	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	5.0	ug/L	10	09/30/20	MH	SW8260C
1,1,2-Trichloroethane	ND	5.0	ug/L	10	09/30/20	MH	SW8260C
1,1-Dichloroethane	23	10	ug/L	10	09/30/20	MH	SW8260C
1,1-Dichloroethene	ND	7.0	ug/L	10	09/30/20	MH	SW8260C
1,1-Dichloropropene	ND	10	ug/L	10	09/30/20	MH	SW8260C
1,2,3-Trichlorobenzene	ND	7.0	ug/L	10	09/30/20	MH	SW8260C
1,2,3-Trichloropropane	ND	5.0	ug/L	10	09/30/20	MH	SW8260C
1,2,4-Trichlorobenzene	ND	10	ug/L	10	09/30/20	MH	SW8260C
1,2,4-Trimethylbenzene	ND	10	ug/L	10	09/30/20	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	5.0	ug/L	10	09/30/20	MH	SW8260C
1,2-Dibromoethane	ND	5.0	ug/L	10	09/30/20	MH	SW8260C
1,2-Dichlorobenzene	ND	10	ug/L	10	09/30/20	MH	SW8260C
1,2-Dichloroethane	ND	5.0	ug/L	10	09/30/20	MH	SW8260C
1,2-Dichloropropane	ND	5.0	ug/L	10	09/30/20	MH	SW8260C
1,3,5-Trimethylbenzene	ND	10	ug/L	10	09/30/20	MH	SW8260C
1,3-Dichlorobenzene	ND	10	ug/L	10	09/30/20	MH	SW8260C
1,3-Dichloropropane	ND	10	ug/L	10	09/30/20	MH	SW8260C
1,4-Dichlorobenzene	ND	5.0	ug/L	10	09/30/20	MH	SW8260C
2,2-Dichloropropane	ND	10	ug/L	10	09/30/20	MH	SW8260C
2-Chlorotoluene	ND	10	ug/L	10	09/30/20	MH	SW8260C
2-Hexanone	ND	50	ug/L	10	09/30/20	MH	SW8260C
4-Chlorotoluene	ND	10	ug/L	10	09/30/20	MH	SW8260C
4-Methyl-2-pentanone	ND	50	ug/L	10	09/30/20	MH	SW8260C
Acetone	ND	250	ug/L	10	09/30/20	MH	SW8260C

Ver 1

Project ID: LOCKHEED WILMINGTON MA 60552044.19 Phoenix I.D.: CG84826

Client ID: 20A-IDW3-092320-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	
Benzene	ND	5.0	ug/L	10	09/30/20	MH	SW8260C
Bromobenzene	ND	10	ug/L	10	09/30/20	MH	SW8260C
Bromochloromethane	ND	10	ug/L	10	09/30/20	MH	SW8260C
Bromodichloromethane	ND	5.0	ug/L	10	09/30/20	MH	SW8260C
Bromoform	ND	5.0	ug/L	10	09/30/20	MH	SW8260C
Bromomethane	ND	7.0	ug/L	10	09/30/20	MH	SW8260C
Carbon Disulfide	ND	50	ug/L	10	09/30/20	MH	SW8260C
Carbon tetrachloride	ND	5.0	ug/L	10	09/30/20	MH	SW8260C
Chlorobenzene	ND	10	ug/L	10	09/30/20	MH	SW8260C
Chloroethane	ND	10	ug/L	10	09/30/20	MH	SW8260C
Chloroform	ND	10	ug/L	10	09/30/20	MH	SW8260C
Chloromethane	ND	10	ug/L	10	09/30/20	MH	SW8260C
cis-1,2-Dichloroethene	270	10	ug/L	10	09/30/20	MH	SW8260C
cis-1,3-Dichloropropene	ND	5.0	ug/L	10	09/30/20	MH	SW8260C
Dibromochloromethane	ND	5.0	ug/L	10	09/30/20	MH	SW8260C
Dibromomethane	ND	8.3	ug/L	10	09/30/20	MH	SW8260C
Dichlorodifluoromethane	ND	10	ug/L	10	09/30/20	MH	SW8260C
Ethylbenzene	ND	10	ug/L	10	09/30/20	MH	SW8260C
Hexachlorobutadiene	ND	5.0	ug/L	10	09/30/20	MH	SW8260C
Isopropylbenzene	ND	10	ug/L	10	09/30/20	MH	SW8260C
m&p-Xylene	ND	10	ug/L	10	09/30/20	MH	SW8260C
Methyl ethyl ketone	ND	50	ug/L	10	09/30/20	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	10	ug/L	10	09/30/20	MH	SW8260C
Methylene chloride	ND	10	ug/L	10	09/30/20	MH	SW8260C
Naphthalene	ND	10	ug/L	10	09/30/20	MH	SW8260C
n-Butylbenzene	ND	10	ug/L	10	09/30/20	MH	SW8260C
n-Propylbenzene	ND	10	ug/L	10	09/30/20	MH	SW8260C
o-Xylene	ND	10	ug/L	10	09/30/20	MH	SW8260C
p-Isopropyltoluene	ND	10	ug/L	10	09/30/20	MH	SW8260C
sec-Butylbenzene	ND	10	ug/L	10	09/30/20	MH	SW8260C
Styrene	ND	10	ug/L	10	09/30/20	MH	SW8260C
tert-Butylbenzene	ND	10	ug/L	10	09/30/20	MH	SW8260C
Tetrachloroethene	540	10	ug/L	10	09/30/20	MH	SW8260C
Tetrahydrofuran (THF)	ND	25	ug/L	10	09/30/20	MH	SW8260C
Toluene	35	10	ug/L	10	09/30/20	MH	SW8260C
trans-1,2-Dichloroethene	ND	10	ug/L	10	09/30/20	MH	SW8260C
trans-1,3-Dichloropropene	ND	5.0	ug/L	10	09/30/20	MH	SW8260C
Trichloroethene	1300	20	ug/L	20	09/28/20	MH	SW8260C
Trichlorofluoromethane	ND	10	ug/L	10	09/30/20	MH	SW8260C
Trichlorotrifluoroethane	ND	10	ug/L	10	09/30/20	MH	SW8260C
Vinyl chloride	21	10	ug/L	10	09/30/20	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4 (10x)	99		%	10	09/30/20	MH	70 - 130 %
% Bromofluorobenzene (10x)	95		%	10	09/30/20	MH	70 - 130 %
% Dibromofluoromethane (10x)	102		%	10	09/30/20	MH	70 - 130 %
% Toluene-d8 (10x)	96		%	10	09/30/20	MH	70 - 130 %
% 1,2-dichlorobenzene-d4 (20x)	100		%	20	09/28/20	MH	70 - 130 %
% Bromofluorobenzene (20x)	99		%	20	09/28/20	MH	70 - 130 %
% Dibromofluoromethane (20x)	100		%	20	09/28/20	MH	70 - 130 %

Project ID: LOCKHEED WILMINGTON MA 60552044.19 Phoenix I.D.: CG84826
Client ID: 20A-IDW3-092320-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	
% Toluene-d8 (20x)	99		%	20	09/28/20	MH	70 - 130 %

Oxygenates& Dioxane

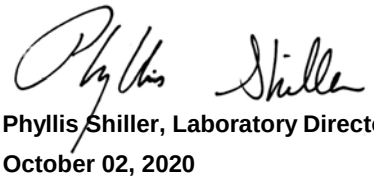
1,4-dioxane	ND	1000	ug/L	10	09/30/20	MH	SW8260C (OXY)
Diethyl ether	ND	10	ug/L	10	09/30/20	MH	SW8260C (OXY)
Di-isopropyl ether	ND	10	ug/L	10	09/30/20	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	10	ug/L	10	09/30/20	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	10	ug/L	10	09/30/20	MH	SW8260C (OXY)

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

Volatile Comment:
Elevated reporting limits for volatiles due to the presence of target and/or non-target compounds.

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
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Phyllis Shiller, Laboratory Director
October 02, 2020
Reviewed and Released by: Greg Lawrence, Assistant Lab Director

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

October 02, 2020

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		09/23/20	15:30
Location Code:	AECOM-WILMINGTN	Received by:	B	09/24/20	15:48
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	127680				

Laboratory Data

SDG ID: GCG84823
Phoenix ID: CG84827

Project ID: LOCKHEED WILMINGTON MA 60552044.19
Client ID: 20A-IDW4-092320-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Volatiles							
1,1,1,2-Tetrachloroethane	ND	10	ug/L	20	09/28/20	MH	SW8260C
1,1,1-Trichloroethane	ND	20	ug/L	20	09/28/20	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	10	ug/L	20	09/28/20	MH	SW8260C
1,1,2-Trichloroethane	ND	10	ug/L	20	09/28/20	MH	SW8260C
1,1-Dichloroethane	24	20	ug/L	20	09/28/20	MH	SW8260C
1,1-Dichloroethene	ND	10	ug/L	20	09/28/20	MH	SW8260C
1,1-Dichloropropene	ND	20	ug/L	20	09/28/20	MH	SW8260C
1,2,3-Trichlorobenzene	ND	10	ug/L	20	09/28/20	MH	SW8260C
1,2,3-Trichloropropane	ND	10	ug/L	20	09/28/20	MH	SW8260C
1,2,4-Trichlorobenzene	ND	20	ug/L	20	09/28/20	MH	SW8260C
1,2,4-Trimethylbenzene	ND	20	ug/L	20	09/28/20	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	10	ug/L	20	09/28/20	MH	SW8260C
1,2-Dibromoethane	ND	10	ug/L	20	09/28/20	MH	SW8260C
1,2-Dichlorobenzene	ND	20	ug/L	20	09/28/20	MH	SW8260C
1,2-Dichloroethane	ND	10	ug/L	20	09/28/20	MH	SW8260C
1,2-Dichloropropane	ND	10	ug/L	20	09/28/20	MH	SW8260C
1,3,5-Trimethylbenzene	ND	20	ug/L	20	09/28/20	MH	SW8260C
1,3-Dichlorobenzene	ND	20	ug/L	20	09/28/20	MH	SW8260C
1,3-Dichloropropane	ND	20	ug/L	20	09/28/20	MH	SW8260C
1,4-Dichlorobenzene	ND	10	ug/L	20	09/28/20	MH	SW8260C
2,2-Dichloropropane	ND	20	ug/L	20	09/28/20	MH	SW8260C
2-Chlorotoluene	ND	20	ug/L	20	09/28/20	MH	SW8260C
2-Hexanone	ND	100	ug/L	20	09/28/20	MH	SW8260C
4-Chlorotoluene	ND	20	ug/L	20	09/28/20	MH	SW8260C
4-Methyl-2-pentanone	ND	100	ug/L	20	09/28/20	MH	SW8260C
Acetone	ND	500	ug/L	20	09/28/20	MH	SW8260C

Ver 1

Project ID: LOCKHEED WILMINGTON MA 60552044.19 Phoenix I.D.: CG84827

Client ID: 20A-IDW4-092320-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	
Benzene	ND	10	ug/L	20	09/28/20	MH	SW8260C
Bromobenzene	ND	20	ug/L	20	09/28/20	MH	SW8260C
Bromochloromethane	ND	20	ug/L	20	09/28/20	MH	SW8260C
Bromodichloromethane	ND	10	ug/L	20	09/28/20	MH	SW8260C
Bromoform	ND	10	ug/L	20	09/28/20	MH	SW8260C
Bromomethane	ND	10	ug/L	20	09/28/20	MH	SW8260C
Carbon Disulfide	ND	100	ug/L	20	09/28/20	MH	SW8260C
Carbon tetrachloride	ND	10	ug/L	20	09/28/20	MH	SW8260C
Chlorobenzene	ND	20	ug/L	20	09/28/20	MH	SW8260C
Chloroethane	ND	20	ug/L	20	09/28/20	MH	SW8260C
Chloroform	ND	20	ug/L	20	09/28/20	MH	SW8260C
Chloromethane	ND	20	ug/L	20	09/28/20	MH	SW8260C
cis-1,2-Dichloroethene	87	20	ug/L	20	09/28/20	MH	SW8260C
cis-1,3-Dichloropropene	ND	10	ug/L	20	09/28/20	MH	SW8260C
Dibromochloromethane	ND	10	ug/L	20	09/28/20	MH	SW8260C
Dibromomethane	ND	10	ug/L	20	09/28/20	MH	SW8260C
Dichlorodifluoromethane	ND	20	ug/L	20	09/28/20	MH	SW8260C
Ethylbenzene	ND	20	ug/L	20	09/28/20	MH	SW8260C
Hexachlorobutadiene	ND	10	ug/L	20	09/28/20	MH	SW8260C
Isopropylbenzene	ND	20	ug/L	20	09/28/20	MH	SW8260C
m&p-Xylene	ND	20	ug/L	20	09/28/20	MH	SW8260C
Methyl ethyl ketone	ND	100	ug/L	20	09/28/20	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	20	ug/L	20	09/28/20	MH	SW8260C
Methylene chloride	ND	20	ug/L	20	09/28/20	MH	SW8260C
Naphthalene	ND	20	ug/L	20	09/28/20	MH	SW8260C
n-Butylbenzene	ND	20	ug/L	20	09/28/20	MH	SW8260C
n-Propylbenzene	ND	20	ug/L	20	09/28/20	MH	SW8260C
o-Xylene	ND	20	ug/L	20	09/28/20	MH	SW8260C
p-Isopropyltoluene	ND	20	ug/L	20	09/28/20	MH	SW8260C
sec-Butylbenzene	ND	20	ug/L	20	09/28/20	MH	SW8260C
Styrene	ND	20	ug/L	20	09/28/20	MH	SW8260C
tert-Butylbenzene	ND	20	ug/L	20	09/28/20	MH	SW8260C
Tetrachloroethene	570	20	ug/L	20	09/28/20	MH	SW8260C
Tetrahydrofuran (THF)	ND	50	ug/L	20	09/28/20	MH	SW8260C
Toluene	50	20	ug/L	20	09/28/20	MH	SW8260C
trans-1,2-Dichloroethene	ND	20	ug/L	20	09/28/20	MH	SW8260C
trans-1,3-Dichloropropene	ND	10	ug/L	20	09/28/20	MH	SW8260C
Trichloroethene	2300	50	ug/L	50	09/30/20	MH	SW8260C
Trichlorofluoromethane	ND	20	ug/L	20	09/28/20	MH	SW8260C
Trichlorotrifluoroethane	ND	20	ug/L	20	09/28/20	MH	SW8260C
Vinyl chloride	ND	10	ug/L	20	09/28/20	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4 (20x)	98		%	20	09/28/20	MH	70 - 130 %
% Bromofluorobenzene (20x)	99		%	20	09/28/20	MH	70 - 130 %
% Dibromofluoromethane (20x)	99		%	20	09/28/20	MH	70 - 130 %
% Toluene-d8 (20x)	100		%	20	09/28/20	MH	70 - 130 %
% 1,2-dichlorobenzene-d4 (50x)	100		%	50	09/30/20	MH	70 - 130 %
% Bromofluorobenzene (50x)	93		%	50	09/30/20	MH	70 - 130 %
% Dibromofluoromethane (50x)	104		%	50	09/30/20	MH	70 - 130 %

Project ID: LOCKHEED WILMINGTON MA 60552044.19 Phoenix I.D.: CG84827
Client ID: 20A-IDW4-092320-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	
% Toluene-d8 (50x)	99		%	50	09/30/20	MH	70 - 130 %

Oxygenates& Dioxane

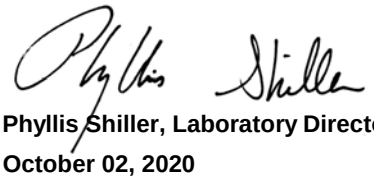
1,4-dioxane	ND	2000	ug/L	20	09/28/20	MH	SW8260C (OXY)
Diethyl ether	ND	20	ug/L	20	09/28/20	MH	SW8260C (OXY)
Di-isopropyl ether	ND	20	ug/L	20	09/28/20	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	20	ug/L	20	09/28/20	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	20	ug/L	20	09/28/20	MH	SW8260C (OXY)

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

Volatile Comment:
Elevated reporting limits for volatiles due to the presence of target and/or non-target compounds.

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.



Phyllis Shiller, Laboratory Director
October 02, 2020
Reviewed and Released by: Greg Lawrence, Assistant Lab Director

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

October 02, 2020

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		09/24/20	14:00
Location Code:	AECOM-WILMINGTN	Received by:	B	09/24/20	15:48
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	127680				

Laboratory Data

SDG ID: GCG84823
Phoenix ID: CG84828

Project ID: LOCKHEED WILMINGTON MA 60552044.19
Client ID: 20A-IDW5-092420-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Volatiles							
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	1	09/30/20	MH	SW8260C
1,1,1-Trichloroethane	ND	1.0	ug/L	1	09/30/20	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L	1	09/30/20	MH	SW8260C
1,1,2-Trichloroethane	ND	1.0	ug/L	1	09/30/20	MH	SW8260C
1,1-Dichloroethane	6.3	1.0	ug/L	1	09/30/20	MH	SW8260C
1,1-Dichloroethene	ND	1.0	ug/L	1	09/30/20	MH	SW8260C
1,1-Dichloropropene	ND	1.0	ug/L	1	09/30/20	MH	SW8260C
1,2,3-Trichlorobenzene	ND	1.0	ug/L	1	09/30/20	MH	SW8260C
1,2,3-Trichloropropane	ND	0.50	ug/L	1	09/30/20	MH	SW8260C
1,2,4-Trichlorobenzene	ND	1.0	ug/L	1	09/30/20	MH	SW8260C
1,2,4-Trimethylbenzene	ND	1.0	ug/L	1	09/30/20	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	0.50	ug/L	1	09/30/20	MH	SW8260C
1,2-Dibromoethane	ND	0.50	ug/L	1	09/30/20	MH	SW8260C
1,2-Dichlorobenzene	ND	1.0	ug/L	1	09/30/20	MH	SW8260C
1,2-Dichloroethane	ND	0.60	ug/L	1	09/30/20	MH	SW8260C
1,2-Dichloropropane	ND	1.0	ug/L	1	09/30/20	MH	SW8260C
1,3,5-Trimethylbenzene	ND	1.0	ug/L	1	09/30/20	MH	SW8260C
1,3-Dichlorobenzene	ND	1.0	ug/L	1	09/30/20	MH	SW8260C
1,3-Dichloropropane	ND	1.0	ug/L	1	09/30/20	MH	SW8260C
1,4-Dichlorobenzene	ND	1.0	ug/L	1	09/30/20	MH	SW8260C
2,2-Dichloropropane	ND	1.0	ug/L	1	09/30/20	MH	SW8260C
2-Chlorotoluene	ND	1.0	ug/L	1	09/30/20	MH	SW8260C
2-Hexanone	ND	5.0	ug/L	1	09/30/20	MH	SW8260C
4-Chlorotoluene	ND	1.0	ug/L	1	09/30/20	MH	SW8260C
4-Methyl-2-pentanone	ND	5.0	ug/L	1	09/30/20	MH	SW8260C
Acetone	ND	25	ug/L	1	09/30/20	MH	SW8260C

Project ID: LOCKHEED WILMINGTON MA 60552044.19 Phoenix I.D.: CG84828

Client ID: 20A-IDW5-092420-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	
Benzene	ND	0.70	ug/L	1	09/30/20	MH	SW8260C
Bromobenzene	ND	1.0	ug/L	1	09/30/20	MH	SW8260C
Bromochloromethane	ND	1.0	ug/L	1	09/30/20	MH	SW8260C
Bromodichloromethane	ND	0.50	ug/L	1	09/30/20	MH	SW8260C
Bromoform	ND	1.0	ug/L	1	09/30/20	MH	SW8260C
Bromomethane	ND	1.0	ug/L	1	09/30/20	MH	SW8260C
Carbon Disulfide	ND	5.0	ug/L	1	09/30/20	MH	SW8260C
Carbon tetrachloride	ND	1.0	ug/L	1	09/30/20	MH	SW8260C
Chlorobenzene	ND	1.0	ug/L	1	09/30/20	MH	SW8260C
Chloroethane	ND	1.0	ug/L	1	09/30/20	MH	SW8260C
Chloroform	ND	1.0	ug/L	1	09/30/20	MH	SW8260C
Chloromethane	ND	1.0	ug/L	1	09/30/20	MH	SW8260C
cis-1,2-Dichloroethene	26	1.0	ug/L	1	09/30/20	MH	SW8260C
cis-1,3-Dichloropropene	ND	0.40	ug/L	1	09/30/20	MH	SW8260C
Dibromochloromethane	ND	0.50	ug/L	1	09/30/20	MH	SW8260C
Dibromomethane	ND	1.0	ug/L	1	09/30/20	MH	SW8260C
Dichlorodifluoromethane	ND	1.0	ug/L	1	09/30/20	MH	SW8260C
Ethylbenzene	ND	1.0	ug/L	1	09/30/20	MH	SW8260C
Hexachlorobutadiene	ND	0.40	ug/L	1	09/30/20	MH	SW8260C
Isopropylbenzene	ND	1.0	ug/L	1	09/30/20	MH	SW8260C
m&p-Xylene	ND	1.0	ug/L	1	09/30/20	MH	SW8260C
Methyl ethyl ketone	ND	5.0	ug/L	1	09/30/20	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	1.0	ug/L	1	09/30/20	MH	SW8260C
Methylene chloride	ND	1.0	ug/L	1	09/30/20	MH	SW8260C
Naphthalene	ND	1.0	ug/L	1	09/30/20	MH	SW8260C
n-Butylbenzene	ND	1.0	ug/L	1	09/30/20	MH	SW8260C
n-Propylbenzene	ND	1.0	ug/L	1	09/30/20	MH	SW8260C
o-Xylene	ND	1.0	ug/L	1	09/30/20	MH	SW8260C
p-Isopropyltoluene	ND	1.0	ug/L	1	09/30/20	MH	SW8260C
sec-Butylbenzene	ND	1.0	ug/L	1	09/30/20	MH	SW8260C
Styrene	ND	1.0	ug/L	1	09/30/20	MH	SW8260C
tert-Butylbenzene	ND	1.0	ug/L	1	09/30/20	MH	SW8260C
Tetrachloroethene	99	1.0	ug/L	1	09/30/20	MH	SW8260C
Tetrahydrofuran (THF)	ND	2.5	ug/L	1	09/30/20	MH	SW8260C
Toluene	ND	1.0	ug/L	1	09/30/20	MH	SW8260C
trans-1,2-Dichloroethene	1.0	1.0	ug/L	1	09/30/20	MH	SW8260C
trans-1,3-Dichloropropene	ND	0.40	ug/L	1	09/30/20	MH	SW8260C
Trichloroethene	180	20	ug/L	20	09/28/20	MH	SW8260C
Trichlorofluoromethane	ND	1.0	ug/L	1	09/30/20	MH	SW8260C
Trichlorotrifluoroethane	ND	1.0	ug/L	1	09/30/20	MH	SW8260C
Vinyl chloride	1.7	1.0	ug/L	1	09/30/20	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	100		%	1	09/30/20	MH	70 - 130 %
% Bromofluorobenzene	99		%	1	09/30/20	MH	70 - 130 %
% Dibromofluoromethane	101		%	1	09/30/20	MH	70 - 130 %
% Toluene-d8	93		%	1	09/30/20	MH	70 - 130 %
% 1,2-dichlorobenzene-d4 (20x)	99		%	20	09/28/20	MH	70 - 130 %
% Bromofluorobenzene (20x)	100		%	20	09/28/20	MH	70 - 130 %
% Dibromofluoromethane (20x)	100		%	20	09/28/20	MH	70 - 130 %

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	
% Toluene-d8 (20x)	103		%	20	09/28/20	MH	70 - 130 %

Oxygenates& Dioxane

1,4-dioxane	ND	100	ug/L	1	09/30/20	MH	SW8260C (OXY)
Diethyl ether	ND	1.0	ug/L	1	09/30/20	MH	SW8260C (OXY)
Di-isopropyl ether	ND	1.0	ug/L	1	09/30/20	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	1.0	ug/L	1	09/30/20	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	1.0	ug/L	1	09/30/20	MH	SW8260C (OXY)

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

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Phyllis Shiller, Laboratory Director
October 02, 2020
Reviewed and Released by: Greg Lawrence, Assistant Lab Director

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

QA/QC Report

October 02, 2020

QA/QC Data

SDG I.D.: GCG84823

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits
QA/QC Batch 547726 (ug/L), QC Sample No: CG84822 (CG84824 (5X) , CG84825 (5X) , CG84826 (10X) , CG84827 (50X) , CG84828)										
Volatiles - Ground Water										
1,1,1,2-Tetrachloroethane	ND	1.0	97	101	4.0	112	107	4.6	70 - 130	30
1,1,1-Trichloroethane	ND	1.0	91	91	0.0	110	108	1.8	70 - 130	30
1,1,2,2-Tetrachloroethane	ND	0.50	101	106	4.8	120	110	8.7	70 - 130	30
1,1,2-Trichloroethane	ND	1.0	97	99	2.0	107	103	3.8	70 - 130	30
1,1-Dichloroethane	ND	1.0	92	93	1.1	111	109	1.8	70 - 130	30
1,1-Dichloroethene	ND	1.0	92	91	1.1	125	121	3.3	70 - 130	30
1,1-Dichloropropene	ND	1.0	94	94	0.0	112	110	1.8	70 - 130	30
1,2,3-Trichlorobenzene	ND	1.0	102	107	4.8	114	107	6.3	70 - 130	30
1,2,3-Trichloropropane	ND	1.0	97	101	4.0	114	107	6.3	70 - 130	30
1,2,4-Trichlorobenzene	ND	1.0	100	104	3.9	113	105	7.3	70 - 130	30
1,2,4-Trimethylbenzene	ND	1.0	99	100	1.0	115	110	4.4	70 - 130	30
1,2-Dibromo-3-chloropropane	ND	1.0	102	113	10.2	114	107	6.3	70 - 130	30
1,2-Dibromoethane	ND	1.0	99	102	3.0	114	106	7.3	70 - 130	30
1,2-Dichlorobenzene	ND	1.0	99	101	2.0	114	108	5.4	70 - 130	30
1,2-Dichloroethane	ND	1.0	95	96	1.0	105	99	5.9	70 - 130	30
1,2-Dichloropropane	ND	1.0	98	98	0.0	112	108	3.6	70 - 130	30
1,3,5-Trimethylbenzene	ND	1.0	99	100	1.0	117	113	3.5	70 - 130	30
1,3-Dichlorobenzene	ND	1.0	99	100	1.0	114	107	6.3	70 - 130	30
1,3-Dichloropropane	ND	1.0	99	103	4.0	114	107	6.3	70 - 130	30
1,4-Dichlorobenzene	ND	1.0	97	98	1.0	114	108	5.4	70 - 130	30
1,4-dioxane	ND	100	96	97	1.0	111	103	7.5	40 - 160	30
2,2-Dichloropropane	ND	1.0	98	97	1.0	105	100	4.9	70 - 130	30
2-Chlorotoluene	ND	1.0	98	100	2.0	116	111	4.4	70 - 130	30
2-Hexanone	ND	5.0	93	100	7.3	109	102	6.6	40 - 160	30
4-Chlorotoluene	ND	1.0	99	102	3.0	118	111	6.1	70 - 130	30
4-Methyl-2-pentanone	ND	5.0	95	101	6.1	105	99	5.9	40 - 160	30
Acetone	ND	5.0	84	89	5.8	112	104	7.4	40 - 160	30
Benzene	ND	0.70	96	98	2.1	113	109	3.6	70 - 130	30
Bromobenzene	ND	1.0	95	96	1.0	108	105	2.8	70 - 130	30
Bromochloromethane	ND	1.0	98	101	3.0	113	111	1.8	70 - 130	30
Bromodichloromethane	ND	0.50	98	100	2.0	111	106	4.6	70 - 130	30
Bromoform	ND	1.0	98	102	4.0	112	104	7.4	70 - 130	30
Bromomethane	ND	1.0	86	86	0.0	108	107	0.9	40 - 160	30
Carbon Disulfide	ND	1.0	94	92	2.2	123	120	2.5	70 - 130	30
Carbon tetrachloride	ND	1.0	91	106	15.2	127	124	2.4	70 - 130	30
Chlorobenzene	ND	1.0	99	100	1.0	113	109	3.6	70 - 130	30
Chloroethane	ND	1.0	86	86	0.0	117	111	5.3	70 - 130	30
Chloroform	ND	1.0	93	96	3.2	111	107	3.7	70 - 130	30
Chloromethane	ND	1.0	90	88	2.2	106	104	1.9	40 - 160	30
cis-1,2-Dichloroethene	ND	1.0	91	93	2.2	NC	NC	NC	70 - 130	30

QA/QC Data

SDG I.D.: GCG84823

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits
cis-1,3-Dichloropropene	ND	0.40	98	98	0.0	105	101	3.9	70 - 130	30
Dibromochloromethane	ND	0.50	103	105	1.9	117	111	5.3	70 - 130	30
Dibromomethane	ND	1.0	95	97	2.1	107	100	6.8	70 - 130	30
Dichlorodifluoromethane	ND	1.0	84	84	0.0	95	95	0.0	40 - 160	30
Di-isopropyl ether	ND	1.0	90	93	3.3	109	105	3.7	70 - 130	30
Ethyl ether	ND	1.0	78	80	2.5	102	92	10.3	70 - 130	30
Ethyl tert-butyl ether	ND	1.0	94	96	2.1	111	107	3.7	70 - 130	30
Ethylbenzene	ND	1.0	99	101	2.0	117	114	2.6	70 - 130	30
Hexachlorobutadiene	ND	0.40	98	104	5.9	117	110	6.2	70 - 130	30
Isopropylbenzene	ND	1.0	98	101	3.0	118	114	3.4	70 - 130	30
m&p-Xylene	ND	1.0	101	103	2.0	117	114	2.6	70 - 130	30
Methyl ethyl ketone	ND	5.0	95	102	7.1	116	106	9.0	40 - 160	30
Methyl t-butyl ether (MTBE)	ND	1.0	86	87	1.2	105	99	5.9	70 - 130	30
Methylene chloride	ND	1.0	93	95	2.1	108	106	1.9	70 - 130	30
Naphthalene	ND	1.0	106	114	7.3	123	111	10.3	70 - 130	30
n-Butylbenzene	ND	1.0	101	102	1.0	122	115	5.9	70 - 130	30
n-Propylbenzene	ND	1.0	97	100	3.0	119	113	5.2	70 - 130	30
o-Xylene	ND	1.0	102	104	1.9	119	114	4.3	70 - 130	30
p-Isopropyltoluene	ND	1.0	103	103	0.0	122	116	5.0	70 - 130	30
sec-Butylbenzene	ND	1.0	106	109	2.8	130	125	3.9	70 - 130	30
Styrene	ND	1.0	101	104	2.9	117	111	5.3	70 - 130	30
tert-amyl methyl ether	ND	1.0	93	97	4.2	104	99	4.9	70 - 130	30
tert-Butylbenzene	ND	1.0	102	101	1.0	120	116	3.4	70 - 130	30
Tetrachloroethene	ND	1.0	94	96	2.1	108	109	0.9	70 - 130	30
Tetrahydrofuran (THF)	ND	2.5	99	104	4.9	116	108	7.1	70 - 130	30
Toluene	ND	1.0	98	100	2.0	112	108	3.6	70 - 130	30
trans-1,2-Dichloroethene	ND	1.0	97	95	2.1	126	123	2.4	70 - 130	30
trans-1,3-Dichloropropene	ND	0.40	97	102	5.0	107	102	4.8	70 - 130	30
Trichloroethene	ND	1.0	96	98	2.1	+++ONC	+++ONC	NC	70 - 130	30
Trichlorofluoromethane	ND	1.0	87	85	2.3	115	110	4.4	70 - 130	30
Trichlorotrifluoroethane	ND	1.0	100	99	1.0	129	127	1.6	70 - 130	30
Vinyl chloride	ND	1.0	89	92	3.3	117	115	1.7	70 - 130	30
% 1,2-dichlorobenzene-d4	99	%	100	100	0.0	100	101	1.0	70 - 130	30
% Bromofluorobenzene	93	%	98	99	1.0	98	99	1.0	70 - 130	30
% Dibromofluoromethane	102	%	100	99	1.0	101	100	1.0	70 - 130	30
% Toluene-d8	100	%	97	99	2.0	97	96	1.0	70 - 130	30

Comment:

Additional 8260 criteria: 10% of compounds can be outside of acceptance criteria as long as recovery is 10%.

QA/QC Batch 547319 (ug/L), QC Sample No: CG84823 (CG84823, CG84824 (20X) , CG84825 (20X) , CG84826 (20X) , CG84827 (20X) , CG84828 (20X))

Volatiles - Ground Water

1,1,1,2-Tetrachloroethane	ND	1.0	100	113	12.2				70 - 130	30
1,1,1-Trichloroethane	ND	1.0	95	104	9.0				70 - 130	30
1,1,2,2-Tetrachloroethane	ND	0.50	102	107	4.8				70 - 130	30
1,1,2-Trichloroethane	ND	1.0	97	102	5.0				70 - 130	30
1,1-Dichloroethane	ND	1.0	96	107	10.8				70 - 130	30
1,1-Dichloroethene	ND	1.0	98	101	3.0				70 - 130	30
1,1-Dichloropropene	ND	1.0	97	106	8.9				70 - 130	30
1,2,3-Trichlorobenzene	ND	1.0	100	107	6.8				70 - 130	30
1,2,3-Trichloropropane	ND	1.0	99	102	3.0				70 - 130	30
1,2,4-Trichlorobenzene	ND	1.0	99	109	9.6				70 - 130	30
1,2,4-Trimethylbenzene	ND	1.0	96	106	9.9				70 - 130	30

QA/QC Data

SDG I.D.: GCG84823

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits
1,2-Dibromo-3-chloropropane	ND	1.0	111	117	5.3				70 - 130	30
1,2-Dibromoethane	ND	1.0	99	106	6.8				70 - 130	30
1,2-Dichlorobenzene	ND	1.0	96	104	8.0				70 - 130	30
1,2-Dichloroethane	ND	1.0	94	104	10.1				70 - 130	30
1,2-Dichloropropane	ND	1.0	92	102	10.3				70 - 130	30
1,3,5-Trimethylbenzene	ND	1.0	100	111	10.4				70 - 130	30
1,3-Dichlorobenzene	ND	1.0	97	108	10.7				70 - 130	30
1,3-Dichloropropane	ND	1.0	97	106	8.9				70 - 130	30
1,4-Dichlorobenzene	ND	1.0	98	106	7.8				70 - 130	30
1,4-dioxane	ND	100	107	111	3.7				40 - 160	30
2,2-Dichloropropane	ND	1.0	111	123	10.3				70 - 130	30
2-Chlorotoluene	ND	1.0	98	110	11.5				70 - 130	30
2-Hexanone	ND	5.0	106	114	7.3				40 - 160	30
4-Chlorotoluene	ND	1.0	96	106	9.9				70 - 130	30
4-Methyl-2-pentanone	ND	5.0	107	110	2.8				40 - 160	30
Acetone	ND	5.0	88	87	1.1				40 - 160	30
Benzene	ND	0.70	93	101	8.2				70 - 130	30
Bromobenzene	ND	1.0	97	106	8.9				70 - 130	30
Bromochloromethane	ND	1.0	90	99	9.5				70 - 130	30
Bromodichloromethane	ND	0.50	98	108	9.7				70 - 130	30
Bromoform	ND	1.0	108	115	6.3				70 - 130	30
Bromomethane	ND	1.0	85	93	9.0				40 - 160	30
Carbon Disulfide	ND	1.0	97	105	7.9				70 - 130	30
Carbon tetrachloride	ND	1.0	90	98	8.5				70 - 130	30
Chlorobenzene	ND	1.0	96	108	11.8				70 - 130	30
Chloroethane	ND	1.0	90	103	13.5				70 - 130	30
Chloroform	ND	1.0	88	99	11.8				70 - 130	30
Chloromethane	ND	1.0	84	95	12.3				40 - 160	30
cis-1,2-Dichloroethene	ND	1.0	87	92	5.6				70 - 130	30
cis-1,3-Dichloropropene	ND	0.40	97	106	8.9				70 - 130	30
Dibromochloromethane	ND	0.50	106	117	9.9				70 - 130	30
Dibromomethane	ND	1.0	91	101	10.4				70 - 130	30
Dichlorodifluoromethane	ND	1.0	105	113	7.3				40 - 160	30
Di-isopropyl ether	ND	1.0	88	106	18.6				70 - 130	30
Ethyl ether	ND	1.0	84	96	13.3				70 - 130	30
Ethyl tert-butyl ether	ND	1.0	98	107	8.8				70 - 130	30
Ethylbenzene	ND	1.0	98	107	8.8				70 - 130	30
Hexachlorobutadiene	ND	0.40	102	113	10.2				70 - 130	30
Isopropylbenzene	ND	1.0	102	111	8.5				70 - 130	30
m&p-Xylene	ND	1.0	98	110	11.5				70 - 130	30
Methyl ethyl ketone	ND	5.0	107	110	2.8				40 - 160	30
Methyl t-butyl ether (MTBE)	ND	1.0	92	98	6.3				70 - 130	30
Methylene chloride	ND	1.0	84	92	9.1				70 - 130	30
Naphthalene	ND	1.0	108	115	6.3				70 - 130	30
n-Butylbenzene	ND	1.0	103	113	9.3				70 - 130	30
n-Propylbenzene	ND	1.0	102	113	10.2				70 - 130	30
o-Xylene	ND	1.0	97	109	11.7				70 - 130	30
p-Isopropyltoluene	ND	1.0	104	114	9.2				70 - 130	30
sec-Butylbenzene	ND	1.0	111	120	7.8				70 - 130	30
Styrene	ND	1.0	99	110	10.5				70 - 130	30
tert-amyl methyl ether	ND	1.0	96	106	9.9				70 - 130	30
tert-Butylbenzene	ND	1.0	102	112	9.3				70 - 130	30
Tetrachloroethene	ND	1.0	99	106	6.8				70 - 130	30

QA/QC Data

SDG I.D.: GCG84823

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits
Tetrahydrofuran (THF)	ND	2.5	99	103	4.0				70 - 130	30
Toluene	ND	1.0	93	103	10.2				70 - 130	30
trans-1,2-Dichloroethene	ND	1.0	98	103	5.0				70 - 130	30
trans-1,3-Dichloropropene	ND	0.40	100	109	8.6				70 - 130	30
Trichloroethene	ND	1.0	96	107	10.8				70 - 130	30
Trichlorofluoromethane	ND	1.0	94	100	6.2				70 - 130	30
Trichlorotrifluoroethane	ND	1.0	98	107	8.8				70 - 130	30
Vinyl chloride	ND	1.0	96	103	7.0				70 - 130	30
% 1,2-dichlorobenzene-d4	98	%	99	99	0.0				70 - 130	30
% Bromofluorobenzene	97	%	100	100	0.0				70 - 130	30
% Dibromofluoromethane	99	%	97	103	6.0				70 - 130	30
% Toluene-d8	99	%	99	98	1.0				70 - 130	30

Comment:

A LCS and LCS Duplicate were performed instead of a matrix spike and matrix spike duplicate.

Additional 8260 criteria: 10% of compounds can be outside of acceptance criteria as long as recovery is 10%.

If there are any questions regarding this data, please call Phoenix Client Services at extension 200.

RPD - Relative Percent Difference
LCS - Laboratory Control Sample
LCSD - Laboratory Control Sample Duplicate
MS - Matrix Spike
MS Dup - Matrix Spike Duplicate
NC - No Criteria
Intf - Interference

Phyllis Shiller, Laboratory Director
October 02, 2020

Friday, October 02, 2020

Criteria: MA: GW1, GW2, GW3

State: MA

Sample Criteria Exceedances Report

GCG84823 - AECOM-WILMINGTN

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units
CG84823	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.00075	0.00075	ug/L
CG84823	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.00033	0.00033	ug/L
CG84823	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.0075	0.0075	ug/L
CG84823	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	0.50	0.02	0.02	ug/L
CG84823	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	0.50	0.02	0.02	ug/L
CG84823	$MCPADD-WM	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	100	0.3	0.3	ug/L
CG84823	$MCPADD-WM	1,4-dioxane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	100	3	3	ug/L
CG84823	$MCPADD-WM	1,4-dioxane	MA / GROUNDWATER STANDARDS / GW-1	ND	100	0.3	0.3	ug/L
CG84824	$8260GWR-WI	cis-1,3-Dichloropropene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	2.5	0.47	0.47	ug/L
CG84824	$8260GWR-WI	Dibromochloromethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	2.5	2	2	ug/L
CG84824	$8260GWR-WI	Vinyl chloride	MA / Client Specified Criteria / LOCKHEED WILMINGTO	20	5.0	2	2	ug/L
CG84824	$8260GWR-WI	cis-1,2-Dichloroethene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	570	20	20	20	ug/L
CG84824	$8260GWR-WI	Carbon tetrachloride	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	2.5	2	2	ug/L
CG84824	$8260GWR-WI	Trichloroethene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	480	5.0	5	5	ug/L
CG84824	$8260GWR-WI	Tetrachloroethene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	100	5.0	5	5	ug/L
CG84824	$8260GWR-WI	Hexachlorobutadiene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	2.5	0.6	0.6	ug/L
CG84824	$8260GWR-WI	1,1,2,2-Tetrachloroethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	2.5	2	2	ug/L
CG84824	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	2.5	0.0075	0.0075	ug/L
CG84824	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	2.5	0.00033	0.00033	ug/L
CG84824	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	2.5	0.00075	0.00075	ug/L
CG84824	$8260GWR-WI	trans-1,3-Dichloropropene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	2.5	0.47	0.47	ug/L
CG84824	$8260GWR-WI	Dibromochloromethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	2.5	2	2	ug/L
CG84824	$8260GWR-WI	cis-1,3-Dichloropropene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	2.5	0.5	0.5	ug/L
CG84824	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-1 (mg/l)	20	5.0	2	2	ug/L
CG84824	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-1 (mg/l)	20	5.0	2	2	ug/L
CG84824	$8260GWR-WI	cis-1,2-Dichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	570	20	20	20	ug/L
CG84824	$8260GWR-WI	trans-1,3-Dichloropropene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	2.5	0.5	0.5	ug/L
CG84824	$8260GWR-WI	Tetrachloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	100	5.0	5	5	ug/L
CG84824	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	480	5.0	5	5	ug/L
CG84824	$8260GWR-WI	Hexachlorobutadiene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	2.5	0.6	0.6	ug/L
CG84824	$8260GWR-WI	Carbon tetrachloride	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	2.5	2	2	ug/L
CG84824	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	2.5	0.02	0.02	ug/L
CG84824	$8260GWR-WI	1,1,2,2-Tetrachloroethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	2.5	2	2	ug/L
CG84824	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	480	5.0	5	5	ug/L
CG84824	$8260GWR-WI	Hexachlorobutadiene	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	2.5	1	1	ug/L
CG84824	$8260GWR-WI	cis-1,2-Dichloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	570	20	20	20	ug/L
CG84824	$8260GWR-WI	Carbon tetrachloride	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	2.5	2	2	ug/L
CG84824	$8260GWR-WI	Tetrachloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	100	5.0	50	50	ug/L
CG84824	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-2 (mg/l)	20	5.0	2	2	ug/L
CG84824	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	2.5	2	2	ug/L
CG84824	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-2 (mg/l)	20	5.0	2	2	ug/L

Friday, October 02, 2020

Criteria: MA: GW1, GW2, GW3

State: MA

Sample Criteria Exceedances Report

GCG84823 - AECOM-WILMINGTN

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units
CG84824	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-1	480	5.0	5	5	ug/L
CG84824	$8260GWR-WI	Vinyl chloride	MA / GROUNDWATER STANDARDS / GW-1	20	5.0	2	2	ug/L
CG84824	$8260GWR-WI	Tetrachloroethene	MA / GROUNDWATER STANDARDS / GW-1	100	5.0	5	5	ug/L
CG84824	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	2.5	0.02	0.02	ug/L
CG84824	$8260GWR-WI	Hexachlorobutadiene	MA / GROUNDWATER STANDARDS / GW-1	ND	2.5	0.6	0.6	ug/L
CG84824	$8260GWR-WI	Dibromochloromethane	MA / GROUNDWATER STANDARDS / GW-1	ND	2.5	2	2	ug/L
CG84824	$8260GWR-WI	cis-1,2-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-1	570	20	70	70	ug/L
CG84824	$8260GWR-WI	1,1,2,2-Tetrachloroethane	MA / GROUNDWATER STANDARDS / GW-1	ND	2.5	2	2	ug/L
CG84824	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-2	480	5.0	5	5	ug/L
CG84824	$8260GWR-WI	cis-1,2-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-2	570	20	20	20	ug/L
CG84824	$8260GWR-WI	Carbon tetrachloride	MA / GROUNDWATER STANDARDS / GW-2	ND	2.5	2	2	ug/L
CG84824	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-2	ND	2.5	2	2	ug/L
CG84824	$8260GWR-WI	Vinyl chloride	MA / GROUNDWATER STANDARDS / GW-2	20	5.0	2	2	ug/L
CG84824	$8260GWR-WI	Tetrachloroethene	MA / GROUNDWATER STANDARDS / GW-2	100	5.0	50	50	ug/L
CG84824	$MCPADD-WM	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	500	0.3	0.3	ug/L
CG84824	$MCPADD-WM	1,4-dioxane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	500	3	3	ug/L
CG84824	$MCPADD-WM	1,4-dioxane	MA / GROUNDWATER STANDARDS / GW-1	ND	500	0.3	0.3	ug/L
CG84825	$8260GWR-WI	Tetrachloroethene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	230	5.0	5	5	ug/L
CG84825	$8260GWR-WI	cis-1,3-Dichloropropene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	2.5	0.47	0.47	ug/L
CG84825	$8260GWR-WI	Dibromochloromethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	2.5	2	2	ug/L
CG84825	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	2.5	0.00075	0.00075	ug/L
CG84825	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	2.5	0.00033	0.00033	ug/L
CG84825	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	2.5	0.0075	0.0075	ug/L
CG84825	$8260GWR-WI	Vinyl chloride	MA / Client Specified Criteria / LOCKHEED WILMINGTO	5.4	5.0	2	2	ug/L
CG84825	$8260GWR-WI	Trichloroethene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	530	20	5	5	ug/L
CG84825	$8260GWR-WI	cis-1,2-Dichloroethene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	91	5.0	20	20	ug/L
CG84825	$8260GWR-WI	Carbon tetrachloride	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	2.5	2	2	ug/L
CG84825	$8260GWR-WI	trans-1,3-Dichloropropene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	2.5	0.47	0.47	ug/L
CG84825	$8260GWR-WI	Hexachlorobutadiene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	2.5	0.6	0.6	ug/L
CG84825	$8260GWR-WI	1,1,2,2-Tetrachloroethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	2.5	2	2	ug/L
CG84825	$8260GWR-WI	Dibromochloromethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	2.5	2	2	ug/L
CG84825	$8260GWR-WI	Hexachlorobutadiene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	2.5	0.6	0.6	ug/L
CG84825	$8260GWR-WI	Tetrachloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	230	5.0	5	5	ug/L
CG84825	$8260GWR-WI	trans-1,3-Dichloropropene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	2.5	0.5	0.5	ug/L
CG84825	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	530	20	5	5	ug/L
CG84825	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-1 (mg/l)	5.4	5.0	2	2	ug/L
CG84825	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-1 (mg/l)	5.4	5.0	2	2	ug/L
CG84825	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	2.5	0.02	0.02	ug/L
CG84825	$8260GWR-WI	cis-1,3-Dichloropropene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	2.5	0.5	0.5	ug/L
CG84825	$8260GWR-WI	1,1,2,2-Tetrachloroethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	2.5	2	2	ug/L
CG84825	$8260GWR-WI	Carbon tetrachloride	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	2.5	2	2	ug/L

Friday, October 02, 2020

Criteria: MA: GW1, GW2, GW3

State: MA

Sample Criteria Exceedances Report

GCG84823 - AECOM-WILMINGTN

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units
CG84825	$8260GWR-WI	cis-1,2-Dichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	91	5.0	20	20	ug/L
CG84825	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-2 (mg/l)	5.4	5.0	2	2	ug/L
CG84825	$8260GWR-WI	cis-1,2-Dichloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	91	5.0	20	20	ug/L
CG84825	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-2 (mg/l)	5.4	5.0	2	2	ug/L
CG84825	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	530	20	5	5	ug/L
CG84825	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	2.5	2	2	ug/L
CG84825	$8260GWR-WI	Carbon tetrachloride	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	2.5	2	2	ug/L
CG84825	$8260GWR-WI	Tetrachloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	230	5.0	50	50	ug/L
CG84825	$8260GWR-WI	Hexachlorobutadiene	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	2.5	1	1	ug/L
CG84825	$8260GWR-WI	Vinyl chloride	MA / GROUNDWATER STANDARDS / GW-1	5.4	5.0	2	2	ug/L
CG84825	$8260GWR-WI	Tetrachloroethene	MA / GROUNDWATER STANDARDS / GW-1	230	5.0	5	5	ug/L
CG84825	$8260GWR-WI	Dibromochloromethane	MA / GROUNDWATER STANDARDS / GW-1	ND	2.5	2	2	ug/L
CG84825	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	2.5	0.02	0.02	ug/L
CG84825	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-1	530	20	5	5	ug/L
CG84825	$8260GWR-WI	1,1,2,2-Tetrachloroethane	MA / GROUNDWATER STANDARDS / GW-1	ND	2.5	2	2	ug/L
CG84825	$8260GWR-WI	cis-1,2-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-1	91	5.0	70	70	ug/L
CG84825	$8260GWR-WI	Hexachlorobutadiene	MA / GROUNDWATER STANDARDS / GW-1	ND	2.5	0.6	0.6	ug/L
CG84825	$8260GWR-WI	cis-1,2-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-2	91	5.0	20	20	ug/L
CG84825	$8260GWR-WI	Vinyl chloride	MA / GROUNDWATER STANDARDS / GW-2	5.4	5.0	2	2	ug/L
CG84825	$8260GWR-WI	Tetrachloroethene	MA / GROUNDWATER STANDARDS / GW-2	230	5.0	50	50	ug/L
CG84825	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-2	530	20	5	5	ug/L
CG84825	$8260GWR-WI	Carbon tetrachloride	MA / GROUNDWATER STANDARDS / GW-2	ND	2.5	2	2	ug/L
CG84825	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-2	ND	2.5	2	2	ug/L
CG84825	$MCPADD-WM	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	500	0.3	0.3	ug/L
CG84825	$MCPADD-WM	1,4-dioxane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	500	3	3	ug/L
CG84825	$MCPADD-WM	1,4-dioxane	MA / GROUNDWATER STANDARDS / GW-1	ND	500	0.3	0.3	ug/L
CG84826	$8260GWR-WI	Carbon tetrachloride	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	5.0	2	2	ug/L
CG84826	$8260GWR-WI	cis-1,2-Dichloroethene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	270	10	20	20	ug/L
CG84826	$8260GWR-WI	Vinyl chloride	MA / Client Specified Criteria / LOCKHEED WILMINGTO	21	10	2	2	ug/L
CG84826	$8260GWR-WI	cis-1,3-Dichloropropene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	5.0	0.47	0.47	ug/L
CG84826	$8260GWR-WI	Trichloroethene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	1300	20	5	5	ug/L
CG84826	$8260GWR-WI	Methylene chloride	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	10	5	5	ug/L
CG84826	$8260GWR-WI	trans-1,3-Dichloropropene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	5.0	0.47	0.47	ug/L
CG84826	$8260GWR-WI	Tetrachloroethene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	540	10	5	5	ug/L
CG84826	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	5.0	0.00033	0.00033	ug/L
CG84826	$8260GWR-WI	Hexachlorobutadiene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	5.0	0.6	0.6	ug/L
CG84826	$8260GWR-WI	Bromoform	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	5.0	4	4	ug/L
CG84826	$8260GWR-WI	Dibromochloromethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	5.0	2	2	ug/L
CG84826	$8260GWR-WI	1,2-Dichloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	5.0	3	3	ug/L
CG84826	$8260GWR-WI	Bromodichloromethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	5.0	3	3	ug/L
CG84826	$8260GWR-WI	2-Hexanone	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	50	38	38	ug/L

Friday, October 02, 2020

Criteria: MA: GW1, GW2, GW3

State: MA

Sample Criteria Exceedances Report

GCG84823 - AECOM-WILMINGTN

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units
CG84826	$8260GWR-WI	Methyl ethyl ketone	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	50	38	38	ug/L
CG84826	$8260GWR-WI	1,1,2,2-Tetrachloroethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	5.0	2	2	ug/L
CG84826	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	5.0	0.00075	0.00075	ug/L
CG84826	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	5.0	0.0075	0.0075	ug/L
CG84826	$8260GWR-WI	Hexachlorobutadiene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	5.0	0.6	0.6	ug/L
CG84826	$8260GWR-WI	Methylene chloride	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	5	5	ug/L
CG84826	$8260GWR-WI	1,1,2,2-Tetrachloroethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	5.0	2	2	ug/L
CG84826	$8260GWR-WI	Tetrachloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	540	10	5	5	ug/L
CG84826	$8260GWR-WI	Dibromochloromethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	5.0	2	2	ug/L
CG84826	$8260GWR-WI	cis-1,3-Dichloropropene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	5.0	0.5	0.5	ug/L
CG84826	$8260GWR-WI	trans-1,3-Dichloropropene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	5.0	0.5	0.5	ug/L
CG84826	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	5.0	0.02	0.02	ug/L
CG84826	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	1300	20	5	5	ug/L
CG84826	$8260GWR-WI	Bromodichloromethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	5.0	3	3	ug/L
CG84826	$8260GWR-WI	cis-1,2-Dichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	270	10	20	20	ug/L
CG84826	$8260GWR-WI	1,2-Dichloropropane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	5.0	3	3	ug/L
CG84826	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-1 (mg/l)	21	10	2	2	ug/L
CG84826	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-1 (mg/l)	21	10	2	2	ug/L
CG84826	$8260GWR-WI	Carbon tetrachloride	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	5.0	2	2	ug/L
CG84826	$8260GWR-WI	Bromoform	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	5.0	4	4	ug/L
CG84826	$8260GWR-WI	cis-1,2-Dichloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	270	10	20	20	ug/L
CG84826	$8260GWR-WI	1,2-Dichloropropane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	5.0	3	3	ug/L
CG84826	$8260GWR-WI	Carbon tetrachloride	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	5.0	2	2	ug/L
CG84826	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	5.0	2	2	ug/L
CG84826	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	1300	20	5	5	ug/L
CG84826	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-2 (mg/l)	21	10	2	2	ug/L
CG84826	$8260GWR-WI	Tetrachloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	540	10	50	50	ug/L
CG84826	$8260GWR-WI	Hexachlorobutadiene	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	5.0	1	1	ug/L
CG84826	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-2 (mg/l)	21	10	2	2	ug/L
CG84826	$8260GWR-WI	Vinyl chloride	MA / GROUNDWATER STANDARDS / GW-1	21	10	2	2	ug/L
CG84826	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	5.0	0.02	0.02	ug/L
CG84826	$8260GWR-WI	Bromodichloromethane	MA / GROUNDWATER STANDARDS / GW-1	ND	5.0	3	3	ug/L
CG84826	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-1	1300	20	5	5	ug/L
CG84826	$8260GWR-WI	Bromoform	MA / GROUNDWATER STANDARDS / GW-1	ND	5.0	4	4	ug/L
CG84826	$8260GWR-WI	Hexachlorobutadiene	MA / GROUNDWATER STANDARDS / GW-1	ND	5.0	0.6	0.6	ug/L
CG84826	$8260GWR-WI	Tetrachloroethene	MA / GROUNDWATER STANDARDS / GW-1	540	10	5	5	ug/L
CG84826	$8260GWR-WI	Dibromochloromethane	MA / GROUNDWATER STANDARDS / GW-1	ND	5.0	2	2	ug/L
CG84826	$8260GWR-WI	Methylene chloride	MA / GROUNDWATER STANDARDS / GW-1	ND	10	5	5	ug/L
CG84826	$8260GWR-WI	1,1,2,2-Tetrachloroethane	MA / GROUNDWATER STANDARDS / GW-1	ND	5.0	2	2	ug/L
CG84826	$8260GWR-WI	cis-1,2-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-1	270	10	70	70	ug/L
CG84826	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-2	ND	5.0	2	2	ug/L
CG84826	$8260GWR-WI	Vinyl chloride	MA / GROUNDWATER STANDARDS / GW-2	21	10	2	2	ug/L

Friday, October 02, 2020

Criteria: MA: GW1, GW2, GW3

State: MA

Sample Criteria Exceedances Report

GCG84823 - AECOM-WILMINGTN

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units
CG84826	$8260GWR-WI	1,2-Dichloropropane	MA / GROUNDWATER STANDARDS / GW-2	ND	5.0	3	3	ug/L
CG84826	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-2	1300	20	5	5	ug/L
CG84826	$8260GWR-WI	cis-1,2-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-2	270	10	20	20	ug/L
CG84826	$8260GWR-WI	Tetrachloroethene	MA / GROUNDWATER STANDARDS / GW-2	540	10	50	50	ug/L
CG84826	$8260GWR-WI	Carbon tetrachloride	MA / GROUNDWATER STANDARDS / GW-2	ND	5.0	2	2	ug/L
CG84826	$MCPADD-WM	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	1000	0.3	0.3	ug/L
CG84826	$MCPADD-WM	1,4-dioxane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	1000	3	3	ug/L
CG84826	$MCPADD-WM	1,4-dioxane	MA / GROUNDWATER STANDARDS / GW-1	ND	1000	0.3	0.3	ug/L
CG84827	$8260GWR-WI	cis-1,2-Dichloroethene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	87	20	20	20	ug/L
CG84827	$8260GWR-WI	Methyl ethyl ketone	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	100	38	38	ug/L
CG84827	$8260GWR-WI	Hexachlorobutadiene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	10	0.6	0.6	ug/L
CG84827	$8260GWR-WI	Dibromomethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	10	8.3	8.3	ug/L
CG84827	$8260GWR-WI	1,2-Dichloroethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	10	5	5	ug/L
CG84827	$8260GWR-WI	Bromodichloromethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	10	3	3	ug/L
CG84827	$8260GWR-WI	Dibromochloromethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	10	2	2	ug/L
CG84827	$8260GWR-WI	1,2-Dichloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	10	3	3	ug/L
CG84827	$8260GWR-WI	Benzene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	10	5	5	ug/L
CG84827	$8260GWR-WI	Carbon tetrachloride	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	10	2	2	ug/L
CG84827	$8260GWR-WI	trans-1,3-Dichloropropene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	10	0.47	0.47	ug/L
CG84827	$8260GWR-WI	1,4-Dichlorobenzene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	10	5	5	ug/L
CG84827	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	10	0.0075	0.0075	ug/L
CG84827	$8260GWR-WI	2-Hexanone	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	100	38	38	ug/L
CG84827	$8260GWR-WI	cis-1,3-Dichloropropene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	10	0.47	0.47	ug/L
CG84827	$8260GWR-WI	1,1,1,2-Tetrachloroethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	10	5	5	ug/L
CG84827	$8260GWR-WI	1,1,2,2-Tetrachloroethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	10	2	2	ug/L
CG84827	$8260GWR-WI	Vinyl chloride	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	10	2	2	ug/L
CG84827	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	10	0.00033	0.00033	ug/L
CG84827	$8260GWR-WI	1,1,2-Trichloroethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	10	5	5	ug/L
CG84827	$8260GWR-WI	Trichloroethene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	2300	50	5	5	ug/L
CG84827	$8260GWR-WI	Bromoform	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	10	4	4	ug/L
CG84827	$8260GWR-WI	Bromomethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	10	7	7	ug/L
CG84827	$8260GWR-WI	Tetrachloroethene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	570	20	5	5	ug/L
CG84827	$8260GWR-WI	Methylene chloride	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	20	5	5	ug/L
CG84827	$8260GWR-WI	1,2,3-Trichlorobenzene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	10	7	7	ug/L
CG84827	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	10	0.00075	0.00075	ug/L
CG84827	$8260GWR-WI	Bromoform	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	4	4	ug/L
CG84827	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	2	2	ug/L
CG84827	$8260GWR-WI	Bromomethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	7	7	ug/L
CG84827	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	2	2	ug/L
CG84827	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	2300	50	5	5	ug/L
CG84827	$8260GWR-WI	Carbon tetrachloride	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	2	2	ug/L

Friday, October 02, 2020

Criteria: MA: GW1, GW2, GW3

State: MA

Sample Criteria Exceedances Report

GCG84823 - AECOM-WILMINGTN

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units
CG84827	$8260GWR-WI	Tetrachloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	570	20	5	5	ug/L
CG84827	$8260GWR-WI	cis-1,2-Dichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	87	20	20	20	ug/L
CG84827	$8260GWR-WI	cis-1,3-Dichloropropene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	0.5	0.5	ug/L
CG84827	$8260GWR-WI	Dibromochloromethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	2	2	ug/L
CG84827	$8260GWR-WI	Methylene chloride	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	20	5	5	ug/L
CG84827	$8260GWR-WI	Hexachlorobutadiene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	0.6	0.6	ug/L
CG84827	$8260GWR-WI	trans-1,3-Dichloropropene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	0.5	0.5	ug/L
CG84827	$8260GWR-WI	1,4-Dichlorobenzene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	5	5	ug/L
CG84827	$8260GWR-WI	1,2-Dichloropropane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	3	3	ug/L
CG84827	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	0.02	0.02	ug/L
CG84827	$8260GWR-WI	1,1-Dichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	7	7	ug/L
CG84827	$8260GWR-WI	1,1,1,2-Tetrachloroethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	5	5	ug/L
CG84827	$8260GWR-WI	1,1,2-Trichloroethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	5	5	ug/L
CG84827	$8260GWR-WI	1,2-Dichloroethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	5	5	ug/L
CG84827	$8260GWR-WI	Benzene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	5	5	ug/L
CG84827	$8260GWR-WI	Bromodichloromethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	3	3	ug/L
CG84827	$8260GWR-WI	1,1,2,2-Tetrachloroethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	2	2	ug/L
CG84827	$8260GWR-WI	Bromodichloromethane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	10	6	6	ug/L
CG84827	$8260GWR-WI	Bromomethane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	10	7	7	ug/L
CG84827	$8260GWR-WI	trans-1,3-Dichloropropene	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	10	5	5	ug/L
CG84827	$8260GWR-WI	1,1,2,2-Tetrachloroethane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	10	9	9	ug/L
CG84827	$8260GWR-WI	Hexachlorobutadiene	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	10	1	1	ug/L
CG84827	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	10	2	2	ug/L
CG84827	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	2300	50	5	5	ug/L
CG84827	$8260GWR-WI	cis-1,3-Dichloropropene	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	10	5	5	ug/L
CG84827	$8260GWR-WI	Tetrachloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	570	20	50	50	ug/L
CG84827	$8260GWR-WI	Carbon tetrachloride	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	10	2	2	ug/L
CG84827	$8260GWR-WI	cis-1,2-Dichloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	87	20	20	20	ug/L
CG84827	$8260GWR-WI	1,2-Dichloropropane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	10	3	3	ug/L
CG84827	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	10	2	2	ug/L
CG84827	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	10	2	2	ug/L
CG84827	$8260GWR-WI	1,2-Dichloroethane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	10	5	5	ug/L
CG84827	$8260GWR-WI	Bromodichloromethane	MA / GROUNDWATER STANDARDS / GW-1	ND	10	3	3	ug/L
CG84827	$8260GWR-WI	Benzene	MA / GROUNDWATER STANDARDS / GW-1	ND	10	5	5	ug/L
CG84827	$8260GWR-WI	Bromoform	MA / GROUNDWATER STANDARDS / GW-1	ND	10	4	4	ug/L
CG84827	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-1	2300	50	5	5	ug/L
CG84827	$8260GWR-WI	1,4-Dichlorobenzene	MA / GROUNDWATER STANDARDS / GW-1	ND	10	5	5	ug/L
CG84827	$8260GWR-WI	Tetrachloroethene	MA / GROUNDWATER STANDARDS / GW-1	570	20	5	5	ug/L
CG84827	$8260GWR-WI	Vinyl chloride	MA / GROUNDWATER STANDARDS / GW-1	ND	10	2	2	ug/L
CG84827	$8260GWR-WI	1,1,2-Trichloroethane	MA / GROUNDWATER STANDARDS / GW-1	ND	10	5	5	ug/L
CG84827	$8260GWR-WI	Methylene chloride	MA / GROUNDWATER STANDARDS / GW-1	ND	20	5	5	ug/L
CG84827	$8260GWR-WI	1,1-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-1	ND	10	7	7	ug/L

Friday, October 02, 2020

Criteria: MA: GW1, GW2, GW3

State: MA

Sample Criteria Exceedances Report

GCG84823 - AECOM-WILMINGTN

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units
CG84827	$8260GWR-WI	cis-1,2-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-1	87	20	70	70	ug/L
CG84827	$8260GWR-WI	Hexachlorobutadiene	MA / GROUNDWATER STANDARDS / GW-1	ND	10	0.6	0.6	ug/L
CG84827	$8260GWR-WI	Carbon tetrachloride	MA / GROUNDWATER STANDARDS / GW-1	ND	10	5	5	ug/L
CG84827	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	10	0.02	0.02	ug/L
CG84827	$8260GWR-WI	Dibromochloromethane	MA / GROUNDWATER STANDARDS / GW-1	ND	10	2	2	ug/L
CG84827	$8260GWR-WI	1,1,2,2-Tetrachloroethane	MA / GROUNDWATER STANDARDS / GW-1	ND	10	2	2	ug/L
CG84827	$8260GWR-WI	1,2-Dichloroethane	MA / GROUNDWATER STANDARDS / GW-1	ND	10	5	5	ug/L
CG84827	$8260GWR-WI	1,1,1,2-Tetrachloroethane	MA / GROUNDWATER STANDARDS / GW-1	ND	10	5	5	ug/L
CG84827	$8260GWR-WI	1,2-Dichloropropane	MA / GROUNDWATER STANDARDS / GW-1	ND	10	5	5	ug/L
CG84827	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-2	2300	50	5	5	ug/L
CG84827	$8260GWR-WI	Vinyl chloride	MA / GROUNDWATER STANDARDS / GW-2	ND	10	2	2	ug/L
CG84827	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-2	ND	10	2	2	ug/L
CG84827	$8260GWR-WI	1,2-Dichloroethane	MA / GROUNDWATER STANDARDS / GW-2	ND	10	5	5	ug/L
CG84827	$8260GWR-WI	cis-1,2-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-2	87	20	20	20	ug/L
CG84827	$8260GWR-WI	1,1,2,2-Tetrachloroethane	MA / GROUNDWATER STANDARDS / GW-2	ND	10	9	9	ug/L
CG84827	$8260GWR-WI	Carbon tetrachloride	MA / GROUNDWATER STANDARDS / GW-2	ND	10	2	2	ug/L
CG84827	$8260GWR-WI	1,2-Dichloropropane	MA / GROUNDWATER STANDARDS / GW-2	ND	10	3	3	ug/L
CG84827	$8260GWR-WI	Bromomethane	MA / GROUNDWATER STANDARDS / GW-2	ND	10	7	7	ug/L
CG84827	$8260GWR-WI	Bromodichloromethane	MA / GROUNDWATER STANDARDS / GW-2	ND	10	6	6	ug/L
CG84827	$8260GWR-WI	Tetrachloroethene	MA / GROUNDWATER STANDARDS / GW-2	570	20	50	50	ug/L
CG84827	$MCPADD-WM	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	2000	0.3	0.3	ug/L
CG84827	$MCPADD-WM	1,4-dioxane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	2000	3	3	ug/L
CG84827	$MCPADD-WM	1,4-dioxane	MA / GROUNDWATER STANDARDS / GW-1	ND	2000	0.3	0.3	ug/L
CG84828	$8260GWR-WI	Tetrachloroethene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	99	1.0	5	5	ug/L
CG84828	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.00075	0.00075	ug/L
CG84828	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.00033	0.00033	ug/L
CG84828	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.0075	0.0075	ug/L
CG84828	$8260GWR-WI	Trichloroethene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	180	20	5	5	ug/L
CG84828	$8260GWR-WI	cis-1,2-Dichloroethene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	26	1.0	20	20	ug/L
CG84828	$8260GWR-WI	Tetrachloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	99	1.0	5	5	ug/L
CG84828	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	180	20	5	5	ug/L
CG84828	$8260GWR-WI	cis-1,2-Dichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	26	1.0	20	20	ug/L
CG84828	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	0.50	0.02	0.02	ug/L
CG84828	$8260GWR-WI	cis-1,2-Dichloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	26	1.0	20	20	ug/L
CG84828	$8260GWR-WI	Tetrachloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	99	1.0	50	50	ug/L
CG84828	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	180	20	5	5	ug/L
CG84828	$8260GWR-WI	Tetrachloroethene	MA / GROUNDWATER STANDARDS / GW-1	99	1.0	5	5	ug/L
CG84828	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-1	180	20	5	5	ug/L
CG84828	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	0.50	0.02	0.02	ug/L
CG84828	$8260GWR-WI	cis-1,2-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-2	26	1.0	20	20	ug/L
CG84828	$8260GWR-WI	Tetrachloroethene	MA / GROUNDWATER STANDARDS / GW-2	99	1.0	50	50	ug/L

Friday, October 02, 2020

Criteria: MA: GW1, GW2, GW3

State: MA

Sample Criteria Exceedances Report

GCG84823 - AECOM-WILMINGTN

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units
CG84828	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-2	180	20	5	5	ug/L
CG84828	$MCPADD-WM	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	100	0.3	0.3	ug/L
CG84828	$MCPADD-WM	1,4-dioxane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	100	3	3	ug/L
CG84828	$MCPADD-WM	1,4-dioxane	MA / GROUNDWATER STANDARDS / GW-1	ND	100	0.3	0.3	ug/L

Phoenix Laboratories does not assume responsibility for the data contained in this exceedance report. It is provided as an additional tool to identify requested criteria exceedences. All efforts are made to ensure the accuracy of the data (obtained from appropriate agencies). A lack of exceedence information does not necessarily suggest conformance to the criteria. It is ultimately the site professional's responsibility to determine appropriate compliance.

MassDEP Analytical Protocol Certification Form

Laboratory Name: Phoenix Environmental Laboratories, Inc. **Project #:**

Project Location: LOCKHEED WILMINGTON MA 6055204 **RTN:**

This Form provides certifications for the following data set: [list Laboratory Sample ID Number(s)]

CG84823, CG84824, CG84825, CG84826, CG84827, CG84828

Matrices: ☑ Groundwater/Surface Water ☐ Soil/Sediment ☐ Drinking Water ☐ Air ☐ Other:

CAM Protocol (check all that apply below)

8260 VOC CAM II A ☑	7470/7471 Hg CAM III B ☐	MassDEP VPH CAM IV A ☐	8081 Pesticides CAM V B ☐	7196 Hex Cr CAM VI B ☐	MassDEP APH CAM IX A ☐
8270 SVOC CAM II B ☐	7010 Metals CAM III C ☐	MassDEP EPH CAM IV B ☐	8151 Herbicides CAM V C ☐	8330 Explosives CAM VIII A ☐	TO-15 VOC CAM IX B ☐
6010 Metals CAM III A ☐	6020 Metals CAM III D ☐	8082 PCB CAM V A ☐	9012 Total Cyanide/PAC CAM V1 A ☐	6860 Perchlorate CAM VIII B ☐	

Affirmative responses to questions A through F are required for "Presumptive Certainty" status

A	Were all samples received in a condition consistent with those described on the Chain-of-Custody, properly preserved (including temperature*) in the field or laboratory, and prepared/analyzed with method holding times? (* see narrative)	☑ Yes ☐ No
B	Were the analytical method(s) and all associated QC requirements specified in the selected CAM protocol(s) followed?	☑ Yes ☐ No
C	Were all required corrective actions and analytical response actions specified in the selected CAM protocol(s) implemented for all identified performance standard non-conformances?	☑ Yes ☐ No
D	Does the laboratory report comply with all the reporting requirements speified in CAM VII A, "Quality Assurance and Quality Control Guidelines for the Acquisition and Reporting of Analytical Data"?	☑ Yes ☐ No
E	a. VPH, EPH, and APH Methods only: Was each method conducted without significant modification(s)? (refer to the individual method(s) for a list of significant modifications). b. APH and TO-15 methods only: Was the complete analyte list reported for each method?	☐ Yes ☐ No ☐ Yes ☐ No
F	Were all applicable CAM protocol QC and performance standard non-conformances identified and evaluated in a laboratory narrative (including all "No" responses to Questions A through E)?	☑ Yes ☐ No

Responses to questions G, H and I below is required for "Presumptive Certainty" status

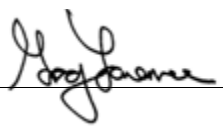
G	Were the reporting limits at or below all CAM reporting limits specified in the selected CAM protocol(s)?	☐ Yes ☑ No

Data User Note: Data that achieve "Presumptive Certainty" status may not necessarily meet the data usability and representativeness requirements described in 310 CMR 40. 1056(2)(k) and WSC-07-350

H	Were all QC performance standards specified in the CAM protocol(s) achieved?	☑ Yes ☐ No
I	Were results reported for the complete analyte list specified in the selected CAM protocol(s)?	☑ Yes ☐ No

All negative responses must be addressed in an attached laboratory narrative.

I, the undersigned, attest under the pains and penalties of perjury that, based upon my personal inquiry of those responsible for obtaining the information, the material contained in this analytical report is, to the best of my knowledge and belief, accurate and complete.

Authorized Signature: 

Date: Friday, October 02, 2020

Printed Name: Greg Lawrence

Position: Assistant Lab Director

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

ACCREDITED IN ACCORDANCE WITH nelac NY # 11301

MCP Certification Report

October 02, 2020

SDG I.D.: GCG84823

SDG Comments

Not all requested reporting levels were achieved due to the presence of target and non target compounds. Please refer to the Sample Criteria Exceedances section of this report.

VOA Narration

Were all QA/QC performance criteria specified in the MADEP document CAM achieved? Yes.

Instrument:

CHEM23 09/28/20-1 Michael Hahn, Chemist 09/28/20

CG84823 (1X), CG84824 (20X), CG84825 (20X), CG84826 (20X), CG84827 (20X), CG84828 (20X)

Initial Calibration Evaluation (CHEM23/VOA23_092520):
94% of target compounds met criteria.
The following compounds had %RSDs >20%: Dichlorodifluoromethane 27% (20%), Trichlorofluoromethane 22% (20%), Trichlorotrifluoroethane 22% (20%)
The following compounds did not meet Table 4 recommended minimum response factors: Tetrachloroethene 0.186 (0.2)
The following compounds did not meet the minimum response factor of 0.05: None.

Continuing Calibration Verification (CHEM23/0928_02-VOA23_092520) (MCP Compliance):
Internal standard areas were within 50 to 200% of the initial calibration with the following exceptions: None.
97% of target compounds met criteria.
The following compounds did not meet % deviation criteria: None.
The following compounds did not meet maximum % deviations: None.
The following compounds did not meet Table 4 recommended minimum response factors: Acetone 0.089 (0.1)
The following compounds did not meet the minimum MCP response factor of 0.05: None.

CHEM23 09/30/20-1 Michael Hahn, Chemist 09/30/20

CG84824 (5X), CG84825 (5X), CG84826 (10X), CG84827 (50X), CG84828 (1X)

Initial Calibration Evaluation (CHEM23/VOA23_092820):
99% of target compounds met criteria.
The following compounds had %RSDs >20%: Bromomethane 28% (20%)
The following compounds did not meet Table 4 recommended minimum response factors: None.
The following compounds did not meet the minimum response factor of 0.05: None.

Continuing Calibration Verification (CHEM23/0930_02-VOA23_092820) (MCP Compliance):
Internal standard areas were within 50 to 200% of the initial calibration with the following exceptions: None.
98% of target compounds met criteria.
The following compounds did not meet % deviation criteria: None.
The following compounds did not meet maximum % deviations: None.
The following compounds did not meet Table 4 recommended minimum response factors: None.
The following compounds did not meet the minimum MCP response factor of 0.05: None.

QC (Batch Specific):

Batch 547319 (CG84823) CHEM23 9/28/2020-1

CG84823(1X), CG84824(20X), CG84825(20X), CG84826(20X), CG84827(20X), CG84828(20X)

All LCS recoveries were within 70 - 130 with the following exceptions: None.
All LCSD recoveries were within 70 - 130 with the following exceptions: None.
All LCS/LCSD RPDs were less than 30% with the following exceptions: None.
A LCS and LCS Duplicate were performed instead of a matrix spike and matrix spike duplicate.
Additional 8260 criteria: 10% of compounds can be outside of acceptance criteria as long as recovery is 10%.

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

ACCREDITED IN ACCORDANCE WITH nelac NY # 11301

MCP Certification Report

October 02, 2020

SDG I.D.: GCG84823

VOA Narration

Batch 547726 (CG84822) CHEM23 9/30/2020-1

CG84824(5X), CG84825(5X), CG84826(10X), CG84827(50X), CG84828(1X)

All LCS recoveries were within 70 - 130 with the following exceptions: None.
All LCSD recoveries were within 70 - 130 with the following exceptions: None.
All LCS/LCSD RPDs were less than 30% with the following exceptions: None.
Additional 8260 criteria: 10% of compounds can be outside of acceptance criteria as long as recovery is 10%.

I attest under the pains and penalties of perjury that, based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.

Cooler: Yes ✓ No
Coolant: IPK ICE ✓ No
Temp 1.1 °C Pg of

CHAIN OF CUSTODY RECORD

PHOENIX *Environmental Laboratories, Inc.*

587 East Middle Turnpike, P.O. Box 370, Manchester, CT 06040
Email: info@phoenixlabs.com Fax (860) 645-0823
Client Services (860) 645-8726

Data Delivery/Contact EMails:
lori.herberich@aecom.com
scott.olson@aecom.com

Customer: AECOM
Address: 250 Apollo Drive
Chelmsford, MA 01824 - (978) 905-2100
Contacts: Lori Herberich (Chemist) 978-302-0089 Scott Olson (PM) 978-846-5238

Project: Lockheed - Wilmington MA 60552044.19
Report to: Lori Herberich - Scott Olson - Nicole Callahan
Invoice to: Scott Olson & Lori Herberich
QUOTE # August 2019 (for 2017-2022)

2020 Project PO: 127680

This section MUST be completed with Bottle Quantities.

Client Sample - Information - Identification

Sampler's Signature: [signature] Date: 9/24/20

Matrix Code:
DW=Drinking Water GW=Ground Water SW=Surface Water WW=Waste Water L=Liquid
RW=Raw Water SE=Sediment SL=Sludge S=Soil SD=Solid W=Wipe OIL=Oil B=Bulk

PHOENIX USE ONLY SAMPLE #	Customer Sample Identification	Sample Matrix	Date Sampled	Time Sampled	# of VOA Vials	# of Amber Glass	# of Clear Glass	# of Plastic				VOCs (8260) - HCL + Freon 113	1,4-Dioxane (8270D SIM) - NaHSO4 for DL <0.3 ug/L	VPH - HCL (MassDEP- VPH-04-1.1 Rev 1)	EPH + PAHs - HCL & UNP (MassDEP- EPH-04-1.1 Rev 1)	Total As, Fe, Mn (6010C) - HNO3 [FF]	Dissolved As, Fe, Mn (6010C) - HNO3	Chloride, Nitrate, Nitrite, Sulfate (300) - UNP	Sulfide - Zn-Acetate + NaOH	Total Organic Carbon (9060A) - H3PO4	Comments
84823	20A-TB02-092320-1	GW	9/23/20	1500	2							X									
84824	20A-IDW1-092320-1	GW	9/23/20	1515	3							X									
84825	20A-IDW2-092320-1	GW	9/23/20	1520	3							X									
84826	20A-IDW3-092320-1	GW	9/23/20	1525	3							X									
84827	20A-IDW4-092320-1	GW	9/23/20	1530	3							X									
84828	20A-IDW5-092420-1	GW	9/24/20	1400	3							X									

Relinquished by:	Accepted by:	Date:	Time:
[signature]	[signature]	9-24-20	1405
	[signature]	9/24	1548

Comments, Special Requirements or Regulations:

Turnaround:
10 - 15 days

RI
- ☐ Direct Exposure (Residential)
- ☐ GW
- ☐ Other

CT
- ☐ RCP Cert
- ☐ GW Protection
- ☐ SW Protection
- ☐ GA Mobility
- ☐ GB Mobility
- ☐ Residential DEC
- ☐ I/C DEC
- ☐ Other

MA
- X MCP (CAM Rpt)
- X GW-1
- X GW-2
- X GW-3
- ☐ S-1
- ☐ S-2
- ☐ S-3
- ☐ MWRA eSMART
- ☐ Other

State where samples were collected: MA

Data Format
- x PDF
- x AECOM EQuIS 4-File EDD format

Data Package
- ☐ Tier II Checklist
- ☐ Full Data Package*
- ☐ Phoenix Std Report
- ☐ Other

* SURCHARGE APPLIES

Cooler: Yes ✓ No
Coolant: IPK ICE ✓ No
Temp 1.0 °C Pg of

PHOENIX
Environmental Laboratories, Inc.

CHAIN OF CUSTODY RECORD

587 East Middle Turnpike, P.O. Box 370, Manchester, CT 06040
Email: info@phoenixlabs.com Fax (860) 645-0823
Client Services (860) 645-8726

Data Delivery/Contact EMails:
lori.herberich@aecom.com
scott.olson@aecom.com

Customer: AECOM
Address: 250 Apollo Drive
Chelmsford, MA 01824 - (978) 905-2100
Contacts: Lori Herbierich (Chemist) 978-302-0089 Scott Olson (PM) 978-846-5238

Project: Lockheed - Wilmington MA 60552044.19
Report to: Lori Herberich - Scott Olson - Nicole Callahan
Invoice to: Scott Olson & Lori Herberich
QUOTE # August 2019 (for 2017-2022)

2020 Project PO: 127680

This section MUST be completed with Bottle Quantities.

Client Sample - Information - Identification

Sampler's Signature: [signature] Date: 9/24/20

Matrix Code:
DW=Drinking Water GW=Ground Water SW=Surface Water WW=Waste Water L=Liquid
RW=Raw Water SE=Sediment SL=Sludge S=Soil SD=Solid W=Wipe OIL=Oil B=Bulk

PHOENIX USE ONLY SAMPLE #	Customer Sample Identification	Sample Matrix	Date Sampled	Time Sampled	# of VOA Vials	# of Amber Glass	# of Clear Glass	# of Plastic				VOCs (8260) - HCL + Freon 113	1,4-Dioxane (8270D SIM) - NaHSO4 for DL <0.3 ug/L	VPH - HCL (MassDEP- VPH-04-1.1 Rev 1)	EPH + PAHs - HCL & UNP (MassDEP- EPH-04-1.1 Rev 1)	Total As, Fe, Mn (6010C) - HNO3 [FF]	Dissolved As, Fe, Mn (6010C) - HNO3	Chloride, Nitrate, Nitrite, Sulfate (300) - UNP	Sulfide - Zn-Acetate + NaOH	Total Organic Carbon (9060A) - H3PO4	Comments
84823	20A-TB02-092320-1	GW	9/23/20	1500	2							X									
84824	20A-IDW1-092320-1	GW	9/23/20	1515	3							X									
84825	20A-IDW2-092320-1	GW	9/23/20	1520	3							X									
84826	20A-IDW3-092320-1	GW	9/23/20	1525	3							X									
84827	20A-IDW4-092320-1	GW	9/23/20	1530	3							X									
84828	20A-IDW5-092420-1	GW	9/24/20	1400	3							X									

Relinquished by:	Accepted by:	Date:	Time:
[signature]	[signature]	9-24-20	1405
[signature]	[signature]	9/24	1548

Comments, Special Requirements or Regulations:

Turnaround:
10 - 15 days

RI
- ☐ Direct Exposure (Residential)
- ☐ GW
- ☐ Other

CT
- ☐ RCP Cert
- ☐ GW Protection
- ☐ SW Protection
- ☐ GA Mobility
- ☐ GB Mobility
- ☐ Residential DEC
- ☐ I/C DEC
- ☐ Other

MA
- X MCP (CAM Rpt)
- X GW-1
- X GW-2
- X GW-3
- ☐ S-1
- ☐ S-2
- ☐ S-3
- ☐ MWRA eSMART
- ☐ Other

State where samples were collected: MA

Data Format
- x PDF
- x AECOM EQuIS 4-File EDD format

Data Package
- ☐ Tier II Checklist
- ☐ Full Data Package*
- ☐ Phoenix Std Report
- ☐ Other

* SURCHARGE APPLIES

PHOENIX
Environmental Laboratories, Inc.

Tuesday, October 06, 2020

Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Project ID: **LOCKHEED WILMINGTON MA 60552044.19**
SDG ID: **GCG84829**
Sample ID#s: CG84829 - CG84833

This laboratory is in compliance with the NELAC requirements of procedures used except where indicated.

This report contains results for the parameters tested, under the sampling conditions described on the Chain Of Custody, as received by the laboratory. This report is incomplete unless all pages indicated in the pagination at the bottom of the page are included.

A scanned version of the COC form accompanies the analytical report and is an exact duplicate of the original.

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200. The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.

Sincerely yours,

Phyllis Shiller
Laboratory Director

NELAC - #NY11301
CT Lab Registration #PH-0618
MA Lab Registration #M-CT007
ME Lab Registration #CT-007
NH Lab Registration #213693-A,B
NJ Lab Registration #CT-003
NY Lab Registration #11301
PA Lab Registration #68-03530
RI Lab Registration #63
UT Lab Registration #CT00007
VT Lab Registration #VT11301

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

ACCREDITED IN ACCORDANCE WITH nelac NY # 11301

SDG Comments

October 06, 2020

SDG I.D.: GCG84829

Phoenix reporting levels may exceed those referenced in the CAM protocol. Please refer to criteria sheet for comparisons to requested MCP standards.

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Sample Id Cross Reference

October 06, 2020

SDG I.D.: GCG84829

Project ID: LOCKHEED WILMINGTON MA 60552044.19

Client Id	Lab Id	Matrix
20A-AE101R6-092420-1	CG84829	GROUND WATER
20A-STM3D-092420-1	CG84830	GROUND WATER
20A-GZA105R-092420-1	CG84831	GROUND WATER
20A-GZA105S-092420-1	CG84832	GROUND WATER
20A-GZA101R-092420-1	CG84833	GROUND WATER

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

October 06, 2020

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		09/24/20	12:00
Location Code:	AECOM-WILMINGTN	Received by:	B	09/24/20	15:48
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	127680				

Laboratory Data

SDG ID: GCG84829
Phoenix ID: CG84829

Project ID: LOCKHEED WILMINGTON MA 60552044.19
Client ID: 20A-AE101R6-092420-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Volatiles							
1,1,1,2-Tetrachloroethane	ND	10	ug/L	20	10/01/20	MH	SW8260C
1,1,1-Trichloroethane	ND	20	ug/L	20	10/01/20	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	10	ug/L	20	10/01/20	MH	SW8260C
1,1,2-Trichloroethane	ND	10	ug/L	20	10/01/20	MH	SW8260C
1,1-Dichloroethane	36	20	ug/L	20	10/01/20	MH	SW8260C
1,1-Dichloroethene	12	10	ug/L	20	10/01/20	MH	SW8260C
1,1-Dichloropropene	ND	20	ug/L	20	10/01/20	MH	SW8260C
1,2,3-Trichlorobenzene	ND	10	ug/L	20	10/01/20	MH	SW8260C
1,2,3-Trichloropropane	ND	10	ug/L	20	10/01/20	MH	SW8260C
1,2,4-Trichlorobenzene	ND	20	ug/L	20	10/01/20	MH	SW8260C
1,2,4-Trimethylbenzene	ND	20	ug/L	20	10/01/20	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	10	ug/L	20	10/01/20	MH	SW8260C
1,2-Dibromoethane	ND	10	ug/L	20	10/01/20	MH	SW8260C
1,2-Dichlorobenzene	ND	20	ug/L	20	10/01/20	MH	SW8260C
1,2-Dichloroethane	ND	10	ug/L	20	10/01/20	MH	SW8260C
1,2-Dichloropropane	ND	10	ug/L	20	10/01/20	MH	SW8260C
1,3,5-Trimethylbenzene	ND	20	ug/L	20	10/01/20	MH	SW8260C
1,3-Dichlorobenzene	ND	20	ug/L	20	10/01/20	MH	SW8260C
1,3-Dichloropropane	ND	20	ug/L	20	10/01/20	MH	SW8260C
1,4-Dichlorobenzene	ND	10	ug/L	20	10/01/20	MH	SW8260C
2,2-Dichloropropane	ND	20	ug/L	20	10/01/20	MH	SW8260C
2-Chlorotoluene	ND	20	ug/L	20	10/01/20	MH	SW8260C
2-Hexanone	ND	100	ug/L	20	10/01/20	MH	SW8260C
4-Chlorotoluene	ND	20	ug/L	20	10/01/20	MH	SW8260C
4-Methyl-2-pentanone	ND	100	ug/L	20	10/01/20	MH	SW8260C
Acetone	ND	500	ug/L	20	10/01/20	MH	SW8260C

Project ID: LOCKHEED WILMINGTON MA 60552044.19 Phoenix I.D.: CG84829

Client ID: 20A-AE101R6-092420-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	
Benzene	ND	10	ug/L	20	10/01/20	MH	SW8260C
Bromobenzene	ND	20	ug/L	20	10/01/20	MH	SW8260C
Bromochloromethane	ND	20	ug/L	20	10/01/20	MH	SW8260C
Bromodichloromethane	ND	10	ug/L	20	10/01/20	MH	SW8260C
Bromoform	ND	10	ug/L	20	10/01/20	MH	SW8260C
Bromomethane	ND	10	ug/L	20	10/01/20	MH	SW8260C
Carbon Disulfide	ND	100	ug/L	20	10/01/20	MH	SW8260C
Carbon tetrachloride	ND	10	ug/L	20	10/01/20	MH	SW8260C
Chlorobenzene	ND	20	ug/L	20	10/01/20	MH	SW8260C
Chloroethane	ND	20	ug/L	20	10/01/20	MH	SW8260C
Chloroform	ND	20	ug/L	20	10/01/20	MH	SW8260C
Chloromethane	ND	20	ug/L	20	10/01/20	MH	SW8260C
cis-1,2-Dichloroethene	1700	20	ug/L	20	10/01/20	MH	SW8260C
cis-1,3-Dichloropropene	ND	10	ug/L	20	10/01/20	MH	SW8260C
Dibromochloromethane	ND	10	ug/L	20	10/01/20	MH	SW8260C
Dibromomethane	ND	10	ug/L	20	10/01/20	MH	SW8260C
Dichlorodifluoromethane	ND	20	ug/L	20	10/01/20	MH	SW8260C
Ethylbenzene	ND	20	ug/L	20	10/01/20	MH	SW8260C
Hexachlorobutadiene	ND	10	ug/L	20	10/01/20	MH	SW8260C
Isopropylbenzene	ND	20	ug/L	20	10/01/20	MH	SW8260C
m&p-Xylene	ND	20	ug/L	20	10/01/20	MH	SW8260C
Methyl ethyl ketone	ND	100	ug/L	20	10/01/20	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	20	ug/L	20	10/01/20	MH	SW8260C
Methylene chloride	ND	20	ug/L	20	10/01/20	MH	SW8260C
Naphthalene	ND	20	ug/L	20	10/01/20	MH	SW8260C
n-Butylbenzene	ND	20	ug/L	20	10/01/20	MH	SW8260C
n-Propylbenzene	ND	20	ug/L	20	10/01/20	MH	SW8260C
o-Xylene	ND	20	ug/L	20	10/01/20	MH	SW8260C
p-Isopropyltoluene	ND	20	ug/L	20	10/01/20	MH	SW8260C
sec-Butylbenzene	ND	20	ug/L	20	10/01/20	MH	SW8260C
Styrene	ND	20	ug/L	20	10/01/20	MH	SW8260C
tert-Butylbenzene	ND	20	ug/L	20	10/01/20	MH	SW8260C
Tetrachloroethene	27	20	ug/L	20	10/01/20	MH	SW8260C
Tetrahydrofuran (THF)	ND	50	ug/L	20	10/01/20	MH	SW8260C
Toluene	ND	20	ug/L	20	10/01/20	MH	SW8260C
trans-1,2-Dichloroethene	32	20	ug/L	20	10/01/20	MH	SW8260C
trans-1,3-Dichloropropene	ND	10	ug/L	20	10/01/20	MH	SW8260C
Trichloroethene	920	20	ug/L	20	10/01/20	MH	SW8260C
Trichlorofluoromethane	ND	20	ug/L	20	10/01/20	MH	SW8260C
Trichlorotrifluoroethane	ND	20	ug/L	20	10/01/20	MH	SW8260C
Vinyl chloride	310	20	ug/L	20	10/01/20	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4 (20x)	101		%	20	10/01/20	MH	70 - 130 %
% Bromofluorobenzene (20x)	92		%	20	10/01/20	MH	70 - 130 %
% Dibromofluoromethane (20x)	102		%	20	10/01/20	MH	70 - 130 %
% Toluene-d8 (20x)	98		%	20	10/01/20	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	2000	ug/L	20	10/01/20	MH	SW8260C (OXY)
Diethyl ether	ND	20	ug/L	20	10/01/20	MH	SW8260C (OXY)

Ver 1

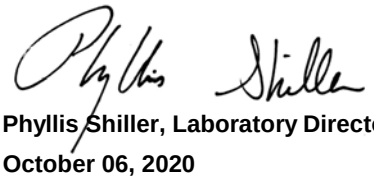
Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	
Di-isopropyl ether	ND	20	ug/L	20	10/01/20	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	20	ug/L	20	10/01/20	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	20	ug/L	20	10/01/20	MH	SW8260C (OXY)
1,4-dioxane							
1,4-dioxane	9.6	0.20	ug/l	1	09/29/20	AW	SW8270DSIM
QA/QC Surrogates							
% 1,4-dioxane-d8	90		%	1	09/29/20	AW	40 - 140 %
Extraction for 1,4-Dioxane	Completed				09/28/20	S/S	

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

Volatile Comment:
Elevated reporting limits for volatiles due to the presence of target and/or non-target compounds.

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.



Phyllis Shiller, Laboratory Director
October 06, 2020
Reviewed and Released by: Greg Lawrence, Assistant Lab Director

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

October 06, 2020

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		09/24/20	12:15
Location Code:	AECOM-WILMINGTN	Received by:	B	09/24/20	15:48
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	127680				

Laboratory Data

SDG ID: GCG84829
Phoenix ID: CG84830

Project ID: LOCKHEED WILMINGTON MA 60552044.19
Client ID: 20A-STM3D-092420-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Volatiles							
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	1	10/01/20	MH	SW8260C
1,1,1-Trichloroethane	ND	1.0	ug/L	1	10/01/20	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L	1	10/01/20	MH	SW8260C
1,1,2-Trichloroethane	ND	1.0	ug/L	1	10/01/20	MH	SW8260C
1,1-Dichloroethane	ND	1.0	ug/L	1	10/01/20	MH	SW8260C
1,1-Dichloroethene	ND	1.0	ug/L	1	10/01/20	MH	SW8260C
1,1-Dichloropropene	ND	1.0	ug/L	1	10/01/20	MH	SW8260C
1,2,3-Trichlorobenzene	ND	1.0	ug/L	1	10/01/20	MH	SW8260C
1,2,3-Trichloropropane	ND	0.50	ug/L	1	10/01/20	MH	SW8260C
1,2,4-Trichlorobenzene	ND	1.0	ug/L	1	10/01/20	MH	SW8260C
1,2,4-Trimethylbenzene	ND	1.0	ug/L	1	10/01/20	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	0.50	ug/L	1	10/01/20	MH	SW8260C
1,2-Dibromoethane	ND	0.50	ug/L	1	10/01/20	MH	SW8260C
1,2-Dichlorobenzene	ND	1.0	ug/L	1	10/01/20	MH	SW8260C
1,2-Dichloroethane	ND	0.60	ug/L	1	10/01/20	MH	SW8260C
1,2-Dichloropropane	ND	1.0	ug/L	1	10/01/20	MH	SW8260C
1,3,5-Trimethylbenzene	ND	1.0	ug/L	1	10/01/20	MH	SW8260C
1,3-Dichlorobenzene	ND	1.0	ug/L	1	10/01/20	MH	SW8260C
1,3-Dichloropropane	ND	1.0	ug/L	1	10/01/20	MH	SW8260C
1,4-Dichlorobenzene	ND	1.0	ug/L	1	10/01/20	MH	SW8260C
2,2-Dichloropropane	ND	1.0	ug/L	1	10/01/20	MH	SW8260C
2-Chlorotoluene	ND	1.0	ug/L	1	10/01/20	MH	SW8260C
2-Hexanone	ND	5.0	ug/L	1	10/01/20	MH	SW8260C
4-Chlorotoluene	ND	1.0	ug/L	1	10/01/20	MH	SW8260C
4-Methyl-2-pentanone	ND	5.0	ug/L	1	10/01/20	MH	SW8260C
Acetone	ND	25	ug/L	1	10/01/20	MH	SW8260C

Project ID: LOCKHEED WILMINGTON MA 60552044.19 Phoenix I.D.: CG84830

Client ID: 20A-STM3D-092420-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	
Benzene	ND	0.70	ug/L	1	10/01/20	MH	SW8260C
Bromobenzene	ND	1.0	ug/L	1	10/01/20	MH	SW8260C
Bromochloromethane	ND	1.0	ug/L	1	10/01/20	MH	SW8260C
Bromodichloromethane	ND	0.50	ug/L	1	10/01/20	MH	SW8260C
Bromoform	ND	1.0	ug/L	1	10/01/20	MH	SW8260C
Bromomethane	ND	1.0	ug/L	1	10/01/20	MH	SW8260C
Carbon Disulfide	ND	5.0	ug/L	1	10/01/20	MH	SW8260C
Carbon tetrachloride	ND	1.0	ug/L	1	10/01/20	MH	SW8260C
Chlorobenzene	ND	1.0	ug/L	1	10/01/20	MH	SW8260C
Chloroethane	ND	1.0	ug/L	1	10/01/20	MH	SW8260C
Chloroform	ND	1.0	ug/L	1	10/01/20	MH	SW8260C
Chloromethane	ND	1.0	ug/L	1	10/01/20	MH	SW8260C
cis-1,2-Dichloroethene	ND	1.0	ug/L	1	10/01/20	MH	SW8260C
cis-1,3-Dichloropropene	ND	0.40	ug/L	1	10/01/20	MH	SW8260C
Dibromochloromethane	ND	0.50	ug/L	1	10/01/20	MH	SW8260C
Dibromomethane	ND	1.0	ug/L	1	10/01/20	MH	SW8260C
Dichlorodifluoromethane	ND	1.0	ug/L	1	10/01/20	MH	SW8260C
Ethylbenzene	ND	1.0	ug/L	1	10/01/20	MH	SW8260C
Hexachlorobutadiene	ND	0.40	ug/L	1	10/01/20	MH	SW8260C
Isopropylbenzene	ND	1.0	ug/L	1	10/01/20	MH	SW8260C
m&p-Xylene	ND	1.0	ug/L	1	10/01/20	MH	SW8260C
Methyl ethyl ketone	ND	5.0	ug/L	1	10/01/20	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	1.0	ug/L	1	10/01/20	MH	SW8260C
Methylene chloride	ND	1.0	ug/L	1	10/01/20	MH	SW8260C
Naphthalene	ND	1.0	ug/L	1	10/01/20	MH	SW8260C
n-Butylbenzene	ND	1.0	ug/L	1	10/01/20	MH	SW8260C
n-Propylbenzene	ND	1.0	ug/L	1	10/01/20	MH	SW8260C
o-Xylene	ND	1.0	ug/L	1	10/01/20	MH	SW8260C
p-Isopropyltoluene	ND	1.0	ug/L	1	10/01/20	MH	SW8260C
sec-Butylbenzene	ND	1.0	ug/L	1	10/01/20	MH	SW8260C
Styrene	ND	1.0	ug/L	1	10/01/20	MH	SW8260C
tert-Butylbenzene	ND	1.0	ug/L	1	10/01/20	MH	SW8260C
Tetrachloroethene	ND	1.0	ug/L	1	10/01/20	MH	SW8260C
Tetrahydrofuran (THF)	ND	2.5	ug/L	1	10/01/20	MH	SW8260C
Toluene	ND	1.0	ug/L	1	10/01/20	MH	SW8260C
trans-1,2-Dichloroethene	ND	1.0	ug/L	1	10/01/20	MH	SW8260C
trans-1,3-Dichloropropene	ND	0.40	ug/L	1	10/01/20	MH	SW8260C
Trichloroethene	ND	1.0	ug/L	1	10/01/20	MH	SW8260C
Trichlorofluoromethane	ND	1.0	ug/L	1	10/01/20	MH	SW8260C
Trichlorotrifluoroethane	ND	1.0	ug/L	1	10/01/20	MH	SW8260C
Vinyl chloride	ND	1.0	ug/L	1	10/01/20	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	101		%	1	10/01/20	MH	70 - 130 %
% Bromofluorobenzene	92		%	1	10/01/20	MH	70 - 130 %
% Dibromofluoromethane	101		%	1	10/01/20	MH	70 - 130 %
% Toluene-d8	102		%	1	10/01/20	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	100	ug/L	1	10/01/20	MH	SW8260C (OXY)
Diethyl ether	ND	1.0	ug/L	1	10/01/20	MH	SW8260C (OXY)

Project ID: LOCKHEED WILMINGTON MA 60552044.19 Phoenix I.D.: CG84830

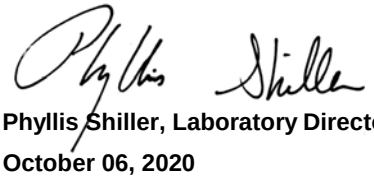
Client ID: 20A-STM3D-092420-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	
Di-isopropyl ether	ND	1.0	ug/L	1	10/01/20	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	1.0	ug/L	1	10/01/20	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	1.0	ug/L	1	10/01/20	MH	SW8260C (OXY)

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

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Phyllis Shiller, Laboratory Director

October 06, 2020

Reviewed and Released by: Greg Lawrence, Assistant Lab Director

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

October 06, 2020

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		09/24/20	12:35
Location Code:	AECOM-WILMINGTN	Received by:	B	09/24/20	15:48
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	127680				

Laboratory Data

SDG ID: GCG84829
Phoenix ID: CG84831

Project ID: LOCKHEED WILMINGTON MA 60552044.19
Client ID: 20A-GZA105R-092420-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Volatiles							
1,1,1,2-Tetrachloroethane	ND	50	ug/L	100	10/01/20	MH	SW8260C
1,1,1-Trichloroethane	ND	100	ug/L	100	10/01/20	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	50	ug/L	100	10/01/20	MH	SW8260C
1,1,2-Trichloroethane	ND	50	ug/L	100	10/01/20	MH	SW8260C
1,1-Dichloroethane	86	70	ug/L	100	10/01/20	MH	SW8260C
1,1-Dichloroethene	ND	50	ug/L	100	10/01/20	MH	SW8260C
1,1-Dichloropropene	ND	100	ug/L	100	10/01/20	MH	SW8260C
1,2,3-Trichlorobenzene	ND	50	ug/L	100	10/01/20	MH	SW8260C
1,2,3-Trichloropropane	ND	50	ug/L	100	10/01/20	MH	SW8260C
1,2,4-Trichlorobenzene	ND	70	ug/L	100	10/01/20	MH	SW8260C
1,2,4-Trimethylbenzene	ND	56	ug/L	100	10/01/20	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	50	ug/L	100	10/01/20	MH	SW8260C
1,2-Dibromoethane	ND	50	ug/L	100	10/01/20	MH	SW8260C
1,2-Dichlorobenzene	ND	100	ug/L	100	10/01/20	MH	SW8260C
1,2-Dichloroethane	ND	50	ug/L	100	10/01/20	MH	SW8260C
1,2-Dichloropropane	ND	50	ug/L	100	10/01/20	MH	SW8260C
1,3,5-Trimethylbenzene	ND	60	ug/L	100	10/01/20	MH	SW8260C
1,3-Dichlorobenzene	ND	50	ug/L	100	10/01/20	MH	SW8260C
1,3-Dichloropropane	ND	100	ug/L	100	10/01/20	MH	SW8260C
1,4-Dichlorobenzene	ND	50	ug/L	100	10/01/20	MH	SW8260C
2,2-Dichloropropane	ND	100	ug/L	100	10/01/20	MH	SW8260C
2-Chlorotoluene	ND	100	ug/L	100	10/01/20	MH	SW8260C
2-Hexanone	ND	500	ug/L	100	10/01/20	MH	SW8260C
4-Chlorotoluene	ND	100	ug/L	100	10/01/20	MH	SW8260C
4-Methyl-2-pentanone	ND	500	ug/L	100	10/01/20	MH	SW8260C
Acetone	ND	2500	ug/L	100	10/01/20	MH	SW8260C

Project ID: LOCKHEED WILMINGTON MA 60552044.19 Phoenix I.D.: CG84831
Client ID: 20A-GZA105R-092420-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	
Benzene	ND	50	ug/L	100	10/01/20	MH	SW8260C
Bromobenzene	ND	62	ug/L	100	10/01/20	MH	SW8260C
Bromochloromethane	ND	83	ug/L	100	10/01/20	MH	SW8260C
Bromodichloromethane	ND	50	ug/L	100	10/01/20	MH	SW8260C
Bromoform	ND	50	ug/L	100	10/01/20	MH	SW8260C
Bromomethane	ND	50	ug/L	100	10/01/20	MH	SW8260C
Carbon Disulfide	ND	500	ug/L	100	10/01/20	MH	SW8260C
Carbon tetrachloride	ND	50	ug/L	100	10/01/20	MH	SW8260C
Chlorobenzene	ND	100	ug/L	100	10/01/20	MH	SW8260C
Chloroethane	ND	100	ug/L	100	10/01/20	MH	SW8260C
Chloroform	ND	50	ug/L	100	10/01/20	MH	SW8260C
Chloromethane	ND	100	ug/L	100	10/01/20	MH	SW8260C
cis-1,2-Dichloroethene	190	100	ug/L	100	10/01/20	MH	SW8260C
cis-1,3-Dichloropropene	ND	50	ug/L	100	10/01/20	MH	SW8260C
Dibromochloromethane	ND	50	ug/L	100	10/01/20	MH	SW8260C
Dibromomethane	ND	50	ug/L	100	10/01/20	MH	SW8260C
Dichlorodifluoromethane	ND	100	ug/L	100	10/01/20	MH	SW8260C
Ethylbenzene	ND	100	ug/L	100	10/01/20	MH	SW8260C
Hexachlorobutadiene	ND	50	ug/L	100	10/01/20	MH	SW8260C
Isopropylbenzene	ND	100	ug/L	100	10/01/20	MH	SW8260C
m&p-Xylene	ND	100	ug/L	100	10/01/20	MH	SW8260C
Methyl ethyl ketone	ND	500	ug/L	100	10/01/20	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	70	ug/L	100	10/01/20	MH	SW8260C
Methylene chloride	ND	100	ug/L	100	10/01/20	MH	SW8260C
Naphthalene	ND	100	ug/L	100	10/01/20	MH	SW8260C
n-Butylbenzene	ND	100	ug/L	100	10/01/20	MH	SW8260C
n-Propylbenzene	ND	100	ug/L	100	10/01/20	MH	SW8260C
o-Xylene	ND	100	ug/L	100	10/01/20	MH	SW8260C
p-Isopropyltoluene	ND	100	ug/L	100	10/01/20	MH	SW8260C
sec-Butylbenzene	ND	100	ug/L	100	10/01/20	MH	SW8260C
Styrene	ND	100	ug/L	100	10/01/20	MH	SW8260C
tert-Butylbenzene	ND	100	ug/L	100	10/01/20	MH	SW8260C
Tetrachloroethene	5300	100	ug/L	100	10/01/20	MH	SW8260C
Tetrahydrofuran (THF)	ND	250	ug/L	100	10/01/20	MH	SW8260C
Toluene	ND	100	ug/L	100	10/01/20	MH	SW8260C
trans-1,2-Dichloroethene	ND	80	ug/L	100	10/01/20	MH	SW8260C
trans-1,3-Dichloropropene	ND	50	ug/L	100	10/01/20	MH	SW8260C
Trichloroethene	8200	100	ug/L	100	10/01/20	MH	SW8260C
Trichlorofluoromethane	ND	100	ug/L	100	10/01/20	MH	SW8260C
Trichlorotrifluoroethane	ND	100	ug/L	100	10/01/20	MH	SW8260C
Vinyl chloride	ND	50	ug/L	100	10/01/20	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4 (100x)	100		%	100	10/01/20	MH	70 - 130 %
% Bromofluorobenzene (100x)	91		%	100	10/01/20	MH	70 - 130 %
% Dibromofluoromethane (100x)	101		%	100	10/01/20	MH	70 - 130 %
% Toluene-d8 (100x)	95		%	100	10/01/20	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	10000	ug/L	100	10/01/20	MH	SW8260C (OXY)
Diethyl ether	ND	100	ug/L	100	10/01/20	MH	SW8260C (OXY)

Ver 1

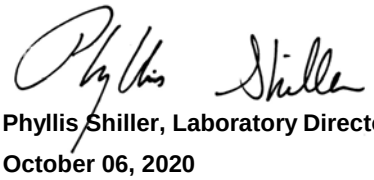
Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	
Di-isopropyl ether	ND	100	ug/L	100	10/01/20	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	100	ug/L	100	10/01/20	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	100	ug/L	100	10/01/20	MH	SW8260C (OXY)

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

Volatile Comment:
Elevated reporting limits for volatiles due to the presence of target and/or non-target compounds.

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.



Phyllis Shiller, Laboratory Director

October 06, 2020

Reviewed and Released by: Greg Lawrence, Assistant Lab Director

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

October 06, 2020

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		09/24/20	11:00
Location Code:	AECOM-WILMINGTN	Received by:	B	09/24/20	15:48
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	127680				

Laboratory Data

SDG ID: GCG84829
Phoenix ID: CG84832

Project ID: LOCKHEED WILMINGTON MA 60552044.19
Client ID: 20A-GZA105S-092420-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Arsenic	0.195	0.004	mg/L	1	09/26/20	CPP	SW6010D
Arsenic (Dissolved)	0.194	0.004	mg/L	1	09/26/20	CPP	SW6010D
Iron (Dissolved)	28.3	0.011	mg/L	1	09/26/20	CPP	SW6010D
Manganese (Dissolved)	1.59	0.001	mg/L	1	09/26/20	EK	SW6010D
Iron	28.5	0.010	mg/L	1	09/26/20	CPP	SW6010D
Manganese	1.62	0.001	mg/L	1	09/26/20	CPP	SW6010D
EPH Extraction	Completed				10/02/20	JS/CAJ/KT	SW3510C
MA Petroleum Hydrocarbon (EPH)	Completed				09/24/20		MADEP EPH-04
Semi-Volatile Extraction	Completed				09/28/20	/AT/CG/K	SW3520C
Dissolved Metals Preparation	Completed				09/25/20	AG	SW3005A
Total Metals Digestion	Completed				09/25/20	AG	
MA Petroleum Hydrocarbon (VPH)	Completed				09/27/20	RM	MADEP VPH04
Volatiles							
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	1	10/01/20	MH	SW8260C
1,1,1-Trichloroethane	ND	1.0	ug/L	1	10/01/20	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L	1	10/01/20	MH	SW8260C
1,1,2-Trichloroethane	ND	1.0	ug/L	1	10/01/20	MH	SW8260C
1,1-Dichloroethane	ND	1.0	ug/L	1	10/01/20	MH	SW8260C
1,1-Dichloroethene	ND	1.0	ug/L	1	10/01/20	MH	SW8260C
1,1-Dichloropropene	ND	1.0	ug/L	1	10/01/20	MH	SW8260C
1,2,3-Trichlorobenzene	ND	1.0	ug/L	1	10/01/20	MH	SW8260C
1,2,3-Trichloropropane	ND	0.50	ug/L	1	10/01/20	MH	SW8260C
1,2,4-Trichlorobenzene	ND	1.0	ug/L	1	10/01/20	MH	SW8260C
1,2,4-Trimethylbenzene	ND	1.0	ug/L	1	10/01/20	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	0.50	ug/L	1	10/01/20	MH	SW8260C
1,2-Dibromoethane	ND	0.50	ug/L	1	10/01/20	MH	SW8260C
1,2-Dichlorobenzene	ND	1.0	ug/L	1	10/01/20	MH	SW8260C

Project ID: LOCKHEED WILMINGTON MA 60552044.19 Phoenix I.D.: CG84832

Client ID: 20A-GZA105S-092420-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	
1,2-Dichloroethane	ND	0.60	ug/L	1	10/01/20	MH	SW8260C
1,2-Dichloropropane	ND	1.0	ug/L	1	10/01/20	MH	SW8260C
1,3,5-Trimethylbenzene	ND	1.0	ug/L	1	10/01/20	MH	SW8260C
1,3-Dichlorobenzene	ND	1.0	ug/L	1	10/01/20	MH	SW8260C
1,3-Dichloropropane	ND	1.0	ug/L	1	10/01/20	MH	SW8260C
1,4-Dichlorobenzene	ND	1.0	ug/L	1	10/01/20	MH	SW8260C
2,2-Dichloropropane	ND	1.0	ug/L	1	10/01/20	MH	SW8260C
2-Chlorotoluene	ND	1.0	ug/L	1	10/01/20	MH	SW8260C
2-Hexanone	ND	5.0	ug/L	1	10/01/20	MH	SW8260C
4-Chlorotoluene	ND	1.0	ug/L	1	10/01/20	MH	SW8260C
4-Methyl-2-pentanone	ND	5.0	ug/L	1	10/01/20	MH	SW8260C
Acetone	ND	25	ug/L	1	10/01/20	MH	SW8260C
Benzene	ND	0.70	ug/L	1	10/01/20	MH	SW8260C
Bromobenzene	ND	1.0	ug/L	1	10/01/20	MH	SW8260C
Bromochloromethane	ND	1.0	ug/L	1	10/01/20	MH	SW8260C
Bromodichloromethane	ND	0.50	ug/L	1	10/01/20	MH	SW8260C
Bromoform	ND	1.0	ug/L	1	10/01/20	MH	SW8260C
Bromomethane	ND	1.0	ug/L	1	10/01/20	MH	SW8260C
Carbon Disulfide	ND	5.0	ug/L	1	10/01/20	MH	SW8260C
Carbon tetrachloride	ND	1.0	ug/L	1	10/01/20	MH	SW8260C
Chlorobenzene	ND	1.0	ug/L	1	10/01/20	MH	SW8260C
Chloroethane	ND	1.0	ug/L	1	10/01/20	MH	SW8260C
Chloroform	ND	1.0	ug/L	1	10/01/20	MH	SW8260C
Chloromethane	ND	1.0	ug/L	1	10/01/20	MH	SW8260C
cis-1,2-Dichloroethene	ND	1.0	ug/L	1	10/01/20	MH	SW8260C
cis-1,3-Dichloropropene	ND	0.40	ug/L	1	10/01/20	MH	SW8260C
Dibromochloromethane	ND	0.50	ug/L	1	10/01/20	MH	SW8260C
Dibromomethane	ND	1.0	ug/L	1	10/01/20	MH	SW8260C
Dichlorodifluoromethane	ND	1.0	ug/L	1	10/01/20	MH	SW8260C
Ethylbenzene	ND	1.0	ug/L	1	10/01/20	MH	SW8260C
Hexachlorobutadiene	ND	0.40	ug/L	1	10/01/20	MH	SW8260C
Isopropylbenzene	ND	1.0	ug/L	1	10/01/20	MH	SW8260C
m&p-Xylene	ND	1.0	ug/L	1	10/01/20	MH	SW8260C
Methyl ethyl ketone	ND	5.0	ug/L	1	10/01/20	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	1.0	ug/L	1	10/01/20	MH	SW8260C
Methylene chloride	ND	1.0	ug/L	1	10/01/20	MH	SW8260C
Naphthalene	ND	1.0	ug/L	1	10/01/20	MH	SW8260C
n-Butylbenzene	ND	1.0	ug/L	1	10/01/20	MH	SW8260C
n-Propylbenzene	ND	1.0	ug/L	1	10/01/20	MH	SW8260C
o-Xylene	ND	1.0	ug/L	1	10/01/20	MH	SW8260C
p-Isopropyltoluene	ND	1.0	ug/L	1	10/01/20	MH	SW8260C
sec-Butylbenzene	ND	1.0	ug/L	1	10/01/20	MH	SW8260C
Styrene	ND	1.0	ug/L	1	10/01/20	MH	SW8260C
tert-Butylbenzene	1.8	1.0	ug/L	1	10/01/20	MH	SW8260C
Tetrachloroethene	ND	1.0	ug/L	1	10/01/20	MH	SW8260C
Tetrahydrofuran (THF)	ND	2.5	ug/L	1	10/01/20	MH	SW8260C
Toluene	ND	1.0	ug/L	1	10/01/20	MH	SW8260C
trans-1,2-Dichloroethene	ND	1.0	ug/L	1	10/01/20	MH	SW8260C
trans-1,3-Dichloropropene	ND	0.40	ug/L	1	10/01/20	MH	SW8260C

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	
Trichloroethene	ND	1.0	ug/L	1	10/01/20	MH	SW8260C
Trichlorofluoromethane	ND	1.0	ug/L	1	10/01/20	MH	SW8260C
Trichlorotrifluoroethane	ND	1.0	ug/L	1	10/01/20	MH	SW8260C
Vinyl chloride	ND	1.0	ug/L	1	10/01/20	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	101		%	1	10/01/20	MH	70 - 130 %
% Bromofluorobenzene	96		%	1	10/01/20	MH	70 - 130 %
% Dibromofluoromethane	102		%	1	10/01/20	MH	70 - 130 %
% Toluene-d8	103		%	1	10/01/20	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	100	ug/L	1	10/01/20	MH	SW8260C (OXY)
Diethyl ether	ND	1.0	ug/L	1	10/01/20	MH	SW8260C (OXY)
Di-isopropyl ether	ND	1.0	ug/L	1	10/01/20	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	1.0	ug/L	1	10/01/20	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	1.0	ug/L	1	10/01/20	MH	SW8260C (OXY)
Semivolatiles by SIM, PAH							
2-Methylnaphthalene	ND	0.47	ug/L	1	09/29/20	WB	SW8270D (SIM)
Acenaphthene	ND	0.47	ug/L	1	09/29/20	WB	SW8270D (SIM)
Acenaphthylene	ND	0.09	ug/L	1	09/29/20	WB	SW8270D (SIM)
Anthracene	ND	0.09	ug/L	1	09/29/20	WB	SW8270D (SIM)
Benz(a)anthracene	ND	0.09	ug/L	1	09/29/20	WB	SW8270D (SIM)
Benzo(a)pyrene	ND	0.19	ug/L	1	09/29/20	WB	SW8270D (SIM)
Benzo(b)fluoranthene	ND	0.09	ug/L	1	09/29/20	WB	SW8270D (SIM)
Benzo(ghi)perylene	ND	0.02	ug/L	1	09/29/20	WB	SW8270D (SIM)
Benzo(k)fluoranthene	ND	0.09	ug/L	1	09/29/20	WB	SW8270D (SIM)
Chrysene	ND	0.05	ug/L	1	09/29/20	WB	SW8270D (SIM)
Dibenz(a,h)anthracene	ND	0.02	ug/L	1	09/29/20	WB	SW8270D (SIM)
Fluoranthene	ND	0.47	ug/L	1	09/29/20	WB	SW8270D (SIM)
Fluorene	ND	0.09	ug/L	1	09/29/20	WB	SW8270D (SIM)
Indeno(1,2,3-cd)pyrene	ND	0.09	ug/L	1	09/29/20	WB	SW8270D (SIM)
Naphthalene	ND	0.47	ug/L	1	09/29/20	WB	SW8270D (SIM)
Phenanthrene	ND	0.47	ug/L	1	09/29/20	WB	SW8270D (SIM)
Pyrene	ND	0.07	ug/L	1	09/29/20	WB	SW8270D (SIM)
QA/QC Surrogates							
% 2-Fluorobiphenyl	59		%	1	09/29/20	WB	40 - 140 %
% Nitrobenzene-d5	89		%	1	09/29/20	WB	40 - 140 %
% Terphenyl-d14	68		%	1	09/29/20	WB	40 - 140 %
MA EPH Aliphatic/Aromatic Ranges							
C11-C22 Aromatic Hydrocarbons 1,2*	ND	200	ug/L	1	10/02/20	AW	MAEPH 5/2004
C11-C22 Aromatic Hydrocarbons Unadj	ND	200	ug/L	1	10/02/20	AW	MAEPH 5/2004
C19-C36 Aliphatic Hydrocarbons 1*	ND	200	ug/L	1	10/02/20	AW	MAEPH 5/2004
C9-C18 Aliphatic Hydrocarbons 1*	ND	200	ug/L	1	10/02/20	AW	MAEPH 5/2004
Total TPH 1,2*	ND	200	ug/L	1	10/02/20	AW	MAEPH 5/2004
QA/QC Surrogates							
% 1-chlorooctadecane (aliphatic)	90		%	1	10/02/20	AW	40 - 140 %
% 2-Bromonaphthalene (Fractionation)	105		%	1	10/02/20	AW	40 - 140 %
% 2-Fluorobiphenyl (Fractionation)	110		%	1	10/02/20	AW	40 - 140 %

Project ID: LOCKHEED WILMINGTON MA 60552044.19 Phoenix I.D.: CG84832
Client ID: 20A-GZA105S-092420-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	
% o-terphenyl (aromatic)	87		%	1	10/02/20	AW	40 - 140 %

MA Volatile Petroleum Hydrocarbons (VPH)

Unadjusted C5-C8 Aliphatics (*1)	ND	100	ug/L	1	09/27/20	RM	MA VPH 5/2004
Unadjusted C9-C12 Aliphatics (*1)	310	100	ug/L	1	09/27/20	RM	MA VPH 5/2004
C5-C8 Aliphatic Hydrocarbons *1,2	ND	100	ug/L	1	09/27/20	RM	MA VPH 5/2004
C9-C12 Aliphatic Hydrocarbons *1,3	220	100	ug/L	1	09/27/20	RM	MA VPH 5/2004
C9-C10 Aromatic Hydrocarbons *1	ND	100	ug/L	1	09/27/20	RM	MA VPH 5/2004
Benzene	ND	1.0	ug/L	1	09/27/20	RM	MA VPH 5/2004
Ethyl Benzene	2.3	1.0	ug/L	1	09/27/20	RM	MA VPH 5/2004
MTBE	ND	1.0	ug/L	1	09/27/20	RM	MA VPH 5/2004
Naphthalene	ND	5.0	ug/L	1	09/27/20	RM	MA VPH 5/2004
Toluene	ND	1.0	ug/L	1	09/27/20	RM	MA VPH 5/2004
m,p-Xylenes	ND	2.0	ug/L	1	09/27/20	RM	MA VPH 5/2004
o-Xylene	1.3	1.0	ug/L	1	09/27/20	RM	MA VPH 5/2004
QA/QC Surrogates							
% 2,5-Dibromotoluene (FID)	93		%	1	09/27/20	RM	70 - 130 %
% 2,5-Dibromotoluene (PID)	94		%	1	09/27/20	RM	70 - 130 %

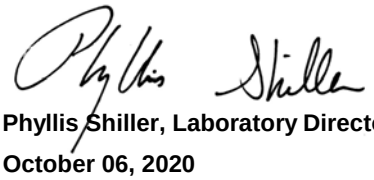
RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

MAEPH:
1* Hydrocarbon range data exclude concentrations of any surrogate(s) and/or internal standards eluting in that range.
2* C11-C12 Aromatic Hydrocarbons exclude the concentration of Target PAH analytes eluting in that range.

VPH:
*1 Range data exclude conc.s of any surrogate(s) and/or Int. std.s eluting in that range.
*2 C5-C8 and C9-C12 Aliphatic exclude the conc. of Target Analytes in that range.
*3 C9-C12 Aliphatic also exclude C9-C10 Aromatic Hydrocarbon

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.



Phyllis Shiller, Laboratory Director
October 06, 2020
Reviewed and Released by: Greg Lawrence, Assistant Lab Director

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

October 06, 2020

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		09/24/20	12:45
Location Code:	AECOM-WILMINGTN	Received by:	B	09/24/20	15:48
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	127680				

Laboratory Data

SDG ID: GCG84829
Phoenix ID: CG84833

Project ID: LOCKHEED WILMINGTON MA 60552044.19
Client ID: 20A-GZA101R-092420-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Arsenic	< 0.004	0.004	mg/L	1	09/26/20	CPP	SW6010D
Arsenic (Dissolved)	< 0.004	0.004	mg/L	1	09/26/20	CPP	SW6010D
Iron (Dissolved)	17.8	0.011	mg/L	1	09/26/20	CPP	SW6010D
Manganese (Dissolved)	8.04	0.011	mg/L	10	09/30/20	EK	SW6010D
Iron	16.8	0.010	mg/L	1	09/26/20	CPP	SW6010D
Manganese	8.00	0.010	mg/L	10	09/28/20	TH	SW6010D
Chloride	1200	75.0	mg/L	25	09/26/20	BS/EG	E300.0
Nitrite as Nitrogen	< 0.004	0.004	mg/L	1	09/25/20 14:05	BS/EG	E300.0
Nitrate as Nitrogen	< 0.05	0.05	mg/L	1	09/25/20 14:05	BS/EG	E300.0
Sulfate	46.4	30.0	mg/L	10	09/26/20	BS/EG	E300.0
Sulfide	< 0.05	0.05	mg/L	1	10/01/20	GD	SM4500S-D-11
Dissolved Metals Preparation	Completed				09/25/20	AG	SW3005A
Total Metals Digestion	Completed				09/25/20	AG	
Volatiles							
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	1	10/02/20	HM	SW8260C
1,1,1-Trichloroethane	ND	1.0	ug/L	1	10/02/20	HM	SW8260C
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L	1	10/02/20	HM	SW8260C
1,1,2-Trichloroethane	ND	1.0	ug/L	1	10/02/20	HM	SW8260C
1,1-Dichloroethane	ND	1.0	ug/L	1	10/02/20	HM	SW8260C
1,1-Dichloroethene	ND	1.0	ug/L	1	10/02/20	HM	SW8260C
1,1-Dichloropropene	ND	1.0	ug/L	1	10/02/20	HM	SW8260C
1,2,3-Trichlorobenzene	ND	1.0	ug/L	1	10/02/20	HM	SW8260C
1,2,3-Trichloropropane	ND	0.50	ug/L	1	10/02/20	HM	SW8260C
1,2,4-Trichlorobenzene	ND	1.0	ug/L	1	10/02/20	HM	SW8260C
1,2,4-Trimethylbenzene	ND	1.0	ug/L	1	10/02/20	HM	SW8260C
1,2-Dibromo-3-chloropropane	ND	0.50	ug/L	1	10/02/20	HM	SW8260C
1,2-Dibromoethane	ND	0.50	ug/L	1	10/02/20	HM	SW8260C

Project ID: LOCKHEED WILMINGTON MA 60552044.19 Phoenix I.D.: CG84833

Client ID: 20A-GZA101R-092420-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	
1,2-Dichlorobenzene	ND	1.0	ug/L	1	10/02/20	HM	SW8260C
1,2-Dichloroethane	ND	0.60	ug/L	1	10/02/20	HM	SW8260C
1,2-Dichloropropane	ND	1.0	ug/L	1	10/02/20	HM	SW8260C
1,3,5-Trimethylbenzene	ND	1.0	ug/L	1	10/02/20	HM	SW8260C
1,3-Dichlorobenzene	ND	1.0	ug/L	1	10/02/20	HM	SW8260C
1,3-Dichloropropane	ND	1.0	ug/L	1	10/02/20	HM	SW8260C
1,4-Dichlorobenzene	ND	1.0	ug/L	1	10/02/20	HM	SW8260C
2,2-Dichloropropane	ND	1.0	ug/L	1	10/02/20	HM	SW8260C
2-Chlorotoluene	ND	1.0	ug/L	1	10/02/20	HM	SW8260C
2-Hexanone	ND	5.0	ug/L	1	10/02/20	HM	SW8260C
4-Chlorotoluene	ND	1.0	ug/L	1	10/02/20	HM	SW8260C
4-Methyl-2-pentanone	ND	5.0	ug/L	1	10/02/20	HM	SW8260C
Acetone	ND	25	ug/L	1	10/02/20	HM	SW8260C
Benzene	ND	0.70	ug/L	1	10/02/20	HM	SW8260C
Bromobenzene	ND	1.0	ug/L	1	10/02/20	HM	SW8260C
Bromochloromethane	ND	1.0	ug/L	1	10/02/20	HM	SW8260C
Bromodichloromethane	ND	0.50	ug/L	1	10/02/20	HM	SW8260C
Bromoform	ND	1.0	ug/L	1	10/02/20	HM	SW8260C
Bromomethane	ND	1.0	ug/L	1	10/02/20	HM	SW8260C
Carbon Disulfide	ND	5.0	ug/L	1	10/02/20	HM	SW8260C
Carbon tetrachloride	ND	1.0	ug/L	1	10/02/20	HM	SW8260C
Chlorobenzene	ND	1.0	ug/L	1	10/02/20	HM	SW8260C
Chloroethane	ND	1.0	ug/L	1	10/02/20	HM	SW8260C
Chloroform	ND	1.0	ug/L	1	10/02/20	HM	SW8260C
Chloromethane	ND	1.0	ug/L	1	10/02/20	HM	SW8260C
cis-1,2-Dichloroethene	5.4	1.0	ug/L	1	10/02/20	HM	SW8260C
cis-1,3-Dichloropropene	ND	0.40	ug/L	1	10/02/20	HM	SW8260C
Dibromochloromethane	ND	0.50	ug/L	1	10/02/20	HM	SW8260C
Dibromomethane	ND	1.0	ug/L	1	10/02/20	HM	SW8260C
Dichlorodifluoromethane	ND	1.0	ug/L	1	10/02/20	HM	SW8260C
Ethylbenzene	ND	1.0	ug/L	1	10/02/20	HM	SW8260C
Hexachlorobutadiene	ND	0.40	ug/L	1	10/02/20	HM	SW8260C
Isopropylbenzene	ND	1.0	ug/L	1	10/02/20	HM	SW8260C
m&p-Xylene	ND	1.0	ug/L	1	10/02/20	HM	SW8260C
Methyl ethyl ketone	ND	5.0	ug/L	1	10/02/20	HM	SW8260C
Methyl t-butyl ether (MTBE)	ND	1.0	ug/L	1	10/02/20	HM	SW8260C
Methylene chloride	ND	1.0	ug/L	1	10/02/20	HM	SW8260C
Naphthalene	ND	1.0	ug/L	1	10/02/20	HM	SW8260C
n-Butylbenzene	ND	1.0	ug/L	1	10/02/20	HM	SW8260C
n-Propylbenzene	ND	1.0	ug/L	1	10/02/20	HM	SW8260C
o-Xylene	ND	1.0	ug/L	1	10/02/20	HM	SW8260C
p-Isopropyltoluene	ND	1.0	ug/L	1	10/02/20	HM	SW8260C
sec-Butylbenzene	ND	1.0	ug/L	1	10/02/20	HM	SW8260C
Styrene	ND	1.0	ug/L	1	10/02/20	HM	SW8260C
tert-Butylbenzene	ND	1.0	ug/L	1	10/02/20	HM	SW8260C
Tetrachloroethene	240	5.0	ug/L	5	10/01/20	HM	SW8260C
Tetrahydrofuran (THF)	ND	2.5	ug/L	1	10/02/20	HM	SW8260C
Toluene	ND	1.0	ug/L	1	10/02/20	HM	SW8260C
trans-1,2-Dichloroethene	ND	1.0	ug/L	1	10/02/20	HM	SW8260C

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	
trans-1,3-Dichloropropene	ND	0.40	ug/L	1	10/02/20	HM	SW8260C
Trichloroethene	110	5.0	ug/L	5	10/01/20	HM	SW8260C
Trichlorofluoromethane	ND	1.0	ug/L	1	10/02/20	HM	SW8260C
Trichlorotrifluoroethane	ND	1.0	ug/L	1	10/02/20	HM	SW8260C
Vinyl chloride	ND	1.0	ug/L	1	10/02/20	HM	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	99		%	1	10/02/20	HM	70 - 130 %
% Bromofluorobenzene	87		%	1	10/02/20	HM	70 - 130 %
% Dibromofluoromethane	100		%	1	10/02/20	HM	70 - 130 %
% Toluene-d8	89		%	1	10/02/20	HM	70 - 130 %
% 1,2-dichlorobenzene-d4 (5x)	102		%	5	10/01/20	HM	70 - 130 %
% Bromofluorobenzene (5x)	92		%	5	10/01/20	HM	70 - 130 %
% Dibromofluoromethane (5x)	100		%	5	10/01/20	HM	70 - 130 %
% Toluene-d8 (5x)	98		%	5	10/01/20	HM	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	100	ug/L	1	10/02/20	HM	SW8260C (OXY)
Diethyl ether	ND	1.0	ug/L	1	10/02/20	HM	SW8260C (OXY)
Di-isopropyl ether	ND	1.0	ug/L	1	10/02/20	HM	SW8260C (OXY)
Ethyl tert-butyl ether	ND	1.0	ug/L	1	10/02/20	HM	SW8260C (OXY)
tert-amyl methyl ether	ND	1.0	ug/L	1	10/02/20	HM	SW8260C (OXY)

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.

Phyllis Shiller, Laboratory Director
October 06, 2020
Reviewed and Released by: Greg Lawrence, Assistant Lab Director

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

QA/QC Report

October 06, 2020

QA/QC Data

SDG I.D.: GCG84829

Parameter	Blank	Blk RL	Sample Result	Dup Result	Dup RPD	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits
QA/QC Batch 547002 (mg/L), QC Sample No: CG83819 (CG84833)													
ICP Metals - Aqueous													
Arsenic	BRL	0.004	<0.004	<0.004	NC	96.5	97.0	0.5	97.3			80 - 120	20
Iron	BRL	0.010	0.069	0.073	5.60	96.8	97.6	0.8	99.2			80 - 120	20
Manganese	BRL	0.001	0.002	0.002	NC	98.6	98.9	0.3	99.8			80 - 120	20
Comment:													
Additional: LCS acceptance range is 80-120% MS acceptance range 75-125%.													
QA/QC Batch 547005 (mg/L), QC Sample No: CG84812 (CG84832, CG84833)													
ICP Metals - Dissolved													
Arsenic	BRL	0.004	0.057	0.051	11.1	84.4	82.9	1.8	86.6	89.0	2.7	80 - 120	20
Iron	BRL	0.011	23.7	22.6	4.80	84.5	83.3	1.4	NC	NC	NC	80 - 120	20
Manganese	BRL	0.001	3.12	3.11	0.30	86.9	85.7	1.4	80.2	90.5	12.1	80 - 120	20
Comment:													
Additional: LCS acceptance range is 80-120% MS acceptance range 75-125%.													
QA/QC Batch 547003 (mg/L), QC Sample No: CG84832 (CG84832)													
ICP Metals - Aqueous													
Arsenic	BRL	0.004	0.195	0.192	1.60	92.7	93.4	0.8	94.6			80 - 120	20
Iron	BRL	0.010	28.5	27.9	2.10	93.1	94.3	1.3	NC			80 - 120	20
Manganese	BRL	0.001	1.62	1.59	1.90	95.0	96.4	1.5	88.4			80 - 120	20
Comment:													
Additional: LCS acceptance range is 80-120% MS acceptance range 75-125%.													

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QA/QC Report

October 06, 2020

QA/QC Data

SDG I.D.: GCG84829

Parameter	Blank	Blk RL	Sample Result	Dup Result	Dup RPD	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits
QA/QC Batch 547575 (mg/L), QC Sample No: CG84818 (CG84833)													
Sulfide	BRL	0.05	<0.05	<0.05	NC	93.7			91.5			90 - 110	20
QA/QC Batch 547016 (mg/L), QC Sample No: CG84973 (CG84833)													
Chloride	BRL	3.0	<3.0	<3.0	NC	95.0			94.8			90 - 110	20
Sulfate	BRL	3.0	<3.0	<3.0	NC	94.7			99.1			90 - 110	20
QA/QC Batch 547226 (mg/L), QC Sample No: CG85802 (CG84833)													
Chloride	BRL	3.0	<3.0	<3.0	NC	95.6			94.6			90 - 110	20
Nitrate as Nitrogen	BRL	0.05	0.33	0.33	0	92.0			101			90 - 110	20
Sulfate	BRL	3.0	6.9	6.8	NC	95.6			94.8			90 - 110	20
QA/QC Batch 547016 (mg/L), QC Sample No: CG84973 (CG84833)													
Nitrate as Nitrogen	BRL	0.05	1.00	0.98	2.00	93.7			103			90 - 110	20
Nitrite as Nitrogen	BRL	0.01	<0.01	<0.01	NC	93.1			98.4			90 - 110	20

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QA/QC Report

October 06, 2020

QA/QC Data

SDG I.D.: GCG84829

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits	
QA/QC Batch 547878 (ug/L), QC Sample No: CG87895 (CG84832)											
MAEPH - Ground Water											
C9-C18 Aliphatic Hydrocarbons 1*	ND	100	44	51	14.7				40 - 140	25	
C19-C36 Aliphatic Hydrocarbons 1*	ND	100	71	78	9.4				40 - 140	25	
C11-C22 Aromatic Hydrocarbons 1	ND	100	66	68	3.0				40 - 140	25	
C11-C22 Aromatic Hydrocarbons U	ND	100							40 - 140	25	
Total TPH 1,2*	ND	100	59	67	12.7				40 - 140	25	
C9 - Nonane	ND	10	23	29	23.1				30 - 140	25	I
C-10 Decane	ND	10	30	38	23.5				40 - 140	25	I
C12 - Dodecane	ND	10	35	44	22.8				40 - 140	25	I
C14 - Tetradecane	ND	10	48	53	9.9				40 - 140	25	
C16 - Hexadecane	ND	10	60	66	9.5				40 - 140	25	
C18 - Octadecane	ND	10	67	75	11.3				40 - 140	25	
C19 - Nonadecane	ND	10	66	74	11.4				40 - 140	25	
C20 - Eicosane	ND	10	69	77	11.0				40 - 140	25	
C22 - Docosane	ND	10	69	77	11.0				40 - 140	25	
C24 - Tetracosane	ND	10	70	77	9.5				40 - 140	25	
C26 - Hexacosane	ND	10	69	77	11.0				40 - 140	25	
C28 - Octacosane	ND	10	68	77	12.4				40 - 140	25	
C30 - Tricotane	ND	10	68	76	11.1				40 - 140	25	
C36 - Hexatriacontane	ND	10	84	92	9.1				40 - 140	25	
% 1-chlorooctadecane (aliphatic)	70	%	74	69	7.0				40 - 140	25	
% o-terphenyl (aromatic)	77	%	70	70	0.0				40 - 140	25	
% 2-Fluorobiphenyl (Fractionation)	92	%	115	96	18.0				40 - 140	25	
% 2-Bromonaphthalene (Fractionati	96	%	110	99	10.5				40 - 140	25	
% 2-Methylnaphthalene BT		%	0	0	NC				0 - 5		
% Naphthalene BT		%	0	0	NC				0 - 5		
Comment:											
Additional EPH fractionation criteria: Breakthrough criteria (BT) is 0 to 5%											
QA/QC Batch 547240 (ug/l), QC Sample No: CG85194 (CG84829)											
1,4dioxane - Ground Water											
1,4-dioxane	ND	0.20	89	79	11.9	83			40 - 140	30	
% 1,4-dioxane-d8	94	%	88	86	2.3	83			40 - 140	30	
QA/QC Batch 547236 (ug/L), QC Sample No: CG84455 (CG84832)											
Semivolatiles by SIM, PAH - Ground Water											
2-Methylnaphthalene	ND	0.50	68	96	34.1				40 - 140	20	r
Acenaphthene	ND	0.50	64	71	10.4				40 - 140	20	
Acenaphthylene	ND	0.10	61	64	4.8				40 - 140	20	
Anthracene	ND	0.10	69	76	9.7				40 - 140	20	
Benz(a)anthracene	ND	0.02	73	83	12.8				40 - 140	20	
Benzo(a)pyrene	ND	0.02	69	75	8.3				40 - 140	20	
Benzo(b)fluoranthene	ND	0.02	95	110	14.6				40 - 140	20	

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits	
Benzo(ghi)perylene	ND	0.02	81	90	10.5				40 - 140	20	
Benzo(k)fluoranthene	ND	0.02	63	71	11.9				40 - 140	20	
Chrysene	ND	0.02	74	82	10.3				40 - 140	20	
Dibenz(a,h)anthracene	ND	0.02	64	74	14.5				40 - 140	20	
Fluoranthene	ND	0.50	65	70	7.4				40 - 140	20	
Fluorene	ND	0.10	50	56	11.3				40 - 140	20	
Indeno(1,2,3-cd)pyrene	ND	0.02	65	72	10.2				40 - 140	20	
Naphthalene	ND	0.50	59	87	38.4				40 - 140	20	r
Phenanthrene	ND	0.06	62	69	10.7				40 - 140	20	
Pyrene	ND	0.07	73	81	10.4				40 - 140	20	
% 2-Fluorobiphenyl	59	%	55	57	3.6				40 - 140	20	
% Nitrobenzene-d5	79	%	72	80	10.5				40 - 140	20	
% Terphenyl-d14	84	%	76	82	7.6				40 - 140	20	

Comment:

Additional 8270 criteria: 10% of compounds can be outside of acceptance criteria as long as recovery is at least 10%. (Acid surrogates acceptance range for aqueous samples: 10-110%, for soils 30-130%)

QA/QC Batch 547922 (ug/L), QC Sample No: CG84830 (CG84829 (20X) , CG84830, CG84831 (100X) , CG84832, CG84833 (5X))

Volatiles - Ground Water

1,1,1,2-Tetrachloroethane	ND	1.0	97	96	1.0				70 - 130	30	
1,1,1-Trichloroethane	ND	1.0	92	88	4.4				70 - 130	30	
1,1,2,2-Tetrachloroethane	ND	0.50	111	106	4.6				70 - 130	30	
1,1,2-Trichloroethane	ND	1.0	99	98	1.0				70 - 130	30	
1,1-Dichloroethane	ND	1.0	98	94	4.2				70 - 130	30	
1,1-Dichloroethene	ND	1.0	107	101	5.8				70 - 130	30	
1,1-Dichloropropene	ND	1.0	94	92	2.2				70 - 130	30	
1,2,3-Trichlorobenzene	ND	1.0	101	98	3.0				70 - 130	30	
1,2,3-Trichloropropane	ND	1.0	102	100	2.0				70 - 130	30	
1,2,4-Trichlorobenzene	ND	1.0	97	94	3.1				70 - 130	30	
1,2,4-Trimethylbenzene	ND	1.0	101	96	5.1				70 - 130	30	
1,2-Dibromo-3-chloropropane	ND	1.0	102	103	1.0				70 - 130	30	
1,2-Dibromoethane	ND	1.0	102	99	3.0				70 - 130	30	
1,2-Dichlorobenzene	ND	1.0	101	97	4.0				70 - 130	30	
1,2-Dichloroethane	ND	1.0	95	92	3.2				70 - 130	30	
1,2-Dichloropropane	ND	1.0	102	100	2.0				70 - 130	30	
1,3,5-Trimethylbenzene	ND	1.0	102	97	5.0				70 - 130	30	
1,3-Dichlorobenzene	ND	1.0	100	98	2.0				70 - 130	30	
1,3-Dichloropropane	ND	1.0	102	101	1.0				70 - 130	30	
1,4-Dichlorobenzene	ND	1.0	100	96	4.1				70 - 130	30	
1,4-dioxane	ND	100	97	100	3.0				40 - 160	30	
2,2-Dichloropropane	ND	1.0	103	95	8.1				70 - 130	30	
2-Chlorotoluene	ND	1.0	98	98	0.0				70 - 130	30	
2-Hexanone	ND	5.0	104	100	3.9				40 - 160	30	
4-Chlorotoluene	ND	1.0	101	99	2.0				70 - 130	30	
4-Methyl-2-pentanone	ND	5.0	104	102	1.9				40 - 160	30	
Acetone	ND	5.0	104	98	5.9				40 - 160	30	
Benzene	ND	0.70	101	99	2.0				70 - 130	30	
Bromobenzene	ND	1.0	96	94	2.1				70 - 130	30	
Bromochloromethane	ND	1.0	105	101	3.9				70 - 130	30	
Bromodichloromethane	ND	0.50	98	96	2.1				70 - 130	30	
Bromoform	ND	1.0	99	95	4.1				70 - 130	30	
Bromomethane	ND	1.0	97	94	3.1				40 - 160	30	
Carbon Disulfide	ND	1.0	107	103	3.8				70 - 130	30	

QA/QC Data

SDG I.D.: GCG84829

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits
Carbon tetrachloride	ND	1.0	90	86	4.5				70 - 130	30
Chlorobenzene	ND	1.0	101	99	2.0				70 - 130	30
Chloroethane	ND	1.0	93	89	4.4				70 - 130	30
Chloroform	ND	1.0	98	93	5.2				70 - 130	30
Chloromethane	ND	1.0	99	92	7.3				40 - 160	30
cis-1,2-Dichloroethene	ND	1.0	98	93	5.2				70 - 130	30
cis-1,3-Dichloropropene	ND	0.40	100	99	1.0				70 - 130	30
Dibromochloromethane	ND	0.50	104	102	1.9				70 - 130	30
Dibromomethane	ND	1.0	97	95	2.1				70 - 130	30
Dichlorodifluoromethane	ND	1.0	87	84	3.5				40 - 160	30
Di-isopropyl ether	ND	1.0	99	95	4.1				70 - 130	30
Ethyl ether	ND	1.0	91	90	1.1				70 - 130	30
Ethyl tert-butyl ether	ND	1.0	99	95	4.1				70 - 130	30
Ethylbenzene	ND	1.0	101	100	1.0				70 - 130	30
Hexachlorobutadiene	ND	0.40	94	88	6.6				70 - 130	30
Isopropylbenzene	ND	1.0	101	99	2.0				70 - 130	30
m&p-Xylene	ND	1.0	104	101	2.9				70 - 130	30
Methyl ethyl ketone	ND	5.0	111	107	3.7				40 - 160	30
Methyl t-butyl ether (MTBE)	ND	1.0	98	96	2.1				70 - 130	30
Methylene chloride	ND	1.0	97	95	2.1				70 - 130	30
Naphthalene	ND	1.0	107	104	2.8				70 - 130	30
n-Butylbenzene	ND	1.0	102	98	4.0				70 - 130	30
n-Propylbenzene	ND	1.0	101	97	4.0				70 - 130	30
o-Xylene	ND	1.0	103	101	2.0				70 - 130	30
p-Isopropyltoluene	ND	1.0	102	100	2.0				70 - 130	30
sec-Butylbenzene	ND	1.0	109	105	3.7				70 - 130	30
Styrene	ND	1.0	105	101	3.9				70 - 130	30
tert-amyl methyl ether	ND	1.0	95	95	0.0				70 - 130	30
tert-Butylbenzene	ND	1.0	102	98	4.0				70 - 130	30
Tetrachloroethene	ND	1.0	92	89	3.3				70 - 130	30
Tetrahydrofuran (THF)	ND	2.5	114	109	4.5				70 - 130	30
Toluene	ND	1.0	99	97	2.0				70 - 130	30
trans-1,2-Dichloroethene	ND	1.0	113	106	6.4				70 - 130	30
trans-1,3-Dichloropropene	ND	0.40	99	98	1.0				70 - 130	30
Trichloroethene	ND	1.0	99	95	4.1				70 - 130	30
Trichlorofluoromethane	ND	1.0	93	91	2.2				70 - 130	30
Trichlorotrifluoroethane	ND	1.0	111	106	4.6				70 - 130	30
Vinyl chloride	ND	1.0	101	97	4.0				70 - 130	30
% 1,2-dichlorobenzene-d4	99	%	101	100	1.0				70 - 130	30
% Bromofluorobenzene	92	%	98	98	0.0				70 - 130	30
% Dibromofluoromethane	102	%	98	99	1.0				70 - 130	30
% Toluene-d8	100	%	98	100	2.0				70 - 130	30

Comment:

A LCS and LCS Duplicate were performed instead of a matrix spike and matrix spike duplicate.

Additional 8260 criteria: 10% of compounds can be outside of acceptance criteria as long as recovery is 10%.

QA/QC Batch 548114 (ug/L), QC Sample No: CG88119 (CG84833)

Volatiles - Ground Water

1,1,1,2-Tetrachloroethane	ND	1.0	93	93	0.0	103	102	1.0	70 - 130	30
1,1,1-Trichloroethane	ND	1.0	82	82	0.0	99	96	3.1	70 - 130	30
1,1,2,2-Tetrachloroethane	ND	0.50	101	102	1.0	108	106	1.9	70 - 130	30
1,1,2-Trichloroethane	ND	1.0	92	93	1.1	100	102	2.0	70 - 130	30

QA/QC Data

SDG I.D.: GCG84829

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits
1,1-Dichloroethane	ND	1.0	86	87	1.2	101	100	1.0	70 - 130	30
1,1-Dichloroethene	ND	1.0	91	92	1.1	116	116	0.0	70 - 130	30
1,1-Dichloropropene	ND	1.0	86	89	3.4	104	104	0.0	70 - 130	30
1,2,3-Trichlorobenzene	ND	1.0	93	94	1.1	102	102	0.0	70 - 130	30
1,2,3-Trichloropropane	ND	1.0	96	97	1.0	100	99	1.0	70 - 130	30
1,2,4-Trichlorobenzene	ND	1.0	92	92	0.0	103	102	1.0	70 - 130	30
1,2,4-Trimethylbenzene	ND	1.0	92	94	2.2	103	105	1.9	70 - 130	30
1,2-Dibromo-3-chloropropane	ND	1.0	104	103	1.0	105	108	2.8	70 - 130	30
1,2-Dibromoethane	ND	1.0	97	97	0.0	103	102	1.0	70 - 130	30
1,2-Dichlorobenzene	ND	1.0	94	96	2.1	105	104	1.0	70 - 130	30
1,2-Dichloroethane	ND	1.0	84	86	2.4	94	93	1.1	70 - 130	30
1,2-Dichloropropane	ND	1.0	91	94	3.2	105	105	0.0	70 - 130	30
1,3,5-Trimethylbenzene	ND	1.0	94	96	2.1	107	106	0.9	70 - 130	30
1,3-Dichlorobenzene	ND	1.0	96	96	0.0	104	105	1.0	70 - 130	30
1,3-Dichloropropane	ND	1.0	94	94	0.0	101	100	1.0	70 - 130	30
1,4-Dichlorobenzene	ND	1.0	94	96	2.1	102	104	1.9	70 - 130	30
1,4-dioxane	ND	100	90	93	3.3	96	100	4.1	40 - 160	30
2,2-Dichloropropane	ND	1.0	89	91	2.2	95	94	1.1	70 - 130	30
2-Chlorotoluene	ND	1.0	97	99	2.0	107	108	0.9	70 - 130	30
2-Hexanone	ND	5.0	95	98	3.1	102	101	1.0	40 - 160	30
4-Chlorotoluene	ND	1.0	97	99	2.0	108	106	1.9	70 - 130	30
4-Methyl-2-pentanone	ND	5.0	99	97	2.0	104	104	0.0	40 - 160	30
Acetone	ND	5.0	83	85	2.4	102	107	4.8	40 - 160	30
Benzene	ND	0.70	94	94	0.0	108	107	0.9	70 - 130	30
Bromobenzene	ND	1.0	93	95	2.1	100	102	2.0	70 - 130	30
Bromochloromethane	ND	1.0	98	100	2.0	109	108	0.9	70 - 130	30
Bromodichloromethane	ND	0.50	89	91	2.2	99	99	0.0	70 - 130	30
Bromoform	ND	1.0	93	95	2.1	97	98	1.0	70 - 130	30
Bromomethane	ND	1.0	73	77	5.3	62	74	17.6	40 - 160	30
Carbon Disulfide	ND	1.0	91	91	0.0	113	114	0.9	70 - 130	30
Carbon tetrachloride	ND	1.0	94	95	1.1	99	115	15.0	70 - 130	30
Chlorobenzene	ND	1.0	95	97	2.1	107	107	0.0	70 - 130	30
Chloroethane	ND	1.0	75	75	0.0	103	100	3.0	70 - 130	30
Chloroform	ND	1.0	86	87	1.2	102	98	4.0	70 - 130	30
Chloromethane	ND	1.0	84	85	1.2	106	107	0.9	40 - 160	30
cis-1,2-Dichloroethene	ND	1.0	85	89	4.6	103	103	0.0	70 - 130	30
cis-1,3-Dichloropropene	ND	0.40	91	92	1.1	94	96	2.1	70 - 130	30
Dibromochloromethane	ND	0.50	98	98	0.0	103	104	1.0	70 - 130	30
Dibromomethane	ND	1.0	88	91	3.4	97	98	1.0	70 - 130	30
Dichlorodifluoromethane	ND	1.0	78	78	0.0	100	101	1.0	40 - 160	30
Di-isopropyl ether	ND	1.0	91	93	2.2	103	102	1.0	70 - 130	30
Ethyl ether	ND	1.0	82	84	2.4	96	95	1.0	70 - 130	30
Ethyl tert-butyl ether	ND	1.0	91	92	1.1	102	103	1.0	70 - 130	30
Ethylbenzene	ND	1.0	96	98	2.1	110	109	0.9	70 - 130	30
Hexachlorobutadiene	ND	0.40	87	87	0.0	103	102	1.0	70 - 130	30
Isopropylbenzene	ND	1.0	97	100	3.0	111	109	1.8	70 - 130	30
m&p-Xylene	ND	1.0	97	98	1.0	111	109	1.8	70 - 130	30
Methyl ethyl ketone	ND	5.0	101	100	1.0	105	110	4.7	40 - 160	30
Methyl t-butyl ether (MTBE)	ND	1.0	89	88	1.1	100	100	0.0	70 - 130	30
Methylene chloride	ND	1.0	83	87	4.7	102	103	1.0	70 - 130	30
Naphthalene	ND	1.0	99	102	3.0	111	114	2.7	70 - 130	30
n-Butylbenzene	ND	1.0	93	95	2.1	110	107	2.8	70 - 130	30
n-Propylbenzene	ND	1.0	98	98	0.0	110	109	0.9	70 - 130	30

QA/QC Data

SDG I.D.: GCG84829

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits
o-Xylene	ND	1.0	97	99	2.0	111	109	1.8	70 - 130	30
p-Isopropyltoluene	ND	1.0	96	97	1.0	112	110	1.8	70 - 130	30
sec-Butylbenzene	ND	1.0	100	103	3.0	119	117	1.7	70 - 130	30
Styrene	ND	1.0	96	98	2.1	108	108	0.0	70 - 130	30
tert-amyl methyl ether	ND	1.0	93	93	0.0	98	100	2.0	70 - 130	30
tert-Butylbenzene	ND	1.0	94	96	2.1	110	108	1.8	70 - 130	30
Tetrahydrofuran (THF)	ND	2.5	101	102	1.0	105	110	4.7	70 - 130	30
Toluene	ND	1.0	93	94	1.1	107	107	0.0	70 - 130	30
trans-1,2-Dichloroethene	ND	1.0	96	99	3.1	119	120	0.8	70 - 130	30
trans-1,3-Dichloropropene	ND	0.40	90	92	2.2	95	97	2.1	70 - 130	30
Trichlorofluoromethane	ND	1.0	77	78	1.3	106	103	2.9	70 - 130	30
Trichlorotrifluoroethane	ND	1.0	98	99	1.0	128	121	5.6	70 - 130	30
Vinyl chloride	ND	1.0	85	87	2.3	108	113	4.5	70 - 130	30
% 1,2-dichlorobenzene-d4	100	%	99	100	1.0	99	99	0.0	70 - 130	30
% Bromofluorobenzene	90	%	93	93	0.0	94	93	1.1	70 - 130	30
% Dibromofluoromethane	100	%	101	99	2.0	99	101	2.0	70 - 130	30
% Toluene-d8	99	%	95	95	0.0	96	97	1.0	70 - 130	30

Comment:

Additional 8260 criteria: 10% of compounds can be outside of acceptance criteria as long as recovery is 10%.

QA/QC Batch 547175 (ug/L), QC Sample No: CG84812 (CG84832)

Volatile Petroleum Hydrocarbons - Ground Water

Unadjusted C5-C8 Aliphatics (*1)	ND	100	99	102	3.0	NC	NC	NC	70 - 130	25
Unadjusted C9-C12 Aliphatics (*1)	ND	100	97	98	1.0	NC	NC	NC	70 - 130	25
C5-C8 Aliphatic Hydrocarbons *1,2	ND	100	99	102	3.0	NC	NC	NC	70 - 130	25
C9-C12 Aliphatic Hydrocarbons *1,	ND	100	97	98	1.0	NC	NC	NC	70 - 130	25
C9-C10 Aromatic Hydrocarbons *1	ND	100	94	94	0.0	NC	NC	NC	70 - 130	25
Benzene	ND	1.0	85	85	0.0	88	95	7.7	70 - 130	25
Ethyl Benzene	ND	1.0	88	88	0.0	90	97	7.5	70 - 130	25
MTBE	ND	1.0	94	93	1.1	90	98	8.5	70 - 130	25
Naphthalene	ND	5.0	85	86	1.2	83	90	8.1	70 - 130	25
Toluene	ND	1.0	90	90	0.0	93	100	7.3	70 - 130	25
m,p-Xylenes	ND	2.0	90	90	0.0	93	100	7.3	70 - 130	25
o-Xylene	ND	1.0	86	86	0.0	83	90	8.1	70 - 130	25

l = This parameter is outside laboratory LCS/LCSD specified recovery limits.
r = This parameter is outside laboratory RPD specified recovery limits.

If there are any questions regarding this data, please call Phoenix Client Services at extension 200.

RPD - Relative Percent Difference
LCS - Laboratory Control Sample
LCSD - Laboratory Control Sample Duplicate
MS - Matrix Spike
MS Dup - Matrix Spike Duplicate
NC - No Criteria
Intf - Interference

Phyllis Shiller, Laboratory Director
October 06, 2020

Tuesday, October 06, 2020

Criteria: MA: GW1, GW2, GW3

State: MA

Sample Criteria Exceedances Report

GCG84829 - AECOM-WILMINGTN

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units
CG84829	$8260GWR-WI	Benzene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	10	5	5	ug/L
CG84829	$8260GWR-WI	Bromoform	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	10	4	4	ug/L
CG84829	$8260GWR-WI	1,2-Dichloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	10	3	3	ug/L
CG84829	$8260GWR-WI	1,1,1,2-Tetrachloroethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	10	5	5	ug/L
CG84829	$8260GWR-WI	cis-1,2-Dichloroethene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	1700	20	20	20	ug/L
CG84829	$8260GWR-WI	Methylene chloride	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	20	5	5	ug/L
CG84829	$8260GWR-WI	Methyl ethyl ketone	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	100	38	38	ug/L
CG84829	$8260GWR-WI	Trichloroethene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	920	20	5	5	ug/L
CG84829	$8260GWR-WI	2-Hexanone	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	100	38	38	ug/L
CG84829	$8260GWR-WI	Hexachlorobutadiene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	10	0.6	0.6	ug/L
CG84829	$8260GWR-WI	cis-1,3-Dichloropropene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	10	0.47	0.47	ug/L
CG84829	$8260GWR-WI	trans-1,3-Dichloropropene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	10	0.47	0.47	ug/L
CG84829	$8260GWR-WI	Bromodichloromethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	10	3	3	ug/L
CG84829	$8260GWR-WI	Carbon tetrachloride	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	10	2	2	ug/L
CG84829	$8260GWR-WI	Bromomethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	10	7	7	ug/L
CG84829	$8260GWR-WI	1,1,2,2-Tetrachloroethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	10	2	2	ug/L
CG84829	$8260GWR-WI	1,4-Dichlorobenzene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	10	5	5	ug/L
CG84829	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	10	0.00033	0.00033	ug/L
CG84829	$8260GWR-WI	1,1,2-Trichloroethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	10	5	5	ug/L
CG84829	$8260GWR-WI	Dibromomethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	10	8.3	8.3	ug/L
CG84829	$8260GWR-WI	Dibromochloromethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	10	2	2	ug/L
CG84829	$8260GWR-WI	1,2,3-Trichlorobenzene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	10	7	7	ug/L
CG84829	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	10	0.00075	0.00075	ug/L
CG84829	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	10	0.0075	0.0075	ug/L
CG84829	$8260GWR-WI	Tetrachloroethene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	27	20	5	5	ug/L
CG84829	$8260GWR-WI	1,2-Dichloroethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	10	5	5	ug/L
CG84829	$8260GWR-WI	Vinyl chloride	MA / Client Specified Criteria / LOCKHEED WILMINGTO	310	20	2	2	ug/L
CG84829	$8260GWR-WI	cis-1,3-Dichloropropene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	0.5	0.5	ug/L
CG84829	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	920	20	5	5	ug/L
CG84829	$8260GWR-WI	1,1,1,2-Tetrachloroethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	5	5	ug/L
CG84829	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-1 (mg/l)	310	20	2	2	ug/L
CG84829	$8260GWR-WI	cis-1,2-Dichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	1700	20	20	20	ug/L
CG84829	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-1 (mg/l)	310	20	2	2	ug/L
CG84829	$8260GWR-WI	Carbon tetrachloride	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	2	2	ug/L
CG84829	$8260GWR-WI	Dibromochloromethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	2	2	ug/L
CG84829	$8260GWR-WI	Bromomethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	7	7	ug/L
CG84829	$8260GWR-WI	1,1,2,2-Tetrachloroethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	2	2	ug/L
CG84829	$8260GWR-WI	Hexachlorobutadiene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	0.6	0.6	ug/L
CG84829	$8260GWR-WI	Tetrachloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	27	20	5	5	ug/L
CG84829	$8260GWR-WI	Bromoform	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	4	4	ug/L
CG84829	$8260GWR-WI	Methylene chloride	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	20	5	5	ug/L
CG84829	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	0.02	0.02	ug/L

Tuesday, October 06, 2020

Criteria: MA: GW1, GW2, GW3

State: MA

Sample Criteria Exceedances Report

GCG84829 - AECOM-WILMINGTN

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units
CG84829	$8260GWR-WI	1,2-Dichloropropane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	3	3	ug/L
CG84829	$8260GWR-WI	1,2-Dichloroethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	5	5	ug/L
CG84829	$8260GWR-WI	1,4-Dichlorobenzene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	5	5	ug/L
CG84829	$8260GWR-WI	Benzene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	5	5	ug/L
CG84829	$8260GWR-WI	Bromodichloromethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	3	3	ug/L
CG84829	$8260GWR-WI	1,1-Dichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	12	10	7	7	ug/L
CG84829	$8260GWR-WI	1,1,2-Trichloroethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	5	5	ug/L
CG84829	$8260GWR-WI	trans-1,3-Dichloropropene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	0.5	0.5	ug/L
CG84829	$8260GWR-WI	cis-1,2-Dichloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	1700	20	20	20	ug/L
CG84829	$8260GWR-WI	1,1,2,2-Tetrachloroethane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	10	9	9	ug/L
CG84829	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	920	20	5	5	ug/L
CG84829	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-2 (mg/l)	310	20	2	2	ug/L
CG84829	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	10	2	2	ug/L
CG84829	$8260GWR-WI	cis-1,3-Dichloropropene	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	10	5	5	ug/L
CG84829	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-2 (mg/l)	310	20	2	2	ug/L
CG84829	$8260GWR-WI	trans-1,3-Dichloropropene	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	10	5	5	ug/L
CG84829	$8260GWR-WI	1,2-Dichloropropane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	10	3	3	ug/L
CG84829	$8260GWR-WI	Bromodichloromethane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	10	6	6	ug/L
CG84829	$8260GWR-WI	Hexachlorobutadiene	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	10	1	1	ug/L
CG84829	$8260GWR-WI	Bromomethane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	10	7	7	ug/L
CG84829	$8260GWR-WI	Carbon tetrachloride	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	10	2	2	ug/L
CG84829	$8260GWR-WI	1,2-Dichloroethane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	10	5	5	ug/L
CG84829	$8260GWR-WI	1,1,1,2-Tetrachloroethane	MA / GROUNDWATER STANDARDS / GW-1	ND	10	5	5	ug/L
CG84829	$8260GWR-WI	Vinyl chloride	MA / GROUNDWATER STANDARDS / GW-1	310	20	2	2	ug/L
CG84829	$8260GWR-WI	Methylene chloride	MA / GROUNDWATER STANDARDS / GW-1	ND	20	5	5	ug/L
CG84829	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-1	920	20	5	5	ug/L
CG84829	$8260GWR-WI	Tetrachloroethene	MA / GROUNDWATER STANDARDS / GW-1	27	20	5	5	ug/L
CG84829	$8260GWR-WI	Dibromochloromethane	MA / GROUNDWATER STANDARDS / GW-1	ND	10	2	2	ug/L
CG84829	$8260GWR-WI	Bromodichloromethane	MA / GROUNDWATER STANDARDS / GW-1	ND	10	3	3	ug/L
CG84829	$8260GWR-WI	1,1,2-Trichloroethane	MA / GROUNDWATER STANDARDS / GW-1	ND	10	5	5	ug/L
CG84829	$8260GWR-WI	1,1-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-1	12	10	7	7	ug/L
CG84829	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	10	0.02	0.02	ug/L
CG84829	$8260GWR-WI	1,2-Dichloroethane	MA / GROUNDWATER STANDARDS / GW-1	ND	10	5	5	ug/L
CG84829	$8260GWR-WI	1,2-Dichloropropane	MA / GROUNDWATER STANDARDS / GW-1	ND	10	5	5	ug/L
CG84829	$8260GWR-WI	Benzene	MA / GROUNDWATER STANDARDS / GW-1	ND	10	5	5	ug/L
CG84829	$8260GWR-WI	Bromoform	MA / GROUNDWATER STANDARDS / GW-1	ND	10	4	4	ug/L
CG84829	$8260GWR-WI	Carbon tetrachloride	MA / GROUNDWATER STANDARDS / GW-1	ND	10	5	5	ug/L
CG84829	$8260GWR-WI	cis-1,2-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-1	1700	20	70	70	ug/L
CG84829	$8260GWR-WI	Hexachlorobutadiene	MA / GROUNDWATER STANDARDS / GW-1	ND	10	0.6	0.6	ug/L
CG84829	$8260GWR-WI	1,1,2,2-Tetrachloroethane	MA / GROUNDWATER STANDARDS / GW-1	ND	10	2	2	ug/L
CG84829	$8260GWR-WI	1,4-Dichlorobenzene	MA / GROUNDWATER STANDARDS / GW-1	ND	10	5	5	ug/L
CG84829	$8260GWR-WI	Bromomethane	MA / GROUNDWATER STANDARDS / GW-2	ND	10	7	7	ug/L

Tuesday, October 06, 2020

Criteria: MA: GW1, GW2, GW3

State: MA

Sample Criteria Exceedances Report

GCG84829 - AECOM-WILMINGTN

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units
CG84829	$8260GWR-WI	Bromodichloromethane	MA / GROUNDWATER STANDARDS / GW-2	ND	10	6	6	ug/L
CG84829	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-2	920	20	5	5	ug/L
CG84829	$8260GWR-WI	Carbon tetrachloride	MA / GROUNDWATER STANDARDS / GW-2	ND	10	2	2	ug/L
CG84829	$8260GWR-WI	1,2-Dichloropropane	MA / GROUNDWATER STANDARDS / GW-2	ND	10	3	3	ug/L
CG84829	$8260GWR-WI	1,1,2,2-Tetrachloroethane	MA / GROUNDWATER STANDARDS / GW-2	ND	10	9	9	ug/L
CG84829	$8260GWR-WI	1,2-Dichloroethane	MA / GROUNDWATER STANDARDS / GW-2	ND	10	5	5	ug/L
CG84829	$8260GWR-WI	Vinyl chloride	MA / GROUNDWATER STANDARDS / GW-2	310	20	2	2	ug/L
CG84829	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-2	ND	10	2	2	ug/L
CG84829	$8260GWR-WI	cis-1,2-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-2	1700	20	20	20	ug/L
CG84829	$DIOX_LDL	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	9.6	0.20	0.3	0.3	ug/l
CG84829	$DIOX_LDL	1,4-dioxane	MA / CMR 310.40.1600 / GW-1 (mg/l)	9.6	0.20	3	3	ug/l
CG84829	$DIOX_LDL	1,4-dioxane	MA / GROUNDWATER STANDARDS / GW-1	9.6	0.20	0.3	0.3	ug/l
CG84829	$MCPADD-WM	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	2000	0.3	0.3	ug/L
CG84830	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.00033	0.00033	ug/L
CG84830	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.00075	0.00075	ug/L
CG84830	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.0075	0.0075	ug/L
CG84830	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	0.50	0.02	0.02	ug/L
CG84830	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	0.50	0.02	0.02	ug/L
CG84830	$MCPADD-WM	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	100	0.3	0.3	ug/L
CG84830	$MCPADD-WM	1,4-dioxane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	100	3	3	ug/L
CG84830	$MCPADD-WM	1,4-dioxane	MA / GROUNDWATER STANDARDS / GW-1	ND	100	0.3	0.3	ug/L
CG84831	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	50	0.0075	0.0075	ug/L
CG84831	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	50	0.00033	0.00033	ug/L
CG84831	$8260GWR-WI	1,2-Dichloroethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	50	5	5	ug/L
CG84831	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	50	0.00075	0.00075	ug/L
CG84831	$8260GWR-WI	1,2,3-Trichlorobenzene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	50	7	7	ug/L
CG84831	$8260GWR-WI	1,1-Dichloroethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	86	70	70	70	ug/L
CG84831	$8260GWR-WI	1,1,2-Trichloroethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	50	5	5	ug/L
CG84831	$8260GWR-WI	1,1,2,2-Tetrachloroethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	50	2	2	ug/L
CG84831	$8260GWR-WI	1,2-Dichloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	50	3	3	ug/L
CG84831	$8260GWR-WI	1,1,1,2-Tetrachloroethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	50	5	5	ug/L
CG84831	$8260GWR-WI	Bromodichloromethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	50	3	3	ug/L
CG84831	$8260GWR-WI	1,4-Dichlorobenzene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	50	5	5	ug/L
CG84831	$8260GWR-WI	cis-1,2-Dichloroethene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	190	100	20	20	ug/L
CG84831	$8260GWR-WI	Tetrachloroethene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	5300	100	5	5	ug/L
CG84831	$8260GWR-WI	Carbon tetrachloride	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	50	2	2	ug/L
CG84831	$8260GWR-WI	Dibromomethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	50	8.3	8.3	ug/L
CG84831	$8260GWR-WI	Methylene chloride	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	100	5	5	ug/L
CG84831	$8260GWR-WI	Dibromochloromethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	50	2	2	ug/L
CG84831	$8260GWR-WI	Bromoform	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	50	4	4	ug/L

Tuesday, October 06, 2020

Criteria: MA: GW1, GW2, GW3

State: MA

Sample Criteria Exceedances Report

GCG84829 - AECOM-WILMINGTN

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units
CG84831	$8260GWR-WI	cis-1,3-Dichloropropene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	50	0.47	0.47	ug/L
CG84831	$8260GWR-WI	trans-1,3-Dichloropropene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	50	0.47	0.47	ug/L
CG84831	$8260GWR-WI	Bromomethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	50	7	7	ug/L
CG84831	$8260GWR-WI	Trichloroethene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	8200	100	5	5	ug/L
CG84831	$8260GWR-WI	Benzene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	50	5	5	ug/L
CG84831	$8260GWR-WI	Methyl ethyl ketone	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	500	38	38	ug/L
CG84831	$8260GWR-WI	Vinyl chloride	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	50	2	2	ug/L
CG84831	$8260GWR-WI	4-Methyl-2-pentanone	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	500	350	350	ug/L
CG84831	$8260GWR-WI	2-Hexanone	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	500	38	38	ug/L
CG84831	$8260GWR-WI	Hexachlorobutadiene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	50	0.6	0.6	ug/L
CG84831	$8260GWR-WI	Hexachlorobutadiene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	50	0.6	0.6	ug/L
CG84831	$8260GWR-WI	1,1,2,2-Tetrachloroethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	50	2	2	ug/L
CG84831	$8260GWR-WI	Methylene chloride	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	100	5	5	ug/L
CG84831	$8260GWR-WI	1,1,1,2-Tetrachloroethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	50	5	5	ug/L
CG84831	$8260GWR-WI	trans-1,3-Dichloropropene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	50	0.5	0.5	ug/L
CG84831	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	8200	100	5	5	ug/L
CG84831	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	50	2	2	ug/L
CG84831	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	50	2	2	ug/L
CG84831	$8260GWR-WI	Tetrachloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	5300	100	5	5	ug/L
CG84831	$8260GWR-WI	Bromomethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	50	7	7	ug/L
CG84831	$8260GWR-WI	1,3-Dichlorobenzene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	50	40	40	ug/L
CG84831	$8260GWR-WI	1,4-Dichlorobenzene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	50	5	5	ug/L
CG84831	$8260GWR-WI	1,2-Dichloropropane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	50	3	3	ug/L
CG84831	$8260GWR-WI	4-Methyl-2-pentanone	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	500	350	350	ug/L
CG84831	$8260GWR-WI	Benzene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	50	5	5	ug/L
CG84831	$8260GWR-WI	1,2-Dichloroethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	50	5	5	ug/L
CG84831	$8260GWR-WI	1,1-Dichloroethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	86	70	70	70	ug/L
CG84831	$8260GWR-WI	Bromoform	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	50	4	4	ug/L
CG84831	$8260GWR-WI	1,1,2-Trichloroethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	50	5	5	ug/L
CG84831	$8260GWR-WI	Carbon tetrachloride	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	50	2	2	ug/L
CG84831	$8260GWR-WI	cis-1,2-Dichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	190	100	20	20	ug/L
CG84831	$8260GWR-WI	1,1-Dichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	50	7	7	ug/L
CG84831	$8260GWR-WI	cis-1,3-Dichloropropene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	50	0.5	0.5	ug/L
CG84831	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	50	0.02	0.02	ug/L
CG84831	$8260GWR-WI	Dibromochloromethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	50	2	2	ug/L
CG84831	$8260GWR-WI	Bromodichloromethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	50	3	3	ug/L
CG84831	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	50	2	2	ug/L
CG84831	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	50	2	2	ug/L
CG84831	$8260GWR-WI	1,1,1,2-Tetrachloroethane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	50	10	10	ug/L
CG84831	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	8200	100	5	5	ug/L
CG84831	$8260GWR-WI	trans-1,3-Dichloropropene	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	50	5	5	ug/L
CG84831	$8260GWR-WI	Tetrachloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	5300	100	50	50	ug/L

Tuesday, October 06, 2020

Criteria: MA: GW1, GW2, GW3

State: MA

Sample Criteria Exceedances Report

GCG84829 - AECOM-WILMINGTN

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units
CG84831	$8260GWR-WI	Hexachlorobutadiene	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	50	1	1	ug/L
CG84831	$8260GWR-WI	Dibromochloromethane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	50	20	20	ug/L
CG84831	$8260GWR-WI	cis-1,3-Dichloropropene	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	50	5	5	ug/L
CG84831	$8260GWR-WI	cis-1,2-Dichloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	190	100	20	20	ug/L
CG84831	$8260GWR-WI	Carbon tetrachloride	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	50	2	2	ug/L
CG84831	$8260GWR-WI	Bromomethane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	50	7	7	ug/L
CG84831	$8260GWR-WI	Bromodichloromethane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	50	6	6	ug/L
CG84831	$8260GWR-WI	1,2-Dichloropropane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	50	3	3	ug/L
CG84831	$8260GWR-WI	1,1,2,2-Tetrachloroethane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	50	9	9	ug/L
CG84831	$8260GWR-WI	1,2-Dichloroethane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	50	5	5	ug/L
CG84831	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	50	2	2	ug/L
CG84831	$8260GWR-WI	1,1-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-1	ND	50	7	7	ug/L
CG84831	$8260GWR-WI	Vinyl chloride	MA / GROUNDWATER STANDARDS / GW-1	ND	50	2	2	ug/L
CG84831	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	50	0.02	0.02	ug/L
CG84831	$8260GWR-WI	1,1,1,2-Tetrachloroethane	MA / GROUNDWATER STANDARDS / GW-1	ND	50	5	5	ug/L
CG84831	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-1	8200	100	5	5	ug/L
CG84831	$8260GWR-WI	1,1,2,2-Tetrachloroethane	MA / GROUNDWATER STANDARDS / GW-1	ND	50	2	2	ug/L
CG84831	$8260GWR-WI	Tetrachloroethene	MA / GROUNDWATER STANDARDS / GW-1	5300	100	5	5	ug/L
CG84831	$8260GWR-WI	Methylene chloride	MA / GROUNDWATER STANDARDS / GW-1	ND	100	5	5	ug/L
CG84831	$8260GWR-WI	Hexachlorobutadiene	MA / GROUNDWATER STANDARDS / GW-1	ND	50	0.6	0.6	ug/L
CG84831	$8260GWR-WI	1,1,2-Trichloroethane	MA / GROUNDWATER STANDARDS / GW-1	ND	50	5	5	ug/L
CG84831	$8260GWR-WI	1,1-Dichloroethane	MA / GROUNDWATER STANDARDS / GW-1	86	70	70	70	ug/L
CG84831	$8260GWR-WI	cis-1,2-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-1	190	100	70	70	ug/L
CG84831	$8260GWR-WI	Bromodichloromethane	MA / GROUNDWATER STANDARDS / GW-1	ND	50	3	3	ug/L
CG84831	$8260GWR-WI	1,2-Dichloroethane	MA / GROUNDWATER STANDARDS / GW-1	ND	50	5	5	ug/L
CG84831	$8260GWR-WI	1,2-Dichloropropane	MA / GROUNDWATER STANDARDS / GW-1	ND	50	5	5	ug/L
CG84831	$8260GWR-WI	Bromomethane	MA / GROUNDWATER STANDARDS / GW-1	ND	50	10	10	ug/L
CG84831	$8260GWR-WI	1,4-Dichlorobenzene	MA / GROUNDWATER STANDARDS / GW-1	ND	50	5	5	ug/L
CG84831	$8260GWR-WI	4-Methyl-2-pentanone	MA / GROUNDWATER STANDARDS / GW-1	ND	500	350	350	ug/L
CG84831	$8260GWR-WI	Bromoform	MA / GROUNDWATER STANDARDS / GW-1	ND	50	4	4	ug/L
CG84831	$8260GWR-WI	Benzene	MA / GROUNDWATER STANDARDS / GW-1	ND	50	5	5	ug/L
CG84831	$8260GWR-WI	Carbon tetrachloride	MA / GROUNDWATER STANDARDS / GW-1	ND	50	5	5	ug/L
CG84831	$8260GWR-WI	Dibromochloromethane	MA / GROUNDWATER STANDARDS / GW-1	ND	50	2	2	ug/L
CG84831	$8260GWR-WI	Vinyl chloride	MA / GROUNDWATER STANDARDS / GW-2	ND	50	2	2	ug/L
CG84831	$8260GWR-WI	1,2-Dichloropropane	MA / GROUNDWATER STANDARDS / GW-2	ND	50	3	3	ug/L
CG84831	$8260GWR-WI	1,1,1,2-Tetrachloroethane	MA / GROUNDWATER STANDARDS / GW-2	ND	50	10	10	ug/L
CG84831	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-2	8200	100	5	5	ug/L
CG84831	$8260GWR-WI	1,1,2,2-Tetrachloroethane	MA / GROUNDWATER STANDARDS / GW-2	ND	50	9	9	ug/L
CG84831	$8260GWR-WI	Bromodichloromethane	MA / GROUNDWATER STANDARDS / GW-2	ND	50	6	6	ug/L
CG84831	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-2	ND	50	2	2	ug/L
CG84831	$8260GWR-WI	Dibromochloromethane	MA / GROUNDWATER STANDARDS / GW-2	ND	50	20	20	ug/L
CG84831	$8260GWR-WI	1,2-Dichloroethane	MA / GROUNDWATER STANDARDS / GW-2	ND	50	5	5	ug/L

Tuesday, October 06, 2020

Criteria: MA: GW1, GW2, GW3

State: MA

Sample Criteria Exceedances Report

GCG84829 - AECOM-WILMINGTN

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units
CG84831	$8260GWR-WI	cis-1,2-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-2	190	100	20	20	ug/L
CG84831	$8260GWR-WI	Bromomethane	MA / GROUNDWATER STANDARDS / GW-2	ND	50	7	7	ug/L
CG84831	$8260GWR-WI	Carbon tetrachloride	MA / GROUNDWATER STANDARDS / GW-2	ND	50	2	2	ug/L
CG84831	$8260GWR-WI	Tetrachloroethene	MA / GROUNDWATER STANDARDS / GW-2	5300	100	50	50	ug/L
CG84831	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-3	8200	100	5000	5000	ug/L
CG84831	$MCPADD-WM	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	10000	0.3	0.3	ug/L
CG84831	$MCPADD-WM	1,4-dioxane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10000	3	3	ug/L
CG84831	$MCPADD-WM	1,4-dioxane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	10000	6000	6000	ug/L
CG84831	$MCPADD-WM	1,4-dioxane	MA / GROUNDWATER STANDARDS / GW-1	ND	10000	0.3	0.3	ug/L
CG84831	$MCPADD-WM	1,4-dioxane	MA / GROUNDWATER STANDARDS / GW-2	ND	10000	6000	6000	ug/L
CG84832	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.00075	0.00075	ug/L
CG84832	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.00033	0.00033	ug/L
CG84832	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.0075	0.0075	ug/L
CG84832	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	0.50	0.02	0.02	ug/L
CG84832	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	0.50	0.02	0.02	ug/L
CG84832	$MCPADD-WM	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	100	0.3	0.3	ug/L
CG84832	$MCPADD-WM	1,4-dioxane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	100	3	3	ug/L
CG84832	$MCPADD-WM	1,4-dioxane	MA / GROUNDWATER STANDARDS / GW-1	ND	100	0.3	0.3	ug/L
CG84832	AS-WM	Arsenic	MA / Client Specified Criteria / LOCKHEED WILMINGTO	0.195	0.004	0.01	0.01	mg/L
CG84832	AS-WM	Arsenic	MA / CMR 310.40.1600 / GW-1 (mg/l)	0.195	0.004	0.01	0.01	mg/L
CG84832	AS-WM	Arsenic	MA / GROUNDWATER STANDARDS / GW-1	0.195	0.004	0.01	0.01	mg/L
CG84832	D-AS	Arsenic (Dissolved)	MA / Client Specified Criteria / LOCKHEED WILMINGTO	0.194	0.004	0.01	0.01	mg/L
CG84832	D-AS	Arsenic (Dissolved)	MA / CMR 310.40.1600 / GW-1 (mg/l)	0.194	0.004	0.01	0.01	mg/L
CG84832	D-AS	Arsenic (Dissolved)	MA / GROUNDWATER STANDARDS / GW-1	0.194	0.004	0.01	0.01	mg/L
CG84832	D-FE	Iron (Dissolved)	MA / Client Specified Criteria / LOCKHEED WILMINGTO	28.3	0.011	14	14	mg/L
CG84832	D-MN	Manganese (Dissolved)	MA / Client Specified Criteria / LOCKHEED WILMINGTO	1.59	0.001	0.43	0.43	mg/L
CG84832	FE-WM	Iron	MA / Client Specified Criteria / LOCKHEED WILMINGTO	28.5	0.010	14	14	mg/L
CG84832	MN-WM	Manganese	MA / Client Specified Criteria / LOCKHEED WILMINGTO	1.62	0.001	0.43	0.43	mg/L
CG84833	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.00075	0.00075	ug/L
CG84833	$8260GWR-WI	Trichloroethene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	110	5.0	5	5	ug/L
CG84833	$8260GWR-WI	Tetrachloroethene	MA / Client Specified Criteria / LOCKHEED WILMINGTO	240	5.0	5	5	ug/L
CG84833	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.0075	0.0075	ug/L
CG84833	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.00033	0.00033	ug/L
CG84833	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	110	5.0	5	5	ug/L
CG84833	$8260GWR-WI	Tetrachloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	240	5.0	5	5	ug/L
CG84833	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	0.50	0.02	0.02	ug/L
CG84833	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	110	5.0	5	5	ug/L
CG84833	$8260GWR-WI	Tetrachloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	240	5.0	50	50	ug/L
CG84833	$8260GWR-WI	Tetrachloroethene	MA / GROUNDWATER STANDARDS / GW-1	240	5.0	5	5	ug/L
CG84833	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	0.50	0.02	0.02	ug/L

Tuesday, October 06, 2020

Criteria: MA: GW1, GW2, GW3

State: MA

Sample Criteria Exceedances Report

GCG84829 - AECOM-WILMINGTN

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units
CG84833	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-1	110	5.0	5	5	ug/L
CG84833	$8260GWR-WI	Tetrachloroethene	MA / GROUNDWATER STANDARDS / GW-2	240	5.0	50	50	ug/L
CG84833	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-2	110	5.0	5	5	ug/L
CG84833	$MCPADD-WM	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	100	0.3	0.3	ug/L
CG84833	$MCPADD-WM	1,4-dioxane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	100	3	3	ug/L
CG84833	$MCPADD-WM	1,4-dioxane	MA / GROUNDWATER STANDARDS / GW-1	ND	100	0.3	0.3	ug/L
CG84833	D-FE	Iron (Dissolved)	MA / Client Specified Criteria / LOCKHEED WILMINGTO	17.8	0.011	14	14	mg/L
CG84833	D-MN	Manganese (Dissolved)	MA / Client Specified Criteria / LOCKHEED WILMINGTO	8.04	0.011	0.43	0.43	mg/L
CG84833	FE-WM	Iron	MA / Client Specified Criteria / LOCKHEED WILMINGTO	16.8	0.010	14	14	mg/L
CG84833	MN-WM	Manganese	MA / Client Specified Criteria / LOCKHEED WILMINGTO	8.00	0.010	0.43	0.43	mg/L

Phoenix Laboratories does not assume responsibility for the data contained in this exceedance report. It is provided as an additional tool to identify requested criteria exceedences. All efforts are made to ensure the accuracy of the data (obtained from appropriate agencies). A lack of exceedence information does not necessarily suggest conformance to the criteria. It is ultimately the site professional's responsibility to determine appropriate compliance.

MassDEP Analytical Protocol Certification Form

Laboratory Name: Phoenix Environmental Laboratories, Inc. **Project #:**

Project Location: LOCKHEED WILMINGTON MA 6055204 **RTN:**

This Form provides certifications for the following data set: [list Laboratory Sample ID Number(s)]

CG84829, CG84830, CG84831, CG84832, CG84833

Matrices: ☑ Groundwater/Surface Water ☐ Soil/Sediment ☐ Drinking Water ☐ Air ☐ Other:

CAM Protocol (check all that apply below)

8260 VOC CAM II A ☑	7470/7471 Hg CAM III B ☐	MassDEP VPH CAM IV A ☑	8081 Pesticides CAM V B ☐	7196 Hex Cr CAM VI B ☐	MassDEP APH CAM IX A ☐
8270 SVOC CAM II B ☑	7010 Metals CAM III C ☐	MassDEP EPH CAM IV B ☑	8151 Herbicides CAM V C ☐	8330 Explosives CAM VIII A ☐	TO-15 VOC CAM IX B ☐
6010 Metals CAM III A ☑	6020 Metals CAM III D ☐	8082 PCB CAM V A ☐	9012 Total Cyanide/PAC CAM V1 A ☐	6860 Perchlorate CAM VIII B ☐	

Affirmative responses to questions A through F are required for "Presumptive Certainty" status

A	Were all samples received in a condition consistent with those described on the Chain-of-Custody, properly preserved (including temperature*) in the field or laboratory, and prepared/analyzed with method holding times? (* see narrative)	☑ Yes ☐ No
B	Were the analytical method(s) and all associated QC requirements specified in the selected CAM protocol(s) followed?	☑ Yes ☐ No
C	Were all required corrective actions and analytical response actions specified in the selected CAM protocol(s) implemented for all identified performance standard non-conformances?	☑ Yes ☐ No
D	Does the laboratory report comply with all the reporting requirements speified in CAM VII A, "Quality Assurance and Quality Control Guidelines for the Acquisition and Reporting of Analytical Data"?	☑ Yes ☐ No
E	a. VPH, EPH, and APH Methods only: Was each method conducted without significant modification(s)? (refer to the individual method(s) for a list of significant modifications). b. APH and TO-15 methods only: Was the complete analyte list reported for each method?	☑ Yes ☐ No ☐ Yes ☐ No
F	Were all applicable CAM protocol QC and performance standard non-conformances identified and evaluated in a laboratory narrative (including all "No" responses to Questions A through E)?	☑ Yes ☐ No

Responses to questions G, H and I below is required for "Presumptive Certainty" status

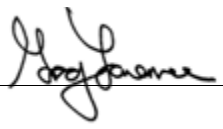
G	Were the reporting limits at or below all CAM reporting limits specified in the selected CAM protocol(s)?	☐ Yes ☑ No

Data User Note: Data that achieve "Presumptive Certainty" status may not necessarily meet the data usability and representativeness requirements described in 310 CMR 40. 1056(2)(k) and WSC-07-350

H	Were all QC performance standards specified in the CAM protocol(s) achieved? See Sections: EPH, SVOASIM Narrations .	☐ Yes ☑ No
I	Were results reported for the complete analyte list specified in the selected CAM protocol(s)?	☐ Yes ☑ No

All negative responses must be addressed in an attached laboratory narrative.

I, the undersigned, attest under the pains and penalties of perjury that, based upon my personal inquiry of those responsible for obtaining the information, the material contained in this analytical report is, to the best of my knowledge and belief, accurate and complete.

Authorized Signature: 

Date: Tuesday, October 06, 2020

Printed Name: Greg Lawrence

Position: Assistant Lab Director

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

ACCREDITED IN ACCORDANCE WITH nelac NY # 11301

MCP Certification Report

October 06, 2020

SDG I.D.: GCG84829

SDG Comments

Metals Analysis:
The client requested a shorter list of elements than the 6010 MCP list. The following analytes from the 6010 Metals list were not reported: Antimony, Barium, Beryllium, Cadmium, Chromium, Lead, Nickel, Selenium, Silver, Thallium, Vanadium, Zinc.

Not all requested reporting levels were achieved due to the presence of target and non target compounds. Please refer to the Sample Criteria Exceedances section of this report.

EPH Narration

Were all QA/QC performance criteria specified in the MADEP document CAM achieved? No.

QC Batch 547878 (Samples: CG84832): -----

The LCS/LCSD recovery is below the method criteria. A low bias for these analytes is possible. (C-10 Decane, C9 - Nonane)

The LCS recovery is below the method criteria. The LCSD is acceptable. A slight low bias is possible. (C12 - Dodecane)

Instrument:

AU-FID4 10/02/20-1 Adam Werner, Chemist 10/02/20

CG84832 (1X)

The initial calibration (AL0929BI) RSD for the compound list was less than 25% except for the following compounds: None.
The continuing calibration %D for the compound list was less than 25% except for the following compounds:None.

QC (Batch Specific):

Batch 547878 (CG87895)

CG84832

All LCS recoveries were within 40 - 140 with the following exceptions: C-10 Decane(30%), C12 - Dodecane(35%), C9 - Nonane(23%)
All LCSD recoveries were within 40 - 140 with the following exceptions: C-10 Decane(38%), C9 - Nonane(29%)
All LCS/LCSD RPDs were less than 25% with the following exceptions: None.
Additional EPH fractionation criteria: Breakthrough criteria (BT) is 0 to 5%

I attest under the pains and penalties of perjury that, based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.

Wet Chemistry Analysis

Were all QA/QC performance criteria specified in the MADEP document CAM achieved? Yes.

Instrument:

BECKMAN DU720 10/01/20-1 Greg Danielewski, Chemist 10/01/20

CG84833

The initial calibration met all criteria including a standard run at the reporting level.
All method verification standards and blanks met criteria.

QC (Batch Specific):

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MCP Certification Report

October 06, 2020

SDG I.D.: GCG84829

Wet Chemistry Analysis

Batch 547575 (CG84818)

CG84833

All LCS recoveries were within 85 - 115 with the following exceptions: None.
Additional: LCS acceptance range is 85-115% MS acceptance range 75-125%.

I attest under the pains and penalties of perjury that, based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.

IC

Were all QA/QC performance criteria specified in the MADEP document CAM achieved? Yes.

Instrument:

IC 09/24/20-2 Brian Sheriden, Eric Geyer, Chemist 09/24/20

CG84833

The initial calibration met all criteria including a standard run at the reporting level.
All method verification standards and blanks met criteria.

IC 09/25/20-2 Brian Sheriden, Eric Geyer, Chemist 09/25/20

CG84833

The initial calibration met all criteria including a standard run at the reporting level.
All method verification standards and blanks met criteria.

QC (Batch Specific):

Batch 547016 (CG84973)

CG84833

All LCS recoveries were within 90 - 110 with the following exceptions: None.

Batch 547226 (CG85802)

CG84833

All LCS recoveries were within 90 - 110 with the following exceptions: None.

I attest under the pains and penalties of perjury that, based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.

ICP Metals Narration

Were all QA/QC performance criteria specified in the analytical method achieved? Yes.

Instrument:

BLUE 09/25/20 12:40 Cindy Pearce, Emily Kolominskaya, Tina Hall, Chemist 09/25/

CG84833

The initial calibration met criteria.

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Certification Report

October 06, 2020

SDG I.D.: GCG84829

ICP Metals Narration

The continuing calibration standards met criteria for all the elements reported. The linear range is defined daily by the calibration range.
The continuing calibration blanks were less than the reporting level for the elements reported.
The ICSA and ICSAB were analyzed at the beginning and end of the run and were within criteria.The linear range is defined daily by the calibration range.
The following Initial Calibration Verification (ICV) compounds did not meet criteria: None.
The following Continuing Calibration Verification (CCV) compounds did not meet criteria: None.
The following ICP Interference Check (ICSAB) compounds did not meet criteria: None.

BLUE 09/26/20 09:16 Cindy Pearce, Emily Kolominskaya, Tina Hall, Chemist 09/26/

CG84832, CG84833

The initial calibration met criteria.
The continuing calibration standards met criteria for all the elements reported. The linear range is defined daily by the calibration range.
The continuing calibration blanks were less than the reporting level for the elements reported.
The ICSA and ICSAB were analyzed at the beginning and end of the run and were within criteria.The linear range is defined daily by the calibration range.
The following Initial Calibration Verification (ICV) compounds did not meet criteria: None.
The following Continuing Calibration Verification (CCV) compounds did not meet criteria: None.
The following ICP Interference Check (ICSAB) compounds did not meet criteria: None.

BLUE 09/28/20 09:47 Cindy Pearce, Emily Kolominskaya, Tina Hall, Chemist 09/28/

CG84833

The initial calibration met criteria.
The continuing calibration standards met criteria for all the elements reported. The linear range is defined daily by the calibration range.
The continuing calibration blanks were less than the reporting level for the elements reported.
The ICSA and ICSAB were analyzed at the beginning and end of the run and were within criteria.The linear range is defined daily by the calibration range.
The following Initial Calibration Verification (ICV) compounds did not meet criteria: None.
The following Continuing Calibration Verification (CCV) compounds did not meet criteria: None.
The following ICP Interference Check (ICSAB) compounds did not meet criteria: None.

BLUE 09/29/20 09:46 Cindy Pearce, Emily Kolominskaya, Tina Hall, Chemist 09/29/

CG84833

The initial calibration met criteria.
The continuing calibration standards met criteria for all the elements reported. The linear range is defined daily by the calibration range.
The continuing calibration blanks were less than the reporting level for the elements reported.
The ICSA and ICSAB were analyzed at the beginning and end of the run and were within criteria.The linear range is defined daily by the calibration range.
The following Initial Calibration Verification (ICV) compounds did not meet criteria: None.
The following Continuing Calibration Verification (CCV) compounds did not meet criteria: None.
The following ICP Interference Check (ICSAB) compounds did not meet criteria: None.

QC (Batch Specific):

Batch 547002 (CG83819)

CG84833

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Certification Report

October 06, 2020

SDG I.D.: GCG84829

ICP Metals Narration

All LCS recoveries were within 80 - 120 with the following exceptions: None.
All LCSD recoveries were within 80 - 120 with the following exceptions: None.
All LCS/LCSD RPDs were less than 20% with the following exceptions: None.
Additional: LCS acceptance range is 80-120% MS acceptance range 75-125%.

Batch 547003 (CG84832)

CG84832

All LCS recoveries were within 80 - 120 with the following exceptions: None.
All LCSD recoveries were within 80 - 120 with the following exceptions: None.
All LCS/LCSD RPDs were less than 20% with the following exceptions: None.
Additional: LCS acceptance range is 80-120% MS acceptance range 75-125%.

Batch 547005 (CG84812)

CG84832, CG84833

All LCS recoveries were within 80 - 120 with the following exceptions: None.
All LCSD recoveries were within 80 - 120 with the following exceptions: None.
All LCS/LCSD RPDs were less than 20% with the following exceptions: None.
Additional: LCS acceptance range is 80-120% MS acceptance range 75-125%.

SVOA-Dioxane

Were all QA/QC performance criteria specified in the MADEP document CAM achieved? Yes.

Instrument:

CHEM22 09/29/20-1 Adam Werner, Chemist 09/29/20

CG84829 (1X)

Initial Calibration Evaluation (CHEM22/DIOX_0818):
100% of target compounds met criteria.
The following compounds had %RSDs >20%: None.
The following compounds did not meet recommended response factors: None.
The following compounds did not meet a minimum response factors: None.

Continuing Calibration Verification (CHEM22/0929_06-DIOX_0818) (MCP Compliance):
Internal standard areas were within 50 to 200% of the initial calibration with the following exceptions: None.
100% of target compounds met criteria.
The following compounds did not meet % deviation criteria: None.
The following compounds did not meet maximum % deviations: None.
The following compounds did not meet recommended response factors: None.
The following compounds did not meet minimum response factors: None.

QC (Batch Specific):

Batch 547240 (CG85194)

CG84829

All LCS recoveries were within 40 - 140 with the following exceptions: None.
All LCSD recoveries were within 40 - 140 with the following exceptions: None.
All LCS/LCSD RPDs were less than 30% with the following exceptions: None.

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MCP Certification Report

October 06, 2020

SDG I.D.: GCG84829

SVOA-Dioxane

I attest under the pains and penalties of perjury that, based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.

SVOASIM Narration

Were all QA/QC performance criteria specified in the MADEP document CAM achieved? No.

QC Batch 547236 (Samples: CG84832): -----

The LCS/LCSD RPD exceeds the method criteria for one or more analytes. These analytes were not reported in the sample(s). No significant variability is suspected. (2-Methylnaphthalene, Naphthalene)

Instrument:

CHEM25 09/29/20-1 Wes Bryon, Chemist 09/29/20

CG84832 (1X)

For 8270 BN list, benzidine peak tailing was evaluated in the DFTPP tune and was found to be in control.

Initial Calibration Evaluation (CHEM25/25_BNSIM18_0805):
100% of target compounds met criteria.
The following compounds had %RSDs >20%: None.
The following compounds did not meet recommended response factors: None.
The following compounds did not meet a minimum response factors: None.

Continuing Calibration Verification (CHEM25/0929_03-25_BNSIM18_0805) (MCP Compliance):
Internal standard areas were within 50 to 200% of the initial calibration with the following exceptions: None.
90% of target compounds met criteria.
The following compounds did not meet % deviation criteria: None.
The following compounds did not meet maximum % deviations: None.
The following compounds did not meet recommended response factors: None.
The following compounds did not meet minimum response factors: None.

QC (Batch Specific):

Batch 547236 (CG84455)

CG84832

All LCS recoveries were within 40 - 140 with the following exceptions: None.
All LCSD recoveries were within 40 - 140 with the following exceptions: None.
All LCS/LCSD RPDs were less than 20% with the following exceptions: 2-Methylnaphthalene(34.1%), Naphthalene(38.4%)
Additional 8270 criteria: 10% of compounds can be outside of acceptance criteria as long as recovery is at least 10%. (Acid surrogates acceptance range for aqueous samples: 10-110%, for soils 30-130%)

I attest under the pains and penalties of perjury that, based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.

VOA Narration

Were all QA/QC performance criteria specified in the MADEP document CAM achieved? Yes.

Instrument:

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MCP Certification Report

October 06, 2020

SDG I.D.: GCG84829

VOA Narration

CHEM23 10/01/20-1 Michael Hahn, Chemist 10/01/20

CG84829 (20X), CG84830 (1X), CG84831 (100X), CG84832 (1X), CG84833 (5X)

Initial Calibration Evaluation (CHEM23/VOA23_092820):
99% of target compounds met criteria.
The following compounds had %RSDs >20%: Bromomethane 28% (20%)
The following compounds did not meet Table 4 recommended minimum response factors: None.
The following compounds did not meet the minimum response factor of 0.05: None.

Continuing Calibration Verification (CHEM23/1001_03-VOA23_092820) (MCP Compliance):
Internal standard areas were within 50 to 200% of the initial calibration with the following exceptions: None.
99% of target compounds met criteria.
The following compounds did not meet % deviation criteria: None.
The following compounds did not meet maximum % deviations: None.
The following compounds did not meet Table 4 recommended minimum response factors: Tetrachloroethene 0.188 (0.2)
The following compounds did not meet the minimum MCP response factor of 0.05: None.

CHEM23 10/02/20-1 Harry Mullin, Chemist 10/02/20

CG84833 (1X)

Initial Calibration Evaluation (CHEM23/VOA23_092820):
99% of target compounds met criteria.
The following compounds had %RSDs >20%: Bromomethane 28% (20%)
The following compounds did not meet Table 4 recommended minimum response factors: None.
The following compounds did not meet the minimum response factor of 0.05: None.

Continuing Calibration Verification (CHEM23/1002_02-VOA23_092820) (MCP Compliance):
Internal standard areas were within 50 to 200% of the initial calibration with the following exceptions: None.
94% of target compounds met criteria.
The following compounds did not meet % deviation criteria: None.
The following compounds did not meet maximum % deviations: None.
The following compounds did not meet Table 4 recommended minimum response factors: Acetone 0.097 (0.1)
The following compounds did not meet the minimum MCP response factor of 0.05: None.

QC (Batch Specific):

Batch 547922 (CG84830) CHEM23 10/1/2020-1

CG84829(20X), CG84830(1X), CG84831(100X), CG84832(1X), CG84833(5X)

All LCS recoveries were within 70 - 130 with the following exceptions: None.
All LCSD recoveries were within 70 - 130 with the following exceptions: None.
All LCS/LCSD RPDs were less than 30% with the following exceptions: None.
A LCS and LCS Duplicate were performed instead of a matrix spike and matrix spike duplicate.
Additional 8260 criteria: 10% of compounds can be outside of acceptance criteria as long as recovery is 10%.

Batch 548114 (CG88119) CHEM23 10/2/2020-1

CG84833(1X)

All LCS recoveries were within 70 - 130 with the following exceptions: None.
All LCSD recoveries were within 70 - 130 with the following exceptions: None.
All LCS/LCSD RPDs were less than 30% with the following exceptions: None.
Additional 8260 criteria: 10% of compounds can be outside of acceptance criteria as long as recovery is 10%.

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Tel. (860) 645-1102 Fax (860) 645-0823

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MCP Certification Report

October 06, 2020

SDG I.D.: GCG84829

VOA Narration

I attest under the pains and penalties of perjury that, based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.

VPH Narration

Were all QA/QC performance criteria specified in the MADEP document CAM achieved? Yes.

Instrument:

PIDFID 09/26/20-3 Raman Makol, Chemist 09/26/20

CG84832 (1X)

QC (Batch Specific):

Batch 547175 (CG84812)

CG84832(1X)

All LCS recoveries were within 70 - 130 with the following exceptions: None.
All LCSD recoveries were within 70 - 130 with the following exceptions: None.
All LCS/LCSD RPDs were less than 25% with the following exceptions: None.

I attest under the pains and penalties of perjury that, based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.

Cooler: Yes ☐ No ☐
Coolant: IPK ☐ ICE ☐ No ☐

CHAIN OF CUSTODY RECORD

Temp 1.4° C Pg of

PHOENIX Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O. Box 370, Manchester, CT 06040
Email: info@phoenixlabs.com Fax (860) 645-0823
Client Services (860) 645-8726

Data Delivery/Contact EMails:
lori.herberich@aecom.com
scott.olson@aecom.com

Customer: AECOM
Address: 250 Apollo Drive
Chelmsford, MA 01824 - (978) 905-2100
Contacts: Lori Herbierich (Chemist) 978-302-0089 Scott Olson (PM) 978-846-5238

Project: Lockheed - Wilmington MA 60552044.19
Report to: Lori Herberich - Scott Olson - Nicole Callahan
Invoice to: Scott Olson & Lori Herberich
QUOTE # August 2019 (for 2017-2022)

2020 Project PO: 127680

This section MUST be completed with Bottle Quantities.

Sampler's Signature: [signature] Date: 9/24/20

Client Sample - Information - Identification

Matrix Code:
DW=Drinking Water GW=Ground Water SW=Surface Water WW=Waste Water L=Liquid
RW=Raw Water SE=Sediment SL=Sludge S=Soil SD=Solid W=Wipe OIL=Oil B=Bulk

PHOENIX USE ONLY SAMPLE #	Customer Sample Identification	Sample Matrix	Date Sampled	Time Sampled	# of VOA Vials	# of Amber Glass	# of Clear Glass	# of Plastic				VOCs (8260) - HCL + Freon 113	1,4-Dioxane (8270D SIM) - NaHSO4 for DL <0.3 ug/L	VPH - HCL (MassDEP- VPH-04-1.1 Rev 1)	EPH + PAHs - HCL & UNP (MassDEP- EPH-04-1.1 Rev 1)	Total As, Fe, Mn (6010C) - HNO3 [FF]	Dissolved As, Fe, Mn (6010C) - HNO3	Chloride, Nitrate, Nitrite, Sulfate (300) - UNP	Sulfide - Zn-Acetate + NaOH	Total Organic Carbon (9060A) - H3PO4	Comments
84829	~~84811~~ 20A-AE101R6-092420-1	GW	9/24/20	1200	3	1						X	X								
84830	~~84812~~ 20A-STM3D-092420-1	GW	9/24/20	1215	3							X									
84831	~~84813~~ 20A-GZA105R-092420-1	GW	9/24/20	1235	3							X									
84832	~~84814~~ 20A-GZA105S-092420-1	GW	9/24/20	1100	5	3		2				X		X	X	X	X				
84833	~~84815~~ 20A-GZA101R-092420-1	GW	9/24/20	1245	3			4				X				X	X	X	X		
	~~84816~~																				
	~~84817~~																				
	~~84818~~																				
	~~84819~~																				
	~~84820~~																				
	~~84821~~																				
	~~84822~~																				

Relinquished by:	Accepted by:	Date:	Time:
[signature]	[signature]	9-24-20	14:05
[signature]	[signature]	9/24	1548

Comments, Special Requirements or Regulations:
~~* 1 VOA labeled "TRC401R-0924" 20-1" However date/time match sample "1PIR2-092420-1" and all of gcg 84819 accounted for~~ (KD)

Turnaround:
10 - 15 days

RI
☐ Direct Exposure (Residential)
☐ GW
☐ Other

CT
☐ RCP Cert
☐ GW Protection
☐ SW Protection
☐ GA Mobility
☐ GB Mobility
☐ Residential DEC
☐ I/C DEC
☐ Other

MA
X MCP (CAM Rpt)
X GW-1
X GW-2
X GW-3
☐ S-1
☐ S-2
☐ S-3
☐ MWRA eSMART
☐ Other

State where samples were collected: MA

Data Format
x PDF
x AECOM EQuIS 4-File EDD format

Data Package
☐ Tier II Checklist
☐ Full Data Package*
☐ Phoenix Std Report
☐ Other

* SURCHARGE APPLIES

PHOENIX
Environmental Laboratories, Inc.

Monday, October 05, 2020

Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Project ID: **LOCKHEED WILMINGTON MA 60552044.19**
SDG ID: **GCG85555**
Sample ID#s: CG85555 - CG85556

This laboratory is in compliance with the NELAC requirements of procedures used except where indicated.

This report contains results for the parameters tested, under the sampling conditions described on the Chain Of Custody, as received by the laboratory. This report is incomplete unless all pages indicated in the pagination at the bottom of the page are included.

A scanned version of the COC form accompanies the analytical report and is an exact duplicate of the original.

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200. The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.

Sincerely yours,

Phyllis Shiller
Laboratory Director

NELAC - #NY11301
CT Lab Registration #PH-0618
MA Lab Registration #M-CT007
ME Lab Registration #CT-007
NH Lab Registration #213693-A,B
NJ Lab Registration #CT-003
NY Lab Registration #11301
PA Lab Registration #68-03530
RI Lab Registration #63
UT Lab Registration #CT00007
VT Lab Registration #VT11301

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

ACCREDITED IN ACCORDANCE WITH nelac NY # 11301

SDG Comments

October 05, 2020

SDG I.D.: GCG85555

Phoenix reporting levels may exceed those referenced in the CAM protocol. Please refer to criteria sheet for comparisons to requested MCP standards.

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Sample Id Cross Reference

October 05, 2020

SDG I.D.: GCG85555

Project ID: LOCKHEED WILMINGTON MA 60552044.19

Client Id	Lab Id	Matrix
20A-TB01-092520-1	CG85555	GROUND WATER
20A-PZ2S-092520-1	CG85556	GROUND WATER

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

October 05, 2020

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		09/25/20	7:30
Location Code:	AECOM-WILMINGTN	Received by:	B	09/25/20	15:24
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	127680				

Laboratory Data

SDG ID: GCG85555
Phoenix ID: CG85555

Project ID: LOCKHEED WILMINGTON MA 60552044.19
Client ID: 20A-TB01-092520-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Volatiles							
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	1	09/30/20	MH	SW8260C
1,1,1-Trichloroethane	ND	1.0	ug/L	1	09/30/20	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L	1	09/30/20	MH	SW8260C
1,1,2-Trichloroethane	ND	1.0	ug/L	1	09/30/20	MH	SW8260C
1,1-Dichloroethane	ND	1.0	ug/L	1	09/30/20	MH	SW8260C
1,1-Dichloroethene	ND	1.0	ug/L	1	09/30/20	MH	SW8260C
1,1-Dichloropropene	ND	1.0	ug/L	1	09/30/20	MH	SW8260C
1,2,3-Trichlorobenzene	ND	1.0	ug/L	1	09/30/20	MH	SW8260C
1,2,3-Trichloropropane	ND	0.50	ug/L	1	09/30/20	MH	SW8260C
1,2,4-Trichlorobenzene	ND	1.0	ug/L	1	09/30/20	MH	SW8260C
1,2,4-Trimethylbenzene	ND	1.0	ug/L	1	09/30/20	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	0.50	ug/L	1	09/30/20	MH	SW8260C
1,2-Dibromoethane	ND	0.50	ug/L	1	09/30/20	MH	SW8260C
1,2-Dichlorobenzene	ND	1.0	ug/L	1	09/30/20	MH	SW8260C
1,2-Dichloroethane	ND	0.60	ug/L	1	09/30/20	MH	SW8260C
1,2-Dichloropropane	ND	1.0	ug/L	1	09/30/20	MH	SW8260C
1,3,5-Trimethylbenzene	ND	1.0	ug/L	1	09/30/20	MH	SW8260C
1,3-Dichlorobenzene	ND	1.0	ug/L	1	09/30/20	MH	SW8260C
1,3-Dichloropropane	ND	1.0	ug/L	1	09/30/20	MH	SW8260C
1,4-Dichlorobenzene	ND	1.0	ug/L	1	09/30/20	MH	SW8260C
2,2-Dichloropropane	ND	1.0	ug/L	1	09/30/20	MH	SW8260C
2-Chlorotoluene	ND	1.0	ug/L	1	09/30/20	MH	SW8260C
2-Hexanone	ND	5.0	ug/L	1	09/30/20	MH	SW8260C
4-Chlorotoluene	ND	1.0	ug/L	1	09/30/20	MH	SW8260C
4-Methyl-2-pentanone	ND	5.0	ug/L	1	09/30/20	MH	SW8260C
Acetone	ND	25	ug/L	1	09/30/20	MH	SW8260C

Project ID: LOCKHEED WILMINGTON MA 60552044.19 Phoenix I.D.: CG85555

Client ID: 20A-TB01-092520-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	
Benzene	ND	0.70	ug/L	1	09/30/20	MH	SW8260C
Bromobenzene	ND	1.0	ug/L	1	09/30/20	MH	SW8260C
Bromochloromethane	ND	1.0	ug/L	1	09/30/20	MH	SW8260C
Bromodichloromethane	ND	0.50	ug/L	1	09/30/20	MH	SW8260C
Bromoform	ND	1.0	ug/L	1	09/30/20	MH	SW8260C
Bromomethane	ND	1.0	ug/L	1	09/30/20	MH	SW8260C
Carbon Disulfide	ND	5.0	ug/L	1	09/30/20	MH	SW8260C
Carbon tetrachloride	ND	1.0	ug/L	1	09/30/20	MH	SW8260C
Chlorobenzene	ND	1.0	ug/L	1	09/30/20	MH	SW8260C
Chloroethane	ND	1.0	ug/L	1	09/30/20	MH	SW8260C
Chloroform	ND	1.0	ug/L	1	09/30/20	MH	SW8260C
Chloromethane	ND	1.0	ug/L	1	09/30/20	MH	SW8260C
cis-1,2-Dichloroethene	ND	1.0	ug/L	1	09/30/20	MH	SW8260C
cis-1,3-Dichloropropene	ND	0.40	ug/L	1	09/30/20	MH	SW8260C
Dibromochloromethane	ND	0.50	ug/L	1	09/30/20	MH	SW8260C
Dibromomethane	ND	1.0	ug/L	1	09/30/20	MH	SW8260C
Dichlorodifluoromethane	ND	1.0	ug/L	1	09/30/20	MH	SW8260C
Ethylbenzene	ND	1.0	ug/L	1	09/30/20	MH	SW8260C
Hexachlorobutadiene	ND	0.40	ug/L	1	09/30/20	MH	SW8260C
Isopropylbenzene	ND	1.0	ug/L	1	09/30/20	MH	SW8260C
m&p-Xylene	ND	1.0	ug/L	1	09/30/20	MH	SW8260C
Methyl ethyl ketone	ND	5.0	ug/L	1	09/30/20	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	1.0	ug/L	1	09/30/20	MH	SW8260C
Methylene chloride	ND	1.0	ug/L	1	09/30/20	MH	SW8260C
Naphthalene	ND	1.0	ug/L	1	09/30/20	MH	SW8260C
n-Butylbenzene	ND	1.0	ug/L	1	09/30/20	MH	SW8260C
n-Propylbenzene	ND	1.0	ug/L	1	09/30/20	MH	SW8260C
o-Xylene	ND	1.0	ug/L	1	09/30/20	MH	SW8260C
p-Isopropyltoluene	ND	1.0	ug/L	1	09/30/20	MH	SW8260C
sec-Butylbenzene	ND	1.0	ug/L	1	09/30/20	MH	SW8260C
Styrene	ND	1.0	ug/L	1	09/30/20	MH	SW8260C
tert-Butylbenzene	ND	1.0	ug/L	1	09/30/20	MH	SW8260C
Tetrachloroethene	ND	1.0	ug/L	1	09/30/20	MH	SW8260C
Tetrahydrofuran (THF)	ND	2.5	ug/L	1	09/30/20	MH	SW8260C
Toluene	ND	1.0	ug/L	1	09/30/20	MH	SW8260C
trans-1,2-Dichloroethene	ND	1.0	ug/L	1	09/30/20	MH	SW8260C
trans-1,3-Dichloropropene	ND	0.40	ug/L	1	09/30/20	MH	SW8260C
Trichloroethene	ND	1.0	ug/L	1	09/30/20	MH	SW8260C
Trichlorofluoromethane	ND	1.0	ug/L	1	09/30/20	MH	SW8260C
Trichlorotrifluoroethane	ND	1.0	ug/L	1	09/30/20	MH	SW8260C
Vinyl chloride	ND	1.0	ug/L	1	09/30/20	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	100		%	1	09/30/20	MH	70 - 130 %
% Bromofluorobenzene	93		%	1	09/30/20	MH	70 - 130 %
% Dibromofluoromethane	100		%	1	09/30/20	MH	70 - 130 %
% Toluene-d8	100		%	1	09/30/20	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	100	ug/L	1	09/30/20	MH	SW8260C (OXY)
Diethyl ether	ND	1.0	ug/L	1	09/30/20	MH	SW8260C (OXY)

Ver 1

Project ID: LOCKHEED WILMINGTON MA 60552044.19 Phoenix I.D.: CG85555

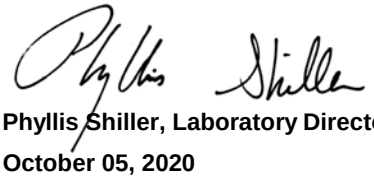
Client ID: 20A-TB01-092520-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	
Di-isopropyl ether	ND	1.0	ug/L	1	09/30/20	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	1.0	ug/L	1	09/30/20	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	1.0	ug/L	1	09/30/20	MH	SW8260C (OXY)

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.



Phyllis Shiller, Laboratory Director

October 05, 2020

Reviewed and Released by: Greg Lawrence, Assistant Lab Director

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

October 05, 2020

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		09/25/20	7:45
Location Code:	AECOM-WILMINGTN	Received by:	B	09/25/20	15:24
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	127680				

Laboratory Data

SDG ID: GCG85555
Phoenix ID: CG85556

Project ID: LOCKHEED WILMINGTON MA 60552044.19
Client ID: 20A-PZ2S-092520-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
EPH Extraction	Completed				09/29/20	JS/JS	SW3510C
MA Petroleum Hydrocarbon (EPH)	Completed				09/25/20		MADEP EPH-04
Semi-Volatile Extraction	Completed				09/28/20	P/AT/CG/L	SW3520C
MA Petroleum Hydrocarbon (VPH)	Completed				09/27/20	RM	MADEP VPH04
Volatiles							
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	1	09/30/20	MH	SW8260C
1,1,1-Trichloroethane	ND	1.0	ug/L	1	09/30/20	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L	1	09/30/20	MH	SW8260C
1,1,2-Trichloroethane	ND	1.0	ug/L	1	09/30/20	MH	SW8260C
1,1-Dichloroethane	ND	1.0	ug/L	1	09/30/20	MH	SW8260C
1,1-Dichloroethene	ND	1.0	ug/L	1	09/30/20	MH	SW8260C
1,1-Dichloropropene	ND	1.0	ug/L	1	09/30/20	MH	SW8260C
1,2,3-Trichlorobenzene	ND	1.0	ug/L	1	09/30/20	MH	SW8260C
1,2,3-Trichloropropane	ND	0.50	ug/L	1	09/30/20	MH	SW8260C
1,2,4-Trichlorobenzene	ND	1.0	ug/L	1	09/30/20	MH	SW8260C
1,2,4-Trimethylbenzene	ND	1.0	ug/L	1	09/30/20	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	0.50	ug/L	1	09/30/20	MH	SW8260C
1,2-Dibromoethane	ND	0.50	ug/L	1	09/30/20	MH	SW8260C
1,2-Dichlorobenzene	ND	1.0	ug/L	1	09/30/20	MH	SW8260C
1,2-Dichloroethane	ND	0.60	ug/L	1	09/30/20	MH	SW8260C
1,2-Dichloropropane	ND	1.0	ug/L	1	09/30/20	MH	SW8260C
1,3,5-Trimethylbenzene	ND	1.0	ug/L	1	09/30/20	MH	SW8260C
1,3-Dichlorobenzene	ND	1.0	ug/L	1	09/30/20	MH	SW8260C
1,3-Dichloropropane	ND	1.0	ug/L	1	09/30/20	MH	SW8260C
1,4-Dichlorobenzene	ND	1.0	ug/L	1	09/30/20	MH	SW8260C
2,2-Dichloropropane	ND	1.0	ug/L	1	09/30/20	MH	SW8260C
2-Chlorotoluene	ND	1.0	ug/L	1	09/30/20	MH	SW8260C

Project ID: LOCKHEED WILMINGTON MA 60552044.19 Phoenix I.D.: CG85556

Client ID: 20A-PZ2S-092520-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	
2-Hexanone	ND	5.0	ug/L	1	09/30/20	MH	SW8260C
4-Chlorotoluene	ND	1.0	ug/L	1	09/30/20	MH	SW8260C
4-Methyl-2-pentanone	ND	5.0	ug/L	1	09/30/20	MH	SW8260C
Acetone	ND	25	ug/L	1	09/30/20	MH	SW8260C
Benzene	ND	0.70	ug/L	1	09/30/20	MH	SW8260C
Bromobenzene	ND	1.0	ug/L	1	09/30/20	MH	SW8260C
Bromochloromethane	ND	1.0	ug/L	1	09/30/20	MH	SW8260C
Bromodichloromethane	ND	0.50	ug/L	1	09/30/20	MH	SW8260C
Bromoform	ND	1.0	ug/L	1	09/30/20	MH	SW8260C
Bromomethane	ND	1.0	ug/L	1	09/30/20	MH	SW8260C
Carbon Disulfide	ND	5.0	ug/L	1	09/30/20	MH	SW8260C
Carbon tetrachloride	ND	1.0	ug/L	1	09/30/20	MH	SW8260C
Chlorobenzene	ND	1.0	ug/L	1	09/30/20	MH	SW8260C
Chloroethane	ND	1.0	ug/L	1	09/30/20	MH	SW8260C
Chloroform	ND	1.0	ug/L	1	09/30/20	MH	SW8260C
Chloromethane	ND	1.0	ug/L	1	09/30/20	MH	SW8260C
cis-1,2-Dichloroethene	ND	1.0	ug/L	1	09/30/20	MH	SW8260C
cis-1,3-Dichloropropene	ND	0.40	ug/L	1	09/30/20	MH	SW8260C
Dibromochloromethane	ND	0.50	ug/L	1	09/30/20	MH	SW8260C
Dibromomethane	ND	1.0	ug/L	1	09/30/20	MH	SW8260C
Dichlorodifluoromethane	ND	1.0	ug/L	1	09/30/20	MH	SW8260C
Ethylbenzene	ND	1.0	ug/L	1	09/30/20	MH	SW8260C
Hexachlorobutadiene	ND	0.40	ug/L	1	09/30/20	MH	SW8260C
Isopropylbenzene	ND	1.0	ug/L	1	09/30/20	MH	SW8260C
m&p-Xylene	ND	1.0	ug/L	1	09/30/20	MH	SW8260C
Methyl ethyl ketone	ND	5.0	ug/L	1	09/30/20	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	1.0	ug/L	1	09/30/20	MH	SW8260C
Methylene chloride	ND	1.0	ug/L	1	09/30/20	MH	SW8260C
Naphthalene	ND	1.0	ug/L	1	09/30/20	MH	SW8260C
n-Butylbenzene	ND	1.0	ug/L	1	09/30/20	MH	SW8260C
n-Propylbenzene	ND	1.0	ug/L	1	09/30/20	MH	SW8260C
o-Xylene	ND	1.0	ug/L	1	09/30/20	MH	SW8260C
p-Isopropyltoluene	ND	1.0	ug/L	1	09/30/20	MH	SW8260C
sec-Butylbenzene	ND	1.0	ug/L	1	09/30/20	MH	SW8260C
Styrene	ND	1.0	ug/L	1	09/30/20	MH	SW8260C
tert-Butylbenzene	ND	1.0	ug/L	1	09/30/20	MH	SW8260C
Tetrachloroethene	ND	1.0	ug/L	1	09/30/20	MH	SW8260C
Tetrahydrofuran (THF)	ND	2.5	ug/L	1	09/30/20	MH	SW8260C
Toluene	ND	1.0	ug/L	1	09/30/20	MH	SW8260C
trans-1,2-Dichloroethene	ND	1.0	ug/L	1	09/30/20	MH	SW8260C
trans-1,3-Dichloropropene	ND	0.40	ug/L	1	09/30/20	MH	SW8260C
Trichloroethene	ND	1.0	ug/L	1	09/30/20	MH	SW8260C
Trichlorofluoromethane	ND	1.0	ug/L	1	09/30/20	MH	SW8260C
Trichlorotrifluoroethane	ND	1.0	ug/L	1	09/30/20	MH	SW8260C
Vinyl chloride	ND	1.0	ug/L	1	09/30/20	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	100		%	1	09/30/20	MH	70 - 130 %
% Bromofluorobenzene	98		%	1	09/30/20	MH	70 - 130 %
% Dibromofluoromethane	98		%	1	09/30/20	MH	70 - 130 %

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By		
% Toluene-d8	102		%	1	09/30/20	MH	70 - 130 %	
Oxygenates& Dioxane								
1,4-dioxane	ND	100	ug/L	1	09/30/20	MH	SW8260C (OXY)	
Diethyl ether	ND	1.0	ug/L	1	09/30/20	MH	SW8260C (OXY)	
Di-isopropyl ether	ND	1.0	ug/L	1	09/30/20	MH	SW8260C (OXY)	
Ethyl tert-butyl ether	ND	1.0	ug/L	1	09/30/20	MH	SW8260C (OXY)	
tert-amyl methyl ether	ND	1.0	ug/L	1	09/30/20	MH	SW8260C (OXY)	
Semivolatiles by SIM, PAH								
2-Methylnaphthalene	ND	0.49	ug/L	1	09/29/20	WB	SW8270D (SIM)	
Acenaphthene	ND	0.49	ug/L	1	09/29/20	WB	SW8270D (SIM)	
Acenaphthylene	ND	0.10	ug/L	1	09/29/20	WB	SW8270D (SIM)	
Anthracene	ND	0.09	ug/L	1	09/29/20	WB	SW8270D (SIM)	
Benz(a)anthracene	ND	0.10	ug/L	1	09/29/20	WB	SW8270D (SIM)	
Benzo(a)pyrene	ND	0.20	ug/L	1	09/29/20	WB	SW8270D (SIM)	
Benzo(b)fluoranthene	ND	0.10	ug/L	1	09/29/20	WB	SW8270D (SIM)	
Benzo(ghi)perylene	0.06	0.02	ug/L	1	09/29/20	WB	SW8270D (SIM)	
Benzo(k)fluoranthene	ND	0.10	ug/L	1	09/29/20	WB	SW8270D (SIM)	
Chrysene	0.06	0.05	ug/L	1	09/29/20	WB	SW8270D (SIM)	
Dibenz(a,h)anthracene	ND	0.02	ug/L	1	09/29/20	WB	SW8270D (SIM)	
Fluoranthene	ND	0.49	ug/L	1	09/29/20	WB	SW8270D (SIM)	
Fluorene	ND	0.10	ug/L	1	09/29/20	WB	SW8270D (SIM)	
Indeno(1,2,3-cd)pyrene	ND	0.10	ug/L	1	09/29/20	WB	SW8270D (SIM)	
Naphthalene	ND	0.49	ug/L	1	09/29/20	WB	SW8270D (SIM)	
Phenanthrene	ND	0.49	ug/L	1	09/29/20	WB	SW8270D (SIM)	
Pyrene	0.14	0.07	ug/L	1	09/29/20	WB	SW8270D (SIM)	
QA/QC Surrogates								
% 2-Fluorobiphenyl	49		%	1	09/29/20	WB	40 - 140 %	
% Nitrobenzene-d5	134		%	1	09/29/20	WB	40 - 140 %	
% Terphenyl-d14	38		%	1	09/29/20	WB	40 - 140 %	3
MA EPH Aliphatic/Aromatic Ranges								
C11-C22 Aromatic Hydrocarbons 1,2*	ND	200	ug/L	1	09/30/20	AW	MAEPH 5/2004	
C11-C22 Aromatic Hydrocarbons Unadj	ND	200	ug/L	1	09/30/20	AW	MAEPH 5/2004	
C19-C36 Aliphatic Hydrocarbons 1*	ND	200	ug/L	1	09/30/20	AW	MAEPH 5/2004	
C9-C18 Aliphatic Hydrocarbons 1*	690	200	ug/L	1	09/30/20	AW	MAEPH 5/2004	
Total TPH 1,2*	690	200	ug/L	1	09/30/20	AW	MAEPH 5/2004	
QA/QC Surrogates								
% 1-chlorooctadecane (aliphatic)	63		%	1	09/30/20	AW	40 - 140 %	
% 2-Bromonaphthalene (Fractionation)	114		%	1	09/30/20	AW	40 - 140 %	
% 2-Fluorobiphenyl (Fractionation)	113		%	1	09/30/20	AW	40 - 140 %	
% o-terphenyl (aromatic)	75		%	1	09/30/20	AW	40 - 140 %	
MA Volatile Petroleum Hydrocarbons (VPH)								
Unadjusted C5-C8 Aliphatics (*1)	ND	100	ug/L	1	09/28/20	RM	MA VPH 5/2004	
Unadjusted C9-C12 Aliphatics (*1)	320	100	ug/L	1	09/28/20	RM	MA VPH 5/2004	
C5-C8 Aliphatic Hydrocarbons *1,2	ND	100	ug/L	1	09/28/20	RM	MA VPH 5/2004	
C9-C12 Aliphatic Hydrocarbons *1,3	220	100	ug/L	1	09/28/20	RM	MA VPH 5/2004	
C9-C10 Aromatic Hydrocarbons *1	ND	100	ug/L	1	09/28/20	RM	MA VPH 5/2004	

Project ID: LOCKHEED WILMINGTON MA 60552044.19 Phoenix I.D.: CG85556

Client ID: 20A-PZ2S-092520-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	
Benzene	ND	1.0	ug/L	1	09/28/20	RM	MA VPH 5/2004
Ethyl Benzene	ND	1.0	ug/L	1	09/28/20	RM	MA VPH 5/2004
MTBE	ND	1.0	ug/L	1	09/28/20	RM	MA VPH 5/2004
Naphthalene	ND	5.0	ug/L	1	09/28/20	RM	MA VPH 5/2004
Toluene	ND	1.0	ug/L	1	09/28/20	RM	MA VPH 5/2004
m,p-Xylenes	ND	2.0	ug/L	1	09/28/20	RM	MA VPH 5/2004
o-Xylene	2.1	1.0	ug/L	1	09/28/20	RM	MA VPH 5/2004
QA/QC Surrogates							
% 2,5-Dibromotoluene (FID)	106		%	1	09/28/20	RM	70 - 130 %
% 2,5-Dibromotoluene (PID)	95		%	1	09/28/20	RM	70 - 130 %

3 = This parameter exceeds laboratory specified limits.

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

MAEPH:
1* Hydrocarbon range data exclude concentrations of any surrogate(s) and/or internal standards eluting in that range.
2* C11-C12 Aromatic Hydrocarbons exclude the concentration of Target PAH analytes eluting in that range.

VPH:
*1 Range data exclude conc.s of any surrogate(s) and/or Int. std.s eluting in that range.
*2 C5-C8 and C9-C12 Aliphatic exclude the conc. of Target Analytes in that range.
*3 C9-C12 Aliphatic also exclude C9-C10 Aromatic Hydrocarbon

Semi-Volatile Comment:
Poor surrogate recovery was observed for one surrogate. The other surrogates associated with this sample were within QA/QC criteria. A slight low bias is possible.

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.

Phyllis Shiller, Laboratory Director

October 05, 2020

Reviewed and Released by: Greg Lawrence, Assistant Lab Director

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

QA/QC Report

October 05, 2020

QA/QC Data

SDG I.D.: GCG85555

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits
QA/QC Batch 547303 (ug/L), QC Sample No: CG84820 (CG85556)										
MAEPH - Ground Water										
C9-C18 Aliphatic Hydrocarbons 1*	ND	100	45	49	8.5	53	54	1.9	40 - 140	25
C19-C36 Aliphatic Hydrocarbons 1*	ND	100	80	85	6.1	82	84	2.4	40 - 140	25
C11-C22 Aromatic Hydrocarbons 1	ND	100	69	69	0.0	69	77	11.0	40 - 140	25
C11-C22 Aromatic Hydrocarbons U	ND	100							40 - 140	25
Total TPH 1,2*	ND	100	65	70	7.4	70	71	1.4	40 - 140	25
C9 - Nonane	ND	10	24	26	8.0	32	30	6.5	30 - 140	25
C-10 Decane	ND	10	32	35	9.0	42	40	4.9	40 - 140	25
C12 - Dodecane	ND	10	37	42	12.7	49	47	4.2	40 - 140	25
C14 - Tetradecane	ND	10	44	49	10.8	57	58	1.7	40 - 140	25
C16 - Hexadecane	ND	10	59	63	6.6	67	72	7.2	40 - 140	25
C18 - Octadecane	ND	10	73	77	5.3	74	78	5.3	40 - 140	25
C19 - Nonadecane	ND	10	74	79	6.5	75	78	3.9	40 - 140	25
C20 - Eicosane	ND	10	76	81	6.4	78	80	2.5	40 - 140	25
C22 - Docosane	ND	10	77	82	6.3	79	80	1.3	40 - 140	25
C24 - Tetracosane	ND	10	77	82	6.3	80	81	1.2	40 - 140	25
C26 - Hexacosane	ND	10	77	82	6.3	80	81	1.2	40 - 140	25
C28 - Octacosane	ND	10	77	82	6.3	80	81	1.2	40 - 140	25
C30 - Tricotane	ND	10	77	81	5.1	79	81	2.5	40 - 140	25
C36 - Hexatriacontane	ND	10	102	110	7.5	105	106	0.9	40 - 140	25
% 1-chlorooctadecane (aliphatic)	62	%	68	76	11.1	74	69	7.0	40 - 140	25
% o-terphenyl (aromatic)	73	%	74	74	0.0	72	83	14.2	40 - 140	25
% 2-Fluorobiphenyl (Fractionation)	116	%	109	112	2.7	103	113	9.3	40 - 140	25
% 2-Bromonaphthalene (Fractionati	110	%	113	105	7.3	112	116	3.5	40 - 140	25
% 2-Methylnaphthalene BT		%	0	0	NC				0 - 5	
% Naphthalene BT		%	0	0	NC				0 - 5	
Comment:										
Additional EPH fractionation criteria: Breakthrough criteria (BT) is 0 to 5%										
QA/QC Batch 547256 (ug/L), QC Sample No: CG85556 (CG85556)										
Semivolatiles by SIM, PAH - Ground Water										
2-Methylnaphthalene	ND	0.50	61	57	6.8				40 - 140	20
Acenaphthene	ND	0.50	67	68	1.5				40 - 140	20
Acenaphthylene	ND	0.10	67	68	1.5				40 - 140	20
Anthracene	ND	0.10	65	69	6.0				40 - 140	20
Benz(a)anthracene	ND	0.02	96	93	3.2				40 - 140	20
Benzo(a)pyrene	ND	0.02	74	77	4.0				40 - 140	20
Benzo(b)fluoranthene	ND	0.02	89	96	7.6				40 - 140	20
Benzo(ghi)perylene	ND	0.02	70	78	10.8				40 - 140	20
Benzo(k)fluoranthene	ND	0.02	57	64	11.6				40 - 140	20
Chrysene	ND	0.02	77	79	2.6				40 - 140	20
Dibenz(a,h)anthracene	ND	0.02	76	84	10.0				40 - 140	20

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits	
Fluoranthene	ND	0.50	63	66	4.7				40 - 140	20	
Fluorene	ND	0.10	64	65	1.6				40 - 140	20	
Indeno(1,2,3-cd)pyrene	ND	0.02	80	83	3.7				40 - 140	20	
Naphthalene	ND	0.50	57	54	5.4				40 - 140	20	
Phenanthrene	ND	0.06	72	76	5.4				40 - 140	20	
Pyrene	ND	0.07	58	61	5.0				40 - 140	20	
% 2-Fluorobiphenyl	57	%	64	62	3.2				40 - 140	20	
% Nitrobenzene-d5	68	%	87	68	24.5				40 - 140	20	r
% Terphenyl-d14	58	%	58	59	1.7				40 - 140	20	

Comment:

Additional 8270 criteria: 10% of compounds can be outside of acceptance criteria as long as recovery is at least 10%. (Acid surrogates acceptance range for aqueous samples: 10-110%, for soils 30-130%)

QA/QC Batch 547726 (ug/L), QC Sample No: CG84822 (CG85555, CG85556)

Volatiles - Ground Water

1,1,1,2-Tetrachloroethane	ND	1.0	97	101	4.0	112	107	4.6	70 - 130	30
1,1,1-Trichloroethane	ND	1.0	91	91	0.0	110	108	1.8	70 - 130	30
1,1,2,2-Tetrachloroethane	ND	0.50	101	106	4.8	120	110	8.7	70 - 130	30
1,1,2-Trichloroethane	ND	1.0	97	99	2.0	107	103	3.8	70 - 130	30
1,1-Dichloroethane	ND	1.0	92	93	1.1	111	109	1.8	70 - 130	30
1,1-Dichloroethene	ND	1.0	92	91	1.1	125	121	3.3	70 - 130	30
1,1-Dichloropropene	ND	1.0	94	94	0.0	112	110	1.8	70 - 130	30
1,2,3-Trichlorobenzene	ND	1.0	102	107	4.8	114	107	6.3	70 - 130	30
1,2,3-Trichloropropane	ND	1.0	97	101	4.0	114	107	6.3	70 - 130	30
1,2,4-Trichlorobenzene	ND	1.0	100	104	3.9	113	105	7.3	70 - 130	30
1,2,4-Trimethylbenzene	ND	1.0	99	100	1.0	115	110	4.4	70 - 130	30
1,2-Dibromo-3-chloropropane	ND	1.0	102	113	10.2	114	107	6.3	70 - 130	30
1,2-Dibromoethane	ND	1.0	99	102	3.0	114	106	7.3	70 - 130	30
1,2-Dichlorobenzene	ND	1.0	99	101	2.0	114	108	5.4	70 - 130	30
1,2-Dichloroethane	ND	1.0	95	96	1.0	105	99	5.9	70 - 130	30
1,2-Dichloropropane	ND	1.0	98	98	0.0	112	108	3.6	70 - 130	30
1,3,5-Trimethylbenzene	ND	1.0	99	100	1.0	117	113	3.5	70 - 130	30
1,3-Dichlorobenzene	ND	1.0	99	100	1.0	114	107	6.3	70 - 130	30
1,3-Dichloropropane	ND	1.0	99	103	4.0	114	107	6.3	70 - 130	30
1,4-Dichlorobenzene	ND	1.0	97	98	1.0	114	108	5.4	70 - 130	30
1,4-dioxane	ND	100	96	97	1.0	111	103	7.5	40 - 160	30
2,2-Dichloropropane	ND	1.0	98	97	1.0	105	100	4.9	70 - 130	30
2-Chlorotoluene	ND	1.0	98	100	2.0	116	111	4.4	70 - 130	30
2-Hexanone	ND	5.0	93	100	7.3	109	102	6.6	40 - 160	30
4-Chlorotoluene	ND	1.0	99	102	3.0	118	111	6.1	70 - 130	30
4-Methyl-2-pentanone	ND	5.0	95	101	6.1	105	99	5.9	40 - 160	30
Acetone	ND	5.0	84	89	5.8	112	104	7.4	40 - 160	30
Benzene	ND	0.70	96	98	2.1	113	109	3.6	70 - 130	30
Bromobenzene	ND	1.0	95	96	1.0	108	105	2.8	70 - 130	30
Bromochloromethane	ND	1.0	98	101	3.0	113	111	1.8	70 - 130	30
Bromodichloromethane	ND	0.50	98	100	2.0	111	106	4.6	70 - 130	30
Bromoform	ND	1.0	98	102	4.0	112	104	7.4	70 - 130	30
Bromomethane	ND	1.0	86	86	0.0	108	107	0.9	40 - 160	30
Carbon Disulfide	ND	1.0	94	92	2.2	123	120	2.5	70 - 130	30
Carbon tetrachloride	ND	1.0	91	106	15.2	127	124	2.4	70 - 130	30
Chlorobenzene	ND	1.0	99	100	1.0	113	109	3.6	70 - 130	30
Chloroethane	ND	1.0	86	86	0.0	117	111	5.3	70 - 130	30
Chloroform	ND	1.0	93	96	3.2	111	107	3.7	70 - 130	30

QA/QC Data

SDG I.D.: GCG85555

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits
Chloromethane	ND	1.0	90	88	2.2	106	104	1.9	40 - 160	30
cis-1,2-Dichloroethene	ND	1.0	91	93	2.2	NC	NC	NC	70 - 130	30
cis-1,3-Dichloropropene	ND	0.40	98	98	0.0	105	101	3.9	70 - 130	30
Dibromochloromethane	ND	0.50	103	105	1.9	117	111	5.3	70 - 130	30
Dibromomethane	ND	1.0	95	97	2.1	107	100	6.8	70 - 130	30
Dichlorodifluoromethane	ND	1.0	84	84	0.0	95	95	0.0	40 - 160	30
Di-isopropyl ether	ND	1.0	90	93	3.3	109	105	3.7	70 - 130	30
Ethyl ether	ND	1.0	78	80	2.5	102	92	10.3	70 - 130	30
Ethyl tert-butyl ether	ND	1.0	94	96	2.1	111	107	3.7	70 - 130	30
Ethylbenzene	ND	1.0	99	101	2.0	117	114	2.6	70 - 130	30
Hexachlorobutadiene	ND	0.40	98	104	5.9	117	110	6.2	70 - 130	30
Isopropylbenzene	ND	1.0	98	101	3.0	118	114	3.4	70 - 130	30
m&p-Xylene	ND	1.0	101	103	2.0	117	114	2.6	70 - 130	30
Methyl ethyl ketone	ND	5.0	95	102	7.1	116	106	9.0	40 - 160	30
Methyl t-butyl ether (MTBE)	ND	1.0	86	87	1.2	105	99	5.9	70 - 130	30
Methylene chloride	ND	1.0	93	95	2.1	108	106	1.9	70 - 130	30
Naphthalene	ND	1.0	106	114	7.3	123	111	10.3	70 - 130	30
n-Butylbenzene	ND	1.0	101	102	1.0	122	115	5.9	70 - 130	30
n-Propylbenzene	ND	1.0	97	100	3.0	119	113	5.2	70 - 130	30
o-Xylene	ND	1.0	102	104	1.9	119	114	4.3	70 - 130	30
p-Isopropyltoluene	ND	1.0	103	103	0.0	122	116	5.0	70 - 130	30
sec-Butylbenzene	ND	1.0	106	109	2.8	130	125	3.9	70 - 130	30
Styrene	ND	1.0	101	104	2.9	117	111	5.3	70 - 130	30
tert-amyl methyl ether	ND	1.0	93	97	4.2	104	99	4.9	70 - 130	30
tert-Butylbenzene	ND	1.0	102	101	1.0	120	116	3.4	70 - 130	30
Tetrachloroethene	ND	1.0	94	96	2.1	108	109	0.9	70 - 130	30
Tetrahydrofuran (THF)	ND	2.5	99	104	4.9	116	108	7.1	70 - 130	30
Toluene	ND	1.0	98	100	2.0	112	108	3.6	70 - 130	30
trans-1,2-Dichloroethene	ND	1.0	97	95	2.1	126	123	2.4	70 - 130	30
trans-1,3-Dichloropropene	ND	0.40	97	102	5.0	107	102	4.8	70 - 130	30
Trichloroethene	ND	1.0	96	98	2.1	104	122	15.9	70 - 130	30
Trichlorofluoromethane	ND	1.0	87	85	2.3	115	110	4.4	70 - 130	30
Trichlorotrifluoroethane	ND	1.0	100	99	1.0	129	127	1.6	70 - 130	30
Vinyl chloride	ND	1.0	89	92	3.3	117	115	1.7	70 - 130	30
% 1,2-dichlorobenzene-d4	99	%	100	100	0.0	100	101	1.0	70 - 130	30
% Bromofluorobenzene	93	%	98	99	1.0	98	99	1.0	70 - 130	30
% Dibromofluoromethane	102	%	100	99	1.0	101	100	1.0	70 - 130	30
% Toluene-d8	100	%	97	99	2.0	97	96	1.0	70 - 130	30

Comment:

Additional 8260 criteria: 10% of compounds can be outside of acceptance criteria as long as recovery is 10%.

QA/QC Batch 547458 (ug/L), QC Sample No: CG85556 (CG85556)

Volatile Petroleum Hydrocarbons - Ground Water

Unadjusted C5-C8 Aliphatics (*1)	ND	100	95	97	2.1	99	97	2.0	70 - 130	25
Unadjusted C9-C12 Aliphatics (*1)	ND	100	92	95	3.2	NC	NC	NC	70 - 130	25
C5-C8 Aliphatic Hydrocarbons *1,2	ND	100	95	97	2.1	99	97	2.0	70 - 130	25
C9-C12 Aliphatic Hydrocarbons *1,	ND	100	92	95	3.2	NC	NC	NC	70 - 130	25
C9-C10 Aromatic Hydrocarbons *1	ND	100	92	90	2.2	NC	NC	NC	70 - 130	25
Benzene	ND	1.0	83	82	1.2	83	85	2.4	70 - 130	25
Ethyl Benzene	ND	1.0	85	84	1.2	85	87	2.3	70 - 130	25
MTBE	ND	1.0	94	93	1.1	96	96	0.0	70 - 130	25
Naphthalene	ND	5.0	88	88	0.0	90	88	2.2	70 - 130	25
Toluene	ND	1.0	86	86	0.0	87	89	2.3	70 - 130	25

QA/QC Data

SDG I.D.: GCG85555

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits
m,p-Xylenes	ND	2.0	87	86	1.2	88	90	2.2	70 - 130	25
o-Xylene	ND	1.0	84	82	2.4	84	86	2.4	70 - 130	25

Comment:

A blank MS/MSD was analyzed with this batch.

l = This parameter is outside laboratory LCS/LCSD specified recovery limits.
r = This parameter is outside laboratory RPD specified recovery limits.

If there are any questions regarding this data, please call Phoenix Client Services at extension 200.

RPD - Relative Percent Difference
LCS - Laboratory Control Sample
LCSD - Laboratory Control Sample Duplicate
MS - Matrix Spike
MS Dup - Matrix Spike Duplicate
NC - No Criteria
Intf - Interference

Phyllis Shiller, Laboratory Director
October 05, 2020

Monday, October 05, 2020

Criteria: MA: GW1, GW2, GW3

State: MA

Sample Criteria Exceedances Report

GCG85555 - AECOM-WILMINGTN

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units
CG85555	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.00033	0.00033	ug/L
CG85555	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.0075	0.0075	ug/L
CG85555	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.00075	0.00075	ug/L
CG85555	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	0.50	0.02	0.02	ug/L
CG85555	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	0.50	0.02	0.02	ug/L
CG85555	$MCPADD-WM	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	100	0.3	0.3	ug/L
CG85555	$MCPADD-WM	1,4-dioxane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	100	3	3	ug/L
CG85555	$MCPADD-WM	1,4-dioxane	MA / GROUNDWATER STANDARDS / GW-1	ND	100	0.3	0.3	ug/L
CG85556	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.00033	0.00033	ug/L
CG85556	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.0075	0.0075	ug/L
CG85556	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	0.50	0.00075	0.00075	ug/L
CG85556	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	0.50	0.02	0.02	ug/L
CG85556	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	0.50	0.02	0.02	ug/L
CG85556	$MCPADD-WM	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED WILMINGTO	ND	100	0.3	0.3	ug/L
CG85556	$MCPADD-WM	1,4-dioxane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	100	3	3	ug/L
CG85556	$MCPADD-WM	1,4-dioxane	MA / GROUNDWATER STANDARDS / GW-1	ND	100	0.3	0.3	ug/L

Phoenix Laboratories does not assume responsibility for the data contained in this exceedance report. It is provided as an additional tool to identify requested criteria exceedences. All efforts are made to ensure the accuracy of the data (obtained from appropriate agencies). A lack of exceedence information does not necessarily suggest conformance to the criteria. It is ultimately the site professional's responsibility to determine appropriate compliance.

MassDEP Analytical Protocol Certification Form

Laboratory Name: Phoenix Environmental Laboratories, Inc. **Project #:**

Project Location: LOCKHEED WILMINGTON MA 6055204 **RTN:**

This Form provides certifications for the following data set: [list Laboratory Sample ID Number(s)]

CG85555, CG85556

Matrices: ☑ Groundwater/Surface Water ☐ Soil/Sediment ☐ Drinking Water ☐ Air ☐ Other:

CAM Protocol (check all that apply below)

8260 VOC CAM II A ☑	7470/7471 Hg CAM III B ☐	MassDEP VPH CAM IV A ☑	8081 Pesticides CAM V B ☐	7196 Hex Cr CAM VI B ☐	MassDEP APH CAM IX A ☐
8270 SVOC CAM II B ☑	7010 Metals CAM III C ☐	MassDEP EPH CAM IV B ☑	8151 Herbicides CAM V C ☐	8330 Explosives CAM VIII A ☐	TO-15 VOC CAM IX B ☐
6010 Metals CAM III A ☐	6020 Metals CAM III D ☐	8082 PCB CAM V A ☐	9012 Total Cyanide/PAC CAM V1 A ☐	6860 Perchlorate CAM VIII B ☐	

Affirmative responses to questions A through F are required for "Presumptive Certainty" status

A	Were all samples received in a condition consistent with those described on the Chain-of-Custody, properly preserved (including temperature*) in the field or laboratory, and prepared/analyzed with method holding times? (* see narrative)	☑ Yes ☐ No
B	Were the analytical method(s) and all associated QC requirements specified in the selected CAM protocol(s) followed?	☑ Yes ☐ No
C	Were all required corrective actions and analytical response actions specified in the selected CAM protocol(s) implemented for all identified performance standard non-conformances?	☑ Yes ☐ No
D	Does the laboratory report comply with all the reporting requirements speified in CAM VII A, "Quality Assurance and Quality Control Guidelines for the Acquisition and Reporting of Analytical Data"?	☑ Yes ☐ No
E	a. VPH, EPH, and APH Methods only: Was each method conducted without significant modification(s)? (refer to the individual method(s) for a list of significant modifications). b. APH and TO-15 methods only: Was the complete analyte list reported for each method?	☑ Yes ☐ No ☐ Yes ☐ No
F	Were all applicable CAM protocol QC and performance standard non-conformances identified and evaluated in a laboratory narrative (including all "No" responses to Questions A through E)?	☑ Yes ☐ No

Responses to questions G, H and I below is required for "Presumptive Certainty" status

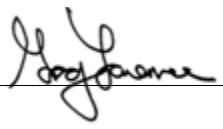
G	Were the reporting limits at or below all CAM reporting limits specified in the selected CAM protocol(s)?	☐ Yes ☑ No

Data User Note: Data that achieve "Presumptive Certainty" status may not necessarily meet the data usability and representativeness requirements described in 310 CMR 40. 1056(2)(k) and WSC-07-350

H	Were all QC performance standards specified in the CAM protocol(s) achieved? See Sections: EPH, SVOASIM Narrations .	☐ Yes ☑ No
I	Were results reported for the complete analyte list specified in the selected CAM protocol(s)?	☐ Yes ☑ No

All negative responses must be addressed in an attached laboratory narrative.

I, the undersigned, attest under the pains and penalties of perjury that, based upon my personal inquiry of those responsible for obtaining the information, the material contained in this analytical report is, to the best of my knowledge and belief, accurate and complete.

Authorized Signature: 

Date: Monday, October 05, 2020

Printed Name: Greg Lawrence

Position: Assistant Lab Director

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

ACCREDITED IN ACCORDANCE WITH nelac NY # 11301

MCP Certification Report

October 05, 2020

SDG I.D.: GCG85555

SDG Comments

Not all requested reporting levels were achieved due to the presence of target and non target compounds. Please refer to the Sample Criteria Exceedances section of this report.

EPH Narration

Were all QA/QC performance criteria specified in the MADEP document CAM achieved? No.

QC Batch 547303 (Samples: CG85556): -----

The LCS/LCSD is below the method criteria. The Batch MS/MSD recovery is acceptable. A low bias for these analytes is possible. (C-10 Decane, C9 - Nonane)

The LCS recovery is below the method criteria. All of the other QC is acceptable, therefore no significant bias is suspected. (C12 - Dodecane)

Instrument:

AU-FID3 09/30/20-1 Adam Werner, Chemist 09/30/20

CG85556 (1X)

No significant modifications were made to the EPH method, as specified in Section 11.3 of the method.

The initial calibration (AR0923BI) RSD for the compound list was less than 25% except for the following compounds: None.
The continuing calibration %D for the compound list was less than 25% except for the following compounds:None.

AU-FID4 09/29/20-1 Adam Werner, Chemist 09/29/20

CG85556 (1X)

The initial calibration (AL0929BI) RSD for the compound list was less than 25% except for the following compounds: None.
The continuing calibration %D for the compound list was less than 25% except for the following compounds:None.

QC (Batch Specific):

Batch 547303 (CG84820)

CG85556

All LCS recoveries were within 40 - 140 with the following exceptions: C-10 Decane(32%), C12 - Dodecane(37%), C9 - Nonane(24%)
All LCSD recoveries were within 40 - 140 with the following exceptions: C-10 Decane(35%), C9 - Nonane(26%)
All LCS/LCSD RPDs were less than 25% with the following exceptions: None.
Additional EPH fractionation criteria: Breakthrough criteria (BT) is 0 to 5%

I attest under the pains and penalties of perjury that, based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.

SVOASIM Narration

Were all QA/QC performance criteria specified in the MADEP document CAM achieved? No.

QC Batch 547256 (Samples: CG85556): -----

The LCS/LCSD RPD exceeds the method criteria for one surrogate. The RPD for the other surrogates and the target analytes is acceptable. No significant variability is suspected. (% Nitrobenzene-d5)

Instrument:

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

ACCREDITED IN ACCORDANCE WITH nelac NY # 11301

MCP Certification Report

October 05, 2020

SDG I.D.: GCG85555

SVOASIM Narration

CHEM33 09/29/20-1 Wes Bryon, Chemist 09/29/20

CG85556 (1X)

Initial Calibration Evaluation (CHEM33/33_PAHSIM_0910):
100% of target compounds met criteria.
The following compounds had %RSDs >20%: None.
The following compounds did not meet recommended response factors: None.
The following compounds did not meet a minimum response factors: None.

Continuing Calibration Verification (CHEM33/0929_03-33_PAHSIM_0910) (MCP Compliance):
Internal standard areas were within 50 to 200% of the initial calibration with the following exceptions: None.
90% of target compounds met criteria.
The following compounds did not meet % deviation criteria: None.
The following compounds did not meet maximum % deviations: None.
The following compounds did not meet recommended response factors: None.
The following compounds did not meet minimum response factors: None.

QC (Batch Specific):

Batch 547256 (CG85556)

CG85556

All LCS recoveries were within 40 - 140 with the following exceptions: None.
All LCSD recoveries were within 40 - 140 with the following exceptions: None.
All LCS/LCSD RPDs were less than 20% with the following exceptions: % Nitrobenzene-d5(24.5%)
Additional 8270 criteria: 10% of compounds can be outside of acceptance criteria as long as recovery is at least 10%. (Acid surrogates acceptance range for aqueous samples: 10-110%, for soils 30-130%)

I attest under the pains and penalties of perjury that, based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.

VOA Narration

Were all QA/QC performance criteria specified in the MADEP document CAM achieved? Yes.

Instrument:

CHEM23 09/30/20-1 Michael Hahn, Chemist 09/30/20

CG85555 (1X), CG85556 (1X)

Initial Calibration Evaluation (CHEM23/VOA23_092820):
99% of target compounds met criteria.
The following compounds had %RSDs >20%: Bromomethane 28% (20%)
The following compounds did not meet Table 4 recommended minimum response factors: None.
The following compounds did not meet the minimum response factor of 0.05: None.

Continuing Calibration Verification (CHEM23/0930_02-VOA23_092820) (MCP Compliance):
Internal standard areas were within 50 to 200% of the initial calibration with the following exceptions: None.
98% of target compounds met criteria.
The following compounds did not meet % deviation criteria: None.
The following compounds did not meet maximum % deviations: None.
The following compounds did not meet Table 4 recommended minimum response factors: None.

Environmental Laboratories, Inc.
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Tel. (860) 645-1102 Fax (860) 645-0823

ACCREDITED IN ACCORDANCE WITH nelac NY # 11301

MCP Certification Report

October 05, 2020

SDG I.D.: GCG85555

VOA Narration

The following compounds did not meet the minimum MCP response factor of 0.05: None.

QC (Batch Specific):

Batch 547726 (CG84822) CHEM23 9/30/2020-1

CG85555(1X), CG85556(1X)

All LCS recoveries were within 70 - 130 with the following exceptions: None.
All LCSD recoveries were within 70 - 130 with the following exceptions: None.
All LCS/LCSD RPDs were less than 30% with the following exceptions: None.
Additional 8260 criteria: 10% of compounds can be outside of acceptance criteria as long as recovery is 10%.

I attest under the pains and penalties of perjury that, based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.

VPH Narration

Were all QA/QC performance criteria specified in the MADEP document CAM achieved? Yes.

Instrument:

PIDFID 09/28/20-2 Raman Makol, Chemist 09/28/20

CG85556 (1X)

QC (Batch Specific):

Batch 547458 (CG85556)

CG85556(1X)

All LCS recoveries were within 70 - 130 with the following exceptions: None.
All LCSD recoveries were within 70 - 130 with the following exceptions: None.
All LCS/LCSD RPDs were less than 25% with the following exceptions: None.
A blank MS/MSD was analyzed with this batch.

I attest under the pains and penalties of perjury that, based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.

Cooler: Yes ☑ No ☐
Coolant: IPK ☑ ICE ☐ No ☐

Temp 2.1 °C Pg of

PHOENIX
Environmental Laboratories, Inc.

CHAIN OF CUSTODY RECORD

587 East Middle Turnpike, P.O. Box 370, Manchester, CT 06040
Email: info@phoenixlabs.com Fax (860) 645-0823
Client Services (860) 645-8726

Data Delivery/Contact EMails:
lori.herberich@aecom.com
scott.olson@aecom.com

Customer: AECOM
Address: 250 Apollo Drive
Chelmsford, MA 01824 - (978) 905-2100
Contacts: Lori Herberich (Chemist) 978-302-0089 Scott Olson (PM) 978-846-5238

Project: Lockheed - Wilmington MA 60552044.19
Report to: Lori Herberich - Scott Olson - Nicole Callahan
Invoice to: Scott Olson & Lori Herberich
QUOTE # August 2019 (for 2017-2022)

2020 Project PO: 127680

This section MUST be completed with Bottle Quantities.

Sampler's Signature: [signature] Date: 9/25/20

Matrix Code:
DW=Drinking Water GW=Ground Water SW=Surface Water WW=Waste Water L=Liquid
RW=Raw Water SE=Sediment SL=Sludge S=Soil SD=Solid W=Wipe OIL=Oil B=Bulk

PHOENIX USE ONLY SAMPLE #	Client Sample - Information - Identification: Customer Sample Identification	Sample Matrix	Date Sampled	Time Sampled	# of VOA Vials	# of Amber Glass	# of Clear Glass	# of Plastic				VOCs (8260) - HCL + Freon 113	1,4-Dioxane (8270D SIM) - NaHSO4 for DL <0.3 ug/L	VPH - HCL (MassDEP- VPH-04-1.1 Rev 1)	EPH + PAHs - HCL & UNP (MassDEP- EPH-04-1.1 Rev 1)	Total As, Fe, Mn (6010C) - HNO3 [FF]	Dissolved As, Fe, Mn (6010C) - HNO3	Chloride, Nitrate, Nitrite, Sulfate (300) - UNP	Sulfide - Zn-Acetate + NaOH	Total Organic Carbon (9050A) - H3PO4	Comments
85555	20A-TB01-092520-1	GW	9/25/20	0730	2							X									
85556	20A-PZ25-092520-1	GW	9/25/20	0745	5	3						X		X	X						

Relinquished by:	Accepted by:	Date:	Time:
[signature]	[signature]	9-25-20	13:45
[signature]	[signature]	9/25	1524

Comments, Special Requirements or Regulations:
Rec: 3 x 1000 mL ambers
5 x voas

Turnaround:
10 - 15 days

RI
☐ Direct Exposure (Residential)
☐ GW
☐ Other

CT
☐ RCP Cert
☐ GW Protection
☐ SW Protection
☐ GA Mobility
☐ GB Mobility
☐ Residential DEC
☐ I/C DEC
☐ Other

MA
X MCP (CAM Rpt)
X GW-1
X GW-2
X GW-3
☐ S-1
☐ S-2
☐ S-3
☐ MWRA eSMART
☐ Other

State where samples were collected: MA

Data Format
x PDF
x AECOM EQuIS 4-File EDD format

Data Package
☐ Tier II Checklist
☐ Full Data Package*
☐ Phoenix Std Report
☐ Other

* SURCHARGE APPLIES

LELAP CERTIFICATE NUMBER: 01955
DOD-ELAP ACCREDITATION NUMBER: 74960

ANALYTICAL RESULTS

PERFORMED BY

Pace Analytical Gulf Coast
7979 Innovation Park Dr.
Baton Rouge, LA 70820
(225) 769-4900

Report Date 09/24/2020

Report # 220091126

Project LMC Wilmington

Deliver To	***Additional Recipients***
Scott Olson AECOM 250 Apollo Drive Chelmsford, MA 01824 978.846.5238	Lori Herberich, AECOM Nicole Callahan, AECOM

Laboratory Endorsement

Sample analysis was performed in accordance with approved methodologies provided by the Environmental Protection Agency or other recognized agencies. The samples and their corresponding extracts will be maintained for a period of 30 days unless otherwise arranged. Following this retention period the samples will be disposed in accordance with Pace Gulf Coast's Standard Operating Procedures.

Common Abbreviations that may be Utilized in this Report

ND	Indicates the result was Not Detected at the specified reporting limit
NO	Indicates the sample did not ignite when preliminary test performed for EPA Method 1030
DO	Indicates the result was Diluted Out
MI	Indicates the result was subject to Matrix Interference
TNTC	Indicates the result was Too Numerous To Count
SUBC	Indicates the analysis was Sub-Contracted
FLD	Indicates the analysis was performed in the Field
DL	Detection Limit
LOD	Limit of Detection
LOQ	Limit of Quantitation
RE	Re-analysis
CF	HPLC or GC Confirmation
00:01	Reported as a time equivalent to 12:00 AM

Reporting Flags that may be Utilized in this Report

J or I	Indicates the result is between the MDL and LOQ
J	DOD flag on analyte in the parent sample for MS/MSD outside acceptance criteria
U	Indicates the compound was analyzed for but not detected
B or V	Indicates the analyte was detected in the associated Method Blank
Q	Indicates a non-compliant QC Result (See Q Flag Application Report)
*****	Indicates a non-compliant or not applicable QC recovery or RPD – see narrative
E	Organics - The result is estimated because it exceeded the instrument calibration range
E	Metals - % diference for the serial dilution is > 10%
L	Reporting Limits adjusted to meet risk-based limit.
P	RPD between primary and confirmation result is greater than 40
DL	Diluted analysis – when appended to Client Sample ID

Sample receipt at Pace Gulf Coast is documented through the attached chain of custody. In accordance with NELAC, this report shall be reproduced only in full and with the written permission of Pace Gulf Coast. The results contained within this report relate only to the samples reported. The documented results are presented within this report.

This report pertains only to the samples listed in the Report Sample Summary and should be retained as a permanent record thereof. The results contained within this report are intended for the use of the client. Any unauthorized use of the information contained in this report is prohibited.

I certify that this data package is in compliance with The NELAC Institute (TNI) Standard 2009 and terms and conditions of the contract and Statement of Work both technically and for completeness, for other than the conditions in the case narrative. Release of the data contained in this hardcopy data package and in the computer readable data submitted has been authorized by the Quality Assurance Manager or his/her designee, as verified by the following signature.

Estimated uncertainty of measurement is available upon request. This report is in compliance with the DOD QSM as specified in the contract if applicable.

_____

Authorized Signature
Pace Gulf Coast Report 220091126

Certifications

Certification	Certification Number
DOD ELAP	74960
Alabama	01955
Arkansas	88-0655
Colorado	01955
Delaware	01955
Florida	E87854
Georgia	01955
Hawaii	01955
Idaho	01955
Illinois	200048
Indiana	01955
Kansas	E-10354
Kentucky	95
Louisiana	01955
Maryland	01955
Massachusetts	01955
Michigan	01955
Mississippi	01955
Missouri	01955
Montana	N/A
Nebraska	01955
New Mexico	01955
North Carolina	618
North Dakota	R-195
Oklahoma	9403
South Carolina	73006001
South Dakota	01955
Tennessee	01955
Texas	T104704178
Vermont	01955
Virginia	460215
Washington	C929
USDA Soil Permit	P330-16-00234

Case Narrative

Client: AECOM - Chelmsford, MA **Report:** 220091126

Pace Analytical Gulf Coast received and analyzed the sample(s) listed
on the Report Sample Summary page of this report. Receipt of the sample(s) is documented
by the attached chain of custody. This applies only to the sample(s) listed in this report.
No sample integrity or quality control exceptions were identified unless noted below.

PROJECT MANAGER COMMENTS

Per client email, sample ID for 22009112608 changed to 20A-AE101R5-091020-1 (Ruth Welsh 09/14/2020 08:01)

Sample Summary

LAB ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
22009112601	20A-AE102M-090920-1	Bubble Strip	09/09/2020 12:15	09/11/2020 10:00
22009112602	20A-AE102M-090920-2	Bubble Strip	09/09/2020 12:35	09/11/2020 10:00
22009112603	20A-AE108R1-090920-1	Bubble Strip	09/09/2020 15:34	09/11/2020 10:00
22009112604	20A-AE102RR6-090920-1	Bubble Strip	09/09/2020 18:05	09/11/2020 10:00
22009112605	20A-AE103D-091020-1	Bubble Strip	09/10/2020 11:10	09/11/2020 10:00
22009112606	20A-AE103R5-091020-1	Bubble Strip	09/10/2020 16:20	09/11/2020 10:00
22009112607	20A-AE103R1-091020-1	Bubble Strip	09/10/2020 16:48	09/11/2020 10:00
22009112608	20A-AE101R5-091020-1	Bubble Strip	09/10/2020 18:20	09/11/2020 10:00

Summary of Compounds Detected

20A-AE102M-090920-1				
Collect Date	09/09/2020 12:15	LAB ID	22009112601	
Receive Date	09/11/2020 10:00	Matrix	Bubble Strip	

AM20GAX

CAS#	Parameter	Result	DL	LOQ	Units
1333-74-0	Hydrogen	2.3J	0.98	3.8	nM

20A-AE102M-090920-2				
Collect Date	09/09/2020 12:35	LAB ID	22009112602	
Receive Date	09/11/2020 10:00	Matrix	Bubble Strip	

AM20GAX

CAS#	Parameter	Result	DL	LOQ	Units
1333-74-0	Hydrogen	1.9J	0.98	3.8	nM

20A-AE103D-091020-1				
Collect Date	09/10/2020 11:10	LAB ID	22009112605	
Receive Date	09/11/2020 10:00	Matrix	Bubble Strip	

AM20GAX

CAS#	Parameter	Result	DL	LOQ	Units
1333-74-0	Hydrogen	2.7J	0.98	3.8	nM

20A-AE103R5-091020-1				
Collect Date	09/10/2020 16:20	LAB ID	22009112606	
Receive Date	09/11/2020 10:00	Matrix	Bubble Strip	

AM20GAX

CAS#	Parameter	Result	DL	LOQ	Units
1333-74-0	Hydrogen	3.2J	0.98	3.8	nM

Summary of Compounds Detected

20A-AE103R1-091020-1				
	Collect Date	09/10/2020 16:48	LAB ID	22009112607
	Receive Date	09/11/2020 10:00	Matrix	Bubble Strip

AM20GAX

CAS#	Parameter	Result	DL	LOQ	Units
1333-74-0	Hydrogen	1.2J	0.98	3.8	nM

20A-AE101R5-091020-1				
	Collect Date	09/10/2020 18:20	LAB ID	22009112608
	Receive Date	09/11/2020 10:00	Matrix	Bubble Strip

AM20GAX

CAS#	Parameter	Result	DL	LOQ	Units
1333-74-0	Hydrogen	5.3	0.98	3.8	nM

Sample Results

20A-AE102M-090920-1

Collect Date	09/09/2020 12:15	LAB ID	22009112601
Receive Date	09/11/2020 10:00	Matrix	Bubble Strip

AM20GAX

Prep Date	Prep Batch	Prep Method	Dilution	Analysis Date	By	Analytical Batch
NA	NA	NA	2	09/22/2020 12:06	AWE	692101

CAS#	Parameter	Result	DL	LOQ	Units
1333-74-0	Hydrogen	2.3J	0.98	3.8	nM

20A-AE102M-090920-2

Collect Date	09/09/2020 12:35	LAB ID	22009112602
Receive Date	09/11/2020 10:00	Matrix	Bubble Strip

AM20GAX

Prep Date	Prep Batch	Prep Method	Dilution	Analysis Date	By	Analytical Batch
NA	NA	NA	2	09/22/2020 12:18	AWE	692101

CAS#	Parameter	Result	DL	LOQ	Units
1333-74-0	Hydrogen	1.9J	0.98	3.8	nM

20A-AE108R1-090920-1

Collect Date	09/09/2020 15:34	LAB ID	22009112603
Receive Date	09/11/2020 10:00	Matrix	Bubble Strip

AM20GAX

Prep Date	Prep Batch	Prep Method	Dilution	Analysis Date	By	Analytical Batch
NA	NA	NA	2	09/22/2020 12:31	AWE	692101

CAS#	Parameter	Result	DL	LOQ	Units
1333-74-0	Hydrogen	0.98U	0.98	3.8	nM

20A-AE102RR6-090920-1

Collect Date	09/09/2020 18:05	LAB ID	22009112604
Receive Date	09/11/2020 10:00	Matrix	Bubble Strip

AM20GAX

Prep Date	Prep Batch	Prep Method	Dilution	Analysis Date	By	Analytical Batch
NA	NA	NA	2	09/22/2020 12:44	AWE	692101

CAS#	Parameter	Result	DL	LOQ	Units
1333-74-0	Hydrogen	0.98U	0.98	3.8	nM

Sample Results

20A-AE103D-091020-1

Collect Date	09/10/2020 11:10	LAB ID	22009112605
Receive Date	09/11/2020 10:00	Matrix	Bubble Strip

AM20GAX

Prep Date	Prep Batch	Prep Method	Dilution	Analysis Date	By	Analytical Batch
NA	NA	NA	2	09/22/2020 13:05	AWE	692101

CAS#	Parameter	Result	DL	LOQ	Units
1333-74-0	Hydrogen	2.7J	0.98	3.8	nM

20A-AE103R5-091020-1

Collect Date	09/10/2020 16:20	LAB ID	22009112606
Receive Date	09/11/2020 10:00	Matrix	Bubble Strip

AM20GAX

Prep Date	Prep Batch	Prep Method	Dilution	Analysis Date	By	Analytical Batch
NA	NA	NA	2	09/22/2020 13:17	AWE	692101

CAS#	Parameter	Result	DL	LOQ	Units
1333-74-0	Hydrogen	3.2J	0.98	3.8	nM

20A-AE103R1-091020-1

Collect Date	09/10/2020 16:48	LAB ID	22009112607
Receive Date	09/11/2020 10:00	Matrix	Bubble Strip

AM20GAX

Prep Date	Prep Batch	Prep Method	Dilution	Analysis Date	By	Analytical Batch
NA	NA	NA	2	09/22/2020 13:30	AWE	692101

CAS#	Parameter	Result	DL	LOQ	Units
1333-74-0	Hydrogen	1.2J	0.98	3.8	nM

Sample Results

20A-AE101R5-091020-1				
	Collect Date	09/10/2020 18:20	LAB ID	22009112608
	Receive Date	09/11/2020 10:00	Matrix	Bubble Strip

AM20GAX

Prep Date	Prep Batch	Prep Method	Dilution	Analysis Date	By	Analytical Batch
NA	NA	NA	2	09/22/2020 14:22	AWE	692101

CAS#	Parameter	Result	DL	LOQ	Units
1333-74-0	Hydrogen	5.3	0.98	3.8	nM

General Chromatography QC Summary

Analytical Batch 692101		Client ID	MB692101		LCS692101				LCSD692101				
		LAB ID	2083210		2083211				2083212				
		Sample Type	MB		LCS				LCSD				
		Prep Date											
		Analysis Date	09/22/20 11:25		09/22/20 11:37				09/22/20 11:49				
		Matrix											
AM20GAX			Units Result	nM DL	Spike Added	Result	%R	Control Limits%R	Spike Added	Result	%R	RPD	RPD Limit
Hydrogen	1333-74-0		0.49U	0.49	12	9.9	84	70 - 130	12	10	89	6	20

CHAIN-OF-CUSTODY Analytical Request Document

Pace Analytical

Chain-of-Custody is a LEGAL DOCUMENT - Complete all relevent fields

LAB USE ONLY- Affix Workorder/Login Label Here or List Pace Workorder Number or

Client ID: AECOM -Chelm - AECOM - Chelmsford, MA
SDG: 220091126
PM: RWe

Company: AECOM	Billing Information: Accts Payable AECOM
Address: 250 Apollo Dr, Chelmsford, MA 01824	
Report To: Scott Olson	Email To: lori.herberich@aecom.com
Copy To: Lori Herberich / Nicole Callahan	Site Collection Info/Address: 40 Fordham Rd
Customer Project Name/Number: LMC Wilmington 60552044.19	State: MA County/City: Wilmington Time Zone Collected: [ ]PT [ ]MT [ ]CT [X]ET
Phone: 978-302-0089 Email:	Site/Facility ID #: LMC Wilmington
Collected By (print): Dylan Potter	Purchase Order #: 117459 Quote #: 2017-2021
Collected By (signature):	Turnaround Date Required: Standard / 15-day
Sample Disposal: [X] Dispose as appropriate [ ] Return [ ] Archive: [ ] Hold:	Rush: [ ] Same Day [ ] Next Day [ ] 2 Day [ ] 3 Day [ ] 4 Day [ ] 5 Day (Expedite Charges Apply)
	Compliance Monitoring? [ ] Yes [ ] No
	DW PWS ID #: DW Location Code:
	Immediately Packed on Ice: [X] Yes [ ] No
	Field Filtered (if applicable): [ ] Yes [ ] No Analysis:

* Matrix Codes (Insert in Matrix box below): Drinking Water (DW), Ground Water (GW), Wastewater (WW), Product (P), Soil/Solid (SL), Oil (OL), Wipe (WP), Air (AR), Tissue (TS), Bioassay (B), Vapor (V), Other (OT)

Container Preservative T — U | D

** Preservative Types: (1) nitric acid, (2) su
(6) methanol, (7) sodium bisulfate, (8) sodium thiosulfate, (9) hexane, (A) ascorbic acid, (B) ammonium sulfate, (C) ammonium hydroxide, (D) TSP, (U) Unpreserved, (O) Other _____

Analyses: Dissolved Hydrogen; [Acetylene, Methane, Propane, Ethane, Ethene]

Customer Sample ID	Matrix *	Comp / Grab	Collected (or Composite Start) Date	Collected (or Composite Start) Time	Composite End Date	Composite End Time	Res Cl	# of Ctns	Dissolved Hydrogen	[Acetylene, Methane, Propane, Ethane, Ethene]									
20A-AE102M-090920-1	GW	Comp	9/9/20	1200	9/9/20	1215		1	X										1
20A-AE102M-090920-2	GW	Comp	9/9/20	1220	9/9/20	1235		1	X										2
20A-AE108R1-090920-1	GW	Comp	9/9/20	~~1042~~ 1504	9/9/20	1534		1	X										3
20A-AE102RR6-090920-1	GW	Comp	9/9/20	1735	9/9/20	1805		1	X										4
20A-AE103D-091020-1	GW	Comp	9/10/20	1040	9/10/20	1110		1	X										5
20A-AE103RS-091020-1	GW	Comp	9/10/20	1600	9/10/20	1620		1	X										6
20A-AE103R1-091020-1	GW	Comp	9/10/20	1628	9/10/20	1648		1	X										7
20A-AE100R1-091020-1	GW	Comp	9/10/20	1755	9/10/20	1820		1	X										8

Lab Profile/Line:

Lab Sample Receipt Checklist:

Custody Seals Present/Intact	Y N NA
Custody Signatures Present	Y N NA
Collector Signature Present	Y N NA
Bottles Intact	Y N NA
Correct Bottles	Y N NA
Sufficient Volume	Y N NA
Samples Received on Ice	Y N NA
VOA - Headspace Acceptable	Y N NA
USDA Regulated Soils	Y N NA
Samples in Holding Time	Y N NA
Residual Chlorine Present	Y N NA
Cl Strips:	
Sample pH Acceptable	Y N NA
pH Strips:	
Sulfide Present	Y N NA
Lead Acetate Strips:	

LAB USE ONLY:
Lab Sample # / Comments:

Customer Remarks / Special Conditions / Possible Hazards:
See AECOM QAPP

Type of Ice Used: Wet Blue Dry None

Packing Material Used: 3967 0812 4550

Radchem sample(s) screened (<500 cpm): Y N NA

SHORT HOLDS PRESENT (<72 hours): Y N N/A

Lab Tracking #: 2540828

Samples received via: FEDEX UPS Client Courier Pace Courier

Lab Sample Temperature Info:
Temp Blank Received: Y N NA
Therm ID#:
Cooler 1 Temp Upon Receipt: oC
Cooler 1 Therm Corr. Factor: oC
Cooler 1 Corrected Temp: oC
Comments:
D.9.E80

Trip Blank Received: Y N NA
HCL MeOH TSP Other

Non Conformance(s): YES / NO

Page: of:

Relinquished by/Company: (Signature) AECOM	Date/Time: 1830 9/10/20	Received by/Company: (Signature)	Date/Time:
Relinquished by/Company: (Signature) FedEx	Date/Time: 9-11-20 10:00	Received by/Company: (Signature) Dodie McClure	Date/Time: 9-11-20 10:00
Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:

MTJL LAB USE ONLY
Table #:
Acctnum:
Template:
Prelogin:
PM:
PB:

SAMPLE RECEIVING CHECKLIST

SAMPLE DELIVERY GROUP 220091126	
Client **PM** RWe AECOM-Chelm - AECOM-Chelmsford, MA	**Transport Method** FEDEX
Profile Number 284674	**Received By** McCune, Dodie N.
Line Item(s) 2 - Hydrogen	**Receive Date(s)** 09/11/20

CHECKLIST	YES	NO
Samples received with proper thermal preservation?	☑	☐
Radioactivity is <1600 cpm? If no, record cpm value in notes section.	☑	☐
COC relinquished and complete (including sampleIDs, collect times, and sampler)?	☑	☐
All containers received in good condition and within hold time?	☑	☐
All sample labels and containers received match the chain of custody?	☑	☐
Preservative added to any containers?	☐	☑
If received, was headspace for VOC water containers < 6mm?	☑	☐
Samples collected in containers provided by Pace Gulf Coast?	☑	☐

COOLERS

Airbill	Thermometer ID: E26	Temp °C
396708724550		0.9

DISCREPANCIES

None

LAB PRESERVATIONS

None

NOTES

Revision 1.6

LELAP CERTIFICATE NUMBER: 01955
DOD-ELAP ACCREDITATION NUMBER: 74960

ANALYTICAL RESULTS

PERFORMED BY

Pace Analytical Gulf Coast
7979 Innovation Park Dr.
Baton Rouge, LA 70820
(225) 769-4900

Report Date 09/29/2020

Report # 220091128

Project LMC Wilmington

Deliver To	***Additional Recipients***
Scott Olson AECOM 250 Apollo Drive Chelmsford, MA 01824 978.846.5238	Lori Herberich, AECOM Nicole Callahan, AECOM

Laboratory Endorsement

Sample analysis was performed in accordance with approved methodologies provided by the Environmental Protection Agency or other recognized agencies. The samples and their corresponding extracts will be maintained for a period of 30 days unless otherwise arranged. Following this retention period the samples will be disposed in accordance with Pace Gulf Coast's Standard Operating Procedures.

Common Abbreviations that may be Utilized in this Report

ND	Indicates the result was Not Detected at the specified reporting limit
NO	Indicates the sample did not ignite when preliminary test performed for EPA Method 1030
DO	Indicates the result was Diluted Out
MI	Indicates the result was subject to Matrix Interference
TNTC	Indicates the result was Too Numerous To Count
SUBC	Indicates the analysis was Sub-Contracted
FLD	Indicates the analysis was performed in the Field
DL	Detection Limit
LOD	Limit of Detection
LOQ	Limit of Quantitation
RE	Re-analysis
CF	HPLC or GC Confirmation
00:01	Reported as a time equivalent to 12:00 AM

Reporting Flags that may be Utilized in this Report

J or I	Indicates the result is between the MDL and LOQ
J	DOD flag on analyte in the parent sample for MS/MSD outside acceptance criteria
U	Indicates the compound was analyzed for but not detected
B or V	Indicates the analyte was detected in the associated Method Blank
Q	Indicates a non-compliant QC Result (See Q Flag Application Report)
*****	Indicates a non-compliant or not applicable QC recovery or RPD – see narrative
E	Organics - The result is estimated because it exceeded the instrument calibration range
E	Metals - % diference for the serial dilution is > 10%
L	Reporting Limits adjusted to meet risk-based limit.
P	RPD between primary and confirmation result is greater than 40
DL	Diluted analysis – when appended to Client Sample ID

Sample receipt at Pace Gulf Coast is documented through the attached chain of custody. In accordance with NELAC, this report shall be reproduced only in full and with the written permission of Pace Gulf Coast. The results contained within this report relate only to the samples reported. The documented results are presented within this report.

This report pertains only to the samples listed in the Report Sample Summary and should be retained as a permanent record thereof. The results contained within this report are intended for the use of the client. Any unauthorized use of the information contained in this report is prohibited.

I certify that this data package is in compliance with The NELAC Institute (TNI) Standard 2009 and terms and conditions of the contract and Statement of Work both technically and for completeness, for other than the conditions in the case narrative. Release of the data contained in this hardcopy data package and in the computer readable data submitted has been authorized by the Quality Assurance Manager or his/her designee, as verified by the following signature.

Estimated uncertainty of measurement is available upon request. This report is in compliance with the DOD QSM as specified in the contract if applicable.

_____

Authorized Signature
Pace Gulf Coast Report 220091128

Certifications

Certification	Certification Number
DOD ELAP	74960
Alabama	01955
Arkansas	88-0655
Colorado	01955
Delaware	01955
Florida	E87854
Georgia	01955
Hawaii	01955
Idaho	01955
Illinois	200048
Indiana	01955
Kansas	E-10354
Kentucky	95
Louisiana	01955
Maryland	01955
Massachusetts	01955
Michigan	01955
Mississippi	01955
Missouri	01955
Montana	N/A
Nebraska	01955
New Mexico	01955
North Carolina	618
North Dakota	R-195
Oklahoma	9403
South Carolina	73006001
South Dakota	01955
Tennessee	01955
Texas	T104704178
Vermont	01955
Virginia	460215
Washington	C929
USDA Soil Permit	P330-16-00234

Case Narrative

Client: AECOM - Chelmsford, MA **Report:** 220091128

Pace Analytical Gulf Coast received and analyzed the sample(s) listed
on the Report Sample Summary page of this report. Receipt of the sample(s) is documented
by the attached chain of custody. This applies only to the sample(s) listed in this report.
No sample integrity or quality control exceptions were identified unless noted below.

No anomalies were found for the analyzed sample(s).

Sample Summary

LAB ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
22009112801	20A-TB01-090920-1	Water	09/09/2020 08:00	09/11/2020 10:00
22009112802	20A-AE102M-090920-1	Water	09/09/2020 11:00	09/11/2020 10:00
22009112803	20A-AE102M-090920-2	Water	09/09/2020 11:02	09/11/2020 10:00
22009112804	20A-AE108R1-090920-1	Water	09/09/2020 11:40	09/11/2020 10:00
22009112805	20A-AE102RR6-090920-1	Water	09/09/2020 12:45	09/11/2020 10:00
22009112806	20A-AE103D-091020-1	Water	09/10/2020 09:20	09/11/2020 10:00
22009112807	20A-AE100R5-091020-1	Water	09/10/2020 13:00	09/11/2020 10:00
22009112808	20A-AE103R5-091020-1	Water	09/10/2020 13:35	09/11/2020 10:00
22009112809	20A-AE103R1-091020-1	Water	09/10/2020 13:00	09/11/2020 10:00

Summary of Compounds Detected

20A-AE102M-090920-1

Collect Date 09/09/2020 11:00 | LAB ID 22009112802
Receive Date 09/11/2020 10:00 | Matrix Water

AM20GAX

CAS#	Parameter	Result	DL	LOQ	Units
74-84-0	Ethane	6.9	0.075	1.0	ug/L
74-85-1	Ethene	1.2	0.12	1.0	ug/L
74-82-8	Methane	160	2.5	5.0	ug/L
74-98-6	Propane	0.057J	0.014	0.10	ug/L

20A-AE102M-090920-2

Collect Date 09/09/2020 11:02 | LAB ID 22009112803
Receive Date 09/11/2020 10:00 | Matrix Water

AM20GAX

CAS#	Parameter	Result	DL	LOQ	Units
74-84-0	Ethane	6.5	0.075	1.0	ug/L
74-85-1	Ethene	1.2	0.12	1.0	ug/L
74-82-8	Methane	160	2.5	5.0	ug/L
74-98-6	Propane	0.050J	0.014	0.10	ug/L

20A-AE108R1-090920-1

Collect Date 09/09/2020 11:40 | LAB ID 22009112804
Receive Date 09/11/2020 10:00 | Matrix Water

AM20GAX

CAS#	Parameter	Result	DL	LOQ	Units
74-84-0	Ethane	0.82J	0.075	1.0	ug/L
74-85-1	Ethene	1.0	0.12	1.0	ug/L
74-82-8	Methane	2800	2.5	5.0	ug/L
74-98-6	Propane	0.20	0.014	0.10	ug/L

20A-AE102RR6-090920-1

Collect Date 09/09/2020 12:45 | LAB ID 22009112805
Receive Date 09/11/2020 10:00 | Matrix Water

AM20GAX

CAS#	Parameter	Result	DL	LOQ	Units
74-84-0	Ethane	0.83J	0.075	1.0	ug/L
74-85-1	Ethene	6.5	0.12	1.0	ug/L
74-82-8	Methane	51	2.5	5.0	ug/L

Summary of Compounds Detected

20A-AE102RR6-090920-1

Collect Date 09/09/2020 12:45 **LAB ID** 22009112805

Receive Date 09/11/2020 10:00 **Matrix** Water

AM20GAX (Continued)

CAS#	Parameter	Result	DL	LOQ	Units
74-98-6	Propane	0.059J	0.014	0.10	ug/L

20A-AE103D-091020-1

Collect Date 09/10/2020 09:20 **LAB ID** 22009112806

Receive Date 09/11/2020 10:00 **Matrix** Water

AM20GAX

CAS#	Parameter	Result	DL	LOQ	Units
74-86-2	Acetylene	34	0.11	0.74	ug/L
74-84-0	Ethane	0.15J	0.075	1.0	ug/L
74-82-8	Methane	6.0	2.5	5.0	ug/L

20A-AE100R5-091020-1

Collect Date 09/10/2020 13:00 **LAB ID** 22009112807

Receive Date 09/11/2020 10:00 **Matrix** Water

AM20GAX

CAS#	Parameter	Result	DL	LOQ	Units
74-84-0	Ethane	1.8	0.075	1.0	ug/L
74-85-1	Ethene	7.3	0.12	1.0	ug/L
74-82-8	Methane	69	2.5	5.0	ug/L

20A-AE103R5-091020-1

Collect Date 09/10/2020 13:35 **LAB ID** 22009112808

Receive Date 09/11/2020 10:00 **Matrix** Water

AM20GAX

CAS#	Parameter	Result	DL	LOQ	Units
74-86-2	Acetylene	17	0.11	0.74	ug/L
74-84-0	Ethane	0.81J	0.075	1.0	ug/L
74-85-1	Ethene	150	0.12	1.0	ug/L
74-82-8	Methane	98	2.5	5.0	ug/L
74-98-6	Propane	0.10	0.014	0.10	ug/L

Summary of Compounds Detected

20A-AE103R1-091020-1				
	Collect Date	09/10/2020 13:00	LAB ID	22009112809
	Receive Date	09/11/2020 10:00	Matrix	Water

AM20GAX

CAS#	Parameter	Result	DL	LOQ	Units
74-84-0	Ethane	0.41J	0.075	1.0	ug/L
74-85-1	Ethene	5.4	0.12	1.0	ug/L
74-82-8	Methane	160	4.9	10	ug/L
74-98-6	Propane	0.034J	0.014	0.10	ug/L

Sample Results

20A-TB01-090920-1

Collect Date	09/09/2020 08:00	LAB ID	22009112801
Receive Date	09/11/2020 10:00	Matrix	Water

AM20GAX

Prep Date	Prep Batch	Prep Method	Dilution	Analysis Date	By	Analytical Batch
NA	NA	NA	1	09/23/2020 14:22	AWE	692767

CAS#	Parameter	Result	DL	LOQ	Units
74-86-2	Acetylene	0.11U	0.11	0.74	ug/L
74-84-0	Ethane	0.075U	0.075	1.0	ug/L
74-85-1	Ethene	0.12U	0.12	1.0	ug/L
74-82-8	Methane	2.5U	2.5	5.0	ug/L
74-98-6	Propane	0.014U	0.014	0.10	ug/L

20A-AE102M-090920-1

Collect Date	09/09/2020 11:00	LAB ID	22009112802
Receive Date	09/11/2020 10:00	Matrix	Water

AM20GAX

Prep Date	Prep Batch	Prep Method	Dilution	Analysis Date	By	Analytical Batch
NA	NA	NA	1	09/19/2020 17:54	JCK2	692583

CAS#	Parameter	Result	DL	LOQ	Units
74-86-2	Acetylene	0.11U	0.11	0.74	ug/L
74-84-0	**Ethane**	**6.9**	**0.075**	**1.0**	**ug/L**
74-85-1	**Ethene**	**1.2**	**0.12**	**1.0**	**ug/L**
74-82-8	**Methane**	**160**	**2.5**	**5.0**	**ug/L**
74-98-6	**Propane**	**0.057J**	**0.014**	**0.10**	**ug/L**

20A-AE102M-090920-2

Collect Date	09/09/2020 11:02	LAB ID	22009112803
Receive Date	09/11/2020 10:00	Matrix	Water

AM20GAX

Prep Date	Prep Batch	Prep Method	Dilution	Analysis Date	By	Analytical Batch
NA	NA	NA	1	09/19/2020 18:07	JCK2	692583

CAS#	Parameter	Result	DL	LOQ	Units
74-86-2	Acetylene	0.11U	0.11	0.74	ug/L
74-84-0	**Ethane**	**6.5**	**0.075**	**1.0**	**ug/L**
74-85-1	**Ethene**	**1.2**	**0.12**	**1.0**	**ug/L**
74-82-8	**Methane**	**160**	**2.5**	**5.0**	**ug/L**
74-98-6	**Propane**	**0.050J**	**0.014**	**0.10**	**ug/L**

Sample Results

20A-AE108R1-090920-1

Collect Date	09/09/2020 11:40	LAB ID	22009112804
Receive Date	09/11/2020 10:00	Matrix	Water

AM20GAX

Prep Date	Prep Batch	Prep Method	Dilution	Analysis Date	By	Analytical Batch
NA	NA	NA	1	09/19/2020 18:19	JCK2	692583

CAS#	Parameter	Result	DL	LOQ	Units
74-86-2	Acetylene	0.11U	0.11	0.74	ug/L
74-84-0	**Ethane**	**0.82J**	**0.075**	**1.0**	**ug/L**
74-85-1	**Ethene**	**1.0**	**0.12**	**1.0**	**ug/L**
74-82-8	**Methane**	**2800**	**2.5**	**5.0**	**ug/L**
74-98-6	**Propane**	**0.20**	**0.014**	**0.10**	**ug/L**

20A-AE102RR6-090920-1

Collect Date	09/09/2020 12:45	LAB ID	22009112805
Receive Date	09/11/2020 10:00	Matrix	Water

AM20GAX

Prep Date	Prep Batch	Prep Method	Dilution	Analysis Date	By	Analytical Batch
NA	NA	NA	1	09/19/2020 18:31	JCK2	692583

CAS#	Parameter	Result	DL	LOQ	Units
74-86-2	Acetylene	0.11U	0.11	0.74	ug/L
74-84-0	**Ethane**	**0.83J**	**0.075**	**1.0**	**ug/L**
74-85-1	**Ethene**	**6.5**	**0.12**	**1.0**	**ug/L**
74-82-8	**Methane**	**51**	**2.5**	**5.0**	**ug/L**
74-98-6	**Propane**	**0.059J**	**0.014**	**0.10**	**ug/L**

20A-AE103D-091020-1

Collect Date	09/10/2020 09:20	LAB ID	22009112806
Receive Date	09/11/2020 10:00	Matrix	Water

AM20GAX

Prep Date	Prep Batch	Prep Method	Dilution	Analysis Date	By	Analytical Batch
NA	NA	NA	1	09/23/2020 14:34	AWE	692767

CAS#	Parameter	Result	DL	LOQ	Units
74-86-2	**Acetylene**	**34**	**0.11**	**0.74**	**ug/L**
74-84-0	**Ethane**	**0.15J**	**0.075**	**1.0**	**ug/L**
74-85-1	Ethene	0.12U	0.12	1.0	ug/L
74-82-8	**Methane**	**6.0**	**2.5**	**5.0**	**ug/L**
74-98-6	Propane	0.014U	0.014	0.10	ug/L

Sample Results

20A-AE100R5-091020-1

Collect Date	09/10/2020 13:00	LAB ID	22009112807
Receive Date	09/11/2020 10:00	Matrix	Water

AM20GAX

Prep Date	Prep Batch	Prep Method	Dilution	Analysis Date	By	Analytical Batch
NA	NA	NA	1	09/23/2020 14:47	AWE	692767

CAS#	Parameter	Result	DL	LOQ	Units
74-86-2	Acetylene	0.11U	0.11	0.74	ug/L
74-84-0	**Ethane**	**1.8**	**0.075**	**1.0**	**ug/L**
74-85-1	**Ethene**	**7.3**	**0.12**	**1.0**	**ug/L**
74-82-8	**Methane**	**69**	**2.5**	**5.0**	**ug/L**
74-98-6	Propane	0.014U	0.014	0.10	ug/L

20A-AE103R5-091020-1

Collect Date	09/10/2020 13:35	LAB ID	22009112808
Receive Date	09/11/2020 10:00	Matrix	Water

AM20GAX

Prep Date	Prep Batch	Prep Method	Dilution	Analysis Date	By	Analytical Batch
NA	NA	NA	1	09/23/2020 14:59	AWE	692767

CAS#	Parameter	Result	DL	LOQ	Units
74-86-2	**Acetylene**	**17**	**0.11**	**0.74**	**ug/L**
74-84-0	**Ethane**	**0.81J**	**0.075**	**1.0**	**ug/L**
74-85-1	**Ethene**	**150**	**0.12**	**1.0**	**ug/L**
74-82-8	**Methane**	**98**	**2.5**	**5.0**	**ug/L**
74-98-6	**Propane**	**0.10**	**0.014**	**0.10**	**ug/L**

20A-AE103R1-091020-1

Collect Date	09/10/2020 13:00	LAB ID	22009112809
Receive Date	09/11/2020 10:00	Matrix	Water

AM20GAX

Prep Date	Prep Batch	Prep Method	Dilution	Analysis Date	By	Analytical Batch
NA	NA	NA	1	09/23/2020 15:17	AWE	692767

CAS#	Parameter	Result	DL	LOQ	Units
74-86-2	Acetylene	0.11U	0.11	0.74	ug/L
74-84-0	**Ethane**	**0.41J**	**0.075**	**1.0**	**ug/L**
74-85-1	**Ethene**	**5.4**	**0.12**	**1.0**	**ug/L**
74-98-6	**Propane**	**0.034J**	**0.014**	**0.10**	**ug/L**

Sample Results

20A-AE103R1-091020-1				
	Collect Date	09/10/2020 13:00	LAB ID	22009112809
	Receive Date	09/11/2020 10:00	Matrix	Water

AM20GAX

Prep Date	Prep Batch	Prep Method	Dilution	Analysis Date	By	Analytical Batch
NA	NA	NA	2	09/24/2020 16:14	AWE	693005

CAS#	Parameter	Result	DL	LOQ	Units
74-82-8	Methane	160	4.9	10	ug/L

General Chromatography QC Summary

Analytical Batch 692583	Client ID	MB692583		LCS692583				LCSD692583				
	LAB ID	2085720		2085721				2085722				
	Sample Type	MB		LCS				LCSD				
	Prep Date											
	Analysis Date	09/19/20 16:45		09/19/20 17:10				09/19/20 17:23				
	Matrix	Water		Water				Water				
AM20GAX		Units Result	ug/L DL	Spike Added	Result	%R	Control Limits%R	Spike Added	Result	%R	RPD	RPD Limit
Acetylene	74-86-2	0.11U	0.11	33	35	107	70 - 130	33	30	91	16	20
Ethane	74-84-0	0.075U	0.075	38	34	91	70 - 130	38	34	90	1	20
Ethene	74-85-1	0.12U	0.12	35	32	92	70 - 130	35	32	91	0	20
Methane	74-82-8	2.5U	2.5	750	700	94	70 - 130	750	680	91	3	20
Propane	74-98-6	0.014U	0.014	56	44	80	70 - 130	56	46	83	5	20

Analytical Batch 692767	Client ID	MB692767		LCS692767				LCSD692767				
	LAB ID	2086505		2086506				2086507				
	Sample Type	MB		LCS				LCSD				
	Prep Date											
	Analysis Date	09/23/20 12:44		09/23/20 13:10				09/23/20 13:25				
	Matrix	Water		Water				Water				
AM20GAX		Units Result	ug/L DL	Spike Added	Result	%R	Control Limits%R	Spike Added	Result	%R	RPD	RPD Limit
Acetylene	74-86-2	0.11U	0.11	33	31	95	70 - 130	33	33	100	5	20
Ethane	74-84-0	0.075U	0.075	38	33	88	70 - 130	38	37	98	10	20
Ethene	74-85-1	0.12U	0.12	35	31	87	70 - 130	35	34	97	10	20
Methane	74-82-8	2.5U	2.5	750	640	85	70 - 130	750	730	98	14	20
Propane	74-98-6	0.014U	0.014	56	48	86	70 - 130	56	54	97	12	20

Analytical Batch 693005	Client ID	MB693005		LCS693005				LCSD693005				
	LAB ID	2087490		2087491				2087492				
	Sample Type	MB		LCS				LCSD				
	Prep Date											
	Analysis Date	09/24/20 12:00		09/24/20 12:12				09/24/20 12:25				
	Matrix	Water		Water				Water				
AM20GAX		Units Result	ug/L DL	Spike Added	Result	%R	Control Limits%R	Spike Added	Result	%R	RPD	RPD Limit
Methane	74-82-8	2.5U	2.5	750	710	95	70 - 130	750	680	91	5	20

CHAIN-OF-CUSTODY Analytical Request Document

Pace Analytical

Chain-of-Custody is a LEGAL DOCUMENT - Complete all relevent fields

LAB USE ONLY- Affix Workorder/Login Label Here or List Pace Workorder Number or

Client ID: AECOM -Chelm - AECOM - Chelmsford, MA
SDG: 220091128
PM: RWe

Company: AECOM	Billing Information: Accts Payable AECOM
Address: 250 Apollo Dr, Chelmsford, MA 01824	
Report To: Scott Olson	Email To: lori.herberich@aecom.com
Copy To: Lori Herberich / Nicole Callahan	Site Collection Info/Address: 40 Fordham Rd
Customer Project Name/Number: LMC Wilmington 60552044.19	State: MA County/City: Wilmington Time Zone Collected: [ ]PT [ ]MT [ ]CT [X]ET
Phone: 978-302-0089 Email:	Site/Facility ID #: LMC Wilmington
Collected By (print):	Purchase Order #: 117459 Quote #: 2017-2021
Collected By (signature):	Turnaround Date Required: Standard / 15-day
Sample Disposal: [ ] Dispose as appropriate [ ] Return [ ] Archive: [ ] Hold:	Rush: [ ] Same Day [ ] Next Day [ ] 2 Day [ ] 3 Day [ ] 4 Day [ ] 5 Day (Expedite Charges Apply)
Compliance Monitoring? [ ] Yes [ ] No	DW PWS ID #: DW Location Code:
Immediately Packed on Ice: [X] Yes [ ] No	Field Filtered (if applicable): [ ] Yes [ ] No Analysis:

* Matrix Codes (Insert in Matrix box below): Drinking Water (DW), Ground Water (GW), Wastewater (WW), Product (P), Soil/Solid (SL), Oil (OL), Wipe (WP), Air (AR), Tissue (TS), Bioassay (B), Vapor (V), Other (OT)

** Preservative Types: (1) nitric acid, (2) sul... (6) methanol, (7) sodium bisulfate, (8) sodium thiosulfate, (9) hexane, (A) ascorbic acid, (B) ammonium sulfate, (C) ammonium hydroxide, (D) TSP, (U) Unpreserved, (O) Other _____

Container Preservative Ty... U D

Analyses: Dissolved Hydrogen; Acetylene, Methane, Propane; Ethane, Ethene

Customer Sample ID	Matrix *	Comp / Grab	Collected (or Composite Start) Date	Collected (or Composite Start) Time	Composite End Date	Composite End Time	Res Cl	# of Ctns										Lab Profile/Line:
20A-TB01-090920-1	GW	Grab	9/9/20	0800	—	—			X									1
20A-AE102M-090920-1	GW	Grab	9/9/20	1110	—	—		3	X									2
20A-AE102M-090920-2	GW	Grab	9/9/20	1112	—	—		3	X									3
20A-AE108R1-090920-1	GW	Grab	9/9/20	1140	—	—		3	X									4
20A-AE102RR6-090920-1	GW	Grab	9/9/20	1245	—	—		3	X									5
20A-AE103D-091020-1	GW	Grab	9/10/20	0920	—	—		3	X									6
20A-AE100RS-091020-1	GW	Grab	9/10/20	1300	—	—		3	X									7
20A-AE103RS-091020-1	GW	Grab	9/10/20	1335	—	—		3	X									8
20A-AE103R1-091020-1	GW	Grab	9/10/20	1300	—	—		3	X									9

Lab Sample Receipt Checklist:

Custody Seals Present/Intact	Y N NA
Custody Signatures Present	Y N NA
Collector Signature Present	Y N NA
Bottles Intact	Y N NA
Correct Bottles	Y N NA
Sufficient Volume	Y N NA
Samples Received on Ice	Y N NA
VOA - Headspace Acceptable	Y N NA
USDA Regulated Soils	Y N NA
Samples in Holding Time	Y N NA
Residual Chlorine Present	Y N NA
Cl Strips:	
Sample pH Acceptable	Y N NA
pH Strips:	
Sulfide Present	Y N NA
Lead Acetate Strips:	

LAB USE ONLY:
Lab Sample # / Comments:

Customer Remarks / Special Conditions / Possible Hazards:
See AECOM QAPP

Type of Ice Used: Wet Blue Dry None

Packing Material Used: 3916 0872 4550

Radchem sample(s) screened (<500 cpm): Y N NA

SHORT HOLDS PRESENT (<72 hours): Y N N/A

Lab Tracking #: 2540825

Samples received via: FEDEX UPS Client Courier Pace Courier

Lab Sample Temperature Info:
Temp Blank Received: Y N NA
Therm ID#:
Cooler 1 Temp Upon Receipt: oC
Cooler 1 Therm Corr. Factor: oC
Cooler 1 Corrected Temp: oC
Comments: 0.9 Exp

Trip Blank Received: Y N NA
HCL MeOH TSP Other

Relinquished by/Company: (Signature) AECOM	Date/Time: 9/10/20 1830	Received by/Company: (Signature)	Date/Time:
Relinquished by/Company: (Signature) FedEX	Date/Time: 9/11/20 10:00	Received by/Company: (Signature) Dodie McClure	Date/Time: 9/11/20 10:00
Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:

MTJL LAB USE ONLY
Table #:
Acctnum:
Template:
Prelogin:
PM:
PB:

Non Conformance(s): YES / NO

Page: of:

SAMPLE RECEIVING CHECKLIST

SAMPLE DELIVERY GROUP 220091128	
Client **PM** RWe AECOM-Chelm - AECOM-Chelmsford, MA	**Transport Method** FEDEX
Profile Number 284674	**Received By** McCune, Dodie N.
Line Item(s) 1 - MEE, Propane, Acetylene	**Receive Date(s)** 09/11/20

CHECKLIST	YES	NO
Samples received with proper thermal preservation?	☑	☐
Radioactivity is <1600 cpm? If no, record cpm value in notes section.	☑	☐
COC relinquished and complete (including sampleIDs, collect times, and sampler)?	☑	☐
All containers received in good condition and within hold time?	☑	☐
All sample labels and containers received match the chain of custody?	☑	☐
Preservative added to any containers?	☐	☑
If received, was headspace for VOC water containers < 6mm?	☑	☐
Samples collected in containers provided by Pace Gulf Coast?	☑	☐

COOLERS

Airbill	Thermometer ID: E26	Temp °C
396708724550		0.9

DISCREPANCIES

None

LAB PRESERVATIONS

None

NOTES

LELAP CERTIFICATE NUMBER: 01955
DOD-ELAP ACCREDITATION NUMBER: 74960

ANALYTICAL RESULTS

PERFORMED BY

Pace Analytical Gulf Coast
7979 Innovation Park Dr.
Baton Rouge, LA 70820
(225) 769-4900

Report Date 10/01/2020

Report # 220092202

Project LMC Wilmington

Deliver To	***Additional Recipients***
Scott Olson AECOM 250 Apollo Drive Chelmsford, MA 01824 978.846.5238	Lori Herberich, AECOM Nicole Callahan, AECOM

Laboratory Endorsement

Sample analysis was performed in accordance with approved methodologies provided by the Environmental Protection Agency or other recognized agencies. The samples and their corresponding extracts will be maintained for a period of 30 days unless otherwise arranged. Following this retention period the samples will be disposed in accordance with Pace Gulf Coast's Standard Operating Procedures.

Common Abbreviations that may be Utilized in this Report

ND	Indicates the result was Not Detected at the specified reporting limit
NO	Indicates the sample did not ignite when preliminary test performed for EPA Method 1030
DO	Indicates the result was Diluted Out
MI	Indicates the result was subject to Matrix Interference
TNTC	Indicates the result was Too Numerous To Count
SUBC	Indicates the analysis was Sub-Contracted
FLD	Indicates the analysis was performed in the Field
DL	Detection Limit
LOD	Limit of Detection
LOQ	Limit of Quantitation
RE	Re-analysis
CF	HPLC or GC Confirmation
00:01	Reported as a time equivalent to 12:00 AM

Reporting Flags that may be Utilized in this Report

J or I	Indicates the result is between the MDL and LOQ
J	DOD flag on analyte in the parent sample for MS/MSD outside acceptance criteria
U	Indicates the compound was analyzed for but not detected
B or V	Indicates the analyte was detected in the associated Method Blank
Q	Indicates a non-compliant QC Result (See Q Flag Application Report)
*****	Indicates a non-compliant or not applicable QC recovery or RPD – see narrative
E	Organics - The result is estimated because it exceeded the instrument calibration range
E	Metals - % diference for the serial dilution is > 10%
L	Reporting Limits adjusted to meet risk-based limit.
P	RPD between primary and confirmation result is greater than 40
DL	Diluted analysis – when appended to Client Sample ID

Sample receipt at Pace Gulf Coast is documented through the attached chain of custody. In accordance with NELAC, this report shall be reproduced only in full and with the written permission of Pace Gulf Coast. The results contained within this report relate only to the samples reported. The documented results are presented within this report.

This report pertains only to the samples listed in the Report Sample Summary and should be retained as a permanent record thereof. The results contained within this report are intended for the use of the client. Any unauthorized use of the information contained in this report is prohibited.

I certify that this data package is in compliance with The NELAC Institute (TNI) Standard 2009 and terms and conditions of the contract and Statement of Work both technically and for completeness, for other than the conditions in the case narrative. Release of the data contained in this hardcopy data package and in the computer readable data submitted has been authorized by the Quality Assurance Manager or his/her designee, as verified by the following signature.

Estimated uncertainty of measurement is available upon request. This report is in compliance with the DOD QSM as specified in the contract if applicable.

_____

Authorized Signature
Pace Gulf Coast Report 220092202

Certifications

Certification	Certification Number
DOD ELAP	74960
Alabama	01955
Arkansas	88-0655
Colorado	01955
Delaware	01955
Florida	E87854
Georgia	01955
Hawaii	01955
Idaho	01955
Illinois	200048
Indiana	01955
Kansas	E-10354
Kentucky	95
Louisiana	01955
Maryland	01955
Massachusetts	01955
Michigan	01955
Mississippi	01955
Missouri	01955
Montana	N/A
Nebraska	01955
New Mexico	01955
North Carolina	618
North Dakota	R-195
Oklahoma	9403
South Carolina	73006001
South Dakota	01955
Tennessee	01955
Texas	T104704178
Vermont	01955
Virginia	460215
Washington	C929
USDA Soil Permit	P330-16-00234

Case Narrative

Client: AECOM - Chelmsford, MA **Report:** 220092202

Pace Analytical Gulf Coast received and analyzed the sample(s) listed
on the Report Sample Summary page of this report. Receipt of the sample(s) is documented
by the attached chain of custody. This applies only to the sample(s) listed in this report.
No sample integrity or quality control exceptions were identified unless noted below.

No anomalies were found for the analyzed sample(s).

Sample Summary

LAB ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
22009220201	20A-AE28R2-091420-1	Water	09/14/2020 10:15	09/18/2020 15:36
22009220202	20A-AE26R1-091420-1	Water	09/14/2020 10:20	09/18/2020 15:36
22009220203	20A-TRC301R4-091520-1	Water	09/15/2020 11:20	09/18/2020 15:36
22009220204	20A-AE109R5-091620-1	Water	09/16/2020 14:45	09/18/2020 15:36
22009220205	20A-AE105S-091720-1	Water	09/17/2020 11:20	09/18/2020 15:36
22009220206	20A-AE105R2-091720-1	Water	09/17/2020 12:20	09/18/2020 15:36
22009220207	20A-AE106D-091720-1	Water	09/17/2020 11:15	09/18/2020 15:36
22009220208	20A-AE106R3-091720-1	Water	09/17/2020 13:25	09/18/2020 15:36
22009220209	20A-TB01-091420-1	Water	09/14/2020 10:00	09/18/2020 15:36
22009220210	20A-AE26R1-091420-1	Bubble Strip	09/14/2020 10:51	09/18/2020 15:36
22009220211	20A-AE28R2-091420-1	Bubble Strip	09/14/2020 11:25	09/18/2020 15:36
22009220212	20A-TRC301R4-091520-1	Bubble Strip	09/15/2020 12:38	09/18/2020 15:36
22009220213	20A-AE109R5-091620-1	Bubble Strip	09/16/2020 16:45	09/18/2020 15:36
22009220214	20A-AE105S-091720-1	Bubble Strip	09/17/2020 12:00	09/18/2020 15:36
22009220215	20A-AE106D-091720-1	Bubble Strip	09/17/2020 11:52	09/18/2020 15:36
22009220216	20A-AE105R2-091720-1	Bubble Strip	09/17/2020 14:30	09/18/2020 15:36
22009220217	20A-AE106R3-091720-1	Bubble Strip	09/17/2020 13:33	09/18/2020 15:36

Summary of Compounds Detected

20A-AE28R2-091420-1

Collect Date 09/14/2020 10:15 **LAB ID** 22009220201

Receive Date 09/18/2020 15:36 **Matrix** Water

AM20GAX

CAS#	Parameter	Result	DL	LOQ	Units
74-84-0	Ethane	6.1	0.075	1.0	ug/L
74-85-1	Ethene	10	0.12	1.0	ug/L
74-82-8	Methane	130	2.5	5.0	ug/L
74-98-6	Propane	0.57	0.014	0.10	ug/L

20A-AE26R1-091420-1

Collect Date 09/14/2020 10:20 **LAB ID** 22009220202

Receive Date 09/18/2020 15:36 **Matrix** Water

AM20GAX

CAS#	Parameter	Result	DL	LOQ	Units
74-84-0	Ethane	1.6	0.075	1.0	ug/L
74-85-1	Ethene	1.1	0.12	1.0	ug/L
74-82-8	Methane	160	2.5	5.0	ug/L
74-98-6	Propane	0.18	0.014	0.10	ug/L

20A-TRC301R4-091520-1

Collect Date 09/15/2020 11:20 **LAB ID** 22009220203

Receive Date 09/18/2020 15:36 **Matrix** Water

AM20GAX

CAS#	Parameter	Result	DL	LOQ	Units
74-84-0	Ethane	1.2	0.075	1.0	ug/L
74-85-1	Ethene	1.6	0.12	1.0	ug/L
74-82-8	Methane	270	2.5	5.0	ug/L
74-98-6	Propane	1.1	0.014	0.10	ug/L

20A-AE109R5-091620-1

Collect Date 09/16/2020 14:45 **LAB ID** 22009220204

Receive Date 09/18/2020 15:36 **Matrix** Water

AM20GAX

CAS#	Parameter	Result	DL	LOQ	Units
74-84-0	Ethane	0.57J	0.075	1.0	ug/L
74-85-1	Ethene	1.0	0.12	1.0	ug/L

Summary of Compounds Detected

20A-AE109R5-091620-1

Collect Date 09/16/2020 14:45 | LAB ID 22009220204
Receive Date 09/18/2020 15:36 | Matrix Water

AM20GAX (Continued)

CAS#	Parameter	Result	DL	LOQ	Units
74-82-8	Methane	530	2.5	5.0	ug/L
74-98-6	Propane	0.090J	0.014	0.10	ug/L

20A-AE105S-091720-1

Collect Date 09/17/2020 11:20 | LAB ID 22009220205
Receive Date 09/18/2020 15:36 | Matrix Water

AM20GAX

CAS#	Parameter	Result	DL	LOQ	Units
74-85-1	Ethene	0.20J	0.12	1.0	ug/L
74-82-8	Methane	69	2.5	5.0	ug/L
74-98-6	Propane	0.014J	0.014	0.10	ug/L

20A-AE105R2-091720-1

Collect Date 09/17/2020 12:20 | LAB ID 22009220206
Receive Date 09/18/2020 15:36 | Matrix Water

AM20GAX

CAS#	Parameter	Result	DL	LOQ	Units
74-84-0	Ethane	0.32J	0.075	1.0	ug/L
74-85-1	Ethene	0.60J	0.12	1.0	ug/L
74-82-8	Methane	120	2.5	5.0	ug/L
74-98-6	Propane	0.11	0.014	0.10	ug/L

20A-AE106D-091720-1

Collect Date 09/17/2020 11:15 | LAB ID 22009220207
Receive Date 09/18/2020 15:36 | Matrix Water

AM20GAX

CAS#	Parameter	Result	DL	LOQ	Units
74-82-8	Methane	7.9	2.5	5.0	ug/L

Summary of Compounds Detected

20A-AE106R3-091720-1

Collect Date 09/17/2020 13:25 **LAB ID** 22009220208

Receive Date 09/18/2020 15:36 **Matrix** Water

AM20GAX

CAS#	Parameter	Result	DL	LOQ	Units
74-84-0	Ethane	0.16J	0.075	1.0	ug/L
74-85-1	Ethene	3.9	0.12	1.0	ug/L
74-82-8	Methane	630	2.5	5.0	ug/L
74-98-6	Propane	0.028J	0.014	0.10	ug/L

20A-AE26R1-091420-1

Collect Date 09/14/2020 10:51 **LAB ID** 22009220210

Receive Date 09/18/2020 15:36 **Matrix** Bubble Strip

AM20GAX

CAS#	Parameter	Result	DL	LOQ	Units
1333-74-0	Hydrogen	67	0.98	3.8	nM

20A-AE28R2-091420-1

Collect Date 09/14/2020 11:25 **LAB ID** 22009220211

Receive Date 09/18/2020 15:36 **Matrix** Bubble Strip

AM20GAX

CAS#	Parameter	Result	DL	LOQ	Units
1333-74-0	Hydrogen	1.8J	0.49	1.9	nM

20A-TRC301R4-091520-1

Collect Date 09/15/2020 12:38 **LAB ID** 22009220212

Receive Date 09/18/2020 15:36 **Matrix** Bubble Strip

AM20GAX

CAS#	Parameter	Result	DL	LOQ	Units
1333-74-0	Hydrogen	3.0	0.49	1.9	nM

Summary of Compounds Detected

20A-AE109R5-091620-1				
Collect Date	09/16/2020 16:45	LAB ID	22009220213	
Receive Date	09/18/2020 15:36	Matrix	Bubble Strip	

AM20GAX

CAS#	Parameter	Result	DL	LOQ	Units
1333-74-0	Hydrogen	2.6	0.49	1.9	nM

20A-AE105S-091720-1				
Collect Date	09/17/2020 12:00	LAB ID	22009220214	
Receive Date	09/18/2020 15:36	Matrix	Bubble Strip	

AM20GAX

CAS#	Parameter	Result	DL	LOQ	Units
1333-74-0	Hydrogen	0.67J	0.49	1.9	nM

20A-AE106D-091720-1				
Collect Date	09/17/2020 11:52	LAB ID	22009220215	
Receive Date	09/18/2020 15:36	Matrix	Bubble Strip	

AM20GAX

CAS#	Parameter	Result	DL	LOQ	Units
1333-74-0	Hydrogen	0.62J	0.49	1.9	nM

20A-AE105R2-091720-1				
Collect Date	09/17/2020 14:30	LAB ID	22009220216	
Receive Date	09/18/2020 15:36	Matrix	Bubble Strip	

AM20GAX

CAS#	Parameter	Result	DL	LOQ	Units
1333-74-0	Hydrogen	2.6	0.49	1.9	nM

Summary of Compounds Detected

20A-AE106R3-091720-1				
	Collect Date	09/17/2020 13:33	LAB ID	22009220217
	Receive Date	09/18/2020 15:36	Matrix	Bubble Strip

AM20GAX

CAS#	Parameter	Result	DL	LOQ	Units
1333-74-0	Hydrogen	0.71J	0.49	1.9	nM

Sample Results

20A-AE28R2-091420-1

Collect Date	09/14/2020 10:15	**LAB ID**	22009220201
Receive Date	09/18/2020 15:36	**Matrix**	Water

AM20GAX

Prep Date	Prep Batch	Prep Method	Dilution	Analysis Date	By	Analytical Batch
NA	NA	NA	1	09/25/2020 15:43	AWE	693090

CAS#	Parameter	Result	DL	LOQ	Units
74-86-2	Acetylene	0.11U	0.11	0.74	ug/L
74-84-0	**Ethane**	**6.1**	**0.075**	**1.0**	**ug/L**
74-85-1	**Ethene**	**10**	**0.12**	**1.0**	**ug/L**
74-82-8	**Methane**	**130**	**2.5**	**5.0**	**ug/L**
74-98-6	**Propane**	**0.57**	**0.014**	**0.10**	**ug/L**

20A-AE26R1-091420-1

Collect Date	09/14/2020 10:20	**LAB ID**	22009220202
Receive Date	09/18/2020 15:36	**Matrix**	Water

AM20GAX

Prep Date	Prep Batch	Prep Method	Dilution	Analysis Date	By	Analytical Batch
NA	NA	NA	1	09/25/2020 15:57	AWE	693090

CAS#	Parameter	Result	DL	LOQ	Units
74-86-2	Acetylene	0.11U	0.11	0.74	ug/L
74-84-0	**Ethane**	**1.6**	**0.075**	**1.0**	**ug/L**
74-85-1	**Ethene**	**1.1**	**0.12**	**1.0**	**ug/L**
74-82-8	**Methane**	**160**	**2.5**	**5.0**	**ug/L**
74-98-6	**Propane**	**0.18**	**0.014**	**0.10**	**ug/L**

20A-TRC301R4-091520-1

Collect Date	09/15/2020 11:20	**LAB ID**	22009220203
Receive Date	09/18/2020 15:36	**Matrix**	Water

AM20GAX

Prep Date	Prep Batch	Prep Method	Dilution	Analysis Date	By	Analytical Batch
NA	NA	NA	1	09/29/2020 16:25	AWE	693374

CAS#	Parameter	Result	DL	LOQ	Units
74-86-2	Acetylene	0.11U	0.11	0.74	ug/L
74-84-0	**Ethane**	**1.2**	**0.075**	**1.0**	**ug/L**
74-85-1	**Ethene**	**1.6**	**0.12**	**1.0**	**ug/L**
74-82-8	**Methane**	**270**	**2.5**	**5.0**	**ug/L**
74-98-6	**Propane**	**1.1**	**0.014**	**0.10**	**ug/L**

Sample Results

20A-AE109R5-091620-1

Collect Date	09/16/2020 14:45	LAB ID	22009220204
Receive Date	09/18/2020 15:36	Matrix	Water

AM20GAX

Prep Date	Prep Batch	Prep Method	Dilution	Analysis Date	By	Analytical Batch
NA	NA	NA	1	09/29/2020 16:37	AWE	693374

CAS#	Parameter	Result	DL	LOQ	Units
74-86-2	Acetylene	0.11U	0.11	0.74	ug/L
74-84-0	**Ethane**	**0.57J**	**0.075**	**1.0**	**ug/L**
74-85-1	**Ethene**	**1.0**	**0.12**	**1.0**	**ug/L**
74-82-8	**Methane**	**530**	**2.5**	**5.0**	**ug/L**
74-98-6	**Propane**	**0.090J**	**0.014**	**0.10**	**ug/L**

20A-AE105S-091720-1

Collect Date	09/17/2020 11:20	LAB ID	22009220205
Receive Date	09/18/2020 15:36	Matrix	Water

AM20GAX

Prep Date	Prep Batch	Prep Method	Dilution	Analysis Date	By	Analytical Batch
NA	NA	NA	1	09/30/2020 14:26	AWE	693489

CAS#	Parameter	Result	DL	LOQ	Units
74-86-2	Acetylene	0.11U	0.11	0.74	ug/L
74-84-0	Ethane	0.075U	0.075	1.0	ug/L
74-85-1	**Ethene**	**0.20J**	**0.12**	**1.0**	**ug/L**
74-82-8	**Methane**	**69**	**2.5**	**5.0**	**ug/L**
74-98-6	**Propane**	**0.014J**	**0.014**	**0.10**	**ug/L**

20A-AE105R2-091720-1

Collect Date	09/17/2020 12:20	LAB ID	22009220206
Receive Date	09/18/2020 15:36	Matrix	Water

AM20GAX

Prep Date	Prep Batch	Prep Method	Dilution	Analysis Date	By	Analytical Batch
NA	NA	NA	1	09/29/2020 17:02	AWE	693374

CAS#	Parameter	Result	DL	LOQ	Units
74-86-2	Acetylene	0.11U	0.11	0.74	ug/L
74-84-0	**Ethane**	**0.32J**	**0.075**	**1.0**	**ug/L**
74-85-1	**Ethene**	**0.60J**	**0.12**	**1.0**	**ug/L**
74-82-8	**Methane**	**120**	**2.5**	**5.0**	**ug/L**
74-98-6	**Propane**	**0.11**	**0.014**	**0.10**	**ug/L**

Sample Results

20A-AE106D-091720-1

Collect Date	09/17/2020 11:15	**LAB ID**	22009220207
Receive Date	09/18/2020 15:36	**Matrix**	Water

AM20GAX

Prep Date	Prep Batch	Prep Method	Dilution	Analysis Date	By	Analytical Batch
NA	NA	NA	1	09/29/2020 17:14	AWE	693374

CAS#	Parameter	Result	DL	LOQ	Units
74-86-2	Acetylene	0.11U	0.11	0.74	ug/L
74-84-0	Ethane	0.075U	0.075	1.0	ug/L
74-85-1	Ethene	0.12U	0.12	1.0	ug/L
74-82-8	**Methane**	**7.9**	**2.5**	**5.0**	**ug/L**
74-98-6	Propane	0.014U	0.014	0.10	ug/L

20A-AE106R3-091720-1

Collect Date	09/17/2020 13:25	**LAB ID**	22009220208
Receive Date	09/18/2020 15:36	**Matrix**	Water

AM20GAX

Prep Date	Prep Batch	Prep Method	Dilution	Analysis Date	By	Analytical Batch
NA	NA	NA	1	09/29/2020 17:26	AWE	693374

CAS#	Parameter	Result	DL	LOQ	Units
74-86-2	Acetylene	0.11U	0.11	0.74	ug/L
74-84-0	**Ethane**	**0.16J**	**0.075**	**1.0**	**ug/L**
74-85-1	**Ethene**	**3.9**	**0.12**	**1.0**	**ug/L**
74-82-8	**Methane**	**630**	**2.5**	**5.0**	**ug/L**
74-98-6	**Propane**	**0.028J**	**0.014**	**0.10**	**ug/L**

20A-TB01-091420-1

Collect Date	09/14/2020 10:00	**LAB ID**	22009220209
Receive Date	09/18/2020 15:36	**Matrix**	Water

AM20GAX

Prep Date	Prep Batch	Prep Method	Dilution	Analysis Date	By	Analytical Batch
NA	NA	NA	1	09/25/2020 16:11	AWE	693090

CAS#	Parameter	Result	DL	LOQ	Units
74-86-2	Acetylene	0.11U	0.11	0.74	ug/L
74-84-0	Ethane	0.075U	0.075	1.0	ug/L
74-85-1	Ethene	0.12U	0.12	1.0	ug/L
74-82-8	Methane	2.5U	2.5	5.0	ug/L
74-98-6	Propane	0.014U	0.014	0.10	ug/L

Sample Results

20A-AE26R1-091420-1

Collect Date	09/14/2020 10:51	LAB ID	22009220210
Receive Date	09/18/2020 15:36	Matrix	Bubble Strip

AM20GAX

Prep Date	Prep Batch	Prep Method	Dilution	Analysis Date	By	Analytical Batch
NA	NA	NA	2	09/28/2020 20:18	AWE	693235

CAS#	Parameter	Result	DL	LOQ	Units
1333-74-0	Hydrogen	67	0.98	3.8	nM

20A-AE28R2-091420-1

Collect Date	09/14/2020 11:25	LAB ID	22009220211
Receive Date	09/18/2020 15:36	Matrix	Bubble Strip

AM20GAX

Prep Date	Prep Batch	Prep Method	Dilution	Analysis Date	By	Analytical Batch
NA	NA	NA	1	09/28/2020 18:50	AWE	693235

CAS#	Parameter	Result	DL	LOQ	Units
1333-74-0	Hydrogen	1.8J	0.49	1.9	nM

20A-TRC301R4-091520-1

Collect Date	09/15/2020 12:38	LAB ID	22009220212
Receive Date	09/18/2020 15:36	Matrix	Bubble Strip

AM20GAX

Prep Date	Prep Batch	Prep Method	Dilution	Analysis Date	By	Analytical Batch
NA	NA	NA	1	09/28/2020 19:03	AWE	693235

CAS#	Parameter	Result	DL	LOQ	Units
1333-74-0	Hydrogen	3.0	0.49	1.9	nM

Sample Results

20A-AE109R5-091620-1				
	Collect Date	09/16/2020 16:45	LAB ID	22009220213
	Receive Date	09/18/2020 15:36	Matrix	Bubble Strip

AM20GAX

Prep Date	Prep Batch	Prep Method	Dilution	Analysis Date	By	Analytical Batch
NA	NA	NA	1	09/28/2020 19:15	AWE	693235

CAS#	Parameter	Result	DL	LOQ	Units
1333-74-0	Hydrogen	2.6	0.49	1.9	nM

20A-AE105S-091720-1				
	Collect Date	09/17/2020 12:00	LAB ID	22009220214
	Receive Date	09/18/2020 15:36	Matrix	Bubble Strip

AM20GAX

Prep Date	Prep Batch	Prep Method	Dilution	Analysis Date	By	Analytical Batch
NA	NA	NA	1	09/28/2020 19:27	AWE	693235

CAS#	Parameter	Result	DL	LOQ	Units
1333-74-0	Hydrogen	0.67J	0.49	1.9	nM

20A-AE106D-091720-1				
	Collect Date	09/17/2020 11:52	LAB ID	22009220215
	Receive Date	09/18/2020 15:36	Matrix	Bubble Strip

AM20GAX

Prep Date	Prep Batch	Prep Method	Dilution	Analysis Date	By	Analytical Batch
NA	NA	NA	1	09/28/2020 19:41	AWE	693235

CAS#	Parameter	Result	DL	LOQ	Units
1333-74-0	Hydrogen	0.62J	0.49	1.9	nM

Sample Results

20A-AE105R2-091720-1				
	Collect Date	09/17/2020 14:30	LAB ID	22009220216
	Receive Date	09/18/2020 15:36	Matrix	Bubble Strip

AM20GAX

Prep Date	Prep Batch	Prep Method	Dilution	Analysis Date	By	Analytical Batch
NA	NA	NA	1	09/28/2020 19:53	AWE	693235

CAS#	Parameter	Result	DL	LOQ	Units
1333-74-0	Hydrogen	2.6	0.49	1.9	nM

20A-AE106R3-091720-1				
	Collect Date	09/17/2020 13:33	LAB ID	22009220217
	Receive Date	09/18/2020 15:36	Matrix	Bubble Strip

AM20GAX

Prep Date	Prep Batch	Prep Method	Dilution	Analysis Date	By	Analytical Batch
NA	NA	NA	1	09/28/2020 20:05	AWE	693235

CAS#	Parameter	Result	DL	LOQ	Units
1333-74-0	Hydrogen	0.71J	0.49	1.9	nM

General Chromatography QC Summary

Analytical Batch 693235	Client ID	MB693235		LCS693235				LCSD693235				
	LAB ID	2089076		2089077				2089078				
	Sample Type	MB		LCS				LCSD				
	Prep Date											
	Analysis Date	09/28/20 18:02		09/28/20 18:14				09/28/20 18:26				
	Matrix											
AM20GAX		Units Result	nM DL	Spike Added	Result	%R	Control Limits%R	Spike Added	Result	%R	RPD	RPD Limit
Hydrogen	1333-74-0	0.49U	0.49	12	12	98	70 - 130	12	12	102	4	20

Analytical Batch 693090	Client ID	MB693090		LCS693090				LCSD693090				
	LAB ID	2088112		2088113				2088114				
	Sample Type	MB		LCS				LCSD				
	Prep Date											
	Analysis Date	09/25/20 12:02		09/25/20 12:15				09/25/20 12:27				
	Matrix	Water		Water				Water				
AM20GAX		Units Result	ug/L DL	Spike Added	Result	%R	Control Limits%R	Spike Added	Result	%R	RPD	RPD Limit
Acetylene	74-86-2	0.11U	0.11	33	34	103	70 - 130	33	36	109	5	20
Ethane	74-84-0	0.075U	0.075	38	37	99	70 - 130	38	39	103	4	20
Ethene	74-85-1	0.12U	0.12	35	35	99	70 - 130	35	36	103	4	20
Methane	74-82-8	2.5U	2.5	750	750	100	70 - 130	750	750	100	0	20
Propane	74-98-6	0.014U	0.014	56	53	95	70 - 130	56	54	98	3	20

Analytical Batch 693374	Client ID	MB693374		LCS693374				LCSD693374				
	LAB ID	2089571		2089572				2089573				
	Sample Type	MB		LCS				LCSD				
	Prep Date											
	Analysis Date	09/29/20 15:23		09/29/20 16:00				09/29/20 16:13				
	Matrix	Water		Water				Water				
AM20GAX		Units Result	ug/L DL	Spike Added	Result	%R	Control Limits%R	Spike Added	Result	%R	RPD	RPD Limit
Acetylene	74-86-2	0.11U	0.11	33	32	98	70 - 130	33	27	83	16	20
Ethane	74-84-0	0.075U	0.075	38	38	99	70 - 130	38	36	95	5	20
Ethene	74-85-1	0.12U	0.12	35	35	99	70 - 130	35	33	95	5	20
Methane	74-82-8	2.5U	2.5	750	680	91	70 - 130	750	700	93	2	20
Propane	74-98-6	0.014U	0.014	56	53	95	70 - 130	56	49	89	7	20

Analytical Batch 693489	Client ID	MB693489		LCS693489				LCSD693489				
	LAB ID	2090152		2090153				2090154				
	Sample Type	MB		LCS				LCSD				
	Prep Date											
	Analysis Date	09/30/20 13:14		09/30/20 13:36				09/30/20 13:55				
	Matrix	Water		Water				Water				
AM20GAX		Units Result	ug/L DL	Spike Added	Result	%R	Control Limits%R	Spike Added	Result	%R	RPD	RPD Limit
Acetylene	74-86-2	0.11U	0.11	33	34	105	70 - 130	33	36	110	5	20
Ethane	74-84-0	0.075U	0.075	38	39	102	70 - 130	38	39	103	1	20
Ethene	74-85-1	0.12U	0.12	35	36	101	70 - 130	35	36	103	1	20
Methane	74-82-8	2.5U	2.5	750	680	91	70 - 130	750	670	90	1	20
Propane	74-98-6	0.014U	0.014	56	56	102	70 - 130	56	57	103	1	20

CHAIN-OF-CUSTODY Analytical Request Document

Pace Analytical

Chain-of-Custody is a LEGAL DOCUMENT - Complete all relevent fields

LAB USE ONLY- Affix Workorder/Login Label Here or List Pace Workorder Numbers:

Client ID: AECOM -Chelm - AECOM - Chelmsford, MA

SDG: 220092202

PM: RWe

Company: AECOM	Billing Information: Accts Payable AECOM		
Address: 250 Apollo Dr. Chelmsford, MA 01824			
Report To: Scott Olson	Email To: lori.herberich@aecom.com		
Copy To: Lori Herberich / Nicole Callahan	Site Collection Info/Address: 40 Fordham Rd		
Customer Project Name/Number: LMC Wilmington 60552044.19	State: MA County/City: Wilmington Time Zone Collected: [ ]PT [ ]MT [ ]CT [X]ET		
Phone: 978-302-0089 Email:	Site/Facility ID #: LMC-Wilmington	Compliance Monitoring? [ ] Yes [ ] No	
Collected By (print): Dylan Potter	Purchase Order #: 117459 Quote #: 2017-2021	DW PWS ID #: DW Location Code:	
Collected By (signature):	Turnaround Date Required: Standard / 15-day	Immediately Packed on Ice: [X] Yes [ ] No	
Sample Disposal: [X] Dispose as appropriate [ ] Return [ ] Archive: [ ] Hold:	Rush: [ ] Same Day [ ] Next Day [ ] 2 Day [ ] 3 Day [ ] 4 Day [ ] 5 Day (Expedite Charges Apply)	Field Filtered (if applicable): [ ] Yes [ ] No Analysis:	

* Matrix Codes (Insert in Matrix box below): Drinking Water (DW), Ground Water (GW), Wastewater (WW), Product (P), Soil/Solid (SL), Oil (OL), Wipe (WP), Air (AR), Tissue (TS), Bioassay (B), Vapor (V), Other (OT)

Container Preservative Ty: V D

** Preservative Types: (1) nitric acid, (2) sulf... (6) methanol, (7) sodium bisulfate, (8) sodium thiosulfate, (9) hexane, (A) ascorbic acid, (B) ammonium sulfate, (C) ammonium hydroxide, (D) TSP, (U) Unpreserved, (O) Other _____

Customer Sample ID	Matrix *	Comp / Grab	Collected (or Composite Start) Date	Collected (or Composite Start) Time	Composite End Date	Composite End Time	Res Cl	# of Ctns	Analyses: Dissolved Hydrogen	Analyses: [Acetylene, methane, Propane, Ethane, Ethene]	
20A-AE28R2-091420-1	GW	Grab	9/14/20	1015	—	—		3		X	1
20A-AE26R1-091420-1	GW	Grab	9/14/20	1020	—	—		3		X	2
20A-TRC301RM-091520-1	GW	Grab	9/15/20	1120	—	—		3		X	3
20A-AE109RS-091620-1	GW	Grab	9/16/20	1445	—	—		3		X	4
20A-AE105S-091720-1	GW	Grab	9/17/20	1120	—	—		3		X	5
20A-AE105R2-091720-1	GW	Grab	9/17/20	1220	—	—		3		X	6
20A-AE106D-091720-1	GW	Grab	9/17/20	1115	—	—		3		X	7
20A-AE106R3-091720-1	GW	Grab	9/17/20	1325	—	—		3		X	8
20A-TB01-091420-1	GW	Grab	9/14/20	1000	—	—		2		X	9
20A-AE26R1-091420-1	GW	COMP	9/14/20	1036	9/14/20	1051		1	X		10

Lab Profile/Line:

Lab Sample Receipt Checklist:

Custody Seals Present/Intact	Y N NA
Custody Signatures Present	Y N NA
Collector Signature Present	Y N NA
Bottles Intact	Y N NA
Correct Bottles	Y N NA
Sufficient Volume	Y N NA
Samples Received on Ice	Y N NA
VOA - Headspace Acceptable	Y N NA
USDA Regulated Soils	Y N NA
Samples in Holding Time	Y N NA
Residual Chlorine Present	Y N NA
Cl Strips: _____	
Sample pH Acceptable	Y N NA
pH Strips: _____	
Sulfide Present	Y N NA
Lead Acetate Strips: _____	

LAB USE ONLY:
Lab Sample # / Comments:

Customer Remarks / Special Conditions / Possible Hazards:

Type of Ice Used: Wet Blue Dry None

Packing Material Used: 9119 2120 7634

Radchem sample(s) screened (<500 cpm): Y N NA

SHORT HOLDS PRESENT (<72 hours): Y N N/A

Lab Tracking #: 2536646

Samples received via: FEDEX UPS Client Courier Pace Courier

Lab Sample Temperature Info:
Temp Blank Received: Y N NA
Therm ID#: _____
Cooler 1 Temp Upon Receipt: _____oC
Cooler 1 Therm Corr. Factor: _____oC
Cooler 1 Corrected Temp: _____oC
Comments: 4.2 E26

Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:
AECOM	9/17/20 1730		
Fedex	9/18/20 15:36	Rachul Alagyadhi	9/18/20 15:36

MTJL LAB USE ONLY
Table #:
Acctnum:
Template:
Prelogin:
PM:
PB:

Trip Blank Received: Y N NA
HCL MeOH TSP Other

Non Conformance(s): YES / NO

Page: _____ of: _____

CHAIN-OF-CUSTODY Analytical Request Document

Pace Analytical®

Chain-of-Custody is a LEGAL DOCUMENT - Complete all relevent fields

LAB USE ONLY- Affix Workorder/Login Label Here on Last Page Work

Client ID: AECOM -Chelm - AECOM - Chelmsford, MA
SDG: 220092202
PM: RWe

Company: AECOM	Billing Information: Accts Payable AECOM
Address: 250 Apollo Dr, Chelmsford, MA 01824	
Report To: Scott Olson	Email To: lori.herberich@aecom.com
Copy To: Lori Herberich / Nicole Callahan	Site Collection Info/Address: 40 Fordham Rd
Customer Project Name/Number: LMC Wilmington 60552014.19	State: MA County/City: Wilmington Time Zone Collected: [ ]PT [ ]MT [ ]CT [X]ET
Phone: 978-302-0589 Email:	Site/Facility ID #: LMC-Wilmington
Collected By (print): Dylan Potter	Purchase Order #: 117459 Quote #: 2017-2021
Collected By (signature):	Turnaround Date Required: Standard / 15-day
Sample Disposal: [X] Dispose as appropriate [ ] Return [ ] Archive: [ ] Hold:	Rush: [ ] Same Day [ ] Next Day [ ] 2 Day [ ] 3 Day [ ] 4 Day [ ] 5 Day (Expedite Charges Apply)
	Compliance Monitoring? [ ] Yes [ ] No
	DW PWS ID #: DW Location Code:
	Immediately Packed on Ice: [ ] Yes [ ] No
	Field Filtered (if applicable): [ ] Yes [ ] No Analysis:

* Matrix Codes (Insert in Matrix box below): Drinking Water (DW), Ground Water (GW), Wastewater (WW), Product (P), Soil/Solid (SL), Oil (OL), Wipe (WP), Air (AR), Tissue (TS), Bioassay (B), Vapor (V), Other (OT)

Container Preservative Ty: V

** Preservative Types: (1) nitric acid, (2) sulf... (6) methanol, (7) sodium bisulfate, (8) sodium thiosulfate, (9) hexane, (A) ascorbic acid, (B) ammonium sulfate, (C) ammonium hydroxide, (D) TSP, (U) Unpreserved, (O) Other _____

Analyses: Dissolved Hydrogen

Customer Sample ID	Matrix *	Comp / Grab	Collected (or Composite Start) Date	Collected (or Composite Start) Time	Composite End Date	Composite End Time	Res Cl	# of Ctns	Dissolved Hydrogen	
20A-AE26R2-091420-1	GW	Comp	9/14/20	1100	9/14/20	1125		1	X	11
20A-TRC30184-091520-1	GW	Comp	9/15/20	1218	9/15/20	1238		1	X	12
20A-AE109R5-091620-1	GW	Comp	9/16/20	1620	9/16/20	1645		1	X	13
20A-AE105S-091720-1	GW	Comp	9/17/20	1140	9/17/20	1200		1	X	14
20A-AE106D-091720-1	GW	Comp	9/17/20	1137	9/17/20	1152		1	X	15
20A-AE105R2-091720-1	GW	Comp	9/17/20	1405	9/17/20	1430		1	X	16
20A-AE106R3-091720-1	GW	Comp	9/17/20	1308	9/17/20	1333		1	X	17

Lab Profile/Line:

Lab Sample Receipt Checklist:

Custody Seals Present/Intact	Y N NA
Custody Signatures Present	Y N NA
Collector Signature Present	Y N NA
Bottles Intact	Y N NA
Correct Bottles	Y N NA
Sufficient Volume	Y N NA
Samples Received on Ice	Y N NA
VOA - Headspace Acceptable	Y N NA
USDA Regulated Soils	Y N NA
Samples in Holding Time	Y N NA
Residual Chlorine Present	Y N NA
Cl Strips: _____	
Sample pH Acceptable	Y N NA
pH Strips: _____	
Sulfide Present	Y N NA
Lead Acetate Strips: _____	

LAB USE ONLY:
Lab Sample # / Comments:

Customer Remarks / Special Conditions / Possible Hazards:

Type of Ice Used: Wet Blue Dry None

Packing Material Used: 9119 2120 7634

Radchem sample(s) screened (<500 cpm): Y N NA

SHORT HOLDS PRESENT (<72 hours): Y N N/A

Lab Tracking #:

Samples received via: FEDEX UPS Client Courier Pace Courier

Lab Sample Temperature Info:
Temp Blank Received: Y N NA
Therm ID#: _____
Cooler 1 Temp Upon Receipt: _____oC
Cooler 1 Therm Corr. Factor: _____oC
Cooler 1 Corrected Temp: _____oC
Comments: 4.2 E26

Relinquished by/Company: (Signature) AECOM	Date/Time: 9/17/20 1730	Received by/Company: (Signature)	Date/Time:	MTJL LAB USE ONLY Table #:
Relinquished by/Company: (Signature) Fedex	Date/Time: 9/18/20 15:36	Received by/Company: (Signature) Rachel Mayyadhi	Date/Time: 9/18/20 15:36	Acctnum: Template: Prelogin: PM: PB:
Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:	

Trip Blank Received: Y N NA
HCL MeOH TSP Other

Non Conformance(s): YES / NO

Page: _____ of: _____

SAMPLE RECEIVING CHECKLIST

SAMPLE DELIVERY GROUP 220092202	
Client **PM** RWe AECOM-Chelm - AECOM-Chelmsford, MA	**Transport Method** FEDEX
Profile Number 284674	**Received By** McCune, Dodie N.
Line Item(s) 1 - MEE, Propane, Acetylene 2 - Hydrogen	**Receive Date(s)** 09/18/20

CHECKLIST	YES	NO
Samples received with proper thermal preservation?	☑	☐
Radioactivity is <1600 cpm? If no, record cpm value in notes section.	☑	☐
COC relinquished and complete (including sampleIDs, collect times, and sampler)?	☑	☐
All containers received in good condition and within hold time?	☑	☐
All sample labels and containers received match the chain of custody?	☑	☐
Preservative added to any containers?	☐	☑
If received, was headspace for VOC water containers < 6mm?	☑	☐
Samples collected in containers provided by Pace Gulf Coast?	☑	☐

COOLERS

Airbill	Thermometer ID: E26	Temp °C
911921207634		4.2

DISCREPANCIES

None

LAB PRESERVATIONS

None

NOTES

Revision 1.6

LELAP CERTIFICATE NUMBER: 01955
DOD-ELAP ACCREDITATION NUMBER: 74960

ANALYTICAL RESULTS

PERFORMED BY

Pace Analytical Gulf Coast
7979 Innovation Park Dr.
Baton Rouge, LA 70820
(225) 769-4900

Report Date 10/07/2020

Report # 220092625

Project LMC Wilmington 60552044.19

Deliver To	***Additional Recipients***
Scott Olson AECOM 250 Apollo Drive Chelmsford, MA 01824 978.846.5238	Lori Herberich, AECOM Nicole Callahan, AECOM

Laboratory Endorsement

Sample analysis was performed in accordance with approved methodologies provided by the Environmental Protection Agency or other recognized agencies. The samples and their corresponding extracts will be maintained for a period of 30 days unless otherwise arranged. Following this retention period the samples will be disposed in accordance with Pace Gulf Coast's Standard Operating Procedures.

Common Abbreviations that may be Utilized in this Report

ND	Indicates the result was Not Detected at the specified reporting limit
NO	Indicates the sample did not ignite when preliminary test performed for EPA Method 1030
DO	Indicates the result was Diluted Out
MI	Indicates the result was subject to Matrix Interference
TNTC	Indicates the result was Too Numerous To Count
SUBC	Indicates the analysis was Sub-Contracted
FLD	Indicates the analysis was performed in the Field
DL	Detection Limit
LOD	Limit of Detection
LOQ	Limit of Quantitation
RE	Re-analysis
CF	HPLC or GC Confirmation
00:01	Reported as a time equivalent to 12:00 AM

Reporting Flags that may be Utilized in this Report

J or I	Indicates the result is between the MDL and LOQ
J	DOD flag on analyte in the parent sample for MS/MSD outside acceptance criteria
U	Indicates the compound was analyzed for but not detected
B or V	Indicates the analyte was detected in the associated Method Blank
Q	Indicates a non-compliant QC Result (See Q Flag Application Report)
*****	Indicates a non-compliant or not applicable QC recovery or RPD – see narrative
E	Organics - The result is estimated because it exceeded the instrument calibration range
E	Metals - % diference for the serial dilution is > 10%
L	Reporting Limits adjusted to meet risk-based limit.
P	RPD between primary and confirmation result is greater than 40
DL	Diluted analysis – when appended to Client Sample ID

Sample receipt at Pace Gulf Coast is documented through the attached chain of custody. In accordance with NELAC, this report shall be reproduced only in full and with the written permission of Pace Gulf Coast. The results contained within this report relate only to the samples reported. The documented results are presented within this report.

This report pertains only to the samples listed in the Report Sample Summary and should be retained as a permanent record thereof. The results contained within this report are intended for the use of the client. Any unauthorized use of the information contained in this report is prohibited.

I certify that this data package is in compliance with The NELAC Institute (TNI) Standard 2009 and terms and conditions of the contract and Statement of Work both technically and for completeness, for other than the conditions in the case narrative. Release of the data contained in this hardcopy data package and in the computer readable data submitted has been authorized by the Quality Assurance Manager or his/her designee, as verified by the following signature.

Estimated uncertainty of measurement is available upon request. This report is in compliance with the DOD QSM as specified in the contract if applicable.

_____

Authorized Signature
Pace Gulf Coast Report 220092625

Certifications

Certification	Certification Number
DOD ELAP	74960
Alabama	01955
Arkansas	88-0655
Colorado	01955
Delaware	01955
Florida	E87854
Georgia	01955
Hawaii	01955
Idaho	01955
Illinois	200048
Indiana	01955
Kansas	E-10354
Kentucky	95
Louisiana	01955
Maryland	01955
Massachusetts	01955
Michigan	01955
Mississippi	01955
Missouri	01955
Montana	N/A
Nebraska	01955
New Mexico	01955
North Carolina	618
North Dakota	R-195
Oklahoma	9403
South Carolina	73006001
South Dakota	01955
Tennessee	01955
Texas	T104704178
Vermont	01955
Virginia	460215
Washington	C929
USDA Soil Permit	P330-16-00234

Case Narrative

Client: AECOM - Chelmsford, MA **Report:** 220092625

Pace Analytical Gulf Coast received and analyzed the sample(s) listed
on the Report Sample Summary page of this report. Receipt of the sample(s) is documented
by the attached chain of custody. This applies only to the sample(s) listed in this report.
No sample integrity or quality control exceptions were identified unless noted below.

No anomalies were found for the analyzed sample(s).

Sample Summary

LAB ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
22009262501	20A-TB01-092120-1	Water	09/21/2020 08:00	09/25/2020 12:00
22009262502	20A-EMW11R2-092120-1	Water	09/21/2020 10:45	09/25/2020 12:00
22009262503	20A-EB01-092220-1	Water	09/22/2020 17:45	09/25/2020 12:00
22009262504	20A-AE29R6-092220-1	Water	09/22/2020 10:35	09/25/2020 12:00
22009262505	20A-STM8R1-092320-1	Water	09/23/2020 12:30	09/25/2020 12:00
22009262506	20A-GZA12-092420-1	Water	09/24/2020 09:15	09/25/2020 12:00
22009262507	20A-GZA101R-092420-1	Water	09/24/2020 12:45	09/25/2020 12:00
22009262508	20A-EMW11R2-092120-1	Bubble Strip	09/21/2020 12:10	09/25/2020 12:00
22009262509	20A-AE29R6-09220-1	Bubble Strip	09/22/2020 11:55	09/25/2020 12:00
22009262510	20A-GZA12-092420-1	Bubble Strip	09/24/2020 09:45	09/25/2020 12:00
22009262511	20A-STM8R1-092420-1	Bubble Strip	09/24/2020 14:20	09/25/2020 12:00
22009262512	20A-GZA101R-092420-1	Bubble Strip	09/24/2020 13:35	09/25/2020 12:00

Summary of Compounds Detected

20A-EMW11R2-092120-1

Collect Date 09/21/2020 10:45 | LAB ID 22009262502
Receive Date 09/25/2020 12:00 | Matrix Water

AM20GAX

CAS#	Parameter	Result	DL	LOQ	Units
74-84-0	Ethane	2.9	0.075	1.0	ug/L
74-85-1	Ethene	42	0.12	1.0	ug/L
74-82-8	Methane	320	2.5	5.0	ug/L

20A-AE29R6-092220-1

Collect Date 09/22/2020 10:35 | LAB ID 22009262504
Receive Date 09/25/2020 12:00 | Matrix Water

AM20GAX

CAS#	Parameter	Result	DL	LOQ	Units
74-84-0	Ethane	0.42J	0.075	1.0	ug/L
74-85-1	Ethene	1.2	0.12	1.0	ug/L
74-82-8	Methane	900	2.5	5.0	ug/L
74-98-6	Propane	0.13	0.014	0.10	ug/L

20A-STM8R1-092320-1

Collect Date 09/23/2020 12:30 | LAB ID 22009262505
Receive Date 09/25/2020 12:00 | Matrix Water

AM20GAX

CAS#	Parameter	Result	DL	LOQ	Units
74-82-8	Methane	14	2.5	5.0	ug/L

20A-GZA101R-092420-1

Collect Date 09/24/2020 12:45 | LAB ID 22009262507
Receive Date 09/25/2020 12:00 | Matrix Water

AM20GAX

CAS#	Parameter	Result	DL	LOQ	Units
74-84-0	Ethane	0.40J	0.075	1.0	ug/L
74-82-8	Methane	4.6J	2.5	5.0	ug/L
74-98-6	Propane	0.15	0.014	0.10	ug/L

Summary of Compounds Detected

20A-EMW11R2-092120-1				
Collect Date	09/21/2020 12:10	LAB ID	22009262508	
Receive Date	09/25/2020 12:00	Matrix	Bubble Strip	

AM20GAX

CAS#	Parameter	Result	DL	LOQ	Units
1333-74-0	Hydrogen	2.9	0.49	1.9	nM

20A-AE29R6-09220-1				
Collect Date	09/22/2020 11:55	LAB ID	22009262509	
Receive Date	09/25/2020 12:00	Matrix	Bubble Strip	

AM20GAX

CAS#	Parameter	Result	DL	LOQ	Units
1333-74-0	Hydrogen	15	0.49	1.9	nM

20A-GZA12-092420-1				
Collect Date	09/24/2020 09:45	LAB ID	22009262510	
Receive Date	09/25/2020 12:00	Matrix	Bubble Strip	

AM20GAX

CAS#	Parameter	Result	DL	LOQ	Units
1333-74-0	Hydrogen	28	0.49	1.9	nM

20A-STM8R1-092420-1				
Collect Date	09/24/2020 14:20	LAB ID	22009262511	
Receive Date	09/25/2020 12:00	Matrix	Bubble Strip	

AM20GAX

CAS#	Parameter	Result	DL	LOQ	Units
1333-74-0	Hydrogen	2.6	0.49	1.9	nM

Summary of Compounds Detected

20A-GZA101R-092420-1				
	Collect Date	09/24/2020 13:35	LAB ID	22009262512
	Receive Date	09/25/2020 12:00	Matrix	Bubble Strip

AM20GAX

CAS#	Parameter	Result	DL	LOQ	Units
1333-74-0	Hydrogen	26	0.49	1.9	nM

Sample Results

20A-TB01-092120-1

Collect Date	09/21/2020 08:00	LAB ID	22009262501
Receive Date	09/25/2020 12:00	Matrix	Water

AM20GAX

Prep Date	Prep Batch	Prep Method	Dilution	Analysis Date	By	Analytical Batch
NA	NA	NA	1	10/05/2020 13:27	AWE	693858

CAS#	Parameter	Result	DL	LOQ	Units
74-86-2	Acetylene	0.74 U	0.11	0.74	ug/L
74-84-0	Ethane	1.0 U	0.075	1.0	ug/L
74-85-1	Ethene	1.0 U	0.12	1.0	ug/L
74-82-8	Methane	5.0 U	2.5	5.0	ug/L
74-98-6	Propane	0.10 U	0.014	0.10	ug/L

20A-EMW11R2-092120-1

Collect Date	09/21/2020 10:45	LAB ID	22009262502
Receive Date	09/25/2020 12:00	Matrix	Water

AM20GAX

Prep Date	Prep Batch	Prep Method	Dilution	Analysis Date	By	Analytical Batch
NA	NA	NA	1	10/05/2020 13:41	AWE	693858

CAS#	Parameter	Result	DL	LOQ	Units
74-86-2	Acetylene	0.74 U	0.11	0.74	ug/L
74-84-0	**Ethane**	**2.9**	**0.075**	**1.0**	**ug/L**
74-85-1	**Ethene**	**42**	**0.12**	**1.0**	**ug/L**
74-82-8	**Methane**	**320**	**2.5**	**5.0**	**ug/L**
74-98-6	Propane	0.10 U	0.014	0.10	ug/L

20A-EB01-092220-1

Collect Date	09/22/2020 17:45	LAB ID	22009262503
Receive Date	09/25/2020 12:00	Matrix	Water

AM20GAX

Prep Date	Prep Batch	Prep Method	Dilution	Analysis Date	By	Analytical Batch
NA	NA	NA	1	10/05/2020 13:54	AWE	693858

CAS#	Parameter	Result	DL	LOQ	Units
74-86-2	Acetylene	0.74 U	0.11	0.74	ug/L
74-84-0	Ethane	1.0 U	0.075	1.0	ug/L
74-85-1	Ethene	1.0 U	0.12	1.0	ug/L
74-82-8	Methane	5.0 U	2.5	5.0	ug/L
74-98-6	Propane	0.10 U	0.014	0.10	ug/L

Sample Results

20A-AE29R6-092220-1

Collect Date	09/22/2020 10:35	LAB ID	22009262504
Receive Date	09/25/2020 12:00	Matrix	Water

AM20GAX

Prep Date	Prep Batch	Prep Method	Dilution	Analysis Date	By	Analytical Batch
NA	NA	NA	1	10/05/2020 14:06	AWE	693858

CAS#	Parameter	Result	DL	LOQ	Units
74-86-2	Acetylene	0.74 U	0.11	0.74	ug/L
74-84-0	**Ethane**	**0.42J**	**0.075**	**1.0**	**ug/L**
74-85-1	**Ethene**	**1.2**	**0.12**	**1.0**	**ug/L**
74-82-8	**Methane**	**900**	**2.5**	**5.0**	**ug/L**
74-98-6	**Propane**	**0.13**	**0.014**	**0.10**	**ug/L**

20A-STM8R1-092320-1

Collect Date	09/23/2020 12:30	LAB ID	22009262505
Receive Date	09/25/2020 12:00	Matrix	Water

AM20GAX

Prep Date	Prep Batch	Prep Method	Dilution	Analysis Date	By	Analytical Batch
NA	NA	NA	1	10/05/2020 14:18	AWE	693858

CAS#	Parameter	Result	DL	LOQ	Units
74-86-2	Acetylene	0.74 U	0.11	0.74	ug/L
74-84-0	Ethane	1.0 U	0.075	1.0	ug/L
74-85-1	Ethene	1.0 U	0.12	1.0	ug/L
74-82-8	**Methane**	**14**	**2.5**	**5.0**	**ug/L**
74-98-6	Propane	0.10 U	0.014	0.10	ug/L

20A-GZA12-092420-1

Collect Date	09/24/2020 09:15	LAB ID	22009262506
Receive Date	09/25/2020 12:00	Matrix	Water

AM20GAX

Prep Date	Prep Batch	Prep Method	Dilution	Analysis Date	By	Analytical Batch
NA	NA	NA	1	10/05/2020 14:31	AWE	693858

CAS#	Parameter	Result	DL	LOQ	Units
74-86-2	Acetylene	0.74 U	0.11	0.74	ug/L
74-84-0	Ethane	1.0 U	0.075	1.0	ug/L
74-85-1	Ethene	1.0 U	0.12	1.0	ug/L
74-82-8	Methane	5.0 U	2.5	5.0	ug/L
74-98-6	Propane	0.10 U	0.014	0.10	ug/L

Sample Results

20A-GZA101R-092420-1

Collect Date	09/24/2020 12:45	LAB ID	22009262507
Receive Date	09/25/2020 12:00	Matrix	Water

AM20GAX

Prep Date	Prep Batch	Prep Method	Dilution	Analysis Date	By	Analytical Batch
NA	NA	NA	1	10/05/2020 15:13	AWE	693858

CAS#	Parameter	Result	DL	LOQ	Units
74-86-2	Acetylene	0.74 U	0.11	0.74	ug/L
74-84-0	**Ethane**	**0.40J**	**0.075**	**1.0**	**ug/L**
74-85-1	Ethene	1.0 U	0.12	1.0	ug/L
74-82-8	**Methane**	**4.6J**	**2.5**	**5.0**	**ug/L**
74-98-6	**Propane**	**0.15**	**0.014**	**0.10**	**ug/L**

20A-EMW11R2-092120-1

Collect Date	09/21/2020 12:10	LAB ID	22009262508
Receive Date	09/25/2020 12:00	Matrix	Bubble Strip

AM20GAX

Prep Date	Prep Batch	Prep Method	Dilution	Analysis Date	By	Analytical Batch
NA	NA	NA	1	10/05/2020 19:31	AWE	693860

CAS#	Parameter	Result	DL	LOQ	Units
1333-74-0	**Hydrogen**	**2.9**	**0.49**	**1.9**	**nM**

20A-AE29R6-09220-1

Collect Date	09/22/2020 11:55	LAB ID	22009262509
Receive Date	09/25/2020 12:00	Matrix	Bubble Strip

AM20GAX

Prep Date	Prep Batch	Prep Method	Dilution	Analysis Date	By	Analytical Batch
NA	NA	NA	1	10/06/2020 12:28	AWE	693960

CAS#	Parameter	Result	DL	LOQ	Units
1333-74-0	**Hydrogen**	**15**	**0.49**	**1.9**	**nM**

Sample Results

20A-GZA12-092420-1

Collect Date	09/24/2020 09:45	LAB ID	22009262510
Receive Date	09/25/2020 12:00	Matrix	Bubble Strip

AM20GAX

Prep Date	Prep Batch	Prep Method	Dilution	Analysis Date	By	Analytical Batch
NA	NA	NA	1	10/06/2020 12:41	AWE	693960

CAS#	Parameter	Result	DL	LOQ	Units
1333-74-0	Hydrogen	28	0.49	1.9	nM

20A-STM8R1-092420-1

Collect Date	09/24/2020 14:20	LAB ID	22009262511
Receive Date	09/25/2020 12:00	Matrix	Bubble Strip

AM20GAX

Prep Date	Prep Batch	Prep Method	Dilution	Analysis Date	By	Analytical Batch
NA	NA	NA	1	10/06/2020 12:53	AWE	693960

CAS#	Parameter	Result	DL	LOQ	Units
1333-74-0	Hydrogen	2.6	0.49	1.9	nM

20A-GZA101R-092420-1

Collect Date	09/24/2020 13:35	LAB ID	22009262512
Receive Date	09/25/2020 12:00	Matrix	Bubble Strip

AM20GAX

Prep Date	Prep Batch	Prep Method	Dilution	Analysis Date	By	Analytical Batch
NA	NA	NA	1	10/06/2020 13:14	AWE	693960

CAS#	Parameter	Result	DL	LOQ	Units
1333-74-0	Hydrogen	26	0.49	1.9	nM

General Chromatography QC Summary

Analytical Batch 693860	Client ID	MB693860	LCS693860	LCSD693860
	LAB ID	2092345	2092346	2092347
	Sample Type	MB	LCS	LCSD
	Prep Date			
	Analysis Date	10/05/20 18:52	10/05/20 19:07	10/05/20 19:19
	Matrix			

AM20GAX		Units Result	nM LOQ	Spike Added	Result	%R	Control Limits%R	Spike Added	Result	%R	RPD	RPD Limit
Hydrogen	1333-74-0	1.9U	1.9	12	12	106	70 - 130	12	12	104	2	20

Analytical Batch 693960	Client ID	MB693960	LCS693960	LCSD693960
	LAB ID	2092775	2092776	2092777
	Sample Type	MB	LCS	LCSD
	Prep Date			
	Analysis Date	10/06/20 11:22	10/06/20 11:34	10/06/20 11:52
	Matrix			

AM20GAX		Units Result	nM LOQ	Spike Added	Result	%R	Control Limits%R	Spike Added	Result	%R	RPD	RPD Limit
Hydrogen	1333-74-0	1.9U	1.9	12	11	91	70 - 130	12	10	87	4	20

Analytical Batch 693858	Client ID	MB693858	LCS693858	LCSD693858
	LAB ID	2092342	2092343	2092344
	Sample Type	MB	LCS	LCSD
	Prep Date			
	Analysis Date	10/05/20 12:42	10/05/20 12:54	10/05/20 13:08
	Matrix	Water	Water	Water

AM20GAX		Units Result	ug/L LOQ	Spike Added	Result	%R	Control Limits%R	Spike Added	Result	%R	RPD	RPD Limit
Acetylene	74-86-2	0.74U	0.74	33	32	98	70 - 130	33	33	101	3	20
Ethane	74-84-0	1.0U	1.0	38	32	85	70 - 130	38	37	98	15	20
Ethene	74-85-1	1.0U	1.0	35	30	86	70 - 130	35	35	98	14	20
Methane	74-82-8	5.0U	5.0	750	700	94	70 - 130	750	660	89	6	20
Propane	74-98-6	0.10U	0.10	56	45	81	70 - 130	56	53	96	16	20

CHAIN-OF-CUSTODY Analytical Request Document

Pace Analytical

Chain-of-Custody is a LEGAL DOCUMENT - Complete all relevent fields

LAB USE ONLY- Affix Workorde

Client ID: AECOM -Chelm - AECOM - Chelmsford, MA

SDG: 220092625

PM: RWe

ALL SHADED

Company: AECOM	Billing Information: Accts Payable AECOM
Address: 250 Apollo Dr, Chelmsford, MA 01824	
Report To: Scott Olson	Email To: lori.herbarich@aecom.com
Copy To: Lori Herbarich / Nicole Callahan	Site Collection Info/Address: 40 Fordham Rd
Customer Project Name/Number: LMC Wilmington 60552044.19	State: MA County/City: Wilmington Time Zone Collected: [ ]PT [ ]MT [ ]CT [X]ET
Phone: 978-302-0084 Email:	Site/Facility ID #: LMC-Wilmington
Collected By (print): Dylan Potter	Purchase Order #: 117459 Quote #: 2017-2021
Collected By (signature):	Turnaround Date Required: Standard / 15 day
Sample Disposal: [X] Dispose as appropriate [ ] Return [ ] Archive: [ ] Hold:	Rush: [ ] Same Day [ ] Next Day [ ] 2 Day [ ] 3 Day [ ] 4 Day [ ] 5 Day (Expedite Charges Apply)
	Compliance Monitoring? [ ] Yes [ ] No
	DW PWS ID #: DW Location Code:
	Immediately Packed on Ice: [X] Yes [ ] No
	Field Filtered (if applicable): [ ] Yes [ ] No Analysis:

Container Preservative Type **: U | D/4

** Preservative Types: (1) nitric acid, (2) sulfuric acid, (3) hydrochloric acid, (4) sodium hydroxide, (5) zinc acetate, (6) methanol, (7) sodium bisulfate, (8) sodium thiosulfate, (9) hexane, (A) ascorbic acid, (B) ammonium sulfate, (C) ammonium hydroxide, (D) TSP, (U) Unpreserved, (O) Other _____

Analyses: Dissolved Hydrogen | [Acetylene, Methane, Propane, Ethane, Ethene]

Lab Profile/Line:

Lab Sample Receipt Checklist:

Custody Seals Present/Intact	Y N NA
Custody Signatures Present	Y N NA
Collector Signature Present	Y N NA
Bottles Intact	Y N NA
Correct Bottles	Y N NA
Sufficient Volume	Y N NA
Samples Received on Ice	Y N NA
VOA - Headspace Acceptable	Y N NA
USDA Regulated Soils	Y N NA
Samples in Holding Time	Y N NA
Residual Chlorine Present	Y N NA
Cl Strips:	
Sample pH Acceptable	Y N NA
pH Strips:	
Sulfide Present	Y N NA
Lead Acetate Strips:	

LAB USE ONLY:
Lab Sample # / Comments:

* Matrix Codes (Insert in Matrix box below): Drinking Water (DW), Ground Water (GW), Wastewater (WW), Product (P), Soil/Solid (SL), Oil (OL), Wipe (WP), Air (AR), Tissue (TS), Bioassay (B), Vapor (V), Other (OT)

Customer Sample ID	Matrix *	Comp / Grab	Collected (or Composite Start) Date	Collected (or Composite Start) Time	Composite End Date	Composite End Time	Res Cl	# of Ctns	Dissolved Hydrogen	Acetylene, Methane, Propane, Ethane, Ethene									
20A-TB01-092120-1	GW	Grab	9/21/20	0800				3		X									1
20A-EMW1R2-092120-1	GW	Grab	9/21/20	1015				3		X									2
20A-EB01-092220-1	GW	Grab	9/22/20	1745				2		X									3
20A-AE24R6-092220-1	GW	Grab	9/22/20	1035				3		X									4
20A-STM8R1-092320-1	GW	Grab	9/23/20	1230				2		X									5
20A-GZA12-092420-1	GW	Grab	9/24/20	0915				3		X									6
20A-GZA10R-092420-1	GW	Grab	9/24/20	1245				3		X									7
20A-EMW1R2-092120-1	GW	COMP	9/21/20	1145	9/21/20	1210		1	X										8
20A-AE24R6-092220-1	GW	COMP	9/22/20	1125	9/22/20	1155		1	X										9
20A-GZA12-092420-1	GW	COMP	9/24/20	0930	9/24/20	0945		1	X										10

Customer Remarks / Special Conditions / Possible Hazards: See AECOM QAPP

Type of Ice Used: Wet Blue Dry None

Packing Material Used: 391175939051

Radchem sample(s) screened (<500 cpm): Y N NA

SHORT HOLDS PRESENT (<72 hours): Y N N/A

Lab Tracking #: 2540826

Samples received via: FEDEX UPS Client Courier Pace Courier

Lab Sample Temperature Info:
Temp Blank Received: Y N NA
Therm ID#:
Cooler 1 Temp Upon Receipt: oC
Cooler 1 Therm Corr. Factor: oC
Cooler 1 Corrected Temp: oC
Comments:

Relinquished by/Company: (Signature) AECOM	Date/Time: 9/24/20 1700	Received by/Company: (Signature)	Date/Time:
Relinquished by/Company: (Signature) FedEx 9-25-20 12:00	Date/Time:	Received by/Company: (Signature) Doug McCleane 9-25-20	Date/Time: 1200
Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:

MTJL LAB USE ONLY
Table #:
Acctnum:
Template:
Prelogin:
PM:
PB:

Trip Blank Received: Y N NA
HCL MeOH TSP Other

Non Conformance(s): YES / NO

Page: of:

CHAIN-OF-CUSTODY Analytical Request Document

Pace Analytical

Chain-of-Custody is a LEGAL DOCUMENT - Complete all relevent fields

LAB USE ONLY- Affix Wor

Client ID: AECOM -Chelm - AECOM - Chelmsford, MA

SDG: 220092625

PM: RWe

Company: AECOM	Billing Information: Accts Payable AECOM
Address: 250 Apollo Dr, Chelmsford, MA 01824	
Report To: Scott Olson	Email To:
Copy To: Lori Herberich / Nicole Gallahan	Site Collection Info/Address:
Customer Project Name/Number: LMC Wilmington 60552044.19	State: / County/City: Time Zone Collected: [ ]PT [ ]MT [ ]CT [ ]ET
Phone: 978-302-8089 Email:	Site/Facility ID #: Compliance Monitoring? [ ] Yes [ ] No
Collected By (print): Dylan Potter	Purchase Order #: 11748-9 Quote #: 2017-2021 DW PWS ID #: DW Location Code:
Collected By (signature):	Turnaround Date Required: Standard/15 day Immediately Packed on Ice: [ ] Yes [ ] No
Sample Disposal: [x] Dispose as appropriate [ ] Return [ ] Archive: [ ] Hold:	Rush: [ ] Same Day [ ] Next Day [ ] 2 Day [ ] 3 Day [ ] 4 Day [ ] 5 Day (Expedite Charges Apply) Field Filtered (if applicable): [ ] Yes [ ] No Analysis:

* Matrix Codes (Insert in Matrix box below): Drinking Water (DW), Ground Water (GW), Wastewater (WW), Product (P), Soil/Solid (SL), Oil (OL), Wipe (WP), Air (AR), Tissue (TS), Bioassay (B), Vapor (V), Other (OT)

Container Preservative T

** Preservative Types: (1) nitric acid, (2) sulfuric acid, (3) hydrochloric acid, (4) sodium hydroxide, (5) zinc acetate, (6) methanol, (7) sodium bisulfate, (8) sodium thiosulfate, (9) hexane, (A) ascorbic acid, (B) ammonium sulfate, (C) ammonium hydroxide, (D) TSP, (U) Unpreserved, (O) Other _____

Customer Sample ID	Matrix *	Comp / Grab	Collected (or Composite Start) Date	Collected (or Composite Start) Time	Composite End Date	Composite End Time	Res Cl	# of Ctns	Analyses: Dissolved Hydrogen	Analyses: [Acetylene, Methane, Propane, Ethane, Ethene]	Lab Profile/Line:
20A-STM8R1-092420-1	GW	Comp	9/24/20	1355	9/24/20	1420		1	X		11
20A-GZA101R-092420-1	GW	Comp	9/24/20	1305	9/24/20	1335		1	X		12

Lab Profile/Line:

Lab Sample Receipt Checklist:

Custody Seals Present/Intact	Y N NA
Custody Signatures Present	Y N NA
Collector Signature Present	Y N NA
Bottles Intact	Y N NA
Correct Bottles	Y N NA
Sufficient Volume	Y N NA
Samples Received on Ice	Y N NA
VOA - Headspace Acceptable	Y N NA
USDA Regulated Soils	Y N NA
Samples in Holding Time	Y N NA
Residual Chlorine Present	Y N NA
Cl Strips: _____	
Sample pH Acceptable	Y N NA
pH Strips: _____	
Sulfide Present	Y N NA
Lead Acetate Strips: _____	

LAB USE ONLY:
Lab Sample # / Comments:

Customer Remarks / Special Conditions / Possible Hazards:

See AECOM QAPP

Type of Ice Used: Wet Blue Dry None

Packing Material Used: 3971 7593 9051

Radchem sample(s) screened (<500 cpm): Y N NA

SHORT HOLDS PRESENT (<72 hours): Y N N/A

Lab Tracking #: 2540827

Samples received via: FEDEX UPS Client Courier Pace Courier

Lab Sample Temperature Info:

Temp Blank Received: Y N NA

Therm ID#: _____

Cooler 1 Temp Upon Receipt: _____oC

Cooler 1 Therm Corr. Factor: _____oC

Cooler 1 Corrected Temp: _____oC

Comments:

0.9 Ede

Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:
AECOM	9/24/20 1700		
FedEx	9-25-20 12:00	DoaeMCune	9-25-20 12:00

MTJL LAB USE ONLY

Table #:

Acctnum:

Template:

Prelogin:

PM:

PB:

Trip Blank Received: Y N NA

HCL MeOH TSP Other

Non Conformance(s): YES / NO

Page: _____ of: _____

SAMPLE RECEIVING CHECKLIST

SAMPLE DELIVERY GROUP 220092625	
Client **PM** RWe AECOM-Chelm - AECOM-Chelmsford, MA	**Transport Method**
Profile Number 284253	**Received By** McCune, Dodie N.
Line Item(s) 1 - MEE, Propane, Acetylene 2 - Hydrogen	**Receive Date(s)** 09/25/20

CHECKLIST	YES	NO
Samples received with proper thermal preservation?	☑	☐
Radioactivity is <1600 cpm? If no, record cpm value in notes section.	☑	☐
COC relinquished and complete (including sampleIDs, collect times, and sampler)?	☑	☐
All containers received in good condition and within hold time?	☑	☐
All sample labels and containers received match the chain of custody?	☑	☐
Preservative added to any containers?	☐	☑
If received, was headspace for VOC water containers < 6mm?	☑	☐
Samples collected in containers provided by Pace Gulf Coast?	☑	☐

COOLERS

Airbill	Thermometer ID: E26	Temp °C
397175939051		0.9

DISCREPANCIES

None

LAB PRESERVATIONS

None

NOTES

Revision 1.6

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Sample Delivery Group Information

Sample Delivery Group Summary

Alpha Job Number : L2040277

Account Name : AECOM
Project Number : 60552044.19
Project Name : LOCKHEED MARTIN

Received : 24-SEP-2020
Reviewer : Andrew Kussmaul

Delivery Information

Samples Delivered By : Alpha Courier

Chain of Custody : Present

Cooler Information

Cooler	Seal/Seal#	Preservation	Temperature(°C)	Additional Information
A	Absent/	Ice	5.6	

Condition Information

1) All samples on COC received?	**YES**
2) Extra samples received?	**NO**
3) Are there any sample container discrepancies?	**NO**
4) Are there any discrepancies between sample labels & COC?	**NO**
5) Are samples in appropriate containers for requested analysis?	**YES**
6) Are samples properly preserved for requested analysis?	**YES**
7) Are samples within holding time for requested analysis?	**YES**
8) All sampling equipment returned?	**NA**

Volatile Organics/VPH

1) Reagent Water Vials Frozen by Client?	**NO**

LIMS Chain of Custody

ALPHA ANALYTICAL LABORATORIES, INC.
LOGIN CHAIN OF CUSTODY REPORT
Oct 07 2020, 03:17 pm

Login Number: L2040277
Account: AECOM-MA AECOMProject: 60552044.19
Received: 24SEP20 Due Date: 08OCT20

Sample #	Client ID	Mat	PR	Collected
L2040277-01	20A-EMW11R2-092320-1	S0	1	23SEP20 10:45
Need Full Narration DPKG-FULL Package Due Date: 10/08/20				
A2-PIANO8260,DPKG-FULL				
L2040277-02	20A-AE3-092320-1	S0	1	23SEP20 10:55
Need Full Narration Package Due Date: 10/08/20				
A2-PIANO8260				
L2040277-03	20A-TRC101-092320-1	S0	1	23SEP20 16:00
Need Full Narration Package Due Date: 10/08/20				
A2-PIANO8260				

Logged By: Karyn Raymond

Container Tracking

ALPHA ANALYTICAL LABORATORIES
Container Tracking Report

Container ID	Type	Status	Transaction Date	From Response	From Location	From Operator	To Response	To Location	To Operator
L2040277-01A	Vial-B	INTACT	30-SEP-20	A2-CUSTODY-REFRIDGE	A2-GC/MS	John Trimble	A2-CUSTODY-VOA8	A2-CUSTODY-VOA8	John Trimble
L2040277-01A	Vial-B	INTACT	30-SEP-20	A2-CUSTODY-REFRIDGE	A2-CUSTODY-VOA8	John Trimble	A2-GC/MS	A2-GC/MS	John Trimble
L2040277-01A	Vial-B	INTACT	24-SEP-20	A2-CUSTODY-REFRIDGE	CUSTODY	Andrew Kussmaul	A2-CUSTODY-VOA8	A2-CUSTODY-VOA8	Andrew Kussmaul
L2040277-01A	Vial-B	INTACT	24-SEP-20	LOGIN	LOGIN	Andrew Kussmaul	CUSTODY	CUSTODY	Andrew Kussmaul
L2040277-01B	Vial-B	INTACT	24-SEP-20	A2-CUSTODY-REFRIDGE	CUSTODY	Andrew Kussmaul	A2-CUSTODY-VOA8	A2-CUSTODY-VOA8	Andrew Kussmaul
L2040277-01B	Vial-B	INTACT	24-SEP-20	LOGIN	LOGIN	Andrew Kussmaul	CUSTODY	CUSTODY	Andrew Kussmaul
L2040277-01C	Vial-B	INTACT	24-SEP-20	A2-CUSTODY-REFRIDGE	CUSTODY	Andrew Kussmaul	A2-CUSTODY-VOA8	A2-CUSTODY-VOA8	Andrew Kussmaul
L2040277-01C	Vial-B	INTACT	24-SEP-20	LOGIN	LOGIN	Andrew Kussmaul	CUSTODY	CUSTODY	Andrew Kussmaul
L2040277-02A	Vial-B	INTACT	30-SEP-20	A2-CUSTODY-REFRIDGE	A2-GC/MS	John Trimble	A2-CUSTODY-VOA8	A2-CUSTODY-VOA8	John Trimble
L2040277-02A	Vial-B	INTACT	30-SEP-20	A2-CUSTODY-REFRIDGE	A2-CUSTODY-VOA8	John Trimble	A2-GC/MS	A2-GC/MS	John Trimble
L2040277-02A	Vial-B	INTACT	24-SEP-20	A2-CUSTODY-REFRIDGE	CUSTODY	Andrew Kussmaul	A2-CUSTODY-VOA8	A2-CUSTODY-VOA8	Andrew Kussmaul
L2040277-02A	Vial-B	INTACT	24-SEP-20	LOGIN	LOGIN	Andrew Kussmaul	CUSTODY	CUSTODY	Andrew Kussmaul
L2040277-02B	Vial-B	INTACT	24-SEP-20	A2-CUSTODY-REFRIDGE	CUSTODY	Andrew Kussmaul	A2-CUSTODY-VOA8	A2-CUSTODY-VOA8	Andrew Kussmaul
L2040277-02B	Vial-B	INTACT	24-SEP-20	LOGIN	LOGIN	Andrew Kussmaul	CUSTODY	CUSTODY	Andrew Kussmaul
L2040277-02C	Vial-B	INTACT	24-SEP-20	A2-CUSTODY-REFRIDGE	CUSTODY	Andrew Kussmaul	A2-CUSTODY-VOA8	A2-CUSTODY-VOA8	Andrew Kussmaul
L2040277-02C	Vial-B	INTACT	24-SEP-20	LOGIN	LOGIN	Andrew Kussmaul	CUSTODY	CUSTODY	Andrew Kussmaul
L2040277-03A	Vial-B	INTACT	30-SEP-20	A2-CUSTODY-REFRIDGE	A2-GC/MS	John Trimble	A2-CUSTODY-VOA8	A2-CUSTODY-VOA8	John Trimble
L2040277-03A	Vial-B	INTACT	30-SEP-20	A2-CUSTODY-REFRIDGE	A2-CUSTODY-VOA8	John Trimble	A2-GC/MS	A2-GC/MS	John Trimble
L2040277-03A	Vial-B	INTACT	24-SEP-20	A2-CUSTODY-REFRIDGE	CUSTODY	Andrew Kussmaul	A2-CUSTODY-VOA8	A2-CUSTODY-VOA8	Andrew Kussmaul
L2040277-03A	Vial-B	INTACT	24-SEP-20	LOGIN	LOGIN	Andrew Kussmaul	CUSTODY	CUSTODY	Andrew Kussmaul
L2040277-03B	Vial-B	INTACT	24-SEP-20	A2-CUSTODY-REFRIDGE	CUSTODY	Andrew Kussmaul	A2-CUSTODY-VOA8	A2-CUSTODY-VOA8	Andrew Kussmaul
L2040277-03B	Vial-B	INTACT	24-SEP-20	LOGIN	LOGIN	Andrew Kussmaul	CUSTODY	CUSTODY	Andrew Kussmaul
L2040277-03C	Vial-B	INTACT	24-SEP-20	A2-CUSTODY-REFRIDGE	CUSTODY	Andrew Kussmaul	A2-CUSTODY-VOA8	A2-CUSTODY-VOA8	Andrew Kussmaul
L2040277-03C	Vial-B	INTACT	24-SEP-20	LOGIN	LOGIN	Andrew Kussmaul	CUSTODY	CUSTODY	Andrew Kussmaul

Chain of Custody

CHAIN OF CUSTODY

PAGE OF

ALPHA ANALYTICAL — Mass Clean Chemistry

Westborough, MA TEL: 508-898-9220 FAX: 508-898-9193
Mansfield, MA TEL: 508-822-9300 FAX: 508-822-3288

Date Rec'd in Lab: 9/24/20

ALPHA Job #: L2040277

Client Information

Client: AECOM
Address: 250 Apollo Drive
Chelmsford, MA 01824
Phone: 978-905-2100
Fax: 978-905-2101
Email: lori.herberich@aecom.com;

☐ These samples have been Previously analyzed by Alpha

Project Information

Project Name: Lockheed Martin
Project Location: Wilmington MA
Project #: 60552044.19
Project Manager: scott.olson@aecom.com
ALPHA Quote #: May 20 Email J.Occhialini

Turn-Around Time

☒ Standard ☐ Rush (ONLY IF PRE-APPROVED)

Due Date: Time:

Report Information — Data Deliverables

☐ FAX ☐ EMAIL
☐ ADEx ☐ Add'l Deliverables

Billing Information

☐ Same as Client info PO #: 127683

Regulatory Requirements/Report Limits

State/Fed Program	Criteria
MassDEP MCP CAM	GW-1, -2, -3

MCP PRESUMPTIVE CERTAINTY-CT REASONABLE CONFIDENCE PROTOCOLS

☒ Yes ☐ No Are MCP Analytical Methods Required?
☐ Yes ☐ No Are CT RCP (Reasonable Confidence Protocols) Required?

Other Project Specific Requirements/Comments/Detection Limits:
AECOM Contacts = Lori Herberich (Chemist) and Scott Olson (PM)

ANALYSIS

SAMPLE HANDLING
Filtration
☐ Done
☐ Not Needed
☐ Lab to do
Preservation
☐ Lab to do
(Please specify below)

PIANO

Sample Specific Comments

TOTAL # BOTTLES

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date	Collection Time	Sample Matrix	Sampler's Initials	TOTAL # BOTTLES
40277-01	20A-EMW11R2-092120-1	9/23/20	1045	GW	LZ	3
-02	20A-AE3-092320-1	9/23/20	1055	GW	AG	3
-03	20A-TRC101-092320-1	9/23/20	1600	GW	SH	3

Container Type
Preservative

PLEASE ANSWER QUESTIONS ABOVE!

IS YOUR PROJECT MA MCP or CT RCP?

FORM NO. 01-01(A) (rev. 3-JAN-12)

Relinquished By	Date/Time	Received By	Date/Time
		TGlenn AAL	9/24/20 1210
9/24/20 2000	9/24/20 2000		9-24-20

Please print clearly, legibly and completely. Samples can not be logged in and turnaround time clock will not start until any ambiguities are resolved. All samples submitted are subject to Alpha's Payment Terms.

Organics

GC/MS 8260
Analysis

Initial Calibration

Response Factor Report VOA6

Method Path : O:\Organics\DATA\VOA6\2020\09-SEP\200918\
Method File : P6091820W.M
Title : PIANO VOLATILES
Last Update : Sat Sep 19 08:40:17 2020
Response Via : Initial Calibration

Calibration Files
2 =V6012464.D 5 =V6012465.D 50 =V6012467.D 100 =V6012468.D 200 =V6012469.D 20 =V6012466.D

		Compound	2	5	50	100	200	20	Avg	%RSD
1)	I	Chlorobenzene-D5 [IS]	ISTD							
2)		3-Methyl-1-butene	0.384	0.358	0.363	0.393	0.388	0.357	0.3736	4.36
3)		Isopentane	0.265	0.208	0.197	0.211	0.205	0.196	0.2137	12.19
4)		1-Pentene	0.225	0.212	0.221	0.234	0.233	0.213	0.2231	4.31
5)		2-Methyl-1-butene	0.377	0.356	0.367	0.392	0.386	0.358	0.3727	3.96
6)		Pentane	0.387	0.345	0.337	0.359	0.352	0.333	0.3521	5.58
7)		trans-2-Pentene	0.378	0.350	0.364	0.384	0.383	0.354	0.3688	4.11
8)		2-Methyl-1,3-butadiene	0.248	0.228	0.250	0.269	0.268	0.239	0.2505	6.34
9)		cis-2-Pentene	0.376	0.340	0.346	0.370	0.371	0.341	0.3575	4.68
10)		Tertiary butanol		0.028	0.031	0.033	0.032	0.031	0.0311#	6.45
11)		2,2-Dimethylbutane	0.260	0.252	0.212	0.223	0.220	0.214	0.2302	8.96
12)		4-Methyl-1-pentene	0.285	0.250	0.250	0.264	0.261	0.241	0.2584	5.99
13)		Cyclopentane	0.146	0.141	0.148	0.158	0.158	0.141	0.1485	5.12
14)		2,3-Dimethylbutane	0.105	0.108	0.117	0.125	0.125	0.111	0.1153	7.38
15)		2-Methylpentane	0.417	0.366	0.365	0.390	0.385	0.364	0.3813	5.51
16)		MTBE	0.444	0.436	0.489	0.511	0.510	0.470	0.4767	6.74
17)		3-Methylpentane	0.331	0.319	0.349	0.371	0.369	0.330	0.3448	6.33
18)		1-Hexene	0.181	0.184	0.198	0.212	0.211	0.192	0.1962	6.58
19)		Hexane	0.291	0.258	0.278	0.299	0.296	0.266	0.2814	5.95
20)		Diisopropyl ether	0.441	0.437	0.494	0.514	0.507	0.480	0.4786	6.89
21)		trans-2-Hexene	0.339	0.322	0.341	0.361	0.361	0.332	0.3426	4.53
22)		2-Methyl-2-pentene	0.351	0.342	0.376	0.388	0.393	0.356	0.3676	5.78
23)		cis-2-Hexene	0.282	0.257	0.278	0.296	0.296	0.267	0.2795	5.52
24)	S	Dibromofluoromethane (surr)	0.317	0.312	0.313	0.309	0.312	0.308	0.3118	1.09
25)		Ethyl tertiary butyl ether	0.456	0.450	0.514	0.535	0.534	0.495	0.4974	7.55
26)		2,2-Dimethylpentane	0.410	0.400	0.434	0.451	0.450	0.414	0.4264	5.10
27)		Methylcyclopentane	0.351	0.332	0.365	0.379	0.378	0.350	0.3589	5.07
28)		2,4-Dimethylpentane	0.374	0.327	0.337	0.353	0.355	0.334	0.3467	5.02
29)		2,2,3-Trimethylbutane	0.348	0.349	0.379	0.401	0.398	0.362	0.3729	6.32
30)		1,2-Dichloroethane	0.244	0.235	0.247	0.258	0.256	0.243	0.2471	3.43
31)		3,3-Dimethylpentane	0.430	0.390	0.404	0.425	0.422	0.393	0.4107	4.25
32)		Cyclohexane	0.283	0.278	0.303	0.318	0.318	0.294	0.2990	5.71

Method Path : O:\Organics\DATA\VOA6\2020\09-SEP\200918\
Method File : P6091820W.M
Title : PIANO VOLATILES
Last Update : Sat Sep 19 08:40:17 2020
Response Via : Initial Calibration

Calibration Files
2 =V6012464.D 5 =V6012465.D 50 =V6012467.D 100 =V6012468.D 200 =V6012469.D 20 =V6012466.D

		Compound	2	5	50	100	200	20	Avg	%RSD
33)		2-Methylhexane	0.379	0.349	0.356	0.373	0.369	0.348	0.3624	3.58
34)	M	Benzene	0.724	0.692	0.764	0.799	0.799	0.739	0.7527	5.64
35)		2,3-Dimethylpentane	0.288	0.288	0.311	0.322	0.323	0.297	0.3047	5.25
36)		Thiophene	0.391	0.387	0.431	0.453	0.452	0.421	0.4223	6.84
37)		1,1-Dimethylcyclopentane	0.185	0.193	0.213	0.227	0.230	0.207	0.2093	8.66
38)		3-Methylhexane	0.339	0.311	0.322	0.329	0.329	0.310	0.3234	3.54
39)		TAME	0.806	0.584	0.512	0.525	0.521	0.515	0.5772	19.95
40)		cis-1,3-Dimethylcyclopentane	0.303	0.291	0.307	0.328	0.330	0.298	0.3096	5.10
41)		3-Ethylpentane	0.440	0.406	0.400	0.412	0.413	0.378	0.4080	4.99
42)		trans-1,3-DMCP/2-Methyl-1...	0.172	0.125	0.133	0.140	0.144	0.130	0.1405	11.93
43)		1-Heptene/trans-1,2-DMCP	0.146	0.149	0.164	0.169	0.173	0.154	0.1592	6.95
44)		Isooctane	0.732	0.725	0.782	0.819	0.825	0.768	0.7753	5.42
45)		trans-3-Heptene	0.323	0.253	0.252	0.263	0.263	0.247	0.2668	10.63
46)		Heptane	0.325	0.294	0.290	0.305	0.306	0.289	0.3014	4.52
48)		trans-2-Heptene	0.220	0.219	0.236	0.251	0.251	0.228	0.2343	6.18
49)		cis-2-Heptene	0.162	0.167	0.179	0.188	0.190	0.175	0.1769	6.39
50)		2,2-Dimethylhexane	0.704	0.713	0.773	0.808	0.797	0.752	0.7579	5.66
51)		Methylcyclohexane	0.311	0.316	0.358	0.381	0.384	0.346	0.3495	8.88
52)		2,5-Dimethylhexane	0.360	0.350	0.390	0.405	0.399	0.377	0.3803	5.78
53)		2,4-Dimethylhexane	0.291	0.289	0.305	0.320	0.319	0.291	0.3026	4.73
54)		Ethylcyclopentane	0.278	0.275	0.301	0.318	0.320	0.292	0.2973	6.47
55)		2,2,3-Trimethylpentane	0.555	0.559	0.612	0.636	0.633	0.594	0.5980	5.92
57)		2,3,4-Trimethylpentane	0.425	0.399	0.416	0.433	0.428	0.407	0.4178	3.18
58)		2,3,3-Trimethylpentane	0.363	0.339	0.354	0.369	0.367	0.347	0.3565	3.34
59)		2,3-Dimethylhexane	0.404	0.373	0.394	0.403	0.400	0.382	0.3928	3.26
60)		2-Methylheptane	0.327	0.324	0.358	0.372	0.367	0.347	0.3492	5.78
61)		4-Methylheptane	0.420	0.397	0.413	0.430	0.424	0.410	0.4158	2.84
62)	S	Toluene-d8 (surr)	1.185	1.185	1.202	1.190	1.209	1.184	1.1924	0.86
63)		3-Methylheptane	0.439	0.356	0.311	0.316	0.314	0.321	0.3429	14.58
64)	S	2-Bromo-1-chloropropane (...	0.253	0.251	0.287	0.305	0.298	0.284	0.2796	8.10
65)		3-Ethylhexane	0.438	0.408	0.433	0.441	0.442	0.419	0.4302	3.20
66)	M	Toluene	0.881	0.859	0.915	0.962	0.957	0.898	0.9120	4.52
67)		2-Methylthiophene	0.632	0.648	0.715	0.753	0.756	0.703	0.7011	7.38

Response Factor Report VOA6

Method Path : O:\Organics\DATA\VOA6\2020\09-SEP\200918\
Method File : P6091820W.M
Title : PIANO VOLATILES
Last Update : Sat Sep 19 08:40:17 2020
Response Via : Initial Calibration

Calibration Files
2 =V6012464.D 5 =V6012465.D 50 =V6012467.D 100 =V6012468.D 200 =V6012469.D 20 =V6012466.D

		Compound	2	5	50	100	200	20	Avg	%RSD
68)		trans-1,4-Dimethylcyclohe...	0.398	0.411	0.462	0.486	0.488	0.442	0.4480	8.39
69)		3-Methylthiophene	0.662	0.649	0.718	0.755	0.758	0.703	0.7074	6.42
70)		1-Octene	0.182	0.165	0.179	0.184	0.185	0.174	0.1780	4.37
71)		Octane	0.356	0.339	0.346	0.360	0.352	0.345	0.3499	2.19
72)		trans-1,2-Dimethylcyclohe...	0.309	0.287	0.306	0.317	0.316	0.305	0.3065	3.56
73)		1,2-Dibromoethane	0.165	0.171	0.192	0.205	0.206	0.187	0.1876	9.02
75)		cis-2-Octene	0.263	0.260	0.264	0.281	0.280	0.264	0.2686	3.44
76)		Isopropylcyclopentane	0.293	0.301	0.334	0.354	0.358	0.342	0.3306	8.26
77)		cis-1,2-Dimethylcyclohexane	0.288	0.276	0.291	0.305	0.304	0.287	0.2918	3.89
78)		2,5-Dimethylheptane	0.500	0.479	0.508	0.540	0.519	0.514	0.5100	3.96
79)		3,5-Dimethylheptane	0.548	0.583	0.612	0.599	0.571	0.559	0.5787	4.16
80)		3,3-Dimethylheptane	0.378	0.370	0.399	0.414	0.403	0.392	0.3926	4.13
81)		1,1,4-Trimethylcyclohexane	0.337	0.335	0.371	0.390	0.385	0.365	0.3640	6.45
82)		2,3-Dimethylheptane	0.446	0.436	0.449	0.468	0.450	0.447	0.4493	2.34
83)		3,4-Dimethylheptane	0.310	0.282	0.279	0.290	0.281	0.289	0.2884	3.90
84)		4-Methyloctane	0.456	0.418	0.431	0.444	0.413	0.417	0.4299	4.01
85)		2-Methyloctane	0.336	0.339	0.360	0.377	0.371	0.382	0.3608	5.46
86)		Ethylbenzene	0.966	0.961	1.036	1.100	1.098	1.027	1.0311	5.89
87)	S	1-Chloro-2-fluorobenzene ...	0.521	0.546	0.589	0.631	0.629	0.591	0.5846	7.52
88)		2-Ethylthiophene	0.714	0.725	0.804	0.858	0.868	0.794	0.7938	8.11
89)		3-Methyloctane	0.600	0.611	0.666	0.696	0.676	0.659	0.6513	5.81
90)		3,3-Diethylpentane	0.705	0.703	0.779	0.814	0.800	0.766	0.7611	6.21
91)		p/m-Xylene	0.733	0.731	0.787	0.840	0.845	0.782	0.7864	6.28
92)		1-Nonene	0.170	0.174	0.195	0.206	0.203	0.190	0.1895	7.87
93)		trans-3-Nonene	0.250	0.242	0.258	0.271	0.268	0.256	0.2576	4.24
94)		cis-3-Nonene	0.286	0.254	0.293	0.301	0.304	0.273	0.2851	6.62
95)		Nonane	0.345	0.330	0.346	0.355	0.338	0.338	0.3419	2.56
96)		Styrene	0.588	0.607	0.666	0.718	0.731	0.660	0.6618	8.66
97)	S	1,4-Dichlorobutane (H/surr)	0.252	0.251	0.259	0.267	0.274	0.261	0.2608	3.42
98)		o-Xylene	0.777	0.775	0.812	0.877	0.895	0.810	0.8244	6.15
99)		2-Nonene	0.250	0.243	0.270	0.285	0.286	0.266	0.2667	6.60
100)		Isopropylcyclohexane	0.366	0.364	0.399	0.420	0.418	0.388	0.3926	6.21
101)	S	4-Bromofluorobenzene (surr)	0.495	0.497	0.491	0.495	0.502	0.493	0.4956	0.81

Method Path : O:\Organics\DATA\VOA6\2020\09-SEP\200918\
Method File : P6091820W.M
Title : PIANO VOLATILES
Last Update : Sat Sep 19 08:40:17 2020
Response Via : Initial Calibration

Calibration Files
2 =V6012464.D 5 =V6012465.D 50 =V6012467.D 100 =V6012468.D 200 =V6012469.D 20 =V6012466.D

	Compound	2	5	50	100	200	20	Avg	%RSD
102)	Isopropylbenzene	0.999	1.003	1.068	1.151	1.158	1.066	1.0743	6.39
103)	3,3-Dimethyloctane	0.497	0.546	0.600	0.616	0.567	0.592	0.5695	7.62
104)	n-Propylbenzene	1.161	1.163	1.263	1.361	1.360	1.271	1.2633	7.03
105)	2-Methylnonane	0.343	0.320	0.341	0.344	0.302	0.337	0.3312	5.14
106)	3-Methylnonane	0.387	0.383	0.428	0.432	0.382	0.413	0.4042	5.72
107)	1-Methyl-3-ethylbenzene	0.952	0.990	1.071	1.158	1.168	1.070	1.0683	8.12
108)	1-Methyl-4-ethylbenzene	0.928	0.963	1.033	1.119	1.135	1.030	1.0348	7.93
109)	1,3,5-Trimethylbenzene	0.776	0.809	0.904	0.981	0.995	0.895	0.8935	9.89
110)	1-Decene	0.206	0.191	0.213	0.224	0.213	0.206	0.2086	5.16
111)	Isobutylcyclohexane	0.377	0.392	0.429	0.457	0.445	0.426	0.4208	7.34
112)	1-Methyl-2-ethylbenzene	0.953	1.019	1.097	1.199	1.235	1.092	1.0994	9.66
113)	Decane	0.296	0.288	0.304	0.306	0.270	0.302	0.2944	4.65
114)	tert-Butylbenzene	0.700	0.748	0.818	0.893	0.916	0.809	0.8141	10.11
115)	1,2,4-Trimethylbenzene	0.788	0.826	0.925	1.008	1.033	0.910	0.9150	10.58
116)	Isobutylbenzene	0.896	0.913	1.024	1.119	1.100	0.993	1.0076	9.22
117)	sec-Butylbenzene	1.047	1.078	1.188	1.313	1.344	1.184	1.1923	10.07
118)	1-Methyl-3-isopropylbenzene	0.849	0.900	1.013	1.116	1.140	0.994	1.0021	11.47
119)	1-Methyl-4-isopropylbenzene	0.879	0.945	1.049	1.157	1.186	1.034	1.0415	11.36
120)	1,2,3-Trimethylbenzene	0.821	0.828	0.928	1.020	1.045	0.912	0.9255	10.12
121)	1-Methyl-2-isopropylbenzene	0.887	0.931	1.031	1.144	1.173	1.015	1.0301	10.97
122)	Indan	0.792	0.800	0.874	0.967	0.994	0.873	0.8833	9.43
123)	1,3-Diethylbenzene	0.549	0.569	0.639	0.712	0.739	0.620	0.6380	11.88
124)	1-Methyl-3-propylbenzene	1.004	1.043	1.194	1.339	1.371	1.163	1.1858	12.62
125)	Indene	0.673	0.686	0.782	0.872	0.895	0.760	0.7780	11.81
126)	1-Methyl-4-propylbenzene	1.270	1.305	1.512	1.708	1.750	1.456	1.5002	13.29
127)	n-Butylbenzene	0.977	1.007	1.135	1.268	1.293	1.108	1.1313	11.48
128)	1,2-Dimethyl-4-ethylbenzene	0.896	0.931	1.107	1.260	1.295	1.056	1.0909	15.06
129)	1,2-Diethylbenzene	0.441	0.451	0.522	0.597	0.613	0.506	0.5218	13.70
130)	1-Methyl-2-propylbenzene	1.124	1.128	1.303	1.467	1.503	1.259	1.2973	12.48
131)	1,4-Dimethyl-2-ethylbenzene	0.855	0.873	1.021	1.153	1.192	0.982	1.0127	13.78
132)	Undecane	0.331	0.345	0.353	0.325	0.286	0.384	0.3374	9.63
133)	1,3-Dimethyl-4-ethylbenzene	1.041	1.063	1.228	1.401	1.433	1.181	1.2245	13.49
134)	1,3-Dimethyl-5-ethylbenzene	0.966	0.996	1.157	1.321	1.353	1.108	1.1503	14.00

Method Path : O:\Organics\DATA\VOA6\2020\09-SEP\200918\
Method File : P6091820W.M
Title : PIANO VOLATILES
Last Update : Sat Sep 19 08:40:17 2020
Response Via : Initial Calibration

Calibration Files
2 =V6012464.D 5 =V6012465.D 50 =V6012467.D 100 =V6012468.D 200 =V6012469.D 20 =V6012466.D

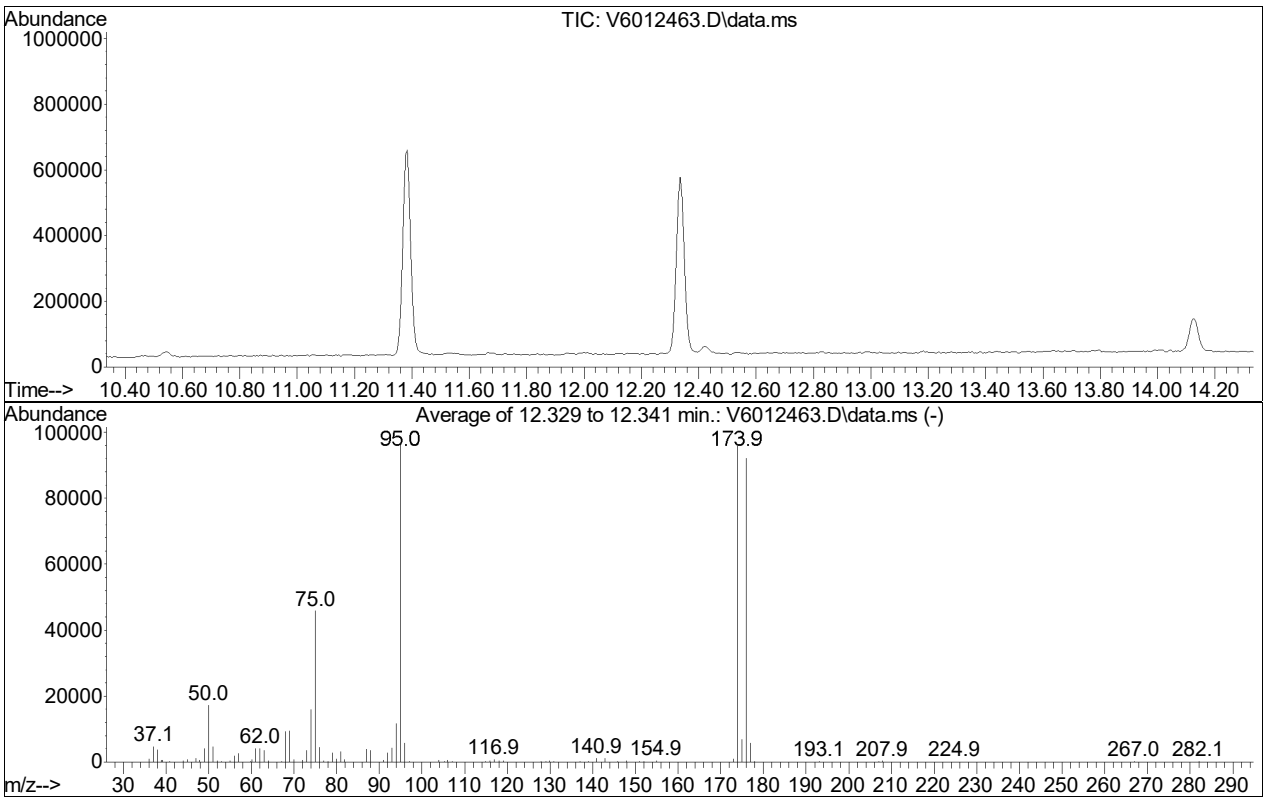
	Compound	2	5	50	100	200	20	Avg	%RSD
135)	1,3-Dimethyl-2-ethylbenzene	1.026	1.042	1.194	1.352	1.387	1.151	1.1920	12.74
136)	1,2-Dimethyl-3-ethylbenzene	0.914	0.924	1.071	1.202	1.241	1.036	1.0647	12.84
137)	1,2,4,5-Tetramethylbenzene	0.978	0.979	1.127	1.268	1.305	1.103	1.1265	12.32
138)	1,2,3,5-Tetramethylbenzene	0.864	0.867	1.005	1.135	1.169	0.979	1.0032	12.87
139)	Pentylbenzene	0.842	0.840	0.944	1.048	1.044	0.933	0.9417	9.74
140)	1,2,3,4-Tetramethylbenzene	1.148	1.174	1.333	1.500	1.535	1.304	1.3322	12.06
141)	1,3-DM-5-tert-Butylbenzene	0.869	0.883	1.021	1.148	1.146	0.999	1.0110	11.98
142)	Dodecane	0.304	0.287	0.225	0.196	0.185	0.275	0.2455	20.40
143)	1,3,5-Triethylbenzene	0.560	0.563	0.655	0.722	0.720	0.647	0.6445	11.14
144)	Naphthalene	0.866	0.839	0.900	0.992	1.028	0.886	0.9186	8.13
145)	Benzothiophene	0.460	0.450	0.494	0.547	0.573	0.482	0.5009	9.78
146)	1,2,4-Triethylbenzene	0.521	0.517	0.599	0.668	0.673	0.594	0.5954	11.38
147)	Hexylbenzene	0.796	0.785	0.866	0.943	0.905	0.874	0.8613	7.09
148)	MMT	0.314	0.322	0.361	0.397	0.410	0.353	0.3597	10.73
149)	Tridecane	0.350	0.305	0.223	0.206	0.209	0.263	0.2593	22.49
150)	2-Methylnaphthalene	0.587	0.549	0.615	0.668	0.690	0.605	0.6190	8.38
151)	1-Methylnaphthalene	0.476	0.463	0.513	0.557	0.578	0.503	0.5150	8.73
152)	Tetradecane	0.291	0.231	0.193	0.180	0.193	0.209	0.2164	18.83
153)	Pentadecane	0.205	0.151	0.154	0.149	0.164	0.158	0.1638	12.86

(#) = Out of Range

Data Path : O:\Organics\DATA\VOA6\2020\09-SEP\200918\
Data File : V6012463.D
Acq On : 18 Sep 2020 3:24 pm
Operator : VOA6:JT
Sample : WG1412463-1,31
Misc : WG1412463
ALS Vial : 2 Sample Multiplier: 1

Integration File: RTEINT.P

Method : O:\Organics\DATA\VOA6\2020\09-SEP\200918\P6091820W.M
Title : PIANO VOLATILES
Last Update : Sat Sep 19 08:40:17 2020



Spectrum Information: Average of 12.329 to 12.341 min.

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	17.8	17278	PASS
75	95	30	60	47.3	45812	PASS
95	95	100	100	100.0	96845	PASS
96	95	5	9	6.0	5850	PASS
173	174	0.00	2	0.9	897	PASS
174	95	50	100	99.0	95885	PASS
175	174	5	9	7.3	6970	PASS
176	174	95	101	96.1	92189	PASS
177	176	5	9	6.3	5824	PASS

Quantitation Report (QT Reviewed)

Data Path : O:\Organics\DATA\VOA6\2020\09-SEP\200918\
Data File : V6012464.D
Acq On : 18 Sep 2020 4:00 pm
Operator : VOA6:JT
Sample : I609182001
Misc : WG1412463
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Sep 19 08:20:52 2020
Quant Method : O:\Organics\DATA\VOA6\2020\09-SEP\200918\P6091820W.M
Quant Title : PIANO VOLATILES
QLast Update : Sat Sep 19 08:08:27 2020
Response via : Initial Calibration

Sub List : PIANO - PIANO

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Chlorobenzene-D5 [IS]	38.35	117	481157	50.000	ug/L	0.00
System Monitoring Compounds						
24) Dibromofluoromethane (...	16.63	113	152712	44.592	ug/L	0.00
Spiked Amount 50.000	Range 78 - 118		Recovery = 89.18%			
62) Toluene-d8 (surr)	30.56	98	570254	48.512	ug/L	0.00
Spiked Amount 50.000	Range 87 - 113		Recovery = 97.02%			
64) 2-Bromo-1-chloropropan...	30.78	77	4875	1.761	ug/L	0.00
Spiked Amount 50.000	Range 70 - 130		Recovery = 3.52%#			
87) 1-Chloro-2-fluorobenze...	39.99	130	10030M1	1.686	ug/L	0.02
Spiked Amount 50.000	Range 70 - 130		Recovery = 3.37%#			
97) 1,4-Dichlorobutane (H/...	43.22	55	4852	1.816	ug/L	0.00
Spiked Amount 50.000	Range 70 - 130		Recovery = 3.63%#			
101) 4-Bromofluorobenzene (...	45.78	95	238045	50.645	ug/L	0.00
Spiked Amount 50.000	Range 76 - 120		Recovery = 101.29%			
Target Compounds						Qvalue
2) 3-Methyl-1-butene	7.42	55	7382	1.880	ug/L	90
3) Isopentane	7.95	43	5109	2.423	ug/L	95
4) 1-Pentene	8.60	42	4337	2.006	ug/L	96
5) 2-Methyl-1-butene	8.91	55	7263	1.900	ug/L	89
6) Pentane	8.96	43	7451	2.140	ug/L	96
7) trans-2-Pentene	9.41	55	7268	1.929	ug/L	98
8) 2-Methyl-1,3-butadiene	9.57	67	4780	1.782	ug/L	86
9) cis-2-Pentene	9.77	55	7246	1.995	ug/L	95
10) Tertiary butanol	0.00		0	N.D.	d	
11) 2,2-Dimethylbutane	10.80	43	5005	2.431	ug/L #	66
12) 4-Methyl-1-pentene	12.08	43	5487	2.322	ug/L	94
13) Cyclopentane	12.57	70	2812	1.831	ug/L #	57
14) 2,3-Dimethylbutane	12.56	71	2026	1.702	ug/L #	83
15) 2-Methylpentane	12.79	43	8032	2.295	ug/L	94
16) MTBE	13.10	73	8553	1.658	ug/L	87
17) 3-Methylpentane	13.74	57	6368	1.867	ug/L	94
18) 1-Hexene	14.32	56	3487	1.812	ug/L	89
19) Hexane	14.91	57	5599	2.038	ug/L	93
20) Diisopropyl ether	15.21	45	8482	1.934	ug/L	91
21) trans-2-Hexene	15.41	55	6530	1.989	ug/L	92
22) 2-Methyl-2-pentene	15.59	69	6751	1.770	ug/L	98
23) cis-2-Hexene	16.14	55	5432	1.987	ug/L	97

Data Path : O:\Organics\DATA\VOA6\2020\09-SEP\200918\
Data File : V6012464.D
Acq On : 18 Sep 2020 4:00 pm
Operator : VOA6:JT
Sample : I609182001
Misc : WG1412463
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Sep 19 08:20:52 2020
Quant Method : O:\Organics\DATA\VOA6\2020\09-SEP\200918\P6091820W.M
Quant Title : PIANO VOLATILES
QLast Update : Sat Sep 19 08:08:27 2020
Response via : Initial Calibration

Sub List : PIANO - PIANO

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
25) Ethyl tertiary butyl e...	16.66	59	8774	1.759	ug/L		96
26) 2,2-Dimethylpentane	16.94	57	7896M1	1.859	ug/L		
27) Methylcyclopentane	17.22	56	6750	1.916	ug/L		87
28) 2,4-Dimethylpentane	17.36	43	7202	2.288	ug/L	#	83
29) 2,2,3-Trimethylbutane	17.97	57	6706	1.822	ug/L		93
30) 1,2-Dichloroethane	18.68	62	4687	1.795	ug/L		98
31) 3,3-Dimethylpentane	19.62	43	8284	2.276	ug/L		89
32) Cyclohexane	20.08	56	5454	1.866	ug/L		92
33) 2-Methylhexane	20.52	43	7290	2.326	ug/L		93
34) Benzene	20.70	78	13931	1.769	ug/L		97
35) 2,3-Dimethylpentane	20.82	56	5535	1.853	ug/L		96
36) Thiophene	21.15	84	7518	1.682	ug/L		96
37) 1,1-Dimethylcyclopentane	21.28	83	3554	1.485	ug/L		97
38) 3-Methylhexane	21.33	43	6533	2.260	ug/L		89
39) TAME	21.71	73	15508	2.633	ug/L		84
40) cis-1,3-Dimethylcyclop...	22.11	70	5840	1.792	ug/L		91
41) 3-Ethylpentane	22.28	43	8476	2.308	ug/L		81
42) trans-1,3-DMCP/2-Methy...	22.41	70	6614M4	5.173	ug/L		
43) 1-Heptene/trans-1,2-DMCP	22.67	70	5628M1	3.427	ug/L		
44) Isooctane	22.74	57	14094	1.877	ug/L		91
45) trans-3-Heptene	23.35	41	6221	2.886	ug/L	#	79
46) Heptane	23.49	43	6250	2.324	ug/L		91
48) trans-2-Heptene	24.12	56	4235	1.916	ug/L		87
49) cis-2-Heptene	24.93	56	3113	1.922	ug/L		91
50) 2,2-Dimethylhexane	25.66	57	13557	1.883	ug/L		95
51) Methylcyclohexane	25.91	83	5990	1.656	ug/L		94
52) 2,5-Dimethylhexane	26.56	57	6935	1.977	ug/L		92
53) 2,4-Dimethylhexane	26.83	57	5606	1.908	ug/L		99
54) Ethylcyclopentane	26.86	69	5352	1.825	ug/L		99
55) 2,2,3-Trimethylpentane	27.08	57	10675	1.854	ug/L		97
57) 2,3,4-Trimethylpentane	28.58	43	8188	2.217	ug/L	#	83
58) 2,3,3-Trimethylpentane	29.17	43	6977	2.188	ug/L		91
59) 2,3-Dimethylhexane	29.43	43	7781	2.250	ug/L		84
60) 2-Methylheptane	29.87	57	6294	1.967	ug/L		91
61) 4-Methylheptane	30.05	43	8086	2.173	ug/L		90
63) 3-Methylheptane	30.59	43	8453M4	3.036	ug/L		
65) 3-Ethylhexane	30.73	43	8437	2.115	ug/L		90
66) Toluene	30.92	91	16947	1.734	ug/L		97
67) 2-Methylthiophene	31.10	97	12171	1.643	ug/L		98
68) trans-1,4-Dimethylcycl...	31.57	97	7668	1.644	ug/L		97
69) 3-Methylthiophene	31.86	97	12748	1.755	ug/L		89

Quantitation Report (QT Reviewed)

Data Path : O:\Organics\DATA\VOA6\2020\09-SEP\200918\
Data File : V6012464.D
Acq On : 18 Sep 2020 4:00 pm
Operator : VOA6:JT
Sample : I609182001
Misc : WG1412463
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Sep 19 08:20:52 2020
Quant Method : O:\Organics\DATA\VOA6\2020\09-SEP\200918\P6091820W.M
Quant Title : PIANO VOLATILES
QLast Update : Sat Sep 19 08:08:27 2020
Response via : Initial Calibration

Sub List : PIANO - PIANO

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
70) 1-Octene	32.29	55	3494	2.210	ug/L		94
71) Octane	33.11	43	6857	2.301	ug/L		92
72) trans-1,2-Dimethylcycl...	33.39	55	5953	2.037	ug/L		85
73) 1,2-Dibromoethane	33.61	107	3182	1.616	ug/L		83
75) cis-2-Octene	34.48	55	5068	1.873	ug/L		84
76) Isopropylcyclopentane	34.62	68	5641	1.675	ug/L		87
77) cis-1,2-Dimethylcycloh...	36.37	55	5548M1	2.005	ug/L		
78) 2,5-Dimethylheptane	36.71	57	9623	2.151	ug/L		96
79) 3,5-Dimethylheptane	36.84	57	10555M4	1.806	ug/L		
80) 3,3-Dimethylheptane	37.09	57	7273	1.958	ug/L		94
81) 1,1,4-Trimethylcyclohe...	37.62	69	6492	1.803	ug/L		88
82) 2,3-Dimethylheptane	38.77	43	8587	2.211	ug/L		94
83) 3,4-Dimethylheptane	39.06	43	5958M1	2.357	ug/L		
84) 4-Methyloctane	39.36	43	8778M6	2.493	ug/L		
85) 2-Methyloctane	39.46	43	6461M6	1.872	ug/L		
86) Ethylbenzene	39.97	91	18583	1.769	ug/L		94
88) 2-Ethylthiophene	40.10	97	13742	1.680	ug/L		86
89) 3-Methyloctane	40.10	57	11546	1.895	ug/L		94
90) 3,3-Diethylpentane	41.09	57	13575	1.900	ug/L		92
91) p/m-Xylene	41.21	91	28225M1	3.486	ug/L		
92) 1-Nonene	41.88	56	3269	1.892	ug/L		94
93) trans-3-Nonene	42.28	55	4815	2.006	ug/L	#	80
94) cis-3-Nonene	42.59	55	5495	1.958	ug/L		77
95) Nonane	42.66	43	6643M6	2.151	ug/L		
96) Styrene	43.07	104	11319	1.673	ug/L		98
98) o-Xylene	43.49	91	14957	1.734	ug/L		88
99) 2-Nonene	43.92	55	4818	1.918	ug/L	#	88
100) Isopropylcyclohexane	45.19	83	7042	1.790	ug/L		92
102) Isopropylbenzene	45.81	105	19235	1.758	ug/L		97
103) 3,3-Dimethyloctane	46.30	71	9565	1.720	ug/L		81
104) n-Propylbenzene	48.43	91	22351	1.773	ug/L		100
105) 2-Methylnonane	48.50	43	6611	2.304	ug/L		88
106) 3-Methylnonane	48.94	57	7452	1.999	ug/L		98
107) 1-Methyl-3-ethylbenzene	49.07	105	18328	1.699	ug/L		95
108) 1-Methyl-4-ethylbenzene	49.24	105	17865	1.622	ug/L		99
109) 1,3,5-Trimethylbenzene	49.85	105	14942	1.594	ug/L		99
110) 1-Decene	49.99	41	3959	2.235	ug/L	#	79
111) Isobutylcyclohexane	50.15	83	7249	1.693	ug/L		96
112) 1-Methyl-2-ethylbenzene	50.18	105	18345	1.567	ug/L		96
113) Decane	50.38	43	5704	2.192	ug/L		86
114) tert-Butylbenzene	50.64	119	13482	1.588	ug/L		94

Data Path : O:\Organics\DATA\VOA6\2020\09-SEP\200918\
Data File : V6012464.D
Acq On : 18 Sep 2020 4:00 pm
Operator : VOA6:JT
Sample : I609182001
Misc : WG1412463
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Sep 19 08:20:52 2020
Quant Method : O:\Organics\DATA\VOA6\2020\09-SEP\200918\P6091820W.M
Quant Title : PIANO VOLATILES
QLast Update : Sat Sep 19 08:08:27 2020
Response via : Initial Calibration

Sub List : PIANO - PIANO

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
115) 1,2,4-Trimethylbenzene	51.07	105	15161	1.582	ug/L	95
116) Isobutylbenzene	51.27	91	17237M6	1.684	ug/L	
117) sec-Butylbenzene	51.33	105	20145	1.608	ug/L	89
118) 1-Methyl-3-isopropylbe...	51.72	119	16340	1.594	ug/L	97
119) 1-Methyl-4-isopropylbe...	51.92	119	16918	1.568	ug/L	97
120) 1,2,3-Trimethylbenzene	52.19	105	15800	1.648	ug/L	89
121) 1-Methyl-2-isopropylbe...	52.41	119	17075	1.619	ug/L	99
122) Indan	52.50	117	15252	1.647	ug/L	97
123) 1,3-Diethylbenzene	52.66	105	10570	1.619	ug/L	94
124) 1-Methyl-3-propylbenzene	52.77	105	19326	1.597	ug/L	98
125) Indene	52.94	115	12952	1.642	ug/L	97
126) 1-Methyl-4-propylbenzene	52.92	105	24451	1.639	ug/L	97
127) n-Butylbenzene	52.93	91	18804	1.682	ug/L	97
128) 1,2-Dimethyl-4-ethylbe...	53.05	119	17253	1.569	ug/L	96
129) 1,2-Diethylbenzene	53.14	119	8493	1.538	ug/L	94
130) 1-Methyl-2-propylbenzene	53.34	105	21640	1.660	ug/L	99
131) 1,4-Dimethyl-2-ethylbe...	53.65	119	16452	1.616	ug/L	97
132) Undecane	53.69	57	6364	2.100	ug/L	95
133) 1,3-Dimethyl-4-ethylbe...	53.74	119	20031	1.607	ug/L	97
134) 1,3-Dimethyl-5-ethylbe...	53.88	119	18595	1.582	ug/L	98
135) 1,3-Dimethyl-2-ethylbe...	54.10	119	19755	1.629	ug/L	97
136) 1,2-Dimethyl-3-ethylbe...	54.46	119	17586	1.616	ug/L	95
137) 1,2,4,5-Tetramethylben...	54.87	119	18825	1.697	ug/L	95
138) 1,2,3,5-Tetramethylben...	54.95	119	16638	1.596	ug/L	98
139) Pentylbenzene	55.43	91	16196	1.760	ug/L	98
140) 1,2,3,4-Tetramethylben...	55.76	119	22093	1.640	ug/L	97
141) 1,3-DM-5-tert-Butylben...	55.75	147	16734	1.692	ug/L	96
142) Dodecane	55.92	43	5855	2.847	ug/L	91
143) 1,3,5-Triethylbenzene	56.63	147	10775	1.722	ug/L	97
144) Naphthalene	56.77	128	16674	1.801	ug/L	98
145) Benzothiophene	56.86	134	8847	1.732	ug/L	97
146) 1,2,4-Triethylbenzene	57.18	147	10036	1.744	ug/L	99
147) Hexylbenzene	57.67	91	15324	1.839	ug/L	93
148) MMT	57.93	134	6051	1.617	ug/L	92
149) Tridecane	57.98	57	6733	2.948	ug/L	96
150) 2-Methylnaphthalene	59.48	142	11294	1.882	ug/L	96
151) 1-Methylnaphthalene	59.95	142	9159	1.807	ug/L	97
152) Tetradecane	60.22	57	5610	3.025	ug/L	95
153) Pentadecane	62.93	57	3955	2.921	ug/L	86

Quantitation Report (QT Reviewed)

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Data File : V6012464.D
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Operator : VOA6:JT
Sample : I609182001
Misc : WG1412463
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Sep 19 08:20:52 2020
Quant Method : O:\Organics\DATA\VOA6\2020\09-SEP\200918\P6091820W.M
Quant Title : PIANO VOLATILES
QLast Update : Sat Sep 19 08:08:27 2020
Response via : Initial Calibration

Sub List : PIANO - PIANO

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)

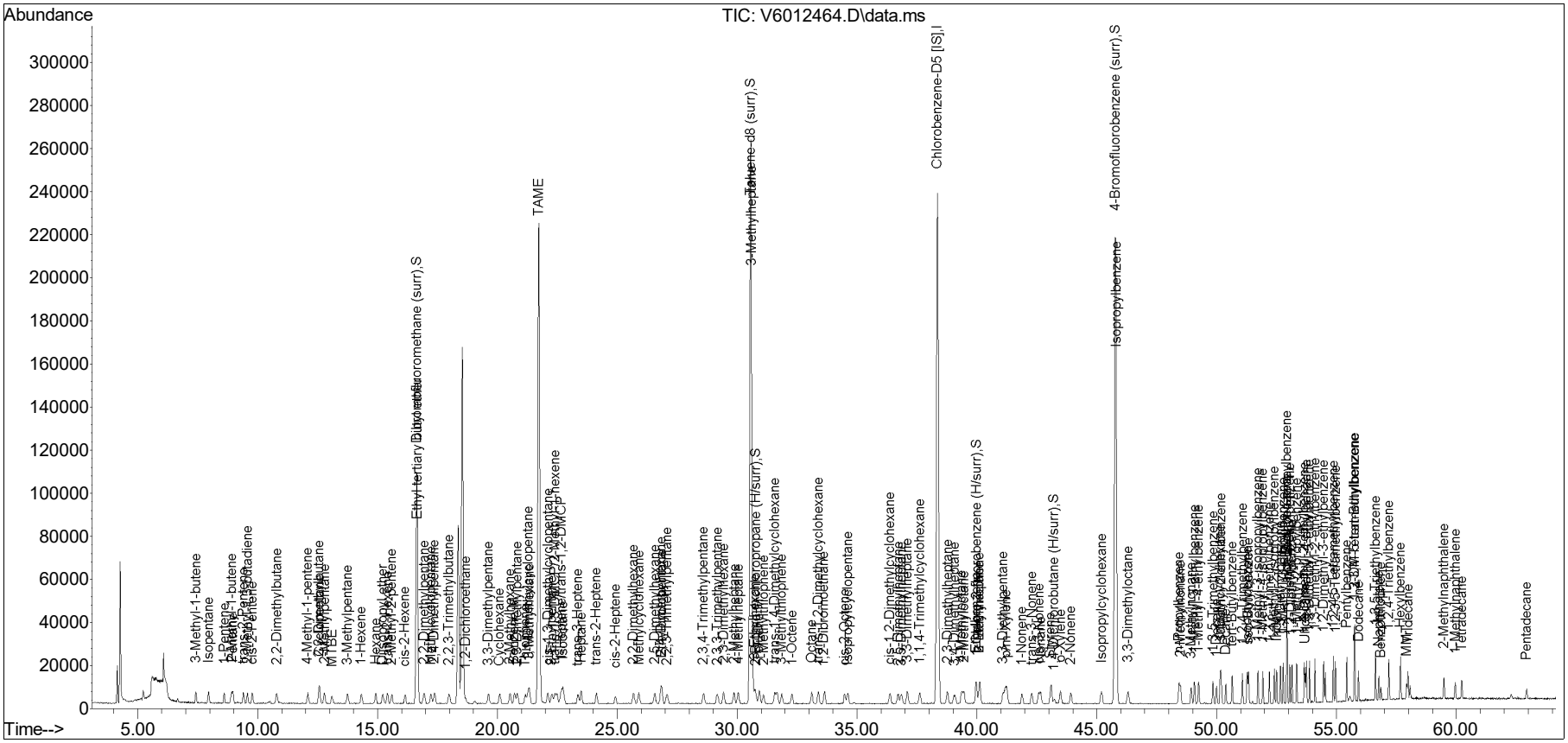
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

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Sub List : PIANO - PIANO



Quantitation Report (QT Reviewed)

Data Path : O:\Organics\DATA\VOA6\2020\09-SEP\200918\
Data File : V6012465.D
Acq On : 18 Sep 2020 5:11 pm
Operator : VOA6:JT
Sample : I609182002
Misc : WG1412463
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Sep 19 08:25:34 2020
Quant Method : O:\Organics\DATA\VOA6\2020\09-SEP\200918\P6091820W.M
Quant Title : PIANO VOLATILES
QLast Update : Sat Sep 19 08:08:28 2020
Response via : Initial Calibration

Sub List : PIANO - PIANO

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Chlorobenzene-D5 [IS]	38.35	117	507526	50.000	ug/L	0.00
System Monitoring Compounds						
24) Dibromofluoromethane (...	16.63	113	158383	43.845	ug/L	0.00
Spiked Amount 50.000	Range 78 - 118		Recovery = 87.69%			
62) Toluene-d8 (surr)	30.56	98	601411	48.504	ug/L	0.00
Spiked Amount 50.000	Range 87 - 113		Recovery = 97.01%			
64) 2-Bromo-1-chloropropan...	30.78	77	12720	4.357	ug/L	0.00
Spiked Amount 50.000	Range 70 - 130		Recovery = 8.71%#			
87) 1-Chloro-2-fluorobenze...	39.98	130	27729	4.420	ug/L	0.00
Spiked Amount 50.000	Range 70 - 130		Recovery = 8.84%#			
97) 1,4-Dichlorobutane (H/...	43.24	55	12739	4.521	ug/L	0.01
Spiked Amount 50.000	Range 70 - 130		Recovery = 9.04%#			
101) 4-Bromofluorobenzene (...	45.78	95	252372	50.904	ug/L	0.00
Spiked Amount 50.000	Range 76 - 120		Recovery = 101.81%			
Target Compounds						Qvalue
2) 3-Methyl-1-butene	7.42	55	18165	4.385	ug/L	93
3) Isopentane	7.96	43	10559	4.747	ug/L	96
4) 1-Pentene	8.60	42	10739	4.710	ug/L	98
5) 2-Methyl-1-butene	8.91	55	18092	4.487	ug/L	98
6) Pentane	8.96	43	17493	4.762	ug/L	98
7) trans-2-Pentene	9.40	55	17756	4.468	ug/L	99
8) 2-Methyl-1,3-butadiene	9.57	67	11592	4.097	ug/L	97
9) cis-2-Pentene	9.77	55	17264	4.506	ug/L	94
10) Tertiary butanol	10.43	59	7058	23.706	ug/L	79
11) 2,2-Dimethylbutane	10.79	43	12806	5.897	ug/L	93
12) 4-Methyl-1-pentene	12.10	43	12692	5.092	ug/L	96
13) Cyclopentane	12.58	70	7149	4.414	ug/L #	83
14) 2,3-Dimethylbutane	12.55	71	5481	4.364	ug/L #	90
15) 2-Methylpentane	12.77	43	18561	5.028	ug/L	97
16) MTBE	13.09	73	22124	4.066	ug/L	98
17) 3-Methylpentane	13.76	57	16199	4.502	ug/L	96
18) 1-Hexene	14.32	56	9353	4.609	ug/L	89
19) Hexane	14.93	57	13115	4.525	ug/L	99
20) Diisopropyl ether	15.22	45	22173	4.793	ug/L	98
21) trans-2-Hexene	15.41	55	16361	4.725	ug/L	98
22) 2-Methyl-2-pentene	15.60	69	17340	4.311	ug/L	99
23) cis-2-Hexene	16.15	55	13067	4.531	ug/L	97
25) Ethyl tertiary butyl e...	16.66	59	22833	4.341	ug/L	97

Data Path : O:\Organics\DATA\VOA6\2020\09-SEP\200918\
Data File : V6012465.D
Acq On : 18 Sep 2020 5:11 pm
Operator : VOA6:JT
Sample : I609182002
Misc : WG1412463
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Sep 19 08:25:34 2020
Quant Method : O:\Organics\DATA\VOA6\2020\09-SEP\200918\P6091820W.M
Quant Title : PIANO VOLATILES
QLast Update : Sat Sep 19 08:08:28 2020
Response via : Initial Calibration

Sub List : PIANO - PIANO

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
26) 2,2-Dimethylpentane	16.94	57	20284	4.527 ug/L	94
27) Methylcyclopentane	17.22	56	16845	4.532 ug/L	96
28) 2,4-Dimethylpentane	17.38	43	16614	5.003 ug/L	93
29) 2,2,3-Trimethylbutane	18.00	57	17690	4.557 ug/L	95
30) 1,2-Dichloroethane	18.67	62	11939	4.336 ug/L	92
31) 3,3-Dimethylpentane	19.62	43	19808	5.159 ug/L	98
32) Cyclohexane	20.09	56	14103	4.575 ug/L	100
33) 2-Methylhexane	20.52	43	17711	5.359 ug/L	96
34) Benzene	20.71	78	35135	4.230 ug/L	100
35) 2,3-Dimethylpentane	20.83	56	14628	4.644 ug/L	97
36) Thiophene	21.17	84	19623	4.162 ug/L	97
37) 1,1-Dimethylcyclopentane	21.27	83	9807	3.885 ug/L	96
38) 3-Methylhexane	21.33	43	15791	5.179 ug/L	88
39) TAME	21.72	73	29661	4.774 ug/L	87
40) cis-1,3-Dimethylcyclop...	22.10	70	14786	4.301 ug/L	96
41) 3-Ethylpentane	22.27	43	20581	5.313 ug/L	90
42) trans-1,3-DMCP/2-Methy...	22.39	70	12644	9.376 ug/L	93
43) 1-Heptene/trans-1,2-DMCP	22.66	70	15135	8.736 ug/L	70
44) Isooctane	22.75	57	36798	4.647 ug/L	97
45) trans-3-Heptene	23.36	41	12824	5.640 ug/L	87
46) Heptane	23.50	43	14908	5.255 ug/L	91
48) trans-2-Heptene	24.13	56	11110M1	4.765 ug/L	
49) cis-2-Heptene	24.92	56	8466	4.955 ug/L	95
50) 2,2-Dimethylhexane	25.67	57	36168	4.762 ug/L	97
51) Methylcyclohexane	25.89	83	16059	4.208 ug/L	96
52) 2,5-Dimethylhexane	26.55	57	17740	4.794 ug/L	97
53) 2,4-Dimethylhexane	26.82	57	14684	4.738 ug/L	95
54) Ethylcyclopentane	26.86	69	13955	4.511 ug/L	92
55) 2,2,3-Trimethylpentane	27.07	57	28370	4.670 ug/L	95
57) 2,3,4-Trimethylpentane	28.59	43	20225	5.191 ug/L	96
58) 2,3,3-Trimethylpentane	29.17	43	17188	5.109 ug/L	98
59) 2,3-Dimethylhexane	29.42	43	18909	5.184 ug/L	96
60) 2-Methylheptane	29.87	57	16463	4.879 ug/L	84
61) 4-Methylheptane	30.04	43	20150	5.133 ug/L	98
63) 3-Methylheptane	30.61	43	18070M4	6.153 ug/L	
65) 3-Ethylhexane	30.74	43	20709	4.921 ug/L	96
66) Toluene	30.92	91	43618	4.230 ug/L	97
67) 2-Methylthiophene	31.10	97	32877	4.208 ug/L	97
68) trans-1,4-Dimethylcycl...	31.57	97	20873	4.242 ug/L	96
69) 3-Methylthiophene	31.86	97	32935	4.299 ug/L	99
70) 1-Octene	32.29	55	8355	5.009 ug/L	94

Data Path : O:\Organics\DATA\VOA6\2020\09-SEP\200918\
Data File : V6012465.D
Acq On : 18 Sep 2020 5:11 pm
Operator : VOA6:JT
Sample : I609182002
Misc : WG1412463
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Sep 19 08:25:34 2020
Quant Method : O:\Organics\DATA\VOA6\2020\09-SEP\200918\P6091820W.M
Quant Title : PIANO VOLATILES
QLast Update : Sat Sep 19 08:08:28 2020
Response via : Initial Calibration

Sub List : PIANO - PIANO

	Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
71)	Octane	33.12	43	17215	5.476	ug/L	96
72)	trans-1,2-Dimethylcycl...	33.38	55	14549M1	4.720	ug/L	
73)	1,2-Dibromoethane	33.61	107	8672	4.175	ug/L	93
75)	cis-2-Octene	34.48	55	13202	4.625	ug/L	92
76)	Isopropylcyclopentane	34.61	68	15299	4.306	ug/L	91
77)	cis-1,2-Dimethylcycloh...	36.37	55	13986	4.791	ug/L	96
78)	2,5-Dimethylheptane	36.72	57	24315	5.153	ug/L	100
79)	3,5-Dimethylheptane	36.84	57	29583M4	4.799	ug/L	
80)	3,3-Dimethylheptane	37.10	57	18801	4.799	ug/L	96
81)	1,1,4-Trimethylcyclohe...	37.62	69	16984	4.472	ug/L	95
82)	2,3-Dimethylheptane	38.76	43	22108	5.396	ug/L	94
83)	3,4-Dimethylheptane	39.07	43	14322	5.370	ug/L	87
84)	4-Methyloctane	39.36	43	21193	5.706	ug/L	97
85)	2-Methyloctane	39.45	43	17198M3	4.725	ug/L	
86)	Ethylbenzene	39.97	91	48754	4.400	ug/L	98
88)	2-Ethylthiophene	40.12	97	36806	4.266	ug/L	95
89)	3-Methyloctane	40.12	57	30993	4.822	ug/L	95
90)	3,3-Diethylpentane	41.09	57	35670	4.733	ug/L	95
91)	p/m-Xylene	41.21	91	74244	8.694	ug/L	97
92)	1-Nonene	41.87	56	8806	4.831	ug/L	94
93)	trans-3-Nonene	42.28	55	12276	4.848	ug/L	99
94)	cis-3-Nonene	42.58	55	12905M6	4.360	ug/L	
95)	Nonane	42.65	43	16724M6	5.133	ug/L	
96)	Styrene	43.08	104	30821	4.318	ug/L	95
98)	o-Xylene	43.49	91	39324M1	4.322	ug/L	
99)	2-Nonene	43.93	55	12334	4.654	ug/L	93
100)	Isopropylcyclohexane	45.19	83	18487	4.455	ug/L	99
102)	Isopropylbenzene	45.80	105	50928	4.413	ug/L	98
103)	3,3-Dimethyloctane	46.29	71	27687	4.721	ug/L	97
104)	n-Propylbenzene	48.43	91	59033	4.439	ug/L	100
105)	2-Methylnonane	48.49	43	16228	5.362	ug/L	91
106)	3-Methylnonane	48.93	57	19437	4.943	ug/L	99
107)	1-Methyl-3-ethylbenzene	49.07	105	50253	4.418	ug/L	94
108)	1-Methyl-4-ethylbenzene	49.25	105	48888	4.209	ug/L	99
109)	1,3,5-Trimethylbenzene	49.84	105	41060	4.152	ug/L	99
110)	1-Decene	49.99	41	9697	5.190	ug/L	97
111)	Isobutylcyclohexane	50.14	83	19879	4.401	ug/L	99
112)	1-Methyl-2-ethylbenzene	50.18	105	51720	4.189	ug/L	98
113)	Decane	50.38	43	14637	5.334	ug/L	95
114)	tert-Butylbenzene	50.64	119	37963	4.240	ug/L	98
115)	1,2,4-Trimethylbenzene	51.07	105	41920	4.146	ug/L	97

Quantitation Report (QT Reviewed)

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Data File : V6012465.D
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Sample : I609182002
Misc : WG1412463
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Sep 19 08:25:34 2020
Quant Method : O:\Organics\DATA\VOA6\2020\09-SEP\200918\P6091820W.M
Quant Title : PIANO VOLATILES
QLast Update : Sat Sep 19 08:08:28 2020
Response via : Initial Calibration

Sub List : PIANO - PIANO

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
116) Isobutylbenzene	51.27	91	46333M6	4.292	ug/L	
117) sec-Butylbenzene	51.33	105	54687	4.138	ug/L	99
118) 1-Methyl-3-isopropylbe...	51.72	119	45692	4.226	ug/L	97
119) 1-Methyl-4-isopropylbe...	51.92	119	47936	4.213	ug/L	98
120) 1,2,3-Trimethylbenzene	52.20	105	42019	4.155	ug/L	96
121) 1-Methyl-2-isopropylbe...	52.41	119	47236	4.245	ug/L	97
122) Indan	52.50	117	40581	4.155	ug/L	97
123) 1,3-Diethylbenzene	52.66	105	28877	4.195	ug/L	93
124) 1-Methyl-3-propylbenzene	52.78	105	52956	4.148	ug/L	98
125) Indene	52.94	115	34839	4.187	ug/L	94
126) 1-Methyl-4-propylbenzene	52.92	105	66228	4.209	ug/L	97
127) n-Butylbenzene	52.92	91	51133	4.335	ug/L	99
128) 1,2-Dimethyl-4-ethylbe...	53.05	119	47276	4.075	ug/L	98
129) 1,2-Diethylbenzene	53.14	119	22908	3.933	ug/L	95
130) 1-Methyl-2-propylbenzene	53.34	105	57239	4.162	ug/L	98
131) 1,4-Dimethyl-2-ethylbe...	53.66	119	44326	4.126	ug/L	99
132) Undecane	53.69	57	17488	5.470	ug/L	94
133) 1,3-Dimethyl-4-ethylbe...	53.74	119	53956	4.104	ug/L	98
134) 1,3-Dimethyl-5-ethylbe...	53.88	119	50573	4.080	ug/L	99
135) 1,3-Dimethyl-2-ethylbe...	54.10	119	52867	4.133	ug/L	98
136) 1,2-Dimethyl-3-ethylbe...	54.46	119	46907	4.087	ug/L	99
137) 1,2,4,5-Tetramethylben...	54.86	119	49668	4.246	ug/L	97
138) 1,2,3,5-Tetramethylben...	54.95	119	43989	4.000	ug/L	99
139) Pentylbenzene	55.43	91	42656	4.395	ug/L	99
140) 1,2,3,4-Tetramethylben...	55.76	119	59571	4.193	ug/L	97
141) 1,3-DM-5-tert-Butylben...	55.75	147	44823	4.298	ug/L	100
142) Dodecane	55.91	43	14579	6.722	ug/L	90
143) 1,3,5-Triethylbenzene	56.63	147	28559	4.327	ug/L	98
144) Naphthalene	56.77	128	42585	4.360	ug/L	98
145) Benzothiophene	56.86	134	22857	4.241	ug/L	97
146) 1,2,4-Triethylbenzene	57.18	147	26231	4.322	ug/L	99
147) Hexylbenzene	57.67	91	39863	4.536	ug/L	97
148) MMT	57.92	134	16352	4.142	ug/L	98
149) Tridecane	57.98	57	15484	6.428	ug/L	95
150) 2-Methylnaphthalene	59.48	142	27879	4.404	ug/L	100
151) 1-Methylnaphthalene	59.95	142	23487	4.392	ug/L	97
152) Tetradecane	60.23	57	11725	5.994	ug/L	98
153) Pentadecane	62.94	57	7687	5.383	ug/L	94

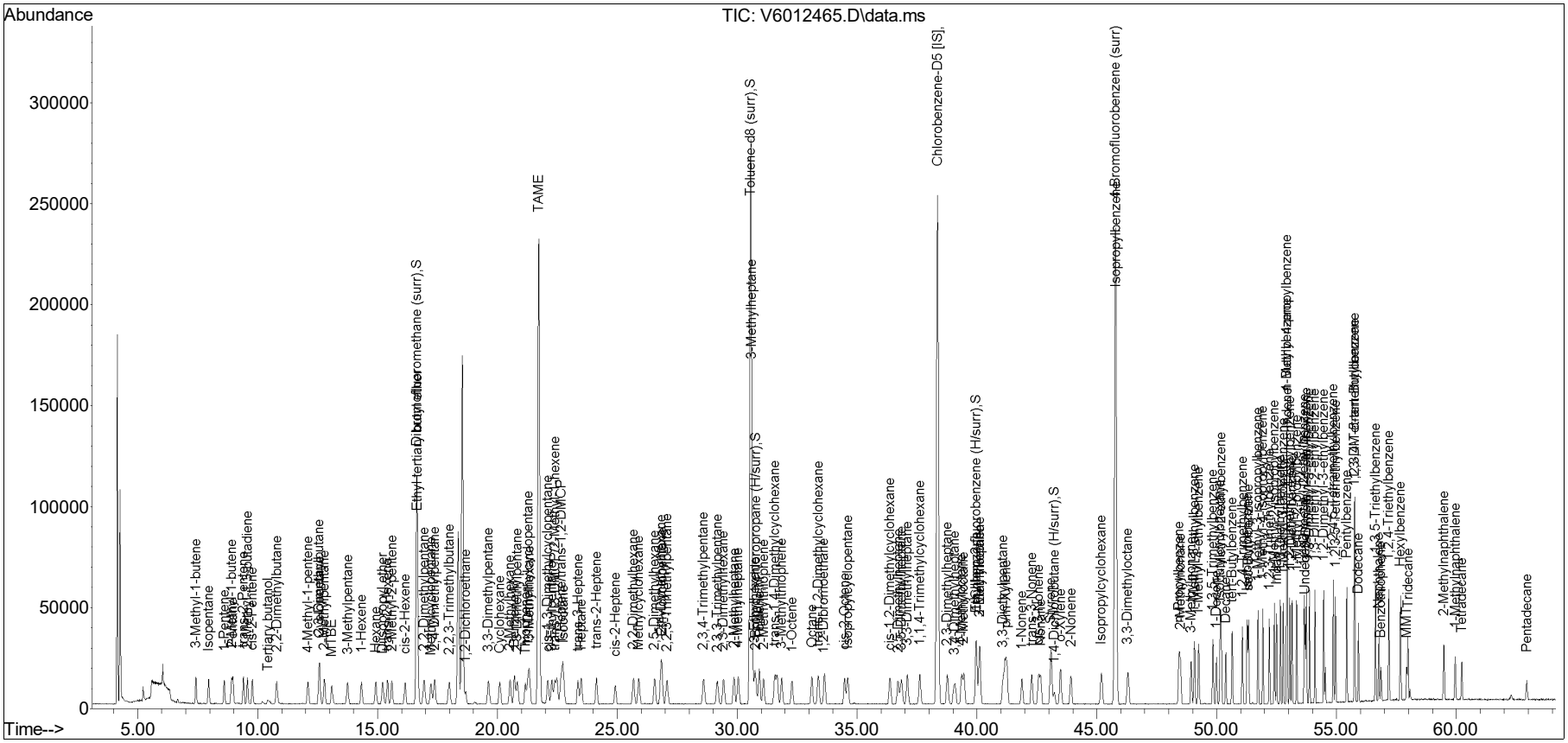
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : O:\Organics\DATA\VOA6\2020\09-SEP\200918\
Data File : V6012465.D
Acq On : 18 Sep 2020 5:11 pm
Operator : VOA6:JT
Sample : I609182002
Misc : WG1412463
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Sep 19 08:25:34 2020
Quant Method : O:\Organics\DATA\VOA6\2020\09-SEP\200918\P6091820W.M
Quant Title : PIANO VOLATILES
QLast Update : Sat Sep 19 08:08:28 2020
Response via : Initial Calibration

Sub List : PIANO - PIANO



Quantitation Report (QT Reviewed)

Data Path : O:\Organics\DATA\VOA6\2020\09-SEP\200918\
Data File : V6012466.D
Acq On : 18 Sep 2020 6:22 pm
Operator : VOA6:JT
Sample : I609182003
Misc : WG1412463
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Sep 19 08:29:05 2020
Quant Method : O:\Organics\DATA\VOA6\2020\09-SEP\200918\P6091820W.M
Quant Title : PIANO VOLATILES
QLast Update : Sat Sep 19 08:08:28 2020
Response via : Initial Calibration

Sub List : PIANO - PIANO

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Chlorobenzene-D5 [IS]	38.35	117	505625	50.000	ug/L	0.00
System Monitoring Compounds						
24) Dibromofluoromethane (...	16.63	113	155575	43.230	ug/L	0.00
Spiked Amount 50.000	Range 78 - 118		Recovery = 86.46%			
62) Toluene-d8 (surr)	30.56	98	598763	48.472	ug/L	0.00
Spiked Amount 50.000	Range 87 - 113		Recovery = 96.94%			
64) 2-Bromo-1-chloropropan...	30.79	77	57535	19.781	ug/L	0.00
Spiked Amount 50.000	Range 70 - 130		Recovery = 39.56%#			
87) 1-Chloro-2-fluorobenze...	39.97	130	119515	19.120	ug/L	0.00
Spiked Amount 50.000	Range 70 - 130		Recovery = 38.24%#			
97) 1,4-Dichlorobutane (H/...	43.22	55	52785	18.805	ug/L	0.00
Spiked Amount 50.000	Range 70 - 130		Recovery = 37.61%#			
101) 4-Bromofluorobenzene (...	45.78	95	249211	50.455	ug/L	0.00
Spiked Amount 50.000	Range 76 - 120		Recovery = 100.91%			
Target Compounds						Qvalue
2) 3-Methyl-1-butene	7.42	55	72103	17.472	ug/L	98
3) Isopentane	7.95	43	39697	17.915	ug/L	95
4) 1-Pentene	8.60	42	43100	18.974	ug/L	98
5) 2-Methyl-1-butene	8.90	55	72362	18.014	ug/L	97
6) Pentane	8.96	43	67356	18.406	ug/L	99
7) trans-2-Pentene	9.40	55	71503	18.061	ug/L	98
8) 2-Methyl-1,3-butadiene	9.57	67	48403	17.170	ug/L	95
9) cis-2-Pentene	9.77	55	68938	18.062	ug/L	96
10) Tertiary butanol	10.41	59	31675	106.786	ug/L	97
11) 2,2-Dimethylbutane	10.79	43	43320	20.022	ug/L	91
12) 4-Methyl-1-pentene	12.10	43	48697	19.611	ug/L	98
13) Cyclopentane	12.57	70	28574	17.708	ug/L #	92
14) 2,3-Dimethylbutane	12.56	71	22522	18.001	ug/L	98
15) 2-Methylpentane	12.78	43	73614	20.015	ug/L	95
16) MTBE	13.08	73	95111	17.544	ug/L	98
17) 3-Methylpentane	13.74	57	66684	18.603	ug/L	97
18) 1-Hexene	14.33	56	38781	19.182	ug/L	96
19) Hexane	14.93	57	53707	18.600	ug/L	92
20) Diisopropyl ether	15.21	45	97063	21.061	ug/L	98
21) trans-2-Hexene	15.41	55	67083	19.445	ug/L	99
22) 2-Methyl-2-pentene	15.59	69	71946	17.952	ug/L	100
23) cis-2-Hexene	16.15	55	54007	18.796	ug/L	99
25) Ethyl tertiary butyl e...	16.66	59	100192	19.119	ug/L	98

Quantitation Report (QT Reviewed)

Data Path : O:\Organics\DATA\VOA6\2020\09-SEP\200918\
Data File : V6012466.D
Acq On : 18 Sep 2020 6:22 pm
Operator : VOA6:JT
Sample : I609182003
Misc : WG1412463
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Sep 19 08:29:05 2020
Quant Method : O:\Organics\DATA\VOA6\2020\09-SEP\200918\P6091820W.M
Quant Title : PIANO VOLATILES
QLast Update : Sat Sep 19 08:08:28 2020
Response via : Initial Calibration

Sub List : PIANO - PIANO

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
26) 2,2-Dimethylpentane	16.94	57	83636	18.737	ug/L	96
27) Methylcyclopentane	17.22	56	70769	19.113	ug/L	97
28) 2,4-Dimethylpentane	17.37	43	67506	20.405	ug/L	97
29) 2,2,3-Trimethylbutane	17.98	57	73200	18.925	ug/L	96
30) 1,2-Dichloroethane	18.68	62	49115	17.904	ug/L	100
31) 3,3-Dimethylpentane	19.62	43	79409	20.760	ug/L	94
32) Cyclohexane	20.09	56	59425	19.351	ug/L	99
33) 2-Methylhexane	20.53	43	70387	21.376	ug/L	98
34) Benzene	20.71	78	149438	18.059	ug/L	100
35) 2,3-Dimethylpentane	20.82	56	60099	19.150	ug/L	98
36) Thiophene	21.16	84	85153	18.127	ug/L	100
37) 1,1-Dimethylcyclopentane	21.27	83	41931M6	16.674	ug/L	
38) 3-Methylhexane	21.33	43	62667	20.632	ug/L	98
39) TAME	21.69	73	104170	16.828	ug/L	96
40) cis-1,3-Dimethylcyclop...	22.10	70	60360	17.625	ug/L	98
41) 3-Ethylpentane	22.28	43	76414	19.800	ug/L	95
42) trans-1,3-DMCP/2-Methy...	22.38	70	52631	39.175	ug/L	97
43) 1-Heptene/trans-1,2-DMCP	22.66	70	62272	36.081	ug/L	75
44) Isooctane	22.75	57	155417	19.700	ug/L	97
45) trans-3-Heptene	23.35	41	49930	22.042	ug/L	95
46) Heptane	23.49	43	58405	20.663	ug/L	92
48) trans-2-Heptene	24.13	56	46180	19.879	ug/L	92
49) cis-2-Heptene	24.91	56	35449	20.826	ug/L	96
50) 2,2-Dimethylhexane	25.67	57	152082	20.098	ug/L	98
51) Methylcyclohexane	25.89	83	70040	18.423	ug/L	100
52) 2,5-Dimethylhexane	26.55	57	76346	20.708	ug/L	98
53) 2,4-Dimethylhexane	26.82	57	58858	19.062	ug/L	99
54) Ethylcyclopentane	26.85	69	58992	19.143	ug/L	93
55) 2,2,3-Trimethylpentane	27.06	57	120100	19.845	ug/L	98
57) 2,3,4-Trimethylpentane	28.60	43	82239	21.187	ug/L	95
58) 2,3,3-Trimethylpentane	29.17	43	70267	20.966	ug/L	98
59) 2,3-Dimethylhexane	29.44	43	77271	21.264	ug/L	92
60) 2-Methylheptane	29.86	57	70099	20.851	ug/L	92
61) 4-Methylheptane	30.04	43	82861	21.187	ug/L	99
63) 3-Methylheptane	30.61	43	64826M4	22.158	ug/L	
65) 3-Ethylhexane	30.74	43	84717	20.207	ug/L	98
66) Toluene	30.92	91	181638	17.683	ug/L	100
67) 2-Methylthiophene	31.10	97	142157	18.263	ug/L	99
68) trans-1,4-Dimethylcycl...	31.57	97	89453	18.250	ug/L	98
69) 3-Methylthiophene	31.86	97	142143	18.625	ug/L	100
70) 1-Octene	32.28	55	35131	21.143	ug/L	95

Data Path : O:\Organics\DATA\VOA6\2020\09-SEP\200918\
Data File : V6012466.D
Acq On : 18 Sep 2020 6:22 pm
Operator : VOA6:JT
Sample : I609182003
Misc : WG1412463
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Sep 19 08:29:05 2020
Quant Method : O:\Organics\DATA\VOA6\2020\09-SEP\200918\P6091820W.M
Quant Title : PIANO VOLATILES
QLast Update : Sat Sep 19 08:08:28 2020
Response via : Initial Calibration

Sub List : PIANO - PIANO

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
71) Octane	33.11	43	69803	22.288	ug/L	98
72) trans-1,2-Dimethylcycl...	33.38	55	61620	20.066	ug/L	94
73) 1,2-Dibromoethane	33.61	107	37798	18.268	ug/L	98
75) cis-2-Octene	34.48	55	53310	18.746	ug/L	93
76) Isopropylcyclopentane	34.61	68	69260	19.568	ug/L	97
77) cis-1,2-Dimethylcycloh...	36.37	55	57963	19.930	ug/L	97
78) 2,5-Dimethylheptane	36.70	57	104033	22.129	ug/L	97
79) 3,5-Dimethylheptane	36.85	57	113101	18.415	ug/L	99
80) 3,3-Dimethylheptane	37.10	57	79188	20.291	ug/L	98
81) 1,1,4-Trimethylcyclohe...	37.61	69	73878	19.527	ug/L	95
82) 2,3-Dimethylheptane	38.76	43	90316	22.128	ug/L	98
83) 3,4-Dimethylheptane	39.06	43	58474	22.009	ug/L	95
84) 4-Methyloctane	39.36	43	84347	22.797	ug/L	97
85) 2-Methyloctane	39.46	43	77298M3	21.318	ug/L	
86) Ethylbenzene	39.96	91	207647	18.809	ug/L	97
88) 2-Ethylthiophene	40.12	97	160565	18.682	ug/L	98
89) 3-Methyloctane	40.11	57	133323	20.821	ug/L	97
90) 3,3-Diethylpentane	41.10	57	154845	20.625	ug/L	97
91) p/m-Xylene	41.21	91	316156	37.161	ug/L	97
92) 1-Nonene	41.87	56	38466	21.182	ug/L	92
93) trans-3-Nonene	42.28	55	51809	20.538	ug/L	92
94) cis-3-Nonene	42.57	55	55154M6	18.703	ug/L	
95) Nonane	42.65	43	68339M6	21.053	ug/L	
96) Styrene	43.08	104	133525	18.777	ug/L	98
98) o-Xylene	43.48	91	163871	18.079	ug/L	98
99) 2-Nonene	43.91	55	53769	20.364	ug/L	98
100) Isopropylcyclohexane	45.19	83	78511	18.989	ug/L	97
102) Isopropylbenzene	45.81	105	215577	18.752	ug/L	99
103) 3,3-Dimethyloctane	46.30	71	119663	20.479	ug/L	94
104) n-Propylbenzene	48.43	91	257103	19.405	ug/L	97
105) 2-Methylnonane	48.49	43	68083	22.579	ug/L	98
106) 3-Methylnonane	48.94	57	83444	21.299	ug/L	96
107) 1-Methyl-3-ethylbenzene	49.08	105	216430	19.098	ug/L	99
108) 1-Methyl-4-ethylbenzene	49.24	105	208322	18.002	ug/L	99
109) 1,3,5-Trimethylbenzene	49.84	105	181053	18.375	ug/L	100
110) 1-Decene	49.99	41	41665	22.385	ug/L	91
111) Isobutylcyclohexane	50.14	83	86156	19.146	ug/L	99
112) 1-Methyl-2-ethylbenzene	50.18	105	220943	17.962	ug/L	98
113) Decane	50.38	43	60995	22.309	ug/L	91
114) tert-Butylbenzene	50.64	119	163614	18.342	ug/L	99
115) 1,2,4-Trimethylbenzene	51.07	105	184064	18.274	ug/L	100

Quantitation Report (QT Reviewed)

Data Path : O:\Organics\DATA\VOA6\2020\09-SEP\200918\
Data File : V6012466.D
Acq On : 18 Sep 2020 6:22 pm
Operator : VOA6:JT
Sample : I609182003
Misc : WG1412463
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Sep 19 08:29:05 2020
Quant Method : O:\Organics\DATA\VOA6\2020\09-SEP\200918\P6091820W.M
Quant Title : PIANO VOLATILES
QLast Update : Sat Sep 19 08:08:28 2020
Response via : Initial Calibration

Sub List : PIANO - PIANO

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
116) Isobutylbenzene	51.27	91	200782M6	18.670	ug/L	
117) sec-Butylbenzene	51.33	105	239470	18.188	ug/L	99
118) 1-Methyl-3-isopropylbe...	51.72	119	201053	18.666	ug/L	98
119) 1-Methyl-4-isopropylbe...	51.92	119	209145	18.451	ug/L	98
120) 1,2,3-Trimethylbenzene	52.20	105	184411	18.303	ug/L	99
121) 1-Methyl-2-isopropylbe...	52.41	119	205323	18.523	ug/L	99
122) Indan	52.50	117	176518	18.142	ug/L	99
123) 1,3-Diethylbenzene	52.66	105	125340	18.275	ug/L	99
124) 1-Methyl-3-propylbenzene	52.78	105	235134	18.486	ug/L	99
125) Indene	52.94	115	153641	18.533	ug/L	100
126) 1-Methyl-4-propylbenzene	52.93	105	294384	18.781	ug/L	95
127) n-Butylbenzene	52.92	91	224082	19.069	ug/L	99
128) 1,2-Dimethyl-4-ethylbe...	53.05	119	213496	18.474	ug/L	99
129) 1,2-Diethylbenzene	53.14	119	102371	17.643	ug/L	96
130) 1-Methyl-2-propylbenzene	53.34	105	254601	18.584	ug/L	100
131) 1,4-Dimethyl-2-ethylbe...	53.65	119	198581	18.556	ug/L	98
132) Undecane	53.70	57	77722	24.400	ug/L	97
133) 1,3-Dimethyl-4-ethylbe...	53.74	119	238852	18.234	ug/L	99
134) 1,3-Dimethyl-5-ethylbe...	53.88	119	224115	18.148	ug/L	99
135) 1,3-Dimethyl-2-ethylbe...	54.10	119	232787	18.269	ug/L	99
136) 1,2-Dimethyl-3-ethylbe...	54.46	119	209562	18.328	ug/L	98
137) 1,2,4,5-Tetramethylben...	54.87	119	222990	19.133	ug/L	99
138) 1,2,3,5-Tetramethylben...	54.95	119	197923	18.066	ug/L	99
139) Pentylbenzene	55.43	91	188718	19.518	ug/L	99
140) 1,2,3,4-Tetramethylben...	55.76	119	263669	18.629	ug/L	97
141) 1,3-DM-5-tert-Butylben...	55.75	147	202145	19.455	ug/L	99
142) Dodecane	55.91	43	55556	25.710	ug/L	93
143) 1,3,5-Triethylbenzene	56.62	147	130834	19.897	ug/L	100
144) Naphthalene	56.77	128	179103	18.404	ug/L	98
145) Benzothiophene	56.86	134	97459	18.153	ug/L	98
146) 1,2,4-Triethylbenzene	57.18	147	120165	19.872	ug/L	97
147) Hexylbenzene	57.67	91	176683	20.181	ug/L	99
148) MMT	57.93	134	71419	18.158	ug/L	98
149) Tridecane	57.98	57	53172	22.157	ug/L	95
150) 2-Methylnaphthalene	59.48	142	122433	19.415	ug/L	100
151) 1-Methylnaphthalene	59.95	142	101807	19.109	ug/L	99
152) Tetradecane	60.23	57	42369	21.741	ug/L	95
153) Pentadecane	62.93	57	32008	22.497	ug/L	94

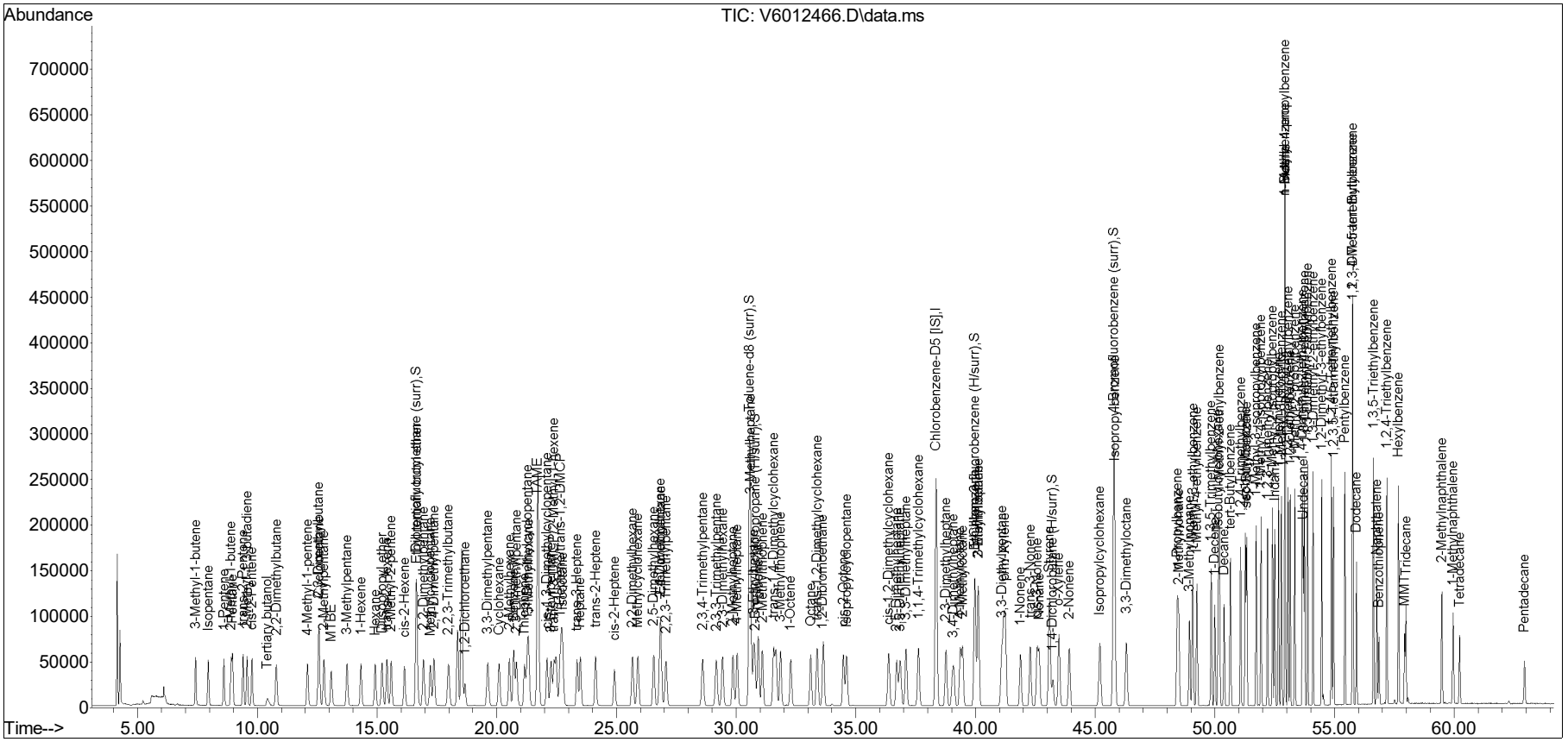
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : O:\Organics\DATA\VOA6\2020\09-SEP\200918\
Data File : V6012466.D
Acq On : 18 Sep 2020 6:22 pm
Operator : VOA6:JT
Sample : I609182003
Misc : WG1412463
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Sep 19 08:29:05 2020
Quant Method : O:\Organics\DATA\VOA6\2020\09-SEP\200918\P6091820W.M
Quant Title : PIANO VOLATILES
QLast Update : Sat Sep 19 08:08:28 2020
Response via : Initial Calibration

Sub List : PIANO - PIANO



Quantitation Report (QT Reviewed)

Data Path : O:\Organics\DATA\VOA6\2020\09-SEP\200918\
Data File : V6012467.D
Acq On : 18 Sep 2020 7:33 pm
Operator : VOA6:JT
Sample : I609182004
Misc : WG1412463
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Sep 19 08:07:49 2020
Quant Method : O:\Organics\DATA\VOA6\2020\09-SEP\200918\P6091820W.M
Quant Title : PIANO VOLATILES
QLast Update : Mon Sep 14 09:00:30 2020
Response via : Initial Calibration

Sub List : PIANO - PIANO

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Chlorobenzene-D5 [IS]	38.35	117	513063	50.000	ug/L	0.07
System Monitoring Compounds						
24) Dibromofluoromethane (...	16.63	113	160341	42.757	ug/L	0.05
Spiked Amount 50.000	Range 78 - 118		Recovery = 85.51%			
62) Toluene-d8 (surr)	30.56	98	616584	48.956	ug/L	0.07
Spiked Amount 50.000	Range 87 - 113		Recovery = 97.91%			
64) 2-Bromo-1-chloropropan...	30.79	77	147298	49.125	ug/L	0.08
Spiked Amount 50.000	Range 70 - 130		Recovery = 98.25%			
87) 1-Chloro-2-fluorobenze...	39.98	130	302344	46.578	ug/L	0.07
Spiked Amount 50.000	Range 70 - 130		Recovery = 93.16%			
97) 1,4-Dichlorobutane (H/...	43.23	55	133031	46.009	ug/L	0.05
Spiked Amount 50.000	Range 70 - 130		Recovery = 92.02%			
101) 4-Bromofluorobenzene (...	45.77	95	251865	50.393	ug/L	0.06
Spiked Amount 50.000	Range 76 - 120		Recovery = 100.79%			
Target Compounds						Qvalue
2) 3-Methyl-1-butene	7.42	55	186257	43.019	ug/L	99
3) Isopentane	7.95	43	100856	44.217	ug/L	96
4) 1-Pentene	8.60	42	113639	48.762	ug/L	96
5) 2-Methyl-1-butene	8.90	55	188184	44.941	ug/L	98
6) Pentane	8.96	43	172779	45.774	ug/L	99
7) trans-2-Pentene	9.40	55	186828	45.345	ug/L	97
8) 2-Methyl-1,3-butadiene	9.57	67	128240	43.428	ug/L	95
9) cis-2-Pentene	9.77	55	177731	44.727	ug/L	95
10) Tertiary butanol	10.38	59	79400	263.113	ug/L	97
11) 2,2-Dimethylbutane	10.79	43	108812	49.319	ug/L	89
12) 4-Methyl-1-pentene	12.09	43	128262	50.743	ug/L	97
13) Cyclopentane	12.57	70	75690	45.049	ug/L	97
14) 2,3-Dimethylbutane	12.57	71	60097	46.042	ug/L #	88
15) 2-Methylpentane	12.78	43	187234	50.064	ug/L	99
16) MTBE	13.08	73	250816	44.259	ug/L	98
17) 3-Methylpentane	13.75	57	178835	48.462	ug/L	99
18) 1-Hexene	14.32	56	101505	48.788	ug/L	92
19) Hexane	14.92	57	142887	48.047	ug/L	96
20) Diisopropyl ether	15.21	45	253324	53.980	ug/L	96
21) trans-2-Hexene	15.41	55	174797	49.242	ug/L	100
22) 2-Methyl-2-pentene	15.59	69	192828	46.389	ug/L	98
23) cis-2-Hexene	16.15	55	142746	48.191	ug/L	98
25) Ethyl tertiary butyl e...	16.66	59	263480	48.713	ug/L	99

Data Path : O:\Organics\DATA\VOA6\2020\09-SEP\200918\
Data File : V6012467.D
Acq On : 18 Sep 2020 7:33 pm
Operator : VOA6:JT
Sample : I609182004
Misc : WG1412463
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Sep 19 08:07:49 2020
Quant Method : O:\Organics\DATA\VOA6\2020\09-SEP\200918\P6091820W.M
Quant Title : PIANO VOLATILES
QLast Update : Mon Sep 14 09:00:30 2020
Response via : Initial Calibration

Sub List : PIANO - PIANO

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
26) 2,2-Dimethylpentane	16.94	57	222598	48.664	ug/L	95
27) Methylcyclopentane	17.22	56	187053	49.202	ug/L	95
28) 2,4-Dimethylpentane	17.38	43	172669	51.662	ug/L	96
29) 2,2,3-Trimethylbutane	17.99	57	194509	49.013	ug/L	97
30) 1,2-Dichloroethane	18.67	62	126822	44.464	ug/L	97
31) 3,3-Dimethylpentane	19.63	43	207131	53.620	ug/L	98
32) Cyclohexane	20.10	56	155453	49.473	ug/L	99
33) 2-Methylhexane	20.52	43	182894	55.052	ug/L	99
34) Benzene	20.71	78	391998	45.629	ug/L	99
35) 2,3-Dimethylpentane	20.83	56	159394	49.602	ug/L	100
36) Thiophene	21.16	84	221109	45.261	ug/L	100
37) 1,1-Dimethylcyclopentane	21.28	83	109286M6	41.127	ug/L	
38) 3-Methylhexane	21.33	43	165242	53.934	ug/L	95
39) TAME	21.69	73	262559	41.037	ug/L	96
40) cis-1,3-Dimethylcyclop...	22.10	70	157462	44.400	ug/L	97
41) 3-Ethylpentane	22.27	43	205167	52.714	ug/L	95
42) trans-1,3-DMCP/2-Methy...	22.39	70	136754	100.787	ug/L	94
43) 1-Heptene/trans-1,2-DMCP	22.66	70	167818	94.447	ug/L	77
44) Isooctane	22.74	57	401117	49.579	ug/L	94
45) trans-3-Heptene	23.36	41	129540	56.602	ug/L	97
46) Heptane	23.49	43	148756	52.052	ug/L	99
48) trans-2-Heptene	24.13	56	121037	50.762	ug/L	95
49) cis-2-Heptene	24.92	56	91994	53.070	ug/L	91
50) 2,2-Dimethylhexane	25.67	57	396812	51.392	ug/L	99
51) Methylcyclohexane	25.89	83	183725	46.561	ug/L	99
52) 2,5-Dimethylhexane	26.56	57	200272	53.478	ug/L	98
53) 2,4-Dimethylhexane	26.82	57	156433	49.891	ug/L	97
54) Ethylcyclopentane	26.86	69	154597	48.729	ug/L	95
55) 2,2,3-Trimethylpentane	27.07	57	313946	50.842	ug/L	96
57) 2,3,4-Trimethylpentane	28.60	43	213308	54.495	ug/L	99
58) 2,3,3-Trimethylpentane	29.17	43	181760	53.763	ug/L	99
59) 2,3-Dimethylhexane	29.43	43	202336	55.744	ug/L	95
60) 2-Methylheptane	29.86	57	183608	53.763	ug/L	95
61) 4-Methylheptane	30.04	43	211997	53.948	ug/L	98
63) 3-Methylheptane	30.61	43	159790	54.637	ug/L	98
65) 3-Ethylhexane	30.73	43	221996	52.115	ug/L	97
66) Toluene	30.92	91	469344	43.923	ug/L	99
67) 2-Methylthiophene	31.09	97	366948	45.346	ug/L	100
68) trans-1,4-Dimethylcycl...	31.56	97	237078	46.602	ug/L	98
69) 3-Methylthiophene	31.85	97	368390	46.710	ug/L	99
70) 1-Octene	32.28	55	91644	54.555	ug/L	97

Data Path : O:\Organics\DATA\VOA6\2020\09-SEP\200918\
Data File : V6012467.D
Acq On : 18 Sep 2020 7:33 pm
Operator : VOA6:JT
Sample : I609182004
Misc : WG1412463
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Sep 19 08:07:49 2020
Quant Method : O:\Organics\DATA\VOA6\2020\09-SEP\200918\P6091820W.M
Quant Title : PIANO VOLATILES
QLast Update : Mon Sep 14 09:00:30 2020
Response via : Initial Calibration

Sub List : PIANO - PIANO

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
71) Octane	33.11	43	177774	56.560	ug/L	98
72) trans-1,2-Dimethylcycl...	33.39	55	156905	50.265	ug/L	91
73) 1,2-Dibromoethane	33.61	107	98471	45.527	ug/L	98
75) cis-2-Octene	34.48	55	135372	46.819	ug/L	93
76) Isopropylcyclopentane	34.61	68	171396M6	46.524	ug/L	
77) cis-1,2-Dimethylcycloh...	36.37	55	149082	50.314	ug/L	99
78) 2,5-Dimethylheptane	36.71	57	260783	54.549	ug/L	99
79) 3,5-Dimethylheptane	36.84	57	313856M4	50.004	ug/L	
80) 3,3-Dimethylheptane	37.09	57	204490	51.536	ug/L	98
81) 1,1,4-Trimethylcyclohe...	37.62	69	190520	49.040	ug/L	98
82) 2,3-Dimethylheptane	38.77	43	230398	56.182	ug/L	98
83) 3,4-Dimethylheptane	39.08	43	143078	53.518	ug/L	96
84) 4-Methyloctane	39.37	43	221309	60.537	ug/L	98
85) 2-Methyloctane	39.46	43	184787M3	50.030	ug/L	
86) Ethylbenzene	39.96	91	531714	46.535	ug/L	99
88) 2-Ethylthiophene	40.11	97	412452	46.207	ug/L	99
89) 3-Methyloctane	40.12	57	341889	52.348	ug/L	99
90) 3,3-Diethylpentane	41.10	57	399532	52.372	ug/L	98
91) p/m-Xylene	41.22	91	807370	91.388	ug/L	99
92) 1-Nonene	41.88	56	99807	53.905	ug/L	96
93) trans-3-Nonene	42.28	55	132552	51.466	ug/L	92
94) cis-3-Nonene	42.58	55	150306M6	49.875	ug/L	
95) Nonane	42.66	43	177732M6	54.234	ug/L	
96) Styrene	43.07	104	341737	46.108	ug/L	98
98) o-Xylene	43.49	91	416524	44.071	ug/L	98
99) 2-Nonene	43.91	55	138495	51.233	ug/L	97
100) Isopropylcyclohexane	45.19	83	204838	48.058	ug/L	98
102) Isopropylbenzene	45.80	105	548156	46.036	ug/L	98
103) 3,3-Dimethyloctane	46.30	71	307989	51.542	ug/L	96
104) n-Propylbenzene	48.43	91	647872	47.299	ug/L	100
105) 2-Methylnonane	48.49	43	174955	57.708	ug/L	94
106) 3-Methylnonane	48.94	57	219616	55.424	ug/L	98
107) 1-Methyl-3-ethylbenzene	49.07	105	549455	46.784	ug/L	100
108) 1-Methyl-4-ethylbenzene	49.25	105	530190	44.107	ug/L	99
109) 1,3,5-Trimethylbenzene	49.85	105	463582	45.286	ug/L	99
110) 1-Decene	49.99	41	109175	58.354	ug/L	93
111) Isobutylcyclohexane	50.14	83	220058	47.223	ug/L	97
112) 1-Methyl-2-ethylbenzene	50.19	105	562963	43.885	ug/L	97
113) Decane	50.39	43	156077	56.787	ug/L	93
114) tert-Butylbenzene	50.64	119	419838	45.207	ug/L	99
115) 1,2,4-Trimethylbenzene	51.07	105	474432	45.311	ug/L	99

Data Path : O:\Organics\DATA\VOA6\2020\09-SEP\200918\
Data File : V6012467.D
Acq On : 18 Sep 2020 7:33 pm
Operator : VOA6:JT
Sample : I609182004
Misc : WG1412463
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Sep 19 08:07:49 2020
Quant Method : O:\Organics\DATA\VOA6\2020\09-SEP\200918\P6091820W.M
Quant Title : PIANO VOLATILES
QLast Update : Mon Sep 14 09:00:30 2020
Response via : Initial Calibration

Sub List : PIANO - PIANO

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
116) Isobutylbenzene	51.27	91	525516M6	47.009	ug/L	
117) sec-Butylbenzene	51.33	105	609647	44.361	ug/L	98
118) 1-Methyl-3-isopropylbe...	51.72	119	519779	46.445	ug/L	98
119) 1-Methyl-4-isopropylbe...	51.92	119	538102	45.669	ug/L	99
120) 1,2,3-Trimethylbenzene	52.20	105	475908	45.310	ug/L	100
121) 1-Methyl-2-isopropylbe...	52.41	119	528759	45.813	ug/L	100
122) Indan	52.50	117	448514	44.028	ug/L	99
123) 1,3-Diethylbenzene	52.66	105	327781	45.687	ug/L	98
124) 1-Methyl-3-propylbenzene	52.77	105	612552	46.076	ug/L	99
125) Indene	52.94	115	401276	45.902	ug/L	98
126) 1-Methyl-4-propylbenzene	52.92	105	775867	47.154	ug/L	97
127) n-Butylbenzene	52.92	91	582297	47.337	ug/L	99
128) 1,2-Dimethyl-4-ethylbe...	53.05	119	568052	46.742	ug/L	100
129) 1,2-Diethylbenzene	53.14	119	268039	43.834	ug/L	97
130) 1-Methyl-2-propylbenzene	53.33	105	668720	46.549	ug/L	99
131) 1,4-Dimethyl-2-ethylbe...	53.66	119	523666M3	46.799	ug/L	
132) Undecane	53.69	57	181137	56.115	ug/L	97
133) 1,3-Dimethyl-4-ethylbe...	53.74	119	630026M3	45.781	ug/L	
134) 1,3-Dimethyl-5-ethylbe...	53.88	119	593385	45.749	ug/L	99
135) 1,3-Dimethyl-2-ethylbe...	54.10	119	612532	45.847	ug/L	99
136) 1,2-Dimethyl-3-ethylbe...	54.46	119	549418	46.062	ug/L	99
137) 1,2,4,5-Tetramethylben...	54.86	119	578349M3	47.770	ug/L	
138) 1,2,3,5-Tetramethylben...	54.95	119	515597	44.944	ug/L	99
139) Pentylbenzene	55.43	91	484125	48.234	ug/L	99
140) 1,2,3,4-Tetramethylben...	55.76	119	683915	46.231	ug/L	99
141) 1,3-DM-5-tert-Butylben...	55.75	147	523680	48.732	ug/L	99
142) Dodecane	55.91	43	115603	53.865	ug/L	97
143) 1,3,5-Triethylbenzene	56.63	147	336082	49.832	ug/L	99
144) Naphthalene	56.77	128	461834	45.413	ug/L	100
145) Benzothiophene	56.86	134	253212	45.196	ug/L	99
146) 1,2,4-Triethylbenzene	57.18	147	307408	49.265	ug/L	98
147) Hexylbenzene	57.67	91	444140	49.038	ug/L	99
148) MMT	57.92	134	185232	45.245	ug/L	99
149) Tridecane	57.98	57	114515	47.752	ug/L	96
150) 2-Methylnaphthalene	59.48	142	315670	48.759	ug/L	98
151) 1-Methylnaphthalene	59.95	142	263350	48.030	ug/L	98
152) Tetradecane	60.22	57	99086	51.454	ug/L	94
153) Pentadecane	62.93	57	79213	56.860	ug/L	94

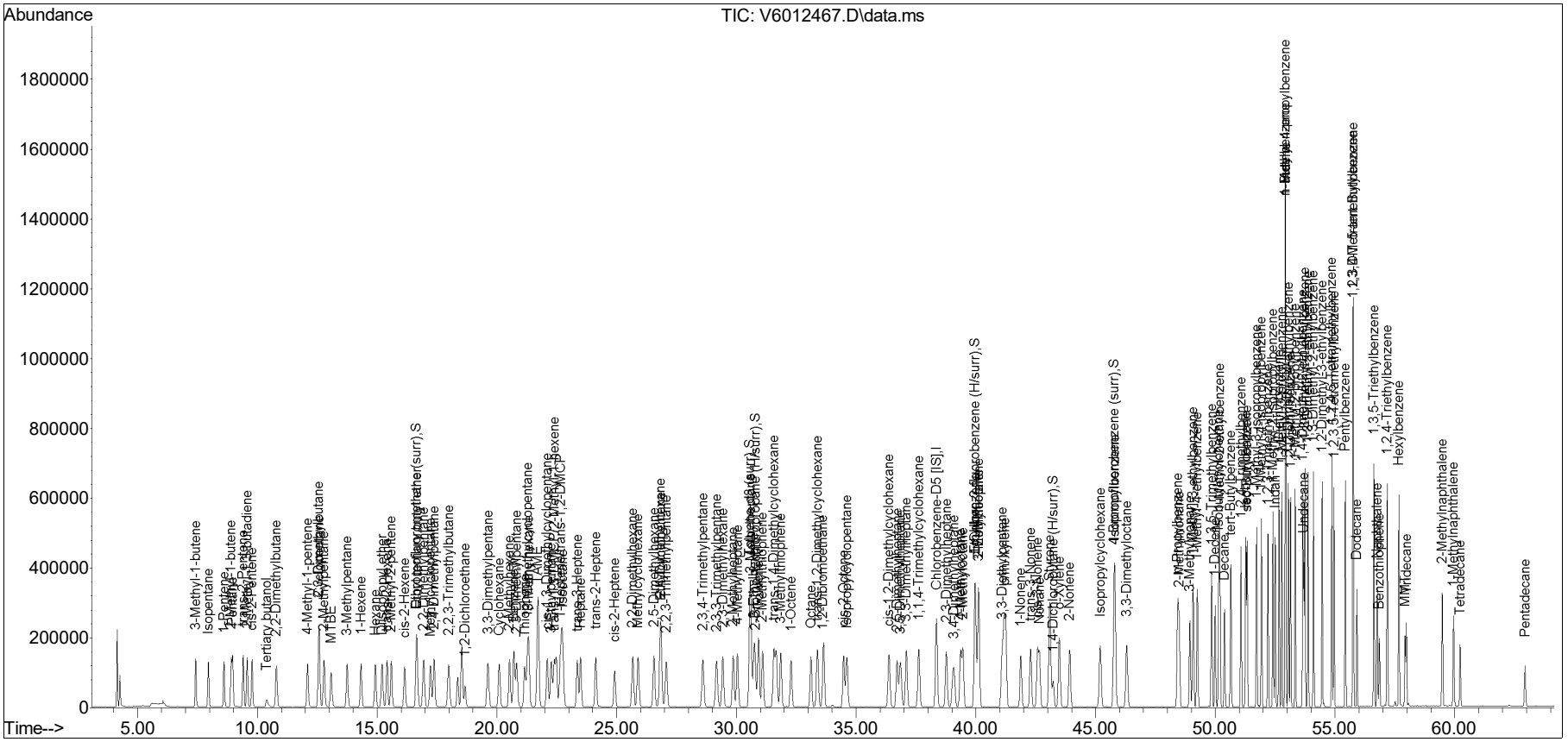
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : O:\Organics\DATA\VOA6\2020\09-SEP\200918\
Data File : V6012467.D
Acq On : 18 Sep 2020 7:33 pm
Operator : VOA6:JT
Sample : I609182004
Misc : WG1412463
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Sep 19 08:07:49 2020
Quant Method : O:\Organics\DATA\VOA6\2020\09-SEP\200918\P6091820W.M
Quant Title : PIANO VOLATILES
QLast Update : Mon Sep 14 09:00:30 2020
Response via : Initial Calibration

Sub List : PIANO - PIANO



Quantitation Report (QT Reviewed)

Data Path : O:\Organics\DATA\VOA6\2020\09-SEP\200918\
Data File : V6012468.D
Acq On : 18 Sep 2020 8:44 pm
Operator : VOA6:JT
Sample : I609182005
Misc : WG1412463
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Sep 19 08:31:54 2020
Quant Method : O:\Organics\DATA\VOA6\2020\09-SEP\200918\P6091820W.M
Quant Title : PIANO VOLATILES
QLast Update : Sat Sep 19 08:08:28 2020
Response via : Initial Calibration

Sub List : PIANO - PIANO

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Chlorobenzene-D5 [IS]	38.35	117	481065	50.000	ug/L	0.00
System Monitoring Compounds						
24) Dibromofluoromethane (...	16.64	113	148588	43.396	ug/L	0.00
Spiked Amount 50.000	Range 78 - 118		Recovery = 86.79%			
62) Toluene-d8 (surr)	30.57	98	572419	48.705	ug/L	0.00
Spiked Amount 50.000	Range 87 - 113		Recovery = 97.41%			
64) 2-Bromo-1-chloropropan...	30.79	77	293238	105.967	ug/L	0.00
Spiked Amount 50.000	Range 70 - 130		Recovery = 211.93%#			
87) 1-Chloro-2-fluorobenze...	39.98	130	606694	102.016	ug/L	0.00
Spiked Amount 50.000	Range 70 - 130		Recovery = 204.03%#			
97) 1,4-Dichlorobutane (H/...	43.23	55	256881	96.190	ug/L	0.00
Spiked Amount 50.000	Range 70 - 130		Recovery = 192.38%#			
101) 4-Bromofluorobenzene (...	45.77	95	238308	50.711	ug/L	0.00
Spiked Amount 50.000	Range 76 - 120		Recovery = 101.42%			
Target Compounds						Qvalue
2) 3-Methyl-1-butene	7.42	55	377698	96.197	ug/L	99
3) Isopentane	7.96	43	202578	96.087	ug/L	97
4) 1-Pentene	8.60	42	225485	104.336	ug/L	98
5) 2-Methyl-1-butene	8.91	55	376686	98.561	ug/L	98
6) Pentane	8.96	43	345271	99.169	ug/L	99
7) trans-2-Pentene	9.41	55	369920	98.210	ug/L	98
8) 2-Methyl-1,3-butadiene	9.57	67	258759	96.474	ug/L	96
9) cis-2-Pentene	9.77	55	356358	98.135	ug/L	97
10) Tertiary butanol	10.37	59	158584	561.930	ug/L	97
11) 2,2-Dimethylbutane	10.79	43	214577	104.238	ug/L	90
12) 4-Methyl-1-pentene	12.10	43	253836	107.442	ug/L	99
13) Cyclopentane	12.58	70	151821	98.891	ug/L	99
14) 2,3-Dimethylbutane	12.57	71	120704	101.398	ug/L	98
15) 2-Methylpentane	12.79	43	375557	107.325	ug/L	99
16) MTBE	13.07	73	491571	95.306	ug/L	99
17) 3-Methylpentane	13.75	57	357136	104.718	ug/L	98
18) 1-Hexene	14.33	56	203524	105.808	ug/L	94
19) Hexane	14.93	57	287333	104.588	ug/L	96
20) Diisopropyl ether	15.21	45	494316	112.736	ug/L	97
21) trans-2-Hexene	15.41	55	347202	105.778	ug/L	98
22) 2-Methyl-2-pentene	15.60	69	373512	97.959	ug/L	98
23) cis-2-Hexene	16.15	55	284367	104.023	ug/L	98
25) Ethyl tertiary butyl e...	16.66	59	515035	103.297	ug/L	98

Quantitation Report (QT Reviewed)

Data Path : O:\Organics\DATA\VOA6\2020\09-SEP\200918\
Data File : V6012468.D
Acq On : 18 Sep 2020 8:44 pm
Operator : VOA6:JT
Sample : I609182005
Misc : WG1412463
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Sep 19 08:31:54 2020
Quant Method : O:\Organics\DATA\VOA6\2020\09-SEP\200918\P6091820W.M
Quant Title : PIANO VOLATILES
QLast Update : Sat Sep 19 08:08:28 2020
Response via : Initial Calibration

Sub List : PIANO - PIANO

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
26) 2,2-Dimethylpentane	16.94	57	433764	102.139 ug/L	97
27) Methylcyclopentane	17.22	56	364497	103.467 ug/L	95
28) 2,4-Dimethylpentane	17.38	43	339867	107.975 ug/L	96
29) 2,2,3-Trimethylbutane	17.99	57	385936	104.876 ug/L	98
30) 1,2-Dichloroethane	18.67	62	247788	94.939 ug/L	97
31) 3,3-Dimethylpentane	19.63	43	409248	112.454 ug/L	98
32) Cyclohexane	20.10	56	306318	104.842 ug/L	100
33) 2-Methylhexane	20.52	43	358644	114.478 ug/L	99
34) Benzene	20.71	78	768309	97.587 ug/L	97
35) 2,3-Dimethylpentane	20.83	56	309365	103.609 ug/L	99
36) Thiophene	21.16	84	435998	97.554 ug/L	99
37) 1,1-Dimethylcyclopentane	21.28	83	218480M6	91.317 ug/L	
38) 3-Methylhexane	21.33	43	316447	109.504 ug/L	96
39) TAME	21.69	73	505207	85.781 ug/L	95
40) cis-1,3-Dimethylcyclop...	22.11	70	315790	96.918 ug/L	99
41) 3-Ethylpentane	22.27	43	396359	107.946 ug/L	98
42) trans-1,3-DMCP/2-Methy...	22.39	70	269216	210.615 ug/L	94
43) 1-Heptene/trans-1,2-DMCP	22.66	70	325621	198.299 ug/L	71
44) Isooctane	22.75	57	787981	104.980 ug/L	96
45) trans-3-Heptene	23.35	41	252890	117.338 ug/L	97
46) Heptane	23.49	43	293873	109.278 ug/L	98
48) trans-2-Heptene	24.13	56	241638	109.327 ug/L	95
49) cis-2-Heptene	24.91	56	181223	111.903 ug/L	94
50) 2,2-Dimethylhexane	25.67	57	777156	107.944 ug/L	99
51) Methylcyclohexane	25.89	83	366366	101.284 ug/L	99
52) 2,5-Dimethylhexane	26.55	57	389635	111.082 ug/L	95
53) 2,4-Dimethylhexane	26.82	57	307710	104.743 ug/L	94
54) Ethylcyclopentane	26.86	69	305484	104.189 ug/L	93
55) 2,2,3-Trimethylpentane	27.08	57	611892	106.270 ug/L	96
57) 2,3,4-Trimethylpentane	28.60	43	416303	112.726 ug/L	98
58) 2,3,3-Trimethylpentane	29.17	43	354881	111.295 ug/L	99
59) 2,3-Dimethylhexane	29.44	43	388063	112.242 ug/L	97
60) 2-Methylheptane	29.87	57	358390	112.044 ug/L	95
61) 4-Methylheptane	30.04	43	414087	111.284 ug/L	98
63) 3-Methylheptane	30.61	43	303788	109.138 ug/L	98
65) 3-Ethylhexane	30.74	43	424484	106.417 ug/L	97
66) Toluene	30.92	91	925901	94.739 ug/L	99
67) 2-Methylthiophene	31.10	97	724210	97.788 ug/L	100
68) trans-1,4-Dimethylcycl...	31.56	97	467651	100.279 ug/L	98
69) 3-Methylthiophene	31.86	97	726101	99.999 ug/L	98
70) 1-Octene	32.29	55	177248	112.118 ug/L	93

Data Path : O:\Organics\DATA\VOA6\2020\09-SEP\200918\
Data File : V6012468.D
Acq On : 18 Sep 2020 8:44 pm
Operator : VOA6:JT
Sample : I609182005
Misc : WG1412463
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Sep 19 08:31:54 2020
Quant Method : O:\Organics\DATA\VOA6\2020\09-SEP\200918\P6091820W.M
Quant Title : PIANO VOLATILES
QLast Update : Sat Sep 19 08:08:28 2020
Response via : Initial Calibration

Sub List : PIANO - PIANO

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
71) Octane	33.11	43	346189	116.179	ug/L	98
72) trans-1,2-Dimethylcycl...	33.38	55	304807	104.324	ug/L	94
73) 1,2-Dibromoethane	33.61	107	197034	100.089	ug/L	99
75) cis-2-Octene	34.48	55	270059	99.812	ug/L	94
76) Isopropylcyclopentane	34.61	68	340910	101.234	ug/L	97
77) cis-1,2-Dimethylcycloh...	36.37	55	293707	106.143	ug/L	97
78) 2,5-Dimethylheptane	36.71	57	519244	116.089	ug/L	99
79) 3,5-Dimethylheptane	36.85	57	576664	98.685	ug/L	100
80) 3,3-Dimethylheptane	37.10	57	398471	107.315	ug/L	96
81) 1,1,4-Trimethylcyclohe...	37.62	69	375293	104.259	ug/L	96
82) 2,3-Dimethylheptane	38.77	43	450233	115.943	ug/L	98
83) 3,4-Dimethylheptane	39.07	43	278814	110.301	ug/L	97
84) 4-Methyloctane	39.37	43	427427	121.419	ug/L	98
85) 2-Methyloctane	39.45	43	362911M3	105.196	ug/L	
86) Ethylbenzene	39.96	91	1057864	100.717	ug/L	100
88) 2-Ethylthiophene	40.11	97	825448	100.948	ug/L	99
89) 3-Methyloctane	40.11	57	669571	109.905	ug/L	98
90) 3,3-Diethylpentane	41.09	57	783482	109.686	ug/L	97
91) p/m-Xylene	41.23	91	1615816M1	199.622	ug/L	
92) 1-Nonene	41.88	56	197779	114.468	ug/L	94
93) trans-3-Nonene	42.29	55	261193	108.825	ug/L	93
94) cis-3-Nonene	42.57	55	289402M6	103.146	ug/L	
95) Nonane	42.66	43	341366M6	110.530	ug/L	
96) Styrene	43.08	104	691145	102.154	ug/L	98
98) o-Xylene	43.48	91	843679	97.831	ug/L	100
99) 2-Nonene	43.92	55	274402	109.231	ug/L	97
100) Isopropylcyclohexane	45.19	83	404135	102.738	ug/L	98
102) Isopropylbenzene	45.80	105	1107258	101.231	ug/L	98
103) 3,3-Dimethyloctane	46.30	71	592451	106.570	ug/L	96
104) n-Propylbenzene	48.43	91	1309856	103.912	ug/L	99
105) 2-Methylnonane	48.49	43	331299	115.482	ug/L	96
106) 3-Methylnonane	48.94	57	416071	111.626	ug/L	97
107) 1-Methyl-3-ethylbenzene	49.07	105	1114161	103.332	ug/L	99
108) 1-Methyl-4-ethylbenzene	49.25	105	1076373	97.764	ug/L	100
109) 1,3,5-Trimethylbenzene	49.85	105	944113	100.710	ug/L	100
110) 1-Decene	49.99	41	215087	121.460	ug/L	95
111) Isobutylcyclohexane	50.15	83	439756	102.716	ug/L	98
112) 1-Methyl-2-ethylbenzene	50.19	105	1154074	98.613	ug/L	98
113) Decane	50.38	43	294483	113.208	ug/L	95
114) tert-Butylbenzene	50.64	119	859073	101.225	ug/L	97
115) 1,2,4-Trimethylbenzene	51.07	105	969758	101.196	ug/L	99

Quantitation Report (QT Reviewed)

Data Path : O:\Organics\DATA\VOA6\2020\09-SEP\200918\
Data File : V6012468.D
Acq On : 18 Sep 2020 8:44 pm
Operator : VOA6:JT
Sample : I609182005
Misc : WG1412463
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Sep 19 08:31:54 2020
Quant Method : O:\Organics\DATA\VOA6\2020\09-SEP\200918\P6091820W.M
Quant Title : PIANO VOLATILES
QLast Update : Sat Sep 19 08:08:28 2020
Response via : Initial Calibration

Sub List : PIANO - PIANO

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
116) Isobutylbenzene	51.27	91	1076963M6	105.256 ug/L	
117) sec-Butylbenzene	51.33	105	1263136	100.833 ug/L	99
118) 1-Methyl-3-isopropylbe...	51.72	119	1074035	104.805 ug/L	99
119) 1-Methyl-4-isopropylbe...	51.92	119	1113350	103.233 ug/L	99
120) 1,2,3-Trimethylbenzene	52.20	105	981129	102.349 ug/L	99
121) 1-Methyl-2-isopropylbe...	52.41	119	1100728	104.369 ug/L	99
122) Indan	52.50	117	930111	100.475 ug/L	100
123) 1,3-Diethylbenzene	52.66	105	685319	105.022 ug/L	98
124) 1-Methyl-3-propylbenzene	52.78	105	1288577	106.476 ug/L	99
125) Indene	52.94	115	839160	106.390 ug/L	98
126) 1-Methyl-4-propylbenzene	52.93	105	1643284	110.190 ug/L	95
127) n-Butylbenzene	52.92	91	1219523	109.076 ug/L	97
128) 1,2-Dimethyl-4-ethylbe...	53.05	119	1212073	110.234 ug/L	100
129) 1,2-Diethylbenzene	53.14	119	574141	104.000 ug/L	97
130) 1-Methyl-2-propylbenzene	53.34	105	1411225	108.268 ug/L	100
131) 1,4-Dimethyl-2-ethylbe...	53.66	119	1109710	108.989 ug/L	99
132) Undecane	53.69	57	313102	103.313 ug/L	96
133) 1,3-Dimethyl-4-ethylbe...	53.74	119	1347492	108.118 ug/L	100
134) 1,3-Dimethyl-5-ethylbe...	53.88	119	1271197	108.194 ug/L	100
135) 1,3-Dimethyl-2-ethylbe...	54.10	119	1300771	107.296 ug/L	99
136) 1,2-Dimethyl-3-ethylbe...	54.46	119	1156582	106.318 ug/L	99
137) 1,2,4,5-Tetramethylben...	54.87	119	1219577	109.986 ug/L	99
138) 1,2,3,5-Tetramethylben...	54.95	119	1092036	104.765 ug/L	100
139) Pentylbenzene	55.43	91	1007862	109.558 ug/L	99
140) 1,2,3,4-Tetramethylben...	55.76	119	1442892	107.152 ug/L	99
141) 1,3-DM-5-tert-Butylben...	55.75	147	1104062	111.685 ug/L	98
142) Dodecane	55.91	43	188966	91.915 ug/L	97
143) 1,3,5-Triethylbenzene	56.63	147	694955	111.083 ug/L	99
144) Naphthalene	56.77	128	954865	103.130 ug/L	99
145) Benzothiophene	56.86	134	526306	103.033 ug/L	97
146) 1,2,4-Triethylbenzene	57.18	147	642927	111.750 ug/L	98
147) Hexylbenzene	57.67	91	906812	108.865 ug/L	98
148) MMT	57.92	134	381930	102.062 ug/L	97
149) Tridecane	57.98	57	197826	86.644 ug/L	97
150) 2-Methylnaphthalene	59.48	142	642241	107.045 ug/L	100
151) 1-Methylnaphthalene	59.95	142	536256	105.792 ug/L	100
152) Tetradecane	60.22	57	173526	93.589 ug/L	94
153) Pentadecane	62.93	57	143694	106.152 ug/L	94

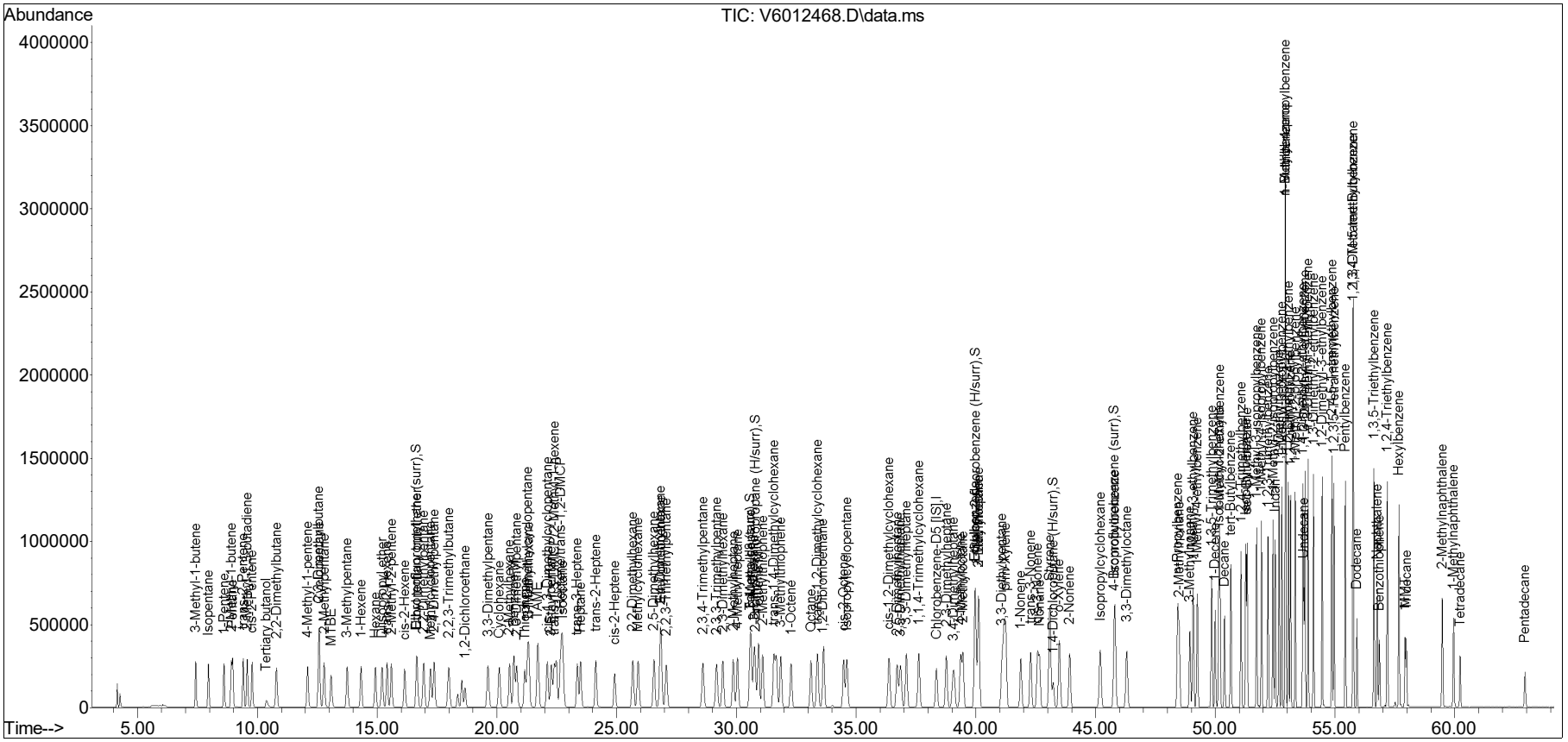
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : O:\Organics\DATA\VOA6\2020\09-SEP\200918\
Data File : V6012468.D
Acq On : 18 Sep 2020 8:44 pm
Operator : VOA6:JT
Sample : I609182005
Misc : WG1412463
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Sep 19 08:31:54 2020
Quant Method : O:\Organics\DATA\VOA6\2020\09-SEP\200918\P6091820W.M
Quant Title : PIANO VOLATILES
QLast Update : Sat Sep 19 08:08:28 2020
Response via : Initial Calibration

Sub List : PIANO - PIANO



Quantitation Report (QT Reviewed)

Data Path : O:\Organics\DATA\VOA6\2020\09-SEP\200918\
Data File : V6012469.D
Acq On : 18 Sep 2020 9:55 pm
Operator : VOA6:JT
Sample : I609182006
Misc : WG1412463
ALS Vial : 8 Sample Multiplier: 1

Quant Time: Sep 19 08:37:18 2020
Quant Method : O:\Organics\DATA\VOA6\2020\09-SEP\200918\P6091820W.M
Quant Title : PIANO VOLATILES
QLast Update : Sat Sep 19 08:08:28 2020
Response via : Initial Calibration

Sub List : PIANO - PIANO

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Chlorobenzene-D5 [IS]	38.35	117	494206	50.000	ug/L	0.00
System Monitoring Compounds						
24) Dibromofluoromethane (...	16.63	113	154282	43.861	ug/L	0.00
Spiked Amount 50.000	Range 78 - 118		Recovery = 87.72%			
62) Toluene-d8 (surr)	30.56	98	597255	49.467	ug/L	0.00
Spiked Amount 50.000	Range 87 - 113		Recovery = 98.93%			
64) 2-Bromo-1-chloropropan...	30.79	77	588225	206.914	ug/L	0.00
Spiked Amount 50.000	Range 70 - 130		Recovery = 413.83%#			
87) 1-Chloro-2-fluorobenze...	39.99	130	1244267	203.661	ug/L	0.01
Spiked Amount 50.000	Range 70 - 130		Recovery = 407.32%#			
97) 1,4-Dichlorobutane (H/...	43.24	55	542421	197.710	ug/L	0.01
Spiked Amount 50.000	Range 70 - 130		Recovery = 395.42%#			
101) 4-Bromofluorobenzene (...	45.77	95	248335	51.439	ug/L	0.00
Spiked Amount 50.000	Range 76 - 120		Recovery = 102.88%			
Target Compounds						Qvalue
2) 3-Methyl-1-butene	7.43	55	767653	190.317	ug/L	99
3) Isopentane	7.95	43	405595	187.267	ug/L	96
4) 1-Pentene	8.60	42	460372	207.358	ug/L	98
5) 2-Methyl-1-butene	8.91	55	764030	194.596	ug/L	99
6) Pentane	8.97	43	695982	194.586	ug/L	100
7) trans-2-Pentene	9.41	55	757622	195.792	ug/L	98
8) 2-Methyl-1,3-butadiene	9.57	67	529579	192.195	ug/L	97
9) cis-2-Pentene	9.78	55	732801	196.435	ug/L	96
10) Tertiary butanol	10.34	59	320425	1105.211	ug/L	97
11) 2,2-Dimethylbutane	10.79	43	434381	205.404	ug/L	92
12) 4-Methyl-1-pentene	12.10	43	515022	212.199	ug/L	99
13) Cyclopentane	12.58	70	311793	197.690	ug/L	98
14) 2,3-Dimethylbutane	12.57	71	246258	201.369	ug/L	98
15) 2-Methylpentane	12.79	43	761631	211.868	ug/L	99
16) MTBE	13.07	73	1007631	190.165	ug/L	99
17) 3-Methylpentane	13.75	57	729759	208.287	ug/L	99
18) 1-Hexene	14.33	56	416436	210.741	ug/L	93
19) Hexane	14.93	57	586015	207.635	ug/L	97
20) Diisopropyl ether	15.20	45	1001525	222.339	ug/L	95
21) trans-2-Hexene	15.41	55	713156	211.491	ug/L	97
22) 2-Methyl-2-pentene	15.60	69	777664	198.531	ug/L	98
23) cis-2-Hexene	16.15	55	585588	208.515	ug/L	98
25) Ethyl tertiary butyl e...	16.66	59	1056333	206.228	ug/L	97

Data Path : O:\Organics\DATA\VOA6\2020\09-SEP\200918\
Data File : V6012469.D
Acq On : 18 Sep 2020 9:55 pm
Operator : VOA6:JT
Sample : I609182006
Misc : WG1412463
ALS Vial : 8 Sample Multiplier: 1

Quant Time: Sep 19 08:37:18 2020
Quant Method : O:\Organics\DATA\VOA6\2020\09-SEP\200918\P6091820W.M
Quant Title : PIANO VOLATILES
QLast Update : Sat Sep 19 08:08:28 2020
Response via : Initial Calibration

Sub List : PIANO - PIANO

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
26) 2,2-Dimethylpentane	16.94	57	890026	204.002 ug/L	94
27) Methylcyclopentane	17.23	56	746423	206.248 ug/L	95
28) 2,4-Dimethylpentane	17.38	43	701966	217.084 ug/L	96
29) 2,2,3-Trimethylbutane	17.99	57	786758	208.112 ug/L	95
30) 1,2-Dichloroethane	18.67	62	506085	188.748 ug/L	98
31) 3,3-Dimethylpentane	19.63	43	834337	223.166 ug/L	100
32) Cyclohexane	20.10	56	627922	209.200 ug/L	97
33) 2-Methylhexane	20.53	43	729693	226.722 ug/L	98
34) Benzene	20.71	78	1578851	195.205 ug/L	100
35) 2,3-Dimethylpentane	20.83	56	638660	208.205 ug/L	97
36) Thiophene	21.16	84	892908	194.475 ug/L	99
37) 1,1-Dimethylcyclopentane	21.27	83	455413M6	185.286 ug/L	
38) 3-Methylhexane	21.34	43	650348	219.064 ug/L	97
39) TAME	21.69	73	1029925	170.226 ug/L	95
40) cis-1,3-Dimethylcyclop...	22.11	70	651391	194.601 ug/L	100
41) 3-Ethylpentane	22.27	43	815757	216.259 ug/L	99
42) trans-1,3-DMCP/2-Methy...	22.39	70	567366	432.063 ug/L	94
43) 1-Heptene/trans-1,2-DMCP	22.66	70	684599	405.827 ug/L	72
44) Isooctane	22.75	57	1630897	211.502 ug/L	97
45) trans-3-Heptene	23.36	41	519237	234.514 ug/L	97
46) Heptane	23.49	43	604183	218.694 ug/L	97
48) trans-2-Heptene	24.13	56	496528	218.676 ug/L	94
49) cis-2-Heptene	24.92	56	375269	225.562 ug/L	95
50) 2,2-Dimethylhexane	25.68	57	1575823	213.055 ug/L	100
51) Methylcyclohexane	25.90	83	759197	204.304 ug/L	99
52) 2,5-Dimethylhexane	26.56	57	788886	218.925 ug/L	94
53) 2,4-Dimethylhexane	26.82	57	631498	209.244 ug/L	95
54) Ethylcyclopentane	26.86	69	633052	210.169 ug/L	92
55) 2,2,3-Trimethylpentane	27.08	57	1250814	211.458 ug/L	97
57) 2,3,4-Trimethylpentane	28.60	43	845771	222.928 ug/L	100
58) 2,3,3-Trimethylpentane	29.17	43	725721	221.543 ug/L	99
59) 2,3-Dimethylhexane	29.43	43	790637	222.600 ug/L	98
60) 2-Methylheptane	29.87	57	724644	220.523 ug/L	95
61) 4-Methylheptane	30.05	43	838684	219.399 ug/L	98
63) 3-Methylheptane	30.62	43	621108	217.205 ug/L	99
65) 3-Ethylhexane	30.74	43	873261	213.102 ug/L	97
66) Toluene	30.92	91	1891463	188.390 ug/L	99
67) 2-Methylthiophene	31.10	97	1493511	196.303 ug/L	98
68) trans-1,4-Dimethylcycl...	31.57	97	964176	201.252 ug/L	98
69) 3-Methylthiophene	31.86	97	1497453	200.746 ug/L	99
70) 1-Octene	32.28	55	366389	225.597 ug/L	95

Data Path : O:\Organics\DATA\VOA6\2020\09-SEP\200918\
Data File : V6012469.D
Acq On : 18 Sep 2020 9:55 pm
Operator : VOA6:JT
Sample : I609182006
Misc : WG1412463
ALS Vial : 8 Sample Multiplier: 1

Quant Time: Sep 19 08:37:18 2020
Quant Method : O:\Organics\DATA\VOA6\2020\09-SEP\200918\P6091820W.M
Quant Title : PIANO VOLATILES
QLast Update : Sat Sep 19 08:08:28 2020
Response via : Initial Calibration

Sub List : PIANO - PIANO

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
71) Octane	33.12	43	696511	227.530	ug/L	98
72) trans-1,2-Dimethylcycl...	33.38	55	623967	207.882	ug/L	94
73) 1,2-Dibromoethane	33.61	107	407361	201.427	ug/L	100
75) cis-2-Octene	34.48	55	553910	199.277	ug/L	92
76) Isopropylcyclopentane	34.61	68	707848M6	204.609	ug/L	
77) cis-1,2-Dimethylcycloh...	36.37	55	601736	211.680	ug/L	96
78) 2,5-Dimethylheptane	36.71	57	1025595	223.198	ug/L	98
79) 3,5-Dimethylheptane	36.85	57	1128115	187.921	ug/L	99
80) 3,3-Dimethylheptane	37.10	57	796458	208.797	ug/L	98
81) 1,1,4-Trimethylcyclohe...	37.62	69	761530	205.932	ug/L	99
82) 2,3-Dimethylheptane	38.77	43	890504	223.224	ug/L	99
83) 3,4-Dimethylheptane	39.07	43	555700	213.993	ug/L	97
84) 4-Methyloctane	39.37	43	817046	225.926	ug/L	98
85) 2-Methyloctane	39.46	43	733282M3	206.902	ug/L	
86) Ethylbenzene	39.97	91	2170434	201.147	ug/L	99
88) 2-Ethylthiophene	40.12	97	1715126	204.173	ug/L	100
89) 3-Methyloctane	40.12	57	1335381	213.365	ug/L	99
90) 3,3-Diethylpentane	41.10	57	1581173	215.475	ug/L	97
91) p/m-Xylene	41.21	91	3342764	401.992	ug/L	98
92) 1-Nonene	41.88	56	401620	226.264	ug/L	94
93) trans-3-Nonene	42.29	55	529038	214.561	ug/L	94
94) cis-3-Nonene	42.58	55	601410M6	208.649	ug/L	
95) Nonane	42.66	43	667986M6	210.535	ug/L	
96) Styrene	43.08	104	1445167	207.922	ug/L	98
98) o-Xylene	43.49	91	1770130	199.802	ug/L	99
99) 2-Nonene	43.92	55	565195	219.005	ug/L	95
100) Isopropylcyclohexane	45.19	83	825853	204.363	ug/L	99
102) Isopropylbenzene	45.81	105	2288384	203.652	ug/L	99
103) 3,3-Dimethyloctane	46.30	71	1120546	196.204	ug/L	97
104) n-Propylbenzene	48.43	91	2688505	207.610	ug/L	100
105) 2-Methylnonane	48.49	43	596536	202.408	ug/L	96
106) 3-Methylnonane	48.94	57	755119	197.201	ug/L	97
107) 1-Methyl-3-ethylbenzene	49.07	105	2309053	208.458	ug/L	99
108) 1-Methyl-4-ethylbenzene	49.25	105	2244239	198.417	ug/L	100
109) 1,3,5-Trimethylbenzene	49.85	105	1967725	204.319	ug/L	99
110) 1-Decene	49.99	41	420152	230.952	ug/L	95
111) Isobutylcyclohexane	50.15	83	879057	199.866	ug/L	98
112) 1-Methyl-2-ethylbenzene	50.19	105	2441787	203.098	ug/L	99
113) Decane	50.38	43	532978	199.444	ug/L	96
114) tert-Butylbenzene	50.64	119	1810599	207.671	ug/L	98
115) 1,2,4-Trimethylbenzene	51.07	105	2042766	207.498	ug/L	99

Quantitation Report (QT Reviewed)

Data Path : O:\Organics\DATA\VOA6\2020\09-SEP\200918\
Data File : V6012469.D
Acq On : 18 Sep 2020 9:55 pm
Operator : VOA6:JT
Sample : I609182006
Misc : WG1412463
ALS Vial : 8 Sample Multiplier: 1

Quant Time: Sep 19 08:37:18 2020
Quant Method : O:\Organics\DATA\VOA6\2020\09-SEP\200918\P6091820W.M
Quant Title : PIANO VOLATILES
QLast Update : Sat Sep 19 08:08:28 2020
Response via : Initial Calibration

Sub List : PIANO - PIANO

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
116) Isobutylbenzene	51.27	91	2175370M6	206.954	ug/L	
117) sec-Butylbenzene	51.33	105	2657243	206.482	ug/L	99
118) 1-Methyl-3-isopropylbe...	51.72	119	2253625	214.063	ug/L	99
119) 1-Methyl-4-isopropylbe...	51.93	119	2343683	211.534	ug/L	99
120) 1,2,3-Trimethylbenzene	52.20	105	2066062	209.795	ug/L	100
121) 1-Methyl-2-isopropylbe...	52.41	119	2318528	213.993	ug/L	100
122) Indan	52.50	117	1965406	206.667	ug/L	99
123) 1,3-Diethylbenzene	52.66	105	1460992	217.936	ug/L	99
124) 1-Methyl-3-propylbenzene	52.78	105	2711012	218.057	ug/L	100
125) Indene	52.94	115	1768552	218.258	ug/L	98
126) 1-Methyl-4-propylbenzene	52.93	105	3459300	225.795	ug/L	94
127) n-Butylbenzene	52.93	91	2555219	222.465	ug/L	96
128) 1,2-Dimethyl-4-ethylbe...	53.05	119	2559994	226.632	ug/L	99
129) 1,2-Diethylbenzene	53.14	119	1211109	213.547	ug/L	97
130) 1-Methyl-2-propylbenzene	53.34	105	2970560	221.840	ug/L	99
131) 1,4-Dimethyl-2-ethylbe...	53.66	119	2357028	225.337	ug/L	99
132) Undecane	53.69	57	566286	181.887	ug/L	98
133) 1,3-Dimethyl-4-ethylbe...	53.75	119	2833766	221.326	ug/L	98
134) 1,3-Dimethyl-5-ethylbe...	53.88	119	2674905	221.612	ug/L	99
135) 1,3-Dimethyl-2-ethylbe...	54.10	119	2741446	220.118	ug/L	100
136) 1,2-Dimethyl-3-ethylbe...	54.46	119	2453516	219.540	ug/L	99
137) 1,2,4,5-Tetramethylben...	54.87	119	2579911	226.479	ug/L	99
138) 1,2,3,5-Tetramethylben...	54.95	119	2311275	215.838	ug/L	99
139) Pentylbenzene	55.43	91	2063811	218.378	ug/L	98
140) 1,2,3,4-Tetramethylben...	55.76	119	3034926	219.387	ug/L	99
141) 1,3-DM-5-tert-Butylben...	55.75	147	2264778	223.010	ug/L	98
142) Dodecane	55.91	43	365444	173.029	ug/L	97
143) 1,3,5-Triethylbenzene	56.63	147	1424020	221.566	ug/L	98
144) Naphthalene	56.77	128	2031774	213.606	ug/L	100
145) Benzothiophene	56.86	134	1132699	215.849	ug/L	98
146) 1,2,4-Triethylbenzene	57.18	147	1329974	225.023	ug/L	99
147) Hexylbenzene	57.67	91	1788047	208.951	ug/L	99
148) MMT	57.92	134	811004	210.960	ug/L	98
149) Tridecane	57.98	57	413431	176.259	ug/L	96
150) 2-Methylnaphthalene	59.48	142	1363535	221.223	ug/L	100
151) 1-Methylnaphthalene	59.95	142	1141645	219.234	ug/L	100
152) Tetradecane	60.22	57	380904	199.973	ug/L	94
153) Pentadecane	62.93	57	323723	232.787	ug/L	94

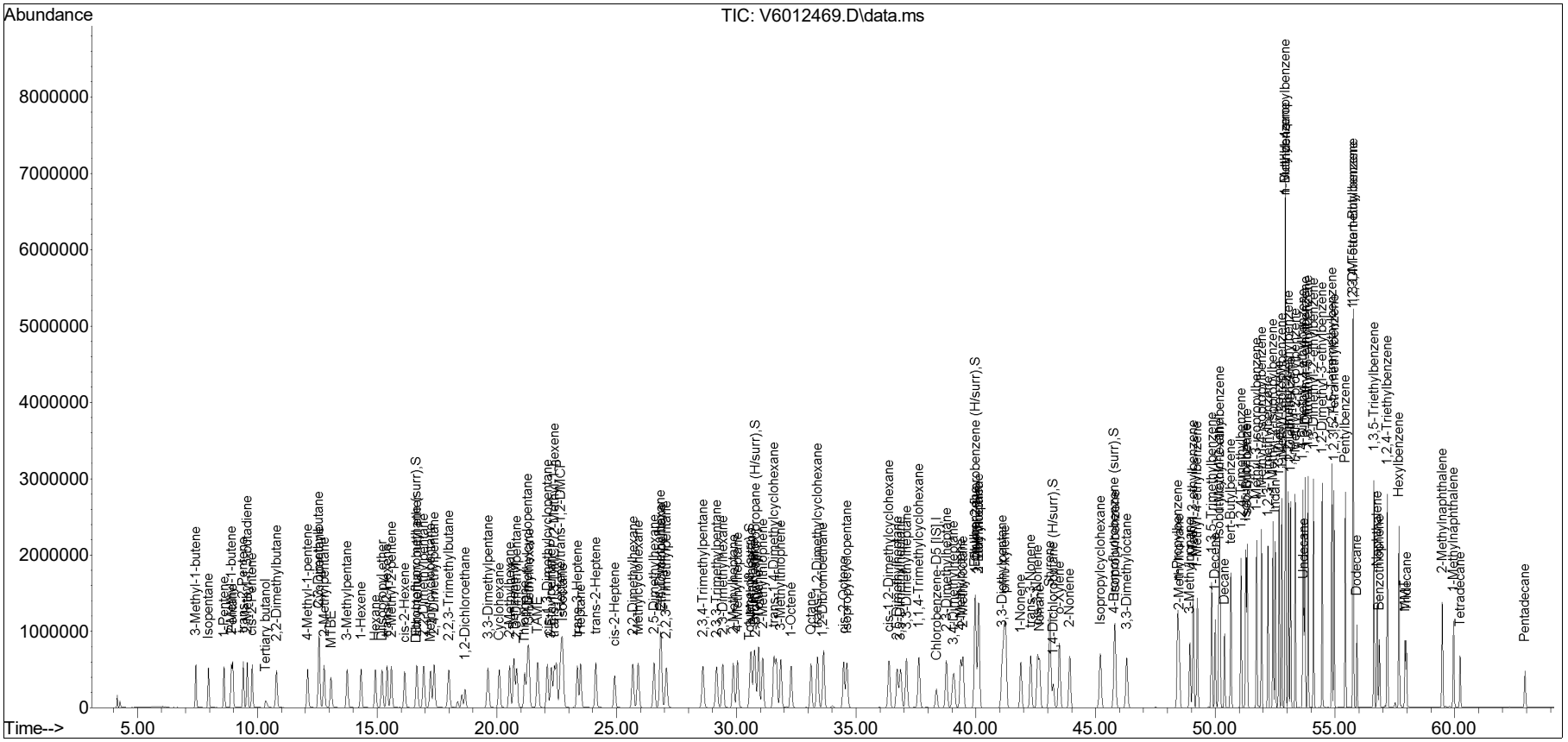
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : O:\Organics\DATA\VOA6\2020\09-SEP\200918\
Data File : V6012469.D
Acq On : 18 Sep 2020 9:55 pm
Operator : VOA6:JT
Sample : I609182006
Misc : WG1412463
ALS Vial : 8 Sample Multiplier: 1

Quant Time: Sep 19 08:37:18 2020
Quant Method : O:\Organics\DATA\VOA6\2020\09-SEP\200918\P6091820W.M
Quant Title : PIANO VOLATILES
QLast Update : Sat Sep 19 08:08:28 2020
Response via : Initial Calibration

Sub List : PIANO - PIANO



Evaluate Continuing Calibration Report

Data Path : O:\Organics\DATA\VOA6\2020\09-SEP\200918\
Data File : V6012471.D
Acq On : 19 Sep 2020 12:16 am
Operator : VOA6:JT
Sample : CQ609182001
Misc : WG1412463
ALS Vial : 10 Sample Multiplier: 1

Quant Time: Sep 19 08:47:04 2020
Quant Method : O:\Organics\DATA\VOA6\2020\09-SEP\200918\P6091820W.M
Quant Title : PIANO VOLATILES
QLast Update : Sat Sep 19 08:40:17 2020
Response via : Initial Calibration

Min. RRF : 0.100 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 25% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1	I	Chlorobenzene-D5 [IS]	1.000	1.000	0.0	93	0.00
2		3-Methyl-1-butene	0.374	0.000#	100.0#	0#	-7.42#
3		Isopentane	0.214	0.000#	100.0#	0#	-7.95#
4		1-Pentene	0.223	0.183	17.9	80	0.00
5		2-Methyl-1-butene	0.373	0.000#	100.0#	0#	-8.90#
6		Pentane	0.352	0.239	32.1#	67	0.00
7		trans-2-Pentene	0.369	0.000#	100.0#	0#	-9.40#
8		2-Methyl-1,3-butadiene	0.250	0.000#	100.0#	0#	-9.57#
9		cis-2-Pentene	0.357	0.000#	100.0#	0#	-9.77#
10		Tertiary butanol	0.031	0.021#	32.3#	62	0.02
11		2,2-Dimethylbutane	0.230	0.000#	100.0#	0#	-10.79#
12		4-Methyl-1-pentene	0.258	0.000#	100.0#	0#	-12.09#
13		Cyclopentane	0.149	0.131	12.1	87	0.00
14		2,3-Dimethylbutane	0.115	0.000#	100.0#	0#	-12.57#
15		2-Methylpentane	0.381	0.314	17.6	80	0.00
16		MTBE	0.477	0.481	-0.8	95	0.00
17		3-Methylpentane	0.345	0.309	10.4	87	0.00
18		1-Hexene	0.196	0.185	5.6	90	0.00
19		Hexane	0.281	0.258	8.2	90	0.00
20		Diisopropyl ether	0.479	0.475	0.8	92	0.00
21		trans-2-Hexene	0.343	0.000#	100.0#	0#	-15.41#
22		2-Methyl-2-pentene	0.368	0.000#	100.0#	0#	-15.59#
23		cis-2-Hexene	0.279	0.000#	100.0#	0#	-16.15#
24	S	Dibromofluoromethane (surr)	0.312	0.307	1.6	93	0.00
25		Ethyl tertiary butyl ether	0.497	0.495	0.4	93	0.00
26		2,2-Dimethylpentane	0.426	0.000#	100.0#	0#	-16.94#
27		Methylcyclopentane	0.359	0.348	3.1	93	0.00
28		2,4-Dimethylpentane	0.347	0.311	10.4	87	0.00
29		2,2,3-Trimethylbutane	0.373	0.000#	100.0#	0#	-17.99#
30		1,2-Dichloroethane	0.247	0.000#	100.0#	0#	-18.67#
31		3,3-Dimethylpentane	0.411	0.000#	100.0#	0#	-19.63#
32		Cyclohexane	0.299	0.303	-1.3	96	0.00
33		2-Methylhexane	0.362	0.340	6.1	91	0.00
34	M	Benzene	0.753	0.754	-0.1	95	0.00
35		2,3-Dimethylpentane	0.305	0.295	3.3	92	-0.01
36		Thiophene	0.422	0.000#	100.0#	0#	-21.16#
37		1,1-Dimethylcyclopentane	0.209	0.000#	100.0#	0#	-21.28#
38		3-Methylhexane	0.323	0.272	15.8	82	0.00
39		TAME	0.577	0.514	10.9	93	0.00

Evaluate Continuing Calibration Report

Data Path : O:\Organics\DATA\VOA6\2020\09-SEP\200918\
Data File : V6012471.D
Acq On : 19 Sep 2020 12:16 am
Operator : VOA6:JT
Sample : CQ609182001
Misc : WG1412463
ALS Vial : 10 Sample Multiplier: 1

Quant Time: Sep 19 08:47:04 2020
Quant Method : O:\Organics\DATA\VOA6\2020\09-SEP\200918\P6091820W.M
Quant Title : PIANO VOLATILES
QLast Update : Sat Sep 19 08:40:17 2020
Response via : Initial Calibration

Min. RRF : 0.100 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 25% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
40		cis-1,3-Dimethylcyclopentan	0.310	0.000#	100.0#	0#	-22.10#
41		3-Ethylpentane	0.408	0.000#	100.0#	0#	-22.27#
42		trans-1,3-DMCP/2-Methyl-1-h	0.141	0.000#	100.0#	0#	-22.39#
43		1-Heptene/trans-1,2-DMCP	0.159	0.000#	100.0#	0#	-22.66#
44		Isooctane	0.775	0.765	1.3	93	0.01
45		trans-3-Heptene	0.267	0.000#	100.0#	0#	-23.36#
46		Heptane	0.301	0.279	7.3	90	0.00
48		trans-2-Heptene	0.234	0.000#	100.0#	0#	-24.13#
49		cis-2-Heptene	0.177	0.000#	100.0#	0#	-24.92#
50		2,2-Dimethylhexane	0.758	0.000#	100.0#	0#	-25.67#
51		Methylcyclohexane	0.349	0.367	-5.2	99	0.00
52		2,5-Dimethylhexane	0.380	0.000#	100.0#	0#	-26.56#
53		2,4-Dimethylhexane	0.303	0.000#	100.0#	0#	-26.82#
54		Ethylcyclopentane	0.297	0.000#	100.0#	0#	-26.86#
55		2,2,3-Trimethylpentane	0.598	0.000#	100.0#	0#	-27.07#
57		2,3,4-Trimethylpentane	0.418	0.000#	100.0#	0#	-28.60#
58		2,3,3-Trimethylpentane	0.356	0.000#	100.0#	0#	-29.17#
59		2,3-Dimethylhexane	0.393	0.000#	100.0#	0#	-29.43#
60		2-Methylheptane	0.349	0.340	2.6	91	0.00
61		4-Methylheptane	0.416	0.000#	100.0#	0#	-30.04#
62	S	Toluene-d8 (surr)	1.192	1.178	1.2	93	0.00
63		3-Methylheptane	0.343	0.309	9.9	90	0.00
64	S	2-Bromo-1-chloropropane (H/	0.280	0.000#	100.0#	0#	-30.79#
65		3-Ethylhexane	0.430	0.000#	100.0#	0#	-30.73#
66	M	Toluene	0.912	0.887	2.7	92	0.00
67		2-Methylthiophene	0.701	0.000#	100.0#	0#	-31.09#
68		trans-1,4-Dimethylcyclohexa	0.448	0.000#	100.0#	0#	-31.56#
69		3-Methylthiophene	0.707	0.000#	100.0#	0#	-31.85#
70		1-Octene	0.178	0.000#	100.0#	0#	-32.28#
71		Octane	0.350	0.359	-2.6	97	0.00
72		trans-1,2-Dimethylcyclohexa	0.306	0.000#	100.0#	0#	-33.39#
73		1,2-Dibromoethane	0.188	0.000#	100.0#	0#	-33.61#
75		cis-2-Octene	0.269	0.000#	100.0#	0#	-34.48#
76		Isopropylcyclopentane	0.331	0.000#	100.0#	0#	-34.61#
77		cis-1,2-Dimethylcyclohexane	0.292	0.000#	100.0#	0#	-36.37#
78		2,5-Dimethylheptane	0.510	0.000#	100.0#	0#	-36.71#
79		3,5-Dimethylheptane	0.579	0.000#	100.0#	0#	-36.84#
80		3,3-Dimethylheptane	0.393	0.000#	100.0#	0#	-37.09#
81		1,1,4-Trimethylcyclohexane	0.364	0.000#	100.0#	0#	-37.62#

Evaluate Continuing Calibration Report

Data Path : O:\Organics\DATA\VOA6\2020\09-SEP\200918\
Data File : V6012471.D
Acq On : 19 Sep 2020 12:16 am
Operator : VOA6:JT
Sample : CQ609182001
Misc : WG1412463
ALS Vial : 10 Sample Multiplier: 1

Quant Time: Sep 19 08:47:04 2020
Quant Method : O:\Organics\DATA\VOA6\2020\09-SEP\200918\P6091820W.M
Quant Title : PIANO VOLATILES
QLast Update : Sat Sep 19 08:40:17 2020
Response via : Initial Calibration

Min. RRF : 0.100 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 25% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
82		2,3-Dimethylheptane	0.449	0.000#	100.0#	0#	-38.77#
83		3,4-Dimethylheptane	0.288	0.000#	100.0#	0#	-39.08#
84		4-Methyloctane	0.430	0.000#	100.0#	0#	-39.37#
85		2-Methyloctane	0.361	0.000#	100.0#	0#	-39.46#
86		Ethylbenzene	1.031	1.021	1.0	93	0.00
87	S	1-Chloro-2-fluorobenzene (H	0.585	0.000#	100.0#	0#	-39.98#
88		2-Ethylthiophene	0.794	0.000#	100.0#	0#	-40.11#
89		3-Methyloctane	0.651	0.000#	100.0#	0#	-40.12#
90		3,3-Diethylpentane	0.761	0.000#	100.0#	0#	-41.10#
91		p/m-Xylene	0.786	0.804	-2.3	96	-0.01
92		1-Nonene	0.189	0.000#	100.0#	0#	-41.88#
93		trans-3-Nonene	0.258	0.000#	100.0#	0#	-42.28#
94		cis-3-Nonene	0.285	0.000#	100.0#	0#	-42.58#
95		Nonane	0.342	0.343	-0.3	94	0.00
96		Styrene	0.662	0.000#	100.0#	0#	-43.07#
97	S	1,4-Dichlorobutane (H/surr)	0.261	0.000#	100.0#	0#	-43.23#
98		o-Xylene	0.824	0.822	0.2	94	0.00
99		2-Nonene	0.267	0.000#	100.0#	0#	-43.91#
100		Isopropylcyclohexane	0.393	0.000#	100.0#	0#	-45.19#
101	S	4-Bromofluorobenzene (surr)	0.496	0.490	1.2	93	0.00
102		Isopropylbenzene	1.074	1.081	-0.7	94	0.00
103		3,3-Dimethyloctane	0.570	0.000#	100.0#	0#	-46.30#
104		n-Propylbenzene	1.263	1.268	-0.4	93	0.00
105		2-Methylnonane	0.331	0.000#	100.0#	0#	-48.49#
106		3-Methylnonane	0.404	0.000#	100.0#	0#	-48.94#
107		1-Methyl-3-ethylbenzene	1.068	1.081	-1.2	94	0.00
108		1-Methyl-4-ethylbenzene	1.035	1.061	-2.5	96	0.00
109		1,3,5-Trimethylbenzene	0.893	0.899	-0.7	93	0.00
110		1-Decene	0.209	0.180	13.9	81	0.00
111		Isobutylcyclohexane	0.421	0.000#	100.0#	0#	-50.14#
112		1-Methyl-2-ethylbenzene	1.099	1.070	2.6	91	0.00
113		Decane	0.294	0.326	-10.9	100	0.00
114		tert-Butylbenzene	0.814	0.000#	100.0#	0#	-50.64#
115		1,2,4-Trimethylbenzene	0.915	0.884	3.4	90	0.00
116		Isobutylbenzene	1.008	0.000#	100.0#	0#	-51.27#
117		sec-Butylbenzene	1.192	1.211	-1.6	95	0.00
118		1-Methyl-3-isopropylbenzene	1.002	0.000#	100.0#	0#	-51.72#
119		1-Methyl-4-isopropylbenzene	1.042	0.000#	100.0#	0#	-51.92#
120		1,2,3-Trimethylbenzene	0.926	0.000#	100.0#	0#	-52.20#

Evaluate Continuing Calibration Report

Data Path : O:\Organics\DATA\VOA6\2020\09-SEP\200918\
Data File : V6012471.D
Acq On : 19 Sep 2020 12:16 am
Operator : VOA6:JT
Sample : CQ609182001
Misc : WG1412463
ALS Vial : 10 Sample Multiplier: 1

Quant Time: Sep 19 08:47:04 2020
Quant Method : O:\Organics\DATA\VOA6\2020\09-SEP\200918\P6091820W.M
Quant Title : PIANO VOLATILES
QLast Update : Sat Sep 19 08:40:17 2020
Response via : Initial Calibration

Min. RRF : 0.100 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 25% Max. Rel. Area : 200%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
121	1-Methyl-2-isopropylbenzene	1.030	0.000#	100.0#	0#	-52.41#
122	Indan	0.883	0.000#	100.0#	0#	-52.50#
123	1,3-Diethylbenzene	0.638	0.000#	100.0#	0#	-52.66#
124	1-Methyl-3-propylbenzene	1.186	0.000#	100.0#	0#	-52.77#
125	Indene	0.778	0.000#	100.0#	0#	-52.94#
126	1-Methyl-4-propylbenzene	1.500	1.360	9.3	87	0.00
127	n-Butylbenzene	1.131	1.073	5.1	90	0.00
128	1,2-Dimethyl-4-ethylbenzene	1.091	0.000#	100.0#	0#	-53.05#
129	1,2-Diethylbenzene	0.522	0.496	5.0	91	0.00
130	1-Methyl-2-propylbenzene	1.297	0.000#	100.0#	0#	-53.33#
131	1,4-Dimethyl-2-ethylbenzene	1.013	0.000#	100.0#	0#	-53.66#
132	Undecane	0.337	0.386	-14.5	93	0.00
133	1,3-Dimethyl-4-ethylbenzene	1.224	0.000#	100.0#	0#	-53.74#
134	1,3-Dimethyl-5-ethylbenzene	1.150	1.087	5.5	91	0.00
135	1,3-Dimethyl-2-ethylbenzene	1.192	0.000#	100.0#	0#	-54.10#
136	1,2-Dimethyl-3-ethylbenzene	1.065	0.000#	100.0#	0#	-54.46#
137	1,2,4,5-Tetramethylbenzene	1.127	0.000#	100.0#	0#	-54.86#
138	1,2,3,5-Tetramethylbenzene	1.003	0.000#	100.0#	0#	-54.95#
139	Pentylbenzene	0.942	0.912	3.2	91	0.00
140	1,2,3,4-Tetramethylbenzene	1.332	0.000#	100.0#	0#	-55.76#
141	1,3-DM-5-tert-Butylbenzene	1.011	0.000#	100.0#	0#	-55.75#
142	Dodecane	0.245	0.315	-28.6#	107	0.00
143	1,3,5-Triethylbenzene	0.645	0.000#	100.0#	0#	-56.63#
144	Naphthalene	0.919	0.000#	100.0#	0#	-56.77#
145	Benzothiophene	0.501	0.000#	100.0#	0#	-56.86#
146	1,2,4-Triethylbenzene	0.595	0.000#	100.0#	0#	-57.18#
147	Hexylbenzene	0.861	0.000#	100.0#	0#	-57.67#
148	MMT	0.360	0.000#	100.0#	0#	-57.92#
149	Tridecane	0.259	0.000#	100.0#	0#	-57.98#
150	2-Methylnaphthalene	0.619	0.000#	100.0#	0#	-59.48#
151	1-Methylnaphthalene	0.515	0.000#	100.0#	0#	-59.95#
152	Tetradecane	0.216	0.000#	100.0#	0#	-60.22#
153	Pentadecane	0.164	0.000#	100.0#	0#	-62.93#

* Evaluation of CC level amount vs concentration.
(#) = Out of Range SPCC's out = 0 CCC's out = 0

Quantitation Report (QT Reviewed)

Data Path : O:\Organics\DATA\VOA6\2020\09-SEP\200918\
Data File : V6012471.D
Acq On : 19 Sep 2020 12:16 am
Operator : VOA6:JT
Sample : CQ609182001
Misc : WG1412463
ALS Vial : 10 Sample Multiplier: 1

Quant Time: Sep 19 08:47:04 2020
Quant Method : O:\Organics\DATA\VOA6\2020\09-SEP\200918\P6091820W.M
Quant Title : PIANO VOLATILES
QLast Update : Sat Sep 19 08:40:17 2020
Response via : Initial Calibration

Sub List : PIANO - PIANO

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Chlorobenzene-D5 [IS]	38.35	117	470496	50.000	ug/L	0.00
System Monitoring Compounds						
24) Dibromofluoromethane (...	16.63	113	144212	49.154	ug/L	0.00
Spiked Amount 50.000	Range 78 - 118		Recovery = 98.31%			
62) Toluene-d8 (surr)	30.56	98	554102	49.382	ug/L	0.00
Spiked Amount 50.000	Range 87 - 113		Recovery = 98.76%			
64) 2-Bromo-1-chloropropan...	0.00	77	0d	0.000	ug/L	
Spiked Amount 50.000	Range 70 - 130		Recovery = 0.00%#			
87) 1-Chloro-2-fluorobenze...	0.00	130	0	0.000	ug/L	
Spiked Amount 50.000	Range 70 - 130		Recovery = 0.00%#			
97) 1,4-Dichlorobutane (H/...	0.00	55	0	0.000	ug/L	
Spiked Amount 50.000	Range 70 - 130		Recovery = 0.00%#			
101) 4-Bromofluorobenzene (...	45.77	95	230702	49.468	ug/L	0.00
Spiked Amount 50.000	Range 76 - 120		Recovery = 98.94%			
Target Compounds						Qvalue
2) 3-Methyl-1-butene	0.00		0	N.D.		
3) Isopentane	0.00		0	N.D. d		
4) 1-Pentene	8.60	42	34367	16.368	ug/L	97
5) 2-Methyl-1-butene	0.00		0	N.D. d		
6) Pentane	8.96	43	44998	13.582	ug/L	100
7) trans-2-Pentene	0.00		0	N.D.		
8) 2-Methyl-1,3-butadiene	0.00		0	N.D.		
9) cis-2-Pentene	0.00		0	N.D.		
10) Tertiary butanol	10.40	59	19488	66.604	ug/L	93
11) 2,2-Dimethylbutane	0.00		0	N.D. d		
12) 4-Methyl-1-pentene	0.00		0	N.D.		
13) Cyclopentane	12.58	70	24721	17.685	ug/L #	38
14) 2,3-Dimethylbutane	0.00		0	N.D. d		
15) 2-Methylpentane	12.77	43	59159	16.490	ug/L	98
16) MTBE	13.08	73	90555	20.188	ug/L	99
17) 3-Methylpentane	13.74	57	58086	17.904	ug/L	96
18) 1-Hexene	14.33	56	34882	18.893	ug/L	93
19) Hexane	14.92	57	48540	18.331	ug/L	94
20) Diisopropyl ether	15.21	45	89425	19.856	ug/L	96
21) trans-2-Hexene	0.00		0	N.D.		
22) 2-Methyl-2-pentene	0.00		0	N.D.		
23) cis-2-Hexene	0.00		0	N.D.		
25) Ethyl tertiary butyl e...	16.66	59	93065	19.884	ug/L	98

Data Path : O:\Organics\DATA\VOA6\2020\09-SEP\200918\
Data File : V6012471.D
Acq On : 19 Sep 2020 12:16 am
Operator : VOA6:JT
Sample : CQ609182001
Misc : WG1412463
ALS Vial : 10 Sample Multiplier: 1

Quant Time: Sep 19 08:47:04 2020
Quant Method : O:\Organics\DATA\VOA6\2020\09-SEP\200918\P6091820W.M
Quant Title : PIANO VOLATILES
QLast Update : Sat Sep 19 08:40:17 2020
Response via : Initial Calibration

Sub List : PIANO - PIANO

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
26) 2,2-Dimethylpentane	0.00		0	N.D.			
27) Methylcyclopentane	17.22	56	65530	19.402	ug/L		97
28) 2,4-Dimethylpentane	17.38	43	58537	17.943	ug/L		97
29) 2,2,3-Trimethylbutane	0.00		0	N.D.			
30) 1,2-Dichloroethane	0.00		0	N.D.		d	
31) 3,3-Dimethylpentane	0.00		0	N.D.			
32) Cyclohexane	20.10	56	56967	20.246	ug/L		100
33) 2-Methylhexane	20.52	43	63993	18.768	ug/L		98
34) Benzene	20.71	78	141893	20.033	ug/L		100
35) 2,3-Dimethylpentane	20.82	56	55557	19.376	ug/L		100
36) Thiophene	0.00		0	N.D.		d	
37) 1,1-Dimethylcyclopentane	0.00		0	N.D.			
38) 3-Methylhexane	21.32	43	51104	16.793	ug/L		93
39) TAME	21.69	73	96724	17.809	ug/L		96
40) cis-1,3-Dimethylcyclop...	0.00		0	N.D.			
41) 3-Ethylpentane	0.00		0	N.D.			
42) trans-1,3-DMCP/2-Methy...	0.00		0	N.D.			
43) 1-Heptene/trans-1,2-DMCP	0.00		0	N.D.		d	
44) Isooctane	22.75	57	144012	19.741	ug/L		95
45) trans-3-Heptene	0.00		0	N.D.		d	
46) Heptane	23.49	43	52572	18.538	ug/L		98
48) trans-2-Heptene	0.00		0	N.D.			
49) cis-2-Heptene	0.00		0	N.D.			
50) 2,2-Dimethylhexane	0.00		0	N.D.		d	
51) Methylcyclohexane	25.89	83	69126	21.020	ug/L		99
52) 2,5-Dimethylhexane	0.00		0	N.D.			
53) 2,4-Dimethylhexane	0.00		0	N.D.			
54) Ethylcyclopentane	0.00		0	N.D.			
55) 2,2,3-Trimethylpentane	0.00		0	N.D.			
57) 2,3,4-Trimethylpentane	0.00		0	N.D.			
58) 2,3,3-Trimethylpentane	0.00		0	N.D.			
59) 2,3-Dimethylhexane	0.00		0	N.D.			
60) 2-Methylheptane	29.86	57	64039	19.491	ug/L		94
61) 4-Methylheptane	0.00		0	N.D.		d	
63) 3-Methylheptane	30.61	43	58199	18.039	ug/L		97
65) 3-Ethylhexane	0.00		0	N.D.		d	
66) Toluene	30.92	91	166972	19.456	ug/L		99
67) 2-Methylthiophene	0.00		0	N.D.			
68) trans-1,4-Dimethylcycl...	0.00		0	N.D.			
69) 3-Methylthiophene	0.00		0	N.D.			
70) 1-Octene	0.00		0	N.D.			

Quantitation Report (QT Reviewed)

Data Path : O:\Organics\DATA\VOA6\2020\09-SEP\200918\
Data File : V6012471.D
Acq On : 19 Sep 2020 12:16 am
Operator : VOA6:JT
Sample : CQ609182001
Misc : WG1412463
ALS Vial : 10 Sample Multiplier: 1

Quant Time: Sep 19 08:47:04 2020
Quant Method : O:\Organics\DATA\VOA6\2020\09-SEP\200918\P6091820W.M
Quant Title : PIANO VOLATILES
QLast Update : Sat Sep 19 08:40:17 2020
Response via : Initial Calibration

Sub List : PIANO - PIANO

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
71) Octane	33.12	43	67529	20.511	ug/L	95
72) trans-1,2-Dimethylcycl...	0.00		0	N.D.		
73) 1,2-Dibromoethane	0.00		0	N.D.		
75) cis-2-Octene	0.00		0	N.D.		
76) Isopropylcyclopentane	0.00		0	N.D.		
77) cis-1,2-Dimethylcycloh...	0.00		0	N.D.		
78) 2,5-Dimethylheptane	0.00		0	N.D.		
79) 3,5-Dimethylheptane	0.00		0	N.D.		
80) 3,3-Dimethylheptane	0.00		0	N.D.		
81) 1,1,4-Trimethylcyclohe...	0.00		0	N.D.		
82) 2,3-Dimethylheptane	0.00		0	N.D.		
83) 3,4-Dimethylheptane	0.00		0	N.D.		
84) 4-Methyloctane	0.00		0	N.D.		
85) 2-Methyloctane	0.00		0	N.D.		
86) Ethylbenzene	39.96	91	192194	19.808	ug/L	100
88) 2-Ethylthiophene	0.00		0	N.D.		
89) 3-Methyloctane	0.00		0	N.D.		
90) 3,3-Diethylpentane	0.00		0	N.D.		
91) p/m-Xylene	41.21	91	302492	40.878	ug/L	100
92) 1-Nonene	0.00		0	N.D.		
93) trans-3-Nonene	0.00		0	N.D.		
94) cis-3-Nonene	0.00		0	N.D.	d	
95) Nonane	42.66	43	64563M4	20.065	ug/L	
96) Styrene	0.00		0	N.D.		
98) o-Xylene	43.48	91	154731	19.946	ug/L	97
99) 2-Nonene	0.00		0	N.D.		
100) Isopropylcyclohexane	0.00		0	N.D.		
102) Isopropylbenzene	45.80	105	203369	20.118	ug/L	98
103) 3,3-Dimethyloctane	0.00		0	N.D.		
104) n-Propylbenzene	48.43	91	238636	20.074	ug/L	100
105) 2-Methylnonane	0.00		0	N.D.		
106) 3-Methylnonane	0.00		0	N.D.	d	
107) 1-Methyl-3-ethylbenzene	49.07	105	203429	20.237	ug/L	99
108) 1-Methyl-4-ethylbenzene	49.24	105	199704	20.509	ug/L	99
109) 1,3,5-Trimethylbenzene	49.85	105	169262	20.132	ug/L	100
110) 1-Decene	49.99	41	33913	17.276	ug/L	95
111) Isobutylcyclohexane	0.00		0	N.D.	d	
112) 1-Methyl-2-ethylbenzene	50.18	105	201466	19.474	ug/L	99
113) Decane	50.38	43	61294	22.128	ug/L	95
114) tert-Butylbenzene	0.00		0	N.D.		
115) 1,2,4-Trimethylbenzene	51.07	105	166461	19.334	ug/L	100

Quantitation Report (QT Reviewed)

Data Path : O:\Organics\DATA\VOA6\2020\09-SEP\200918\
Data File : V6012471.D
Acq On : 19 Sep 2020 12:16 am
Operator : VOA6:JT
Sample : CQ609182001
Misc : WG1412463
ALS Vial : 10 Sample Multiplier: 1

Quant Time: Sep 19 08:47:04 2020
Quant Method : O:\Organics\DATA\VOA6\2020\09-SEP\200918\P6091820W.M
Quant Title : PIANO VOLATILES
QLast Update : Sat Sep 19 08:40:17 2020
Response via : Initial Calibration

Sub List : PIANO - PIANO

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
116) Isobutylbenzene	0.00		0	N.D.	d	
117) sec-Butylbenzene	51.33	105	227933	20.317	ug/L	98
118) 1-Methyl-3-isopropylbe...	0.00		0	N.D.	d	
119) 1-Methyl-4-isopropylbe...	0.00		0	N.D.	d	
120) 1,2,3-Trimethylbenzene	0.00		0	N.D.	d	
121) 1-Methyl-2-isopropylbe...	0.00		0	N.D.		
122) Indan	0.00		0	N.D.		
123) 1,3-Diethylbenzene	0.00		0	N.D.	d	
124) 1-Methyl-3-propylbenzene	0.00		0	N.D.	d	
125) Indene	0.00		0	N.D.	d	
126) 1-Methyl-4-propylbenzene	52.92	105	255883	18.127	ug/L	100
127) n-Butylbenzene	52.92	91	201905	18.967	ug/L	99
128) 1,2-Dimethyl-4-ethylbe...	0.00		0	N.D.	d	
129) 1,2-Diethylbenzene	53.14	119	93414	19.026	ug/L	96
130) 1-Methyl-2-propylbenzene	0.00		0	N.D.	d	
131) 1,4-Dimethyl-2-ethylbe...	0.00		0	N.D.		
132) Undecane	53.69	57	72584	22.861	ug/L	98
133) 1,3-Dimethyl-4-ethylbe...	0.00		0	N.D.	d	
134) 1,3-Dimethyl-5-ethylbe...	53.88	119	204525	18.896	ug/L	98
135) 1,3-Dimethyl-2-ethylbe...	0.00		0	N.D.	d	
136) 1,2-Dimethyl-3-ethylbe...	0.00		0	N.D.	d	
137) 1,2,4,5-Tetramethylben...	0.00		0	N.D.	d	
138) 1,2,3,5-Tetramethylben...	0.00		0	N.D.	d	
139) Pentylbenzene	55.43	91	171554	19.360	ug/L	99
140) 1,2,3,4-Tetramethylben...	0.00		0	N.D.	d	
141) 1,3-DM-5-tert-Butylben...	0.00		0	N.D.	d	
142) Dodecane	55.91	43	59367	25.703	ug/L	96
143) 1,3,5-Triethylbenzene	0.00		0	N.D.	d	
144) Naphthalene	0.00		0	N.D.	d	
145) Benzothiophene	0.00		0	N.D.	d	
146) 1,2,4-Triethylbenzene	0.00		0	N.D.	d	
147) Hexylbenzene	0.00		0	N.D.	d	
148) MMT	0.00		0	N.D.	d	
149) Tridecane	0.00		0	N.D.	d	
150) 2-Methylnaphthalene	0.00		0	N.D.	d	
151) 1-Methylnaphthalene	0.00		0	N.D.	d	
152) Tetradecane	0.00		0	N.D.	d	
153) Pentadecane	0.00		0	N.D.	d	

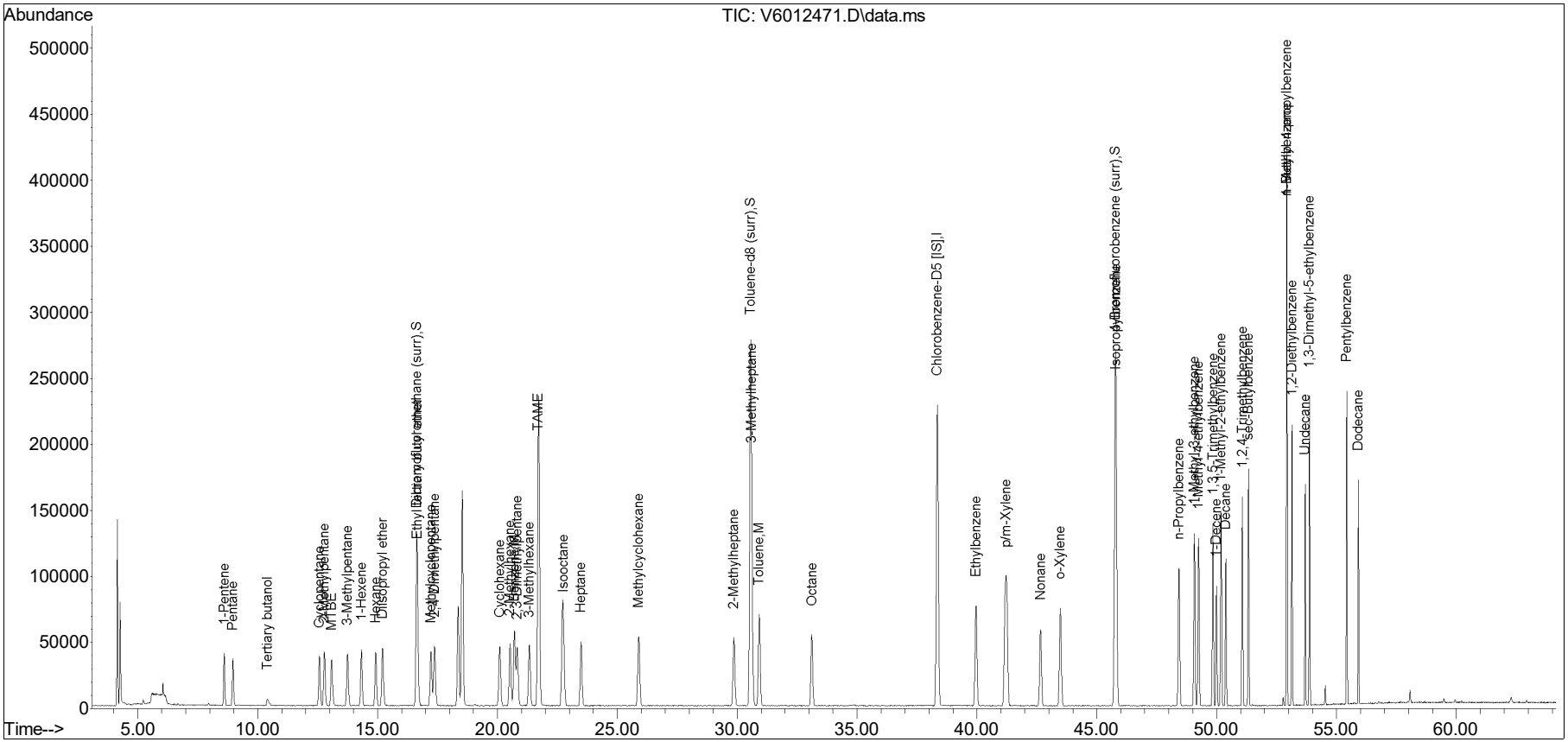
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : O:\Organics\DATA\VOA6\2020\09-SEP\200918\
Data File : V6012471.D
Acq On : 19 Sep 2020 12:16 am
Operator : VOA6:JT
Sample : CQ609182001
Misc : WG1412463
ALS Vial : 10 Sample Multiplier: 1

Quant Time: Sep 19 08:47:04 2020
Quant Method : O:\Organics\DATA\VOA6\2020\09-SEP\200918\P6091820W.M
Quant Title : PIANO VOLATILES
QLast Update : Sat Sep 19 08:40:17 2020
Response via : Initial Calibration

Sub List : PIANO - PIANO



Work Group

ALPHA ANALYTICAL LABORATORIES, INC.

Alpha WORK GROUP REPORT (wk02)

Oct 06 2020, 04:19 pm

Work Group: WG1416337 for Department: 31 GC/MS - Volatiles

Created: 30-SEP-20 Due: Operator: JT

Sample	Client ID	C	Product	Matrix	Stat	UA	HOLD	DUE	PR	Location
L2040277-01	20A-EMW11R2-092320-1	S	A2-PIANO8260	WATER	DONE	U	1007	1008	S0	Vial-B
L2040277-02	20A-AE3-092320-1	S	A2-PIANO8260	WATER	DONE	U	1007	1008	S0	Vial-B
L2040277-03	20A-TRC101-092320-1	S	A2-PIANO8260	WATER	DONE	U	1007	1008	S0	Vial-B
WG1416337-1	MS BFB Tune Standard	S	A2-PIANO8260	WATER	DONE	U				
WG1416337-2	Continuing Calibrati	S	A2-PIANO8260	WATER	DONE	U				
WG1416337-3	Laboratory Control S	S	A2-PIANO8260	WATER	DONE	U				
WG1416337-4	LCS Duplicate	S	A2-PIANO8260	WATER	DONE	U				
WG1416337-5	Laboratory Method Bl	S	A2-PIANO8260	WATER	DONE	U				
WG1416337-6	MS BFB Tune Standard	S	A2-PIANO8260	WATER	DACQ	U				
WG1416337-7	Continuing Calibrati	S	A2-PIANO8260	WATER	DONE	U				

Comments:

WG1416337-4 WG1416337-3

Sequence Logs

Alpha Analytical
Instrument Run Log

Instrument ID: VOA 6

Internal Standard/Surrogate IDs: VW080120K

Date: 09/18/20

CCV/ LCS MIX ID's VW080120G/ VW080120C

Analyst Initials: JT

Sequence File Name: 200918.S

AS Position #	Sample ID	Acquisition Method	Data File ID	Standard ID or Batch ID #, ICAL Ref #	Comment (s)	Date Injected/ TIME	ph
1	BLANK	PIANO	V6012462	WG,ICAL		09/18/20 02:16 PM	
2	T609182001	VOATUNE	V6012463	WG,ICAL		09/18/20 03:24 PM	
3	I609182001	PIANO	V6012464	WG,ICAL		09/18/20 04:00 PM	
4	I609182002	PIANO	V6012465	WG,ICAL		09/18/20 05:11 PM	
5	I609182003	PIANO	V6012466	WG,ICAL		09/18/20 06:22 PM	
6	I609182004	PIANO	V6012467	WG,ICAL		09/18/20 07:33 PM	
7	I609182005	PIANO	V6012468	WG,ICAL		09/18/20 08:44 PM	
8	I609182006	PIANO	V6012469	WG,ICAL		09/18/20 09:55 PM	
9	BLANK	PIANO	V6012470	WG,ICAL		09/18/20 11:06 PM	
10	CQ609182001	PIANO	V6012471	WG,ICAL		09/19/20 12:16 PM	
11	BLANK	PIANO	V6012472	WG,ICAL		09/19/20 01:27 AM	

Alpha Analytical
Instrument Run Log

Instrument ID: VOA 6

Internal Standard/Surrogate IDs: VW080120K

Date: 09/30/20

CCV/ LCS MIX ID's VW080120G/ VW080120C

Analyst Initials: JT

Sequence File Name: 200930.S

AS Position #	Sample ID	Acquisition Method	Data File ID	Standard ID or Batch ID #, ICAL Ref #	Comment (s)	Date Injected/ TIME	ph
1	BLANK	PIANO.M	V6012564	WG, ICAL		09/29/20 03:48 PM	
2	TUNE	VOATUNE.M	V6012565	WG, ICAL		09/29/20 04:56 PM	
3	CCV	PIANO.M	V6012566	WG, ICAL		09/29/20 05:31 PM	
4	LCS	PIANO.M	V6012567	WG, ICAL		09/29/20 06:42 PM	
5	LCSD	PIANO.M	V6012568	WG, ICAL		09/29/20 07:53 PM	
6	BLANK	PIANO.M	V6012569	WG, ICAL		09/29/20 09:05 PM	
7	BLANK	PIANO.M	V6012570	WG, ICAL		09/29/20 10:16 PM	
8	L2040277-01,31,5,5	PIANO.M	V6012571	WG, ICAL		09/30/20 10:15 AM	
9	L2040277-02,31,5,5	PIANO.M	V6012572	WG, ICAL		09/30/20 11:26 AM	
10	L2040277-03,31,5,5	PIANO.M	V6012573	WG, ICAL		09/30/20 12:37 PM	
12	CCV	PIANO.M	V6012575	WG, ICAL		09/30/20 02:55 PM	

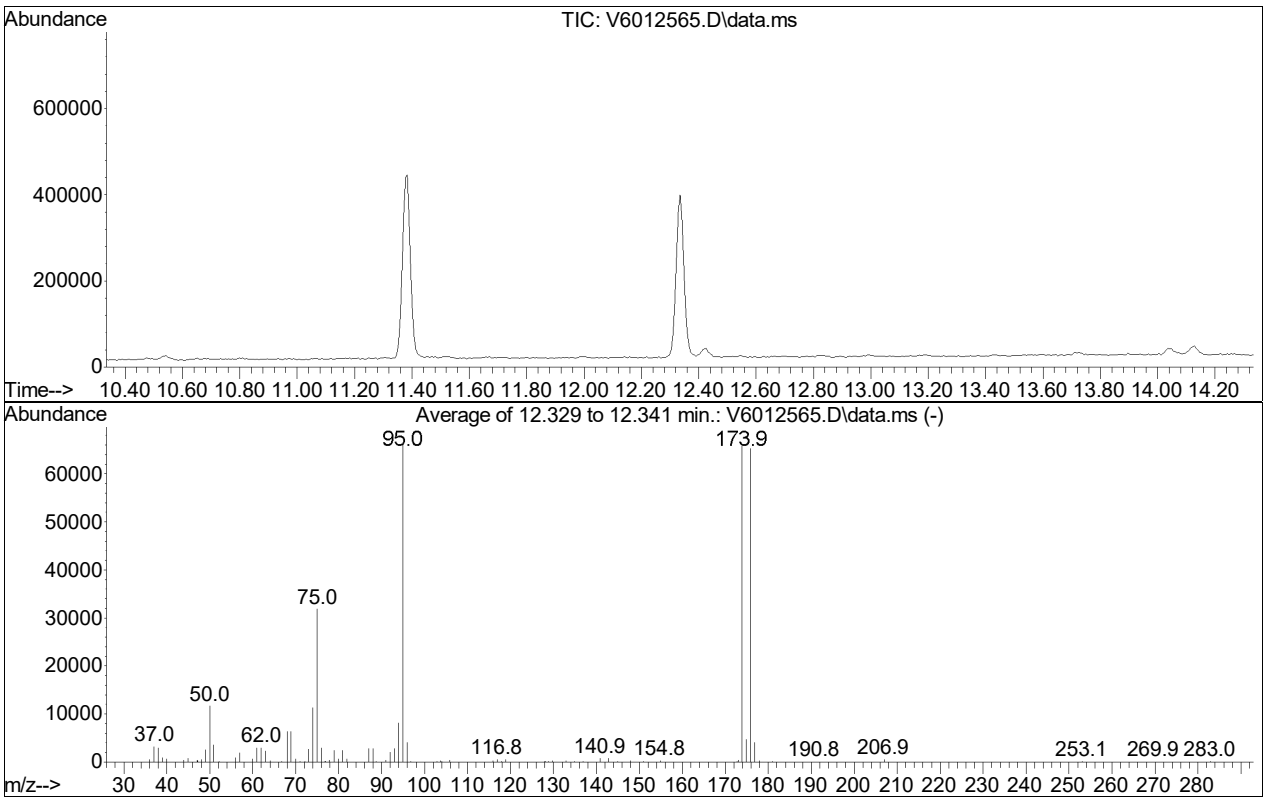
Analytical Event

Continuing Calibration
BFB Tune

Data Path : O:\Organics\DATA\VOA6\2020\09-SEP\200929\
Data File : V6012565.D
Acq On : 29 Sep 2020 4:56 pm
Operator : VOA6:RY
Sample : WG1416337-1,31
Misc : WG1416337,ICAL17149
ALS Vial : 2 Sample Multiplier: 1

Integration File: RTEINT.P

Method : O:\Organics\DATA\VOA6\2020\09-SEP\200929\P6091820W.M
Title : PIANO VOLATILES
Last Update : Sat Sep 19 08:40:17 2020



Spectrum Information: Average of 12.329 to 12.341 min.

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	17.6	11674	PASS
75	95	30	60	48.1	31970	PASS
95	95	100	100	100.0	66517	PASS
96	95	5	9	6.2	4154	PASS
173	174	0.00	2	0.7	446	PASS
174	95	50	100	99.0	65821	PASS
175	174	5	9	7.2	4742	PASS
176	174	95	101	99.3	65349	PASS
177	176	5	9	6.3	4092	PASS

Continuing Calibration

Evaluate Continuing Calibration Report

Data Path : O:\Organics\DATA\VOA6\2020\09-SEP\200929\
Data File : V6012566.D
Acq On : 29 Sep 2020 5:31 pm
Operator : VOA6:RY
Sample : WG1416337-2,31,5,5
Misc : WG1416337,ICAL17149
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Sep 30 09:12:13 2020
Quant Method : O:\Organics\DATA\VOA6\2020\09-SEP\200929\P6091820W.M
Quant Title : PIANO VOLATILES
QLast Update : Sat Sep 19 08:40:17 2020
Response via : Initial Calibration

Min. RRF : 0.100 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 25% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1	I	Chlorobenzene-D5 [IS]	1.000	1.000	0.0	72	0.00
2		3-Methyl-1-butene	0.374	0.353	5.6	70	-0.01
3		Isopentane	0.214	0.185	13.6	68	0.00
4		1-Pentene	0.223	0.216	3.1	70	0.00
5		2-Methyl-1-butene	0.373	0.371	0.5	73	0.00
6		Pentane	0.352	0.328	6.8	70	-0.01
7		trans-2-Pentene	0.369	0.369	0.0	73	0.00
8		2-Methyl-1,3-butadiene	0.250	0.265	-6.0	77	-0.01
9		cis-2-Pentene	0.357	0.360	-0.8	75	-0.01
10		Tertiary butanol	0.031	0.038#	-22.6	89	0.02
11		2,2-Dimethylbutane	0.230	0.206	10.4	70	0.00
12		4-Methyl-1-pentene	0.258	0.252	2.3	73	0.00
13		Cyclopentane	0.149	0.154	-3.4	75	0.00
14		2,3-Dimethylbutane	0.115	0.121	-5.2	75	-0.01
15		2-Methylpentane	0.381	0.366	3.9	72	0.00
16		MTBE	0.477	0.516	-8.2	76	0.00
17		3-Methylpentane	0.345	0.359	-4.1	74	-0.01
18		1-Hexene	0.196	0.206	-5.1	75	0.00
19		Hexane	0.281	0.294	-4.6	76	0.00
20		Diisopropyl ether	0.479	0.521	-8.8	76	0.00
21		trans-2-Hexene	0.343	0.359	-4.7	76	-0.01
22		2-Methyl-2-pentene	0.368	0.388	-5.4	75	0.00
23		cis-2-Hexene	0.279	0.293	-5.0	76	-0.01
24	S	Dibromofluoromethane (surr)	0.312	0.308	1.3	71	0.00
25		Ethyl tertiary butyl ether	0.497	0.539	-8.5	76	0.00
26		2,2-Dimethylpentane	0.426	0.459	-7.7	76	-0.01
27		Methylcyclopentane	0.359	0.376	-4.7	74	0.00
28		2,4-Dimethylpentane	0.347	0.345	0.6	74	0.00
29		2,2,3-Trimethylbutane	0.373	0.396	-6.2	76	-0.01
30		1,2-Dichloroethane	0.247	0.273	-10.5	80	0.00
31		3,3-Dimethylpentane	0.411	0.412	-0.2	74	0.00
32		Cyclohexane	0.299	0.312	-4.3	74	0.00
33		2-Methylhexane	0.362	0.365	-0.8	74	0.00
34	M	Benzene	0.753	0.843	-12.0	80	0.00
35		2,3-Dimethylpentane	0.305	0.329	-7.9	76	0.00
36		Thiophene	0.422	0.474	-12.3	79	0.00
37		1,1-Dimethylcyclopentane	0.209	0.252	-20.6	85	-0.01
38		3-Methylhexane	0.323	0.331	-2.5	74	0.00
39		TAME	0.577	0.550	4.7	78	0.00

Evaluate Continuing Calibration Report

Data Path : O:\Organics\DATA\VOA6\2020\09-SEP\200929\
Data File : V6012566.D
Acq On : 29 Sep 2020 5:31 pm
Operator : VOA6:RY
Sample : WG1416337-2,31,5,5
Misc : WG1416337,ICAL17149
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Sep 30 09:12:13 2020
Quant Method : O:\Organics\DATA\VOA6\2020\09-SEP\200929\P6091820W.M
Quant Title : PIANO VOLATILES
QLast Update : Sat Sep 19 08:40:17 2020
Response via : Initial Calibration

Min. RRF : 0.100 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 25% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
40		cis-1,3-Dimethylcyclopentan	0.310	0.336	-8.4	79	0.00
41		3-Ethylpentane	0.408	0.411	-0.7	74	0.00
42		trans-1,3-DMCP/2-Methyl-1-h	0.141	0.146	-3.5	79	0.00
43		1-Heptene/trans-1,2-DMCP	0.159	0.176	-10.7	78	0.00
44		Isooctane	0.775	0.842	-8.6	78	0.00
45		trans-3-Heptene	0.267	0.267	0.0	76	0.00
46		Heptane	0.301	0.307	-2.0	77	0.00
48		trans-2-Heptene	0.234	0.251	-7.3	77	0.00
49		cis-2-Heptene	0.177	0.190	-7.3	77	0.00
50		2,2-Dimethylhexane	0.758	0.817	-7.8	76	0.00
51		Methylcyclohexane	0.349	0.387	-10.9	78	0.00
52		2,5-Dimethylhexane	0.380	0.400	-5.3	74	0.00
53		2,4-Dimethylhexane	0.303	0.325	-7.3	77	0.00
54		Ethylcyclopentane	0.297	0.327	-10.1	78	0.00
55		2,2,3-Trimethylpentane	0.598	0.644	-7.7	76	0.00
57		2,3,4-Trimethylpentane	0.418	0.422	-1.0	73	0.00
58		2,3,3-Trimethylpentane	0.356	0.361	-1.4	74	0.00
59		2,3-Dimethylhexane	0.393	0.397	-1.0	73	0.00
60		2-Methylheptane	0.349	0.362	-3.7	73	0.00
61		4-Methylheptane	0.416	0.421	-1.2	74	0.00
62	S	Toluene-d8 (surr)	1.192	1.180	1.0	71	0.00
63		3-Methylheptane	0.343	0.323	5.8	75	0.00
64	S	2-Bromo-1-chloropropane (H/	0.280	0.318	-13.6	80	0.00
65		3-Ethylhexane	0.430	0.460	-7.0	77	0.00
66	M	Toluene	0.912	1.019	-11.7	80	0.00
67		2-Methylthiophene	0.701	0.792	-13.0	80	0.00
68		trans-1,4-Dimethylcyclohexa	0.448	0.497	-10.9	78	0.00
69		3-Methylthiophene	0.707	0.803	-13.6	81	0.00
70		1-Octene	0.178	0.184	-3.4	74	0.00
71		Octane	0.350	0.349	0.3	73	0.00
72		trans-1,2-Dimethylcyclohexa	0.306	0.322	-5.2	76	0.00
73		1,2-Dibromoethane	0.188	0.225	-19.7	85	0.00
75		cis-2-Octene	0.269	0.281	-4.5	77	0.00
76		Isopropylcyclopentane	0.331	0.380	-14.8	82	0.00
77		cis-1,2-Dimethylcyclohexane	0.292	0.303	-3.8	75	0.00
78		2,5-Dimethylheptane	0.510	0.541	-6.1	77	0.00
79		3,5-Dimethylheptane	0.579	0.624	-7.8	74	0.00
80		3,3-Dimethylheptane	0.393	0.408	-3.8	74	0.00
81		1,1,4-Trimethylcyclohexane	0.364	0.388	-6.6	75	0.00

Evaluate Continuing Calibration Report

Data Path : O:\Organics\DATA\VOA6\2020\09-SEP\200929\
Data File : V6012566.D
Acq On : 29 Sep 2020 5:31 pm
Operator : VOA6:RY
Sample : WG1416337-2,31,5,5
Misc : WG1416337,ICAL17149
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Sep 30 09:12:13 2020
Quant Method : O:\Organics\DATA\VOA6\2020\09-SEP\200929\P6091820W.M
Quant Title : PIANO VOLATILES
QLast Update : Sat Sep 19 08:40:17 2020
Response via : Initial Calibration

Min. RRF : 0.100 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 25% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
82		2,3-Dimethylheptane	0.449	0.455	-1.3	73	-0.01
83		3,4-Dimethylheptane	0.288	0.289	-0.3	75	-0.01
84		4-Methyloctane	0.430	0.408	5.1	68	0.00
85		2-Methyloctane	0.361	0.403	-11.6	81	0.00
86		Ethylbenzene	1.031	1.134	-10.0	79	0.00
87	S	1-Chloro-2-fluorobenzene (H	0.585	0.650	-11.1	80	0.00
88		2-Ethylthiophene	0.794	0.897	-13.0	81	0.00
89		3-Methyloctane	0.651	0.697	-7.1	76	-0.01
90		3,3-Diethylpentane	0.761	0.799	-5.0	74	-0.01
91		p/m-Xylene	0.786	0.861	-9.5	79	-0.01
92		1-Nonene	0.189	0.199	-5.3	74	0.00
93		trans-3-Nonene	0.258	0.265	-2.7	74	0.00
94		cis-3-Nonene	0.285	0.306	-7.4	75	-0.01
95		Nonane	0.342	0.358	-4.7	75	-0.01
96		Styrene	0.662	0.731	-10.4	79	0.00
97	S	1,4-Dichlorobutane (H/surr)	0.261	0.299	-14.6	83	0.00
98		o-Xylene	0.824	0.899	-9.1	80	0.00
99		2-Nonene	0.267	0.281	-5.2	75	0.00
100		Isopropylcyclohexane	0.393	0.427	-8.7	77	0.00
101	S	4-Bromofluorobenzene (surr)	0.496	0.483	2.6	71	0.00
102		Isopropylbenzene	1.074	1.181	-10.0	80	0.00
103		3,3-Dimethyloctane	0.570	0.632	-10.9	76	-0.01
104		n-Propylbenzene	1.263	1.387	-9.8	79	0.00
105		2-Methylnonane	0.331	0.348	-5.1	74	0.00
106		3-Methylnonane	0.404	0.436	-7.9	74	0.00
107		1-Methyl-3-ethylbenzene	1.068	1.183	-10.8	80	0.00
108		1-Methyl-4-ethylbenzene	1.035	1.143	-10.4	80	0.00
109		1,3,5-Trimethylbenzene	0.893	0.984	-10.2	79	0.00
110		1-Decene	0.209	0.216	-3.3	73	0.00
111		Isobutylcyclohexane	0.421	0.472	-12.1	80	0.00
112		1-Methyl-2-ethylbenzene	1.099	1.222	-11.2	80	0.00
113		Decane	0.294	0.313	-6.5	74	0.00
114		tert-Butylbenzene	0.814	0.897	-10.2	79	0.00
115		1,2,4-Trimethylbenzene	0.915	1.013	-10.7	79	0.00
116		Isobutylbenzene	1.008	1.126	-11.7	79	0.00
117		sec-Butylbenzene	1.192	1.340	-12.4	81	0.00
118		1-Methyl-3-isopropylbenzene	1.002	1.106	-10.4	79	0.00
119		1-Methyl-4-isopropylbenzene	1.042	1.155	-10.8	80	0.00
120		1,2,3-Trimethylbenzene	0.926	1.017	-9.8	79	0.00

Evaluate Continuing Calibration Report

Data Path : O:\Organics\DATA\VOA6\2020\09-SEP\200929\
Data File : V6012566.D
Acq On : 29 Sep 2020 5:31 pm
Operator : VOA6:RY
Sample : WG1416337-2,31,5,5
Misc : WG1416337,ICAL17149
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Sep 30 09:12:13 2020
Quant Method : O:\Organics\DATA\VOA6\2020\09-SEP\200929\P6091820W.M
Quant Title : PIANO VOLATILES
QLast Update : Sat Sep 19 08:40:17 2020
Response via : Initial Calibration

Min. RRF : 0.100 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 25% Max. Rel. Area : 200%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
121	1-Methyl-2-isopropylbenzene	1.030	1.139	-10.6	80	0.00
122	Indan	0.883	0.988	-11.9	82	0.00
123	1,3-Diethylbenzene	0.638	0.715	-12.1	81	0.00
124	1-Methyl-3-propylbenzene	1.186	1.337	-12.7	81	0.00
125	Indene	0.778	0.909	-16.8	84	0.00
126	1-Methyl-4-propylbenzene	1.500	1.730	-15.3	83	0.00
127	n-Butylbenzene	1.131	1.300	-14.9	83	0.00
128	1,2-Dimethyl-4-ethylbenzene	1.091	1.231	-12.8	80	0.00
129	1,2-Diethylbenzene	0.522	0.594	-13.8	82	0.00
130	1-Methyl-2-propylbenzene	1.297	1.473	-13.6	82	0.00
131	1,4-Dimethyl-2-ethylbenzene	1.013	1.129	-11.5	80	0.00
132	Undecane	0.337	0.389	-15.4	80	0.00
133	1,3-Dimethyl-4-ethylbenzene	1.224	1.373	-12.2	81	0.00
134	1,3-Dimethyl-5-ethylbenzene	1.150	1.297	-12.8	81	0.00
135	1,3-Dimethyl-2-ethylbenzene	1.192	1.324	-11.1	80	0.00
136	1,2-Dimethyl-3-ethylbenzene	1.065	1.180	-10.8	80	0.00
137	1,2,4,5-Tetramethylbenzene	1.127	1.241	-10.1	79	0.00
138	1,2,3,5-Tetramethylbenzene	1.003	1.109	-10.6	80	0.00
139	Pentylbenzene	0.942	1.066	-13.2	82	0.00
140	1,2,3,4-Tetramethylbenzene	1.332	1.478	-11.0	80	0.00
141	1,3-DM-5-tert-Butylbenzene	1.011	1.124	-11.2	80	0.00
142	Dodecane	0.245	0.250	-2.0	80	0.00
143	1,3,5-Triethylbenzene	0.645	0.715	-10.9	79	0.00
144	Naphthalene	0.919	1.065	-15.9	85	0.00
145	Benzothiophene	0.501	0.591	-18.0	87	0.00
146	1,2,4-Triethylbenzene	0.595	0.662	-11.3	80	0.00
147	Hexylbenzene	0.861	0.981	-13.9	82	0.00
148	MMT	0.360	0.413	-14.7	83	0.00
149	Tridecane	0.259	0.257	0.8	83	0.00
150	2-Methylnaphthalene	0.619	0.708	-14.4	83	0.00
151	1-Methylnaphthalene	0.515	0.597	-15.9	84	0.00
152	Tetradecane	0.216	0.216	0.0	81	0.00
153	Pentadecane	0.164	0.167	-1.8	78	0.00

* Evaluation of CC level amount vs concentration.
(#) = Out of Range SPCC's out = 0 CCC's out = 0

Quantitation Report (QT Reviewed)

Data Path : O:\Organics\DATA\VOA6\2020\09-SEP\200929\
Data File : V6012566.D
Acq On : 29 Sep 2020 5:31 pm
Operator : VOA6:RY
Sample : WG1416337-2,31,5,5
Misc : WG1416337,ICAL17149
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Sep 30 09:12:13 2020
Quant Method : O:\Organics\DATA\VOA6\2020\09-SEP\200929\P6091820W.M
Quant Title : PIANO VOLATILES
QLast Update : Sat Sep 19 08:40:17 2020
Response via : Initial Calibration

Sub List : PIANO - PIANO

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Chlorobenzene-D5 [IS]	38.35	117	370570	50.000	ug/L	0.00
System Monitoring Compounds						
24) Dibromofluoromethane (...	16.63	113	114168	49.407	ug/L	0.00
Spiked Amount 50.000	Range 78 - 118		Recovery = 98.81%			
62) Toluene-d8 (surr)	30.56	98	437422	49.496	ug/L	0.00
Spiked Amount 50.000	Range 87 - 113		Recovery = 98.99%			
64) 2-Bromo-1-chloropropan...	30.79	77	117823	56.850	ug/L	0.00
Spiked Amount 50.000	Range 70 - 130		Recovery = 113.70%			
87) 1-Chloro-2-fluorobenze...	39.98	130	240775	55.570	ug/L	0.00
Spiked Amount 50.000	Range 70 - 130		Recovery = 111.14%			
97) 1,4-Dichlorobutane (H/...	43.23	55	110735M4	57.291	ug/L	0.00
Spiked Amount 50.000	Range 70 - 130		Recovery = 114.58%			
101) 4-Bromofluorobenzene (...	45.77	95	178898	48.704	ug/L	0.00
Spiked Amount 50.000	Range 76 - 120		Recovery = 97.41%			
Target Compounds						Qvalue
2) 3-Methyl-1-butene	7.41	55	130965	47.292	ug/L	99
3) Isopentane	7.94	43	68600	43.317	ug/L	97
4) 1-Pentene	8.59	42	79963	48.354	ug/L	100
5) 2-Methyl-1-butene	8.90	55	137555	49.794	ug/L	99
6) Pentane	8.95	43	121577	46.591	ug/L	99
7) trans-2-Pentene	9.40	55	136914	50.088	ug/L	99
8) 2-Methyl-1,3-butadiene	9.56	67	98193	52.894	ug/L	94
9) cis-2-Pentene	9.76	55	133267	50.298	ug/L	98
10) Tertiary butanol	10.40	59	70401	305.492	ug/L	98
11) 2,2-Dimethylbutane	10.78	43	76153	44.629	ug/L	96
12) 4-Methyl-1-pentene	12.09	43	93203	48.671	ug/L	98
13) Cyclopentane	12.57	70	57090	51.855	ug/L #	91
14) 2,3-Dimethylbutane	12.55	71	44979	52.637	ug/L	100
15) 2-Methylpentane	12.77	43	135604	47.990	ug/L	97
16) MTBE	13.08	73	191153	54.107	ug/L	98
17) 3-Methylpentane	13.74	57	133181	52.120	ug/L	98
18) 1-Hexene	14.32	56	76443	52.568	ug/L	96
19) Hexane	14.91	57	108958	52.242	ug/L	98
20) Diisopropyl ether	15.21	45	192913	54.385	ug/L	97
21) trans-2-Hexene	15.40	55	132969	52.366	ug/L	99
22) 2-Methyl-2-pentene	15.58	69	143715	52.751	ug/L	98
23) cis-2-Hexene	16.13	55	108704	52.484	ug/L	99

Quantitation Report (QT Reviewed)

Data Path : O:\Organics\DATA\VOA6\2020\09-SEP\200929\
Data File : V6012566.D
Acq On : 29 Sep 2020 5:31 pm
Operator : VOA6:RY
Sample : WG1416337-2,31,5,5
Misc : WG1416337,ICAL17149
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Sep 30 09:12:13 2020
Quant Method : O:\Organics\DATA\VOA6\2020\09-SEP\200929\P6091820W.M
Quant Title : PIANO VOLATILES
QLast Update : Sat Sep 19 08:40:17 2020
Response via : Initial Calibration

Sub List : PIANO - PIANO

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
25) Ethyl tertiary butyl e...	16.66	59	199718	54.177	ug/L	98
26) 2,2-Dimethylpentane	16.93	57	170098	53.825	ug/L	97
27) Methylcyclopentane	17.22	56	139335	52.379	ug/L	96
28) 2,4-Dimethylpentane	17.37	43	127762	49.721	ug/L	97
29) 2,2,3-Trimethylbutane	17.97	57	146906	53.161	ug/L	96
30) 1,2-Dichloroethane	18.67	62	101149	55.241	ug/L	96
31) 3,3-Dimethylpentane	19.62	43	152714	50.166	ug/L	98
32) Cyclohexane	20.10	56	115730	52.222	ug/L	99
33) 2-Methylhexane	20.53	43	135332	50.393	ug/L	97
34) Benzene	20.70	78	312245	55.972	ug/L	99
35) 2,3-Dimethylpentane	20.82	56	121896	53.977	ug/L	99
36) Thiophene	21.16	84	175515	56.072	ug/L	99
37) 1,1-Dimethylcyclopentane	21.27	83	93231	60.108	ug/L	99
38) 3-Methylhexane	21.33	43	122595	51.149	ug/L	97
39) TAME	21.70	73	203931	47.673	ug/L	95
40) cis-1,3-Dimethylcyclop...	22.10	70	124367	54.193	ug/L	97
41) 3-Ethylpentane	22.27	43	152193	50.326	ug/L	99
42) trans-1,3-DMCP/2-Methy...	22.39	70	108561	104.232	ug/L	95
43) 1-Heptene/trans-1,2-DMCP	22.65	70	130780	110.842	ug/L	82
44) Isooctane	22.74	57	311965	54.294	ug/L	96
45) trans-3-Heptene	23.35	41	98962	50.048	ug/L	96
46) Heptane	23.49	43	113825	50.960	ug/L	97
48) trans-2-Heptene	24.13	56	92973	53.552	ug/L	98
49) cis-2-Heptene	24.91	56	70468	53.752	ug/L	93
50) 2,2-Dimethylhexane	25.67	57	302861	53.919	ug/L	99
51) Methylcyclohexane	25.89	83	143582	55.434	ug/L	99
52) 2,5-Dimethylhexane	26.56	57	148336	52.630	ug/L	95
53) 2,4-Dimethylhexane	26.82	57	120287	53.630	ug/L	95
54) Ethylcyclopentane	26.85	69	121215	55.013	ug/L	93
55) 2,2,3-Trimethylpentane	27.07	57	238789	53.877	ug/L	96
57) 2,3,4-Trimethylpentane	28.59	43	156454	50.526	ug/L	99
58) 2,3,3-Trimethylpentane	29.17	43	133766	50.631	ug/L	97
59) 2,3-Dimethylhexane	29.44	43	147092	50.531	ug/L	99
60) 2-Methylheptane	29.86	57	134221	51.868	ug/L	97
61) 4-Methylheptane	30.04	43	155874	50.583	ug/L	99
63) 3-Methylheptane	30.61	43	119722	47.115	ug/L	98
65) 3-Ethylhexane	30.73	43	170506M4	53.483	ug/L	
66) Toluene	30.92	91	377518	55.853	ug/L	98
67) 2-Methylthiophene	31.09	97	293666	56.518	ug/L	99
68) trans-1,4-Dimethylcycl...	31.56	97	184132	55.459	ug/L	98
69) 3-Methylthiophene	31.84	97	297627	56.770	ug/L	99

Data Path : O:\Organics\DATA\VOA6\2020\09-SEP\200929\
Data File : V6012566.D
Acq On : 29 Sep 2020 5:31 pm
Operator : VOA6:RY
Sample : WG1416337-2,31,5,5
Misc : WG1416337,ICAL17149
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Sep 30 09:12:13 2020
Quant Method : O:\Organics\DATA\VOA6\2020\09-SEP\200929\P6091820W.M
Quant Title : PIANO VOLATILES
QLast Update : Sat Sep 19 08:40:17 2020
Response via : Initial Calibration

Sub List : PIANO - PIANO

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
70) 1-Octene	32.28	55	68018	51.556	ug/L	98
71) Octane	33.11	43	129449	49.921	ug/L	97
72) trans-1,2-Dimethylcycl...	33.38	55	119233	52.491	ug/L	90
73) 1,2-Dibromoethane	33.61	107	83209	59.832	ug/L	99
75) cis-2-Octene	34.48	55	104161	52.318	ug/L	98
76) Isopropylcyclopentane	34.61	68	140940	57.526	ug/L	95
77) cis-1,2-Dimethylcycloh...	36.37	55	112443	51.997	ug/L	97
78) 2,5-Dimethylheptane	36.71	57	200652	53.081	ug/L	98
79) 3,5-Dimethylheptane	36.85	57	231330M4	53.935	ug/L	
80) 3,3-Dimethylheptane	37.09	57	151131	51.943	ug/L	96
81) 1,1,4-Trimethylcyclohe...	37.62	69	143704	53.271	ug/L	98
82) 2,3-Dimethylheptane	38.76	43	168603	50.632	ug/L	97
83) 3,4-Dimethylheptane	39.07	43	106985	50.046	ug/L	98
84) 4-Methyloctane	39.37	43	151015	47.393	ug/L	99
85) 2-Methyloctane	39.45	43	149344M3	55.843	ug/L	
86) Ethylbenzene	39.96	91	420385	55.010	ug/L	99
88) 2-Ethylthiophene	40.10	97	332562	56.531	ug/L	100
89) 3-Methyloctane	40.10	57	258469	53.549	ug/L	98
90) 3,3-Diethylpentane	41.09	57	296169	52.504	ug/L	97
91) p/m-Xylene	41.21	91	638110	109.487	ug/L	99
92) 1-Nonene	41.87	56	73782	52.543	ug/L	96
93) trans-3-Nonene	42.28	55	98255	51.462	ug/L	96
94) cis-3-Nonene	42.57	55	113412M4	53.678	ug/L	
95) Nonane	42.65	43	132800M4	52.401	ug/L	
96) Styrene	43.08	104	270744	55.195	ug/L	98
98) o-Xylene	43.48	91	333026	54.506	ug/L	99
99) 2-Nonene	43.91	55	104114	52.671	ug/L	96
100) Isopropylcyclohexane	45.19	83	158075	54.331	ug/L	96
102) Isopropylbenzene	45.80	105	437707	54.976	ug/L	97
103) 3,3-Dimethyloctane	46.29	71	234071	55.455	ug/L	96
104) n-Propylbenzene	48.43	91	514016	54.899	ug/L	100
105) 2-Methylnonane	48.49	43	128851	52.498	ug/L	95
106) 3-Methylnonane	48.94	57	161474	53.902	ug/L	99
107) 1-Methyl-3-ethylbenzene	49.07	105	438410	55.374	ug/L	99
108) 1-Methyl-4-ethylbenzene	49.25	105	423497	55.219	ug/L	98
109) 1,3,5-Trimethylbenzene	49.84	105	364543	55.052	ug/L	99
110) 1-Decene	49.99	41	80218	51.885	ug/L	98
111) Isobutylcyclohexane	50.14	83	175027	56.118	ug/L	99
112) 1-Methyl-2-ethylbenzene	50.19	105	452776	55.566	ug/L	98
113) Decane	50.38	43	116021	53.179	ug/L	97
114) tert-Butylbenzene	50.64	119	332346	55.083	ug/L	98

Quantitation Report (QT Reviewed)

Data Path : O:\Organics\DATA\VOA6\2020\09-SEP\200929\
Data File : V6012566.D
Acq On : 29 Sep 2020 5:31 pm
Operator : VOA6:RY
Sample : WG1416337-2,31,5,5
Misc : WG1416337,ICAL17149
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Sep 30 09:12:13 2020
Quant Method : O:\Organics\DATA\VOA6\2020\09-SEP\200929\P6091820W.M
Quant Title : PIANO VOLATILES
QLast Update : Sat Sep 19 08:40:17 2020
Response via : Initial Calibration

Sub List : PIANO - PIANO

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
115) 1,2,4-Trimethylbenzene	51.07	105	375312	55.346	ug/L	98
116) Isobutylbenzene	51.27	91	417437M4	55.901	ug/L	
117) sec-Butylbenzene	51.32	105	496701	56.211	ug/L	96
118) 1-Methyl-3-isopropylbe...	51.72	119	409745	55.168	ug/L	99
119) 1-Methyl-4-isopropylbe...	51.92	119	427928	55.437	ug/L	99
120) 1,2,3-Trimethylbenzene	52.20	105	376897	54.946	ug/L	98
121) 1-Methyl-2-isopropylbe...	52.41	119	422105	55.289	ug/L	100
122) Indan	52.50	117	366227	55.941	ug/L	99
123) 1,3-Diethylbenzene	52.66	105	264781	55.995	ug/L	97
124) 1-Methyl-3-propylbenzene	52.77	105	495477	56.379	ug/L	99
125) Indene	52.93	115	336897	58.427	ug/L	99
126) 1-Methyl-4-propylbenzene	52.92	105	641109	57.662	ug/L	96
127) n-Butylbenzene	52.92	91	481845	57.471	ug/L	99
128) 1,2-Dimethyl-4-ethylbe...	53.05	119	456092	56.411	ug/L	98
129) 1,2-Diethylbenzene	53.14	119	220070	56.909	ug/L	96
130) 1-Methyl-2-propylbenzene	53.33	105	545672	56.753	ug/L	99
131) 1,4-Dimethyl-2-ethylbe...	53.65	119	418470	55.753	ug/L	99
132) Undecane	53.69	57	144313	57.709	ug/L	98
133) 1,3-Dimethyl-4-ethylbe...	53.74	119	508716	56.056	ug/L	100
134) 1,3-Dimethyl-5-ethylbe...	53.87	119	480542	56.368	ug/L	99
135) 1,3-Dimethyl-2-ethylbe...	54.10	119	490531	55.527	ug/L	100
136) 1,2-Dimethyl-3-ethylbe...	54.46	119	437123	55.396	ug/L	99
137) 1,2,4,5-Tetramethylben...	54.86	119	459700	55.059	ug/L	99
138) 1,2,3,5-Tetramethylben...	54.95	119	410824	55.257	ug/L	99
139) Pentylbenzene	55.43	91	395137	56.615	ug/L	99
140) 1,2,3,4-Tetramethylben...	55.76	119	547720	55.473	ug/L	99
141) 1,3-DM-5-tert-Butylben...	55.75	147	416652	55.606	ug/L	97
142) Dodecane	55.91	43	92537	50.867	ug/L	96
143) 1,3,5-Triethylbenzene	56.63	147	264925	55.460	ug/L	98
144) Naphthalene	56.77	128	394473	57.944	ug/L	99
145) Benzothiophene	56.86	134	219095	59.017	ug/L	98
146) 1,2,4-Triethylbenzene	57.18	147	245203	55.564	ug/L	98
147) Hexylbenzene	57.67	91	363542	56.950	ug/L	99
148) MMT	57.92	134	153181	57.466	ug/L	97
149) Tridecane	57.98	57	95108	49.490	ug/L	96
150) 2-Methylnaphthalene	59.48	142	262200	57.153	ug/L	100
151) 1-Methylnaphthalene	59.95	142	221218	57.954	ug/L	100
152) Tetradecane	60.22	57	80152	49.985	ug/L	94
153) Pentadecane	62.93	57	61779	50.894	ug/L	95

Quantitation Report (QT Reviewed)

Data Path : O:\Organics\DATA\VOA6\2020\09-SEP\200929\
Data File : V6012566.D
Acq On : 29 Sep 2020 5:31 pm
Operator : VOA6:RY
Sample : WG1416337-2,31,5,5
Misc : WG1416337,ICAL17149
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Sep 30 09:12:13 2020
Quant Method : O:\Organics\DATA\VOA6\2020\09-SEP\200929\P6091820W.M
Quant Title : PIANO VOLATILES
QLast Update : Sat Sep 19 08:40:17 2020
Response via : Initial Calibration

Sub List : PIANO - PIANO

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)

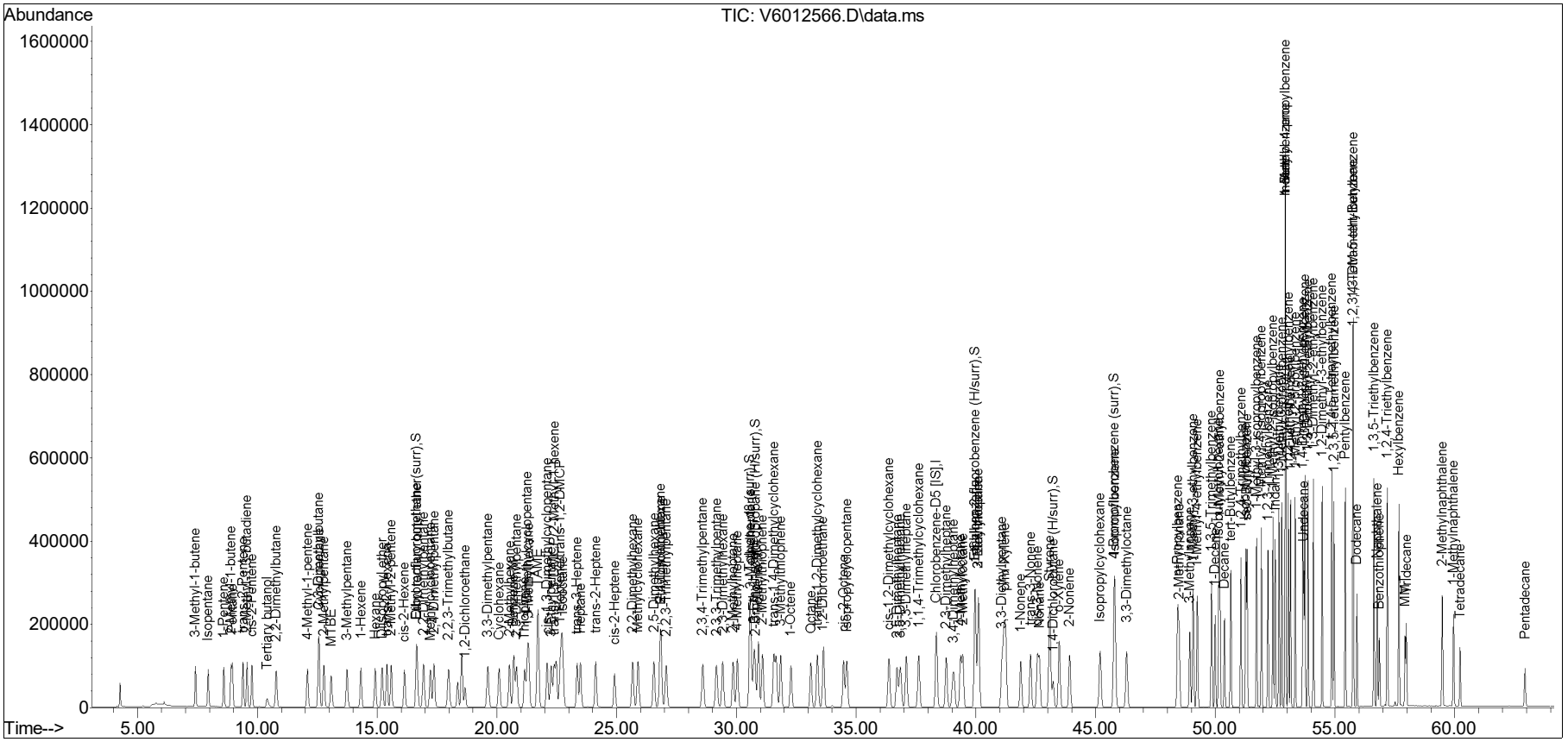
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : O:\Organics\DATA\VOA6\2020\09-SEP\200929\
Data File : V6012566.D
Acq On : 29 Sep 2020 5:31 pm
Operator : VOA6:RY
Sample : WG1416337-2,31,5,5
Misc : WG1416337,ICAL17149
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Sep 30 09:12:13 2020
Quant Method : O:\Organics\DATA\VOA6\2020\09-SEP\200929\P6091820W.M
Quant Title : PIANO VOLATILES
QLast Update : Sat Sep 19 08:40:17 2020
Response via : Initial Calibration

Sub List : PIANO - PIANO



Evaluate Continuing Calibration Report

Data Path : O:\ORGANICS\DATA\VOA6\2020\09-SEP\200929\
Data File : V6012574.D
Acq On : 30 Sep 2020 2:55 pm
Operator : VOA6:RY
Sample : WG1416337-7,31,5,5
Misc : WG1416337,ICAL17149
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Sep 30 16:09:48 2020
Quant Method : O:\Organics\DATA\VOA6\2020\09-SEP\200929\P6091820W.M
Quant Title : PIANO VOLATILES
QLast Update : Sat Sep 19 08:40:17 2020
Response via : Initial Calibration

Min. RRF : 0.100 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 25% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1	I	Chlorobenzene-D5 [IS]	1.000	1.000	0.0	73	0.00
2		3-Methyl-1-butene	0.374	0.365	2.4	74	0.00
3		Isopentane	0.214	0.192	10.3	71	0.00
4		1-Pentene	0.223	0.211	5.4	70	0.00
5		2-Methyl-1-butene	0.373	0.369	1.1	73	0.00
6		Pentane	0.352	0.339	3.7	74	0.00
7		trans-2-Pentene	0.369	0.365	1.1	73	0.00
8		2-Methyl-1,3-butadiene	0.250	0.256	-2.4	75	0.00
9		cis-2-Pentene	0.357	0.354	0.8	75	0.00
10		Tertiary butanol	0.031	0.029#	6.5	69	-0.02
11		2,2-Dimethylbutane	0.230	0.196	14.8	68	0.01
12		4-Methyl-1-pentene	0.258	0.235	8.9	69	0.00
13		Cyclopentane	0.149	0.151	-1.3	75	0.00
14		2,3-Dimethylbutane	0.115	0.119	-3.5	74	0.00
15		2-Methylpentane	0.381	0.352	7.6	70	0.00
16		MTBE	0.477	0.485	-1.7	72	-0.01
17		3-Methylpentane	0.345	0.344	0.3	72	0.00
18		1-Hexene	0.196	0.195	0.5	72	0.00
19		Hexane	0.281	0.278	1.1	73	0.00
20		Diisopropyl ether	0.479	0.479	0.0	71	0.00
21		trans-2-Hexene	0.343	0.341	0.6	73	0.00
22		2-Methyl-2-pentene	0.368	0.374	-1.6	73	0.00
23		cis-2-Hexene	0.279	0.276	1.1	72	0.00
24	S	Dibromofluoromethane (surr)	0.312	0.307	1.6	72	0.00
25		Ethyl tertiary butyl ether	0.497	0.504	-1.4	72	0.00
26		2,2-Dimethylpentane	0.426	0.435	-2.1	73	0.00
27		Methylcyclopentane	0.359	0.358	0.3	72	0.00
28		2,4-Dimethylpentane	0.347	0.334	3.7	72	0.00
29		2,2,3-Trimethylbutane	0.373	0.373	0.0	72	0.00
30		1,2-Dichloroethane	0.247	0.260	-5.3	77	0.00
31		3,3-Dimethylpentane	0.411	0.380	7.5	69	0.00
32		Cyclohexane	0.299	0.293	2.0	71	0.00
33		2-Methylhexane	0.362	0.339	6.4	69	0.00
34	M	Benzene	0.753	0.806	-7.0	77	0.00
35		2,3-Dimethylpentane	0.305	0.309	-1.3	73	0.00
36		Thiophene	0.422	0.456	-8.1	77	0.00
37		1,1-Dimethylcyclopentane	0.209	0.240	-14.8	82	0.00
38		3-Methylhexane	0.323	0.305	5.6	69	0.00
39		TAME	0.577	0.514	10.9	73	0.00

Evaluate Continuing Calibration Report

Data Path : O:\ORGANICS\DATA\VOA6\2020\09-SEP\200929\
Data File : V6012574.D
Acq On : 30 Sep 2020 2:55 pm
Operator : VOA6:RY
Sample : WG1416337-7,31,5,5
Misc : WG1416337,ICAL17149
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Sep 30 16:09:48 2020
Quant Method : O:\Organics\DATA\VOA6\2020\09-SEP\200929\P6091820W.M
Quant Title : PIANO VOLATILES
QLast Update : Sat Sep 19 08:40:17 2020
Response via : Initial Calibration

Min. RRF : 0.100 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 25% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
40		cis-1,3-Dimethylcyclopentan	0.310	0.317	-2.3	76	0.00
41		3-Ethylpentane	0.408	0.382	6.4	70	0.00
42		trans-1,3-DMCP/2-Methyl-1-h	0.141	0.138	2.1	76	0.00
43		1-Heptene/trans-1,2-DMCP	0.159	0.167	-5.0	75	0.00
44		Isooctane	0.775	0.790	-1.9	74	0.00
45		trans-3-Heptene	0.267	0.241	9.7	70	0.00
46		Heptane	0.301	0.286	5.0	72	0.00
48		trans-2-Heptene	0.234	0.235	-0.4	73	0.00
49		cis-2-Heptene	0.177	0.178	-0.6	72	0.00
50		2,2-Dimethylhexane	0.758	0.762	-0.5	72	0.00
51		Methylcyclohexane	0.349	0.374	-7.2	76	0.00
52		2,5-Dimethylhexane	0.380	0.373	1.8	70	0.00
53		2,4-Dimethylhexane	0.303	0.302	0.3	72	0.00
54		Ethylcyclopentane	0.297	0.313	-5.4	76	0.00
55		2,2,3-Trimethylpentane	0.598	0.614	-2.7	73	0.00
57		2,3,4-Trimethylpentane	0.418	0.388	7.2	68	0.00
58		2,3,3-Trimethylpentane	0.356	0.333	6.5	69	0.00
59		2,3-Dimethylhexane	0.393	0.369	6.1	68	0.00
60		2-Methylheptane	0.349	0.338	3.2	69	0.00
61		4-Methylheptane	0.416	0.389	6.5	69	0.00
62	S	Toluene-d8 (surr)	1.192	1.163	2.4	71	0.00
63		3-Methylheptane	0.343	0.299	12.8	70	0.00
64	S	2-Bromo-1-chloropropane (H/	0.280	0.299	-6.8	76	0.00
65		3-Ethylhexane	0.430	0.413	4.0	70	0.00
66	M	Toluene	0.912	0.979	-7.3	78	0.00
67		2-Methylthiophene	0.701	0.775	-10.6	79	0.00
68		trans-1,4-Dimethylcyclohexa	0.448	0.476	-6.2	75	0.00
69		3-Methylthiophene	0.707	0.780	-10.3	79	0.00
70		1-Octene	0.178	0.170	4.5	69	0.00
71		Octane	0.350	0.324	7.4	68	0.00
72		trans-1,2-Dimethylcyclohexa	0.306	0.299	2.3	71	0.00
73		1,2-Dibromoethane	0.188	0.212	-12.8	81	0.00
75		cis-2-Octene	0.269	0.259	3.7	72	0.00
76		Isopropylcyclopentane	0.331	0.361	-9.1	79	0.00
77		cis-1,2-Dimethylcyclohexane	0.292	0.284	2.7	72	0.00
78		2,5-Dimethylheptane	0.510	0.490	3.9	70	-0.01
79		3,5-Dimethylheptane	0.579	0.605	-4.5	72	0.01
80		3,3-Dimethylheptane	0.393	0.381	3.1	70	0.00
81		1,1,4-Trimethylcyclohexane	0.364	0.370	-1.6	73	0.00

Evaluate Continuing Calibration Report

Data Path : O:\ORGANICS\DATA\VOA6\2020\09-SEP\200929\
Data File : V6012574.D
Acq On : 30 Sep 2020 2:55 pm
Operator : VOA6:RY
Sample : WG1416337-7,31,5,5
Misc : WG1416337,ICAL17149
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Sep 30 16:09:48 2020
Quant Method : O:\Organics\DATA\VOA6\2020\09-SEP\200929\P6091820W.M
Quant Title : PIANO VOLATILES
QLast Update : Sat Sep 19 08:40:17 2020
Response via : Initial Calibration

Min. RRF : 0.100 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 25% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
82		2,3-Dimethylheptane	0.449	0.424	5.6	69	-0.01
83		3,4-Dimethylheptane	0.288	0.270	6.2	71	-0.01
84		4-Methyloctane	0.430	0.401	6.7	68	0.00
85		2-Methyloctane	0.361	0.359	0.6	73	0.00
86		Ethylbenzene	1.031	1.097	-6.4	77	0.00
87	S	1-Chloro-2-fluorobenzene (H	0.585	0.637	-8.9	79	0.00
88		2-Ethylthiophene	0.794	0.878	-10.6	80	0.00
89		3-Methyloctane	0.651	0.663	-1.8	73	-0.01
90		3,3-Diethylpentane	0.761	0.755	0.8	71	0.00
91		p/m-Xylene	0.786	0.833	-6.0	77	0.00
92		1-Nonene	0.189	0.189	0.0	71	0.00
93		trans-3-Nonene	0.258	0.253	1.9	72	0.00
94		cis-3-Nonene	0.285	0.297	-4.2	74	0.00
95		Nonane	0.342	0.335	2.0	71	0.00
96		Styrene	0.662	0.718	-8.5	79	0.00
97	S	1,4-Dichlorobutane (H/surr)	0.261	0.269	-3.1	76	0.00
98		o-Xylene	0.824	0.872	-5.8	78	0.00
99		2-Nonene	0.267	0.268	-0.4	72	0.00
100		Isopropylcyclohexane	0.393	0.410	-4.3	75	0.00
101	S	4-Bromofluorobenzene (surr)	0.496	0.480	3.2	71	0.00
102		Isopropylbenzene	1.074	1.150	-7.1	79	0.00
103		3,3-Dimethyloctane	0.570	0.608	-6.7	74	0.00
104		n-Propylbenzene	1.263	1.339	-6.0	77	0.00
105		2-Methylnonane	0.331	0.333	-0.6	71	0.00
106		3-Methylnonane	0.404	0.422	-4.5	72	0.00
107		1-Methyl-3-ethylbenzene	1.068	1.155	-8.1	79	0.00
108		1-Methyl-4-ethylbenzene	1.035	1.117	-7.9	79	0.00
109		1,3,5-Trimethylbenzene	0.893	0.958	-7.3	77	0.00
110		1-Decene	0.209	0.209	0.0	72	0.00
111		Isobutylcyclohexane	0.421	0.457	-8.6	78	0.00
112		1-Methyl-2-ethylbenzene	1.099	1.201	-9.3	80	0.00
113		Decane	0.294	0.301	-2.4	72	0.00
114		tert-Butylbenzene	0.814	0.876	-7.6	78	0.00
115		1,2,4-Trimethylbenzene	0.915	0.996	-8.9	79	0.00
116		Isobutylbenzene	1.008	1.116	-10.7	80	0.00
117		sec-Butylbenzene	1.192	1.308	-9.7	80	0.00
118		1-Methyl-3-isopropylbenzene	1.002	1.084	-8.2	78	0.00
119		1-Methyl-4-isopropylbenzene	1.042	1.133	-8.7	79	0.00
120		1,2,3-Trimethylbenzene	0.926	1.009	-9.0	79	0.00

Evaluate Continuing Calibration Report

Data Path : O:\ORGANICS\DATA\VOA6\2020\09-SEP\200929\
Data File : V6012574.D
Acq On : 30 Sep 2020 2:55 pm
Operator : VOA6:RY
Sample : WG1416337-7,31,5,5
Misc : WG1416337,ICAL17149
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Sep 30 16:09:48 2020
Quant Method : O:\Organics\DATA\VOA6\2020\09-SEP\200929\P6091820W.M
Quant Title : PIANO VOLATILES
QLast Update : Sat Sep 19 08:40:17 2020
Response via : Initial Calibration

Min. RRF : 0.100 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 25% Max. Rel. Area : 200%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
121	1-Methyl-2-isopropylbenzene	1.030	1.121	-8.8	79	0.00
122	Indan	0.883	0.975	-10.4	82	0.00
123	1,3-Diethylbenzene	0.638	0.697	-9.2	80	0.00
124	1-Methyl-3-propylbenzene	1.186	1.317	-11.0	81	0.00
125	Indene	0.778	0.893	-14.8	83	0.00
126	1-Methyl-4-propylbenzene	1.500	1.704	-13.6	82	0.00
127	n-Butylbenzene	1.131	1.273	-12.6	82	0.00
128	1,2-Dimethyl-4-ethylbenzene	1.091	1.214	-11.3	80	0.00
129	1,2-Diethylbenzene	0.522	0.583	-11.7	81	0.00
130	1-Methyl-2-propylbenzene	1.297	1.453	-12.0	81	0.00
131	1,4-Dimethyl-2-ethylbenzene	1.013	1.116	-10.2	80	0.00
132	Undecane	0.337	0.387	-14.8	80	0.00
133	1,3-Dimethyl-4-ethylbenzene	1.224	1.359	-11.0	81	0.00
134	1,3-Dimethyl-5-ethylbenzene	1.150	1.283	-11.6	81	0.00
135	1,3-Dimethyl-2-ethylbenzene	1.192	1.320	-10.7	81	0.00
136	1,2-Dimethyl-3-ethylbenzene	1.065	1.169	-9.8	80	0.00
137	1,2,4,5-Tetramethylbenzene	1.127	1.232	-9.3	80	0.00
138	1,2,3,5-Tetramethylbenzene	1.003	1.105	-10.2	80	0.00
139	Pentylbenzene	0.942	1.040	-10.4	81	0.00
140	1,2,3,4-Tetramethylbenzene	1.332	1.483	-11.3	81	0.00
141	1,3-DM-5-tert-Butylbenzene	1.011	1.119	-10.7	80	0.00
142	Dodecane	0.245	0.258	-5.3	84	0.00
143	1,3,5-Triethylbenzene	0.645	0.709	-9.9	79	0.00
144	Naphthalene	0.919	1.014	-10.3	82	0.00
145	Benzothiophene	0.501	0.551	-10.0	82	0.00
146	1,2,4-Triethylbenzene	0.595	0.657	-10.4	80	0.00
147	Hexylbenzene	0.861	0.965	-12.1	81	0.00
148	MMT	0.360	0.402	-11.7	81	0.00
149	Tridecane	0.259	0.263	-1.5	86	0.00
150	2-Methylnaphthalene	0.619	0.675	-9.0	80	0.00
151	1-Methylnaphthalene	0.515	0.557	-8.2	79	0.00
152	Tetradecane	0.216	0.223	-3.2	84	0.00
153	Pentadecane	0.164	0.172	-4.9	81	0.00

* Evaluation of CC level amount vs concentration.
(#) = Out of Range SPCC's out = 0 CCC's out = 0

Quantitation Report (QT Reviewed)

Data Path : O:\ORGANICS\DATA\VOA6\2020\09-SEP\200929\
Data File : V6012574.D
Acq On : 30 Sep 2020 2:55 pm
Operator : VOA6:RY
Sample : WG1416337-7,31,5,5
Misc : WG1416337,ICAL17149
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Sep 30 16:09:48 2020
Quant Method : O:\Organics\DATA\VOA6\2020\09-SEP\200929\P6091820W.M
Quant Title : PIANO VOLATILES
QLast Update : Sat Sep 19 08:40:17 2020
Response via : Initial Calibration

Sub List : PIANO - PIANO

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Chlorobenzene-D5 [IS]	38.35	117	374839	50.000	ug/L	0.00
System Monitoring Compounds						
24) Dibromofluoromethane (...	16.63	113	115162	49.270	ug/L	0.00
Spiked Amount 50.000	Range 78 - 118		Recovery = 98.54%			
62) Toluene-d8 (surr)	30.56	98	435873	48.759	ug/L	0.00
Spiked Amount 50.000	Range 87 - 113		Recovery = 97.52%			
64) 2-Bromo-1-chloropropan...	30.78	77	111966	53.409	ug/L	0.00
Spiked Amount 50.000	Range 70 - 130		Recovery = 106.82%			
87) 1-Chloro-2-fluorobenze...	39.98	130	238938	54.518	ug/L	0.00
Spiked Amount 50.000	Range 70 - 130		Recovery = 109.04%			
97) 1,4-Dichlorobutane (H/...	43.23	55	100651	51.481	ug/L	0.00
Spiked Amount 50.000	Range 70 - 130		Recovery = 102.96%			
101) 4-Bromofluorobenzene (...	45.78	95	179811	48.395	ug/L	0.00
Spiked Amount 50.000	Range 76 - 120		Recovery = 96.79%			
Target Compounds						Qvalue
2) 3-Methyl-1-butene	7.42	55	136983	48.902	ug/L	100
3) Isopentane	7.95	43	72046	44.975	ug/L	97
4) 1-Pentene	8.60	42	79156	47.321	ug/L	98
5) 2-Methyl-1-butene	8.91	55	138260	49.479	ug/L	99
6) Pentane	8.96	43	127192	48.187	ug/L	98
7) trans-2-Pentene	9.41	55	136929	49.523	ug/L	99
8) 2-Methyl-1,3-butadiene	9.57	67	96128	51.192	ug/L	94
9) cis-2-Pentene	9.77	55	132728	49.524	ug/L	97
10) Tertiary butanol	10.37	59	54498	233.791	ug/L	98
11) 2,2-Dimethylbutane	10.80	43	73622	42.654	ug/L	97
12) 4-Methyl-1-pentene	12.09	43	88048	45.455	ug/L	96
13) Cyclopentane	12.58	70	56705	50.919	ug/L #	92
14) 2,3-Dimethylbutane	12.57	71	44440	51.414	ug/L	93
15) 2-Methylpentane	12.78	43	131811	46.116	ug/L	96
16) MTBE	13.07	73	181708	50.848	ug/L	99
17) 3-Methylpentane	13.74	57	128941	49.886	ug/L	100
18) 1-Hexene	14.32	56	72975	49.612	ug/L	97
19) Hexane	14.92	57	104126	49.357	ug/L	99
20) Diisopropyl ether	15.20	45	179637	50.066	ug/L	96
21) trans-2-Hexene	15.41	55	127923	49.805	ug/L	94
22) 2-Methyl-2-pentene	15.59	69	140146	50.855	ug/L	98
23) cis-2-Hexene	16.15	55	103390	49.350	ug/L	95
25) Ethyl tertiary butyl e...	16.66	59	188961	50.675	ug/L	97

Quantitation Report (QT Reviewed)

Data Path : O:\ORGANICS\DATA\VOA6\2020\09-SEP\200929\
Data File : V6012574.D
Acq On : 30 Sep 2020 2:55 pm
Operator : VOA6:RY
Sample : WG1416337-7,31,5,5
Misc : WG1416337,ICAL17149
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Sep 30 16:09:48 2020
Quant Method : O:\Organics\DATA\VOA6\2020\09-SEP\200929\P6091820W.M
Quant Title : PIANO VOLATILES
QLast Update : Sat Sep 19 08:40:17 2020
Response via : Initial Calibration

Sub List : PIANO - PIANO

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
26) 2,2-Dimethylpentane	16.94	57	163019	50.998	ug/L	97
27) Methylcyclopentane	17.23	56	134196	49.873	ug/L	98
28) 2,4-Dimethylpentane	17.38	43	125131	48.143	ug/L	97
29) 2,2,3-Trimethylbutane	17.99	57	139966	50.073	ug/L	98
30) 1,2-Dichloroethane	18.67	62	97413	52.595	ug/L	98
31) 3,3-Dimethylpentane	19.63	43	142521	46.284	ug/L	96
32) Cyclohexane	20.10	56	110014	49.077	ug/L	97
33) 2-Methylhexane	20.52	43	126918	46.721	ug/L	94
34) Benzene	20.70	78	302296	53.571	ug/L	98
35) 2,3-Dimethylpentane	20.83	56	115796	50.691	ug/L	97
36) Thiophene	21.16	84	170815	53.949	ug/L	95
37) 1,1-Dimethylcyclopentane	21.27	83	89958	57.338	ug/L	96
38) 3-Methylhexane	21.33	43	114468	47.214	ug/L	97
39) TAME	21.69	73	192685	44.531	ug/L	95
40) cis-1,3-Dimethylcyclop...	22.10	70	118955	51.245	ug/L	98
41) 3-Ethylpentane	22.27	43	143296	46.844	ug/L	95
42) trans-1,3-DMCP/2-Methy...	22.39	70	103502	98.243	ug/L	97
43) 1-Heptene/trans-1,2-DMCP	22.66	70	125029	104.761	ug/L	77
44) Isooctane	22.74	57	296212	50.966	ug/L	96
45) trans-3-Heptene	23.35	41	90307	45.151	ug/L	96
46) Heptane	23.49	43	107086	47.397	ug/L	97
48) trans-2-Heptene	24.13	56	88182	50.214	ug/L	96
49) cis-2-Heptene	24.92	56	66554	50.188	ug/L	96
50) 2,2-Dimethylhexane	25.67	57	285713	50.287	ug/L	99
51) Methylcyclohexane	25.89	83	140048	53.454	ug/L	97
52) 2,5-Dimethylhexane	26.55	57	139647	48.983	ug/L	95
53) 2,4-Dimethylhexane	26.81	57	113172	49.883	ug/L	91
54) Ethylcyclopentane	26.85	69	117428	52.687	ug/L	96
55) 2,2,3-Trimethylpentane	27.07	57	230175	51.342	ug/L	98
57) 2,3,4-Trimethylpentane	28.59	43	145269	46.379	ug/L	93
58) 2,3,3-Trimethylpentane	29.16	43	124658	46.647	ug/L	93
59) 2,3-Dimethylhexane	29.43	43	138417	47.009	ug/L	97
60) 2-Methylheptane	29.86	57	126520	48.335	ug/L	97
61) 4-Methylheptane	30.04	43	145646	46.726	ug/L	96
63) 3-Methylheptane	30.61	43	111956	43.557	ug/L	96
65) 3-Ethylhexane	30.73	43	154905M4	48.036	ug/L	
66) Toluene	30.92	91	367074	53.689	ug/L	99
67) 2-Methylthiophene	31.09	97	290658	55.302	ug/L	100
68) trans-1,4-Dimethylcycl...	31.57	97	178278	53.085	ug/L	96
69) 3-Methylthiophene	31.86	97	292332	55.125	ug/L	98
70) 1-Octene	32.28	55	63600	47.659	ug/L	94

Data Path : O:\ORGANICS\DATA\VOA6\2020\09-SEP\200929\
Data File : V6012574.D
Acq On : 30 Sep 2020 2:55 pm
Operator : VOA6:RY
Sample : WG1416337-7,31,5,5
Misc : WG1416337,ICAL17149
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Sep 30 16:09:48 2020
Quant Method : O:\Organics\DATA\VOA6\2020\09-SEP\200929\P6091820W.M
Quant Title : PIANO VOLATILES
QLast Update : Sat Sep 19 08:40:17 2020
Response via : Initial Calibration

Sub List : PIANO - PIANO

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
71) Octane	33.12	43	121279	46.238	ug/L	97
72) trans-1,2-Dimethylcycl...	33.39	55	111920	48.711	ug/L	87
73) 1,2-Dibromoethane	33.61	107	79440	56.471	ug/L	99
75) cis-2-Octene	34.47	55	96913	48.123	ug/L	94
76) Isopropylcyclopentane	34.62	68	135439	54.651	ug/L	98
77) cis-1,2-Dimethylcycloh...	36.37	55	106622	48.744	ug/L	95
78) 2,5-Dimethylheptane	36.70	57	183842	48.080	ug/L	99
79) 3,5-Dimethylheptane	36.85	57	226831M4	52.283	ug/L	
80) 3,3-Dimethylheptane	37.10	57	142805	48.522	ug/L	94
81) 1,1,4-Trimethylcyclohe...	37.62	69	138679	50.823	ug/L	98
82) 2,3-Dimethylheptane	38.76	43	158798	47.145	ug/L	98
83) 3,4-Dimethylheptane	39.07	43	101231	46.815	ug/L	99
84) 4-Methyloctane	39.36	43	150228	46.609	ug/L	97
85) 2-Methyloctane	39.46	43	134736M3	49.807	ug/L	
86) Ethylbenzene	39.96	91	411042	53.175	ug/L	99
88) 2-Ethylthiophene	40.10	97	329059	55.298	ug/L	99
89) 3-Methyloctane	40.10	57	248397	50.876	ug/L	98
90) 3,3-Diethylpentane	41.09	57	283156	49.625	ug/L	96
91) p/m-Xylene	41.21	91	624653	105.957	ug/L	98
92) 1-Nonene	41.88	56	70716	49.786	ug/L	93
93) trans-3-Nonene	42.29	55	94813	49.094	ug/L	95
94) cis-3-Nonene	42.57	55	111350M4	52.102	ug/L	
95) Nonane	42.66	43	125498M4	48.955	ug/L	
96) Styrene	43.08	104	269163	54.248	ug/L	99
98) o-Xylene	43.48	91	326816	52.880	ug/L	100
99) 2-Nonene	43.91	55	100396	50.211	ug/L	93
100) Isopropylcyclohexane	45.19	83	153534	52.170	ug/L	96
102) Isopropylbenzene	45.80	105	431245	53.547	ug/L	98
103) 3,3-Dimethyloctane	46.30	71	227996	53.401	ug/L	96
104) n-Propylbenzene	48.43	91	501749	52.979	ug/L	99
105) 2-Methylnonane	48.49	43	124813	50.274	ug/L	95
106) 3-Methylnonane	48.94	57	158132	52.185	ug/L	98
107) 1-Methyl-3-ethylbenzene	49.07	105	433112	54.081	ug/L	99
108) 1-Methyl-4-ethylbenzene	49.24	105	418658	53.966	ug/L	99
109) 1,3,5-Trimethylbenzene	49.85	105	358987	53.595	ug/L	99
110) 1-Decene	49.99	41	78479	50.182	ug/L	94
111) Isobutylcyclohexane	50.14	83	171477	54.353	ug/L	97
112) 1-Methyl-2-ethylbenzene	50.18	105	450021	54.599	ug/L	97
113) Decane	50.38	43	112742	51.087	ug/L	98
114) tert-Butylbenzene	50.64	119	328543	53.832	ug/L	99
115) 1,2,4-Trimethylbenzene	51.07	105	373431	54.442	ug/L	99

Quantitation Report (QT Reviewed)

Data Path : O:\ORGANICS\DATA\VOA6\2020\09-SEP\200929\
Data File : V6012574.D
Acq On : 30 Sep 2020 2:55 pm
Operator : VOA6:RY
Sample : WG1416337-7,31,5,5
Misc : WG1416337,ICAL17149
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Sep 30 16:09:48 2020
Quant Method : O:\Organics\DATA\VOA6\2020\09-SEP\200929\P6091820W.M
Quant Title : PIANO VOLATILES
QLast Update : Sat Sep 19 08:40:17 2020
Response via : Initial Calibration

Sub List : PIANO - PIANO

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
116) Isobutylbenzene	51.27	91	418326M4	55.382	ug/L	
117) sec-Butylbenzene	51.33	105	490396	54.866	ug/L	99
118) 1-Methyl-3-isopropylbe...	51.72	119	406164	54.063	ug/L	99
119) 1-Methyl-4-isopropylbe...	51.92	119	424602	54.380	ug/L	100
120) 1,2,3-Trimethylbenzene	52.19	105	378267	54.518	ug/L	98
121) 1-Methyl-2-isopropylbe...	52.41	119	420247	54.419	ug/L	99
122) Indan	52.50	117	365541	55.200	ug/L	100
123) 1,3-Diethylbenzene	52.66	105	261237	54.617	ug/L	96
124) 1-Methyl-3-propylbenzene	52.77	105	493653	55.531	ug/L	99
125) Indene	52.94	115	334616	57.371	ug/L	99
126) 1-Methyl-4-propylbenzene	52.92	105	638591	56.782	ug/L	97
127) n-Butylbenzene	52.92	91	477225	56.272	ug/L	98
128) 1,2-Dimethyl-4-ethylbe...	53.05	119	454990	55.633	ug/L	100
129) 1,2-Diethylbenzene	53.14	119	218392	55.832	ug/L	97
130) 1-Methyl-2-propylbenzene	53.33	105	544721	56.009	ug/L	99
131) 1,4-Dimethyl-2-ethylbe...	53.66	119	418294	55.095	ug/L	99
132) Undecane	53.69	57	145182	57.396	ug/L	99
133) 1,3-Dimethyl-4-ethylbe...	53.74	119	509433	55.496	ug/L	100
134) 1,3-Dimethyl-5-ethylbe...	53.88	119	480771	55.752	ug/L	100
135) 1,3-Dimethyl-2-ethylbe...	54.10	119	494739	55.366	ug/L	100
136) 1,2-Dimethyl-3-ethylbe...	54.46	119	438263	54.907	ug/L	99
137) 1,2,4,5-Tetramethylben...	54.87	119	461655	54.664	ug/L	99
138) 1,2,3,5-Tetramethylben...	54.95	119	414111	55.064	ug/L	100
139) Pentylbenzene	55.43	91	389818	55.217	ug/L	99
140) 1,2,3,4-Tetramethylben...	55.76	119	556029	55.674	ug/L	99
141) 1,3-DM-5-tert-Butylben...	55.75	147	419556	55.356	ug/L	98
142) Dodecane	55.91	43	96569	52.479	ug/L	95
143) 1,3,5-Triethylbenzene	56.63	147	265810	55.012	ug/L	98
144) Naphthalene	56.77	128	380190	55.210	ug/L	100
145) Benzothiophene	56.86	134	206402	54.964	ug/L	97
146) 1,2,4-Triethylbenzene	57.18	147	246392	55.197	ug/L	97
147) Hexylbenzene	57.67	91	361691	56.014	ug/L	99
148) MMT	57.92	134	150767	55.916	ug/L	98
149) Tridecane	57.98	57	98752	50.801	ug/L	97
150) 2-Methylnaphthalene	59.48	142	252887	54.495	ug/L	100
151) 1-Methylnaphthalene	59.95	142	208615	54.030	ug/L	100
152) Tetradecane	60.22	57	83704	51.605	ug/L	94
153) Pentadecane	62.93	57	64418	52.463	ug/L	93

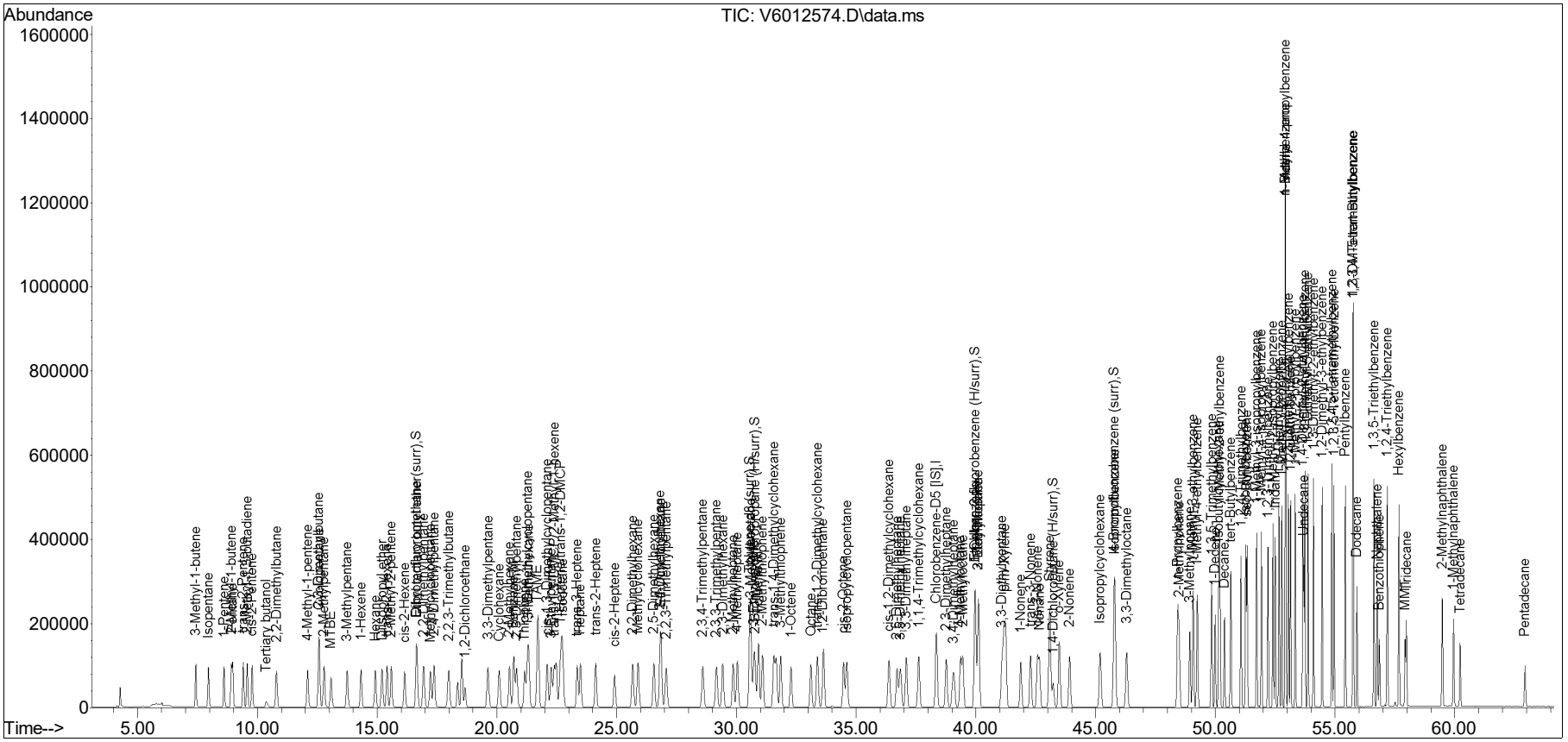
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : O:\ORGANICS\DATA\VOA6\2020\09-SEP\200929\
Data File : V6012574.D
Acq On : 30 Sep 2020 2:55 pm
Operator : VOA6:RY
Sample : WG1416337-7,31,5,5
Misc : WG1416337,ICAL17149
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Sep 30 16:09:48 2020
Quant Method : O:\Organics\DATA\VOA6\2020\09-SEP\200929\P6091820W.M
Quant Title : PIANO VOLATILES
QLast Update : Sat Sep 19 08:40:17 2020
Response via : Initial Calibration

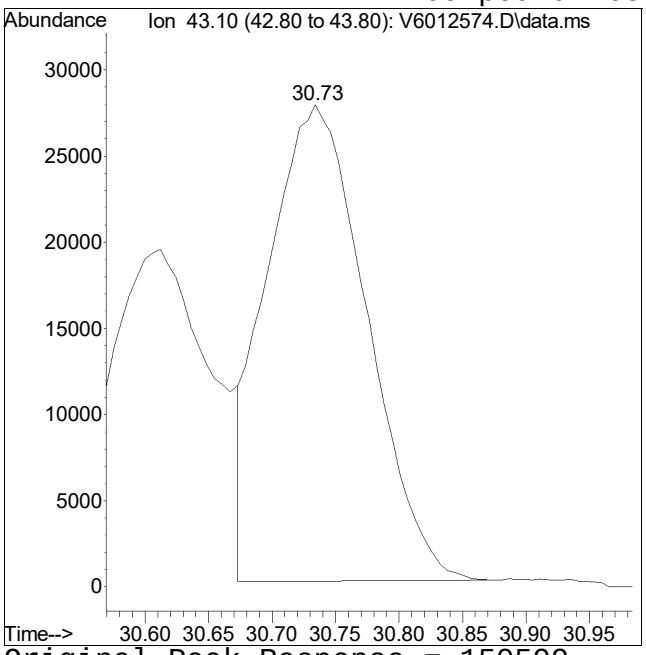
Sub List : PIANO - PIANO



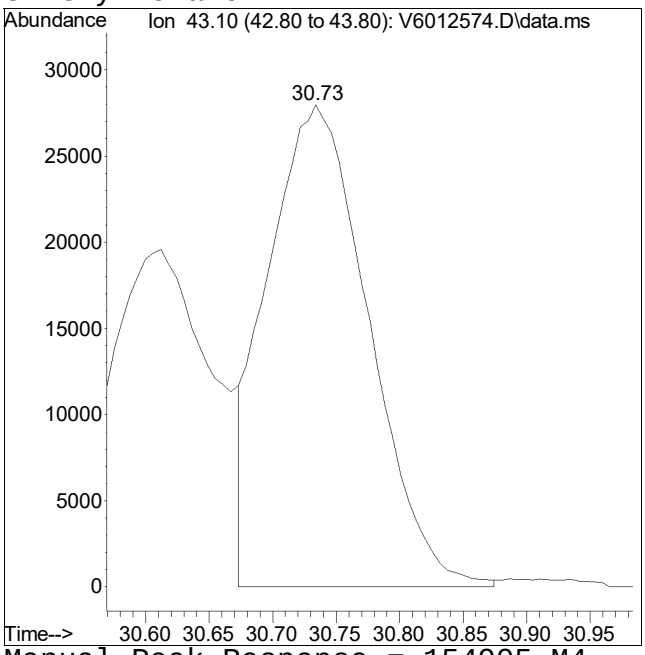
Manual Integration/Negative Proof Report

Data Path : O:\ORGANICS\DATA\VOA6\2020\ Method : P6091820W.M
Data File : V6012574.D Operator : VOA6:RY
Date Inj'd : 9/30/2020 0:2: 5 Instrument : VOA6
Sample : WG1416337-7,31,5,5 Quant Date : 9/30/2020 4:07 pm

Compound #65: 3-Ethylhexane



Original Peak Response = 150599



Manual Peak Response = 154905 M4

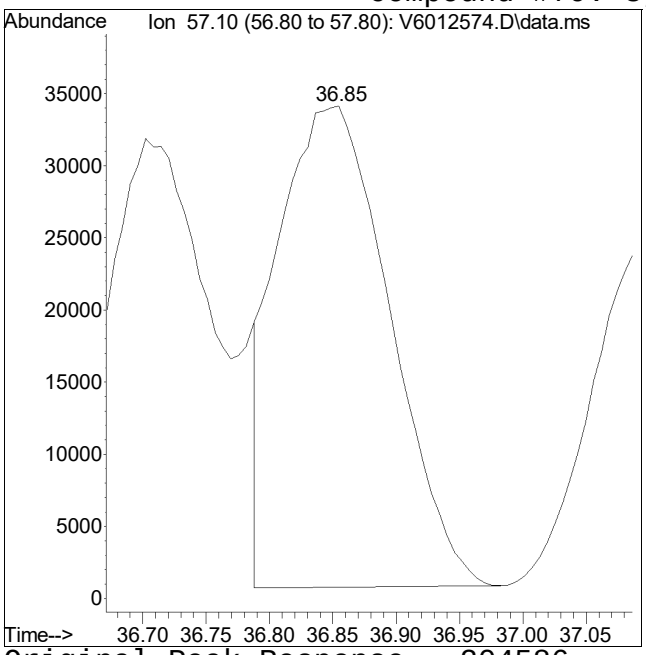
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

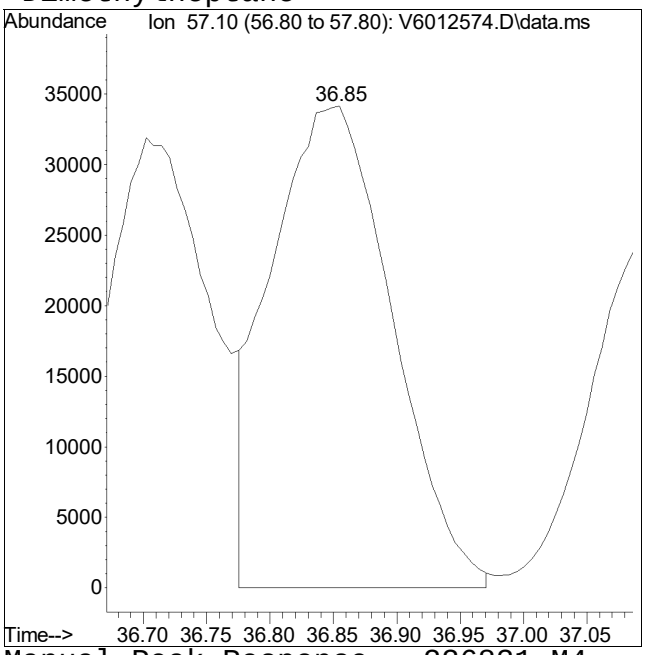
Data Path : O:\ORGANICS\DATA\VOA6\2020\
Data File : V6012574.D
Date Inj'd : 9/30/2020 0:2: 5
Sample : WG1416337-7,31,5,5

QMethod : P6091820W.M
Operator : VOA6:RY
Instrument : VOA6
Quant Date : 9/30/2020 4:07 pm

Compound #79: 3,5-Dimethylheptane



Original Peak Response = 204586



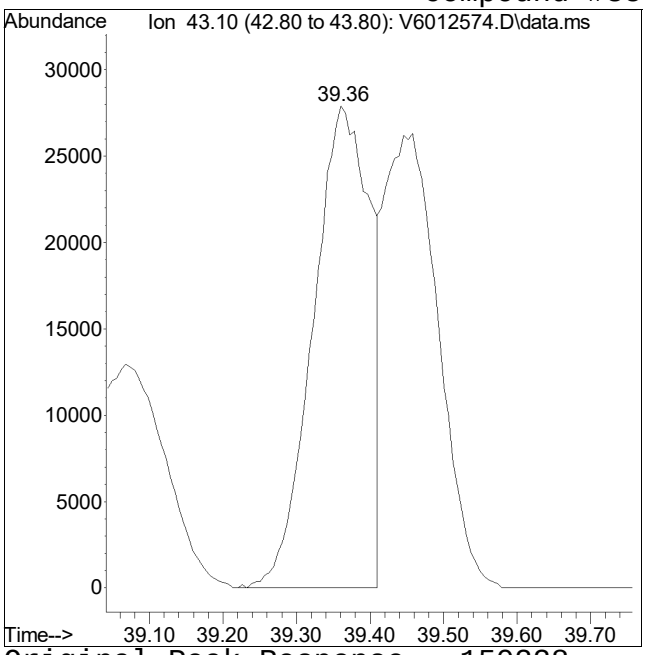
Manual Peak Response = 226831 M4

M4 = Poor automated baseline construction.

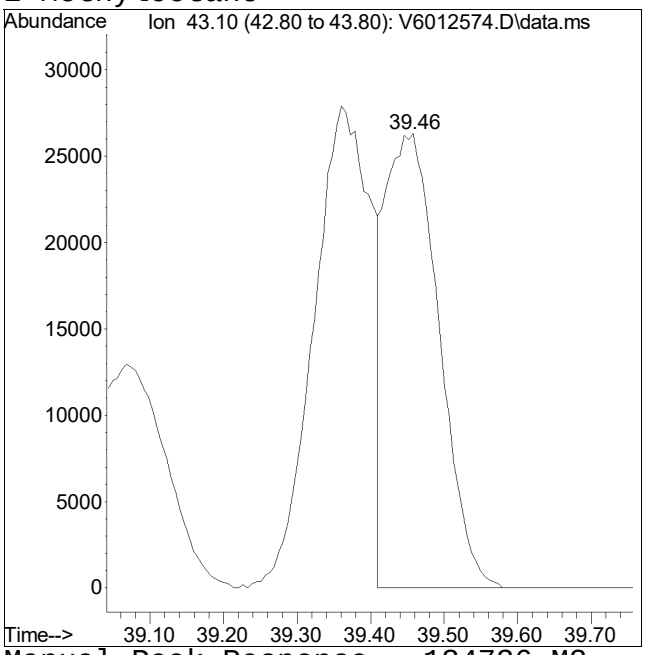
Manual Integration/Negative Proof Report

Data Path : O:\ORGANICS\DATA\VOA6\2020\ QMethod : P6091820W.M
Data File : V6012574.D Operator : VOA6:RY
Date Inj'd : 9/30/2020 0:2: 5 Instrument : VOA6
Sample : WG1416337-7,31,5,5 Quant Date : 9/30/2020 4:07 pm

Compound #85: 2-Methyloctane



Original Peak Response = 150228



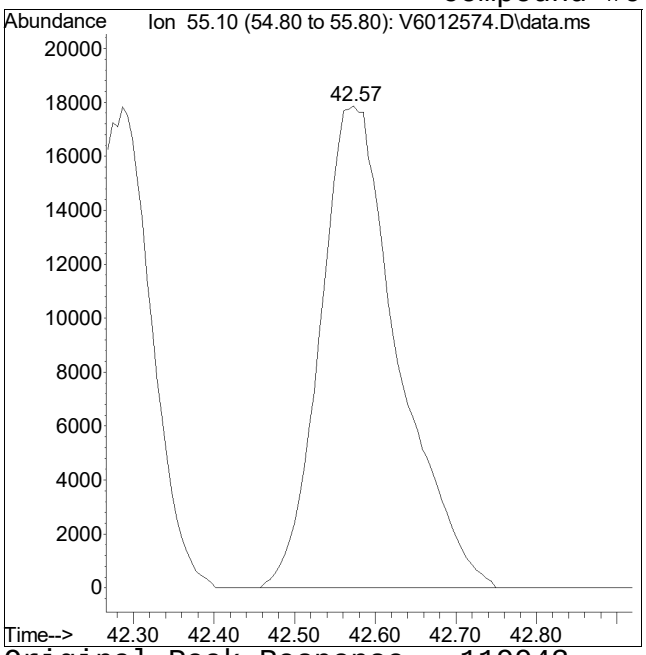
Manual Peak Response = 134736 M3

M3 = Misidentification of the peak (i.e. 1,4-dichlorobenzene identified as 1,3-dichlorobenzene), or misidentification from 2 partially resolved peaks not being split.

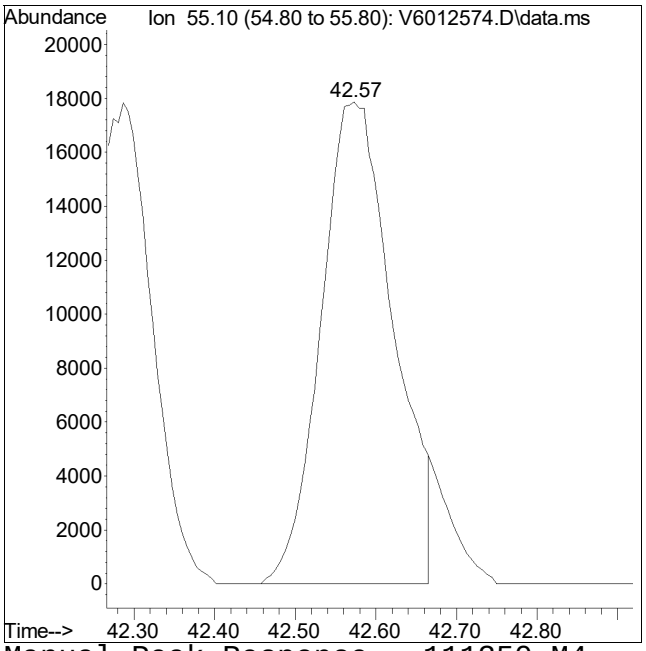
Manual Integration/Negative Proof Report

Data Path : O:\ORGANICS\DATA\VOA6\2020\ QMethod : P6091820W.M
Data File : V6012574.D Operator : VOA6:RY
Date Inj'd : 9/30/2020 0:2: 5 Instrument : VOA6
Sample : WG1416337-7,31,5,5 Quant Date : 9/30/2020 4:07 pm

Compound #94: cis-3-Nonene



Original Peak Response = 119943



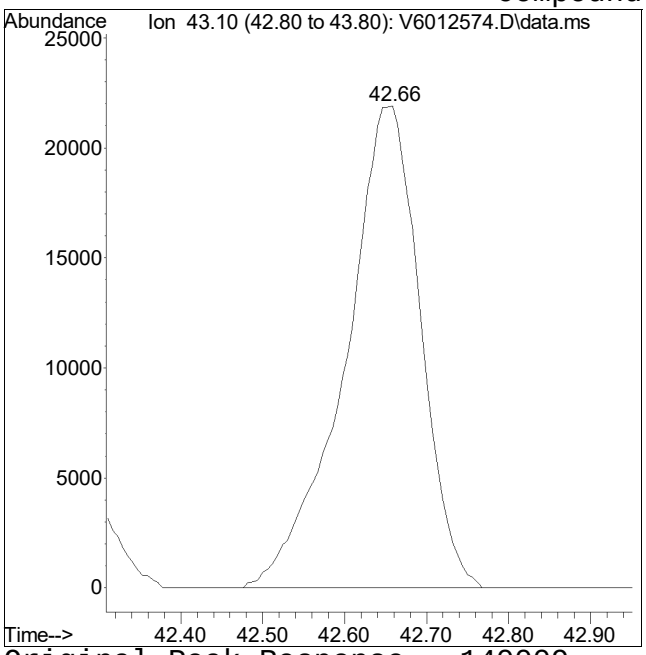
Manual Peak Response = 111350 M4

M4 = Poor automated baseline construction.

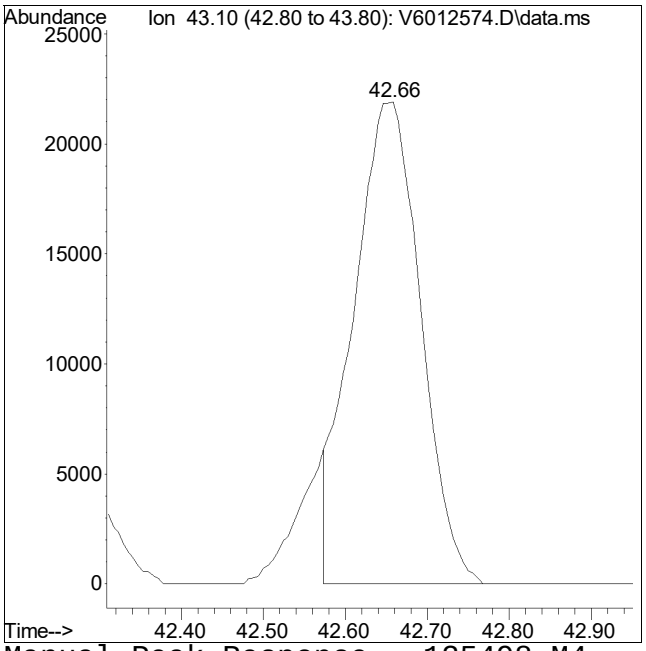
Manual Integration/Negative Proof Report

Data Path : O:\ORGANICS\DATA\VOA6\2020\ QMethod : P6091820W.M
Data File : V6012574.D Operator : VOA6:RY
Date Inj'd : 9/30/2020 0:2: 5 Instrument : VOA6
Sample : WG1416337-7,31,5,5 Quant Date : 9/30/2020 4:07 pm

Compound #95: Nonane



Original Peak Response = 140009



Manual Peak Response = 125498 M4

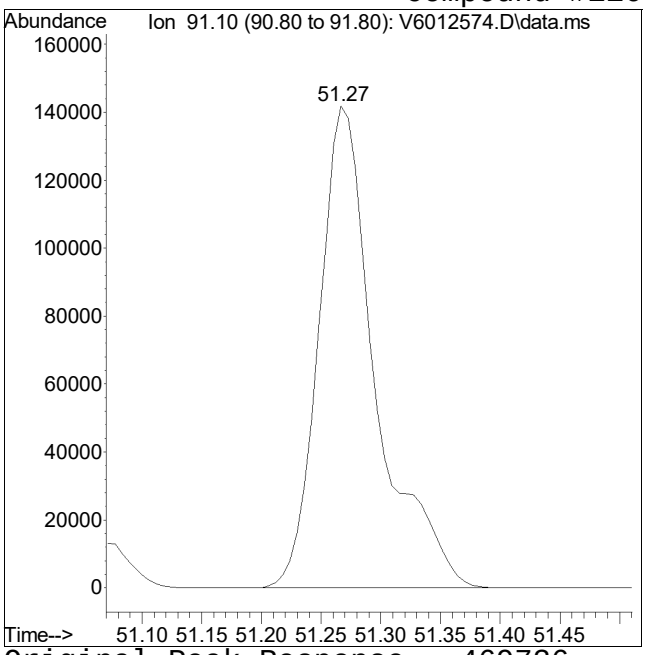
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

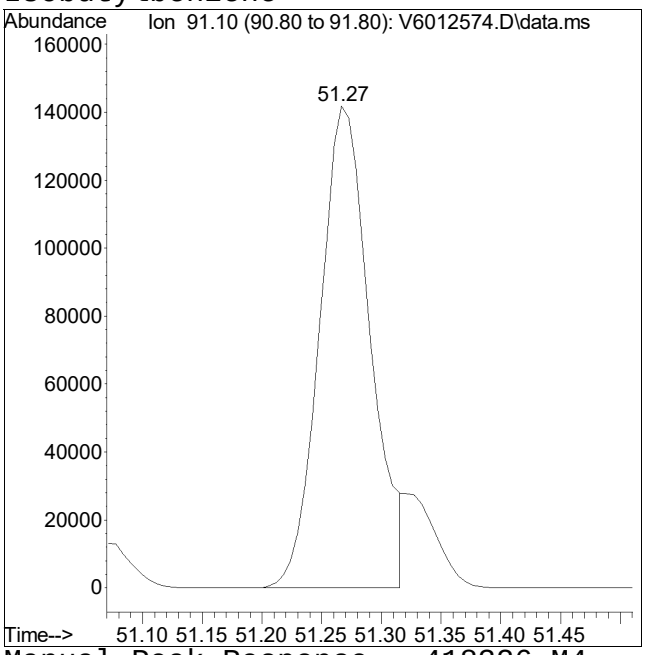
Data Path : O:\ORGANICS\DATA\VOA6\2020\
Data File : V6012574.D
Date Inj'd : 9/30/2020 0:2: 5
Sample : WG1416337-7,31,5,5

QMethod : P6091820W.M
Operator : VOA6:RY
Instrument : VOA6
Quant Date : 9/30/2020 4:07 pm

Compound #116: Isobutylbenzene



Original Peak Response = 469736



Manual Peak Response = 418326 M4

M4 = Poor automated baseline construction.

Sample Raw Data

Quantitation Report (QT Reviewed)

Data Path : O:\Organics\DATA\VOA6\2020\09-SEP\200929\
Data File : V6012571.D
Acq On : 30 Sep 2020 10:15 am
Operator : VOA6:RY
Sample : L2040277-01,31,5,5
Misc : WG1416337,ICAL17149
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Sep 30 14:08:47 2020
Quant Method : O:\Organics\DATA\VOA6\2020\09-SEP\200929\P6091820W.M
Quant Title : PIANO VOLATILES
QLast Update : Sat Sep 19 08:40:17 2020
Response via : Initial Calibration

Sub List : PIANO - PIANO

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Chlorobenzene-D5 [IS]	38.35	117	403260	50.000	ug/L	0.00
System Monitoring Compounds						
24) Dibromofluoromethane (...	16.63	113	130355	51.839	ug/L	0.00
Spiked Amount 50.000	Range 78 - 118		Recovery = 103.68%			
62) Toluene-d8 (surr)	30.56	98	484384	50.367	ug/L	0.00
Spiked Amount 50.000	Range 87 - 113		Recovery = 100.73%			
64) 2-Bromo-1-chloropropan...	0.00	77	0	0.000	ug/L	
Spiked Amount 50.000	Range 70 - 130		Recovery = 0.00%#			
87) 1-Chloro-2-fluorobenze...	0.00	130	0	0.000	ug/L	
Spiked Amount 50.000	Range 70 - 130		Recovery = 0.00%#			
97) 1,4-Dichlorobutane (H/...	0.00	55	0	0.000	ug/L	
Spiked Amount 50.000	Range 70 - 130		Recovery = 0.00%#			
101) 4-Bromofluorobenzene (...	45.77	95	181594	45.431	ug/L	0.00
Spiked Amount 50.000	Range 76 - 120		Recovery = 90.86%			

Target Compounds				Qvalue
2) 3-Methyl-1-butene	0.00	0	N.D.	
3) Isopentane	0.00	0	N.D.	
4) 1-Pentene	0.00	0	N.D.	
5) 2-Methyl-1-butene	0.00	0	N.D.	
6) Pentane	0.00	0	N.D.	d
7) trans-2-Pentene	0.00	0	N.D.	
8) 2-Methyl-1,3-butadiene	0.00	0	N.D.	
9) cis-2-Pentene	0.00	0	N.D.	
10) Tertiary butanol	0.00	0	N.D.	
11) 2,2-Dimethylbutane	0.00	0	N.D.	
12) 4-Methyl-1-pentene	0.00	0	N.D.	
13) Cyclopentane	0.00	0	N.D.	
14) 2,3-Dimethylbutane	0.00	0	N.D.	
15) 2-Methylpentane	0.00	0	N.D.	
16) MTBE	0.00	0	N.D.	
17) 3-Methylpentane	0.00	0	N.D.	
18) 1-Hexene	0.00	0	N.D.	
19) Hexane	0.00	0	N.D.	
20) Diisopropyl ether	0.00	0	N.D.	
21) trans-2-Hexene	0.00	0	N.D.	
22) 2-Methyl-2-pentene	0.00	0	N.D.	
23) cis-2-Hexene	0.00	0	N.D.	
25) Ethyl tertiary butyl e...	0.00	0	N.D.	

Data Path : O:\Organics\DATA\VOA6\2020\09-SEP\200929\
Data File : V6012571.D
Acq On : 30 Sep 2020 10:15 am
Operator : VOA6:RY
Sample : L2040277-01,31,5,5
Misc : WG1416337,ICAL17149
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Sep 30 14:08:47 2020
Quant Method : O:\Organics\DATA\VOA6\2020\09-SEP\200929\P6091820W.M
Quant Title : PIANO VOLATILES
QLast Update : Sat Sep 19 08:40:17 2020
Response via : Initial Calibration

Sub List : PIANO - PIANO

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
26) 2,2-Dimethylpentane	0.00		0	N.D.			
27) Methylcyclopentane	0.00		0	N.D.			
28) 2,4-Dimethylpentane	0.00		0	N.D.			
29) 2,2,3-Trimethylbutane	0.00		0	N.D.			
30) 1,2-Dichloroethane	0.00		0	N.D.		d	
31) 3,3-Dimethylpentane	0.00		0	N.D.			
32) Cyclohexane	0.00		0	N.D.			
33) 2-Methylhexane	0.00		0	N.D.			
34) Benzene	0.00		0	N.D.			
35) 2,3-Dimethylpentane	0.00		0	N.D.			
36) Thiophene	0.00		0	N.D.			
37) 1,1-Dimethylcyclopentane	0.00		0	N.D.			
38) 3-Methylhexane	0.00		0	N.D.			
39) TAME	0.00		0	N.D.		d	
40) cis-1,3-Dimethylcyclop...	0.00		0	N.D.			
41) 3-Ethylpentane	0.00		0	N.D.			
42) trans-1,3-DMCP/2-Methy...	0.00		0	N.D.			
43) 1-Heptene/trans-1,2-DMCP	0.00		0	N.D.			
44) Isooctane	0.00		0	N.D.			
45) trans-3-Heptene	0.00		0	N.D.			
46) Heptane	0.00		0	N.D.		d	
48) trans-2-Heptene	0.00		0	N.D.			
49) cis-2-Heptene	0.00		0	N.D.			
50) 2,2-Dimethylhexane	0.00		0	N.D.			
51) Methylcyclohexane	0.00		0	N.D.			
52) 2,5-Dimethylhexane	0.00		0	N.D.			
53) 2,4-Dimethylhexane	0.00		0	N.D.			
54) Ethylcyclopentane	0.00		0	N.D.			
55) 2,2,3-Trimethylpentane	0.00		0	N.D.			
57) 2,3,4-Trimethylpentane	0.00		0	N.D.			
58) 2,3,3-Trimethylpentane	0.00		0	N.D.			
59) 2,3-Dimethylhexane	0.00		0	N.D.			
60) 2-Methylheptane	0.00		0	N.D.			
61) 4-Methylheptane	0.00		0	N.D.			
63) 3-Methylheptane	0.00		0	N.D.		d	
65) 3-Ethylhexane	0.00		0	N.D.		d	
66) Toluene	30.93	91	5298	0.720	ug/L		87
67) 2-Methylthiophene	0.00		0	N.D.			
68) trans-1,4-Dimethylcycl...	0.00		0	N.D.			
69) 3-Methylthiophene	0.00		0	N.D.			
70) 1-Octene	0.00		0	N.D.			

Data Path : O:\Organics\DATA\VOA6\2020\09-SEP\200929\
Data File : V6012571.D
Acq On : 30 Sep 2020 10:15 am
Operator : VOA6:RY
Sample : L2040277-01,31,5,5
Misc : WG1416337,ICAL17149
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Sep 30 14:08:47 2020
Quant Method : O:\Organics\DATA\VOA6\2020\09-SEP\200929\P6091820W.M
Quant Title : PIANO VOLATILES
QLast Update : Sat Sep 19 08:40:17 2020
Response via : Initial Calibration

Sub List : PIANO - PIANO

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
71) Octane	0.00		0		N.D.	
72) trans-1,2-Dimethylcycl...	0.00		0		N.D.	
73) 1,2-Dibromoethane	0.00		0		N.D.	
75) cis-2-Octene	0.00		0		N.D.	
76) Isopropylcyclopentane	0.00		0		N.D.	
77) cis-1,2-Dimethylcycloh...	0.00		0		N.D.	
78) 2,5-Dimethylheptane	0.00		0		N.D.	
79) 3,5-Dimethylheptane	0.00		0		N.D.	
80) 3,3-Dimethylheptane	0.00		0		N.D.	
81) 1,1,4-Trimethylcyclohe...	0.00		0		N.D.	
82) 2,3-Dimethylheptane	0.00		0		N.D.	
83) 3,4-Dimethylheptane	0.00		0		N.D.	
84) 4-Methyloctane	0.00		0		N.D.	
85) 2-Methyloctane	0.00		0		N.D.	
86) Ethylbenzene	0.00		0		N.D.	d
88) 2-Ethylthiophene	0.00		0		N.D.	
89) 3-Methyloctane	0.00		0		N.D.	
90) 3,3-Diethylpentane	0.00		0		N.D.	
91) p/m-Xylene	0.00		0		N.D.	
92) 1-Nonene	0.00		0		N.D.	
93) trans-3-Nonene	0.00		0		N.D.	
94) cis-3-Nonene	0.00		0		N.D.	
95) Nonane	0.00		0		N.D.	
96) Styrene	0.00		0		N.D.	
98) o-Xylene	0.00		0		N.D.	
99) 2-Nonene	0.00		0		N.D.	
100) Isopropylcyclohexane	0.00		0		N.D.	
102) Isopropylbenzene	0.00		0		N.D.	
103) 3,3-Dimethyloctane	0.00		0		N.D.	
104) n-Propylbenzene	0.00		0		N.D.	
105) 2-Methylnonane	0.00		0		N.D.	
106) 3-Methylnonane	0.00		0		N.D.	
107) 1-Methyl-3-ethylbenzene	0.00		0		N.D.	
108) 1-Methyl-4-ethylbenzene	0.00		0		N.D.	
109) 1,3,5-Trimethylbenzene	0.00		0		N.D.	
110) 1-Decene	0.00		0		N.D.	
111) Isobutylcyclohexane	0.00		0		N.D.	
112) 1-Methyl-2-ethylbenzene	0.00		0		N.D.	d
113) Decane	0.00		0		N.D.	
114) tert-Butylbenzene	0.00		0		N.D.	
115) 1,2,4-Trimethylbenzene	0.00		0		N.D.	

Data Path : O:\Organics\DATA\VOA6\2020\09-SEP\200929\
Data File : V6012571.D
Acq On : 30 Sep 2020 10:15 am
Operator : VOA6:RY
Sample : L2040277-01,31,5,5
Misc : WG1416337,ICAL17149
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Sep 30 14:08:47 2020
Quant Method : O:\Organics\DATA\VOA6\2020\09-SEP\200929\P6091820W.M
Quant Title : PIANO VOLATILES
QLast Update : Sat Sep 19 08:40:17 2020
Response via : Initial Calibration

Sub List : PIANO - PIANO

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
116) Isobutylbenzene	0.00		0	N.D.		
117) sec-Butylbenzene	0.00		0	N.D.	d	
118) 1-Methyl-3-isopropylbe...	0.00		0	N.D.		
119) 1-Methyl-4-isopropylbe...	0.00		0	N.D.		
120) 1,2,3-Trimethylbenzene	0.00		0	N.D.	d	
121) 1-Methyl-2-isopropylbe...	0.00		0	N.D.		
122) Indan	0.00		0	N.D.		
123) 1,3-Diethylbenzene	0.00		0	N.D.		
124) 1-Methyl-3-propylbenzene	0.00		0	N.D.		
125) Indene	0.00		0	N.D.		
126) 1-Methyl-4-propylbenzene	0.00		0	N.D.		
127) n-Butylbenzene	0.00		0	N.D.		
128) 1,2-Dimethyl-4-ethylbe...	0.00		0	N.D.		
129) 1,2-Diethylbenzene	0.00		0	N.D.		
130) 1-Methyl-2-propylbenzene	0.00		0	N.D.		
131) 1,4-Dimethyl-2-ethylbe...	0.00		0	N.D.		
132) Undecane	0.00		0	N.D.		
133) 1,3-Dimethyl-4-ethylbe...	0.00		0	N.D.		
134) 1,3-Dimethyl-5-ethylbe...	0.00		0	N.D.		
135) 1,3-Dimethyl-2-ethylbe...	0.00		0	N.D.		
136) 1,2-Dimethyl-3-ethylbe...	0.00		0	N.D.		
137) 1,2,4,5-Tetramethylben...	0.00		0	N.D.		
138) 1,2,3,5-Tetramethylben...	0.00		0	N.D.		
139) Pentylbenzene	0.00		0	N.D.		
140) 1,2,3,4-Tetramethylben...	0.00		0	N.D.		
141) 1,3-DM-5-tert-Butylben...	0.00		0	N.D.		
142) Dodecane	0.00		0	N.D.		
143) 1,3,5-Triethylbenzene	0.00		0	N.D.		
144) Naphthalene	0.00		0	N.D.	d	
145) Benzothiophene	0.00		0	N.D.		
146) 1,2,4-Triethylbenzene	0.00		0	N.D.		
147) Hexylbenzene	0.00		0	N.D.		
148) MMT	0.00		0	N.D.		
149) Tridecane	0.00		0	N.D.		
150) 2-Methylnaphthalene	0.00		0	N.D.	d	
151) 1-Methylnaphthalene	0.00		0	N.D.		
152) Tetradecane	0.00		0	N.D.		
153) Pentadecane	0.00		0	N.D.		

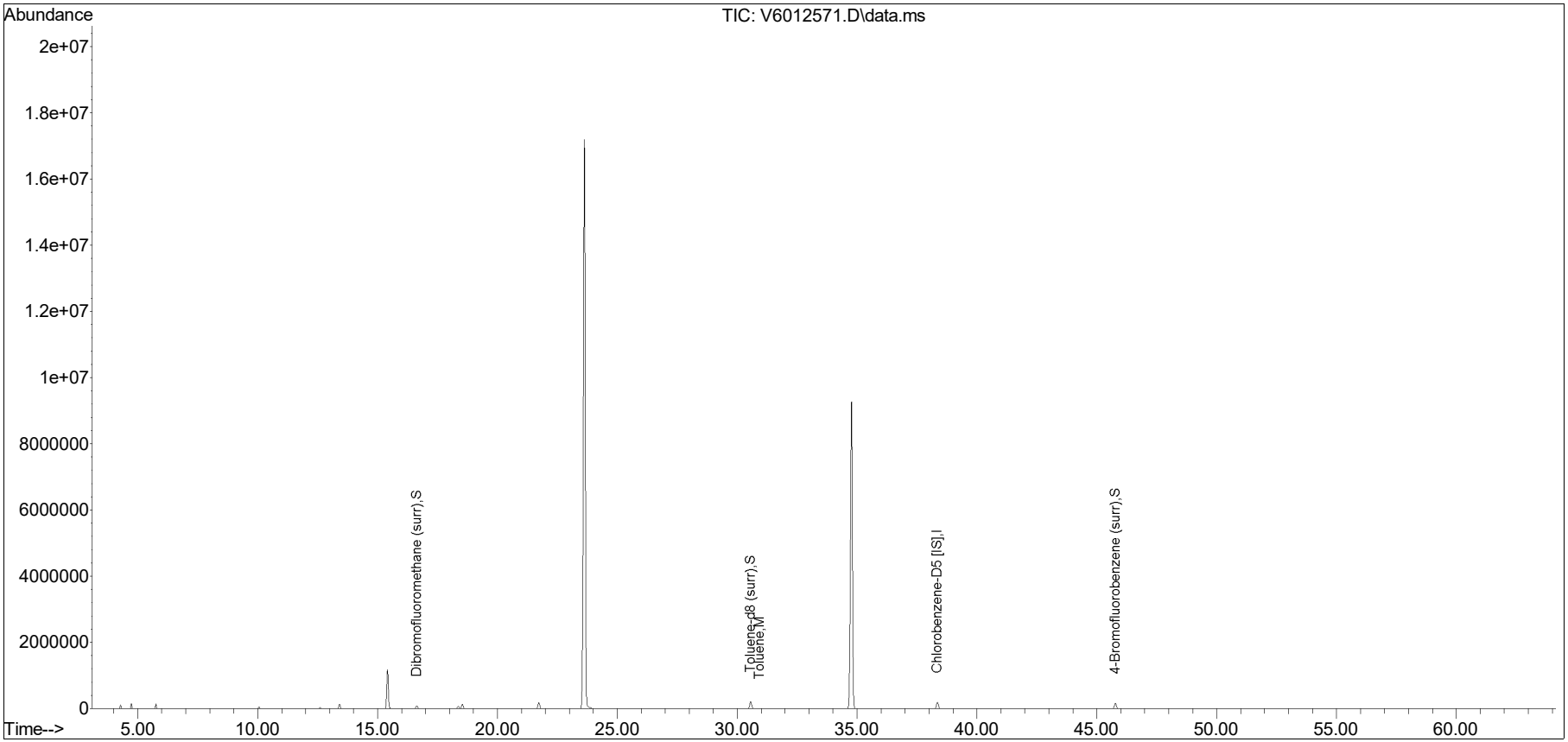
(#) = qualifier out of range (m) = manual integration (+) = signals summed

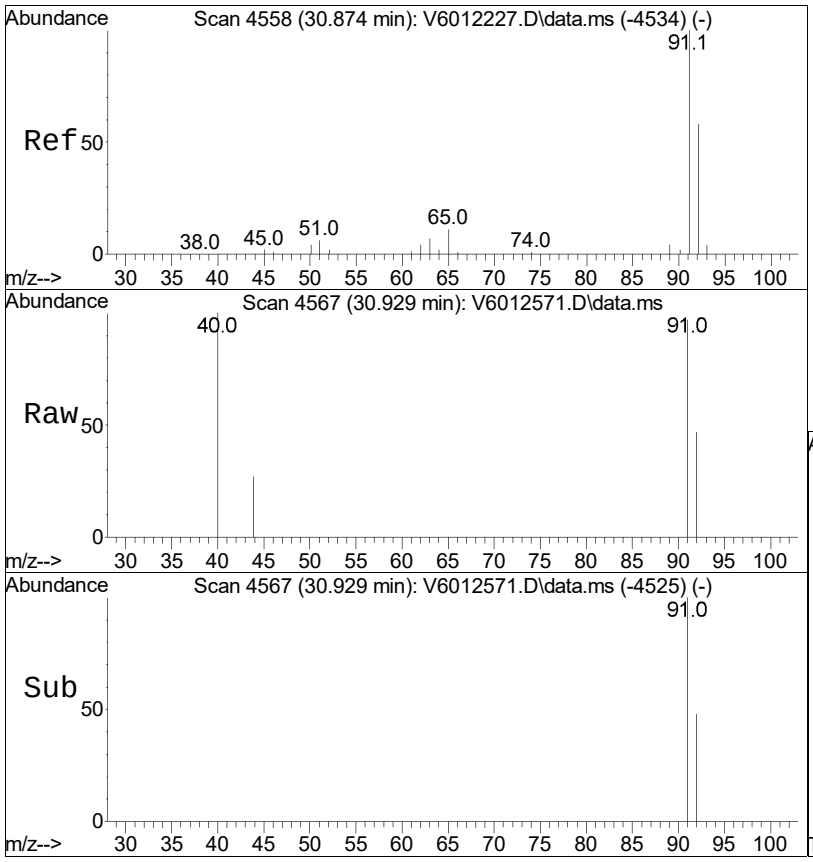
Quantitation Report (QT Reviewed)

Data Path : O:\Organics\DATA\VOA6\2020\09-SEP\200929\
Data File : V6012571.D
Acq On : 30 Sep 2020 10:15 am
Operator : VOA6:RY
Sample : L2040277-01,31,5,5
Misc : WG1416337,ICAL17149
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Sep 30 14:08:47 2020
Quant Method : O:\Organics\DATA\VOA6\2020\09-SEP\200929\P6091820W.M
Quant Title : PIANO VOLATILES
QLast Update : Sat Sep 19 08:40:17 2020
Response via : Initial Calibration

Sub List : PIANO - PIANO

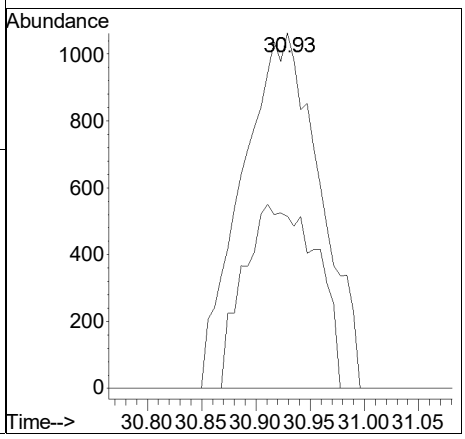




#66
Toluene
Concen: 0.72 ug/L
RT: 30.93 min Scan# 4567
Delta R.T. 0.006 min
Lab File: V6012571.D
Acq: 30 Sep 2020 10:15 am

Tgt Ion: 91 Resp: 5298

Ion	Ratio	Lower	Upper
91	100		
92	48.4	38.2	78.2



Quantitation Report (QT Reviewed)

Data Path : O:\Organics\DATA\VOA6\2020\09-SEP\200929\
Data File : V6012572.D
Acq On : 30 Sep 2020 11:26 am
Operator : VOA6:RY
Sample : L2040277-02,31,5,5
Misc : WG1416337,ICAL17149
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Sep 30 14:12:20 2020
Quant Method : O:\Organics\DATA\VOA6\2020\09-SEP\200929\P6091820W.M
Quant Title : PIANO VOLATILES
QLast Update : Sat Sep 19 08:40:17 2020
Response via : Initial Calibration

Sub List : PIANO - PIANO

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Chlorobenzene-D5 [IS]	38.35	117	384836	50.000	ug/L	0.00
System Monitoring Compounds						
24) Dibromofluoromethane (...	16.63	113	125241	52.190	ug/L	0.00
Spiked Amount 50.000	Range 78 - 118		Recovery = 104.38%			
62) Toluene-d8 (surr)	30.56	98	457491	49.848	ug/L	0.00
Spiked Amount 50.000	Range 87 - 113		Recovery = 99.70%			
64) 2-Bromo-1-chloropropan...	0.00	77	0	0.000	ug/L	
Spiked Amount 50.000	Range 70 - 130		Recovery = 0.00%#			
87) 1-Chloro-2-fluorobenze...	0.00	130	0	0.000	ug/L	
Spiked Amount 50.000	Range 70 - 130		Recovery = 0.00%#			
97) 1,4-Dichlorobutane (H/...	0.00	55	0	0.000	ug/L	
Spiked Amount 50.000	Range 70 - 130		Recovery = 0.00%#			
101) 4-Bromofluorobenzene (...	45.77	95	181191	47.500	ug/L	0.00
Spiked Amount 50.000	Range 76 - 120		Recovery = 95.00%			
Target Compounds						Qvalue
2) 3-Methyl-1-butene	0.00		0	N.D.		
3) Isopentane	0.00		0	N.D.		
4) 1-Pentene	0.00		0	N.D.		
5) 2-Methyl-1-butene	0.00		0	N.D.		
6) Pentane	0.00		0	N.D.		
7) trans-2-Pentene	0.00		0	N.D.		
8) 2-Methyl-1,3-butadiene	0.00		0	N.D.		
9) cis-2-Pentene	0.00		0	N.D.		
10) Tertiary butanol	0.00		0	N.D.		
11) 2,2-Dimethylbutane	0.00		0	N.D.		
12) 4-Methyl-1-pentene	0.00		0	N.D.		
13) Cyclopentane	0.00		0	N.D.		
14) 2,3-Dimethylbutane	0.00		0	N.D.		
15) 2-Methylpentane	0.00		0	N.D.		
16) MTBE	0.00		0	N.D.		
17) 3-Methylpentane	0.00		0	N.D.	d	
18) 1-Hexene	0.00		0	N.D.		
19) Hexane	0.00		0	N.D.		
20) Diisopropyl ether	0.00		0	N.D.		
21) trans-2-Hexene	0.00		0	N.D.		
22) 2-Methyl-2-pentene	0.00		0	N.D.		
23) cis-2-Hexene	0.00		0	N.D.		
25) Ethyl tertiary butyl e...	0.00		0	N.D.		

Data Path : O:\Organics\DATA\VOA6\2020\09-SEP\200929\
Data File : V6012572.D
Acq On : 30 Sep 2020 11:26 am
Operator : VOA6:RY
Sample : L2040277-02,31,5,5
Misc : WG1416337,ICAL17149
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Sep 30 14:12:20 2020
Quant Method : O:\Organics\DATA\VOA6\2020\09-SEP\200929\P6091820W.M
Quant Title : PIANO VOLATILES
QLast Update : Sat Sep 19 08:40:17 2020
Response via : Initial Calibration

Sub List : PIANO - PIANO

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
26) 2,2-Dimethylpentane	0.00		0	N.D.		
27) Methylcyclopentane	17.24	56	2110M4	0.764	ug/L	
28) 2,4-Dimethylpentane	0.00		0	N.D.		
29) 2,2,3-Trimethylbutane	0.00		0	N.D.		
30) 1,2-Dichloroethane	0.00		0	N.D.	d	
31) 3,3-Dimethylpentane	0.00		0	N.D.		
32) Cyclohexane	20.10	56	2180	0.947	ug/L #	77
33) 2-Methylhexane	0.00		0	N.D.		
34) Benzene	0.00		0	N.D.		
35) 2,3-Dimethylpentane	0.00		0	N.D.		
36) Thiophene	0.00		0	N.D.		
37) 1,1-Dimethylcyclopentane	0.00		0	N.D.		
38) 3-Methylhexane	0.00		0	N.D.		
39) TAME	0.00		0	N.D.	d	
40) cis-1,3-Dimethylcyclop...	0.00		0	N.D.	d	
41) 3-Ethylpentane	0.00		0	N.D.		
42) trans-1,3-DMCP/2-Methy...	0.00		0	N.D.	d	
43) 1-Heptene/trans-1,2-DMCP	0.00		0	N.D.	d	
44) Isooctane	0.00		0	N.D.		
45) trans-3-Heptene	0.00		0	N.D.		
46) Heptane	0.00		0	N.D.		
48) trans-2-Heptene	0.00		0	N.D.		
49) cis-2-Heptene	0.00		0	N.D.		
50) 2,2-Dimethylhexane	0.00		0	N.D.		
51) Methylcyclohexane	25.91	83	3896	1.448	ug/L	93
52) 2,5-Dimethylhexane	0.00		0	N.D.		
53) 2,4-Dimethylhexane	0.00		0	N.D.		
54) Ethylcyclopentane	0.00		0	N.D.		
55) 2,2,3-Trimethylpentane	0.00		0	N.D.		
57) 2,3,4-Trimethylpentane	0.00		0	N.D.		
58) 2,3,3-Trimethylpentane	0.00		0	N.D.		
59) 2,3-Dimethylhexane	0.00		0	N.D.		
60) 2-Methylheptane	0.00		0	N.D.		
61) 4-Methylheptane	0.00		0	N.D.		
63) 3-Methylheptane	0.00		0	N.D.	d	
65) 3-Ethylhexane	0.00		0	N.D.	d	
66) Toluene	0.00		0	N.D.		
67) 2-Methylthiophene	0.00		0	N.D.		
68) trans-1,4-Dimethylcycl...	0.00		0	N.D.	d	
69) 3-Methylthiophene	0.00		0	N.D.		
70) 1-Octene	0.00		0	N.D.		

Data Path : O:\Organics\DATA\VOA6\2020\09-SEP\200929\
Data File : V6012572.D
Acq On : 30 Sep 2020 11:26 am
Operator : VOA6:RY
Sample : L2040277-02,31,5,5
Misc : WG1416337,ICAL17149
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Sep 30 14:12:20 2020
Quant Method : O:\Organics\DATA\VOA6\2020\09-SEP\200929\P6091820W.M
Quant Title : PIANO VOLATILES
QLast Update : Sat Sep 19 08:40:17 2020
Response via : Initial Calibration

Sub List : PIANO - PIANO

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
71) Octane	0.00		0	N.D.		
72) trans-1,2-Dimethylcycl...	33.37	55	1947	0.825	ug/L #	79
73) 1,2-Dibromoethane	0.00		0	N.D.		
75) cis-2-Octene	0.00		0	N.D.		
76) Isopropylcyclopentane	0.00		0	N.D.		
77) cis-1,2-Dimethylcycloh...	36.37	55	3509	1.563	ug/L	99
78) 2,5-Dimethylheptane	0.00		0	N.D.	d	
79) 3,5-Dimethylheptane	0.00		0	N.D.	d	
80) 3,3-Dimethylheptane	0.00		0	N.D.		
81) 1,1,4-Trimethylcyclohe...	0.00		0	N.D.	d	
82) 2,3-Dimethylheptane	0.00		0	N.D.	d	
83) 3,4-Dimethylheptane	0.00		0	N.D.		
84) 4-Methyloctane	0.00		0	N.D.		
85) 2-Methyloctane	0.00		0	N.D.		
86) Ethylbenzene	39.95	91	3968M4	0.500	ug/L	
88) 2-Ethylthiophene	0.00		0	N.D.		
89) 3-Methyloctane	0.00		0	N.D.		
90) 3,3-Diethylpentane	0.00		0	N.D.		
91) p/m-Xylene	0.00		0	N.D.		
92) 1-Nonene	0.00		0	N.D.	d	
93) trans-3-Nonene	0.00		0	N.D.	d	
94) cis-3-Nonene	0.00		0	N.D.	d	
95) Nonane	0.00		0	N.D.		
96) Styrene	0.00		0	N.D.		
98) o-Xylene	0.00		0	N.D.		
99) 2-Nonene	0.00		0	N.D.	d	
100) Isopropylcyclohexane	0.00		0	N.D.	d	
102) Isopropylbenzene	45.80	105	29546	3.573	ug/L	94
103) 3,3-Dimethyloctane	0.00		0	N.D.	d	
104) n-Propylbenzene	48.43	91	85775	8.822	ug/L	100
105) 2-Methylnonane	0.00		0	N.D.		
106) 3-Methylnonane	0.00		0	N.D.	d	
107) 1-Methyl-3-ethylbenzene	0.00		0	N.D.		
108) 1-Methyl-4-ethylbenzene	0.00		0	N.D.		
109) 1,3,5-Trimethylbenzene	0.00		0	N.D.		
110) 1-Decene	0.00		0	N.D.	d	
111) Isobutylcyclohexane	0.00		0	N.D.	d	
112) 1-Methyl-2-ethylbenzene	0.00		0	N.D.	d	
113) Decane	0.00		0	N.D.	d	
114) tert-Butylbenzene	50.64	119	27928	4.457	ug/L	97
115) 1,2,4-Trimethylbenzene	0.00		0	N.D.		

Data Path : O:\Organics\DATA\VOA6\2020\09-SEP\200929\
Data File : V6012572.D
Acq On : 30 Sep 2020 11:26 am
Operator : VOA6:RY
Sample : L2040277-02,31,5,5
Misc : WG1416337,ICAL17149
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Sep 30 14:12:20 2020
Quant Method : O:\Organics\DATA\VOA6\2020\09-SEP\200929\P6091820W.M
Quant Title : PIANO VOLATILES
QLast Update : Sat Sep 19 08:40:17 2020
Response via : Initial Calibration

Sub List : PIANO - PIANO

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
116) Isobutylbenzene	51.27	91	43516M4	5.611	ug/L		
117) sec-Butylbenzene	51.33	105	48204	5.253	ug/L		97
118) 1-Methyl-3-isopropylbe...	0.00		0	N.D.			
119) 1-Methyl-4-isopropylbe...	0.00		0	N.D.			
120) 1,2,3-Trimethylbenzene	0.00		0	N.D.	d		
121) 1-Methyl-2-isopropylbe...	52.41	119	19792	2.496	ug/L		95
122) Indan	52.50	117	41267	6.070	ug/L		99
123) 1,3-Diethylbenzene	52.66	105	60919	12.405	ug/L		98
124) 1-Methyl-3-propylbenzene	0.00		0	N.D.	d		
125) Indene	52.90	115	2696	0.450	ug/L	#	24
126) 1-Methyl-4-propylbenzene	52.90	105	19411	1.681	ug/L	#	81
127) n-Butylbenzene	52.92	91	34593	3.973	ug/L		88
128) 1,2-Dimethyl-4-ethylbe...	0.00		0	N.D.	d		
129) 1,2-Diethylbenzene	53.14	119	19530	4.863	ug/L		100
130) 1-Methyl-2-propylbenzene	0.00		0	N.D.	d		
131) 1,4-Dimethyl-2-ethylbe...	0.00		0	N.D.	d		
132) Undecane	0.00		0	N.D.	d		
133) 1,3-Dimethyl-4-ethylbe...	0.00		0	N.D.	d		
134) 1,3-Dimethyl-5-ethylbe...	53.88	119	123356	13.933	ug/L		99
135) 1,3-Dimethyl-2-ethylbe...	54.10	119	33482	3.650	ug/L		89
136) 1,2-Dimethyl-3-ethylbe...	0.00		0	N.D.	d		
137) 1,2,4,5-Tetramethylben...	54.87	119	105534M4	12.171	ug/L		
138) 1,2,3,5-Tetramethylben...	0.00		0	N.D.	d		
139) Pentylbenzene	0.00		0	N.D.	d		
140) 1,2,3,4-Tetramethylben...	55.76	119	72214	7.043	ug/L		90
141) 1,3-DM-5-tert-Butylben...	0.00		0	N.D.			
142) Dodecane	0.00		0	N.D.	d		
143) 1,3,5-Triethylbenzene	0.00		0	N.D.	d		
144) Naphthalene	56.77	128	38308	5.418	ug/L		100
145) Benzothiophene	0.00		0	N.D.	d		
146) 1,2,4-Triethylbenzene	0.00		0	N.D.			
147) Hexylbenzene	0.00		0	N.D.	d		
148) MMT	0.00		0	N.D.			
149) Tridecane	0.00		0	N.D.			
150) 2-Methylnaphthalene	59.48	142	15342	3.220	ug/L		97
151) 1-Methylnaphthalene	59.95	142	14875	3.752	ug/L		100
152) Tetradecane	0.00		0	N.D.			
153) Pentadecane	0.00		0	N.D.			

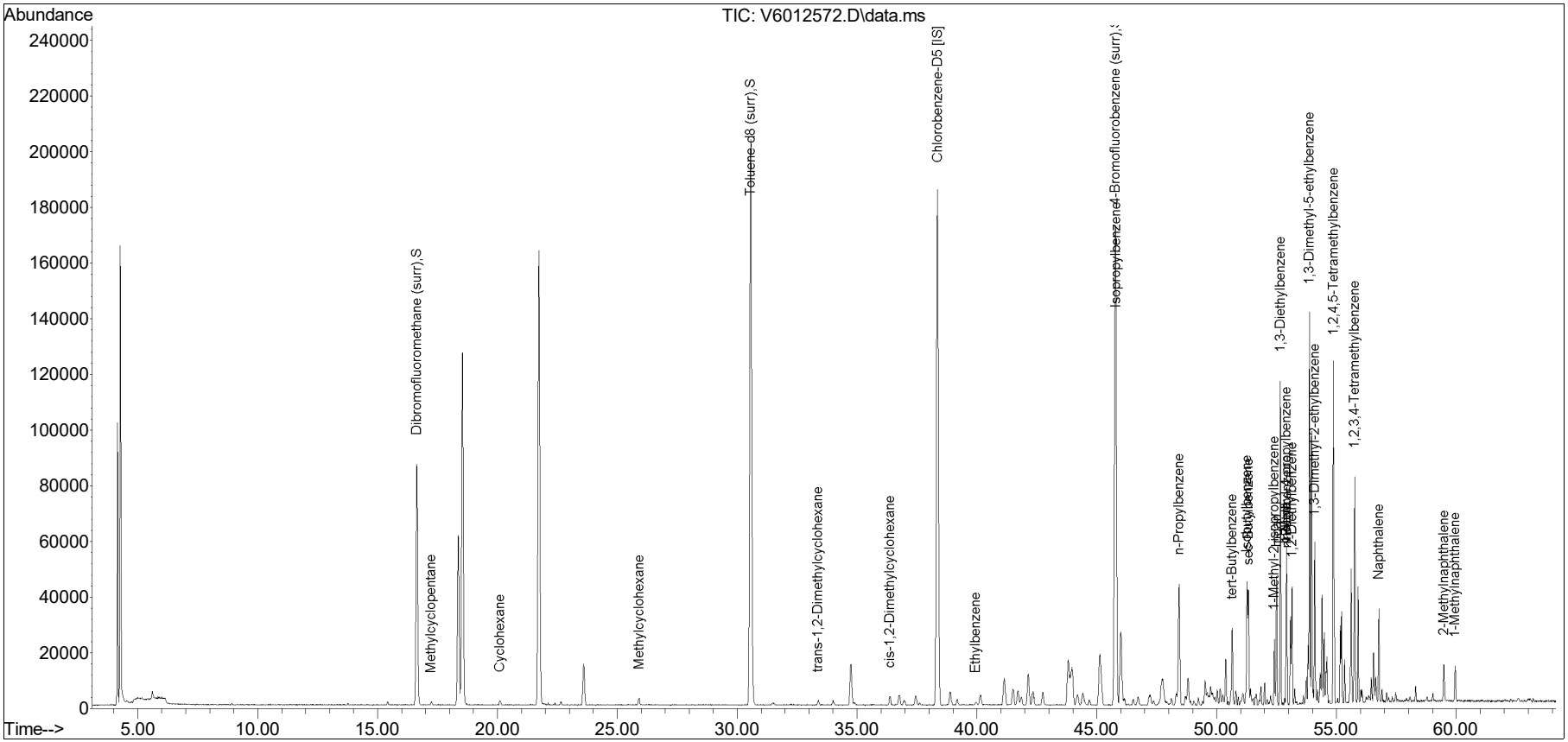
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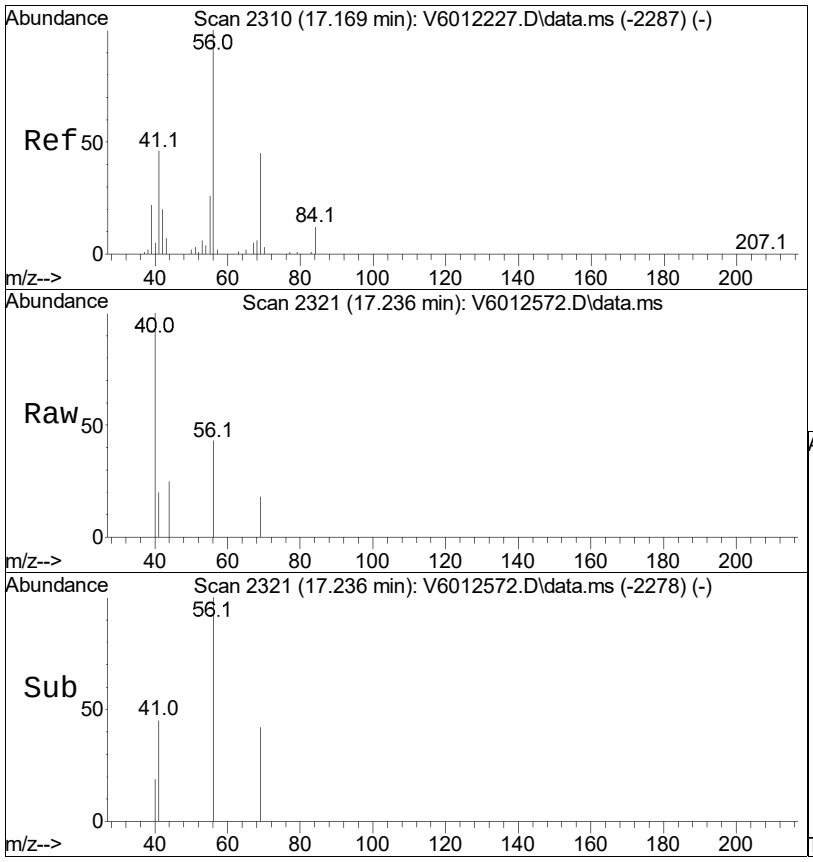
Quantitation Report (QT Reviewed)

Data Path : O:\Organics\DATA\VOA6\2020\09-SEP\200929\
Data File : V6012572.D
Acq On : 30 Sep 2020 11:26 am
Operator : VOA6:RY
Sample : L2040277-02,31,5,5
Misc : WG1416337,ICAL17149
ALS Vial : 2 Sample Multiplier: 1

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Quant Title : PIANO VOLATILES
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Sub List : PIANO - PIANO

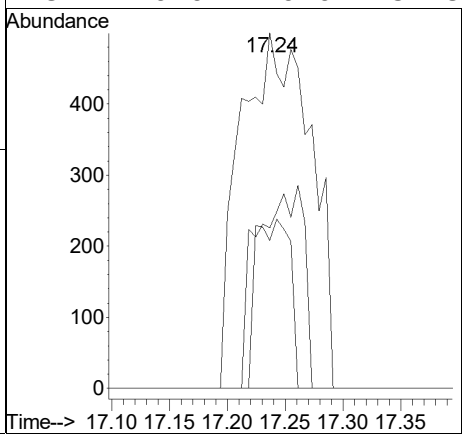


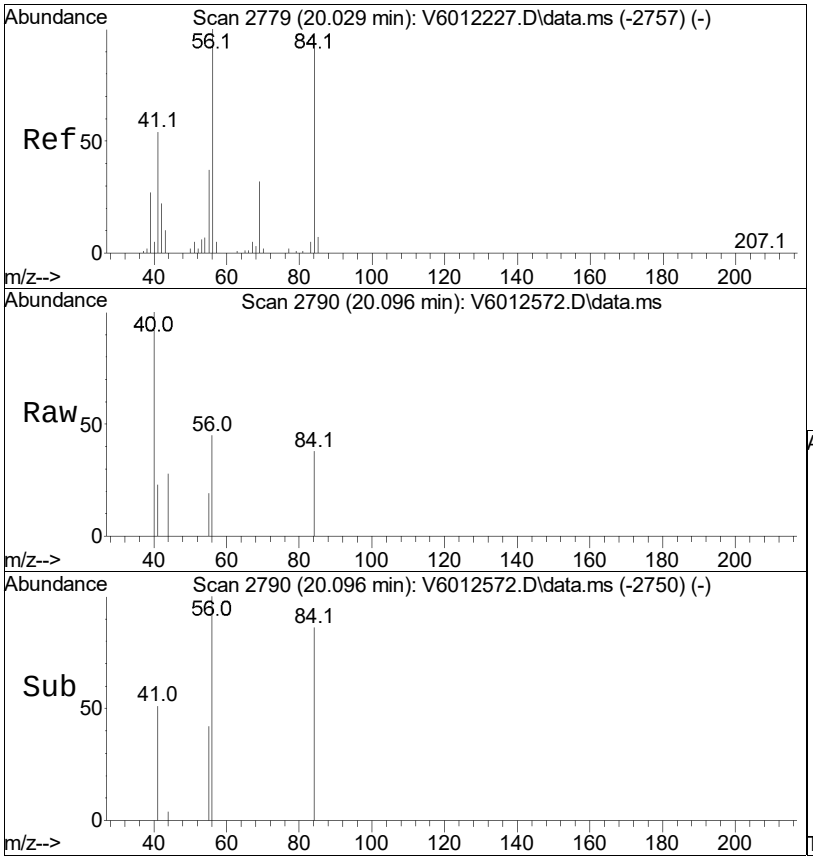


#27
Methylcyclopentane
Concen: 0.76 ug/L m
RT: 17.24 min Scan# 2321
Delta R.T. 0.012 min
Lab File: V6012572.D
Acq: 30 Sep 2020 11:26 am

Tgt Ion: 56 Resp: 2110

Ion	Ratio	Lower	Upper
56	100		
69	41.6	25.0	65.0
41	45.2	26.3	66.3
84	0.0	0.0	31.8

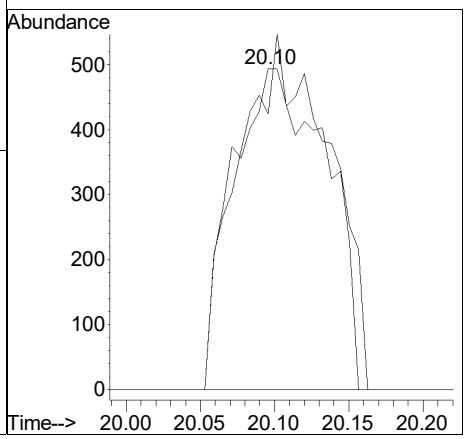


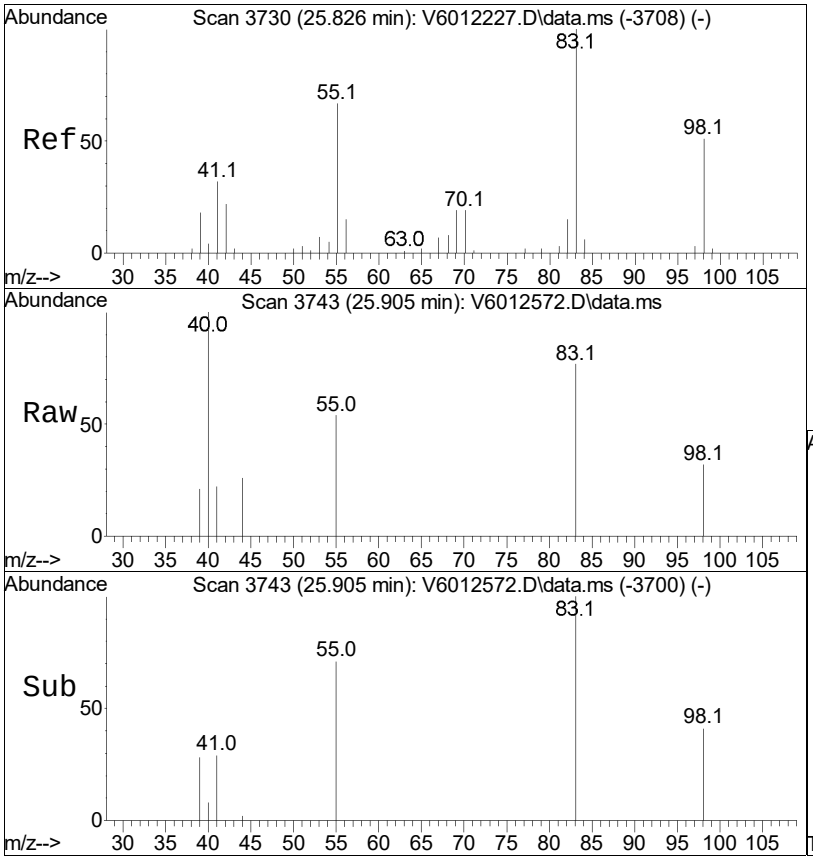


#32
Cyclohexane
Concen: 0.95 ug/L
RT: 20.10 min Scan# 2790
Delta R.T. -0.006 min
Lab File: V6012572.D
Acq: 30 Sep 2020 11:26 am

Tgt Ion: 56 Resp: 2180

Ion	Ratio	Lower	Upper
56	100		
84	85.8	77.5	117.5
69	0.0	12.1	52.1#

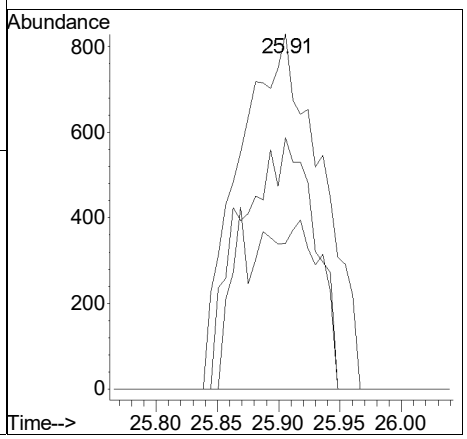


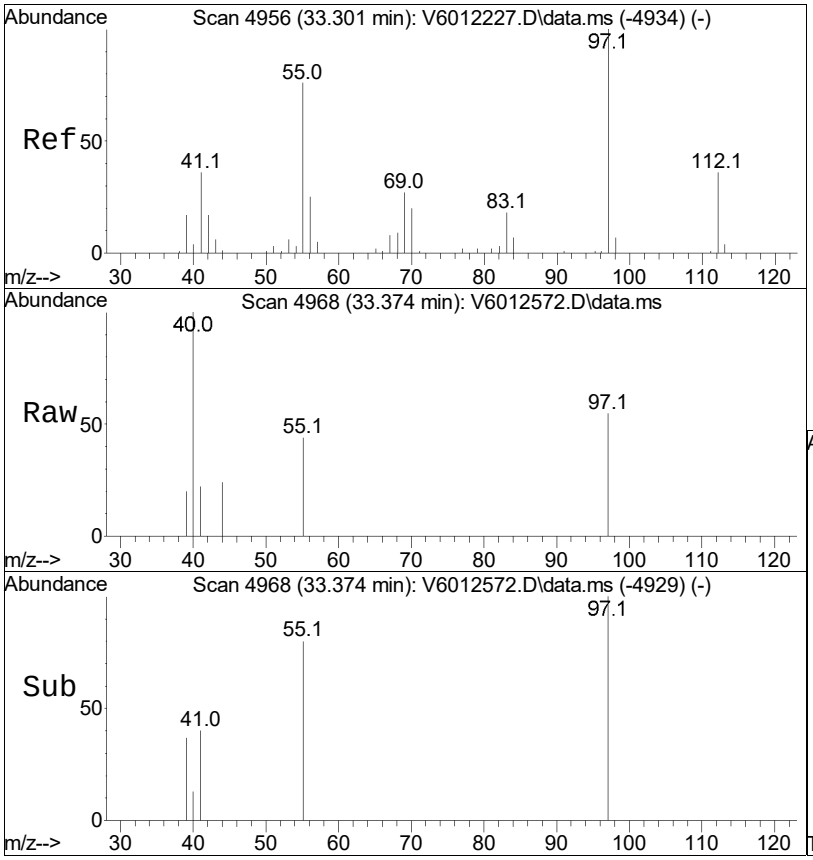


#51
Methylcyclohexane
Concen: 1.45 ug/L
RT: 25.91 min Scan# 3743
Delta R.T. 0.012 min
Lab File: V6012572.D
Acq: 30 Sep 2020 11:26 am

Tgt Ion: 83 Resp: 3896

Ion	Ratio	Lower	Upper
83	100		
55	70.8	48.9	88.9
98	41.1	30.6	70.6

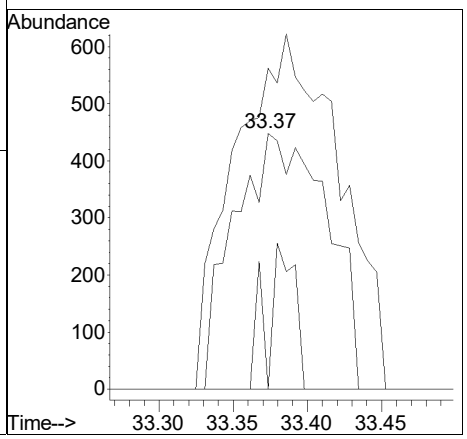


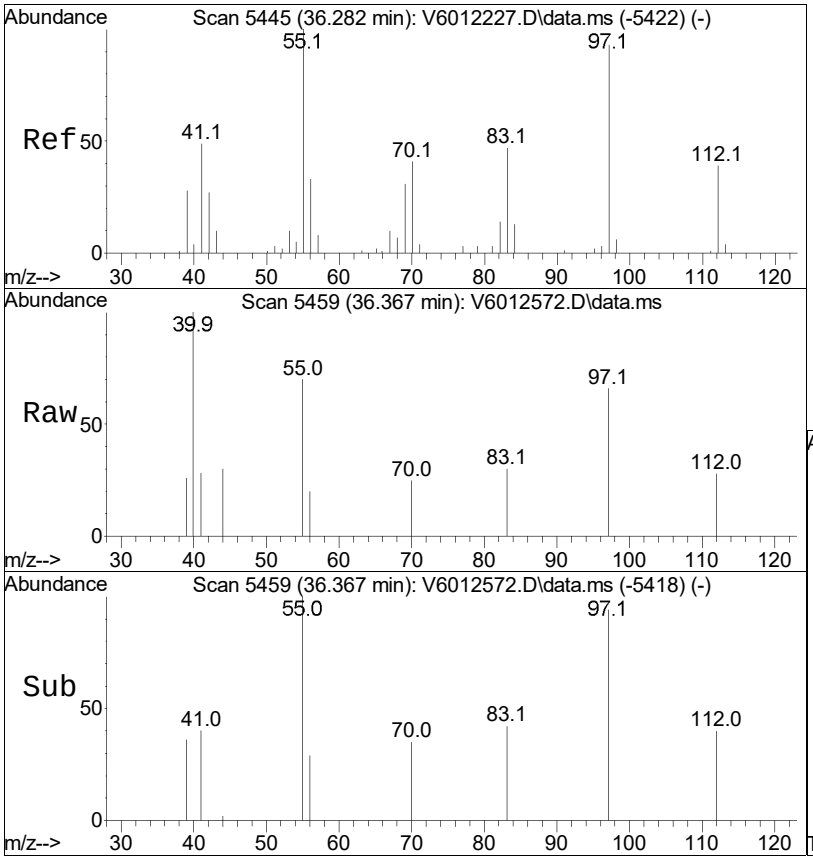


#72
trans-1,2-Dimethylcyclohexane
Concen: 0.83 ug/L
RT: 33.37 min Scan# 4968
Delta R.T. -0.012 min
Lab File: V6012572.D
Acq: 30 Sep 2020 11:26 am

Tgt Ion: 55 Resp: 1947

Ion	Ratio	Lower	Upper
55	100		
97	125.4	110.1	150.1
112	0.0	26.2	66.2#

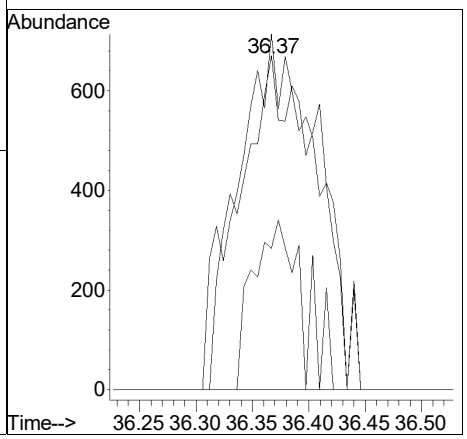


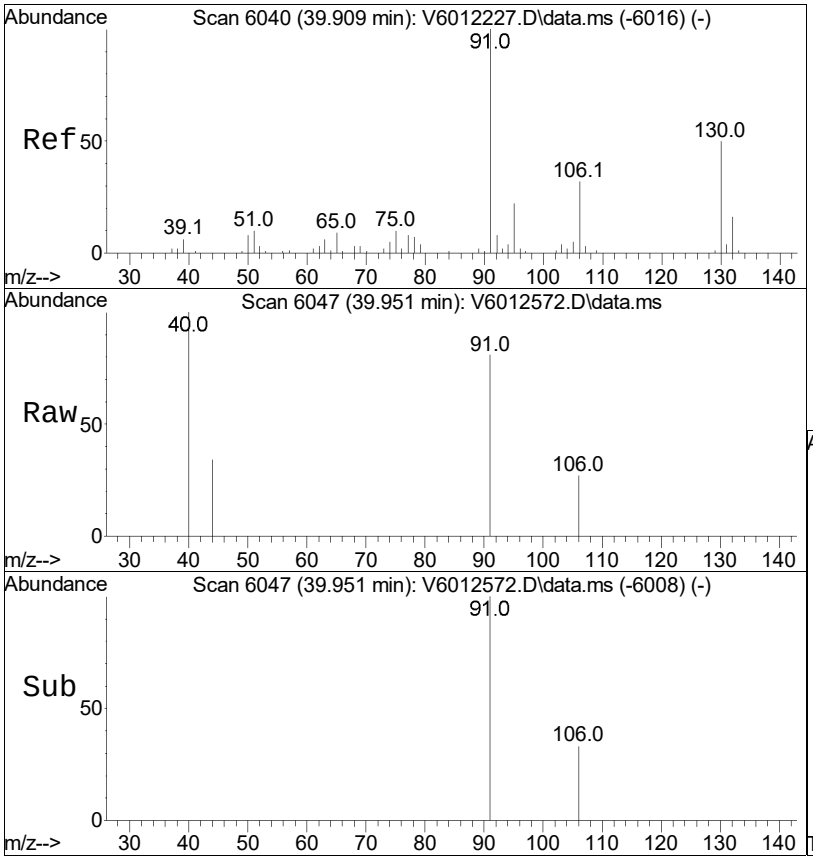


#77
cis-1,2-Dimethylcyclohexane
Concen: 1.56 ug/L
RT: 36.37 min Scan# 5459
Delta R.T. -0.000 min
Lab File: V6012572.D
Acq: 30 Sep 2020 11:26 am

Tgt Ion: 55 Resp: 3509

Ion	Ratio	Lower	Upper
55	100		
97	94.0	73.0	113.0
112	39.8	18.6	58.6

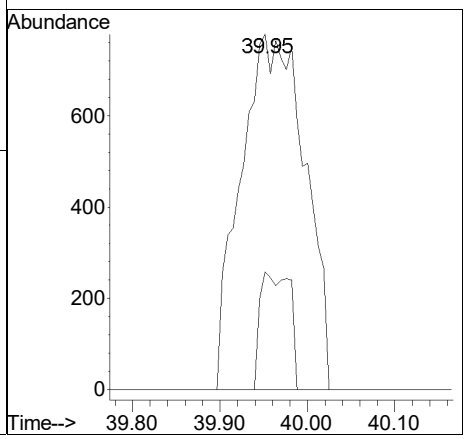


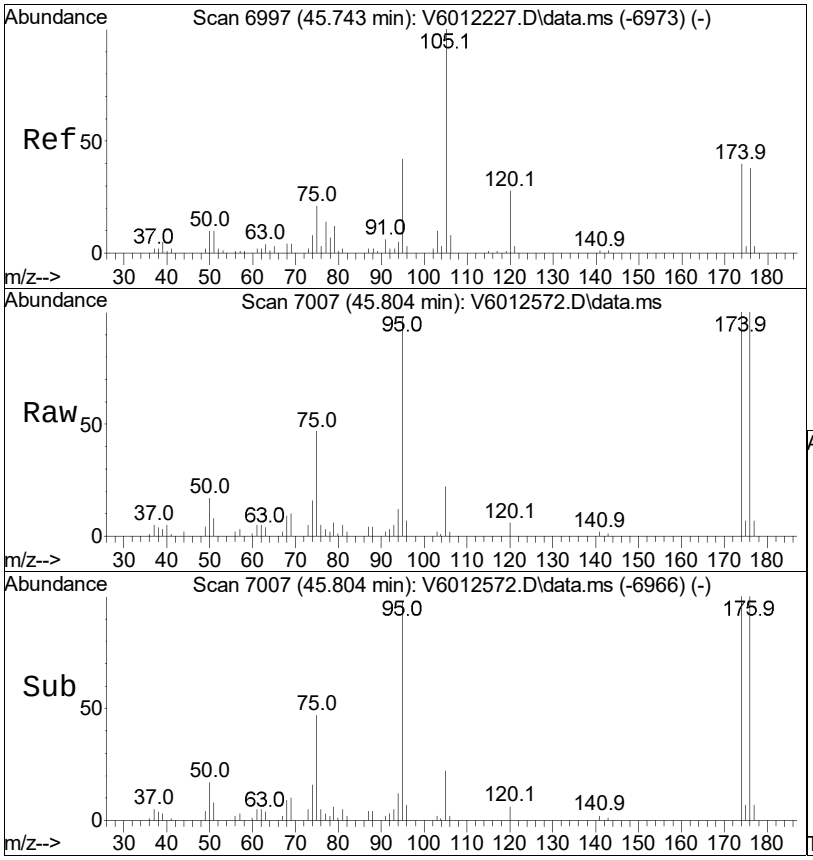


#86
Ethylbenzene
Concen: 0.50 ug/L m
RT: 39.95 min Scan# 6047
Delta R.T. -0.012 min
Lab File: V6012572.D
Acq: 30 Sep 2020 11:26 am

Tgt Ion: 91 Resp: 3968

Ion	Ratio	Lower	Upper
91	100		
106	33.1	12.1	52.1

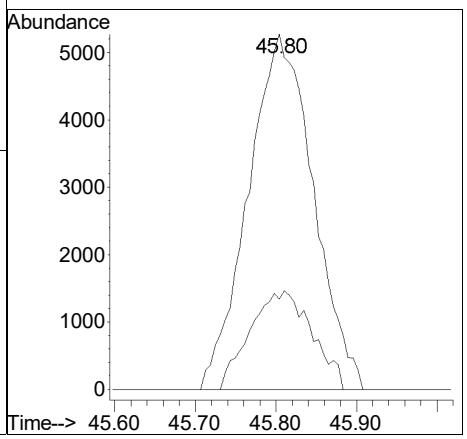


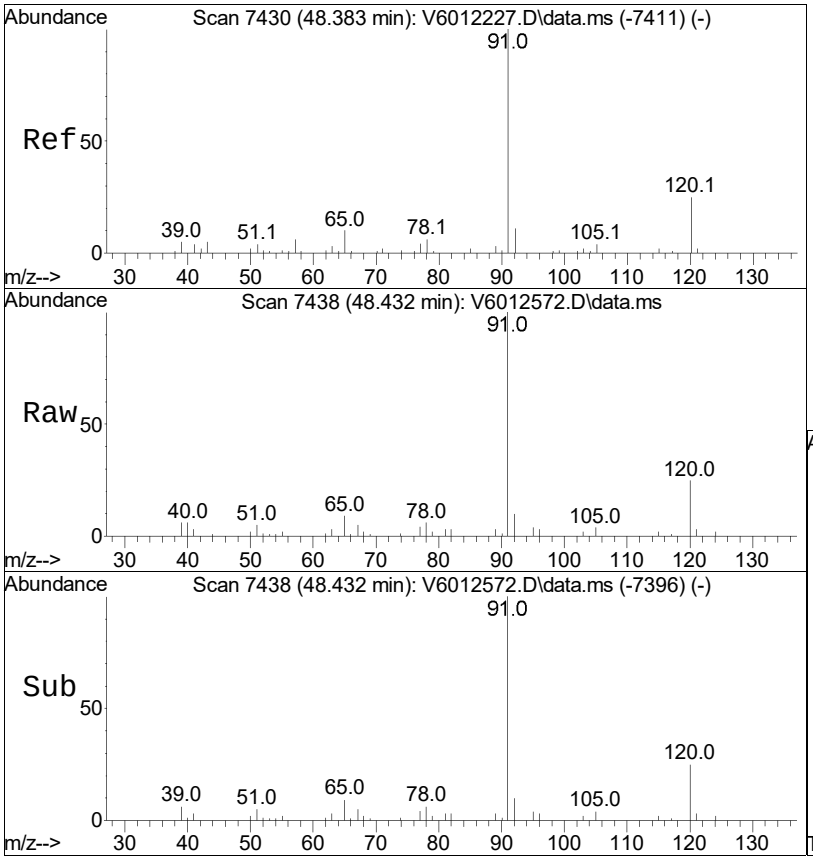


#102
Isopropylbenzene
Concen: 3.57 ug/L
RT: 45.80 min Scan# 7007
Delta R.T. -0.000 min
Lab File: V6012572.D
Acq: 30 Sep 2020 11:26 am

Tgt Ion:105 Resp: 29546

Ion	Ratio	Lower	Upper
105	100		
120	25.4	8.4	48.4

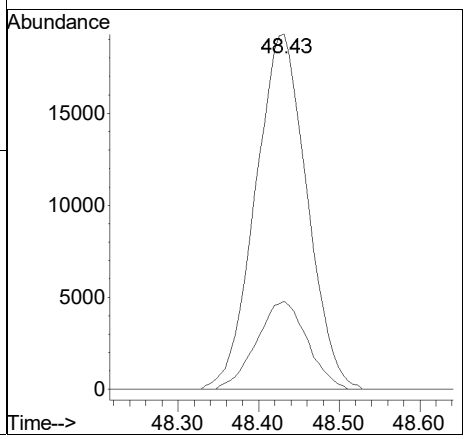


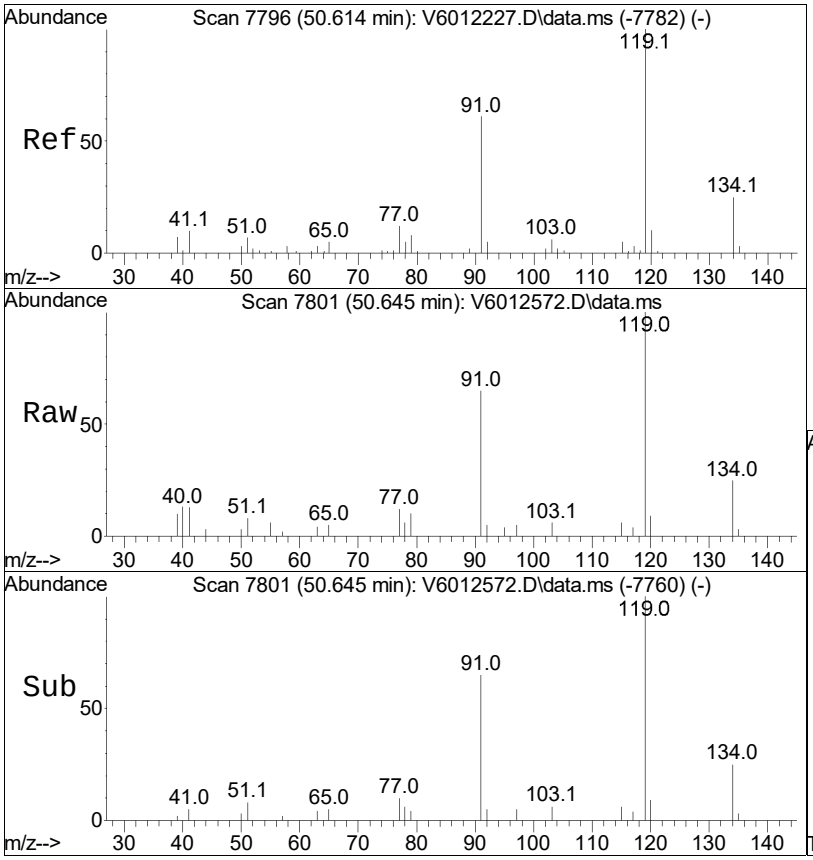


#104
n-Propylbenzene
Concen: 8.82 ug/L
RT: 48.43 min Scan# 7438
Delta R.T. 0.006 min
Lab File: V6012572.D
Acq: 30 Sep 2020 11:26 am

Tgt Ion: 91 Resp: 85775

Ion	Ratio	Lower	Upper
91	100		
120	24.8	4.9	44.9

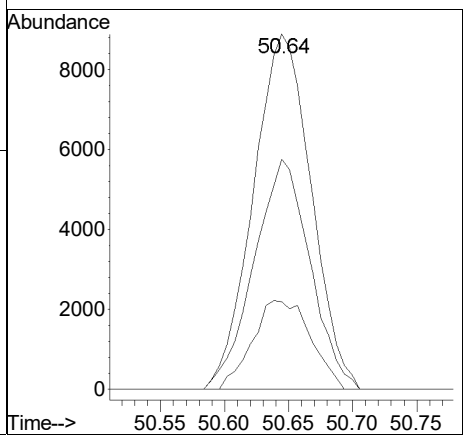


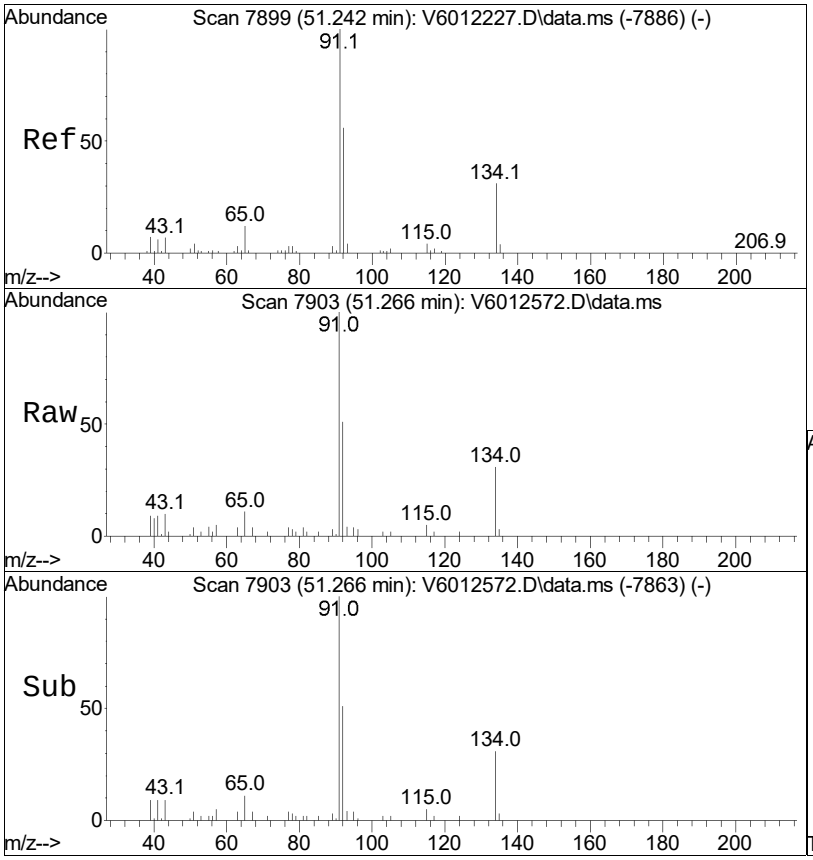


#114
tert-Butylbenzene
Concen: 4.46 ug/L
RT: 50.64 min Scan# 7801
Delta R.T. -0.000 min
Lab File: V6012572.D
Acq: 30 Sep 2020 11:26 am

Tgt Ion:119 Resp: 27928

Ion	Ratio	Lower	Upper
119	100		
91	64.8	41.3	81.3
134	24.7	5.0	45.0

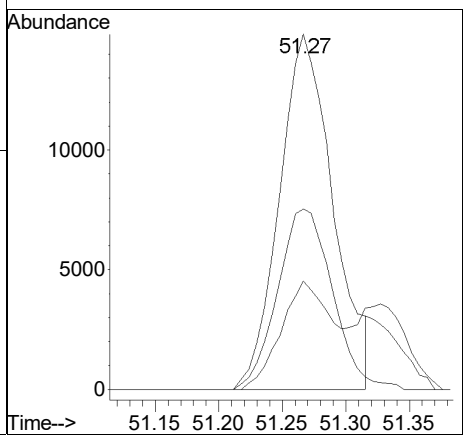


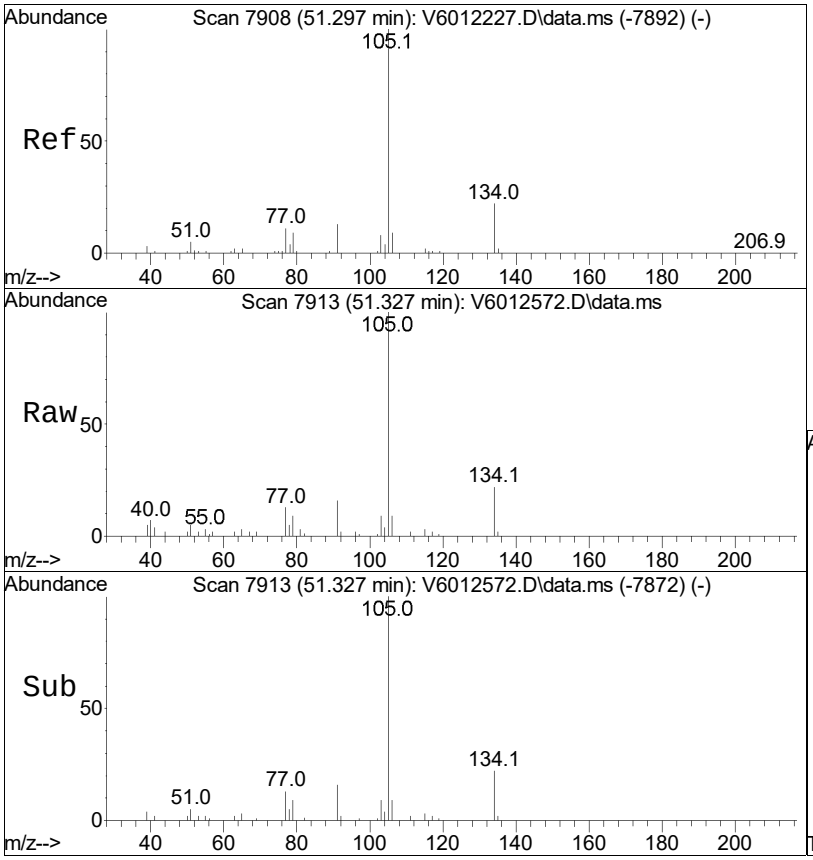


#116
Isobutylbenzene
Concen: 5.61 ug/L m
RT: 51.27 min Scan# 7903
Delta R.T. -0.006 min
Lab File: V6012572.D
Acq: 30 Sep 2020 11:26 am

Tgt Ion: 91 Resp: 43516

Ion	Ratio	Lower	Upper
91	100		
92	50.8	35.8	75.8
134	30.5	10.5	50.5

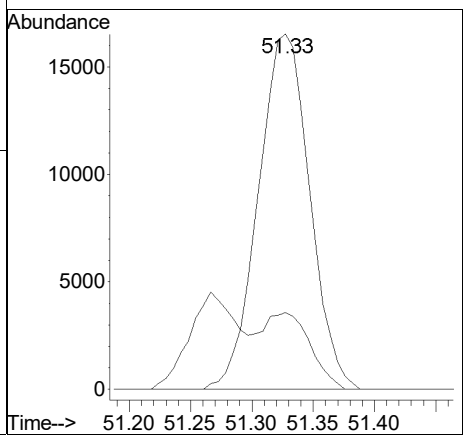


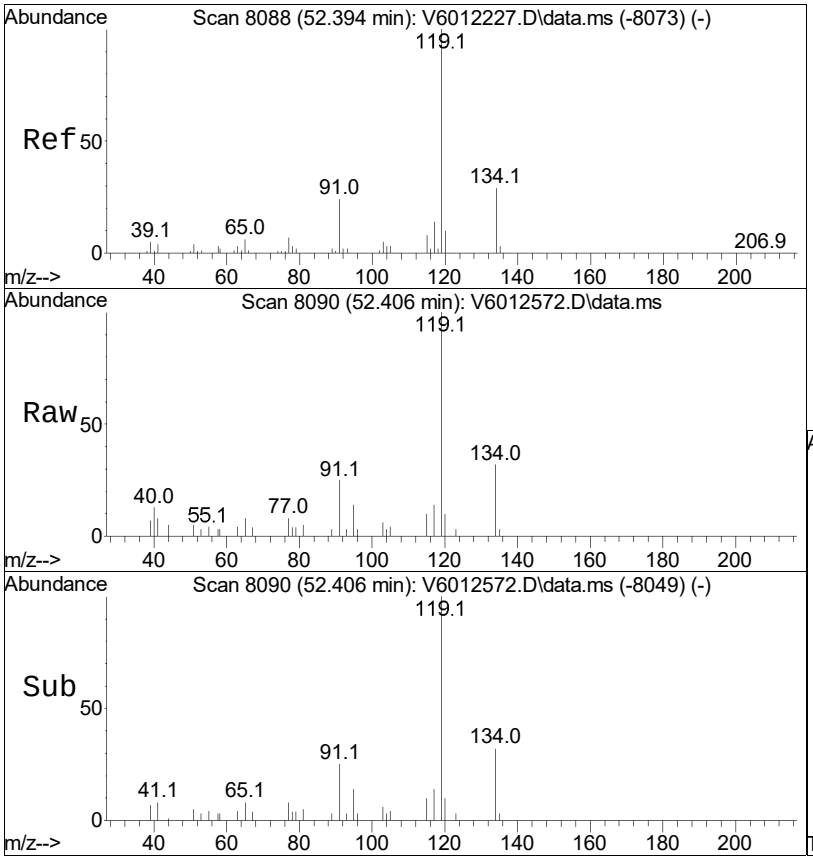


#117
sec-Butylbenzene
Concen: 5.25 ug/L
RT: 51.33 min Scan# 7913
Delta R.T. -0.000 min
Lab File: V6012572.D
Acq: 30 Sep 2020 11:26 am

Tgt Ion:105 Resp: 48204

Ion	Ratio	Lower	Upper
105	100		
134	21.6	3.2	43.2

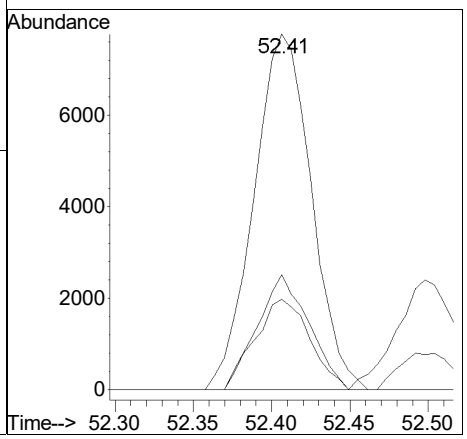


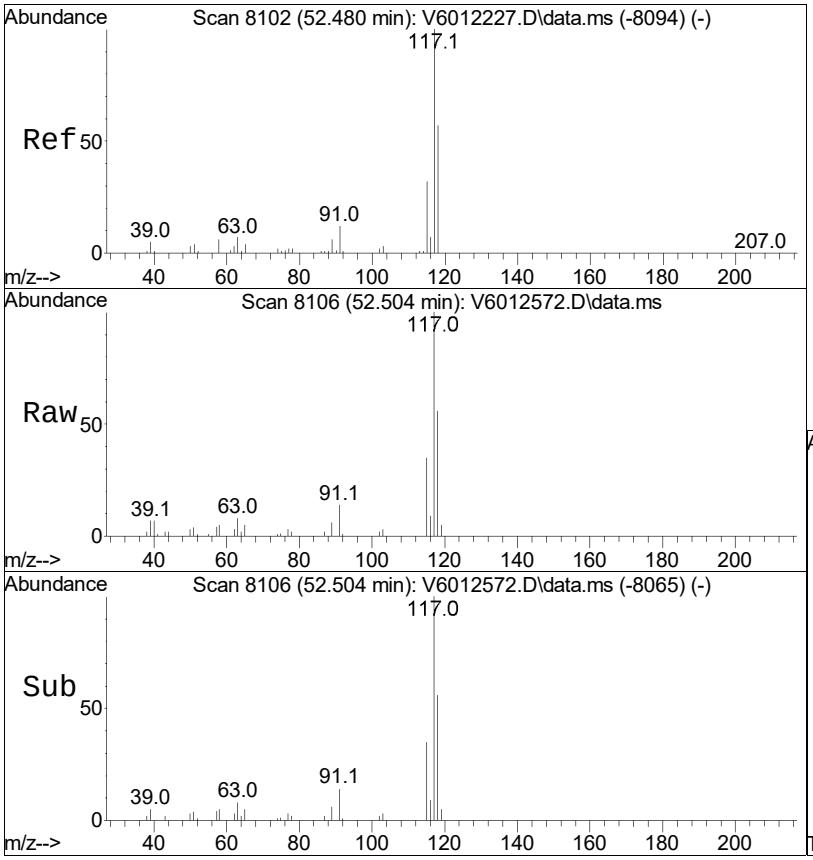


#121
1-Methyl-2-isopropylbenzene
Concen: 2.50 ug/L
RT: 52.41 min Scan# 8090
Delta R.T. -0.000 min
Lab File: V6012572.D
Acq: 30 Sep 2020 11:26 am

Tgt Ion:119 Resp: 19792

Ion	Ratio	Lower	Upper
119	100		
134	32.3	9.5	49.5
91	25.4	3.5	43.5

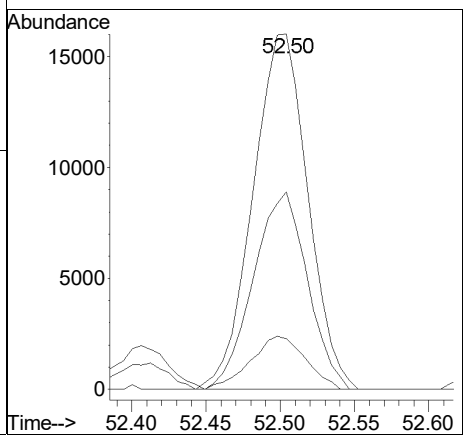


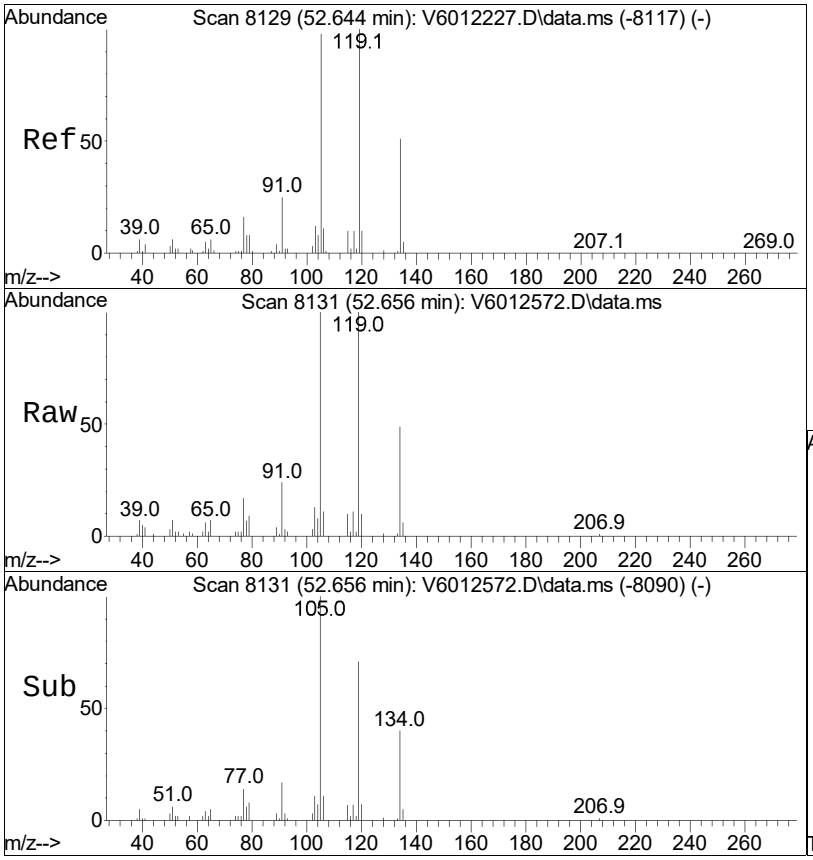


#122
Indan
Concen: 6.07 ug/L
RT: 52.50 min Scan# 8106
Delta R.T. -0.000 min
Lab File: V6012572.D
Acq: 30 Sep 2020 11:26 am

Tgt Ion:117 Resp: 41267

Ion	Ratio	Lower	Upper
117	100		
118	55.6	36.2	76.2
91	14.3	0.0	34.3

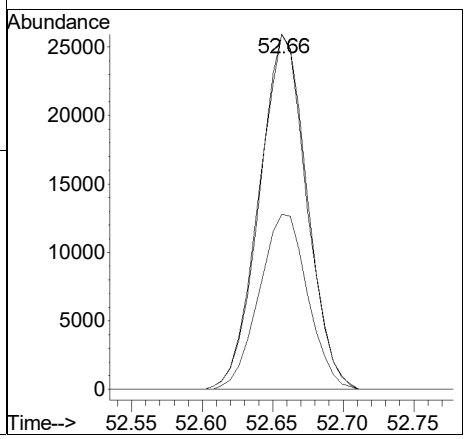


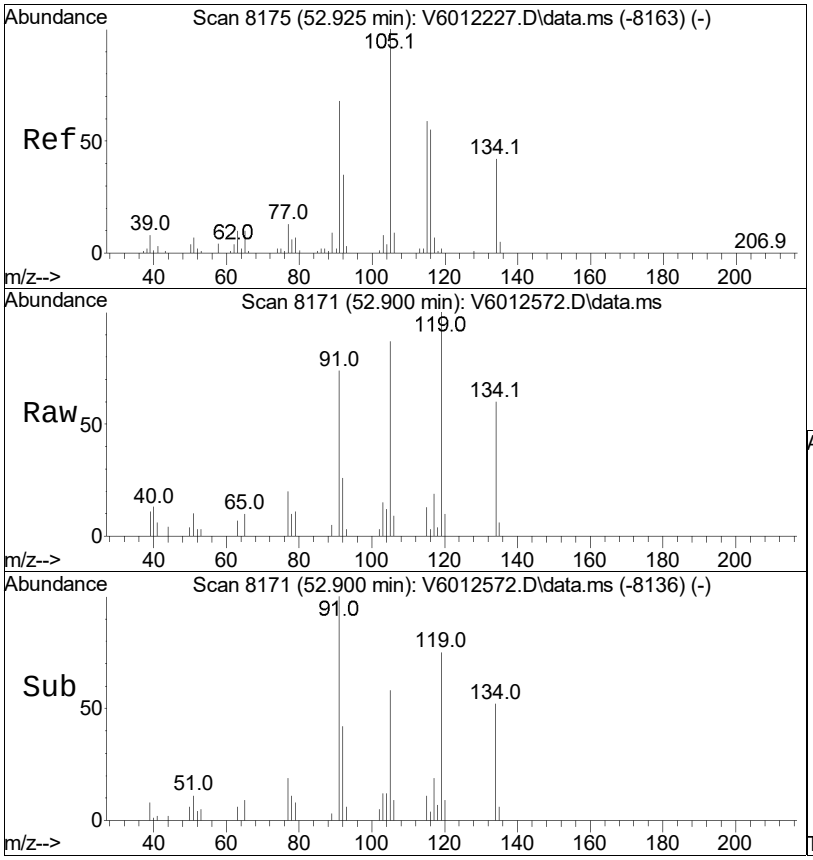


#123
1,3-Diethylbenzene
Concen: 12.41 ug/L
RT: 52.66 min Scan# 8131
Delta R.T. -0.000 min
Lab File: V6012572.D
Acq: 30 Sep 2020 11:26 am

Tgt Ion:105 Resp: 60919

Ion	Ratio	Lower	Upper
105	100		
119	100.1	81.8	121.8
134	49.4	32.1	72.1

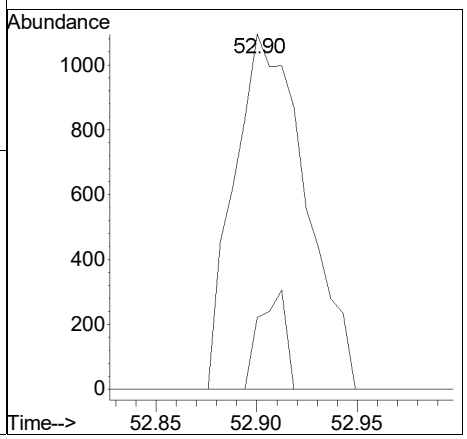


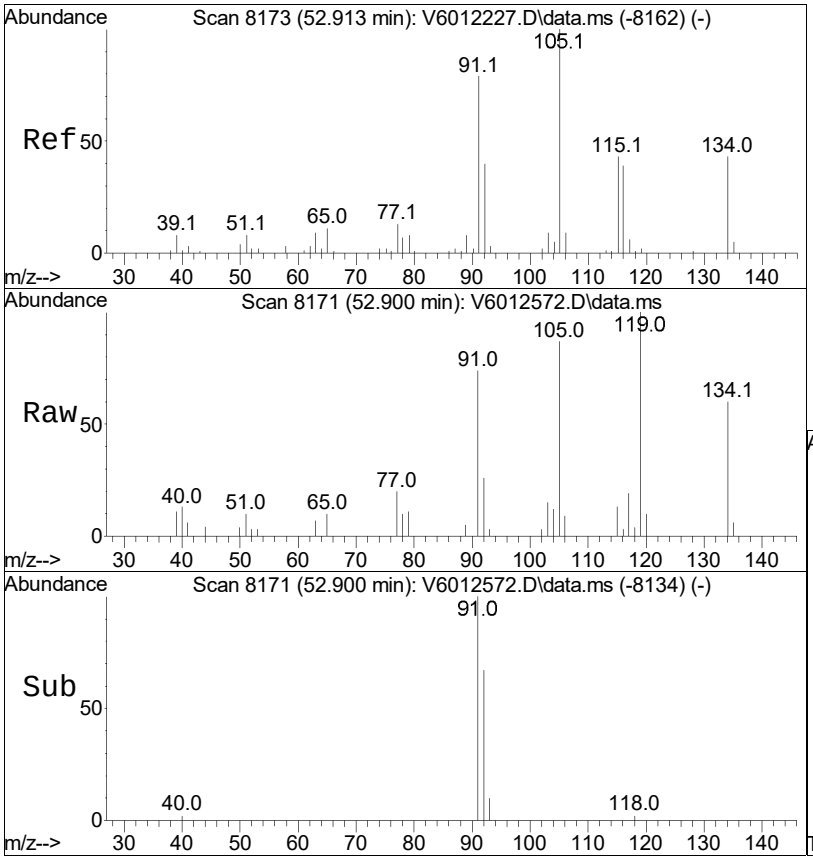


#125
Indene
Concen: 0.45 ug/L
RT: 52.90 min Scan# 8171
Delta R.T. -0.037 min
Lab File: V6012572.D
Acq: 30 Sep 2020 11:26 am

Tgt Ion:115 Resp: 2696

Ion	Ratio	Lower	Upper
115	100		
116	20.2	73.0	113.0#

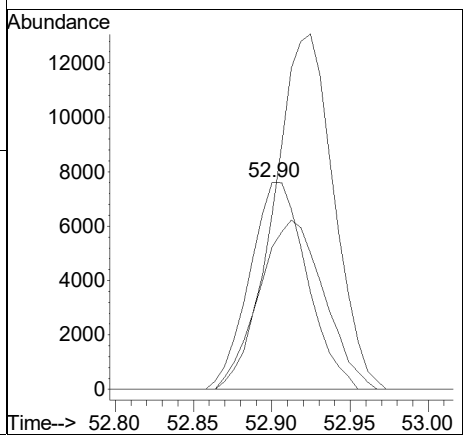


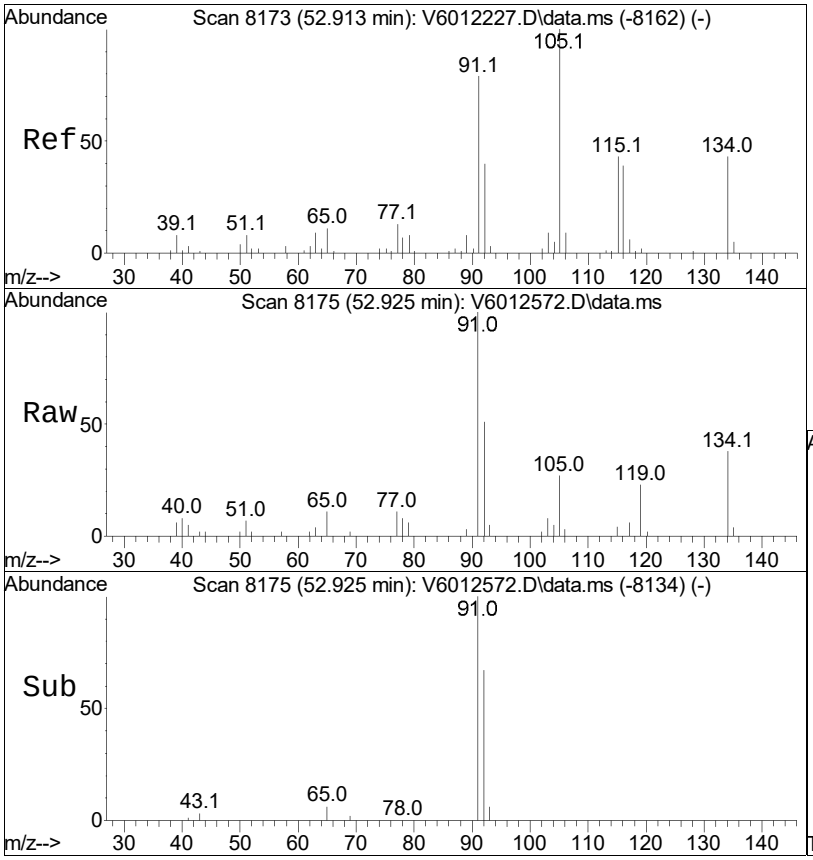


#126
1-Methyl-4-propylbenzene
Concen: 1.68 ug/L
RT: 52.90 min Scan# 8171
Delta R.T. -0.024 min
Lab File: V6012572.D
Acq: 30 Sep 2020 11:26 am

Tgt Ion:105 Resp: 19411

Ion	Ratio	Lower	Upper
105	100		
134	68.8	23.0	63.0#
91	84.9	58.3	98.3

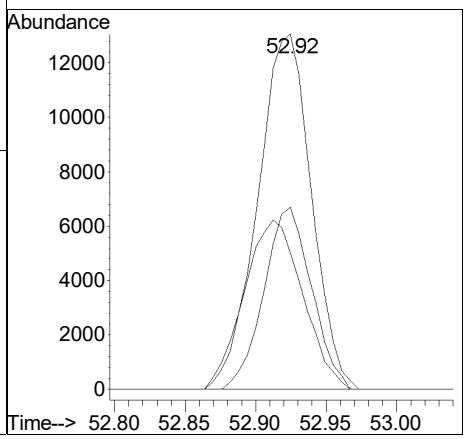


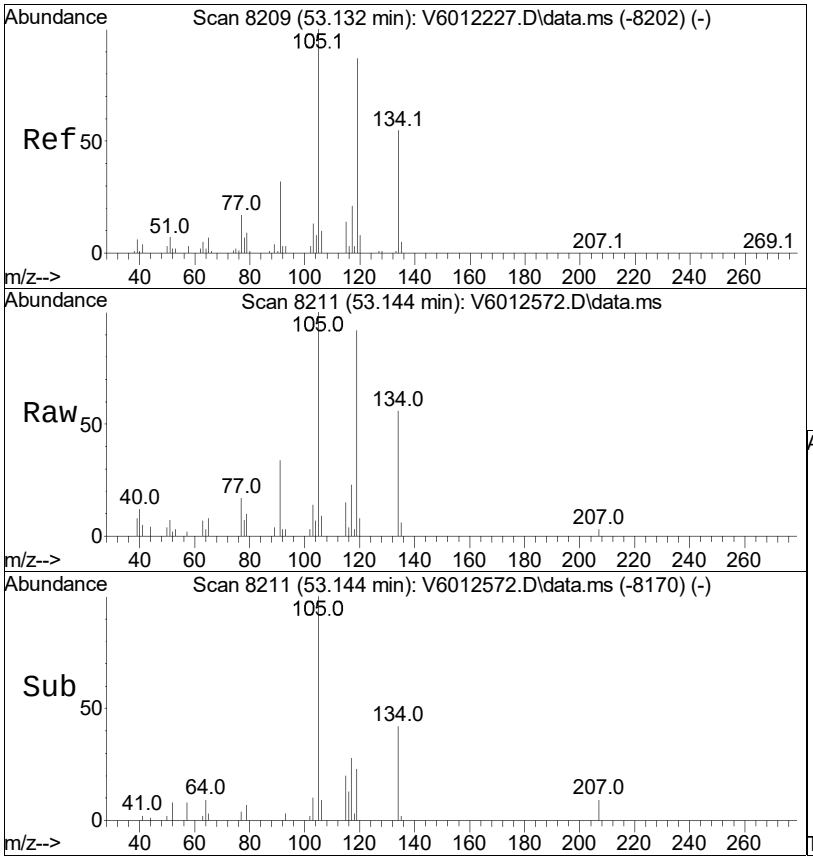


#127
n-Butylbenzene
Concen: 3.97 ug/L
RT: 52.92 min Scan# 8175
Delta R.T. -0.000 min
Lab File: V6012572.D
Acq: 30 Sep 2020 11:26 am

Tgt Ion: 91 Resp: 34593

Ion	Ratio	Lower	Upper
91	100		
92	51.2	30.6	70.6
134	38.4	34.9	74.9

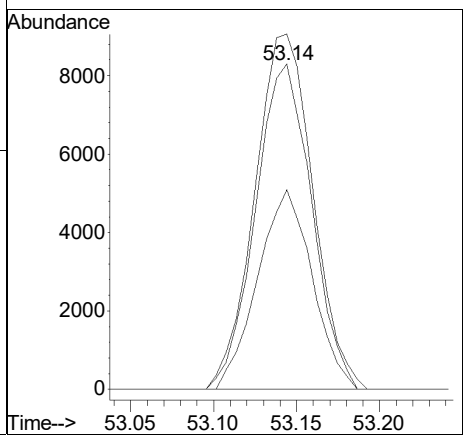


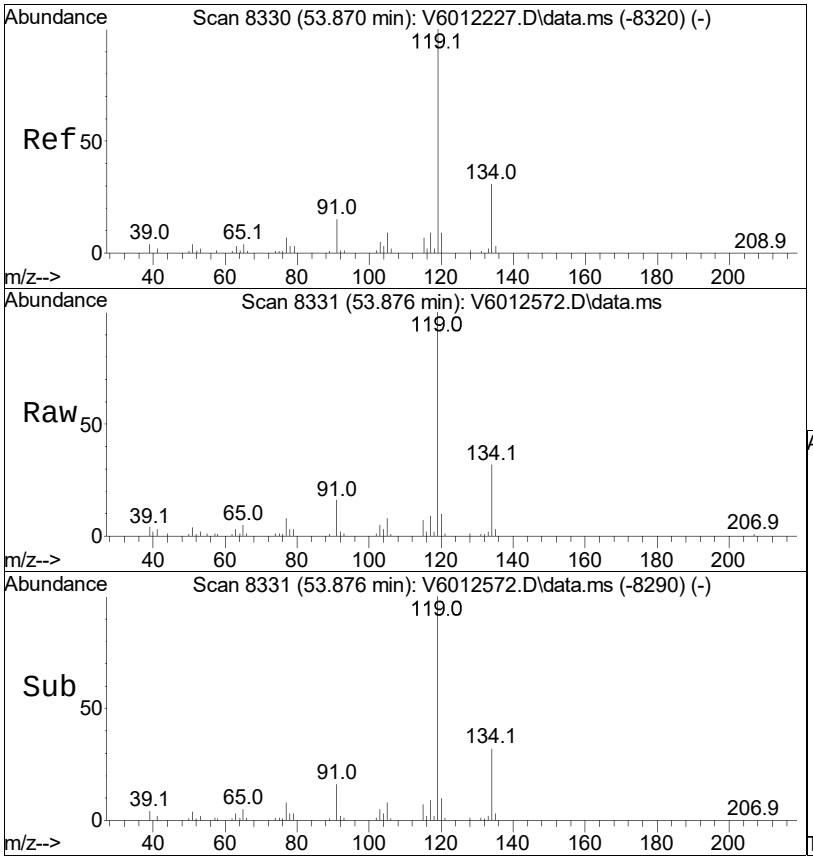


#129
1,2-Diethylbenzene
Concen: 4.86 ug/L
RT: 53.14 min Scan# 8211
Delta R.T. -0.000 min
Lab File: V6012572.D
Acq: 30 Sep 2020 11:26 am

Tgt Ion:119 Resp: 19530

Ion	Ratio	Lower	Upper
119	100		
105	109.2	89.9	129.9
134	61.3	41.5	81.5

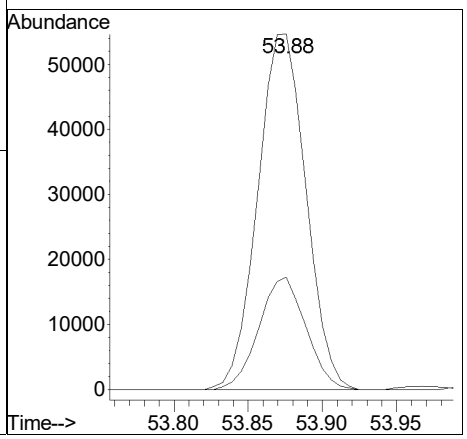


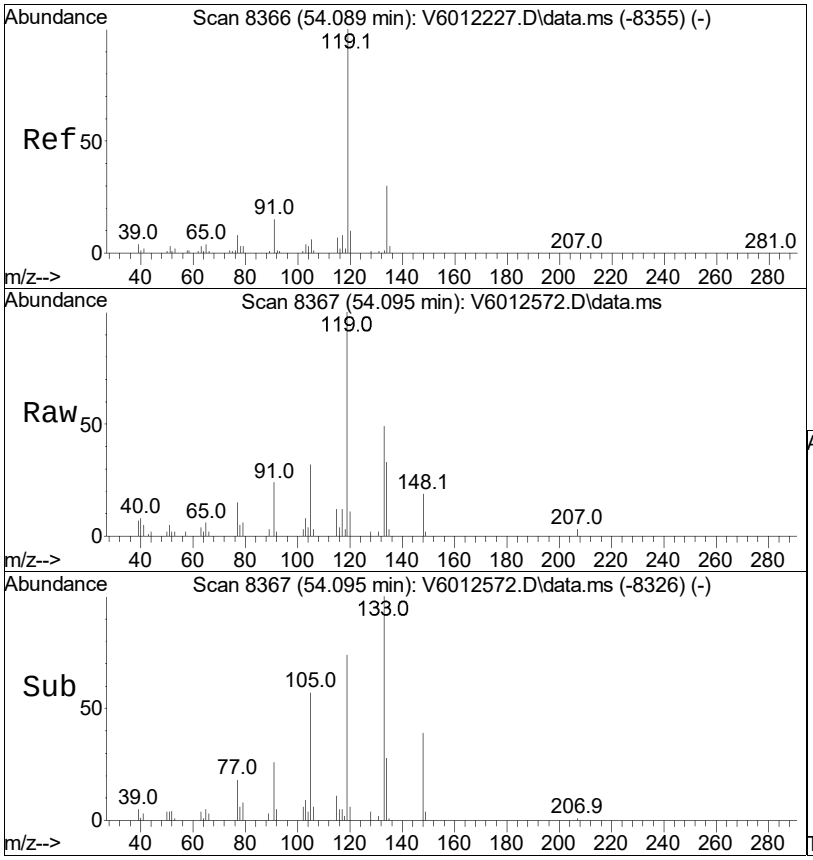


#134
1,3-Dimethyl-5-ethylbenzene
Concen: 13.93 ug/L
RT: 53.88 min Scan# 8331
Delta R.T. -0.000 min
Lab File: V6012572.D
Acq: 30 Sep 2020 11:26 am

Tgt Ion:119 Resp: 123356

Ion	Ratio	Lower	Upper
119	100		
134	31.6	11.3	51.3

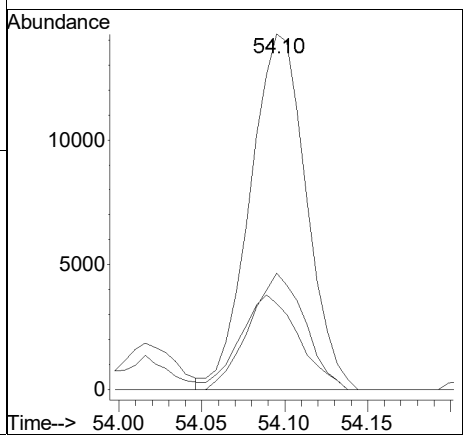


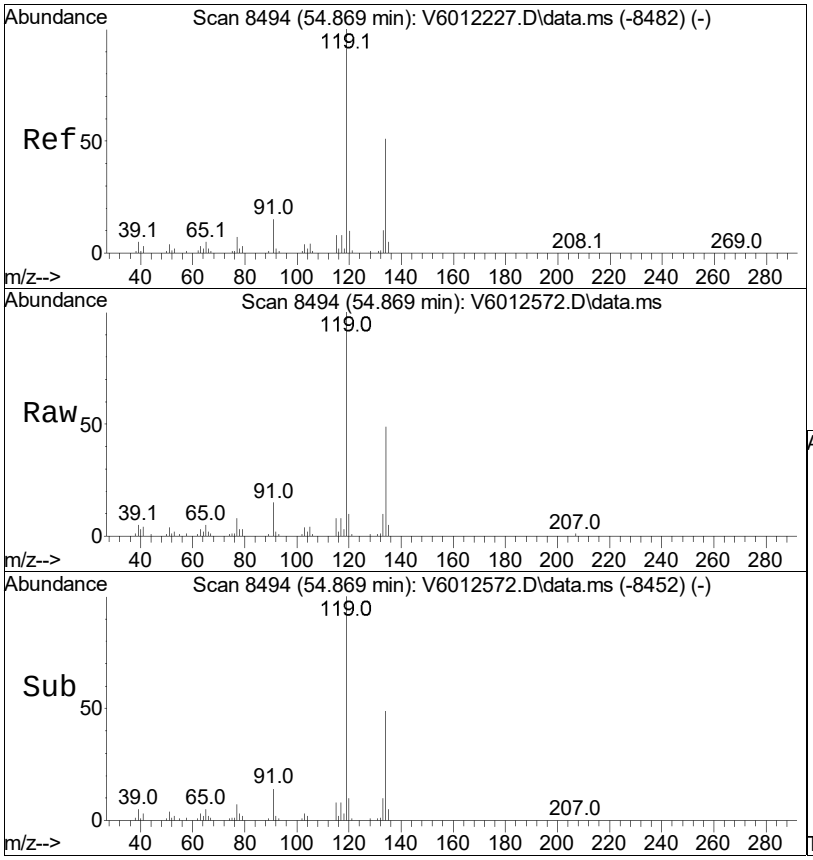


#135
1,3-Dimethyl-2-ethylbenzene
Concen: 3.65 ug/L
RT: 54.10 min Scan# 8367
Delta R.T. -0.000 min
Lab File: V6012572.D
Acq: 30 Sep 2020 11:26 am

Tgt Ion:119 Resp: 33482

Ion	Ratio	Lower	Upper
119	100		
134	32.7	9.8	49.8
91	24.1	0.0	34.5

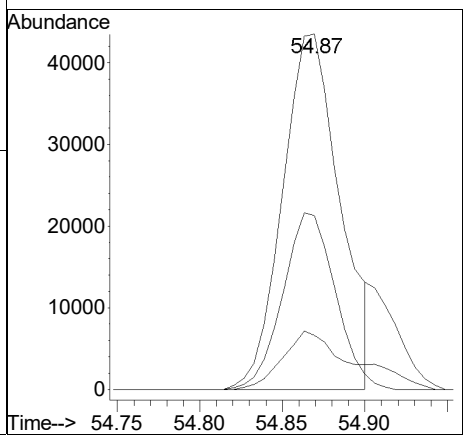


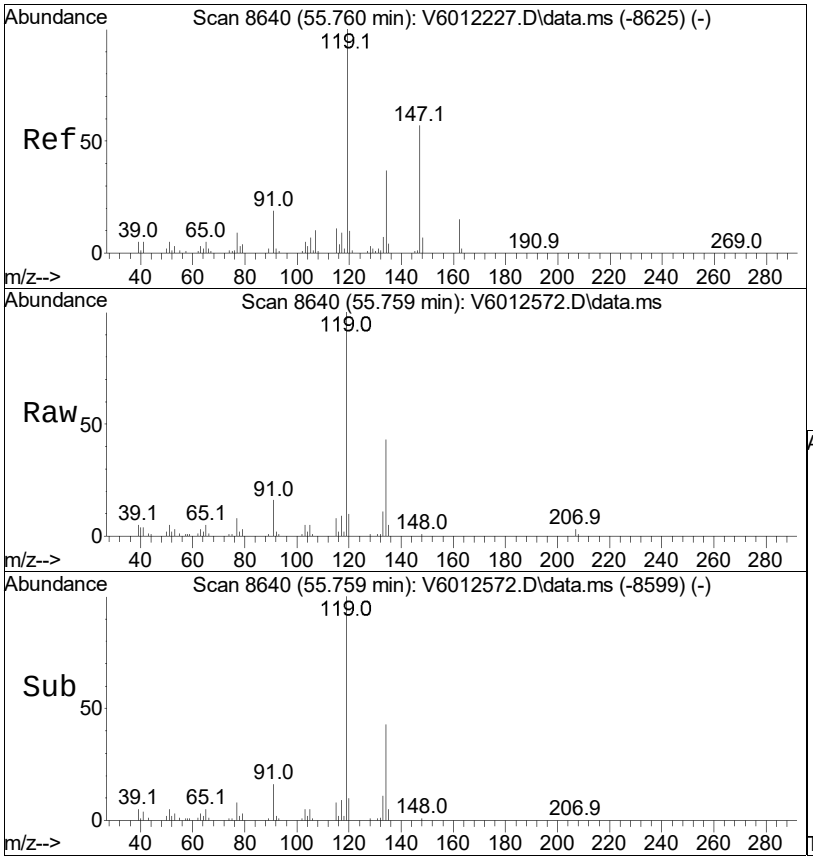


#137
1,2,4,5-Tetramethylbenzene
Concen: 12.17 ug/L m
RT: 54.87 min Scan# 8494
Delta R.T. 0.006 min
Lab File: V6012572.D
Acq: 30 Sep 2020 11:26 am

Tgt Ion:119 Resp: 105534

Ion	Ratio	Lower	Upper
119	100		
134	48.9	30.9	70.9
91	15.2	0.0	35.1

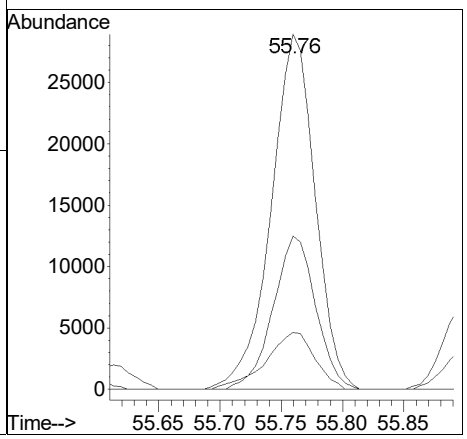


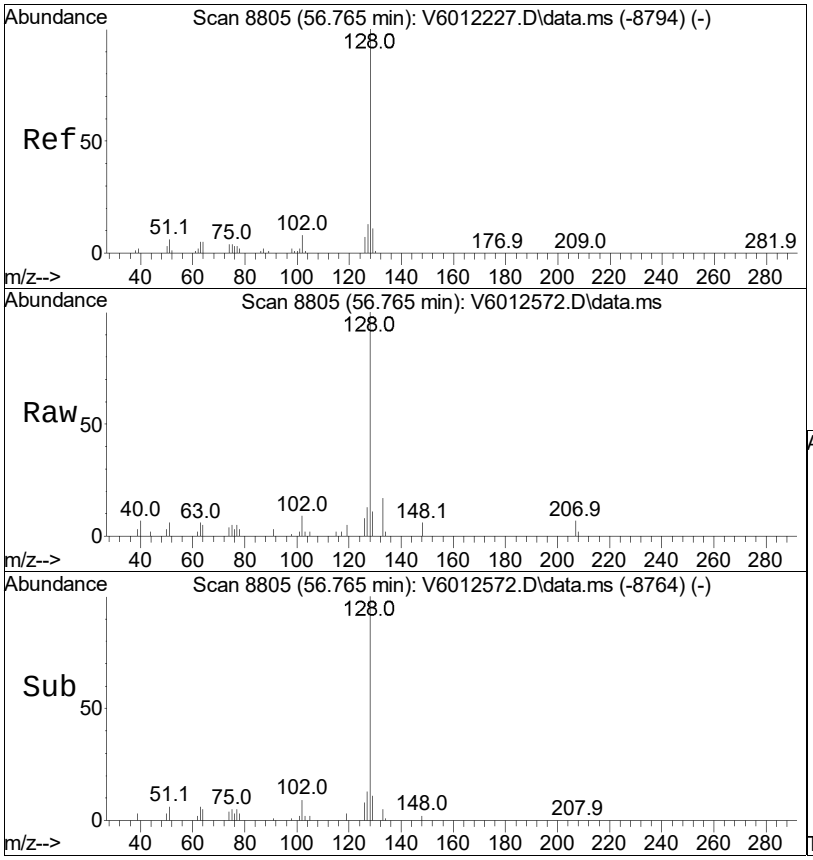


#140
1,2,3,4-Tetramethylbenzene
Concen: 7.04 ug/L
RT: 55.76 min Scan# 8640
Delta R.T. -0.000 min
Lab File: V6012572.D
Acq: 30 Sep 2020 11:26 am

Tgt Ion:119 Resp: 72214

Ion	Ratio	Lower	Upper
119	100		
134	43.1	16.6	56.6
91	16.1	0.0	39.0

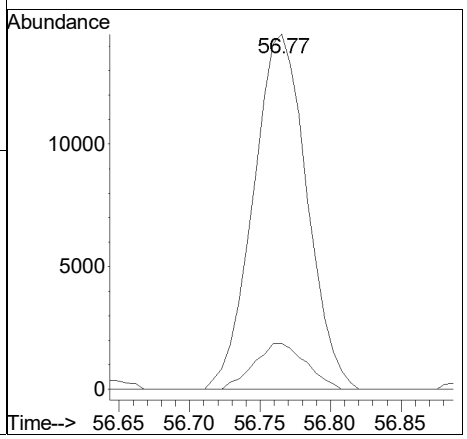


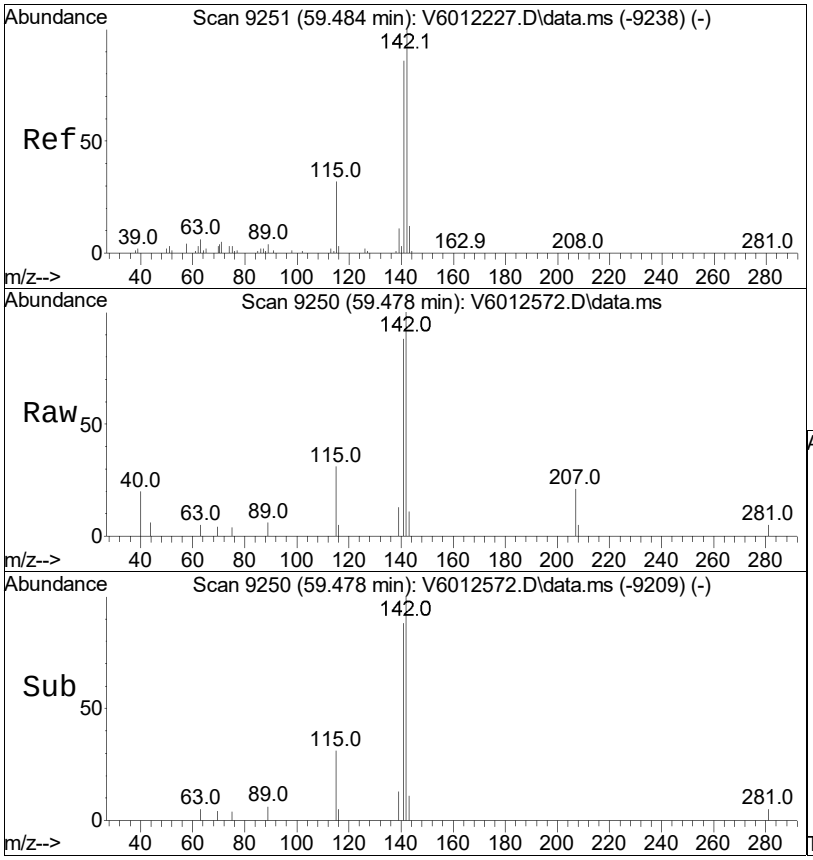


#144
Naphthalene
Concen: 5.42 ug/L
RT: 56.77 min Scan# 8805
Delta R.T. -0.000 min
Lab File: V6012572.D
Acq: 30 Sep 2020 11:26 am

Tgt Ion:128 Resp: 38308

Ion	Ratio	Lower	Upper
128	100		
127	12.9	0.0	33.0

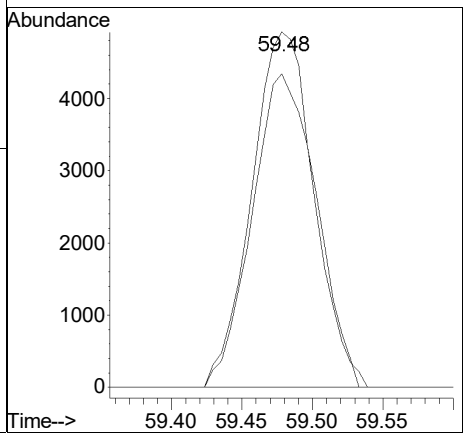


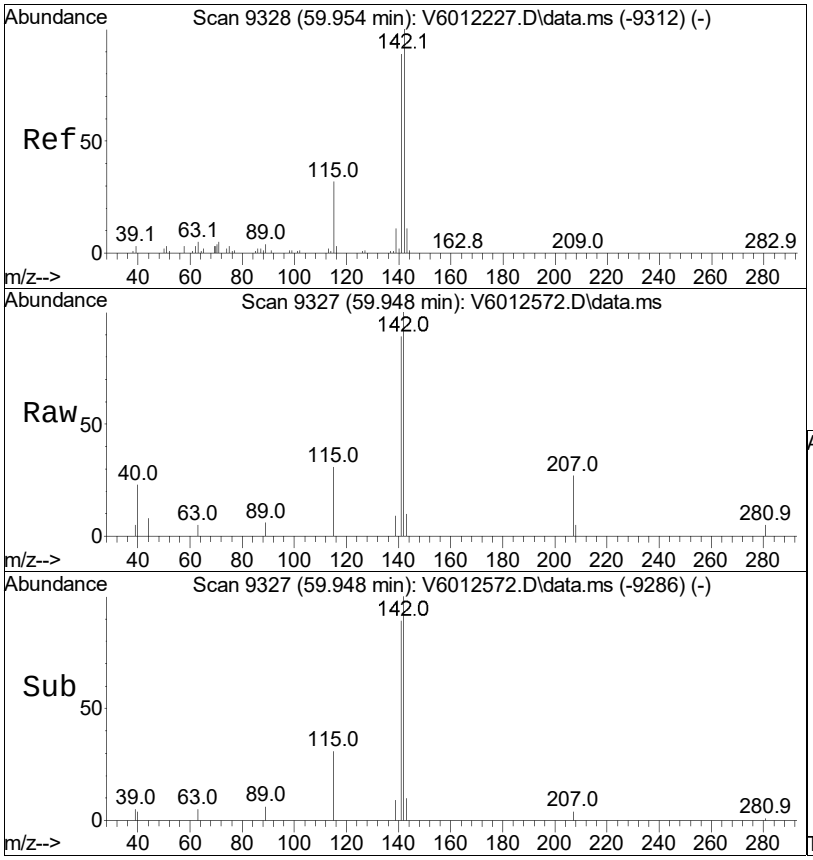


#150
2-Methylnaphthalene
Concen: 3.22 ug/L
RT: 59.48 min Scan# 9250
Delta R.T. -0.000 min
Lab File: V6012572.D
Acq: 30 Sep 2020 11:26 am

Tgt Ion:142 Resp: 15342

Ion	Ratio	Lower	Upper
142	100		
141	88.3	65.6	105.6

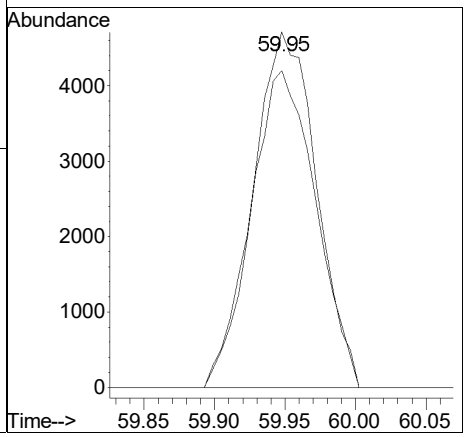




#151
1-Methylnaphthalene
Concen: 3.75 ug/L
RT: 59.95 min Scan# 9327
Delta R.T. -0.000 min
Lab File: V6012572.D
Acq: 30 Sep 2020 11:26 am

Tgt Ion:142 Resp: 14875

Ion	Ratio	Lower	Upper
142	100		
141	89.2	69.0	109.0



Quantitation Report (QT Reviewed)

Data Path : O:\Organics\DATA\VOA6\2020\09-SEP\200929\
Data File : V6012573.D
Acq On : 30 Sep 2020 12:37 pm
Operator : VOA6:RY
Sample : L2040277-03,31,5,5
Misc : WG1416337,ICAL17149
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Sep 30 14:15:32 2020
Quant Method : O:\Organics\DATA\VOA6\2020\09-SEP\200929\P6091820W.M
Quant Title : PIANO VOLATILES
QLast Update : Sat Sep 19 08:40:17 2020
Response via : Initial Calibration

Sub List : PIANO - PIANO

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Chlorobenzene-D5 [IS]	38.35	117	392431	50.000	ug/L	0.00
System Monitoring Compounds						
24) Dibromofluoromethane (...	16.63	113	126262	51.597	ug/L	0.00
Spiked Amount 50.000	Range 78 - 118		Recovery = 103.19%			
62) Toluene-d8 (surr)	30.56	98	466998	49.899	ug/L	0.00
Spiked Amount 50.000	Range 87 - 113		Recovery = 99.80%			
64) 2-Bromo-1-chloropropan...	0.00	77	0	0.000	ug/L	
Spiked Amount 50.000	Range 70 - 130		Recovery = 0.00%#			
87) 1-Chloro-2-fluorobenze...	0.00	130	0	0.000	ug/L	
Spiked Amount 50.000	Range 70 - 130		Recovery = 0.00%#			
97) 1,4-Dichlorobutane (H/...	0.00	55	0	0.000	ug/L	
Spiked Amount 50.000	Range 70 - 130		Recovery = 0.00%#			
101) 4-Bromofluorobenzene (...	45.77	95	182792	46.992	ug/L	0.00
Spiked Amount 50.000	Range 76 - 120		Recovery = 93.98%			

Target Compounds			Qvalue
2) 3-Methyl-1-butene	0.00	0	N.D.
3) Isopentane	0.00	0	N.D.
4) 1-Pentene	0.00	0	N.D.
5) 2-Methyl-1-butene	0.00	0	N.D.
6) Pentane	0.00	0	N.D.
7) trans-2-Pentene	0.00	0	N.D.
8) 2-Methyl-1,3-butadiene	0.00	0	N.D.
9) cis-2-Pentene	0.00	0	N.D.
10) Tertiary butanol	0.00	0	N.D.
11) 2,2-Dimethylbutane	0.00	0	N.D.
12) 4-Methyl-1-pentene	0.00	0	N.D.
13) Cyclopentane	0.00	0	N.D.
14) 2,3-Dimethylbutane	0.00	0	N.D.
15) 2-Methylpentane	0.00	0	N.D.
16) MTBE	0.00	0	N.D.
17) 3-Methylpentane	0.00	0	N.D.
18) 1-Hexene	0.00	0	N.D.
19) Hexane	0.00	0	N.D.
20) Diisopropyl ether	0.00	0	N.D.
21) trans-2-Hexene	0.00	0	N.D.
22) 2-Methyl-2-pentene	0.00	0	N.D.
23) cis-2-Hexene	0.00	0	N.D.
25) Ethyl tertiary butyl e...	0.00	0	N.D.

Data Path : O:\Organics\DATA\VOA6\2020\09-SEP\200929\
Data File : V6012573.D
Acq On : 30 Sep 2020 12:37 pm
Operator : VOA6:RY
Sample : L2040277-03,31,5,5
Misc : WG1416337,ICAL17149
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Sep 30 14:15:32 2020
Quant Method : O:\Organics\DATA\VOA6\2020\09-SEP\200929\P6091820W.M
Quant Title : PIANO VOLATILES
QLast Update : Sat Sep 19 08:40:17 2020
Response via : Initial Calibration

Sub List : PIANO - PIANO

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
26) 2,2-Dimethylpentane	0.00		0	N.D.			
27) Methylcyclopentane	0.00		0	N.D.			
28) 2,4-Dimethylpentane	0.00		0	N.D.			
29) 2,2,3-Trimethylbutane	0.00		0	N.D.			
30) 1,2-Dichloroethane	0.00		0	N.D.		d	
31) 3,3-Dimethylpentane	0.00		0	N.D.			
32) Cyclohexane	0.00		0	N.D.		d	
33) 2-Methylhexane	0.00		0	N.D.			
34) Benzene	0.00		0	N.D.			
35) 2,3-Dimethylpentane	0.00		0	N.D.			
36) Thiophene	0.00		0	N.D.			
37) 1,1-Dimethylcyclopentane	0.00		0	N.D.			
38) 3-Methylhexane	0.00		0	N.D.			
39) TAME	0.00		0	N.D.		d	
40) cis-1,3-Dimethylcyclop...	0.00		0	N.D.			
41) 3-Ethylpentane	0.00		0	N.D.			
42) trans-1,3-DMCP/2-Methy...	0.00		0	N.D.			
43) 1-Heptene/trans-1,2-DMCP	0.00		0	N.D.			
44) Isooctane	0.00		0	N.D.			
45) trans-3-Heptene	0.00		0	N.D.			
46) Heptane	0.00		0	N.D.			
48) trans-2-Heptene	0.00		0	N.D.			
49) cis-2-Heptene	0.00		0	N.D.			
50) 2,2-Dimethylhexane	0.00		0	N.D.			
51) Methylcyclohexane	25.89	83	1201	0.438	ug/L	#	20
52) 2,5-Dimethylhexane	0.00		0	N.D.			
53) 2,4-Dimethylhexane	0.00		0	N.D.			
54) Ethylcyclopentane	0.00		0	N.D.			
55) 2,2,3-Trimethylpentane	0.00		0	N.D.			
57) 2,3,4-Trimethylpentane	0.00		0	N.D.			
58) 2,3,3-Trimethylpentane	0.00		0	N.D.			
59) 2,3-Dimethylhexane	0.00		0	N.D.			
60) 2-Methylheptane	0.00		0	N.D.			
61) 4-Methylheptane	0.00		0	N.D.			
63) 3-Methylheptane	0.00		0	N.D.		d	
65) 3-Ethylhexane	0.00		0	N.D.		d	
66) Toluene	30.92	91	1711	0.239	ug/L		87
67) 2-Methylthiophene	0.00		0	N.D.			
68) trans-1,4-Dimethylcycl...	0.00		0	N.D.		d	
69) 3-Methylthiophene	0.00		0	N.D.			
70) 1-Octene	0.00		0	N.D.			

Data Path : O:\Organics\DATA\VOA6\2020\09-SEP\200929\
Data File : V6012573.D
Acq On : 30 Sep 2020 12:37 pm
Operator : VOA6:RY
Sample : L2040277-03,31,5,5
Misc : WG1416337,ICAL17149
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Sep 30 14:15:32 2020
Quant Method : O:\Organics\DATA\VOA6\2020\09-SEP\200929\P6091820W.M
Quant Title : PIANO VOLATILES
QLast Update : Sat Sep 19 08:40:17 2020
Response via : Initial Calibration

Sub List : PIANO - PIANO

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
71) Octane	0.00		0	N.D.		
72) trans-1,2-Dimethylcycl...	0.00		0	N.D.	d	
73) 1,2-Dibromoethane	0.00		0	N.D.		
75) cis-2-Octene	0.00		0	N.D.		
76) Isopropylcyclopentane	0.00		0	N.D.		
77) cis-1,2-Dimethylcycloh...	0.00		0	N.D.	d	
78) 2,5-Dimethylheptane	0.00		0	N.D.	d	
79) 3,5-Dimethylheptane	0.00		0	N.D.	d	
80) 3,3-Dimethylheptane	0.00		0	N.D.		
81) 1,1,4-Trimethylcyclohe...	0.00		0	N.D.	d	
82) 2,3-Dimethylheptane	0.00		0	N.D.	d	
83) 3,4-Dimethylheptane	0.00		0	N.D.	d	
84) 4-Methyloctane	0.00		0	N.D.	d	
85) 2-Methyloctane	0.00		0	N.D.	d	
86) Ethylbenzene	0.00		0	N.D.	d	
88) 2-Ethylthiophene	0.00		0	N.D.		
89) 3-Methyloctane	0.00		0	N.D.	d	
90) 3,3-Diethylpentane	0.00		0	N.D.	d	
91) p/m-Xylene	0.00		0	N.D.		
92) 1-Nonene	0.00		0	N.D.	d	
93) trans-3-Nonene	0.00		0	N.D.	d	
94) cis-3-Nonene	0.00		0	N.D.		
95) Nonane	0.00		0	N.D.		
96) Styrene	0.00		0	N.D.		
98) o-Xylene	0.00		0	N.D.		
99) 2-Nonene	0.00		0	N.D.	d	
100) Isopropylcyclohexane	0.00		0	N.D.	d	
102) Isopropylbenzene	45.80	105	20077	2.381	ug/L	97
103) 3,3-Dimethyloctane	46.30	71	5950	1.331	ug/L	92
104) n-Propylbenzene	48.43	91	83899	8.462	ug/L	98
105) 2-Methylnonane	0.00		0	N.D.	d	
106) 3-Methylnonane	0.00		0	N.D.	d	
107) 1-Methyl-3-ethylbenzene	0.00		0	N.D.		
108) 1-Methyl-4-ethylbenzene	0.00		0	N.D.		
109) 1,3,5-Trimethylbenzene	0.00		0	N.D.		
110) 1-Decene	0.00		0	N.D.	d	
111) Isobutylcyclohexane	0.00		0	N.D.	d	
112) 1-Methyl-2-ethylbenzene	0.00		0	N.D.	d	
113) Decane	0.00		0	N.D.	d	
114) tert-Butylbenzene	50.64	119	52224	8.173	ug/L	97
115) 1,2,4-Trimethylbenzene	0.00		0	N.D.		

Quantitation Report (QT Reviewed)

Data Path : O:\Organics\DATA\VOA6\2020\09-SEP\200929\
Data File : V6012573.D
Acq On : 30 Sep 2020 12:37 pm
Operator : VOA6:RY
Sample : L2040277-03,31,5,5
Misc : WG1416337,ICAL17149
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Sep 30 14:15:32 2020
Quant Method : O:\Organics\DATA\VOA6\2020\09-SEP\200929\P6091820W.M
Quant Title : PIANO VOLATILES
QLast Update : Sat Sep 19 08:40:17 2020
Response via : Initial Calibration

Sub List : PIANO - PIANO

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
116) Isobutylbenzene	51.27	91	47006M4	5.944	ug/L		
117) sec-Butylbenzene	51.33	105	48539	5.187	ug/L		99
118) 1-Methyl-3-isopropylbe...	0.00		0	N.D.			
119) 1-Methyl-4-isopropylbe...	0.00		0	N.D.			
120) 1,2,3-Trimethylbenzene	0.00		0	N.D.	d		
121) 1-Methyl-2-isopropylbe...	52.41	119	26032	3.220	ug/L		100
122) Indan	52.50	117	15030	2.168	ug/L		94
123) 1,3-Diethylbenzene	52.66	105	66423	13.264	ug/L		99
124) 1-Methyl-3-propylbenzene	0.00		0	N.D.	d		
125) Indene	52.90	115	2978	0.488	ug/L	#	29
126) 1-Methyl-4-propylbenzene	52.90	105	21875	1.858	ug/L	#	82
127) n-Butylbenzene	52.92	91	36341	4.093	ug/L		89
128) 1,2-Dimethyl-4-ethylbe...	0.00		0	N.D.	d		
129) 1,2-Diethylbenzene	53.14	119	25761	6.291	ug/L		92
130) 1-Methyl-2-propylbenzene	0.00		0	N.D.	d		
131) 1,4-Dimethyl-2-ethylbe...	0.00		0	N.D.	d		
132) Undecane	0.00		0	N.D.	d		
133) 1,3-Dimethyl-4-ethylbe...	0.00		0	N.D.	d		
134) 1,3-Dimethyl-5-ethylbe...	53.87	119	113855	12.611	ug/L		100
135) 1,3-Dimethyl-2-ethylbe...	54.10	119	33745	3.607	ug/L		93
136) 1,2-Dimethyl-3-ethylbe...	0.00		0	N.D.	d		
137) 1,2,4,5-Tetramethylben...	54.87	119	121659	13.760	ug/L		99
138) 1,2,3,5-Tetramethylben...	0.00		0	N.D.	d		
139) Pentylbenzene	0.00		0	N.D.	d		
140) 1,2,3,4-Tetramethylben...	55.76	119	44472	4.253	ug/L		92
141) 1,3-DM-5-tert-Butylben...	0.00		0	N.D.			
142) Dodecane	0.00		0	N.D.	d		
143) 1,3,5-Triethylbenzene	0.00		0	N.D.	d		
144) Naphthalene	0.00		0	N.D.	d		
145) Benzothiophene	0.00		0	N.D.	d		
146) 1,2,4-Triethylbenzene	0.00		0	N.D.			
147) Hexylbenzene	0.00		0	N.D.			
148) MMT	0.00		0	N.D.			
149) Tridecane	0.00		0	N.D.			
150) 2-Methylnaphthalene	59.47	142	2376	0.489	ug/L		94
151) 1-Methylnaphthalene	59.95	142	6318	1.563	ug/L		98
152) Tetradecane	0.00		0	N.D.			
153) Pentadecane	0.00		0	N.D.			

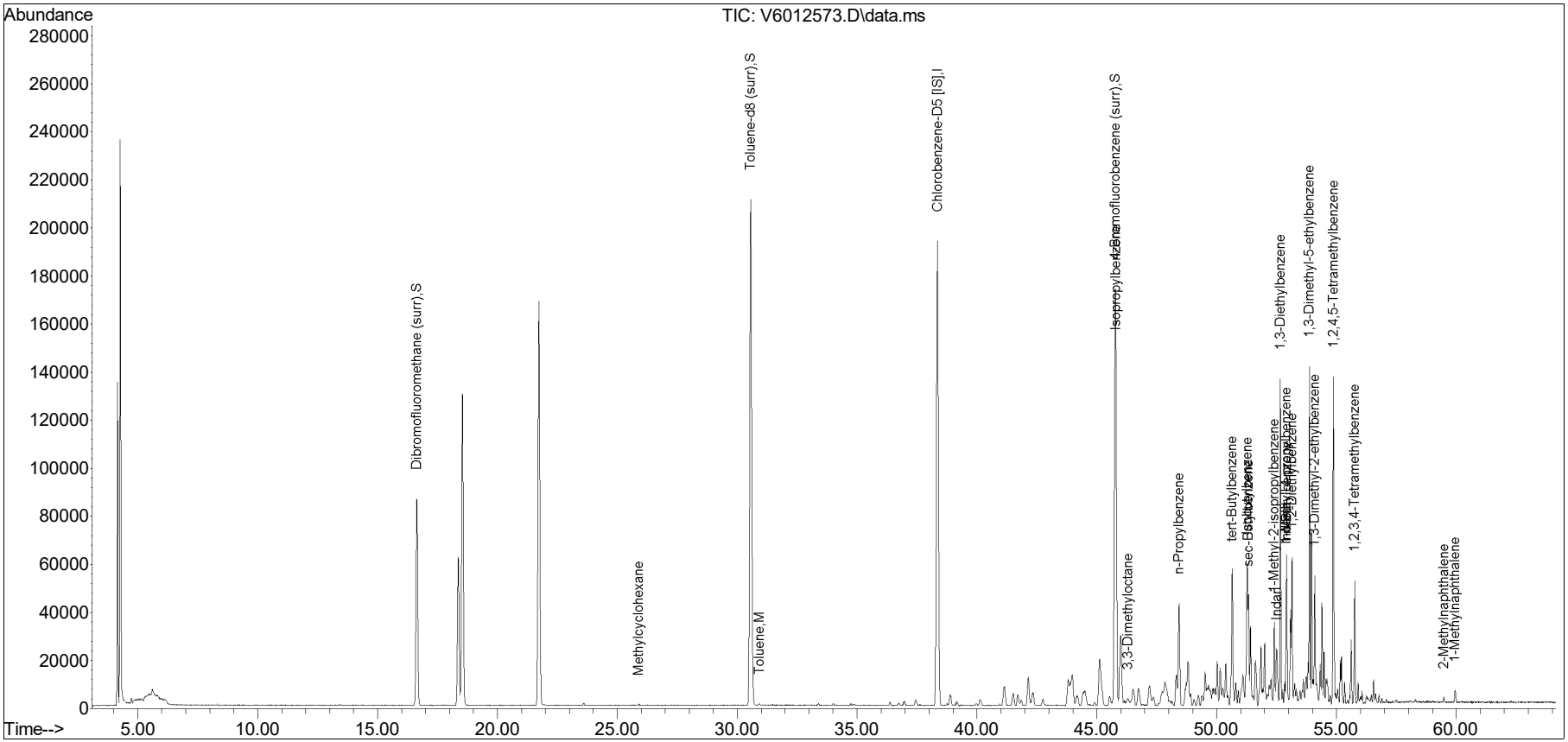
(#) = qualifier out of range (m) = manual integration (+) = signals summed

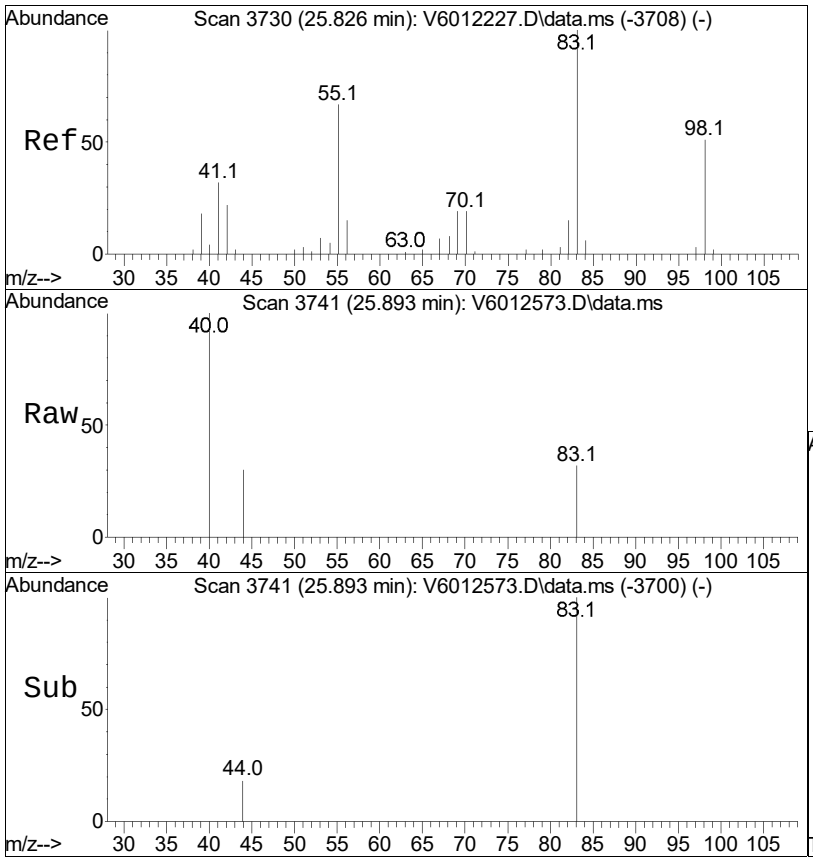
Quantitation Report (QT Reviewed)

Data Path : O:\Organics\DATA\VOA6\2020\09-SEP\200929\
Data File : V6012573.D
Acq On : 30 Sep 2020 12:37 pm
Operator : VOA6:RY
Sample : L2040277-03,31,5,5
Misc : WG1416337,ICAL17149
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Sep 30 14:15:32 2020
Quant Method : O:\Organics\DATA\VOA6\2020\09-SEP\200929\P6091820W.M
Quant Title : PIANO VOLATILES
QLast Update : Sat Sep 19 08:40:17 2020
Response via : Initial Calibration

Sub List : PIANO - PIANO

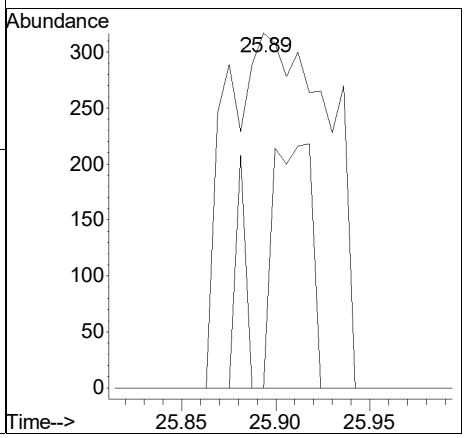


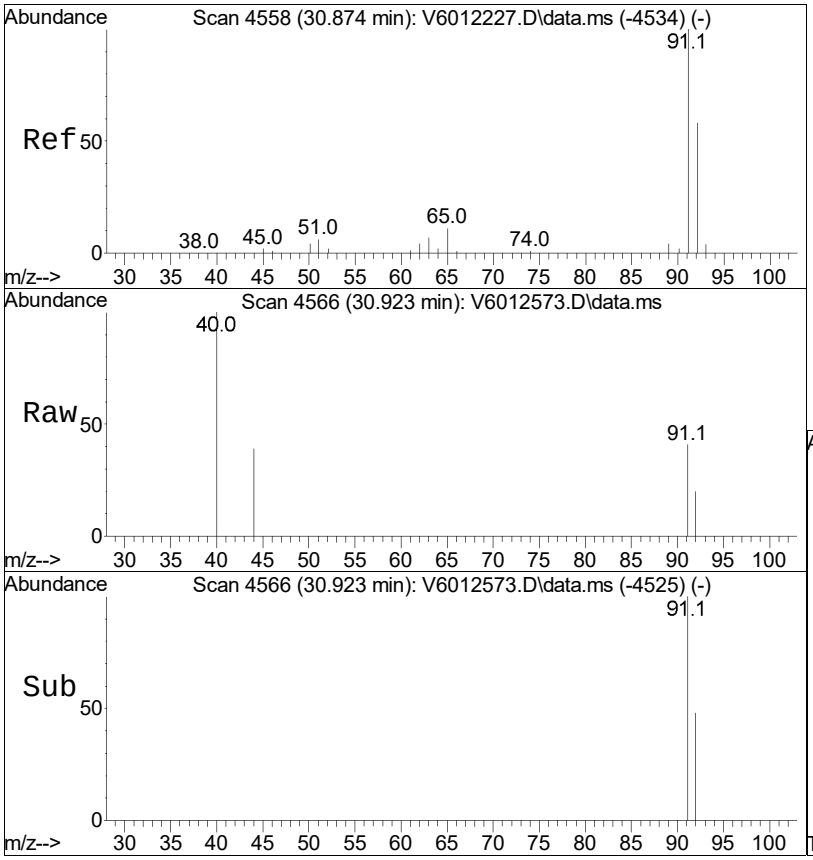


#51
Methylcyclohexane
Concen: 0.44 ug/L
RT: 25.89 min Scan# 3741
Delta R.T. 0.000 min
Lab File: V6012573.D
Acq: 30 Sep 2020 12:37 pm

Tgt Ion: 83 Resp: 1201

Ion	Ratio	Lower	Upper
83	100		
55	0.0	48.9	88.9#
98	0.0	30.6	70.6#

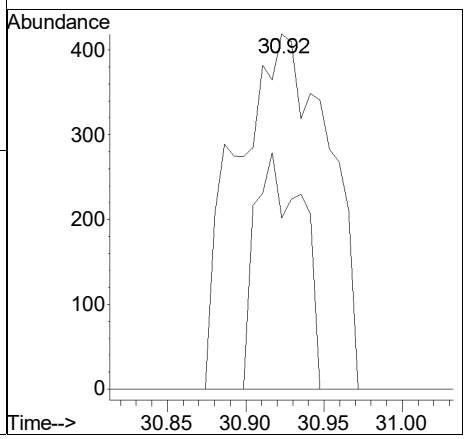


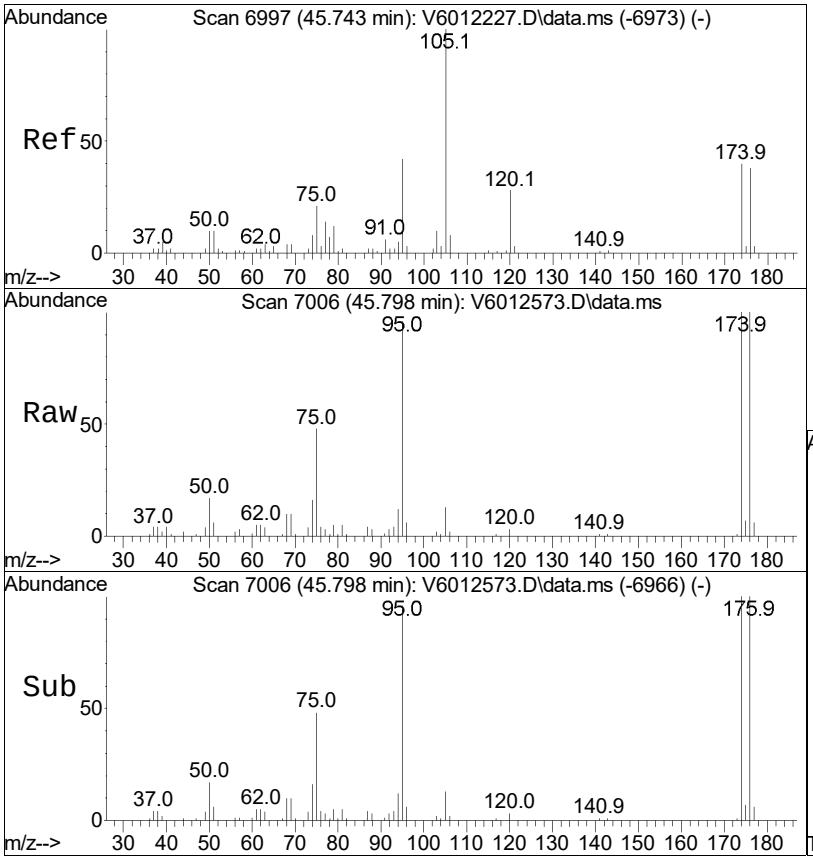


#66
Toluene
Concen: 0.24 ug/L
RT: 30.92 min Scan# 4566
Delta R.T. 0.000 min
Lab File: V6012573.D
Acq: 30 Sep 2020 12:37 pm

Tgt Ion: 91 Resp: 1711

Ion	Ratio	Lower	Upper
91	100		
92	48.2	38.2	78.2

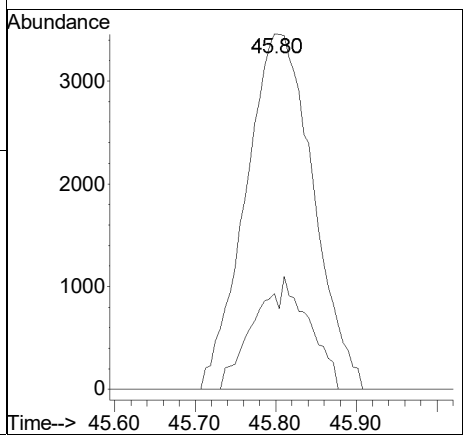


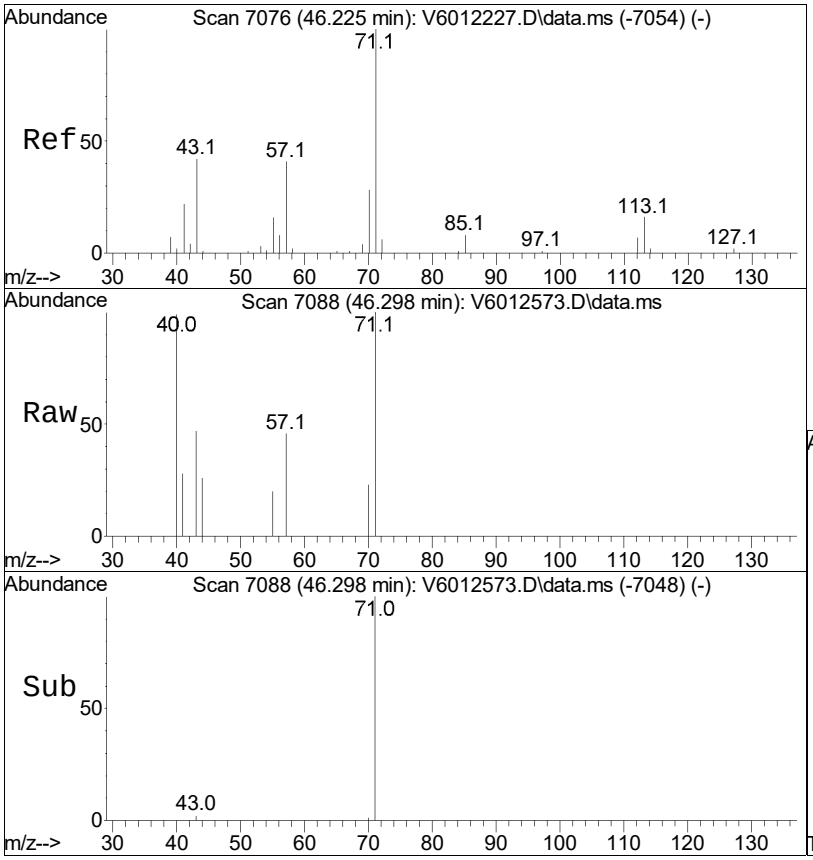


#102
Isopropylbenzene
Concen: 2.38 ug/L
RT: 45.80 min Scan# 7006
Delta R.T. -0.006 min
Lab File: V6012573.D
Acq: 30 Sep 2020 12:37 pm

Tgt Ion:105 Resp: 20077

Ion	Ratio	Lower	Upper
105	100		
120	27.0	8.4	48.4

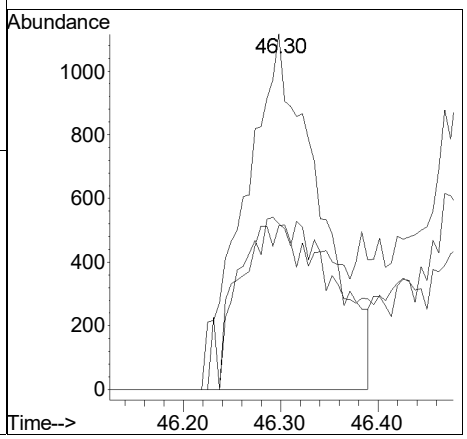


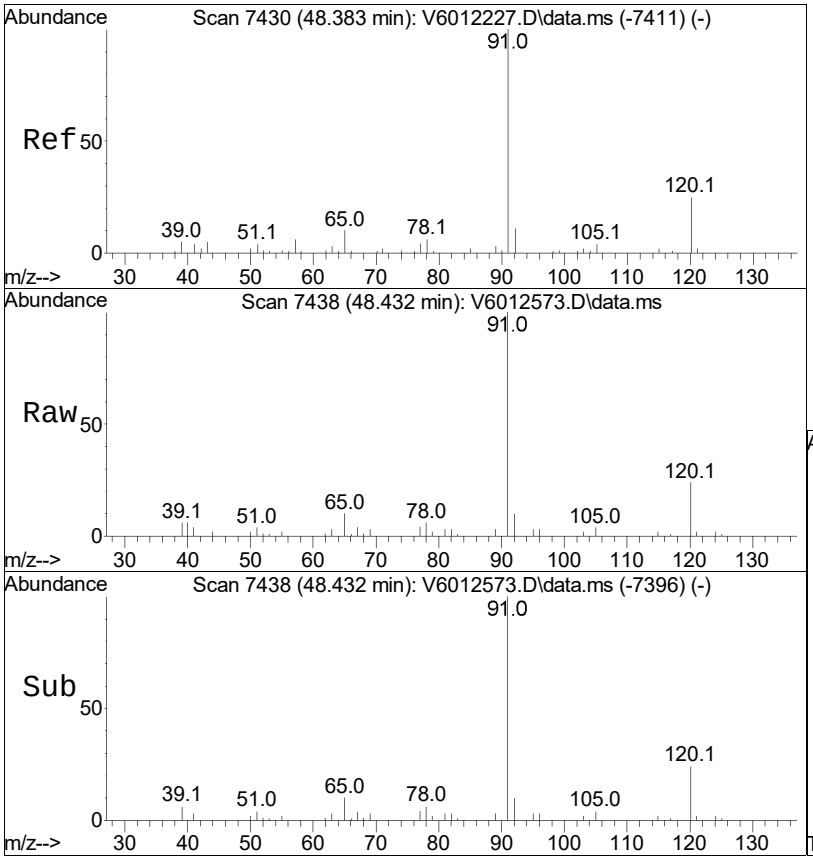


#103
3,3-Dimethyloctane
Concen: 1.33 ug/L
RT: 46.30 min Scan# 7088
Delta R.T. -0.006 min
Lab File: V6012573.D
Acq: 30 Sep 2020 12:37 pm

Tgt Ion: 71 Resp: 5950

Ion	Ratio	Lower	Upper
71	100		
57	46.1	20.8	60.8
43	46.7	22.3	62.3

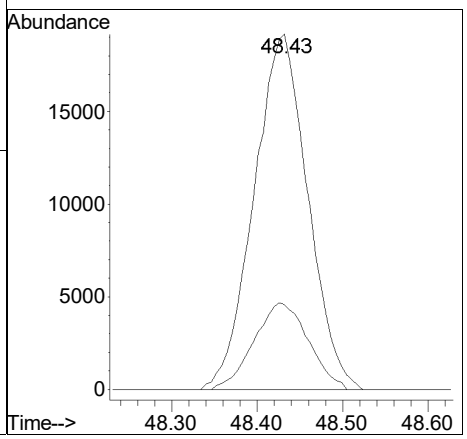


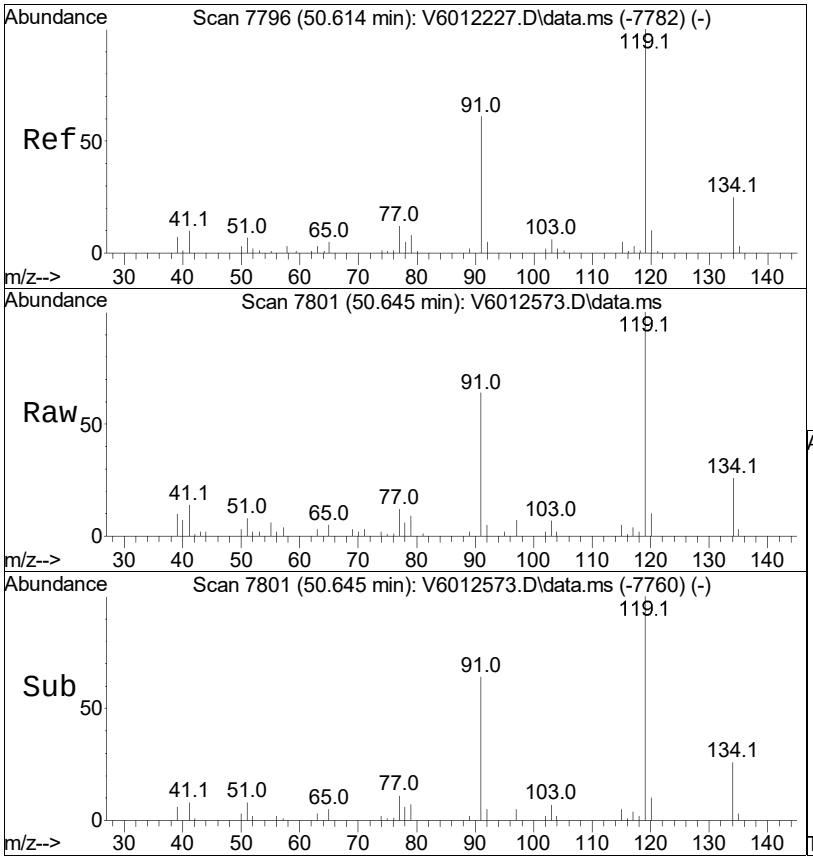


#104
n-Propylbenzene
Concen: 8.46 ug/L
RT: 48.43 min Scan# 7438
Delta R.T. 0.006 min
Lab File: V6012573.D
Acq: 30 Sep 2020 12:37 pm

Tgt Ion: 91 Resp: 83899

Ion	Ratio	Lower	Upper
91	100		
120	23.9	4.9	44.9

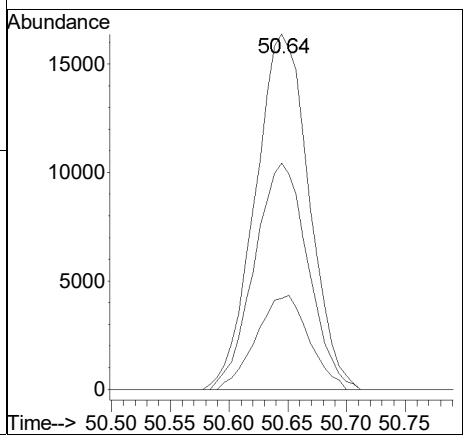


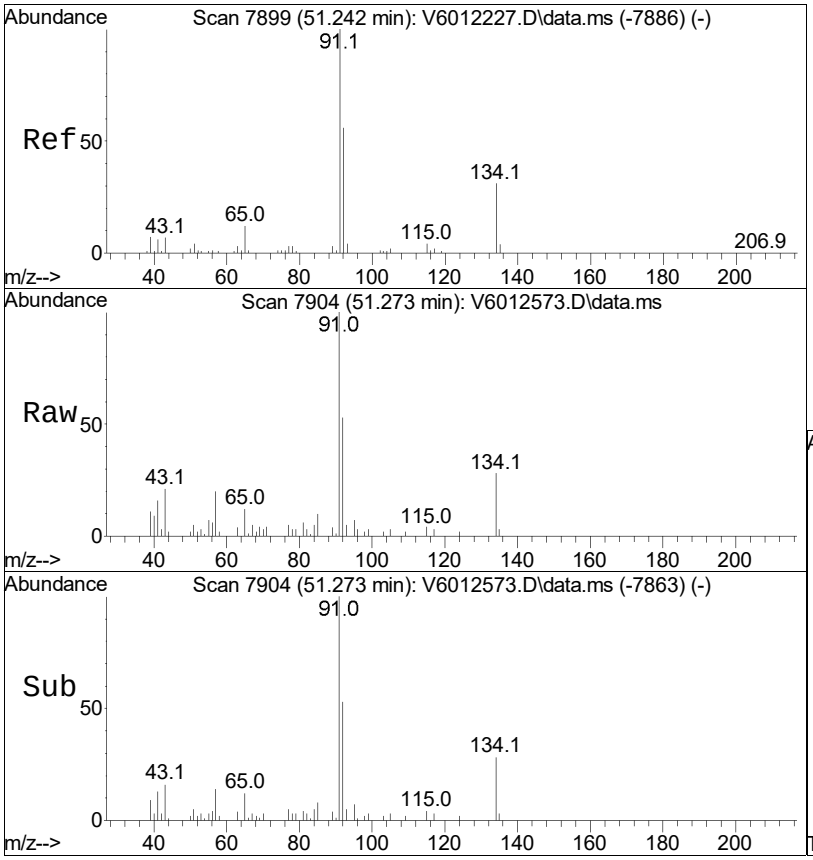


#114
tert-Butylbenzene
Concen: 8.17 ug/L
RT: 50.64 min Scan# 7801
Delta R.T. 0.000 min
Lab File: V6012573.D
Acq: 30 Sep 2020 12:37 pm

Tgt Ion:119 Resp: 52224

Ion	Ratio	Lower	Upper
119	100		
91	63.7	41.3	81.3
134	25.6	5.0	45.0

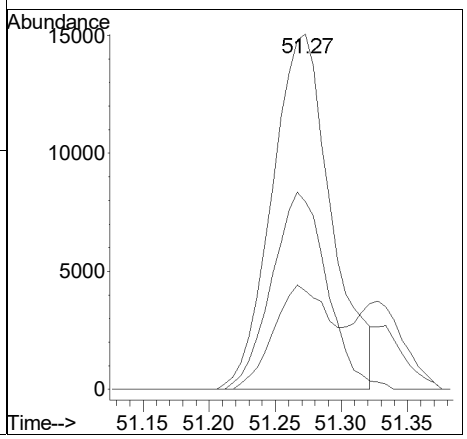


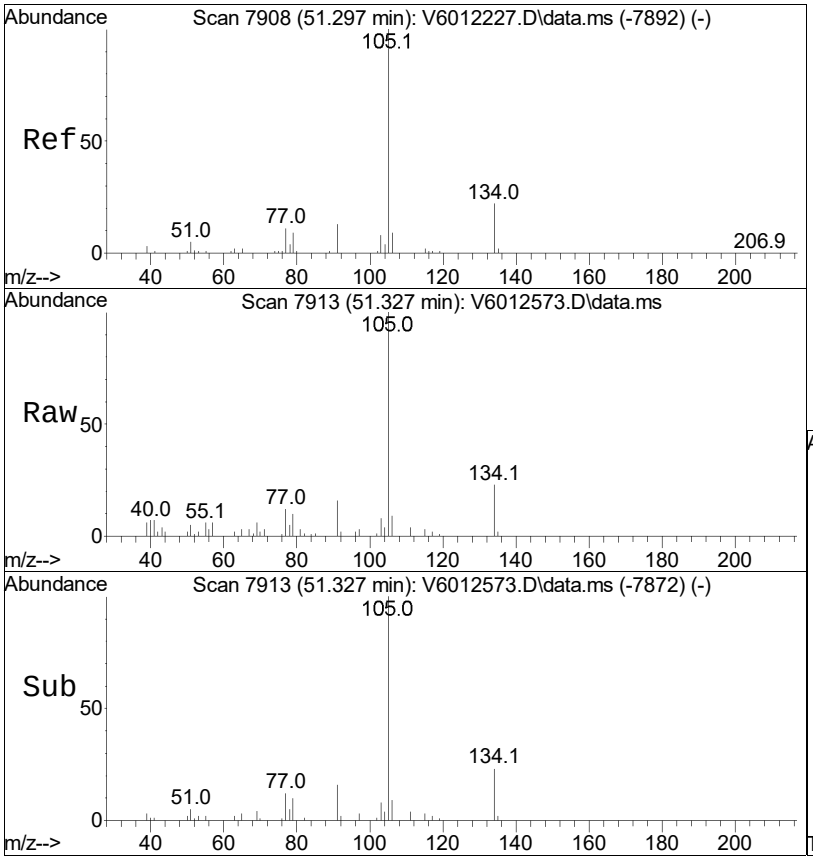


#116
Isobutylbenzene
Concen: 5.94 ug/L m
RT: 51.27 min Scan# 7904
Delta R.T. 0.000 min
Lab File: V6012573.D
Acq: 30 Sep 2020 12:37 pm

Tgt Ion: 91 Resp: 47006

Ion	Ratio	Lower	Upper
91	100		
92	52.9	35.8	75.8
134	27.7	10.5	50.5

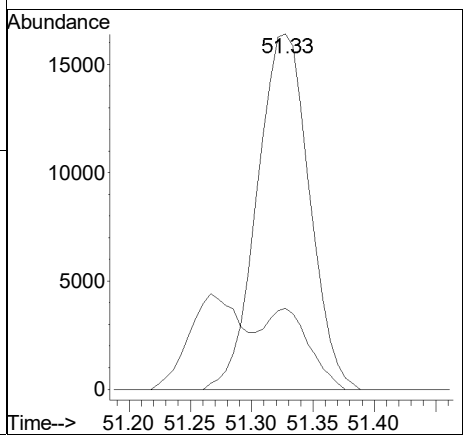


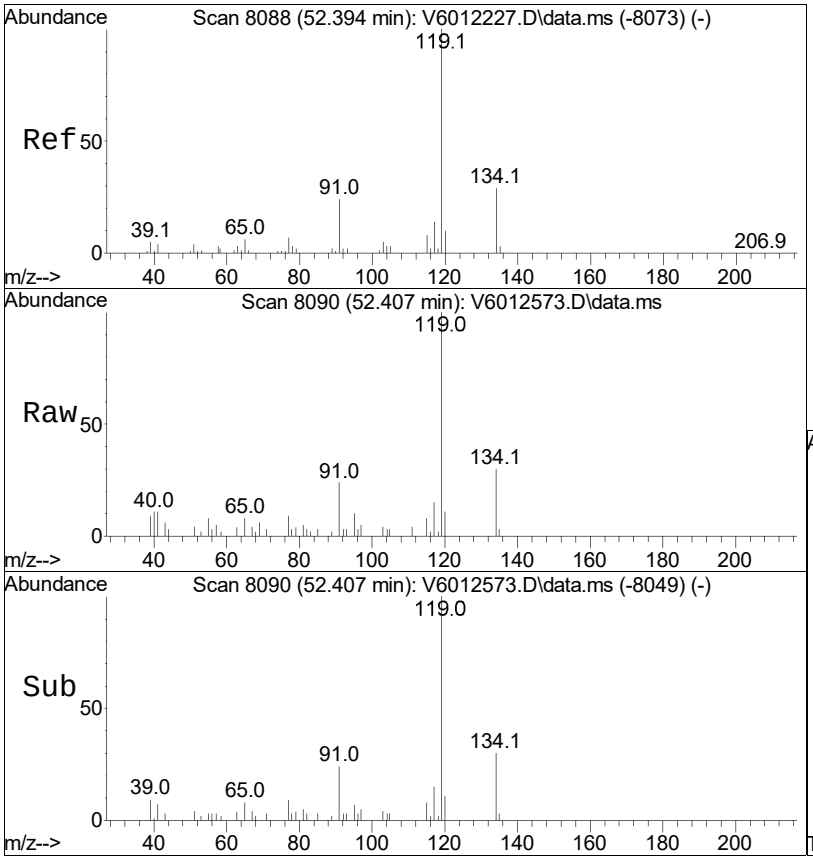


#117
sec-Butylbenzene
Concen: 5.19 ug/L
RT: 51.33 min Scan# 7913
Delta R.T. 0.000 min
Lab File: V6012573.D
Acq: 30 Sep 2020 12:37 pm

Tgt Ion:105 Resp: 48539

Ion	Ratio	Lower	Upper
105	100		
134	22.8	3.2	43.2

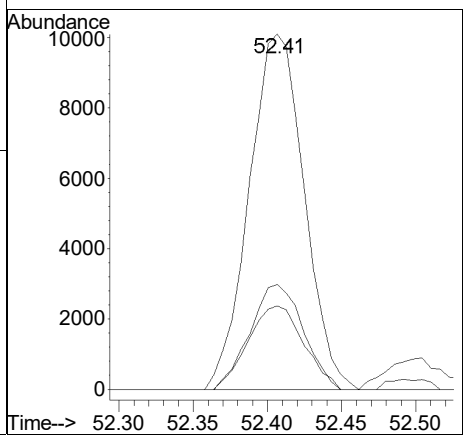


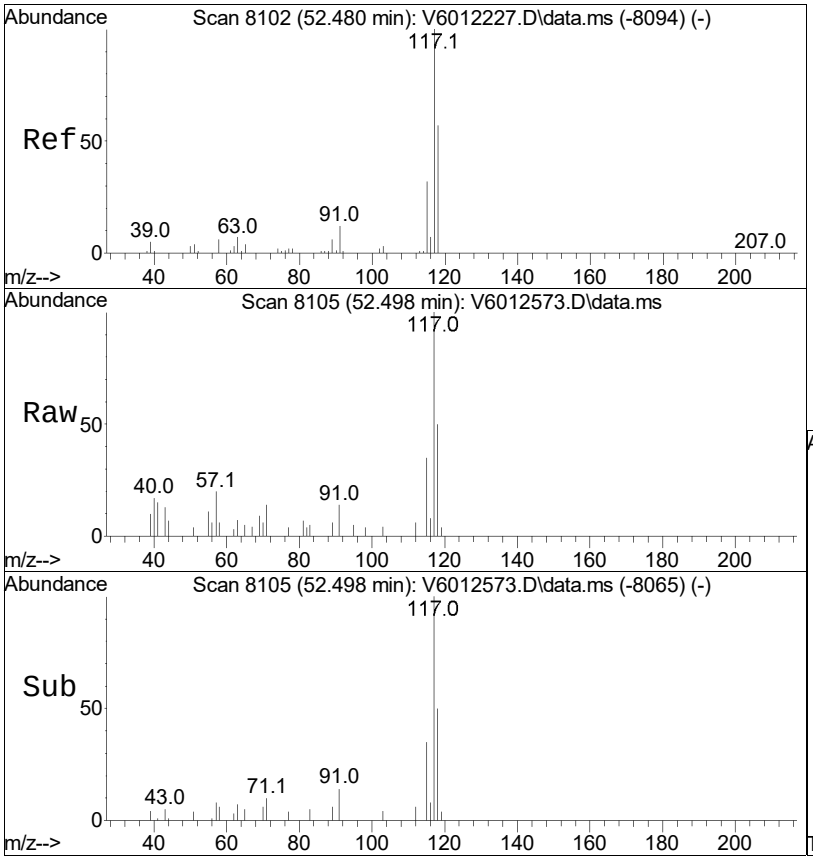


#121
1-Methyl-2-isopropylbenzene
Concen: 3.22 ug/L
RT: 52.41 min Scan# 8090
Delta R.T. 0.000 min
Lab File: V6012573.D
Acq: 30 Sep 2020 12:37 pm

Tgt Ion:119 Resp: 26032

Ion	Ratio	Lower	Upper
119	100		
134	29.5	9.5	49.5
91	23.5	3.5	43.5

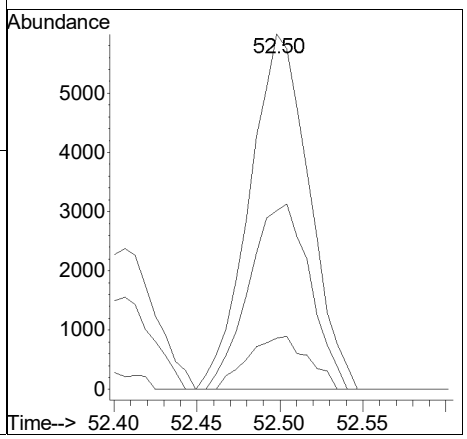


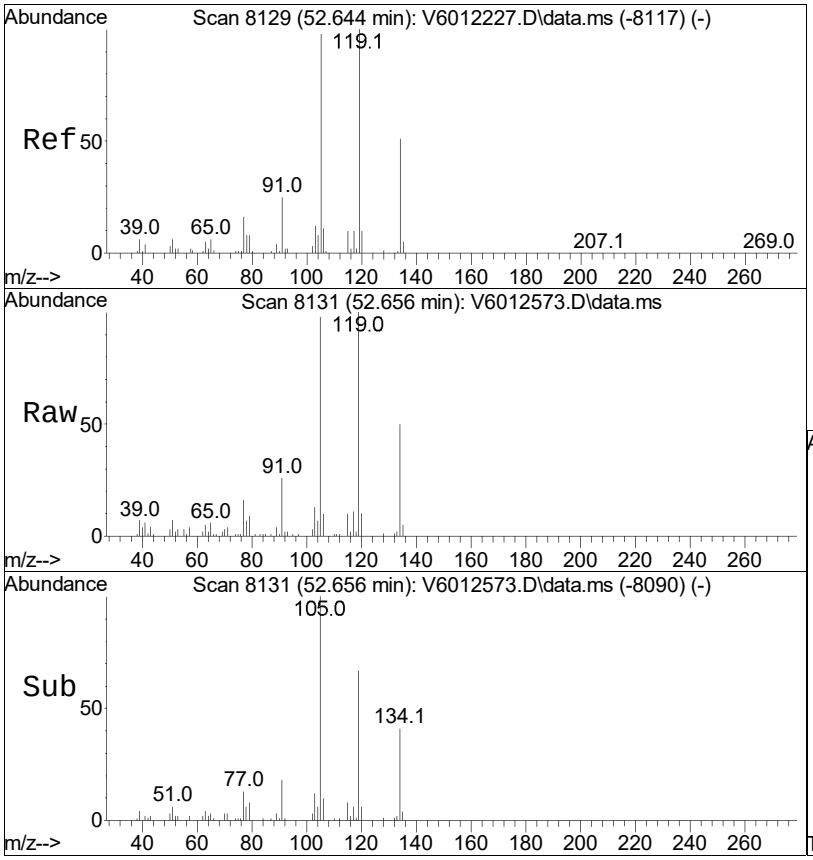


#122
Indan
Concen: 2.17 ug/L
RT: 52.50 min Scan# 8105
Delta R.T. -0.006 min
Lab File: V6012573.D
Acq: 30 Sep 2020 12:37 pm

Tgt Ion:117 Resp: 15030

Ion	Ratio	Lower	Upper
117	100		
118	50.3	36.2	76.2
91	14.4	0.0	34.3

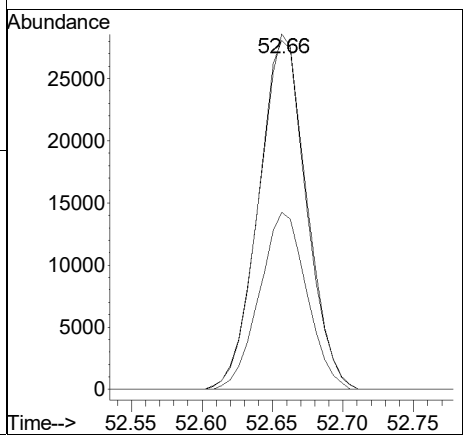


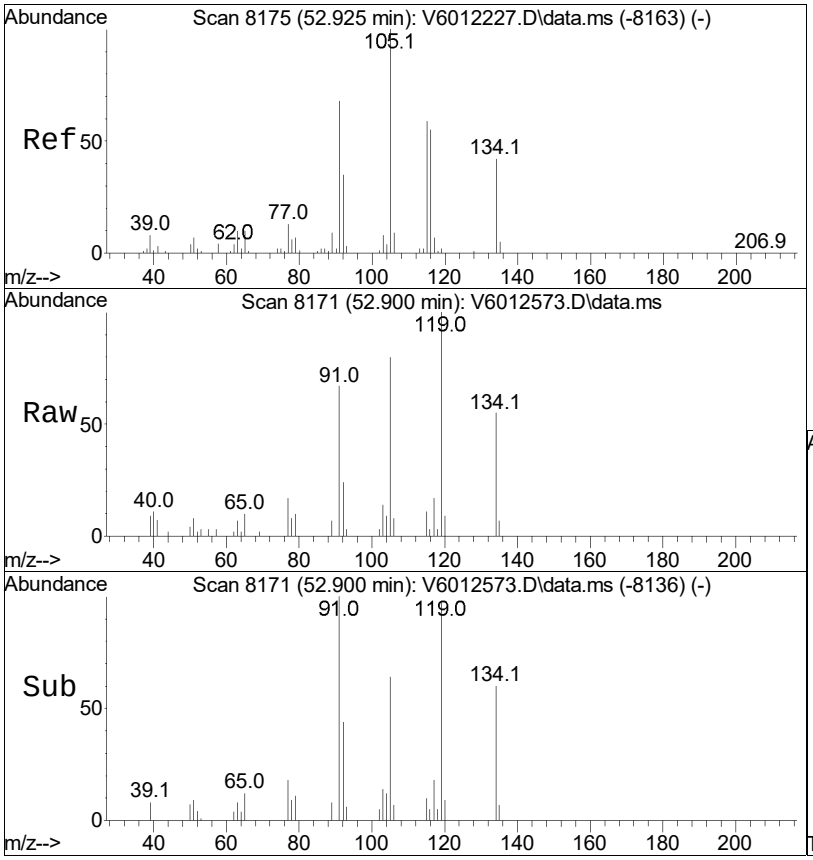


#123
1,3-Diethylbenzene
Concen: 13.26 ug/L
RT: 52.66 min Scan# 8131
Delta R.T. 0.000 min
Lab File: V6012573.D
Acq: 30 Sep 2020 12:37 pm

Tgt Ion:105 Resp: 66423

Ion	Ratio	Lower	Upper
105	100		
119	101.8	81.8	121.8
134	50.7	32.1	72.1

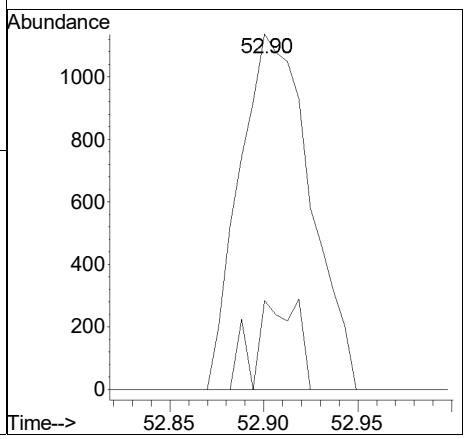


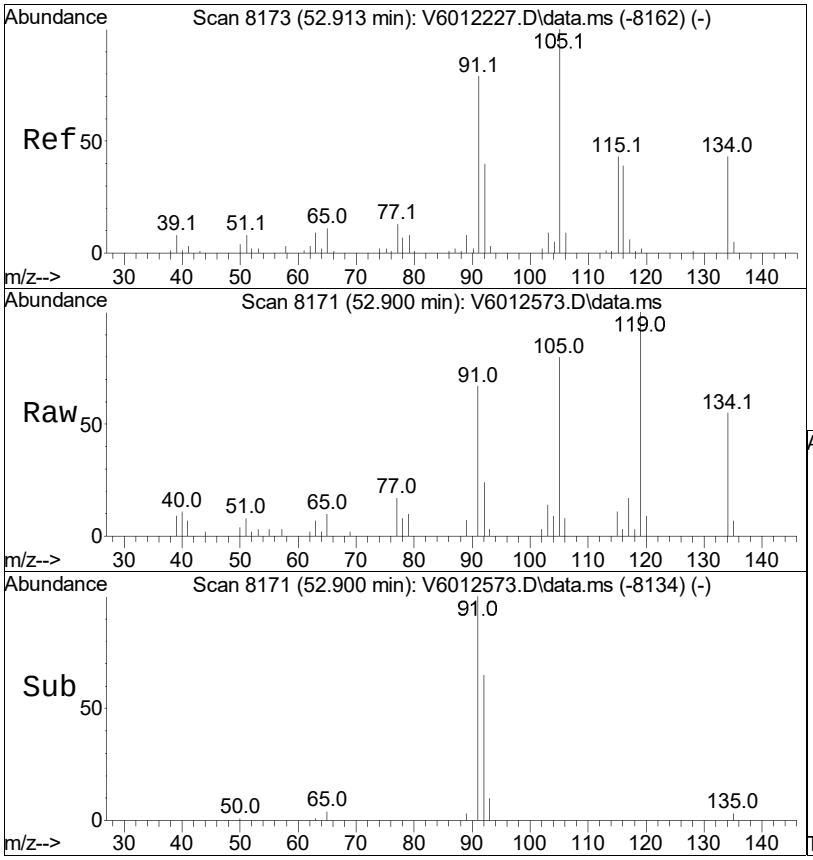


#125
Indene
Concen: 0.49 ug/L
RT: 52.90 min Scan# 8171
Delta R.T. -0.036 min
Lab File: V6012573.D
Acq: 30 Sep 2020 12:37 pm

Tgt Ion:115 Resp: 2978

Ion	Ratio	Lower	Upper
115	100		
116	25.0	73.0	113.0#

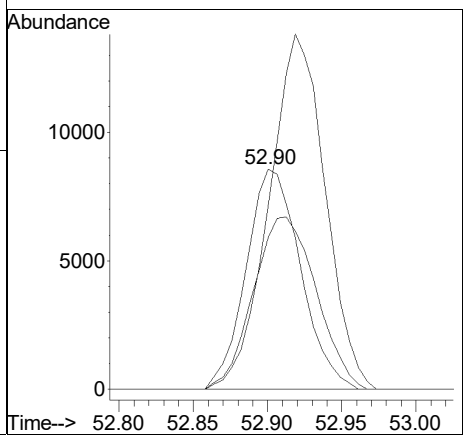


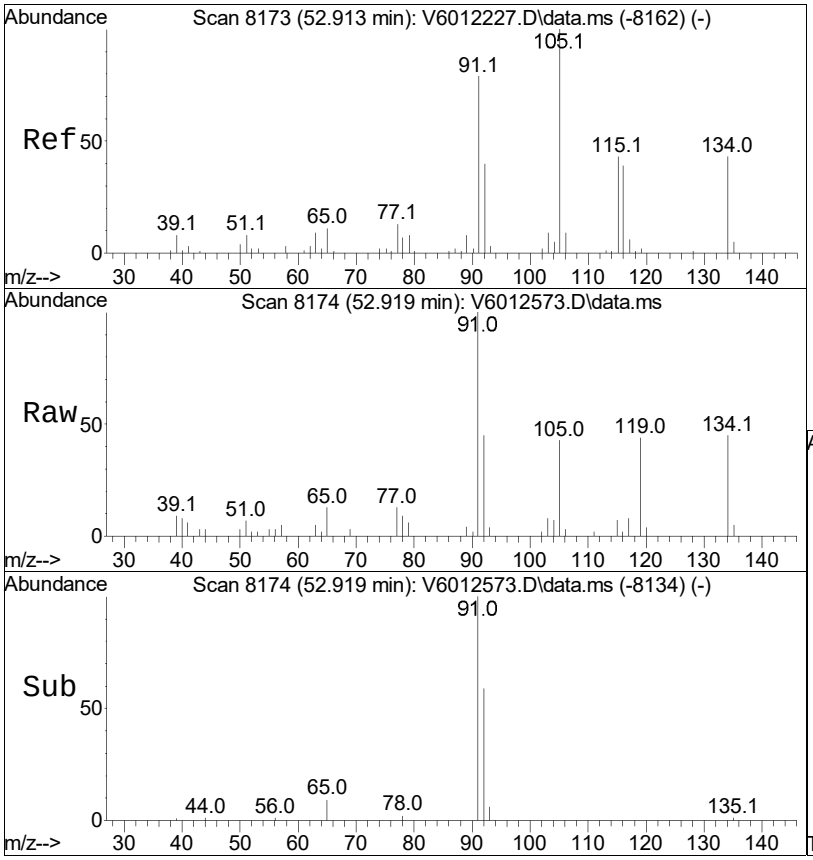


#126
1-Methyl-4-propylbenzene
Concen: 1.86 ug/L
RT: 52.90 min Scan# 8171
Delta R.T. -0.024 min
Lab File: V6012573.D
Acq: 30 Sep 2020 12:37 pm

Tgt Ion:105 Resp: 21875

Ion	Ratio	Lower	Upper
105	100		
134	68.9	23.0	63.0#
91	83.4	58.3	98.3

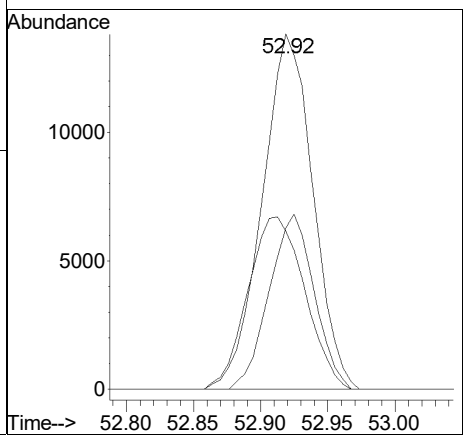


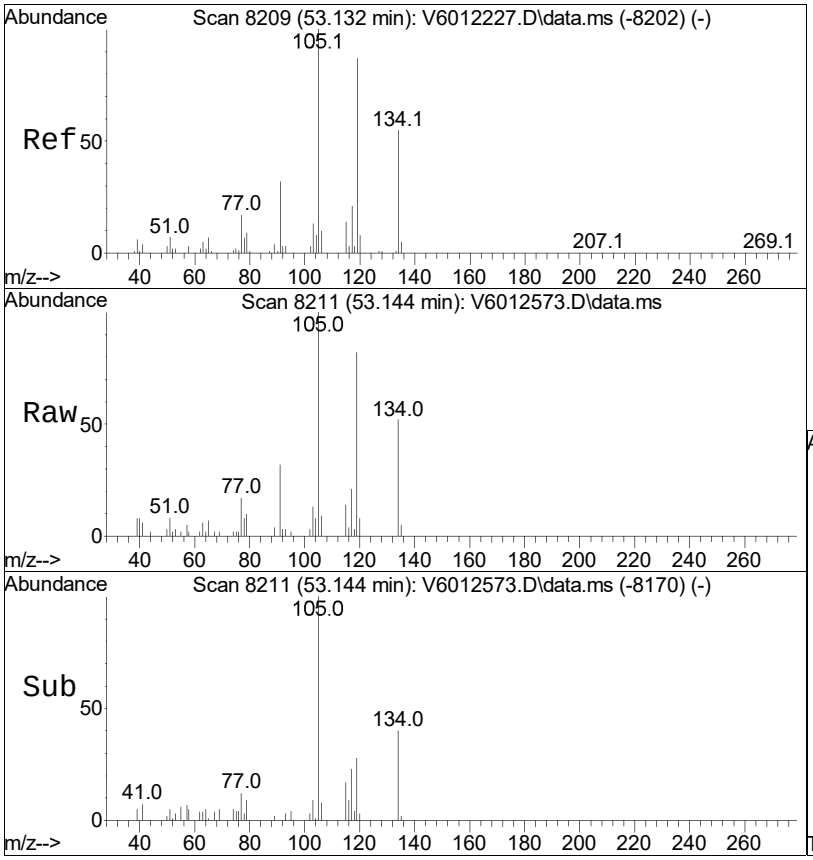


#127
n-Butylbenzene
Concen: 4.09 ug/L
RT: 52.92 min Scan# 8174
Delta R.T. -0.006 min
Lab File: V6012573.D
Acq: 30 Sep 2020 12:37 pm

Tgt Ion: 91 Resp: 36341

Ion	Ratio	Lower	Upper
91	100		
92	45.4	30.6	70.6
134	44.5	34.9	74.9

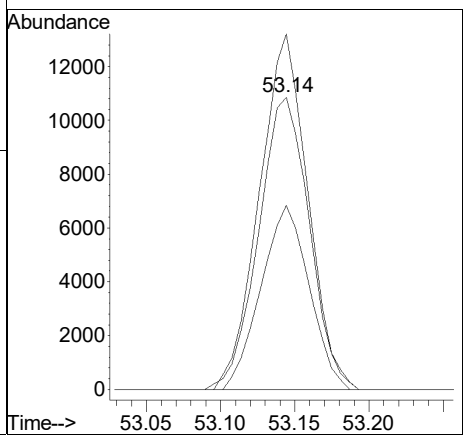


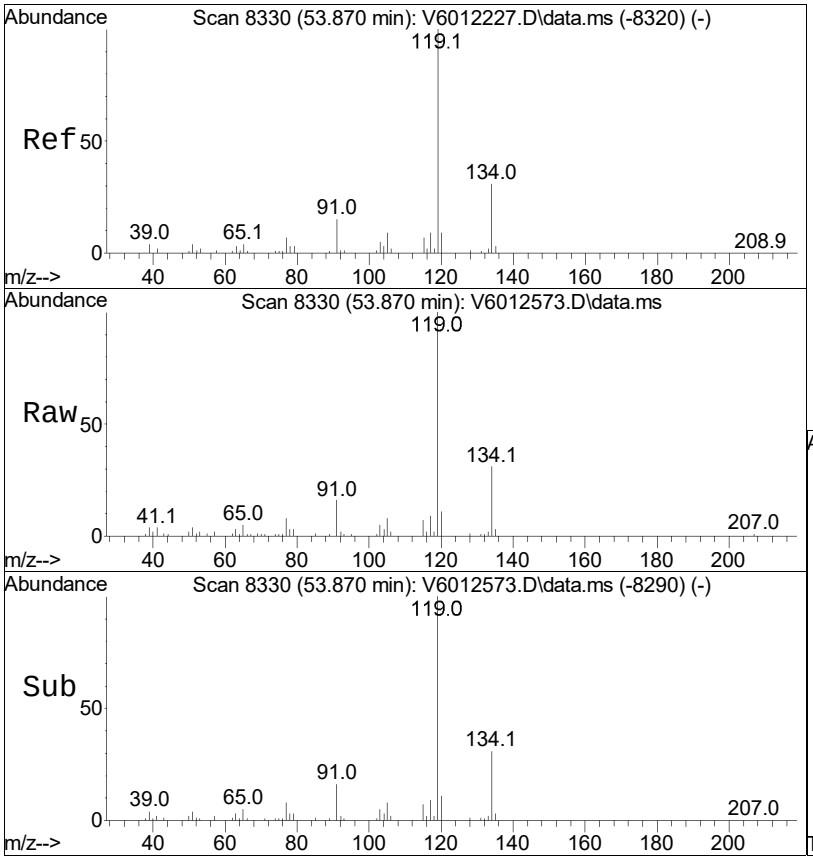


#129
1,2-Diethylbenzene
Concen: 6.29 ug/L
RT: 53.14 min Scan# 8211
Delta R.T. 0.000 min
Lab File: V6012573.D
Acq: 30 Sep 2020 12:37 pm

Tgt Ion:119 Resp: 25761

Ion	Ratio	Lower	Upper
119	100		
105	121.6	89.9	129.9
134	63.0	41.5	81.5

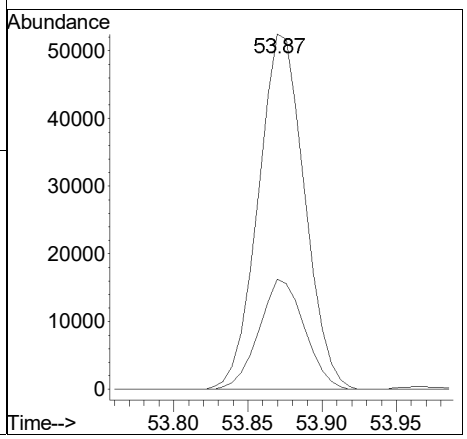


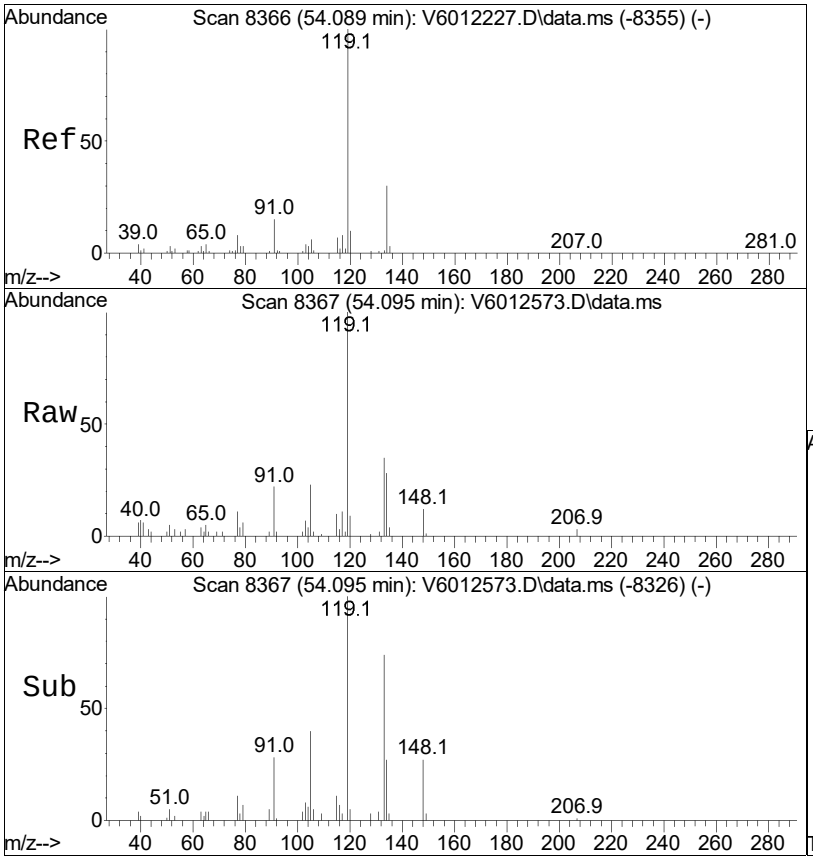


#134
1,3-Dimethyl-5-ethylbenzene
Concen: 12.61 ug/L
RT: 53.87 min Scan# 8330
Delta R.T. -0.006 min
Lab File: V6012573.D
Acq: 30 Sep 2020 12:37 pm

Tgt Ion:119 Resp: 113855

Ion	Ratio	Lower	Upper
119	100		
134	31.0	11.3	51.3

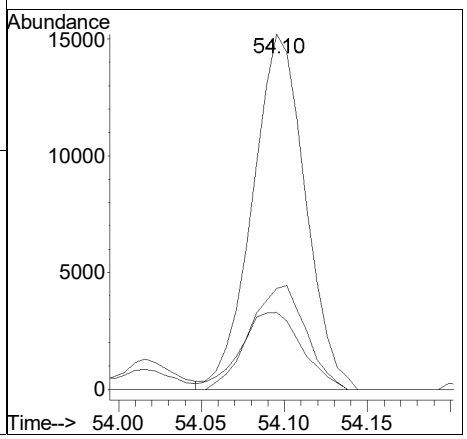


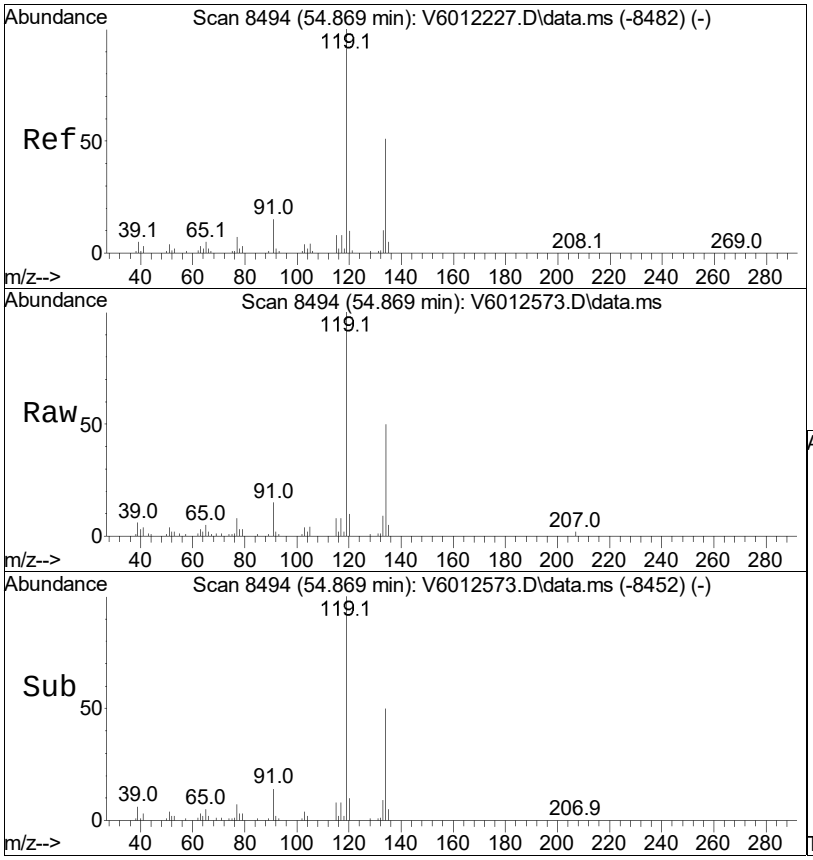


#135
1,3-Dimethyl-2-ethylbenzene
Concen: 3.61 ug/L
RT: 54.10 min Scan# 8367
Delta R.T. 0.000 min
Lab File: V6012573.D
Acq: 30 Sep 2020 12:37 pm

Tgt Ion:119 Resp: 33745

Ion	Ratio	Lower	Upper
119	100		
134	28.4	9.8	49.8
91	21.7	0.0	34.5

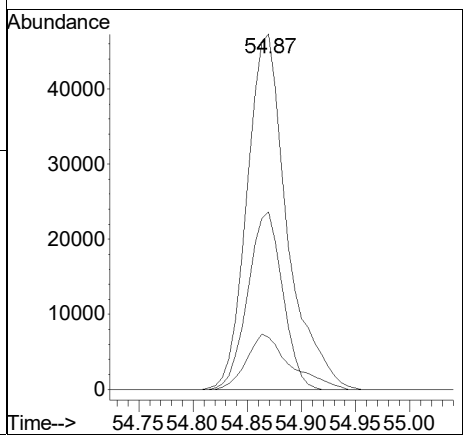


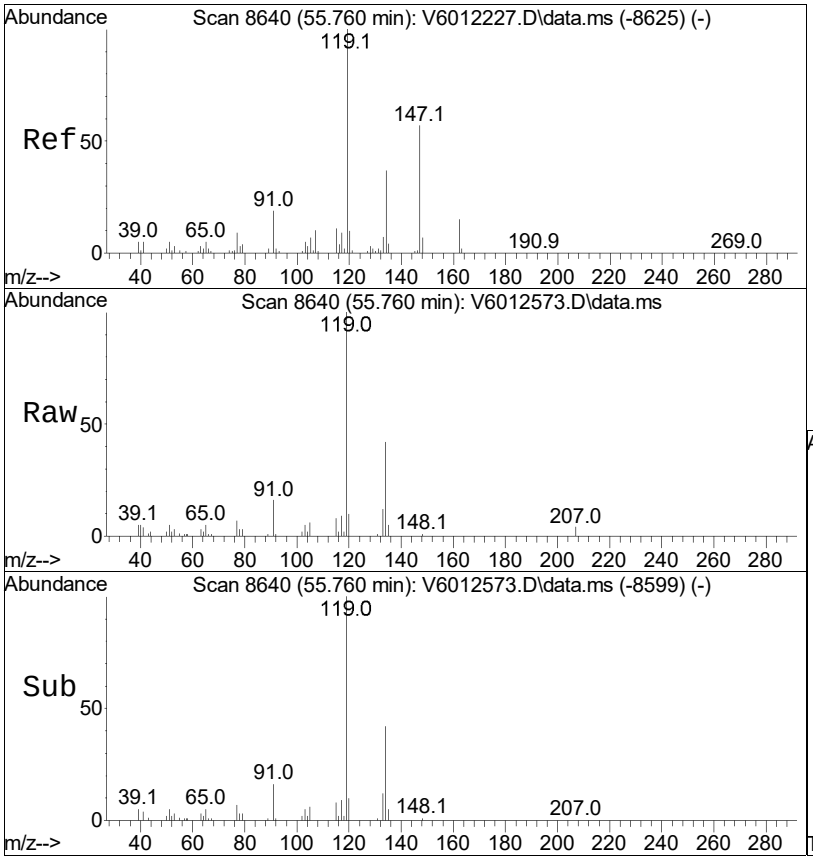


#137
1,2,4,5-Tetramethylbenzene
Concen: 13.76 ug/L
RT: 54.87 min Scan# 8494
Delta R.T. 0.006 min
Lab File: V6012573.D
Acq: 30 Sep 2020 12:37 pm

Tgt Ion:119 Resp: 121659

Ion	Ratio	Lower	Upper
119	100		
134	50.0	30.9	70.9
91	14.7	0.0	35.1

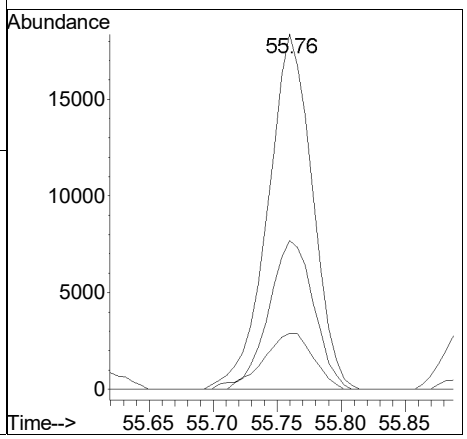


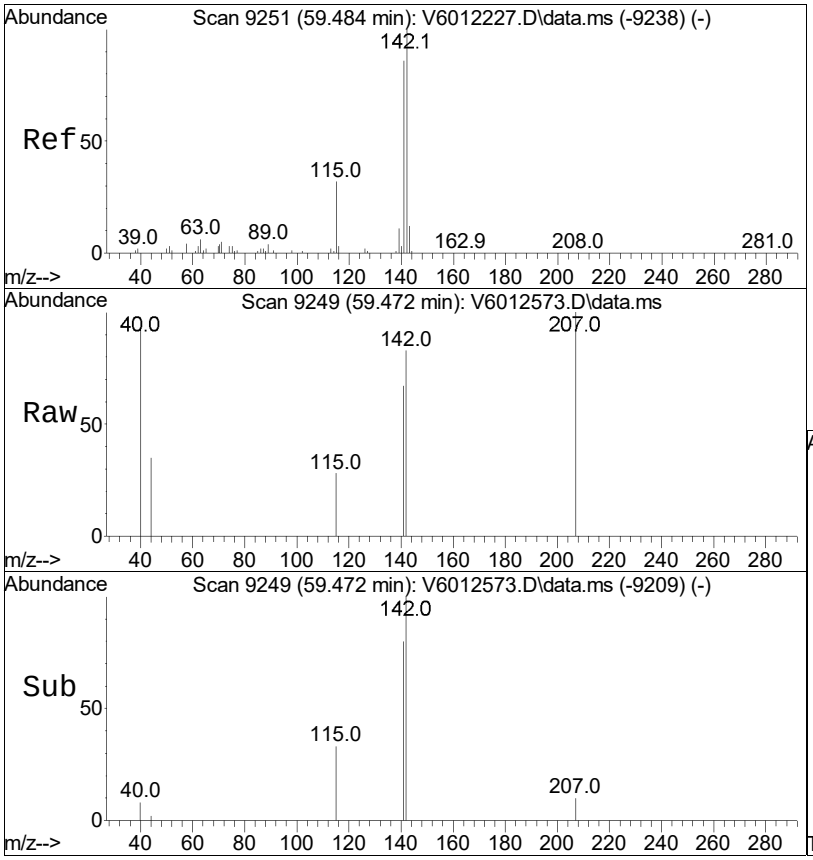


#140
1,2,3,4-Tetramethylbenzene
Concen: 4.25 ug/L
RT: 55.76 min Scan# 8640
Delta R.T. 0.000 min
Lab File: V6012573.D
Acq: 30 Sep 2020 12:37 pm

Tgt Ion:119 Resp: 44472

Ion	Ratio	Lower	Upper
119	100		
134	41.9	16.6	56.6
91	15.8	0.0	39.0

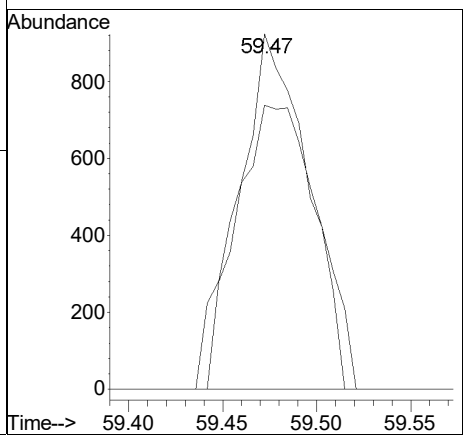


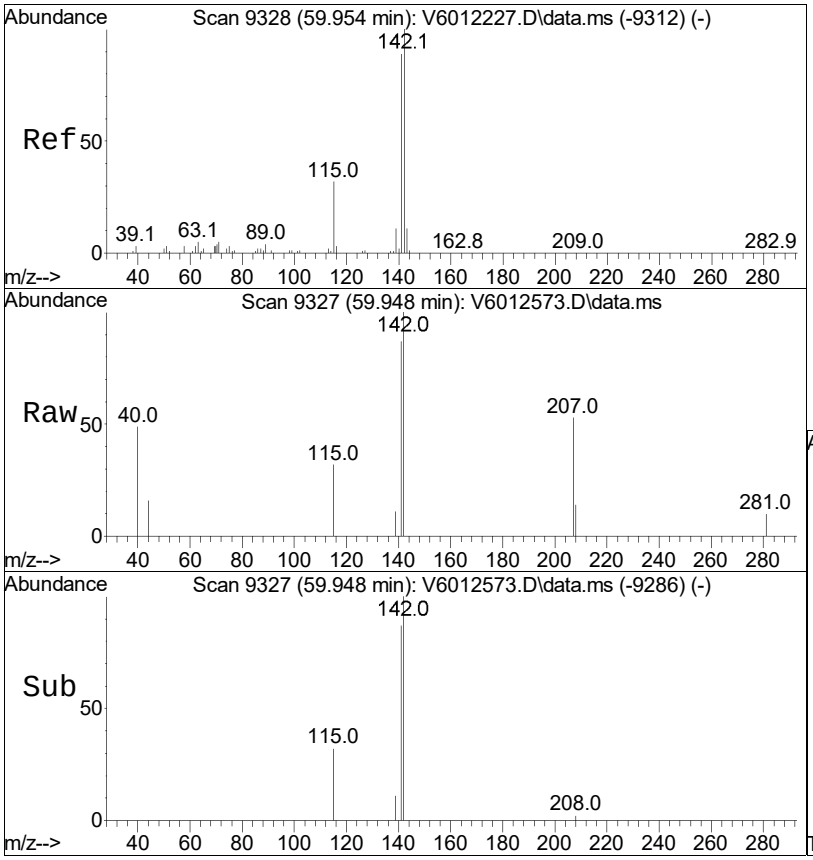


#150
2-Methylnaphthalene
Concen: 0.49 ug/L
RT: 59.47 min Scan# 9249
Delta R.T. -0.006 min
Lab File: V6012573.D
Acq: 30 Sep 2020 12:37 pm

Tgt Ion:142 Resp: 2376

Ion	Ratio	Lower	Upper
142	100		
141	80.0	65.6	105.6

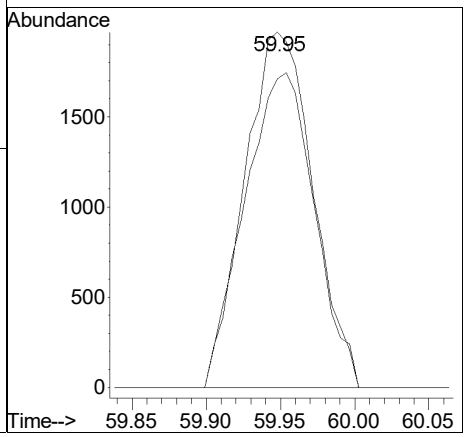




#151
1-Methylnaphthalene
Concen: 1.56 ug/L
RT: 59.95 min Scan# 9327
Delta R.T. 0.000 min
Lab File: V6012573.D
Acq: 30 Sep 2020 12:37 pm

Tgt Ion:142 Resp: 6318

Ion	Ratio	Lower	Upper
142	100		
141	86.8	69.0	109.0



Batch Quality Control

Method Blank
Raw Data

Quantitation Report (QT Reviewed)

Data Path : O:\Organics\DATA\VOA6\2020\09-SEP\200929\
Data File : V6012569.D
Acq On : 29 Sep 2020 9:05 pm
Operator : VOA6:RY
Sample : WG1416337-5,31,5,5
Misc : WG1416337,ICAL17149
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Sep 30 14:03:53 2020
Quant Method : O:\Organics\DATA\VOA6\2020\09-SEP\200929\P6091820W.M
Quant Title : PIANO VOLATILES
QLast Update : Sat Sep 19 08:40:17 2020
Response via : Initial Calibration

Sub List : PIANO - PIANO

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Chlorobenzene-D5 [IS]	38.35	117	379343	50.000	ug/L	0.00
System Monitoring Compounds						
24) Dibromofluoromethane (...	16.63	113	118284	50.004	ug/L	0.00
Spiked Amount 50.000	Range 78 - 118		Recovery = 100.01%			
62) Toluene-d8 (surr)	30.56	98	443124	48.982	ug/L	0.00
Spiked Amount 50.000	Range 87 - 113		Recovery = 97.96%			
64) 2-Bromo-1-chloropropan...	0.00	77	0	0.000	ug/L	
Spiked Amount 50.000	Range 70 - 130		Recovery = 0.00%#			
87) 1-Chloro-2-fluorobenze...	0.00	130	0	0.000	ug/L	
Spiked Amount 50.000	Range 70 - 130		Recovery = 0.00%#			
97) 1,4-Dichlorobutane (H/...	0.00	55	0	0.000	ug/L	
Spiked Amount 50.000	Range 70 - 130		Recovery = 0.00%#			
101) 4-Bromofluorobenzene (...	45.77	95	179978	47.865	ug/L	0.00
Spiked Amount 50.000	Range 76 - 120		Recovery = 95.73%			

Target Compounds				Qvalue
2) 3-Methyl-1-butene	0.00	0	N.D.	
3) Isopentane	0.00	0	N.D. d	
4) 1-Pentene	0.00	0	N.D.	
5) 2-Methyl-1-butene	0.00	0	N.D.	
6) Pentane	0.00	0	N.D. d	
7) trans-2-Pentene	0.00	0	N.D.	
8) 2-Methyl-1,3-butadiene	0.00	0	N.D.	
9) cis-2-Pentene	0.00	0	N.D.	
10) Tertiary butanol	0.00	0	N.D.	
11) 2,2-Dimethylbutane	0.00	0	N.D.	
12) 4-Methyl-1-pentene	0.00	0	N.D.	
13) Cyclopentane	0.00	0	N.D.	
14) 2,3-Dimethylbutane	0.00	0	N.D.	
15) 2-Methylpentane	0.00	0	N.D.	
16) MTBE	0.00	0	N.D.	
17) 3-Methylpentane	0.00	0	N.D.	
18) 1-Hexene	0.00	0	N.D.	
19) Hexane	0.00	0	N.D. d	
20) Diisopropyl ether	0.00	0	N.D.	
21) trans-2-Hexene	0.00	0	N.D.	
22) 2-Methyl-2-pentene	0.00	0	N.D.	
23) cis-2-Hexene	0.00	0	N.D.	
25) Ethyl tertiary butyl e...	0.00	0	N.D.	

Data Path : O:\Organics\DATA\VOA6\2020\09-SEP\200929\
Data File : V6012569.D
Acq On : 29 Sep 2020 9:05 pm
Operator : VOA6:RY
Sample : WG1416337-5,31,5,5
Misc : WG1416337,ICAL17149
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Sep 30 14:03:53 2020
Quant Method : O:\Organics\DATA\VOA6\2020\09-SEP\200929\P6091820W.M
Quant Title : PIANO VOLATILES
QLast Update : Sat Sep 19 08:40:17 2020
Response via : Initial Calibration

Sub List : PIANO - PIANO

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
26) 2,2-Dimethylpentane	0.00		0	N.D.		
27) Methylcyclopentane	0.00		0	N.D.		
28) 2,4-Dimethylpentane	0.00		0	N.D.		
29) 2,2,3-Trimethylbutane	0.00		0	N.D.		
30) 1,2-Dichloroethane	0.00		0	N.D.		
31) 3,3-Dimethylpentane	0.00		0	N.D.		
32) Cyclohexane	0.00		0	N.D.		
33) 2-Methylhexane	0.00		0	N.D.		
34) Benzene	0.00		0	N.D.		
35) 2,3-Dimethylpentane	0.00		0	N.D.		
36) Thiophene	0.00		0	N.D.		
37) 1,1-Dimethylcyclopentane	0.00		0	N.D.		
38) 3-Methylhexane	0.00		0	N.D.		
39) TAME	0.00		0	N.D.		d
40) cis-1,3-Dimethylcyclop...	0.00		0	N.D.		
41) 3-Ethylpentane	0.00		0	N.D.		
42) trans-1,3-DMCP/2-Methy...	0.00		0	N.D.		
43) 1-Heptene/trans-1,2-DMCP	0.00		0	N.D.		
44) Isooctane	0.00		0	N.D.		
45) trans-3-Heptene	0.00		0	N.D.		
46) Heptane	0.00		0	N.D.		
48) trans-2-Heptene	0.00		0	N.D.		
49) cis-2-Heptene	0.00		0	N.D.		
50) 2,2-Dimethylhexane	0.00		0	N.D.		
51) Methylcyclohexane	0.00		0	N.D.		
52) 2,5-Dimethylhexane	0.00		0	N.D.		
53) 2,4-Dimethylhexane	0.00		0	N.D.		
54) Ethylcyclopentane	0.00		0	N.D.		
55) 2,2,3-Trimethylpentane	0.00		0	N.D.		
57) 2,3,4-Trimethylpentane	0.00		0	N.D.		
58) 2,3,3-Trimethylpentane	0.00		0	N.D.		
59) 2,3-Dimethylhexane	0.00		0	N.D.		
60) 2-Methylheptane	0.00		0	N.D.		
61) 4-Methylheptane	0.00		0	N.D.		
63) 3-Methylheptane	0.00		0	N.D.		d
65) 3-Ethylhexane	0.00		0	N.D.		d
66) Toluene	0.00		0	N.D.		
67) 2-Methylthiophene	0.00		0	N.D.		
68) trans-1,4-Dimethylcycl...	0.00		0	N.D.		
69) 3-Methylthiophene	0.00		0	N.D.		
70) 1-Octene	0.00		0	N.D.		

Data Path : O:\Organics\DATA\VOA6\2020\09-SEP\200929\
Data File : V6012569.D
Acq On : 29 Sep 2020 9:05 pm
Operator : VOA6:RY
Sample : WG1416337-5,31,5,5
Misc : WG1416337,ICAL17149
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Sep 30 14:03:53 2020
Quant Method : O:\Organics\DATA\VOA6\2020\09-SEP\200929\P6091820W.M
Quant Title : PIANO VOLATILES
QLast Update : Sat Sep 19 08:40:17 2020
Response via : Initial Calibration

Sub List : PIANO - PIANO

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
71) Octane	0.00		0		N.D.	
72) trans-1,2-Dimethylcycl...	0.00		0		N.D.	
73) 1,2-Dibromoethane	0.00		0		N.D.	
75) cis-2-Octene	0.00		0		N.D.	
76) Isopropylcyclopentane	0.00		0		N.D.	
77) cis-1,2-Dimethylcycloh...	0.00		0		N.D.	
78) 2,5-Dimethylheptane	0.00		0		N.D.	
79) 3,5-Dimethylheptane	0.00		0		N.D.	
80) 3,3-Dimethylheptane	0.00		0		N.D.	
81) 1,1,4-Trimethylcyclohe...	0.00		0		N.D.	
82) 2,3-Dimethylheptane	0.00		0		N.D.	
83) 3,4-Dimethylheptane	0.00		0		N.D.	
84) 4-Methyloctane	0.00		0		N.D.	
85) 2-Methyloctane	0.00		0		N.D.	
86) Ethylbenzene	0.00		0		N.D.	
88) 2-Ethylthiophene	0.00		0		N.D.	
89) 3-Methyloctane	0.00		0		N.D.	
90) 3,3-Diethylpentane	0.00		0		N.D.	
91) p/m-Xylene	0.00		0		N.D.	
92) 1-Nonene	0.00		0		N.D.	
93) trans-3-Nonene	0.00		0		N.D.	
94) cis-3-Nonene	0.00		0		N.D.	
95) Nonane	0.00		0		N.D.	
96) Styrene	0.00		0		N.D.	
98) o-Xylene	0.00		0		N.D.	
99) 2-Nonene	0.00		0		N.D.	
100) Isopropylcyclohexane	0.00		0		N.D.	
102) Isopropylbenzene	0.00		0		N.D.	
103) 3,3-Dimethyloctane	0.00		0		N.D.	
104) n-Propylbenzene	0.00		0		N.D.	
105) 2-Methylnonane	0.00		0		N.D.	
106) 3-Methylnonane	0.00		0		N.D.	
107) 1-Methyl-3-ethylbenzene	0.00		0		N.D.	
108) 1-Methyl-4-ethylbenzene	0.00		0		N.D.	
109) 1,3,5-Trimethylbenzene	0.00		0		N.D.	
110) 1-Decene	0.00		0		N.D.	
111) Isobutylcyclohexane	0.00		0		N.D.	
112) 1-Methyl-2-ethylbenzene	0.00		0		N.D.	
113) Decane	0.00		0		N.D.	
114) tert-Butylbenzene	0.00		0		N.D.	
115) 1,2,4-Trimethylbenzene	0.00		0		N.D.	

Data Path : O:\Organics\DATA\VOA6\2020\09-SEP\200929\
Data File : V6012569.D
Acq On : 29 Sep 2020 9:05 pm
Operator : VOA6:RY
Sample : WG1416337-5,31,5,5
Misc : WG1416337,ICAL17149
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Sep 30 14:03:53 2020
Quant Method : O:\Organics\DATA\VOA6\2020\09-SEP\200929\P6091820W.M
Quant Title : PIANO VOLATILES
QLast Update : Sat Sep 19 08:40:17 2020
Response via : Initial Calibration

Sub List : PIANO - PIANO

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
116) Isobutylbenzene	0.00		0	N.D.		
117) sec-Butylbenzene	0.00		0	N.D.		
118) 1-Methyl-3-isopropylbe...	0.00		0	N.D.		
119) 1-Methyl-4-isopropylbe...	0.00		0	N.D.		
120) 1,2,3-Trimethylbenzene	0.00		0	N.D.		
121) 1-Methyl-2-isopropylbe...	0.00		0	N.D.		
122) Indan	0.00		0	N.D.		
123) 1,3-Diethylbenzene	0.00		0	N.D.		
124) 1-Methyl-3-propylbenzene	0.00		0	N.D.		
125) Indene	0.00		0	N.D.		
126) 1-Methyl-4-propylbenzene	0.00		0	N.D.		
127) n-Butylbenzene	0.00		0	N.D.		
128) 1,2-Dimethyl-4-ethylbe...	0.00		0	N.D.		
129) 1,2-Diethylbenzene	0.00		0	N.D.		
130) 1-Methyl-2-propylbenzene	0.00		0	N.D.		
131) 1,4-Dimethyl-2-ethylbe...	0.00		0	N.D.		d
132) Undecane	0.00		0	N.D.		
133) 1,3-Dimethyl-4-ethylbe...	0.00		0	N.D.		d
134) 1,3-Dimethyl-5-ethylbe...	0.00		0	N.D.		d
135) 1,3-Dimethyl-2-ethylbe...	0.00		0	N.D.		d
136) 1,2-Dimethyl-3-ethylbe...	0.00		0	N.D.		
137) 1,2,4,5-Tetramethylben...	0.00		0	N.D.		
138) 1,2,3,5-Tetramethylben...	0.00		0	N.D.		
139) Pentylbenzene	0.00		0	N.D.		d
140) 1,2,3,4-Tetramethylben...	0.00		0	N.D.		
141) 1,3-DM-5-tert-Butylben...	0.00		0	N.D.		
142) Dodecane	0.00		0	N.D.		
143) 1,3,5-Triethylbenzene	0.00		0	N.D.		
144) Naphthalene	0.00		0	N.D.		d
145) Benzothiophene	0.00		0	N.D.		
146) 1,2,4-Triethylbenzene	0.00		0	N.D.		
147) Hexylbenzene	0.00		0	N.D.		
148) MMT	0.00		0	N.D.		
149) Tridecane	0.00		0	N.D.		
150) 2-Methylnaphthalene	0.00		0	N.D.		
151) 1-Methylnaphthalene	0.00		0	N.D.		
152) Tetradecane	0.00		0	N.D.		
153) Pentadecane	0.00		0	N.D.		

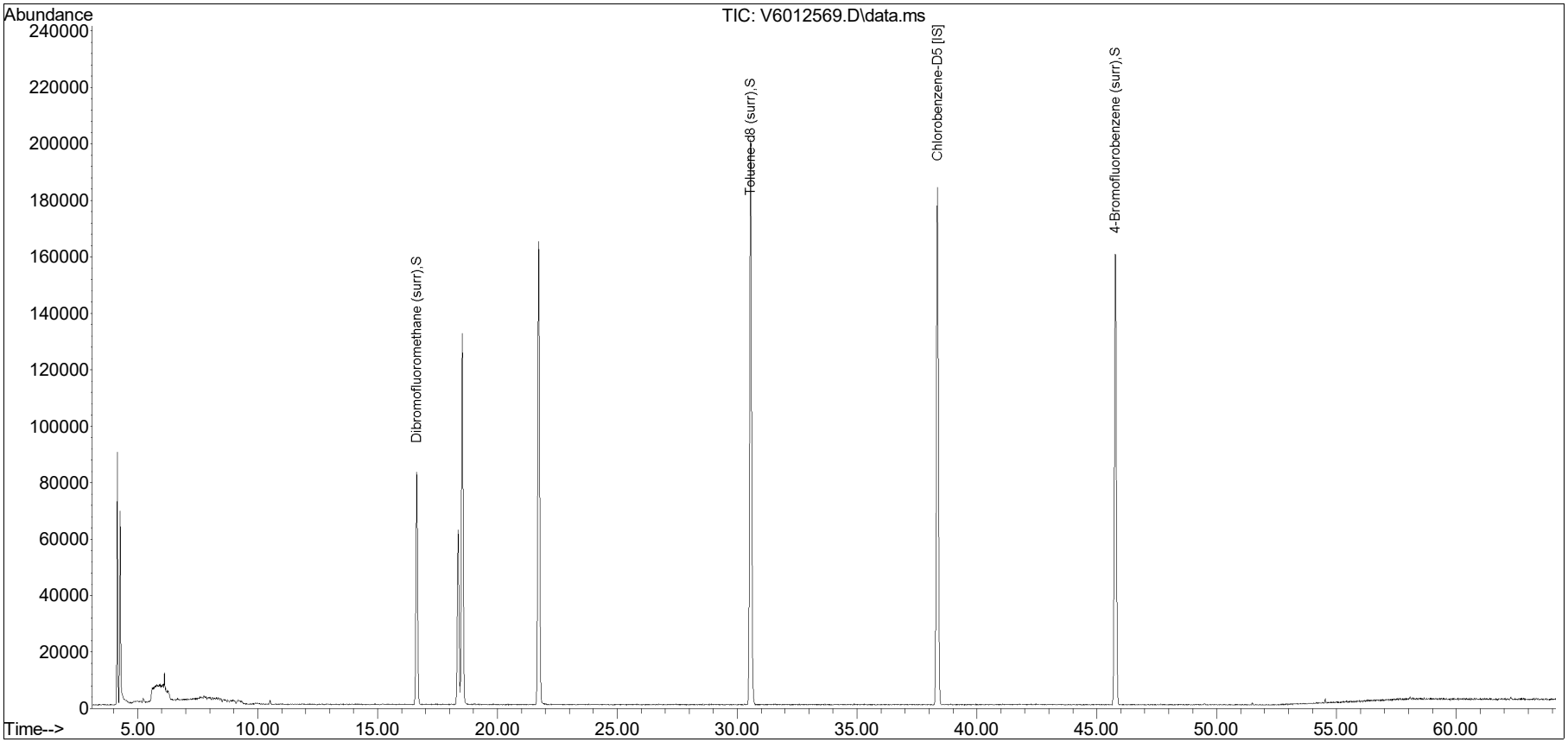
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : O:\Organics\DATA\VOA6\2020\09-SEP\200929\
Data File : V6012569.D
Acq On : 29 Sep 2020 9:05 pm
Operator : VOA6:RY
Sample : WG1416337-5,31,5,5
Misc : WG1416337,ICAL17149
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Sep 30 14:03:53 2020
Quant Method : O:\Organics\DATA\VOA6\2020\09-SEP\200929\P6091820W.M
Quant Title : PIANO VOLATILES
QLast Update : Sat Sep 19 08:40:17 2020
Response via : Initial Calibration

Sub List : PIANO - PIANO



LCS Raw Data

Quantitation Report (QT Reviewed)

Data Path : O:\Organics\DATA\VOA6\2020\09-SEP\200929\
Data File : V6012567.D
Acq On : 29 Sep 2020 6:42 pm
Operator : VOA6:RY
Sample : WG1416337-3,31,5,5
Misc : WG1416337,ICAL17149
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Sep 30 09:16:01 2020
Quant Method : O:\Organics\DATA\VOA6\2020\09-SEP\200929\P6091820W.M
Quant Title : PIANO VOLATILES
QLast Update : Sat Sep 19 08:40:17 2020
Response via : Initial Calibration

Sub List : PIANO - PIANO

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Chlorobenzene-D5 [IS]	38.35	117	384265	50.000	ug/L	0.00
System Monitoring Compounds						
24) Dibromofluoromethane (...	16.63	113	118647	49.515	ug/L	0.00
Spiked Amount 50.000	Range 78 - 118		Recovery = 99.03%			
62) Toluene-d8 (surr)	30.56	98	453796	49.519	ug/L	0.00
Spiked Amount 50.000	Range 87 - 113		Recovery = 99.04%			
64) 2-Bromo-1-chloropropan...	0.00	77	0d	0.000	ug/L	
Spiked Amount 50.000	Range 70 - 130		Recovery = 0.00%#			
87) 1-Chloro-2-fluorobenze...	0.00	130	0	0.000	ug/L	
Spiked Amount 50.000	Range 70 - 130		Recovery = 0.00%#			
97) 1,4-Dichlorobutane (H/...	0.00	55	0	0.000	ug/L	
Spiked Amount 50.000	Range 70 - 130		Recovery = 0.00%#			
101) 4-Bromofluorobenzene (...	45.77	95	186142	48.870	ug/L	0.00
Spiked Amount 50.000	Range 76 - 120		Recovery = 97.74%			
Target Compounds						Qvalue
2) 3-Methyl-1-butene	0.00		0	N.D.		
3) Isopentane	0.00		0	N.D. d		
4) 1-Pentene	8.60	42	25999	15.161	ug/L	97
5) 2-Methyl-1-butene	0.00		0	N.D. d		
6) Pentane	8.96	43	34771	12.850	ug/L	97
7) trans-2-Pentene	0.00		0	N.D.		
8) 2-Methyl-1,3-butadiene	0.00		0	N.D.		
9) cis-2-Pentene	0.00		0	N.D.		
10) Tertiary butanol	10.40	59	19379	81.095	ug/L	97
11) 2,2-Dimethylbutane	0.00		0	N.D. d		
12) 4-Methyl-1-pentene	0.00		0	N.D.		
13) Cyclopentane	12.57	70	19283	16.891	ug/L #	38
14) 2,3-Dimethylbutane	0.00		0	N.D. d		
15) 2-Methylpentane	12.78	43	44599	15.221	ug/L	99
16) MTBE	13.08	73	74898	20.445	ug/L	99
17) 3-Methylpentane	13.74	57	44601	16.832	ug/L	96
18) 1-Hexene	14.32	56	26812	17.781	ug/L	96
19) Hexane	14.92	57	38043	17.590	ug/L	99
20) Diisopropyl ether	15.21	45	70986	19.299	ug/L	96
21) trans-2-Hexene	0.00		0	N.D.		
22) 2-Methyl-2-pentene	0.00		0	N.D.		
23) cis-2-Hexene	0.00		0	N.D.		
25) Ethyl tertiary butyl e...	16.67	59	74633	19.524	ug/L	97

Data Path : O:\Organics\DATA\VOA6\2020\09-SEP\200929\
Data File : V6012567.D
Acq On : 29 Sep 2020 6:42 pm
Operator : VOA6:RY
Sample : WG1416337-3,31,5,5
Misc : WG1416337,ICAL17149
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Sep 30 09:16:01 2020
Quant Method : O:\Organics\DATA\VOA6\2020\09-SEP\200929\P6091820W.M
Quant Title : PIANO VOLATILES
QLast Update : Sat Sep 19 08:40:17 2020
Response via : Initial Calibration

Sub List : PIANO - PIANO

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
26) 2,2-Dimethylpentane	0.00		0	N.D.		
27) Methylcyclopentane	17.22	56	51222	18.569	ug/L	98
28) 2,4-Dimethylpentane	17.37	43	44733	16.788	ug/L	94
29) 2,2,3-Trimethylbutane	0.00		0	N.D.		
30) 1,2-Dichloroethane	0.00		0	N.D.	d	
31) 3,3-Dimethylpentane	0.00		0	N.D.		
32) Cyclohexane	20.09	56	43299	18.842	ug/L	98
33) 2-Methylhexane	20.52	43	48148	17.290	ug/L	98
34) Benzene	20.70	78	115664	19.994	ug/L	99
35) 2,3-Dimethylpentane	20.82	56	43503	18.577	ug/L	96
36) Thiophene	0.00		0	N.D.		
37) 1,1-Dimethylcyclopentane	0.00		0	N.D.		
38) 3-Methylhexane	21.33	43	38466	15.477	ug/L	93
39) TAME	21.69	73	78735	17.750	ug/L	96
40) cis-1,3-Dimethylcyclop...	0.00		0	N.D.		
41) 3-Ethylpentane	0.00		0	N.D.		
42) trans-1,3-DMCP/2-Methy...	0.00		0	N.D.		
43) 1-Heptene/trans-1,2-DMCP	0.00		0	N.D.	d	
44) Isooctane	22.74	57	113740	19.090	ug/L	96
45) trans-3-Heptene	0.00		0	N.D.	d	
46) Heptane	23.49	43	39048	16.859	ug/L	96
48) trans-2-Heptene	0.00		0	N.D.		
49) cis-2-Heptene	0.00		0	N.D.		
50) 2,2-Dimethylhexane	0.00		0	N.D.	d	
51) Methylcyclohexane	25.89	83	53922	20.076	ug/L	95
52) 2,5-Dimethylhexane	0.00		0	N.D.		
53) 2,4-Dimethylhexane	0.00		0	N.D.		
54) Ethylcyclopentane	0.00		0	N.D.		
55) 2,2,3-Trimethylpentane	0.00		0	N.D.		
57) 2,3,4-Trimethylpentane	0.00		0	N.D.		
58) 2,3,3-Trimethylpentane	0.00		0	N.D.		
59) 2,3-Dimethylhexane	0.00		0	N.D.		
60) 2-Methylheptane	29.86	57	48493	18.072	ug/L	96
61) 4-Methylheptane	0.00		0	N.D.	d	
63) 3-Methylheptane	30.60	43	44741	16.980	ug/L	97
65) 3-Ethylhexane	0.00		0	N.D.	d	
66) Toluene	30.92	91	135851	19.382	ug/L	99
67) 2-Methylthiophene	0.00		0	N.D.		
68) trans-1,4-Dimethylcycl...	0.00		0	N.D.		
69) 3-Methylthiophene	0.00		0	N.D.		
70) 1-Octene	0.00		0	N.D.		

Data Path : O:\Organics\DATA\VOA6\2020\09-SEP\200929\
Data File : V6012567.D
Acq On : 29 Sep 2020 6:42 pm
Operator : VOA6:RY
Sample : WG1416337-3,31,5,5
Misc : WG1416337,ICAL17149
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Sep 30 09:16:01 2020
Quant Method : O:\Organics\DATA\VOA6\2020\09-SEP\200929\P6091820W.M
Quant Title : PIANO VOLATILES
QLast Update : Sat Sep 19 08:40:17 2020
Response via : Initial Calibration

Sub List : PIANO - PIANO

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
71) Octane	33.11	43	50961	18.952	ug/L	97
72) trans-1,2-Dimethylcycl...	0.00		0	N.D.		
73) 1,2-Dibromoethane	0.00		0	N.D.		
75) cis-2-Octene	0.00		0	N.D.		
76) Isopropylcyclopentane	0.00		0	N.D.		
77) cis-1,2-Dimethylcycloh...	0.00		0	N.D.		
78) 2,5-Dimethylheptane	0.00		0	N.D.		
79) 3,5-Dimethylheptane	0.00		0	N.D.		
80) 3,3-Dimethylheptane	0.00		0	N.D.		
81) 1,1,4-Trimethylcyclohe...	0.00		0	N.D.		
82) 2,3-Dimethylheptane	0.00		0	N.D.		
83) 3,4-Dimethylheptane	0.00		0	N.D.		
84) 4-Methyloctane	0.00		0	N.D.		
85) 2-Methyloctane	0.00		0	N.D.		
86) Ethylbenzene	39.95	91	154887	19.546	ug/L	100
88) 2-Ethylthiophene	0.00		0	N.D.		
89) 3-Methyloctane	0.00		0	N.D.		
90) 3,3-Diethylpentane	0.00		0	N.D.		
91) p/m-Xylene	41.21	91	242555M4	40.134	ug/L	
92) 1-Nonene	0.00		0	N.D.		
93) trans-3-Nonene	0.00		0	N.D.		
94) cis-3-Nonene	0.00		0	N.D.	d	
95) Nonane	42.65	43	48832	18.582	ug/L	97
96) Styrene	0.00		0	N.D.		
98) o-Xylene	43.48	91	122512	19.337	ug/L	98
99) 2-Nonene	0.00		0	N.D.		
100) Isopropylcyclohexane	0.00		0	N.D.		
102) Isopropylbenzene	45.80	105	163293	19.779	ug/L	99
103) 3,3-Dimethyloctane	0.00		0	N.D.		
104) n-Propylbenzene	48.43	91	188528	19.418	ug/L	97
105) 2-Methylnonane	0.00		0	N.D.		
106) 3-Methylnonane	0.00		0	N.D.	d	
107) 1-Methyl-3-ethylbenzene	49.07	105	160846	19.592	ug/L	99
108) 1-Methyl-4-ethylbenzene	49.24	105	159589	20.067	ug/L	96
109) 1,3,5-Trimethylbenzene	49.85	105	131802	19.195	ug/L	99
110) 1-Decene	49.99	41	25319	15.793	ug/L	97
111) Isobutylcyclohexane	0.00		0	N.D.	d	
112) 1-Methyl-2-ethylbenzene	50.18	105	161694	19.137	ug/L	99
113) Decane	50.38	43	47137	20.835	ug/L	98
114) tert-Butylbenzene	0.00		0	N.D.	d	
115) 1,2,4-Trimethylbenzene	51.07	105	131650	18.722	ug/L	99

Quantitation Report (QT Reviewed)

Data Path : O:\Organics\DATA\VOA6\2020\09-SEP\200929\
Data File : V6012567.D
Acq On : 29 Sep 2020 6:42 pm
Operator : VOA6:RY
Sample : WG1416337-3,31,5,5
Misc : WG1416337,ICAL17149
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Sep 30 09:16:01 2020
Quant Method : O:\Organics\DATA\VOA6\2020\09-SEP\200929\P6091820W.M
Quant Title : PIANO VOLATILES
QLast Update : Sat Sep 19 08:40:17 2020
Response via : Initial Calibration

Sub List : PIANO - PIANO

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
116) Isobutylbenzene	0.00		0	N.D.	d	
117) sec-Butylbenzene	51.33	105	180697	19.721	ug/L	97
118) 1-Methyl-3-isopropylbe...	0.00		0	N.D.	d	
119) 1-Methyl-4-isopropylbe...	0.00		0	N.D.	d	
120) 1,2,3-Trimethylbenzene	0.00		0	N.D.	d	
121) 1-Methyl-2-isopropylbe...	0.00		0	N.D.	d	
122) Indan	0.00		0	N.D.	d	
123) 1,3-Diethylbenzene	0.00		0	N.D.	d	
124) 1-Methyl-3-propylbenzene	0.00		0	N.D.	d	
125) Indene	0.00		0	N.D.	d	
126) 1-Methyl-4-propylbenzene	52.92	105	204264	17.717	ug/L	100
127) n-Butylbenzene	52.92	91	160345	18.443	ug/L	100
128) 1,2-Dimethyl-4-ethylbe...	0.00		0	N.D.	d	
129) 1,2-Diethylbenzene	53.14	119	73592	18.352	ug/L	95
130) 1-Methyl-2-propylbenzene	0.00		0	N.D.	d	
131) 1,4-Dimethyl-2-ethylbe...	0.00		0	N.D.	d	
132) Undecane	53.69	57	55279	21.318	ug/L	95
133) 1,3-Dimethyl-4-ethylbe...	0.00		0	N.D.	d	
134) 1,3-Dimethyl-5-ethylbe...	53.87	119	160563	18.163	ug/L	99
135) 1,3-Dimethyl-2-ethylbe...	0.00		0	N.D.	d	
136) 1,2-Dimethyl-3-ethylbe...	0.00		0	N.D.	d	
137) 1,2,4,5-Tetramethylben...	0.00		0	N.D.	d	
138) 1,2,3,5-Tetramethylben...	0.00		0	N.D.	d	
139) Pentylbenzene	55.43	91	136386	18.845	ug/L	99
140) 1,2,3,4-Tetramethylben...	0.00		0	N.D.	d	
141) 1,3-DM-5-tert-Butylben...	0.00		0	N.D.	d	
142) Dodecane	55.91	43	44493	23.586	ug/L	96
143) 1,3,5-Triethylbenzene	0.00		0	N.D.	d	
144) Naphthalene	0.00		0	N.D.	d	
145) Benzothiophene	0.00		0	N.D.	d	
146) 1,2,4-Triethylbenzene	0.00		0	N.D.	d	
147) Hexylbenzene	0.00		0	N.D.	d	
148) MMT	0.00		0	N.D.	d	
149) Tridecane	0.00		0	N.D.	d	
150) 2-Methylnaphthalene	0.00		0	N.D.	d	
151) 1-Methylnaphthalene	0.00		0	N.D.	d	
152) Tetradecane	0.00		0	N.D.	d	
153) Pentadecane	0.00		0	N.D.	d	

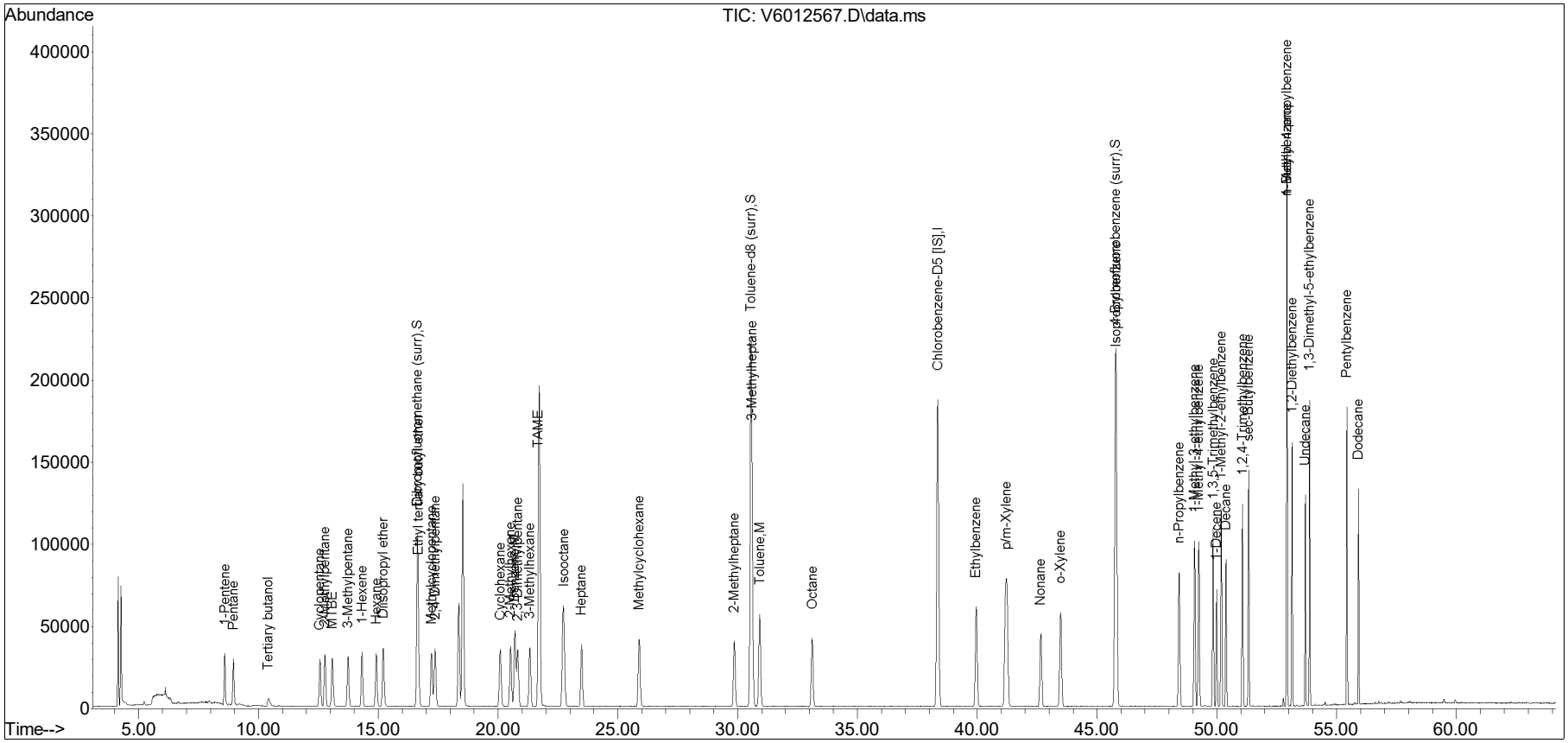
(#) = qualifier out of range (m) = manual integration (+) = signals summed

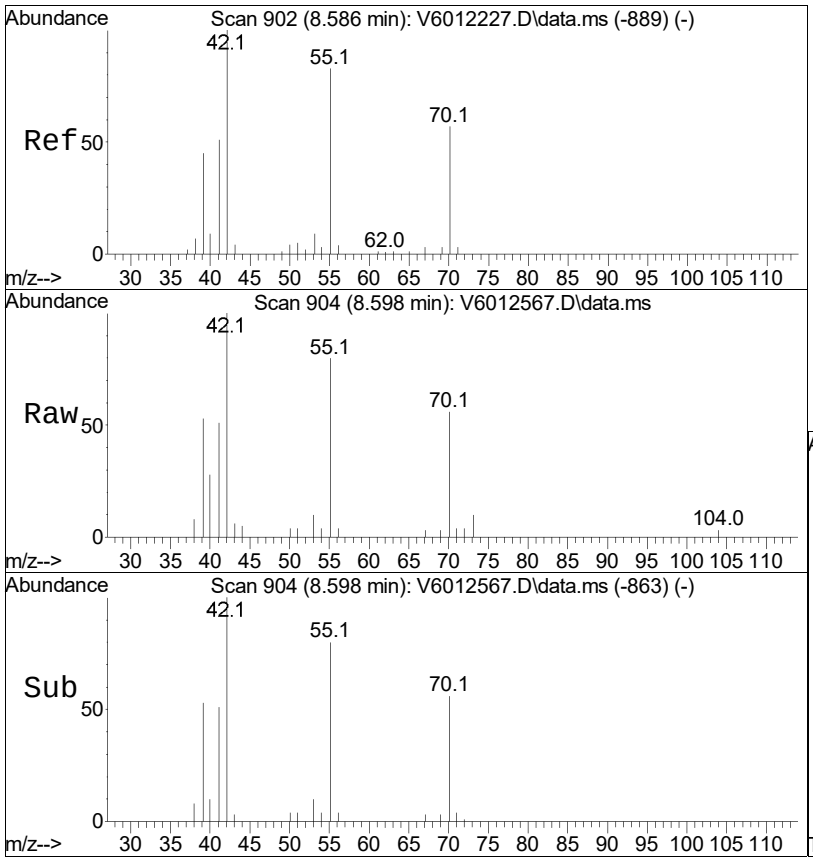
Quantitation Report (QT Reviewed)

Data Path : O:\Organics\DATA\VOA6\2020\09-SEP\200929\
Data File : V6012567.D
Acq On : 29 Sep 2020 6:42 pm
Operator : VOA6:RY
Sample : WG1416337-3,31,5,5
Misc : WG1416337,ICAL17149
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Sep 30 09:16:01 2020
Quant Method : O:\Organics\DATA\VOA6\2020\09-SEP\200929\P6091820W.M
Quant Title : PIANO VOLATILES
QLast Update : Sat Sep 19 08:40:17 2020
Response via : Initial Calibration

Sub List : PIANO - PIANO

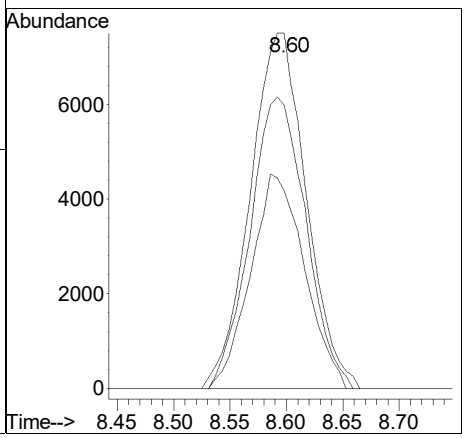


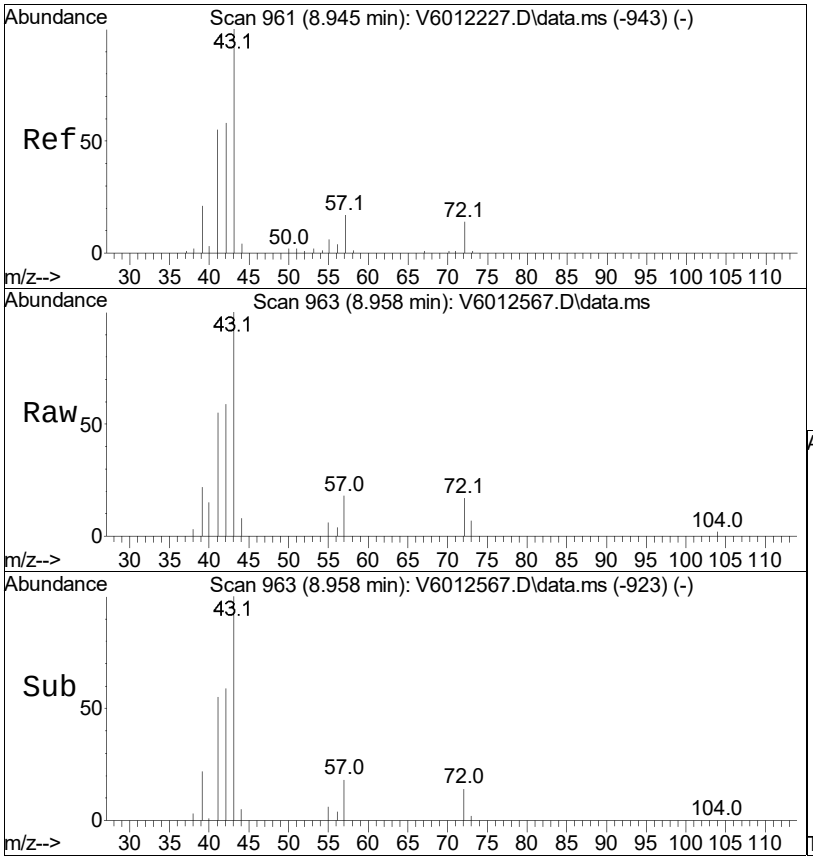


#4
1-Pentene
Concen: 15.16 ug/L
RT: 8.60 min Scan# 904
Delta R.T. 0.000 min
Lab File: V6012567.D
Acq: 29 Sep 2020 6:42 pm

Tgt Ion: 42 Resp: 25999

Ion	Ratio	Lower	Upper
42	100		
55	79.7	63.5	103.5
70	55.6	37.3	77.3

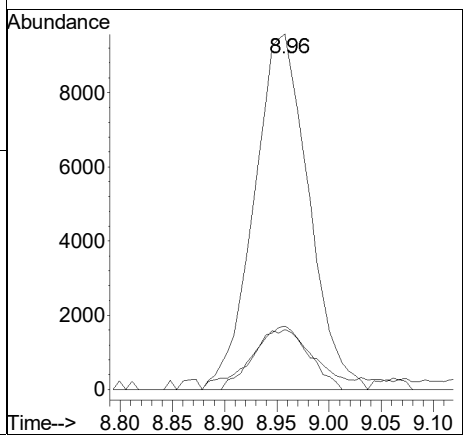


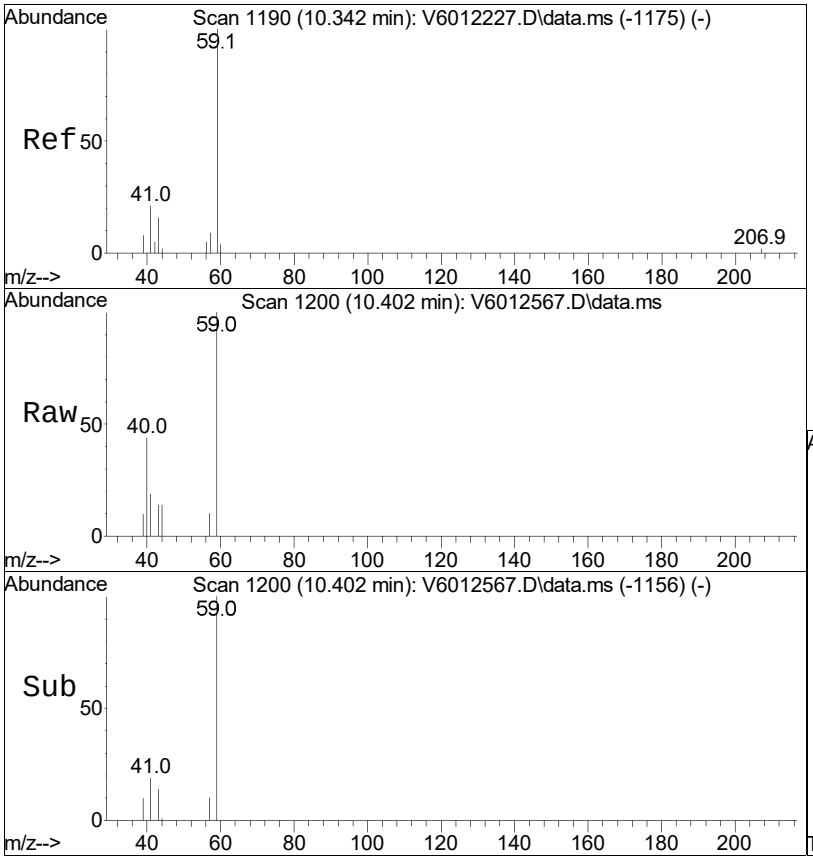


#6
Pentane
Concen: 12.85 ug/L
RT: 8.96 min Scan# 963
Delta R.T. -0.006 min
Lab File: V6012567.D
Acq: 29 Sep 2020 6:42 pm

Tgt Ion: 43 Resp: 34771

Ion	Ratio	Lower	Upper
43	100		
57	17.9	0.0	37.3
72	16.8	0.0	34.4

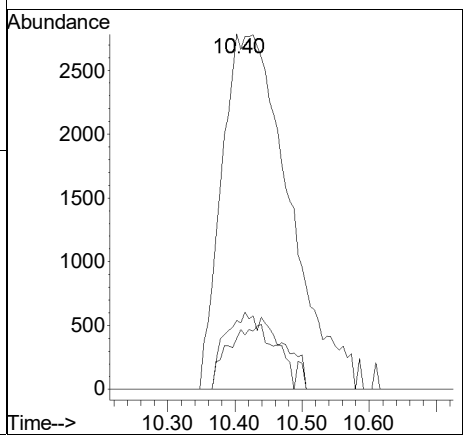


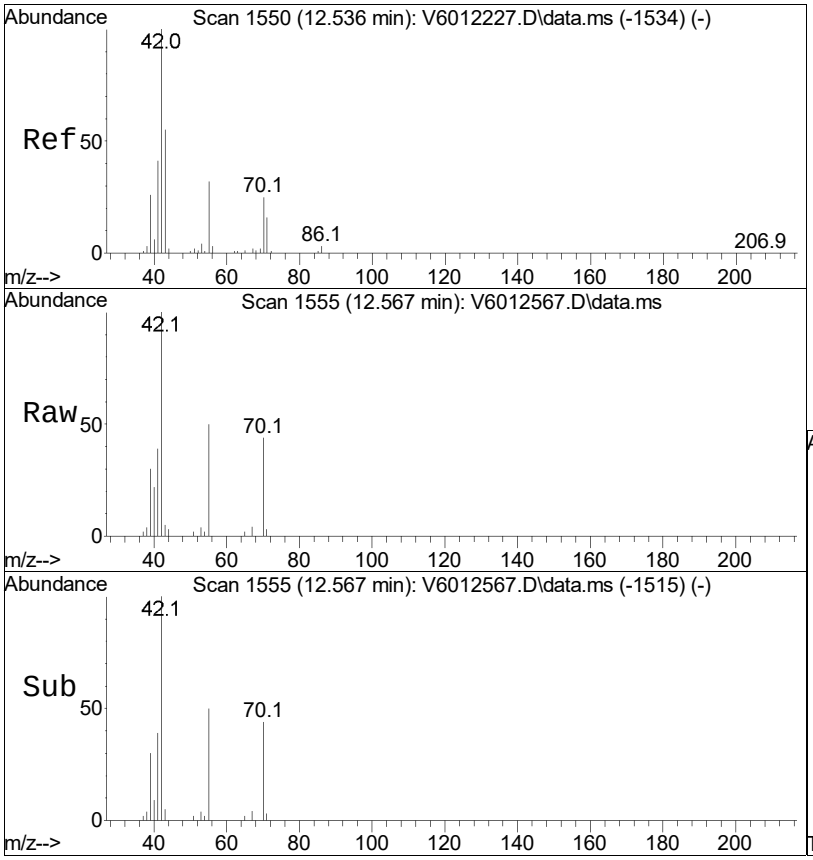


#10
Tertiary butanol
Concen: 81.09 ug/L
RT: 10.40 min Scan# 1200
Delta R.T. 0.018 min
Lab File: V6012567.D
Acq: 29 Sep 2020 6:42 pm

Tgt Ion: 59 Resp: 19379

Ion	Ratio	Lower	Upper
59	100		
41	19.4	0.6	40.6
43	14.3	0.0	35.5

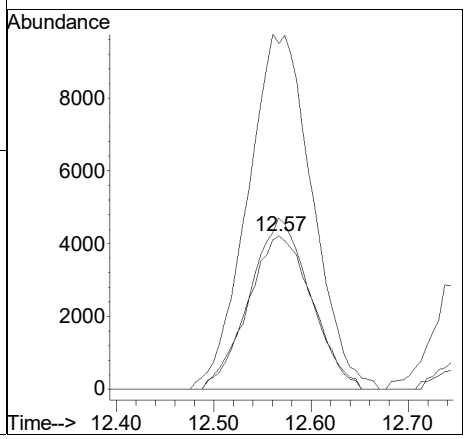


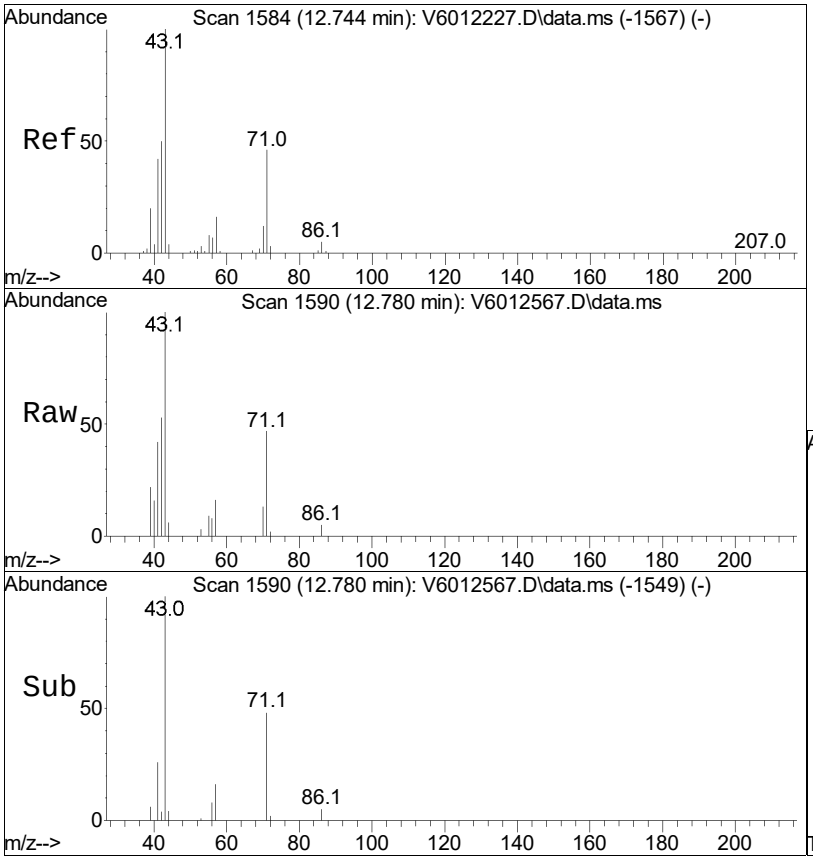


#13
Cyclopentane
Concen: 16.89 ug/L
RT: 12.57 min Scan# 1555
Delta R.T. -0.006 min
Lab File: V6012567.D
Acq: 29 Sep 2020 6:42 pm

Tgt Ion: 70 Resp: 19283

Ion	Ratio	Lower	Upper
70	100		
42	225.4	391.7	431.7#
55	111.9	110.4	150.4

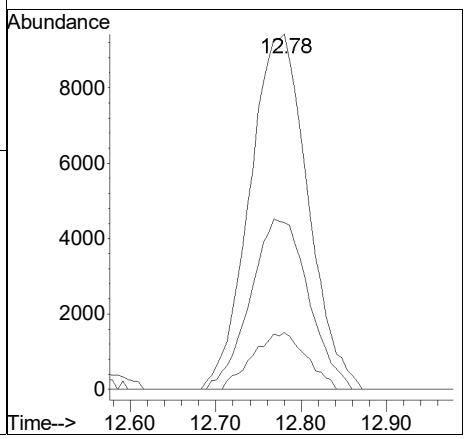


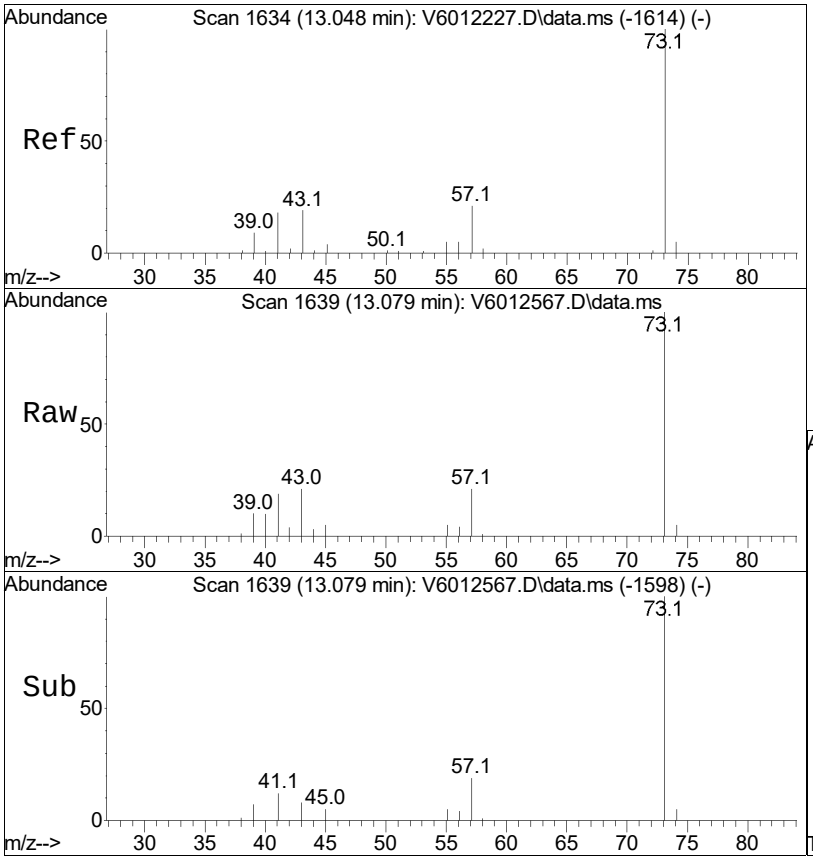


#15
2-Methylpentane
Concen: 15.22 ug/L
RT: 12.78 min Scan# 1590
Delta R.T. 0.000 min
Lab File: V6012567.D
Acq: 29 Sep 2020 6:42 pm

Tgt Ion: 43 Resp: 44599

Ion	Ratio	Lower	Upper
43	100		
71	46.9	26.3	66.3
57	16.0	0.0	35.9

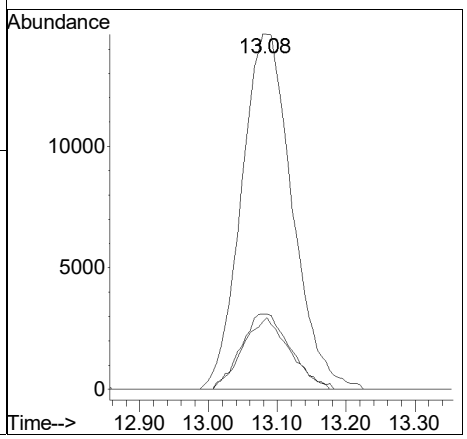


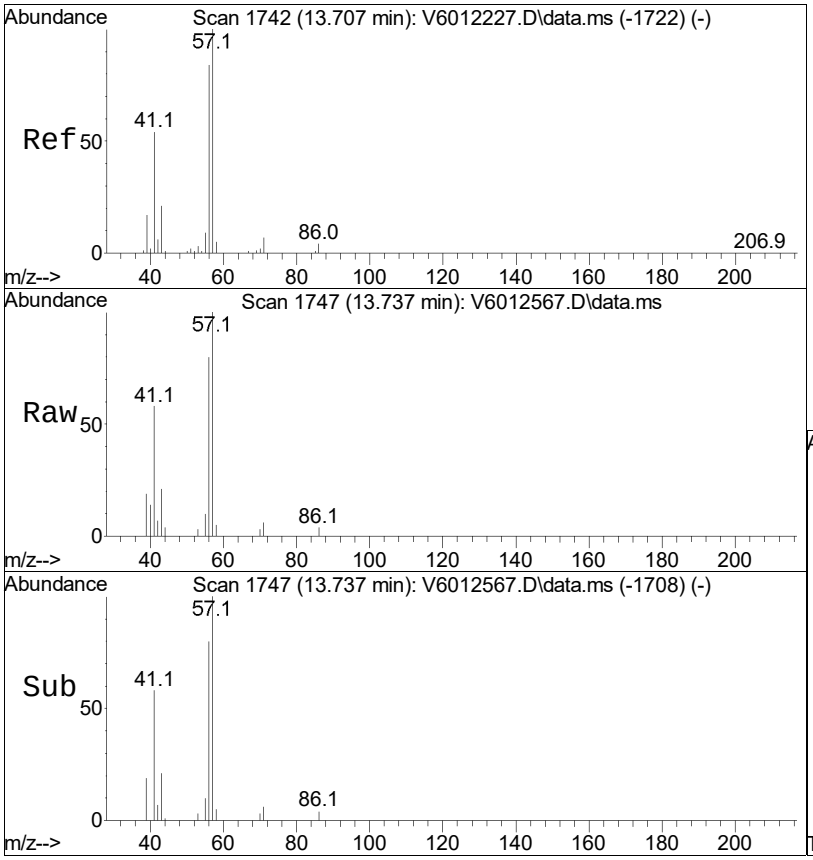


#16
MTBE
Concen: 20.44 ug/L
RT: 13.08 min Scan# 1639
Delta R.T. 0.000 min
Lab File: V6012567.D
Acq: 29 Sep 2020 6:42 pm

Tgt Ion: 73 Resp: 74898

Ion	Ratio	Lower	Upper
73	100		
57	21.3	1.0	41.0
41	19.1	0.0	38.4

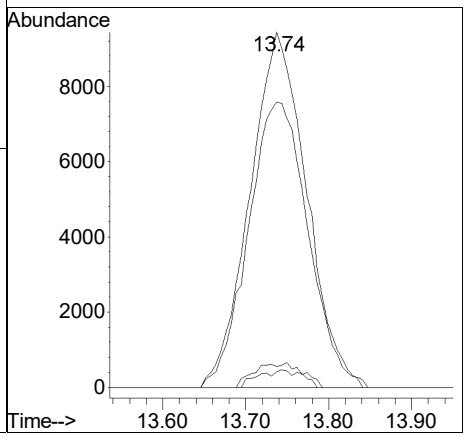


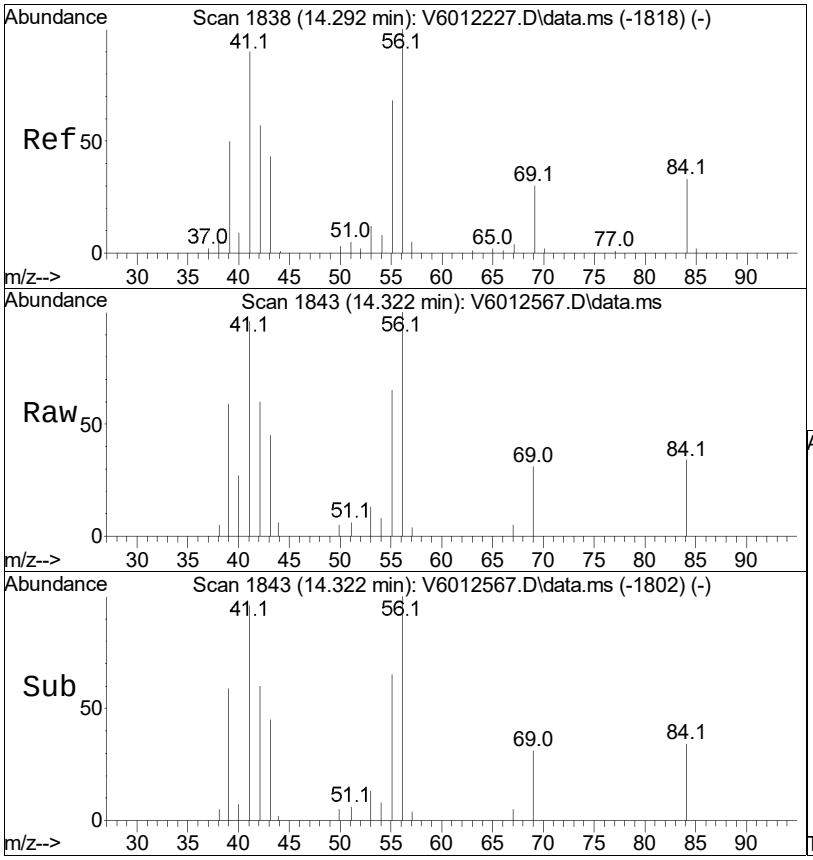


#17
3-Methylpentane
Concen: 16.83 ug/L
RT: 13.74 min Scan# 1747
Delta R.T. -0.012 min
Lab File: V6012567.D
Acq: 29 Sep 2020 6:42 pm

Tgt Ion: 57 Resp: 44601

Ion	Ratio	Lower	Upper
57	100		
56	80.3	63.7	103.7
71	5.9	0.0	26.6
86	4.4	0.0	23.8

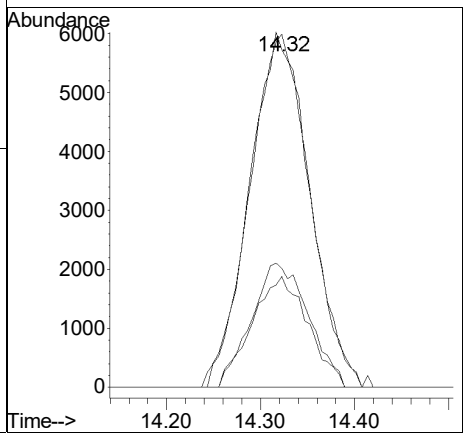


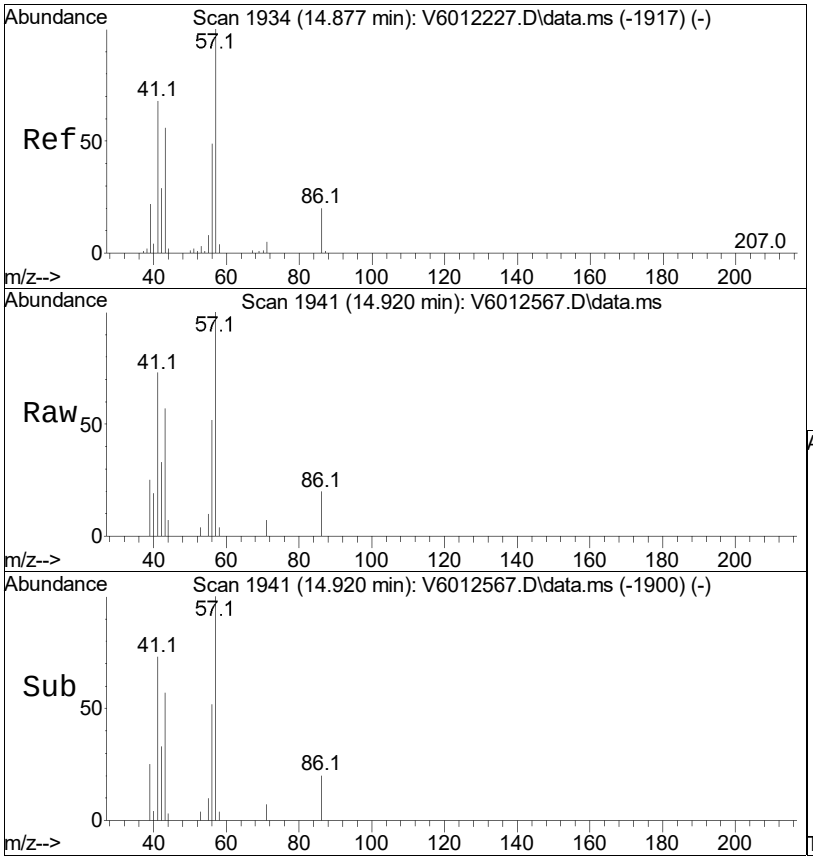


#18
1-Hexene
Concen: 17.78 ug/L
RT: 14.32 min Scan# 1843
Delta R.T. 0.000 min
Lab File: V6012567.D
Acq: 29 Sep 2020 6:42 pm

Tgt Ion: 56 Resp: 26812

Ion	Ratio	Lower	Upper
56	100		
41	95.7	70.0	110.0
84	33.7	13.4	53.4
69	31.4	10.0	50.0

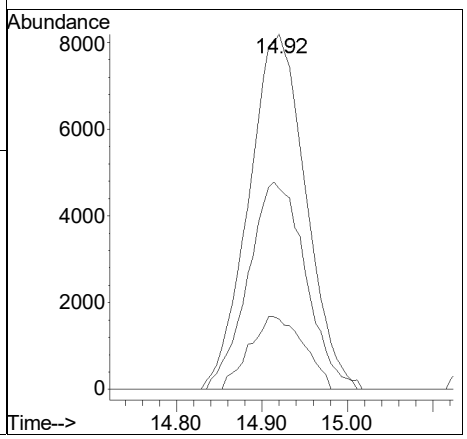


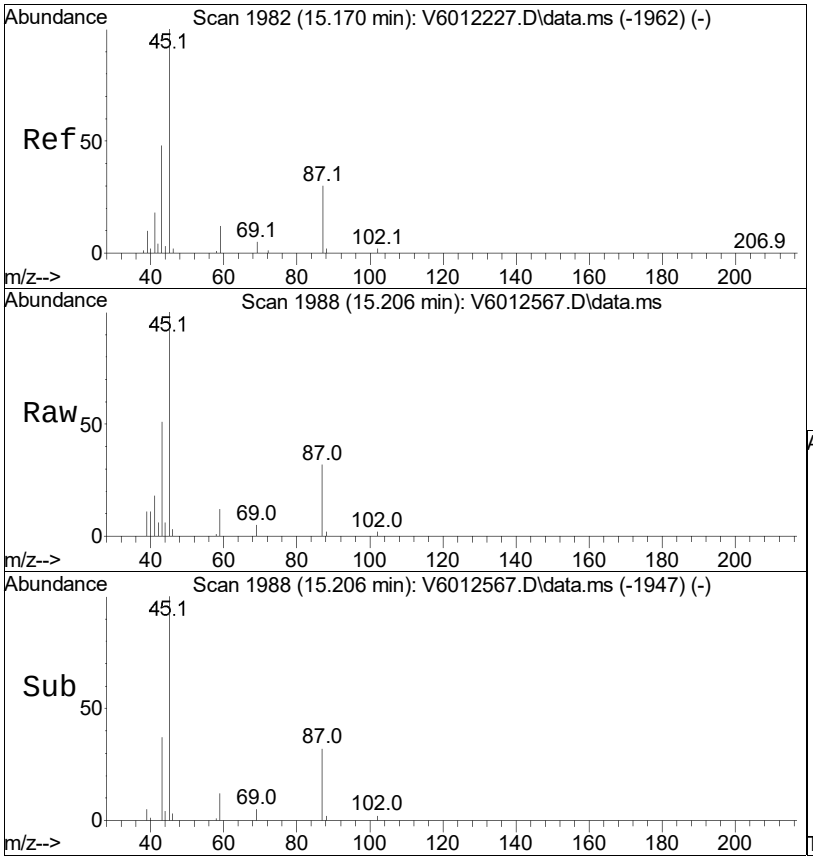


#19
Hexane
Concen: 17.59 ug/L
RT: 14.92 min Scan# 1941
Delta R.T. 0.000 min
Lab File: V6012567.D
Acq: 29 Sep 2020 6:42 pm

Tgt Ion: 57 Resp: 38043

Ion	Ratio	Lower	Upper
57	100		
43	56.6	36.0	76.0
86	19.8	0.0	39.8

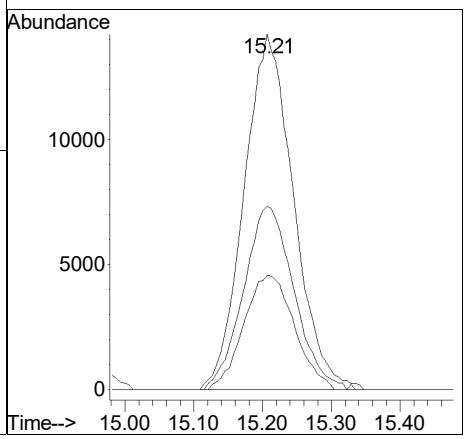


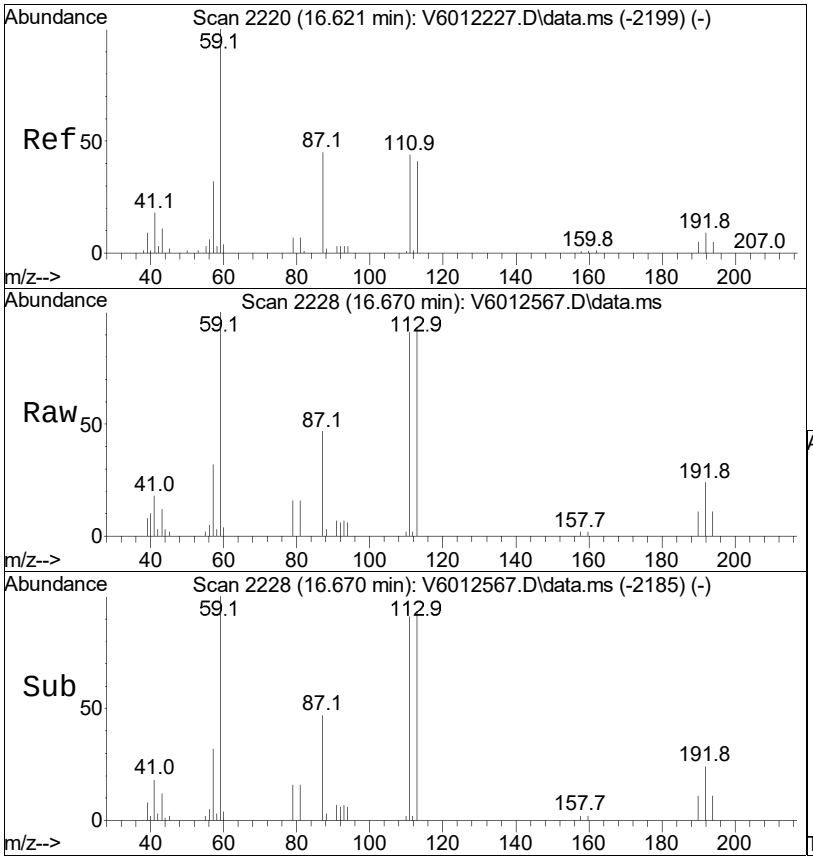


#20
Diisopropyl ether
Concen: 19.30 ug/L
RT: 15.21 min Scan# 1988
Delta R.T. 0.000 min
Lab File: V6012567.D
Acq: 29 Sep 2020 6:42 pm

Tgt Ion: 45 Resp: 70986

Ion	Ratio	Lower	Upper
45	100		
87	32.0	10.3	50.3
43	51.5	28.8	68.8

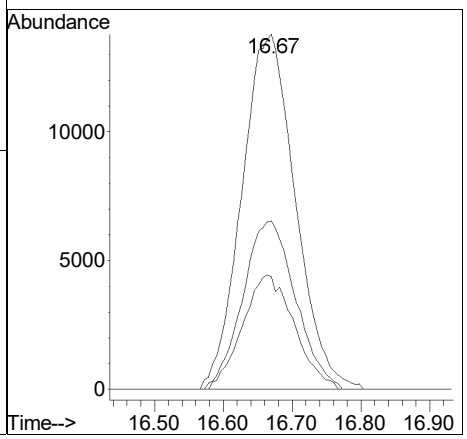


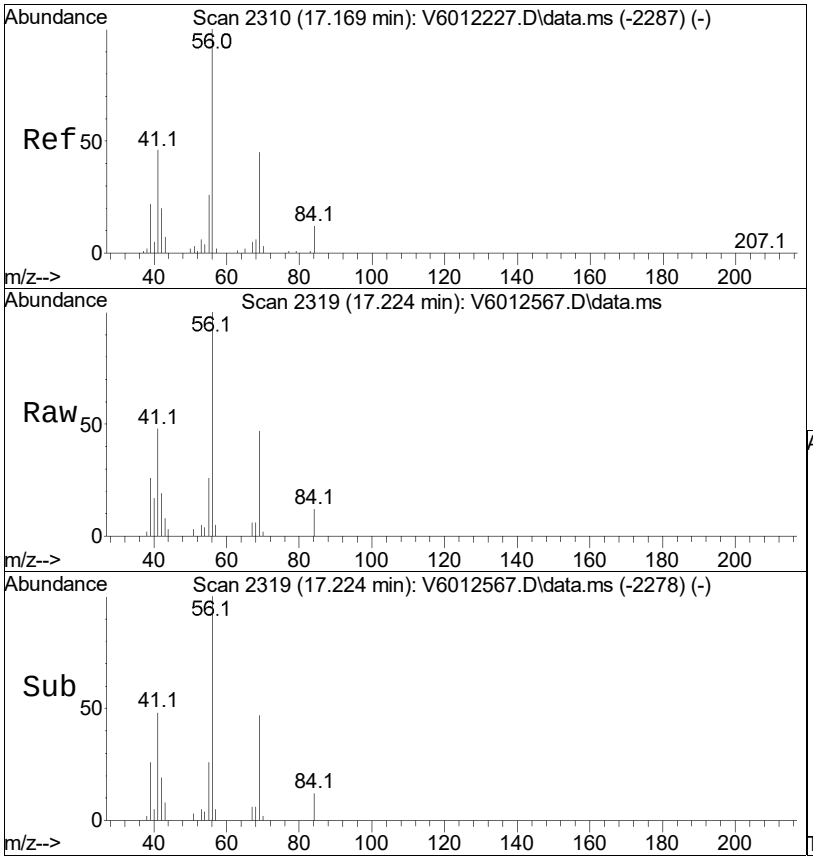


#25
Ethyl tertiary butyl ether
Concen: 19.52 ug/L
RT: 16.67 min Scan# 2228
Delta R.T. 0.012 min
Lab File: V6012567.D
Acq: 29 Sep 2020 6:42 pm

Tgt Ion: 59 Resp: 74633

Ion	Ratio	Lower	Upper
59	100		
87	47.4	24.8	64.8
57	31.8	12.4	52.4

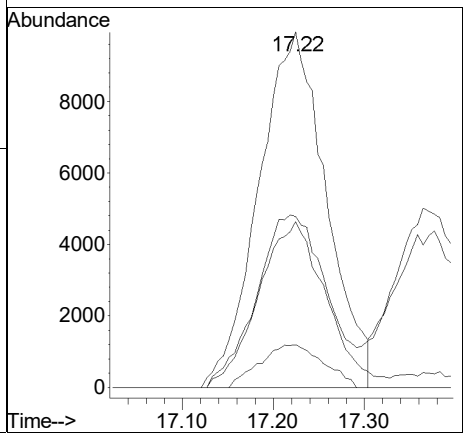


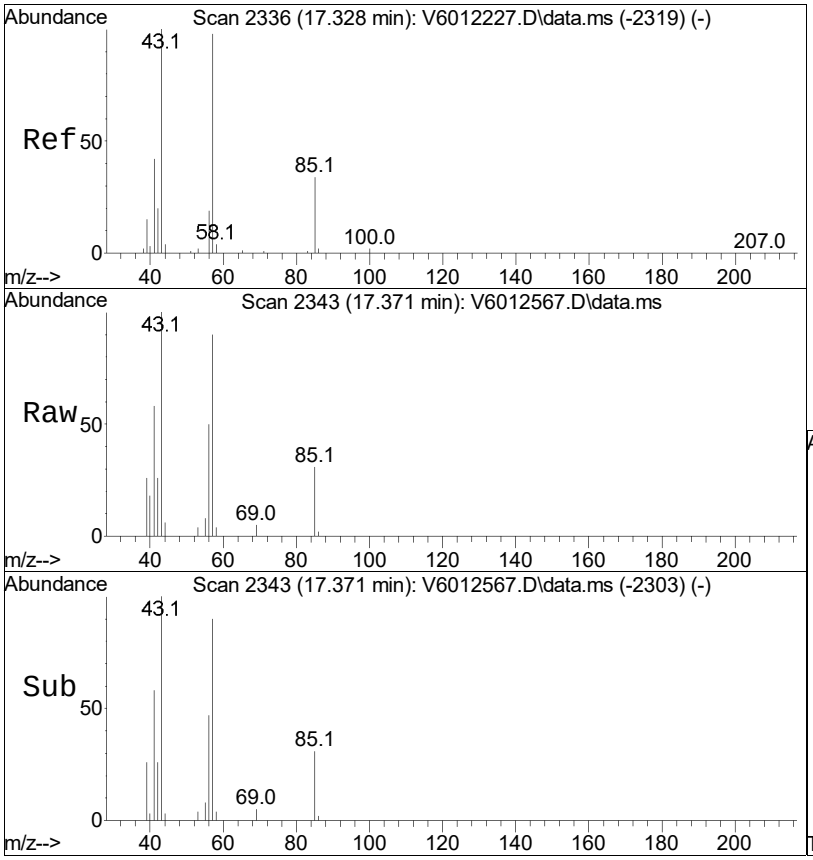


#27
Methylcyclopentane
Concen: 18.57 ug/L
RT: 17.22 min Scan# 2319
Delta R.T. 0.000 min
Lab File: V6012567.D
Acq: 29 Sep 2020 6:42 pm

Tgt Ion: 56 Resp: 51222

Ion	Ratio	Lower	Upper
56	100		
69	46.7	25.0	65.0
41	48.1	26.3	66.3
84	12.0	0.0	31.8

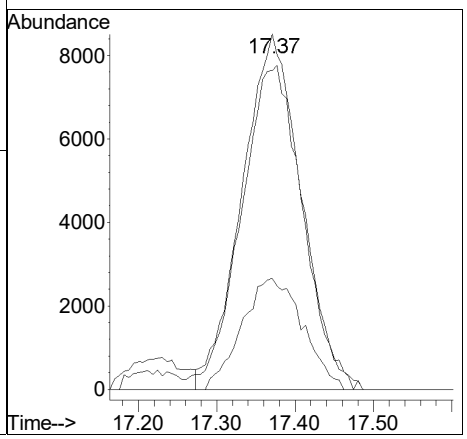


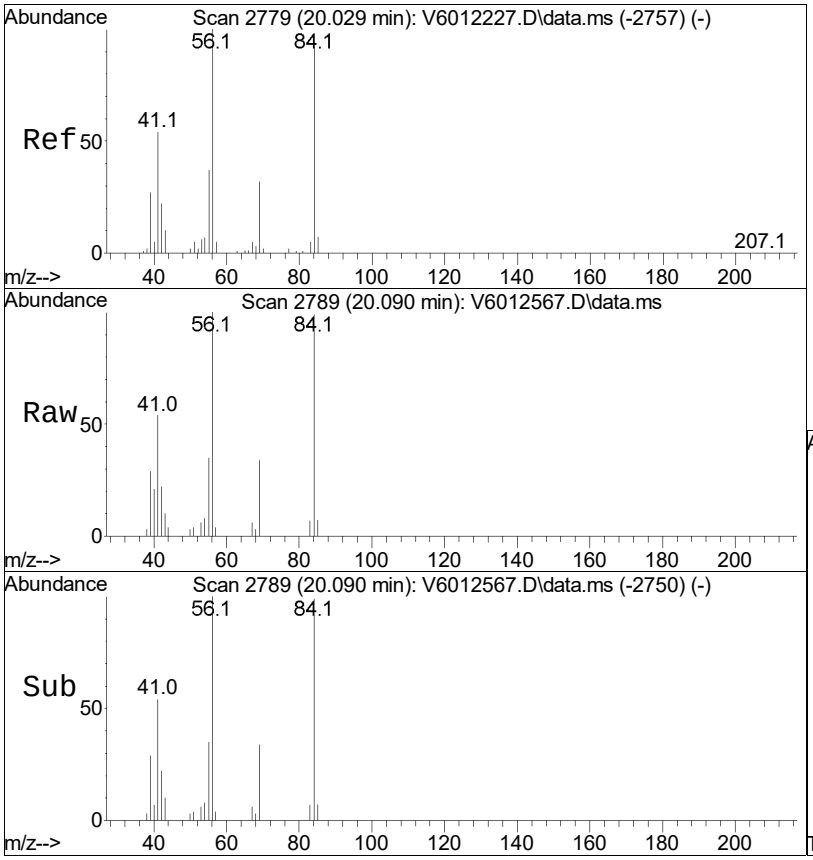


#28
2,4-Dimethylpentane
Concen: 16.79 ug/L
RT: 17.37 min Scan# 2343
Delta R.T. -0.006 min
Lab File: V6012567.D
Acq: 29 Sep 2020 6:42 pm

Tgt Ion: 43 Resp: 44733

Ion	Ratio	Lower	Upper
43	100		
57	89.7	77.1	117.1
85	31.3	12.0	52.0

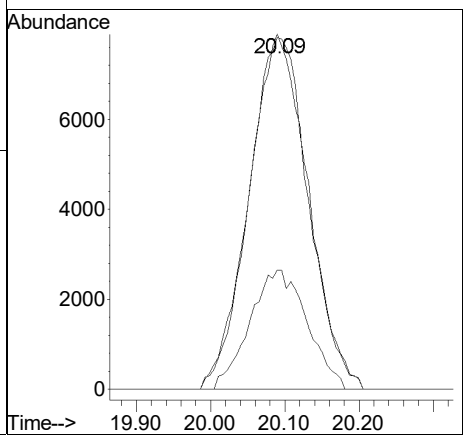


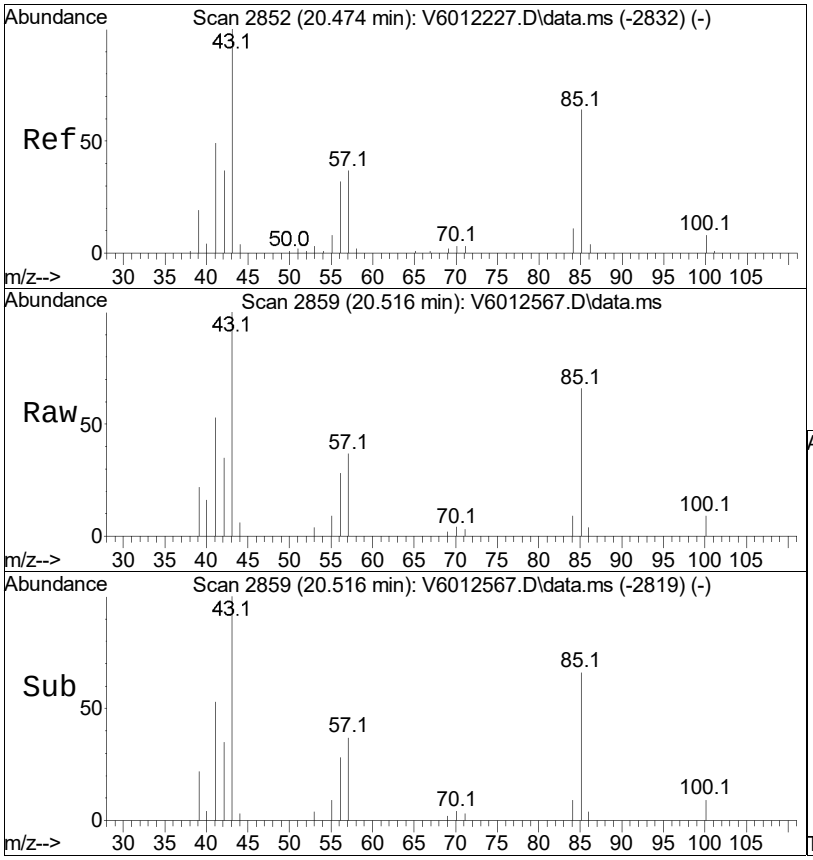


#32
Cyclohexane
Concen: 18.84 ug/L
RT: 20.09 min Scan# 2789
Delta R.T. -0.012 min
Lab File: V6012567.D
Acq: 29 Sep 2020 6:42 pm

Tgt Ion: 56 Resp: 43299

Ion	Ratio	Lower	Upper
56	100		
84	99.0	77.5	117.5
69	33.6	12.1	52.1

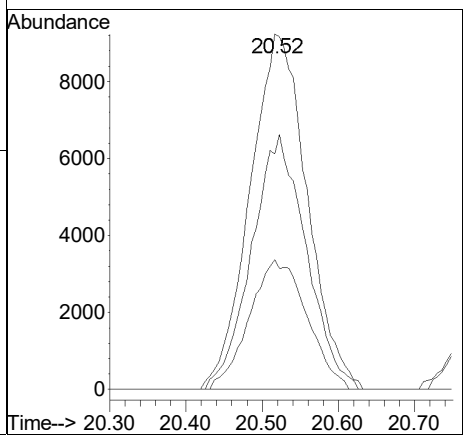


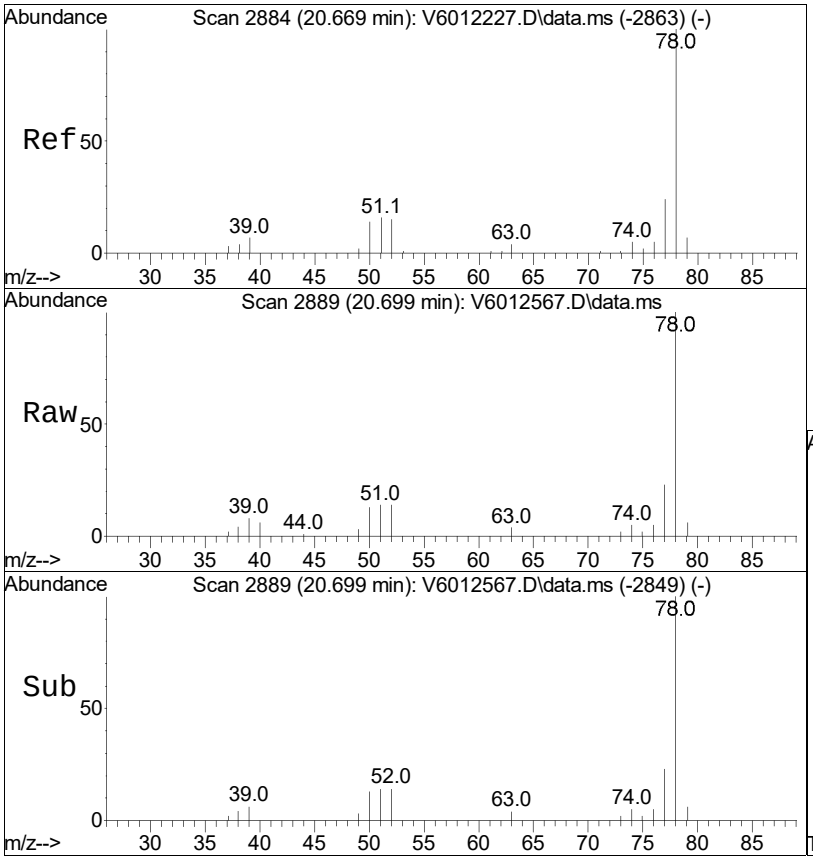


#33
2-Methylhexane
Concen: 17.29 ug/L
RT: 20.52 min Scan# 2859
Delta R.T. -0.006 min
Lab File: V6012567.D
Acq: 29 Sep 2020 6:42 pm

Tgt Ion: 43 Resp: 48148

Ion	Ratio	Lower	Upper
43	100		
85	66.3	43.9	83.9
57	36.5	16.6	56.6

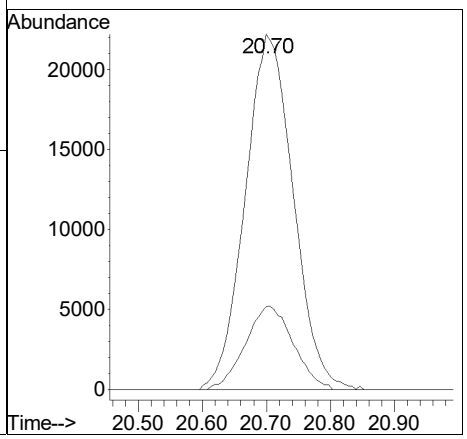


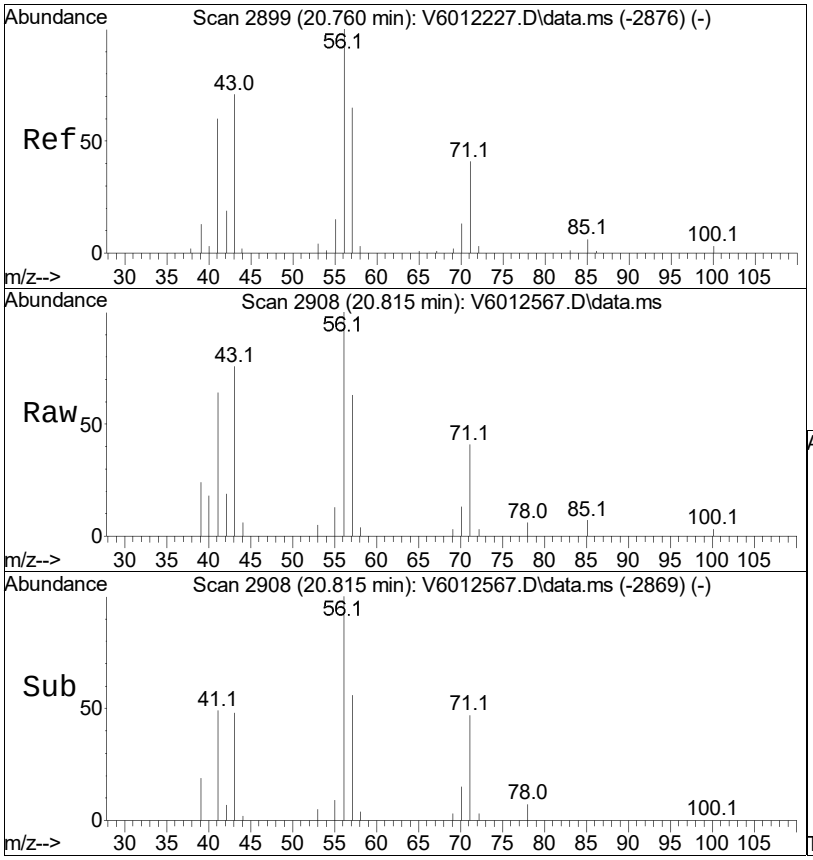


#34
Benzene
Concen: 19.99 ug/L
RT: 20.70 min Scan# 2889
Delta R.T. -0.006 min
Lab File: V6012567.D
Acq: 29 Sep 2020 6:42 pm

Tgt Ion: 78 Resp: 115664

Ion	Ratio	Lower	Upper
78	100		
77	23.3	3.7	43.7

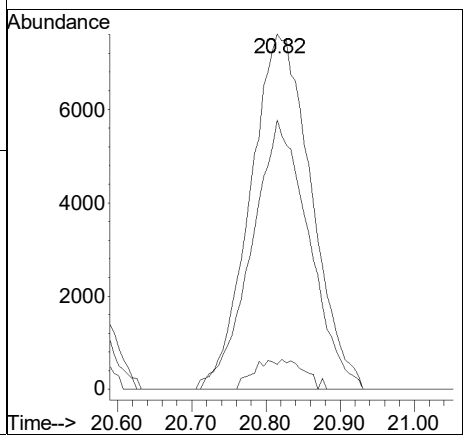


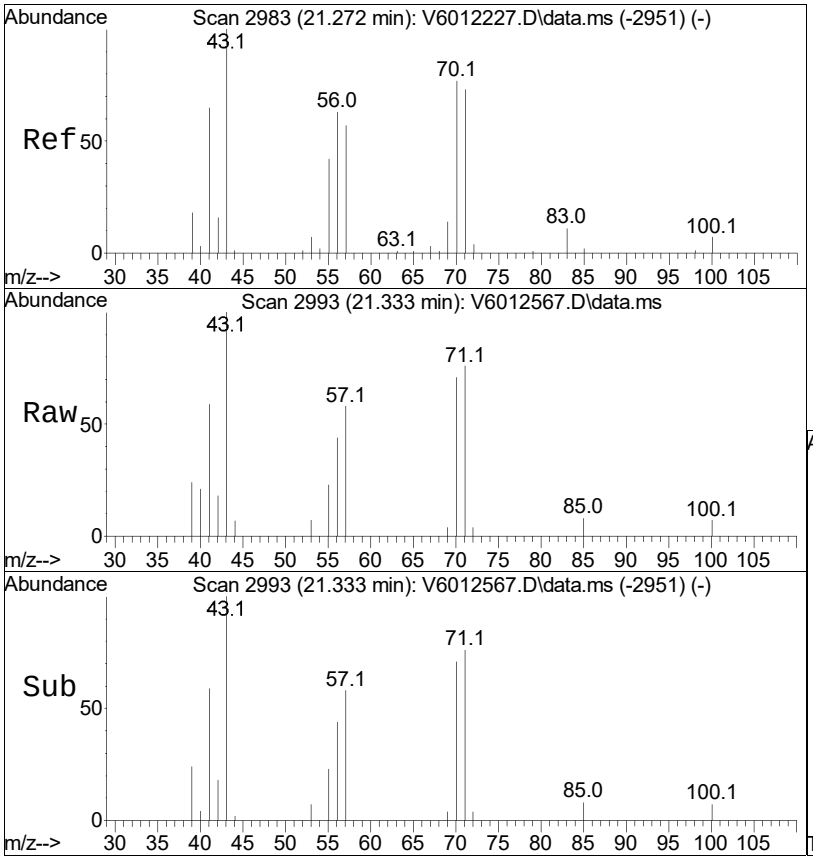


#35
2,3-Dimethylpentane
Concen: 18.58 ug/L
RT: 20.82 min Scan# 2908
Delta R.T. -0.012 min
Lab File: V6012567.D
Acq: 29 Sep 2020 6:42 pm

Tgt Ion: 56 Resp: 43503

Ion	Ratio	Lower	Upper
56	100		
43	75.9	52.1	92.1
85	7.0	0.0	27.1

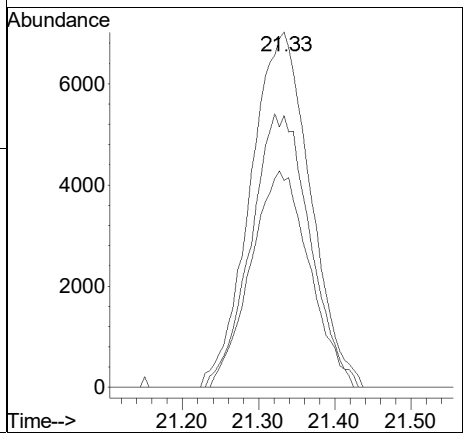


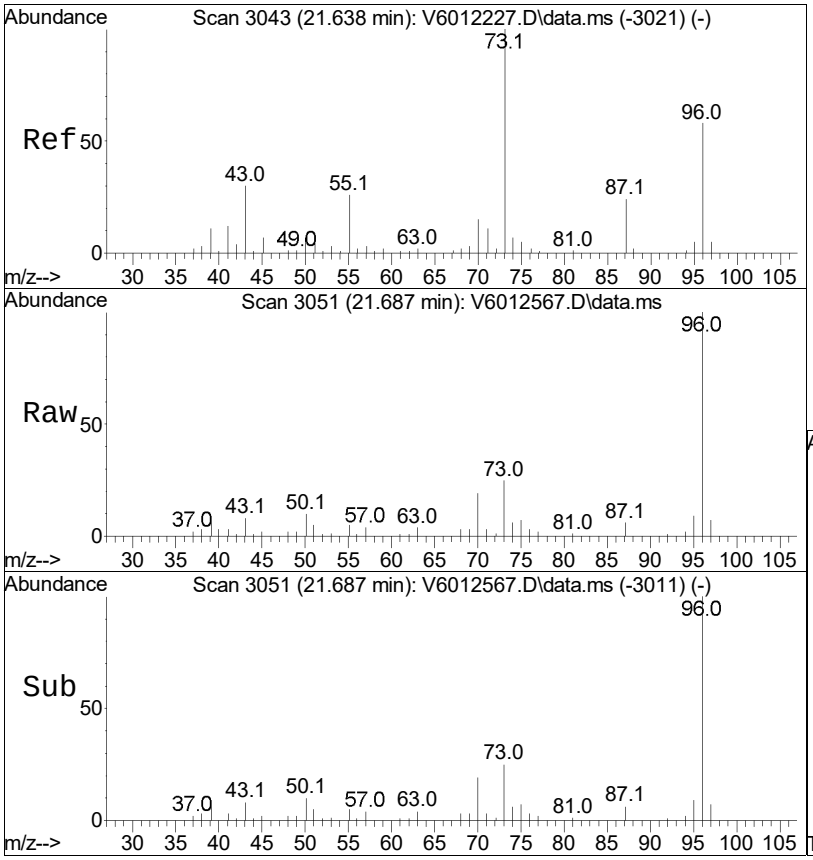


#38
3-Methylhexane
Concen: 15.48 ug/L
RT: 21.33 min Scan# 2993
Delta R.T. 0.006 min
Lab File: V6012567.D
Acq: 29 Sep 2020 6:42 pm

Tgt Ion: 43 Resp: 38466

Ion	Ratio	Lower	Upper
43	100		
57	58.2	46.6	86.6
71	76.5	53.2	93.2

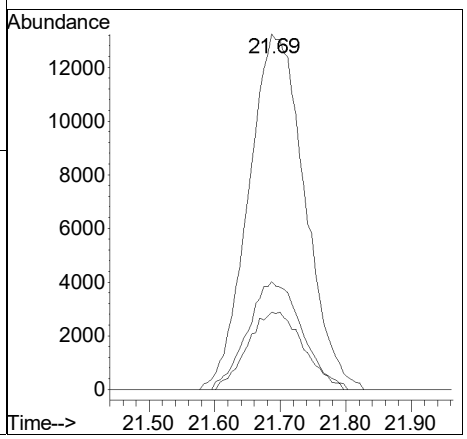


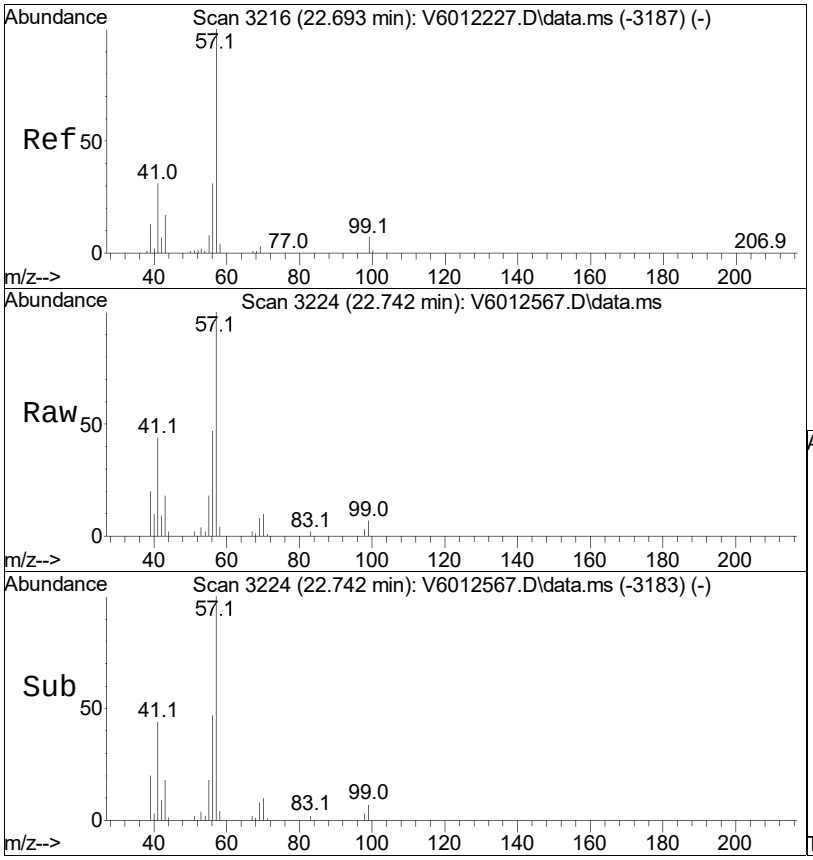


#39
TAME
Concen: 17.75 ug/L
RT: 21.69 min Scan# 3051
Delta R.T. -0.006 min
Lab File: V6012567.D
Acq: 29 Sep 2020 6:42 pm

Tgt Ion: 73 Resp: 78735

Ion	Ratio	Lower	Upper
73	100		
43	30.4	10.7	50.7
55	21.8	6.2	46.2

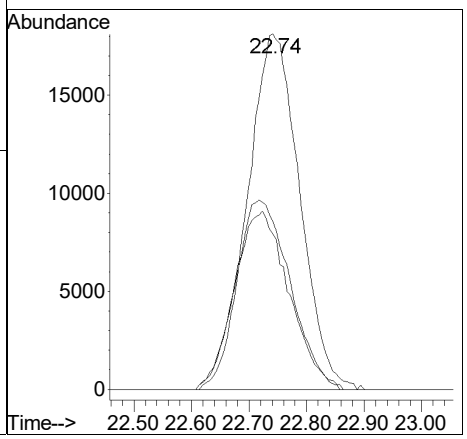


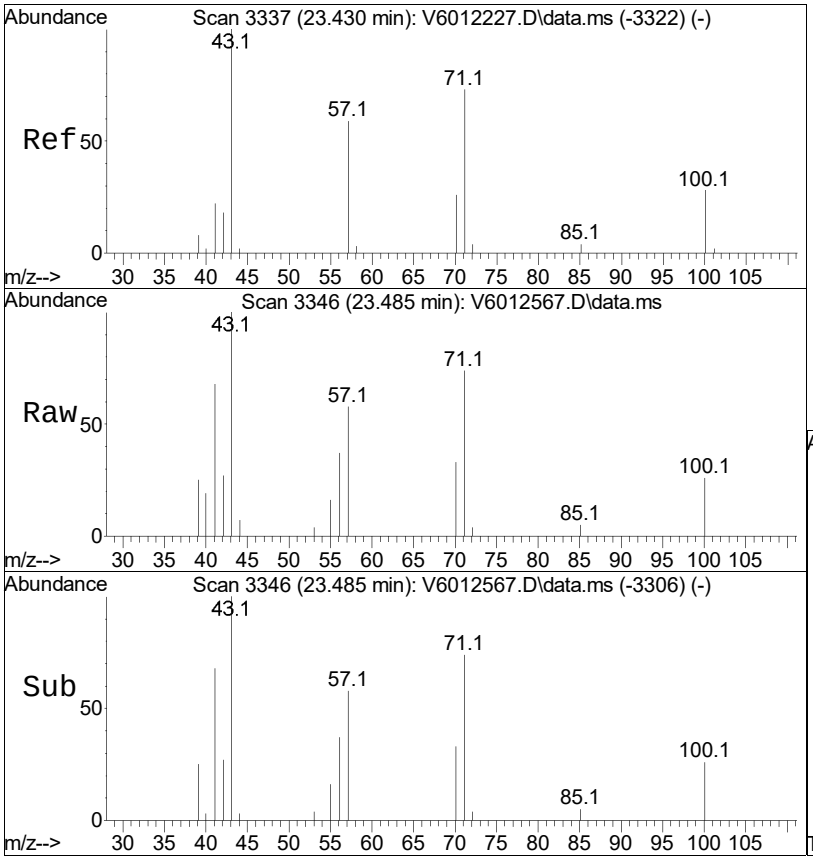


#44
Isooctane
Concen: 19.09 ug/L
RT: 22.74 min Scan# 3224
Delta R.T. 0.000 min
Lab File: V6012567.D
Acq: 29 Sep 2020 6:42 pm

Tgt Ion: 57 Resp: 113740

Ion	Ratio	Lower	Upper
57	100		
41	43.7	19.7	59.7
56	47.3	29.1	69.1

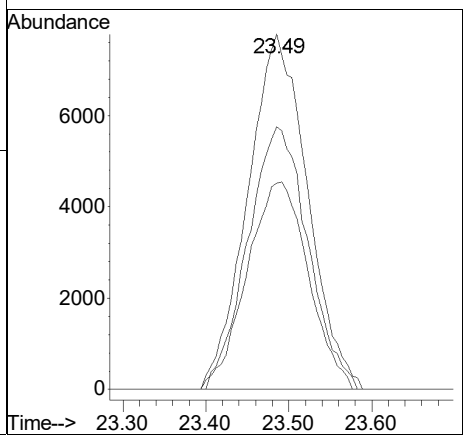


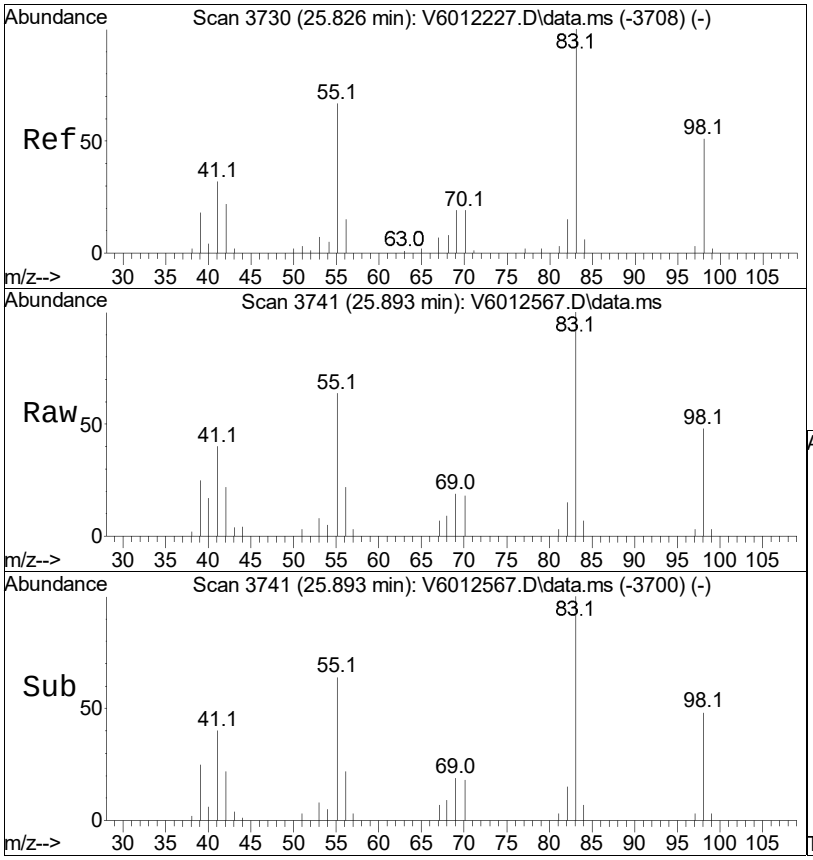


#46
Heptane
Concen: 16.86 ug/L
RT: 23.49 min Scan# 3346
Delta R.T. -0.006 min
Lab File: V6012567.D
Acq: 29 Sep 2020 6:42 pm

Tgt Ion: 43 Resp: 39048

Ion	Ratio	Lower	Upper
43	100		
57	58.0	41.1	81.1
71	73.9	50.3	90.3

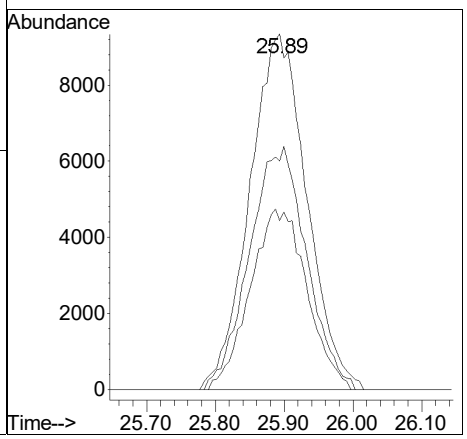


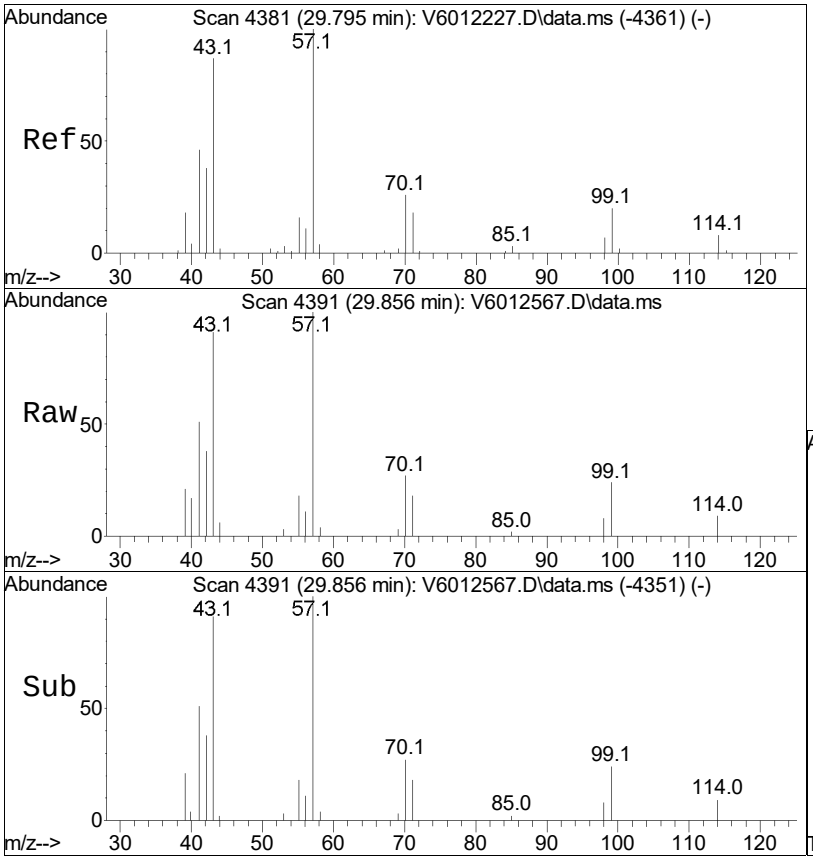


#51
Methylcyclohexane
Concen: 20.08 ug/L
RT: 25.89 min Scan# 3741
Delta R.T. 0.000 min
Lab File: V6012567.D
Acq: 29 Sep 2020 6:42 pm

Tgt Ion: 83 Resp: 53922

Ion	Ratio	Lower	Upper
83	100		
55	64.2	48.9	88.9
98	47.5	30.6	70.6

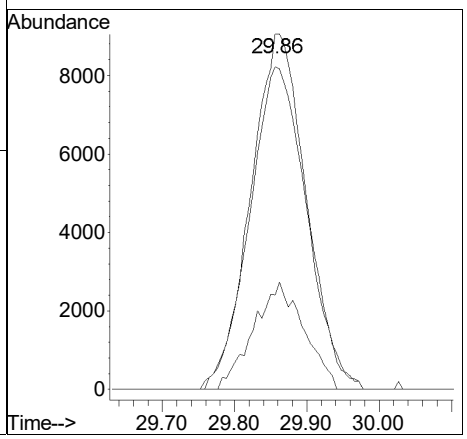


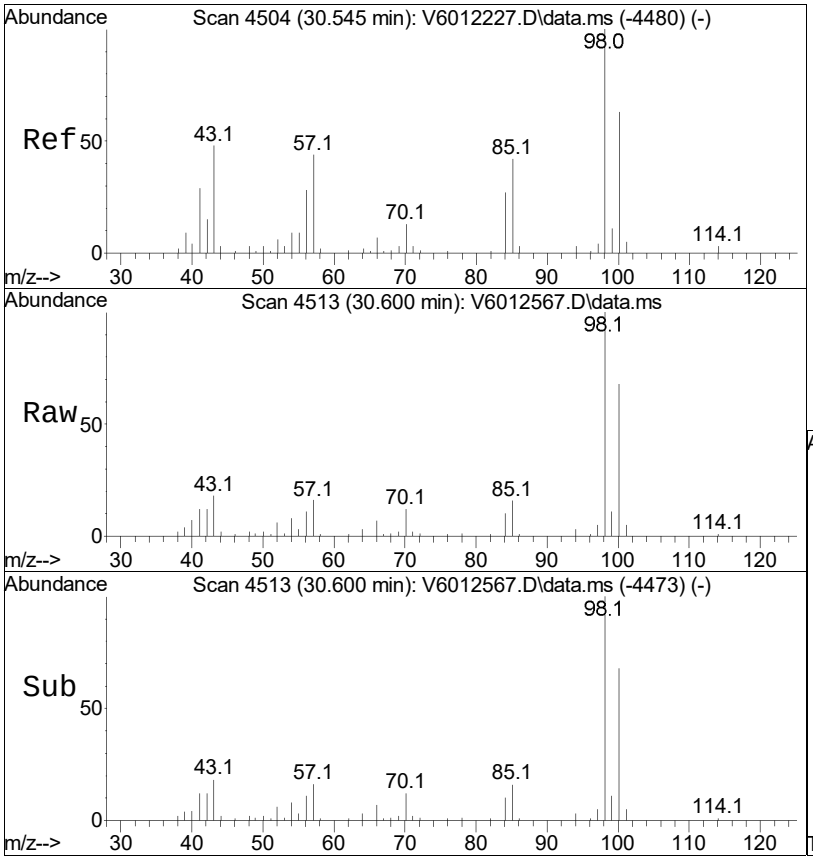


#60
2-Methylheptane
Concen: 18.07 ug/L
RT: 29.86 min Scan# 4391
Delta R.T. -0.006 min
Lab File: V6012567.D
Acq: 29 Sep 2020 6:42 pm

Tgt Ion: 57 Resp: 48493

Ion	Ratio	Lower	Upper
57	100		
43	90.8	66.6	106.6
70	26.6	5.8	45.8

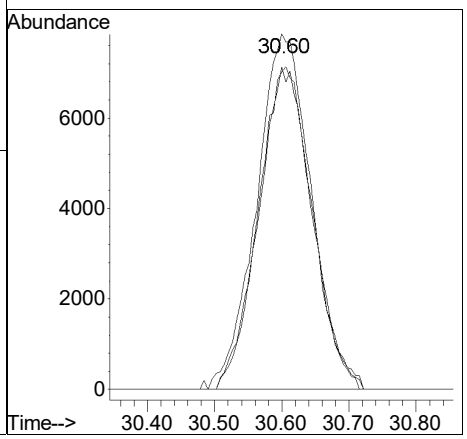


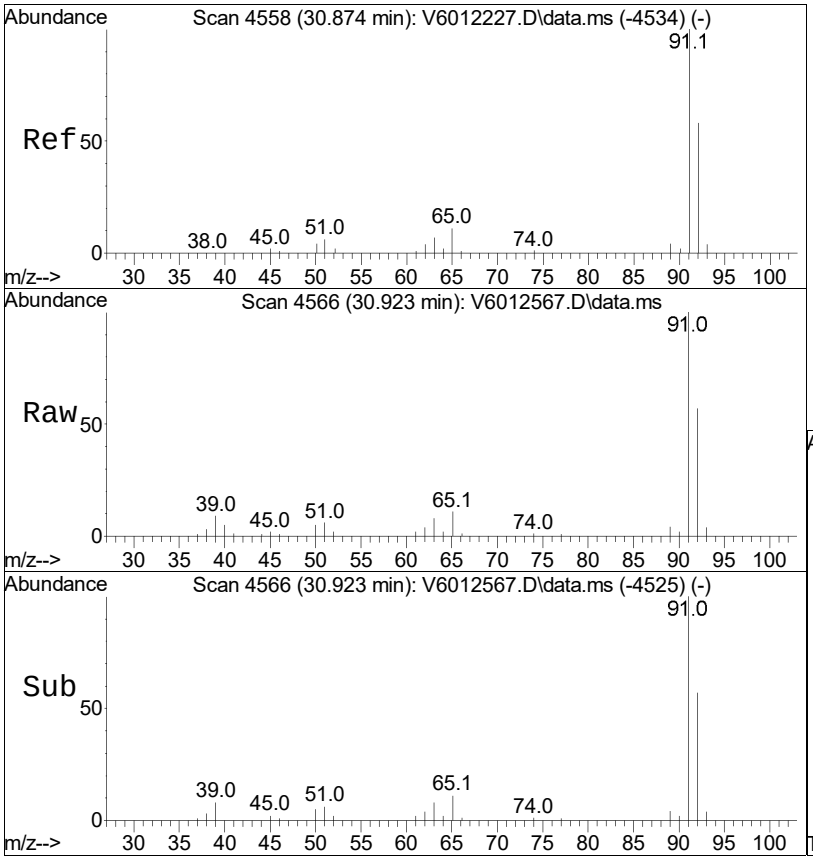


#63
3-Methylheptane
Concen: 16.98 ug/L
RT: 30.60 min Scan# 4513
Delta R.T. -0.006 min
Lab File: V6012567.D
Acq: 29 Sep 2020 6:42 pm

Tgt Ion: 43 Resp: 44741

Ion	Ratio	Lower	Upper
43	100		
57	89.3	72.5	112.5
85	90.7	68.3	108.3

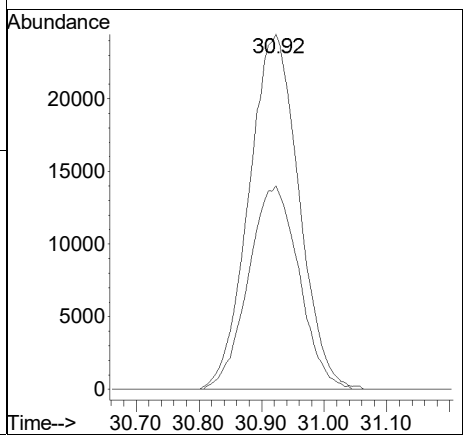


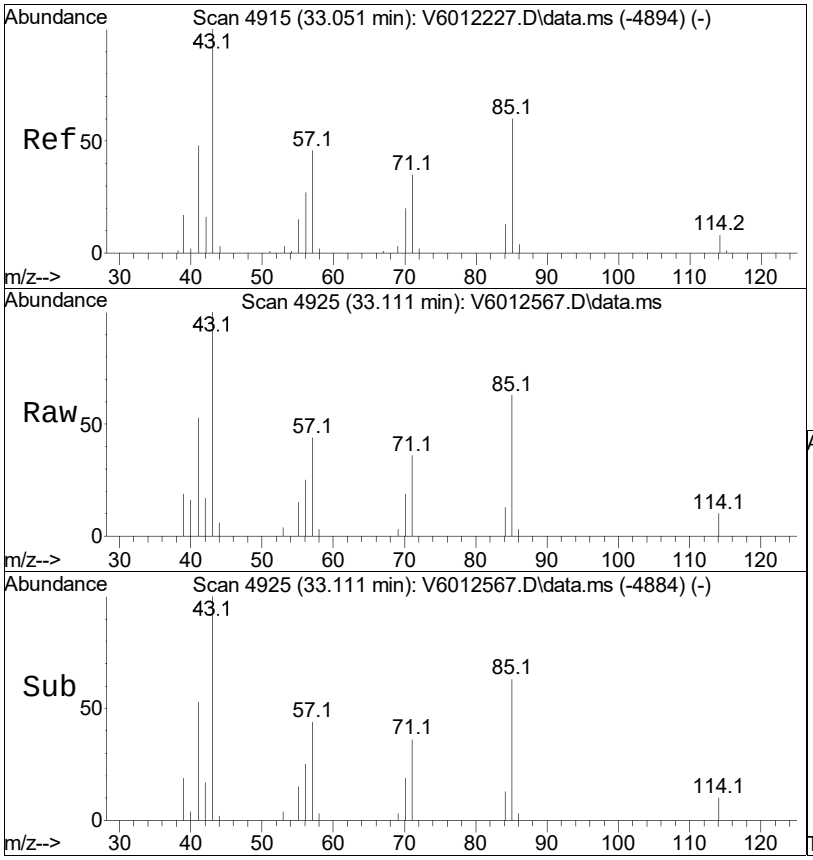


#66
Toluene
Concen: 19.38 ug/L
RT: 30.92 min Scan# 4566
Delta R.T. 0.000 min
Lab File: V6012567.D
Acq: 29 Sep 2020 6:42 pm

Tgt Ion: 91 Resp: 135851

Ion	Ratio	Lower	Upper
91	100		
92	57.3	38.2	78.2

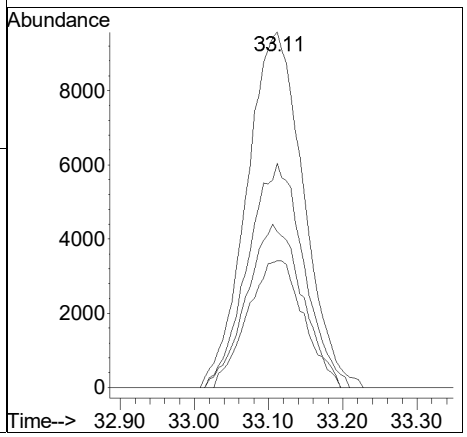


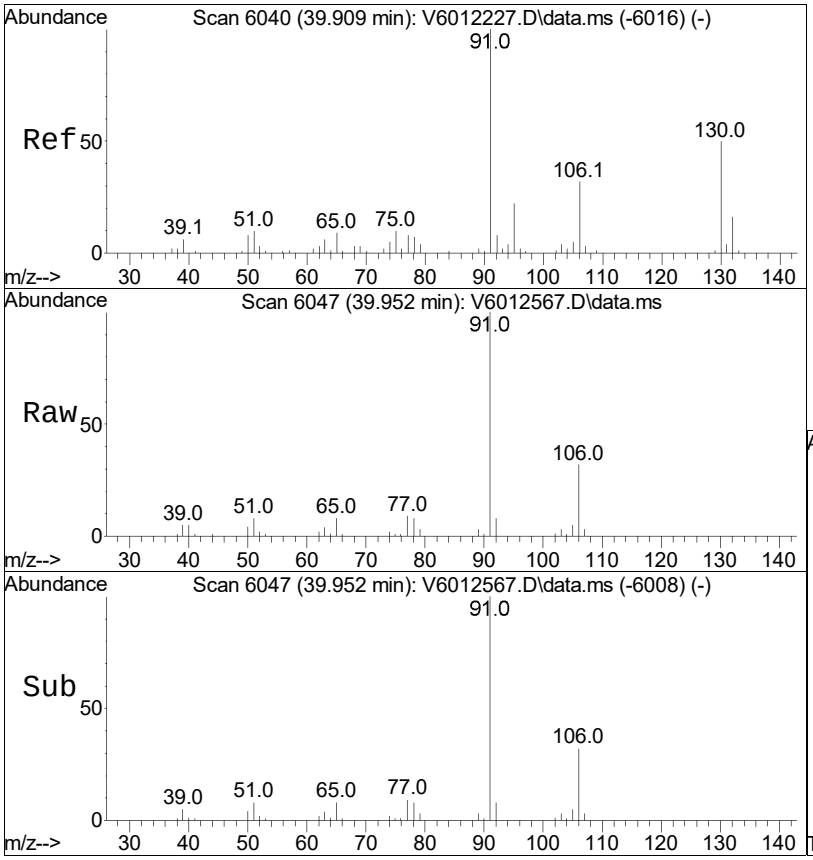


#71
Octane
Concen: 18.95 ug/L
RT: 33.11 min Scan# 4925
Delta R.T. 0.000 min
Lab File: V6012567.D
Acq: 29 Sep 2020 6:42 pm

Tgt Ion: 43 Resp: 50961

Ion	Ratio	Lower	Upper
43	100		
57	43.8	26.0	66.0
85	63.0	39.8	79.8
71	35.7	14.6	54.6

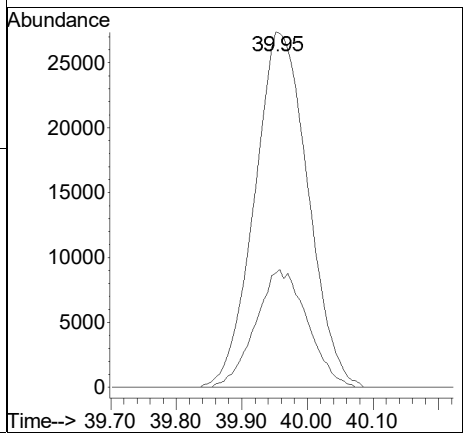


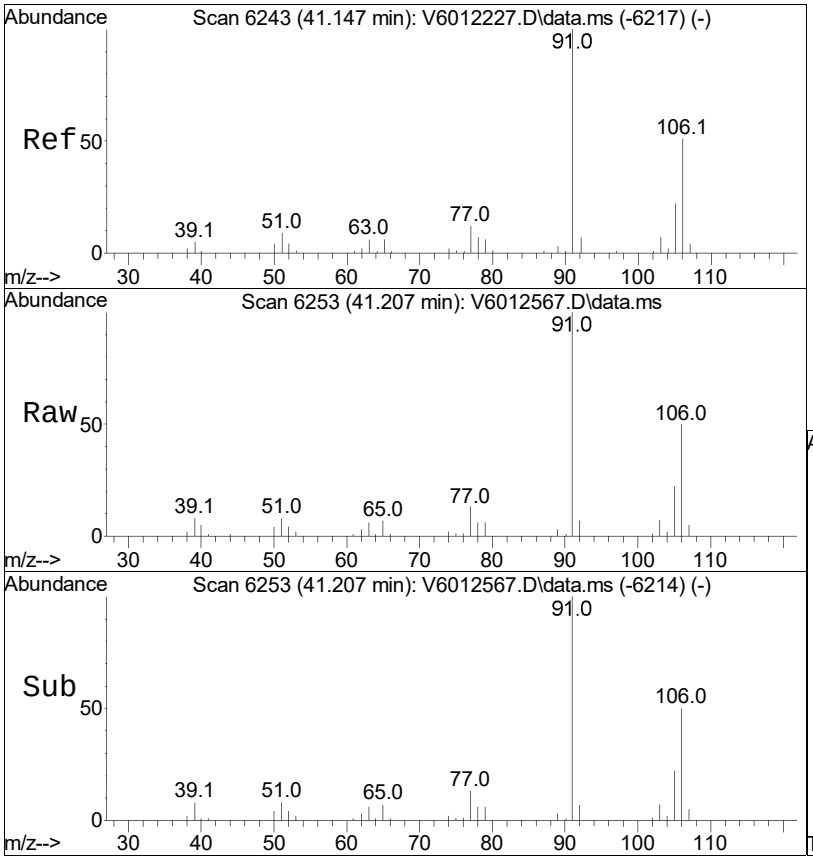


#86
Ethylbenzene
Concen: 19.55 ug/L
RT: 39.95 min Scan# 6047
Delta R.T. -0.012 min
Lab File: V6012567.D
Acq: 29 Sep 2020 6:42 pm

Tgt Ion: 91 Resp: 154887

Ion	Ratio	Lower	Upper
91	100		
106	32.2	12.1	52.1

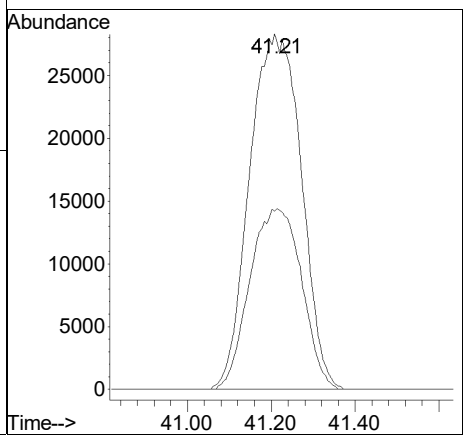


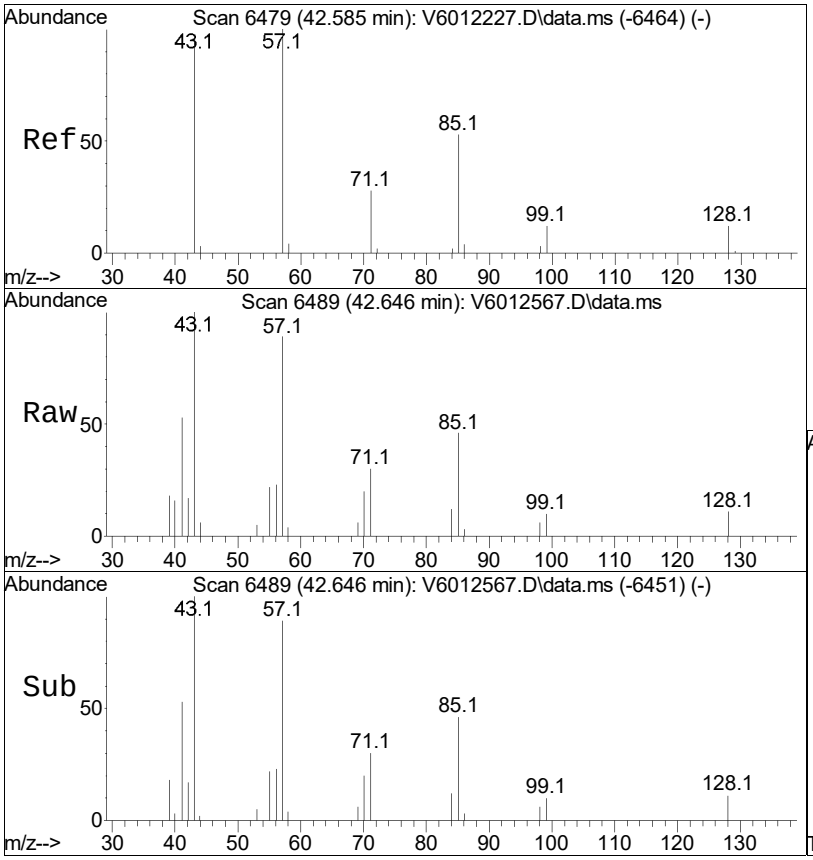


#91
p/m-Xylene
Concen: 40.13 ug/L m
RT: 41.21 min Scan# 6253
Delta R.T. -0.012 min
Lab File: V6012567.D
Acq: 29 Sep 2020 6:42 pm

Tgt Ion: 91 Resp: 242555

Ion	Ratio	Lower	Upper
91	100		
106	50.2	30.7	70.7

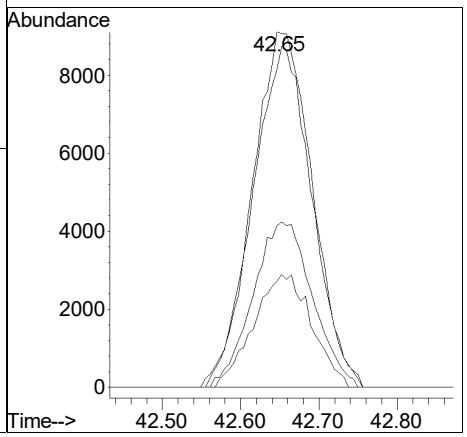


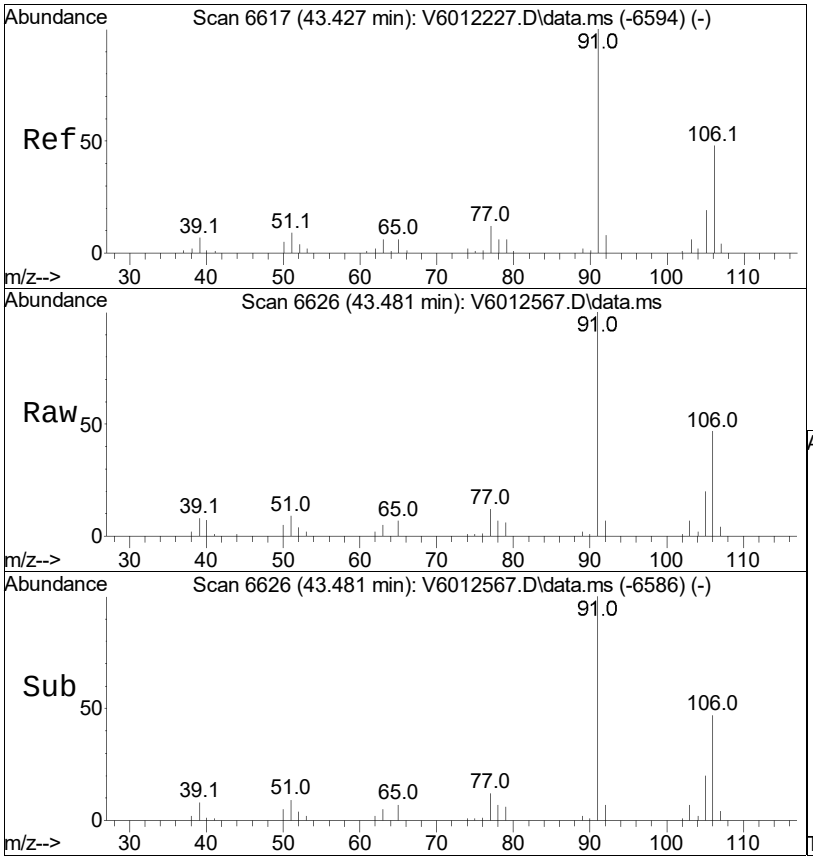


#95
Nonane
Concen: 18.58 ug/L
RT: 42.65 min Scan# 6489
Delta R.T. -0.018 min
Lab File: V6012567.D
Acq: 29 Sep 2020 6:42 pm

Tgt Ion: 43 Resp: 48832

Ion	Ratio	Lower	Upper
43	100		
57	89.5	74.2	114.2
85	45.5	24.5	64.5
71	30.0	10.5	50.5

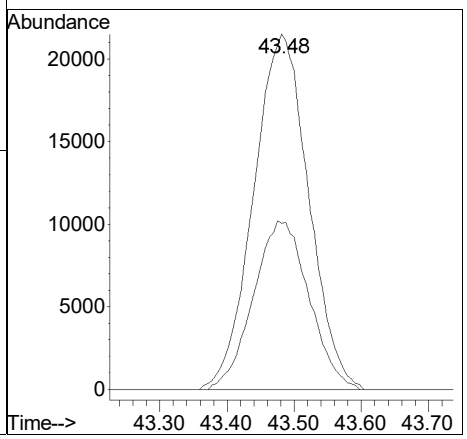


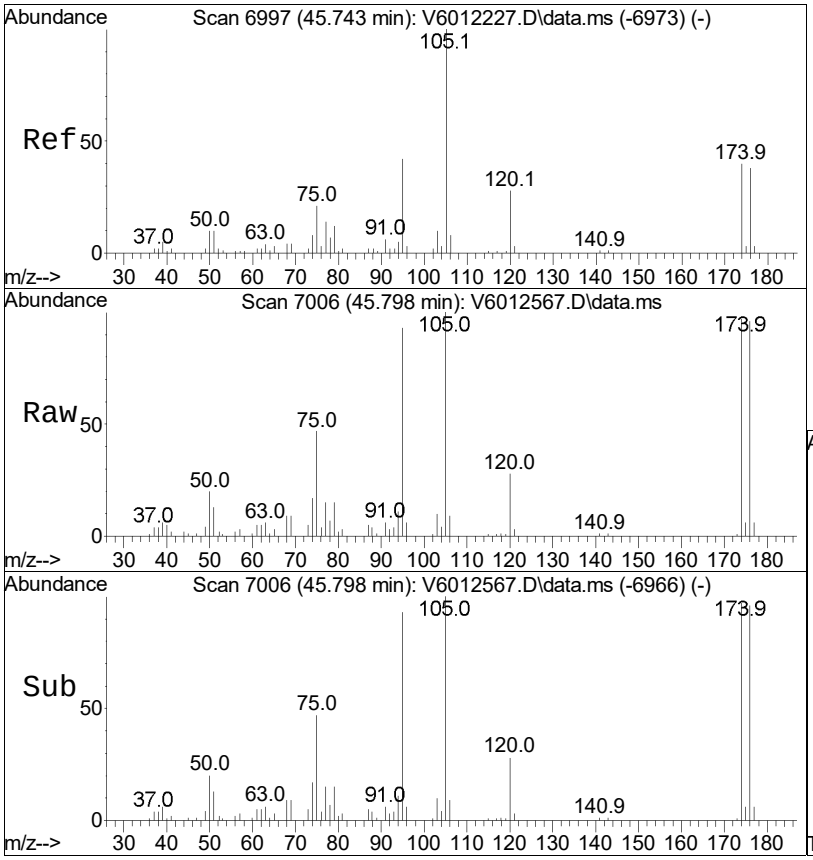


#98
o-Xylene
Concen: 19.34 ug/L
RT: 43.48 min Scan# 6626
Delta R.T. -0.006 min
Lab File: V6012567.D
Acq: 29 Sep 2020 6:42 pm

Tgt Ion: 91 Resp: 122512

Ion	Ratio	Lower	Upper
91	100		
106	46.8	28.3	68.3

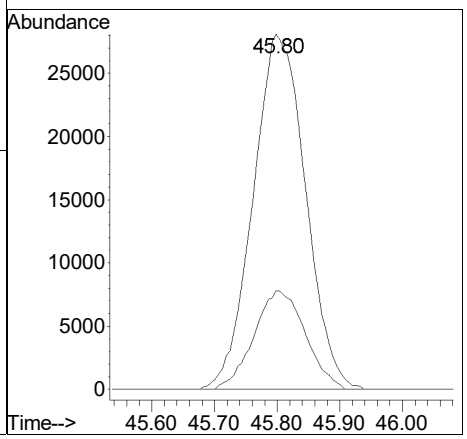


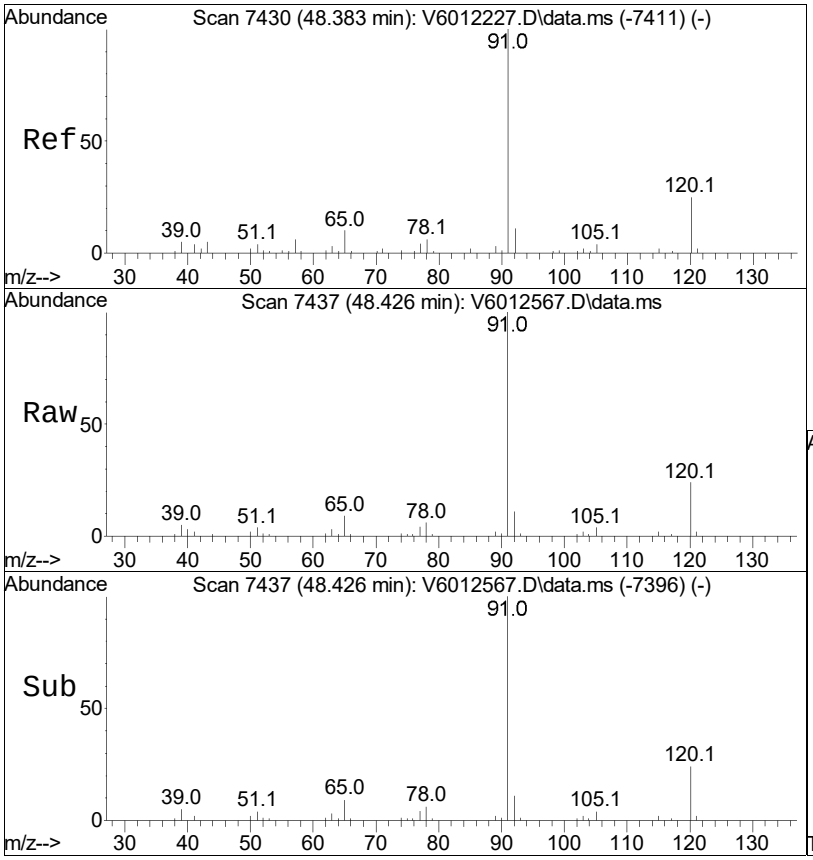


#102
Isopropylbenzene
Concen: 19.78 ug/L
RT: 45.80 min Scan# 7006
Delta R.T. -0.006 min
Lab File: V6012567.D
Acq: 29 Sep 2020 6:42 pm

Tgt Ion:105 Resp: 163293

Ion	Ratio	Lower	Upper
105	100		
120	27.8	8.4	48.4

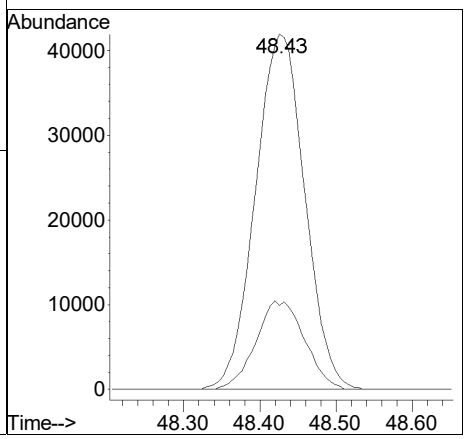


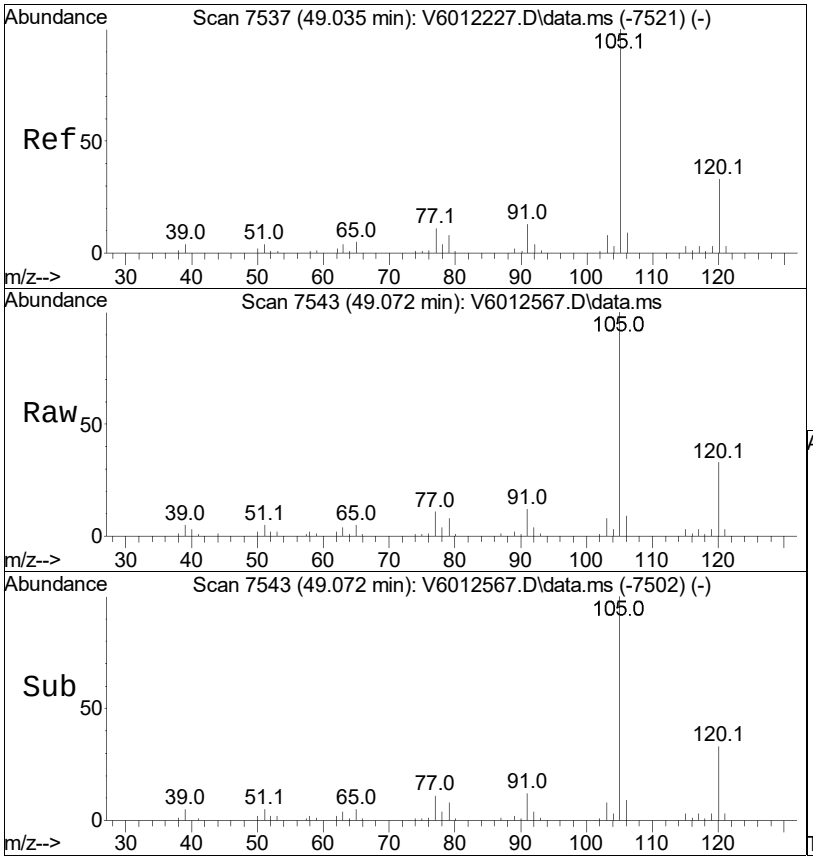


#104
n-Propylbenzene
Concen: 19.42 ug/L
RT: 48.43 min Scan# 7437
Delta R.T. 0.000 min
Lab File: V6012567.D
Acq: 29 Sep 2020 6:42 pm

Tgt Ion: 91 Resp: 188528

Ion	Ratio	Lower	Upper
91	100		
120	23.6	4.9	44.9

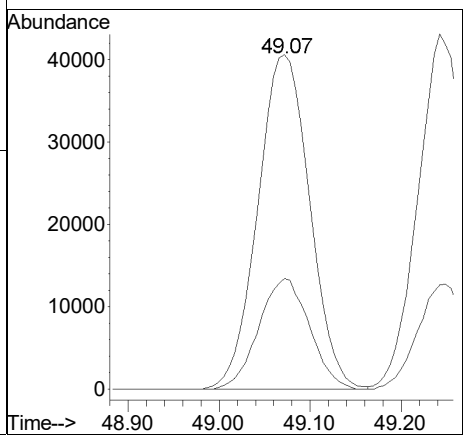


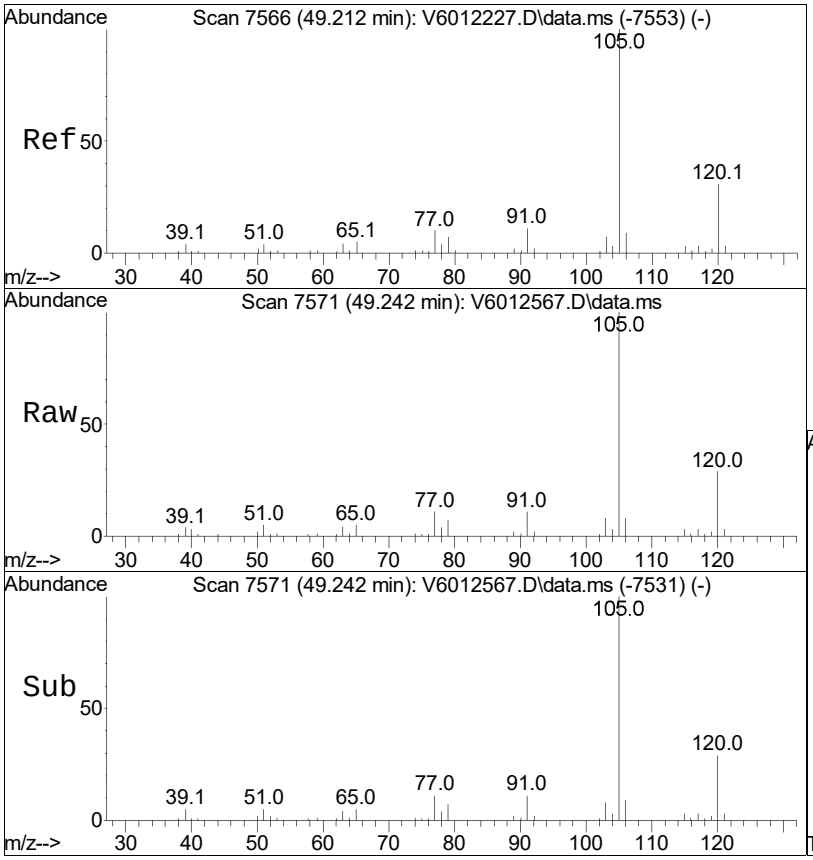


#107
1-Methyl-3-ethylbenzene
Concen: 19.59 ug/L
RT: 49.07 min Scan# 7543
Delta R.T. 0.000 min
Lab File: V6012567.D
Acq: 29 Sep 2020 6:42 pm

Tgt Ion:105 Resp: 160846

Ion	Ratio	Lower	Upper
105	100		
120	33.1	12.7	52.7

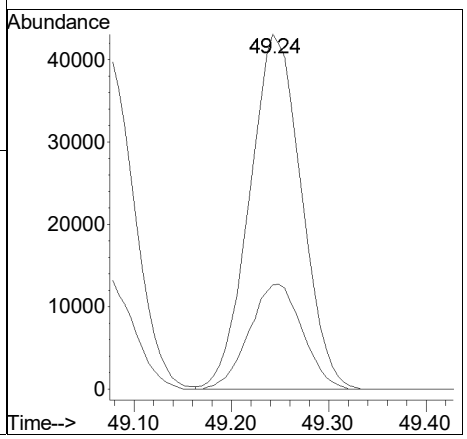


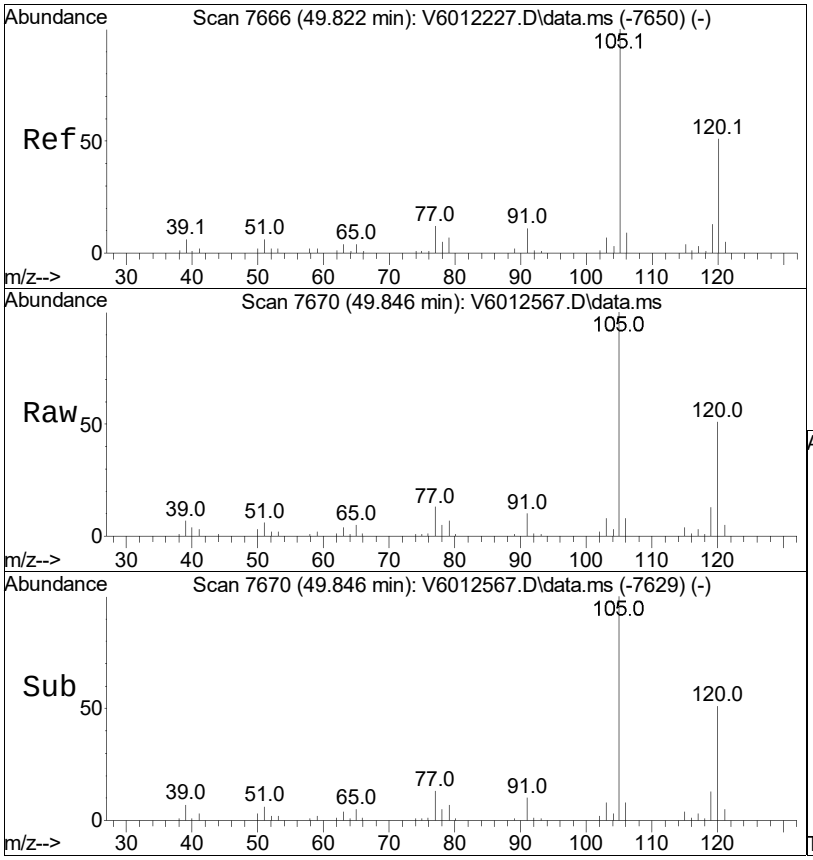


#108
1-Methyl-4-ethylbenzene
Concen: 20.07 ug/L
RT: 49.24 min Scan# 7571
Delta R.T. -0.006 min
Lab File: V6012567.D
Acq: 29 Sep 2020 6:42 pm

Tgt Ion:105 Resp: 159589

Ion	Ratio	Lower	Upper
105	100		
120	29.4	11.4	51.4

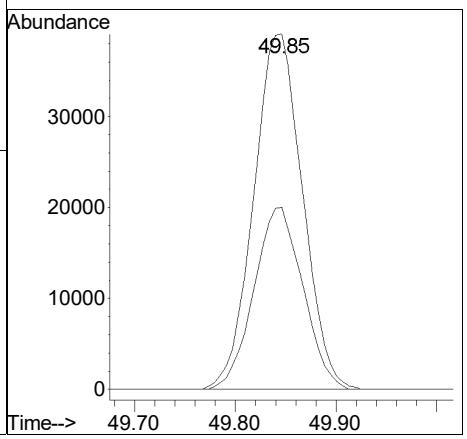


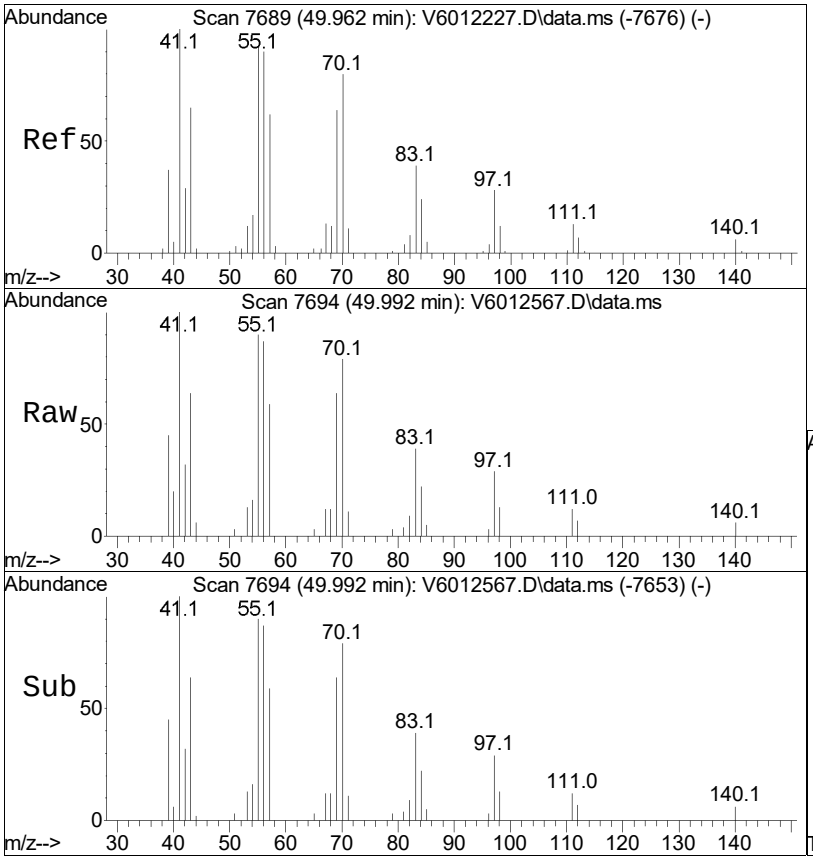


#109
1,3,5-Trimethylbenzene
Concen: 19.19 ug/L
RT: 49.85 min Scan# 7670
Delta R.T. 0.000 min
Lab File: V6012567.D
Acq: 29 Sep 2020 6:42 pm

Tgt Ion:105 Resp: 131802

Ion	Ratio	Lower	Upper
105	100		
120	51.3	30.8	70.8

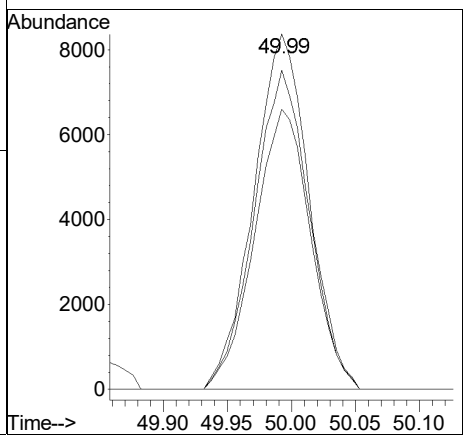


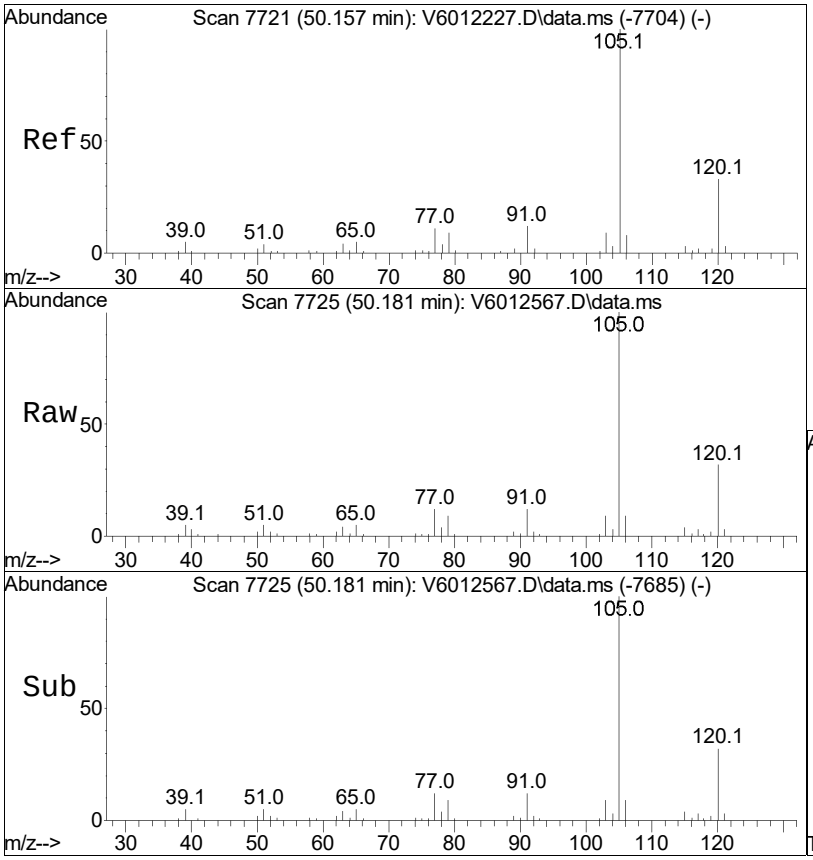


#110
1-Decene
Concen: 15.79 ug/L
RT: 49.99 min Scan# 7694
Delta R.T. 0.000 min
Lab File: V6012567.D
Acq: 29 Sep 2020 6:42 pm

Tgt Ion: 41 Resp: 25319

Ion	Ratio	Lower	Upper
41	100		
55	89.8	73.4	113.4
70	78.9	60.3	100.3

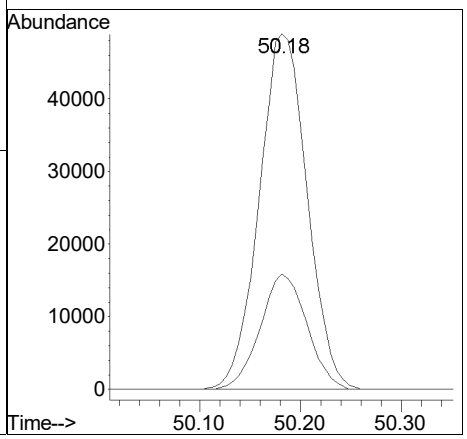


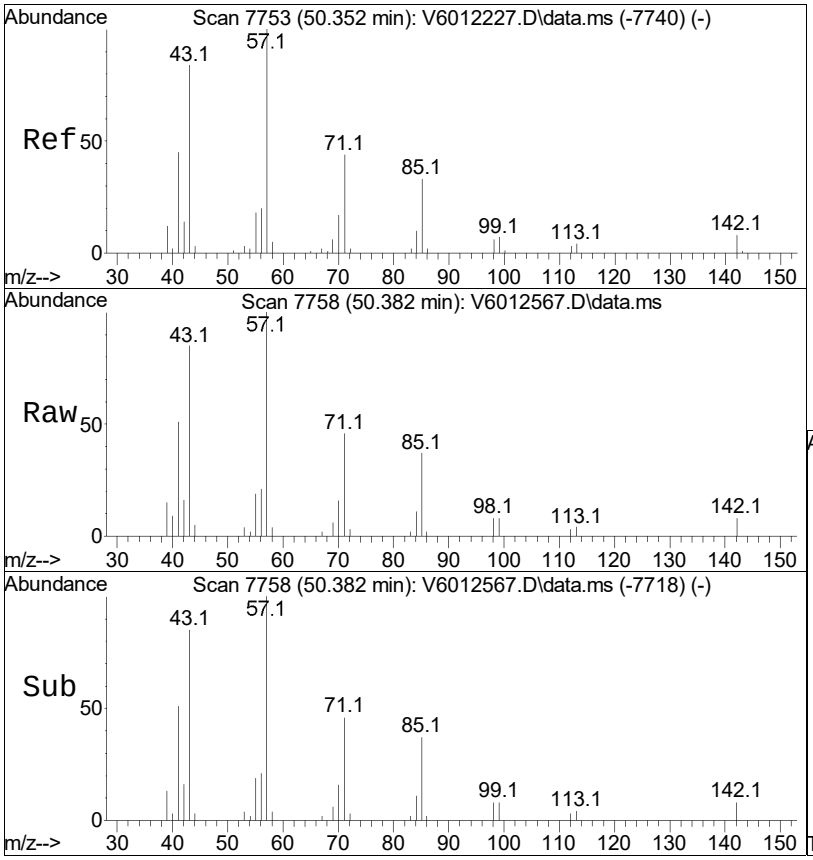


#112
1-Methyl-2-ethylbenzene
Concen: 19.14 ug/L
RT: 50.18 min Scan# 7725
Delta R.T. -0.006 min
Lab File: V6012567.D
Acq: 29 Sep 2020 6:42 pm

Tgt Ion:105 Resp: 161694

Ion	Ratio	Lower	Upper
105	100		
120	32.5	13.0	53.0

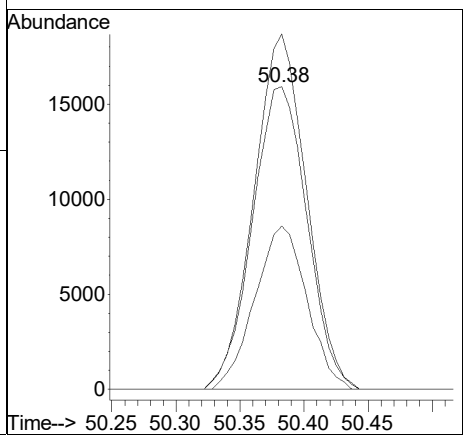


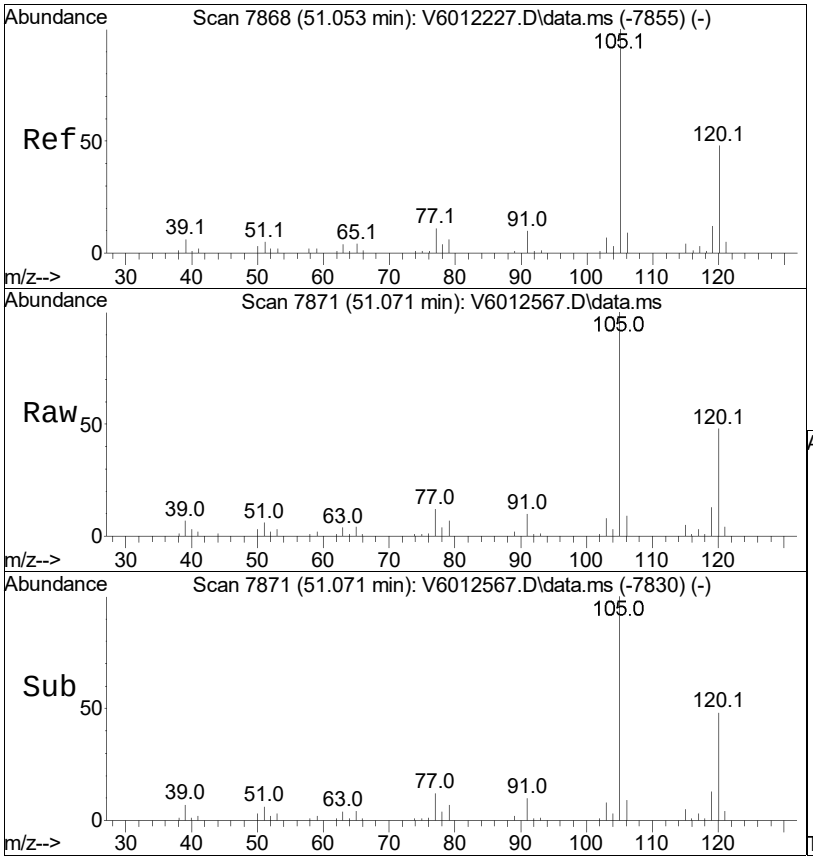


#113
Decane
Concen: 20.84 ug/L
RT: 50.38 min Scan# 7758
Delta R.T. -0.006 min
Lab File: V6012567.D
Acq: 29 Sep 2020 6:42 pm

Tgt Ion: 43 Resp: 47137

Ion	Ratio	Lower	Upper
43	100		
57	117.3	99.5	139.5
71	53.9	32.3	72.3

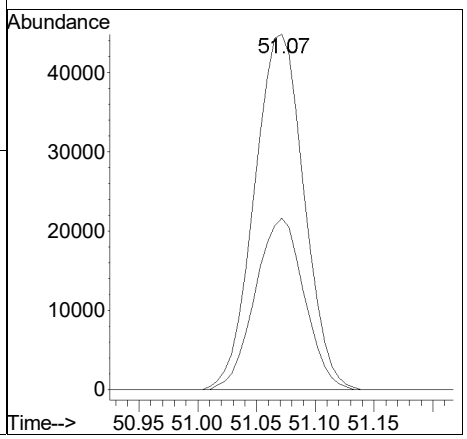


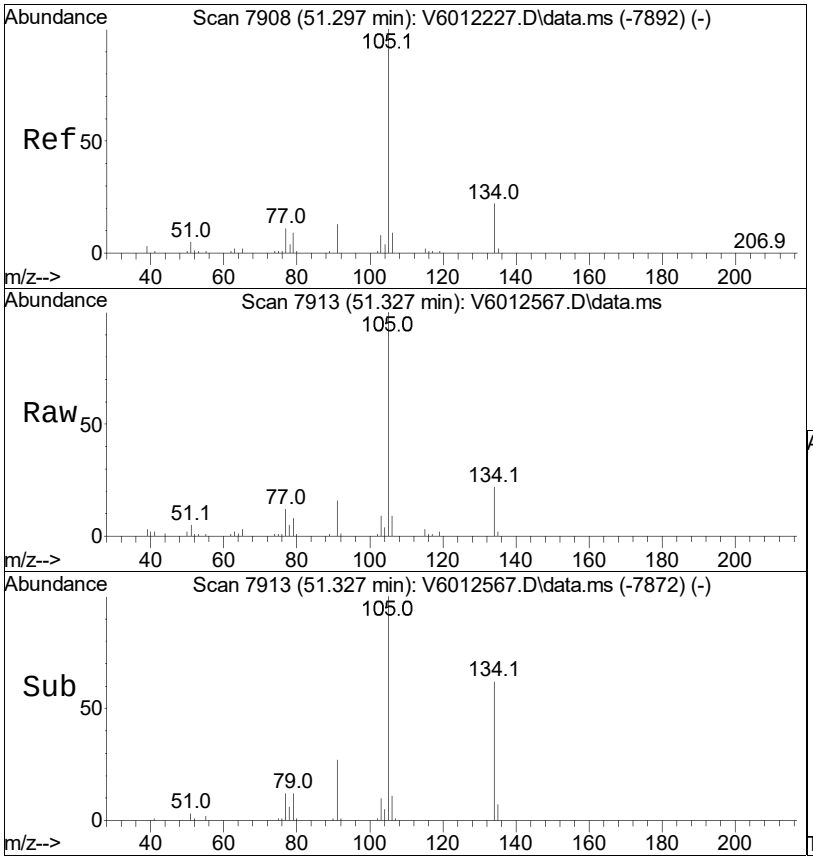


#115
1,2,4-Trimethylbenzene
Concen: 18.72 ug/L
RT: 51.07 min Scan# 7871
Delta R.T. 0.000 min
Lab File: V6012567.D
Acq: 29 Sep 2020 6:42 pm

Tgt Ion:105 Resp: 131650

Ion	Ratio	Lower	Upper
105	100		
120	48.2	27.6	67.6

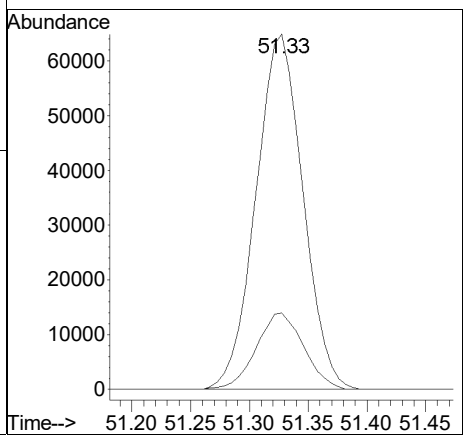


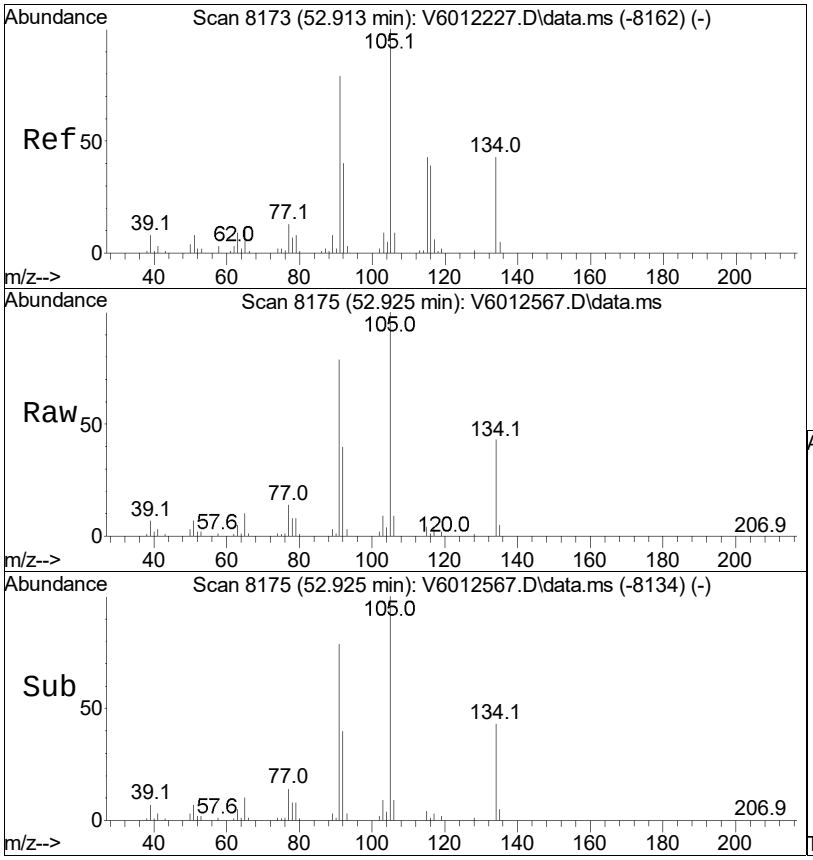


#117
sec-Butylbenzene
Concen: 19.72 ug/L
RT: 51.33 min Scan# 7913
Delta R.T. 0.000 min
Lab File: V6012567.D
Acq: 29 Sep 2020 6:42 pm

Tgt Ion:105 Resp: 180697

Ion	Ratio	Lower	Upper
105	100		
134	21.5	3.2	43.2

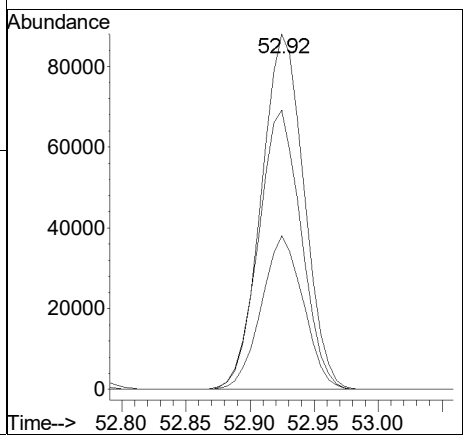


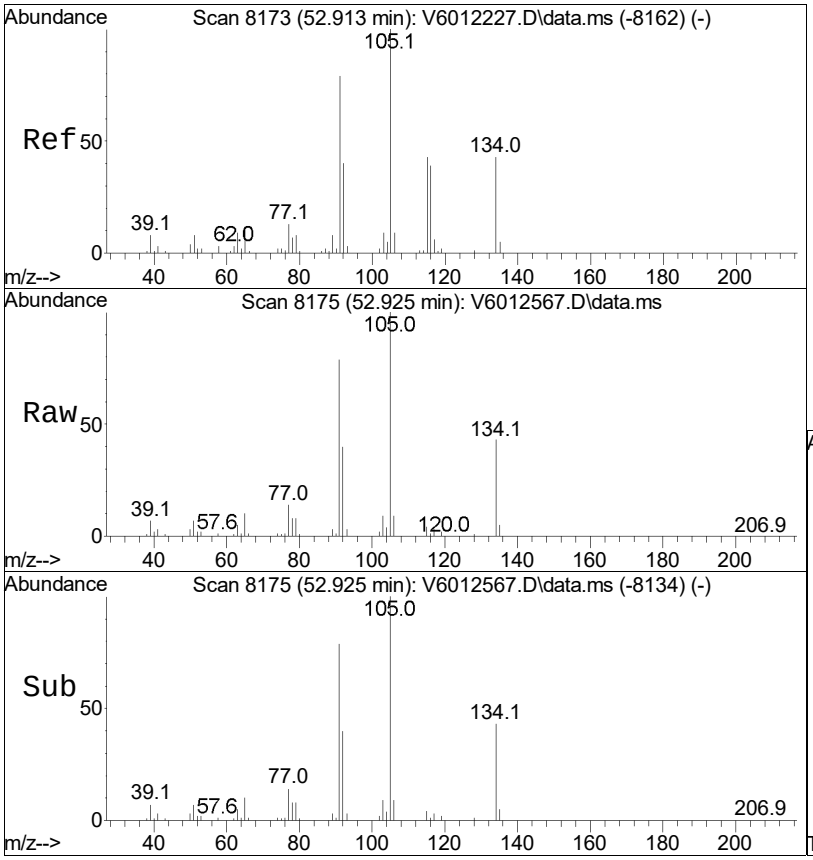


#126
1-Methyl-4-propylbenzene
Concen: 17.72 ug/L
RT: 52.92 min Scan# 8175
Delta R.T. 0.000 min
Lab File: V6012567.D
Acq: 29 Sep 2020 6:42 pm

Tgt Ion:105 Resp: 204264

Ion	Ratio	Lower	Upper
105	100		
134	43.2	23.0	63.0
91	78.5	58.3	98.3

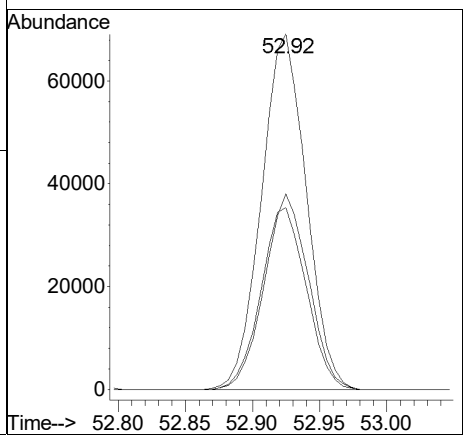


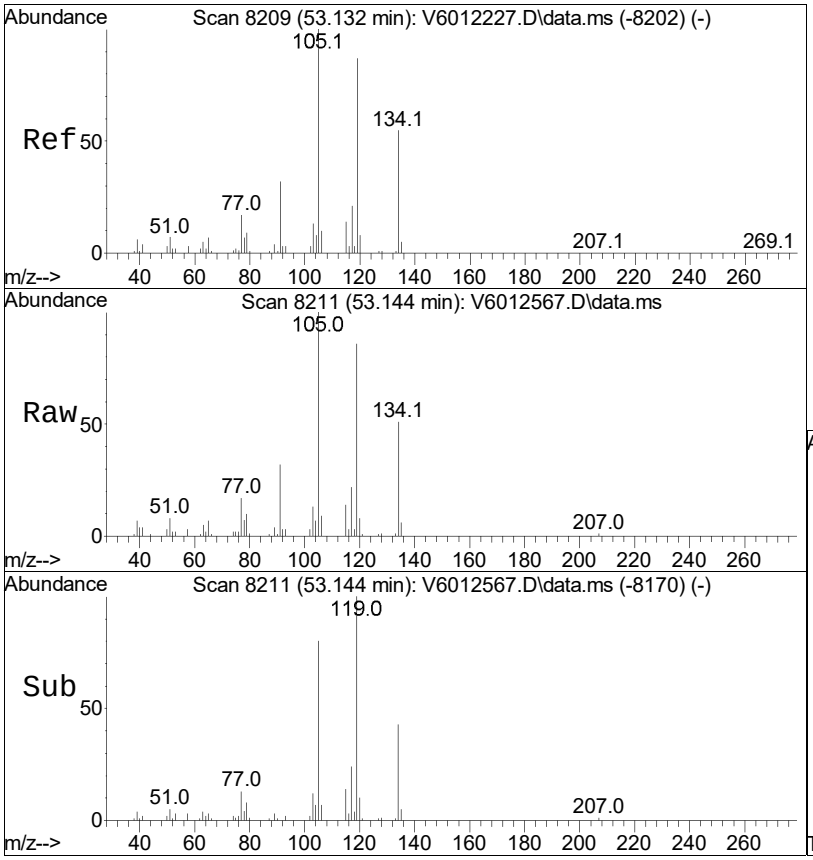


#127
n-Butylbenzene
Concen: 18.44 ug/L
RT: 52.92 min Scan# 8175
Delta R.T. 0.000 min
Lab File: V6012567.D
Acq: 29 Sep 2020 6:42 pm

Tgt Ion: 91 Resp: 160345

Ion	Ratio	Lower	Upper
91	100		
92	51.2	30.6	70.6
134	55.0	34.9	74.9

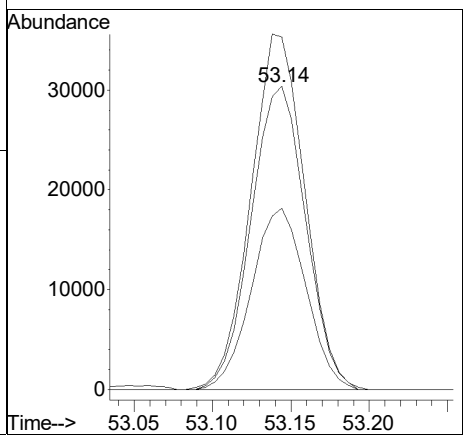


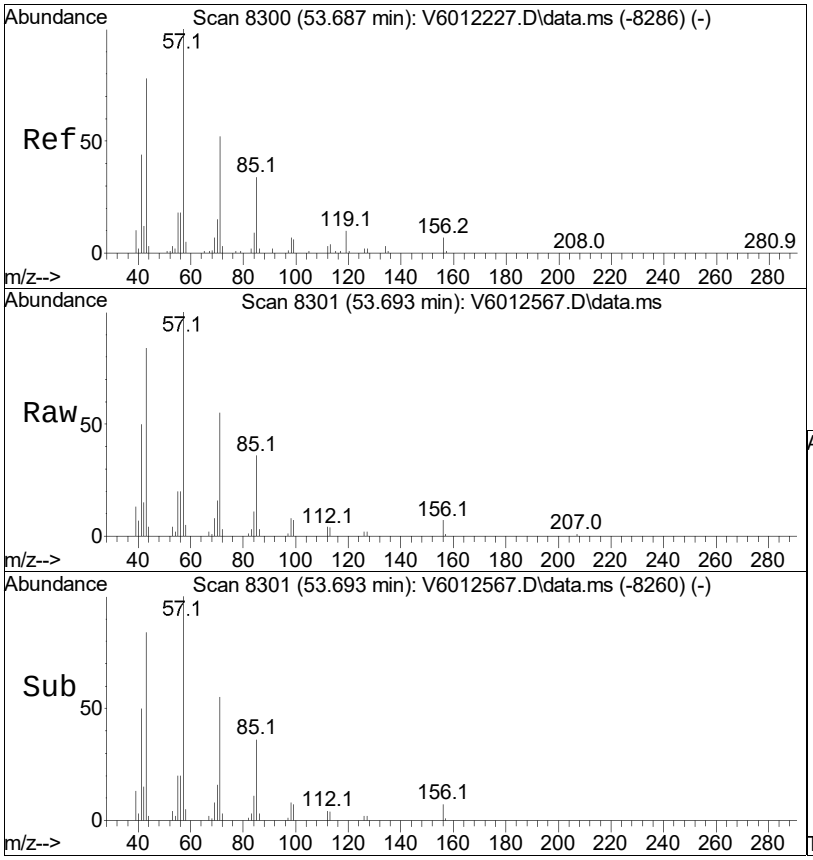


#129
1,2-Diethylbenzene
Concen: 18.35 ug/L
RT: 53.14 min Scan# 8211
Delta R.T. 0.000 min
Lab File: V6012567.D
Acq: 29 Sep 2020 6:42 pm

Tgt Ion:119 Resp: 73592

Ion	Ratio	Lower	Upper
119	100		
105	116.2	89.9	129.9
134	59.7	41.5	81.5

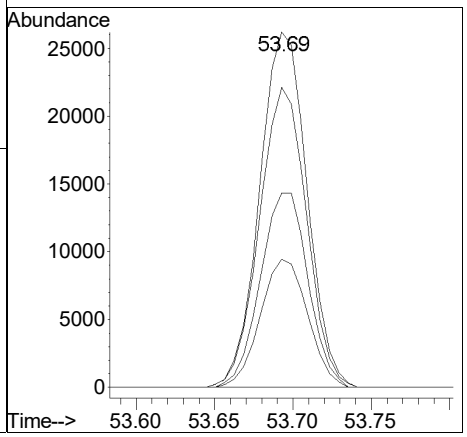


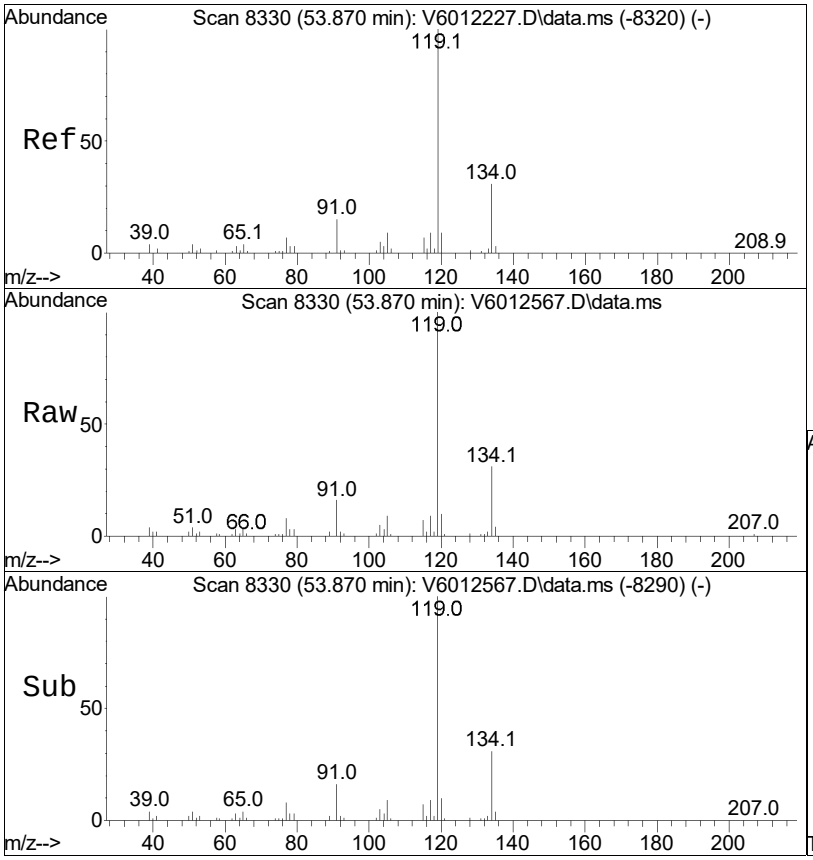


#132
Undecane
Concen: 21.32 ug/L
RT: 53.69 min Scan# 8301
Delta R.T. 0.000 min
Lab File: V6012567.D
Acq: 29 Sep 2020 6:42 pm

Tgt Ion: 57 Resp: 55279

Ion	Ratio	Lower	Upper
57	100		
43	84.4	58.4	98.4
71	54.7	32.1	72.1
85	36.1	14.5	54.5

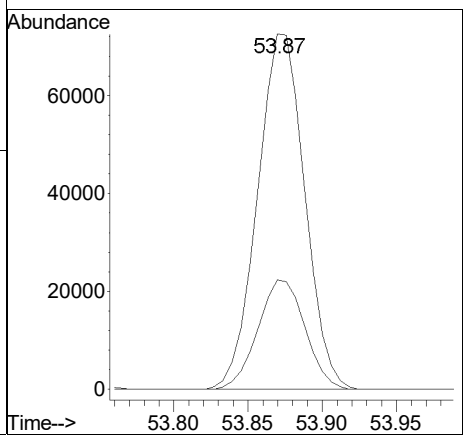


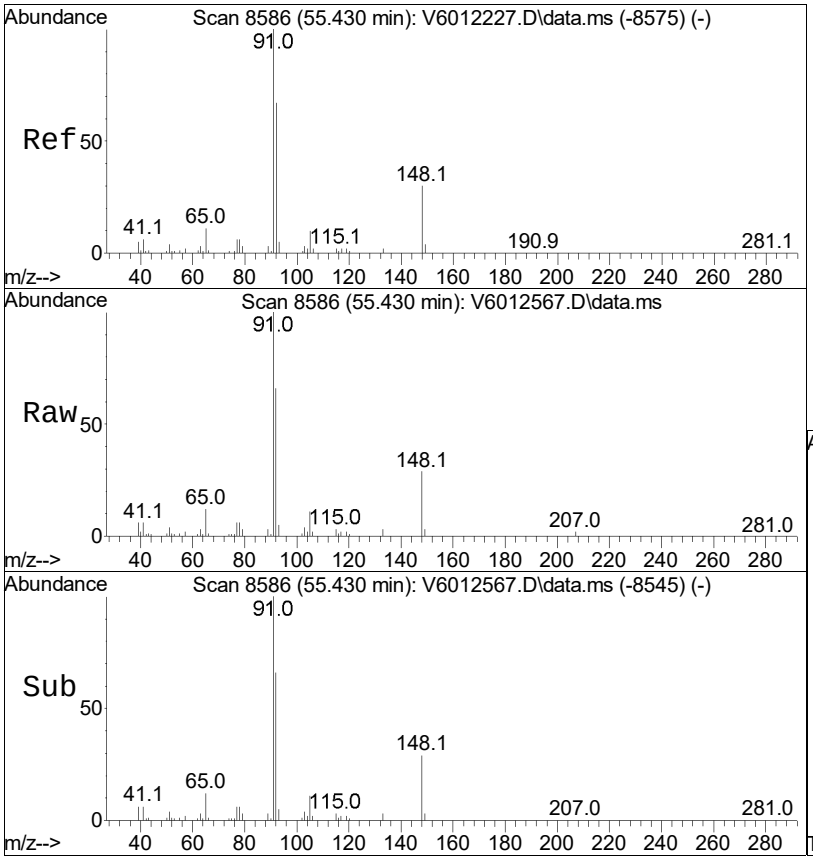


#134
1,3-Dimethyl-5-ethylbenzene
Concen: 18.16 ug/L
RT: 53.87 min Scan# 8330
Delta R.T. -0.006 min
Lab File: V6012567.D
Acq: 29 Sep 2020 6:42 pm

Tgt Ion:119 Resp: 160563

Ion	Ratio	Lower	Upper
119	100		
134	30.8	11.3	51.3

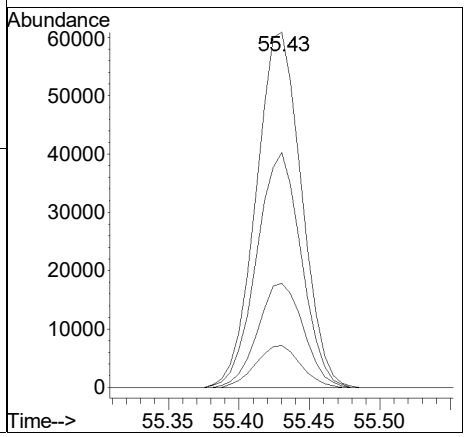


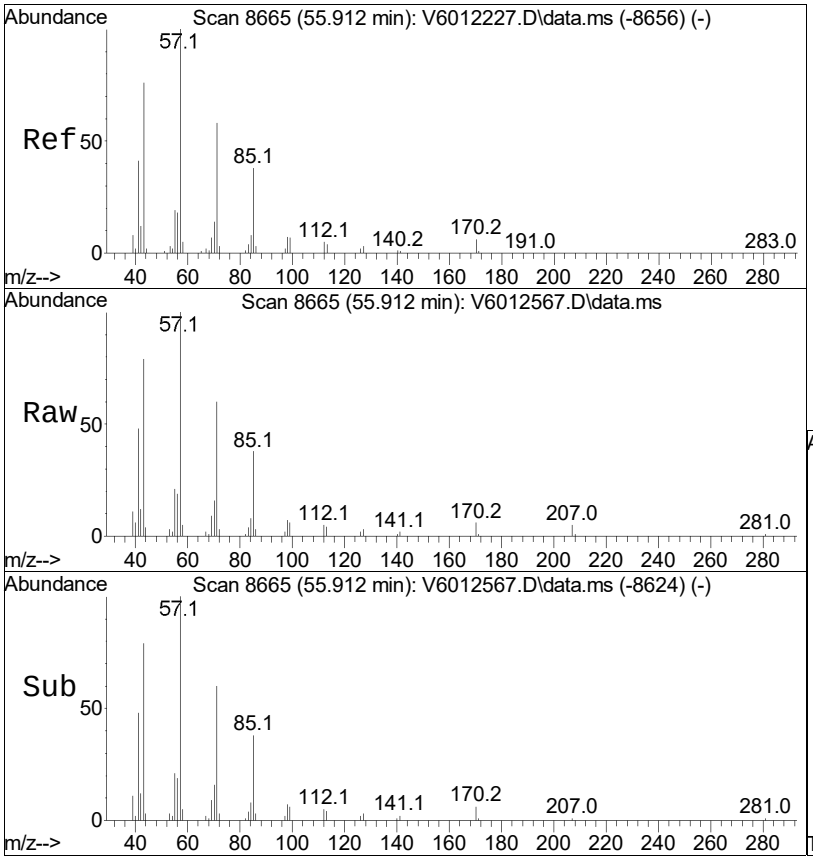


#139
Pentylbenzene
Concen: 18.84 ug/L
RT: 55.43 min Scan# 8586
Delta R.T. 0.000 min
Lab File: V6012567.D
Acq: 29 Sep 2020 6:42 pm

Tgt Ion: 91 Resp: 136386

Ion	Ratio	Lower	Upper
91	100		
92	66.1	47.0	87.0
65	11.8	0.0	31.1
148	29.3	10.2	50.2

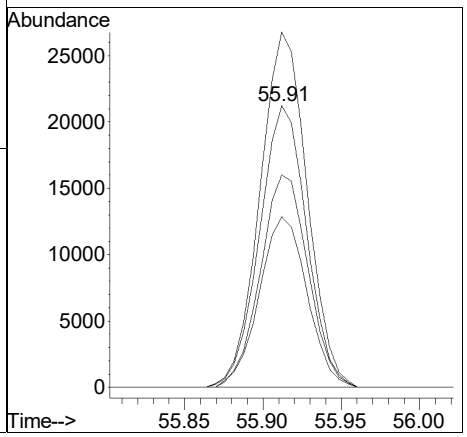




#142
Dodecane
Concen: 23.59 ug/L
RT: 55.91 min Scan# 8665
Delta R.T. 0.000 min
Lab File: V6012567.D
Acq: 29 Sep 2020 6:42 pm

Tgt Ion: 43 Resp: 44493

Ion	Ratio	Lower	Upper
43	100		
57	126.2	111.5	151.5
71	75.5	55.7	95.7
41	60.5	34.0	74.0



LCS Duplicate Raw Data

Quantitation Report (QT Reviewed)

Data Path : O:\Organics\DATA\VOA6\2020\09-SEP\200929\
Data File : V6012568.D
Acq On : 29 Sep 2020 7:53 pm
Operator : VOA6:RY
Sample : WG1416337-4,31,5,5
Misc : WG1416337,ICAL17149
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Sep 30 09:19:21 2020
Quant Method : O:\Organics\DATA\VOA6\2020\09-SEP\200929\P6091820W.M
Quant Title : PIANO VOLATILES
QLast Update : Sat Sep 19 08:40:17 2020
Response via : Initial Calibration

Sub List : PIANO - PIANO

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Chlorobenzene-D5 [IS]	38.35	117	380103	50.000	ug/L	0.00
System Monitoring Compounds						
24) Dibromofluoromethane (...	16.63	113	116985	49.356	ug/L	0.00
Spiked Amount 50.000	Range 78 - 118		Recovery = 98.71%			
62) Toluene-d8 (surr)	30.56	98	442740	48.841	ug/L	0.00
Spiked Amount 50.000	Range 87 - 113		Recovery = 97.68%			
64) 2-Bromo-1-chloropropan...	0.00	77	0d	0.000	ug/L	
Spiked Amount 50.000	Range 70 - 130		Recovery = 0.00%#			
87) 1-Chloro-2-fluorobenze...	0.00	130	0	0.000	ug/L	
Spiked Amount 50.000	Range 70 - 130		Recovery = 0.00%#			
97) 1,4-Dichlorobutane (H/...	0.00	55	0	0.000	ug/L	
Spiked Amount 50.000	Range 70 - 130		Recovery = 0.00%#			
101) 4-Bromofluorobenzene (...	45.77	95	182351	48.399	ug/L	0.00
Spiked Amount 50.000	Range 76 - 120		Recovery = 96.80%			
Target Compounds						Qvalue
2) 3-Methyl-1-butene	0.00		0	N.D.		
3) Isopentane	0.00		0	N.D. d		
4) 1-Pentene	8.60	42	25485	15.024	ug/L	97
5) 2-Methyl-1-butene	0.00		0	N.D. d		
6) Pentane	8.96	43	33838	12.642	ug/L	96
7) trans-2-Pentene	0.00		0	N.D.		
8) 2-Methyl-1,3-butadiene	0.00		0	N.D.		
9) cis-2-Pentene	0.00		0	N.D.		
10) Tertiary butanol	10.41	59	17132	72.477	ug/L	98
11) 2,2-Dimethylbutane	0.00		0	N.D.		
12) 4-Methyl-1-pentene	0.00		0	N.D.		
13) Cyclopentane	12.56	70	18903	16.739	ug/L #	35
14) 2,3-Dimethylbutane	0.00		0	N.D. d		
15) 2-Methylpentane	12.77	43	43240	14.919	ug/L	93
16) MTBE	13.08	73	72166	19.915	ug/L	98
17) 3-Methylpentane	13.74	57	43601	16.635	ug/L	98
18) 1-Hexene	14.32	56	25532	17.117	ug/L	94
19) Hexane	14.91	57	37435	17.499	ug/L	98
20) Diisopropyl ether	15.21	45	68673	18.874	ug/L	94
21) trans-2-Hexene	0.00		0	N.D.		
22) 2-Methyl-2-pentene	0.00		0	N.D.		
23) cis-2-Hexene	0.00		0	N.D.		
25) Ethyl tertiary butyl e...	16.67	59	72491	19.171	ug/L	96

Quantitation Report (QT Reviewed)

Data Path : O:\Organics\DATA\VOA6\2020\09-SEP\200929\
Data File : V6012568.D
Acq On : 29 Sep 2020 7:53 pm
Operator : VOA6:RY
Sample : WG1416337-4,31,5,5
Misc : WG1416337,ICAL17149
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Sep 30 09:19:21 2020
Quant Method : O:\Organics\DATA\VOA6\2020\09-SEP\200929\P6091820W.M
Quant Title : PIANO VOLATILES
QLast Update : Sat Sep 19 08:40:17 2020
Response via : Initial Calibration

Sub List : PIANO - PIANO

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
26) 2,2-Dimethylpentane	0.00		0	N.D.		
27) Methylcyclopentane	17.22	56	48592	17.809	ug/L	93
28) 2,4-Dimethylpentane	17.37	43	43807	16.621	ug/L	95
29) 2,2,3-Trimethylbutane	0.00		0	N.D.		
30) 1,2-Dichloroethane	0.00		0	N.D.	d	
31) 3,3-Dimethylpentane	0.00		0	N.D.		
32) Cyclohexane	20.09	56	42871	18.860	ug/L	98
33) 2-Methylhexane	20.52	43	46762	16.976	ug/L	99
34) Benzene	20.71	78	113056	19.758	ug/L	99
35) 2,3-Dimethylpentane	20.82	56	41856	18.069	ug/L	95
36) Thiophene	0.00		0	N.D.		
37) 1,1-Dimethylcyclopentane	0.00		0	N.D.		
38) 3-Methylhexane	21.33	43	37433	15.226	ug/L	95
39) TAME	21.69	73	77275	17.611	ug/L	93
40) cis-1,3-Dimethylcyclop...	0.00		0	N.D.		
41) 3-Ethylpentane	0.00		0	N.D.		
42) trans-1,3-DMCP/2-Methy...	0.00		0	N.D.		
43) 1-Heptene/trans-1,2-DMCP	0.00		0	N.D.	d	
44) Isooctane	22.75	57	111744	18.960	ug/L	93
45) trans-3-Heptene	0.00		0	N.D.	d	
46) Heptane	23.49	43	38022	16.596	ug/L	94
48) trans-2-Heptene	0.00		0	N.D.		
49) cis-2-Heptene	0.00		0	N.D.		
50) 2,2-Dimethylhexane	0.00		0	N.D.	d	
51) Methylcyclohexane	25.90	83	53401	20.100	ug/L	94
52) 2,5-Dimethylhexane	0.00		0	N.D.		
53) 2,4-Dimethylhexane	0.00		0	N.D.		
54) Ethylcyclopentane	0.00		0	N.D.		
55) 2,2,3-Trimethylpentane	0.00		0	N.D.		
57) 2,3,4-Trimethylpentane	0.00		0	N.D.		
58) 2,3,3-Trimethylpentane	0.00		0	N.D.		
59) 2,3-Dimethylhexane	0.00		0	N.D.		
60) 2-Methylheptane	29.86	57	47185	17.777	ug/L	95
61) 4-Methylheptane	0.00		0	N.D.	d	
63) 3-Methylheptane	30.60	43	43060	16.521	ug/L	99
65) 3-Ethylhexane	0.00		0	N.D.	d	
66) Toluene	30.92	91	134312	19.373	ug/L	99
67) 2-Methylthiophene	0.00		0	N.D.		
68) trans-1,4-Dimethylcycl...	0.00		0	N.D.		
69) 3-Methylthiophene	0.00		0	N.D.		
70) 1-Octene	0.00		0	N.D.		

Data Path : O:\Organics\DATA\VOA6\2020\09-SEP\200929\
Data File : V6012568.D
Acq On : 29 Sep 2020 7:53 pm
Operator : VOA6:RY
Sample : WG1416337-4,31,5,5
Misc : WG1416337,ICAL17149
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Sep 30 09:19:21 2020
Quant Method : O:\Organics\DATA\VOA6\2020\09-SEP\200929\P6091820W.M
Quant Title : PIANO VOLATILES
QLast Update : Sat Sep 19 08:40:17 2020
Response via : Initial Calibration

Sub List : PIANO - PIANO

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
71) Octane	33.11	43	49414	18.578	ug/L		99
72) trans-1,2-Dimethylcycl...	0.00		0	N.D.			
73) 1,2-Dibromoethane	0.00		0	N.D.			
75) cis-2-Octene	0.00		0	N.D.			
76) Isopropylcyclopentane	0.00		0	N.D.			
77) cis-1,2-Dimethylcycloh...	0.00		0	N.D.			
78) 2,5-Dimethylheptane	0.00		0	N.D.			
79) 3,5-Dimethylheptane	0.00		0	N.D.			
80) 3,3-Dimethylheptane	0.00		0	N.D.			
81) 1,1,4-Trimethylcyclohe...	0.00		0	N.D.			
82) 2,3-Dimethylheptane	0.00		0	N.D.			
83) 3,4-Dimethylheptane	0.00		0	N.D.			
84) 4-Methyloctane	0.00		0	N.D.			
85) 2-Methyloctane	0.00		0	N.D.			
86) Ethylbenzene	39.96	91	153301	19.557	ug/L		97
88) 2-Ethylthiophene	0.00		0	N.D.			
89) 3-Methyloctane	0.00		0	N.D.			
90) 3,3-Diethylpentane	0.00		0	N.D.			
91) p/m-Xylene	41.22	91	239690	40.094	ug/L		100
92) 1-Nonene	0.00		0	N.D.			
93) trans-3-Nonene	0.00		0	N.D.			
94) cis-3-Nonene	0.00		0	N.D.	d		
95) Nonane	42.65	43	46997	18.079	ug/L		99
96) Styrene	0.00		0	N.D.			
98) o-Xylene	43.48	91	121688	19.417	ug/L		97
99) 2-Nonene	0.00		0	N.D.			
100) Isopropylcyclohexane	0.00		0	N.D.			
102) Isopropylbenzene	45.80	105	163020	19.962	ug/L		100
103) 3,3-Dimethyloctane	0.00		0	N.D.			
104) n-Propylbenzene	48.43	91	188721	19.651	ug/L		98
105) 2-Methylnonane	0.00		0	N.D.			
106) 3-Methylnonane	0.00		0	N.D.	d		
107) 1-Methyl-3-ethylbenzene	49.07	105	160175	19.724	ug/L		100
108) 1-Methyl-4-ethylbenzene	49.24	105	160885	20.451	ug/L		100
109) 1,3,5-Trimethylbenzene	49.85	105	131972	19.430	ug/L		100
110) 1-Decene	49.99	41	25045	15.793	ug/L		93
111) Isobutylcyclohexane	0.00		0	N.D.	d		
112) 1-Methyl-2-ethylbenzene	50.18	105	161038	19.268	ug/L		98
113) Decane	50.38	43	45856	20.491	ug/L		96
114) tert-Butylbenzene	0.00		0	N.D.			
115) 1,2,4-Trimethylbenzene	51.07	105	132456	19.043	ug/L		99

Quantitation Report (QT Reviewed)

Data Path : O:\Organics\DATA\VOA6\2020\09-SEP\200929\
Data File : V6012568.D
Acq On : 29 Sep 2020 7:53 pm
Operator : VOA6:RY
Sample : WG1416337-4,31,5,5
Misc : WG1416337,ICAL17149
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Sep 30 09:19:21 2020
Quant Method : O:\Organics\DATA\VOA6\2020\09-SEP\200929\P6091820W.M
Quant Title : PIANO VOLATILES
QLast Update : Sat Sep 19 08:40:17 2020
Response via : Initial Calibration

Sub List : PIANO - PIANO

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
116) Isobutylbenzene	0.00		0	N.D.	d	
117) sec-Butylbenzene	51.33	105	183546	20.251	ug/L	97
118) 1-Methyl-3-isopropylbe...	0.00		0	N.D.	d	
119) 1-Methyl-4-isopropylbe...	0.00		0	N.D.	d	
120) 1,2,3-Trimethylbenzene	0.00		0	N.D.		
121) 1-Methyl-2-isopropylbe...	0.00		0	N.D.		
122) Indan	0.00		0	N.D.		
123) 1,3-Diethylbenzene	0.00		0	N.D.	d	
124) 1-Methyl-3-propylbenzene	0.00		0	N.D.	d	
125) Indene	0.00		0	N.D.	d	
126) 1-Methyl-4-propylbenzene	52.92	105	202537	17.760	ug/L	100
127) n-Butylbenzene	52.92	91	159828	18.585	ug/L	99
128) 1,2-Dimethyl-4-ethylbe...	0.00		0	N.D.	d	
129) 1,2-Diethylbenzene	53.14	119	72976	18.398	ug/L	95
130) 1-Methyl-2-propylbenzene	0.00		0	N.D.	d	
131) 1,4-Dimethyl-2-ethylbe...	0.00		0	N.D.	d	
132) Undecane	53.69	57	53626	20.907	ug/L	95
133) 1,3-Dimethyl-4-ethylbe...	0.00		0	N.D.	d	
134) 1,3-Dimethyl-5-ethylbe...	53.87	119	161040	18.416	ug/L	99
135) 1,3-Dimethyl-2-ethylbe...	0.00		0	N.D.	d	
136) 1,2-Dimethyl-3-ethylbe...	0.00		0	N.D.		
137) 1,2,4,5-Tetramethylben...	0.00		0	N.D.		
138) 1,2,3,5-Tetramethylben...	0.00		0	N.D.		
139) Pentylbenzene	55.43	91	136015	19.000	ug/L	98
140) 1,2,3,4-Tetramethylben...	0.00		0	N.D.		
141) 1,3-DM-5-tert-Butylben...	0.00		0	N.D.		
142) Dodecane	55.91	43	44160	23.666	ug/L	94
143) 1,3,5-Triethylbenzene	0.00		0	N.D.		
144) Naphthalene	0.00		0	N.D.	d	
145) Benzothiophene	0.00		0	N.D.		
146) 1,2,4-Triethylbenzene	0.00		0	N.D.		
147) Hexylbenzene	0.00		0	N.D.		
148) MMT	0.00		0	N.D.		
149) Tridecane	0.00		0	N.D.		
150) 2-Methylnaphthalene	0.00		0	N.D.	d	
151) 1-Methylnaphthalene	0.00		0	N.D.		
152) Tetradecane	0.00		0	N.D.		
153) Pentadecane	0.00		0	N.D.		

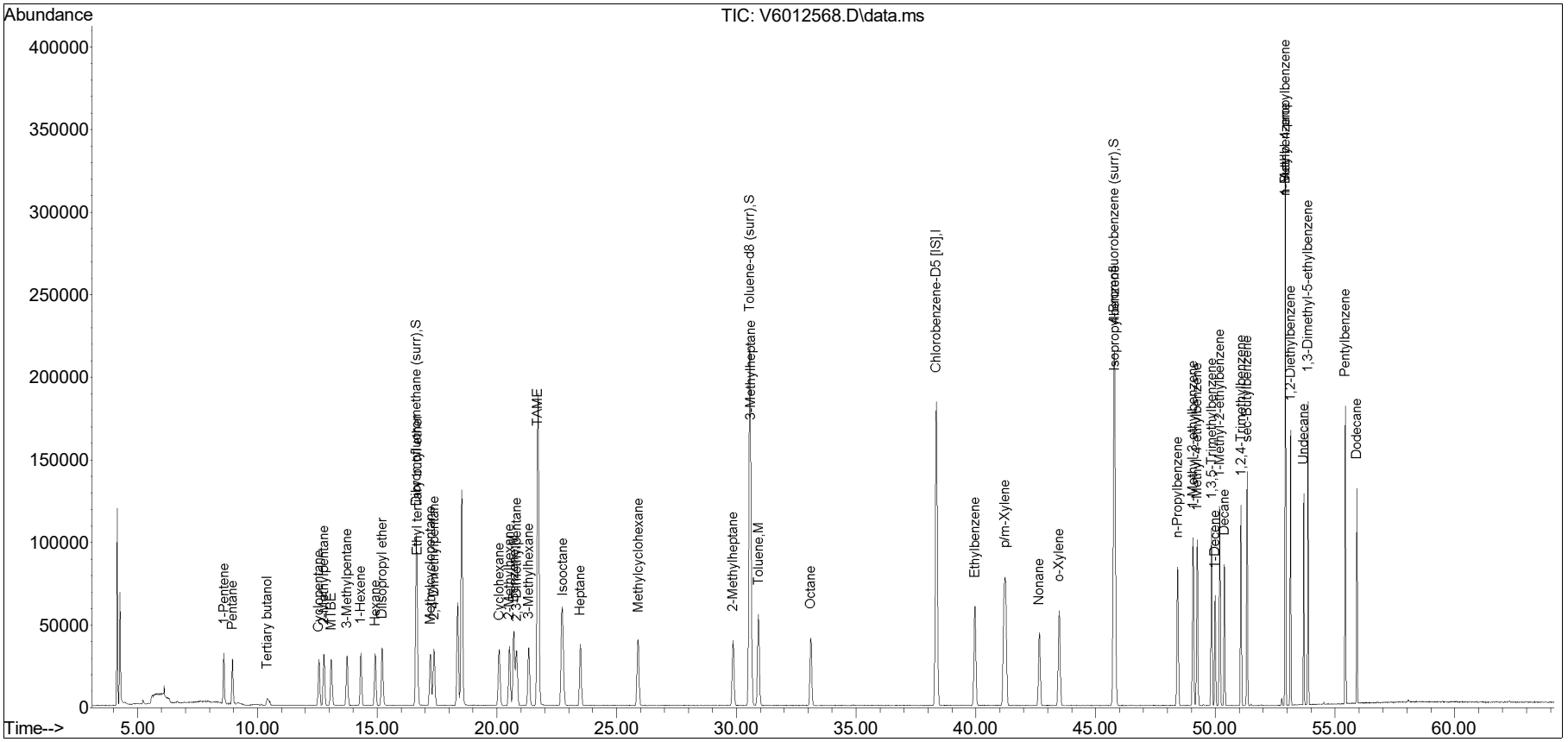
(#) = qualifier out of range (m) = manual integration (+) = signals summed

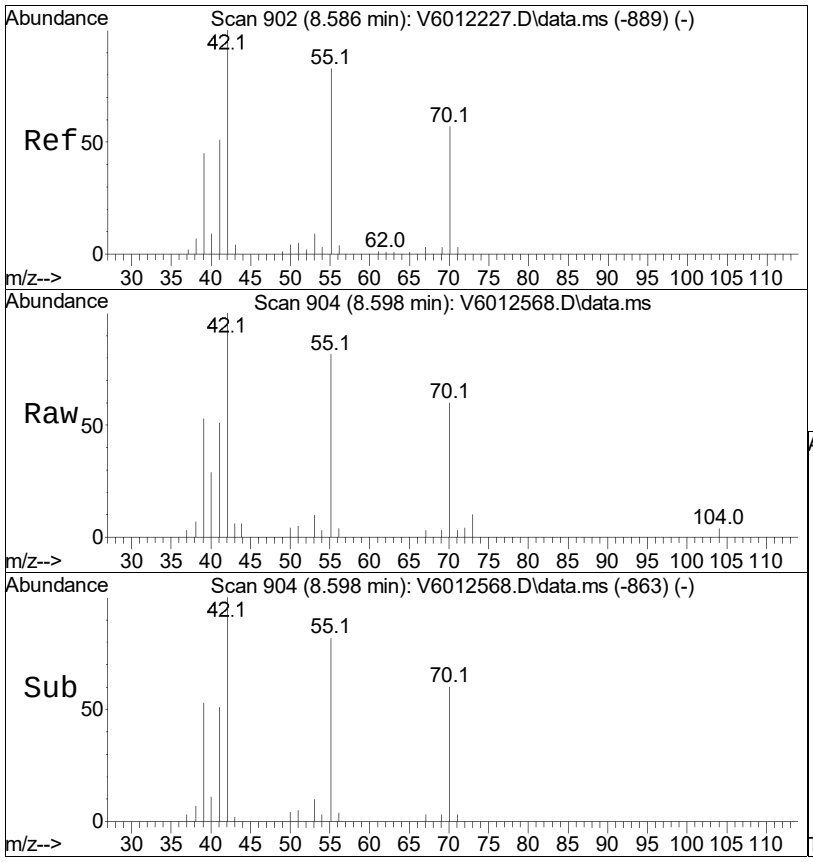
Quantitation Report (QT Reviewed)

Data Path : O:\Organics\DATA\VOA6\2020\09-SEP\200929\
Data File : V6012568.D
Acq On : 29 Sep 2020 7:53 pm
Operator : VOA6:RY
Sample : WG1416337-4,31,5,5
Misc : WG1416337,ICAL17149
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Sep 30 09:19:21 2020
Quant Method : O:\Organics\DATA\VOA6\2020\09-SEP\200929\P6091820W.M
Quant Title : PIANO VOLATILES
QLast Update : Sat Sep 19 08:40:17 2020
Response via : Initial Calibration

Sub List : PIANO - PIANO

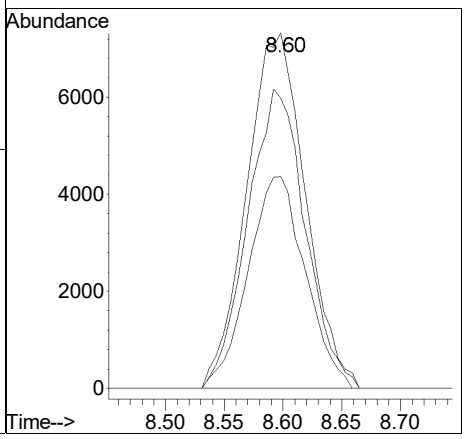


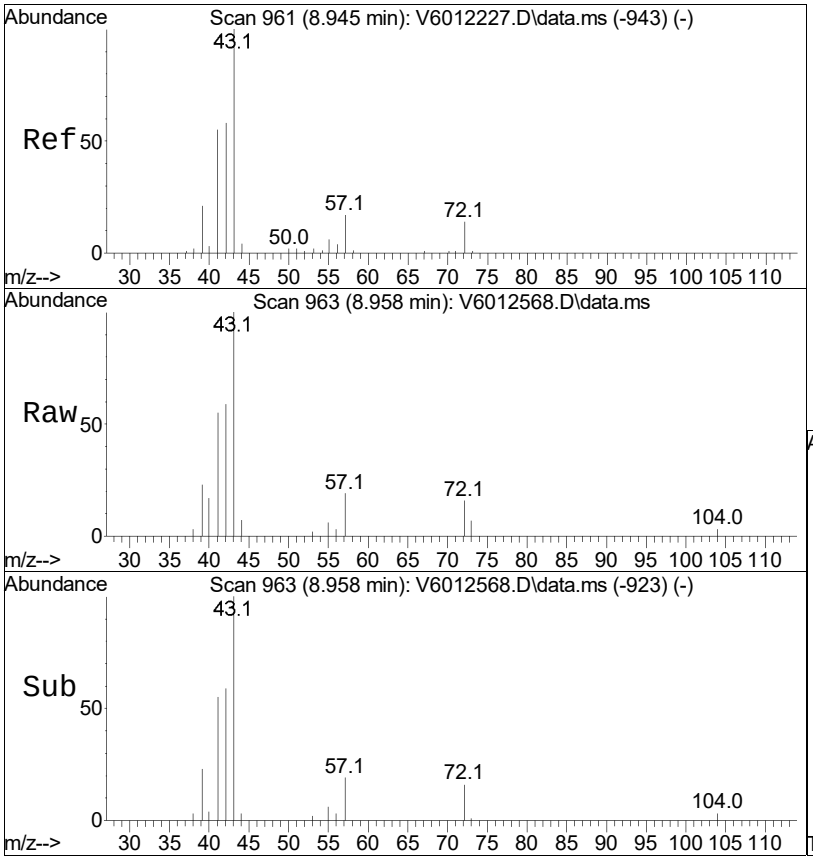


#4
1-Pentene
Concen: 15.02 ug/L
RT: 8.60 min Scan# 904
Delta R.T. 0.000 min
Lab File: V6012568.D
Acq: 29 Sep 2020 7:53 pm

Tgt Ion: 42 Resp: 25485

Ion	Ratio	Lower	Upper
42	100		
55	81.6	63.5	103.5
70	59.6	37.3	77.3

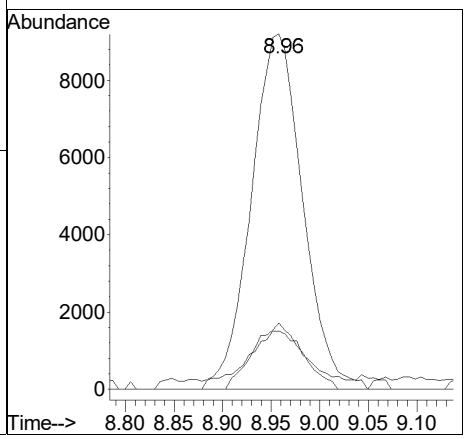


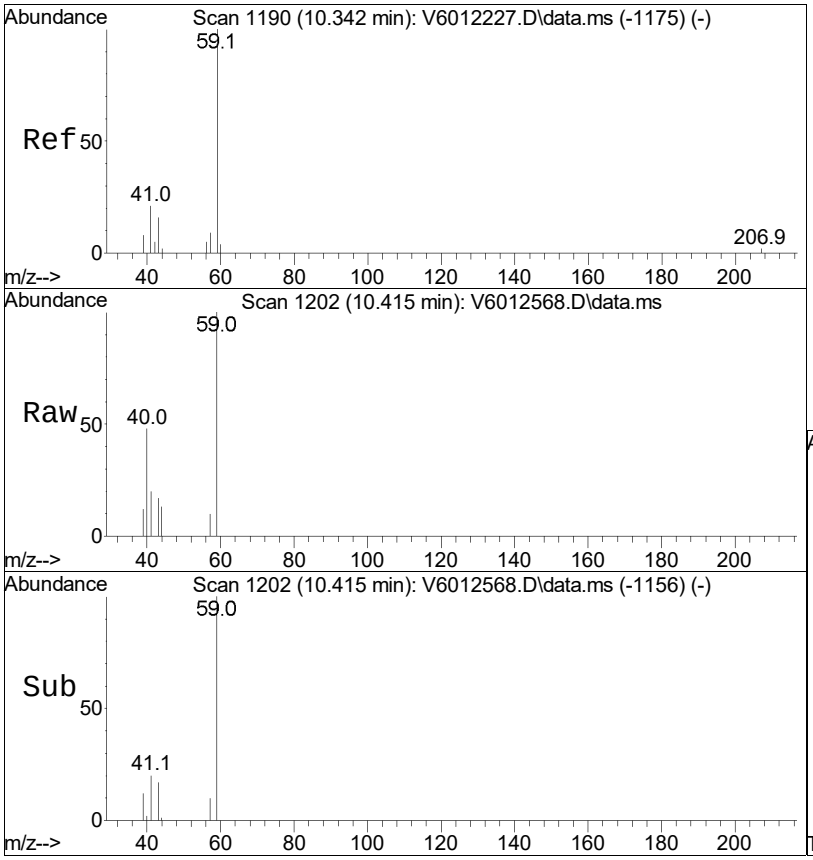


#6
Pentane
Concen: 12.64 ug/L
RT: 8.96 min Scan# 963
Delta R.T. -0.006 min
Lab File: V6012568.D
Acq: 29 Sep 2020 7:53 pm

Tgt Ion: 43 Resp: 33838

Ion	Ratio	Lower	Upper
43	100		
57	18.7	0.0	37.3
72	16.4	0.0	34.4

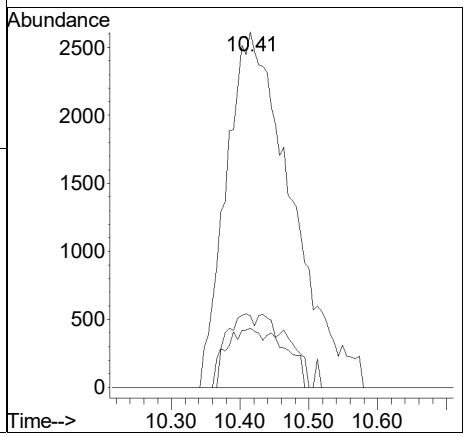


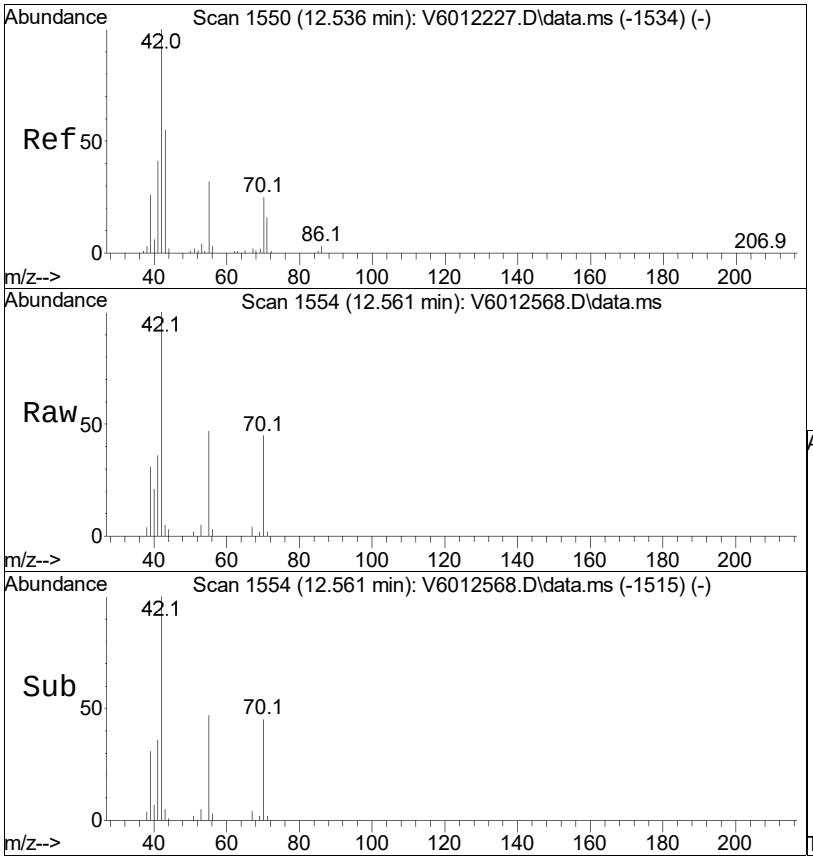


#10
Tertiary butanol
Concen: 72.48 ug/L
RT: 10.41 min Scan# 1202
Delta R.T. 0.031 min
Lab File: V6012568.D
Acq: 29 Sep 2020 7:53 pm

Tgt Ion: 59 Resp: 17132

Ion	Ratio	Lower	Upper
59	100		
41	20.1	0.6	40.6
43	16.7	0.0	35.5

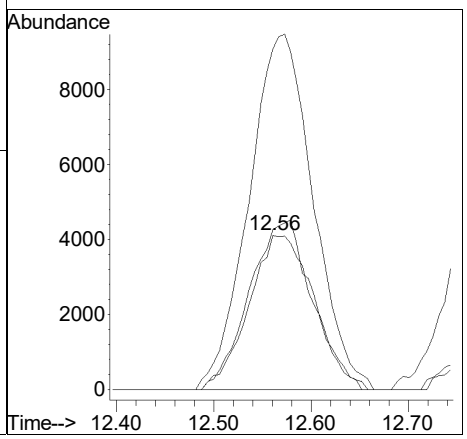


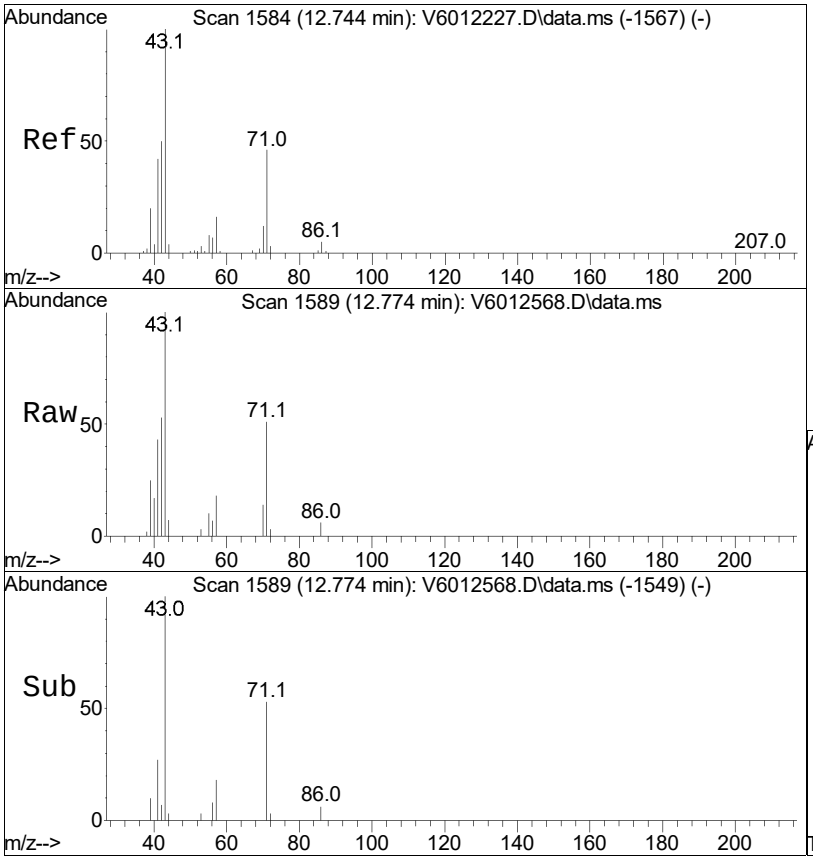


#13
Cyclopentane
Concen: 16.74 ug/L
RT: 12.56 min Scan# 1554
Delta R.T. -0.012 min
Lab File: V6012568.D
Acq: 29 Sep 2020 7:53 pm

Tgt Ion: 70 Resp: 18903

Ion	Ratio	Lower	Upper
70	100		
42	221.0	391.7	431.7#
55	103.7	110.4	150.4#

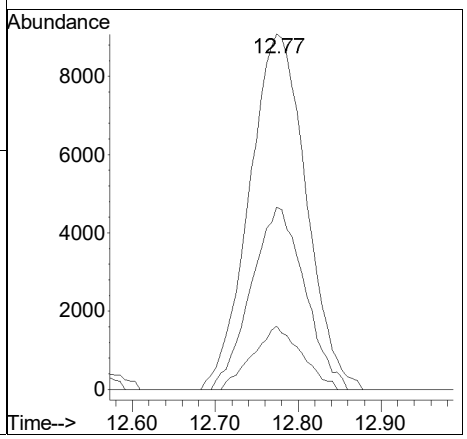


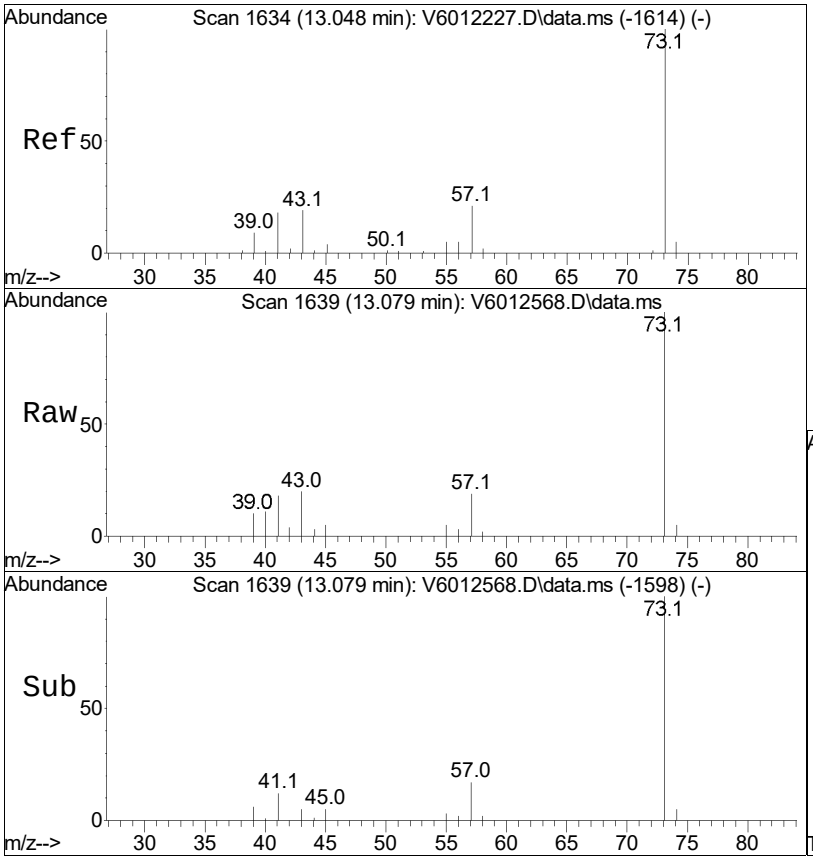


#15
2-Methylpentane
Concen: 14.92 ug/L
RT: 12.77 min Scan# 1589
Delta R.T. -0.006 min
Lab File: V6012568.D
Acq: 29 Sep 2020 7:53 pm

Tgt Ion: 43 Resp: 43240

Ion	Ratio	Lower	Upper
43	100		
71	51.3	26.3	66.3
57	17.8	0.0	35.9

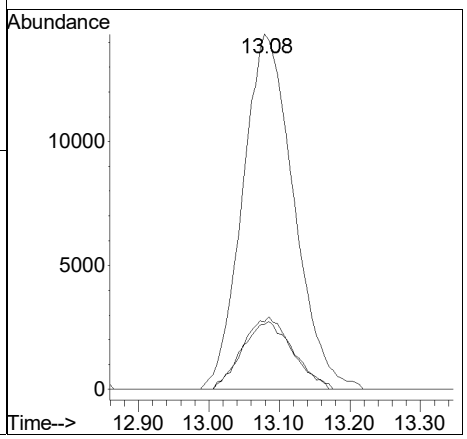


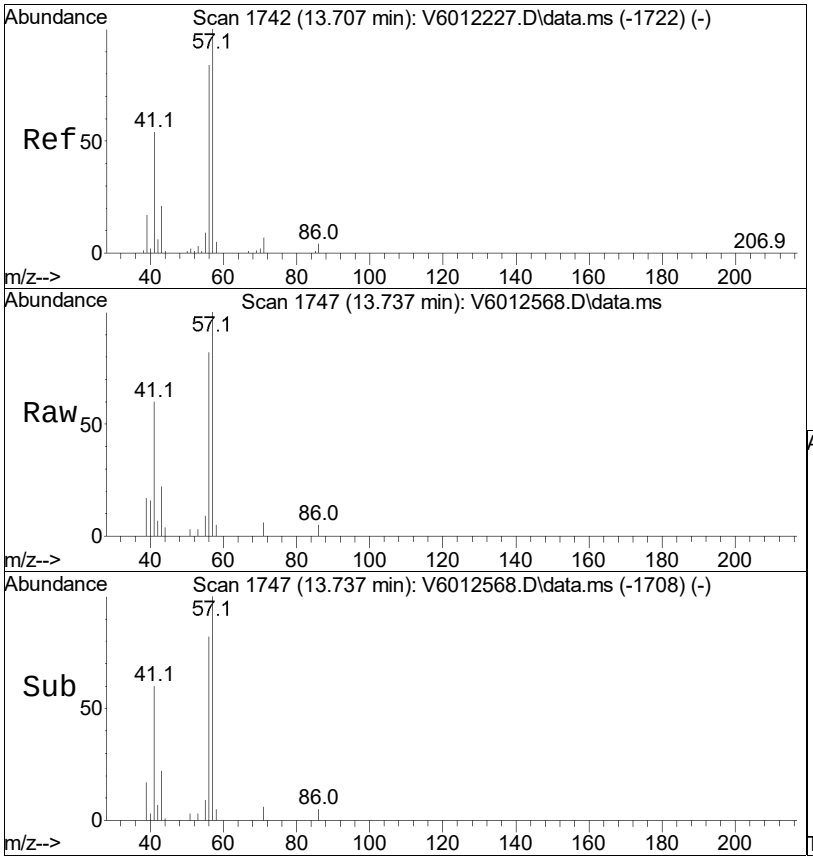


#16
MTBE
Concen: 19.91 ug/L
RT: 13.08 min Scan# 1639
Delta R.T. 0.000 min
Lab File: V6012568.D
Acq: 29 Sep 2020 7:53 pm

Tgt Ion: 73 Resp: 72166

Ion	Ratio	Lower	Upper
73	100		
57	19.0	1.0	41.0
41	18.3	0.0	38.4

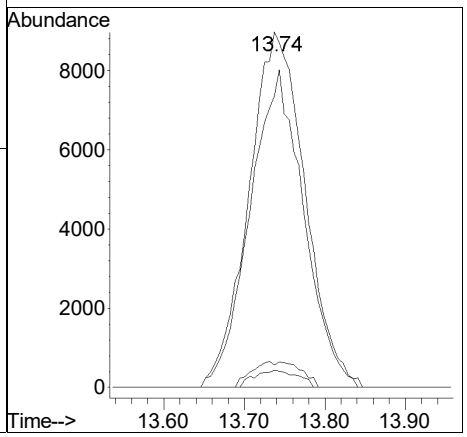


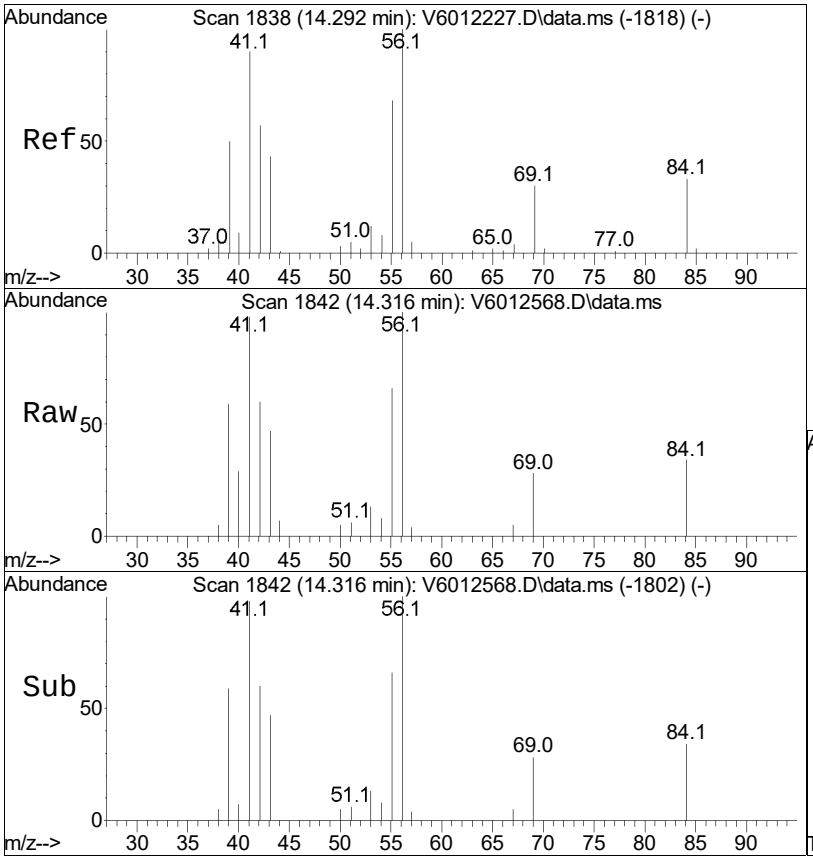


#17
3-Methylpentane
Concen: 16.64 ug/L
RT: 13.74 min Scan# 1747
Delta R.T. -0.012 min
Lab File: V6012568.D
Acq: 29 Sep 2020 7:53 pm

Tgt Ion: 57 Resp: 43601

Ion	Ratio	Lower	Upper
57	100		
56	82.0	63.7	103.7
71	6.3	0.0	26.6
86	4.8	0.0	23.8

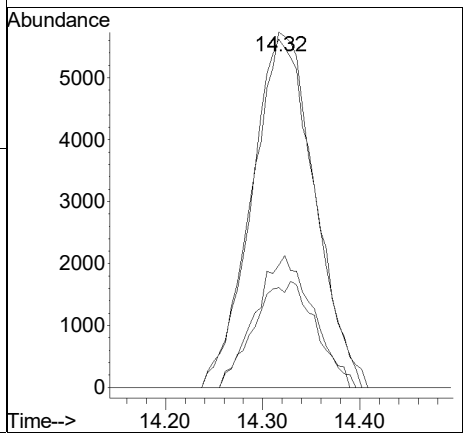


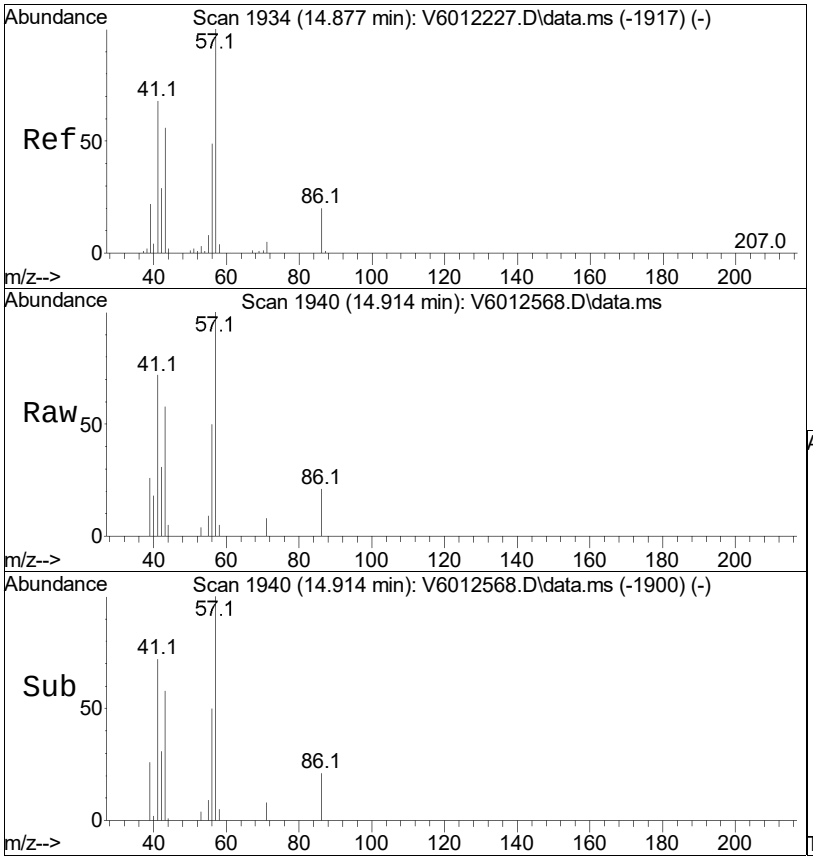


#18
1-Hexene
Concen: 17.12 ug/L
RT: 14.32 min Scan# 1842
Delta R.T. -0.006 min
Lab File: V6012568.D
Acq: 29 Sep 2020 7:53 pm

Tgt Ion: 56 Resp: 25532

Ion	Ratio	Lower	Upper
56	100		
41	98.0	70.0	110.0
84	34.4	13.4	53.4
69	28.0	10.0	50.0

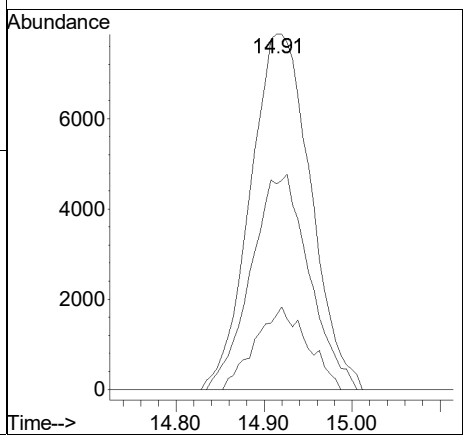


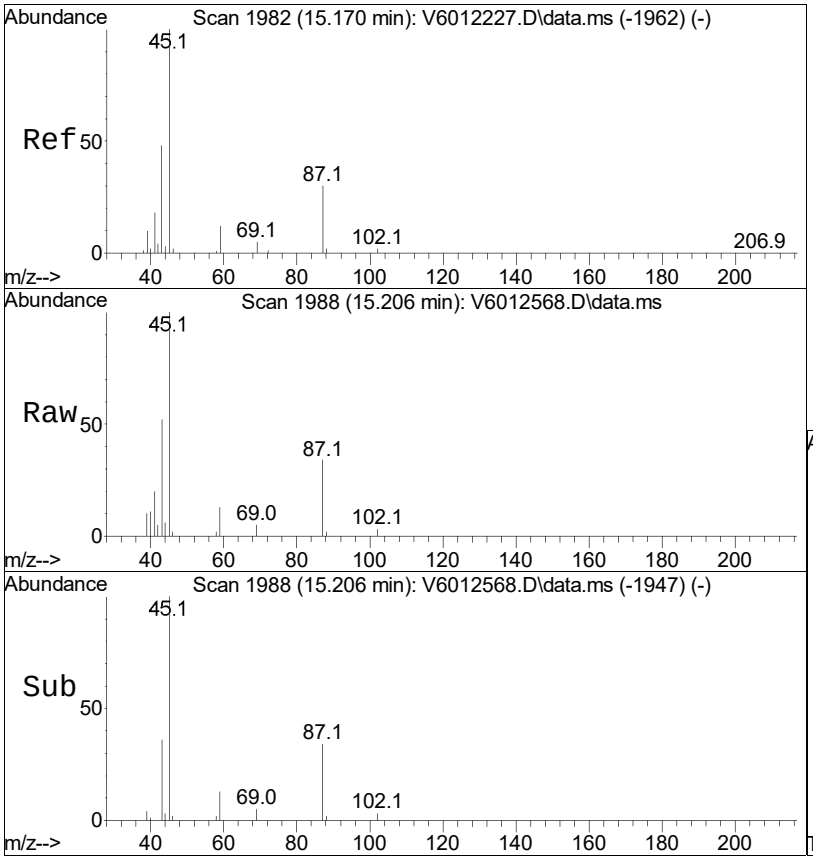


#19
Hexane
Concen: 17.50 ug/L
RT: 14.91 min Scan# 1940
Delta R.T. -0.006 min
Lab File: V6012568.D
Acq: 29 Sep 2020 7:53 pm

Tgt Ion: 57 Resp: 37435

Ion	Ratio	Lower	Upper
57	100		
43	57.8	36.0	76.0
86	20.9	0.0	39.8

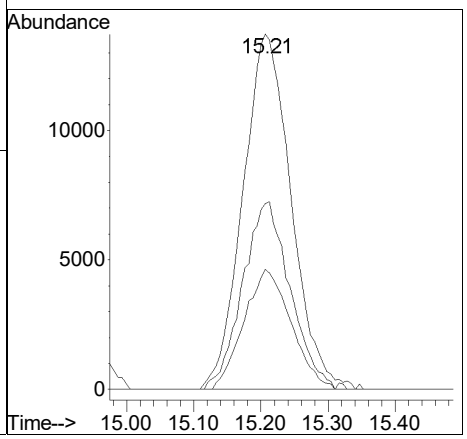


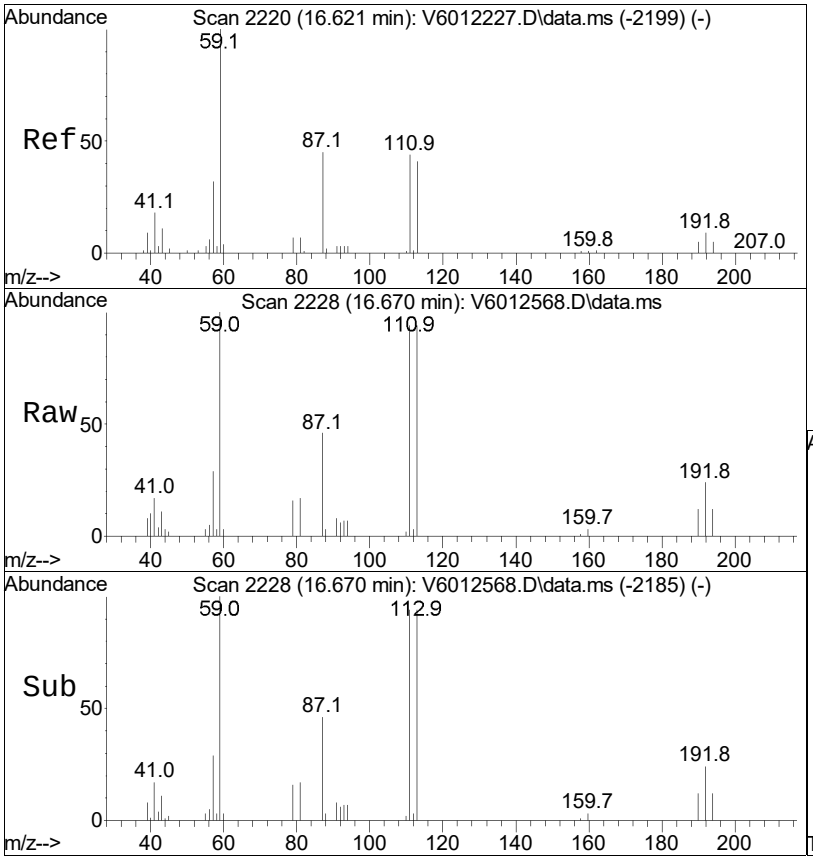


#20
Diisopropyl ether
Concen: 18.87 ug/L
RT: 15.21 min Scan# 1988
Delta R.T. 0.000 min
Lab File: V6012568.D
Acq: 29 Sep 2020 7:53 pm

Tgt Ion: 45 Resp: 68673

Ion	Ratio	Lower	Upper
45	100		
87	33.8	10.3	50.3
43	52.3	28.8	68.8

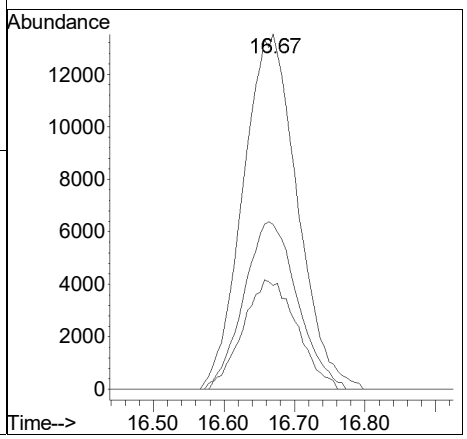


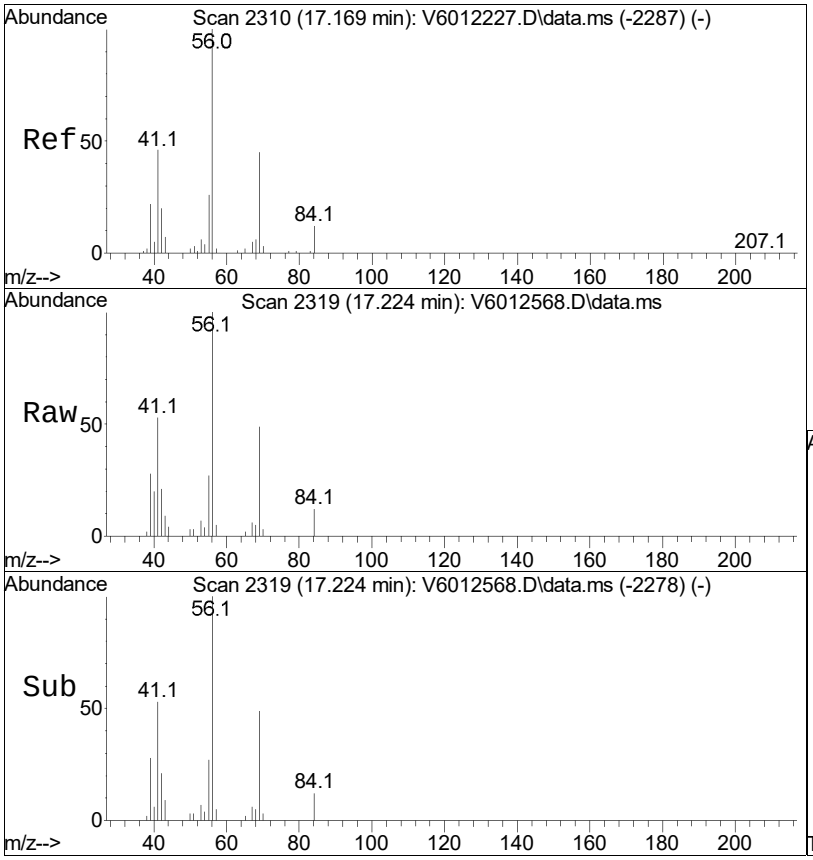


#25
Ethyl tertiary butyl ether
Concen: 19.17 ug/L
RT: 16.67 min Scan# 2228
Delta R.T. 0.012 min
Lab File: V6012568.D
Acq: 29 Sep 2020 7:53 pm

Tgt Ion: 59 Resp: 72491

Ion	Ratio	Lower	Upper
59	100		
87	46.4	24.8	64.8
57	29.2	12.4	52.4

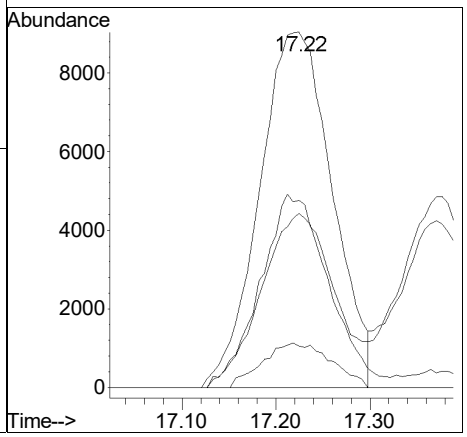


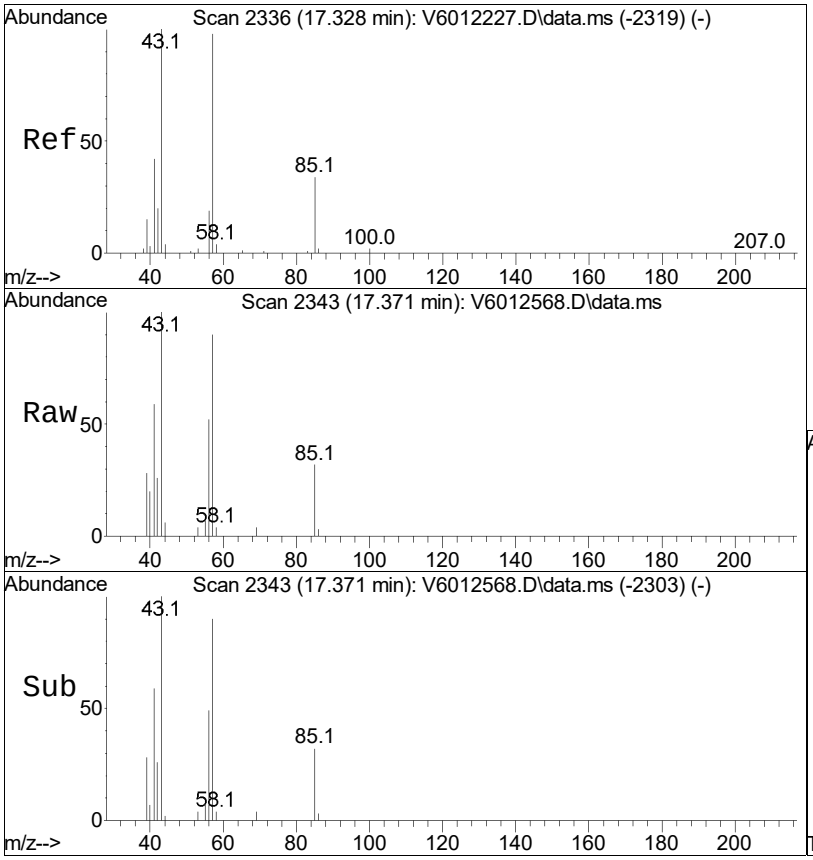


#27
Methylcyclopentane
Concen: 17.81 ug/L
RT: 17.22 min Scan# 2319
Delta R.T. 0.000 min
Lab File: V6012568.D
Acq: 29 Sep 2020 7:53 pm

Tgt Ion: 56 Resp: 48592

Ion	Ratio	Lower	Upper
56	100		
69	48.9	25.0	65.0
41	52.7	26.3	66.3
84	11.7	0.0	31.8

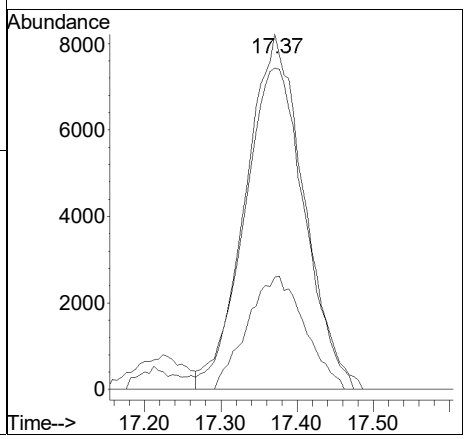


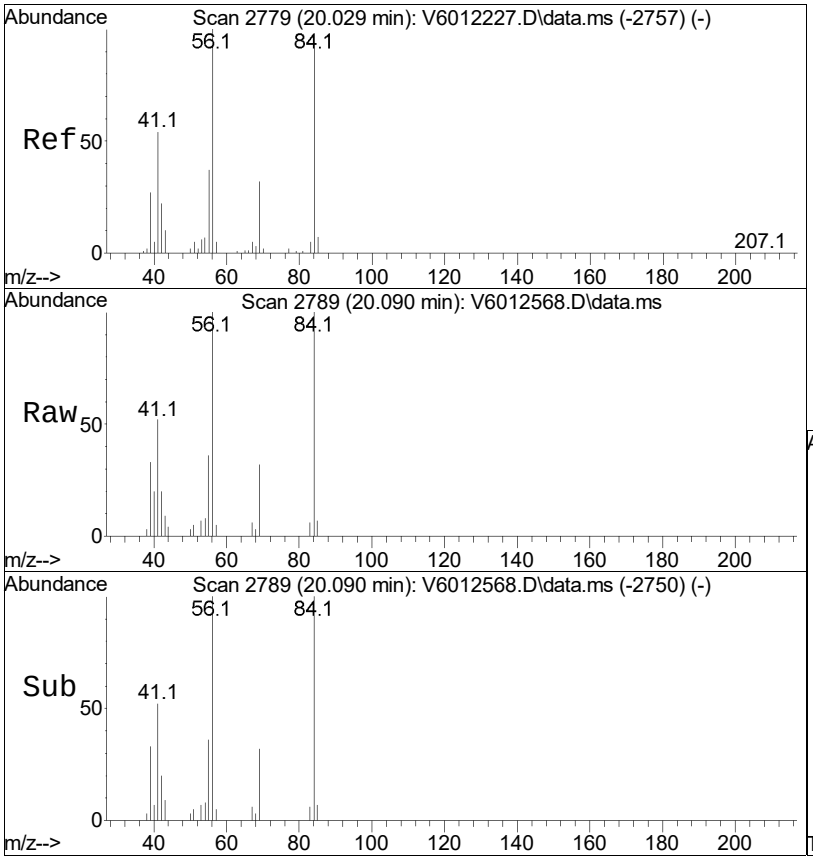


#28
2,4-Dimethylpentane
Concen: 16.62 ug/L
RT: 17.37 min Scan# 2343
Delta R.T. -0.006 min
Lab File: V6012568.D
Acq: 29 Sep 2020 7:53 pm

Tgt Ion: 43 Resp: 43807

Ion	Ratio	Lower	Upper
43	100		
57	90.4	77.1	117.1
85	31.6	12.0	52.0

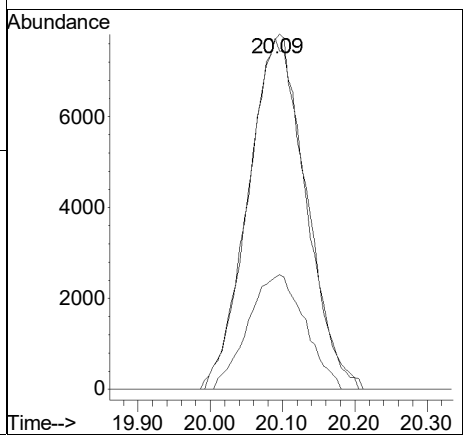


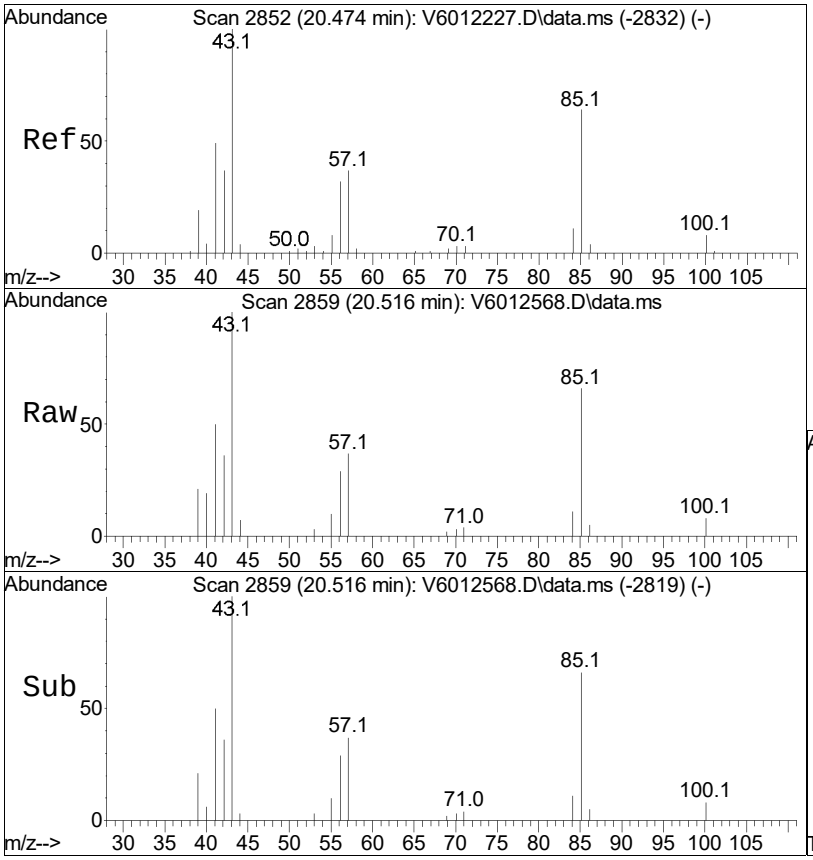


#32
Cyclohexane
Concen: 18.86 ug/L
RT: 20.09 min Scan# 2789
Delta R.T. -0.012 min
Lab File: V6012568.D
Acq: 29 Sep 2020 7:53 pm

Tgt Ion: 56 Resp: 42871

Ion	Ratio	Lower	Upper
56	100		
84	99.7	77.5	117.5
69	31.9	12.1	52.1

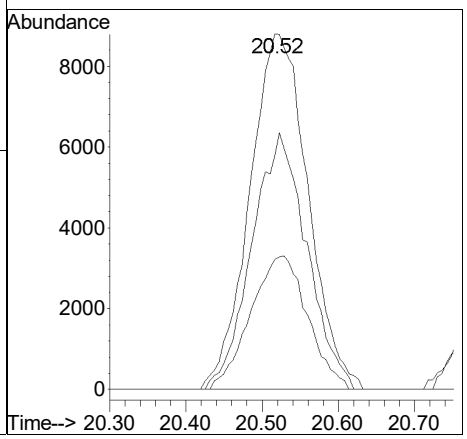


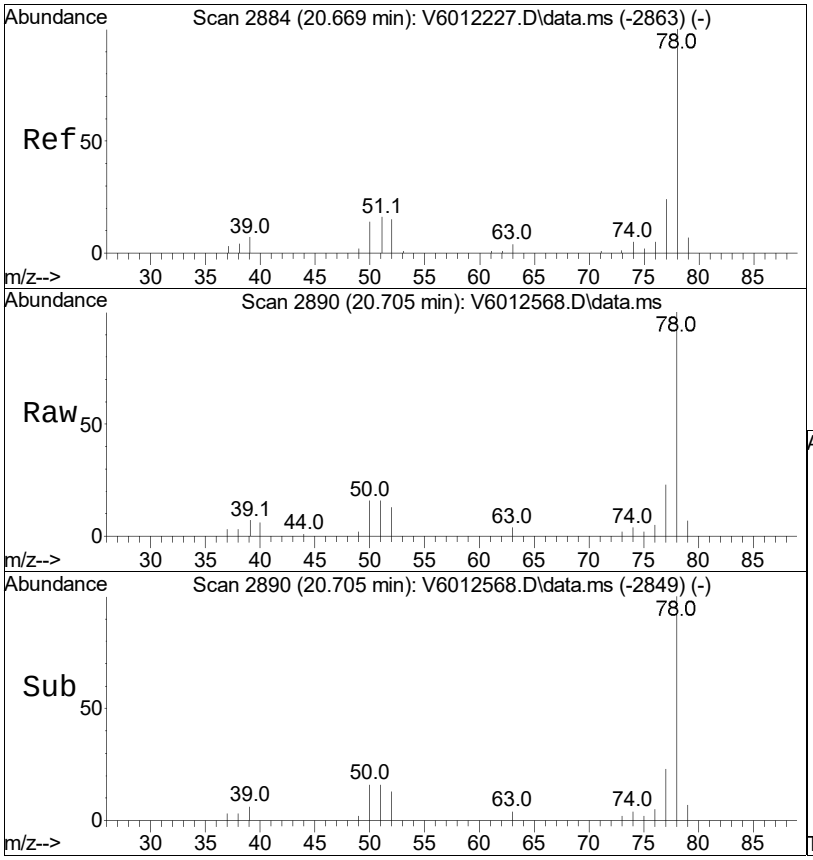


#33
2-Methylhexane
Concen: 16.98 ug/L
RT: 20.52 min Scan# 2859
Delta R.T. -0.006 min
Lab File: V6012568.D
Acq: 29 Sep 2020 7:53 pm

Tgt Ion: 43 Resp: 46762

Ion	Ratio	Lower	Upper
43	100		
85	65.7	43.9	83.9
57	36.6	16.6	56.6

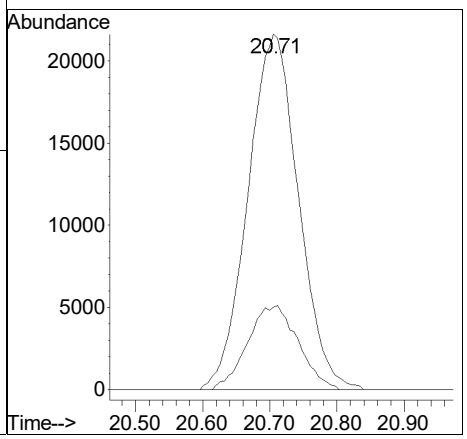


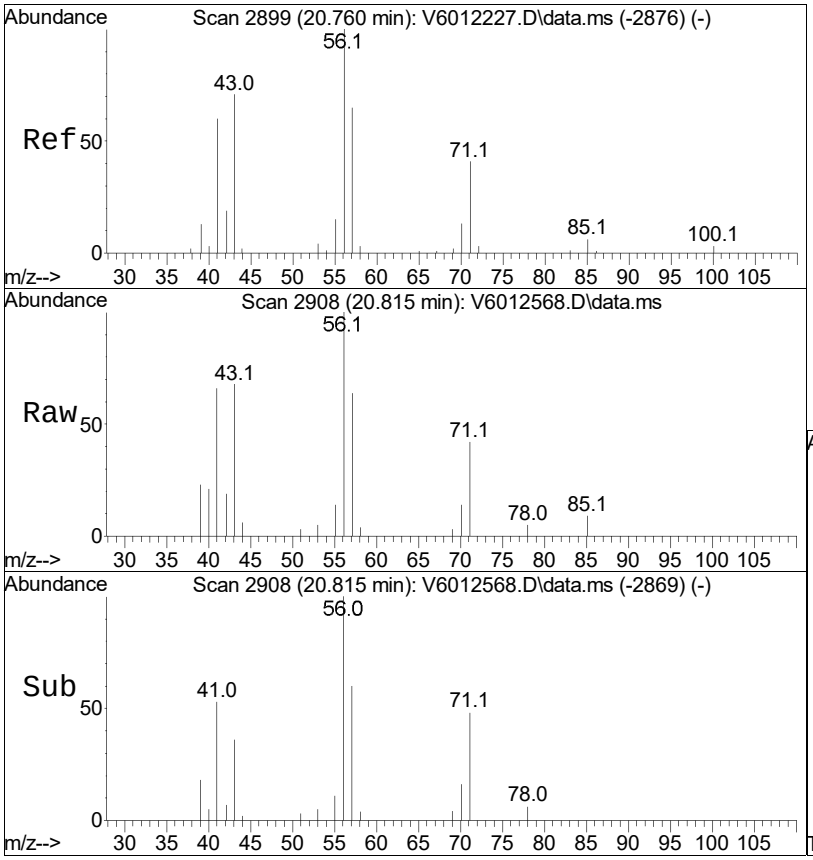


#34
Benzene
Concen: 19.76 ug/L
RT: 20.71 min Scan# 2890
Delta R.T. 0.000 min
Lab File: V6012568.D
Acq: 29 Sep 2020 7:53 pm

Tgt Ion: 78 Resp: 113056

Ion	Ratio	Lower	Upper
78	100		
77	23.2	3.7	43.7

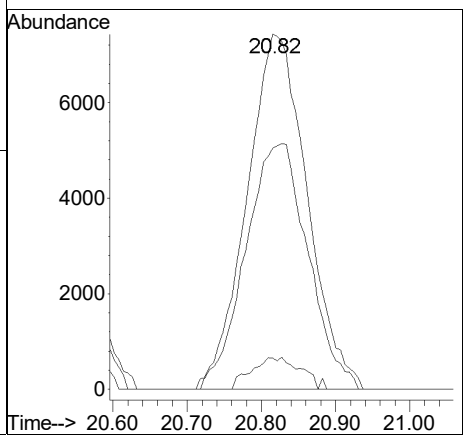


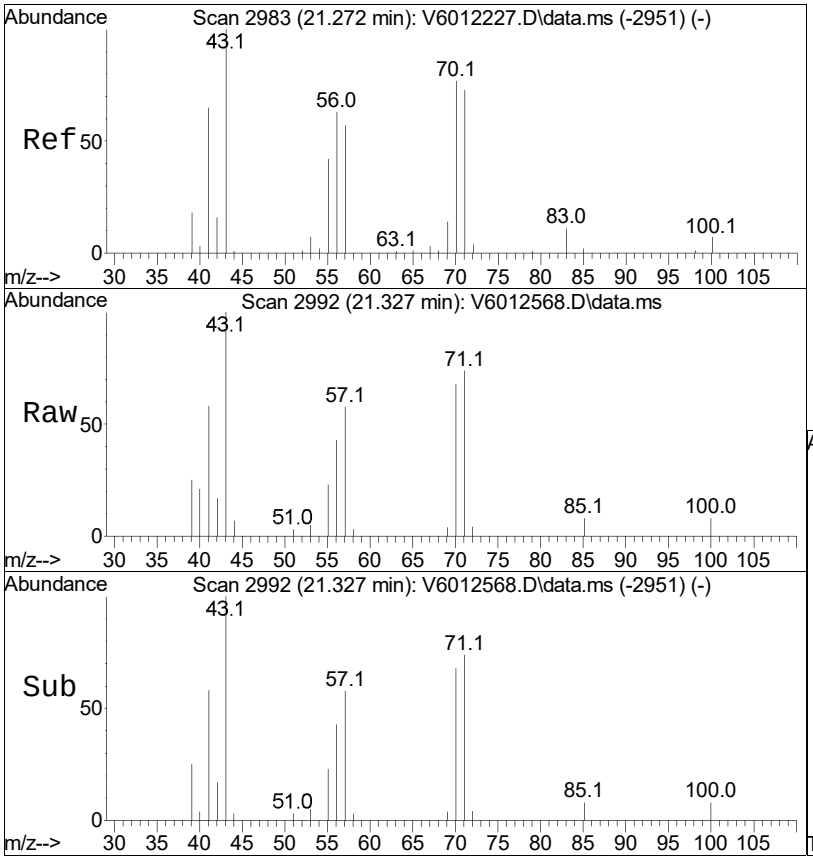


#35
2,3-Dimethylpentane
Concen: 18.07 ug/L
RT: 20.82 min Scan# 2908
Delta R.T. -0.012 min
Lab File: V6012568.D
Acq: 29 Sep 2020 7:53 pm

Tgt Ion: 56 Resp: 41856

Ion	Ratio	Lower	Upper
56	100		
43	67.9	52.1	92.1
85	8.8	0.0	27.1

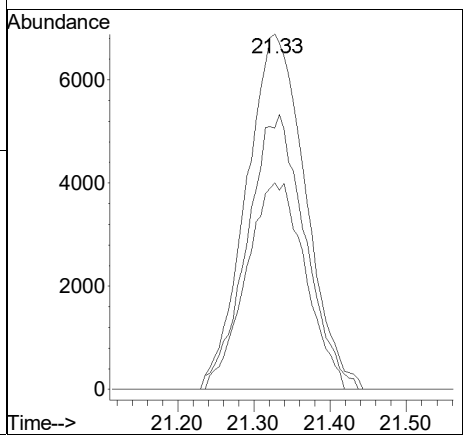


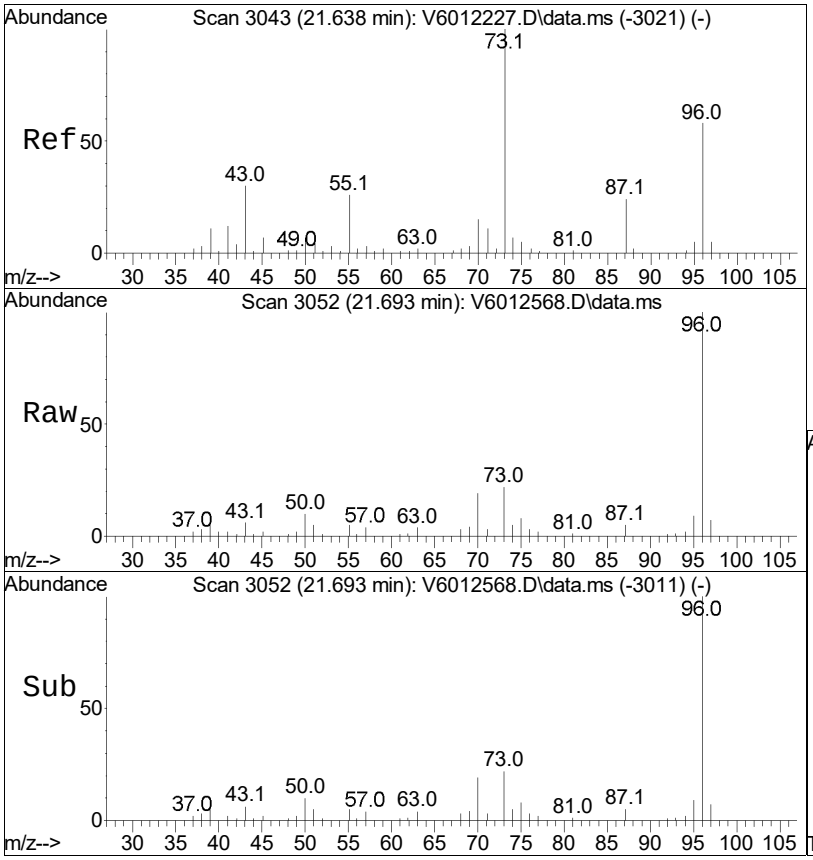


#38
3-Methylhexane
Concen: 15.23 ug/L
RT: 21.33 min Scan# 2992
Delta R.T. 0.000 min
Lab File: V6012568.D
Acq: 29 Sep 2020 7:53 pm

Tgt Ion: 43 Resp: 37433

Ion	Ratio	Lower	Upper
43	100		
57	58.1	46.6	86.6
71	73.6	53.2	93.2

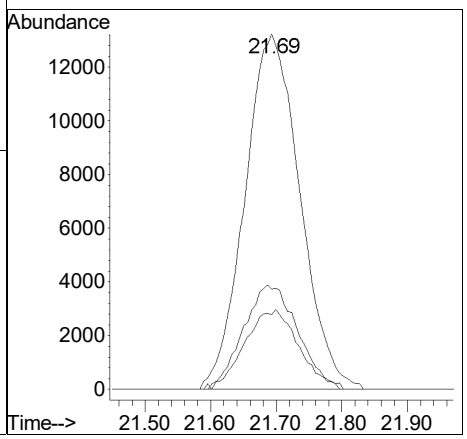


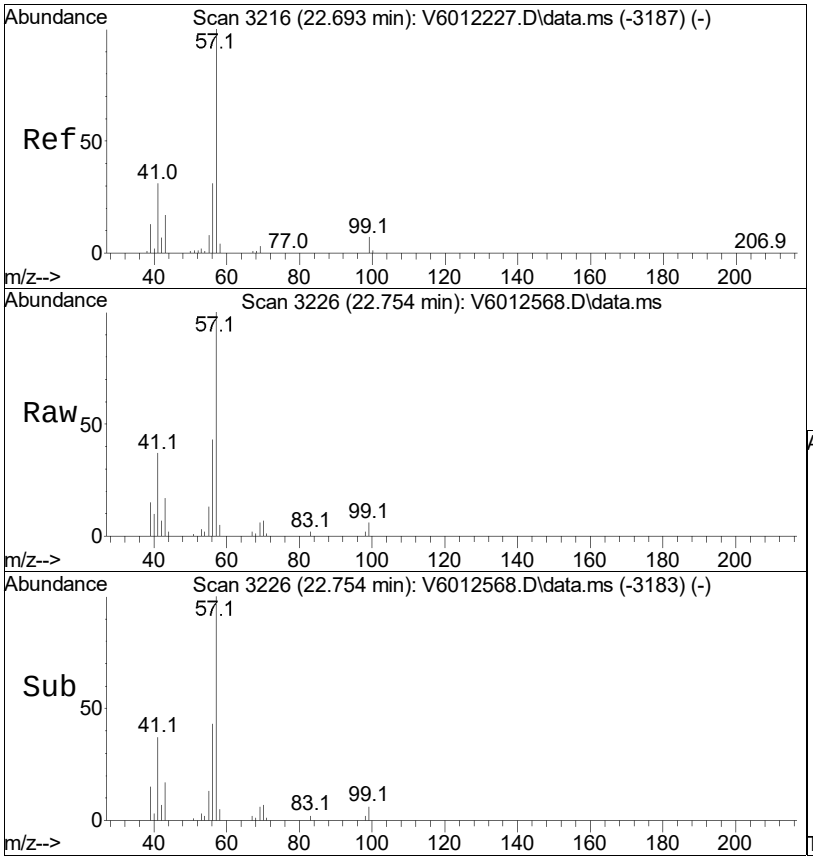


#39
TAME
Concen: 17.61 ug/L
RT: 21.69 min Scan# 3052
Delta R.T. 0.000 min
Lab File: V6012568.D
Acq: 29 Sep 2020 7:53 pm

Tgt Ion: 73 Resp: 77275

Ion	Ratio	Lower	Upper
73	100		
43	28.2	10.7	50.7
55	21.0	6.2	46.2

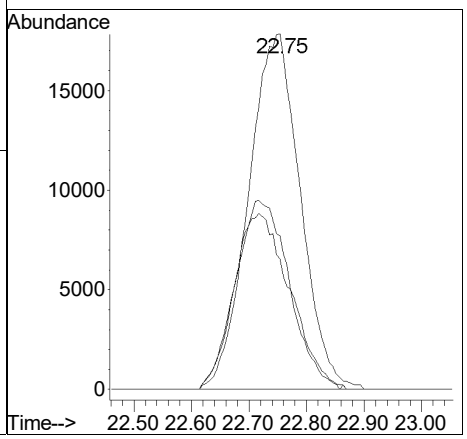


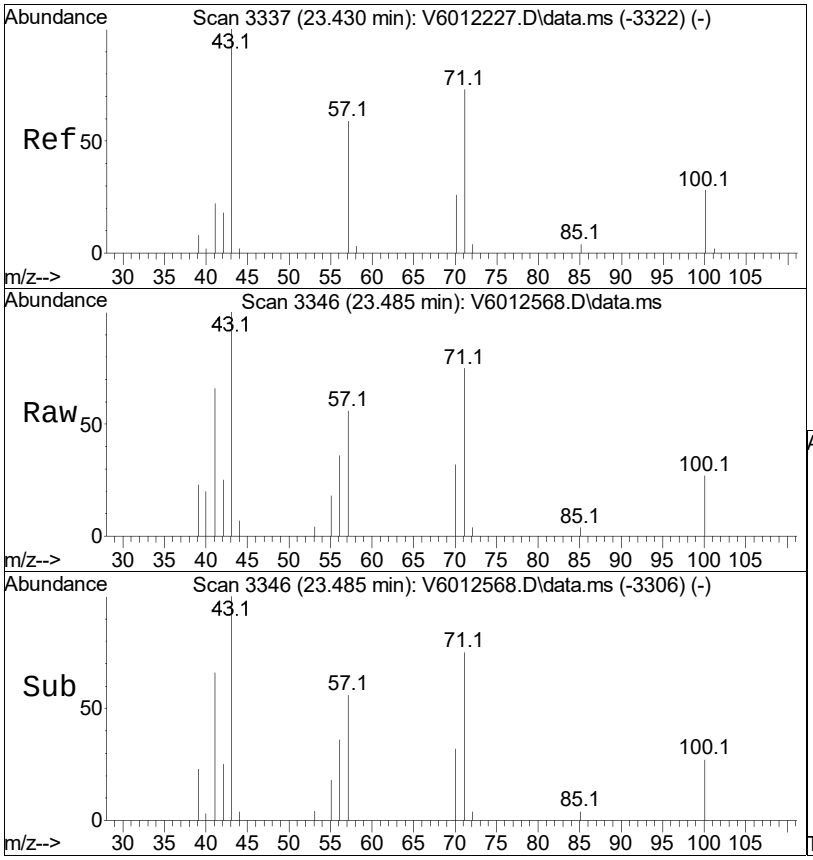


#44
Isooctane
Concen: 18.96 ug/L
RT: 22.75 min Scan# 3226
Delta R.T. 0.012 min
Lab File: V6012568.D
Acq: 29 Sep 2020 7:53 pm

Tgt Ion: 57 Resp: 111744

Ion	Ratio	Lower	Upper
57	100		
41	36.7	19.7	59.7
56	43.2	29.1	69.1

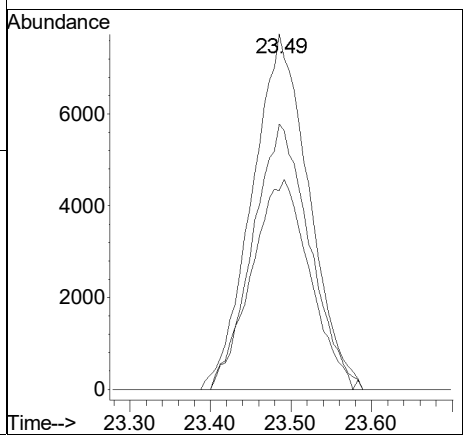


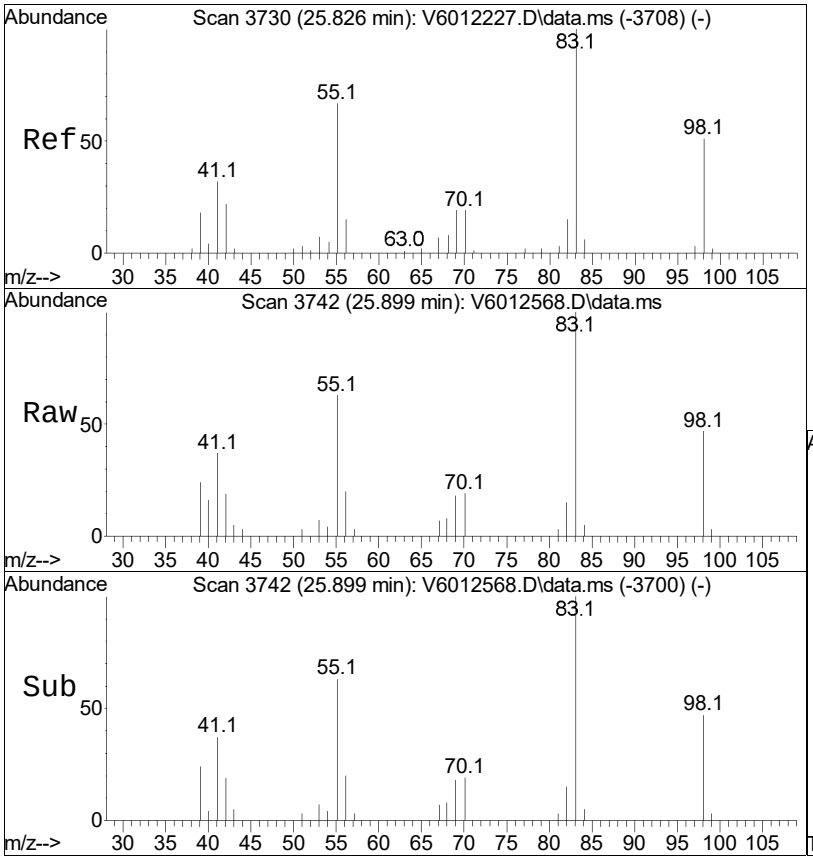


#46
Heptane
Concen: 16.60 ug/L
RT: 23.49 min Scan# 3346
Delta R.T. -0.006 min
Lab File: V6012568.D
Acq: 29 Sep 2020 7:53 pm

Tgt Ion: 43 Resp: 38022

Ion	Ratio	Lower	Upper
43	100		
57	56.0	41.1	81.1
71	74.7	50.3	90.3

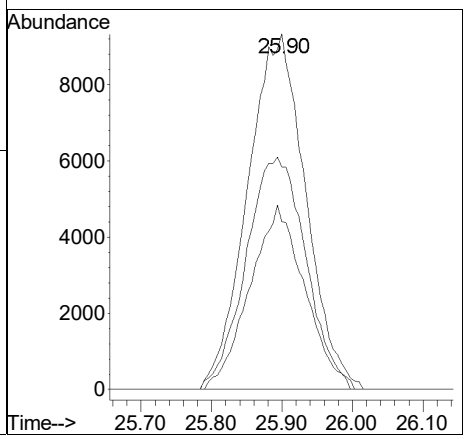


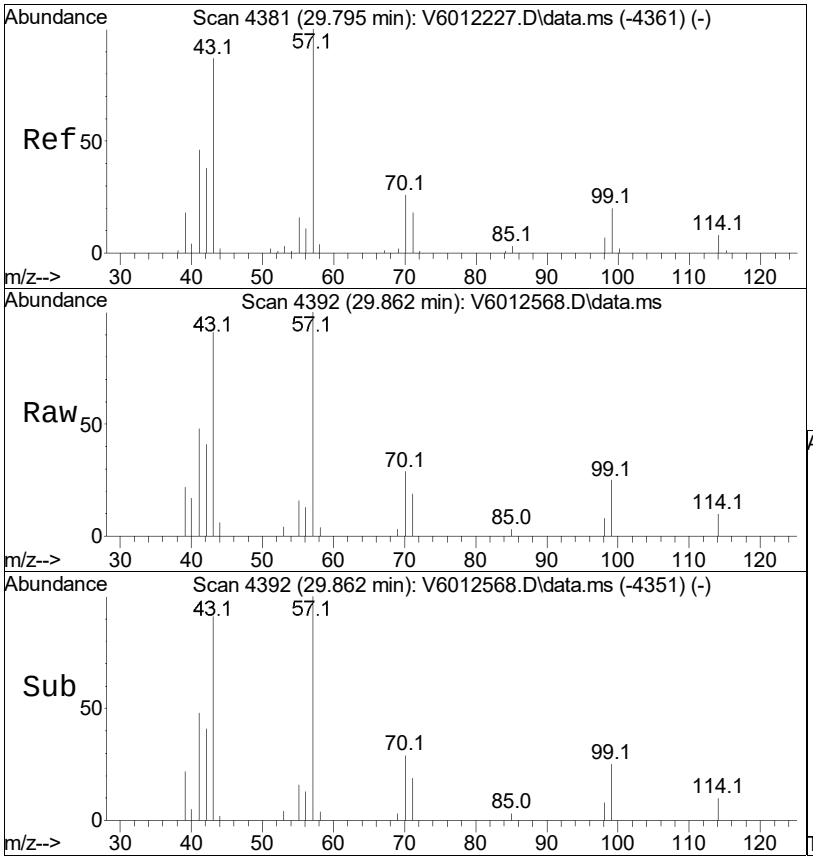


#51
Methylcyclohexane
Concen: 20.10 ug/L
RT: 25.90 min Scan# 3742
Delta R.T. 0.006 min
Lab File: V6012568.D
Acq: 29 Sep 2020 7:53 pm

Tgt Ion: 83 Resp: 53401

Ion	Ratio	Lower	Upper
83	100		
55	62.6	48.9	88.9
98	47.3	30.6	70.6

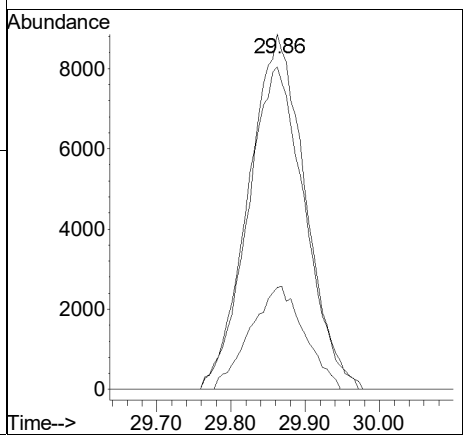


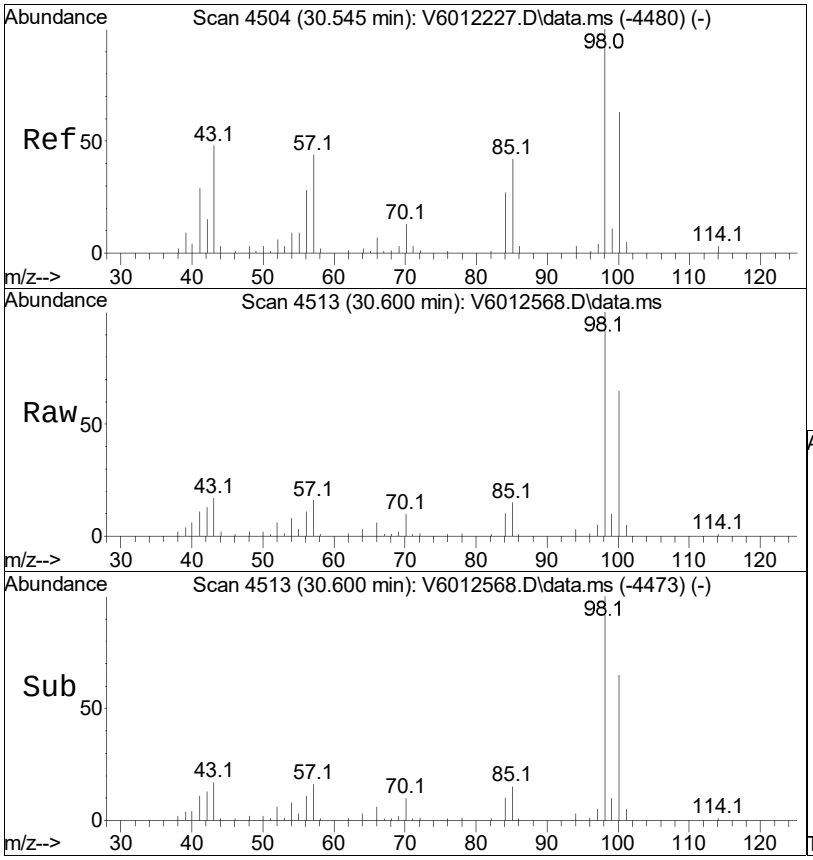


#60
2-Methylheptane
Concen: 17.78 ug/L
RT: 29.86 min Scan# 4392
Delta R.T. 0.000 min
Lab File: V6012568.D
Acq: 29 Sep 2020 7:53 pm

Tgt Ion: 57 Resp: 47185

Ion	Ratio	Lower	Upper
57	100		
43	90.8	66.6	106.6
70	28.7	5.8	45.8

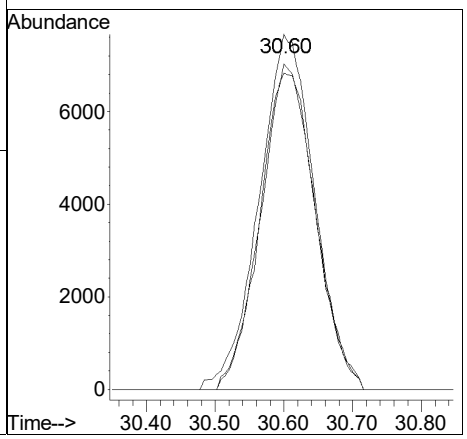


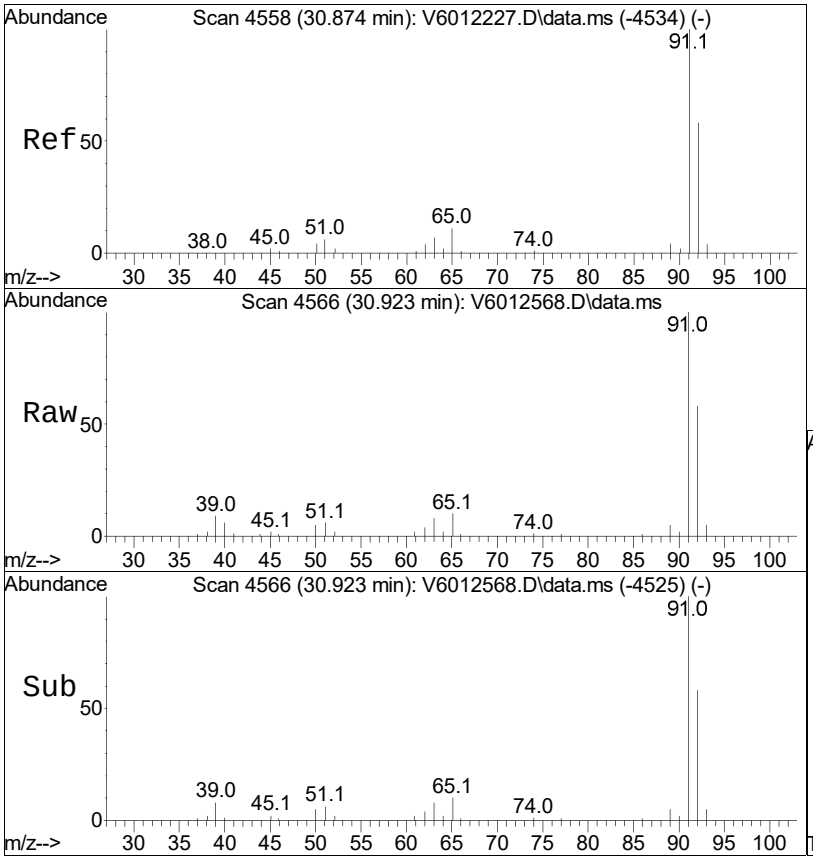


#63
3-Methylheptane
Concen: 16.52 ug/L
RT: 30.60 min Scan# 4513
Delta R.T. -0.006 min
Lab File: V6012568.D
Acq: 29 Sep 2020 7:53 pm

Tgt Ion: 43 Resp: 43060

Ion	Ratio	Lower	Upper
43	100		
57	91.6	72.5	112.5
85	88.9	68.3	108.3

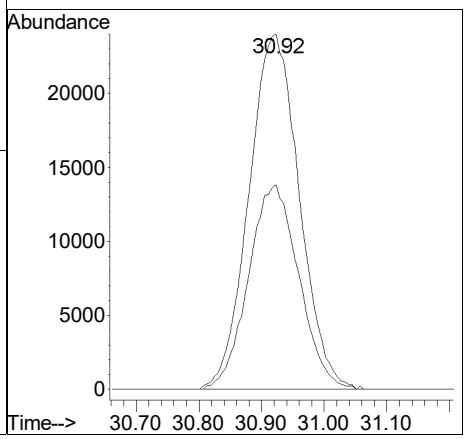


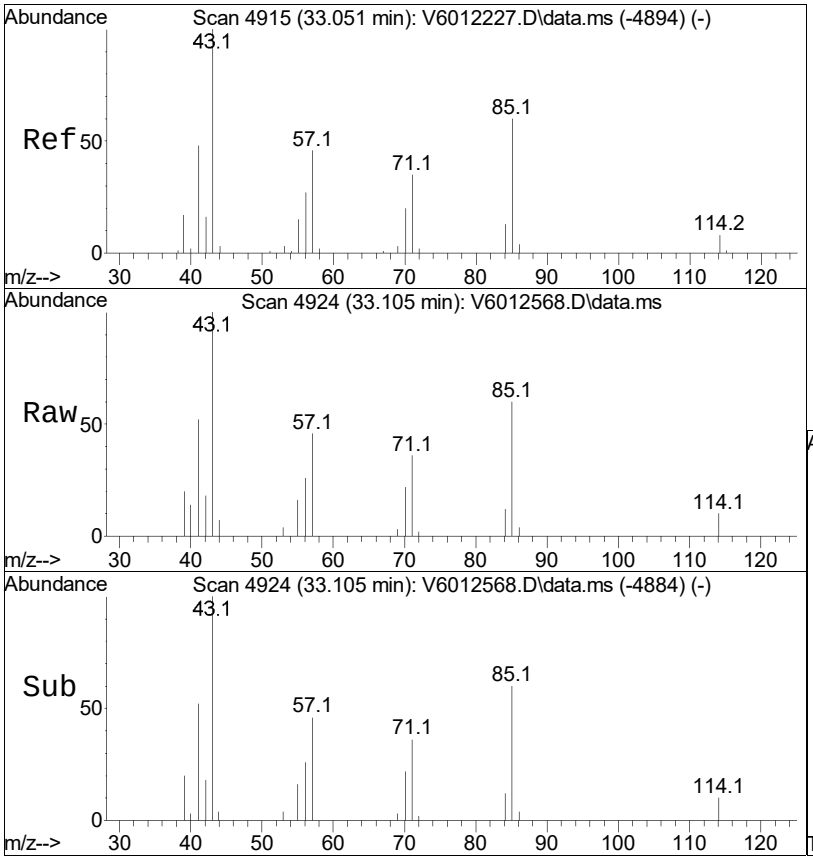


#66
Toluene
Concen: 19.37 ug/L
RT: 30.92 min Scan# 4566
Delta R.T. 0.000 min
Lab File: V6012568.D
Acq: 29 Sep 2020 7:53 pm

Tgt Ion: 91 Resp: 134312

Ion	Ratio	Lower	Upper
91	100		
92	57.7	38.2	78.2

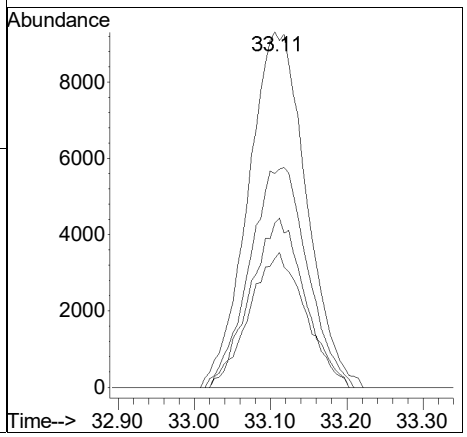


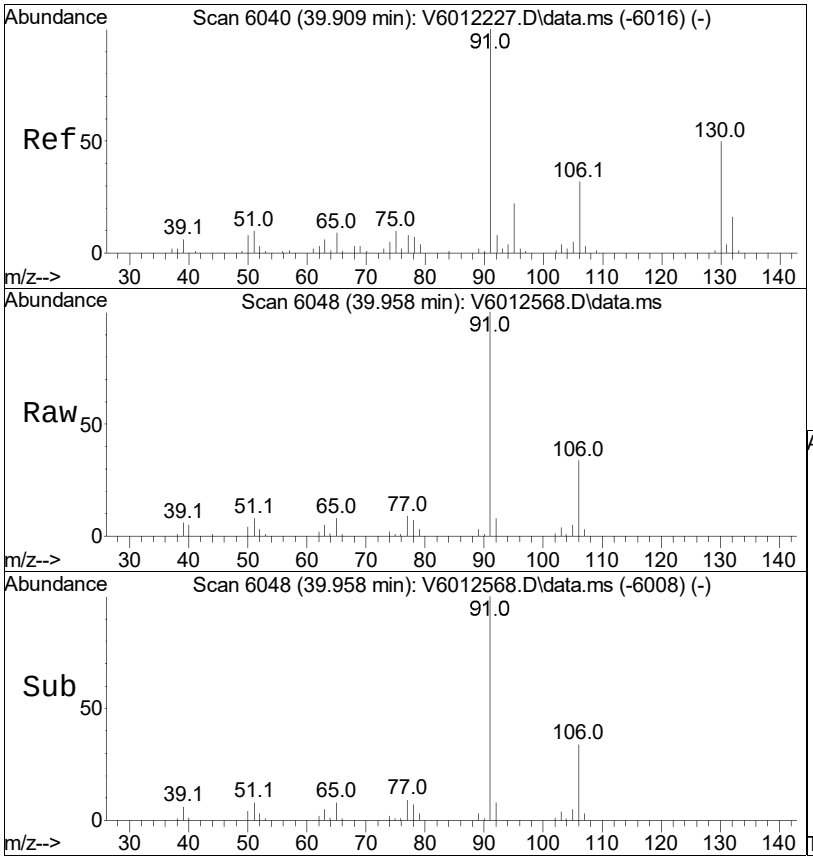


#71
Octane
Concen: 18.58 ug/L
RT: 33.11 min Scan# 4924
Delta R.T. -0.006 min
Lab File: V6012568.D
Acq: 29 Sep 2020 7:53 pm

Tgt Ion: 43 Resp: 49414

Ion	Ratio	Lower	Upper
43	100		
57	46.2	26.0	66.0
85	60.2	39.8	79.8
71	36.2	14.6	54.6

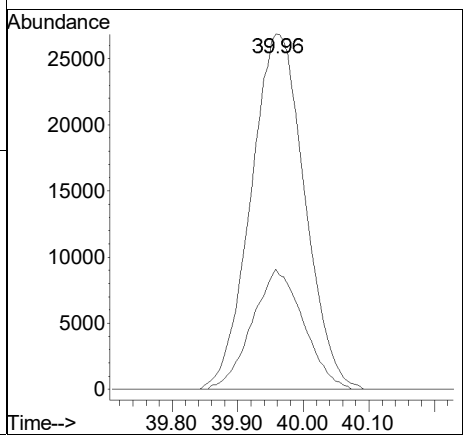


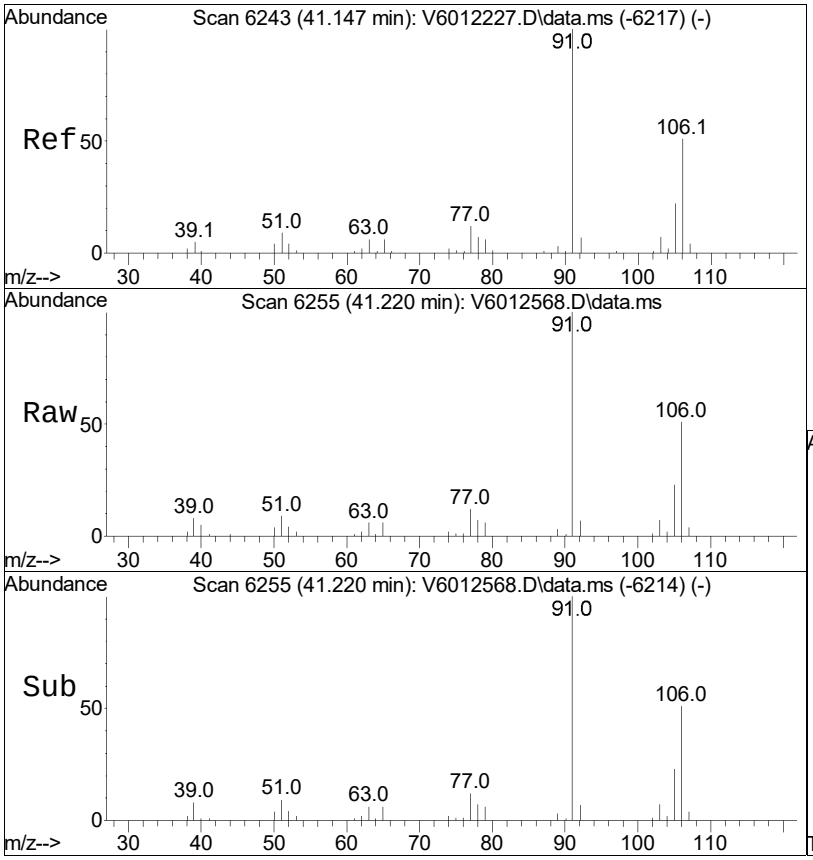


#86
Ethylbenzene
Concen: 19.56 ug/L
RT: 39.96 min Scan# 6048
Delta R.T. -0.006 min
Lab File: V6012568.D
Acq: 29 Sep 2020 7:53 pm

Tgt Ion: 91 Resp: 153301

Ion	Ratio	Lower	Upper
91	100		
106	33.8	12.1	52.1

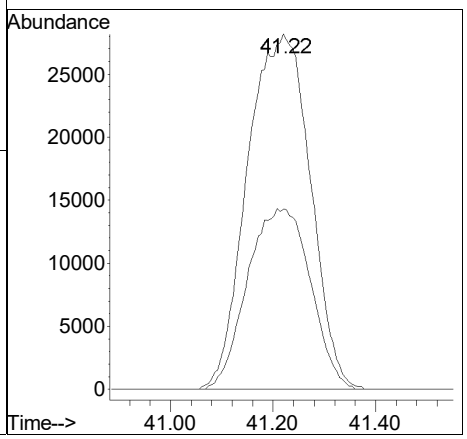


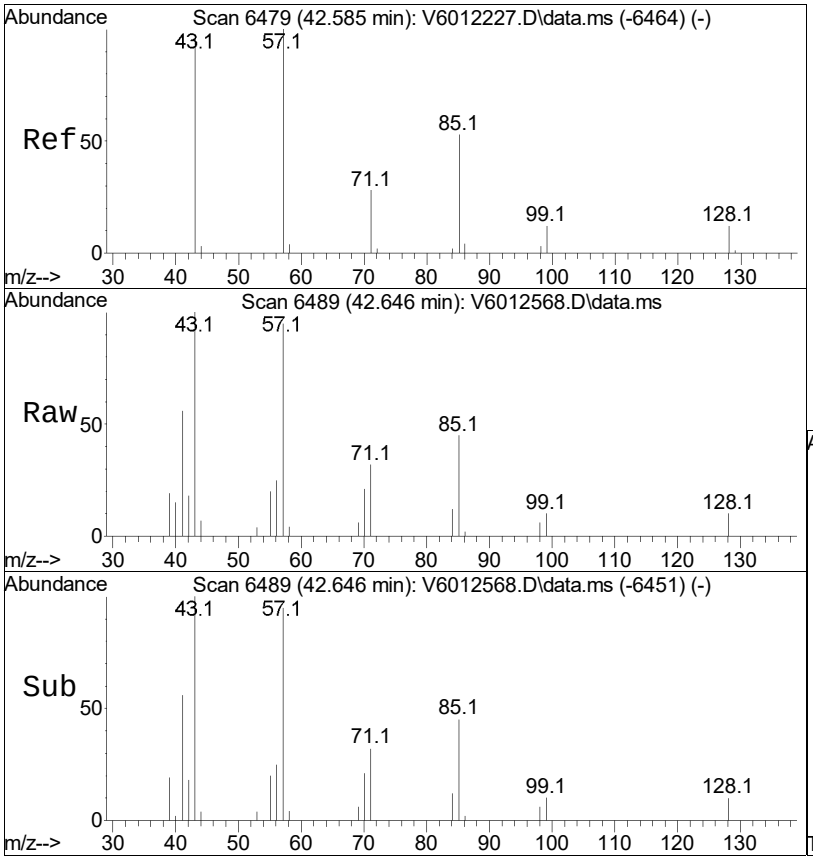


#91
p/m-Xylene
Concen: 40.09 ug/L
RT: 41.22 min Scan# 6255
Delta R.T. 0.000 min
Lab File: V6012568.D
Acq: 29 Sep 2020 7:53 pm

Tgt Ion: 91 Resp: 239690

Ion	Ratio	Lower	Upper
91	100		
106	50.7	30.7	70.7

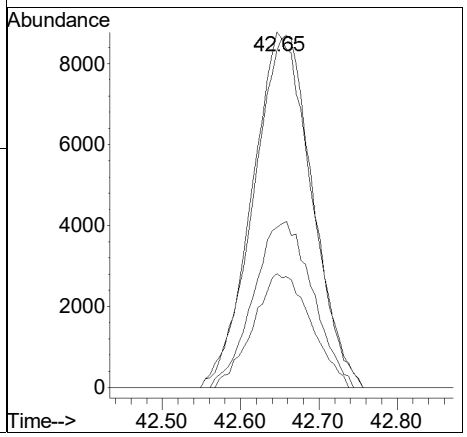


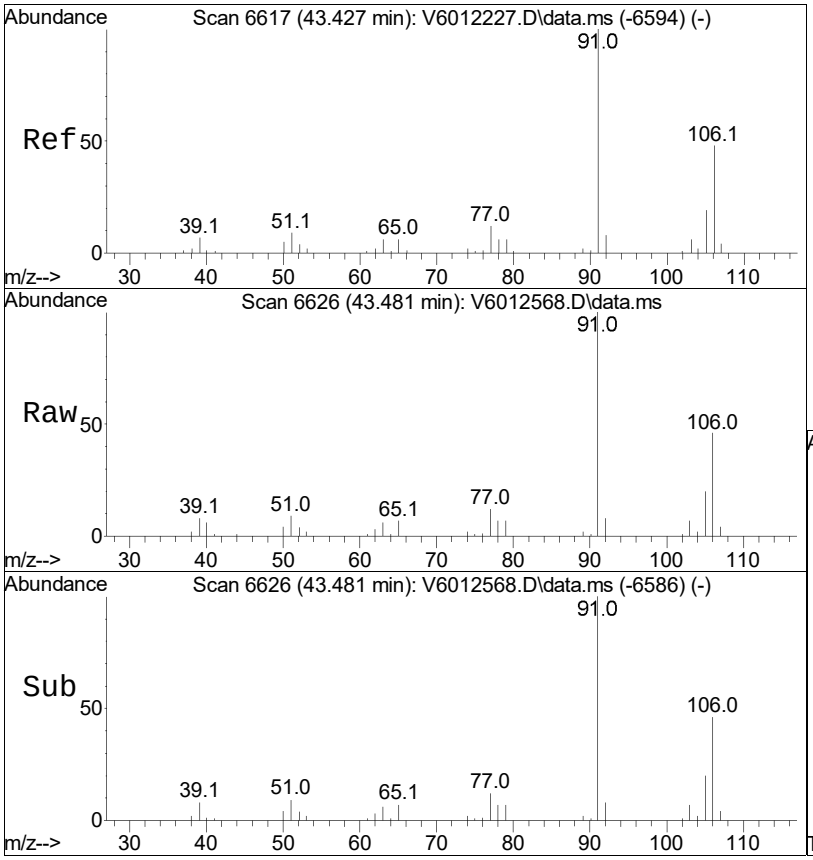


#95
Nonane
Concen: 18.08 ug/L
RT: 42.65 min Scan# 6489
Delta R.T. -0.018 min
Lab File: V6012568.D
Acq: 29 Sep 2020 7:53 pm

Tgt Ion: 43 Resp: 46997

Ion	Ratio	Lower	Upper
43	100		
57	94.9	74.2	114.2
85	45.0	24.5	64.5
71	32.0	10.5	50.5

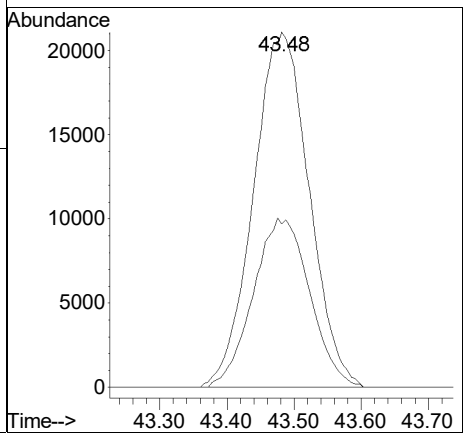


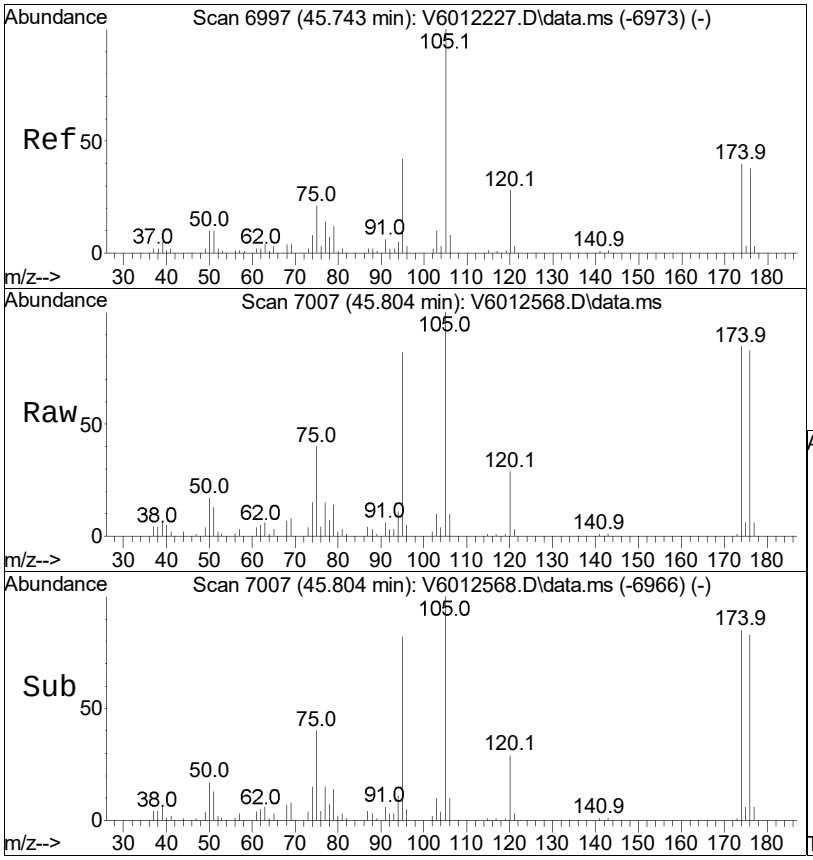


#98
o-Xylene
Concen: 19.42 ug/L
RT: 43.48 min Scan# 6626
Delta R.T. -0.006 min
Lab File: V6012568.D
Acq: 29 Sep 2020 7:53 pm

Tgt Ion: 91 Resp: 121688

Ion	Ratio	Lower	Upper
91	100		
106	46.0	28.3	68.3

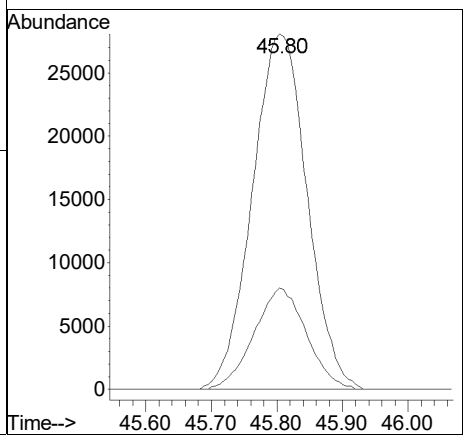


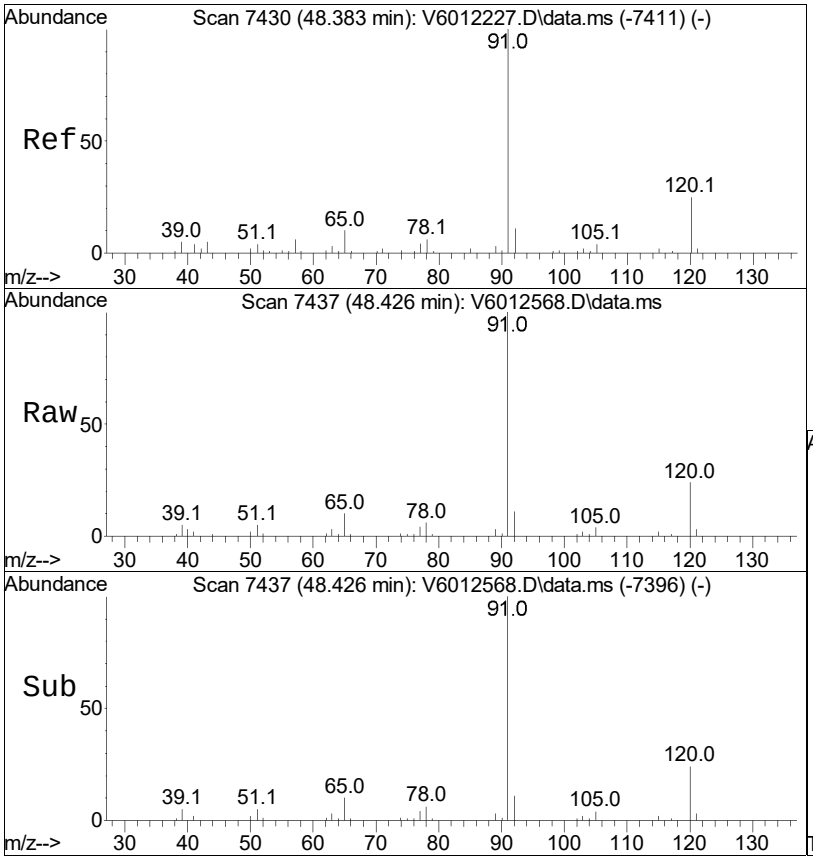


#102
Isopropylbenzene
Concen: 19.96 ug/L
RT: 45.80 min Scan# 7007
Delta R.T. 0.000 min
Lab File: V6012568.D
Acq: 29 Sep 2020 7:53 pm

Tgt Ion:105 Resp: 163020

Ion	Ratio	Lower	Upper
105	100		
120	28.5	8.4	48.4

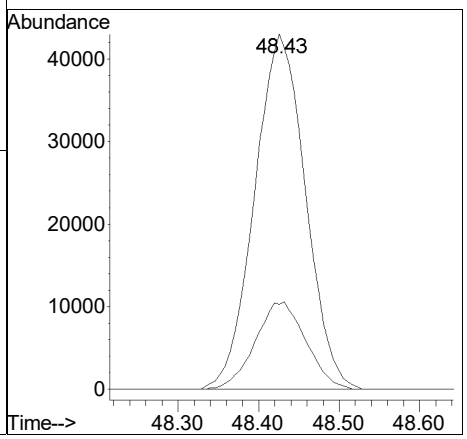


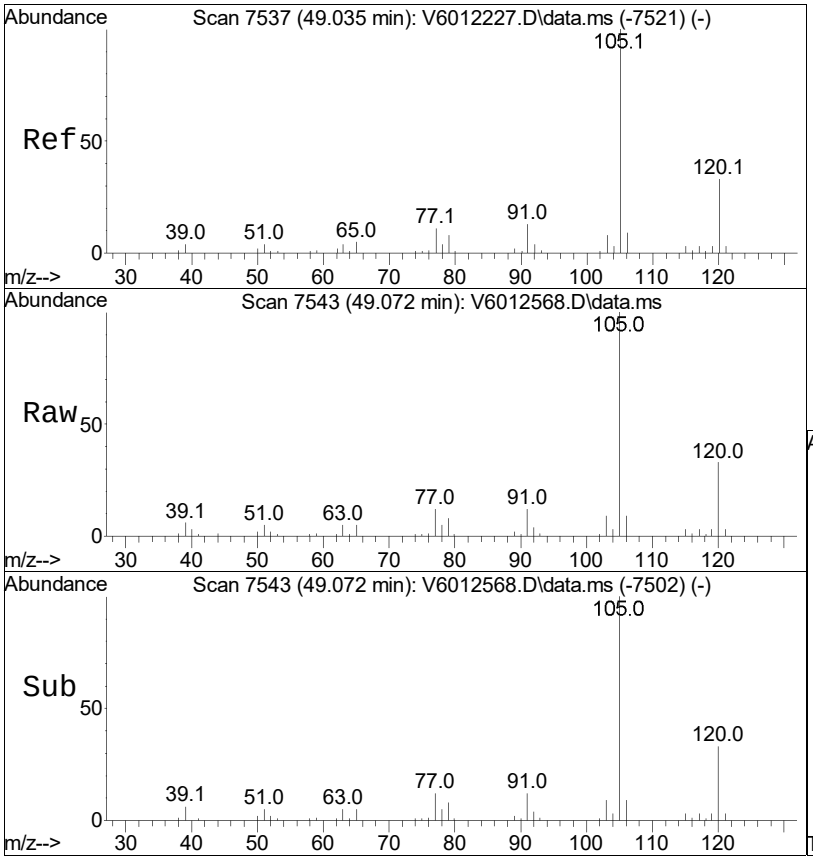


#104
n-Propylbenzene
Concen: 19.65 ug/L
RT: 48.43 min Scan# 7437
Delta R.T. 0.000 min
Lab File: V6012568.D
Acq: 29 Sep 2020 7:53 pm

Tgt Ion: 91 Resp: 188721

Ion	Ratio	Lower	Upper
91	100		
120	23.9	4.9	44.9

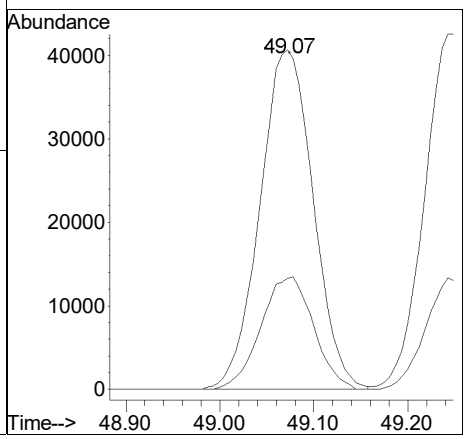


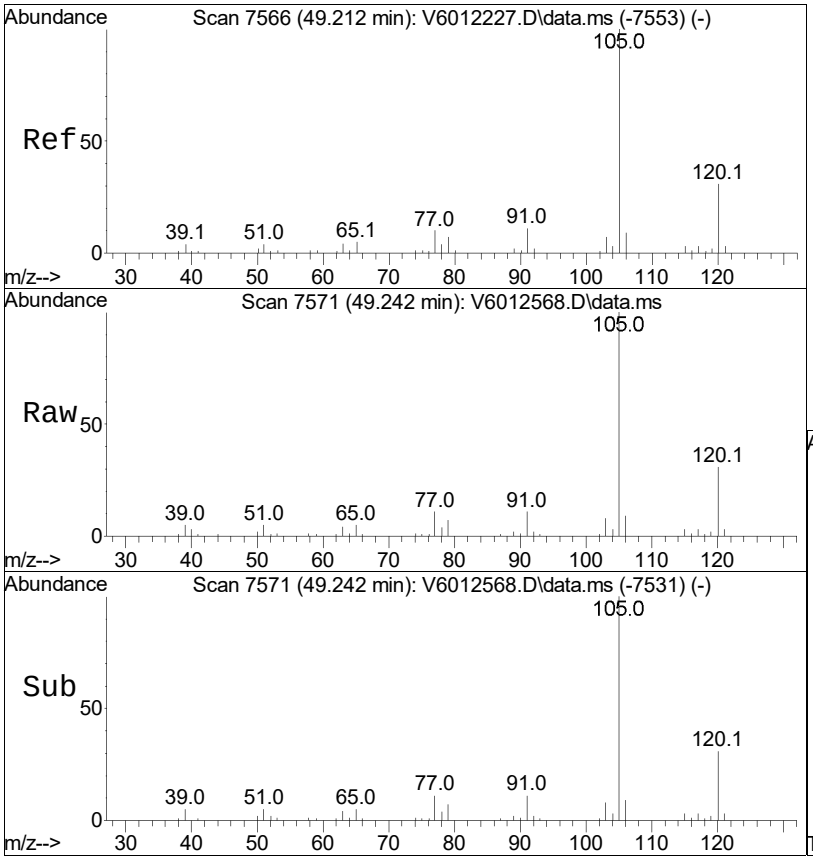


#107
1-Methyl-3-ethylbenzene
Concen: 19.72 ug/L
RT: 49.07 min Scan# 7543
Delta R.T. 0.000 min
Lab File: V6012568.D
Acq: 29 Sep 2020 7:53 pm

Tgt Ion:105 Resp: 160175

Ion	Ratio	Lower	Upper
105	100		
120	32.7	12.7	52.7

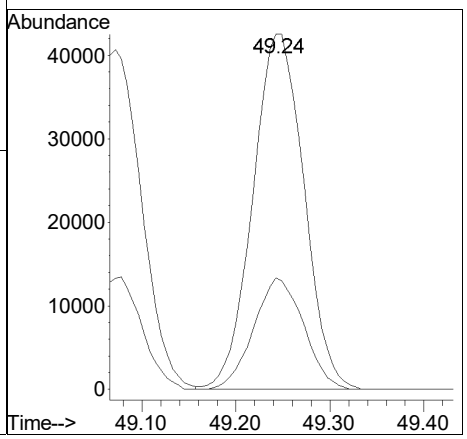


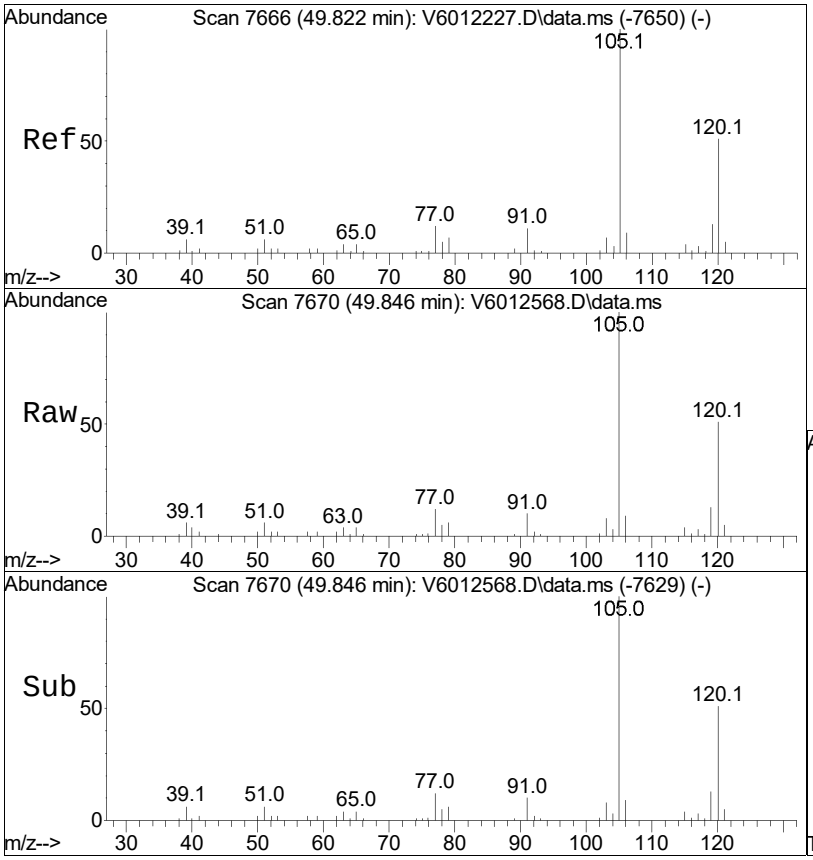


#108
1-Methyl-4-ethylbenzene
Concen: 20.45 ug/L
RT: 49.24 min Scan# 7571
Delta R.T. -0.006 min
Lab File: V6012568.D
Acq: 29 Sep 2020 7:53 pm

Tgt Ion:105 Resp: 160885

Ion	Ratio	Lower	Upper
105	100		
120	31.4	11.4	51.4

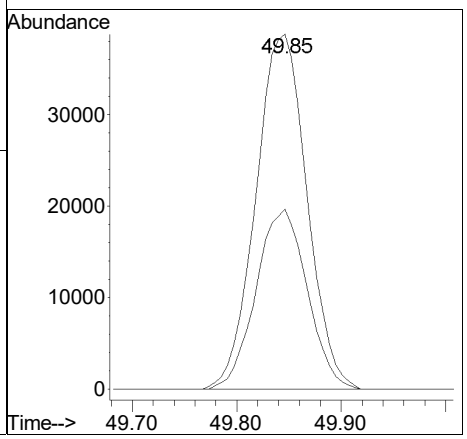


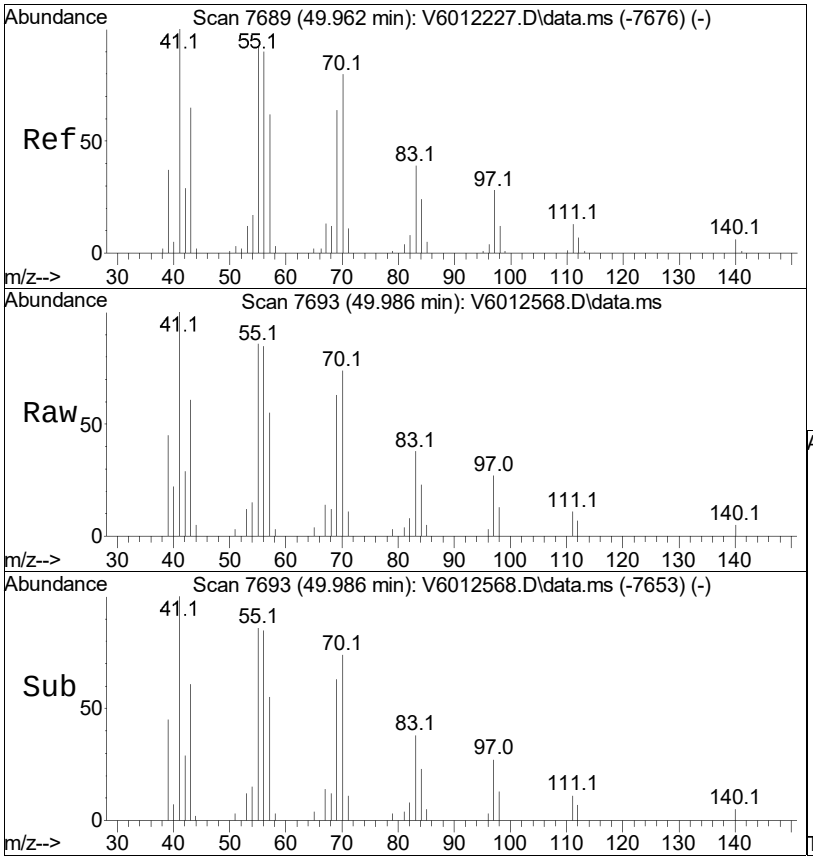


#109
1,3,5-Trimethylbenzene
Concen: 19.43 ug/L
RT: 49.85 min Scan# 7670
Delta R.T. 0.000 min
Lab File: V6012568.D
Acq: 29 Sep 2020 7:53 pm

Tgt Ion:105 Resp: 131972

Ion	Ratio	Lower	Upper
105	100		
120	50.8	30.8	70.8

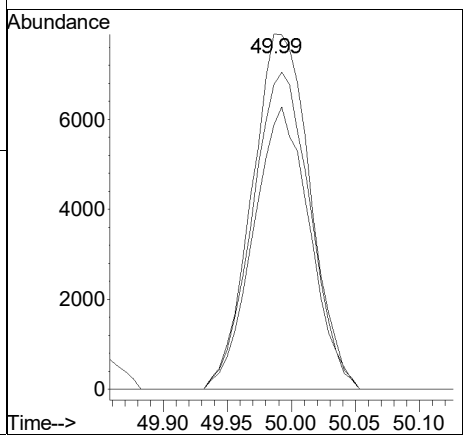


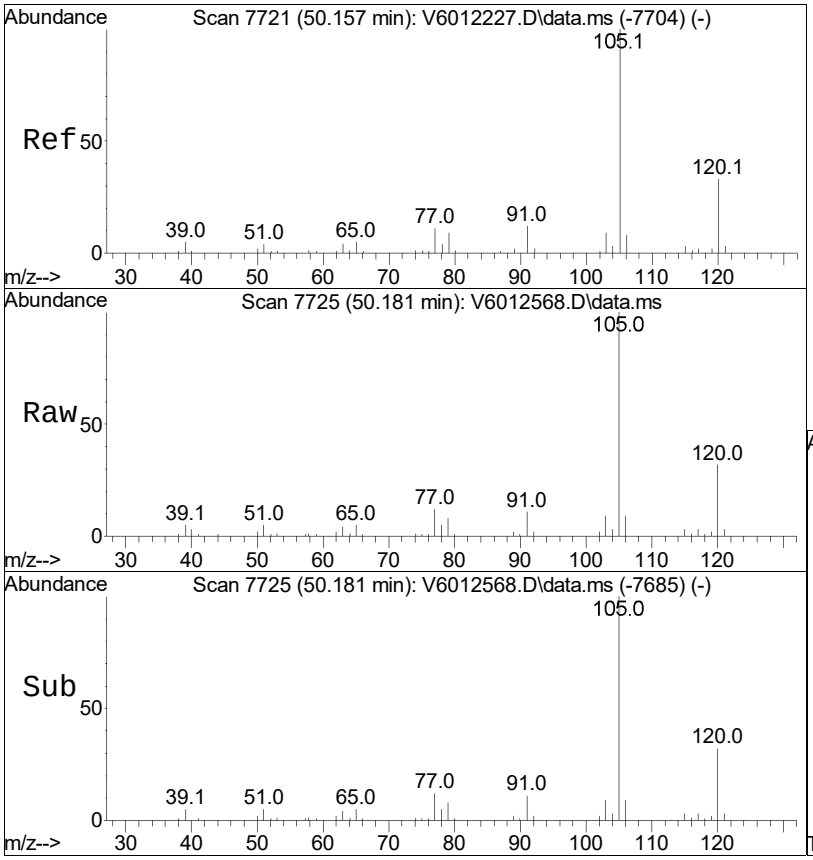


#110
1-Decene
Concen: 15.79 ug/L
RT: 49.99 min Scan# 7693
Delta R.T. -0.006 min
Lab File: V6012568.D
Acq: 29 Sep 2020 7:53 pm

Tgt Ion: 41 Resp: 25045

Ion	Ratio	Lower	Upper
41	100		
55	85.8	73.4	113.4
70	74.4	60.3	100.3

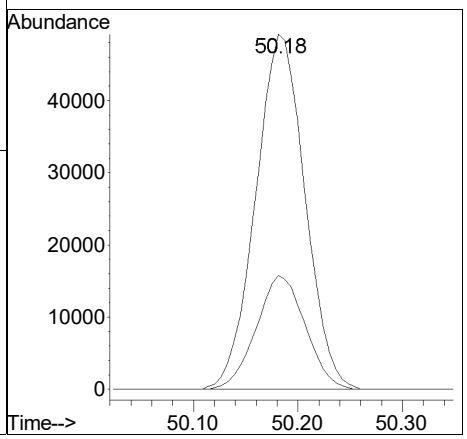


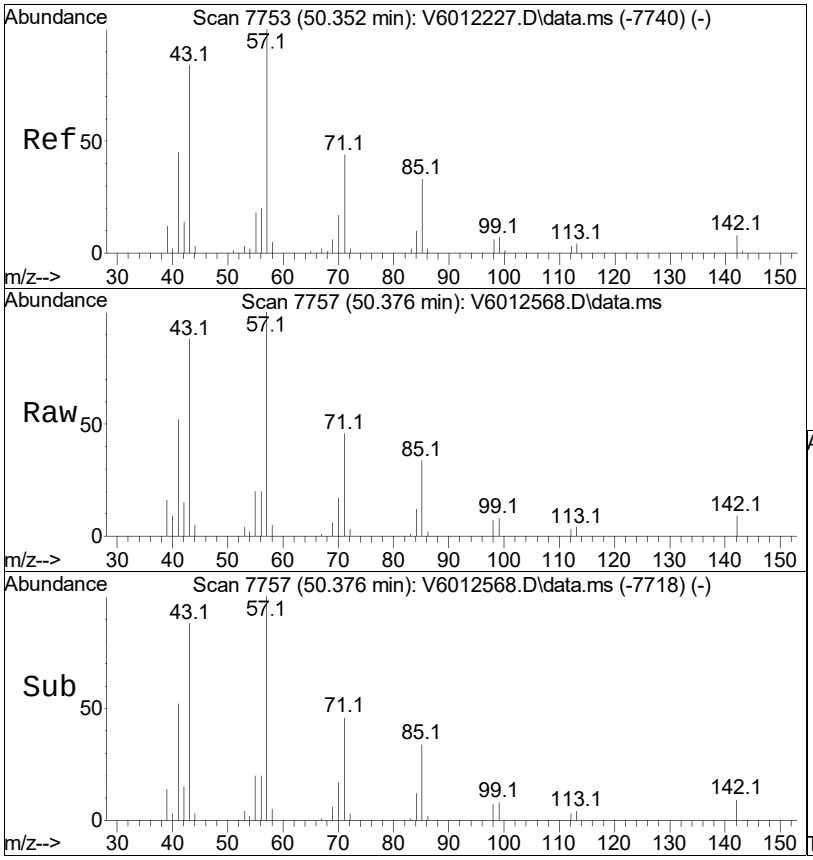


#112
1-Methyl-2-ethylbenzene
Concen: 19.27 ug/L
RT: 50.18 min Scan# 7725
Delta R.T. -0.006 min
Lab File: V6012568.D
Acq: 29 Sep 2020 7:53 pm

Tgt Ion:105 Resp: 161038

Ion	Ratio	Lower	Upper
105	100		
120	32.1	13.0	53.0

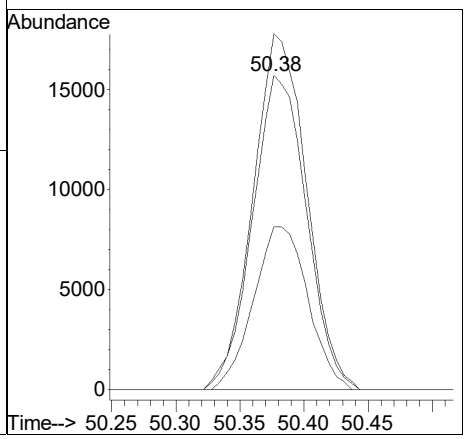


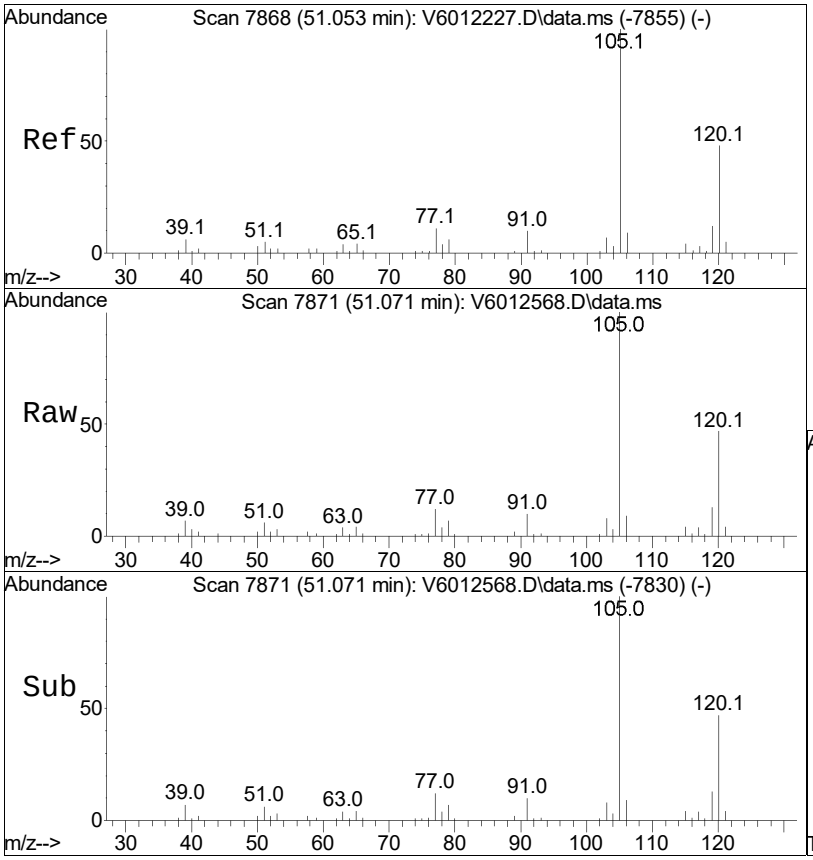


#113
Decane
Concen: 20.49 ug/L
RT: 50.38 min Scan# 7757
Delta R.T. -0.012 min
Lab File: V6012568.D
Acq: 29 Sep 2020 7:53 pm

Tgt Ion: 43 Resp: 45856

Ion	Ratio	Lower	Upper
43	100		
57	113.1	99.5	139.5
71	51.8	32.3	72.3

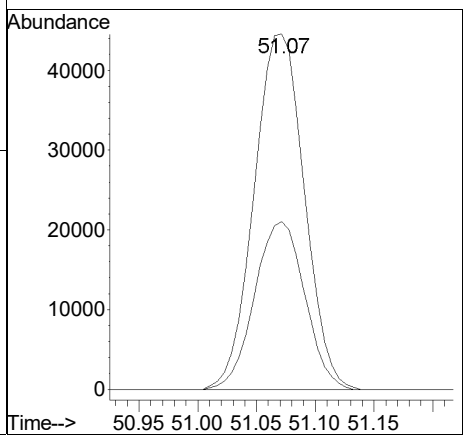


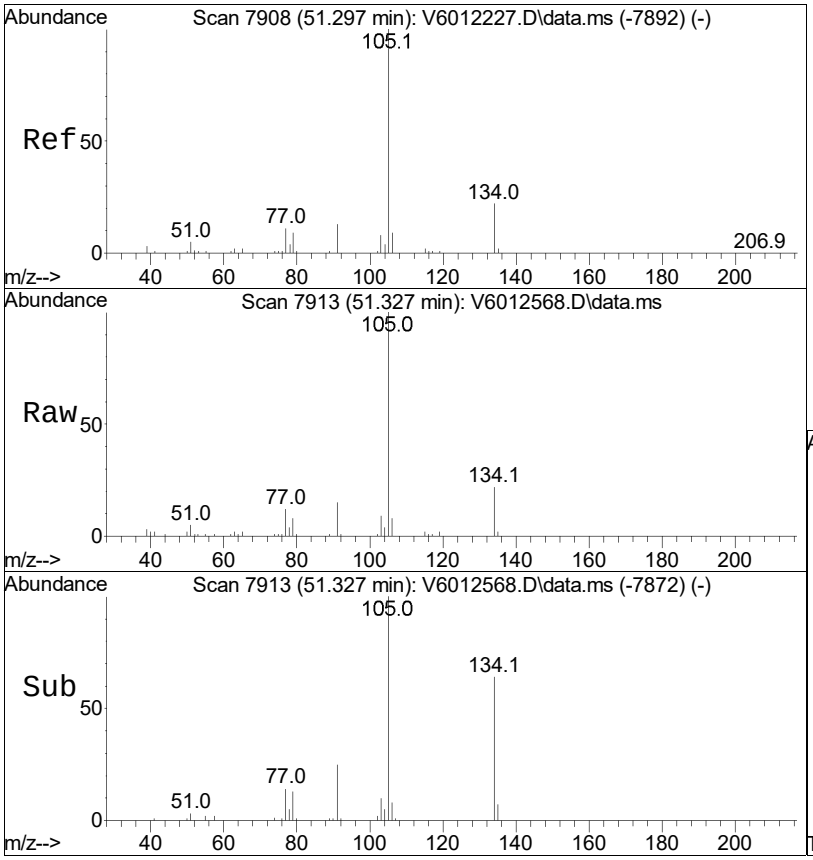


#115
1,2,4-Trimethylbenzene
Concen: 19.04 ug/L
RT: 51.07 min Scan# 7871
Delta R.T. 0.000 min
Lab File: V6012568.D
Acq: 29 Sep 2020 7:53 pm

Tgt Ion:105 Resp: 132456

Ion	Ratio	Lower	Upper
105	100		
120	47.2	27.6	67.6

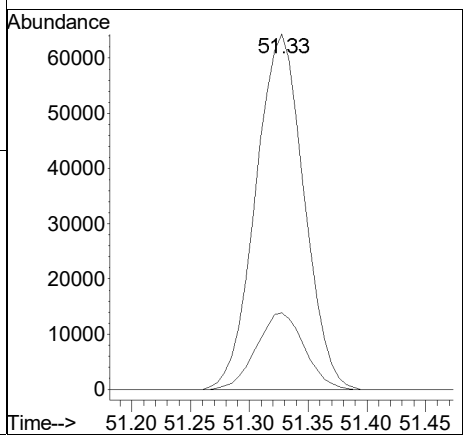


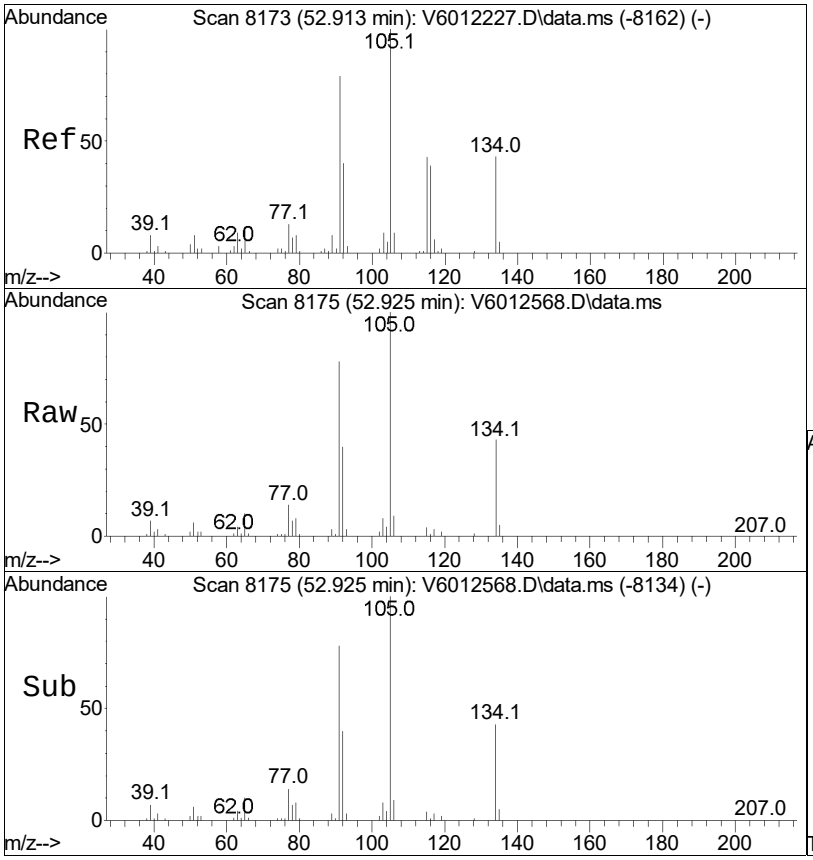


#117
sec-Butylbenzene
Concen: 20.25 ug/L
RT: 51.33 min Scan# 7913
Delta R.T. 0.000 min
Lab File: V6012568.D
Acq: 29 Sep 2020 7:53 pm

Tgt Ion:105 Resp: 183546

Ion	Ratio	Lower	Upper
105	100		
134	21.5	3.2	43.2

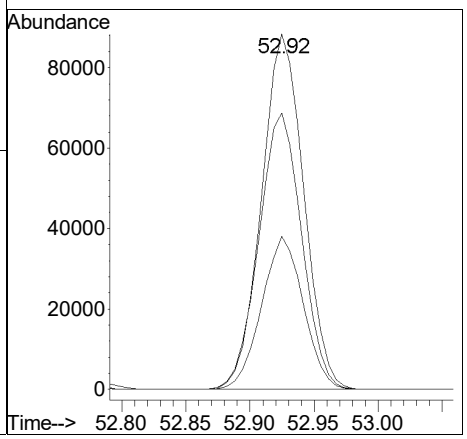


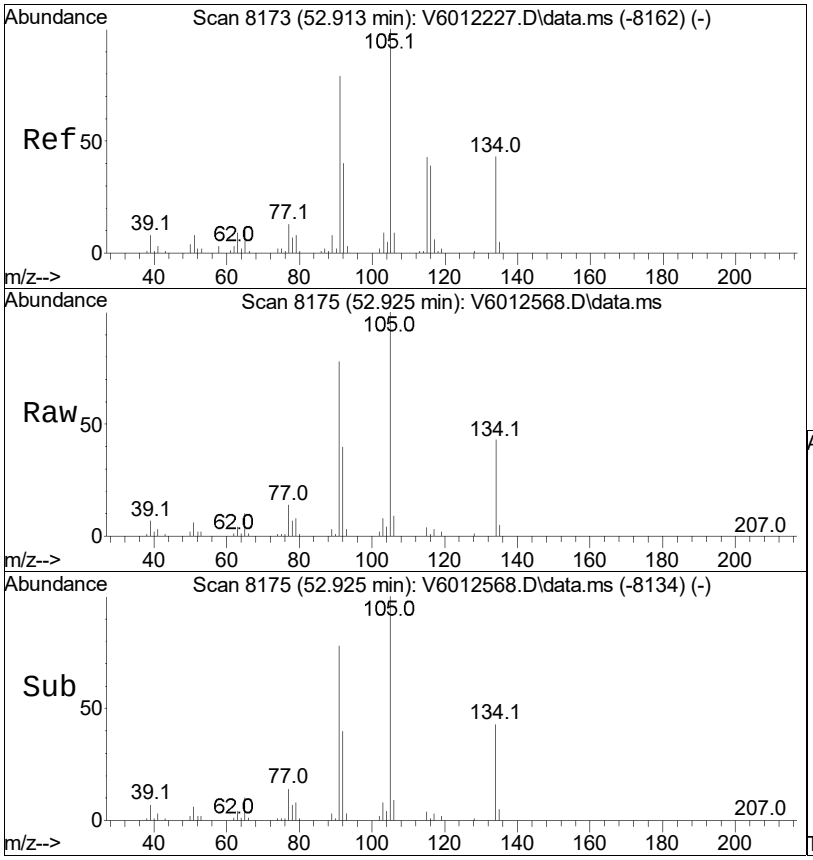


#126
1-Methyl-4-propylbenzene
Concen: 17.76 ug/L
RT: 52.92 min Scan# 8175
Delta R.T. 0.000 min
Lab File: V6012568.D
Acq: 29 Sep 2020 7:53 pm

Tgt Ion:105 Resp: 202537

Ion	Ratio	Lower	Upper
105	100		
134	43.1	23.0	63.0
91	77.8	58.3	98.3

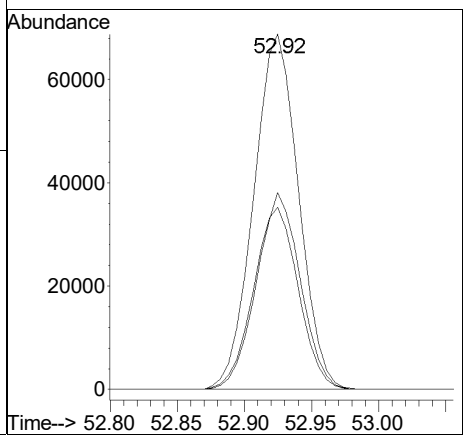


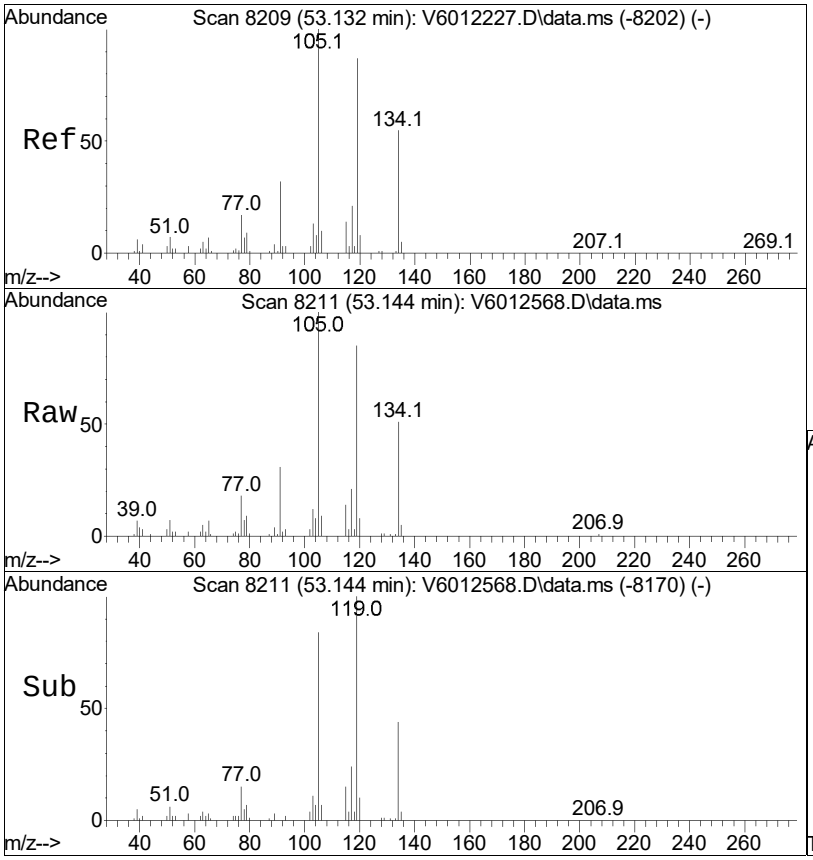


#127
n-Butylbenzene
Concen: 18.58 ug/L
RT: 52.92 min Scan# 8175
Delta R.T. 0.000 min
Lab File: V6012568.D
Acq: 29 Sep 2020 7:53 pm

Tgt Ion: 91 Resp: 159828

Ion	Ratio	Lower	Upper
91	100		
92	51.3	30.6	70.6
134	55.4	34.9	74.9

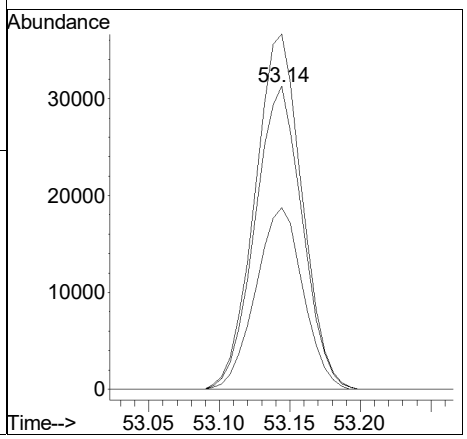


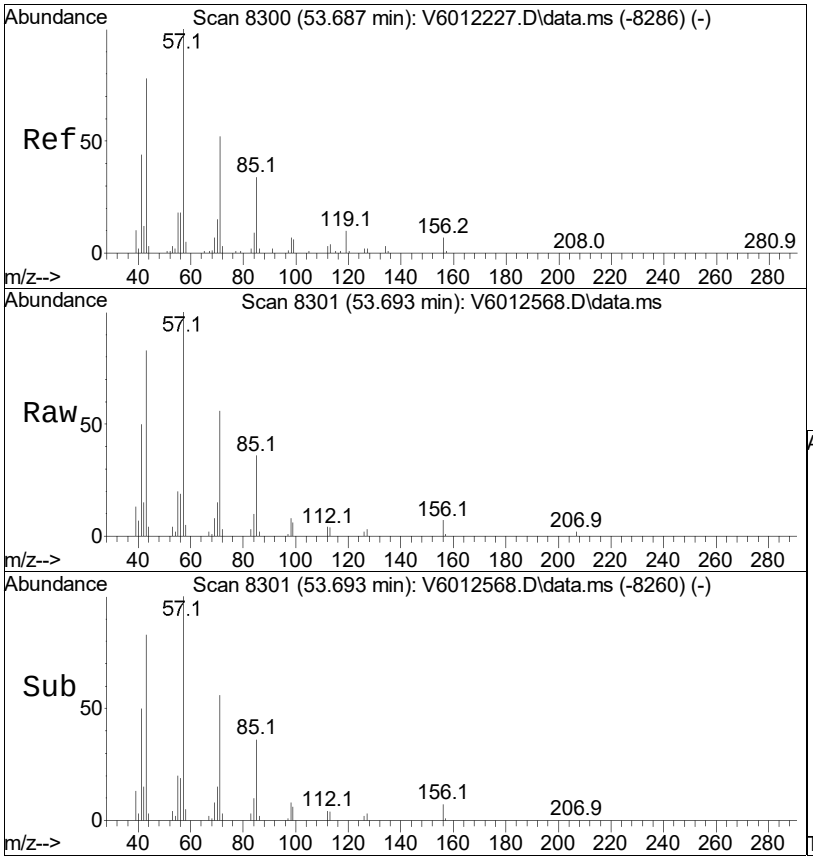


#129
1,2-Diethylbenzene
Concen: 18.40 ug/L
RT: 53.14 min Scan# 8211
Delta R.T. 0.000 min
Lab File: V6012568.D
Acq: 29 Sep 2020 7:53 pm

Tgt Ion:119 Resp: 72976

Ion	Ratio	Lower	Upper
119	100		
105	117.2	89.9	129.9
134	59.9	41.5	81.5

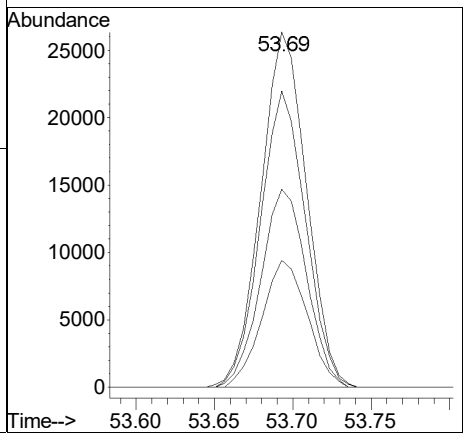


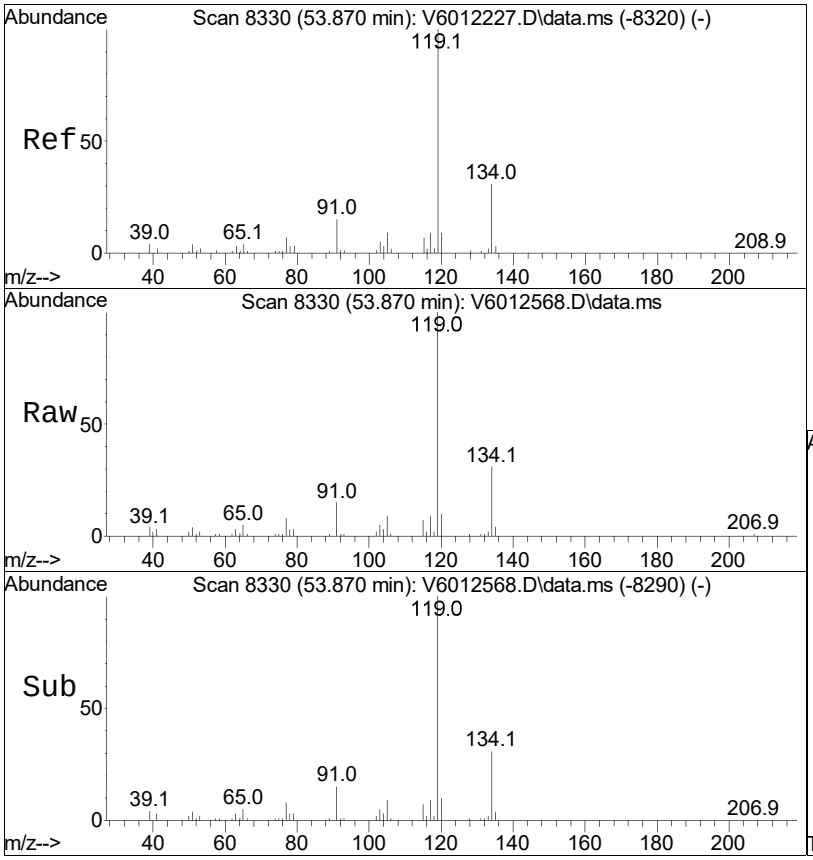


#132
Undecane
Concen: 20.91 ug/L
RT: 53.69 min Scan# 8301
Delta R.T. 0.000 min
Lab File: V6012568.D
Acq: 29 Sep 2020 7:53 pm

Tgt Ion: 57 Resp: 53626

Ion	Ratio	Lower	Upper
57	100		
43	83.4	58.4	98.4
71	55.7	32.1	72.1
85	35.8	14.5	54.5

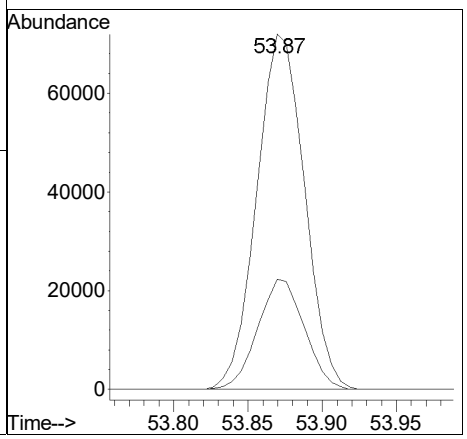


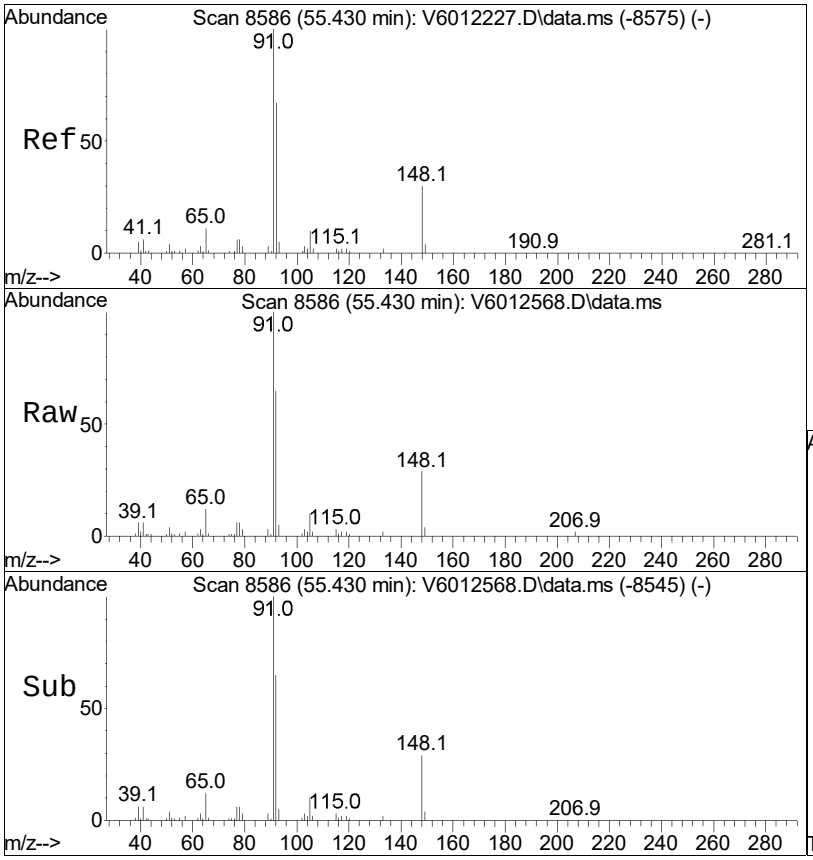


#134
1,3-Dimethyl-5-ethylbenzene
Concen: 18.42 ug/L
RT: 53.87 min Scan# 8330
Delta R.T. -0.006 min
Lab File: V6012568.D
Acq: 29 Sep 2020 7:53 pm

Tgt Ion:119 Resp: 161040

Ion	Ratio	Lower	Upper
119	100		
134	31.0	11.3	51.3

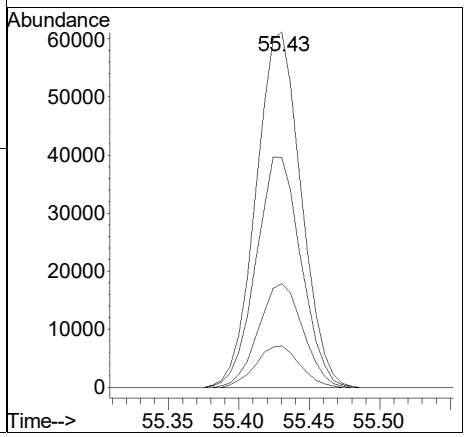


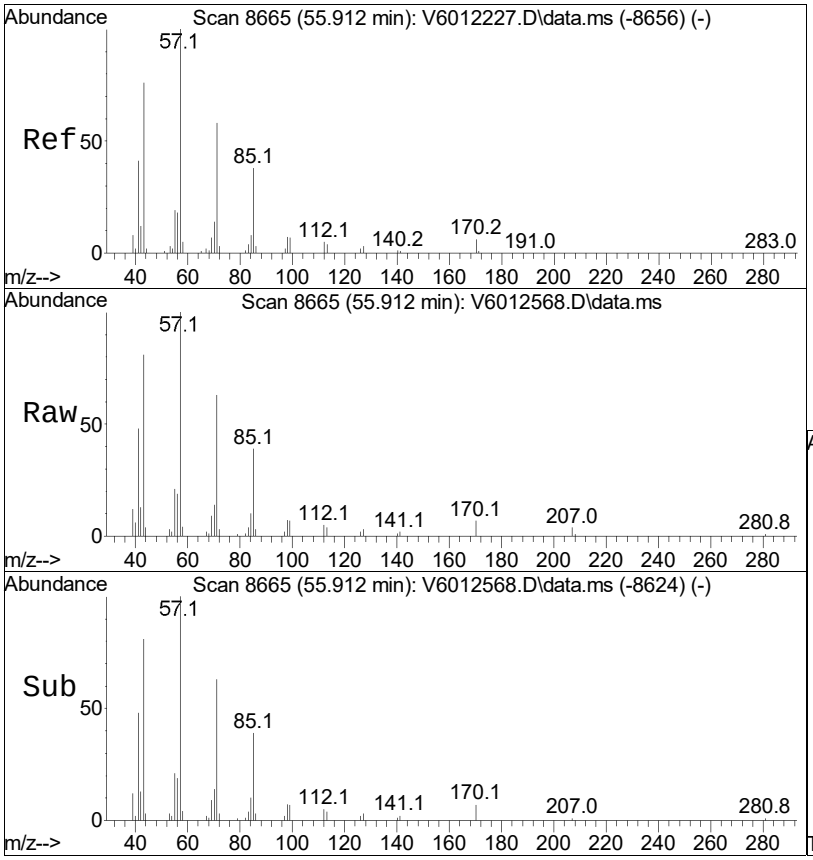


#139
Pentylbenzene
Concen: 19.00 ug/L
RT: 55.43 min Scan# 8586
Delta R.T. 0.000 min
Lab File: V6012568.D
Acq: 29 Sep 2020 7:53 pm

Tgt Ion: 91 Resp: 136015

Ion	Ratio	Lower	Upper
91	100		
92	64.7	47.0	87.0
65	11.7	0.0	31.1
148	29.2	10.2	50.2

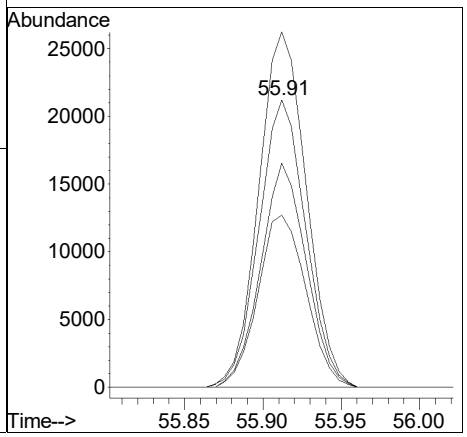




#142
Dodecane
Concen: 23.67 ug/L
RT: 55.91 min Scan# 8665
Delta R.T. 0.000 min
Lab File: V6012568.D
Acq: 29 Sep 2020 7:53 pm

Tgt Ion: 43 Resp: 44160

Ion	Ratio	Lower	Upper
43	100		
57	123.6	111.5	151.5
71	77.9	55.7	95.7
41	59.9	34.0	74.0



Alpha Report

Certification Information

The following analytes are not included in our Primary NELAP Scope of Accreditation:

Westborough Facility
EPA 624/624.1: m/p-xylene, o-xylene, Naphthalene
EPA 8260C: NPW: 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene, Azobenzene; SCM: Iodomethane (methyl iodide), 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene.
EPA 8270D: NPW: Dimethylnaphthalene,1,4-Diphenylhydrazine; SCM: Dimethylnaphthalene,1,4-Diphenylhydrazine.
SM4500: NPW: Amenable Cyanide; SCM: Total Phosphorus, TKN, NO2, NO3.

Mansfield Facility
SM 2540D: TSS
EPA 8082A: NPW: PCB: 1, 5, 31, 87,101, 110, 141, 151, 153, 180, 183, 187.
EPA TO-15: Halothane, 2,4,4-Trimethyl-2-pentene, 2,4,4-Trimethyl-1-pentene, Thiophene, 2-Methylthiophene, 3-Methylthiophene, 2-Ethylthiophene, 1,2,3-Trimethylbenzene, Indan, Indene, 1,2,4,5-Tetramethylbenzene, Benzothiophene, 1-Methylnaphthalene.
EPA TO-12 Non-methane organics
EPA 3C Fixed gases
Biological Tissue Matrix: EPA 3050B

The following analytes are included in our Massachusetts DEP Scope of Accreditation

Westborough Facility:

Drinking Water
EPA 300.0: Chloride, Nitrate-N, Fluoride, Sulfate; **EPA 353.2**: Nitrate-N, Nitrite-N; **SM4500NO3-F**: Nitrate-N, Nitrite-N; **SM4500F-C, SM4500CN-CE, EPA 180.1, SM2130B, SM4500Cl-D, SM2320B, SM2540C, SM4500H-B, SM4500NO2-B**
EPA 332: Perchlorate; **EPA 524.2:** THMs and VOCs; **EPA 504.1:** EDB, DBCP.
Microbiology: **SM9215B; SM9223-P/A, SM9223B-Colilert-QT,SM9222D**.

Non-Potable Water
SM4500H,B, EPA 120.1, SM2510B, SM2540C, SM2320B, SM4500CL-E, SM4500F-BC, SM4500NH3-BH: Ammonia-N and Kjeldahl-N, **EPA 350.1**: Ammonia-N, **LACHAT 10-107-06-1-B**: Ammonia-N, **EPA 351.1, SM4500NO3-F, EPA 353.2**: Nitrate-N**, SM4500P-E, SM4500P-B, E, SM4500SO4-E, SM5220D, EPA 410.4, SM5210B, SM5310C, SM4500CL-D, EPA 1664, EPA 420.1, SM4500-CN-CE, SM2540D, EPA 300: Chloride, Sulfate, Nitrate.**
EPA 624.1: Volatile Halocarbons & Aromatics,
EPA 608.3: Chlordane, Toxaphene, Aldrin, alpha-BHC, beta-BHC, gamma-BHC, delta-BHC, Dieldrin, DDD, DDE, DDT, Endosulfan I, Endosulfan II, Endosulfan sulfate, Endrin, Endrin Aldehyde, Heptachlor, Heptachlor Epoxide, PCBs
EPA 625.1: SVOC (Acid/Base/Neutral Extractables), **EPA 600/4-81-045**: PCB-Oil.
Microbiology: **SM9223B-Colilert-QT; Enterolert-QT, SM9221E, EPA 1600, EPA 1603.**

Mansfield Facility:

Drinking Water
EPA 200.7: Al, Ba, Cd, Cr, Cu, Fe, Mn, Ni, Na, Ag, Ca, Zn. **EPA 200.8:** Al, Sb, As, Ba, Be, Cd, Cr, Cu, Pb, Mn, Ni, Se, Ag, TL, Zn. **EPA 245.1** Hg.
EPA 522.

Non-Potable Water
EPA 200.7: Al, Sb, As, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Mo, Ni, K, Se, Ag, Na, Sr, TL, Ti, V, Zn.
EPA 200.8: Al, Sb**,** As, Be, Cd, Cr, Cu, Fe, Pb, Mn, Ni, K, Se, Ag, Na, TL, Zn.
EPA 245.1 Hg.
SM2340B

For a complete listing of analytes and methods, please contact your Alpha Project Manager.

CHAIN OF CUSTODY

PAGE OF

ALPHA ANALYTICAL — Mass Clean Chemistry

Westborough, MA TEL: 508-898-9220 FAX: 508-898-9193
Mansfield, MA TEL: 508-822-9300 FAX: 508-822-3288

Date Rec'd in Lab: 9/24/20

ALPHA Job #: L2040277

Client Information

Client: AECOM
Address: 250 Apollo Drive
Chelmsford, MA 01824
Phone: 978-905-2100
Fax: 978-905-2101
Email: lori.herberich@aecom.com;

☐ These samples have been Previously analyzed by Alpha

Project Information

Project Name: Lockheed Martin
Project Location: Wilmington MA
Project #: 60552044.19
Project Manager: scott.olson@aecom.com
ALPHA Quote #: May 20 Email J.Occhialini

Turn-Around Time

☒ Standard ☐ Rush (ONLY IF PRE-APPROVED)

Due Date: Time:

Report Information — Data Deliverables

☐ FAX ☐ EMAIL
☐ ADEx ☐ Add'l Deliverables

Billing Information

☐ Same as Client info PO #: 127683

Regulatory Requirements/Report Limits

State/Fed Program	Criteria
MassDEP MCP CAM	GW-1, -2, -3

MCP PRESUMPTIVE CERTAINTY-CT REASONABLE CONFIDENCE PROTOCOLS

☒ Yes ☐ No Are MCP Analytical Methods Required?
☐ Yes ☐ No Are CT RCP (Reasonable Confidence Protocols) Required?

Other Project Specific Requirements/Comments/Detection Limits:
AECOM Contacts = Lori Herberich (Chemist) and Scott Olson (PM)

ANALYSIS

PIANO

SAMPLE HANDLING
Filtration
☐ Done
☐ Not Needed
☐ Lab to do
Preservation
☐ Lab to do
(Please specify below)

Sample Specific Comments

TOTAL # BOTTLES

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date	Collection Time	Sample Matrix	Sampler's Initials	PIANO	TOTAL # BOTTLES
40277-01	20A-EMW11R2-092120-1	9/23/20	1045	GW	LZ	☒	3
-02	20A-AE3-092320-1	9/23/20	1055	GW	AG	☒	3
-03	20A-TRC101-092320-1	9/23/20	1600	GW	SH	☒	3

Container Type
Preservative

PLEASE ANSWER QUESTIONS ABOVE!

IS YOUR PROJECT MA MCP or CT RCP?

Relinquished By	Date/Time	Received By	Date/Time
		TGlenn AM	9/24 1210
TGlenn AM	9/24 1215		9-24-20
	9/24/20 2000		9/24/20 2000
9/24/20 2000			9/24/20 2000

Please print clearly, legibly and completely. Samples can not be logged in and turnaround time clock will not start until any ambiguities are resolved. All samples submitted are subject to Alpha's Payment Terms.

Alpha
Summary Forms

Organic Summary Forms

Results Summary
Form 1
PIANO Volatile Organics by GC/MS

Client	: AECOM	**Lab Number**	: L2040277
Project Name	: LOCKHEED MARTIN	**Project Number**	: 60552044.19
Lab ID	: L2040277-01	**Date Collected**	: 09/23/20 10:45
Client ID	: 20A-EMW11R2-092320-1	**Date Received**	: 09/24/20
Sample Location	: WILMINGTON, MA	**Date Analyzed**	: 09/30/20 10:15
Sample Matrix	: WATER	**Dilution Factor**	: 1
Analytical Method	: 1,8260B	**Analyst**	: RY
Lab File ID	: V6012571	**Instrument ID**	: VOA6
Sample Amount	: 5 ml	**GC Column**	: DB-VRX
Level	: LOW	**%Solids**	: N/A
Extract Volume (MeOH)	: N/A	**Injection Volume**	: N/A

		ug/L			
CAS NO.	**Parameter**	**Results**	**RL**	**MDL**	**Qualifier**
563-45-1	3-Methyl-1-butene	ND	2.00	0.297	U
78-78-4	Isopentane	ND	2.00	0.366	U
109-67-1	1-Pentene	ND	2.00	0.365	U
563-46-2	2-Methyl-1-Butene	ND	2.00	0.311	U
109-66-0	Pentane	ND	2.00	0.624	U
646-04-8	trans-2-Pentene	ND	2.00	0.270	U
78-79-5	Isoprene	ND	2.00	0.357	U
627-20-3	cis-2-Pentene	ND	2.00	0.322	U
75-65-0	Tertiary Butanol	ND	25.0	3.24	U
75-83-2	2,2-Dimethylbutane	ND	2.00	0.617	U
691-37-2	4-Methyl-1-pentene	ND	2.00	0.311	U
287-92-3	Cyclopentane	ND	2.00	0.519	U
79-29-8	2,3-Dimethylbutane	ND	2.00	0.826	U
107-83-5	2-Methylpentane	ND	2.00	0.542	U
1634-04-4	Methyl tert butyl ether	ND	2.00	0.412	U
96-14-0	3-Methylpentane	ND	2.00	0.317	U
592-41-6	1-Hexene	ND	2.00	0.281	U
110-54-3	n-Hexane	ND	2.00	0.329	U
108-20-3	Isopropyl Ether	ND	2.00	0.242	U
4050-45-7	trans-2-Hexene	ND	2.00	0.261	U
625-27-4	2-Methyl-2-pentene	ND	2.00	0.306	U
7688-21-3	cis-2-Hexene	ND	2.00	0.271	U
637-92-3	Ethyl-Tert-Butyl-Ether	ND	2.00	0.303	U
590-35-2	2,2-Dimethylpentane	ND	2.00	0.269	U
96-37-7	Methylcyclopentane	ND	2.00	0.268	U

Results Summary
Form 1
PIANO Volatile Organics by GC/MS

Client	: AECOM	**Lab Number**	: L2040277
Project Name	: LOCKHEED MARTIN	**Project Number**	: 60552044.19
Lab ID	: L2040277-01	**Date Collected**	: 09/23/20 10:45
Client ID	: 20A-EMW11R2-092320-1	**Date Received**	: 09/24/20
Sample Location	: WILMINGTON, MA	**Date Analyzed**	: 09/30/20 10:15
Sample Matrix	: WATER	**Dilution Factor**	: 1
Analytical Method	: 1,8260B	**Analyst**	: RY
Lab File ID	: V6012571	**Instrument ID**	: VOA6
Sample Amount	: 5 ml	**GC Column**	: DB-VRX
Level	: LOW	**%Solids**	: N/A
Extract Volume (MeOH)	: N/A	**Injection Volume**	: N/A

		ug/L			
CAS NO.	**Parameter**	**Results**	**RL**	**MDL**	**Qualifier**
108-08-7	2,4-Dimethylpentane	ND	2.00	0.247	U
464-06-2	2,2,3-Trimethylbutane	ND	2.00	0.270	U
107-06-2	1,2-Dichloroethane	ND	2.00	0.295	U
562-49-2	3,3-Dimethylpentane	ND	2.00	0.372	U
110-82-7	Cyclohexane	ND	2.00	0.247	U
591-76-4	2-Methylhexane	ND	2.00	0.315	U
71-43-2	Benzene	ND	2.00	0.305	U
565-59-3	2,3-Dimethylpentane	ND	2.00	0.265	U
110-02-1	Thiophene	ND	2.00	0.284	U
1638-26-2	1,1-Dimethylcyclopentane	ND	2.00	0.240	U
589-34-4	3-Methylhexane	ND	2.00	0.320	U
994-05-8	Tertiary-Amyl Methyl Ether	ND	2.00	0.246	U
2532-58-3	1,3-Dimethylcyclopentane (cis)	ND	2.00	0.301	U
617-78-7	3-Ethylpentane	ND	2.00	0.289	U
1759-58-6/6094-02-6	1,3-DMCP (trans)/2-Methyl-1-hexene	ND	4.00	0.702	U
592-76-7/822-50-4	1-Heptene/1,2-DMCP (trans)	ND	4.00	0.585	U
540-84-1	Isooctane	ND	2.00	0.218	U
14686-14-7	trans-3-Heptene	ND	2.00	0.311	U
142-82-5	Heptane	ND	2.00	0.348	U
14686-13-6	trans-2-Heptene	ND	2.00	0.256	U
6443-92-1	cis-2-Heptene	ND	2.00	0.387	U
590-73-8	2,2-Dimethylhexane	ND	2.00	0.290	U
108-87-2	Methylcyclohexane	ND	2.00	0.270	U
592-13-2	2,5-Dimethylhexane	ND	2.00	0.348	U
589-43-5	2,4-Dimethylhexane	ND	2.00	0.243	U

Results Summary
Form 1
PIANO Volatile Organics by GC/MS

Client	: AECOM	**Lab Number**	: L2040277
Project Name	: LOCKHEED MARTIN	**Project Number**	: 60552044.19
Lab ID	: L2040277-01	**Date Collected**	: 09/23/20 10:45
Client ID	: 20A-EMW11R2-092320-1	**Date Received**	: 09/24/20
Sample Location	: WILMINGTON, MA	**Date Analyzed**	: 09/30/20 10:15
Sample Matrix	: WATER	**Dilution Factor**	: 1
Analytical Method	: 1,8260B	**Analyst**	: RY
Lab File ID	: V6012571	**Instrument ID**	: VOA6
Sample Amount	: 5 ml	**GC Column**	: DB-VRX
Level	: LOW	**%Solids**	: N/A
Extract Volume (MeOH)	: N/A	**Injection Volume**	: N/A

		ug/L			
CAS NO.	**Parameter**	**Results**	**RL**	**MDL**	**Qualifier**
1640-89-7	Ethylcyclopentane	ND	2.00	0.265	U
564-02-3	2,2,3-Trimethylpentane	ND	2.00	0.347	U
565-75-3	2,3,4-Trimethylpentane	ND	2.00	0.261	U
1330-20-7	Xylene (Total)	ND	2.00	0.209	U
560-21-4	2,3,3-Trimethylpentane	ND	2.00	0.397	U
584-94-1	2,3-Dimethylhexane	ND	2.00	0.485	U
592-27-8	2-Methylheptane	ND	2.00	0.338	U
589-53-7	4-Methylheptane	ND	2.00	0.344	U
589-81-1	3-Methylheptane	ND	2.00	0.385	U
619-99-8	3-Ethylhexane	ND	2.00	0.358	U
108-88-3	Toluene	0.720	2.00	0.271	J
554-14-3	2-Methylthiophene	ND	2.00	0.170	U
2207-04-7	1,4-Dimethylcyclohexane (trans)	ND	2.00	0.260	U
616-44-4	3-Methylthiophene	ND	2.00	0.234	U
111-66-0	1-Octene	ND	5.00	0.307	U
111-65-9	Octane	ND	2.00	0.235	U
6876-23-9	1,2-Dimethylcyclohexane (trans)	ND	2.00	0.294	U
106-93-4	1,2-Dibromoethane	ND	2.00	0.320	U
7642-04-8	cis-2-Octene	ND	2.00	0.229	U
3875-51-2	Isopropylcyclopentane	ND	2.00	0.293	U
2207-01-4	1,2-Dimethylcyclohexane (cis)	ND	2.00	0.581	U
2216-30-0	2,5-Dimethylheptane	ND	2.00	0.335	U
926-82-9	3,5-Dimethylheptane	ND	2.00	0.282	U
4032-86-4	3,3-Dimethylheptane	ND	2.00	0.242	U
7094-27-1	1,1,4-Trimethylcyclohexane	ND	2.00	0.199	U

Results Summary
Form 1
PIANO Volatile Organics by GC/MS

Client	: AECOM	**Lab Number**	: L2040277
Project Name	: LOCKHEED MARTIN	**Project Number**	: 60552044.19
Lab ID	: L2040277-01	**Date Collected**	: 09/23/20 10:45
Client ID	: 20A-EMW11R2-092320-1	**Date Received**	: 09/24/20
Sample Location	: WILMINGTON, MA	**Date Analyzed**	: 09/30/20 10:15
Sample Matrix	: WATER	**Dilution Factor**	: 1
Analytical Method	: 1,8260B	**Analyst**	: RY
Lab File ID	: V6012571	**Instrument ID**	: VOA6
Sample Amount	: 5 ml	**GC Column**	: DB-VRX
Level	: LOW	**%Solids**	: N/A
Extract Volume (MeOH)	: N/A	**Injection Volume**	: N/A

		ug/L			
CAS NO.	**Parameter**	**Results**	**RL**	**MDL**	**Qualifier**
3074-71-3	2,3-Dimethylheptane	ND	2.00	0.228	U
922-28-1	3,4-Dimethylheptane	ND	2.00	0.340	U
2216-34-4	4-Methyloctane	ND	2.00	0.334	U
3221-61-2	2-Methyloctane	ND	2.00	0.512	U
100-41-4	Ethylbenzene	ND	2.00	0.216	U
872-55-9	2-Ethylthiophene	ND	2.00	0.176	U
2216-33-3	3-Methyloctane	ND	2.00	0.224	U
1067-20-5	3,3-Diethylpentane	ND	2.00	0.233	U
179601-23-1	p/m-Xylene	ND	4.00	0.381	U
124-11-8	1-Nonene	ND	5.00	0.270	U
20063-92-7	trans-3-Nonene	ND	2.00	0.237	U
20237-46-1	cis-3-Nonene	ND	2.00	0.374	U
111-84-2	Nonane (C9)	ND	2.00	0.311	U
100-42-5	Styrene	ND	2.00	0.202	U
95-47-6	o-Xylene	ND	2.00	0.209	U
6434-77-1	2-Nonene	ND	5.00	0.254	U
696-29-7	Isopropylcyclohexane	ND	2.00	0.212	U
98-82-8	Isopropylbenzene	ND	2.00	0.187	U
4110-44-5	3,3-Dimethyloctane	ND	2.00	0.202	U
103-65-1	n-Propylbenzene	ND	2.00	0.177	U
871-83-0	2-Methylnonane	ND	2.00	0.283	U
5911-04-6	3-Methylnonane	ND	2.00	0.279	U
620-14-4	1-Methyl-3-Ethylbenzene	ND	2.00	0.316	U
622-96-8	1-Methyl-4-Ethylbenzene	ND	2.00	0.282	U
108-67-8	1,3,5-Trimethylbenzene	ND	2.00	0.230	U

Results Summary
Form 1
PIANO Volatile Organics by GC/MS

Client	: AECOM	**Lab Number**	: L2040277
Project Name	: LOCKHEED MARTIN	**Project Number**	: 60552044.19
Lab ID	: L2040277-01	**Date Collected**	: 09/23/20 10:45
Client ID	: 20A-EMW11R2-092320-1	**Date Received**	: 09/24/20
Sample Location	: WILMINGTON, MA	**Date Analyzed**	: 09/30/20 10:15
Sample Matrix	: WATER	**Dilution Factor**	: 1
Analytical Method	: 1,8260B	**Analyst**	: RY
Lab File ID	: V6012571	**Instrument ID**	: VOA6
Sample Amount	: 5 ml	**GC Column**	: DB-VRX
Level	: LOW	**%Solids**	: N/A
Extract Volume (MeOH)	: N/A	**Injection Volume**	: N/A

		ug/L			
CAS NO.	**Parameter**	**Results**	**RL**	**MDL**	**Qualifier**
872-05-9	1-Decene	ND	2.00	0.260	U
1678-98-4	Isobutylcyclohexane	ND	2.00	0.163	U
611-14-3	1-Methyl-2-Ethylbenzene	ND	2.00	0.170	U
124-18-5	Decane (C10)	ND	2.00	0.271	U
98-06-6	tert-Butylbenzene	ND	2.00	0.211	U
95-63-6	1,2,4-Trimethylbenzene	ND	2.00	0.207	U
538-93-2	Isobutylbenzene	ND	2.00	0.270	U
135-98-8	sec-Butylbenzene	ND	2.00	0.259	U
535-77-3	1-Methyl-3-Isopropylbenzene	ND	2.00	0.258	U
99-87-6	1-Methyl-4-Isopropylbenzene	ND	2.00	0.212	U
526-73-8	1,2,3-Trimethylbenzene	ND	2.00	0.223	U
527-84-4	1-Methyl-2-Isopropylbenzene	ND	2.00	0.217	U
496-11-7	Indane	ND	2.00	0.123	U
141-93-5	1,3-Diethylbenzene	ND	2.00	0.249	U
1074-43-7	1-Methyl-3-N-Propylbenzene	ND	2.00	0.202	U
95-13-6	Indene	ND	2.00	0.116	U
1074-55-1	1-Methyl-4-N-Propylbenzene	ND	2.00	0.250	U
104-51-8	n-Butylbenzene	ND	2.00	0.197	U
934-80-5	1,2-Dimethyl-4-Ethylbenzene	ND	2.00	0.245	U
135-01-3	1,2-Diethylbenzene	ND	2.00	0.296	U
1074-17-5	1-Methyl-2-N-Propylbenzene	ND	2.00	0.249	U
1758-88-9	1,4-Dimethyl-2-Ethylbenzene	ND	2.00	0.187	U
1120-21-4	Undecane	ND	2.00	0.222	U
874-41-9	1,3-Dimethyl-4-Ethylbenzene	ND	2.00	0.194	U
934-74-7	1,3-Dimethyl-5-Ethylbenzene	ND	2.00	0.236	U

Results Summary
Form 1
PIANO Volatile Organics by GC/MS

Client	: AECOM	**Lab Number**	: L2040277
Project Name	: LOCKHEED MARTIN	**Project Number**	: 60552044.19
Lab ID	: L2040277-01	**Date Collected**	: 09/23/20 10:45
Client ID	: 20A-EMW11R2-092320-1	**Date Received**	: 09/24/20
Sample Location	: WILMINGTON, MA	**Date Analyzed**	: 09/30/20 10:15
Sample Matrix	: WATER	**Dilution Factor**	: 1
Analytical Method	: 1,8260B	**Analyst**	: RY
Lab File ID	: V6012571	**Instrument ID**	: VOA6
Sample Amount	: 5 ml	**GC Column**	: DB-VRX
Level	: LOW	**%Solids**	: N/A
Extract Volume (MeOH)	: N/A	**Injection Volume**	: N/A

		ug/L			
CAS NO.	**Parameter**	**Results**	**RL**	**MDL**	**Qualifier**
2870-04-4	1,3-Dimethyl-2-Ethylbenzene	ND	2.00	0.149	U
933-98-2	1,2-Dimethyl-3-Ethylbenzene	ND	2.00	0.127	U
95-93-2	1,2,4,5-Tetramethylbenzene	ND	2.00	0.155	U
527-53-7	1,2,3,5-Tetramethylbenzene	ND	2.00	0.152	U
538-68-1	N-Pentylbenzene	ND	2.00	0.249	U
488-23-3	1,2,3,4-Tetramethylbenzene	ND	2.00	0.214	U
98-19-1	1,3-Dimethyl-5-tert-Butylbenzene	ND	2.00	0.285	U
112-40-3	Dodecane (C12)	ND	5.00	0.657	U
102-25-0	1,3,5-Triethylbenzene	ND	2.00	0.380	U
91-20-3	Naphthalene	ND	2.00	0.835	U
95-15-8	Benzothiophene	ND	2.00	1.06	U
877-44-1	1,2,4-Triethylbenzene	ND	2.00	0.340	U
1077-16-3	Hexylbenzene	ND	2.00	0.385	U
12108-13-3	MMT	ND	5.00	1.29	U
629-50-5	Tridecane	ND	5.00	1.39	U
91-57-6	2-Methylnaphthalene	ND	5.00	1.32	U
90-12-0	1-Methylnaphthalene	ND	5.00	1.47	U
629-59-4	Tetradecane (C14)	ND	5.00	0.612	U
629-62-9	Pentadecane	ND	5.00	1.12	U

Results Summary
Form 1
PIANO Volatile Organics by GC/MS

Client	: AECOM	**Lab Number**	: L2040277
Project Name	: LOCKHEED MARTIN	**Project Number**	: 60552044.19
Lab ID	: L2040277-02	**Date Collected**	: 09/23/20 10:55
Client ID	: 20A-AE3-092320-1	**Date Received**	: 09/24/20
Sample Location	: WILMINGTON, MA	**Date Analyzed**	: 09/30/20 11:26
Sample Matrix	: WATER	**Dilution Factor**	: 1
Analytical Method	: 1,8260B	**Analyst**	: RY
Lab File ID	: V6012572	**Instrument ID**	: VOA6
Sample Amount	: 5 ml	**GC Column**	: DB-VRX
Level	: LOW	**%Solids**	: N/A
Extract Volume (MeOH)	: N/A	**Injection Volume**	: N/A

		ug/L			
CAS NO.	**Parameter**	**Results**	**RL**	**MDL**	**Qualifier**
563-45-1	3-Methyl-1-butene	ND	2.00	0.297	U
78-78-4	Isopentane	ND	2.00	0.366	U
109-67-1	1-Pentene	ND	2.00	0.365	U
563-46-2	2-Methyl-1-Butene	ND	2.00	0.311	U
109-66-0	Pentane	ND	2.00	0.624	U
646-04-8	trans-2-Pentene	ND	2.00	0.270	U
78-79-5	Isoprene	ND	2.00	0.357	U
627-20-3	cis-2-Pentene	ND	2.00	0.322	U
75-65-0	Tertiary Butanol	ND	25.0	3.24	U
75-83-2	2,2-Dimethylbutane	ND	2.00	0.617	U
691-37-2	4-Methyl-1-pentene	ND	2.00	0.311	U
287-92-3	Cyclopentane	ND	2.00	0.519	U
79-29-8	2,3-Dimethylbutane	ND	2.00	0.826	U
107-83-5	2-Methylpentane	ND	2.00	0.542	U
1634-04-4	Methyl tert butyl ether	ND	2.00	0.412	U
96-14-0	3-Methylpentane	ND	2.00	0.317	U
592-41-6	1-Hexene	ND	2.00	0.281	U
110-54-3	n-Hexane	ND	2.00	0.329	U
108-20-3	Isopropyl Ether	ND	2.00	0.242	U
4050-45-7	trans-2-Hexene	ND	2.00	0.261	U
625-27-4	2-Methyl-2-pentene	ND	2.00	0.306	U
7688-21-3	cis-2-Hexene	ND	2.00	0.271	U
637-92-3	Ethyl-Tert-Butyl-Ether	ND	2.00	0.303	U
590-35-2	2,2-Dimethylpentane	ND	2.00	0.269	U
96-37-7	Methylcyclopentane	0.764	2.00	0.268	J

Results Summary
Form 1
PIANO Volatile Organics by GC/MS

Client	: AECOM	**Lab Number**	: L2040277
Project Name	: LOCKHEED MARTIN	**Project Number**	: 60552044.19
Lab ID	: L2040277-02	**Date Collected**	: 09/23/20 10:55
Client ID	: 20A-AE3-092320-1	**Date Received**	: 09/24/20
Sample Location	: WILMINGTON, MA	**Date Analyzed**	: 09/30/20 11:26
Sample Matrix	: WATER	**Dilution Factor**	: 1
Analytical Method	: 1,8260B	**Analyst**	: RY
Lab File ID	: V6012572	**Instrument ID**	: VOA6
Sample Amount	: 5 ml	**GC Column**	: DB-VRX
Level	: LOW	**%Solids**	: N/A
Extract Volume (MeOH)	: N/A	**Injection Volume**	: N/A

		ug/L			
CAS NO.	**Parameter**	**Results**	**RL**	**MDL**	**Qualifier**
108-08-7	2,4-Dimethylpentane	ND	2.00	0.247	U
464-06-2	2,2,3-Trimethylbutane	ND	2.00	0.270	U
107-06-2	1,2-Dichloroethane	ND	2.00	0.295	U
562-49-2	3,3-Dimethylpentane	ND	2.00	0.372	U
110-82-7	Cyclohexane	0.947	2.00	0.247	J
591-76-4	2-Methylhexane	ND	2.00	0.315	U
71-43-2	Benzene	ND	2.00	0.305	U
565-59-3	2,3-Dimethylpentane	ND	2.00	0.265	U
110-02-1	Thiophene	ND	2.00	0.284	U
1638-26-2	1,1-Dimethylcyclopentane	ND	2.00	0.240	U
589-34-4	3-Methylhexane	ND	2.00	0.320	U
994-05-8	Tertiary-Amyl Methyl Ether	ND	2.00	0.246	U
2532-58-3	1,3-Dimethylcyclopentane (cis)	ND	2.00	0.301	U
617-78-7	3-Ethylpentane	ND	2.00	0.289	U
1759-58-6/6094-02-6	1,3-DMCP (trans)/2-Methyl-1-hexene	ND	4.00	0.702	U
592-76-7/822-50-4	1-Heptene/1,2-DMCP (trans)	ND	4.00	0.585	U
540-84-1	Isooctane	ND	2.00	0.218	U
14686-14-7	trans-3-Heptene	ND	2.00	0.311	U
142-82-5	Heptane	ND	2.00	0.348	U
14686-13-6	trans-2-Heptene	ND	2.00	0.256	U
6443-92-1	cis-2-Heptene	ND	2.00	0.387	U
590-73-8	2,2-Dimethylhexane	ND	2.00	0.290	U
108-87-2	Methylcyclohexane	1.45	2.00	0.270	J
592-13-2	2,5-Dimethylhexane	ND	2.00	0.348	U
589-43-5	2,4-Dimethylhexane	ND	2.00	0.243	U

Results Summary
Form 1
PIANO Volatile Organics by GC/MS

Client	: AECOM	**Lab Number**	: L2040277
Project Name	: LOCKHEED MARTIN	**Project Number**	: 60552044.19
Lab ID	: L2040277-02	**Date Collected**	: 09/23/20 10:55
Client ID	: 20A-AE3-092320-1	**Date Received**	: 09/24/20
Sample Location	: WILMINGTON, MA	**Date Analyzed**	: 09/30/20 11:26
Sample Matrix	: WATER	**Dilution Factor**	: 1
Analytical Method	: 1,8260B	**Analyst**	: RY
Lab File ID	: V6012572	**Instrument ID**	: VOA6
Sample Amount	: 5 ml	**GC Column**	: DB-VRX
Level	: LOW	**%Solids**	: N/A
Extract Volume (MeOH)	: N/A	**Injection Volume**	: N/A

		ug/L			
CAS NO.	**Parameter**	**Results**	**RL**	**MDL**	**Qualifier**
1640-89-7	Ethylcyclopentane	ND	2.00	0.265	U
564-02-3	2,2,3-Trimethylpentane	ND	2.00	0.347	U
565-75-3	2,3,4-Trimethylpentane	ND	2.00	0.261	U
1330-20-7	Xylene (Total)	ND	2.00	0.209	U
560-21-4	2,3,3-Trimethylpentane	ND	2.00	0.397	U
584-94-1	2,3-Dimethylhexane	ND	2.00	0.485	U
592-27-8	2-Methylheptane	ND	2.00	0.338	U
589-53-7	4-Methylheptane	ND	2.00	0.344	U
589-81-1	3-Methylheptane	ND	2.00	0.385	U
619-99-8	3-Ethylhexane	ND	2.00	0.358	U
108-88-3	Toluene	ND	2.00	0.271	U
554-14-3	2-Methylthiophene	ND	2.00	0.170	U
2207-04-7	1,4-Dimethylcyclohexane (trans)	ND	2.00	0.260	U
616-44-4	3-Methylthiophene	ND	2.00	0.234	U
111-66-0	1-Octene	ND	5.00	0.307	U
111-65-9	Octane	ND	2.00	0.235	U
6876-23-9	1,2-Dimethylcyclohexane (trans)	0.825	2.00	0.294	J
106-93-4	1,2-Dibromoethane	ND	2.00	0.320	U
7642-04-8	cis-2-Octene	ND	2.00	0.229	U
3875-51-2	Isopropylcyclopentane	ND	2.00	0.293	U
2207-01-4	1,2-Dimethylcyclohexane (cis)	1.56	2.00	0.581	J
2216-30-0	2,5-Dimethylheptane	ND	2.00	0.335	U
926-82-9	3,5-Dimethylheptane	ND	2.00	0.282	U
4032-86-4	3,3-Dimethylheptane	ND	2.00	0.242	U
7094-27-1	1,1,4-Trimethylcyclohexane	ND	2.00	0.199	U

Results Summary
Form 1
PIANO Volatile Organics by GC/MS

Client	: AECOM	**Lab Number**	: L2040277
Project Name	: LOCKHEED MARTIN	**Project Number**	: 60552044.19
Lab ID	: L2040277-02	**Date Collected**	: 09/23/20 10:55
Client ID	: 20A-AE3-092320-1	**Date Received**	: 09/24/20
Sample Location	: WILMINGTON, MA	**Date Analyzed**	: 09/30/20 11:26
Sample Matrix	: WATER	**Dilution Factor**	: 1
Analytical Method	: 1,8260B	**Analyst**	: RY
Lab File ID	: V6012572	**Instrument ID**	: VOA6
Sample Amount	: 5 ml	**GC Column**	: DB-VRX
Level	: LOW	**%Solids**	: N/A
Extract Volume (MeOH)	: N/A	**Injection Volume**	: N/A

		ug/L			
CAS NO.	**Parameter**	**Results**	**RL**	**MDL**	**Qualifier**
3074-71-3	2,3-Dimethylheptane	ND	2.00	0.228	U
922-28-1	3,4-Dimethylheptane	ND	2.00	0.340	U
2216-34-4	4-Methyloctane	ND	2.00	0.334	U
3221-61-2	2-Methyloctane	ND	2.00	0.512	U
100-41-4	Ethylbenzene	0.500	2.00	0.216	J
872-55-9	2-Ethylthiophene	ND	2.00	0.176	U
2216-33-3	3-Methyloctane	ND	2.00	0.224	U
1067-20-5	3,3-Diethylpentane	ND	2.00	0.233	U
179601-23-1	p/m-Xylene	ND	4.00	0.381	U
124-11-8	1-Nonene	ND	5.00	0.270	U
20063-92-7	trans-3-Nonene	ND	2.00	0.237	U
20237-46-1	cis-3-Nonene	ND	2.00	0.374	U
111-84-2	Nonane (C9)	ND	2.00	0.311	U
100-42-5	Styrene	ND	2.00	0.202	U
95-47-6	o-Xylene	ND	2.00	0.209	U
6434-77-1	2-Nonene	ND	5.00	0.254	U
696-29-7	Isopropylcyclohexane	ND	2.00	0.212	U
98-82-8	Isopropylbenzene	3.57	2.00	0.187	
4110-44-5	3,3-Dimethyloctane	ND	2.00	0.202	U
103-65-1	n-Propylbenzene	8.82	2.00	0.177	
871-83-0	2-Methylnonane	ND	2.00	0.283	U
5911-04-6	3-Methylnonane	ND	2.00	0.279	U
620-14-4	1-Methyl-3-Ethylbenzene	ND	2.00	0.316	U
622-96-8	1-Methyl-4-Ethylbenzene	ND	2.00	0.282	U
108-67-8	1,3,5-Trimethylbenzene	ND	2.00	0.230	U

Results Summary
Form 1
PIANO Volatile Organics by GC/MS

Client	: AECOM	**Lab Number**	: L2040277
Project Name	: LOCKHEED MARTIN	**Project Number**	: 60552044.19
Lab ID	: L2040277-02	**Date Collected**	: 09/23/20 10:55
Client ID	: 20A-AE3-092320-1	**Date Received**	: 09/24/20
Sample Location	: WILMINGTON, MA	**Date Analyzed**	: 09/30/20 11:26
Sample Matrix	: WATER	**Dilution Factor**	: 1
Analytical Method	: 1,8260B	**Analyst**	: RY
Lab File ID	: V6012572	**Instrument ID**	: VOA6
Sample Amount	: 5 ml	**GC Column**	: DB-VRX
Level	: LOW	**%Solids**	: N/A
Extract Volume (MeOH)	: N/A	**Injection Volume**	: N/A

		ug/L			
CAS NO.	**Parameter**	**Results**	**RL**	**MDL**	**Qualifier**
872-05-9	1-Decene	ND	2.00	0.260	U
1678-98-4	Isobutylcyclohexane	ND	2.00	0.163	U
611-14-3	1-Methyl-2-Ethylbenzene	ND	2.00	0.170	U
124-18-5	Decane (C10)	ND	2.00	0.271	U
98-06-6	tert-Butylbenzene	4.46	2.00	0.211	
95-63-6	1,2,4-Trimethylbenzene	ND	2.00	0.207	U
538-93-2	Isobutylbenzene	5.61	2.00	0.270	
135-98-8	sec-Butylbenzene	5.25	2.00	0.259	
535-77-3	1-Methyl-3-Isopropylbenzene	ND	2.00	0.258	U
99-87-6	1-Methyl-4-Isopropylbenzene	ND	2.00	0.212	U
526-73-8	1,2,3-Trimethylbenzene	ND	2.00	0.223	U
527-84-4	1-Methyl-2-Isopropylbenzene	2.50	2.00	0.217	
496-11-7	Indane	6.07	2.00	0.123	
141-93-5	1,3-Diethylbenzene	12.4	2.00	0.249	
1074-43-7	1-Methyl-3-N-Propylbenzene	ND	2.00	0.202	U
95-13-6	Indene	0.450	2.00	0.116	J
1074-55-1	1-Methyl-4-N-Propylbenzene	1.68	2.00	0.250	J
104-51-8	n-Butylbenzene	3.97	2.00	0.197	
934-80-5	1,2-Dimethyl-4-Ethylbenzene	ND	2.00	0.245	U
135-01-3	1,2-Diethylbenzene	4.86	2.00	0.296	
1074-17-5	1-Methyl-2-N-Propylbenzene	ND	2.00	0.249	U
1758-88-9	1,4-Dimethyl-2-Ethylbenzene	ND	2.00	0.187	U
1120-21-4	Undecane	ND	2.00	0.222	U
874-41-9	1,3-Dimethyl-4-Ethylbenzene	ND	2.00	0.194	U
934-74-7	1,3-Dimethyl-5-Ethylbenzene	13.9	2.00	0.236	

Results Summary
Form 1
PIANO Volatile Organics by GC/MS

Client	: AECOM	**Lab Number**	: L2040277
Project Name	: LOCKHEED MARTIN	**Project Number**	: 60552044.19
Lab ID	: L2040277-02	**Date Collected**	: 09/23/20 10:55
Client ID	: 20A-AE3-092320-1	**Date Received**	: 09/24/20
Sample Location	: WILMINGTON, MA	**Date Analyzed**	: 09/30/20 11:26
Sample Matrix	: WATER	**Dilution Factor**	: 1
Analytical Method	: 1,8260B	**Analyst**	: RY
Lab File ID	: V6012572	**Instrument ID**	: VOA6
Sample Amount	: 5 ml	**GC Column**	: DB-VRX
Level	: LOW	**%Solids**	: N/A
Extract Volume (MeOH)	: N/A	**Injection Volume**	: N/A

		ug/L			
CAS NO.	**Parameter**	**Results**	**RL**	**MDL**	**Qualifier**
2870-04-4	1,3-Dimethyl-2-Ethylbenzene	3.65	2.00	0.149	
933-98-2	1,2-Dimethyl-3-Ethylbenzene	ND	2.00	0.127	U
95-93-2	1,2,4,5-Tetramethylbenzene	12.2	2.00	0.155	
527-53-7	1,2,3,5-Tetramethylbenzene	ND	2.00	0.152	U
538-68-1	N-Pentylbenzene	ND	2.00	0.249	U
488-23-3	1,2,3,4-Tetramethylbenzene	7.04	2.00	0.214	
98-19-1	1,3-Dimethyl-5-tert-Butylbenzene	ND	2.00	0.285	U
112-40-3	Dodecane (C12)	ND	5.00	0.657	U
102-25-0	1,3,5-Triethylbenzene	ND	2.00	0.380	U
91-20-3	Naphthalene	5.42	2.00	0.835	
95-15-8	Benzothiophene	ND	2.00	1.06	U
877-44-1	1,2,4-Triethylbenzene	ND	2.00	0.340	U
1077-16-3	Hexylbenzene	ND	2.00	0.385	U
12108-13-3	MMT	ND	5.00	1.29	U
629-50-5	Tridecane	ND	5.00	1.39	U
91-57-6	2-Methylnaphthalene	3.22	5.00	1.32	J
90-12-0	1-Methylnaphthalene	3.75	5.00	1.47	J
629-59-4	Tetradecane (C14)	ND	5.00	0.612	U
629-62-9	Pentadecane	ND	5.00	1.12	U

Results Summary
Form 1
PIANO Volatile Organics by GC/MS

Client	: AECOM	**Lab Number**	: L2040277
Project Name	: LOCKHEED MARTIN	**Project Number**	: 60552044.19
Lab ID	: L2040277-03	**Date Collected**	: 09/23/20 16:00
Client ID	: 20A-TRC101-092320-1	**Date Received**	: 09/24/20
Sample Location	: WILMINGTON, MA	**Date Analyzed**	: 09/30/20 12:37
Sample Matrix	: WATER	**Dilution Factor**	: 1
Analytical Method	: 1,8260B	**Analyst**	: RY
Lab File ID	: V6012573	**Instrument ID**	: VOA6
Sample Amount	: 5 ml	**GC Column**	: DB-VRX
Level	: LOW	**%Solids**	: N/A
Extract Volume (MeOH)	: N/A	**Injection Volume**	: N/A

		ug/L			
CAS NO.	**Parameter**	**Results**	**RL**	**MDL**	**Qualifier**
563-45-1	3-Methyl-1-butene	ND	2.00	0.297	U
78-78-4	Isopentane	ND	2.00	0.366	U
109-67-1	1-Pentene	ND	2.00	0.365	U
563-46-2	2-Methyl-1-Butene	ND	2.00	0.311	U
109-66-0	Pentane	ND	2.00	0.624	U
646-04-8	trans-2-Pentene	ND	2.00	0.270	U
78-79-5	Isoprene	ND	2.00	0.357	U
627-20-3	cis-2-Pentene	ND	2.00	0.322	U
75-65-0	Tertiary Butanol	ND	25.0	3.24	U
75-83-2	2,2-Dimethylbutane	ND	2.00	0.617	U
691-37-2	4-Methyl-1-pentene	ND	2.00	0.311	U
287-92-3	Cyclopentane	ND	2.00	0.519	U
79-29-8	2,3-Dimethylbutane	ND	2.00	0.826	U
107-83-5	2-Methylpentane	ND	2.00	0.542	U
1634-04-4	Methyl tert butyl ether	ND	2.00	0.412	U
96-14-0	3-Methylpentane	ND	2.00	0.317	U
592-41-6	1-Hexene	ND	2.00	0.281	U
110-54-3	n-Hexane	ND	2.00	0.329	U
108-20-3	Isopropyl Ether	ND	2.00	0.242	U
4050-45-7	trans-2-Hexene	ND	2.00	0.261	U
625-27-4	2-Methyl-2-pentene	ND	2.00	0.306	U
7688-21-3	cis-2-Hexene	ND	2.00	0.271	U
637-92-3	Ethyl-Tert-Butyl-Ether	ND	2.00	0.303	U
590-35-2	2,2-Dimethylpentane	ND	2.00	0.269	U
96-37-7	Methylcyclopentane	ND	2.00	0.268	U

Results Summary
Form 1
PIANO Volatile Organics by GC/MS

Client	: AECOM	**Lab Number**	: L2040277
Project Name	: LOCKHEED MARTIN	**Project Number**	: 60552044.19
Lab ID	: L2040277-03	**Date Collected**	: 09/23/20 16:00
Client ID	: 20A-TRC101-092320-1	**Date Received**	: 09/24/20
Sample Location	: WILMINGTON, MA	**Date Analyzed**	: 09/30/20 12:37
Sample Matrix	: WATER	**Dilution Factor**	: 1
Analytical Method	: 1,8260B	**Analyst**	: RY
Lab File ID	: V6012573	**Instrument ID**	: VOA6
Sample Amount	: 5 ml	**GC Column**	: DB-VRX
Level	: LOW	**%Solids**	: N/A
Extract Volume (MeOH)	: N/A	**Injection Volume**	: N/A

		ug/L			
CAS NO.	**Parameter**	**Results**	**RL**	**MDL**	**Qualifier**
108-08-7	2,4-Dimethylpentane	ND	2.00	0.247	U
464-06-2	2,2,3-Trimethylbutane	ND	2.00	0.270	U
107-06-2	1,2-Dichloroethane	ND	2.00	0.295	U
562-49-2	3,3-Dimethylpentane	ND	2.00	0.372	U
110-82-7	Cyclohexane	ND	2.00	0.247	U
591-76-4	2-Methylhexane	ND	2.00	0.315	U
71-43-2	Benzene	ND	2.00	0.305	U
565-59-3	2,3-Dimethylpentane	ND	2.00	0.265	U
110-02-1	Thiophene	ND	2.00	0.284	U
1638-26-2	1,1-Dimethylcyclopentane	ND	2.00	0.240	U
589-34-4	3-Methylhexane	ND	2.00	0.320	U
994-05-8	Tertiary-Amyl Methyl Ether	ND	2.00	0.246	U
2532-58-3	1,3-Dimethylcyclopentane (cis)	ND	2.00	0.301	U
617-78-7	3-Ethylpentane	ND	2.00	0.289	U
1759-58-6/6094-02-6	1,3-DMCP (trans)/2-Methyl-1-hexene	ND	4.00	0.702	U
592-76-7/822-50-4	1-Heptene/1,2-DMCP (trans)	ND	4.00	0.585	U
540-84-1	Isooctane	ND	2.00	0.218	U
14686-14-7	trans-3-Heptene	ND	2.00	0.311	U
142-82-5	Heptane	ND	2.00	0.348	U
14686-13-6	trans-2-Heptene	ND	2.00	0.256	U
6443-92-1	cis-2-Heptene	ND	2.00	0.387	U
590-73-8	2,2-Dimethylhexane	ND	2.00	0.290	U
108-87-2	Methylcyclohexane	0.438	2.00	0.270	J
592-13-2	2,5-Dimethylhexane	ND	2.00	0.348	U
589-43-5	2,4-Dimethylhexane	ND	2.00	0.243	U

Results Summary
Form 1
PIANO Volatile Organics by GC/MS

Client	: AECOM	**Lab Number**	: L2040277
Project Name	: LOCKHEED MARTIN	**Project Number**	: 60552044.19
Lab ID	: L2040277-03	**Date Collected**	: 09/23/20 16:00
Client ID	: 20A-TRC101-092320-1	**Date Received**	: 09/24/20
Sample Location	: WILMINGTON, MA	**Date Analyzed**	: 09/30/20 12:37
Sample Matrix	: WATER	**Dilution Factor**	: 1
Analytical Method	: 1,8260B	**Analyst**	: RY
Lab File ID	: V6012573	**Instrument ID**	: VOA6
Sample Amount	: 5 ml	**GC Column**	: DB-VRX
Level	: LOW	**%Solids**	: N/A
Extract Volume (MeOH)	: N/A	**Injection Volume**	: N/A

		ug/L			
CAS NO.	**Parameter**	**Results**	**RL**	**MDL**	**Qualifier**
1640-89-7	Ethylcyclopentane	ND	2.00	0.265	U
564-02-3	2,2,3-Trimethylpentane	ND	2.00	0.347	U
565-75-3	2,3,4-Trimethylpentane	ND	2.00	0.261	U
1330-20-7	Xylene (Total)	ND	2.00	0.209	U
560-21-4	2,3,3-Trimethylpentane	ND	2.00	0.397	U
584-94-1	2,3-Dimethylhexane	ND	2.00	0.485	U
592-27-8	2-Methylheptane	ND	2.00	0.338	U
589-53-7	4-Methylheptane	ND	2.00	0.344	U
589-81-1	3-Methylheptane	ND	2.00	0.385	U
619-99-8	3-Ethylhexane	ND	2.00	0.358	U
108-88-3	Toluene	ND	2.00	0.271	U
554-14-3	2-Methylthiophene	ND	2.00	0.170	U
2207-04-7	1,4-Dimethylcyclohexane (trans)	ND	2.00	0.260	U
616-44-4	3-Methylthiophene	ND	2.00	0.234	U
111-66-0	1-Octene	ND	5.00	0.307	U
111-65-9	Octane	ND	2.00	0.235	U
6876-23-9	1,2-Dimethylcyclohexane (trans)	ND	2.00	0.294	U
106-93-4	1,2-Dibromoethane	ND	2.00	0.320	U
7642-04-8	cis-2-Octene	ND	2.00	0.229	U
3875-51-2	Isopropylcyclopentane	ND	2.00	0.293	U
2207-01-4	1,2-Dimethylcyclohexane (cis)	ND	2.00	0.581	U
2216-30-0	2,5-Dimethylheptane	ND	2.00	0.335	U
926-82-9	3,5-Dimethylheptane	ND	2.00	0.282	U
4032-86-4	3,3-Dimethylheptane	ND	2.00	0.242	U
7094-27-1	1,1,4-Trimethylcyclohexane	ND	2.00	0.199	U

Results Summary
Form 1
PIANO Volatile Organics by GC/MS

Client	: AECOM	**Lab Number**	: L2040277
Project Name	: LOCKHEED MARTIN	**Project Number**	: 60552044.19
Lab ID	: L2040277-03	**Date Collected**	: 09/23/20 16:00
Client ID	: 20A-TRC101-092320-1	**Date Received**	: 09/24/20
Sample Location	: WILMINGTON, MA	**Date Analyzed**	: 09/30/20 12:37
Sample Matrix	: WATER	**Dilution Factor**	: 1
Analytical Method	: 1,8260B	**Analyst**	: RY
Lab File ID	: V6012573	**Instrument ID**	: VOA6
Sample Amount	: 5 ml	**GC Column**	: DB-VRX
Level	: LOW	**%Solids**	: N/A
Extract Volume (MeOH)	: N/A	**Injection Volume**	: N/A

		ug/L			
CAS NO.	**Parameter**	**Results**	**RL**	**MDL**	**Qualifier**
3074-71-3	2,3-Dimethylheptane	ND	2.00	0.228	U
922-28-1	3,4-Dimethylheptane	ND	2.00	0.340	U
2216-34-4	4-Methyloctane	ND	2.00	0.334	U
3221-61-2	2-Methyloctane	ND	2.00	0.512	U
100-41-4	Ethylbenzene	ND	2.00	0.216	U
872-55-9	2-Ethylthiophene	ND	2.00	0.176	U
2216-33-3	3-Methyloctane	ND	2.00	0.224	U
1067-20-5	3,3-Diethylpentane	ND	2.00	0.233	U
179601-23-1	p/m-Xylene	ND	4.00	0.381	U
124-11-8	1-Nonene	ND	5.00	0.270	U
20063-92-7	trans-3-Nonene	ND	2.00	0.237	U
20237-46-1	cis-3-Nonene	ND	2.00	0.374	U
111-84-2	Nonane (C9)	ND	2.00	0.311	U
100-42-5	Styrene	ND	2.00	0.202	U
95-47-6	o-Xylene	ND	2.00	0.209	U
6434-77-1	2-Nonene	ND	5.00	0.254	U
696-29-7	Isopropylcyclohexane	ND	2.00	0.212	U
98-82-8	Isopropylbenzene	2.38	2.00	0.187	
4110-44-5	3,3-Dimethyloctane	1.33	2.00	0.202	J
103-65-1	n-Propylbenzene	8.46	2.00	0.177	
871-83-0	2-Methylnonane	ND	2.00	0.283	U
5911-04-6	3-Methylnonane	ND	2.00	0.279	U
620-14-4	1-Methyl-3-Ethylbenzene	ND	2.00	0.316	U
622-96-8	1-Methyl-4-Ethylbenzene	ND	2.00	0.282	U
108-67-8	1,3,5-Trimethylbenzene	ND	2.00	0.230	U

Results Summary
Form 1
PIANO Volatile Organics by GC/MS

Client	: AECOM	**Lab Number**	: L2040277
Project Name	: LOCKHEED MARTIN	**Project Number**	: 60552044.19
Lab ID	: L2040277-03	**Date Collected**	: 09/23/20 16:00
Client ID	: 20A-TRC101-092320-1	**Date Received**	: 09/24/20
Sample Location	: WILMINGTON, MA	**Date Analyzed**	: 09/30/20 12:37
Sample Matrix	: WATER	**Dilution Factor**	: 1
Analytical Method	: 1,8260B	**Analyst**	: RY
Lab File ID	: V6012573	**Instrument ID**	: VOA6
Sample Amount	: 5 ml	**GC Column**	: DB-VRX
Level	: LOW	**%Solids**	: N/A
Extract Volume (MeOH)	: N/A	**Injection Volume**	: N/A

		ug/L			
CAS NO.	**Parameter**	**Results**	**RL**	**MDL**	**Qualifier**
872-05-9	1-Decene	ND	2.00	0.260	U
1678-98-4	Isobutylcyclohexane	ND	2.00	0.163	U
611-14-3	1-Methyl-2-Ethylbenzene	ND	2.00	0.170	U
124-18-5	Decane (C10)	ND	2.00	0.271	U
98-06-6	tert-Butylbenzene	8.17	2.00	0.211	
95-63-6	1,2,4-Trimethylbenzene	ND	2.00	0.207	U
538-93-2	Isobutylbenzene	5.94	2.00	0.270	
135-98-8	sec-Butylbenzene	5.19	2.00	0.259	
535-77-3	1-Methyl-3-Isopropylbenzene	ND	2.00	0.258	U
99-87-6	1-Methyl-4-Isopropylbenzene	ND	2.00	0.212	U
526-73-8	1,2,3-Trimethylbenzene	ND	2.00	0.223	U
527-84-4	1-Methyl-2-Isopropylbenzene	3.22	2.00	0.217	
496-11-7	Indane	2.17	2.00	0.123	
141-93-5	1,3-Diethylbenzene	13.3	2.00	0.249	
1074-43-7	1-Methyl-3-N-Propylbenzene	ND	2.00	0.202	U
95-13-6	Indene	0.488	2.00	0.116	J
1074-55-1	1-Methyl-4-N-Propylbenzene	1.86	2.00	0.250	J
104-51-8	n-Butylbenzene	4.09	2.00	0.197	
934-80-5	1,2-Dimethyl-4-Ethylbenzene	ND	2.00	0.245	U
135-01-3	1,2-Diethylbenzene	6.29	2.00	0.296	
1074-17-5	1-Methyl-2-N-Propylbenzene	ND	2.00	0.249	U
1758-88-9	1,4-Dimethyl-2-Ethylbenzene	ND	2.00	0.187	U
1120-21-4	Undecane	ND	2.00	0.222	U
874-41-9	1,3-Dimethyl-4-Ethylbenzene	ND	2.00	0.194	U
934-74-7	1,3-Dimethyl-5-Ethylbenzene	12.6	2.00	0.236	

Results Summary
Form 1
PIANO Volatile Organics by GC/MS

Client	: AECOM	**Lab Number**	: L2040277
Project Name	: LOCKHEED MARTIN	**Project Number**	: 60552044.19
Lab ID	: L2040277-03	**Date Collected**	: 09/23/20 16:00
Client ID	: 20A-TRC101-092320-1	**Date Received**	: 09/24/20
Sample Location	: WILMINGTON, MA	**Date Analyzed**	: 09/30/20 12:37
Sample Matrix	: WATER	**Dilution Factor**	: 1
Analytical Method	: 1,8260B	**Analyst**	: RY
Lab File ID	: V6012573	**Instrument ID**	: VOA6
Sample Amount	: 5 ml	**GC Column**	: DB-VRX
Level	: LOW	**%Solids**	: N/A
Extract Volume (MeOH)	: N/A	**Injection Volume**	: N/A

		ug/L			
CAS NO.	**Parameter**	**Results**	**RL**	**MDL**	**Qualifier**
2870-04-4	1,3-Dimethyl-2-Ethylbenzene	3.61	2.00	0.149	
933-98-2	1,2-Dimethyl-3-Ethylbenzene	ND	2.00	0.127	U
95-93-2	1,2,4,5-Tetramethylbenzene	13.8	2.00	0.155	
527-53-7	1,2,3,5-Tetramethylbenzene	ND	2.00	0.152	U
538-68-1	N-Pentylbenzene	ND	2.00	0.249	U
488-23-3	1,2,3,4-Tetramethylbenzene	4.25	2.00	0.214	
98-19-1	1,3-Dimethyl-5-tert-Butylbenzene	ND	2.00	0.285	U
112-40-3	Dodecane (C12)	ND	5.00	0.657	U
102-25-0	1,3,5-Triethylbenzene	ND	2.00	0.380	U
91-20-3	Naphthalene	ND	2.00	0.835	U
95-15-8	Benzothiophene	ND	2.00	1.06	U
877-44-1	1,2,4-Triethylbenzene	ND	2.00	0.340	U
1077-16-3	Hexylbenzene	ND	2.00	0.385	U
12108-13-3	MMT	ND	5.00	1.29	U
629-50-5	Tridecane	ND	5.00	1.39	U
91-57-6	2-Methylnaphthalene	ND	5.00	1.32	U
90-12-0	1-Methylnaphthalene	1.56	5.00	1.47	J
629-59-4	Tetradecane (C14)	ND	5.00	0.612	U
629-62-9	Pentadecane	ND	5.00	1.12	U

Results Summary
Form 1
PIANO Volatile Organics by GC/MS

Client	: AECOM	**Lab Number**	: L2040277
Project Name	: LOCKHEED MARTIN	**Project Number**	: 60552044.19
Lab ID	: WG1416337-5	**Date Collected**	: NA
Client ID	: WG1416337-5BLANK	**Date Received**	: NA
Sample Location	:	**Date Analyzed**	: 09/29/20 21:05
Sample Matrix	: WATER	**Dilution Factor**	: 1
Analytical Method	: 1,8260B	**Analyst**	: RY
Lab File ID	: V6012569	**Instrument ID**	: VOA6
Sample Amount	: 5 ml	**GC Column**	: DB-VRX
Level	: LOW	**%Solids**	: N/A
Extract Volume (MeOH)	: N/A	**Injection Volume**	: N/A

		ug/L			
CAS NO.	**Parameter**	**Results**	**RL**	**MDL**	**Qualifier**
563-45-1	3-Methyl-1-butene	ND	2.00	0.297	U
78-78-4	Isopentane	ND	2.00	0.366	U
109-67-1	1-Pentene	ND	2.00	0.365	U
563-46-2	2-Methyl-1-Butene	ND	2.00	0.311	U
109-66-0	Pentane	ND	2.00	0.624	U
646-04-8	trans-2-Pentene	ND	2.00	0.270	U
78-79-5	Isoprene	ND	2.00	0.357	U
627-20-3	cis-2-Pentene	ND	2.00	0.322	U
75-65-0	Tertiary Butanol	ND	25.0	3.24	U
75-83-2	2,2-Dimethylbutane	ND	2.00	0.617	U
691-37-2	4-Methyl-1-pentene	ND	2.00	0.311	U
287-92-3	Cyclopentane	ND	2.00	0.519	U
79-29-8	2,3-Dimethylbutane	ND	2.00	0.826	U
107-83-5	2-Methylpentane	ND	2.00	0.542	U
1634-04-4	Methyl tert butyl ether	ND	2.00	0.412	U
96-14-0	3-Methylpentane	ND	2.00	0.317	U
592-41-6	1-Hexene	ND	2.00	0.281	U
110-54-3	n-Hexane	ND	2.00	0.329	U
108-20-3	Isopropyl Ether	ND	2.00	0.242	U
4050-45-7	trans-2-Hexene	ND	2.00	0.261	U
625-27-4	2-Methyl-2-pentene	ND	2.00	0.306	U
7688-21-3	cis-2-Hexene	ND	2.00	0.271	U
637-92-3	Ethyl-Tert-Butyl-Ether	ND	2.00	0.303	U
590-35-2	2,2-Dimethylpentane	ND	2.00	0.269	U
96-37-7	Methylcyclopentane	ND	2.00	0.268	U

Results Summary
Form 1
PIANO Volatile Organics by GC/MS

Client	: AECOM	**Lab Number**	: L2040277
Project Name	: LOCKHEED MARTIN	**Project Number**	: 60552044.19
Lab ID	: WG1416337-5	**Date Collected**	: NA
Client ID	: WG1416337-5BLANK	**Date Received**	: NA
Sample Location	:	**Date Analyzed**	: 09/29/20 21:05
Sample Matrix	: WATER	**Dilution Factor**	: 1
Analytical Method	: 1,8260B	**Analyst**	: RY
Lab File ID	: V6012569	**Instrument ID**	: VOA6
Sample Amount	: 5 ml	**GC Column**	: DB-VRX
Level	: LOW	**%Solids**	: N/A
Extract Volume (MeOH)	: N/A	**Injection Volume**	: N/A

		ug/L			
CAS NO.	**Parameter**	**Results**	**RL**	**MDL**	**Qualifier**
108-08-7	2,4-Dimethylpentane	ND	2.00	0.247	U
464-06-2	2,2,3-Trimethylbutane	ND	2.00	0.270	U
107-06-2	1,2-Dichloroethane	ND	2.00	0.295	U
562-49-2	3,3-Dimethylpentane	ND	2.00	0.372	U
110-82-7	Cyclohexane	ND	2.00	0.247	U
591-76-4	2-Methylhexane	ND	2.00	0.315	U
71-43-2	Benzene	ND	2.00	0.305	U
565-59-3	2,3-Dimethylpentane	ND	2.00	0.265	U
110-02-1	Thiophene	ND	2.00	0.284	U
1638-26-2	1,1-Dimethylcyclopentane	ND	2.00	0.240	U
589-34-4	3-Methylhexane	ND	2.00	0.320	U
994-05-8	Tertiary-Amyl Methyl Ether	ND	2.00	0.246	U
2532-58-3	1,3-Dimethylcyclopentane (cis)	ND	2.00	0.301	U
617-78-7	3-Ethylpentane	ND	2.00	0.289	U
1759-58-6/6094-02-6	1,3-DMCP (trans)/2-Methyl-1-hexene	ND	4.00	0.702	U
592-76-7/822-50-4	1-Heptene/1,2-DMCP (trans)	ND	4.00	0.585	U
540-84-1	Isooctane	ND	2.00	0.218	U
14686-14-7	trans-3-Heptene	ND	2.00	0.311	U
142-82-5	Heptane	ND	2.00	0.348	U
14686-13-6	trans-2-Heptene	ND	2.00	0.256	U
6443-92-1	cis-2-Heptene	ND	2.00	0.387	U
590-73-8	2,2-Dimethylhexane	ND	2.00	0.290	U
108-87-2	Methylcyclohexane	ND	2.00	0.270	U
592-13-2	2,5-Dimethylhexane	ND	2.00	0.348	U
589-43-5	2,4-Dimethylhexane	ND	2.00	0.243	U

Results Summary
Form 1
PIANO Volatile Organics by GC/MS

Client	: AECOM	**Lab Number**	: L2040277
Project Name	: LOCKHEED MARTIN	**Project Number**	: 60552044.19
Lab ID	: WG1416337-5	**Date Collected**	: NA
Client ID	: WG1416337-5BLANK	**Date Received**	: NA
Sample Location	:	**Date Analyzed**	: 09/29/20 21:05
Sample Matrix	: WATER	**Dilution Factor**	: 1
Analytical Method	: 1,8260B	**Analyst**	: RY
Lab File ID	: V6012569	**Instrument ID**	: VOA6
Sample Amount	: 5 ml	**GC Column**	: DB-VRX
Level	: LOW	**%Solids**	: N/A
Extract Volume (MeOH)	: N/A	**Injection Volume**	: N/A

		ug/L			
CAS NO.	**Parameter**	**Results**	**RL**	**MDL**	**Qualifier**
1640-89-7	Ethylcyclopentane	ND	2.00	0.265	U
564-02-3	2,2,3-Trimethylpentane	ND	2.00	0.347	U
565-75-3	2,3,4-Trimethylpentane	ND	2.00	0.261	U
1330-20-7	Xylene (Total)	ND	2.00	0.209	U
560-21-4	2,3,3-Trimethylpentane	ND	2.00	0.397	U
584-94-1	2,3-Dimethylhexane	ND	2.00	0.485	U
592-27-8	2-Methylheptane	ND	2.00	0.338	U
589-53-7	4-Methylheptane	ND	2.00	0.344	U
589-81-1	3-Methylheptane	ND	2.00	0.385	U
619-99-8	3-Ethylhexane	ND	2.00	0.358	U
108-88-3	Toluene	ND	2.00	0.271	U
554-14-3	2-Methylthiophene	ND	2.00	0.170	U
2207-04-7	1,4-Dimethylcyclohexane (trans)	ND	2.00	0.260	U
616-44-4	3-Methylthiophene	ND	2.00	0.234	U
111-66-0	1-Octene	ND	5.00	0.307	U
111-65-9	Octane	ND	2.00	0.235	U
6876-23-9	1,2-Dimethylcyclohexane (trans)	ND	2.00	0.294	U
106-93-4	1,2-Dibromoethane	ND	2.00	0.320	U
7642-04-8	cis-2-Octene	ND	2.00	0.229	U
3875-51-2	Isopropylcyclopentane	ND	2.00	0.293	U
2207-01-4	1,2-Dimethylcyclohexane (cis)	ND	2.00	0.581	U
2216-30-0	2,5-Dimethylheptane	ND	2.00	0.335	U
926-82-9	3,5-Dimethylheptane	ND	2.00	0.282	U
4032-86-4	3,3-Dimethylheptane	ND	2.00	0.242	U
7094-27-1	1,1,4-Trimethylcyclohexane	ND	2.00	0.199	U

Results Summary
Form 1
PIANO Volatile Organics by GC/MS

Client	: AECOM	**Lab Number**	: L2040277
Project Name	: LOCKHEED MARTIN	**Project Number**	: 60552044.19
Lab ID	: WG1416337-5	**Date Collected**	: NA
Client ID	: WG1416337-5BLANK	**Date Received**	: NA
Sample Location	:	**Date Analyzed**	: 09/29/20 21:05
Sample Matrix	: WATER	**Dilution Factor**	: 1
Analytical Method	: 1,8260B	**Analyst**	: RY
Lab File ID	: V6012569	**Instrument ID**	: VOA6
Sample Amount	: 5 ml	**GC Column**	: DB-VRX
Level	: LOW	**%Solids**	: N/A
Extract Volume (MeOH)	: N/A	**Injection Volume**	: N/A

		ug/L			
CAS NO.	**Parameter**	**Results**	**RL**	**MDL**	**Qualifier**
3074-71-3	2,3-Dimethylheptane	ND	2.00	0.228	U
922-28-1	3,4-Dimethylheptane	ND	2.00	0.340	U
2216-34-4	4-Methyloctane	ND	2.00	0.334	U
3221-61-2	2-Methyloctane	ND	2.00	0.512	U
100-41-4	Ethylbenzene	ND	2.00	0.216	U
872-55-9	2-Ethylthiophene	ND	2.00	0.176	U
2216-33-3	3-Methyloctane	ND	2.00	0.224	U
1067-20-5	3,3-Diethylpentane	ND	2.00	0.233	U
179601-23-1	p/m-Xylene	ND	4.00	0.381	U
124-11-8	1-Nonene	ND	5.00	0.270	U
20063-92-7	trans-3-Nonene	ND	2.00	0.237	U
20237-46-1	cis-3-Nonene	ND	2.00	0.374	U
111-84-2	Nonane (C9)	ND	2.00	0.311	U
100-42-5	Styrene	ND	2.00	0.202	U
95-47-6	o-Xylene	ND	2.00	0.209	U
6434-77-1	2-Nonene	ND	5.00	0.254	U
696-29-7	Isopropylcyclohexane	ND	2.00	0.212	U
98-82-8	Isopropylbenzene	ND	2.00	0.187	U
4110-44-5	3,3-Dimethyloctane	ND	2.00	0.202	U
103-65-1	n-Propylbenzene	ND	2.00	0.177	U
871-83-0	2-Methylnonane	ND	2.00	0.283	U
5911-04-6	3-Methylnonane	ND	2.00	0.279	U
620-14-4	1-Methyl-3-Ethylbenzene	ND	2.00	0.316	U
622-96-8	1-Methyl-4-Ethylbenzene	ND	2.00	0.282	U
108-67-8	1,3,5-Trimethylbenzene	ND	2.00	0.230	U

Results Summary
Form 1
PIANO Volatile Organics by GC/MS

Client	: AECOM	**Lab Number**	: L2040277
Project Name	: LOCKHEED MARTIN	**Project Number**	: 60552044.19
Lab ID	: WG1416337-5	**Date Collected**	: NA
Client ID	: WG1416337-5BLANK	**Date Received**	: NA
Sample Location	:	**Date Analyzed**	: 09/29/20 21:05
Sample Matrix	: WATER	**Dilution Factor**	: 1
Analytical Method	: 1,8260B	**Analyst**	: RY
Lab File ID	: V6012569	**Instrument ID**	: VOA6
Sample Amount	: 5 ml	**GC Column**	: DB-VRX
Level	: LOW	**%Solids**	: N/A
Extract Volume (MeOH)	: N/A	**Injection Volume**	: N/A

		ug/L			
CAS NO.	**Parameter**	**Results**	**RL**	**MDL**	**Qualifier**
872-05-9	1-Decene	ND	2.00	0.260	U
1678-98-4	Isobutylcyclohexane	ND	2.00	0.163	U
611-14-3	1-Methyl-2-Ethylbenzene	ND	2.00	0.170	U
124-18-5	Decane (C10)	ND	2.00	0.271	U
98-06-6	tert-Butylbenzene	ND	2.00	0.211	U
95-63-6	1,2,4-Trimethylbenzene	ND	2.00	0.207	U
538-93-2	Isobutylbenzene	ND	2.00	0.270	U
135-98-8	sec-Butylbenzene	ND	2.00	0.259	U
535-77-3	1-Methyl-3-Isopropylbenzene	ND	2.00	0.258	U
99-87-6	1-Methyl-4-Isopropylbenzene	ND	2.00	0.212	U
526-73-8	1,2,3-Trimethylbenzene	ND	2.00	0.223	U
527-84-4	1-Methyl-2-Isopropylbenzene	ND	2.00	0.217	U
496-11-7	Indane	ND	2.00	0.123	U
141-93-5	1,3-Diethylbenzene	ND	2.00	0.249	U
1074-43-7	1-Methyl-3-N-Propylbenzene	ND	2.00	0.202	U
95-13-6	Indene	ND	2.00	0.116	U
1074-55-1	1-Methyl-4-N-Propylbenzene	ND	2.00	0.250	U
104-51-8	n-Butylbenzene	ND	2.00	0.197	U
934-80-5	1,2-Dimethyl-4-Ethylbenzene	ND	2.00	0.245	U
135-01-3	1,2-Diethylbenzene	ND	2.00	0.296	U
1074-17-5	1-Methyl-2-N-Propylbenzene	ND	2.00	0.249	U
1758-88-9	1,4-Dimethyl-2-Ethylbenzene	ND	2.00	0.187	U
1120-21-4	Undecane	ND	2.00	0.222	U
874-41-9	1,3-Dimethyl-4-Ethylbenzene	ND	2.00	0.194	U
934-74-7	1,3-Dimethyl-5-Ethylbenzene	ND	2.00	0.236	U

Results Summary
Form 1
PIANO Volatile Organics by GC/MS

Client	: AECOM	**Lab Number**	: L2040277
Project Name	: LOCKHEED MARTIN	**Project Number**	: 60552044.19
Lab ID	: WG1416337-5	**Date Collected**	: NA
Client ID	: WG1416337-5BLANK	**Date Received**	: NA
Sample Location	:	**Date Analyzed**	: 09/29/20 21:05
Sample Matrix	: WATER	**Dilution Factor**	: 1
Analytical Method	: 1,8260B	**Analyst**	: RY
Lab File ID	: V6012569	**Instrument ID**	: VOA6
Sample Amount	: 5 ml	**GC Column**	: DB-VRX
Level	: LOW	**%Solids**	: N/A
Extract Volume (MeOH)	: N/A	**Injection Volume**	: N/A

		ug/L			
CAS NO.	**Parameter**	**Results**	**RL**	**MDL**	**Qualifier**
2870-04-4	1,3-Dimethyl-2-Ethylbenzene	ND	2.00	0.149	U
933-98-2	1,2-Dimethyl-3-Ethylbenzene	ND	2.00	0.127	U
95-93-2	1,2,4,5-Tetramethylbenzene	ND	2.00	0.155	U
527-53-7	1,2,3,5-Tetramethylbenzene	ND	2.00	0.152	U
538-68-1	N-Pentylbenzene	ND	2.00	0.249	U
488-23-3	1,2,3,4-Tetramethylbenzene	ND	2.00	0.214	U
98-19-1	1,3-Dimethyl-5-tert-Butylbenzene	ND	2.00	0.285	U
112-40-3	Dodecane (C12)	ND	5.00	0.657	U
102-25-0	1,3,5-Triethylbenzene	ND	2.00	0.380	U
91-20-3	Naphthalene	ND	2.00	0.835	U
95-15-8	Benzothiophene	ND	2.00	1.06	U
877-44-1	1,2,4-Triethylbenzene	ND	2.00	0.340	U
1077-16-3	Hexylbenzene	ND	2.00	0.385	U
12108-13-3	MMT	ND	5.00	1.29	U
629-50-5	Tridecane	ND	5.00	1.39	U
91-57-6	2-Methylnaphthalene	ND	5.00	1.32	U
90-12-0	1-Methylnaphthalene	ND	5.00	1.47	U
629-59-4	Tetradecane (C14)	ND	5.00	0.612	U
629-62-9	Pentadecane	ND	5.00	1.12	U

Surrogate Recovery Summary
Form 2
Volatiles

Client: AECOM
Project Name: LOCKHEED MARTIN

Lab Number: L2040277
Project Number: 60552044.19
Matrix: Water

CLIENT ID (LAB SAMPLE NO.)	S1 (DBFM)	S2 (TOL)	S3 (BFB)	S4 ()	S5 ()	S6 ()	TOT OUT
20A-EMW11R2-092320-1 (L2040277-01)	104	101	91	--	--	--	0
20A-AE3-092320-1 (L2040277-02)	104	100	95	--	--	--	0
20A-TRC101-092320-1 (L2040277-03)	103	100	94	--	--	--	0
WG1416337-3LCS	99	99	98	--	--	--	0
WG1416337-4LCSD	99	98	97	--	--	--	0
WG1416337-5BLANK	100	98	96	--	--	--	0

QC LIMITS
(70-130) DBFM = DIBROMOFLUOROMETHANE
(70-130) TOL = TOLUENE-D8
(70-130) BFB = 4-BROMOFLUOROBENZENE

*** Values outside of QC limits**

FORM II A2-PIANO8260

Laboratory Control Sample Summary
Form 3
Volatiles

Client	: AECOM	**Lab Number**	: L2040277
Project Name	: LOCKHEED MARTIN	**Project Number**	: 60552044.19
Matrix	: WATER		
LCS Sample ID	: WG1416337-3	**Analysis Date** : 09/29/20 18:42	**File ID** : V6012567
LCSD Sample ID	: WG1416337-4	**Analysis Date** : 09/29/20 19:53	**File ID** : V6012568

	Laboratory Control Sample			Laboratory Control Duplicate					
Parameter	True (ug/l)	Found (ug/l)	%R	True (ug/l)	Found (ug/l)	%R	RPD	Recovery Limits	RPD Limit
1-Pentene	20	15.2	76	20	15.0	75	1	50-130	30
Pentane	20	12.8	64	20	12.6	63	2	50-130	30
Tertiary Butanol	100	81.1	81	100	72.5	72	12	50-130	30
Cyclopentane	20	16.9	84	20	16.7	84	0	50-130	30
2-Methylpentane	20	15.2	76	20	14.9	74	3	50-130	30
Methyl tert butyl ether	20	20.4	102	20	19.9	100	2	50-130	30
3-Methylpentane	20	16.8	84	20	16.6	83	1	50-130	30
1-Hexene	20	17.8	89	20	17.1	86	3	50-130	30
n-Hexane	20	17.6	88	20	17.5	88	0	50-130	30
Isopropyl Ether	20	19.3	96	20	18.9	94	2	50-130	30
Ethyl-Tert-Butyl-Ether	20	19.5	98	20	19.2	96	2	50-130	30
Methylcyclopentane	20	18.6	93	20	17.8	89	4	50-130	30
2,4-Dimethylpentane	20	16.8	84	20	16.6	83	1	50-130	30
Cyclohexane	20	18.8	94	20	18.9	94	0	50-130	30
2-Methylhexane	20	17.3	86	20	17.0	85	1	50-130	30
Benzene	20	20.0	100	20	19.8	99	1	50-130	30
2,3-Dimethylpentane	20	18.6	93	20	18.1	90	3	50-130	30
3-Methylhexane	20	15.5	78	20	15.2	76	3	50-130	30
Tertiary-Amyl Methyl Ether	20	17.8	89	20	17.6	88	1	50-130	30
Isooctane	20	19.1	96	20	19.0	95	1	50-130	30
Heptane	20	16.8	84	20	16.6	83	1	50-130	30
Methylcyclohexane	20	20.1	100	20	20.1	100	0	50-130	30
2-Methylheptane	20	18.1	90	20	17.8	89	1	50-130	30
3-Methylheptane	20	17.0	85	20	16.5	82	4	50-130	30
Toluene	20	19.4	97	20	19.4	97	0	50-130	30
Octane	20	19.0	95	20	18.6	93	2	50-130	30

Laboratory Control Sample Summary
Form 3
Volatiles

Client : AECOM
Project Name : LOCKHEED MARTIN
Matrix : WATER
LCS Sample ID : WG1416337-3 **Analysis Date** : 09/29/20 18:42 **File ID** : V6012567
LCSD Sample ID : WG1416337-4 **Analysis Date** : 09/29/20 19:53 **File ID** : V6012568
Lab Number : L2040277
Project Number : 60552044.19

	Laboratory Control Sample			Laboratory Control Duplicate					
Parameter	True (ug/l)	Found (ug/l)	%R	True (ug/l)	Found (ug/l)	%R	RPD	Recovery Limits	RPD Limit
Ethylbenzene	20	19.5	98	20	19.6	98	0	50-130	30
p/m-Xylene	40	40.1	100	40	40.1	100	0	50-130	30
Nonane (C9)	20	18.6	93	20	18.1	90	3	50-130	30
o-Xylene	20	19.3	96	20	19.4	97	1	50-130	30
Isopropylbenzene	20	19.8	99	20	20.0	100	1	50-130	30
n-Propylbenzene	20	19.4	97	20	19.6	98	1	50-130	30
1-Methyl-3-Ethylbenzene	20	19.6	98	20	19.7	98	0	50-130	30
1-Methyl-4-Ethylbenzene	20	20.1	100	20	20.4	102	2	50-130	30
1,3,5-Trimethylbenzene	20	19.2	96	20	19.4	97	1	50-130	30
1-Decene	20	15.8	79	20	15.8	79	0	50-130	30
1-Methyl-2-Ethylbenzene	20	19.1	96	20	19.3	96	0	50-130	30
Decane (C10)	20	20.8	104	20	20.5	102	2	50-130	30
1,2,4-Trimethylbenzene	20	18.7	94	20	19.0	95	1	50-130	30
sec-Butylbenzene	20	19.7	98	20	20.2	101	3	50-130	30
1-Methyl-4-N-Propylbenzene	20	17.7	88	20	17.8	89	1	50-130	30
n-Butylbenzene	20	18.4	92	20	18.6	93	1	50-130	30
1,2-Diethylbenzene	20	18.4	92	20	18.4	92	0	50-130	30
Undecane	20	21.3	106	20	20.9	104	2	50-130	30
N-Pentylbenzene	20	18.8	94	20	19.0	95	1	50-130	30
Dodecane (C12)	20	23.6	118	20	23.7	118	0	50-130	30

Method Blank Summary
Form 4
Volatiles

Client	: AECOM	**Lab Number**	: L2040277
Project Name	: LOCKHEED MARTIN	**Project Number**	: 60552044.19
Lab Sample ID	: WG1416337-5	**Lab File ID**	: V6012569
Instrument ID	: VOA6		
Matrix	: WATER	**Analysis Date**	: 09/29/20 21:05

Client Sample No.	Lab Sample ID	Analysis Date
WG1416337-3LCS	WG1416337-3	09/29/20 18:42
WG1416337-4LCSD	WG1416337-4	09/29/20 19:53
20A-EMW11R2-092320-1	L2040277-01	09/30/20 10:15
20A-AE3-092320-1	L2040277-02	09/30/20 11:26
20A-TRC101-092320-1	L2040277-03	09/30/20 12:37

Instrument Performance Check (Tune) Summary
Form 5
Volatiles
Bromofluorobenzene (BFB)

Client	: AECOM	**Lab Number**	: L2040277
Project Name	: LOCKHEED MARTIN	**Project Number**	: 60552044.19
Instrument ID	: VOA6	**Analysis Date**	: 09/18/20 15:24
Tune Standard	: WG1412463-1	**Tune File ID**	: V6012463_tune

m/e	Ion Abundance Criteria	%Relative Abundance
50	15.0 - 40.0% of mass 95	17.8
75	30.0 - 60.0% of mass 95	47.3
95	Base Peak, 100% relative abundance	100
96	5.0 - 9.0% of mass 95	6
173	Less than 2.0% of mass 174	0.9 (.9)1
174	Greater than 50.0 of mass 95	99
175	5.0 - 9.0% of mass 174	7.2 (7.3)1
176	95.0 - 101% of mass 174	95.2 (96.1)1
177	5.0 - 9.0% of mass 176	6 (6.3)2

1-Value is % of mass 174 2-Value is % of mass 176

This Check Applies to the following Samples, MS, MSD, Blanks, and Standards:

Client Sample ID	Lab Sample ID	File ID	Analysis Date/Time
2	R1352051-1	V6012464	09/18/20 16:00
5	R1352051-2	V6012465	09/18/20 17:11
20	R1352051-3	V6012466	09/18/20 18:22
50	R1352051-4	V6012467	09/18/20 19:33
100	R1352051-5	V6012468	09/18/20 20:44
200	R1352051-6	V6012469	09/18/20 21:55
ICV QUANT	R1352051-7	V6012471	09/19/20 00:16

Instrument Performance Check (Tune) Summary
Form 5
Volatiles
Bromofluorobenzene (BFB)

Client	: AECOM	**Lab Number**	: L2040277
Project Name	: LOCKHEED MARTIN	**Project Number**	: 60552044.19
Instrument ID	: VOA6	**Analysis Date**	: 09/29/20 16:56
Tune Standard	: WG1416337-1	**Tune File ID**	: V6012565_tune

m/e	Ion Abundance Criteria	%Relative Abundance
50	15.0 - 40.0% of mass 95	17.6
75	30.0 - 60.0% of mass 95	48.1
95	Base Peak, 100% relative abundance	100
96	5.0 - 9.0% of mass 95	6.2
173	Less than 2.0% of mass 174	0.7 (.7)1
174	Greater than 50.0 of mass 95	99
175	5.0 - 9.0% of mass 174	7.1 (7.2)1
176	95.0 - 101% of mass 174	98.2 (99.3)1
177	5.0 - 9.0% of mass 176	6.2 (6.3)2

1-Value is % of mass 174 2-Value is % of mass 176

This Check Applies to the following Samples, MS, MSD, Blanks, and Standards:

Client Sample ID	Lab Sample ID	File ID	Analysis Date/Time
WG1416337-2CCAL	WG1416337-2	V6012566	09/29/20 17:31
WG1416337-3LCS	WG1416337-3	V6012567	09/29/20 18:42
WG1416337-4LCSD	WG1416337-4	V6012568	09/29/20 19:53
WG1416337-5BLANK	WG1416337-5	V6012569	09/29/20 21:05
20A-EMW11R2-092320-1	L2040277-01	V6012571	09/30/20 10:15
20A-AE3-092320-1	L2040277-02	V6012572	09/30/20 11:26
20A-TRC101-092320-1	L2040277-03	V6012573	09/30/20 12:37
WG1416337-7CCAL	WG1416337-7	V6012574	09/30/20 14:55

Initial Calibration Summary
Form 6
Volatiles

Client	**: AECOM**	**Lab Number**	**: L2040277**
Project Name	**: LOCKHEED MARTIN**	**Project Number**	**: 60552044.19**
Instrument ID	**: VOA6**	**Ical Ref**	**: ICAL17149**
Calibration dates	**: 09/18/20 16:00 09/18/20 21:55**		

Calibration Files

2 =V6012464.D 5 =V6012465.D 50 =V6012467.D 100 =V6012468.D 200 =V6012469.D 20 =V6012466.D

		Compound	2	5	50	100	200	20	Avg	%RSD
1)	I	Chlorobenzene-D5 [IS]	----------ISTD----------							
2)		3-Methyl-1-butene	0.384	0.358	0.363	0.393	0.388	0.357	0.3736	4.36
3)		Isopentane	0.265	0.208	0.197	0.211	0.205	0.196	0.2137	12.19
4)		1-Pentene	0.225	0.212	0.221	0.234	0.233	0.213	0.2231	4.31
5)		2-Methyl-1-butene	0.377	0.356	0.367	0.392	0.386	0.358	0.3727	3.96
6)		Pentane	0.387	0.345	0.337	0.359	0.352	0.333	0.3521	5.58
7)		trans-2-Pentene	0.378	0.350	0.364	0.384	0.383	0.354	0.3688	4.11
8)		2-Methyl-1,3-butadiene	0.248	0.228	0.250	0.269	0.268	0.239	0.2505	6.34
9)		cis-2-Pentene	0.376	0.340	0.346	0.370	0.371	0.341	0.3575	4.68
10)		Tertiary butanol		0.028	0.031	0.033	0.032	0.031	0.0311#	6.45
11)		2,2-Dimethylbutane	0.260	0.252	0.212	0.223	0.220	0.214	0.2302	8.96
12)		4-Methyl-1-pentene	0.285	0.250	0.250	0.264	0.261	0.241	0.2584	5.99
13)		Cyclopentane	0.146	0.141	0.148	0.158	0.158	0.141	0.1485	5.12
14)		2,3-Dimethylbutane	0.105	0.108	0.117	0.125	0.125	0.111	0.1153	7.38
15)		2-Methylpentane	0.417	0.366	0.365	0.390	0.385	0.364	0.3813	5.51
16)		MTBE	0.444	0.436	0.489	0.511	0.510	0.470	0.4767	6.74
17)		3-Methylpentane	0.331	0.319	0.349	0.371	0.369	0.330	0.3448	6.33
18)		1-Hexene	0.181	0.184	0.198	0.212	0.211	0.192	0.1962	6.58
19)		Hexane	0.291	0.258	0.278	0.299	0.296	0.266	0.2814	5.95
20)		Diisopropyl ether	0.441	0.437	0.494	0.514	0.507	0.480	0.4786	6.89
21)		trans-2-Hexene	0.339	0.322	0.341	0.361	0.361	0.332	0.3426	4.53
22)		2-Methyl-2-pentene	0.351	0.342	0.376	0.388	0.393	0.356	0.3676	5.78
23)		cis-2-Hexene	0.282	0.257	0.278	0.296	0.296	0.267	0.2795	5.52
24)	S	Dibromofluoromethane (surr)	0.317	0.312	0.313	0.309	0.312	0.308	0.3118	1.09
25)		Ethyl tertiary butyl ether	0.456	0.450	0.514	0.535	0.534	0.495	0.4974	7.55
26)		2,2-Dimethylpentane	0.410	0.400	0.434	0.451	0.450	0.414	0.4264	5.10
27)		Methylcyclopentane	0.351	0.332	0.365	0.379	0.378	0.350	0.3589	5.07
28)		2,4-Dimethylpentane	0.374	0.327	0.337	0.353	0.355	0.334	0.3467	5.02
29)		2,2,3-Trimethylbutane	0.348	0.349	0.379	0.401	0.398	0.362	0.3729	6.32
30)		1,2-Dichloroethane	0.244	0.235	0.247	0.258	0.256	0.243	0.2471	3.43
31)		3,3-Dimethylpentane	0.430	0.390	0.404	0.425	0.422	0.393	0.4107	4.25
32)		Cyclohexane	0.283	0.278	0.303	0.318	0.318	0.294	0.2990	5.71
33)		2-Methylhexane	0.379	0.349	0.356	0.373	0.369	0.348	0.3624	3.58
34)	M	Benzene	0.724	0.692	0.764	0.799	0.799	0.739	0.7527	5.64
35)		2,3-Dimethylpentane	0.288	0.288	0.311	0.322	0.323	0.297	0.3047	5.25
36)		Thiophene	0.391	0.387	0.431	0.453	0.452	0.421	0.4223	6.84

Initial Calibration Summary
Form 6
Volatiles

Client	**: AECOM**	**Lab Number**	**: L2040277**
Project Name	**: LOCKHEED MARTIN**	**Project Number**	**: 60552044.19**
Instrument ID	**: VOA6**	**Ical Ref**	**: ICAL17149**
Calibration dates	**: 09/18/20 16:00 09/18/20 21:55**		

Calibration Files

2 =V6012464.D 5 =V6012465.D 50 =V6012467.D 100 =V6012468.D 200 =V6012469.D 20 =V6012466.D

		Compound	2	5	50	100	200	20	Avg	%RSD
37)		1,1-Dimethylcyclopentane	0.185	0.193	0.213	0.227	0.230	0.207	0.2093	8.66
38)		3-Methylhexane	0.339	0.311	0.322	0.329	0.329	0.310	0.3234	3.54
39)		TAME	0.806	0.584	0.512	0.525	0.521	0.515	0.5772	19.95
40)		cis-1,3-Dimethylcyclopentane	0.303	0.291	0.307	0.328	0.330	0.298	0.3096	5.10
41)		3-Ethylpentane	0.440	0.406	0.400	0.412	0.413	0.378	0.4080	4.99
42)		trans-1,3-DMCP/2-Methyl-1-hexene	0.172	0.125	0.133	0.140	0.144	0.130	0.1405	11.93
43)		1-Heptene/trans-1,2-DMCP	0.146	0.149	0.164	0.169	0.173	0.154	0.1592	6.95
44)		Isooctane	0.732	0.725	0.782	0.819	0.825	0.768	0.7753	5.42
45)		trans-3-Heptene	0.323	0.253	0.252	0.263	0.263	0.247	0.2668	10.63
46)		Heptane	0.325	0.294	0.290	0.305	0.306	0.289	0.3014	4.52
48)		trans-2-Heptene	0.220	0.219	0.236	0.251	0.251	0.228	0.2343	6.18
49)		cis-2-Heptene	0.162	0.167	0.179	0.188	0.190	0.175	0.1769	6.39
50)		2,2-Dimethylhexane	0.704	0.713	0.773	0.808	0.797	0.752	0.7579	5.66
51)		Methylcyclohexane	0.311	0.316	0.358	0.381	0.384	0.346	0.3495	8.88
52)		2,5-Dimethylhexane	0.360	0.350	0.390	0.405	0.399	0.377	0.3803	5.78
53)		2,4-Dimethylhexane	0.291	0.289	0.305	0.320	0.319	0.291	0.3026	4.73
54)		Ethylcyclopentane	0.278	0.275	0.301	0.318	0.320	0.292	0.2973	6.47
55)		2,2,3-Trimethylpentane	0.555	0.559	0.612	0.636	0.633	0.594	0.5980	5.92
57)		2,3,4-Trimethylpentane	0.425	0.399	0.416	0.433	0.428	0.407	0.4178	3.18
58)		2,3,3-Trimethylpentane	0.363	0.339	0.354	0.369	0.367	0.347	0.3565	3.34
59)		2,3-Dimethylhexane	0.404	0.373	0.394	0.403	0.400	0.382	0.3928	3.26
60)		2-Methylheptane	0.327	0.324	0.358	0.372	0.367	0.347	0.3492	5.78
61)		4-Methylheptane	0.420	0.397	0.413	0.430	0.424	0.410	0.4158	2.84
62)	S	Toluene-d8 (surr)	1.185	1.185	1.202	1.190	1.209	1.184	1.1924	0.86
63)		3-Methylheptane	0.439	0.356	0.311	0.316	0.314	0.321	0.3429	14.58
64)	S	2-Bromo-1-Chloropropane	0.253	0.251	0.287	0.305	0.298	0.284	0.2796	8.10
65)		3-Ethylhexane	0.438	0.408	0.433	0.441	0.442	0.419	0.4302	3.20
66)	M	Toluene	0.881	0.859	0.915	0.962	0.957	0.898	0.9120	4.52
67)		2-Methylthiophene	0.632	0.648	0.715	0.753	0.756	0.703	0.7011	7.38
68)		trans-1,4-Dimethylcyclohexane	0.398	0.411	0.462	0.486	0.488	0.442	0.4480	8.39
69)		3-Methylthiophene	0.662	0.649	0.718	0.755	0.758	0.703	0.7074	6.42
70)		1-Octene	0.182	0.165	0.179	0.184	0.185	0.174	0.1780	4.37
71)		Octane	0.356	0.339	0.346	0.360	0.352	0.345	0.3499	2.19
72)		trans-1,2-Dimethylcyclohexane	0.309	0.287	0.306	0.317	0.316	0.305	0.3065	3.56
73)		1,2-Dibromoethane	0.165	0.171	0.192	0.205	0.206	0.187	0.1876	9.02
75)		cis-2-Octene	0.263	0.260	0.264	0.281	0.280	0.264	0.2686	3.44

Initial Calibration Summary
Form 6
Volatiles

Client	**: AECOM**	**Lab Number**	**: L2040277**
Project Name	**: LOCKHEED MARTIN**	**Project Number**	**: 60552044.19**
Instrument ID	**: VOA6**	**Ical Ref**	**: ICAL17149**
Calibration dates	**: 09/18/20 16:00 09/18/20 21:55**		

Calibration Files

2 =V6012464.D 5 =V6012465.D 50 =V6012467.D 100 =V6012468.D 200 =V6012469.D 20 =V6012466.D

	Compound	2	5	50	100	200	20	Avg	%RSD
76)	Isopropylcyclopentane	0.293	0.301	0.334	0.354	0.358	0.342	0.3306	8.26
77)	cis-1,2-Dimethylcyclohexane	0.288	0.276	0.291	0.305	0.304	0.287	0.2918	3.89
78)	2,5-Dimethylheptane	0.500	0.479	0.508	0.540	0.519	0.514	0.5100	3.96
79)	3,5-Dimethylheptane	0.548	0.583	0.612	0.599	0.571	0.559	0.5787	4.16
80)	3,3-Dimethylheptane	0.378	0.370	0.399	0.414	0.403	0.392	0.3926	4.13
81)	1,1,4-Trimethylcyclohexane	0.337	0.335	0.371	0.390	0.385	0.365	0.3640	6.45
82)	2,3-Dimethylheptane	0.446	0.436	0.449	0.468	0.450	0.447	0.4493	2.34
83)	3,4-Dimethylheptane	0.310	0.282	0.279	0.290	0.281	0.289	0.2884	3.90
84)	4-Methyloctane	0.456	0.418	0.431	0.444	0.413	0.417	0.4299	4.01
85)	2-Methyloctane	0.336	0.339	0.360	0.377	0.371	0.382	0.3608	5.46
86)	Ethylbenzene	0.966	0.961	1.036	1.100	1.098	1.027	1.0311	5.89
87) S	1-Chloro-2-Fluorobenzene	0.521	0.546	0.589	0.631	0.629	0.591	0.5846	7.52
88)	2-Ethylthiophene	0.714	0.725	0.804	0.858	0.868	0.794	0.7938	8.11
89)	3-Methyloctane	0.600	0.611	0.666	0.696	0.676	0.659	0.6513	5.81
90)	3,3-Diethylpentane	0.705	0.703	0.779	0.814	0.800	0.766	0.7611	6.21
91)	p/m-Xylene	0.733	0.731	0.787	0.840	0.845	0.782	0.7864	6.28
92)	1-Nonene	0.170	0.174	0.195	0.206	0.203	0.190	0.1895	7.87
93)	trans-3-Nonene	0.250	0.242	0.258	0.271	0.268	0.256	0.2576	4.24
94)	cis-3-Nonene	0.286	0.254	0.293	0.301	0.304	0.273	0.2851	6.62
95)	Nonane	0.345	0.330	0.346	0.355	0.338	0.338	0.3419	2.56
96)	Styrene	0.588	0.607	0.666	0.718	0.731	0.660	0.6618	8.66
97) S	1,4-Dichlorobutane (H/surr)	0.252	0.251	0.259	0.267	0.274	0.261	0.2608	3.42
98)	o-Xylene	0.777	0.775	0.812	0.877	0.895	0.810	0.8244	6.15
99)	2-Nonene	0.250	0.243	0.270	0.285	0.286	0.266	0.2667	6.60
100)	Isopropylcyclohexane	0.366	0.364	0.399	0.420	0.418	0.388	0.3926	6.21
101) S	4-Bromofluorobenzene (surr)	0.495	0.497	0.491	0.495	0.502	0.493	0.4956	0.81
102)	Isopropylbenzene	0.999	1.003	1.068	1.151	1.158	1.066	1.0743	6.39
103)	3,3-Dimethyloctane	0.497	0.546	0.600	0.616	0.567	0.592	0.5695	7.62
104)	n-Propylbenzene	1.161	1.163	1.263	1.361	1.360	1.271	1.2633	7.03
105)	2-Methylnonane	0.343	0.320	0.341	0.344	0.302	0.337	0.3312	5.14
106)	3-Methylnonane	0.387	0.383	0.428	0.432	0.382	0.413	0.4042	5.72
107)	1-Methyl-3-ethylbenzene	0.952	0.990	1.071	1.158	1.168	1.070	1.0683	8.12
108)	1-Methyl-4-ethylbenzene	0.928	0.963	1.033	1.119	1.135	1.030	1.0348	7.93
109)	1,3,5-Trimethylbenzene	0.776	0.809	0.904	0.981	0.995	0.895	0.8935	9.89
110)	1-Decene	0.206	0.191	0.213	0.224	0.213	0.206	0.2086	5.16
111)	Isobutylcyclohexane	0.377	0.392	0.429	0.457	0.445	0.426	0.4208	7.34

Initial Calibration Summary
Form 6
Volatiles

Client	**: AECOM**	**Lab Number**	**: L2040277**
Project Name	**: LOCKHEED MARTIN**	**Project Number**	**: 60552044.19**
Instrument ID	**: VOA6**	**Ical Ref**	**: ICAL17149**
Calibration dates	**: 09/18/20 16:00 09/18/20 21:55**		

Calibration Files
2 =V6012464.D 5 =V6012465.D 50 =V6012467.D 100 =V6012468.D 200 =V6012469.D 20 =V6012466.D

	Compound	2	5	50	100	200	20	Avg	%RSD
112)	1-Methyl-2-ethylbenzene	0.953	1.019	1.097	1.199	1.235	1.092	1.0994	9.66
113)	Decane	0.296	0.288	0.304	0.306	0.270	0.302	0.2944	4.65
114)	tert-Butylbenzene	0.700	0.748	0.818	0.893	0.916	0.809	0.8141	10.11
115)	1,2,4-Trimethylbenzene	0.788	0.826	0.925	1.008	1.033	0.910	0.9150	10.58
116)	Isobutylbenzene	0.896	0.913	1.024	1.119	1.100	0.993	1.0076	9.22
117)	sec-Butylbenzene	1.047	1.078	1.188	1.313	1.344	1.184	1.1923	10.07
118)	1-Methyl-3-isopropylbenzene	0.849	0.900	1.013	1.116	1.140	0.994	1.0021	11.47
119)	1-Methyl-4-isopropylbenzene	0.879	0.945	1.049	1.157	1.186	1.034	1.0415	11.36
120)	1,2,3-Trimethylbenzene	0.821	0.828	0.928	1.020	1.045	0.912	0.9255	10.12
121)	1-Methyl-2-isopropylbenzene	0.887	0.931	1.031	1.144	1.173	1.015	1.0301	10.97
122)	Indan	0.792	0.800	0.874	0.967	0.994	0.873	0.8833	9.43
123)	1,3-Diethylbenzene	0.549	0.569	0.639	0.712	0.739	0.620	0.6380	11.88
124)	1-Methyl-3-propylbenzene	1.004	1.043	1.194	1.339	1.371	1.163	1.1858	12.62
125)	Indene	0.673	0.686	0.782	0.872	0.895	0.760	0.7780	11.81
126)	1-Methyl-4-propylbenzene	1.270	1.305	1.512	1.708	1.750	1.456	1.5002	13.29
127)	n-Butylbenzene	0.977	1.007	1.135	1.268	1.293	1.108	1.1313	11.48
128)	1,2-Dimethyl-4-ethylbenzene	0.896	0.931	1.107	1.260	1.295	1.056	1.0909	15.06
129)	1,2-Diethylbenzene	0.441	0.451	0.522	0.597	0.613	0.506	0.5218	13.70
130)	1-Methyl-2-propylbenzene	1.124	1.128	1.303	1.467	1.503	1.259	1.2973	12.48
131)	1,4-Dimethyl-2-ethylbenzene	0.855	0.873	1.021	1.153	1.192	0.982	1.0127	13.78
132)	Undecane	0.331	0.345	0.353	0.325	0.286	0.384	0.3374	9.63
133)	1,3-Dimethyl-4-ethylbenzene	1.041	1.063	1.228	1.401	1.433	1.181	1.2245	13.49
134)	1,3-Dimethyl-5-ethylbenzene	0.966	0.996	1.157	1.321	1.353	1.108	1.1503	14.00
135)	1,3-Dimethyl-2-ethylbenzene	1.026	1.042	1.194	1.352	1.387	1.151	1.1920	12.74
136)	1,2-Dimethyl-3-ethylbenzene	0.914	0.924	1.071	1.202	1.241	1.036	1.0647	12.84
137)	1,2,4,5-Tetramethylbenzene	0.978	0.979	1.127	1.268	1.305	1.103	1.1265	12.32
138)	1,2,3,5-Tetramethylbenzene	0.864	0.867	1.005	1.135	1.169	0.979	1.0032	12.87
139)	Pentylbenzene	0.842	0.840	0.944	1.048	1.044	0.933	0.9417	9.74
140)	1,2,3,4-Tetramethylbenzene	1.148	1.174	1.333	1.500	1.535	1.304	1.3322	12.06
141)	1,3-DM-5-tert-Butylbenzene	0.869	0.883	1.021	1.148	1.146	0.999	1.0110	11.98
142)	Dodecane	0.304	0.287	0.225	0.196	0.185	0.275	0.2455	20.40
143)	1,3,5-Triethylbenzene	0.560	0.563	0.655	0.722	0.720	0.647	0.6445	11.14
144)	Naphthalene	0.866	0.839	0.900	0.992	1.028	0.886	0.9186	8.13
145)	Benzothiophene	0.460	0.450	0.494	0.547	0.573	0.482	0.5009	9.78
146)	1,2,4-Triethylbenzene	0.521	0.517	0.599	0.668	0.673	0.594	0.5954	11.38
147)	Hexylbenzene	0.796	0.785	0.866	0.943	0.905	0.874	0.8613	7.09

Initial Calibration Summary
Form 6
Volatiles

Client	**: AECOM**	**Lab Number**	**: L2040277**
Project Name	**: LOCKHEED MARTIN**	**Project Number**	**: 60552044.19**
Instrument ID	**: VOA6**	**Ical Ref**	**: ICAL17149**
Calibration dates	**: 09/18/20 16:00 09/18/20 21:55**		

Calibration Files

2 =V6012464.D 5 =V6012465.D 50 =V6012467.D 100 =V6012468.D 200 =V6012469.D 20 =V6012466.D

	Compound	2	5	50	100	200	20	Avg	%RSD
148)	MMT	0.314	0.322	0.361	0.397	0.410	0.353	0.3597	10.73
149)	Tridecane	0.350	0.305	0.223	0.206	0.209	0.263	0.2593	22.49
150)	2-Methylnaphthalene	0.587	0.549	0.615	0.668	0.690	0.605	0.6190	8.38
151)	1-Methylnaphthalene	0.476	0.463	0.513	0.557	0.578	0.503	0.5150	8.73
152)	Tetradecane	0.291	0.231	0.193	0.180	0.193	0.209	0.2164	18.83
153)	Pentadecane	0.205	0.151	0.154	0.149	0.164	0.158	0.1638	12.86

Calibration Verification Summary
Form 7
Volatiles

Client	: AECOM	**Lab Number**	: L2040277		
Project Name	: LOCKHEED MARTIN	**Project Number**	: 60552044.19		
Instrument ID	: VOA6	**Calibration Date**	: 09/29/20 17:31		
Lab File ID	: V6012566	**Init. Calib. Date(s)**	: 09/18/20	09/18/20	
Sample No	: WG1416337-2	**Init. Calib. Times**	: 16:00	21:55	
Channel	:				

Compound	Ave. RRF	RRF	Min RRF	%D	Max %D	Area%	Dev(min)
Chlorobenzene-D5 [IS]	1	1	.1	0	25	72	0
3-Methyl-1-butene	0.374	0.353	.1	5.6	25	70	-.01
Isopentane	0.214	0.185	.1	13.6	25	68	0
1-Pentene	0.223	0.216	.1	3.1	25	70	0
2-Methyl-1-butene	0.373	0.371	.1	0.5	25	73	0
Pentane	0.352	0.328	.1	6.8	25	70	-.01
trans-2-Pentene	0.369	0.369	.1	0	25	73	0
2-Methyl-1,3-butadiene	0.25	0.265	.1	-6	25	77	-.01
cis-2-Pentene	0.357	0.36	.1	-0.8	25	75	-.01
Tertiary butanol	0.031	0.038*	.1	-22.6	25	89	.02
2,2-Dimethylbutane	0.23	0.206	.1	10.4	25	70	0
4-Methyl-1-pentene	0.258	0.252	.1	2.3	25	73	0
Cyclopentane	0.149	0.154	.1	-3.4	25	75	0
2,3-Dimethylbutane	0.115	0.121	.1	-5.2	25	75	-.01
2-Methylpentane	0.381	0.366	.1	3.9	25	72	0
MTBE	0.477	0.516	.1	-8.2	25	76	0
3-Methylpentane	0.345	0.359	.1	-4.1	25	74	-.01
1-Hexene	0.196	0.206	.1	-5.1	25	75	0
Hexane	0.281	0.294	.1	-4.6	25	76	0
Diisopropyl ether	0.479	0.521	.1	-8.8	25	76	0
trans-2-Hexene	0.343	0.359	.1	-4.7	25	76	-.01
2-Methyl-2-pentene	0.368	0.388	.1	-5.4	25	75	0
cis-2-Hexene	0.279	0.293	.1	-5	25	76	-.01
Dibromofluoromethane (surr	0.312	0.308	.1	1.3	25	71	0
Ethyl tertiary butyl ether	0.497	0.539	.1	-8.5	25	76	0
2,2-Dimethylpentane	0.426	0.459	.1	-7.7	25	76	-.01
Methylcyclopentane	0.359	0.376	.1	-4.7	25	74	0
2,4-Dimethylpentane	0.347	0.345	.1	0.6	25	74	0
2,2,3-Trimethylbutane	0.373	0.396	.1	-6.2	25	76	-.01
1,2-Dichloroethane	0.247	0.273	.1	-10.5	25	80	0
3,3-Dimethylpentane	0.411	0.412	.1	-0.2	25	74	0
Cyclohexane	0.299	0.312	.1	-4.3	25	74	0
2-Methylhexane	0.362	0.365	.1	-0.8	25	74	0
Benzene	0.753	0.843	.1	-12	25	80	0
2,3-Dimethylpentane	0.305	0.329	.1	-7.9	25	76	0
Thiophene	0.422	0.474	.1	-12.3	25	79	0
1,1-Dimethylcyclopentane	0.209	0.252	.1	-20.6	25	85	-.01
3-Methylhexane	0.323	0.331	.1	-2.5	25	74	0
TAME	0.577	0.55	.1	4.7	25	78	0
cis-1,3-Dimethylcyclopenta	0.31	0.336	.1	-8.4	25	79	0
3-Ethylpentane	0.408	0.411	.1	-0.7	25	74	0
trans-1,3-DMCP/2-Methyl-1-	0.141	0.146	.1	-3.5	25	79	0
1-Heptene/trans-1,2-DMCP	0.159	0.176	.1	-10.7	25	78	0

*** Value outside of QC limits.**

Calibration Verification Summary
Form 7
Volatiles

Client	: AECOM	**Lab Number**	: L2040277		
Project Name	: LOCKHEED MARTIN	**Project Number**	: 60552044.19		
Instrument ID	: VOA6	**Calibration Date**	: 09/29/20 17:31		
Lab File ID	: V6012566	**Init. Calib. Date(s)**	: 09/18/20	09/18/20	
Sample No	: WG1416337-2	**Init. Calib. Times**	: 16:00	21:55	
Channel	:				

Compound	Ave. RRF	RRF	Min RRF	%D	Max %D	Area%	Dev(min)
Isooctane	0.775	0.842	.1	-8.6	25	78	0
trans-3-Heptene	0.267	0.267	.1	0	25	76	0
Heptane	0.301	0.307	.1	-2	25	77	0
trans-2-Heptene	0.234	0.251	.1	-7.3	25	77	0
cis-2-Heptene	0.177	0.19	.1	-7.3	25	77	0
2,2-Dimethylhexane	0.758	0.817	.1	-7.8	25	76	0
Methylcyclohexane	0.349	0.387	.1	-10.9	25	78	0
2,5-Dimethylhexane	0.38	0.4	.1	-5.3	25	74	0
2,4-Dimethylhexane	0.303	0.325	.1	-7.3	25	77	0
Ethylcyclopentane	0.297	0.327	.1	-10.1	25	78	0
2,2,3-Trimethylpentane	0.598	0.644	.1	-7.7	25	76	0
2,3,4-Trimethylpentane	0.418	0.422	.1	-1	25	73	0
2,3,3-Trimethylpentane	0.356	0.361	.1	-1.4	25	74	0
2,3-Dimethylhexane	0.393	0.397	.1	-1	25	73	0
2-Methylheptane	0.349	0.362	.1	-3.7	25	73	0
4-Methylheptane	0.416	0.421	.1	-1.2	25	74	0
Toluene-d8 (surr)	1.192	1.18	.1	1	25	71	0
3-Methylheptane	0.343	0.323	.1	5.8	25	75	0
2-Bromo-1-chloropropane (H	0.28	0.318	.1	-13.6	25	80	0
3-Ethylhexane	0.43	0.46	.1	-7	25	77	0
Toluene	0.912	1.019	.1	-11.7	25	80	0
2-Methylthiophene	0.701	0.792	.1	-13	25	80	0
trans-1,4-Dimethylcyclohex	0.448	0.497	.1	-10.9	25	78	0
3-Methylthiophene	0.707	0.803	.1	-13.6	25	81	0
1-Octene	0.178	0.184	.1	-3.4	25	74	0
Octane	0.35	0.349	.1	0.3	25	73	0
trans-1,2-Dimethylcyclohex	0.306	0.322	.1	-5.2	25	76	0
1,2-Dibromoethane	0.188	0.225	.1	-19.7	25	85	0
cis-2-Octene	0.269	0.281	.1	-4.5	25	77	0
Isopropylcyclopentane	0.331	0.38	.1	-14.8	25	82	0
cis-1,2-Dimethylcyclohexan	0.292	0.303	.1	-3.8	25	75	0
2,5-Dimethylheptane	0.51	0.541	.1	-6.1	25	77	0
3,5-Dimethylheptane	0.579	0.624	.1	-7.8	25	74	0
3,3-Dimethylheptane	0.393	0.408	.1	-3.8	25	74	0
1,1,4-Trimethylcyclohexane	0.364	0.388	.1	-6.6	25	75	0
2,3-Dimethylheptane	0.449	0.455	.1	-1.3	25	73	-.01
3,4-Dimethylheptane	0.288	0.289	.1	-0.3	25	75	-.01
4-Methyloctane	0.43	0.408	.1	5.1	25	68	0
2-Methyloctane	0.361	0.403	.1	-11.6	25	81	0
Ethylbenzene	1.031	1.134	.1	-10	25	79	0
1-Chloro-2-fluorobenzene (	0.585	0.65	.1	-11.1	25	80	0
2-Ethylthiophene	0.794	0.897	.1	-13	25	81	0
3-Methyloctane	0.651	0.697	.1	-7.1	25	76	-.01

*** Value outside of QC limits.**

Calibration Verification Summary
Form 7
Volatiles

Client	: AECOM	**Lab Number**	: L2040277		
Project Name	: LOCKHEED MARTIN	**Project Number**	: 60552044.19		
Instrument ID	: VOA6	**Calibration Date**	: 09/29/20 17:31		
Lab File ID	: V6012566	**Init. Calib. Date(s)**	: 09/18/20	09/18/20	
Sample No	: WG1416337-2	**Init. Calib. Times**	: 16:00	21:55	
Channel	:				

Compound	Ave. RRF	RRF	Min RRF	%D	Max %D	Area%	Dev(min)
3,3-Diethylpentane	0.761	0.799	.1	-5	25	74	-.01
p/m-Xylene	0.786	0.861	.1	-9.5	25	79	-.01
1-Nonene	0.189	0.199	.1	-5.3	25	74	0
trans-3-Nonene	0.258	0.265	.1	-2.7	25	74	0
cis-3-Nonene	0.285	0.306	.1	-7.4	25	75	-.01
Nonane	0.342	0.358	.1	-4.7	25	75	-.01
Styrene	0.662	0.731	.1	-10.4	25	79	0
1,4-Dichlorobutane (H/surr	0.261	0.299	.1	-14.6	25	83	0
o-Xylene	0.824	0.899	.1	-9.1	25	80	0
2-Nonene	0.267	0.281	.1	-5.2	25	75	0
Isopropylcyclohexane	0.393	0.427	.1	-8.7	25	77	0
4-Bromofluorobenzene (surr	0.496	0.483	.1	2.6	25	71	0
Isopropylbenzene	1.074	1.181	.1	-10	25	80	0
3,3-Dimethyloctane	0.57	0.632	.1	-10.9	25	76	-.01
n-Propylbenzene	1.263	1.387	.1	-9.8	25	79	0
2-Methylnonane	0.331	0.348	.1	-5.1	25	74	0
3-Methylnonane	0.404	0.436	.1	-7.9	25	74	0
1-Methyl-3-ethylbenzene	1.068	1.183	.1	-10.8	25	80	0
1-Methyl-4-ethylbenzene	1.035	1.143	.1	-10.4	25	80	0
1,3,5-Trimethylbenzene	0.893	0.984	.1	-10.2	25	79	0
1-Decene	0.209	0.216	.1	-3.3	25	73	0
Isobutylcyclohexane	0.421	0.472	.1	-12.1	25	80	0
1-Methyl-2-ethylbenzene	1.099	1.222	.1	-11.2	25	80	0
Decane	0.294	0.313	.1	-6.5	25	74	0
tert-Butylbenzene	0.814	0.897	.1	-10.2	25	79	0
1,2,4-Trimethylbenzene	0.915	1.013	.1	-10.7	25	79	0
Isobutylbenzene	1.008	1.126	.1	-11.7	25	79	0
sec-Butylbenzene	1.192	1.34	.1	-12.4	25	81	0
1-Methyl-3-isopropylbenzen	1.002	1.106	.1	-10.4	25	79	0
1-Methyl-4-isopropylbenzen	1.042	1.155	.1	-10.8	25	80	0
1,2,3-Trimethylbenzene	0.926	1.017	.1	-9.8	25	79	0
1-Methyl-2-isopropylbenzen	1.03	1.139	.1	-10.6	25	80	0
Indan	0.883	0.988	.1	-11.9	25	82	0
1,3-Diethylbenzene	0.638	0.715	.1	-12.1	25	81	0
1-Methyl-3-propylbenzene	1.186	1.337	.1	-12.7	25	81	0
Indene	0.778	0.909	.1	-16.8	25	84	0
1-Methyl-4-propylbenzene	1.5	1.73	.1	-15.3	25	83	0
n-Butylbenzene	1.131	1.3	.1	-14.9	25	83	0
1,2-Dimethyl-4-ethylbenzen	1.091	1.231	.1	-12.8	25	80	0
1,2-Diethylbenzene	0.522	0.594	.1	-13.8	25	82	0
1-Methyl-2-propylbenzene	1.297	1.473	.1	-13.6	25	82	0
1,4-Dimethyl-2-ethylbenzen	1.013	1.129	.1	-11.5	25	80	0
Undecane	0.337	0.389	.1	-15.4	25	80	0

*** Value outside of QC limits.**

Calibration Verification Summary
Form 7
Volatiles

Client	: AECOM	**Lab Number**	: L2040277		
Project Name	: LOCKHEED MARTIN	**Project Number**	: 60552044.19		
Instrument ID	: VOA6	**Calibration Date**	: 09/29/20 17:31		
Lab File ID	: V6012566	**Init. Calib. Date(s)**	: 09/18/20	09/18/20	
Sample No	: WG1416337-2	**Init. Calib. Times**	: 16:00	21:55	
Channel	:				

Compound	Ave. RRF	RRF	Min RRF	%D	Max %D	Area%	Dev(min)
1,3-Dimethyl-4-ethylbenzen	1.224	1.373	.1	-12.2	25	81	0
1,3-Dimethyl-5-ethylbenzen	1.15	1.297	.1	-12.8	25	81	0
1,3-Dimethyl-2-ethylbenzen	1.192	1.324	.1	-11.1	25	80	0
1,2-Dimethyl-3-ethylbenzen	1.065	1.18	.1	-10.8	25	80	0
1,2,4,5-Tetramethylbenzene	1.127	1.241	.1	-10.1	25	79	0
1,2,3,5-Tetramethylbenzene	1.003	1.109	.1	-10.6	25	80	0
Pentylbenzene	0.942	1.066	.1	-13.2	25	82	0
1,2,3,4-Tetramethylbenzene	1.332	1.478	.1	-11	25	80	0
1,3-DM-5-tert-Butylbenzene	1.011	1.124	.1	-11.2	25	80	0
Dodecane	0.245	0.25	.1	-2	25	80	0
1,3,5-Triethylbenzene	0.645	0.715	.1	-10.9	25	79	0
Naphthalene	0.919	1.065	.1	-15.9	25	85	0
Benzothiophene	0.501	0.591	.1	-18	25	87	0
1,2,4-Triethylbenzene	0.595	0.662	.1	-11.3	25	80	0
Hexylbenzene	0.861	0.981	.1	-13.9	25	82	0
MMT	0.36	0.413	.1	-14.7	25	83	0
Tridecane	0.259	0.257	.1	0.8	25	83	0
2-Methylnaphthalene	0.619	0.708	.1	-14.4	25	83	0
1-Methylnaphthalene	0.515	0.597	.1	-15.9	25	84	0
Tetradecane	0.216	0.216	.1	0	25	81	0
Pentadecane	0.164	0.167	.1	-1.8	25	78	0

*** Value outside of QC limits.**

Calibration Verification Summary
Form 7
Volatiles

Client	: AECOM	**Lab Number**	: L2040277		
Project Name	: LOCKHEED MARTIN	**Project Number**	: 60552044.19		
Instrument ID	: VOA6	**Calibration Date**	: 09/30/20 14:55		
Lab File ID	: V6012574	**Init. Calib. Date(s)**	: 09/18/20	09/18/20	
Sample No	: WG1416337-7	**Init. Calib. Times**	: 16:00	21:55	
Channel	:				

Compound	Ave. RRF	RRF	Min RRF	%D	Max %D	Area%	Dev(min)
Chlorobenzene-D5 [IS]	1	1	.1	0	25	73	0
3-Methyl-1-butene	0.374	0.365	.1	2.4	25	74	0
Isopentane	0.214	0.192	.1	10.3	25	71	0
1-Pentene	0.223	0.211	.1	5.4	25	70	0
2-Methyl-1-butene	0.373	0.369	.1	1.1	25	73	0
Pentane	0.352	0.339	.1	3.7	25	74	0
trans-2-Pentene	0.369	0.365	.1	1.1	25	73	0
2-Methyl-1,3-butadiene	0.25	0.256	.1	-2.4	25	75	0
cis-2-Pentene	0.357	0.354	.1	0.8	25	75	0
Tertiary butanol	0.031	0.029*	.1	6.5	25	69	-.02
2,2-Dimethylbutane	0.23	0.196	.1	14.8	25	68	.01
4-Methyl-1-pentene	0.258	0.235	.1	8.9	25	69	0
Cyclopentane	0.149	0.151	.1	-1.3	25	75	0
2,3-Dimethylbutane	0.115	0.119	.1	-3.5	25	74	0
2-Methylpentane	0.381	0.352	.1	7.6	25	70	0
MTBE	0.477	0.485	.1	-1.7	25	72	-.01
3-Methylpentane	0.345	0.344	.1	0.3	25	72	0
1-Hexene	0.196	0.195	.1	0.5	25	72	0
Hexane	0.281	0.278	.1	1.1	25	73	0
Diisopropyl ether	0.479	0.479	.1	0	25	71	0
trans-2-Hexene	0.343	0.341	.1	0.6	25	73	0
2-Methyl-2-pentene	0.368	0.374	.1	-1.6	25	73	0
cis-2-Hexene	0.279	0.276	.1	1.1	25	72	0
Dibromofluoromethane (surr	0.312	0.307	.1	1.6	25	72	0
Ethyl tertiary butyl ether	0.497	0.504	.1	-1.4	25	72	0
2,2-Dimethylpentane	0.426	0.435	.1	-2.1	25	73	0
Methylcyclopentane	0.359	0.358	.1	0.3	25	72	0
2,4-Dimethylpentane	0.347	0.334	.1	3.7	25	72	0
2,2,3-Trimethylbutane	0.373	0.373	.1	0	25	72	0
1,2-Dichloroethane	0.247	0.26	.1	-5.3	25	77	0
3,3-Dimethylpentane	0.411	0.38	.1	7.5	25	69	0
Cyclohexane	0.299	0.293	.1	2	25	71	0
2-Methylhexane	0.362	0.339	.1	6.4	25	69	0
Benzene	0.753	0.806	.1	-7	25	77	0
2,3-Dimethylpentane	0.305	0.309	.1	-1.3	25	73	0
Thiophene	0.422	0.456	.1	-8.1	25	77	0
1,1-Dimethylcyclopentane	0.209	0.24	.1	-14.8	25	82	0
3-Methylhexane	0.323	0.305	.1	5.6	25	69	0
TAME	0.577	0.514	.1	10.9	25	73	0
cis-1,3-Dimethylcyclopenta	0.31	0.317	.1	-2.3	25	76	0
3-Ethylpentane	0.408	0.382	.1	6.4	25	70	0
trans-1,3-DMCP/2-Methyl-1-	0.141	0.138	.1	2.1	25	76	0
1-Heptene/trans-1,2-DMCP	0.159	0.167	.1	-5	25	75	0

*** Value outside of QC limits.**

Calibration Verification Summary
Form 7
Volatiles

Client	: AECOM		**Lab Number**	: L2040277	
Project Name	: LOCKHEED MARTIN		**Project Number**	: 60552044.19	
Instrument ID	: VOA6		**Calibration Date**	: 09/30/20 14:55	
Lab File ID	: V6012574		**Init. Calib. Date(s)**	: 09/18/20	09/18/20
Sample No	: WG1416337-7		**Init. Calib. Times**	: 16:00	21:55
Channel	:				

Compound	Ave. RRF	RRF	Min RRF	%D	Max %D	Area%	Dev(min)
Isooctane	0.775	0.79	.1	-1.9	25	74	0
trans-3-Heptene	0.267	0.241	.1	9.7	25	70	0
Heptane	0.301	0.286	.1	5	25	72	0
trans-2-Heptene	0.234	0.235	.1	-0.4	25	73	0
cis-2-Heptene	0.177	0.178	.1	-0.6	25	72	0
2,2-Dimethylhexane	0.758	0.762	.1	-0.5	25	72	0
Methylcyclohexane	0.349	0.374	.1	-7.2	25	76	0
2,5-Dimethylhexane	0.38	0.373	.1	1.8	25	70	0
2,4-Dimethylhexane	0.303	0.302	.1	0.3	25	72	0
Ethylcyclopentane	0.297	0.313	.1	-5.4	25	76	0
2,2,3-Trimethylpentane	0.598	0.614	.1	-2.7	25	73	0
2,3,4-Trimethylpentane	0.418	0.388	.1	7.2	25	68	0
2,3,3-Trimethylpentane	0.356	0.333	.1	6.5	25	69	0
2,3-Dimethylhexane	0.393	0.369	.1	6.1	25	68	0
2-Methylheptane	0.349	0.338	.1	3.2	25	69	0
4-Methylheptane	0.416	0.389	.1	6.5	25	69	0
Toluene-d8 (surr)	1.192	1.163	.1	2.4	25	71	0
3-Methylheptane	0.343	0.299	.1	12.8	25	70	0
2-Bromo-1-chloropropane (H	0.28	0.299	.1	-6.8	25	76	0
3-Ethylhexane	0.43	0.413	.1	4	25	70	0
Toluene	0.912	0.979	.1	-7.3	25	78	0
2-Methylthiophene	0.701	0.775	.1	-10.6	25	79	0
trans-1,4-Dimethylcyclohex	0.448	0.476	.1	-6.2	25	75	0
3-Methylthiophene	0.707	0.78	.1	-10.3	25	79	0
1-Octene	0.178	0.17	.1	4.5	25	69	0
Octane	0.35	0.324	.1	7.4	25	68	0
trans-1,2-Dimethylcyclohex	0.306	0.299	.1	2.3	25	71	0
1,2-Dibromoethane	0.188	0.212	.1	-12.8	25	81	0
cis-2-Octene	0.269	0.259	.1	3.7	25	72	0
Isopropylcyclopentane	0.331	0.361	.1	-9.1	25	79	0
cis-1,2-Dimethylcyclohexan	0.292	0.284	.1	2.7	25	72	0
2,5-Dimethylheptane	0.51	0.49	.1	3.9	25	70	-.01
3,5-Dimethylheptane	0.579	0.605	.1	-4.5	25	72	.01
3,3-Dimethylheptane	0.393	0.381	.1	3.1	25	70	0
1,1,4-Trimethylcyclohexane	0.364	0.37	.1	-1.6	25	73	0
2,3-Dimethylheptane	0.449	0.424	.1	5.6	25	69	-.01
3,4-Dimethylheptane	0.288	0.27	.1	6.2	25	71	-.01
4-Methyloctane	0.43	0.401	.1	6.7	25	68	0
2-Methyloctane	0.361	0.359	.1	0.6	25	73	0
Ethylbenzene	1.031	1.097	.1	-6.4	25	77	0
1-Chloro-2-fluorobenzene (	0.585	0.637	.1	-8.9	25	79	0
2-Ethylthiophene	0.794	0.878	.1	-10.6	25	80	0
3-Methyloctane	0.651	0.663	.1	-1.8	25	73	-.01

*** Value outside of QC limits.**

Calibration Verification Summary
Form 7
Volatiles

Client	: AECOM	**Lab Number**	: L2040277		
Project Name	: LOCKHEED MARTIN	**Project Number**	: 60552044.19		
Instrument ID	: VOA6	**Calibration Date**	: 09/30/20 14:55		
Lab File ID	: V6012574	**Init. Calib. Date(s)**	: 09/18/20	09/18/20	
Sample No	: WG1416337-7	**Init. Calib. Times**	: 16:00	21:55	
Channel	:				

Compound	Ave. RRF	RRF	Min RRF	%D	Max %D	Area%	Dev(min)
3,3-Diethylpentane	0.761	0.755	.1	0.8	25	71	0
p/m-Xylene	0.786	0.833	.1	-6	25	77	0
1-Nonene	0.189	0.189	.1	0	25	71	0
trans-3-Nonene	0.258	0.253	.1	1.9	25	72	0
cis-3-Nonene	0.285	0.297	.1	-4.2	25	74	0
Nonane	0.342	0.335	.1	2	25	71	0
Styrene	0.662	0.718	.1	-8.5	25	79	0
1,4-Dichlorobutane (H/surr	0.261	0.269	.1	-3.1	25	76	0
o-Xylene	0.824	0.872	.1	-5.8	25	78	0
2-Nonene	0.267	0.268	.1	-0.4	25	72	0
Isopropylcyclohexane	0.393	0.41	.1	-4.3	25	75	0
4-Bromofluorobenzene (surr	0.496	0.48	.1	3.2	25	71	0
Isopropylbenzene	1.074	1.15	.1	-7.1	25	79	0
3,3-Dimethyloctane	0.57	0.608	.1	-6.7	25	74	0
n-Propylbenzene	1.263	1.339	.1	-6	25	77	0
2-Methylnonane	0.331	0.333	.1	-0.6	25	71	0
3-Methylnonane	0.404	0.422	.1	-4.5	25	72	0
1-Methyl-3-ethylbenzene	1.068	1.155	.1	-8.1	25	79	0
1-Methyl-4-ethylbenzene	1.035	1.117	.1	-7.9	25	79	0
1,3,5-Trimethylbenzene	0.893	0.958	.1	-7.3	25	77	0
1-Decene	0.209	0.209	.1	0	25	72	0
Isobutylcyclohexane	0.421	0.457	.1	-8.6	25	78	0
1-Methyl-2-ethylbenzene	1.099	1.201	.1	-9.3	25	80	0
Decane	0.294	0.301	.1	-2.4	25	72	0
tert-Butylbenzene	0.814	0.876	.1	-7.6	25	78	0
1,2,4-Trimethylbenzene	0.915	0.996	.1	-8.9	25	79	0
Isobutylbenzene	1.008	1.116	.1	-10.7	25	80	0
sec-Butylbenzene	1.192	1.308	.1	-9.7	25	80	0
1-Methyl-3-isopropylbenzen	1.002	1.084	.1	-8.2	25	78	0
1-Methyl-4-isopropylbenzen	1.042	1.133	.1	-8.7	25	79	0
1,2,3-Trimethylbenzene	0.926	1.009	.1	-9	25	79	0
1-Methyl-2-isopropylbenzen	1.03	1.121	.1	-8.8	25	79	0
Indan	0.883	0.975	.1	-10.4	25	82	0
1,3-Diethylbenzene	0.638	0.697	.1	-9.2	25	80	0
1-Methyl-3-propylbenzene	1.186	1.317	.1	-11	25	81	0
Indene	0.778	0.893	.1	-14.8	25	83	0
1-Methyl-4-propylbenzene	1.5	1.704	.1	-13.6	25	82	0
n-Butylbenzene	1.131	1.273	.1	-12.6	25	82	0
1,2-Dimethyl-4-ethylbenzen	1.091	1.214	.1	-11.3	25	80	0
1,2-Diethylbenzene	0.522	0.583	.1	-11.7	25	81	0
1-Methyl-2-propylbenzene	1.297	1.453	.1	-12	25	81	0
1,4-Dimethyl-2-ethylbenzen	1.013	1.116	.1	-10.2	25	80	0
Undecane	0.337	0.387	.1	-14.8	25	80	0

*** Value outside of QC limits.**

Calibration Verification Summary
Form 7
Volatiles

Client	: AECOM		**Lab Number**	: L2040277	
Project Name	: LOCKHEED MARTIN		**Project Number**	: 60552044.19	
Instrument ID	: VOA6		**Calibration Date**	: 09/30/20 14:55	
Lab File ID	: V6012574		**Init. Calib. Date(s)**	: 09/18/20	09/18/20
Sample No	: WG1416337-7		**Init. Calib. Times**	: 16:00	21:55
Channel	:				

Compound	Ave. RRF	RRF	Min RRF	%D	Max %D	Area%	Dev(min)
1,3-Dimethyl-4-ethylbenzen	1.224	1.359	.1	-11	25	81	0
1,3-Dimethyl-5-ethylbenzen	1.15	1.283	.1	-11.6	25	81	0
1,3-Dimethyl-2-ethylbenzen	1.192	1.32	.1	-10.7	25	81	0
1,2-Dimethyl-3-ethylbenzen	1.065	1.169	.1	-9.8	25	80	0
1,2,4,5-Tetramethylbenzene	1.127	1.232	.1	-9.3	25	80	0
1,2,3,5-Tetramethylbenzene	1.003	1.105	.1	-10.2	25	80	0
Pentylbenzene	0.942	1.04	.1	-10.4	25	81	0
1,2,3,4-Tetramethylbenzene	1.332	1.483	.1	-11.3	25	81	0
1,3-DM-5-tert-Butylbenzene	1.011	1.119	.1	-10.7	25	80	0
Dodecane	0.245	0.258	.1	-5.3	25	84	0
1,3,5-Triethylbenzene	0.645	0.709	.1	-9.9	25	79	0
Naphthalene	0.919	1.014	.1	-10.3	25	82	0
Benzothiophene	0.501	0.551	.1	-10	25	82	0
1,2,4-Triethylbenzene	0.595	0.657	.1	-10.4	25	80	0
Hexylbenzene	0.861	0.965	.1	-12.1	25	81	0
MMT	0.36	0.402	.1	-11.7	25	81	0
Tridecane	0.259	0.263	.1	-1.5	25	86	0
2-Methylnaphthalene	0.619	0.675	.1	-9	25	80	0
1-Methylnaphthalene	0.515	0.557	.1	-8.2	25	79	0
Tetradecane	0.216	0.223	.1	-3.2	25	84	0
Pentadecane	0.164	0.172	.1	-4.9	25	81	0

*** Value outside of QC limits.**

Internal Standard Area and RT Summary
Form 8a
Volatiles

Client	: AECOM	**Lab Number**	: L2040277
Project Name	: LOCKHEED MARTIN	**Project Number**	: 60552044.19
Instrument ID	: VOA6	**Analysis Date**	: 09/29/20 17:31
Sample No	: WG1416337-2	**Lab File ID**	: V6012566

	Chlorobenzene-d5					
	Area	RT	Area	RT	Area	RT
WG1416337-2	370570	38.35				
Upper Limit	741140	38.85				
Lower Limit	185285	37.85				
Sample ID						
WG1416337-3 LCS	384265	38.35				
WG1416337-4 LCSD	380103	38.35				
WG1416337-5 BLANK	379343	38.35				
20A-EMW11R2-092320-1	403260	38.35				
20A-AE3-092320-1	384836	38.35				
20A-TRC101-092320-1	392431	38.35				
WG1416337-7 CCAL	374839	38.35				

Area Upper Limit = +100% of internal standard area
Area Lower Limit = - 50% of internal standard area

RT Upper Limit = +0.50 minutes of internal standard RT
RT Lower Limit = -0.50 minutes of internal standard RT

* Values outside of QC limits

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Sample Delivery Group Information

Sample Delivery Group Summary

Alpha Job Number : L2037809

Account Name : AECOM
Project Number : 60552044.19
Project Name : LOCKHEED MARTIN

Received : 11-SEP-2020
Reviewer : Andrew Kussmaul

Delivery Information

Samples Delivered By : Alpha Courier

Chain of Custody : Present

Cooler Information

Cooler	Seal/Seal#	Preservation	Temperature(°C)	Additional Information
A	Absent/	Ice	2.0	

Condition Information

1) All samples on COC received?	**YES**
2) Extra samples received?	**NO**
3) Are there any sample container discrepancies?	**NO**
4) Are there any discrepancies between sample labels & COC?	**NO**
5) Are samples in appropriate containers for requested analysis?	**YES**
6) Are samples properly preserved for requested analysis?	**YES**
7) Are samples within holding time for requested analysis?	**YES**
8) All sampling equipment returned?	**NA**

Volatile Organics/VPH

1) Reagent Water Vials Frozen by Client?	**NO**

LIMS Chain of Custody

ALPHA ANALYTICAL LABORATORIES, INC.
LOGIN CHAIN OF CUSTODY REPORT
Oct 08 2020, 11:23 am

Login Number: L2037809
Account: AECOM-MA AECOMProject: 60552044.19
Received: 11SEP20 Due Date: 25SEP20

Sample #	Client ID		Mat	PR	Collected
L2037809-01	20A-AE102RR6-090920-1		1	S0	09SEP20 12:45
Need Full Narration DPKG-FULL Package Due Date: 10/07/20					
A2-PIANO8260,DPKG-FULL					
L2037809-02	20A-AE103R1-091020-1		1	S0	10SEP20 13:00
Need Full Narration Package Due Date: 10/07/20					
A2-PIANO8260					
L2037809-03	20A-AE104R4-091120-1		1	S0	11SEP20 12:30
Need Full Narration Package Due Date: 10/07/20					
A2-PIANO8260					

Logged By: Kelly Stenstrom

Container Tracking

ALPHA ANALYTICAL LABORATORIES
Container Tracking Report

Container ID	Type	Status	Transaction Date	From Response	From Location	From Operator	To Response	To Location	To Operator
L2037809-01A	Vial-B	INTACT	11-SEP-20	A2-CUSTODY-REFRIDGE	CUSTODY	Andrew Kussmaul	A2-CUSTODY-VOA8	A2-CUSTODY-VOA8	Andrew Kussmaul
L2037809-01A	Vial-B	INTACT	11-SEP-20	LOGIN	LOGIN	Andrew Kussmaul	CUSTODY	CUSTODY	Andrew Kussmaul
L2037809-01B	Vial-B	INTACT	11-SEP-20	A2-CUSTODY-REFRIDGE	CUSTODY	Andrew Kussmaul	A2-CUSTODY-VOA8	A2-CUSTODY-VOA8	Andrew Kussmaul
L2037809-01B	Vial-B	INTACT	11-SEP-20	LOGIN	LOGIN	Andrew Kussmaul	CUSTODY	CUSTODY	Andrew Kussmaul
L2037809-01C	Vial-B	INTACT	11-SEP-20	A2-CUSTODY-REFRIDGE	CUSTODY	Andrew Kussmaul	A2-CUSTODY-VOA8	A2-CUSTODY-VOA8	Andrew Kussmaul
L2037809-01C	Vial-B	INTACT	11-SEP-20	LOGIN	LOGIN	Andrew Kussmaul	CUSTODY	CUSTODY	Andrew Kussmaul
L2037809-02A	Vial-B	INTACT	11-SEP-20	A2-CUSTODY-REFRIDGE	CUSTODY	Andrew Kussmaul	A2-CUSTODY-VOA8	A2-CUSTODY-VOA8	Andrew Kussmaul
L2037809-02A	Vial-B	INTACT	11-SEP-20	LOGIN	LOGIN	Andrew Kussmaul	CUSTODY	CUSTODY	Andrew Kussmaul
L2037809-02B	Vial-B	INTACT	11-SEP-20	A2-CUSTODY-REFRIDGE	CUSTODY	Andrew Kussmaul	A2-CUSTODY-VOA8	A2-CUSTODY-VOA8	Andrew Kussmaul
L2037809-02B	Vial-B	INTACT	11-SEP-20	LOGIN	LOGIN	Andrew Kussmaul	CUSTODY	CUSTODY	Andrew Kussmaul
L2037809-02C	Vial-B	INTACT	11-SEP-20	A2-CUSTODY-REFRIDGE	CUSTODY	Andrew Kussmaul	A2-CUSTODY-VOA8	A2-CUSTODY-VOA8	Andrew Kussmaul
L2037809-02C	Vial-B	INTACT	11-SEP-20	LOGIN	LOGIN	Andrew Kussmaul	CUSTODY	CUSTODY	Andrew Kussmaul
L2037809-03A	Vial-B	INTACT	11-SEP-20	A2-CUSTODY-REFRIDGE	CUSTODY	Andrew Kussmaul	A2-CUSTODY-VOA8	A2-CUSTODY-VOA8	Andrew Kussmaul
L2037809-03A	Vial-B	INTACT	11-SEP-20	LOGIN	LOGIN	Andrew Kussmaul	CUSTODY	CUSTODY	Andrew Kussmaul
L2037809-03B	Vial-B	INTACT	11-SEP-20	A2-CUSTODY-REFRIDGE	CUSTODY	Andrew Kussmaul	A2-CUSTODY-VOA8	A2-CUSTODY-VOA8	Andrew Kussmaul
L2037809-03B	Vial-B	INTACT	11-SEP-20	LOGIN	LOGIN	Andrew Kussmaul	CUSTODY	CUSTODY	Andrew Kussmaul
L2037809-03C	Vial-B	INTACT	11-SEP-20	A2-CUSTODY-REFRIDGE	CUSTODY	Andrew Kussmaul	A2-CUSTODY-VOA8	A2-CUSTODY-VOA8	Andrew Kussmaul
L2037809-03C	Vial-B	INTACT	11-SEP-20	LOGIN	LOGIN	Andrew Kussmaul	CUSTODY	CUSTODY	Andrew Kussmaul

Chain of Custody

CHAIN OF CUSTODY

PAGE | OF |

Date Rec'd in Lab: 9/11/20

ALPHA Job #: L2037309

ALPHA ANALYTICAL — World Class Chemistry

Westborough, MA TEL: 508-898-9220 FAX: 508-898-9193
Mansfield, MA TEL: 508-822-9300 FAX: 508-822-3288

Project Information

Project Name: Lockheed Martin

Project Location: Wilmington MA

Project #: 60552044.19

Project Manager: scott.olson@aecom.com

ALPHA Quote #: May 20 Email J.Occhialini

Client Information

Client: AECOM

Address: 250 Apollo Drive

Chelmsford, MA 01824

Phone: 978-905-2100

Fax: 978-905-2101

Email: lori.herberich@aecom.com;

☐ These samples have been Previously analyzed by Alpha

Turn-Around Time

☒ Standard ☐ Rush (ONLY IF PRE-APPROVED)

Due Date: Time:

Report Information Data Deliverables

☐ FAX ☐ EMAIL

☐ ADEx ☐ Add'l Deliverables

Billing Information

☐ Same as Client info PO # 127683

Regulatory Requirements/Report Limits

State/Fed Program	Criteria
MassDEP: MCP CAM	GW - 1, -2, -3

MCP PRESUMPTIVE CERTAINTY-CT REASONABLE CONFIDENCE PROTOCOLS

☒ Yes ☐ No Are MCP Analytical Methods Required?

☐ Yes ☐ No Are CT RCP (Reasonable Confidence Protocols) Required?

Other Project Specific Requirements/Comments/Detection Limits:
AECOM Contacts = Lori Herberich (Chemist) and Scott Olson (PM)

ANALYSIS

PIANO

SAMPLE HANDLING
Filtration
☐ Done
☐ Not Needed
☐ Lab to do
Preservation
☐ Lab to do
(Please specify below)

Sample Specific Comments

TOTAL # BOTTLES

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date	Collection Time	Sample Matrix	Sampler's Initials													
37809-01	~~AE~~ 20A-AE102RR6-090920-1	9/9/20	1245	GW	AG	☐	☒	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	3
-02	20A-AE103R1-091020-1	9/10/20	1300	GW	SH	☐	☒	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	3
-03	20A-AE104R4-091120-1	9/11/20	1230	GW	FB	☐	☒	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	3
						☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	
						☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	
						☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	
						☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	
						☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	
						☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	
						☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	

Container Type
Preservative

PLEASE ANSWER QUESTIONS ABOVE!

IS YOUR PROJECT MA MCP *or* CT RCP?

FORM NO: 01-01(I)

Relinquished By	Date/Time	Received By	Date/Time
Paul Davis	9/11/20		
Paul Davis	9/11/20 1535	DSV DAA	9/11/20 15:45
William Moore	9/11/20 2103	DSV DAA	9/11/20 1537
		RJCC - AAC	9/11/20 2103

Please print clearly, legibly and completely. Samples can not be logged in and turnaround time clock will not start until any ambiguities are resolved. All samples submitted are subject to Alpha's Payment Terms.

Organics

GC/MS 8260
Analysis

Initial Calibration

Response Factor Report VOA6

Method Path : O:\Organics\DATA\VOA6\2020\09-SEP\200918\
Method File : P6091820W.M
Title : PIANO VOLATILES
Last Update : Sat Sep 19 08:40:17 2020
Response Via : Initial Calibration

Calibration Files
2 =V6012464.D 5 =V6012465.D 50 =V6012467.D 100 =V6012468.D 200 =V6012469.D 20 =V6012466.D

		Compound	2	5	50	100	200	20	Avg	%RSD
1)	I	Chlorobenzene-D5 [IS]	ISTD							
2)		3-Methyl-1-butene	0.384	0.358	0.363	0.393	0.388	0.357	0.3736	4.36
3)		Isopentane	0.265	0.208	0.197	0.211	0.205	0.196	0.2137	12.19
4)		1-Pentene	0.225	0.212	0.221	0.234	0.233	0.213	0.2231	4.31
5)		2-Methyl-1-butene	0.377	0.356	0.367	0.392	0.386	0.358	0.3727	3.96
6)		Pentane	0.387	0.345	0.337	0.359	0.352	0.333	0.3521	5.58
7)		trans-2-Pentene	0.378	0.350	0.364	0.384	0.383	0.354	0.3688	4.11
8)		2-Methyl-1,3-butadiene	0.248	0.228	0.250	0.269	0.268	0.239	0.2505	6.34
9)		cis-2-Pentene	0.376	0.340	0.346	0.370	0.371	0.341	0.3575	4.68
10)		Tertiary butanol		0.028	0.031	0.033	0.032	0.031	0.0311#	6.45
11)		2,2-Dimethylbutane	0.260	0.252	0.212	0.223	0.220	0.214	0.2302	8.96
12)		4-Methyl-1-pentene	0.285	0.250	0.250	0.264	0.261	0.241	0.2584	5.99
13)		Cyclopentane	0.146	0.141	0.148	0.158	0.158	0.141	0.1485	5.12
14)		2,3-Dimethylbutane	0.105	0.108	0.117	0.125	0.125	0.111	0.1153	7.38
15)		2-Methylpentane	0.417	0.366	0.365	0.390	0.385	0.364	0.3813	5.51
16)		MTBE	0.444	0.436	0.489	0.511	0.510	0.470	0.4767	6.74
17)		3-Methylpentane	0.331	0.319	0.349	0.371	0.369	0.330	0.3448	6.33
18)		1-Hexene	0.181	0.184	0.198	0.212	0.211	0.192	0.1962	6.58
19)		Hexane	0.291	0.258	0.278	0.299	0.296	0.266	0.2814	5.95
20)		Diisopropyl ether	0.441	0.437	0.494	0.514	0.507	0.480	0.4786	6.89
21)		trans-2-Hexene	0.339	0.322	0.341	0.361	0.361	0.332	0.3426	4.53
22)		2-Methyl-2-pentene	0.351	0.342	0.376	0.388	0.393	0.356	0.3676	5.78
23)		cis-2-Hexene	0.282	0.257	0.278	0.296	0.296	0.267	0.2795	5.52
24)	S	Dibromofluoromethane (surr)	0.317	0.312	0.313	0.309	0.312	0.308	0.3118	1.09
25)		Ethyl tertiary butyl ether	0.456	0.450	0.514	0.535	0.534	0.495	0.4974	7.55
26)		2,2-Dimethylpentane	0.410	0.400	0.434	0.451	0.450	0.414	0.4264	5.10
27)		Methylcyclopentane	0.351	0.332	0.365	0.379	0.378	0.350	0.3589	5.07
28)		2,4-Dimethylpentane	0.374	0.327	0.337	0.353	0.355	0.334	0.3467	5.02
29)		2,2,3-Trimethylbutane	0.348	0.349	0.379	0.401	0.398	0.362	0.3729	6.32
30)		1,2-Dichloroethane	0.244	0.235	0.247	0.258	0.256	0.243	0.2471	3.43
31)		3,3-Dimethylpentane	0.430	0.390	0.404	0.425	0.422	0.393	0.4107	4.25
32)		Cyclohexane	0.283	0.278	0.303	0.318	0.318	0.294	0.2990	5.71

Method Path : O:\Organics\DATA\VOA6\2020\09-SEP\200918\
Method File : P6091820W.M
Title : PIANO VOLATILES
Last Update : Sat Sep 19 08:40:17 2020
Response Via : Initial Calibration

Calibration Files
2 =V6012464.D 5 =V6012465.D 50 =V6012467.D 100 =V6012468.D 200 =V6012469.D 20 =V6012466.D

		Compound	2	5	50	100	200	20	Avg	%RSD
33)		2-Methylhexane	0.379	0.349	0.356	0.373	0.369	0.348	0.3624	3.58
34)	M	Benzene	0.724	0.692	0.764	0.799	0.799	0.739	0.7527	5.64
35)		2,3-Dimethylpentane	0.288	0.288	0.311	0.322	0.323	0.297	0.3047	5.25
36)		Thiophene	0.391	0.387	0.431	0.453	0.452	0.421	0.4223	6.84
37)		1,1-Dimethylcyclopentane	0.185	0.193	0.213	0.227	0.230	0.207	0.2093	8.66
38)		3-Methylhexane	0.339	0.311	0.322	0.329	0.329	0.310	0.3234	3.54
39)		TAME	0.806	0.584	0.512	0.525	0.521	0.515	0.5772	19.95
40)		cis-1,3-Dimethylcyclopentane	0.303	0.291	0.307	0.328	0.330	0.298	0.3096	5.10
41)		3-Ethylpentane	0.440	0.406	0.400	0.412	0.413	0.378	0.4080	4.99
42)		trans-1,3-DMCP/2-Methyl-1...	0.172	0.125	0.133	0.140	0.144	0.130	0.1405	11.93
43)		1-Heptene/trans-1,2-DMCP	0.146	0.149	0.164	0.169	0.173	0.154	0.1592	6.95
44)		Isooctane	0.732	0.725	0.782	0.819	0.825	0.768	0.7753	5.42
45)		trans-3-Heptene	0.323	0.253	0.252	0.263	0.263	0.247	0.2668	10.63
46)		Heptane	0.325	0.294	0.290	0.305	0.306	0.289	0.3014	4.52
48)		trans-2-Heptene	0.220	0.219	0.236	0.251	0.251	0.228	0.2343	6.18
49)		cis-2-Heptene	0.162	0.167	0.179	0.188	0.190	0.175	0.1769	6.39
50)		2,2-Dimethylhexane	0.704	0.713	0.773	0.808	0.797	0.752	0.7579	5.66
51)		Methylcyclohexane	0.311	0.316	0.358	0.381	0.384	0.346	0.3495	8.88
52)		2,5-Dimethylhexane	0.360	0.350	0.390	0.405	0.399	0.377	0.3803	5.78
53)		2,4-Dimethylhexane	0.291	0.289	0.305	0.320	0.319	0.291	0.3026	4.73
54)		Ethylcyclopentane	0.278	0.275	0.301	0.318	0.320	0.292	0.2973	6.47
55)		2,2,3-Trimethylpentane	0.555	0.559	0.612	0.636	0.633	0.594	0.5980	5.92
57)		2,3,4-Trimethylpentane	0.425	0.399	0.416	0.433	0.428	0.407	0.4178	3.18
58)		2,3,3-Trimethylpentane	0.363	0.339	0.354	0.369	0.367	0.347	0.3565	3.34
59)		2,3-Dimethylhexane	0.404	0.373	0.394	0.403	0.400	0.382	0.3928	3.26
60)		2-Methylheptane	0.327	0.324	0.358	0.372	0.367	0.347	0.3492	5.78
61)		4-Methylheptane	0.420	0.397	0.413	0.430	0.424	0.410	0.4158	2.84
62)	S	Toluene-d8 (surr)	1.185	1.185	1.202	1.190	1.209	1.184	1.1924	0.86
63)		3-Methylheptane	0.439	0.356	0.311	0.316	0.314	0.321	0.3429	14.58
64)	S	2-Bromo-1-chloropropane (...	0.253	0.251	0.287	0.305	0.298	0.284	0.2796	8.10
65)		3-Ethylhexane	0.438	0.408	0.433	0.441	0.442	0.419	0.4302	3.20
66)	M	Toluene	0.881	0.859	0.915	0.962	0.957	0.898	0.9120	4.52
67)		2-Methylthiophene	0.632	0.648	0.715	0.753	0.756	0.703	0.7011	7.38

Response Factor Report VOA6

Method Path : O:\Organics\DATA\VOA6\2020\09-SEP\200918\
Method File : P6091820W.M
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Last Update : Sat Sep 19 08:40:17 2020
Response Via : Initial Calibration

Calibration Files
2 =V6012464.D 5 =V6012465.D 50 =V6012467.D 100 =V6012468.D 200 =V6012469.D 20 =V6012466.D

		Compound	2	5	50	100	200	20	Avg	%RSD
68)		trans-1,4-Dimethylcyclohe...	0.398	0.411	0.462	0.486	0.488	0.442	0.4480	8.39
69)		3-Methylthiophene	0.662	0.649	0.718	0.755	0.758	0.703	0.7074	6.42
70)		1-Octene	0.182	0.165	0.179	0.184	0.185	0.174	0.1780	4.37
71)		Octane	0.356	0.339	0.346	0.360	0.352	0.345	0.3499	2.19
72)		trans-1,2-Dimethylcyclohe...	0.309	0.287	0.306	0.317	0.316	0.305	0.3065	3.56
73)		1,2-Dibromoethane	0.165	0.171	0.192	0.205	0.206	0.187	0.1876	9.02
75)		cis-2-Octene	0.263	0.260	0.264	0.281	0.280	0.264	0.2686	3.44
76)		Isopropylcyclopentane	0.293	0.301	0.334	0.354	0.358	0.342	0.3306	8.26
77)		cis-1,2-Dimethylcyclohexane	0.288	0.276	0.291	0.305	0.304	0.287	0.2918	3.89
78)		2,5-Dimethylheptane	0.500	0.479	0.508	0.540	0.519	0.514	0.5100	3.96
79)		3,5-Dimethylheptane	0.548	0.583	0.612	0.599	0.571	0.559	0.5787	4.16
80)		3,3-Dimethylheptane	0.378	0.370	0.399	0.414	0.403	0.392	0.3926	4.13
81)		1,1,4-Trimethylcyclohexane	0.337	0.335	0.371	0.390	0.385	0.365	0.3640	6.45
82)		2,3-Dimethylheptane	0.446	0.436	0.449	0.468	0.450	0.447	0.4493	2.34
83)		3,4-Dimethylheptane	0.310	0.282	0.279	0.290	0.281	0.289	0.2884	3.90
84)		4-Methyloctane	0.456	0.418	0.431	0.444	0.413	0.417	0.4299	4.01
85)		2-Methyloctane	0.336	0.339	0.360	0.377	0.371	0.382	0.3608	5.46
86)		Ethylbenzene	0.966	0.961	1.036	1.100	1.098	1.027	1.0311	5.89
87)	S	1-Chloro-2-fluorobenzene ...	0.521	0.546	0.589	0.631	0.629	0.591	0.5846	7.52
88)		2-Ethylthiophene	0.714	0.725	0.804	0.858	0.868	0.794	0.7938	8.11
89)		3-Methyloctane	0.600	0.611	0.666	0.696	0.676	0.659	0.6513	5.81
90)		3,3-Diethylpentane	0.705	0.703	0.779	0.814	0.800	0.766	0.7611	6.21
91)		p/m-Xylene	0.733	0.731	0.787	0.840	0.845	0.782	0.7864	6.28
92)		1-Nonene	0.170	0.174	0.195	0.206	0.203	0.190	0.1895	7.87
93)		trans-3-Nonene	0.250	0.242	0.258	0.271	0.268	0.256	0.2576	4.24
94)		cis-3-Nonene	0.286	0.254	0.293	0.301	0.304	0.273	0.2851	6.62
95)		Nonane	0.345	0.330	0.346	0.355	0.338	0.338	0.3419	2.56
96)		Styrene	0.588	0.607	0.666	0.718	0.731	0.660	0.6618	8.66
97)	S	1,4-Dichlorobutane (H/surr)	0.252	0.251	0.259	0.267	0.274	0.261	0.2608	3.42
98)		o-Xylene	0.777	0.775	0.812	0.877	0.895	0.810	0.8244	6.15
99)		2-Nonene	0.250	0.243	0.270	0.285	0.286	0.266	0.2667	6.60
100)		Isopropylcyclohexane	0.366	0.364	0.399	0.420	0.418	0.388	0.3926	6.21
101)	S	4-Bromofluorobenzene (surr)	0.495	0.497	0.491	0.495	0.502	0.493	0.4956	0.81

Method Path : O:\Organics\DATA\VOA6\2020\09-SEP\200918\
Method File : P6091820W.M
Title : PIANO VOLATILES
Last Update : Sat Sep 19 08:40:17 2020
Response Via : Initial Calibration

Calibration Files
2 =V6012464.D 5 =V6012465.D 50 =V6012467.D 100 =V6012468.D 200 =V6012469.D 20 =V6012466.D

	Compound	2	5	50	100	200	20	Avg	%RSD
102)	Isopropylbenzene	0.999	1.003	1.068	1.151	1.158	1.066	1.0743	6.39
103)	3,3-Dimethyloctane	0.497	0.546	0.600	0.616	0.567	0.592	0.5695	7.62
104)	n-Propylbenzene	1.161	1.163	1.263	1.361	1.360	1.271	1.2633	7.03
105)	2-Methylnonane	0.343	0.320	0.341	0.344	0.302	0.337	0.3312	5.14
106)	3-Methylnonane	0.387	0.383	0.428	0.432	0.382	0.413	0.4042	5.72
107)	1-Methyl-3-ethylbenzene	0.952	0.990	1.071	1.158	1.168	1.070	1.0683	8.12
108)	1-Methyl-4-ethylbenzene	0.928	0.963	1.033	1.119	1.135	1.030	1.0348	7.93
109)	1,3,5-Trimethylbenzene	0.776	0.809	0.904	0.981	0.995	0.895	0.8935	9.89
110)	1-Decene	0.206	0.191	0.213	0.224	0.213	0.206	0.2086	5.16
111)	Isobutylcyclohexane	0.377	0.392	0.429	0.457	0.445	0.426	0.4208	7.34
112)	1-Methyl-2-ethylbenzene	0.953	1.019	1.097	1.199	1.235	1.092	1.0994	9.66
113)	Decane	0.296	0.288	0.304	0.306	0.270	0.302	0.2944	4.65
114)	tert-Butylbenzene	0.700	0.748	0.818	0.893	0.916	0.809	0.8141	10.11
115)	1,2,4-Trimethylbenzene	0.788	0.826	0.925	1.008	1.033	0.910	0.9150	10.58
116)	Isobutylbenzene	0.896	0.913	1.024	1.119	1.100	0.993	1.0076	9.22
117)	sec-Butylbenzene	1.047	1.078	1.188	1.313	1.344	1.184	1.1923	10.07
118)	1-Methyl-3-isopropylbenzene	0.849	0.900	1.013	1.116	1.140	0.994	1.0021	11.47
119)	1-Methyl-4-isopropylbenzene	0.879	0.945	1.049	1.157	1.186	1.034	1.0415	11.36
120)	1,2,3-Trimethylbenzene	0.821	0.828	0.928	1.020	1.045	0.912	0.9255	10.12
121)	1-Methyl-2-isopropylbenzene	0.887	0.931	1.031	1.144	1.173	1.015	1.0301	10.97
122)	Indan	0.792	0.800	0.874	0.967	0.994	0.873	0.8833	9.43
123)	1,3-Diethylbenzene	0.549	0.569	0.639	0.712	0.739	0.620	0.6380	11.88
124)	1-Methyl-3-propylbenzene	1.004	1.043	1.194	1.339	1.371	1.163	1.1858	12.62
125)	Indene	0.673	0.686	0.782	0.872	0.895	0.760	0.7780	11.81
126)	1-Methyl-4-propylbenzene	1.270	1.305	1.512	1.708	1.750	1.456	1.5002	13.29
127)	n-Butylbenzene	0.977	1.007	1.135	1.268	1.293	1.108	1.1313	11.48
128)	1,2-Dimethyl-4-ethylbenzene	0.896	0.931	1.107	1.260	1.295	1.056	1.0909	15.06
129)	1,2-Diethylbenzene	0.441	0.451	0.522	0.597	0.613	0.506	0.5218	13.70
130)	1-Methyl-2-propylbenzene	1.124	1.128	1.303	1.467	1.503	1.259	1.2973	12.48
131)	1,4-Dimethyl-2-ethylbenzene	0.855	0.873	1.021	1.153	1.192	0.982	1.0127	13.78
132)	Undecane	0.331	0.345	0.353	0.325	0.286	0.384	0.3374	9.63
133)	1,3-Dimethyl-4-ethylbenzene	1.041	1.063	1.228	1.401	1.433	1.181	1.2245	13.49
134)	1,3-Dimethyl-5-ethylbenzene	0.966	0.996	1.157	1.321	1.353	1.108	1.1503	14.00

Method Path : O:\Organics\DATA\VOA6\2020\09-SEP\200918\
Method File : P6091820W.M
Title : PIANO VOLATILES
Last Update : Sat Sep 19 08:40:17 2020
Response Via : Initial Calibration

Calibration Files
2 =V6012464.D 5 =V6012465.D 50 =V6012467.D 100 =V6012468.D 200 =V6012469.D 20 =V6012466.D

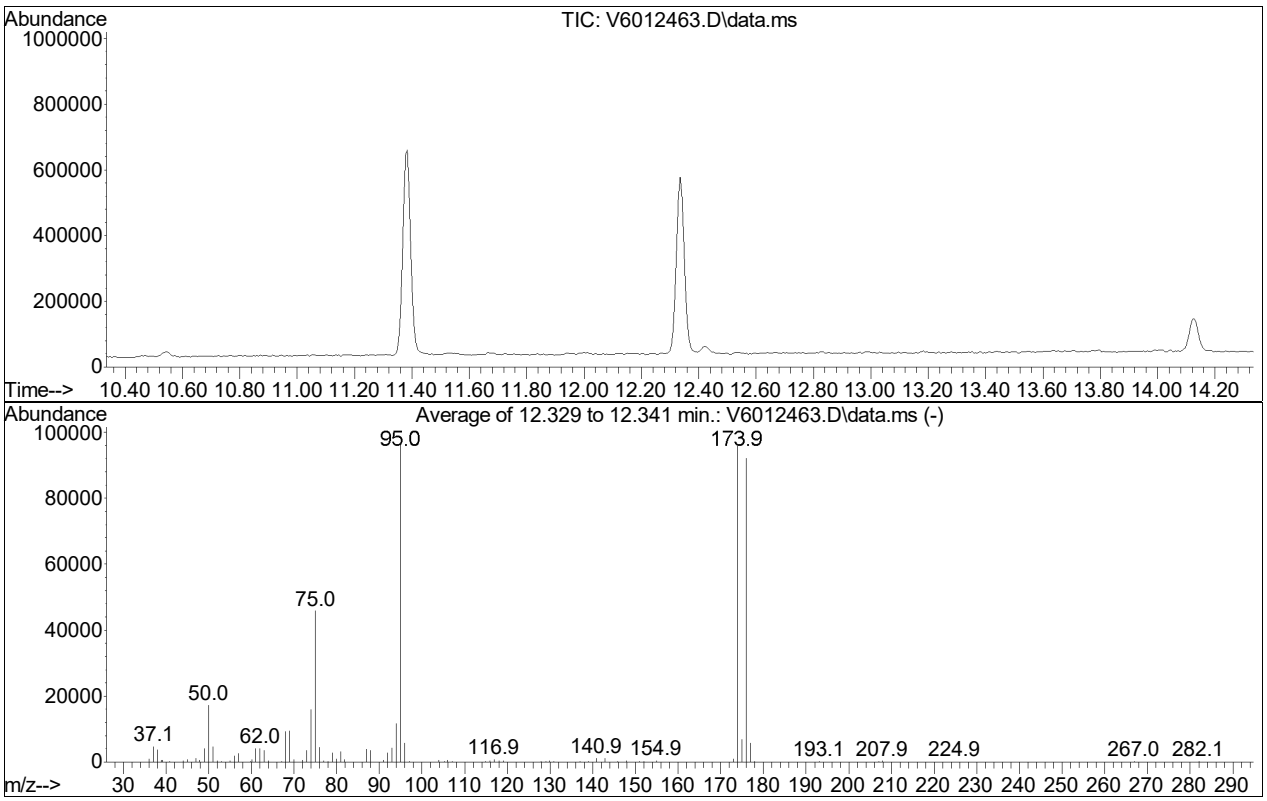
	Compound	2	5	50	100	200	20	Avg	%RSD
135)	1,3-Dimethyl-2-ethylbenzene	1.026	1.042	1.194	1.352	1.387	1.151	1.1920	12.74
136)	1,2-Dimethyl-3-ethylbenzene	0.914	0.924	1.071	1.202	1.241	1.036	1.0647	12.84
137)	1,2,4,5-Tetramethylbenzene	0.978	0.979	1.127	1.268	1.305	1.103	1.1265	12.32
138)	1,2,3,5-Tetramethylbenzene	0.864	0.867	1.005	1.135	1.169	0.979	1.0032	12.87
139)	Pentylbenzene	0.842	0.840	0.944	1.048	1.044	0.933	0.9417	9.74
140)	1,2,3,4-Tetramethylbenzene	1.148	1.174	1.333	1.500	1.535	1.304	1.3322	12.06
141)	1,3-DM-5-tert-Butylbenzene	0.869	0.883	1.021	1.148	1.146	0.999	1.0110	11.98
142)	Dodecane	0.304	0.287	0.225	0.196	0.185	0.275	0.2455	20.40
143)	1,3,5-Triethylbenzene	0.560	0.563	0.655	0.722	0.720	0.647	0.6445	11.14
144)	Naphthalene	0.866	0.839	0.900	0.992	1.028	0.886	0.9186	8.13
145)	Benzothiophene	0.460	0.450	0.494	0.547	0.573	0.482	0.5009	9.78
146)	1,2,4-Triethylbenzene	0.521	0.517	0.599	0.668	0.673	0.594	0.5954	11.38
147)	Hexylbenzene	0.796	0.785	0.866	0.943	0.905	0.874	0.8613	7.09
148)	MMT	0.314	0.322	0.361	0.397	0.410	0.353	0.3597	10.73
149)	Tridecane	0.350	0.305	0.223	0.206	0.209	0.263	0.2593	22.49
150)	2-Methylnaphthalene	0.587	0.549	0.615	0.668	0.690	0.605	0.6190	8.38
151)	1-Methylnaphthalene	0.476	0.463	0.513	0.557	0.578	0.503	0.5150	8.73
152)	Tetradecane	0.291	0.231	0.193	0.180	0.193	0.209	0.2164	18.83
153)	Pentadecane	0.205	0.151	0.154	0.149	0.164	0.158	0.1638	12.86

(#) = Out of Range

Data Path : O:\Organics\DATA\VOA6\2020\09-SEP\200918\
Data File : V6012463.D
Acq On : 18 Sep 2020 3:24 pm
Operator : VOA6:JT
Sample : WG1412463-1,31
Misc : WG1412463
ALS Vial : 2 Sample Multiplier: 1

Integration File: RTEINT.P

Method : O:\Organics\DATA\VOA6\2020\09-SEP\200918\P6091820W.M
Title : PIANO VOLATILES
Last Update : Sat Sep 19 08:40:17 2020



Spectrum Information: Average of 12.329 to 12.341 min.

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	17.8	17278	PASS
75	95	30	60	47.3	45812	PASS
95	95	100	100	100.0	96845	PASS
96	95	5	9	6.0	5850	PASS
173	174	0.00	2	0.9	897	PASS
174	95	50	100	99.0	95885	PASS
175	174	5	9	7.3	6970	PASS
176	174	95	101	96.1	92189	PASS
177	176	5	9	6.3	5824	PASS

Quantitation Report (QT Reviewed)

Data Path : O:\Organics\DATA\VOA6\2020\09-SEP\200918\
Data File : V6012464.D
Acq On : 18 Sep 2020 4:00 pm
Operator : VOA6:JT
Sample : I609182001
Misc : WG1412463
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Sep 19 08:20:52 2020
Quant Method : O:\Organics\DATA\VOA6\2020\09-SEP\200918\P6091820W.M
Quant Title : PIANO VOLATILES
QLast Update : Sat Sep 19 08:08:27 2020
Response via : Initial Calibration

Sub List : PIANO - PIANO

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Chlorobenzene-D5 [IS]	38.35	117	481157	50.000	ug/L	0.00
System Monitoring Compounds						
24) Dibromofluoromethane (...	16.63	113	152712	44.592	ug/L	0.00
Spiked Amount 50.000	Range 78 - 118		Recovery = 89.18%			
62) Toluene-d8 (surr)	30.56	98	570254	48.512	ug/L	0.00
Spiked Amount 50.000	Range 87 - 113		Recovery = 97.02%			
64) 2-Bromo-1-chloropropan...	30.78	77	4875	1.761	ug/L	0.00
Spiked Amount 50.000	Range 70 - 130		Recovery = 3.52%#			
87) 1-Chloro-2-fluorobenze...	39.99	130	10030M1	1.686	ug/L	0.02
Spiked Amount 50.000	Range 70 - 130		Recovery = 3.37%#			
97) 1,4-Dichlorobutane (H/...	43.22	55	4852	1.816	ug/L	0.00
Spiked Amount 50.000	Range 70 - 130		Recovery = 3.63%#			
101) 4-Bromofluorobenzene (...	45.78	95	238045	50.645	ug/L	0.00
Spiked Amount 50.000	Range 76 - 120		Recovery = 101.29%			
Target Compounds						Qvalue
2) 3-Methyl-1-butene	7.42	55	7382	1.880	ug/L	90
3) Isopentane	7.95	43	5109	2.423	ug/L	95
4) 1-Pentene	8.60	42	4337	2.006	ug/L	96
5) 2-Methyl-1-butene	8.91	55	7263	1.900	ug/L	89
6) Pentane	8.96	43	7451	2.140	ug/L	96
7) trans-2-Pentene	9.41	55	7268	1.929	ug/L	98
8) 2-Methyl-1,3-butadiene	9.57	67	4780	1.782	ug/L	86
9) cis-2-Pentene	9.77	55	7246	1.995	ug/L	95
10) Tertiary butanol	0.00		0	N.D.	d	
11) 2,2-Dimethylbutane	10.80	43	5005	2.431	ug/L #	66
12) 4-Methyl-1-pentene	12.08	43	5487	2.322	ug/L	94
13) Cyclopentane	12.57	70	2812	1.831	ug/L #	57
14) 2,3-Dimethylbutane	12.56	71	2026	1.702	ug/L #	83
15) 2-Methylpentane	12.79	43	8032	2.295	ug/L	94
16) MTBE	13.10	73	8553	1.658	ug/L	87
17) 3-Methylpentane	13.74	57	6368	1.867	ug/L	94
18) 1-Hexene	14.32	56	3487	1.812	ug/L	89
19) Hexane	14.91	57	5599	2.038	ug/L	93
20) Diisopropyl ether	15.21	45	8482	1.934	ug/L	91
21) trans-2-Hexene	15.41	55	6530	1.989	ug/L	92
22) 2-Methyl-2-pentene	15.59	69	6751	1.770	ug/L	98
23) cis-2-Hexene	16.14	55	5432	1.987	ug/L	97

Quantitation Report (QT Reviewed)

Data Path : O:\Organics\DATA\VOA6\2020\09-SEP\200918\
Data File : V6012464.D
Acq On : 18 Sep 2020 4:00 pm
Operator : VOA6:JT
Sample : I609182001
Misc : WG1412463
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Sep 19 08:20:52 2020
Quant Method : O:\Organics\DATA\VOA6\2020\09-SEP\200918\P6091820W.M
Quant Title : PIANO VOLATILES
QLast Update : Sat Sep 19 08:08:27 2020
Response via : Initial Calibration

Sub List : PIANO - PIANO

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
25) Ethyl tertiary butyl e...	16.66	59	8774	1.759	ug/L		96
26) 2,2-Dimethylpentane	16.94	57	7896M1	1.859	ug/L		
27) Methylcyclopentane	17.22	56	6750	1.916	ug/L		87
28) 2,4-Dimethylpentane	17.36	43	7202	2.288	ug/L	#	83
29) 2,2,3-Trimethylbutane	17.97	57	6706	1.822	ug/L		93
30) 1,2-Dichloroethane	18.68	62	4687	1.795	ug/L		98
31) 3,3-Dimethylpentane	19.62	43	8284	2.276	ug/L		89
32) Cyclohexane	20.08	56	5454	1.866	ug/L		92
33) 2-Methylhexane	20.52	43	7290	2.326	ug/L		93
34) Benzene	20.70	78	13931	1.769	ug/L		97
35) 2,3-Dimethylpentane	20.82	56	5535	1.853	ug/L		96
36) Thiophene	21.15	84	7518	1.682	ug/L		96
37) 1,1-Dimethylcyclopentane	21.28	83	3554	1.485	ug/L		97
38) 3-Methylhexane	21.33	43	6533	2.260	ug/L		89
39) TAME	21.71	73	15508	2.633	ug/L		84
40) cis-1,3-Dimethylcyclop...	22.11	70	5840	1.792	ug/L		91
41) 3-Ethylpentane	22.28	43	8476	2.308	ug/L		81
42) trans-1,3-DMCP/2-Methy...	22.41	70	6614M4	5.173	ug/L		
43) 1-Heptene/trans-1,2-DMCP	22.67	70	5628M1	3.427	ug/L		
44) Isooctane	22.74	57	14094	1.877	ug/L		91
45) trans-3-Heptene	23.35	41	6221	2.886	ug/L	#	79
46) Heptane	23.49	43	6250	2.324	ug/L		91
48) trans-2-Heptene	24.12	56	4235	1.916	ug/L		87
49) cis-2-Heptene	24.93	56	3113	1.922	ug/L		91
50) 2,2-Dimethylhexane	25.66	57	13557	1.883	ug/L		95
51) Methylcyclohexane	25.91	83	5990	1.656	ug/L		94
52) 2,5-Dimethylhexane	26.56	57	6935	1.977	ug/L		92
53) 2,4-Dimethylhexane	26.83	57	5606	1.908	ug/L		99
54) Ethylcyclopentane	26.86	69	5352	1.825	ug/L		99
55) 2,2,3-Trimethylpentane	27.08	57	10675	1.854	ug/L		97
57) 2,3,4-Trimethylpentane	28.58	43	8188	2.217	ug/L	#	83
58) 2,3,3-Trimethylpentane	29.17	43	6977	2.188	ug/L		91
59) 2,3-Dimethylhexane	29.43	43	7781	2.250	ug/L		84
60) 2-Methylheptane	29.87	57	6294	1.967	ug/L		91
61) 4-Methylheptane	30.05	43	8086	2.173	ug/L		90
63) 3-Methylheptane	30.59	43	8453M4	3.036	ug/L		
65) 3-Ethylhexane	30.73	43	8437	2.115	ug/L		90
66) Toluene	30.92	91	16947	1.734	ug/L		97
67) 2-Methylthiophene	31.10	97	12171	1.643	ug/L		98
68) trans-1,4-Dimethylcycl...	31.57	97	7668	1.644	ug/L		97
69) 3-Methylthiophene	31.86	97	12748	1.755	ug/L		89

Data Path : O:\Organics\DATA\VOA6\2020\09-SEP\200918\
Data File : V6012464.D
Acq On : 18 Sep 2020 4:00 pm
Operator : VOA6:JT
Sample : I609182001
Misc : WG1412463
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Sep 19 08:20:52 2020
Quant Method : O:\Organics\DATA\VOA6\2020\09-SEP\200918\P6091820W.M
Quant Title : PIANO VOLATILES
QLast Update : Sat Sep 19 08:08:27 2020
Response via : Initial Calibration

Sub List : PIANO - PIANO

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
70) 1-Octene	32.29	55	3494	2.210	ug/L		94
71) Octane	33.11	43	6857	2.301	ug/L		92
72) trans-1,2-Dimethylcycl...	33.39	55	5953	2.037	ug/L		85
73) 1,2-Dibromoethane	33.61	107	3182	1.616	ug/L		83
75) cis-2-Octene	34.48	55	5068	1.873	ug/L		84
76) Isopropylcyclopentane	34.62	68	5641	1.675	ug/L		87
77) cis-1,2-Dimethylcycloh...	36.37	55	5548M1	2.005	ug/L		
78) 2,5-Dimethylheptane	36.71	57	9623	2.151	ug/L		96
79) 3,5-Dimethylheptane	36.84	57	10555M4	1.806	ug/L		
80) 3,3-Dimethylheptane	37.09	57	7273	1.958	ug/L		94
81) 1,1,4-Trimethylcyclohe...	37.62	69	6492	1.803	ug/L		88
82) 2,3-Dimethylheptane	38.77	43	8587	2.211	ug/L		94
83) 3,4-Dimethylheptane	39.06	43	5958M1	2.357	ug/L		
84) 4-Methyloctane	39.36	43	8778M6	2.493	ug/L		
85) 2-Methyloctane	39.46	43	6461M6	1.872	ug/L		
86) Ethylbenzene	39.97	91	18583	1.769	ug/L		94
88) 2-Ethylthiophene	40.10	97	13742	1.680	ug/L		86
89) 3-Methyloctane	40.10	57	11546	1.895	ug/L		94
90) 3,3-Diethylpentane	41.09	57	13575	1.900	ug/L		92
91) p/m-Xylene	41.21	91	28225M1	3.486	ug/L		
92) 1-Nonene	41.88	56	3269	1.892	ug/L		94
93) trans-3-Nonene	42.28	55	4815	2.006	ug/L	#	80
94) cis-3-Nonene	42.59	55	5495	1.958	ug/L		77
95) Nonane	42.66	43	6643M6	2.151	ug/L		
96) Styrene	43.07	104	11319	1.673	ug/L		98
98) o-Xylene	43.49	91	14957	1.734	ug/L		88
99) 2-Nonene	43.92	55	4818	1.918	ug/L	#	88
100) Isopropylcyclohexane	45.19	83	7042	1.790	ug/L		92
102) Isopropylbenzene	45.81	105	19235	1.758	ug/L		97
103) 3,3-Dimethyloctane	46.30	71	9565	1.720	ug/L		81
104) n-Propylbenzene	48.43	91	22351	1.773	ug/L		100
105) 2-Methylnonane	48.50	43	6611	2.304	ug/L		88
106) 3-Methylnonane	48.94	57	7452	1.999	ug/L		98
107) 1-Methyl-3-ethylbenzene	49.07	105	18328	1.699	ug/L		95
108) 1-Methyl-4-ethylbenzene	49.24	105	17865	1.622	ug/L		99
109) 1,3,5-Trimethylbenzene	49.85	105	14942	1.594	ug/L		99
110) 1-Decene	49.99	41	3959	2.235	ug/L	#	79
111) Isobutylcyclohexane	50.15	83	7249	1.693	ug/L		96
112) 1-Methyl-2-ethylbenzene	50.18	105	18345	1.567	ug/L		96
113) Decane	50.38	43	5704	2.192	ug/L		86
114) tert-Butylbenzene	50.64	119	13482	1.588	ug/L		94

Data Path : O:\Organics\DATA\VOA6\2020\09-SEP\200918\
Data File : V6012464.D
Acq On : 18 Sep 2020 4:00 pm
Operator : VOA6:JT
Sample : I609182001
Misc : WG1412463
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Sep 19 08:20:52 2020
Quant Method : O:\Organics\DATA\VOA6\2020\09-SEP\200918\P6091820W.M
Quant Title : PIANO VOLATILES
QLast Update : Sat Sep 19 08:08:27 2020
Response via : Initial Calibration

Sub List : PIANO - PIANO

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
115) 1,2,4-Trimethylbenzene	51.07	105	15161	1.582	ug/L	95
116) Isobutylbenzene	51.27	91	17237M6	1.684	ug/L	
117) sec-Butylbenzene	51.33	105	20145	1.608	ug/L	89
118) 1-Methyl-3-isopropylbe...	51.72	119	16340	1.594	ug/L	97
119) 1-Methyl-4-isopropylbe...	51.92	119	16918	1.568	ug/L	97
120) 1,2,3-Trimethylbenzene	52.19	105	15800	1.648	ug/L	89
121) 1-Methyl-2-isopropylbe...	52.41	119	17075	1.619	ug/L	99
122) Indan	52.50	117	15252	1.647	ug/L	97
123) 1,3-Diethylbenzene	52.66	105	10570	1.619	ug/L	94
124) 1-Methyl-3-propylbenzene	52.77	105	19326	1.597	ug/L	98
125) Indene	52.94	115	12952	1.642	ug/L	97
126) 1-Methyl-4-propylbenzene	52.92	105	24451	1.639	ug/L	97
127) n-Butylbenzene	52.93	91	18804	1.682	ug/L	97
128) 1,2-Dimethyl-4-ethylbe...	53.05	119	17253	1.569	ug/L	96
129) 1,2-Diethylbenzene	53.14	119	8493	1.538	ug/L	94
130) 1-Methyl-2-propylbenzene	53.34	105	21640	1.660	ug/L	99
131) 1,4-Dimethyl-2-ethylbe...	53.65	119	16452	1.616	ug/L	97
132) Undecane	53.69	57	6364	2.100	ug/L	95
133) 1,3-Dimethyl-4-ethylbe...	53.74	119	20031	1.607	ug/L	97
134) 1,3-Dimethyl-5-ethylbe...	53.88	119	18595	1.582	ug/L	98
135) 1,3-Dimethyl-2-ethylbe...	54.10	119	19755	1.629	ug/L	97
136) 1,2-Dimethyl-3-ethylbe...	54.46	119	17586	1.616	ug/L	95
137) 1,2,4,5-Tetramethylben...	54.87	119	18825	1.697	ug/L	95
138) 1,2,3,5-Tetramethylben...	54.95	119	16638	1.596	ug/L	98
139) Pentylbenzene	55.43	91	16196	1.760	ug/L	98
140) 1,2,3,4-Tetramethylben...	55.76	119	22093	1.640	ug/L	97
141) 1,3-DM-5-tert-Butylben...	55.75	147	16734	1.692	ug/L	96
142) Dodecane	55.92	43	5855	2.847	ug/L	91
143) 1,3,5-Triethylbenzene	56.63	147	10775	1.722	ug/L	97
144) Naphthalene	56.77	128	16674	1.801	ug/L	98
145) Benzothiophene	56.86	134	8847	1.732	ug/L	97
146) 1,2,4-Triethylbenzene	57.18	147	10036	1.744	ug/L	99
147) Hexylbenzene	57.67	91	15324	1.839	ug/L	93
148) MMT	57.93	134	6051	1.617	ug/L	92
149) Tridecane	57.98	57	6733	2.948	ug/L	96
150) 2-Methylnaphthalene	59.48	142	11294	1.882	ug/L	96
151) 1-Methylnaphthalene	59.95	142	9159	1.807	ug/L	97
152) Tetradecane	60.22	57	5610	3.025	ug/L	95
153) Pentadecane	62.93	57	3955	2.921	ug/L	86

Quantitation Report (QT Reviewed)

Data Path : O:\Organics\DATA\VOA6\2020\09-SEP\200918\
Data File : V6012464.D
Acq On : 18 Sep 2020 4:00 pm
Operator : VOA6:JT
Sample : I609182001
Misc : WG1412463
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Sep 19 08:20:52 2020
Quant Method : O:\Organics\DATA\VOA6\2020\09-SEP\200918\P6091820W.M
Quant Title : PIANO VOLATILES
QLast Update : Sat Sep 19 08:08:27 2020
Response via : Initial Calibration

Sub List : PIANO - PIANO

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)

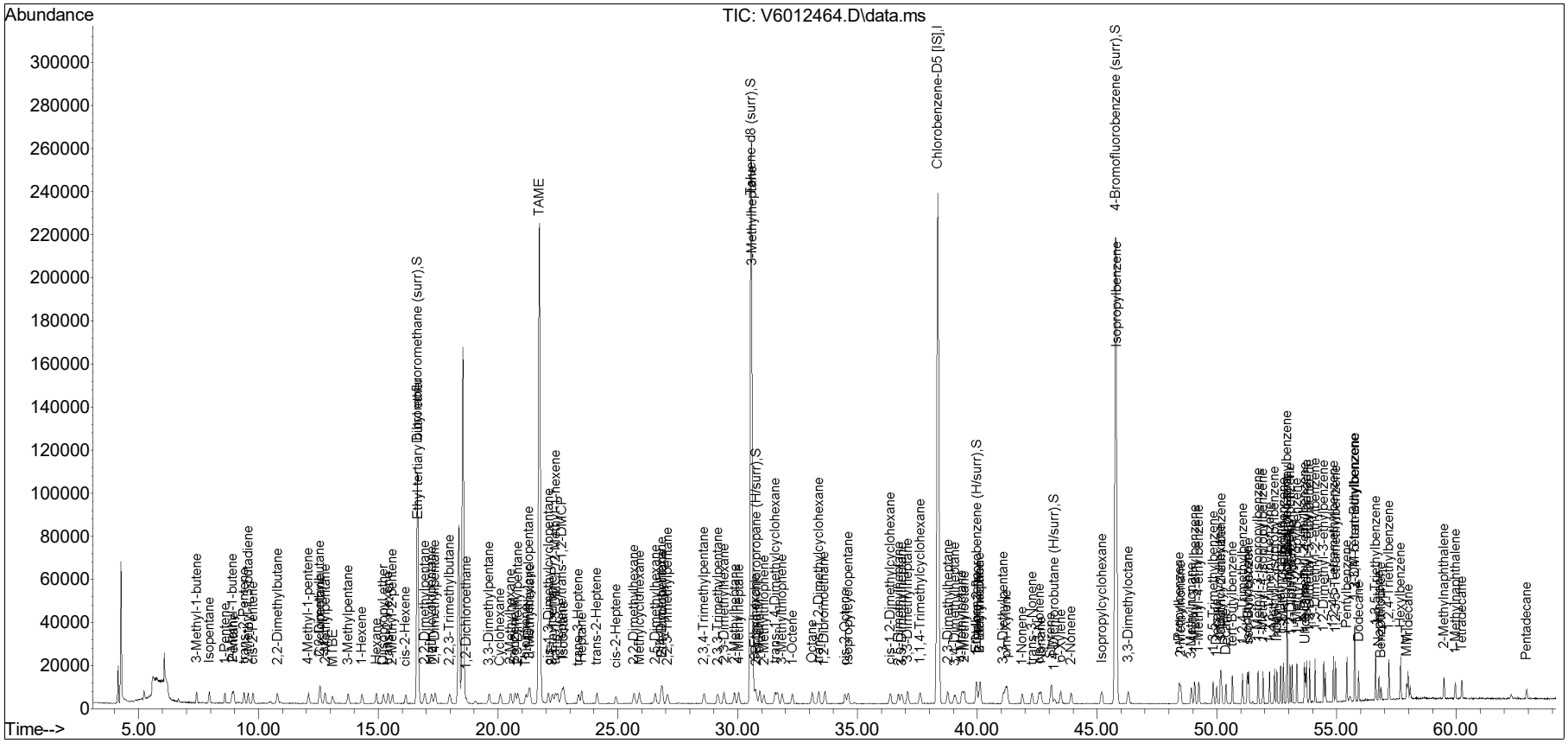
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : O:\Organics\DATA\VOA6\2020\09-SEP\200918\
Data File : V6012464.D
Acq On : 18 Sep 2020 4:00 pm
Operator : VOA6:JT
Sample : I609182001
Misc : WG1412463
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Sep 19 08:20:52 2020
Quant Method : O:\Organics\DATA\VOA6\2020\09-SEP\200918\P6091820W.M
Quant Title : PIANO VOLATILES
QLast Update : Sat Sep 19 08:08:27 2020
Response via : Initial Calibration

Sub List : PIANO - PIANO



Quantitation Report (QT Reviewed)

Data Path : O:\Organics\DATA\VOA6\2020\09-SEP\200918\
Data File : V6012465.D
Acq On : 18 Sep 2020 5:11 pm
Operator : VOA6:JT
Sample : I609182002
Misc : WG1412463
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Sep 19 08:25:34 2020
Quant Method : O:\Organics\DATA\VOA6\2020\09-SEP\200918\P6091820W.M
Quant Title : PIANO VOLATILES
QLast Update : Sat Sep 19 08:08:28 2020
Response via : Initial Calibration

Sub List : PIANO - PIANO

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Chlorobenzene-D5 [IS]	38.35	117	507526	50.000	ug/L	0.00
System Monitoring Compounds						
24) Dibromofluoromethane (...	16.63	113	158383	43.845	ug/L	0.00
Spiked Amount 50.000	Range 78 - 118		Recovery = 87.69%			
62) Toluene-d8 (surr)	30.56	98	601411	48.504	ug/L	0.00
Spiked Amount 50.000	Range 87 - 113		Recovery = 97.01%			
64) 2-Bromo-1-chloropropan...	30.78	77	12720	4.357	ug/L	0.00
Spiked Amount 50.000	Range 70 - 130		Recovery = 8.71%#			
87) 1-Chloro-2-fluorobenze...	39.98	130	27729	4.420	ug/L	0.00
Spiked Amount 50.000	Range 70 - 130		Recovery = 8.84%#			
97) 1,4-Dichlorobutane (H/...	43.24	55	12739	4.521	ug/L	0.01
Spiked Amount 50.000	Range 70 - 130		Recovery = 9.04%#			
101) 4-Bromofluorobenzene (...	45.78	95	252372	50.904	ug/L	0.00
Spiked Amount 50.000	Range 76 - 120		Recovery = 101.81%			
Target Compounds						Qvalue
2) 3-Methyl-1-butene	7.42	55	18165	4.385	ug/L	93
3) Isopentane	7.96	43	10559	4.747	ug/L	96
4) 1-Pentene	8.60	42	10739	4.710	ug/L	98
5) 2-Methyl-1-butene	8.91	55	18092	4.487	ug/L	98
6) Pentane	8.96	43	17493	4.762	ug/L	98
7) trans-2-Pentene	9.40	55	17756	4.468	ug/L	99
8) 2-Methyl-1,3-butadiene	9.57	67	11592	4.097	ug/L	97
9) cis-2-Pentene	9.77	55	17264	4.506	ug/L	94
10) Tertiary butanol	10.43	59	7058	23.706	ug/L	79
11) 2,2-Dimethylbutane	10.79	43	12806	5.897	ug/L	93
12) 4-Methyl-1-pentene	12.10	43	12692	5.092	ug/L	96
13) Cyclopentane	12.58	70	7149	4.414	ug/L #	83
14) 2,3-Dimethylbutane	12.55	71	5481	4.364	ug/L #	90
15) 2-Methylpentane	12.77	43	18561	5.028	ug/L	97
16) MTBE	13.09	73	22124	4.066	ug/L	98
17) 3-Methylpentane	13.76	57	16199	4.502	ug/L	96
18) 1-Hexene	14.32	56	9353	4.609	ug/L	89
19) Hexane	14.93	57	13115	4.525	ug/L	99
20) Diisopropyl ether	15.22	45	22173	4.793	ug/L	98
21) trans-2-Hexene	15.41	55	16361	4.725	ug/L	98
22) 2-Methyl-2-pentene	15.60	69	17340	4.311	ug/L	99
23) cis-2-Hexene	16.15	55	13067	4.531	ug/L	97
25) Ethyl tertiary butyl e...	16.66	59	22833	4.341	ug/L	97

Quantitation Report (QT Reviewed)

Data Path : O:\Organics\DATA\VOA6\2020\09-SEP\200918\
Data File : V6012465.D
Acq On : 18 Sep 2020 5:11 pm
Operator : VOA6:JT
Sample : I609182002
Misc : WG1412463
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Sep 19 08:25:34 2020
Quant Method : O:\Organics\DATA\VOA6\2020\09-SEP\200918\P6091820W.M
Quant Title : PIANO VOLATILES
QLast Update : Sat Sep 19 08:08:28 2020
Response via : Initial Calibration

Sub List : PIANO - PIANO

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
26) 2,2-Dimethylpentane	16.94	57	20284	4.527	ug/L	94
27) Methylcyclopentane	17.22	56	16845	4.532	ug/L	96
28) 2,4-Dimethylpentane	17.38	43	16614	5.003	ug/L	93
29) 2,2,3-Trimethylbutane	18.00	57	17690	4.557	ug/L	95
30) 1,2-Dichloroethane	18.67	62	11939	4.336	ug/L	92
31) 3,3-Dimethylpentane	19.62	43	19808	5.159	ug/L	98
32) Cyclohexane	20.09	56	14103	4.575	ug/L	100
33) 2-Methylhexane	20.52	43	17711	5.359	ug/L	96
34) Benzene	20.71	78	35135	4.230	ug/L	100
35) 2,3-Dimethylpentane	20.83	56	14628	4.644	ug/L	97
36) Thiophene	21.17	84	19623	4.162	ug/L	97
37) 1,1-Dimethylcyclopentane	21.27	83	9807	3.885	ug/L	96
38) 3-Methylhexane	21.33	43	15791	5.179	ug/L	88
39) TAME	21.72	73	29661	4.774	ug/L	87
40) cis-1,3-Dimethylcyclop...	22.10	70	14786	4.301	ug/L	96
41) 3-Ethylpentane	22.27	43	20581	5.313	ug/L	90
42) trans-1,3-DMCP/2-Methy...	22.39	70	12644	9.376	ug/L	93
43) 1-Heptene/trans-1,2-DMCP	22.66	70	15135	8.736	ug/L	70
44) Isooctane	22.75	57	36798	4.647	ug/L	97
45) trans-3-Heptene	23.36	41	12824	5.640	ug/L	87
46) Heptane	23.50	43	14908	5.255	ug/L	91
48) trans-2-Heptene	24.13	56	11110M1	4.765	ug/L	
49) cis-2-Heptene	24.92	56	8466	4.955	ug/L	95
50) 2,2-Dimethylhexane	25.67	57	36168	4.762	ug/L	97
51) Methylcyclohexane	25.89	83	16059	4.208	ug/L	96
52) 2,5-Dimethylhexane	26.55	57	17740	4.794	ug/L	97
53) 2,4-Dimethylhexane	26.82	57	14684	4.738	ug/L	95
54) Ethylcyclopentane	26.86	69	13955	4.511	ug/L	92
55) 2,2,3-Trimethylpentane	27.07	57	28370	4.670	ug/L	95
57) 2,3,4-Trimethylpentane	28.59	43	20225	5.191	ug/L	96
58) 2,3,3-Trimethylpentane	29.17	43	17188	5.109	ug/L	98
59) 2,3-Dimethylhexane	29.42	43	18909	5.184	ug/L	96
60) 2-Methylheptane	29.87	57	16463	4.879	ug/L	84
61) 4-Methylheptane	30.04	43	20150	5.133	ug/L	98
63) 3-Methylheptane	30.61	43	18070M4	6.153	ug/L	
65) 3-Ethylhexane	30.74	43	20709	4.921	ug/L	96
66) Toluene	30.92	91	43618	4.230	ug/L	97
67) 2-Methylthiophene	31.10	97	32877	4.208	ug/L	97
68) trans-1,4-Dimethylcycl...	31.57	97	20873	4.242	ug/L	96
69) 3-Methylthiophene	31.86	97	32935	4.299	ug/L	99
70) 1-Octene	32.29	55	8355	5.009	ug/L	94

Data Path : O:\Organics\DATA\VOA6\2020\09-SEP\200918\
Data File : V6012465.D
Acq On : 18 Sep 2020 5:11 pm
Operator : VOA6:JT
Sample : I609182002
Misc : WG1412463
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Sep 19 08:25:34 2020
Quant Method : O:\Organics\DATA\VOA6\2020\09-SEP\200918\P6091820W.M
Quant Title : PIANO VOLATILES
QLast Update : Sat Sep 19 08:08:28 2020
Response via : Initial Calibration

Sub List : PIANO - PIANO

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
71) Octane	33.12	43	17215	5.476	ug/L	96
72) trans-1,2-Dimethylcycl...	33.38	55	14549M1	4.720	ug/L	
73) 1,2-Dibromoethane	33.61	107	8672	4.175	ug/L	93
75) cis-2-Octene	34.48	55	13202	4.625	ug/L	92
76) Isopropylcyclopentane	34.61	68	15299	4.306	ug/L	91
77) cis-1,2-Dimethylcycloh...	36.37	55	13986	4.791	ug/L	96
78) 2,5-Dimethylheptane	36.72	57	24315	5.153	ug/L	100
79) 3,5-Dimethylheptane	36.84	57	29583M4	4.799	ug/L	
80) 3,3-Dimethylheptane	37.10	57	18801	4.799	ug/L	96
81) 1,1,4-Trimethylcyclohe...	37.62	69	16984	4.472	ug/L	95
82) 2,3-Dimethylheptane	38.76	43	22108	5.396	ug/L	94
83) 3,4-Dimethylheptane	39.07	43	14322	5.370	ug/L	87
84) 4-Methyloctane	39.36	43	21193	5.706	ug/L	97
85) 2-Methyloctane	39.45	43	17198M3	4.725	ug/L	
86) Ethylbenzene	39.97	91	48754	4.400	ug/L	98
88) 2-Ethylthiophene	40.12	97	36806	4.266	ug/L	95
89) 3-Methyloctane	40.12	57	30993	4.822	ug/L	95
90) 3,3-Diethylpentane	41.09	57	35670	4.733	ug/L	95
91) p/m-Xylene	41.21	91	74244	8.694	ug/L	97
92) 1-Nonene	41.87	56	8806	4.831	ug/L	94
93) trans-3-Nonene	42.28	55	12276	4.848	ug/L	99
94) cis-3-Nonene	42.58	55	12905M6	4.360	ug/L	
95) Nonane	42.65	43	16724M6	5.133	ug/L	
96) Styrene	43.08	104	30821	4.318	ug/L	95
98) o-Xylene	43.49	91	39324M1	4.322	ug/L	
99) 2-Nonene	43.93	55	12334	4.654	ug/L	93
100) Isopropylcyclohexane	45.19	83	18487	4.455	ug/L	99
102) Isopropylbenzene	45.80	105	50928	4.413	ug/L	98
103) 3,3-Dimethyloctane	46.29	71	27687	4.721	ug/L	97
104) n-Propylbenzene	48.43	91	59033	4.439	ug/L	100
105) 2-Methylnonane	48.49	43	16228	5.362	ug/L	91
106) 3-Methylnonane	48.93	57	19437	4.943	ug/L	99
107) 1-Methyl-3-ethylbenzene	49.07	105	50253	4.418	ug/L	94
108) 1-Methyl-4-ethylbenzene	49.25	105	48888	4.209	ug/L	99
109) 1,3,5-Trimethylbenzene	49.84	105	41060	4.152	ug/L	99
110) 1-Decene	49.99	41	9697	5.190	ug/L	97
111) Isobutylcyclohexane	50.14	83	19879	4.401	ug/L	99
112) 1-Methyl-2-ethylbenzene	50.18	105	51720	4.189	ug/L	98
113) Decane	50.38	43	14637	5.334	ug/L	95
114) tert-Butylbenzene	50.64	119	37963	4.240	ug/L	98
115) 1,2,4-Trimethylbenzene	51.07	105	41920	4.146	ug/L	97

Data Path : O:\Organics\DATA\VOA6\2020\09-SEP\200918\
Data File : V6012465.D
Acq On : 18 Sep 2020 5:11 pm
Operator : VOA6:JT
Sample : I609182002
Misc : WG1412463
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Sep 19 08:25:34 2020
Quant Method : O:\Organics\DATA\VOA6\2020\09-SEP\200918\P6091820W.M
Quant Title : PIANO VOLATILES
QLast Update : Sat Sep 19 08:08:28 2020
Response via : Initial Calibration

Sub List : PIANO - PIANO

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
116) Isobutylbenzene	51.27	91	46333M6	4.292	ug/L	
117) sec-Butylbenzene	51.33	105	54687	4.138	ug/L	99
118) 1-Methyl-3-isopropylbe...	51.72	119	45692	4.226	ug/L	97
119) 1-Methyl-4-isopropylbe...	51.92	119	47936	4.213	ug/L	98
120) 1,2,3-Trimethylbenzene	52.20	105	42019	4.155	ug/L	96
121) 1-Methyl-2-isopropylbe...	52.41	119	47236	4.245	ug/L	97
122) Indan	52.50	117	40581	4.155	ug/L	97
123) 1,3-Diethylbenzene	52.66	105	28877	4.195	ug/L	93
124) 1-Methyl-3-propylbenzene	52.78	105	52956	4.148	ug/L	98
125) Indene	52.94	115	34839	4.187	ug/L	94
126) 1-Methyl-4-propylbenzene	52.92	105	66228	4.209	ug/L	97
127) n-Butylbenzene	52.92	91	51133	4.335	ug/L	99
128) 1,2-Dimethyl-4-ethylbe...	53.05	119	47276	4.075	ug/L	98
129) 1,2-Diethylbenzene	53.14	119	22908	3.933	ug/L	95
130) 1-Methyl-2-propylbenzene	53.34	105	57239	4.162	ug/L	98
131) 1,4-Dimethyl-2-ethylbe...	53.66	119	44326	4.126	ug/L	99
132) Undecane	53.69	57	17488	5.470	ug/L	94
133) 1,3-Dimethyl-4-ethylbe...	53.74	119	53956	4.104	ug/L	98
134) 1,3-Dimethyl-5-ethylbe...	53.88	119	50573	4.080	ug/L	99
135) 1,3-Dimethyl-2-ethylbe...	54.10	119	52867	4.133	ug/L	98
136) 1,2-Dimethyl-3-ethylbe...	54.46	119	46907	4.087	ug/L	99
137) 1,2,4,5-Tetramethylben...	54.86	119	49668	4.246	ug/L	97
138) 1,2,3,5-Tetramethylben...	54.95	119	43989	4.000	ug/L	99
139) Pentylbenzene	55.43	91	42656	4.395	ug/L	99
140) 1,2,3,4-Tetramethylben...	55.76	119	59571	4.193	ug/L	97
141) 1,3-DM-5-tert-Butylben...	55.75	147	44823	4.298	ug/L	100
142) Dodecane	55.91	43	14579	6.722	ug/L	90
143) 1,3,5-Triethylbenzene	56.63	147	28559	4.327	ug/L	98
144) Naphthalene	56.77	128	42585	4.360	ug/L	98
145) Benzothiophene	56.86	134	22857	4.241	ug/L	97
146) 1,2,4-Triethylbenzene	57.18	147	26231	4.322	ug/L	99
147) Hexylbenzene	57.67	91	39863	4.536	ug/L	97
148) MMT	57.92	134	16352	4.142	ug/L	98
149) Tridecane	57.98	57	15484	6.428	ug/L	95
150) 2-Methylnaphthalene	59.48	142	27879	4.404	ug/L	100
151) 1-Methylnaphthalene	59.95	142	23487	4.392	ug/L	97
152) Tetradecane	60.23	57	11725	5.994	ug/L	98
153) Pentadecane	62.94	57	7687	5.383	ug/L	94

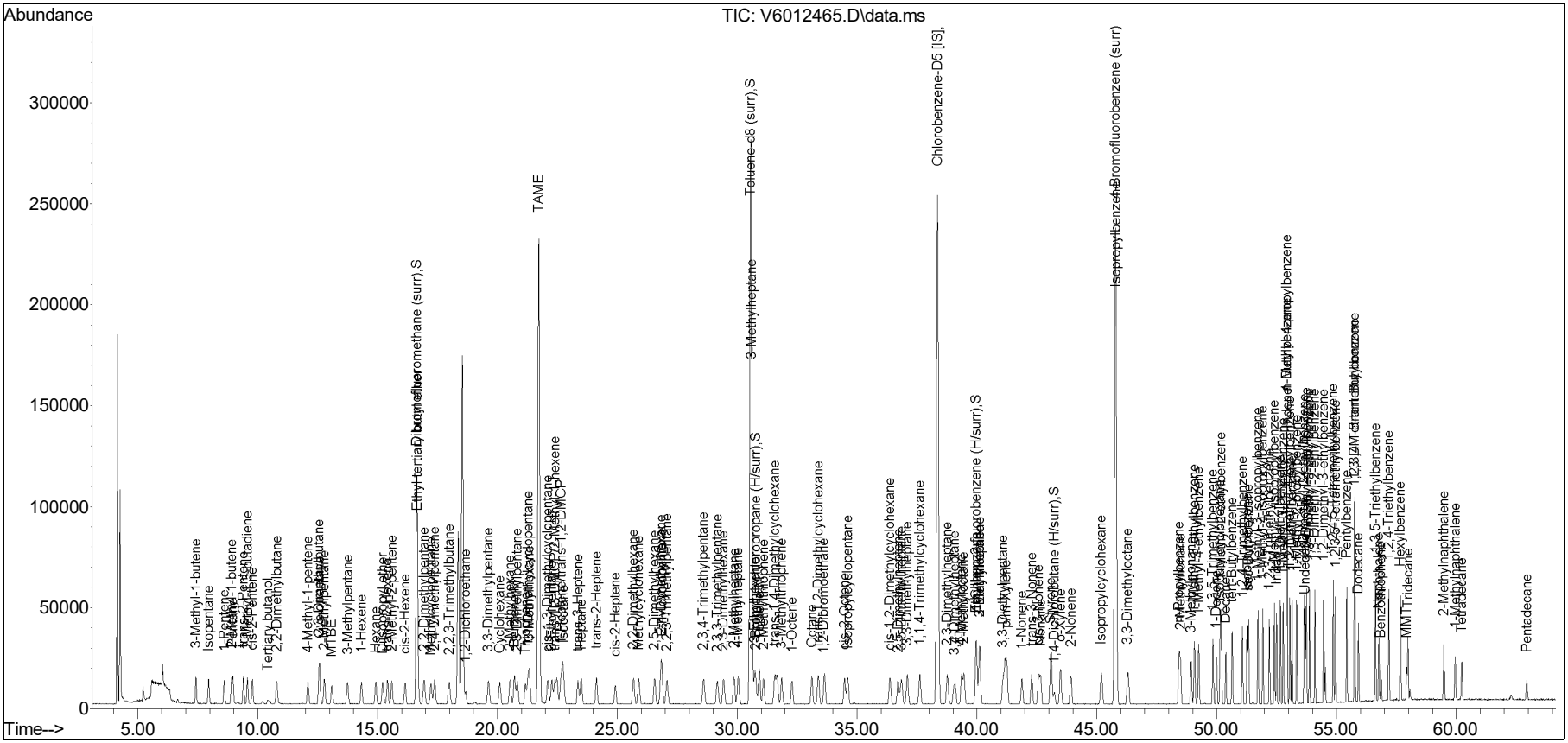
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : O:\Organics\DATA\VOA6\2020\09-SEP\200918\
Data File : V6012465.D
Acq On : 18 Sep 2020 5:11 pm
Operator : VOA6:JT
Sample : I609182002
Misc : WG1412463
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Sep 19 08:25:34 2020
Quant Method : O:\Organics\DATA\VOA6\2020\09-SEP\200918\P6091820W.M
Quant Title : PIANO VOLATILES
QLast Update : Sat Sep 19 08:08:28 2020
Response via : Initial Calibration

Sub List : PIANO - PIANO



Quantitation Report (QT Reviewed)

Data Path : O:\Organics\DATA\VOA6\2020\09-SEP\200918\
Data File : V6012466.D
Acq On : 18 Sep 2020 6:22 pm
Operator : VOA6:JT
Sample : I609182003
Misc : WG1412463
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Sep 19 08:29:05 2020
Quant Method : O:\Organics\DATA\VOA6\2020\09-SEP\200918\P6091820W.M
Quant Title : PIANO VOLATILES
QLast Update : Sat Sep 19 08:08:28 2020
Response via : Initial Calibration

Sub List : PIANO - PIANO

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Chlorobenzene-D5 [IS]	38.35	117	505625	50.000	ug/L	0.00
System Monitoring Compounds						
24) Dibromofluoromethane (...	16.63	113	155575	43.230	ug/L	0.00
Spiked Amount 50.000	Range 78 - 118		Recovery = 86.46%			
62) Toluene-d8 (surr)	30.56	98	598763	48.472	ug/L	0.00
Spiked Amount 50.000	Range 87 - 113		Recovery = 96.94%			
64) 2-Bromo-1-chloropropan...	30.79	77	57535	19.781	ug/L	0.00
Spiked Amount 50.000	Range 70 - 130		Recovery = 39.56%#			
87) 1-Chloro-2-fluorobenze...	39.97	130	119515	19.120	ug/L	0.00
Spiked Amount 50.000	Range 70 - 130		Recovery = 38.24%#			
97) 1,4-Dichlorobutane (H/...	43.22	55	52785	18.805	ug/L	0.00
Spiked Amount 50.000	Range 70 - 130		Recovery = 37.61%#			
101) 4-Bromofluorobenzene (...	45.78	95	249211	50.455	ug/L	0.00
Spiked Amount 50.000	Range 76 - 120		Recovery = 100.91%			
Target Compounds						Qvalue
2) 3-Methyl-1-butene	7.42	55	72103	17.472	ug/L	98
3) Isopentane	7.95	43	39697	17.915	ug/L	95
4) 1-Pentene	8.60	42	43100	18.974	ug/L	98
5) 2-Methyl-1-butene	8.90	55	72362	18.014	ug/L	97
6) Pentane	8.96	43	67356	18.406	ug/L	99
7) trans-2-Pentene	9.40	55	71503	18.061	ug/L	98
8) 2-Methyl-1,3-butadiene	9.57	67	48403	17.170	ug/L	95
9) cis-2-Pentene	9.77	55	68938	18.062	ug/L	96
10) Tertiary butanol	10.41	59	31675	106.786	ug/L	97
11) 2,2-Dimethylbutane	10.79	43	43320	20.022	ug/L	91
12) 4-Methyl-1-pentene	12.10	43	48697	19.611	ug/L	98
13) Cyclopentane	12.57	70	28574	17.708	ug/L #	92
14) 2,3-Dimethylbutane	12.56	71	22522	18.001	ug/L	98
15) 2-Methylpentane	12.78	43	73614	20.015	ug/L	95
16) MTBE	13.08	73	95111	17.544	ug/L	98
17) 3-Methylpentane	13.74	57	66684	18.603	ug/L	97
18) 1-Hexene	14.33	56	38781	19.182	ug/L	96
19) Hexane	14.93	57	53707	18.600	ug/L	92
20) Diisopropyl ether	15.21	45	97063	21.061	ug/L	98
21) trans-2-Hexene	15.41	55	67083	19.445	ug/L	99
22) 2-Methyl-2-pentene	15.59	69	71946	17.952	ug/L	100
23) cis-2-Hexene	16.15	55	54007	18.796	ug/L	99
25) Ethyl tertiary butyl e...	16.66	59	100192	19.119	ug/L	98

Data Path : O:\Organics\DATA\VOA6\2020\09-SEP\200918\
Data File : V6012466.D
Acq On : 18 Sep 2020 6:22 pm
Operator : VOA6:JT
Sample : I609182003
Misc : WG1412463
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Sep 19 08:29:05 2020
Quant Method : O:\Organics\DATA\VOA6\2020\09-SEP\200918\P6091820W.M
Quant Title : PIANO VOLATILES
QLast Update : Sat Sep 19 08:08:28 2020
Response via : Initial Calibration

Sub List : PIANO - PIANO

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
26) 2,2-Dimethylpentane	16.94	57	83636	18.737 ug/L	96
27) Methylcyclopentane	17.22	56	70769	19.113 ug/L	97
28) 2,4-Dimethylpentane	17.37	43	67506	20.405 ug/L	97
29) 2,2,3-Trimethylbutane	17.98	57	73200	18.925 ug/L	96
30) 1,2-Dichloroethane	18.68	62	49115	17.904 ug/L	100
31) 3,3-Dimethylpentane	19.62	43	79409	20.760 ug/L	94
32) Cyclohexane	20.09	56	59425	19.351 ug/L	99
33) 2-Methylhexane	20.53	43	70387	21.376 ug/L	98
34) Benzene	20.71	78	149438	18.059 ug/L	100
35) 2,3-Dimethylpentane	20.82	56	60099	19.150 ug/L	98
36) Thiophene	21.16	84	85153	18.127 ug/L	100
37) 1,1-Dimethylcyclopentane	21.27	83	41931M6	16.674 ug/L	
38) 3-Methylhexane	21.33	43	62667	20.632 ug/L	98
39) TAME	21.69	73	104170	16.828 ug/L	96
40) cis-1,3-Dimethylcyclop...	22.10	70	60360	17.625 ug/L	98
41) 3-Ethylpentane	22.28	43	76414	19.800 ug/L	95
42) trans-1,3-DMCP/2-Methy...	22.38	70	52631	39.175 ug/L	97
43) 1-Heptene/trans-1,2-DMCP	22.66	70	62272	36.081 ug/L	75
44) Isooctane	22.75	57	155417	19.700 ug/L	97
45) trans-3-Heptene	23.35	41	49930	22.042 ug/L	95
46) Heptane	23.49	43	58405	20.663 ug/L	92
48) trans-2-Heptene	24.13	56	46180	19.879 ug/L	92
49) cis-2-Heptene	24.91	56	35449	20.826 ug/L	96
50) 2,2-Dimethylhexane	25.67	57	152082	20.098 ug/L	98
51) Methylcyclohexane	25.89	83	70040	18.423 ug/L	100
52) 2,5-Dimethylhexane	26.55	57	76346	20.708 ug/L	98
53) 2,4-Dimethylhexane	26.82	57	58858	19.062 ug/L	99
54) Ethylcyclopentane	26.85	69	58992	19.143 ug/L	93
55) 2,2,3-Trimethylpentane	27.06	57	120100	19.845 ug/L	98
57) 2,3,4-Trimethylpentane	28.60	43	82239	21.187 ug/L	95
58) 2,3,3-Trimethylpentane	29.17	43	70267	20.966 ug/L	98
59) 2,3-Dimethylhexane	29.44	43	77271	21.264 ug/L	92
60) 2-Methylheptane	29.86	57	70099	20.851 ug/L	92
61) 4-Methylheptane	30.04	43	82861	21.187 ug/L	99
63) 3-Methylheptane	30.61	43	64826M4	22.158 ug/L	
65) 3-Ethylhexane	30.74	43	84717	20.207 ug/L	98
66) Toluene	30.92	91	181638	17.683 ug/L	100
67) 2-Methylthiophene	31.10	97	142157	18.263 ug/L	99
68) trans-1,4-Dimethylcycl...	31.57	97	89453	18.250 ug/L	98
69) 3-Methylthiophene	31.86	97	142143	18.625 ug/L	100
70) 1-Octene	32.28	55	35131	21.143 ug/L	95

Data Path : O:\Organics\DATA\VOA6\2020\09-SEP\200918\
Data File : V6012466.D
Acq On : 18 Sep 2020 6:22 pm
Operator : VOA6:JT
Sample : I609182003
Misc : WG1412463
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Sep 19 08:29:05 2020
Quant Method : O:\Organics\DATA\VOA6\2020\09-SEP\200918\P6091820W.M
Quant Title : PIANO VOLATILES
QLast Update : Sat Sep 19 08:08:28 2020
Response via : Initial Calibration

Sub List : PIANO - PIANO

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
71) Octane	33.11	43	69803	22.288	ug/L	98
72) trans-1,2-Dimethylcycl...	33.38	55	61620	20.066	ug/L	94
73) 1,2-Dibromoethane	33.61	107	37798	18.268	ug/L	98
75) cis-2-Octene	34.48	55	53310	18.746	ug/L	93
76) Isopropylcyclopentane	34.61	68	69260	19.568	ug/L	97
77) cis-1,2-Dimethylcycloh...	36.37	55	57963	19.930	ug/L	97
78) 2,5-Dimethylheptane	36.70	57	104033	22.129	ug/L	97
79) 3,5-Dimethylheptane	36.85	57	113101	18.415	ug/L	99
80) 3,3-Dimethylheptane	37.10	57	79188	20.291	ug/L	98
81) 1,1,4-Trimethylcyclohe...	37.61	69	73878	19.527	ug/L	95
82) 2,3-Dimethylheptane	38.76	43	90316	22.128	ug/L	98
83) 3,4-Dimethylheptane	39.06	43	58474	22.009	ug/L	95
84) 4-Methyloctane	39.36	43	84347	22.797	ug/L	97
85) 2-Methyloctane	39.46	43	77298M3	21.318	ug/L	
86) Ethylbenzene	39.96	91	207647	18.809	ug/L	97
88) 2-Ethylthiophene	40.12	97	160565	18.682	ug/L	98
89) 3-Methyloctane	40.11	57	133323	20.821	ug/L	97
90) 3,3-Diethylpentane	41.10	57	154845	20.625	ug/L	97
91) p/m-Xylene	41.21	91	316156	37.161	ug/L	97
92) 1-Nonene	41.87	56	38466	21.182	ug/L	92
93) trans-3-Nonene	42.28	55	51809	20.538	ug/L	92
94) cis-3-Nonene	42.57	55	55154M6	18.703	ug/L	
95) Nonane	42.65	43	68339M6	21.053	ug/L	
96) Styrene	43.08	104	133525	18.777	ug/L	98
98) o-Xylene	43.48	91	163871	18.079	ug/L	98
99) 2-Nonene	43.91	55	53769	20.364	ug/L	98
100) Isopropylcyclohexane	45.19	83	78511	18.989	ug/L	97
102) Isopropylbenzene	45.81	105	215577	18.752	ug/L	99
103) 3,3-Dimethyloctane	46.30	71	119663	20.479	ug/L	94
104) n-Propylbenzene	48.43	91	257103	19.405	ug/L	97
105) 2-Methylnonane	48.49	43	68083	22.579	ug/L	98
106) 3-Methylnonane	48.94	57	83444	21.299	ug/L	96
107) 1-Methyl-3-ethylbenzene	49.08	105	216430	19.098	ug/L	99
108) 1-Methyl-4-ethylbenzene	49.24	105	208322	18.002	ug/L	99
109) 1,3,5-Trimethylbenzene	49.84	105	181053	18.375	ug/L	100
110) 1-Decene	49.99	41	41665	22.385	ug/L	91
111) Isobutylcyclohexane	50.14	83	86156	19.146	ug/L	99
112) 1-Methyl-2-ethylbenzene	50.18	105	220943	17.962	ug/L	98
113) Decane	50.38	43	60995	22.309	ug/L	91
114) tert-Butylbenzene	50.64	119	163614	18.342	ug/L	99
115) 1,2,4-Trimethylbenzene	51.07	105	184064	18.274	ug/L	100

Quantitation Report (QT Reviewed)

Data Path : O:\Organics\DATA\VOA6\2020\09-SEP\200918\
Data File : V6012466.D
Acq On : 18 Sep 2020 6:22 pm
Operator : VOA6:JT
Sample : I609182003
Misc : WG1412463
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Sep 19 08:29:05 2020
Quant Method : O:\Organics\DATA\VOA6\2020\09-SEP\200918\P6091820W.M
Quant Title : PIANO VOLATILES
QLast Update : Sat Sep 19 08:08:28 2020
Response via : Initial Calibration

Sub List : PIANO - PIANO

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
116) Isobutylbenzene	51.27	91	200782M6	18.670	ug/L	
117) sec-Butylbenzene	51.33	105	239470	18.188	ug/L	99
118) 1-Methyl-3-isopropylbe...	51.72	119	201053	18.666	ug/L	98
119) 1-Methyl-4-isopropylbe...	51.92	119	209145	18.451	ug/L	98
120) 1,2,3-Trimethylbenzene	52.20	105	184411	18.303	ug/L	99
121) 1-Methyl-2-isopropylbe...	52.41	119	205323	18.523	ug/L	99
122) Indan	52.50	117	176518	18.142	ug/L	99
123) 1,3-Diethylbenzene	52.66	105	125340	18.275	ug/L	99
124) 1-Methyl-3-propylbenzene	52.78	105	235134	18.486	ug/L	99
125) Indene	52.94	115	153641	18.533	ug/L	100
126) 1-Methyl-4-propylbenzene	52.93	105	294384	18.781	ug/L	95
127) n-Butylbenzene	52.92	91	224082	19.069	ug/L	99
128) 1,2-Dimethyl-4-ethylbe...	53.05	119	213496	18.474	ug/L	99
129) 1,2-Diethylbenzene	53.14	119	102371	17.643	ug/L	96
130) 1-Methyl-2-propylbenzene	53.34	105	254601	18.584	ug/L	100
131) 1,4-Dimethyl-2-ethylbe...	53.65	119	198581	18.556	ug/L	98
132) Undecane	53.70	57	77722	24.400	ug/L	97
133) 1,3-Dimethyl-4-ethylbe...	53.74	119	238852	18.234	ug/L	99
134) 1,3-Dimethyl-5-ethylbe...	53.88	119	224115	18.148	ug/L	99
135) 1,3-Dimethyl-2-ethylbe...	54.10	119	232787	18.269	ug/L	99
136) 1,2-Dimethyl-3-ethylbe...	54.46	119	209562	18.328	ug/L	98
137) 1,2,4,5-Tetramethylben...	54.87	119	222990	19.133	ug/L	99
138) 1,2,3,5-Tetramethylben...	54.95	119	197923	18.066	ug/L	99
139) Pentylbenzene	55.43	91	188718	19.518	ug/L	99
140) 1,2,3,4-Tetramethylben...	55.76	119	263669	18.629	ug/L	97
141) 1,3-DM-5-tert-Butylben...	55.75	147	202145	19.455	ug/L	99
142) Dodecane	55.91	43	55556	25.710	ug/L	93
143) 1,3,5-Triethylbenzene	56.62	147	130834	19.897	ug/L	100
144) Naphthalene	56.77	128	179103	18.404	ug/L	98
145) Benzothiophene	56.86	134	97459	18.153	ug/L	98
146) 1,2,4-Triethylbenzene	57.18	147	120165	19.872	ug/L	97
147) Hexylbenzene	57.67	91	176683	20.181	ug/L	99
148) MMT	57.93	134	71419	18.158	ug/L	98
149) Tridecane	57.98	57	53172	22.157	ug/L	95
150) 2-Methylnaphthalene	59.48	142	122433	19.415	ug/L	100
151) 1-Methylnaphthalene	59.95	142	101807	19.109	ug/L	99
152) Tetradecane	60.23	57	42369	21.741	ug/L	95
153) Pentadecane	62.93	57	32008	22.497	ug/L	94

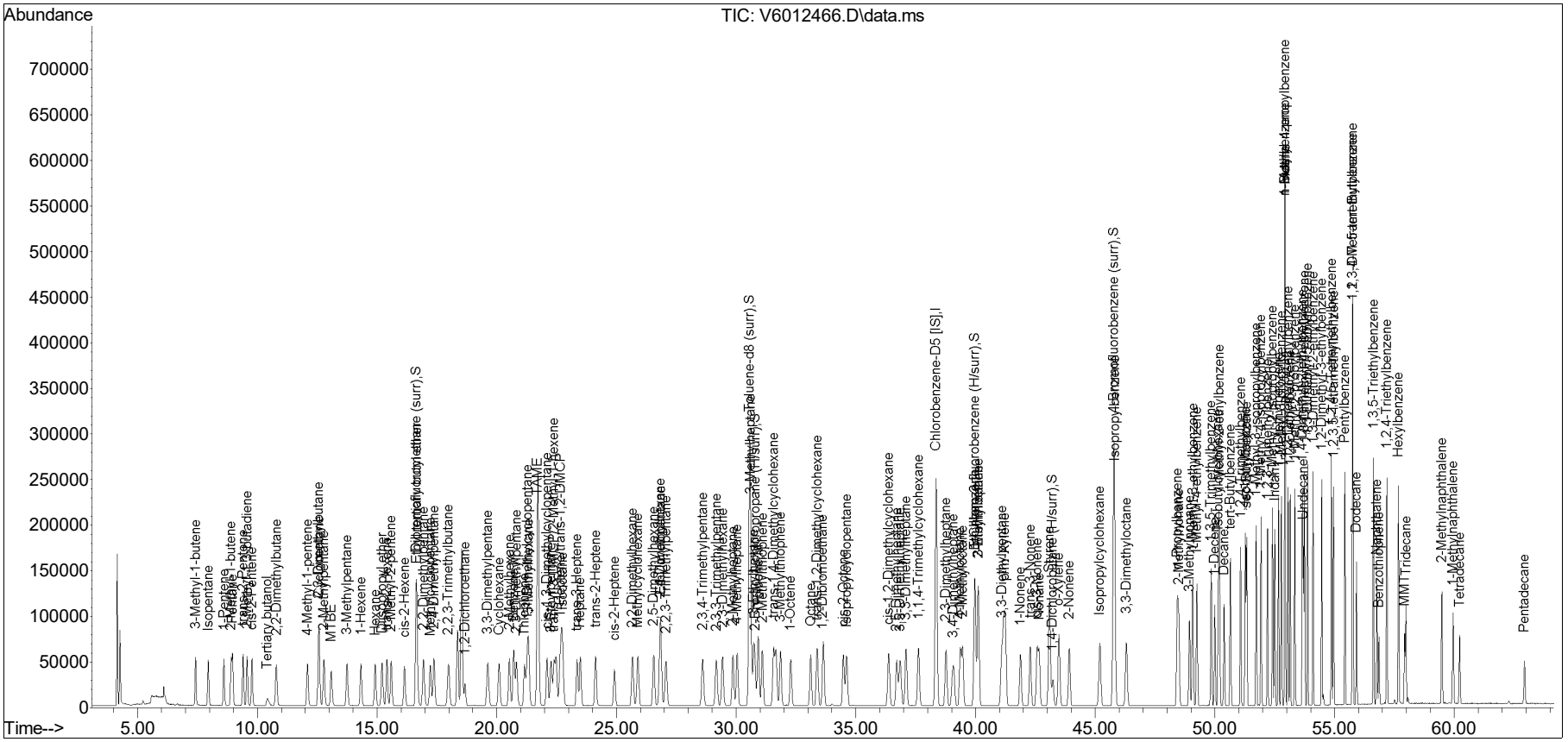
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : O:\Organics\DATA\VOA6\2020\09-SEP\200918\
Data File : V6012466.D
Acq On : 18 Sep 2020 6:22 pm
Operator : VOA6:JT
Sample : I609182003
Misc : WG1412463
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Sep 19 08:29:05 2020
Quant Method : O:\Organics\DATA\VOA6\2020\09-SEP\200918\P6091820W.M
Quant Title : PIANO VOLATILES
QLast Update : Sat Sep 19 08:08:28 2020
Response via : Initial Calibration

Sub List : PIANO - PIANO



Quantitation Report (QT Reviewed)

Data Path : O:\Organics\DATA\VOA6\2020\09-SEP\200918\
Data File : V6012467.D
Acq On : 18 Sep 2020 7:33 pm
Operator : VOA6:JT
Sample : I609182004
Misc : WG1412463
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Sep 19 08:07:49 2020
Quant Method : O:\Organics\DATA\VOA6\2020\09-SEP\200918\P6091820W.M
Quant Title : PIANO VOLATILES
QLast Update : Mon Sep 14 09:00:30 2020
Response via : Initial Calibration

Sub List : PIANO - PIANO

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Chlorobenzene-D5 [IS]	38.35	117	513063	50.000	ug/L	0.07
System Monitoring Compounds						
24) Dibromofluoromethane (...	16.63	113	160341	42.757	ug/L	0.05
Spiked Amount 50.000	Range 78 - 118		Recovery = 85.51%			
62) Toluene-d8 (surr)	30.56	98	616584	48.956	ug/L	0.07
Spiked Amount 50.000	Range 87 - 113		Recovery = 97.91%			
64) 2-Bromo-1-chloropropan...	30.79	77	147298	49.125	ug/L	0.08
Spiked Amount 50.000	Range 70 - 130		Recovery = 98.25%			
87) 1-Chloro-2-fluorobenze...	39.98	130	302344	46.578	ug/L	0.07
Spiked Amount 50.000	Range 70 - 130		Recovery = 93.16%			
97) 1,4-Dichlorobutane (H/...	43.23	55	133031	46.009	ug/L	0.05
Spiked Amount 50.000	Range 70 - 130		Recovery = 92.02%			
101) 4-Bromofluorobenzene (...	45.77	95	251865	50.393	ug/L	0.06
Spiked Amount 50.000	Range 76 - 120		Recovery = 100.79%			
Target Compounds						Qvalue
2) 3-Methyl-1-butene	7.42	55	186257	43.019	ug/L	99
3) Isopentane	7.95	43	100856	44.217	ug/L	96
4) 1-Pentene	8.60	42	113639	48.762	ug/L	96
5) 2-Methyl-1-butene	8.90	55	188184	44.941	ug/L	98
6) Pentane	8.96	43	172779	45.774	ug/L	99
7) trans-2-Pentene	9.40	55	186828	45.345	ug/L	97
8) 2-Methyl-1,3-butadiene	9.57	67	128240	43.428	ug/L	95
9) cis-2-Pentene	9.77	55	177731	44.727	ug/L	95
10) Tertiary butanol	10.38	59	79400	263.113	ug/L	97
11) 2,2-Dimethylbutane	10.79	43	108812	49.319	ug/L	89
12) 4-Methyl-1-pentene	12.09	43	128262	50.743	ug/L	97
13) Cyclopentane	12.57	70	75690	45.049	ug/L	97
14) 2,3-Dimethylbutane	12.57	71	60097	46.042	ug/L #	88
15) 2-Methylpentane	12.78	43	187234	50.064	ug/L	99
16) MTBE	13.08	73	250816	44.259	ug/L	98
17) 3-Methylpentane	13.75	57	178835	48.462	ug/L	99
18) 1-Hexene	14.32	56	101505	48.788	ug/L	92
19) Hexane	14.92	57	142887	48.047	ug/L	96
20) Diisopropyl ether	15.21	45	253324	53.980	ug/L	96
21) trans-2-Hexene	15.41	55	174797	49.242	ug/L	100
22) 2-Methyl-2-pentene	15.59	69	192828	46.389	ug/L	98
23) cis-2-Hexene	16.15	55	142746	48.191	ug/L	98
25) Ethyl tertiary butyl e...	16.66	59	263480	48.713	ug/L	99

Data Path : O:\Organics\DATA\VOA6\2020\09-SEP\200918\
Data File : V6012467.D
Acq On : 18 Sep 2020 7:33 pm
Operator : VOA6:JT
Sample : I609182004
Misc : WG1412463
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Sep 19 08:07:49 2020
Quant Method : O:\Organics\DATA\VOA6\2020\09-SEP\200918\P6091820W.M
Quant Title : PIANO VOLATILES
QLast Update : Mon Sep 14 09:00:30 2020
Response via : Initial Calibration

Sub List : PIANO - PIANO

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
26) 2,2-Dimethylpentane	16.94	57	222598	48.664	ug/L	95
27) Methylcyclopentane	17.22	56	187053	49.202	ug/L	95
28) 2,4-Dimethylpentane	17.38	43	172669	51.662	ug/L	96
29) 2,2,3-Trimethylbutane	17.99	57	194509	49.013	ug/L	97
30) 1,2-Dichloroethane	18.67	62	126822	44.464	ug/L	97
31) 3,3-Dimethylpentane	19.63	43	207131	53.620	ug/L	98
32) Cyclohexane	20.10	56	155453	49.473	ug/L	99
33) 2-Methylhexane	20.52	43	182894	55.052	ug/L	99
34) Benzene	20.71	78	391998	45.629	ug/L	99
35) 2,3-Dimethylpentane	20.83	56	159394	49.602	ug/L	100
36) Thiophene	21.16	84	221109	45.261	ug/L	100
37) 1,1-Dimethylcyclopentane	21.28	83	109286M6	41.127	ug/L	
38) 3-Methylhexane	21.33	43	165242	53.934	ug/L	95
39) TAME	21.69	73	262559	41.037	ug/L	96
40) cis-1,3-Dimethylcyclop...	22.10	70	157462	44.400	ug/L	97
41) 3-Ethylpentane	22.27	43	205167	52.714	ug/L	95
42) trans-1,3-DMCP/2-Methy...	22.39	70	136754	100.787	ug/L	94
43) 1-Heptene/trans-1,2-DMCP	22.66	70	167818	94.447	ug/L	77
44) Isooctane	22.74	57	401117	49.579	ug/L	94
45) trans-3-Heptene	23.36	41	129540	56.602	ug/L	97
46) Heptane	23.49	43	148756	52.052	ug/L	99
48) trans-2-Heptene	24.13	56	121037	50.762	ug/L	95
49) cis-2-Heptene	24.92	56	91994	53.070	ug/L	91
50) 2,2-Dimethylhexane	25.67	57	396812	51.392	ug/L	99
51) Methylcyclohexane	25.89	83	183725	46.561	ug/L	99
52) 2,5-Dimethylhexane	26.56	57	200272	53.478	ug/L	98
53) 2,4-Dimethylhexane	26.82	57	156433	49.891	ug/L	97
54) Ethylcyclopentane	26.86	69	154597	48.729	ug/L	95
55) 2,2,3-Trimethylpentane	27.07	57	313946	50.842	ug/L	96
57) 2,3,4-Trimethylpentane	28.60	43	213308	54.495	ug/L	99
58) 2,3,3-Trimethylpentane	29.17	43	181760	53.763	ug/L	99
59) 2,3-Dimethylhexane	29.43	43	202336	55.744	ug/L	95
60) 2-Methylheptane	29.86	57	183608	53.763	ug/L	95
61) 4-Methylheptane	30.04	43	211997	53.948	ug/L	98
63) 3-Methylheptane	30.61	43	159790	54.637	ug/L	98
65) 3-Ethylhexane	30.73	43	221996	52.115	ug/L	97
66) Toluene	30.92	91	469344	43.923	ug/L	99
67) 2-Methylthiophene	31.09	97	366948	45.346	ug/L	100
68) trans-1,4-Dimethylcycl...	31.56	97	237078	46.602	ug/L	98
69) 3-Methylthiophene	31.85	97	368390	46.710	ug/L	99
70) 1-Octene	32.28	55	91644	54.555	ug/L	97

Data Path : O:\Organics\DATA\VOA6\2020\09-SEP\200918\
Data File : V6012467.D
Acq On : 18 Sep 2020 7:33 pm
Operator : VOA6:JT
Sample : I609182004
Misc : WG1412463
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Sep 19 08:07:49 2020
Quant Method : O:\Organics\DATA\VOA6\2020\09-SEP\200918\P6091820W.M
Quant Title : PIANO VOLATILES
QLast Update : Mon Sep 14 09:00:30 2020
Response via : Initial Calibration

Sub List : PIANO - PIANO

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
71) Octane	33.11	43	177774	56.560 ug/L	98
72) trans-1,2-Dimethylcycl...	33.39	55	156905	50.265 ug/L	91
73) 1,2-Dibromoethane	33.61	107	98471	45.527 ug/L	98
75) cis-2-Octene	34.48	55	135372	46.819 ug/L	93
76) Isopropylcyclopentane	34.61	68	171396M6	46.524 ug/L	
77) cis-1,2-Dimethylcycloh...	36.37	55	149082	50.314 ug/L	99
78) 2,5-Dimethylheptane	36.71	57	260783	54.549 ug/L	99
79) 3,5-Dimethylheptane	36.84	57	313856M4	50.004 ug/L	
80) 3,3-Dimethylheptane	37.09	57	204490	51.536 ug/L	98
81) 1,1,4-Trimethylcyclohe...	37.62	69	190520	49.040 ug/L	98
82) 2,3-Dimethylheptane	38.77	43	230398	56.182 ug/L	98
83) 3,4-Dimethylheptane	39.08	43	143078	53.518 ug/L	96
84) 4-Methyloctane	39.37	43	221309	60.537 ug/L	98
85) 2-Methyloctane	39.46	43	184787M3	50.030 ug/L	
86) Ethylbenzene	39.96	91	531714	46.535 ug/L	99
88) 2-Ethylthiophene	40.11	97	412452	46.207 ug/L	99
89) 3-Methyloctane	40.12	57	341889	52.348 ug/L	99
90) 3,3-Diethylpentane	41.10	57	399532	52.372 ug/L	98
91) p/m-Xylene	41.22	91	807370	91.388 ug/L	99
92) 1-Nonene	41.88	56	99807	53.905 ug/L	96
93) trans-3-Nonene	42.28	55	132552	51.466 ug/L	92
94) cis-3-Nonene	42.58	55	150306M6	49.875 ug/L	
95) Nonane	42.66	43	177732M6	54.234 ug/L	
96) Styrene	43.07	104	341737	46.108 ug/L	98
98) o-Xylene	43.49	91	416524	44.071 ug/L	98
99) 2-Nonene	43.91	55	138495	51.233 ug/L	97
100) Isopropylcyclohexane	45.19	83	204838	48.058 ug/L	98
102) Isopropylbenzene	45.80	105	548156	46.036 ug/L	98
103) 3,3-Dimethyloctane	46.30	71	307989	51.542 ug/L	96
104) n-Propylbenzene	48.43	91	647872	47.299 ug/L	100
105) 2-Methylnonane	48.49	43	174955	57.708 ug/L	94
106) 3-Methylnonane	48.94	57	219616	55.424 ug/L	98
107) 1-Methyl-3-ethylbenzene	49.07	105	549455	46.784 ug/L	100
108) 1-Methyl-4-ethylbenzene	49.25	105	530190	44.107 ug/L	99
109) 1,3,5-Trimethylbenzene	49.85	105	463582	45.286 ug/L	99
110) 1-Decene	49.99	41	109175	58.354 ug/L	93
111) Isobutylcyclohexane	50.14	83	220058	47.223 ug/L	97
112) 1-Methyl-2-ethylbenzene	50.19	105	562963	43.885 ug/L	97
113) Decane	50.39	43	156077	56.787 ug/L	93
114) tert-Butylbenzene	50.64	119	419838	45.207 ug/L	99
115) 1,2,4-Trimethylbenzene	51.07	105	474432	45.311 ug/L	99

Quantitation Report (QT Reviewed)

Data Path : O:\Organics\DATA\VOA6\2020\09-SEP\200918\
Data File : V6012467.D
Acq On : 18 Sep 2020 7:33 pm
Operator : VOA6:JT
Sample : I609182004
Misc : WG1412463
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Sep 19 08:07:49 2020
Quant Method : O:\Organics\DATA\VOA6\2020\09-SEP\200918\P6091820W.M
Quant Title : PIANO VOLATILES
QLast Update : Mon Sep 14 09:00:30 2020
Response via : Initial Calibration

Sub List : PIANO - PIANO

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
116) Isobutylbenzene	51.27	91	525516M6	47.009 ug/L	
117) sec-Butylbenzene	51.33	105	609647	44.361 ug/L	98
118) 1-Methyl-3-isopropylbe...	51.72	119	519779	46.445 ug/L	98
119) 1-Methyl-4-isopropylbe...	51.92	119	538102	45.669 ug/L	99
120) 1,2,3-Trimethylbenzene	52.20	105	475908	45.310 ug/L	100
121) 1-Methyl-2-isopropylbe...	52.41	119	528759	45.813 ug/L	100
122) Indan	52.50	117	448514	44.028 ug/L	99
123) 1,3-Diethylbenzene	52.66	105	327781	45.687 ug/L	98
124) 1-Methyl-3-propylbenzene	52.77	105	612552	46.076 ug/L	99
125) Indene	52.94	115	401276	45.902 ug/L	98
126) 1-Methyl-4-propylbenzene	52.92	105	775867	47.154 ug/L	97
127) n-Butylbenzene	52.92	91	582297	47.337 ug/L	99
128) 1,2-Dimethyl-4-ethylbe...	53.05	119	568052	46.742 ug/L	100
129) 1,2-Diethylbenzene	53.14	119	268039	43.834 ug/L	97
130) 1-Methyl-2-propylbenzene	53.33	105	668720	46.549 ug/L	99
131) 1,4-Dimethyl-2-ethylbe...	53.66	119	523666M3	46.799 ug/L	
132) Undecane	53.69	57	181137	56.115 ug/L	97
133) 1,3-Dimethyl-4-ethylbe...	53.74	119	630026M3	45.781 ug/L	
134) 1,3-Dimethyl-5-ethylbe...	53.88	119	593385	45.749 ug/L	99
135) 1,3-Dimethyl-2-ethylbe...	54.10	119	612532	45.847 ug/L	99
136) 1,2-Dimethyl-3-ethylbe...	54.46	119	549418	46.062 ug/L	99
137) 1,2,4,5-Tetramethylben...	54.86	119	578349M3	47.770 ug/L	
138) 1,2,3,5-Tetramethylben...	54.95	119	515597	44.944 ug/L	99
139) Pentylbenzene	55.43	91	484125	48.234 ug/L	99
140) 1,2,3,4-Tetramethylben...	55.76	119	683915	46.231 ug/L	99
141) 1,3-DM-5-tert-Butylben...	55.75	147	523680	48.732 ug/L	99
142) Dodecane	55.91	43	115603	53.865 ug/L	97
143) 1,3,5-Triethylbenzene	56.63	147	336082	49.832 ug/L	99
144) Naphthalene	56.77	128	461834	45.413 ug/L	100
145) Benzothiophene	56.86	134	253212	45.196 ug/L	99
146) 1,2,4-Triethylbenzene	57.18	147	307408	49.265 ug/L	98
147) Hexylbenzene	57.67	91	444140	49.038 ug/L	99
148) MMT	57.92	134	185232	45.245 ug/L	99
149) Tridecane	57.98	57	114515	47.752 ug/L	96
150) 2-Methylnaphthalene	59.48	142	315670	48.759 ug/L	98
151) 1-Methylnaphthalene	59.95	142	263350	48.030 ug/L	98
152) Tetradecane	60.22	57	99086	51.454 ug/L	94
153) Pentadecane	62.93	57	79213	56.860 ug/L	94

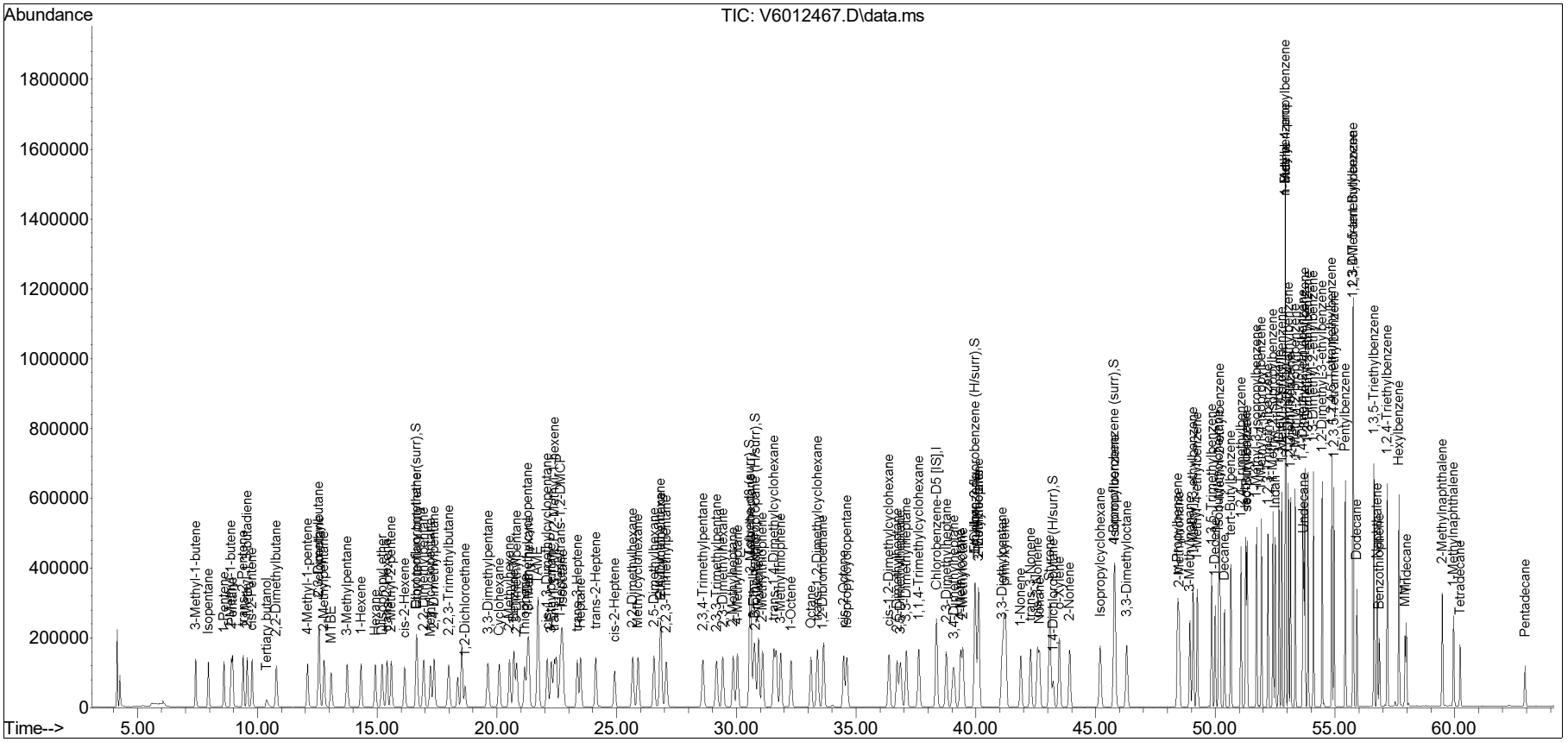
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : O:\Organics\DATA\VOA6\2020\09-SEP\200918\
Data File : V6012467.D
Acq On : 18 Sep 2020 7:33 pm
Operator : VOA6:JT
Sample : I609182004
Misc : WG1412463
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Sep 19 08:07:49 2020
Quant Method : O:\Organics\DATA\VOA6\2020\09-SEP\200918\P6091820W.M
Quant Title : PIANO VOLATILES
QLast Update : Mon Sep 14 09:00:30 2020
Response via : Initial Calibration

Sub List : PIANO - PIANO



Quantitation Report (QT Reviewed)

Data Path : O:\Organics\DATA\VOA6\2020\09-SEP\200918\
Data File : V6012468.D
Acq On : 18 Sep 2020 8:44 pm
Operator : VOA6:JT
Sample : I609182005
Misc : WG1412463
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Sep 19 08:31:54 2020
Quant Method : O:\Organics\DATA\VOA6\2020\09-SEP\200918\P6091820W.M
Quant Title : PIANO VOLATILES
QLast Update : Sat Sep 19 08:08:28 2020
Response via : Initial Calibration

Sub List : PIANO - PIANO

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Chlorobenzene-D5 [IS]	38.35	117	481065	50.000	ug/L	0.00
System Monitoring Compounds						
24) Dibromofluoromethane (...	16.64	113	148588	43.396	ug/L	0.00
Spiked Amount 50.000	Range 78 - 118		Recovery = 86.79%			
62) Toluene-d8 (surr)	30.57	98	572419	48.705	ug/L	0.00
Spiked Amount 50.000	Range 87 - 113		Recovery = 97.41%			
64) 2-Bromo-1-chloropropan...	30.79	77	293238	105.967	ug/L	0.00
Spiked Amount 50.000	Range 70 - 130		Recovery = 211.93%#			
87) 1-Chloro-2-fluorobenze...	39.98	130	606694	102.016	ug/L	0.00
Spiked Amount 50.000	Range 70 - 130		Recovery = 204.03%#			
97) 1,4-Dichlorobutane (H/...	43.23	55	256881	96.190	ug/L	0.00
Spiked Amount 50.000	Range 70 - 130		Recovery = 192.38%#			
101) 4-Bromofluorobenzene (...	45.77	95	238308	50.711	ug/L	0.00
Spiked Amount 50.000	Range 76 - 120		Recovery = 101.42%			
Target Compounds						Qvalue
2) 3-Methyl-1-butene	7.42	55	377698	96.197	ug/L	99
3) Isopentane	7.96	43	202578	96.087	ug/L	97
4) 1-Pentene	8.60	42	225485	104.336	ug/L	98
5) 2-Methyl-1-butene	8.91	55	376686	98.561	ug/L	98
6) Pentane	8.96	43	345271	99.169	ug/L	99
7) trans-2-Pentene	9.41	55	369920	98.210	ug/L	98
8) 2-Methyl-1,3-butadiene	9.57	67	258759	96.474	ug/L	96
9) cis-2-Pentene	9.77	55	356358	98.135	ug/L	97
10) Tertiary butanol	10.37	59	158584	561.930	ug/L	97
11) 2,2-Dimethylbutane	10.79	43	214577	104.238	ug/L	90
12) 4-Methyl-1-pentene	12.10	43	253836	107.442	ug/L	99
13) Cyclopentane	12.58	70	151821	98.891	ug/L	99
14) 2,3-Dimethylbutane	12.57	71	120704	101.398	ug/L	98
15) 2-Methylpentane	12.79	43	375557	107.325	ug/L	99
16) MTBE	13.07	73	491571	95.306	ug/L	99
17) 3-Methylpentane	13.75	57	357136	104.718	ug/L	98
18) 1-Hexene	14.33	56	203524	105.808	ug/L	94
19) Hexane	14.93	57	287333	104.588	ug/L	96
20) Diisopropyl ether	15.21	45	494316	112.736	ug/L	97
21) trans-2-Hexene	15.41	55	347202	105.778	ug/L	98
22) 2-Methyl-2-pentene	15.60	69	373512	97.959	ug/L	98
23) cis-2-Hexene	16.15	55	284367	104.023	ug/L	98
25) Ethyl tertiary butyl e...	16.66	59	515035	103.297	ug/L	98

Quantitation Report (QT Reviewed)

Data Path : O:\Organics\DATA\VOA6\2020\09-SEP\200918\
Data File : V6012468.D
Acq On : 18 Sep 2020 8:44 pm
Operator : VOA6:JT
Sample : I609182005
Misc : WG1412463
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Sep 19 08:31:54 2020
Quant Method : O:\Organics\DATA\VOA6\2020\09-SEP\200918\P6091820W.M
Quant Title : PIANO VOLATILES
QLast Update : Sat Sep 19 08:08:28 2020
Response via : Initial Calibration

Sub List : PIANO - PIANO

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
26) 2,2-Dimethylpentane	16.94	57	433764	102.139 ug/L	97
27) Methylcyclopentane	17.22	56	364497	103.467 ug/L	95
28) 2,4-Dimethylpentane	17.38	43	339867	107.975 ug/L	96
29) 2,2,3-Trimethylbutane	17.99	57	385936	104.876 ug/L	98
30) 1,2-Dichloroethane	18.67	62	247788	94.939 ug/L	97
31) 3,3-Dimethylpentane	19.63	43	409248	112.454 ug/L	98
32) Cyclohexane	20.10	56	306318	104.842 ug/L	100
33) 2-Methylhexane	20.52	43	358644	114.478 ug/L	99
34) Benzene	20.71	78	768309	97.587 ug/L	97
35) 2,3-Dimethylpentane	20.83	56	309365	103.609 ug/L	99
36) Thiophene	21.16	84	435998	97.554 ug/L	99
37) 1,1-Dimethylcyclopentane	21.28	83	218480M6	91.317 ug/L	
38) 3-Methylhexane	21.33	43	316447	109.504 ug/L	96
39) TAME	21.69	73	505207	85.781 ug/L	95
40) cis-1,3-Dimethylcyclop...	22.11	70	315790	96.918 ug/L	99
41) 3-Ethylpentane	22.27	43	396359	107.946 ug/L	98
42) trans-1,3-DMCP/2-Methy...	22.39	70	269216	210.615 ug/L	94
43) 1-Heptene/trans-1,2-DMCP	22.66	70	325621	198.299 ug/L	71
44) Isooctane	22.75	57	787981	104.980 ug/L	96
45) trans-3-Heptene	23.35	41	252890	117.338 ug/L	97
46) Heptane	23.49	43	293873	109.278 ug/L	98
48) trans-2-Heptene	24.13	56	241638	109.327 ug/L	95
49) cis-2-Heptene	24.91	56	181223	111.903 ug/L	94
50) 2,2-Dimethylhexane	25.67	57	777156	107.944 ug/L	99
51) Methylcyclohexane	25.89	83	366366	101.284 ug/L	99
52) 2,5-Dimethylhexane	26.55	57	389635	111.082 ug/L	95
53) 2,4-Dimethylhexane	26.82	57	307710	104.743 ug/L	94
54) Ethylcyclopentane	26.86	69	305484	104.189 ug/L	93
55) 2,2,3-Trimethylpentane	27.08	57	611892	106.270 ug/L	96
57) 2,3,4-Trimethylpentane	28.60	43	416303	112.726 ug/L	98
58) 2,3,3-Trimethylpentane	29.17	43	354881	111.295 ug/L	99
59) 2,3-Dimethylhexane	29.44	43	388063	112.242 ug/L	97
60) 2-Methylheptane	29.87	57	358390	112.044 ug/L	95
61) 4-Methylheptane	30.04	43	414087	111.284 ug/L	98
63) 3-Methylheptane	30.61	43	303788	109.138 ug/L	98
65) 3-Ethylhexane	30.74	43	424484	106.417 ug/L	97
66) Toluene	30.92	91	925901	94.739 ug/L	99
67) 2-Methylthiophene	31.10	97	724210	97.788 ug/L	100
68) trans-1,4-Dimethylcycl...	31.56	97	467651	100.279 ug/L	98
69) 3-Methylthiophene	31.86	97	726101	99.999 ug/L	98
70) 1-Octene	32.29	55	177248	112.118 ug/L	93

Data Path : O:\Organics\DATA\VOA6\2020\09-SEP\200918\
Data File : V6012468.D
Acq On : 18 Sep 2020 8:44 pm
Operator : VOA6:JT
Sample : I609182005
Misc : WG1412463
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Sep 19 08:31:54 2020
Quant Method : O:\Organics\DATA\VOA6\2020\09-SEP\200918\P6091820W.M
Quant Title : PIANO VOLATILES
QLast Update : Sat Sep 19 08:08:28 2020
Response via : Initial Calibration

Sub List : PIANO - PIANO

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
71) Octane	33.11	43	346189	116.179	ug/L	98
72) trans-1,2-Dimethylcycl...	33.38	55	304807	104.324	ug/L	94
73) 1,2-Dibromoethane	33.61	107	197034	100.089	ug/L	99
75) cis-2-Octene	34.48	55	270059	99.812	ug/L	94
76) Isopropylcyclopentane	34.61	68	340910	101.234	ug/L	97
77) cis-1,2-Dimethylcycloh...	36.37	55	293707	106.143	ug/L	97
78) 2,5-Dimethylheptane	36.71	57	519244	116.089	ug/L	99
79) 3,5-Dimethylheptane	36.85	57	576664	98.685	ug/L	100
80) 3,3-Dimethylheptane	37.10	57	398471	107.315	ug/L	96
81) 1,1,4-Trimethylcyclohe...	37.62	69	375293	104.259	ug/L	96
82) 2,3-Dimethylheptane	38.77	43	450233	115.943	ug/L	98
83) 3,4-Dimethylheptane	39.07	43	278814	110.301	ug/L	97
84) 4-Methyloctane	39.37	43	427427	121.419	ug/L	98
85) 2-Methyloctane	39.45	43	362911M3	105.196	ug/L	
86) Ethylbenzene	39.96	91	1057864	100.717	ug/L	100
88) 2-Ethylthiophene	40.11	97	825448	100.948	ug/L	99
89) 3-Methyloctane	40.11	57	669571	109.905	ug/L	98
90) 3,3-Diethylpentane	41.09	57	783482	109.686	ug/L	97
91) p/m-Xylene	41.23	91	1615816M1	199.622	ug/L	
92) 1-Nonene	41.88	56	197779	114.468	ug/L	94
93) trans-3-Nonene	42.29	55	261193	108.825	ug/L	93
94) cis-3-Nonene	42.57	55	289402M6	103.146	ug/L	
95) Nonane	42.66	43	341366M6	110.530	ug/L	
96) Styrene	43.08	104	691145	102.154	ug/L	98
98) o-Xylene	43.48	91	843679	97.831	ug/L	100
99) 2-Nonene	43.92	55	274402	109.231	ug/L	97
100) Isopropylcyclohexane	45.19	83	404135	102.738	ug/L	98
102) Isopropylbenzene	45.80	105	1107258	101.231	ug/L	98
103) 3,3-Dimethyloctane	46.30	71	592451	106.570	ug/L	96
104) n-Propylbenzene	48.43	91	1309856	103.912	ug/L	99
105) 2-Methylnonane	48.49	43	331299	115.482	ug/L	96
106) 3-Methylnonane	48.94	57	416071	111.626	ug/L	97
107) 1-Methyl-3-ethylbenzene	49.07	105	1114161	103.332	ug/L	99
108) 1-Methyl-4-ethylbenzene	49.25	105	1076373	97.764	ug/L	100
109) 1,3,5-Trimethylbenzene	49.85	105	944113	100.710	ug/L	100
110) 1-Decene	49.99	41	215087	121.460	ug/L	95
111) Isobutylcyclohexane	50.15	83	439756	102.716	ug/L	98
112) 1-Methyl-2-ethylbenzene	50.19	105	1154074	98.613	ug/L	98
113) Decane	50.38	43	294483	113.208	ug/L	95
114) tert-Butylbenzene	50.64	119	859073	101.225	ug/L	97
115) 1,2,4-Trimethylbenzene	51.07	105	969758	101.196	ug/L	99

Quantitation Report (QT Reviewed)

Data Path : O:\Organics\DATA\VOA6\2020\09-SEP\200918\
Data File : V6012468.D
Acq On : 18 Sep 2020 8:44 pm
Operator : VOA6:JT
Sample : I609182005
Misc : WG1412463
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Sep 19 08:31:54 2020
Quant Method : O:\Organics\DATA\VOA6\2020\09-SEP\200918\P6091820W.M
Quant Title : PIANO VOLATILES
QLast Update : Sat Sep 19 08:08:28 2020
Response via : Initial Calibration

Sub List : PIANO - PIANO

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
116) Isobutylbenzene	51.27	91	1076963M6	105.256	ug/L	
117) sec-Butylbenzene	51.33	105	1263136	100.833	ug/L	99
118) 1-Methyl-3-isopropylbe...	51.72	119	1074035	104.805	ug/L	99
119) 1-Methyl-4-isopropylbe...	51.92	119	1113350	103.233	ug/L	99
120) 1,2,3-Trimethylbenzene	52.20	105	981129	102.349	ug/L	99
121) 1-Methyl-2-isopropylbe...	52.41	119	1100728	104.369	ug/L	99
122) Indan	52.50	117	930111	100.475	ug/L	100
123) 1,3-Diethylbenzene	52.66	105	685319	105.022	ug/L	98
124) 1-Methyl-3-propylbenzene	52.78	105	1288577	106.476	ug/L	99
125) Indene	52.94	115	839160	106.390	ug/L	98
126) 1-Methyl-4-propylbenzene	52.93	105	1643284	110.190	ug/L	95
127) n-Butylbenzene	52.92	91	1219523	109.076	ug/L	97
128) 1,2-Dimethyl-4-ethylbe...	53.05	119	1212073	110.234	ug/L	100
129) 1,2-Diethylbenzene	53.14	119	574141	104.000	ug/L	97
130) 1-Methyl-2-propylbenzene	53.34	105	1411225	108.268	ug/L	100
131) 1,4-Dimethyl-2-ethylbe...	53.66	119	1109710	108.989	ug/L	99
132) Undecane	53.69	57	313102	103.313	ug/L	96
133) 1,3-Dimethyl-4-ethylbe...	53.74	119	1347492	108.118	ug/L	100
134) 1,3-Dimethyl-5-ethylbe...	53.88	119	1271197	108.194	ug/L	100
135) 1,3-Dimethyl-2-ethylbe...	54.10	119	1300771	107.296	ug/L	99
136) 1,2-Dimethyl-3-ethylbe...	54.46	119	1156582	106.318	ug/L	99
137) 1,2,4,5-Tetramethylben...	54.87	119	1219577	109.986	ug/L	99
138) 1,2,3,5-Tetramethylben...	54.95	119	1092036	104.765	ug/L	100
139) Pentylbenzene	55.43	91	1007862	109.558	ug/L	99
140) 1,2,3,4-Tetramethylben...	55.76	119	1442892	107.152	ug/L	99
141) 1,3-DM-5-tert-Butylben...	55.75	147	1104062	111.685	ug/L	98
142) Dodecane	55.91	43	188966	91.915	ug/L	97
143) 1,3,5-Triethylbenzene	56.63	147	694955	111.083	ug/L	99
144) Naphthalene	56.77	128	954865	103.130	ug/L	99
145) Benzothiophene	56.86	134	526306	103.033	ug/L	97
146) 1,2,4-Triethylbenzene	57.18	147	642927	111.750	ug/L	98
147) Hexylbenzene	57.67	91	906812	108.865	ug/L	98
148) MMT	57.92	134	381930	102.062	ug/L	97
149) Tridecane	57.98	57	197826	86.644	ug/L	97
150) 2-Methylnaphthalene	59.48	142	642241	107.045	ug/L	100
151) 1-Methylnaphthalene	59.95	142	536256	105.792	ug/L	100
152) Tetradecane	60.22	57	173526	93.589	ug/L	94
153) Pentadecane	62.93	57	143694	106.152	ug/L	94

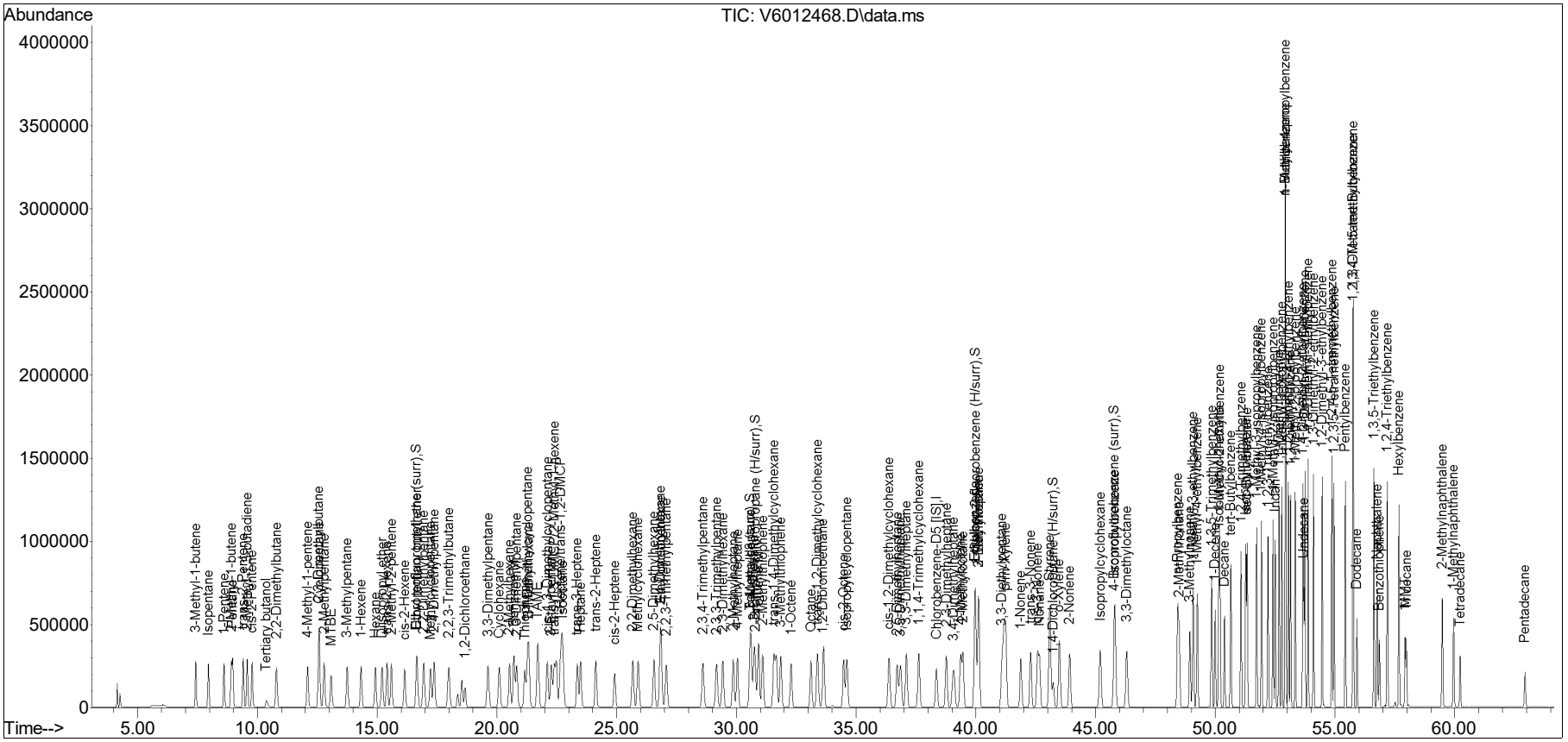
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : O:\Organics\DATA\VOA6\2020\09-SEP\200918\
Data File : V6012468.D
Acq On : 18 Sep 2020 8:44 pm
Operator : VOA6:JT
Sample : I609182005
Misc : WG1412463
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Sep 19 08:31:54 2020
Quant Method : O:\Organics\DATA\VOA6\2020\09-SEP\200918\P6091820W.M
Quant Title : PIANO VOLATILES
QLast Update : Sat Sep 19 08:08:28 2020
Response via : Initial Calibration

Sub List : PIANO - PIANO



Quantitation Report (QT Reviewed)

Data Path : O:\Organics\DATA\VOA6\2020\09-SEP\200918\
Data File : V6012469.D
Acq On : 18 Sep 2020 9:55 pm
Operator : VOA6:JT
Sample : I609182006
Misc : WG1412463
ALS Vial : 8 Sample Multiplier: 1

Quant Time: Sep 19 08:37:18 2020
Quant Method : O:\Organics\DATA\VOA6\2020\09-SEP\200918\P6091820W.M
Quant Title : PIANO VOLATILES
QLast Update : Sat Sep 19 08:08:28 2020
Response via : Initial Calibration

Sub List : PIANO - PIANO

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Chlorobenzene-D5 [IS]	38.35	117	494206	50.000	ug/L	0.00
System Monitoring Compounds						
24) Dibromofluoromethane (...	16.63	113	154282	43.861	ug/L	0.00
Spiked Amount 50.000	Range 78 - 118		Recovery = 87.72%			
62) Toluene-d8 (surr)	30.56	98	597255	49.467	ug/L	0.00
Spiked Amount 50.000	Range 87 - 113		Recovery = 98.93%			
64) 2-Bromo-1-chloropropan...	30.79	77	588225	206.914	ug/L	0.00
Spiked Amount 50.000	Range 70 - 130		Recovery = 413.83%#			
87) 1-Chloro-2-fluorobenze...	39.99	130	1244267	203.661	ug/L	0.01
Spiked Amount 50.000	Range 70 - 130		Recovery = 407.32%#			
97) 1,4-Dichlorobutane (H/...	43.24	55	542421	197.710	ug/L	0.01
Spiked Amount 50.000	Range 70 - 130		Recovery = 395.42%#			
101) 4-Bromofluorobenzene (...	45.77	95	248335	51.439	ug/L	0.00
Spiked Amount 50.000	Range 76 - 120		Recovery = 102.88%			
Target Compounds						Qvalue
2) 3-Methyl-1-butene	7.43	55	767653	190.317	ug/L	99
3) Isopentane	7.95	43	405595	187.267	ug/L	96
4) 1-Pentene	8.60	42	460372	207.358	ug/L	98
5) 2-Methyl-1-butene	8.91	55	764030	194.596	ug/L	99
6) Pentane	8.97	43	695982	194.586	ug/L	100
7) trans-2-Pentene	9.41	55	757622	195.792	ug/L	98
8) 2-Methyl-1,3-butadiene	9.57	67	529579	192.195	ug/L	97
9) cis-2-Pentene	9.78	55	732801	196.435	ug/L	96
10) Tertiary butanol	10.34	59	320425	1105.211	ug/L	97
11) 2,2-Dimethylbutane	10.79	43	434381	205.404	ug/L	92
12) 4-Methyl-1-pentene	12.10	43	515022	212.199	ug/L	99
13) Cyclopentane	12.58	70	311793	197.690	ug/L	98
14) 2,3-Dimethylbutane	12.57	71	246258	201.369	ug/L	98
15) 2-Methylpentane	12.79	43	761631	211.868	ug/L	99
16) MTBE	13.07	73	1007631	190.165	ug/L	99
17) 3-Methylpentane	13.75	57	729759	208.287	ug/L	99
18) 1-Hexene	14.33	56	416436	210.741	ug/L	93
19) Hexane	14.93	57	586015	207.635	ug/L	97
20) Diisopropyl ether	15.20	45	1001525	222.339	ug/L	95
21) trans-2-Hexene	15.41	55	713156	211.491	ug/L	97
22) 2-Methyl-2-pentene	15.60	69	777664	198.531	ug/L	98
23) cis-2-Hexene	16.15	55	585588	208.515	ug/L	98
25) Ethyl tertiary butyl e...	16.66	59	1056333	206.228	ug/L	97

Quantitation Report (QT Reviewed)

Data Path : O:\Organics\DATA\VOA6\2020\09-SEP\200918\
Data File : V6012469.D
Acq On : 18 Sep 2020 9:55 pm
Operator : VOA6:JT
Sample : I609182006
Misc : WG1412463
ALS Vial : 8 Sample Multiplier: 1

Quant Time: Sep 19 08:37:18 2020
Quant Method : O:\Organics\DATA\VOA6\2020\09-SEP\200918\P6091820W.M
Quant Title : PIANO VOLATILES
QLast Update : Sat Sep 19 08:08:28 2020
Response via : Initial Calibration

Sub List : PIANO - PIANO

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
26) 2,2-Dimethylpentane	16.94	57	890026	204.002 ug/L	94
27) Methylcyclopentane	17.23	56	746423	206.248 ug/L	95
28) 2,4-Dimethylpentane	17.38	43	701966	217.084 ug/L	96
29) 2,2,3-Trimethylbutane	17.99	57	786758	208.112 ug/L	95
30) 1,2-Dichloroethane	18.67	62	506085	188.748 ug/L	98
31) 3,3-Dimethylpentane	19.63	43	834337	223.166 ug/L	100
32) Cyclohexane	20.10	56	627922	209.200 ug/L	97
33) 2-Methylhexane	20.53	43	729693	226.722 ug/L	98
34) Benzene	20.71	78	1578851	195.205 ug/L	100
35) 2,3-Dimethylpentane	20.83	56	638660	208.205 ug/L	97
36) Thiophene	21.16	84	892908	194.475 ug/L	99
37) 1,1-Dimethylcyclopentane	21.27	83	455413M6	185.286 ug/L	
38) 3-Methylhexane	21.34	43	650348	219.064 ug/L	97
39) TAME	21.69	73	1029925	170.226 ug/L	95
40) cis-1,3-Dimethylcyclop...	22.11	70	651391	194.601 ug/L	100
41) 3-Ethylpentane	22.27	43	815757	216.259 ug/L	99
42) trans-1,3-DMCP/2-Methy...	22.39	70	567366	432.063 ug/L	94
43) 1-Heptene/trans-1,2-DMCP	22.66	70	684599	405.827 ug/L	72
44) Isooctane	22.75	57	1630897	211.502 ug/L	97
45) trans-3-Heptene	23.36	41	519237	234.514 ug/L	97
46) Heptane	23.49	43	604183	218.694 ug/L	97
48) trans-2-Heptene	24.13	56	496528	218.676 ug/L	94
49) cis-2-Heptene	24.92	56	375269	225.562 ug/L	95
50) 2,2-Dimethylhexane	25.68	57	1575823	213.055 ug/L	100
51) Methylcyclohexane	25.90	83	759197	204.304 ug/L	99
52) 2,5-Dimethylhexane	26.56	57	788886	218.925 ug/L	94
53) 2,4-Dimethylhexane	26.82	57	631498	209.244 ug/L	95
54) Ethylcyclopentane	26.86	69	633052	210.169 ug/L	92
55) 2,2,3-Trimethylpentane	27.08	57	1250814	211.458 ug/L	97
57) 2,3,4-Trimethylpentane	28.60	43	845771	222.928 ug/L	100
58) 2,3,3-Trimethylpentane	29.17	43	725721	221.543 ug/L	99
59) 2,3-Dimethylhexane	29.43	43	790637	222.600 ug/L	98
60) 2-Methylheptane	29.87	57	724644	220.523 ug/L	95
61) 4-Methylheptane	30.05	43	838684	219.399 ug/L	98
63) 3-Methylheptane	30.62	43	621108	217.205 ug/L	99
65) 3-Ethylhexane	30.74	43	873261	213.102 ug/L	97
66) Toluene	30.92	91	1891463	188.390 ug/L	99
67) 2-Methylthiophene	31.10	97	1493511	196.303 ug/L	98
68) trans-1,4-Dimethylcycl...	31.57	97	964176	201.252 ug/L	98
69) 3-Methylthiophene	31.86	97	1497453	200.746 ug/L	99
70) 1-Octene	32.28	55	366389	225.597 ug/L	95

Data Path : O:\Organics\DATA\VOA6\2020\09-SEP\200918\
Data File : V6012469.D
Acq On : 18 Sep 2020 9:55 pm
Operator : VOA6:JT
Sample : I609182006
Misc : WG1412463
ALS Vial : 8 Sample Multiplier: 1

Quant Time: Sep 19 08:37:18 2020
Quant Method : O:\Organics\DATA\VOA6\2020\09-SEP\200918\P6091820W.M
Quant Title : PIANO VOLATILES
QLast Update : Sat Sep 19 08:08:28 2020
Response via : Initial Calibration

Sub List : PIANO - PIANO

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
71) Octane	33.12	43	696511	227.530	ug/L	98
72) trans-1,2-Dimethylcycl...	33.38	55	623967	207.882	ug/L	94
73) 1,2-Dibromoethane	33.61	107	407361	201.427	ug/L	100
75) cis-2-Octene	34.48	55	553910	199.277	ug/L	92
76) Isopropylcyclopentane	34.61	68	707848M6	204.609	ug/L	
77) cis-1,2-Dimethylcycloh...	36.37	55	601736	211.680	ug/L	96
78) 2,5-Dimethylheptane	36.71	57	1025595	223.198	ug/L	98
79) 3,5-Dimethylheptane	36.85	57	1128115	187.921	ug/L	99
80) 3,3-Dimethylheptane	37.10	57	796458	208.797	ug/L	98
81) 1,1,4-Trimethylcyclohe...	37.62	69	761530	205.932	ug/L	99
82) 2,3-Dimethylheptane	38.77	43	890504	223.224	ug/L	99
83) 3,4-Dimethylheptane	39.07	43	555700	213.993	ug/L	97
84) 4-Methyloctane	39.37	43	817046	225.926	ug/L	98
85) 2-Methyloctane	39.46	43	733282M3	206.902	ug/L	
86) Ethylbenzene	39.97	91	2170434	201.147	ug/L	99
88) 2-Ethylthiophene	40.12	97	1715126	204.173	ug/L	100
89) 3-Methyloctane	40.12	57	1335381	213.365	ug/L	99
90) 3,3-Diethylpentane	41.10	57	1581173	215.475	ug/L	97
91) p/m-Xylene	41.21	91	3342764	401.992	ug/L	98
92) 1-Nonene	41.88	56	401620	226.264	ug/L	94
93) trans-3-Nonene	42.29	55	529038	214.561	ug/L	94
94) cis-3-Nonene	42.58	55	601410M6	208.649	ug/L	
95) Nonane	42.66	43	667986M6	210.535	ug/L	
96) Styrene	43.08	104	1445167	207.922	ug/L	98
98) o-Xylene	43.49	91	1770130	199.802	ug/L	99
99) 2-Nonene	43.92	55	565195	219.005	ug/L	95
100) Isopropylcyclohexane	45.19	83	825853	204.363	ug/L	99
102) Isopropylbenzene	45.81	105	2288384	203.652	ug/L	99
103) 3,3-Dimethyloctane	46.30	71	1120546	196.204	ug/L	97
104) n-Propylbenzene	48.43	91	2688505	207.610	ug/L	100
105) 2-Methylnonane	48.49	43	596536	202.408	ug/L	96
106) 3-Methylnonane	48.94	57	755119	197.201	ug/L	97
107) 1-Methyl-3-ethylbenzene	49.07	105	2309053	208.458	ug/L	99
108) 1-Methyl-4-ethylbenzene	49.25	105	2244239	198.417	ug/L	100
109) 1,3,5-Trimethylbenzene	49.85	105	1967725	204.319	ug/L	99
110) 1-Decene	49.99	41	420152	230.952	ug/L	95
111) Isobutylcyclohexane	50.15	83	879057	199.866	ug/L	98
112) 1-Methyl-2-ethylbenzene	50.19	105	2441787	203.098	ug/L	99
113) Decane	50.38	43	532978	199.444	ug/L	96
114) tert-Butylbenzene	50.64	119	1810599	207.671	ug/L	98
115) 1,2,4-Trimethylbenzene	51.07	105	2042766	207.498	ug/L	99

Quantitation Report (QT Reviewed)

Data Path : O:\Organics\DATA\VOA6\2020\09-SEP\200918\
Data File : V6012469.D
Acq On : 18 Sep 2020 9:55 pm
Operator : VOA6:JT
Sample : I609182006
Misc : WG1412463
ALS Vial : 8 Sample Multiplier: 1

Quant Time: Sep 19 08:37:18 2020
Quant Method : O:\Organics\DATA\VOA6\2020\09-SEP\200918\P6091820W.M
Quant Title : PIANO VOLATILES
QLast Update : Sat Sep 19 08:08:28 2020
Response via : Initial Calibration

Sub List : PIANO - PIANO

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
116) Isobutylbenzene	51.27	91	2175370M6	206.954	ug/L	
117) sec-Butylbenzene	51.33	105	2657243	206.482	ug/L	99
118) 1-Methyl-3-isopropylbe...	51.72	119	2253625	214.063	ug/L	99
119) 1-Methyl-4-isopropylbe...	51.93	119	2343683	211.534	ug/L	99
120) 1,2,3-Trimethylbenzene	52.20	105	2066062	209.795	ug/L	100
121) 1-Methyl-2-isopropylbe...	52.41	119	2318528	213.993	ug/L	100
122) Indan	52.50	117	1965406	206.667	ug/L	99
123) 1,3-Diethylbenzene	52.66	105	1460992	217.936	ug/L	99
124) 1-Methyl-3-propylbenzene	52.78	105	2711012	218.057	ug/L	100
125) Indene	52.94	115	1768552	218.258	ug/L	98
126) 1-Methyl-4-propylbenzene	52.93	105	3459300	225.795	ug/L	94
127) n-Butylbenzene	52.93	91	2555219	222.465	ug/L	96
128) 1,2-Dimethyl-4-ethylbe...	53.05	119	2559994	226.632	ug/L	99
129) 1,2-Diethylbenzene	53.14	119	1211109	213.547	ug/L	97
130) 1-Methyl-2-propylbenzene	53.34	105	2970560	221.840	ug/L	99
131) 1,4-Dimethyl-2-ethylbe...	53.66	119	2357028	225.337	ug/L	99
132) Undecane	53.69	57	566286	181.887	ug/L	98
133) 1,3-Dimethyl-4-ethylbe...	53.75	119	2833766	221.326	ug/L	98
134) 1,3-Dimethyl-5-ethylbe...	53.88	119	2674905	221.612	ug/L	99
135) 1,3-Dimethyl-2-ethylbe...	54.10	119	2741446	220.118	ug/L	100
136) 1,2-Dimethyl-3-ethylbe...	54.46	119	2453516	219.540	ug/L	99
137) 1,2,4,5-Tetramethylben...	54.87	119	2579911	226.479	ug/L	99
138) 1,2,3,5-Tetramethylben...	54.95	119	2311275	215.838	ug/L	99
139) Pentylbenzene	55.43	91	2063811	218.378	ug/L	98
140) 1,2,3,4-Tetramethylben...	55.76	119	3034926	219.387	ug/L	99
141) 1,3-DM-5-tert-Butylben...	55.75	147	2264778	223.010	ug/L	98
142) Dodecane	55.91	43	365444	173.029	ug/L	97
143) 1,3,5-Triethylbenzene	56.63	147	1424020	221.566	ug/L	98
144) Naphthalene	56.77	128	2031774	213.606	ug/L	100
145) Benzothiophene	56.86	134	1132699	215.849	ug/L	98
146) 1,2,4-Triethylbenzene	57.18	147	1329974	225.023	ug/L	99
147) Hexylbenzene	57.67	91	1788047	208.951	ug/L	99
148) MMT	57.92	134	811004	210.960	ug/L	98
149) Tridecane	57.98	57	413431	176.259	ug/L	96
150) 2-Methylnaphthalene	59.48	142	1363535	221.223	ug/L	100
151) 1-Methylnaphthalene	59.95	142	1141645	219.234	ug/L	100
152) Tetradecane	60.22	57	380904	199.973	ug/L	94
153) Pentadecane	62.93	57	323723	232.787	ug/L	94

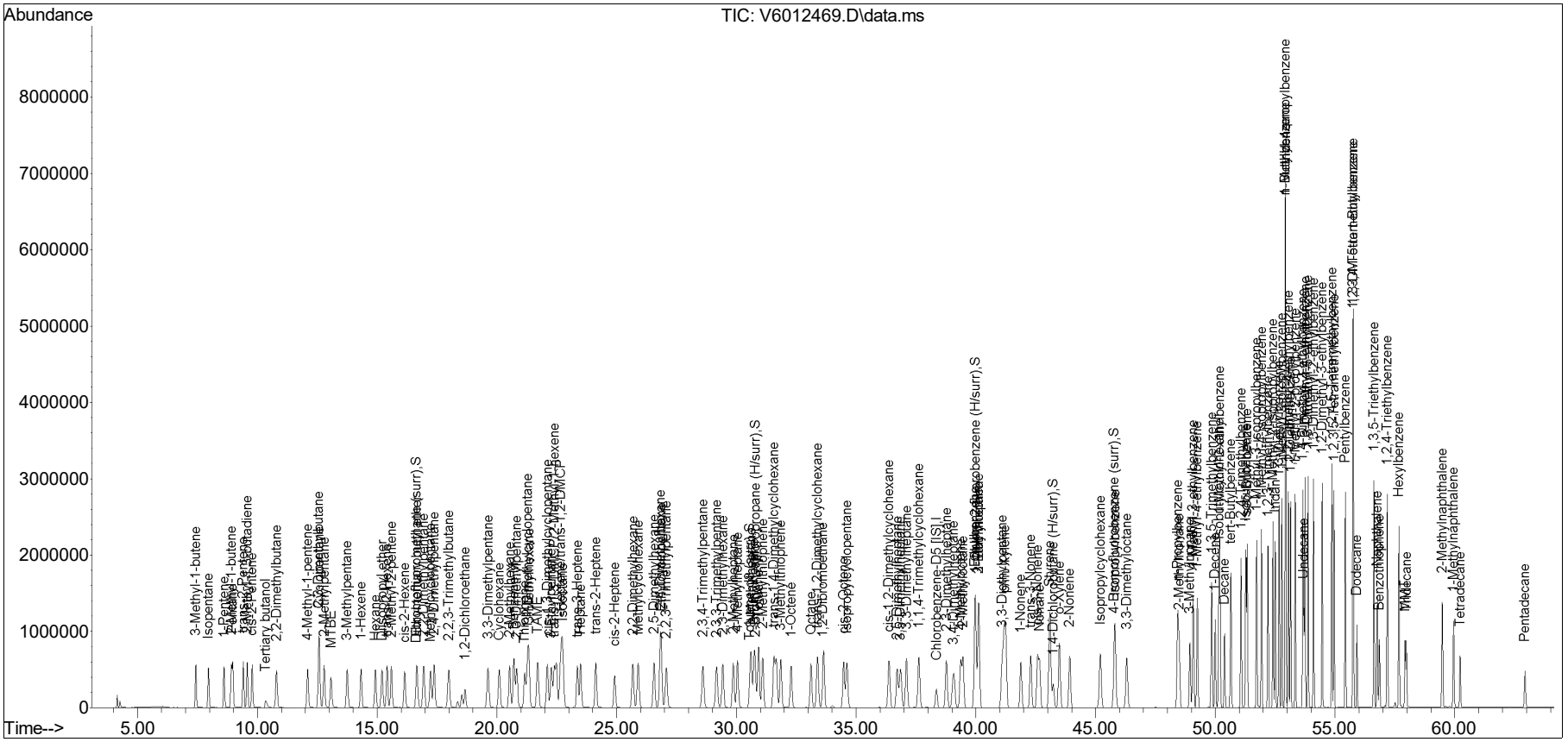
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : O:\Organics\DATA\VOA6\2020\09-SEP\200918\
Data File : V6012469.D
Acq On : 18 Sep 2020 9:55 pm
Operator : VOA6:JT
Sample : I609182006
Misc : WG1412463
ALS Vial : 8 Sample Multiplier: 1

Quant Time: Sep 19 08:37:18 2020
Quant Method : O:\Organics\DATA\VOA6\2020\09-SEP\200918\P6091820W.M
Quant Title : PIANO VOLATILES
QLast Update : Sat Sep 19 08:08:28 2020
Response via : Initial Calibration

Sub List : PIANO - PIANO



Evaluate Continuing Calibration Report

Data Path : O:\Organics\DATA\VOA6\2020\09-SEP\200918\
Data File : V6012471.D
Acq On : 19 Sep 2020 12:16 am
Operator : VOA6:JT
Sample : CQ609182001
Misc : WG1412463
ALS Vial : 10 Sample Multiplier: 1

Quant Time: Sep 19 08:47:04 2020
Quant Method : O:\Organics\DATA\VOA6\2020\09-SEP\200918\P6091820W.M
Quant Title : PIANO VOLATILES
QLast Update : Sat Sep 19 08:40:17 2020
Response via : Initial Calibration

Min. RRF : 0.100 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 25% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1	I	Chlorobenzene-D5 [IS]	1.000	1.000	0.0	93	0.00
2		3-Methyl-1-butene	0.374	0.000#	100.0#	0#	-7.42#
3		Isopentane	0.214	0.000#	100.0#	0#	-7.95#
4		1-Pentene	0.223	0.183	17.9	80	0.00
5		2-Methyl-1-butene	0.373	0.000#	100.0#	0#	-8.90#
6		Pentane	0.352	0.239	32.1#	67	0.00
7		trans-2-Pentene	0.369	0.000#	100.0#	0#	-9.40#
8		2-Methyl-1,3-butadiene	0.250	0.000#	100.0#	0#	-9.57#
9		cis-2-Pentene	0.357	0.000#	100.0#	0#	-9.77#
10		Tertiary butanol	0.031	0.021#	32.3#	62	0.02
11		2,2-Dimethylbutane	0.230	0.000#	100.0#	0#	-10.79#
12		4-Methyl-1-pentene	0.258	0.000#	100.0#	0#	-12.09#
13		Cyclopentane	0.149	0.131	12.1	87	0.00
14		2,3-Dimethylbutane	0.115	0.000#	100.0#	0#	-12.57#
15		2-Methylpentane	0.381	0.314	17.6	80	0.00
16		MTBE	0.477	0.481	-0.8	95	0.00
17		3-Methylpentane	0.345	0.309	10.4	87	0.00
18		1-Hexene	0.196	0.185	5.6	90	0.00
19		Hexane	0.281	0.258	8.2	90	0.00
20		Diisopropyl ether	0.479	0.475	0.8	92	0.00
21		trans-2-Hexene	0.343	0.000#	100.0#	0#	-15.41#
22		2-Methyl-2-pentene	0.368	0.000#	100.0#	0#	-15.59#
23		cis-2-Hexene	0.279	0.000#	100.0#	0#	-16.15#
24	S	Dibromofluoromethane (surr)	0.312	0.307	1.6	93	0.00
25		Ethyl tertiary butyl ether	0.497	0.495	0.4	93	0.00
26		2,2-Dimethylpentane	0.426	0.000#	100.0#	0#	-16.94#
27		Methylcyclopentane	0.359	0.348	3.1	93	0.00
28		2,4-Dimethylpentane	0.347	0.311	10.4	87	0.00
29		2,2,3-Trimethylbutane	0.373	0.000#	100.0#	0#	-17.99#
30		1,2-Dichloroethane	0.247	0.000#	100.0#	0#	-18.67#
31		3,3-Dimethylpentane	0.411	0.000#	100.0#	0#	-19.63#
32		Cyclohexane	0.299	0.303	-1.3	96	0.00
33		2-Methylhexane	0.362	0.340	6.1	91	0.00
34	M	Benzene	0.753	0.754	-0.1	95	0.00
35		2,3-Dimethylpentane	0.305	0.295	3.3	92	-0.01
36		Thiophene	0.422	0.000#	100.0#	0#	-21.16#
37		1,1-Dimethylcyclopentane	0.209	0.000#	100.0#	0#	-21.28#
38		3-Methylhexane	0.323	0.272	15.8	82	0.00
39		TAME	0.577	0.514	10.9	93	0.00

Evaluate Continuing Calibration Report

Data Path : O:\Organics\DATA\VOA6\2020\09-SEP\200918\
Data File : V6012471.D
Acq On : 19 Sep 2020 12:16 am
Operator : VOA6:JT
Sample : CQ609182001
Misc : WG1412463
ALS Vial : 10 Sample Multiplier: 1

Quant Time: Sep 19 08:47:04 2020
Quant Method : O:\Organics\DATA\VOA6\2020\09-SEP\200918\P6091820W.M
Quant Title : PIANO VOLATILES
QLast Update : Sat Sep 19 08:40:17 2020
Response via : Initial Calibration

Min. RRF : 0.100 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 25% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
40		cis-1,3-Dimethylcyclopentan	0.310	0.000#	100.0#	0#	-22.10#
41		3-Ethylpentane	0.408	0.000#	100.0#	0#	-22.27#
42		trans-1,3-DMCP/2-Methyl-1-h	0.141	0.000#	100.0#	0#	-22.39#
43		1-Heptene/trans-1,2-DMCP	0.159	0.000#	100.0#	0#	-22.66#
44		Isooctane	0.775	0.765	1.3	93	0.01
45		trans-3-Heptene	0.267	0.000#	100.0#	0#	-23.36#
46		Heptane	0.301	0.279	7.3	90	0.00
48		trans-2-Heptene	0.234	0.000#	100.0#	0#	-24.13#
49		cis-2-Heptene	0.177	0.000#	100.0#	0#	-24.92#
50		2,2-Dimethylhexane	0.758	0.000#	100.0#	0#	-25.67#
51		Methylcyclohexane	0.349	0.367	-5.2	99	0.00
52		2,5-Dimethylhexane	0.380	0.000#	100.0#	0#	-26.56#
53		2,4-Dimethylhexane	0.303	0.000#	100.0#	0#	-26.82#
54		Ethylcyclopentane	0.297	0.000#	100.0#	0#	-26.86#
55		2,2,3-Trimethylpentane	0.598	0.000#	100.0#	0#	-27.07#
57		2,3,4-Trimethylpentane	0.418	0.000#	100.0#	0#	-28.60#
58		2,3,3-Trimethylpentane	0.356	0.000#	100.0#	0#	-29.17#
59		2,3-Dimethylhexane	0.393	0.000#	100.0#	0#	-29.43#
60		2-Methylheptane	0.349	0.340	2.6	91	0.00
61		4-Methylheptane	0.416	0.000#	100.0#	0#	-30.04#
62	S	Toluene-d8 (surr)	1.192	1.178	1.2	93	0.00
63		3-Methylheptane	0.343	0.309	9.9	90	0.00
64	S	2-Bromo-1-chloropropane (H/	0.280	0.000#	100.0#	0#	-30.79#
65		3-Ethylhexane	0.430	0.000#	100.0#	0#	-30.73#
66	M	Toluene	0.912	0.887	2.7	92	0.00
67		2-Methylthiophene	0.701	0.000#	100.0#	0#	-31.09#
68		trans-1,4-Dimethylcyclohexa	0.448	0.000#	100.0#	0#	-31.56#
69		3-Methylthiophene	0.707	0.000#	100.0#	0#	-31.85#
70		1-Octene	0.178	0.000#	100.0#	0#	-32.28#
71		Octane	0.350	0.359	-2.6	97	0.00
72		trans-1,2-Dimethylcyclohexa	0.306	0.000#	100.0#	0#	-33.39#
73		1,2-Dibromoethane	0.188	0.000#	100.0#	0#	-33.61#
75		cis-2-Octene	0.269	0.000#	100.0#	0#	-34.48#
76		Isopropylcyclopentane	0.331	0.000#	100.0#	0#	-34.61#
77		cis-1,2-Dimethylcyclohexane	0.292	0.000#	100.0#	0#	-36.37#
78		2,5-Dimethylheptane	0.510	0.000#	100.0#	0#	-36.71#
79		3,5-Dimethylheptane	0.579	0.000#	100.0#	0#	-36.84#
80		3,3-Dimethylheptane	0.393	0.000#	100.0#	0#	-37.09#
81		1,1,4-Trimethylcyclohexane	0.364	0.000#	100.0#	0#	-37.62#

Evaluate Continuing Calibration Report

Data Path : O:\Organics\DATA\VOA6\2020\09-SEP\200918\
Data File : V6012471.D
Acq On : 19 Sep 2020 12:16 am
Operator : VOA6:JT
Sample : CQ609182001
Misc : WG1412463
ALS Vial : 10 Sample Multiplier: 1

Quant Time: Sep 19 08:47:04 2020
Quant Method : O:\Organics\DATA\VOA6\2020\09-SEP\200918\P6091820W.M
Quant Title : PIANO VOLATILES
QLast Update : Sat Sep 19 08:40:17 2020
Response via : Initial Calibration

Min. RRF : 0.100 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 25% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
82		2,3-Dimethylheptane	0.449	0.000#	100.0#	0#	-38.77#
83		3,4-Dimethylheptane	0.288	0.000#	100.0#	0#	-39.08#
84		4-Methyloctane	0.430	0.000#	100.0#	0#	-39.37#
85		2-Methyloctane	0.361	0.000#	100.0#	0#	-39.46#
86		Ethylbenzene	1.031	1.021	1.0	93	0.00
87	S	1-Chloro-2-fluorobenzene (H	0.585	0.000#	100.0#	0#	-39.98#
88		2-Ethylthiophene	0.794	0.000#	100.0#	0#	-40.11#
89		3-Methyloctane	0.651	0.000#	100.0#	0#	-40.12#
90		3,3-Diethylpentane	0.761	0.000#	100.0#	0#	-41.10#
91		p/m-Xylene	0.786	0.804	-2.3	96	-0.01
92		1-Nonene	0.189	0.000#	100.0#	0#	-41.88#
93		trans-3-Nonene	0.258	0.000#	100.0#	0#	-42.28#
94		cis-3-Nonene	0.285	0.000#	100.0#	0#	-42.58#
95		Nonane	0.342	0.343	-0.3	94	0.00
96		Styrene	0.662	0.000#	100.0#	0#	-43.07#
97	S	1,4-Dichlorobutane (H/surr)	0.261	0.000#	100.0#	0#	-43.23#
98		o-Xylene	0.824	0.822	0.2	94	0.00
99		2-Nonene	0.267	0.000#	100.0#	0#	-43.91#
100		Isopropylcyclohexane	0.393	0.000#	100.0#	0#	-45.19#
101	S	4-Bromofluorobenzene (surr)	0.496	0.490	1.2	93	0.00
102		Isopropylbenzene	1.074	1.081	-0.7	94	0.00
103		3,3-Dimethyloctane	0.570	0.000#	100.0#	0#	-46.30#
104		n-Propylbenzene	1.263	1.268	-0.4	93	0.00
105		2-Methylnonane	0.331	0.000#	100.0#	0#	-48.49#
106		3-Methylnonane	0.404	0.000#	100.0#	0#	-48.94#
107		1-Methyl-3-ethylbenzene	1.068	1.081	-1.2	94	0.00
108		1-Methyl-4-ethylbenzene	1.035	1.061	-2.5	96	0.00
109		1,3,5-Trimethylbenzene	0.893	0.899	-0.7	93	0.00
110		1-Decene	0.209	0.180	13.9	81	0.00
111		Isobutylcyclohexane	0.421	0.000#	100.0#	0#	-50.14#
112		1-Methyl-2-ethylbenzene	1.099	1.070	2.6	91	0.00
113		Decane	0.294	0.326	-10.9	100	0.00
114		tert-Butylbenzene	0.814	0.000#	100.0#	0#	-50.64#
115		1,2,4-Trimethylbenzene	0.915	0.884	3.4	90	0.00
116		Isobutylbenzene	1.008	0.000#	100.0#	0#	-51.27#
117		sec-Butylbenzene	1.192	1.211	-1.6	95	0.00
118		1-Methyl-3-isopropylbenzene	1.002	0.000#	100.0#	0#	-51.72#
119		1-Methyl-4-isopropylbenzene	1.042	0.000#	100.0#	0#	-51.92#
120		1,2,3-Trimethylbenzene	0.926	0.000#	100.0#	0#	-52.20#

Evaluate Continuing Calibration Report

Data Path : O:\Organics\DATA\VOA6\2020\09-SEP\200918\
Data File : V6012471.D
Acq On : 19 Sep 2020 12:16 am
Operator : VOA6:JT
Sample : CQ609182001
Misc : WG1412463
ALS Vial : 10 Sample Multiplier: 1

Quant Time: Sep 19 08:47:04 2020
Quant Method : O:\Organics\DATA\VOA6\2020\09-SEP\200918\P6091820W.M
Quant Title : PIANO VOLATILES
QLast Update : Sat Sep 19 08:40:17 2020
Response via : Initial Calibration

Min. RRF : 0.100 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 25% Max. Rel. Area : 200%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
121	1-Methyl-2-isopropylbenzene	1.030	0.000#	100.0#	0#	-52.41#
122	Indan	0.883	0.000#	100.0#	0#	-52.50#
123	1,3-Diethylbenzene	0.638	0.000#	100.0#	0#	-52.66#
124	1-Methyl-3-propylbenzene	1.186	0.000#	100.0#	0#	-52.77#
125	Indene	0.778	0.000#	100.0#	0#	-52.94#
126	1-Methyl-4-propylbenzene	1.500	1.360	9.3	87	0.00
127	n-Butylbenzene	1.131	1.073	5.1	90	0.00
128	1,2-Dimethyl-4-ethylbenzene	1.091	0.000#	100.0#	0#	-53.05#
129	1,2-Diethylbenzene	0.522	0.496	5.0	91	0.00
130	1-Methyl-2-propylbenzene	1.297	0.000#	100.0#	0#	-53.33#
131	1,4-Dimethyl-2-ethylbenzene	1.013	0.000#	100.0#	0#	-53.66#
132	Undecane	0.337	0.386	-14.5	93	0.00
133	1,3-Dimethyl-4-ethylbenzene	1.224	0.000#	100.0#	0#	-53.74#
134	1,3-Dimethyl-5-ethylbenzene	1.150	1.087	5.5	91	0.00
135	1,3-Dimethyl-2-ethylbenzene	1.192	0.000#	100.0#	0#	-54.10#
136	1,2-Dimethyl-3-ethylbenzene	1.065	0.000#	100.0#	0#	-54.46#
137	1,2,4,5-Tetramethylbenzene	1.127	0.000#	100.0#	0#	-54.86#
138	1,2,3,5-Tetramethylbenzene	1.003	0.000#	100.0#	0#	-54.95#
139	Pentylbenzene	0.942	0.912	3.2	91	0.00
140	1,2,3,4-Tetramethylbenzene	1.332	0.000#	100.0#	0#	-55.76#
141	1,3-DM-5-tert-Butylbenzene	1.011	0.000#	100.0#	0#	-55.75#
142	Dodecane	0.245	0.315	-28.6#	107	0.00
143	1,3,5-Triethylbenzene	0.645	0.000#	100.0#	0#	-56.63#
144	Naphthalene	0.919	0.000#	100.0#	0#	-56.77#
145	Benzothiophene	0.501	0.000#	100.0#	0#	-56.86#
146	1,2,4-Triethylbenzene	0.595	0.000#	100.0#	0#	-57.18#
147	Hexylbenzene	0.861	0.000#	100.0#	0#	-57.67#
148	MMT	0.360	0.000#	100.0#	0#	-57.92#
149	Tridecane	0.259	0.000#	100.0#	0#	-57.98#
150	2-Methylnaphthalene	0.619	0.000#	100.0#	0#	-59.48#
151	1-Methylnaphthalene	0.515	0.000#	100.0#	0#	-59.95#
152	Tetradecane	0.216	0.000#	100.0#	0#	-60.22#
153	Pentadecane	0.164	0.000#	100.0#	0#	-62.93#

* Evaluation of CC level amount vs concentration.
(#) = Out of Range SPCC's out = 0 CCC's out = 0

Quantitation Report (QT Reviewed)

Data Path : O:\Organics\DATA\VOA6\2020\09-SEP\200918\
Data File : V6012471.D
Acq On : 19 Sep 2020 12:16 am
Operator : VOA6:JT
Sample : CQ609182001
Misc : WG1412463
ALS Vial : 10 Sample Multiplier: 1

Quant Time: Sep 19 08:47:04 2020
Quant Method : O:\Organics\DATA\VOA6\2020\09-SEP\200918\P6091820W.M
Quant Title : PIANO VOLATILES
QLast Update : Sat Sep 19 08:40:17 2020
Response via : Initial Calibration

Sub List : PIANO - PIANO

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Chlorobenzene-D5 [IS]	38.35	117	470496	50.000	ug/L	0.00
System Monitoring Compounds						
24) Dibromofluoromethane (...	16.63	113	144212	49.154	ug/L	0.00
Spiked Amount 50.000	Range 78 - 118		Recovery = 98.31%			
62) Toluene-d8 (surr)	30.56	98	554102	49.382	ug/L	0.00
Spiked Amount 50.000	Range 87 - 113		Recovery = 98.76%			
64) 2-Bromo-1-chloropropan...	0.00	77	0d	0.000	ug/L	
Spiked Amount 50.000	Range 70 - 130		Recovery = 0.00%#			
87) 1-Chloro-2-fluorobenze...	0.00	130	0	0.000	ug/L	
Spiked Amount 50.000	Range 70 - 130		Recovery = 0.00%#			
97) 1,4-Dichlorobutane (H/...	0.00	55	0	0.000	ug/L	
Spiked Amount 50.000	Range 70 - 130		Recovery = 0.00%#			
101) 4-Bromofluorobenzene (...	45.77	95	230702	49.468	ug/L	0.00
Spiked Amount 50.000	Range 76 - 120		Recovery = 98.94%			
Target Compounds						Qvalue
2) 3-Methyl-1-butene	0.00		0	N.D.		
3) Isopentane	0.00		0	N.D. d		
4) 1-Pentene	8.60	42	34367	16.368	ug/L	97
5) 2-Methyl-1-butene	0.00		0	N.D. d		
6) Pentane	8.96	43	44998	13.582	ug/L	100
7) trans-2-Pentene	0.00		0	N.D.		
8) 2-Methyl-1,3-butadiene	0.00		0	N.D.		
9) cis-2-Pentene	0.00		0	N.D.		
10) Tertiary butanol	10.40	59	19488	66.604	ug/L	93
11) 2,2-Dimethylbutane	0.00		0	N.D. d		
12) 4-Methyl-1-pentene	0.00		0	N.D.		
13) Cyclopentane	12.58	70	24721	17.685	ug/L #	38
14) 2,3-Dimethylbutane	0.00		0	N.D. d		
15) 2-Methylpentane	12.77	43	59159	16.490	ug/L	98
16) MTBE	13.08	73	90555	20.188	ug/L	99
17) 3-Methylpentane	13.74	57	58086	17.904	ug/L	96
18) 1-Hexene	14.33	56	34882	18.893	ug/L	93
19) Hexane	14.92	57	48540	18.331	ug/L	94
20) Diisopropyl ether	15.21	45	89425	19.856	ug/L	96
21) trans-2-Hexene	0.00		0	N.D.		
22) 2-Methyl-2-pentene	0.00		0	N.D.		
23) cis-2-Hexene	0.00		0	N.D.		
25) Ethyl tertiary butyl e...	16.66	59	93065	19.884	ug/L	98

Data Path : O:\Organics\DATA\VOA6\2020\09-SEP\200918\
Data File : V6012471.D
Acq On : 19 Sep 2020 12:16 am
Operator : VOA6:JT
Sample : CQ609182001
Misc : WG1412463
ALS Vial : 10 Sample Multiplier: 1

Quant Time: Sep 19 08:47:04 2020
Quant Method : O:\Organics\DATA\VOA6\2020\09-SEP\200918\P6091820W.M
Quant Title : PIANO VOLATILES
QLast Update : Sat Sep 19 08:40:17 2020
Response via : Initial Calibration

Sub List : PIANO - PIANO

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
26) 2,2-Dimethylpentane	0.00		0	N.D.			
27) Methylcyclopentane	17.22	56	65530	19.402	ug/L		97
28) 2,4-Dimethylpentane	17.38	43	58537	17.943	ug/L		97
29) 2,2,3-Trimethylbutane	0.00		0	N.D.			
30) 1,2-Dichloroethane	0.00		0	N.D.		d	
31) 3,3-Dimethylpentane	0.00		0	N.D.			
32) Cyclohexane	20.10	56	56967	20.246	ug/L		100
33) 2-Methylhexane	20.52	43	63993	18.768	ug/L		98
34) Benzene	20.71	78	141893	20.033	ug/L		100
35) 2,3-Dimethylpentane	20.82	56	55557	19.376	ug/L		100
36) Thiophene	0.00		0	N.D.		d	
37) 1,1-Dimethylcyclopentane	0.00		0	N.D.			
38) 3-Methylhexane	21.32	43	51104	16.793	ug/L		93
39) TAME	21.69	73	96724	17.809	ug/L		96
40) cis-1,3-Dimethylcyclop...	0.00		0	N.D.			
41) 3-Ethylpentane	0.00		0	N.D.			
42) trans-1,3-DMCP/2-Methy...	0.00		0	N.D.			
43) 1-Heptene/trans-1,2-DMCP	0.00		0	N.D.		d	
44) Isooctane	22.75	57	144012	19.741	ug/L		95
45) trans-3-Heptene	0.00		0	N.D.		d	
46) Heptane	23.49	43	52572	18.538	ug/L		98
48) trans-2-Heptene	0.00		0	N.D.			
49) cis-2-Heptene	0.00		0	N.D.			
50) 2,2-Dimethylhexane	0.00		0	N.D.		d	
51) Methylcyclohexane	25.89	83	69126	21.020	ug/L		99
52) 2,5-Dimethylhexane	0.00		0	N.D.			
53) 2,4-Dimethylhexane	0.00		0	N.D.			
54) Ethylcyclopentane	0.00		0	N.D.			
55) 2,2,3-Trimethylpentane	0.00		0	N.D.			
57) 2,3,4-Trimethylpentane	0.00		0	N.D.			
58) 2,3,3-Trimethylpentane	0.00		0	N.D.			
59) 2,3-Dimethylhexane	0.00		0	N.D.			
60) 2-Methylheptane	29.86	57	64039	19.491	ug/L		94
61) 4-Methylheptane	0.00		0	N.D.		d	
63) 3-Methylheptane	30.61	43	58199	18.039	ug/L		97
65) 3-Ethylhexane	0.00		0	N.D.		d	
66) Toluene	30.92	91	166972	19.456	ug/L		99
67) 2-Methylthiophene	0.00		0	N.D.			
68) trans-1,4-Dimethylcycl...	0.00		0	N.D.			
69) 3-Methylthiophene	0.00		0	N.D.			
70) 1-Octene	0.00		0	N.D.			

Quantitation Report (QT Reviewed)

Data Path : O:\Organics\DATA\VOA6\2020\09-SEP\200918\
Data File : V6012471.D
Acq On : 19 Sep 2020 12:16 am
Operator : VOA6:JT
Sample : CQ609182001
Misc : WG1412463
ALS Vial : 10 Sample Multiplier: 1

Quant Time: Sep 19 08:47:04 2020
Quant Method : O:\Organics\DATA\VOA6\2020\09-SEP\200918\P6091820W.M
Quant Title : PIANO VOLATILES
QLast Update : Sat Sep 19 08:40:17 2020
Response via : Initial Calibration

Sub List : PIANO - PIANO

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
71) Octane	33.12	43	67529	20.511	ug/L	95
72) trans-1,2-Dimethylcycl...	0.00		0	N.D.		
73) 1,2-Dibromoethane	0.00		0	N.D.		
75) cis-2-Octene	0.00		0	N.D.		
76) Isopropylcyclopentane	0.00		0	N.D.		
77) cis-1,2-Dimethylcycloh...	0.00		0	N.D.		
78) 2,5-Dimethylheptane	0.00		0	N.D.		
79) 3,5-Dimethylheptane	0.00		0	N.D.		
80) 3,3-Dimethylheptane	0.00		0	N.D.		
81) 1,1,4-Trimethylcyclohe...	0.00		0	N.D.		
82) 2,3-Dimethylheptane	0.00		0	N.D.		
83) 3,4-Dimethylheptane	0.00		0	N.D.		
84) 4-Methyloctane	0.00		0	N.D.		
85) 2-Methyloctane	0.00		0	N.D.		
86) Ethylbenzene	39.96	91	192194	19.808	ug/L	100
88) 2-Ethylthiophene	0.00		0	N.D.		
89) 3-Methyloctane	0.00		0	N.D.		
90) 3,3-Diethylpentane	0.00		0	N.D.		
91) p/m-Xylene	41.21	91	302492	40.878	ug/L	100
92) 1-Nonene	0.00		0	N.D.		
93) trans-3-Nonene	0.00		0	N.D.		
94) cis-3-Nonene	0.00		0	N.D.	d	
95) Nonane	42.66	43	64563M4	20.065	ug/L	
96) Styrene	0.00		0	N.D.		
98) o-Xylene	43.48	91	154731	19.946	ug/L	97
99) 2-Nonene	0.00		0	N.D.		
100) Isopropylcyclohexane	0.00		0	N.D.		
102) Isopropylbenzene	45.80	105	203369	20.118	ug/L	98
103) 3,3-Dimethyloctane	0.00		0	N.D.		
104) n-Propylbenzene	48.43	91	238636	20.074	ug/L	100
105) 2-Methylnonane	0.00		0	N.D.		
106) 3-Methylnonane	0.00		0	N.D.	d	
107) 1-Methyl-3-ethylbenzene	49.07	105	203429	20.237	ug/L	99
108) 1-Methyl-4-ethylbenzene	49.24	105	199704	20.509	ug/L	99
109) 1,3,5-Trimethylbenzene	49.85	105	169262	20.132	ug/L	100
110) 1-Decene	49.99	41	33913	17.276	ug/L	95
111) Isobutylcyclohexane	0.00		0	N.D.	d	
112) 1-Methyl-2-ethylbenzene	50.18	105	201466	19.474	ug/L	99
113) Decane	50.38	43	61294	22.128	ug/L	95
114) tert-Butylbenzene	0.00		0	N.D.		
115) 1,2,4-Trimethylbenzene	51.07	105	166461	19.334	ug/L	100

Quantitation Report (QT Reviewed)

Data Path : O:\Organics\DATA\VOA6\2020\09-SEP\200918\
Data File : V6012471.D
Acq On : 19 Sep 2020 12:16 am
Operator : VOA6:JT
Sample : CQ609182001
Misc : WG1412463
ALS Vial : 10 Sample Multiplier: 1

Quant Time: Sep 19 08:47:04 2020
Quant Method : O:\Organics\DATA\VOA6\2020\09-SEP\200918\P6091820W.M
Quant Title : PIANO VOLATILES
QLast Update : Sat Sep 19 08:40:17 2020
Response via : Initial Calibration

Sub List : PIANO - PIANO

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
116) Isobutylbenzene	0.00		0	N.D.	d	
117) sec-Butylbenzene	51.33	105	227933	20.317	ug/L	98
118) 1-Methyl-3-isopropylbe...	0.00		0	N.D.	d	
119) 1-Methyl-4-isopropylbe...	0.00		0	N.D.	d	
120) 1,2,3-Trimethylbenzene	0.00		0	N.D.	d	
121) 1-Methyl-2-isopropylbe...	0.00		0	N.D.		
122) Indan	0.00		0	N.D.		
123) 1,3-Diethylbenzene	0.00		0	N.D.	d	
124) 1-Methyl-3-propylbenzene	0.00		0	N.D.	d	
125) Indene	0.00		0	N.D.	d	
126) 1-Methyl-4-propylbenzene	52.92	105	255883	18.127	ug/L	100
127) n-Butylbenzene	52.92	91	201905	18.967	ug/L	99
128) 1,2-Dimethyl-4-ethylbe...	0.00		0	N.D.	d	
129) 1,2-Diethylbenzene	53.14	119	93414	19.026	ug/L	96
130) 1-Methyl-2-propylbenzene	0.00		0	N.D.	d	
131) 1,4-Dimethyl-2-ethylbe...	0.00		0	N.D.		
132) Undecane	53.69	57	72584	22.861	ug/L	98
133) 1,3-Dimethyl-4-ethylbe...	0.00		0	N.D.	d	
134) 1,3-Dimethyl-5-ethylbe...	53.88	119	204525	18.896	ug/L	98
135) 1,3-Dimethyl-2-ethylbe...	0.00		0	N.D.	d	
136) 1,2-Dimethyl-3-ethylbe...	0.00		0	N.D.	d	
137) 1,2,4,5-Tetramethylben...	0.00		0	N.D.	d	
138) 1,2,3,5-Tetramethylben...	0.00		0	N.D.	d	
139) Pentylbenzene	55.43	91	171554	19.360	ug/L	99
140) 1,2,3,4-Tetramethylben...	0.00		0	N.D.	d	
141) 1,3-DM-5-tert-Butylben...	0.00		0	N.D.	d	
142) Dodecane	55.91	43	59367	25.703	ug/L	96
143) 1,3,5-Triethylbenzene	0.00		0	N.D.	d	
144) Naphthalene	0.00		0	N.D.	d	
145) Benzothiophene	0.00		0	N.D.	d	
146) 1,2,4-Triethylbenzene	0.00		0	N.D.	d	
147) Hexylbenzene	0.00		0	N.D.	d	
148) MMT	0.00		0	N.D.	d	
149) Tridecane	0.00		0	N.D.	d	
150) 2-Methylnaphthalene	0.00		0	N.D.	d	
151) 1-Methylnaphthalene	0.00		0	N.D.	d	
152) Tetradecane	0.00		0	N.D.	d	
153) Pentadecane	0.00		0	N.D.	d	

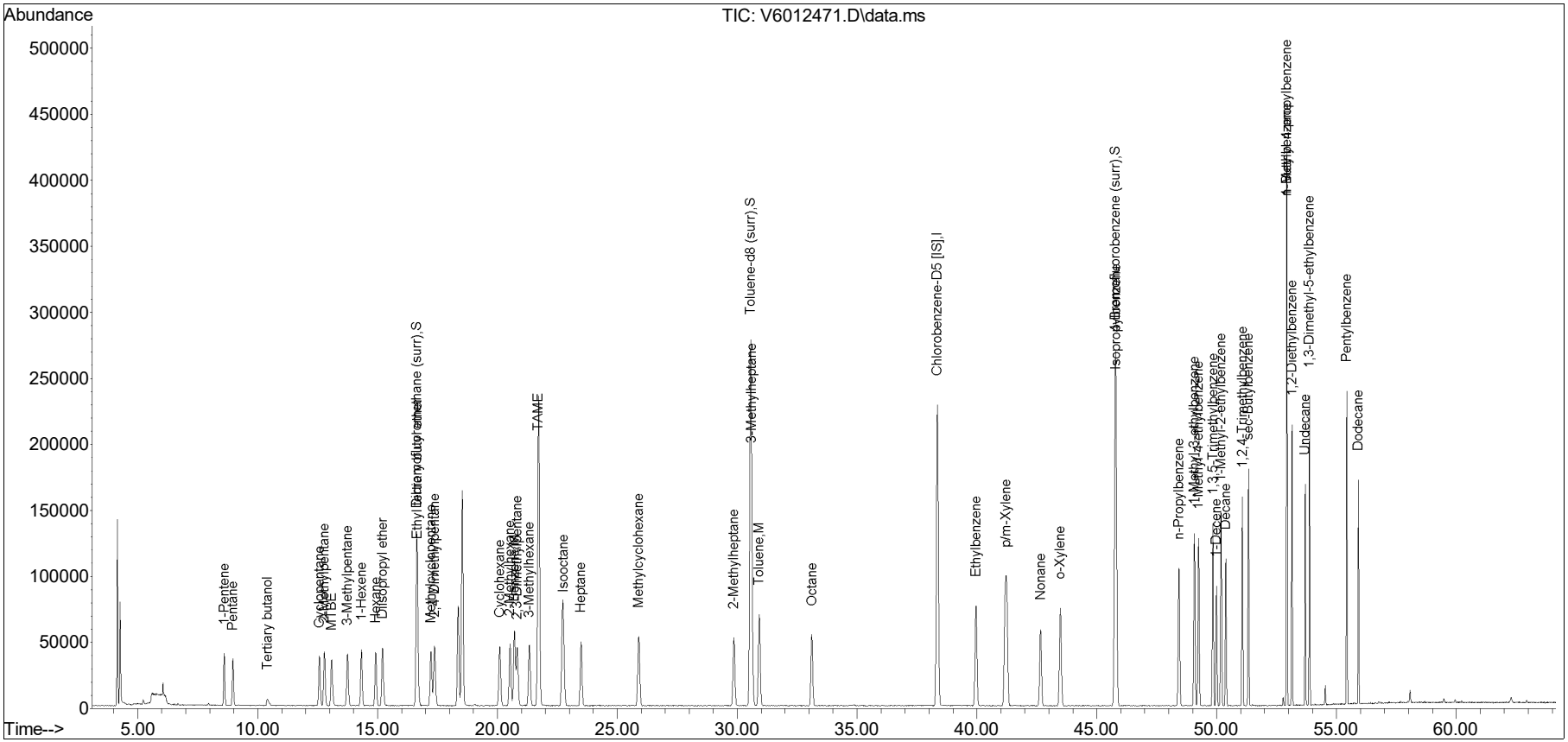
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : O:\Organics\DATA\VOA6\2020\09-SEP\200918\
Data File : V6012471.D
Acq On : 19 Sep 2020 12:16 am
Operator : VOA6:JT
Sample : CQ609182001
Misc : WG1412463
ALS Vial : 10 Sample Multiplier: 1

Quant Time: Sep 19 08:47:04 2020
Quant Method : O:\Organics\DATA\VOA6\2020\09-SEP\200918\P6091820W.M
Quant Title : PIANO VOLATILES
QLast Update : Sat Sep 19 08:40:17 2020
Response via : Initial Calibration

Sub List : PIANO - PIANO



Work Group

ALPHA ANALYTICAL LABORATORIES, INC.

Alpha WORK GROUP REPORT (wk02)

Sep 25 2020, 02:35 pm

Work Group: WG1413379 for Department: 31 GC/MS - Volatiles

Created: 23-SEP-20 Due: Operator: ry

Sample	Client ID	C	Product	Matrix	Stat	UA	HOLD	DUE	PR	Location
L2037809-01	20A-AE102RRG-090920-1	S	A2-PIANO8260	WATER	DONE	U	0923	0925	S0	Vial-B
L2037809-02	20A-AE103R1-091020-1	S	A2-PIANO8260	WATER	DONE	U	0924	0925	S0	Vial-B
L2037809-03	20A-AE104R4-091120-1	S	A2-PIANO8260	WATER	DONE	U	0925	0925	S0	Vial-B
WG1413379-1	MS BFB Tune Standard	S	A2-PIANO8260	WATER	DONE	U				
WG1413379-2	Continuing Calibrati	S	A2-PIANO8260	WATER	DONE	U				
WG1413379-3	Laboratory Control S	S	A2-PIANO8260	WATER	DONE	U				
WG1413379-4	LCS Duplicate	S	A2-PIANO8260	WATER	DONE	U				
WG1413379-5	Laboratory Method Bl	S	A2-PIANO8260	WATER	DONE	U				
WG1413379-6	MS BFB Tune Standard	S	A2-PIANO8260	WATER	DONE	U				
WG1413379-7	Continuing Calibrati	S	A2-PIANO8260	WATER	DONE	U				

Comments:

WG1413379-4 WG1413379-3

Sequence Logs

Alpha Analytical
Instrument Run Log

Instrument ID: VOA 6

Internal Standard/Surrogate IDs: VW080120K

Date: 09/18/20

CCV/ LCS MIX ID's VW080120G/ VW080120C

Analyst Initials: JT

Sequence File Name: 200918.S

AS Position #	Sample ID	Acquisition Method	Data File ID	Standard ID or Batch ID #, ICAL Ref #	Comment (s)	Date Injected/ TIME	ph
1	BLANK	PIANO	V6012462	WG,ICAL		09/18/20 02:16 PM	
2	T609182001	VOATUNE	V6012463	WG,ICAL		09/18/20 03:24 PM	
3	I609182001	PIANO	V6012464	WG,ICAL		09/18/20 04:00 PM	
4	I609182002	PIANO	V6012465	WG,ICAL		09/18/20 05:11 PM	
5	I609182003	PIANO	V6012466	WG,ICAL		09/18/20 06:22 PM	
6	I609182004	PIANO	V6012467	WG,ICAL		09/18/20 07:33 PM	
7	I609182005	PIANO	V6012468	WG,ICAL		09/18/20 08:44 PM	
8	I609182006	PIANO	V6012469	WG,ICAL		09/18/20 09:55 PM	
9	BLANK	PIANO	V6012470	WG,ICAL		09/18/20 11:06 PM	
10	CQ609182001	PIANO	V6012471	WG,ICAL		09/19/20 12:16 PM	
11	BLANK	PIANO	V6012472	WG,ICAL		09/19/20 01:27 AM	

Alpha Analytical
Instrument Run Log

Instrument ID: VOA 6

Internal Standard/Surrogate IDs: VW080120K

Date: 09/18/20

CCV/ LCS MIX ID's VW080120G/ VW080120C

Analyst Initials: JT

Sequence File Name: 200918.S

AS Position #	Sample ID	Acquisition Method	Data File ID	Standard ID or Batch ID #, ICAL Ref #	Comment (s)	Date Injected/ TIME	ph
1	BLANK	PIANO	V6012462	WG,ICAL		09/18/20 02:16 PM	
2	T609182001	VOATUNE	V6012463	WG,ICAL		09/18/20 03:24 PM	
3	I609182001	PIANO	V6012464	WG,ICAL		09/18/20 04:00 PM	
4	I609182002	PIANO	V6012465	WG,ICAL		09/18/20 05:11 PM	
5	I609182003	PIANO	V6012466	WG,ICAL		09/18/20 06:22 PM	
6	I609182004	PIANO	V6012467	WG,ICAL		09/18/20 07:33 PM	
7	I609182005	PIANO	V6012468	WG,ICAL		09/18/20 08:44 PM	
8	I609182006	PIANO	V6012469	WG,ICAL		09/18/20 09:55 PM	
9	BLANK	PIANO	V6012470	WG,ICAL		09/18/20 11:06 PM	
10	CQ609182001	PIANO	V6012471	WG,ICAL		09/19/20 12:16 PM	
11	BLANK	PIANO	V6012472	WG,ICAL		09/19/20 01:27 AM	
12	TUNE	VOATUNE	V6012473	WG,ICAL		09/19/20 02:35 AM	
13	CCV	PIANO	V6012474	WG,ICAL		09/19/20 03:09 AM	
14	LCS	PIANO	V6012475	Bad purge, RA		09/19/20 04:20 AM	
15	LCSD	PIANO	V6012476	Bad Purge, RA		09/19/20 05:31 AM	
16	LD7	PIANO	V6012477	WG,ICAL		09/19/20 06:42 AM	
17	BLANK	PIANO	V6012478	WG,ICAL		09/19/20 07:53 AM	
18	BLANK	PIANO	V6012479	WG,ICAL		09/19/20 11:23 AM	
19	LCS	PIANO	V6012480	WG,ICAL		09/19/20 12:34 PM	
20	LCSD	PIANO	V6012481	Bad Purge, RA		09/19/20 01:45 PM	
21	BLANK	PIANO	V6012482	WG,ICAL		09/19/20 02:56 PM	
22	L2037017-01D,31,0.1020,10,0.01	PIANO	V6012483	WG,ICAL		09/19/20 04:07 PM	

Alpha Analytical
Instrument Run Log

23	L2037017-02D,31,0.1061,10,0.01	PIANO	V6012484	Bad Purge, RA		09/19/20 05:18 PM	
24	L2037017-03D,31,0.1049,10,0.01	PIANO	V6012485	WG,ICAL		09/19/20 06:28 PM	
25	L2037017-04D,31,0.1091,10,0.01	PIANO	V6012486	WG,ICAL		09/19/20 07:40 PM	
26	L2037017-05D,31,0.1017,10,0.01	PIANO	V6012487	RR 25uls		09/19/20 08:51 PM	
27	L2037017-06D,31,0.1124,10,0.01	PIANO	V6012488	WG,ICAL		09/19/20 10:01 PM	
28	L2037017-07D,31,0.1019,10,0.01	PIANO	V6012489	WG,ICAL		09/19/20 11:12 PM	
29	L2037017-08D,31,0.1115,10,0.01	PIANO	V6012490	WG,ICAL		09/20/20 12:23 PM	
30	L2037017-09D,31,0.1110,10,0.01	PIANO	V6012491	WG,ICAL		09/20/20 01:34 AM	
31	L2037017-10D,31,0.1025,10,0.01	PIANO	V6012492	Bad Purge, RA		09/20/20 02:44 AM	
32	L2037017-11D,31,0.1056,10,0.01	PIANO	V6012493	WG,ICAL		09/20/20 03:55 AM	
33	BLANK	PIANO	V6012494	WG,ICAL		09/20/20 05:06 AM	
34	TUNE	VOATUNE	V6012495	WG,ICAL		09/20/20 06:14 AM	
35	CCV	PIANO	V6012496	WG,ICAL		09/20/20 06:48 AM	
36	L2037017-01D2,31,0.1020,10,0.0005	PIANO	V6012497	WG,ICAL		09/20/20 07:59 AM	
37	L2037017-02D2,31,0.1061,10,0.0005	PIANO	V6012498	WG,ICAL		09/20/20 09:10 AM	
38	L2037017-03D2,31,0.1049,10,0.0005	PIANO	V6012499	WG,ICAL		09/20/20 10:21 AM	
39	L2037017-04D2,31,0.1091,10,0.0005	PIANO	V6012500	WG,ICAL		09/20/20 11:31 AM	
40	L2037017-05D2,31,0.1017,10,0.0005	PIANO	V6012501	WG,ICAL		09/20/20 12:42 PM	
41	L2037017-06D2,31,0.1124,10,0.0005	PIANO	V6012502	WG,ICAL		09/20/20 01:53 PM	
42	L2037017-07D2,31,0.1019,10,0.0005	PIANO	V6012503	WG,ICAL		09/20/20 03:04 PM	
43	L2037017-08D2,31,0.1115,10,0.0005	PIANO	V6012504	WG,ICAL		09/20/20 04:15 PM	
44	L2037017-09D2,31,0.1110,10,0.0005	PIANO	V6012505	WG,ICAL		09/20/20 05:25 PM	
45	L2037017-10D2,31,0.1025,10,0.0005	PIANO	V6012506	WG,ICAL		09/20/20 06:36 PM	
46	L2037017-11D2,31,0.1056,10,0.0005	PIANO	V6012507	WG,ICAL		09/20/20 07:47 PM	
47	BLANK	PIANO	V6012508	WG,ICAL		09/20/20 08:58 PM	

Alpha Analytical
Instrument Run Log

48	TUNE	VOATUNE	V6012509	WG,ICAL		09/20/20 10:06 PM	
49	CCV	PIANO	V6012510	WG,ICAL		09/20/20 10:39 PM	
50	L2035515-01D,31,0.1122,10,0.01	PIANO	V6012511	WG,ICAL		09/20/20 11:50 PM	
51	L2035515-02D2,31,0.1077,10,0.01	PIANO	V6012512	RR 20uls		09/21/20 01:01 AM	
52	L2035515-03D,31,0.1178,10,0.01	PIANO	V6012513	WG,ICAL		09/21/20 02:12 AM	
53	L2035515-04D,31,0.1098,10,0.01	PIANO	V6012514	WG,ICAL		09/21/20 03:22 AM	
54	L2035515-05D,31,0.1048,10,0.01	PIANO	V6012515	WG,ICAL		09/21/20 04:33 AM	
55	L2035515-06D,31,0.1120,10,0.01	PIANO	V6012516	WG,ICAL		09/21/20 05:44 AM	
56	L2035515-07D2,31,0.1088,10,0.01	PIANO	V6012517	RR 20uls		09/21/20 06:55 AM	
57	L2035515-07DUPD2,31,0.1070,10,0.01	PIANO	V6012518	WG,ICAL		09/21/20 08:06 AM	
58	L2035515-08D,31,0.1048,10,0.01	PIANO	V6012519	Bad Purge, RA		09/21/20 09:17 AM	
59	BLANK	PIANO	V6012520	WG,ICAL		09/21/20 10:28 AM	
60	LCSD	PIANO	V6012521	WG,ICAL		09/21/20 11:39 AM	
61	L2035515-01D2,31,0.1122,10,0.0005	PIANO	V6012522	WG,ICAL		09/21/20 12:49 PM	
62	L2035515-02D,31,0.1077,10,0.02	PIANO	V6012523	WG,ICAL		09/21/20 02:00 PM	
63	L2035515-03D2,31,0.1178,10,0.0005	PIANO	V6012524	WG,ICAL		09/21/20 03:11 PM	
64	L2035515-04D2,31,0.1098,10,0.0005	PIANO	V6012525	WG,ICAL		09/21/20 04:22 PM	
65	L2035515-05D2,31,0.1048,10,0.0005	PIANO	V6012526	WG,ICAL		09/21/20 05:33 PM	
66	L2035515-06D2,31,0.1120,10,0.0005	PIANO	V6012527	WG,ICAL		09/21/20 06:44 PM	
67	L2035515-07D,31,0.1088,10,0.02	PIANO	V6012528	WG,ICAL		09/21/20 07:55 PM	
68	L2035515-07DUPD,31,0.1070,10,0.02	PIANO	V6012529	WG,ICAL		09/21/20 09:06 PM	
69	L2035515-08D2,31,0.1048,10,0.0005	PIANO	V6012530	WG,ICAL		09/21/20 10:16 PM	
70	BLANK	PIANO	V6012531	WG,ICAL		09/21/20 11:27 PM	
71	TUNE	VOATUNE	V6012532	WG,ICAL		09/22/20 12:35 PM	
72	CCV	PIANO	V6012533	Bad Purge, RA	failed	09/22/20 01:09 AM	
73	L2037017-02D,31,0.1061,10,0.01	PIANO	V6012534	WG,ICAL		09/22/20 02:19 AM	
74	L2037017-05D,31,0.1017,10,0.025	PIANO	V6012535	WG,ICAL	overdiluted	09/22/20 03:30 AM	

Alpha Analytical
Instrument Run Log

75	L2037017-10D,31,0.1025,10,0.01	PIANO	V6012536	WG,ICAL		09/22/20 04:41 AM	
76	L2035515-08D,31,0.1048,10,0.01	PIANO	V6012537	WG,ICAL		09/22/20 05:52 AM	
77	BLANK	PIANO	V6012538	WG,ICAL		09/22/20 07:03 AM	
78	TUNE	VOATUNE	V6012539	WG,ICAL		09/22/20 08:12 AM	
79	CCV	PIANO	V6012540	WG,ICAL		09/22/20 08:46 AM	
80	LCS	PIANO	V6012541	WG,ICAL		09/22/20 09:57 AM	
81	LCSD	PIANO	V6012542	WG,ICAL		09/22/20 11:08 AM	
82	BLANK	PIANO	V6012543	WG,ICAL		09/22/20 12:18 PM	
83	BLANK	PIANO	V6012544	WG,ICAL		09/22/20 01:30 PM	
1	BLANK	PIANO	V6012545	WG,ICAL		09/22/20 06:29 PM	
2	L2037809-01,31,5,5	PIANO	V6012546	WG,ICAL		09/22/20 07:40 PM	
3	L2037809-02,31,5,5	PIANO	V6012547	WG,ICAL		09/22/20 08:51 PM	
4	L2037809-03,31,5,5	PIANO	V6012548	WG,ICAL		09/22/20 10:02 PM	
5	L2037017-10D2,31,0.1025,10,0.0005	PIANO	V6012549	WG,ICAL		09/22/20 11:13 PM	
6	L2037017-05D,31,0.1017,10,0.100	PIANO	V6012550	WG,ICAL		09/23/20 12:24 PM	
7	L2036426-01D,31,0.1094,10,0.01	PIANO	V6012551	WG,ICAL		09/23/20 01:35 AM	
8	L2036426-02D,31,0.1083,10,0.01	PIANO	V6012552	WG,ICAL		09/23/20 02:46 AM	
9	BLANK	PIANO	V6012553	WG,ICAL		09/23/20 03:58 AM	
10	L2036426-01D2,31,0.1094,10,0.0005	PIANO	V6012554	Do not need		09/23/20 05:09 AM	
11	L2036426-02D2,31,0.1083,10,0.0005	PIANO	V6012555	Do not need		09/23/20 06:20 AM	
12	BLANK	PIANO	V6012556	WG,ICAL		09/23/20 07:31 AM	
13	TUNE	VOATUNE	V6012557	WG,ICAL		09/23/20 08:38 AM	
14	CCV	PIANO	V6012558	WG,ICAL	failed	09/23/20 09:13 AM	
15	CCV	PIANO	V6012559	WG,ICAL		09/23/20 11:10 AM	

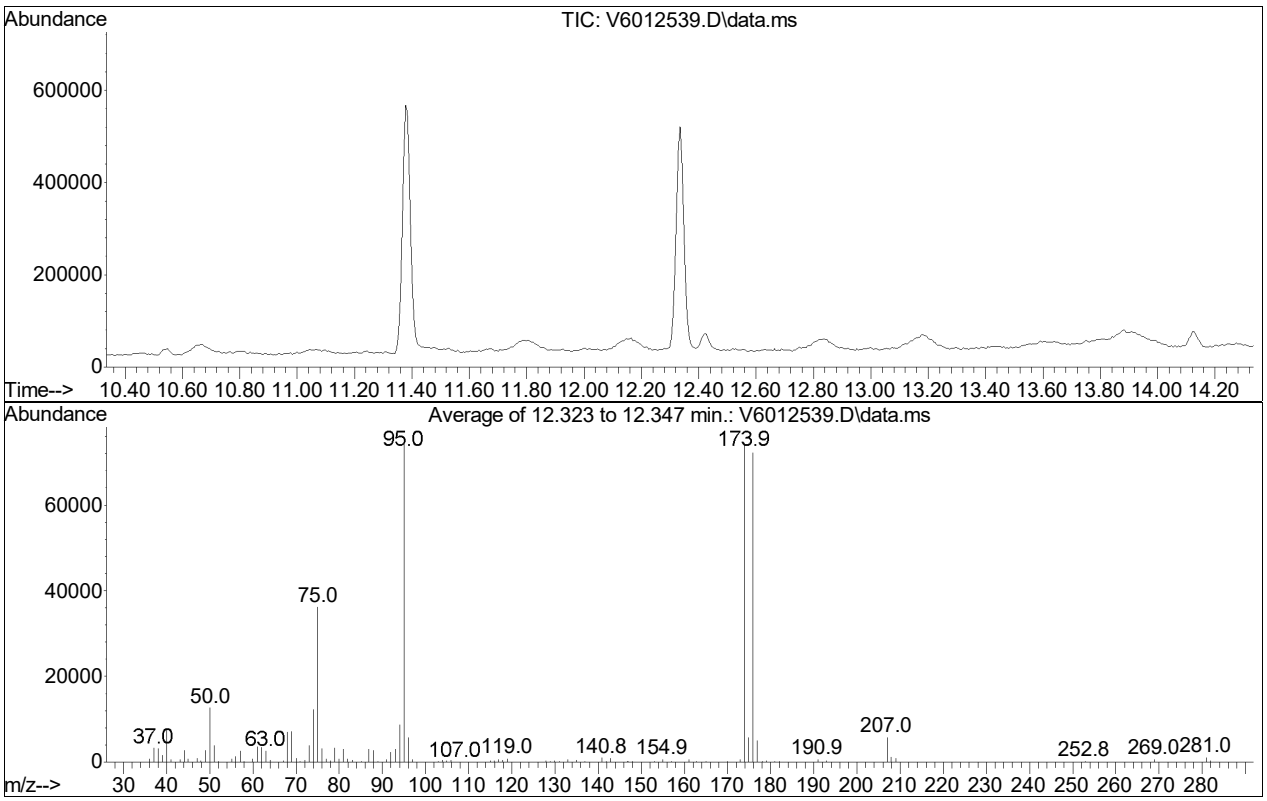
Analytical Event

Continuing Calibration
BFB Tune

Data Path : O:\Organics\DATA\VOA6\2020\09-SEP\200918\
Data File : V6012539.D
Acq On : 22 Sep 2020 8:12 am
Operator : VOA6:RY
Sample : WG1413379-1,31
Misc : WG1413379,ICAL17149
ALS Vial : 78 Sample Multiplier: 1

Integration File: RTEINT.P

Method : O:\Organics\DATA\VOA6\2020\09-SEP\200918\P6091820W.M
Title : PIANO VOLATILES
Last Update : Sat Sep 19 08:40:17 2020



Spectrum Information: Average of 12.323 to 12.347 min.

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	17.0	12646	PASS
75	95	30	60	48.5	36174	PASS
95	95	100	100	100.0	74578	PASS
96	95	5	9	7.8	5787	PASS
173	174	0.00	2	0.9	635	PASS
174	95	50	100	99.8	74451	PASS
175	174	5	9	7.7	5724	PASS
176	174	95	101	97.1	72301	PASS
177	176	5	9	6.9	4979	PASS

Continuing Calibration

Evaluate Continuing Calibration Report

Data Path : O:\Organics\DATA\VOA6\2020\09-SEP\200918\
Data File : V6012540.D
Acq On : 22 Sep 2020 8:46 am
Operator : VOA6:RY
Sample : WG1413379-2,31,5,5
Misc : WG1413379,ICAL17149
ALS Vial : 79 Sample Multiplier: 1

Quant Time: Sep 22 10:06:48 2020
Quant Method : O:\Organics\DATA\VOA6\2020\09-SEP\200918\P6091820W.M
Quant Title : PIANO VOLATILES
QLast Update : Sat Sep 19 08:40:17 2020
Response via : Initial Calibration

Min. RRF : 0.100 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 25% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1	I	Chlorobenzene-D5 [IS]	1.000	1.000	0.0	82	-0.01
2		3-Methyl-1-butene	0.374	0.383	-2.4	86	0.00
3		Isopentane	0.214	0.198	7.5	82	0.00
4		1-Pentene	0.223	0.226	-1.3	84	0.00
5		2-Methyl-1-butene	0.373	0.386	-3.5	86	0.00
6		Pentane	0.352	0.347	1.4	84	0.00
7		trans-2-Pentene	0.369	0.381	-3.3	86	0.00
8		2-Methyl-1,3-butadiene	0.250	0.266	-6.4	87	0.00
9		cis-2-Pentene	0.357	0.369	-3.4	87	0.00
10		Tertiary butanol	0.031	0.035#	-12.9	94	0.01
11		2,2-Dimethylbutane	0.230	0.217	5.7	84	0.00
12		4-Methyl-1-pentene	0.258	0.253	1.9	83	0.00
13		Cyclopentane	0.149	0.155	-4.0	86	0.00
14		2,3-Dimethylbutane	0.115	0.124	-7.8	87	0.00
15		2-Methylpentane	0.381	0.374	1.8	84	0.00
16		MTBE	0.477	0.501	-5.0	84	0.00
17		3-Methylpentane	0.345	0.359	-4.1	84	-0.01
18		1-Hexene	0.196	0.203	-3.6	84	0.00
19		Hexane	0.281	0.289	-2.8	85	0.00
20		Diisopropyl ether	0.479	0.498	-4.0	83	0.00
21		trans-2-Hexene	0.343	0.355	-3.5	85	0.00
22		2-Methyl-2-pentene	0.368	0.386	-4.9	84	0.00
23		cis-2-Hexene	0.279	0.289	-3.6	85	0.00
24		Ethyl tertiary butyl ether	0.497	0.309	37.8#	49#	-0.02
25		Ethyl tertiary butyl ether	0.497	0.529	-6.4	84	0.00
26		2,2-Dimethylpentane	0.426	0.453	-6.3	85	0.00
27		Methylcyclopentane	0.359	0.372	-3.6	84	0.00
28		2,4-Dimethylpentane	0.347	0.344	0.9	84	0.00
29		2,2,3-Trimethylbutane	0.373	0.395	-5.9	85	0.00
30		1,2-Dichloroethane	0.247	0.257	-4.0	85	0.00
31		3,3-Dimethylpentane	0.411	0.408	0.7	83	-0.01
32		Cyclohexane	0.299	0.308	-3.0	83	-0.01
33		2-Methylhexane	0.362	0.361	0.3	83	0.00
34	M	Benzene	0.753	0.800	-6.2	86	0.00
35		2,3-Dimethylpentane	0.305	0.322	-5.6	85	0.00
36		Thiophene	0.422	0.451	-6.9	86	-0.01
37		1,1-Dimethylcyclopentane	0.209	0.248	-18.7	95	0.00
38		3-Methylhexane	0.323	0.322	0.3	82	0.00
39		TAME	0.577	0.527	8.7	84	0.00

Data Path : O:\Organics\DATA\VOA6\2020\09-SEP\200918\
Data File : V6012540.D
Acq On : 22 Sep 2020 8:46 am
Operator : VOA6:RY
Sample : WG1413379-2,31,5,5
Misc : WG1413379,ICAL17149
ALS Vial : 79 Sample Multiplier: 1

Quant Time: Sep 22 10:06:48 2020
Quant Method : O:\Organics\DATA\VOA6\2020\09-SEP\200918\P6091820W.M
Quant Title : PIANO VOLATILES
QLast Update : Sat Sep 19 08:40:17 2020
Response via : Initial Calibration

Min. RRF : 0.100 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 25% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
40		cis-1,3-Dimethylcyclopentan	0.310	0.326	-5.2	87	0.00
41		3-Ethylpentane	0.408	0.400	2.0	82	0.00
42		trans-1,3-DMCP/2-Methyl-1-h	0.141	0.140	0.7	86	0.00
43		1-Heptene/trans-1,2-DMCP	0.159	0.170	-6.9	85	0.00
44		Isooctane	0.775	0.819	-5.7	86	0.00
45		trans-3-Heptene	0.267	0.254	4.9	82	-0.01
46		Heptane	0.301	0.298	1.0	84	-0.01
48		trans-2-Heptene	0.234	0.242	-3.4	84	0.00
49		cis-2-Heptene	0.177	0.183	-3.4	83	-0.01
50		2,2-Dimethylhexane	0.758	0.789	-4.1	84	0.00
51		Methylcyclohexane	0.349	0.381	-9.2	87	0.00
52		2,5-Dimethylhexane	0.380	0.389	-2.4	82	0.00
53		2,4-Dimethylhexane	0.303	0.309	-2.0	83	0.00
54		Ethylcyclopentane	0.297	0.315	-6.1	86	0.00
55		2,2,3-Trimethylpentane	0.598	0.631	-5.5	84	0.00
57		2,3,4-Trimethylpentane	0.418	0.413	1.2	81	0.00
58		2,3,3-Trimethylpentane	0.356	0.353	0.8	82	0.00
59		2,3-Dimethylhexane	0.393	0.387	1.5	80	0.00
60		2-Methylheptane	0.349	0.349	0.0	80	0.00
61		4-Methylheptane	0.416	0.404	2.9	80	-0.01
62		3-Methylheptane	0.343	1.197	-249.0#	315#	-0.05
63		3-Methylheptane	0.343	0.301	12.2	79	0.00
64	S	2-Bromo-1-chloropropane (H/	0.280	0.298	-6.4	85	0.00
65		3-Ethylhexane	0.430	0.438	-1.9	83	0.00
66	M	Toluene	0.912	0.959	-5.2	86	0.00
67		2-Methylthiophene	0.701	0.760	-8.4	87	0.00
68		trans-1,4-Dimethylcyclohexa	0.448	0.482	-7.6	85	0.00
69		3-Methylthiophene	0.707	0.759	-7.4	87	0.00
70		1-Octene	0.178	0.174	2.2	80	0.00
71		Octane	0.350	0.333	4.9	79	0.00
72		trans-1,2-Dimethylcyclohexa	0.306	0.310	-1.3	83	0.00
73		1,2-Dibromoethane	0.188	0.206	-9.6	88	0.00
75		cis-2-Octene	0.269	0.264	1.9	82	0.00
76		Isopropylcyclopentane	0.331	0.360	-8.8	88	0.00
77		cis-1,2-Dimethylcyclohexane	0.292	0.295	-1.0	83	0.00
78		2,5-Dimethylheptane	0.510	0.505	1.0	81	-0.01
79		3,5-Dimethylheptane	0.579	0.610	-5.4	82	0.00
80		3,3-Dimethylheptane	0.393	0.388	1.3	80	0.00
81		1,1,4-Trimethylcyclohexane	0.364	0.376	-3.3	83	0.00

Data Path : O:\Organics\DATA\VOA6\2020\09-SEP\200918\
Data File : V6012540.D
Acq On : 22 Sep 2020 8:46 am
Operator : VOA6:RY
Sample : WG1413379-2,31,5,5
Misc : WG1413379,ICAL17149
ALS Vial : 79 Sample Multiplier: 1

Quant Time: Sep 22 10:06:48 2020
Quant Method : O:\Organics\DATA\VOA6\2020\09-SEP\200918\P6091820W.M
Quant Title : PIANO VOLATILES
QLast Update : Sat Sep 19 08:40:17 2020
Response via : Initial Calibration

Min. RRF : 0.100 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 25% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
82		2,3-Dimethylheptane	0.449	0.432	3.8	79	0.00
83		3,4-Dimethylheptane	0.288	0.279	3.1	82	0.00
84		4-Methyloctane	0.430	0.386	10.2	73	0.00
85		2-Methyloctane	0.361	0.374	-3.6	85	0.00
86		Ethylbenzene	1.031	1.074	-4.2	85	0.00
87	S	1-Chloro-2-fluorobenzene (H	0.585	0.618	-5.6	86	0.00
88		2-Ethylthiophene	0.794	0.845	-6.4	86	0.00
89		3-Methyloctane	0.651	0.654	-0.5	80	0.00
90		3,3-Diethylpentane	0.761	0.764	-0.4	80	-0.01
91		p/m-Xylene	0.786	0.809	-2.9	84	0.00
92		1-Nonene	0.189	0.190	-0.5	80	0.00
93		trans-3-Nonene	0.258	0.253	1.9	80	0.00
94		cis-3-Nonene	0.285	0.292	-2.5	82	0.00
95		Nonane	0.342	0.326	4.7	77	0.00
96		Styrene	0.662	0.689	-4.1	85	0.00
97	S	1,4-Dichlorobutane (H/surr)	0.261	0.271	-3.8	86	0.00
98		o-Xylene	0.824	0.844	-2.4	85	-0.01
99		2-Nonene	0.267	0.265	0.7	80	0.00
100		Isopropylcyclohexane	0.393	0.407	-3.6	84	0.00
101		Isopropylbenzene	1.074	0.478	55.5#	37#	-0.03
102		Isopropylbenzene	1.074	1.121	-4.4	86	0.00
103		3,3-Dimethyloctane	0.570	0.592	-3.9	81	-0.01
104		n-Propylbenzene	1.263	1.316	-4.2	85	0.00
105		2-Methylnonane	0.331	0.317	4.2	76	0.00
106		3-Methylnonane	0.404	0.403	0.2	77	0.00
107		1-Methyl-3-ethylbenzene	1.068	1.118	-4.7	86	0.00
108		1-Methyl-4-ethylbenzene	1.035	1.080	-4.3	86	0.00
109		1,3,5-Trimethylbenzene	0.893	0.940	-5.3	85	0.00
110		1-Decene	0.209	0.202	3.3	78	0.00
111		Isobutylcyclohexane	0.421	0.440	-4.5	84	0.00
112		1-Methyl-2-ethylbenzene	1.099	1.152	-4.8	86	0.00
113		Decane	0.294	0.282	4.1	76	0.00
114		tert-Butylbenzene	0.814	0.861	-5.8	86	0.00
115		1,2,4-Trimethylbenzene	0.915	0.955	-4.4	85	0.00
116		Isobutylbenzene	1.008	1.065	-5.7	85	0.00
117		sec-Butylbenzene	1.192	1.263	-6.0	87	0.00
118		1-Methyl-3-isopropylbenzene	1.002	1.066	-6.4	86	0.00
119		1-Methyl-4-isopropylbenzene	1.042	1.103	-5.9	86	0.00
120		1,2,3-Trimethylbenzene	0.926	0.960	-3.7	85	0.00

Evaluate Continuing Calibration Report

Data Path : O:\Organics\DATA\VOA6\2020\09-SEP\200918\
Data File : V6012540.D
Acq On : 22 Sep 2020 8:46 am
Operator : VOA6:RY
Sample : WG1413379-2,31,5,5
Misc : WG1413379,ICAL17149
ALS Vial : 79 Sample Multiplier: 1

Quant Time: Sep 22 10:06:48 2020
Quant Method : O:\Organics\DATA\VOA6\2020\09-SEP\200918\P6091820W.M
Quant Title : PIANO VOLATILES
QLast Update : Sat Sep 19 08:40:17 2020
Response via : Initial Calibration

Min. RRF : 0.100 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 25% Max. Rel. Area : 200%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
121	1-Methyl-2-isopropylbenzene	1.030	1.093	-6.1	87	0.00
122	Indan	0.883	0.926	-4.9	87	0.00
123	1,3-Diethylbenzene	0.638	0.673	-5.5	86	0.00
124	1-Methyl-3-propylbenzene	1.186	1.261	-6.3	87	0.00
125	Indene	0.778	0.827	-6.3	87	0.00
126	1-Methyl-4-propylbenzene	1.500	1.604	-6.9	87	0.00
127	n-Butylbenzene	1.131	1.203	-6.4	87	0.00
128	1,2-Dimethyl-4-ethylbenzene	1.091	1.157	-6.0	86	0.00
129	1,2-Diethylbenzene	0.522	0.560	-7.3	88	0.00
130	1-Methyl-2-propylbenzene	1.297	1.381	-6.5	87	0.00
131	1,4-Dimethyl-2-ethylbenzene	1.013	1.077	-6.3	86	0.00
132	Undecane	0.337	0.331	1.8	77	0.00
133	1,3-Dimethyl-4-ethylbenzene	1.224	1.302	-6.4	87	0.00
134	1,3-Dimethyl-5-ethylbenzene	1.150	1.224	-6.4	87	0.00
135	1,3-Dimethyl-2-ethylbenzene	1.192	1.264	-6.0	87	0.00
136	1,2-Dimethyl-3-ethylbenzene	1.065	1.125	-5.6	86	0.00
137	1,2,4,5-Tetramethylbenzene	1.127	1.181	-4.8	86	0.00
138	1,2,3,5-Tetramethylbenzene	1.003	1.061	-5.8	86	0.00
139	Pentylbenzene	0.942	1.011	-7.3	88	0.00
140	1,2,3,4-Tetramethylbenzene	1.332	1.402	-5.3	86	0.00
141	1,3-DM-5-tert-Butylbenzene	1.011	1.078	-6.6	87	0.00
142	Dodecane	0.245	0.206	15.9	75	0.00
143	1,3,5-Triethylbenzene	0.645	0.687	-6.5	86	0.00
144	Naphthalene	0.919	0.977	-6.3	89	0.00
145	Benzothiophene	0.501	0.543	-8.4	90	0.00
146	1,2,4-Triethylbenzene	0.595	0.632	-6.2	86	0.00
147	Hexylbenzene	0.861	0.918	-6.6	87	0.00
148	MMT	0.360	0.387	-7.5	88	0.00
149	Tridecane	0.259	0.203	21.6	75	0.00
150	2-Methylnaphthalene	0.619	0.660	-6.6	88	0.00
151	1-Methylnaphthalene	0.515	0.549	-6.6	88	0.00
152	Tetradecane	0.216	0.165	23.6	70	0.00
153	Pentadecane	0.164	0.120	26.8#	64	0.00

* Evaluation of CC level amount vs concentration.
(#) = Out of Range SPCC's out = 0 CCC's out = 0

Quantitation Report (QT Reviewed)

Data Path : O:\Organics\DATA\VOA6\2020\09-SEP\200918\
Data File : V6012540.D
Acq On : 22 Sep 2020 8:46 am
Operator : VOA6:RY
Sample : WG1413379-2,31,5,5
Misc : WG1413379,ICAL17149
ALS Vial : 79 Sample Multiplier: 1

Quant Time: Sep 22 10:06:48 2020
Quant Method : O:\Organics\DATA\VOA6\2020\09-SEP\200918\P6091820W.M
Quant Title : PIANO VOLATILES
QLast Update : Sat Sep 19 08:40:17 2020
Response via : Initial Calibration

Sub List : PIANO - PIANO

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Chlorobenzene-D5 [IS]	38.34	117	420295	50.000	ug/L	-0.01
System Monitoring Compounds						
24) Dibromofluoromethane (...	16.63	113	129967	49.590	ug/L	0.00
Spiked Amount 50.000	Range 78 - 118		Recovery = 99.18%			
62) Toluene-d8 (surr)	30.56	98	502947	50.177	ug/L	0.00
Spiked Amount 50.000	Range 87 - 113		Recovery = 100.35%			
64) 2-Bromo-1-chloropropan...	30.79	77	125390	53.343	ug/L	0.00
Spiked Amount 50.000	Range 70 - 130		Recovery = 106.69%			
87) 1-Chloro-2-fluorobenze...	39.98	130	259597	52.825	ug/L	0.00
Spiked Amount 50.000	Range 70 - 130		Recovery = 105.65%			
97) 1,4-Dichlorobutane (H/...	43.23	55	113744M4	51.886	ug/L	0.00
Spiked Amount 50.000	Range 70 - 130		Recovery = 103.77%			
101) 4-Bromofluorobenzene (...	45.77	95	201089	48.269	ug/L	0.00
Spiked Amount 50.000	Range 76 - 120		Recovery = 96.54%			
Target Compounds						Qvalue
2) 3-Methyl-1-butene	7.42	55	160898	51.227	ug/L	100
3) Isopentane	7.94	43	83160	46.298	ug/L	98
4) 1-Pentene	8.60	42	95147	50.729	ug/L	100
5) 2-Methyl-1-butene	8.90	55	162165	51.757	ug/L	98
6) Pentane	8.96	43	145983	49.325	ug/L	99
7) trans-2-Pentene	9.40	55	159928	51.586	ug/L	98
8) 2-Methyl-1,3-butadiene	9.57	67	111797	53.098	ug/L	94
9) cis-2-Pentene	9.77	55	154900	51.546	ug/L	94
10) Tertiary butanol	10.40	59	74369	284.531	ug/L	97
11) 2,2-Dimethylbutane	10.79	43	91233	47.141	ug/L	92
12) 4-Methyl-1-pentene	12.08	43	106331	48.957	ug/L	98
13) Cyclopentane	12.57	70	65098	52.133	ug/L	94
14) 2,3-Dimethylbutane	12.57	71	52179	53.839	ug/L	100
15) 2-Methylpentane	12.77	43	157007	48.990	ug/L	97
16) MTBE	13.08	73	210737	52.593	ug/L	98
17) 3-Methylpentane	13.74	57	150804	52.034	ug/L	98
18) 1-Hexene	14.32	56	85350	51.749	ug/L	91
19) Hexane	14.92	57	121632	51.419	ug/L	99
20) Diisopropyl ether	15.20	45	209254	52.012	ug/L	95
21) trans-2-Hexene	15.41	55	149042	51.752	ug/L	98
22) 2-Methyl-2-pentene	15.58	69	162319	52.530	ug/L	98
23) cis-2-Hexene	16.15	55	121258	51.619	ug/L	98

Quantitation Report (QT Reviewed)

Data Path : O:\Organics\DATA\VOA6\2020\09-SEP\200918\
Data File : V6012540.D
Acq On : 22 Sep 2020 8:46 am
Operator : VOA6:RY
Sample : WG1413379-2,31,5,5
Misc : WG1413379,ICAL17149
ALS Vial : 79 Sample Multiplier: 1

Quant Time: Sep 22 10:06:48 2020
Quant Method : O:\Organics\DATA\VOA6\2020\09-SEP\200918\P6091820W.M
Quant Title : PIANO VOLATILES
QLast Update : Sat Sep 19 08:40:17 2020
Response via : Initial Calibration

Sub List : PIANO - PIANO

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
25) Ethyl tertiary butyl e...	16.66	59	222458	53.206	ug/L	98
26) 2,2-Dimethylpentane	16.94	57	190259	53.082	ug/L	96
27) Methylcyclopentane	17.22	56	156459	51.858	ug/L	96
28) 2,4-Dimethylpentane	17.37	43	144662	49.638	ug/L	96
29) 2,2,3-Trimethylbutane	17.99	57	165918	52.938	ug/L	98
30) 1,2-Dichloroethane	18.67	62	108157	52.080	ug/L	100
31) 3,3-Dimethylpentane	19.61	43	171392	49.640	ug/L	100
32) Cyclohexane	20.09	56	129453	51.503	ug/L	98
33) 2-Methylhexane	20.52	43	151606	49.774	ug/L	97
34) Benzene	20.71	78	336285	53.149	ug/L	99
35) 2,3-Dimethylpentane	20.82	56	135389	52.859	ug/L	97
36) Thiophene	21.15	84	189597	53.404	ug/L	98
37) 1,1-Dimethylcyclopentane	21.27	83	104151	59.204	ug/L	98
38) 3-Methylhexane	21.33	43	135437	49.821	ug/L	95
39) TAME	21.69	73	221696	45.694	ug/L	97
40) cis-1,3-Dimethylcyclop...	22.10	70	137019	52.643	ug/L	98
41) 3-Ethylpentane	22.27	43	168286	49.064	ug/L	99
42) trans-1,3-DMCP/2-Methy...	22.39	70	117646	99.591	ug/L	95
43) 1-Heptene/trans-1,2-DMCP	22.66	70	143158	106.978	ug/L	73
44) Isooctane	22.74	57	344113	52.804	ug/L	91
45) trans-3-Heptene	23.34	41	106722	47.587	ug/L	97
46) Heptane	23.48	43	125266	49.447	ug/L	98
48) trans-2-Heptene	24.12	56	101701	51.648	ug/L	95
49) cis-2-Heptene	24.91	56	76774	51.634	ug/L	95
50) 2,2-Dimethylhexane	25.67	57	331708	52.068	ug/L	99
51) Methylcyclohexane	25.89	83	159941	54.444	ug/L	98
52) 2,5-Dimethylhexane	26.55	57	163621	51.185	ug/L	96
53) 2,4-Dimethylhexane	26.81	57	129739	51.000	ug/L	92
54) Ethylcyclopentane	26.85	69	132334	52.954	ug/L	93
55) 2,2,3-Trimethylpentane	27.06	57	265058	52.729	ug/L	97
57) 2,3,4-Trimethylpentane	28.61	43	173472	49.393	ug/L	100
58) 2,3,3-Trimethylpentane	29.17	43	148455	49.543	ug/L	98
59) 2,3-Dimethylhexane	29.42	43	162512	49.223	ug/L	100
60) 2-Methylheptane	29.86	57	146755	50.002	ug/L	94
61) 4-Methylheptane	30.03	43	169751	48.569	ug/L	99
63) 3-Methylheptane	30.60	43	126613	43.932	ug/L	97
65) 3-Ethylhexane	30.73	43	184158M4	50.931	ug/L	
66) Toluene	30.92	91	402901	52.556	ug/L	100
67) 2-Methylthiophene	31.09	97	319494	54.214	ug/L	100
68) trans-1,4-Dimethylcycl...	31.56	97	202467	53.767	ug/L	94
69) 3-Methylthiophene	31.85	97	319104	53.665	ug/L	98

Data Path : O:\Organics\DATA\VOA6\2020\09-SEP\200918\
Data File : V6012540.D
Acq On : 22 Sep 2020 8:46 am
Operator : VOA6:RY
Sample : WG1413379-2,31,5,5
Misc : WG1413379,ICAL17149
ALS Vial : 79 Sample Multiplier: 1

Quant Time: Sep 22 10:06:48 2020
Quant Method : O:\Organics\DATA\VOA6\2020\09-SEP\200918\P6091820W.M
Quant Title : PIANO VOLATILES
QLast Update : Sat Sep 19 08:40:17 2020
Response via : Initial Calibration

Sub List : PIANO - PIANO

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
70) 1-Octene	32.28	55	73299	48.986	ug/L	94
71) Octane	33.11	43	139826	47.543	ug/L	96
72) trans-1,2-Dimethylcycl...	33.38	55	130218	50.545	ug/L	92
73) 1,2-Dibromoethane	33.61	107	86632	54.923	ug/L	96
75) cis-2-Octene	34.48	55	111015	49.164	ug/L	92
76) Isopropylcyclopentane	34.60	68	151346	54.465	ug/L	97
77) cis-1,2-Dimethylcycloh...	36.37	55	123944	50.535	ug/L	96
78) 2,5-Dimethylheptane	36.70	57	212351	49.530	ug/L	98
79) 3,5-Dimethylheptane	36.84	57	256488M4	52.725	ug/L	
80) 3,3-Dimethylheptane	37.09	57	163005	49.395	ug/L	97
81) 1,1,4-Trimethylcyclohe...	37.61	69	158057	51.660	ug/L	99
82) 2,3-Dimethylheptane	38.76	43	181640	48.094	ug/L	98
83) 3,4-Dimethylheptane	39.07	43	117197	48.337	ug/L	98
84) 4-Methyloctane	39.37	43	162270	44.900	ug/L	98
85) 2-Methyloctane	39.46	43	157252M3	51.844	ug/L	
86) Ethylbenzene	39.96	91	451525	52.095	ug/L	99
88) 2-Ethylthiophene	40.11	97	355011	53.207	ug/L	99
89) 3-Methyloctane	40.11	57	274992	50.232	ug/L	99
90) 3,3-Diethylpentane	41.09	57	320925	50.162	ug/L	96
91) p/m-Xylene	41.21	91	679826	102.844	ug/L	99
92) 1-Nonene	41.87	56	80046	50.260	ug/L	94
93) trans-3-Nonene	42.28	55	106456	49.161	ug/L	94
94) cis-3-Nonene	42.57	55	122612M4	51.166	ug/L	
95) Nonane	42.66	43	136958M4	47.648	ug/L	
96) Styrene	43.07	104	289506	52.038	ug/L	98
98) o-Xylene	43.48	91	354833	51.204	ug/L	100
99) 2-Nonene	43.91	55	111304	49.646	ug/L	96
100) Isopropylcyclohexane	45.19	83	171118	51.856	ug/L	97
102) Isopropylbenzene	45.80	105	471044	52.163	ug/L	99
103) 3,3-Dimethyloctane	46.29	71	248707	51.952	ug/L	97
104) n-Propylbenzene	48.42	91	553190	52.093	ug/L	100
105) 2-Methylnonane	48.49	43	133049	47.795	ug/L	96
106) 3-Methylnonane	48.94	57	169231	49.807	ug/L	96
107) 1-Methyl-3-ethylbenzene	49.07	105	469942	52.334	ug/L	99
108) 1-Methyl-4-ethylbenzene	49.24	105	454093	52.203	ug/L	100
109) 1,3,5-Trimethylbenzene	49.85	105	395191	52.619	ug/L	99
110) 1-Decene	49.99	41	84832	48.377	ug/L	97
111) Isobutylcyclohexane	50.14	83	184795	52.240	ug/L	99
112) 1-Methyl-2-ethylbenzene	50.18	105	484042	52.376	ug/L	98
113) Decane	50.38	43	118330	47.820	ug/L	95
114) tert-Butylbenzene	50.64	119	362000	52.899	ug/L	97

Quantitation Report (QT Reviewed)

Data Path : O:\Organics\DATA\VOA6\2020\09-SEP\200918\
Data File : V6012540.D
Acq On : 22 Sep 2020 8:46 am
Operator : VOA6:RY
Sample : WG1413379-2,31,5,5
Misc : WG1413379,ICAL17149
ALS Vial : 79 Sample Multiplier: 1

Quant Time: Sep 22 10:06:48 2020
Quant Method : O:\Organics\DATA\VOA6\2020\09-SEP\200918\P6091820W.M
Quant Title : PIANO VOLATILES
QLast Update : Sat Sep 19 08:40:17 2020
Response via : Initial Calibration

Sub List : PIANO - PIANO

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
115) 1,2,4-Trimethylbenzene	51.07	105	401391	52.189	ug/L	99
116) Isobutylbenzene	51.27	91	447769M4	52.869	ug/L	
117) sec-Butylbenzene	51.32	105	530707	52.954	ug/L	99
118) 1-Methyl-3-isopropylbe...	51.72	119	448069	53.191	ug/L	99
119) 1-Methyl-4-isopropylbe...	51.92	119	463410	52.931	ug/L	99
120) 1,2,3-Trimethylbenzene	52.19	105	403406	51.853	ug/L	99
121) 1-Methyl-2-isopropylbe...	52.41	119	459426	53.058	ug/L	100
122) Indan	52.50	117	389063	52.398	ug/L	99
123) 1,3-Diethylbenzene	52.66	105	282692	52.710	ug/L	99
124) 1-Methyl-3-propylbenzene	52.77	105	529979	53.170	ug/L	99
125) Indene	52.94	115	347643	53.158	ug/L	99
126) 1-Methyl-4-propylbenzene	52.92	105	674287	53.471	ug/L	97
127) n-Butylbenzene	52.92	91	505800	53.191	ug/L	98
128) 1,2-Dimethyl-4-ethylbe...	53.05	119	486113	53.010	ug/L	99
129) 1,2-Diethylbenzene	53.14	119	235348	53.659	ug/L	96
130) 1-Methyl-2-propylbenzene	53.33	105	580284	53.212	ug/L	100
131) 1,4-Dimethyl-2-ethylbe...	53.65	119	452552	53.160	ug/L	98
132) Undecane	53.69	57	139062	49.030	ug/L	97
133) 1,3-Dimethyl-4-ethylbe...	53.74	119	547159	53.159	ug/L	99
134) 1,3-Dimethyl-5-ethylbe...	53.87	119	514261	53.186	ug/L	100
135) 1,3-Dimethyl-2-ethylbe...	54.10	119	531188	53.016	ug/L	99
136) 1,2-Dimethyl-3-ethylbe...	54.46	119	473008	52.851	ug/L	99
137) 1,2,4,5-Tetramethylben...	54.86	119	496292	52.409	ug/L	98
138) 1,2,3,5-Tetramethylben...	54.95	119	445747	52.861	ug/L	99
139) Pentylbenzene	55.43	91	424902	53.677	ug/L	99
140) 1,2,3,4-Tetramethylben...	55.75	119	589098	52.605	ug/L	94
141) 1,3-DM-5-tert-Butylben...	55.75	147	453089	53.315	ug/L	98
142) Dodecane	55.91	43	86722	42.031	ug/L	96
143) 1,3,5-Triethylbenzene	56.63	147	288948	53.333	ug/L	99
144) Naphthalene	56.76	128	410783	53.201	ug/L	100
145) Benzothiophene	56.85	134	228097	54.172	ug/L	98
146) 1,2,4-Triethylbenzene	57.18	147	265655	53.076	ug/L	98
147) Hexylbenzene	57.67	91	385985	53.312	ug/L	98
148) MMT	57.92	134	162644	53.797	ug/L	98
149) Tridecane	57.98	57	85420	39.190	ug/L	94
150) 2-Methylnaphthalene	59.48	142	277275	53.288	ug/L	99
151) 1-Methylnaphthalene	59.95	142	230690	53.286	ug/L	100
152) Tetradecane	60.22	57	69420	38.170	ug/L	95
153) Pentadecane	62.93	57	50429	36.629	ug/L	98

Quantitation Report (QT Reviewed)

Data Path : O:\Organics\DATA\VOA6\2020\09-SEP\200918\
Data File : V6012540.D
Acq On : 22 Sep 2020 8:46 am
Operator : VOA6:RY
Sample : WG1413379-2,31,5,5
Misc : WG1413379,ICAL17149
ALS Vial : 79 Sample Multiplier: 1

Quant Time: Sep 22 10:06:48 2020
Quant Method : O:\Organics\DATA\VOA6\2020\09-SEP\200918\P6091820W.M
Quant Title : PIANO VOLATILES
QLast Update : Sat Sep 19 08:40:17 2020
Response via : Initial Calibration

Sub List : PIANO - PIANO

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)

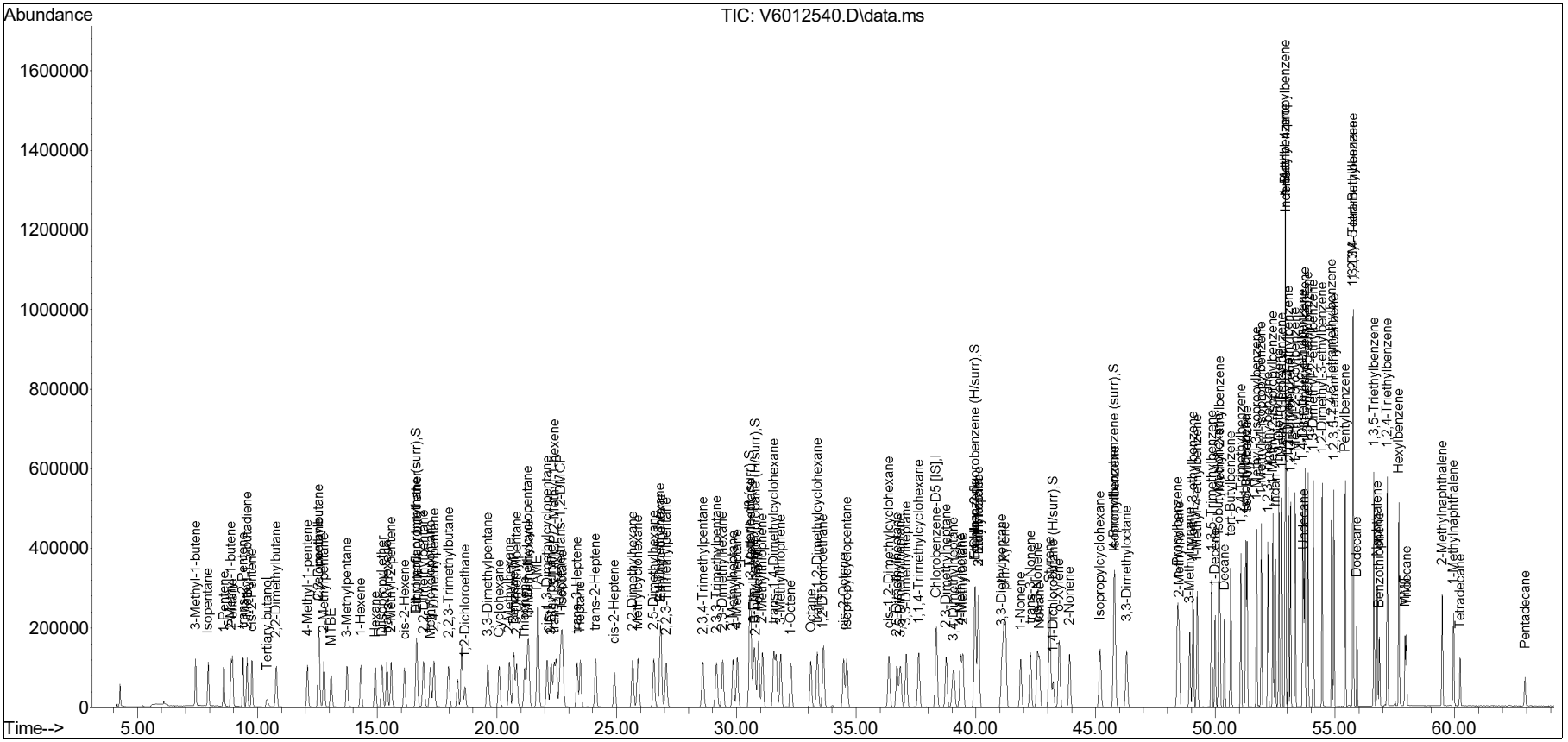
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : O:\Organics\DATA\VOA6\2020\09-SEP\200918\
Data File : V6012540.D
Acq On : 22 Sep 2020 8:46 am
Operator : VOA6:RY
Sample : WG1413379-2,31,5,5
Misc : WG1413379,ICAL17149
ALS Vial : 79 Sample Multiplier: 1

Quant Time: Sep 22 10:06:48 2020
Quant Method : O:\Organics\DATA\VOA6\2020\09-SEP\200918\P6091820W.M
Quant Title : PIANO VOLATILES
QLast Update : Sat Sep 19 08:40:17 2020
Response via : Initial Calibration

Sub List : PIANO - PIANO



Evaluate Continuing Calibration Report

Data Path : O:\Organics\DATA\VOA6\2020\09-SEP\200918\
Data File : V6012559.D
Acq On : 23 Sep 2020 11:10 am
Operator : VOA6:RY
Sample : WG1413379-7,31,5,5
Misc : WG1413379,ICAL17149
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Sep 23 12:43:47 2020
Quant Method : O:\Organics\DATA\VOA6\2020\09-SEP\200918\P6091820W.M
Quant Title : PIANO VOLATILES
QLast Update : Sat Sep 19 08:40:17 2020
Response via : Initial Calibration

Min. RRF : 0.100 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 25% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1	I	Chlorobenzene-D5 [IS]	1.000	1.000	0.0	77	0.00
2		3-Methyl-1-butene	0.374	0.394	-5.3	84	0.00
3		Isopentane	0.214	0.211	1.4	83	0.00
4		1-Pentene	0.223	0.235	-5.4	82	0.00
5		2-Methyl-1-butene	0.373	0.397	-6.4	83	0.00
6		Pentane	0.352	0.371	-5.4	85	0.00
7		trans-2-Pentene	0.369	0.394	-6.8	83	0.00
8		2-Methyl-1,3-butadiene	0.250	0.277	-10.8	85	0.00
9		cis-2-Pentene	0.357	0.381	-6.7	85	0.00
10		Tertiary butanol	0.031	0.029#	6.5	72	-0.02
11		2,2-Dimethylbutane	0.230	0.218	5.2	79	0.00
12		4-Methyl-1-pentene	0.258	0.257	0.4	79	0.00
13		Cyclopentane	0.149	0.159	-6.7	83	0.00
14		2,3-Dimethylbutane	0.115	0.127	-10.4	84	0.00
15		2-Methylpentane	0.381	0.382	-0.3	81	0.00
16		MTBE	0.477	0.517	-8.4	81	0.00
17		3-Methylpentane	0.345	0.369	-7.0	81	0.00
18		1-Hexene	0.196	0.209	-6.6	81	0.00
19		Hexane	0.281	0.298	-6.0	82	0.00
20		Diisopropyl ether	0.479	0.507	-5.8	79	-0.01
21		trans-2-Hexene	0.343	0.364	-6.1	82	0.00
22		2-Methyl-2-pentene	0.368	0.397	-7.9	81	0.00
23		cis-2-Hexene	0.279	0.296	-6.1	82	0.00
24	S	Dibromofluoromethane (surr)	0.312	0.309	1.0	76	0.00
25		Ethyl tertiary butyl ether	0.497	0.532	-7.0	80	0.00
26		2,2-Dimethylpentane	0.426	0.461	-8.2	82	0.00
27		Methylcyclopentane	0.359	0.376	-4.7	79	0.00
28		2,4-Dimethylpentane	0.347	0.349	-0.6	80	0.00
29		2,2,3-Trimethylbutane	0.373	0.397	-6.4	81	0.00
30		1,2-Dichloroethane	0.247	0.266	-7.7	83	0.00
31		3,3-Dimethylpentane	0.411	0.410	0.2	78	0.00
32		Cyclohexane	0.299	0.313	-4.7	80	0.00
33		2-Methylhexane	0.362	0.366	-1.1	79	0.00
34	M	Benzene	0.753	0.825	-9.6	83	0.00
35		2,3-Dimethylpentane	0.305	0.327	-7.2	81	0.00
36		Thiophene	0.422	0.464	-10.0	83	0.00
37		1,1-Dimethylcyclopentane	0.209	0.251	-20.1	91	0.00
38		3-Methylhexane	0.323	0.329	-1.9	79	0.00
39		TAME	0.577	0.534	7.5	80	-0.01

Evaluate Continuing Calibration Report

Data Path : O:\Organics\DATA\VOA6\2020\09-SEP\200918\
Data File : V6012559.D
Acq On : 23 Sep 2020 11:10 am
Operator : VOA6:RY
Sample : WG1413379-7,31,5,5
Misc : WG1413379,ICAL17149
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Sep 23 12:43:47 2020
Quant Method : O:\Organics\DATA\VOA6\2020\09-SEP\200918\P6091820W.M
Quant Title : PIANO VOLATILES
QLast Update : Sat Sep 19 08:40:17 2020
Response via : Initial Calibration

Min. RRF : 0.100 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 25% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
40		cis-1,3-Dimethylcyclopentan	0.310	0.332	-7.1	83	0.00
41		3-Ethylpentane	0.408	0.399	2.2	77	0.00
42		trans-1,3-DMCP/2-Methyl-1-h	0.141	0.145	-2.8	84	0.00
43		1-Heptene/trans-1,2-DMCP	0.159	0.175	-10.1	83	0.00
44		Isooctane	0.775	0.825	-6.5	81	0.00
45		trans-3-Heptene	0.267	0.264	1.1	81	0.00
46		Heptane	0.301	0.304	-1.0	81	0.00
48		trans-2-Heptene	0.234	0.250	-6.8	82	0.00
49		cis-2-Heptene	0.177	0.187	-5.6	80	0.00
50		2,2-Dimethylhexane	0.758	0.803	-5.9	80	0.00
51		Methylcyclohexane	0.349	0.390	-11.7	84	0.00
52		2,5-Dimethylhexane	0.380	0.396	-4.2	78	0.00
53		2,4-Dimethylhexane	0.303	0.320	-5.6	81	0.00
54		Ethylcyclopentane	0.297	0.324	-9.1	83	0.00
55		2,2,3-Trimethylpentane	0.598	0.641	-7.2	81	0.00
57		2,3,4-Trimethylpentane	0.418	0.416	0.5	77	0.00
58		2,3,3-Trimethylpentane	0.356	0.358	-0.6	78	0.00
59		2,3-Dimethylhexane	0.393	0.392	0.3	77	0.00
60		2-Methylheptane	0.349	0.358	-2.6	77	0.00
61		4-Methylheptane	0.416	0.411	1.2	77	0.00
62	S	Toluene-d8 (surr)	1.192	1.197	-0.4	77	0.00
63		3-Methylheptane	0.343	0.318	7.3	79	0.00
64	S	2-Bromo-1-chloropropane (H/	0.280	0.307	-9.6	82	0.00
65		3-Ethylhexane	0.430	0.449	-4.4	80	0.00
66	M	Toluene	0.912	0.992	-8.8	84	0.00
67		2-Methylthiophene	0.701	0.785	-12.0	85	0.00
68		trans-1,4-Dimethylcyclohexa	0.448	0.494	-10.3	82	0.00
69		3-Methylthiophene	0.707	0.784	-10.9	84	0.00
70		1-Octene	0.178	0.180	-1.1	78	0.00
71		Octane	0.350	0.345	1.4	77	0.00
72		trans-1,2-Dimethylcyclohexa	0.306	0.315	-2.9	79	0.00
73		1,2-Dibromoethane	0.188	0.214	-13.8	86	0.00
75		cis-2-Octene	0.269	0.277	-3.0	81	0.00
76		Isopropylcyclopentane	0.331	0.373	-12.7	86	0.00
77		cis-1,2-Dimethylcyclohexane	0.292	0.298	-2.1	79	0.01
78		2,5-Dimethylheptane	0.510	0.540	-5.9	82	0.00
79		3,5-Dimethylheptane	0.579	0.616	-6.4	78	0.00
80		3,3-Dimethylheptane	0.393	0.401	-2.0	77	0.00
81		1,1,4-Trimethylcyclohexane	0.364	0.385	-5.8	80	0.00

Evaluate Continuing Calibration Report

Data Path : O:\Organics\DATA\VOA6\2020\09-SEP\200918\
Data File : V6012559.D
Acq On : 23 Sep 2020 11:10 am
Operator : VOA6:RY
Sample : WG1413379-7,31,5,5
Misc : WG1413379,ICAL17149
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Sep 23 12:43:47 2020
Quant Method : O:\Organics\DATA\VOA6\2020\09-SEP\200918\P6091820W.M
Quant Title : PIANO VOLATILES
QLast Update : Sat Sep 19 08:40:17 2020
Response via : Initial Calibration

Min. RRF : 0.100 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 25% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
82		2,3-Dimethylheptane	0.449	0.445	0.9	76	0.00
83		3,4-Dimethylheptane	0.288	0.284	1.4	78	-0.02
84		4-Methyloctane	0.430	0.427	0.7	76	0.00
85		2-Methyloctane	0.361	0.371	-2.8	79	-0.01
86		Ethylbenzene	1.031	1.105	-7.2	82	0.00
87	S	1-Chloro-2-fluorobenzene (H	0.585	0.638	-9.1	83	0.00
88		2-Ethylthiophene	0.794	0.871	-9.7	83	0.00
89		3-Methyloctane	0.651	0.682	-4.8	79	0.00
90		3,3-Diethylpentane	0.761	0.790	-3.8	78	0.00
91		p/m-Xylene	0.786	0.840	-6.9	82	-0.01
92		1-Nonene	0.189	0.196	-3.7	78	0.00
93		trans-3-Nonene	0.258	0.261	-1.2	78	0.00
94		cis-3-Nonene	0.285	0.293	-2.8	77	0.00
95		Nonane	0.342	0.338	1.2	75	-0.02
96		Styrene	0.662	0.713	-7.7	82	0.00
97	S	1,4-Dichlorobutane (H/surr)	0.261	0.278	-6.5	83	0.00
98		o-Xylene	0.824	0.874	-6.1	83	0.00
99		2-Nonene	0.267	0.277	-3.7	79	0.00
100		Isopropylcyclohexane	0.393	0.420	-6.9	81	0.00
101	S	4-Bromofluorobenzene (surr)	0.496	0.480	3.2	75	0.00
102		Isopropylbenzene	1.074	1.152	-7.3	83	0.00
103		3,3-Dimethyloctane	0.570	0.617	-8.2	79	0.00
104		n-Propylbenzene	1.263	1.349	-6.8	82	0.00
105		2-Methylnonane	0.331	0.338	-2.1	76	0.00
106		3-Methylnonane	0.404	0.426	-5.4	77	0.00
107		1-Methyl-3-ethylbenzene	1.068	1.152	-7.9	83	0.00
108		1-Methyl-4-ethylbenzene	1.035	1.121	-8.3	84	0.00
109		1,3,5-Trimethylbenzene	0.893	0.961	-7.6	82	0.00
110		1-Decene	0.209	0.213	-1.9	77	0.00
111		Isobutylcyclohexane	0.421	0.462	-9.7	83	0.00
112		1-Methyl-2-ethylbenzene	1.099	1.196	-8.8	84	0.00
113		Decane	0.294	0.303	-3.1	77	0.00
114		tert-Butylbenzene	0.814	0.882	-8.4	83	0.00
115		1,2,4-Trimethylbenzene	0.915	0.992	-8.4	83	0.00
116		Isobutylbenzene	1.008	1.127	-11.8	85	0.00
117		sec-Butylbenzene	1.192	1.307	-9.6	85	0.00
118		1-Methyl-3-isopropylbenzene	1.002	1.092	-9.0	83	0.00
119		1-Methyl-4-isopropylbenzene	1.042	1.133	-8.7	83	0.00
120		1,2,3-Trimethylbenzene	0.926	0.997	-7.7	83	0.00

Evaluate Continuing Calibration Report

Data Path : O:\Organics\DATA\VOA6\2020\09-SEP\200918\
Data File : V6012559.D
Acq On : 23 Sep 2020 11:10 am
Operator : VOA6:RY
Sample : WG1413379-7,31,5,5
Misc : WG1413379,ICAL17149
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Sep 23 12:43:47 2020
Quant Method : O:\Organics\DATA\VOA6\2020\09-SEP\200918\P6091820W.M
Quant Title : PIANO VOLATILES
QLast Update : Sat Sep 19 08:40:17 2020
Response via : Initial Calibration

Min. RRF : 0.100 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 25% Max. Rel. Area : 200%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
121	1-Methyl-2-isopropylbenzene	1.030	1.117	-8.4	83	0.00
122	Indan	0.883	0.957	-8.4	84	0.00
123	1,3-Diethylbenzene	0.638	0.698	-9.4	84	0.00
124	1-Methyl-3-propylbenzene	1.186	1.311	-10.5	85	0.00
125	Indene	0.778	0.859	-10.4	85	0.00
126	1-Methyl-4-propylbenzene	1.500	1.670	-11.3	85	0.00
127	n-Butylbenzene	1.131	1.256	-11.1	85	0.00
128	1,2-Dimethyl-4-ethylbenzene	1.091	1.197	-9.7	83	0.00
129	1,2-Diethylbenzene	0.522	0.578	-10.7	85	0.00
130	1-Methyl-2-propylbenzene	1.297	1.435	-10.6	85	0.00
131	1,4-Dimethyl-2-ethylbenzene	1.013	1.109	-9.5	84	0.00
132	Undecane	0.337	0.365	-8.3	80	0.00
133	1,3-Dimethyl-4-ethylbenzene	1.224	1.346	-10.0	84	0.00
134	1,3-Dimethyl-5-ethylbenzene	1.150	1.274	-10.8	85	0.00
135	1,3-Dimethyl-2-ethylbenzene	1.192	1.303	-9.3	84	0.00
136	1,2-Dimethyl-3-ethylbenzene	1.065	1.155	-8.5	83	0.00
137	1,2,4,5-Tetramethylbenzene	1.127	1.216	-7.9	83	0.00
138	1,2,3,5-Tetramethylbenzene	1.003	1.091	-8.8	84	0.00
139	Pentylbenzene	0.942	1.047	-11.1	85	0.00
140	1,2,3,4-Tetramethylbenzene	1.332	1.448	-8.7	84	0.00
141	1,3-DM-5-tert-Butylbenzene	1.011	1.106	-9.4	83	0.00
142	Dodecane	0.245	0.231	5.7	79	0.00
143	1,3,5-Triethylbenzene	0.645	0.698	-8.2	82	0.00
144	Naphthalene	0.919	0.991	-7.8	85	0.00
145	Benzothiophene	0.501	0.544	-8.6	85	0.00
146	1,2,4-Triethylbenzene	0.595	0.645	-8.4	83	0.00
147	Hexylbenzene	0.861	0.955	-10.9	85	0.00
148	MMT	0.360	0.392	-8.9	84	0.00
149	Tridecane	0.259	0.235	9.3	81	0.00
150	2-Methylnaphthalene	0.619	0.661	-6.8	83	0.00
151	1-Methylnaphthalene	0.515	0.553	-7.4	83	0.00
152	Tetradecane	0.216	0.204	5.6	81	0.00
153	Pentadecane	0.164	0.160	2.4	80	0.00

* Evaluation of CC level amount vs concentration.
(#) = Out of Range SPCC's out = 0 CCC's out = 0

Quantitation Report (QT Reviewed)

Data Path : O:\Organics\DATA\VOA6\2020\09-SEP\200918\
Data File : V6012559.D
Acq On : 23 Sep 2020 11:10 am
Operator : VOA6:RY
Sample : WG1413379-7,31,5,5
Misc : WG1413379,ICAL17149
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Sep 23 12:43:47 2020
Quant Method : O:\Organics\DATA\VOA6\2020\09-SEP\200918\P6091820W.M
Quant Title : PIANO VOLATILES
QLast Update : Sat Sep 19 08:40:17 2020
Response via : Initial Calibration

Sub List : PIANO - PIANO

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Chlorobenzene-D5 [IS]	38.35	117	395220	50.000	ug/L	0.00
System Monitoring Compounds						
24) Dibromofluoromethane (...	16.63	113	122155	49.566	ug/L	0.00
Spiked Amount 50.000	Range 78 - 118		Recovery = 99.13%			
62) Toluene-d8 (surr)	30.56	98	473073	50.191	ug/L	0.00
Spiked Amount 50.000	Range 87 - 113		Recovery = 100.38%			
64) 2-Bromo-1-chloropropan...	30.78	77	121234	54.848	ug/L	0.00
Spiked Amount 50.000	Range 70 - 130		Recovery = 109.70%			
87) 1-Chloro-2-fluorobenze...	39.98	130	252169	54.569	ug/L	0.00
Spiked Amount 50.000	Range 70 - 130		Recovery = 109.14%			
97) 1,4-Dichlorobutane (H/...	43.23	55	109983	53.353	ug/L	0.00
Spiked Amount 50.000	Range 70 - 130		Recovery = 106.71%			
101) 4-Bromofluorobenzene (...	45.78	95	189508	48.375	ug/L	0.00
Spiked Amount 50.000	Range 76 - 120		Recovery = 96.75%			
Target Compounds						Qvalue
2) 3-Methyl-1-butene	7.43	55	155529	52.660	ug/L	99
3) Isopentane	7.95	43	83452	49.409	ug/L	97
4) 1-Pentene	8.60	42	92876	52.660	ug/L	100
5) 2-Methyl-1-butene	8.91	55	156825	53.228	ug/L	99
6) Pentane	8.97	43	146763	52.734	ug/L	99
7) trans-2-Pentene	9.41	55	155569	53.363	ug/L	98
8) 2-Methyl-1,3-butadiene	9.57	67	109283	55.197	ug/L	95
9) cis-2-Pentene	9.77	55	150458	53.244	ug/L	95
10) Tertiary butanol	10.36	59	57544	234.128	ug/L	97
11) 2,2-Dimethylbutane	10.79	43	86056	47.287	ug/L	94
12) 4-Methyl-1-pentene	12.09	43	101627	49.760	ug/L	99
13) Cyclopentane	12.58	70	62881	53.553	ug/L	93
14) 2,3-Dimethylbutane	12.57	71	50272	55.162	ug/L	95
15) 2-Methylpentane	12.78	43	151091	50.136	ug/L	96
16) MTBE	13.07	73	204176	54.189	ug/L	98
17) 3-Methylpentane	13.75	57	145650	53.444	ug/L	99
18) 1-Hexene	14.32	56	82461	53.170	ug/L	94
19) Hexane	14.92	57	117712	52.919	ug/L	98
20) Diisopropyl ether	15.19	45	200412	52.975	ug/L	94
21) trans-2-Hexene	15.41	55	143923	53.145	ug/L	97
22) 2-Methyl-2-pentene	15.58	69	157041	54.047	ug/L	100
23) cis-2-Hexene	16.14	55	116875	52.910	ug/L	97
25) Ethyl tertiary butyl e...	16.65	59	210239	53.474	ug/L	97

Quantitation Report (QT Reviewed)

Data Path : O:\Organics\DATA\VOA6\2020\09-SEP\200918\
Data File : V6012559.D
Acq On : 23 Sep 2020 11:10 am
Operator : VOA6:RY
Sample : WG1413379-7,31,5,5
Misc : WG1413379,ICAL17149
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Sep 23 12:43:47 2020
Quant Method : O:\Organics\DATA\VOA6\2020\09-SEP\200918\P6091820W.M
Quant Title : PIANO VOLATILES
QLast Update : Sat Sep 19 08:40:17 2020
Response via : Initial Calibration

Sub List : PIANO - PIANO

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
26) 2,2-Dimethylpentane	16.94	57	182102	54.030	ug/L	95
27) Methylcyclopentane	17.22	56	148617	52.384	ug/L	97
28) 2,4-Dimethylpentane	17.38	43	138006	50.358	ug/L	97
29) 2,2,3-Trimethylbutane	17.98	57	157012	53.275	ug/L	95
30) 1,2-Dichloroethane	18.67	62	105047	53.792	ug/L	97
31) 3,3-Dimethylpentane	19.63	43	162072	49.919	ug/L	96
32) Cyclohexane	20.10	56	123671	52.325	ug/L	99
33) 2-Methylhexane	20.52	43	144609	50.489	ug/L	97
34) Benzene	20.71	78	325909	54.777	ug/L	99
35) 2,3-Dimethylpentane	20.83	56	129207	53.645	ug/L	99
36) Thiophene	21.16	84	183332	54.916	ug/L	99
37) 1,1-Dimethylcyclopentane	21.27	83	99118	59.918	ug/L	99
38) 3-Methylhexane	21.33	43	129975	50.846	ug/L	97
39) TAME	21.68	73	211166	46.285	ug/L	96
40) cis-1,3-Dimethylcyclop...	22.10	70	131338	53.661	ug/L	96
41) 3-Ethylpentane	22.27	43	157854	48.942	ug/L	96
42) trans-1,3-DMCP/2-Methy...	22.39	70	114800	103.348	ug/L	94
43) 1-Heptene/trans-1,2-DMCP	22.66	70	138711	110.232	ug/L	64
44) Isooctane	22.74	57	326216	53.234	ug/L	95
45) trans-3-Heptene	23.36	41	104473	49.540	ug/L	96
46) Heptane	23.49	43	119963	50.358	ug/L	98
48) trans-2-Heptene	24.13	56	98750	53.332	ug/L	96
49) cis-2-Heptene	24.91	56	73775	52.765	ug/L	92
50) 2,2-Dimethylhexane	25.67	57	317551	53.008	ug/L	99
51) Methylcyclohexane	25.89	83	154010	55.752	ug/L	99
52) 2,5-Dimethylhexane	26.55	57	156611	52.100	ug/L	96
53) 2,4-Dimethylhexane	26.81	57	126549	52.902	ug/L	90
54) Ethylcyclopentane	26.86	69	128111	54.516	ug/L	92
55) 2,2,3-Trimethylpentane	27.06	57	253140	53.553	ug/L	97
57) 2,3,4-Trimethylpentane	28.59	43	164360	49.768	ug/L	97
58) 2,3,3-Trimethylpentane	29.17	43	141589	50.250	ug/L	98
59) 2,3-Dimethylhexane	29.43	43	155000	49.927	ug/L	99
60) 2-Methylheptane	29.86	57	141556	51.291	ug/L	96
61) 4-Methylheptane	30.04	43	162605	49.476	ug/L	98
63) 3-Methylheptane	30.61	43	125857	46.440	ug/L	98
65) 3-Ethylhexane	30.73	43	177547M4	52.218	ug/L	
66) Toluene	30.92	91	392196	54.405	ug/L	100
67) 2-Methylthiophene	31.09	97	310252	55.986	ug/L	99
68) trans-1,4-Dimethylcycl...	31.56	97	195046	55.082	ug/L	96
69) 3-Methylthiophene	31.85	97	310021	55.446	ug/L	99
70) 1-Octene	32.28	55	71063	50.505	ug/L	96

Data Path : O:\Organics\DATA\VOA6\2020\09-SEP\200918\
Data File : V6012559.D
Acq On : 23 Sep 2020 11:10 am
Operator : VOA6:RY
Sample : WG1413379-7,31,5,5
Misc : WG1413379,ICAL17149
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Sep 23 12:43:47 2020
Quant Method : O:\Organics\DATA\VOA6\2020\09-SEP\200918\P6091820W.M
Quant Title : PIANO VOLATILES
QLast Update : Sat Sep 19 08:40:17 2020
Response via : Initial Calibration

Sub List : PIANO - PIANO

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
71) Octane	33.11	43	136255	49.269	ug/L	98
72) trans-1,2-Dimethylcycl...	33.39	55	124643	51.451	ug/L	87
73) 1,2-Dibromoethane	33.62	107	84489	56.963	ug/L	97
75) cis-2-Octene	34.48	55	109550	51.593	ug/L	95
76) Isopropylcyclopentane	34.61	68	147579	56.479	ug/L	96
77) cis-1,2-Dimethylcycloh...	36.38	55	117697	51.032	ug/L	92
78) 2,5-Dimethylheptane	36.71	57	213360	52.922	ug/L	99
79) 3,5-Dimethylheptane	36.85	57	243361M4	53.201	ug/L	
80) 3,3-Dimethylheptane	37.09	57	158425	51.053	ug/L	96
81) 1,1,4-Trimethylcyclohe...	37.61	69	152014	52.837	ug/L	98
82) 2,3-Dimethylheptane	38.77	43	175986	49.553	ug/L	99
83) 3,4-Dimethylheptane	39.06	43	112256	49.236	ug/L	97
84) 4-Methyloctane	39.36	43	168819	49.676	ug/L	99
85) 2-Methyloctane	39.45	43	146471M3	51.353	ug/L	
86) Ethylbenzene	39.96	91	436703	53.581	ug/L	100
88) 2-Ethylthiophene	40.10	97	344311	54.877	ug/L	99
89) 3-Methyloctane	40.11	57	269560	52.364	ug/L	98
90) 3,3-Diethylpentane	41.10	57	312152	51.886	ug/L	97
91) p/m-Xylene	41.21	91	664144	106.846	ug/L	100
92) 1-Nonene	41.88	56	77618	51.827	ug/L	94
93) trans-3-Nonene	42.28	55	103068	50.616	ug/L	92
94) cis-3-Nonene	42.57	55	115636M4	51.317	ug/L	
95) Nonane	42.65	43	133549M4	49.409	ug/L	
96) Styrene	43.07	104	281916	53.888	ug/L	99
98) o-Xylene	43.48	91	345608	53.037	ug/L	99
99) 2-Nonene	43.91	55	109492	51.937	ug/L	96
100) Isopropylcyclohexane	45.19	83	165868	53.454	ug/L	96
102) Isopropylbenzene	45.80	105	455341	53.623	ug/L	99
103) 3,3-Dimethyloctane	46.30	71	243861	54.171	ug/L	96
104) n-Propylbenzene	48.43	91	532983	53.375	ug/L	98
105) 2-Methylnonane	48.49	43	133776	51.106	ug/L	97
106) 3-Methylnonane	48.94	57	168279	52.670	ug/L	98
107) 1-Methyl-3-ethylbenzene	49.07	105	455322	53.923	ug/L	99
108) 1-Methyl-4-ethylbenzene	49.25	105	443075	54.168	ug/L	99
109) 1,3,5-Trimethylbenzene	49.85	105	379999	53.807	ug/L	99
110) 1-Decene	49.99	41	84174	51.048	ug/L	98
111) Isobutylcyclohexane	50.14	83	182726	54.932	ug/L	100
112) 1-Methyl-2-ethylbenzene	50.18	105	472706	54.394	ug/L	98
113) Decane	50.38	43	119654	51.423	ug/L	97
114) tert-Butylbenzene	50.64	119	348590	54.172	ug/L	99
115) 1,2,4-Trimethylbenzene	51.07	105	392164	54.224	ug/L	100

Quantitation Report (QT Reviewed)

Data Path : O:\Organics\DATA\VOA6\2020\09-SEP\200918\
Data File : V6012559.D
Acq On : 23 Sep 2020 11:10 am
Operator : VOA6:RY
Sample : WG1413379-7,31,5,5
Misc : WG1413379,ICAL17149
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Sep 23 12:43:47 2020
Quant Method : O:\Organics\DATA\VOA6\2020\09-SEP\200918\P6091820W.M
Quant Title : PIANO VOLATILES
QLast Update : Sat Sep 19 08:40:17 2020
Response via : Initial Calibration

Sub List : PIANO - PIANO

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
116) Isobutylbenzene	51.27	91	445491M4	55.937	ug/L	
117) sec-Butylbenzene	51.33	105	516521	54.809	ug/L	97
118) 1-Methyl-3-isopropylbe...	51.72	119	431660	54.494	ug/L	99
119) 1-Methyl-4-isopropylbe...	51.92	119	447839	54.398	ug/L	100
120) 1,2,3-Trimethylbenzene	52.20	105	394000	53.857	ug/L	99
121) 1-Methyl-2-isopropylbe...	52.41	119	441343	54.204	ug/L	99
122) Indan	52.50	117	378060	54.147	ug/L	99
123) 1,3-Diethylbenzene	52.66	105	275831	54.694	ug/L	98
124) 1-Methyl-3-propylbenzene	52.77	105	518172	55.284	ug/L	98
125) Indene	52.93	115	339594	55.222	ug/L	98
126) 1-Methyl-4-propylbenzene	52.92	105	659920	55.652	ug/L	97
127) n-Butylbenzene	52.92	91	496277	55.500	ug/L	98
128) 1,2-Dimethyl-4-ethylbe...	53.05	119	473072	54.861	ug/L	99
129) 1,2-Diethylbenzene	53.14	119	228421	55.384	ug/L	96
130) 1-Methyl-2-propylbenzene	53.33	105	567288	55.321	ug/L	99
131) 1,4-Dimethyl-2-ethylbe...	53.65	119	438181	54.738	ug/L	99
132) Undecane	53.69	57	144432	54.155	ug/L	97
133) 1,3-Dimethyl-4-ethylbe...	53.74	119	532010	54.967	ug/L	99
134) 1,3-Dimethyl-5-ethylbe...	53.88	119	503515	55.379	ug/L	100
135) 1,3-Dimethyl-2-ethylbe...	54.10	119	514988	54.660	ug/L	99
136) 1,2-Dimethyl-3-ethylbe...	54.46	119	456455	54.238	ug/L	99
137) 1,2,4,5-Tetramethylben...	54.86	119	480477	53.959	ug/L	98
138) 1,2,3,5-Tetramethylben...	54.95	119	431131	54.371	ug/L	100
139) Pentylbenzene	55.43	91	413806	55.592	ug/L	99
140) 1,2,3,4-Tetramethylben...	55.76	119	572280	54.346	ug/L	99
141) 1,3-DM-5-tert-Butylben...	55.75	147	437249	54.715	ug/L	98
142) Dodecane	55.91	43	91261	47.037	ug/L	95
143) 1,3,5-Triethylbenzene	56.63	147	275961	54.167	ug/L	99
144) Naphthalene	56.77	128	391562	53.929	ug/L	100
145) Benzothiophene	56.86	134	215033	54.310	ug/L	98
146) 1,2,4-Triethylbenzene	57.18	147	254827	54.143	ug/L	98
147) Hexylbenzene	57.67	91	377397	55.433	ug/L	99
148) MMT	57.92	134	155120	54.564	ug/L	98
149) Tridecane	57.98	57	92891	45.322	ug/L	94
150) 2-Methylnaphthalene	59.48	142	261288	53.402	ug/L	97
151) 1-Methylnaphthalene	59.95	142	218701	53.721	ug/L	96
152) Tetradecane	60.22	57	80491	47.065	ug/L	91
153) Pentadecane	62.93	57	63341	48.926	ug/L	96

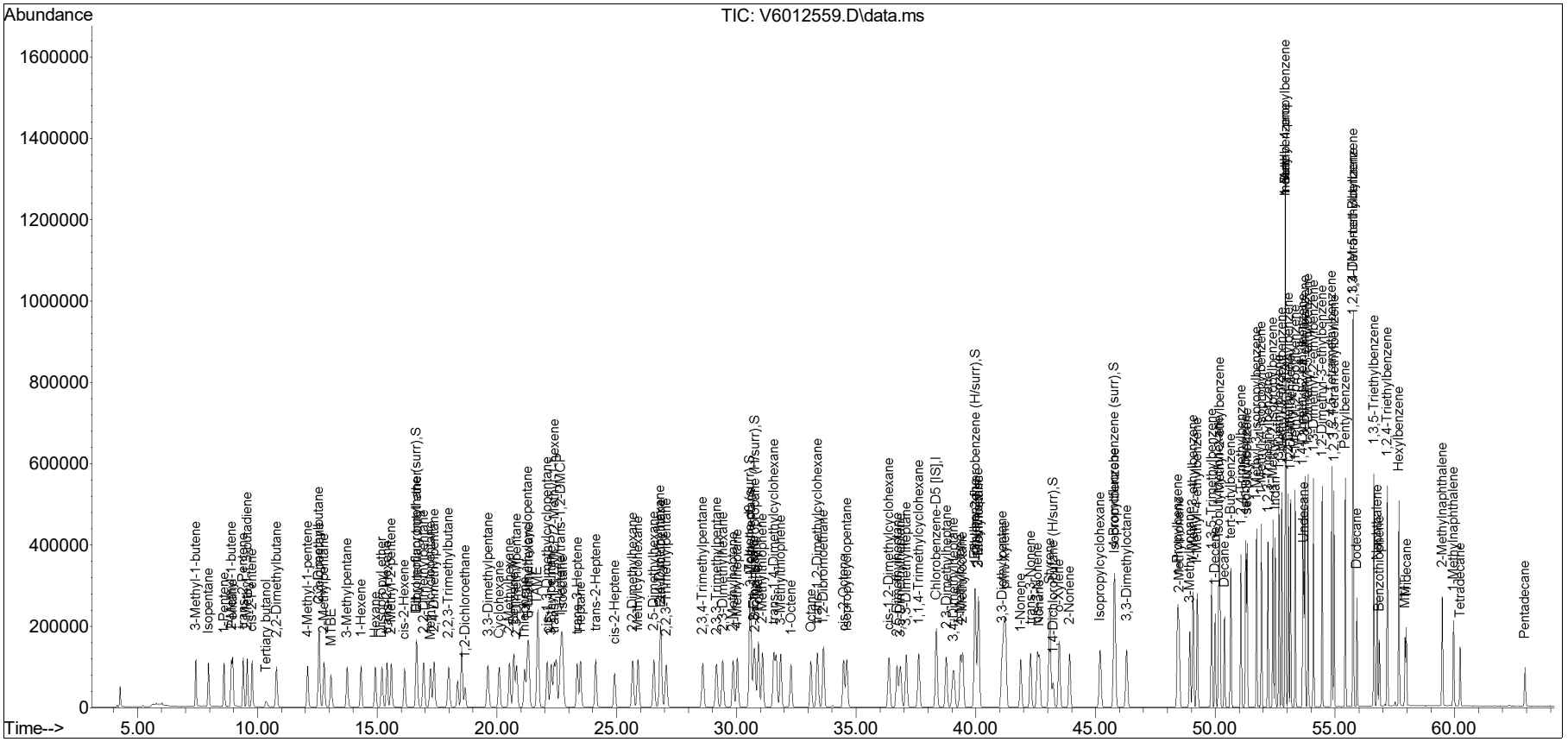
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : O:\Organics\DATA\VOA6\2020\09-SEP\200918\
Data File : V6012559.D
Acq On : 23 Sep 2020 11:10 am
Operator : VOA6:RY
Sample : WG1413379-7,31,5,5
Misc : WG1413379,ICAL17149
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Sep 23 12:43:47 2020
Quant Method : O:\Organics\DATA\VOA6\2020\09-SEP\200918\P6091820W.M
Quant Title : PIANO VOLATILES
QLast Update : Sat Sep 19 08:40:17 2020
Response via : Initial Calibration

Sub List : PIANO - PIANO



Sample Raw Data

Quantitation Report (QT Reviewed)

Data Path : O:\Organics\DATA\VOA6\2020\09-SEP\200918\
Data File : V6012546.D
Acq On : 22 Sep 2020 7:40 pm
Operator : VOA6:RY
Sample : L2037809-01,31,5,5
Misc : WG1413379,ICAL17149
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Sep 23 16:21:19 2020
Quant Method : O:\Organics\DATA\VOA6\2020\09-SEP\200918\P6091820W.M
Quant Title : PIANO VOLATILES
QLast Update : Sat Sep 19 08:40:17 2020
Response via : Initial Calibration

Sub List : PIANO - PIANO

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Chlorobenzene-D5 [IS]	38.35	117	441591	50.000	ug/L	0.00
System Monitoring Compounds						
24) Dibromofluoromethane (...	16.63	113	143594	52.147	ug/L	0.00
Spiked Amount 50.000	Range 78 - 118		Recovery = 104.29%			
62) Toluene-d8 (surr)	30.56	98	534898	50.791	ug/L	0.00
Spiked Amount 50.000	Range 87 - 113		Recovery = 101.58%			
64) 2-Bromo-1-chloropropan...	0.00	77	0	0.000	ug/L	
Spiked Amount 50.000	Range 70 - 130		Recovery = 0.00%#			
87) 1-Chloro-2-fluorobenze...	0.00	130	0	0.000	ug/L	
Spiked Amount 50.000	Range 70 - 130		Recovery = 0.00%#			
97) 1,4-Dichlorobutane (H/...	0.00	55	0	0.000	ug/L	
Spiked Amount 50.000	Range 70 - 130		Recovery = 0.00%#			
101) 4-Bromofluorobenzene (...	45.77	95	202788	46.329	ug/L	0.00
Spiked Amount 50.000	Range 76 - 120		Recovery = 92.66%			

Target Compounds			Qvalue
2) 3-Methyl-1-butene	0.00	0	N.D.
3) Isopentane	0.00	0	N.D.
4) 1-Pentene	0.00	0	N.D.
5) 2-Methyl-1-butene	0.00	0	N.D.
6) Pentane	0.00	0	N.D.
7) trans-2-Pentene	0.00	0	N.D.
8) 2-Methyl-1,3-butadiene	0.00	0	N.D.
9) cis-2-Pentene	0.00	0	N.D.
10) Tertiary butanol	0.00	0	N.D.
11) 2,2-Dimethylbutane	0.00	0	N.D.
12) 4-Methyl-1-pentene	0.00	0	N.D.
13) Cyclopentane	0.00	0	N.D.
14) 2,3-Dimethylbutane	0.00	0	N.D.
15) 2-Methylpentane	0.00	0	N.D.
16) MTBE	0.00	0	N.D.
17) 3-Methylpentane	0.00	0	N.D.
18) 1-Hexene	0.00	0	N.D.
19) Hexane	0.00	0	N.D.
20) Diisopropyl ether	0.00	0	N.D.
21) trans-2-Hexene	0.00	0	N.D.
22) 2-Methyl-2-pentene	0.00	0	N.D.
23) cis-2-Hexene	0.00	0	N.D.
25) Ethyl tertiary butyl e...	0.00	0	N.D.

Data Path : O:\Organics\DATA\VOA6\2020\09-SEP\200918\
Data File : V6012546.D
Acq On : 22 Sep 2020 7:40 pm
Operator : VOA6:RY
Sample : L2037809-01,31,5,5
Misc : WG1413379,ICAL17149
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Sep 23 16:21:19 2020
Quant Method : O:\Organics\DATA\VOA6\2020\09-SEP\200918\P6091820W.M
Quant Title : PIANO VOLATILES
QLast Update : Sat Sep 19 08:40:17 2020
Response via : Initial Calibration

Sub List : PIANO - PIANO

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
26) 2,2-Dimethylpentane	0.00		0	N.D.			
27) Methylcyclopentane	0.00		0	N.D.			
28) 2,4-Dimethylpentane	0.00		0	N.D.			
29) 2,2,3-Trimethylbutane	0.00		0	N.D.			
30) 1,2-Dichloroethane	0.00		0	N.D.		d	
31) 3,3-Dimethylpentane	0.00		0	N.D.			
32) Cyclohexane	0.00		0	N.D.			
33) 2-Methylhexane	0.00		0	N.D.			
34) Benzene	0.00		0	N.D.			
35) 2,3-Dimethylpentane	0.00		0	N.D.			
36) Thiophene	0.00		0	N.D.			
37) 1,1-Dimethylcyclopentane	0.00		0	N.D.			
38) 3-Methylhexane	0.00		0	N.D.			
39) TAME	0.00		0	N.D.		d	
40) cis-1,3-Dimethylcyclop...	0.00		0	N.D.			
41) 3-Ethylpentane	0.00		0	N.D.			
42) trans-1,3-DMCP/2-Methy...	0.00		0	N.D.			
43) 1-Heptene/trans-1,2-DMCP	0.00		0	N.D.			
44) Isooctane	0.00		0	N.D.			
45) trans-3-Heptene	0.00		0	N.D.			
46) Heptane	0.00		0	N.D.			
48) trans-2-Heptene	0.00		0	N.D.			
49) cis-2-Heptene	0.00		0	N.D.			
50) 2,2-Dimethylhexane	0.00		0	N.D.			
51) Methylcyclohexane	0.00		0	N.D.			
52) 2,5-Dimethylhexane	0.00		0	N.D.			
53) 2,4-Dimethylhexane	0.00		0	N.D.			
54) Ethylcyclopentane	0.00		0	N.D.			
55) 2,2,3-Trimethylpentane	0.00		0	N.D.			
57) 2,3,4-Trimethylpentane	0.00		0	N.D.			
58) 2,3,3-Trimethylpentane	0.00		0	N.D.			
59) 2,3-Dimethylhexane	0.00		0	N.D.			
60) 2-Methylheptane	0.00		0	N.D.			
61) 4-Methylheptane	0.00		0	N.D.			
63) 3-Methylheptane	0.00		0	N.D.		d	
65) 3-Ethylhexane	0.00		0	N.D.		d	
66) Toluene	30.92	91	2099	0.261	ug/L		94
67) 2-Methylthiophene	0.00		0	N.D.			
68) trans-1,4-Dimethylcycl...	0.00		0	N.D.			
69) 3-Methylthiophene	0.00		0	N.D.			
70) 1-Octene	0.00		0	N.D.			

Data Path : O:\Organics\DATA\VOA6\2020\09-SEP\200918\
Data File : V6012546.D
Acq On : 22 Sep 2020 7:40 pm
Operator : VOA6:RY
Sample : L2037809-01,31,5,5
Misc : WG1413379,ICAL17149
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Sep 23 16:21:19 2020
Quant Method : O:\Organics\DATA\VOA6\2020\09-SEP\200918\P6091820W.M
Quant Title : PIANO VOLATILES
QLast Update : Sat Sep 19 08:40:17 2020
Response via : Initial Calibration

Sub List : PIANO - PIANO

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
71) Octane	0.00		0	N.D.		
72) trans-1,2-Dimethylcycl...	0.00		0	N.D.		
73) 1,2-Dibromoethane	0.00		0	N.D.		
75) cis-2-Octene	0.00		0	N.D.		
76) Isopropylcyclopentane	0.00		0	N.D.		
77) cis-1,2-Dimethylcycloh...	0.00		0	N.D.		
78) 2,5-Dimethylheptane	0.00		0	N.D.		
79) 3,5-Dimethylheptane	0.00		0	N.D.		
80) 3,3-Dimethylheptane	0.00		0	N.D.		
81) 1,1,4-Trimethylcyclohe...	0.00		0	N.D.		
82) 2,3-Dimethylheptane	0.00		0	N.D.		
83) 3,4-Dimethylheptane	0.00		0	N.D.		
84) 4-Methyloctane	0.00		0	N.D.		
85) 2-Methyloctane	0.00		0	N.D.		
86) Ethylbenzene	0.00		0	N.D.	d	
88) 2-Ethylthiophene	0.00		0	N.D.		
89) 3-Methyloctane	0.00		0	N.D.		
90) 3,3-Diethylpentane	0.00		0	N.D.		
91) p/m-Xylene	0.00		0	N.D.		
92) 1-Nonene	0.00		0	N.D.		
93) trans-3-Nonene	0.00		0	N.D.		
94) cis-3-Nonene	0.00		0	N.D.		
95) Nonane	0.00		0	N.D.		
96) Styrene	0.00		0	N.D.		
98) o-Xylene	0.00		0	N.D.		
99) 2-Nonene	0.00		0	N.D.		
100) Isopropylcyclohexane	0.00		0	N.D.		
102) Isopropylbenzene	0.00		0	N.D.		
103) 3,3-Dimethyloctane	0.00		0	N.D.		
104) n-Propylbenzene	0.00		0	N.D.		
105) 2-Methylnonane	0.00		0	N.D.		
106) 3-Methylnonane	0.00		0	N.D.		
107) 1-Methyl-3-ethylbenzene	0.00		0	N.D.		
108) 1-Methyl-4-ethylbenzene	0.00		0	N.D.		
109) 1,3,5-Trimethylbenzene	0.00		0	N.D.	d	
110) 1-Decene	0.00		0	N.D.		
111) Isobutylcyclohexane	0.00		0	N.D.		
112) 1-Methyl-2-ethylbenzene	0.00		0	N.D.	d	
113) Decane	0.00		0	N.D.		
114) tert-Butylbenzene	0.00		0	N.D.		
115) 1,2,4-Trimethylbenzene	51.07	105	1299	0.161	ug/L #	29

Quantitation Report (QT Reviewed)

Data Path : O:\Organics\DATA\VOA6\2020\09-SEP\200918\
Data File : V6012546.D
Acq On : 22 Sep 2020 7:40 pm
Operator : VOA6:RY
Sample : L2037809-01,31,5,5
Misc : WG1413379,ICAL17149
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Sep 23 16:21:19 2020
Quant Method : O:\Organics\DATA\VOA6\2020\09-SEP\200918\P6091820W.M
Quant Title : PIANO VOLATILES
QLast Update : Sat Sep 19 08:40:17 2020
Response via : Initial Calibration

Sub List : PIANO - PIANO

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
116) Isobutylbenzene	0.00		0		N.D.	
117) sec-Butylbenzene	0.00		0		N.D.	
118) 1-Methyl-3-isopropylbe...	0.00		0		N.D.	
119) 1-Methyl-4-isopropylbe...	0.00		0		N.D.	
120) 1,2,3-Trimethylbenzene	0.00		0		N.D.	d
121) 1-Methyl-2-isopropylbe...	0.00		0		N.D.	
122) Indan	0.00		0		N.D.	
123) 1,3-Diethylbenzene	0.00		0		N.D.	
124) 1-Methyl-3-propylbenzene	0.00		0		N.D.	
125) Indene	0.00		0		N.D.	
126) 1-Methyl-4-propylbenzene	0.00		0		N.D.	
127) n-Butylbenzene	0.00		0		N.D.	
128) 1,2-Dimethyl-4-ethylbe...	0.00		0		N.D.	
129) 1,2-Diethylbenzene	0.00		0		N.D.	
130) 1-Methyl-2-propylbenzene	0.00		0		N.D.	
131) 1,4-Dimethyl-2-ethylbe...	0.00		0		N.D.	
132) Undecane	0.00		0		N.D.	
133) 1,3-Dimethyl-4-ethylbe...	0.00		0		N.D.	
134) 1,3-Dimethyl-5-ethylbe...	0.00		0		N.D.	
135) 1,3-Dimethyl-2-ethylbe...	0.00		0		N.D.	
136) 1,2-Dimethyl-3-ethylbe...	0.00		0		N.D.	
137) 1,2,4,5-Tetramethylben...	0.00		0		N.D.	
138) 1,2,3,5-Tetramethylben...	0.00		0		N.D.	
139) Pentylbenzene	0.00		0		N.D.	
140) 1,2,3,4-Tetramethylben...	0.00		0		N.D.	
141) 1,3-DM-5-tert-Butylben...	0.00		0		N.D.	
142) Dodecane	0.00		0		N.D.	
143) 1,3,5-Triethylbenzene	0.00		0		N.D.	
144) Naphthalene	0.00		0		N.D.	
145) Benzothiophene	0.00		0		N.D.	
146) 1,2,4-Triethylbenzene	0.00		0		N.D.	
147) Hexylbenzene	0.00		0		N.D.	
148) MMT	0.00		0		N.D.	
149) Tridecane	0.00		0		N.D.	
150) 2-Methylnaphthalene	0.00		0		N.D.	
151) 1-Methylnaphthalene	0.00		0		N.D.	
152) Tetradecane	0.00		0		N.D.	
153) Pentadecane	0.00		0		N.D.	

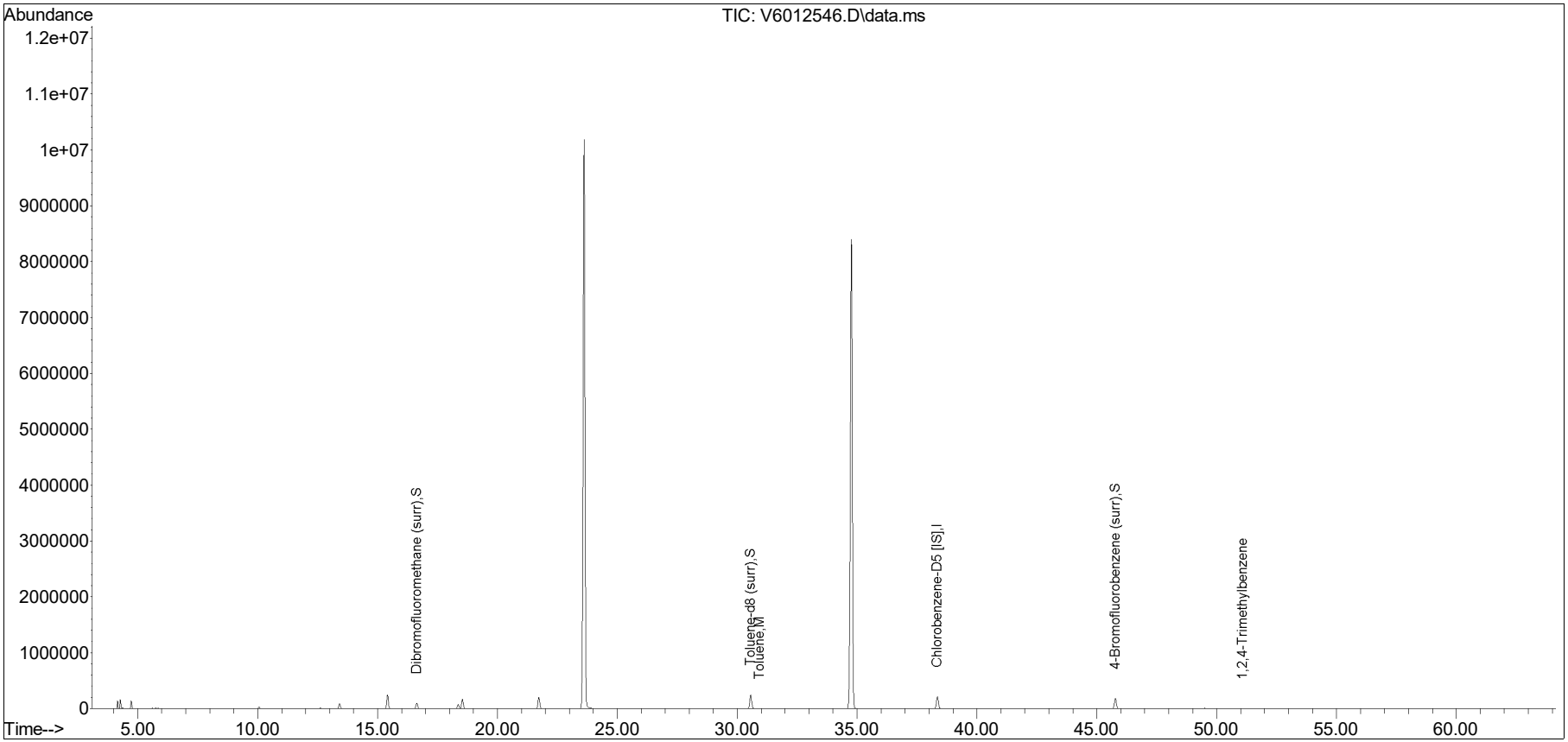
(#) = qualifier out of range (m) = manual integration (+) = signals summed

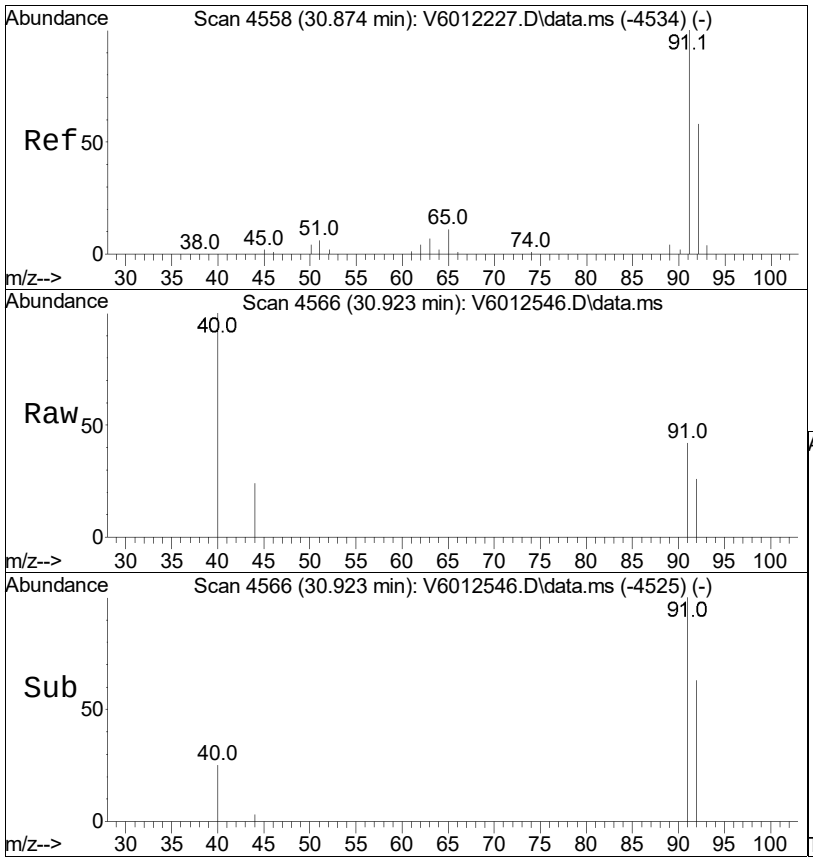
Quantitation Report (QT Reviewed)

Data Path : O:\Organics\DATA\VOA6\2020\09-SEP\200918\
Data File : V6012546.D
Acq On : 22 Sep 2020 7:40 pm
Operator : VOA6:RY
Sample : L2037809-01,31,5,5
Misc : WG1413379,ICAL17149
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Sep 23 16:21:19 2020
Quant Method : O:\Organics\DATA\VOA6\2020\09-SEP\200918\P6091820W.M
Quant Title : PIANO VOLATILES
QLast Update : Sat Sep 19 08:40:17 2020
Response via : Initial Calibration

Sub List : PIANO - PIANO

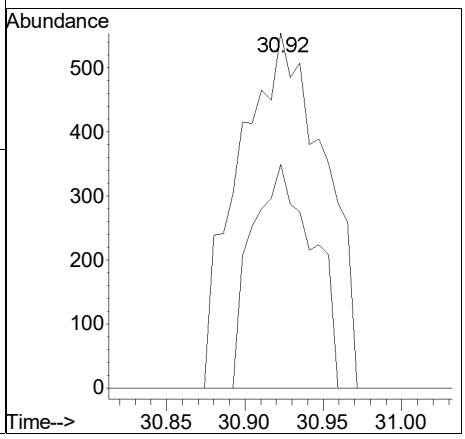


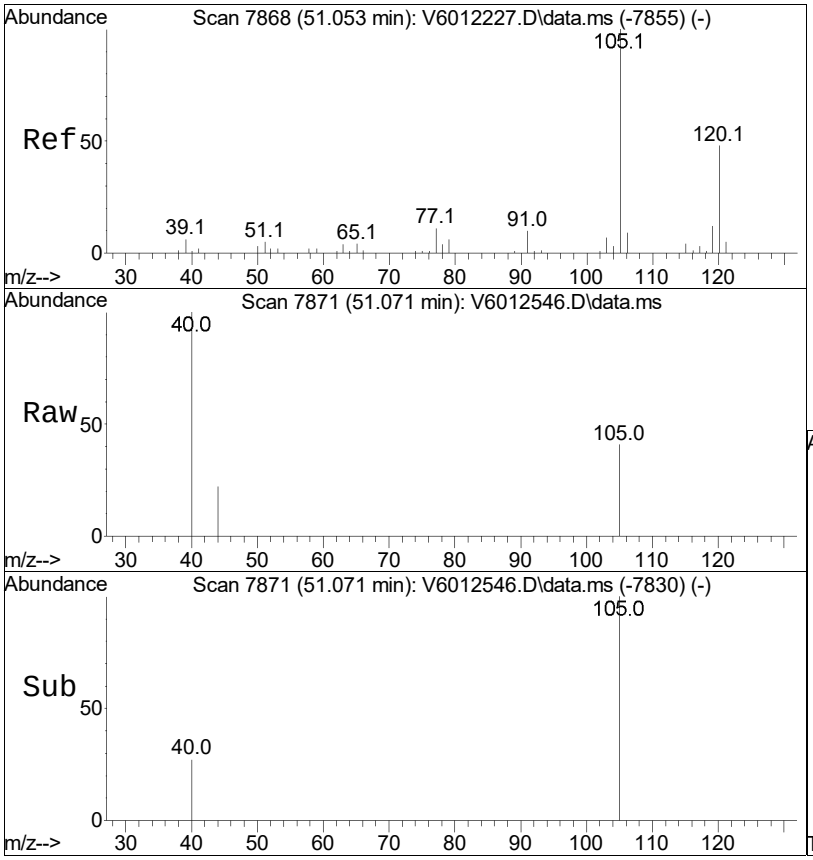


#66
Toluene
Concen: 0.26 ug/L
RT: 30.92 min Scan# 4566
Delta R.T. -0.000 min
Lab File: V6012546.D
Acq: 22 Sep 2020 7:40 pm

Tgt Ion: 91 Resp: 2099

Ion	Ratio	Lower	Upper
91	100		
92	63.0	38.2	78.2

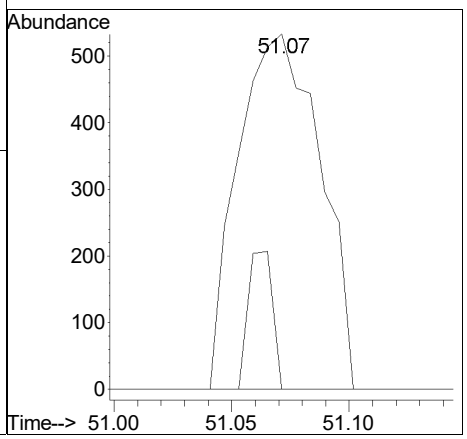




#115
1,2,4-Trimethylbenzene
Concen: 0.16 ug/L
RT: 51.07 min Scan# 7871
Delta R.T. -0.000 min
Lab File: V6012546.D
Acq: 22 Sep 2020 7:40 pm

Tgt Ion:105 Resp: 1299

Ion	Ratio	Lower	Upper
105	100		
120	0.0	27.6	67.6#



Quantitation Report (QT Reviewed)

Data Path : O:\Organics\DATA\VOA6\2020\09-SEP\200918\
Data File : V6012547.D
Acq On : 22 Sep 2020 8:51 pm
Operator : VOA6:RY
Sample : L2037809-02,31,5,5
Misc : WG1413379,ICAL17149
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Sep 23 16:22:28 2020
Quant Method : O:\Organics\DATA\VOA6\2020\09-SEP\200918\P6091820W.M
Quant Title : PIANO VOLATILES
QLast Update : Sat Sep 19 08:40:17 2020
Response via : Initial Calibration

Sub List : PIANO - PIANO

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Chlorobenzene-D5 [IS]	38.35	117	427096	50.000	ug/L	0.00
System Monitoring Compounds						
24) Dibromofluoromethane (...	16.63	113	142417	53.475	ug/L	0.00
Spiked Amount 50.000	Range 78 - 118		Recovery = 106.95%			
62) Toluene-d8 (surr)	30.56	98	517553	50.812	ug/L	0.00
Spiked Amount 50.000	Range 87 - 113		Recovery = 101.62%			
64) 2-Bromo-1-chloropropan...	0.00	77	0	0.000	ug/L	
Spiked Amount 50.000	Range 70 - 130		Recovery = 0.00%#			
87) 1-Chloro-2-fluorobenze...	0.00	130	0	0.000	ug/L	
Spiked Amount 50.000	Range 70 - 130		Recovery = 0.00%#			
97) 1,4-Dichlorobutane (H/...	0.00	55	0	0.000	ug/L	
Spiked Amount 50.000	Range 70 - 130		Recovery = 0.00%#			
101) 4-Bromofluorobenzene (...	45.77	95	197554	46.665	ug/L	0.00
Spiked Amount 50.000	Range 76 - 120		Recovery = 93.33%			
Target Compounds						Qvalue
2) 3-Methyl-1-butene	0.00		0	N.D.		
3) Isopentane	0.00		0	N.D.		
4) 1-Pentene	0.00		0	N.D.		
5) 2-Methyl-1-butene	0.00		0	N.D.		
6) Pentane	0.00		0	N.D.		d
7) trans-2-Pentene	0.00		0	N.D.		
8) 2-Methyl-1,3-butadiene	0.00		0	N.D.		
9) cis-2-Pentene	0.00		0	N.D.		
10) Tertiary butanol	0.00		0	N.D.		
11) 2,2-Dimethylbutane	0.00		0	N.D.		
12) 4-Methyl-1-pentene	0.00		0	N.D.		
13) Cyclopentane	0.00		0	N.D.		
14) 2,3-Dimethylbutane	0.00		0	N.D.		
15) 2-Methylpentane	0.00		0	N.D.		
16) MTBE	0.00		0	N.D.		
17) 3-Methylpentane	0.00		0	N.D.		
18) 1-Hexene	0.00		0	N.D.		
19) Hexane	0.00		0	N.D.		
20) Diisopropyl ether	0.00		0	N.D.		
21) trans-2-Hexene	0.00		0	N.D.		
22) 2-Methyl-2-pentene	0.00		0	N.D.		
23) cis-2-Hexene	0.00		0	N.D.		
25) Ethyl tertiary butyl e...	0.00		0	N.D.		

Data Path : O:\Organics\DATA\VOA6\2020\09-SEP\200918\
Data File : V6012547.D
Acq On : 22 Sep 2020 8:51 pm
Operator : VOA6:RY
Sample : L2037809-02,31,5,5
Misc : WG1413379,ICAL17149
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Sep 23 16:22:28 2020
Quant Method : O:\Organics\DATA\VOA6\2020\09-SEP\200918\P6091820W.M
Quant Title : PIANO VOLATILES
QLast Update : Sat Sep 19 08:40:17 2020
Response via : Initial Calibration

Sub List : PIANO - PIANO

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
26) 2,2-Dimethylpentane	0.00		0		N.D.	
27) Methylcyclopentane	0.00		0		N.D.	
28) 2,4-Dimethylpentane	0.00		0		N.D.	
29) 2,2,3-Trimethylbutane	0.00		0		N.D.	
30) 1,2-Dichloroethane	0.00		0		N.D.	d
31) 3,3-Dimethylpentane	0.00		0		N.D.	
32) Cyclohexane	0.00		0		N.D.	
33) 2-Methylhexane	0.00		0		N.D.	
34) Benzene	0.00		0		N.D.	
35) 2,3-Dimethylpentane	0.00		0		N.D.	
36) Thiophene	0.00		0		N.D.	
37) 1,1-Dimethylcyclopentane	0.00		0		N.D.	
38) 3-Methylhexane	0.00		0		N.D.	
39) TAME	0.00		0		N.D.	d
40) cis-1,3-Dimethylcyclop...	0.00		0		N.D.	
41) 3-Ethylpentane	0.00		0		N.D.	
42) trans-1,3-DMCP/2-Methy...	0.00		0		N.D.	
43) 1-Heptene/trans-1,2-DMCP	0.00		0		N.D.	
44) Isooctane	0.00		0		N.D.	
45) trans-3-Heptene	0.00		0		N.D.	
46) Heptane	0.00		0		N.D.	
48) trans-2-Heptene	0.00		0		N.D.	
49) cis-2-Heptene	0.00		0		N.D.	
50) 2,2-Dimethylhexane	0.00		0		N.D.	
51) Methylcyclohexane	0.00		0		N.D.	
52) 2,5-Dimethylhexane	0.00		0		N.D.	
53) 2,4-Dimethylhexane	0.00		0		N.D.	
54) Ethylcyclopentane	0.00		0		N.D.	
55) 2,2,3-Trimethylpentane	0.00		0		N.D.	
57) 2,3,4-Trimethylpentane	0.00		0		N.D.	
58) 2,3,3-Trimethylpentane	0.00		0		N.D.	
59) 2,3-Dimethylhexane	0.00		0		N.D.	
60) 2-Methylheptane	0.00		0		N.D.	
61) 4-Methylheptane	0.00		0		N.D.	
63) 3-Methylheptane	0.00		0		N.D.	d
65) 3-Ethylhexane	0.00		0		N.D.	d
66) Toluene	0.00		0		N.D.	
67) 2-Methylthiophene	0.00		0		N.D.	
68) trans-1,4-Dimethylcycl...	0.00		0		N.D.	
69) 3-Methylthiophene	0.00		0		N.D.	
70) 1-Octene	0.00		0		N.D.	

Data Path : O:\Organics\DATA\VOA6\2020\09-SEP\200918\
Data File : V6012547.D
Acq On : 22 Sep 2020 8:51 pm
Operator : VOA6:RY
Sample : L2037809-02,31,5,5
Misc : WG1413379,ICAL17149
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Sep 23 16:22:28 2020
Quant Method : O:\Organics\DATA\VOA6\2020\09-SEP\200918\P6091820W.M
Quant Title : PIANO VOLATILES
QLast Update : Sat Sep 19 08:40:17 2020
Response via : Initial Calibration

Sub List : PIANO - PIANO

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
71) Octane	0.00		0		N.D.	
72) trans-1,2-Dimethylcycl...	0.00		0		N.D.	
73) 1,2-Dibromoethane	0.00		0		N.D.	
75) cis-2-Octene	0.00		0		N.D.	
76) Isopropylcyclopentane	0.00		0		N.D.	
77) cis-1,2-Dimethylcycloh...	0.00		0		N.D.	
78) 2,5-Dimethylheptane	0.00		0		N.D.	
79) 3,5-Dimethylheptane	0.00		0		N.D.	
80) 3,3-Dimethylheptane	0.00		0		N.D.	
81) 1,1,4-Trimethylcyclohe...	0.00		0		N.D.	
82) 2,3-Dimethylheptane	0.00		0		N.D.	
83) 3,4-Dimethylheptane	0.00		0		N.D.	
84) 4-Methyloctane	0.00		0		N.D.	
85) 2-Methyloctane	0.00		0		N.D.	
86) Ethylbenzene	0.00		0		N.D.	
88) 2-Ethylthiophene	0.00		0		N.D.	
89) 3-Methyloctane	0.00		0		N.D.	
90) 3,3-Diethylpentane	0.00		0		N.D.	
91) p/m-Xylene	0.00		0		N.D.	
92) 1-Nonene	0.00		0		N.D.	
93) trans-3-Nonene	0.00		0		N.D.	
94) cis-3-Nonene	0.00		0		N.D.	
95) Nonane	0.00		0		N.D.	
96) Styrene	0.00		0		N.D.	
98) o-Xylene	0.00		0		N.D.	
99) 2-Nonene	0.00		0		N.D.	
100) Isopropylcyclohexane	0.00		0		N.D.	
102) Isopropylbenzene	0.00		0		N.D.	
103) 3,3-Dimethyloctane	0.00		0		N.D.	
104) n-Propylbenzene	0.00		0		N.D.	
105) 2-Methylnonane	0.00		0		N.D.	
106) 3-Methylnonane	0.00		0		N.D.	
107) 1-Methyl-3-ethylbenzene	0.00		0		N.D.	
108) 1-Methyl-4-ethylbenzene	0.00		0		N.D.	
109) 1,3,5-Trimethylbenzene	0.00		0		N.D.	
110) 1-Decene	0.00		0		N.D.	
111) Isobutylcyclohexane	0.00		0		N.D.	
112) 1-Methyl-2-ethylbenzene	0.00		0		N.D.	
113) Decane	0.00		0		N.D.	
114) tert-Butylbenzene	0.00		0		N.D.	
115) 1,2,4-Trimethylbenzene	0.00		0		N.D.	

Quantitation Report (QT Reviewed)

Data Path : O:\Organics\DATA\VOA6\2020\09-SEP\200918\
Data File : V6012547.D
Acq On : 22 Sep 2020 8:51 pm
Operator : VOA6:RY
Sample : L2037809-02,31,5,5
Misc : WG1413379,ICAL17149
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Sep 23 16:22:28 2020
Quant Method : O:\Organics\DATA\VOA6\2020\09-SEP\200918\P6091820W.M
Quant Title : PIANO VOLATILES
QLast Update : Sat Sep 19 08:40:17 2020
Response via : Initial Calibration

Sub List : PIANO - PIANO

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
116) Isobutylbenzene	0.00		0		N.D.	
117) sec-Butylbenzene	0.00		0		N.D.	
118) 1-Methyl-3-isopropylbe...	0.00		0		N.D.	
119) 1-Methyl-4-isopropylbe...	0.00		0		N.D.	
120) 1,2,3-Trimethylbenzene	0.00		0		N.D.	
121) 1-Methyl-2-isopropylbe...	0.00		0		N.D.	
122) Indan	0.00		0		N.D.	
123) 1,3-Diethylbenzene	0.00		0		N.D.	
124) 1-Methyl-3-propylbenzene	0.00		0		N.D.	
125) Indene	0.00		0		N.D.	
126) 1-Methyl-4-propylbenzene	0.00		0		N.D.	
127) n-Butylbenzene	0.00		0		N.D.	
128) 1,2-Dimethyl-4-ethylbe...	0.00		0		N.D.	
129) 1,2-Diethylbenzene	0.00		0		N.D.	
130) 1-Methyl-2-propylbenzene	0.00		0		N.D.	
131) 1,4-Dimethyl-2-ethylbe...	0.00		0		N.D.	
132) Undecane	0.00		0		N.D.	
133) 1,3-Dimethyl-4-ethylbe...	0.00		0		N.D.	
134) 1,3-Dimethyl-5-ethylbe...	0.00		0		N.D.	
135) 1,3-Dimethyl-2-ethylbe...	0.00		0		N.D.	
136) 1,2-Dimethyl-3-ethylbe...	0.00		0		N.D.	
137) 1,2,4,5-Tetramethylben...	0.00		0		N.D.	
138) 1,2,3,5-Tetramethylben...	0.00		0		N.D.	
139) Pentylbenzene	0.00		0		N.D.	
140) 1,2,3,4-Tetramethylben...	0.00		0		N.D.	
141) 1,3-DM-5-tert-Butylben...	0.00		0		N.D.	
142) Dodecane	0.00		0		N.D.	
143) 1,3,5-Triethylbenzene	0.00		0		N.D.	
144) Naphthalene	0.00		0		N.D.	
145) Benzothiophene	0.00		0		N.D.	
146) 1,2,4-Triethylbenzene	0.00		0		N.D.	
147) Hexylbenzene	0.00		0		N.D.	
148) MMT	0.00		0		N.D.	
149) Tridecane	0.00		0		N.D.	
150) 2-Methylnaphthalene	0.00		0		N.D.	
151) 1-Methylnaphthalene	0.00		0		N.D.	
152) Tetradecane	0.00		0		N.D.	
153) Pentadecane	0.00		0		N.D.	

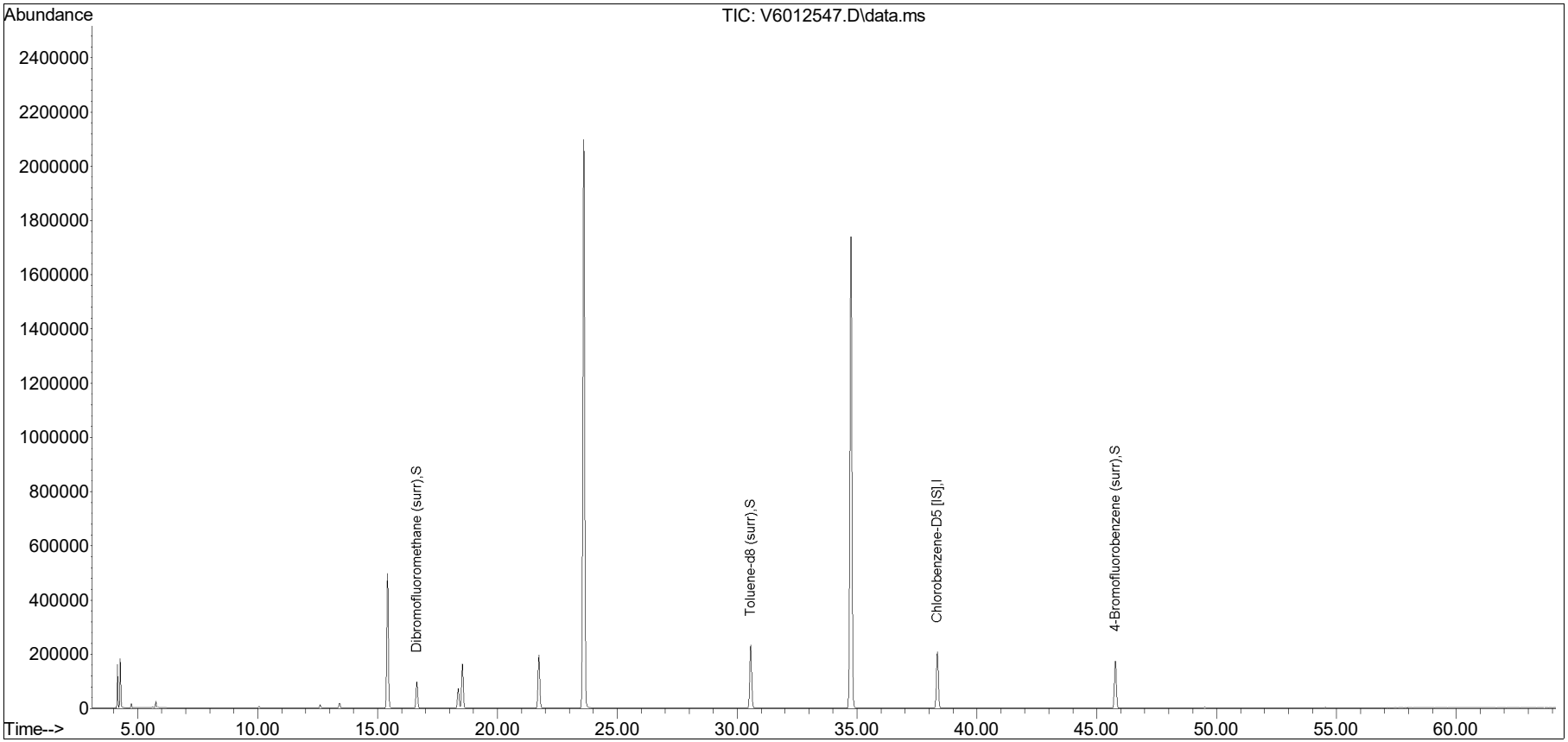
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : O:\Organics\DATA\VOA6\2020\09-SEP\200918\
Data File : V6012547.D
Acq On : 22 Sep 2020 8:51 pm
Operator : VOA6:RY
Sample : L2037809-02,31,5,5
Misc : WG1413379,ICAL17149
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Sep 23 16:22:28 2020
Quant Method : O:\Organics\DATA\VOA6\2020\09-SEP\200918\P6091820W.M
Quant Title : PIANO VOLATILES
QLast Update : Sat Sep 19 08:40:17 2020
Response via : Initial Calibration

Sub List : PIANO - PIANO



Quantitation Report (QT Reviewed)

Data Path : O:\Organics\DATA\VOA6\2020\09-SEP\200918\
Data File : V6012548.D
Acq On : 22 Sep 2020 10:02 pm
Operator : VOA6:RY
Sample : L2037809-03,31,5,5
Misc : WG1413379,ICAL17149
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Sep 23 16:24:33 2020
Quant Method : O:\Organics\DATA\VOA6\2020\09-SEP\200918\P6091820W.M
Quant Title : PIANO VOLATILES
QLast Update : Sat Sep 19 08:40:17 2020
Response via : Initial Calibration

Sub List : PIANO - PIANO

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Chlorobenzene-D5 [IS]	38.35	117	428280	50.000	ug/L	0.00
System Monitoring Compounds						
24) Dibromofluoromethane (...	16.63	113	144123	53.966	ug/L	0.00
Spiked Amount 50.000	Range 78 - 118		Recovery = 107.93%			
62) Toluene-d8 (surr)	30.56	98	518944	50.808	ug/L	0.00
Spiked Amount 50.000	Range 87 - 113		Recovery = 101.62%			
64) 2-Bromo-1-chloropropan...	0.00	77	0	0.000	ug/L	
Spiked Amount 50.000	Range 70 - 130		Recovery = 0.00%#			
87) 1-Chloro-2-fluorobenze...	0.00	130	0	0.000	ug/L	
Spiked Amount 50.000	Range 70 - 130		Recovery = 0.00%#			
97) 1,4-Dichlorobutane (H/...	0.00	55	0	0.000	ug/L	
Spiked Amount 50.000	Range 70 - 130		Recovery = 0.00%#			
101) 4-Bromofluorobenzene (...	45.77	95	198969	46.869	ug/L	0.00
Spiked Amount 50.000	Range 76 - 120		Recovery = 93.74%			

Target Compounds			Qvalue
2) 3-Methyl-1-butene	0.00	0	N.D.
3) Isopentane	0.00	0	N.D.
4) 1-Pentene	0.00	0	N.D.
5) 2-Methyl-1-butene	0.00	0	N.D.
6) Pentane	0.00	0	N.D.
7) trans-2-Pentene	0.00	0	N.D.
8) 2-Methyl-1,3-butadiene	0.00	0	N.D.
9) cis-2-Pentene	0.00	0	N.D.
10) Tertiary butanol	0.00	0	N.D.
11) 2,2-Dimethylbutane	0.00	0	N.D.
12) 4-Methyl-1-pentene	0.00	0	N.D.
13) Cyclopentane	0.00	0	N.D.
14) 2,3-Dimethylbutane	0.00	0	N.D.
15) 2-Methylpentane	0.00	0	N.D.
16) MTBE	0.00	0	N.D.
17) 3-Methylpentane	0.00	0	N.D.
18) 1-Hexene	0.00	0	N.D.
19) Hexane	0.00	0	N.D.
20) Diisopropyl ether	0.00	0	N.D.
21) trans-2-Hexene	0.00	0	N.D.
22) 2-Methyl-2-pentene	0.00	0	N.D.
23) cis-2-Hexene	0.00	0	N.D.
25) Ethyl tertiary butyl e...	0.00	0	N.D.

Data Path : O:\Organics\DATA\VOA6\2020\09-SEP\200918\
Data File : V6012548.D
Acq On : 22 Sep 2020 10:02 pm
Operator : VOA6:RY
Sample : L2037809-03,31,5,5
Misc : WG1413379,ICAL17149
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Sep 23 16:24:33 2020
Quant Method : O:\Organics\DATA\VOA6\2020\09-SEP\200918\P6091820W.M
Quant Title : PIANO VOLATILES
QLast Update : Sat Sep 19 08:40:17 2020
Response via : Initial Calibration

Sub List : PIANO - PIANO

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
26) 2,2-Dimethylpentane	0.00		0	N.D.			
27) Methylcyclopentane	0.00		0	N.D.			
28) 2,4-Dimethylpentane	0.00		0	N.D.			
29) 2,2,3-Trimethylbutane	0.00		0	N.D.			
30) 1,2-Dichloroethane	0.00		0	N.D.		d	
31) 3,3-Dimethylpentane	0.00		0	N.D.			
32) Cyclohexane	0.00		0	N.D.			
33) 2-Methylhexane	0.00		0	N.D.			
34) Benzene	0.00		0	N.D.			
35) 2,3-Dimethylpentane	0.00		0	N.D.			
36) Thiophene	0.00		0	N.D.		d	
37) 1,1-Dimethylcyclopentane	0.00		0	N.D.			
38) 3-Methylhexane	0.00		0	N.D.			
39) TAME	0.00		0	N.D.		d	
40) cis-1,3-Dimethylcyclop...	0.00		0	N.D.			
41) 3-Ethylpentane	0.00		0	N.D.			
42) trans-1,3-DMCP/2-Methy...	0.00		0	N.D.			
43) 1-Heptene/trans-1,2-DMCP	0.00		0	N.D.			
44) Isooctane	0.00		0	N.D.			
45) trans-3-Heptene	0.00		0	N.D.			
46) Heptane	0.00		0	N.D.			
48) trans-2-Heptene	0.00		0	N.D.			
49) cis-2-Heptene	0.00		0	N.D.			
50) 2,2-Dimethylhexane	0.00		0	N.D.			
51) Methylcyclohexane	0.00		0	N.D.			
52) 2,5-Dimethylhexane	0.00		0	N.D.			
53) 2,4-Dimethylhexane	0.00		0	N.D.			
54) Ethylcyclopentane	0.00		0	N.D.			
55) 2,2,3-Trimethylpentane	0.00		0	N.D.			
57) 2,3,4-Trimethylpentane	0.00		0	N.D.			
58) 2,3,3-Trimethylpentane	0.00		0	N.D.			
59) 2,3-Dimethylhexane	0.00		0	N.D.			
60) 2-Methylheptane	0.00		0	N.D.			
61) 4-Methylheptane	0.00		0	N.D.			
63) 3-Methylheptane	0.00		0	N.D.		d	
65) 3-Ethylhexane	0.00		0	N.D.		d	
66) Toluene	30.94	91	2712	0.347	ug/L		88
67) 2-Methylthiophene	0.00		0	N.D.			
68) trans-1,4-Dimethylcycl...	0.00		0	N.D.			
69) 3-Methylthiophene	0.00		0	N.D.			
70) 1-Octene	0.00		0	N.D.			

Data Path : O:\Organics\DATA\VOA6\2020\09-SEP\200918\
Data File : V6012548.D
Acq On : 22 Sep 2020 10:02 pm
Operator : VOA6:RY
Sample : L2037809-03,31,5,5
Misc : WG1413379,ICAL17149
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Sep 23 16:24:33 2020
Quant Method : O:\Organics\DATA\VOA6\2020\09-SEP\200918\P6091820W.M
Quant Title : PIANO VOLATILES
QLast Update : Sat Sep 19 08:40:17 2020
Response via : Initial Calibration

Sub List : PIANO - PIANO

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
71) Octane	0.00		0		N.D.	
72) trans-1,2-Dimethylcycl...	0.00		0		N.D.	
73) 1,2-Dibromoethane	0.00		0		N.D.	
75) cis-2-Octene	0.00		0		N.D.	
76) Isopropylcyclopentane	0.00		0		N.D.	
77) cis-1,2-Dimethylcycloh...	0.00		0		N.D.	
78) 2,5-Dimethylheptane	0.00		0		N.D.	
79) 3,5-Dimethylheptane	0.00		0		N.D.	
80) 3,3-Dimethylheptane	0.00		0		N.D.	
81) 1,1,4-Trimethylcyclohe...	0.00		0		N.D.	
82) 2,3-Dimethylheptane	0.00		0		N.D.	
83) 3,4-Dimethylheptane	0.00		0		N.D.	
84) 4-Methyloctane	0.00		0		N.D.	
85) 2-Methyloctane	0.00		0		N.D.	
86) Ethylbenzene	0.00		0		N.D.	
88) 2-Ethylthiophene	0.00		0		N.D.	
89) 3-Methyloctane	0.00		0		N.D.	
90) 3,3-Diethylpentane	0.00		0		N.D.	
91) p/m-Xylene	0.00		0		N.D.	
92) 1-Nonene	0.00		0		N.D.	
93) trans-3-Nonene	0.00		0		N.D.	
94) cis-3-Nonene	0.00		0		N.D.	
95) Nonane	0.00		0		N.D.	
96) Styrene	0.00		0		N.D.	
98) o-Xylene	0.00		0		N.D.	
99) 2-Nonene	0.00		0		N.D.	
100) Isopropylcyclohexane	0.00		0		N.D.	
102) Isopropylbenzene	0.00		0		N.D.	
103) 3,3-Dimethyloctane	0.00		0		N.D.	
104) n-Propylbenzene	0.00		0		N.D.	
105) 2-Methylnonane	0.00		0		N.D.	
106) 3-Methylnonane	0.00		0		N.D.	
107) 1-Methyl-3-ethylbenzene	0.00		0		N.D.	
108) 1-Methyl-4-ethylbenzene	0.00		0		N.D.	
109) 1,3,5-Trimethylbenzene	0.00		0		N.D.	
110) 1-Decene	0.00		0		N.D.	
111) Isobutylcyclohexane	0.00		0		N.D.	
112) 1-Methyl-2-ethylbenzene	0.00		0		N.D.	
113) Decane	0.00		0		N.D.	
114) tert-Butylbenzene	0.00		0		N.D.	
115) 1,2,4-Trimethylbenzene	0.00		0		N.D.	

Quantitation Report (QT Reviewed)

Data Path : O:\Organics\DATA\VOA6\2020\09-SEP\200918\
Data File : V6012548.D
Acq On : 22 Sep 2020 10:02 pm
Operator : VOA6:RY
Sample : L2037809-03,31,5,5
Misc : WG1413379,ICAL17149
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Sep 23 16:24:33 2020
Quant Method : O:\Organics\DATA\VOA6\2020\09-SEP\200918\P6091820W.M
Quant Title : PIANO VOLATILES
QLast Update : Sat Sep 19 08:40:17 2020
Response via : Initial Calibration

Sub List : PIANO - PIANO

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
116) Isobutylbenzene	0.00		0		N.D.	
117) sec-Butylbenzene	0.00		0		N.D.	
118) 1-Methyl-3-isopropylbe...	0.00		0		N.D.	
119) 1-Methyl-4-isopropylbe...	0.00		0		N.D.	
120) 1,2,3-Trimethylbenzene	0.00		0		N.D.	
121) 1-Methyl-2-isopropylbe...	0.00		0		N.D.	
122) Indan	0.00		0		N.D.	
123) 1,3-Diethylbenzene	0.00		0		N.D.	
124) 1-Methyl-3-propylbenzene	0.00		0		N.D.	
125) Indene	0.00		0		N.D.	
126) 1-Methyl-4-propylbenzene	0.00		0		N.D.	
127) n-Butylbenzene	0.00		0		N.D.	
128) 1,2-Dimethyl-4-ethylbe...	0.00		0		N.D.	
129) 1,2-Diethylbenzene	0.00		0		N.D.	
130) 1-Methyl-2-propylbenzene	0.00		0		N.D.	
131) 1,4-Dimethyl-2-ethylbe...	0.00		0		N.D.	
132) Undecane	0.00		0		N.D.	
133) 1,3-Dimethyl-4-ethylbe...	0.00		0		N.D.	
134) 1,3-Dimethyl-5-ethylbe...	0.00		0		N.D.	
135) 1,3-Dimethyl-2-ethylbe...	0.00		0		N.D.	
136) 1,2-Dimethyl-3-ethylbe...	0.00		0		N.D.	
137) 1,2,4,5-Tetramethylben...	0.00		0		N.D.	
138) 1,2,3,5-Tetramethylben...	0.00		0		N.D.	
139) Pentylbenzene	0.00		0		N.D.	
140) 1,2,3,4-Tetramethylben...	0.00		0		N.D.	
141) 1,3-DM-5-tert-Butylben...	0.00		0		N.D.	
142) Dodecane	0.00		0		N.D.	
143) 1,3,5-Triethylbenzene	0.00		0		N.D.	
144) Naphthalene	0.00		0		N.D.	d
145) Benzothiophene	0.00		0		N.D.	
146) 1,2,4-Triethylbenzene	0.00		0		N.D.	
147) Hexylbenzene	0.00		0		N.D.	
148) MMT	0.00		0		N.D.	
149) Tridecane	0.00		0		N.D.	
150) 2-Methylnaphthalene	0.00		0		N.D.	
151) 1-Methylnaphthalene	0.00		0		N.D.	
152) Tetradecane	0.00		0		N.D.	
153) Pentadecane	0.00		0		N.D.	

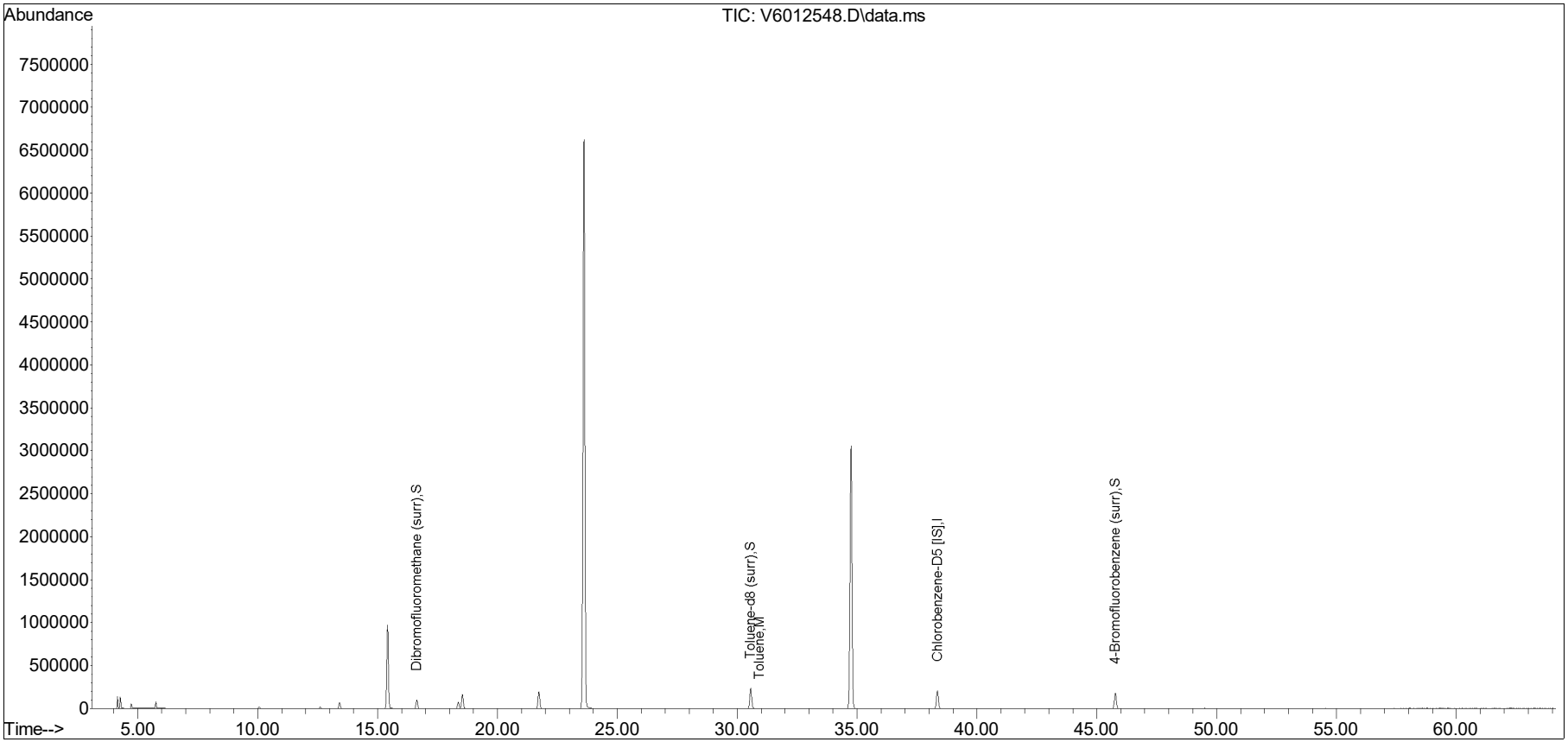
(#) = qualifier out of range (m) = manual integration (+) = signals summed

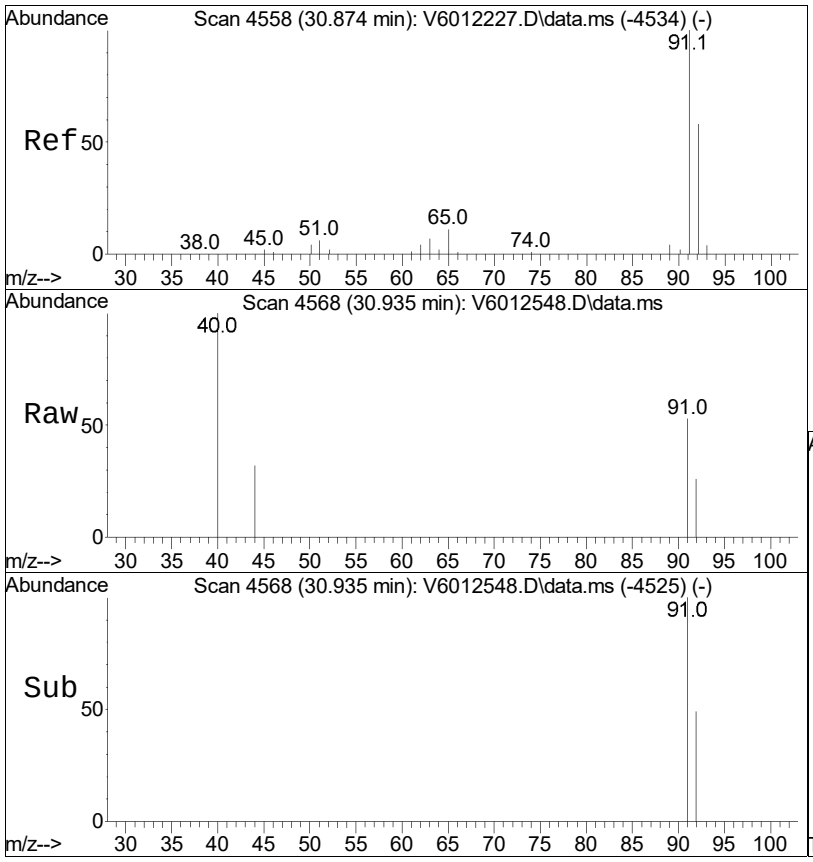
Quantitation Report (QT Reviewed)

Data Path : O:\Organics\DATA\VOA6\2020\09-SEP\200918\
Data File : V6012548.D
Acq On : 22 Sep 2020 10:02 pm
Operator : VOA6:RY
Sample : L2037809-03,31,5,5
Misc : WG1413379,ICAL17149
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Sep 23 16:24:33 2020
Quant Method : O:\Organics\DATA\VOA6\2020\09-SEP\200918\P6091820W.M
Quant Title : PIANO VOLATILES
QLast Update : Sat Sep 19 08:40:17 2020
Response via : Initial Calibration

Sub List : PIANO - PIANO

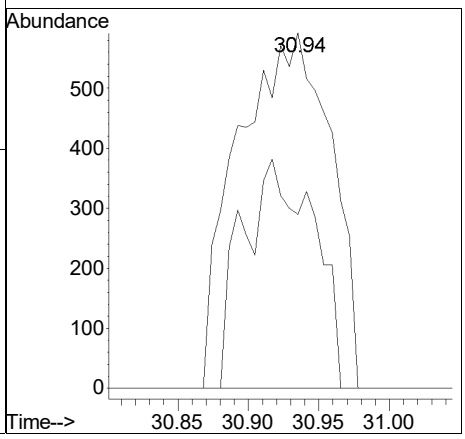




#66
Toluene
Concen: 0.35 ug/L
RT: 30.94 min Scan# 4568
Delta R.T. 0.012 min
Lab File: V6012548.D
Acq: 22 Sep 2020 10:02 pm

Tgt Ion: 91 Resp: 2712

Ion	Ratio	Lower	Upper
91	100		
92	49.0	38.2	78.2



Batch Quality Control

Method Blank
Raw Data

Quantitation Report (QT Reviewed)

Data Path : O:\Organics\DATA\VOA6\2020\09-SEP\200918\
Data File : V6012544.D
Acq On : 22 Sep 2020 1:30 pm
Operator : VOA6:RY
Sample : WG1413379-5,31,5,5
Misc : WG1413379,ICAL17149
ALS Vial : 83 Sample Multiplier: 1

Quant Time: Sep 22 16:16:39 2020
Quant Method : O:\Organics\DATA\VOA6\2020\09-SEP\200918\P6091820W.M
Quant Title : PIANO VOLATILES
QLast Update : Sat Sep 19 08:40:17 2020
Response via : Initial Calibration

Sub List : PIANO - PIANO

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Chlorobenzene-D5 [IS]	38.35	117	437227	50.000	ug/L	0.00
System Monitoring Compounds						
24) Dibromofluoromethane (...	16.63	113	140695	51.604	ug/L	0.00
Spiked Amount 50.000	Range 78 - 118		Recovery = 103.21%			
62) Toluene-d8 (surr)	30.56	98	532735	51.091	ug/L	0.00
Spiked Amount 50.000	Range 87 - 113		Recovery = 102.18%			
64) 2-Bromo-1-chloropropan...	0.00	77	0	0.000	ug/L	
Spiked Amount 50.000	Range 70 - 130		Recovery = 0.00%#			
87) 1-Chloro-2-fluorobenze...	0.00	130	0	0.000	ug/L	
Spiked Amount 50.000	Range 70 - 130		Recovery = 0.00%#			
97) 1,4-Dichlorobutane (H/...	0.00	55	0	0.000	ug/L	
Spiked Amount 50.000	Range 70 - 130		Recovery = 0.00%#			
101) 4-Bromofluorobenzene (...	45.77	95	200617	46.291	ug/L	0.00
Spiked Amount 50.000	Range 76 - 120		Recovery = 92.58%			
Target Compounds						Qvalue
2) 3-Methyl-1-butene	0.00		0	N.D.		
3) Isopentane	0.00		0	N.D.		
4) 1-Pentene	0.00		0	N.D.		
5) 2-Methyl-1-butene	0.00		0	N.D.		
6) Pentane	0.00		0	N.D.	d	
7) trans-2-Pentene	0.00		0	N.D.		
8) 2-Methyl-1,3-butadiene	0.00		0	N.D.		
9) cis-2-Pentene	0.00		0	N.D.		
10) Tertiary butanol	0.00		0	N.D.		
11) 2,2-Dimethylbutane	0.00		0	N.D.		
12) 4-Methyl-1-pentene	0.00		0	N.D.		
13) Cyclopentane	0.00		0	N.D.		
14) 2,3-Dimethylbutane	0.00		0	N.D.		
15) 2-Methylpentane	0.00		0	N.D.		
16) MTBE	0.00		0	N.D.		
17) 3-Methylpentane	0.00		0	N.D.		
18) 1-Hexene	0.00		0	N.D.		
19) Hexane	0.00		0	N.D.		
20) Diisopropyl ether	0.00		0	N.D.		
21) trans-2-Hexene	0.00		0	N.D.		
22) 2-Methyl-2-pentene	0.00		0	N.D.		
23) cis-2-Hexene	0.00		0	N.D.		
25) Ethyl tertiary butyl e...	0.00		0	N.D.		

Data Path : O:\Organics\DATA\VOA6\2020\09-SEP\200918\
Data File : V6012544.D
Acq On : 22 Sep 2020 1:30 pm
Operator : VOA6:RY
Sample : WG1413379-5,31,5,5
Misc : WG1413379,ICAL17149
ALS Vial : 83 Sample Multiplier: 1

Quant Time: Sep 22 16:16:39 2020
Quant Method : O:\Organics\DATA\VOA6\2020\09-SEP\200918\P6091820W.M
Quant Title : PIANO VOLATILES
QLast Update : Sat Sep 19 08:40:17 2020
Response via : Initial Calibration

Sub List : PIANO - PIANO

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
26) 2,2-Dimethylpentane	0.00		0	N.D.		
27) Methylcyclopentane	0.00		0	N.D.		
28) 2,4-Dimethylpentane	0.00		0	N.D.		
29) 2,2,3-Trimethylbutane	0.00		0	N.D.		
30) 1,2-Dichloroethane	0.00		0	N.D.		d
31) 3,3-Dimethylpentane	0.00		0	N.D.		
32) Cyclohexane	0.00		0	N.D.		
33) 2-Methylhexane	0.00		0	N.D.		
34) Benzene	0.00		0	N.D.		
35) 2,3-Dimethylpentane	0.00		0	N.D.		
36) Thiophene	0.00		0	N.D.		
37) 1,1-Dimethylcyclopentane	0.00		0	N.D.		
38) 3-Methylhexane	0.00		0	N.D.		
39) TAME	0.00		0	N.D.		d
40) cis-1,3-Dimethylcyclop...	0.00		0	N.D.		
41) 3-Ethylpentane	0.00		0	N.D.		
42) trans-1,3-DMCP/2-Methy...	0.00		0	N.D.		
43) 1-Heptene/trans-1,2-DMCP	0.00		0	N.D.		
44) Isooctane	0.00		0	N.D.		
45) trans-3-Heptene	0.00		0	N.D.		
46) Heptane	0.00		0	N.D.		
48) trans-2-Heptene	0.00		0	N.D.		
49) cis-2-Heptene	0.00		0	N.D.		
50) 2,2-Dimethylhexane	0.00		0	N.D.		
51) Methylcyclohexane	0.00		0	N.D.		
52) 2,5-Dimethylhexane	0.00		0	N.D.		
53) 2,4-Dimethylhexane	0.00		0	N.D.		
54) Ethylcyclopentane	0.00		0	N.D.		
55) 2,2,3-Trimethylpentane	0.00		0	N.D.		
57) 2,3,4-Trimethylpentane	0.00		0	N.D.		
58) 2,3,3-Trimethylpentane	0.00		0	N.D.		
59) 2,3-Dimethylhexane	0.00		0	N.D.		
60) 2-Methylheptane	0.00		0	N.D.		
61) 4-Methylheptane	0.00		0	N.D.		
63) 3-Methylheptane	0.00		0	N.D.		d
65) 3-Ethylhexane	0.00		0	N.D.		d
66) Toluene	0.00		0	N.D.		
67) 2-Methylthiophene	0.00		0	N.D.		
68) trans-1,4-Dimethylcycl...	0.00		0	N.D.		
69) 3-Methylthiophene	0.00		0	N.D.		
70) 1-Octene	0.00		0	N.D.		

Data Path : O:\Organics\DATA\VOA6\2020\09-SEP\200918\
Data File : V6012544.D
Acq On : 22 Sep 2020 1:30 pm
Operator : VOA6:RY
Sample : WG1413379-5,31,5,5
Misc : WG1413379,ICAL17149
ALS Vial : 83 Sample Multiplier: 1

Quant Time: Sep 22 16:16:39 2020
Quant Method : O:\Organics\DATA\VOA6\2020\09-SEP\200918\P6091820W.M
Quant Title : PIANO VOLATILES
QLast Update : Sat Sep 19 08:40:17 2020
Response via : Initial Calibration

Sub List : PIANO - PIANO

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
71) Octane	0.00		0		N.D.	
72) trans-1,2-Dimethylcycl...	0.00		0		N.D.	
73) 1,2-Dibromoethane	0.00		0		N.D.	
75) cis-2-Octene	0.00		0		N.D.	
76) Isopropylcyclopentane	0.00		0		N.D.	
77) cis-1,2-Dimethylcycloh...	0.00		0		N.D.	
78) 2,5-Dimethylheptane	0.00		0		N.D.	
79) 3,5-Dimethylheptane	0.00		0		N.D.	
80) 3,3-Dimethylheptane	0.00		0		N.D.	
81) 1,1,4-Trimethylcyclohe...	0.00		0		N.D.	
82) 2,3-Dimethylheptane	0.00		0		N.D.	
83) 3,4-Dimethylheptane	0.00		0		N.D.	
84) 4-Methyloctane	0.00		0		N.D.	
85) 2-Methyloctane	0.00		0		N.D.	
86) Ethylbenzene	0.00		0		N.D.	
88) 2-Ethylthiophene	0.00		0		N.D.	
89) 3-Methyloctane	0.00		0		N.D.	
90) 3,3-Diethylpentane	0.00		0		N.D.	
91) p/m-Xylene	0.00		0		N.D.	
92) 1-Nonene	0.00		0		N.D.	
93) trans-3-Nonene	0.00		0		N.D.	
94) cis-3-Nonene	0.00		0		N.D.	
95) Nonane	0.00		0		N.D.	
96) Styrene	0.00		0		N.D.	
98) o-Xylene	0.00		0		N.D.	
99) 2-Nonene	0.00		0		N.D.	
100) Isopropylcyclohexane	0.00		0		N.D.	
102) Isopropylbenzene	0.00		0		N.D.	
103) 3,3-Dimethyloctane	0.00		0		N.D.	
104) n-Propylbenzene	0.00		0		N.D.	
105) 2-Methylnonane	0.00		0		N.D.	
106) 3-Methylnonane	0.00		0		N.D.	
107) 1-Methyl-3-ethylbenzene	0.00		0		N.D.	
108) 1-Methyl-4-ethylbenzene	0.00		0		N.D.	
109) 1,3,5-Trimethylbenzene	0.00		0		N.D.	
110) 1-Decene	0.00		0		N.D.	
111) Isobutylcyclohexane	0.00		0		N.D.	
112) 1-Methyl-2-ethylbenzene	0.00		0		N.D.	
113) Decane	0.00		0		N.D.	
114) tert-Butylbenzene	0.00		0		N.D.	
115) 1,2,4-Trimethylbenzene	0.00		0		N.D.	

Data Path : O:\Organics\DATA\VOA6\2020\09-SEP\200918\
Data File : V6012544.D
Acq On : 22 Sep 2020 1:30 pm
Operator : VOA6:RY
Sample : WG1413379-5,31,5,5
Misc : WG1413379,ICAL17149
ALS Vial : 83 Sample Multiplier: 1

Quant Time: Sep 22 16:16:39 2020
Quant Method : O:\Organics\DATA\VOA6\2020\09-SEP\200918\P6091820W.M
Quant Title : PIANO VOLATILES
QLast Update : Sat Sep 19 08:40:17 2020
Response via : Initial Calibration

Sub List : PIANO - PIANO

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
116) Isobutylbenzene	0.00		0	N.D.		
117) sec-Butylbenzene	0.00		0	N.D.		
118) 1-Methyl-3-isopropylbe...	0.00		0	N.D.		
119) 1-Methyl-4-isopropylbe...	0.00		0	N.D.		
120) 1,2,3-Trimethylbenzene	0.00		0	N.D.		
121) 1-Methyl-2-isopropylbe...	0.00		0	N.D.		
122) Indan	0.00		0	N.D.		
123) 1,3-Diethylbenzene	0.00		0	N.D.		
124) 1-Methyl-3-propylbenzene	0.00		0	N.D.		
125) Indene	0.00		0	N.D.		
126) 1-Methyl-4-propylbenzene	0.00		0	N.D.		
127) n-Butylbenzene	0.00		0	N.D.		
128) 1,2-Dimethyl-4-ethylbe...	0.00		0	N.D.		
129) 1,2-Diethylbenzene	0.00		0	N.D.		
130) 1-Methyl-2-propylbenzene	0.00		0	N.D.		
131) 1,4-Dimethyl-2-ethylbe...	0.00		0	N.D.		
132) Undecane	0.00		0	N.D.		
133) 1,3-Dimethyl-4-ethylbe...	0.00		0	N.D.		
134) 1,3-Dimethyl-5-ethylbe...	0.00		0	N.D.		
135) 1,3-Dimethyl-2-ethylbe...	0.00		0	N.D.		
136) 1,2-Dimethyl-3-ethylbe...	0.00		0	N.D.		
137) 1,2,4,5-Tetramethylben...	0.00		0	N.D.		
138) 1,2,3,5-Tetramethylben...	0.00		0	N.D.		
139) Pentylbenzene	0.00		0	N.D.		
140) 1,2,3,4-Tetramethylben...	0.00		0	N.D.		
141) 1,3-DM-5-tert-Butylben...	0.00		0	N.D.		
142) Dodecane	0.00		0	N.D.		
143) 1,3,5-Triethylbenzene	0.00		0	N.D.		
144) Naphthalene	0.00		0	N.D.	d	
145) Benzothiophene	0.00		0	N.D.		
146) 1,2,4-Triethylbenzene	0.00		0	N.D.		
147) Hexylbenzene	0.00		0	N.D.		
148) MMT	0.00		0	N.D.		
149) Tridecane	0.00		0	N.D.		
150) 2-Methylnaphthalene	0.00		0	N.D.	d	
151) 1-Methylnaphthalene	0.00		0	N.D.		
152) Tetradecane	0.00		0	N.D.		
153) Pentadecane	0.00		0	N.D.		

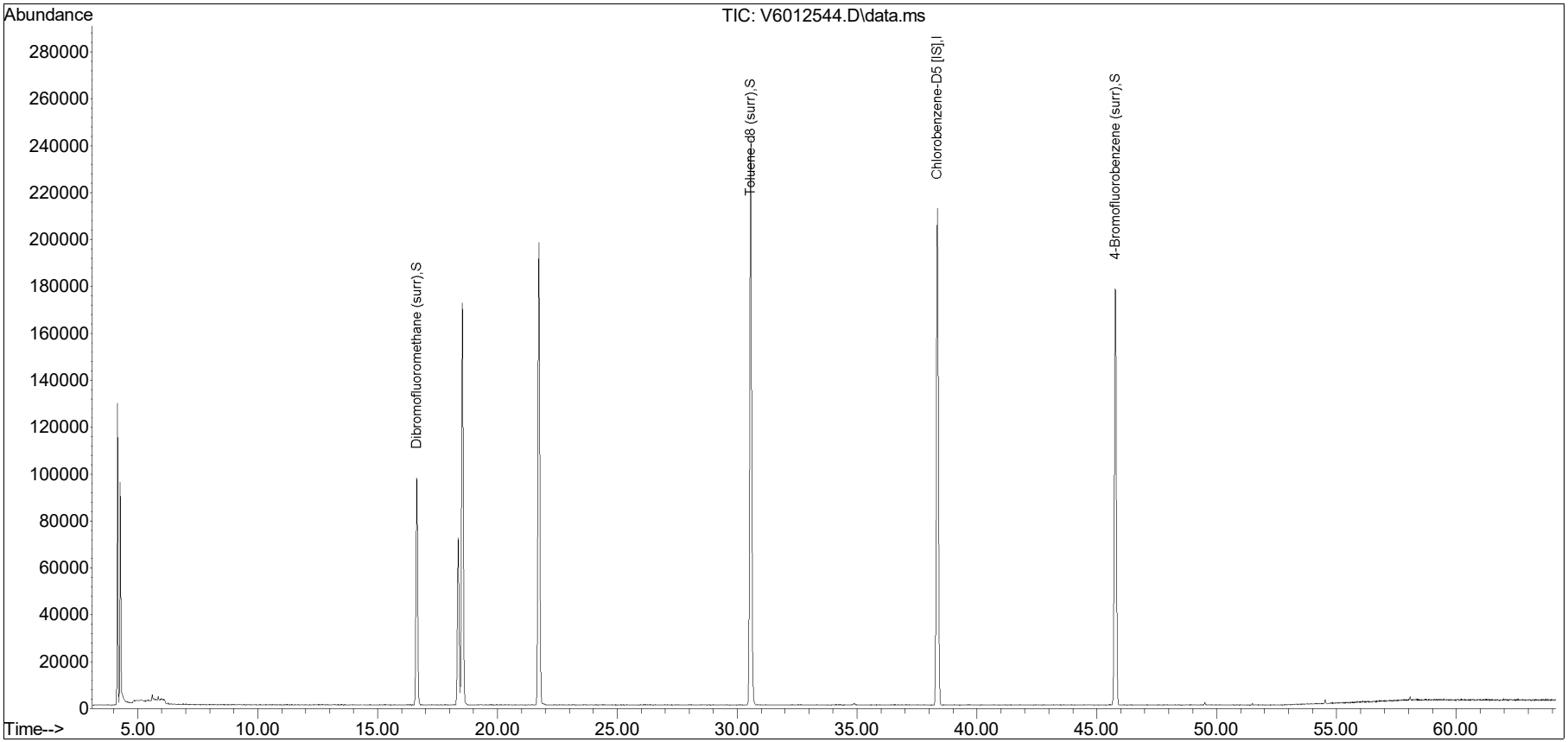
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : O:\Organics\DATA\VOA6\2020\09-SEP\200918\
Data File : V6012544.D
Acq On : 22 Sep 2020 1:30 pm
Operator : VOA6:RY
Sample : WG1413379-5,31,5,5
Misc : WG1413379,ICAL17149
ALS Vial : 83 Sample Multiplier: 1

Quant Time: Sep 22 16:16:39 2020
Quant Method : O:\Organics\DATA\VOA6\2020\09-SEP\200918\P6091820W.M
Quant Title : PIANO VOLATILES
QLast Update : Sat Sep 19 08:40:17 2020
Response via : Initial Calibration

Sub List : PIANO - PIANO



LCS Raw Data

Quantitation Report (QT Reviewed)

Data Path : O:\Organics\DATA\VOA6\2020\09-SEP\200918\
Data File : V6012541.D
Acq On : 22 Sep 2020 9:57 am
Operator : VOA6:RY
Sample : WG1413379-3,31,5,5
Misc : WG1413379,ICAL17149
ALS Vial : 80 Sample Multiplier: 1

Quant Time: Sep 22 13:27:17 2020
Quant Method : O:\Organics\DATA\VOA6\2020\09-SEP\200918\P6091820W.M
Quant Title : PIANO VOLATILES
QLast Update : Sat Sep 19 08:40:17 2020
Response via : Initial Calibration

Sub List : PIANO - PIANO

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Chlorobenzene-D5 [IS]	38.35	117	416739	50.000	ug/L	0.00
System Monitoring Compounds						
24) Dibromofluoromethane (...	16.63	113	128526	49.458	ug/L	0.00
Spiked Amount 50.000	Range 78 - 118		Recovery = 98.92%			
62) Toluene-d8 (surr)	30.55	98	493624	49.667	ug/L	-0.01
Spiked Amount 50.000	Range 87 - 113		Recovery = 99.33%			
64) 2-Bromo-1-chloropropan...	0.00	77	0d	0.000	ug/L	
Spiked Amount 50.000	Range 70 - 130		Recovery = 0.00%#			
87) 1-Chloro-2-fluorobenze...	0.00	130	0	0.000	ug/L	
Spiked Amount 50.000	Range 70 - 130		Recovery = 0.00%#			
97) 1,4-Dichlorobutane (H/...	0.00	55	0	0.000	ug/L	
Spiked Amount 50.000	Range 70 - 130		Recovery = 0.00%#			
101) 4-Bromofluorobenzene (...	45.78	95	199079	48.194	ug/L	0.00
Spiked Amount 50.000	Range 76 - 120		Recovery = 96.39%			
Target Compounds						Qvalue
2) 3-Methyl-1-butene	0.00		0	N.D.		
3) Isopentane	0.00		0	N.D. d		
4) 1-Pentene	8.60	42	34705	18.661	ug/L	97
5) 2-Methyl-1-butene	0.00		0	N.D. d		
6) Pentane	8.95	43	47084	16.044	ug/L	98
7) trans-2-Pentene	0.00		0	N.D.		
8) 2-Methyl-1,3-butadiene	0.00		0	N.D.		
9) cis-2-Pentene	0.00		0	N.D.		
10) Tertiary butanol	10.42	59	21263M4	82.045	ug/L	
11) 2,2-Dimethylbutane	0.00		0	N.D. d		
12) 4-Methyl-1-pentene	0.00		0	N.D.		
13) Cyclopentane	12.57	70	23838	19.253	ug/L #	40
14) 2,3-Dimethylbutane	0.00		0	N.D. d		
15) 2-Methylpentane	12.77	43	55599	17.496	ug/L	97
16) MTBE	13.08	73	80524	20.268	ug/L	98
17) 3-Methylpentane	13.74	57	54648	19.017	ug/L	100
18) 1-Hexene	14.32	56	32168	19.670	ug/L	95
19) Hexane	14.91	57	45521	19.408	ug/L	98
20) Diisopropyl ether	15.21	45	76159	19.092	ug/L	96
21) trans-2-Hexene	0.00		0	N.D.		
22) 2-Methyl-2-pentene	0.00		0	N.D.		
23) cis-2-Hexene	0.00		0	N.D.		
25) Ethyl tertiary butyl e...	16.66	59	80612	19.445	ug/L	98

Data Path : O:\Organics\DATA\VOA6\2020\09-SEP\200918\
Data File : V6012541.D
Acq On : 22 Sep 2020 9:57 am
Operator : VOA6:RY
Sample : WG1413379-3,31,5,5
Misc : WG1413379,ICAL17149
ALS Vial : 80 Sample Multiplier: 1

Quant Time: Sep 22 13:27:17 2020
Quant Method : O:\Organics\DATA\VOA6\2020\09-SEP\200918\P6091820W.M
Quant Title : PIANO VOLATILES
QLast Update : Sat Sep 19 08:40:17 2020
Response via : Initial Calibration

Sub List : PIANO - PIANO

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
26) 2,2-Dimethylpentane	0.00		0	N.D.			
27) Methylcyclopentane	17.22	56	60299	20.156	ug/L		98
28) 2,4-Dimethylpentane	17.38	43	52466	18.156	ug/L		96
29) 2,2,3-Trimethylbutane	0.00		0	N.D.			
30) 1,2-Dichloroethane	0.00		0	N.D.	d		
31) 3,3-Dimethylpentane	0.00		0	N.D.			
32) Cyclohexane	20.09	56	51189	20.540	ug/L		99
33) 2-Methylhexane	20.52	43	55843	18.490	ug/L		98
34) Benzene	20.70	78	126545	20.171	ug/L		99
35) 2,3-Dimethylpentane	20.81	56	49546	19.509	ug/L		97
36) Thiophene	0.00		0	N.D.			
37) 1,1-Dimethylcyclopentane	0.00		0	N.D.			
38) 3-Methylhexane	21.32	43	44847	16.638	ug/L		94
39) TAME	21.69	73	83495	17.356	ug/L		94
40) cis-1,3-Dimethylcyclop...	0.00		0	N.D.			
41) 3-Ethylpentane	0.00		0	N.D.			
42) trans-1,3-DMCP/2-Methy...	0.00		0	N.D.			
43) 1-Heptene/trans-1,2-DMCP	0.00		0	N.D.	d		
44) Isooctane	22.74	57	129492	20.040	ug/L		96
45) trans-3-Heptene	0.00		0	N.D.	d		
46) Heptane	23.49	43	45191	17.991	ug/L		98
48) trans-2-Heptene	0.00		0	N.D.			
49) cis-2-Heptene	0.00		0	N.D.			
50) 2,2-Dimethylhexane	0.00		0	N.D.	d		
51) Methylcyclohexane	25.89	83	61839	21.230	ug/L		96
52) 2,5-Dimethylhexane	0.00		0	N.D.			
53) 2,4-Dimethylhexane	0.00		0	N.D.			
54) Ethylcyclopentane	0.00		0	N.D.			
55) 2,2,3-Trimethylpentane	0.00		0	N.D.			
57) 2,3,4-Trimethylpentane	0.00		0	N.D.			
58) 2,3,3-Trimethylpentane	0.00		0	N.D.			
59) 2,3-Dimethylhexane	0.00		0	N.D.			
60) 2-Methylheptane	29.86	57	54758	18.816	ug/L		97
61) 4-Methylheptane	0.00		0	N.D.	d		
63) 3-Methylheptane	30.61	43	49229	17.227	ug/L		96
65) 3-Ethylhexane	0.00		0	N.D.	d		
66) Toluene	30.92	91	147192	19.364	ug/L		99
67) 2-Methylthiophene	0.00		0	N.D.			
68) trans-1,4-Dimethylcycl...	0.00		0	N.D.			
69) 3-Methylthiophene	0.00		0	N.D.			
70) 1-Octene	0.00		0	N.D.			

Data Path : O:\Organics\DATA\VOA6\2020\09-SEP\200918\
Data File : V6012541.D
Acq On : 22 Sep 2020 9:57 am
Operator : VOA6:RY
Sample : WG1413379-3,31,5,5
Misc : WG1413379,ICAL17149
ALS Vial : 80 Sample Multiplier: 1

Quant Time: Sep 22 13:27:17 2020
Quant Method : O:\Organics\DATA\VOA6\2020\09-SEP\200918\P6091820W.M
Quant Title : PIANO VOLATILES
QLast Update : Sat Sep 19 08:40:17 2020
Response via : Initial Calibration

Sub List : PIANO - PIANO

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
71) Octane	33.11	43	57547	19.734	ug/L	98
72) trans-1,2-Dimethylcycl...	0.00		0	N.D.		
73) 1,2-Dibromoethane	0.00		0	N.D.		
75) cis-2-Octene	0.00		0	N.D.		
76) Isopropylcyclopentane	0.00		0	N.D.		
77) cis-1,2-Dimethylcycloh...	0.00		0	N.D.		
78) 2,5-Dimethylheptane	0.00		0	N.D.		
79) 3,5-Dimethylheptane	0.00		0	N.D.		
80) 3,3-Dimethylheptane	0.00		0	N.D.		
81) 1,1,4-Trimethylcyclohe...	0.00		0	N.D.		
82) 2,3-Dimethylheptane	0.00		0	N.D.		
83) 3,4-Dimethylheptane	0.00		0	N.D.		
84) 4-Methyloctane	0.00		0	N.D.		
85) 2-Methyloctane	0.00		0	N.D.		
86) Ethylbenzene	39.96	91	169196	19.688	ug/L	97
88) 2-Ethylthiophene	0.00		0	N.D.		
89) 3-Methyloctane	0.00		0	N.D.		
90) 3,3-Diethylpentane	0.00		0	N.D.		
91) p/m-Xylene	41.20	91	264332	40.329	ug/L	99
92) 1-Nonene	0.00		0	N.D.		
93) trans-3-Nonene	0.00		0	N.D.		
94) cis-3-Nonene	0.00		0	N.D.	d	
95) Nonane	42.65	43	53817	18.883	ug/L	99
96) Styrene	0.00		0	N.D.		
98) o-Xylene	43.48	91	134685	19.602	ug/L	100
99) 2-Nonene	0.00		0	N.D.		
100) Isopropylcyclohexane	0.00		0	N.D.		
102) Isopropylbenzene	45.80	105	178980	19.989	ug/L	99
103) 3,3-Dimethyloctane	0.00		0	N.D.		
104) n-Propylbenzene	48.43	91	207449	19.702	ug/L	99
105) 2-Methylnonane	0.00		0	N.D.		
106) 3-Methylnonane	0.00		0	N.D.	d	
107) 1-Methyl-3-ethylbenzene	49.07	105	176741	19.850	ug/L	98
108) 1-Methyl-4-ethylbenzene	49.24	105	173406	20.105	ug/L	99
109) 1,3,5-Trimethylbenzene	49.84	105	146321	19.649	ug/L	98
110) 1-Decene	49.99	41	28050	16.133	ug/L	95
111) Isobutylcyclohexane	0.00		0	N.D.	d	
112) 1-Methyl-2-ethylbenzene	50.18	105	174642	19.058	ug/L	98
113) Decane	50.38	43	51570	21.019	ug/L	98
114) tert-Butylbenzene	0.00		0	N.D.	d	
115) 1,2,4-Trimethylbenzene	51.07	105	143459	18.812	ug/L	99

Quantitation Report (QT Reviewed)

Data Path : O:\Organics\DATA\VOA6\2020\09-SEP\200918\
Data File : V6012541.D
Acq On : 22 Sep 2020 9:57 am
Operator : VOA6:RY
Sample : WG1413379-3,31,5,5
Misc : WG1413379,ICAL17149
ALS Vial : 80 Sample Multiplier: 1

Quant Time: Sep 22 13:27:17 2020
Quant Method : O:\Organics\DATA\VOA6\2020\09-SEP\200918\P6091820W.M
Quant Title : PIANO VOLATILES
QLast Update : Sat Sep 19 08:40:17 2020
Response via : Initial Calibration

Sub List : PIANO - PIANO

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
116) Isobutylbenzene	0.00		0	N.D.	d	
117) sec-Butylbenzene	51.33	105	200120	20.138	ug/L	98
118) 1-Methyl-3-isopropylbe...	0.00		0	N.D.	d	
119) 1-Methyl-4-isopropylbe...	0.00		0	N.D.	d	
120) 1,2,3-Trimethylbenzene	0.00		0	N.D.	d	
121) 1-Methyl-2-isopropylbe...	0.00		0	N.D.	d	
122) Indan	0.00		0	N.D.	d	
123) 1,3-Diethylbenzene	0.00		0	N.D.	d	
124) 1-Methyl-3-propylbenzene	0.00		0	N.D.	d	
125) Indene	0.00		0	N.D.	d	
126) 1-Methyl-4-propylbenzene	52.92	105	222075	17.761	ug/L	100
127) n-Butylbenzene	52.92	91	175994	18.666	ug/L	100
128) 1,2-Dimethyl-4-ethylbe...	0.00		0	N.D.	d	
129) 1,2-Diethylbenzene	53.14	119	80740	18.566	ug/L	96
130) 1-Methyl-2-propylbenzene	0.00		0	N.D.	d	
131) 1,4-Dimethyl-2-ethylbe...	0.00		0	N.D.	d	
132) Undecane	53.69	57	60188	21.402	ug/L	95
133) 1,3-Dimethyl-4-ethylbe...	0.00		0	N.D.	d	
134) 1,3-Dimethyl-5-ethylbe...	53.87	119	177251	18.488	ug/L	99
135) 1,3-Dimethyl-2-ethylbe...	0.00		0	N.D.	d	
136) 1,2-Dimethyl-3-ethylbe...	0.00		0	N.D.	d	
137) 1,2,4,5-Tetramethylben...	0.00		0	N.D.	d	
138) 1,2,3,5-Tetramethylben...	0.00		0	N.D.	d	
139) Pentylbenzene	55.42	91	149811	19.087	ug/L	98
140) 1,2,3,4-Tetramethylben...	0.00		0	N.D.	d	
141) 1,3-DM-5-tert-Butylben...	0.00		0	N.D.	d	
142) Dodecane	55.91	43	46943	22.946	ug/L	96
143) 1,3,5-Triethylbenzene	0.00		0	N.D.	d	
144) Naphthalene	0.00		0	N.D.	d	
145) Benzothiophene	0.00		0	N.D.	d	
146) 1,2,4-Triethylbenzene	0.00		0	N.D.	d	
147) Hexylbenzene	0.00		0	N.D.	d	
148) MMT	0.00		0	N.D.	d	
149) Tridecane	0.00		0	N.D.	d	
150) 2-Methylnaphthalene	0.00		0	N.D.	d	
151) 1-Methylnaphthalene	0.00		0	N.D.	d	
152) Tetradecane	0.00		0	N.D.	d	
153) Pentadecane	0.00		0	N.D.	d	

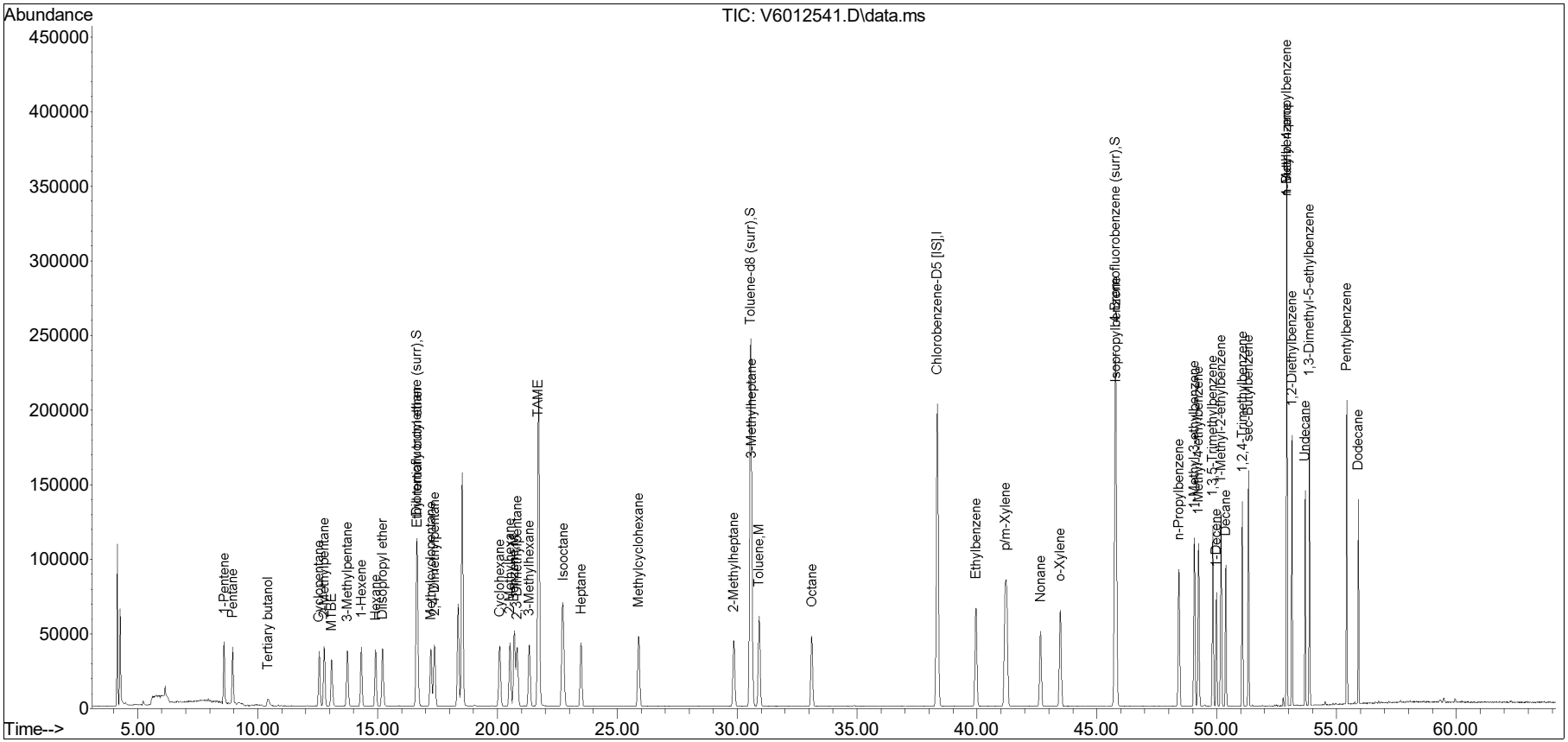
(#) = qualifier out of range (m) = manual integration (+) = signals summed

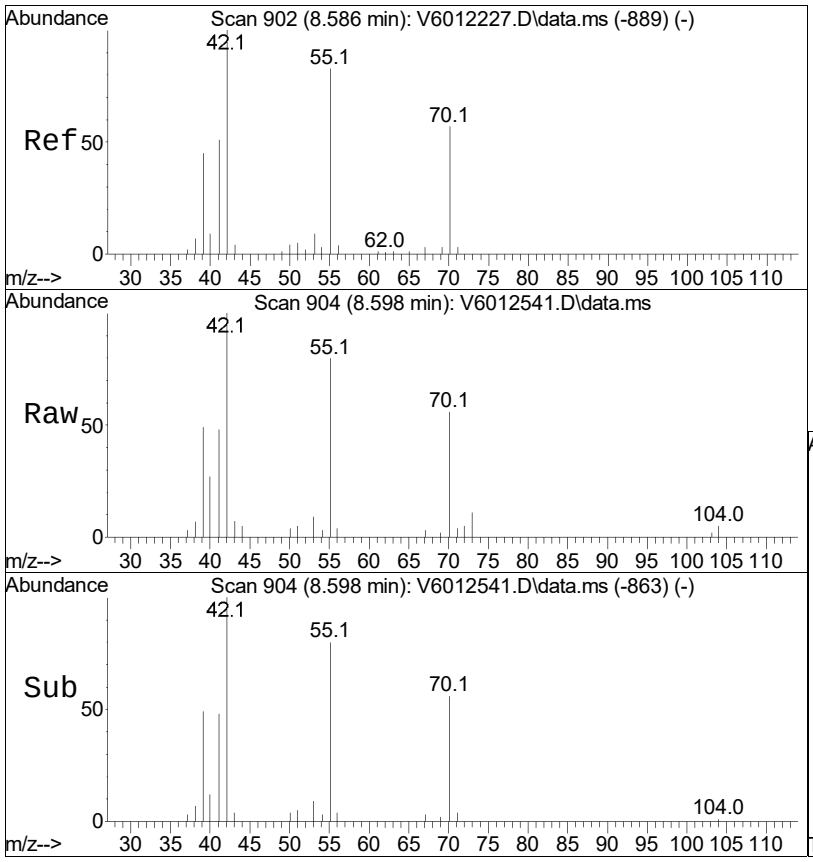
Quantitation Report (QT Reviewed)

Data Path : O:\Organics\DATA\VOA6\2020\09-SEP\200918\
Data File : V6012541.D
Acq On : 22 Sep 2020 9:57 am
Operator : VOA6:RY
Sample : WG1413379-3,31,5,5
Misc : WG1413379,ICAL17149
ALS Vial : 80 Sample Multiplier: 1

Quant Time: Sep 22 13:27:17 2020
Quant Method : O:\Organics\DATA\VOA6\2020\09-SEP\200918\P6091820W.M
Quant Title : PIANO VOLATILES
QLast Update : Sat Sep 19 08:40:17 2020
Response via : Initial Calibration

Sub List : PIANO - PIANO

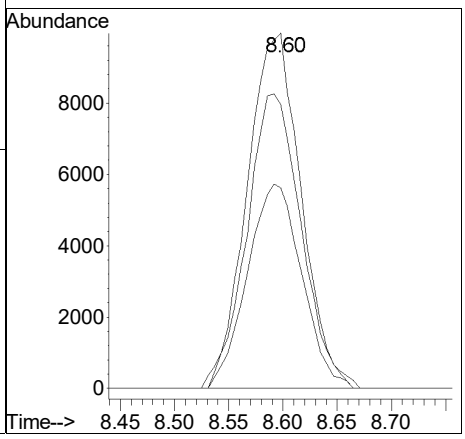


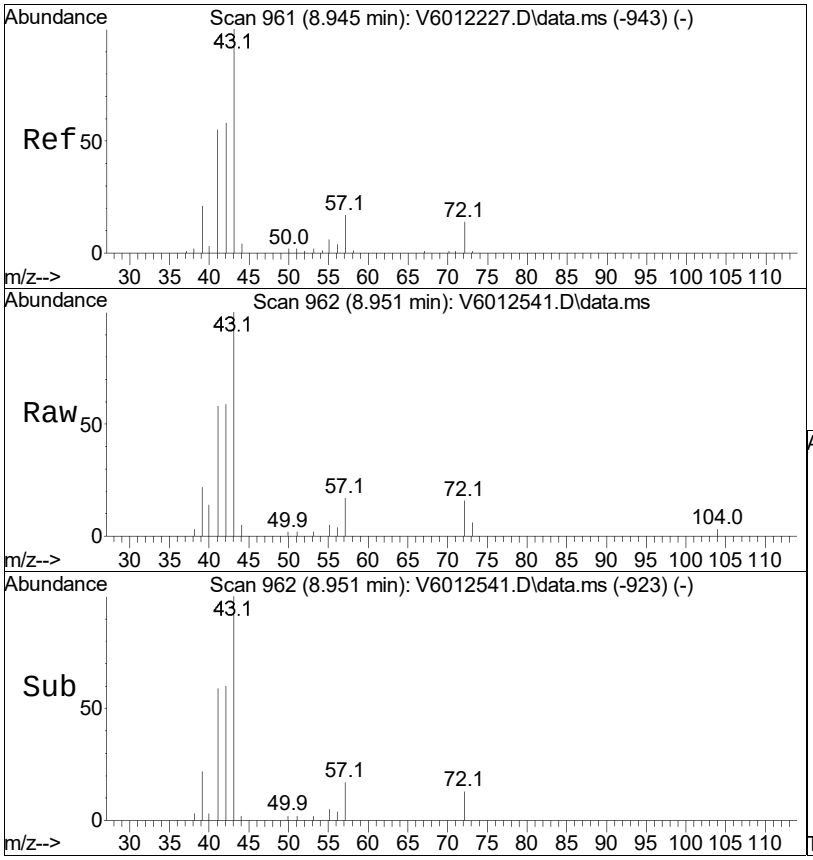


#4
1-Pentene
Concen: 18.66 ug/L
RT: 8.60 min Scan# 904
Delta R.T. -0.000 min
Lab File: V6012541.D
Acq: 22 Sep 2020 9:57 am

Tgt Ion: 42 Resp: 34705

Ion	Ratio	Lower	Upper
42	100		
55	79.9	63.5	103.5
70	56.4	37.3	77.3

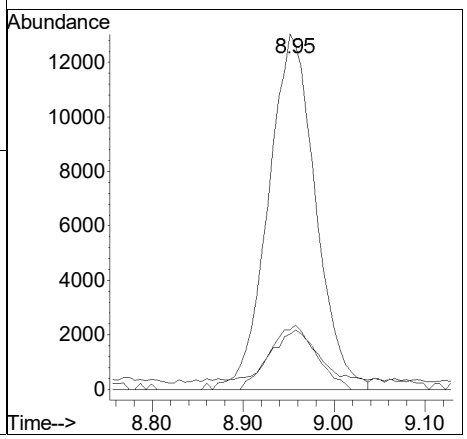


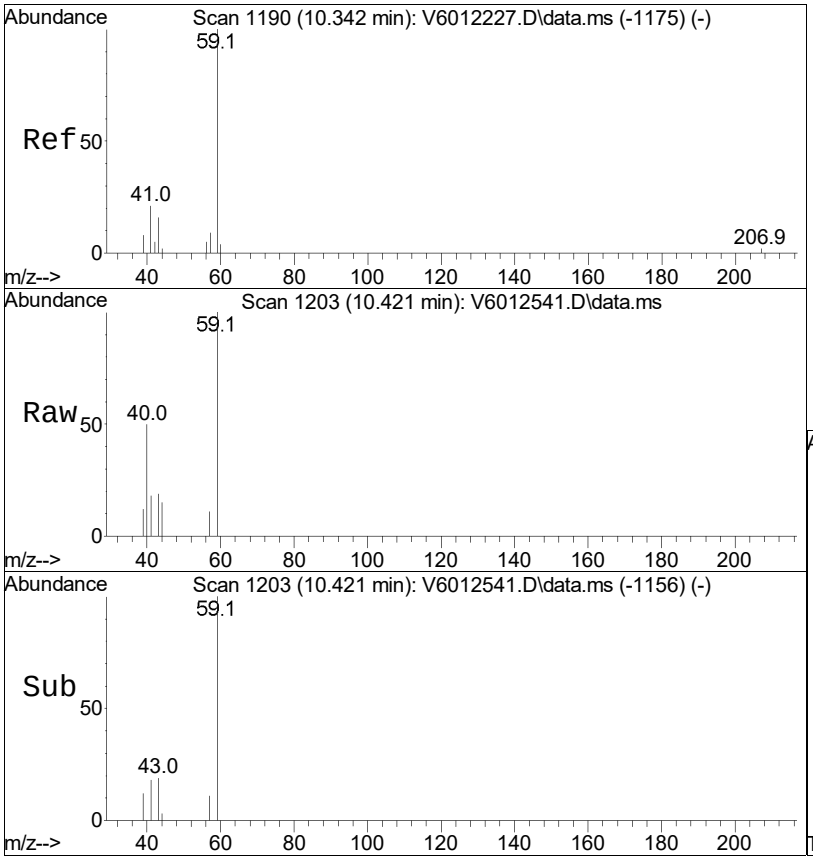


#6
Pentane
Concen: 16.04 ug/L
RT: 8.95 min Scan# 962
Delta R.T. -0.012 min
Lab File: V6012541.D
Acq: 22 Sep 2020 9:57 am

Tgt Ion: 43 Resp: 47084

Ion	Ratio	Lower	Upper
43	100		
57	16.8	0.0	37.3
72	15.5	0.0	34.4

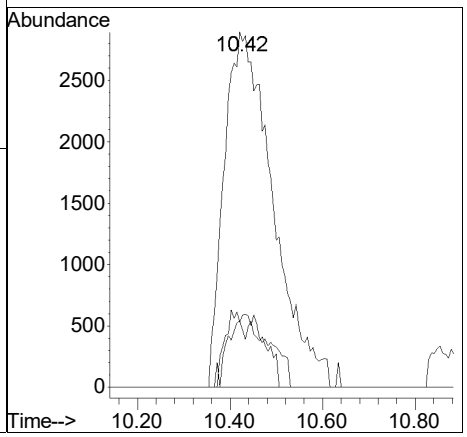


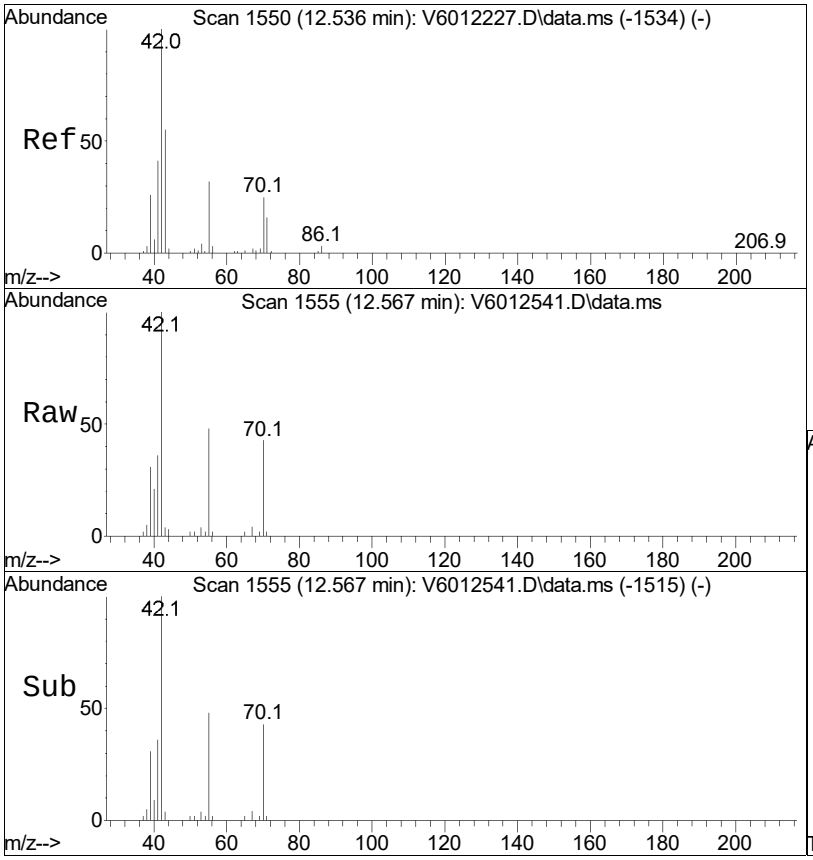


#10
Tertiary butanol
Concen: 82.04 ug/L m
RT: 10.42 min Scan# 1203
Delta R.T. 0.037 min
Lab File: V6012541.D
Acq: 22 Sep 2020 9:57 am

Tgt Ion: 59 Resp: 21263

Ion	Ratio	Lower	Upper
59	100		
41	18.4	0.6	40.6
43	18.7	0.0	35.5

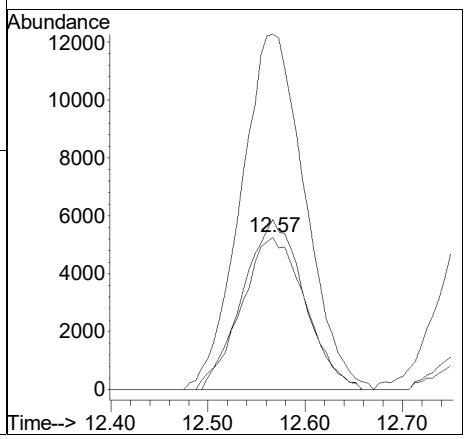


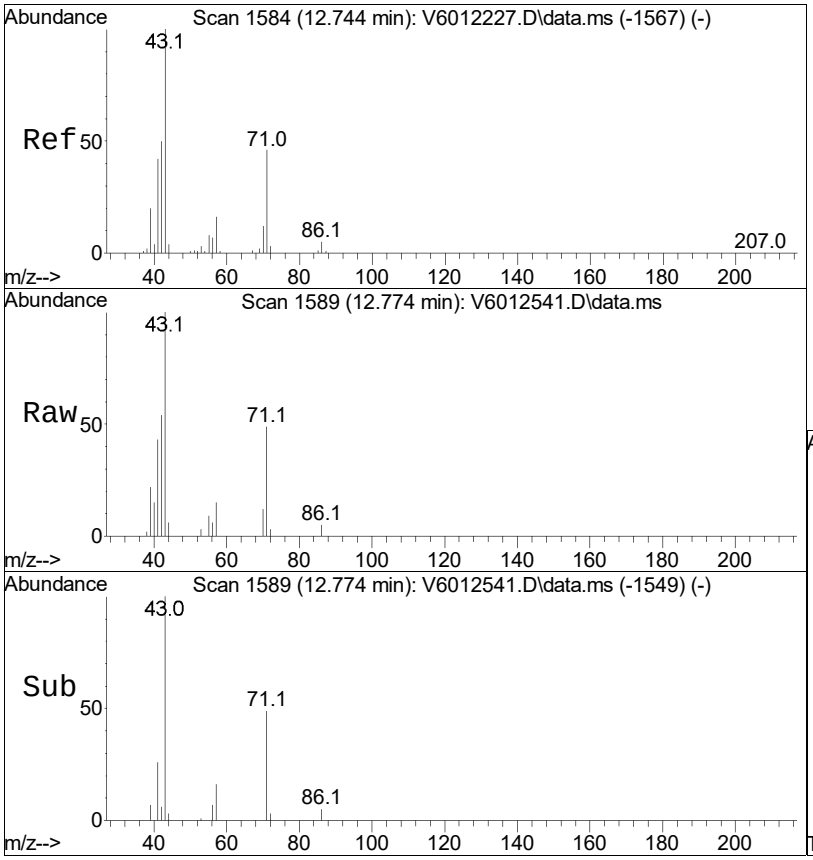


#13
Cyclopentane
Concen: 19.25 ug/L
RT: 12.57 min Scan# 1555
Delta R.T. -0.006 min
Lab File: V6012541.D
Acq: 22 Sep 2020 9:57 am

Tgt Ion: 70 Resp: 23838

Ion	Ratio	Lower	Upper
70	100		
42	233.8	391.7	431.7#
55	111.7	110.4	150.4

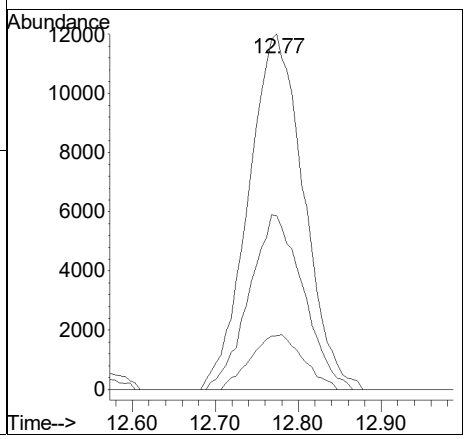


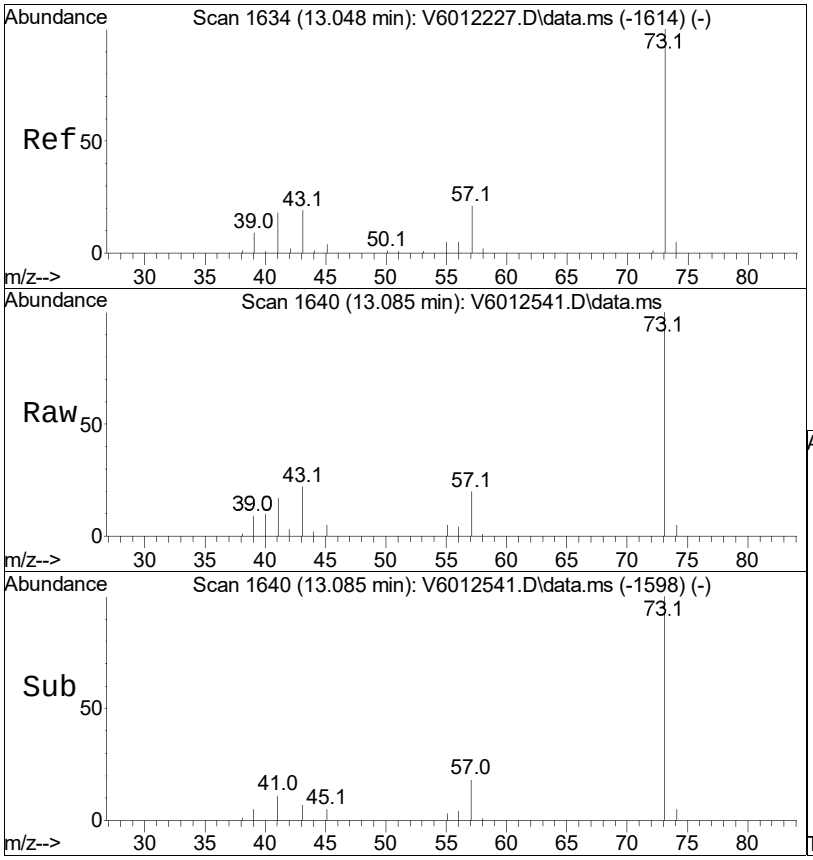


#15
2-Methylpentane
Concen: 17.50 ug/L
RT: 12.77 min Scan# 1589
Delta R.T. -0.006 min
Lab File: V6012541.D
Acq: 22 Sep 2020 9:57 am

Tgt Ion: 43 Resp: 55599

Ion	Ratio	Lower	Upper
43	100		
71	48.9	26.3	66.3
57	15.1	0.0	35.9

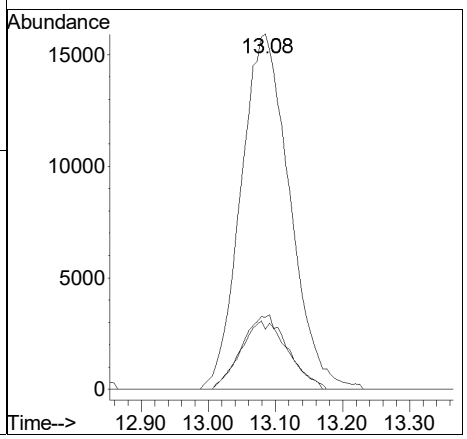


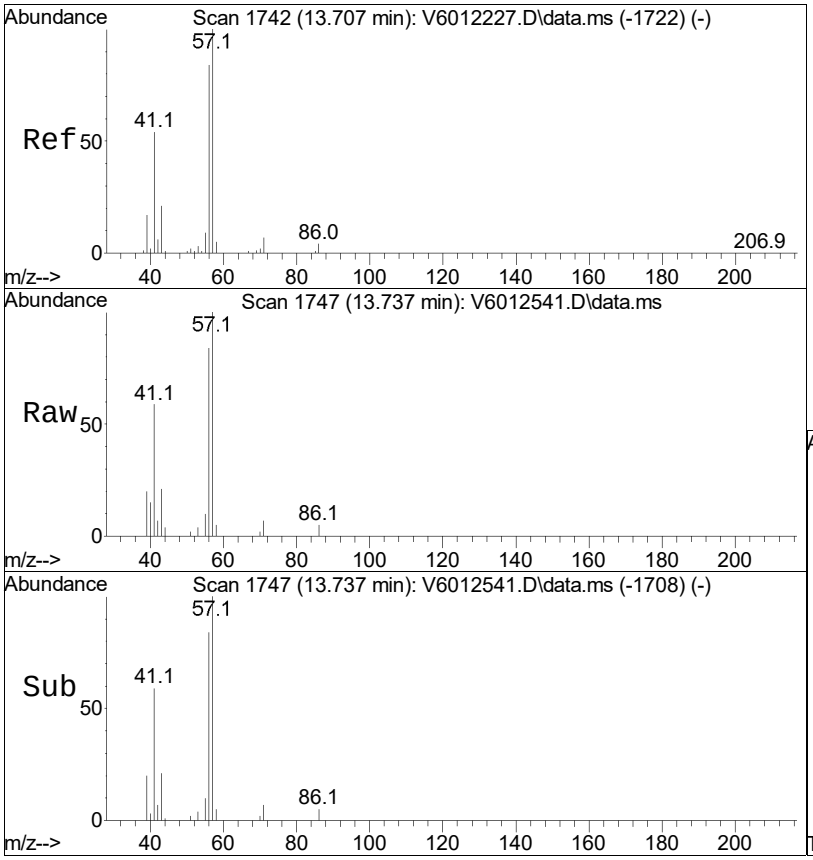


#16
MTBE
Concen: 20.27 ug/L
RT: 13.08 min Scan# 1640
Delta R.T. 0.006 min
Lab File: V6012541.D
Acq: 22 Sep 2020 9:57 am

Tgt Ion: 73 Resp: 80524

Ion	Ratio	Lower	Upper
73	100		
57	20.3	1.0	41.0
41	16.9	0.0	38.4

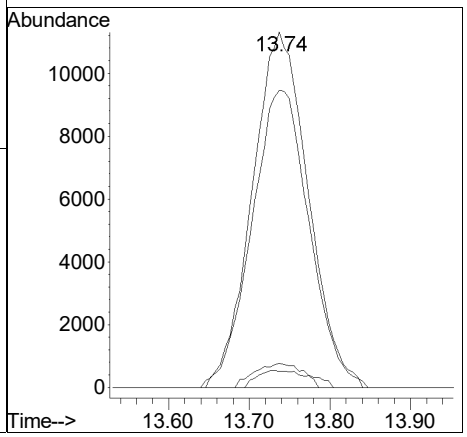


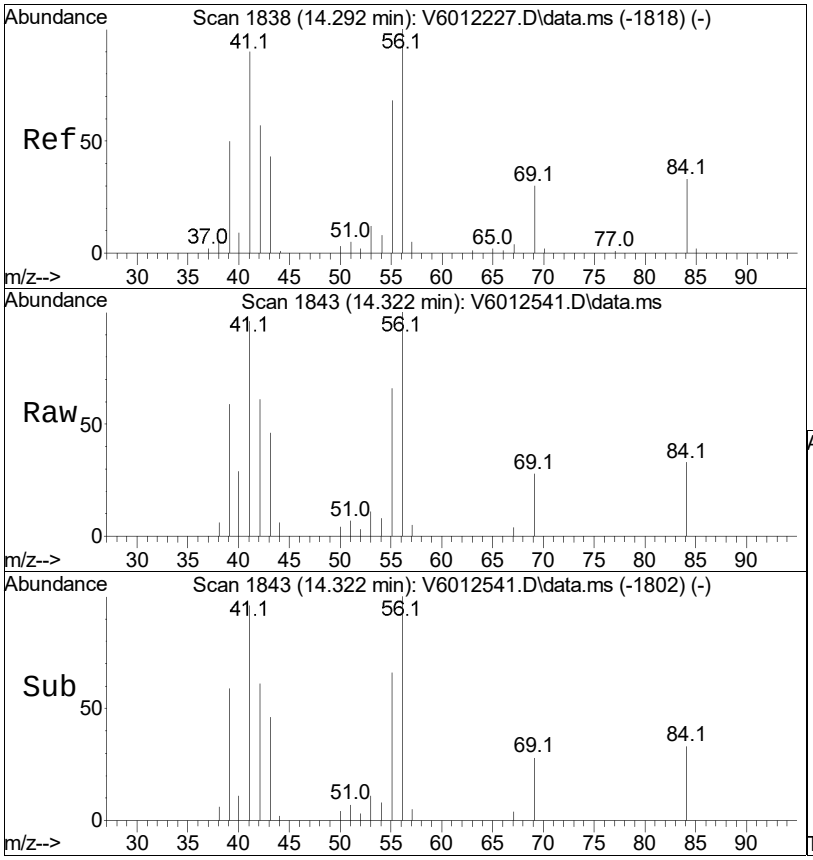


#17
3-Methylpentane
Concen: 19.02 ug/L
RT: 13.74 min Scan# 1747
Delta R.T. -0.012 min
Lab File: V6012541.D
Acq: 22 Sep 2020 9:57 am

Tgt Ion: 57 Resp: 54648

Ion	Ratio	Lower	Upper
57	100		
56	83.6	63.7	103.7
71	6.8	0.0	26.6
86	4.6	0.0	23.8

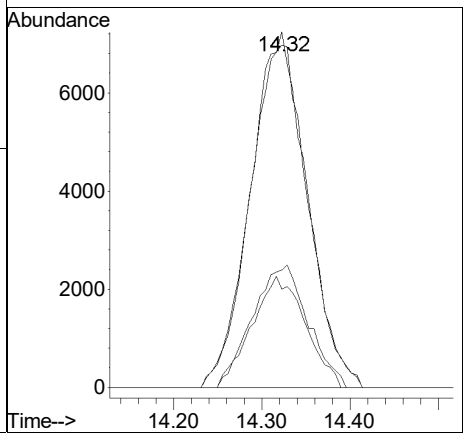


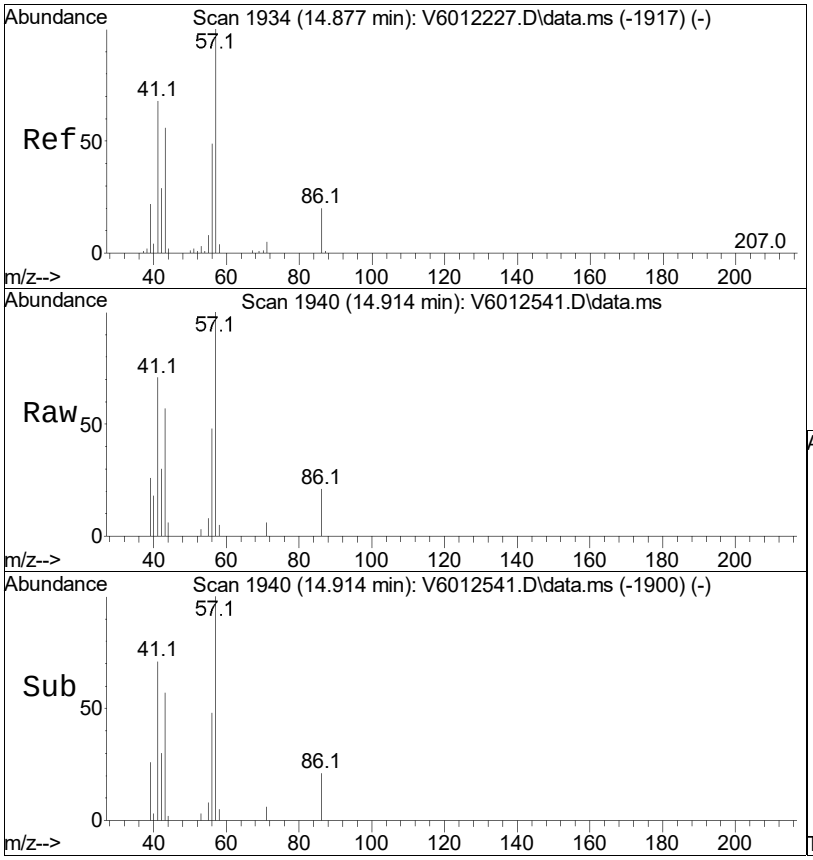


#18
1-Hexene
Concen: 19.67 ug/L
RT: 14.32 min Scan# 1843
Delta R.T. -0.000 min
Lab File: V6012541.D
Acq: 22 Sep 2020 9:57 am

Tgt Ion: 56 Resp: 32168

Ion	Ratio	Lower	Upper
56	100		
41	96.3	70.0	110.0
84	33.0	13.4	53.4
69	27.7	10.0	50.0

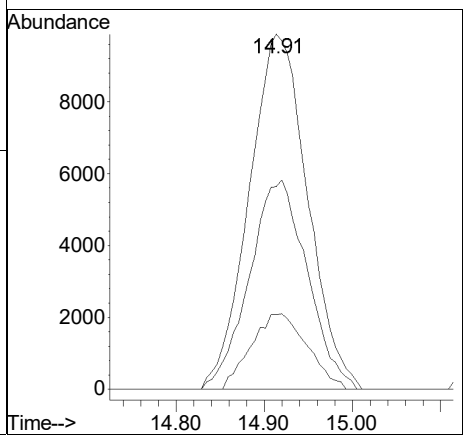


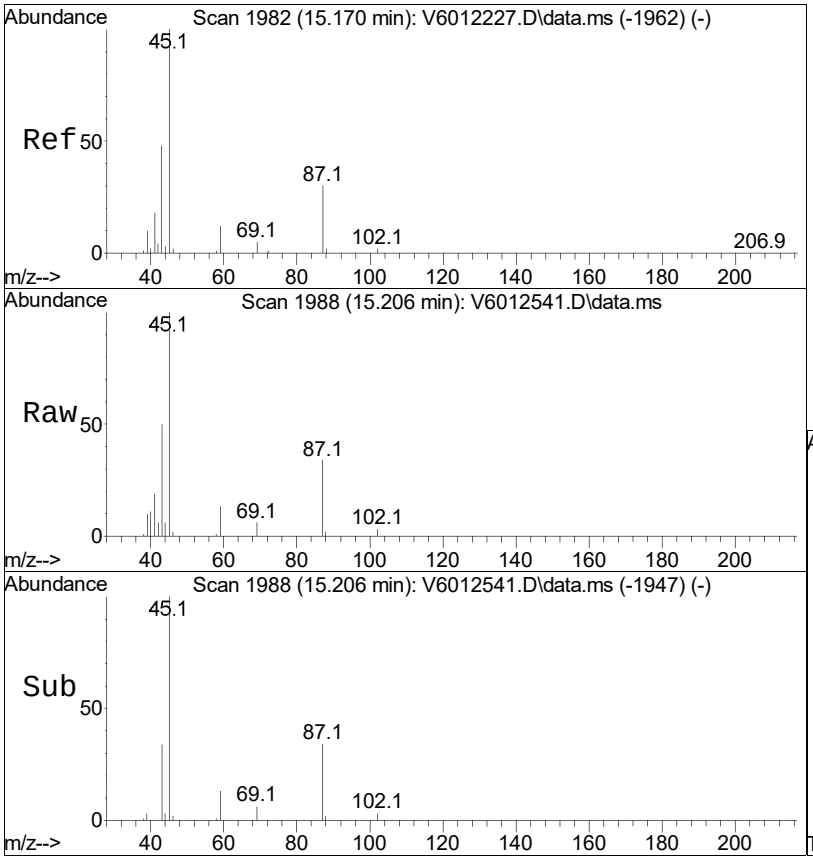


#19
Hexane
Concen: 19.41 ug/L
RT: 14.91 min Scan# 1940
Delta R.T. -0.006 min
Lab File: V6012541.D
Acq: 22 Sep 2020 9:57 am

Tgt Ion: 57 Resp: 45521

Ion	Ratio	Lower	Upper
57	100		
43	57.1	36.0	76.0
86	20.9	0.0	39.8

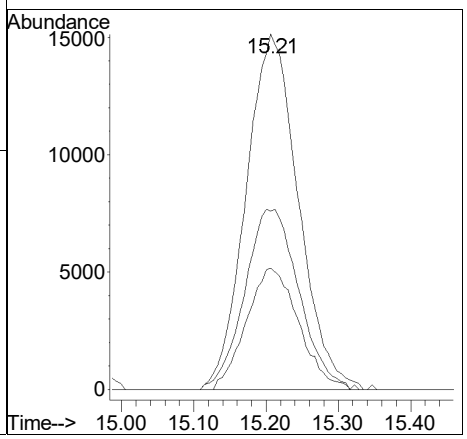


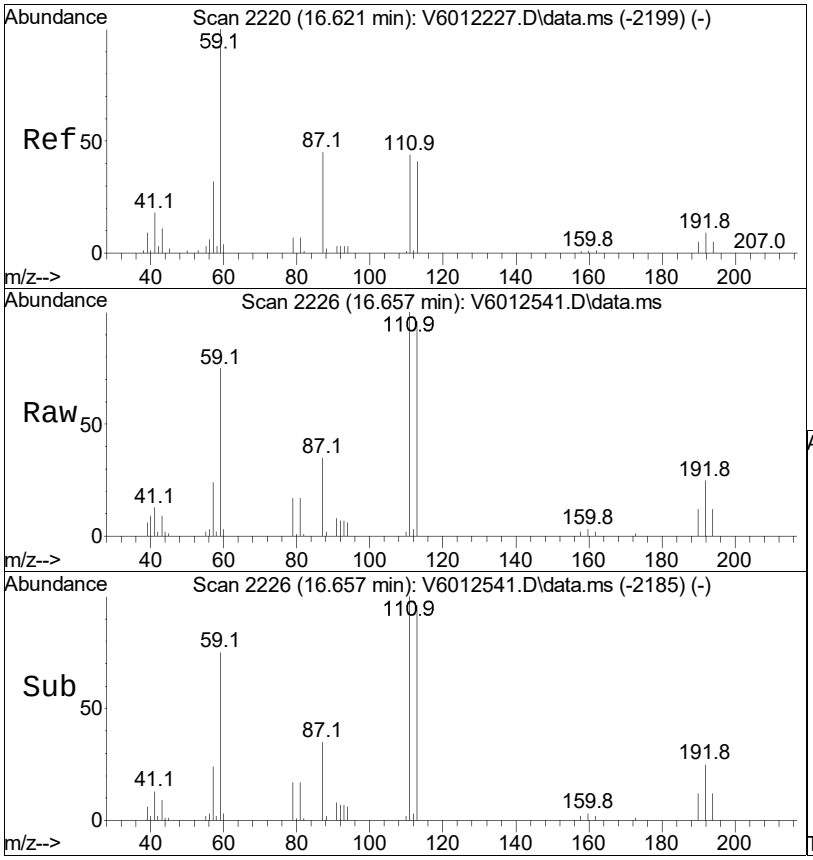


#20
Diisopropyl ether
Concen: 19.09 ug/L
RT: 15.21 min Scan# 1988
Delta R.T. -0.000 min
Lab File: V6012541.D
Acq: 22 Sep 2020 9:57 am

Tgt Ion: 45 Resp: 76159

Ion	Ratio	Lower	Upper
45	100		
87	34.2	10.3	50.3
43	50.2	28.8	68.8

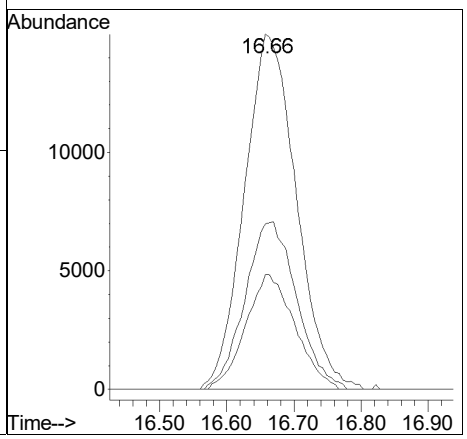


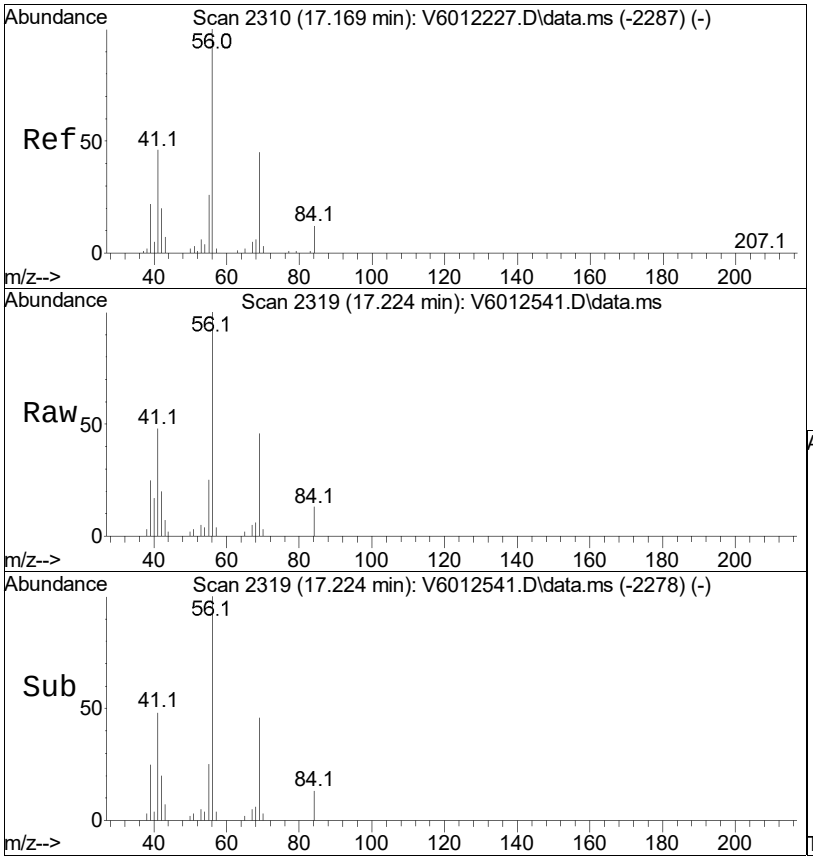


#25
Ethyl tertiary butyl ether
Concen: 19.44 ug/L
RT: 16.66 min Scan# 2226
Delta R.T. -0.000 min
Lab File: V6012541.D
Acq: 22 Sep 2020 9:57 am

Tgt Ion: 59 Resp: 80612

Ion	Ratio	Lower	Upper
59	100		
87	46.6	24.8	64.8
57	32.4	12.4	52.4

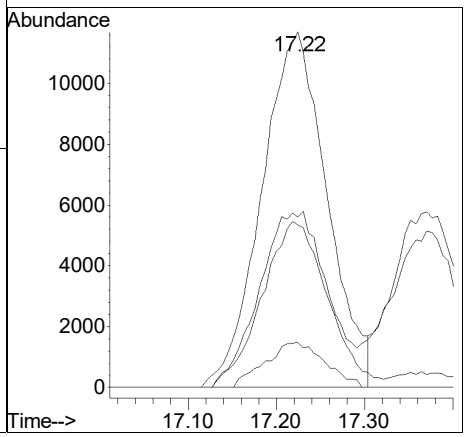


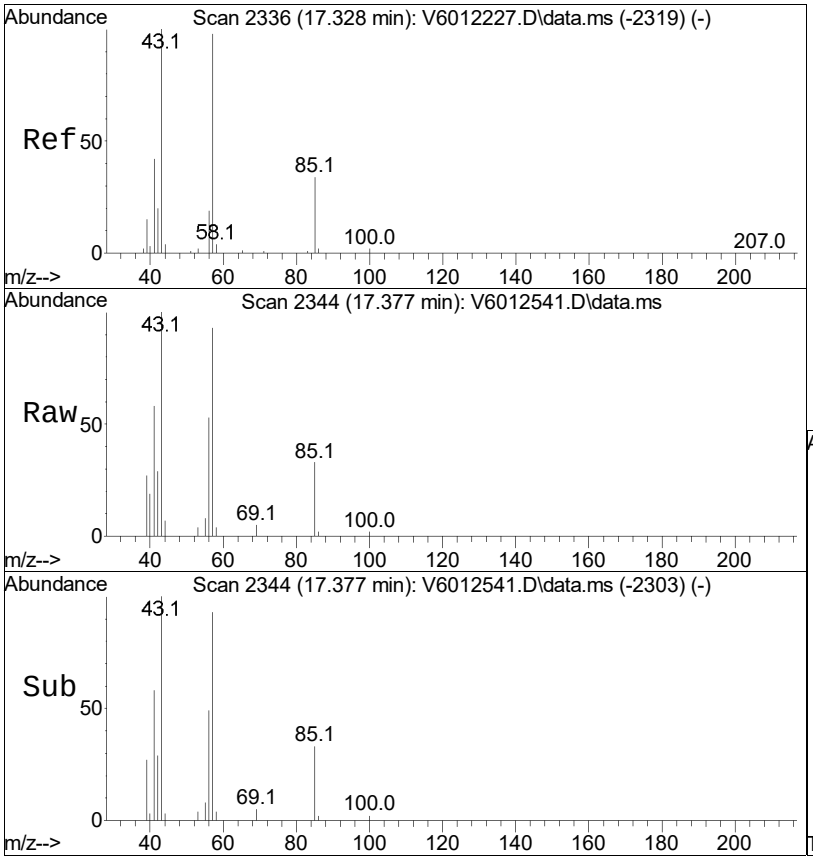


#27
Methylcyclopentane
Concen: 20.16 ug/L
RT: 17.22 min Scan# 2319
Delta R.T. -0.000 min
Lab File: V6012541.D
Acq: 22 Sep 2020 9:57 am

Tgt Ion: 56 Resp: 60299

Ion	Ratio	Lower	Upper
56	100		
69	45.7	25.0	65.0
41	48.0	26.3	66.3
84	12.6	0.0	31.8

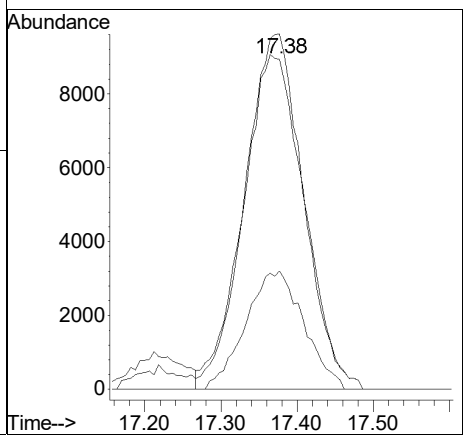


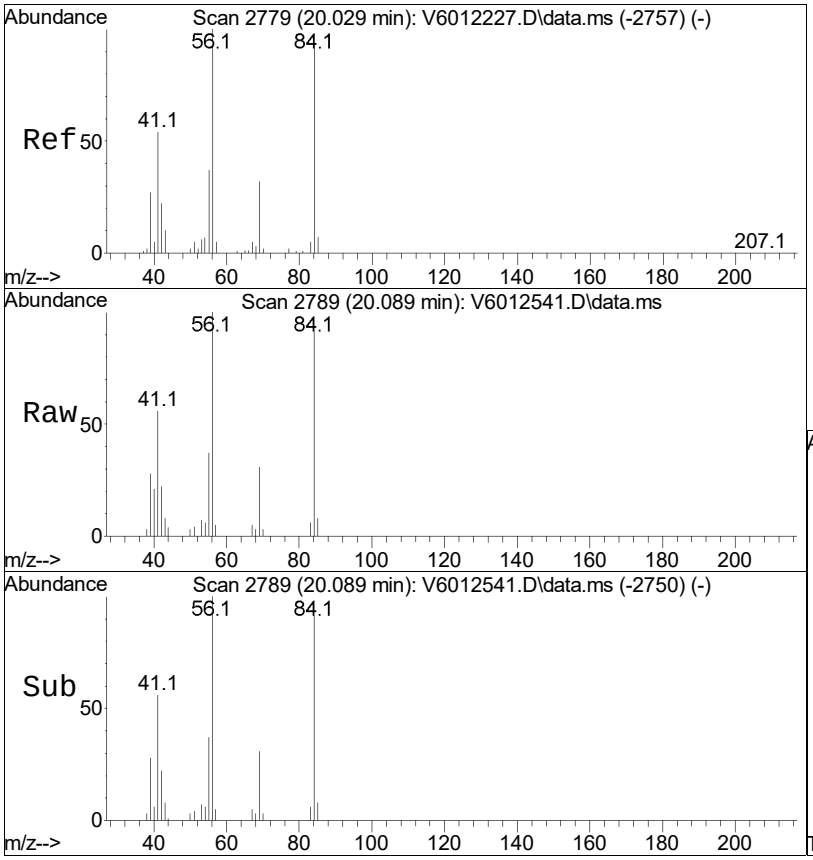


#28
2,4-Dimethylpentane
Concen: 18.16 ug/L
RT: 17.38 min Scan# 2344
Delta R.T. -0.000 min
Lab File: V6012541.D
Acq: 22 Sep 2020 9:57 am

Tgt Ion: 43 Resp: 52466

Ion	Ratio	Lower	Upper
43	100		
57	92.9	77.1	117.1
85	33.3	12.0	52.0

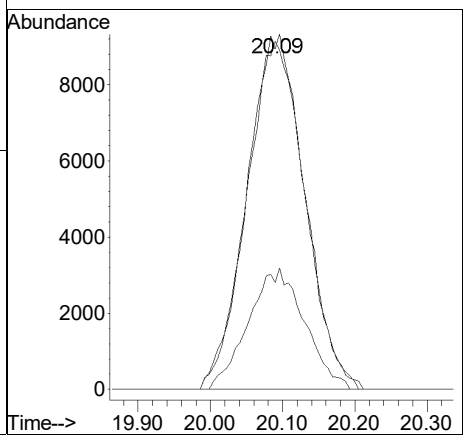


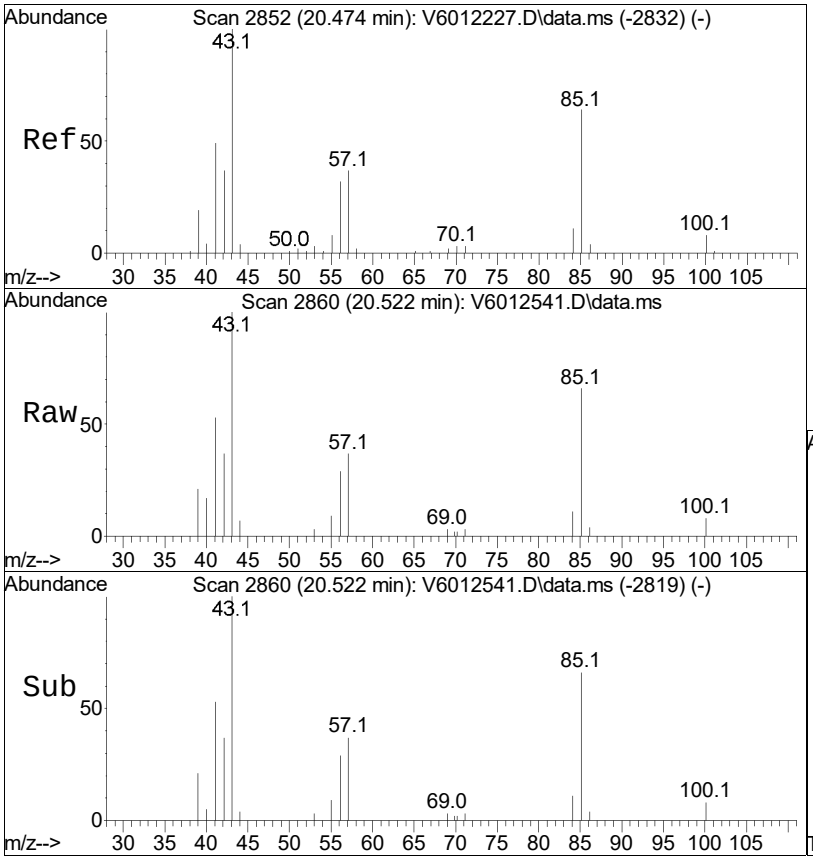


#32
Cyclohexane
Concen: 20.54 ug/L
RT: 20.09 min Scan# 2789
Delta R.T. -0.012 min
Lab File: V6012541.D
Acq: 22 Sep 2020 9:57 am

Tgt Ion: 56 Resp: 51189

Ion	Ratio	Lower	Upper
56	100		
84	97.8	77.5	117.5
69	30.7	12.1	52.1

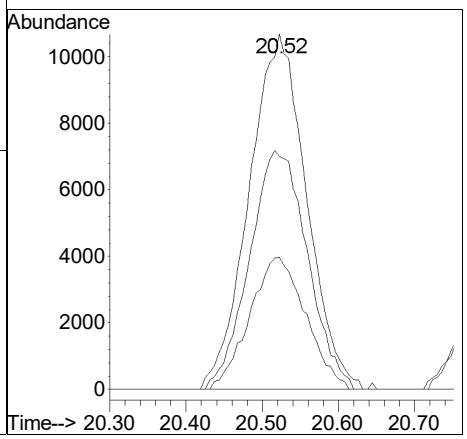


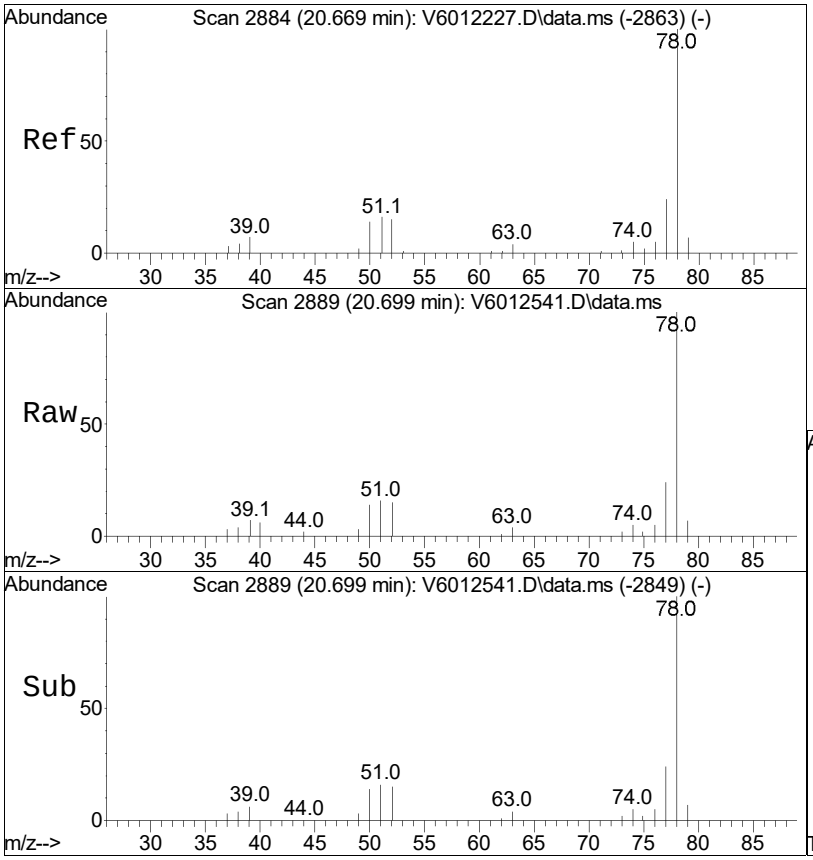


#33
2-Methylhexane
Concen: 18.49 ug/L
RT: 20.52 min Scan# 2860
Delta R.T. -0.000 min
Lab File: V6012541.D
Acq: 22 Sep 2020 9:57 am

Tgt Ion: 43 Resp: 55843

Ion	Ratio	Lower	Upper
43	100		
85	65.6	43.9	83.9
57	37.2	16.6	56.6

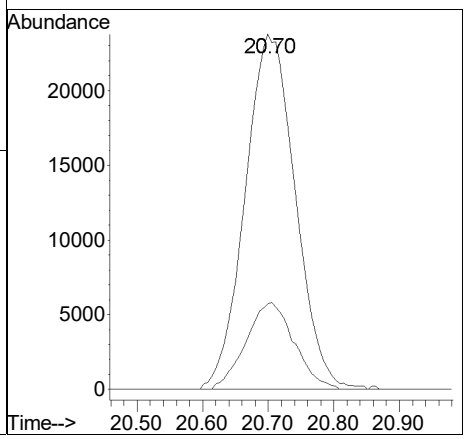


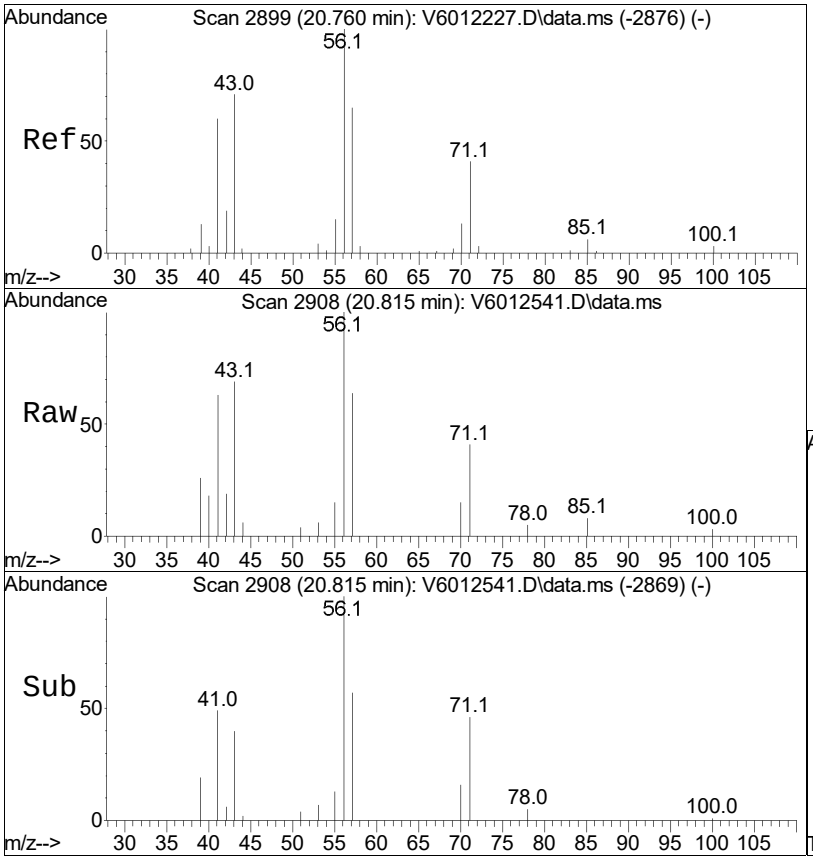


#34
Benzene
Concen: 20.17 ug/L
RT: 20.70 min Scan# 2889
Delta R.T. -0.006 min
Lab File: V6012541.D
Acq: 22 Sep 2020 9:57 am

Tgt Ion: 78 Resp: 126545

Ion	Ratio	Lower	Upper
78	100		
77	24.0	3.7	43.7

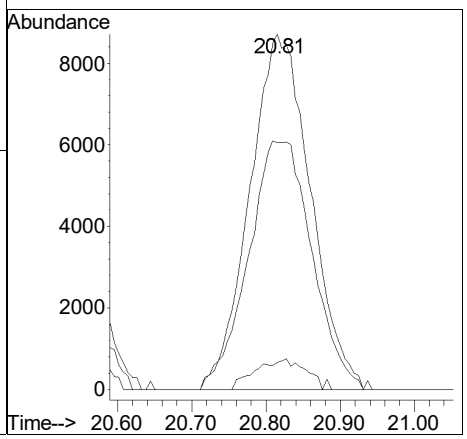


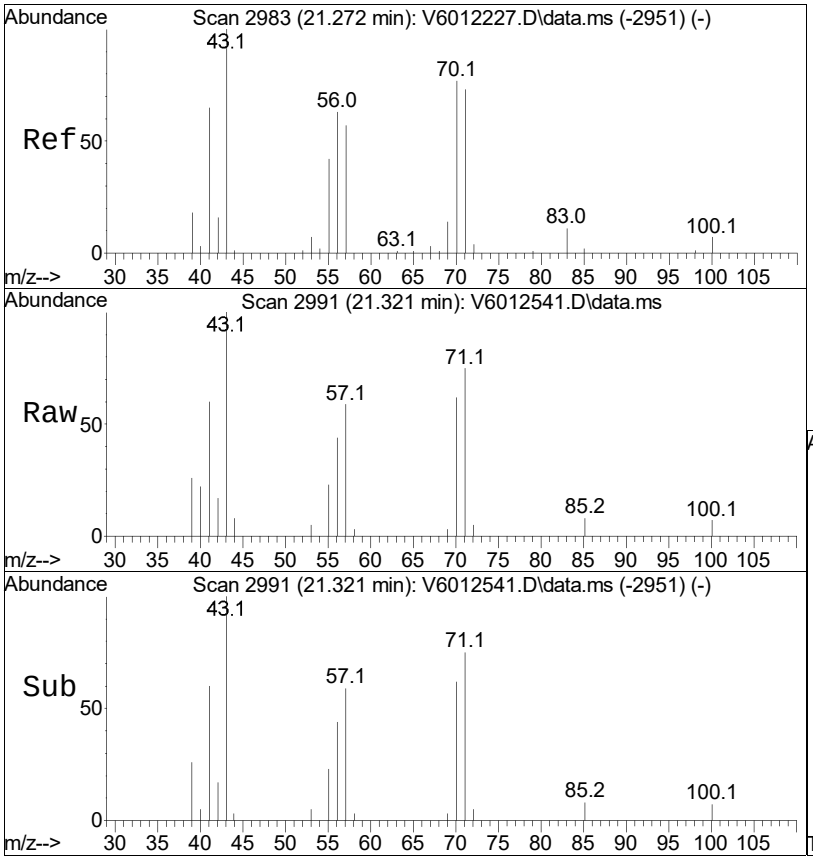


#35
2,3-Dimethylpentane
Concen: 19.51 ug/L
RT: 20.81 min Scan# 2908
Delta R.T. -0.012 min
Lab File: V6012541.D
Acq: 22 Sep 2020 9:57 am

Tgt Ion: 56 Resp: 49546

Ion	Ratio	Lower	Upper
56	100		
43	69.4	52.1	92.1
85	7.6	0.0	27.1

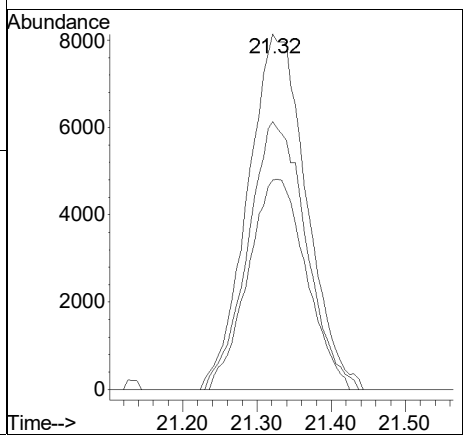


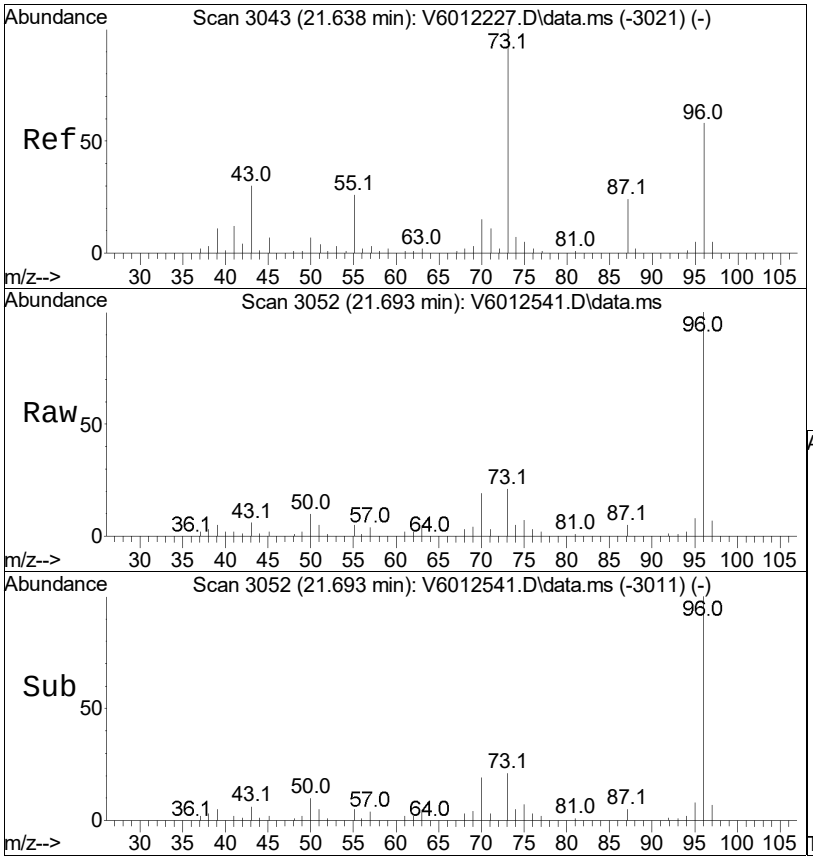


#38
3-Methylhexane
Concen: 16.64 ug/L
RT: 21.32 min Scan# 2991
Delta R.T. -0.006 min
Lab File: V6012541.D
Acq: 22 Sep 2020 9:57 am

Tgt Ion: 43 Resp: 44847

Ion	Ratio	Lower	Upper
43	100		
57	58.9	46.6	86.6
71	75.3	53.2	93.2

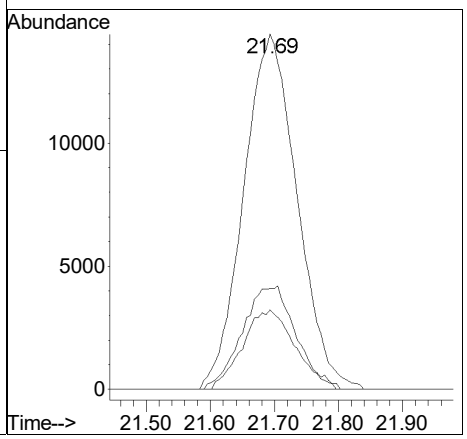


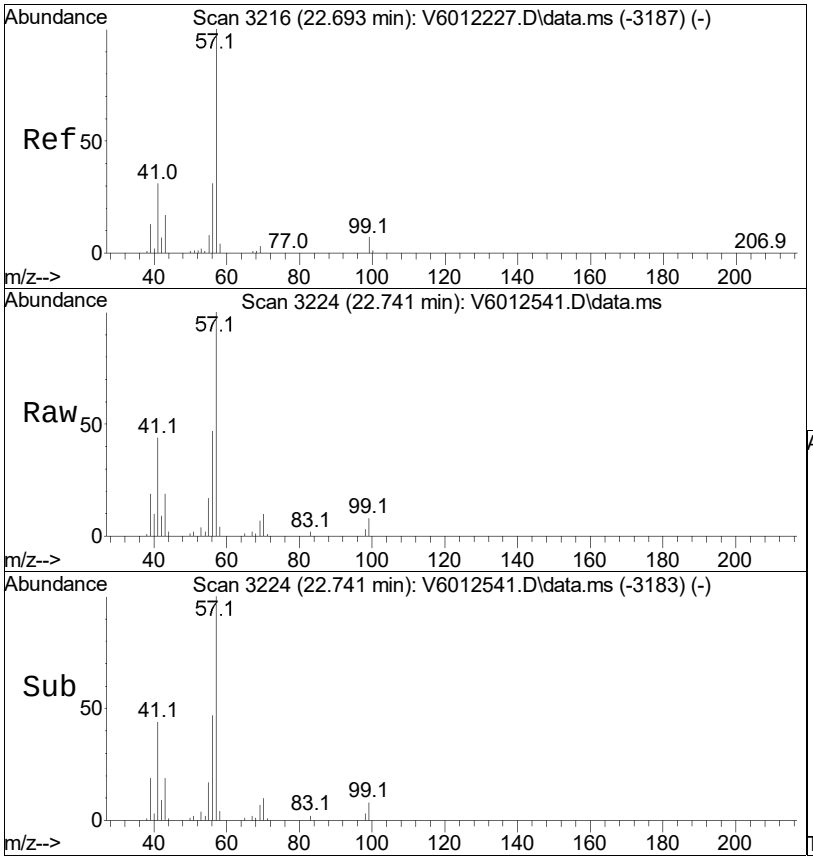


#39
TAME
Concen: 17.36 ug/L
RT: 21.69 min Scan# 3052
Delta R.T. -0.000 min
Lab File: V6012541.D
Acq: 22 Sep 2020 9:57 am

Tgt Ion: 73 Resp: 83495

Ion	Ratio	Lower	Upper
73	100		
43	28.4	10.7	50.7
55	22.4	6.2	46.2

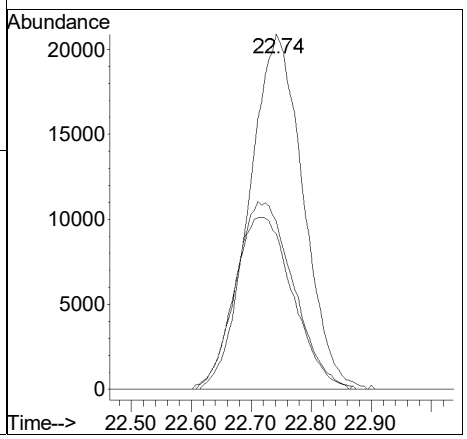


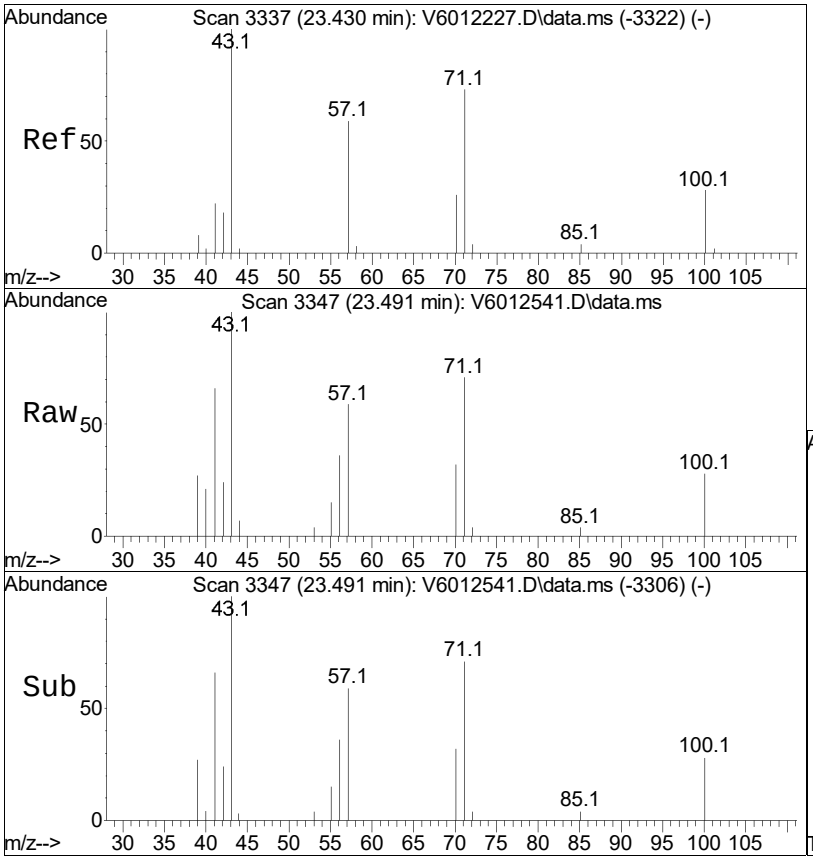


#44
Isooctane
Concen: 20.04 ug/L
RT: 22.74 min Scan# 3224
Delta R.T. -0.000 min
Lab File: V6012541.D
Acq: 22 Sep 2020 9:57 am

Tgt Ion: 57 Resp: 129492

Ion	Ratio	Lower	Upper
57	100		
41	43.8	19.7	59.7
56	47.3	29.1	69.1

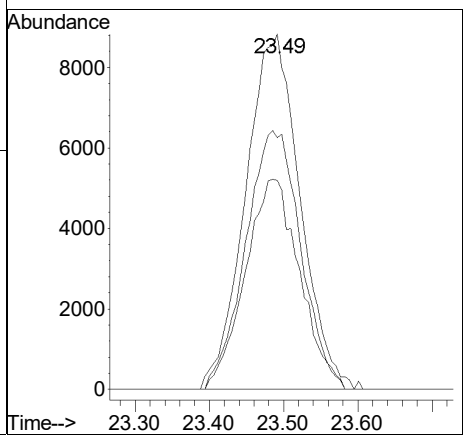


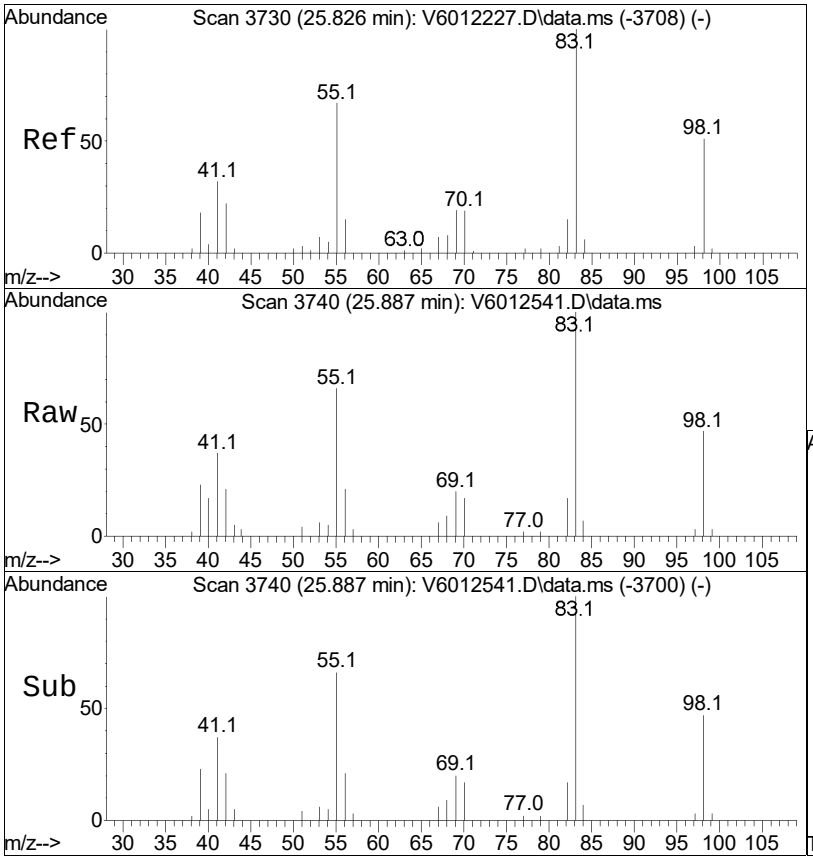


#46
Heptane
Concen: 17.99 ug/L
RT: 23.49 min Scan# 3347
Delta R.T. -0.000 min
Lab File: V6012541.D
Acq: 22 Sep 2020 9:57 am

Tgt Ion: 43 Resp: 45191

Ion	Ratio	Lower	Upper
43	100		
57	58.8	41.1	81.1
71	70.9	50.3	90.3

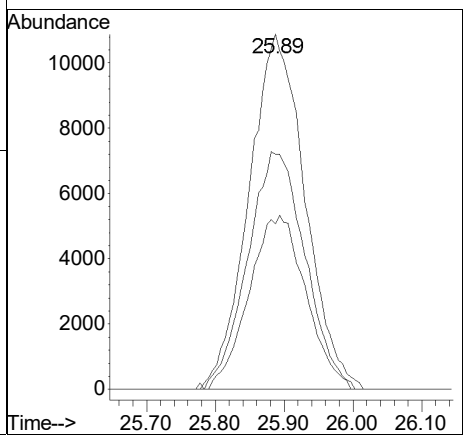


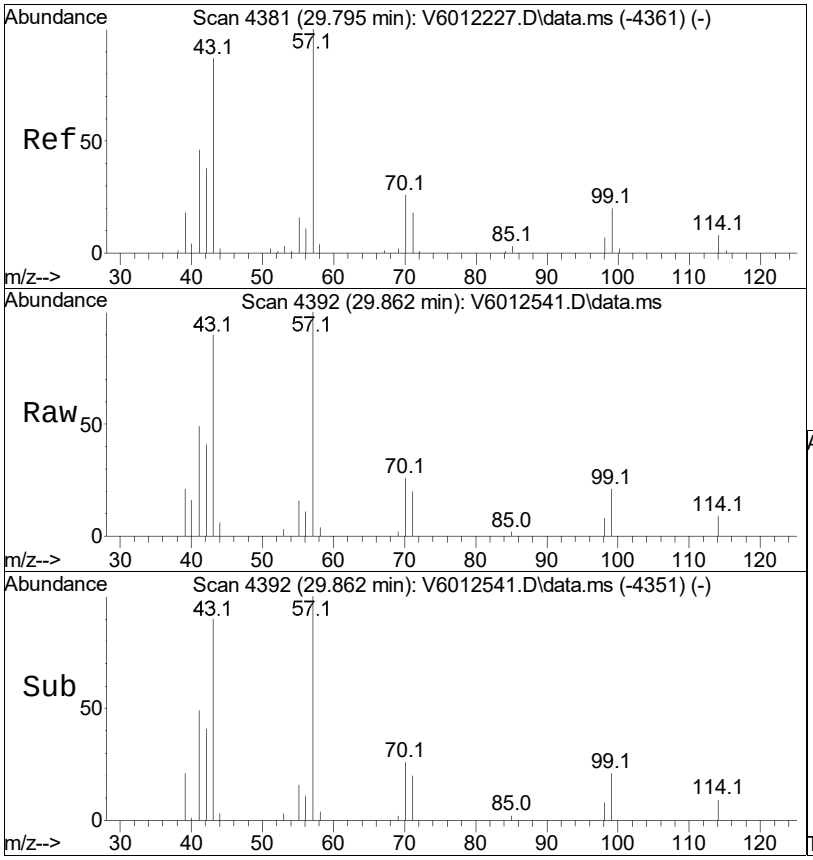


#51
Methylcyclohexane
Concen: 21.23 ug/L
RT: 25.89 min Scan# 3740
Delta R.T. -0.006 min
Lab File: V6012541.D
Acq: 22 Sep 2020 9:57 am

Tgt Ion: 83 Resp: 61839

Ion	Ratio	Lower	Upper
83	100		
55	66.2	48.9	88.9
98	46.5	30.6	70.6

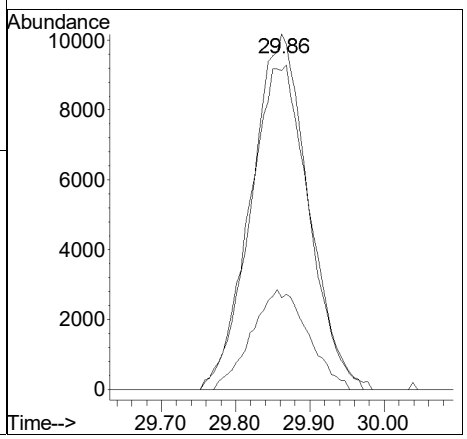


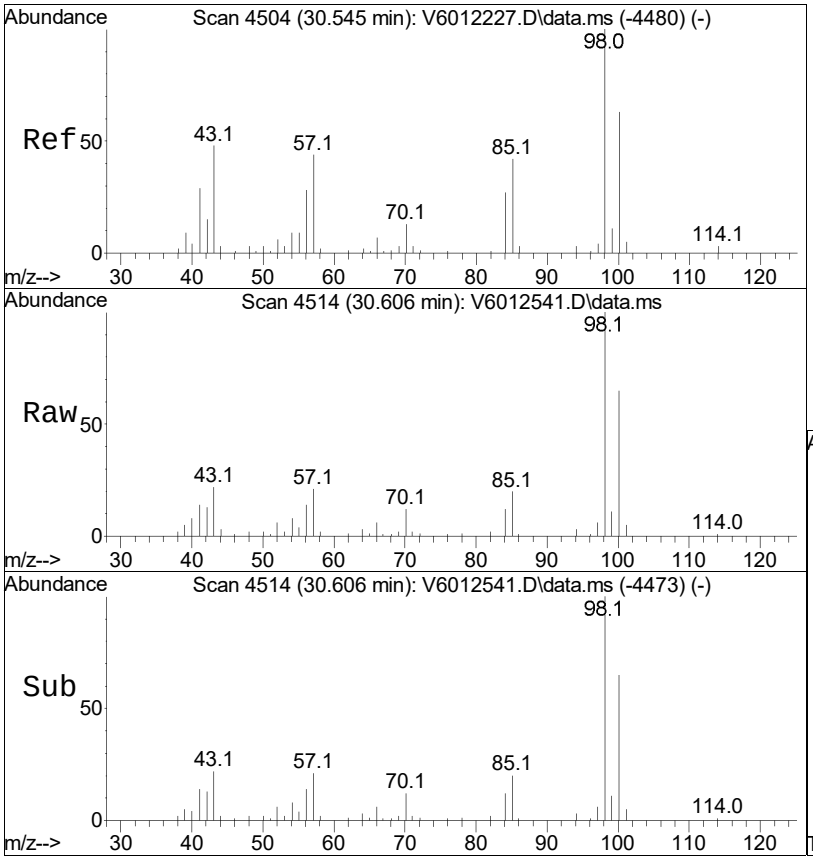


#60
2-Methylheptane
Concen: 18.82 ug/L
RT: 29.86 min Scan# 4392
Delta R.T. -0.000 min
Lab File: V6012541.D
Acq: 22 Sep 2020 9:57 am

Tgt Ion: 57 Resp: 54758

Ion	Ratio	Lower	Upper
57	100		
43	89.7	66.6	106.6
70	25.8	5.8	45.8

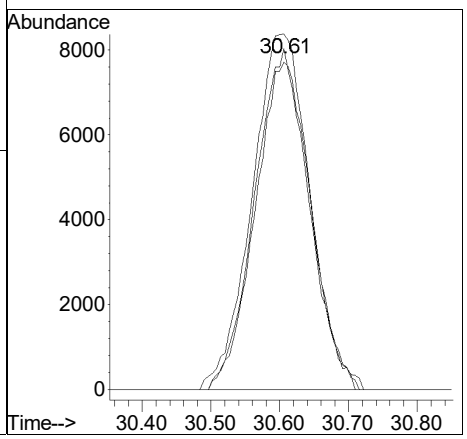


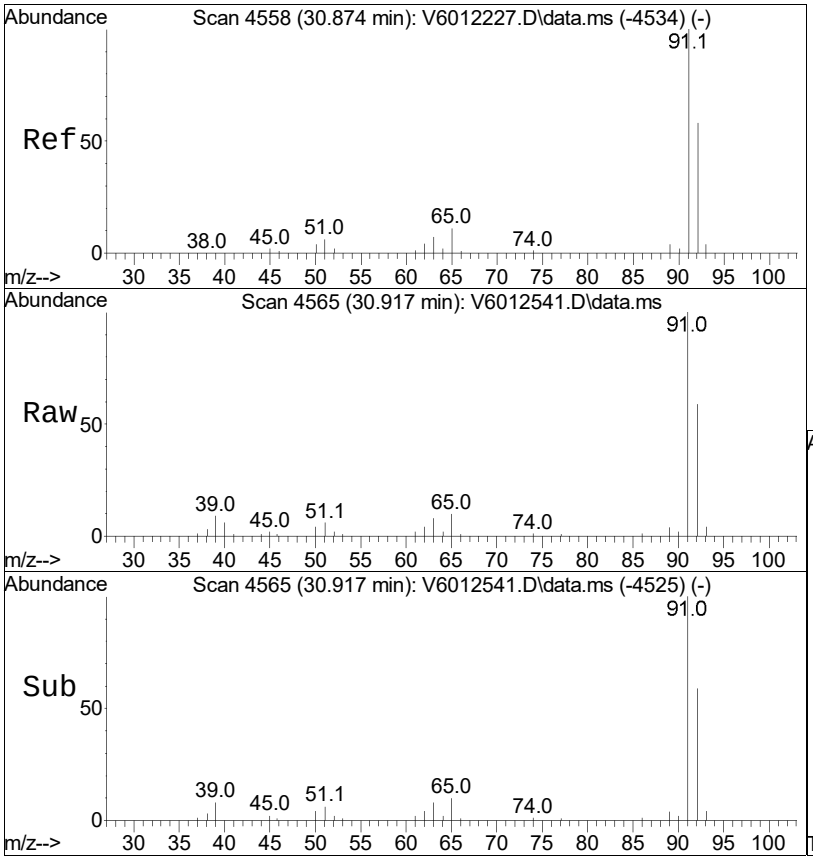


#63
3-Methylheptane
Concen: 17.23 ug/L
RT: 30.61 min Scan# 4514
Delta R.T. -0.000 min
Lab File: V6012541.D
Acq: 22 Sep 2020 9:57 am

Tgt Ion: 43 Resp: 49229

Ion	Ratio	Lower	Upper
43	100		
57	95.9	72.5	112.5
85	92.1	68.3	108.3

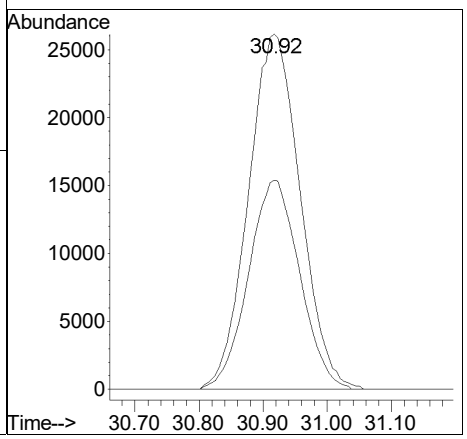


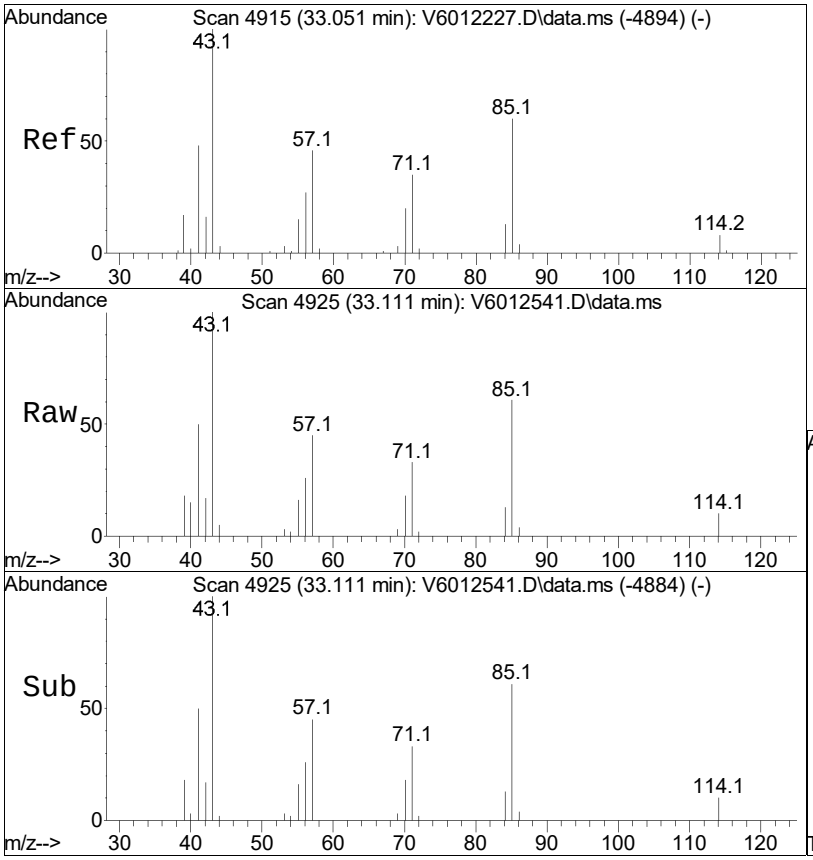


#66
Toluene
Concen: 19.36 ug/L
RT: 30.92 min Scan# 4565
Delta R.T. -0.006 min
Lab File: V6012541.D
Acq: 22 Sep 2020 9:57 am

Tgt Ion: 91 Resp: 147192

Ion	Ratio	Lower	Upper
91	100		
92	58.9	38.2	78.2

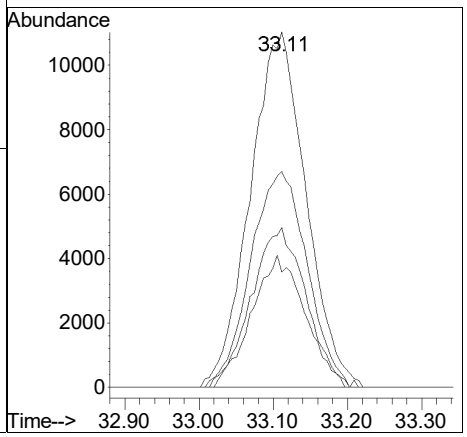


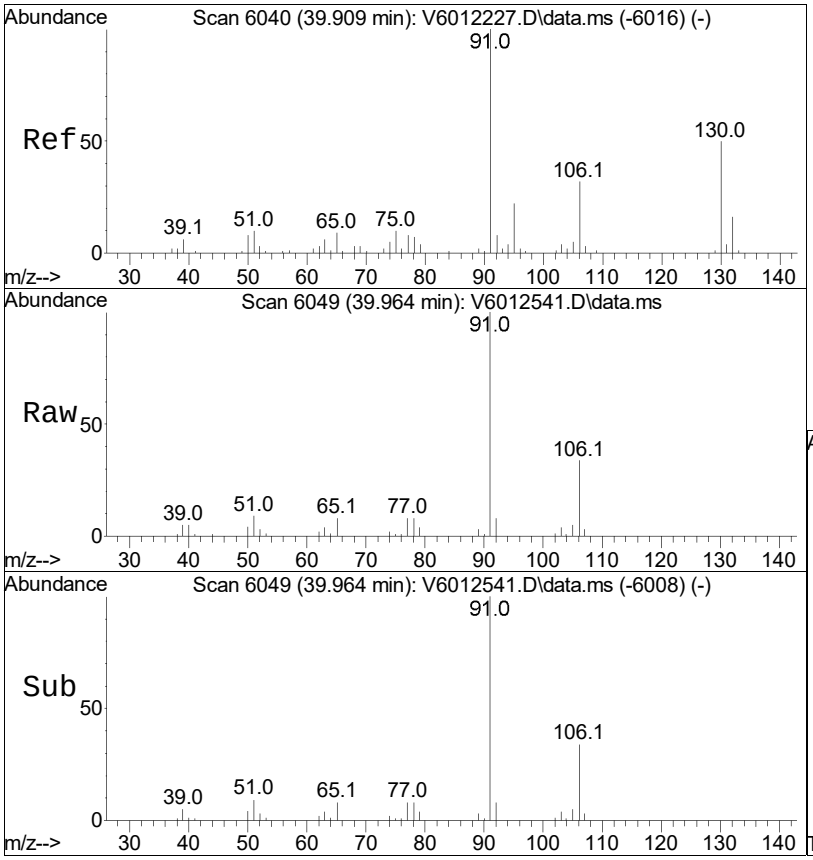


#71
Octane
Concen: 19.73 ug/L
RT: 33.11 min Scan# 4925
Delta R.T. -0.000 min
Lab File: V6012541.D
Acq: 22 Sep 2020 9:57 am

Tgt Ion: 43 Resp: 57547

Ion	Ratio	Lower	Upper
43	100		
57	45.0	26.0	66.0
85	60.7	39.8	79.8
71	32.5	14.6	54.6

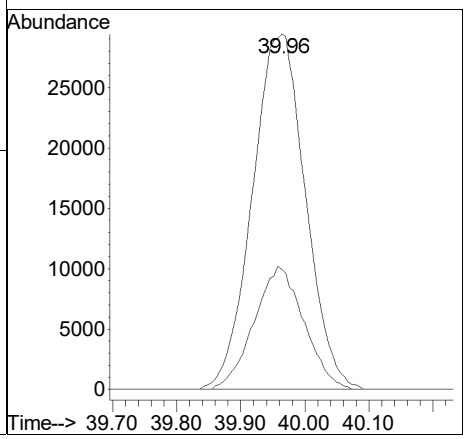


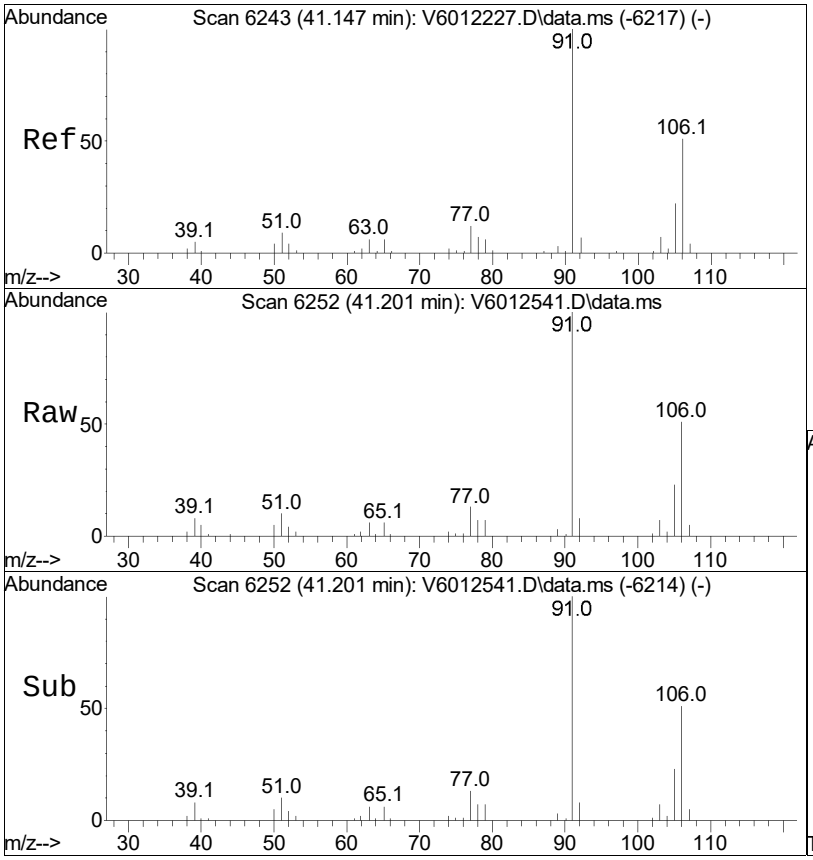


#86
Ethylbenzene
Concen: 19.69 ug/L
RT: 39.96 min Scan# 6049
Delta R.T. -0.000 min
Lab File: V6012541.D
Acq: 22 Sep 2020 9:57 am

Tgt Ion: 91 Resp: 169196

Ion	Ratio	Lower	Upper
91	100		
106	33.8	12.1	52.1

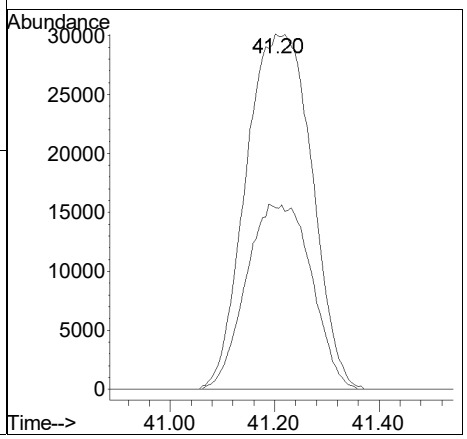


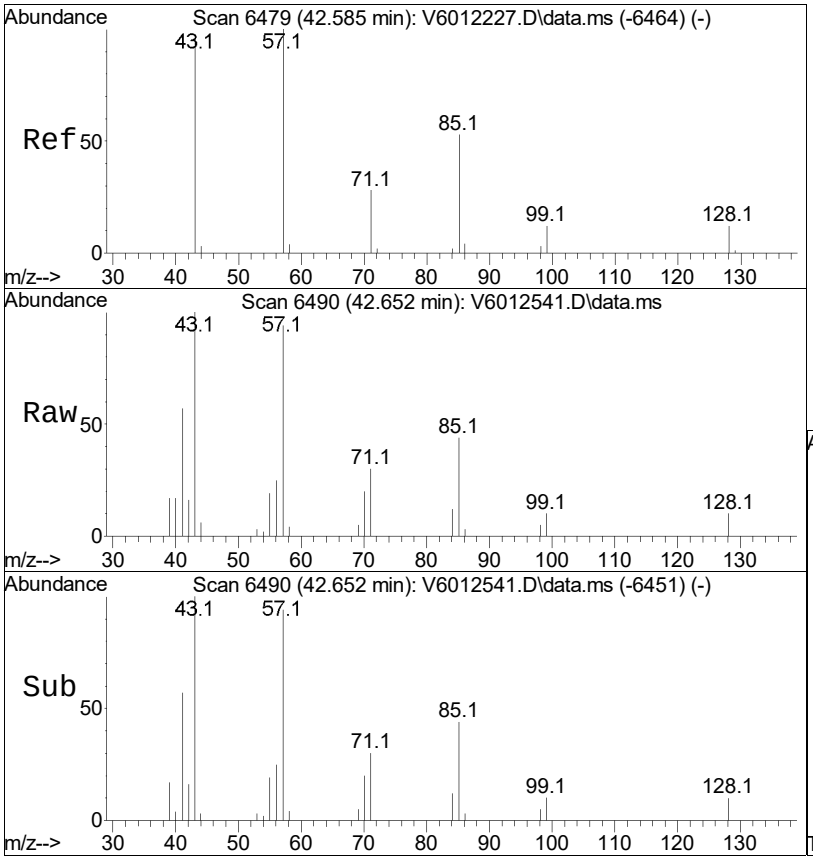


#91
p/m-Xylene
Concen: 40.33 ug/L
RT: 41.20 min Scan# 6252
Delta R.T. -0.018 min
Lab File: V6012541.D
Acq: 22 Sep 2020 9:57 am

Tgt Ion: 91 Resp: 264332

Ion	Ratio	Lower	Upper
91	100		
106	51.2	30.7	70.7

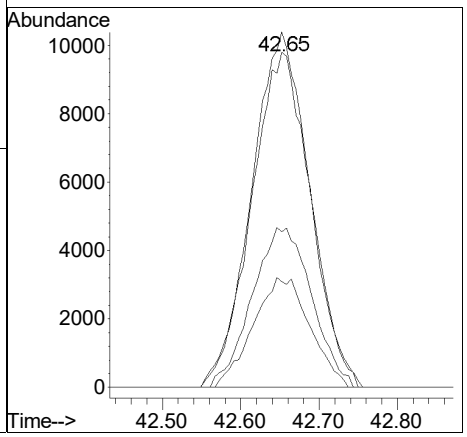


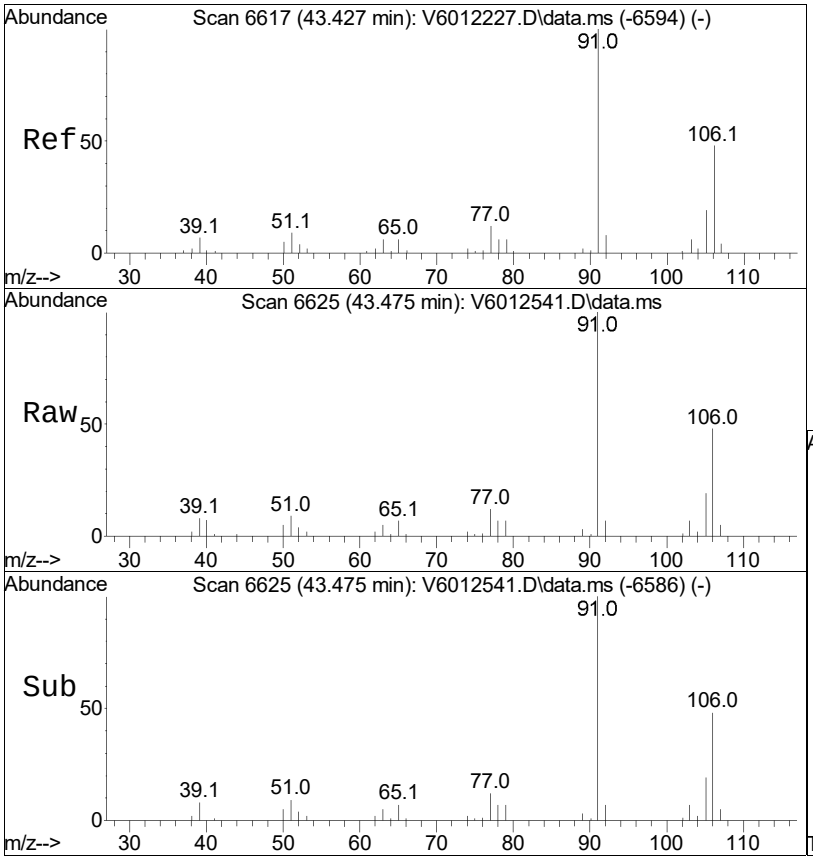


#95
Nonane
Concen: 18.88 ug/L
RT: 42.65 min Scan# 6490
Delta R.T. -0.012 min
Lab File: V6012541.D
Acq: 22 Sep 2020 9:57 am

Tgt Ion: 43 Resp: 53817

Ion	Ratio	Lower	Upper
43	100		
57	94.3	74.2	114.2
85	43.8	24.5	64.5
71	29.8	10.5	50.5

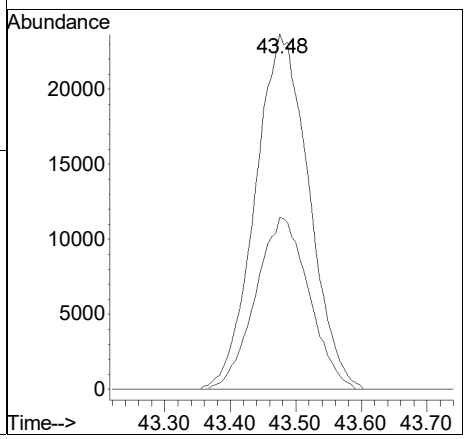


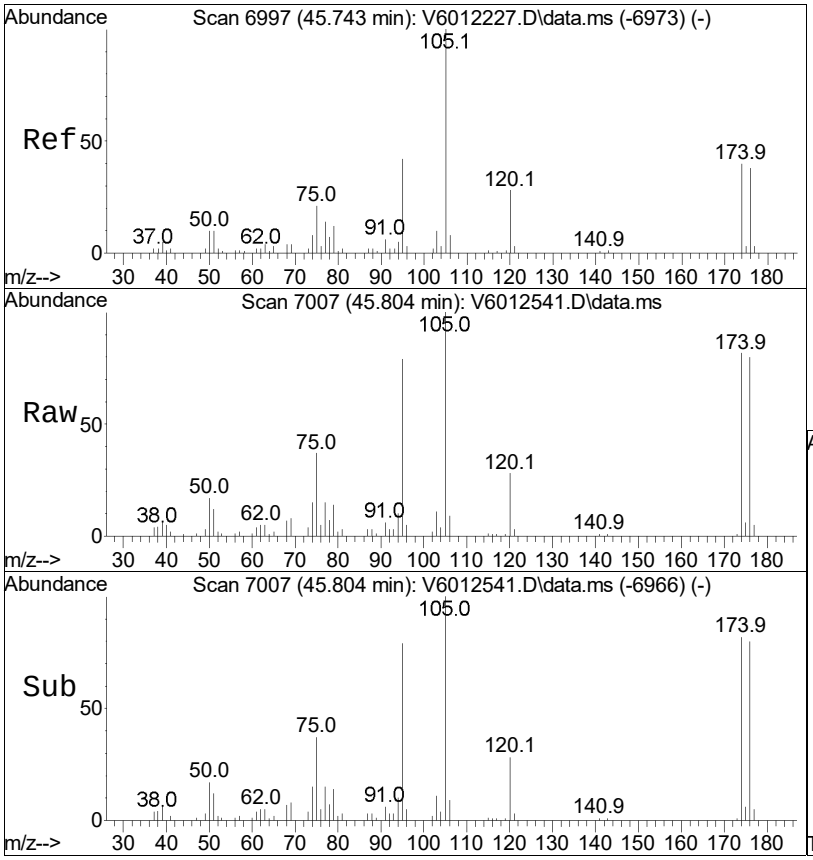


#98
o-Xylene
Concen: 19.60 ug/L
RT: 43.48 min Scan# 6625
Delta R.T. -0.012 min
Lab File: V6012541.D
Acq: 22 Sep 2020 9:57 am

Tgt Ion: 91 Resp: 134685

Ion	Ratio	Lower	Upper
91	100		
106	48.4	28.3	68.3

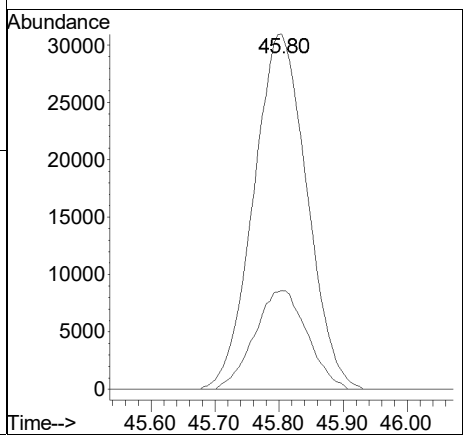


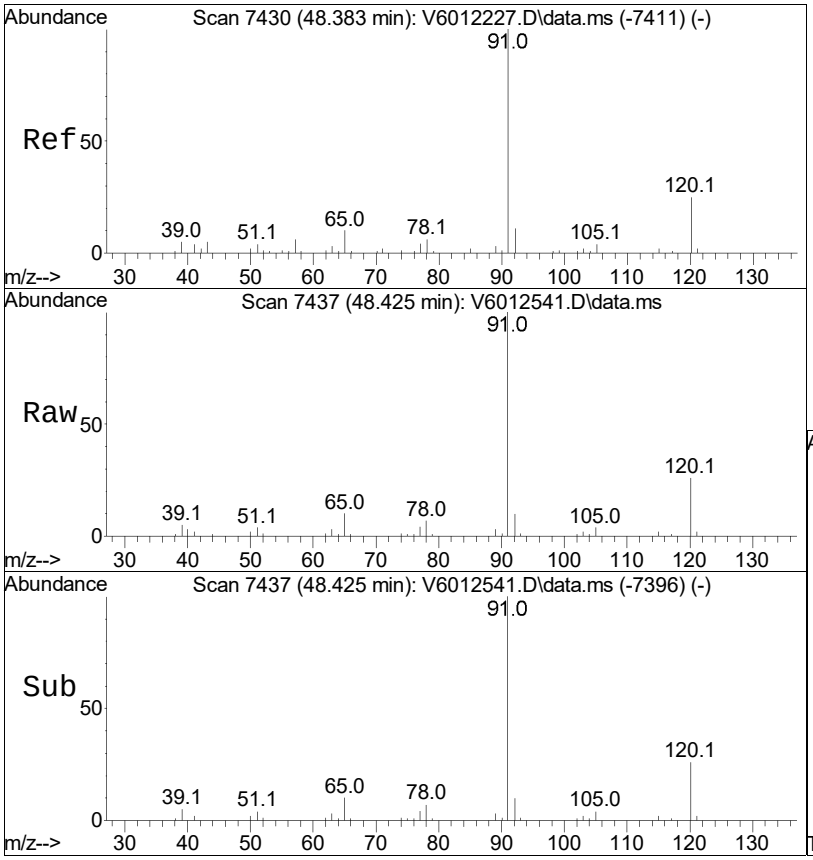


#102
Isopropylbenzene
Concen: 19.99 ug/L
RT: 45.80 min Scan# 7007
Delta R.T. -0.000 min
Lab File: V6012541.D
Acq: 22 Sep 2020 9:57 am

Tgt Ion:105 Resp: 178980

Ion	Ratio	Lower	Upper
105	100		
120	27.8	8.4	48.4

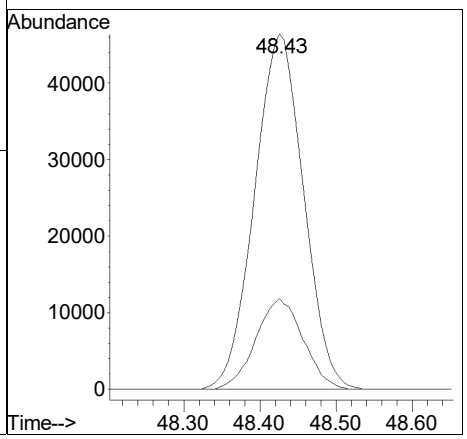


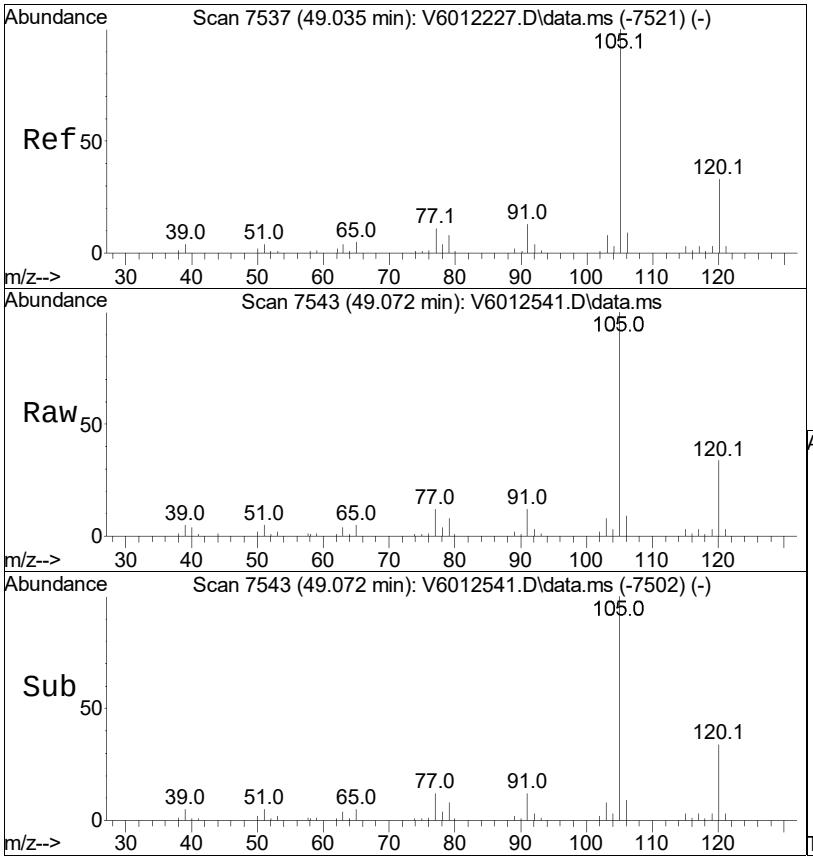


#104
n-Propylbenzene
Concen: 19.70 ug/L
RT: 48.43 min Scan# 7437
Delta R.T. -0.000 min
Lab File: V6012541.D
Acq: 22 Sep 2020 9:57 am

Tgt Ion: 91 Resp: 207449

Ion	Ratio	Lower	Upper
91	100		
120	25.6	4.9	44.9

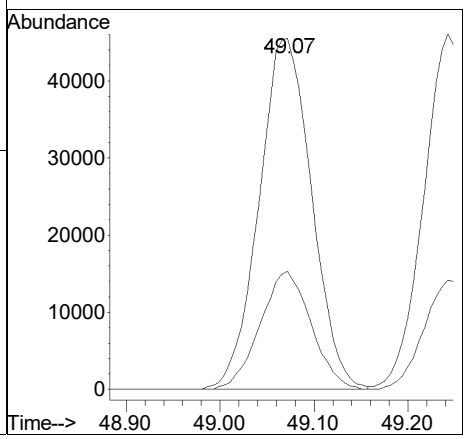


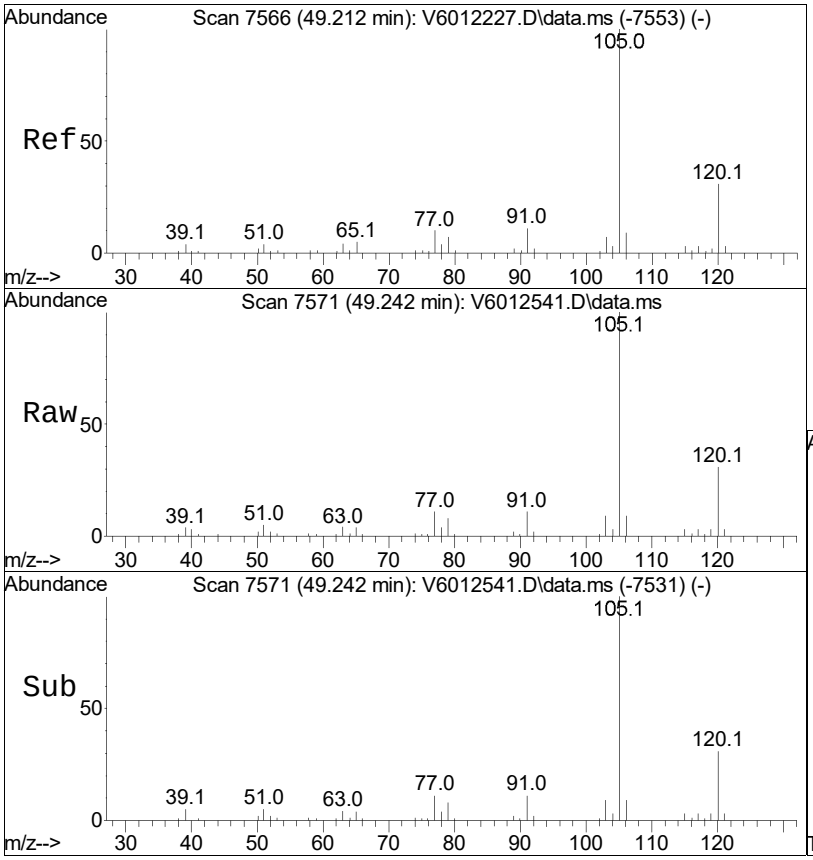


#107
1-Methyl-3-ethylbenzene
Concen: 19.85 ug/L
RT: 49.07 min Scan# 7543
Delta R.T. -0.000 min
Lab File: V6012541.D
Acq: 22 Sep 2020 9:57 am

Tgt Ion:105 Resp: 176741

Ion	Ratio	Lower	Upper
105	100		
120	33.7	12.7	52.7

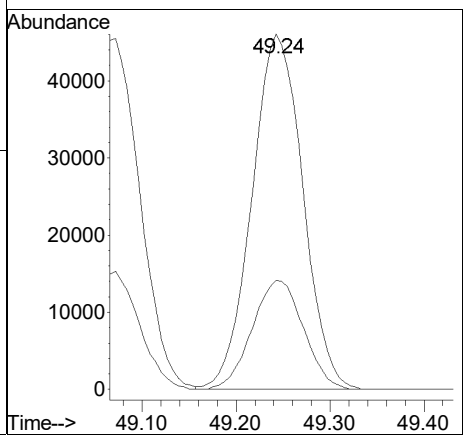


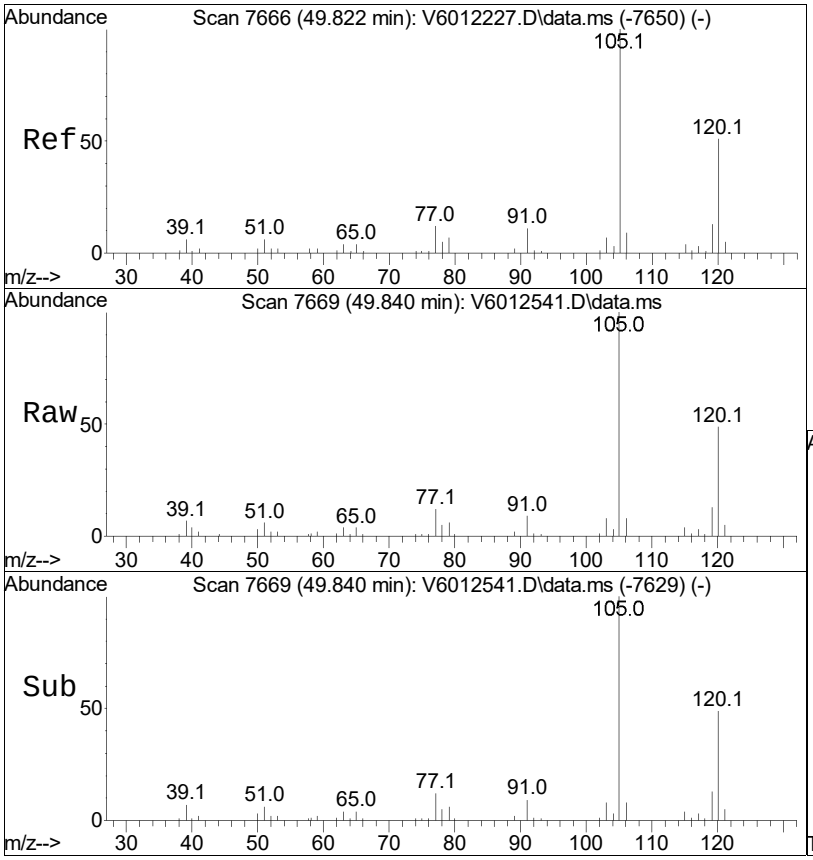


#108
1-Methyl-4-ethylbenzene
Concen: 20.11 ug/L
RT: 49.24 min Scan# 7571
Delta R.T. -0.006 min
Lab File: V6012541.D
Acq: 22 Sep 2020 9:57 am

Tgt Ion:105 Resp: 173406

Ion	Ratio	Lower	Upper
105	100		
120	30.7	11.4	51.4

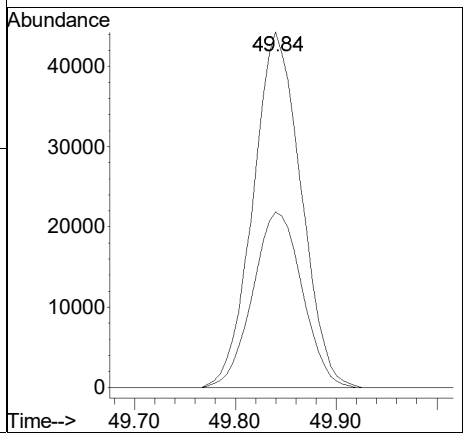


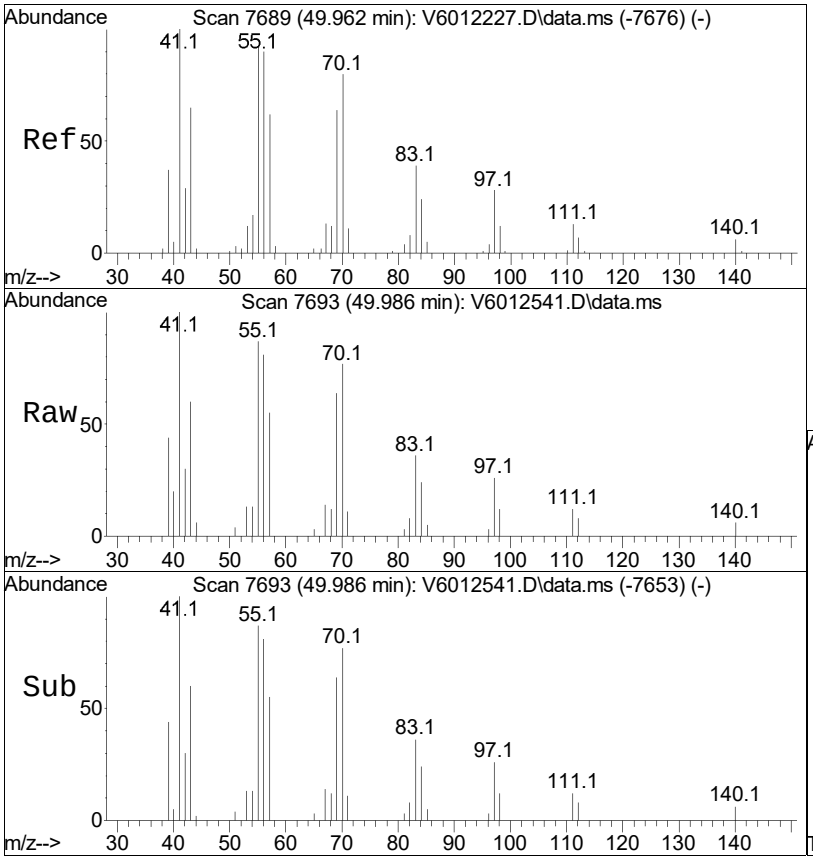


#109
1,3,5-Trimethylbenzene
Concen: 19.65 ug/L
RT: 49.84 min Scan# 7669
Delta R.T. -0.006 min
Lab File: V6012541.D
Acq: 22 Sep 2020 9:57 am

Tgt Ion:105 Resp: 146321

Ion	Ratio	Lower	Upper
105	100		
120	49.4	30.8	70.8

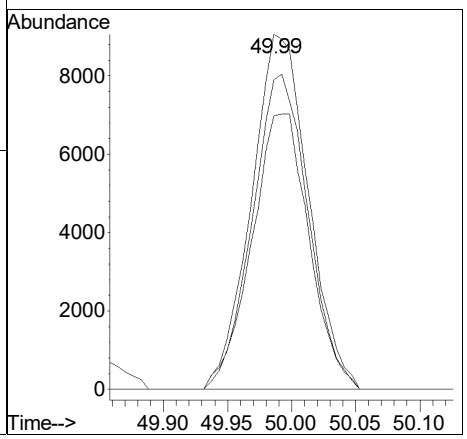


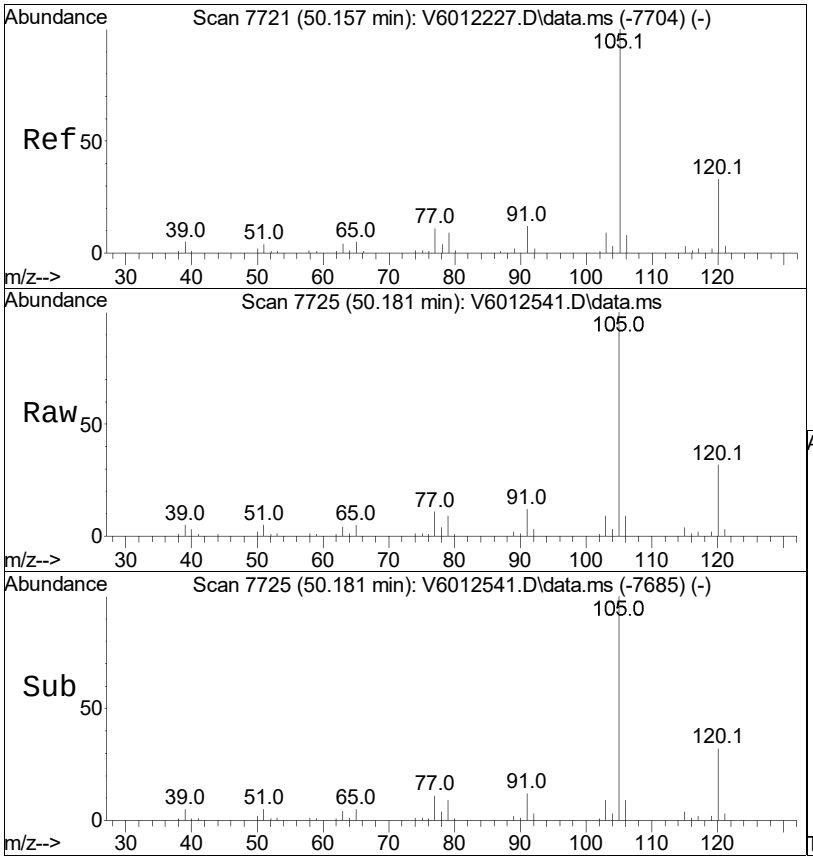


#110
1-Decene
Concen: 16.13 ug/L
RT: 49.99 min Scan# 7693
Delta R.T. -0.006 min
Lab File: V6012541.D
Acq: 22 Sep 2020 9:57 am

Tgt Ion: 41 Resp: 28050

Ion	Ratio	Lower	Upper
41	100		
55	87.1	73.4	113.4
70	77.0	60.3	100.3

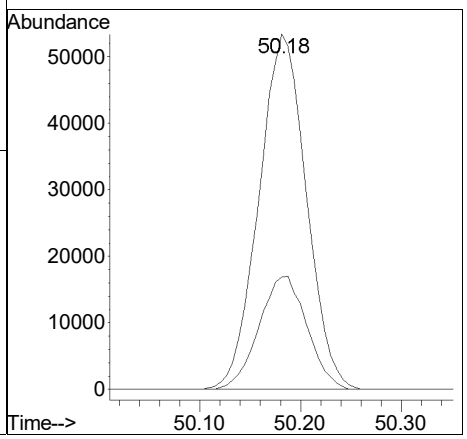


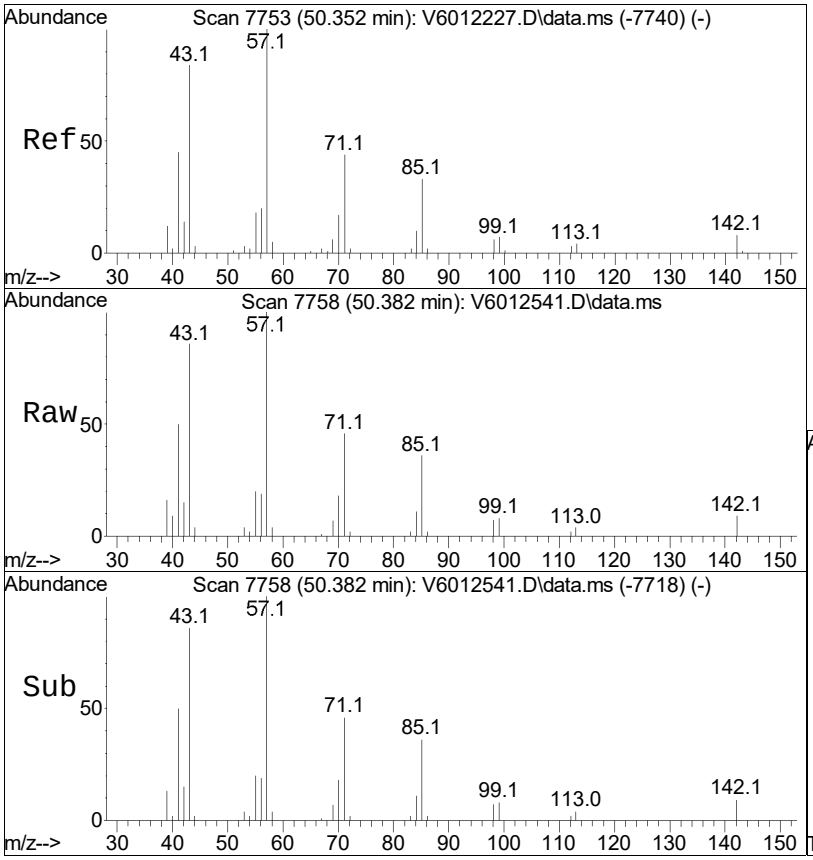


#112
1-Methyl-2-ethylbenzene
Concen: 19.06 ug/L
RT: 50.18 min Scan# 7725
Delta R.T. -0.006 min
Lab File: V6012541.D
Acq: 22 Sep 2020 9:57 am

Tgt Ion:105 Resp: 174642

Ion	Ratio	Lower	Upper
105	100		
120	31.6	13.0	53.0

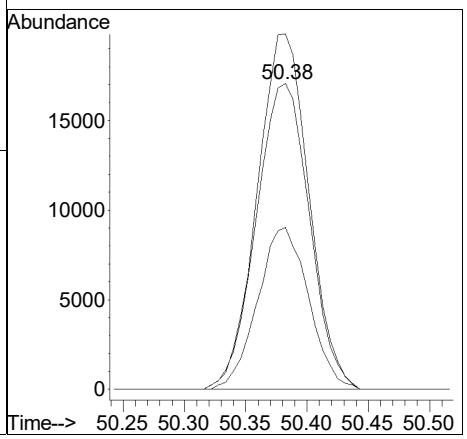


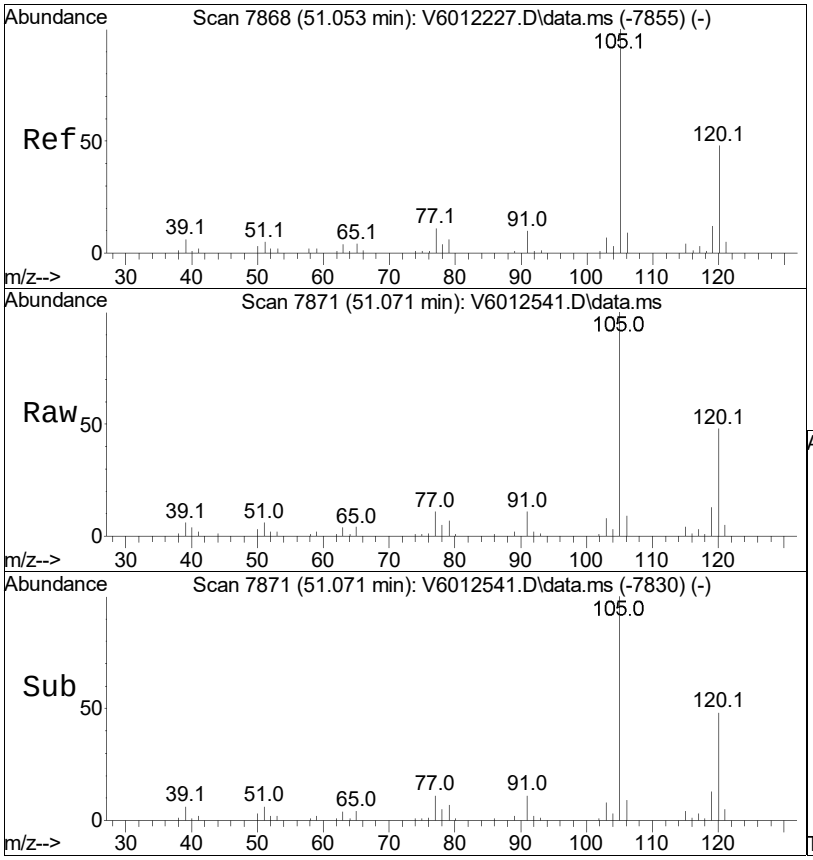


#113
Decane
Concen: 21.02 ug/L
RT: 50.38 min Scan# 7758
Delta R.T. -0.006 min
Lab File: V6012541.D
Acq: 22 Sep 2020 9:57 am

Tgt Ion: 43 Resp: 51570

Ion	Ratio	Lower	Upper
43	100		
57	116.2	99.5	139.5
71	53.0	32.3	72.3

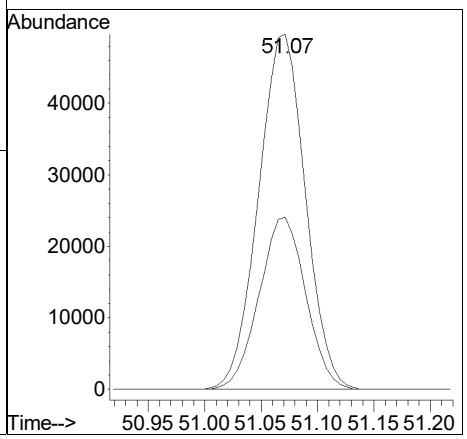


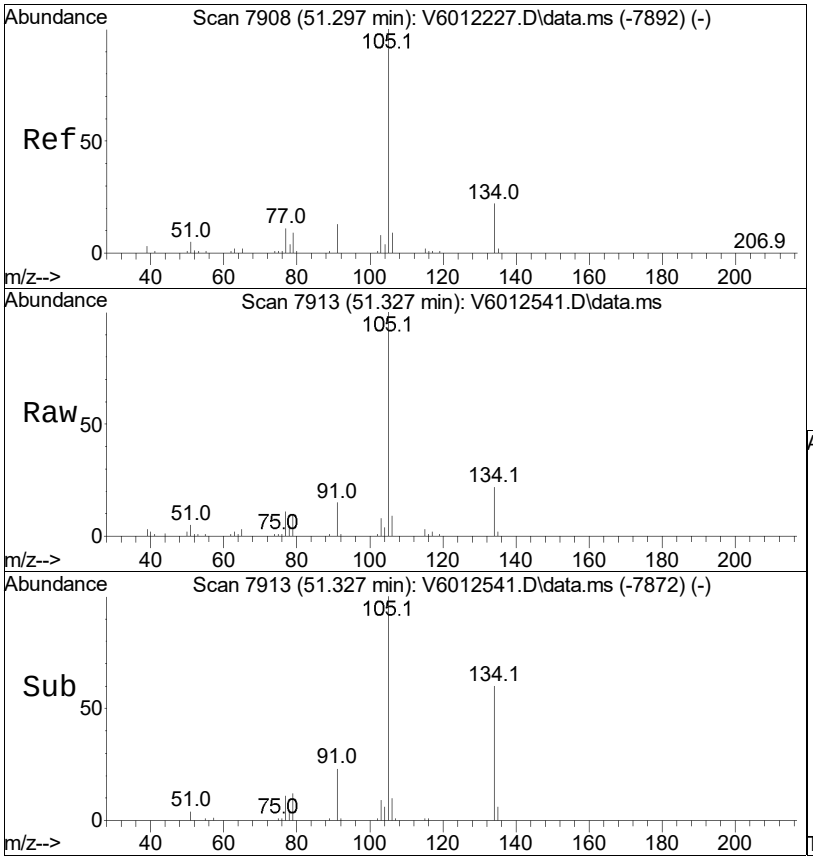


#115
1,2,4-Trimethylbenzene
Concen: 18.81 ug/L
RT: 51.07 min Scan# 7871
Delta R.T. -0.000 min
Lab File: V6012541.D
Acq: 22 Sep 2020 9:57 am

Tgt Ion:105 Resp: 143459

Ion	Ratio	Lower	Upper
105	100		
120	48.4	27.6	67.6

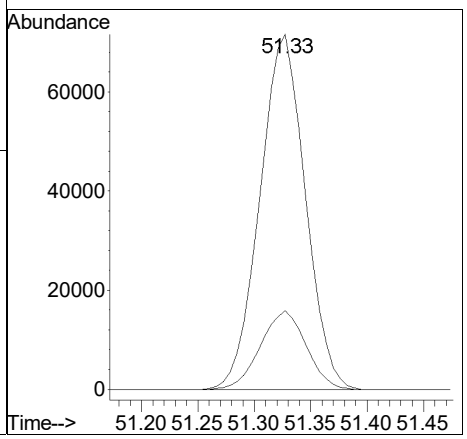


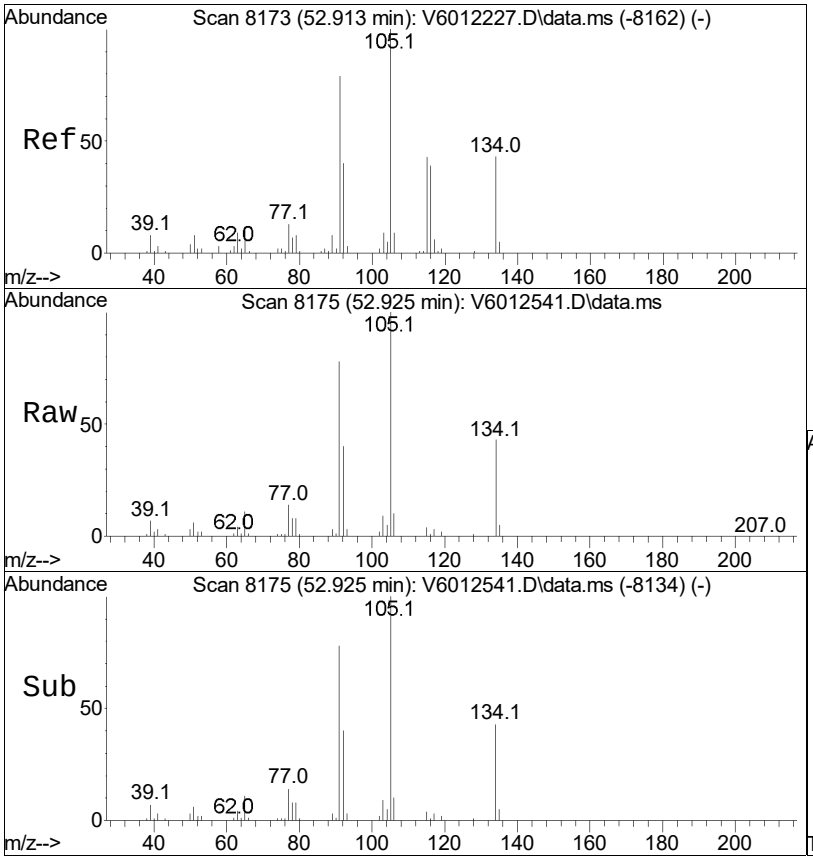


#117
sec-Butylbenzene
Concen: 20.14 ug/L
RT: 51.33 min Scan# 7913
Delta R.T. -0.000 min
Lab File: V6012541.D
Acq: 22 Sep 2020 9:57 am

Tgt Ion:105 Resp: 200120

Ion	Ratio	Lower	Upper
105	100		
134	22.2	3.2	43.2

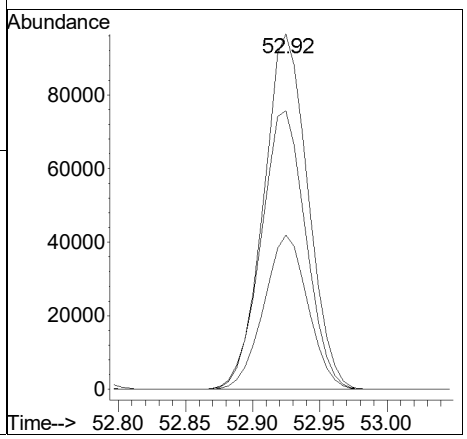


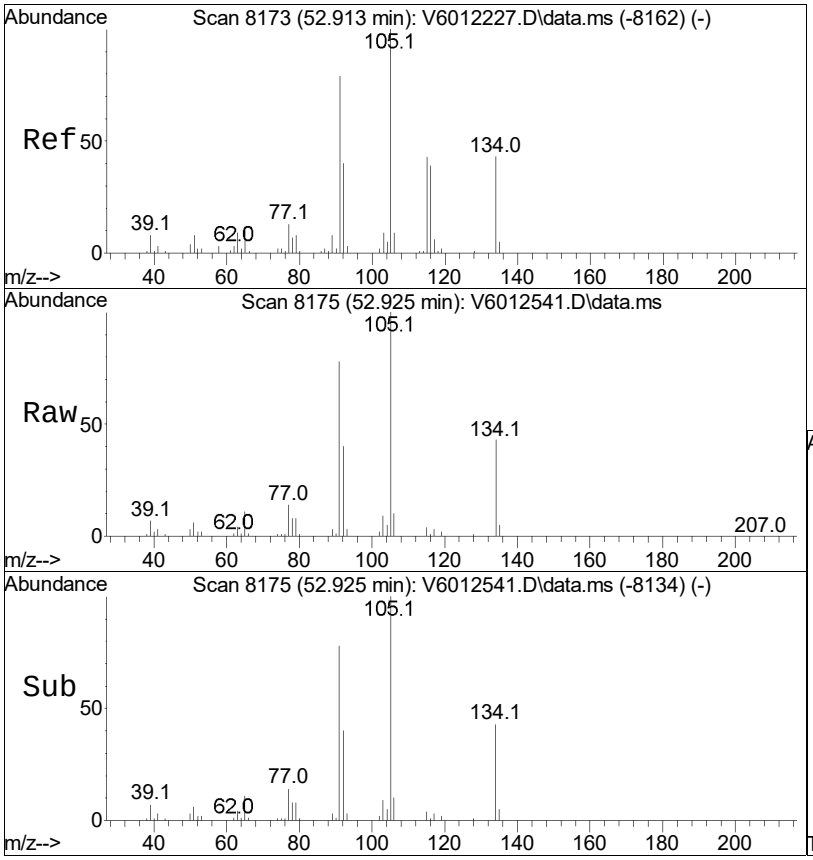


#126
1-Methyl-4-propylbenzene
Concen: 17.76 ug/L
RT: 52.92 min Scan# 8175
Delta R.T. -0.000 min
Lab File: V6012541.D
Acq: 22 Sep 2020 9:57 am

Tgt Ion:105 Resp: 222075

Ion	Ratio	Lower	Upper
105	100		
134	43.4	23.0	63.0
91	78.4	58.3	98.3

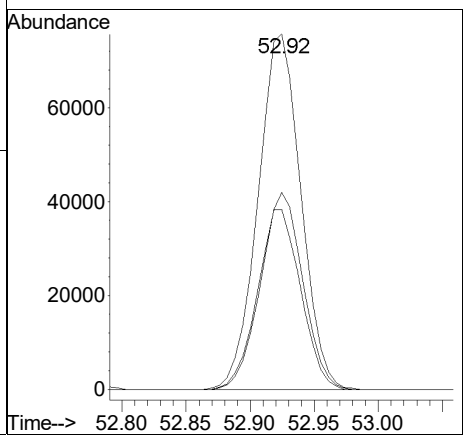


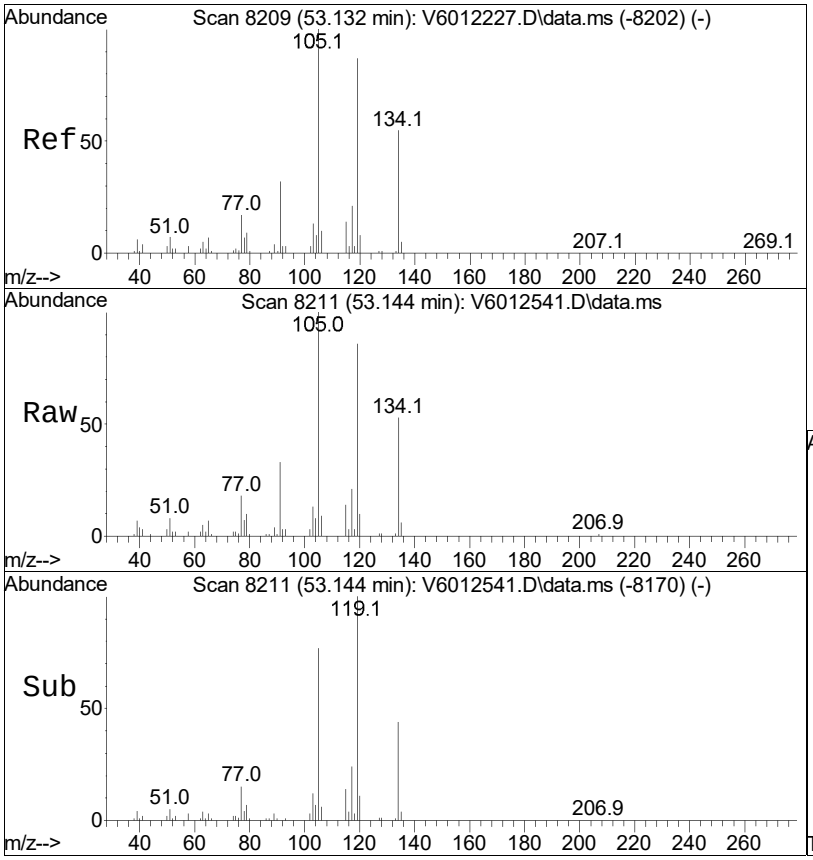


#127
n-Butylbenzene
Concen: 18.67 ug/L
RT: 52.92 min Scan# 8175
Delta R.T. -0.000 min
Lab File: V6012541.D
Acq: 22 Sep 2020 9:57 am

Tgt Ion: 91 Resp: 175994

Ion	Ratio	Lower	Upper
91	100		
92	50.6	30.6	70.6
134	55.4	34.9	74.9

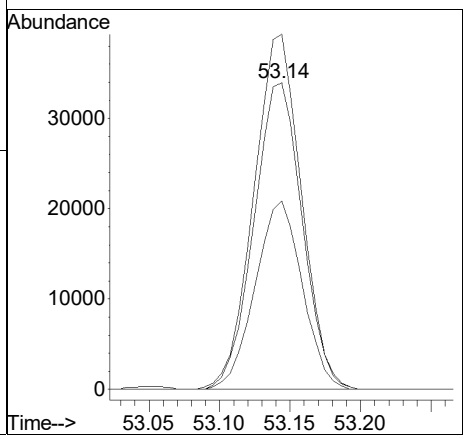


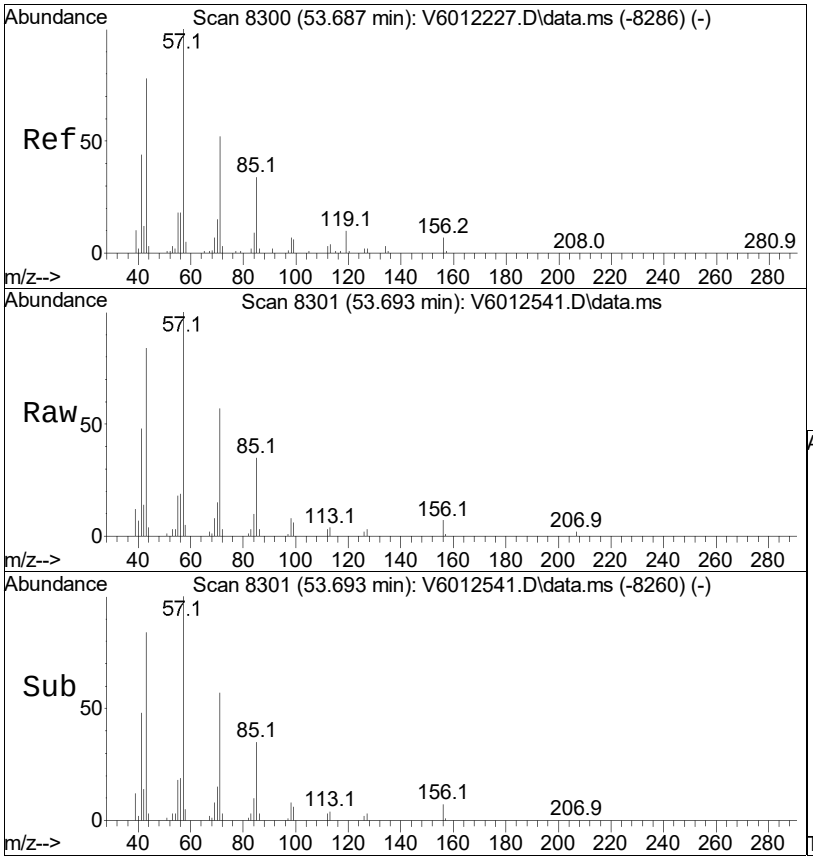


#129
1,2-Diethylbenzene
Concen: 18.57 ug/L
RT: 53.14 min Scan# 8211
Delta R.T. -0.000 min
Lab File: V6012541.D
Acq: 22 Sep 2020 9:57 am

Tgt Ion:119 Resp: 80740

Ion	Ratio	Lower	Upper
119	100		
105	115.9	89.9	129.9
134	61.5	41.5	81.5

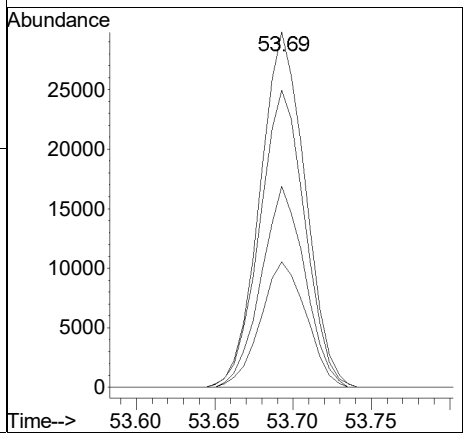


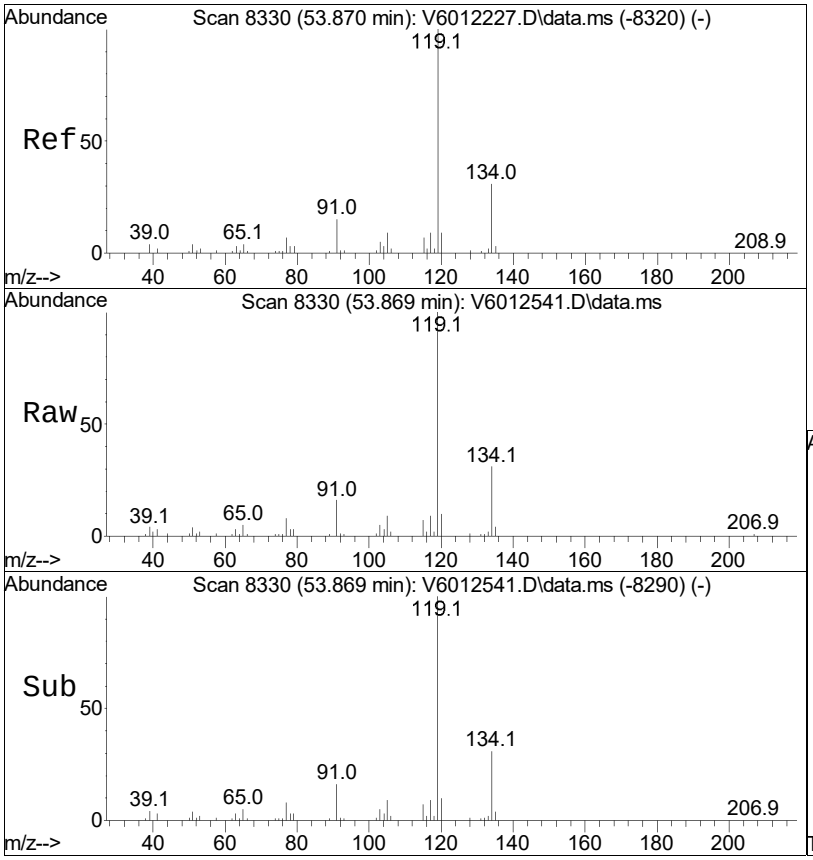


#132
Undecane
Concen: 21.40 ug/L
RT: 53.69 min Scan# 8301
Delta R.T. -0.000 min
Lab File: V6012541.D
Acq: 22 Sep 2020 9:57 am

Tgt Ion: 57 Resp: 60188

Ion	Ratio	Lower	Upper
57	100		
43	83.6	58.4	98.4
71	56.6	32.1	72.1
85	35.3	14.5	54.5

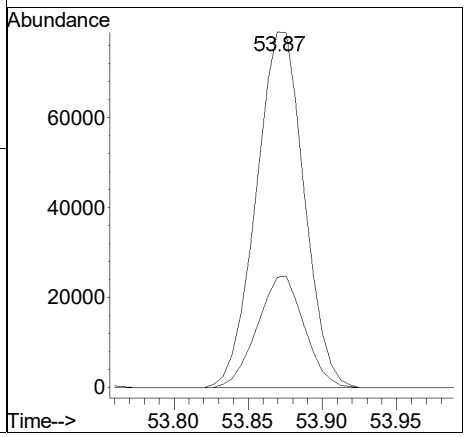


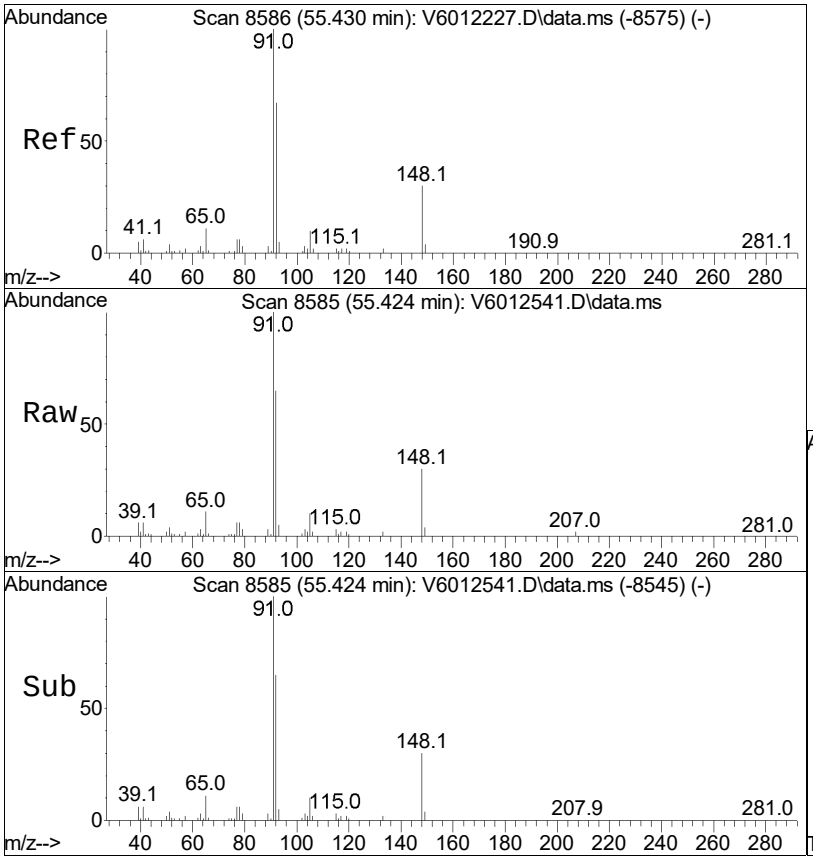


#134
1,3-Dimethyl-5-ethylbenzene
Concen: 18.49 ug/L
RT: 53.87 min Scan# 8330
Delta R.T. -0.006 min
Lab File: V6012541.D
Acq: 22 Sep 2020 9:57 am

Tgt Ion:119 Resp: 177251

Ion	Ratio	Lower	Upper
119	100		
134	31.0	11.3	51.3

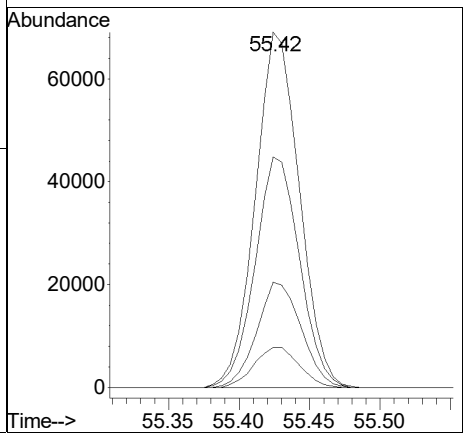


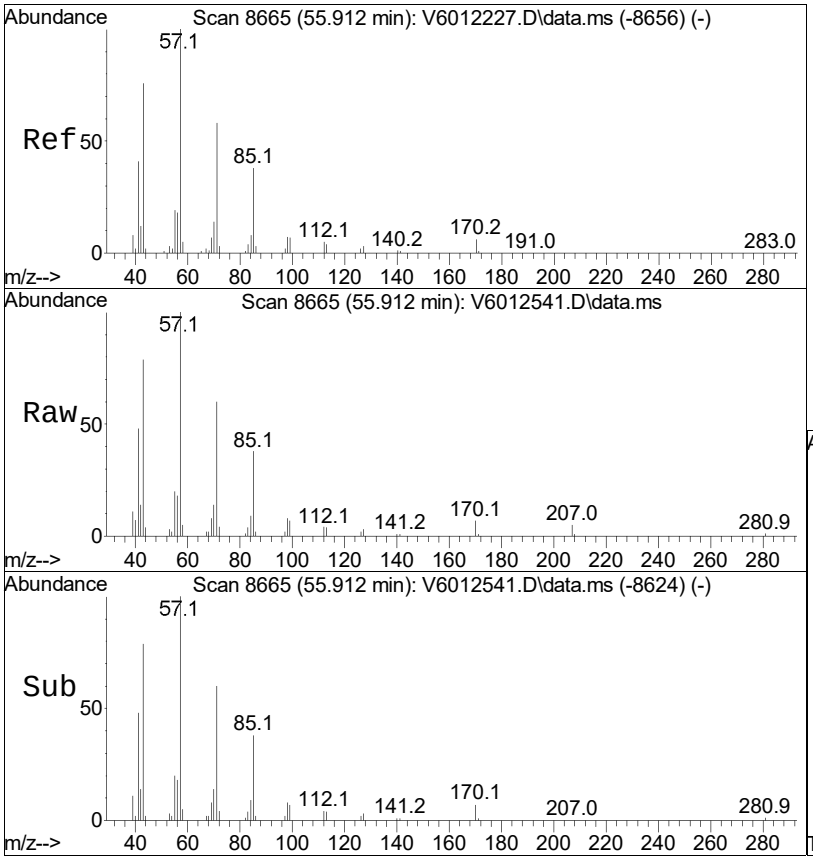


#139
Pentylbenzene
Concen: 19.09 ug/L
RT: 55.42 min Scan# 8585
Delta R.T. -0.006 min
Lab File: V6012541.D
Acq: 22 Sep 2020 9:57 am

Tgt Ion: 91 Resp: 149811

Ion	Ratio	Lower	Upper
91	100		
92	64.8	47.0	87.0
65	11.2	0.0	31.1
148	29.6	10.2	50.2

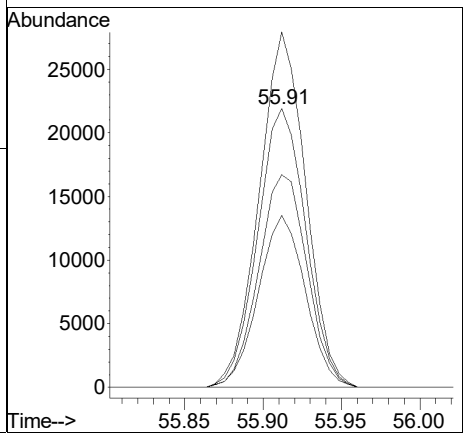




#142
Dodecane
Concen: 22.95 ug/L
RT: 55.91 min Scan# 8665
Delta R.T. -0.000 min
Lab File: V6012541.D
Acq: 22 Sep 2020 9:57 am

Tgt Ion: 43 Resp: 46943

Ion	Ratio	Lower	Upper
43	100		
57	127.4	111.5	151.5
71	76.2	55.7	95.7
41	61.6	34.0	74.0



LCS Duplicate Raw Data

Quantitation Report (QT Reviewed)

Data Path : O:\Organics\DATA\VOA6\2020\09-SEP\200918\
Data File : V6012542.D
Acq On : 22 Sep 2020 11:08 am
Operator : VOA6:RY
Sample : WG1413379-4,31,5,5
Misc : WG1413379,ICAL17149
ALS Vial : 81 Sample Multiplier: 1

Quant Time: Sep 22 13:30:48 2020
Quant Method : O:\Organics\DATA\VOA6\2020\09-SEP\200918\P6091820W.M
Quant Title : PIANO VOLATILES
QLast Update : Sat Sep 19 08:40:17 2020
Response via : Initial Calibration

Sub List : PIANO - PIANO

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Chlorobenzene-D5 [IS]	38.35	117	413569	50.000	ug/L	0.00
System Monitoring Compounds						
24) Dibromofluoromethane (...	16.63	113	128115	49.678	ug/L	0.00
Spiked Amount 50.000	Range 78 - 118		Recovery = 99.36%			
62) Toluene-d8 (surr)	30.56	98	496543	50.344	ug/L	0.00
Spiked Amount 50.000	Range 87 - 113		Recovery = 100.69%			
64) 2-Bromo-1-chloropropan...	0.00	77	0d	0.000	ug/L	
Spiked Amount 50.000	Range 70 - 130		Recovery = 0.00%#			
87) 1-Chloro-2-fluorobenze...	0.00	130	0	0.000	ug/L	
Spiked Amount 50.000	Range 70 - 130		Recovery = 0.00%#			
97) 1,4-Dichlorobutane (H/...	0.00	55	0	0.000	ug/L	
Spiked Amount 50.000	Range 70 - 130		Recovery = 0.00%#			
101) 4-Bromofluorobenzene (...	45.77	95	197777	48.246	ug/L	0.00
Spiked Amount 50.000	Range 76 - 120		Recovery = 96.49%			
Target Compounds						Qvalue
2) 3-Methyl-1-butene	0.00		0	N.D.		
3) Isopentane	0.00		0	N.D. d		
4) 1-Pentene	8.58	42	36646	19.856	ug/L	99
5) 2-Methyl-1-butene	0.00		0	N.D. d		
6) Pentane	8.94	43	50469	17.330	ug/L	96
7) trans-2-Pentene	0.00		0	N.D.		
8) 2-Methyl-1,3-butadiene	0.00		0	N.D.		
9) cis-2-Pentene	0.00		0	N.D.		
10) Tertiary butanol	10.47	59	25663M4	99.782	ug/L	
11) 2,2-Dimethylbutane	0.00		0	N.D. d		
12) 4-Methyl-1-pentene	0.00		0	N.D.		
13) Cyclopentane	12.55	70	24649	20.061	ug/L #	35
14) 2,3-Dimethylbutane	0.00		0	N.D. d		
15) 2-Methylpentane	12.77	43	57279	18.163	ug/L	99
16) MTBE	13.08	73	84243	21.366	ug/L	97
17) 3-Methylpentane	13.73	57	56325	19.751	ug/L	99
18) 1-Hexene	14.31	56	33197	20.455	ug/L	94
19) Hexane	14.91	57	46544	19.996	ug/L	98
20) Diisopropyl ether	15.21	45	79853	20.171	ug/L	96
21) trans-2-Hexene	0.00		0	N.D.		
22) 2-Methyl-2-pentene	0.00		0	N.D.		
23) cis-2-Hexene	0.00		0	N.D.		
25) Ethyl tertiary butyl e...	16.67	59	84055	20.431	ug/L	98

Quantitation Report (QT Reviewed)

Data Path : O:\Organics\DATA\VOA6\2020\09-SEP\200918\
Data File : V6012542.D
Acq On : 22 Sep 2020 11:08 am
Operator : VOA6:RY
Sample : WG1413379-4,31,5,5
Misc : WG1413379,ICAL17149
ALS Vial : 81 Sample Multiplier: 1

Quant Time: Sep 22 13:30:48 2020
Quant Method : O:\Organics\DATA\VOA6\2020\09-SEP\200918\P6091820W.M
Quant Title : PIANO VOLATILES
QLast Update : Sat Sep 19 08:40:17 2020
Response via : Initial Calibration

Sub List : PIANO - PIANO

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
26) 2,2-Dimethylpentane	0.00		0	N.D.		
27) Methylcyclopentane	17.21	56	62660	21.106	ug/L	96
28) 2,4-Dimethylpentane	17.36	43	54613	19.044	ug/L	98
29) 2,2,3-Trimethylbutane	0.00		0	N.D.		
30) 1,2-Dichloroethane	0.00		0	N.D.	d	
31) 3,3-Dimethylpentane	0.00		0	N.D.		
32) Cyclohexane	20.09	56	52990	21.425	ug/L	99
33) 2-Methylhexane	20.52	43	57959	19.338	ug/L	97
34) Benzene	20.71	78	130627	20.981	ug/L	99
35) 2,3-Dimethylpentane	20.82	56	51207	20.317	ug/L	96
36) Thiophene	0.00		0	N.D.		
37) 1,1-Dimethylcyclopentane	0.00		0	N.D.		
38) 3-Methylhexane	21.33	43	46073	17.224	ug/L	94
39) TAME	21.69	73	87843	18.400	ug/L	94
40) cis-1,3-Dimethylcyclop...	0.00		0	N.D.		
41) 3-Ethylpentane	0.00		0	N.D.		
42) trans-1,3-DMCP/2-Methy...	0.00		0	N.D.		
43) 1-Heptene/trans-1,2-DMCP	0.00		0	N.D.	d	
44) Isooctane	22.74	57	133556	20.827	ug/L	96
45) trans-3-Heptene	0.00		0	N.D.	d	
46) Heptane	23.48	43	47186	18.929	ug/L	94
48) trans-2-Heptene	0.00		0	N.D.		
49) cis-2-Heptene	0.00		0	N.D.		
50) 2,2-Dimethylhexane	0.00		0	N.D.	d	
51) Methylcyclohexane	25.89	83	63843	22.086	ug/L	96
52) 2,5-Dimethylhexane	0.00		0	N.D.		
53) 2,4-Dimethylhexane	0.00		0	N.D.		
54) Ethylcyclopentane	0.00		0	N.D.		
55) 2,2,3-Trimethylpentane	0.00		0	N.D.		
57) 2,3,4-Trimethylpentane	0.00		0	N.D.		
58) 2,3,3-Trimethylpentane	0.00		0	N.D.		
59) 2,3-Dimethylhexane	0.00		0	N.D.		
60) 2-Methylheptane	29.86	57	56687	19.629	ug/L	96
61) 4-Methylheptane	0.00		0	N.D.	d	
63) 3-Methylheptane	30.61	43	50973	17.974	ug/L	98
65) 3-Ethylhexane	0.00		0	N.D.	d	
66) Toluene	30.92	91	151722	20.113	ug/L	98
67) 2-Methylthiophene	0.00		0	N.D.		
68) trans-1,4-Dimethylcycl...	0.00		0	N.D.		
69) 3-Methylthiophene	0.00		0	N.D.		
70) 1-Octene	0.00		0	N.D.		

Data Path : O:\Organics\DATA\VOA6\2020\09-SEP\200918\
Data File : V6012542.D
Acq On : 22 Sep 2020 11:08 am
Operator : VOA6:RY
Sample : WG1413379-4,31,5,5
Misc : WG1413379,ICAL17149
ALS Vial : 81 Sample Multiplier: 1

Quant Time: Sep 22 13:30:48 2020
Quant Method : O:\Organics\DATA\VOA6\2020\09-SEP\200918\P6091820W.M
Quant Title : PIANO VOLATILES
QLast Update : Sat Sep 19 08:40:17 2020
Response via : Initial Calibration

Sub List : PIANO - PIANO

	Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
71)	Octane	33.11	43	58867	20.341	ug/L		95
72)	trans-1,2-Dimethylcycl...	0.00		0	N.D.			
73)	1,2-Dibromoethane	0.00		0	N.D.			
75)	cis-2-Octene	0.00		0	N.D.			
76)	Isopropylcyclopentane	0.00		0	N.D.			
77)	cis-1,2-Dimethylcycloh...	0.00		0	N.D.			
78)	2,5-Dimethylheptane	0.00		0	N.D.			
79)	3,5-Dimethylheptane	0.00		0	N.D.			
80)	3,3-Dimethylheptane	0.00		0	N.D.			
81)	1,1,4-Trimethylcyclohe...	0.00		0	N.D.			
82)	2,3-Dimethylheptane	0.00		0	N.D.			
83)	3,4-Dimethylheptane	0.00		0	N.D.			
84)	4-Methyloctane	0.00		0	N.D.			
85)	2-Methyloctane	0.00		0	N.D.			
86)	Ethylbenzene	39.96	91	175284	20.552	ug/L		99
88)	2-Ethylthiophene	0.00		0	N.D.			
89)	3-Methyloctane	0.00		0	N.D.			
90)	3,3-Diethylpentane	0.00		0	N.D.			
91)	p/m-Xylene	41.21	91	273268	42.012	ug/L		99
92)	1-Nonene	0.00		0	N.D.			
93)	trans-3-Nonene	0.00		0	N.D.			
94)	cis-3-Nonene	0.00		0	N.D.		d	
95)	Nonane	42.65	43	55498	19.622	ug/L		97
96)	Styrene	0.00		0	N.D.			
98)	o-Xylene	43.48	91	138198	20.267	ug/L		98
99)	2-Nonene	0.00		0	N.D.			
100)	Isopropylcyclohexane	0.00		0	N.D.			
102)	Isopropylbenzene	45.80	105	183750	20.679	ug/L		96
103)	3,3-Dimethyloctane	0.00		0	N.D.			
104)	n-Propylbenzene	48.43	91	211811	20.270	ug/L		100
105)	2-Methylnonane	0.00		0	N.D.			
106)	3-Methylnonane	0.00		0	N.D.		d	
107)	1-Methyl-3-ethylbenzene	49.07	105	181156	20.502	ug/L		98
108)	1-Methyl-4-ethylbenzene	49.24	105	177540	20.742	ug/L		99
109)	1,3,5-Trimethylbenzene	49.85	105	148883	20.146	ug/L		100
110)	1-Decene	49.99	41	29051	16.836	ug/L		96
111)	Isobutylcyclohexane	0.00		0	N.D.		d	
112)	1-Methyl-2-ethylbenzene	50.18	105	182066	20.021	ug/L		98
113)	Decane	50.38	43	52691	21.640	ug/L		95
114)	tert-Butylbenzene	0.00		0	N.D.			
115)	1,2,4-Trimethylbenzene	51.07	105	148564	19.631	ug/L		99

Quantitation Report (QT Reviewed)

Data Path : O:\Organics\DATA\VOA6\2020\09-SEP\200918\
Data File : V6012542.D
Acq On : 22 Sep 2020 11:08 am
Operator : VOA6:RY
Sample : WG1413379-4,31,5,5
Misc : WG1413379,ICAL17149
ALS Vial : 81 Sample Multiplier: 1

Quant Time: Sep 22 13:30:48 2020
Quant Method : O:\Organics\DATA\VOA6\2020\09-SEP\200918\P6091820W.M
Quant Title : PIANO VOLATILES
QLast Update : Sat Sep 19 08:40:17 2020
Response via : Initial Calibration

Sub List : PIANO - PIANO

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
116) Isobutylbenzene	0.00		0	N.D.	d	
117) sec-Butylbenzene	51.33	105	203196	20.605	ug/L	97
118) 1-Methyl-3-isopropylbe...	0.00		0	N.D.	d	
119) 1-Methyl-4-isopropylbe...	0.00		0	N.D.	d	
120) 1,2,3-Trimethylbenzene	0.00		0	N.D.		
121) 1-Methyl-2-isopropylbe...	0.00		0	N.D.		
122) Indan	0.00		0	N.D.		
123) 1,3-Diethylbenzene	0.00		0	N.D.	d	
124) 1-Methyl-3-propylbenzene	0.00		0	N.D.	d	
125) Indene	0.00		0	N.D.	d	
126) 1-Methyl-4-propylbenzene	52.92	105	228940	18.450	ug/L	99
127) n-Butylbenzene	52.92	91	180234	19.262	ug/L	99
128) 1,2-Dimethyl-4-ethylbe...	0.00		0	N.D.	d	
129) 1,2-Diethylbenzene	53.14	119	82262	19.061	ug/L	97
130) 1-Methyl-2-propylbenzene	0.00		0	N.D.	d	
131) 1,4-Dimethyl-2-ethylbe...	0.00		0	N.D.		
132) Undecane	53.69	57	61355	21.984	ug/L	96
133) 1,3-Dimethyl-4-ethylbe...	0.00		0	N.D.	d	
134) 1,3-Dimethyl-5-ethylbe...	53.88	119	182054	19.135	ug/L	98
135) 1,3-Dimethyl-2-ethylbe...	0.00		0	N.D.	d	
136) 1,2-Dimethyl-3-ethylbe...	0.00		0	N.D.		
137) 1,2,4,5-Tetramethylben...	0.00		0	N.D.		
138) 1,2,3,5-Tetramethylben...	0.00		0	N.D.		
139) Pentylbenzene	55.43	91	151044	19.392	ug/L	99
140) 1,2,3,4-Tetramethylben...	0.00		0	N.D.		
141) 1,3-DM-5-tert-Butylben...	0.00		0	N.D.		
142) Dodecane	55.91	43	49159	24.213	ug/L	96
143) 1,3,5-Triethylbenzene	0.00		0	N.D.		
144) Naphthalene	0.00		0	N.D.	d	
145) Benzothiophene	0.00		0	N.D.		
146) 1,2,4-Triethylbenzene	0.00		0	N.D.		
147) Hexylbenzene	0.00		0	N.D.		
148) MMT	0.00		0	N.D.		
149) Tridecane	0.00		0	N.D.		
150) 2-Methylnaphthalene	0.00		0	N.D.	d	
151) 1-Methylnaphthalene	0.00		0	N.D.	d	
152) Tetradecane	0.00		0	N.D.		
153) Pentadecane	0.00		0	N.D.		

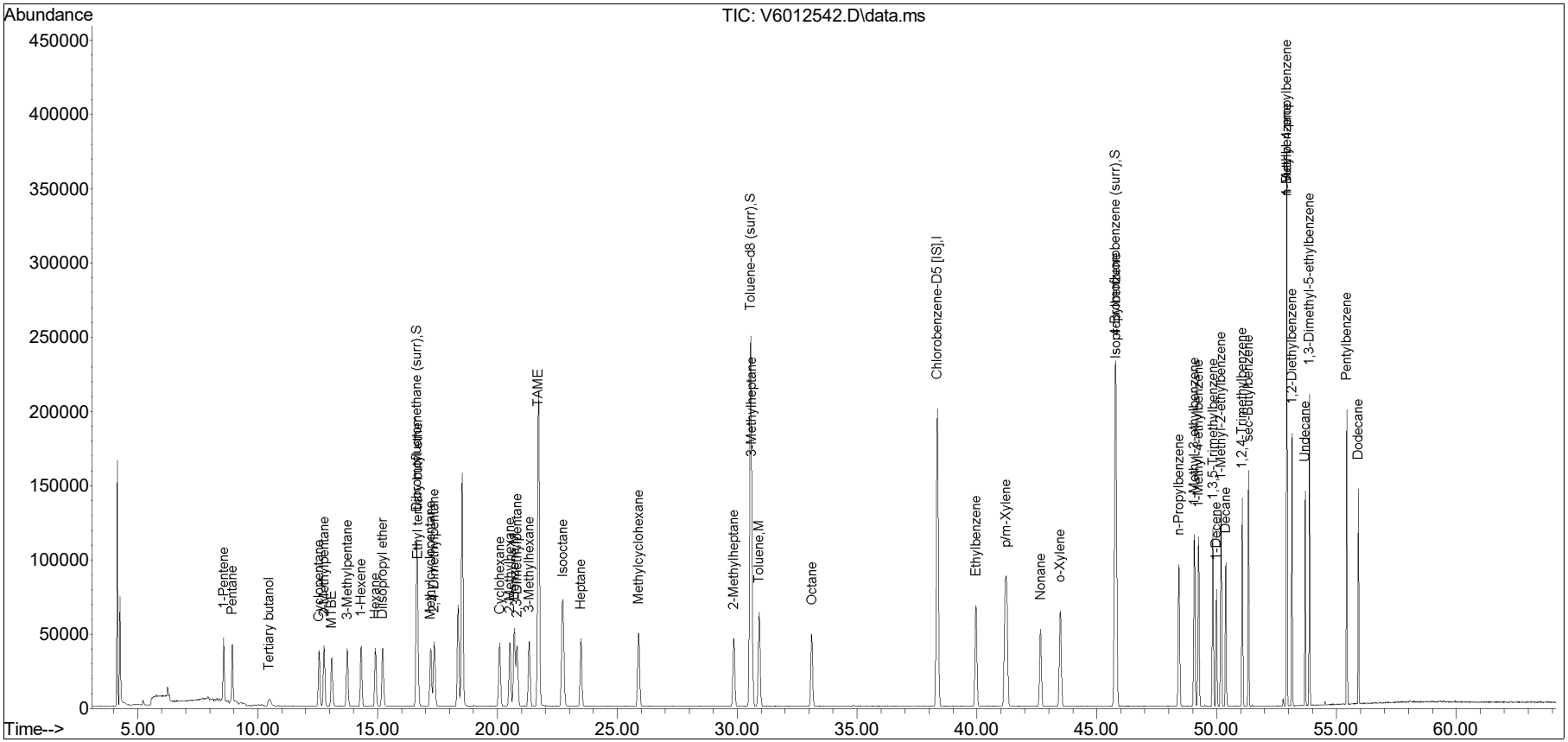
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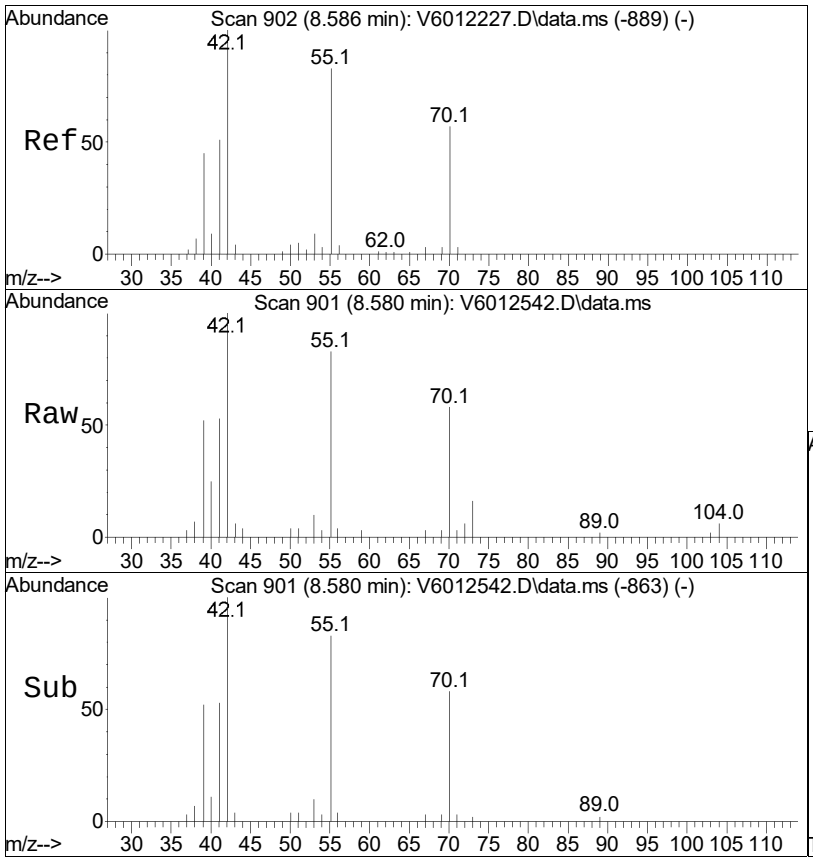
Quantitation Report (QT Reviewed)

Data Path : O:\Organics\DATA\VOA6\2020\09-SEP\200918\
Data File : V6012542.D
Acq On : 22 Sep 2020 11:08 am
Operator : VOA6:RY
Sample : WG1413379-4,31,5,5
Misc : WG1413379,ICAL17149
ALS Vial : 81 Sample Multiplier: 1

Quant Time: Sep 22 13:30:48 2020
Quant Method : O:\Organics\DATA\VOA6\2020\09-SEP\200918\P6091820W.M
Quant Title : PIANO VOLATILES
QLast Update : Sat Sep 19 08:40:17 2020
Response via : Initial Calibration

Sub List : PIANO - PIANO

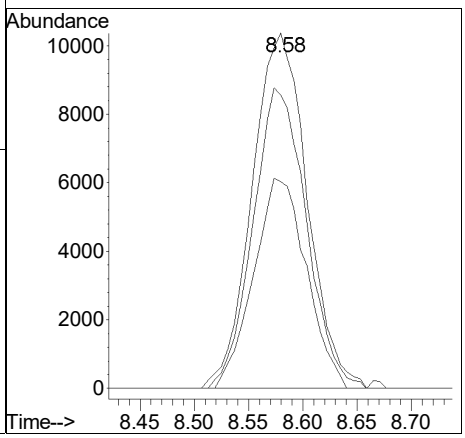


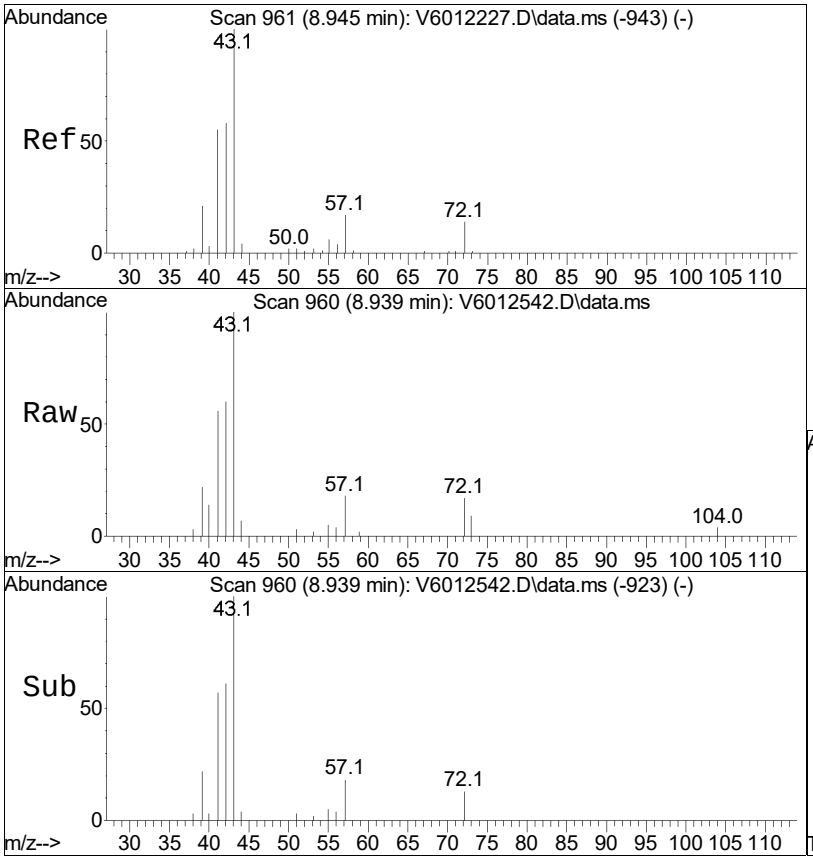


#4
1-Pentene
Concen: 19.86 ug/L
RT: 8.58 min Scan# 901
Delta R.T. -0.018 min
Lab File: V6012542.D
Acq: 22 Sep 2020 11:08 am

Tgt Ion: 42 Resp: 36646

Ion	Ratio	Lower	Upper
42	100		
55	82.5	63.5	103.5
70	58.2	37.3	77.3

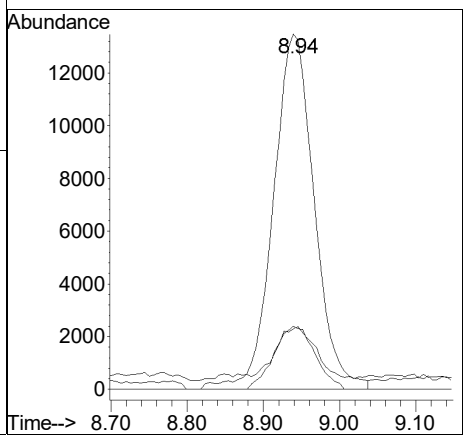


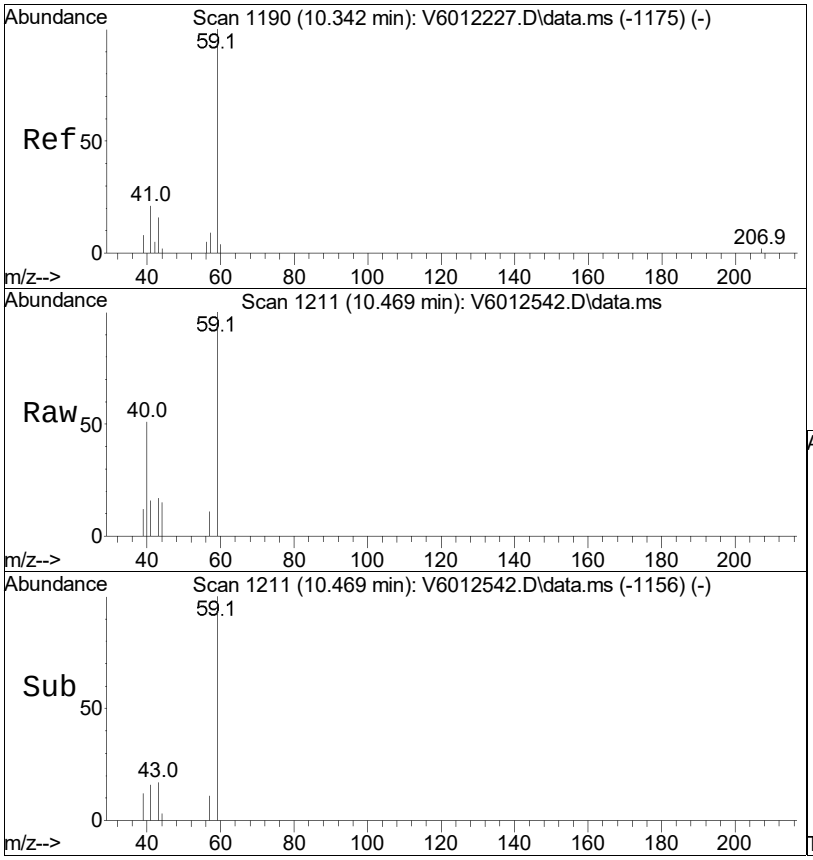


#6
Pentane
Concen: 17.33 ug/L
RT: 8.94 min Scan# 960
Delta R.T. -0.024 min
Lab File: V6012542.D
Acq: 22 Sep 2020 11:08 am

Tgt Ion: 43 Resp: 50469

Ion	Ratio	Lower	Upper
43	100		
57	17.8	0.0	37.3
72	17.1	0.0	34.4

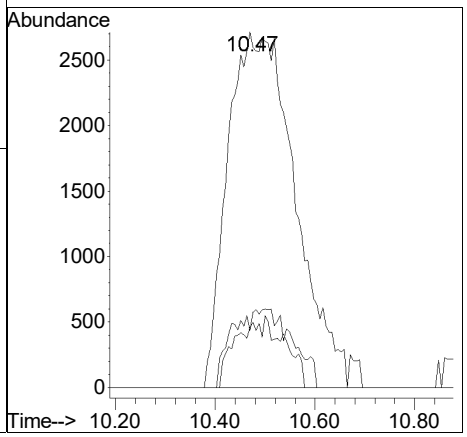


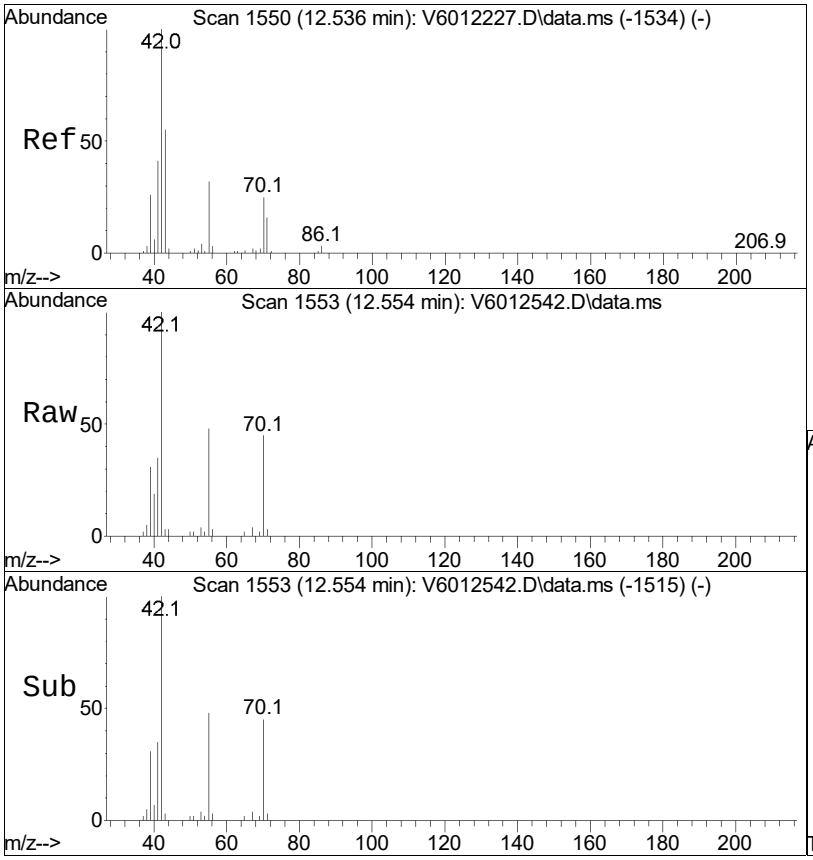


#10
Tertiary butanol
Concen: 99.78 ug/L m
RT: 10.47 min Scan# 1211
Delta R.T. 0.085 min
Lab File: V6012542.D
Acq: 22 Sep 2020 11:08 am

Tgt Ion: 59 Resp: 25663

Ion	Ratio	Lower	Upper
59	100		
41	16.1	0.6	40.6
43	16.9	0.0	35.5

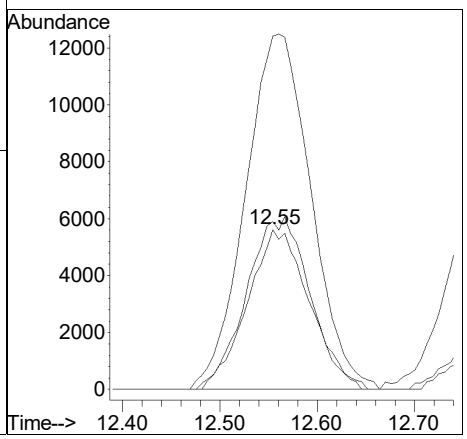


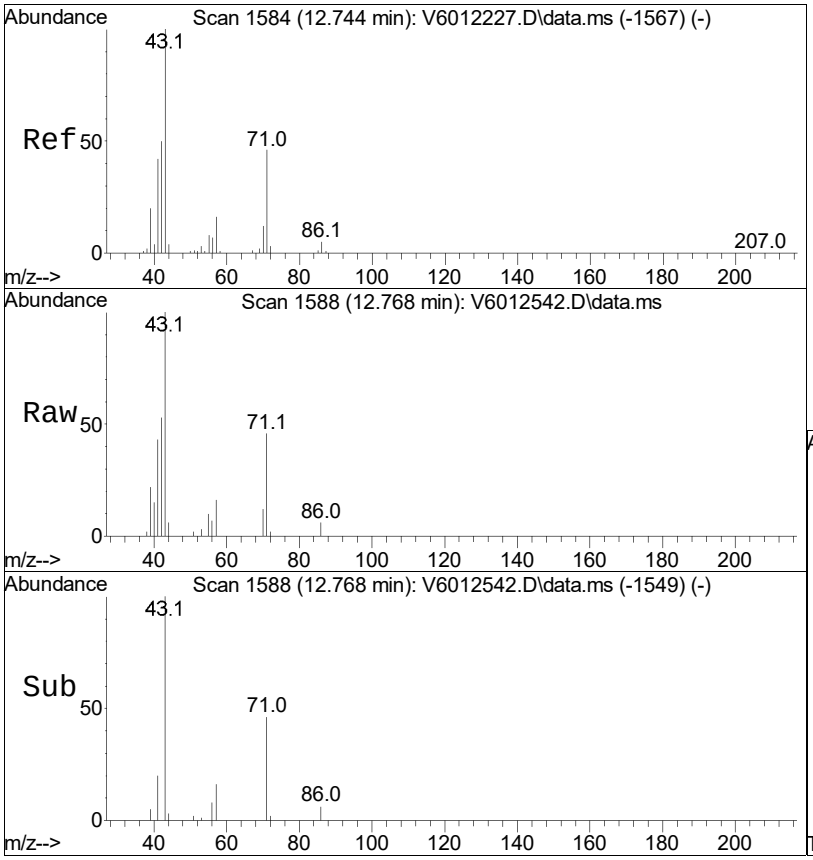


#13
Cyclopentane
Concen: 20.06 ug/L
RT: 12.55 min Scan# 1553
Delta R.T. -0.018 min
Lab File: V6012542.D
Acq: 22 Sep 2020 11:08 am

Tgt Ion: 70 Resp: 24649

Ion	Ratio	Lower	Upper
70	100		
42	221.3	391.7	431.7#
55	105.1	110.4	150.4#

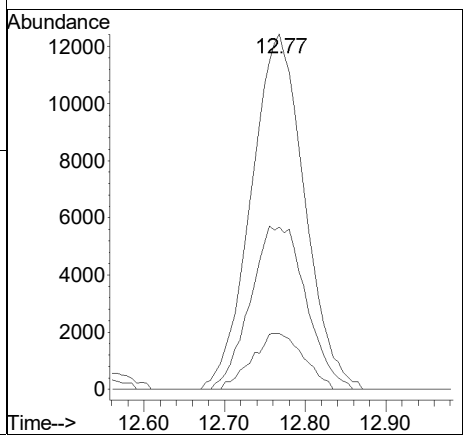


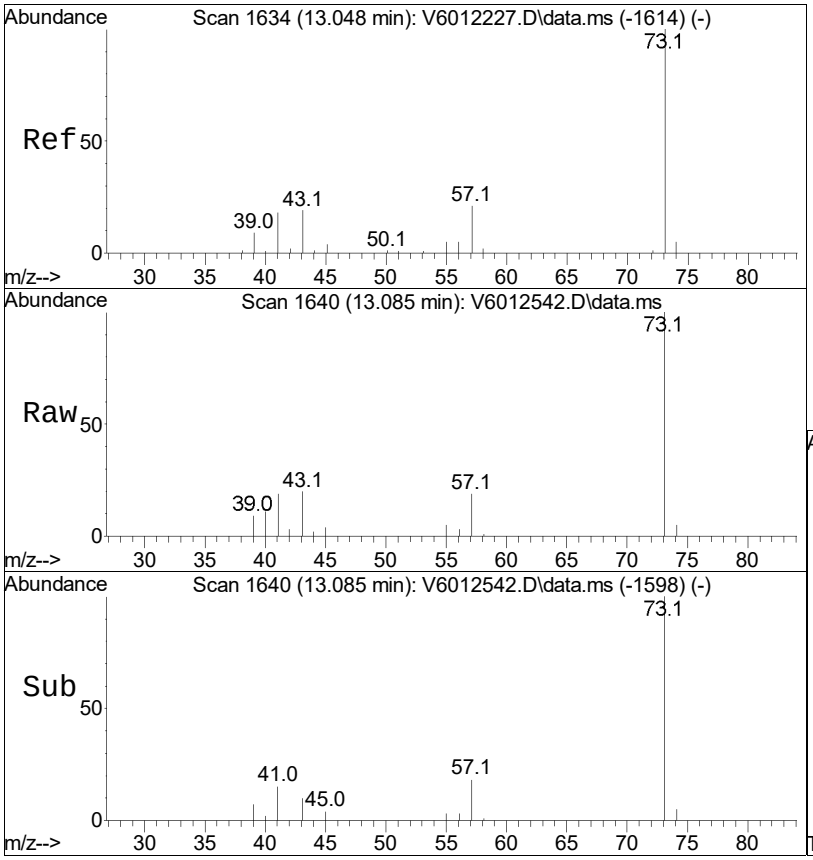


#15
2-Methylpentane
Concen: 18.16 ug/L
RT: 12.77 min Scan# 1588
Delta R.T. -0.012 min
Lab File: V6012542.D
Acq: 22 Sep 2020 11:08 am

Tgt Ion: 43 Resp: 57279

Ion	Ratio	Lower	Upper
43	100		
71	45.7	26.3	66.3
57	15.8	0.0	35.9

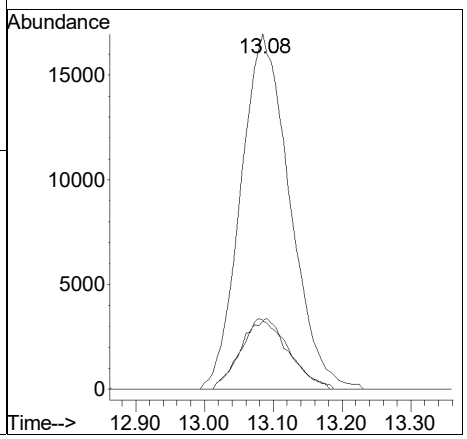


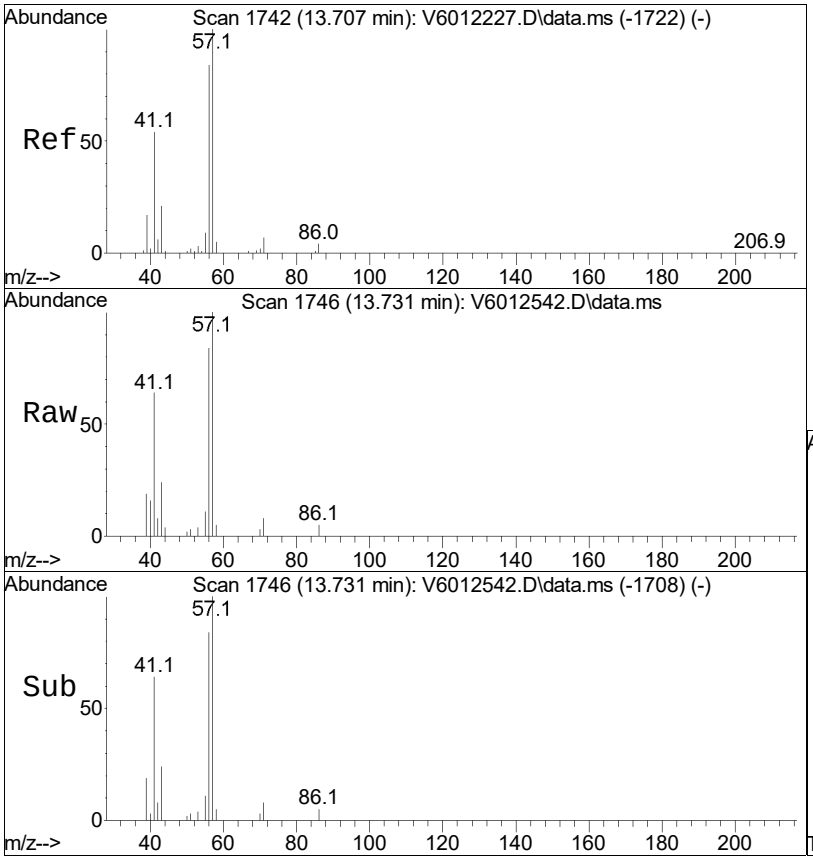


#16
MTBE
Concen: 21.37 ug/L
RT: 13.08 min Scan# 1640
Delta R.T. 0.006 min
Lab File: V6012542.D
Acq: 22 Sep 2020 11:08 am

Tgt Ion: 73 Resp: 84243

Ion	Ratio	Lower	Upper
73	100		
57	19.5	1.0	41.0
41	19.2	0.0	38.4

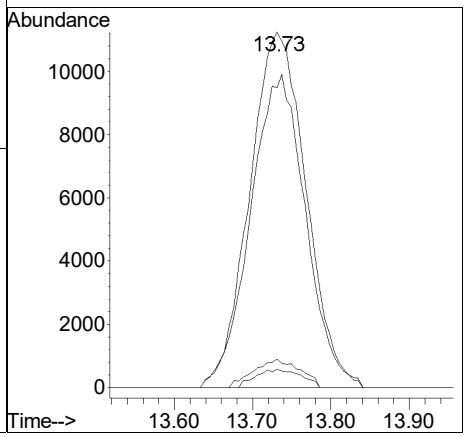


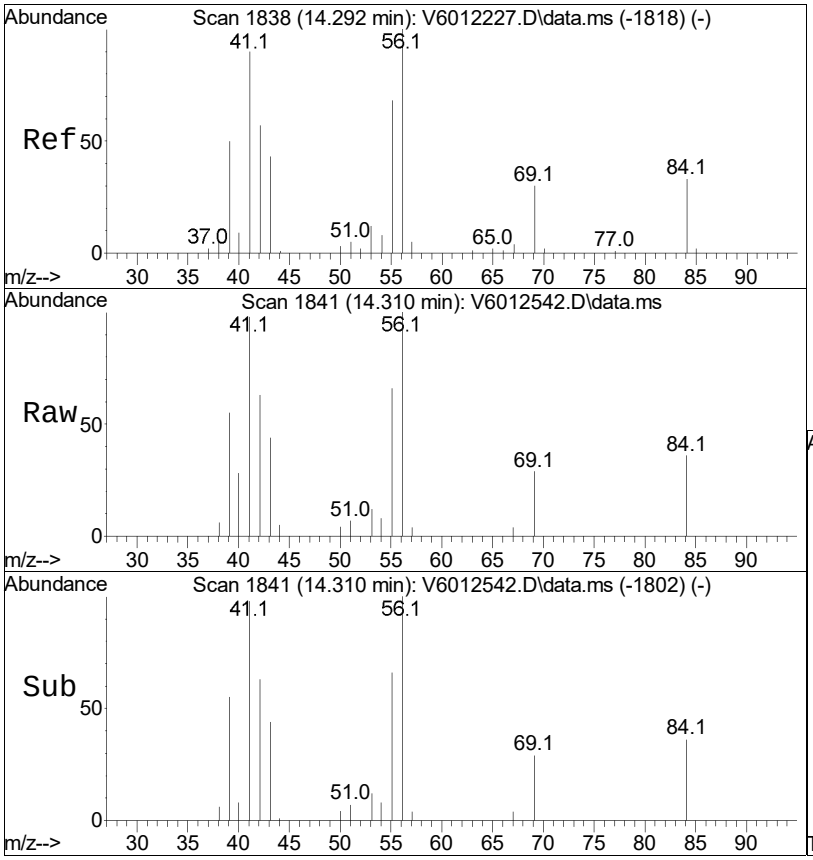


#17
3-Methylpentane
Concen: 19.75 ug/L
RT: 13.73 min Scan# 1746
Delta R.T. -0.018 min
Lab File: V6012542.D
Acq: 22 Sep 2020 11:08 am

Tgt Ion: 57 Resp: 56325

Ion	Ratio	Lower	Upper
57	100		
56	84.3	63.7	103.7
71	7.9	0.0	26.6
86	5.1	0.0	23.8

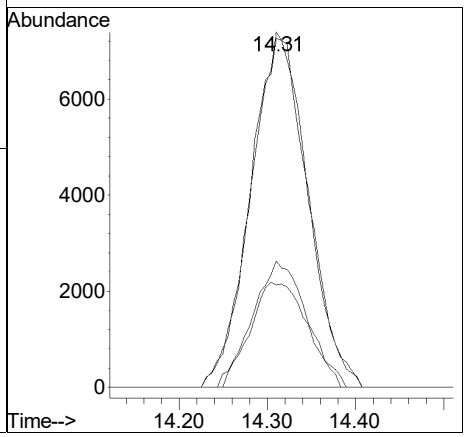


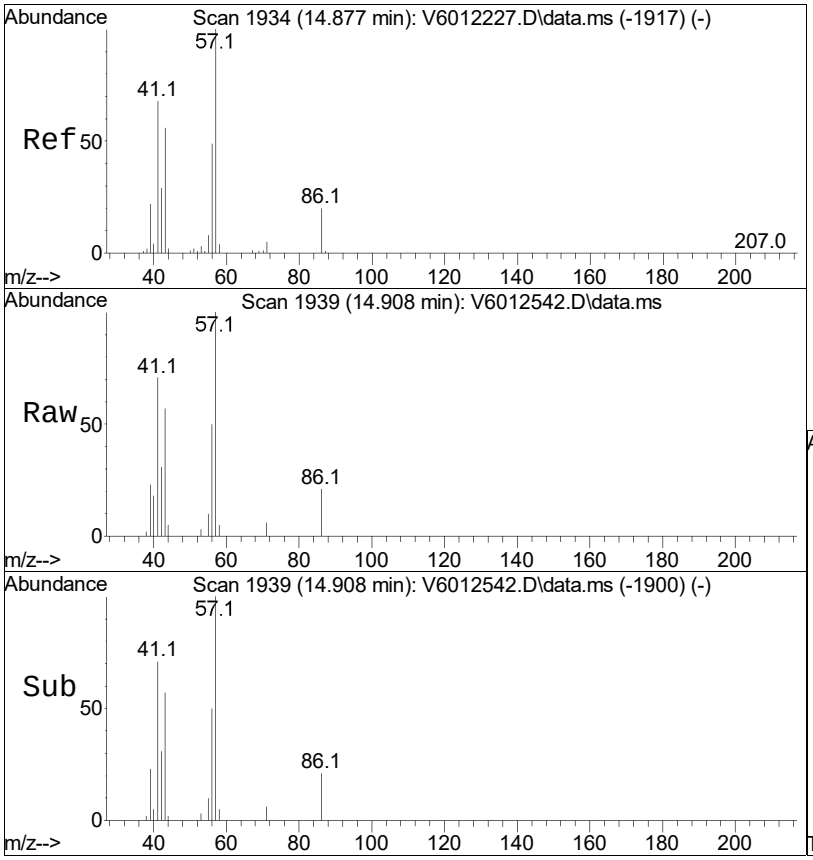


#18
1-Hexene
Concen: 20.46 ug/L
RT: 14.31 min Scan# 1841
Delta R.T. -0.012 min
Lab File: V6012542.D
Acq: 22 Sep 2020 11:08 am

Tgt Ion: 56 Resp: 33197

Ion	Ratio	Lower	Upper
56	100		
41	98.3	70.0	110.0
84	35.6	13.4	53.4
69	28.8	10.0	50.0

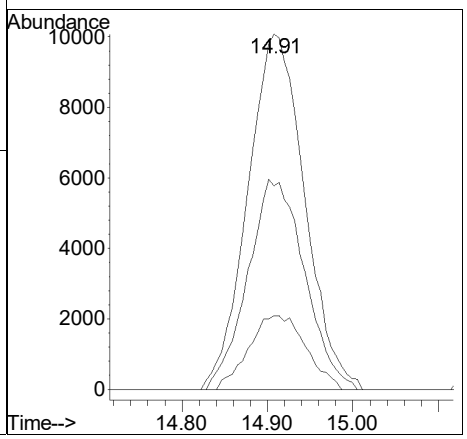


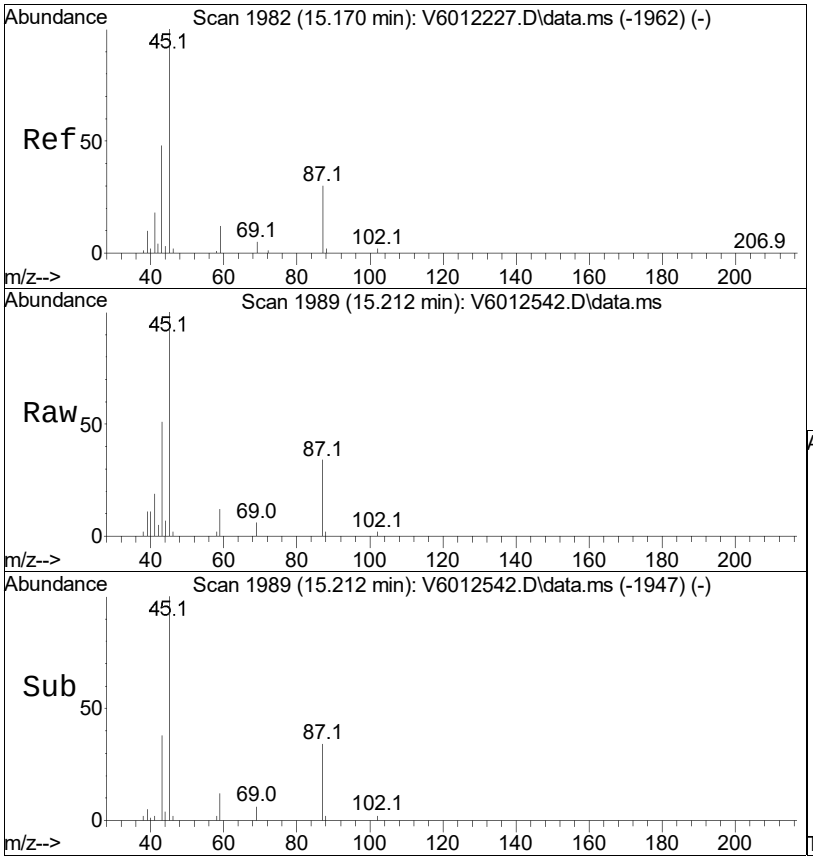


#19
Hexane
Concen: 20.00 ug/L
RT: 14.91 min Scan# 1939
Delta R.T. -0.012 min
Lab File: V6012542.D
Acq: 22 Sep 2020 11:08 am

Tgt Ion: 57 Resp: 46544

Ion	Ratio	Lower	Upper
57	100		
43	57.2	36.0	76.0
86	20.8	0.0	39.8

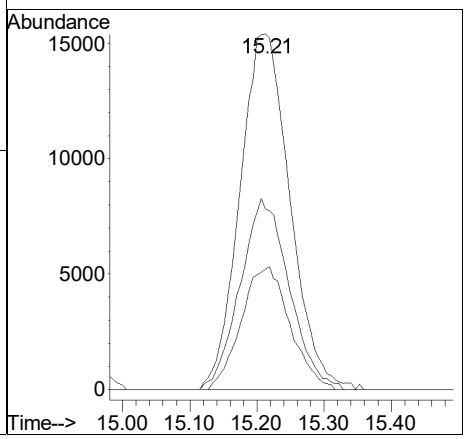


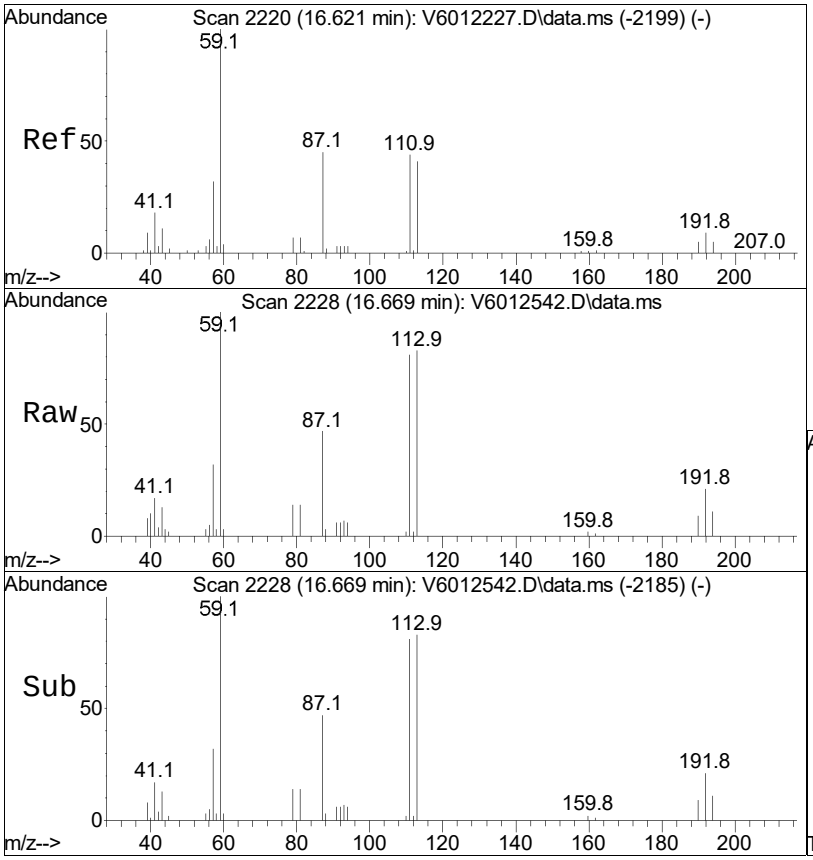


#20
Diisopropyl ether
Concen: 20.17 ug/L
RT: 15.21 min Scan# 1989
Delta R.T. 0.006 min
Lab File: V6012542.D
Acq: 22 Sep 2020 11:08 am

Tgt Ion: 45 Resp: 79853

Ion	Ratio	Lower	Upper
45	100		
87	33.8	10.3	50.3
43	50.8	28.8	68.8

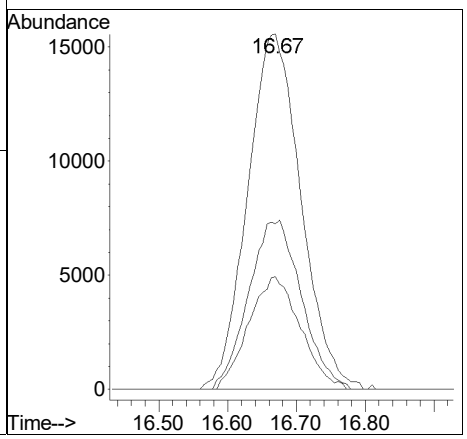


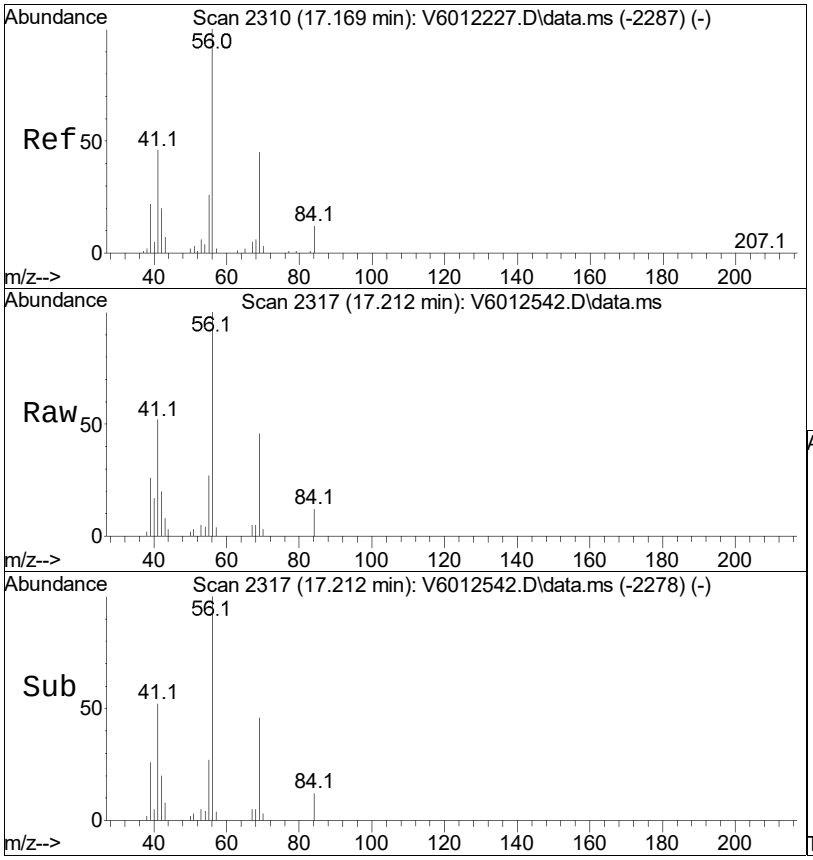


#25
Ethyl tertiary butyl ether
Concen: 20.43 ug/L
RT: 16.67 min Scan# 2228
Delta R.T. 0.012 min
Lab File: V6012542.D
Acq: 22 Sep 2020 11:08 am

Tgt Ion: 59 Resp: 84055

Ion	Ratio	Lower	Upper
59	100		
87	46.6	24.8	64.8
57	31.7	12.4	52.4

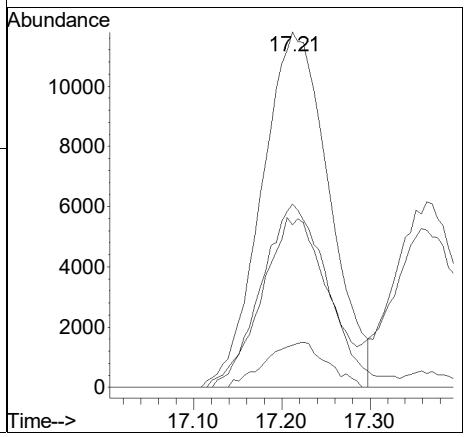


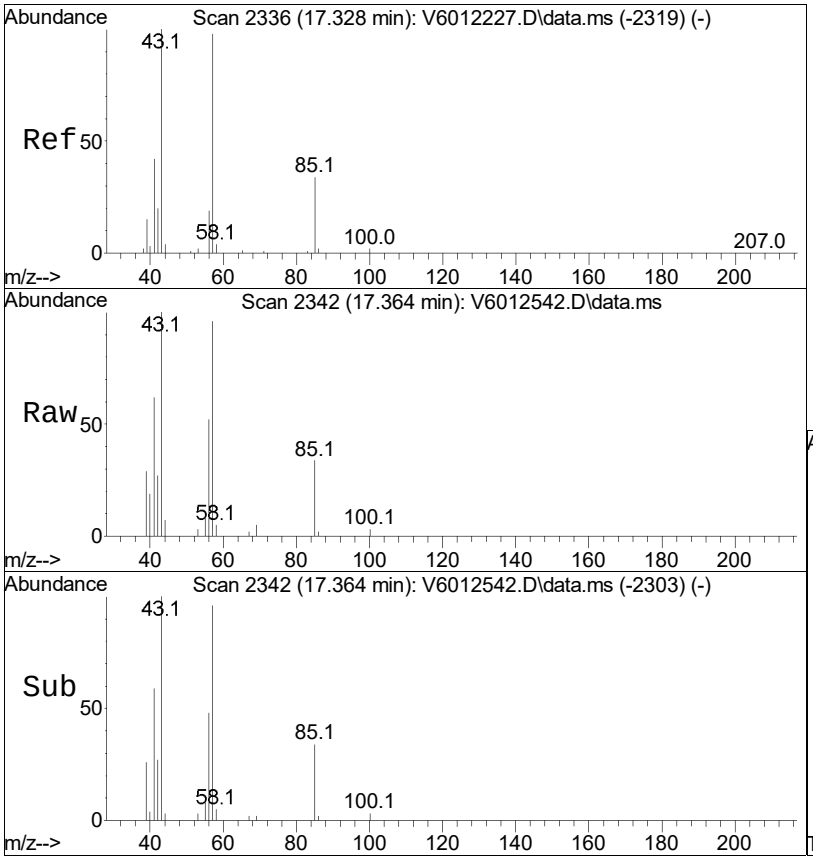


#27
Methylcyclopentane
Concen: 21.11 ug/L
RT: 17.21 min Scan# 2317
Delta R.T. -0.012 min
Lab File: V6012542.D
Acq: 22 Sep 2020 11:08 am

Tgt Ion: 56 Resp: 62660

Ion	Ratio	Lower	Upper
56	100		
69	45.7	25.0	65.0
41	51.6	26.3	66.3
84	11.9	0.0	31.8

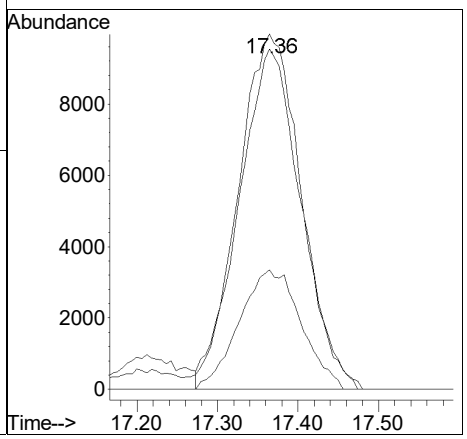


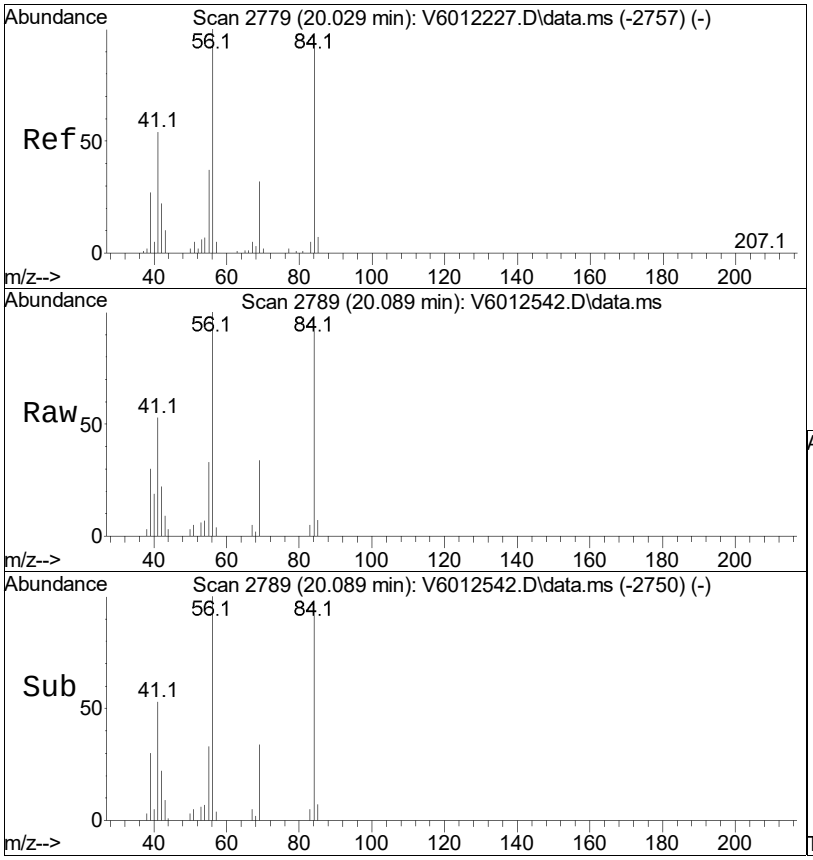


#28
2,4-Dimethylpentane
Concen: 19.04 ug/L
RT: 17.36 min Scan# 2342
Delta R.T. -0.012 min
Lab File: V6012542.D
Acq: 22 Sep 2020 11:08 am

Tgt Ion: 43 Resp: 54613

Ion	Ratio	Lower	Upper
43	100		
57	95.8	77.1	117.1
85	33.6	12.0	52.0

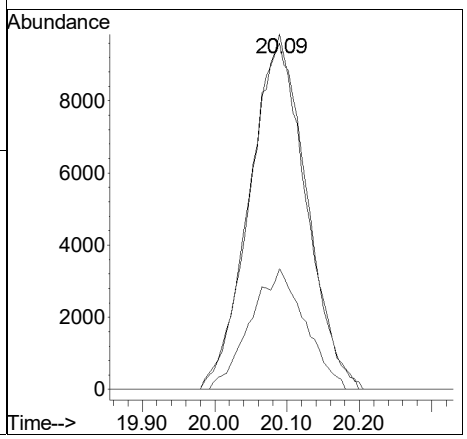


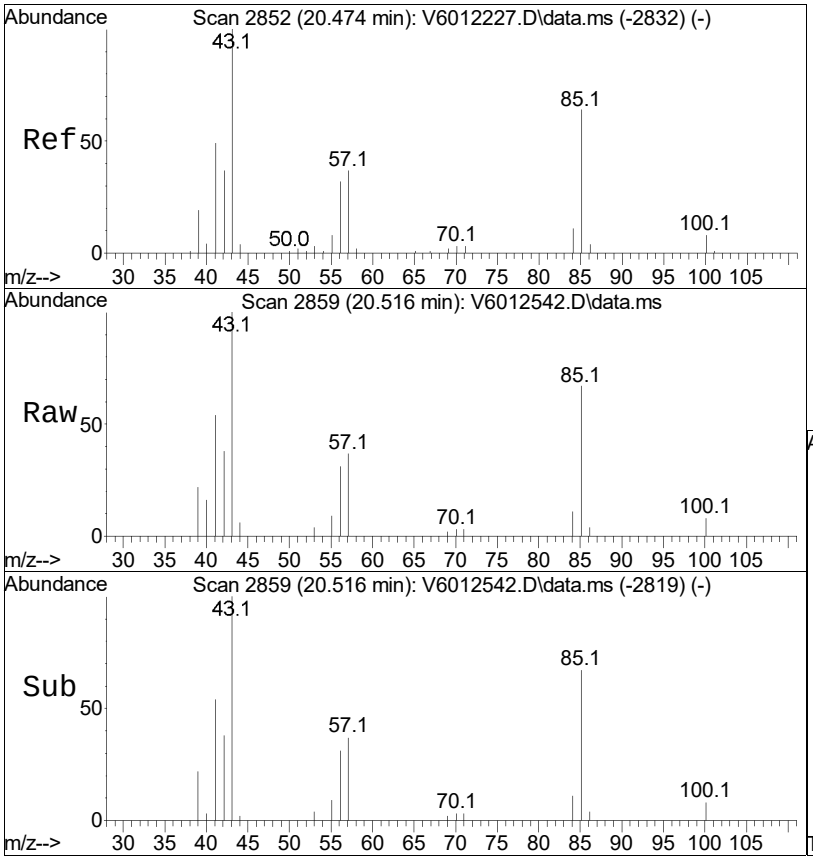


#32
Cyclohexane
Concen: 21.43 ug/L
RT: 20.09 min Scan# 2789
Delta R.T. -0.012 min
Lab File: V6012542.D
Acq: 22 Sep 2020 11:08 am

Tgt Ion: 56 Resp: 52990

Ion	Ratio	Lower	Upper
56	100		
84	97.4	77.5	117.5
69	34.0	12.1	52.1

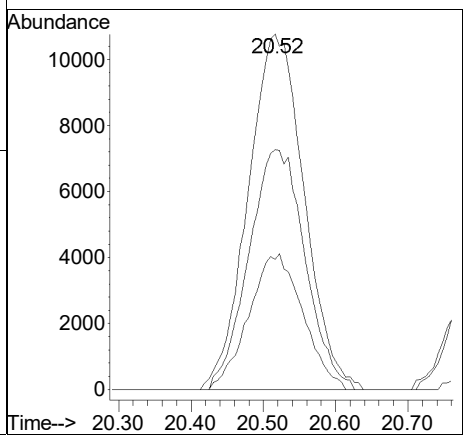


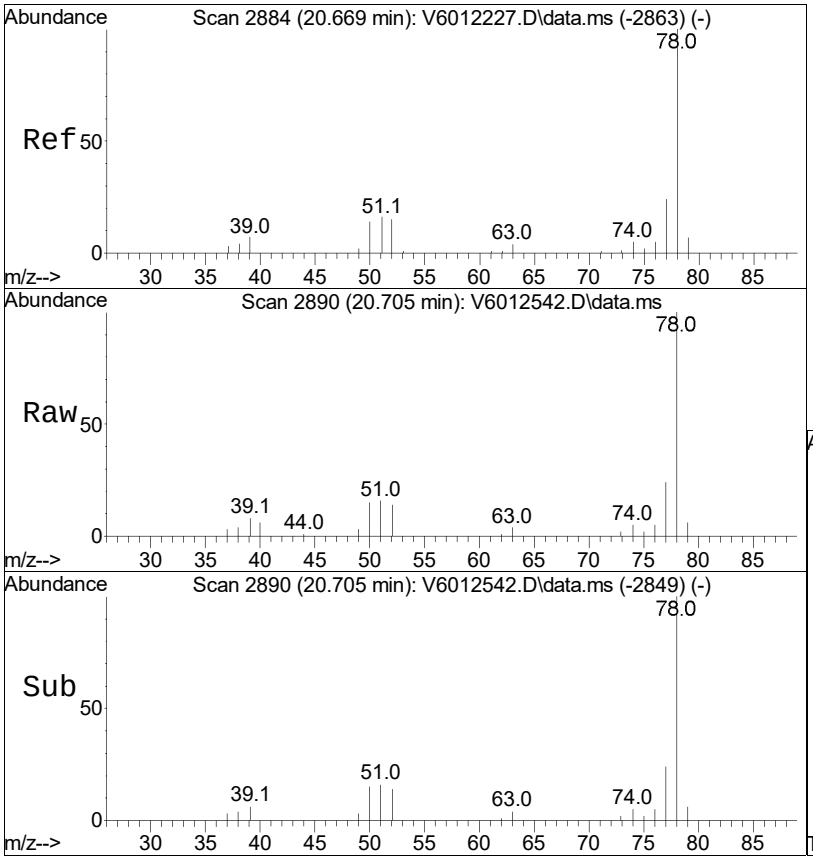


#33
2-Methylhexane
Concen: 19.34 ug/L
RT: 20.52 min Scan# 2859
Delta R.T. -0.006 min
Lab File: V6012542.D
Acq: 22 Sep 2020 11:08 am

Tgt Ion: 43 Resp: 57959

Ion	Ratio	Lower	Upper
43	100		
85	67.5	43.9	83.9
57	36.6	16.6	56.6

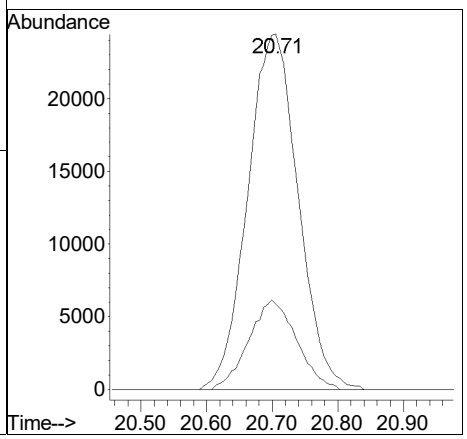


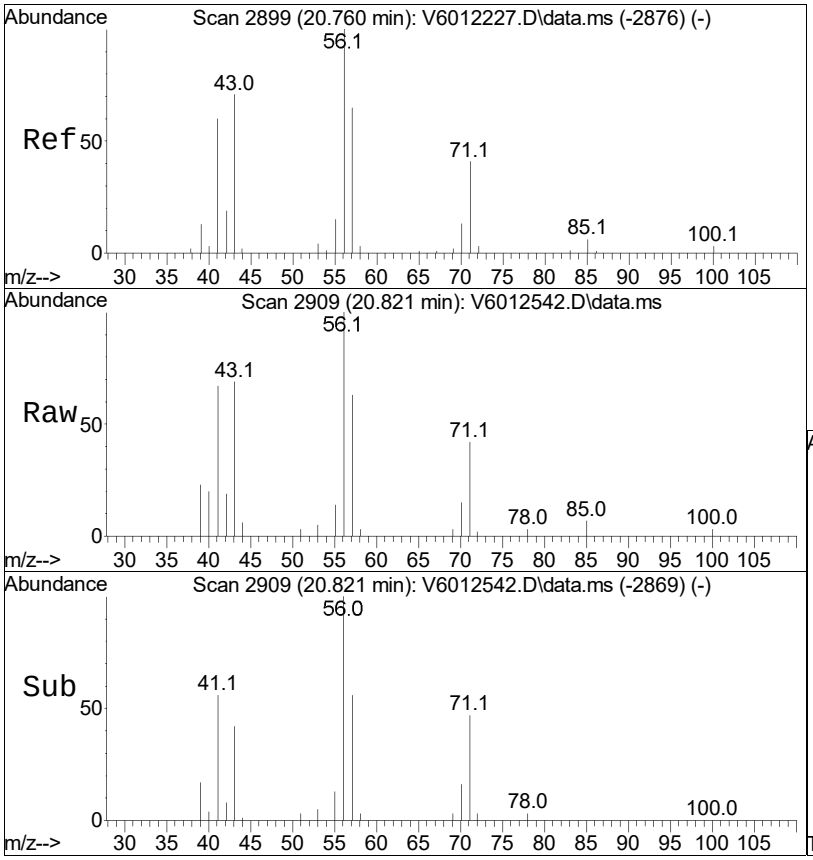


#34
Benzene
Concen: 20.98 ug/L
RT: 20.71 min Scan# 2890
Delta R.T. -0.000 min
Lab File: V6012542.D
Acq: 22 Sep 2020 11:08 am

Tgt Ion: 78 Resp: 130627

Ion	Ratio	Lower	Upper
78	100		
77	24.0	3.7	43.7

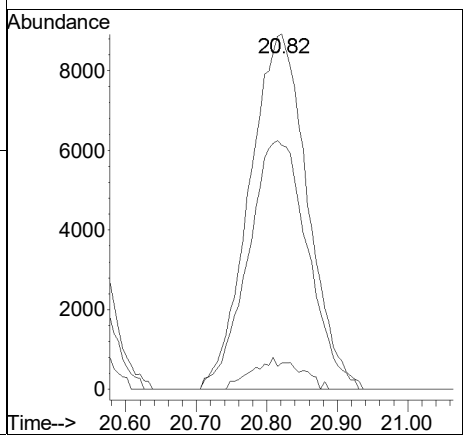


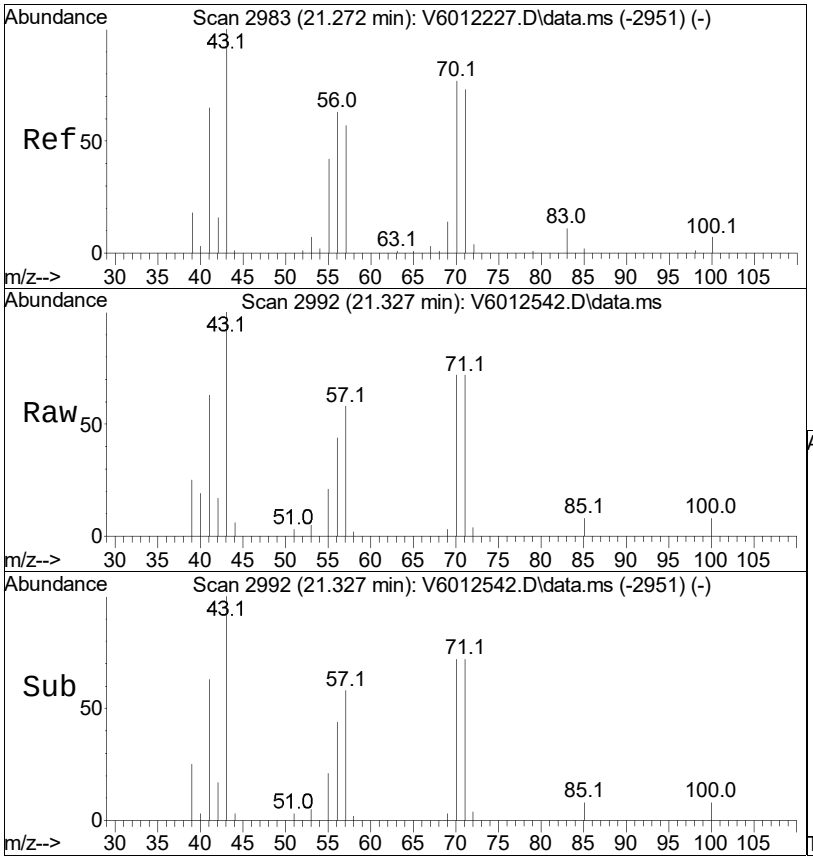


#35
2,3-Dimethylpentane
Concen: 20.32 ug/L
RT: 20.82 min Scan# 2909
Delta R.T. -0.006 min
Lab File: V6012542.D
Acq: 22 Sep 2020 11:08 am

Tgt Ion: 56 Resp: 51207

Ion	Ratio	Lower	Upper
56	100		
43	68.7	52.1	92.1
85	7.4	0.0	27.1

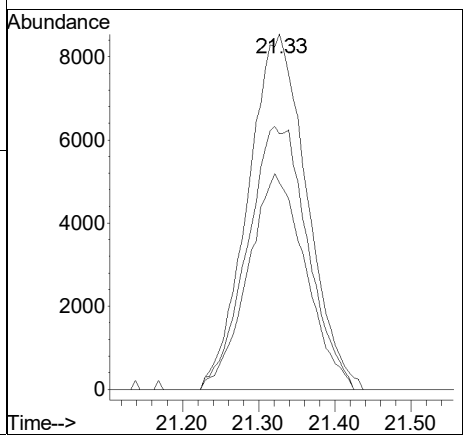


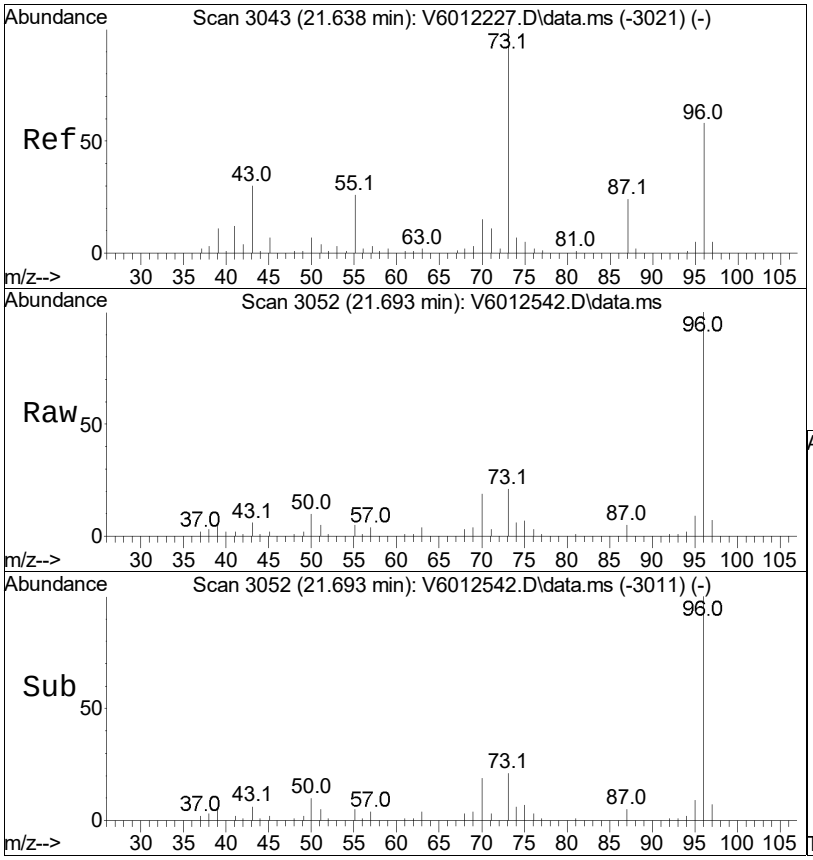


#38
3-Methylhexane
Concen: 17.22 ug/L
RT: 21.33 min Scan# 2992
Delta R.T. -0.000 min
Lab File: V6012542.D
Acq: 22 Sep 2020 11:08 am

Tgt Ion: 43 Resp: 46073

Ion	Ratio	Lower	Upper
43	100		
57	58.2	46.6	86.6
71	71.9	53.2	93.2

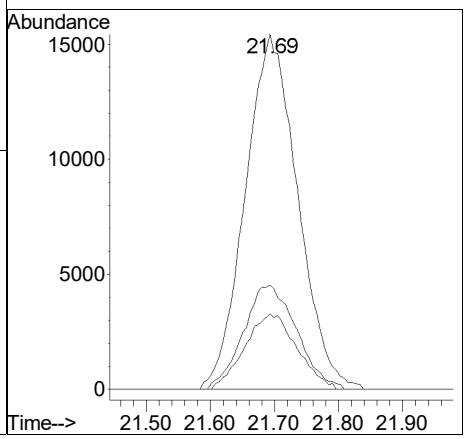


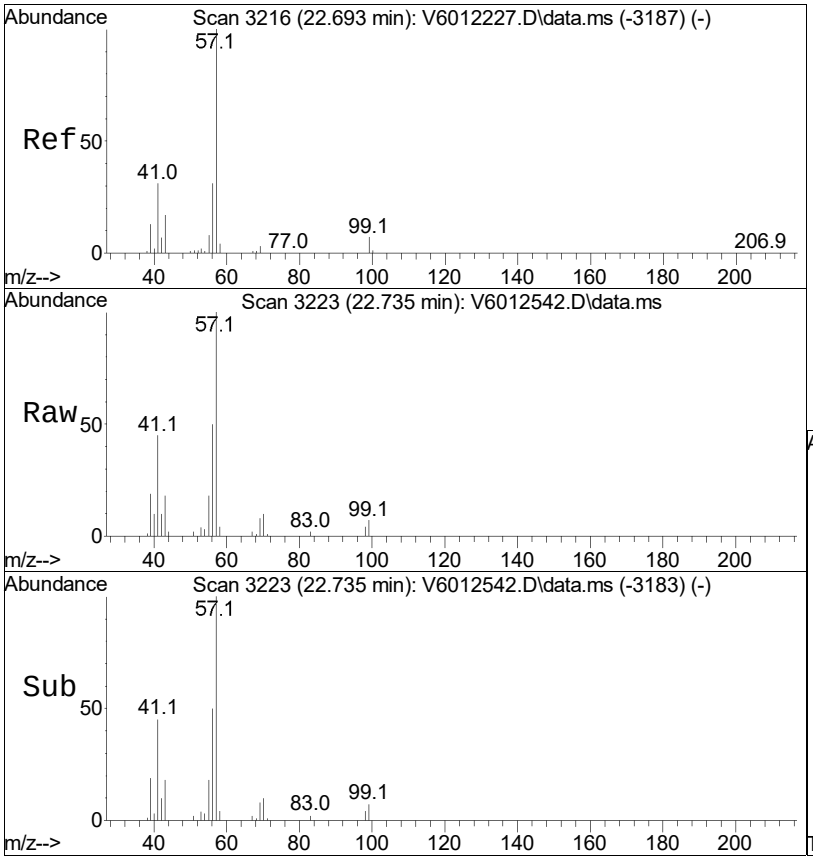


#39
TAME
Concen: 18.40 ug/L
RT: 21.69 min Scan# 3052
Delta R.T. -0.000 min
Lab File: V6012542.D
Acq: 22 Sep 2020 11:08 am

Tgt Ion: 73 Resp: 87843

Ion	Ratio	Lower	Upper
73	100		
43	29.3	10.7	50.7
55	21.2	6.2	46.2

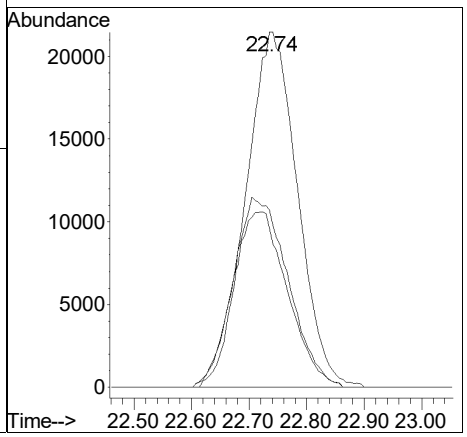


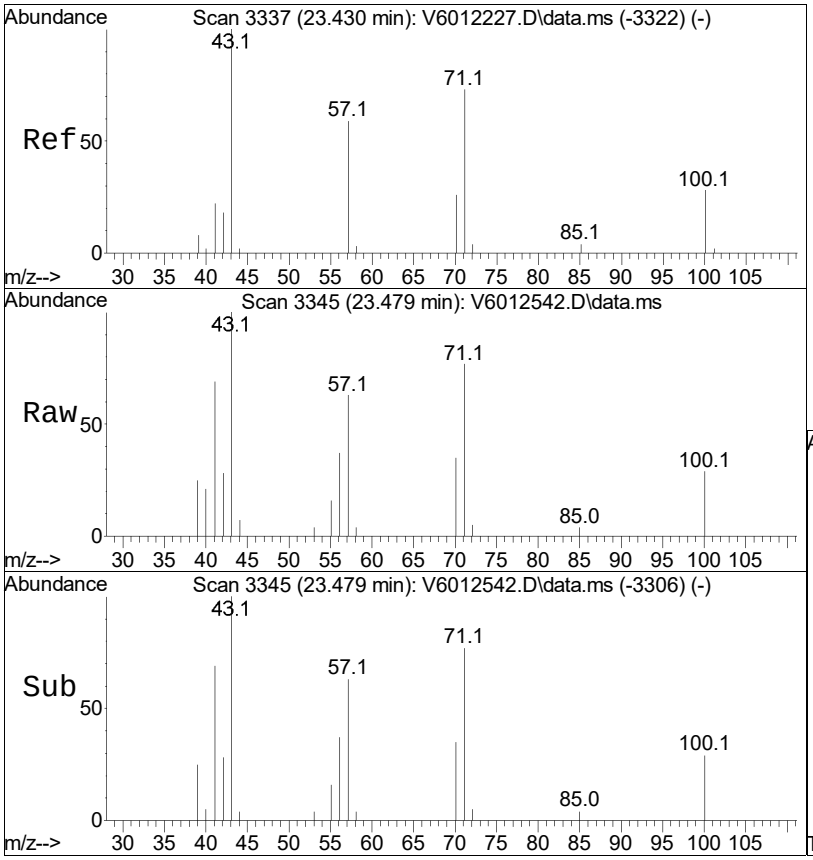


#44
Isooctane
Concen: 20.83 ug/L
RT: 22.74 min Scan# 3223
Delta R.T. -0.006 min
Lab File: V6012542.D
Acq: 22 Sep 2020 11:08 am

Tgt Ion: 57 Resp: 133556

Ion	Ratio	Lower	Upper
57	100		
41	44.8	19.7	59.7
56	49.9	29.1	69.1

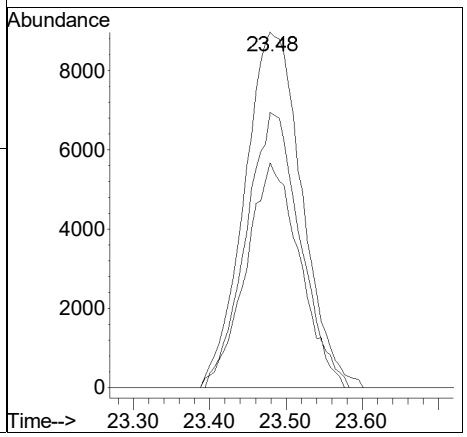


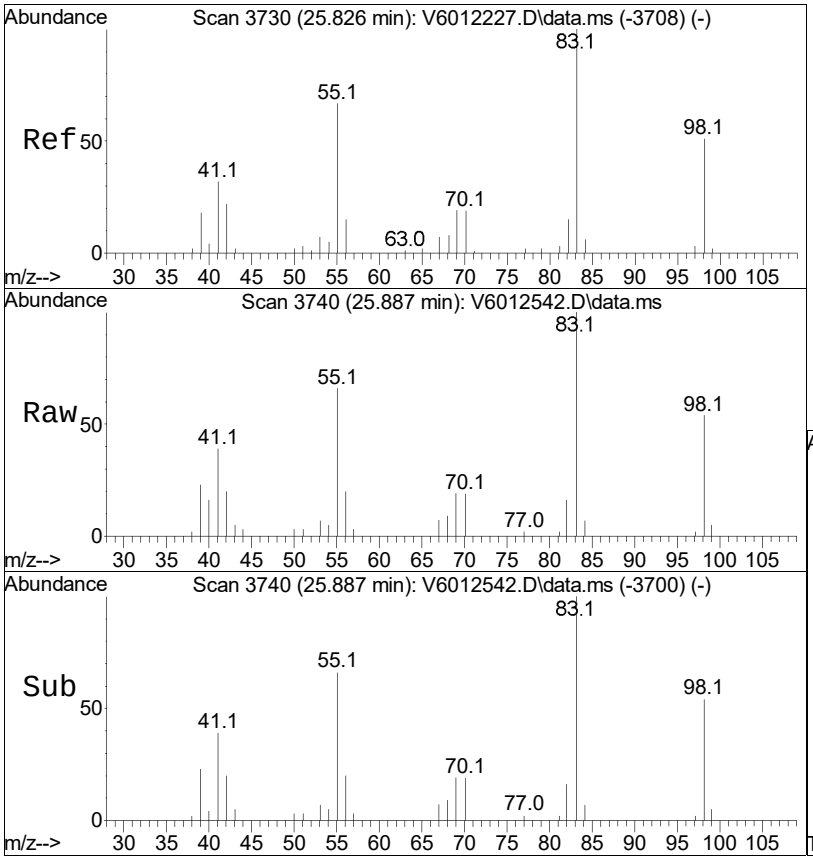


#46
Heptane
Concen: 18.93 ug/L
RT: 23.48 min Scan# 3345
Delta R.T. -0.012 min
Lab File: V6012542.D
Acq: 22 Sep 2020 11:08 am

Tgt Ion: 43 Resp: 47186

Ion	Ratio	Lower	Upper
43	100		
57	63.2	41.1	81.1
71	77.4	50.3	90.3

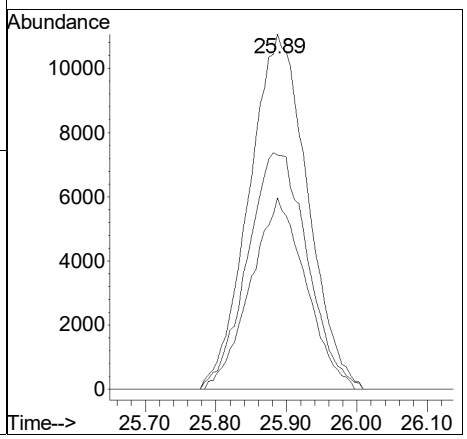


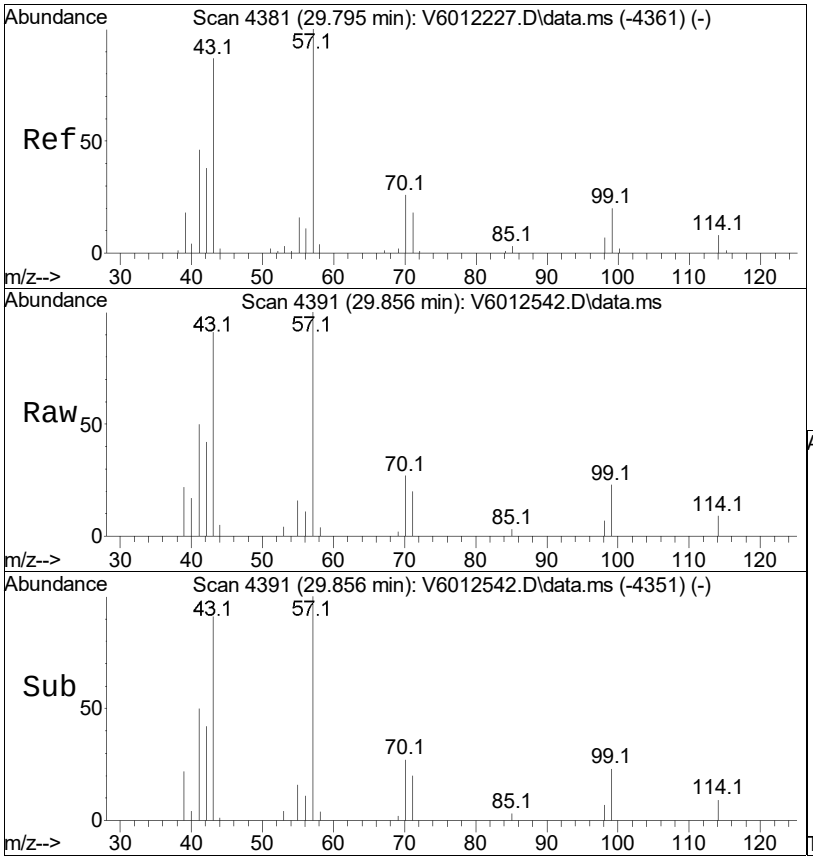


#51
Methylcyclohexane
Concen: 22.09 ug/L
RT: 25.89 min Scan# 3740
Delta R.T. -0.006 min
Lab File: V6012542.D
Acq: 22 Sep 2020 11:08 am

Tgt Ion: 83 Resp: 63843

Ion	Ratio	Lower	Upper
83	100		
55	65.9	48.9	88.9
98	53.9	30.6	70.6

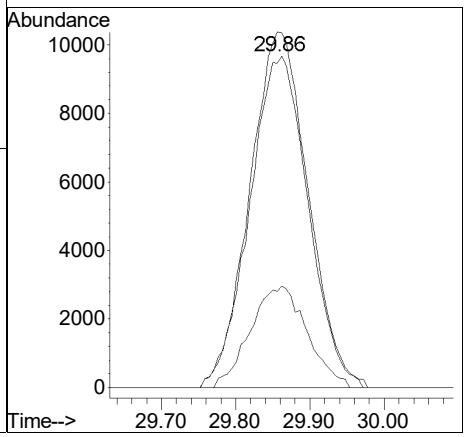


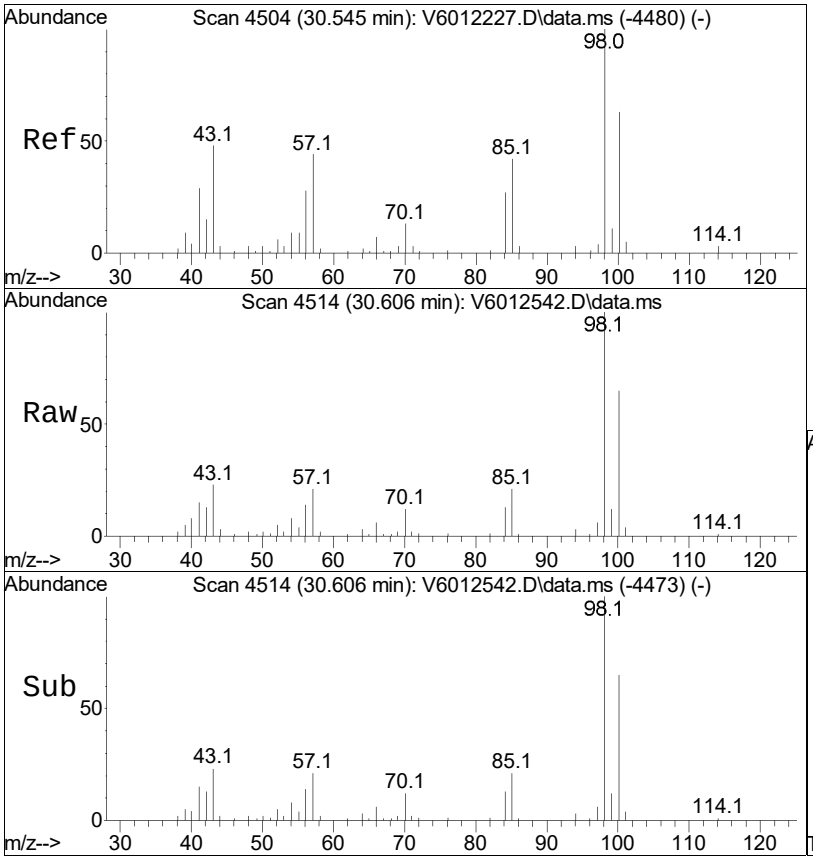


#60
2-Methylheptane
Concen: 19.63 ug/L
RT: 29.86 min Scan# 4391
Delta R.T. -0.006 min
Lab File: V6012542.D
Acq: 22 Sep 2020 11:08 am

Tgt Ion: 57 Resp: 56687

Ion	Ratio	Lower	Upper
57	100		
43	91.2	66.6	106.6
70	27.1	5.8	45.8

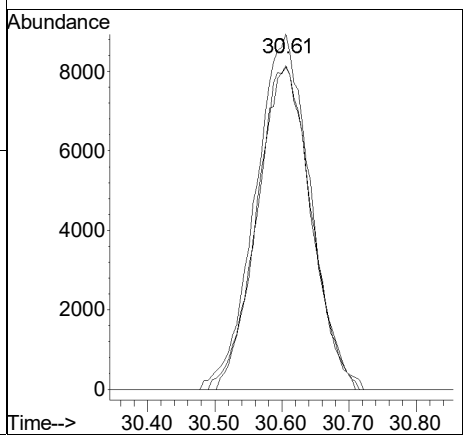


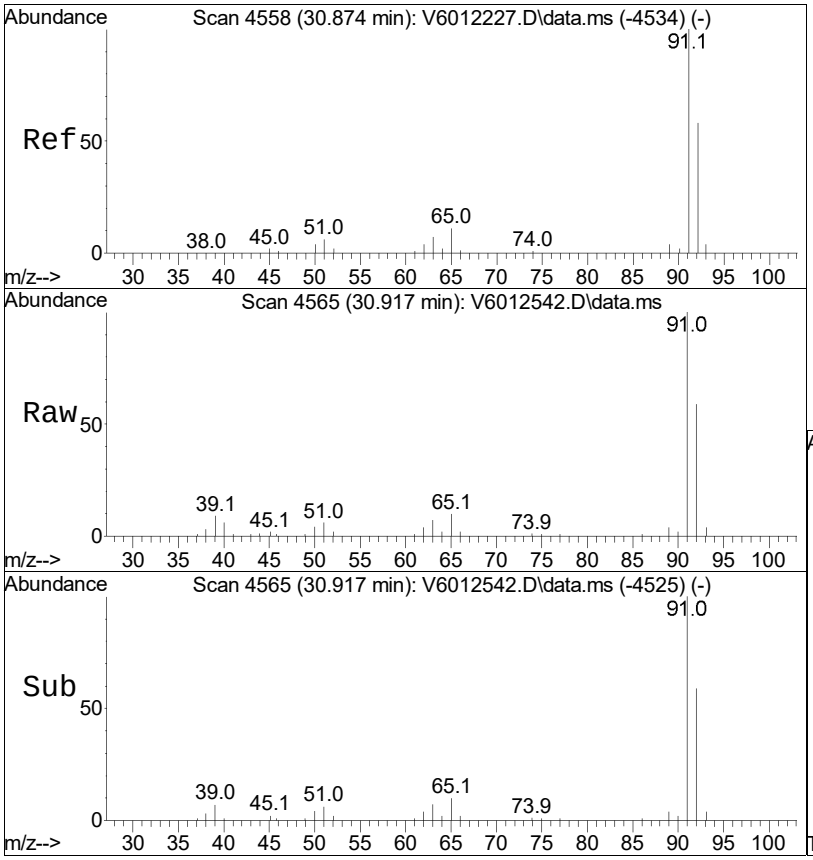


#63
3-Methylheptane
Concen: 17.97 ug/L
RT: 30.61 min Scan# 4514
Delta R.T. -0.000 min
Lab File: V6012542.D
Acq: 22 Sep 2020 11:08 am

Tgt Ion: 43 Resp: 50973

Ion	Ratio	Lower	Upper
43	100		
57	90.7	72.5	112.5
85	91.1	68.3	108.3

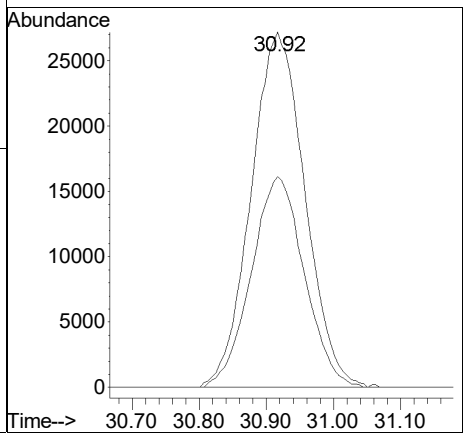


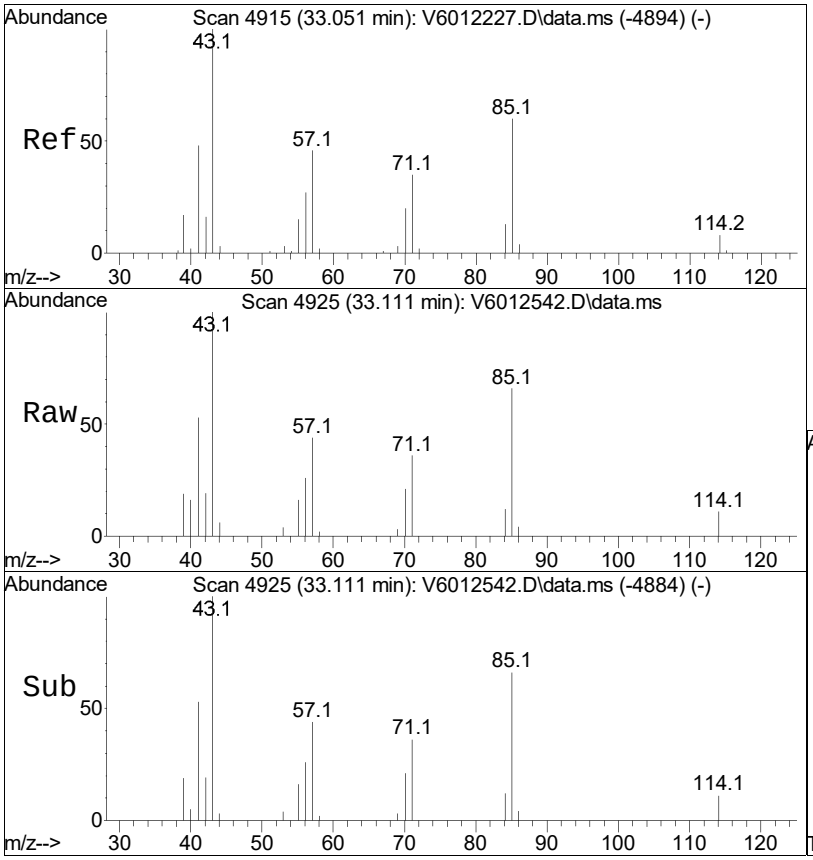


#66
Toluene
Concen: 20.11 ug/L
RT: 30.92 min Scan# 4565
Delta R.T. -0.006 min
Lab File: V6012542.D
Acq: 22 Sep 2020 11:08 am

Tgt Ion: 91 Resp: 151722

Ion	Ratio	Lower	Upper
91	100		
92	59.3	38.2	78.2

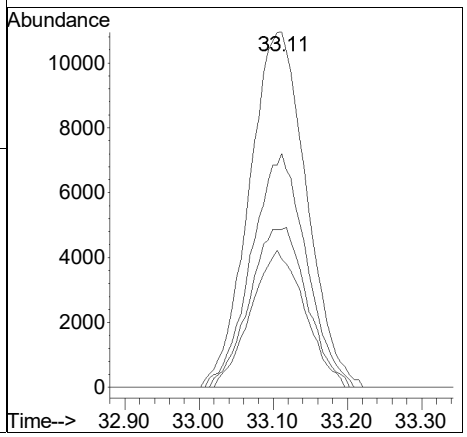


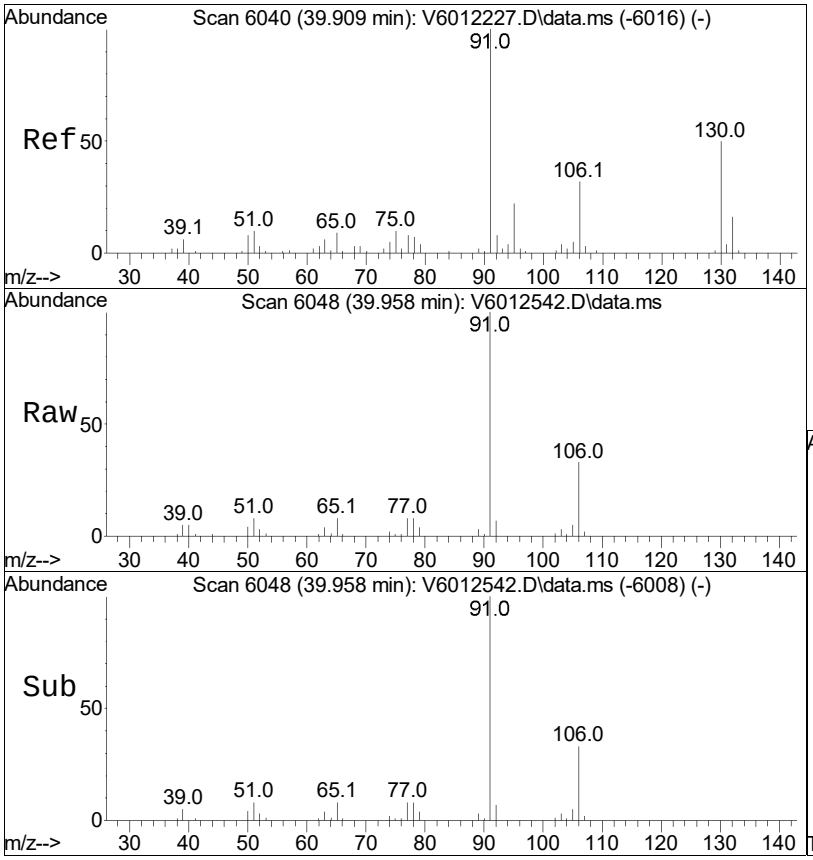


#71
Octane
Concen: 20.34 ug/L
RT: 33.11 min Scan# 4925
Delta R.T. -0.000 min
Lab File: V6012542.D
Acq: 22 Sep 2020 11:08 am

Tgt Ion: 43 Resp: 58867

Ion	Ratio	Lower	Upper
43	100		
57	44.4	26.0	66.0
85	65.8	39.8	79.8
71	36.1	14.6	54.6

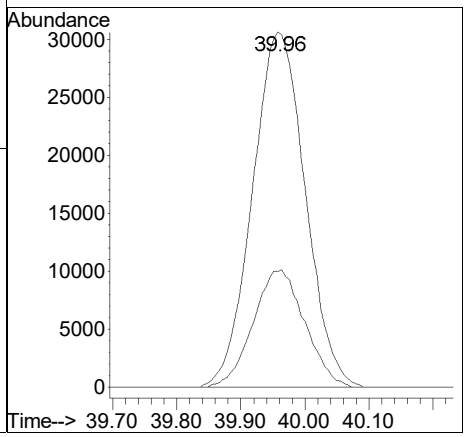


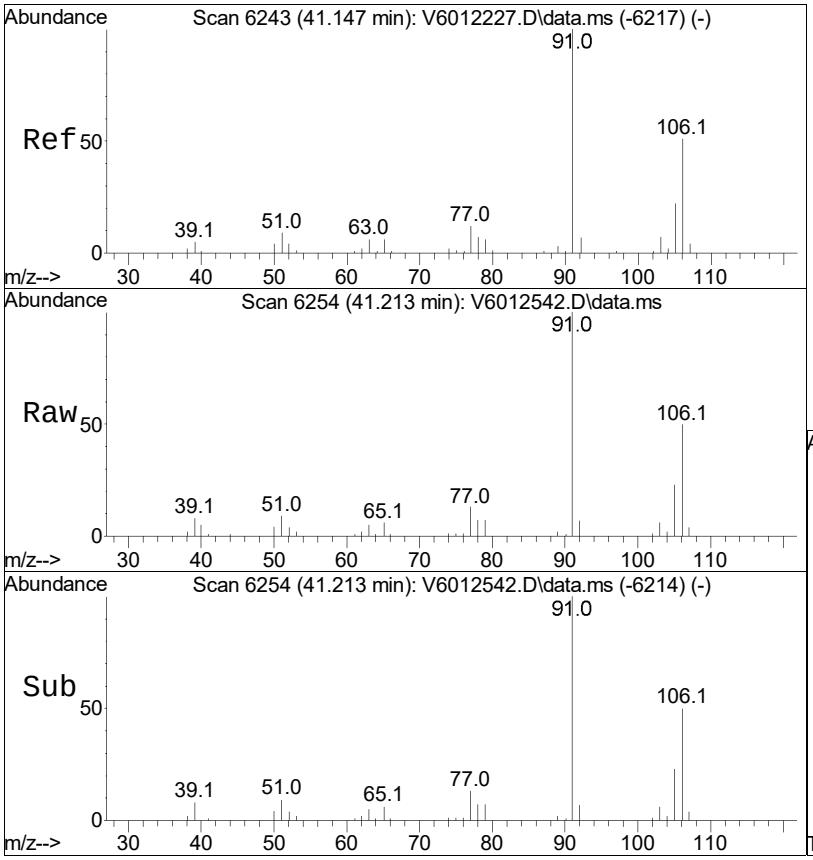


#86
Ethylbenzene
Concen: 20.55 ug/L
RT: 39.96 min Scan# 6048
Delta R.T. -0.006 min
Lab File: V6012542.D
Acq: 22 Sep 2020 11:08 am

Tgt Ion: 91 Resp: 175284

Ion	Ratio	Lower	Upper
91	100		
106	32.6	12.1	52.1

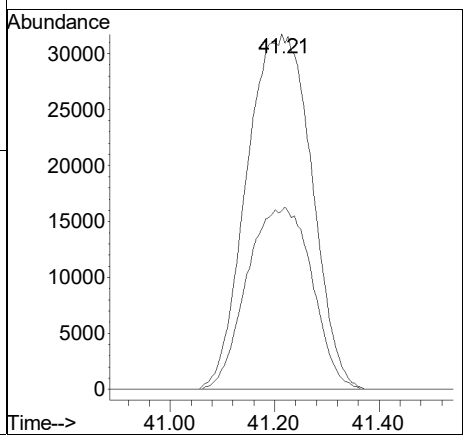


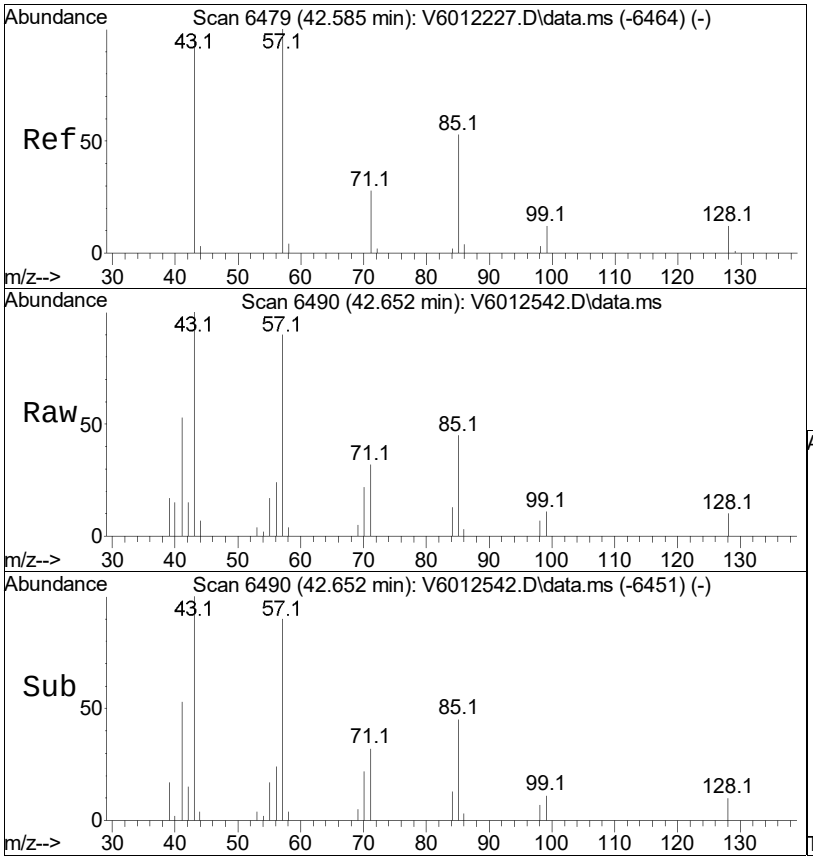


#91
p/m-Xylene
Concen: 42.01 ug/L
RT: 41.21 min Scan# 6254
Delta R.T. -0.006 min
Lab File: V6012542.D
Acq: 22 Sep 2020 11:08 am

Tgt Ion: 91 Resp: 273268

Ion	Ratio	Lower	Upper
91	100		
106	50.3	30.7	70.7

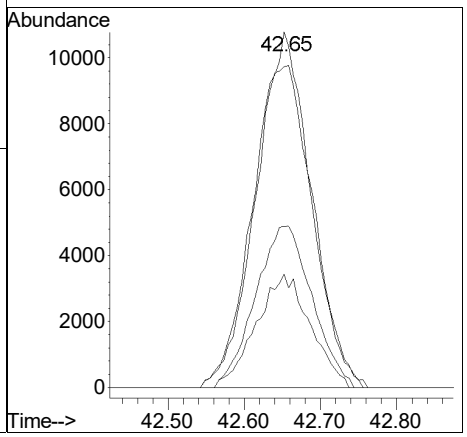


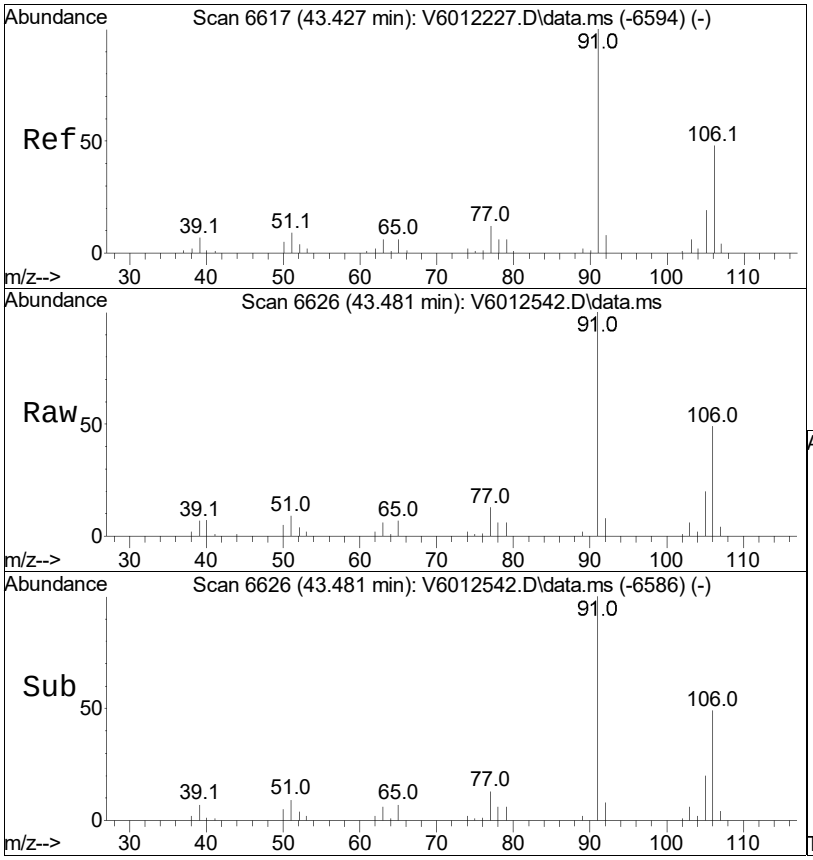


#95
Nonane
Concen: 19.62 ug/L
RT: 42.65 min Scan# 6490
Delta R.T. -0.012 min
Lab File: V6012542.D
Acq: 22 Sep 2020 11:08 am

Tgt Ion: 43 Resp: 55498

Ion	Ratio	Lower	Upper
43	100		
57	90.2	74.2	114.2
85	45.3	24.5	64.5
71	31.9	10.5	50.5

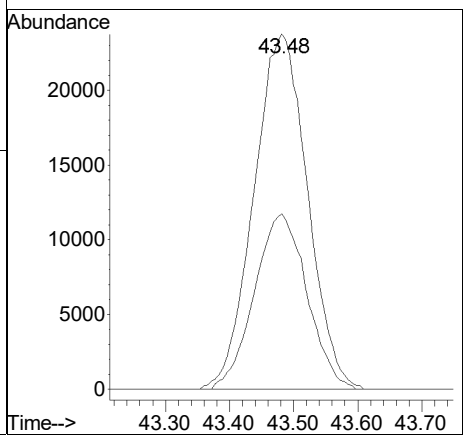


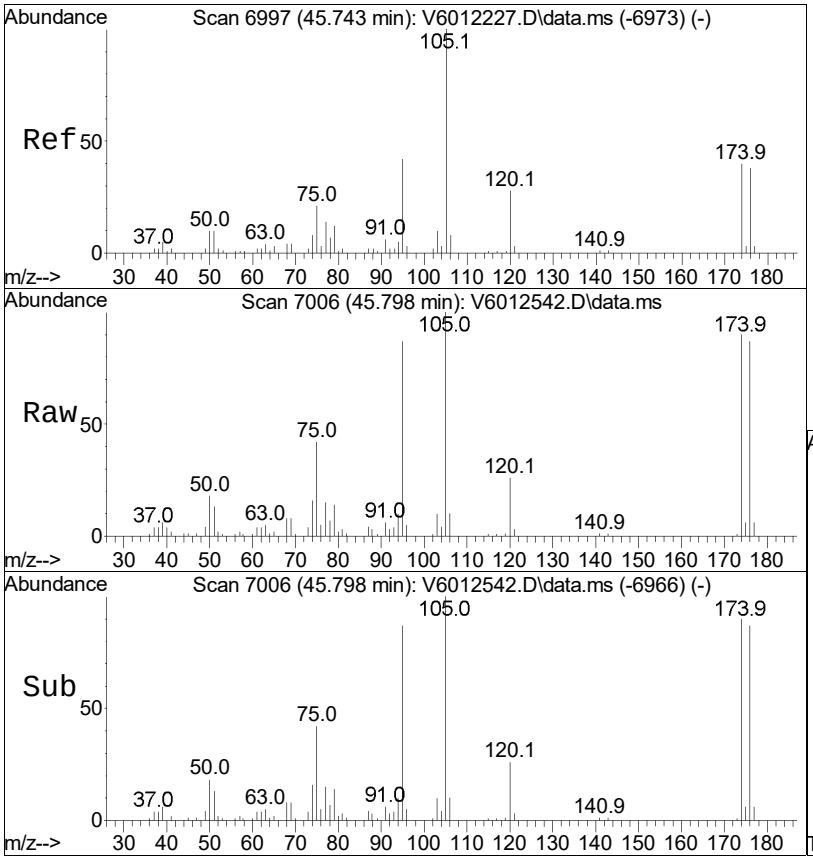


#98
o-Xylene
Concen: 20.27 ug/L
RT: 43.48 min Scan# 6626
Delta R.T. -0.006 min
Lab File: V6012542.D
Acq: 22 Sep 2020 11:08 am

Tgt Ion: 91 Resp: 138198

Ion	Ratio	Lower	Upper
91	100		
106	49.5	28.3	68.3

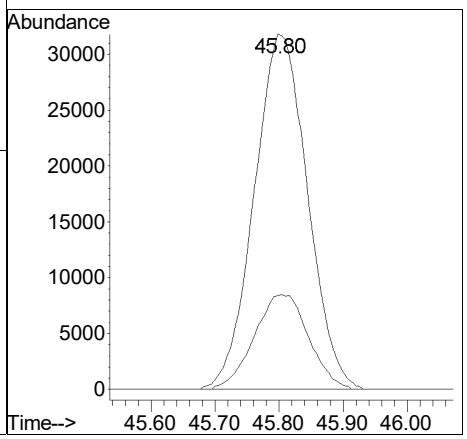


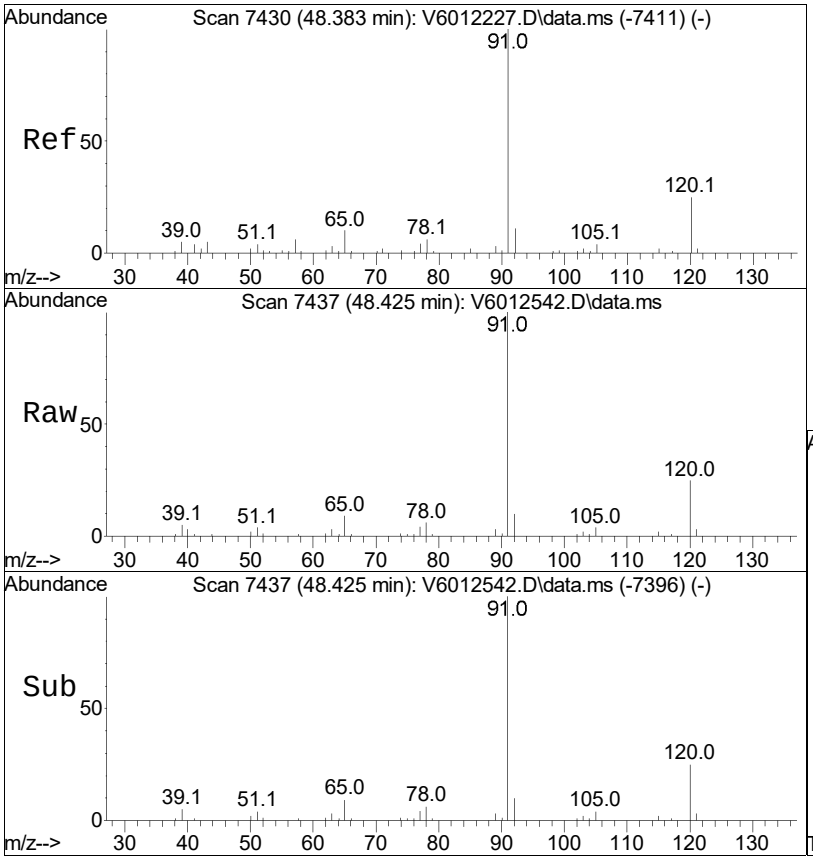


#102
Isopropylbenzene
Concen: 20.68 ug/L
RT: 45.80 min Scan# 7006
Delta R.T. -0.006 min
Lab File: V6012542.D
Acq: 22 Sep 2020 11:08 am

Tgt Ion:105 Resp: 183750

Ion	Ratio	Lower	Upper
105	100		
120	26.4	8.4	48.4

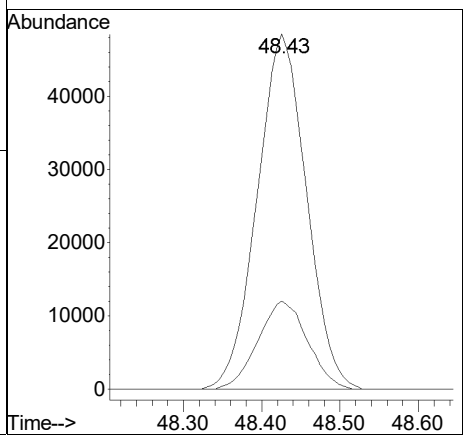


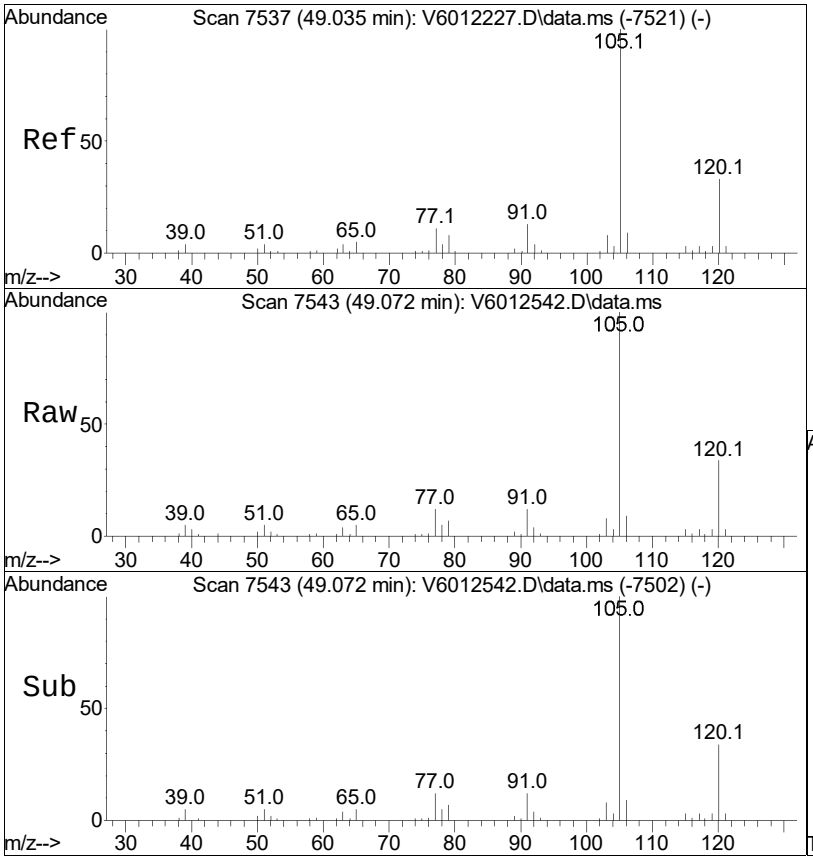


#104
n-Propylbenzene
Concen: 20.27 ug/L
RT: 48.43 min Scan# 7437
Delta R.T. -0.000 min
Lab File: V6012542.D
Acq: 22 Sep 2020 11:08 am

Tgt Ion: 91 Resp: 211811

Ion	Ratio	Lower	Upper
91	100		
120	24.9	4.9	44.9

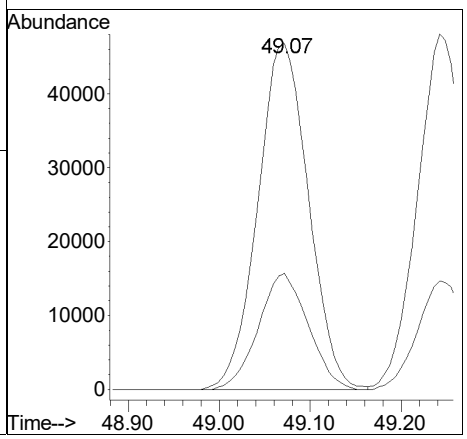


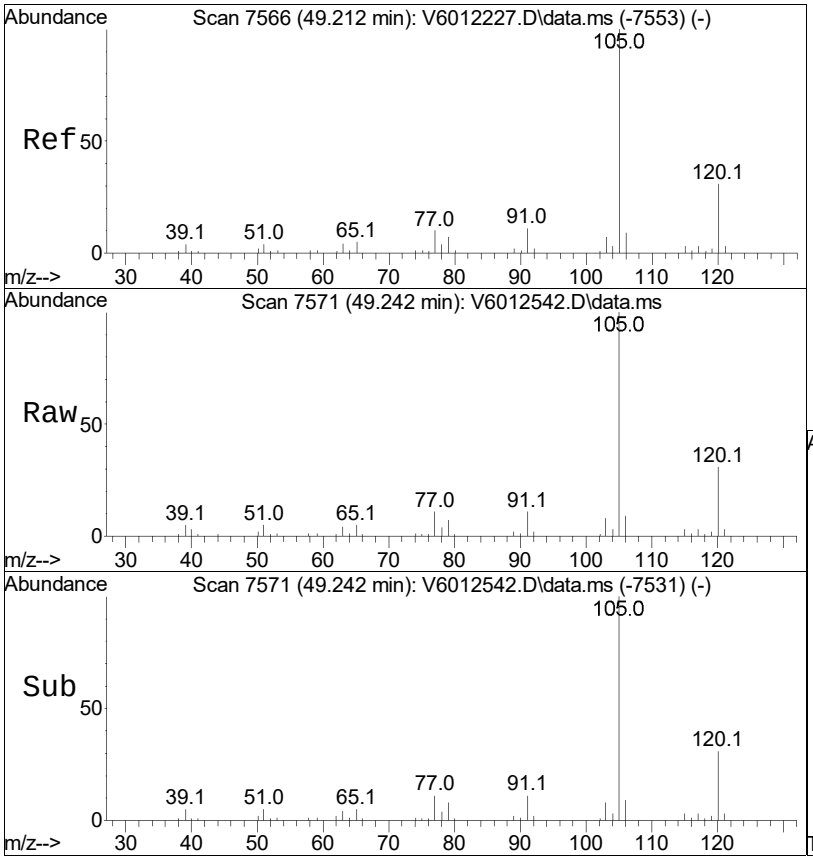


#107
1-Methyl-3-ethylbenzene
Concen: 20.50 ug/L
RT: 49.07 min Scan# 7543
Delta R.T. -0.000 min
Lab File: V6012542.D
Acq: 22 Sep 2020 11:08 am

Tgt Ion:105 Resp: 181156

Ion	Ratio	Lower	Upper
105	100		
120	33.6	12.7	52.7

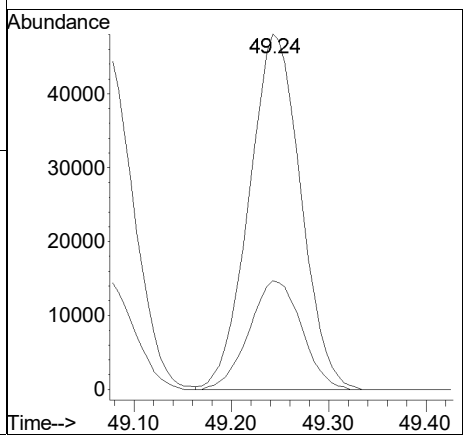


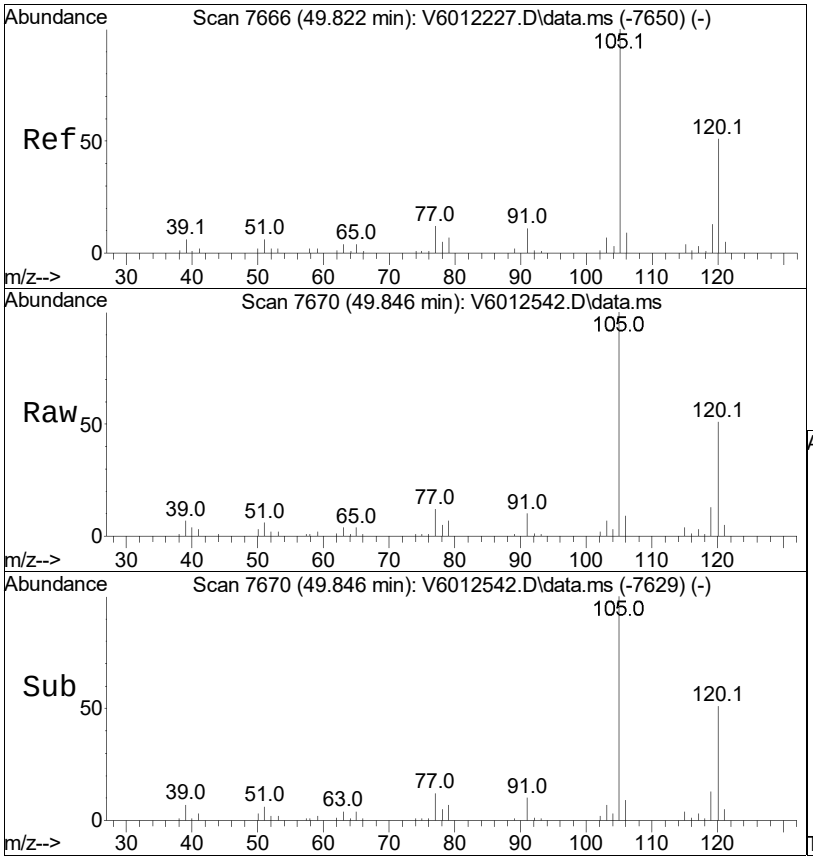


#108
1-Methyl-4-ethylbenzene
Concen: 20.74 ug/L
RT: 49.24 min Scan# 7571
Delta R.T. -0.006 min
Lab File: V6012542.D
Acq: 22 Sep 2020 11:08 am

Tgt Ion:105 Resp: 177540

Ion	Ratio	Lower	Upper
105	100		
120	30.6	11.4	51.4

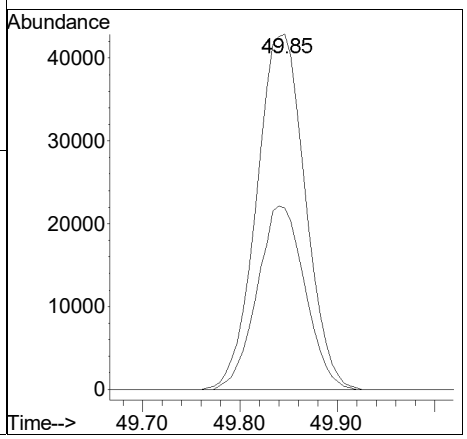


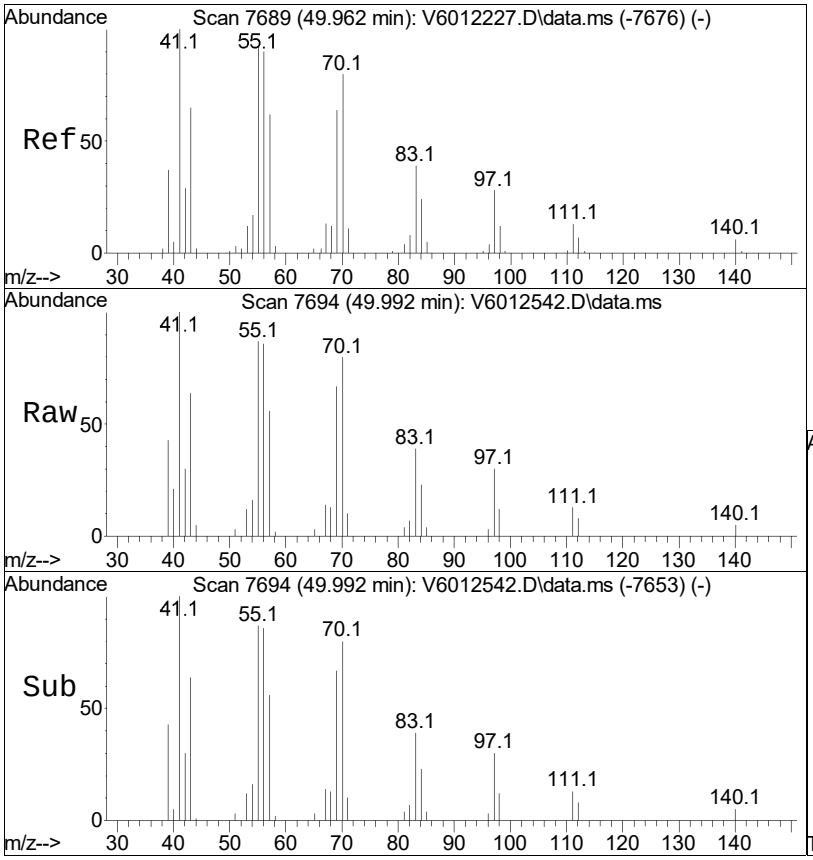


#109
1,3,5-Trimethylbenzene
Concen: 20.15 ug/L
RT: 49.85 min Scan# 7670
Delta R.T. -0.000 min
Lab File: V6012542.D
Acq: 22 Sep 2020 11:08 am

Tgt Ion:105 Resp: 148883

Ion	Ratio	Lower	Upper
105	100		
120	51.1	30.8	70.8

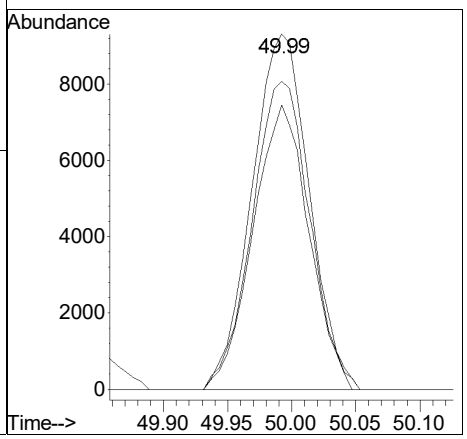


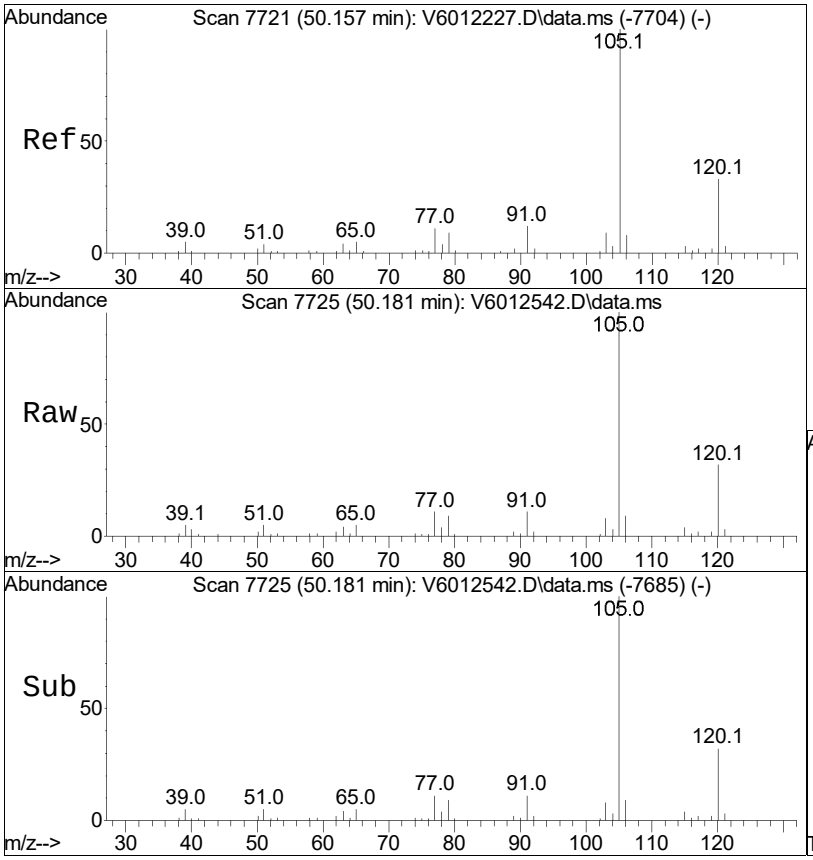


#110
1-Decene
Concen: 16.84 ug/L
RT: 49.99 min Scan# 7694
Delta R.T. -0.000 min
Lab File: V6012542.D
Acq: 22 Sep 2020 11:08 am

Tgt Ion: 41 Resp: 29051

Ion	Ratio	Lower	Upper
41	100		
55	86.8	73.4	113.4
70	80.0	60.3	100.3

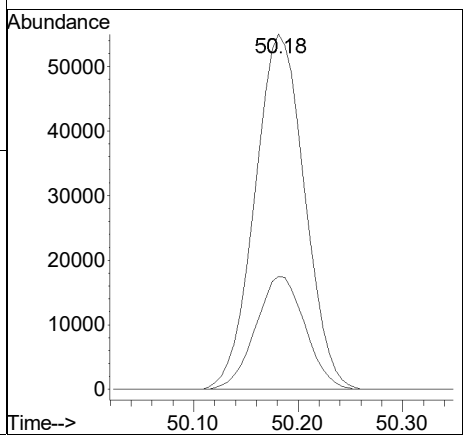


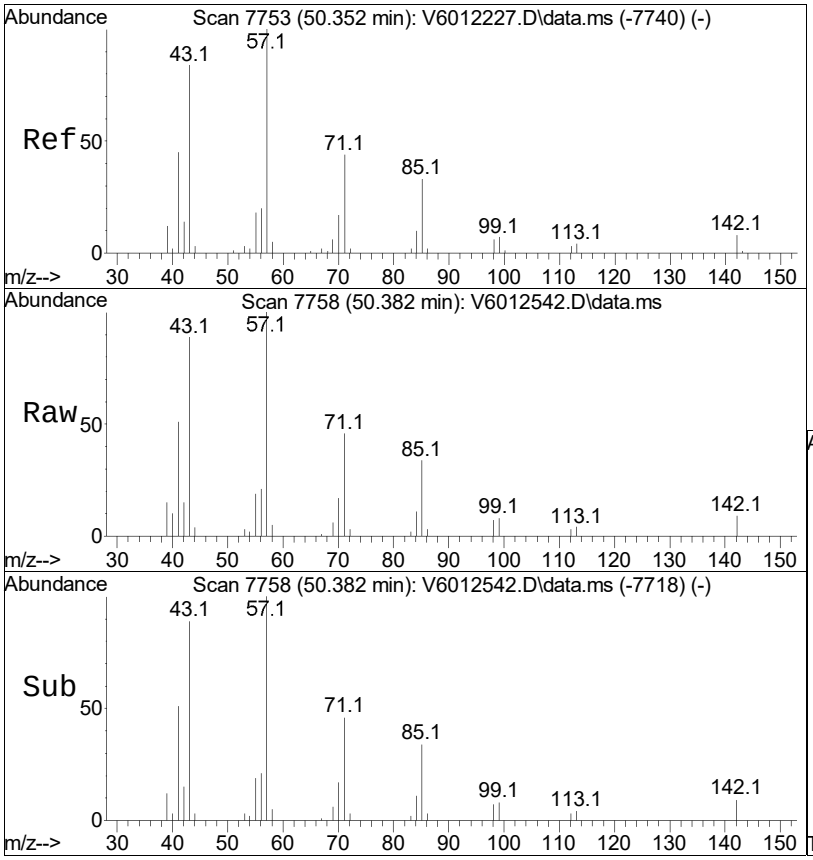


#112
1-Methyl-2-ethylbenzene
Concen: 20.02 ug/L
RT: 50.18 min Scan# 7725
Delta R.T. -0.006 min
Lab File: V6012542.D
Acq: 22 Sep 2020 11:08 am

Tgt Ion:105 Resp: 182066

Ion	Ratio	Lower	Upper
105	100		
120	31.8	13.0	53.0

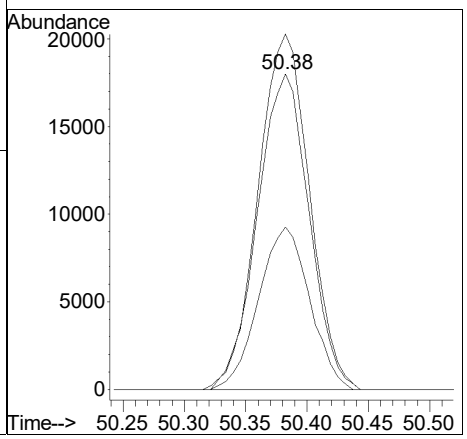


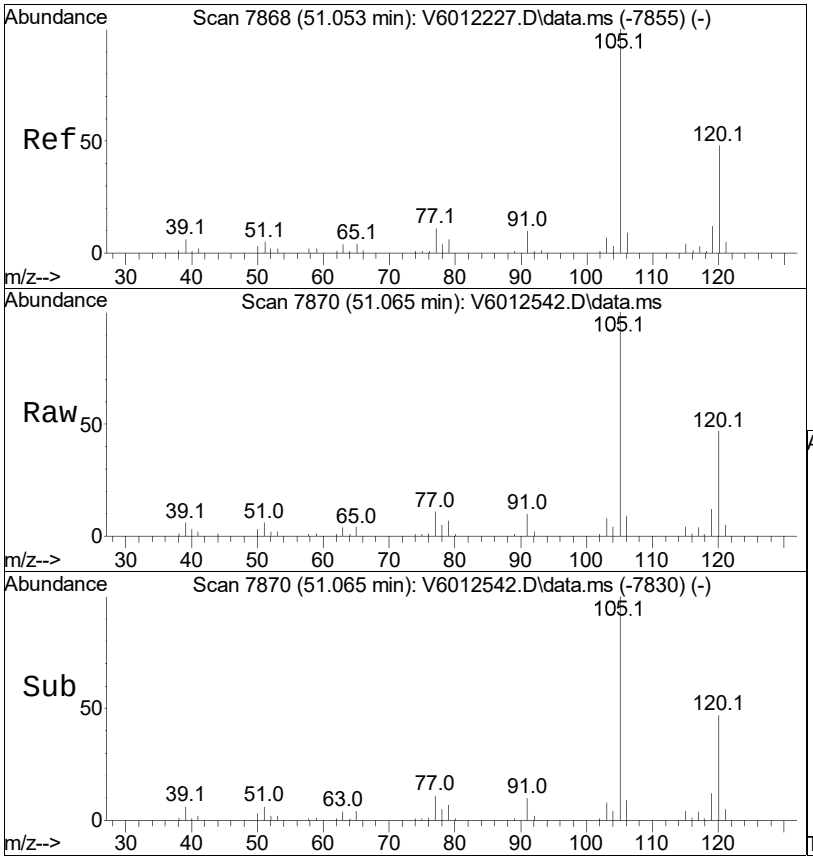


#113
Decane
Concen: 21.64 ug/L
RT: 50.38 min Scan# 7758
Delta R.T. -0.006 min
Lab File: V6012542.D
Acq: 22 Sep 2020 11:08 am

Tgt Ion: 43 Resp: 52691

Ion	Ratio	Lower	Upper
43	100		
57	112.7	99.5	139.5
71	51.5	32.3	72.3

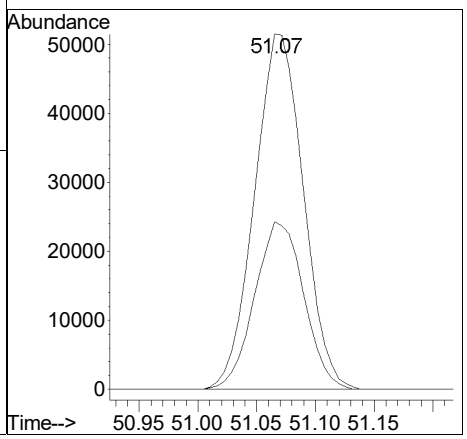


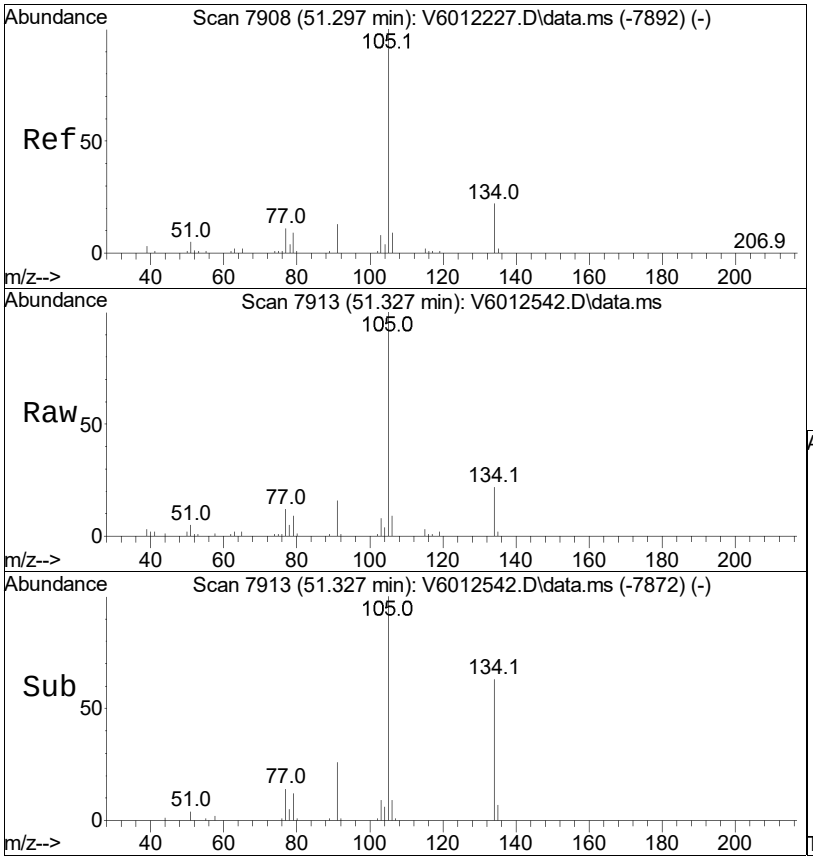


#115
1,2,4-Trimethylbenzene
Concen: 19.63 ug/L
RT: 51.07 min Scan# 7870
Delta R.T. -0.006 min
Lab File: V6012542.D
Acq: 22 Sep 2020 11:08 am

Tgt Ion:105 Resp: 148564

Ion	Ratio	Lower	Upper
105	100		
120	47.2	27.6	67.6

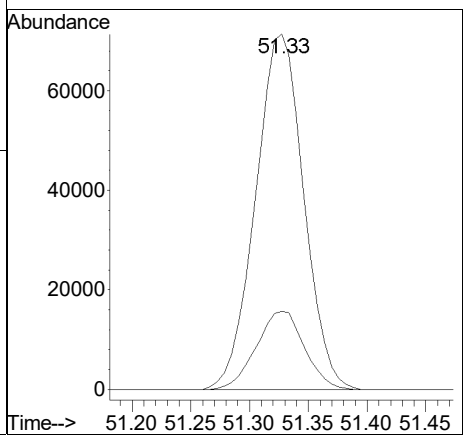


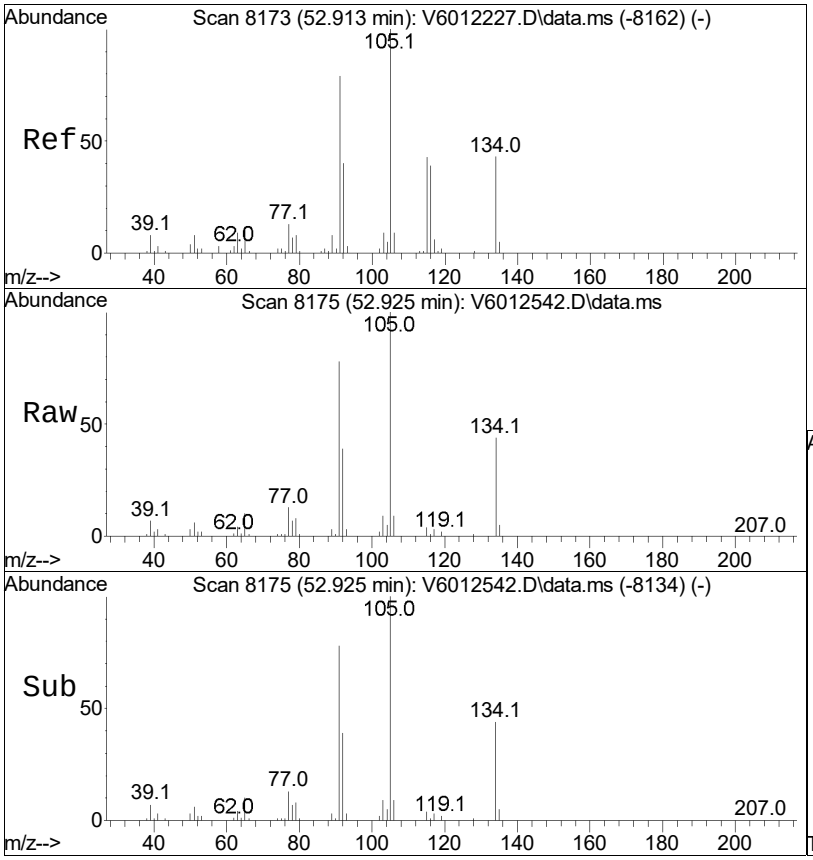


#117
sec-Butylbenzene
Concen: 20.60 ug/L
RT: 51.33 min Scan# 7913
Delta R.T. -0.000 min
Lab File: V6012542.D
Acq: 22 Sep 2020 11:08 am

Tgt Ion:105 Resp: 203196

Ion	Ratio	Lower	Upper
105	100		
134	22.0	3.2	43.2

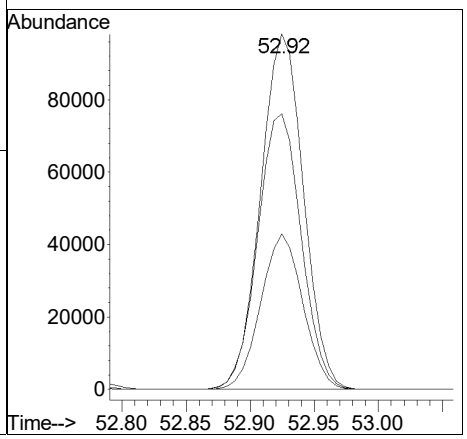


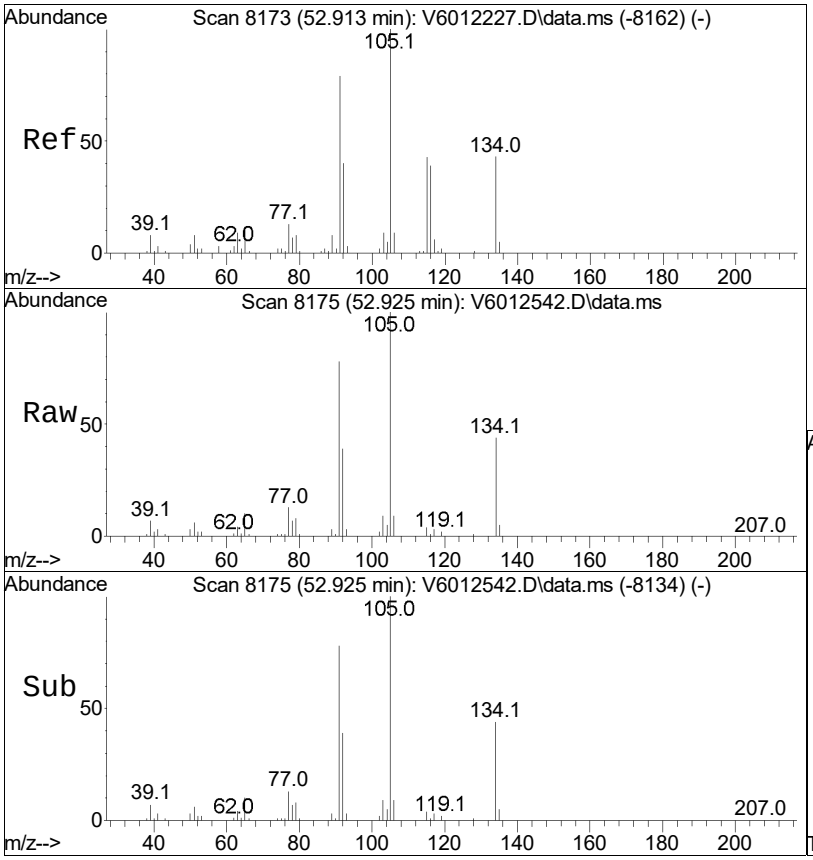


#126
1-Methyl-4-propylbenzene
Concen: 18.45 ug/L
RT: 52.92 min Scan# 8175
Delta R.T. -0.000 min
Lab File: V6012542.D
Acq: 22 Sep 2020 11:08 am

Tgt Ion:105 Resp: 228940

Ion	Ratio	Lower	Upper
105	100		
134	43.8	23.0	63.0
91	77.6	58.3	98.3

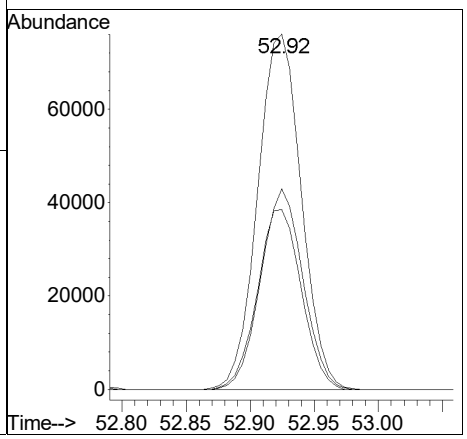


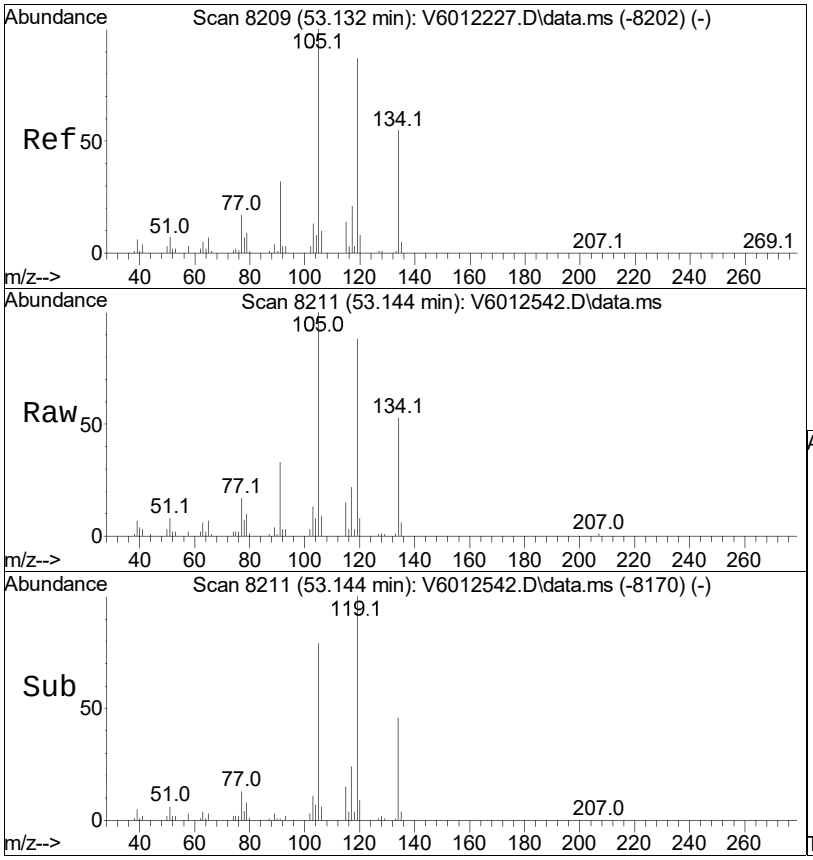


#127
n-Butylbenzene
Concen: 19.26 ug/L
RT: 52.92 min Scan# 8175
Delta R.T. -0.000 min
Lab File: V6012542.D
Acq: 22 Sep 2020 11:08 am

Tgt Ion: 91 Resp: 180234

Ion	Ratio	Lower	Upper
91	100		
92	50.6	30.6	70.6
134	56.5	34.9	74.9

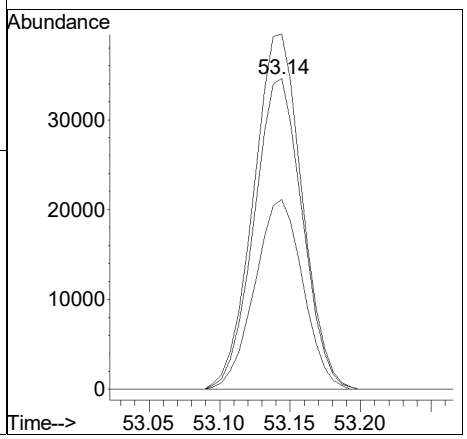


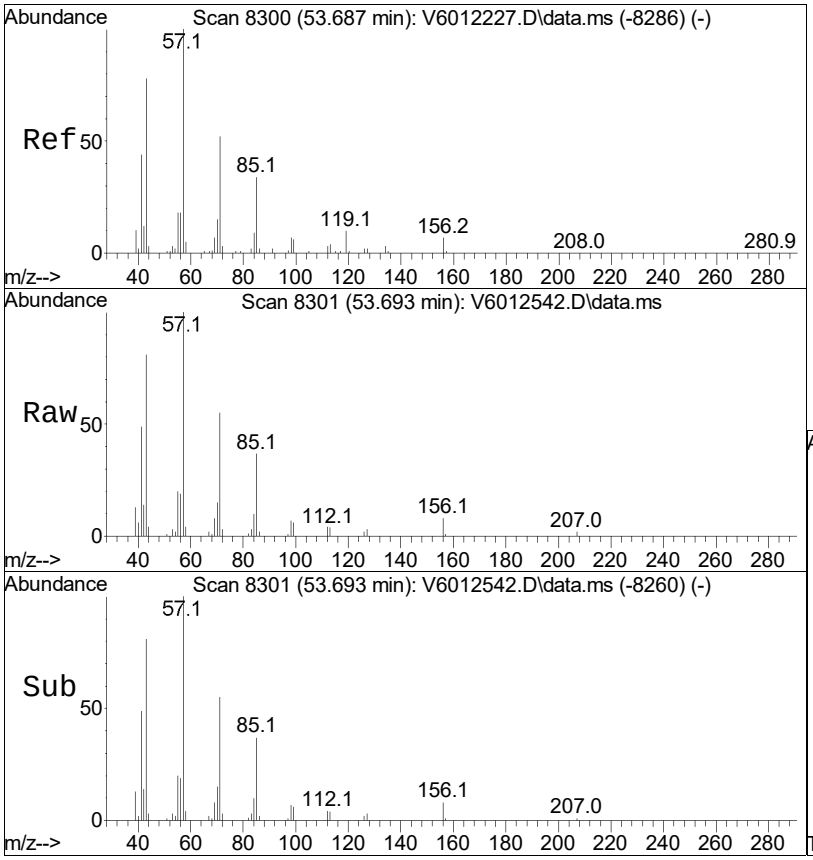


#129
1,2-Diethylbenzene
Concen: 19.06 ug/L
RT: 53.14 min Scan# 8211
Delta R.T. -0.000 min
Lab File: V6012542.D
Acq: 22 Sep 2020 11:08 am

Tgt Ion:119 Resp: 82262

Ion	Ratio	Lower	Upper
119	100		
105	114.3	89.9	129.9
134	61.1	41.5	81.5

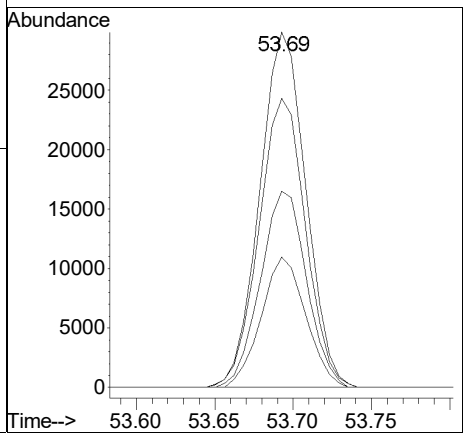


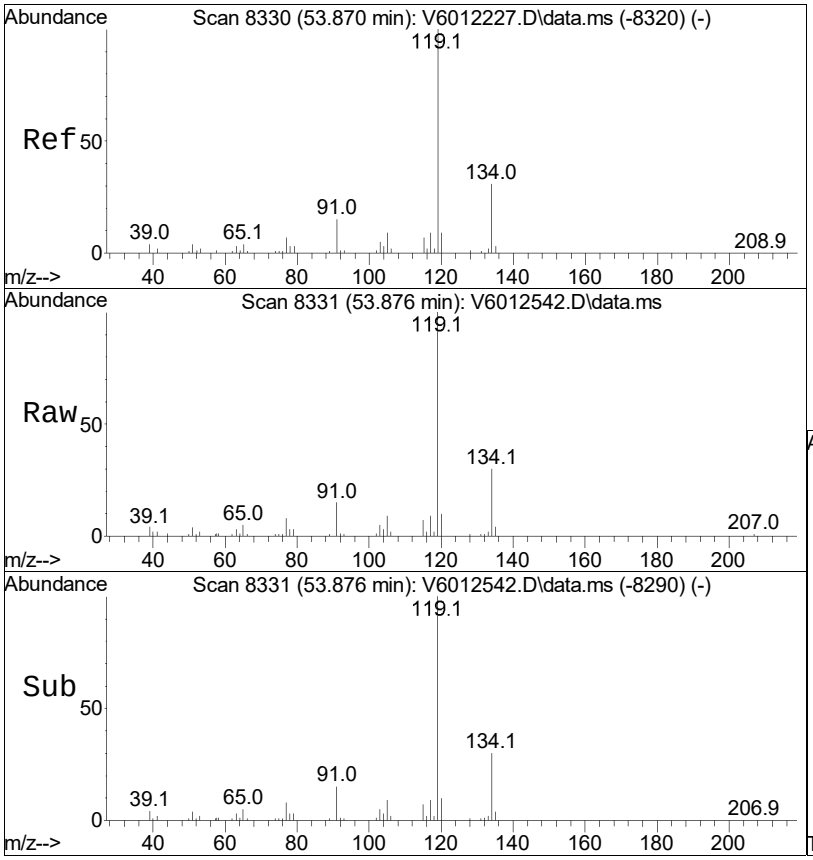


#132
Undecane
Concen: 21.98 ug/L
RT: 53.69 min Scan# 8301
Delta R.T. -0.000 min
Lab File: V6012542.D
Acq: 22 Sep 2020 11:08 am

Tgt Ion: 57 Resp: 61355

Ion	Ratio	Lower	Upper
57	100		
43	81.3	58.4	98.4
71	55.2	32.1	72.1
85	36.7	14.5	54.5

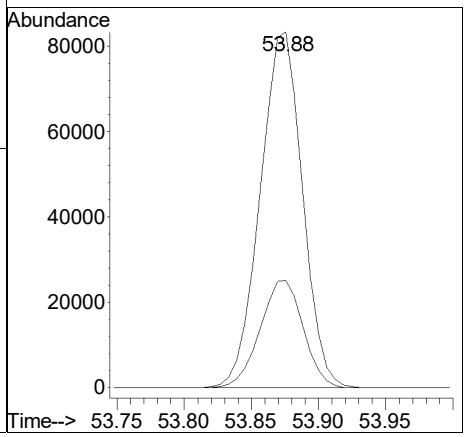


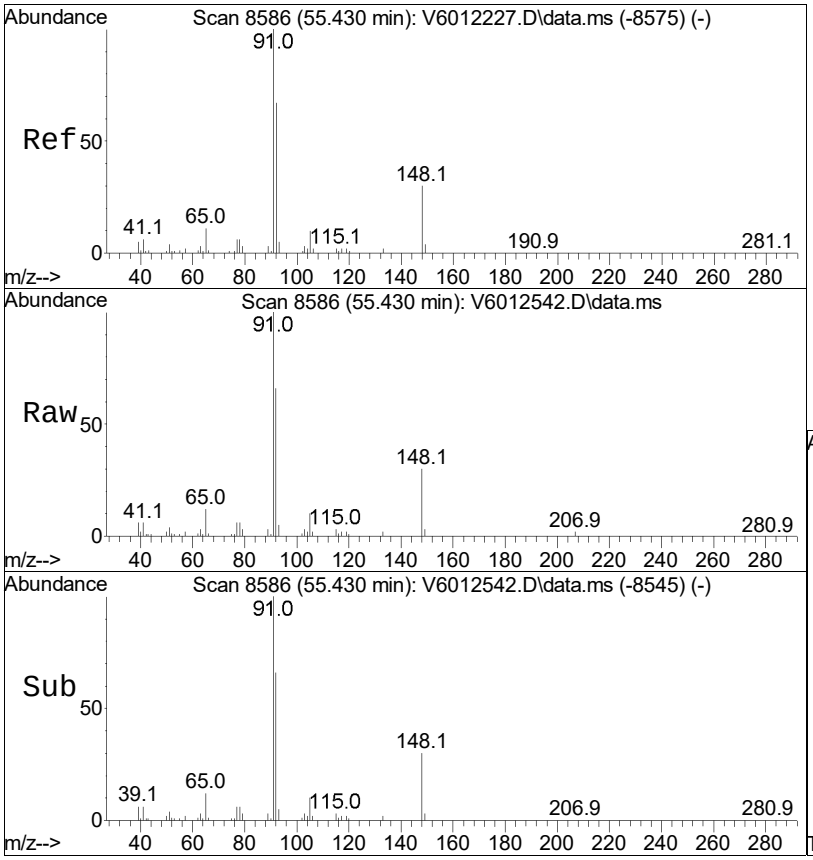


#134
1,3-Dimethyl-5-ethylbenzene
Concen: 19.13 ug/L
RT: 53.88 min Scan# 8331
Delta R.T. -0.000 min
Lab File: V6012542.D
Acq: 22 Sep 2020 11:08 am

Tgt Ion:119 Resp: 182054

Ion	Ratio	Lower	Upper
119	100		
134	30.1	11.3	51.3

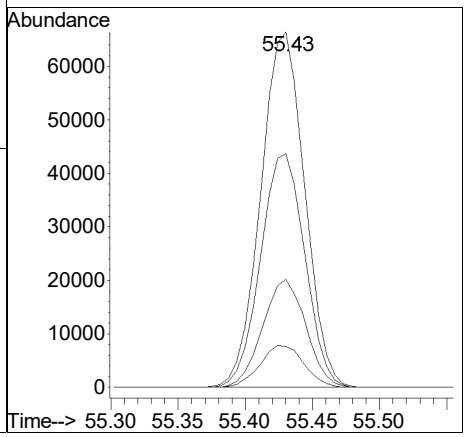


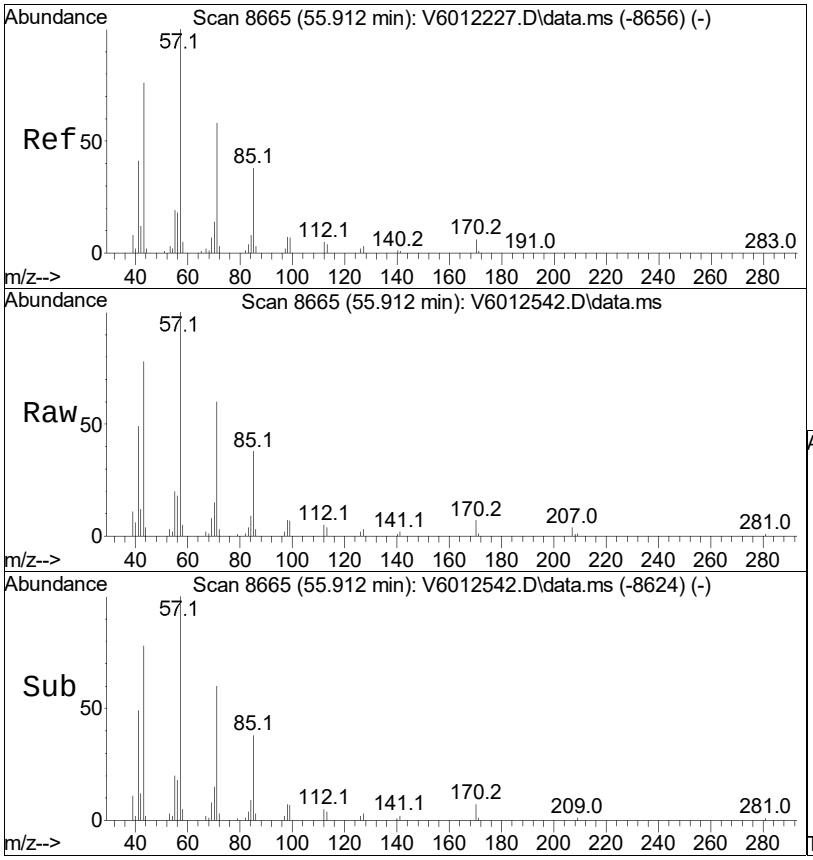


#139
Pentylbenzene
Concen: 19.39 ug/L
RT: 55.43 min Scan# 8586
Delta R.T. -0.000 min
Lab File: V6012542.D
Acq: 22 Sep 2020 11:08 am

Tgt Ion: 91 Resp: 151044

Ion	Ratio	Lower	Upper
91	100		
92	65.8	47.0	87.0
65	11.5	0.0	31.1
148	30.5	10.2	50.2

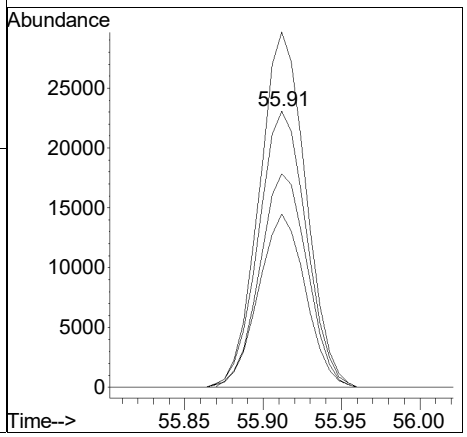




#142
Dodecane
Concen: 24.21 ug/L
RT: 55.91 min Scan# 8665
Delta R.T. -0.000 min
Lab File: V6012542.D
Acq: 22 Sep 2020 11:08 am

Tgt Ion: 43 Resp: 49159

Ion	Ratio	Lower	Upper
43	100		
57	128.7	111.5	151.5
71	77.4	55.7	95.7
41	62.8	34.0	74.0



Alpha Report

Certification Information

The following analytes are not included in our Primary NELAP Scope of Accreditation:

Westborough Facility
EPA 624/624.1: m/p-xylene, o-xylene, Naphthalene
EPA 8260C: NPW: 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene, Azobenzene; SCM: Iodomethane (methyl iodide), 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene.
EPA 8270D: NPW: Dimethylnaphthalene,1,4-Diphenylhydrazine; SCM: Dimethylnaphthalene,1,4-Diphenylhydrazine.
SM4500: NPW: Amenable Cyanide; SCM: Total Phosphorus, TKN, NO2, NO3.

Mansfield Facility
SM 2540D: TSS
EPA 8082A: NPW: PCB: 1, 5, 31, 87,101, 110, 141, 151, 153, 180, 183, 187.
EPA TO-15: Halothane, 2,4,4-Trimethyl-2-pentene, 2,4,4-Trimethyl-1-pentene, Thiophene, 2-Methylthiophene, 3-Methylthiophene, 2-Ethylthiophene, 1,2,3-Trimethylbenzene, Indan, Indene, 1,2,4,5-Tetramethylbenzene, Benzothiophene, 1-Methylnaphthalene.
EPA TO-12 Non-methane organics
EPA 3C Fixed gases
Biological Tissue Matrix: EPA 3050B

The following analytes are included in our Massachusetts DEP Scope of Accreditation

Westborough Facility:

Drinking Water
EPA 300.0: Chloride, Nitrate-N, Fluoride, Sulfate; **EPA 353.2**: Nitrate-N, Nitrite-N; **SM4500NO3-F**: Nitrate-N, Nitrite-N; **SM4500F-C, SM4500CN-CE, EPA 180.1, SM2130B, SM4500Cl-D, SM2320B, SM2540C, SM4500H-B, SM4500NO2-B**
EPA 332: Perchlorate; **EPA 524.2:** THMs and VOCs; **EPA 504.1:** EDB, DBCP.
Microbiology: **SM9215B; SM9223-P/A, SM9223B-Colilert-QT,SM9222D**.

Non-Potable Water
SM4500H,B, EPA 120.1, SM2510B, SM2540C, SM2320B, SM4500CL-E, SM4500F-BC, SM4500NH3-BH: Ammonia-N and Kjeldahl-N, **EPA 350.1**: Ammonia-N, **LACHAT 10-107-06-1-B**: Ammonia-N, **EPA 351.1, SM4500NO3-F, EPA 353.2**: Nitrate-N**, SM4500P-E, SM4500P-B, E, SM4500SO4-E, SM5220D, EPA 410.4, SM5210B, SM5310C, SM4500CL-D, EPA 1664, EPA 420.1, SM4500-CN-CE, SM2540D, EPA 300: Chloride, Sulfate, Nitrate.**
EPA 624.1: Volatile Halocarbons & Aromatics,
EPA 608.3: Chlordane, Toxaphene, Aldrin, alpha-BHC, beta-BHC, gamma-BHC, delta-BHC, Dieldrin, DDD, DDE, DDT, Endosulfan I, Endosulfan II, Endosulfan sulfate, Endrin, Endrin Aldehyde, Heptachlor, Heptachlor Epoxide, PCBs
EPA 625.1: SVOC (Acid/Base/Neutral Extractables), **EPA 600/4-81-045**: PCB-Oil.
Microbiology: **SM9223B-Colilert-QT; Enterolert-QT, SM9221E, EPA 1600, EPA 1603.**

Mansfield Facility:

Drinking Water
EPA 200.7: Al, Ba, Cd, Cr, Cu, Fe, Mn, Ni, Na, Ag, Ca, Zn. **EPA 200.8:** Al, Sb, As, Ba, Be, Cd, Cr, Cu, Pb, Mn, Ni, Se, Ag, TL, Zn. **EPA 245.1** Hg.
EPA 522.

Non-Potable Water
EPA 200.7: Al, Sb, As, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Mo, Ni, K, Se, Ag, Na, Sr, TL, Ti, V, Zn.
EPA 200.8: Al, Sb**,** As, Be, Cd, Cr, Cu, Fe, Pb, Mn, Ni, K, Se, Ag, Na, TL, Zn.
EPA 245.1 Hg.
SM2340B

For a complete listing of analytes and methods, please contact your Alpha Project Manager.

CHAIN OF CUSTODY

PAGE | OF |

ALPHA ANALYTICAL — World Class Chemistry

Westborough, MA TEL: 508-898-9220 FAX: 508-898-9193
Mansfield, MA TEL: 508-822-9300 FAX: 508-822-3288

Date Rec'd in Lab: 9/11/20

ALPHA Job #: L2037309

Client Information

Client: AECOM
Address: 250 Apollo Drive
Chelmsford, MA 01824
Phone: 978-905-2100
Fax: 978-905-2101
Email: lori.herberich@aecom.com;

☐ These samples have been Previously analyzed by Alpha

Project Information

Project Name: Lockheed Martin
Project Location: Wilmington MA
Project #: 60552044.19
Project Manager: scott.olson@aecom.com
ALPHA Quote #: May 20 Email J.Occhialini

Turn-Around Time

☒ Standard ☐ Rush (ONLY IF PRE-APPROVED)

Due Date: Time:

Report Information — Data Deliverables

☐ FAX ☐ EMAIL
☐ ADEx ☐ Add'l Deliverables

Billing Information

☐ Same as Client info PO # 127683

Regulatory Requirements/Report Limits

State/Fed Program: MassDEP: MCP CAM
Criteria: GW - 1, -2, -3

MCP PRESUMPTIVE CERTAINTY-CT REASONABLE CONFIDENCE PROTOCOLS

☒ Yes ☐ No Are MCP Analytical Methods Required?
☐ Yes ☐ No Are CT RCP (Reasonable Confidence Protocols) Required?

Other Project Specific Requirements/Comments/Detection Limits:
AECOM Contacts = Lori Herberich (Chemist) and Scott Olson (PM)

ANALYSIS

SAMPLE HANDLING
Filtration
☐ Done
☐ Not Needed
☐ Lab to do
Preservation
☐ Lab to do
(Please specify below)

Sample Specific Comments

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date	Collection Time	Sample Matrix	Sampler's Initials	PIANO	TOTAL # BOTTLES
37809-01	AE-20A-AE101RR6-090120-1	9/9/20	1245	GW	AG	☒	3
-02	20A-AE103R1-091020-1	9/10/20	1300	GW	SH	☒	3
-03	20A-AE104R4-091120-1	9/11/20	1230	GW	FB	☒	3

Container Type
Preservative

PLEASE ANSWER QUESTIONS ABOVE!

IS YOUR PROJECT MA MCP or CT RCP?

Relinquished By	Date/Time	Received By	Date/Time
Paul Davis	9/11/20		
Paul Davis	9/11/20 1535	DSV DAA	9/11/20 15:45
William Moore	9/11/20 2103	DSV	9/11/20 1537
	9/11/20 2103	RICC - AAC	9/11/20 2103

Please print clearly, legibly and completely. Samples can not be logged in and turnaround time clock will not start until any ambiguities are resolved. All samples submitted are subject to Alpha's Payment Terms.

Alpha
Summary Forms

Organic Summary Forms

Results Summary
Form 1
PIANO Volatile Organics by GC/MS

Client	: AECOM	**Lab Number**	: L2037809
Project Name	: LOCKHEED MARTIN	**Project Number**	: 60552044.19
Lab ID	: L2037809-01	**Date Collected**	: 09/09/20 12:45
Client ID	: 20A-AE102RR6-090920-1	**Date Received**	: 09/11/20
Sample Location	: WILMINGTON, MA	**Date Analyzed**	: 09/22/20 19:40
Sample Matrix	: WATER	**Dilution Factor**	: 1
Analytical Method	: 1,8260B	**Analyst**	: RY
Lab File ID	: V6012546	**Instrument ID**	: VOA6
Sample Amount	: 5 ml	**GC Column**	: DB-VRX
Level	: LOW	**%Solids**	: N/A
Extract Volume (MeOH)	: N/A	**Injection Volume**	: N/A

		ug/L			
CAS NO.	**Parameter**	**Results**	**RL**	**MDL**	**Qualifier**
563-45-1	3-Methyl-1-butene	ND	2.00	0.297	U
78-78-4	Isopentane	ND	2.00	0.366	U
109-67-1	1-Pentene	ND	2.00	0.365	U
563-46-2	2-Methyl-1-Butene	ND	2.00	0.311	U
109-66-0	Pentane	ND	2.00	0.624	U
646-04-8	trans-2-Pentene	ND	2.00	0.270	U
78-79-5	Isoprene	ND	2.00	0.357	U
627-20-3	cis-2-Pentene	ND	2.00	0.322	U
75-65-0	Tertiary Butanol	ND	25.0	3.24	U
75-83-2	2,2-Dimethylbutane	ND	2.00	0.617	U
691-37-2	4-Methyl-1-pentene	ND	2.00	0.311	U
287-92-3	Cyclopentane	ND	2.00	0.519	U
79-29-8	2,3-Dimethylbutane	ND	2.00	0.826	U
107-83-5	2-Methylpentane	ND	2.00	0.542	U
1634-04-4	Methyl tert butyl ether	ND	2.00	0.412	U
96-14-0	3-Methylpentane	ND	2.00	0.317	U
592-41-6	1-Hexene	ND	2.00	0.281	U
110-54-3	n-Hexane	ND	2.00	0.329	U
108-20-3	Isopropyl Ether	ND	2.00	0.242	U
4050-45-7	trans-2-Hexene	ND	2.00	0.261	U
625-27-4	2-Methyl-2-pentene	ND	2.00	0.306	U
7688-21-3	cis-2-Hexene	ND	2.00	0.271	U
637-92-3	Ethyl-Tert-Butyl-Ether	ND	2.00	0.303	U
590-35-2	2,2-Dimethylpentane	ND	2.00	0.269	U
96-37-7	Methylcyclopentane	ND	2.00	0.268	U

Results Summary
Form 1
PIANO Volatile Organics by GC/MS

Client	: AECOM	**Lab Number**	: L2037809
Project Name	: LOCKHEED MARTIN	**Project Number**	: 60552044.19
Lab ID	: L2037809-01	**Date Collected**	: 09/09/20 12:45
Client ID	: 20A-AE102RR6-090920-1	**Date Received**	: 09/11/20
Sample Location	: WILMINGTON, MA	**Date Analyzed**	: 09/22/20 19:40
Sample Matrix	: WATER	**Dilution Factor**	: 1
Analytical Method	: 1,8260B	**Analyst**	: RY
Lab File ID	: V6012546	**Instrument ID**	: VOA6
Sample Amount	: 5 ml	**GC Column**	: DB-VRX
Level	: LOW	**%Solids**	: N/A
Extract Volume (MeOH)	: N/A	**Injection Volume**	: N/A

		ug/L			
CAS NO.	**Parameter**	**Results**	**RL**	**MDL**	**Qualifier**
108-08-7	2,4-Dimethylpentane	ND	2.00	0.247	U
464-06-2	2,2,3-Trimethylbutane	ND	2.00	0.270	U
107-06-2	1,2-Dichloroethane	ND	2.00	0.295	U
562-49-2	3,3-Dimethylpentane	ND	2.00	0.372	U
110-82-7	Cyclohexane	ND	2.00	0.247	U
591-76-4	2-Methylhexane	ND	2.00	0.315	U
71-43-2	Benzene	ND	2.00	0.305	U
565-59-3	2,3-Dimethylpentane	ND	2.00	0.265	U
110-02-1	Thiophene	ND	2.00	0.284	U
1638-26-2	1,1-Dimethylcyclopentane	ND	2.00	0.240	U
589-34-4	3-Methylhexane	ND	2.00	0.320	U
994-05-8	Tertiary-Amyl Methyl Ether	ND	2.00	0.246	U
2532-58-3	1,3-Dimethylcyclopentane (cis)	ND	2.00	0.301	U
617-78-7	3-Ethylpentane	ND	2.00	0.289	U
1759-58-6/6094-02-6	1,3-DMCP (trans)/2-Methyl-1-hexene	ND	4.00	0.702	U
592-76-7/822-50-4	1-Heptene/1,2-DMCP (trans)	ND	4.00	0.585	U
540-84-1	Isooctane	ND	2.00	0.218	U
14686-14-7	trans-3-Heptene	ND	2.00	0.311	U
142-82-5	Heptane	ND	2.00	0.348	U
14686-13-6	trans-2-Heptene	ND	2.00	0.256	U
6443-92-1	cis-2-Heptene	ND	2.00	0.387	U
590-73-8	2,2-Dimethylhexane	ND	2.00	0.290	U
108-87-2	Methylcyclohexane	ND	2.00	0.270	U
592-13-2	2,5-Dimethylhexane	ND	2.00	0.348	U
589-43-5	2,4-Dimethylhexane	ND	2.00	0.243	U

Results Summary
Form 1
PIANO Volatile Organics by GC/MS

Client	: AECOM	**Lab Number**	: L2037809
Project Name	: LOCKHEED MARTIN	**Project Number**	: 60552044.19
Lab ID	: L2037809-01	**Date Collected**	: 09/09/20 12:45
Client ID	: 20A-AE102RR6-090920-1	**Date Received**	: 09/11/20
Sample Location	: WILMINGTON, MA	**Date Analyzed**	: 09/22/20 19:40
Sample Matrix	: WATER	**Dilution Factor**	: 1
Analytical Method	: 1,8260B	**Analyst**	: RY
Lab File ID	: V6012546	**Instrument ID**	: VOA6
Sample Amount	: 5 ml	**GC Column**	: DB-VRX
Level	: LOW	**%Solids**	: N/A
Extract Volume (MeOH)	: N/A	**Injection Volume**	: N/A

		ug/L			
CAS NO.	**Parameter**	**Results**	**RL**	**MDL**	**Qualifier**
1640-89-7	Ethylcyclopentane	ND	2.00	0.265	U
564-02-3	2,2,3-Trimethylpentane	ND	2.00	0.347	U
565-75-3	2,3,4-Trimethylpentane	ND	2.00	0.261	U
1330-20-7	Xylene (Total)	ND	2.00	0.209	U
560-21-4	2,3,3-Trimethylpentane	ND	2.00	0.397	U
584-94-1	2,3-Dimethylhexane	ND	2.00	0.485	U
592-27-8	2-Methylheptane	ND	2.00	0.338	U
589-53-7	4-Methylheptane	ND	2.00	0.344	U
589-81-1	3-Methylheptane	ND	2.00	0.385	U
619-99-8	3-Ethylhexane	ND	2.00	0.358	U
108-88-3	Toluene	ND	2.00	0.271	U
554-14-3	2-Methylthiophene	ND	2.00	0.170	U
2207-04-7	1,4-Dimethylcyclohexane (trans)	ND	2.00	0.260	U
616-44-4	3-Methylthiophene	ND	2.00	0.234	U
111-66-0	1-Octene	ND	5.00	0.307	U
111-65-9	Octane	ND	2.00	0.235	U
6876-23-9	1,2-Dimethylcyclohexane (trans)	ND	2.00	0.294	U
106-93-4	1,2-Dibromoethane	ND	2.00	0.320	U
7642-04-8	cis-2-Octene	ND	2.00	0.229	U
3875-51-2	Isopropylcyclopentane	ND	2.00	0.293	U
2207-01-4	1,2-Dimethylcyclohexane (cis)	ND	2.00	0.581	U
2216-30-0	2,5-Dimethylheptane	ND	2.00	0.335	U
926-82-9	3,5-Dimethylheptane	ND	2.00	0.282	U
4032-86-4	3,3-Dimethylheptane	ND	2.00	0.242	U
7094-27-1	1,1,4-Trimethylcyclohexane	ND	2.00	0.199	U

Results Summary
Form 1
PIANO Volatile Organics by GC/MS

Client	: AECOM	**Lab Number**	: L2037809
Project Name	: LOCKHEED MARTIN	**Project Number**	: 60552044.19
Lab ID	: L2037809-01	**Date Collected**	: 09/09/20 12:45
Client ID	: 20A-AE102RR6-090920-1	**Date Received**	: 09/11/20
Sample Location	: WILMINGTON, MA	**Date Analyzed**	: 09/22/20 19:40
Sample Matrix	: WATER	**Dilution Factor**	: 1
Analytical Method	: 1,8260B	**Analyst**	: RY
Lab File ID	: V6012546	**Instrument ID**	: VOA6
Sample Amount	: 5 ml	**GC Column**	: DB-VRX
Level	: LOW	**%Solids**	: N/A
Extract Volume (MeOH)	: N/A	**Injection Volume**	: N/A

		ug/L			
CAS NO.	**Parameter**	**Results**	**RL**	**MDL**	**Qualifier**
3074-71-3	2,3-Dimethylheptane	ND	2.00	0.228	U
922-28-1	3,4-Dimethylheptane	ND	2.00	0.340	U
2216-34-4	4-Methyloctane	ND	2.00	0.334	U
3221-61-2	2-Methyloctane	ND	2.00	0.512	U
100-41-4	Ethylbenzene	ND	2.00	0.216	U
872-55-9	2-Ethylthiophene	ND	2.00	0.176	U
2216-33-3	3-Methyloctane	ND	2.00	0.224	U
1067-20-5	3,3-Diethylpentane	ND	2.00	0.233	U
179601-23-1	p/m-Xylene	ND	4.00	0.381	U
124-11-8	1-Nonene	ND	5.00	0.270	U
20063-92-7	trans-3-Nonene	ND	2.00	0.237	U
20237-46-1	cis-3-Nonene	ND	2.00	0.374	U
111-84-2	Nonane (C9)	ND	2.00	0.311	U
100-42-5	Styrene	ND	2.00	0.202	U
95-47-6	o-Xylene	ND	2.00	0.209	U
6434-77-1	2-Nonene	ND	5.00	0.254	U
696-29-7	Isopropylcyclohexane	ND	2.00	0.212	U
98-82-8	Isopropylbenzene	ND	2.00	0.187	U
4110-44-5	3,3-Dimethyloctane	ND	2.00	0.202	U
103-65-1	n-Propylbenzene	ND	2.00	0.177	U
871-83-0	2-Methylnonane	ND	2.00	0.283	U
5911-04-6	3-Methylnonane	ND	2.00	0.279	U
620-14-4	1-Methyl-3-Ethylbenzene	ND	2.00	0.316	U
622-96-8	1-Methyl-4-Ethylbenzene	ND	2.00	0.282	U
108-67-8	1,3,5-Trimethylbenzene	ND	2.00	0.230	U

Results Summary
Form 1
PIANO Volatile Organics by GC/MS

Client	: AECOM	**Lab Number**	: L2037809
Project Name	: LOCKHEED MARTIN	**Project Number**	: 60552044.19
Lab ID	: L2037809-01	**Date Collected**	: 09/09/20 12:45
Client ID	: 20A-AE102RR6-090920-1	**Date Received**	: 09/11/20
Sample Location	: WILMINGTON, MA	**Date Analyzed**	: 09/22/20 19:40
Sample Matrix	: WATER	**Dilution Factor**	: 1
Analytical Method	: 1,8260B	**Analyst**	: RY
Lab File ID	: V6012546	**Instrument ID**	: VOA6
Sample Amount	: 5 ml	**GC Column**	: DB-VRX
Level	: LOW	**%Solids**	: N/A
Extract Volume (MeOH)	: N/A	**Injection Volume**	: N/A

		ug/L			
CAS NO.	**Parameter**	**Results**	**RL**	**MDL**	**Qualifier**
872-05-9	1-Decene	ND	2.00	0.260	U
1678-98-4	Isobutylcyclohexane	ND	2.00	0.163	U
611-14-3	1-Methyl-2-Ethylbenzene	ND	2.00	0.170	U
124-18-5	Decane (C10)	ND	2.00	0.271	U
98-06-6	tert-Butylbenzene	ND	2.00	0.211	U
95-63-6	1,2,4-Trimethylbenzene	ND	2.00	0.207	U
538-93-2	Isobutylbenzene	ND	2.00	0.270	U
135-98-8	sec-Butylbenzene	ND	2.00	0.259	U
535-77-3	1-Methyl-3-Isopropylbenzene	ND	2.00	0.258	U
99-87-6	1-Methyl-4-Isopropylbenzene	ND	2.00	0.212	U
526-73-8	1,2,3-Trimethylbenzene	ND	2.00	0.223	U
527-84-4	1-Methyl-2-Isopropylbenzene	ND	2.00	0.217	U
496-11-7	Indane	ND	2.00	0.123	U
141-93-5	1,3-Diethylbenzene	ND	2.00	0.249	U
1074-43-7	1-Methyl-3-N-Propylbenzene	ND	2.00	0.202	U
95-13-6	Indene	ND	2.00	0.116	U
1074-55-1	1-Methyl-4-N-Propylbenzene	ND	2.00	0.250	U
104-51-8	n-Butylbenzene	ND	2.00	0.197	U
934-80-5	1,2-Dimethyl-4-Ethylbenzene	ND	2.00	0.245	U
135-01-3	1,2-Diethylbenzene	ND	2.00	0.296	U
1074-17-5	1-Methyl-2-N-Propylbenzene	ND	2.00	0.249	U
1758-88-9	1,4-Dimethyl-2-Ethylbenzene	ND	2.00	0.187	U
1120-21-4	Undecane	ND	2.00	0.222	U
874-41-9	1,3-Dimethyl-4-Ethylbenzene	ND	2.00	0.194	U
934-74-7	1,3-Dimethyl-5-Ethylbenzene	ND	2.00	0.236	U

Results Summary
Form 1
PIANO Volatile Organics by GC/MS

Client	: AECOM	**Lab Number**	: L2037809
Project Name	: LOCKHEED MARTIN	**Project Number**	: 60552044.19
Lab ID	: L2037809-01	**Date Collected**	: 09/09/20 12:45
Client ID	: 20A-AE102RR6-090920-1	**Date Received**	: 09/11/20
Sample Location	: WILMINGTON, MA	**Date Analyzed**	: 09/22/20 19:40
Sample Matrix	: WATER	**Dilution Factor**	: 1
Analytical Method	: 1,8260B	**Analyst**	: RY
Lab File ID	: V6012546	**Instrument ID**	: VOA6
Sample Amount	: 5 ml	**GC Column**	: DB-VRX
Level	: LOW	**%Solids**	: N/A
Extract Volume (MeOH)	: N/A	**Injection Volume**	: N/A

		ug/L			
CAS NO.	**Parameter**	**Results**	**RL**	**MDL**	**Qualifier**
2870-04-4	1,3-Dimethyl-2-Ethylbenzene	ND	2.00	0.149	U
933-98-2	1,2-Dimethyl-3-Ethylbenzene	ND	2.00	0.127	U
95-93-2	1,2,4,5-Tetramethylbenzene	ND	2.00	0.155	U
527-53-7	1,2,3,5-Tetramethylbenzene	ND	2.00	0.152	U
538-68-1	N-Pentylbenzene	ND	2.00	0.249	U
488-23-3	1,2,3,4-Tetramethylbenzene	ND	2.00	0.214	U
98-19-1	1,3-Dimethyl-5-tert-Butylbenzene	ND	2.00	0.285	U
112-40-3	Dodecane (C12)	ND	5.00	0.657	U
102-25-0	1,3,5-Triethylbenzene	ND	2.00	0.380	U
91-20-3	Naphthalene	ND	2.00	0.835	U
95-15-8	Benzothiophene	ND	2.00	1.06	U
877-44-1	1,2,4-Triethylbenzene	ND	2.00	0.340	U
1077-16-3	Hexylbenzene	ND	2.00	0.385	U
12108-13-3	MMT	ND	5.00	1.29	U
629-50-5	Tridecane	ND	5.00	1.39	U
91-57-6	2-Methylnaphthalene	ND	5.00	1.32	U
90-12-0	1-Methylnaphthalene	ND	5.00	1.47	U
629-59-4	Tetradecane (C14)	ND	5.00	0.612	U
629-62-9	Pentadecane	ND	5.00	1.12	U

Results Summary
Form 1
PIANO Volatile Organics by GC/MS

Client	: AECOM	**Lab Number**	: L2037809
Project Name	: LOCKHEED MARTIN	**Project Number**	: 60552044.19
Lab ID	: L2037809-02	**Date Collected**	: 09/10/20 13:00
Client ID	: 20A-AE103R1-091020-1	**Date Received**	: 09/11/20
Sample Location	: WILMINGTON, MA	**Date Analyzed**	: 09/22/20 20:51
Sample Matrix	: WATER	**Dilution Factor**	: 1
Analytical Method	: 1,8260B	**Analyst**	: RY
Lab File ID	: V6012547	**Instrument ID**	: VOA6
Sample Amount	: 5 ml	**GC Column**	: DB-VRX
Level	: LOW	**%Solids**	: N/A
Extract Volume (MeOH)	: N/A	**Injection Volume**	: N/A

		ug/L			
CAS NO.	**Parameter**	**Results**	**RL**	**MDL**	**Qualifier**
563-45-1	3-Methyl-1-butene	ND	2.00	0.297	U
78-78-4	Isopentane	ND	2.00	0.366	U
109-67-1	1-Pentene	ND	2.00	0.365	U
563-46-2	2-Methyl-1-Butene	ND	2.00	0.311	U
109-66-0	Pentane	ND	2.00	0.624	U
646-04-8	trans-2-Pentene	ND	2.00	0.270	U
78-79-5	Isoprene	ND	2.00	0.357	U
627-20-3	cis-2-Pentene	ND	2.00	0.322	U
75-65-0	Tertiary Butanol	ND	25.0	3.24	U
75-83-2	2,2-Dimethylbutane	ND	2.00	0.617	U
691-37-2	4-Methyl-1-pentene	ND	2.00	0.311	U
287-92-3	Cyclopentane	ND	2.00	0.519	U
79-29-8	2,3-Dimethylbutane	ND	2.00	0.826	U
107-83-5	2-Methylpentane	ND	2.00	0.542	U
1634-04-4	Methyl tert butyl ether	ND	2.00	0.412	U
96-14-0	3-Methylpentane	ND	2.00	0.317	U
592-41-6	1-Hexene	ND	2.00	0.281	U
110-54-3	n-Hexane	ND	2.00	0.329	U
108-20-3	Isopropyl Ether	ND	2.00	0.242	U
4050-45-7	trans-2-Hexene	ND	2.00	0.261	U
625-27-4	2-Methyl-2-pentene	ND	2.00	0.306	U
7688-21-3	cis-2-Hexene	ND	2.00	0.271	U
637-92-3	Ethyl-Tert-Butyl-Ether	ND	2.00	0.303	U
590-35-2	2,2-Dimethylpentane	ND	2.00	0.269	U
96-37-7	Methylcyclopentane	ND	2.00	0.268	U

Results Summary
Form 1
PIANO Volatile Organics by GC/MS

Client	: AECOM	**Lab Number**	: L2037809
Project Name	: LOCKHEED MARTIN	**Project Number**	: 60552044.19
Lab ID	: L2037809-02	**Date Collected**	: 09/10/20 13:00
Client ID	: 20A-AE103R1-091020-1	**Date Received**	: 09/11/20
Sample Location	: WILMINGTON, MA	**Date Analyzed**	: 09/22/20 20:51
Sample Matrix	: WATER	**Dilution Factor**	: 1
Analytical Method	: 1,8260B	**Analyst**	: RY
Lab File ID	: V6012547	**Instrument ID**	: VOA6
Sample Amount	: 5 ml	**GC Column**	: DB-VRX
Level	: LOW	**%Solids**	: N/A
Extract Volume (MeOH)	: N/A	**Injection Volume**	: N/A

		ug/L			
CAS NO.	**Parameter**	**Results**	**RL**	**MDL**	**Qualifier**
108-08-7	2,4-Dimethylpentane	ND	2.00	0.247	U
464-06-2	2,2,3-Trimethylbutane	ND	2.00	0.270	U
107-06-2	1,2-Dichloroethane	ND	2.00	0.295	U
562-49-2	3,3-Dimethylpentane	ND	2.00	0.372	U
110-82-7	Cyclohexane	ND	2.00	0.247	U
591-76-4	2-Methylhexane	ND	2.00	0.315	U
71-43-2	Benzene	ND	2.00	0.305	U
565-59-3	2,3-Dimethylpentane	ND	2.00	0.265	U
110-02-1	Thiophene	ND	2.00	0.284	U
1638-26-2	1,1-Dimethylcyclopentane	ND	2.00	0.240	U
589-34-4	3-Methylhexane	ND	2.00	0.320	U
994-05-8	Tertiary-Amyl Methyl Ether	ND	2.00	0.246	U
2532-58-3	1,3-Dimethylcyclopentane (cis)	ND	2.00	0.301	U
617-78-7	3-Ethylpentane	ND	2.00	0.289	U
1759-58-6/6094-02-6	1,3-DMCP (trans)/2-Methyl-1-hexene	ND	4.00	0.702	U
592-76-7/822-50-4	1-Heptene/1,2-DMCP (trans)	ND	4.00	0.585	U
540-84-1	Isooctane	ND	2.00	0.218	U
14686-14-7	trans-3-Heptene	ND	2.00	0.311	U
142-82-5	Heptane	ND	2.00	0.348	U
14686-13-6	trans-2-Heptene	ND	2.00	0.256	U
6443-92-1	cis-2-Heptene	ND	2.00	0.387	U
590-73-8	2,2-Dimethylhexane	ND	2.00	0.290	U
108-87-2	Methylcyclohexane	ND	2.00	0.270	U
592-13-2	2,5-Dimethylhexane	ND	2.00	0.348	U
589-43-5	2,4-Dimethylhexane	ND	2.00	0.243	U

Results Summary
Form 1
PIANO Volatile Organics by GC/MS

Client	: AECOM	**Lab Number**	: L2037809
Project Name	: LOCKHEED MARTIN	**Project Number**	: 60552044.19
Lab ID	: L2037809-02	**Date Collected**	: 09/10/20 13:00
Client ID	: 20A-AE103R1-091020-1	**Date Received**	: 09/11/20
Sample Location	: WILMINGTON, MA	**Date Analyzed**	: 09/22/20 20:51
Sample Matrix	: WATER	**Dilution Factor**	: 1
Analytical Method	: 1,8260B	**Analyst**	: RY
Lab File ID	: V6012547	**Instrument ID**	: VOA6
Sample Amount	: 5 ml	**GC Column**	: DB-VRX
Level	: LOW	**%Solids**	: N/A
Extract Volume (MeOH)	: N/A	**Injection Volume**	: N/A

		ug/L			
CAS NO.	**Parameter**	**Results**	**RL**	**MDL**	**Qualifier**
1640-89-7	Ethylcyclopentane	ND	2.00	0.265	U
564-02-3	2,2,3-Trimethylpentane	ND	2.00	0.347	U
565-75-3	2,3,4-Trimethylpentane	ND	2.00	0.261	U
1330-20-7	Xylene (Total)	ND	2.00	0.209	U
560-21-4	2,3,3-Trimethylpentane	ND	2.00	0.397	U
584-94-1	2,3-Dimethylhexane	ND	2.00	0.485	U
592-27-8	2-Methylheptane	ND	2.00	0.338	U
589-53-7	4-Methylheptane	ND	2.00	0.344	U
589-81-1	3-Methylheptane	ND	2.00	0.385	U
619-99-8	3-Ethylhexane	ND	2.00	0.358	U
108-88-3	Toluene	ND	2.00	0.271	U
554-14-3	2-Methylthiophene	ND	2.00	0.170	U
2207-04-7	1,4-Dimethylcyclohexane (trans)	ND	2.00	0.260	U
616-44-4	3-Methylthiophene	ND	2.00	0.234	U
111-66-0	1-Octene	ND	5.00	0.307	U
111-65-9	Octane	ND	2.00	0.235	U
6876-23-9	1,2-Dimethylcyclohexane (trans)	ND	2.00	0.294	U
106-93-4	1,2-Dibromoethane	ND	2.00	0.320	U
7642-04-8	cis-2-Octene	ND	2.00	0.229	U
3875-51-2	Isopropylcyclopentane	ND	2.00	0.293	U
2207-01-4	1,2-Dimethylcyclohexane (cis)	ND	2.00	0.581	U
2216-30-0	2,5-Dimethylheptane	ND	2.00	0.335	U
926-82-9	3,5-Dimethylheptane	ND	2.00	0.282	U
4032-86-4	3,3-Dimethylheptane	ND	2.00	0.242	U
7094-27-1	1,1,4-Trimethylcyclohexane	ND	2.00	0.199	U

Results Summary
Form 1
PIANO Volatile Organics by GC/MS

Client	: AECOM	**Lab Number**	: L2037809
Project Name	: LOCKHEED MARTIN	**Project Number**	: 60552044.19
Lab ID	: L2037809-02	**Date Collected**	: 09/10/20 13:00
Client ID	: 20A-AE103R1-091020-1	**Date Received**	: 09/11/20
Sample Location	: WILMINGTON, MA	**Date Analyzed**	: 09/22/20 20:51
Sample Matrix	: WATER	**Dilution Factor**	: 1
Analytical Method	: 1,8260B	**Analyst**	: RY
Lab File ID	: V6012547	**Instrument ID**	: VOA6
Sample Amount	: 5 ml	**GC Column**	: DB-VRX
Level	: LOW	**%Solids**	: N/A
Extract Volume (MeOH)	: N/A	**Injection Volume**	: N/A

		ug/L			
CAS NO.	**Parameter**	**Results**	**RL**	**MDL**	**Qualifier**
3074-71-3	2,3-Dimethylheptane	ND	2.00	0.228	U
922-28-1	3,4-Dimethylheptane	ND	2.00	0.340	U
2216-34-4	4-Methyloctane	ND	2.00	0.334	U
3221-61-2	2-Methyloctane	ND	2.00	0.512	U
100-41-4	Ethylbenzene	ND	2.00	0.216	U
872-55-9	2-Ethylthiophene	ND	2.00	0.176	U
2216-33-3	3-Methyloctane	ND	2.00	0.224	U
1067-20-5	3,3-Diethylpentane	ND	2.00	0.233	U
179601-23-1	p/m-Xylene	ND	4.00	0.381	U
124-11-8	1-Nonene	ND	5.00	0.270	U
20063-92-7	trans-3-Nonene	ND	2.00	0.237	U
20237-46-1	cis-3-Nonene	ND	2.00	0.374	U
111-84-2	Nonane (C9)	ND	2.00	0.311	U
100-42-5	Styrene	ND	2.00	0.202	U
95-47-6	o-Xylene	ND	2.00	0.209	U
6434-77-1	2-Nonene	ND	5.00	0.254	U
696-29-7	Isopropylcyclohexane	ND	2.00	0.212	U
98-82-8	Isopropylbenzene	ND	2.00	0.187	U
4110-44-5	3,3-Dimethyloctane	ND	2.00	0.202	U
103-65-1	n-Propylbenzene	ND	2.00	0.177	U
871-83-0	2-Methylnonane	ND	2.00	0.283	U
5911-04-6	3-Methylnonane	ND	2.00	0.279	U
620-14-4	1-Methyl-3-Ethylbenzene	ND	2.00	0.316	U
622-96-8	1-Methyl-4-Ethylbenzene	ND	2.00	0.282	U
108-67-8	1,3,5-Trimethylbenzene	ND	2.00	0.230	U

Results Summary
Form 1
PIANO Volatile Organics by GC/MS

Client	: AECOM	**Lab Number**	: L2037809
Project Name	: LOCKHEED MARTIN	**Project Number**	: 60552044.19
Lab ID	: L2037809-02	**Date Collected**	: 09/10/20 13:00
Client ID	: 20A-AE103R1-091020-1	**Date Received**	: 09/11/20
Sample Location	: WILMINGTON, MA	**Date Analyzed**	: 09/22/20 20:51
Sample Matrix	: WATER	**Dilution Factor**	: 1
Analytical Method	: 1,8260B	**Analyst**	: RY
Lab File ID	: V6012547	**Instrument ID**	: VOA6
Sample Amount	: 5 ml	**GC Column**	: DB-VRX
Level	: LOW	**%Solids**	: N/A
Extract Volume (MeOH)	: N/A	**Injection Volume**	: N/A

		ug/L			
CAS NO.	**Parameter**	**Results**	**RL**	**MDL**	**Qualifier**
872-05-9	1-Decene	ND	2.00	0.260	U
1678-98-4	Isobutylcyclohexane	ND	2.00	0.163	U
611-14-3	1-Methyl-2-Ethylbenzene	ND	2.00	0.170	U
124-18-5	Decane (C10)	ND	2.00	0.271	U
98-06-6	tert-Butylbenzene	ND	2.00	0.211	U
95-63-6	1,2,4-Trimethylbenzene	ND	2.00	0.207	U
538-93-2	Isobutylbenzene	ND	2.00	0.270	U
135-98-8	sec-Butylbenzene	ND	2.00	0.259	U
535-77-3	1-Methyl-3-Isopropylbenzene	ND	2.00	0.258	U
99-87-6	1-Methyl-4-Isopropylbenzene	ND	2.00	0.212	U
526-73-8	1,2,3-Trimethylbenzene	ND	2.00	0.223	U
527-84-4	1-Methyl-2-Isopropylbenzene	ND	2.00	0.217	U
496-11-7	Indane	ND	2.00	0.123	U
141-93-5	1,3-Diethylbenzene	ND	2.00	0.249	U
1074-43-7	1-Methyl-3-N-Propylbenzene	ND	2.00	0.202	U
95-13-6	Indene	ND	2.00	0.116	U
1074-55-1	1-Methyl-4-N-Propylbenzene	ND	2.00	0.250	U
104-51-8	n-Butylbenzene	ND	2.00	0.197	U
934-80-5	1,2-Dimethyl-4-Ethylbenzene	ND	2.00	0.245	U
135-01-3	1,2-Diethylbenzene	ND	2.00	0.296	U
1074-17-5	1-Methyl-2-N-Propylbenzene	ND	2.00	0.249	U
1758-88-9	1,4-Dimethyl-2-Ethylbenzene	ND	2.00	0.187	U
1120-21-4	Undecane	ND	2.00	0.222	U
874-41-9	1,3-Dimethyl-4-Ethylbenzene	ND	2.00	0.194	U
934-74-7	1,3-Dimethyl-5-Ethylbenzene	ND	2.00	0.236	U

Results Summary
Form 1
PIANO Volatile Organics by GC/MS

Client	: AECOM	**Lab Number**	: L2037809
Project Name	: LOCKHEED MARTIN	**Project Number**	: 60552044.19
Lab ID	: L2037809-02	**Date Collected**	: 09/10/20 13:00
Client ID	: 20A-AE103R1-091020-1	**Date Received**	: 09/11/20
Sample Location	: WILMINGTON, MA	**Date Analyzed**	: 09/22/20 20:51
Sample Matrix	: WATER	**Dilution Factor**	: 1
Analytical Method	: 1,8260B	**Analyst**	: RY
Lab File ID	: V6012547	**Instrument ID**	: VOA6
Sample Amount	: 5 ml	**GC Column**	: DB-VRX
Level	: LOW	**%Solids**	: N/A
Extract Volume (MeOH)	: N/A	**Injection Volume**	: N/A

		ug/L			
CAS NO.	**Parameter**	**Results**	**RL**	**MDL**	**Qualifier**
2870-04-4	1,3-Dimethyl-2-Ethylbenzene	ND	2.00	0.149	U
933-98-2	1,2-Dimethyl-3-Ethylbenzene	ND	2.00	0.127	U
95-93-2	1,2,4,5-Tetramethylbenzene	ND	2.00	0.155	U
527-53-7	1,2,3,5-Tetramethylbenzene	ND	2.00	0.152	U
538-68-1	N-Pentylbenzene	ND	2.00	0.249	U
488-23-3	1,2,3,4-Tetramethylbenzene	ND	2.00	0.214	U
98-19-1	1,3-Dimethyl-5-tert-Butylbenzene	ND	2.00	0.285	U
112-40-3	Dodecane (C12)	ND	5.00	0.657	U
102-25-0	1,3,5-Triethylbenzene	ND	2.00	0.380	U
91-20-3	Naphthalene	ND	2.00	0.835	U
95-15-8	Benzothiophene	ND	2.00	1.06	U
877-44-1	1,2,4-Triethylbenzene	ND	2.00	0.340	U
1077-16-3	Hexylbenzene	ND	2.00	0.385	U
12108-13-3	MMT	ND	5.00	1.29	U
629-50-5	Tridecane	ND	5.00	1.39	U
91-57-6	2-Methylnaphthalene	ND	5.00	1.32	U
90-12-0	1-Methylnaphthalene	ND	5.00	1.47	U
629-59-4	Tetradecane (C14)	ND	5.00	0.612	U
629-62-9	Pentadecane	ND	5.00	1.12	U

Results Summary
Form 1
PIANO Volatile Organics by GC/MS

Client	: AECOM	**Lab Number**	: L2037809
Project Name	: LOCKHEED MARTIN	**Project Number**	: 60552044.19
Lab ID	: L2037809-03	**Date Collected**	: 09/11/20 12:30
Client ID	: 20A-AE104R4-091120-1	**Date Received**	: 09/11/20
Sample Location	: WILMINGTON, MA	**Date Analyzed**	: 09/22/20 22:02
Sample Matrix	: WATER	**Dilution Factor**	: 1
Analytical Method	: 1,8260B	**Analyst**	: RY
Lab File ID	: V6012548	**Instrument ID**	: VOA6
Sample Amount	: 5 ml	**GC Column**	: DB-VRX
Level	: LOW	**%Solids**	: N/A
Extract Volume (MeOH)	: N/A	**Injection Volume**	: N/A

		ug/L			
CAS NO.	**Parameter**	**Results**	**RL**	**MDL**	**Qualifier**
563-45-1	3-Methyl-1-butene	ND	2.00	0.297	U
78-78-4	Isopentane	ND	2.00	0.366	U
109-67-1	1-Pentene	ND	2.00	0.365	U
563-46-2	2-Methyl-1-Butene	ND	2.00	0.311	U
109-66-0	Pentane	ND	2.00	0.624	U
646-04-8	trans-2-Pentene	ND	2.00	0.270	U
78-79-5	Isoprene	ND	2.00	0.357	U
627-20-3	cis-2-Pentene	ND	2.00	0.322	U
75-65-0	Tertiary Butanol	ND	25.0	3.24	U
75-83-2	2,2-Dimethylbutane	ND	2.00	0.617	U
691-37-2	4-Methyl-1-pentene	ND	2.00	0.311	U
287-92-3	Cyclopentane	ND	2.00	0.519	U
79-29-8	2,3-Dimethylbutane	ND	2.00	0.826	U
107-83-5	2-Methylpentane	ND	2.00	0.542	U
1634-04-4	Methyl tert butyl ether	ND	2.00	0.412	U
96-14-0	3-Methylpentane	ND	2.00	0.317	U
592-41-6	1-Hexene	ND	2.00	0.281	U
110-54-3	n-Hexane	ND	2.00	0.329	U
108-20-3	Isopropyl Ether	ND	2.00	0.242	U
4050-45-7	trans-2-Hexene	ND	2.00	0.261	U
625-27-4	2-Methyl-2-pentene	ND	2.00	0.306	U
7688-21-3	cis-2-Hexene	ND	2.00	0.271	U
637-92-3	Ethyl-Tert-Butyl-Ether	ND	2.00	0.303	U
590-35-2	2,2-Dimethylpentane	ND	2.00	0.269	U
96-37-7	Methylcyclopentane	ND	2.00	0.268	U

Results Summary
Form 1
PIANO Volatile Organics by GC/MS

Client	: AECOM	**Lab Number**	: L2037809
Project Name	: LOCKHEED MARTIN	**Project Number**	: 60552044.19
Lab ID	: L2037809-03	**Date Collected**	: 09/11/20 12:30
Client ID	: 20A-AE104R4-091120-1	**Date Received**	: 09/11/20
Sample Location	: WILMINGTON, MA	**Date Analyzed**	: 09/22/20 22:02
Sample Matrix	: WATER	**Dilution Factor**	: 1
Analytical Method	: 1,8260B	**Analyst**	: RY
Lab File ID	: V6012548	**Instrument ID**	: VOA6
Sample Amount	: 5 ml	**GC Column**	: DB-VRX
Level	: LOW	**%Solids**	: N/A
Extract Volume (MeOH)	: N/A	**Injection Volume**	: N/A

		ug/L			
CAS NO.	**Parameter**	**Results**	**RL**	**MDL**	**Qualifier**
108-08-7	2,4-Dimethylpentane	ND	2.00	0.247	U
464-06-2	2,2,3-Trimethylbutane	ND	2.00	0.270	U
107-06-2	1,2-Dichloroethane	ND	2.00	0.295	U
562-49-2	3,3-Dimethylpentane	ND	2.00	0.372	U
110-82-7	Cyclohexane	ND	2.00	0.247	U
591-76-4	2-Methylhexane	ND	2.00	0.315	U
71-43-2	Benzene	ND	2.00	0.305	U
565-59-3	2,3-Dimethylpentane	ND	2.00	0.265	U
110-02-1	Thiophene	ND	2.00	0.284	U
1638-26-2	1,1-Dimethylcyclopentane	ND	2.00	0.240	U
589-34-4	3-Methylhexane	ND	2.00	0.320	U
994-05-8	Tertiary-Amyl Methyl Ether	ND	2.00	0.246	U
2532-58-3	1,3-Dimethylcyclopentane (cis)	ND	2.00	0.301	U
617-78-7	3-Ethylpentane	ND	2.00	0.289	U
1759-58-6/6094-02-6	1,3-DMCP (trans)/2-Methyl-1-hexene	ND	4.00	0.702	U
592-76-7/822-50-4	1-Heptene/1,2-DMCP (trans)	ND	4.00	0.585	U
540-84-1	Isooctane	ND	2.00	0.218	U
14686-14-7	trans-3-Heptene	ND	2.00	0.311	U
142-82-5	Heptane	ND	2.00	0.348	U
14686-13-6	trans-2-Heptene	ND	2.00	0.256	U
6443-92-1	cis-2-Heptene	ND	2.00	0.387	U
590-73-8	2,2-Dimethylhexane	ND	2.00	0.290	U
108-87-2	Methylcyclohexane	ND	2.00	0.270	U
592-13-2	2,5-Dimethylhexane	ND	2.00	0.348	U
589-43-5	2,4-Dimethylhexane	ND	2.00	0.243	U

Results Summary
Form 1
PIANO Volatile Organics by GC/MS

Client	: AECOM	**Lab Number**	: L2037809
Project Name	: LOCKHEED MARTIN	**Project Number**	: 60552044.19
Lab ID	: L2037809-03	**Date Collected**	: 09/11/20 12:30
Client ID	: 20A-AE104R4-091120-1	**Date Received**	: 09/11/20
Sample Location	: WILMINGTON, MA	**Date Analyzed**	: 09/22/20 22:02
Sample Matrix	: WATER	**Dilution Factor**	: 1
Analytical Method	: 1,8260B	**Analyst**	: RY
Lab File ID	: V6012548	**Instrument ID**	: VOA6
Sample Amount	: 5 ml	**GC Column**	: DB-VRX
Level	: LOW	**%Solids**	: N/A
Extract Volume (MeOH)	: N/A	**Injection Volume**	: N/A

		ug/L			
CAS NO.	**Parameter**	**Results**	**RL**	**MDL**	**Qualifier**
1640-89-7	Ethylcyclopentane	ND	2.00	0.265	U
564-02-3	2,2,3-Trimethylpentane	ND	2.00	0.347	U
565-75-3	2,3,4-Trimethylpentane	ND	2.00	0.261	U
1330-20-7	Xylene (Total)	ND	2.00	0.209	U
560-21-4	2,3,3-Trimethylpentane	ND	2.00	0.397	U
584-94-1	2,3-Dimethylhexane	ND	2.00	0.485	U
592-27-8	2-Methylheptane	ND	2.00	0.338	U
589-53-7	4-Methylheptane	ND	2.00	0.344	U
589-81-1	3-Methylheptane	ND	2.00	0.385	U
619-99-8	3-Ethylhexane	ND	2.00	0.358	U
108-88-3	Toluene	0.347	2.00	0.271	J
554-14-3	2-Methylthiophene	ND	2.00	0.170	U
2207-04-7	1,4-Dimethylcyclohexane (trans)	ND	2.00	0.260	U
616-44-4	3-Methylthiophene	ND	2.00	0.234	U
111-66-0	1-Octene	ND	5.00	0.307	U
111-65-9	Octane	ND	2.00	0.235	U
6876-23-9	1,2-Dimethylcyclohexane (trans)	ND	2.00	0.294	U
106-93-4	1,2-Dibromoethane	ND	2.00	0.320	U
7642-04-8	cis-2-Octene	ND	2.00	0.229	U
3875-51-2	Isopropylcyclopentane	ND	2.00	0.293	U
2207-01-4	1,2-Dimethylcyclohexane (cis)	ND	2.00	0.581	U
2216-30-0	2,5-Dimethylheptane	ND	2.00	0.335	U
926-82-9	3,5-Dimethylheptane	ND	2.00	0.282	U
4032-86-4	3,3-Dimethylheptane	ND	2.00	0.242	U
7094-27-1	1,1,4-Trimethylcyclohexane	ND	2.00	0.199	U

Results Summary
Form 1
PIANO Volatile Organics by GC/MS

Client	: AECOM	**Lab Number**	: L2037809
Project Name	: LOCKHEED MARTIN	**Project Number**	: 60552044.19
Lab ID	: L2037809-03	**Date Collected**	: 09/11/20 12:30
Client ID	: 20A-AE104R4-091120-1	**Date Received**	: 09/11/20
Sample Location	: WILMINGTON, MA	**Date Analyzed**	: 09/22/20 22:02
Sample Matrix	: WATER	**Dilution Factor**	: 1
Analytical Method	: 1,8260B	**Analyst**	: RY
Lab File ID	: V6012548	**Instrument ID**	: VOA6
Sample Amount	: 5 ml	**GC Column**	: DB-VRX
Level	: LOW	**%Solids**	: N/A
Extract Volume (MeOH)	: N/A	**Injection Volume**	: N/A

		ug/L			
CAS NO.	**Parameter**	**Results**	**RL**	**MDL**	**Qualifier**
3074-71-3	2,3-Dimethylheptane	ND	2.00	0.228	U
922-28-1	3,4-Dimethylheptane	ND	2.00	0.340	U
2216-34-4	4-Methyloctane	ND	2.00	0.334	U
3221-61-2	2-Methyloctane	ND	2.00	0.512	U
100-41-4	Ethylbenzene	ND	2.00	0.216	U
872-55-9	2-Ethylthiophene	ND	2.00	0.176	U
2216-33-3	3-Methyloctane	ND	2.00	0.224	U
1067-20-5	3,3-Diethylpentane	ND	2.00	0.233	U
179601-23-1	p/m-Xylene	ND	4.00	0.381	U
124-11-8	1-Nonene	ND	5.00	0.270	U
20063-92-7	trans-3-Nonene	ND	2.00	0.237	U
20237-46-1	cis-3-Nonene	ND	2.00	0.374	U
111-84-2	Nonane (C9)	ND	2.00	0.311	U
100-42-5	Styrene	ND	2.00	0.202	U
95-47-6	o-Xylene	ND	2.00	0.209	U
6434-77-1	2-Nonene	ND	5.00	0.254	U
696-29-7	Isopropylcyclohexane	ND	2.00	0.212	U
98-82-8	Isopropylbenzene	ND	2.00	0.187	U
4110-44-5	3,3-Dimethyloctane	ND	2.00	0.202	U
103-65-1	n-Propylbenzene	ND	2.00	0.177	U
871-83-0	2-Methylnonane	ND	2.00	0.283	U
5911-04-6	3-Methylnonane	ND	2.00	0.279	U
620-14-4	1-Methyl-3-Ethylbenzene	ND	2.00	0.316	U
622-96-8	1-Methyl-4-Ethylbenzene	ND	2.00	0.282	U
108-67-8	1,3,5-Trimethylbenzene	ND	2.00	0.230	U

Results Summary
Form 1
PIANO Volatile Organics by GC/MS

Client	: AECOM	**Lab Number**	: L2037809
Project Name	: LOCKHEED MARTIN	**Project Number**	: 60552044.19
Lab ID	: L2037809-03	**Date Collected**	: 09/11/20 12:30
Client ID	: 20A-AE104R4-091120-1	**Date Received**	: 09/11/20
Sample Location	: WILMINGTON, MA	**Date Analyzed**	: 09/22/20 22:02
Sample Matrix	: WATER	**Dilution Factor**	: 1
Analytical Method	: 1,8260B	**Analyst**	: RY
Lab File ID	: V6012548	**Instrument ID**	: VOA6
Sample Amount	: 5 ml	**GC Column**	: DB-VRX
Level	: LOW	**%Solids**	: N/A
Extract Volume (MeOH)	: N/A	**Injection Volume**	: N/A

		ug/L			
CAS NO.	**Parameter**	**Results**	**RL**	**MDL**	**Qualifier**
872-05-9	1-Decene	ND	2.00	0.260	U
1678-98-4	Isobutylcyclohexane	ND	2.00	0.163	U
611-14-3	1-Methyl-2-Ethylbenzene	ND	2.00	0.170	U
124-18-5	Decane (C10)	ND	2.00	0.271	U
98-06-6	tert-Butylbenzene	ND	2.00	0.211	U
95-63-6	1,2,4-Trimethylbenzene	ND	2.00	0.207	U
538-93-2	Isobutylbenzene	ND	2.00	0.270	U
135-98-8	sec-Butylbenzene	ND	2.00	0.259	U
535-77-3	1-Methyl-3-Isopropylbenzene	ND	2.00	0.258	U
99-87-6	1-Methyl-4-Isopropylbenzene	ND	2.00	0.212	U
526-73-8	1,2,3-Trimethylbenzene	ND	2.00	0.223	U
527-84-4	1-Methyl-2-Isopropylbenzene	ND	2.00	0.217	U
496-11-7	Indane	ND	2.00	0.123	U
141-93-5	1,3-Diethylbenzene	ND	2.00	0.249	U
1074-43-7	1-Methyl-3-N-Propylbenzene	ND	2.00	0.202	U
95-13-6	Indene	ND	2.00	0.116	U
1074-55-1	1-Methyl-4-N-Propylbenzene	ND	2.00	0.250	U
104-51-8	n-Butylbenzene	ND	2.00	0.197	U
934-80-5	1,2-Dimethyl-4-Ethylbenzene	ND	2.00	0.245	U
135-01-3	1,2-Diethylbenzene	ND	2.00	0.296	U
1074-17-5	1-Methyl-2-N-Propylbenzene	ND	2.00	0.249	U
1758-88-9	1,4-Dimethyl-2-Ethylbenzene	ND	2.00	0.187	U
1120-21-4	Undecane	ND	2.00	0.222	U
874-41-9	1,3-Dimethyl-4-Ethylbenzene	ND	2.00	0.194	U
934-74-7	1,3-Dimethyl-5-Ethylbenzene	ND	2.00	0.236	U

Results Summary
Form 1
PIANO Volatile Organics by GC/MS

Client	: AECOM	**Lab Number**	: L2037809
Project Name	: LOCKHEED MARTIN	**Project Number**	: 60552044.19
Lab ID	: L2037809-03	**Date Collected**	: 09/11/20 12:30
Client ID	: 20A-AE104R4-091120-1	**Date Received**	: 09/11/20
Sample Location	: WILMINGTON, MA	**Date Analyzed**	: 09/22/20 22:02
Sample Matrix	: WATER	**Dilution Factor**	: 1
Analytical Method	: 1,8260B	**Analyst**	: RY
Lab File ID	: V6012548	**Instrument ID**	: VOA6
Sample Amount	: 5 ml	**GC Column**	: DB-VRX
Level	: LOW	**%Solids**	: N/A
Extract Volume (MeOH)	: N/A	**Injection Volume**	: N/A

		ug/L			
CAS NO.	**Parameter**	**Results**	**RL**	**MDL**	**Qualifier**
2870-04-4	1,3-Dimethyl-2-Ethylbenzene	ND	2.00	0.149	U
933-98-2	1,2-Dimethyl-3-Ethylbenzene	ND	2.00	0.127	U
95-93-2	1,2,4,5-Tetramethylbenzene	ND	2.00	0.155	U
527-53-7	1,2,3,5-Tetramethylbenzene	ND	2.00	0.152	U
538-68-1	N-Pentylbenzene	ND	2.00	0.249	U
488-23-3	1,2,3,4-Tetramethylbenzene	ND	2.00	0.214	U
98-19-1	1,3-Dimethyl-5-tert-Butylbenzene	ND	2.00	0.285	U
112-40-3	Dodecane (C12)	ND	5.00	0.657	U
102-25-0	1,3,5-Triethylbenzene	ND	2.00	0.380	U
91-20-3	Naphthalene	ND	2.00	0.835	U
95-15-8	Benzothiophene	ND	2.00	1.06	U
877-44-1	1,2,4-Triethylbenzene	ND	2.00	0.340	U
1077-16-3	Hexylbenzene	ND	2.00	0.385	U
12108-13-3	MMT	ND	5.00	1.29	U
629-50-5	Tridecane	ND	5.00	1.39	U
91-57-6	2-Methylnaphthalene	ND	5.00	1.32	U
90-12-0	1-Methylnaphthalene	ND	5.00	1.47	U
629-59-4	Tetradecane (C14)	ND	5.00	0.612	U
629-62-9	Pentadecane	ND	5.00	1.12	U

Results Summary
Form 1
PIANO Volatile Organics by GC/MS

Client	: AECOM	**Lab Number**	: L2037809
Project Name	: LOCKHEED MARTIN	**Project Number**	: 60552044.19
Lab ID	: WG1413379-5	**Date Collected**	: NA
Client ID	: WG1413379-5BLANK	**Date Received**	: NA
Sample Location	:	**Date Analyzed**	: 09/22/20 13:30
Sample Matrix	: WATER	**Dilution Factor**	: 1
Analytical Method	: 1,8260B	**Analyst**	: RY
Lab File ID	: V6012544	**Instrument ID**	: VOA6
Sample Amount	: 5 ml	**GC Column**	: DB-VRX
Level	: LOW	**%Solids**	: N/A
Extract Volume (MeOH)	: N/A	**Injection Volume**	: N/A

		ug/L			
CAS NO.	**Parameter**	**Results**	**RL**	**MDL**	**Qualifier**
563-45-1	3-Methyl-1-butene	ND	2.00	0.297	U
78-78-4	Isopentane	ND	2.00	0.366	U
109-67-1	1-Pentene	ND	2.00	0.365	U
563-46-2	2-Methyl-1-Butene	ND	2.00	0.311	U
109-66-0	Pentane	ND	2.00	0.624	U
646-04-8	trans-2-Pentene	ND	2.00	0.270	U
78-79-5	Isoprene	ND	2.00	0.357	U
627-20-3	cis-2-Pentene	ND	2.00	0.322	U
75-65-0	Tertiary Butanol	ND	25.0	3.24	U
75-83-2	2,2-Dimethylbutane	ND	2.00	0.617	U
691-37-2	4-Methyl-1-pentene	ND	2.00	0.311	U
287-92-3	Cyclopentane	ND	2.00	0.519	U
79-29-8	2,3-Dimethylbutane	ND	2.00	0.826	U
107-83-5	2-Methylpentane	ND	2.00	0.542	U
1634-04-4	Methyl tert butyl ether	ND	2.00	0.412	U
96-14-0	3-Methylpentane	ND	2.00	0.317	U
592-41-6	1-Hexene	ND	2.00	0.281	U
110-54-3	n-Hexane	ND	2.00	0.329	U
108-20-3	Isopropyl Ether	ND	2.00	0.242	U
4050-45-7	trans-2-Hexene	ND	2.00	0.261	U
625-27-4	2-Methyl-2-pentene	ND	2.00	0.306	U
7688-21-3	cis-2-Hexene	ND	2.00	0.271	U
637-92-3	Ethyl-Tert-Butyl-Ether	ND	2.00	0.303	U
590-35-2	2,2-Dimethylpentane	ND	2.00	0.269	U
96-37-7	Methylcyclopentane	ND	2.00	0.268	U

Results Summary
Form 1
PIANO Volatile Organics by GC/MS

Client	: AECOM	**Lab Number**	: L2037809
Project Name	: LOCKHEED MARTIN	**Project Number**	: 60552044.19
Lab ID	: WG1413379-5	**Date Collected**	: NA
Client ID	: WG1413379-5BLANK	**Date Received**	: NA
Sample Location	:	**Date Analyzed**	: 09/22/20 13:30
Sample Matrix	: WATER	**Dilution Factor**	: 1
Analytical Method	: 1,8260B	**Analyst**	: RY
Lab File ID	: V6012544	**Instrument ID**	: VOA6
Sample Amount	: 5 ml	**GC Column**	: DB-VRX
Level	: LOW	**%Solids**	: N/A
Extract Volume (MeOH)	: N/A	**Injection Volume**	: N/A

		ug/L			
CAS NO.	**Parameter**	**Results**	**RL**	**MDL**	**Qualifier**
108-08-7	2,4-Dimethylpentane	ND	2.00	0.247	U
464-06-2	2,2,3-Trimethylbutane	ND	2.00	0.270	U
107-06-2	1,2-Dichloroethane	ND	2.00	0.295	U
562-49-2	3,3-Dimethylpentane	ND	2.00	0.372	U
110-82-7	Cyclohexane	ND	2.00	0.247	U
591-76-4	2-Methylhexane	ND	2.00	0.315	U
71-43-2	Benzene	ND	2.00	0.305	U
565-59-3	2,3-Dimethylpentane	ND	2.00	0.265	U
110-02-1	Thiophene	ND	2.00	0.284	U
1638-26-2	1,1-Dimethylcyclopentane	ND	2.00	0.240	U
589-34-4	3-Methylhexane	ND	2.00	0.320	U
994-05-8	Tertiary-Amyl Methyl Ether	ND	2.00	0.246	U
2532-58-3	1,3-Dimethylcyclopentane (cis)	ND	2.00	0.301	U
617-78-7	3-Ethylpentane	ND	2.00	0.289	U
1759-58-6/6094-02-6	1,3-DMCP (trans)/2-Methyl-1-hexene	ND	4.00	0.702	U
592-76-7/822-50-4	1-Heptene/1,2-DMCP (trans)	ND	4.00	0.585	U
540-84-1	Isooctane	ND	2.00	0.218	U
14686-14-7	trans-3-Heptene	ND	2.00	0.311	U
142-82-5	Heptane	ND	2.00	0.348	U
14686-13-6	trans-2-Heptene	ND	2.00	0.256	U
6443-92-1	cis-2-Heptene	ND	2.00	0.387	U
590-73-8	2,2-Dimethylhexane	ND	2.00	0.290	U
108-87-2	Methylcyclohexane	ND	2.00	0.270	U
592-13-2	2,5-Dimethylhexane	ND	2.00	0.348	U
589-43-5	2,4-Dimethylhexane	ND	2.00	0.243	U

Results Summary
Form 1
PIANO Volatile Organics by GC/MS

Client	: AECOM	**Lab Number**	: L2037809
Project Name	: LOCKHEED MARTIN	**Project Number**	: 60552044.19
Lab ID	: WG1413379-5	**Date Collected**	: NA
Client ID	: WG1413379-5BLANK	**Date Received**	: NA
Sample Location	:	**Date Analyzed**	: 09/22/20 13:30
Sample Matrix	: WATER	**Dilution Factor**	: 1
Analytical Method	: 1,8260B	**Analyst**	: RY
Lab File ID	: V6012544	**Instrument ID**	: VOA6
Sample Amount	: 5 ml	**GC Column**	: DB-VRX
Level	: LOW	**%Solids**	: N/A
Extract Volume (MeOH)	: N/A	**Injection Volume**	: N/A

		ug/L			
CAS NO.	**Parameter**	**Results**	**RL**	**MDL**	**Qualifier**
1640-89-7	Ethylcyclopentane	ND	2.00	0.265	U
564-02-3	2,2,3-Trimethylpentane	ND	2.00	0.347	U
565-75-3	2,3,4-Trimethylpentane	ND	2.00	0.261	U
1330-20-7	Xylene (Total)	ND	2.00	0.209	U
560-21-4	2,3,3-Trimethylpentane	ND	2.00	0.397	U
584-94-1	2,3-Dimethylhexane	ND	2.00	0.485	U
592-27-8	2-Methylheptane	ND	2.00	0.338	U
589-53-7	4-Methylheptane	ND	2.00	0.344	U
589-81-1	3-Methylheptane	ND	2.00	0.385	U
619-99-8	3-Ethylhexane	ND	2.00	0.358	U
108-88-3	Toluene	ND	2.00	0.271	U
554-14-3	2-Methylthiophene	ND	2.00	0.170	U
2207-04-7	1,4-Dimethylcyclohexane (trans)	ND	2.00	0.260	U
616-44-4	3-Methylthiophene	ND	2.00	0.234	U
111-66-0	1-Octene	ND	5.00	0.307	U
111-65-9	Octane	ND	2.00	0.235	U
6876-23-9	1,2-Dimethylcyclohexane (trans)	ND	2.00	0.294	U
106-93-4	1,2-Dibromoethane	ND	2.00	0.320	U
7642-04-8	cis-2-Octene	ND	2.00	0.229	U
3875-51-2	Isopropylcyclopentane	ND	2.00	0.293	U
2207-01-4	1,2-Dimethylcyclohexane (cis)	ND	2.00	0.581	U
2216-30-0	2,5-Dimethylheptane	ND	2.00	0.335	U
926-82-9	3,5-Dimethylheptane	ND	2.00	0.282	U
4032-86-4	3,3-Dimethylheptane	ND	2.00	0.242	U
7094-27-1	1,1,4-Trimethylcyclohexane	ND	2.00	0.199	U

Results Summary
Form 1
PIANO Volatile Organics by GC/MS

Client	: AECOM	**Lab Number**	: L2037809
Project Name	: LOCKHEED MARTIN	**Project Number**	: 60552044.19
Lab ID	: WG1413379-5	**Date Collected**	: NA
Client ID	: WG1413379-5BLANK	**Date Received**	: NA
Sample Location	:	**Date Analyzed**	: 09/22/20 13:30
Sample Matrix	: WATER	**Dilution Factor**	: 1
Analytical Method	: 1,8260B	**Analyst**	: RY
Lab File ID	: V6012544	**Instrument ID**	: VOA6
Sample Amount	: 5 ml	**GC Column**	: DB-VRX
Level	: LOW	**%Solids**	: N/A
Extract Volume (MeOH)	: N/A	**Injection Volume**	: N/A

		ug/L			
CAS NO.	**Parameter**	**Results**	**RL**	**MDL**	**Qualifier**
3074-71-3	2,3-Dimethylheptane	ND	2.00	0.228	U
922-28-1	3,4-Dimethylheptane	ND	2.00	0.340	U
2216-34-4	4-Methyloctane	ND	2.00	0.334	U
3221-61-2	2-Methyloctane	ND	2.00	0.512	U
100-41-4	Ethylbenzene	ND	2.00	0.216	U
872-55-9	2-Ethylthiophene	ND	2.00	0.176	U
2216-33-3	3-Methyloctane	ND	2.00	0.224	U
1067-20-5	3,3-Diethylpentane	ND	2.00	0.233	U
179601-23-1	p/m-Xylene	ND	4.00	0.381	U
124-11-8	1-Nonene	ND	5.00	0.270	U
20063-92-7	trans-3-Nonene	ND	2.00	0.237	U
20237-46-1	cis-3-Nonene	ND	2.00	0.374	U
111-84-2	Nonane (C9)	ND	2.00	0.311	U
100-42-5	Styrene	ND	2.00	0.202	U
95-47-6	o-Xylene	ND	2.00	0.209	U
6434-77-1	2-Nonene	ND	5.00	0.254	U
696-29-7	Isopropylcyclohexane	ND	2.00	0.212	U
98-82-8	Isopropylbenzene	ND	2.00	0.187	U
4110-44-5	3,3-Dimethyloctane	ND	2.00	0.202	U
103-65-1	n-Propylbenzene	ND	2.00	0.177	U
871-83-0	2-Methylnonane	ND	2.00	0.283	U
5911-04-6	3-Methylnonane	ND	2.00	0.279	U
620-14-4	1-Methyl-3-Ethylbenzene	ND	2.00	0.316	U
622-96-8	1-Methyl-4-Ethylbenzene	ND	2.00	0.282	U
108-67-8	1,3,5-Trimethylbenzene	ND	2.00	0.230	U

Results Summary
Form 1
PIANO Volatile Organics by GC/MS

Client	: AECOM	**Lab Number**	: L2037809
Project Name	: LOCKHEED MARTIN	**Project Number**	: 60552044.19
Lab ID	: WG1413379-5	**Date Collected**	: NA
Client ID	: WG1413379-5BLANK	**Date Received**	: NA
Sample Location	:	**Date Analyzed**	: 09/22/20 13:30
Sample Matrix	: WATER	**Dilution Factor**	: 1
Analytical Method	: 1,8260B	**Analyst**	: RY
Lab File ID	: V6012544	**Instrument ID**	: VOA6
Sample Amount	: 5 ml	**GC Column**	: DB-VRX
Level	: LOW	**%Solids**	: N/A
Extract Volume (MeOH)	: N/A	**Injection Volume**	: N/A

		ug/L			
CAS NO.	**Parameter**	**Results**	**RL**	**MDL**	**Qualifier**
872-05-9	1-Decene	ND	2.00	0.260	U
1678-98-4	Isobutylcyclohexane	ND	2.00	0.163	U
611-14-3	1-Methyl-2-Ethylbenzene	ND	2.00	0.170	U
124-18-5	Decane (C10)	ND	2.00	0.271	U
98-06-6	tert-Butylbenzene	ND	2.00	0.211	U
95-63-6	1,2,4-Trimethylbenzene	ND	2.00	0.207	U
538-93-2	Isobutylbenzene	ND	2.00	0.270	U
135-98-8	sec-Butylbenzene	ND	2.00	0.259	U
535-77-3	1-Methyl-3-Isopropylbenzene	ND	2.00	0.258	U
99-87-6	1-Methyl-4-Isopropylbenzene	ND	2.00	0.212	U
526-73-8	1,2,3-Trimethylbenzene	ND	2.00	0.223	U
527-84-4	1-Methyl-2-Isopropylbenzene	ND	2.00	0.217	U
496-11-7	Indane	ND	2.00	0.123	U
141-93-5	1,3-Diethylbenzene	ND	2.00	0.249	U
1074-43-7	1-Methyl-3-N-Propylbenzene	ND	2.00	0.202	U
95-13-6	Indene	ND	2.00	0.116	U
1074-55-1	1-Methyl-4-N-Propylbenzene	ND	2.00	0.250	U
104-51-8	n-Butylbenzene	ND	2.00	0.197	U
934-80-5	1,2-Dimethyl-4-Ethylbenzene	ND	2.00	0.245	U
135-01-3	1,2-Diethylbenzene	ND	2.00	0.296	U
1074-17-5	1-Methyl-2-N-Propylbenzene	ND	2.00	0.249	U
1758-88-9	1,4-Dimethyl-2-Ethylbenzene	ND	2.00	0.187	U
1120-21-4	Undecane	ND	2.00	0.222	U
874-41-9	1,3-Dimethyl-4-Ethylbenzene	ND	2.00	0.194	U
934-74-7	1,3-Dimethyl-5-Ethylbenzene	ND	2.00	0.236	U

Results Summary
Form 1
PIANO Volatile Organics by GC/MS

Client	: AECOM	**Lab Number**	: L2037809
Project Name	: LOCKHEED MARTIN	**Project Number**	: 60552044.19
Lab ID	: WG1413379-5	**Date Collected**	: NA
Client ID	: WG1413379-5BLANK	**Date Received**	: NA
Sample Location	:	**Date Analyzed**	: 09/22/20 13:30
Sample Matrix	: WATER	**Dilution Factor**	: 1
Analytical Method	: 1,8260B	**Analyst**	: RY
Lab File ID	: V6012544	**Instrument ID**	: VOA6
Sample Amount	: 5 ml	**GC Column**	: DB-VRX
Level	: LOW	**%Solids**	: N/A
Extract Volume (MeOH)	: N/A	**Injection Volume**	: N/A

		ug/L			
CAS NO.	**Parameter**	**Results**	**RL**	**MDL**	**Qualifier**
2870-04-4	1,3-Dimethyl-2-Ethylbenzene	ND	2.00	0.149	U
933-98-2	1,2-Dimethyl-3-Ethylbenzene	ND	2.00	0.127	U
95-93-2	1,2,4,5-Tetramethylbenzene	ND	2.00	0.155	U
527-53-7	1,2,3,5-Tetramethylbenzene	ND	2.00	0.152	U
538-68-1	N-Pentylbenzene	ND	2.00	0.249	U
488-23-3	1,2,3,4-Tetramethylbenzene	ND	2.00	0.214	U
98-19-1	1,3-Dimethyl-5-tert-Butylbenzene	ND	2.00	0.285	U
112-40-3	Dodecane (C12)	ND	5.00	0.657	U
102-25-0	1,3,5-Triethylbenzene	ND	2.00	0.380	U
91-20-3	Naphthalene	ND	2.00	0.835	U
95-15-8	Benzothiophene	ND	2.00	1.06	U
877-44-1	1,2,4-Triethylbenzene	ND	2.00	0.340	U
1077-16-3	Hexylbenzene	ND	2.00	0.385	U
12108-13-3	MMT	ND	5.00	1.29	U
629-50-5	Tridecane	ND	5.00	1.39	U
91-57-6	2-Methylnaphthalene	ND	5.00	1.32	U
90-12-0	1-Methylnaphthalene	ND	5.00	1.47	U
629-59-4	Tetradecane (C14)	ND	5.00	0.612	U
629-62-9	Pentadecane	ND	5.00	1.12	U

Surrogate Recovery Summary
Form 2
Volatiles

Client: AECOM
Project Name: LOCKHEED MARTIN

Lab Number: L2037809
Project Number: 60552044.19
Matrix: Water

CLIENT ID (LAB SAMPLE NO.)	S1 (DBFM)	S2 (TOL)	S3 (BFB)	S4 ()	S5 ()	S6 ()	TOT OUT
20A-AE102RR6-090920-1 (L2037809-01)	104	102	93	--	--	--	0
20A-AE103R1-091020-1 (L2037809-02)	107	102	93	--	--	--	0
20A-AE104R4-091120-1 (L2037809-03)	108	102	94	--	--	--	0
WG1413379-3LCS	99	99	96	--	--	--	0
WG1413379-4LCSD	99	101	96	--	--	--	0
WG1413379-5BLANK	103	102	93	--	--	--	0

QC LIMITS
(70-130) DBFM = DIBROMOFLUOROMETHANE
(70-130) TOL = TOLUENE-D8
(70-130) BFB = 4-BROMOFLUOROBENZENE

*** Values outside of QC limits**

FORM II A2-PIANO8260

Laboratory Control Sample Summary
Form 3
Volatiles

Client	: AECOM	**Lab Number**	: L2037809
Project Name	: LOCKHEED MARTIN	**Project Number**	: 60552044.19
Matrix	: WATER		
LCS Sample ID	: WG1413379-3	**Analysis Date** : 09/22/20 09:57	**File ID** : V6012541
LCSD Sample ID	: WG1413379-4	**Analysis Date** : 09/22/20 11:08	**File ID** : V6012542

	Laboratory Control Sample			Laboratory Control Duplicate					
Parameter	True (ug/l)	Found (ug/l)	%R	True (ug/l)	Found (ug/l)	%R	RPD	Recovery Limits	RPD Limit
1-Pentene	20	18.7	94	20	19.8	99	5	50-130	30
Pentane	20	16.0	80	20	17.3	86	7	50-130	30
Tertiary Butanol	100	82.0	82	100	99.8	100	20	50-130	30
Cyclopentane	20	19.2	96	20	20.1	100	4	50-130	30
2-Methylpentane	20	17.5	88	20	18.2	91	3	50-130	30
Methyl tert butyl ether	20	20.3	102	20	21.4	107	5	50-130	30
3-Methylpentane	20	19.0	95	20	19.8	99	4	50-130	30
1-Hexene	20	19.7	98	20	20.4	102	4	50-130	30
n-Hexane	20	19.4	97	20	20.0	100	3	50-130	30
Isopropyl Ether	20	19.1	96	20	20.2	101	5	50-130	30
Ethyl-Tert-Butyl-Ether	20	19.4	97	20	20.4	102	5	50-130	30
Methylcyclopentane	20	20.2	101	20	21.1	106	5	50-130	30
2,4-Dimethylpentane	20	18.2	91	20	19.0	95	4	50-130	30
Cyclohexane	20	20.5	102	20	21.4	107	5	50-130	30
2-Methylhexane	20	18.5	92	20	19.3	96	4	50-130	30
Benzene	20	20.2	101	20	21.0	105	4	50-130	30
2,3-Dimethylpentane	20	19.5	98	20	20.3	102	4	50-130	30
3-Methylhexane	20	16.6	83	20	17.2	86	4	50-130	30
Tertiary-Amyl Methyl Ether	20	17.4	87	20	18.4	92	6	50-130	30
Isooctane	20	20.0	100	20	20.8	104	4	50-130	30
Heptane	20	18.0	90	20	18.9	94	4	50-130	30
Methylcyclohexane	20	21.2	106	20	22.1	110	4	50-130	30
2-Methylheptane	20	18.8	94	20	19.6	98	4	50-130	30
3-Methylheptane	20	17.2	86	20	18.0	90	5	50-130	30
Toluene	20	19.4	97	20	20.1	100	3	50-130	30
Octane	20	19.7	98	20	20.3	102	4	50-130	30

Laboratory Control Sample Summary
Form 3
Volatiles

Client : AECOM
Project Name : LOCKHEED MARTIN
Matrix : WATER
LCS Sample ID : WG1413379-3 **Analysis Date** : 09/22/20 09:57 **File ID** : V6012541
LCSD Sample ID : WG1413379-4 **Analysis Date** : 09/22/20 11:08 **File ID** : V6012542

Lab Number : L2037809
Project Number : 60552044.19

	Laboratory Control Sample			Laboratory Control Duplicate					
Parameter	True (ug/l)	Found (ug/l)	%R	True (ug/l)	Found (ug/l)	%R	RPD	Recovery Limits	RPD Limit
Ethylbenzene	20	19.7	98	20	20.6	103	5	50-130	30
p/m-Xylene	40	40.3	101	40	42.0	105	4	50-130	30
Nonane (C9)	20	18.9	94	20	19.6	98	4	50-130	30
o-Xylene	20	19.6	98	20	20.3	102	4	50-130	30
Isopropylbenzene	20	20.0	100	20	20.7	104	4	50-130	30
n-Propylbenzene	20	19.7	98	20	20.3	102	4	50-130	30
1-Methyl-3-Ethylbenzene	20	19.8	99	20	20.5	102	3	50-130	30
1-Methyl-4-Ethylbenzene	20	20.1	100	20	20.7	104	4	50-130	30
1,3,5-Trimethylbenzene	20	19.6	98	20	20.1	100	2	50-130	30
1-Decene	20	16.1	80	20	16.8	84	5	50-130	30
1-Methyl-2-Ethylbenzene	20	19.0	95	20	20.0	100	5	50-130	30
Decane (C10)	20	21.0	105	20	21.6	108	3	50-130	30
1,2,4-Trimethylbenzene	20	18.8	94	20	19.6	98	4	50-130	30
sec-Butylbenzene	20	20.1	100	20	20.6	103	3	50-130	30
1-Methyl-4-N-Propylbenzene	20	17.8	89	20	18.4	92	3	50-130	30
n-Butylbenzene	20	18.7	94	20	19.3	96	2	50-130	30
1,2-Diethylbenzene	20	18.6	93	20	19.1	96	3	50-130	30
Undecane	20	21.4	107	20	22.0	110	3	50-130	30
N-Pentylbenzene	20	19.1	96	20	19.4	97	1	50-130	30
Dodecane (C12)	20	22.9	114	20	24.2	121	6	50-130	30

Method Blank Summary
Form 4
Volatiles

Client	: AECOM	**Lab Number**	: L2037809
Project Name	: LOCKHEED MARTIN	**Project Number**	: 60552044.19
Lab Sample ID	: WG1413379-5	**Lab File ID**	: V6012544
Instrument ID	: VOA6		
Matrix	: WATER	**Analysis Date**	: 09/22/20 13:30

Client Sample No.	Lab Sample ID	Analysis Date
WG1413379-3LCS	WG1413379-3	09/22/20 09:57
WG1413379-4LCSD	WG1413379-4	09/22/20 11:08
20A-AE102RR6-090920-1	L2037809-01	09/22/20 19:40
20A-AE103R1-091020-1	L2037809-02	09/22/20 20:51
20A-AE104R4-091120-1	L2037809-03	09/22/20 22:02

Instrument Performance Check (Tune) Summary
Form 5
Volatiles
Bromofluorobenzene (BFB)

Client	: AECOM	**Lab Number**	: L2037809
Project Name	: LOCKHEED MARTIN	**Project Number**	: 60552044.19
Instrument ID	: VOA6	**Analysis Date**	: 09/18/20 15:24
Tune Standard	: WG1412463-1	**Tune File ID**	: V6012463_tune

m/e	Ion Abundance Criteria	%Relative Abundance
50	15.0 - 40.0% of mass 95	17.8
75	30.0 - 60.0% of mass 95	47.3
95	Base Peak, 100% relative abundance	100
96	5.0 - 9.0% of mass 95	6
173	Less than 2.0% of mass 174	0.9 (.9)1
174	Greater than 50.0 of mass 95	99
175	5.0 - 9.0% of mass 174	7.2 (7.3)1
176	95.0 - 101% of mass 174	95.2 (96.1)1
177	5.0 - 9.0% of mass 176	6 (6.3)2

1-Value is % of mass 174 2-Value is % of mass 176

This Check Applies to the following Samples, MS, MSD, Blanks, and Standards:

Client Sample ID	Lab Sample ID	File ID	Analysis Date/Time
2	R1352051-1	V6012464	09/18/20 16:00
5	R1352051-2	V6012465	09/18/20 17:11
20	R1352051-3	V6012466	09/18/20 18:22
50	R1352051-4	V6012467	09/18/20 19:33
100	R1352051-5	V6012468	09/18/20 20:44
200	R1352051-6	V6012469	09/18/20 21:55
ICV QUANT	R1352051-7	V6012471	09/19/20 00:16

Instrument Performance Check (Tune) Summary
Form 5
Volatiles
Bromofluorobenzene (BFB)

Client	: AECOM	**Lab Number**	: L2037809
Project Name	: LOCKHEED MARTIN	**Project Number**	: 60552044.19
Instrument ID	: VOA6	**Analysis Date**	: 09/22/20 08:12
Tune Standard	: WG1413379-1	**Tune File ID**	: V6012539_tune

m/e	Ion Abundance Criteria	%Relative Abundance
50	15.0 - 40.0% of mass 95	17
75	30.0 - 60.0% of mass 95	48.5
95	Base Peak, 100% relative abundance	100
96	5.0 - 9.0% of mass 95	7.8
173	Less than 2.0% of mass 174	0.9 (.9)1
174	Greater than 50.0 of mass 95	99.8
175	5.0 - 9.0% of mass 174	7.7 (7.7)1
176	95.0 - 101% of mass 174	96.9 (97.1)1
177	5.0 - 9.0% of mass 176	6.7 (6.9)2

1-Value is % of mass 174 2-Value is % of mass 176

This Check Applies to the following Samples, MS, MSD, Blanks, and Standards:

Client Sample ID	Lab Sample ID	File ID	Analysis Date/Time
WG1413379-2CCAL	WG1413379-2	V6012540	09/22/20 08:46
WG1413379-3LCS	WG1413379-3	V6012541	09/22/20 09:57
WG1413379-4LCSD	WG1413379-4	V6012542	09/22/20 11:08
WG1413379-5BLANK	WG1413379-5	V6012544	09/22/20 13:30
20A-AE102RR6-090920-1	L2037809-01	V6012546	09/22/20 19:40
20A-AE103R1-091020-1	L2037809-02	V6012547	09/22/20 20:51
20A-AE104R4-091120-1	L2037809-03	V6012548	09/22/20 22:02

Initial Calibration Summary
Form 6
Volatiles

Client	**: AECOM**	**Lab Number**	**: L2037809**
Project Name	**: LOCKHEED MARTIN**	**Project Number**	**: 60552044.19**
Instrument ID	**: VOA6**	**Ical Ref**	**: ICAL17149**
Calibration dates	**: 09/18/20 16:00 09/18/20 21:55**		

Calibration Files

2 =V6012464.D 5 =V6012465.D 50 =V6012467.D 100 =V6012468.D 200 =V6012469.D 20 =V6012466.D

		Compound	2	5	50	100	200	20	Avg	%RSD
1)	I	Chlorobenzene-D5 [IS]	----------ISTD----------							
2)		3-Methyl-1-butene	0.384	0.358	0.363	0.393	0.388	0.357	0.3736	4.36
3)		Isopentane	0.265	0.208	0.197	0.211	0.205	0.196	0.2137	12.19
4)		1-Pentene	0.225	0.212	0.221	0.234	0.233	0.213	0.2231	4.31
5)		2-Methyl-1-butene	0.377	0.356	0.367	0.392	0.386	0.358	0.3727	3.96
6)		Pentane	0.387	0.345	0.337	0.359	0.352	0.333	0.3521	5.58
7)		trans-2-Pentene	0.378	0.350	0.364	0.384	0.383	0.354	0.3688	4.11
8)		2-Methyl-1,3-butadiene	0.248	0.228	0.250	0.269	0.268	0.239	0.2505	6.34
9)		cis-2-Pentene	0.376	0.340	0.346	0.370	0.371	0.341	0.3575	4.68
10)		Tertiary butanol		0.028	0.031	0.033	0.032	0.031	0.0311#	6.45
11)		2,2-Dimethylbutane	0.260	0.252	0.212	0.223	0.220	0.214	0.2302	8.96
12)		4-Methyl-1-pentene	0.285	0.250	0.250	0.264	0.261	0.241	0.2584	5.99
13)		Cyclopentane	0.146	0.141	0.148	0.158	0.158	0.141	0.1485	5.12
14)		2,3-Dimethylbutane	0.105	0.108	0.117	0.125	0.125	0.111	0.1153	7.38
15)		2-Methylpentane	0.417	0.366	0.365	0.390	0.385	0.364	0.3813	5.51
16)		MTBE	0.444	0.436	0.489	0.511	0.510	0.470	0.4767	6.74
17)		3-Methylpentane	0.331	0.319	0.349	0.371	0.369	0.330	0.3448	6.33
18)		1-Hexene	0.181	0.184	0.198	0.212	0.211	0.192	0.1962	6.58
19)		Hexane	0.291	0.258	0.278	0.299	0.296	0.266	0.2814	5.95
20)		Diisopropyl ether	0.441	0.437	0.494	0.514	0.507	0.480	0.4786	6.89
21)		trans-2-Hexene	0.339	0.322	0.341	0.361	0.361	0.332	0.3426	4.53
22)		2-Methyl-2-pentene	0.351	0.342	0.376	0.388	0.393	0.356	0.3676	5.78
23)		cis-2-Hexene	0.282	0.257	0.278	0.296	0.296	0.267	0.2795	5.52
24)	S	Dibromofluoromethane (surr)	0.317	0.312	0.313	0.309	0.312	0.308	0.3118	1.09
25)		Ethyl tertiary butyl ether	0.456	0.450	0.514	0.535	0.534	0.495	0.4974	7.55
26)		2,2-Dimethylpentane	0.410	0.400	0.434	0.451	0.450	0.414	0.4264	5.10
27)		Methylcyclopentane	0.351	0.332	0.365	0.379	0.378	0.350	0.3589	5.07
28)		2,4-Dimethylpentane	0.374	0.327	0.337	0.353	0.355	0.334	0.3467	5.02
29)		2,2,3-Trimethylbutane	0.348	0.349	0.379	0.401	0.398	0.362	0.3729	6.32
30)		1,2-Dichloroethane	0.244	0.235	0.247	0.258	0.256	0.243	0.2471	3.43
31)		3,3-Dimethylpentane	0.430	0.390	0.404	0.425	0.422	0.393	0.4107	4.25
32)		Cyclohexane	0.283	0.278	0.303	0.318	0.318	0.294	0.2990	5.71
33)		2-Methylhexane	0.379	0.349	0.356	0.373	0.369	0.348	0.3624	3.58
34)	M	Benzene	0.724	0.692	0.764	0.799	0.799	0.739	0.7527	5.64
35)		2,3-Dimethylpentane	0.288	0.288	0.311	0.322	0.323	0.297	0.3047	5.25
36)		Thiophene	0.391	0.387	0.431	0.453	0.452	0.421	0.4223	6.84

Initial Calibration Summary
Form 6
Volatiles

Client	**: AECOM**	**Lab Number**	**: L2037809**
Project Name	**: LOCKHEED MARTIN**	**Project Number**	**: 60552044.19**
Instrument ID	**: VOA6**	**Ical Ref**	**: ICAL17149**
Calibration dates	**: 09/18/20 16:00 09/18/20 21:55**		

Calibration Files

2 =V6012464.D 5 =V6012465.D 50 =V6012467.D 100 =V6012468.D 200 =V6012469.D 20 =V6012466.D

		Compound	2	5	50	100	200	20	Avg	%RSD
37)		1,1-Dimethylcyclopentane	0.185	0.193	0.213	0.227	0.230	0.207	0.2093	8.66
38)		3-Methylhexane	0.339	0.311	0.322	0.329	0.329	0.310	0.3234	3.54
39)		TAME	0.806	0.584	0.512	0.525	0.521	0.515	0.5772	19.95
40)		cis-1,3-Dimethylcyclopentane	0.303	0.291	0.307	0.328	0.330	0.298	0.3096	5.10
41)		3-Ethylpentane	0.440	0.406	0.400	0.412	0.413	0.378	0.4080	4.99
42)		trans-1,3-DMCP/2-Methyl-1-hexene	0.172	0.125	0.133	0.140	0.144	0.130	0.1405	11.93
43)		1-Heptene/trans-1,2-DMCP	0.146	0.149	0.164	0.169	0.173	0.154	0.1592	6.95
44)		Isooctane	0.732	0.725	0.782	0.819	0.825	0.768	0.7753	5.42
45)		trans-3-Heptene	0.323	0.253	0.252	0.263	0.263	0.247	0.2668	10.63
46)		Heptane	0.325	0.294	0.290	0.305	0.306	0.289	0.3014	4.52
48)		trans-2-Heptene	0.220	0.219	0.236	0.251	0.251	0.228	0.2343	6.18
49)		cis-2-Heptene	0.162	0.167	0.179	0.188	0.190	0.175	0.1769	6.39
50)		2,2-Dimethylhexane	0.704	0.713	0.773	0.808	0.797	0.752	0.7579	5.66
51)		Methylcyclohexane	0.311	0.316	0.358	0.381	0.384	0.346	0.3495	8.88
52)		2,5-Dimethylhexane	0.360	0.350	0.390	0.405	0.399	0.377	0.3803	5.78
53)		2,4-Dimethylhexane	0.291	0.289	0.305	0.320	0.319	0.291	0.3026	4.73
54)		Ethylcyclopentane	0.278	0.275	0.301	0.318	0.320	0.292	0.2973	6.47
55)		2,2,3-Trimethylpentane	0.555	0.559	0.612	0.636	0.633	0.594	0.5980	5.92
57)		2,3,4-Trimethylpentane	0.425	0.399	0.416	0.433	0.428	0.407	0.4178	3.18
58)		2,3,3-Trimethylpentane	0.363	0.339	0.354	0.369	0.367	0.347	0.3565	3.34
59)		2,3-Dimethylhexane	0.404	0.373	0.394	0.403	0.400	0.382	0.3928	3.26
60)		2-Methylheptane	0.327	0.324	0.358	0.372	0.367	0.347	0.3492	5.78
61)		4-Methylheptane	0.420	0.397	0.413	0.430	0.424	0.410	0.4158	2.84
62)	S	Toluene-d8 (surr)	1.185	1.185	1.202	1.190	1.209	1.184	1.1924	0.86
63)		3-Methylheptane	0.439	0.356	0.311	0.316	0.314	0.321	0.3429	14.58
64)	S	2-Bromo-1-Chloropropane	0.253	0.251	0.287	0.305	0.298	0.284	0.2796	8.10
65)		3-Ethylhexane	0.438	0.408	0.433	0.441	0.442	0.419	0.4302	3.20
66)	M	Toluene	0.881	0.859	0.915	0.962	0.957	0.898	0.9120	4.52
67)		2-Methylthiophene	0.632	0.648	0.715	0.753	0.756	0.703	0.7011	7.38
68)		trans-1,4-Dimethylcyclohexane	0.398	0.411	0.462	0.486	0.488	0.442	0.4480	8.39
69)		3-Methylthiophene	0.662	0.649	0.718	0.755	0.758	0.703	0.7074	6.42
70)		1-Octene	0.182	0.165	0.179	0.184	0.185	0.174	0.1780	4.37
71)		Octane	0.356	0.339	0.346	0.360	0.352	0.345	0.3499	2.19
72)		trans-1,2-Dimethylcyclohexane	0.309	0.287	0.306	0.317	0.316	0.305	0.3065	3.56
73)		1,2-Dibromoethane	0.165	0.171	0.192	0.205	0.206	0.187	0.1876	9.02
75)		cis-2-Octene	0.263	0.260	0.264	0.281	0.280	0.264	0.2686	3.44

Initial Calibration Summary
Form 6
Volatiles

Client	**: AECOM**	**Lab Number**	**: L2037809**
Project Name	**: LOCKHEED MARTIN**	**Project Number**	**: 60552044.19**
Instrument ID	**: VOA6**	**Ical Ref**	**: ICAL17149**
Calibration dates	**: 09/18/20 16:00 09/18/20 21:55**		

Calibration Files
2 =V6012464.D 5 =V6012465.D 50 =V6012467.D 100 =V6012468.D 200 =V6012469.D 20 =V6012466.D

	Compound	2	5	50	100	200	20	Avg	%RSD
76)	Isopropylcyclopentane	0.293	0.301	0.334	0.354	0.358	0.342	0.3306	8.26
77)	cis-1,2-Dimethylcyclohexane	0.288	0.276	0.291	0.305	0.304	0.287	0.2918	3.89
78)	2,5-Dimethylheptane	0.500	0.479	0.508	0.540	0.519	0.514	0.5100	3.96
79)	3,5-Dimethylheptane	0.548	0.583	0.612	0.599	0.571	0.559	0.5787	4.16
80)	3,3-Dimethylheptane	0.378	0.370	0.399	0.414	0.403	0.392	0.3926	4.13
81)	1,1,4-Trimethylcyclohexane	0.337	0.335	0.371	0.390	0.385	0.365	0.3640	6.45
82)	2,3-Dimethylheptane	0.446	0.436	0.449	0.468	0.450	0.447	0.4493	2.34
83)	3,4-Dimethylheptane	0.310	0.282	0.279	0.290	0.281	0.289	0.2884	3.90
84)	4-Methyloctane	0.456	0.418	0.431	0.444	0.413	0.417	0.4299	4.01
85)	2-Methyloctane	0.336	0.339	0.360	0.377	0.371	0.382	0.3608	5.46
86)	Ethylbenzene	0.966	0.961	1.036	1.100	1.098	1.027	1.0311	5.89
87) S	1-Chloro-2-Fluorobenzene	0.521	0.546	0.589	0.631	0.629	0.591	0.5846	7.52
88)	2-Ethylthiophene	0.714	0.725	0.804	0.858	0.868	0.794	0.7938	8.11
89)	3-Methyloctane	0.600	0.611	0.666	0.696	0.676	0.659	0.6513	5.81
90)	3,3-Diethylpentane	0.705	0.703	0.779	0.814	0.800	0.766	0.7611	6.21
91)	p/m-Xylene	0.733	0.731	0.787	0.840	0.845	0.782	0.7864	6.28
92)	1-Nonene	0.170	0.174	0.195	0.206	0.203	0.190	0.1895	7.87
93)	trans-3-Nonene	0.250	0.242	0.258	0.271	0.268	0.256	0.2576	4.24
94)	cis-3-Nonene	0.286	0.254	0.293	0.301	0.304	0.273	0.2851	6.62
95)	Nonane	0.345	0.330	0.346	0.355	0.338	0.338	0.3419	2.56
96)	Styrene	0.588	0.607	0.666	0.718	0.731	0.660	0.6618	8.66
97) S	1,4-Dichlorobutane (H/surr)	0.252	0.251	0.259	0.267	0.274	0.261	0.2608	3.42
98)	o-Xylene	0.777	0.775	0.812	0.877	0.895	0.810	0.8244	6.15
99)	2-Nonene	0.250	0.243	0.270	0.285	0.286	0.266	0.2667	6.60
100)	Isopropylcyclohexane	0.366	0.364	0.399	0.420	0.418	0.388	0.3926	6.21
101) S	4-Bromofluorobenzene (surr)	0.495	0.497	0.491	0.495	0.502	0.493	0.4956	0.81
102)	Isopropylbenzene	0.999	1.003	1.068	1.151	1.158	1.066	1.0743	6.39
103)	3,3-Dimethyloctane	0.497	0.546	0.600	0.616	0.567	0.592	0.5695	7.62
104)	n-Propylbenzene	1.161	1.163	1.263	1.361	1.360	1.271	1.2633	7.03
105)	2-Methylnonane	0.343	0.320	0.341	0.344	0.302	0.337	0.3312	5.14
106)	3-Methylnonane	0.387	0.383	0.428	0.432	0.382	0.413	0.4042	5.72
107)	1-Methyl-3-ethylbenzene	0.952	0.990	1.071	1.158	1.168	1.070	1.0683	8.12
108)	1-Methyl-4-ethylbenzene	0.928	0.963	1.033	1.119	1.135	1.030	1.0348	7.93
109)	1,3,5-Trimethylbenzene	0.776	0.809	0.904	0.981	0.995	0.895	0.8935	9.89
110)	1-Decene	0.206	0.191	0.213	0.224	0.213	0.206	0.2086	5.16
111)	Isobutylcyclohexane	0.377	0.392	0.429	0.457	0.445	0.426	0.4208	7.34

Initial Calibration Summary
Form 6
Volatiles

Client	**: AECOM**	**Lab Number**	**: L2037809**
Project Name	**: LOCKHEED MARTIN**	**Project Number**	**: 60552044.19**
Instrument ID	**: VOA6**	**Ical Ref**	**: ICAL17149**
Calibration dates	**: 09/18/20 16:00 09/18/20 21:55**		

Calibration Files
2 =V6012464.D 5 =V6012465.D 50 =V6012467.D 100 =V6012468.D 200 =V6012469.D 20 =V6012466.D

	Compound	2	5	50	100	200	20	Avg	%RSD
112)	1-Methyl-2-ethylbenzene	0.953	1.019	1.097	1.199	1.235	1.092	1.0994	9.66
113)	Decane	0.296	0.288	0.304	0.306	0.270	0.302	0.2944	4.65
114)	tert-Butylbenzene	0.700	0.748	0.818	0.893	0.916	0.809	0.8141	10.11
115)	1,2,4-Trimethylbenzene	0.788	0.826	0.925	1.008	1.033	0.910	0.9150	10.58
116)	Isobutylbenzene	0.896	0.913	1.024	1.119	1.100	0.993	1.0076	9.22
117)	sec-Butylbenzene	1.047	1.078	1.188	1.313	1.344	1.184	1.1923	10.07
118)	1-Methyl-3-isopropylbenzene	0.849	0.900	1.013	1.116	1.140	0.994	1.0021	11.47
119)	1-Methyl-4-isopropylbenzene	0.879	0.945	1.049	1.157	1.186	1.034	1.0415	11.36
120)	1,2,3-Trimethylbenzene	0.821	0.828	0.928	1.020	1.045	0.912	0.9255	10.12
121)	1-Methyl-2-isopropylbenzene	0.887	0.931	1.031	1.144	1.173	1.015	1.0301	10.97
122)	Indan	0.792	0.800	0.874	0.967	0.994	0.873	0.8833	9.43
123)	1,3-Diethylbenzene	0.549	0.569	0.639	0.712	0.739	0.620	0.6380	11.88
124)	1-Methyl-3-propylbenzene	1.004	1.043	1.194	1.339	1.371	1.163	1.1858	12.62
125)	Indene	0.673	0.686	0.782	0.872	0.895	0.760	0.7780	11.81
126)	1-Methyl-4-propylbenzene	1.270	1.305	1.512	1.708	1.750	1.456	1.5002	13.29
127)	n-Butylbenzene	0.977	1.007	1.135	1.268	1.293	1.108	1.1313	11.48
128)	1,2-Dimethyl-4-ethylbenzene	0.896	0.931	1.107	1.260	1.295	1.056	1.0909	15.06
129)	1,2-Diethylbenzene	0.441	0.451	0.522	0.597	0.613	0.506	0.5218	13.70
130)	1-Methyl-2-propylbenzene	1.124	1.128	1.303	1.467	1.503	1.259	1.2973	12.48
131)	1,4-Dimethyl-2-ethylbenzene	0.855	0.873	1.021	1.153	1.192	0.982	1.0127	13.78
132)	Undecane	0.331	0.345	0.353	0.325	0.286	0.384	0.3374	9.63
133)	1,3-Dimethyl-4-ethylbenzene	1.041	1.063	1.228	1.401	1.433	1.181	1.2245	13.49
134)	1,3-Dimethyl-5-ethylbenzene	0.966	0.996	1.157	1.321	1.353	1.108	1.1503	14.00
135)	1,3-Dimethyl-2-ethylbenzene	1.026	1.042	1.194	1.352	1.387	1.151	1.1920	12.74
136)	1,2-Dimethyl-3-ethylbenzene	0.914	0.924	1.071	1.202	1.241	1.036	1.0647	12.84
137)	1,2,4,5-Tetramethylbenzene	0.978	0.979	1.127	1.268	1.305	1.103	1.1265	12.32
138)	1,2,3,5-Tetramethylbenzene	0.864	0.867	1.005	1.135	1.169	0.979	1.0032	12.87
139)	Pentylbenzene	0.842	0.840	0.944	1.048	1.044	0.933	0.9417	9.74
140)	1,2,3,4-Tetramethylbenzene	1.148	1.174	1.333	1.500	1.535	1.304	1.3322	12.06
141)	1,3-DM-5-tert-Butylbenzene	0.869	0.883	1.021	1.148	1.146	0.999	1.0110	11.98
142)	Dodecane	0.304	0.287	0.225	0.196	0.185	0.275	0.2455	20.40
143)	1,3,5-Triethylbenzene	0.560	0.563	0.655	0.722	0.720	0.647	0.6445	11.14
144)	Naphthalene	0.866	0.839	0.900	0.992	1.028	0.886	0.9186	8.13
145)	Benzothiophene	0.460	0.450	0.494	0.547	0.573	0.482	0.5009	9.78
146)	1,2,4-Triethylbenzene	0.521	0.517	0.599	0.668	0.673	0.594	0.5954	11.38
147)	Hexylbenzene	0.796	0.785	0.866	0.943	0.905	0.874	0.8613	7.09

Initial Calibration Summary
Form 6
Volatiles

Client	**: AECOM**	**Lab Number**	**: L2037809**
Project Name	**: LOCKHEED MARTIN**	**Project Number**	**: 60552044.19**
Instrument ID	**: VOA6**	**Ical Ref**	**: ICAL17149**
Calibration dates	**: 09/18/20 16:00 09/18/20 21:55**		

Calibration Files

2 =V6012464.D 5 =V6012465.D 50 =V6012467.D 100 =V6012468.D 200 =V6012469.D 20 =V6012466.D

	Compound	2	5	50	100	200	20	Avg	%RSD
148)	MMT	0.314	0.322	0.361	0.397	0.410	0.353	0.3597	10.73
149)	Tridecane	0.350	0.305	0.223	0.206	0.209	0.263	0.2593	22.49
150)	2-Methylnaphthalene	0.587	0.549	0.615	0.668	0.690	0.605	0.6190	8.38
151)	1-Methylnaphthalene	0.476	0.463	0.513	0.557	0.578	0.503	0.5150	8.73
152)	Tetradecane	0.291	0.231	0.193	0.180	0.193	0.209	0.2164	18.83
153)	Pentadecane	0.205	0.151	0.154	0.149	0.164	0.158	0.1638	12.86

Calibration Verification Summary
Form 7
Volatiles

Client	: AECOM	**Lab Number**	: L2037809		
Project Name	: LOCKHEED MARTIN	**Project Number**	: 60552044.19		
Instrument ID	: VOA6	**Calibration Date**	: 09/22/20 08:46		
Lab File ID	: V6012540	**Init. Calib. Date(s)**	: 09/18/20	09/18/20	
Sample No	: WG1413379-2	**Init. Calib. Times**	: 16:00	21:55	
Channel	:				

Compound	Ave. RRF	RRF	Min RRF	%D	Max %D	Area%	Dev(min)
Chlorobenzene-D5 [IS]	1	1	.1	0	25	82	-.01
3-Methyl-1-butene	0.374	0.383	.1	-2.4	25	86	0
Isopentane	0.214	0.198	.1	7.5	25	82	0
1-Pentene	0.223	0.226	.1	-1.3	25	84	0
2-Methyl-1-butene	0.373	0.386	.1	-3.5	25	86	0
Pentane	0.352	0.347	.1	1.4	25	84	0
trans-2-Pentene	0.369	0.381	.1	-3.3	25	86	0
2-Methyl-1,3-butadiene	0.25	0.266	.1	-6.4	25	87	0
cis-2-Pentene	0.357	0.369	.1	-3.4	25	87	0
Tertiary butanol	0.031	0.035*	.1	-12.9	25	94	.01
2,2-Dimethylbutane	0.23	0.217	.1	5.7	25	84	0
4-Methyl-1-pentene	0.258	0.253	.1	1.9	25	83	0
Cyclopentane	0.149	0.155	.1	-4	25	86	0
2,3-Dimethylbutane	0.115	0.124	.1	-7.8	25	87	0
2-Methylpentane	0.381	0.374	.1	1.8	25	84	0
MTBE	0.477	0.501	.1	-5	25	84	0
3-Methylpentane	0.345	0.359	.1	-4.1	25	84	-.01
1-Hexene	0.196	0.203	.1	-3.6	25	84	0
Hexane	0.281	0.289	.1	-2.8	25	85	0
Diisopropyl ether	0.479	0.498	.1	-4	25	83	0
trans-2-Hexene	0.343	0.355	.1	-3.5	25	85	0
2-Methyl-2-pentene	0.368	0.386	.1	-4.9	25	84	0
cis-2-Hexene	0.279	0.289	.1	-3.6	25	85	0
Ethyl tertiary butyl ether	0.497	0.309	.1	37.8*	25	49	-.02
2,2-Dimethylpentane	0.426	0.453	.1	-6.3	25	85	0
Methylcyclopentane	0.359	0.372	.1	-3.6	25	84	0
2,4-Dimethylpentane	0.347	0.344	.1	0.9	25	84	0
2,2,3-Trimethylbutane	0.373	0.395	.1	-5.9	25	85	0
1,2-Dichloroethane	0.247	0.257	.1	-4	25	85	0
3,3-Dimethylpentane	0.411	0.408	.1	0.7	25	83	-.01
Cyclohexane	0.299	0.308	.1	-3	25	83	-.01
2-Methylhexane	0.362	0.361	.1	0.3	25	83	0
Benzene	0.753	0.8	.1	-6.2	25	86	0
2,3-Dimethylpentane	0.305	0.322	.1	-5.6	25	85	0
Thiophene	0.422	0.451	.1	-6.9	25	86	-.01
1,1-Dimethylcyclopentane	0.209	0.248	.1	-18.7	25	95	0
3-Methylhexane	0.323	0.322	.1	0.3	25	82	0
TAME	0.577	0.527	.1	8.7	25	84	0
cis-1,3-Dimethylcyclopenta	0.31	0.326	.1	-5.2	25	87	0
3-Ethylpentane	0.408	0.4	.1	2	25	82	0
trans-1,3-DMCP/2-Methyl-1-	0.141	0.14	.1	0.7	25	86	0
1-Heptene/trans-1,2-DMCP	0.159	0.17	.1	-6.9	25	85	0
Isooctane	0.775	0.819	.1	-5.7	25	86	0

*** Value outside of QC limits.**

Calibration Verification Summary
Form 7
Volatiles

Client	: AECOM		**Lab Number**	: L2037809	
Project Name	: LOCKHEED MARTIN		**Project Number**	: 60552044.19	
Instrument ID	: VOA6		**Calibration Date**	: 09/22/20 08:46	
Lab File ID	: V6012540		**Init. Calib. Date(s)**	: 09/18/20	09/18/20
Sample No	: WG1413379-2		**Init. Calib. Times**	: 16:00	21:55
Channel	:				

Compound	Ave. RRF	RRF	Min RRF	%D	Max %D	Area%	Dev(min)
trans-3-Heptene	0.267	0.254	.1	4.9	25	82	-.01
Heptane	0.301	0.298	.1	1	25	84	-.01
trans-2-Heptene	0.234	0.242	.1	-3.4	25	84	0
cis-2-Heptene	0.177	0.183	.1	-3.4	25	83	-.01
2,2-Dimethylhexane	0.758	0.789	.1	-4.1	25	84	0
Methylcyclohexane	0.349	0.381	.1	-9.2	25	87	0
2,5-Dimethylhexane	0.38	0.389	.1	-2.4	25	82	0
2,4-Dimethylhexane	0.303	0.309	.1	-2	25	83	0
Ethylcyclopentane	0.297	0.315	.1	-6.1	25	86	0
2,2,3-Trimethylpentane	0.598	0.631	.1	-5.5	25	84	0
2,3,4-Trimethylpentane	0.418	0.413	.1	1.2	25	81	0
2,3,3-Trimethylpentane	0.356	0.353	.1	0.8	25	82	0
2,3-Dimethylhexane	0.393	0.387	.1	1.5	25	80	0
2-Methylheptane	0.349	0.349	.1	0	25	80	0
4-Methylheptane	0.416	0.404	.1	2.9	25	80	-.01
3-Methylheptane	0.343	1.197	.1	-249*	25	315	-.05
2-Bromo-1-chloropropane (H	0.28	0.298	.1	-6.4	25	85	0
3-Ethylhexane	0.43	0.438	.1	-1.9	25	83	0
Toluene	0.912	0.959	.1	-5.2	25	86	0
2-Methylthiophene	0.701	0.76	.1	-8.4	25	87	0
trans-1,4-Dimethylcyclohex	0.448	0.482	.1	-7.6	25	85	0
3-Methylthiophene	0.707	0.759	.1	-7.4	25	87	0
1-Octene	0.178	0.174	.1	2.2	25	80	0
Octane	0.35	0.333	.1	4.9	25	79	0
trans-1,2-Dimethylcyclohex	0.306	0.31	.1	-1.3	25	83	0
1,2-Dibromoethane	0.188	0.206	.1	-9.6	25	88	0
cis-2-Octene	0.269	0.264	.1	1.9	25	82	0
Isopropylcyclopentane	0.331	0.36	.1	-8.8	25	88	0
cis-1,2-Dimethylcyclohexan	0.292	0.295	.1	-1	25	83	0
2,5-Dimethylheptane	0.51	0.505	.1	1	25	81	-.01
3,5-Dimethylheptane	0.579	0.61	.1	-5.4	25	82	0
3,3-Dimethylheptane	0.393	0.388	.1	1.3	25	80	0
1,1,4-Trimethylcyclohexane	0.364	0.376	.1	-3.3	25	83	0
2,3-Dimethylheptane	0.449	0.432	.1	3.8	25	79	0
3,4-Dimethylheptane	0.288	0.279	.1	3.1	25	82	0
4-Methyloctane	0.43	0.386	.1	10.2	25	73	0
2-Methyloctane	0.361	0.374	.1	-3.6	25	85	0
Ethylbenzene	1.031	1.074	.1	-4.2	25	85	0
1-Chloro-2-fluorobenzene (	0.585	0.618	.1	-5.6	25	86	0
2-Ethylthiophene	0.794	0.845	.1	-6.4	25	86	0
3-Methyloctane	0.651	0.654	.1	-0.5	25	80	0
3,3-Diethylpentane	0.761	0.764	.1	-0.4	25	80	-.01
p/m-Xylene	0.786	0.809	.1	-2.9	25	84	0

*** Value outside of QC limits.**

Calibration Verification Summary
Form 7
Volatiles

Client	: AECOM	**Lab Number**	: L2037809		
Project Name	: LOCKHEED MARTIN	**Project Number**	: 60552044.19		
Instrument ID	: VOA6	**Calibration Date**	: 09/22/20 08:46		
Lab File ID	: V6012540	**Init. Calib. Date(s)**	: 09/18/20	09/18/20	
Sample No	: WG1413379-2	**Init. Calib. Times**	: 16:00	21:55	
Channel	:				

Compound	Ave. RRF	RRF	Min RRF	%D	Max %D	Area%	Dev(min)
1-Nonene	0.189	0.19	.1	-0.5	25	80	0
trans-3-Nonene	0.258	0.253	.1	1.9	25	80	0
cis-3-Nonene	0.285	0.292	.1	-2.5	25	82	0
Nonane	0.342	0.326	.1	4.7	25	77	0
Styrene	0.662	0.689	.1	-4.1	25	85	0
1,4-Dichlorobutane (H/surr	0.261	0.271	.1	-3.8	25	86	0
o-Xylene	0.824	0.844	.1	-2.4	25	85	-.01
2-Nonene	0.267	0.265	.1	0.7	25	80	0
Isopropylcyclohexane	0.393	0.407	.1	-3.6	25	84	0
Isopropylbenzene	1.074	0.478	.1	55.5*	25	37	-.03
3,3-Dimethyloctane	0.57	0.592	.1	-3.9	25	81	-.01
n-Propylbenzene	1.263	1.316	.1	-4.2	25	85	0
2-Methylnonane	0.331	0.317	.1	4.2	25	76	0
3-Methylnonane	0.404	0.403	.1	0.2	25	77	0
1-Methyl-3-ethylbenzene	1.068	1.118	.1	-4.7	25	86	0
1-Methyl-4-ethylbenzene	1.035	1.08	.1	-4.3	25	86	0
1,3,5-Trimethylbenzene	0.893	0.94	.1	-5.3	25	85	0
1-Decene	0.209	0.202	.1	3.3	25	78	0
Isobutylcyclohexane	0.421	0.44	.1	-4.5	25	84	0
1-Methyl-2-ethylbenzene	1.099	1.152	.1	-4.8	25	86	0
Decane	0.294	0.282	.1	4.1	25	76	0
tert-Butylbenzene	0.814	0.861	.1	-5.8	25	86	0
1,2,4-Trimethylbenzene	0.915	0.955	.1	-4.4	25	85	0
Isobutylbenzene	1.008	1.065	.1	-5.7	25	85	0
sec-Butylbenzene	1.192	1.263	.1	-6	25	87	0
1-Methyl-3-isopropylbenzen	1.002	1.066	.1	-6.4	25	86	0
1-Methyl-4-isopropylbenzen	1.042	1.103	.1	-5.9	25	86	0
1,2,3-Trimethylbenzene	0.926	0.96	.1	-3.7	25	85	0
1-Methyl-2-isopropylbenzen	1.03	1.093	.1	-6.1	25	87	0
Indan	0.883	0.926	.1	-4.9	25	87	0
1,3-Diethylbenzene	0.638	0.673	.1	-5.5	25	86	0
1-Methyl-3-propylbenzene	1.186	1.261	.1	-6.3	25	87	0
Indene	0.778	0.827	.1	-6.3	25	87	0
1-Methyl-4-propylbenzene	1.5	1.604	.1	-6.9	25	87	0
n-Butylbenzene	1.131	1.203	.1	-6.4	25	87	0
1,2-Dimethyl-4-ethylbenzen	1.091	1.157	.1	-6	25	86	0
1,2-Diethylbenzene	0.522	0.56	.1	-7.3	25	88	0
1-Methyl-2-propylbenzene	1.297	1.381	.1	-6.5	25	87	0
1,4-Dimethyl-2-ethylbenzen	1.013	1.077	.1	-6.3	25	86	0
Undecane	0.337	0.331	.1	1.8	25	77	0
1,3-Dimethyl-4-ethylbenzen	1.224	1.302	.1	-6.4	25	87	0
1,3-Dimethyl-5-ethylbenzen	1.15	1.224	.1	-6.4	25	87	0
1,3-Dimethyl-2-ethylbenzen	1.192	1.264	.1	-6	25	87	0

*** Value outside of QC limits.**

Calibration Verification Summary
Form 7
Volatiles

Client	: AECOM		**Lab Number**	: L2037809	
Project Name	: LOCKHEED MARTIN		**Project Number**	: 60552044.19	
Instrument ID	: VOA6		**Calibration Date**	: 09/22/20 08:46	
Lab File ID	: V6012540		**Init. Calib. Date(s)**	: 09/18/20	09/18/20
Sample No	: WG1413379-2		**Init. Calib. Times**	: 16:00	21:55
Channel	:				

Compound	Ave. RRF	RRF	Min RRF	%D	Max %D	Area%	Dev(min)
1,2-Dimethyl-3-ethylbenzen	1.065	1.125	.1	-5.6	25	86	0
1,2,4,5-Tetramethylbenzene	1.127	1.181	.1	-4.8	25	86	0
1,2,3,5-Tetramethylbenzene	1.003	1.061	.1	-5.8	25	86	0
Pentylbenzene	0.942	1.011	.1	-7.3	25	88	0
1,2,3,4-Tetramethylbenzene	1.332	1.402	.1	-5.3	25	86	0
1,3-DM-5-tert-Butylbenzene	1.011	1.078	.1	-6.6	25	87	0
Dodecane	0.245	0.206	.1	15.9	25	75	0
1,3,5-Triethylbenzene	0.645	0.687	.1	-6.5	25	86	0
Naphthalene	0.919	0.977	.1	-6.3	25	89	0
Benzothiophene	0.501	0.543	.1	-8.4	25	90	0
1,2,4-Triethylbenzene	0.595	0.632	.1	-6.2	25	86	0
Hexylbenzene	0.861	0.918	.1	-6.6	25	87	0
MMT	0.36	0.387	.1	-7.5	25	88	0
Tridecane	0.259	0.203	.1	21.6	25	75	0
2-Methylnaphthalene	0.619	0.66	.1	-6.6	25	88	0
1-Methylnaphthalene	0.515	0.549	.1	-6.6	25	88	0
Tetradecane	0.216	0.165	.1	23.6	25	70	0
Pentadecane	0.164	0.12	.1	26.8*	25	64	0

*** Value outside of QC limits.**

Calibration Verification Summary
Form 7
Volatiles

Client	: AECOM	**Lab Number**	: L2037809		
Project Name	: LOCKHEED MARTIN	**Project Number**	: 60552044.19		
Instrument ID	: VOA6	**Calibration Date**	: 09/23/20 11:10		
Lab File ID	: V6012559	**Init. Calib. Date(s)**	: 09/18/20	09/18/20	
Sample No	: WG1413379-7	**Init. Calib. Times**	: 16:00	21:55	
Channel	:				

Compound	Ave. RRF	RRF	Min RRF	%D	Max %D	Area%	Dev(min)
Chlorobenzene-D5 [IS]	1	1	.1	0	25	77	0
3-Methyl-1-butene	0.374	0.394	.1	-5.3	25	84	0
Isopentane	0.214	0.211	.1	1.4	25	83	0
1-Pentene	0.223	0.235	.1	-5.4	25	82	0
2-Methyl-1-butene	0.373	0.397	.1	-6.4	25	83	0
Pentane	0.352	0.371	.1	-5.4	25	85	0
trans-2-Pentene	0.369	0.394	.1	-6.8	25	83	0
2-Methyl-1,3-butadiene	0.25	0.277	.1	-10.8	25	85	0
cis-2-Pentene	0.357	0.381	.1	-6.7	25	85	0
Tertiary butanol	0.031	0.029*	.1	6.5	25	72	-.02
2,2-Dimethylbutane	0.23	0.218	.1	5.2	25	79	0
4-Methyl-1-pentene	0.258	0.257	.1	0.4	25	79	0
Cyclopentane	0.149	0.159	.1	-6.7	25	83	0
2,3-Dimethylbutane	0.115	0.127	.1	-10.4	25	84	0
2-Methylpentane	0.381	0.382	.1	-0.3	25	81	0
MTBE	0.477	0.517	.1	-8.4	25	81	0
3-Methylpentane	0.345	0.369	.1	-7	25	81	0
1-Hexene	0.196	0.209	.1	-6.6	25	81	0
Hexane	0.281	0.298	.1	-6	25	82	0
Diisopropyl ether	0.479	0.507	.1	-5.8	25	79	-.01
trans-2-Hexene	0.343	0.364	.1	-6.1	25	82	0
2-Methyl-2-pentene	0.368	0.397	.1	-7.9	25	81	0
cis-2-Hexene	0.279	0.296	.1	-6.1	25	82	0
Dibromofluoromethane (surr	0.312	0.309	.1	1	25	76	0
Ethyl tertiary butyl ether	0.497	0.532	.1	-7	25	80	0
2,2-Dimethylpentane	0.426	0.461	.1	-8.2	25	82	0
Methylcyclopentane	0.359	0.376	.1	-4.7	25	79	0
2,4-Dimethylpentane	0.347	0.349	.1	-0.6	25	80	0
2,2,3-Trimethylbutane	0.373	0.397	.1	-6.4	25	81	0
1,2-Dichloroethane	0.247	0.266	.1	-7.7	25	83	0
3,3-Dimethylpentane	0.411	0.41	.1	0.2	25	78	0
Cyclohexane	0.299	0.313	.1	-4.7	25	80	0
2-Methylhexane	0.362	0.366	.1	-1.1	25	79	0
Benzene	0.753	0.825	.1	-9.6	25	83	0
2,3-Dimethylpentane	0.305	0.327	.1	-7.2	25	81	0
Thiophene	0.422	0.464	.1	-10	25	83	0
1,1-Dimethylcyclopentane	0.209	0.251	.1	-20.1	25	91	0
3-Methylhexane	0.323	0.329	.1	-1.9	25	79	0
TAME	0.577	0.534	.1	7.5	25	80	-.01
cis-1,3-Dimethylcyclopenta	0.31	0.332	.1	-7.1	25	83	0
3-Ethylpentane	0.408	0.399	.1	2.2	25	77	0
trans-1,3-DMCP/2-Methyl-1-	0.141	0.145	.1	-2.8	25	84	0
1-Heptene/trans-1,2-DMCP	0.159	0.175	.1	-10.1	25	83	0

*** Value outside of QC limits.**

Calibration Verification Summary
Form 7
Volatiles

Client	: AECOM		**Lab Number**	: L2037809	
Project Name	: LOCKHEED MARTIN		**Project Number**	: 60552044.19	
Instrument ID	: VOA6		**Calibration Date**	: 09/23/20 11:10	
Lab File ID	: V6012559		**Init. Calib. Date(s)**	: 09/18/20	09/18/20
Sample No	: WG1413379-7		**Init. Calib. Times**	: 16:00	21:55
Channel	:				

Compound	Ave. RRF	RRF	Min RRF	%D	Max %D	Area%	Dev(min)
Isooctane	0.775	0.825	.1	-6.5	25	81	0
trans-3-Heptene	0.267	0.264	.1	1.1	25	81	0
Heptane	0.301	0.304	.1	-1	25	81	0
trans-2-Heptene	0.234	0.25	.1	-6.8	25	82	0
cis-2-Heptene	0.177	0.187	.1	-5.6	25	80	0
2,2-Dimethylhexane	0.758	0.803	.1	-5.9	25	80	0
Methylcyclohexane	0.349	0.39	.1	-11.7	25	84	0
2,5-Dimethylhexane	0.38	0.396	.1	-4.2	25	78	0
2,4-Dimethylhexane	0.303	0.32	.1	-5.6	25	81	0
Ethylcyclopentane	0.297	0.324	.1	-9.1	25	83	0
2,2,3-Trimethylpentane	0.598	0.641	.1	-7.2	25	81	0
2,3,4-Trimethylpentane	0.418	0.416	.1	0.5	25	77	0
2,3,3-Trimethylpentane	0.356	0.358	.1	-0.6	25	78	0
2,3-Dimethylhexane	0.393	0.392	.1	0.3	25	77	0
2-Methylheptane	0.349	0.358	.1	-2.6	25	77	0
4-Methylheptane	0.416	0.411	.1	1.2	25	77	0
Toluene-d8 (surr)	1.192	1.197	.1	-0.4	25	77	0
3-Methylheptane	0.343	0.318	.1	7.3	25	79	0
2-Bromo-1-chloropropane (H	0.28	0.307	.1	-9.6	25	82	0
3-Ethylhexane	0.43	0.449	.1	-4.4	25	80	0
Toluene	0.912	0.992	.1	-8.8	25	84	0
2-Methylthiophene	0.701	0.785	.1	-12	25	85	0
trans-1,4-Dimethylcyclohex	0.448	0.494	.1	-10.3	25	82	0
3-Methylthiophene	0.707	0.784	.1	-10.9	25	84	0
1-Octene	0.178	0.18	.1	-1.1	25	78	0
Octane	0.35	0.345	.1	1.4	25	77	0
trans-1,2-Dimethylcyclohex	0.306	0.315	.1	-2.9	25	79	0
1,2-Dibromoethane	0.188	0.214	.1	-13.8	25	86	0
cis-2-Octene	0.269	0.277	.1	-3	25	81	0
Isopropylcyclopentane	0.331	0.373	.1	-12.7	25	86	0
cis-1,2-Dimethylcyclohexan	0.292	0.298	.1	-2.1	25	79	.01
2,5-Dimethylheptane	0.51	0.54	.1	-5.9	25	82	0
3,5-Dimethylheptane	0.579	0.616	.1	-6.4	25	78	0
3,3-Dimethylheptane	0.393	0.401	.1	-2	25	77	0
1,1,4-Trimethylcyclohexane	0.364	0.385	.1	-5.8	25	80	0
2,3-Dimethylheptane	0.449	0.445	.1	0.9	25	76	0
3,4-Dimethylheptane	0.288	0.284	.1	1.4	25	78	-.02
4-Methyloctane	0.43	0.427	.1	0.7	25	76	0
2-Methyloctane	0.361	0.371	.1	-2.8	25	79	-.01
Ethylbenzene	1.031	1.105	.1	-7.2	25	82	0
1-Chloro-2-fluorobenzene (	0.585	0.638	.1	-9.1	25	83	0
2-Ethylthiophene	0.794	0.871	.1	-9.7	25	83	0
3-Methyloctane	0.651	0.682	.1	-4.8	25	79	0

*** Value outside of QC limits.**

Calibration Verification Summary
Form 7
Volatiles

Client	: AECOM	**Lab Number**	: L2037809		
Project Name	: LOCKHEED MARTIN	**Project Number**	: 60552044.19		
Instrument ID	: VOA6	**Calibration Date**	: 09/23/20 11:10		
Lab File ID	: V6012559	**Init. Calib. Date(s)**	: 09/18/20	09/18/20	
Sample No	: WG1413379-7	**Init. Calib. Times**	: 16:00	21:55	
Channel	:				

Compound	Ave. RRF	RRF	Min RRF	%D	Max %D	Area%	Dev(min)
3,3-Diethylpentane	0.761	0.79	.1	-3.8	25	78	0
p/m-Xylene	0.786	0.84	.1	-6.9	25	82	-.01
1-Nonene	0.189	0.196	.1	-3.7	25	78	0
trans-3-Nonene	0.258	0.261	.1	-1.2	25	78	0
cis-3-Nonene	0.285	0.293	.1	-2.8	25	77	0
Nonane	0.342	0.338	.1	1.2	25	75	-.02
Styrene	0.662	0.713	.1	-7.7	25	82	0
1,4-Dichlorobutane (H/surr	0.261	0.278	.1	-6.5	25	83	0
o-Xylene	0.824	0.874	.1	-6.1	25	83	0
2-Nonene	0.267	0.277	.1	-3.7	25	79	0
Isopropylcyclohexane	0.393	0.42	.1	-6.9	25	81	0
4-Bromofluorobenzene (surr	0.496	0.48	.1	3.2	25	75	0
Isopropylbenzene	1.074	1.152	.1	-7.3	25	83	0
3,3-Dimethyloctane	0.57	0.617	.1	-8.2	25	79	0
n-Propylbenzene	1.263	1.349	.1	-6.8	25	82	0
2-Methylnonane	0.331	0.338	.1	-2.1	25	76	0
3-Methylnonane	0.404	0.426	.1	-5.4	25	77	0
1-Methyl-3-ethylbenzene	1.068	1.152	.1	-7.9	25	83	0
1-Methyl-4-ethylbenzene	1.035	1.121	.1	-8.3	25	84	0
1,3,5-Trimethylbenzene	0.893	0.961	.1	-7.6	25	82	0
1-Decene	0.209	0.213	.1	-1.9	25	77	0
Isobutylcyclohexane	0.421	0.462	.1	-9.7	25	83	0
1-Methyl-2-ethylbenzene	1.099	1.196	.1	-8.8	25	84	0
Decane	0.294	0.303	.1	-3.1	25	77	0
tert-Butylbenzene	0.814	0.882	.1	-8.4	25	83	0
1,2,4-Trimethylbenzene	0.915	0.992	.1	-8.4	25	83	0
Isobutylbenzene	1.008	1.127	.1	-11.8	25	85	0
sec-Butylbenzene	1.192	1.307	.1	-9.6	25	85	0
1-Methyl-3-isopropylbenzen	1.002	1.092	.1	-9	25	83	0
1-Methyl-4-isopropylbenzen	1.042	1.133	.1	-8.7	25	83	0
1,2,3-Trimethylbenzene	0.926	0.997	.1	-7.7	25	83	0
1-Methyl-2-isopropylbenzen	1.03	1.117	.1	-8.4	25	83	0
Indan	0.883	0.957	.1	-8.4	25	84	0
1,3-Diethylbenzene	0.638	0.698	.1	-9.4	25	84	0
1-Methyl-3-propylbenzene	1.186	1.311	.1	-10.5	25	85	0
Indene	0.778	0.859	.1	-10.4	25	85	0
1-Methyl-4-propylbenzene	1.5	1.67	.1	-11.3	25	85	0
n-Butylbenzene	1.131	1.256	.1	-11.1	25	85	0
1,2-Dimethyl-4-ethylbenzen	1.091	1.197	.1	-9.7	25	83	0
1,2-Diethylbenzene	0.522	0.578	.1	-10.7	25	85	0
1-Methyl-2-propylbenzene	1.297	1.435	.1	-10.6	25	85	0
1,4-Dimethyl-2-ethylbenzen	1.013	1.109	.1	-9.5	25	84	0
Undecane	0.337	0.365	.1	-8.3	25	80	0

*** Value outside of QC limits.**

Calibration Verification Summary
Form 7
Volatiles

Client	: AECOM		**Lab Number**	: L2037809	
Project Name	: LOCKHEED MARTIN		**Project Number**	: 60552044.19	
Instrument ID	: VOA6		**Calibration Date**	: 09/23/20 11:10	
Lab File ID	: V6012559		**Init. Calib. Date(s)**	: 09/18/20	09/18/20
Sample No	: WG1413379-7		**Init. Calib. Times**	: 16:00	21:55
Channel	:				

Compound	Ave. RRF	RRF	Min RRF	%D	Max %D	Area%	Dev(min)
1,3-Dimethyl-4-ethylbenzen	1.224	1.346	.1	-10	25	84	0
1,3-Dimethyl-5-ethylbenzen	1.15	1.274	.1	-10.8	25	85	0
1,3-Dimethyl-2-ethylbenzen	1.192	1.303	.1	-9.3	25	84	0
1,2-Dimethyl-3-ethylbenzen	1.065	1.155	.1	-8.5	25	83	0
1,2,4,5-Tetramethylbenzene	1.127	1.216	.1	-7.9	25	83	0
1,2,3,5-Tetramethylbenzene	1.003	1.091	.1	-8.8	25	84	0
Pentylbenzene	0.942	1.047	.1	-11.1	25	85	0
1,2,3,4-Tetramethylbenzene	1.332	1.448	.1	-8.7	25	84	0
1,3-DM-5-tert-Butylbenzene	1.011	1.106	.1	-9.4	25	83	0
Dodecane	0.245	0.231	.1	5.7	25	79	0
1,3,5-Triethylbenzene	0.645	0.698	.1	-8.2	25	82	0
Naphthalene	0.919	0.991	.1	-7.8	25	85	0
Benzothiophene	0.501	0.544	.1	-8.6	25	85	0
1,2,4-Triethylbenzene	0.595	0.645	.1	-8.4	25	83	0
Hexylbenzene	0.861	0.955	.1	-10.9	25	85	0
MMT	0.36	0.392	.1	-8.9	25	84	0
Tridecane	0.259	0.235	.1	9.3	25	81	0
2-Methylnaphthalene	0.619	0.661	.1	-6.8	25	83	0
1-Methylnaphthalene	0.515	0.553	.1	-7.4	25	83	0
Tetradecane	0.216	0.204	.1	5.6	25	81	0
Pentadecane	0.164	0.16	.1	2.4	25	80	0

*** Value outside of QC limits.**

Internal Standard Area and RT Summary
Form 8a
Volatiles

Client	: AECOM	**Lab Number**	: L2037809
Project Name	: LOCKHEED MARTIN	**Project Number**	: 60552044.19
Instrument ID	: VOA6	**Analysis Date**	: 09/22/20 08:46
Sample No	: WG1413379-2	**Lab File ID**	: V6012540

	Chlorobenzene-d5					
	Area	RT	Area	RT	Area	RT
WG1413379-2	420295	38.34				
Upper Limit	840590	38.84				
Lower Limit	210148	37.84				
Sample ID						
WG1413379-3 LCS	416739	38.35				
WG1413379-4 LCSD	413569	38.35				
WG1413379-5 BLANK	437227	38.35				
20A-AE102RR6-090920-1	441591	38.35				
20A-AE103R1-091020-1	427096	38.35				
20A-AE104R4-091120-1	428280	38.35				
WG1413379-7 CCAL	395220	38.35				

Area Upper Limit = +100% of internal standard area
Area Lower Limit = - 50% of internal standard area

RT Upper Limit = +0.50 minutes of internal standard RT
RT Lower Limit = -0.50 minutes of internal standard RT

* Values outside of QC limits

Certification Information

The following analytes are not included in our Primary NELAP Scope of Accreditation:

Westborough Facility
EPA 624/624.1: m/p-xylene, o-xylene, Naphthalene
EPA 8260C: NPW: 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene, Azobenzene; SCM: Iodomethane (methyl iodide), 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene.
EPA 8270D: NPW: Dimethylnaphthalene,1,4-Diphenylhydrazine; SCM: Dimethylnaphthalene,1,4-Diphenylhydrazine.
SM4500: NPW: Amenable Cyanide; SCM: Total Phosphorus, TKN, NO2, NO3.

Mansfield Facility
SM 2540D: TSS
EPA 8082A: NPW: PCB: 1, 5, 31, 87,101, 110, 141, 151, 153, 180, 183, 187.
EPA TO-15: Halothane, 2,4,4-Trimethyl-2-pentene, 2,4,4-Trimethyl-1-pentene, Thiophene, 2-Methylthiophene, 3-Methylthiophene, 2-Ethylthiophene, 1,2,3-Trimethylbenzene, Indan, Indene, 1,2,4,5-Tetramethylbenzene, Benzothiophene, 1-Methylnaphthalene.
EPA TO-12 Non-methane organics
EPA 3C Fixed gases
Biological Tissue Matrix: EPA 3050B

The following analytes are included in our Massachusetts DEP Scope of Accreditation

Westborough Facility:

Drinking Water
EPA 300.0: Chloride, Nitrate-N, Fluoride, Sulfate; **EPA 353.2**: Nitrate-N, Nitrite-N; **SM4500NO3-F**: Nitrate-N, Nitrite-N; **SM4500F-C, SM4500CN-CE, EPA 180.1, SM2130B, SM4500Cl-D, SM2320B, SM2540C, SM4500H-B, SM4500NO2-B**
EPA 332: Perchlorate; **EPA 524.2:** THMs and VOCs; **EPA 504.1:** EDB, DBCP.
Microbiology: **SM9215B; SM9223-P/A, SM9223B-Colilert-QT,SM9222D**.

Non-Potable Water
SM4500H,B, EPA 120.1, SM2510B, SM2540C, SM2320B, SM4500CL-E, SM4500F-BC, SM4500NH3-BH: Ammonia-N and Kjeldahl-N, **EPA 350.1**: Ammonia-N, **LACHAT 10-107-06-1-B**: Ammonia-N, **EPA 351.1, SM4500NO3-F, EPA 353.2**: Nitrate-N**, SM4500P-E, SM4500P-B, E, SM4500SO4-E, SM5220D, EPA 410.4, SM5210B, SM5310C, SM4500CL-D, EPA 1664, EPA 420.1, SM4500-CN-CE, SM2540D, EPA 300: Chloride, Sulfate, Nitrate.**
EPA 624.1: Volatile Halocarbons & Aromatics,
EPA 608.3: Chlordane, Toxaphene, Aldrin, alpha-BHC, beta-BHC, gamma-BHC, delta-BHC, Dieldrin, DDD, DDE, DDT, Endosulfan I, Endosulfan II, Endosulfan sulfate, Endrin, Endrin Aldehyde, Heptachlor, Heptachlor Epoxide, PCBs
EPA 625.1: SVOC (Acid/Base/Neutral Extractables), **EPA 600/4-81-045**: PCB-Oil.
Microbiology: **SM9223B-Colilert-QT; Enterolert-QT, SM9221E, EPA 1600, EPA 1603.**

Mansfield Facility:

Drinking Water
EPA 200.7: Al, Ba, Cd, Cr, Cu, Fe, Mn, Ni, Na, Ag, Ca, Zn. **EPA 200.8:** Al, Sb, As, Ba, Be, Cd, Cr, Cu, Pb, Mn, Ni, Se, Ag, TL, Zn. **EPA 245.1** Hg.
EPA 522.

Non-Potable Water
EPA 200.7: Al, Sb, As, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Mo, Ni, K, Se, Ag, Na, Sr, TL, Ti, V, Zn.
EPA 200.8: Al, Sb**,** As, Be, Cd, Cr, Cu, Fe, Pb, Mn, Ni, K, Se, Ag, Na, TL, Zn.
EPA 245.1 Hg.
SM2340B

For a complete listing of analytes and methods, please contact your Alpha Project Manager.

CHAIN OF CUSTODY

PAGE 1 OF 1

Date Rec'd in Lab: 11/9/20

ALPHA Job #: L2049312

8 Walkup Drive, Westboro, MA 01581, Tel: 508-898-9220
320 Forbes Blvd, Mansfield, MA 02048, Tel: 508-822-9300

Client Information

Client: AECOM
Address: 250 Apollo Dr
Chelmsford, MA 01824
Phone: 978-905-2351
Email: scott.olson@aecom.com

Project Information

Project Name: LMC, Former GE Facility
Project Location: 50 Fordham Rd, Wilmington
Project #: 60552044.19
Project Manager: Scott Olson
ALPHA Quote #:

Report Information - Data Deliverables

☐ ADEx ☐ EMAIL

Billing Information

☐ Same as Client info PO #: 127683

Regulatory Requirements & Project Information Requirements

☑ Yes ☐ No MA MCP Analytical Methods ☐ Yes ☑ No CT RCP Analytical Methods
☐ Yes ☑ No Matrix Spike Required on this SDG? (Required for MCP Inorganics)
☐ Yes ☑ No GW1 Standards (Info Required for Metals & EPH with Targets)
☐ Yes ☑ No NPDES RGP
☐ Other State /Fed Program _____ Criteria _____

Turn-Around Time

☑ Standard ~~☐ RUSH~~ (only confirmed if pre-approved)
Date Due: ~~11/20/20~~ DP

Additional Project Information:
Hold onto sample until at ~~latest~~ least 12/31/2020 DP

ANALYSIS

VOC: ☐ 8260 ☐ 624 ☐ 524.2
SVOC: ☐ ABN ☐ PAH
METALS: ☐ MCP 13 ☐ MCP 14 ☐ RCP 15
METALS: ☐ RCRA5 ☐ RCRA8 ☐ PP13
EPH: ☐ Ranges & Targets ☐ Ranges Only
VPH: ☐ Ranges & Targets ☐ Ranges Only
☐ PCB ☐ PEST
TPH: ☐ Quant Only ☐ Fingerprint
Saturates Hydrocarbon Analysis - GC-FID of C9-C44

SAMPLE INFO
Filtration
☐ Field
☐ Lab to do
Preservation
☐ Lab to do
Sample Comments

TOTAL # BOTTLES

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date	Collection Time	Sample Matrix	Sampler Initials	TPH: Saturates Hydrocarbon Analysis - GC-FID of C9-C44	TOTAL # BOTTLES
L49312-01	CW-2_LNAPL	11/5/20	1600	LNAPL	DP	X	1

Container Type																						G	
Preservative																						A	

Container Type
P= Plastic
A= Amber glass
V= Vial
G= Glass
B= Bacteria cup
C= Cube
O= Other
E= Encore
D= BOD Bottle

Preservative
A= None
B= HCl
C= HNO_3
D= H_2SO_4
E= NaOH
F= MeOH
G= $NaHSO_4$
H= $Na_2S_2O_3$
I= Ascorbic Acid
J= NH_4Cl
K= Zn Acetate
O= Other

Relinquished By:	Date/Time	Received By:	Date/Time
[signature] ARE	11/9/20 1646	[signature] ARE	11/9/20 1322
[signature]	11/9/20 2037	[signature] AM	11/9/20 1614
			11/9/20 20:35

All samples submitted are subject to Alpha's Terms and Conditions. See reverse side.

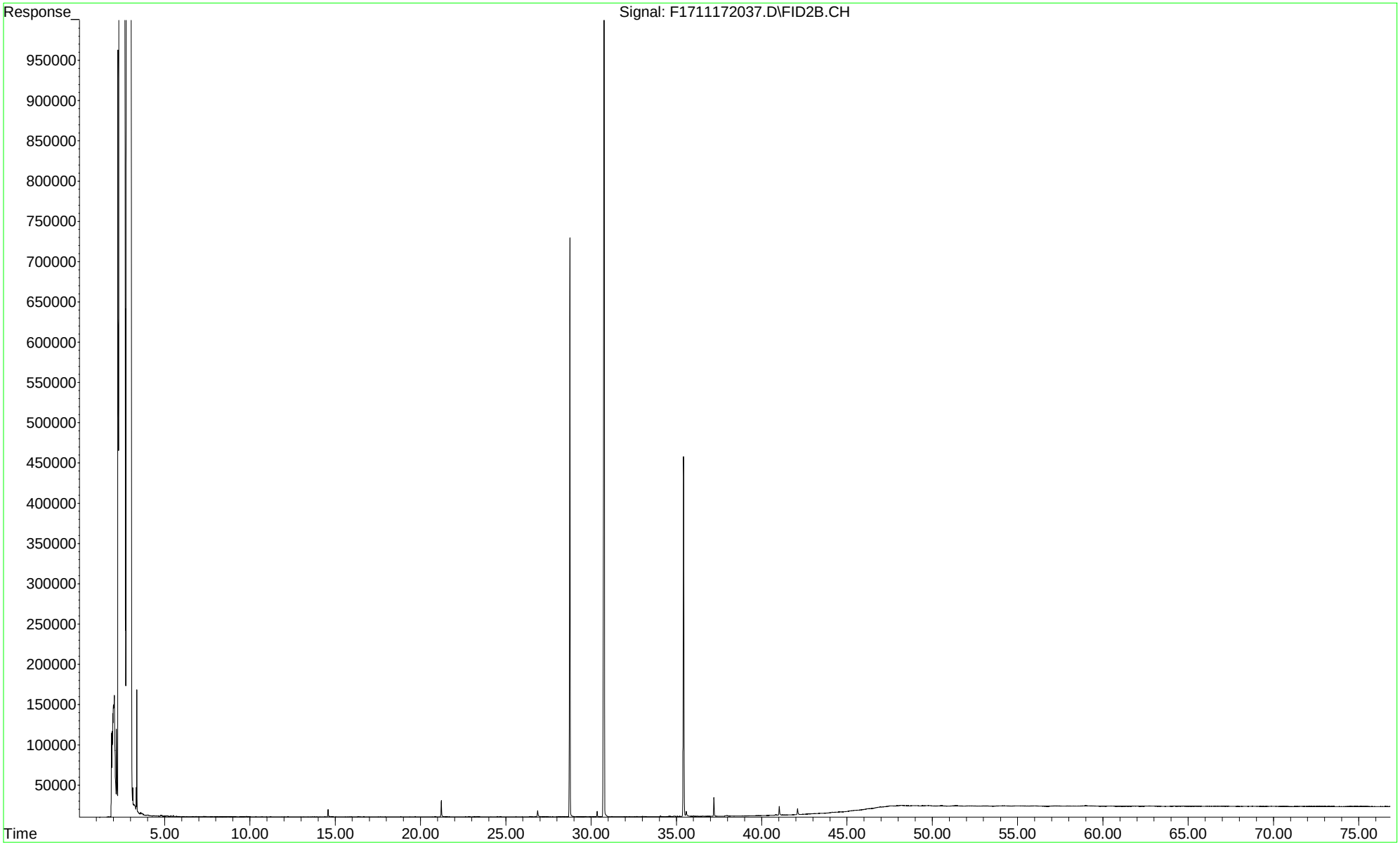
FORM NO: 01-01 (rev. 12-Mar-2012)

GC-FID Chromatogram

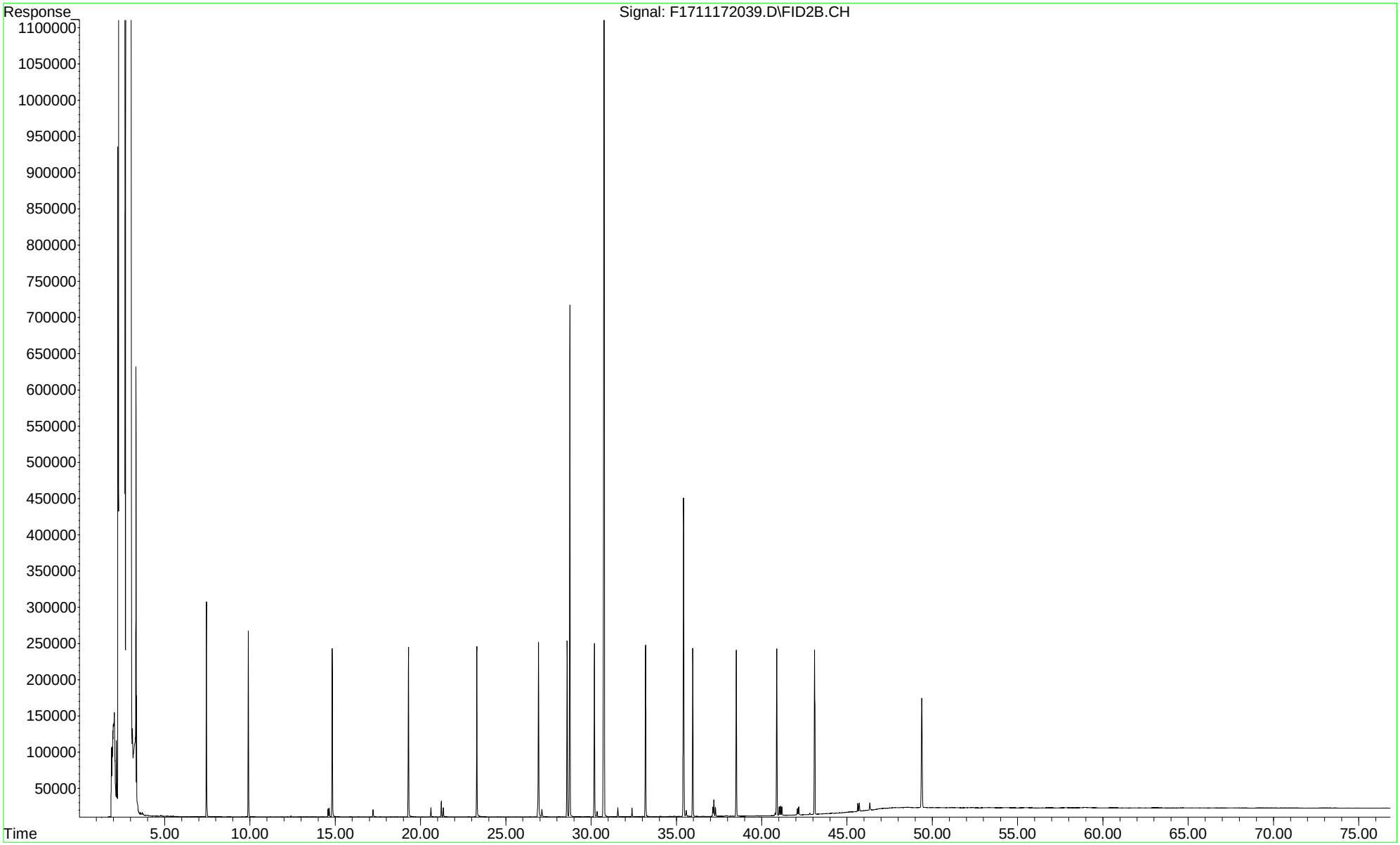
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Acquired : 19 Nov 2020 12:04 am using AcqMethod FID17A.M
Instrument : FID17
Sample : L2049312-01
Misc Info : WG1435836,WG1435757,ICAL17288
ALS Vial : 73



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Acquired : 18 Nov 2020 6:10 pm using AcqMethod FID17A.M
Instrument : FID17
Sample : WG1435757-1
Misc Info : WG1435836,WG1435757,ICAL17288
ALS Vial : 69

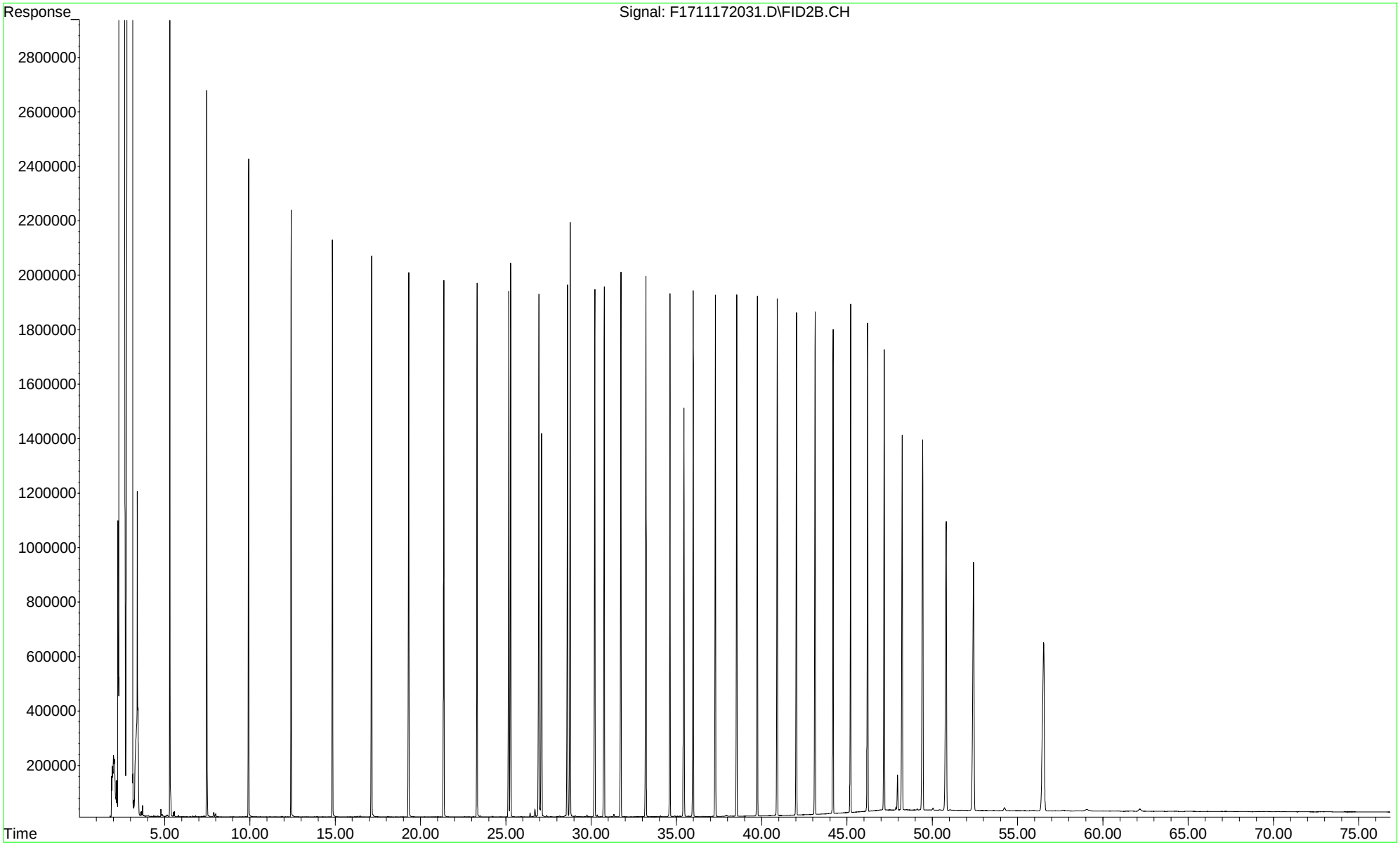


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Operator : FID17:WR
Acquired : 18 Nov 2020 7:39 pm using AcqMethod FID17A.M
Instrument : FID17
Sample : WG1435757-2
Misc Info : WG1435836,WG1435757,ICAL17288
ALS Vial : 70

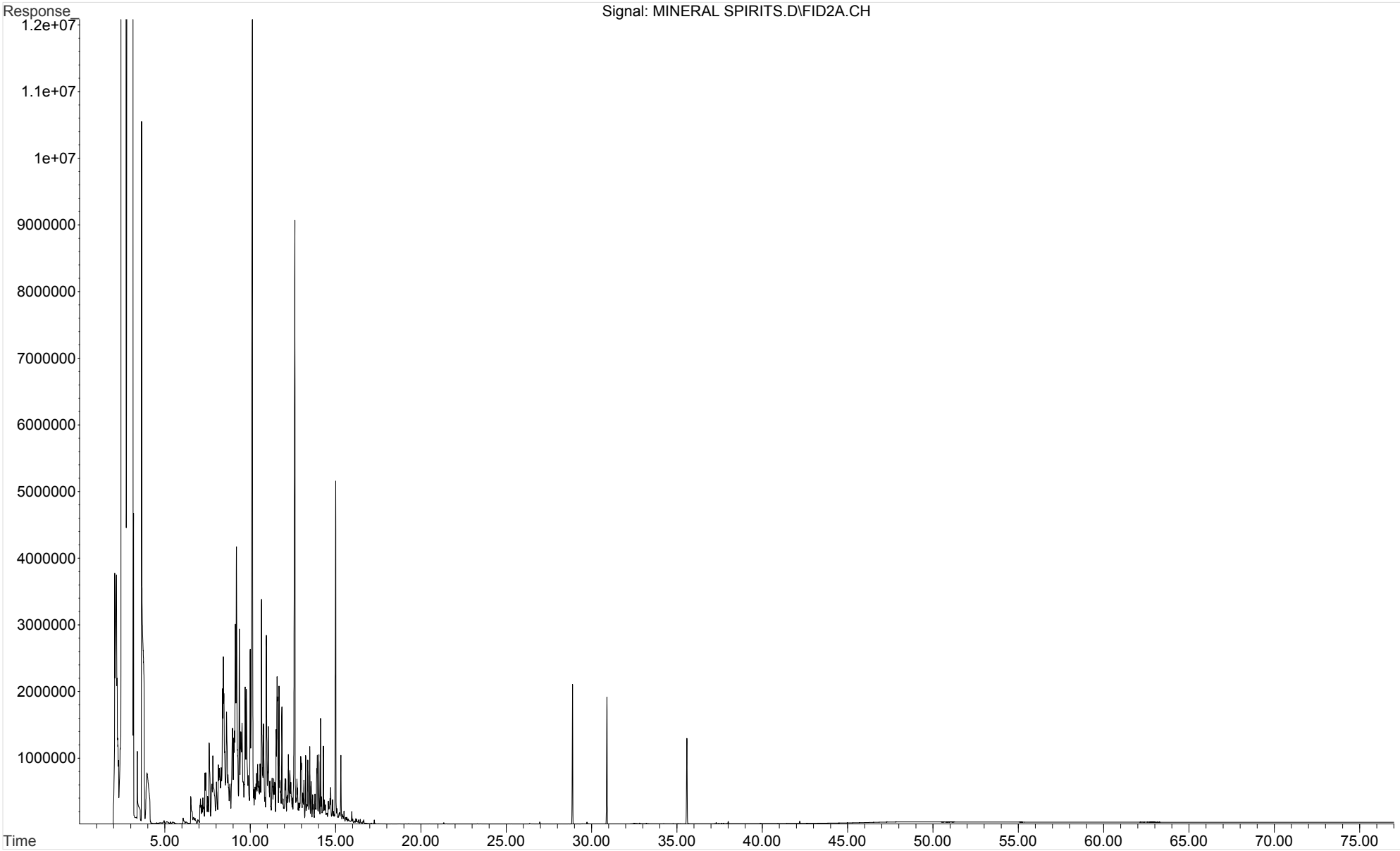


Petroleum Reference Standards

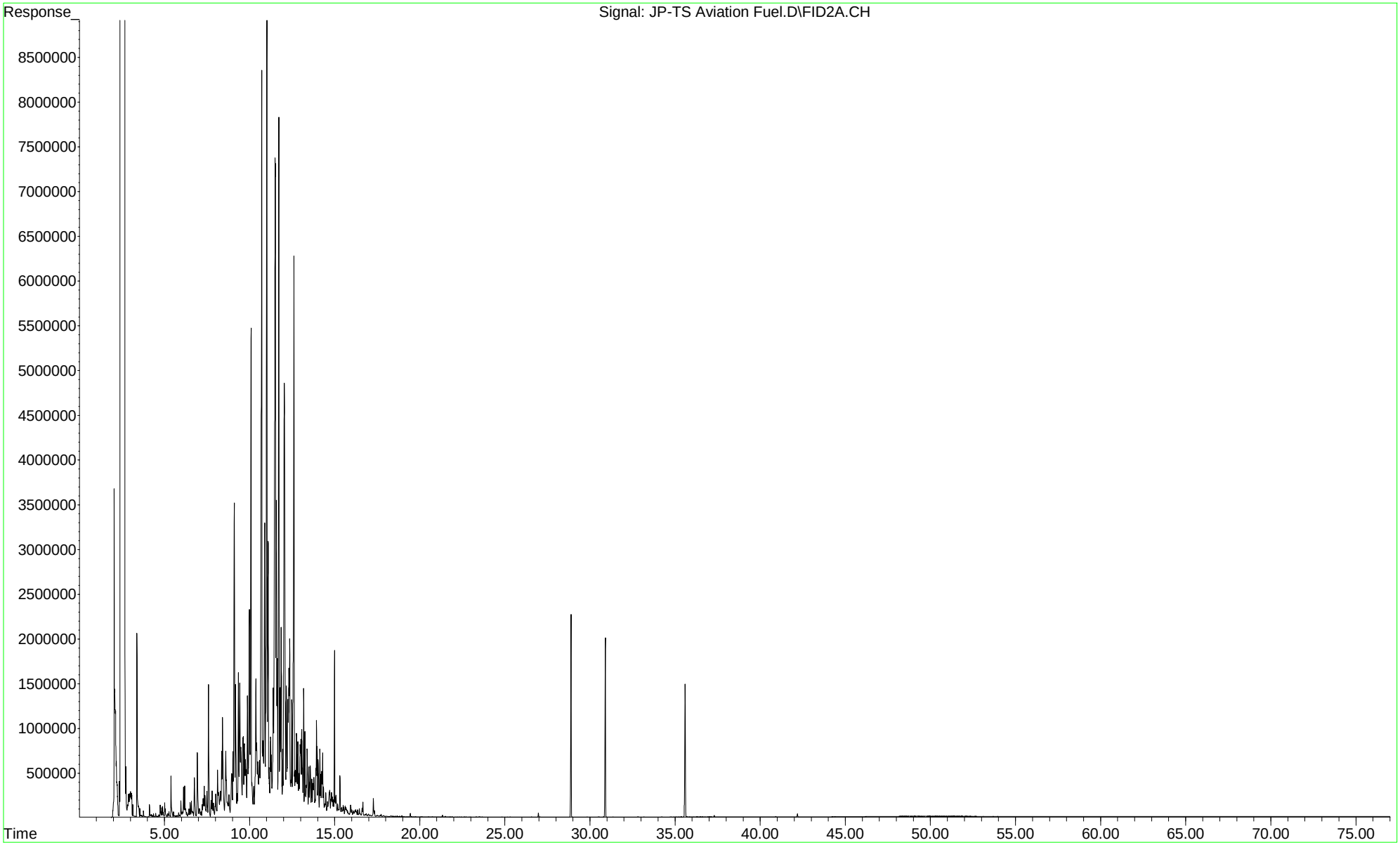
File :O:\Forensics\Data\FID17\2020\NOV\NOV17.SEC\F1711172031.D
Operator : FID17:WR
Acquired : 18 Nov 2020 1:44 pm using AcqMethod FID17A.M
Instrument : FID17
Sample : WG1435836-1
Misc Info : WG1435836,FRBC79,ICAL17288
ALS Vial : 66



File :O:\FORENSICS\LIBRARY\HYDROCARBON REFERENCE STANDARDS\MINERAL
... SPIRITS.D
Operator : PAH2:AC
Instrument : PAH 2
Acquired : 02 Dec 2011 12:40 pm using AcqMethod FRNC2AF.M
Sample : MINERAL SPIRITS
Misc Info : 1X



File :O:\Forensics\Data\LIBRARY\Hydrocarbon Reference Standards\JP
... -TS Aviation Fuel.D
Operator : PAH2:AC
Instrument : PAH 2
Acquired : 19 Nov 2011 7:24 pm using AcqMethod FRNC2AF.M
Sample : JP-TS AVIATION FUEL
Misc Info : F042710S



AECOM
250 Apollo Drive
Chelmsford, Massachusetts 01824

978.905.2100 tel
978.905.2101 fax

Memorandum

To	Scott Olson	Page	1
Subject	Data Validation/Usability Summary Lockheed Martin-Wilmington, MA Site Phoenix Environmental Laboratories, Inc. SDG: GCG73379		
From	Lori Herberich		
Reviewed by	Paula DiMattei		60552044.19
Date	November 4, 2020		

Data validation was performed on the data for samples collected at the Lockheed Martin site in Wilmington, MA on September 9, 2020 and tabulated below. Phoenix Environmental Laboratories, Inc. (Phoenix) in Manchester, CT analyzed the samples and reported the data in sample delivery group (SDG) GCG73379.

The data review was performed with reference to Massachusetts Department of Environmental Protection (MADEP) document WSC-CAM-VIIA, *Quality Assurance and Quality Control Guidelines for the Acquisition and Reporting of Analytical Data in Support of Response Actions Conducted Under the Massachusetts Contingency Plan (MCP)*, Revision 2, January19, 2017, MADEP Bureau of Waste Site Cleanup; MADEP *MCP Representativeness Evaluations and Data Usability Assessments*; Policy #WSC-07-350; September 19, 2007; the applicable MADEP Compendium of Analytical Methods performance standards; and the project-specific work plan. The current EPA Region I Data Validation Guidelines were used as a reference for evaluating the data.

Data for volatile organic compounds (VOCs), 1,4-dioxane, extractable petroleum hydrocarbons (EPH), select metals, total organic carbon (TOC), nitrate, nitrite, chloride, sulfate, and/or sulfide for the following samples was assessed:

Sample ID
20A-AE108R1-090920-1
20A-AE108R3-090920-1
20A-AE108R5-090920-1
20A-AE102M-090920-1
20A-AE102M-090920-2 (field duplicate of 20A-AE102M-090920-1)
20A-AE102RR6-090920-1
20A-TB01-090920-1 (trip blank)

DATA REVIEW ELEMENTS

The assessment was based on the following review elements:

*	Chain-of-custody (COC)/sample integrity
*	Holding times and sample preservation
*	GC/MS tuning[#]
	Initial calibration/initial calibration and continuing calibration verifications[#]
*	Laboratory blanks/equipment blanks/trip blanks
*	Surrogate recoveries (%Rs)
*	Labeled compound recovery (1,4-dioxane only)[#]
	Matrix duplicate (MD)/matrix spike (MS) and/or matrix spike duplicate (MSD) results
*	Laboratory control sample/laboratory control duplicate sample (LCS/LCSD) results
*	Interference check standard results[#]
NA	Serial dilution results[#]
*	Field duplicate results
*	Internal standard (IS) performance[#]
	General reporting issues

The laboratory is required to completely and accurately narrate all quality control exceptions. The symbol (#) indicates that nonconformances concerning this review element are only described in the SDG case narrative since complete results for these review elements are not a required report deliverable. The symbol (*) indicates that all criteria were met, no issues were narrated, and/or no qualifications were required for these review elements. An "NA" indicates that the parameter was not included as part of this data set or was not applicable to this validation and therefore not reviewed. The data appear valid as reported, were qualified as indicated below if required, and may be used for decision making purposes.

Initial Calibration/Initial Calibration and Continuing Calibration Verifications

VOCs

The laboratory narrated the nonconformances tabulated below for the initial calibration and/or continuing calibration verification (CCV) response factors (RFs), percent relative standard deviations (% RSDs), and percent differences or percent drifts (%Ds) that did not meet the QC limits.

Calibration	Compound	RF	QC limit	Actions (Detects/Nondetects)
ICAL for batch 545403	Acetone	0.088	≥ 0.100	J+/R
	Compound	**% RSD**	**QC limit**	**Actions (Detects/Nondetects)**
	1,2-Dibromo-3-chloropropane	25	≤ 20	J/UJ
	Bromoform	24	≤ 20	J/UJ
	Bromomethane	22	≤ 20	J/UJ
	Chloroethane	29	≤ 20	J/UJ
Associated samples: All samples				

Calibration	Compound	RF	QC limit	Actions (Detects/Nondetects)
CCAL for batch 545403	Tetrachloroethene	0.197	≥ 0.200	J+/R
	Acetone	0.093	≥ 0.100	J+/R
Associated samples: All samples				

MD/MS/MSD Results

All percent recoveries (%Rs) and relative percent differences (RPDs) met the QC acceptance limits with the following exceptions. Only nonconformances resulting in data qualification are listed below.

VOCs

Parent Sample	Compound	MS % Recovery	MSD % Recovery	Lower Limit	Upper Limit	Data Validation Actions (Detects/Nondetects)
20A-AE108R1-090920-1	Trichlorofluoromethane	145	155	70	130	J+/Accept
	1,1-Dichloroethene	ok	133	70	130	J+/Accept
	Carbon Disulfide	ok	132	70	130	J+/Accept
	trans-1,2-Dichloroethene	ok	133	70	130	J+/Accept
	Trichlorotrifluoroethane	ok	137	70	130	J+/Accept
All samples in this data set except 20A-TB01-090920-1 are qualified.						

General Reporting Issues

The MassDEP Analytical Protocol Certification Form was reviewed and indicates that the data have met the requirements for “Presumptive Certainty” status for all parameters for which there is a CAM protocol.

The dissolved results exceeded the total results by a moderate amount for manganese and iron in sample 20A-AE108R1-090920-1. The total and dissolved manganese and iron results in this sample are qualified as estimated (J).

Laboratory quantitation limits exceed Project Action Limits (PALs) for several VOCs in the undiluted analyses. Analytical dilutions, if performed, will further elevate those quantitation limits and will cause additional quantitation limits to exceed the PALs. Review elements which may impact sensitivity (i.e., laboratory and field blanks or sample dilutions) have also been reviewed and are summarized, if applicable.

The following methods were used to analyze samples:
VOCs – 8260C
1,4-Dioxane - 8270D
TOC – SM5310-B
EPH - MADEP EPH 12/2019
Arsenic, manganese, and iron – 6010D
Nitrate, nitrite, chloride, and sulfate – 300.0
Sulfide – SM4500-S D

AECOM
250 Apollo Drive
Chelmsford, Massachusetts 01824

978.905.2100 tel
978.905.2101 fax

Memorandum

To	Scott Olson	Page	1
Subject	Data Validation/Usability Summary Lockheed Martin-Wilmington, MA Site Phoenix Environmental Laboratories, Inc. SDG: GCG76015		
From	Lori Herberich		
Reviewed by	Paula DiMattei		60552044.19
Date	November 4, 2020		

Data validation was performed on the data for samples collected at the Lockheed Martin site in Wilmington, MA on September 9-11, 2020 and tabulated below. Phoenix Environmental Laboratories, Inc. (Phoenix) in Manchester, CT analyzed the samples and reported the data in sample delivery group (SDG) GCG76015.

The data review was performed with reference to Massachusetts Department of Environmental Protection (MADEP) document WSC-CAM-VIIA, *Quality Assurance and Quality Control Guidelines for the Acquisition and Reporting of Analytical Data in Support of Response Actions Conducted Under the Massachusetts Contingency Plan (MCP)*, Revision 2, January 19, 2017, MADEP Bureau of Waste Site Cleanup; MADEP *MCP Representativeness Evaluations and Data Usability Assessments*; Policy #WSC-07-350; September 19, 2007; the applicable MADEP Compendium of Analytical Methods performance standards; and the project-specific work plan. The current EPA Region I Data Validation Guidelines were used as a reference for evaluating the data.

Data for volatile organic compounds (VOCs), 1,4-dioxane, volatile petroleum hydrocarbons (VPH), extractable petroleum hydrocarbons (EPH), select metals, total organic carbon (TOC), nitrate, nitrite, chloride, sulfate, and/or sulfide for the following samples was assessed:

Sample ID	
20A-AE100R1-091020-1	20A-AE104R6-091120-1
20A-AE100R3-091020-1	20A-AE112D-091120-1
20A-AE100R4-091020-1	20A-AE112R1-091120-1
20A-AE100R5-091020-1	20A-AE112R3-091120-1
20A-AE100R6-091020-1	20A-AE112R5-091120-1
20A-AE102D-090920-1	20A-AE103D-091020-1
20A-AE102RR2-090920-1	20A-AE103R1-091020-1
20A-TB02-090920-1 (Trip Blank)	20A-AE103R3-091020-1
20A-AE103S-091020-1	20A-AE112R6-091120-1
20A-AE104R1-091120-1	20A-EMW10D-091120-1
20A-AE104R3-091120-1	20A-EMW10R-091120-1
20A-AE104R4-091120-1	20A-EMW11D-091120-1
20A-AE102RR4-090920-1	20A-AE103R4-091020-1

Sample ID	
20A-AE102RR5-090920-1	20A-AE103R5-091020-1
20A-AE102RR6-090920-1	20A-AE103R7-091020-1
20A-AE104R5-091120-1	--

DATA REVIEW ELEMENTS

The assessment was based on the following review elements:

*	Chain-of-custody (COC)/sample integrity
*	Holding times and sample preservation
*	GC/MS tuning[#]
	Initial calibration/initial calibration and continuing calibration verifications[#]
*	Laboratory blanks/equipment blanks/trip blanks
*	Surrogate recoveries (%Rs)
*	Labeled compound recovery (1,4-dioxane only)[#]
	Matrix duplicate (MD)/matrix spike (MS) and/or matrix spike duplicate (MSD) results
	Laboratory control sample/laboratory control duplicate sample (LCS/LCSD) results
*	Interference check standard results[#]
NA	Serial dilution results[#]
NA	Field duplicate results
*	Internal standard (IS) performance[#]
*	General reporting issues

The laboratory is required to completely and accurately narrate all quality control exceptions. The symbol (#) indicates that nonconformances concerning this review element are only described in the SDG case narrative since complete results for these review elements are not a required report deliverable. The symbol (*) indicates that all criteria were met, no issues were narrated, and/or no qualifications were required for these review elements. An "NA" indicates that the parameter was not included as part of this data set or was not applicable to this validation and therefore not reviewed. The data appear valid as reported, were qualified as indicated below if required, and may be used for decision making purposes.

Initial Calibration/Initial Calibration and Continuing Calibration Verifications

<u>VOCs</u>

The laboratory narrated the nonconformances tabulated below for the initial calibration and/or continuing calibration verification (CCV) response factors (RFs), percent relative standard deviations (% RSDs), and percent differences or percent drifts (%Ds) that did not meet the QC limits.

Calibration	Compound	RF	QC limit	Actions (Detects/Nondetects)
ICAL for batch 545403	Acetone	0.088	≥ 0.100	J+/R
	Compound	**% RSD**	**QC limit**	**Actions (Detects/Nondetects)**
	1,2-Dibromo-3-chloropropane	25	≤ 20	J/UJ
	Bromoform	24	≤ 20	J/UJ
	Bromomethane	22	≤ 20	J/UJ
	Chloroethane	29	≤ 20	J/UJ
Calibration	**Compound**	**RF**	**QC limit**	**Actions (Detects/Nondetects)**
CCAL for batch 545403	Tetrachloroethene	0.197	≥ 0.200	J+/R
	Acetone	0.093	≥ 0.100	J+/R
Associated samples: 20A-AE100R1-091020-1, 20A-AE102D-090920-1, 20A-TB02-090920-1, 20A-AE103S-091020-1, 20A-AE112D-091120-1, 20A-AE112R1-091120-1, 20A-AE112R3-091120-1, 20A-AE112R5-091120-1, 20A-AE112R6-091120-1, 20A-EMW10D-091120-1, 20A-EMW11D-091120-1				
Calibration	**Compound**	**% RSD**	**QC limit**	**Actions (Detects/Nondetects)**
ICAL for batches 545781, 546217, 545972	1,2-Dibromo-3-chloropropane	28	≤ 20	J/UJ
	Acetone	21	≤ 20	J/UJ
	Bromomethane	24	≤ 20	J/UJ
	Chloroethane	21	≤ 20	J/UJ
	Methylene chloride	23	≤ 20	J/UJ
Associated samples: 20A-AE100R3-091020-1, 20A-AE100R4-091020-1, 20A-AE100R5-091020-1, 20A-AE100R6-091020-1, 20A-AE102RR2-090920-1, 20A-AE104R4-091120-1, 20A-AE102RR4-090920-1, 20A-AE102RR5-090920-1, 20A-AE102RR6-090920-1, 20A-AE104R5-091120-1, 20A-AE104R6-091120-1, 20A-AE103D-091020-1, 20A-AE103R1-091020-1, 20A-AE103R3-091020-1, 20A-EMW10R-091120-1 20A-AE103R7-091020-1				
Calibration	**Compound**	**RF**	**QC limit**	**Actions (Detects/Nondetects)**
CCAL for batch 545781	Tetrachloroethene	0.192	≥ 0.200	J+/R
Associated samples: 20A-AE104R4-091120-1, 20A-AE102RR5-090920-1, 20A-AE103R3-091020-1, 20A-EMW10D-091120-1, 20A-EMW10R-091120-1				
CCAL for batch 546217	Tetrachloroethene	0.190	≥ 0.200	J+/R
Associated samples: 20A-AE100R5-091020-1, 20A-AE100R6-091020-1, 20A-AE102RR2-090920-1, 20A-AE102RR4-090920-1, 20A-AE103D-091020-1, 20A-AE103R1-091020-1, 20A-AE103R3-091020-1				
CCAL for batch 545972	Tetrachloroethene	0.198	≥ 0.200	J+/R
Associated samples: 20A-AE100R3-091020-1, 20A-AE100R4-091020-1				
Calibration	**Compound**	**% RSD**	**QC limit**	**Actions (Detects/Nondetects)**
ICAL for batches 546288, 546396, 546771	Chloroethane	22	≤ 20	J/UJ
Associated samples: 20A-AE104R1-091120-1, 20A-AE104R3-091120-1, 20A-AE103R4-091020-1 20A-AE103R5-091020-1				

Calibration	Compound	RF	QC limit	Actions (Detects/Nondetects)
CCAL for batch 546771	Tetrachloroethene	0.189	≥ 0.200	J+/R
Associated samples: 20A-AE104R3-091120-1				

MD/MS/MSD Results

All percent recoveries (%Rs) and relative percent differences (RPDs) met the QC acceptance limits with the following exception. Only nonconformances resulting in data qualification are listed below.

VOCs

Parent Sample	Compound	MS % Recovery	MSD % Recovery	Lower Limit	Upper Limit	RPD	RPD Limit	Data Validation Actions (Detects/Nondetects)
20A-AE102RR4-090920-1	Trichloroethene	ok	ok	70	130	32	≤ 20	J/Accept
Result in parent sample only is qualified.								

LCS/LCSD Results

All percent recoveries (%Rs) and relative percent differences (RPDs) met the QC acceptance limits with the following exceptions. Only nonconformances resulting in data qualification are listed below.

VOCs

LCS ID	Compound	LCS % Recovery	LCSD % Recovery	Lower Limit	Upper Limit	Data Validation Actions* (Detects/Nondetects)
Batch 545972	Chloroethane	ok	66	70	130	J-/UJ
Associated samples: 20A-AE100R3-091020-1, 20A-AE100R4-091020-1						
Batch 546288	Diisopropyl ether	66	ok	70	130	J-/UJ
Associated samples: 20A-AE100R3-091020-1, 20A-AE100R4-091020-1, 20A-AE104R1-091120-1						

General Reporting Issues

The MassDEP Analytical Protocol Certification Form was reviewed and indicates that the data have met the requirements for “Presumptive Certainty” status for all parameters for which there is a CAM protocol.

Laboratory quantitation limits exceed Project Action Limits (PALs) for several VOCs in the undiluted analyses. Analytical dilutions, if performed, will further elevate those quantitation limits and will cause additional quantitation limits to exceed the PALs. Review elements which may impact sensitivity (i.e., laboratory and field blanks or sample dilutions) have also been reviewed and are summarized, if applicable.

The following samples were diluted at the noted dilution factor due to concentrations of one or more compounds which would have exceeded the calibration range if analyzed undiluted or do to elevated concentrations of non-target analytes. Sample quantitation limits were raised accordingly.

VOCs

20A-AE102RR6-090920-1: tetrachloroethene, trichloroethene 100x, 20x all others
20A-AE102RR5-090920-1: trichloroethene 100x, 20x all others
20A-AE102RR4-090920-1: 5x
20A-AE102RR2-090920-1: 5x
20A-AE100R5-091020-1: trichloroethene 50x, 20x all others
20A-AE100R6-091020-1: trichloroethene 50x, 10x all others
20A-AE100R4-091020-1: 50x
20A-AE100R3-091020-1: trichloroethene 100x, 50x all others
20A-AE103R1-091020-1: tetrachloroethene 20x, 10x all others
20A-AE103R3-091020-1: trichloroethene, tetrachloroethene 20x, 10x all others
20A-AE103R4-091020-1: 100x
20A-AE103R5-091020-1: 100x
20A-AE103R7-091020-1: trichloroethene, tetrachloroethene 100x, 20x all others
20A-EMW10D-091120-1: tetrachloroethene 10x
20A-AE104R4-091120-1: trichloroethene 100x, 20x all others
20A-AE104R3-091120-1: tetrachloroethene 20x, trichloroethene 50x, 5x all others
20A-AE104R1-091120-1: trichloroethene 20x, 5x all others
20A-AE104R5-091120-1: trichloroethene, tetrachloroethene 100x, 20x all others
20A-AE104R6-091120-1: trichloroethene 100x, 20x all others

VPH
20A-AE102RR6-090920-1: C5-C8 aliphatics 5x
20A-AE103R1-091020-1: C5-C8 aliphatics 5x
20A-AE104R4-091120-1: C5-C8 aliphatics 5x

Nitrite
20A-AE100R5-091020-1: 5x
20A-AE103D-091020-1: 25x
20A-AE103R1-091020-1: 10x
20A-AE103R5-091020-1: 5x

The following methods were used to analyze samples:

VOCs – 8260C
1,4-Dioxane - 8270D
TOC – SM5310-B
VPH – MADEP VPH 5/2004
EPH - MADEP EPH 12/2019
Arsenic, manganese, and iron – 6010D
Nitrate, nitrite, chloride, and sulfate – 300.0
Sulfide – SM4500-S D

AECOM
250 Apollo Drive
Chelmsford, Massachusetts 01824

978.905.2100 tel
978.905.2101 fax

Memorandum

To	Scott Olson	Page	1
Subject	Data Validation/Usability Summary Lockheed Martin-Wilmington, MA Site Phoenix Environmental Laboratories, Inc. SDG: GCG76574		
From	Lori Herberich		
Reviewed by	Paula DiMattei		60552044.19
Date	November 4, 2020		

Data validation was performed on the data for samples collected at the Lockheed Martin site in Wilmington, MA on September 14, 2020 and tabulated below. Phoenix Environmental Laboratories, Inc. (Phoenix) in Manchester, CT analyzed the samples and reported the data in sample delivery group (SDG) GCG76574.

The data review was performed with reference to Massachusetts Department of Environmental Protection (MADEP) document WSC-CAM-VIIA, *Quality Assurance and Quality Control Guidelines for the Acquisition and Reporting of Analytical Data in Support of Response Actions Conducted Under the Massachusetts Contingency Plan (MCP)*, Revision 2, January 19, 2017, MADEP Bureau of Waste Site Cleanup; MADEP *MCP Representativeness Evaluations and Data Usability Assessments*; Policy #WSC-07-350; September 19, 2007; the applicable MADEP Compendium of Analytical Methods performance standards; and the project-specific work plan. The current EPA Region I Data Validation Guidelines were used as a reference for evaluating the data.

Data for volatile organic compounds (VOCs), 1,4-dioxane, volatile petroleum hydrocarbons (VPH), extractable petroleum hydrocarbons (EPH), select metals, total organic carbon (TOC), nitrate, nitrite, chloride, sulfate, and/or sulfide for the following samples was assessed:

Sample ID
20A-AE24-091420-1
20A-AE26R1-091420-1
20A-AE26R2-091420-1
20A-AE26R5-091420-1
20A-AE26S-091420-1
20A-AE28R1-091420-1
20A-AE28R2-091420-1
20A-AE28R3-091420-1
20A-TB01-091420-1 (trip blank)

DATA REVIEW ELEMENTS

The assessment was based on the following review elements:

* Chain-of-custody (COC)/sample integrity
* Holding times and sample preservation

*	GC/MS tuning[#]
	Initial calibration/initial calibration and continuing calibration verifications[#]
*	Laboratory blanks/equipment blanks/trip blanks
*	Surrogate recoveries (%Rs)
*	Labeled compound recovery (1,4-dioxane only)[#]
*	Matrix duplicate (MD)/matrix spike (MS) and/or matrix spike duplicate (MSD) results
	Laboratory control sample/laboratory control duplicate sample (LCS/LCSD) results
*	Interference check standard results[#]
NA	Serial dilution results[#]
NA	Field duplicate results
*	Internal standard (IS) performance[#]
*	General reporting issues

The laboratory is required to completely and accurately narrate all quality control exceptions. The symbol (#) indicates that nonconformances concerning this review element are only described in the SDG case narrative since complete results for these review elements are not a required report deliverable. The symbol (*) indicates that all criteria were met, no issues were narrated, and/or no qualifications were required for these review elements. An "NA" indicates that the parameter was not included as part of this data set or was not applicable to this validation and therefore not reviewed. The data appear valid as reported, were qualified as indicated below if required, and may be used for decision making purposes.

Initial Calibration/Initial Calibration and Continuing Calibration Verifications

VOCs

The laboratory narrated the nonconformances tabulated below for the initial calibration and/or continuing calibration verification (CCV) response factors (RFs), percent relative standard deviations (% RSDs), percent differences or percent drifts (%Ds) that did not meet the QC limits.

Calibration	Compound	% RSD	QC limit	Actions (Detects/Nondetects)
ICAL for batches 545972	1,2-Dibromo-3-chloropropane	28	≤ 20	J/UJ
	Acetone	21	≤ 20	J/UJ
	Bromomethane	24	≤ 20	J/UJ
	Chloroethane	21	≤ 20	J/UJ
	Methylene chloride	23	≤ 20	J/UJ
Calibration	**Compound**	**RF**	**QC limit**	**Actions (Detects/Nondetects)**
CCAL for batch 545972	Tetrachloroethene	0.198	≥ 0.200	J+/R
Associated samples: 20A-AE26R1-091420-1, 20A-AE26R2-091420-1, 20A-AE26R5-091420-1 20A-AE26S-091420-1, 20A-AE28R3-091420-1, 20A-TB01-091420-1				

Calibration	Compound	% RSD	QC limit	Actions (Detects/Nondetects)
ICAL for batches 546836, 546448	Chloroethane	22	≤ 20	J/UJ
Associated samples: 20A-AE28R1-091420-1, 20A-AE24-091420-1, 20A-AE28R2-091420-1				
CCAL for batch 546836	Tetrachloroethene	0.188	≥ 0.200	J+/R
Associated samples: 20A-AE28R1-091420-1				
CCAL for batch 546448	Tetrachloroethene	0.183	≥ 0.200	J+/R
Associated samples: 20A-AE24-091420-1, 20A-AE28R2-091420-1				

LCS/LCSD Results

All percent recoveries (%Rs) and relative percent differences (RPDs) met the QC acceptance limits with the following exceptions. Only nonconformances resulting in data qualification are listed below.

VOCs

LCS ID	Compound	LCS % Recovery	LCSD % Recovery	Lower Limit	Upper Limit	Data Validation Actions* (Detects/Nondetects)
Batch 545972	Chloroethane	ok	66	70	130	J-/UJ
Associated samples: 20A-AE26R1-091420-1, 20A-AE26R2-091420-1, 20A-AE26R5-091420-1 20A-AE26S-091420-1, 20A-AE28R3-091420-1, 20A-TB01-091420-1						

EPH

The RPDs for several polycyclic aromatic hydrocarbons (PAHs) exceeded the criterion of <20%. The results for these PAHs were nondetect in all samples and did not require qualification with the exception of naphthalene in sample 20A-AE28R2-091420-1. The positive naphthalene result in this sample is qualified as estimated (J).

General Reporting Issues

The MassDEP Analytical Protocol Certification Form was reviewed and indicates that the data have met the requirements for “Presumptive Certainty” status for all parameters for which there is a CAM protocol.

Laboratory quantitation limits exceed Project Action Limits (PALs) for several VOCs in the undiluted analyses. Analytical dilutions, if performed, will further elevate those quantitation limits and will cause additional quantitation limits to exceed the PALs. Review elements which may impact sensitivity (i.e., laboratory and field blanks or sample dilutions) have also been reviewed and are summarized, if applicable.

The following samples were diluted at the noted dilution factor due to concentrations of one or more compounds which would have exceeded the calibration range if analyzed undiluted or due to the presence of elevated concentrations of non-target analytes. Sample quantitation limits were raised accordingly.

VOCs

20A-AE24-091420-1: tetrachloroethene 10x, 5x all others
20A-AE26R1-091420-1: P: tetrachloroethene, trichloroethene 20x, 5x all others
20A-AE26R2-091420-1: 2x all
20A-AE26R5-091420-1: trichloroethene 50x, 20x all others
20A-AE28R1-091420-1: trichloroethene 500x, 100x all others
20A-AE28R2-091420-1: tetrachloroethene, trichloroethene 500x, 100x all others
20A-AE28R3-091420-1: 100x all

VPH

20A-AE26R1-091420-1: C5-C8 aliphatics 5x
20A-AE28R2-091420-1: C5-C8 aliphatics 5x

Nitrite

20A-AE26R1-091420-1: 5x
20A-AE28R2-091420-1: 10x

The following methods were used to analyze samples:

VOCs – 8260C
1,4-Dioxane - 8270D
TOC – SM5310-B
VPH – MADEP VPH 5/2004
EPH - MADEP EPH 12/2019
Arsenic, manganese, and iron – 6010D
Nitrate, nitrite, chloride, and sulfate – 300.0
Sulfide – SM4500-S D

AECOM
250 Apollo Drive
Chelmsford, Massachusetts 01824

978.905.2100 tel
978.905.2101 fax

Memorandum

To	Scott Olson	Page	1
Subject	Data Validation/Usability Summary Lockheed Martin-Wilmington, MA Site Phoenix Environmental Laboratories, Inc. SDG: GCG77564		
From	Lori Herberich		
Reviewed by	Paula DiMattei		60552044.19
Date	November 4, 2020		

Data validation was performed on the data for samples collected at the Lockheed Martin site in Wilmington, MA on September 14 and 15, 2020 and tabulated below. Phoenix Environmental Laboratories, Inc. (Phoenix) in Manchester, CT analyzed the samples and reported the data in sample delivery group (SDG) GCG77564.

The data review was performed with reference to Massachusetts Department of Environmental Protection (MADEP) document WSC-CAM-VIIA, *Quality Assurance and Quality Control Guidelines for the Acquisition and Reporting of Analytical Data in Support of Response Actions Conducted Under the Massachusetts Contingency Plan (MCP)*, Revision 2, January 19, 2017, MADEP Bureau of Waste Site Cleanup; MADEP *MCP Representativeness Evaluations and Data Usability Assessments*; Policy #WSC-07-350; September 19, 2007; the applicable MADEP Compendium of Analytical Methods performance standards; and the project-specific work plan. The current EPA Region I Data Validation Guidelines were used as a reference for evaluating the data.

Data for volatile organic compounds (VOCs), 1,4-dioxane, volatile petroleum hydrocarbons (VPH), extractable petroleum hydrocarbons (EPH), select metals, total organic carbon (TOC), nitrate, nitrite, chloride, sulfate, and/or sulfide for the following samples was assessed:

Sample ID
20A-AE28R4-091420-1
20A-AE23R-091420-1
20A-PS1D-091520-1
20A-PS2D-091520-1
20A-TRC301R4-091520-1
20A-TB02-091420-1 (trip blank)

DATA REVIEW ELEMENTS

The assessment was based on the following review elements:

* Chain-of-custody (COC)/sample integrity
* Holding times and sample preservation
* GC/MS tuning[#]

Initial calibration/initial calibration and continuing calibration verifications[#]

*	Laboratory blanks/equipment blanks/trip blanks
*	Surrogate recoveries (%Rs)
*	Labeled compound recovery (1,4-dioxane only)[#]
*	Matrix duplicate (MD)/matrix spike (MS) and/or matrix spike duplicate (MSD) results
	Laboratory control sample/laboratory control duplicate sample (LCS/LCSD) results
*	Interference check standard results[#]
NA	Serial dilution results[#]
NA	Field duplicate results
*	Internal standard (IS) performance[#]
*	General reporting issues

The laboratory is required to completely and accurately narrate all quality control exceptions. The symbol (#) indicates that nonconformances concerning this review element are only described in the SDG case narrative since complete results for these review elements are not a required report deliverable. The symbol (*) indicates that all criteria were met, no issues were narrated, and/or no qualifications were required for these review elements. An "NA" indicates that the parameter was not included as part of this data set or was not applicable to this validation and therefore not reviewed. The data appear valid as reported, were qualified as indicated below if required, and may be used for decision making purposes.

Initial Calibration/Initial Calibration and Continuing Calibration Verifications

VOCs

The laboratory narrated the nonconformances tabulated below for the initial calibration and/or continuing calibration verification (CCV) response factors (RFs), percent relative standard deviations (% RSDs), and percent differences or percent drifts (%Ds) that did not meet the QC limits.

Calibration	Compound	% RSD	QC limit	Actions (Detects/Nondetects)
ICAL for batches 546288, 546448	Chloroethane	22	≤ 20	J/UJ
Associated samples: 20A-AE23R-091420-1, 20A-AE28R4-091420-1, 20A-PS1D-091520-1, 20A-PS2D-091520-1, 20A-TB02-091420-1, 20A-TRC301R4-091520-1				
Calibration	Compound	**RF**	**QC limit**	**Actions (Detects/Nondetects)**
CCAL for batch 546448	Tetrachloroethene	0.183	≥ 0.200	J+/R
Associated samples: 20A-PS1D-091520-1				

LCS/LCSD Results

All percent recoveries (%Rs) and relative percent differences (RPDs) met the QC acceptance limits with the following exceptions. Only nonconformances resulting in data qualification are listed below.

VOCs

LCS ID	Compound	LCS % Recovery	LCSD % Recovery	Lower Limit	Upper Limit	Data Validation Actions* (Detects/Nondetects)
Batch 546288	Diisopropyl ether	68	ok	70	130	J-/UJ
Associated samples: 20A-AE23R-091420-1, 20A-AE28R4-091420-1, 20A-PS2D-091520-1, 20A-TB02-091420-1, 20A-TRC301R4-091520-1						

EPH

The RPDs for several polycyclic aromatic hydrocarbons (PAHs) exceeded the criterion of <20%. The results for these PAHs were nondetect and did not require qualification with the exception of naphthalene. The positive naphthalene result in sample 20A-AE23R-091420-1 is qualified as estimated (J).

General Reporting Issues

The MassDEP Analytical Protocol Certification Form was reviewed and indicates that the data have met the requirements for "Presumptive Certainty" status for all parameters for which there is a CAM protocol.

Laboratory quantitation limits exceed Project Action Limits (PALs) for several VOCs in the undiluted analyses. Analytical dilutions, if performed, will further elevate those quantitation limits and will cause additional quantitation limits to exceed the PALs. Review elements which may impact sensitivity (i.e., laboratory and field blanks or sample dilutions) have also been reviewed and are summarized, if applicable.

The following samples were diluted at the noted dilution factor due to concentrations of one or more compounds which would have exceeded the calibration range if analyzed undiluted or due to the presence of elevated concentrations of non-target compounds. Sample quantitation limits were raised accordingly.

VOCs
20A-AE28R4-091420-1: 100x all
20A-AE23R-091420-1: trichloroethene 5000x, 1000x all others

VPH
20A-AE23R-091420-1: toluene and C5-C8 aliphatics 400x, 20x all others

Nitrite
20A-TRC301R4-091520-1: 2x

The following methods were used to analyze samples:

VOCs – 8260C
1,4-Dioxane - 8270D
TOC – SM5310-B
VPH – MADEP VPH 5/2004
EPH - MADEP EPH 12/2019
Arsenic, manganese, and iron – 6010D
Nitrate, nitrite, chloride, and sulfate – 300.0
Sulfide – SM4500-S D

AECOM
250 Apollo Drive
Chelmsford, Massachusetts 01824

978.905.2100 tel
978.905.2101 fax

Memorandum

To	Scott Olson	Page	1
Subject	Data Validation/Usability Summary Lockheed Martin-Wilmington, MA Site Phoenix Environmental Laboratories, Inc. SDG: GCG79150		
From	Lori Herberich		
Reviewed by	Paula DiMattei		60552044.19
Date	November 4, 2020		

Data validation was performed on the data for samples collected at the Lockheed Martin site in Wilmington, MA on September 15 and 16, 2020 and tabulated below. Phoenix Environmental Laboratories, Inc. (Phoenix) in Manchester, CT analyzed the samples and reported the data in sample delivery group (SDG) GCG79150.

The data review was performed with reference to Massachusetts Department of Environmental Protection (MADEP) document WSC-CAM-VIIA, *Quality Assurance and Quality Control Guidelines for the Acquisition and Reporting of Analytical Data in Support of Response Actions Conducted Under the Massachusetts Contingency Plan (MCP)*, Revision 2, January 19, 2017, MADEP Bureau of Waste Site Cleanup; MADEP *MCP Representativeness Evaluations and Data Usability Assessments*; Policy #WSC-07-350; September 19, 2007; the applicable MADEP Compendium of Analytical Methods performance standards; and the project-specific work plan. The current EPA Region I Data Validation Guidelines were used as a reference for evaluating the data.

Data for volatile organic compounds (VOCs), 1,4-dioxane, select metals, total organic carbon (TOC), nitrate, nitrite, chloride, sulfate, and/or sulfide for the following samples was assessed:

Sample ID	Sample ID
18A-AE109D-091620-1	20A-AE111R3-091620-1
20A-AE104D-091620-1	20A-AE111R5-091620-1
20A-AE104S-091620-1	20A-AE111R6-091620-1
20A-AE110R1-091620-1	20A-PS1S-091520-1
20A-AE110R2-091620-1	20A-PS8D-091520-1
20A-AE110R4-091620-1	20A-TB01-091520-1 (trip blank)
20A-AE110R6-091620-1	20A-TRC301R2-091520-1
20A-AE111R1-091620-1	20A-AE109R5-091620-1

DATA REVIEW ELEMENTS

The assessment was based on the following review elements:

* Chain-of-custody (COC)/sample integrity
* Holding times and sample preservation
* GC/MS tuning[#]

	Initial calibration/initial calibration and continuing calibration verifications[#]
*	Laboratory blanks/equipment blanks/trip blanks
*	Surrogate recoveries (%Rs)
*	Labeled compound recovery (1,4-dioxane only)[#]
*	Matrix duplicate (MD)/matrix spike (MS) and/or matrix spike duplicate (MSD) results
	Laboratory control sample/laboratory control duplicate sample (LCS/LCSD) results
*	Interference check standard results[#]
NA	Serial dilution results[#]
NA	Field duplicate results
*	Internal standard (IS) performance[#]
*	General reporting issues

The laboratory is required to completely and accurately narrate all quality control exceptions. The symbol (#) indicates that nonconformances concerning this review element are only described in the SDG case narrative since complete results for these review elements are not a required report deliverable. The symbol (*) indicates that all criteria were met, no issues were narrated, and/or no qualifications were required for these review elements. An "NA" indicates that the parameter was not included as part of this data set or was not applicable to this validation and therefore not reviewed. The data appear valid as reported, were qualified as indicated below if required, and may be used for decision making purposes.

Initial Calibration/Initial Calibration and Continuing Calibration Verifications

VOCs

The laboratory narrated the nonconformances tabulated below for the initial calibration and/or continuing calibration verification (CCV) response factors (RFs), percent relative standard deviations (% RSDs), percent differences or percent drifts (%Ds) that did not meet the QC limits.

Calibration	Compound	% RSD	QC limit	Actions (Detects/Nondetects)
ICAL for batches 546288, 546396	Chloroethane	22	$\leq$ 20	J/UJ
Associated samples: All				

LCS/LCSD Results

All percent recoveries (%Rs) and relative percent differences (RPDs) met the QC acceptance limits with the following exceptions. Only nonconformances resulting in data qualification are listed below.

VOCs

LCS ID	Compound	LCS % Recovery	LCSD % Recovery	Lower Limit	Upper Limit	Data Validation Actions* (Detects/Nondetects)
Batch 546288	Diisopropyl ether	68	ok	70	130	J-/UJ
Associated samples: All except 20A-PS1S-091520-1 and 20A-PS8D-091520-1						

General Reporting Issues

The MassDEP Analytical Protocol Certification Form was reviewed and indicates that the data have met the requirements for "Presumptive Certainty" status for all parameters for which there is a CAM protocol.

Laboratory quantitation limits exceed Project Action Limits (PALs) for several VOCs in the undiluted analyses. Analytical dilutions, if performed, will further elevate those quantitation limits and will cause additional quantitation limits to exceed the PALs. Review elements which may impact sensitivity (i.e., laboratory and field blanks or sample dilutions) have also been reviewed and are summarized, if applicable.

The following samples were diluted at the noted dilution factor due to concentrations of one or more compounds which would have exceeded the calibration range if analyzed undiluted. Sample quantitation limits were raised accordingly.

VOCs

20A-TRC301R2-091520-1: 10x all

The following methods were used to analyze samples:

VOCs – 8260C
1,4-Dioxane - 8270D
TOC – SM5310-B
Arsenic, manganese, and iron – 6010D
Nitrate, nitrite, chloride, and sulfate – 300.0
Sulfide – SM4500-S D

AECOM
250 Apollo Drive
Chelmsford, Massachusetts 01824

978.905.2100 tel
978.905.2101 fax

Memorandum

To	Scott Olson	Page	1
Subject	Data Validation/Usability Summary Lockheed Martin-Wilmington, MA Site Phoenix Environmental Laboratories, Inc. SDG: GCG80050		
From	Lori Herberich		
Reviewed by	Paula DiMattei		60552044.19
Date	November 5, 2020		

Data validation was performed on the data for samples collected at the Lockheed Martin site in Wilmington, MA on September 16 and 17, 2020 and tabulated below. Phoenix Environmental Laboratories, Inc. (Phoenix) in Manchester, CT analyzed the samples and reported the data in sample delivery group (SDG) GCG80050.

The data review was performed with reference to Massachusetts Department of Environmental Protection (MADEP) document WSC-CAM-VIIA, *Quality Assurance and Quality Control Guidelines for the Acquisition and Reporting of Analytical Data in Support of Response Actions Conducted Under the Massachusetts Contingency Plan (MCP)*, Revision 2, January19, 2017, MADEP Bureau of Waste Site Cleanup; MADEP *MCP Representativeness Evaluations and Data Usability Assessments*; Policy #WSC-07-350; September 19, 2007; the applicable MADEP Compendium of Analytical Methods performance standards; and the project-specific work plan. The current EPA Region I Data Validation Guidelines were used as a reference for evaluating the data.

Data for volatile organic compounds (VOCs), 1,4-dioxane, volatile petroleum hydrocarbons (VPH), extractable petroleum hydrocarbons (EPH), select metals, total organic carbon (TOC), nitrate, nitrite, chloride, sulfate, and/or sulfide for the following samples was assessed:

Sample ID	Sample ID
20A-AE105D-091720-1	20A-AE109R1-091620-1
20A-AE105R1-091720-1	20A-AE109R2-091620-1
20A-AE105R2-091720-1	20A-AE109R3-091620-1
20A-AE105R4-091720-1	20A-AE109R4-091620-1
20A-AE105R5-091720-1	20A-AE109R5-091620-1
20A-AE105S-091720-1	20A-AE109R6-091620-1
20A-AE109R8-091620-1	20A-AE109R7-091620-1
20A-TB01-091620-1 (trip blank)	20A-AE109R7-091620-2 (field duplicate of 20A-AE109R7-091620-1)
20A-AE106D-091720-1	20A-AE109R1-091620-1
20A-AE106S-091720-1	20A-AE106R3-091720-1

DATA REVIEW ELEMENTS

The assessment was based on the following review elements:

*	Chain-of-custody (COC)/sample integrity
*	Holding times and sample preservation
*	GC/MS tuning[#]
	Initial calibration/initial calibration and continuing calibration verifications[#]
*	Laboratory blanks/equipment blanks/trip blanks
*	Surrogate recoveries (%Rs)
*	Labeled compound recovery (1,4-dioxane only)[#]
*	Matrix duplicate (MD)/matrix spike (MS) and/or matrix spike duplicate (MSD) results
	Laboratory control sample/laboratory control duplicate sample (LCS/LCSD) results
*	Interference check standard results[#]
NA	Serial dilution results[#]
NA	Field duplicate results
*	Internal standard (IS) performance[#]
	General reporting issues

The laboratory is required to completely and accurately narrate all quality control exceptions. The symbol (#) indicates that nonconformances concerning this review element are only described in the SDG case narrative since complete results for these review elements are not a required report deliverable. The symbol (*) indicates that all criteria were met, no issues were narrated, and/or no qualifications were required for these review elements. An "NA" indicates that the parameter was not included as part of this data set or was not applicable to this validation and therefore not reviewed. The data appear valid as reported, were qualified as indicated below if required, and may be used for decision making purposes.

Initial Calibration/Initial Calibration and Continuing Calibration Verifications

<u>VOCs</u>

The laboratory narrated the nonconformances tabulated below for the initial calibration and/or continuing calibration verification (CCV) response factors (RFs), percent relative standard deviations (% RSDs), and percent differences or percent drifts (%Ds) that did not meet the QC limits.

Calibration	Compound	% RSD	QC limit	Actions (Detects/Nondetects)
ICAL for batches 546580, 546448	Chloroethane	22	≤ 20	J/UJ
Associated samples: 20A-AE105D-091720-1, 20A-AE105R1-091720-1, 20A-AE105R2-091720-1, 20A-AE105R4-091720-1, 20A-AE105R5-091720-1, 20A-AE109R5-091620-1, 20A-AE109R6-091620-1, 20A-AE105S-091720-1, 20A-AE109R8-091620-1, 20A-TB01-091620-1, 20A-AE106D-091720-1, 20A-AE106S-091720-1, 20A-AE109R1-091620-1, 20A-AE109R2-091620-1, 20A-AE109R3-091620-1, 20A-AE109R4-091620-1, 20A-AE109R7-091620-1, 20A-AE109R7-091620-2				

Calibration	Compound	RF	QC limit	Actions (Detects/Nondetects)
CCAL for batch 546580	Tetrachloroethene	0.190	≥ 0.200	J+/R
Associated samples: 20A-AE105D-091720-1, 20A-AE105R1-091720-1, 20A-AE105R2-091720-1, 20A-AE105R4-091720-1, 20A-AE105R5-091720-1, 20A-AE109R5-091620-1, 20A-AE109R6-091620-1				

Calibration	Compound	RF	QC limit	Actions (Detects/Nondetects)
CCAL for batch 546448	Tetrachloroethene	0.183	≥ 0.200	J+/R
Associated samples: 20A-AE105S-091720-1, 20A-AE109R8-091620-1, 20A-TB01-091620-1, 20A-AE106D-091720-1, 20A-AE106S-091720-1, 20A-AE109R1-091620-1, 20A-AE109R2-091620-1, 20A-AE109R3-091620-1, 20A-AE109R4-091620-1, 20A-AE109R7-091620-1, 20A-AE109R7-091620-2				

LCS/LCSD Results

All percent recoveries (%Rs) and relative percent differences (RPDs) met the QC acceptance limits with the following exceptions. Only nonconformances resulting in data qualification are listed below.

VOCs

LCS ID	Compound	LCS % Recovery	LCSD % Recovery	Lower Limit	Upper Limit	Data Validation Actions* (Detects/Nondetects)
Batch 546580	2,2-Dichloropropane	63	62	70	130	J-/UJ
Associated samples: 20A-AE105D-091720-1, 20A-AE105R1-091720-1, 20A-AE105R2-091720-1, 20A-AE105R4-091720-1, 20A-AE105R5-091720-1, 20A-AE109R5-091620-1, 20A-AE109R6-091620-1						

VPH

LCS ID	Compound	LCS % Recovery	LCSD % Recovery	Lower Limit	Upper Limit	RPD	RPD Limit	Data Validation Actions (Detects/Nondetects)
Batch 545357	Methyl t-butyl ether	ok	ok	30	140	25.9	≤ 25	J/Accept
Associated samples: 20A-AE105R2-091720-1, 20A-AE105R4-091720-1								

General Reporting Issues

The MassDEP Analytical Protocol Certification Form was reviewed and indicates that the data have met the requirements for “Presumptive Certainty” status for all parameters for which there is a CAM protocol.

The dissolved results exceeded the total results by a moderate amount for manganese and iron in sample 20A-AE105R2-091720-1. The total and dissolved manganese and iron results in this sample are qualified as estimated (J).

Laboratory quantitation limits exceed Project Action Limits (PALs) for several VOCs in the undiluted analyses. Analytical dilutions, if performed, will further elevate those quantitation limits and will cause additional quantitation limits to exceed the PALs. Review elements which may impact sensitivity (i.e., laboratory and field blanks or sample dilutions) have also been reviewed and are summarized, if applicable.

The following samples were diluted at the noted dilution factor due to concentrations of one or more compounds which would have exceeded the calibration range if analyzed undiluted or due to the presence of elevated concentrations of non-target analytes. Sample quantitation limits were raised accordingly.

<u>VOCs</u>

20A-AE105R1-091720-1: trichloroethene 10x
20A-AE105R2-091720-1: trichloroethene 10x
20A-AE105R4-091720-1: trichloroethene 20x
20A-AE105R5-091720-1: trichloroethene, cis-1,2-dichloroethene 10x
20A-AE109R4-091620-1: cis-1,2-dichloroethene 5x
20A-AE109R5-091620-1: trichloroethene, cis-1,2-dichloroethene 40x
20A-AE109R6-091620-1: trichloroethene, cis-1,2-dichloroethene 20x
20A-AE109R7-091620-1: cis-1,2-dichloroethene 5x
20A-AE109R7-091620-2: cis-1,2-dichloroethene 5x

<u>Nitrite</u>

20A-AE105S-091720-1: 5x
20A-AE106D-091720-1: 5x

The following methods were used to analyze samples:

VOCs – 8260C
1,4-Dioxane - 8270D
TOC – SM5310-B
VPH – MADEP VPH 5/2004
EPH - MADEP EPH 12/2019
Arsenic, manganese, and iron – 6010D
Nitrate, nitrite, chloride, and sulfate – 300.0
Sulfide – SM4500-S D

AECOM
250 Apollo Drive
Chelmsford, Massachusetts 01824

978.905.2100 tel
978.905.2101 fax

Memorandum

To	Scott Olson	Page	1
Subject	Data Validation/Usability Summary Lockheed Martin-Wilmington, MA Site Phoenix Environmental Laboratories, Inc. SDG: GCG81121		
From	Lori Herberich		
Reviewed by	Paula DiMattei		60552044.19
Date	November 5, 2020		

Data validation was performed on the data for samples collected at the Lockheed Martin site in Wilmington, MA on September 17 and 18, 2020 and tabulated below. Phoenix Environmental Laboratories, Inc. (Phoenix) in Manchester, CT analyzed the samples and reported the data in sample delivery group (SDG) GCG81121.

The data review was performed with reference to Massachusetts Department of Environmental Protection (MADEP) document WSC-CAM-VIIA, *Quality Assurance and Quality Control Guidelines for the Acquisition and Reporting of Analytical Data in Support of Response Actions Conducted Under the Massachusetts Contingency Plan (MCP)*, Revision 2, January19, 2017, MADEP Bureau of Waste Site Cleanup; MADEP *MCP Representativeness Evaluations and Data Usability Assessments*; Policy #WSC-07-350; September 19, 2007; the applicable MADEP Compendium of Analytical Methods performance standards; and the project-specific work plan. The current EPA Region I Data Validation Guidelines were used as a reference for evaluating the data.

Data for volatile organic compounds (VOCs), 1,4-dioxane, volatile petroleum hydrocarbons (VPH), extractable petroleum hydrocarbons (EPH), select metals, and/or total organic carbon (TOC) for the following samples was assessed:

Sample ID	Sample ID
20A-TB01-091720-1 (trip blank)	20A-MW4-091820-2 (field duplicate of 20A-MW4-091820-1)
20A-AE106R3-091720-1	20A-MW4A-091820-1
20A-AE106R5-091720-1	20A-AE106R1-091720-1
20A-AE101S-091820-1	20A-MW7-091720-1
20A-AE101D-091820-1	20A-PS3-091820-1
20A-GZA14A-091720-1	20A-PS5D-091820-1
20A-MW4-091820-1	--

DATA REVIEW ELEMENTS

The assessment was based on the following review elements:

* Chain-of-custody (COC)/sample integrity
* Holding times and sample preservation
* GC/MS tuning[#]

	Initial calibration/initial calibration and continuing calibration verifications[#]
*	Laboratory blanks/equipment blanks/trip blanks
*	Surrogate recoveries (%Rs)
*	Labeled compound recovery (1,4-dioxane only)[#]
	Matrix duplicate (MD)/matrix spike (MS) and/or matrix spike duplicate (MSD) results
	Laboratory control sample/laboratory control duplicate sample (LCS/LCSD) results
*	Interference check standard results[#]
NA	Serial dilution results[#]
*	Field duplicate results
*	Internal standard (IS) performance[#]
*	General reporting issues

The laboratory is required to completely and accurately narrate all quality control exceptions. The symbol (#) indicates that nonconformances concerning this review element are only described in the SDG case narrative since complete results for these review elements are not a required report deliverable. The symbol (*) indicates that all criteria were met, no issues were narrated, and/or no qualifications were required for these review elements. An "NA" indicates that the parameter was not included as part of this data set or was not applicable to this validation and therefore not reviewed. The data appear valid as reported, were qualified as indicated below if required, and may be used for decision making purposes.

Initial Calibration/Initial Calibration and Continuing Calibration Verifications

VOCs

The laboratory narrated the nonconformances tabulated below for the initial calibration and/or continuing calibration verification (CCV) response factors (RFs), percent relative standard deviations (% RSDs), percent differences or percent drifts (%Ds) that did not meet the QC limits.

Calibration	Compound	% RSD	QC limit	Actions (Detects/Nondetects)
ICAL for batches 546580, 546771	Chloroethane	22	≤ 20	J/UJ
Associated samples: 20A-AE101S-091820-1, 20A-MW4-091820-1, 20A-MW4-091820-2, 20A-PS3-091820-1, 20A-TB01-091720-1, 20A-AE106R1-091720-1, 20A-AE106R3-091720-1, 20A-AE106R5-091720-1, 20A-MW7-091720-1, 20A-PS5D-091820-1				
Calibration	**Compound**	**RF**	**QC limit**	**Actions (Detects/Nondetects)**
CCAL for batch 546580	Tetrachloroethene	0.190	≥ 0.200	J+/R
Associated samples: 20A-AE101S-091820-1, 20A-MW4-091820-1, 20A-MW4-091820-2, 20A-PS3-091820-1, 20A-TB01-091720-1				

Calibration	Compound	RF	QC limit	Actions (Detects/Nondetects)
CCAL for batch 546771	Tetrachloroethene	0.189	≥ 0.200	J+/R
Associated samples: 20A-AE106R1-091720-1, 20A-AE106R3-091720-1, 20A-AE106R5-091720-1, 20A-MW7-091720-1, 20A-PS5D-091820-1				

MD/MS/MSD Results

All percent recoveries (%Rs) and relative percent differences (RPDs) met the QC acceptance limits with the following exceptions. Only nonconformances resulting in data qualification are listed below.

VOCs

Parent Sample	Compound	MS % Recovery	MSD % Recovery	Lower Limit	Upper Limit	RPD	RPD Limit	Data Validation Actions (Detects/Nondetects)
20A-AE101D-091820-1	Di-isopropyl ether	ok	ok	70	130	31.0	≤ 20	J/Accept
All samples in this data set are qualified.								

LCS/LCSD Results

All percent recoveries (%Rs) and relative percent differences (RPDs) met the QC acceptance limits with the following exceptions. Only nonconformances resulting in data qualification are listed below.

VOCs

LCS ID	Compound	LCS % Recovery	LCSD % Recovery	Lower Limit	Upper Limit	Data Validation Actions* (Detects/Nondetects)
Batch 546580	2,2-Dichloropropane	63	62	70	130	J-/UJ
Associated samples: 20A-AE101S-091820-1, 20A-MW4-091820-1, 20A-MW4-091820-2, 20A-PS3-091820-1, 20A-TB01-091720-1						

General Reporting Issues

The MassDEP Analytical Protocol Certification Form was reviewed and indicates that the data have met the requirements for “Presumptive Certainty” status for all parameters for which there is a CAM protocol.

Laboratory quantitation limits exceed Project Action Limits (PALs) for several VOCs in the undiluted analyses. Analytical dilutions, if performed, will further elevate those quantitation limits and will cause additional quantitation limits to exceed the PALs. Review elements which may impact sensitivity (i.e., laboratory and field blanks or sample dilutions) have also been reviewed and are summarized, if applicable.

The following methods were used to analyze samples:

VOCs – 8260C
1,4-Dioxane - 8270D
TOC – SM5310-B
VPH – MADEP VPH 5/2004
EPH - MADEP EPH 12/2019
Arsenic, manganese, and iron – 6010D

AECOM
250 Apollo Drive
Chelmsford, Massachusetts 01824

978.905.2100 tel
978.905.2101 fax

Memorandum

To	Scott Olson	Page	1
Subject	Data Validation/Usability Summary Lockheed Martin-Wilmington, MA Site Phoenix Environmental Laboratories, Inc. SDG: GCG81919		
From	Lori Herberich		
Reviewed by	Paula DiMattei		60552044.19
Date	November 5, 2020		

Data validation was performed on the data for samples collected at the Lockheed Martin site in Wilmington, MA on September 21, 2020 and tabulated below. Phoenix Environmental Laboratories, Inc. (Phoenix) in Manchester, CT analyzed the samples and reported the data in sample delivery group (SDG) GCG81919.

The data review was performed with reference to Massachusetts Department of Environmental Protection (MADEP) document WSC-CAM-VIIA, *Quality Assurance and Quality Control Guidelines for the Acquisition and Reporting of Analytical Data in Support of Response Actions Conducted Under the Massachusetts Contingency Plan (MCP)*, Revision 2, January19, 2017, MADEP Bureau of Waste Site Cleanup; MADEP *MCP Representativeness Evaluations and Data Usability Assessments*; Policy #WSC-07-350; September 19, 2007; the applicable MADEP Compendium of Analytical Methods performance standards; and the project-specific work plan. The current EPA Region I Data Validation Guidelines were used as a reference for evaluating the data.

Data for volatile organic compounds (VOCs), volatile petroleum hydrocarbons (VPH), extractable petroleum hydrocarbons (EPH), select metals, total organic carbon (TOC), nitrate, nitrite, chloride, sulfate, and/or sulfide for the following samples was assessed:

Sample ID
20A-EMW11R2-092120-1
20A-GZA6-092120-1
20A-GZA10-092120-1
20A-TB01-092120-1 (trip blank)

DATA REVIEW ELEMENTS

The assessment was based on the following review elements:

* Chain-of-custody (COC)/sample integrity
* Holding times and sample preservation
* GC/MS tuning[#]

  Initial calibration/initial calibration and continuing calibration verifications[#]
* Laboratory blanks/equipment blanks/trip blanks

*	Surrogate recoveries (%Rs)
NA	Labeled compound recovery (1,4-dioxane only)[#]
*	Matrix duplicate (MD)/matrix spike (MS) and/or matrix spike duplicate (MSD) results
	Laboratory control sample/laboratory control duplicate sample (LCS/LCSD) results
*	Interference check standard results[#]
NA	Serial dilution results[#]
NA	Field duplicate results
*	Internal standard (IS) performance[#]
*	General reporting issues

The laboratory is required to completely and accurately narrate all quality control exceptions. The symbol (#) indicates that nonconformances concerning this review element are only described in the SDG case narrative since complete results for these review elements are not a required report deliverable. The symbol (*) indicates that all criteria were met, no issues were narrated, and/or no qualifications were required for these review elements. An "NA" indicates that the parameter was not included as part of this data set or was not applicable to this validation and therefore not reviewed. The data appear valid as reported, were qualified as indicated below if required, and may be used for decision making purposes.

Initial Calibration/Initial Calibration and Continuing Calibration Verifications

VOCs

The laboratory narrated the nonconformances tabulated below for the initial calibration and/or continuing calibration verification (CCV) response factors (RFs), percent relative standard deviations (% RSDs), and percent differences or percent drifts (%Ds) that did not meet the QC limits.

Calibration	Compound	% RSD	QC limit	Actions (Detects/Nondetects)
ICAL for batches 546580	Chloroethane	22	≤ 20	J/UJ
Calibration	**Compound**	**RF**	**QC limit**	**Actions (Detects/Nondetects)**
CCAL for batch 546580	Tetrachloroethene	0.190	≥ 0.200	J+/R
Associated samples: 20A-EMW11R2-092120-1, 20A-TB01-092120-1				

LCS/LCSD Results

All percent recoveries (%Rs) and relative percent differences (RPDs) met the QC acceptance limits with the following exceptions. Only nonconformances resulting in data qualification are listed below.

VOCs

LCS ID	Compound	LCS % Recovery	LCSD % Recovery	Lower Limit	Upper Limit	Data Validation Actions* (Detects/Nondetects)
Batch 546580	2,2-Dichloropropane	63	62	70	130	J-/UJ
Associated samples: 20A-EMW11R2-092120-1, 20A-TB01-092120-1						

General Reporting Issues

The MassDEP Analytical Protocol Certification Form was reviewed and indicates that the data have met the requirements for "Presumptive Certainty" status for all parameters for which there is a CAM protocol.

Laboratory quantitation limits exceed Project Action Limits (PALs) for several VOCs in the undiluted analyses. Analytical dilutions, if performed, will further elevate those quantitation limits and will cause additional quantitation limits to exceed the PALs. Review elements which may impact sensitivity (i.e., laboratory and field blanks or sample dilutions) have also been reviewed and are summarized, if applicable.

The following samples were diluted at the noted dilution factor due to concentrations of one or more compounds which would have exceeded the calibration range if analyzed undiluted or due to the presence of elevated concentrations of nontarget analytes. Sample quantitation limits were raised accordingly.

VOCs

20A-EMW11R2-092120-1: 100x

Nitrite

20A-EMW11R2-092120-1: 5x

The following methods were used to analyze samples:

VOCs – 8260C
TOC – SM5310-B
VPH – MADEP VPH 5/2004
EPH - MADEP EPH 12/2019
Arsenic, manganese, and iron – 6010D
Nitrate, nitrite, chloride, and sulfate – 300.0
Sulfide – SM4500-S D

AECOM
250 Apollo Drive
Chelmsford, Massachusetts 01824

978.905.2100 tel
978.905.2101 fax

Memorandum

To	Scott Olson	Page	1
Subject	Data Validation/Usability Summary Lockheed Martin-Wilmington, MA Site Phoenix Environmental Laboratories, Inc. SDG: GCG83141		
From	Lori Herberich		
Reviewed by	Paula DiMattei		60552044.19
Date	November 5, 2020		

Data validation was performed on the data for samples collected at the Lockheed Martin site in Wilmington, MA on September 21 and 22, 2020 and tabulated below. Phoenix Environmental Laboratories, Inc. (Phoenix) in Manchester, CT analyzed the samples and reported the data in sample delivery group (SDG) GCG83141.

The data review was performed with reference to Massachusetts Department of Environmental Protection (MADEP) document WSC-CAM-VIIA, *Quality Assurance and Quality Control Guidelines for the Acquisition and Reporting of Analytical Data in Support of Response Actions Conducted Under the Massachusetts Contingency Plan (MCP)*, Revision 2, January19, 2017, MADEP Bureau of Waste Site Cleanup; MADEP *MCP Representativeness Evaluations and Data Usability Assessments*; Policy #WSC-07-350; September 19, 2007; the applicable MADEP Compendium of Analytical Methods performance standards; and the project-specific work plan. The current EPA Region I Data Validation Guidelines were used as a reference for evaluating the data.

Data for volatile organic compounds (VOCs), 1,4-dioxane, volatile petroleum hydrocarbons (VPH), extractable petroleum hydrocarbons (EPH), select metals, total organic carbon (TOC), nitrate, nitrite, chloride, sulfate, and/or sulfide for the following samples was assessed:

Sample ID
20A-AE29R1-092220-1
20A-AE29R3-092220-1
20A-AE29R5-092220-1
20A-AE29R6-092220-1
20A-EMW11R1-092120-1
20A-EMW11R3-092120-1
20A-MW5-092120-1
20A-TB02-092120-1 (trip blank)
20A-TRC201R-092220-1

DATA REVIEW ELEMENTS

The assessment was based on the following review elements:

* Chain-of-custody (COC)/sample integrity
* Holding times and sample preservation

*	GC/MS tuning[#]
	Initial calibration/initial calibration and continuing calibration verifications[#]
*	Laboratory blanks/equipment blanks/trip blanks
*	Surrogate recoveries (%Rs)
*	Labeled compound recovery (1,4-dioxane only)[#]
*	Matrix duplicate (MD)/matrix spike (MS) and/or matrix spike duplicate (MSD) results
	Laboratory control sample/laboratory control duplicate sample (LCS/LCSD) results
*	Interference check standard results[#]
NA	Serial dilution results[#]
NA	Field duplicate results
*	Internal standard (IS) performance[#]
*	General reporting issues

The laboratory is required to completely and accurately narrate all quality control exceptions. The symbol (#) indicates that nonconformances concerning this review element are only described in the SDG case narrative since complete results for these review elements are not a required report deliverable. The symbol (*) indicates that all criteria were met, no issues were narrated, and/or no qualifications were required for these review elements. An "NA" indicates that the parameter was not included as part of this data set or was not applicable to this validation and therefore not reviewed. The data appear valid as reported, were qualified as indicated below if required, and may be used for decision making purposes.

Initial Calibration/Initial Calibration and Continuing Calibration Verifications

VOCs

The laboratory narrated the nonconformances tabulated below for the initial calibration and/or continuing calibration verification (CCV) response factors (RFs), percent relative standard deviations (% RSDs), percent differences or percent drifts (%Ds) that did not meet the QC limits.

Calibration	Compound	% RSD	QC limit	Actions (Detects/Nondetects)
ICAL for batches 546771, 546776	Chloroethane	22	≤ 20	J/UJ
Associated samples: 20A-TB02-092120-1, 20A-AE29R1-092220-1, 20A-AE29R3-092220-1, 20A-AE29R5-092220-1, 20A-EMW11R1-092120-1, 20A-EMW11R3-092120-1, 20A-MW5-092120-1, 20A-TRC201R-092220-1				
Calibration	**Compound**	**RF**	**QC limit**	**Actions (Detects/Nondetects)**
CCAL for batch 546771	Tetrachloroethene	0.189	≥ 0.200	J+/R
Associated samples: 20A-TB02-092120-1				

Calibration	Compound	RF	QC limit	Actions (Detects/Nondetects)
CCAL for batch 546776	Tetrachloroethene	0.182	≥ 0.200	J+/R
Associated samples: 20A-AE29R1-092220-1, 20A-AE29R3-092220-1, 20A-AE29R5-092220-1, 20A-EMW11R1-092120-1, 20A-EMW11R3-092120-1, 20A-MW5-092120-1, 20A-TRC201R-092220-1				
Calibration	**Compound**	**% RSD**	**QC limit**	**Actions (Detects/Nondetects)**
ICAL for batch 547174	Trichlorofluoromethane	22	≤ 20	J/UJ
	Dichlorodifluoromethane (CFC-12)	27	≤ 20	J/UJ
	Trichlorotrifluoroethane (Freon TF)	22	≤ 20	J/UJ
Calibration	**Compound**	**RF**	**QC limit**	**Actions (Detects/Nondetects)**
ICAL for batch 547174	Tetrachloroethene	0.186	≥ 0.200	J+/R
Calibration	**Compound**	**RF**	**QC limit**	**Actions (Detects/Nondetects)**
CCAL for batch 547174	Tetrachloroethene	0.192	≥ 0.200	J+/R
Associated samples: 20A-AE29R6-092220-1				

LCS/LCSD Results

All percent recoveries (%Rs) and relative percent differences (RPDs) met the QC acceptance limits with the following exceptions. Only nonconformances resulting in data qualification are listed below.

EPH

LCS ID	Compound	LCS % Recovery	LCSD % Recovery	Lower Limit	Upper Limit	RPD	RPD Limit	Actions (Detects/Nondetects)
Batch 547385	Benzo(a)pyrene	ok	36	30	140	57.4	≤ 25	J/UJ
	Indeno(1,2,3-cd)pyrene	ok	37	30	140	64.2	≤ 25	J/UJ
Associated samples: 20A-AE29R6-092220-1								

General Reporting Issues

The MassDEP Analytical Protocol Certification Form was reviewed and indicates that the data have met the requirements for “Presumptive Certainty” status for all parameters for which there is a CAM protocol.

Laboratory quantitation limits exceed Project Action Limits (PALs) for several VOCs in the undiluted analyses. Analytical dilutions, if performed, will further elevate those quantitation limits and will cause additional quantitation limits to exceed the PALs. Review elements which may impact sensitivity (i.e., laboratory and field blanks or sample dilutions) have also been reviewed and are summarized, if applicable.

The following samples were diluted at the noted dilution factor due to concentrations of one or more compounds which would have exceeded the calibration range if analyzed undiluted or due to the presence of elevated concentrations of nontarget analytes. Sample quantitation limits were raised accordingly.

VOCs

20A-EMW11R3-092120-1: trichloroethene 400x, 40x all others
20A-EMW11R1-092120-1: trichloroethene and PCE 400x, 20x all others
20A-TRC201R-092220-1: cis-1,2-dichloroethene 20x
20A-AE29R6-092220-1: cis-1,2-dichloroethene 5x, 2x all others
20A-AE29R5-092220-1: cis-1,2-dichloroethene 20x

Nitrite

20A-AE29R6-092220-1: 10x

The following methods were used to analyze samples:

VOCs – 8260C
1,4-Dioxane - 8270D
TOC – SM5310-B
VPH – MADEP VPH 5/2004
EPH - MADEP EPH 12/2019
Arsenic, manganese, and iron – 6010D
Nitrate, nitrite, chloride, and sulfate – 300.0
Sulfide – SM4500-S D

AECOM
250 Apollo Drive
Chelmsford, Massachusetts 01824

978.905.2100 tel
978.905.2101 fax

Memorandum

To	Scott Olson	Page	1
Subject	Data Validation/Usability Summary Lockheed Martin-Wilmington, MA Site Phoenix Environmental Laboratories, Inc. SDG: GCG83495		
From	Lori Herberich		
Reviewed by	Paula DiMattei		60552044.19
Date	November 5, 2020		

Data validation was performed on the data for samples collected at the Lockheed Martin site in Wilmington, MA on September 22 and 23, 2020 and tabulated below. Phoenix Environmental Laboratories, Inc. (Phoenix) in Manchester, CT analyzed the samples and reported the data in sample delivery group (SDG) GCG83495.

The data review was performed with reference to Massachusetts Department of Environmental Protection (MADEP) document WSC-CAM-VIIA, *Quality Assurance and Quality Control Guidelines for the Acquisition and Reporting of Analytical Data in Support of Response Actions Conducted Under the Massachusetts Contingency Plan (MCP)*, Revision 2, January19, 2017, MADEP Bureau of Waste Site Cleanup; MADEP *MCP Representativeness Evaluations and Data Usability Assessments*; Policy #WSC-07-350; September 19, 2007; the applicable MADEP Compendium of Analytical Methods performance standards; and the project-specific work plan. The current EPA Region I Data Validation Guidelines were used as a reference for evaluating the data.

Data for volatile organic compounds (VOCs), 1,4-dioxane, volatile petroleum hydrocarbons (VPH), extractable petroleum hydrocarbons (EPH), select metals, total organic carbon (TOC), nitrate, nitrite, chloride, sulfate, and/or sulfide for the following samples was assessed:

Sample ID
20A-AE101R1-092320-1
20A-AE101R1-092320-2 (field duplicate of 20A-AE101R1-092320-1)
20A-AE101R2-092320-1
20A-AE101R3-092320-1
20A-AE3-092320-1
20A-AE3-092320-2 (field duplicate of 20A-AE3-092320-1)
20A-EB01-092220-1 (equipment blank)
20A-EB02-092220-1 (equipment blank)
20A-STM8D-092320-1
20A-STM8R-092320-1
20A-TB01-092220-1 (trip blank)
20A-TRC103-092320-1

DATA REVIEW ELEMENTS

The assessment was based on the following review elements:

*	Chain-of-custody (COC)/sample integrity
*	Holding times and sample preservation
*	GC/MS tuning[#]
	Initial calibration/initial calibration and continuing calibration verifications[#]
*	Laboratory blanks/equipment blanks/trip blanks
*	Surrogate recoveries (%Rs)
*	Labeled compound recovery (1,4-dioxane only)[#]
NA	Matrix duplicate (MD)/matrix spike (MS) and/or matrix spike duplicate (MSD) results
*	Laboratory control sample/laboratory control duplicate sample (LCS/LCSD) results
*	Interference check standard results[#]
NA	Serial dilution results[#]
*	Field duplicate results
*	Internal standard (IS) performance[#]
*	General reporting issues

The laboratory is required to completely and accurately narrate all quality control exceptions. The symbol (#) indicates that nonconformances concerning this review element are only described in the SDG case narrative since complete results for these review elements are not a required report deliverable. The symbol (*) indicates that all criteria were met, no issues were narrated, and/or no qualifications were required for these review elements. An "NA" indicates that the parameter was not included as part of this data set or was not applicable to this validation and therefore not reviewed. The data appear valid as reported, were qualified as indicated below if required, and may be used for decision making purposes.

Initial Calibration/Initial Calibration and Continuing Calibration Verifications

<u>VOCs</u>

The laboratory narrated the nonconformances tabulated below for the initial calibration and/or continuing calibration verification (CCV) response factors (RFs), percent relative standard deviations (% RSDs), and percent differences or percent drifts (%Ds) that did not meet the QC limits.

Calibration	Compound	% RSD	QC limit	Actions (Detects/Nondetects)
ICAL for batches 546836, 546776	Chloroethane	22	≤ 20	J/UJ
Associated samples: 20A-AE101R1-092320-1, 20A-AE101R2-092320-1, 20A-AE101R3-092320-1, 20A-AE3-092320-1, 20A-AE3-092320-2, 20A-EB01-092220-1, 20A-EB02-092220-1, 20A-STM8D-092320-1, 20A-STM8R-092320-1, 20A-TRC103-092320-1, 20A-TB01-092220-1				
Calibration	**Compound**	**RF**	**QC limit**	**Actions (Detects/Nondetects)**
CCAL for batch 546836	Tetrachloroethene	0.188	≥ 0.200	J+/R
Associated samples: 20A-AE101R1-092320-1, 20A-AE101R2-092320-1, 20A-AE101R3-092320-1, 20A-AE3-092320-1, 20A-AE3-092320-2, 20A-EB01-092220-1, 20A-EB02-092220-1, 20A-STM8D-092320-1, 20A-STM8R-092320-1, 20A-TRC103-092320-1				
Calibration	**Compound**	**RF**	**QC limit**	**Actions (Detects/Nondetects)**
CCAL for batch 546776	Tetrachloroethene	0.182	≥ 0.200	J+/R
Associated samples: 20A-TB01-092220-1				
Calibration	**Compound**	**% RSD**	**QC limit**	**Actions (Detects/Nondetects)**
ICAL for batch 547174	Trichlorofluoromethane	22	≤ 20	J/UJ
	Dichlorodifluoromethane (CFC-12)	27	≤ 20	J/UJ
	Trichlorotrifluoroethane (Freon TF)	22	≤ 20	J/UJ
Calibration	**Compound**	**RF**	**QC limit**	**Actions (Detects/Nondetects)**
ICAL for batch 547174	Tetrachloroethene	0.186	≥ 0.200	J+/R
Calibration	**Compound**	**RF**	**QC limit**	**Actions (Detects/Nondetects)**
CCAL for batch 547174	Tetrachloroethene	0.192	≥ 0.200	J+/R
Associated samples: 20A-AE101R1-092320-2				

General Reporting Issues

The MassDEP Analytical Protocol Certification Form was reviewed and indicates that the data have met the requirements for “Presumptive Certainty” status for all parameters for which there is a CAM protocol.

Laboratory quantitation limits exceed Project Action Limits (PALs) for several VOCs in the undiluted analyses. Analytical dilutions, if performed, will further elevate those quantitation limits and will cause additional quantitation limits to exceed the PALs. Review elements which may impact sensitivity (i.e., laboratory and field blanks or sample dilutions) have also been reviewed and are summarized, if applicable.

The following samples were diluted at the noted dilution factor due to concentrations of one or more compounds which would have exceeded the calibration range if analyzed undiluted. Sample quantitation limits were raised accordingly.

VOCs

20A-AE101R1-092320-1: tetrachloroethene 5x
20A-AE101R1-092320-2: tetrachloroethene 20x

The following methods were used to analyze samples:

VOCs – 8260C
1,4-Dioxane - 8270D
TOC – SM5310-B
VPH – MADEP VPH 5/2004
EPH - MADEP EPH 12/2019
Arsenic, manganese, and iron – 6010D
Nitrate, nitrite, chloride, and sulfate – 300.0
Sulfide – SM4500-S D

AECOM
250 Apollo Drive
Chelmsford, Massachusetts 01824

978.905.2100 tel
978.905.2101 fax

Memorandum

To	Scott Olson	Page	1
Subject	Data Validation/Usability Summary Lockheed Martin-Wilmington, MA Site Phoenix Environmental Laboratories, Inc. SDG: GCG84811		
From	Lori Herberich		
Reviewed by	Paula DiMattei		60552044.19
Date	November 5, 2020		

Data validation was performed on the data for samples collected at the Lockheed Martin site in Wilmington, MA on September 23 and 24, 2020 and tabulated below. Phoenix Environmental Laboratories, Inc. (Phoenix) in Manchester, CT analyzed the samples and reported the data in sample delivery group (SDG) GCG84811.

The data review was performed with reference to Massachusetts Department of Environmental Protection (MADEP) document WSC-CAM-VIIA, *Quality Assurance and Quality Control Guidelines for the Acquisition and Reporting of Analytical Data in Support of Response Actions Conducted Under the Massachusetts Contingency Plan (MCP)*, Revision 2, January19, 2017, MADEP Bureau of Waste Site Cleanup; MADEP *MCP Representativeness Evaluations and Data Usability Assessments*; Policy #WSC-07-350; September 19, 2007; the applicable MADEP Compendium of Analytical Methods performance standards; and the project-specific work plan. The current EPA Region I Data Validation Guidelines were used as a reference for evaluating the data.

Data for volatile organic compounds (VOCs), 1,4-dioxane, volatile petroleum hydrocarbons (VPH), extractable petroleum hydrocarbons (EPH), select metals, total organic carbon (TOC), nitrate, nitrite, chloride, sulfate, and/or sulfide for the following samples was assessed:

Sample ID
20A-AE101R5-092420-1
20A-AE4-092320-1
20A-AE4-092320-2 (field duplicate of 20A-AE4-092320-1)
20A-GZA102S-092320-1
20A-GZA105D-092420-1
20A-GZA12-092420-1
20A-IP1R2-092420-1
20A-STM8R1-092320-1
20A-TB01-092320-1 (trip blank)
20A-TRC101-092320-1
20A-TRC102-092320-1
20A-TRC401R-092420-1

DATA REVIEW ELEMENTS

The assessment was based on the following review elements:

*	Chain-of-custody (COC)/sample integrity
	Holding times and sample preservation
*	GC/MS tuning[#]
	Initial calibration/initial calibration and continuing calibration verifications[#]
*	Laboratory blanks/equipment blanks/trip blanks
*	Surrogate recoveries (%Rs)
*	Labeled compound recovery (1,4-dioxane only)[#]
	Matrix duplicate (MD)/matrix spike (MS) and/or matrix spike duplicate (MSD) results
*	Laboratory control sample/laboratory control duplicate sample (LCS/LCSD) results
*	Interference check standard results[#]
NA	Serial dilution results[#]
*	Field duplicate results
*	Internal standard (IS) performance[#]
*	General reporting issues

The laboratory is required to completely and accurately narrate all quality control exceptions. The symbol (#) indicates that nonconformances concerning this review element are only described in the SDG case narrative since complete results for these review elements are not a required report deliverable. The symbol (*) indicates that all criteria were met, no issues were narrated, and/or no qualifications were required for these review elements. An "NA" indicates that the parameter was not included as part of this data set or was not applicable to this validation and therefore not reviewed. The data appear valid as reported, were qualified as indicated below if required, and may be used for decision making purposes.

Holding Times and Sample Preservation

Sample 20A-GZA105D-092420-1 was extracted past the 7-day extraction holding time for 1,4-dioxane. The positive result reported for 1,4-dioxane for this sample is qualified as estimated (J-), with a potential low bias.

Initial Calibration/Initial Calibration and Continuing Calibration Verifications

<u>VOCs</u>

The laboratory narrated the nonconformances tabulated below for the initial calibration and/or continuing calibration verification (CCV) response factors (RFs), percent relative standard deviations (% RSDs), and percent differences or percent drifts (%Ds) that did not meet the QC limits.

Calibration	Compound	% RSD	QC limit	Actions (Detects/Nondetects)
ICAL for batches 547525, 547527, 547726	Bromoethane	28	≤ 20	J/UJ
Associated samples: 20A-AE4-092320-1, 20A-AE4-092320-2, 20A-GZA102S-092320-1, 20A-GZA12-092420-1, 20A-STM8R1-092320-1, 20A-TB01-092320-1, 20A-TRC101-092320-1, 20A-TRC102-092320-1, 20A-TRC401R-092420-1, 20A-GZA105D-092420-, 20A-AE101R5-092420-1, 20A-IP1R2-092420-1				
Calibration	**Compound**	**RF**	**QC limit**	**Actions (Detects/Nondetects)**
CCAL for batch 547525	Tetrachloroethene	0.198	≥ 0.200	J+/R
Associated samples: 20A-AE4-092320-1, 20A-AE4-092320-2, 20A-GZA102S-092320-1, 20A-GZA12-092420-1, 20A-STM8R1-092320-1, 20A-TB01-092320-1, 20A-TRC101-092320-1, 20A-TRC102-092320-1, 20A-TRC401R-092420-1				
Calibration	**Compound**	**RF**	**QC limit**	**Actions (Detects/Nondetects)**
CCAL for batch 547527	Tetrachloroethene	0.198	≥ 0.200	J+/R
Associated samples: 20A-GZA105D-092420-1				
Calibration	**Compound**	**RF**	**QC limit**	**Actions (Detects/Nondetects)**
CCAL for batch 547922	Tetrachloroethene	0.188	≥ 0.200	J+/R
Associated samples: 20A-IP1R2-092420-1				

MD/MS/MSD Results

All percent recoveries (%Rs) and relative percent differences (RPDs) met the QC acceptance limits with the following exceptions. Only nonconformances resulting in data qualification are listed below.EPH

Parent Sample	Compound	MS % Recovery	Lower Limit	Upper Limit	Data Validation Actions (Detects/Nondetects)
20A-TRC102-092320-1	Benzo(k)fluoranthene	33	40	140	J-/UJ
The parent sample only is qualified.					

General Reporting Issues

The MassDEP Analytical Protocol Certification Form was reviewed and indicates that the data have met the requirements for “Presumptive Certainty” status for all parameters for which there is a CAM protocol, with the exception of 1,4-dioxane in sample 20A-GZA105D-092420-1. The 7-day holding time was exceeded for the extraction of this sample for 1,4-dioxane, therefore, Presumptive Certainty status was not achieved for the reported result. The result is usable as an estimated concentration.

Laboratory quantitation limits exceed Project Action Limits (PALs) for several VOCs in the undiluted analyses. Analytical dilutions, if performed, will further elevate those quantitation limits and will cause additional quantitation limits to exceed the PALs. Review elements which may impact sensitivity (i.e., laboratory and field blanks or sample dilutions) have also been reviewed and are summarized, if applicable.

The following samples were diluted at the noted dilution factor due to concentrations of one or more compounds which would have exceeded the calibration range if analyzed undiluted. Sample quantitation limits were raised accordingly.

VOCs

20A-IP1R2-092420-1: tetrachloroethene and trichloroethene 100x, 20x all others
20A-TRC401R-092420-1: trichloroethene 200x, 20x all others
20A-AE101R5-092420-1: trichloroethene 50x, 20x all others

The following methods were used to analyze samples:

VOCs – 8260C
1,4-Dioxane - 8270D
TOC – SM5310-B
VPH – MADEP VPH 5/2004
EPH - MADEP EPH 12/2019
Arsenic, manganese, and iron – 6010D
Nitrate, nitrite, chloride, and sulfate – 300.0
Sulfide – SM4500-S D

AECOM
250 Apollo Drive
Chelmsford, Massachusetts 01824

978.905.2100 tel
978.905.2101 fax

Memorandum

To	Scott Olson	Page	1
Subject	Data Validation/Usability Summary Lockheed Martin-Wilmington, MA Site Phoenix Environmental Laboratories, Inc. SDG: GCG84829		
From	Lori Herberich		
Reviewed by	Paula DiMattei		60552044.19
Date	November 5, 2020		

Data validation was performed on the data for samples collected at the Lockheed Martin site in Wilmington, MA on September 24, 2020 and tabulated below. Phoenix Environmental Laboratories, Inc. (Phoenix) in Manchester, CT analyzed the samples and reported the data in sample delivery group (SDG) GCG84829.

The data review was performed with reference to Massachusetts Department of Environmental Protection (MADEP) document WSC-CAM-VIIA, *Quality Assurance and Quality Control Guidelines for the Acquisition and Reporting of Analytical Data in Support of Response Actions Conducted Under the Massachusetts Contingency Plan (MCP)*, Revision 2, January19, 2017, MADEP Bureau of Waste Site Cleanup; MADEP *MCP Representativeness Evaluations and Data Usability Assessments*; Policy #WSC-07-350; September 19, 2007; the applicable MADEP Compendium of Analytical Methods performance standards; and the project-specific work plan. The current EPA Region I Data Validation Guidelines were used as a reference for evaluating the data.

Data for volatile organic compounds (VOCs), 1,4-dioxane, volatile petroleum hydrocarbons (VPH), extractable petroleum hydrocarbons (EPH), select metals, total organic carbon (TOC), nitrate, nitrite, chloride, sulfate, and/or sulfide for the following samples was assessed:

Sample ID
20A-AE101R6-092420-1
20A-GZA101R-092420-1
20A-GZA105R-092420-1
20A-GZA105S-092420-1
20A-STM3D-092420-1

DATA REVIEW ELEMENTS

The assessment was based on the following review elements:

* Chain-of-custody (COC)/sample integrity
* Holding times and sample preservation
* GC/MS tuning[#]

Initial calibration/initial calibration and continuing calibration verifications[#]

*	Laboratory blanks/equipment blanks/trip blanks
*	Surrogate recoveries (%Rs)
*	Labeled compound recovery (1,4-dioxane only)[#]
NA	Matrix duplicate (MD)/matrix spike (MS) and/or matrix spike duplicate (MSD) results
	Laboratory control sample/laboratory control duplicate sample (LCS/LCSD) results
*	Interference check standard results[#]
NA	Serial dilution results[#]
*	Field duplicate results
*	Internal standard (IS) performance[#]
*	General reporting issues

The laboratory is required to completely and accurately narrate all quality control exceptions. The symbol (#) indicates that nonconformances concerning this review element are only described in the SDG case narrative since complete results for these review elements are not a required report deliverable. The symbol (*) indicates that all criteria were met, no issues were narrated, and/or no qualifications were required for these review elements. An "NA" indicates that the parameter was not included as part of this data set or was not applicable to this validation and therefore not reviewed. The data appear valid as reported, were qualified as indicated below if required, and may be used for decision making purposes.

Initial Calibration/Initial Calibration and Continuing Calibration Verifications

VOCs

The laboratory narrated the nonconformances tabulated below for the initial calibration and/or continuing calibration verification (CCV) response factors (RFs), percent relative standard deviations (% RSDs), percent differences or percent drifts (%Ds) that did not meet the QC limits.

Calibration	Compound	% RSD	QC limit	Actions (Detects/Nondetects)
ICAL for batches 547922, 548114	Bromoethane	28	≤ 20	J/UJ
Associated samples: 20A-AE101R6-092420-1, 20A-GZA105R-092420-1, 20A-GZA105S-092420-1, 20A-STM3D-092420-1, 20A-GZA101R-092420-1				
Calibration	**Compound**	**RF**	**QC limit**	**Actions (Detects/Nondetects)**
CCAL for batch 547922	Tetrachloroethene	0.188	≥ 0.200	J+/R
Associated samples: 20A-AE101R6-092420-1, 20A-GZA105R-092420-1, 20A-GZA105S-092420-1, 20A-STM3D-092420-1				

Calibration	Compound	RF	QC limit	Actions (Detects/Nondetects)
CCAL for batch 548114	Acetone	0.097	≥ 0.100	J+/R
Associated samples: 20A-GZA101R-092420-1				

General Reporting Issues

The MassDEP Analytical Protocol Certification Form was reviewed and indicates that the data have met the requirements for "Presumptive Certainty" status for all parameters for which there is a CAM protocol.

Laboratory quantitation limits exceed Project Action Limits (PALs) for several VOCs in the undiluted analyses. Analytical dilutions, if performed, will further elevate those quantitation limits and will cause additional quantitation limits to exceed the PALs. Review elements which may impact sensitivity (i.e., laboratory and field blanks or sample dilutions) have also been reviewed and are summarized, if applicable.

The following samples were diluted at the noted dilution factor due to concentrations of one or more compounds which would have exceeded the calibration range if analyzed undiluted. Sample quantitation limits were raised accordingly.

VOCs

20A-AE101R6-092420-1: 20x all
20A-GZA105R-092420-1: 100x all
20A-GZA101R-092420-1: tetrachloroethene and trichloroethene 5x

The following methods were used to analyze samples:

VOCs – 8260C
1,4-Dioxane - 8270D
TOC – SM5310-B
VPH – MADEP VPH 5/2004
EPH - MADEP EPH 12/2019
Arsenic, manganese, and iron – 6010D
Nitrate, nitrite, chloride, and sulfate – 300.0
Sulfide – SM4500-S D

AECOM
250 Apollo Drive
Chelmsford, Massachusetts 01824

978.905.2100 tel
978.905.2101 fax

Memorandum

To	Scott Olson	Page	1
Subject	Data Validation/Usability Summary Lockheed Martin-Wilmington, MA Site Phoenix Environmental Laboratories, Inc. SDG: GCG85555		
From	Lori Herberich		
Reviewed by	Paula DiMattei		60552044.19
Date	November 5, 2020		

Data validation was performed on the data for samples collected at the Lockheed Martin site in Wilmington, MA on September 25, 2020 and tabulated below. Phoenix Environmental Laboratories, Inc. (Phoenix) in Manchester, CT analyzed the samples and reported the data in sample delivery group (SDG) GCG85555.

The data review was performed with reference to Massachusetts Department of Environmental Protection (MADEP) document WSC-CAM-VIIA, *Quality Assurance and Quality Control Guidelines for the Acquisition and Reporting of Analytical Data in Support of Response Actions Conducted Under the Massachusetts Contingency Plan (MCP)*, Revision 2, January19, 2017, MADEP Bureau of Waste Site Cleanup; MADEP *MCP Representativeness Evaluations and Data Usability Assessments*; Policy #WSC-07-350; September 19, 2007; the applicable MADEP Compendium of Analytical Methods performance standards; and the project-specific work plan. The current EPA Region I Data Validation Guidelines were used as a reference for evaluating the data.

Data for volatile organic compounds (VOCs), 1,4-dioxane, volatile petroleum hydrocarbons (VPH), extractable petroleum hydrocarbons (EPH), select metals, total organic carbon (TOC), nitrate, nitrite, chloride, sulfate, and/or sulfide for the following samples was assessed:

Sample ID
20A-TB01-092520-1 (trip blank)
20A-PZ2S-092520-1

DATA REVIEW ELEMENTS

The assessment was based on the following review elements:

* Chain-of-custody (COC)/sample integrity
* Holding times and sample preservation
* GC/MS tuning[#]

  Initial calibration/initial calibration and continuing calibration verifications[#]
* Laboratory blanks/equipment blanks/trip blanks

*	Surrogate recoveries (%Rs)
*	Labeled compound recovery (1,4-dioxane only)[#]
NA	Matrix duplicate (MD)/matrix spike (MS) and/or matrix spike duplicate (MSD) results
*	Laboratory control sample/laboratory control duplicate sample (LCS/LCSD) results
*	Interference check standard results[#]
NA	Serial dilution results[#]
NA	Field duplicate results
*	Internal standard (IS) performance[#]
*	General reporting issues

The laboratory is required to completely and accurately narrate all quality control exceptions. The symbol (#) indicates that nonconformances concerning this review element are only described in the SDG case narrative since complete results for these review elements are not a required report deliverable. The symbol (*) indicates that all criteria were met, no issues were narrated, and/or no qualifications were required for these review elements. An "NA" indicates that the parameter was not included as part of this data set or was not applicable to this validation and therefore not reviewed. The data appear valid as reported, were qualified as indicated below if required, and may be used for decision making purposes.

Initial Calibration/Initial Calibration and Continuing Calibration Verifications

VOCs

The laboratory narrated the nonconformances tabulated below for the initial calibration and/or continuing calibration verification (CCV) response factors (RFs), percent relative standard deviations (% RSDs), and percent differences or percent drifts (%Ds) that did not meet the QC limits.

Calibration	Compound	% RSD	QC limit	Actions (Detects/Nondetects)
ICAL for batch 547726	Bromoethane	28	≤ 20	J/UJ
Associated samples: All				

General Reporting Issues

The MassDEP Analytical Protocol Certification Form was reviewed and indicates that the data have met the requirements for "Presumptive Certainty" status for all parameters for which there is a CAM protocol.

Laboratory quantitation limits exceed Project Action Limits (PALs) for several VOCs in the undiluted analyses. Analytical dilutions, if performed, will further elevate those quantitation limits and will cause additional quantitation limits to exceed the PALs. Review elements which may impact sensitivity (i.e., laboratory and field blanks or sample dilutions) have also been reviewed and are summarized, if applicable.

The following methods were used to analyze samples:

VOCs – 8260C
VPH – MADEP VPH 5/2004
EPH - MADEP EPH 12/2019

AECOM
250 Apollo Drive
Chelmsford, Massachusetts 01824

978.905.2100 tel
978.905.2101 fax

Memorandum

To	Scott Olson	Page	1
Subject	Data Validation/Usability Summary Lockheed Martin-Wilmington, MA Site Pace Analytical Gulf Coast Report 220091126		
From	Linda Adams		
Reviewed by	Lori Herberich		60552044.19
Date	October 25, 2020		

Data validation was performed on the data for samples collected at the Lockheed Martin site in Wilmington, MA on September 9 and 10, 2020 and tabulated below. Pace Analytical Gulf Coast (PACE) in Baton Rouge, LA analyzed the samples and reported the data in report number 220091126.

The data review was performed with reference to method Dissolved Gases – Laboratory SOP AM20GAX based on RSK 175, current Region 1 - EPA New England validation guidelines, and the project-specific work plan.

Sample ID	Matrix
20A-AE102M-090920-1	Bubble Strip
20A-AE102M-090920-2 (field duplicate of 20A-AE102M-090920-1)	Bubble Strip
20A-AE108R1-090920-1	Bubble Strip
20A-AE102RR6-090920-1	Bubble Strip
20A-AE103D-091020-1	Bubble Strip
20A-AE103R5-091020-1	Bubble Strip
20A-AE103R1-091020-1	Bubble Strip
20A-AE103R5-091020-1	Bubble Strip

The following method was used to analyze the samples:

Dissolved Gases– Laboratory SOP AM20GAX based on RSK 175 [Hydrogen, Methane, Ethane, Ethene, Acetylene and Propane]

DATA REVIEW ELEMENTS

The assessment was based on the following review elements:

* Chain-of-custody (COC)/sample integrity
* Holding times and sample preservation

NA	Initial calibration/initial calibration and continuing calibration verifications
*	Laboratory blanks
NA	Trip blank/Equipment blank
NA	Matrix duplicate (MD)/matrix spike (MS) and/or matrix spike duplicate (MSD) results
*	Laboratory control sample/laboratory control duplicate sample (LCS/LCSD) results
*	Field duplicate results
*	General reporting issues

The symbol (*) indicates that all criteria were met, no issues were narrated, and/or no qualifications were required for these review elements. An "NA" indicates that the parameter was not included as part of this data set or was not applicable to this validation and therefore not reviewed. Qualification of the data was not required. The data appear valid as reported and may be used for decision making purposes.

COC/Sample Integrity

Sample 20A-AE**101R5**-091020 was incorrectly listed on the COC as 20A-AE**100R1**-091020-1. Based on communications with AECOM, the sample ID was correctly logged in and reported as 20A-AE**101R5**-091020. No validation actions were taken on this basis.

AECOM
250 Apollo Drive
Chelmsford, Massachusetts 01824

978.905.2100 tel
978.905.2101 fax

Memorandum

To	Scott Olson	Page	1
Subject	Data Validation/Usability Summary Lockheed Martin-Wilmington, MA Site Pace Analytical Gulf Coast Report 220091128		
From	Linda Adams		
Reviewed by	Lori Herberich		60552044.19
Date	October 25, 2020		

Data validation was performed on the data for samples collected at the Lockheed Martin site in Wilmington, MA on September 9 and 10, 2020 and tabulated below. Pace Analytical Gulf Coast (PACE) in Baton Rouge, LA analyzed the samples and reported the data in report number 220091128.

The data review was performed with reference to method Dissolved Gases – Laboratory SOP AM20GAX based on RSK 175, current Region 1 - EPA New England validation guidelines, and the project-specific work plan.

Sample ID	Matrix
20A-TB01-090920-1	Trip Blank
20A-AE102M-090920-1	Water
20A-AE102M-090920-2 (field duplicate of 20A-AE102M-090920-1)	Water
20A-AE108R1-090920-1	Water
20A-AE102RR6-090920-1	Water
20A-AE103D-091020-1	Water
20A-AE100R5-091020-1	Water
20A-AE103R5-091020-1	Water
20A-AE103R1-091020-1	Water

The following method was used to analyze the samples:

Dissolved Gases– Laboratory SOP AM20GAX based on RSK 175 [Hydrogen, Methane, Ethane, Ethene, Acetylene and Propane]

DATA REVIEW ELEMENTS

The assessment was based on the following review elements:

* Chain-of-custody (COC)/sample integrity

*	Holding times and sample preservation
NA	Initial calibration/initial calibration and continuing calibration verifications
*	Laboratory blanks
*	Trip blank/Equipment blank
NA	Matrix duplicate (MD)/matrix spike (MS) and/or matrix spike duplicate (MSD) results
*	Laboratory control sample/laboratory control duplicate sample (LCS/LCSD) results
*	Field duplicate results
*	General reporting issues

The symbol (*) indicates that all criteria were met, no issues were narrated, and/or no qualifications were required for these review elements. An “NA” indicates that the parameter was not included as part of this data set or was not applicable to this validation and therefore not reviewed. Qualification of the data was not required. The data appear valid as reported and may be used for decision making purposes.

AECOM
250 Apollo Drive
Chelmsford, Massachusetts 01824

978.905.2100 tel
978.905.2101 fax

Memorandum

To	Scott Olson	Page	1
Subject	Data Validation/Usability Summary Lockheed Martin-Wilmington, MA Site Pace Analytical Gulf Coast Report 220092202		
From	Linda Adams		
Reviewed by	Lori Herberich		60552044.19
Date	October 25, 2020		

Data validation was performed on the data for samples collected at the Lockheed Martin site in Wilmington, MA on September 14, 15, 16, and 17, 2020 and tabulated below. Pace Analytical Gulf Coast (PACE) in Baton Rouge, LA analyzed the samples and reported the data in report number 220092202.

The data review was performed with reference to method Dissolved Gases – Laboratory SOP AM20GAX based on RSK 175, current Region 1 - EPA New England validation guidelines, and the project-specific work plan.

Sample ID	Matrix
20A-AE28R2-091420-1	Water
20A-AE26R1-091420-1	Water
20A-TRC301R4-091520-1	Water
20A-AE109R5-091620-1	Water
20A-AE105S-091720-1	Water
20A-AE105R2-091720-1	Water
20A-AE106D-091720-1	Water
20A-AE106R3-091720-1	Water
20A-TB01-091420-1	Trip Blank
20A-AE26R1-091420-1	Bubble Strip
20A-AE28R2-091420-1	Bubble Strip
20A-TRC301R4-091520-1	Bubble Strip
20A-AE109R5-091620-1	Bubble Strip
20A-AE105S-091720-1	Bubble Strip
20A-AE106D-091720-1	Bubble Strip
20A-AE105R2-091720-1	Bubble Strip
20A-AE106R3-091720-1	Bubble Strip

The following method was used to analyze the samples:

Dissolved Gases– Laboratory SOP AM20GAX based on RSK 175 [Hydrogen, Methane, Ethane, Ethene, Acetylene and Propane]

DATA REVIEW ELEMENTS

The assessment was based on the following review elements:

*	Chain-of-custody (COC)/sample integrity
*	Holding times and sample preservation
NA	Initial calibration/initial calibration and continuing calibration verifications
*	Laboratory blanks
*	Trip blank/Equipment blank
NA	Matrix duplicate (MD)/matrix spike (MS) and/or matrix spike duplicate (MSD) results
*	Laboratory control sample/laboratory control duplicate sample (LCS/LCSD) results
NA	Field duplicate results
*	General reporting issues

The symbol (*) indicates that all criteria were met, no issues were narrated, and/or no qualifications were required for these review elements. An “NA” indicates that the parameter was not included as part of this data set or was not applicable to this validation and therefore not reviewed. Qualification of the data was not required. The data appear valid as reported and may be used for decision making purposes.

AECOM
250 Apollo Drive
Chelmsford, Massachusetts 01824

978.905.2100 tel
978.905.2101 fax

Memorandum

To	Scott Olson	Page	1
Subject	Data Validation/Usability Summary Lockheed Martin-Wilmington, MA Site Pace Analytical Gulf Coast Report 220092625		
From	Linda Adams		
Reviewed by	Lori Herberich		60552044.19
Date	October 25, 2020		

Data validation was performed on the data for samples collected at the Lockheed Martin site in Wilmington, MA on September 21, 22, 23 and 24, 2020 and tabulated below. Pace Analytical Gulf Coast (PACE) in Baton Rouge, LA analyzed the samples and reported the data in report number 220092625.

The data review was performed with reference to method Dissolved Gases – Laboratory SOP AM20GAX based on RSK 175, current Region 1 - EPA New England validation guidelines, and the project-specific work plan.

Sample ID	Matrix
20A-TB01-092120-1	Trip Blank
20A-EMW11R2-092120-1	Water
20A-EB01-092220-1	Equipment Blank
20A-AE29R6-092220-1	Water
20A-STM8R1-092320-1	Water
20A-GZA12-092420-1	Water
20A-GZA101R-092420-1	Water
20A-EMW11R2-092120-1	Bubble Strip
20A-AE29R6-092220-1	Bubble Strip
20A-GZA12-092420-1	Bubble Strip
20A-STM8R1-092420-1	Bubble Strip
20A-GZA101R-092420-1	Bubble Strip

The following method was used to analyze the samples:

Dissolved Gases– Laboratory SOP AM20GAX based on RSK 175 [Hydrogen, Methane, Ethane, Ethene, Acetylene and Propane]

DATA REVIEW ELEMENTS

The assessment was based on the following review elements:

*	Chain-of-custody (COC)/sample integrity
*	Holding times and sample preservation
NA	Initial calibration/initial calibration and continuing calibration verifications
*	Laboratory blanks
*	Trip blank/Equipment blank
NA	Matrix duplicate (MD)/matrix spike (MS) and/or matrix spike duplicate (MSD) results
*	Laboratory control sample/laboratory control duplicate sample (LCS/LCSD) results
NA	Field duplicate results
*	General reporting issues

The symbol (*) indicates that all criteria were met, no issues were narrated, and/or no qualifications were required for these review elements. An “NA” indicates that the parameter was not included as part of this data set or was not applicable to this validation and therefore not reviewed. Qualification of the data was not required. The data appear valid as reported and may be used for decision making purposes.

AECOM
250 Apollo Drive
Chelmsford, Massachusetts 01824

978.905.2100 tel
978.905.2101 fax

Memorandum

To	Scott Olson	Page	1
Subject	Data Validation Summary Lockheed Martin-Wilmington, MA Site Alpha Analytical Laboratory: L2037809		
From	Paula DiMattei		
Reviewed by	Lori Herberich		60552044.19
Date	November 9, 2020		

Data validation was performed on the data for samples collected at the Lockheed Martin site in Wilmington, MA on September 9-11, 2020 and tabulated below. Alpha Analytical Laboratory (ALPHA) in Mansfield, MA analyzed the samples and reported the data in laboratory report L2037809.

The data were reviewed for compliance with Massachusetts Department of Environmental Protection (MADEP) document WSC-CAM-VIIA, *Quality Assurance and Quality Control Guidelines for the Acquisition and Reporting of Analytical Data in Support of Response Actions Conducted Under the Massachusetts Contingency Plan (MCP)*, Revision 1, January 19, 2017, MADEP Bureau of Waste Site Cleanup; MADEP *MCP Representativeness Evaluations and Data Usability Assessments*; Policy #WSC-07-350; September 19, 2007. In the absence of an applicable MADEP Compendium of Analytical Methods performance standard, the laboratory's PIANO (Parafinic, Isoparafinic, Aromatic, Naphthenic, Olefinic) method was referenced. Current EPA Region I Data Validation Guidelines were used as a reference for evaluating the data.

Sample IDs
20A-AE102RR6-090920-1
20A-AE103R1-091020-1
20A-AE104R4-091120-1

DATA REVIEW ELEMENTS

The assessment was based on the following review elements:

*	Chain-of-custody (COC)/sample integrity
*	Holding times and sample preservation
*	GC/MS tuning
	Initial calibration/initial calibration and continuing calibration verifications
*	Laboratory blanks/equipment blanks
*	Surrogate recoveries (%Rs)
NA	Matrix duplicate (MD)/matrix spike (MS) and/or matrix spike duplicate (MSD) results

*	Laboratory control sample/laboratory control duplicate sample (LCS/LCSD) results
NA	Field duplicate results
*	Internal standard (IS) performance
*	General reporting issues

The symbol (*) indicates that all criteria were met, no issues were narrated, and/or no qualifications were required for these review elements. An "NA" indicates that the parameter was not included as part of this data set or was not applicable to this validation and therefore not reviewed. The PIANO data appear valid as reported, were qualified as indicated below, and may be used for decision making purposes.

Initial Calibration/Initial Calibration and Continuing Calibration Verifications

The initial calibration percent relative standard deviations (% RSDs) and the initial calibration and continuing calibration verification (ICV and CCV) percent differences (%Ds) were reviewed for conformance to the QC acceptance criteria. Nonconformances are tabulated below.

Calibration	Compound	%D	QC limit	Actions (Detects/Nondetects)
ICV 9/19/2020	Pentane	32.1	≤ 20%	J/UJ
	t-Butyl alcohol	32.3	≤ 20%	J/UJ
	Dodecane	28.6	≤ 20%	J/UJ
CCV 9/22/2020	Ethyl-t-butyl ether	37.8	≤ 25%	J/UJ
	3-Methylheptane	-249	≤ 25%	J/UJ
	Isopropylbenzene	55.5	≤ 25%	J/UJ
	Pentadecane	26.8	≤ 25%	J/UJ
Associated samples: All samples				

General Reporting Issues

All sample results detected at concentrations less than the lowest calibration standard but greater than the MDL are qualified by the laboratory as estimated (J). This "J" qualifier is retained during data validation.

AECOM
250 Apollo Drive
Chelmsford, Massachusetts 01824

978.905.2100 tel
978.905.2101 fax

Memorandum

To	Scott Olson	Page	1
Subject	Data Validation Summary Lockheed Martin-Wilmington, MA Site Alpha Analytical Laboratory: L2040277		
From	Paula DiMattei		
Reviewed by	Lori Herberich		60552044.19
Date	November 9, 2020		

Data validation was performed on the data for samples collected at the Lockheed Martin site in Wilmington, MA on September 21 and 23, 2020 and tabulated below. Alpha Analytical Laboratory (ALPHA) in Mansfield, MA analyzed the samples and reported the data in laboratory report L2040277.

The data were reviewed for compliance with Massachusetts Department of Environmental Protection (MADEP) document WSC-CAM-VIIA, *Quality Assurance and Quality Control Guidelines for the Acquisition and Reporting of Analytical Data in Support of Response Actions Conducted Under the Massachusetts Contingency Plan (MCP)*, Revision 1, January 19, 2017, MADEP Bureau of Waste Site Cleanup; MADEP *MCP Representativeness Evaluations and Data Usability Assessments*; Policy #WSC-07-350; September 19, 2007. In the absence of an applicable MADEP Compendium of Analytical Methods performance standard, the laboratory's PIANO (Parafinic, Isoparafinic, Aromatic, Naphthenic, Olefinic) method was referenced. Current EPA Region I Data Validation Guidelines were used as a reference for evaluating the data.

Sample IDs
20A-AE3-092320-1
20A-EMW11R2-092120-1
20A-TRC101-092320-1

DATA REVIEW ELEMENTS

The assessment was based on the following review elements:

*	Chain-of-custody (COC)/sample integrity
*	Holding times and sample preservation
*	GC/MS tuning
	Initial calibration/initial calibration and continuing calibration verifications
*	Laboratory blanks/equipment blanks
*	Surrogate recoveries (%Rs)
NA	Matrix duplicate (MD)/matrix spike (MS) and/or matrix spike duplicate (MSD) results

*	Laboratory control sample/laboratory control duplicate sample (LCS/LCSD) results
NA	Field duplicate results
*	Internal standard (IS) performance
*	General reporting issues

The symbol (*) indicates that all criteria were met, no issues were narrated, and/or no qualifications were required for these review elements. An "NA" indicates that the parameter was not included as part of this data set or was not applicable to this validation and therefore not reviewed. The PIANO data appear valid as reported, were qualified as indicated below, and may be used for decision making purposes.

Initial Calibration/Initial Calibration and Continuing Calibration Verifications

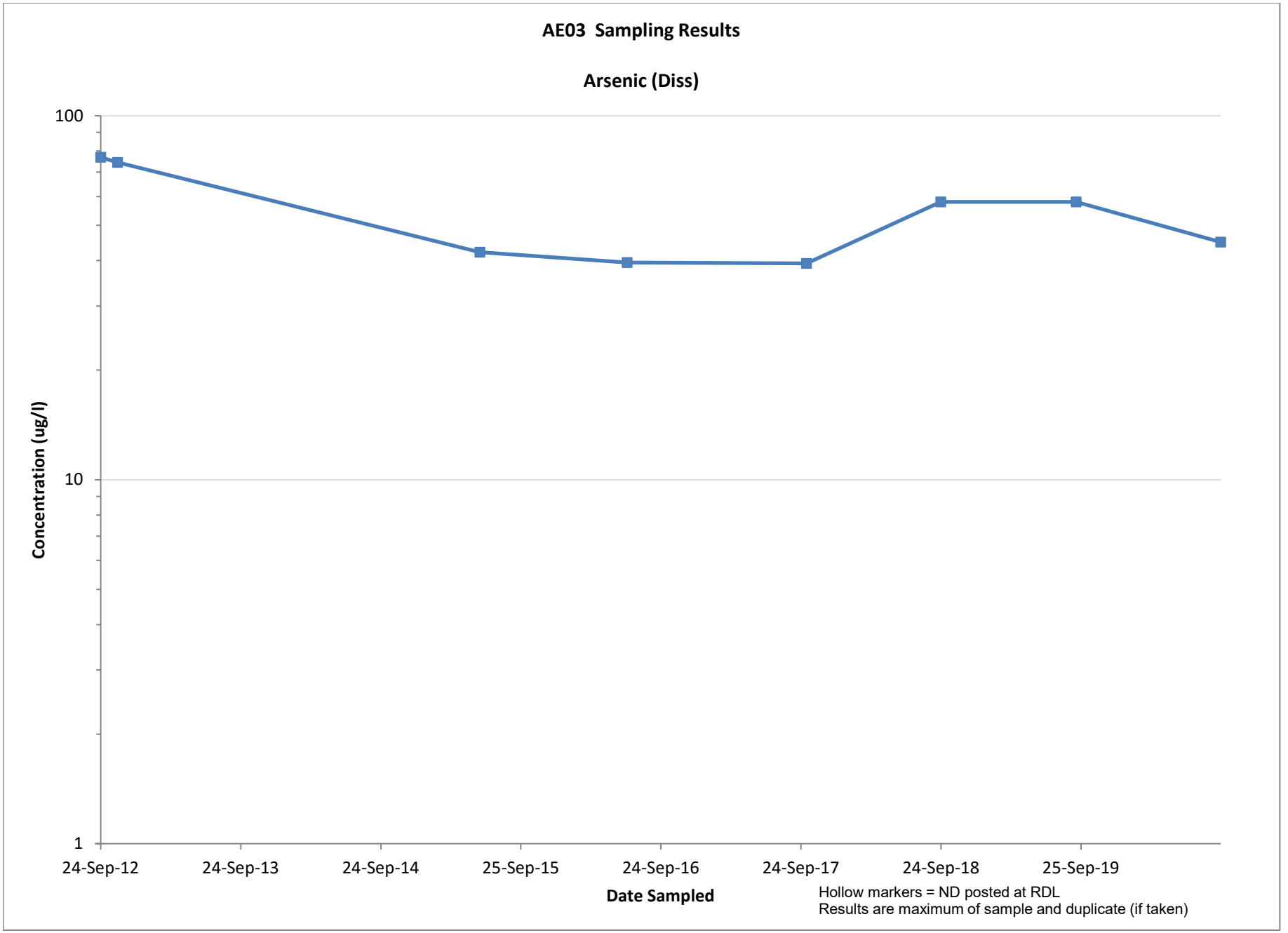
The initial calibration percent relative standard deviations (% RSDs) and the initial calibration and continuing calibration verification (ICV and CCV) percent differences (%Ds) were reviewed for conformance to the QC acceptance criteria. Nonconformances are tabulated below.

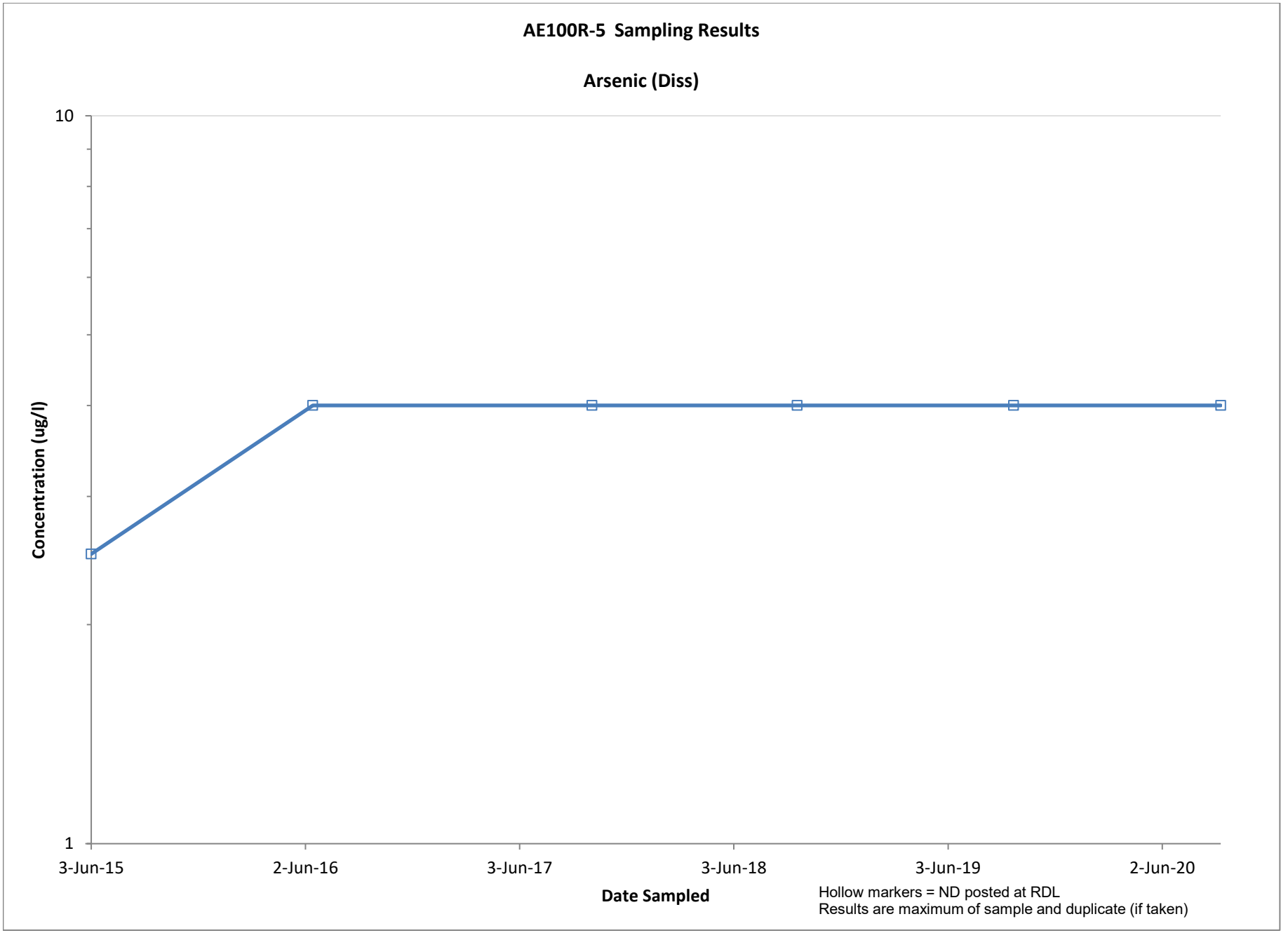
Calibration	Compound	%D	QC limit	Actions (Detects/Nondetects)
ICV 9/19/2020	Pentane	32.1	≤ 20%	J/UJ
	t-Butyl alcohol	32.3	≤ 20%	J/UJ
	Dodecane	28.6	≤ 20%	J/UJ
Associated samples: All samples				

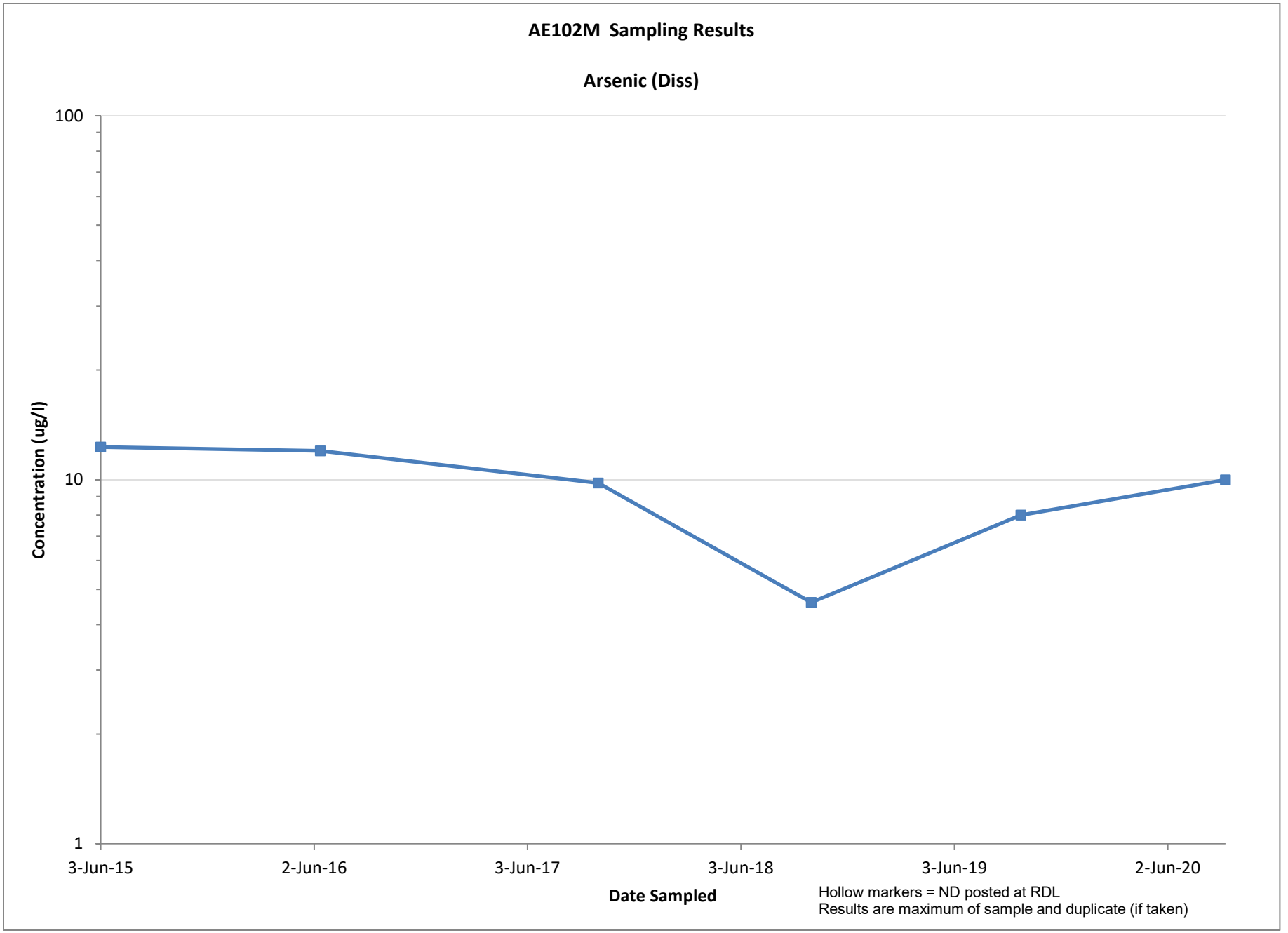
General Reporting Issues

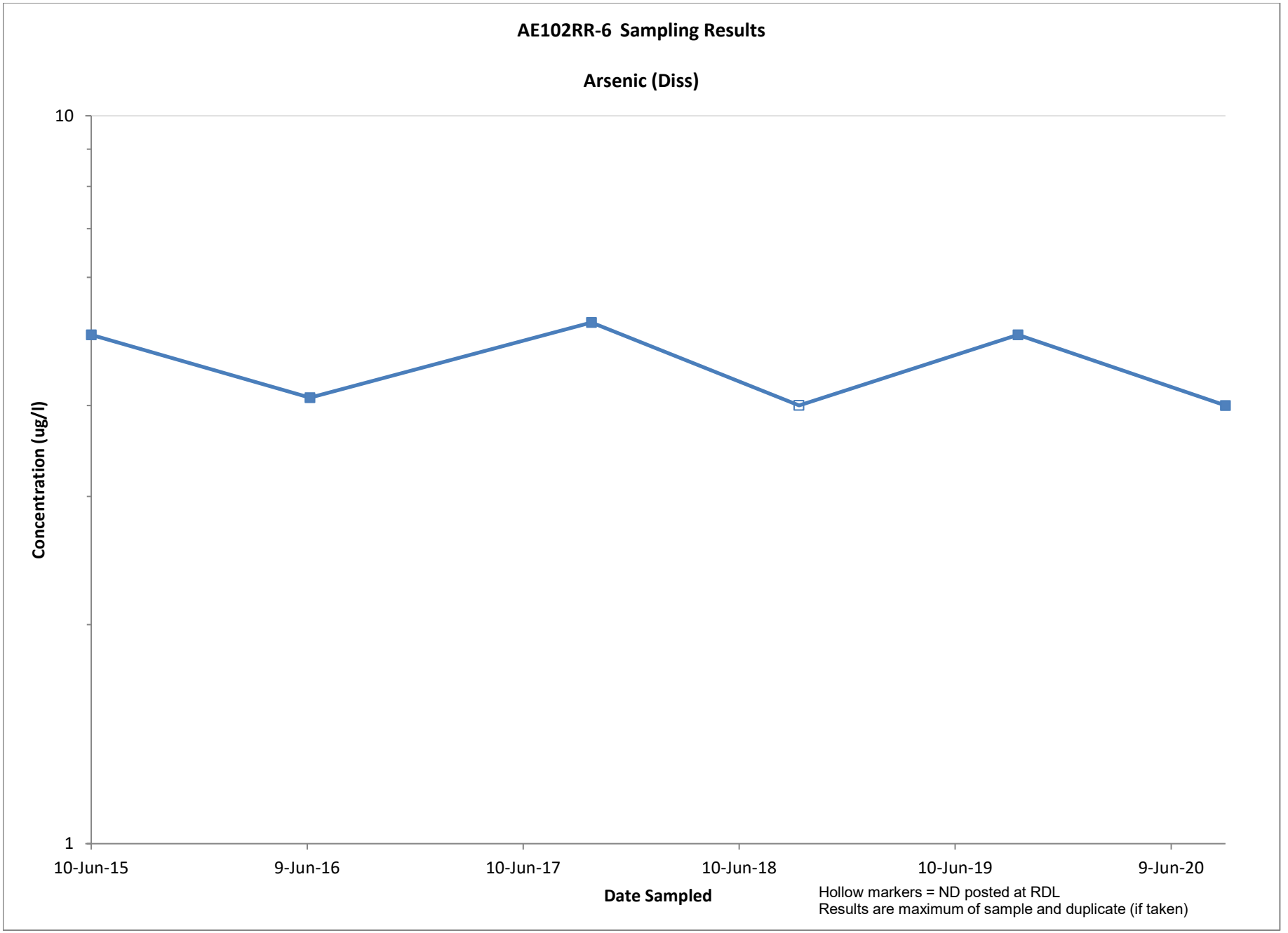
All sample results detected at concentrations less than the lowest calibration standard but greater than the MDL are qualified by the laboratory as estimated (J). This "J" qualifier is retained during data validation.

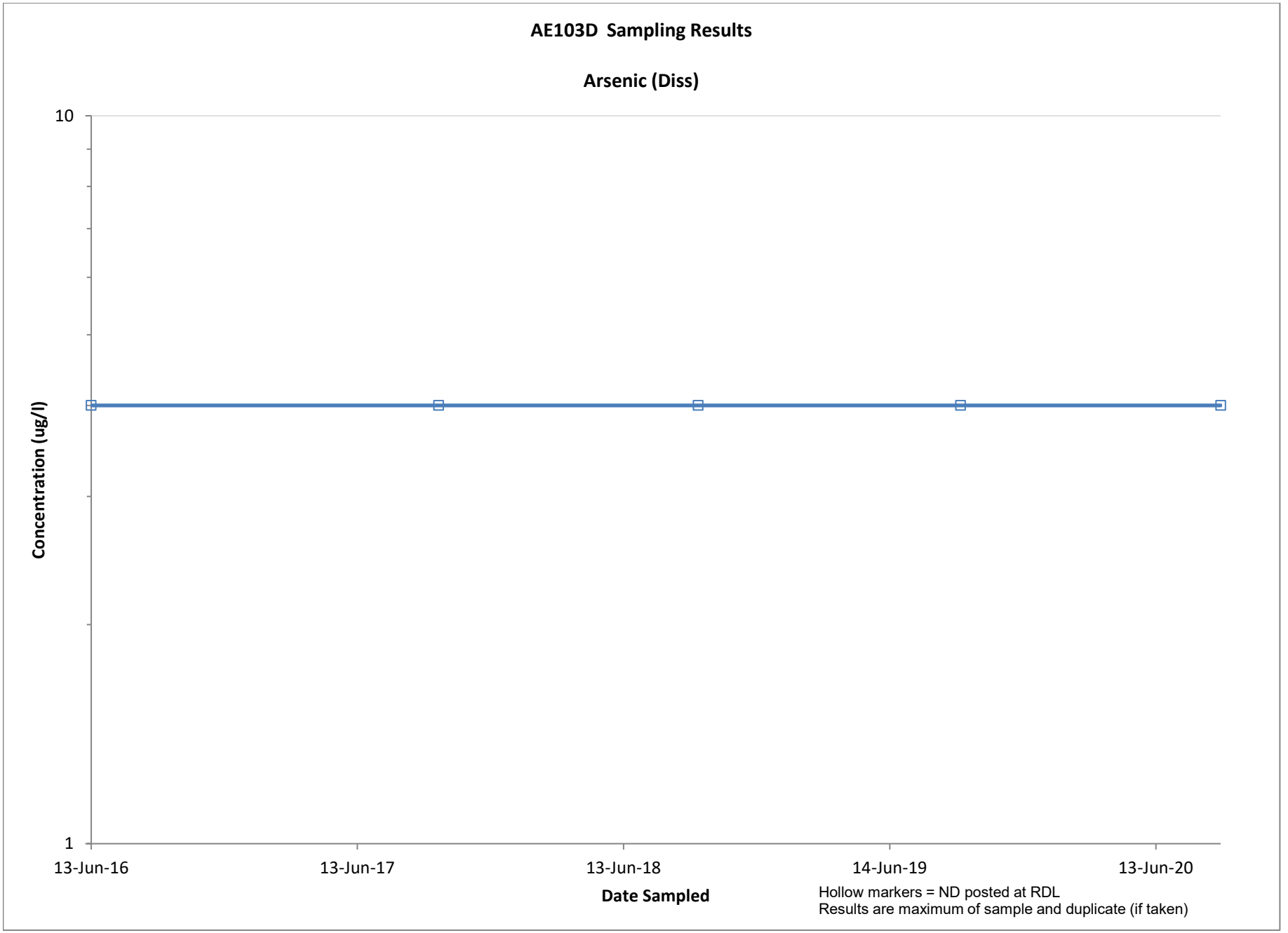
APPENDIX G
GROUNDWATER CONCENTRATION TREND GRAPHS

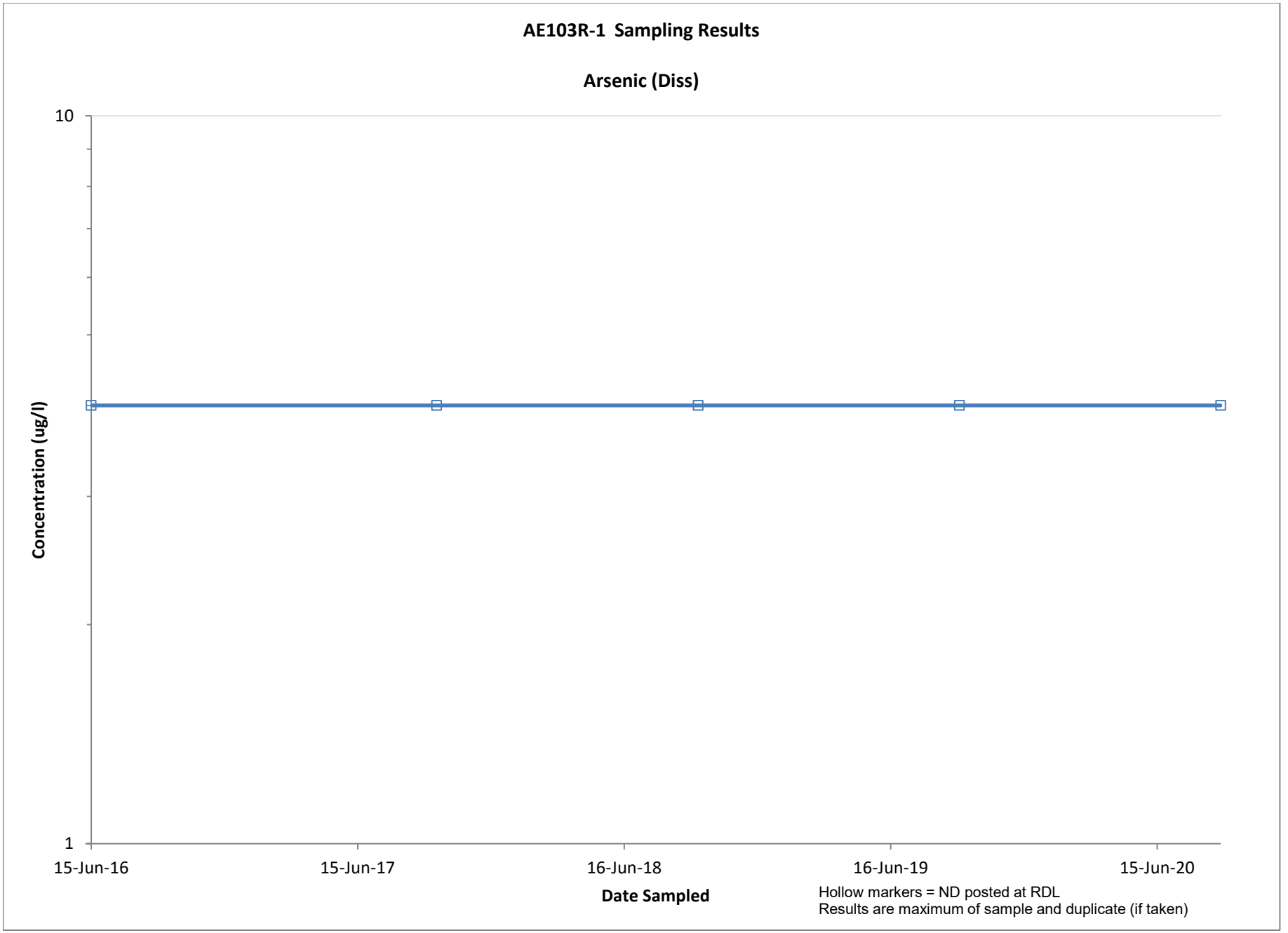

AE03 Sampling Results
Arsenic (Diss)
100
10
1
Concentration (ug/l)
24-Sep-12
24-Sep-13
24-Sep-14
25-Sep-15
24-Sep-16
24-Sep-17
24-Sep-18
25-Sep-19
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)

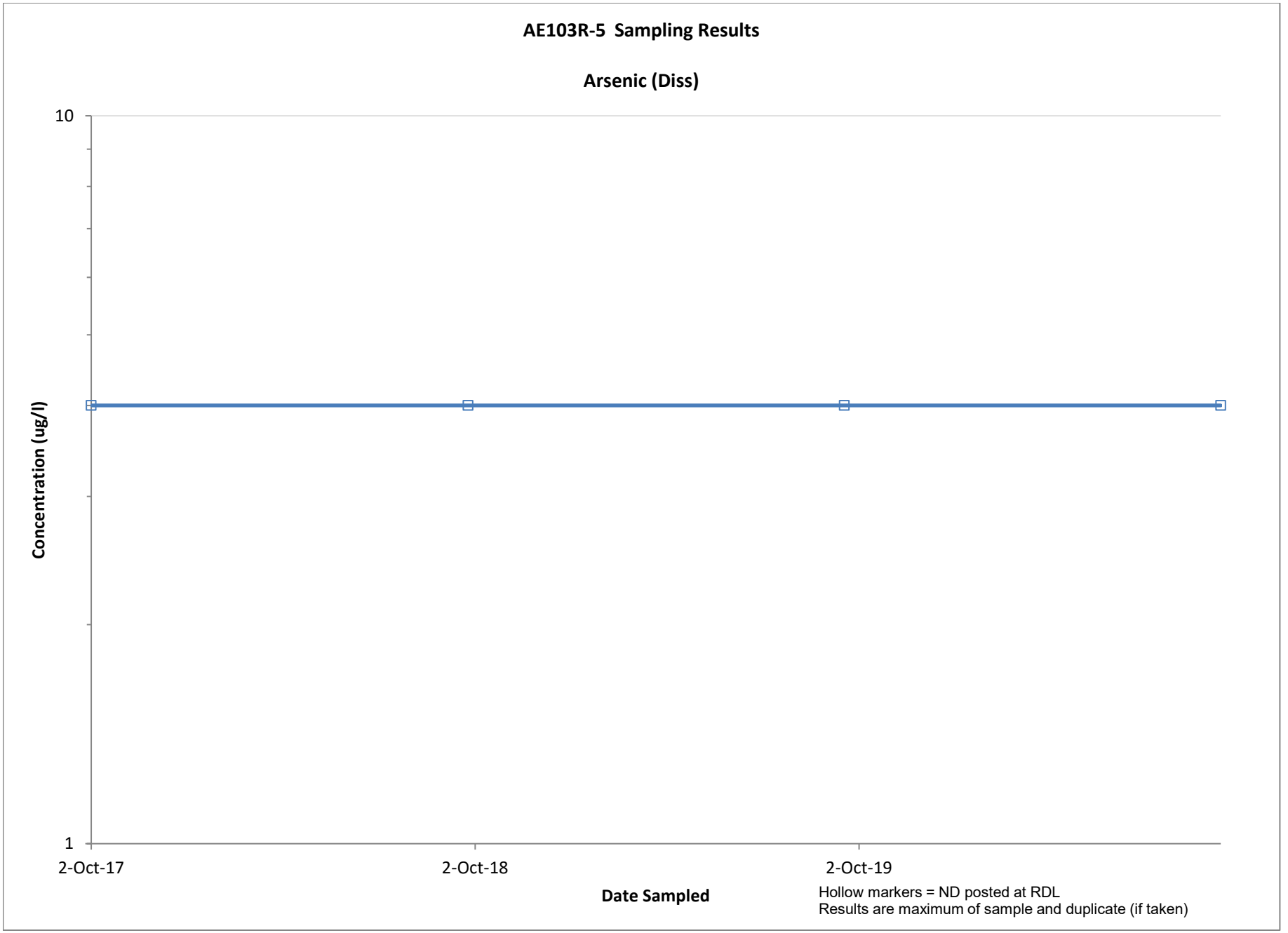

AE100R-5 Sampling Results
Arsenic (Diss)
10
1
Concentration (ug/l)
3-Jun-15
2-Jun-16
3-Jun-17
3-Jun-18
3-Jun-19
2-Jun-20
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)

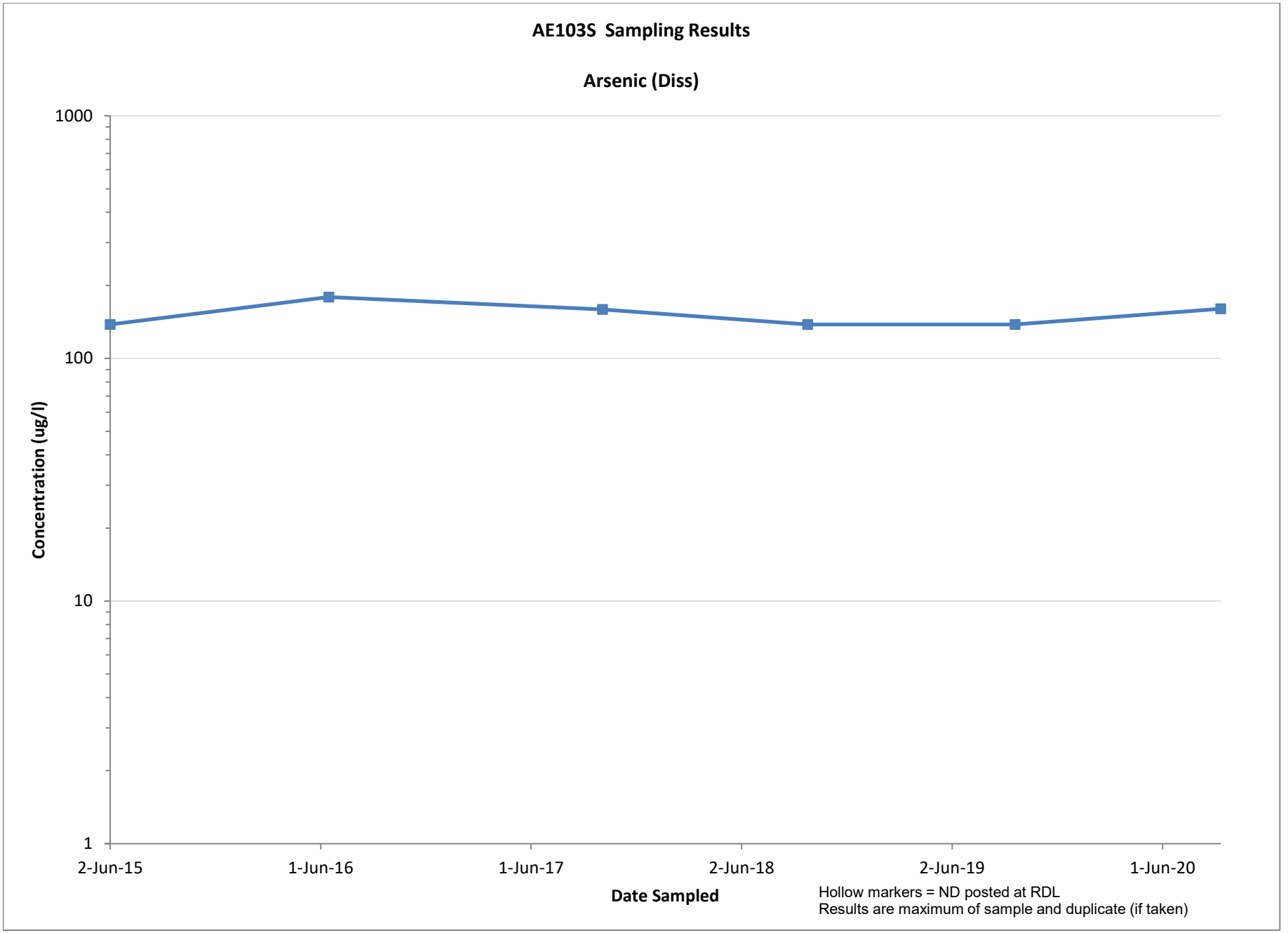

AE102M Sampling Results
Arsenic (Diss)
100
10
1
Concentration (ug/l)
3-Jun-15
2-Jun-16
3-Jun-17
3-Jun-18
3-Jun-19
2-Jun-20
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)

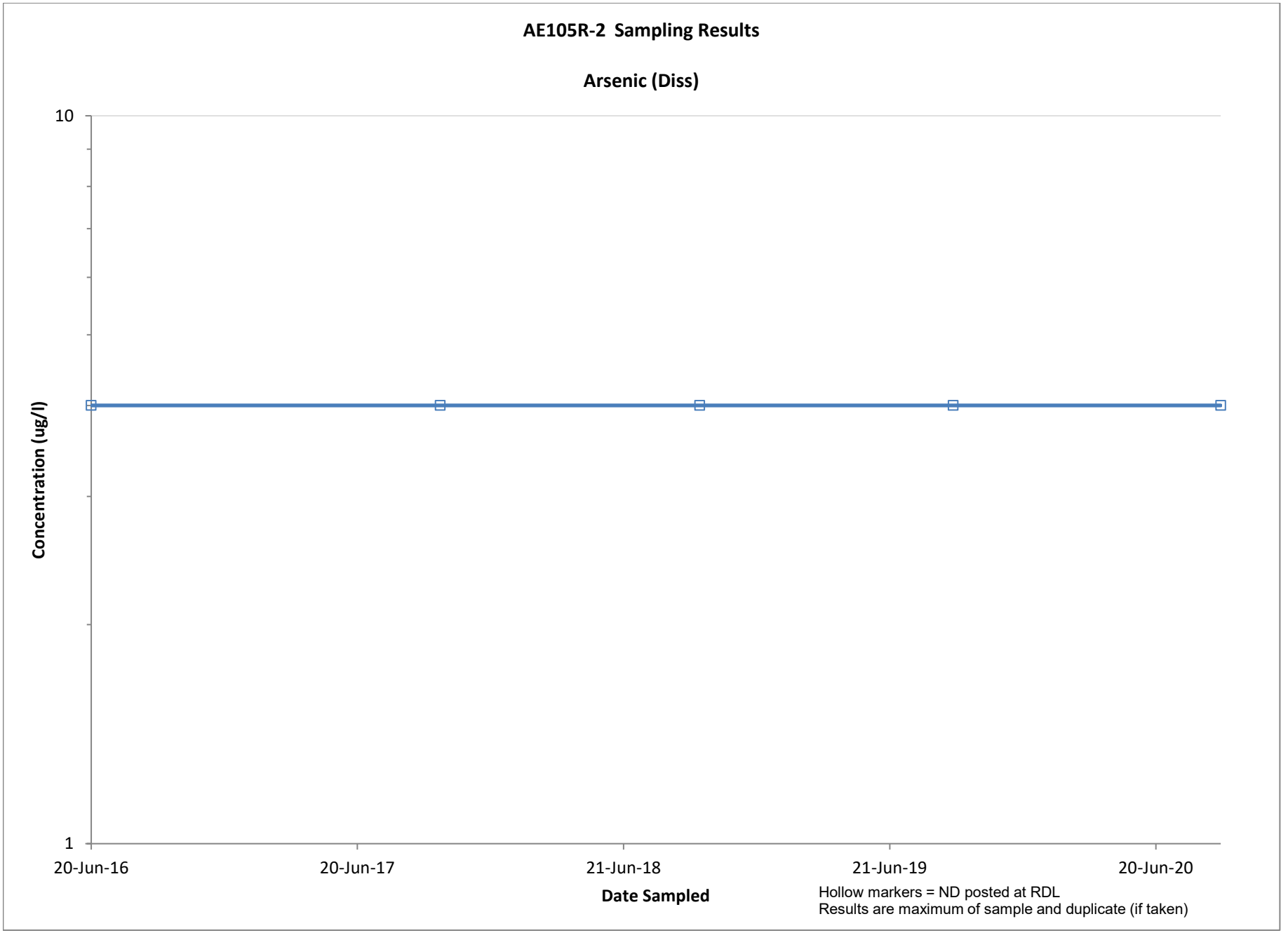

AE102RR-6 Sampling Results
Arsenic (Diss)
10
1
Concentration (ug/l)
10-Jun-15
9-Jun-16
10-Jun-17
10-Jun-18
10-Jun-19
9-Jun-20
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)

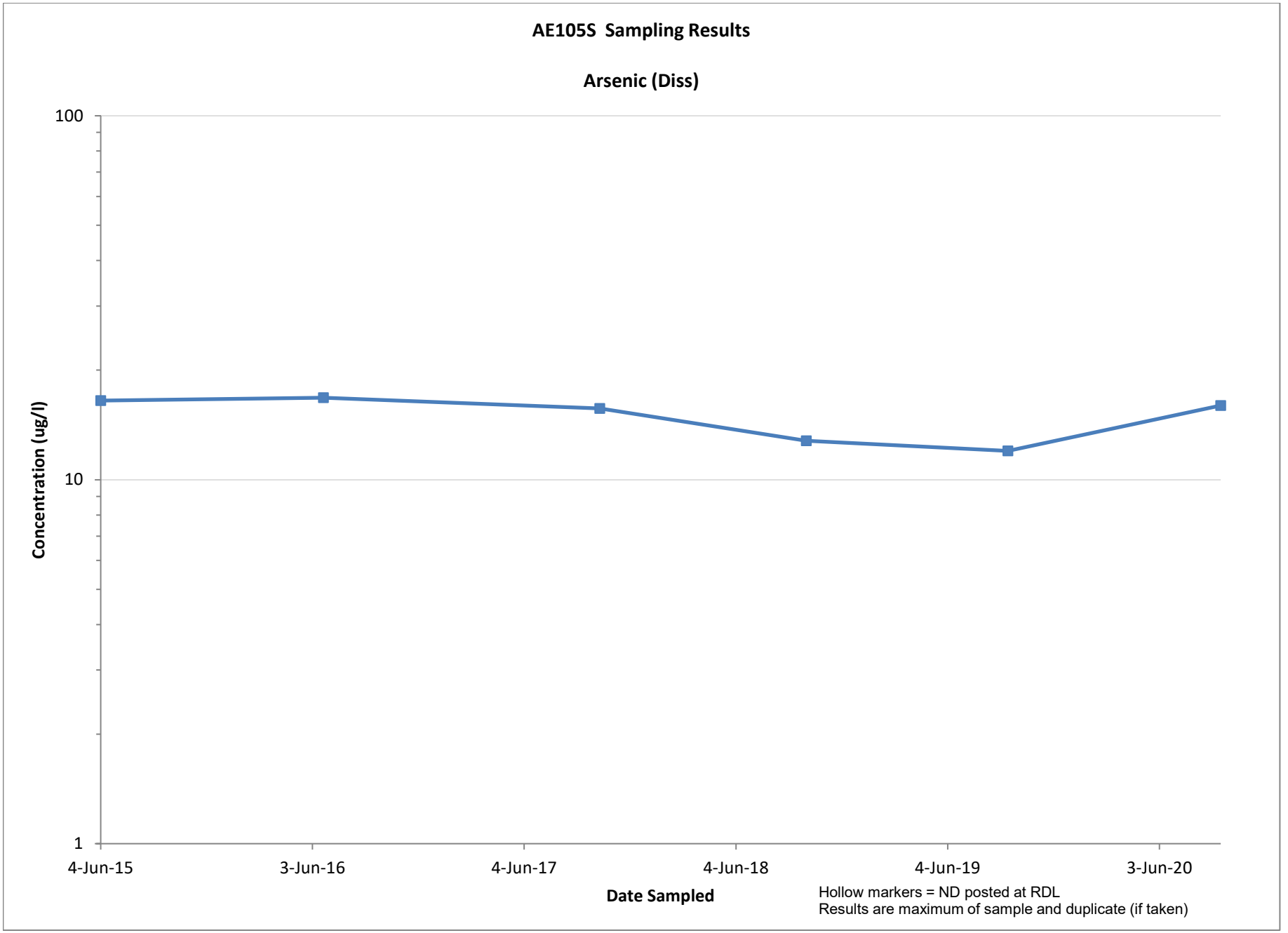

AE103D Sampling Results
Arsenic (Diss)
10
1
Concentration (ug/l)
13-Jun-16
13-Jun-17
13-Jun-18
14-Jun-19
13-Jun-20
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)

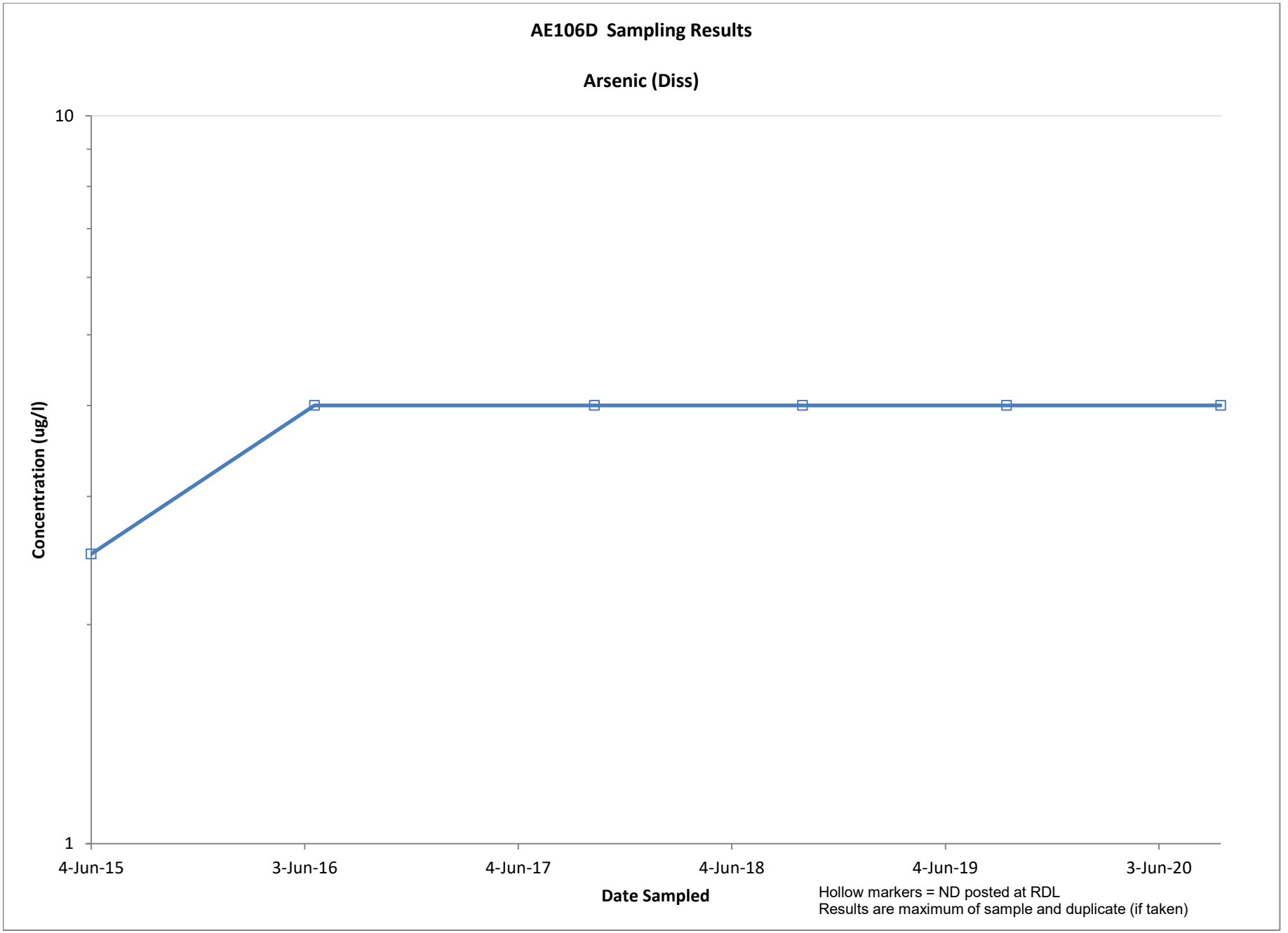

AE103R-1 Sampling Results
Arsenic (Diss)
10
1
Concentration (ug/l)
15-Jun-16
15-Jun-17
16-Jun-18
16-Jun-19
15-Jun-20
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)

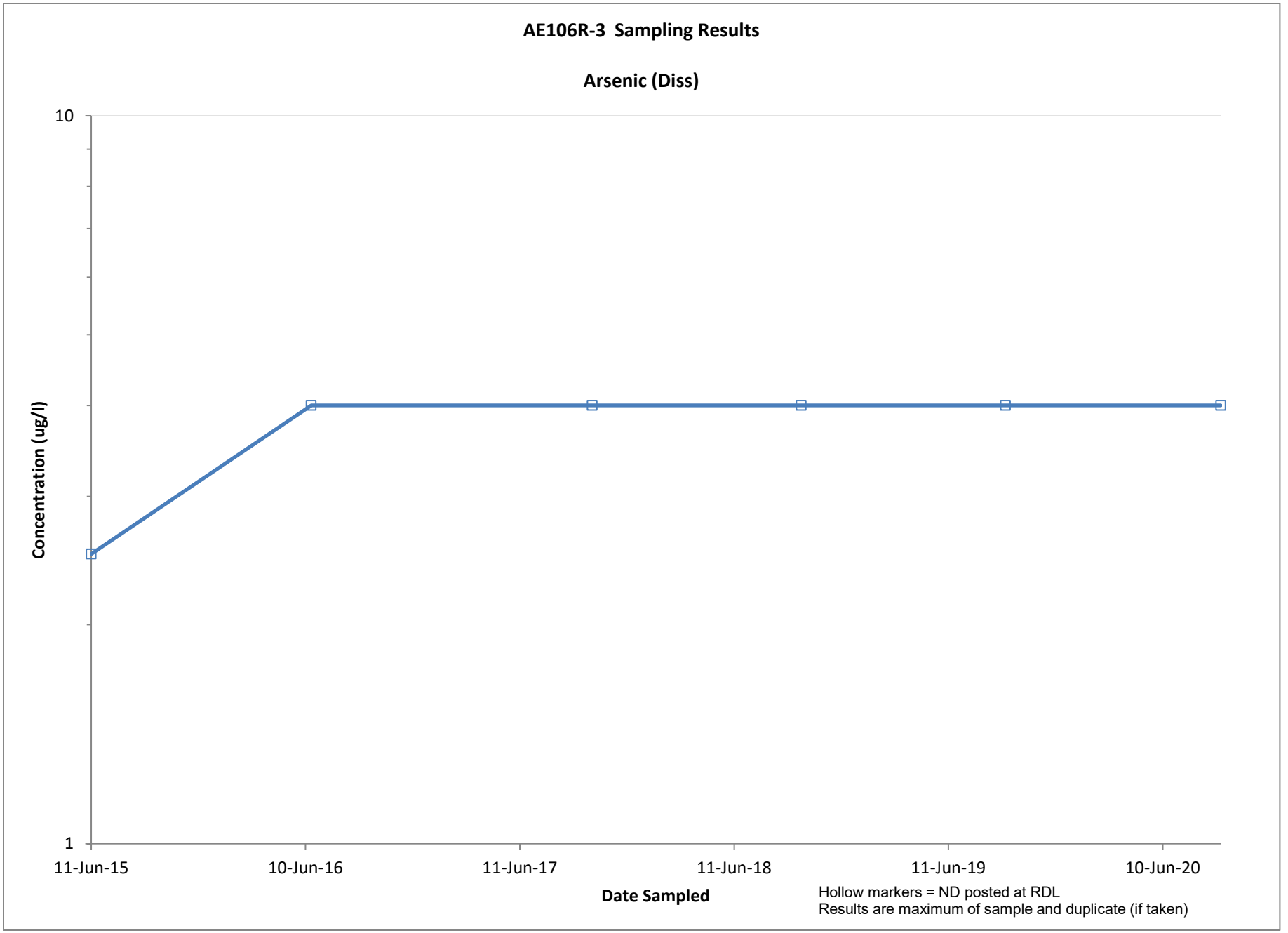

AE103R-5 Sampling Results
Arsenic (Diss)
10
1
Concentration (ug/l)
2-Oct-17
2-Oct-18
2-Oct-19
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)

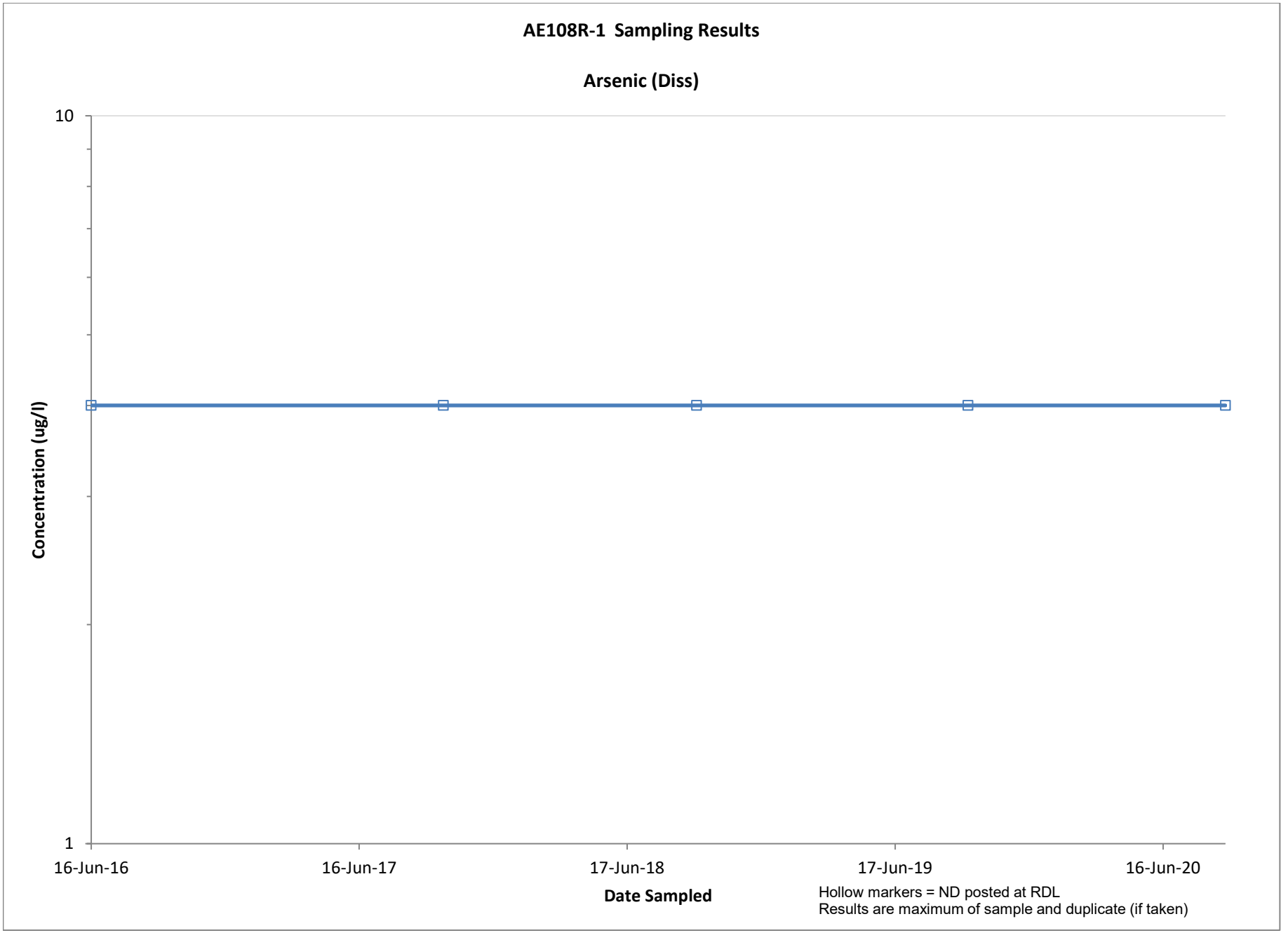

AE103S Sampling Results
Arsenic (Diss)
1000
100
10
1
Concentration (ug/l)
2-Jun-15
1-Jun-16
1-Jun-17
2-Jun-18
2-Jun-19
1-Jun-20
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)

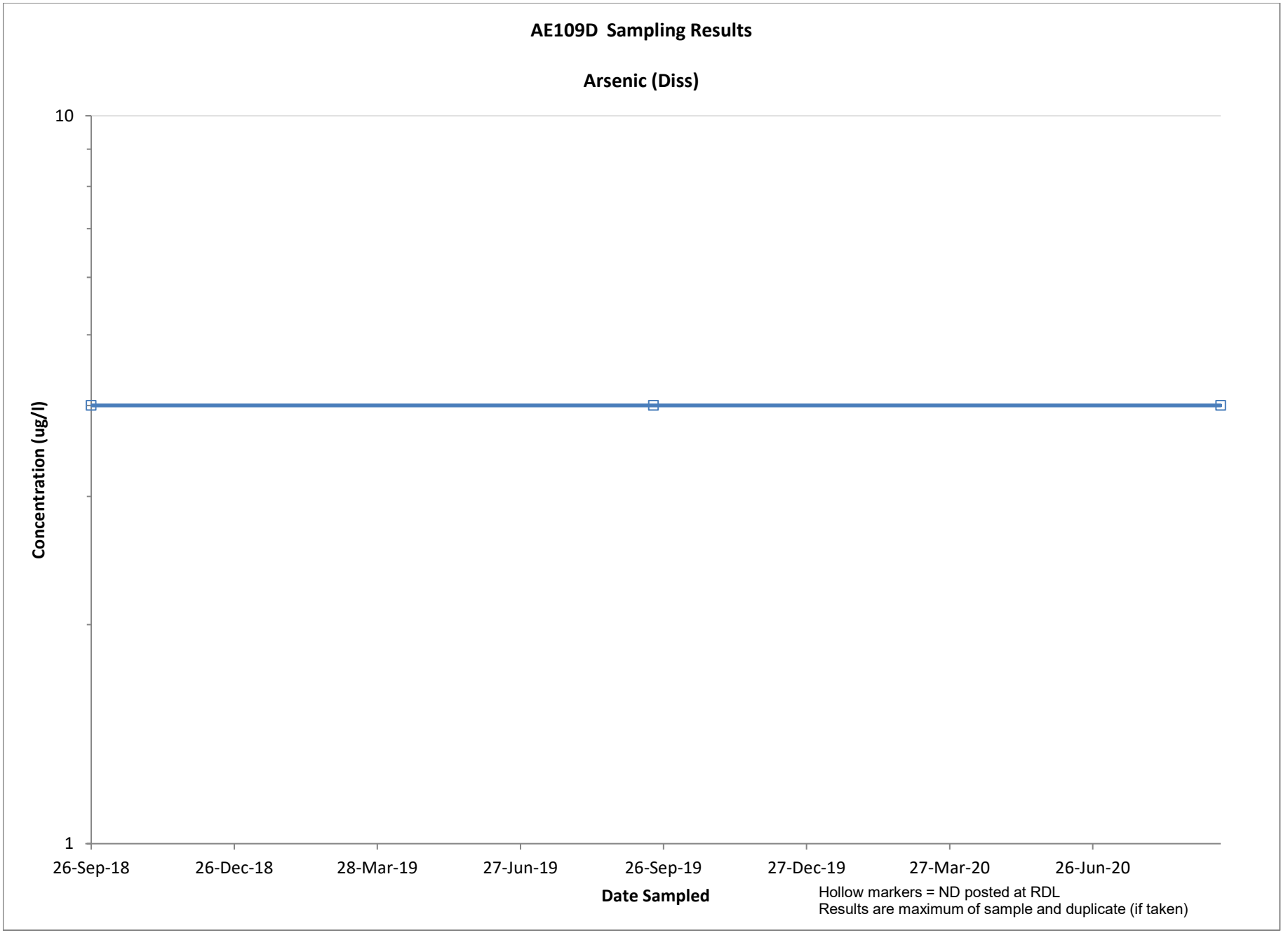

AE105R-2 Sampling Results
Arsenic (Diss)
10
1
Concentration (ug/l)
20-Jun-16
20-Jun-17
21-Jun-18
21-Jun-19
20-Jun-20
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)

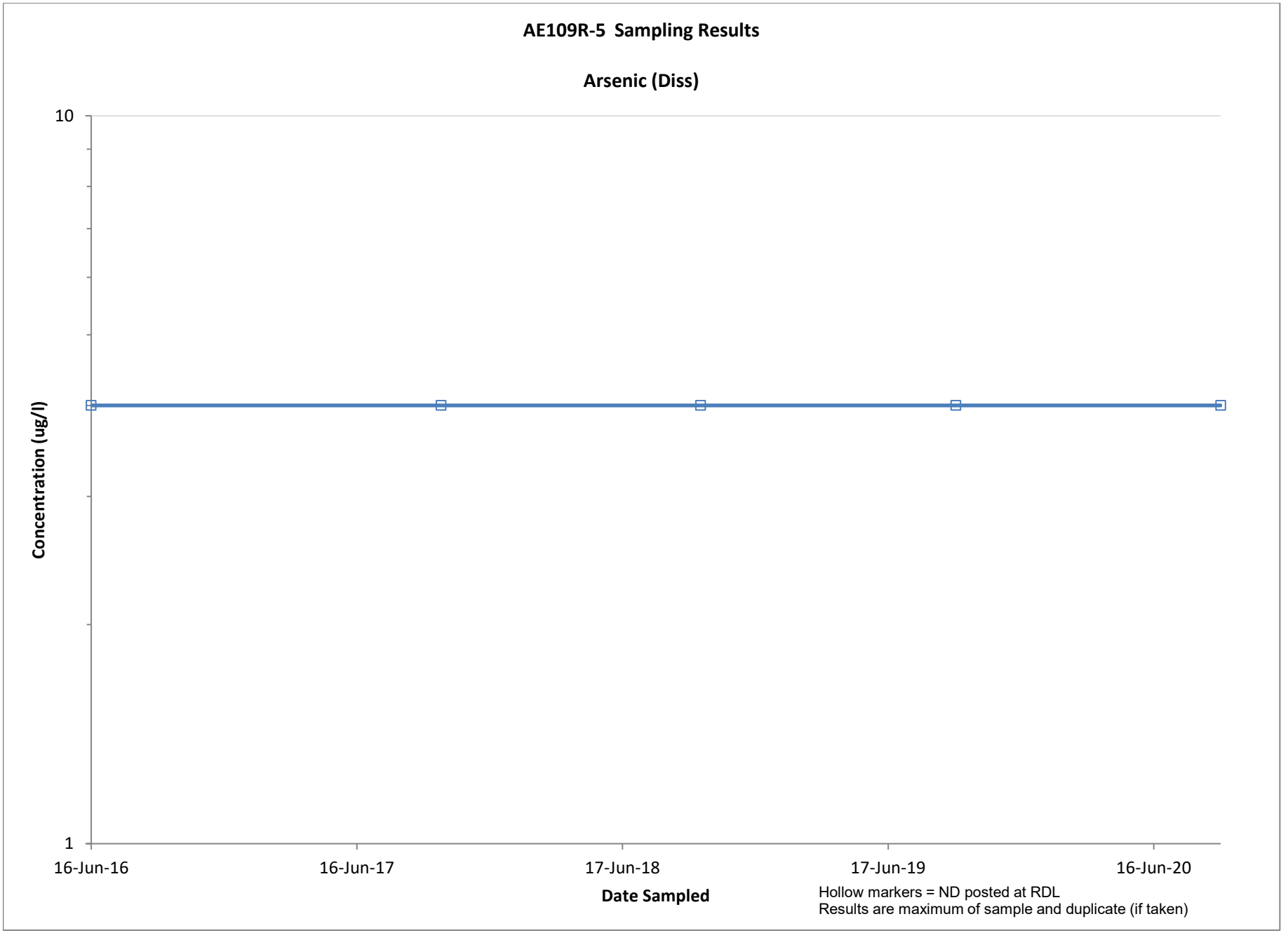

AE105S Sampling Results
Arsenic (Diss)
100
10
1
Concentration (ug/l)
4-Jun-15
3-Jun-16
4-Jun-17
4-Jun-18
4-Jun-19
3-Jun-20
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)

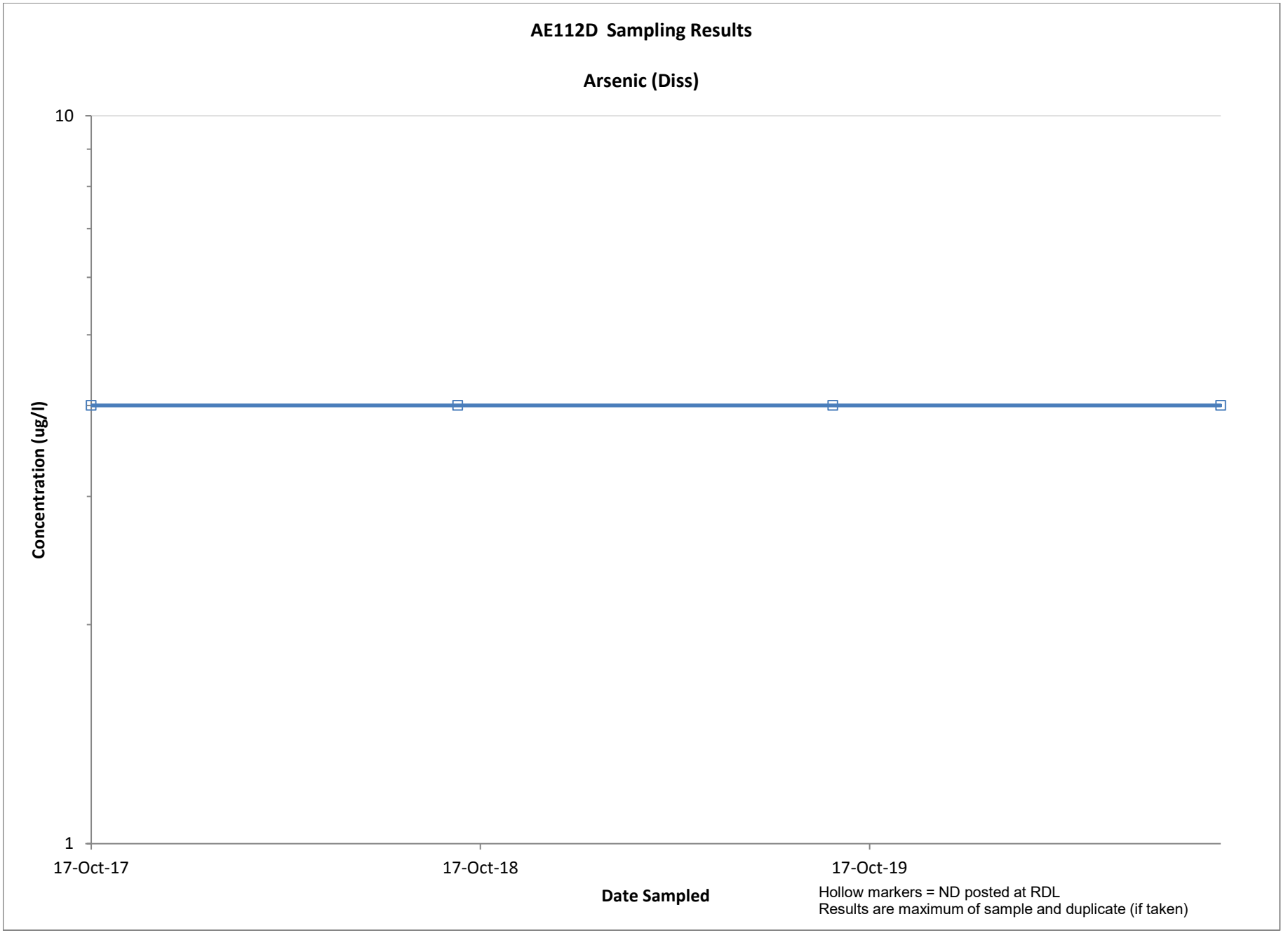

AE106D Sampling Results
Arsenic (Diss)
10
1
Concentration (ug/l)
4-Jun-15
3-Jun-16
4-Jun-17
4-Jun-18
4-Jun-19
3-Jun-20
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)

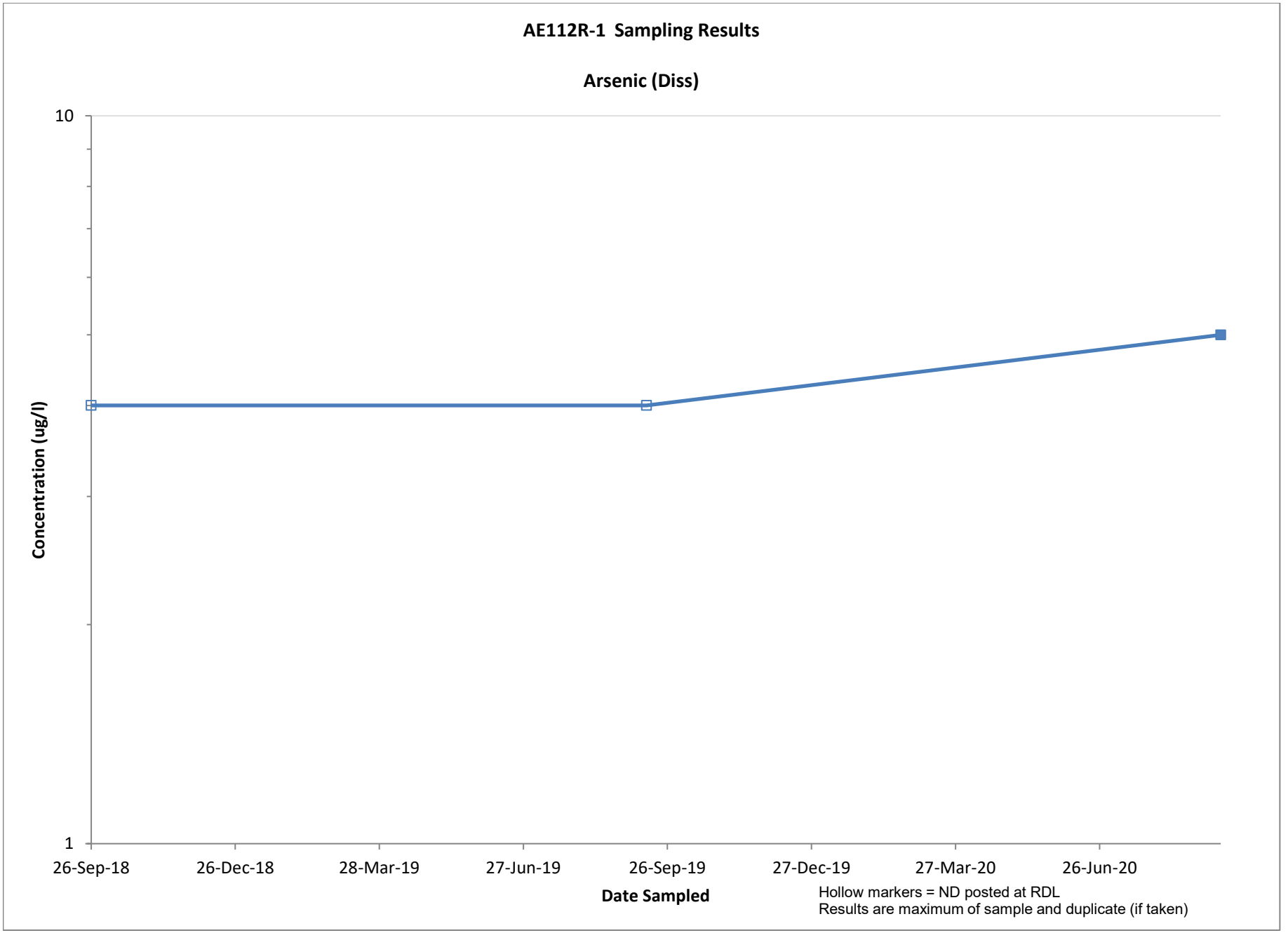

AE106R-3 Sampling Results
Arsenic (Diss)
10
1
Concentration (ug/l)
11-Jun-15
10-Jun-16
11-Jun-17
11-Jun-18
11-Jun-19
10-Jun-20
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)

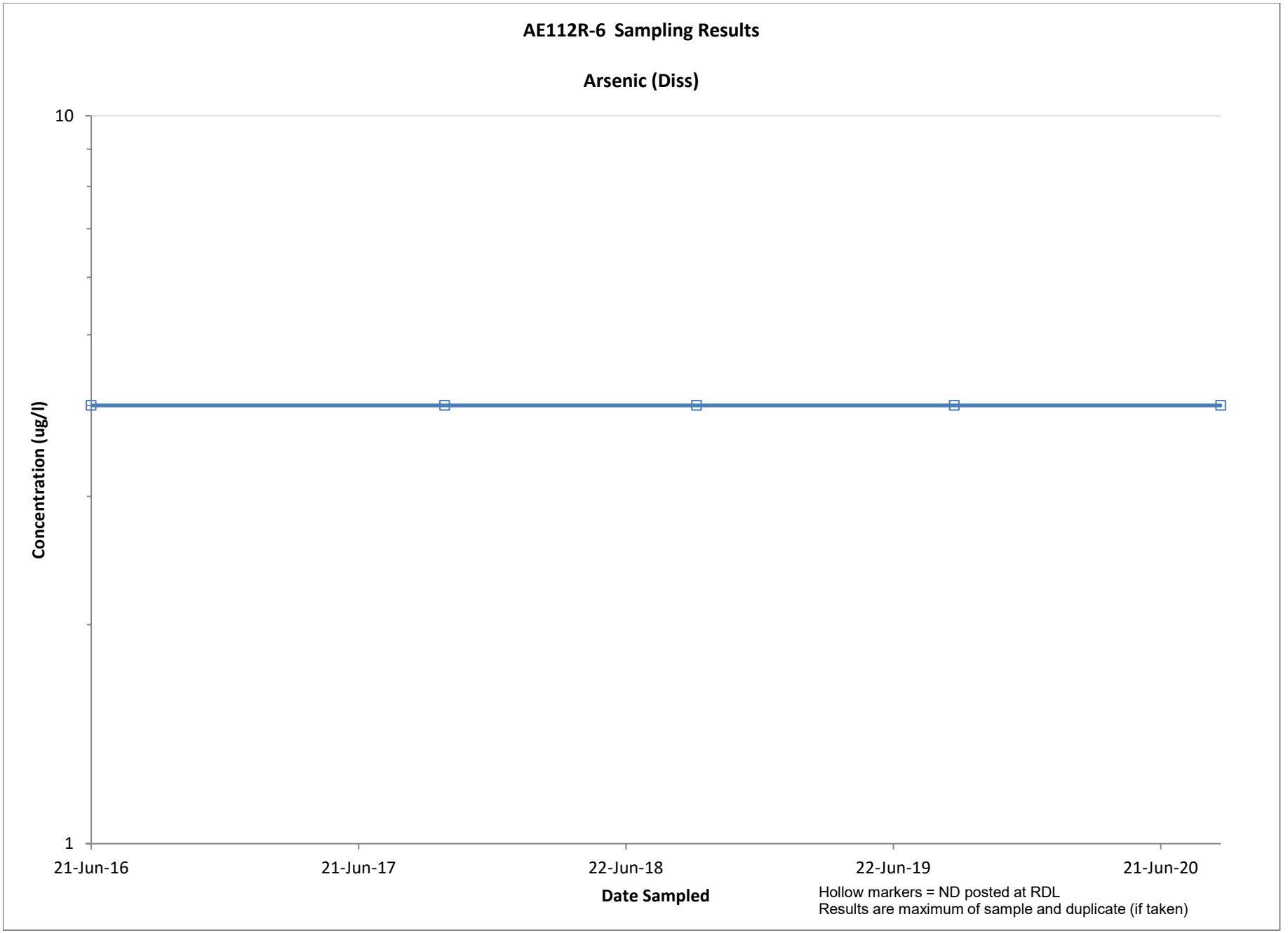

AE108R-1 Sampling Results
Arsenic (Diss)
10
1
Concentration (ug/l)
16-Jun-16
16-Jun-17
17-Jun-18
17-Jun-19
16-Jun-20
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)

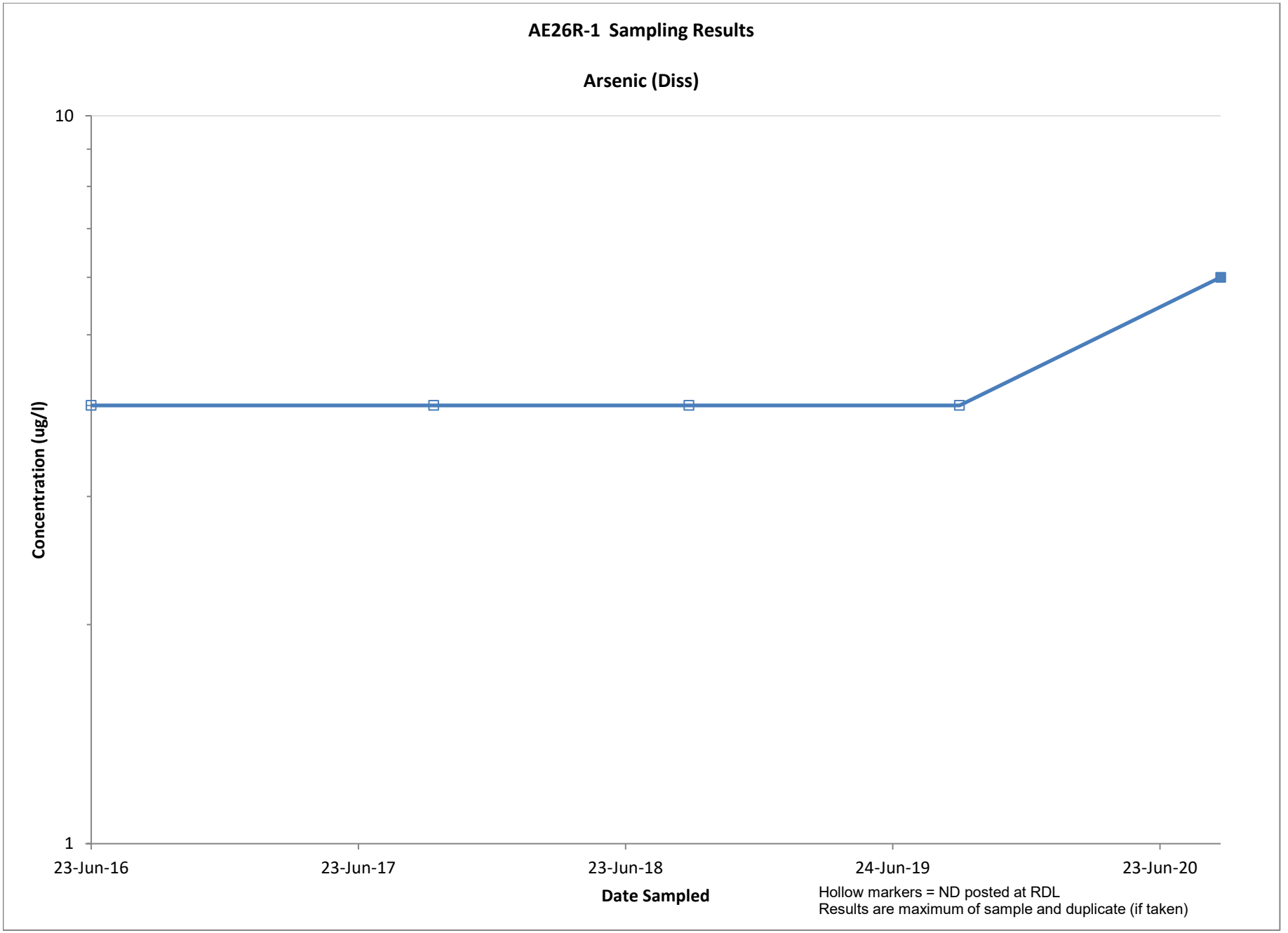

AE109D Sampling Results
Arsenic (Diss)
10
1
Concentration (ug/l)
26-Sep-18
26-Dec-18
28-Mar-19
27-Jun-19
26-Sep-19
27-Dec-19
27-Mar-20
26-Jun-20
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)

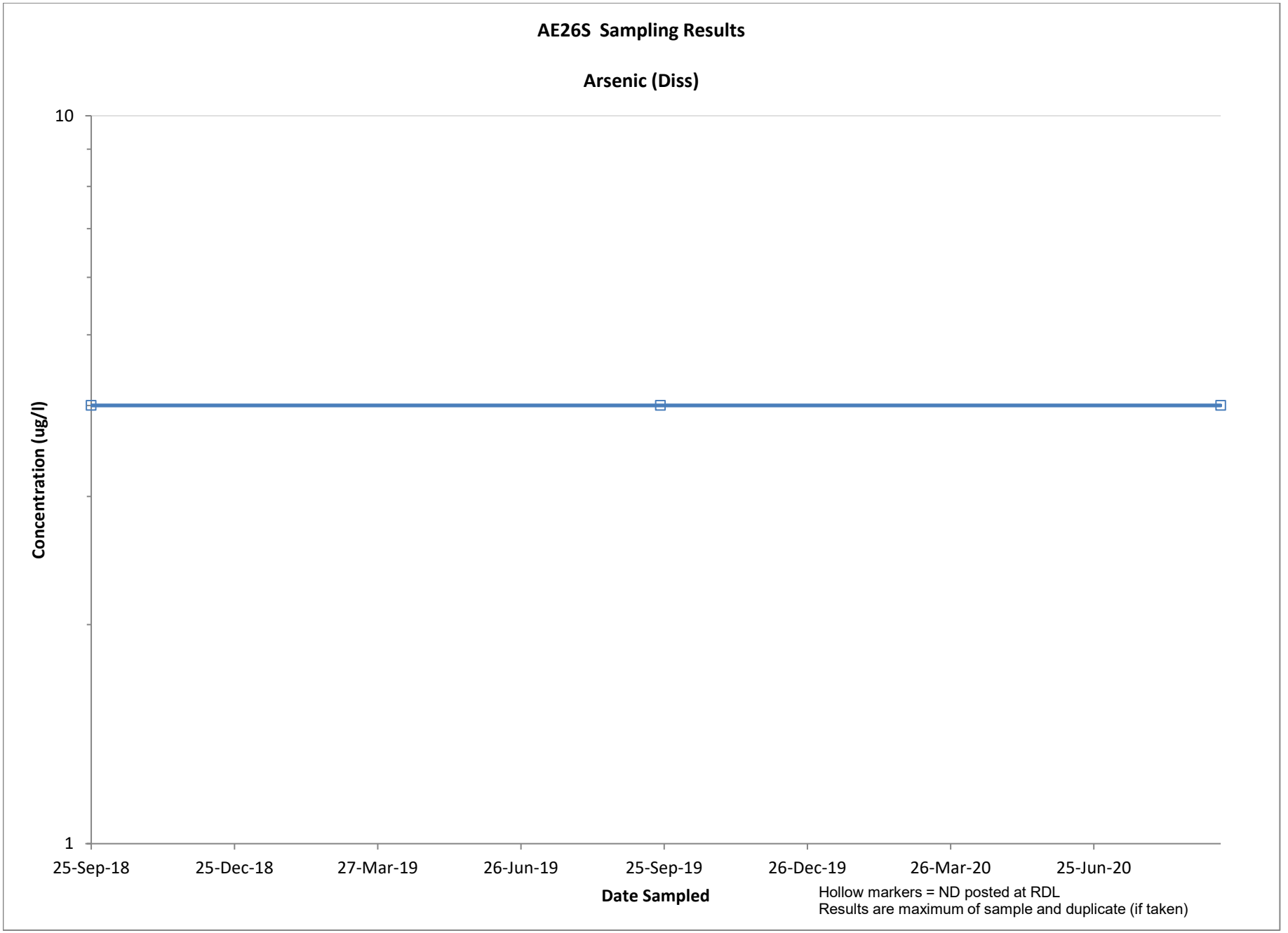

AE109R-5 Sampling Results
Arsenic (Diss)
10
1
Concentration (ug/l)
16-Jun-16
16-Jun-17
17-Jun-18
17-Jun-19
16-Jun-20
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)

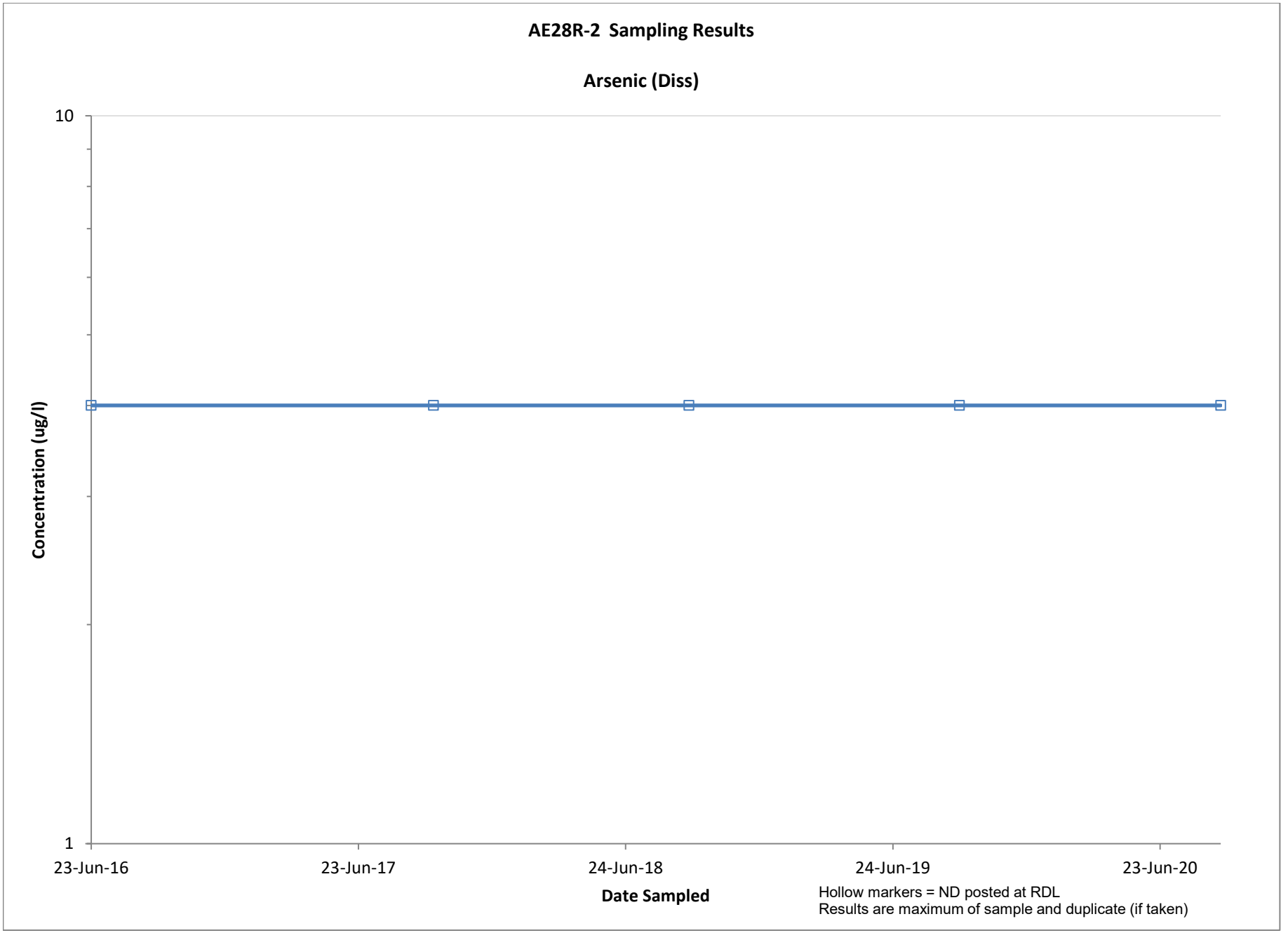

AE112D Sampling Results
Arsenic (Diss)
10
1
Concentration (ug/l)
17-Oct-17
17-Oct-18
17-Oct-19
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)

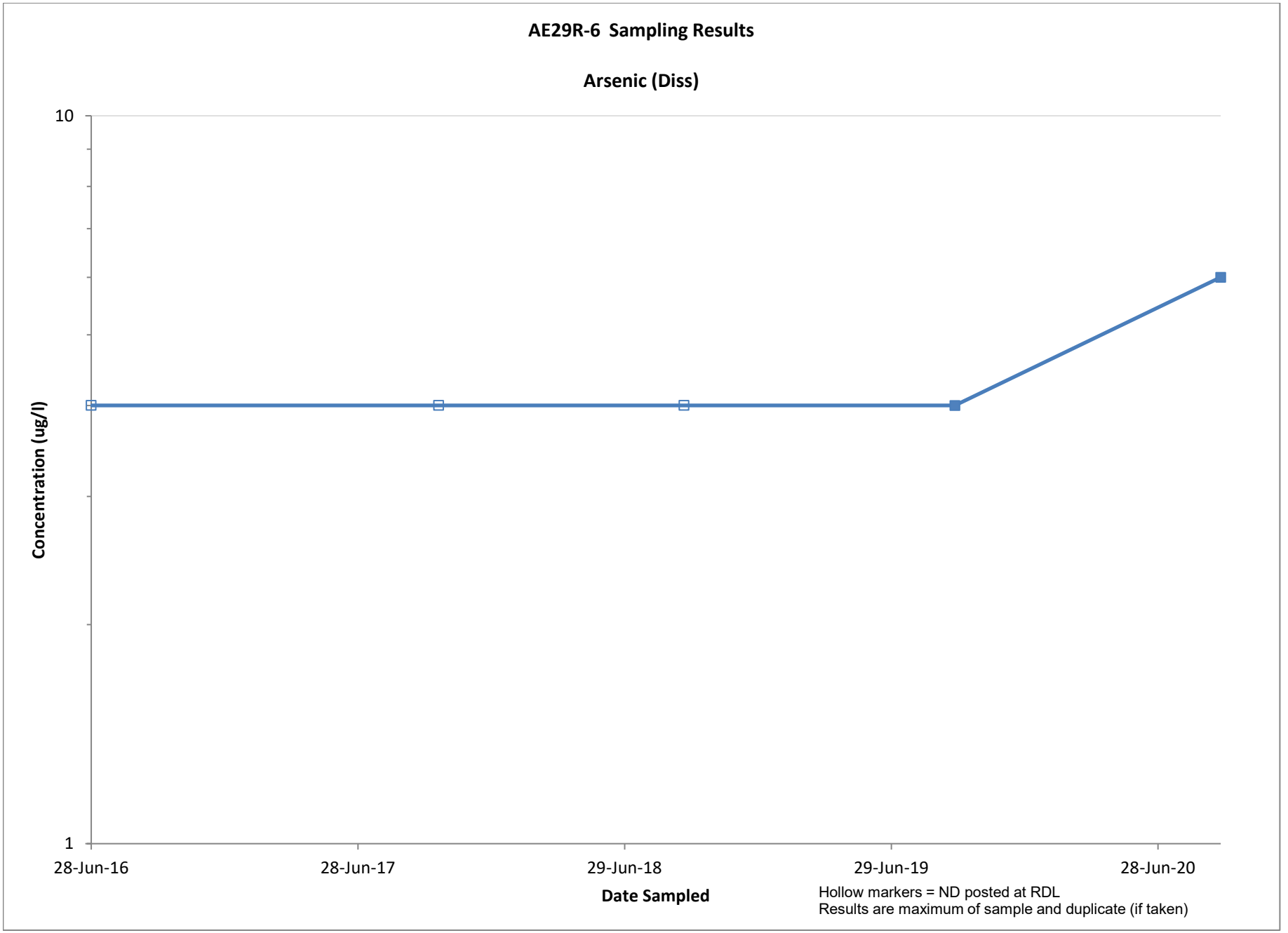

AE112R-1 Sampling Results
Arsenic (Diss)
10
1
Concentration (ug/l)
26-Sep-18
26-Dec-18
28-Mar-19
27-Jun-19
26-Sep-19
27-Dec-19
27-Mar-20
26-Jun-20
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)

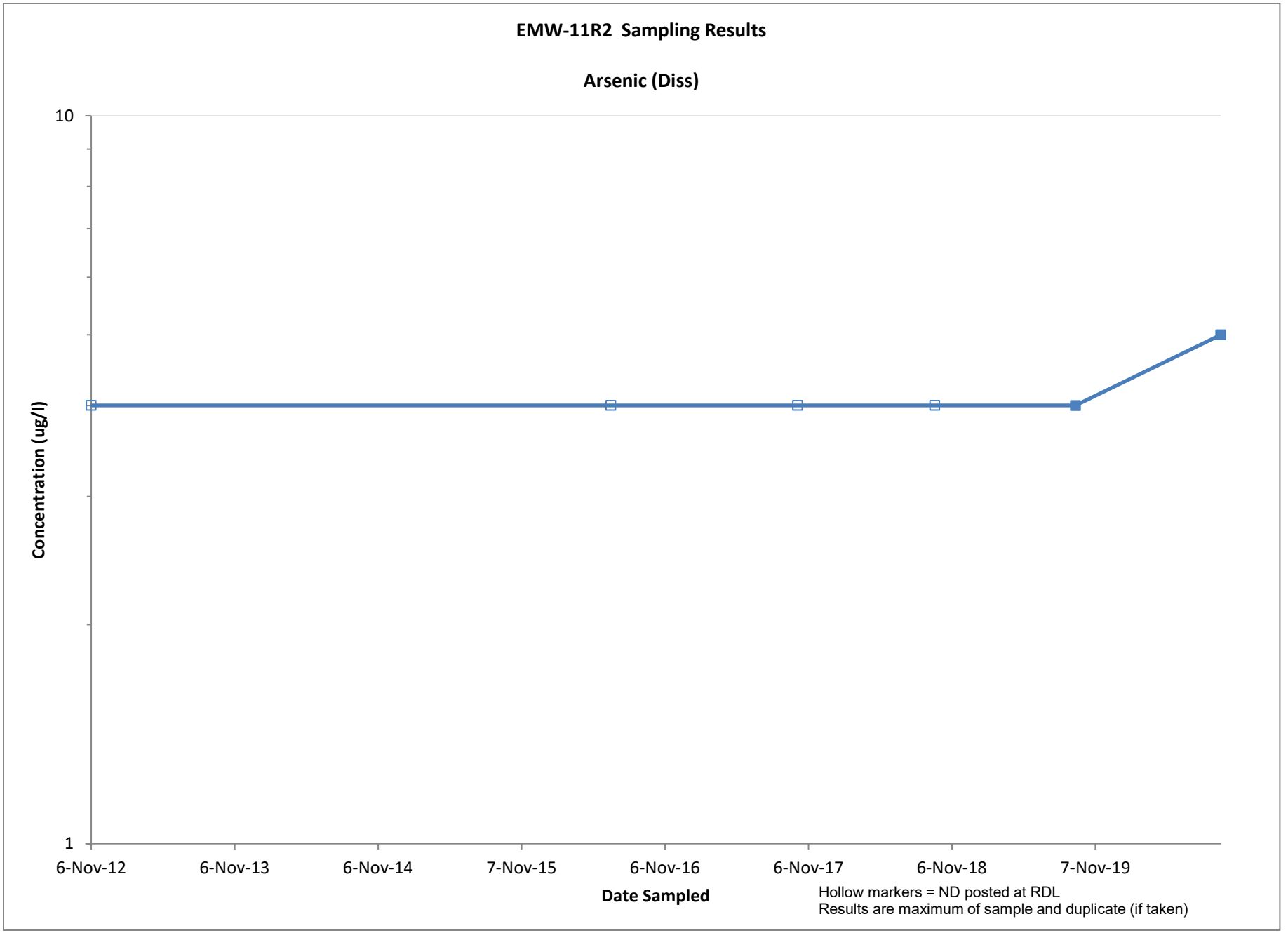

AE112R-6 Sampling Results
Arsenic (Diss)
10
1
Concentration (ug/l)
21-Jun-16
21-Jun-17
22-Jun-18
22-Jun-19
21-Jun-20
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)

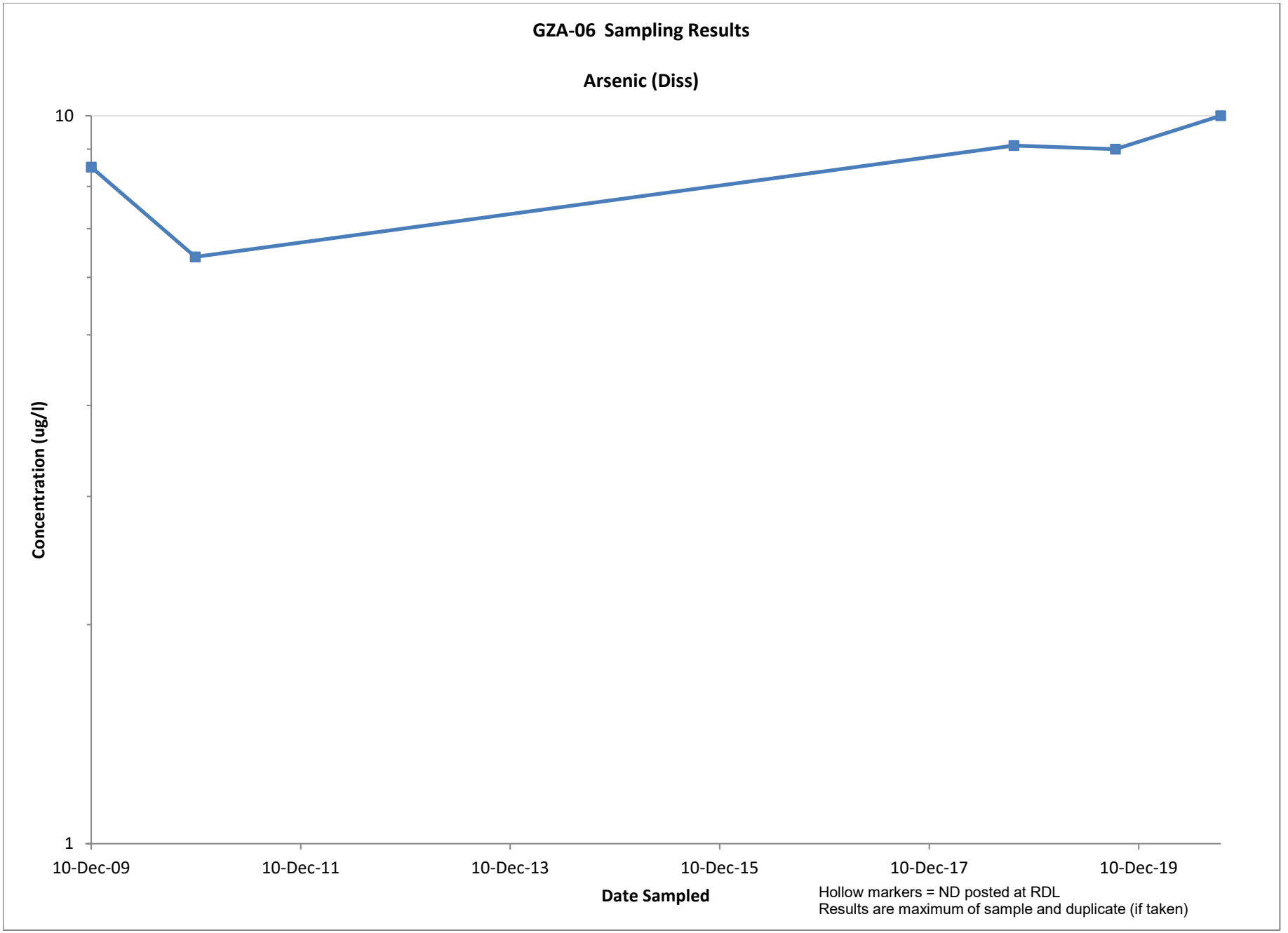

AE26R-1 Sampling Results
Arsenic (Diss)
10
1
Concentration (ug/l)
23-Jun-16
23-Jun-17
23-Jun-18
24-Jun-19
23-Jun-20
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)

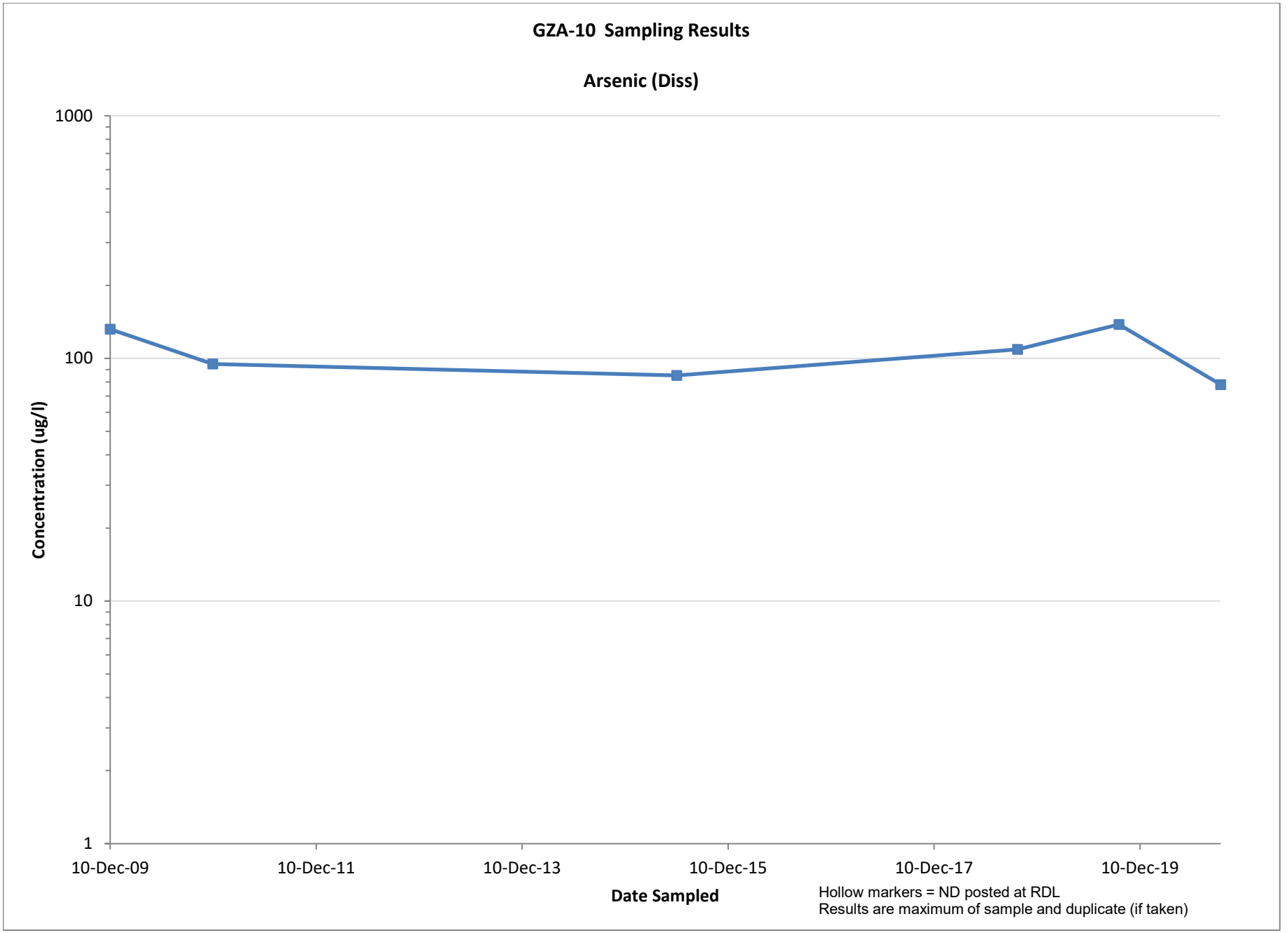

AE26S Sampling Results
Arsenic (Diss)
10
1
Concentration (ug/l)
25-Sep-18
25-Dec-18
27-Mar-19
26-Jun-19
25-Sep-19
26-Dec-19
26-Mar-20
25-Jun-20
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)

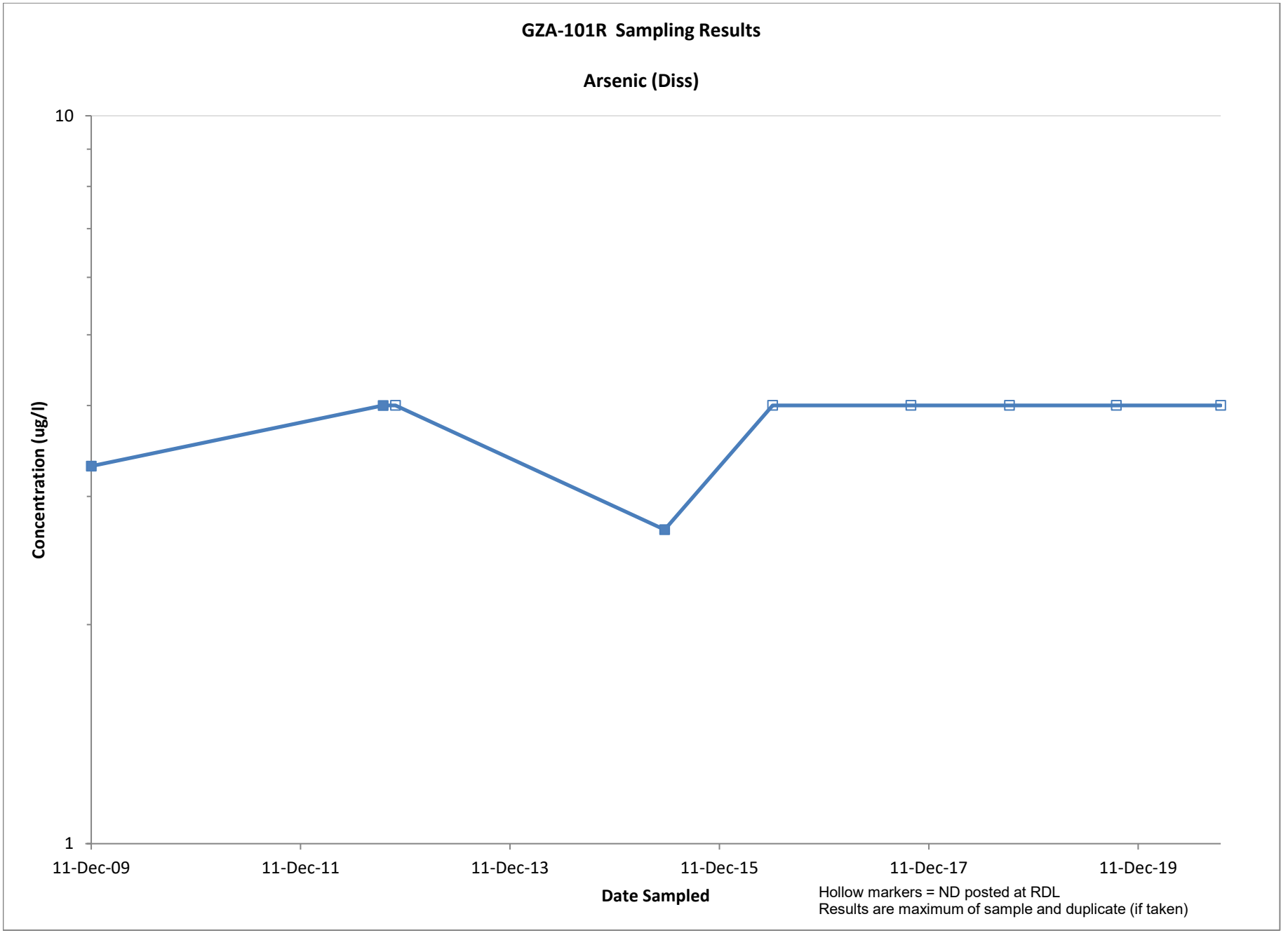

AE28R-2 Sampling Results
Arsenic (Diss)
10
1
Concentration (ug/l)
23-Jun-16
23-Jun-17
24-Jun-18
24-Jun-19
23-Jun-20
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)

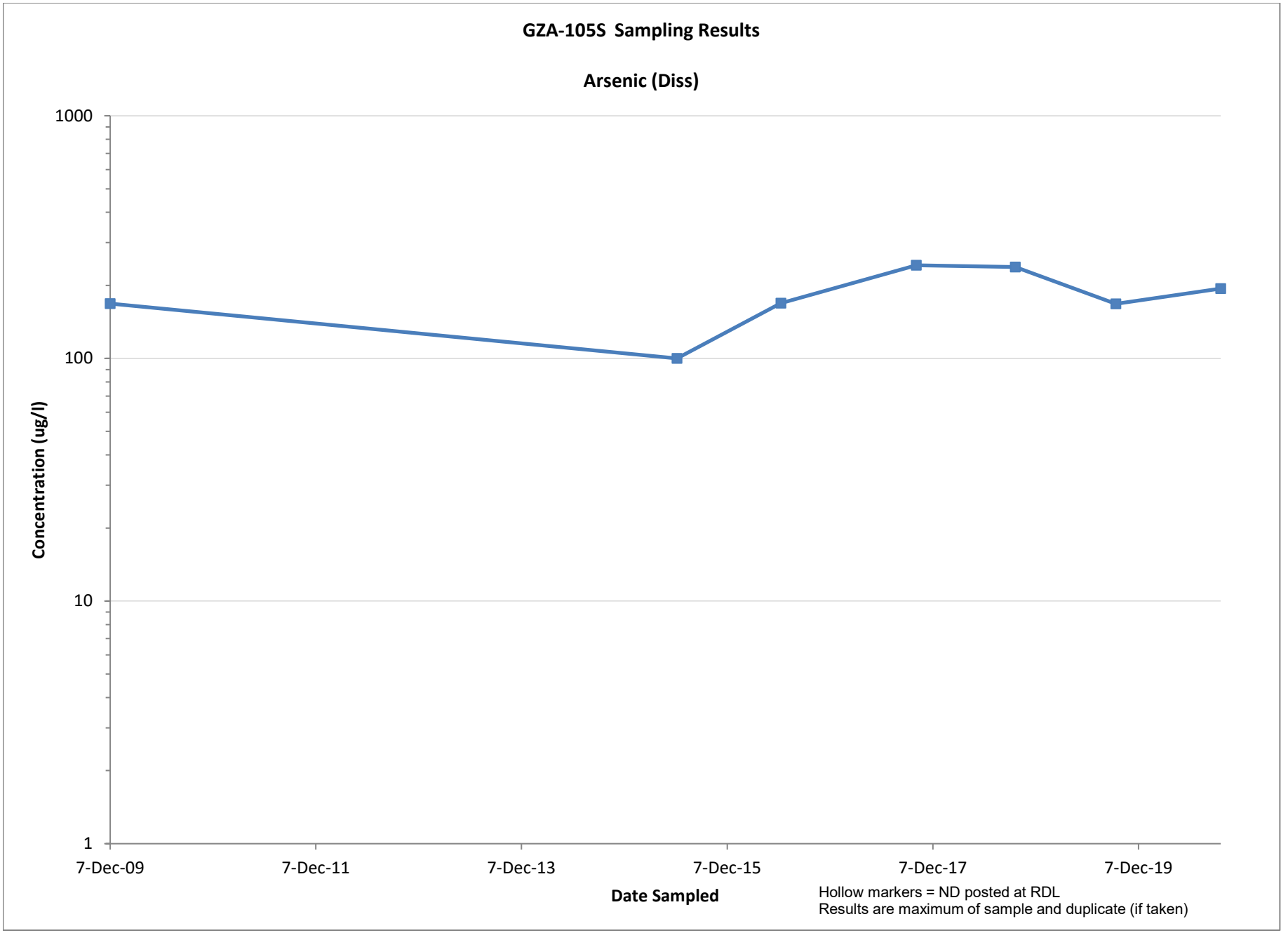

AE29R-6 Sampling Results
Arsenic (Diss)
10
1
Concentration (ug/l)
28-Jun-16
28-Jun-17
29-Jun-18
29-Jun-19
28-Jun-20
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)

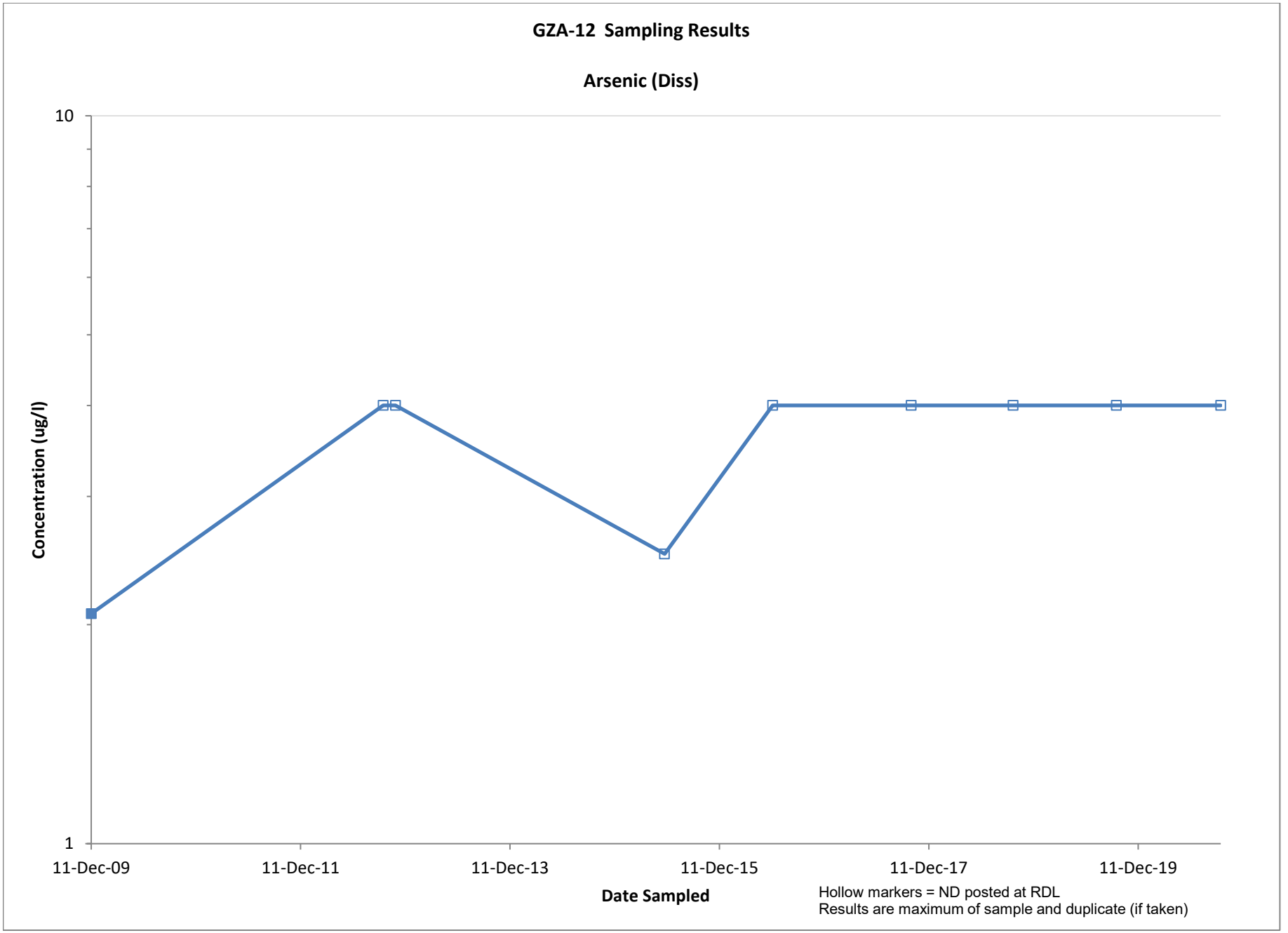

EMW-11R2 Sampling Results
Arsenic (Diss)
10
1
Concentration (ug/l)
6-Nov-12
6-Nov-13
6-Nov-14
7-Nov-15
6-Nov-16
6-Nov-17
6-Nov-18
7-Nov-19
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)

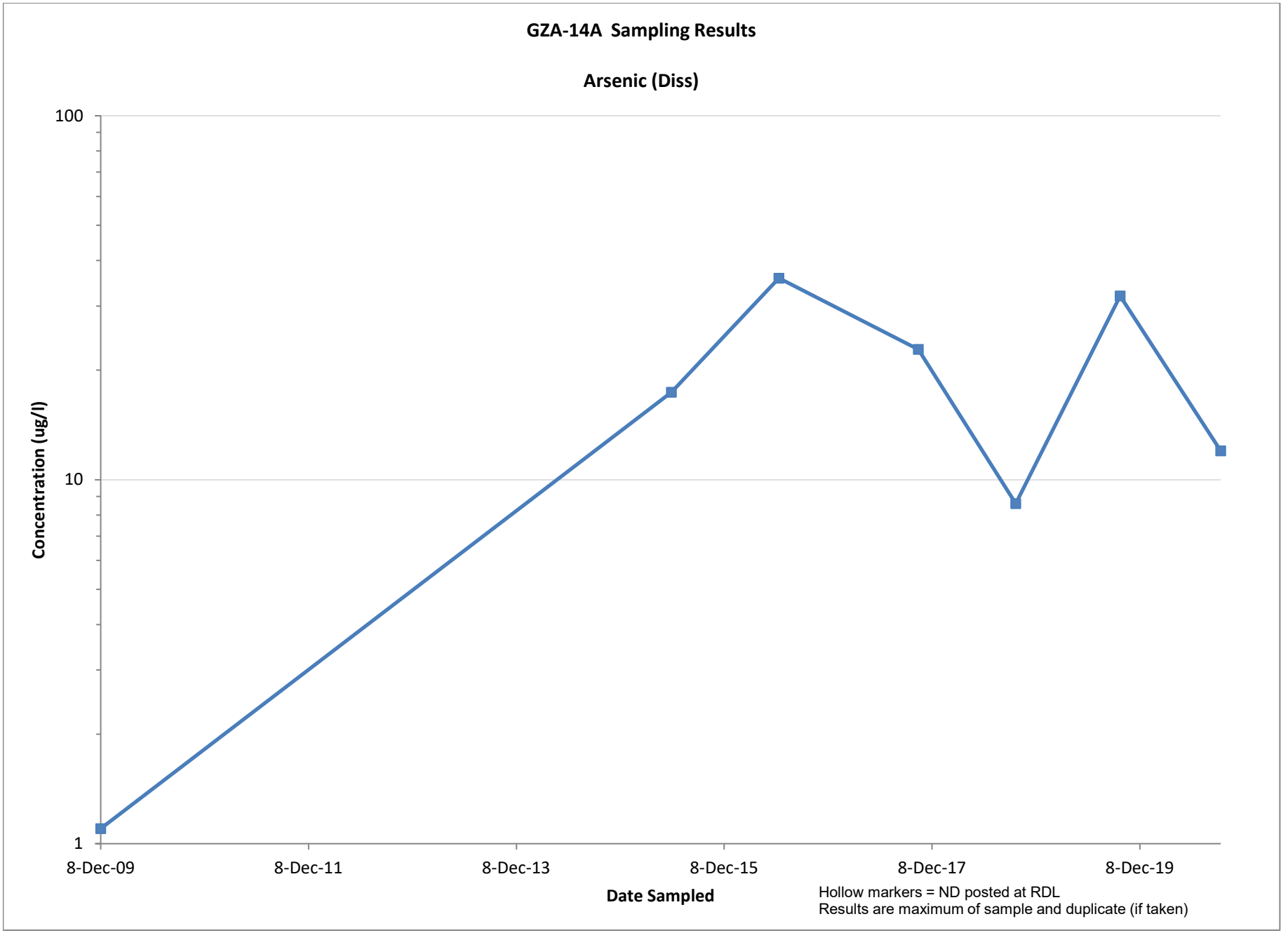

GZA-06 Sampling Results
Arsenic (Diss)
10
1
Concentration (ug/l)
10-Dec-09
10-Dec-11
10-Dec-13
10-Dec-15
10-Dec-17
10-Dec-19
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)

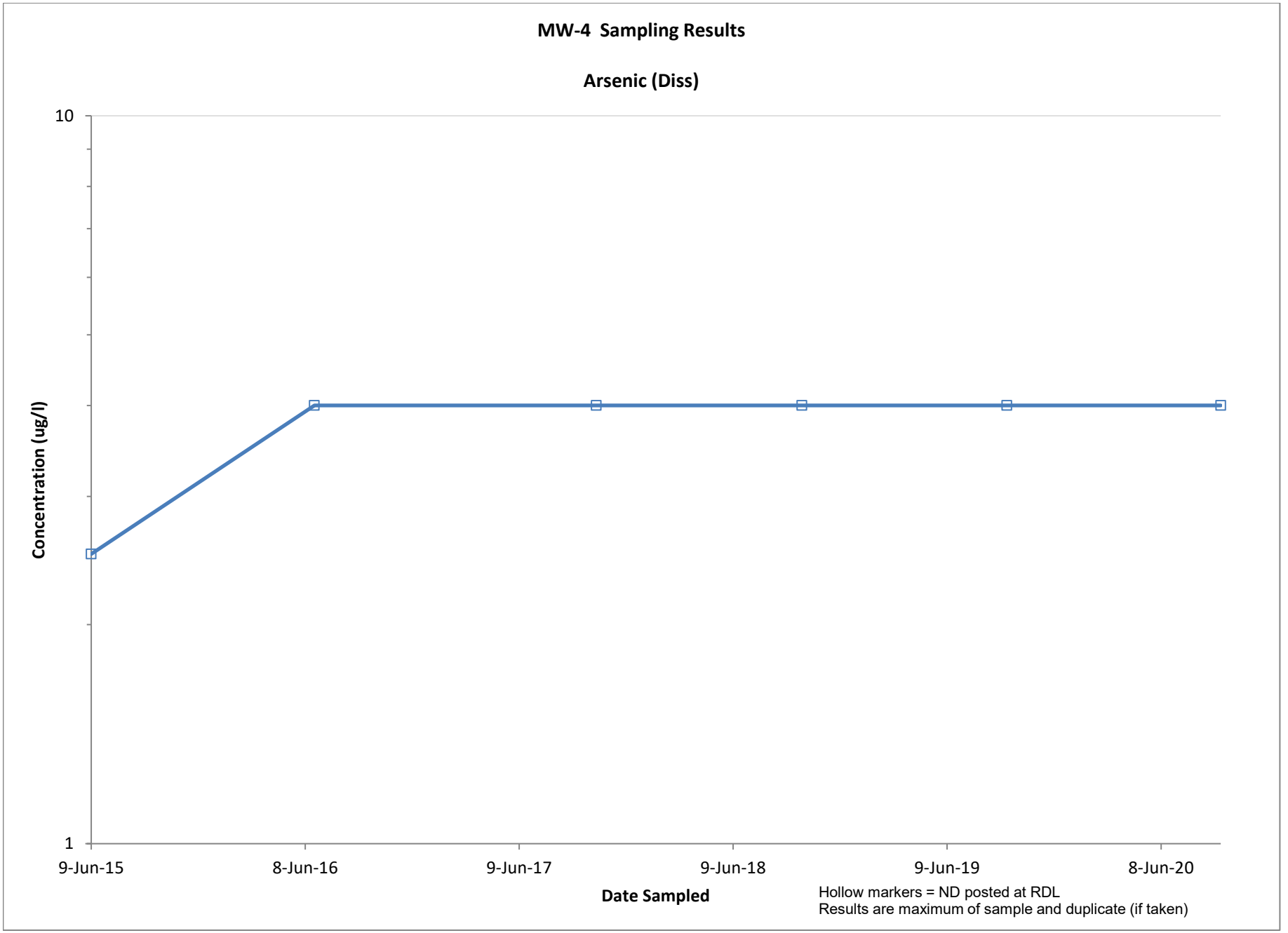

GZA-10 Sampling Results
Arsenic (Diss)
1000
100
10
1
Concentration (ug/l)
10-Dec-09
10-Dec-11
10-Dec-13
10-Dec-15
10-Dec-17
10-Dec-19
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)

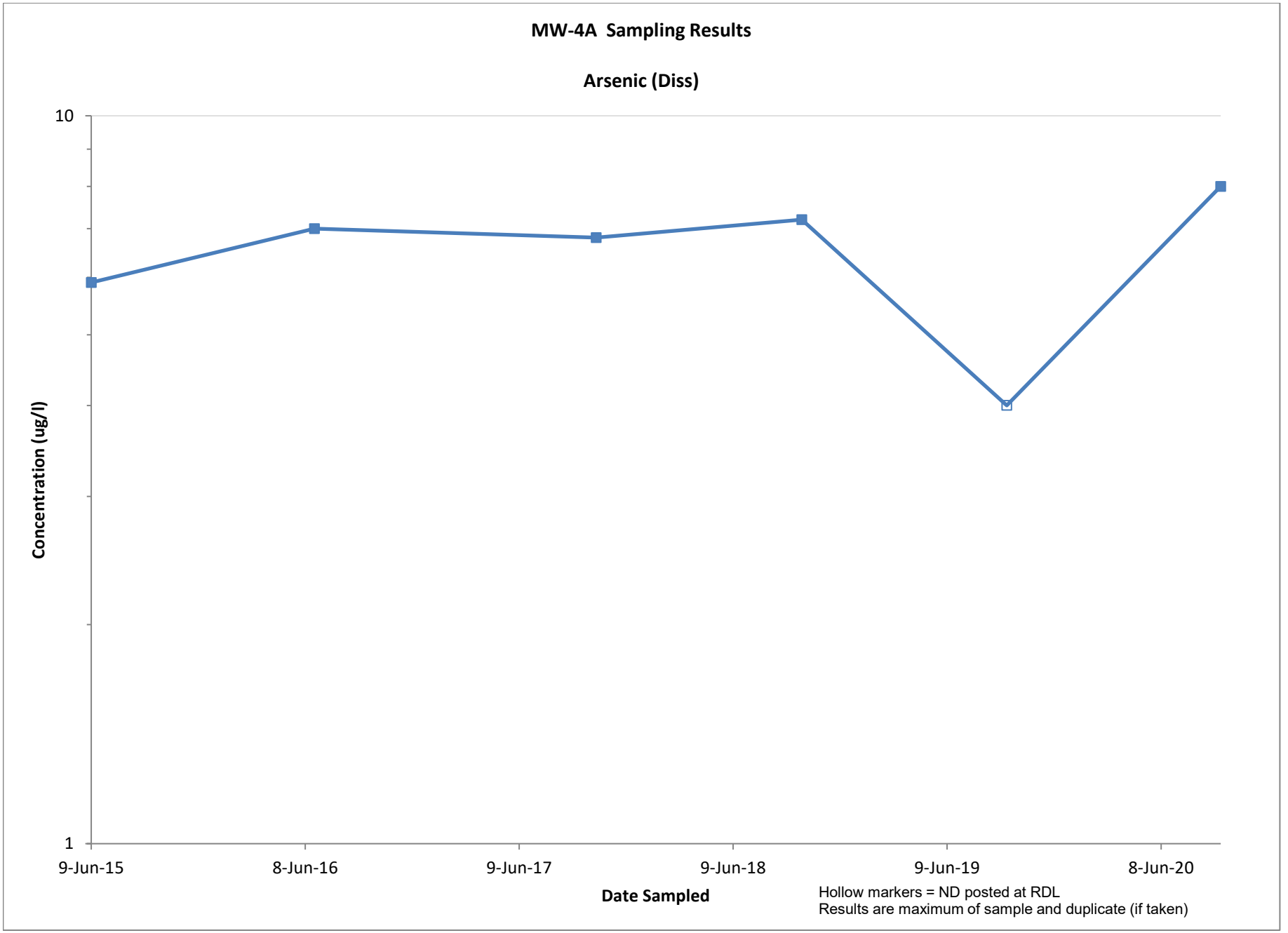

GZA-101R Sampling Results
Arsenic (Diss)
10
1
Concentration (ug/l)
11-Dec-09
11-Dec-11
11-Dec-13
11-Dec-15
11-Dec-17
11-Dec-19
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)

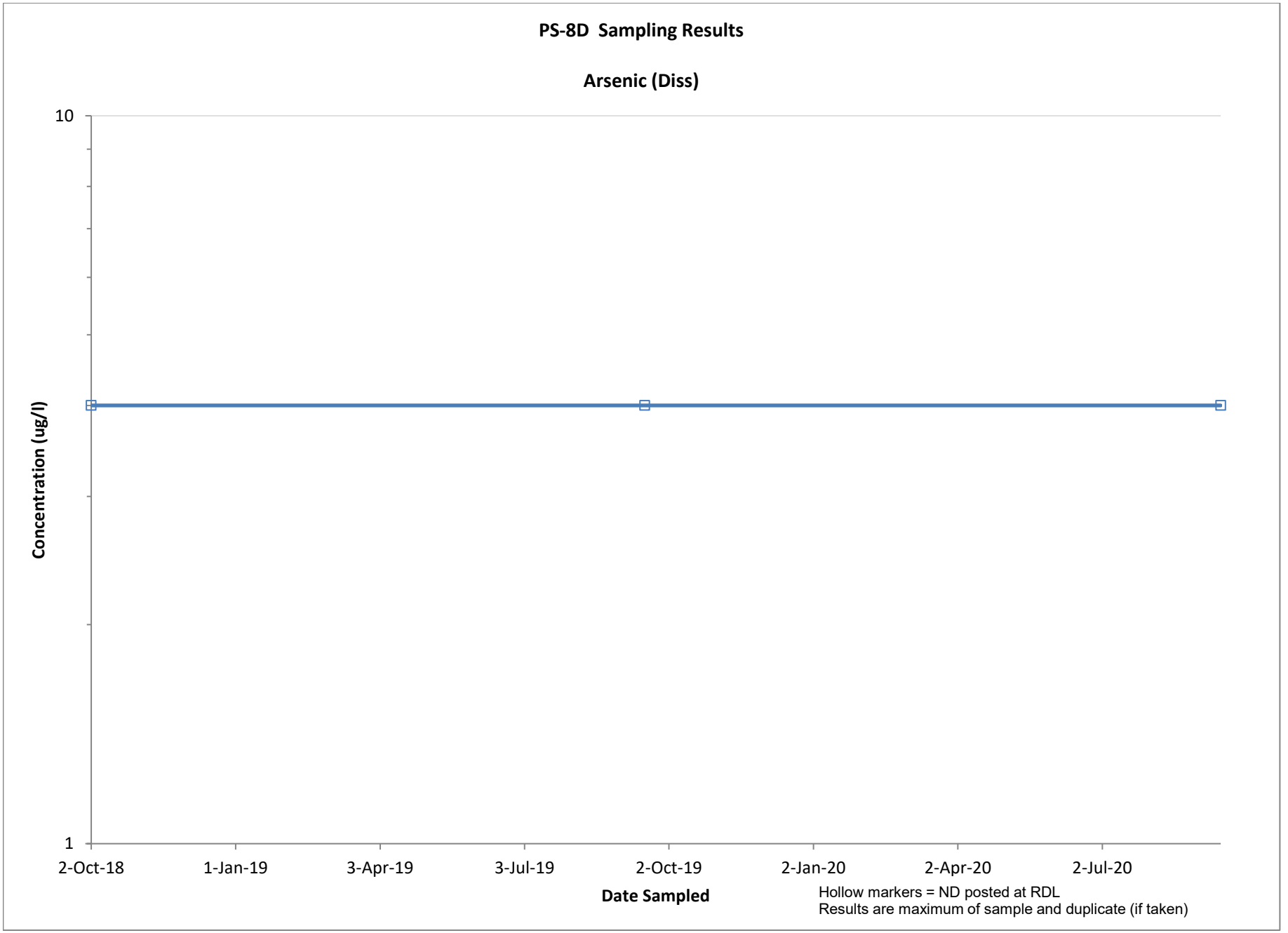

GZA-105S Sampling Results
Arsenic (Diss)
1000
100
10
1
Concentration (ug/l)
7-Dec-09
7-Dec-11
7-Dec-13
7-Dec-15
7-Dec-17
7-Dec-19
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)

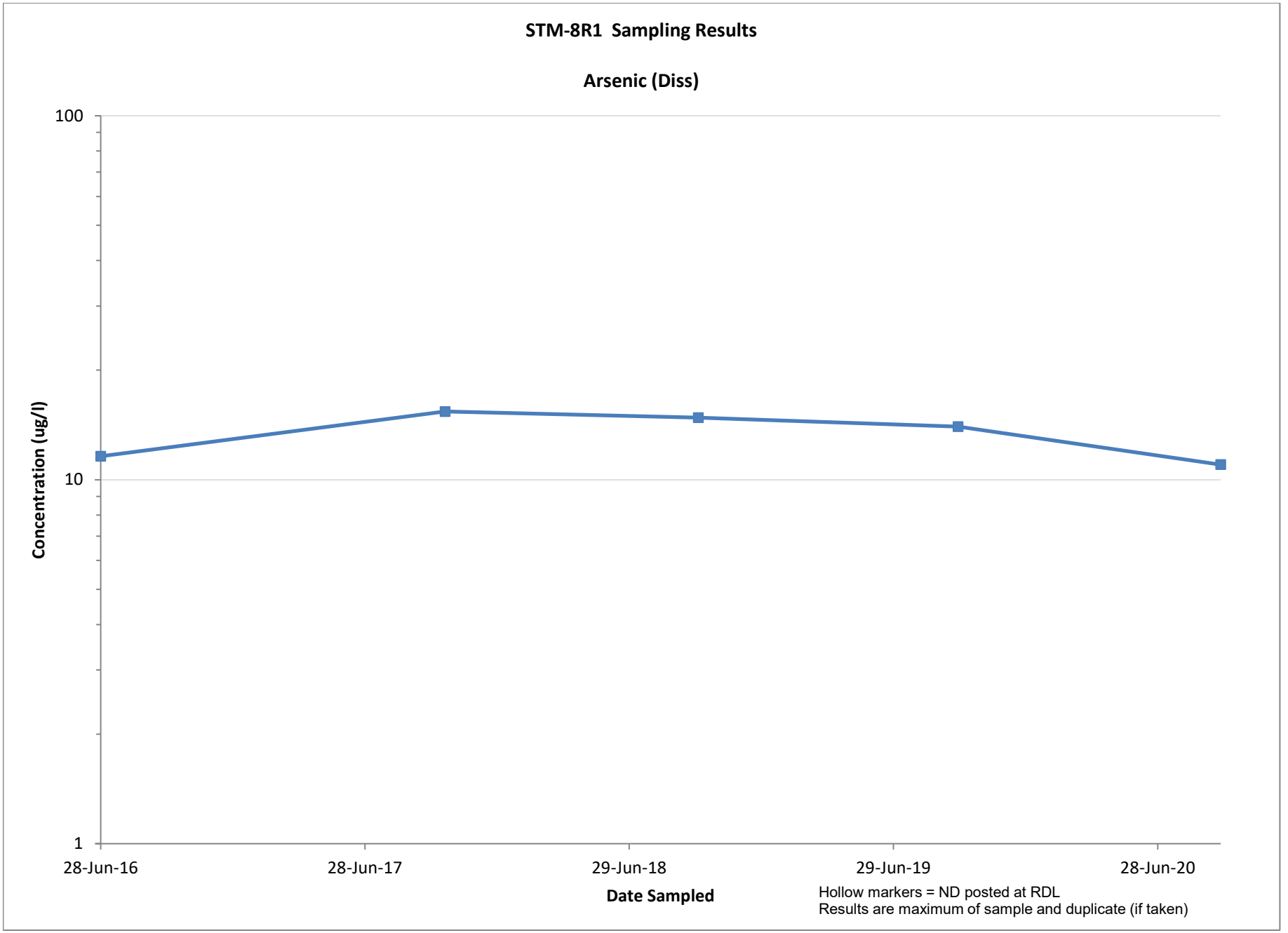

GZA-12 Sampling Results
Arsenic (Diss)
10
1
Concentration (ug/l)
11-Dec-09
11-Dec-11
11-Dec-13
11-Dec-15
11-Dec-17
11-Dec-19
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)

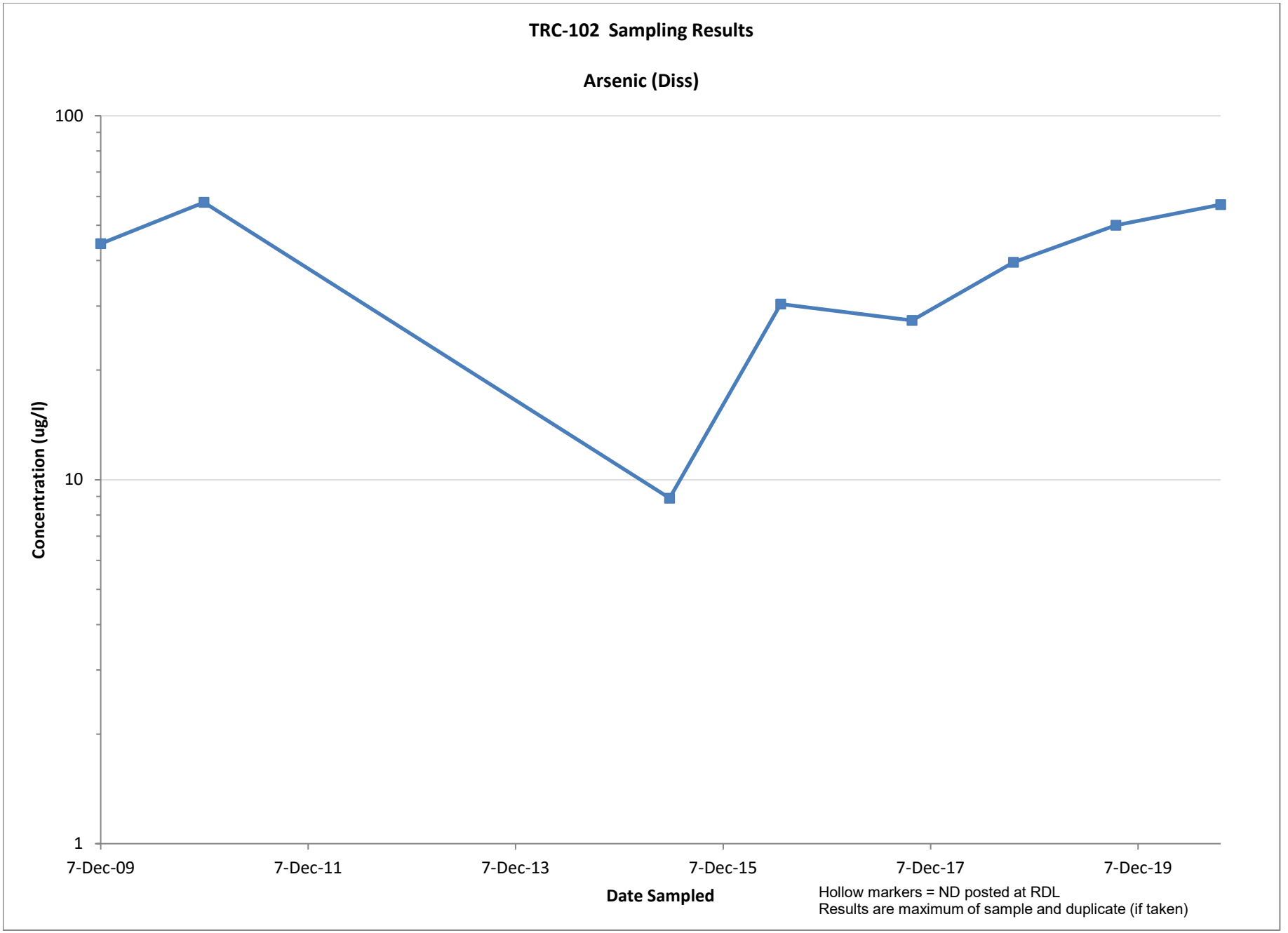

GZA-14A Sampling Results
Arsenic (Diss)
100
10
1
Concentration (ug/l)
8-Dec-09
8-Dec-11
8-Dec-13
8-Dec-15
8-Dec-17
8-Dec-19
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)

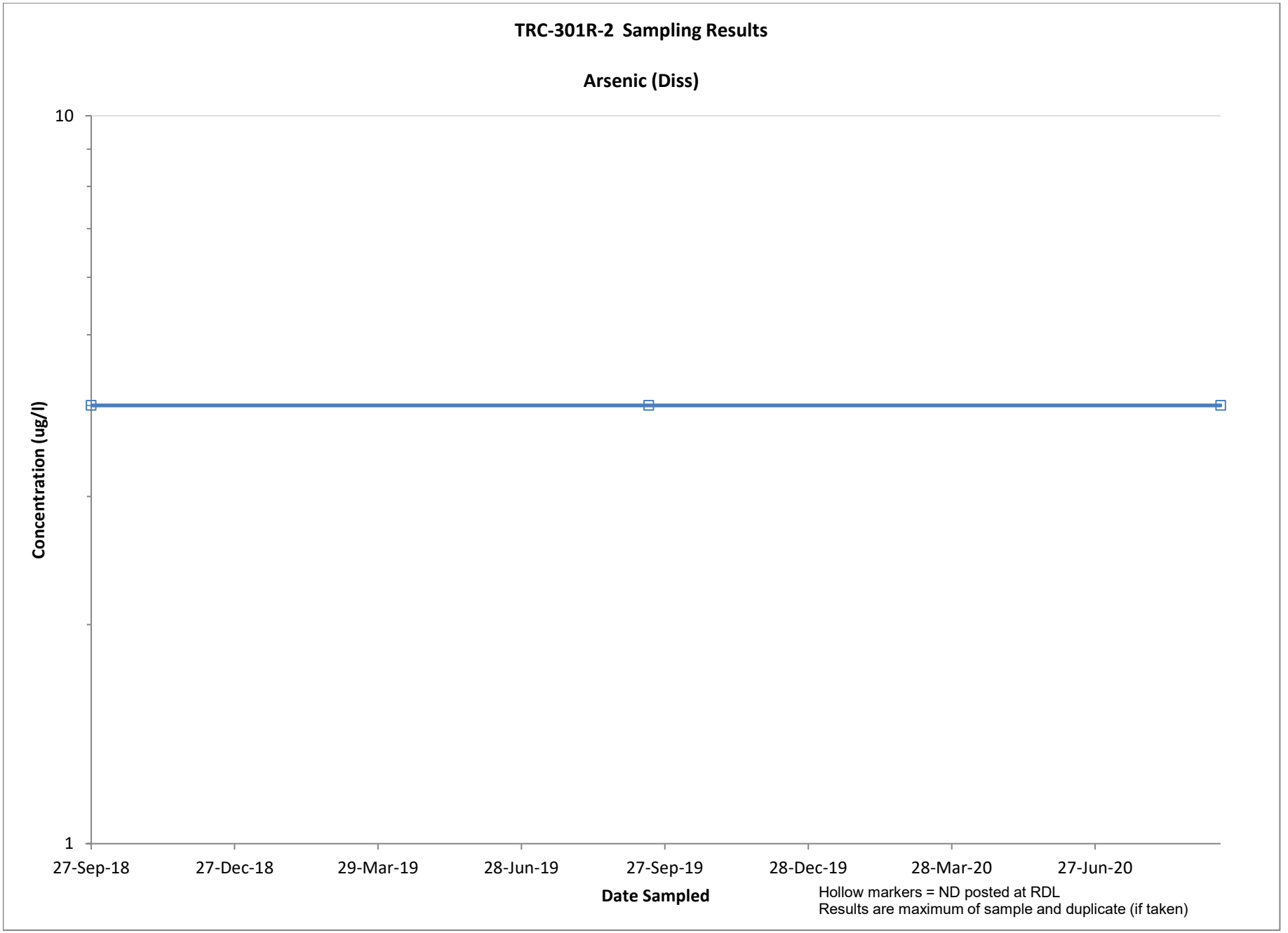

MW-4 Sampling Results
Arsenic (Diss)
10
1
Concentration (ug/l)
9-Jun-15
8-Jun-16
9-Jun-17
9-Jun-18
9-Jun-19
8-Jun-20
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)

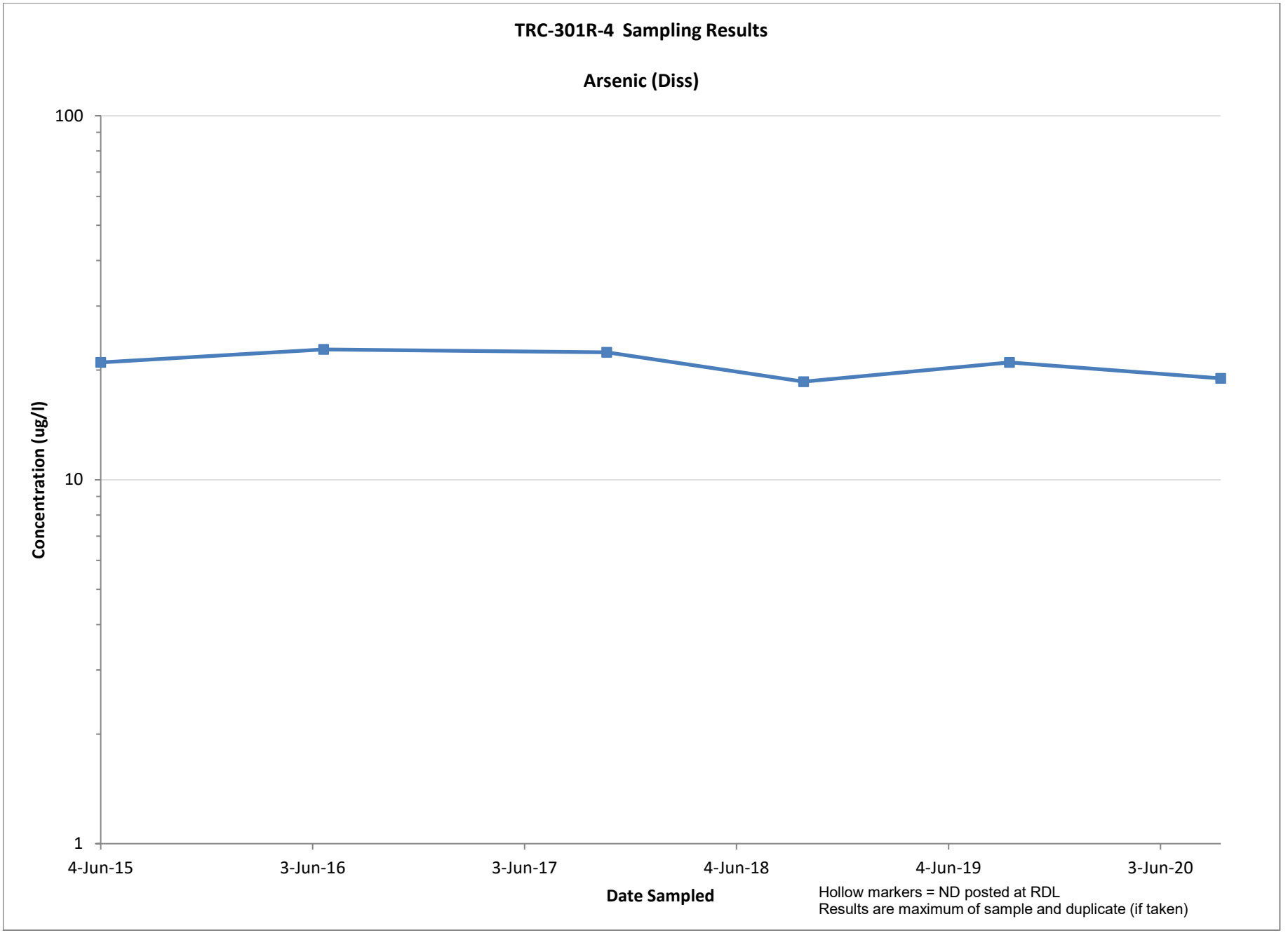

MW-4A Sampling Results
Arsenic (Diss)
10
1
Concentration (ug/l)
9-Jun-15
8-Jun-16
9-Jun-17
9-Jun-18
9-Jun-19
8-Jun-20
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)

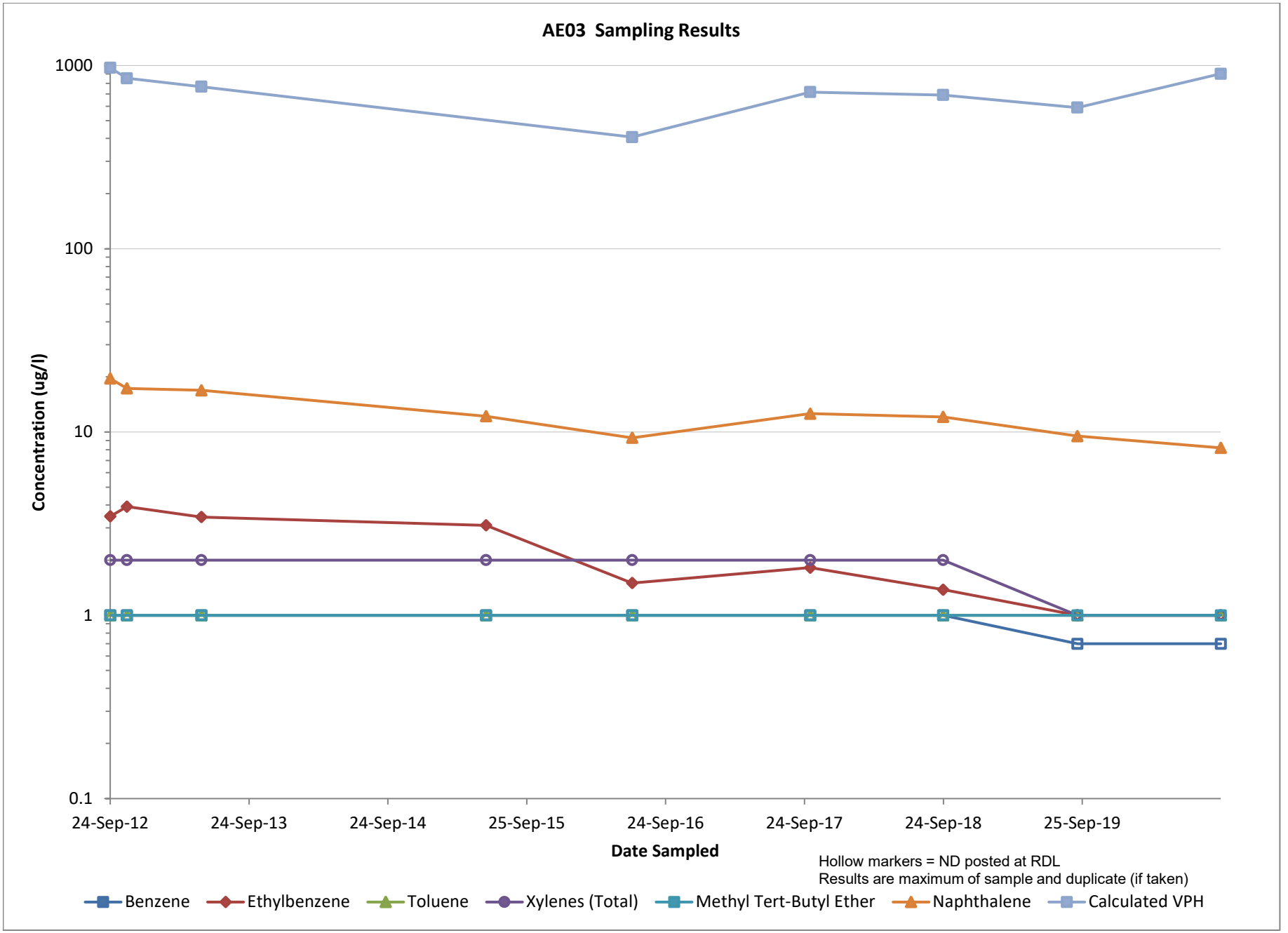

PS-8D Sampling Results
Arsenic (Diss)
10
1
Concentration (ug/l)
2-Oct-18
1-Jan-19
3-Apr-19
3-Jul-19
2-Oct-19
2-Jan-20
2-Apr-20
2-Jul-20
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)

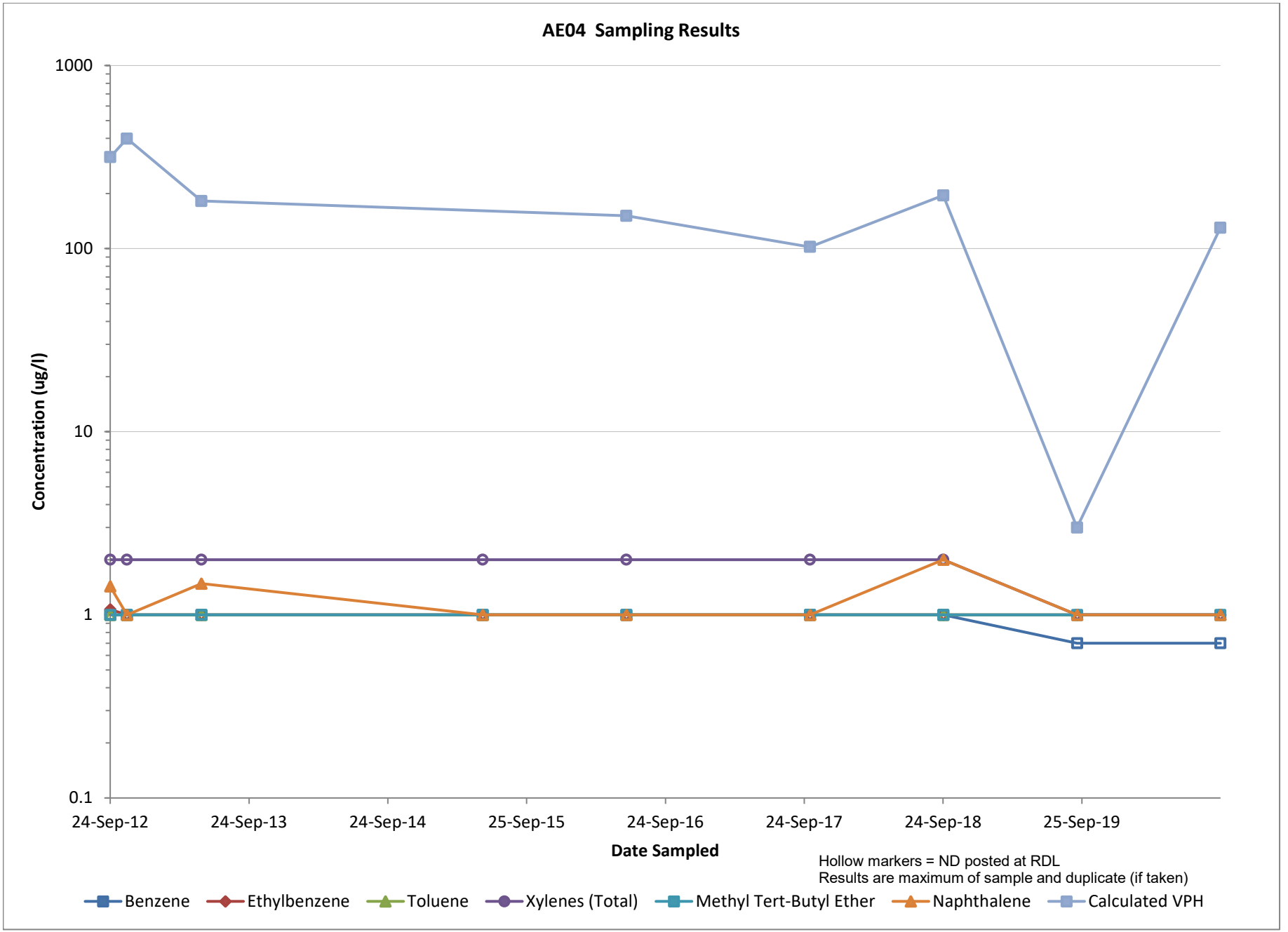

STM-8R1 Sampling Results
Arsenic (Diss)
100
10
1
Concentration (ug/l)
28-Jun-16
28-Jun-17
29-Jun-18
29-Jun-19
28-Jun-20
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)

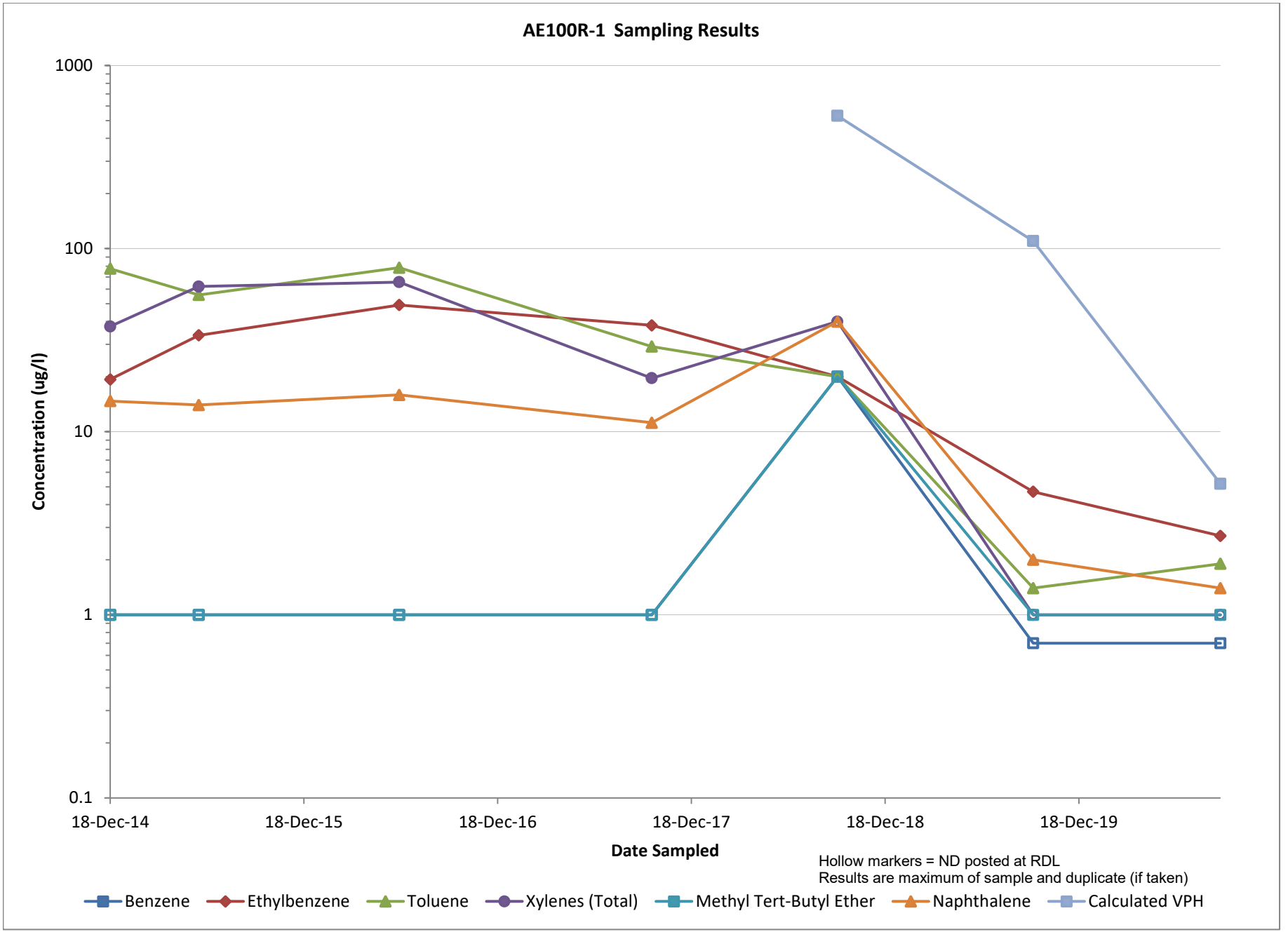

TRC-102 Sampling Results
Arsenic (Diss)
100
10
1
Concentration (ug/l)
7-Dec-09
7-Dec-11
7-Dec-13
7-Dec-15
7-Dec-17
7-Dec-19
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)

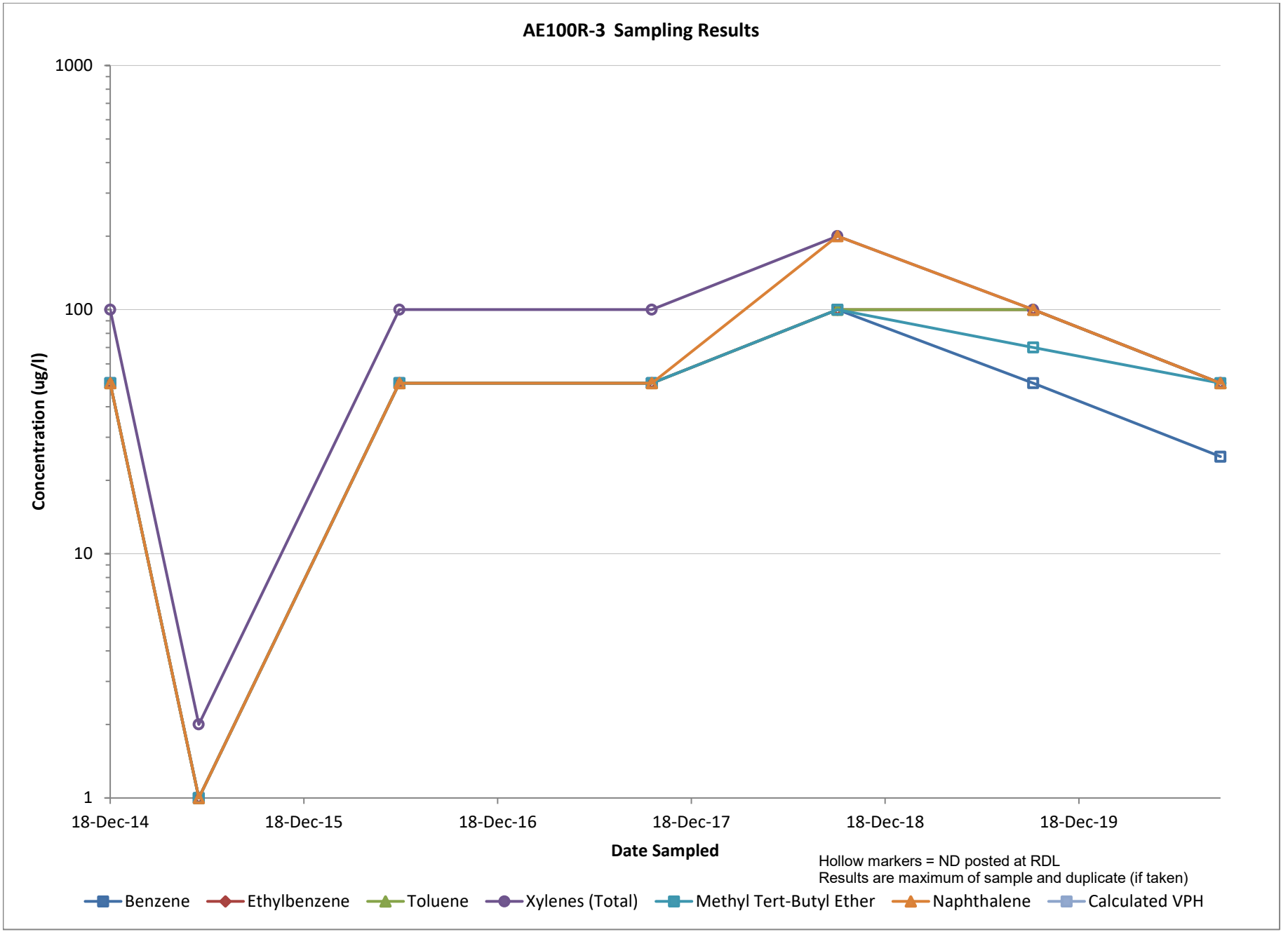

TRC-301R-2 Sampling Results
Arsenic (Diss)
10
1
Concentration (ug/l)
27-Sep-18
27-Dec-18
29-Mar-19
28-Jun-19
27-Sep-19
28-Dec-19
28-Mar-20
27-Jun-20
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)

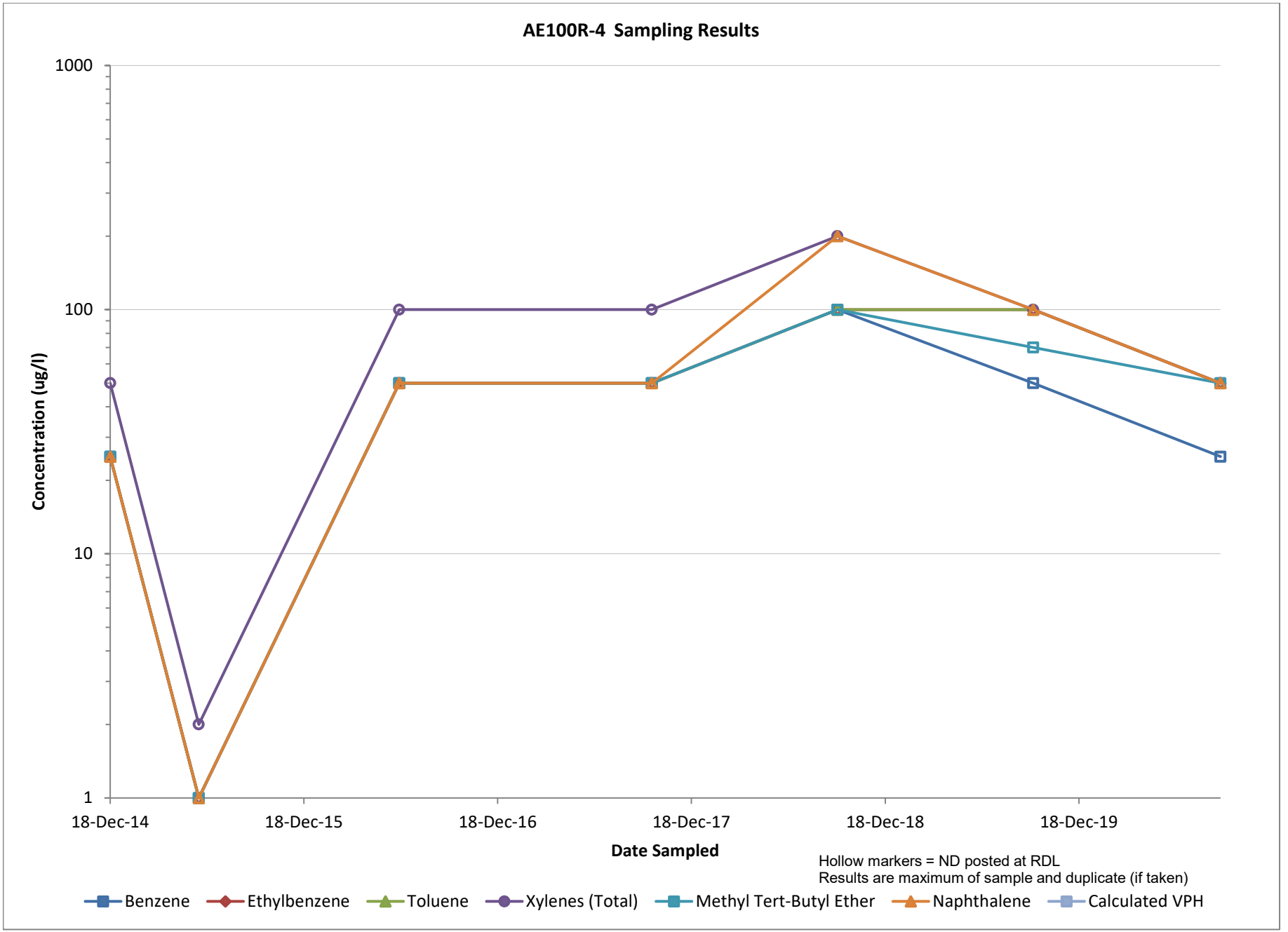

TRC-301R-4 Sampling Results
Arsenic (Diss)
100
10
1
Concentration (ug/l)
4-Jun-15
3-Jun-16
3-Jun-17
4-Jun-18
4-Jun-19
3-Jun-20
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)

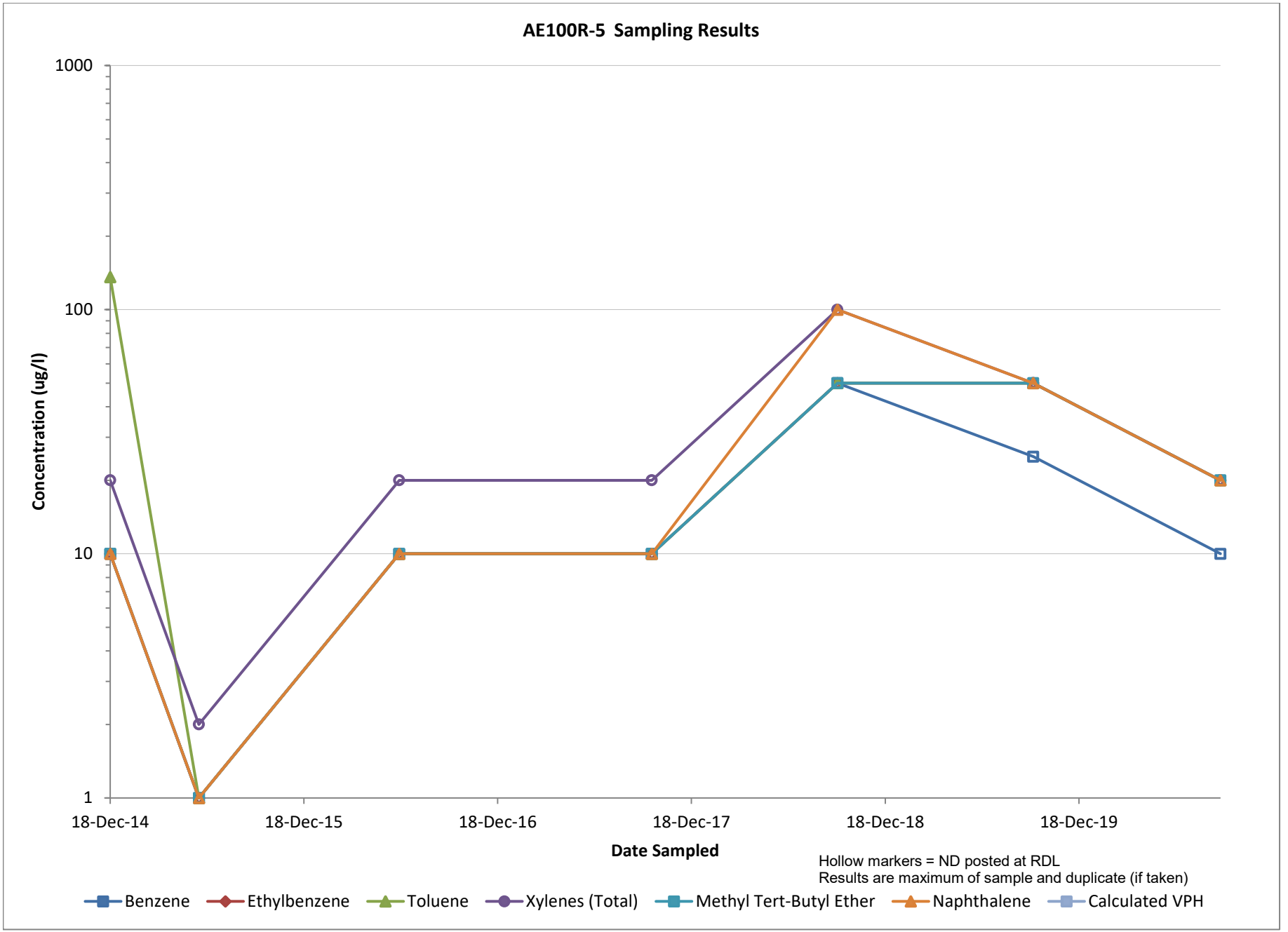

AE03 Sampling Results
1000
100
10
1
0.1
Concentration (ug/l)
24-Sep-12
24-Sep-13
24-Sep-14
25-Sep-15
24-Sep-16
24-Sep-17
24-Sep-18
25-Sep-19
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
Benzene
Ethylbenzene
Toluene
Xylenes (Total)
Methyl Tert-Butyl Ether
Naphthalene
Calculated VPH

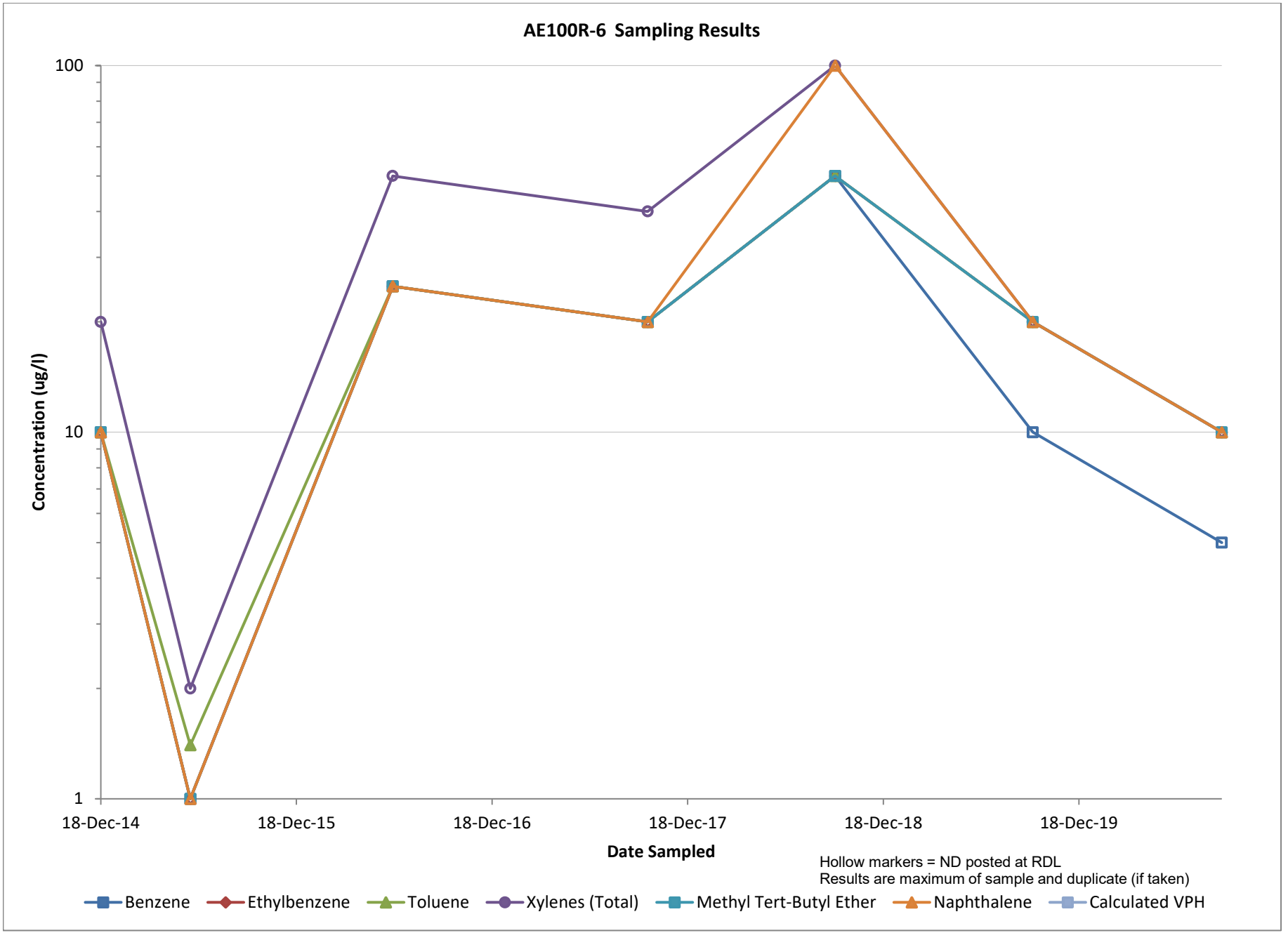

AE04 Sampling Results
1000
100
10
1
0.1
Concentration (ug/l)
24-Sep-12
24-Sep-13
24-Sep-14
25-Sep-15
24-Sep-16
24-Sep-17
24-Sep-18
25-Sep-19
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
Benzene
Ethylbenzene
Toluene
Xylenes (Total)
Methyl Tert-Butyl Ether
Naphthalene
Calculated VPH

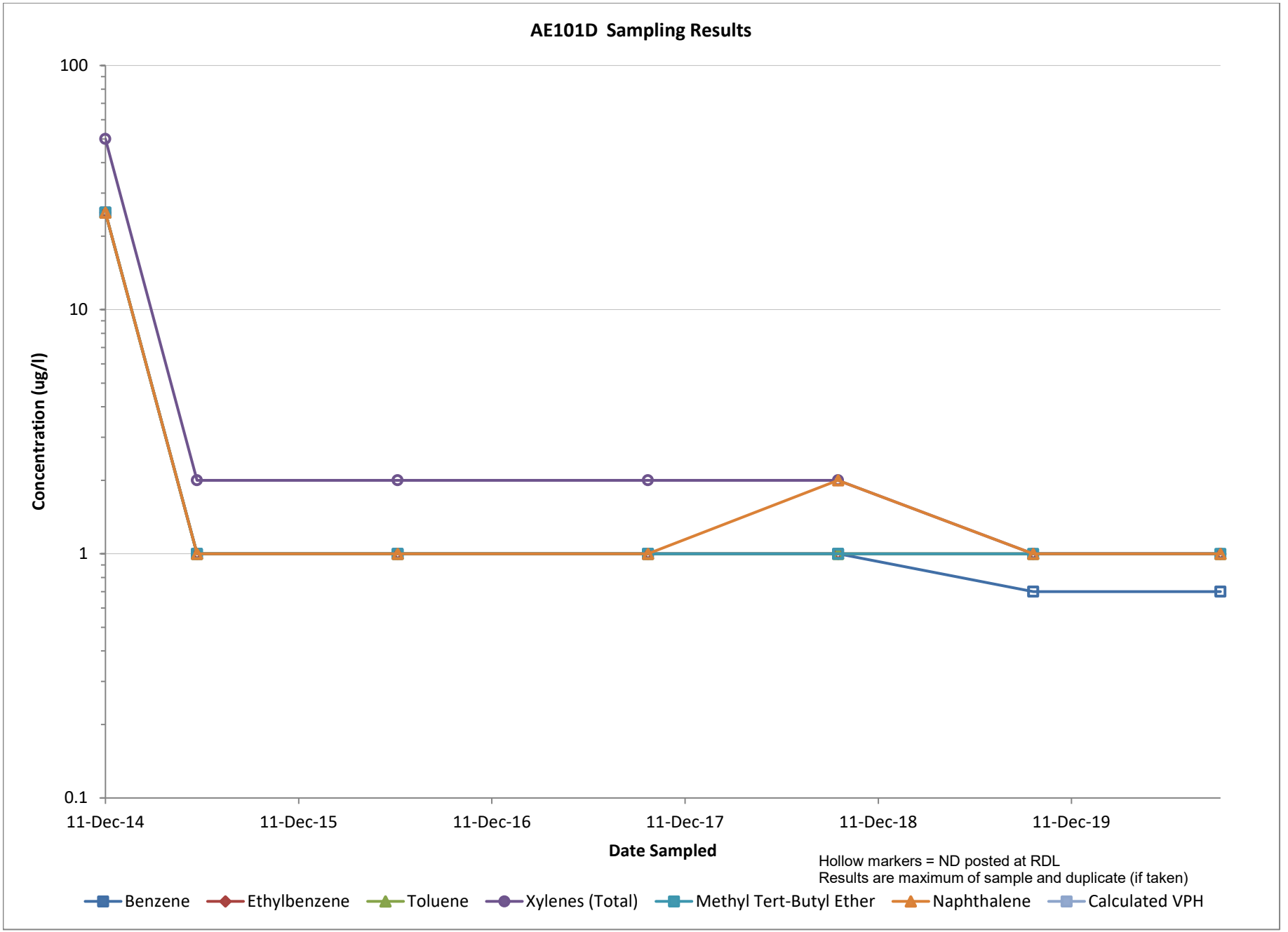

AE100R-1 Sampling Results
1000
100
10
1
0.1
Concentration (ug/l)
18-Dec-14
18-Dec-15
18-Dec-16
18-Dec-17
18-Dec-18
18-Dec-19
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
Benzene
Ethylbenzene
Toluene
Xylenes (Total)
Methyl Tert-Butyl Ether
Naphthalene
Calculated VPH

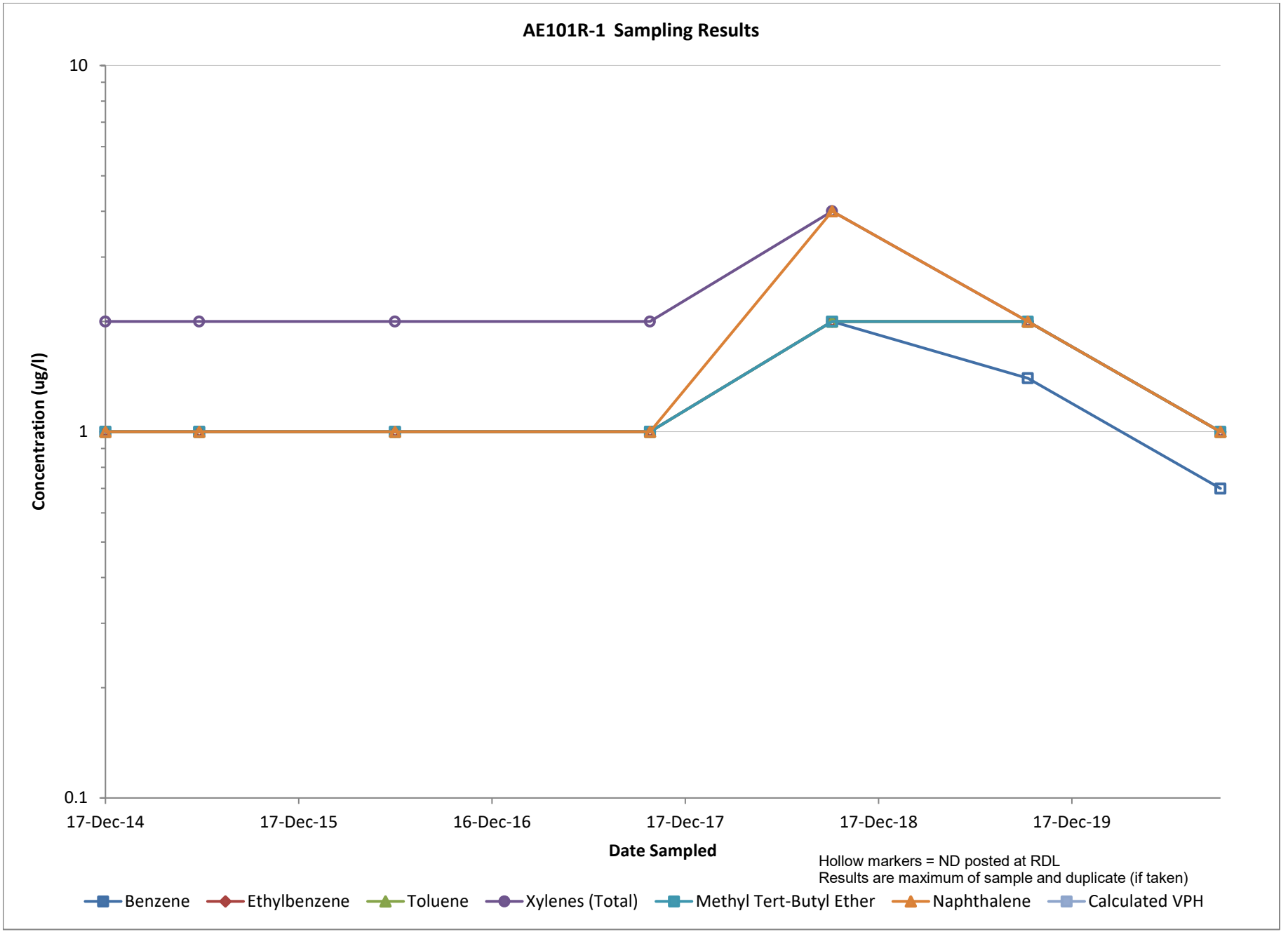

AE100R-3 Sampling Results
1000
100
10
1
Concentration (ug/l)
18-Dec-14
18-Dec-15
18-Dec-16
18-Dec-17
18-Dec-18
18-Dec-19
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
Benzene
Ethylbenzene
Toluene
Xylenes (Total)
Methyl Tert-Butyl Ether
Naphthalene
Calculated VPH

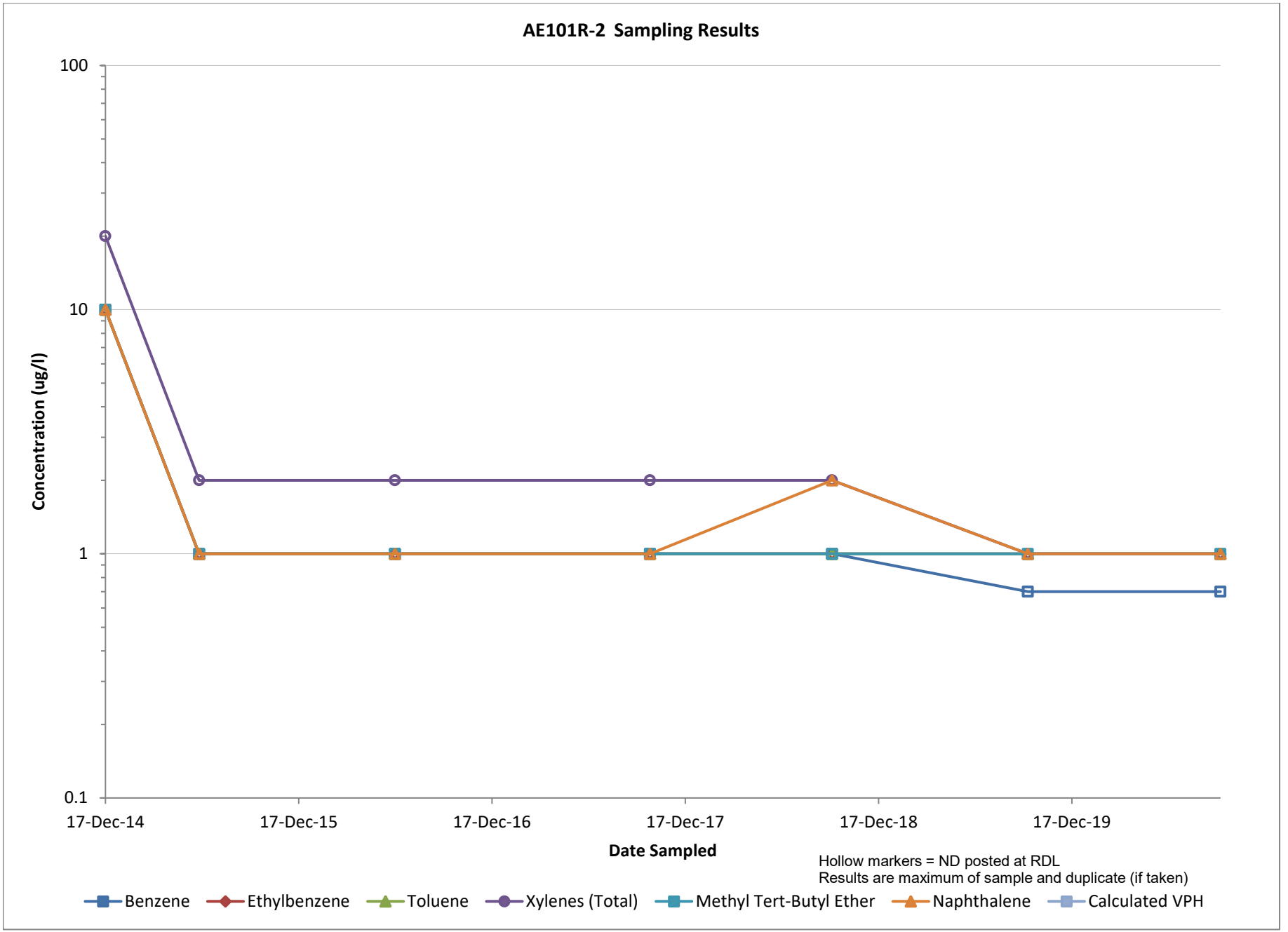

AE100R-4 Sampling Results
1000
100
10
1
Concentration (ug/l)
18-Dec-14
18-Dec-15
18-Dec-16
18-Dec-17
18-Dec-18
18-Dec-19
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
Benzene
Ethylbenzene
Toluene
Xylenes (Total)
Methyl Tert-Butyl Ether
Naphthalene
Calculated VPH

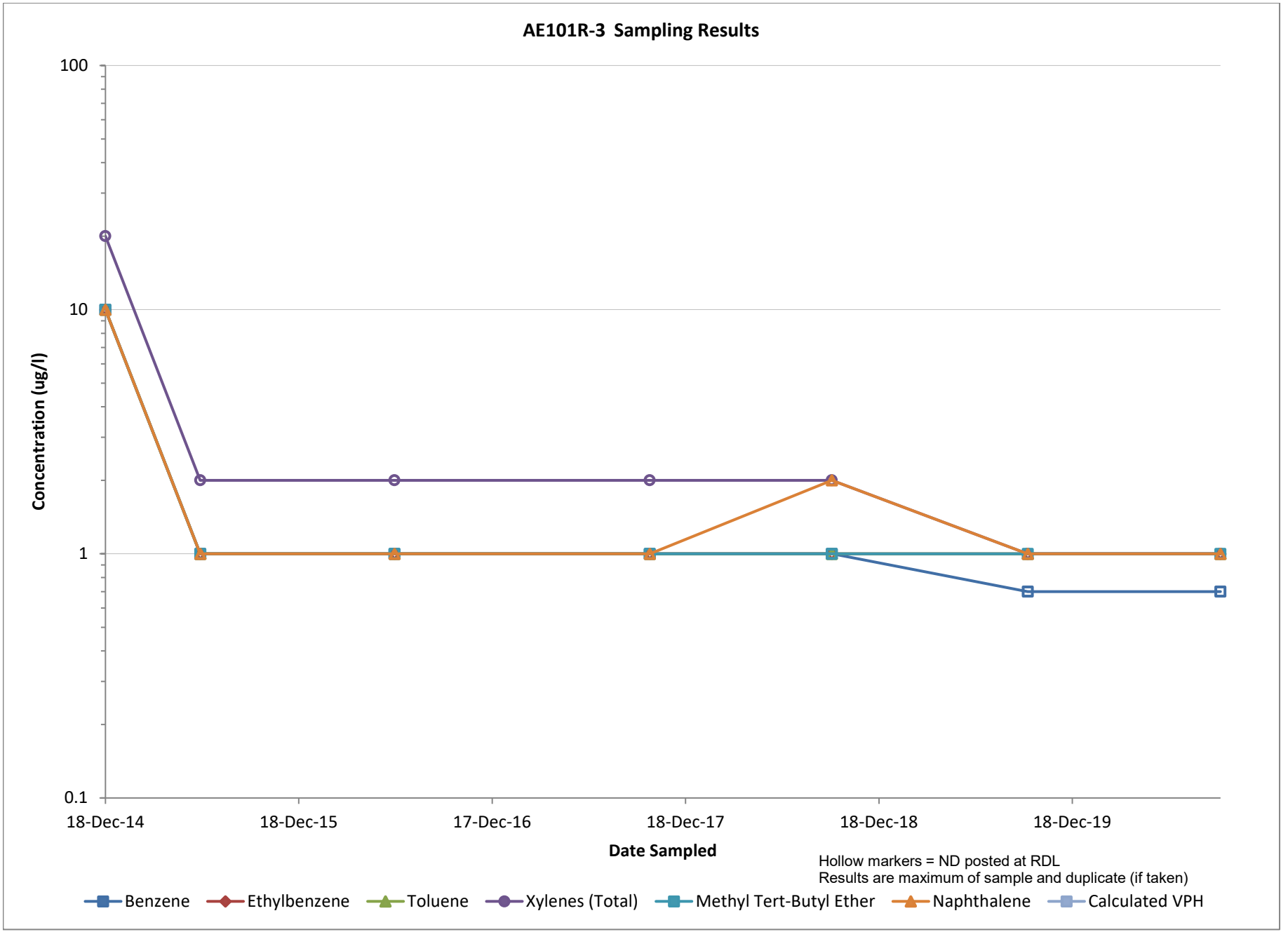

AE100R-5 Sampling Results
1000
100
10
1
Concentration (ug/l)
18-Dec-14
18-Dec-15
18-Dec-16
18-Dec-17
18-Dec-18
18-Dec-19
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
Benzene
Ethylbenzene
Toluene
Xylenes (Total)
Methyl Tert-Butyl Ether
Naphthalene
Calculated VPH

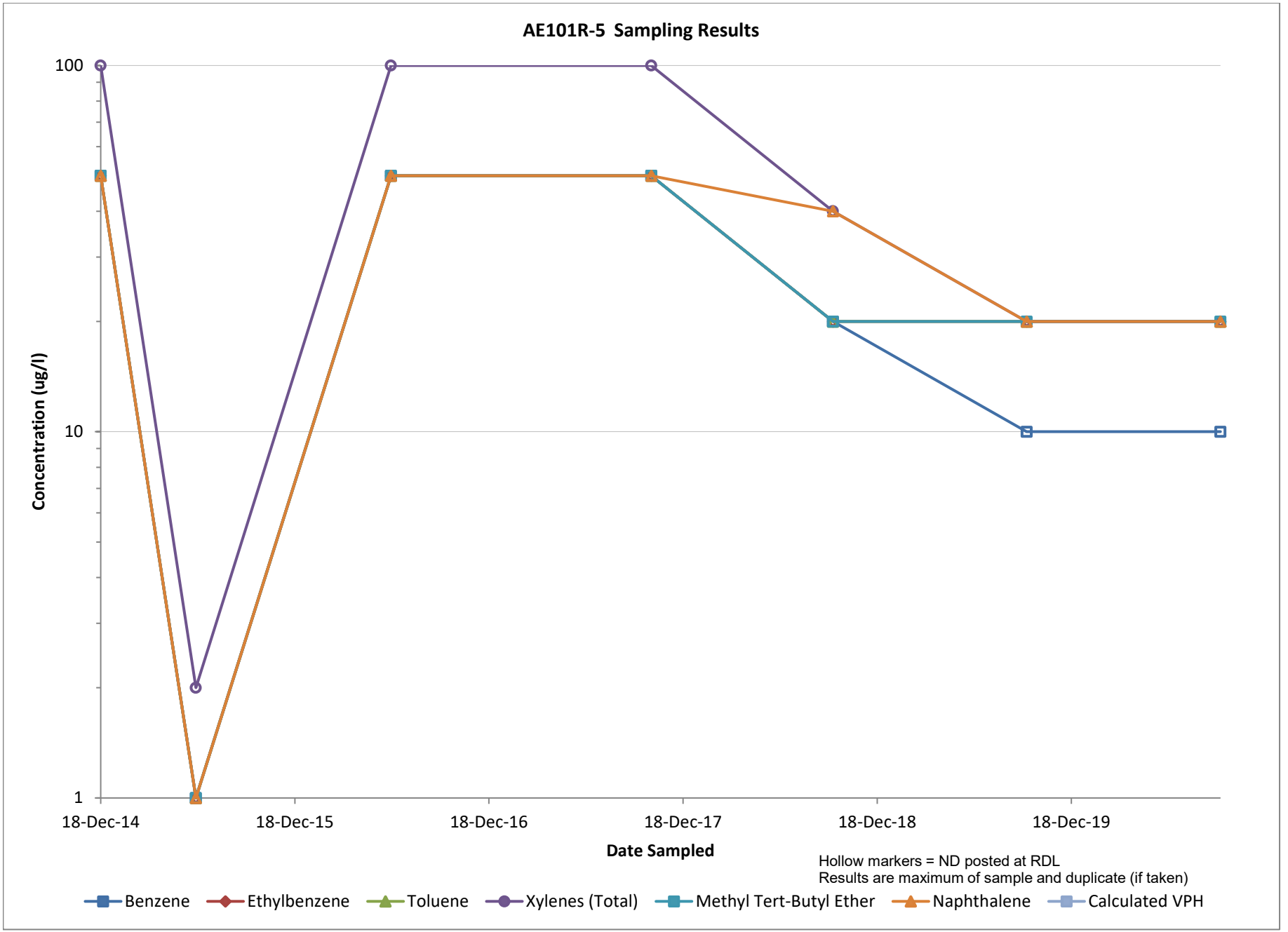

AE100R-6 Sampling Results
100
10
1
Concentration (ug/l)
18-Dec-14
18-Dec-15
18-Dec-16
18-Dec-17
18-Dec-18
18-Dec-19
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
Benzene
Ethylbenzene
Toluene
Xylenes (Total)
Methyl Tert-Butyl Ether
Naphthalene
Calculated VPH

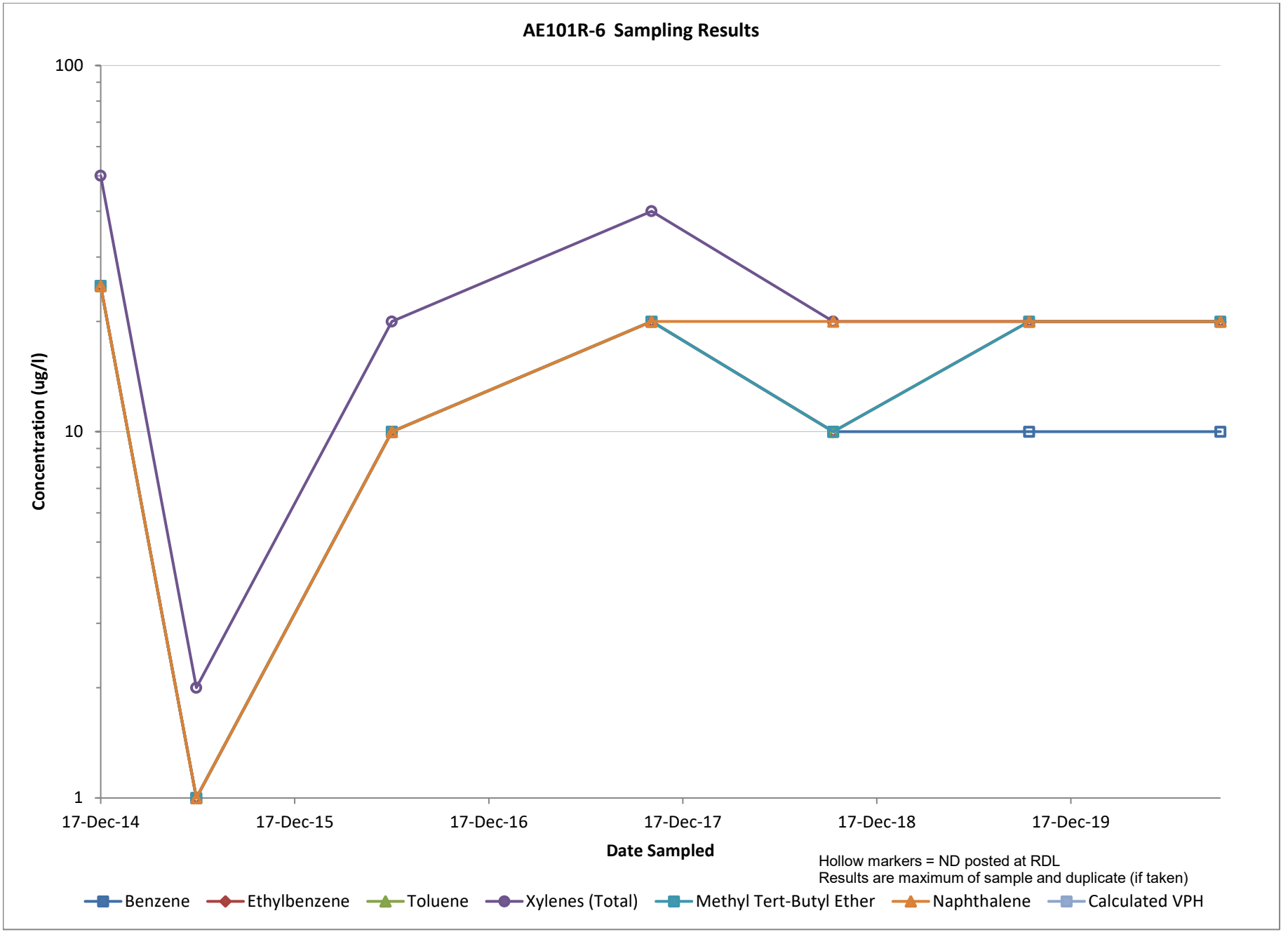

AE101D Sampling Results
100
10
1
0.1
Concentration (ug/l)
11-Dec-14
11-Dec-15
11-Dec-16
11-Dec-17
11-Dec-18
11-Dec-19
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
Benzene
Ethylbenzene
Toluene
Xylenes (Total)
Methyl Tert-Butyl Ether
Naphthalene
Calculated VPH

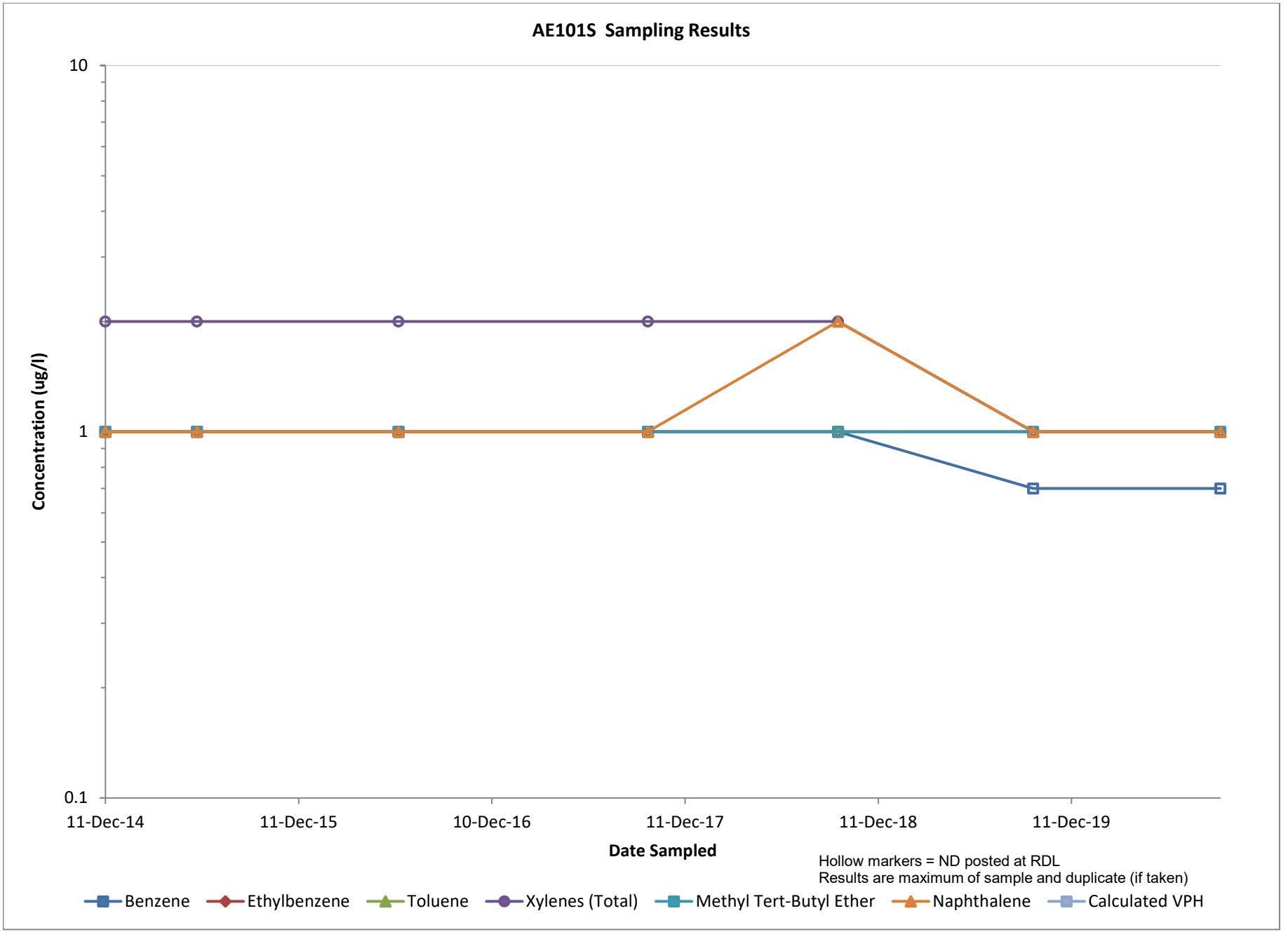

AE101R-1 Sampling Results
10
1
0.1
Concentration (ug/l)
17-Dec-14
17-Dec-15
16-Dec-16
17-Dec-17
17-Dec-18
17-Dec-19
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
Benzene
Ethylbenzene
Toluene
Xylenes (Total)
Methyl Tert-Butyl Ether
Naphthalene
Calculated VPH

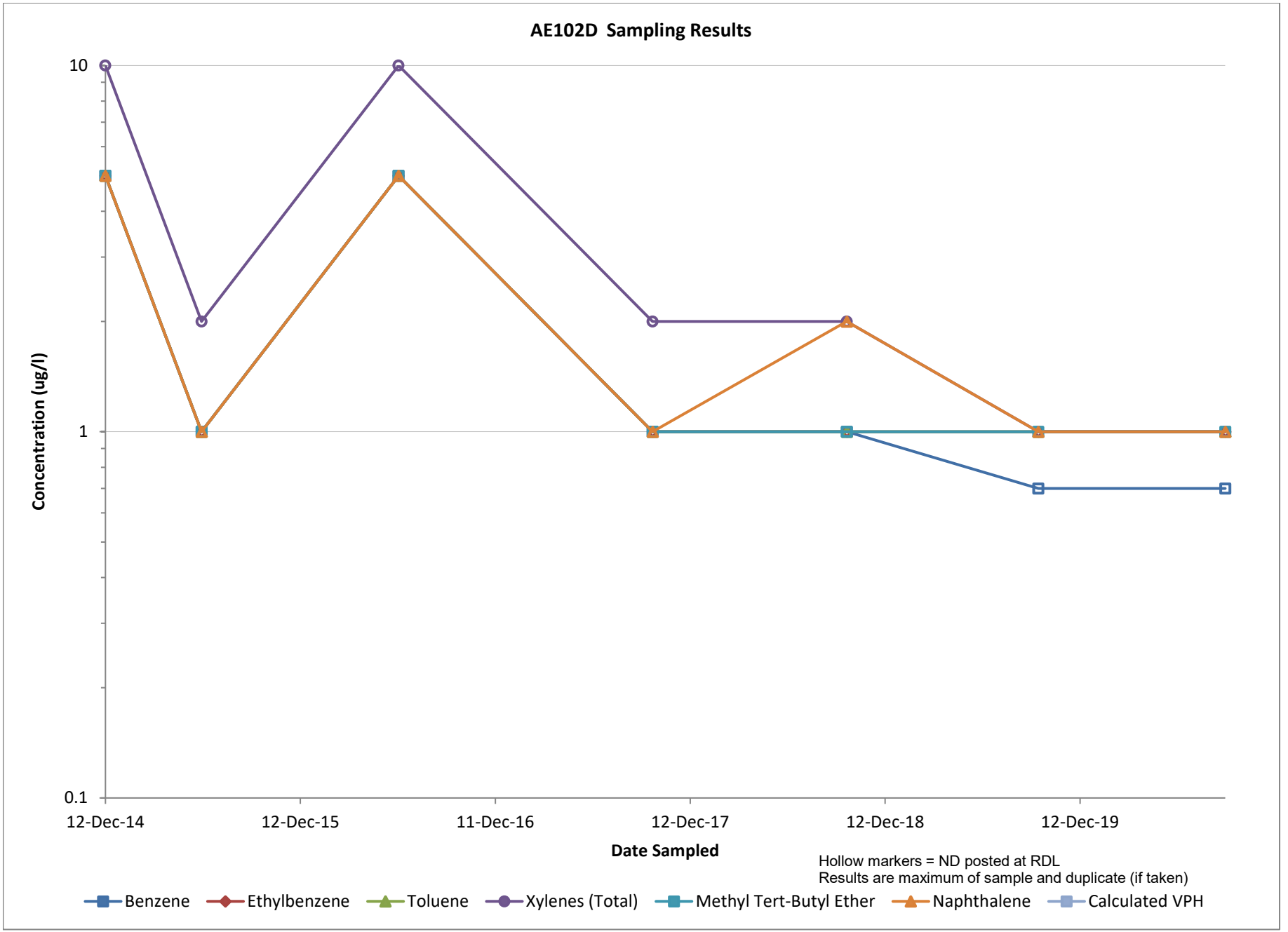

AE101R-2 Sampling Results
100
10
1
0.1
Concentration (ug/l)
17-Dec-14
17-Dec-15
17-Dec-16
17-Dec-17
17-Dec-18
17-Dec-19
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
Benzene
Ethylbenzene
Toluene
Xylenes (Total)
Methyl Tert-Butyl Ether
Naphthalene
Calculated VPH

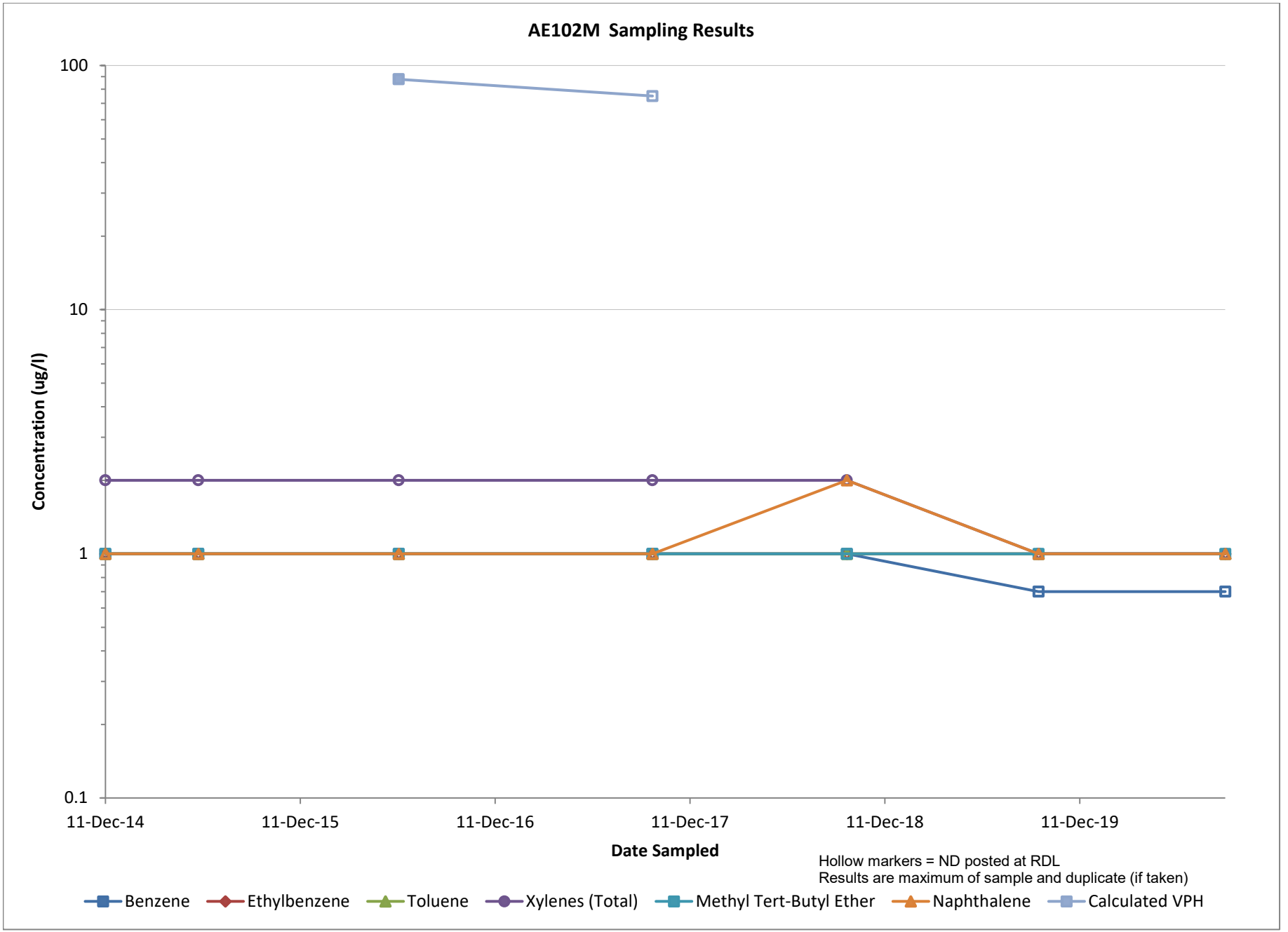

AE101R-3 Sampling Results
100
10
1
0.1
Concentration (ug/l)
18-Dec-14
18-Dec-15
17-Dec-16
18-Dec-17
18-Dec-18
18-Dec-19
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
Benzene
Ethylbenzene
Toluene
Xylenes (Total)
Methyl Tert-Butyl Ether
Naphthalene
Calculated VPH

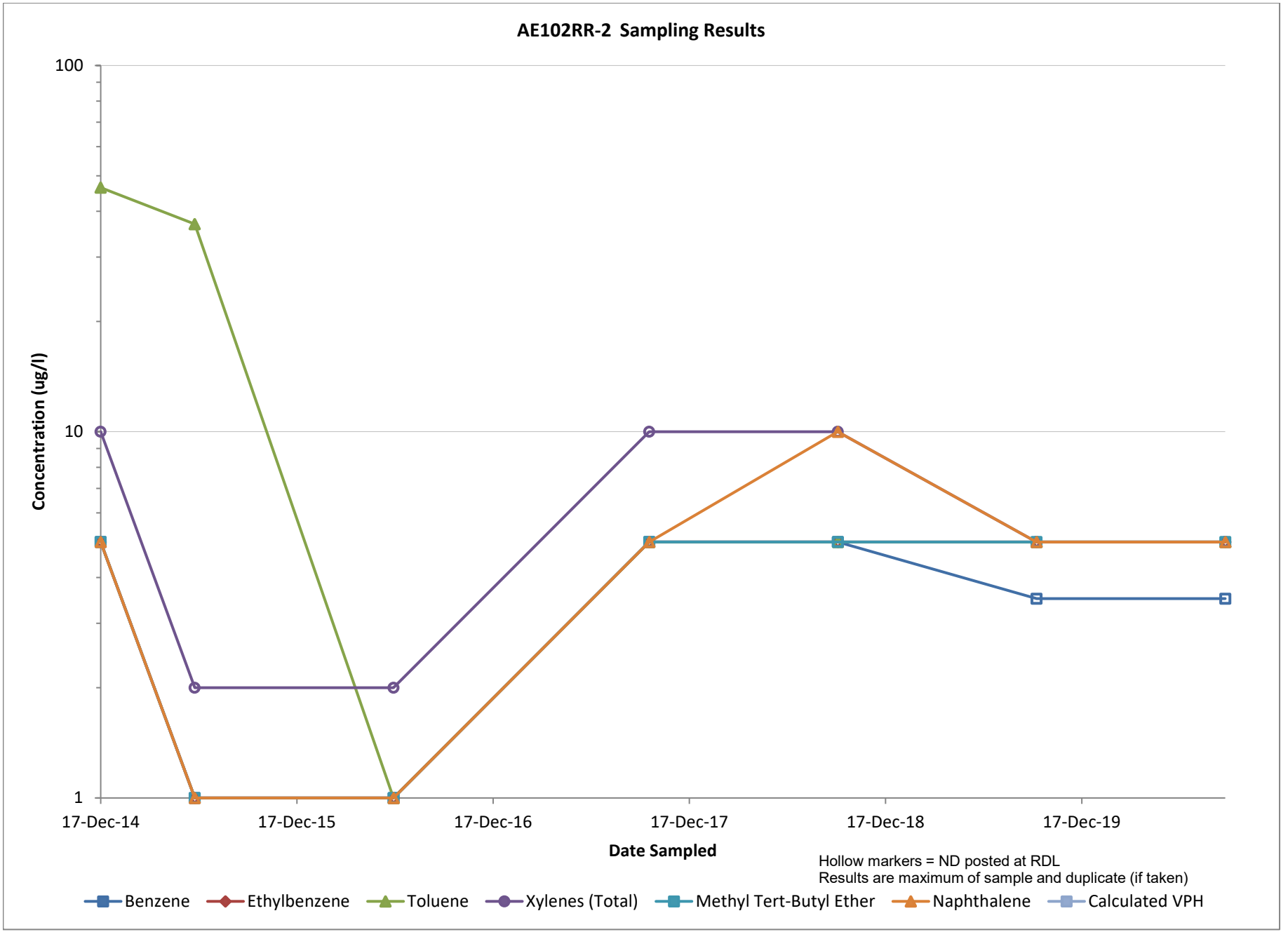

AE101R-5 Sampling Results
100
10
1
Concentration (ug/l)
18-Dec-14
18-Dec-15
18-Dec-16
18-Dec-17
18-Dec-18
18-Dec-19
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
Benzene
Ethylbenzene
Toluene
Xylenes (Total)
Methyl Tert-Butyl Ether
Naphthalene
Calculated VPH

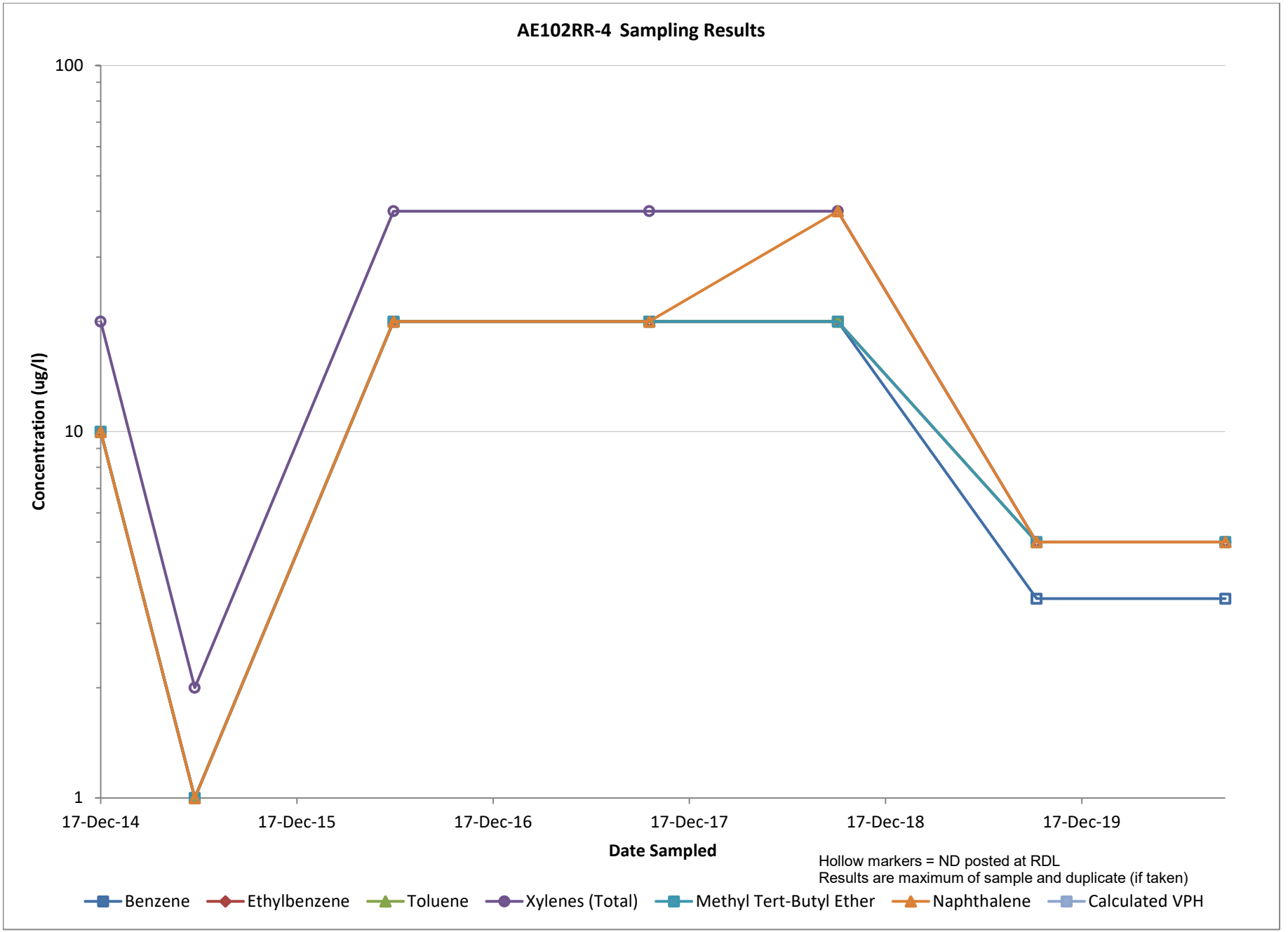

AE101R-6 Sampling Results
100
10
1
Concentration (ug/l)
17-Dec-14
17-Dec-15
17-Dec-16
17-Dec-17
17-Dec-18
17-Dec-19
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
Benzene
Ethylbenzene
Toluene
Xylenes (Total)
Methyl Tert-Butyl Ether
Naphthalene
Calculated VPH

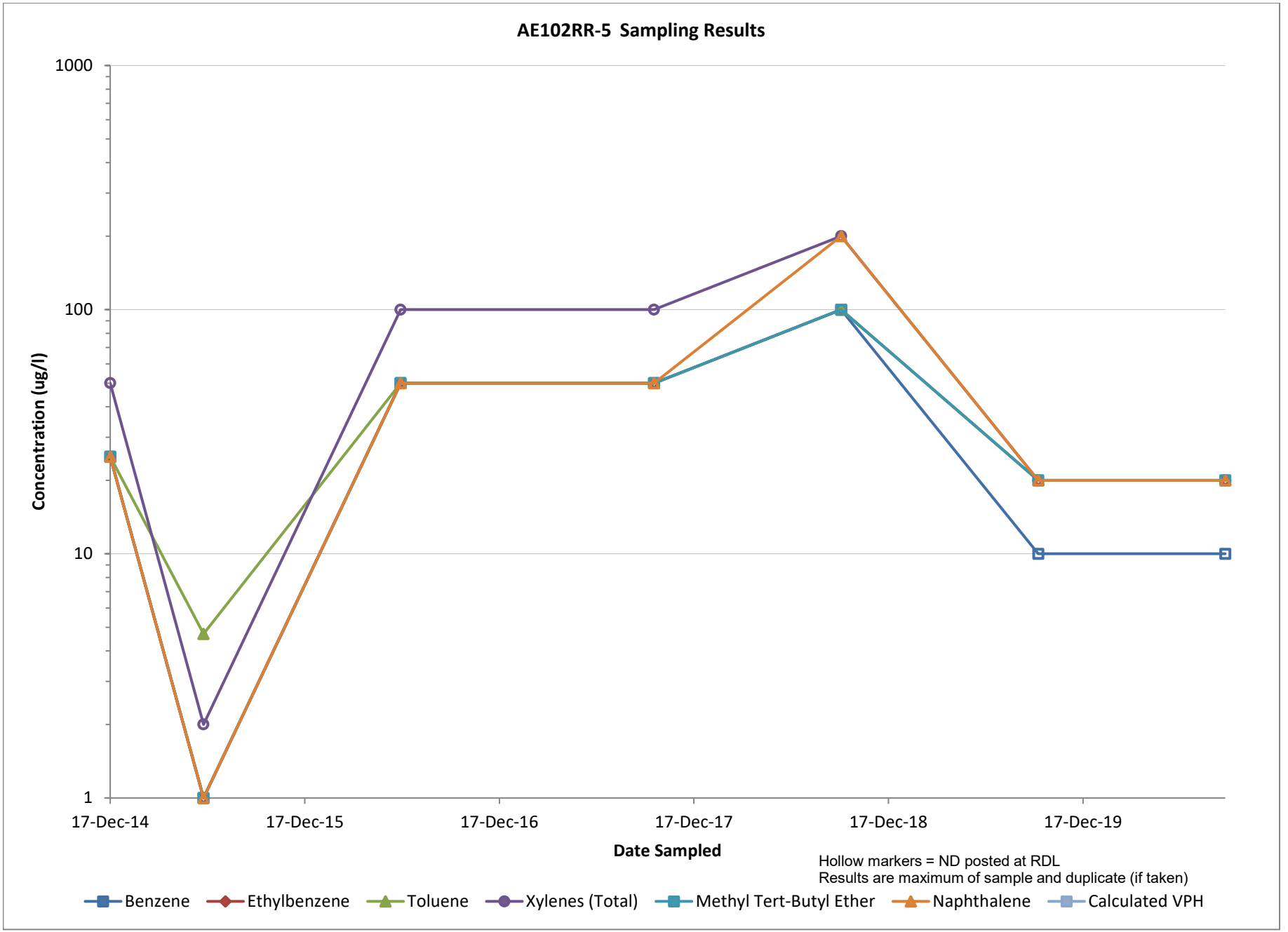

AE101S Sampling Results
10
1
0.1
Concentration (ug/l)
11-Dec-14
11-Dec-15
10-Dec-16
11-Dec-17
11-Dec-18
11-Dec-19
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
Benzene
Ethylbenzene
Toluene
Xylenes (Total)
Methyl Tert-Butyl Ether
Naphthalene
Calculated VPH

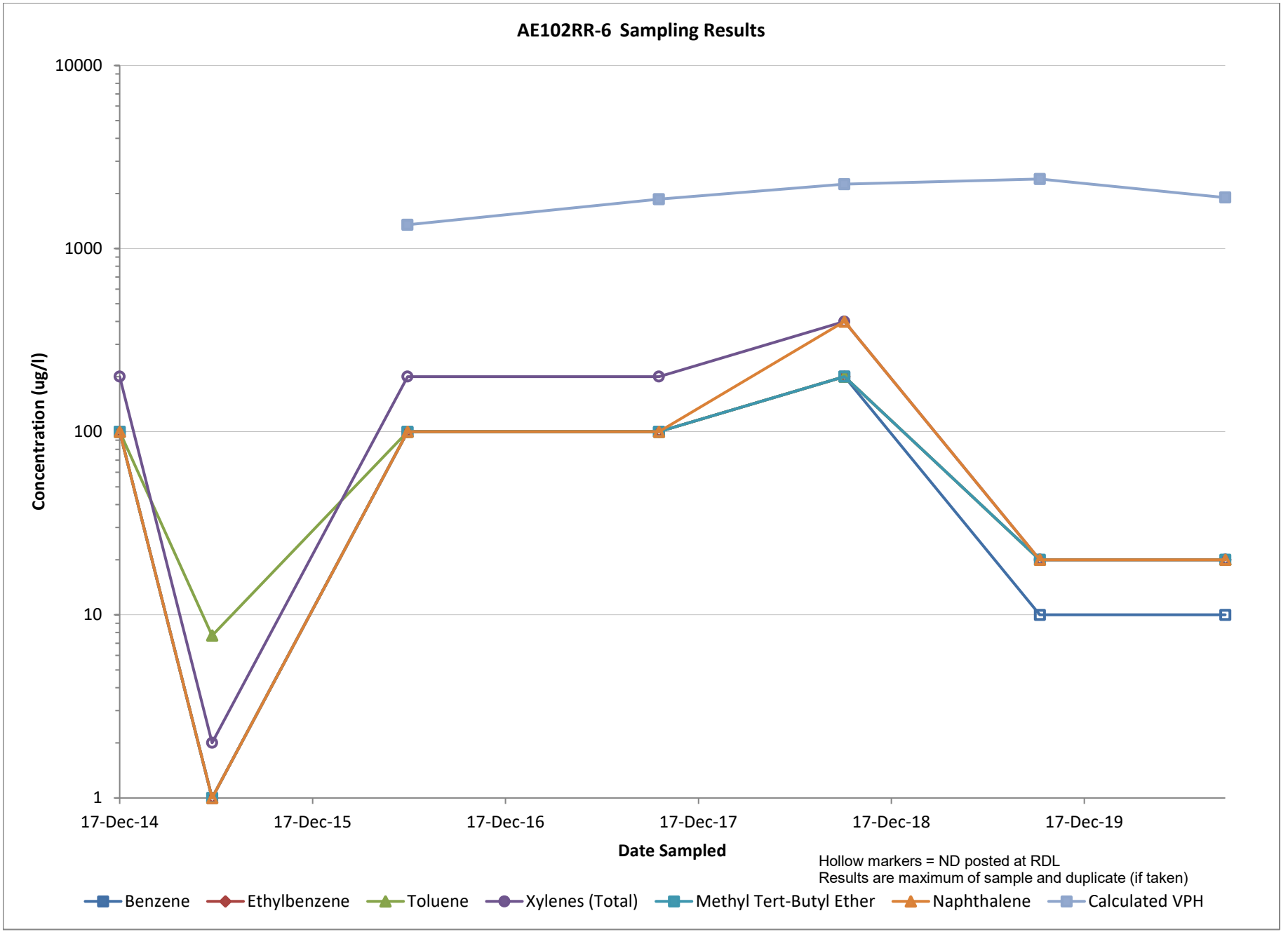

AE102D Sampling Results
10
1
0.1
Concentration (ug/l)
12-Dec-14
12-Dec-15
11-Dec-16
12-Dec-17
12-Dec-18
12-Dec-19
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
Benzene
Ethylbenzene
Toluene
Xylenes (Total)
Methyl Tert-Butyl Ether
Naphthalene
Calculated VPH

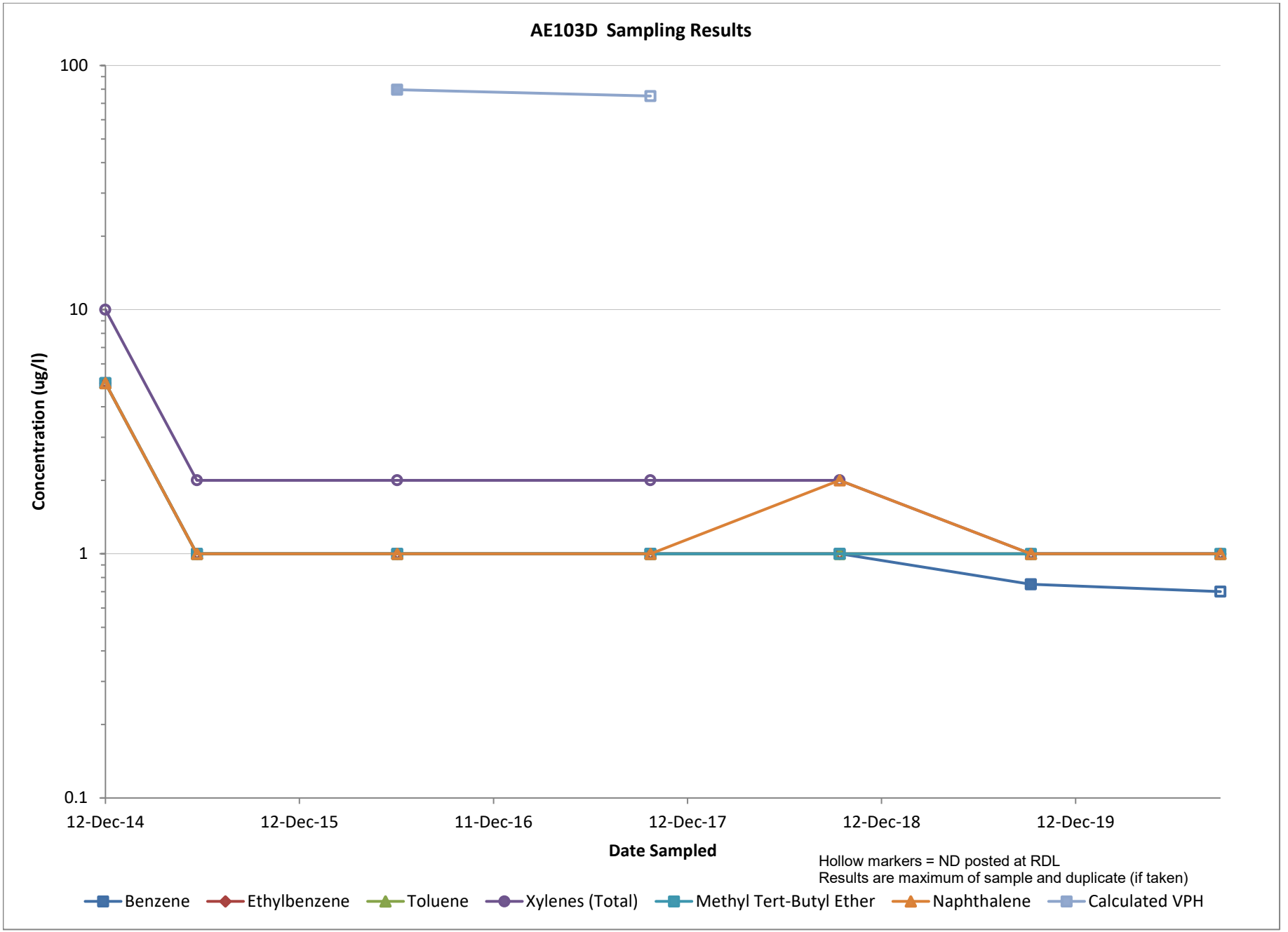

AE102M Sampling Results
100
10
1
0.1
Concentration (ug/l)
11-Dec-14
11-Dec-15
11-Dec-16
11-Dec-17
11-Dec-18
11-Dec-19
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
Benzene
Ethylbenzene
Toluene
Xylenes (Total)
Methyl Tert-Butyl Ether
Naphthalene
Calculated VPH

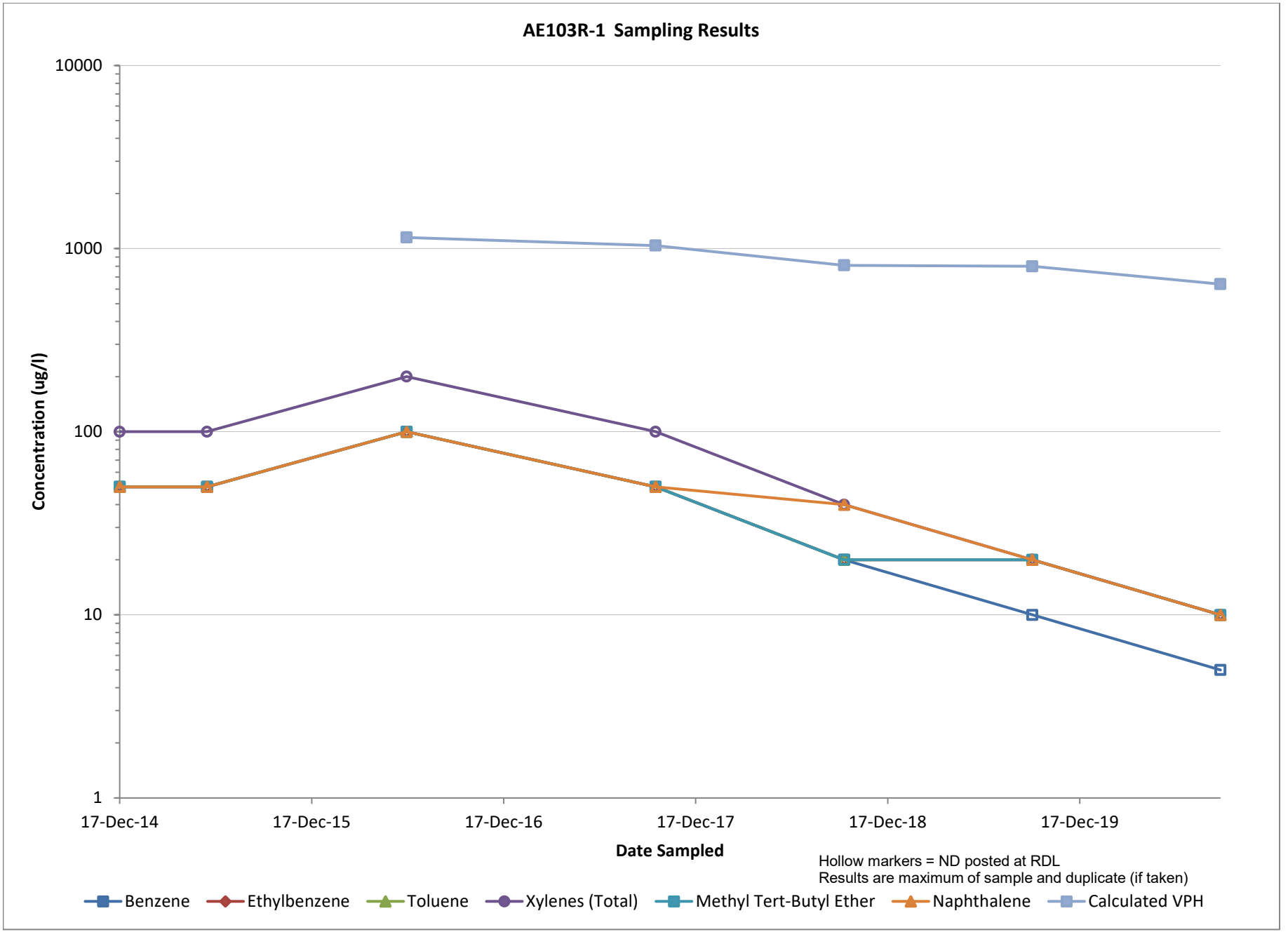

AE102RR-2 Sampling Results
100
10
1
Concentration (ug/l)
17-Dec-14
17-Dec-15
17-Dec-16
17-Dec-17
17-Dec-18
17-Dec-19
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
Benzene
Ethylbenzene
Toluene
Xylenes (Total)
Methyl Tert-Butyl Ether
Naphthalene
Calculated VPH

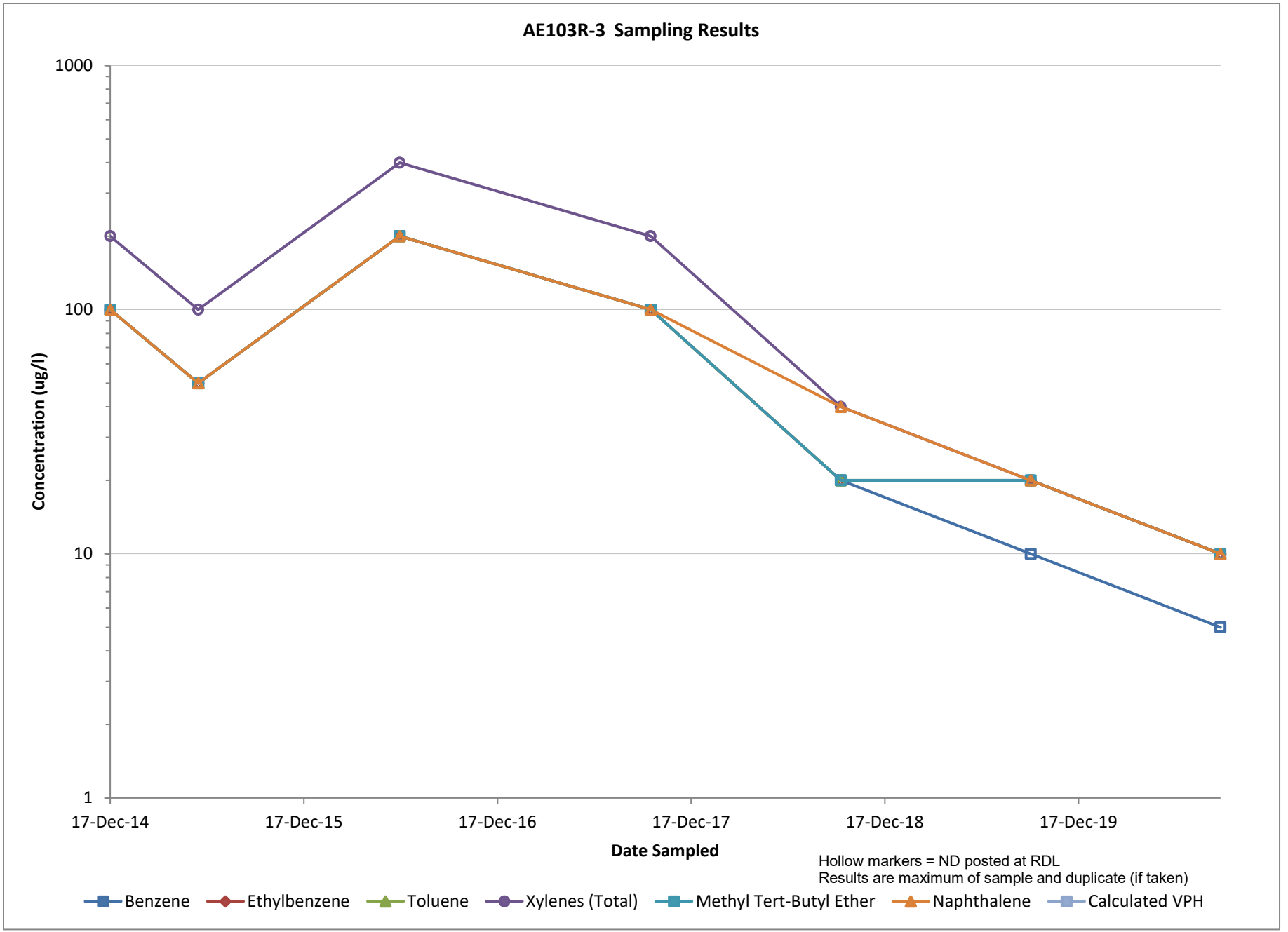

AE102RR-4 Sampling Results
100
10
1
Concentration (ug/l)
17-Dec-14
17-Dec-15
17-Dec-16
17-Dec-17
17-Dec-18
17-Dec-19
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
Benzene
Ethylbenzene
Toluene
Xylenes (Total)
Methyl Tert-Butyl Ether
Naphthalene
Calculated VPH

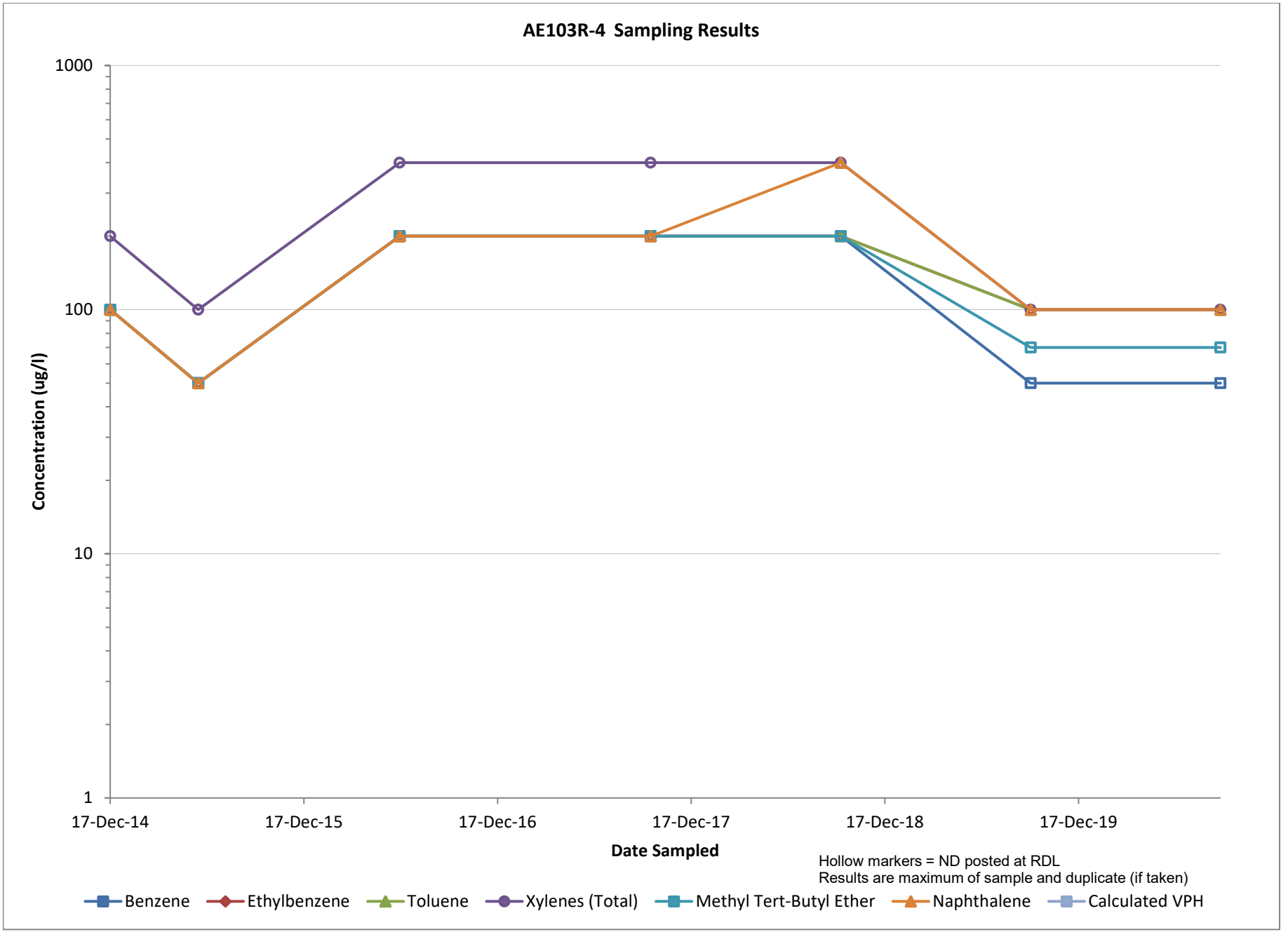

AE102RR-5 Sampling Results
1000
100
10
1
Concentration (ug/l)
17-Dec-14
17-Dec-15
17-Dec-16
17-Dec-17
17-Dec-18
17-Dec-19
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
Benzene
Ethylbenzene
Toluene
Xylenes (Total)
Methyl Tert-Butyl Ether
Naphthalene
Calculated VPH

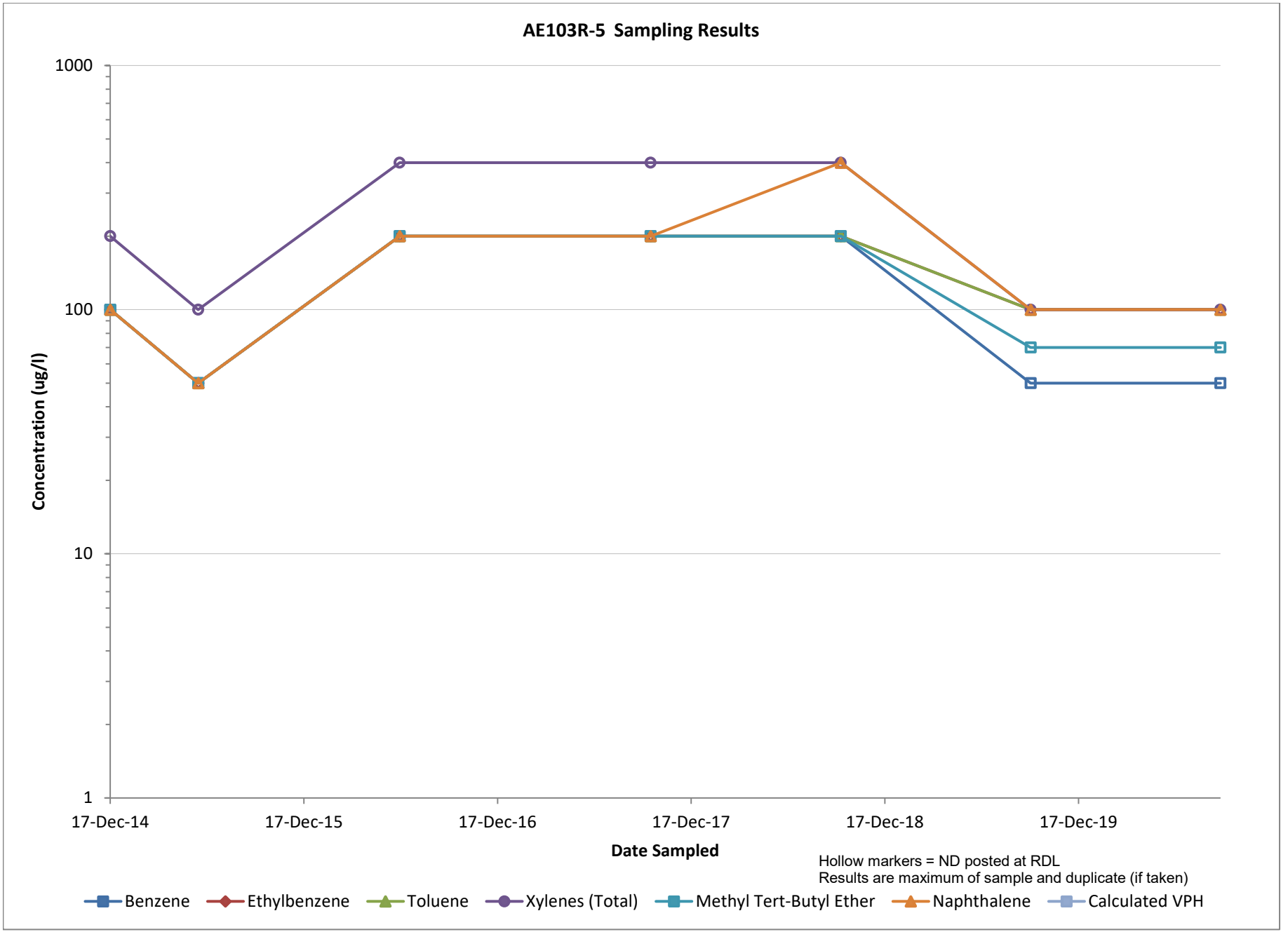

AE102RR-6 Sampling Results
10000
1000
100
10
1
Concentration (ug/l)
17-Dec-14
17-Dec-15
17-Dec-16
17-Dec-17
17-Dec-18
17-Dec-19
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
Benzene
Ethylbenzene
Toluene
Xylenes (Total)
Methyl Tert-Butyl Ether
Naphthalene
Calculated VPH

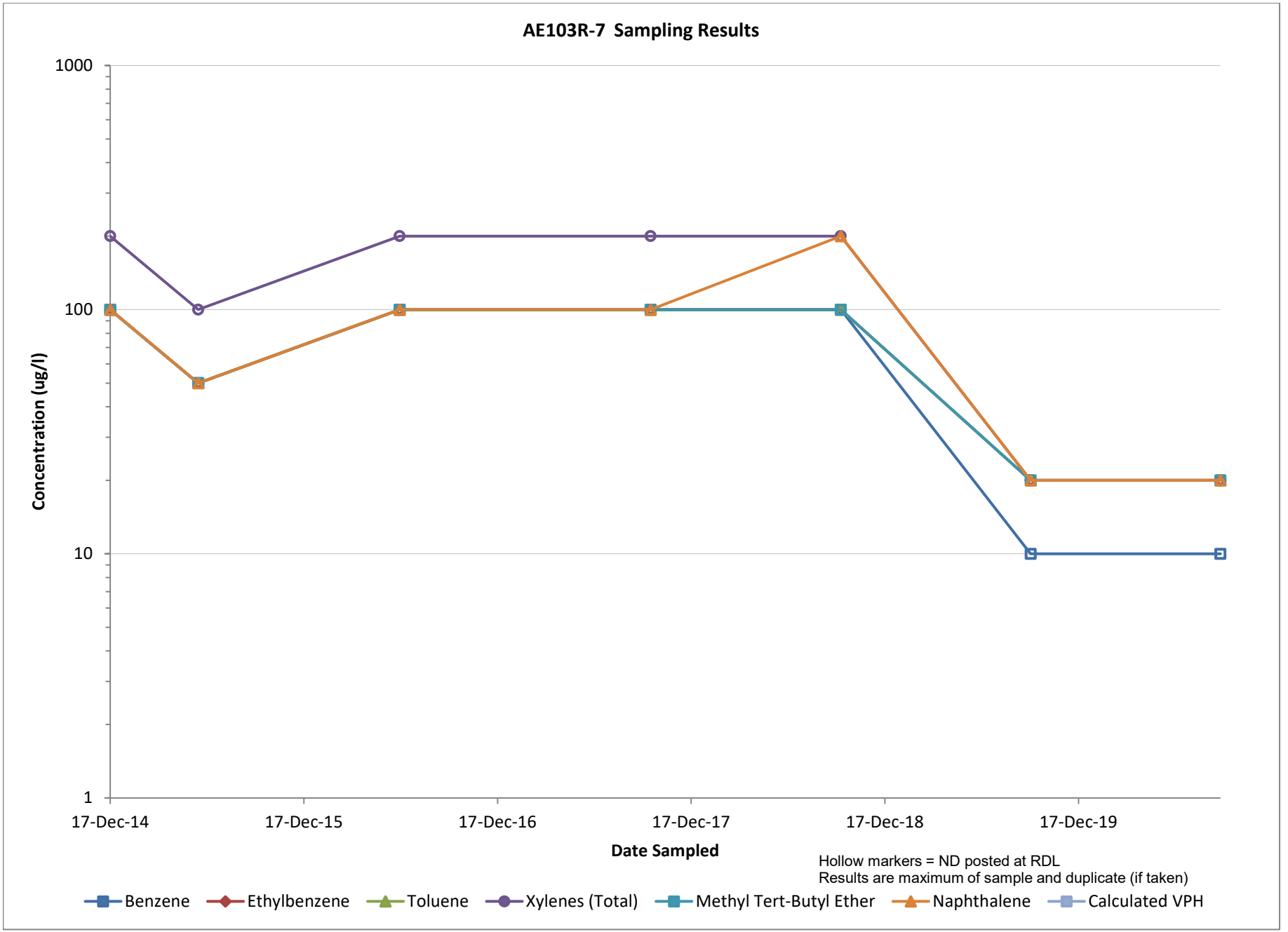

AE103D Sampling Results
100
10
1
0.1
Concentration (ug/l)
12-Dec-14
12-Dec-15
11-Dec-16
12-Dec-17
12-Dec-18
12-Dec-19
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
Benzene
Ethylbenzene
Toluene
Xylenes (Total)
Methyl Tert-Butyl Ether
Naphthalene
Calculated VPH

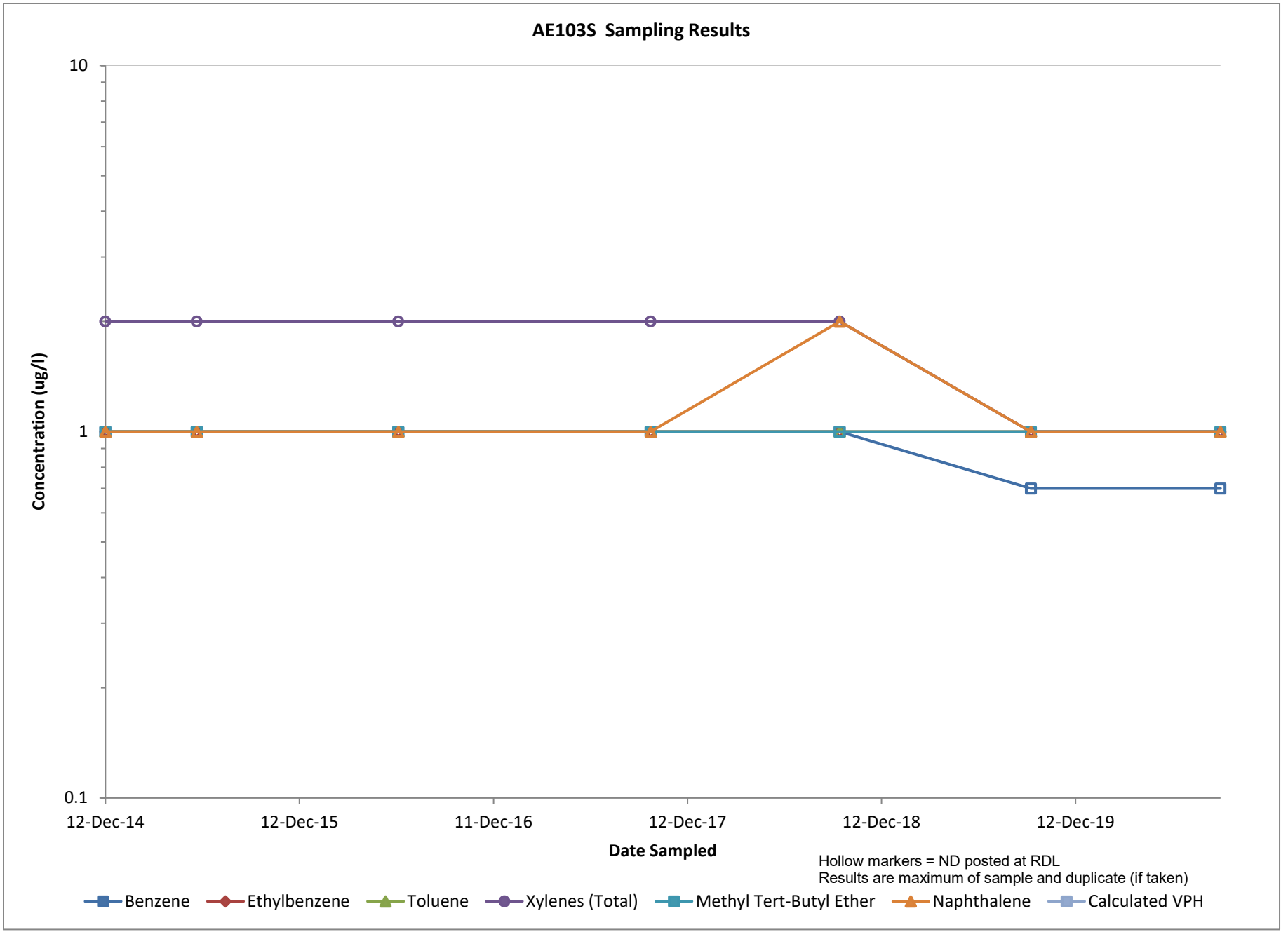

AE103R-1 Sampling Results
10000
1000
100
10
1
Concentration (ug/l)
17-Dec-14
17-Dec-15
17-Dec-16
17-Dec-17
17-Dec-18
17-Dec-19
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
Benzene
Ethylbenzene
Toluene
Xylenes (Total)
Methyl Tert-Butyl Ether
Naphthalene
Calculated VPH

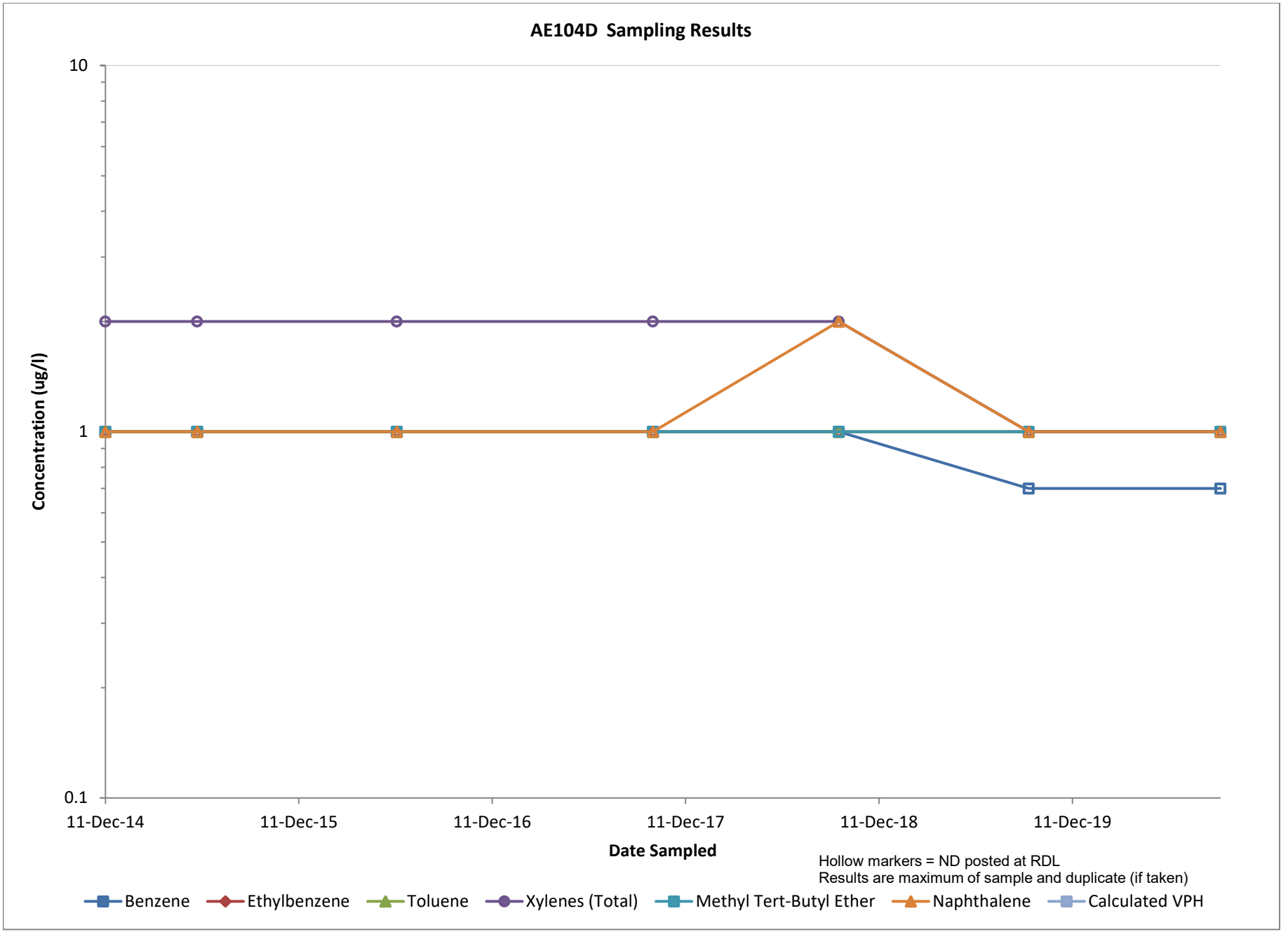

AE103R-3 Sampling Results
1000
100
10
1
Concentration (ug/l)
17-Dec-14
17-Dec-15
17-Dec-16
17-Dec-17
17-Dec-18
17-Dec-19
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
Benzene
Ethylbenzene
Toluene
Xylenes (Total)
Methyl Tert-Butyl Ether
Naphthalene
Calculated VPH

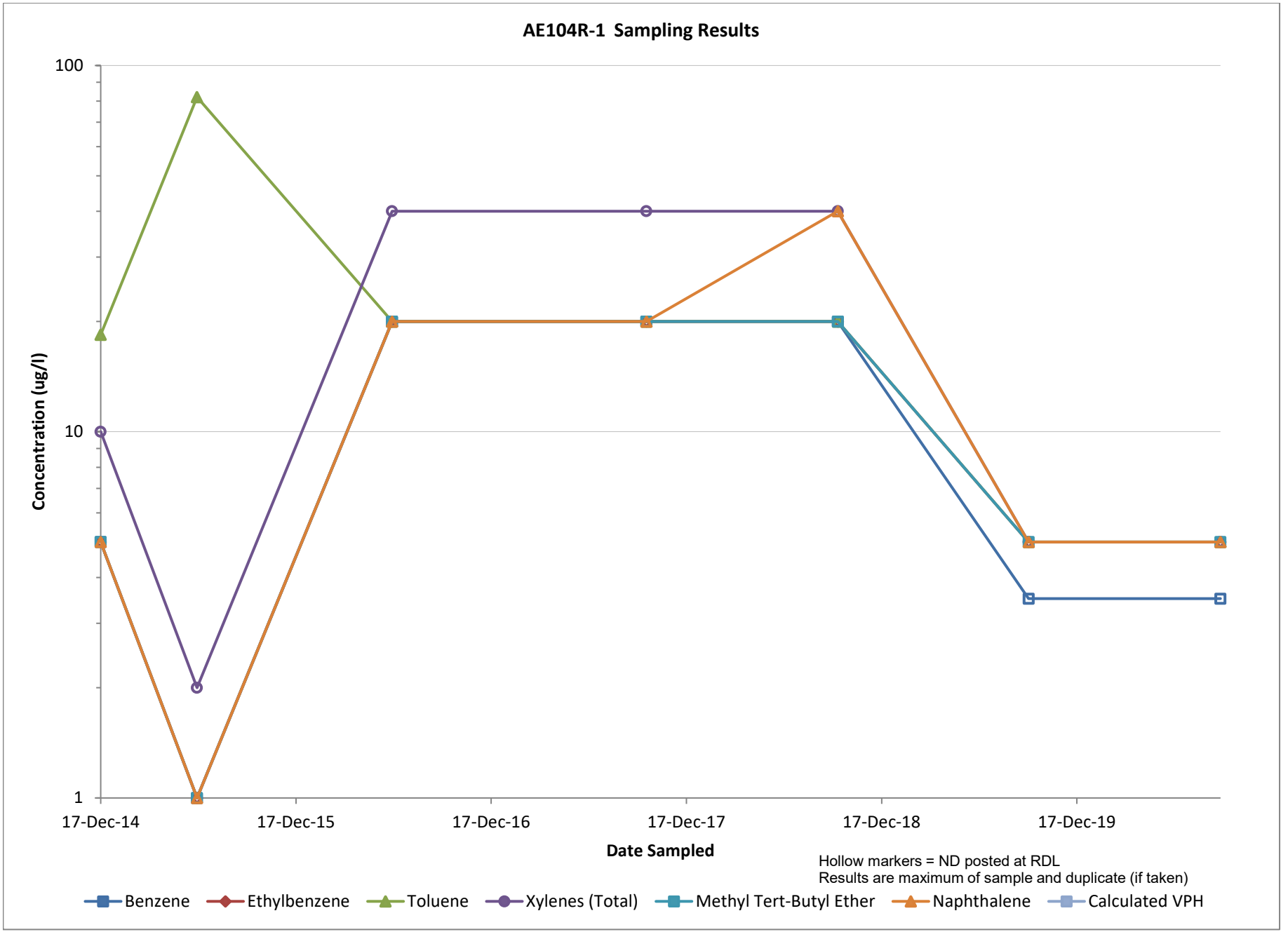

AE103R-4 Sampling Results
1000
100
10
1
Concentration (ug/l)
17-Dec-14
17-Dec-15
17-Dec-16
17-Dec-17
17-Dec-18
17-Dec-19
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
Benzene
Ethylbenzene
Toluene
Xylenes (Total)
Methyl Tert-Butyl Ether
Naphthalene
Calculated VPH

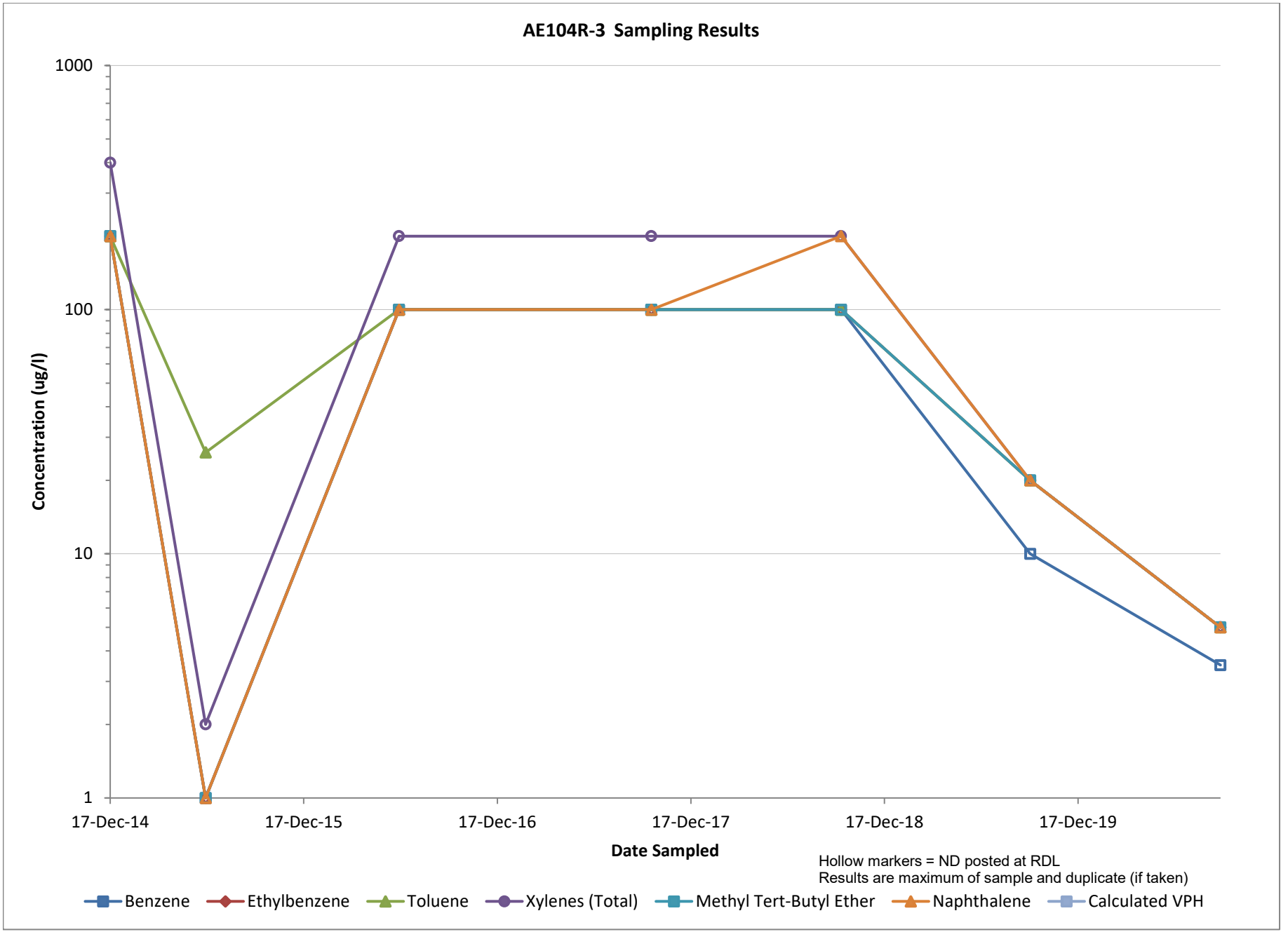

AE103R-5 Sampling Results
1000
100
10
1
Concentration (ug/l)
17-Dec-14
17-Dec-15
17-Dec-16
17-Dec-17
17-Dec-18
17-Dec-19
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
Benzene
Ethylbenzene
Toluene
Xylenes (Total)
Methyl Tert-Butyl Ether
Naphthalene
Calculated VPH

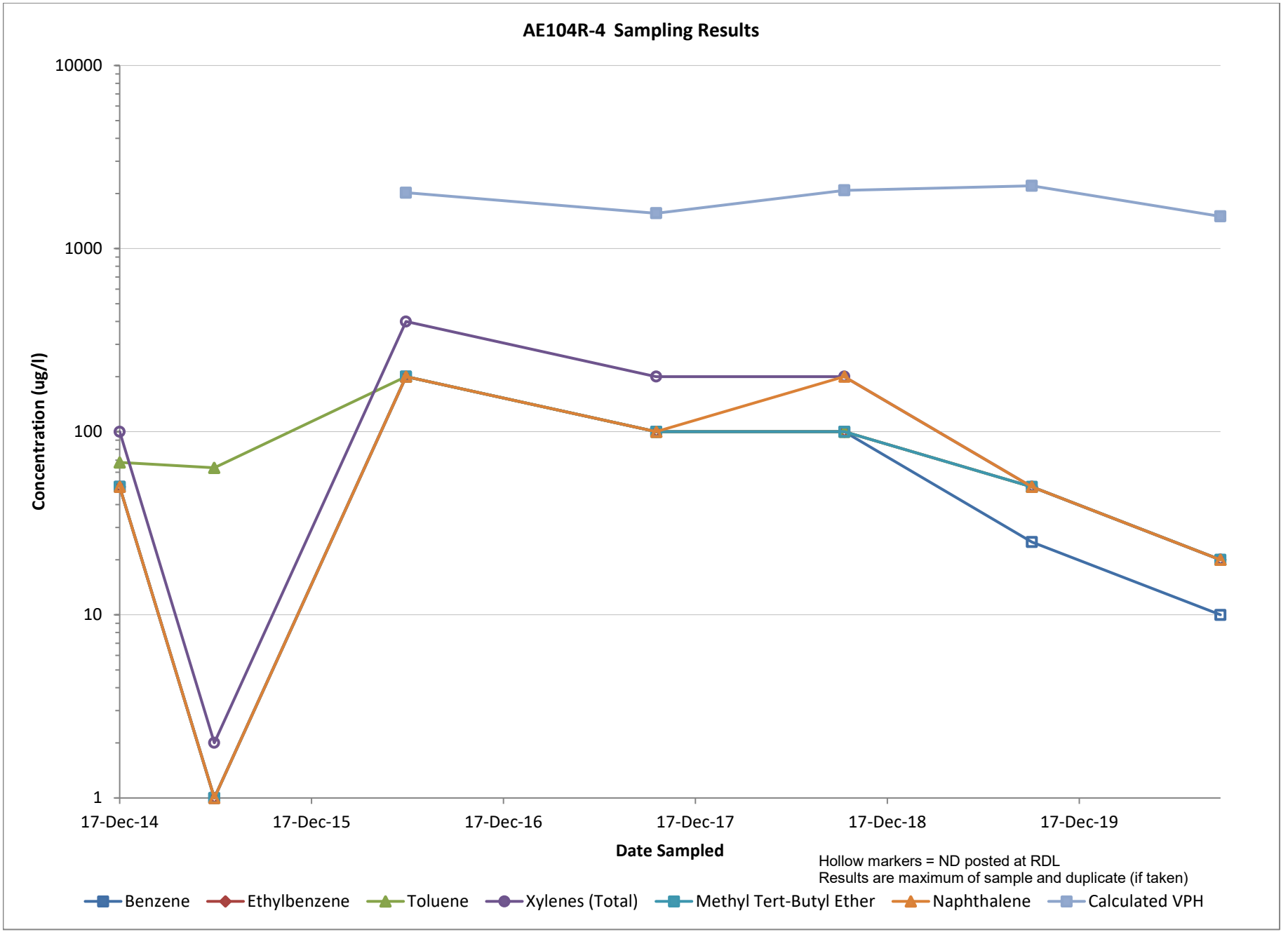

AE103R-7 Sampling Results
1000
100
10
1
Concentration (ug/l)
17-Dec-14
17-Dec-15
17-Dec-16
17-Dec-17
17-Dec-18
17-Dec-19
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
Benzene
Ethylbenzene
Toluene
Xylenes (Total)
Methyl Tert-Butyl Ether
Naphthalene
Calculated VPH

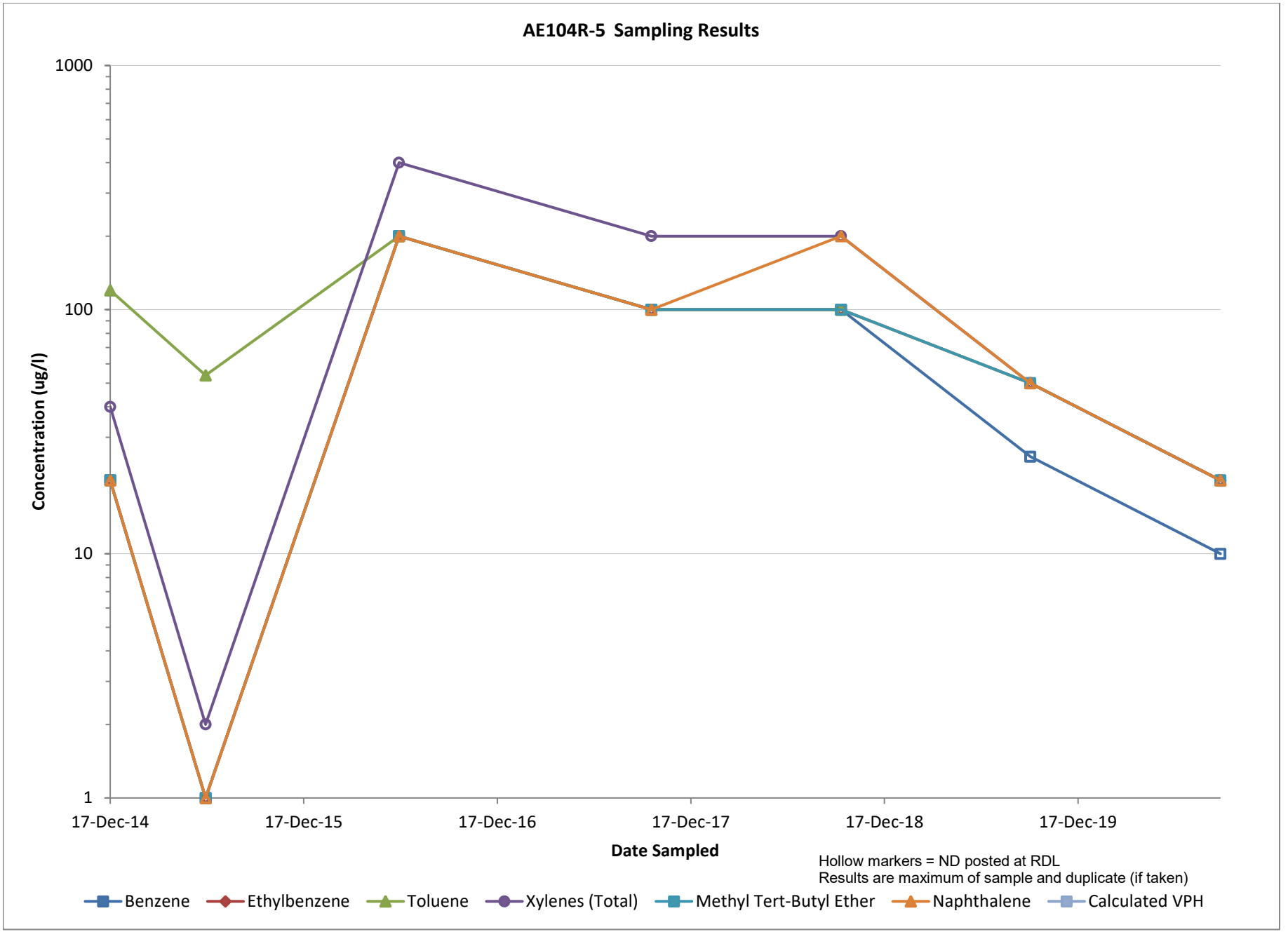

AE103S Sampling Results
10
1
0.1
Concentration (ug/l)
12-Dec-14
12-Dec-15
11-Dec-16
12-Dec-17
12-Dec-18
12-Dec-19
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
Benzene
Ethylbenzene
Toluene
Xylenes (Total)
Methyl Tert-Butyl Ether
Naphthalene
Calculated VPH

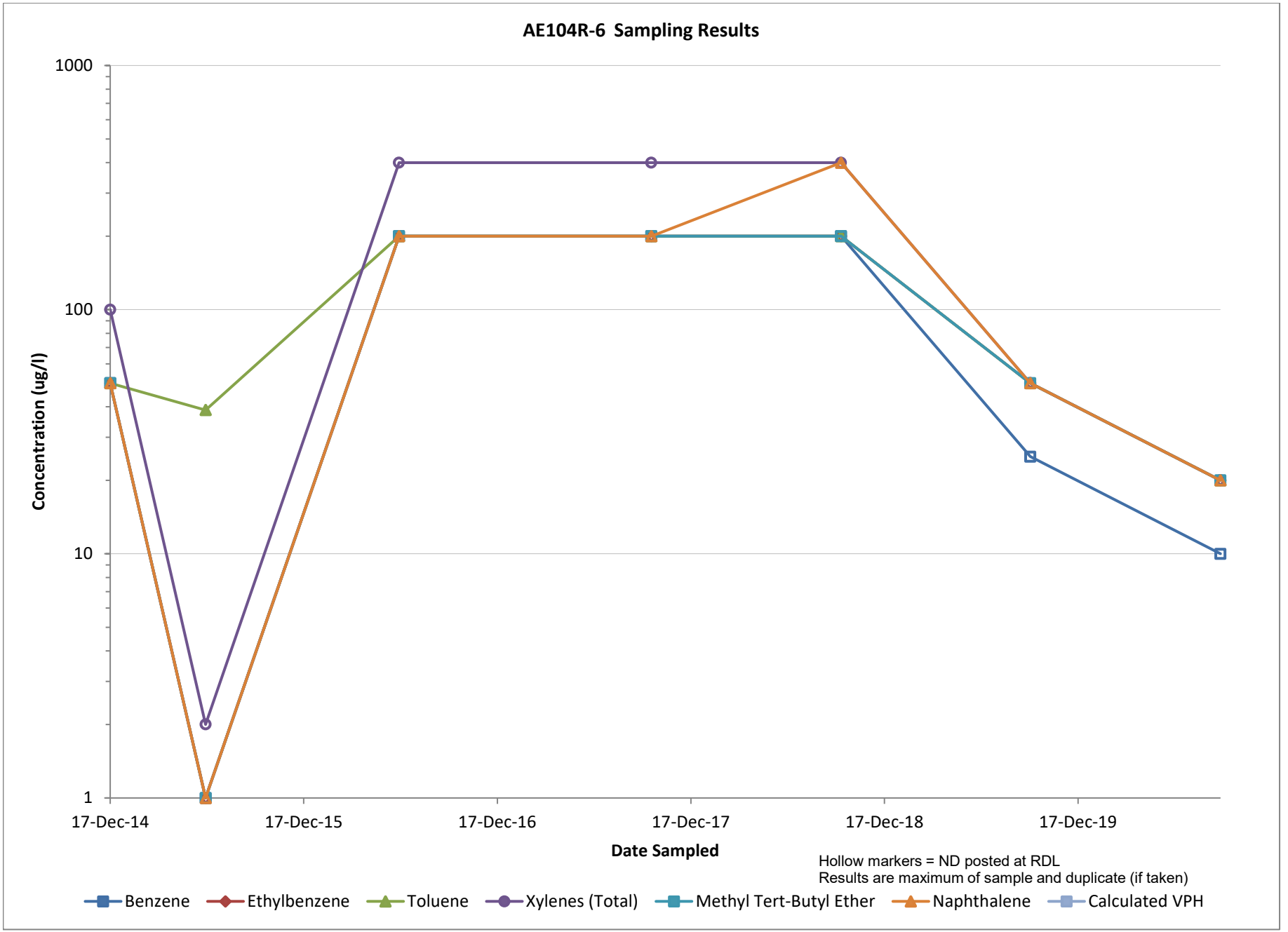

AE104D Sampling Results
10
1
0.1
Concentration (ug/l)
11-Dec-14
11-Dec-15
11-Dec-16
11-Dec-17
11-Dec-18
11-Dec-19
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
Benzene
Ethylbenzene
Toluene
Xylenes (Total)
Methyl Tert-Butyl Ether
Naphthalene
Calculated VPH

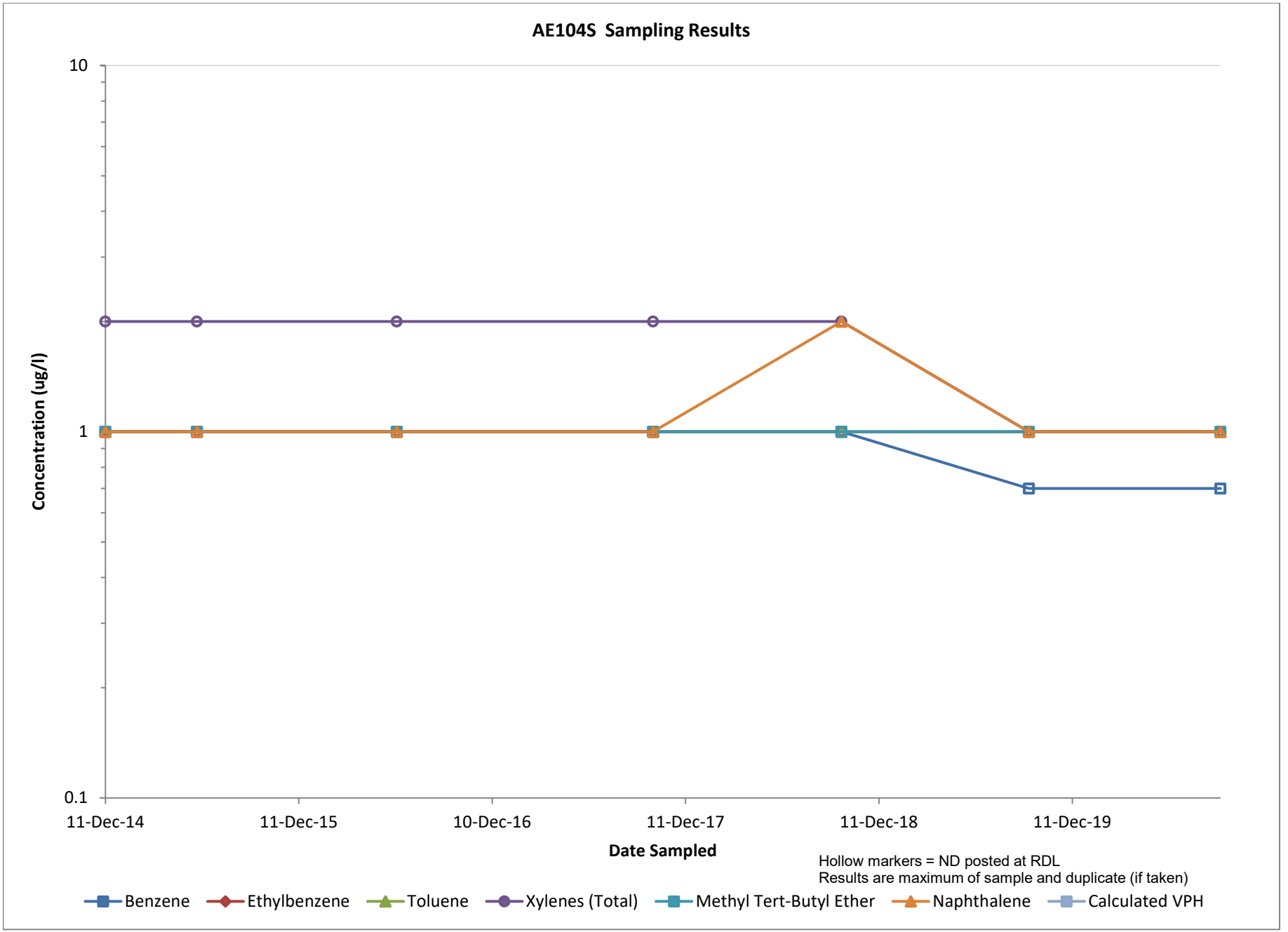

AE104R-1 Sampling Results
100
10
1
Concentration (ug/l)
17-Dec-14
17-Dec-15
17-Dec-16
17-Dec-17
17-Dec-18
17-Dec-19
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
Benzene
Ethylbenzene
Toluene
Xylenes (Total)
Methyl Tert-Butyl Ether
Naphthalene
Calculated VPH

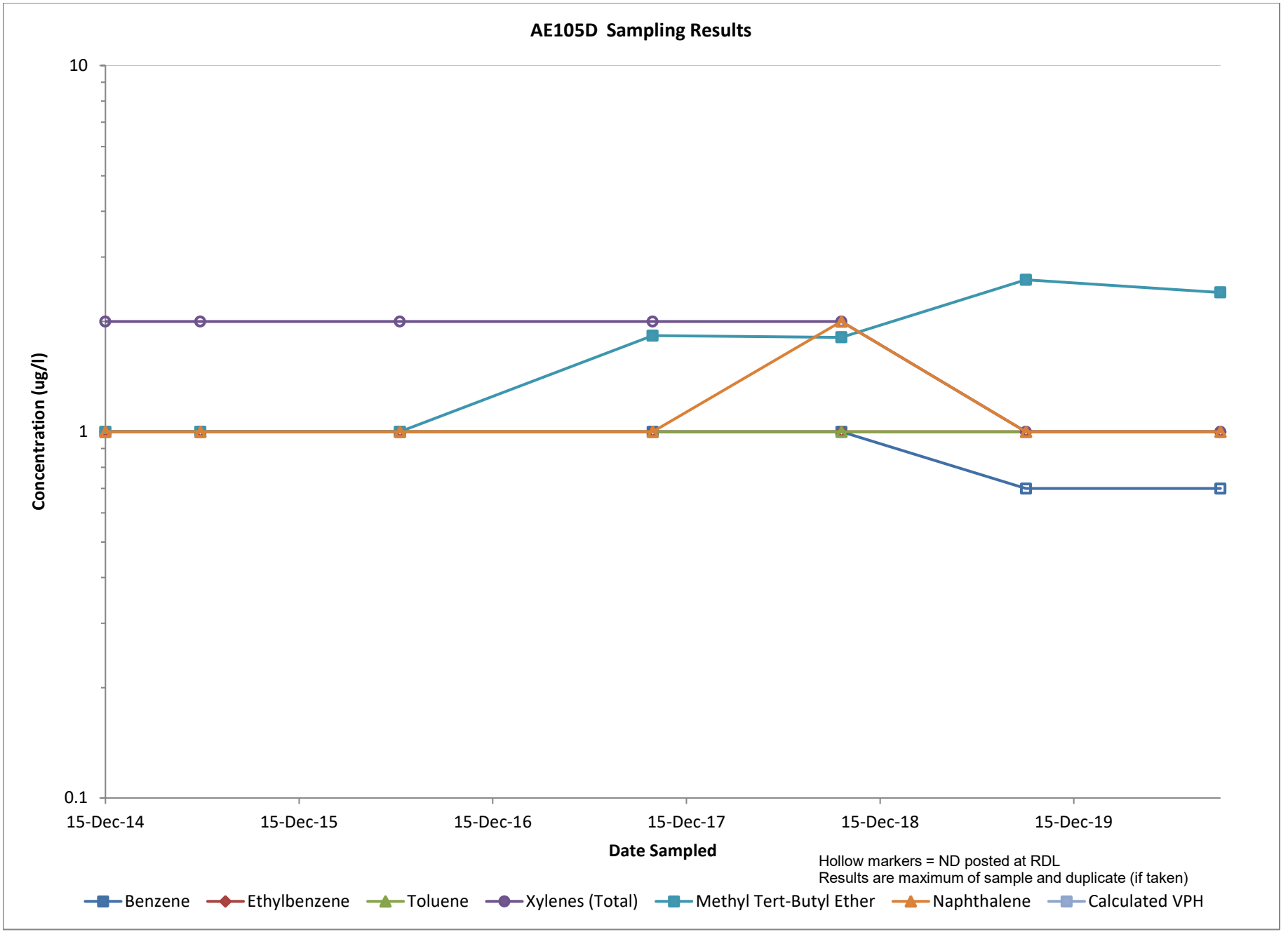

AE104R-3 Sampling Results
1000
100
10
1
Concentration (ug/l)
17-Dec-14
17-Dec-15
17-Dec-16
17-Dec-17
17-Dec-18
17-Dec-19
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
Benzene
Ethylbenzene
Toluene
Xylenes (Total)
Methyl Tert-Butyl Ether
Naphthalene
Calculated VPH

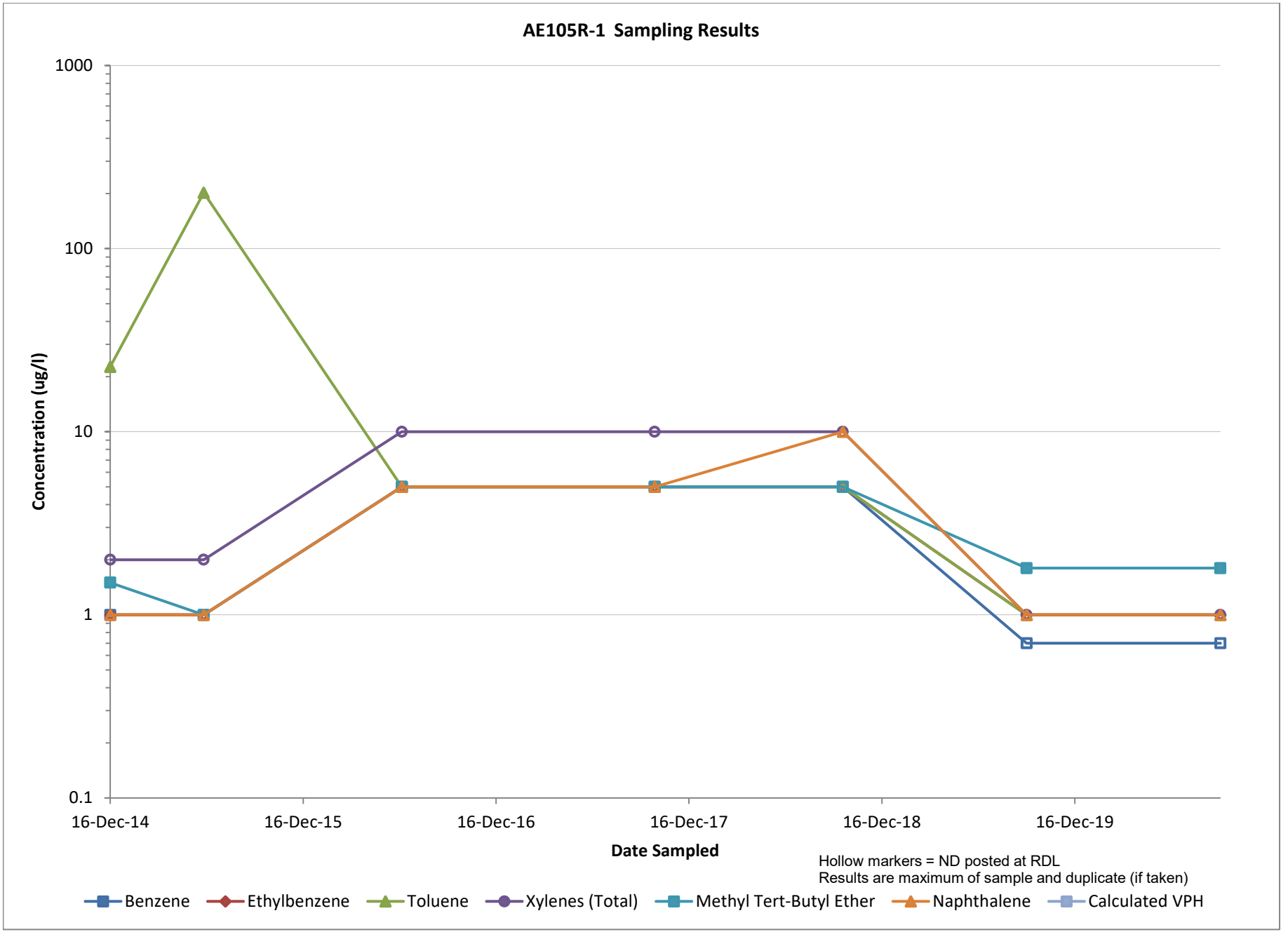

AE104R-4 Sampling Results
10000
1000
100
10
1
Concentration (ug/l)
17-Dec-14
17-Dec-15
17-Dec-16
17-Dec-17
17-Dec-18
17-Dec-19
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
Benzene
Ethylbenzene
Toluene
Xylenes (Total)
Methyl Tert-Butyl Ether
Naphthalene
Calculated VPH

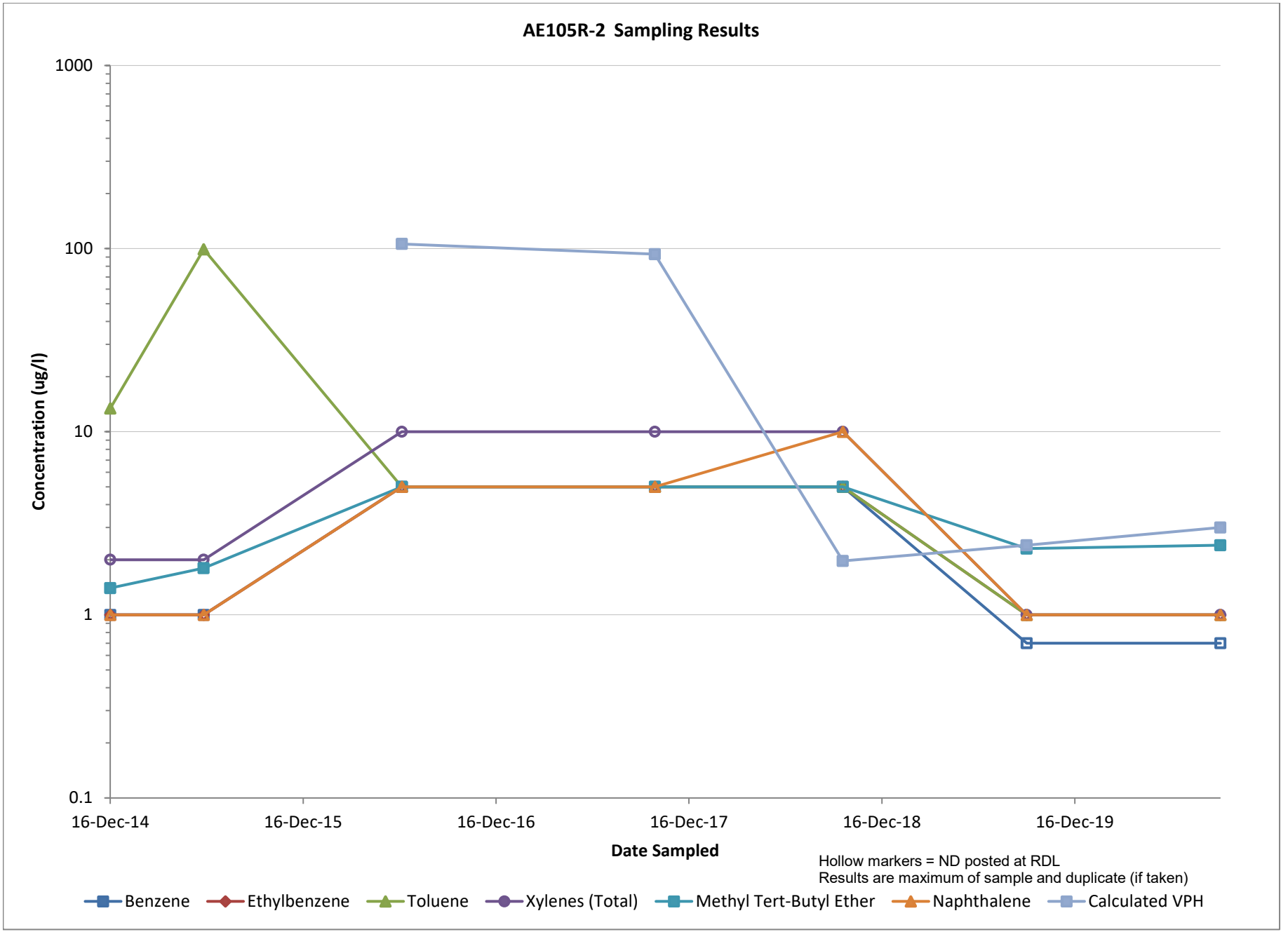

AE104R-5 Sampling Results
1000
100
10
1
Concentration (ug/l)
17-Dec-14
17-Dec-15
17-Dec-16
17-Dec-17
17-Dec-18
17-Dec-19
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
Benzene
Ethylbenzene
Toluene
Xylenes (Total)
Methyl Tert-Butyl Ether
Naphthalene
Calculated VPH

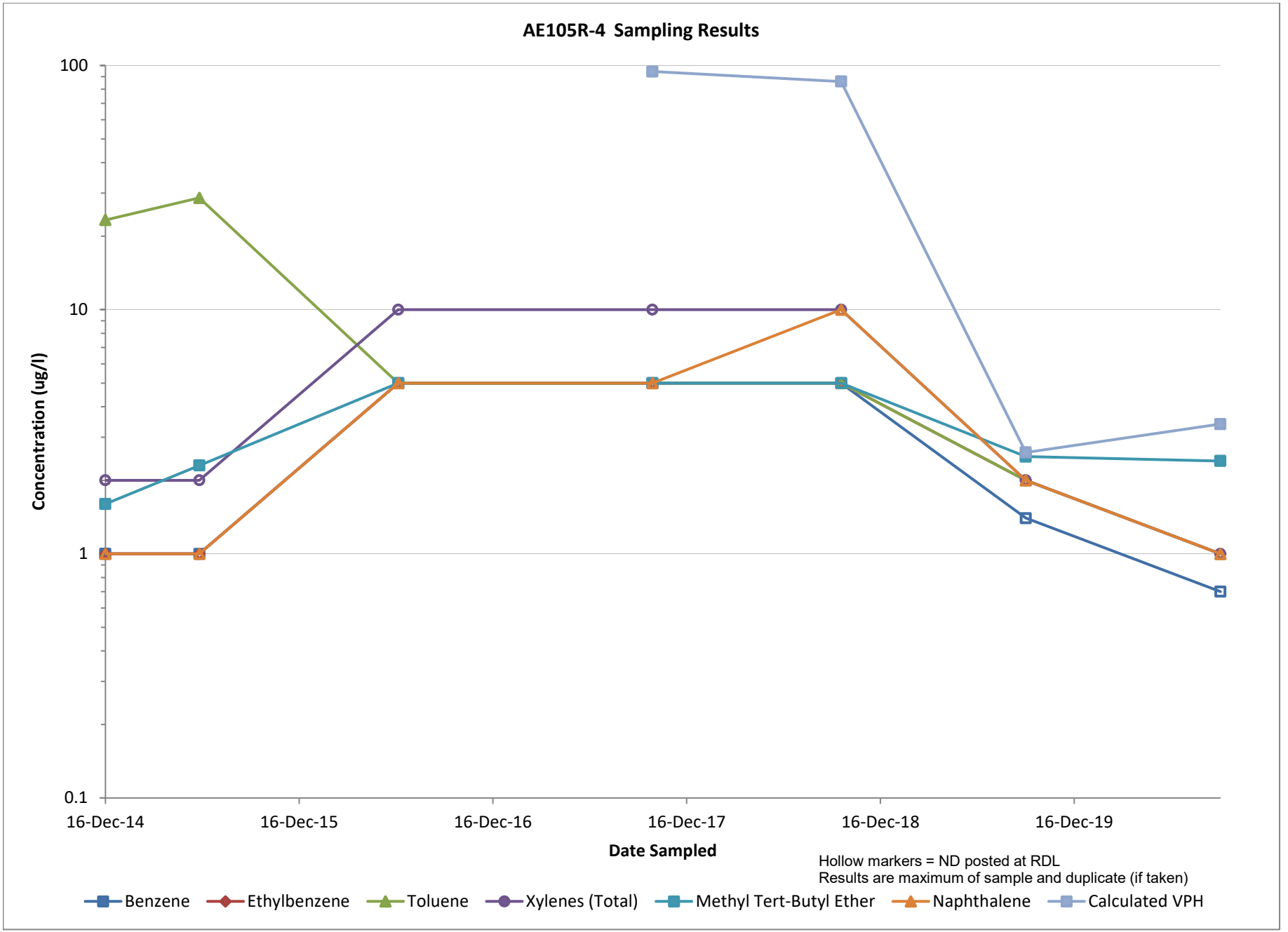

AE104R-6 Sampling Results
1000
100
10
1
Concentration (ug/l)
17-Dec-14
17-Dec-15
17-Dec-16
17-Dec-17
17-Dec-18
17-Dec-19
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
Benzene
Ethylbenzene
Toluene
Xylenes (Total)
Methyl Tert-Butyl Ether
Naphthalene
Calculated VPH

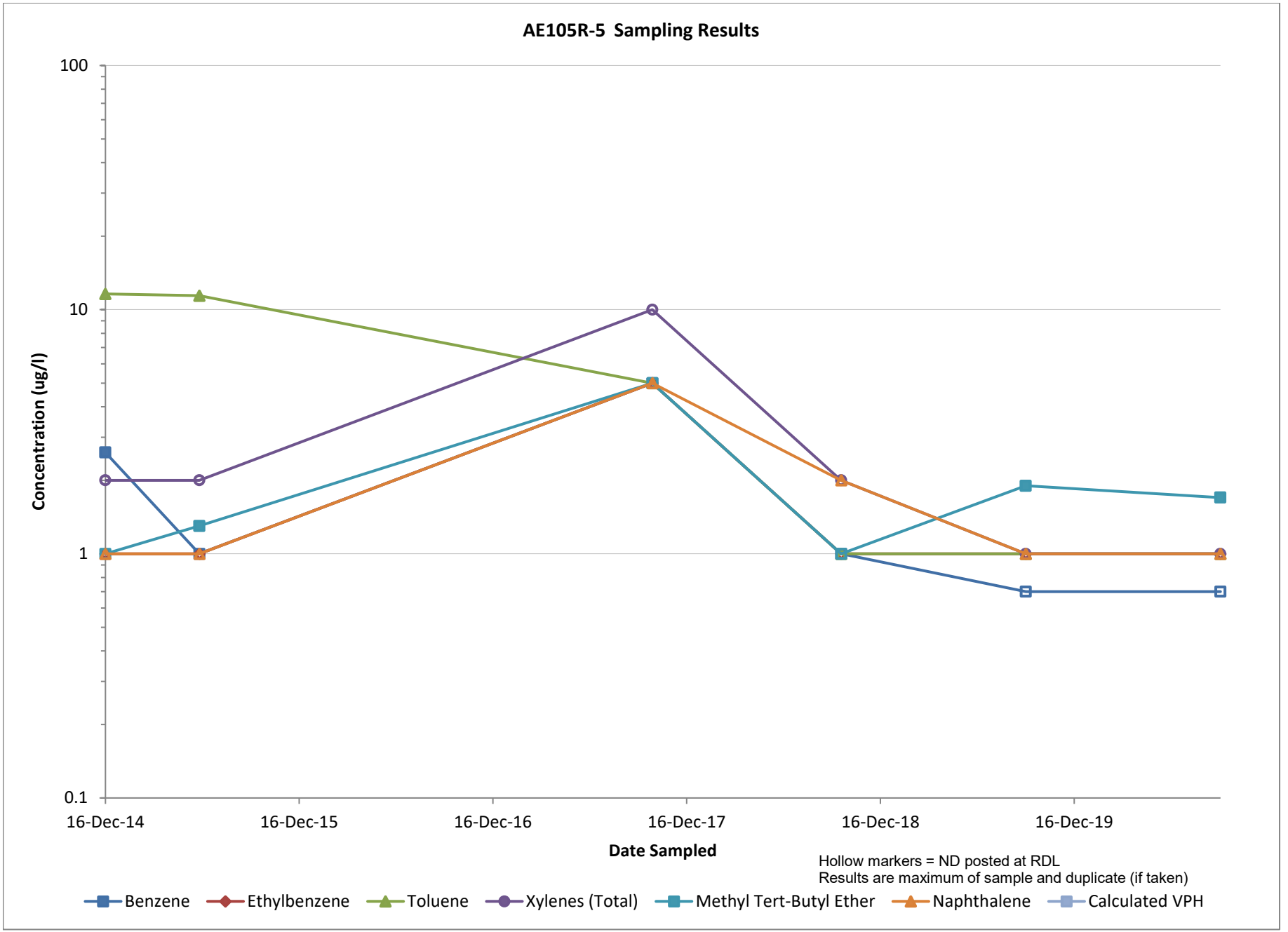

AE104S Sampling Results
10
1
0.1
Concentration (ug/l)
11-Dec-14
11-Dec-15
10-Dec-16
11-Dec-17
11-Dec-18
11-Dec-19
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
Benzene
Ethylbenzene
Toluene
Xylenes (Total)
Methyl Tert-Butyl Ether
Naphthalene
Calculated VPH

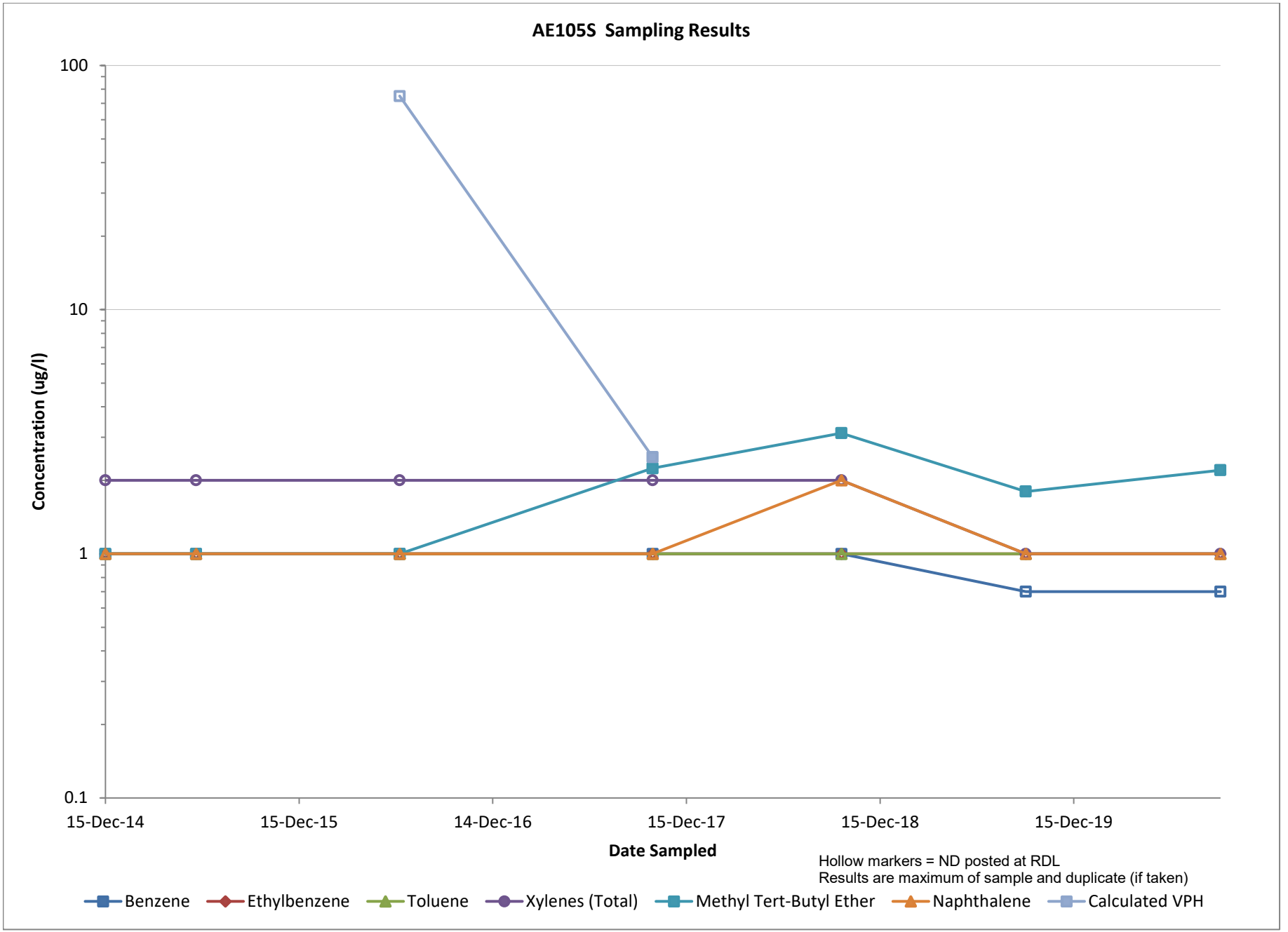

AE105D Sampling Results
10
1
0.1
Concentration (ug/l)
15-Dec-14
15-Dec-15
15-Dec-16
15-Dec-17
15-Dec-18
15-Dec-19
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
Benzene
Ethylbenzene
Toluene
Xylenes (Total)
Methyl Tert-Butyl Ether
Naphthalene
Calculated VPH

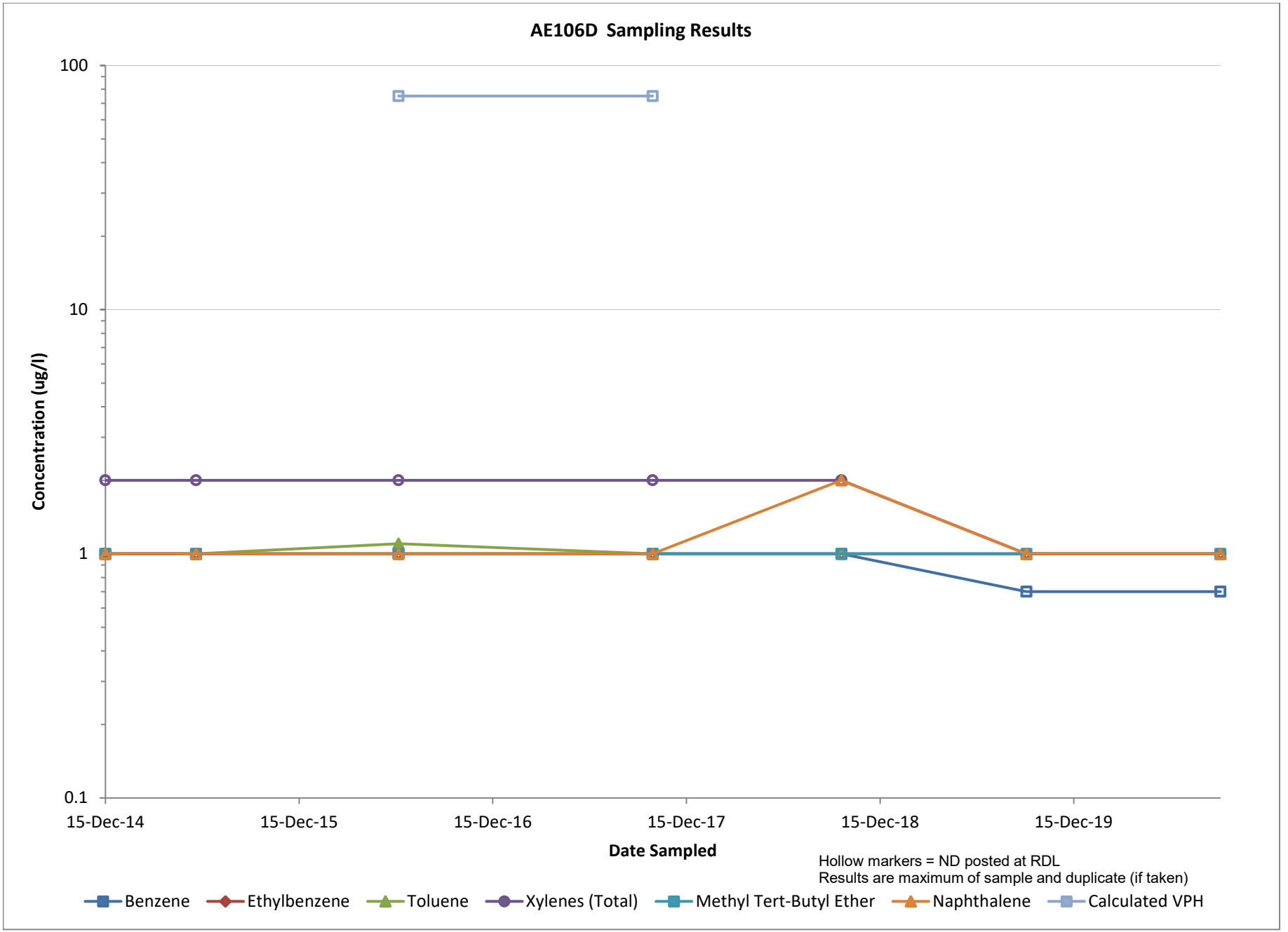

AE105R-1 Sampling Results
1000
100
10
1
0.1
Concentration (ug/l)
16-Dec-14
16-Dec-15
16-Dec-16
16-Dec-17
16-Dec-18
16-Dec-19
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
Benzene
Ethylbenzene
Toluene
Xylenes (Total)
Methyl Tert-Butyl Ether
Naphthalene
Calculated VPH

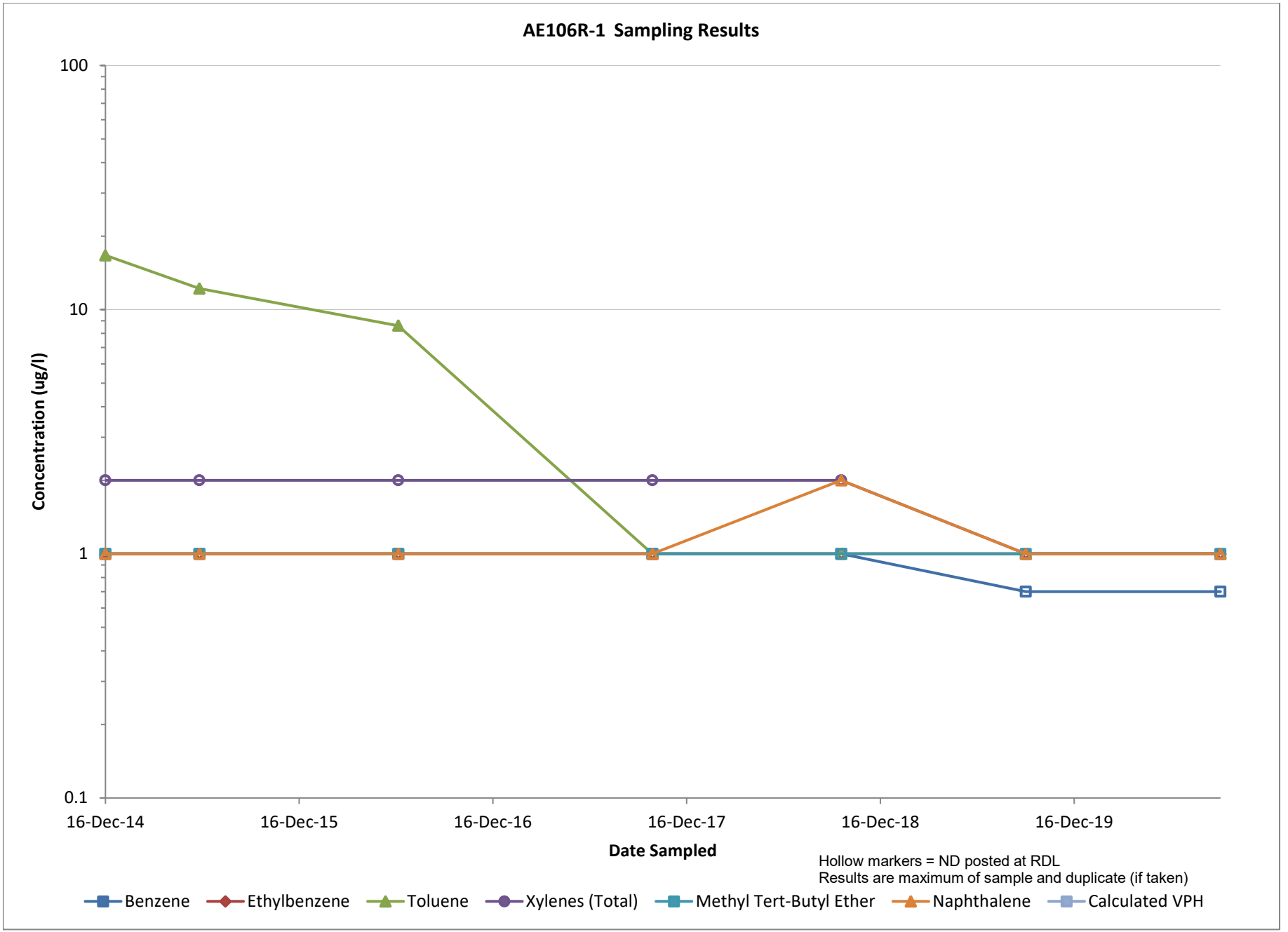

AE105R-2 Sampling Results
1000
100
10
1
0.1
Concentration (ug/l)
16-Dec-14
16-Dec-15
16-Dec-16
16-Dec-17
16-Dec-18
16-Dec-19
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
Benzene
Ethylbenzene
Toluene
Xylenes (Total)
Methyl Tert-Butyl Ether
Naphthalene
Calculated VPH

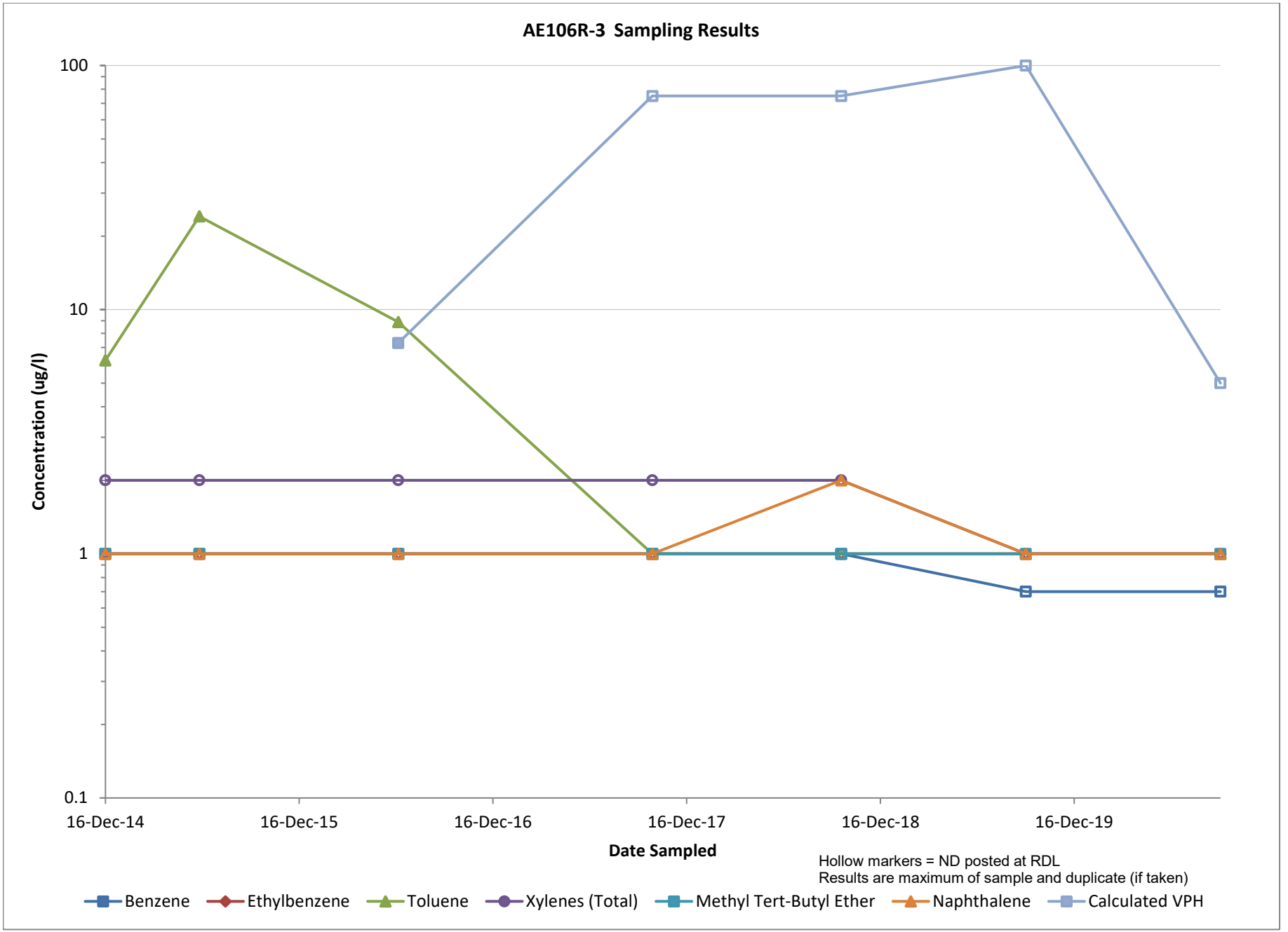

AE105R-4 Sampling Results
100
10
1
0.1
Concentration (ug/l)
16-Dec-14
16-Dec-15
16-Dec-16
16-Dec-17
16-Dec-18
16-Dec-19
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
Benzene
Ethylbenzene
Toluene
Xylenes (Total)
Methyl Tert-Butyl Ether
Naphthalene
Calculated VPH

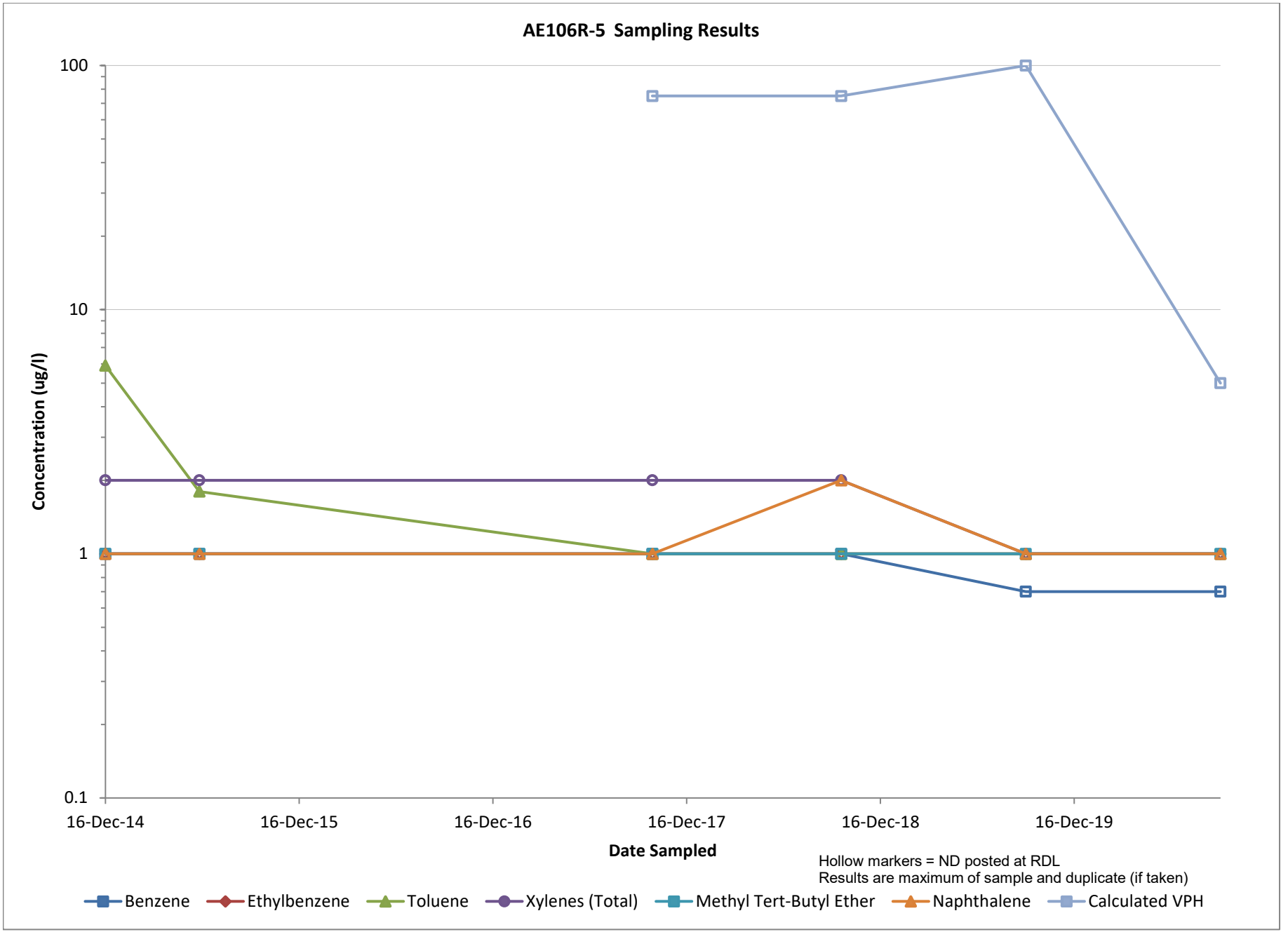

AE105R-5 Sampling Results
100
10
1
0.1
Concentration (ug/l)
16-Dec-14
16-Dec-15
16-Dec-16
16-Dec-17
16-Dec-18
16-Dec-19
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
Benzene
Ethylbenzene
Toluene
Xylenes (Total)
Methyl Tert-Butyl Ether
Naphthalene
Calculated VPH

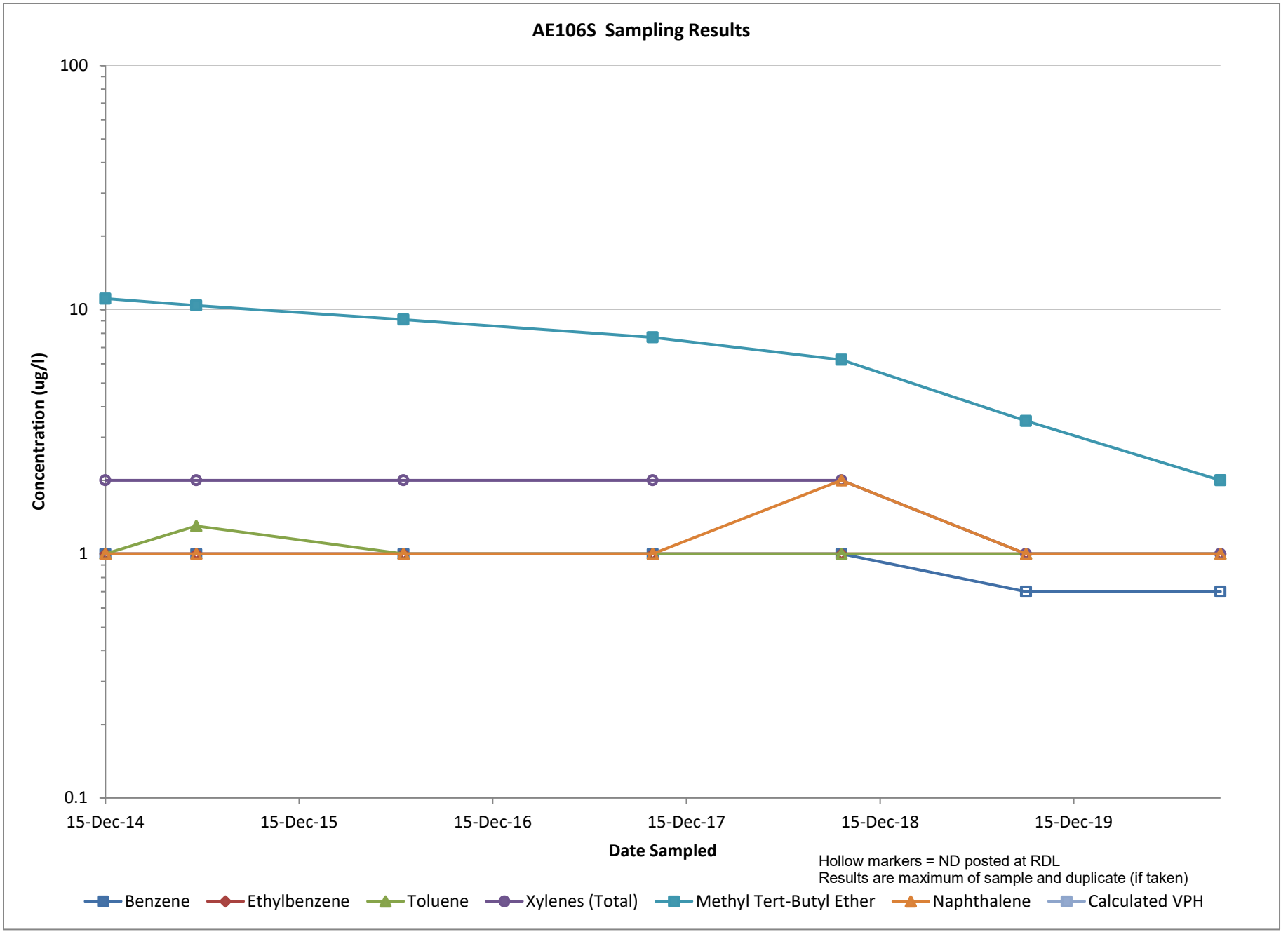

AE105S Sampling Results
100
10
1
0.1
Concentration (ug/l)
15-Dec-14
15-Dec-15
14-Dec-16
15-Dec-17
15-Dec-18
15-Dec-19
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
Benzene
Ethylbenzene
Toluene
Xylenes (Total)
Methyl Tert-Butyl Ether
Naphthalene
Calculated VPH

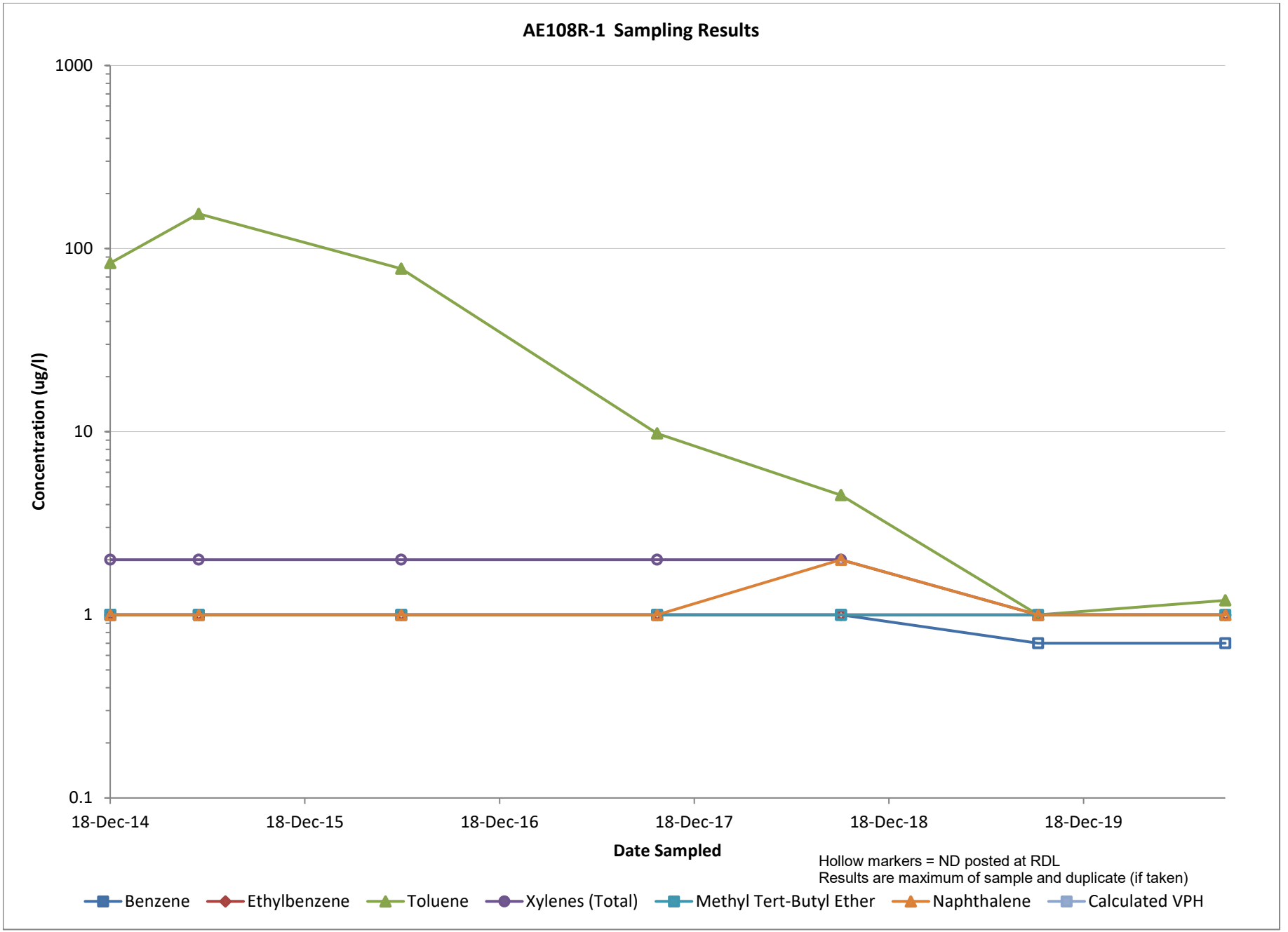

AE106D Sampling Results
100
10
1
0.1
Concentration (ug/l)
15-Dec-14
15-Dec-15
15-Dec-16
15-Dec-17
15-Dec-18
15-Dec-19
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
Benzene
Ethylbenzene
Toluene
Xylenes (Total)
Methyl Tert-Butyl Ether
Naphthalene
Calculated VPH

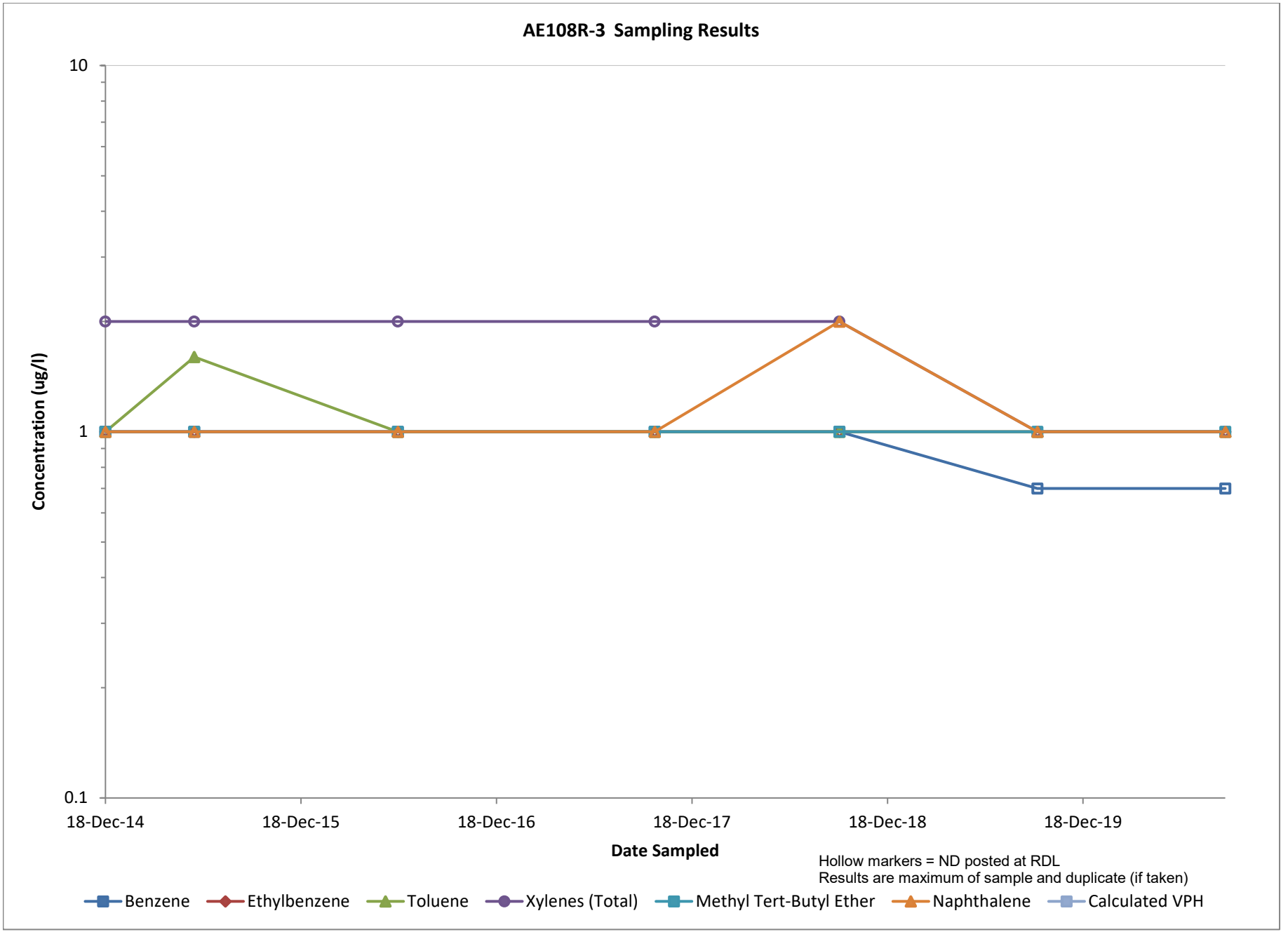

AE106R-1 Sampling Results
100
10
1
0.1
Concentration (ug/l)
16-Dec-14
16-Dec-15
16-Dec-16
16-Dec-17
16-Dec-18
16-Dec-19
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
Benzene
Ethylbenzene
Toluene
Xylenes (Total)
Methyl Tert-Butyl Ether
Naphthalene
Calculated VPH

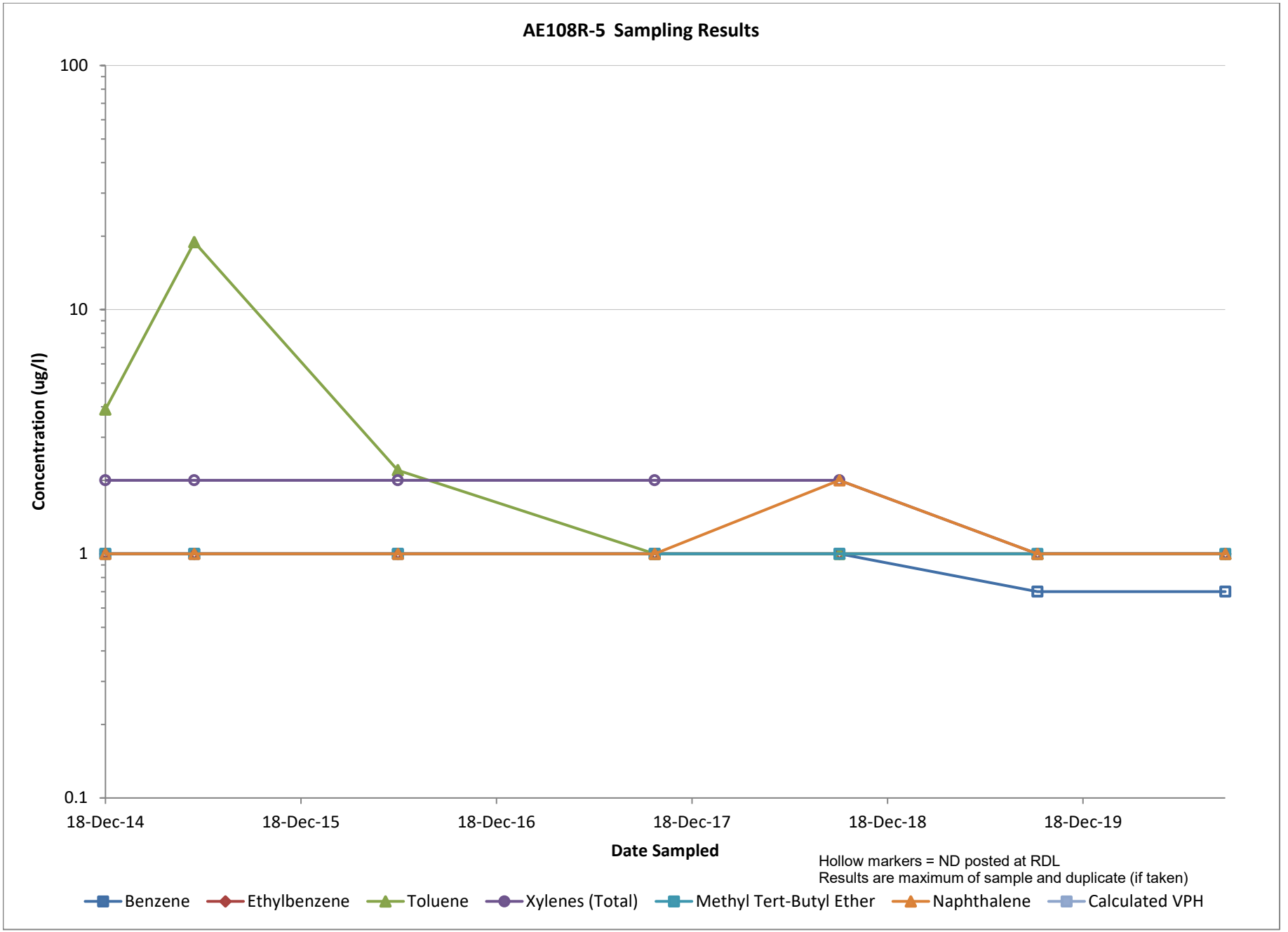

AE106R-3 Sampling Results
100
10
1
0.1
Concentration (ug/l)
16-Dec-14
16-Dec-15
16-Dec-16
16-Dec-17
16-Dec-18
16-Dec-19
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
Benzene
Ethylbenzene
Toluene
Xylenes (Total)
Methyl Tert-Butyl Ether
Naphthalene
Calculated VPH

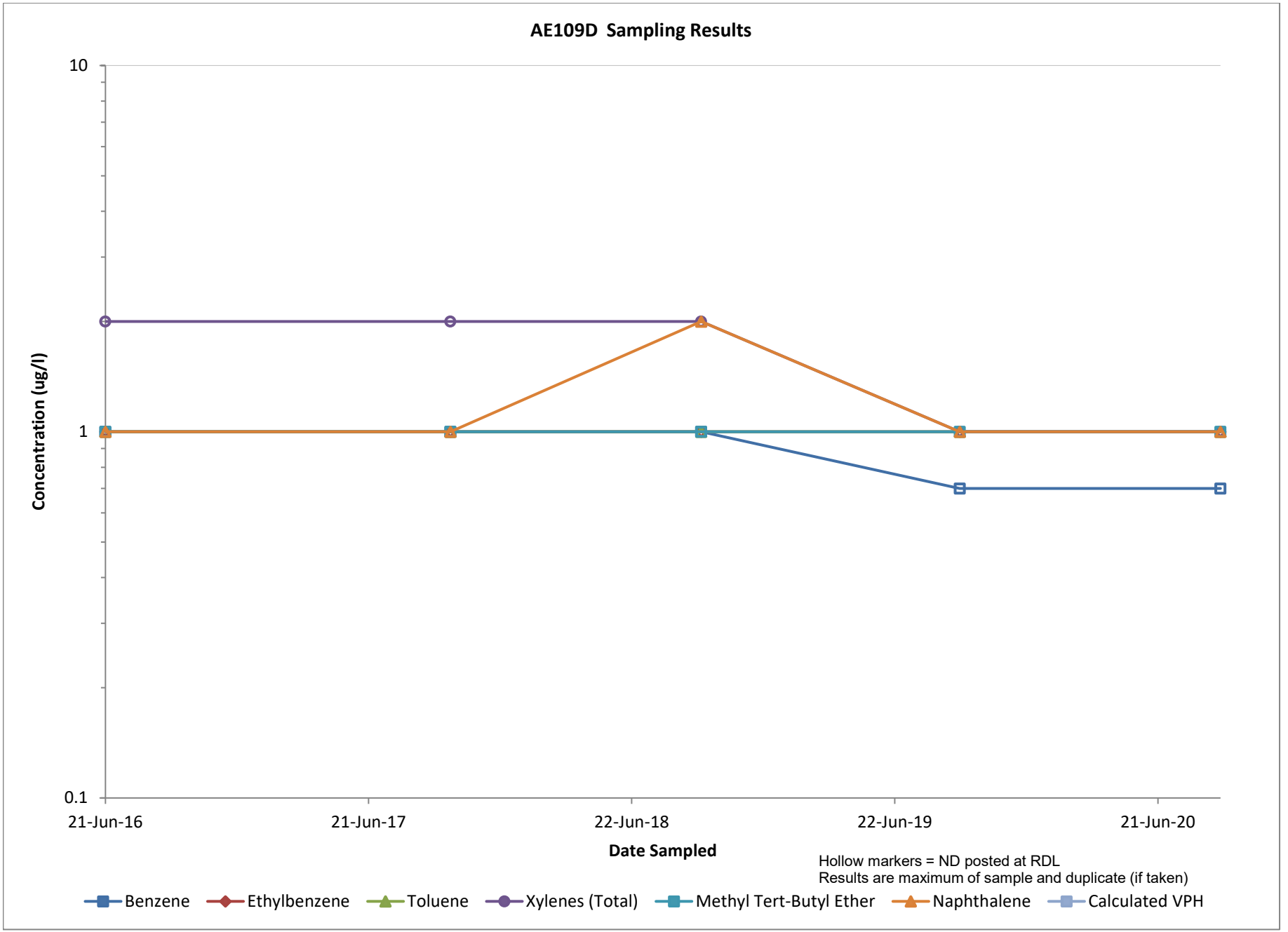

AE106R-5 Sampling Results
100
10
1
0.1
Concentration (ug/l)
16-Dec-14
16-Dec-15
16-Dec-16
16-Dec-17
16-Dec-18
16-Dec-19
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
Benzene
Ethylbenzene
Toluene
Xylenes (Total)
Methyl Tert-Butyl Ether
Naphthalene
Calculated VPH

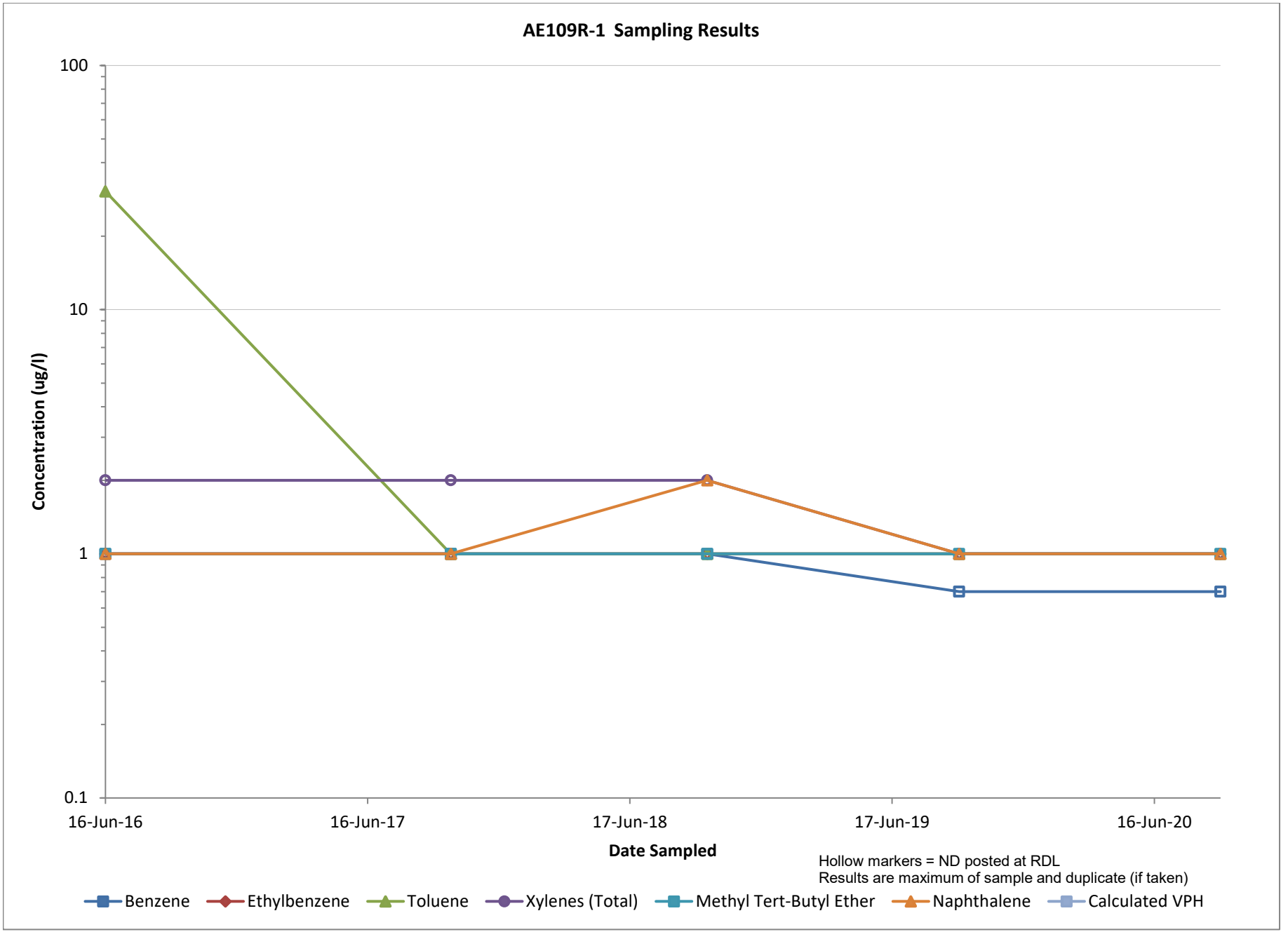

AE106S Sampling Results
100
10
1
0.1
Concentration (ug/l)
15-Dec-14
15-Dec-15
15-Dec-16
15-Dec-17
15-Dec-18
15-Dec-19
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
Benzene
Ethylbenzene
Toluene
Xylenes (Total)
Methyl Tert-Butyl Ether
Naphthalene
Calculated VPH

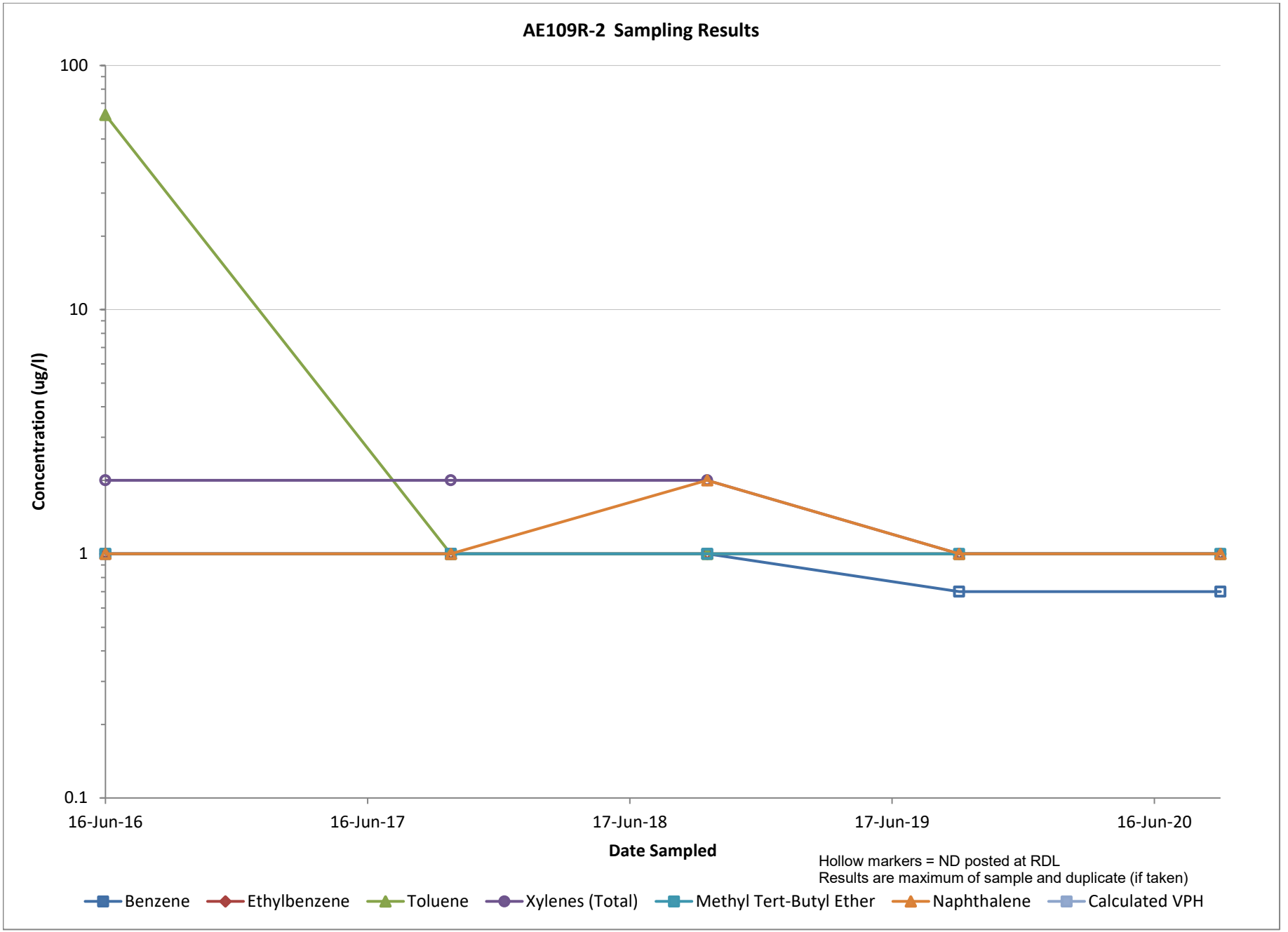

AE108R-1 Sampling Results
1000
100
10
1
0.1
Concentration (ug/l)
18-Dec-14
18-Dec-15
18-Dec-16
18-Dec-17
18-Dec-18
18-Dec-19
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
Benzene
Ethylbenzene
Toluene
Xylenes (Total)
Methyl Tert-Butyl Ether
Naphthalene
Calculated VPH

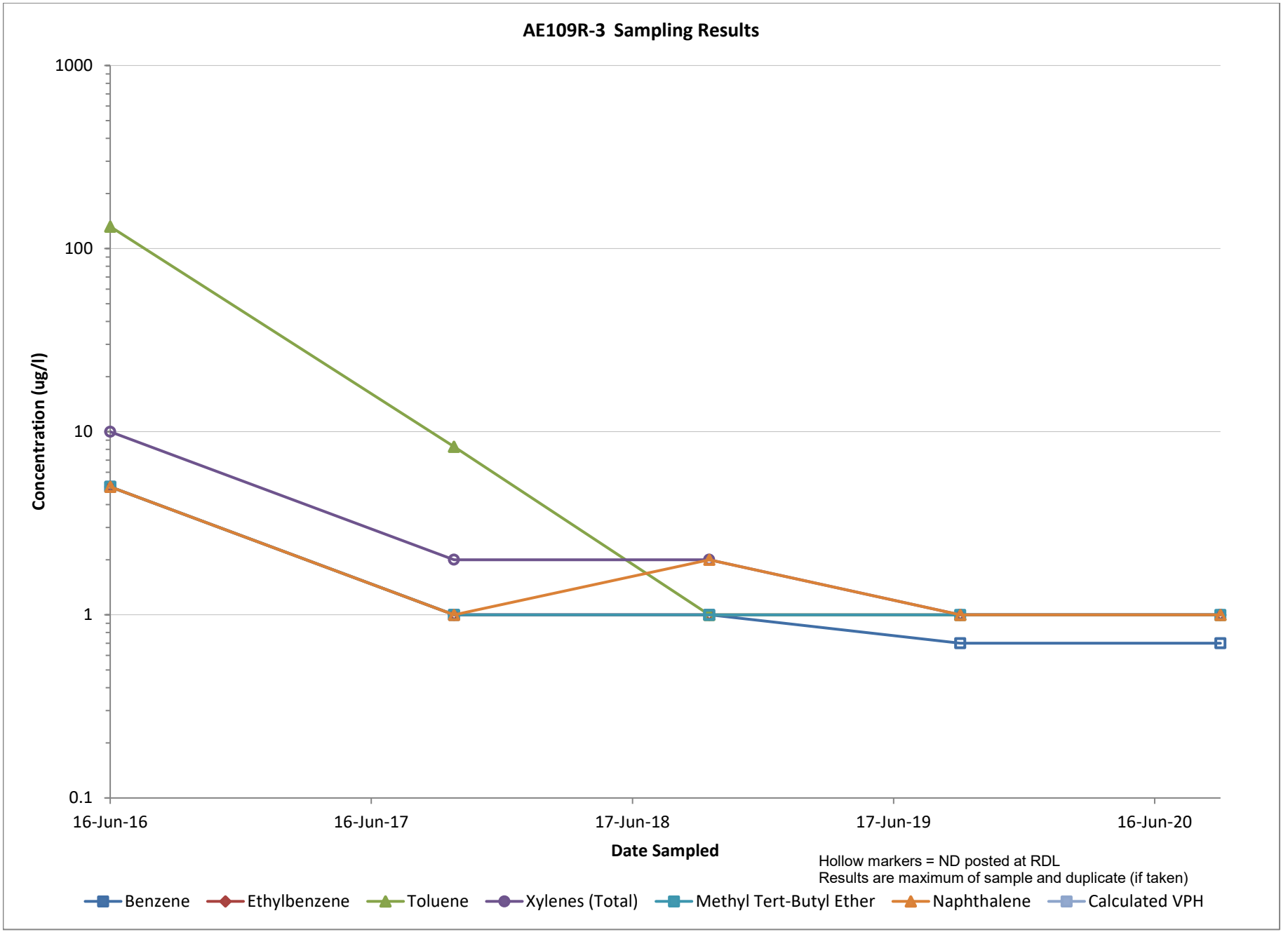

AE108R-3 Sampling Results
10
1
0.1
Concentration (ug/l)
18-Dec-14
18-Dec-15
18-Dec-16
18-Dec-17
18-Dec-18
18-Dec-19
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
Benzene
Ethylbenzene
Toluene
Xylenes (Total)
Methyl Tert-Butyl Ether
Naphthalene
Calculated VPH

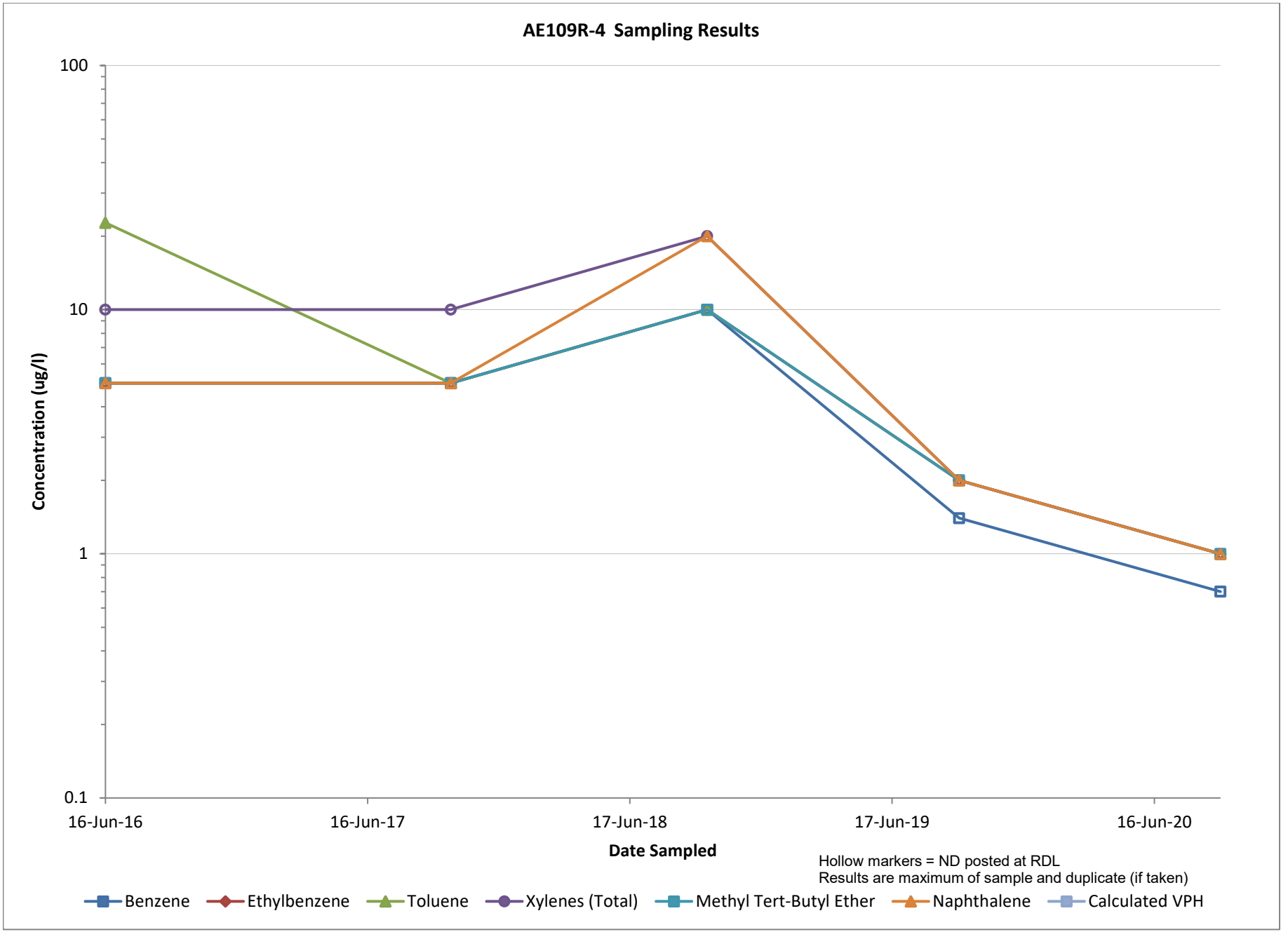

AE108R-5 Sampling Results
100
10
1
0.1
Concentration (ug/l)
18-Dec-14
18-Dec-15
18-Dec-16
18-Dec-17
18-Dec-18
18-Dec-19
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
Benzene
Ethylbenzene
Toluene
Xylenes (Total)
Methyl Tert-Butyl Ether
Naphthalene
Calculated VPH

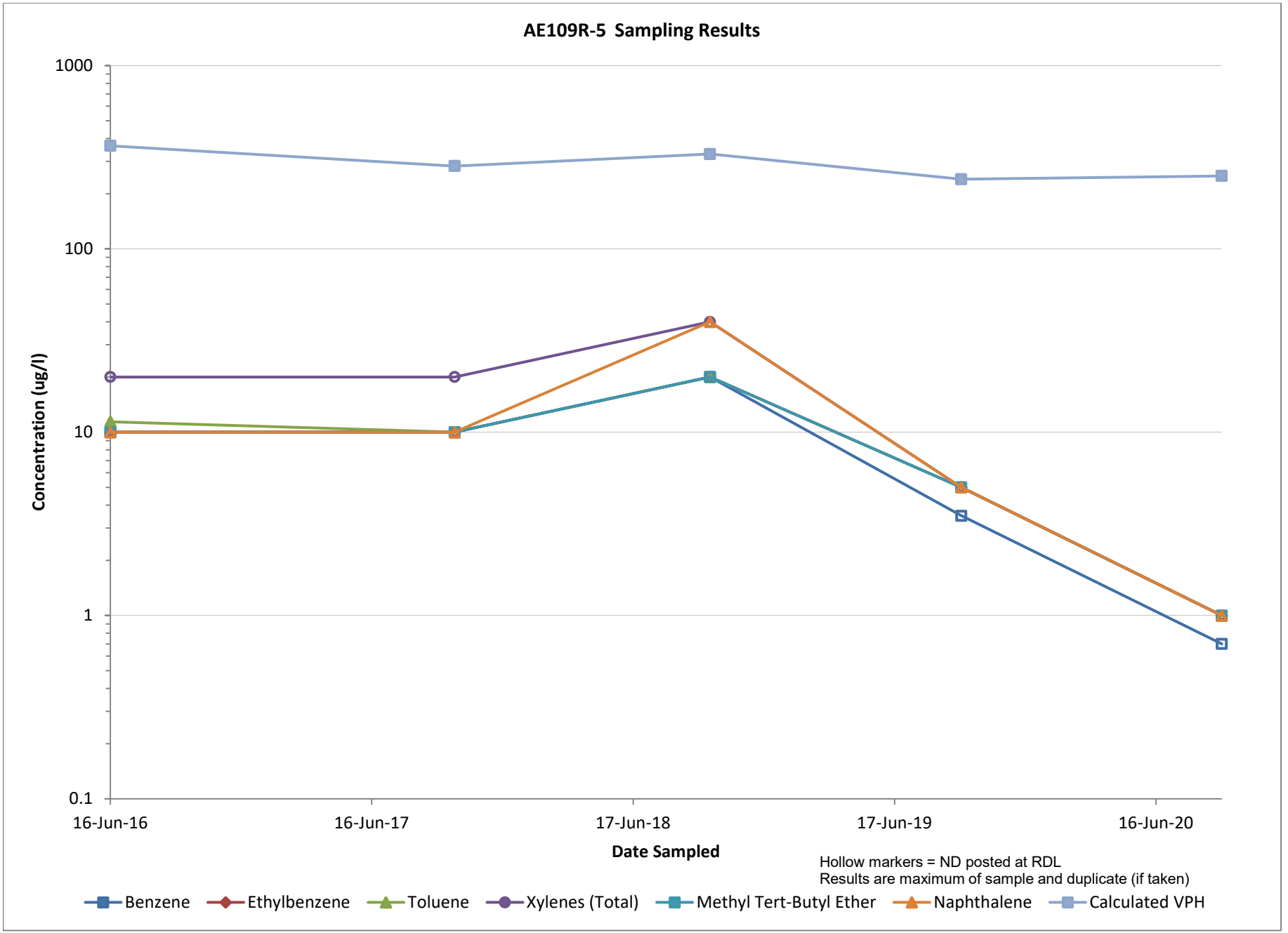

AE109D Sampling Results
10
1
0.1
Concentration (ug/l)
21-Jun-16
21-Jun-17
22-Jun-18
22-Jun-19
21-Jun-20
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
Benzene
Ethylbenzene
Toluene
Xylenes (Total)
Methyl Tert-Butyl Ether
Naphthalene
Calculated VPH

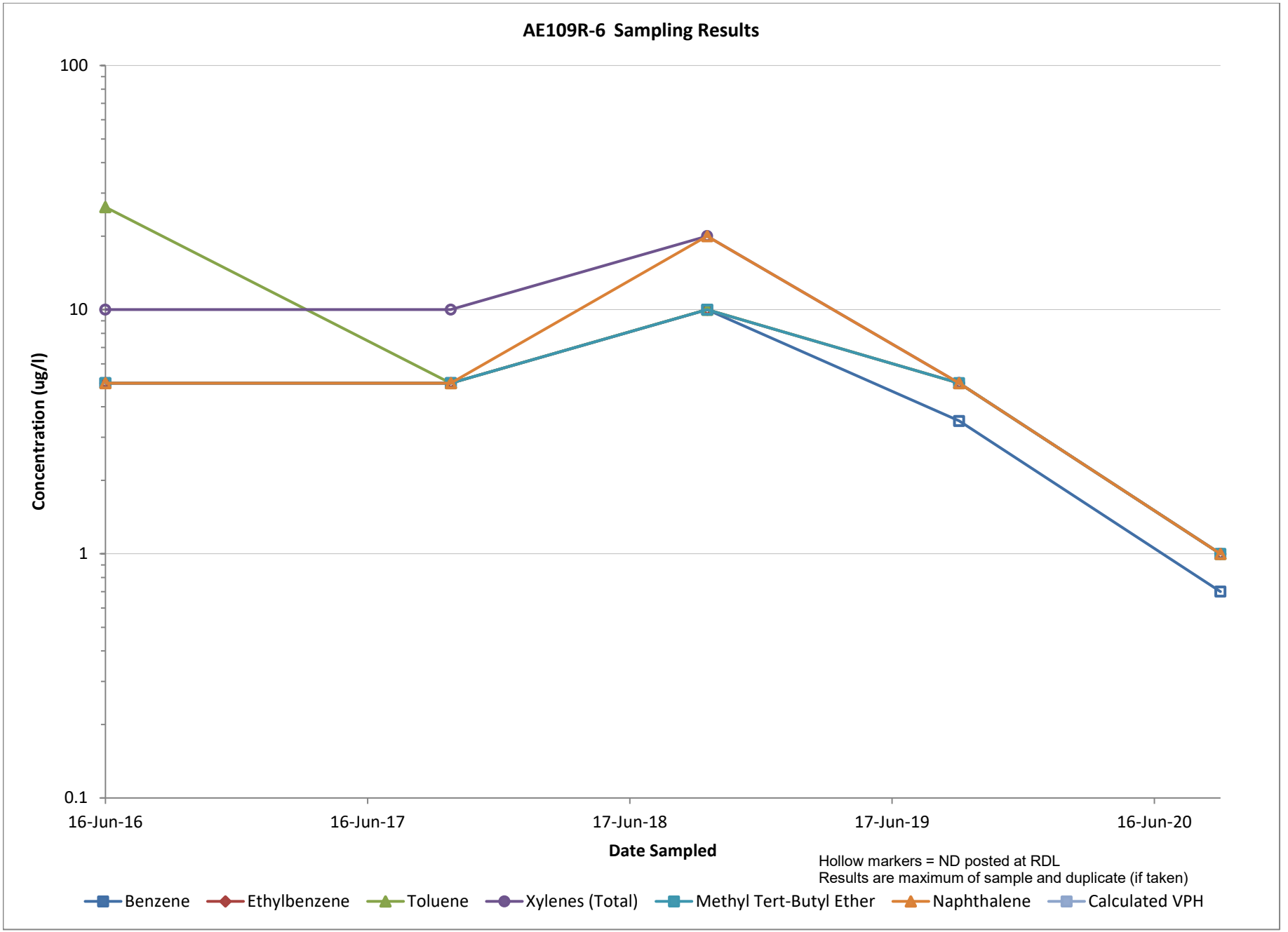

AE109R-1 Sampling Results
100
10
1
0.1
Concentration (ug/l)
16-Jun-16
16-Jun-17
17-Jun-18
17-Jun-19
16-Jun-20
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
Benzene
Ethylbenzene
Toluene
Xylenes (Total)
Methyl Tert-Butyl Ether
Naphthalene
Calculated VPH

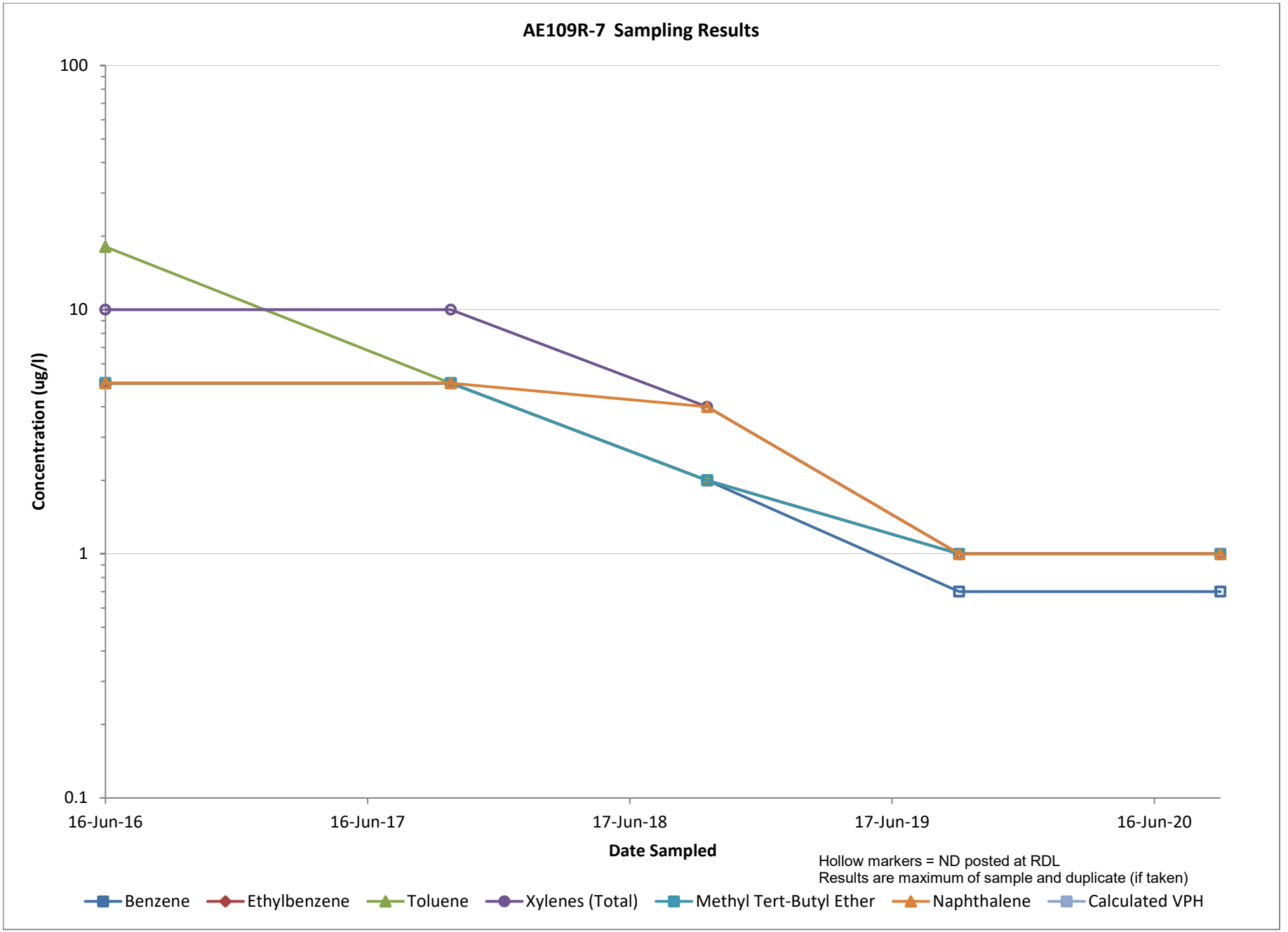

AE109R-2 Sampling Results
100
10
1
0.1
Concentration (ug/l)
16-Jun-16
16-Jun-17
17-Jun-18
17-Jun-19
16-Jun-20
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
Benzene
Ethylbenzene
Toluene
Xylenes (Total)
Methyl Tert-Butyl Ether
Naphthalene
Calculated VPH

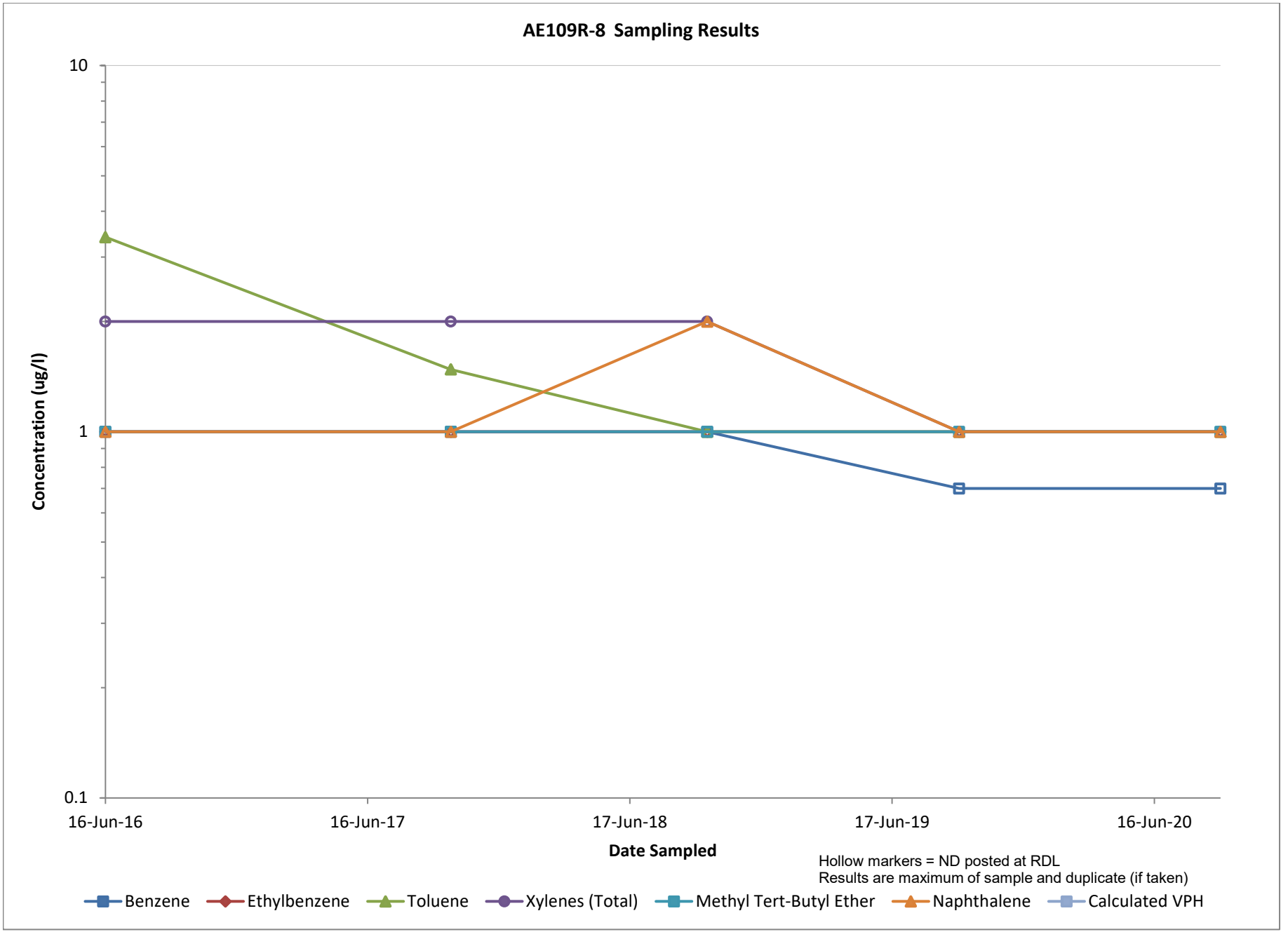

AE109R-3 Sampling Results
1000
100
10
1
0.1
Concentration (ug/l)
16-Jun-16
16-Jun-17
17-Jun-18
17-Jun-19
16-Jun-20
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
Benzene
Ethylbenzene
Toluene
Xylenes (Total)
Methyl Tert-Butyl Ether
Naphthalene
Calculated VPH

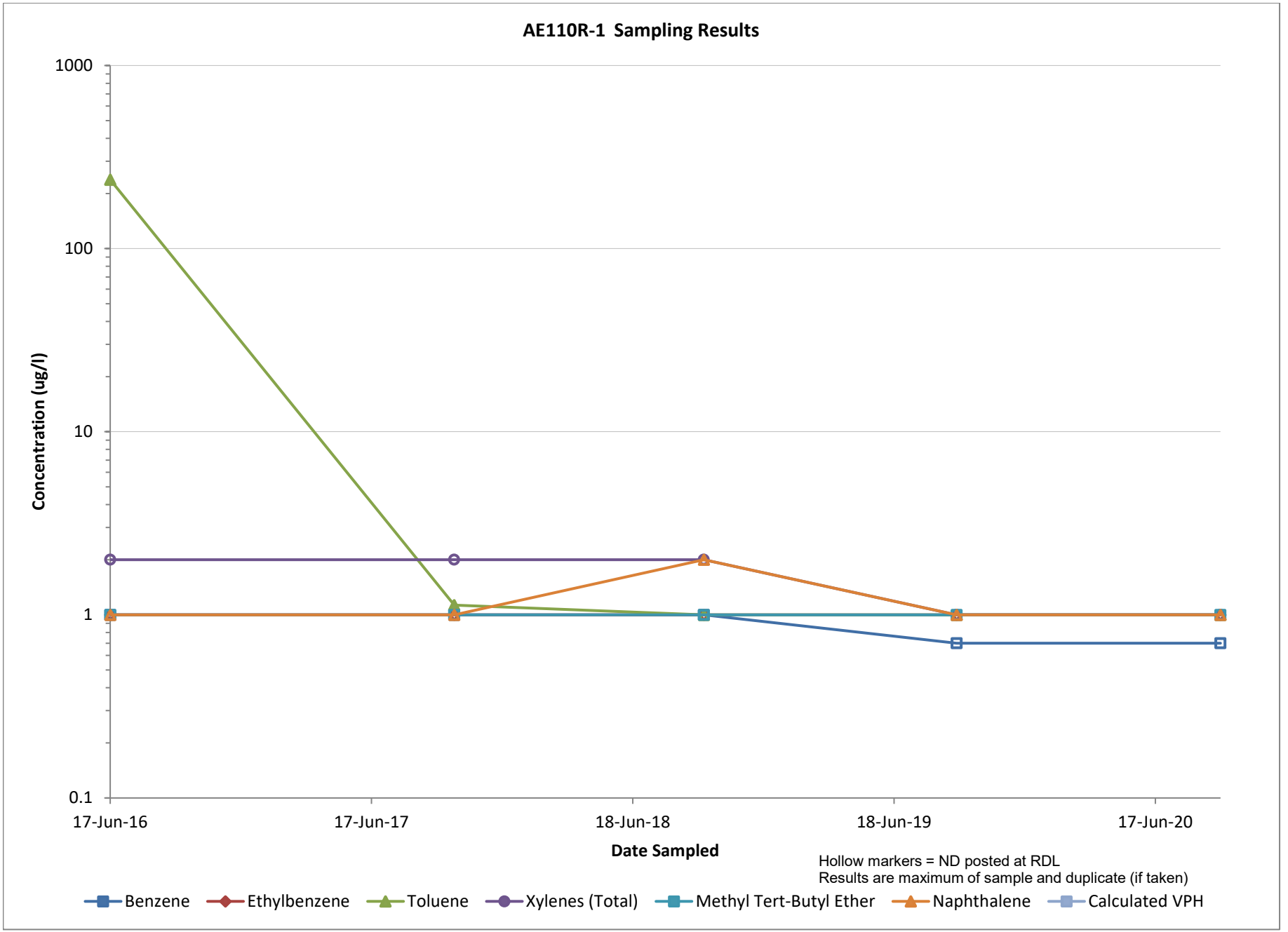

AE109R-4 Sampling Results
100
10
1
0.1
Concentration (ug/l)
16-Jun-16
16-Jun-17
17-Jun-18
17-Jun-19
16-Jun-20
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
Benzene
Ethylbenzene
Toluene
Xylenes (Total)
Methyl Tert-Butyl Ether
Naphthalene
Calculated VPH

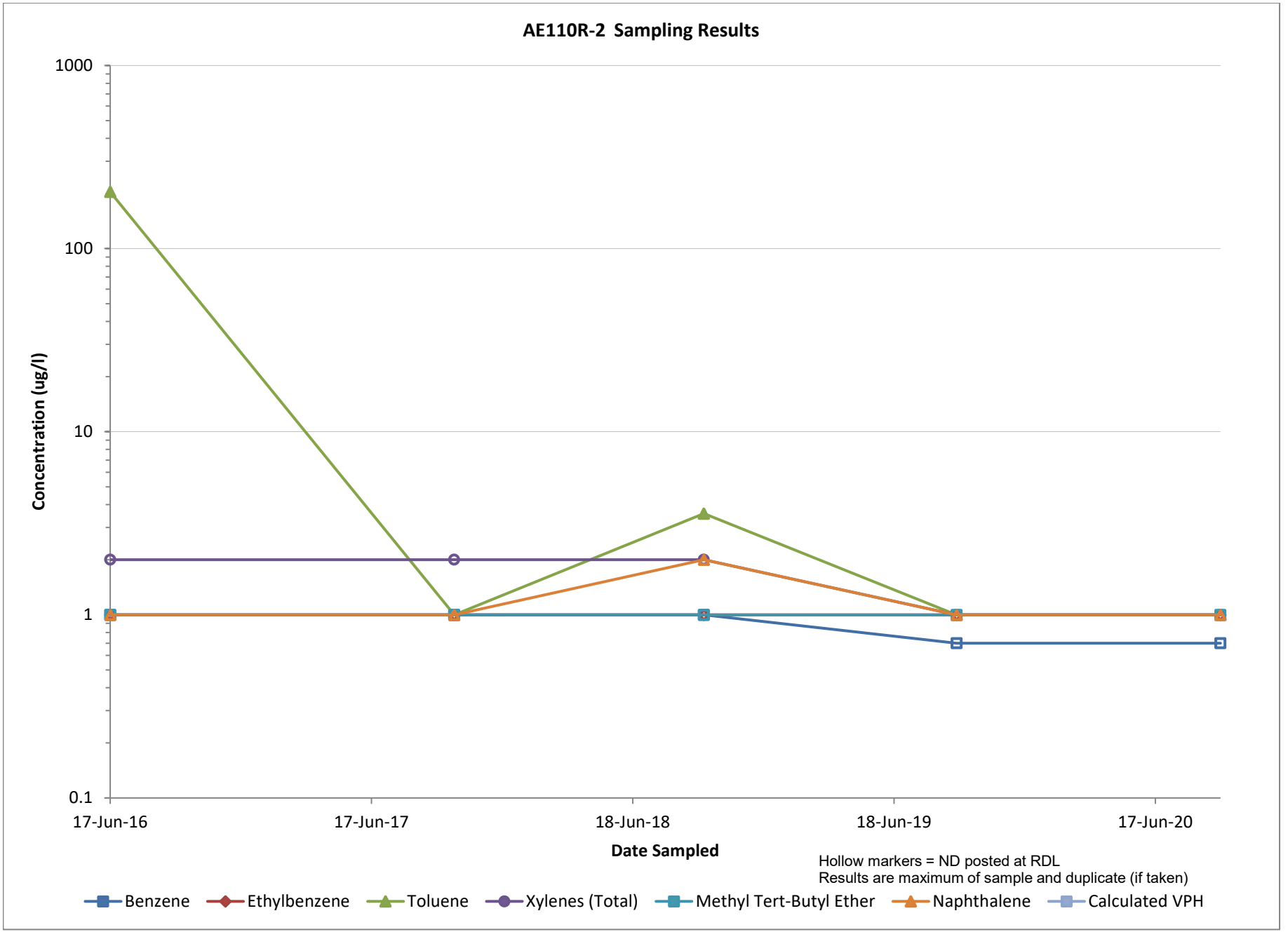

AE109R-5 Sampling Results
1000
100
10
1
0.1
Concentration (ug/l)
16-Jun-16
16-Jun-17
17-Jun-18
17-Jun-19
16-Jun-20
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
Benzene
Ethylbenzene
Toluene
Xylenes (Total)
Methyl Tert-Butyl Ether
Naphthalene
Calculated VPH

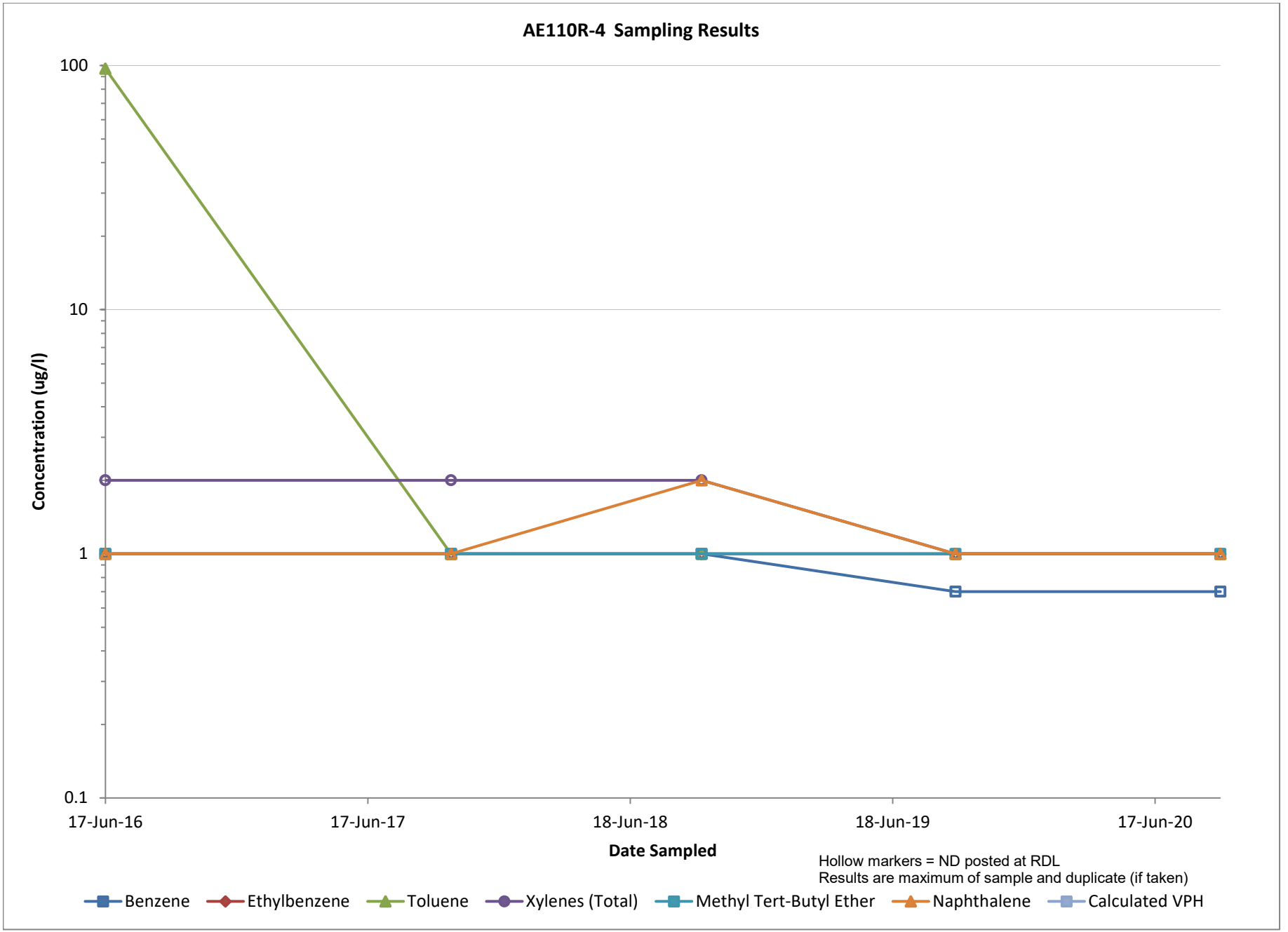

AE109R-6 Sampling Results
100
10
1
0.1
Concentration (ug/l)
16-Jun-16
16-Jun-17
17-Jun-18
17-Jun-19
16-Jun-20
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
Benzene
Ethylbenzene
Toluene
Xylenes (Total)
Methyl Tert-Butyl Ether
Naphthalene
Calculated VPH

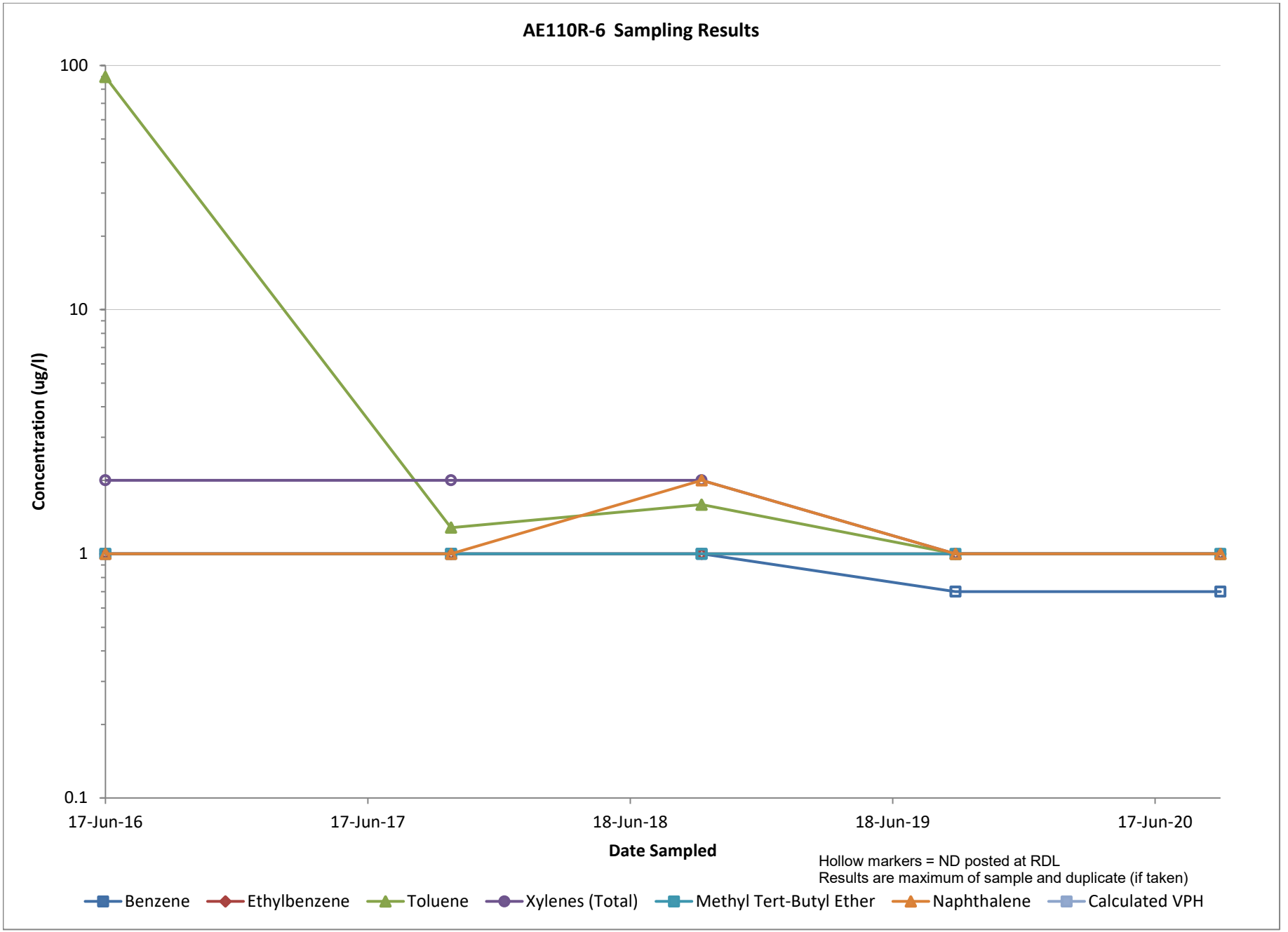

AE109R-7 Sampling Results
100
10
1
0.1
Concentration (ug/l)
16-Jun-16
16-Jun-17
17-Jun-18
17-Jun-19
16-Jun-20
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
Benzene
Ethylbenzene
Toluene
Xylenes (Total)
Methyl Tert-Butyl Ether
Naphthalene
Calculated VPH

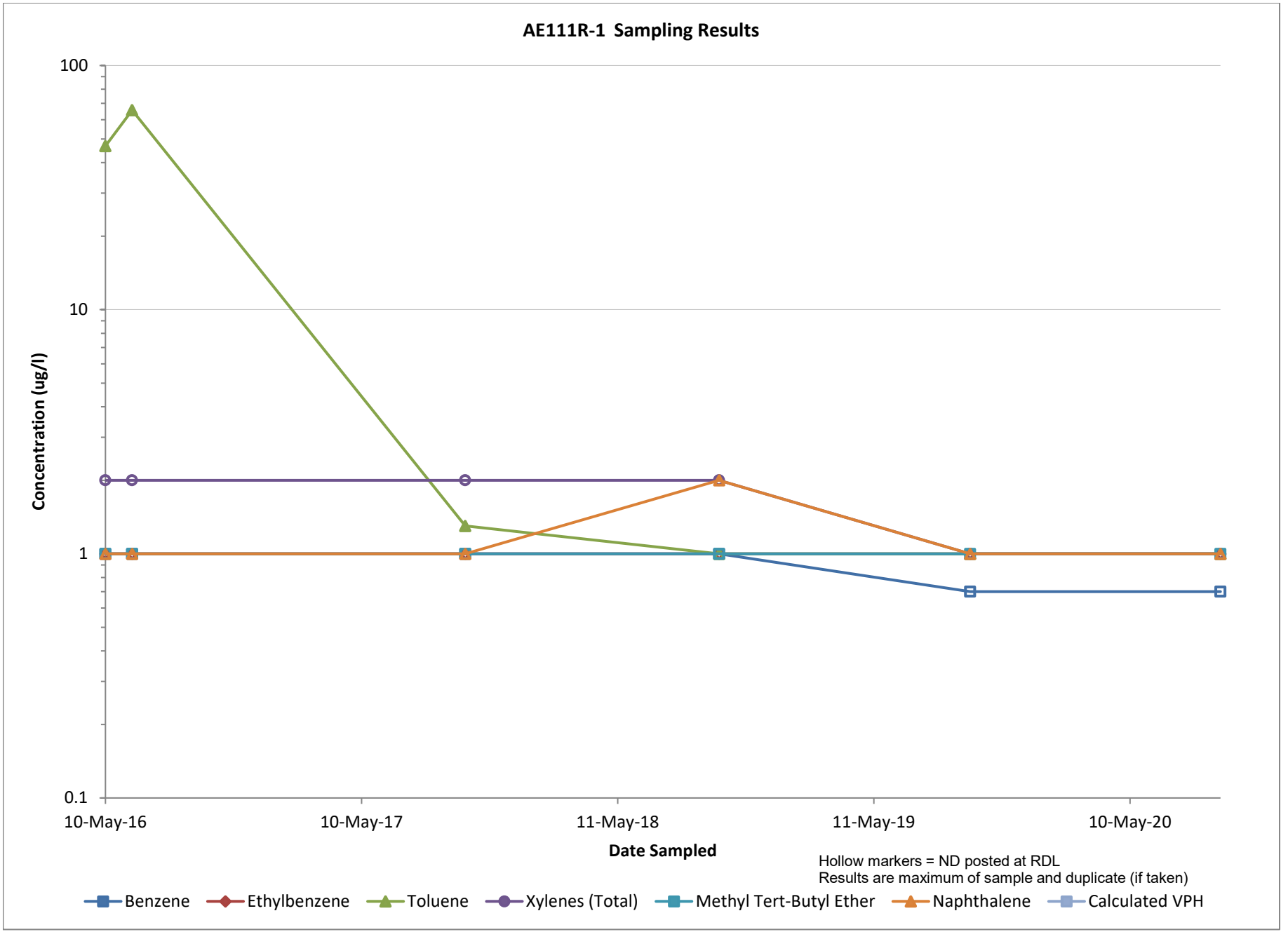

AE109R-8 Sampling Results
10
1
0.1
Concentration (ug/l)
16-Jun-16
16-Jun-17
17-Jun-18
17-Jun-19
16-Jun-20
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
Benzene
Ethylbenzene
Toluene
Xylenes (Total)
Methyl Tert-Butyl Ether
Naphthalene
Calculated VPH

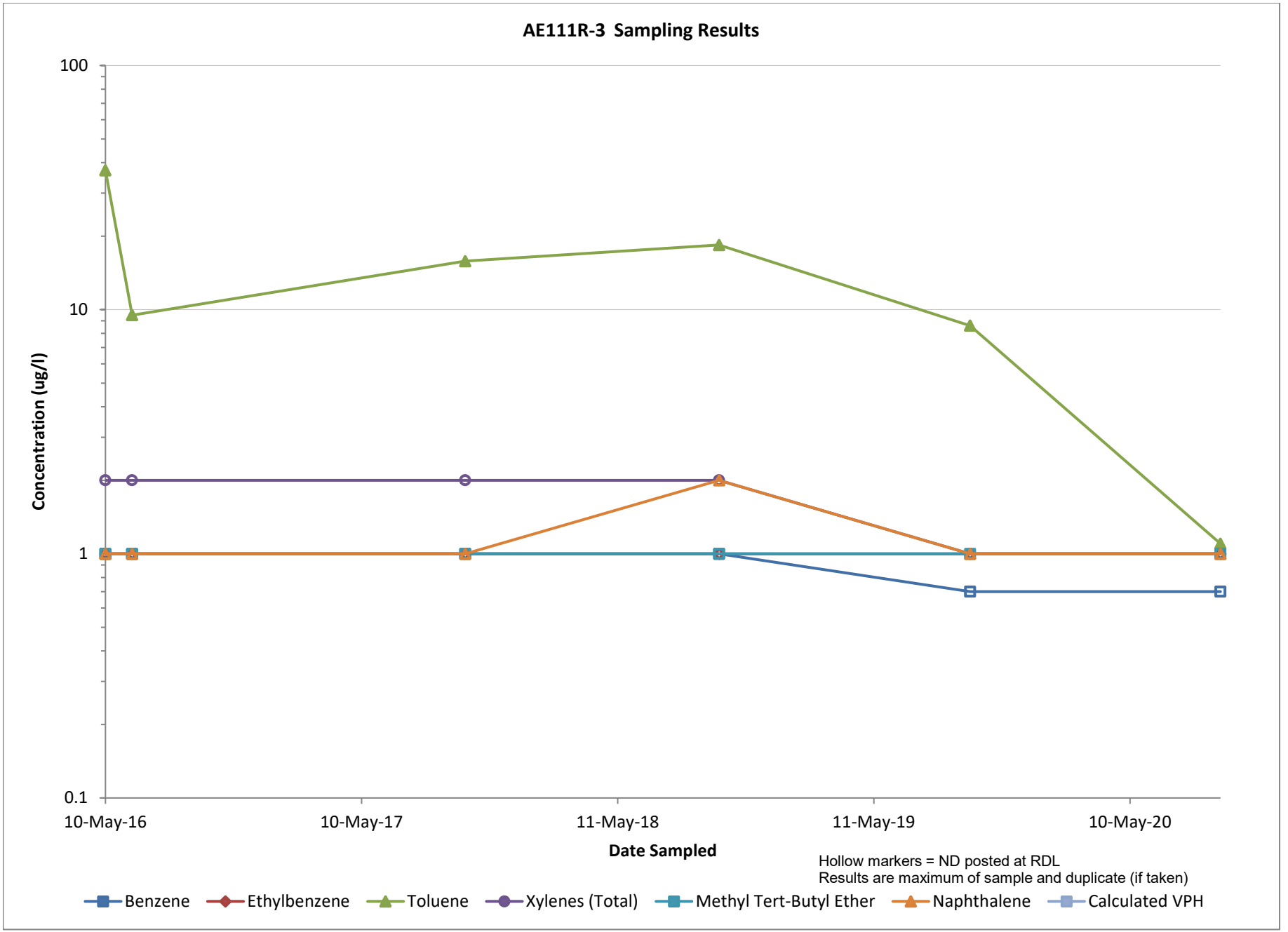

AE110R-1 Sampling Results
1000
100
10
1
0.1
Concentration (ug/l)
17-Jun-16
17-Jun-17
18-Jun-18
18-Jun-19
17-Jun-20
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
Benzene
Ethylbenzene
Toluene
Xylenes (Total)
Methyl Tert-Butyl Ether
Naphthalene
Calculated VPH

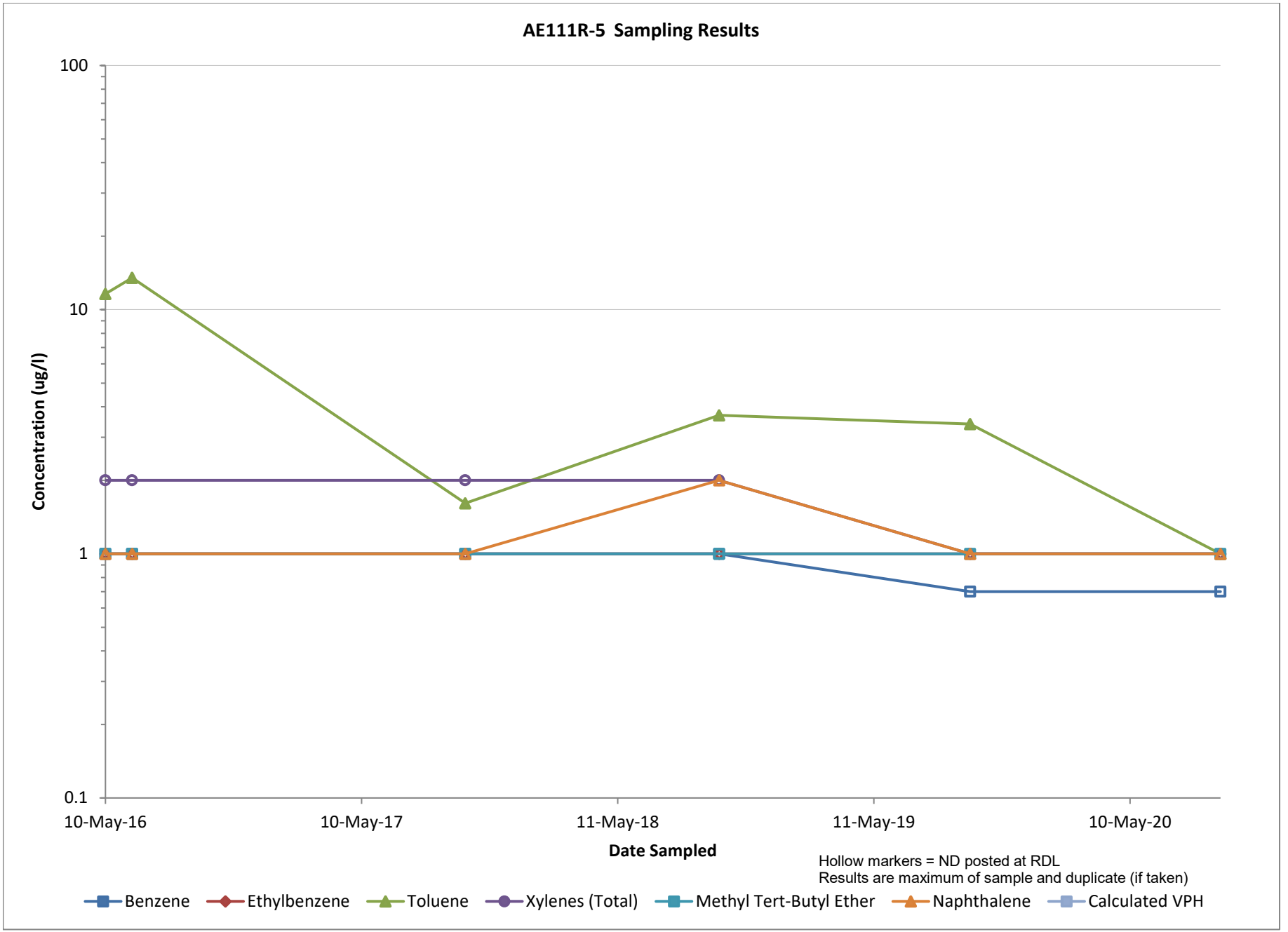

AE110R-2 Sampling Results
1000
100
10
1
0.1
Concentration (ug/l)
17-Jun-16
17-Jun-17
18-Jun-18
18-Jun-19
17-Jun-20
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
Benzene
Ethylbenzene
Toluene
Xylenes (Total)
Methyl Tert-Butyl Ether
Naphthalene
Calculated VPH

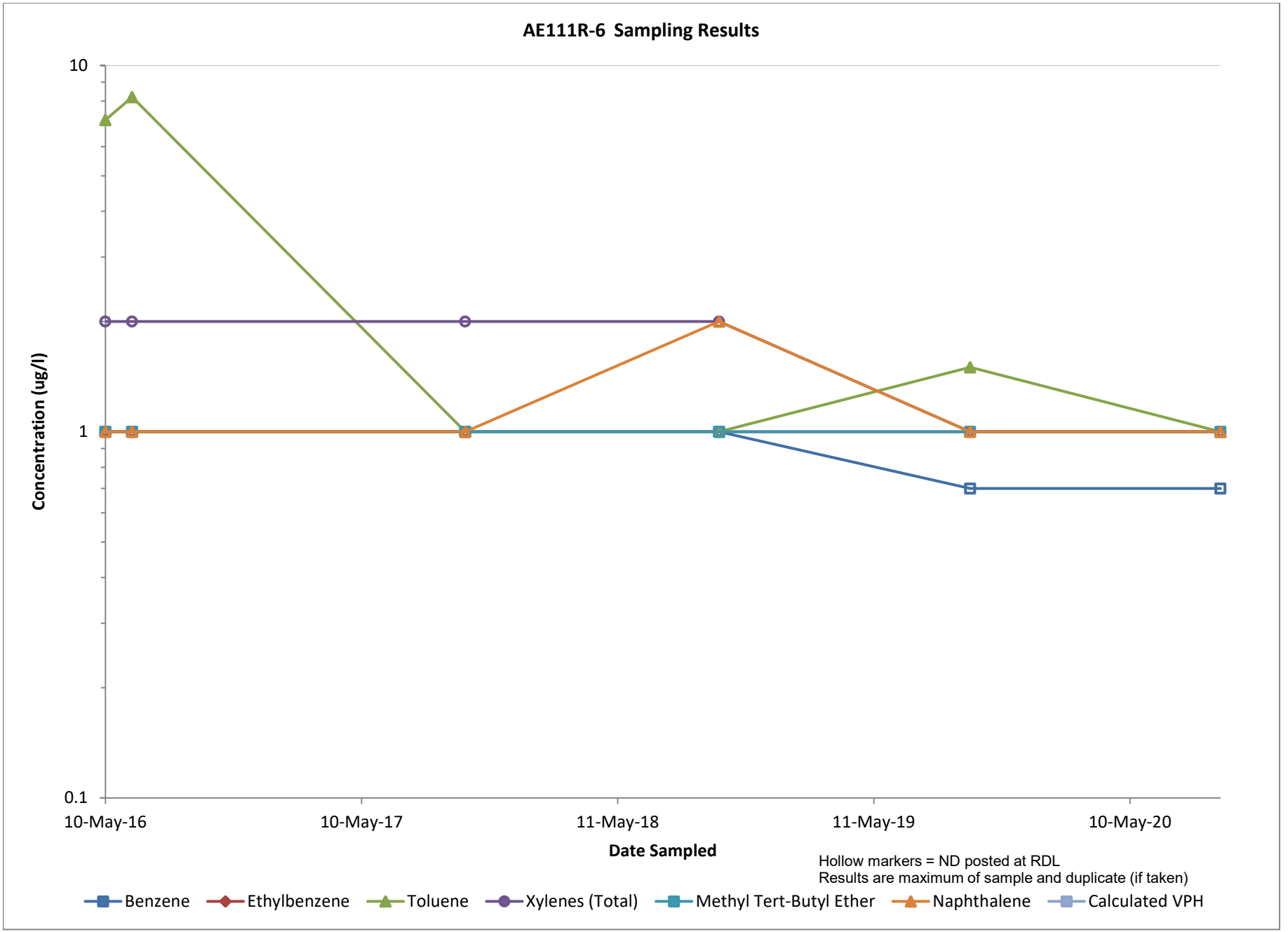

AE110R-4 Sampling Results
100
10
1
0.1
Concentration (ug/l)
17-Jun-16
17-Jun-17
18-Jun-18
18-Jun-19
17-Jun-20
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
Benzene
Ethylbenzene
Toluene
Xylenes (Total)
Methyl Tert-Butyl Ether
Naphthalene
Calculated VPH

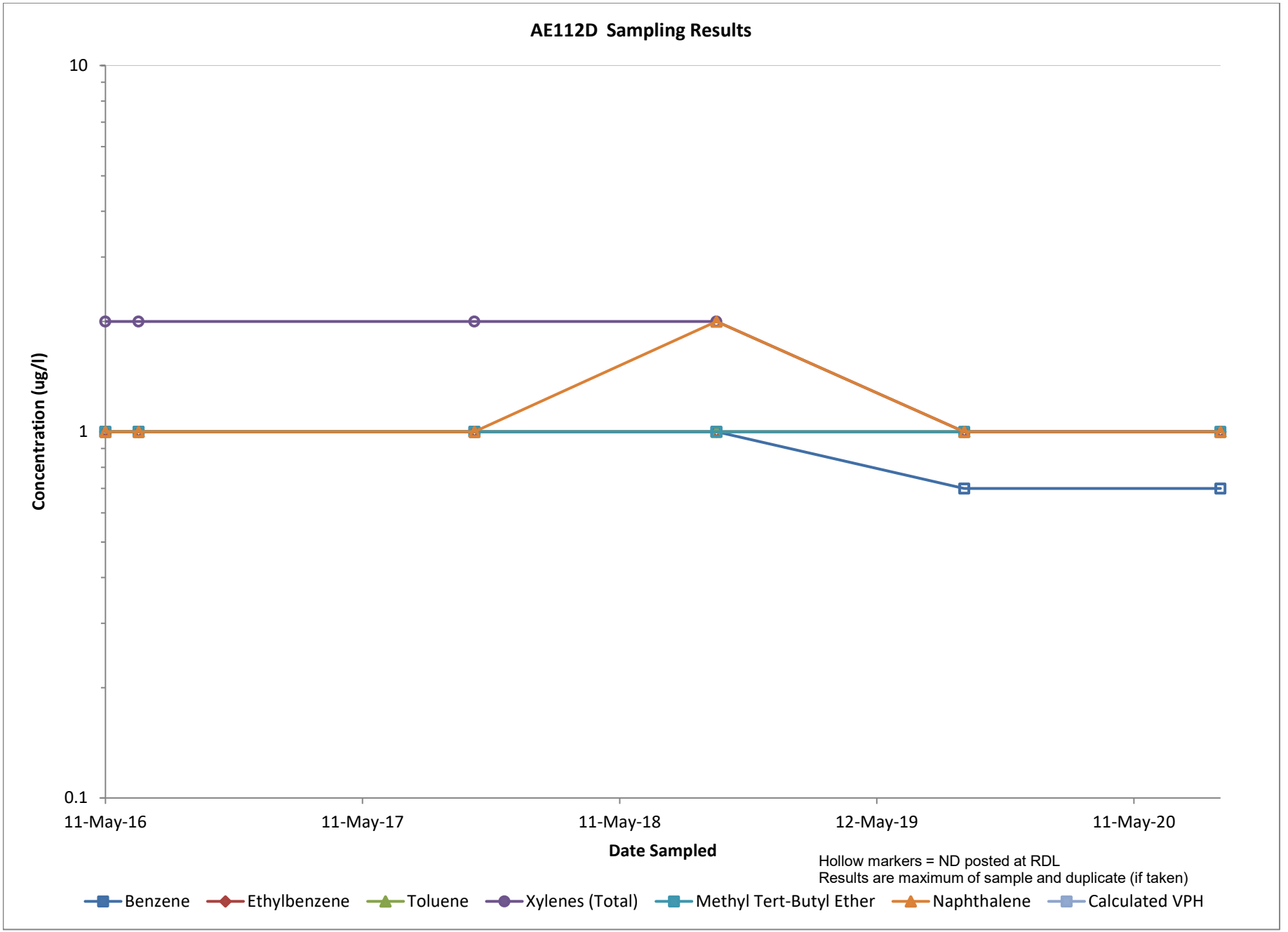

AE110R-6 Sampling Results
100
10
1
0.1
Concentration (ug/l)
17-Jun-16
17-Jun-17
18-Jun-18
18-Jun-19
17-Jun-20
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
Benzene
Ethylbenzene
Toluene
Xylenes (Total)
Methyl Tert-Butyl Ether
Naphthalene
Calculated VPH

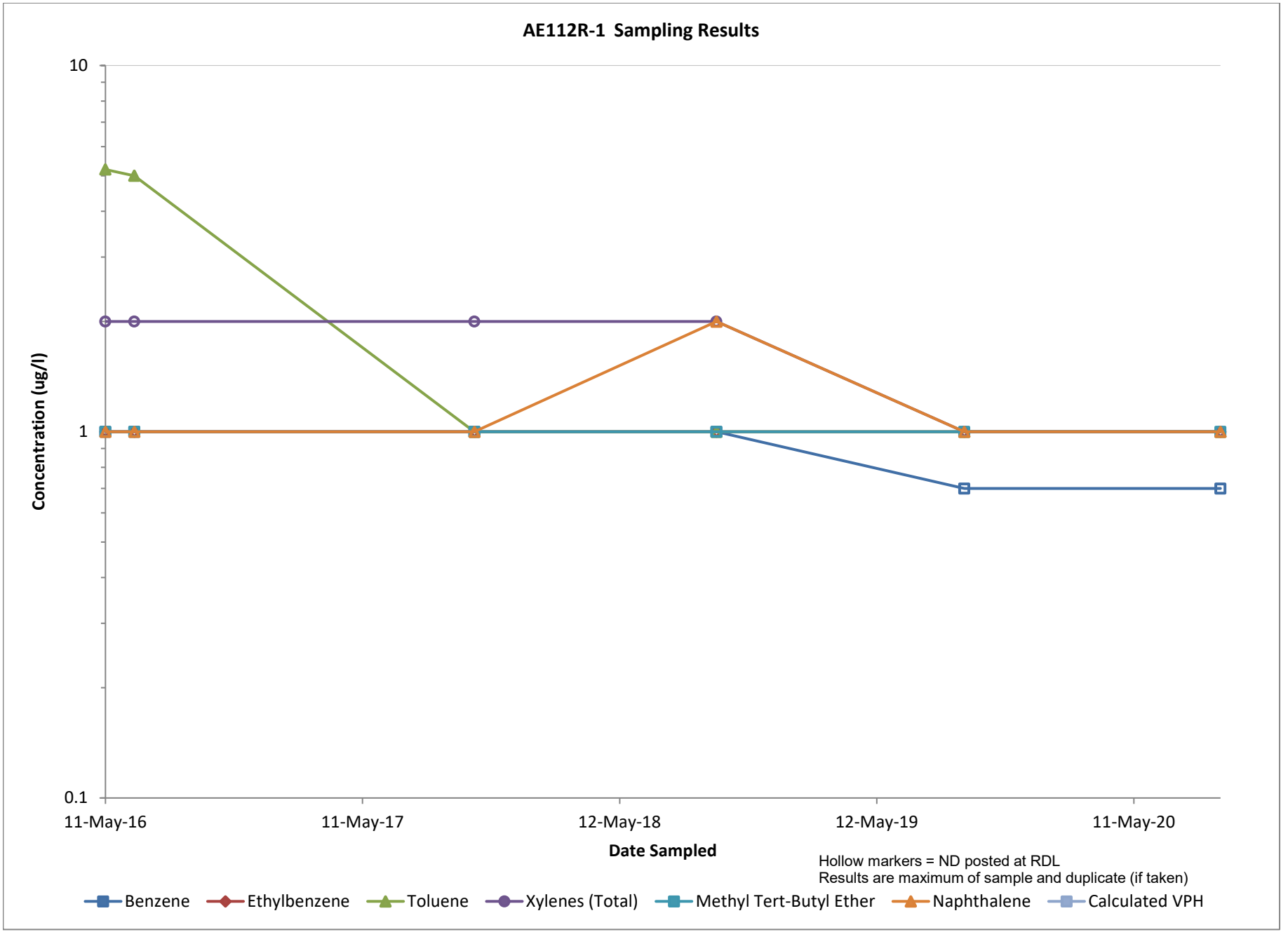

AE111R-1 Sampling Results
100
10
1
0.1
Concentration (ug/l)
10-May-16
10-May-17
11-May-18
11-May-19
10-May-20
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
Benzene
Ethylbenzene
Toluene
Xylenes (Total)
Methyl Tert-Butyl Ether
Naphthalene
Calculated VPH

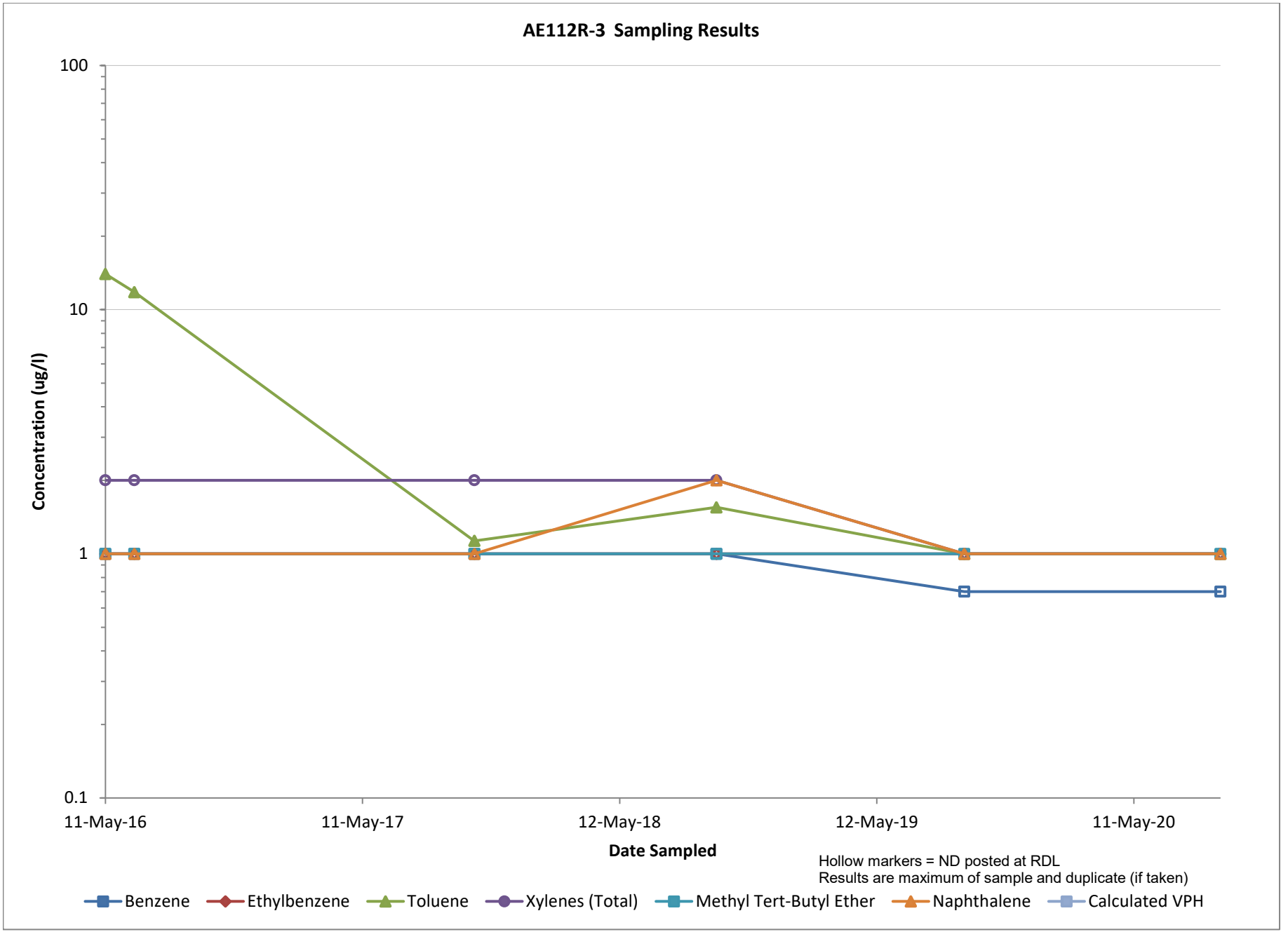

AE111R-3 Sampling Results
100
10
1
0.1
Concentration (ug/l)
10-May-16
10-May-17
11-May-18
11-May-19
10-May-20
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
Benzene
Ethylbenzene
Toluene
Xylenes (Total)
Methyl Tert-Butyl Ether
Naphthalene
Calculated VPH

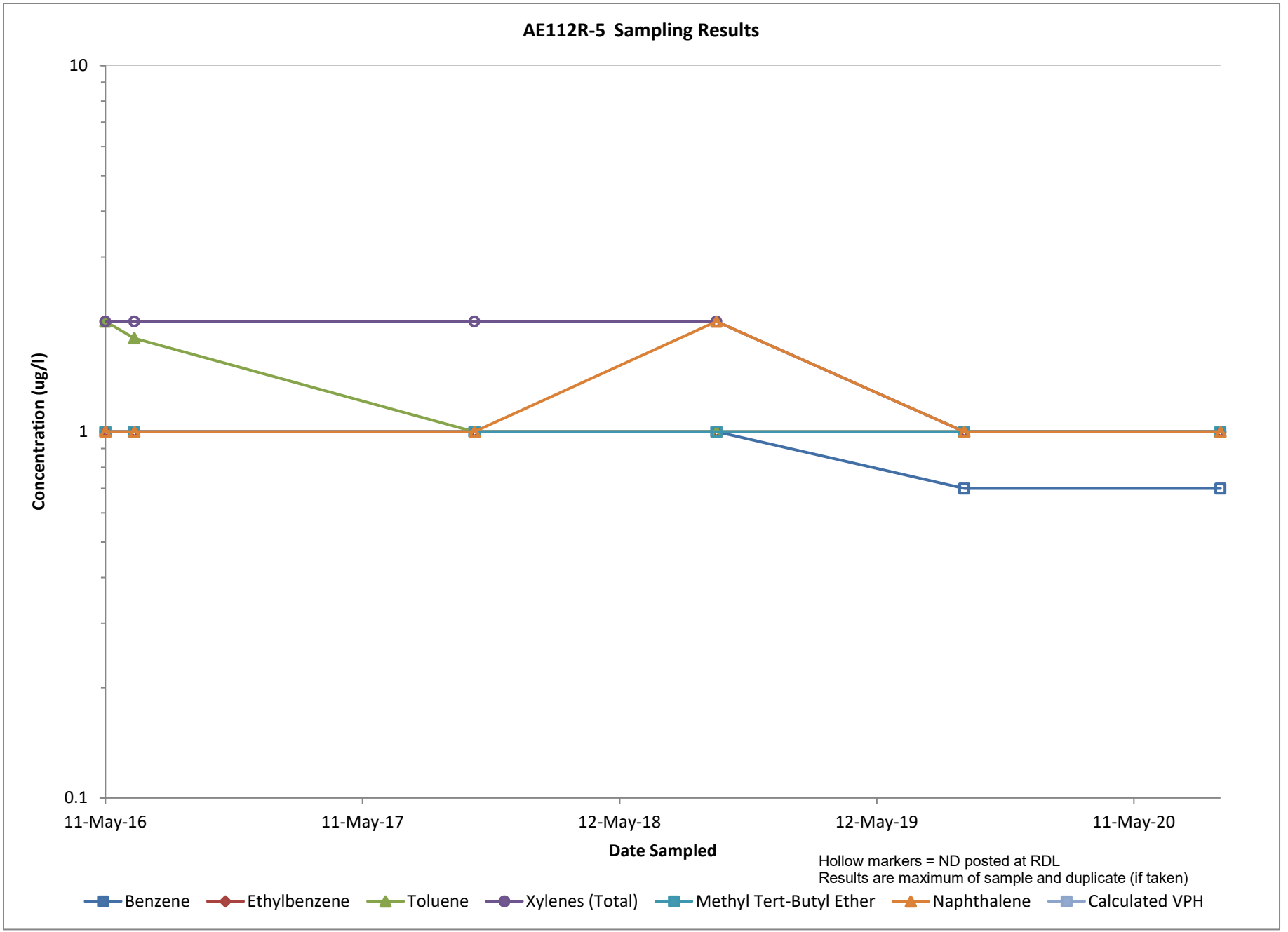

AE111R-5 Sampling Results
100
10
1
0.1
Concentration (ug/l)
10-May-16
10-May-17
11-May-18
11-May-19
10-May-20
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
Benzene
Ethylbenzene
Toluene
Xylenes (Total)
Methyl Tert-Butyl Ether
Naphthalene
Calculated VPH

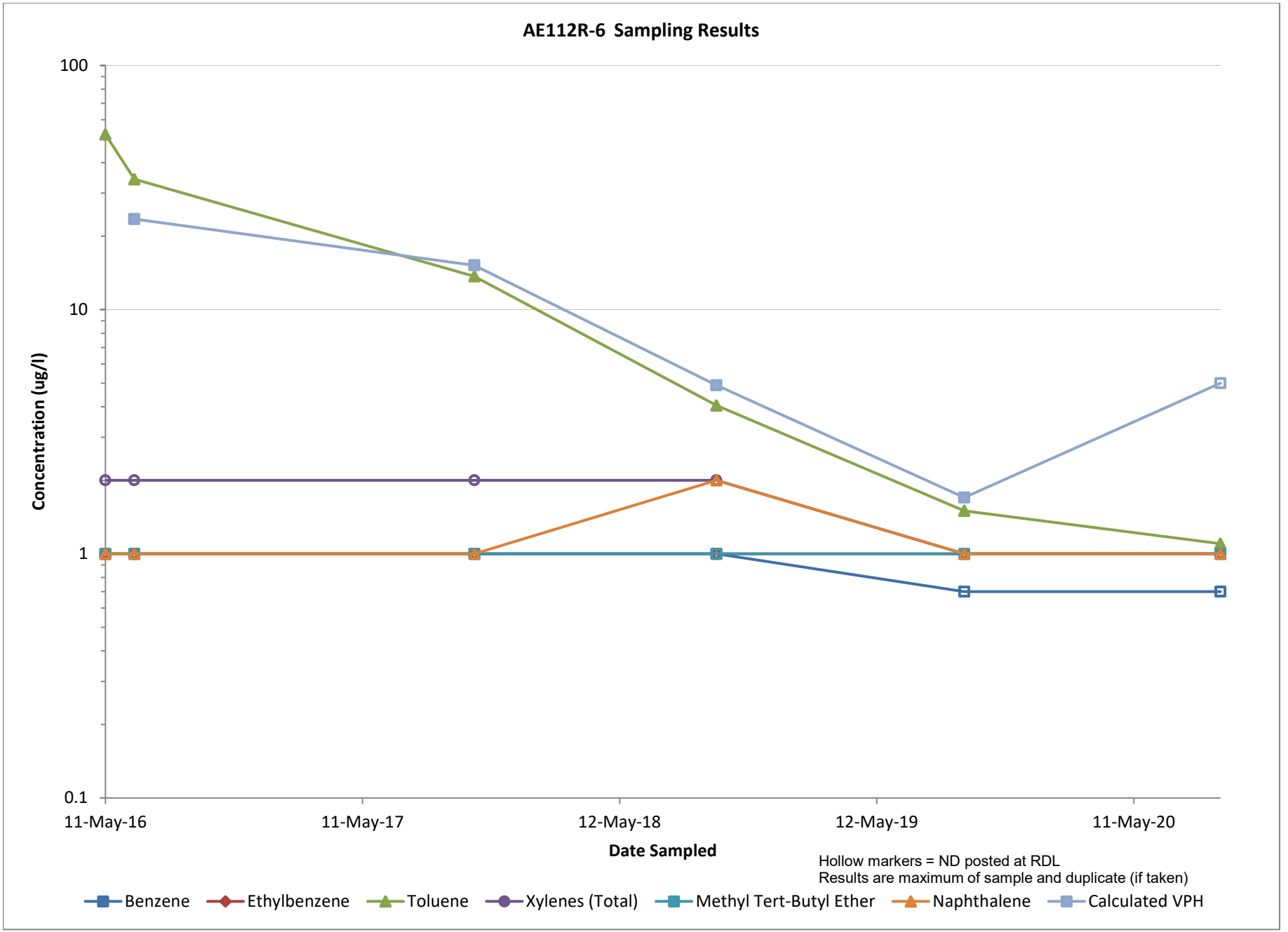

AE111R-6 Sampling Results
10
1
0.1
Concentration (ug/l)
10-May-16
10-May-17
11-May-18
11-May-19
10-May-20
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
Benzene
Ethylbenzene
Toluene
Xylenes (Total)
Methyl Tert-Butyl Ether
Naphthalene
Calculated VPH

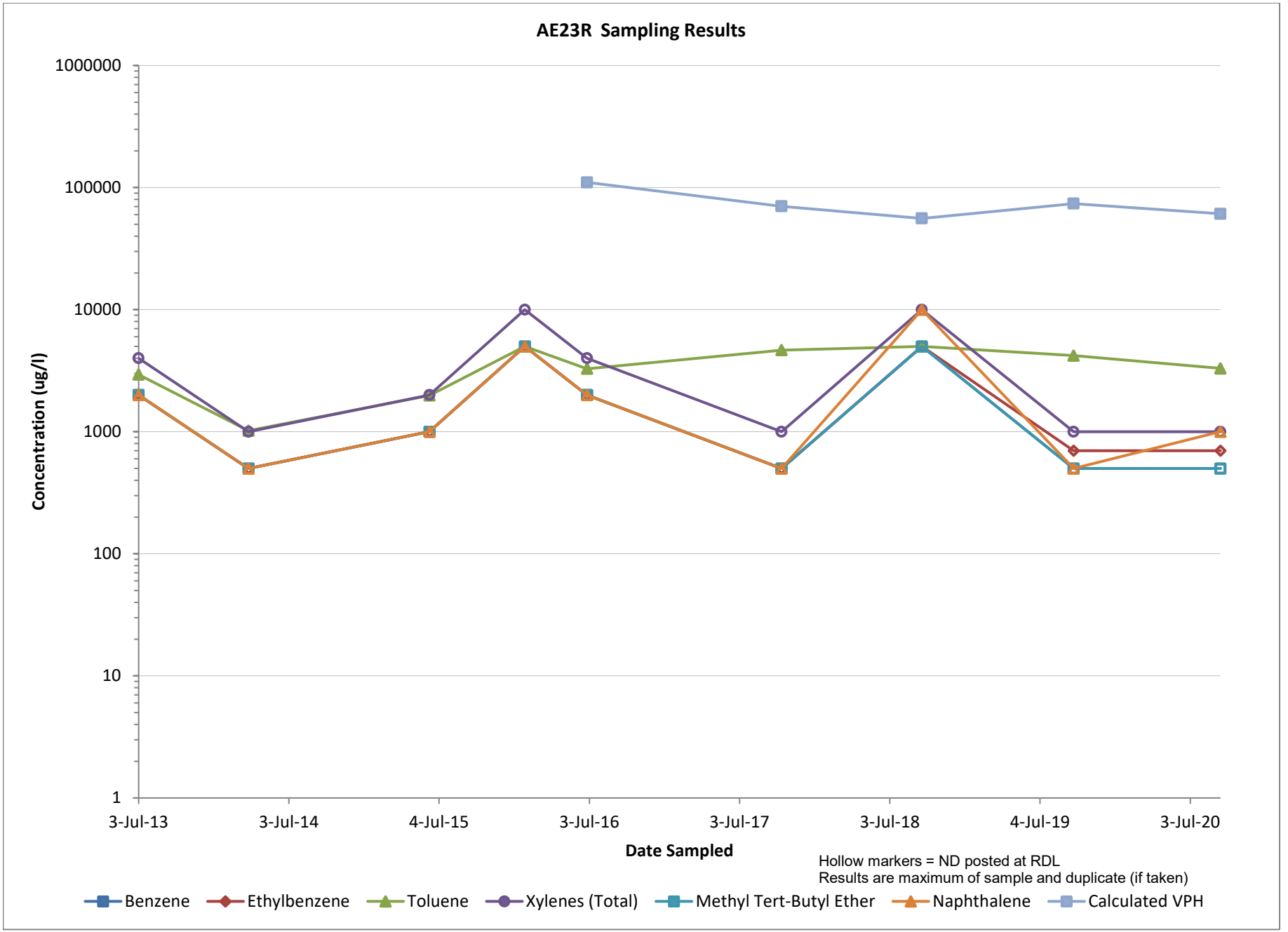

AE112D Sampling Results
10
1
0.1
Concentration (ug/l)
11-May-16
11-May-17
11-May-18
12-May-19
11-May-20
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
Benzene
Ethylbenzene
Toluene
Xylenes (Total)
Methyl Tert-Butyl Ether
Naphthalene
Calculated VPH

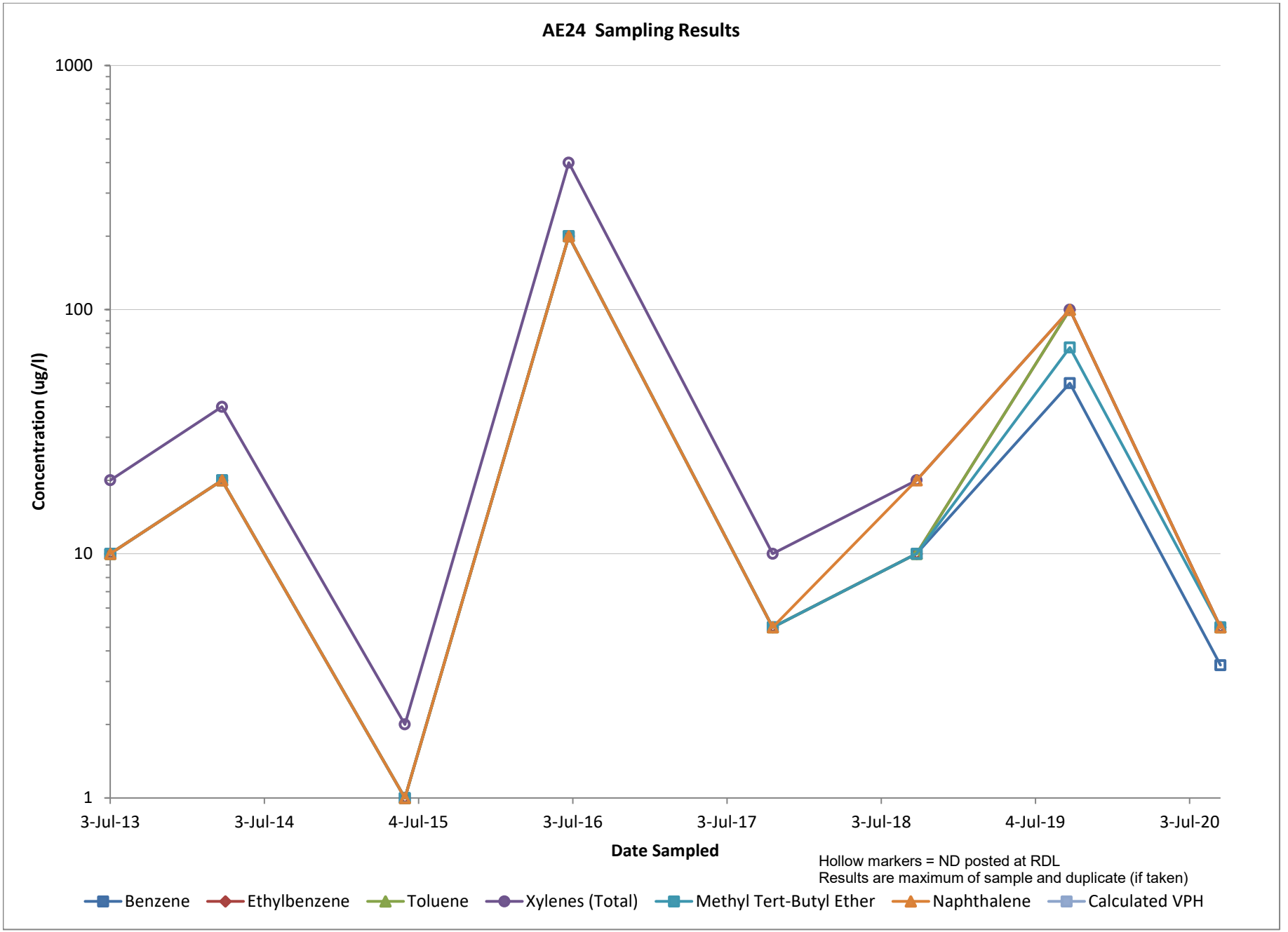

AE112R-1 Sampling Results
10
1
0.1
Concentration (ug/l)
11-May-16
11-May-17
12-May-18
12-May-19
11-May-20
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
Benzene
Ethylbenzene
Toluene
Xylenes (Total)
Methyl Tert-Butyl Ether
Naphthalene
Calculated VPH

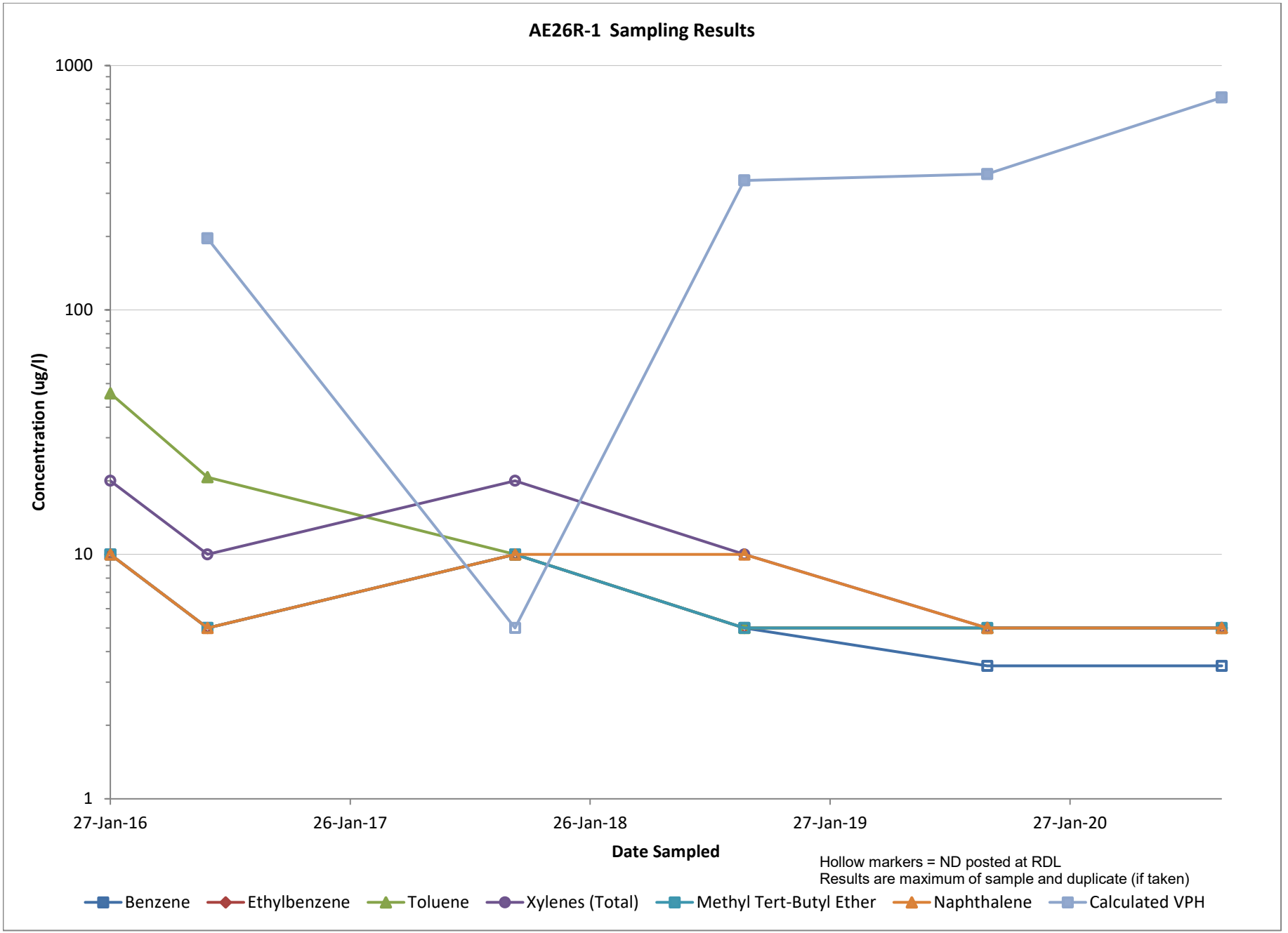

AE112R-3 Sampling Results
100
10
1
0.1
Concentration (ug/l)
11-May-16
11-May-17
12-May-18
12-May-19
11-May-20
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
Benzene
Ethylbenzene
Toluene
Xylenes (Total)
Methyl Tert-Butyl Ether
Naphthalene
Calculated VPH

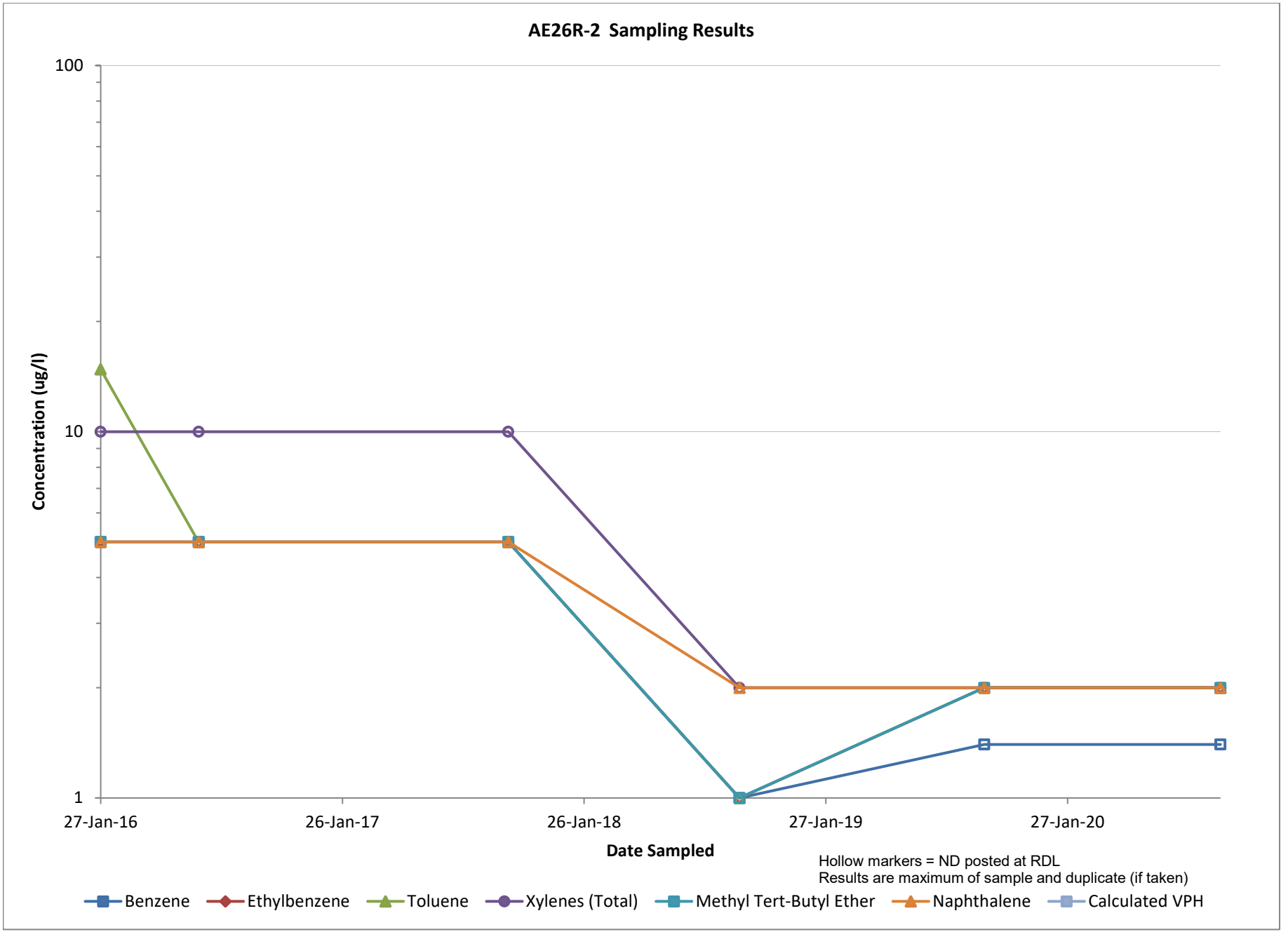

AE112R-5 Sampling Results
10
1
0.1
Concentration (ug/l)
11-May-16
11-May-17
12-May-18
12-May-19
11-May-20
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
Benzene
Ethylbenzene
Toluene
Xylenes (Total)
Methyl Tert-Butyl Ether
Naphthalene
Calculated VPH

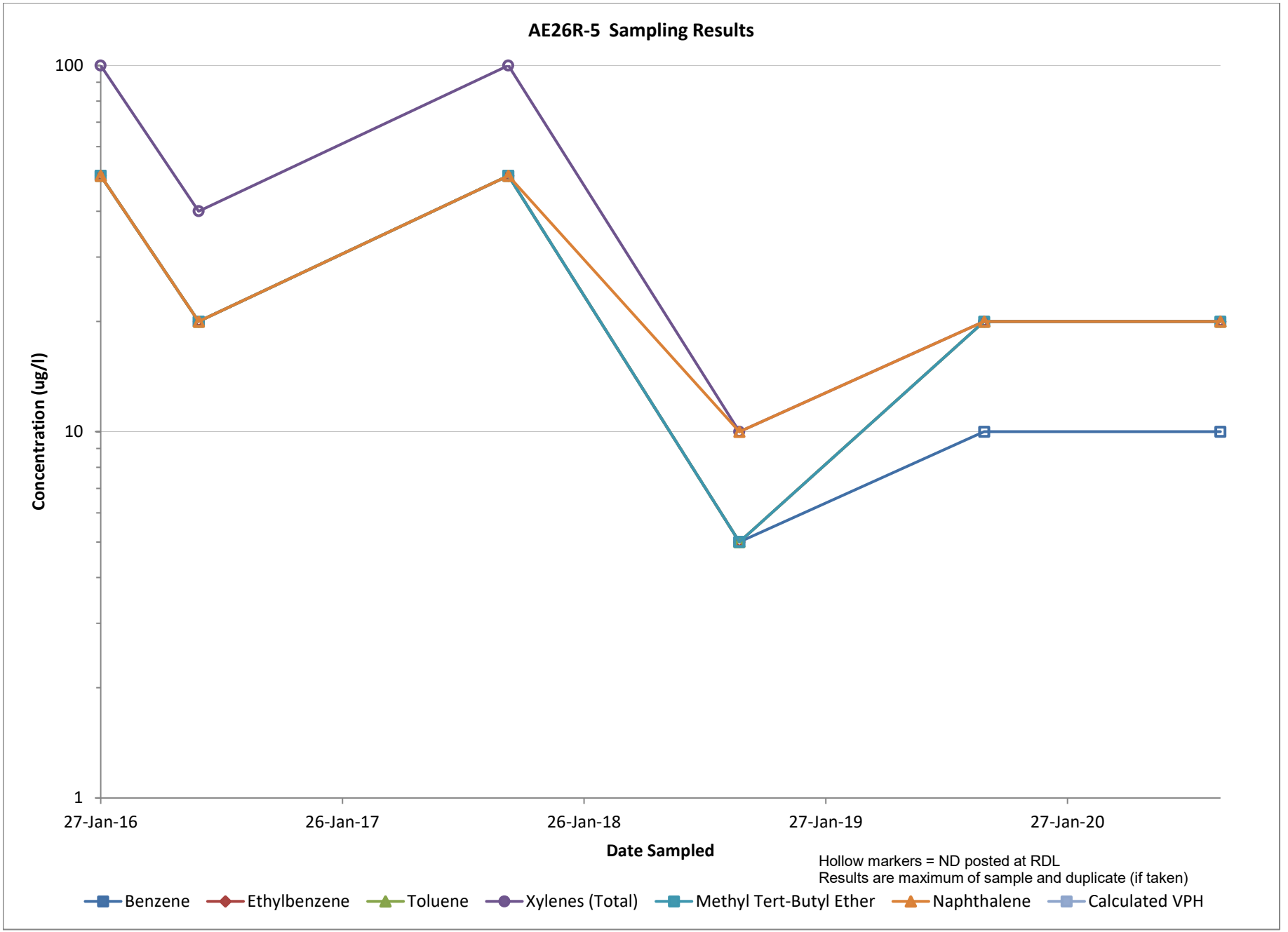

AE112R-6 Sampling Results
100
10
1
0.1
Concentration (ug/l)
11-May-16
11-May-17
12-May-18
12-May-19
11-May-20
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
Benzene
Ethylbenzene
Toluene
Xylenes (Total)
Methyl Tert-Butyl Ether
Naphthalene
Calculated VPH

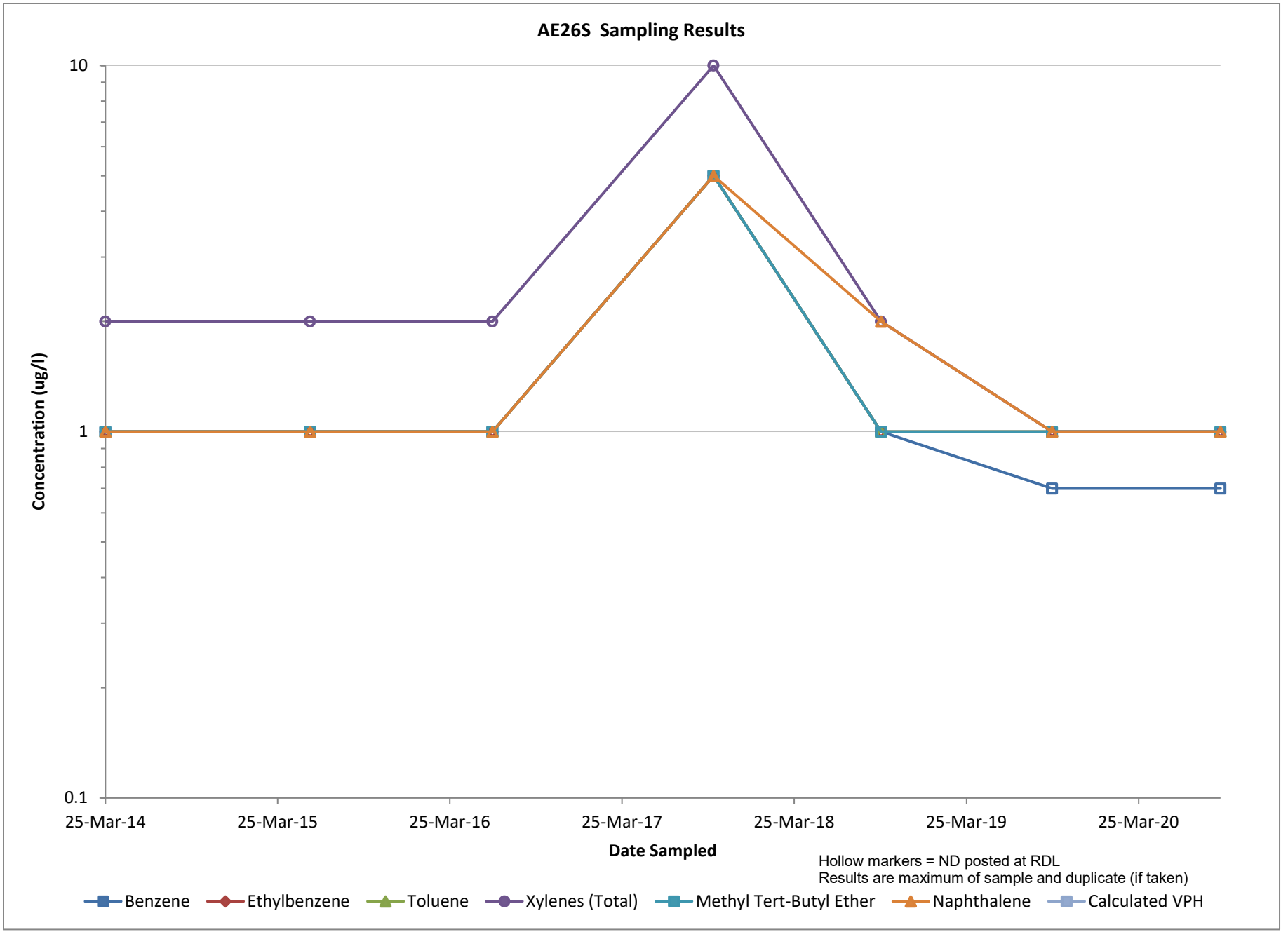

AE23R Sampling Results
1000000
100000
10000
1000
100
10
1
Concentration (ug/l)
3-Jul-13
3-Jul-14
4-Jul-15
3-Jul-16
3-Jul-17
3-Jul-18
4-Jul-19
3-Jul-20
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
Benzene
Ethylbenzene
Toluene
Xylenes (Total)
Methyl Tert-Butyl Ether
Naphthalene
Calculated VPH

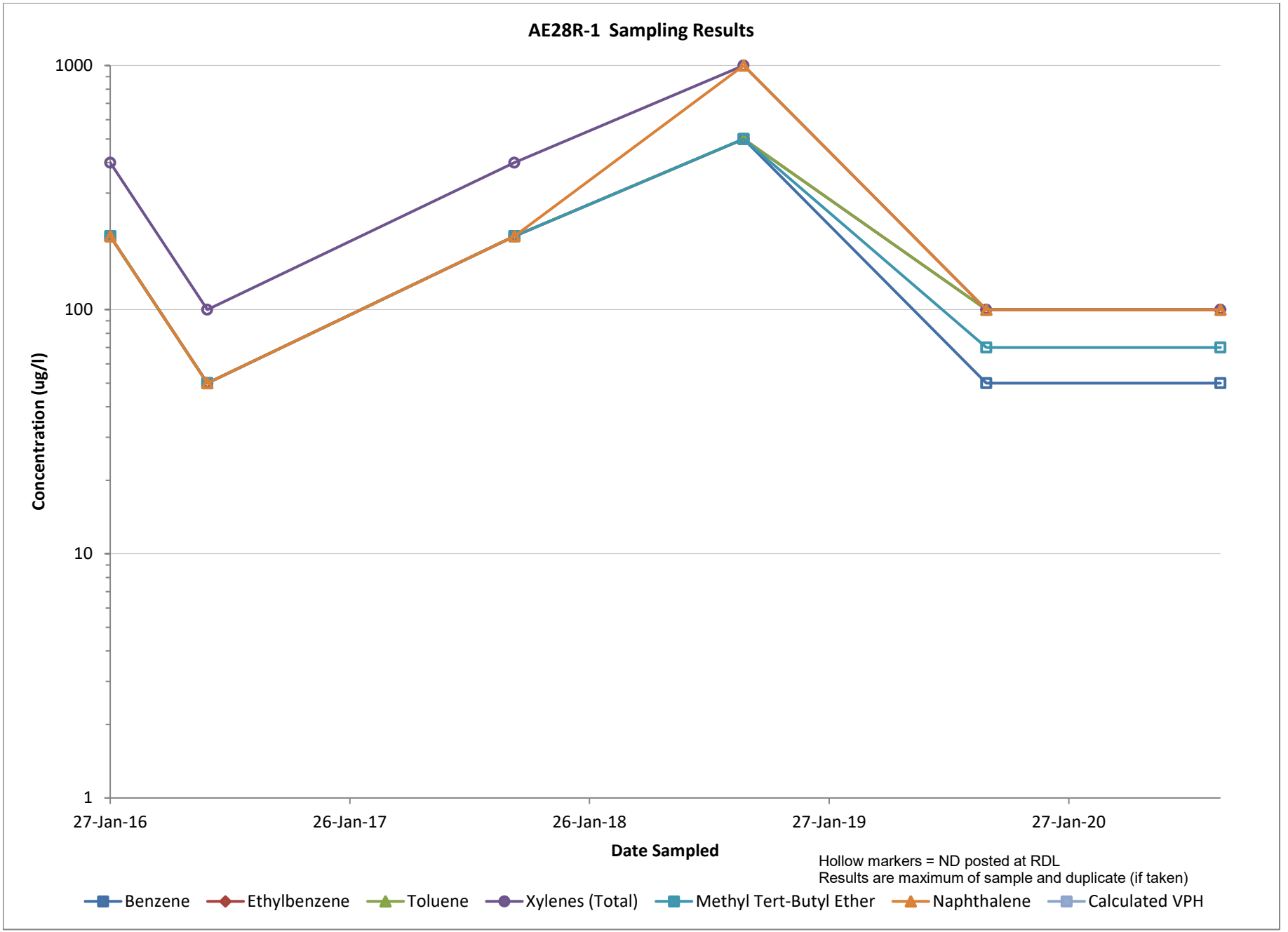

AE24 Sampling Results
1000
100
10
1
Concentration (ug/l)
3-Jul-13
3-Jul-14
4-Jul-15
3-Jul-16
3-Jul-17
3-Jul-18
4-Jul-19
3-Jul-20
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
Benzene
Ethylbenzene
Toluene
Xylenes (Total)
Methyl Tert-Butyl Ether
Naphthalene
Calculated VPH

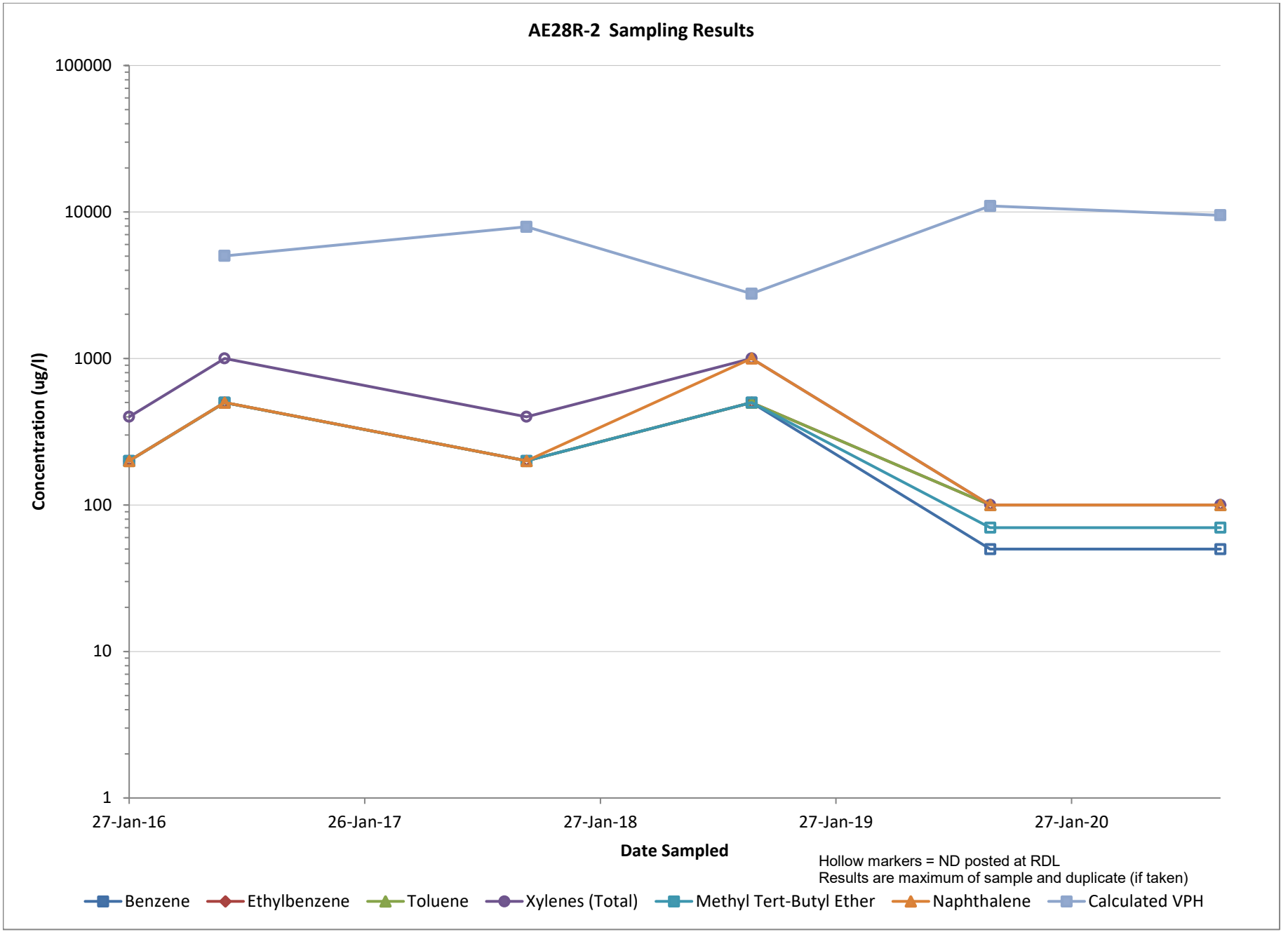

AE26R-1 Sampling Results
1000
100
10
1
Concentration (ug/l)
27-Jan-16
26-Jan-17
26-Jan-18
27-Jan-19
27-Jan-20
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
Benzene
Ethylbenzene
Toluene
Xylenes (Total)
Methyl Tert-Butyl Ether
Naphthalene
Calculated VPH

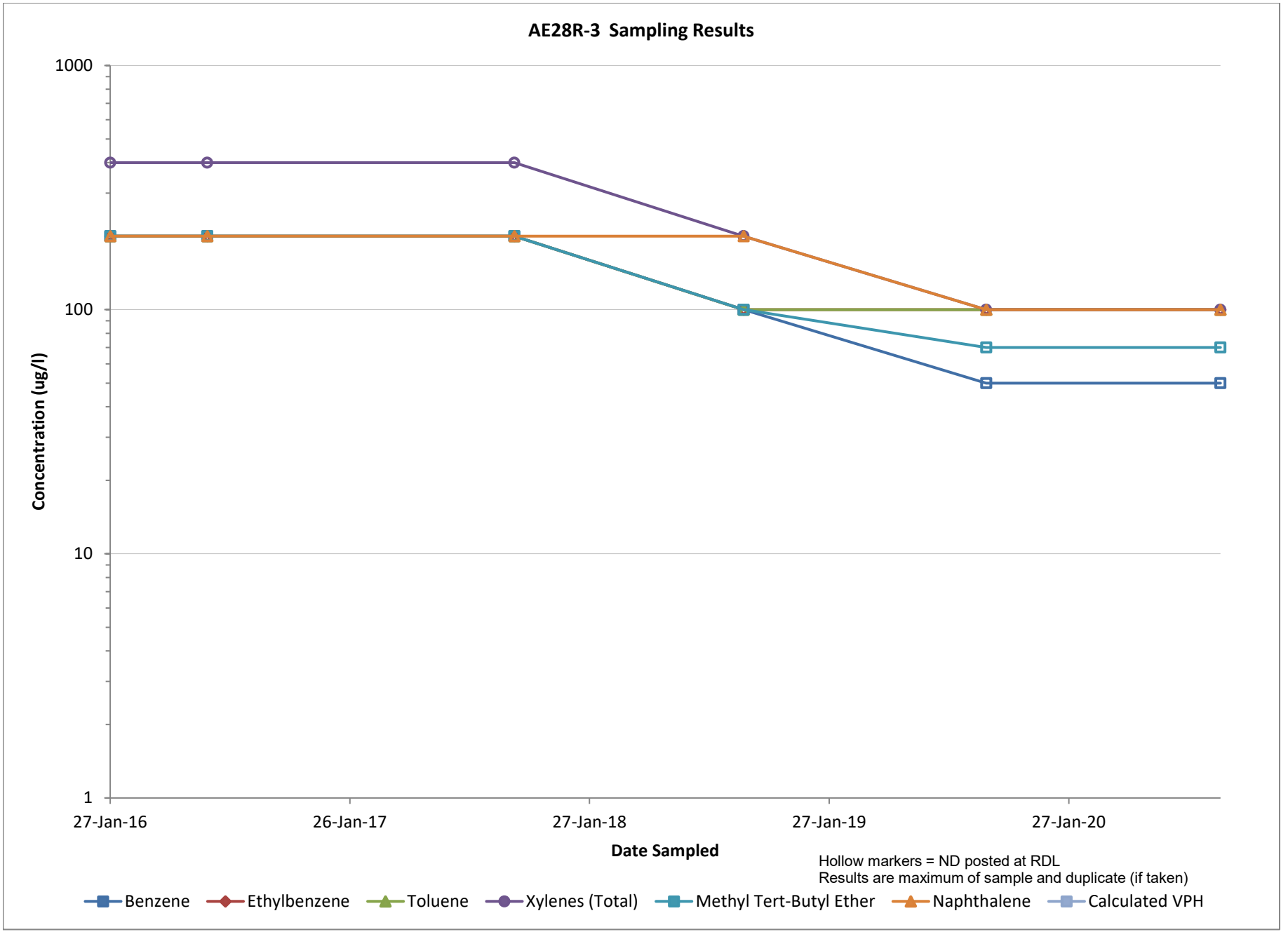

AE26R-2 Sampling Results
100
10
1
Concentration (ug/l)
27-Jan-16
26-Jan-17
26-Jan-18
27-Jan-19
27-Jan-20
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
Benzene
Ethylbenzene
Toluene
Xylenes (Total)
Methyl Tert-Butyl Ether
Naphthalene
Calculated VPH

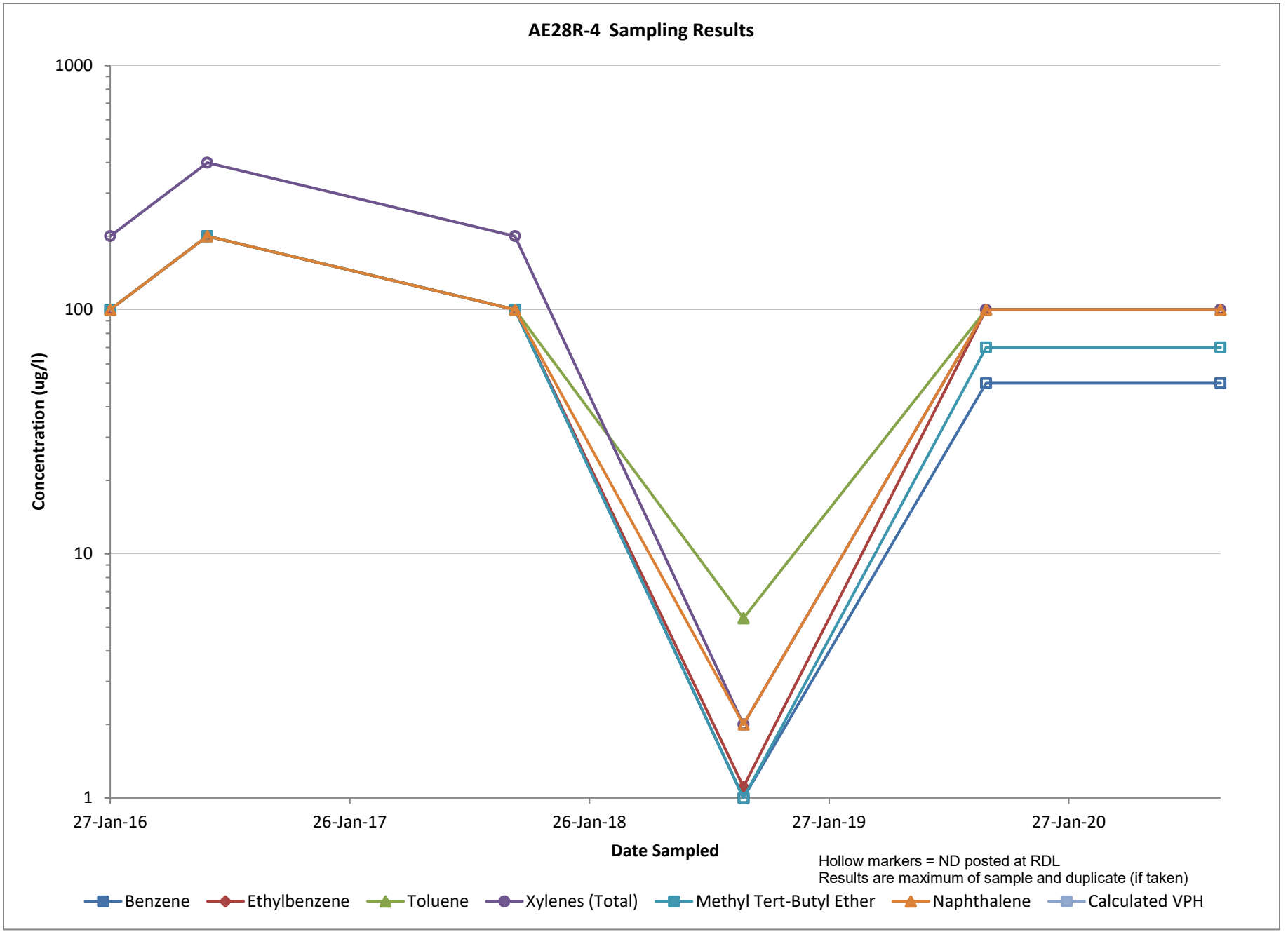

AE26R-5 Sampling Results
100
10
1
Concentration (ug/l)
27-Jan-16
26-Jan-17
26-Jan-18
27-Jan-19
27-Jan-20
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
Benzene
Ethylbenzene
Toluene
Xylenes (Total)
Methyl Tert-Butyl Ether
Naphthalene
Calculated VPH

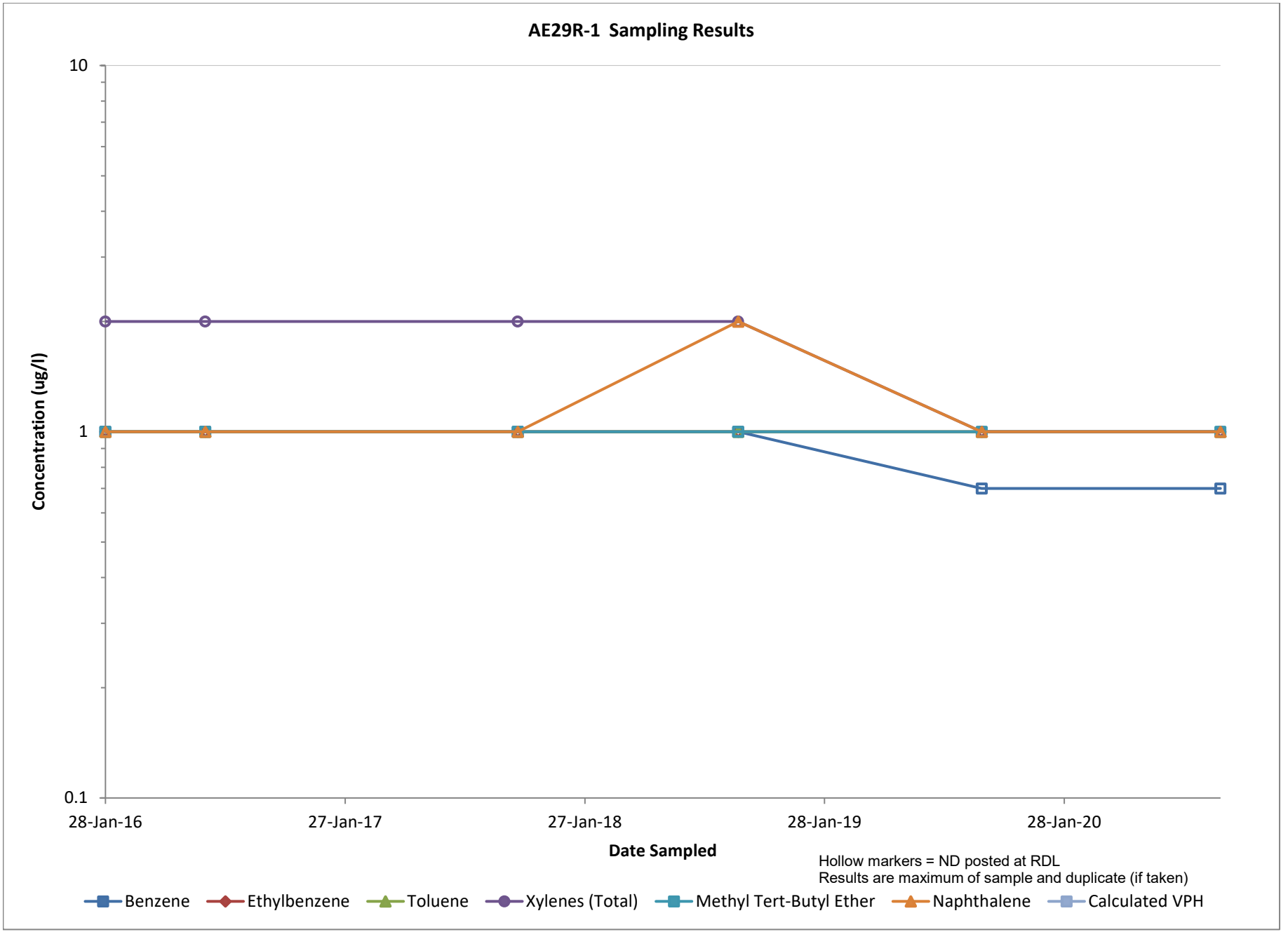

AE26S Sampling Results
10
1
0.1
Concentration (ug/l)
25-Mar-14
25-Mar-15
25-Mar-16
25-Mar-17
25-Mar-18
25-Mar-19
25-Mar-20
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
Benzene
Ethylbenzene
Toluene
Xylenes (Total)
Methyl Tert-Butyl Ether
Naphthalene
Calculated VPH

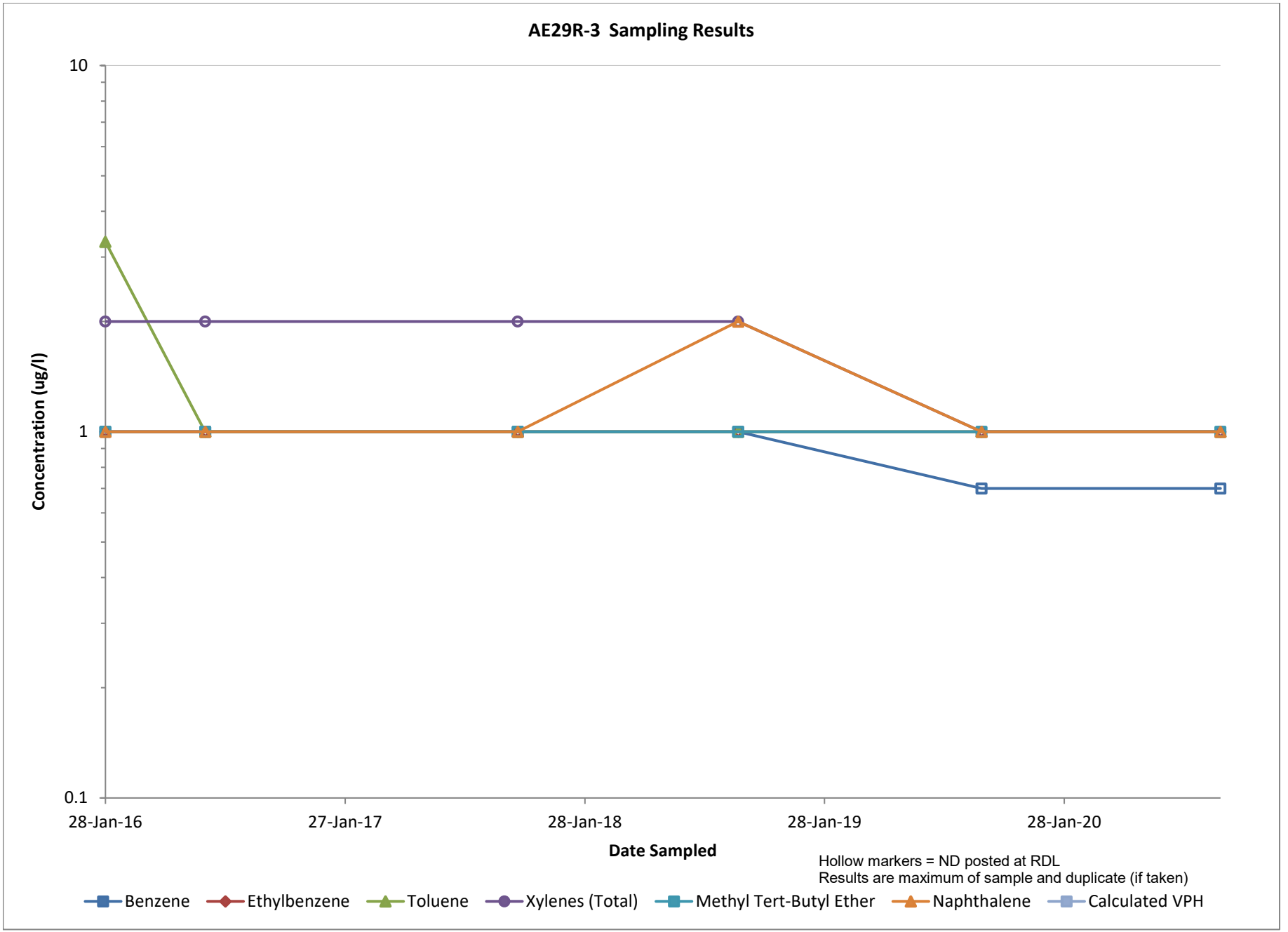

AE28R-1 Sampling Results
1000
100
10
1
Concentration (ug/l)
27-Jan-16
26-Jan-17
26-Jan-18
27-Jan-19
27-Jan-20
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
Benzene
Ethylbenzene
Toluene
Xylenes (Total)
Methyl Tert-Butyl Ether
Naphthalene
Calculated VPH

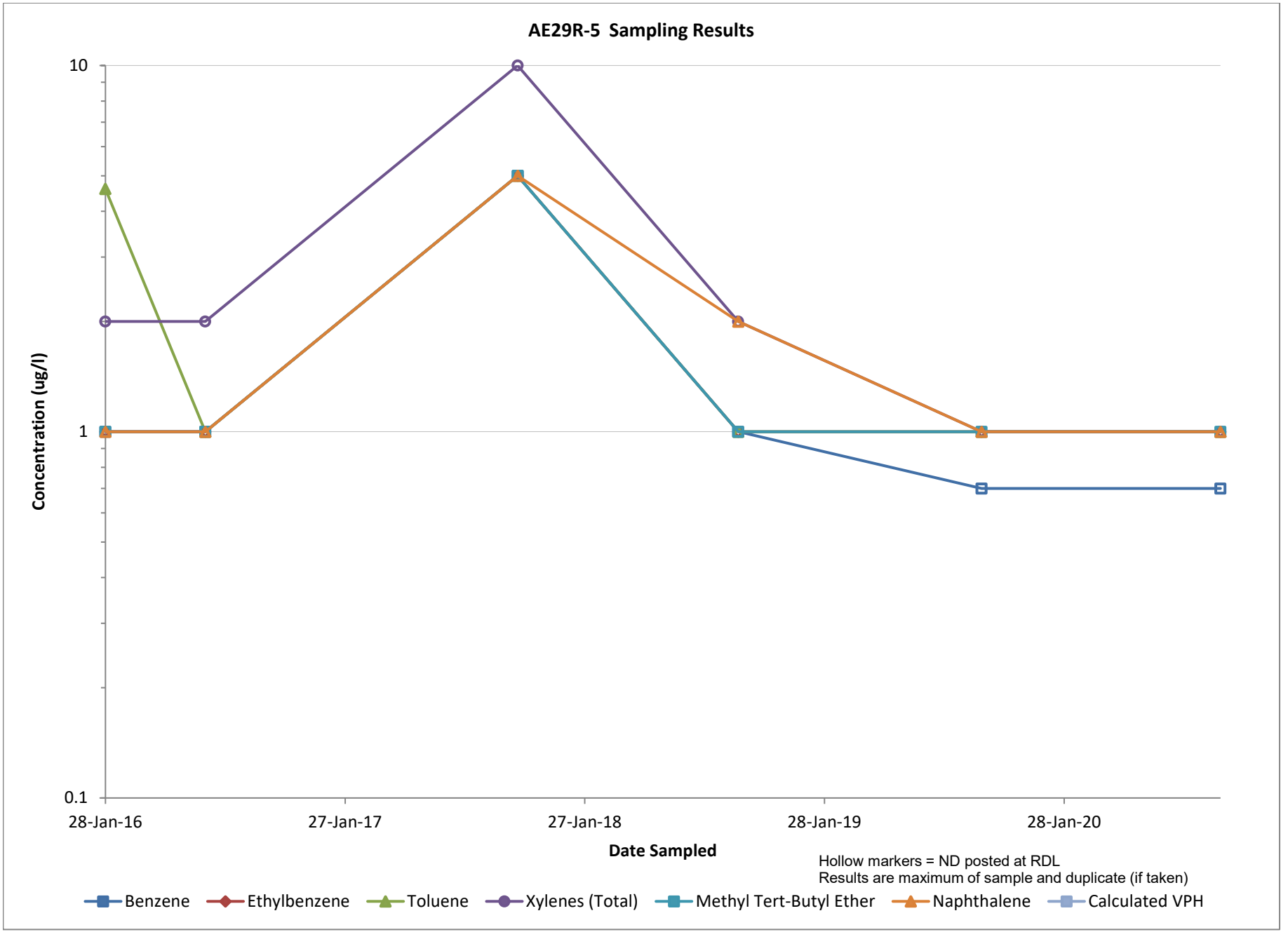

AE28R-2 Sampling Results
100000
10000
1000
100
10
1
Concentration (ug/l)
27-Jan-16
26-Jan-17
27-Jan-18
27-Jan-19
27-Jan-20
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
Benzene
Ethylbenzene
Toluene
Xylenes (Total)
Methyl Tert-Butyl Ether
Naphthalene
Calculated VPH

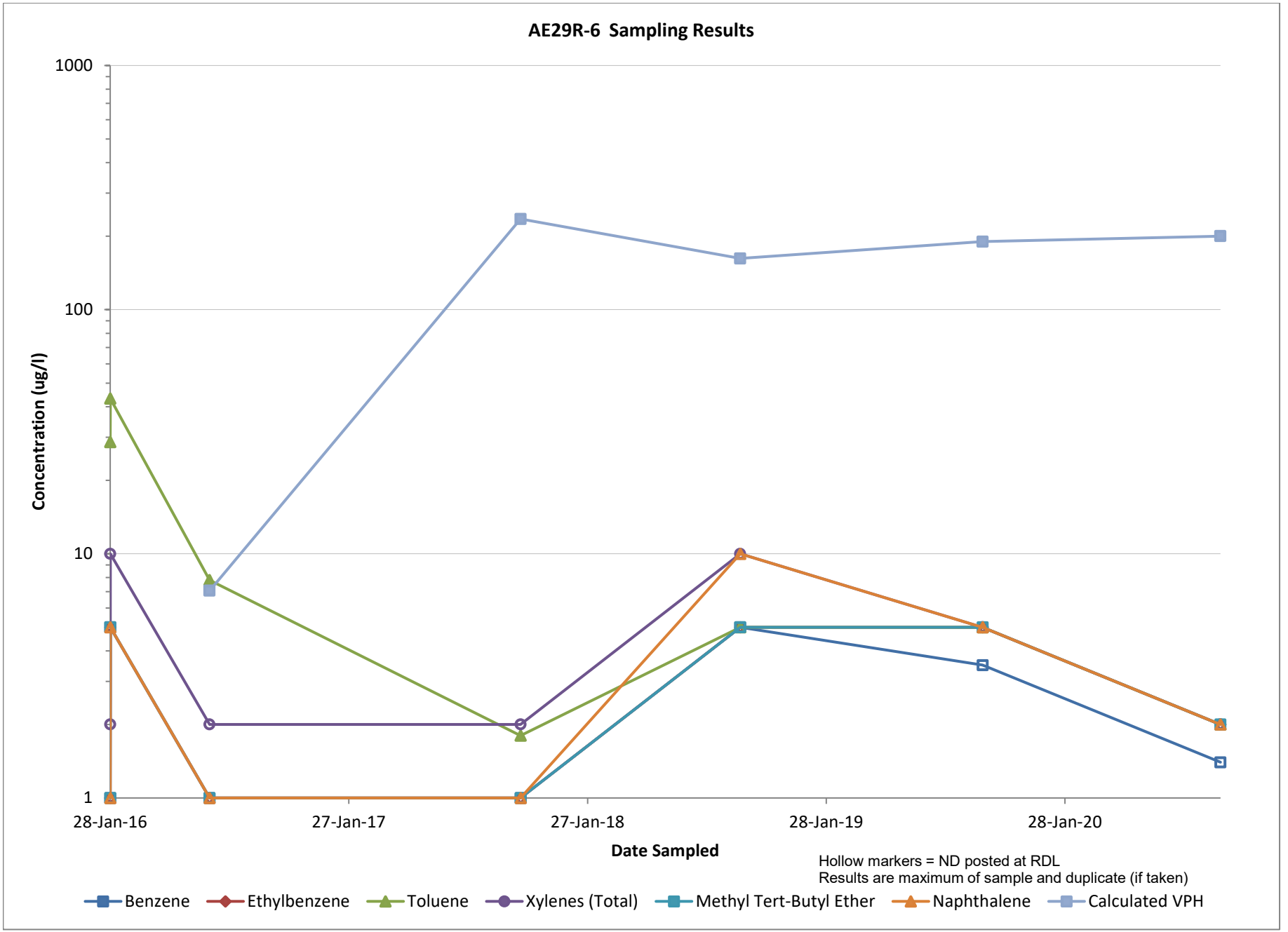

AE28R-3 Sampling Results
1000
100
10
1
Concentration (ug/l)
27-Jan-16
26-Jan-17
27-Jan-18
27-Jan-19
27-Jan-20
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
Benzene
Ethylbenzene
Toluene
Xylenes (Total)
Methyl Tert-Butyl Ether
Naphthalene
Calculated VPH

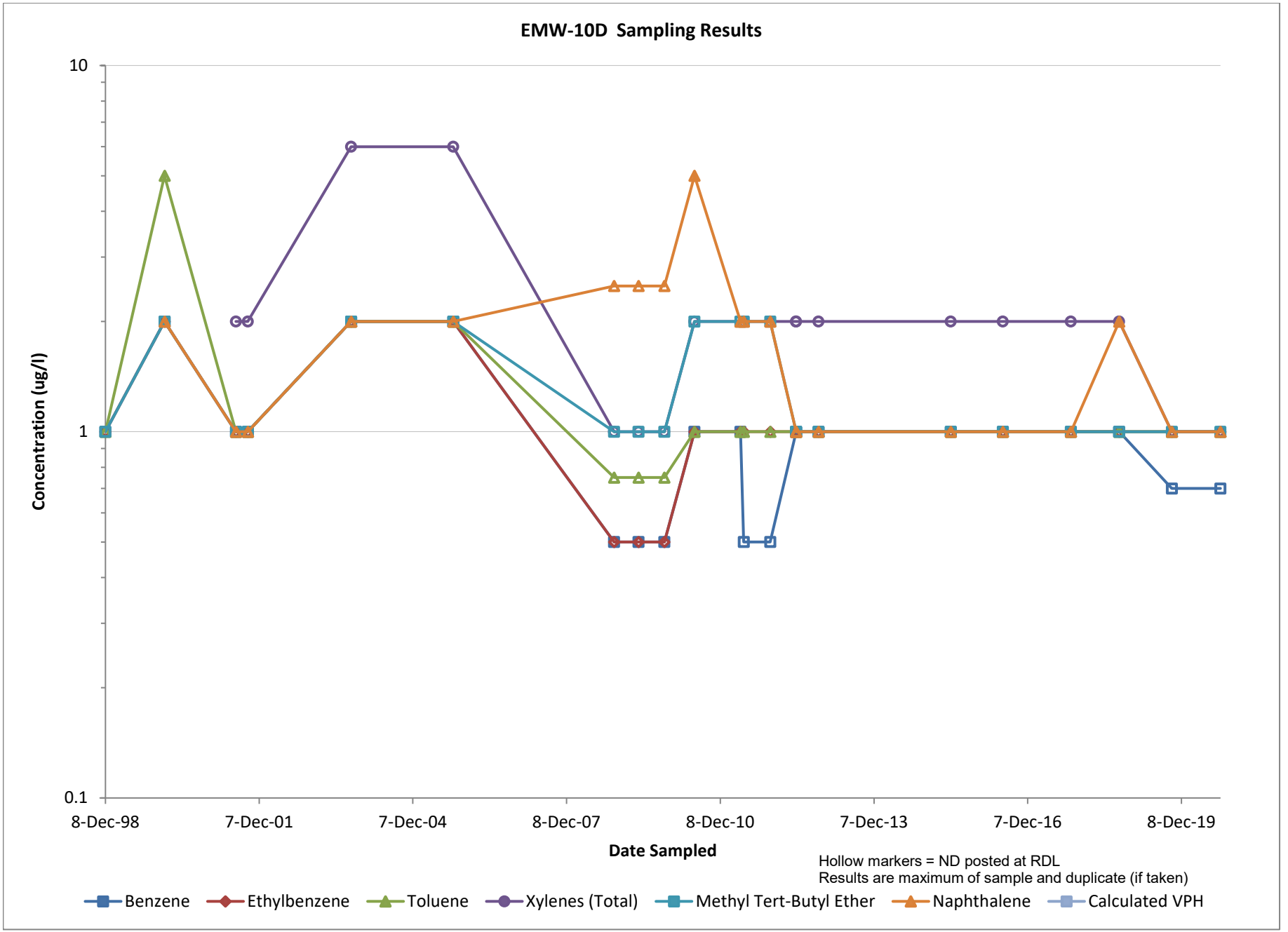

AE28R-4 Sampling Results
1000
100
10
1
Concentration (ug/l)
27-Jan-16
26-Jan-17
26-Jan-18
27-Jan-19
27-Jan-20
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
Benzene
Ethylbenzene
Toluene
Xylenes (Total)
Methyl Tert-Butyl Ether
Naphthalene
Calculated VPH

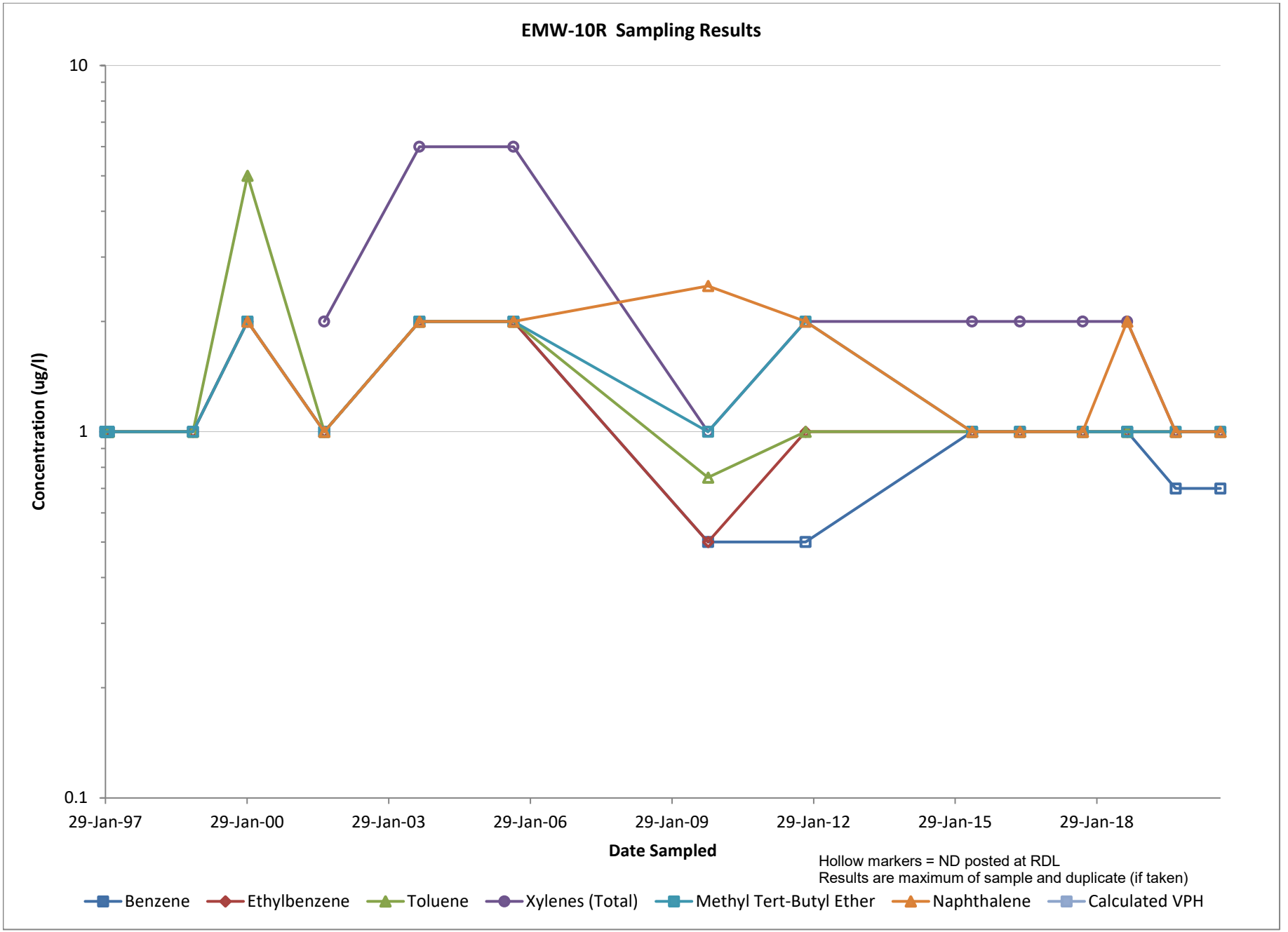

AE29R-1 Sampling Results
10
1
0.1
Concentration (ug/l)
28-Jan-16
27-Jan-17
27-Jan-18
28-Jan-19
28-Jan-20
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
Benzene
Ethylbenzene
Toluene
Xylenes (Total)
Methyl Tert-Butyl Ether
Naphthalene
Calculated VPH

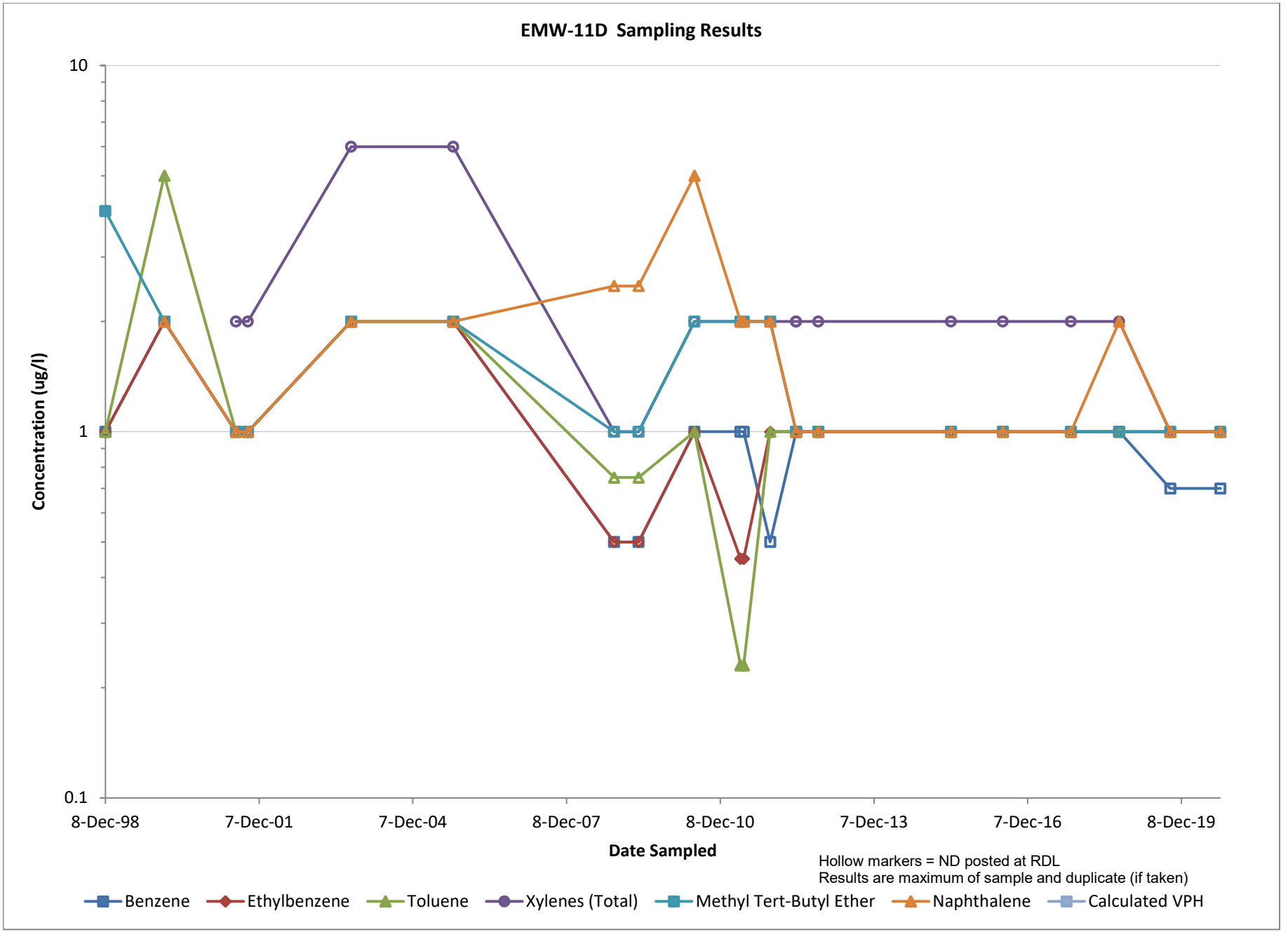

AE29R-3 Sampling Results
10
1
0.1
Concentration (ug/l)
28-Jan-16
27-Jan-17
28-Jan-18
28-Jan-19
28-Jan-20
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
Benzene
Ethylbenzene
Toluene
Xylenes (Total)
Methyl Tert-Butyl Ether
Naphthalene
Calculated VPH

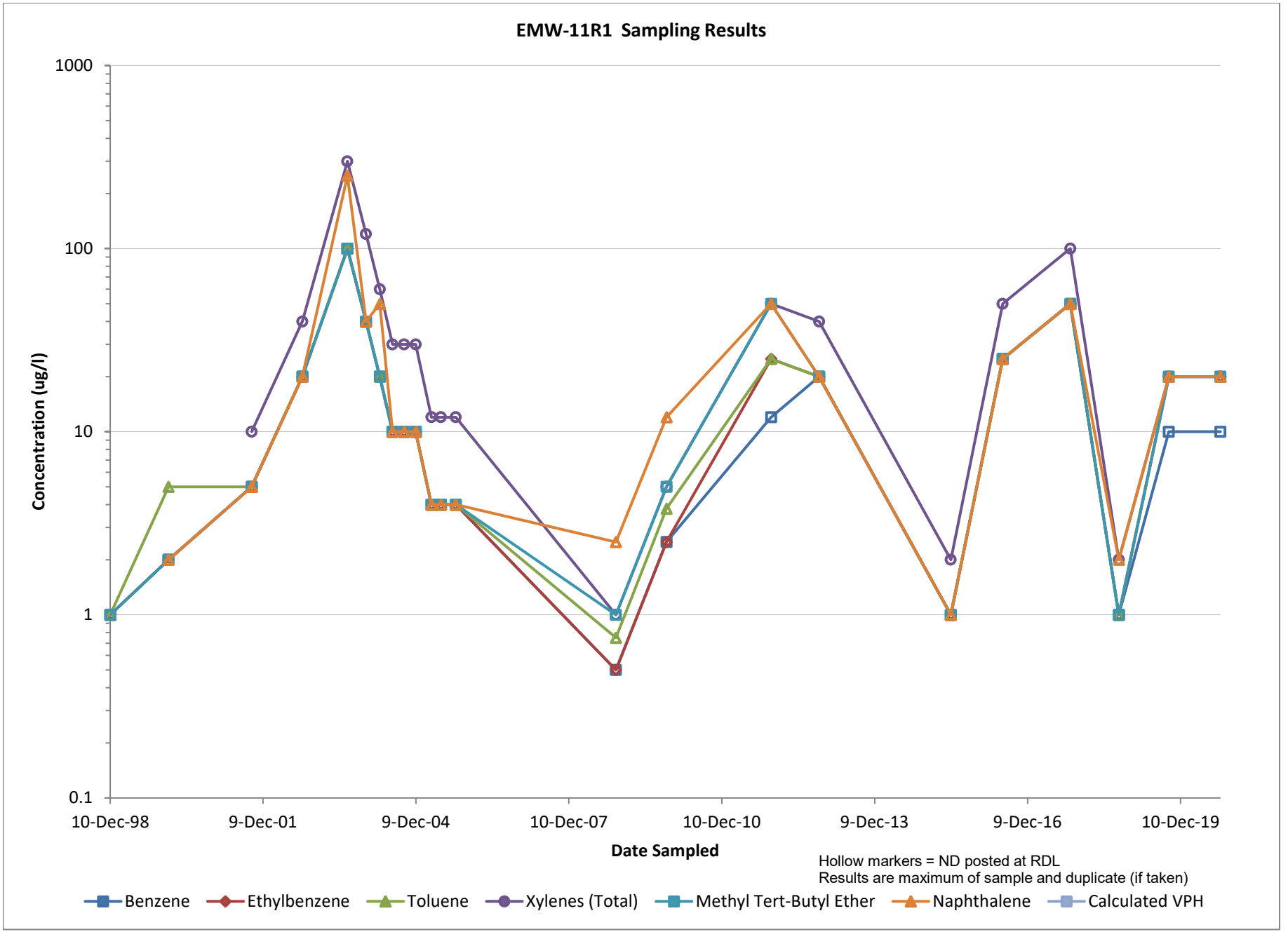

AE29R-5 Sampling Results
10
1
0.1
Concentration (ug/l)
28-Jan-16
27-Jan-17
27-Jan-18
28-Jan-19
28-Jan-20
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
Benzene
Ethylbenzene
Toluene
Xylenes (Total)
Methyl Tert-Butyl Ether
Naphthalene
Calculated VPH

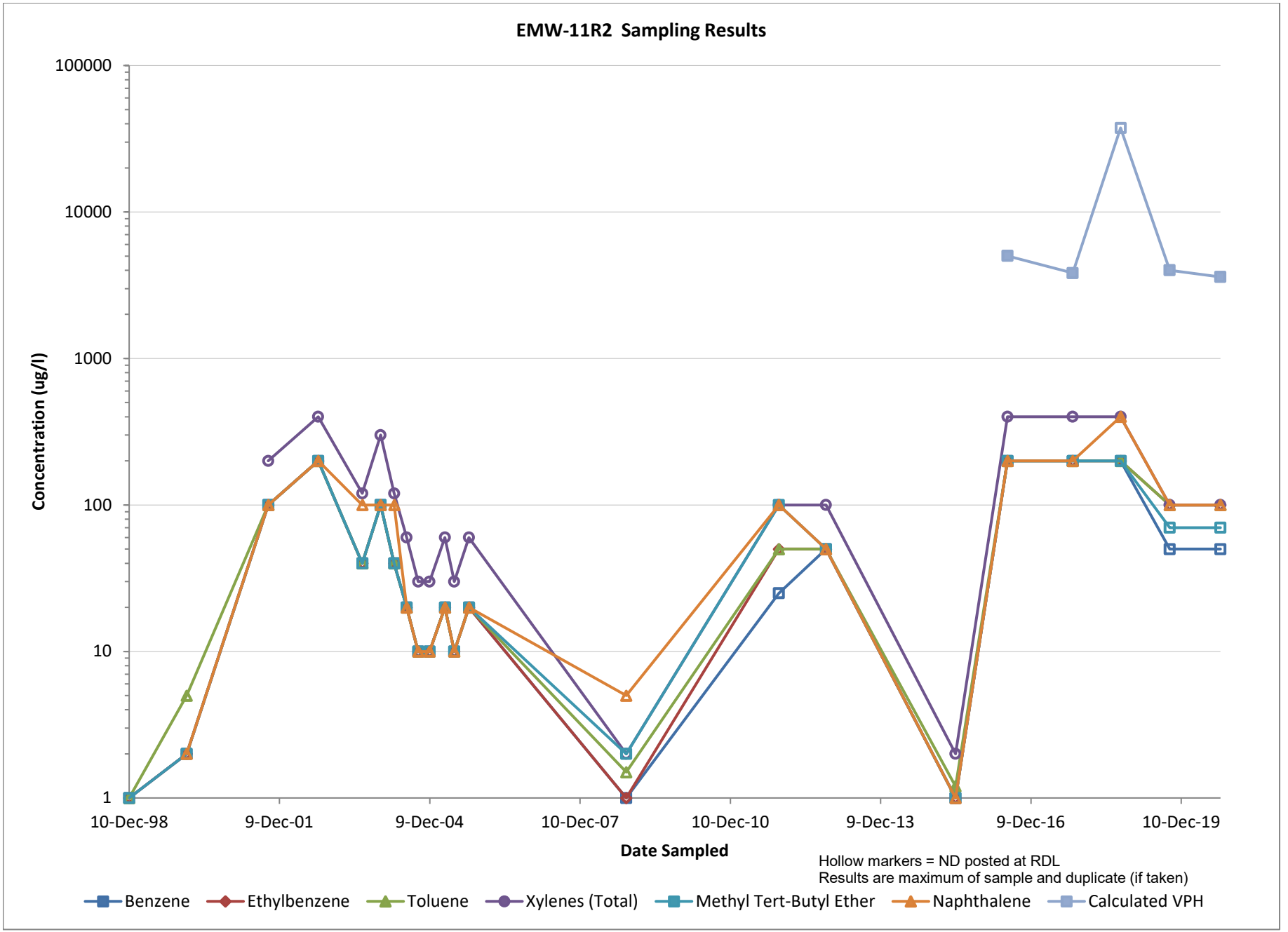

AE29R-6 Sampling Results
1000
100
10
1
Concentration (ug/l)
28-Jan-16
27-Jan-17
27-Jan-18
28-Jan-19
28-Jan-20
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
Benzene
Ethylbenzene
Toluene
Xylenes (Total)
Methyl Tert-Butyl Ether
Naphthalene
Calculated VPH

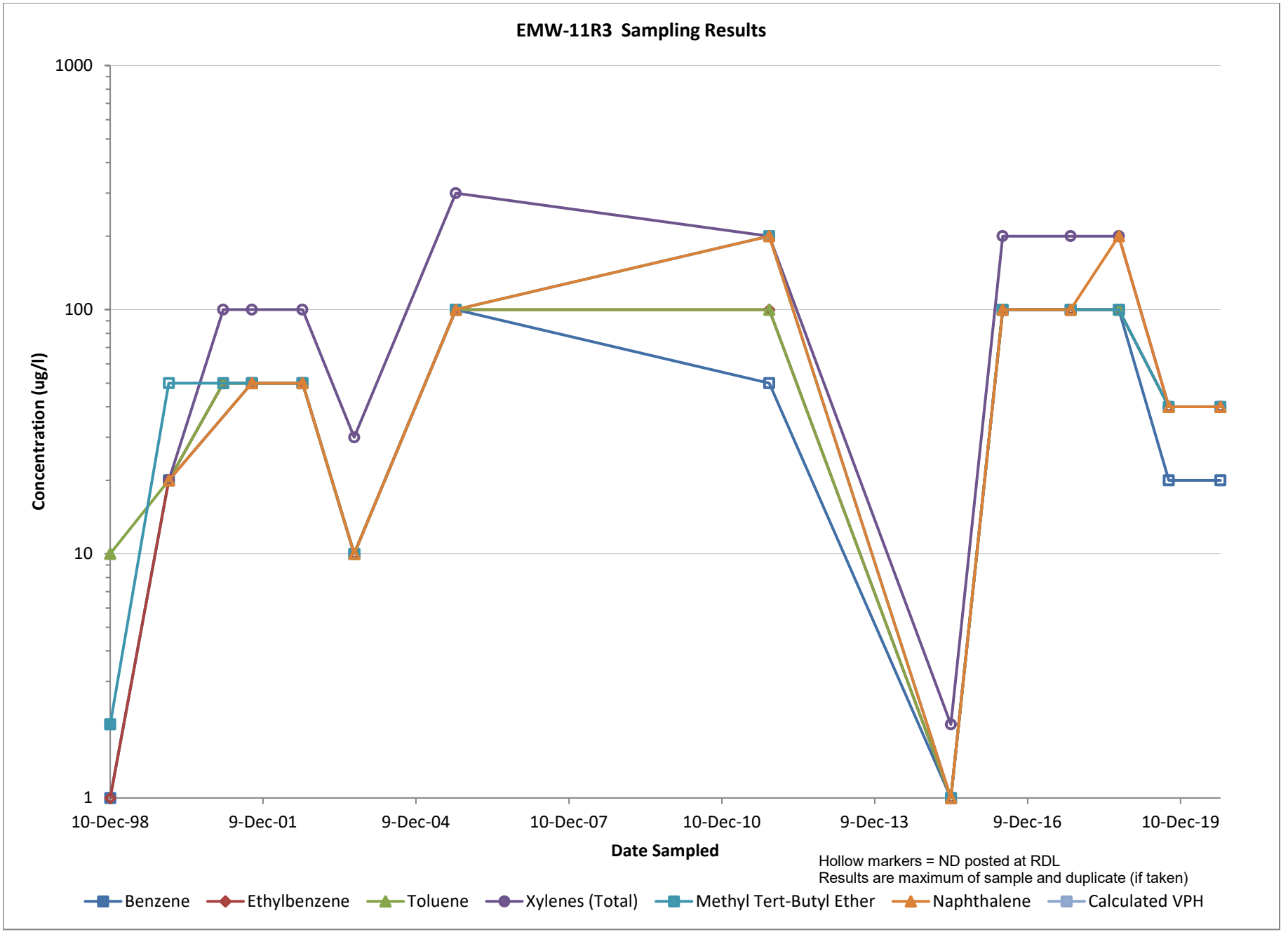

EMW-10D Sampling Results
10
1
0.1
Concentration (ug/l)
8-Dec-98
7-Dec-01
7-Dec-04
8-Dec-07
8-Dec-10
7-Dec-13
7-Dec-16
8-Dec-19
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
Benzene
Ethylbenzene
Toluene
Xylenes (Total)
Methyl Tert-Butyl Ether
Naphthalene
Calculated VPH

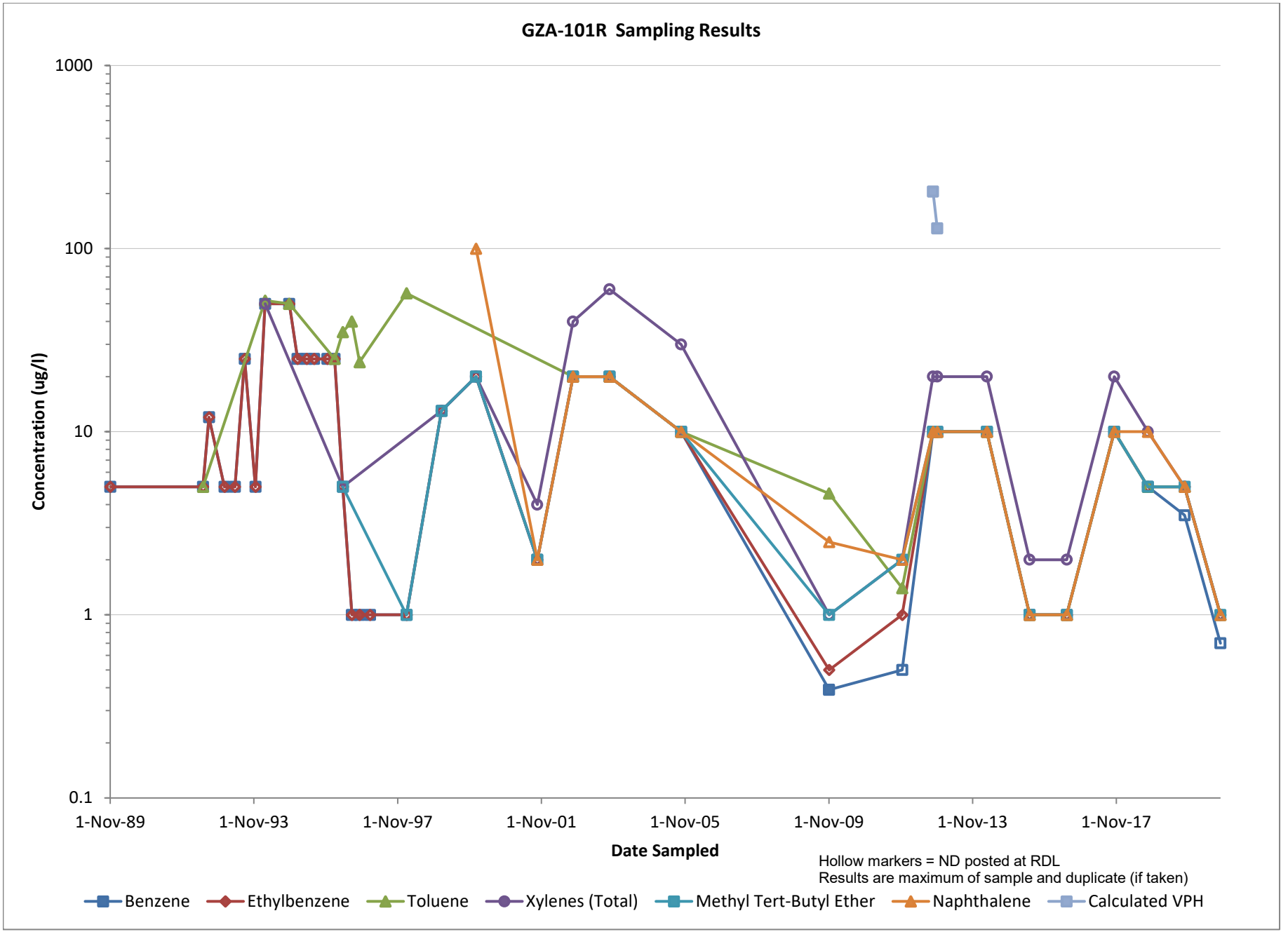

EMW-10R Sampling Results
10
1
0.1
Concentration (ug/l)
29-Jan-97
29-Jan-00
29-Jan-03
29-Jan-06
29-Jan-09
29-Jan-12
29-Jan-15
29-Jan-18
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
Benzene
Ethylbenzene
Toluene
Xylenes (Total)
Methyl Tert-Butyl Ether
Naphthalene
Calculated VPH

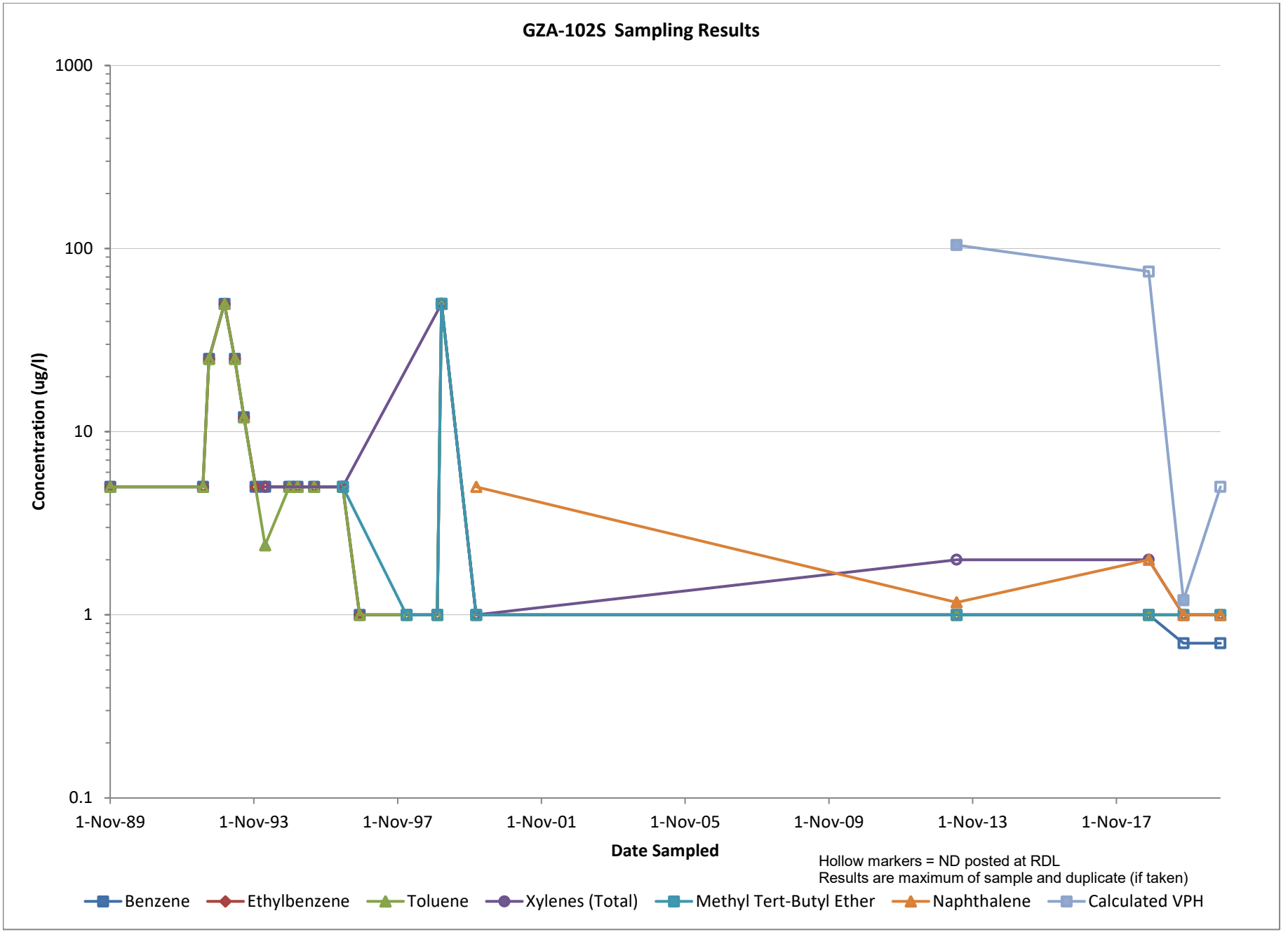

EMW-11D Sampling Results
10
1
0.1
Concentration (ug/l)
8-Dec-98
7-Dec-01
7-Dec-04
8-Dec-07
8-Dec-10
7-Dec-13
7-Dec-16
8-Dec-19
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
Benzene
Ethylbenzene
Toluene
Xylenes (Total)
Methyl Tert-Butyl Ether
Naphthalene
Calculated VPH

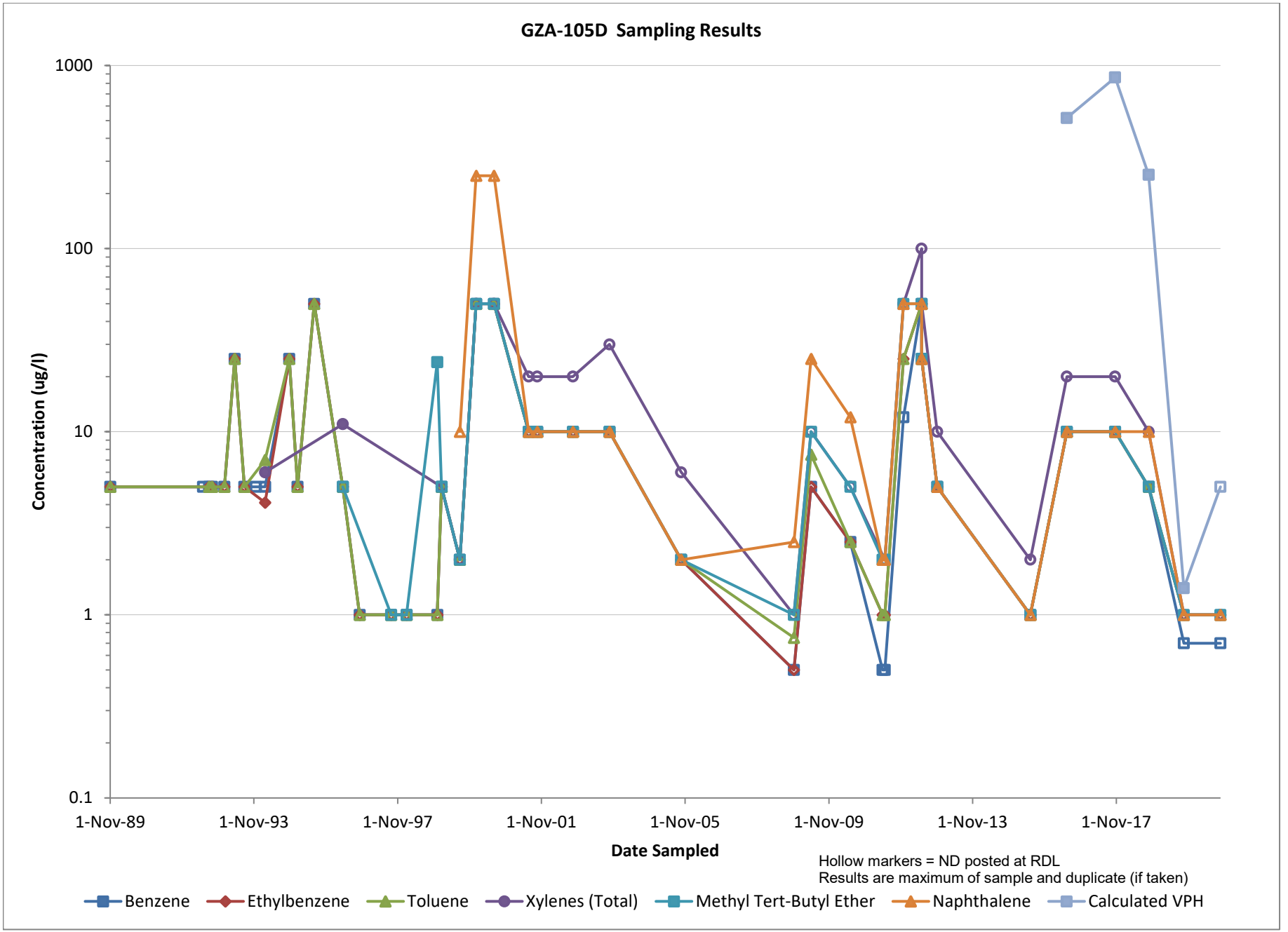

EMW-11R1 Sampling Results
1000
100
10
1
0.1
Concentration (ug/l)
10-Dec-98
9-Dec-01
9-Dec-04
10-Dec-07
10-Dec-10
9-Dec-13
9-Dec-16
10-Dec-19
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
Benzene
Ethylbenzene
Toluene
Xylenes (Total)
Methyl Tert-Butyl Ether
Naphthalene
Calculated VPH

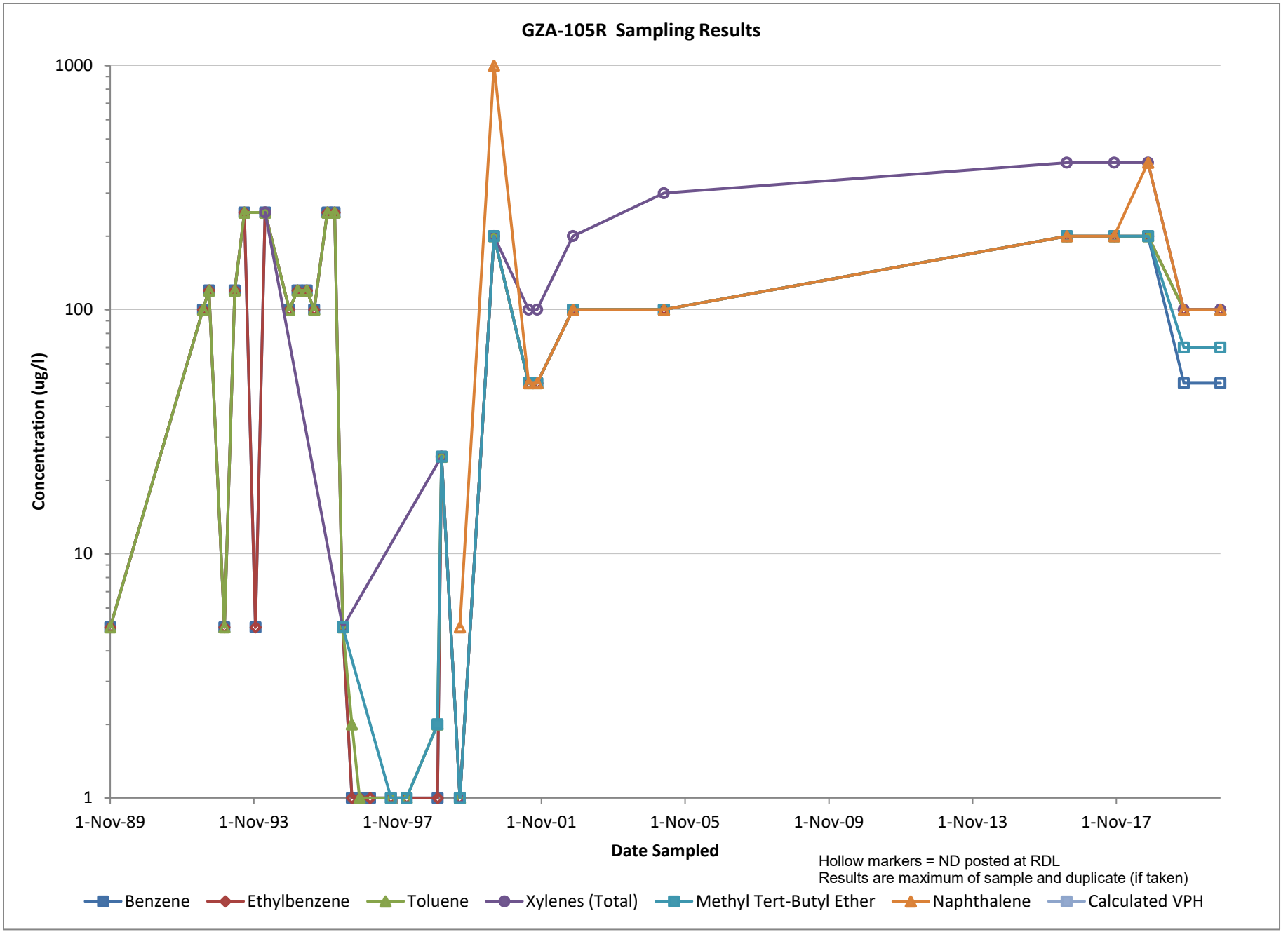

EMW-11R2 Sampling Results
100000
10000
1000
100
10
1
Concentration (ug/l)
10-Dec-98
9-Dec-01
9-Dec-04
10-Dec-07
10-Dec-10
9-Dec-13
9-Dec-16
10-Dec-19
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
Benzene
Ethylbenzene
Toluene
Xylenes (Total)
Methyl Tert-Butyl Ether
Naphthalene
Calculated VPH

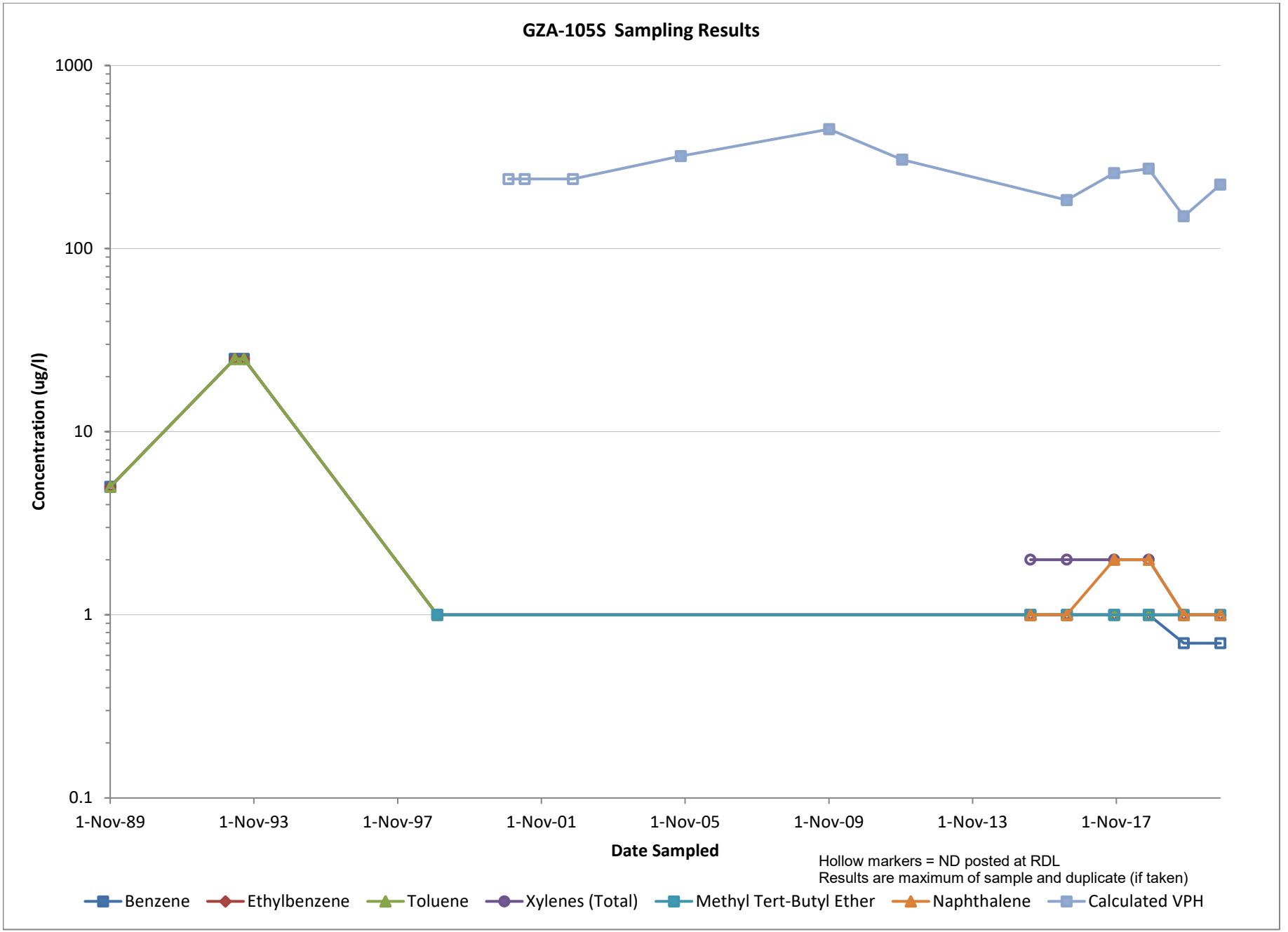

EMW-11R3 Sampling Results
1000
100
10
1
Concentration (ug/l)
10-Dec-98
9-Dec-01
9-Dec-04
10-Dec-07
10-Dec-10
9-Dec-13
9-Dec-16
10-Dec-19
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
Benzene
Ethylbenzene
Toluene
Xylenes (Total)
Methyl Tert-Butyl Ether
Naphthalene
Calculated VPH

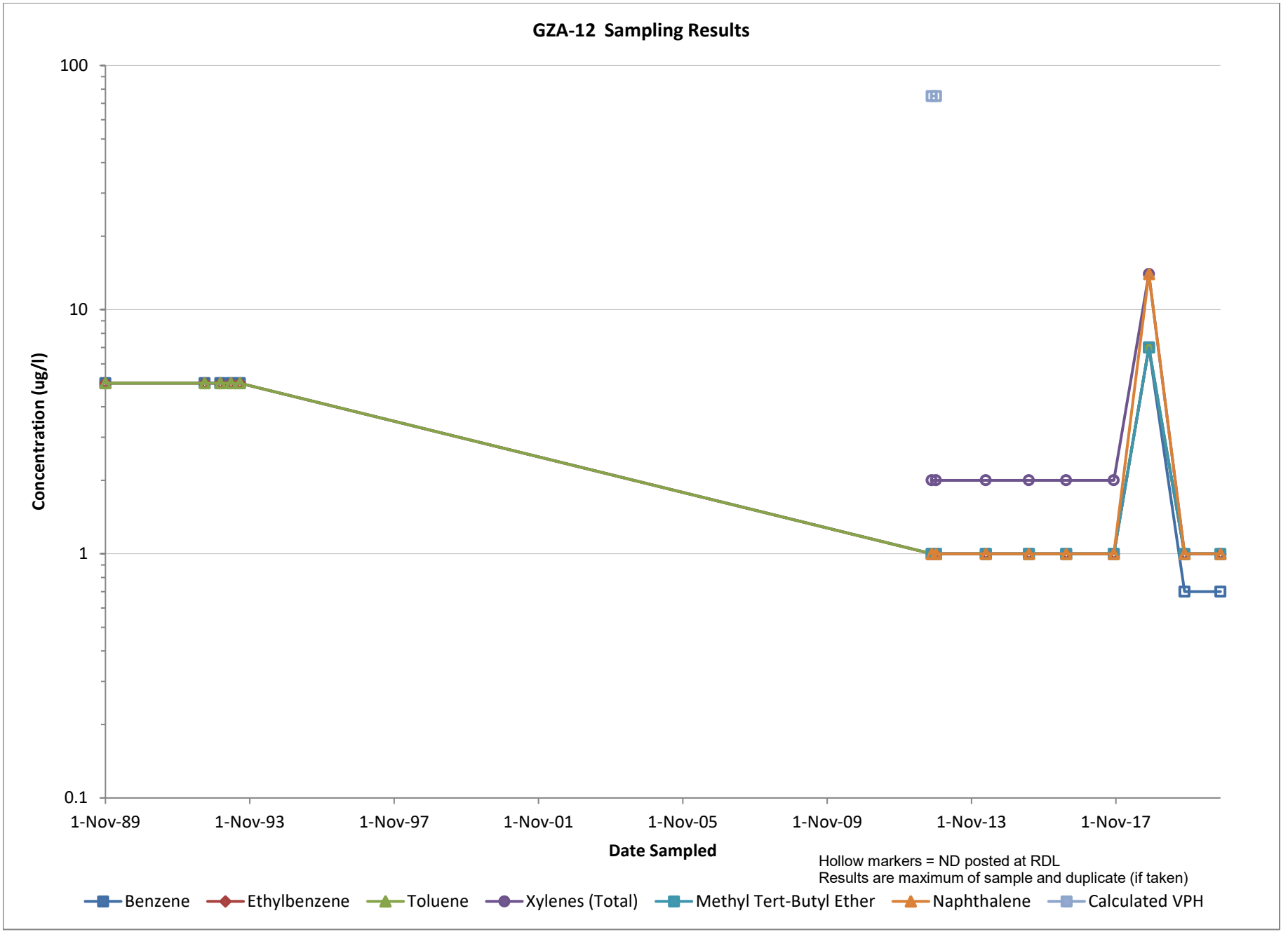

GZA-101R Sampling Results
1000
100
10
1
0.1
Concentration (ug/l)
1-Nov-89
1-Nov-93
1-Nov-97
1-Nov-01
1-Nov-05
1-Nov-09
1-Nov-13
1-Nov-17
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
Benzene
Ethylbenzene
Toluene
Xylenes (Total)
Methyl Tert-Butyl Ether
Naphthalene
Calculated VPH

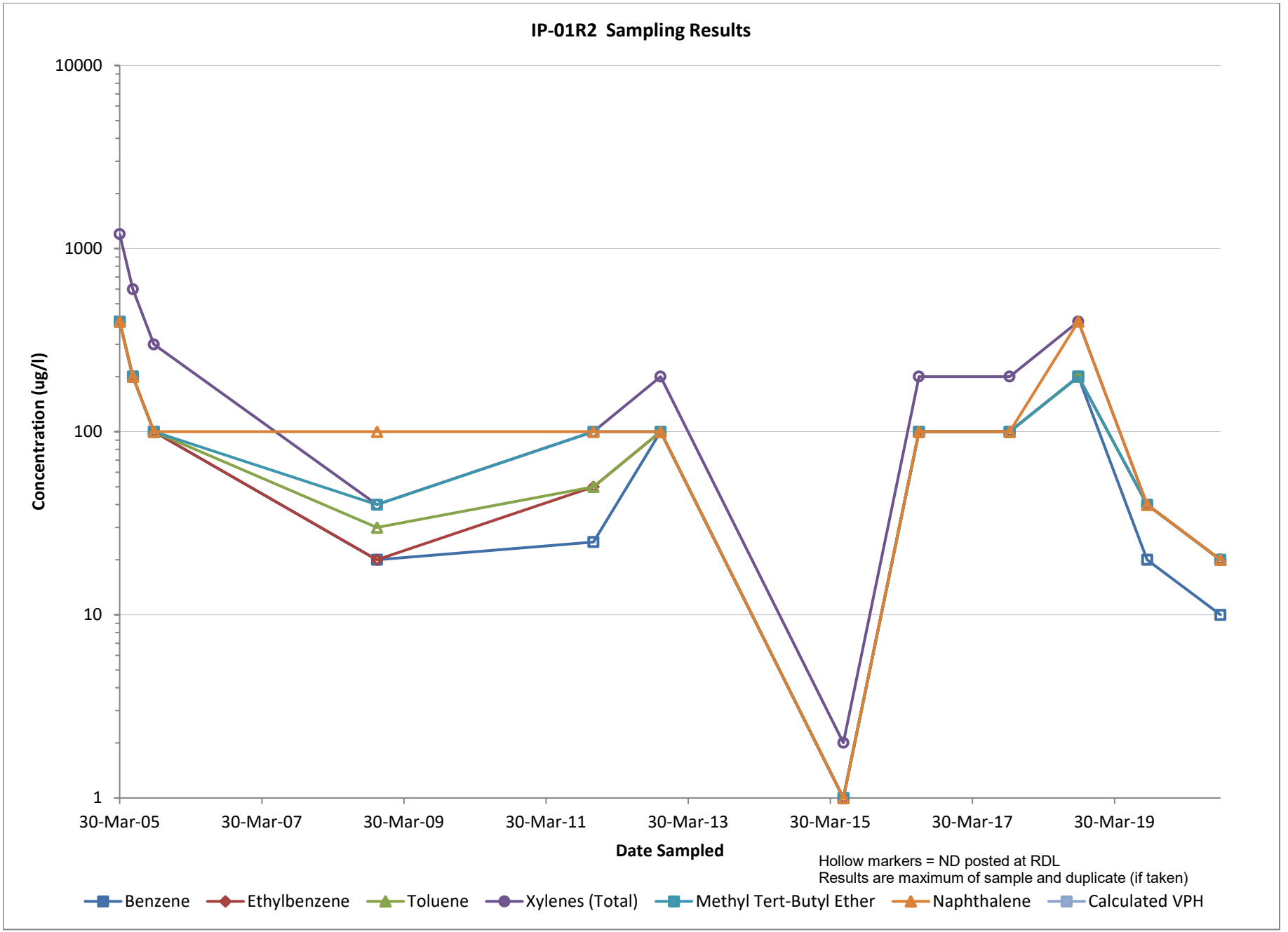

GZA-102S Sampling Results
1000
100
10
1
0.1
Concentration (ug/l)
1-Nov-89
1-Nov-93
1-Nov-97
1-Nov-01
1-Nov-05
1-Nov-09
1-Nov-13
1-Nov-17
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
Benzene
Ethylbenzene
Toluene
Xylenes (Total)
Methyl Tert-Butyl Ether
Naphthalene
Calculated VPH

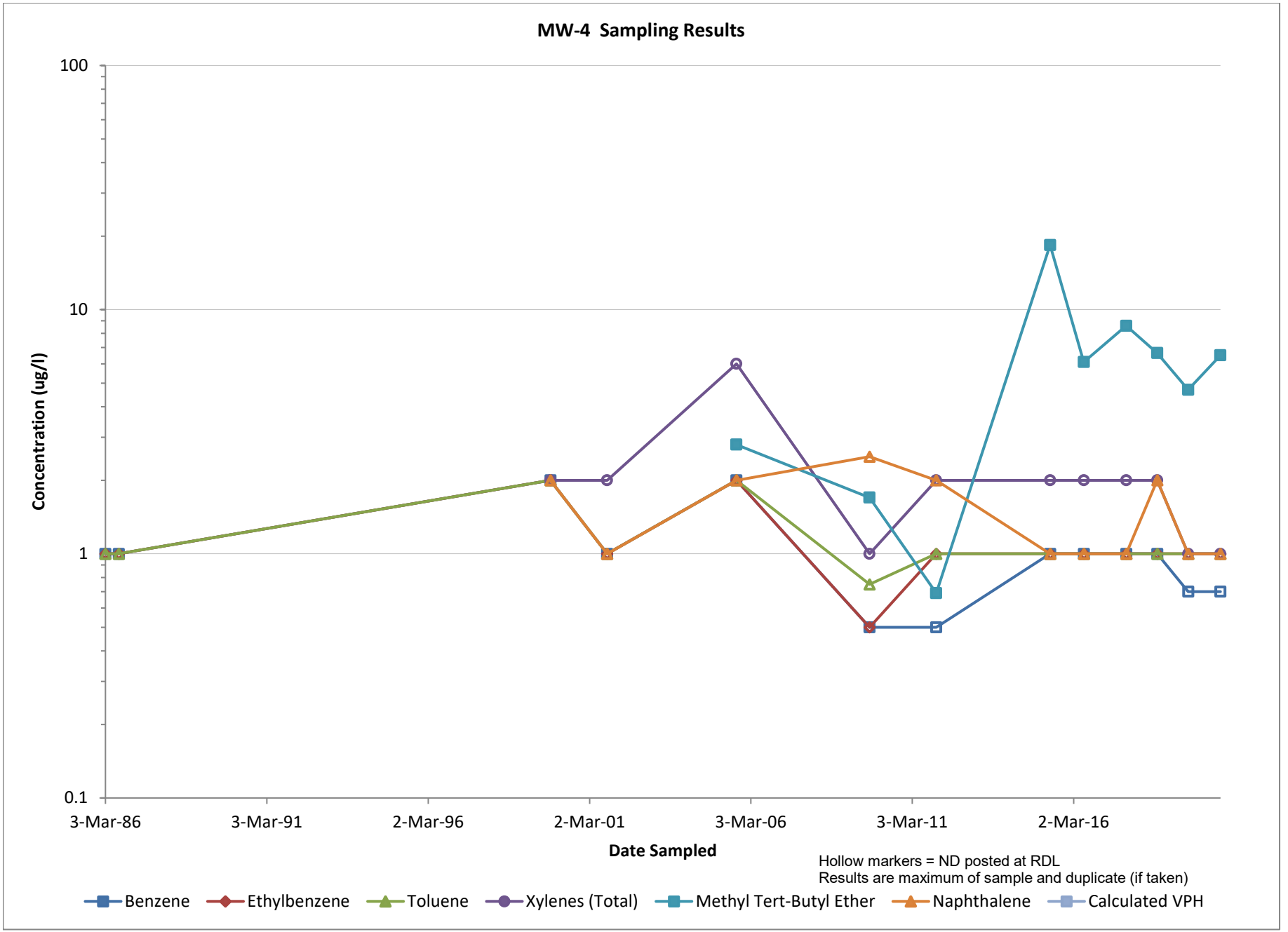

GZA-105D Sampling Results
1000
100
10
1
0.1
Concentration (ug/l)
1-Nov-89
1-Nov-93
1-Nov-97
1-Nov-01
1-Nov-05
1-Nov-09
1-Nov-13
1-Nov-17
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
Benzene
Ethylbenzene
Toluene
Xylenes (Total)
Methyl Tert-Butyl Ether
Naphthalene
Calculated VPH

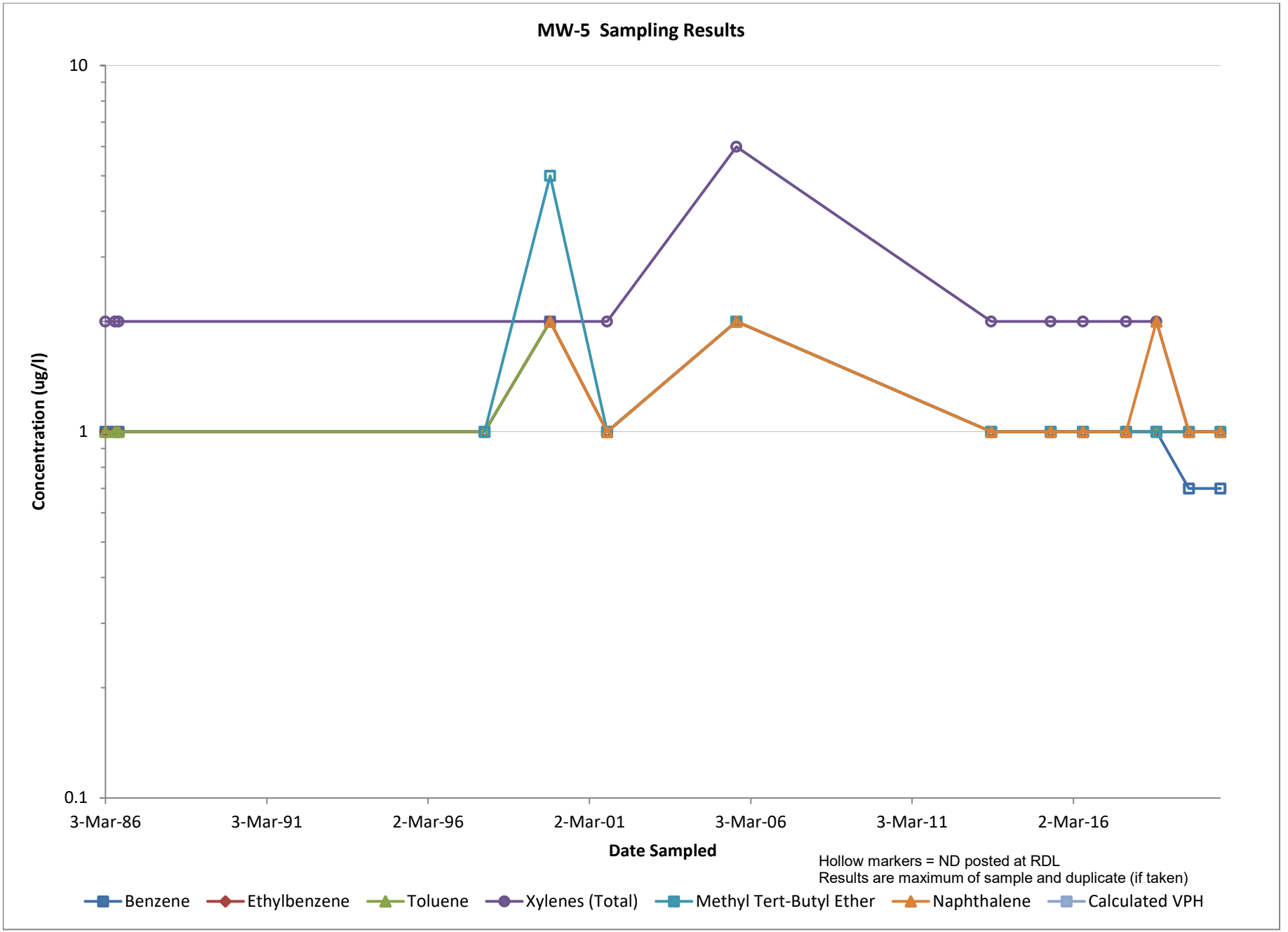

GZA-105R Sampling Results
1000
100
10
1
Concentration (ug/l)
1-Nov-89
1-Nov-93
1-Nov-97
1-Nov-01
1-Nov-05
1-Nov-09
1-Nov-13
1-Nov-17
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
Benzene
Ethylbenzene
Toluene
Xylenes (Total)
Methyl Tert-Butyl Ether
Naphthalene
Calculated VPH

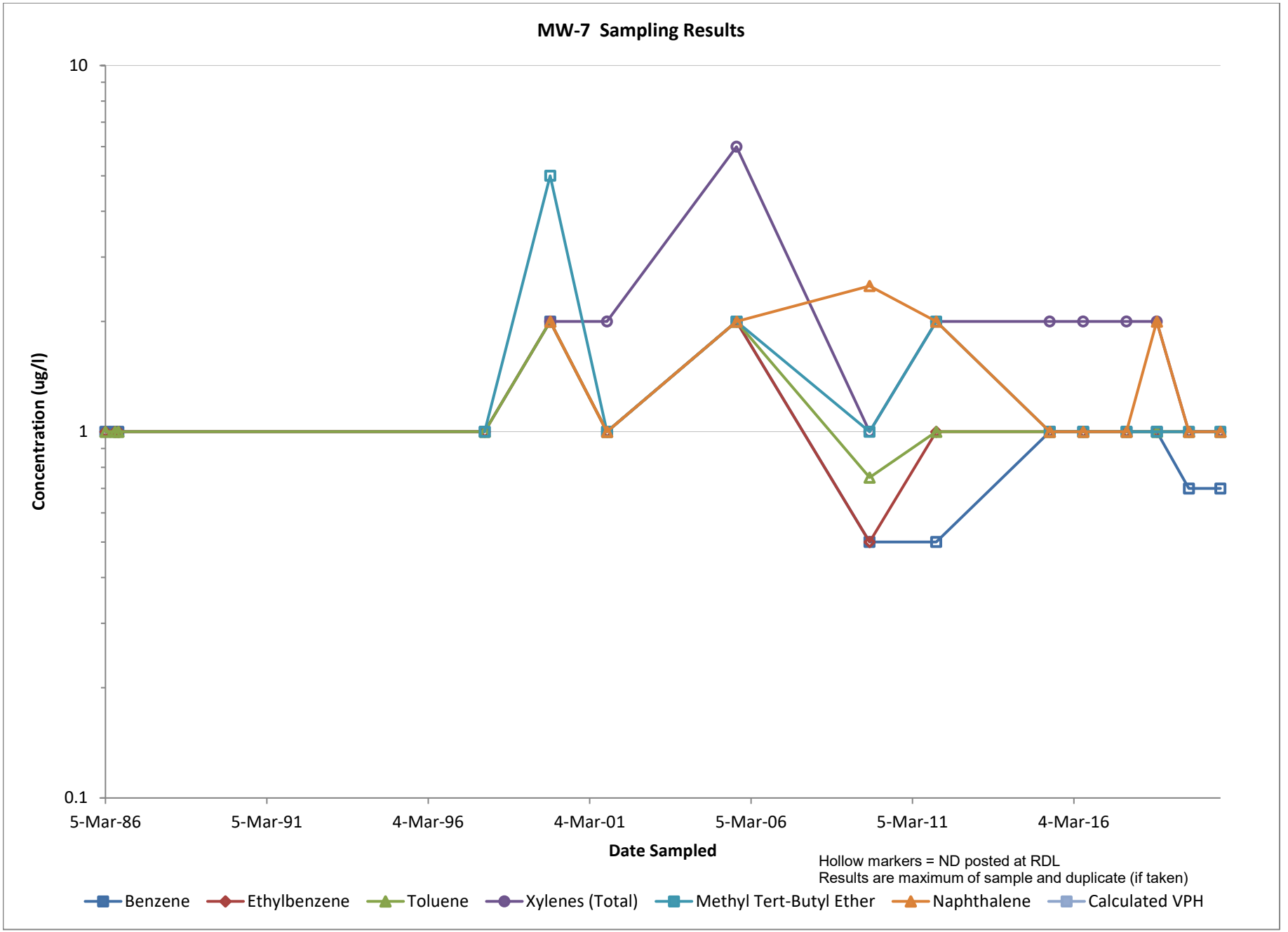

GZA-105S Sampling Results
1000
100
10
1
0.1
Concentration (ug/l)
1-Nov-89
1-Nov-93
1-Nov-97
1-Nov-01
1-Nov-05
1-Nov-09
1-Nov-13
1-Nov-17
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
Benzene
Ethylbenzene
Toluene
Xylenes (Total)
Methyl Tert-Butyl Ether
Naphthalene
Calculated VPH

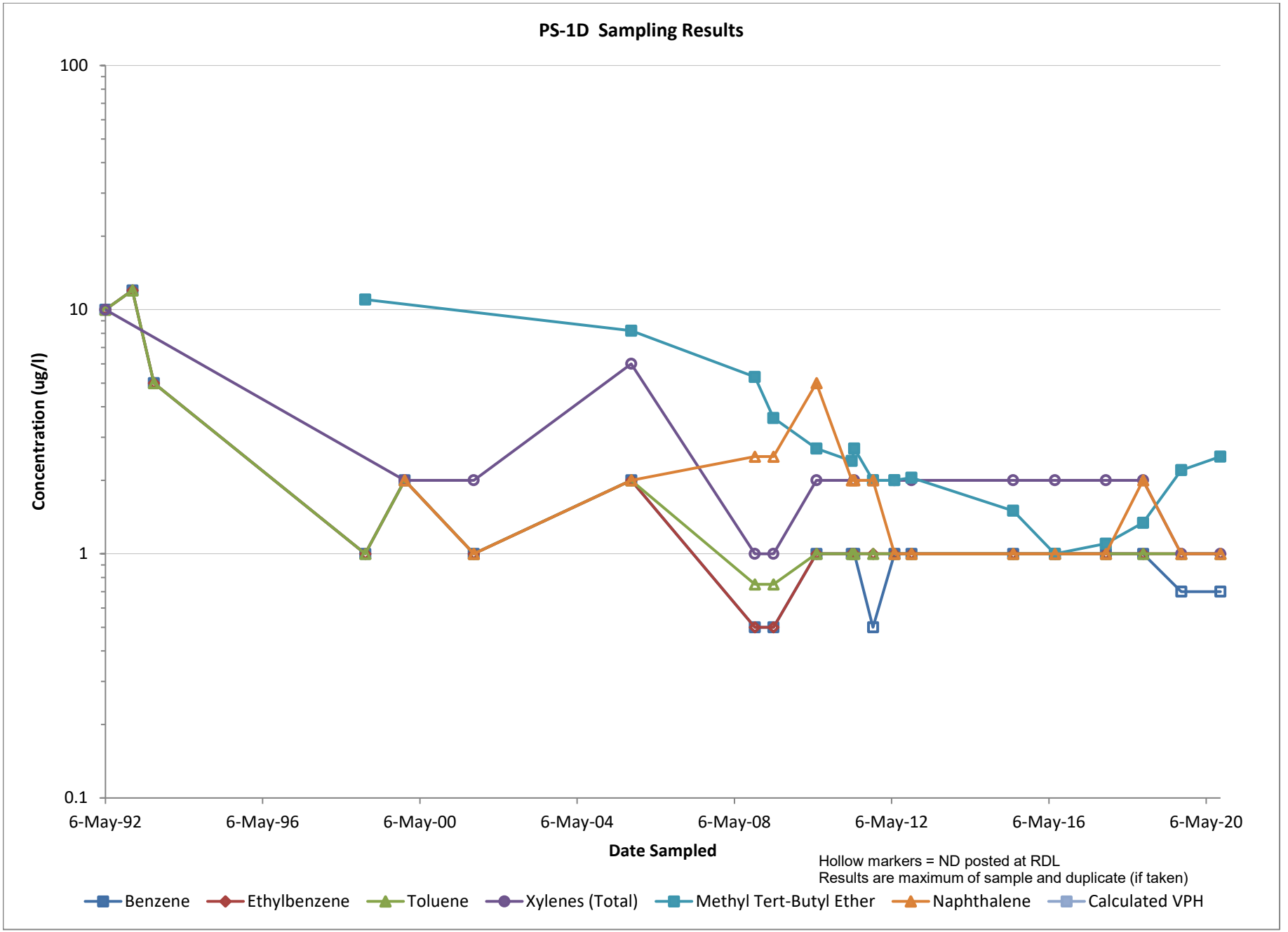

GZA-12 Sampling Results
100
10
1
0.1
Concentration (ug/l)
1-Nov-89
1-Nov-93
1-Nov-97
1-Nov-01
1-Nov-05
1-Nov-09
1-Nov-13
1-Nov-17
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
Benzene
Ethylbenzene
Toluene
Xylenes (Total)
Methyl Tert-Butyl Ether
Naphthalene
Calculated VPH

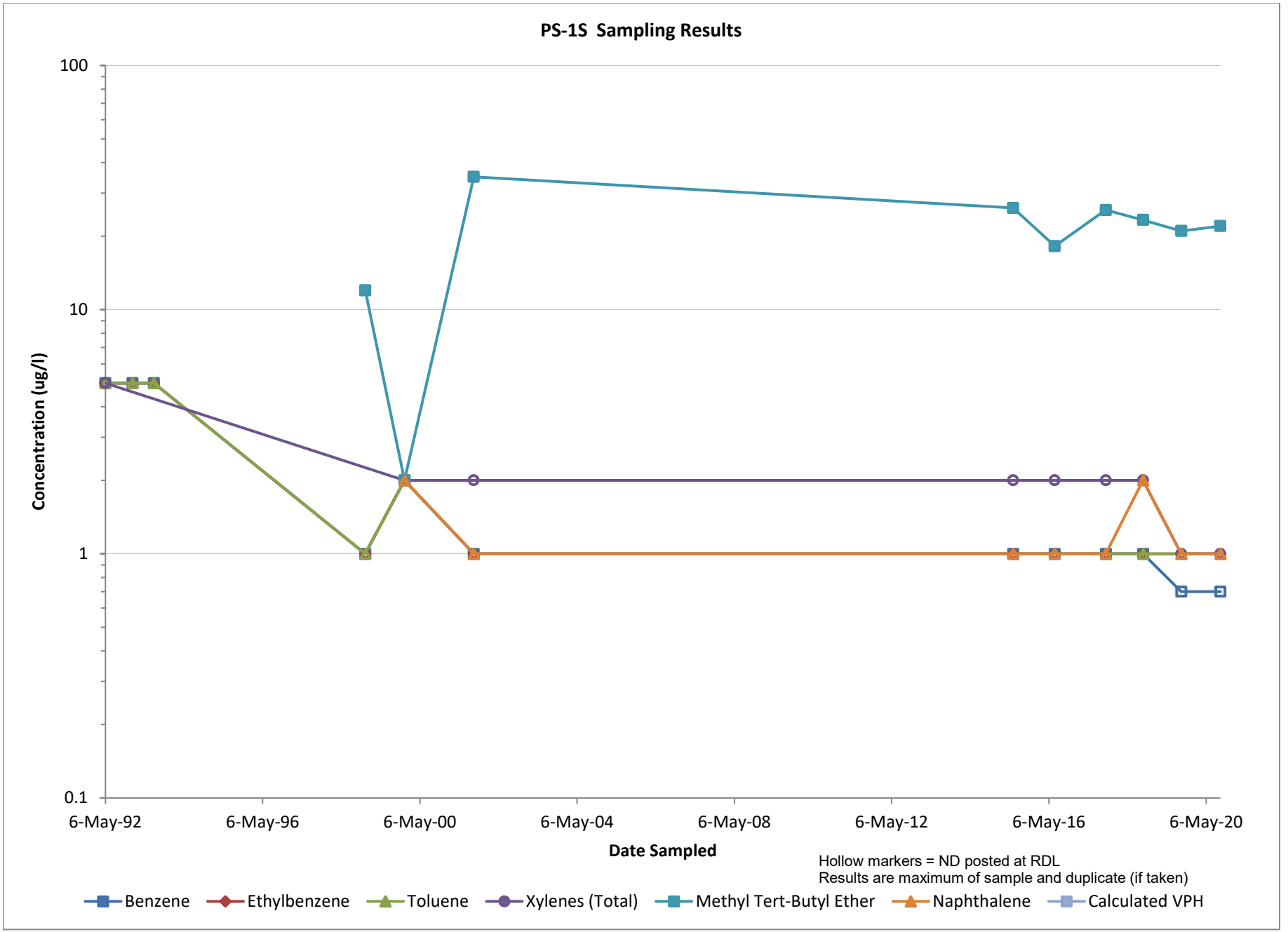

IP-01R2 Sampling Results
10000
1000
100
10
1
Concentration (ug/l)
30-Mar-05
30-Mar-07
30-Mar-09
30-Mar-11
30-Mar-13
30-Mar-15
30-Mar-17
30-Mar-19
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
Benzene
Ethylbenzene
Toluene
Xylenes (Total)
Methyl Tert-Butyl Ether
Naphthalene
Calculated VPH

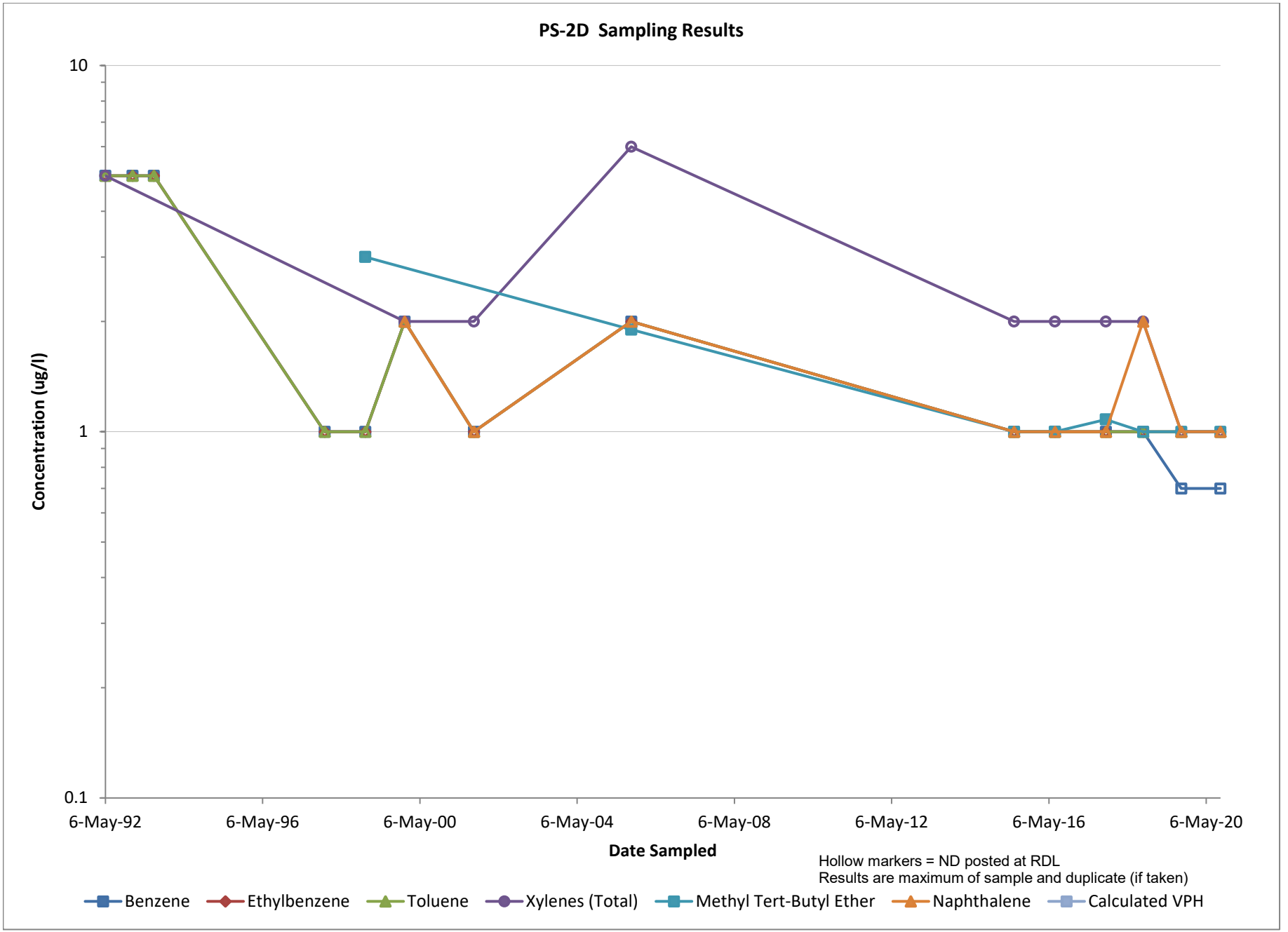

MW-4 Sampling Results
100
10
1
0.1
Concentration (ug/l)
3-Mar-86
3-Mar-91
2-Mar-96
2-Mar-01
3-Mar-06
3-Mar-11
2-Mar-16
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
Benzene
Ethylbenzene
Toluene
Xylenes (Total)
Methyl Tert-Butyl Ether
Naphthalene
Calculated VPH

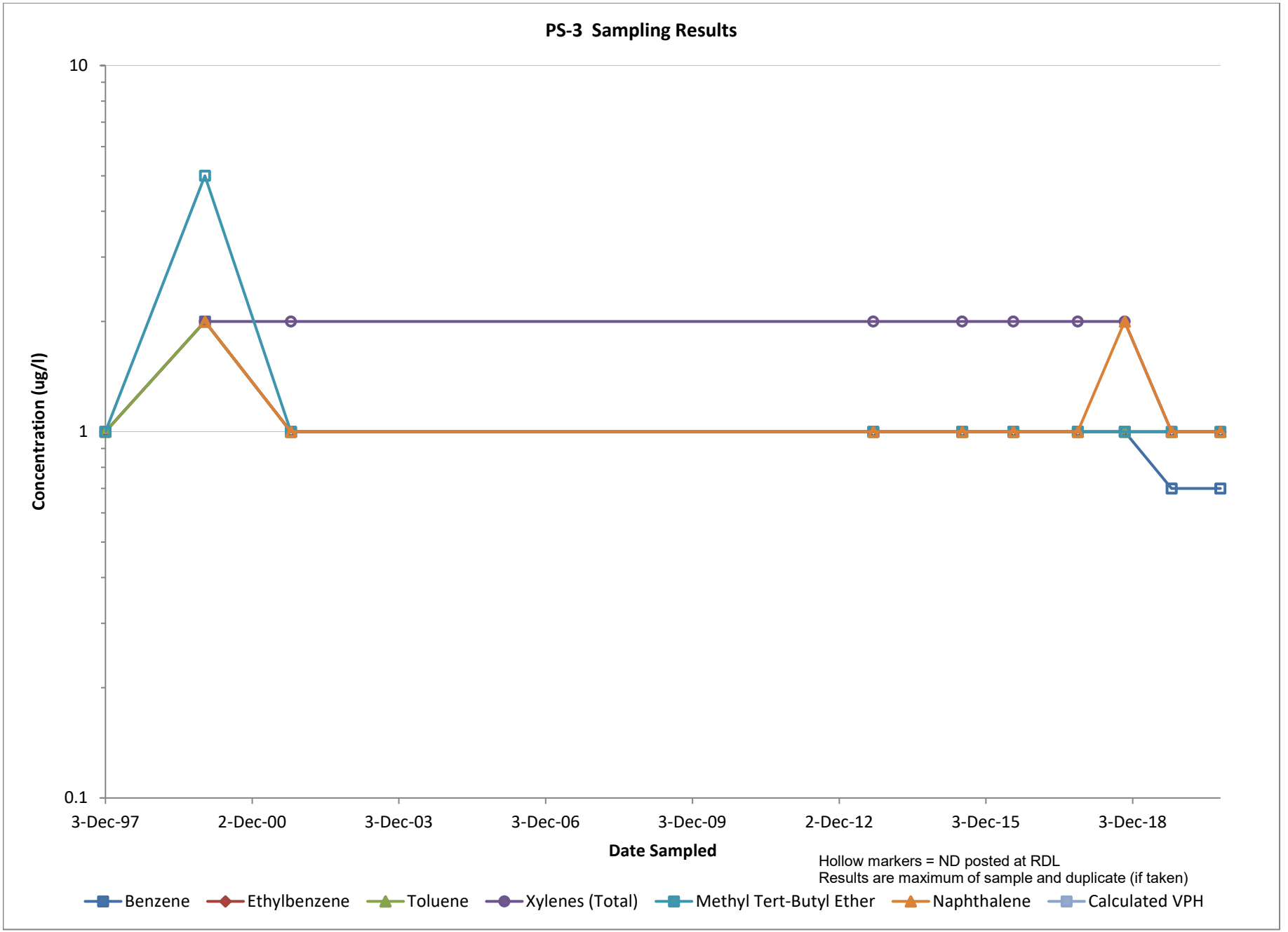

MW-5 Sampling Results
10
1
0.1
Concentration (ug/l)
3-Mar-86
3-Mar-91
2-Mar-96
2-Mar-01
3-Mar-06
3-Mar-11
2-Mar-16
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
Benzene
Ethylbenzene
Toluene
Xylenes (Total)
Methyl Tert-Butyl Ether
Naphthalene
Calculated VPH

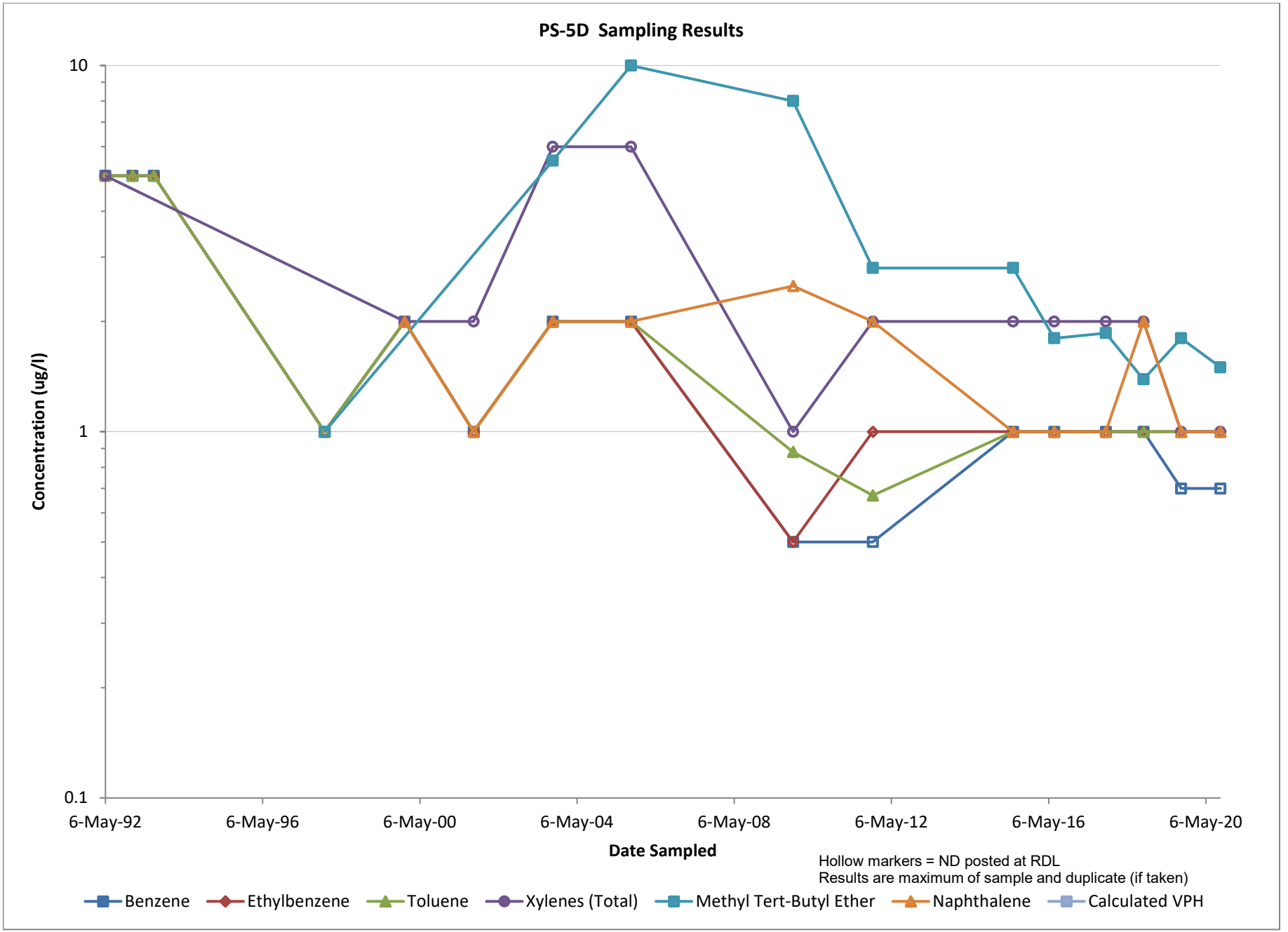

MW-7 Sampling Results
10
1
0.1
Concentration (ug/l)
5-Mar-86
5-Mar-91
4-Mar-96
4-Mar-01
5-Mar-06
5-Mar-11
4-Mar-16
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
Benzene
Ethylbenzene
Toluene
Xylenes (Total)
Methyl Tert-Butyl Ether
Naphthalene
Calculated VPH

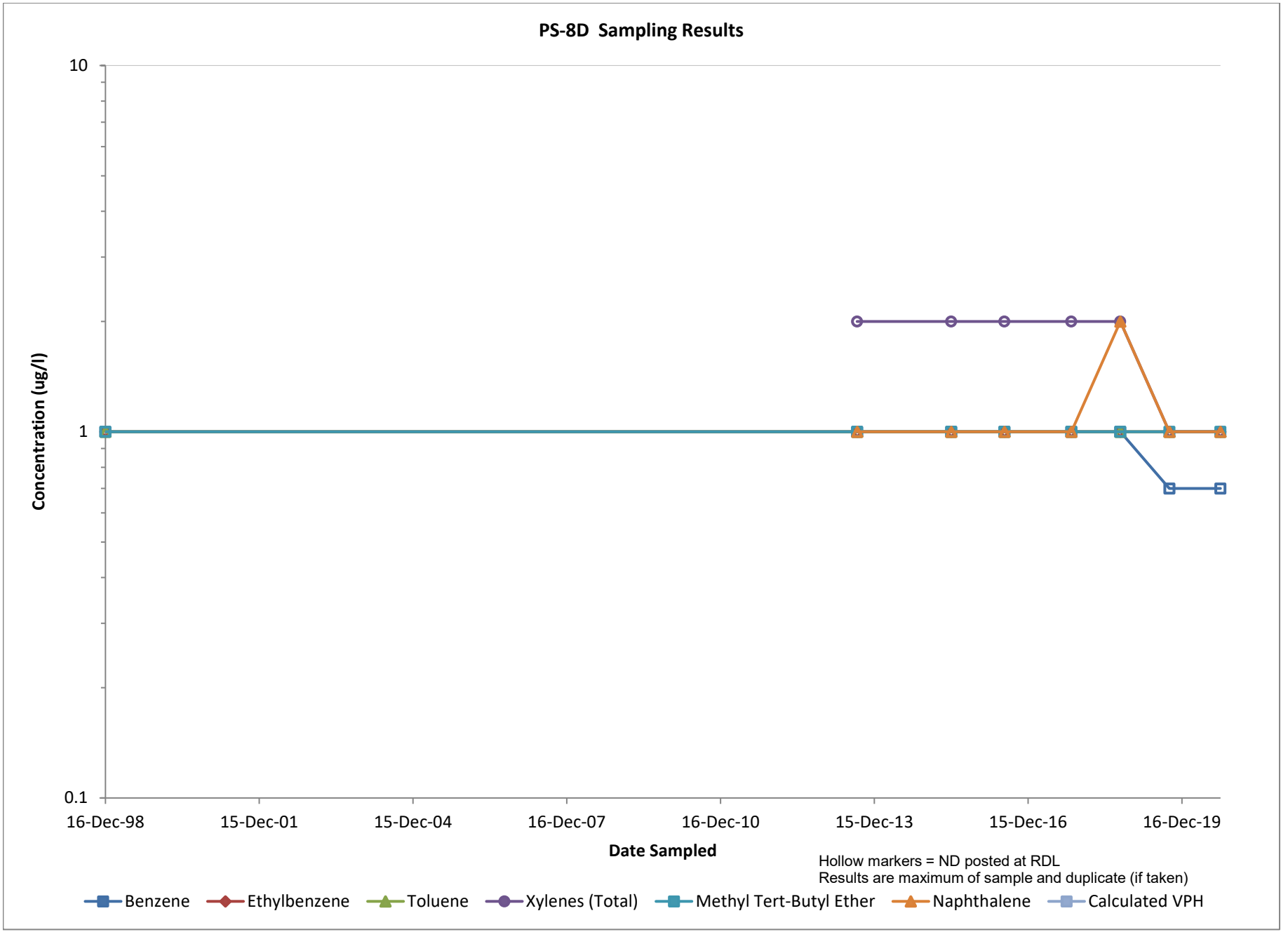

PS-1D Sampling Results
100
10
1
0.1
Concentration (ug/l)
6-May-92
6-May-96
6-May-00
6-May-04
6-May-08
6-May-12
6-May-16
6-May-20
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
Benzene
Ethylbenzene
Toluene
Xylenes (Total)
Methyl Tert-Butyl Ether
Naphthalene
Calculated VPH

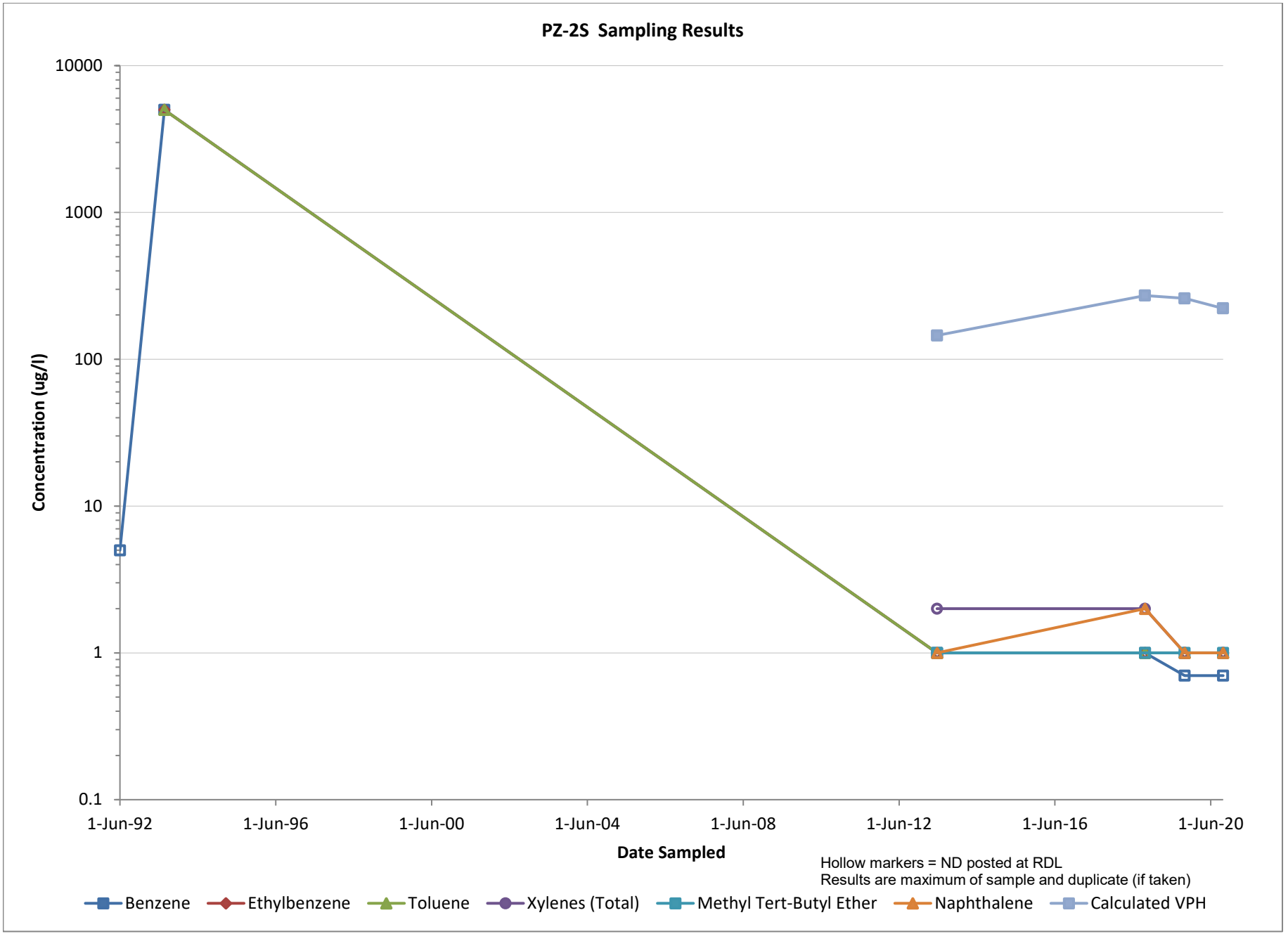

PS-1S Sampling Results
100
10
1
0.1
Concentration (ug/l)
6-May-92
6-May-96
6-May-00
6-May-04
6-May-08
6-May-12
6-May-16
6-May-20
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
Benzene
Ethylbenzene
Toluene
Xylenes (Total)
Methyl Tert-Butyl Ether
Naphthalene
Calculated VPH

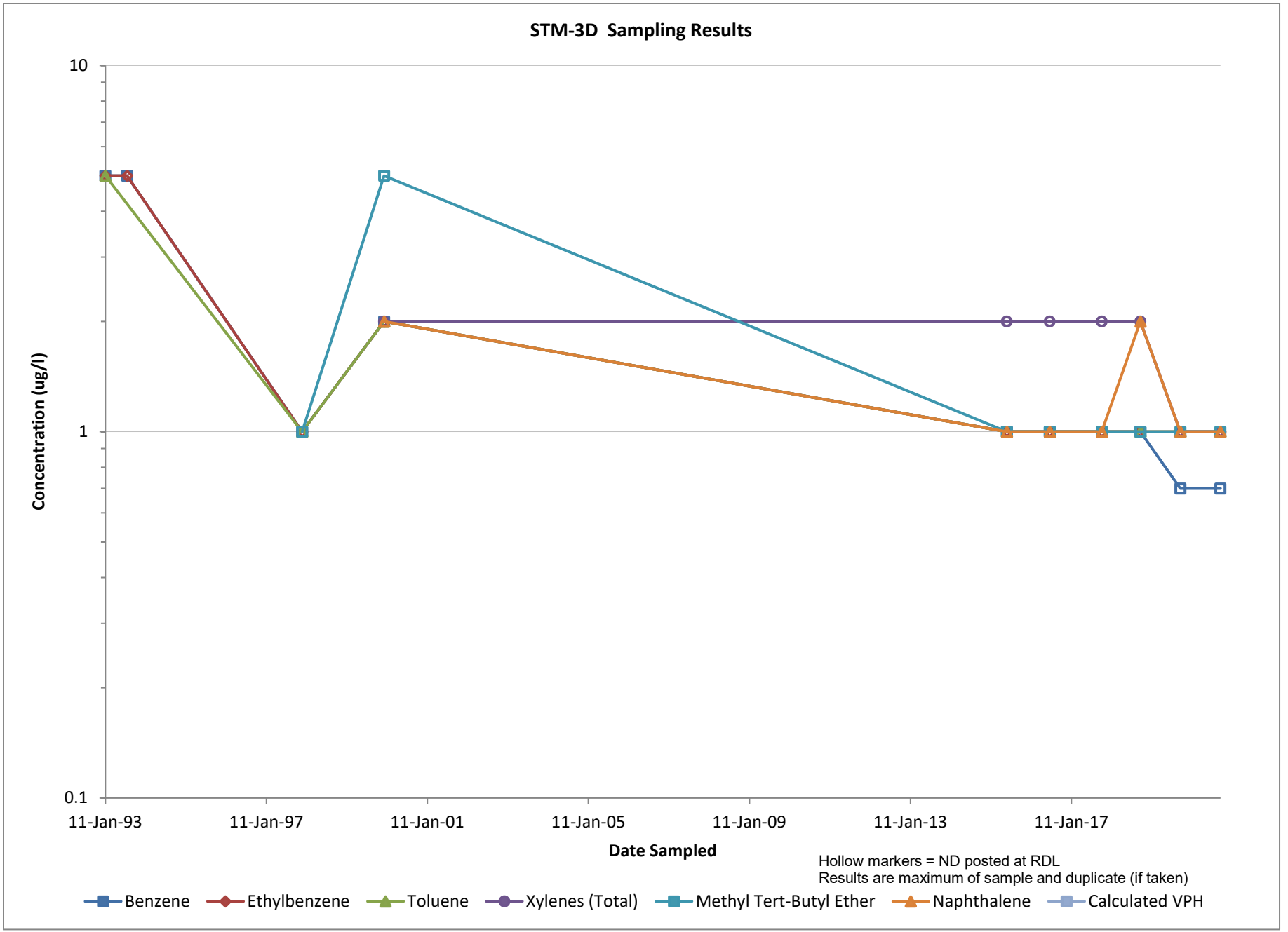

PS-2D Sampling Results
10
1
0.1
Concentration (ug/l)
6-May-92
6-May-96
6-May-00
6-May-04
6-May-08
6-May-12
6-May-16
6-May-20
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
Benzene
Ethylbenzene
Toluene
Xylenes (Total)
Methyl Tert-Butyl Ether
Naphthalene
Calculated VPH

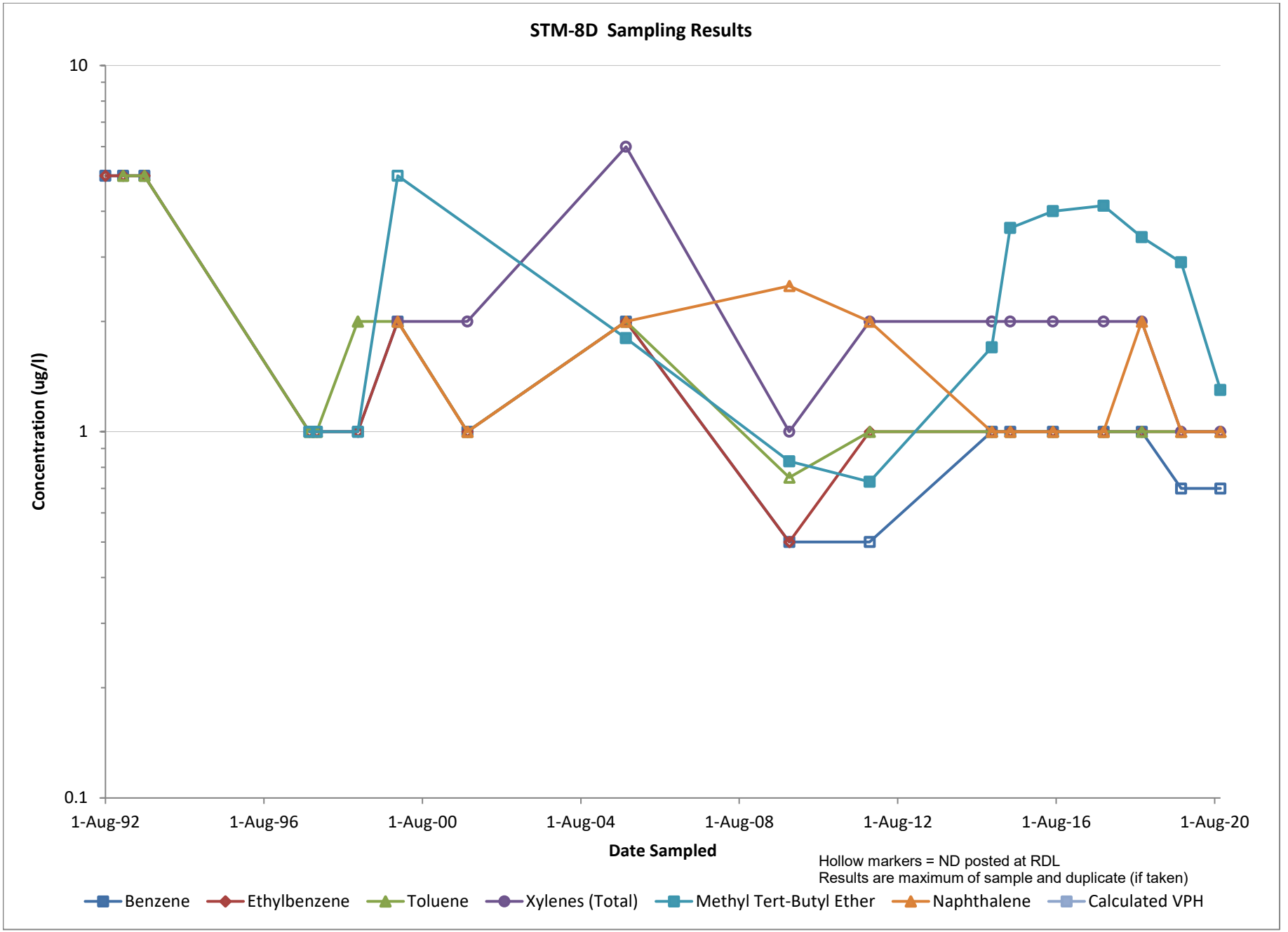

PS-3 Sampling Results
10
1
0.1
Concentration (ug/l)
3-Dec-97
2-Dec-00
3-Dec-03
3-Dec-06
3-Dec-09
2-Dec-12
3-Dec-15
3-Dec-18
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
Benzene
Ethylbenzene
Toluene
Xylenes (Total)
Methyl Tert-Butyl Ether
Naphthalene
Calculated VPH

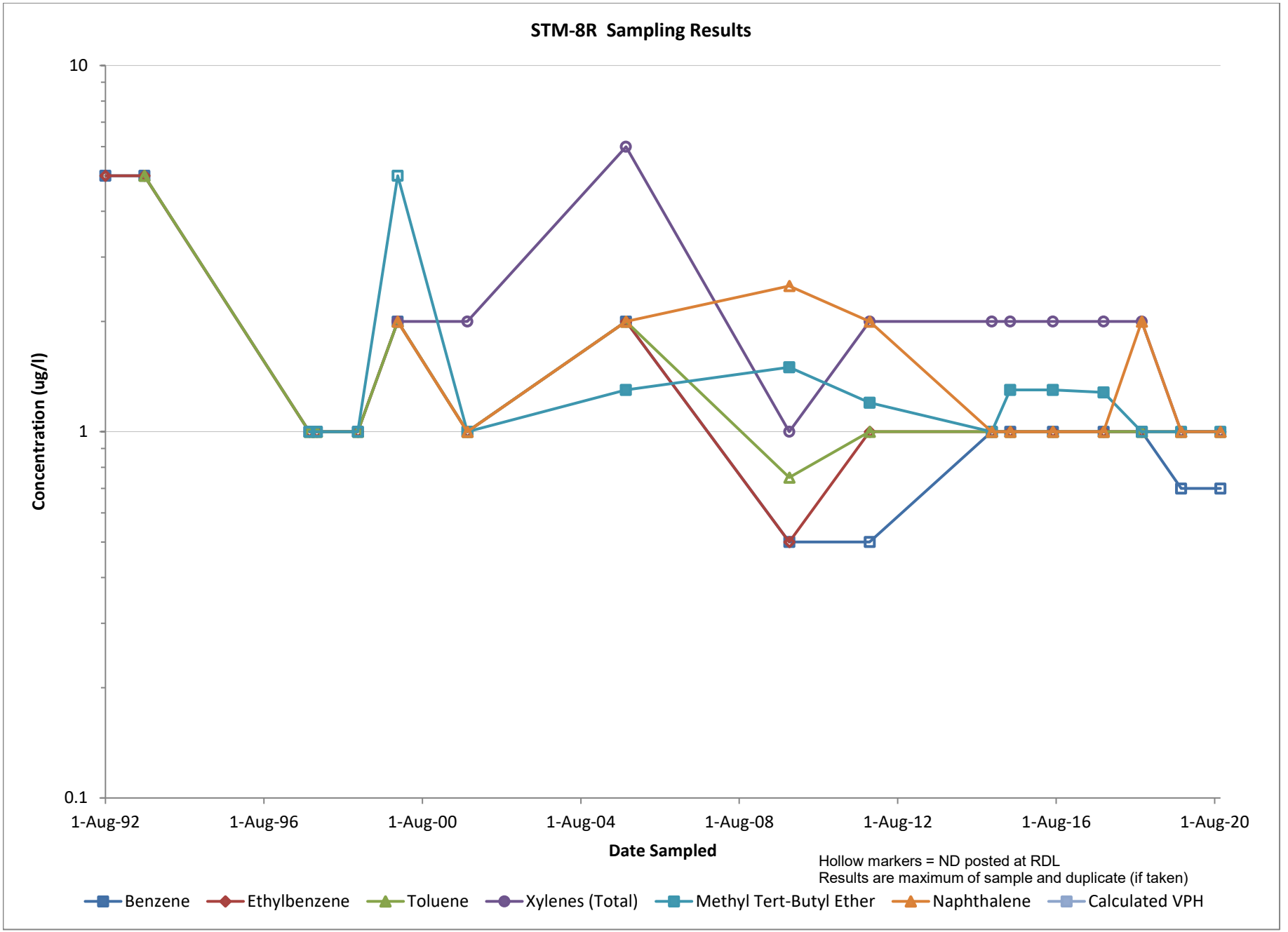

PS-5D Sampling Results
10
1
0.1
Concentration (ug/l)
6-May-92
6-May-96
6-May-00
6-May-04
6-May-08
6-May-12
6-May-16
6-May-20
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
Benzene
Ethylbenzene
Toluene
Xylenes (Total)
Methyl Tert-Butyl Ether
Naphthalene
Calculated VPH

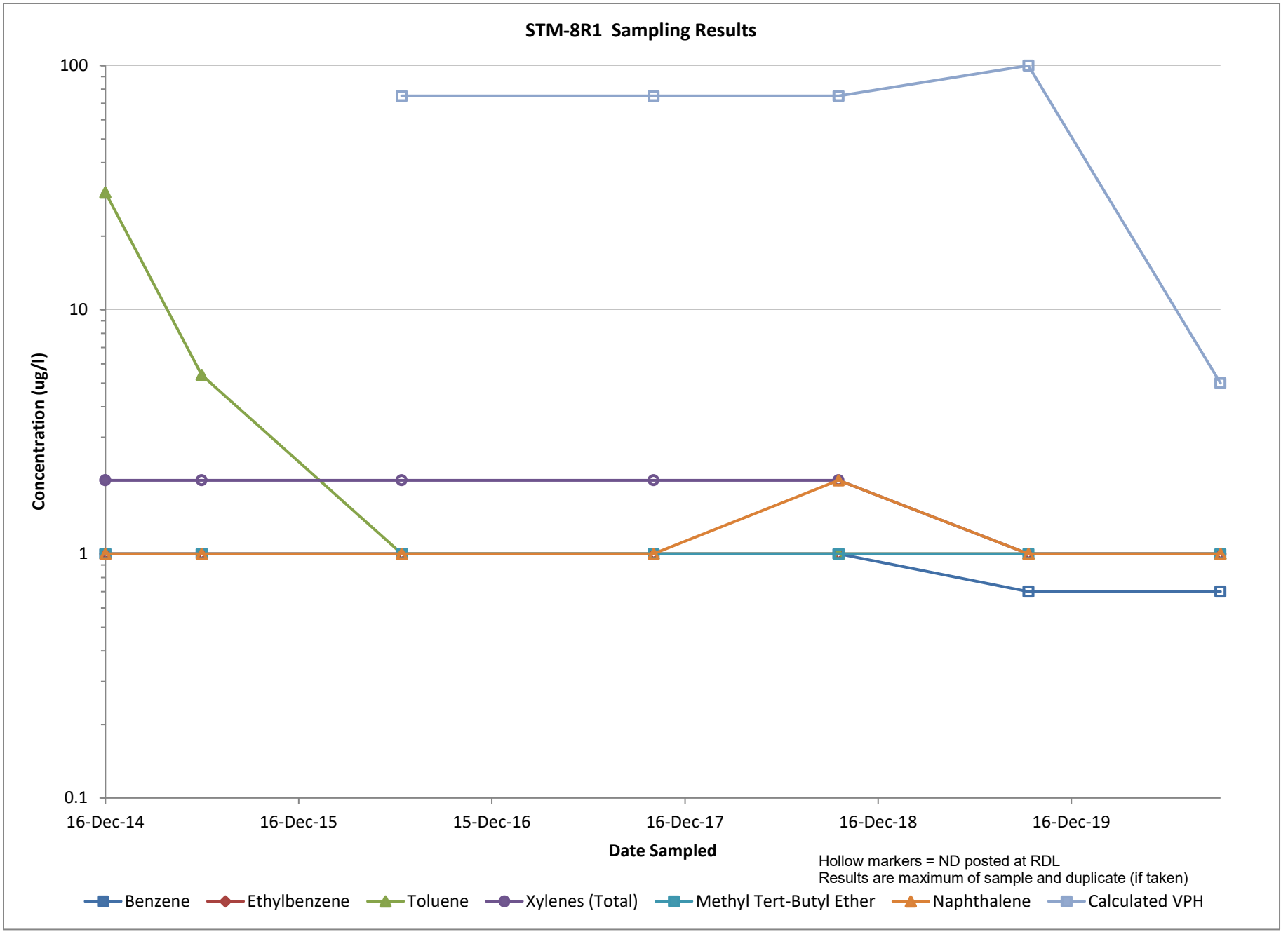

PS-8D Sampling Results
10
1
0.1
Concentration (ug/l)
16-Dec-98
15-Dec-01
15-Dec-04
16-Dec-07
16-Dec-10
15-Dec-13
15-Dec-16
16-Dec-19
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
Benzene
Ethylbenzene
Toluene
Xylenes (Total)
Methyl Tert-Butyl Ether
Naphthalene
Calculated VPH

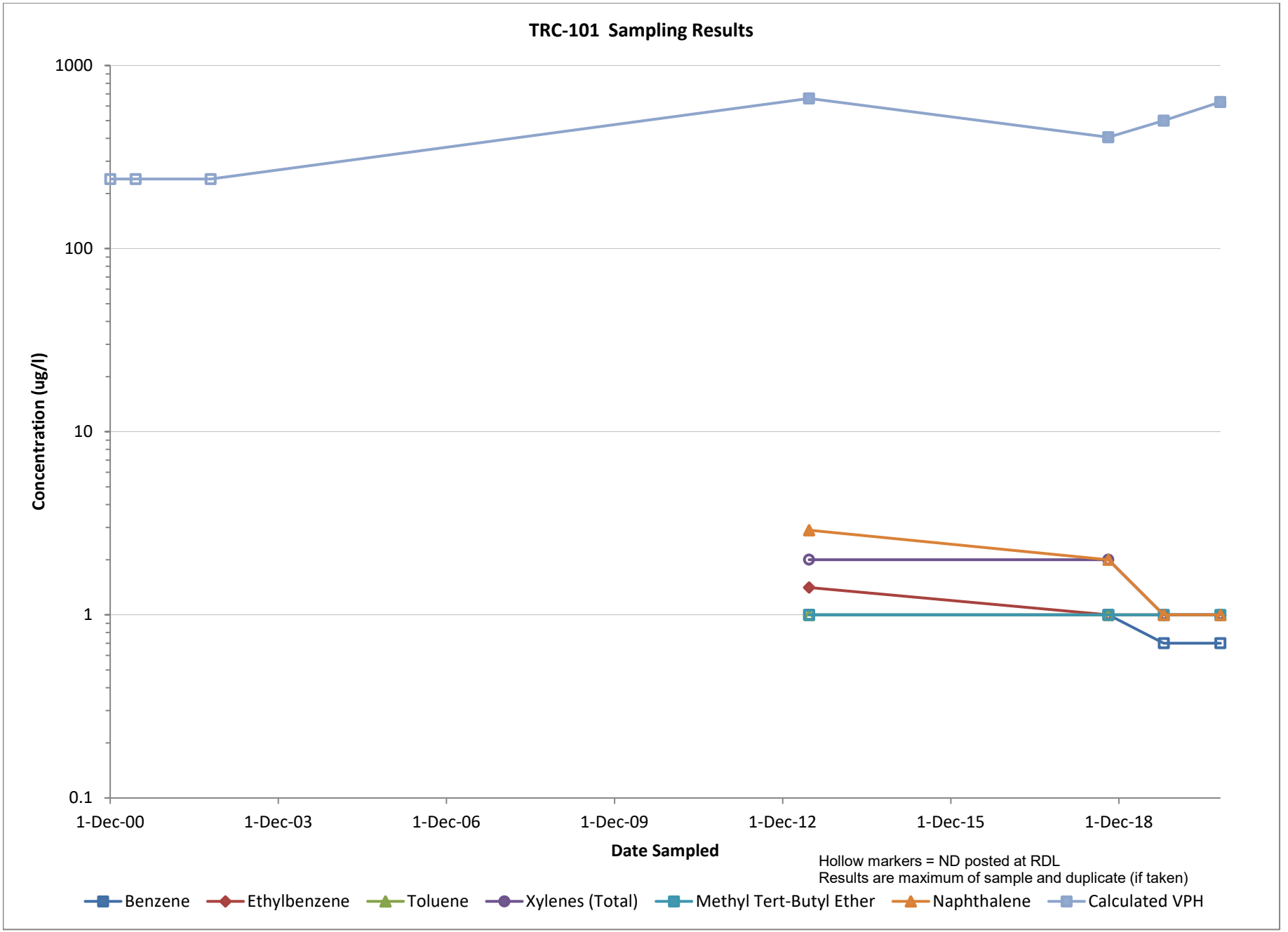

PZ-2S Sampling Results
10000
1000
100
10
1
0.1
Concentration (ug/l)
1-Jun-92
1-Jun-96
1-Jun-00
1-Jun-04
1-Jun-08
1-Jun-12
1-Jun-16
1-Jun-20
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
Benzene
Ethylbenzene
Toluene
Xylenes (Total)
Methyl Tert-Butyl Ether
Naphthalene
Calculated VPH

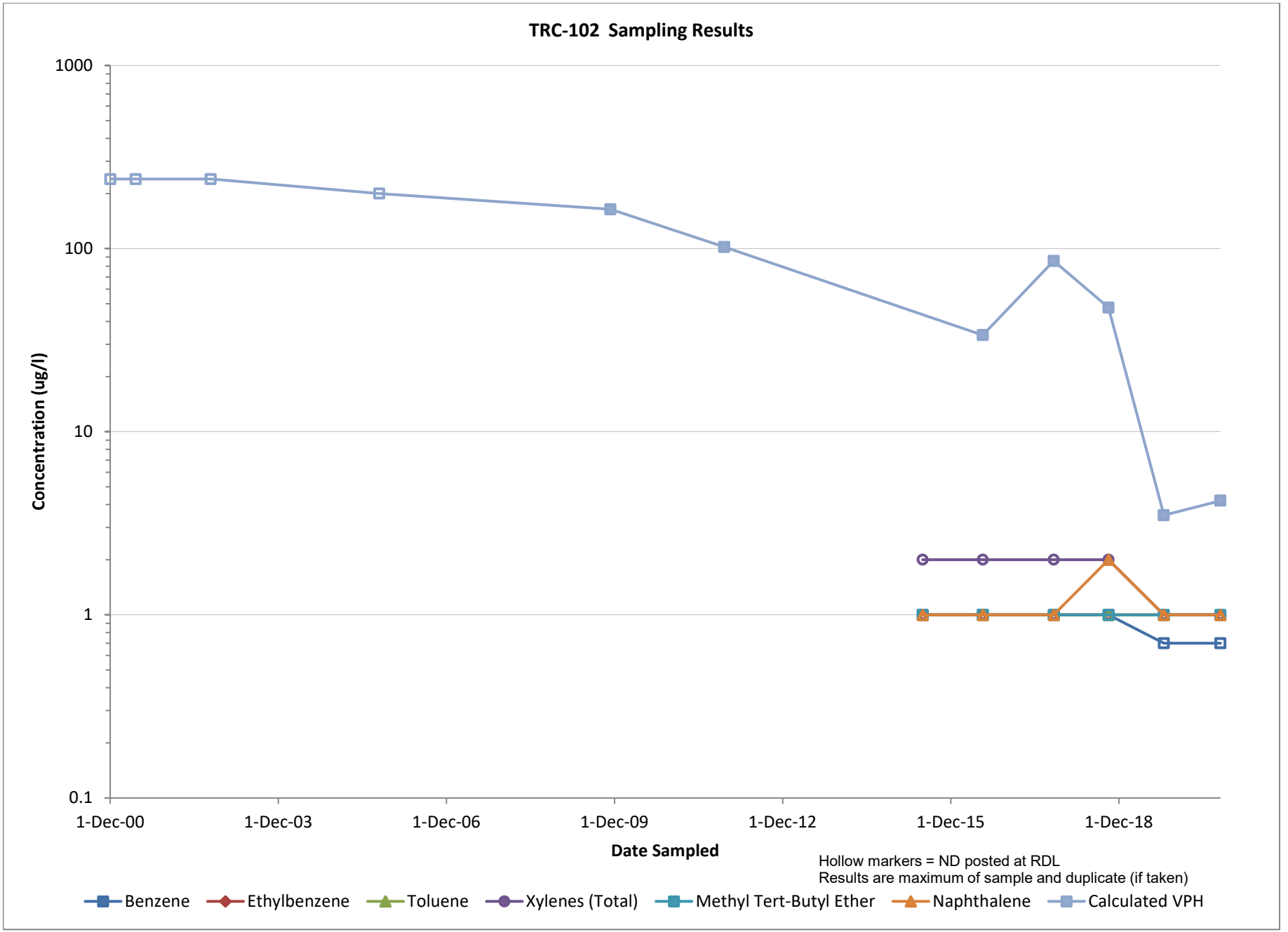

STM-3D Sampling Results
10
1
0.1
Concentration (ug/l)
11-Jan-93
11-Jan-97
11-Jan-01
11-Jan-05
11-Jan-09
11-Jan-13
11-Jan-17
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
Benzene
Ethylbenzene
Toluene
Xylenes (Total)
Methyl Tert-Butyl Ether
Naphthalene
Calculated VPH

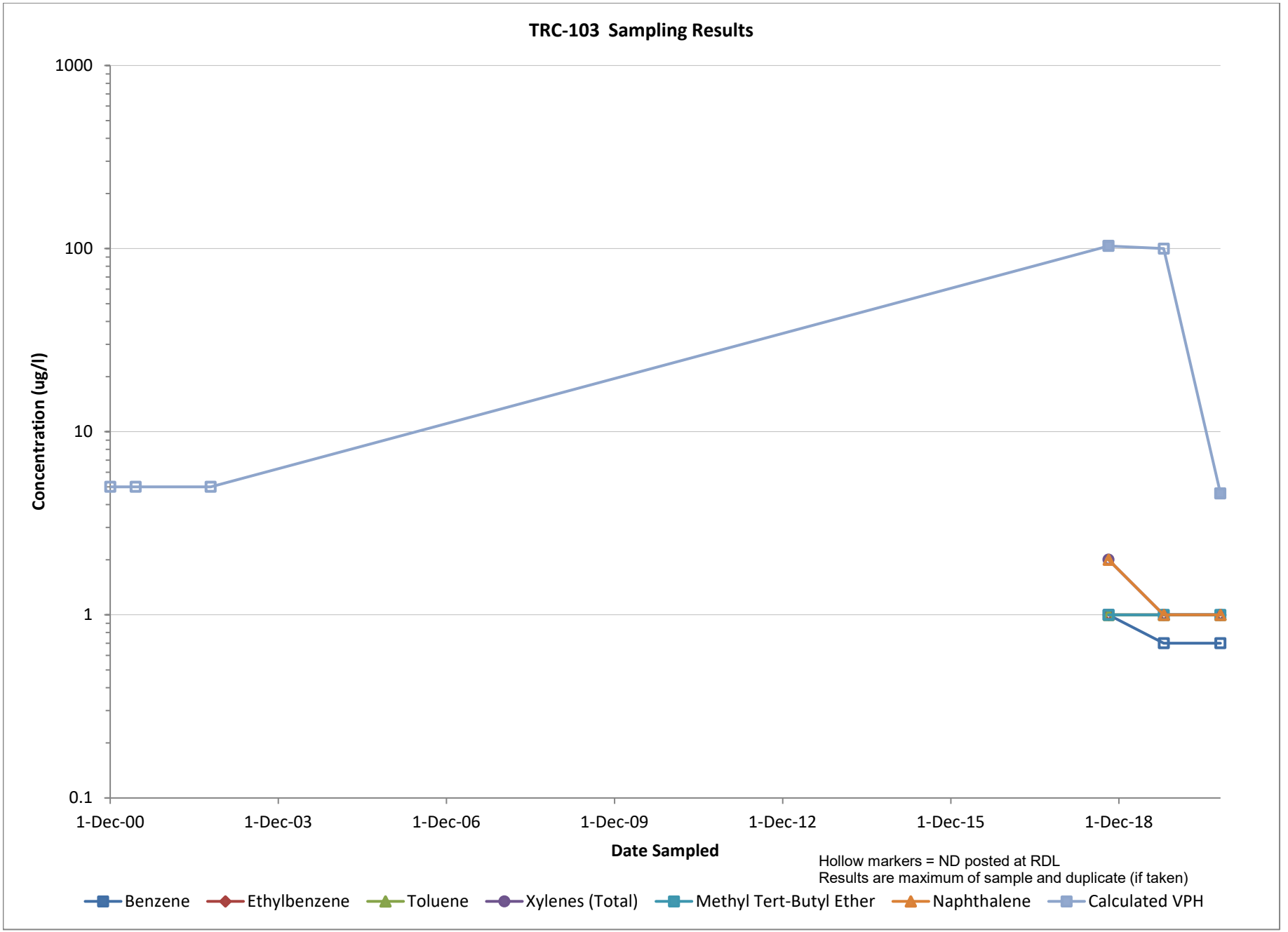

STM-8D Sampling Results
10
1
0.1
Concentration (ug/l)
1-Aug-92
1-Aug-96
1-Aug-00
1-Aug-04
1-Aug-08
1-Aug-12
1-Aug-16
1-Aug-20
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
Benzene
Ethylbenzene
Toluene
Xylenes (Total)
Methyl Tert-Butyl Ether
Naphthalene
Calculated VPH

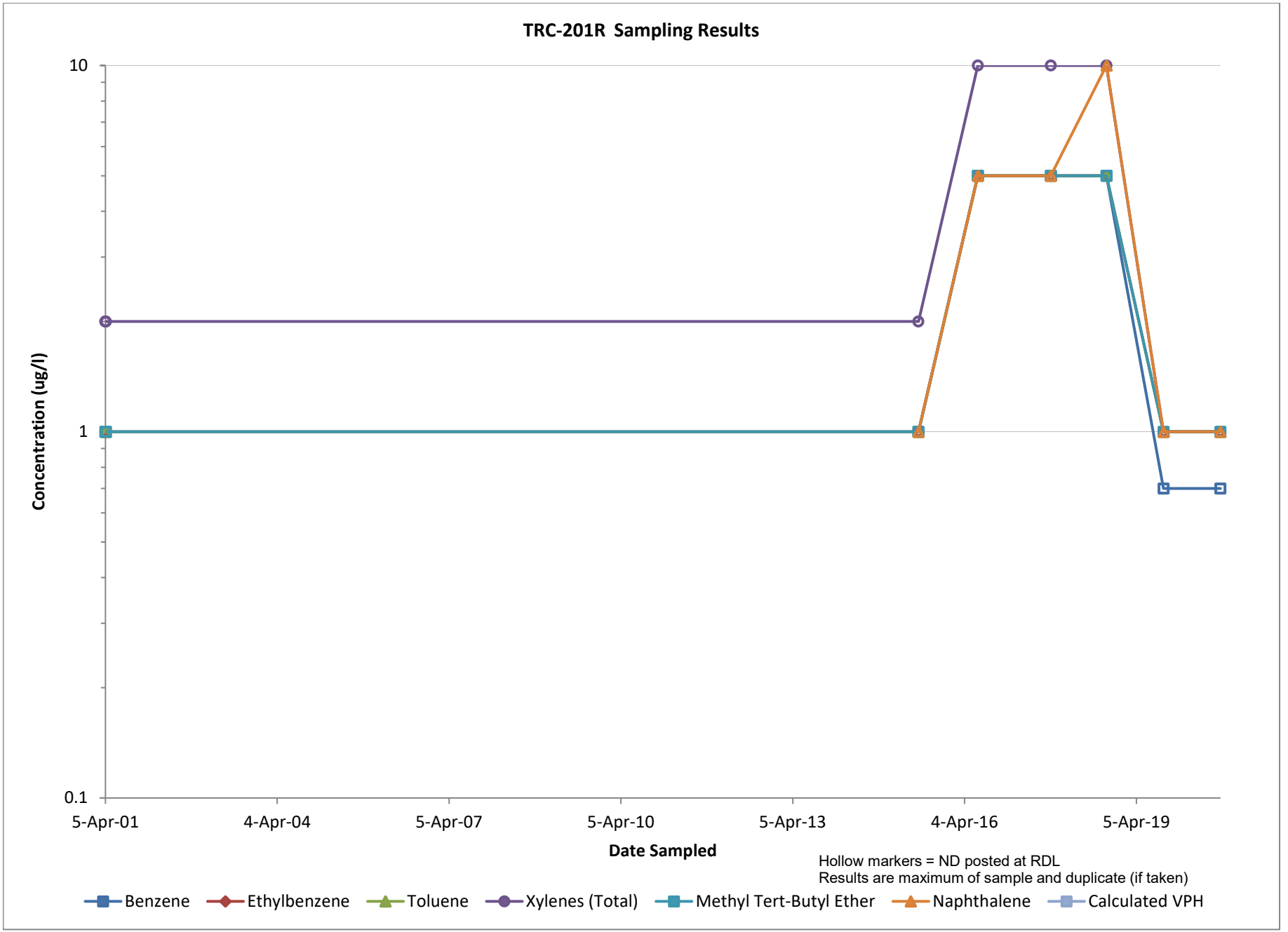

STM-8R Sampling Results
10
1
0.1
Concentration (ug/l)
1-Aug-92
1-Aug-96
1-Aug-00
1-Aug-04
1-Aug-08
1-Aug-12
1-Aug-16
1-Aug-20
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
Benzene
Ethylbenzene
Toluene
Xylenes (Total)
Methyl Tert-Butyl Ether
Naphthalene
Calculated VPH

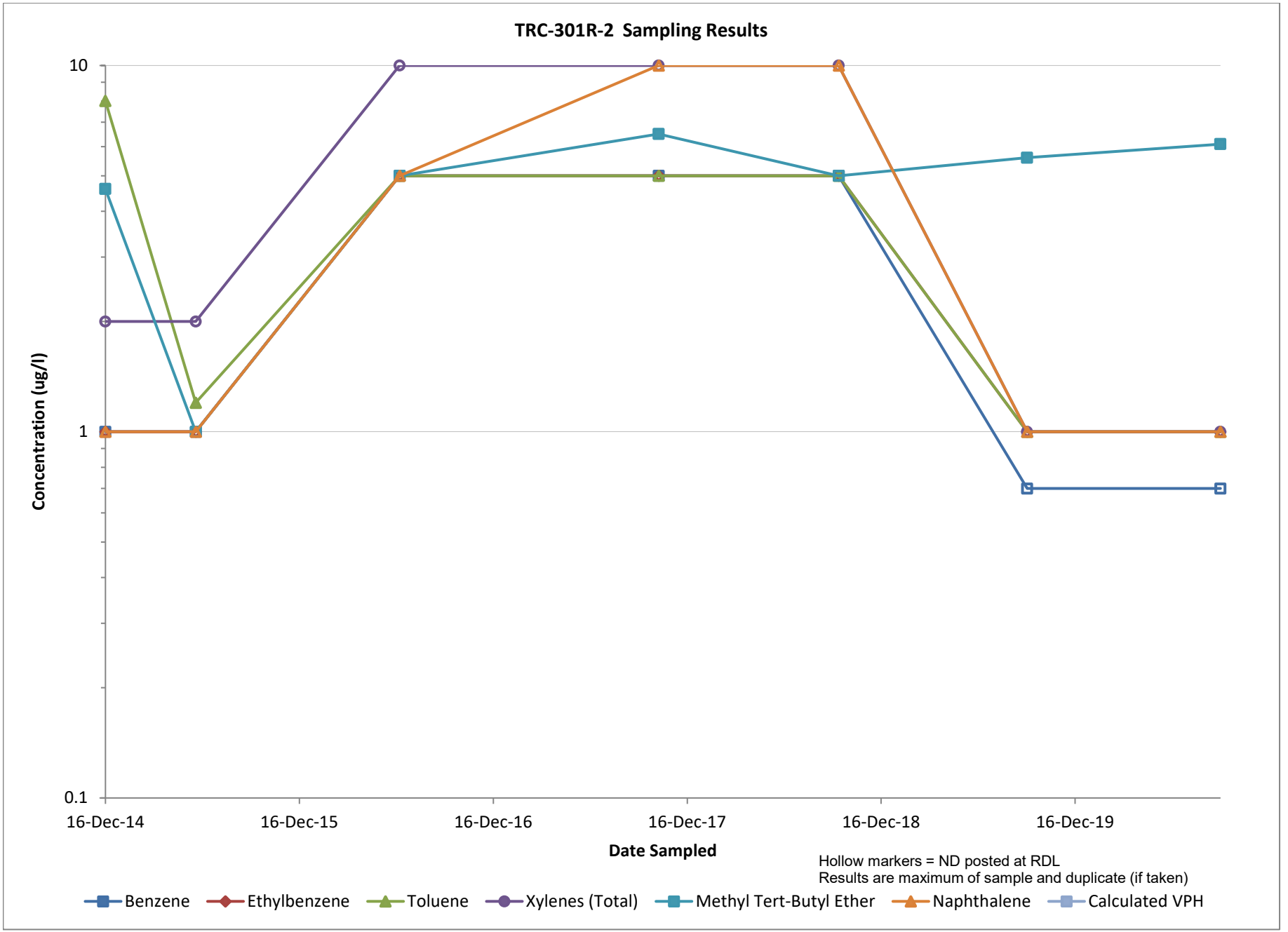

STM-8R1 Sampling Results
100
10
1
0.1
Concentration (ug/l)
16-Dec-14
16-Dec-15
15-Dec-16
16-Dec-17
16-Dec-18
16-Dec-19
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
Benzene
Ethylbenzene
Toluene
Xylenes (Total)
Methyl Tert-Butyl Ether
Naphthalene
Calculated VPH

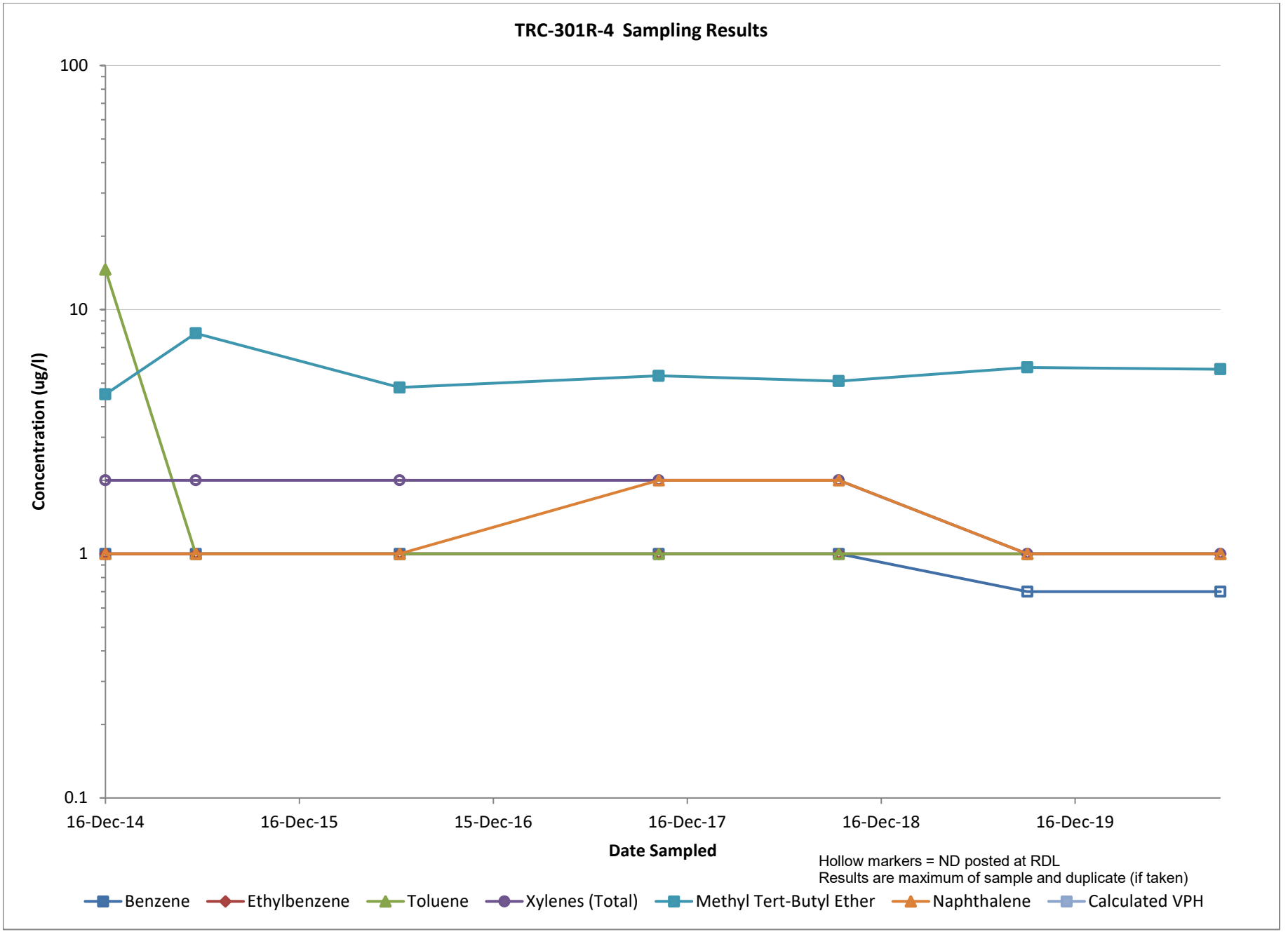

TRC-101 Sampling Results
1000
100
10
1
0.1
Concentration (ug/l)
1-Dec-00
1-Dec-03
1-Dec-06
1-Dec-09
1-Dec-12
1-Dec-15
1-Dec-18
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
Benzene
Ethylbenzene
Toluene
Xylenes (Total)
Methyl Tert-Butyl Ether
Naphthalene
Calculated VPH

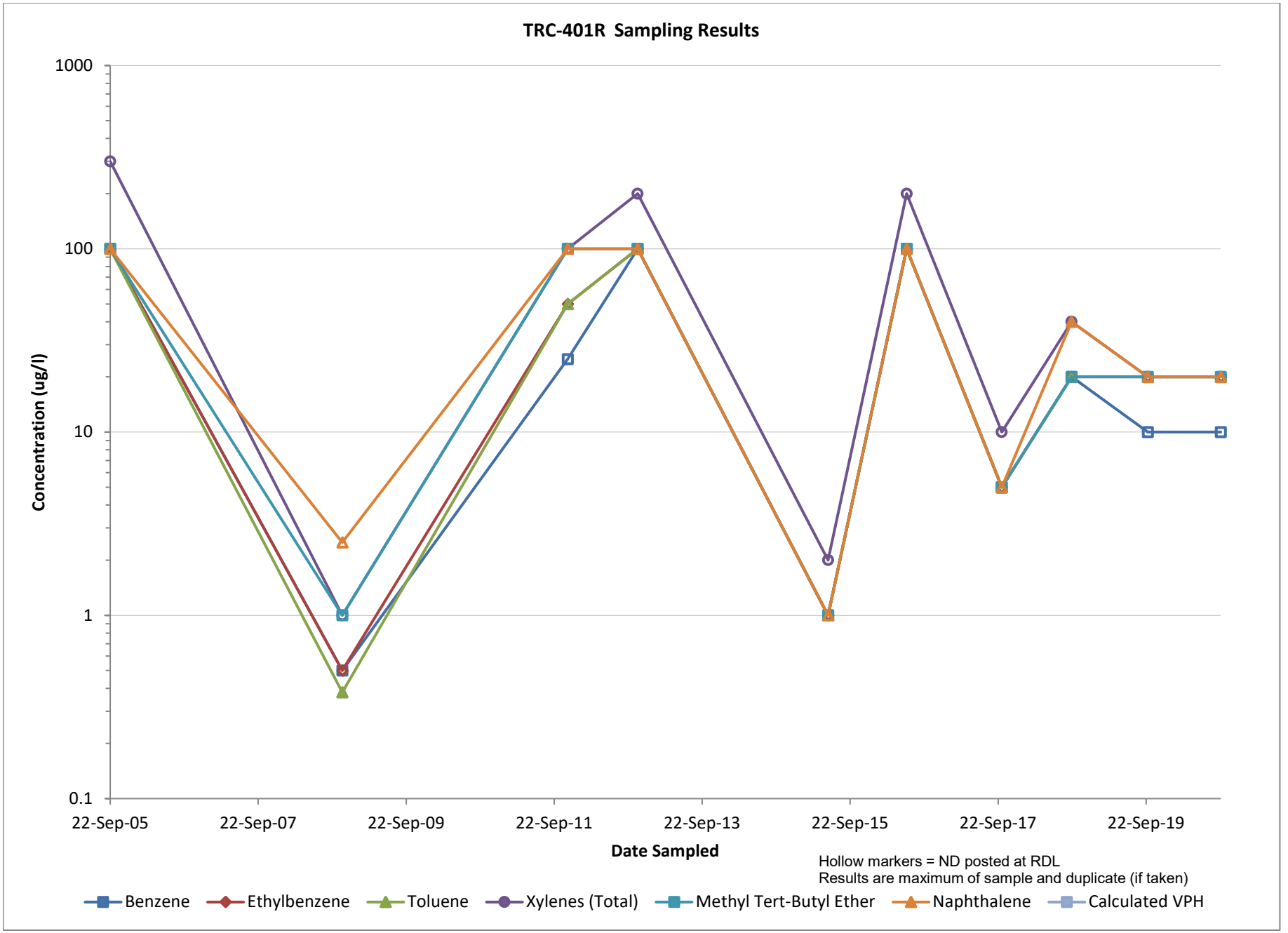

TRC-102 Sampling Results
1000
100
10
1
0.1
Concentration (ug/l)
1-Dec-00
1-Dec-03
1-Dec-06
1-Dec-09
1-Dec-12
1-Dec-15
1-Dec-18
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
Benzene
Ethylbenzene
Toluene
Xylenes (Total)
Methyl Tert-Butyl Ether
Naphthalene
Calculated VPH

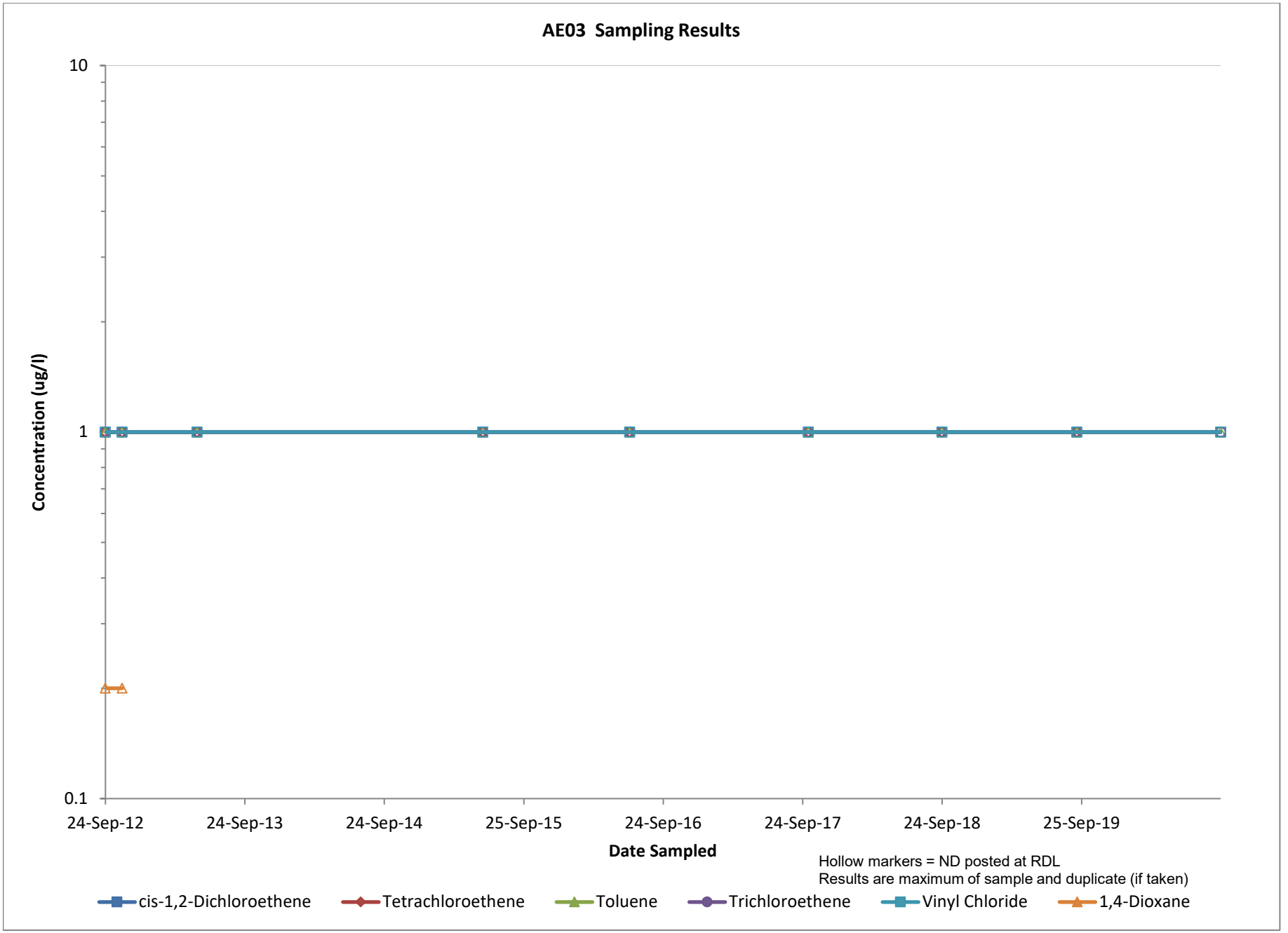

TRC-103 Sampling Results
1000
100
10
1
0.1
Concentration (ug/l)
1-Dec-00
1-Dec-03
1-Dec-06
1-Dec-09
1-Dec-12
1-Dec-15
1-Dec-18
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
Benzene
Ethylbenzene
Toluene
Xylenes (Total)
Methyl Tert-Butyl Ether
Naphthalene
Calculated VPH

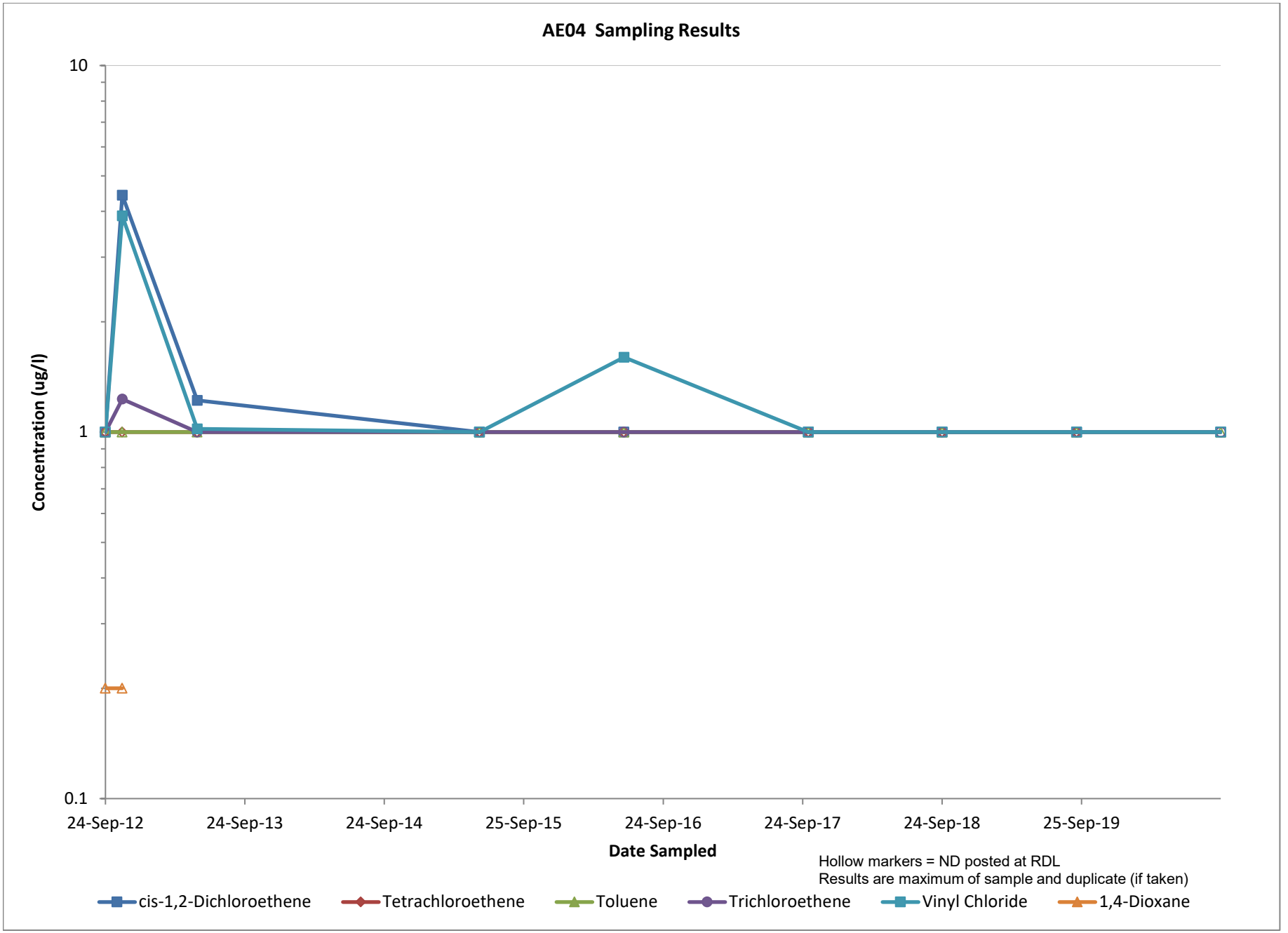

TRC-201R Sampling Results
10
1
0.1
Concentration (ug/l)
5-Apr-01
4-Apr-04
5-Apr-07
5-Apr-10
5-Apr-13
4-Apr-16
5-Apr-19
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
Benzene
Ethylbenzene
Toluene
Xylenes (Total)
Methyl Tert-Butyl Ether
Naphthalene
Calculated VPH

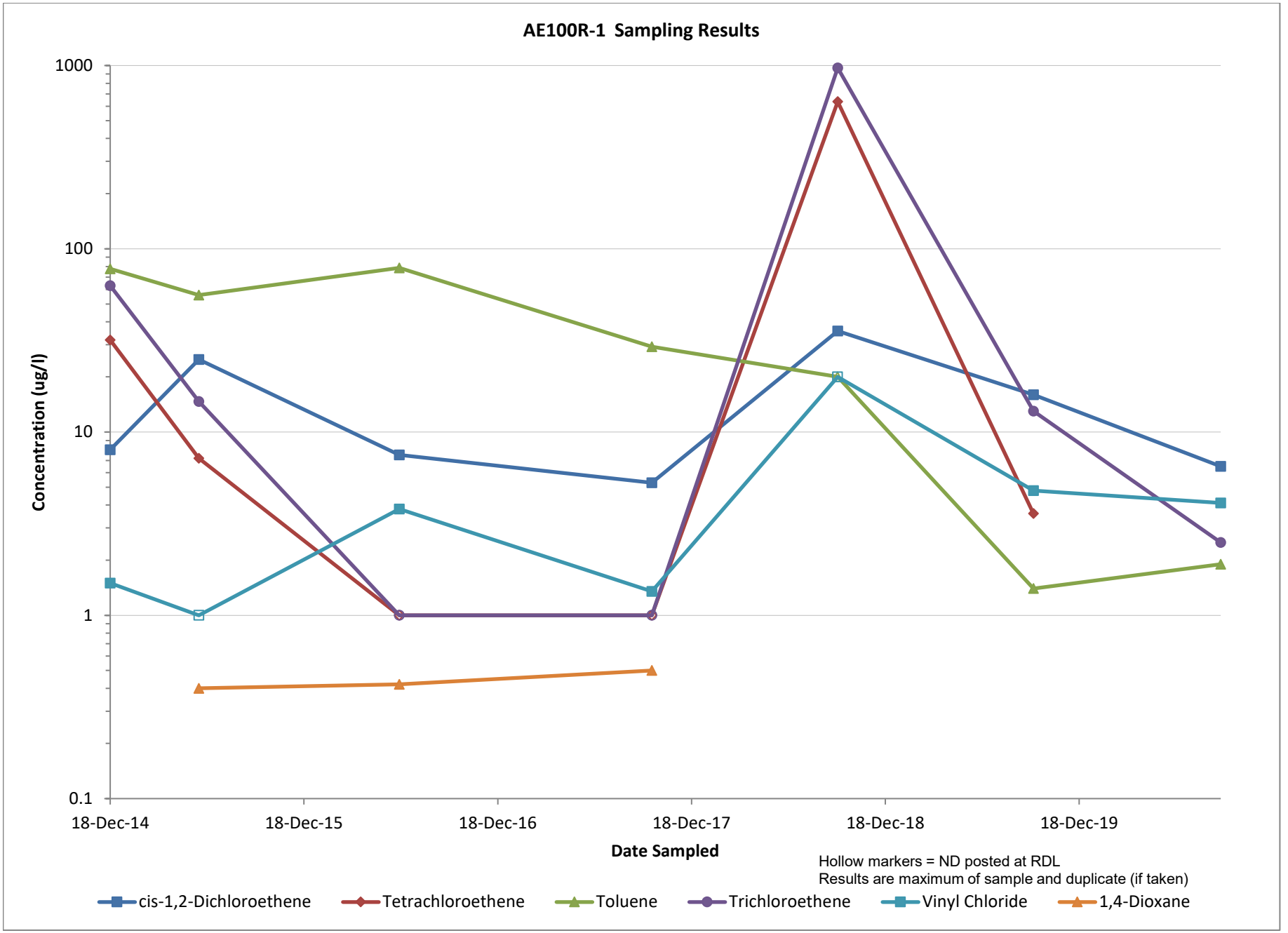

TRC-301R-2 Sampling Results
10
1
0.1
Concentration (ug/l)
16-Dec-14
16-Dec-15
16-Dec-16
16-Dec-17
16-Dec-18
16-Dec-19
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
Benzene
Ethylbenzene
Toluene
Xylenes (Total)
Methyl Tert-Butyl Ether
Naphthalene
Calculated VPH

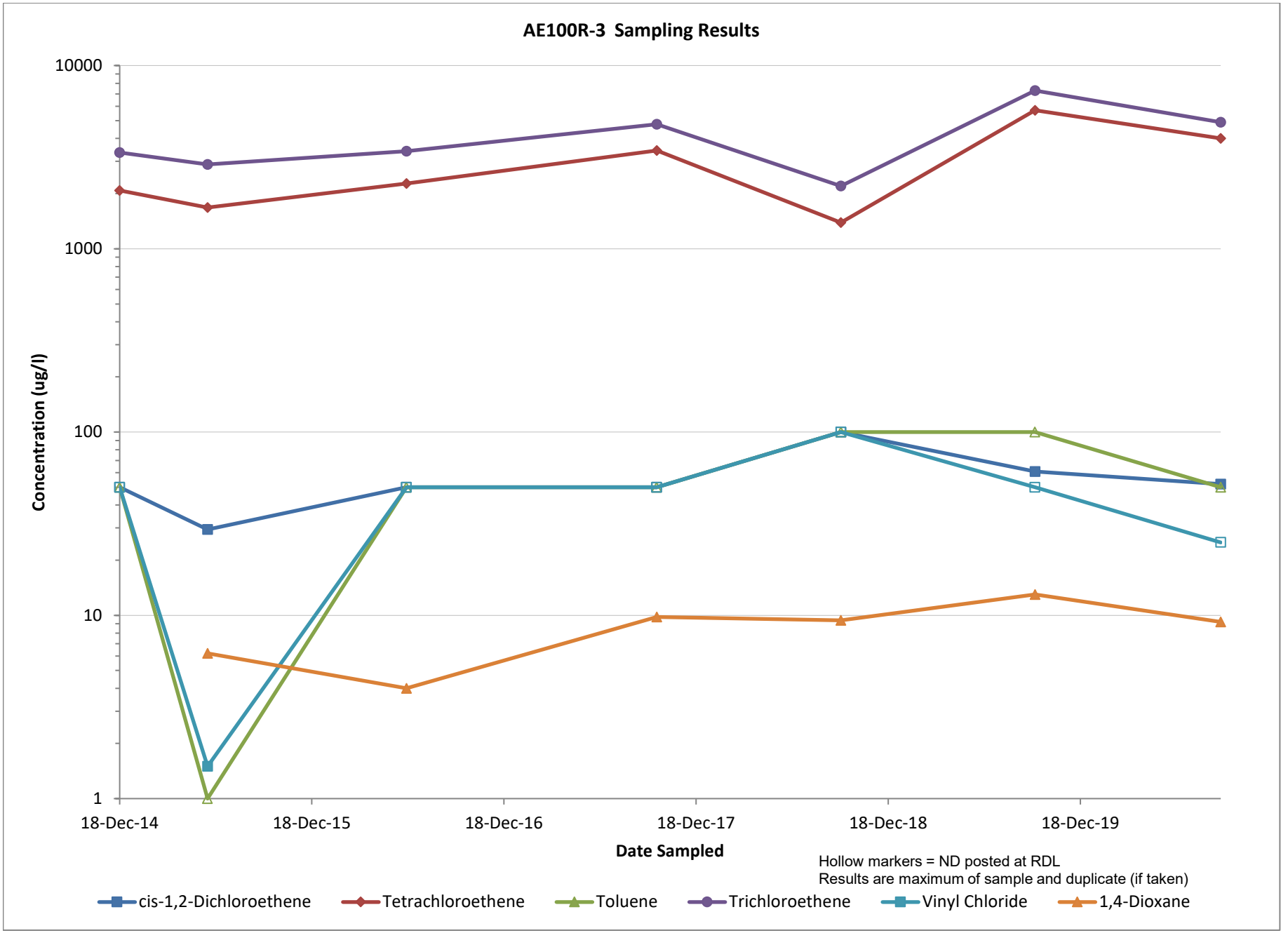

TRC-301R-4 Sampling Results
100
10
1
0.1
Concentration (ug/l)
16-Dec-14
16-Dec-15
15-Dec-16
16-Dec-17
16-Dec-18
16-Dec-19
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
Benzene
Ethylbenzene
Toluene
Xylenes (Total)
Methyl Tert-Butyl Ether
Naphthalene
Calculated VPH

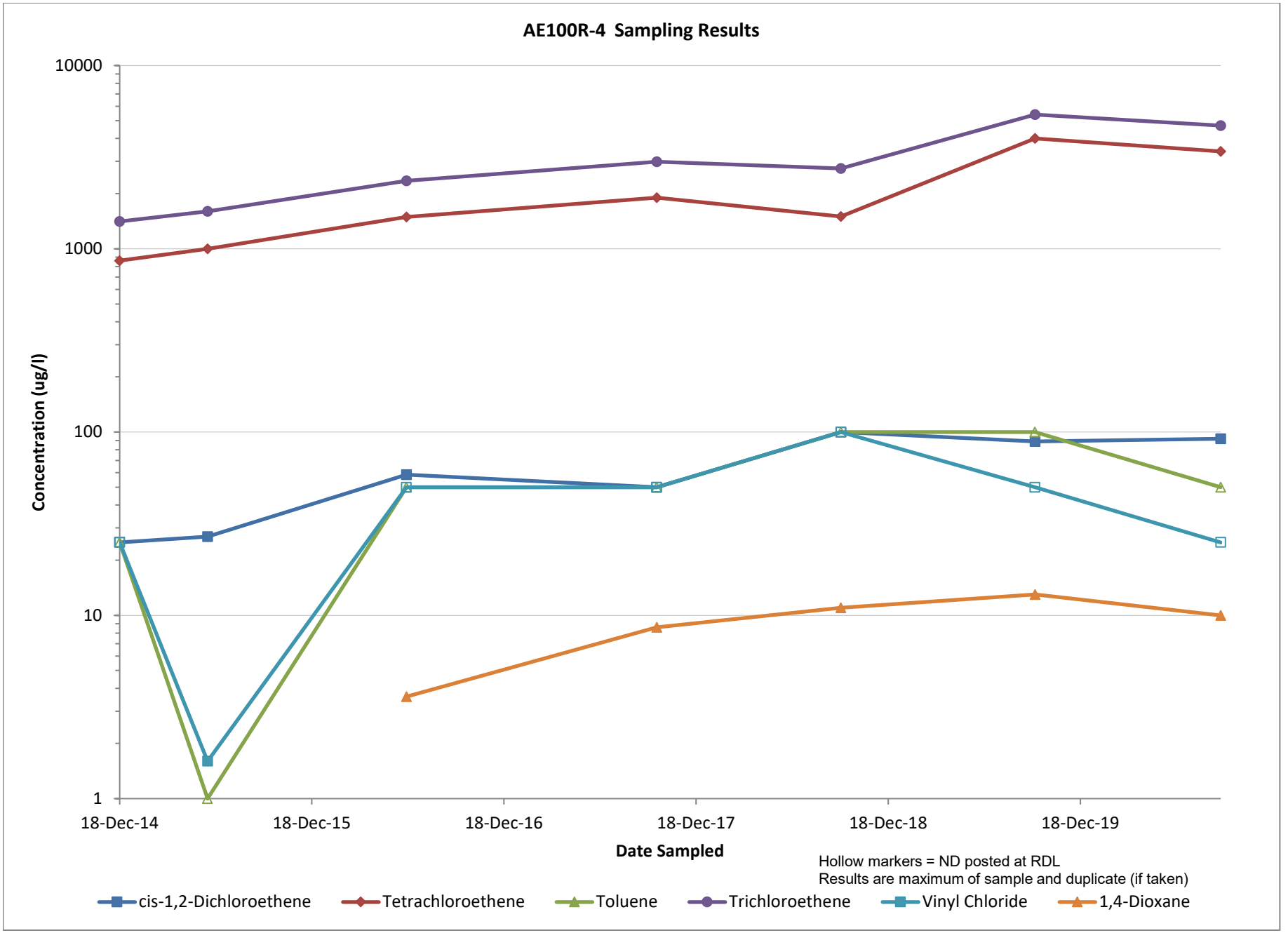

TRC-401R Sampling Results
1000
100
10
1
0.1
Concentration (ug/l)
22-Sep-05
22-Sep-07
22-Sep-09
22-Sep-11
22-Sep-13
22-Sep-15
22-Sep-17
22-Sep-19
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
Benzene
Ethylbenzene
Toluene
Xylenes (Total)
Methyl Tert-Butyl Ether
Naphthalene
Calculated VPH

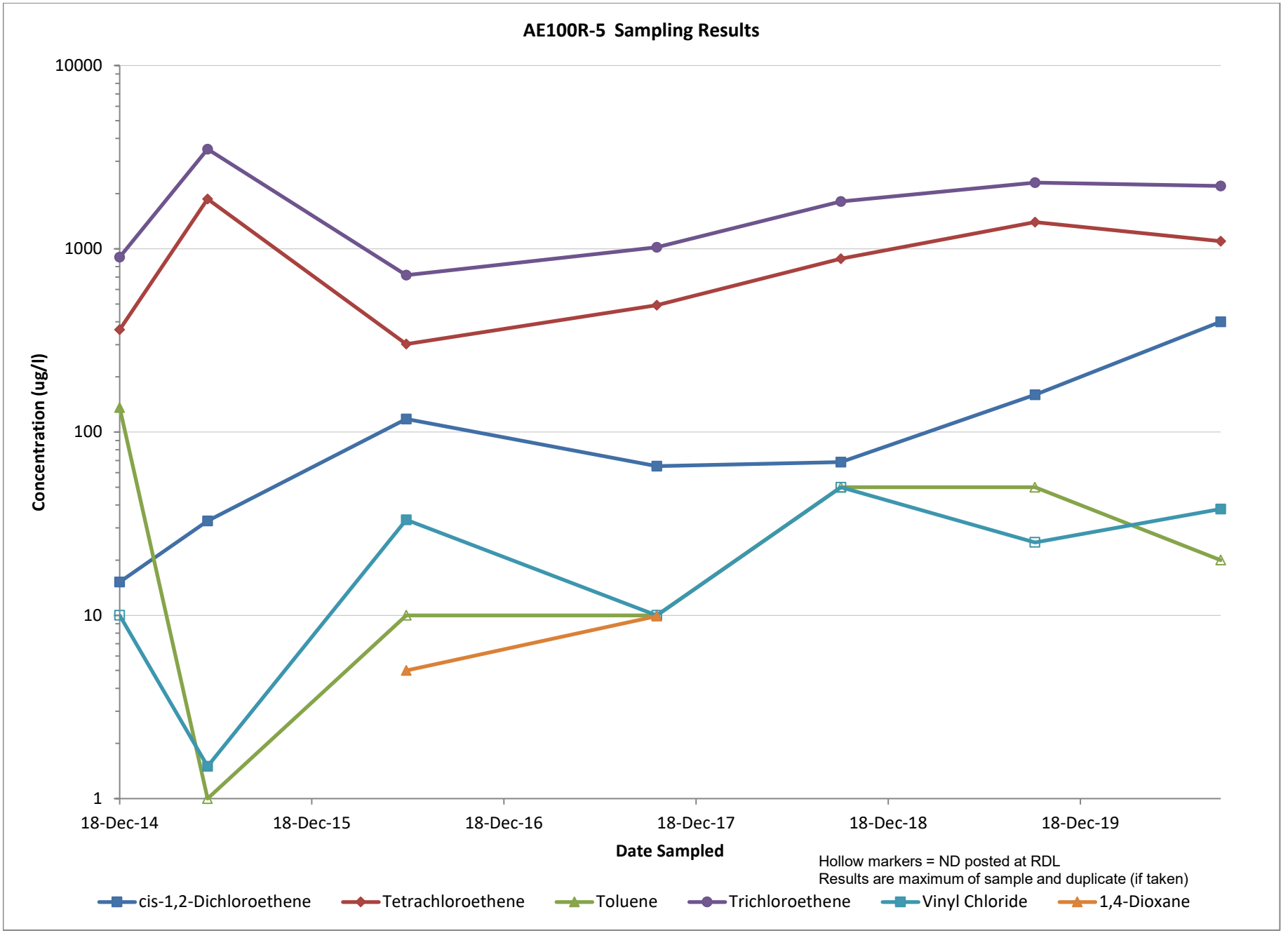

AE03 Sampling Results
10
1
0.1
Concentration (ug/l)
24-Sep-12
24-Sep-13
24-Sep-14
25-Sep-15
24-Sep-16
24-Sep-17
24-Sep-18
25-Sep-19
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
cis-1,2-Dichloroethene
Tetrachloroethene
Toluene
Trichloroethene
Vinyl Chloride
1,4-Dioxane

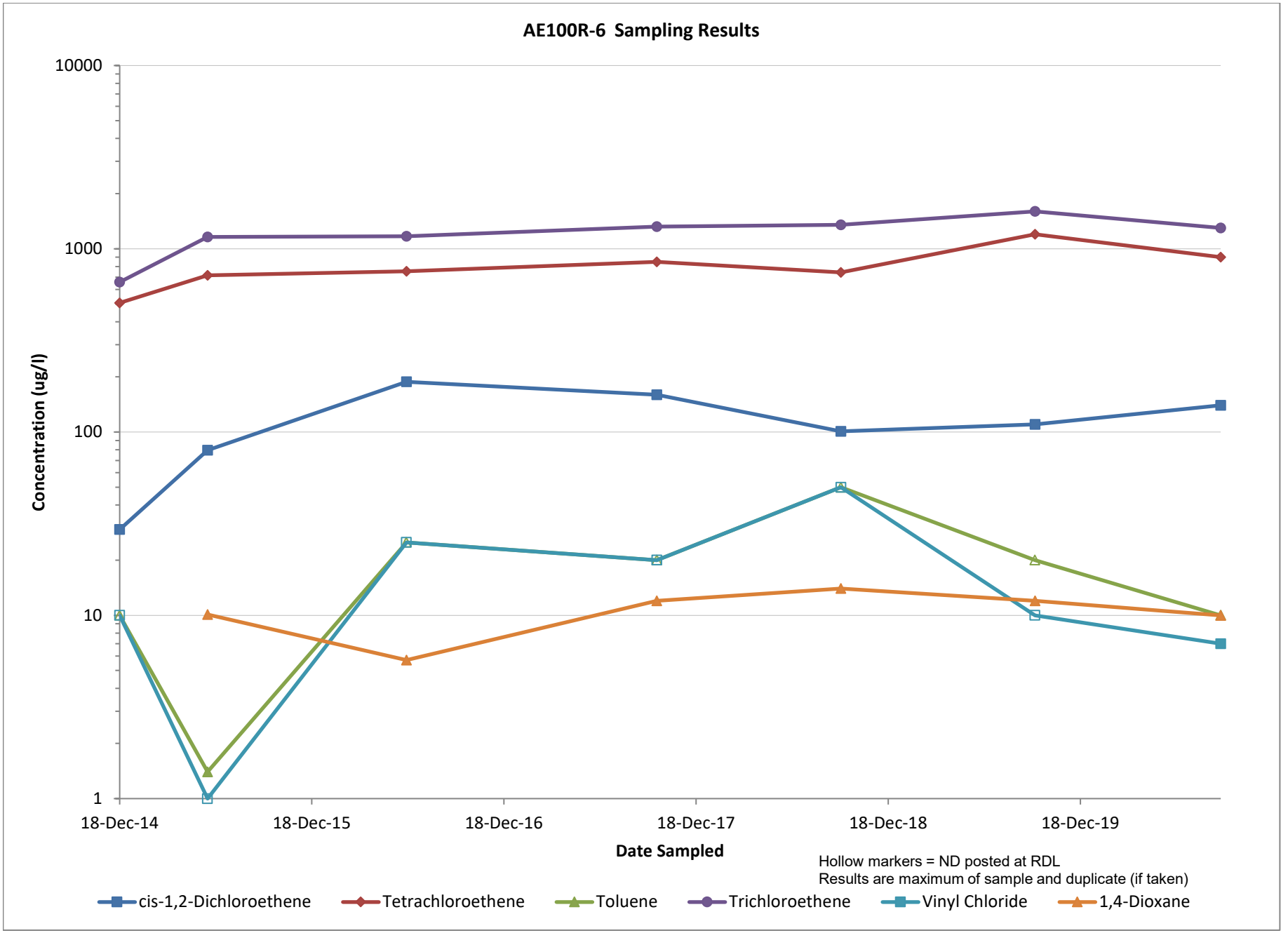

AE04 Sampling Results
10
1
0.1
Concentration (ug/l)
24-Sep-12
24-Sep-13
24-Sep-14
25-Sep-15
24-Sep-16
24-Sep-17
24-Sep-18
25-Sep-19
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
cis-1,2-Dichloroethene
Tetrachloroethene
Toluene
Trichloroethene
Vinyl Chloride
1,4-Dioxane

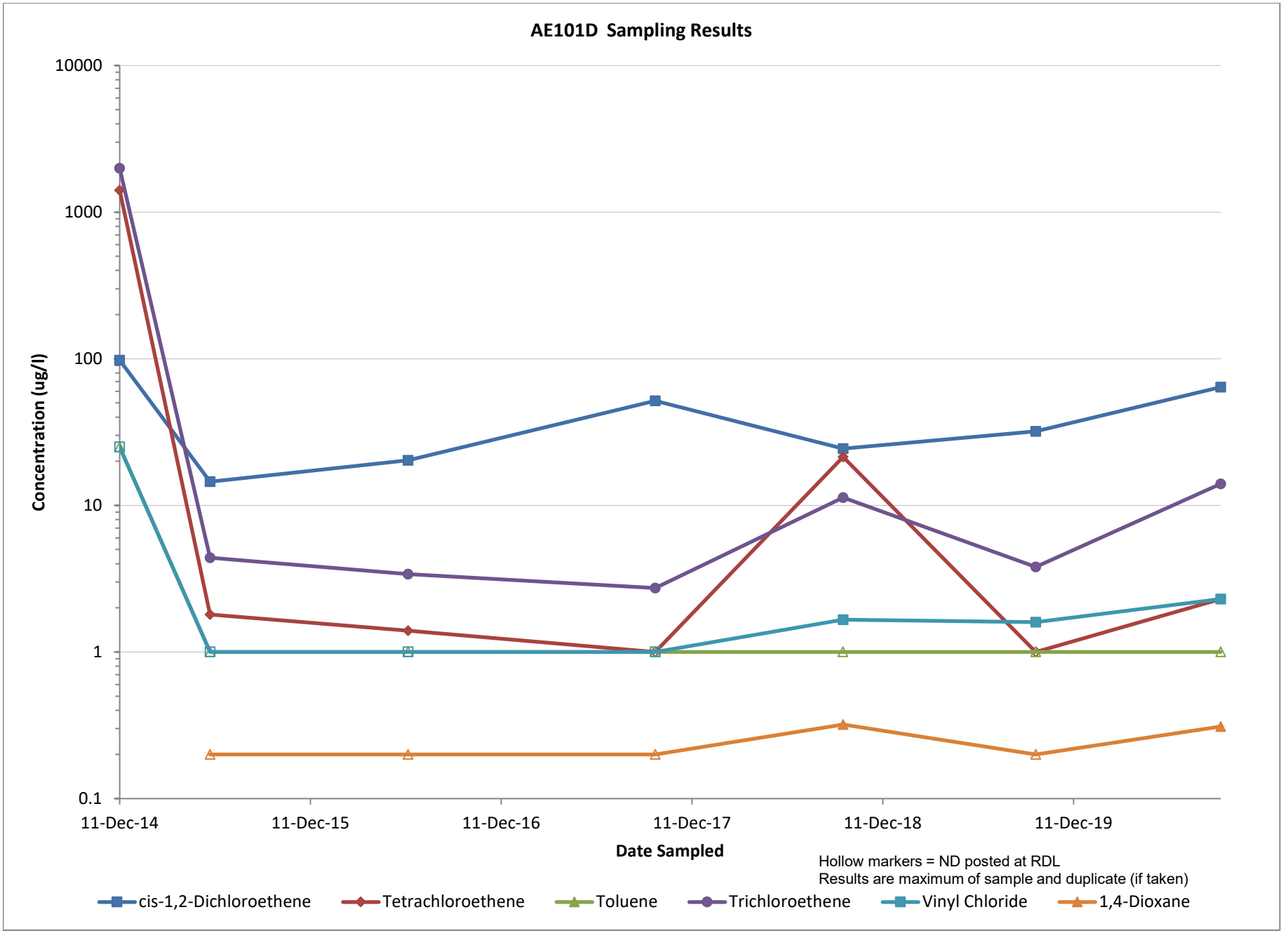

AE100R-1 Sampling Results
1000
100
10
1
0.1
Concentration (ug/l)
18-Dec-14
18-Dec-15
18-Dec-16
18-Dec-17
18-Dec-18
18-Dec-19
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
cis-1,2-Dichloroethene
Tetrachloroethene
Toluene
Trichloroethene
Vinyl Chloride
1,4-Dioxane

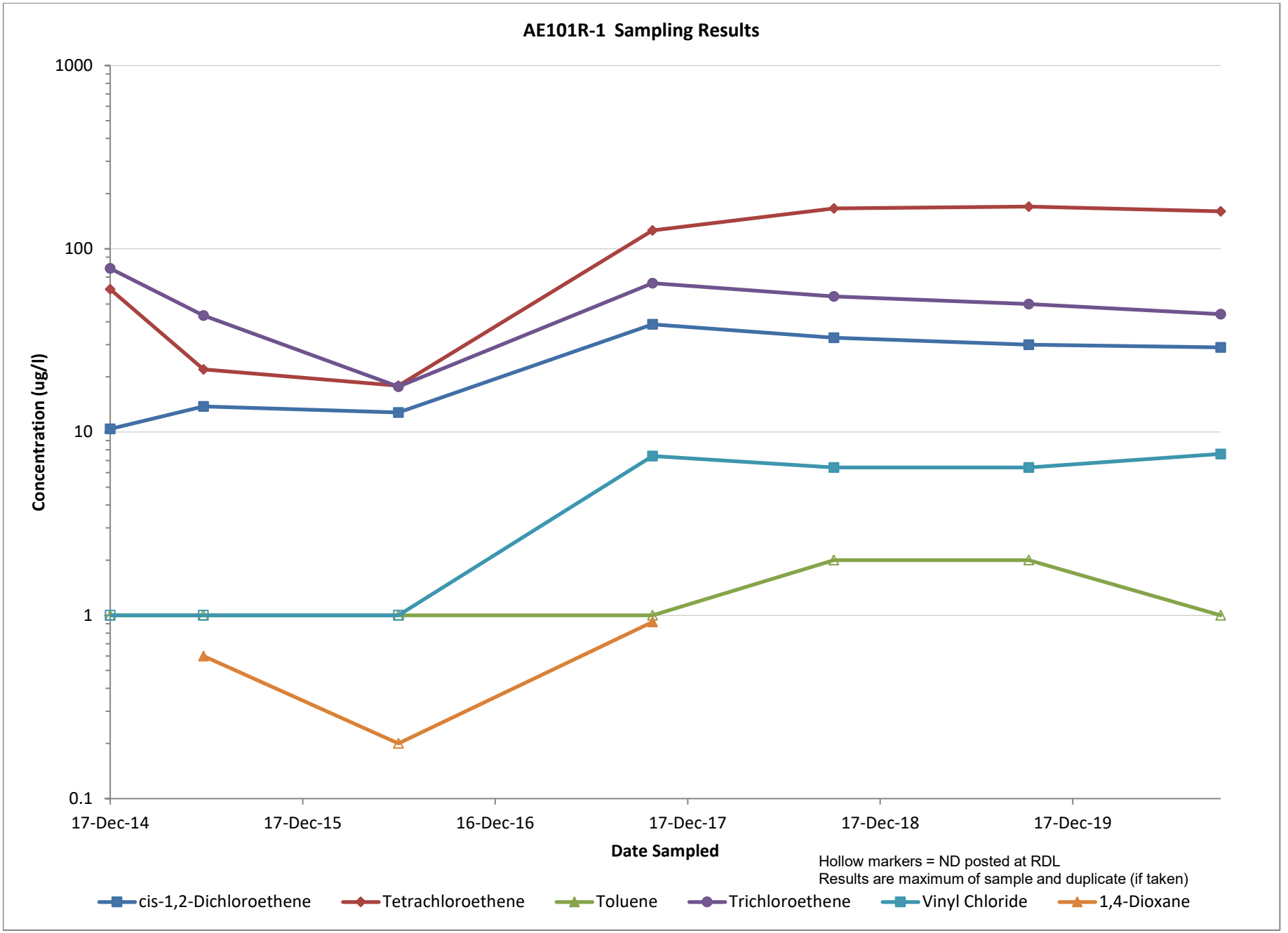

AE100R-3 Sampling Results
10000
1000
100
10
1
Concentration (ug/l)
18-Dec-14
18-Dec-15
18-Dec-16
18-Dec-17
18-Dec-18
18-Dec-19
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
cis-1,2-Dichloroethene
Tetrachloroethene
Toluene
Trichloroethene
Vinyl Chloride
1,4-Dioxane

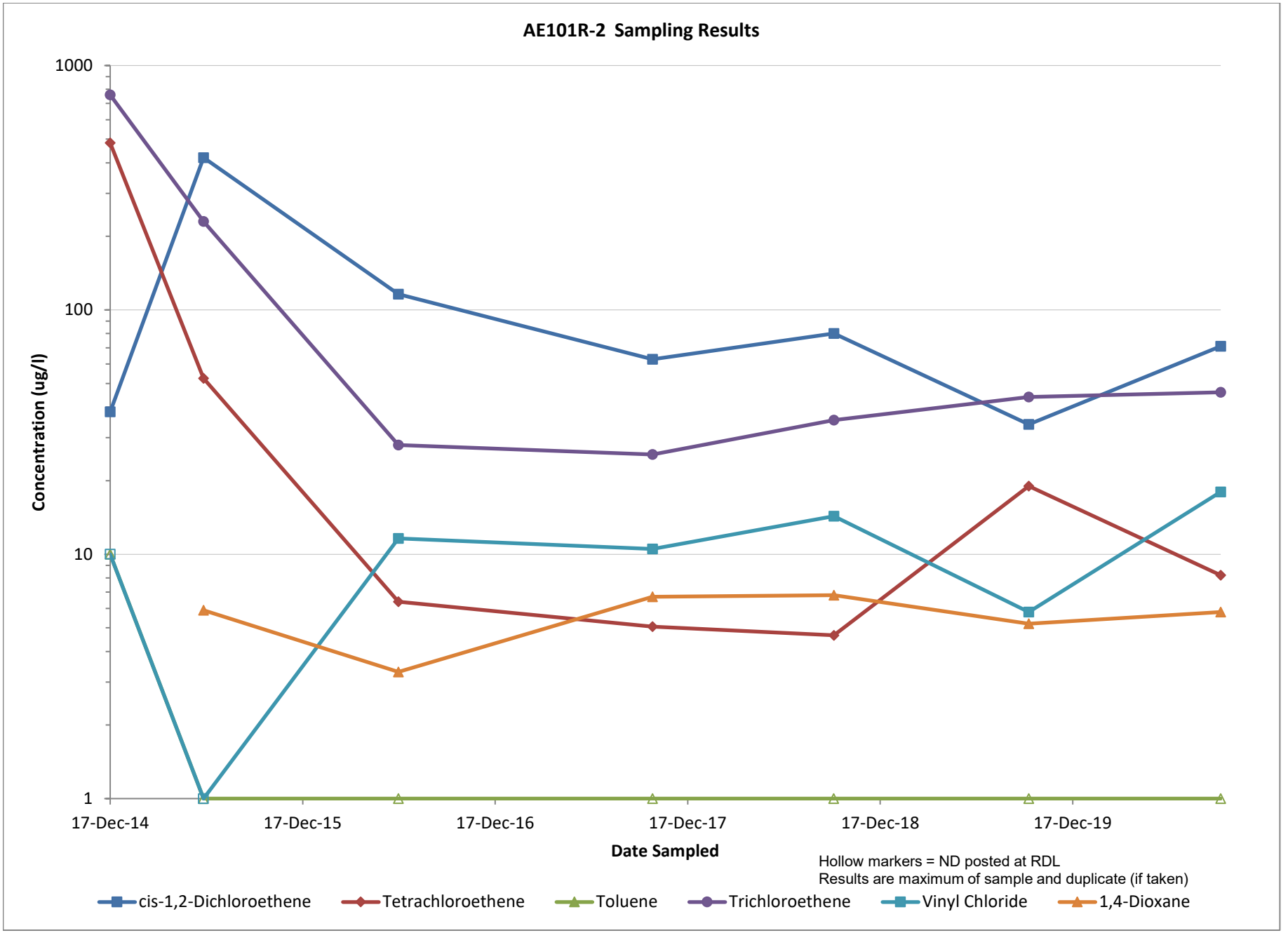

AE100R-4 Sampling Results
10000
1000
100
10
1
Concentration (ug/l)
18-Dec-14
18-Dec-15
18-Dec-16
18-Dec-17
18-Dec-18
18-Dec-19
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
cis-1,2-Dichloroethene
Tetrachloroethene
Toluene
Trichloroethene
Vinyl Chloride
1,4-Dioxane

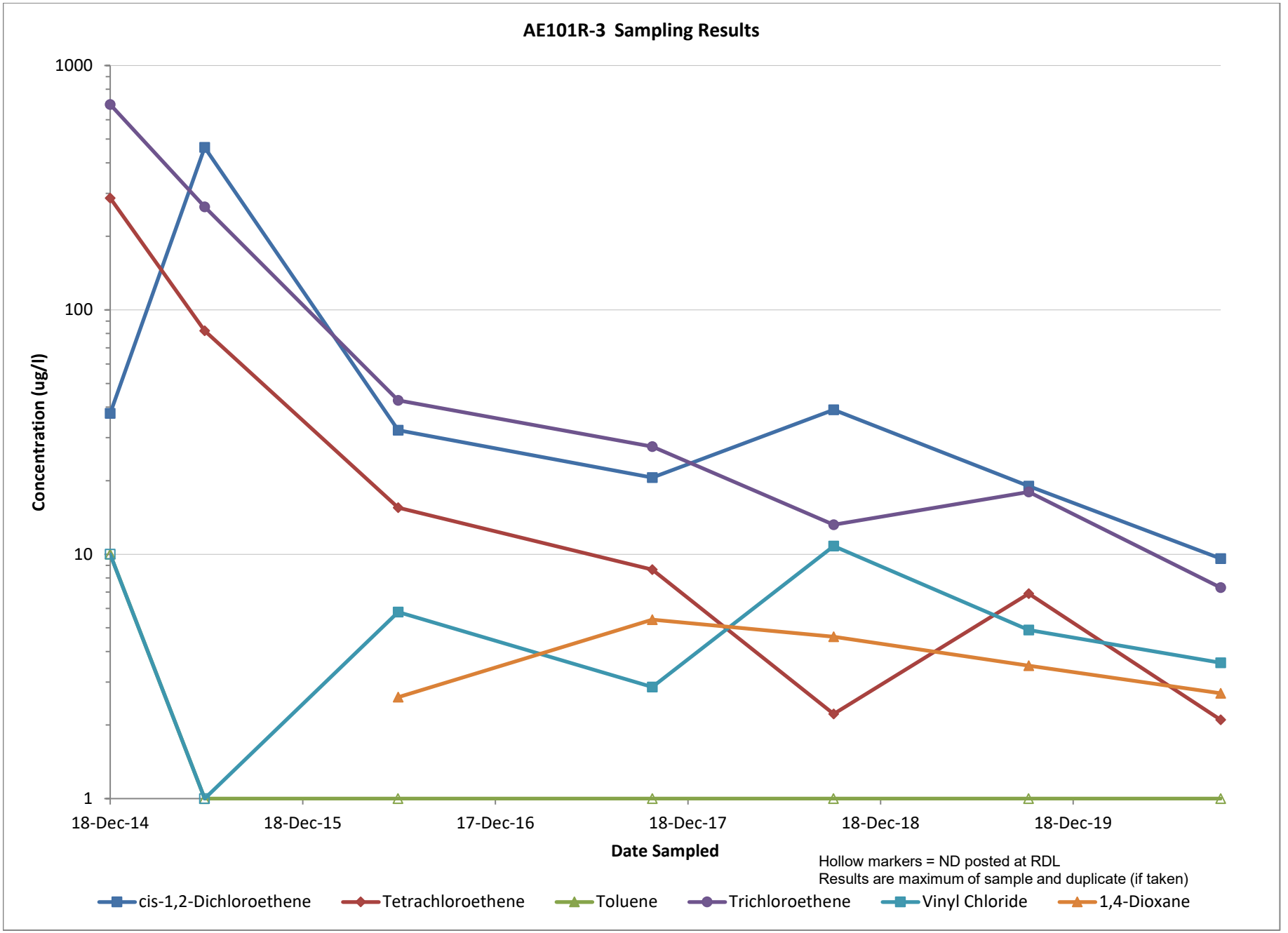

AE100R-5 Sampling Results
10000
1000
100
10
1
Concentration (ug/l)
18-Dec-14
18-Dec-15
18-Dec-16
18-Dec-17
18-Dec-18
18-Dec-19
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
cis-1,2-Dichloroethene
Tetrachloroethene
Toluene
Trichloroethene
Vinyl Chloride
1,4-Dioxane

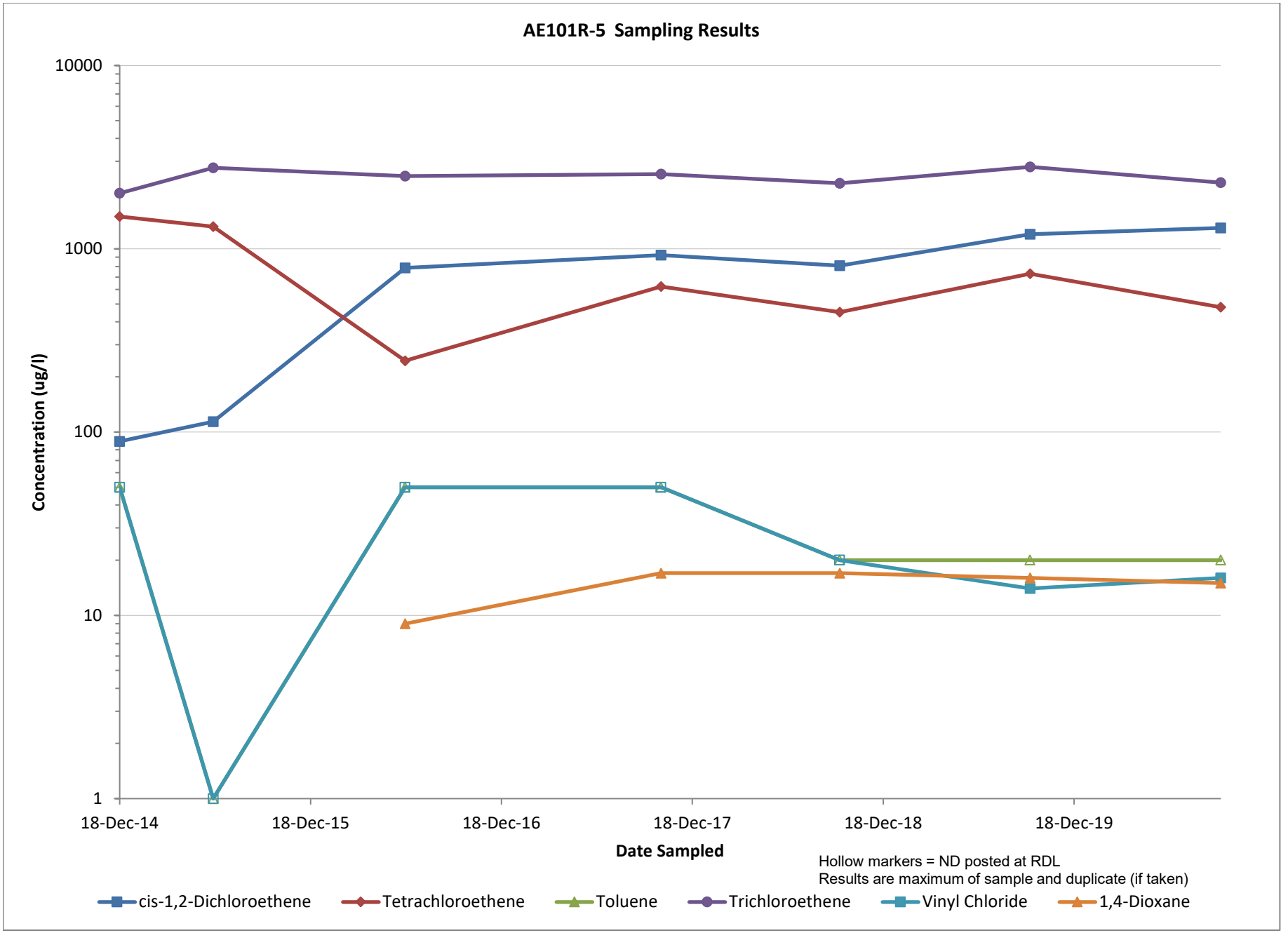

AE100R-6 Sampling Results
10000
1000
100
10
1
Concentration (ug/l)
18-Dec-14
18-Dec-15
18-Dec-16
18-Dec-17
18-Dec-18
18-Dec-19
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
cis-1,2-Dichloroethene
Tetrachloroethene
Toluene
Trichloroethene
Vinyl Chloride
1,4-Dioxane

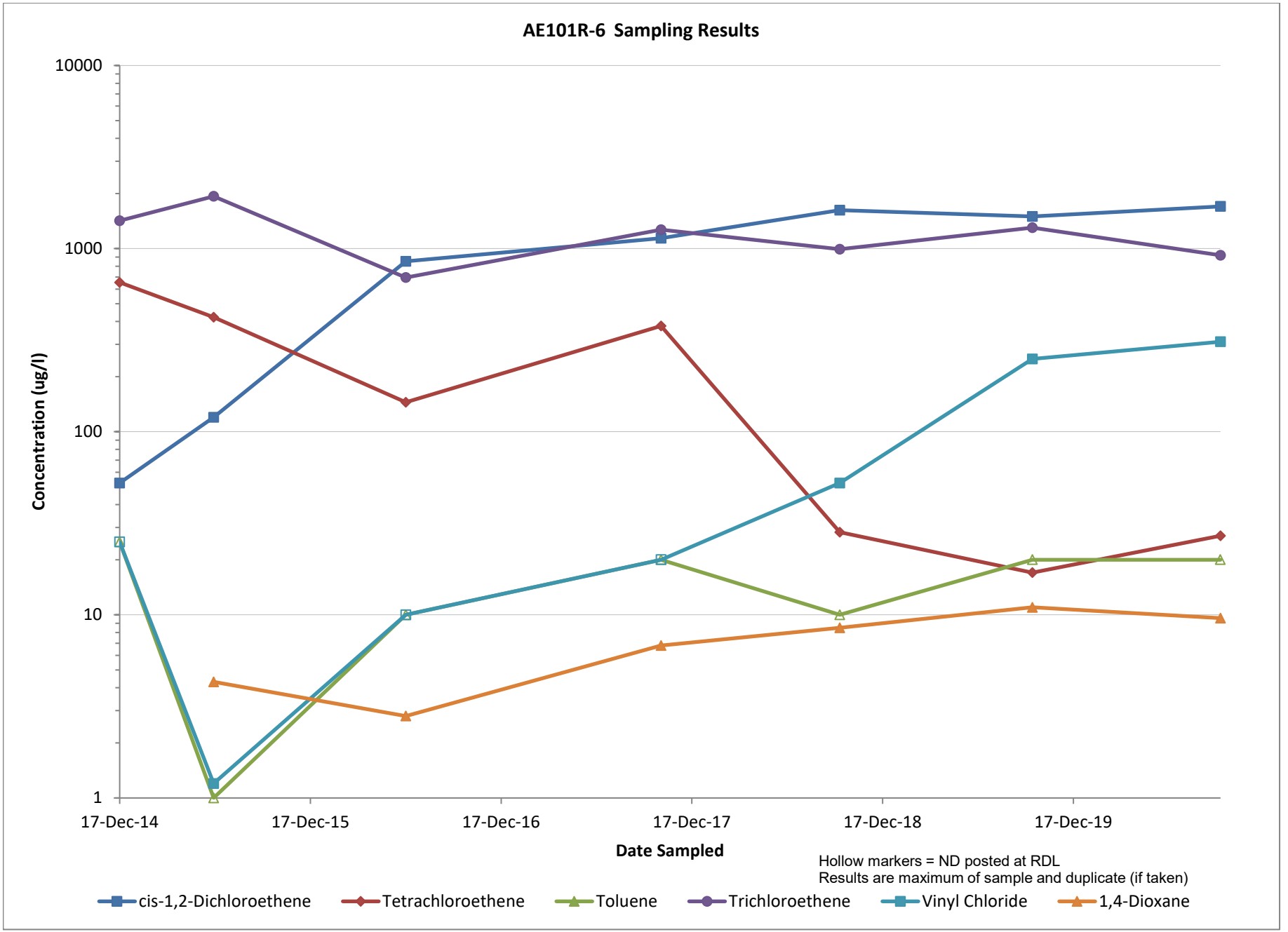

AE101D Sampling Results
10000
1000
100
10
1
0.1
Concentration (ug/l)
11-Dec-14
11-Dec-15
11-Dec-16
11-Dec-17
11-Dec-18
11-Dec-19
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
cis-1,2-Dichloroethene
Tetrachloroethene
Toluene
Trichloroethene
Vinyl Chloride
1,4-Dioxane

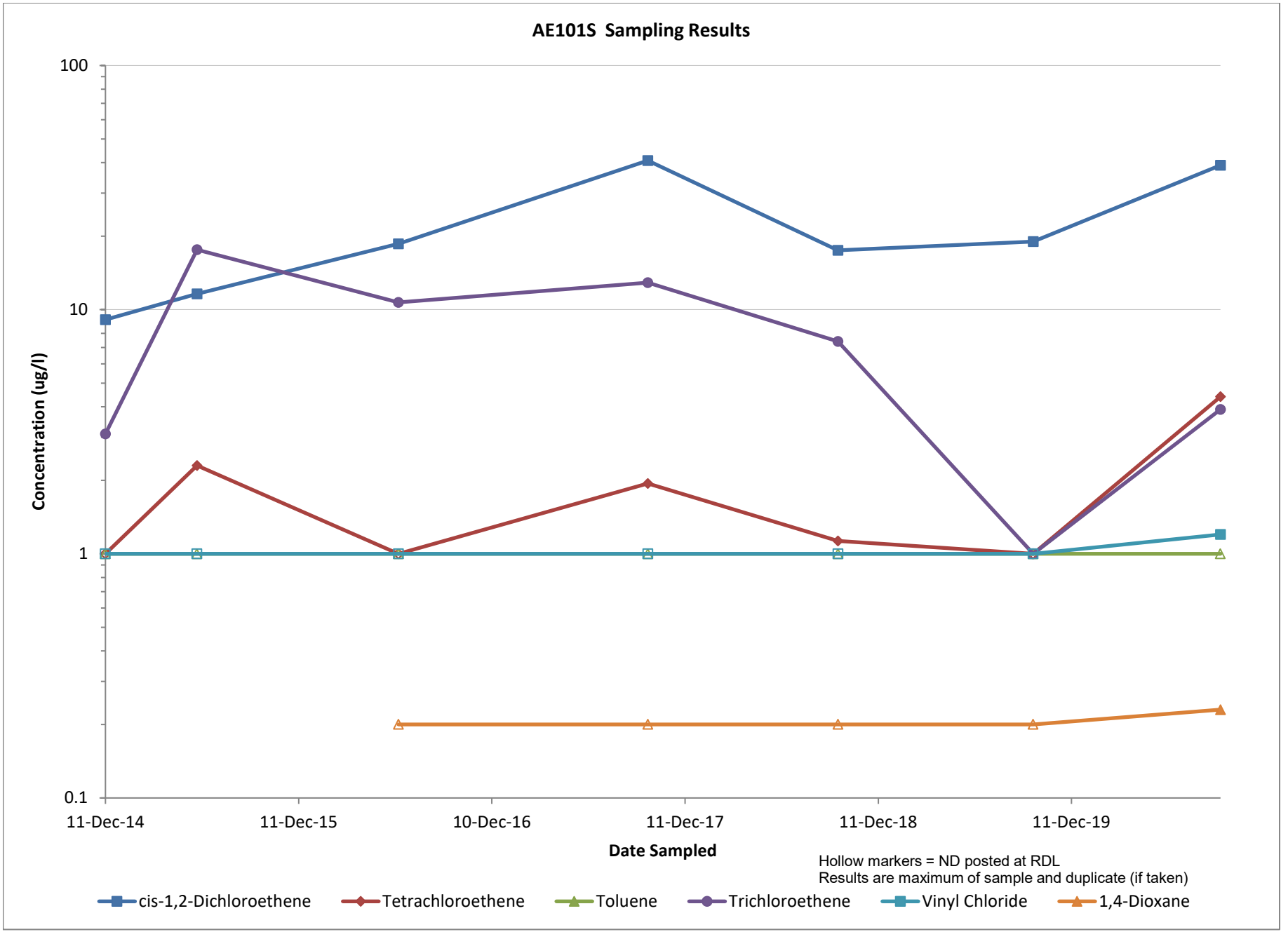

AE101R-1 Sampling Results
1000
100
10
1
0.1
Concentration (ug/l)
17-Dec-14
17-Dec-15
16-Dec-16
17-Dec-17
17-Dec-18
17-Dec-19
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
cis-1,2-Dichloroethene
Tetrachloroethene
Toluene
Trichloroethene
Vinyl Chloride
1,4-Dioxane

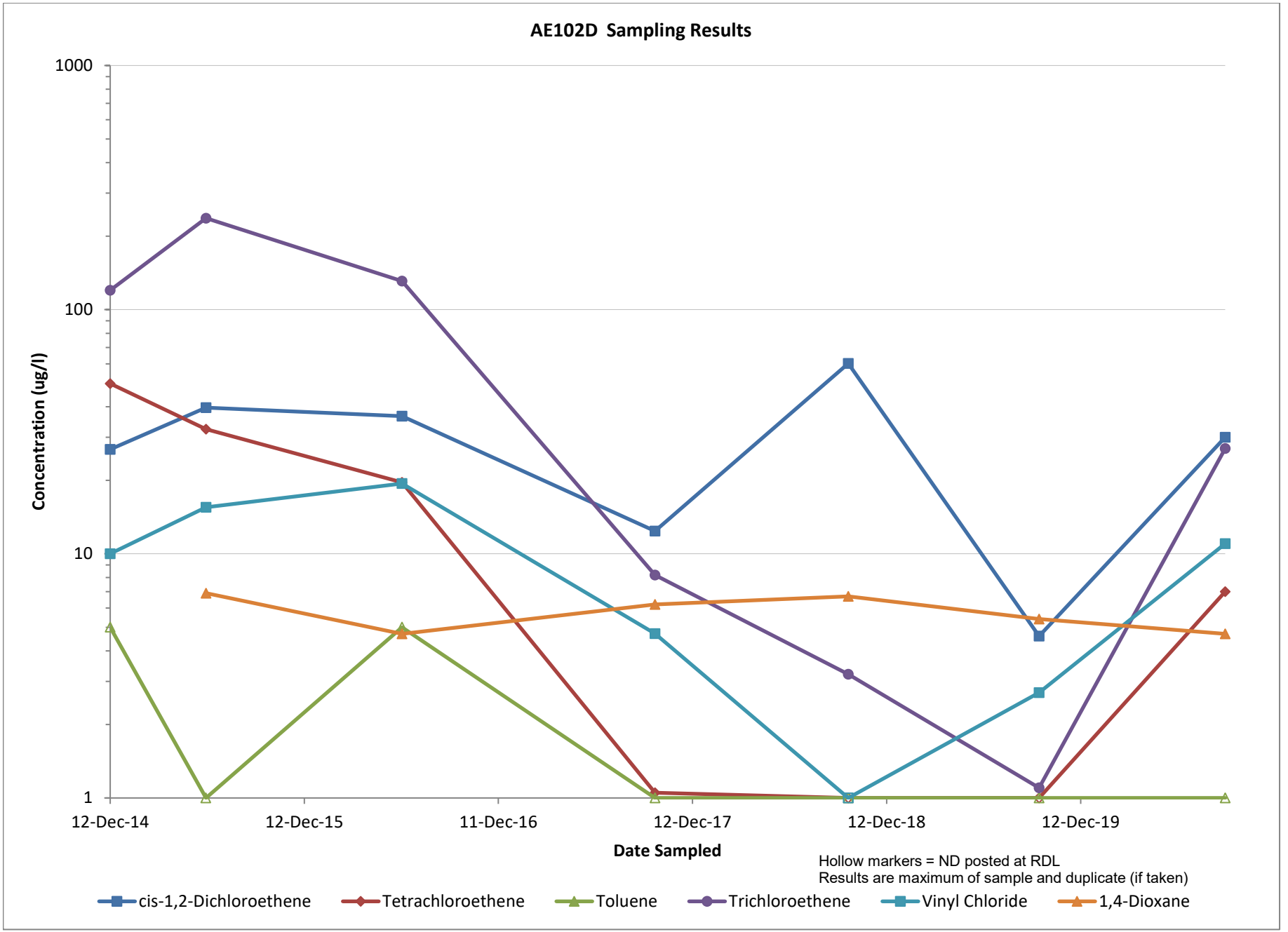

AE101R-2 Sampling Results
1000
100
10
1
Concentration (ug/l)
17-Dec-14
17-Dec-15
17-Dec-16
17-Dec-17
17-Dec-18
17-Dec-19
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
cis-1,2-Dichloroethene
Tetrachloroethene
Toluene
Trichloroethene
Vinyl Chloride
1,4-Dioxane

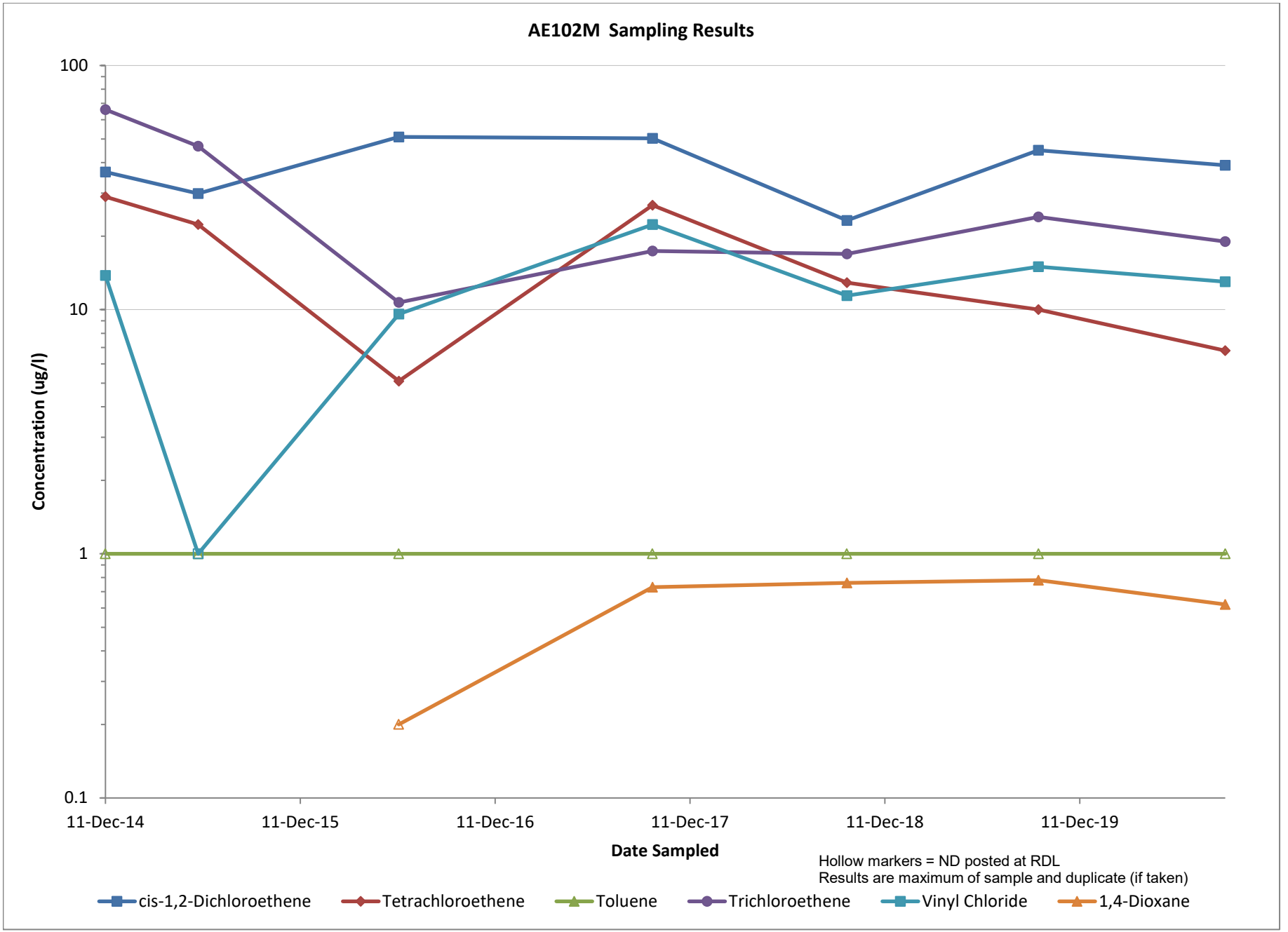

AE101R-3 Sampling Results
1000
100
10
1
Concentration (ug/l)
18-Dec-14
18-Dec-15
17-Dec-16
18-Dec-17
18-Dec-18
18-Dec-19
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
cis-1,2-Dichloroethene
Tetrachloroethene
Toluene
Trichloroethene
Vinyl Chloride
1,4-Dioxane

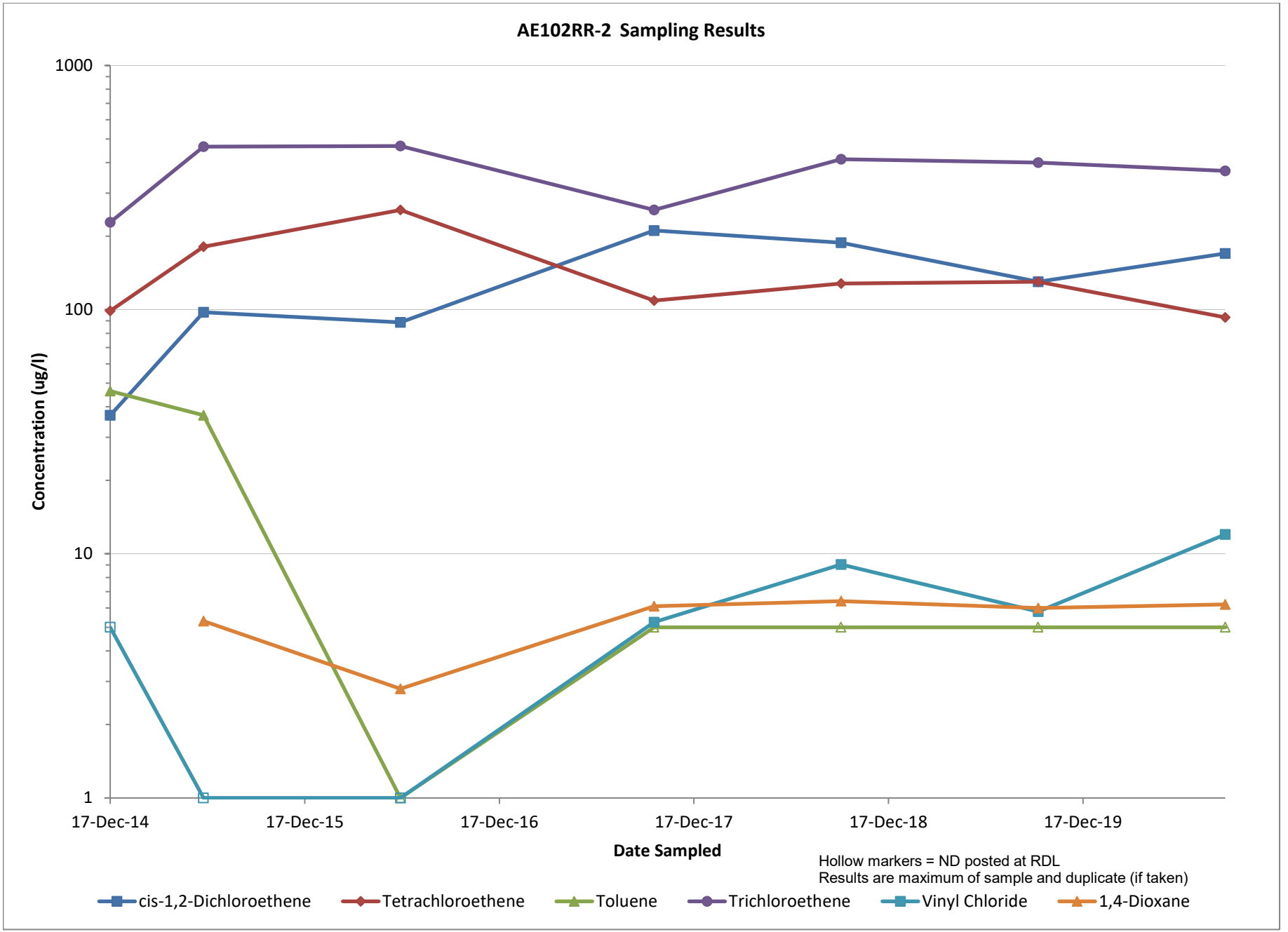

AE101R-5 Sampling Results
10000
1000
100
10
1
Concentration (ug/l)
18-Dec-14
18-Dec-15
18-Dec-16
18-Dec-17
18-Dec-18
18-Dec-19
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
cis-1,2-Dichloroethene
Tetrachloroethene
Toluene
Trichloroethene
Vinyl Chloride
1,4-Dioxane

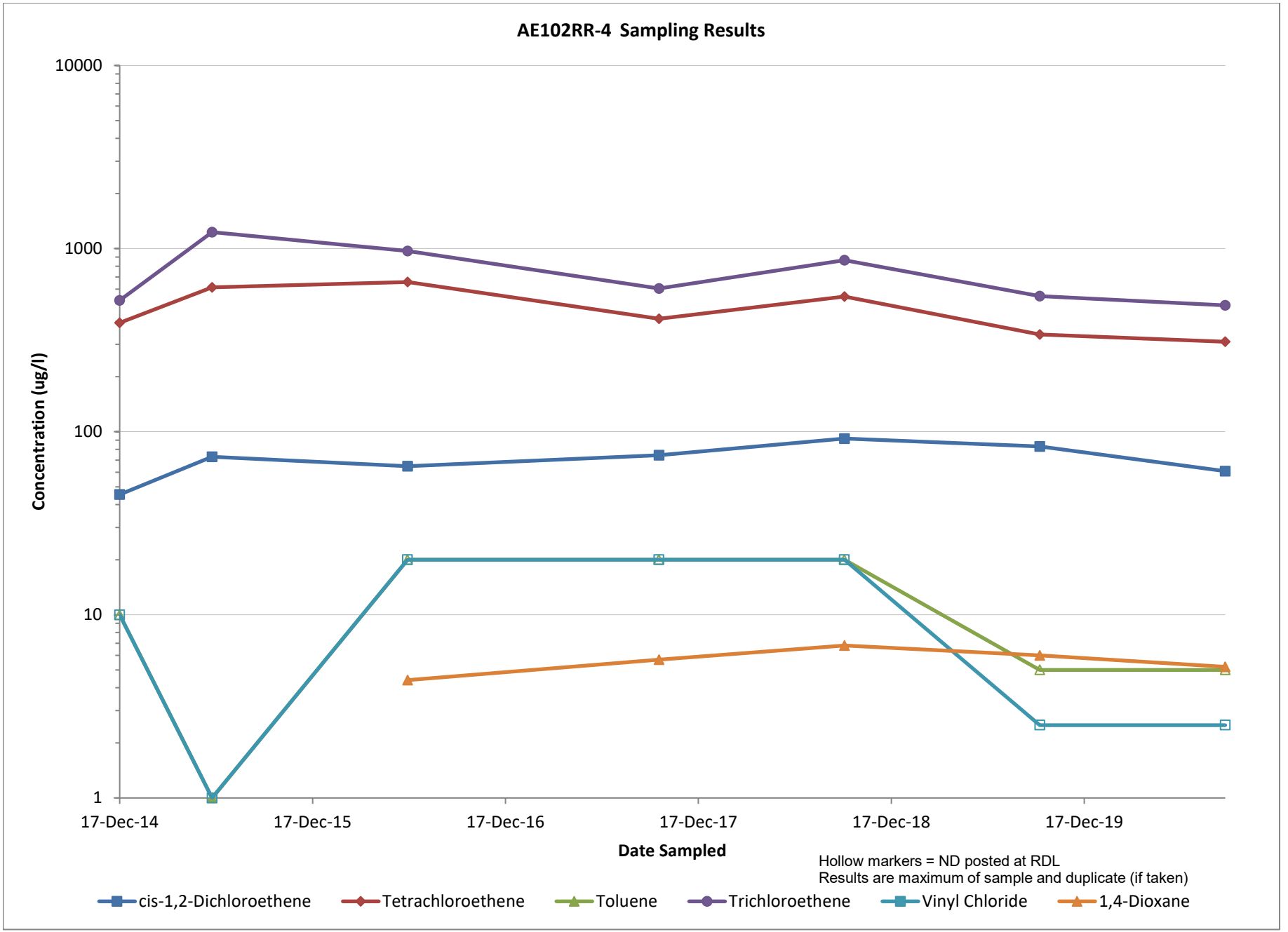

AE101R-6 Sampling Results
10000
1000
100
10
1
Concentration (ug/l)
17-Dec-14
17-Dec-15
17-Dec-16
17-Dec-17
17-Dec-18
17-Dec-19
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
cis-1,2-Dichloroethene
Tetrachloroethene
Toluene
Trichloroethene
Vinyl Chloride
1,4-Dioxane

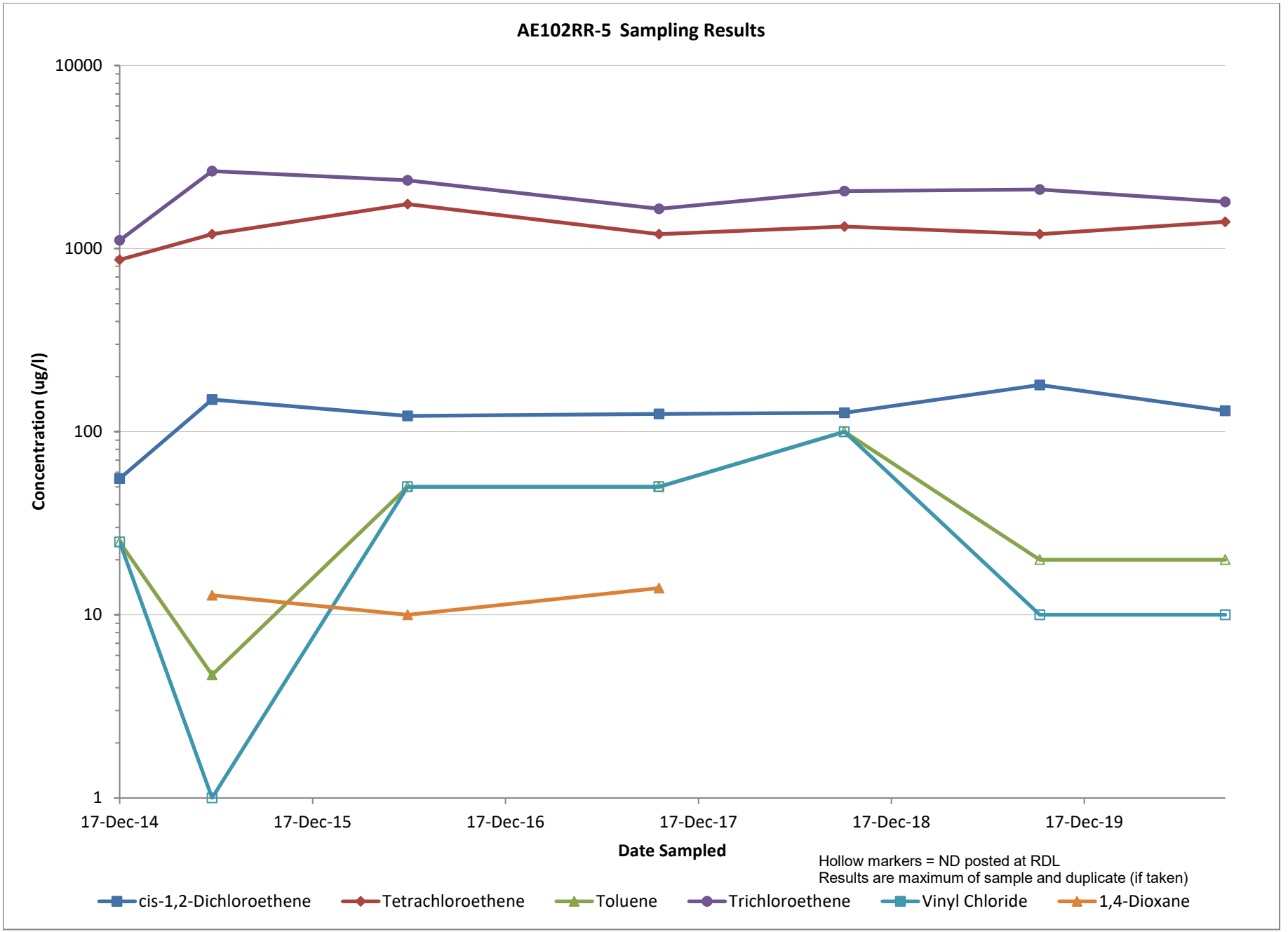

AE101S Sampling Results
100
10
1
0.1
Concentration (ug/l)
11-Dec-14
11-Dec-15
10-Dec-16
11-Dec-17
11-Dec-18
11-Dec-19
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
cis-1,2-Dichloroethene
Tetrachloroethene
Toluene
Trichloroethene
Vinyl Chloride
1,4-Dioxane

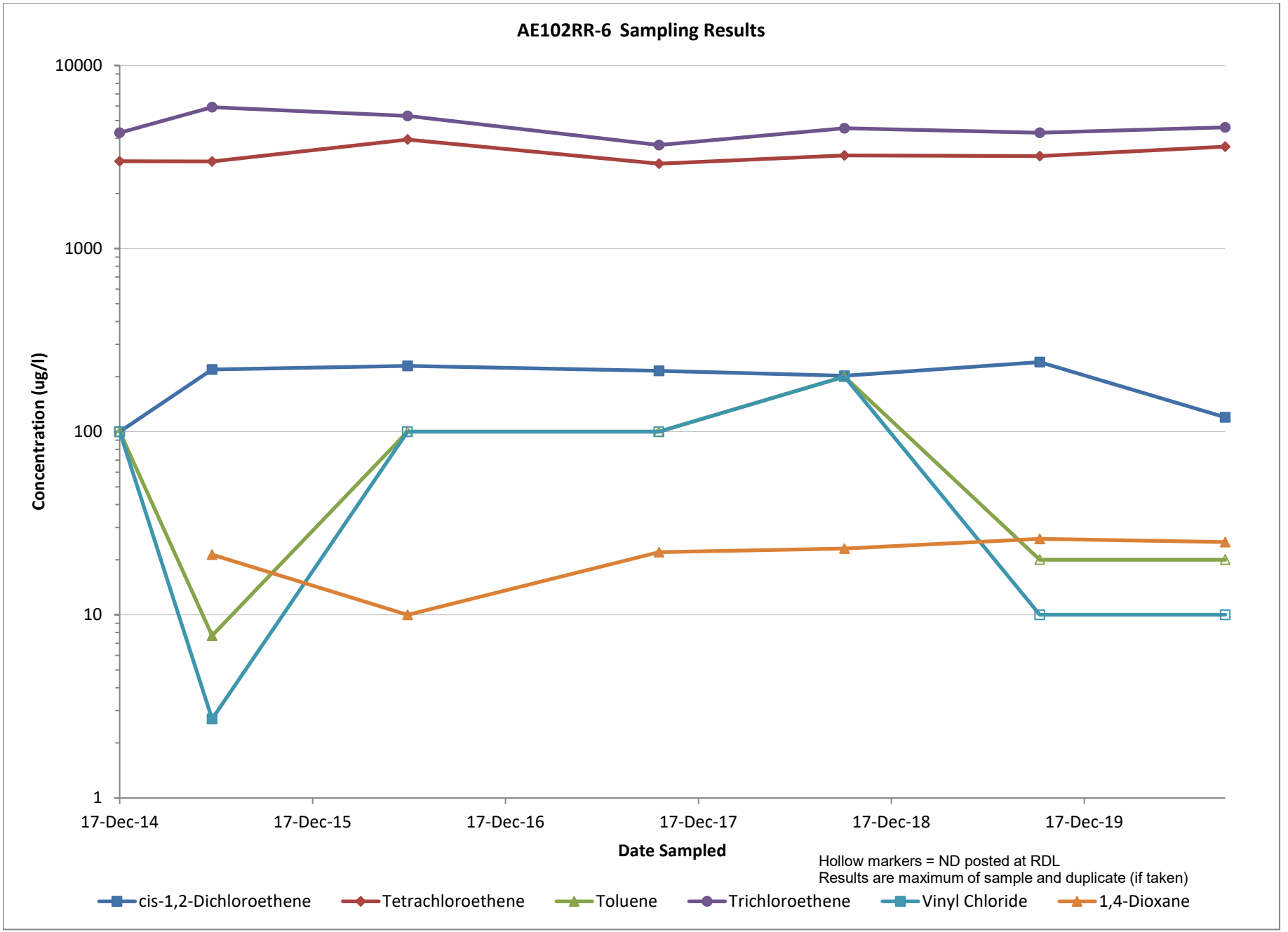

AE102D Sampling Results
1000
100
10
1
Concentration (ug/l)
12-Dec-14
12-Dec-15
11-Dec-16
12-Dec-17
12-Dec-18
12-Dec-19
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
cis-1,2-Dichloroethene
Tetrachloroethene
Toluene
Trichloroethene
Vinyl Chloride
1,4-Dioxane

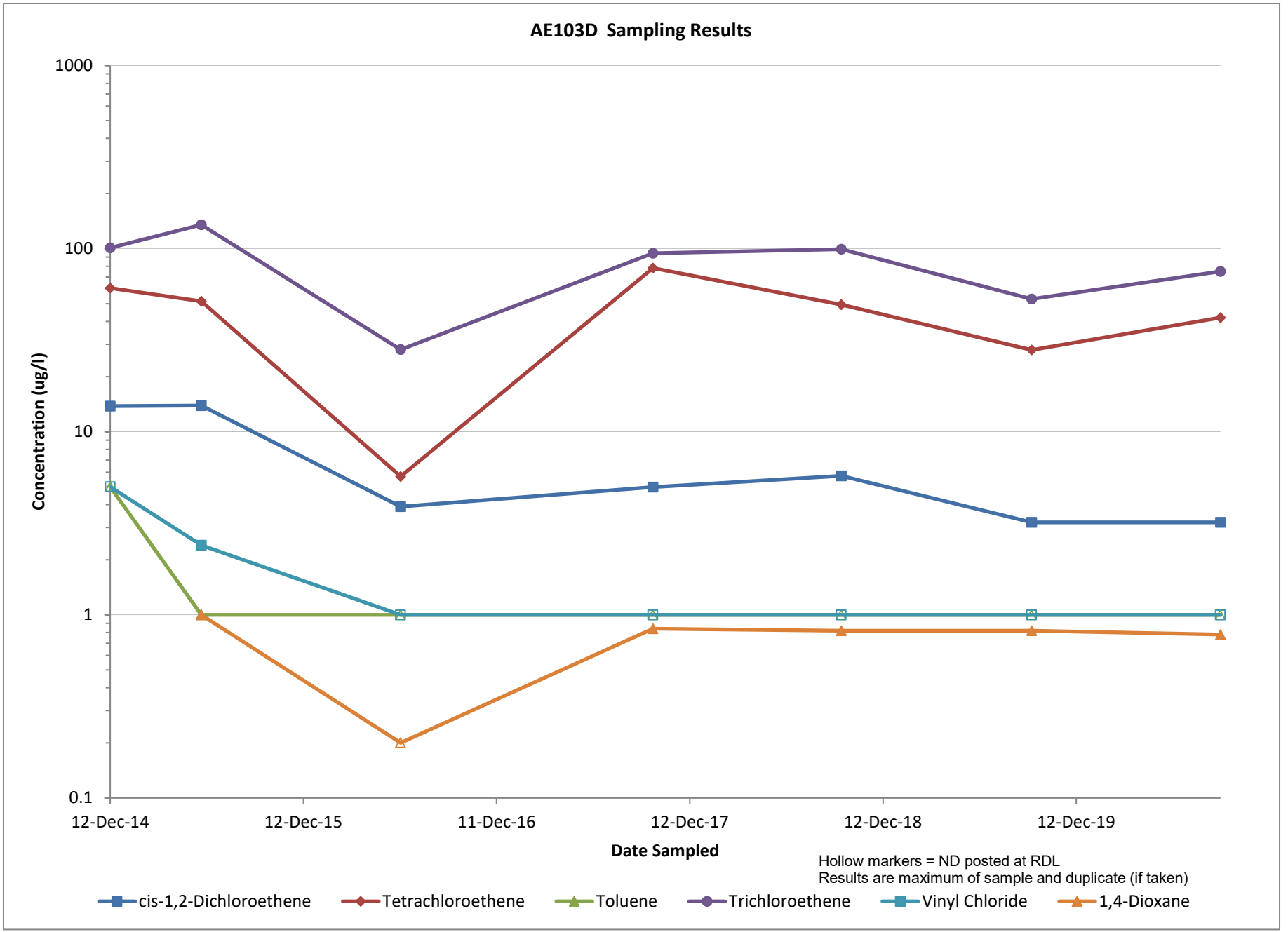

AE102M Sampling Results
100
10
1
0.1
Concentration (ug/l)
11-Dec-14
11-Dec-15
11-Dec-16
11-Dec-17
11-Dec-18
11-Dec-19
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
cis-1,2-Dichloroethene
Tetrachloroethene
Toluene
Trichloroethene
Vinyl Chloride
1,4-Dioxane

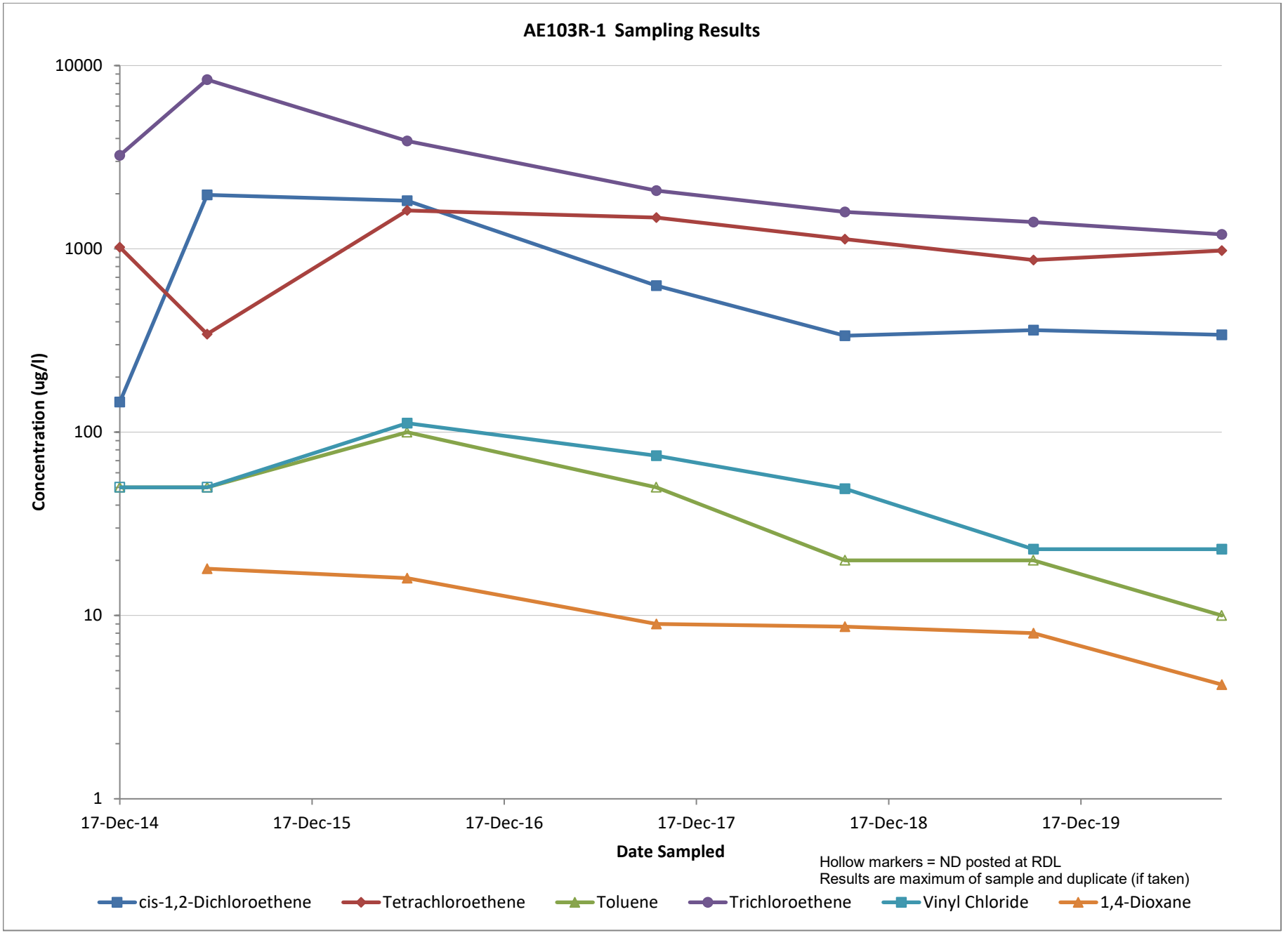

AE102RR-2 Sampling Results
1000
100
10
1
Concentration (ug/l)
17-Dec-14
17-Dec-15
17-Dec-16
17-Dec-17
17-Dec-18
17-Dec-19
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
cis-1,2-Dichloroethene
Tetrachloroethene
Toluene
Trichloroethene
Vinyl Chloride
1,4-Dioxane

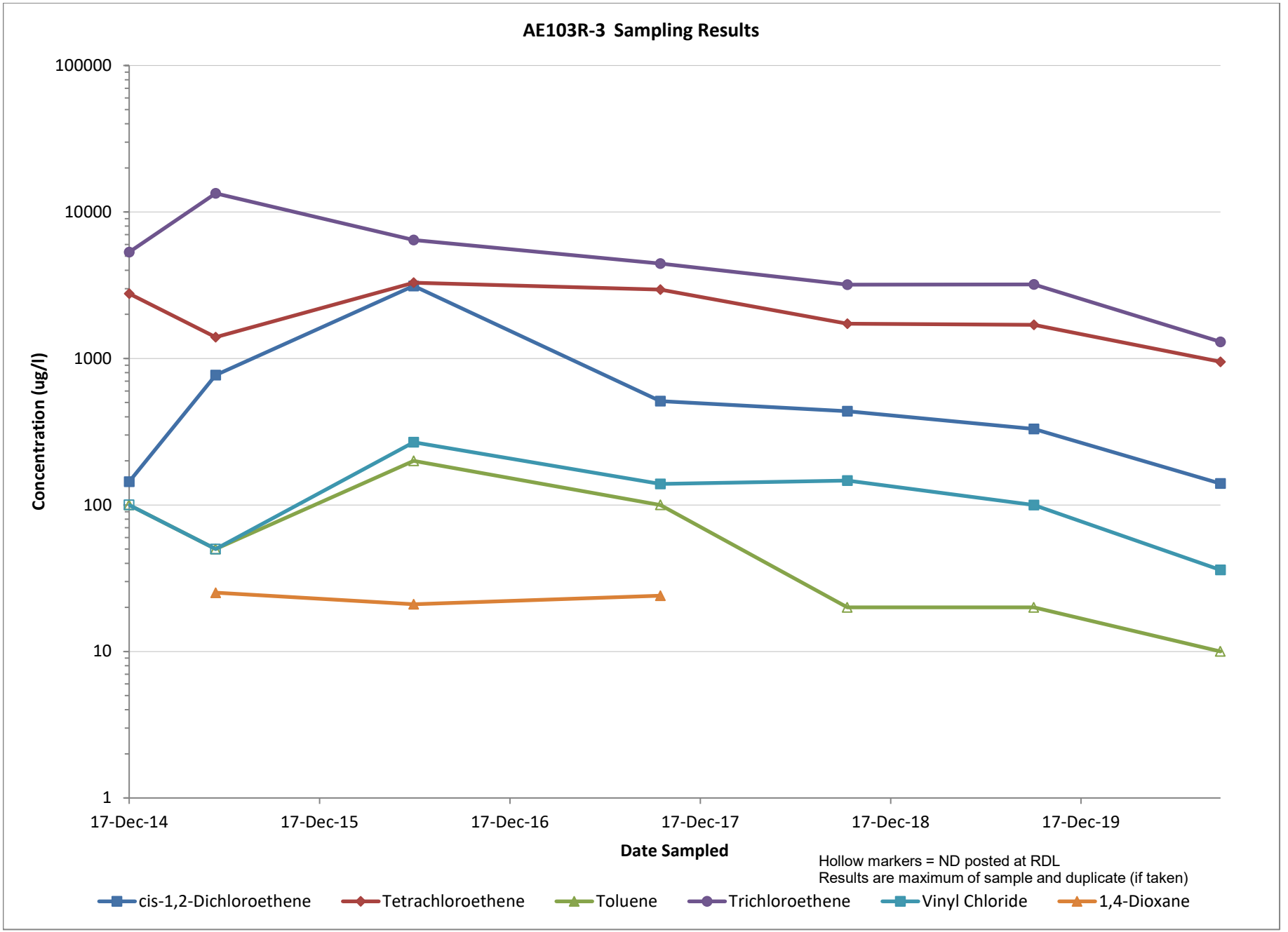

AE102RR-4 Sampling Results
10000
1000
100
10
1
Concentration (ug/l)
17-Dec-14
17-Dec-15
17-Dec-16
17-Dec-17
17-Dec-18
17-Dec-19
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
cis-1,2-Dichloroethene
Tetrachloroethene
Toluene
Trichloroethene
Vinyl Chloride
1,4-Dioxane

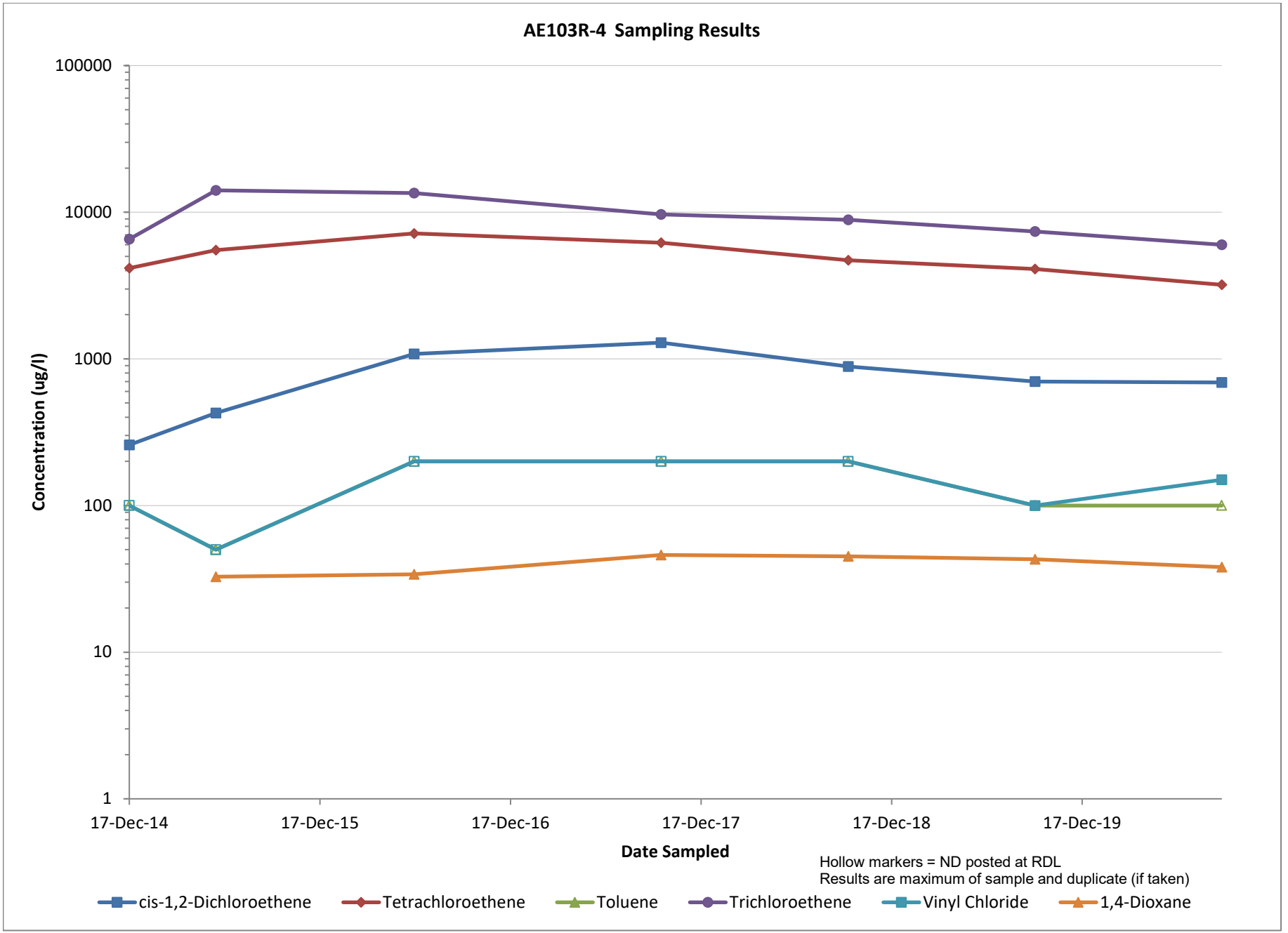

AE102RR-5 Sampling Results
10000
1000
100
10
1
Concentration (ug/l)
17-Dec-14
17-Dec-15
17-Dec-16
17-Dec-17
17-Dec-18
17-Dec-19
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
cis-1,2-Dichloroethene
Tetrachloroethene
Toluene
Trichloroethene
Vinyl Chloride
1,4-Dioxane

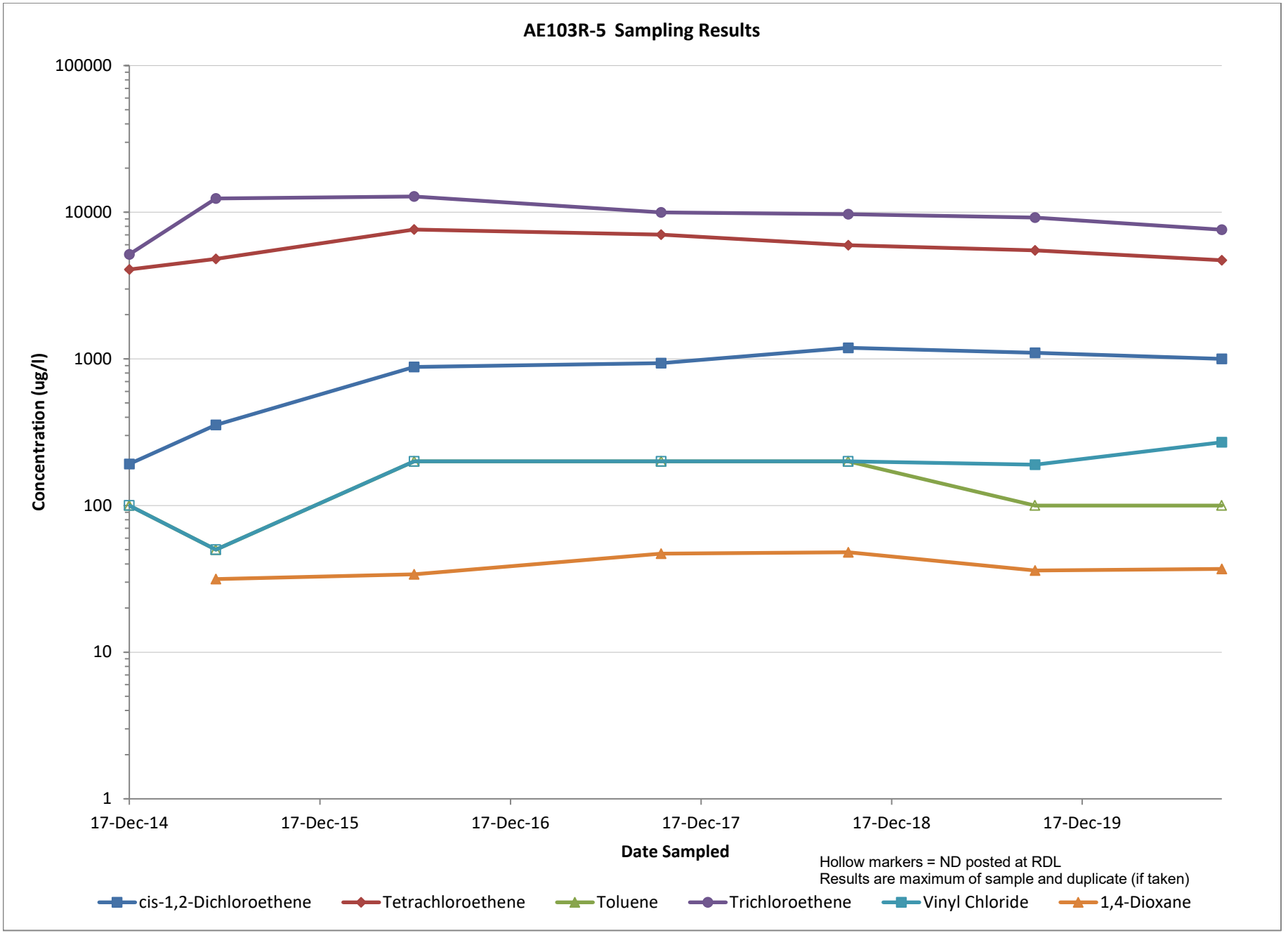

AE102RR-6 Sampling Results
10000
1000
100
10
1
Concentration (ug/l)
17-Dec-14
17-Dec-15
17-Dec-16
17-Dec-17
17-Dec-18
17-Dec-19
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
cis-1,2-Dichloroethene
Tetrachloroethene
Toluene
Trichloroethene
Vinyl Chloride
1,4-Dioxane

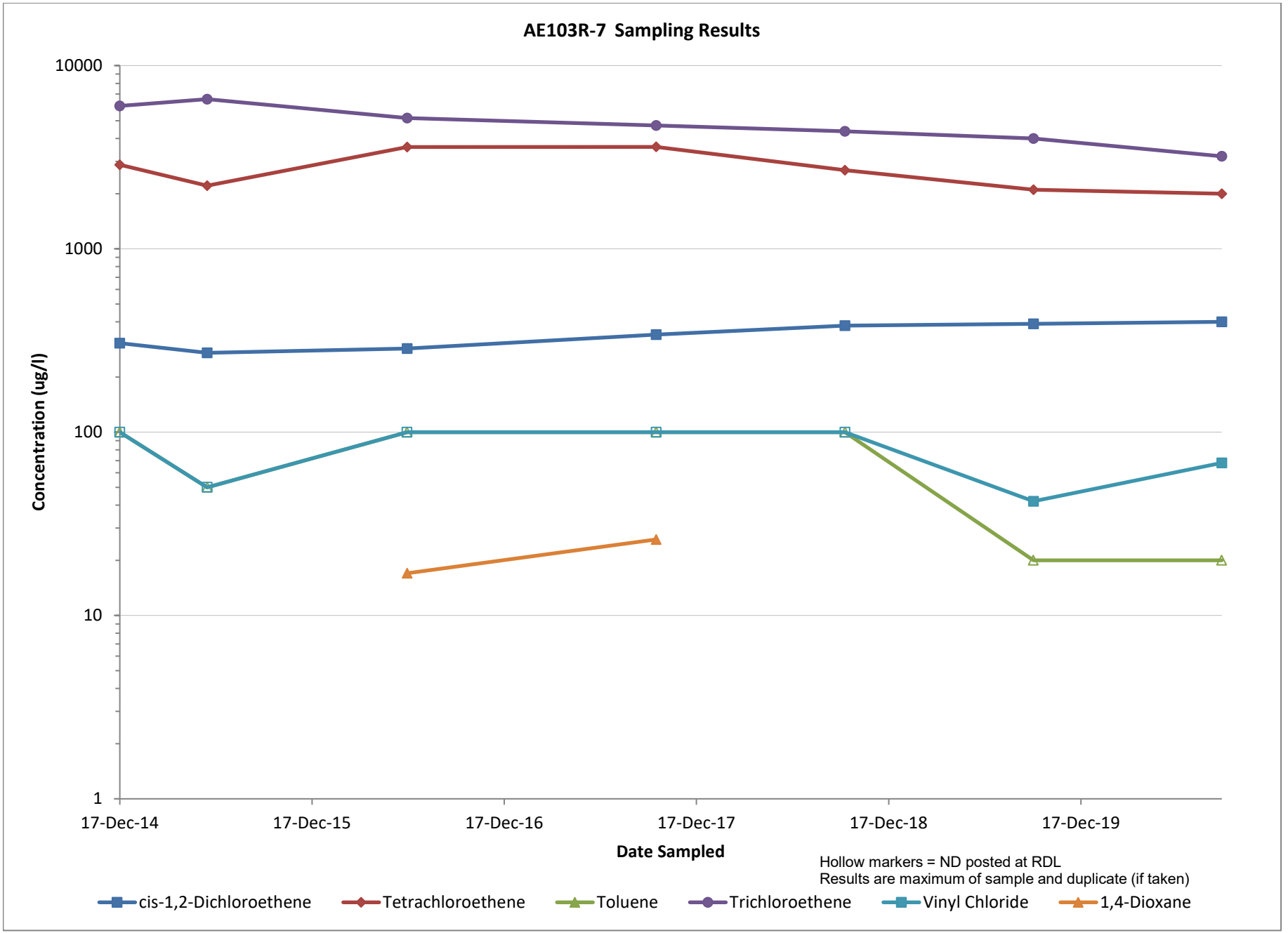

AE103D Sampling Results
1000
100
10
1
0.1
Concentration (ug/l)
12-Dec-14
12-Dec-15
11-Dec-16
12-Dec-17
12-Dec-18
12-Dec-19
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
cis-1,2-Dichloroethene
Tetrachloroethene
Toluene
Trichloroethene
Vinyl Chloride
1,4-Dioxane

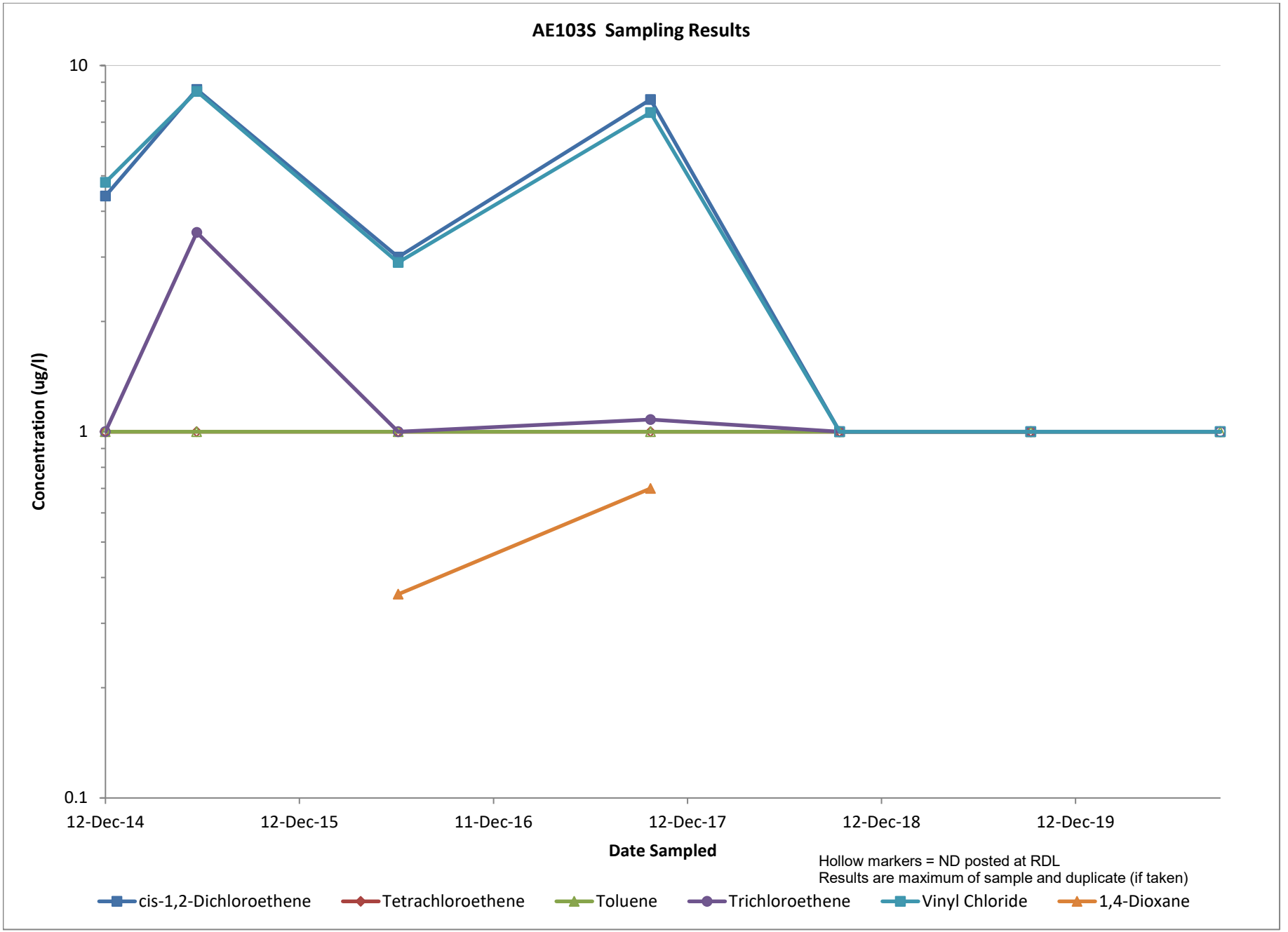

AE103R-1 Sampling Results
10000
1000
100
10
1
Concentration (ug/l)
17-Dec-14
17-Dec-15
17-Dec-16
17-Dec-17
17-Dec-18
17-Dec-19
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
cis-1,2-Dichloroethene
Tetrachloroethene
Toluene
Trichloroethene
Vinyl Chloride
1,4-Dioxane

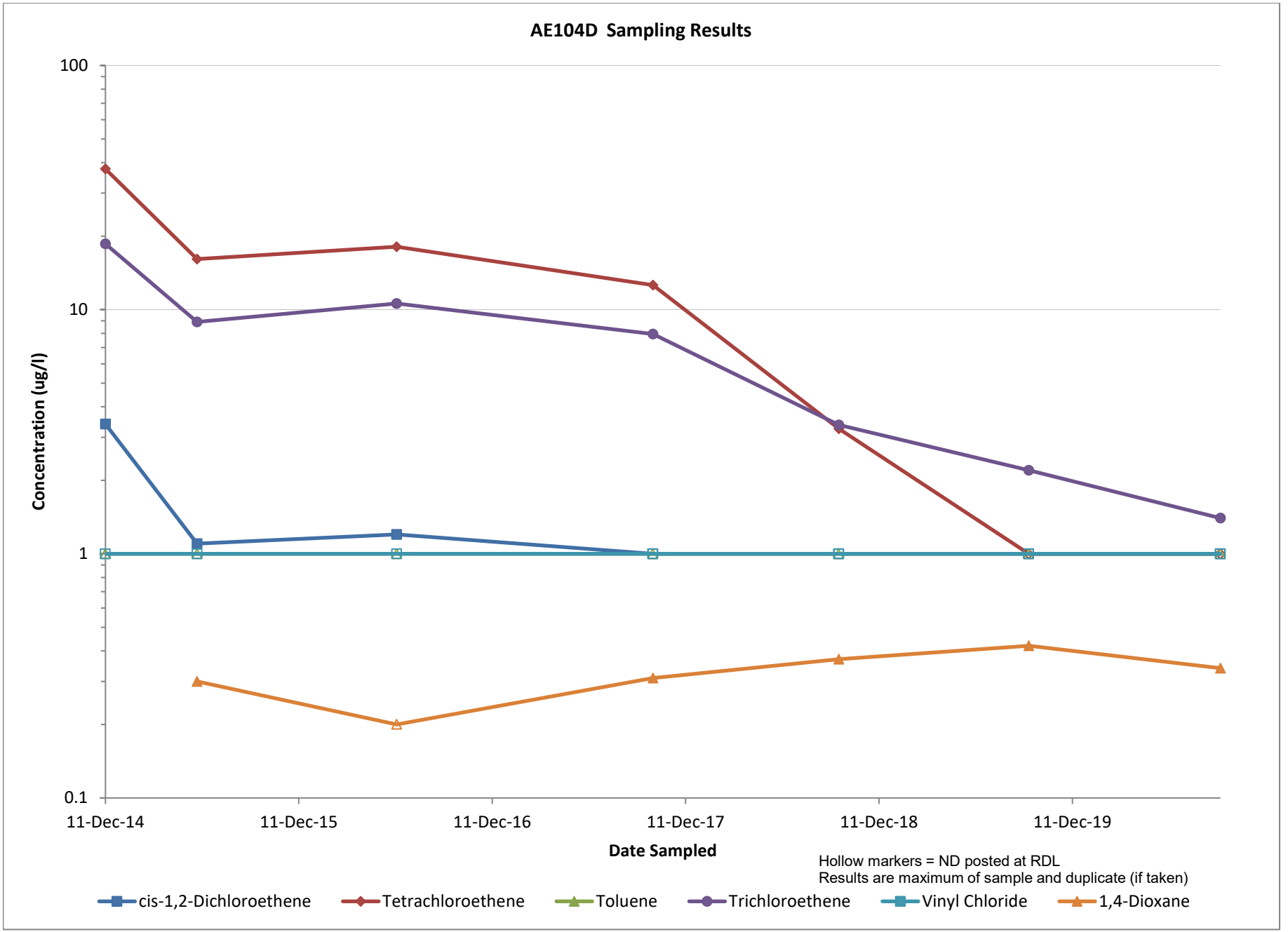

AE103R-3 Sampling Results
100000
10000
1000
100
10
1
Concentration (ug/l)
17-Dec-14
17-Dec-15
17-Dec-16
17-Dec-17
17-Dec-18
17-Dec-19
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
cis-1,2-Dichloroethene
Tetrachloroethene
Toluene
Trichloroethene
Vinyl Chloride
1,4-Dioxane

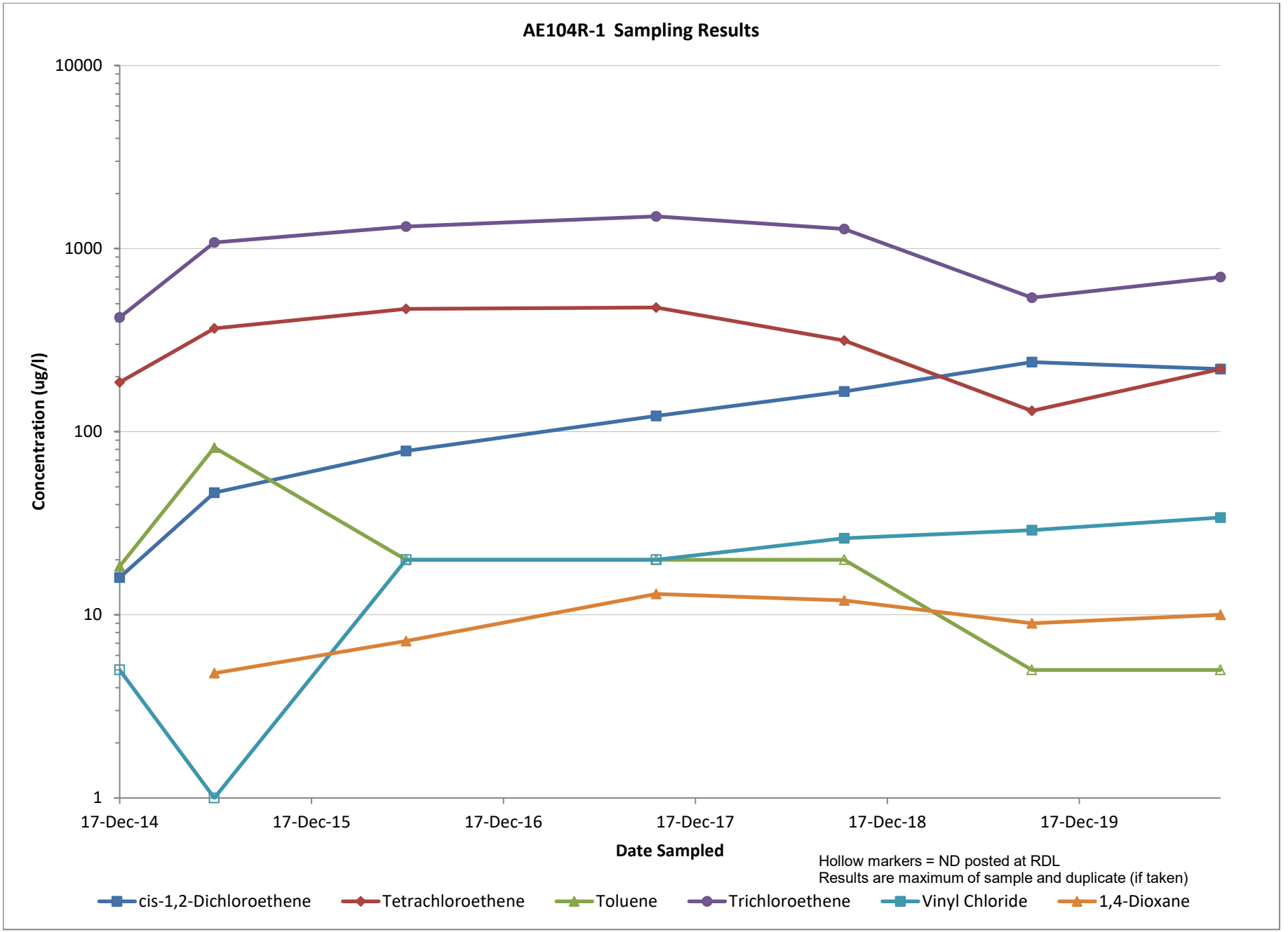

AE103R-4 Sampling Results
100000
10000
1000
100
10
1
Concentration (ug/l)
17-Dec-14
17-Dec-15
17-Dec-16
17-Dec-17
17-Dec-18
17-Dec-19
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
cis-1,2-Dichloroethene
Tetrachloroethene
Toluene
Trichloroethene
Vinyl Chloride
1,4-Dioxane

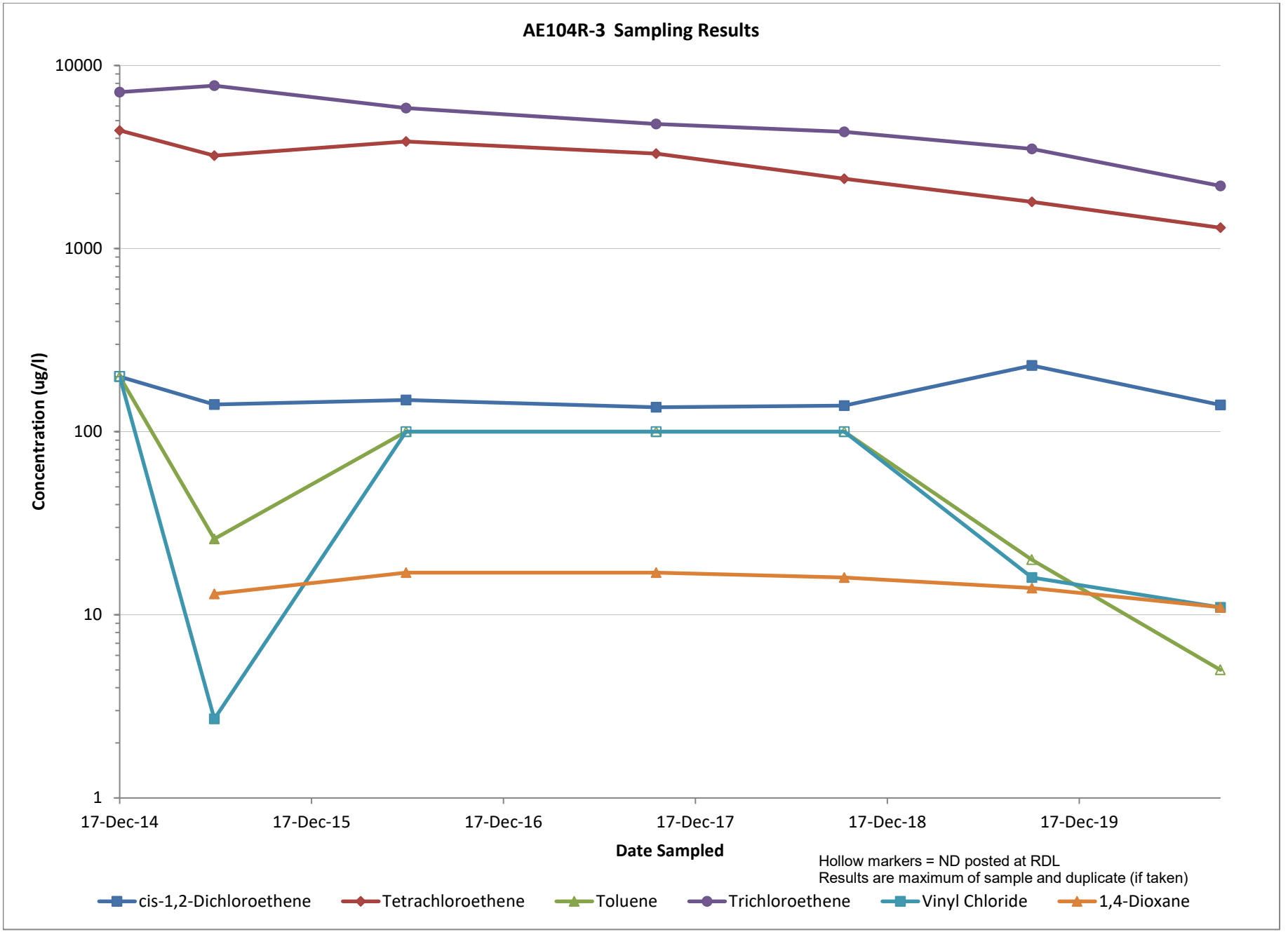

AE103R-5 Sampling Results
100000
10000
1000
100
10
1
Concentration (ug/l)
17-Dec-14
17-Dec-15
17-Dec-16
17-Dec-17
17-Dec-18
17-Dec-19
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
cis-1,2-Dichloroethene
Tetrachloroethene
Toluene
Trichloroethene
Vinyl Chloride
1,4-Dioxane

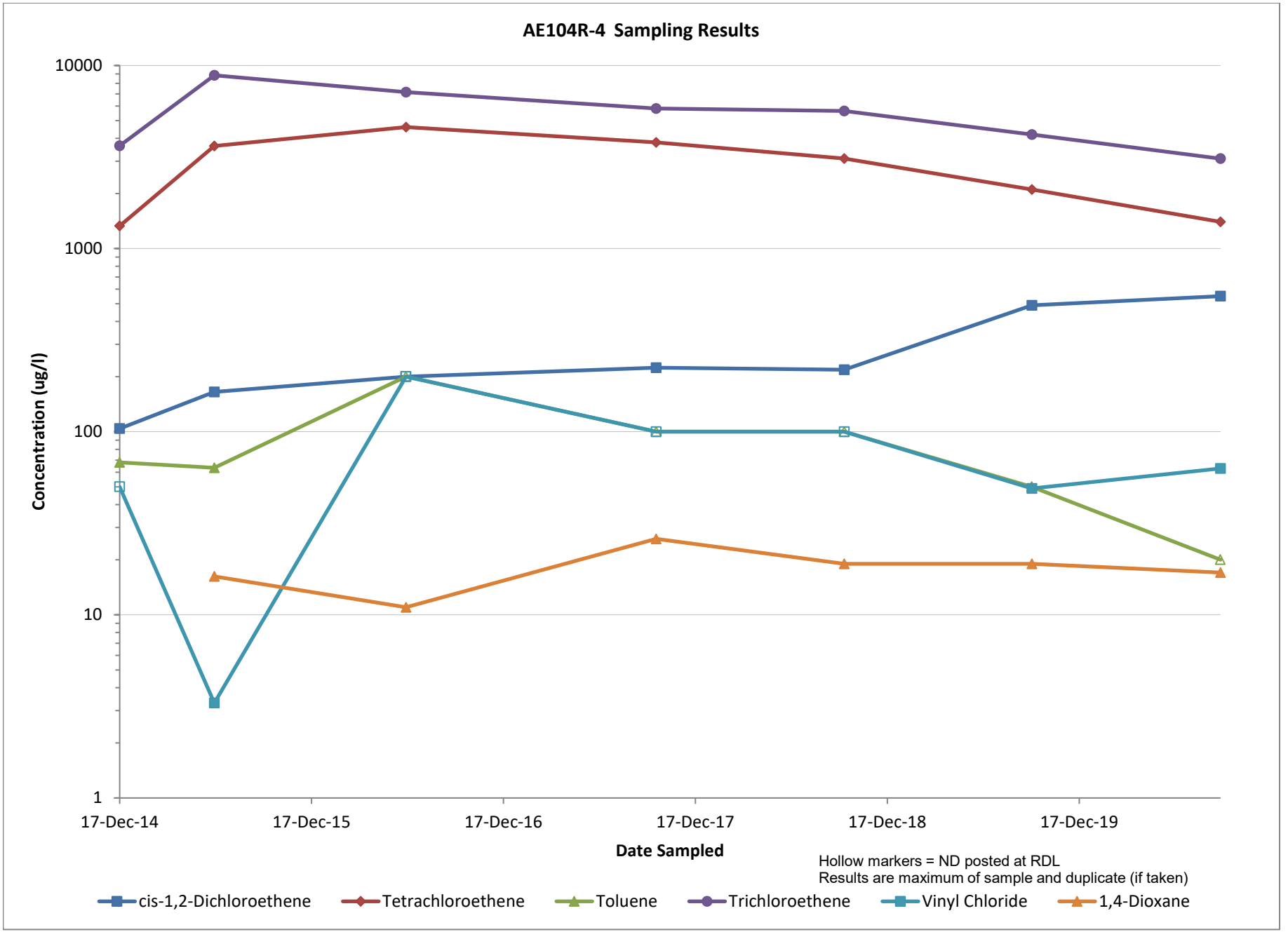

AE103R-7 Sampling Results
10000
1000
100
10
1
Concentration (ug/l)
17-Dec-14
17-Dec-15
17-Dec-16
17-Dec-17
17-Dec-18
17-Dec-19
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
cis-1,2-Dichloroethene
Tetrachloroethene
Toluene
Trichloroethene
Vinyl Chloride
1,4-Dioxane

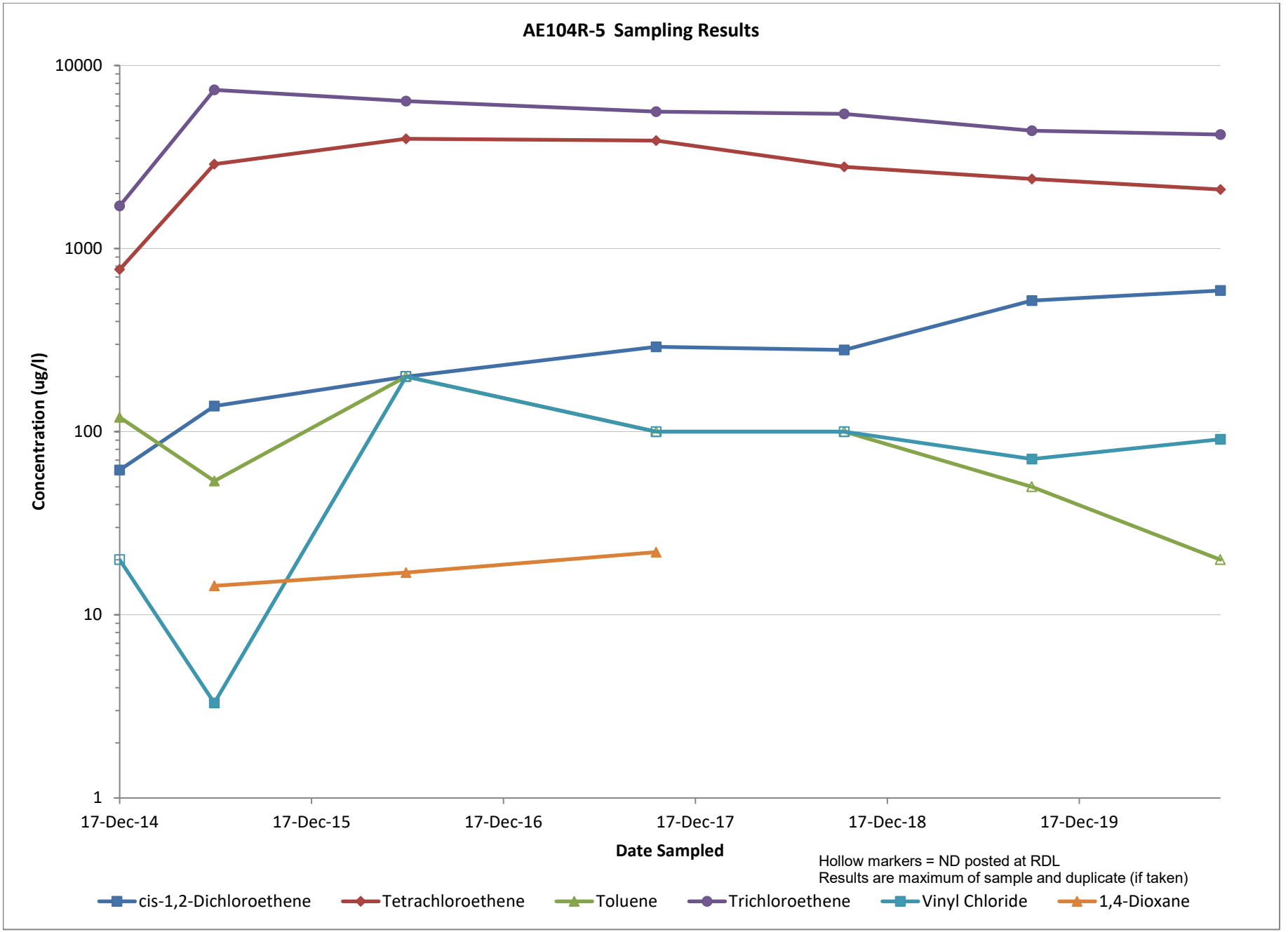

AE103S Sampling Results
10
1
0.1
Concentration (ug/l)
12-Dec-14
12-Dec-15
11-Dec-16
12-Dec-17
12-Dec-18
12-Dec-19
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
cis-1,2-Dichloroethene
Tetrachloroethene
Toluene
Trichloroethene
Vinyl Chloride
1,4-Dioxane

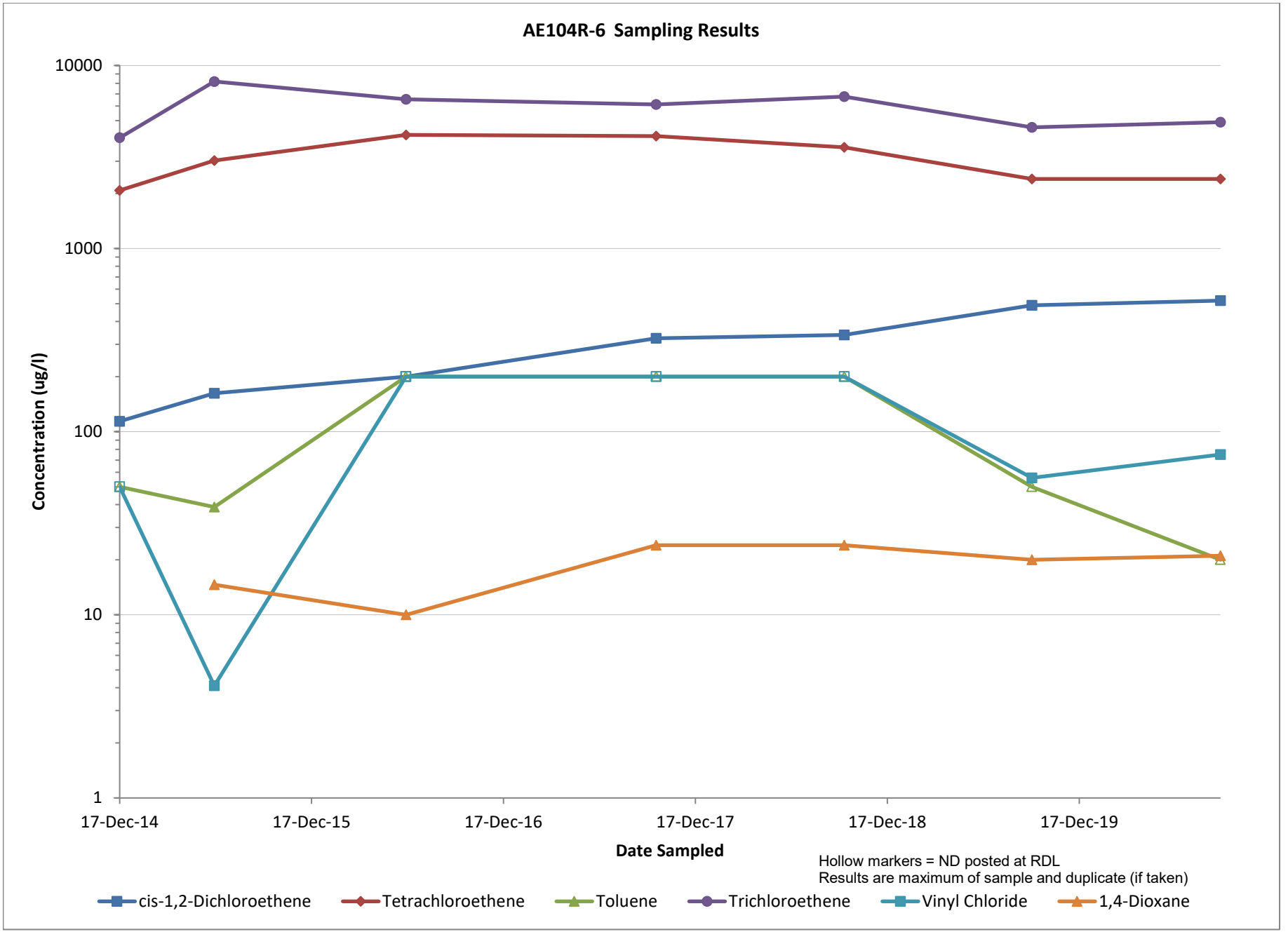

AE104D Sampling Results
100
10
1
0.1
Concentration (ug/l)
11-Dec-14
11-Dec-15
11-Dec-16
11-Dec-17
11-Dec-18
11-Dec-19
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
cis-1,2-Dichloroethene
Tetrachloroethene
Toluene
Trichloroethene
Vinyl Chloride
1,4-Dioxane

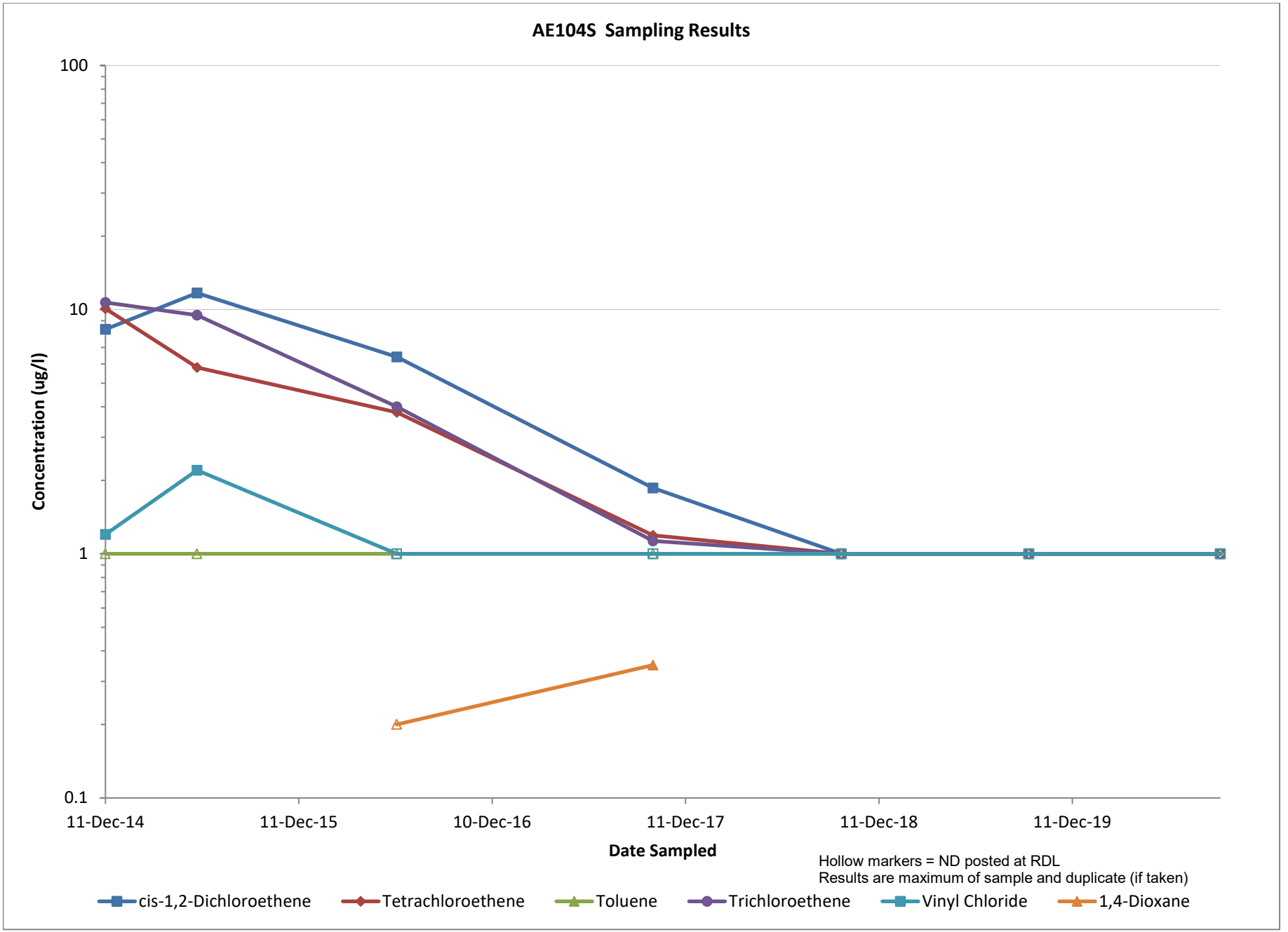

AE104R-1 Sampling Results
10000
1000
100
10
1
Concentration (ug/l)
17-Dec-14
17-Dec-15
17-Dec-16
17-Dec-17
17-Dec-18
17-Dec-19
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
cis-1,2-Dichloroethene
Tetrachloroethene
Toluene
Trichloroethene
Vinyl Chloride
1,4-Dioxane

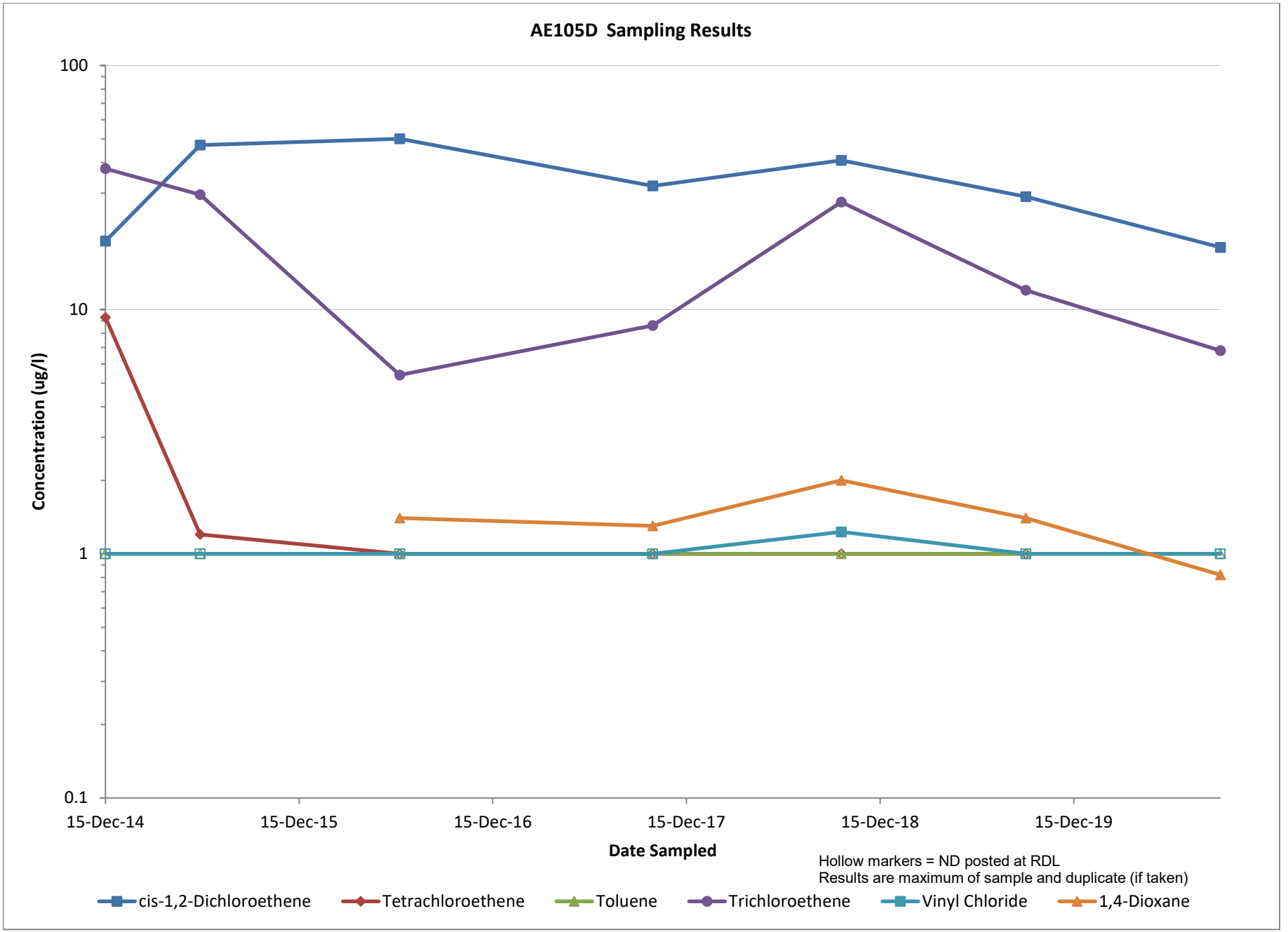

AE104R-3 Sampling Results
10000
1000
100
10
1
Concentration (ug/l)
17-Dec-14
17-Dec-15
17-Dec-16
17-Dec-17
17-Dec-18
17-Dec-19
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
cis-1,2-Dichloroethene
Tetrachloroethene
Toluene
Trichloroethene
Vinyl Chloride
1,4-Dioxane

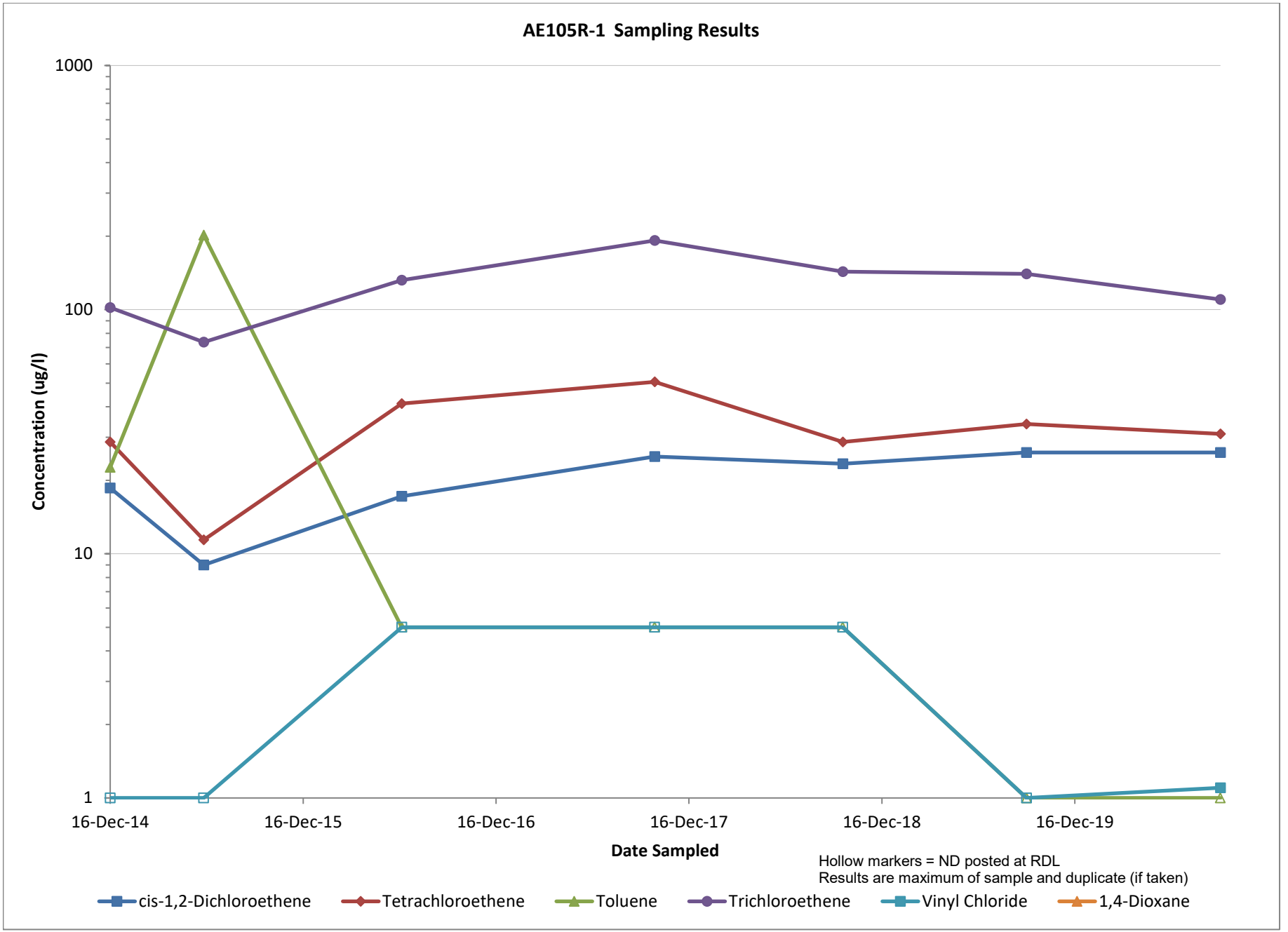

AE104R-4 Sampling Results
10000
1000
100
10
1
Concentration (ug/l)
17-Dec-14
17-Dec-15
17-Dec-16
17-Dec-17
17-Dec-18
17-Dec-19
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
cis-1,2-Dichloroethene
Tetrachloroethene
Toluene
Trichloroethene
Vinyl Chloride
1,4-Dioxane

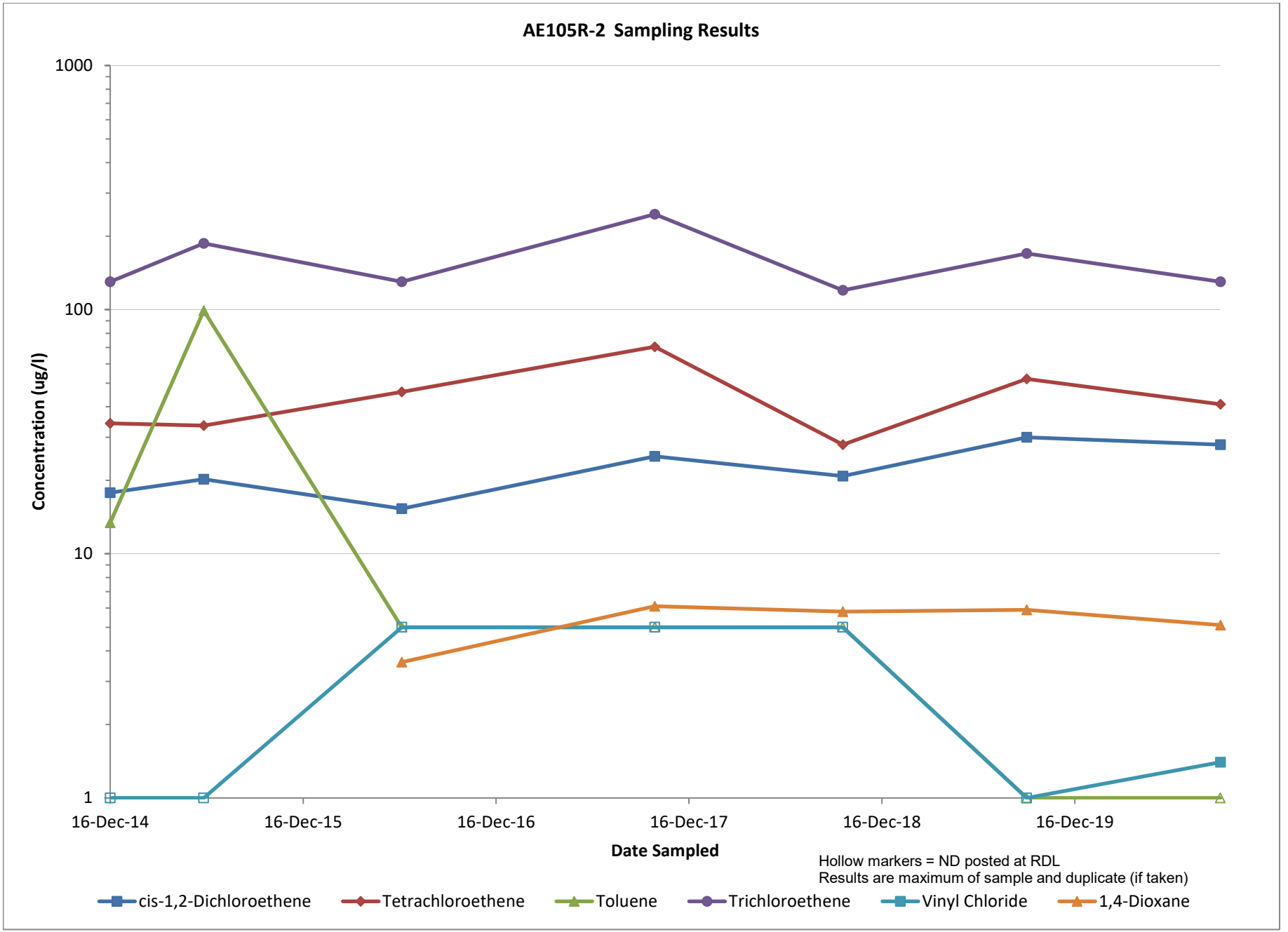

AE104R-5 Sampling Results
10000
1000
100
10
1
Concentration (ug/l)
17-Dec-14
17-Dec-15
17-Dec-16
17-Dec-17
17-Dec-18
17-Dec-19
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
cis-1,2-Dichloroethene
Tetrachloroethene
Toluene
Trichloroethene
Vinyl Chloride
1,4-Dioxane

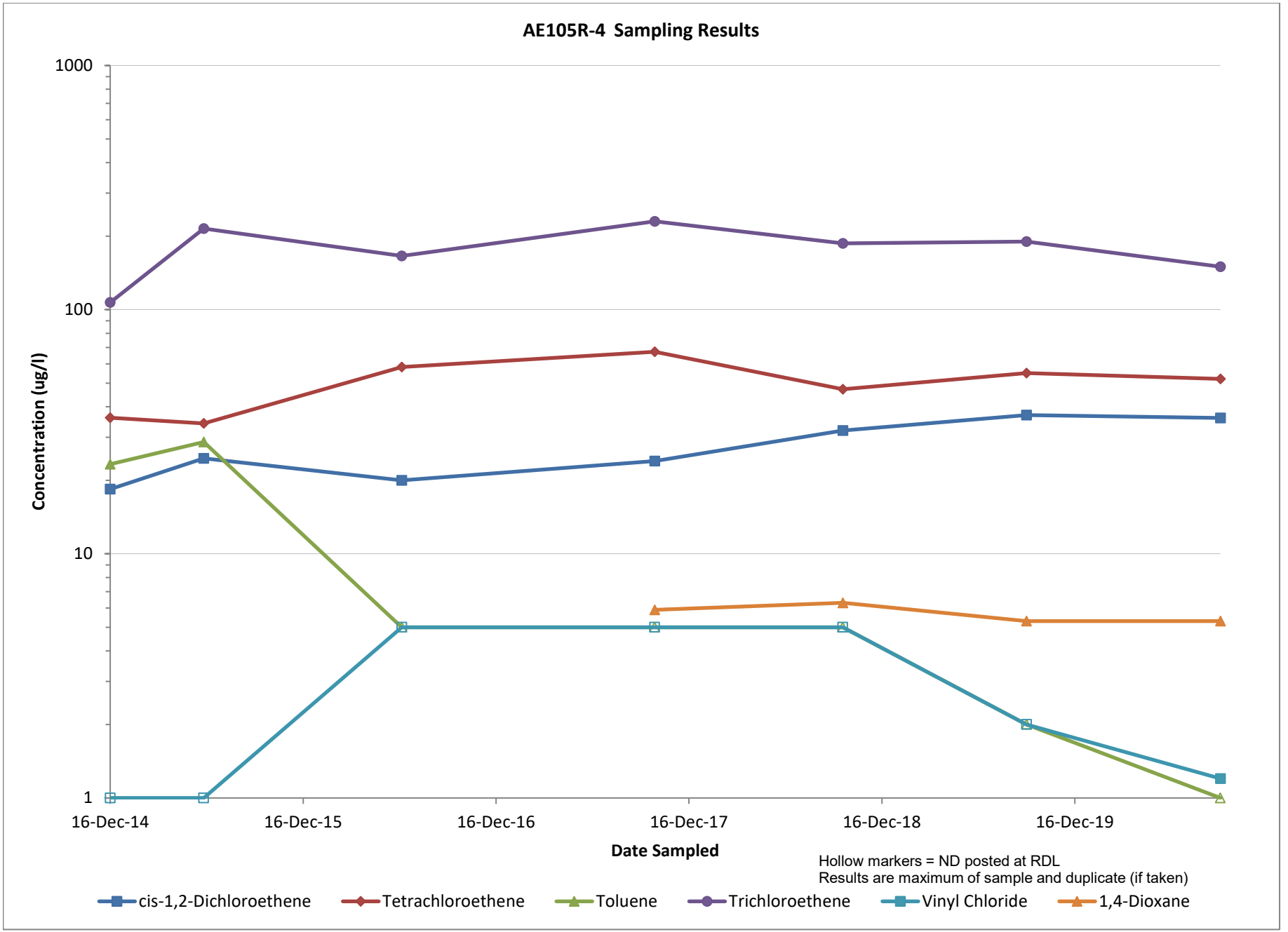

AE104R-6 Sampling Results
10000
1000
100
10
1
Concentration (ug/l)
17-Dec-14
17-Dec-15
17-Dec-16
17-Dec-17
17-Dec-18
17-Dec-19
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
cis-1,2-Dichloroethene
Tetrachloroethene
Toluene
Trichloroethene
Vinyl Chloride
1,4-Dioxane

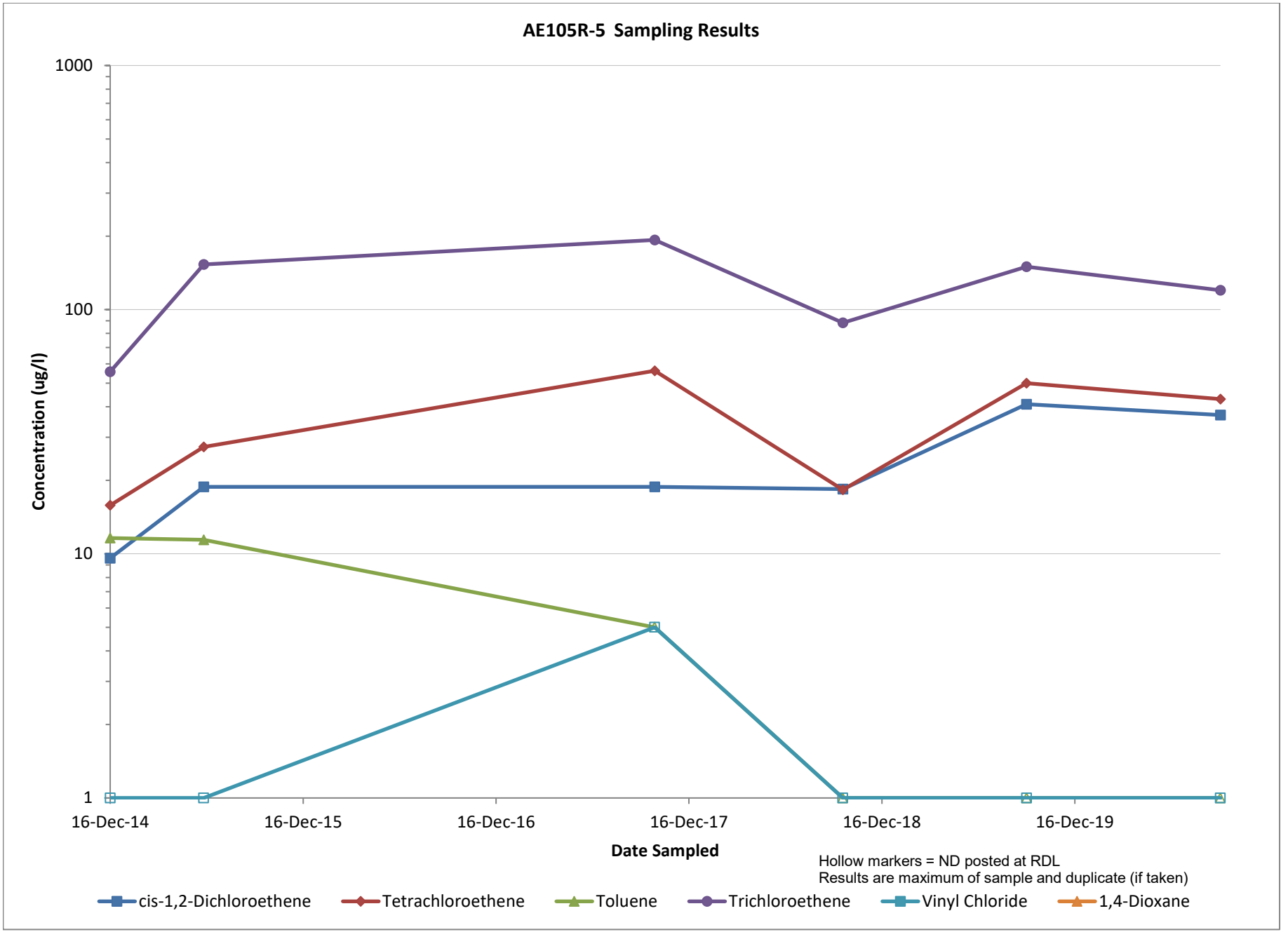

AE104S Sampling Results
100
10
1
0.1
Concentration (ug/l)
11-Dec-14
11-Dec-15
10-Dec-16
11-Dec-17
11-Dec-18
11-Dec-19
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
cis-1,2-Dichloroethene
Tetrachloroethene
Toluene
Trichloroethene
Vinyl Chloride
1,4-Dioxane

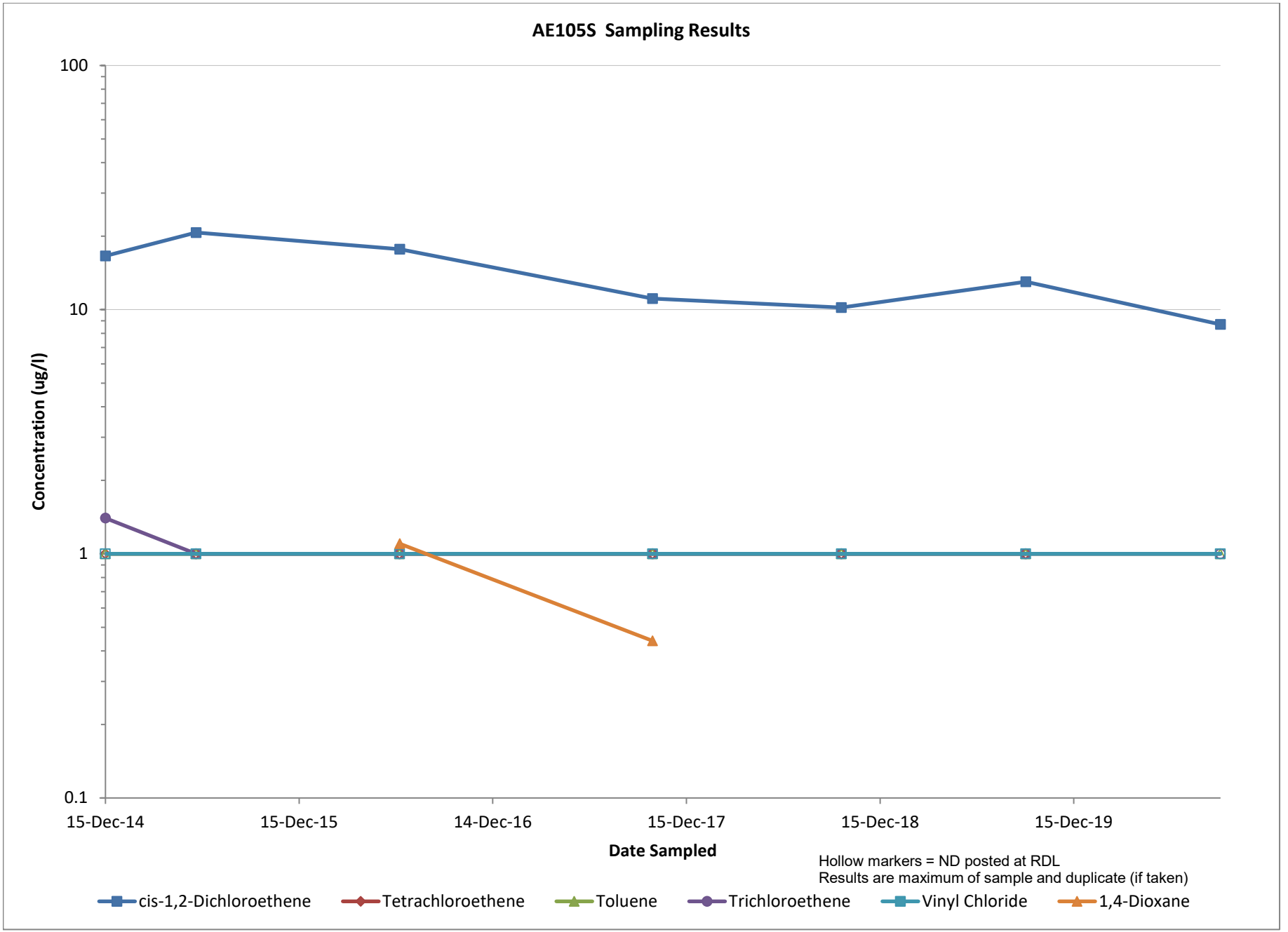

AE105D Sampling Results
100
10
1
0.1
Concentration (ug/l)
15-Dec-14
15-Dec-15
15-Dec-16
15-Dec-17
15-Dec-18
15-Dec-19
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
cis-1,2-Dichloroethene
Tetrachloroethene
Toluene
Trichloroethene
Vinyl Chloride
1,4-Dioxane

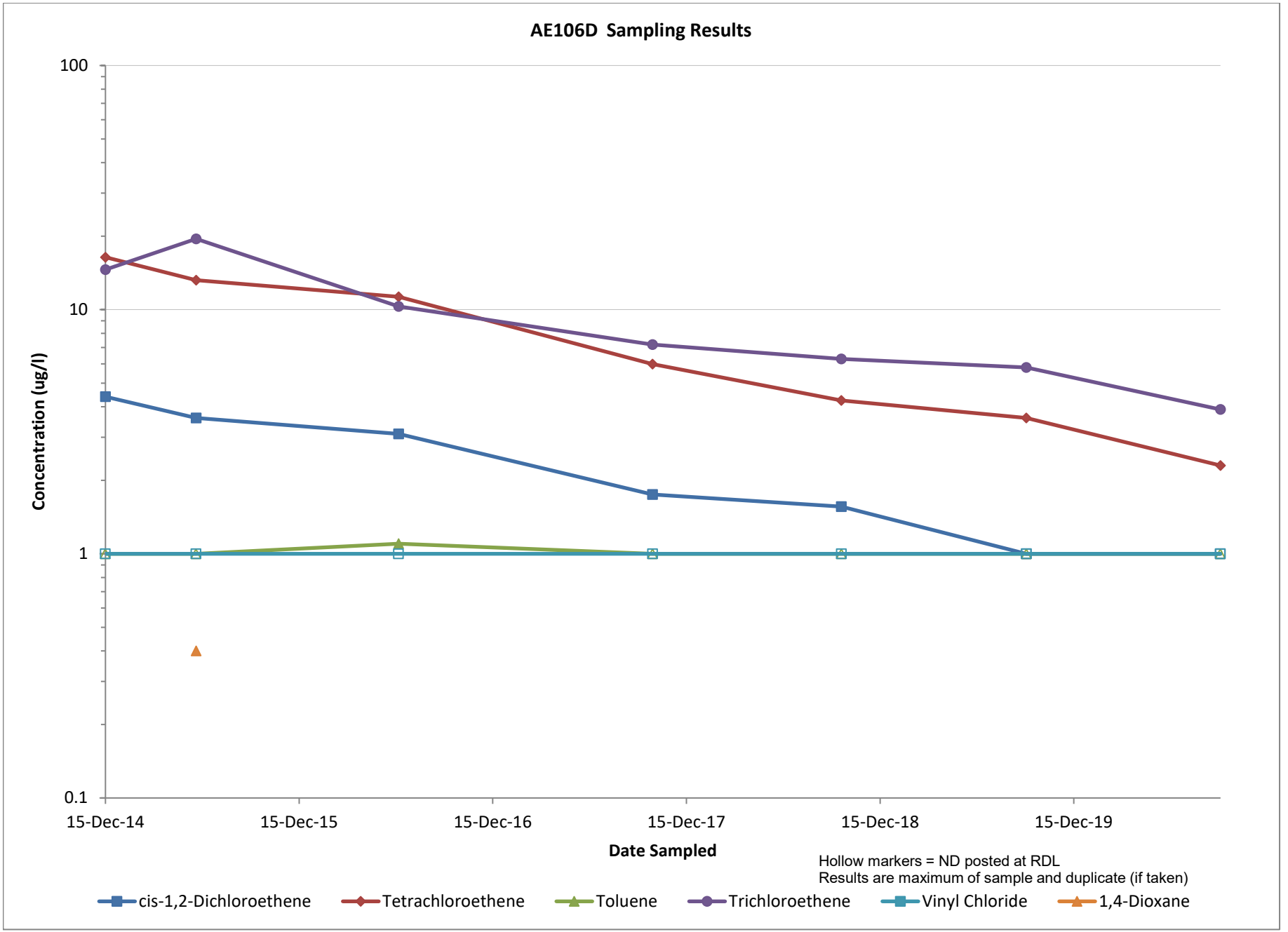

AE105R-1 Sampling Results
1000
100
10
1
Concentration (ug/l)
16-Dec-14
16-Dec-15
16-Dec-16
16-Dec-17
16-Dec-18
16-Dec-19
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
cis-1,2-Dichloroethene
Tetrachloroethene
Toluene
Trichloroethene
Vinyl Chloride
1,4-Dioxane

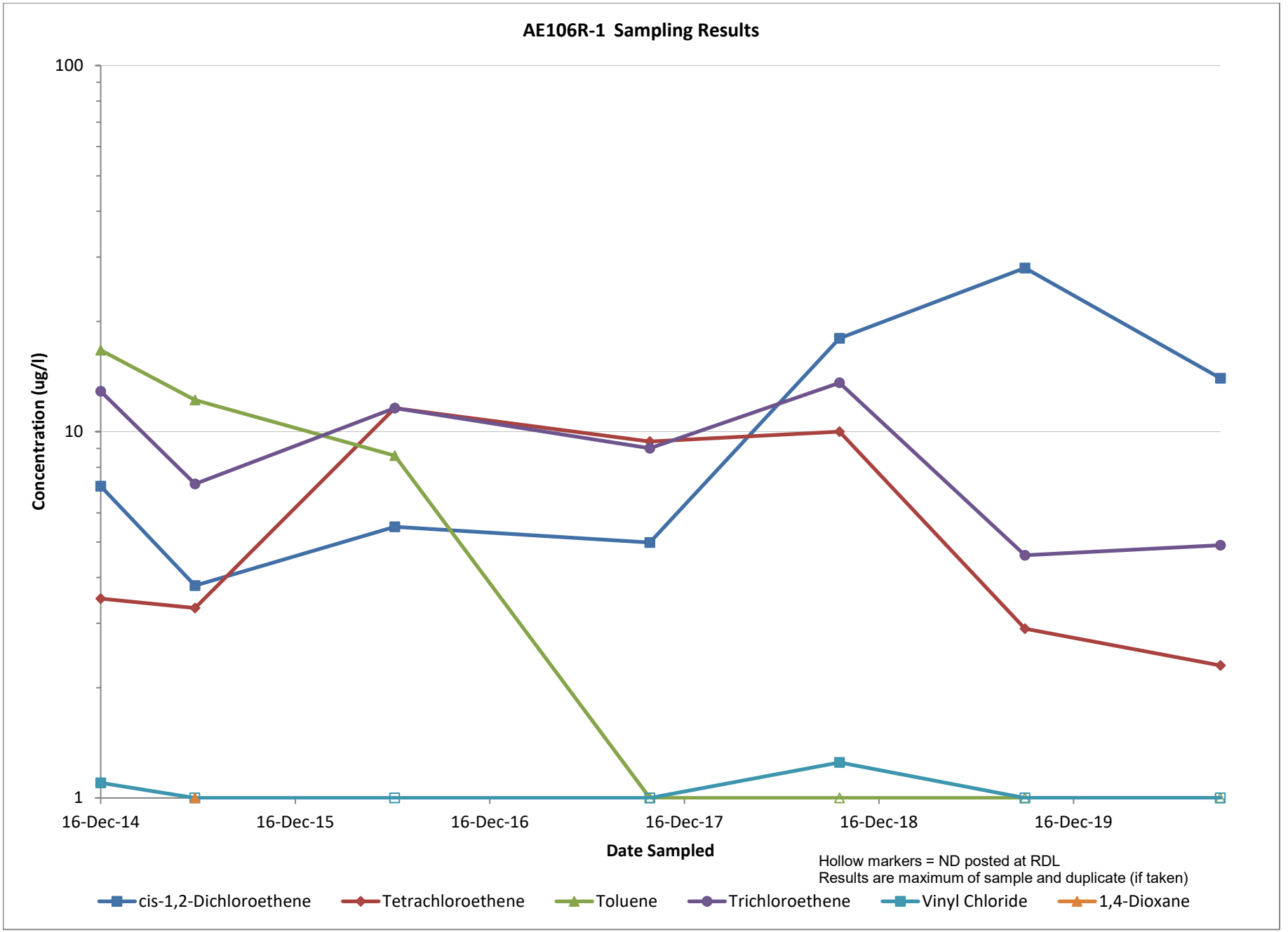

AE105R-2 Sampling Results
1000
100
10
1
Concentration (ug/l)
16-Dec-14
16-Dec-15
16-Dec-16
16-Dec-17
16-Dec-18
16-Dec-19
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
cis-1,2-Dichloroethene
Tetrachloroethene
Toluene
Trichloroethene
Vinyl Chloride
1,4-Dioxane

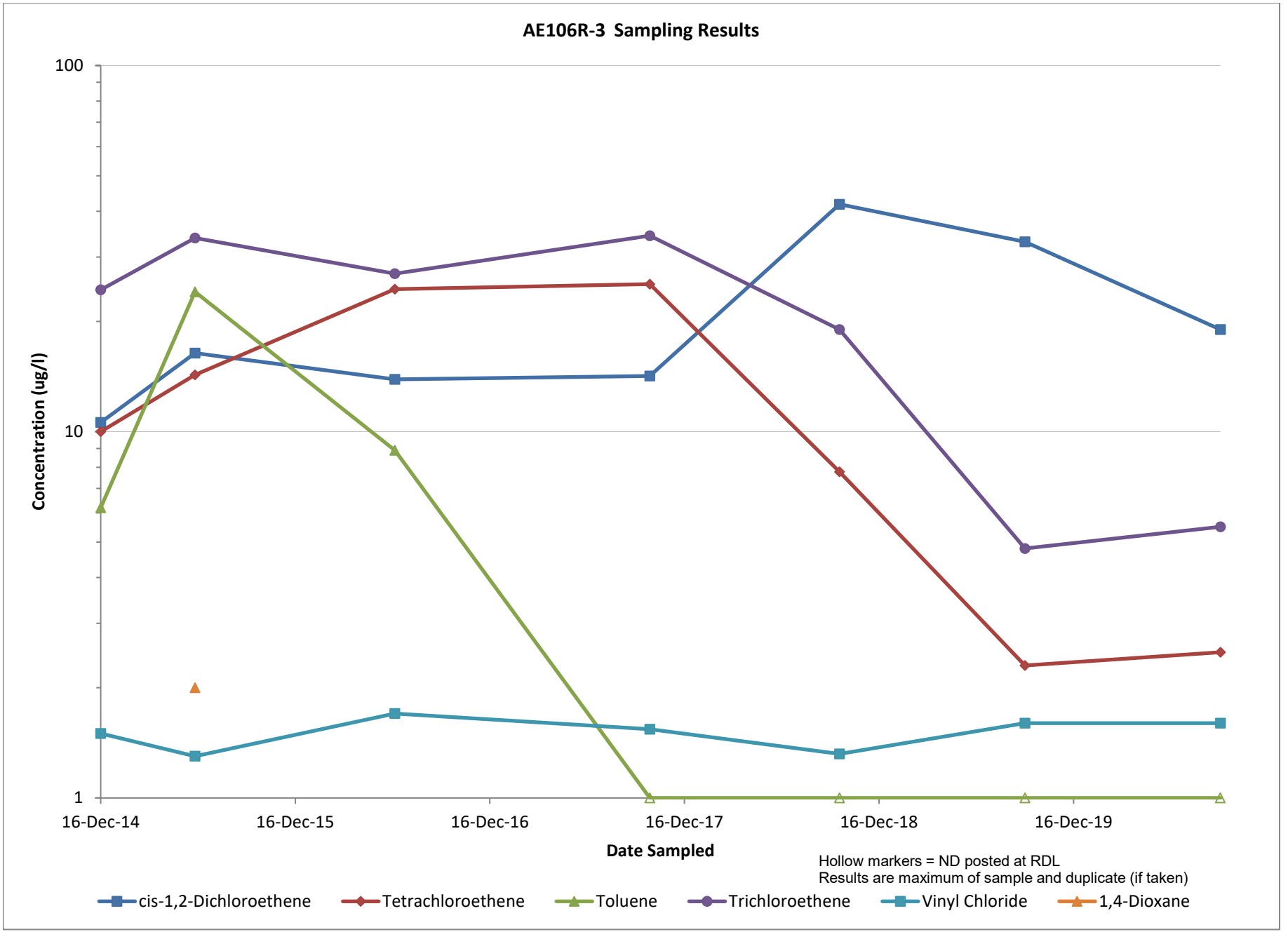

AE105R-4 Sampling Results
1000
100
10
1
Concentration (ug/l)
16-Dec-14
16-Dec-15
16-Dec-16
16-Dec-17
16-Dec-18
16-Dec-19
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
cis-1,2-Dichloroethene
Tetrachloroethene
Toluene
Trichloroethene
Vinyl Chloride
1,4-Dioxane

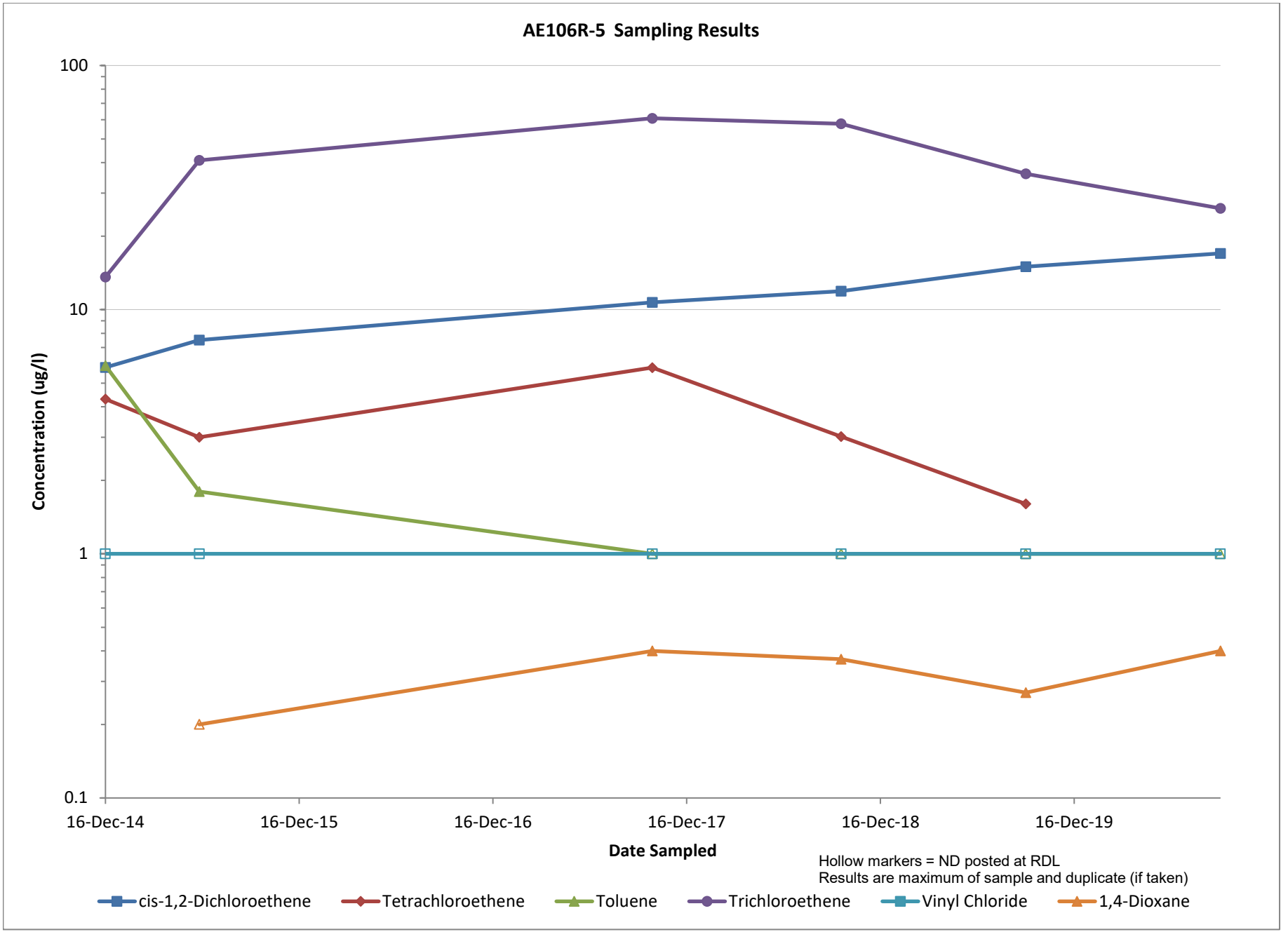

AE105R-5 Sampling Results
1000
100
10
1
Concentration (ug/l)
16-Dec-14
16-Dec-15
16-Dec-16
16-Dec-17
16-Dec-18
16-Dec-19
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
cis-1,2-Dichloroethene
Tetrachloroethene
Toluene
Trichloroethene
Vinyl Chloride
1,4-Dioxane

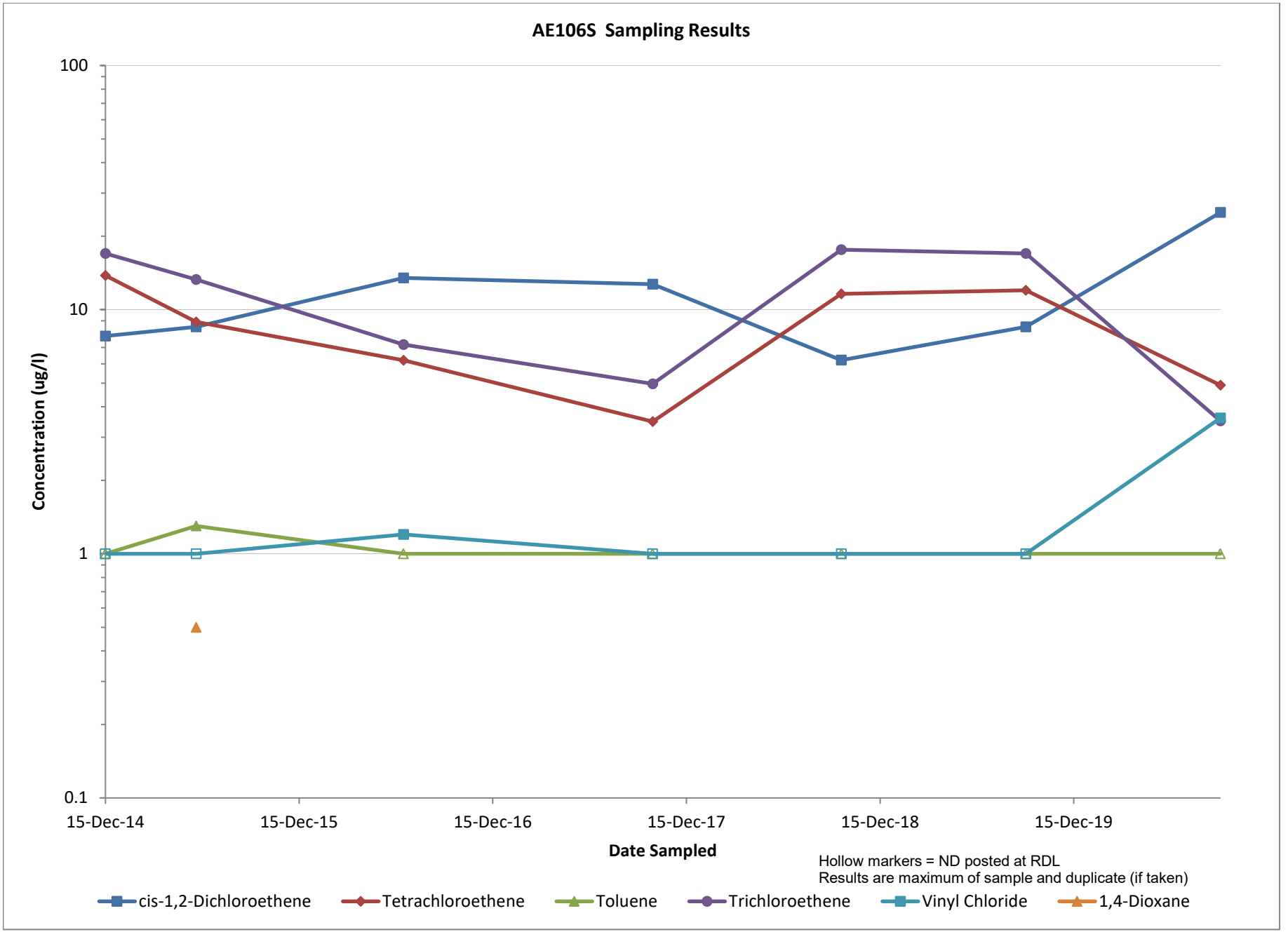

AE105S Sampling Results
100
10
1
0.1
Concentration (ug/l)
15-Dec-14
15-Dec-15
14-Dec-16
15-Dec-17
15-Dec-18
15-Dec-19
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
cis-1,2-Dichloroethene
Tetrachloroethene
Toluene
Trichloroethene
Vinyl Chloride
1,4-Dioxane

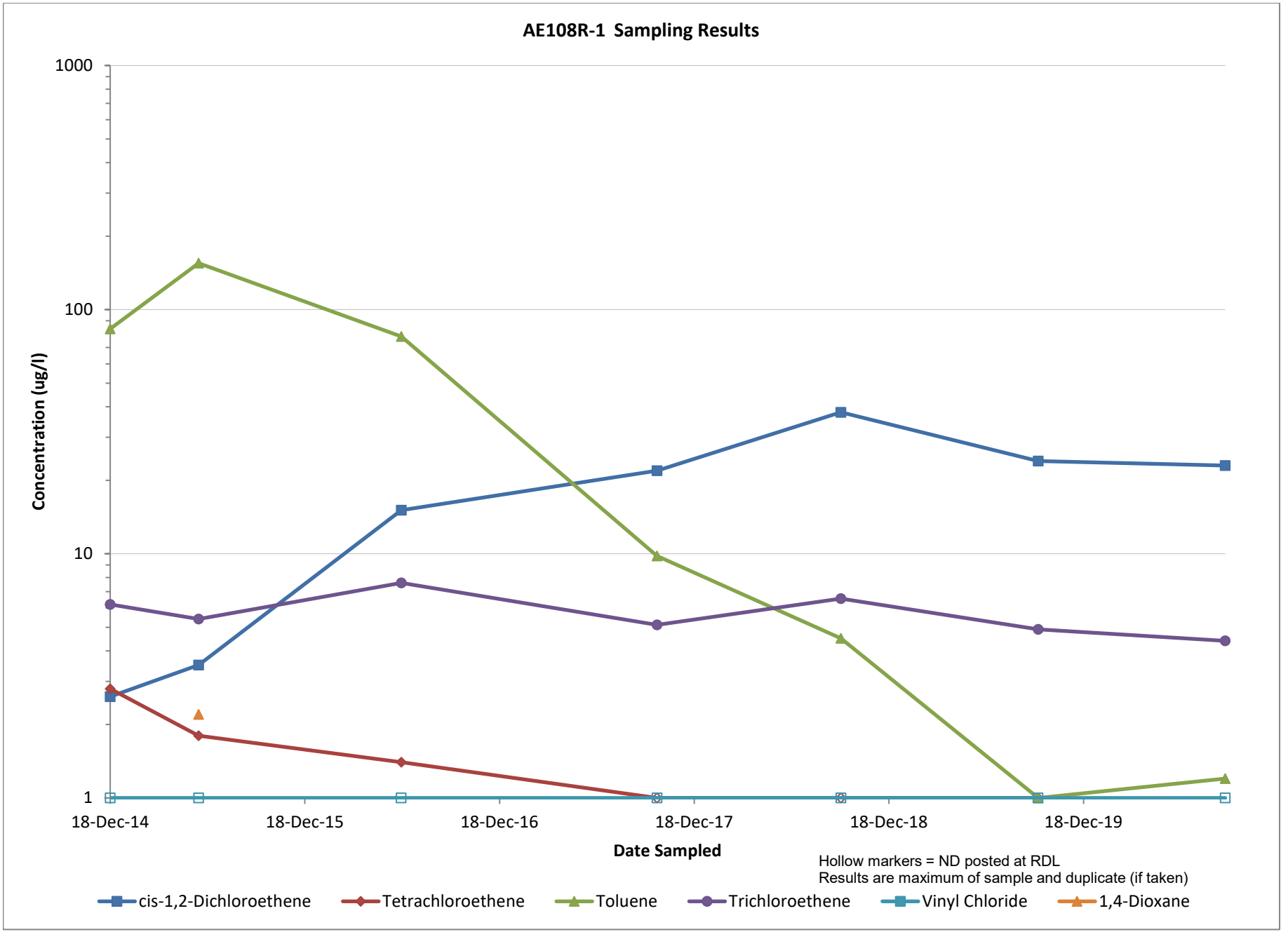

AE106D Sampling Results
100
10
1
0.1
Concentration (ug/l)
15-Dec-14
15-Dec-15
15-Dec-16
15-Dec-17
15-Dec-18
15-Dec-19
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
cis-1,2-Dichloroethene
Tetrachloroethene
Toluene
Trichloroethene
Vinyl Chloride
1,4-Dioxane

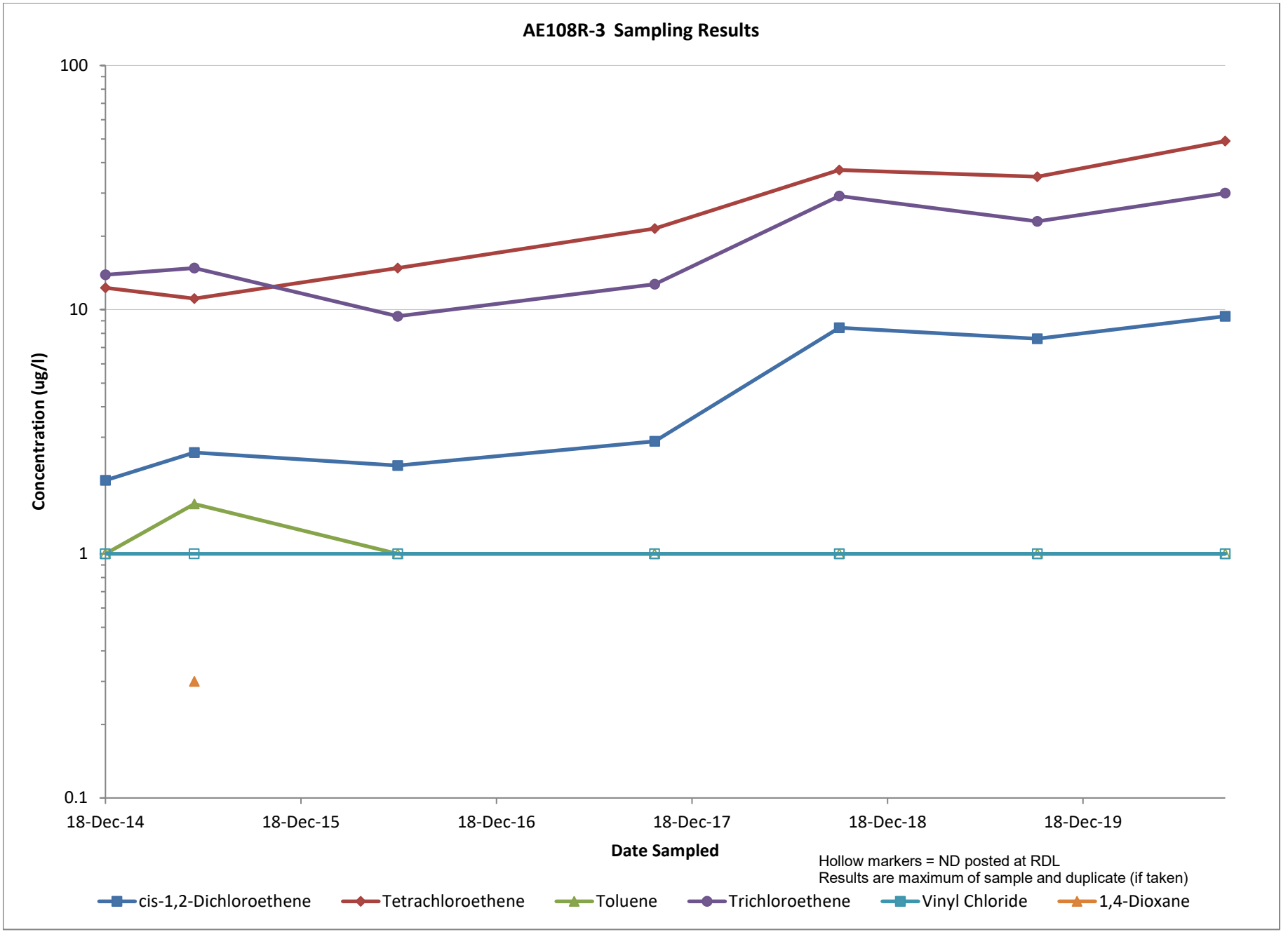

AE106R-1 Sampling Results
100
10
1
Concentration (ug/l)
16-Dec-14
16-Dec-15
16-Dec-16
16-Dec-17
16-Dec-18
16-Dec-19
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
cis-1,2-Dichloroethene
Tetrachloroethene
Toluene
Trichloroethene
Vinyl Chloride
1,4-Dioxane

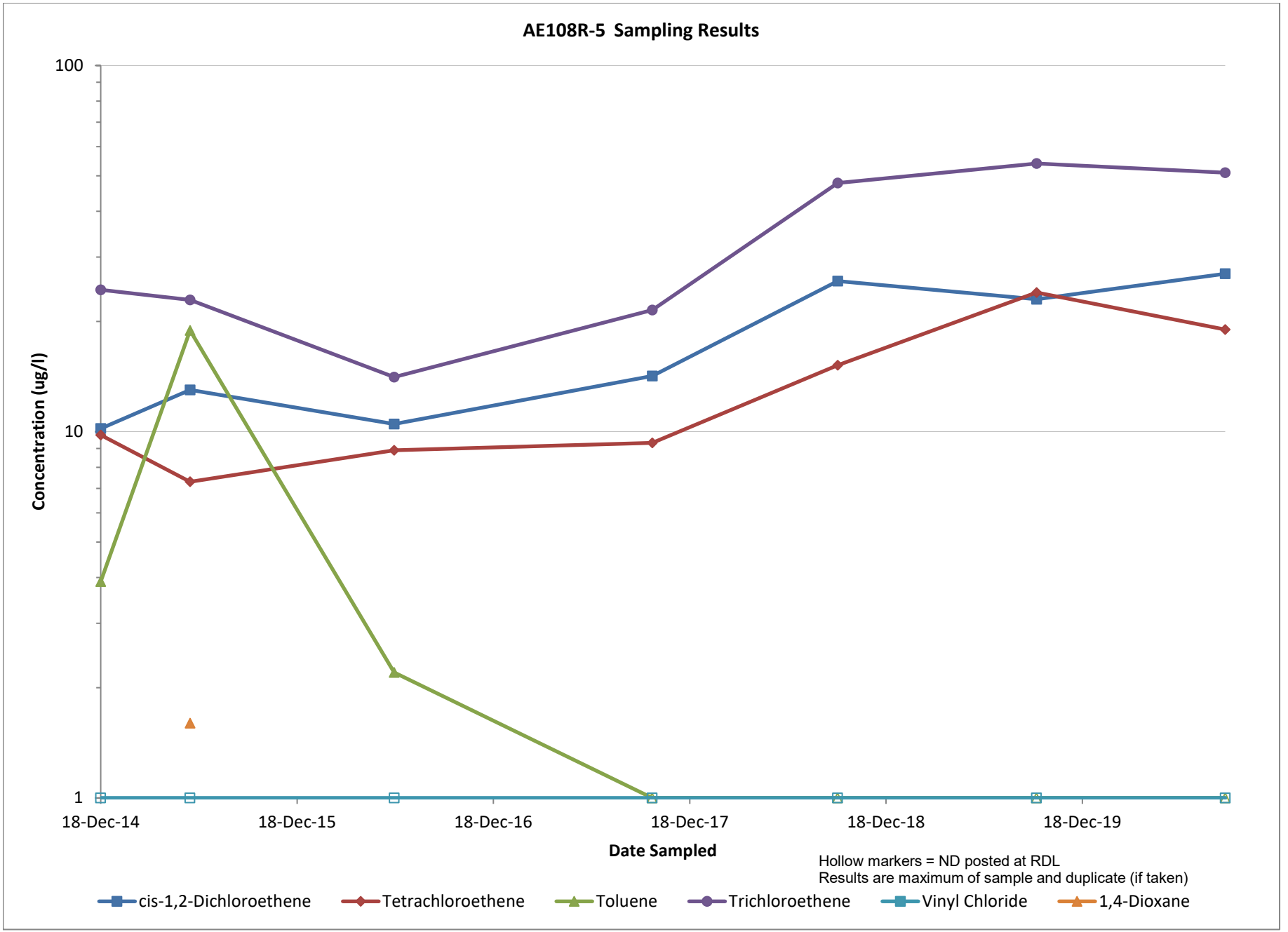

AE106R-3 Sampling Results
100
10
1
Concentration (ug/l)
16-Dec-14
16-Dec-15
16-Dec-16
16-Dec-17
16-Dec-18
16-Dec-19
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
cis-1,2-Dichloroethene
Tetrachloroethene
Toluene
Trichloroethene
Vinyl Chloride
1,4-Dioxane

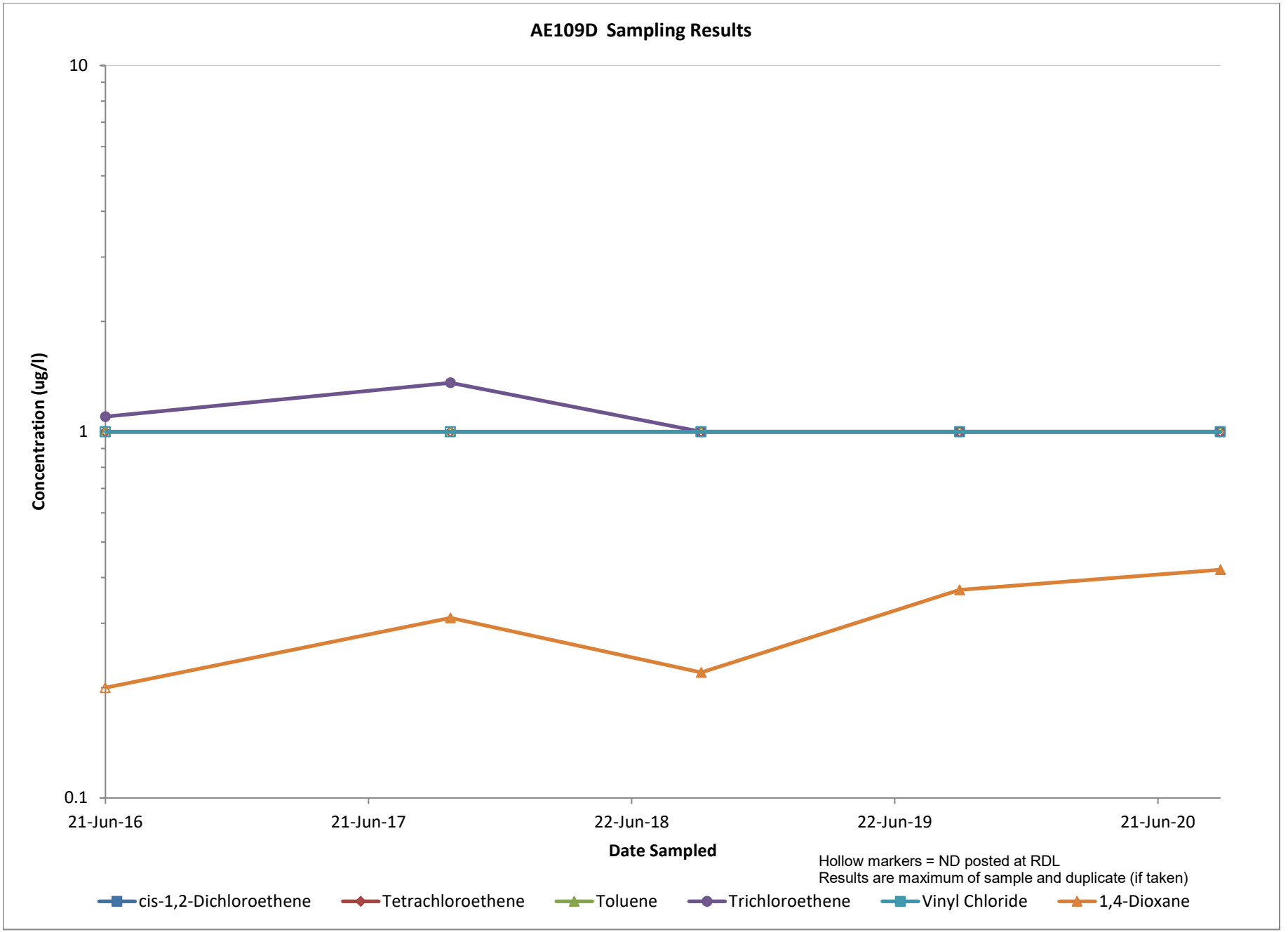

AE106R-5 Sampling Results
100
10
1
0.1
Concentration (ug/l)
16-Dec-14
16-Dec-15
16-Dec-16
16-Dec-17
16-Dec-18
16-Dec-19
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
cis-1,2-Dichloroethene
Tetrachloroethene
Toluene
Trichloroethene
Vinyl Chloride
1,4-Dioxane

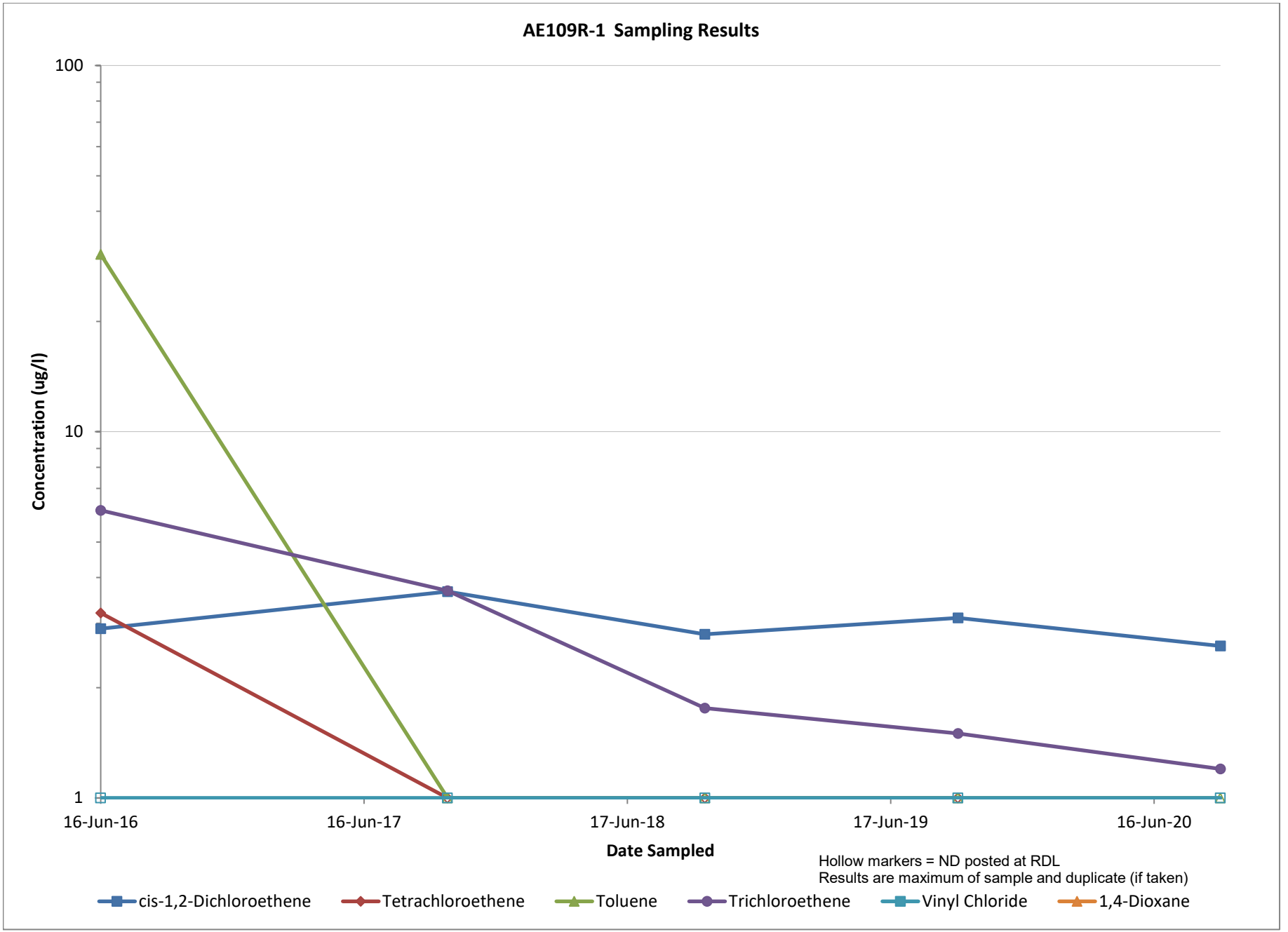

AE106S Sampling Results
100
10
1
0.1
Concentration (ug/l)
15-Dec-14
15-Dec-15
15-Dec-16
15-Dec-17
15-Dec-18
15-Dec-19
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
cis-1,2-Dichloroethene
Tetrachloroethene
Toluene
Trichloroethene
Vinyl Chloride
1,4-Dioxane

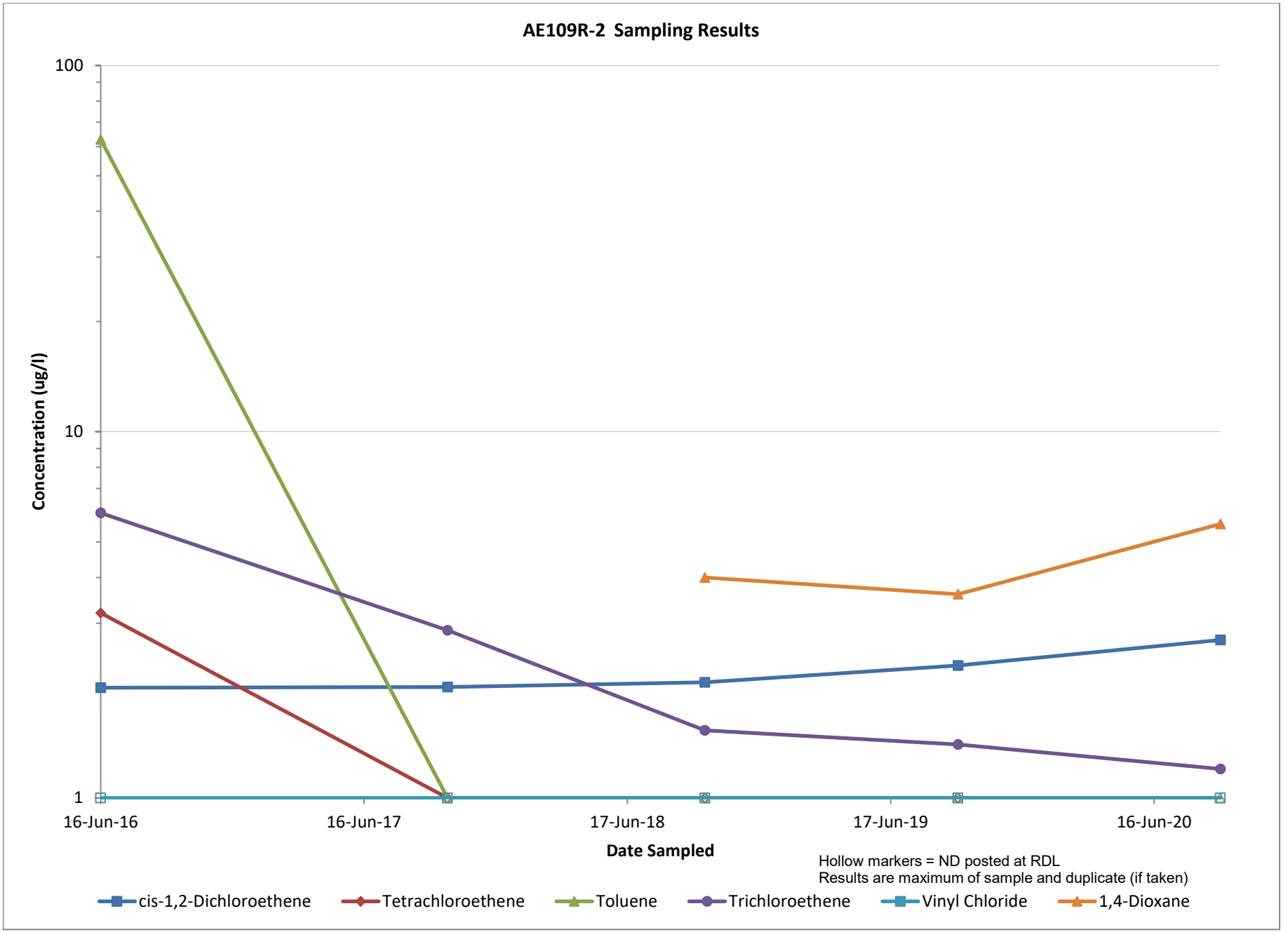

AE108R-1 Sampling Results
1000
100
10
1
Concentration (ug/l)
18-Dec-14
18-Dec-15
18-Dec-16
18-Dec-17
18-Dec-18
18-Dec-19
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
cis-1,2-Dichloroethene
Tetrachloroethene
Toluene
Trichloroethene
Vinyl Chloride
1,4-Dioxane

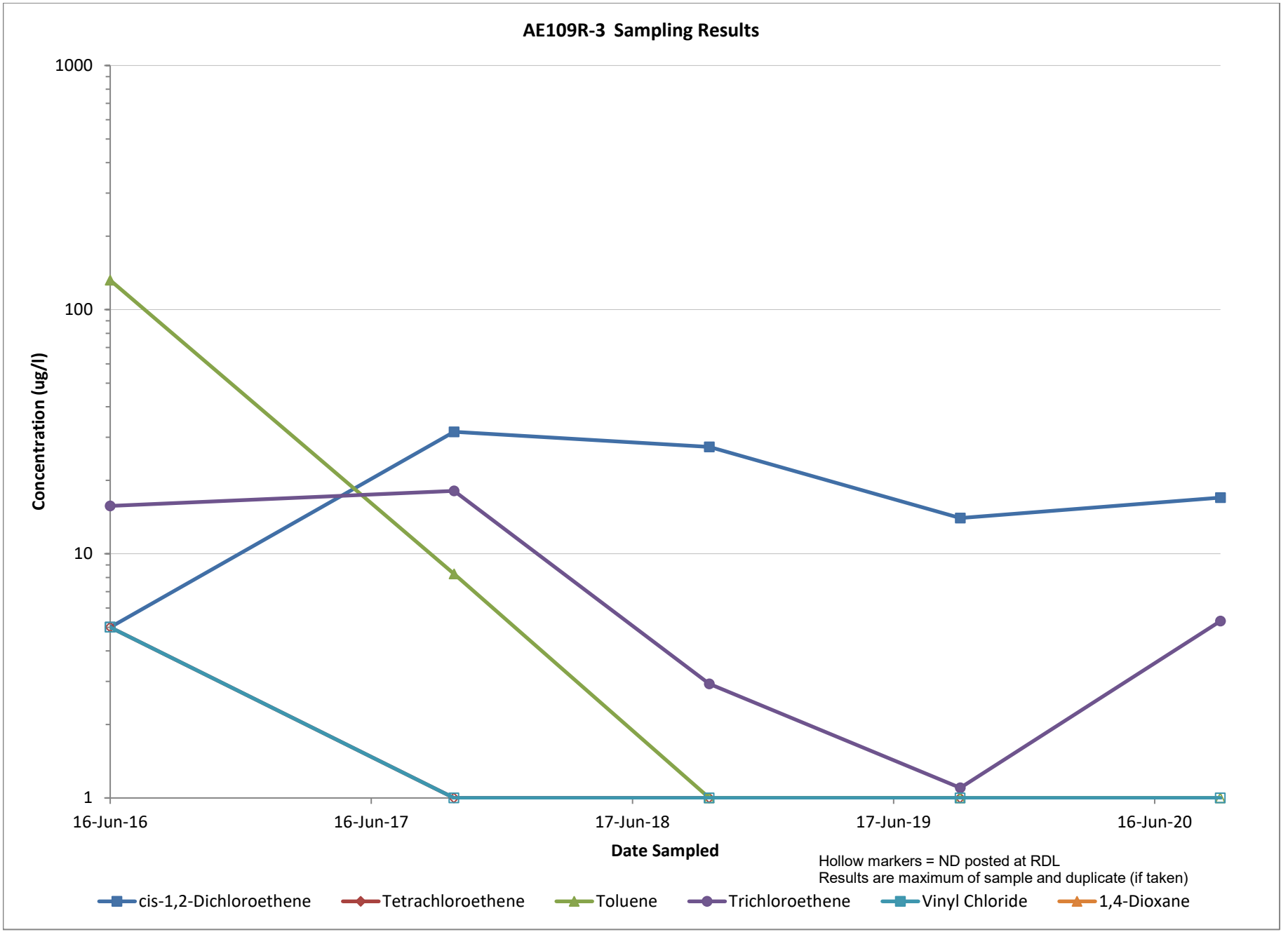

AE108R-3 Sampling Results
100
10
1
0.1
Concentration (ug/l)
18-Dec-14
18-Dec-15
18-Dec-16
18-Dec-17
18-Dec-18
18-Dec-19
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
cis-1,2-Dichloroethene
Tetrachloroethene
Toluene
Trichloroethene
Vinyl Chloride
1,4-Dioxane

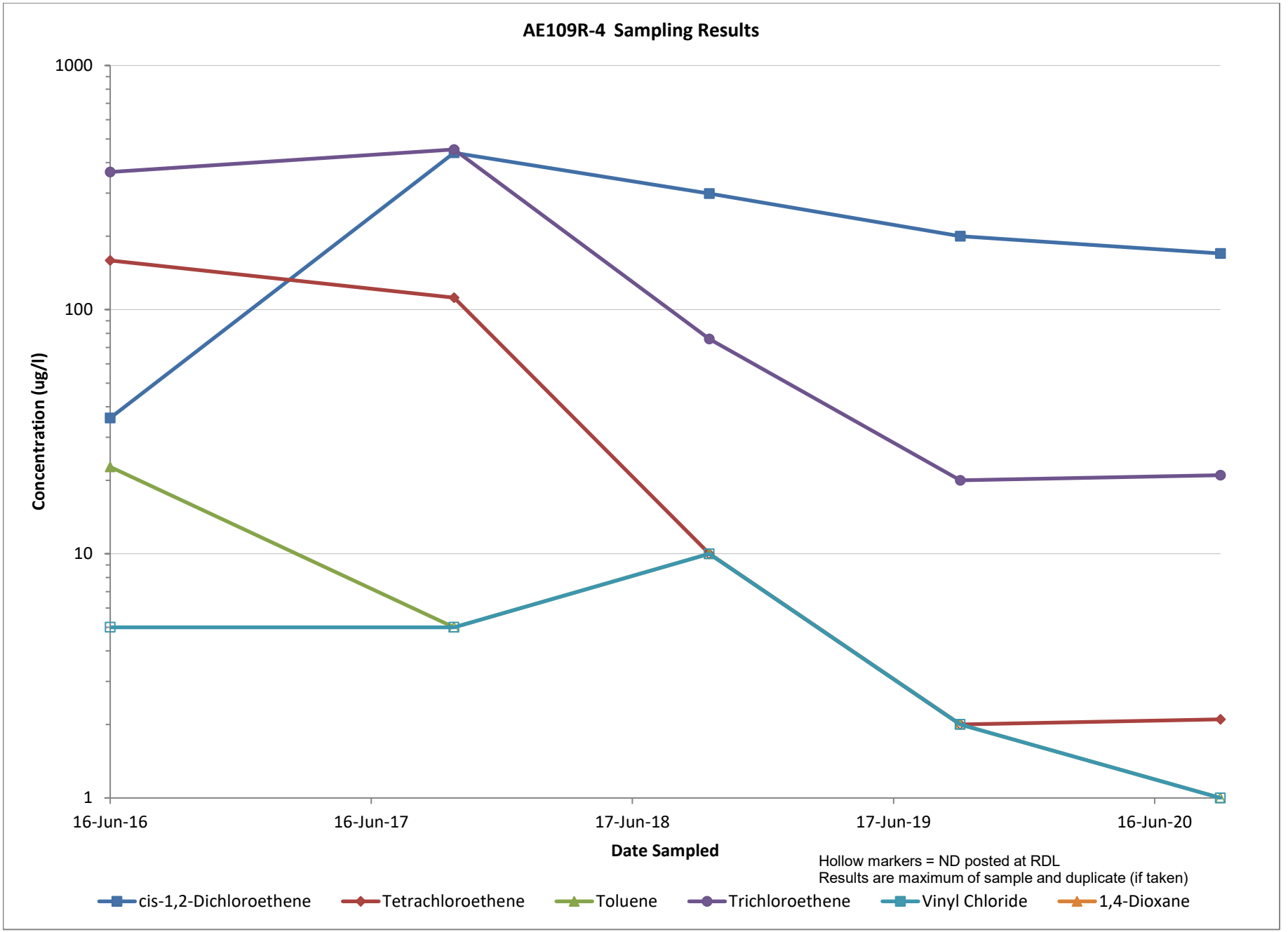

AE108R-5 Sampling Results
100
10
1
Concentration (ug/l)
18-Dec-14
18-Dec-15
18-Dec-16
18-Dec-17
18-Dec-18
18-Dec-19
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
cis-1,2-Dichloroethene
Tetrachloroethene
Toluene
Trichloroethene
Vinyl Chloride
1,4-Dioxane

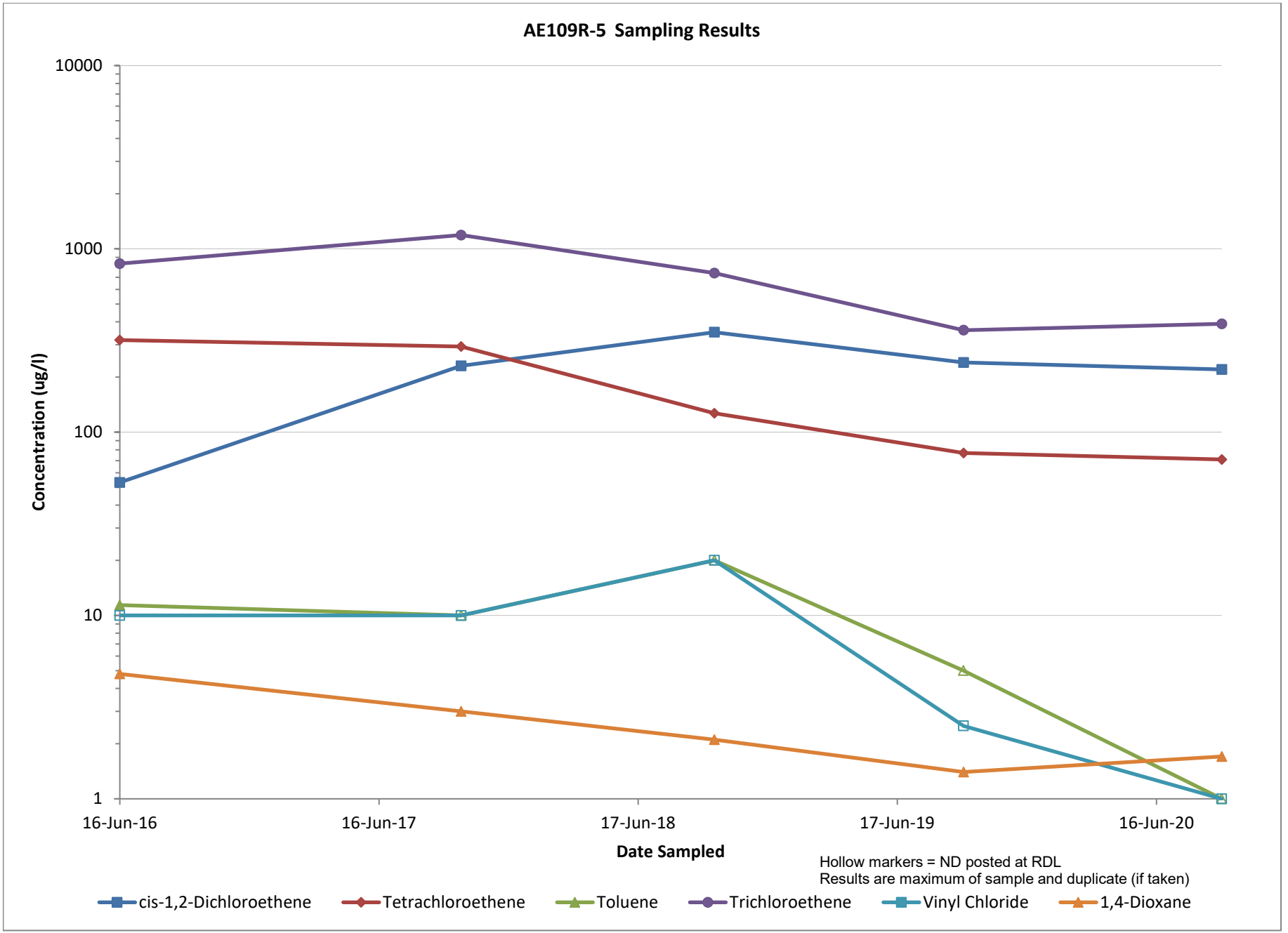

AE109D Sampling Results
10
1
0.1
Concentration (ug/l)
21-Jun-16
21-Jun-17
22-Jun-18
22-Jun-19
21-Jun-20
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
cis-1,2-Dichloroethene
Tetrachloroethene
Toluene
Trichloroethene
Vinyl Chloride
1,4-Dioxane

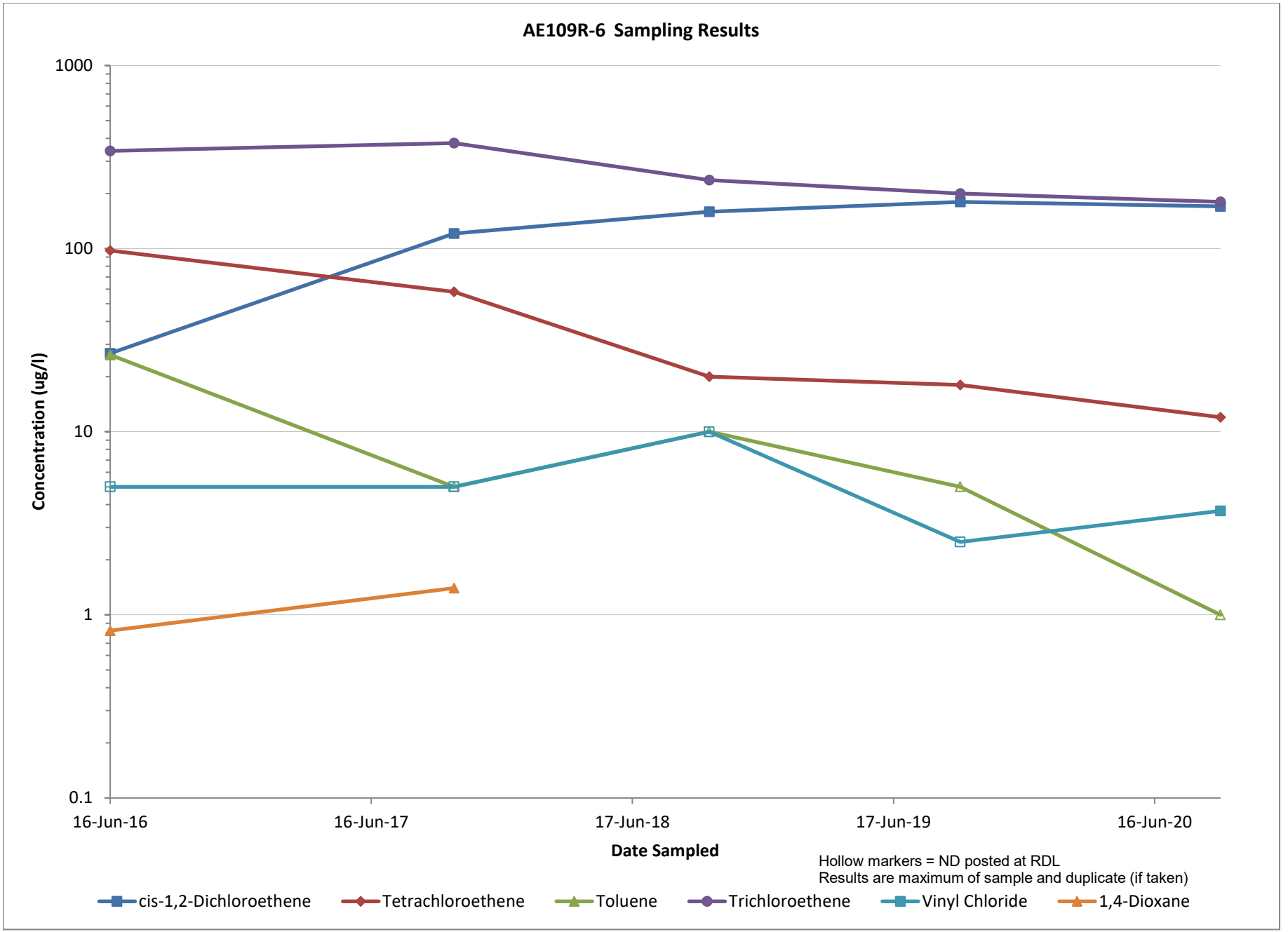

AE109R-1 Sampling Results
100
10
1
Concentration (ug/l)
16-Jun-16
16-Jun-17
17-Jun-18
17-Jun-19
16-Jun-20
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
cis-1,2-Dichloroethene
Tetrachloroethene
Toluene
Trichloroethene
Vinyl Chloride
1,4-Dioxane

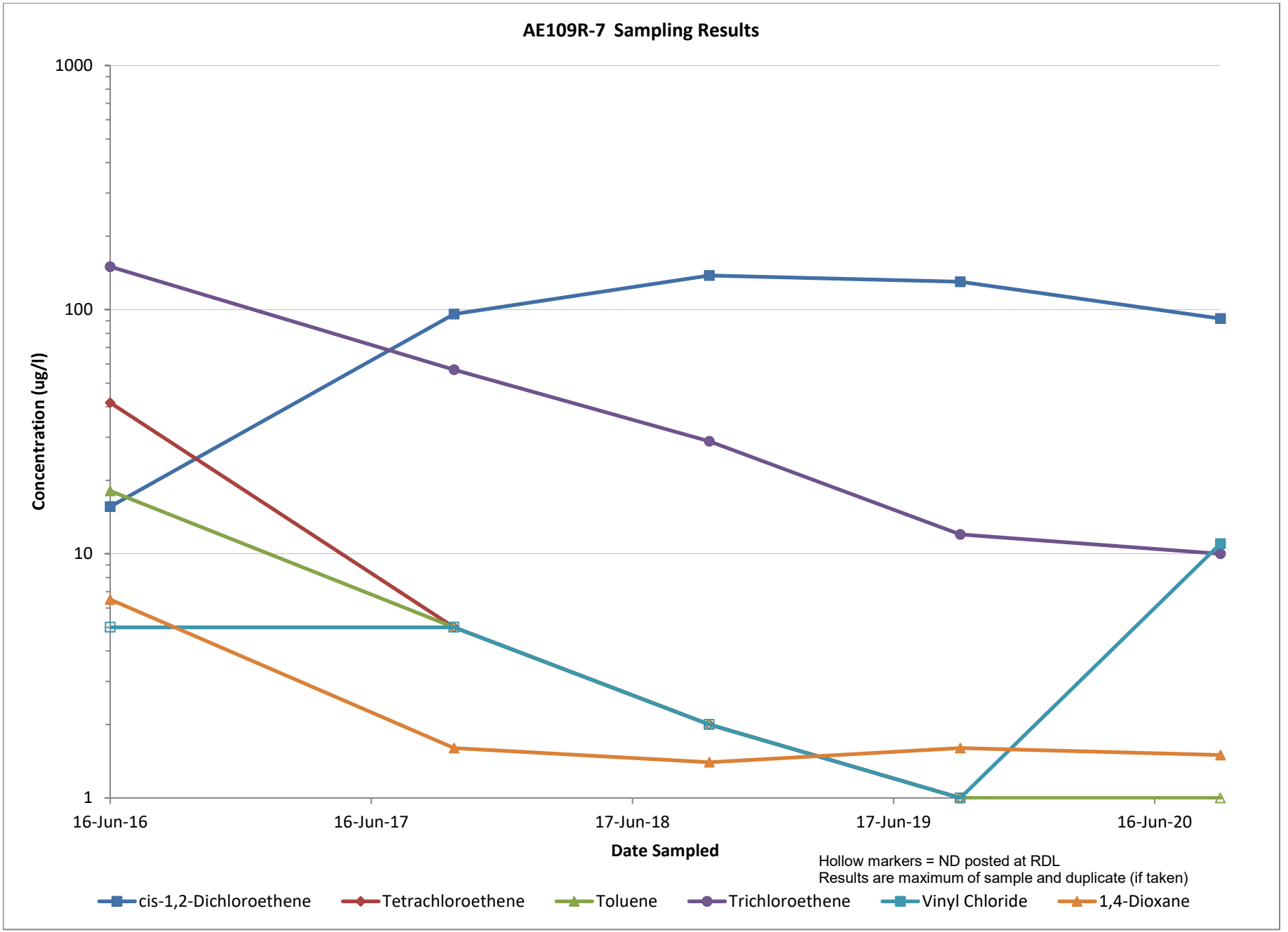

AE109R-2 Sampling Results
100
10
1
Concentration (ug/l)
16-Jun-16
16-Jun-17
17-Jun-18
17-Jun-19
16-Jun-20
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
cis-1,2-Dichloroethene
Tetrachloroethene
Toluene
Trichloroethene
Vinyl Chloride
1,4-Dioxane

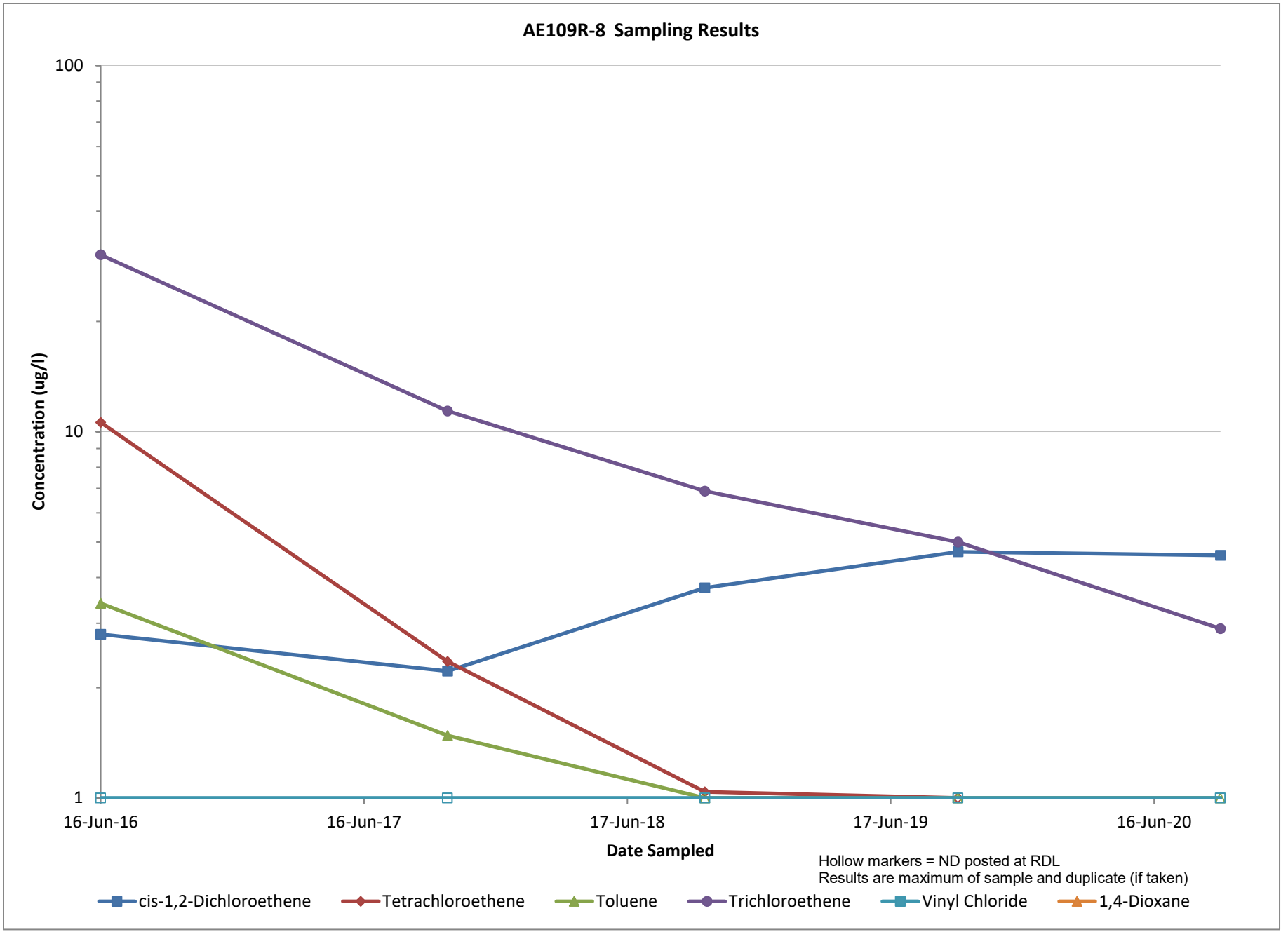

AE109R-3 Sampling Results
1000
100
10
1
Concentration (ug/l)
16-Jun-16
16-Jun-17
17-Jun-18
17-Jun-19
16-Jun-20
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
cis-1,2-Dichloroethene
Tetrachloroethene
Toluene
Trichloroethene
Vinyl Chloride
1,4-Dioxane

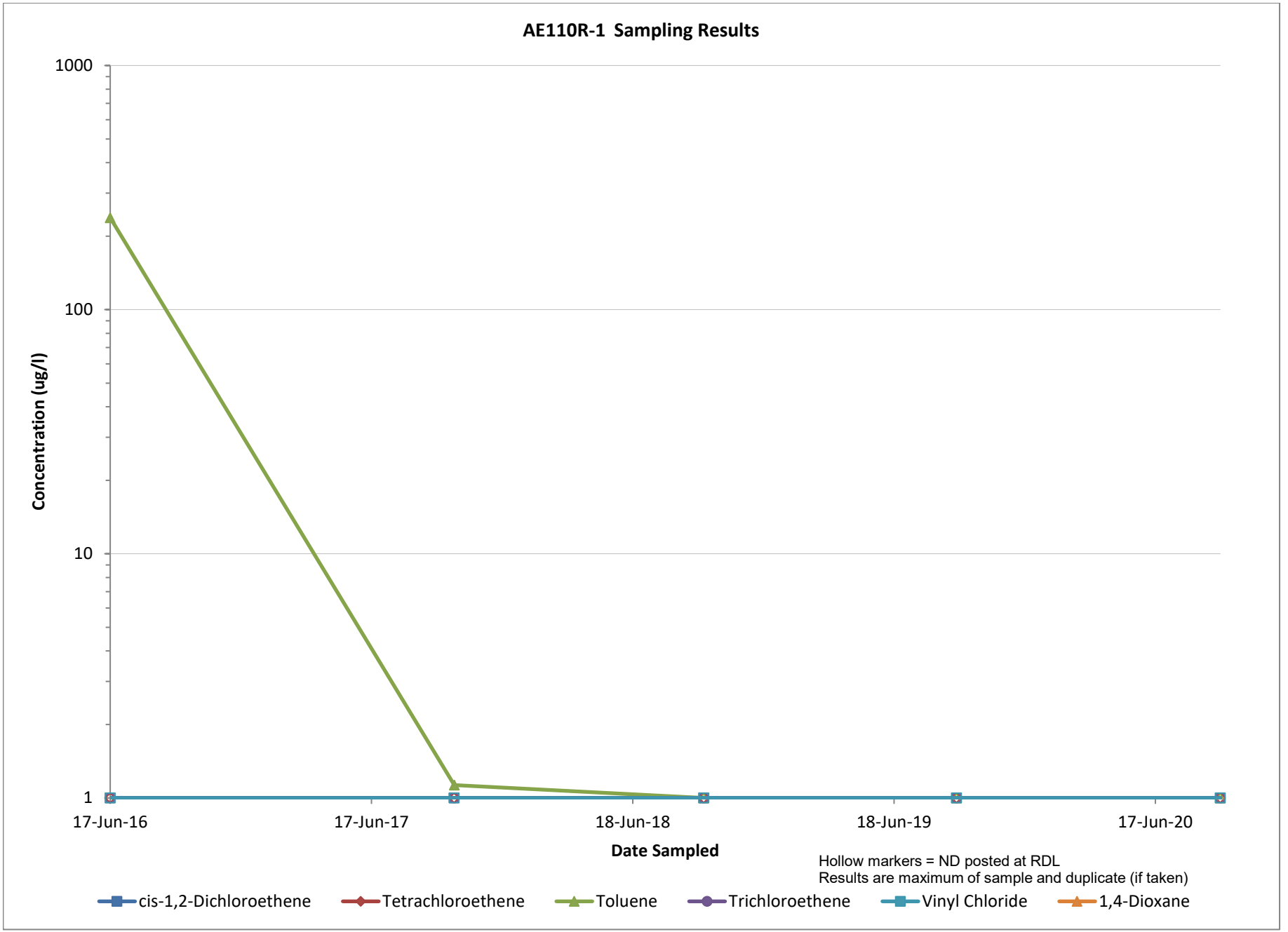

AE109R-4 Sampling Results
1000
100
10
1
Concentration (ug/l)
16-Jun-16
16-Jun-17
17-Jun-18
17-Jun-19
16-Jun-20
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
cis-1,2-Dichloroethene
Tetrachloroethene
Toluene
Trichloroethene
Vinyl Chloride
1,4-Dioxane

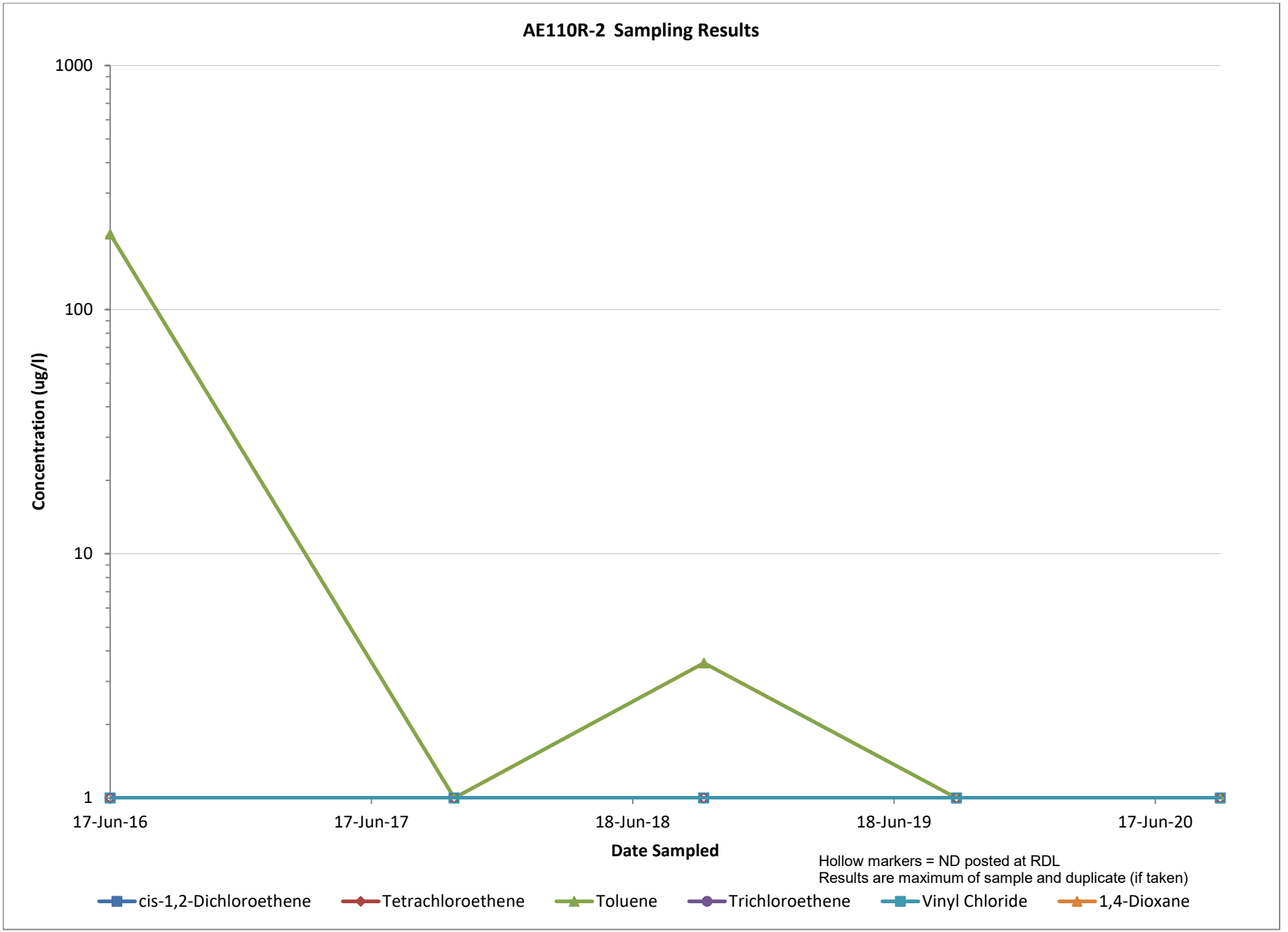

AE109R-5 Sampling Results
10000
1000
100
10
1
Concentration (ug/l)
16-Jun-16
16-Jun-17
17-Jun-18
17-Jun-19
16-Jun-20
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
cis-1,2-Dichloroethene
Tetrachloroethene
Toluene
Trichloroethene
Vinyl Chloride
1,4-Dioxane

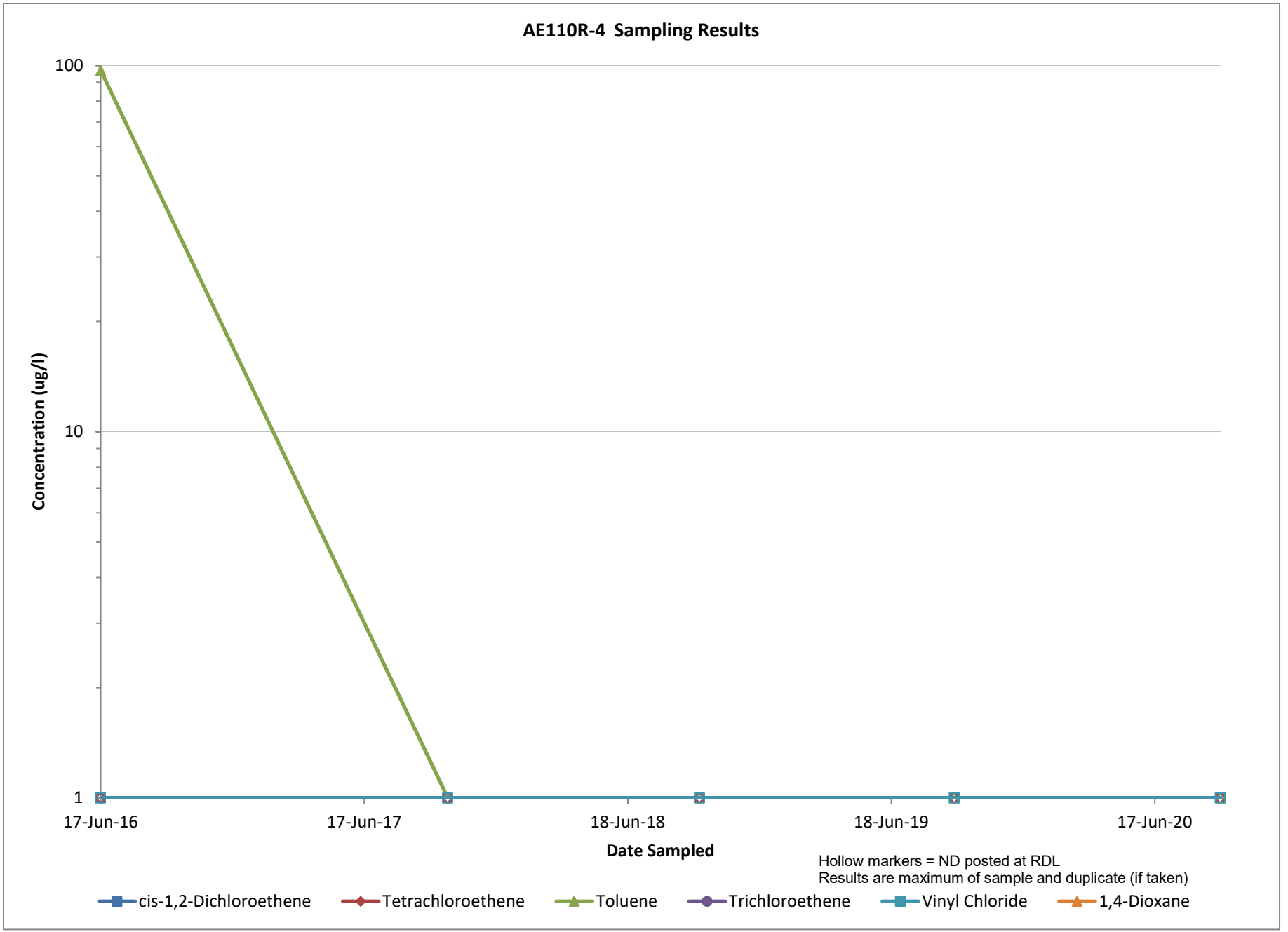

AE109R-6 Sampling Results
1000
100
10
1
0.1
Concentration (ug/l)
16-Jun-16
16-Jun-17
17-Jun-18
17-Jun-19
16-Jun-20
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
cis-1,2-Dichloroethene
Tetrachloroethene
Toluene
Trichloroethene
Vinyl Chloride
1,4-Dioxane

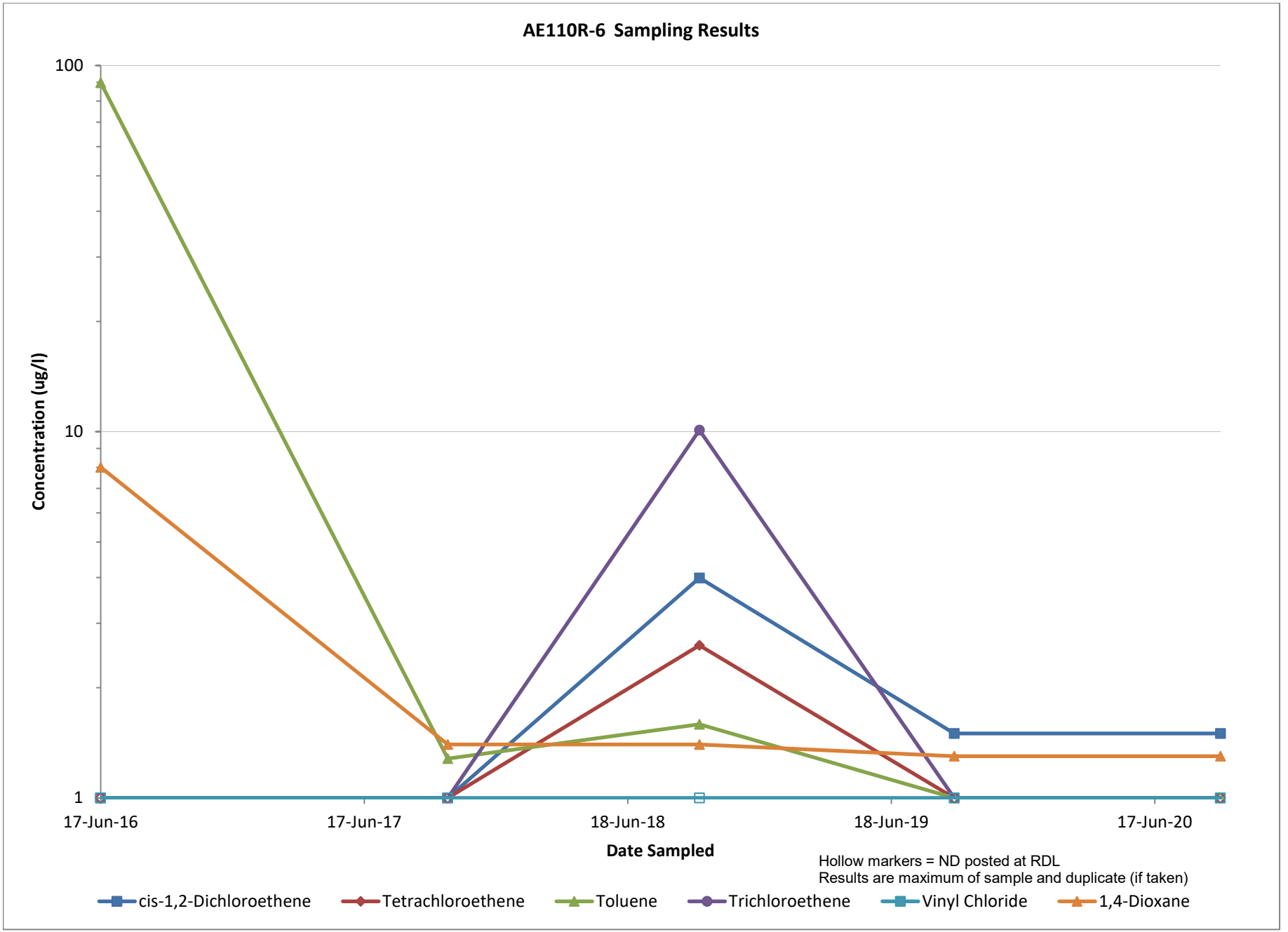

AE109R-7 Sampling Results
1000
100
10
1
Concentration (ug/l)
16-Jun-16
16-Jun-17
17-Jun-18
17-Jun-19
16-Jun-20
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
cis-1,2-Dichloroethene
Tetrachloroethene
Toluene
Trichloroethene
Vinyl Chloride
1,4-Dioxane

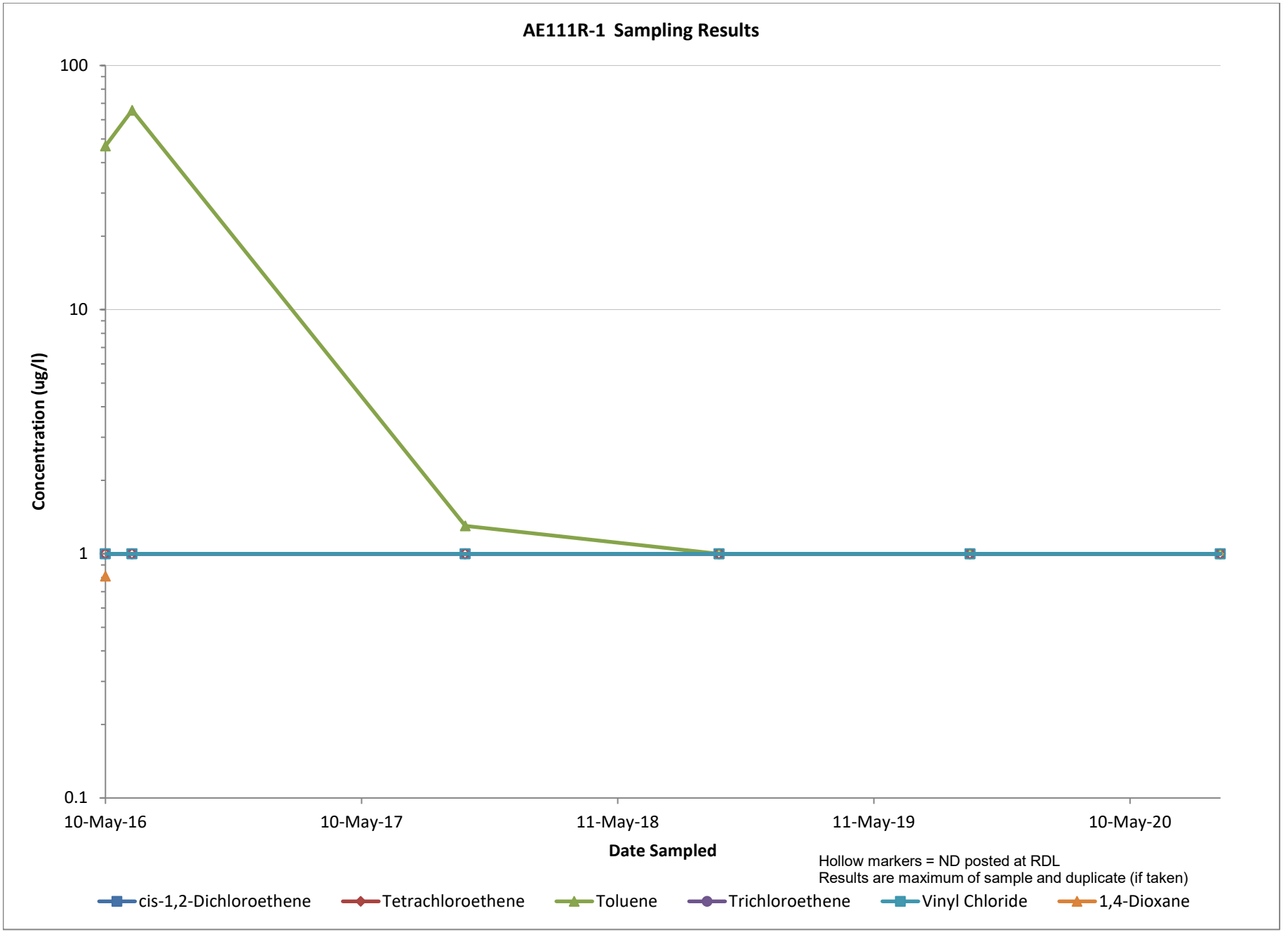

AE109R-8 Sampling Results
100
10
1
Concentration (ug/l)
16-Jun-16
16-Jun-17
17-Jun-18
17-Jun-19
16-Jun-20
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
cis-1,2-Dichloroethene
Tetrachloroethene
Toluene
Trichloroethene
Vinyl Chloride
1,4-Dioxane

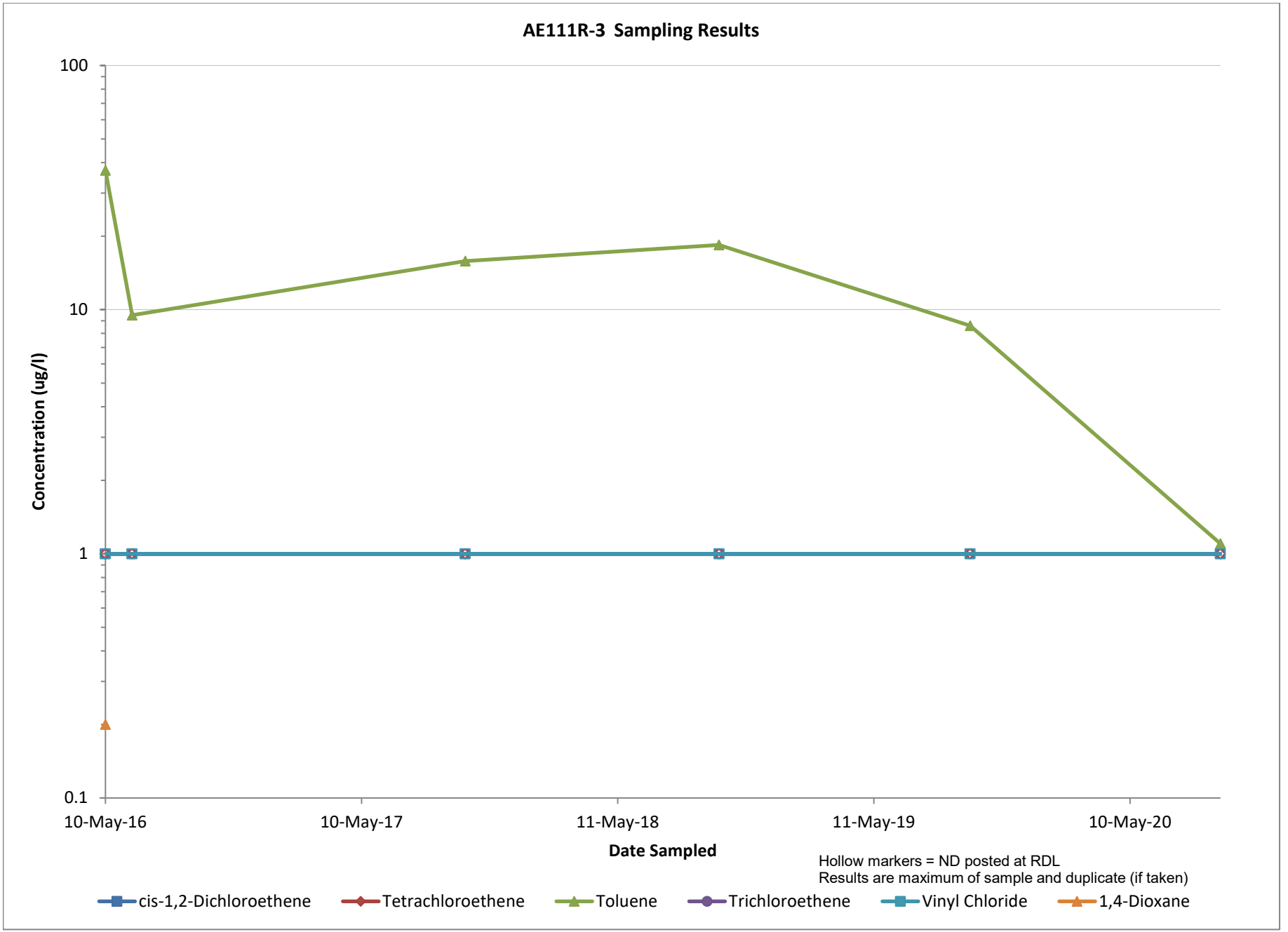

AE110R-1 Sampling Results
1000
100
10
1
Concentration (ug/l)
17-Jun-16
17-Jun-17
18-Jun-18
18-Jun-19
17-Jun-20
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
cis-1,2-Dichloroethene
Tetrachloroethene
Toluene
Trichloroethene
Vinyl Chloride
1,4-Dioxane

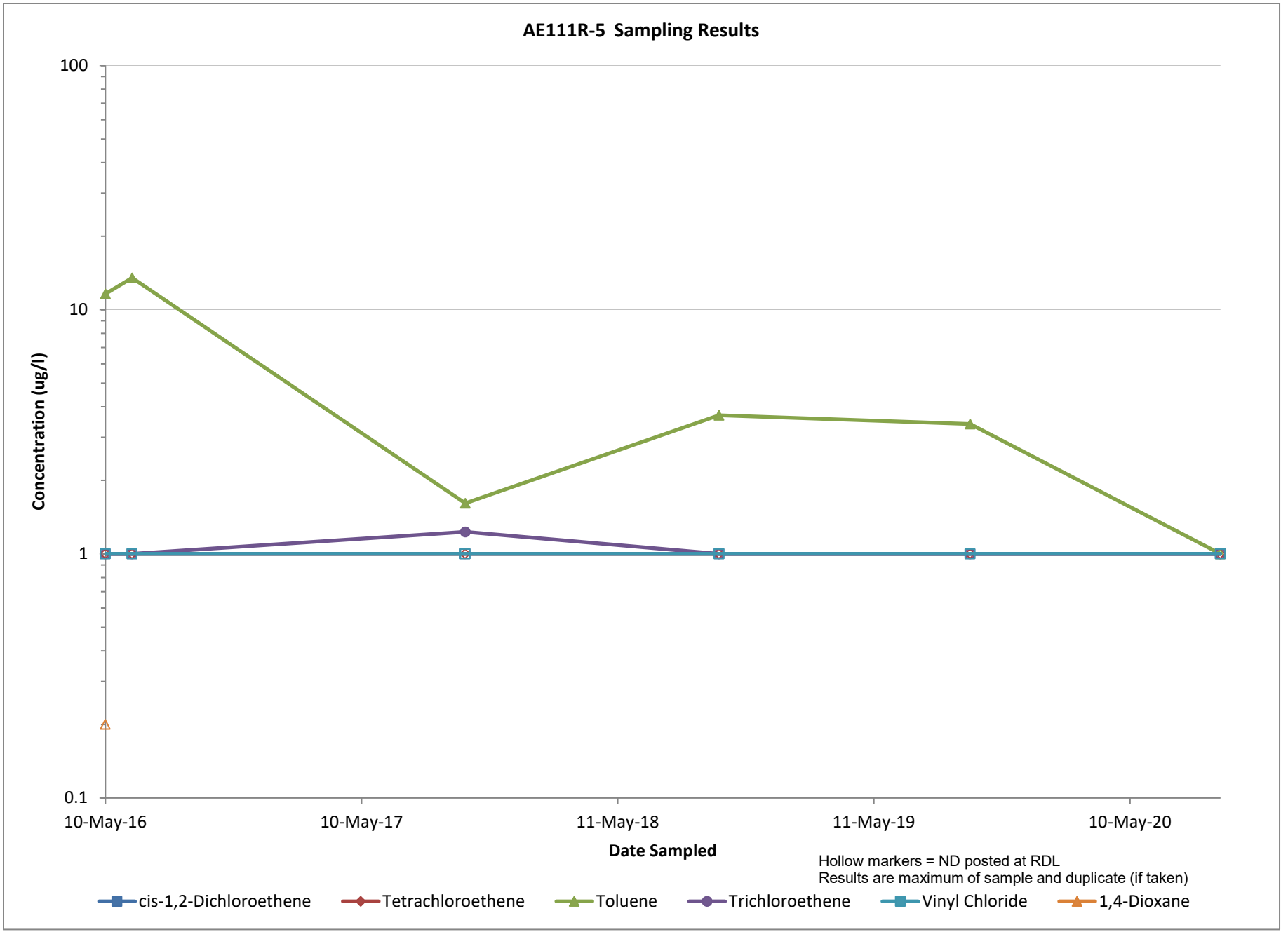

AE110R-2 Sampling Results
1000
100
10
1
Concentration (ug/l)
17-Jun-16
17-Jun-17
18-Jun-18
18-Jun-19
17-Jun-20
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
cis-1,2-Dichloroethene
Tetrachloroethene
Toluene
Trichloroethene
Vinyl Chloride
1,4-Dioxane

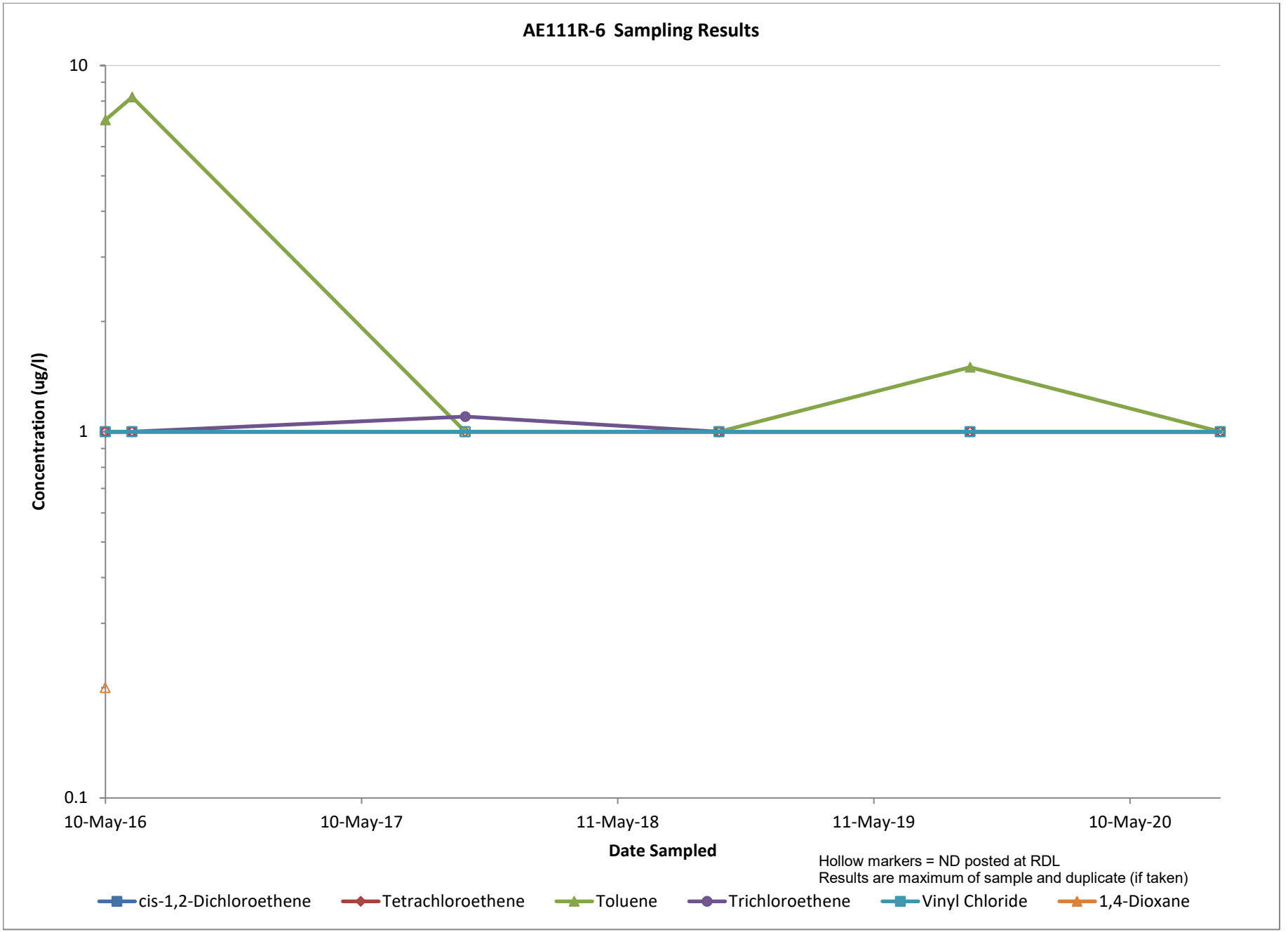

AE110R-4 Sampling Results
100
10
1
Concentration (ug/l)
17-Jun-16
17-Jun-17
18-Jun-18
18-Jun-19
17-Jun-20
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
cis-1,2-Dichloroethene
Tetrachloroethene
Toluene
Trichloroethene
Vinyl Chloride
1,4-Dioxane

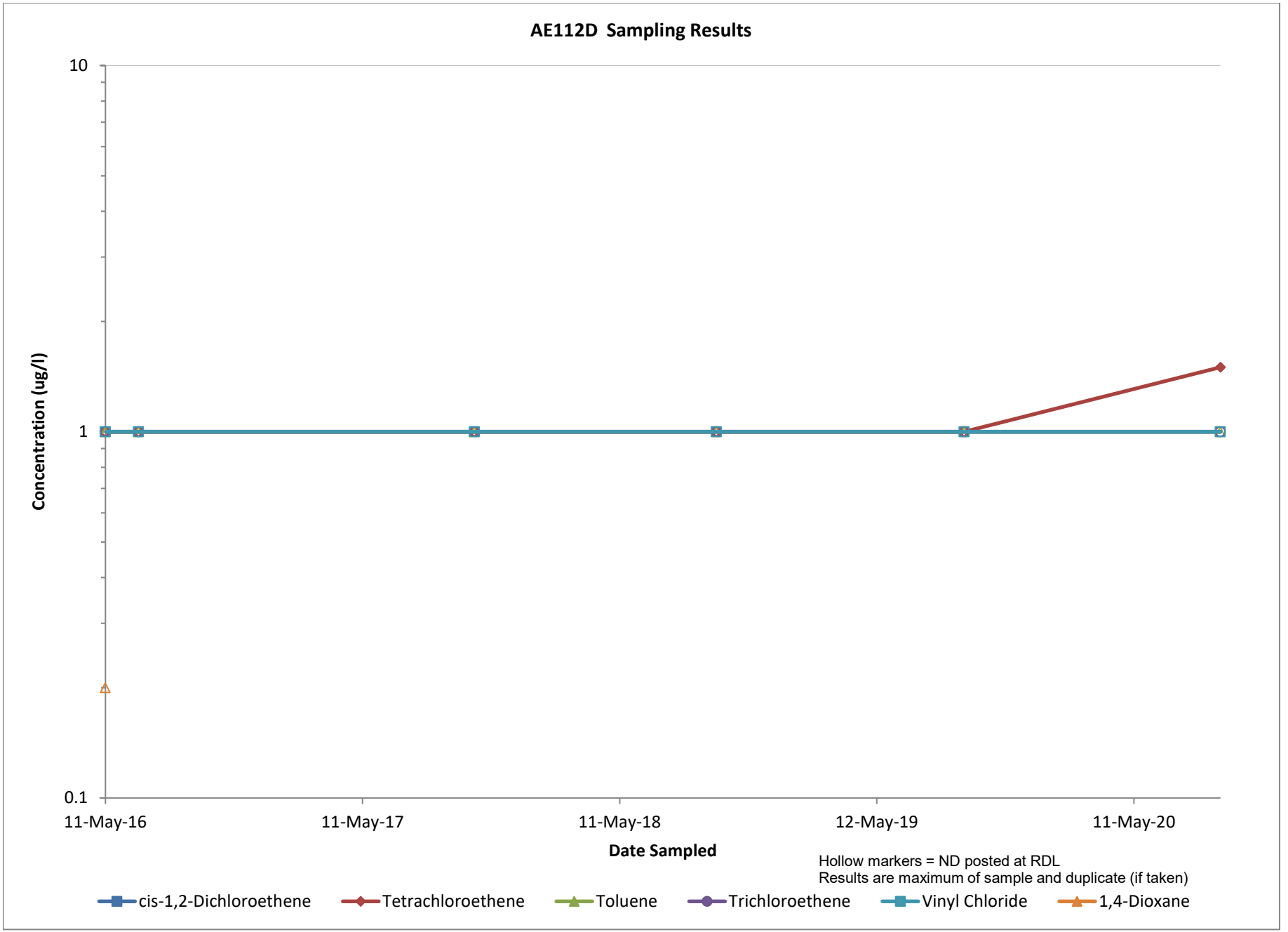

AE110R-6 Sampling Results
100
10
1
Concentration (ug/l)
17-Jun-16
17-Jun-17
18-Jun-18
18-Jun-19
17-Jun-20
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
cis-1,2-Dichloroethene
Tetrachloroethene
Toluene
Trichloroethene
Vinyl Chloride
1,4-Dioxane

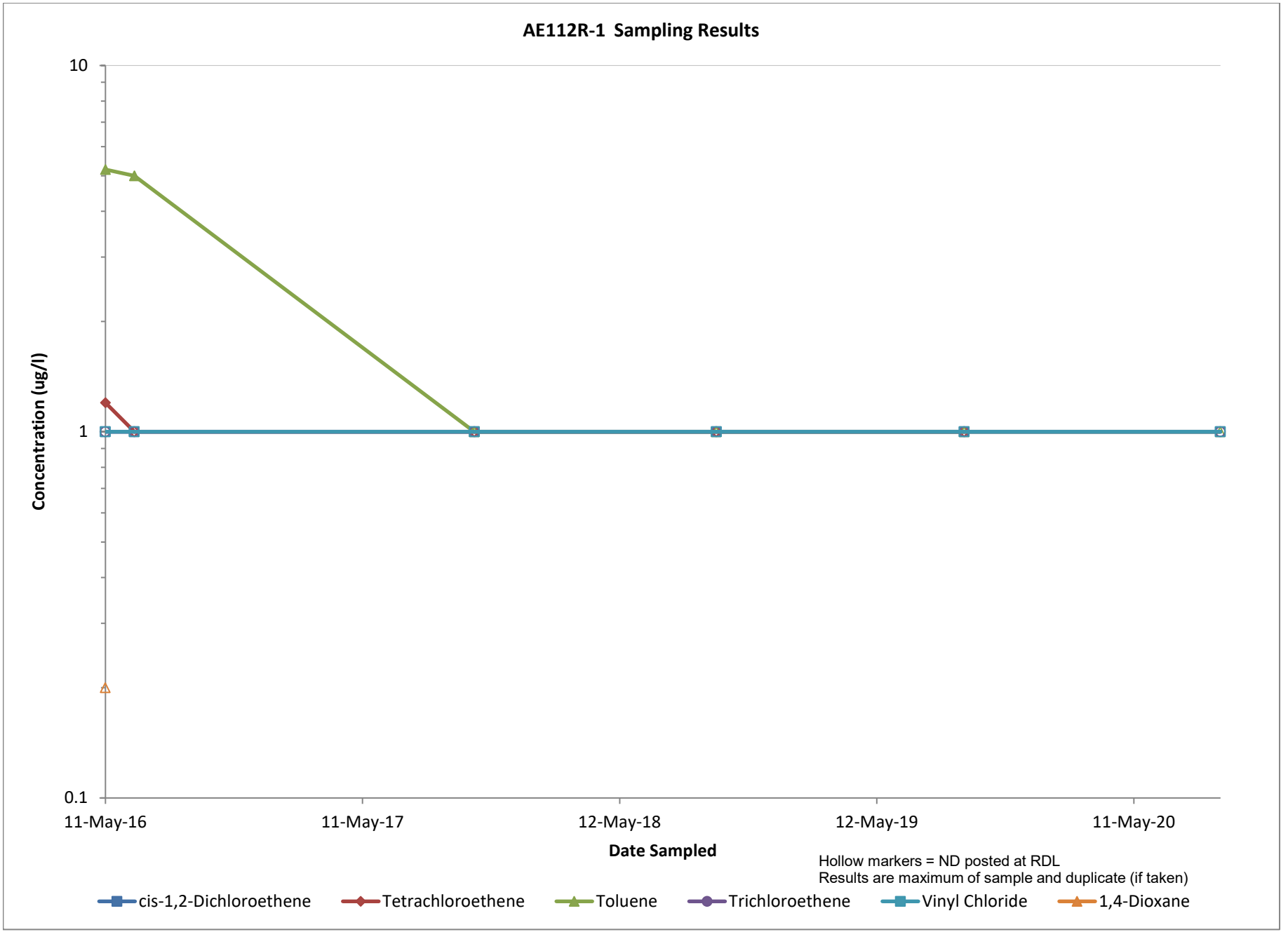

AE111R-1 Sampling Results
100
10
1
0.1
Concentration (ug/l)
10-May-16
10-May-17
11-May-18
11-May-19
10-May-20
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
cis-1,2-Dichloroethene
Tetrachloroethene
Toluene
Trichloroethene
Vinyl Chloride
1,4-Dioxane

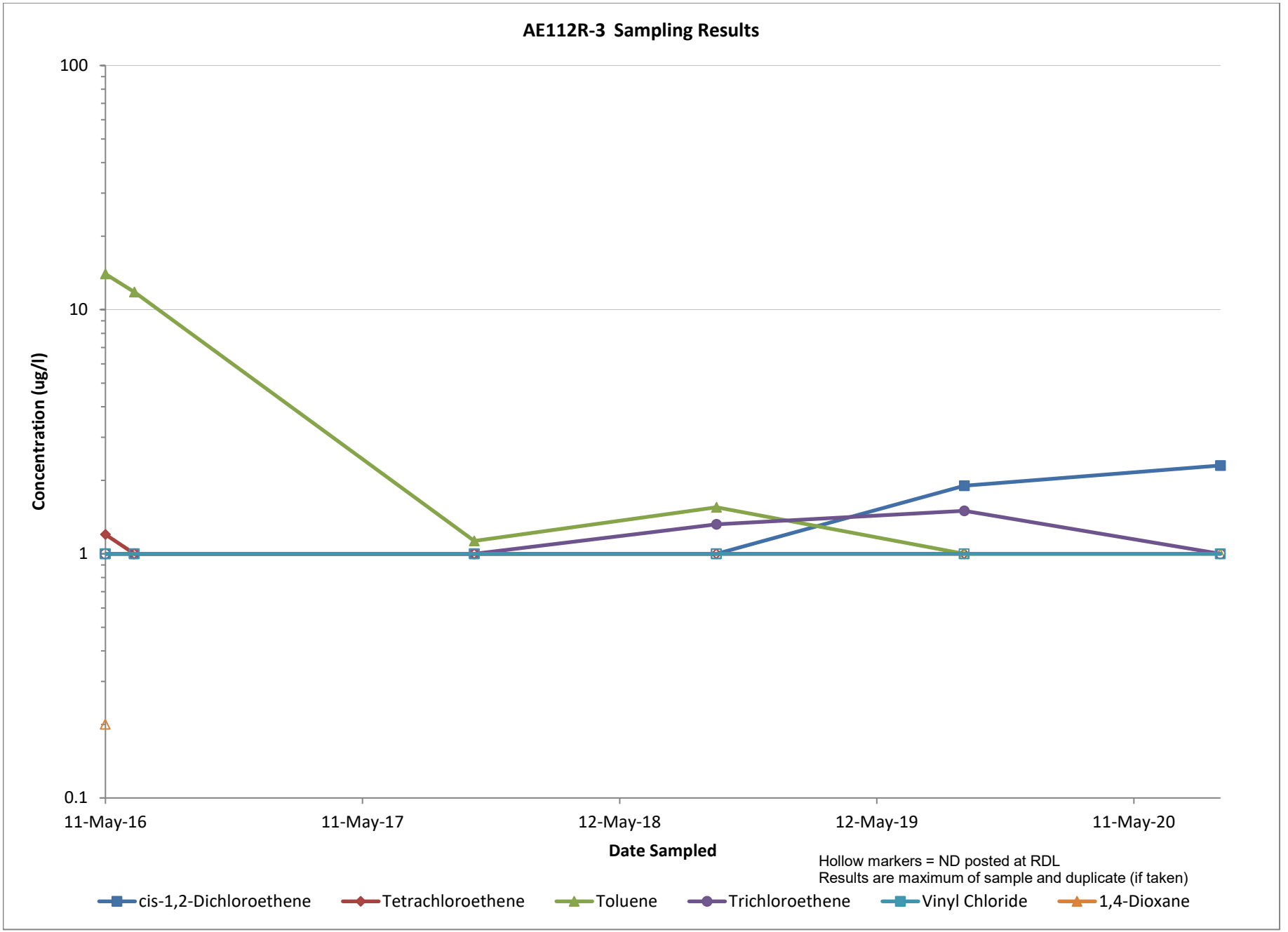

AE111R-3 Sampling Results
100
10
1
0.1
Concentration (ug/l)
10-May-16
10-May-17
11-May-18
11-May-19
10-May-20
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
cis-1,2-Dichloroethene
Tetrachloroethene
Toluene
Trichloroethene
Vinyl Chloride
1,4-Dioxane

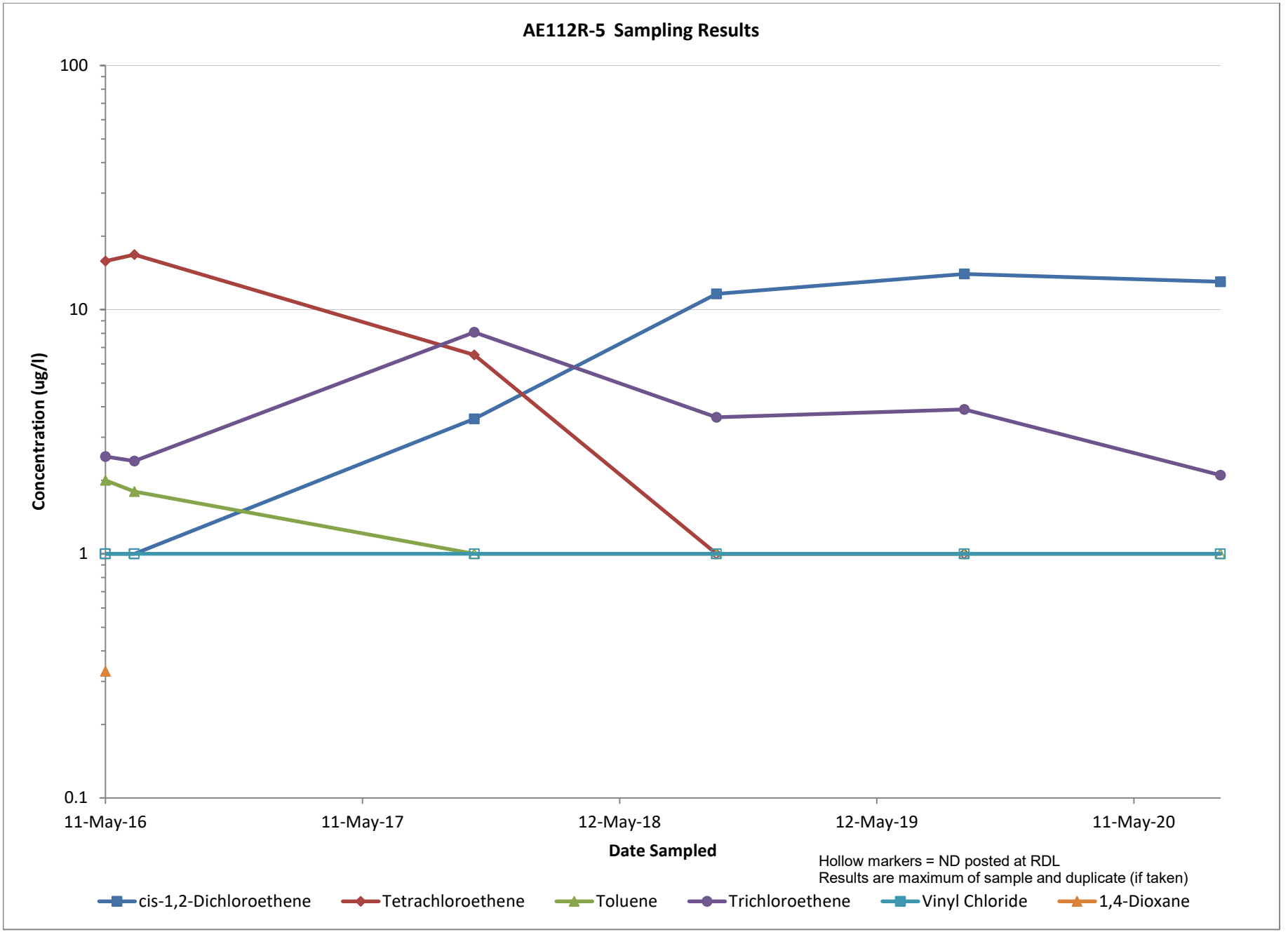

AE111R-5 Sampling Results
100
10
1
0.1
Concentration (ug/l)
10-May-16
10-May-17
11-May-18
11-May-19
10-May-20
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
cis-1,2-Dichloroethene
Tetrachloroethene
Toluene
Trichloroethene
Vinyl Chloride
1,4-Dioxane

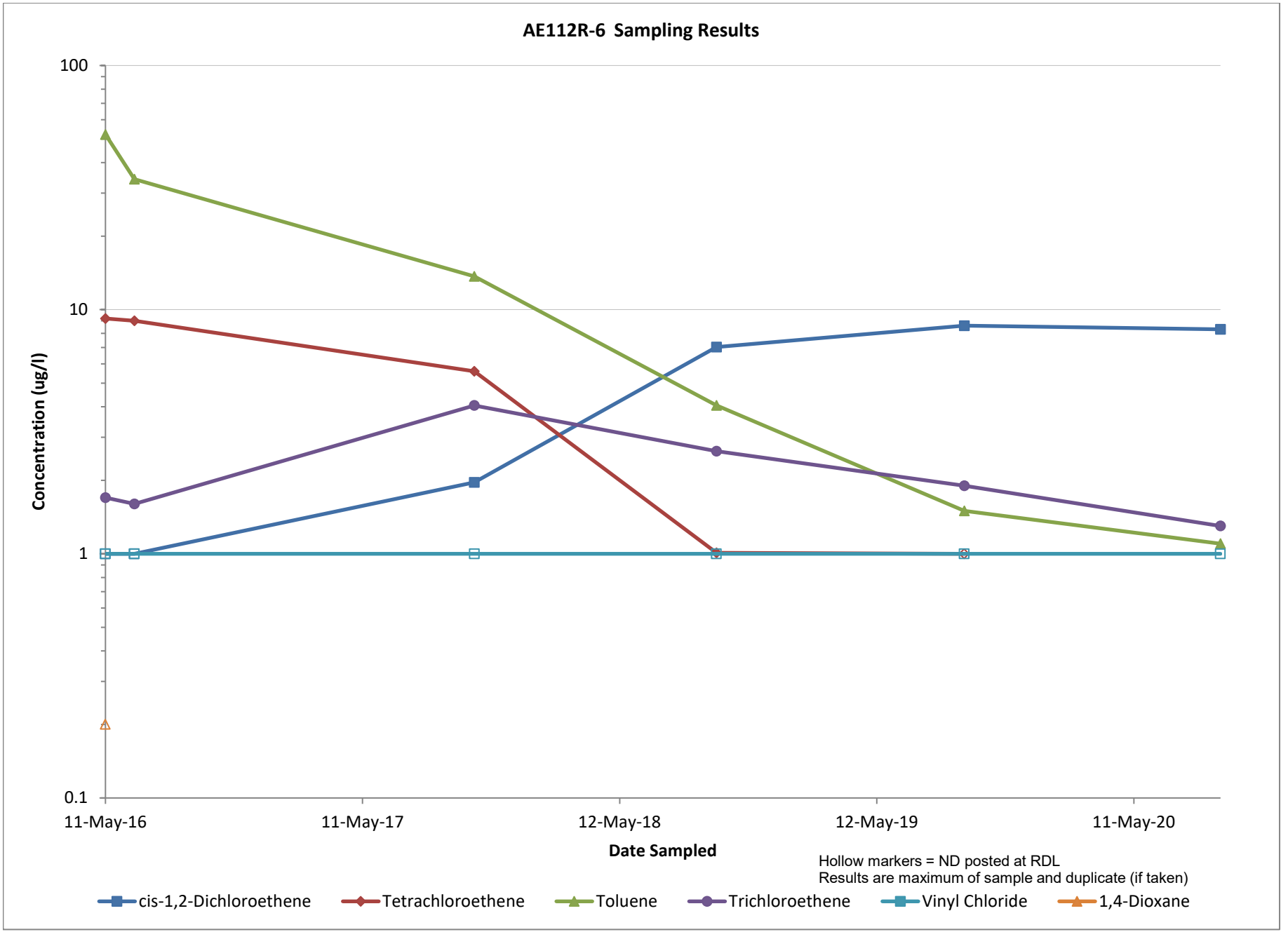

AE111R-6 Sampling Results
10
1
0.1
Concentration (ug/l)
10-May-16
10-May-17
11-May-18
11-May-19
10-May-20
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
cis-1,2-Dichloroethene
Tetrachloroethene
Toluene
Trichloroethene
Vinyl Chloride
1,4-Dioxane

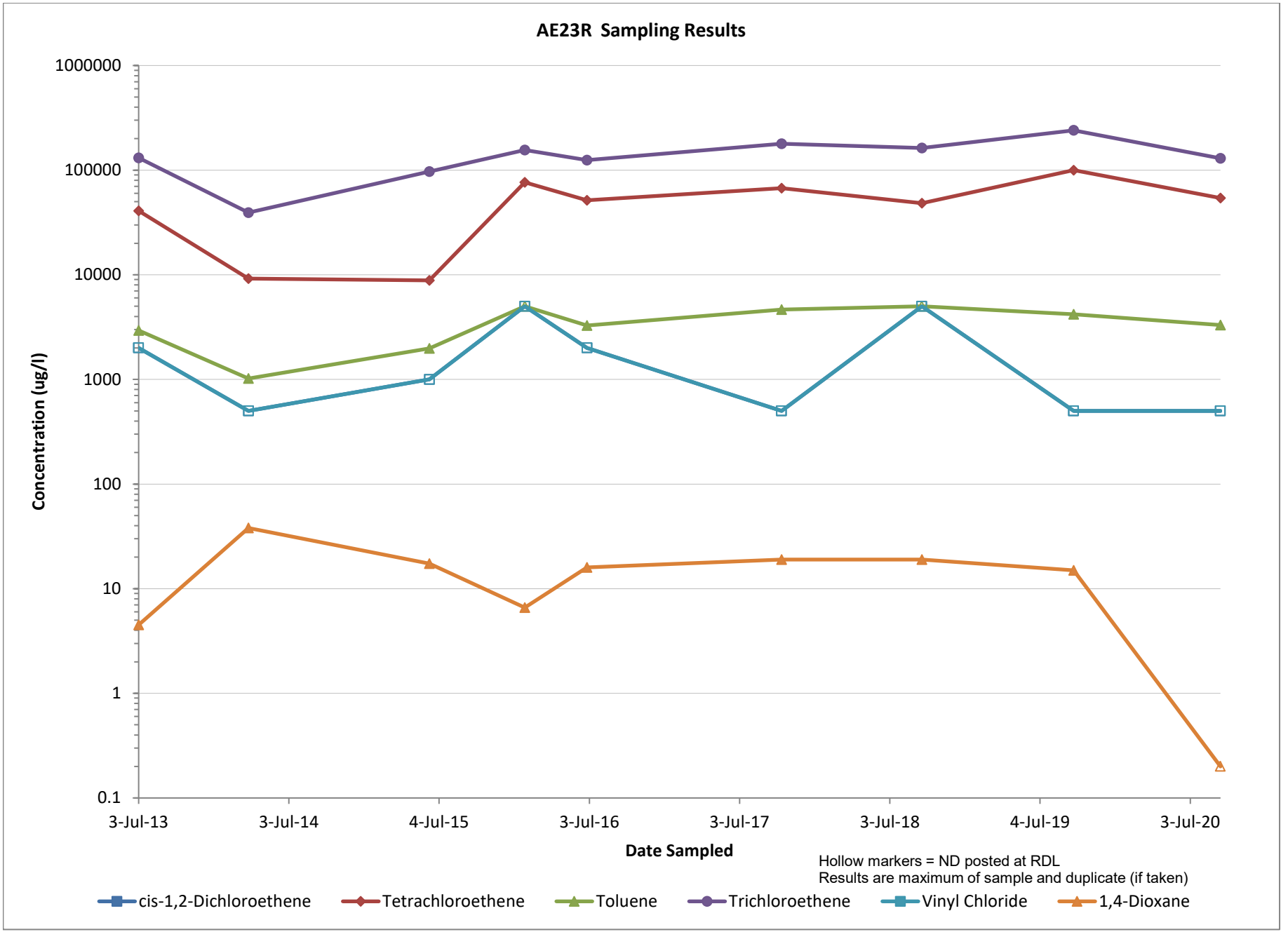

AE112D Sampling Results
10
1
0.1
Concentration (ug/l)
11-May-16
11-May-17
11-May-18
12-May-19
11-May-20
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
cis-1,2-Dichloroethene
Tetrachloroethene
Toluene
Trichloroethene
Vinyl Chloride
1,4-Dioxane

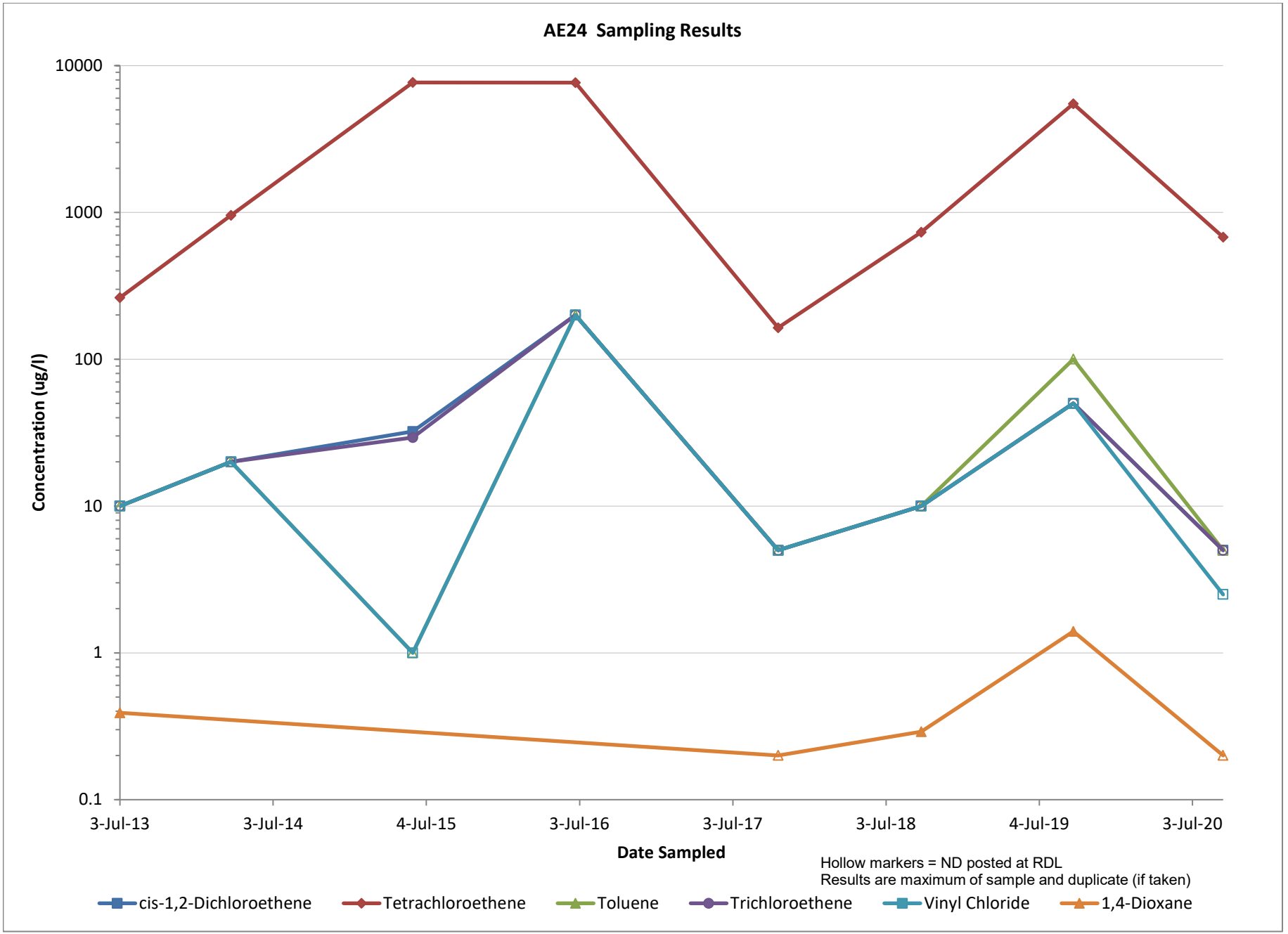

AE112R-1 Sampling Results
10
1
0.1
Concentration (ug/l)
11-May-16
11-May-17
12-May-18
12-May-19
11-May-20
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
cis-1,2-Dichloroethene
Tetrachloroethene
Toluene
Trichloroethene
Vinyl Chloride
1,4-Dioxane

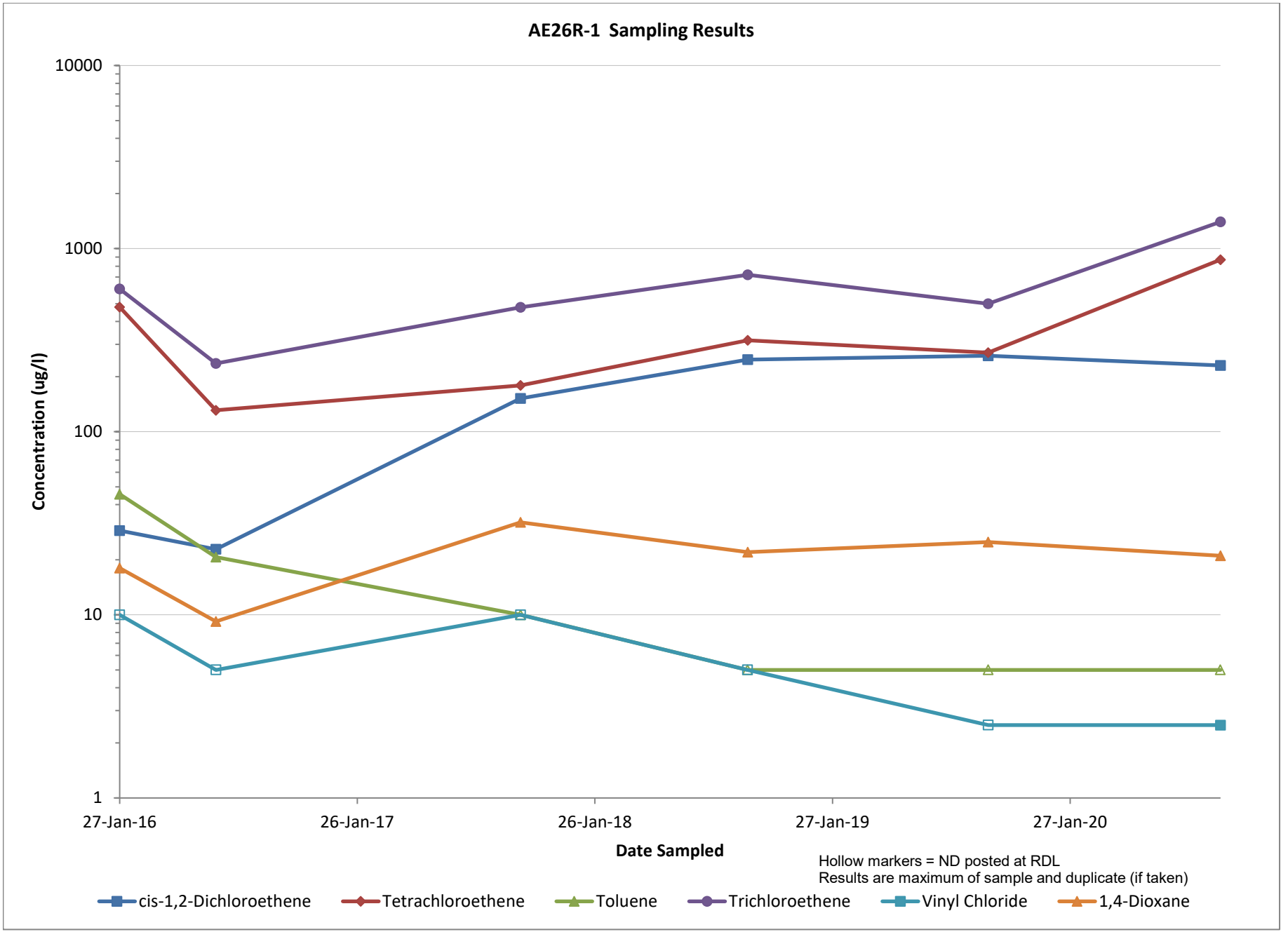

AE112R-3 Sampling Results
100
10
1
0.1
Concentration (ug/l)
11-May-16
11-May-17
12-May-18
12-May-19
11-May-20
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
cis-1,2-Dichloroethene
Tetrachloroethene
Toluene
Trichloroethene
Vinyl Chloride
1,4-Dioxane

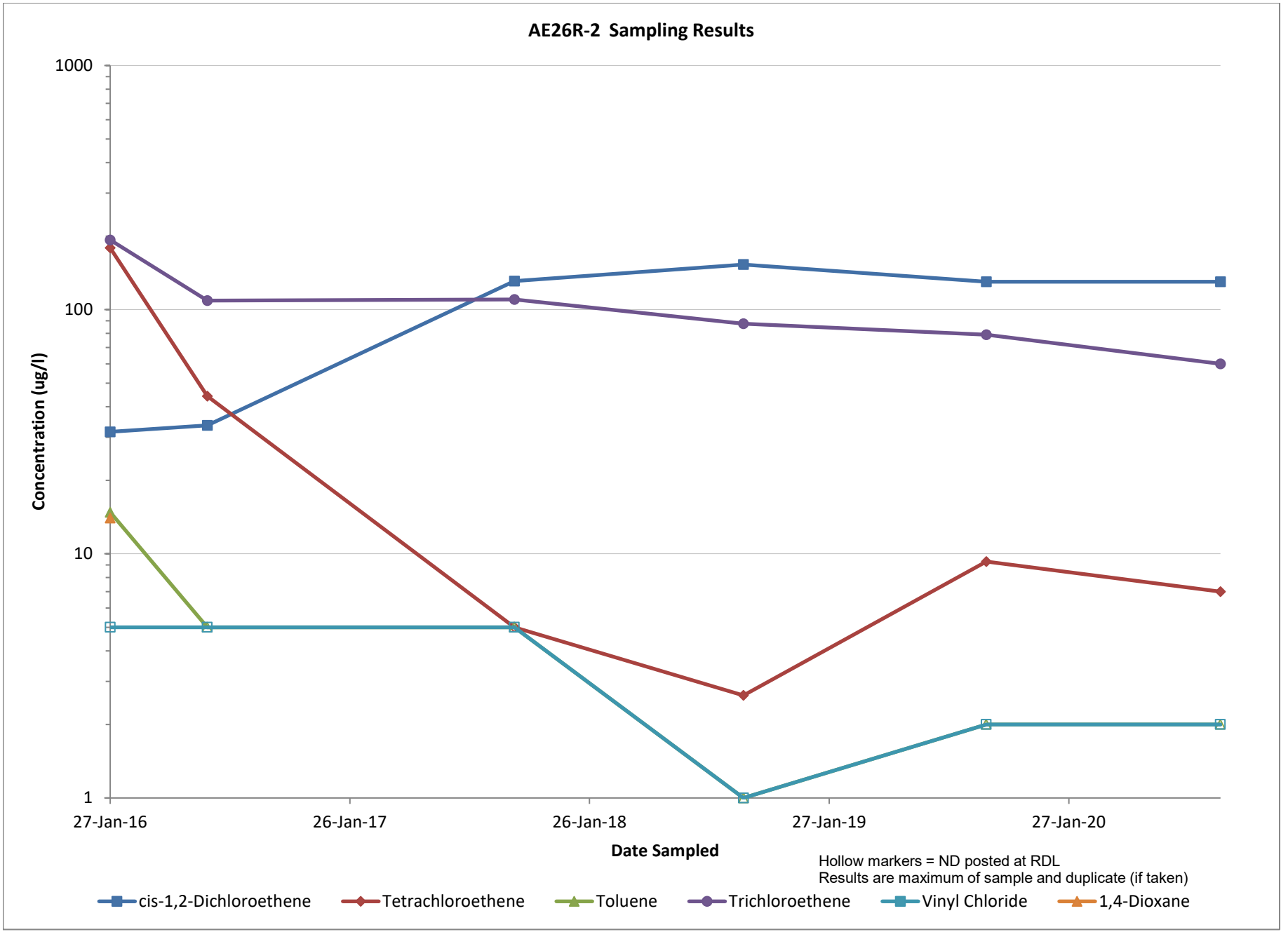

AE112R-5 Sampling Results
100
10
1
0.1
Concentration (ug/l)
11-May-16
11-May-17
12-May-18
12-May-19
11-May-20
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
cis-1,2-Dichloroethene
Tetrachloroethene
Toluene
Trichloroethene
Vinyl Chloride
1,4-Dioxane

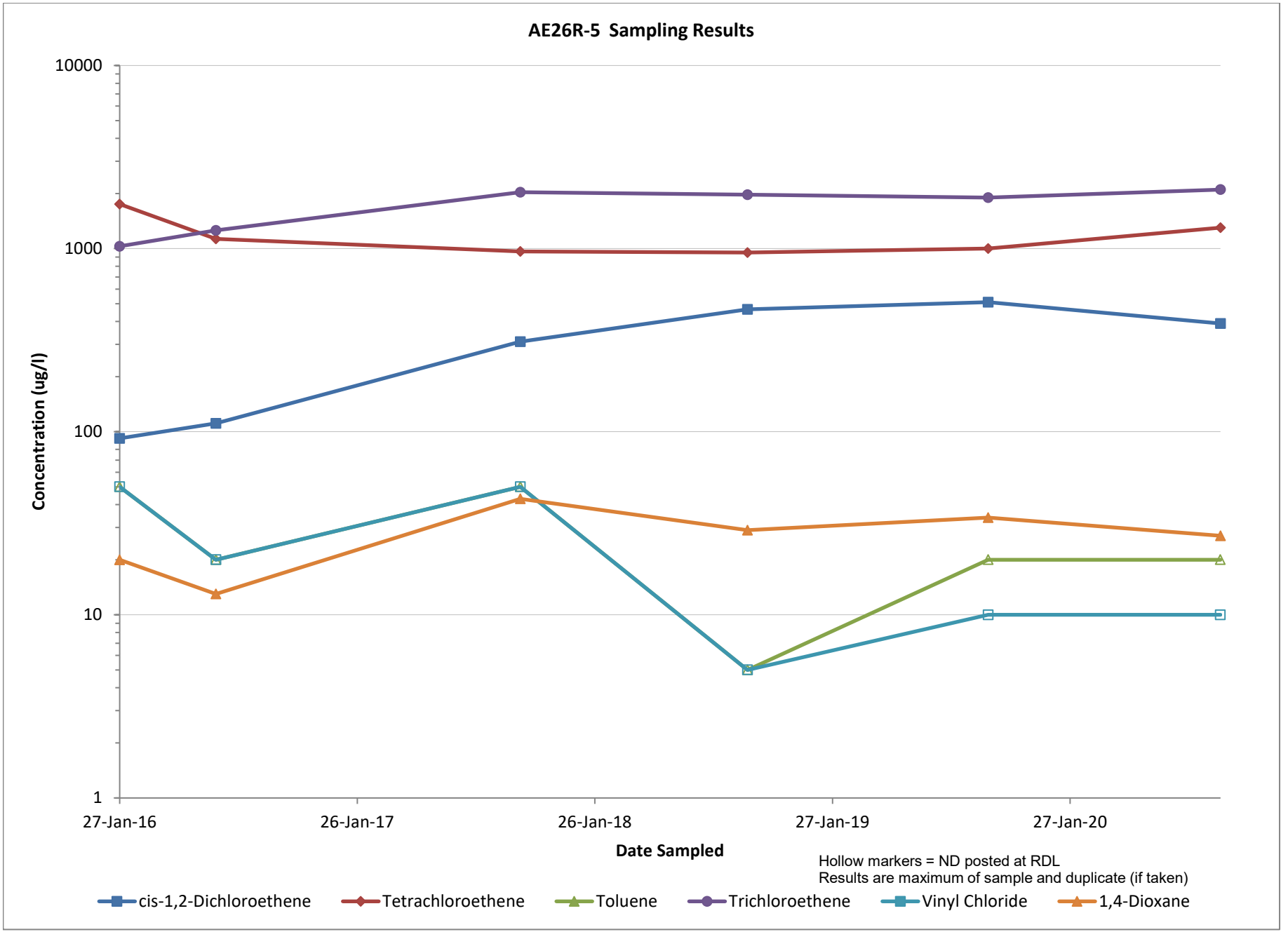

AE112R-6 Sampling Results
100
10
1
0.1
Concentration (ug/l)
11-May-16
11-May-17
12-May-18
12-May-19
11-May-20
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
cis-1,2-Dichloroethene
Tetrachloroethene
Toluene
Trichloroethene
Vinyl Chloride
1,4-Dioxane

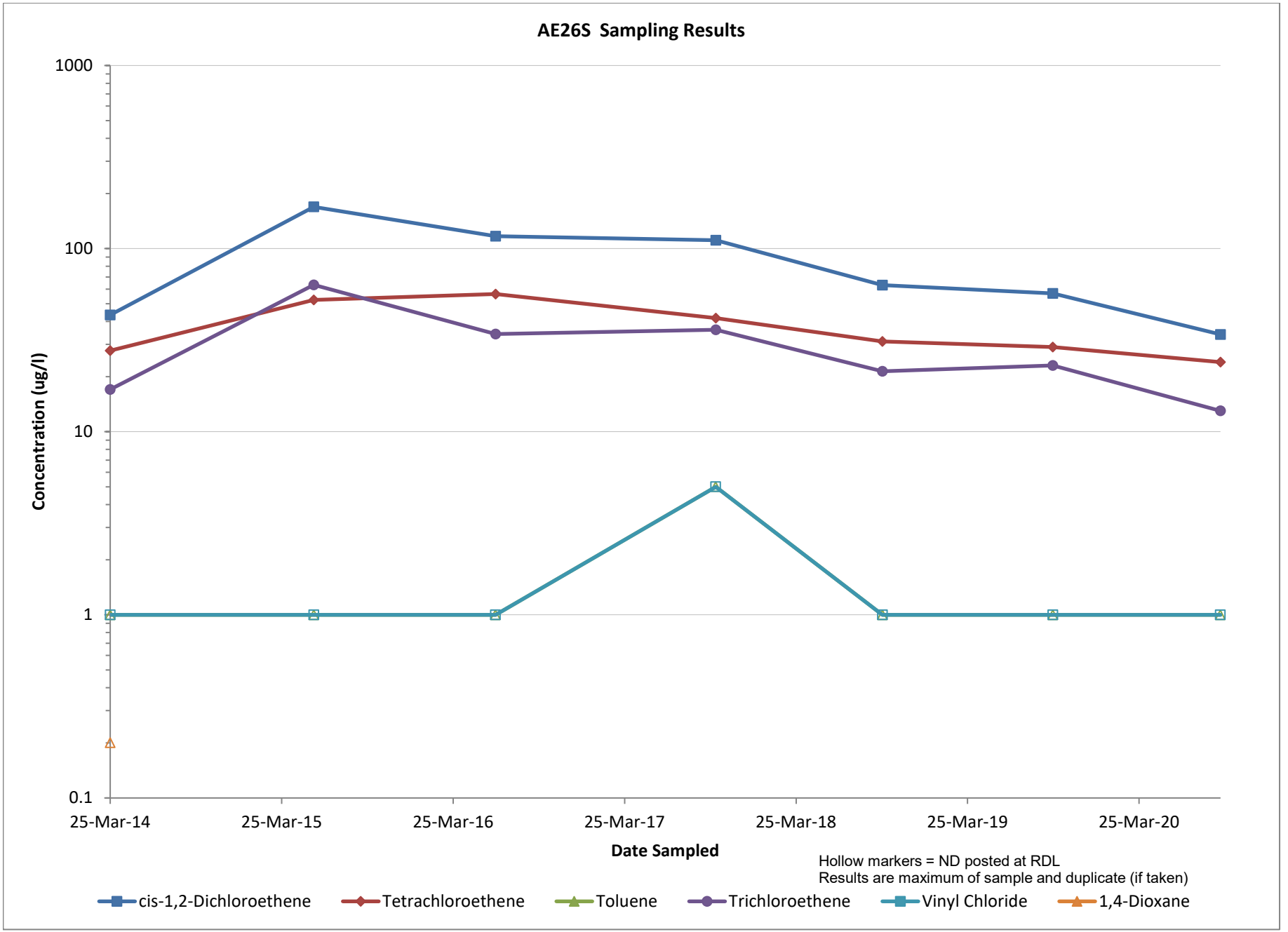

AE23R Sampling Results
1000000
100000
10000
1000
100
10
1
0.1
Concentration (ug/l)
3-Jul-13
3-Jul-14
4-Jul-15
3-Jul-16
3-Jul-17
3-Jul-18
4-Jul-19
3-Jul-20
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
cis-1,2-Dichloroethene
Tetrachloroethene
Toluene
Trichloroethene
Vinyl Chloride
1,4-Dioxane

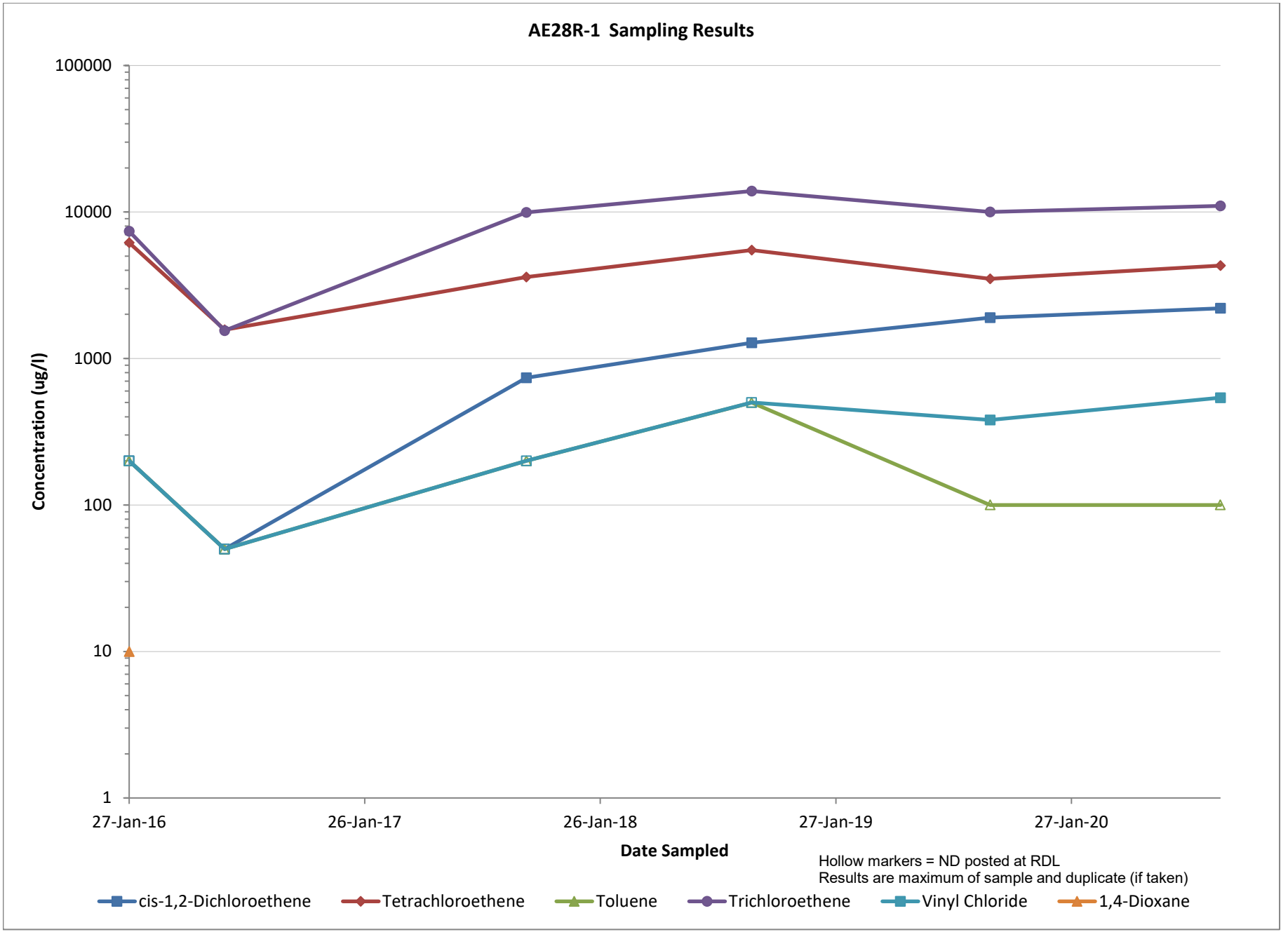

AE24 Sampling Results
10000
1000
100
10
1
0.1
Concentration (ug/l)
3-Jul-13
3-Jul-14
4-Jul-15
3-Jul-16
3-Jul-17
3-Jul-18
4-Jul-19
3-Jul-20
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
cis-1,2-Dichloroethene
Tetrachloroethene
Toluene
Trichloroethene
Vinyl Chloride
1,4-Dioxane

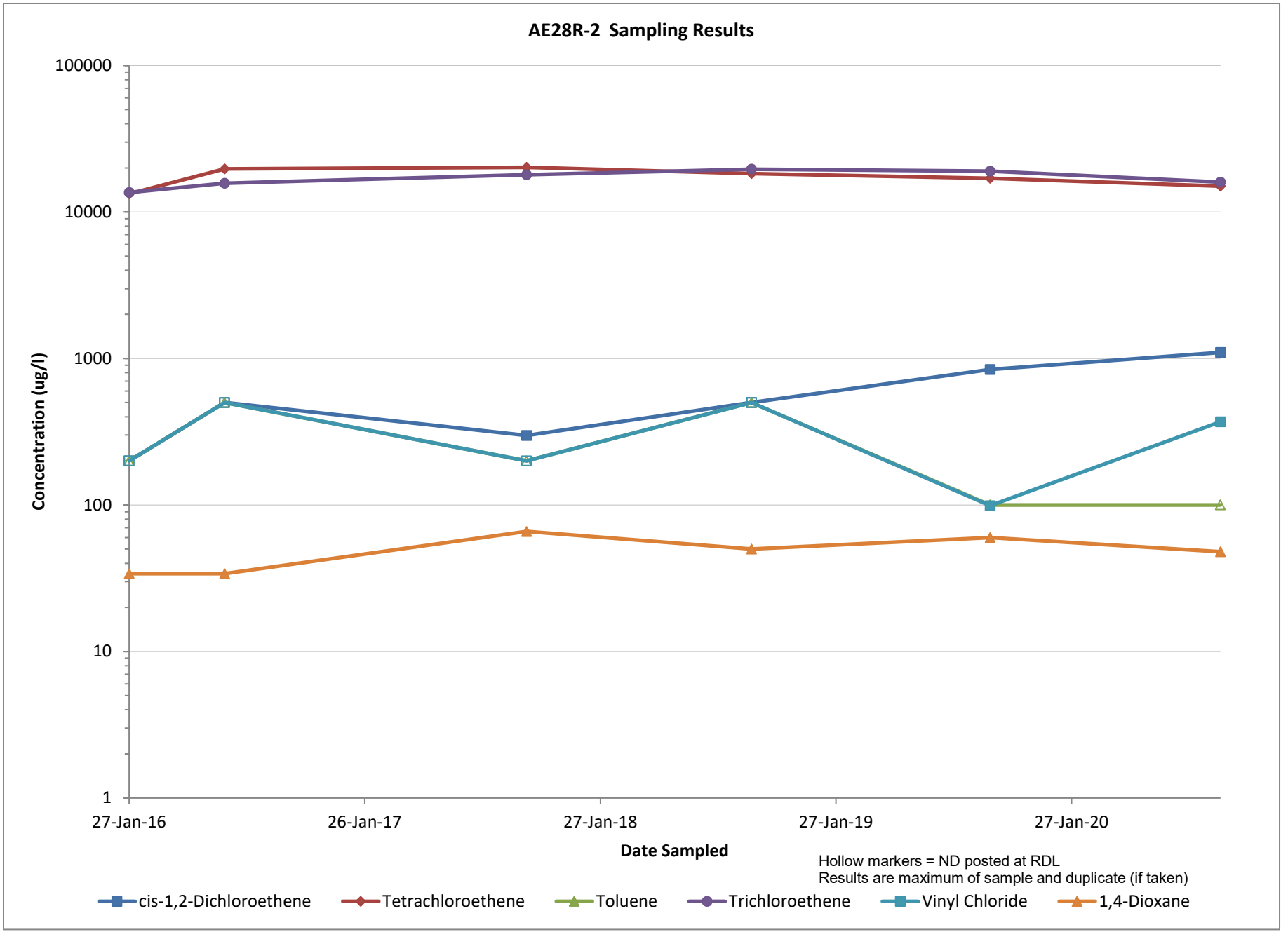

AE26R-1 Sampling Results
10000
1000
100
10
1
Concentration (ug/l)
27-Jan-16
26-Jan-17
26-Jan-18
27-Jan-19
27-Jan-20
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
cis-1,2-Dichloroethene
Tetrachloroethene
Toluene
Trichloroethene
Vinyl Chloride
1,4-Dioxane

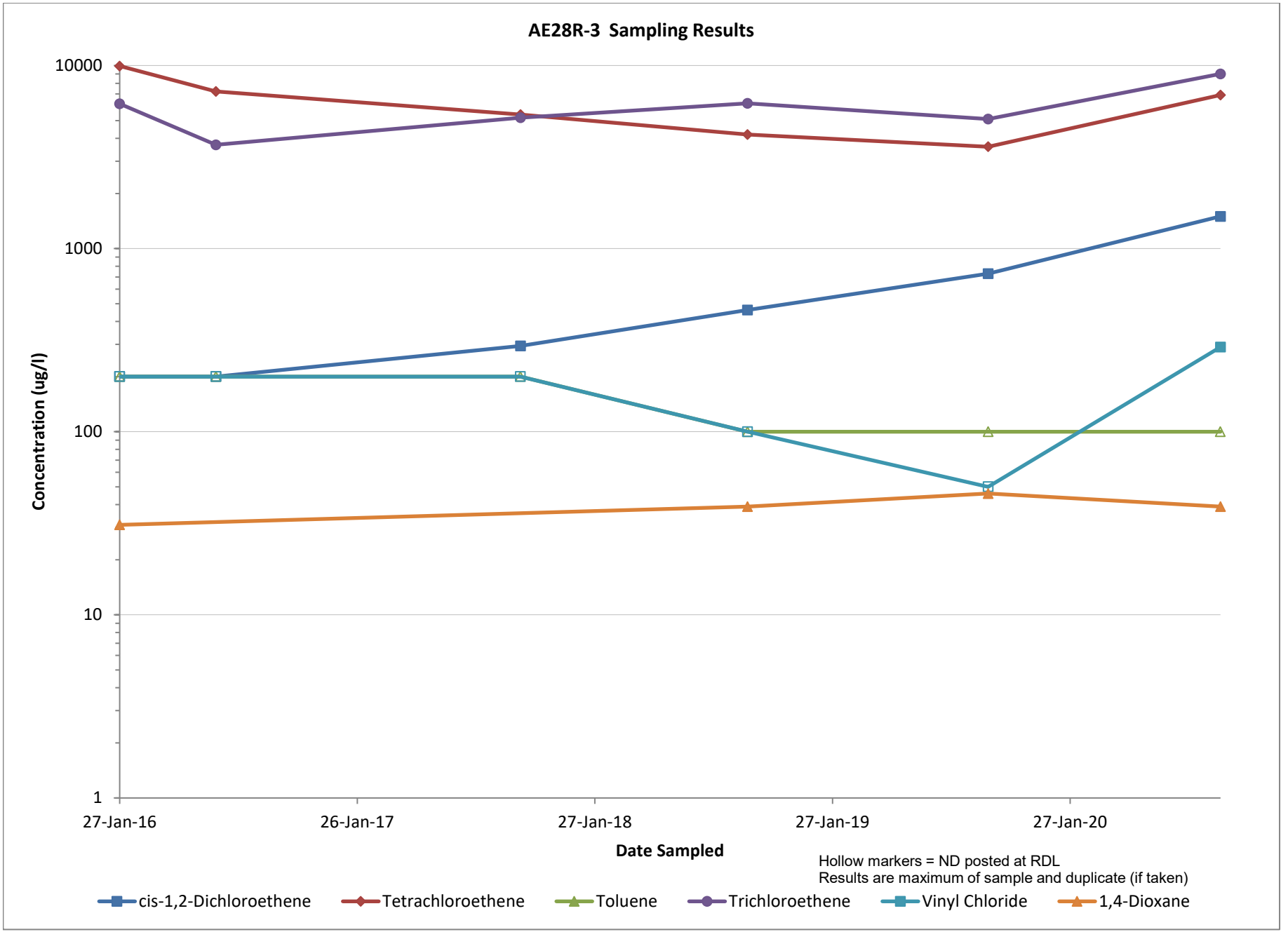

AE26R-2 Sampling Results
1000
100
10
1
Concentration (ug/l)
27-Jan-16
26-Jan-17
26-Jan-18
27-Jan-19
27-Jan-20
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
cis-1,2-Dichloroethene
Tetrachloroethene
Toluene
Trichloroethene
Vinyl Chloride
1,4-Dioxane

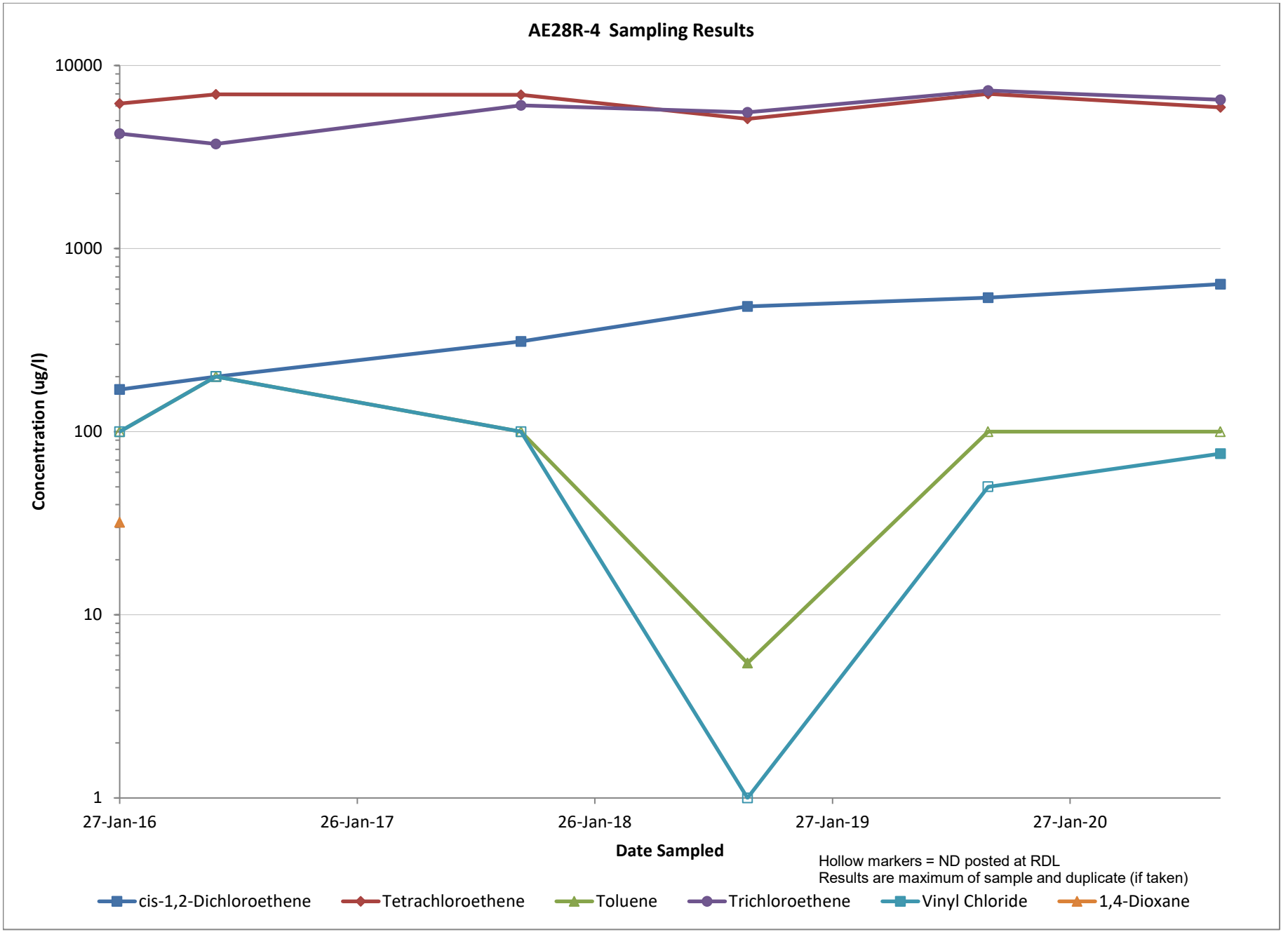

AE26R-5 Sampling Results
10000
1000
100
10
1
Concentration (ug/l)
27-Jan-16
26-Jan-17
26-Jan-18
27-Jan-19
27-Jan-20
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
cis-1,2-Dichloroethene
Tetrachloroethene
Toluene
Trichloroethene
Vinyl Chloride
1,4-Dioxane

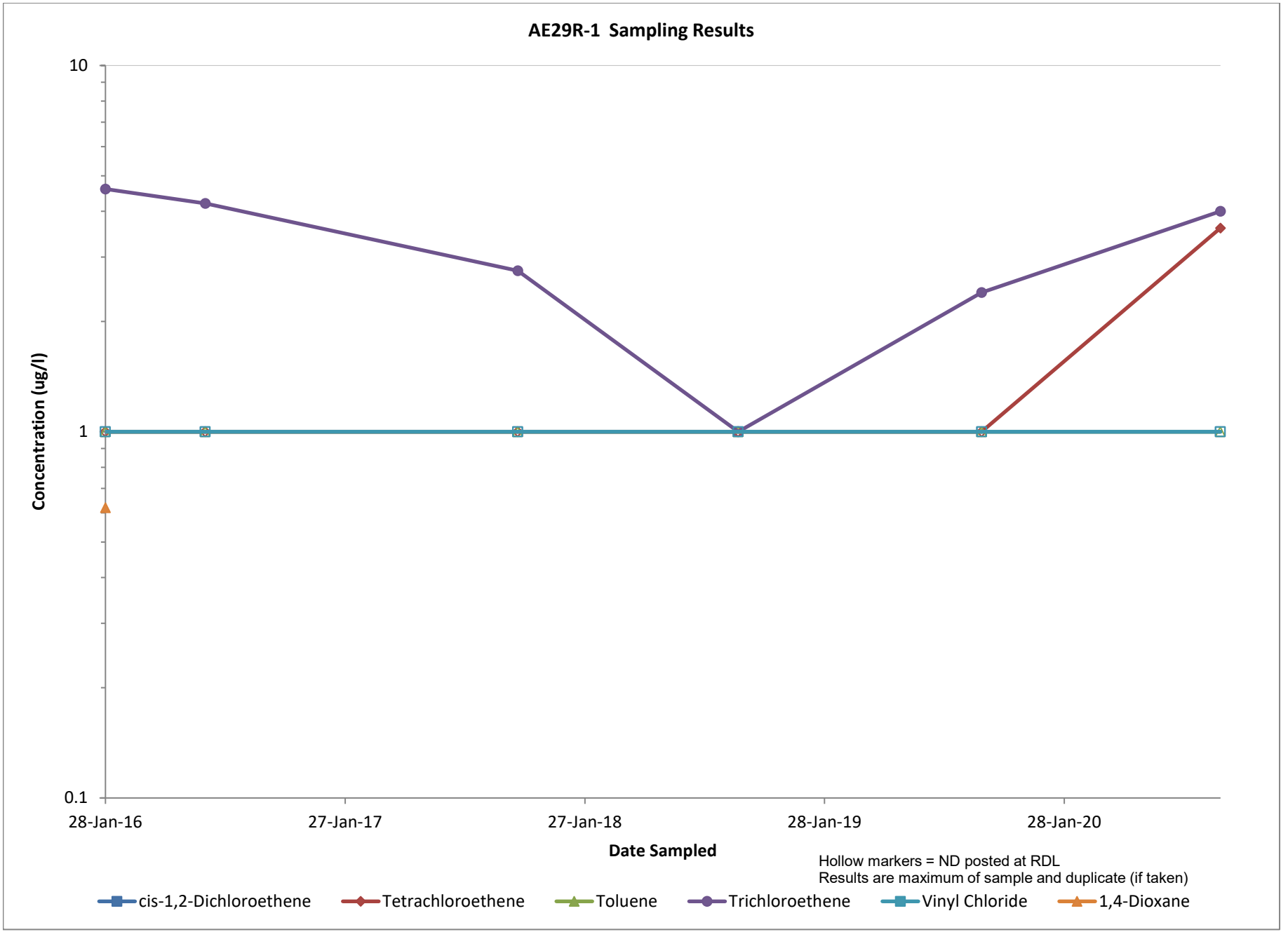

AE26S Sampling Results
1000
100
10
1
0.1
Concentration (ug/l)
25-Mar-14
25-Mar-15
25-Mar-16
25-Mar-17
25-Mar-18
25-Mar-19
25-Mar-20
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
cis-1,2-Dichloroethene
Tetrachloroethene
Toluene
Trichloroethene
Vinyl Chloride
1,4-Dioxane

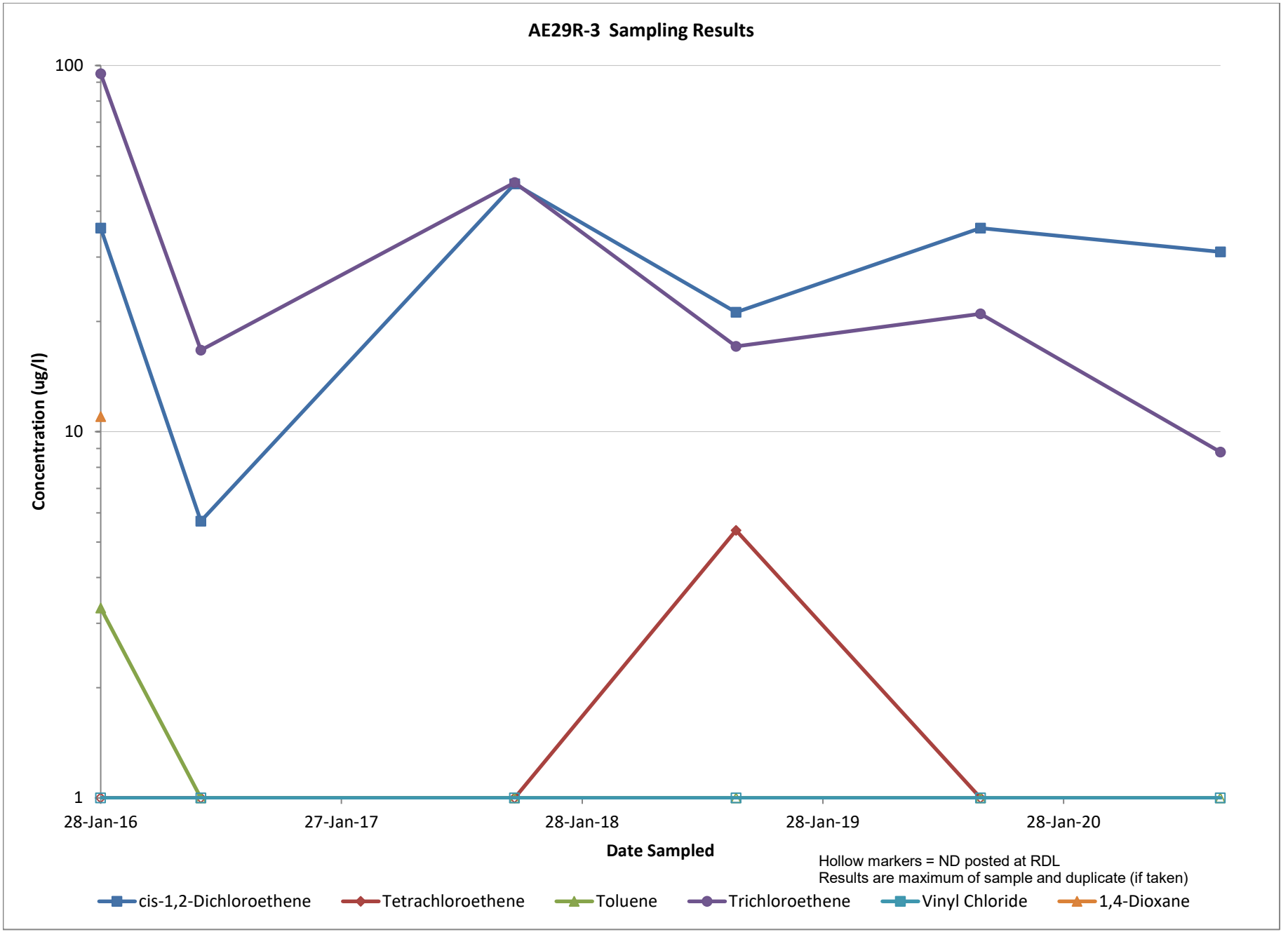

AE28R-1 Sampling Results
100000
10000
1000
100
10
1
Concentration (ug/l)
27-Jan-16
26-Jan-17
26-Jan-18
27-Jan-19
27-Jan-20
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
cis-1,2-Dichloroethene
Tetrachloroethene
Toluene
Trichloroethene
Vinyl Chloride
1,4-Dioxane

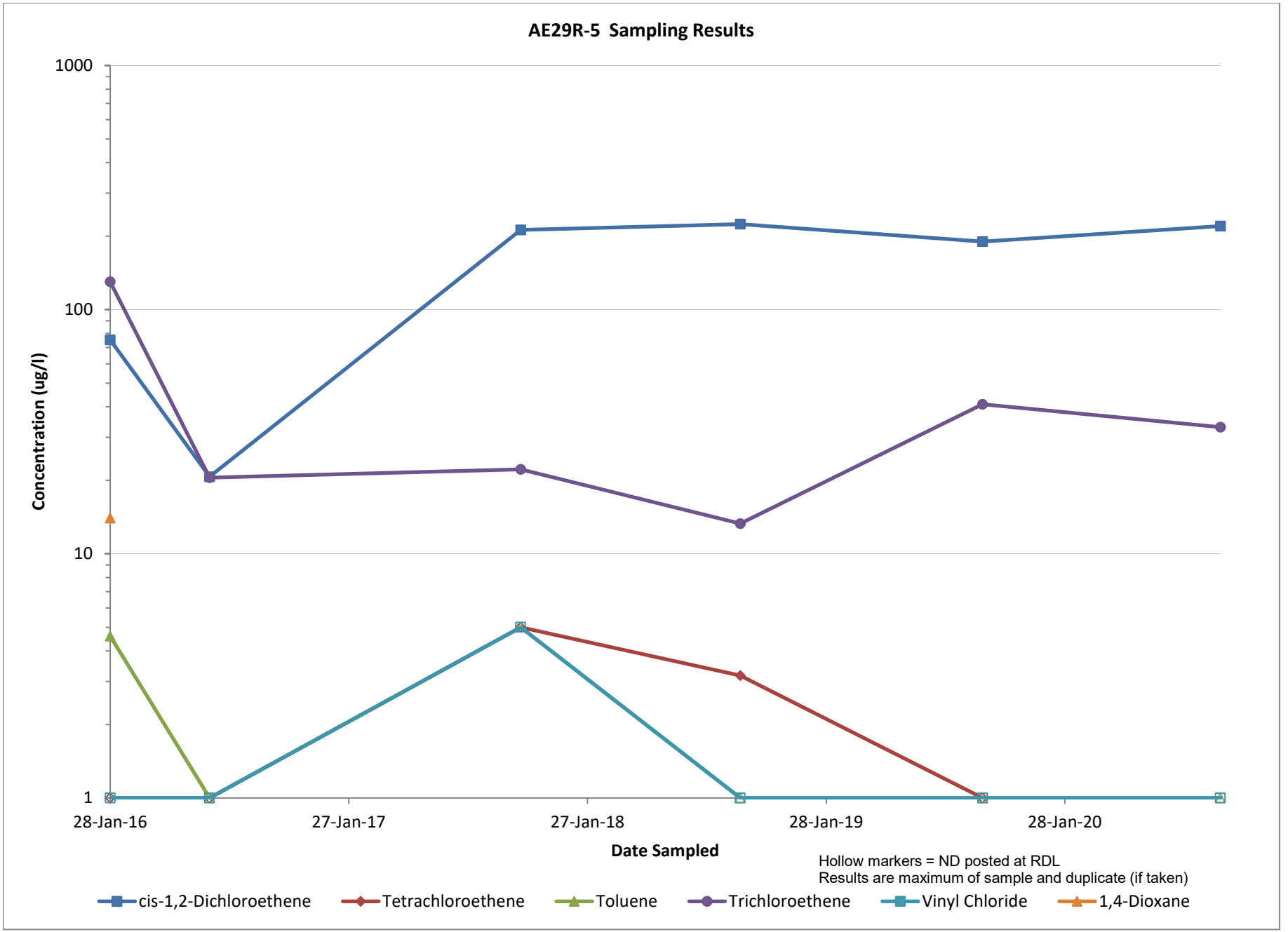

AE28R-2 Sampling Results
100000
10000
1000
100
10
1
Concentration (ug/l)
27-Jan-16
26-Jan-17
27-Jan-18
27-Jan-19
27-Jan-20
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
cis-1,2-Dichloroethene
Tetrachloroethene
Toluene
Trichloroethene
Vinyl Chloride
1,4-Dioxane

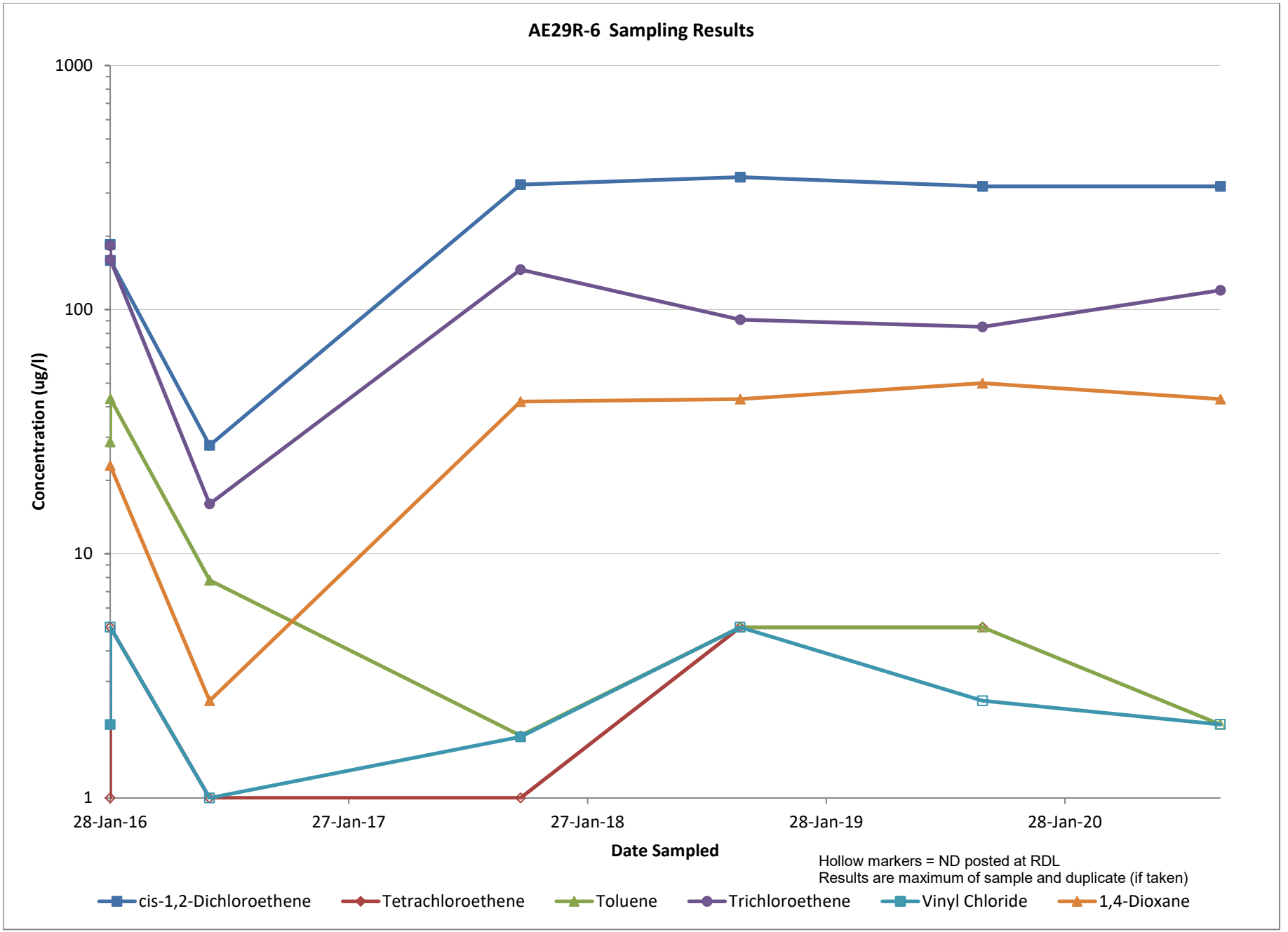

AE28R-3 Sampling Results
10000
1000
100
10
1
Concentration (ug/l)
27-Jan-16
26-Jan-17
27-Jan-18
27-Jan-19
27-Jan-20
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
cis-1,2-Dichloroethene
Tetrachloroethene
Toluene
Trichloroethene
Vinyl Chloride
1,4-Dioxane

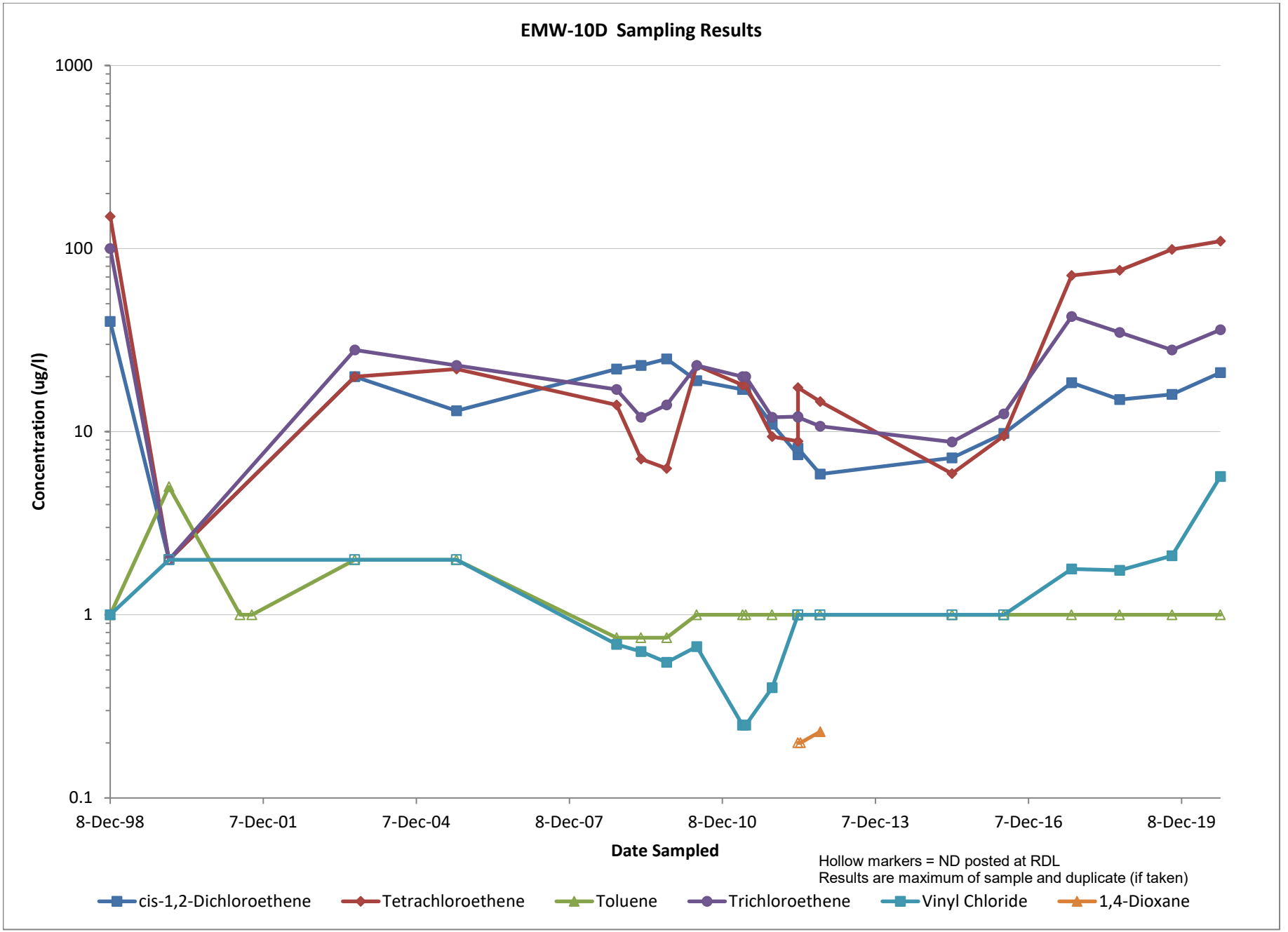

AE28R-4 Sampling Results
10000
1000
100
10
1
Concentration (ug/l)
27-Jan-16
26-Jan-17
26-Jan-18
27-Jan-19
27-Jan-20
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
cis-1,2-Dichloroethene
Tetrachloroethene
Toluene
Trichloroethene
Vinyl Chloride
1,4-Dioxane

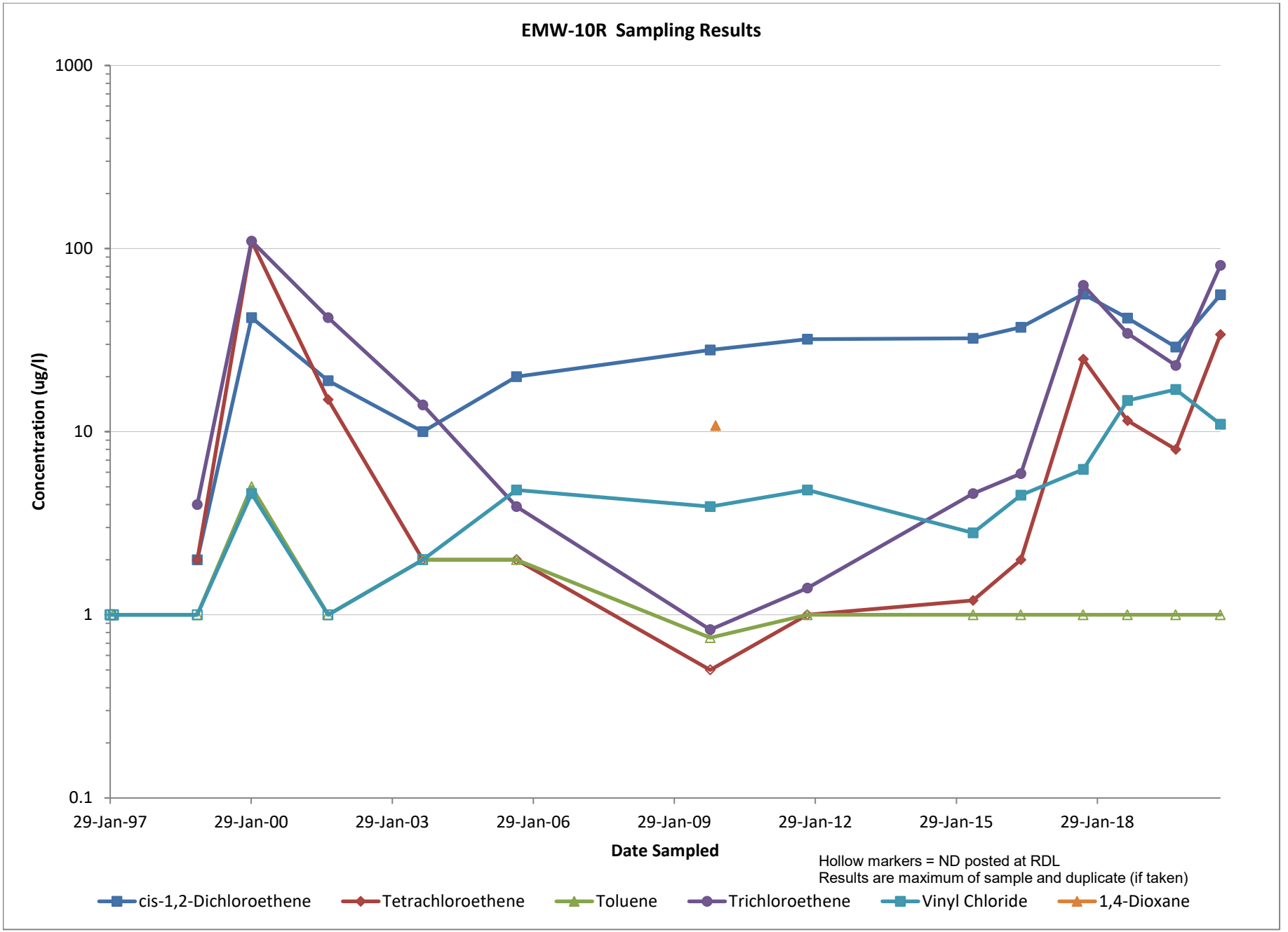

AE29R-1 Sampling Results
10
1
0.1
Concentration (ug/l)
28-Jan-16
27-Jan-17
27-Jan-18
28-Jan-19
28-Jan-20
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
cis-1,2-Dichloroethene
Tetrachloroethene
Toluene
Trichloroethene
Vinyl Chloride
1,4-Dioxane

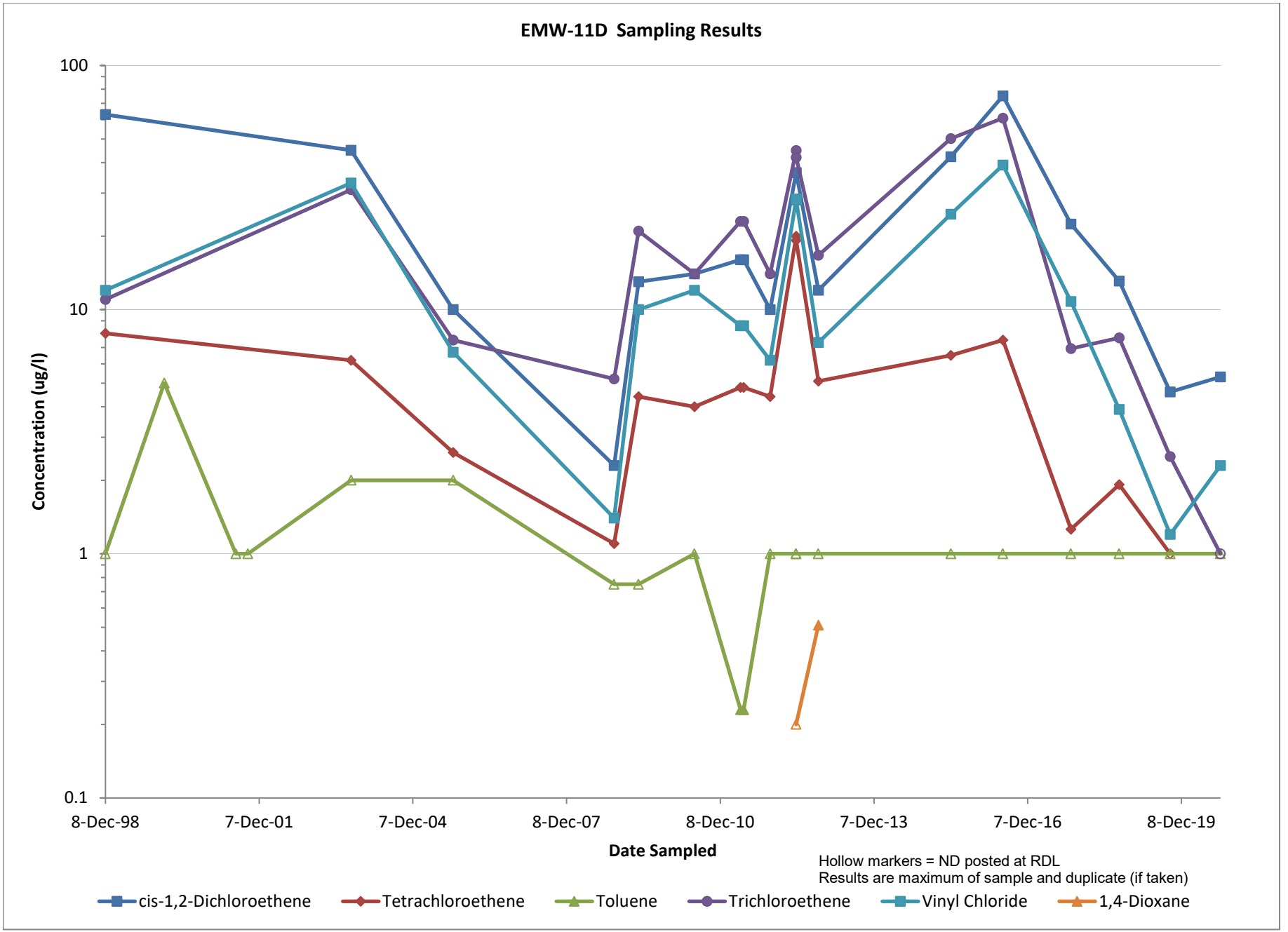

AE29R-3 Sampling Results
100
10
1
Concentration (ug/l)
28-Jan-16
27-Jan-17
28-Jan-18
28-Jan-19
28-Jan-20
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
cis-1,2-Dichloroethene
Tetrachloroethene
Toluene
Trichloroethene
Vinyl Chloride
1,4-Dioxane

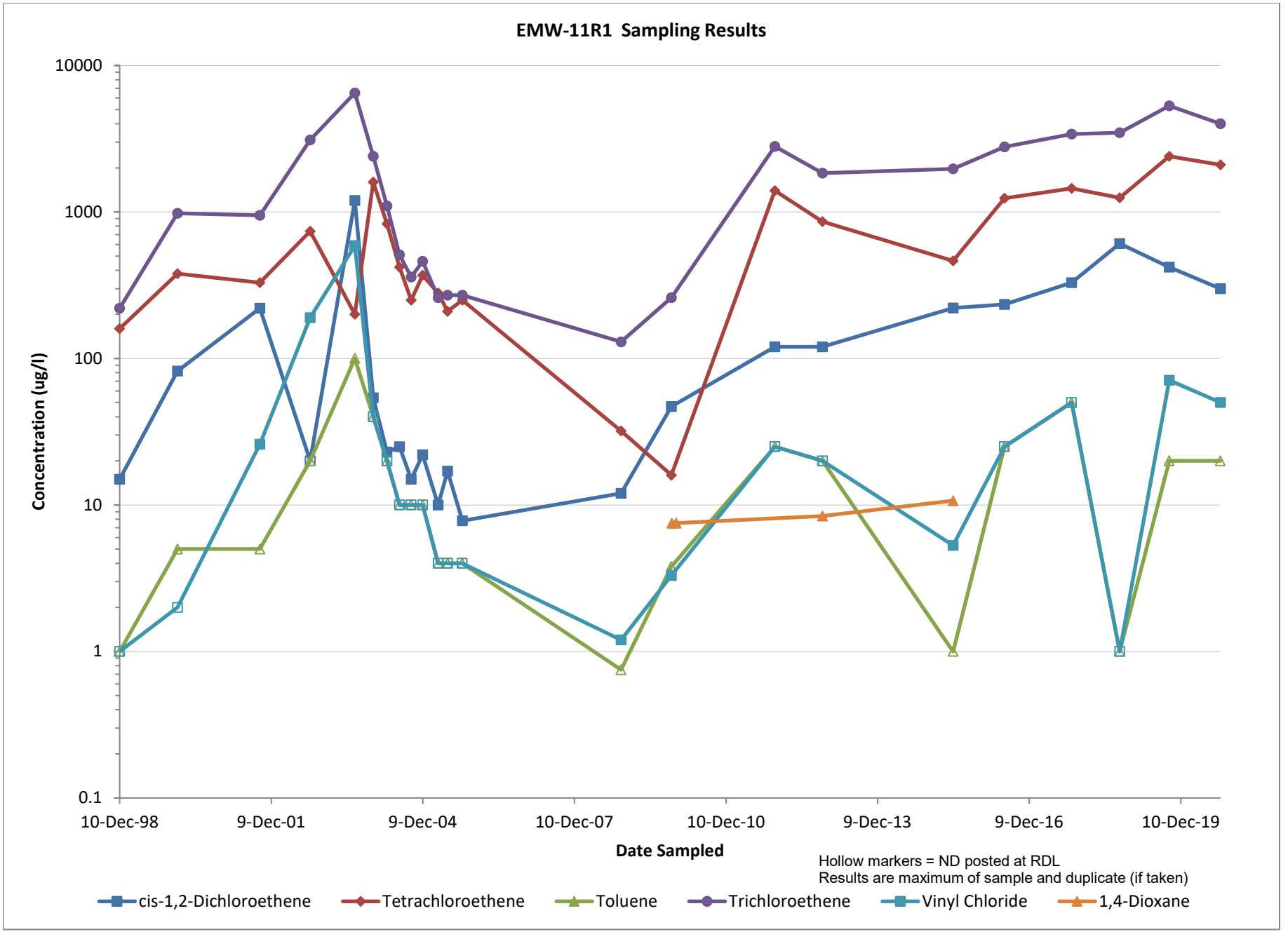

AE29R-5 Sampling Results
1000
100
10
1
Concentration (ug/l)
28-Jan-16
27-Jan-17
27-Jan-18
28-Jan-19
28-Jan-20
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
cis-1,2-Dichloroethene
Tetrachloroethene
Toluene
Trichloroethene
Vinyl Chloride
1,4-Dioxane

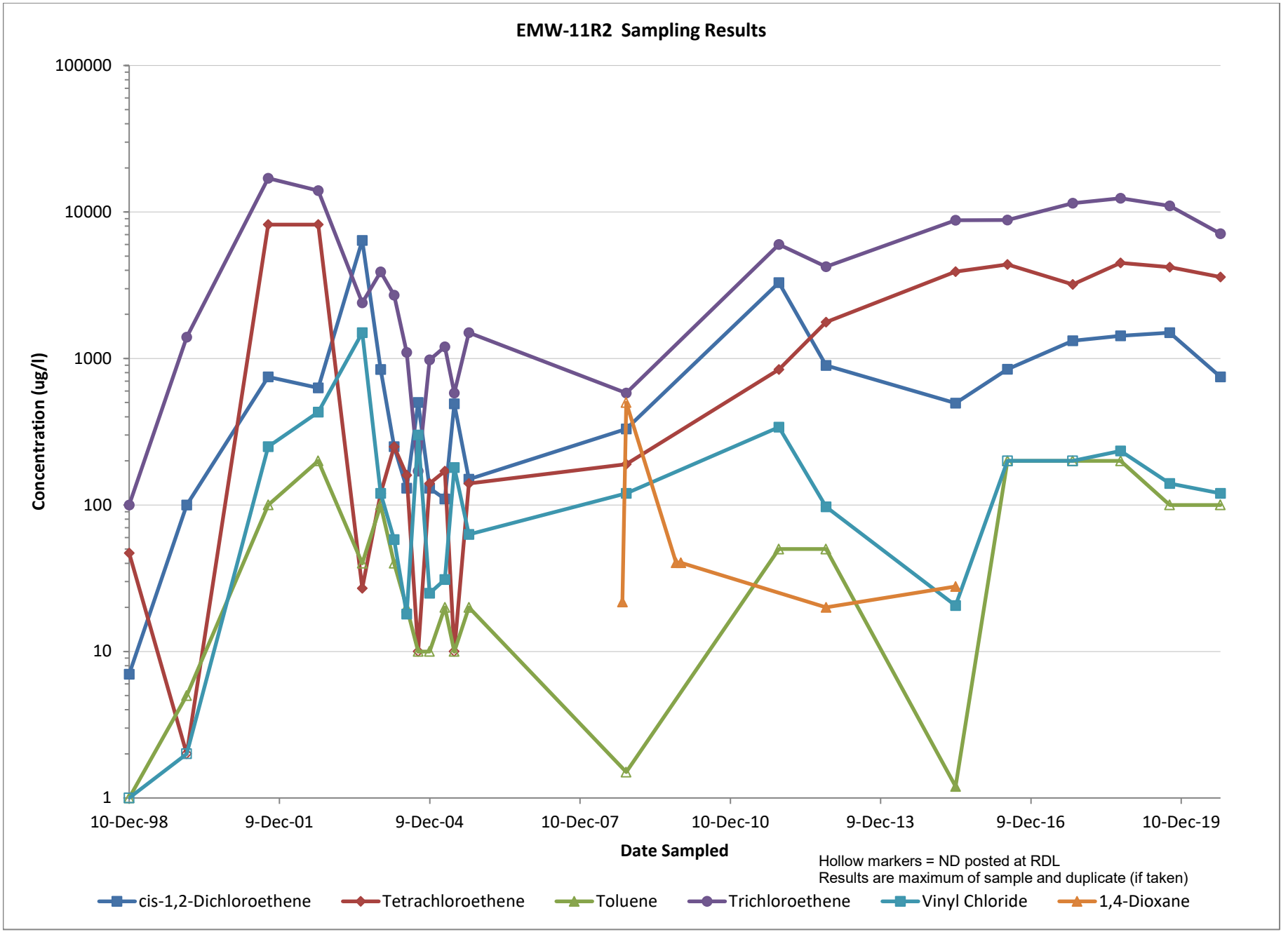

AE29R-6 Sampling Results
1000
100
10
1
Concentration (ug/l)
28-Jan-16
27-Jan-17
27-Jan-18
28-Jan-19
28-Jan-20
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
cis-1,2-Dichloroethene
Tetrachloroethene
Toluene
Trichloroethene
Vinyl Chloride
1,4-Dioxane

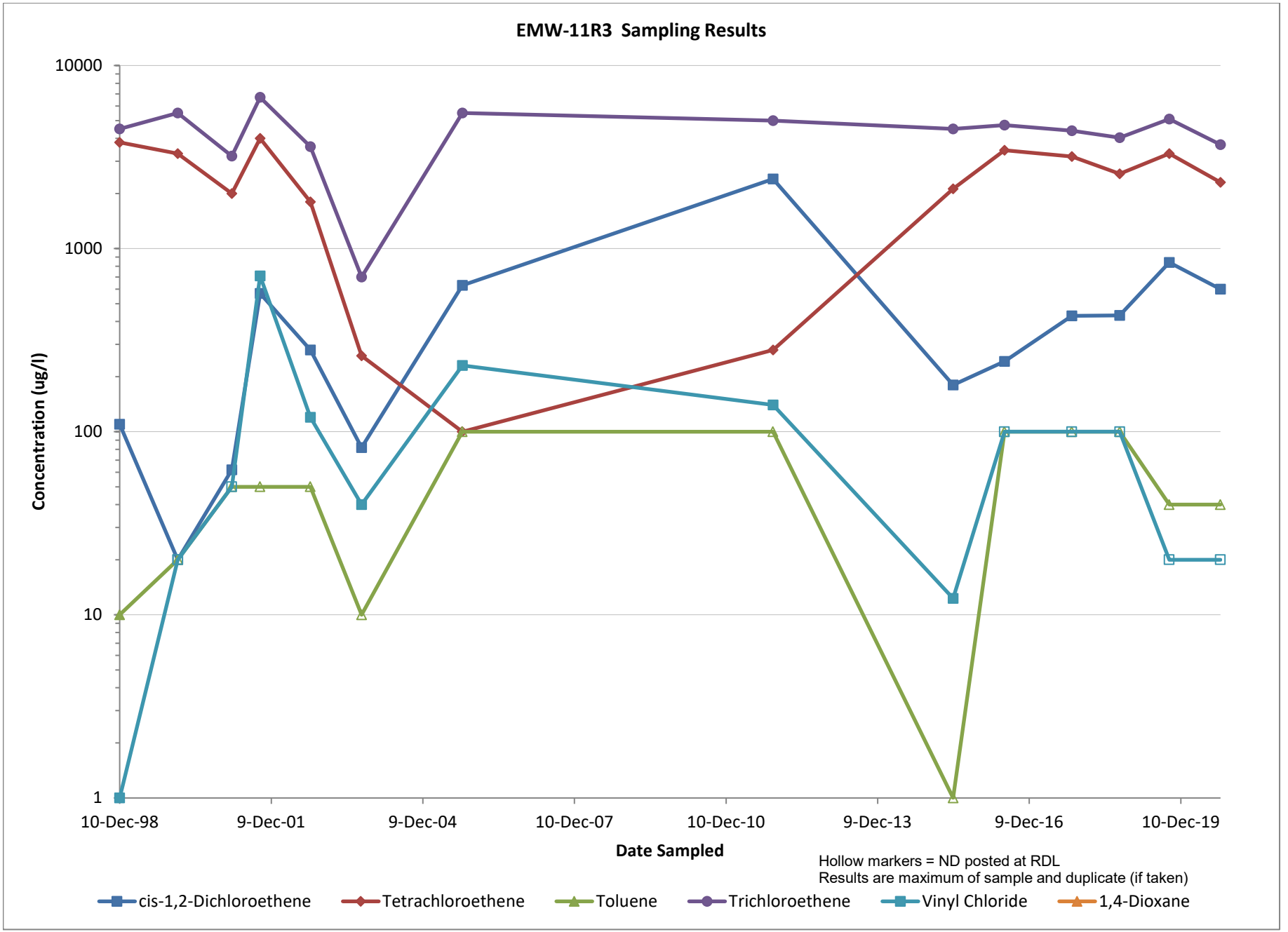

EMW-10D Sampling Results
1000
100
10
1
0.1
Concentration (ug/l)
8-Dec-98
7-Dec-01
7-Dec-04
8-Dec-07
8-Dec-10
7-Dec-13
7-Dec-16
8-Dec-19
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
cis-1,2-Dichloroethene
Tetrachloroethene
Toluene
Trichloroethene
Vinyl Chloride
1,4-Dioxane

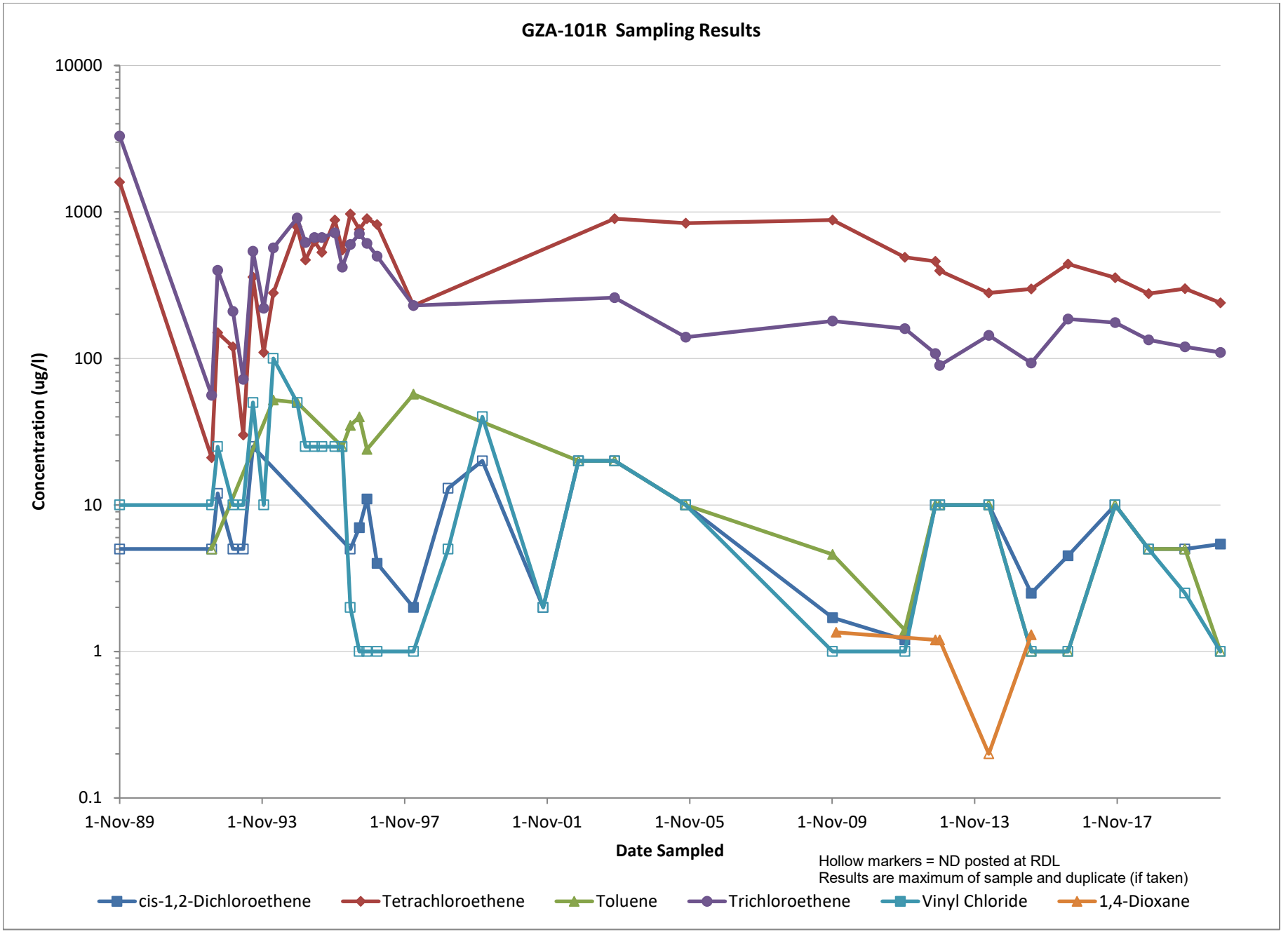

EMW-10R Sampling Results
1000
100
10
1
0.1
Concentration (ug/l)
29-Jan-97
29-Jan-00
29-Jan-03
29-Jan-06
29-Jan-09
29-Jan-12
29-Jan-15
29-Jan-18
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
cis-1,2-Dichloroethene
Tetrachloroethene
Toluene
Trichloroethene
Vinyl Chloride
1,4-Dioxane

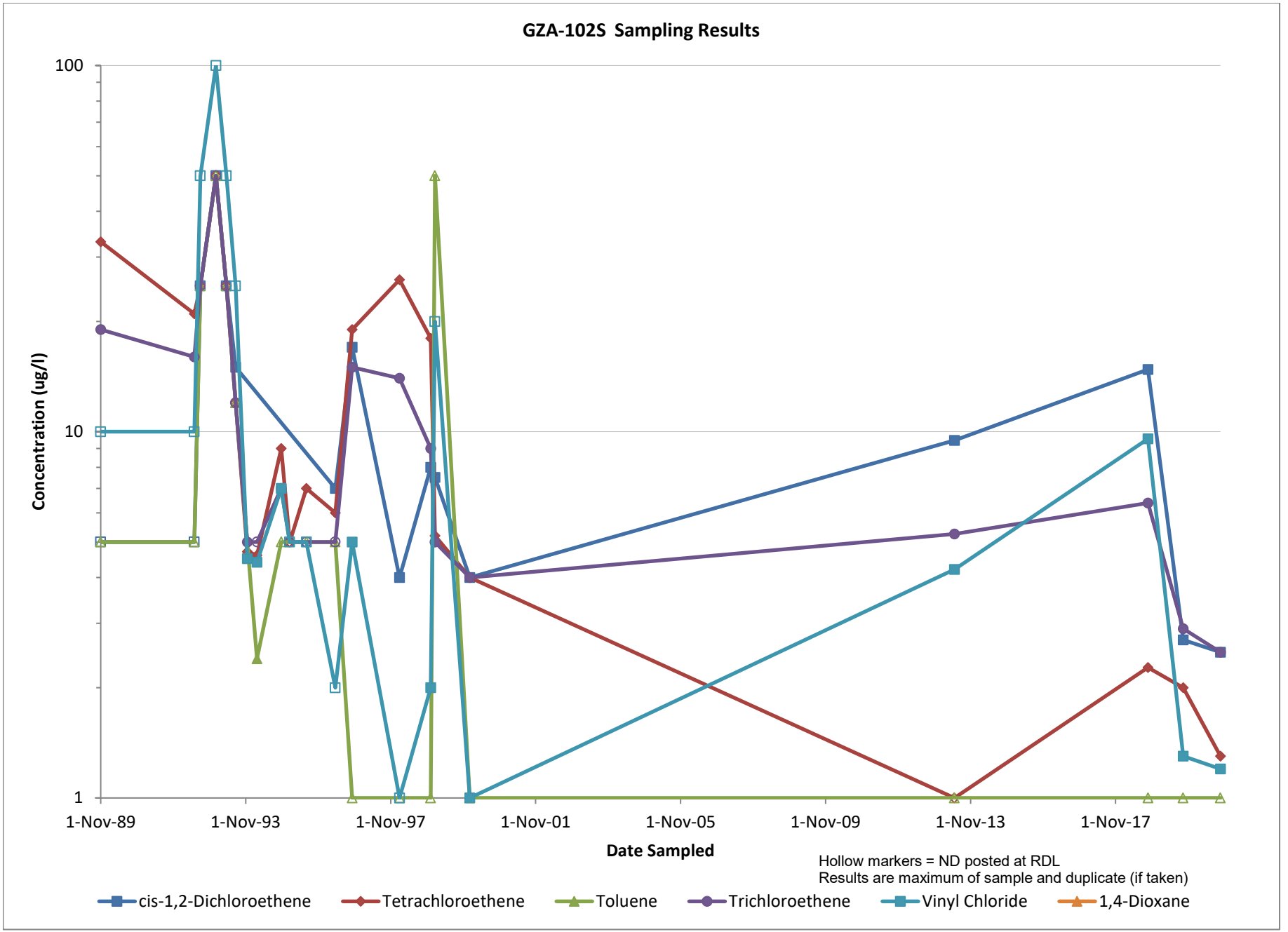

EMW-11D Sampling Results
100
10
1
0.1
Concentration (ug/l)
8-Dec-98
7-Dec-01
7-Dec-04
8-Dec-07
8-Dec-10
7-Dec-13
7-Dec-16
8-Dec-19
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
cis-1,2-Dichloroethene
Tetrachloroethene
Toluene
Trichloroethene
Vinyl Chloride
1,4-Dioxane

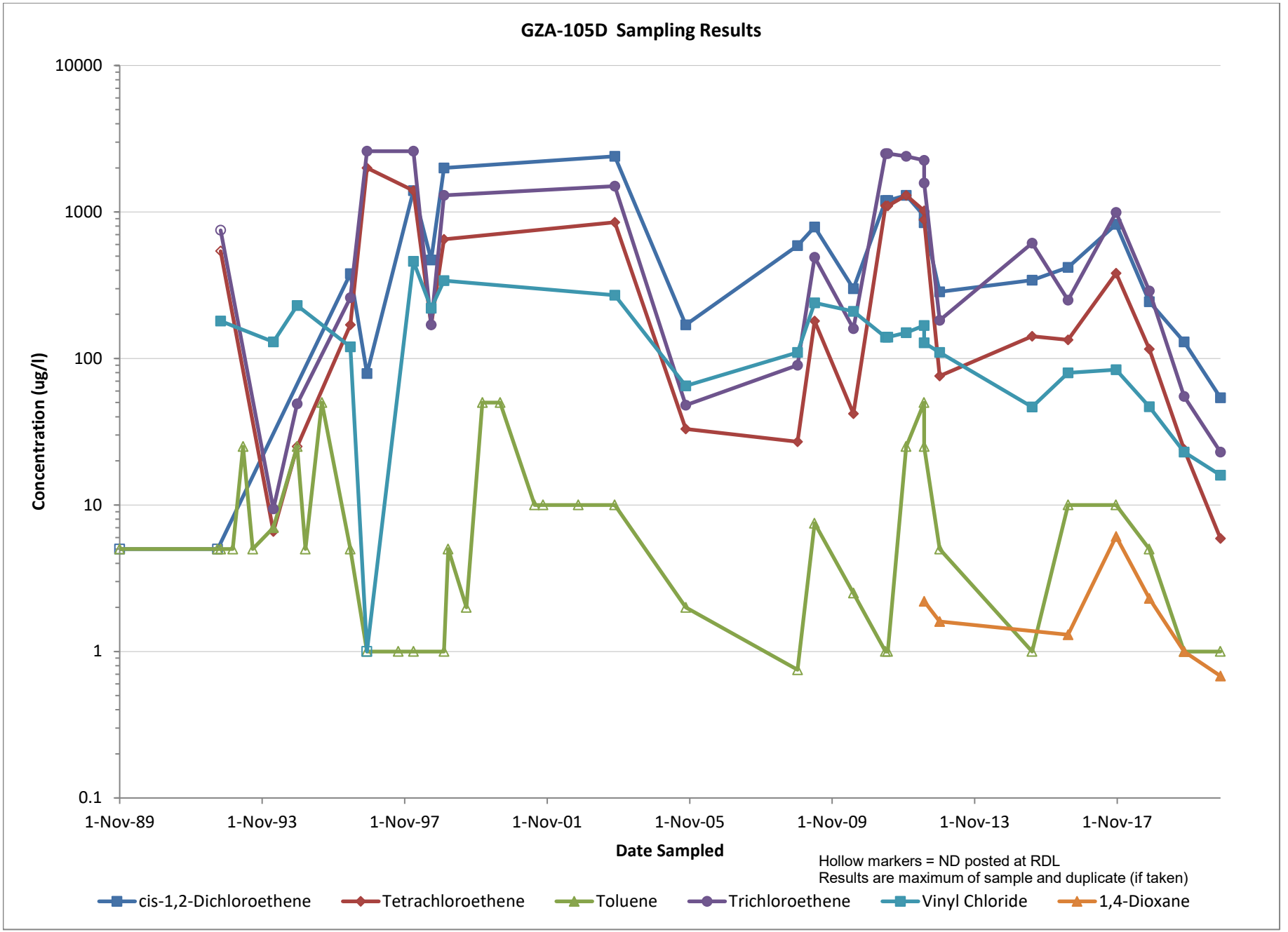

EMW-11R1 Sampling Results
Concentration (ug/l)
10000
1000
100
10
1
0.1
10-Dec-98
9-Dec-01
9-Dec-04
10-Dec-07
10-Dec-10
9-Dec-13
9-Dec-16
10-Dec-19
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
cis-1,2-Dichloroethene
Tetrachloroethene
Toluene
Trichloroethene
Vinyl Chloride
1,4-Dioxane

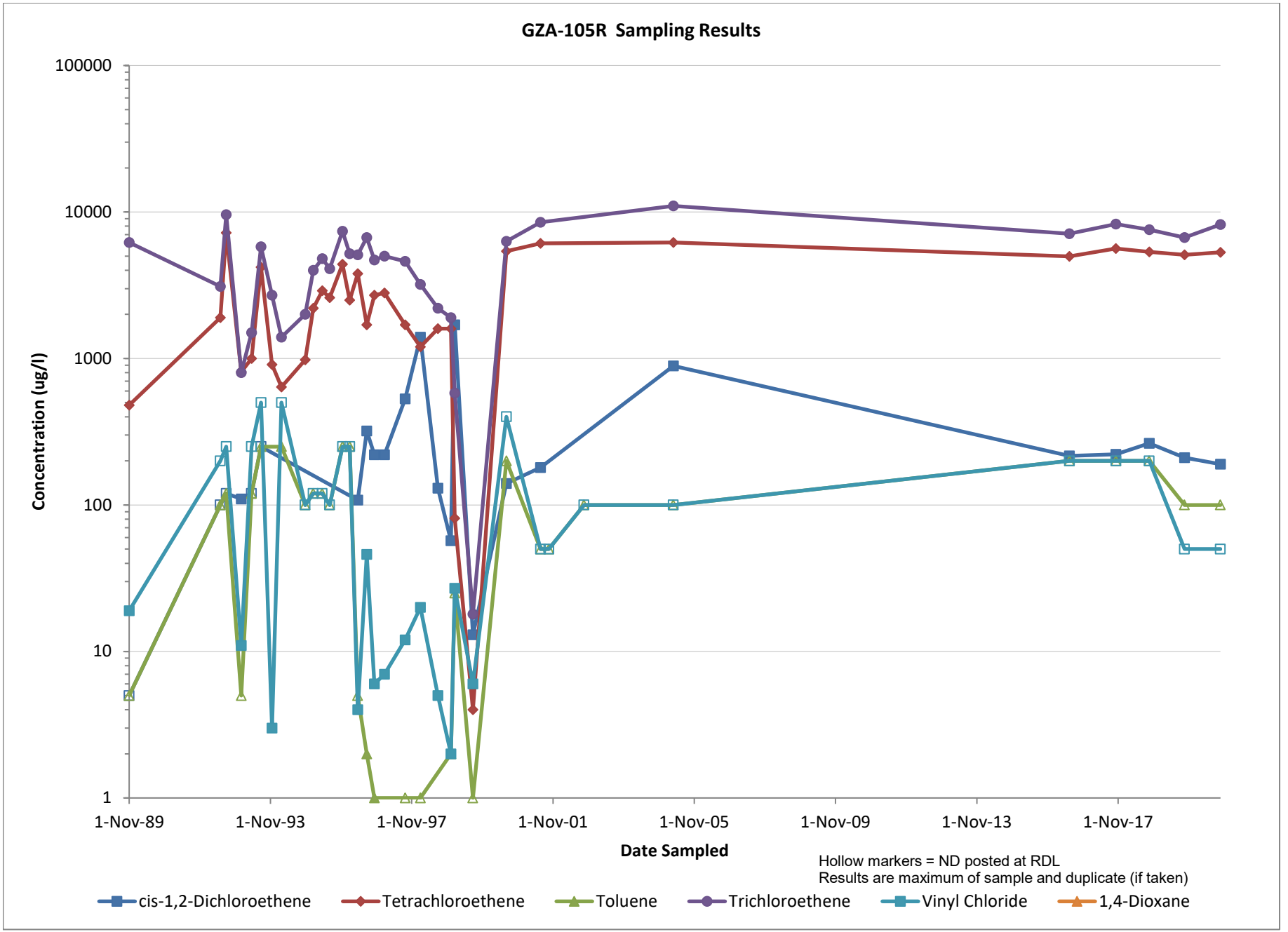

EMW-11R2 Sampling Results
Concentration (ug/l)
100000
10000
1000
100
10
1
10-Dec-98
9-Dec-01
9-Dec-04
10-Dec-07
10-Dec-10
9-Dec-13
9-Dec-16
10-Dec-19
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
cis-1,2-Dichloroethene
Tetrachloroethene
Toluene
Trichloroethene
Vinyl Chloride
1,4-Dioxane

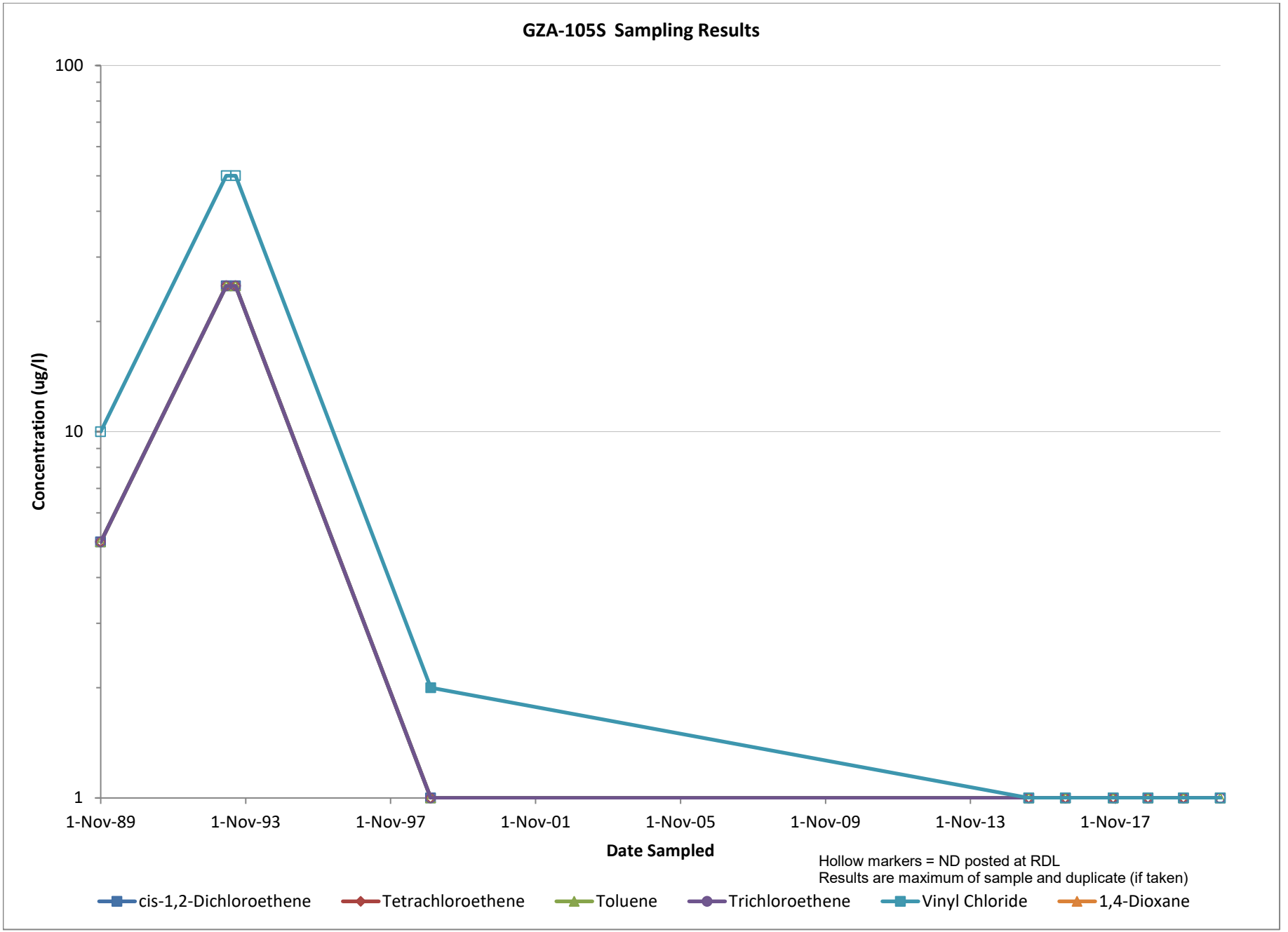

EMW-11R3 Sampling Results
10000
1000
100
10
1
Concentration (ug/l)
10-Dec-98
9-Dec-01
9-Dec-04
10-Dec-07
10-Dec-10
9-Dec-13
9-Dec-16
10-Dec-19
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
cis-1,2-Dichloroethene
Tetrachloroethene
Toluene
Trichloroethene
Vinyl Chloride
1,4-Dioxane

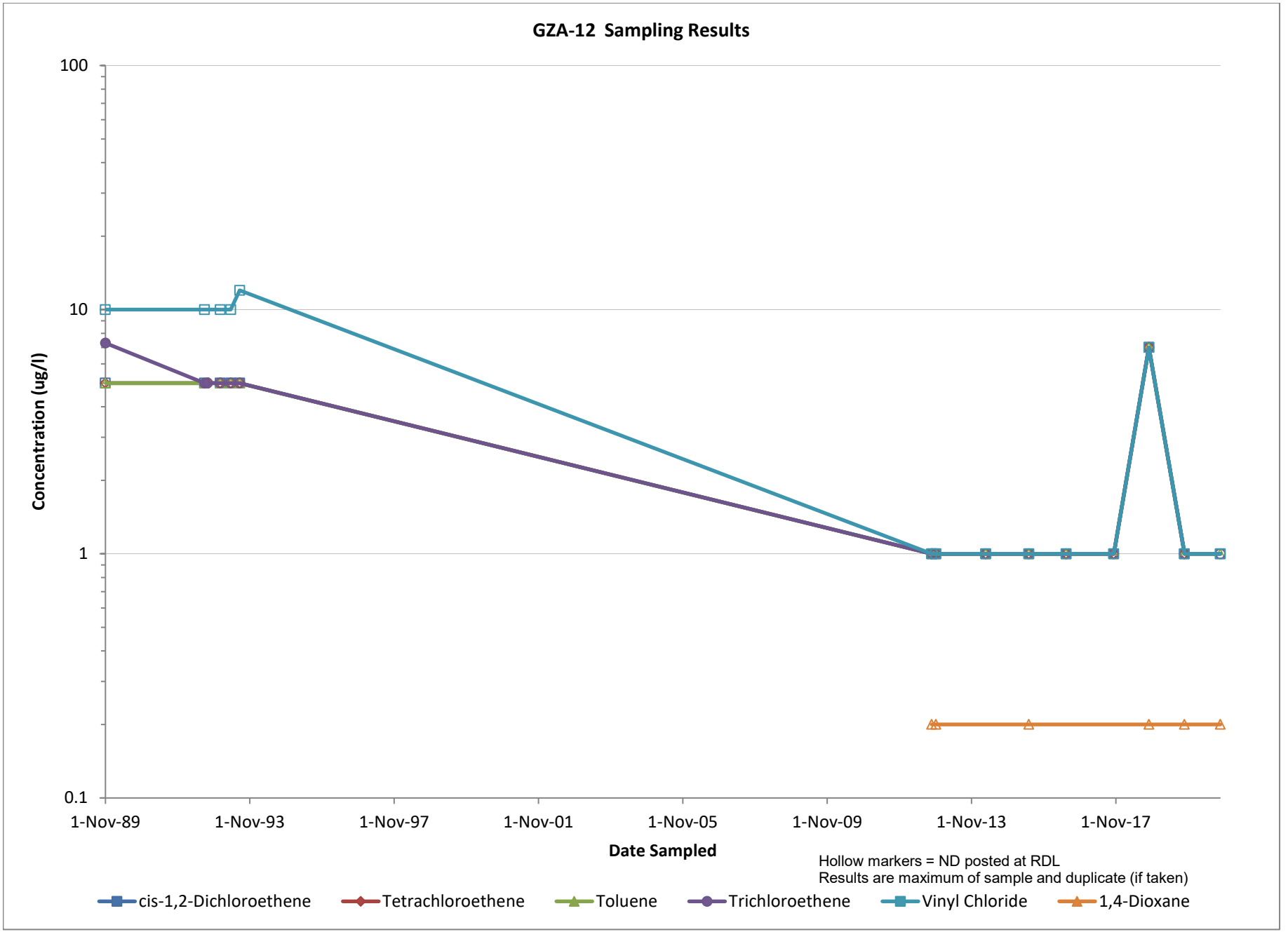

GZA-101R Sampling Results
Concentration (ug/l)
10000
1000
100
10
1
0.1
1-Nov-89
1-Nov-93
1-Nov-97
1-Nov-01
1-Nov-05
1-Nov-09
1-Nov-13
1-Nov-17
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
cis-1,2-Dichloroethene
Tetrachloroethene
Toluene
Trichloroethene
Vinyl Chloride
1,4-Dioxane

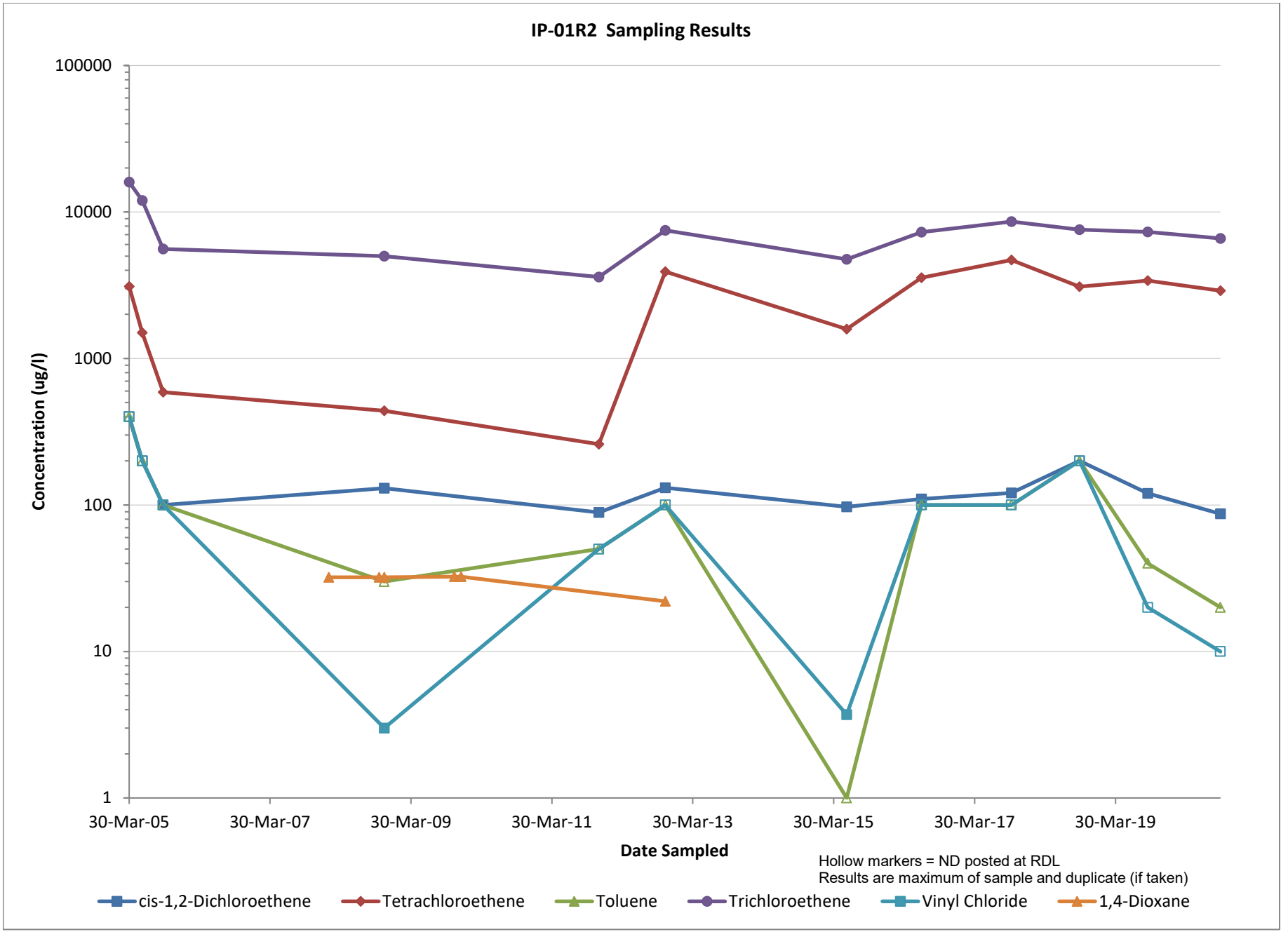

GZA-102S Sampling Results
100
10
1
Concentration (ug/l)
1-Nov-89
1-Nov-93
1-Nov-97
1-Nov-01
1-Nov-05
1-Nov-09
1-Nov-13
1-Nov-17
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
cis-1,2-Dichloroethene
Tetrachloroethene
Toluene
Trichloroethene
Vinyl Chloride
1,4-Dioxane

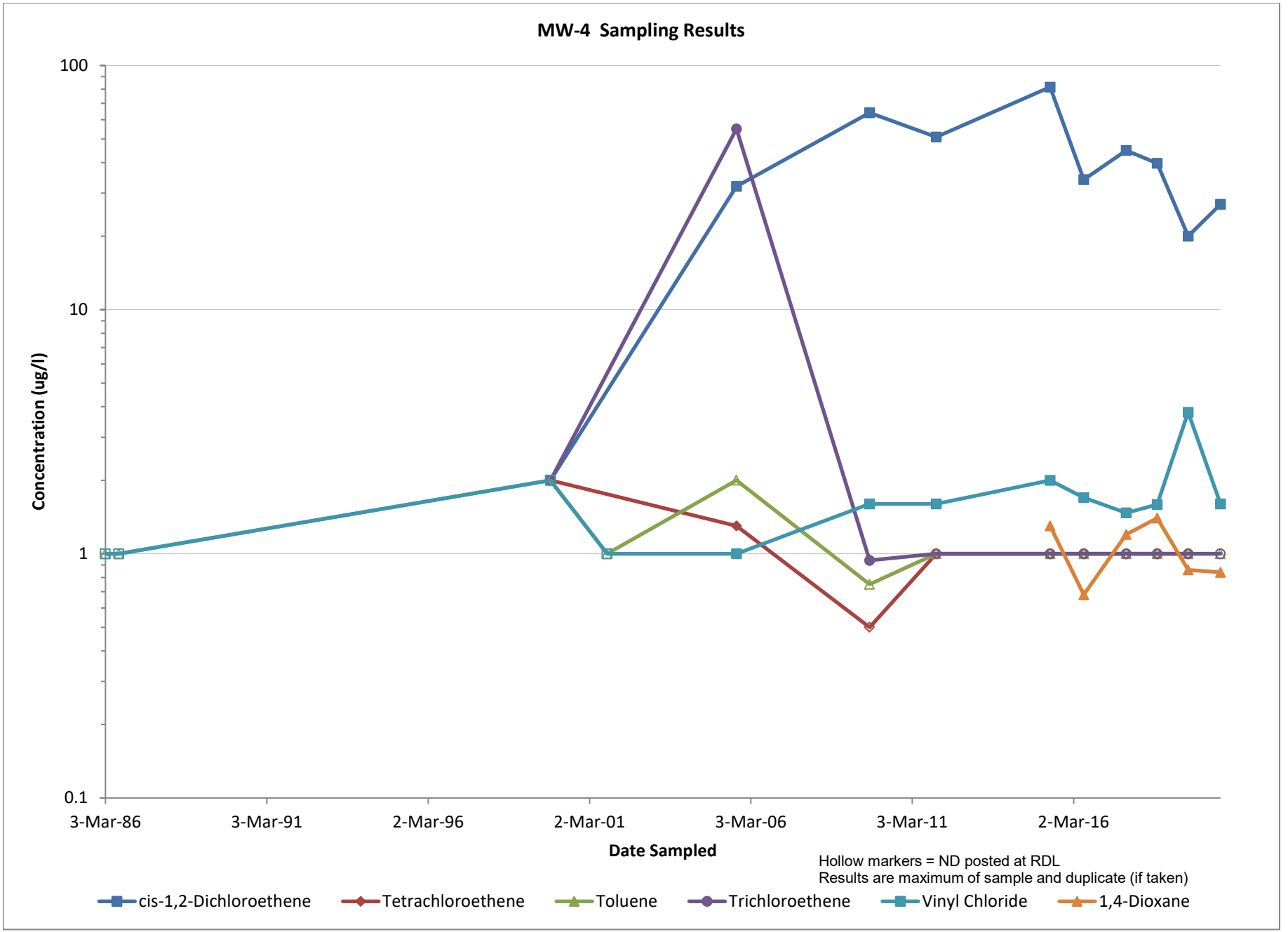

GZA-105D Sampling Results
10000
1000
100
10
1
0.1
Concentration (ug/l)
1-Nov-89
1-Nov-93
1-Nov-97
1-Nov-01
1-Nov-05
1-Nov-09
1-Nov-13
1-Nov-17
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
cis-1,2-Dichloroethene
Tetrachloroethene
Toluene
Trichloroethene
Vinyl Chloride
1,4-Dioxane

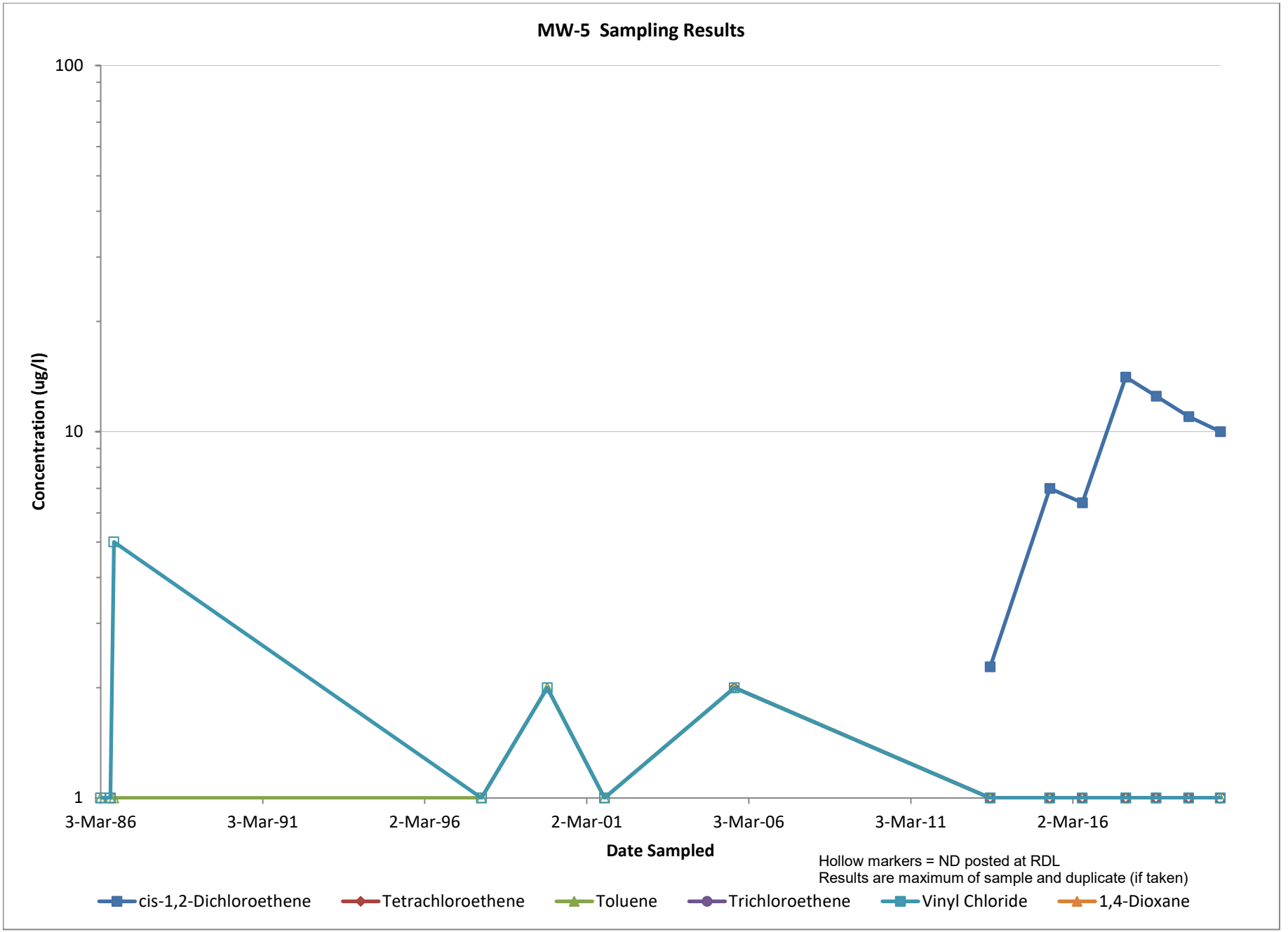

GZA-105R Sampling Results
100000
10000
1000
100
10
1
Concentration (ug/l)
1-Nov-89
1-Nov-93
1-Nov-97
1-Nov-01
1-Nov-05
1-Nov-09
1-Nov-13
1-Nov-17
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
cis-1,2-Dichloroethene
Tetrachloroethene
Toluene
Trichloroethene
Vinyl Chloride
1,4-Dioxane

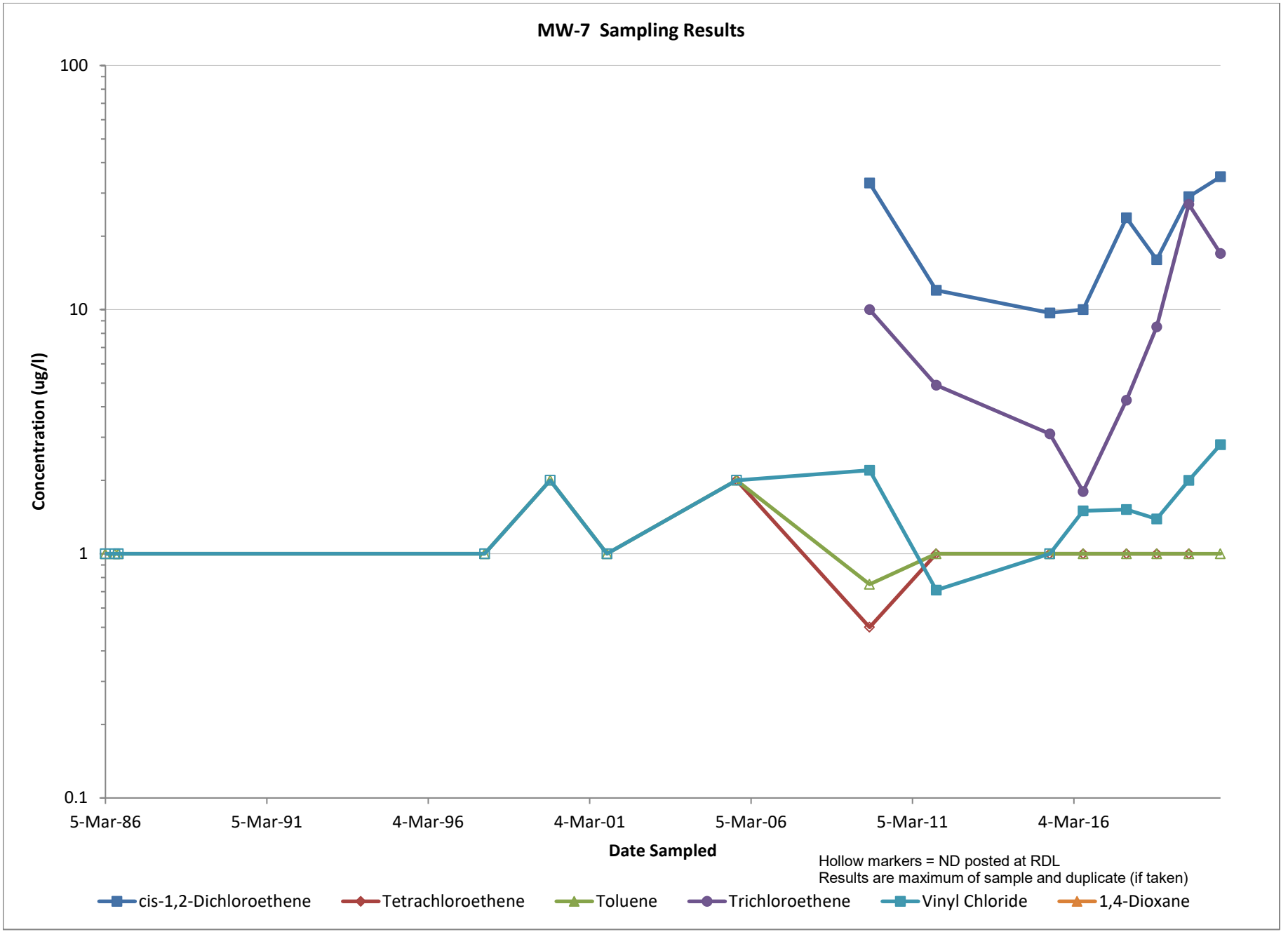

GZA-105S Sampling Results
100
10
1
Concentration (ug/l)
1-Nov-89
1-Nov-93
1-Nov-97
1-Nov-01
1-Nov-05
1-Nov-09
1-Nov-13
1-Nov-17
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
cis-1,2-Dichloroethene
Tetrachloroethene
Toluene
Trichloroethene
Vinyl Chloride
1,4-Dioxane

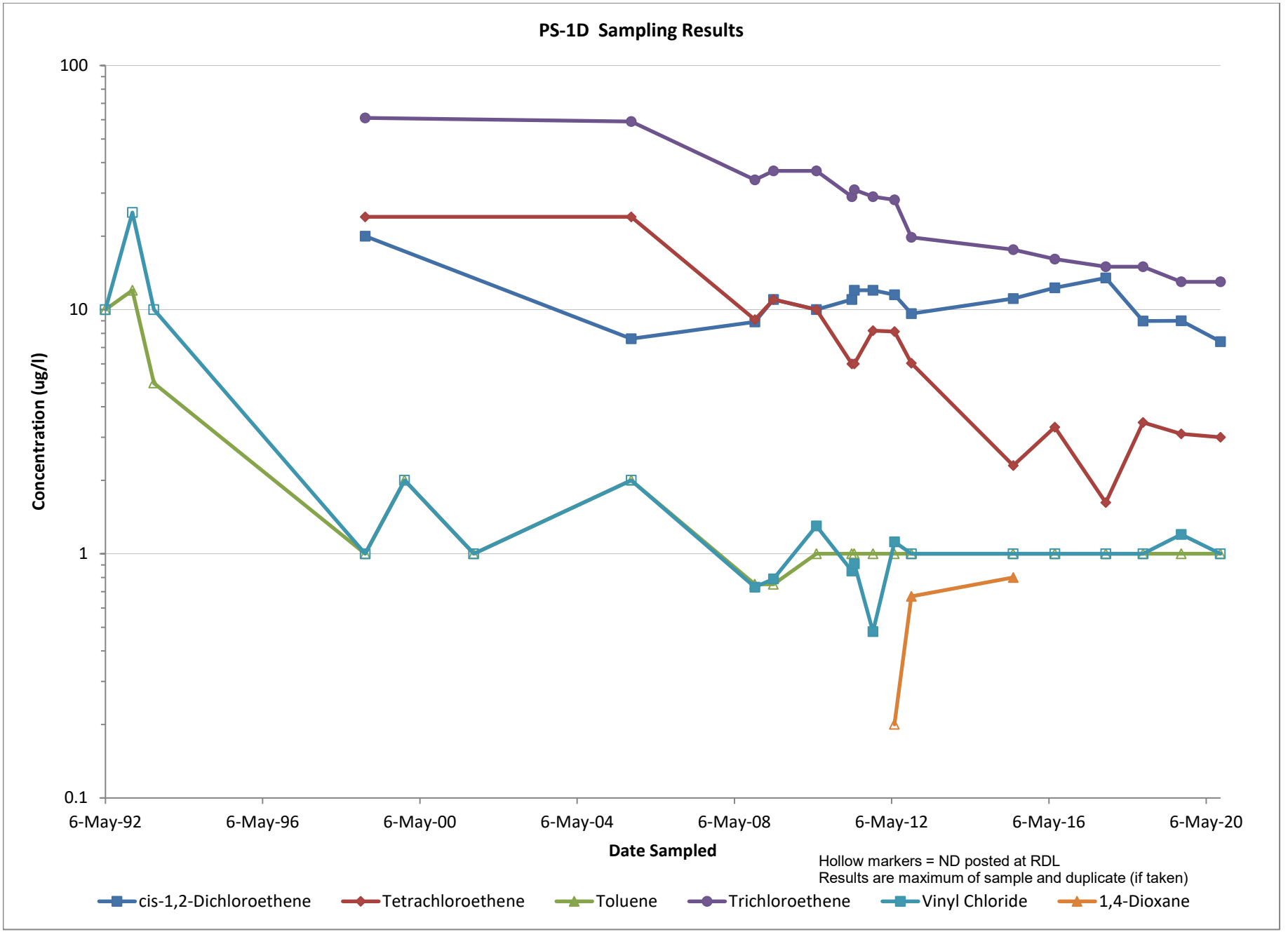

GZA-12 Sampling Results
100
10
1
0.1
Concentration (ug/l)
1-Nov-89
1-Nov-93
1-Nov-97
1-Nov-01
1-Nov-05
1-Nov-09
1-Nov-13
1-Nov-17
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
cis-1,2-Dichloroethene
Tetrachloroethene
Toluene
Trichloroethene
Vinyl Chloride
1,4-Dioxane

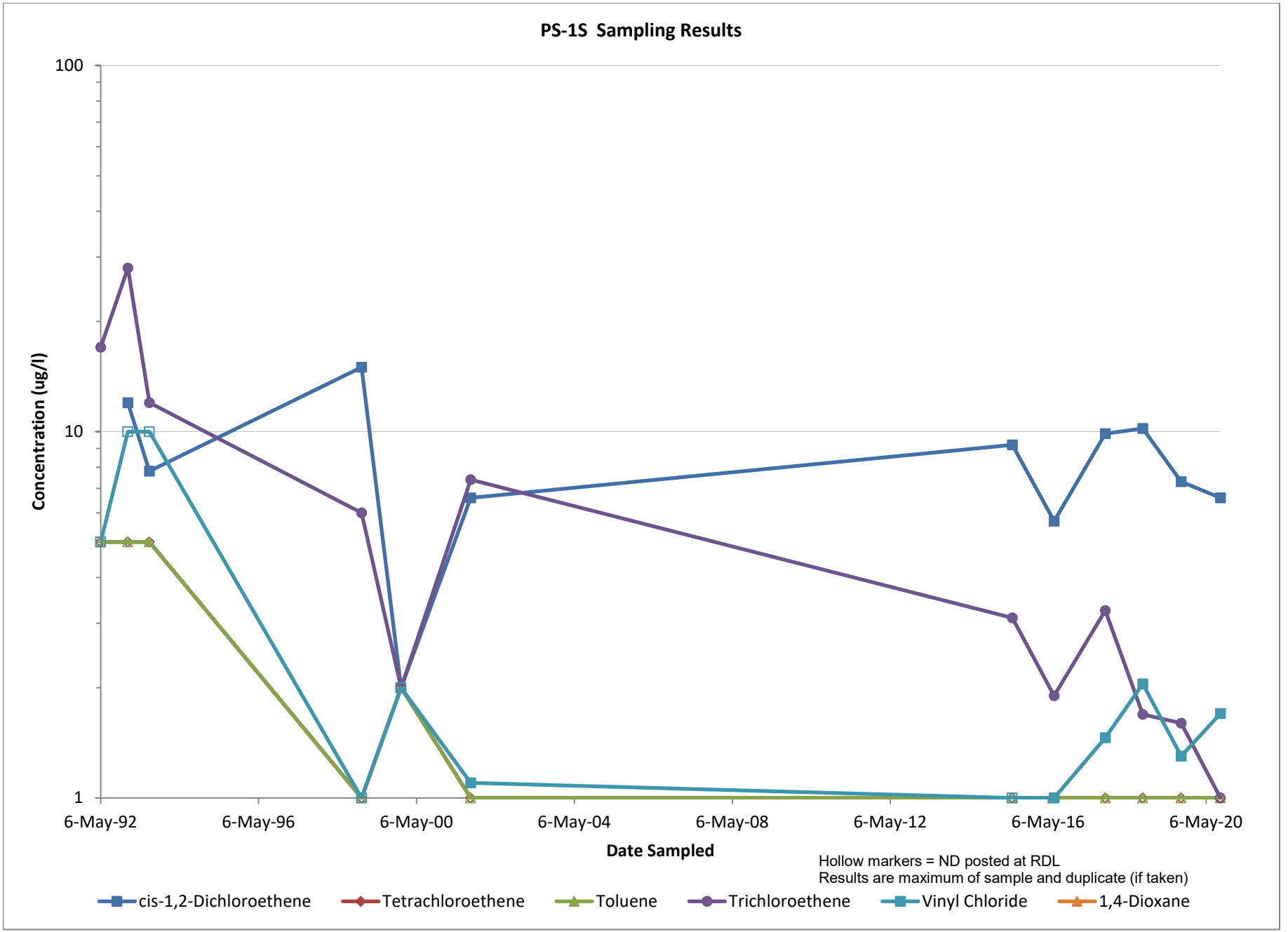

IP-01R2 Sampling Results
100000
10000
1000
100
10
1
Concentration (ug/l)
30-Mar-05
30-Mar-07
30-Mar-09
30-Mar-11
30-Mar-13
30-Mar-15
30-Mar-17
30-Mar-19
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
cis-1,2-Dichloroethene
Tetrachloroethene
Toluene
Trichloroethene
Vinyl Chloride
1,4-Dioxane

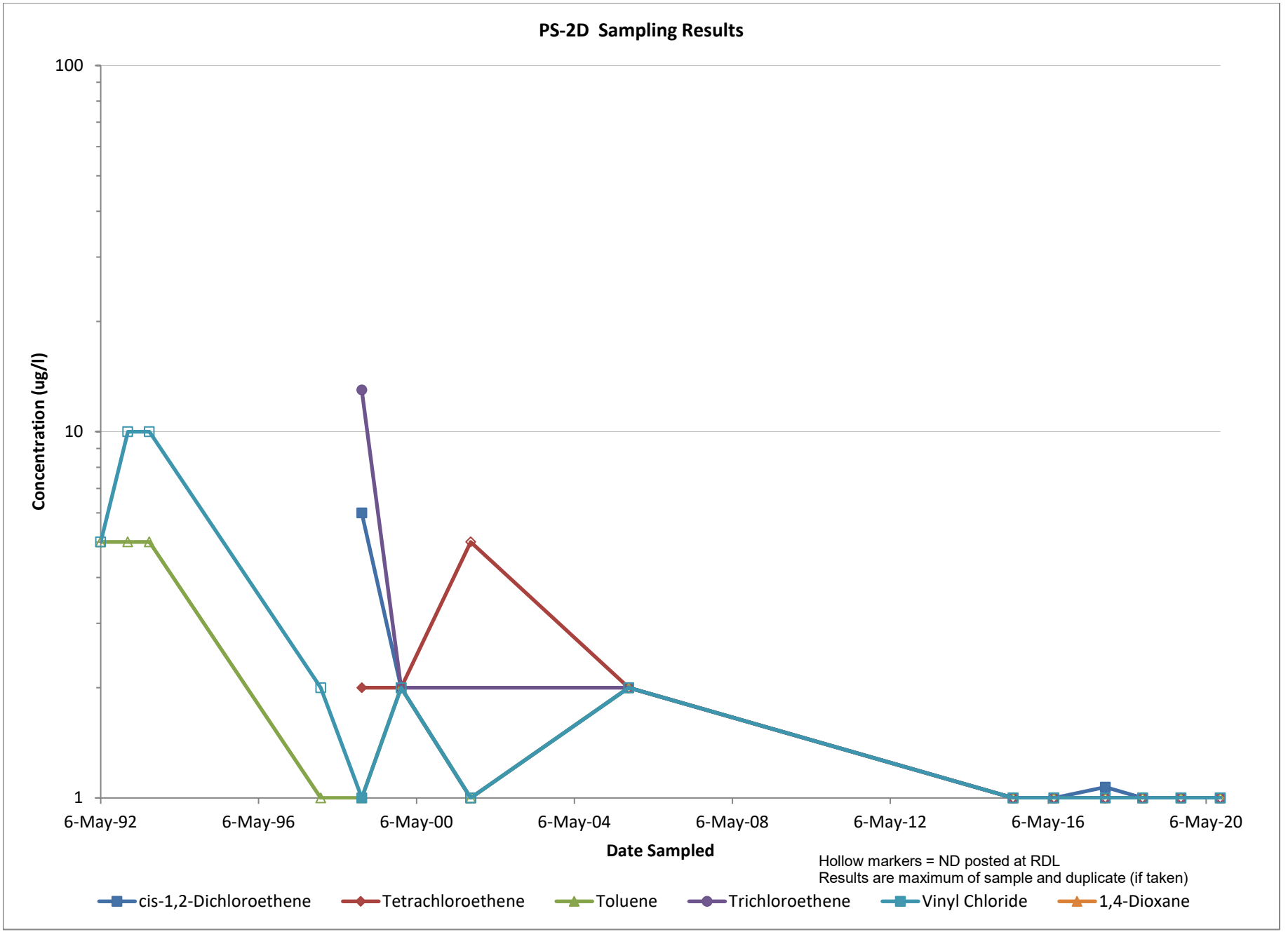

MW-4 Sampling Results
100
10
1
0.1
Concentration (ug/l)
3-Mar-86
3-Mar-91
2-Mar-96
2-Mar-01
3-Mar-06
3-Mar-11
2-Mar-16
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
cis-1,2-Dichloroethene
Tetrachloroethene
Toluene
Trichloroethene
Vinyl Chloride
1,4-Dioxane

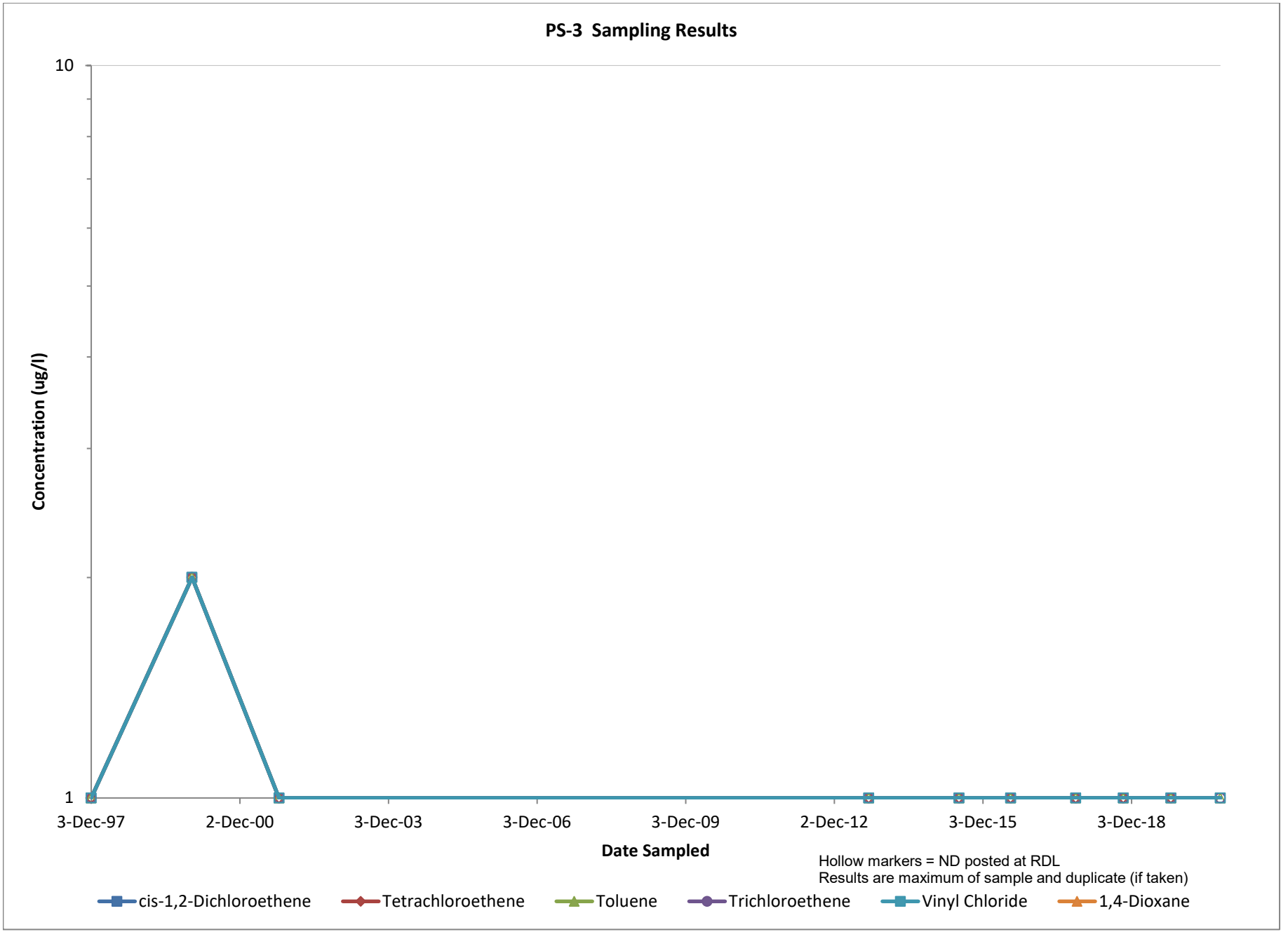

MW-5 Sampling Results
100
10
1
Concentration (ug/l)
3-Mar-86
3-Mar-91
2-Mar-96
2-Mar-01
3-Mar-06
3-Mar-11
2-Mar-16
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
cis-1,2-Dichloroethene
Tetrachloroethene
Toluene
Trichloroethene
Vinyl Chloride
1,4-Dioxane

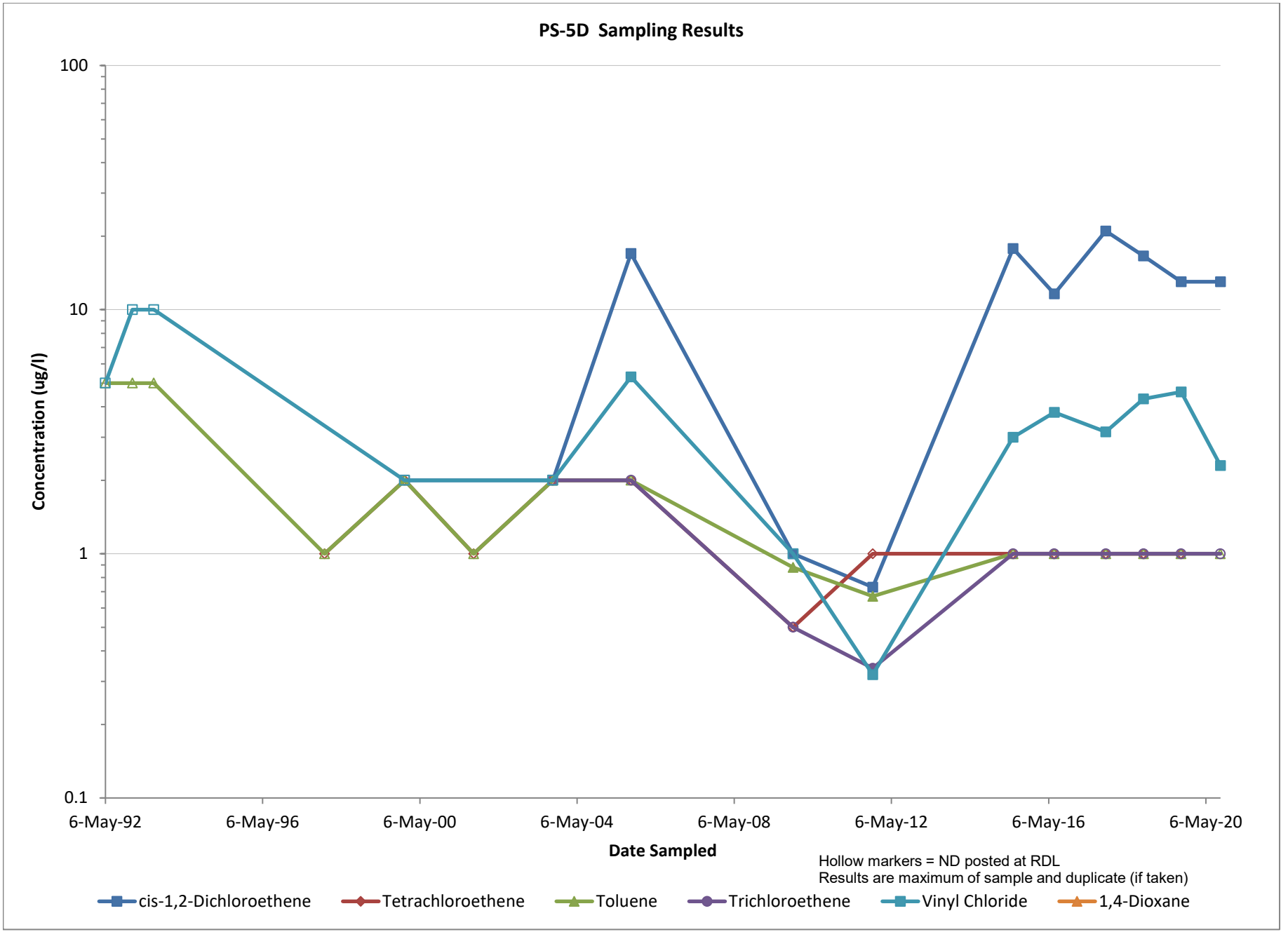

MW-7 Sampling Results
100
10
1
0.1
Concentration (ug/l)
5-Mar-86
5-Mar-91
4-Mar-96
4-Mar-01
5-Mar-06
5-Mar-11
4-Mar-16
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
cis-1,2-Dichloroethene
Tetrachloroethene
Toluene
Trichloroethene
Vinyl Chloride
1,4-Dioxane

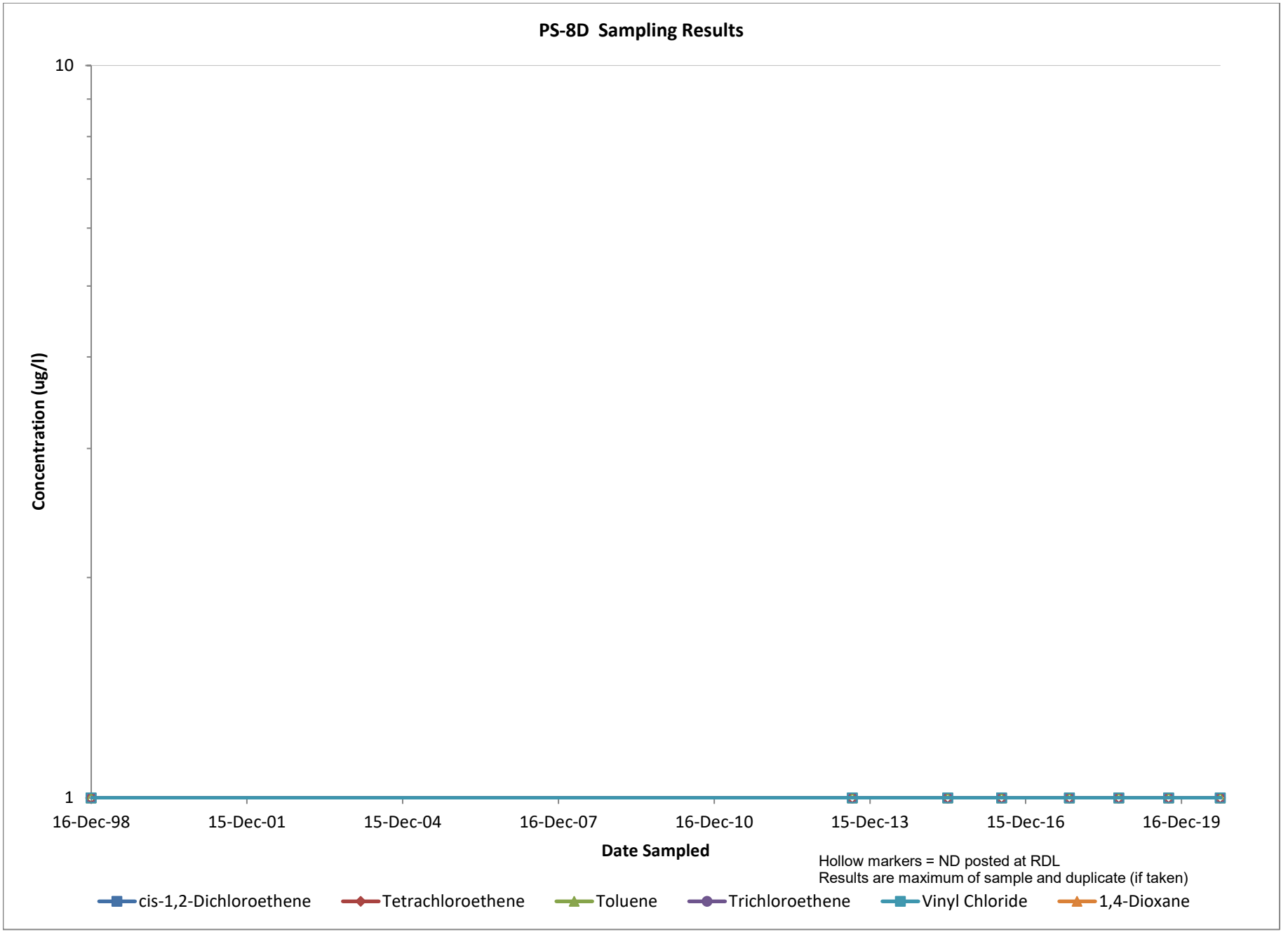

PS-1D Sampling Results
100
10
1
0.1
Concentration (ug/l)
6-May-92
6-May-96
6-May-00
6-May-04
6-May-08
6-May-12
6-May-16
6-May-20
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
cis-1,2-Dichloroethene
Tetrachloroethene
Toluene
Trichloroethene
Vinyl Chloride
1,4-Dioxane

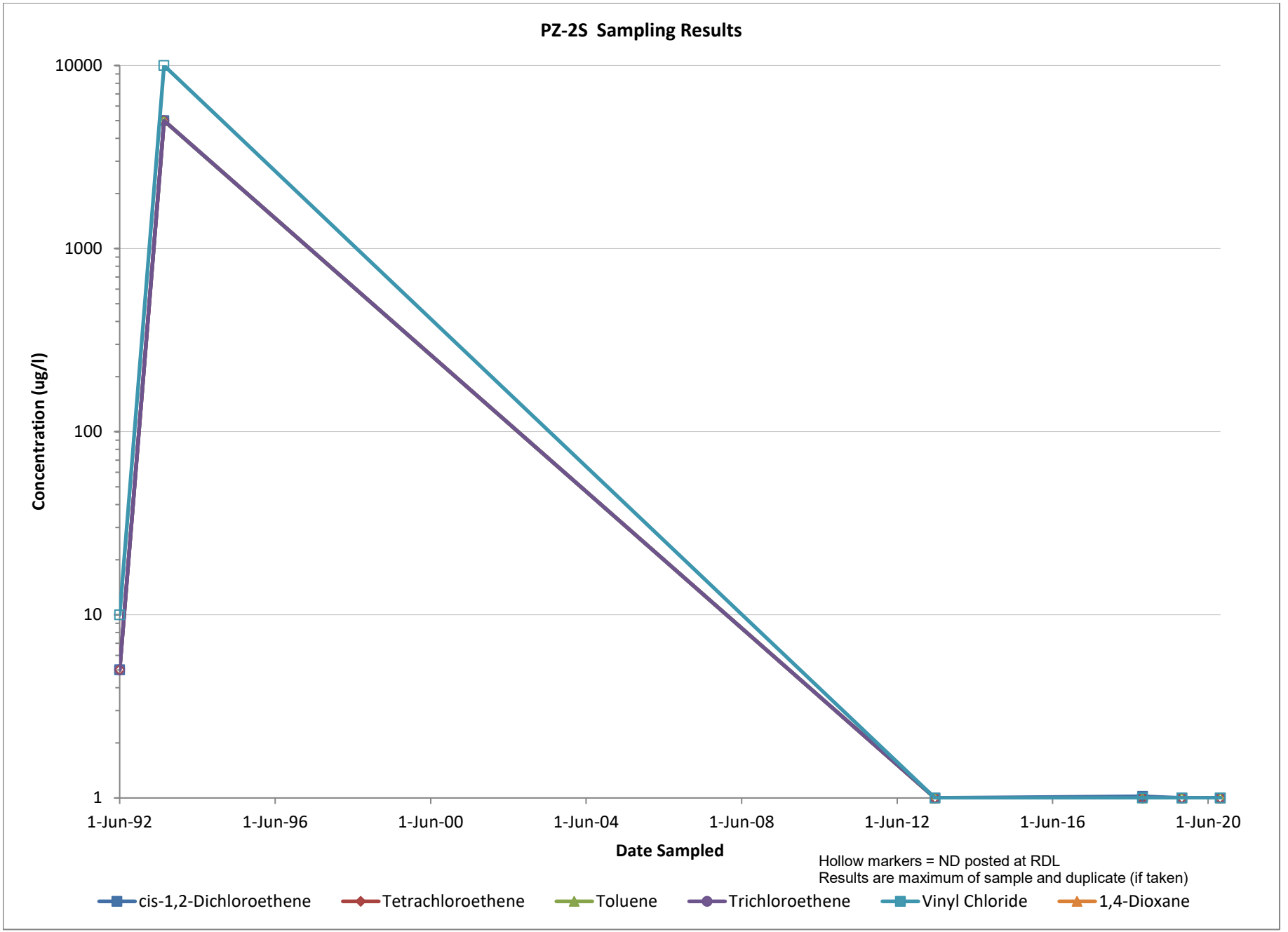

PS-1S Sampling Results
100
10
1
Concentration (ug/l)
6-May-92
6-May-96
6-May-00
6-May-04
6-May-08
6-May-12
6-May-16
6-May-20
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
cis-1,2-Dichloroethene
Tetrachloroethene
Toluene
Trichloroethene
Vinyl Chloride
1,4-Dioxane

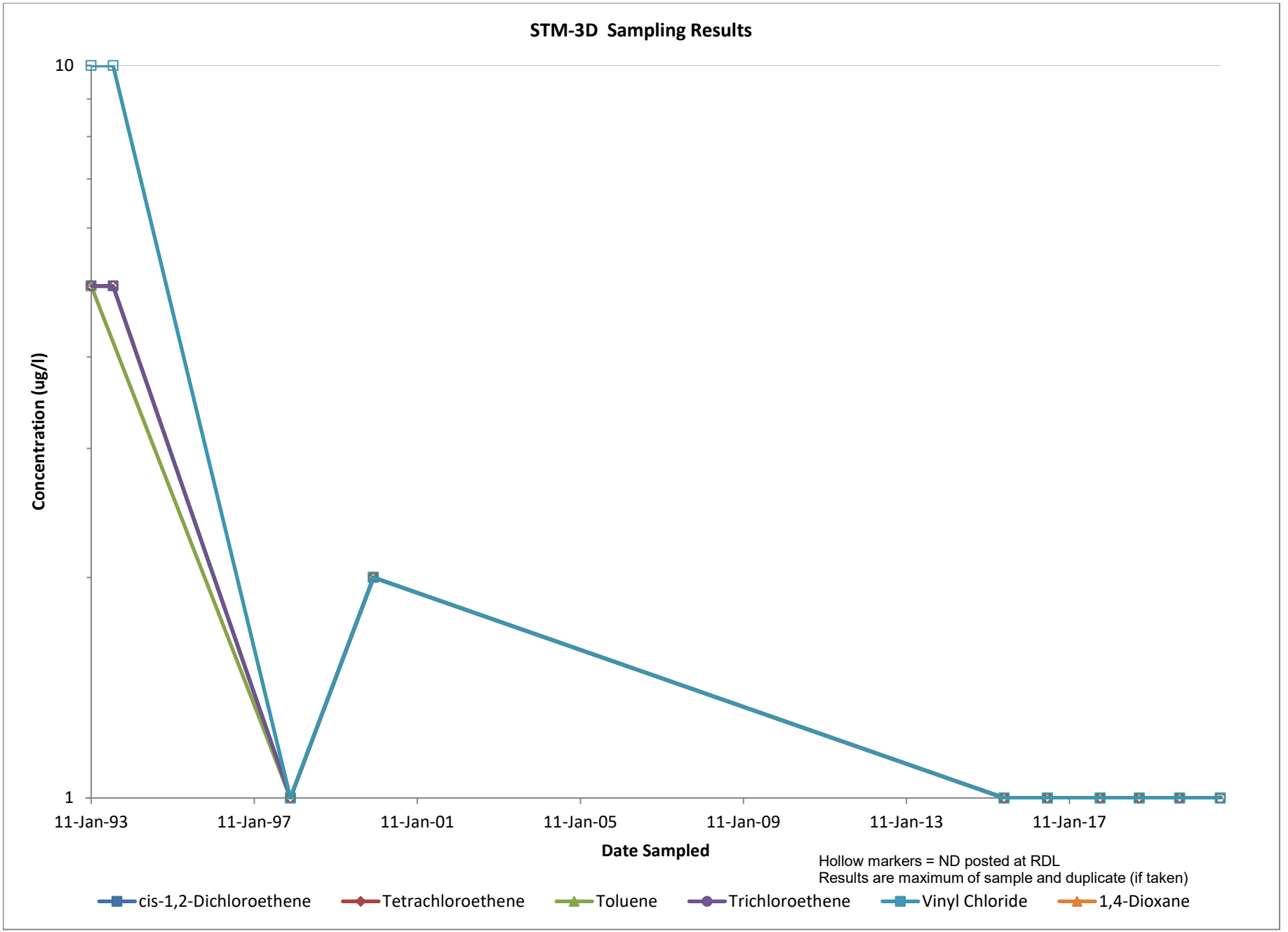

PS-2D Sampling Results
100
10
1
Concentration (ug/l)
6-May-92
6-May-96
6-May-00
6-May-04
6-May-08
6-May-12
6-May-16
6-May-20
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
cis-1,2-Dichloroethene
Tetrachloroethene
Toluene
Trichloroethene
Vinyl Chloride
1,4-Dioxane

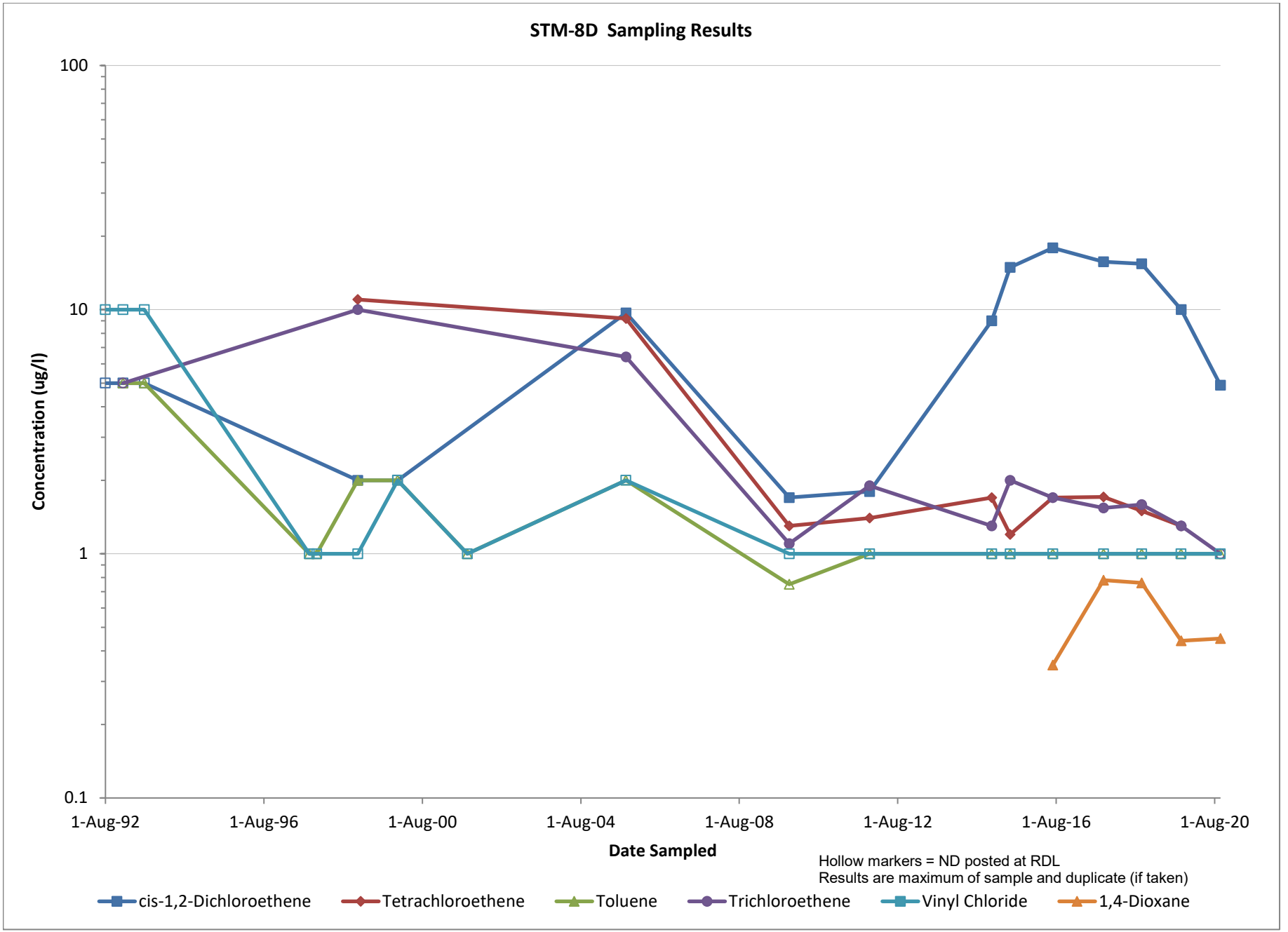

PS-3 Sampling Results
10
1
Concentration (ug/l)
3-Dec-97
2-Dec-00
3-Dec-03
3-Dec-06
3-Dec-09
2-Dec-12
3-Dec-15
3-Dec-18
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
cis-1,2-Dichloroethene
Tetrachloroethene
Toluene
Trichloroethene
Vinyl Chloride
1,4-Dioxane

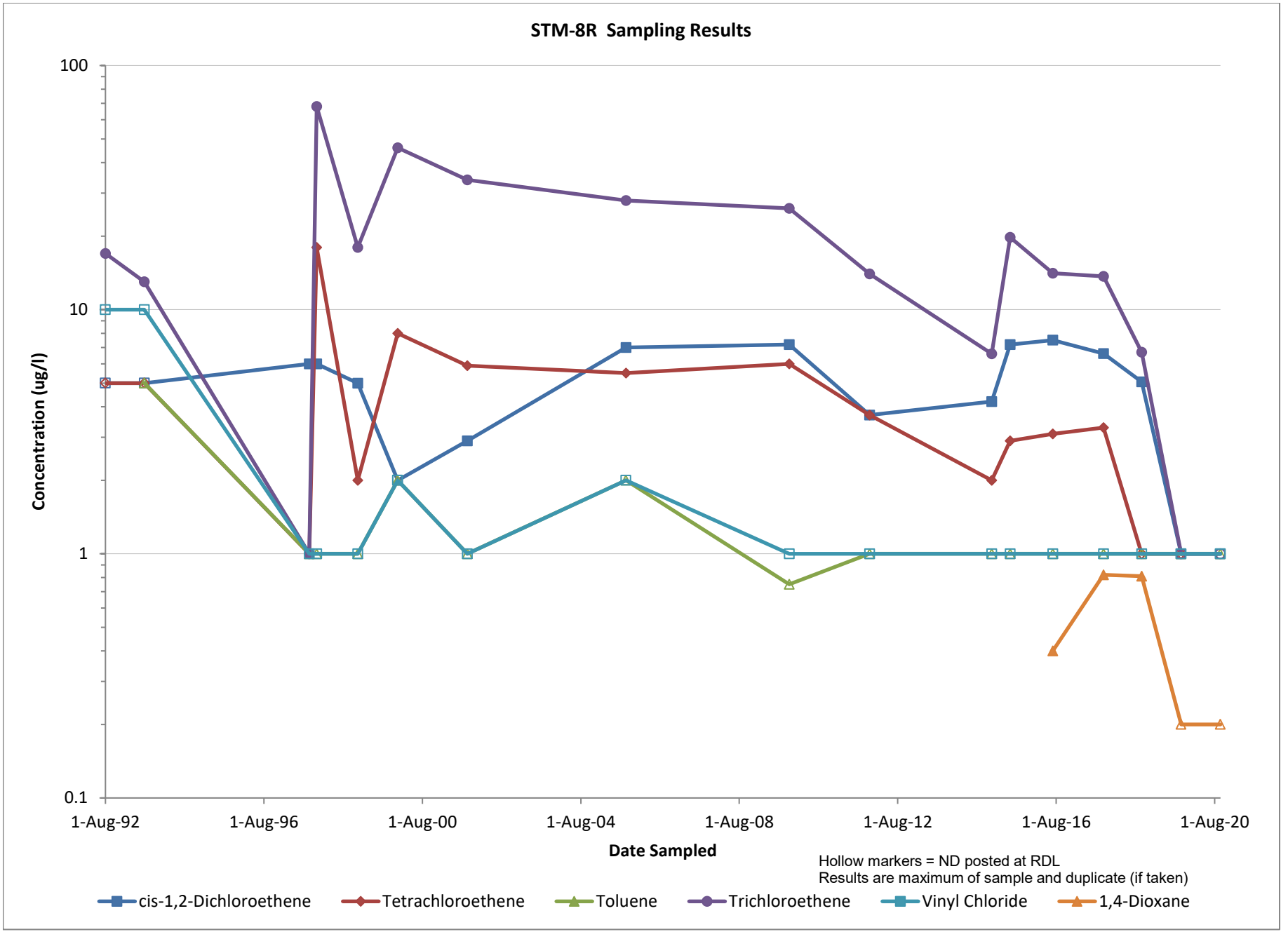

PS-5D Sampling Results
100
10
1
0.1
Concentration (ug/l)
6-May-92
6-May-96
6-May-00
6-May-04
6-May-08
6-May-12
6-May-16
6-May-20
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
cis-1,2-Dichloroethene
Tetrachloroethene
Toluene
Trichloroethene
Vinyl Chloride
1,4-Dioxane

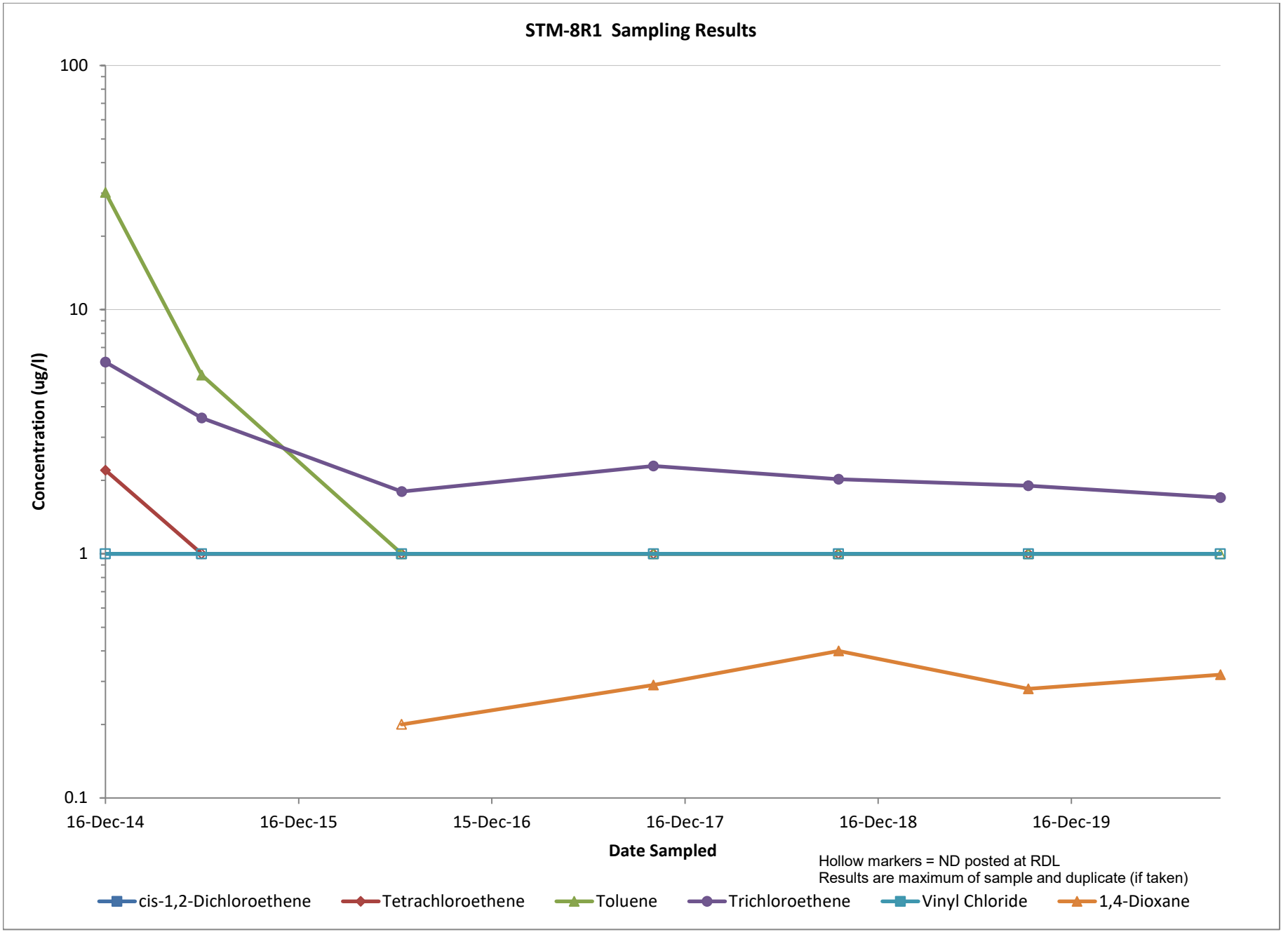

PS-8D Sampling Results
10
1
Concentration (ug/l)
16-Dec-98
15-Dec-01
15-Dec-04
16-Dec-07
16-Dec-10
15-Dec-13
15-Dec-16
16-Dec-19
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
cis-1,2-Dichloroethene
Tetrachloroethene
Toluene
Trichloroethene
Vinyl Chloride
1,4-Dioxane

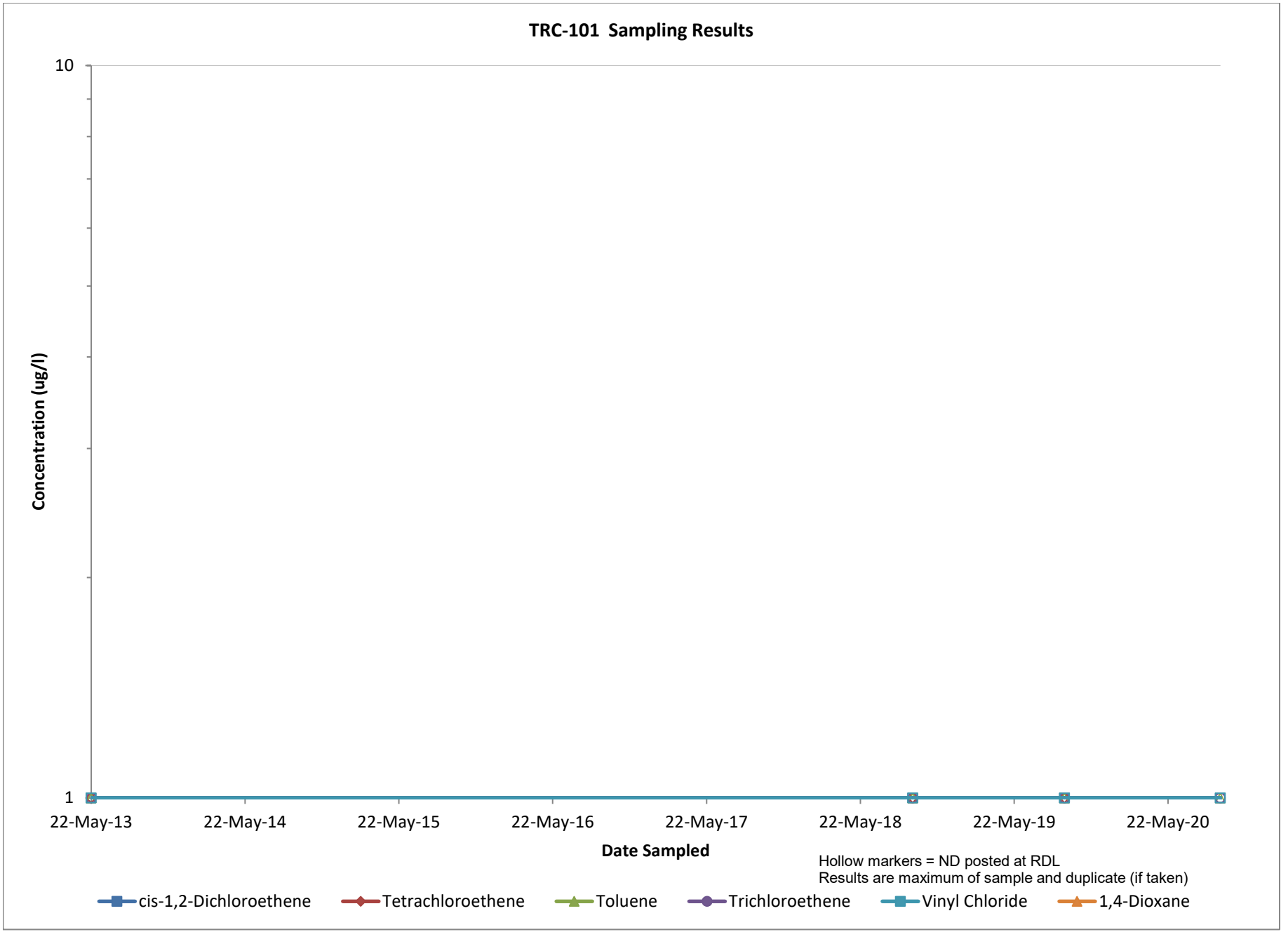

PZ-2S Sampling Results
10000
1000
100
10
1
Concentration (ug/l)
1-Jun-92
1-Jun-96
1-Jun-00
1-Jun-04
1-Jun-08
1-Jun-12
1-Jun-16
1-Jun-20
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
cis-1,2-Dichloroethene
Tetrachloroethene
Toluene
Trichloroethene
Vinyl Chloride
1,4-Dioxane

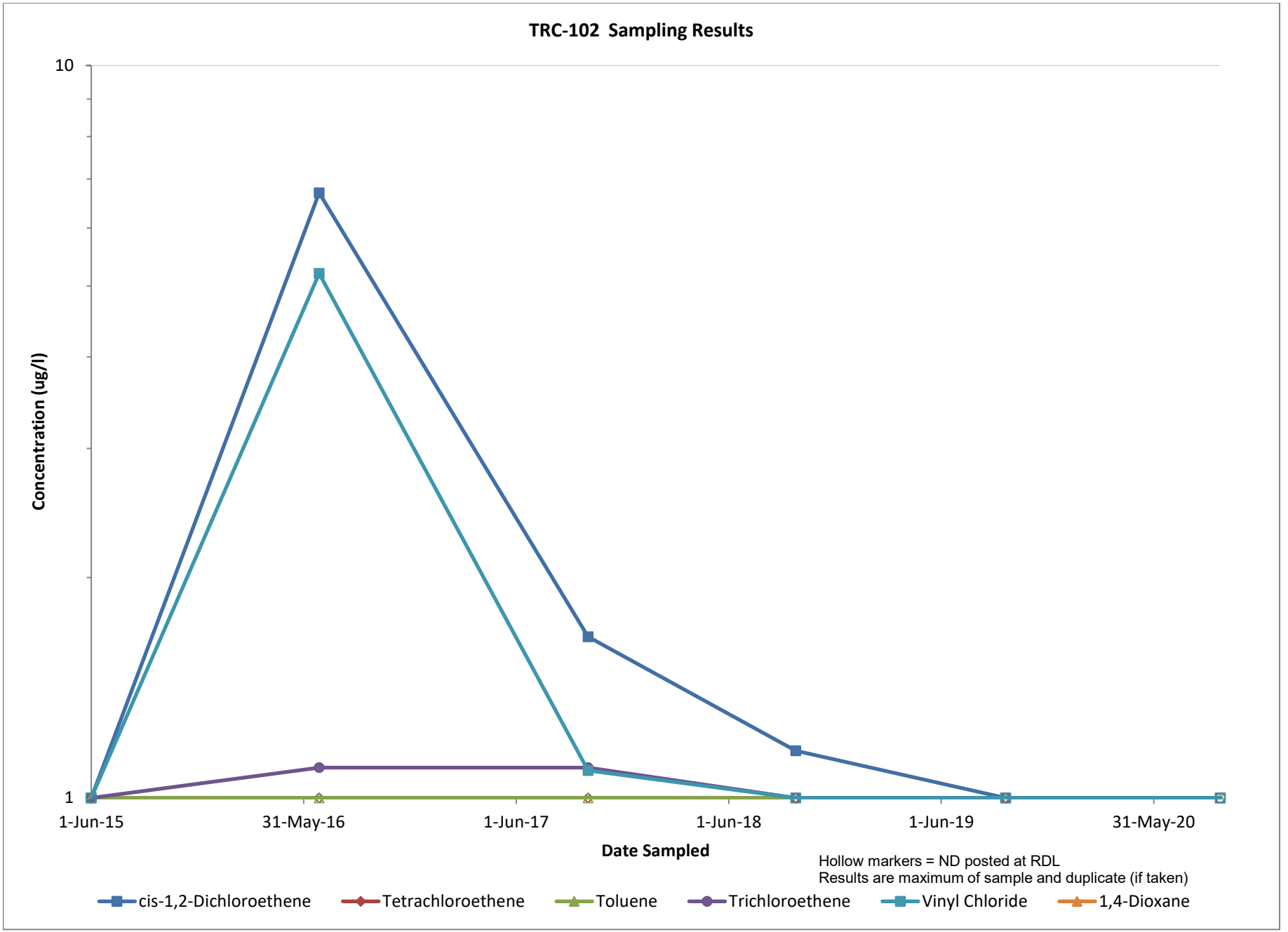

STM-3D Sampling Results
10
1
Concentration (ug/l)
11-Jan-93
11-Jan-97
11-Jan-01
11-Jan-05
11-Jan-09
11-Jan-13
11-Jan-17
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
cis-1,2-Dichloroethene
Tetrachloroethene
Toluene
Trichloroethene
Vinyl Chloride
1,4-Dioxane

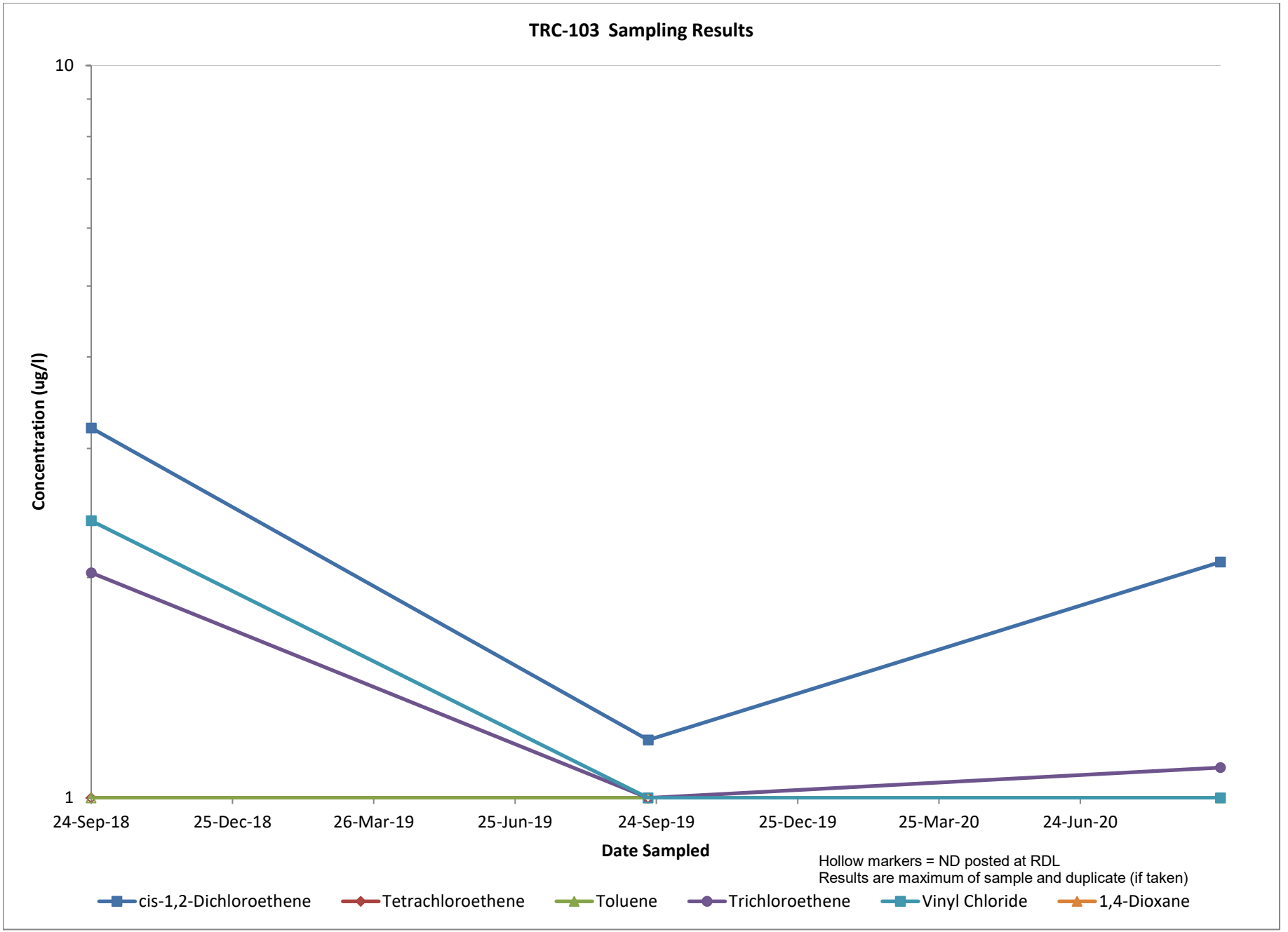

STM-8D Sampling Results
100
10
1
0.1
Concentration (ug/l)
1-Aug-92
1-Aug-96
1-Aug-00
1-Aug-04
1-Aug-08
1-Aug-12
1-Aug-16
1-Aug-20
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
cis-1,2-Dichloroethene
Tetrachloroethene
Toluene
Trichloroethene
Vinyl Chloride
1,4-Dioxane

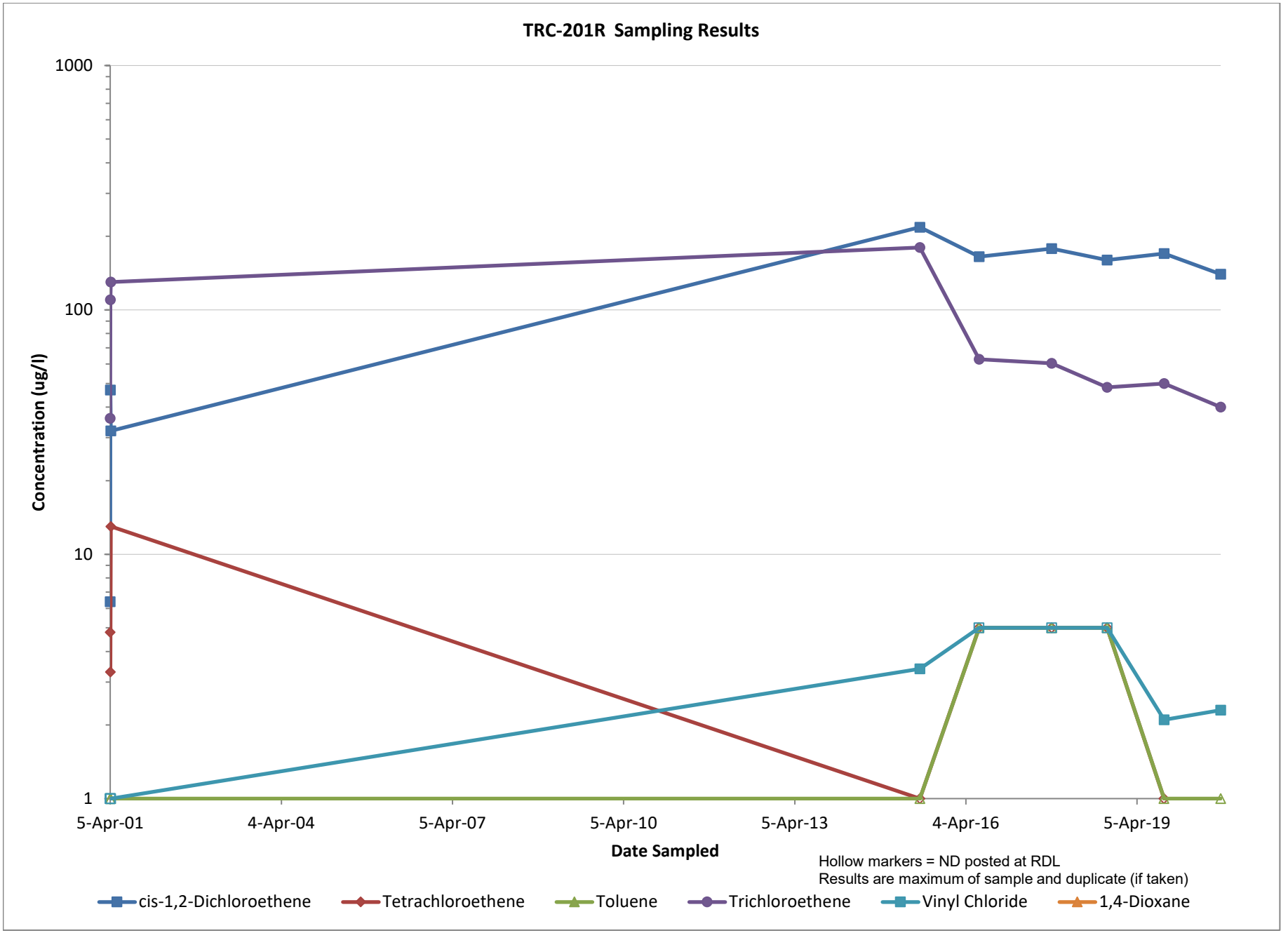

STM-8R Sampling Results
100
10
1
0.1
Concentration (ug/l)
1-Aug-92
1-Aug-96
1-Aug-00
1-Aug-04
1-Aug-08
1-Aug-12
1-Aug-16
1-Aug-20
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
cis-1,2-Dichloroethene
Tetrachloroethene
Toluene
Trichloroethene
Vinyl Chloride
1,4-Dioxane

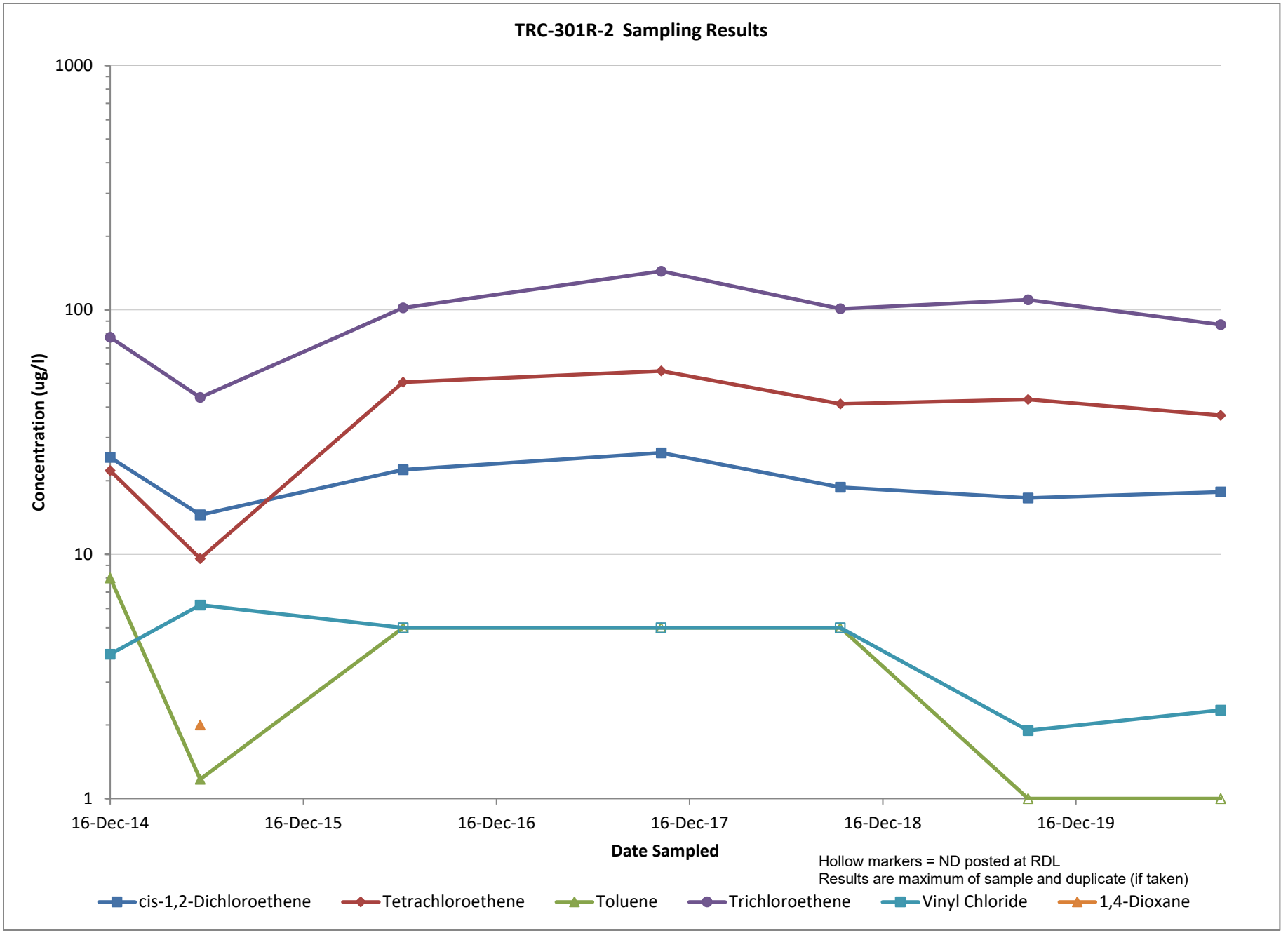

STM-8R1 Sampling Results
100
10
1
0.1
Concentration (ug/l)
16-Dec-14
16-Dec-15
15-Dec-16
16-Dec-17
16-Dec-18
16-Dec-19
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
cis-1,2-Dichloroethene
Tetrachloroethene
Toluene
Trichloroethene
Vinyl Chloride
1,4-Dioxane

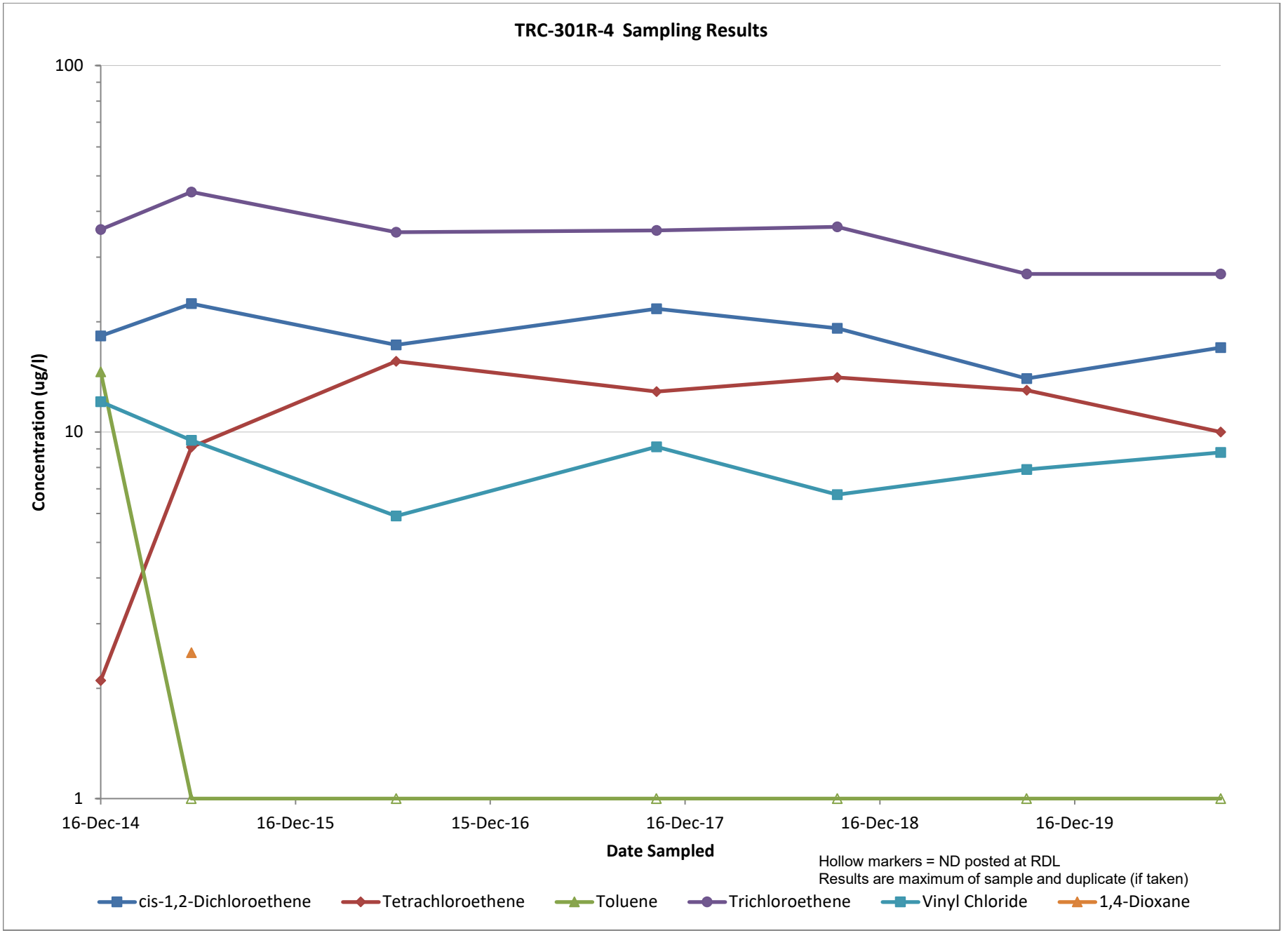

TRC-101 Sampling Results
10
1
Concentration (ug/l)
22-May-13
22-May-14
22-May-15
22-May-16
22-May-17
22-May-18
22-May-19
22-May-20
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
cis-1,2-Dichloroethene
Tetrachloroethene
Toluene
Trichloroethene
Vinyl Chloride
1,4-Dioxane

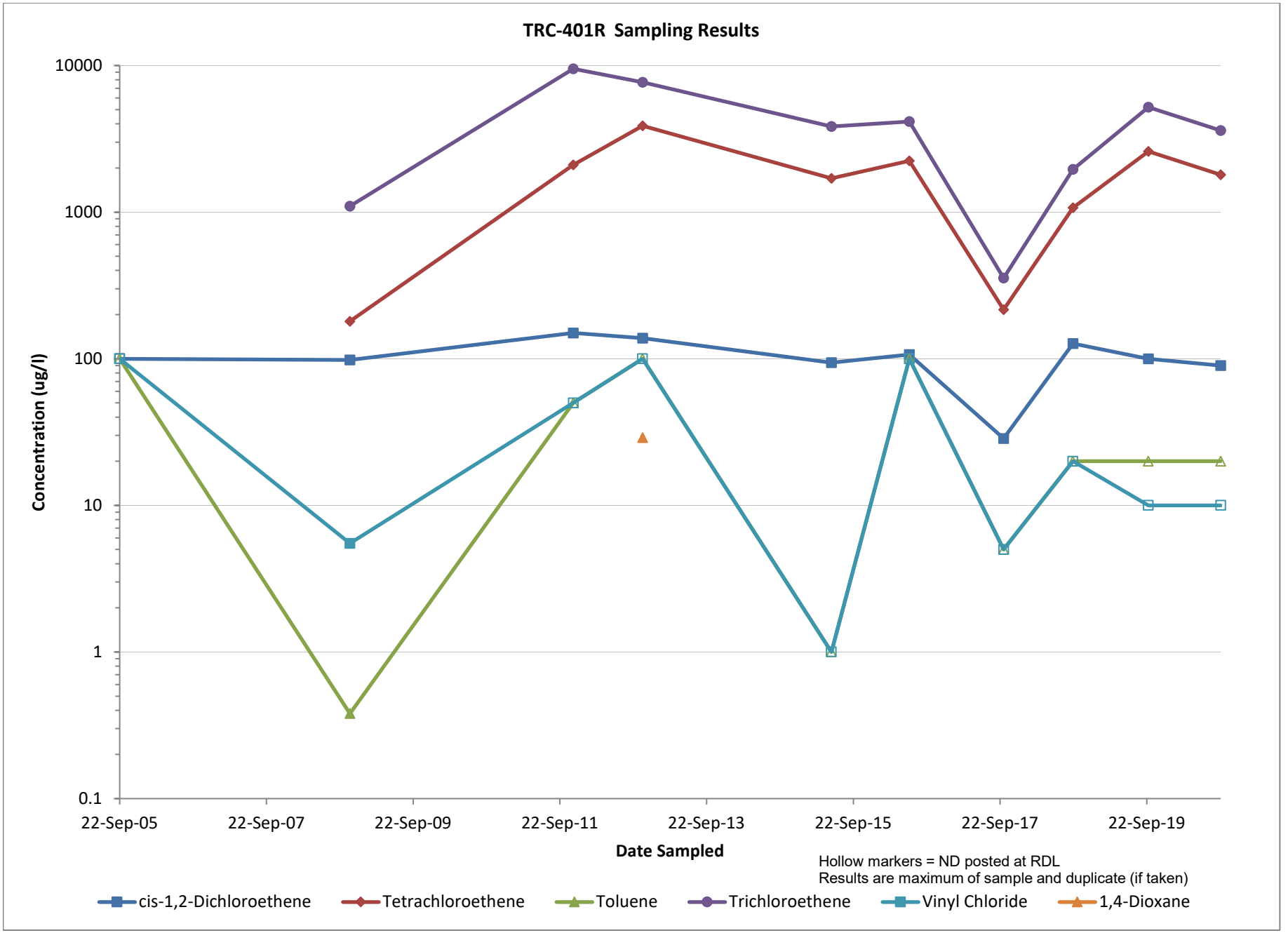

TRC-102 Sampling Results
10
1
Concentration (ug/l)
1-Jun-15
31-May-16
1-Jun-17
1-Jun-18
1-Jun-19
31-May-20
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
cis-1,2-Dichloroethene
Tetrachloroethene
Toluene
Trichloroethene
Vinyl Chloride
1,4-Dioxane


TRC-103 Sampling Results
10
1
Concentration (ug/l)
24-Sep-18
25-Dec-18
26-Mar-19
25-Jun-19
24-Sep-19
25-Dec-19
25-Mar-20
24-Jun-20
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
cis-1,2-Dichloroethene
Tetrachloroethene
Toluene
Trichloroethene
Vinyl Chloride
1,4-Dioxane


TRC-201R Sampling Results
1000
100
10
1
Concentration (ug/l)
5-Apr-01
4-Apr-04
5-Apr-07
5-Apr-10
5-Apr-13
4-Apr-16
5-Apr-19
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
cis-1,2-Dichloroethene
Tetrachloroethene
Toluene
Trichloroethene
Vinyl Chloride
1,4-Dioxane


TRC-301R-2 Sampling Results
1000
100
10
1
Concentration (ug/l)
16-Dec-14
16-Dec-15
16-Dec-16
16-Dec-17
16-Dec-18
16-Dec-19
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
cis-1,2-Dichloroethene
Tetrachloroethene
Toluene
Trichloroethene
Vinyl Chloride
1,4-Dioxane


TRC-301R-4 Sampling Results
100
10
1
Concentration (ug/l)
16-Dec-14
16-Dec-15
15-Dec-16
16-Dec-17
16-Dec-18
16-Dec-19
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
cis-1,2-Dichloroethene
Tetrachloroethene
Toluene
Trichloroethene
Vinyl Chloride
1,4-Dioxane


TRC-401R Sampling Results
10000
1000
100
10
1
0.1
Concentration (ug/l)
22-Sep-05
22-Sep-07
22-Sep-09
22-Sep-11
22-Sep-13
22-Sep-15
22-Sep-17
22-Sep-19
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
cis-1,2-Dichloroethene
Tetrachloroethene
Toluene
Trichloroethene
Vinyl Chloride
1,4-Dioxane

APPENDIX H
LABORATORY ANALYTICAL AND DATA VALIDATION REPORTS – INDOOR AIR

ANALYTICAL REPORT

Lab Number:	L2104188
Client:	AECOM 250 Apollo Dr. Chelmsford, MA 01824
ATTN:	Lori Herberich
Phone:	(978) 589-3383
Project Name:	LOCKHEED MARTIN
Project Number:	60552044.24
Report Date:	02/08/21

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Certifications & Approvals: MA (M-MA030), NH NELAP (2062), CT (PH-0141), DoD (L2474), FL (E87814), IL (200081), LA (85084), ME (MA00030), MD (350), NJ (MA015), NY (11627), NC (685), OH (CL106), PA (68-02089), RI (LAO00299), TX (T104704419), VT (VT-0015), VA (460194), WA (C954), US Army Corps of Engineers, USDA (Permit #P330-17-00150), USFWS (Permit #206964).

320 Forbes Boulevard, Mansfield, MA 02048-1806
508-822-9300 (Fax) 508-822-3288 800-624-9220 - www.alphalab.com

Project Name: LOCKHEED MARTIN
Project Number: 60552044.24

Lab Number: L2104188
Report Date: 02/08/21

Alpha Sample ID	Client ID	Matrix	Sample Location	Collection Date/Time	Receive Date
L2104188-01	21A-AA1-1	AIR	WILMINGTON, MA	01/26/21 16:22	01/27/21
L2104188-02	21A-IA2-1	AIR	WILMINGTON, MA	01/26/21 16:54	01/27/21
L2104188-03	21A-IA3-1	AIR	WILMINGTON, MA	01/26/21 17:00	01/27/21
L2104188-04	21A-IA4-1	AIR	WILMINGTON, MA	01/26/21 16:58	01/27/21
L2104188-05	21A-IA7-1	AIR	WILMINGTON, MA	01/26/21 16:56	01/27/21
L2104188-06	21A-IA8-1	AIR	WILMINGTON, MA	01/26/21 17:02	01/27/21
L2104188-07	21A-IA8-2	AIR	WILMINGTON, MA	01/26/21 17:02	01/27/21
L2104188-08	21A-IA9-1	AIR	WILMINGTON, MA	01/26/21 17:05	01/27/21
L2104188-09	UNUSED CAN #3143	AIR	WILMINGTON, MA		01/27/21

Project Name: LOCKHEED MARTIN **Lab Number:** L2104188

Project Number: 60552044.24 **Report Date:** 02/08/21

MADEP MCP Response Action Analytical Report Certification

This form provides certifications for all samples performed by MCP methods. Please refer to the Sample Results and Container Information sections of this report for specification of MCP methods used for each analysis. The following questions pertain only to MCP Analytical Methods.

An affirmative response to questions A through F is required for "Presumptive Certainty" status		
A	Were all samples received in a condition consistent with those described on the Chain-of-Custody, properly preserved (including temperature) in the field or laboratory, and prepared/analyzed within method holding times?	YES
B	Were the analytical method(s) and all associated QC requirements specified in the selected CAM protocol(s) followed?	YES
C	Were all required corrective actions and analytical response actions specified in the selected CAM protocol(s) implemented for all identified performance standard non-conformances?	YES
D	Does the laboratory report comply with all the reporting requirements specified in CAM VII A, "Quality Assurance and Quality Control Guidelines for the Acquisition and Reporting of Analytical Data?"	YES
E a.	VPH, EPH, and APH Methods only: Was each method conducted without significant modification(s)? (Refer to the individual method(s) for a list of significant modifications).	N/A
E b.	APH and TO-15 Methods only: Was the complete analyte list reported for each method?	YES
F	Were all applicable CAM protocol QC and performance standard non-conformances identified and evaluated in a laboratory narrative (including all "No" responses to Questions A through E)?	YES

A response to questions G, H and I is required for "Presumptive Certainty" status		
G	Were the reporting limits at or below all CAM reporting limits specified in the selected CAM protocol(s)?	NO
H	Were all QC performance standards specified in the CAM protocol(s) achieved?	NO
I	Were results reported for the complete analyte list specified in the selected CAM protocol(s)?	YES

For any questions answered "No", please refer to the case narrative section on the following page(s).

Please note that sample matrix information is located in the Sample Results section of this report.

Project Name:	LOCKHEED MARTIN	**Lab Number:**	L2104188
Project Number:	60552044.24	**Report Date:**	02/08/21

Case Narrative

The samples were received in accordance with the Chain of Custody and no significant deviations were encountered during the preparation or analysis unless otherwise noted. Sample Receipt, Container Information, and the Chain of Custody are located at the back of the report.

Results contained within this report relate only to the samples submitted under this Alpha Lab Number and meet NELAP requirements for all NELAP accredited parameters unless otherwise noted in the following narrative. The data presented in this report is organized by parameter (i.e. VOC, SVOC, etc.). Sample specific Quality Control data (i.e. Surrogate Spike Recovery) is reported at the end of the target analyte list for each individual sample, followed by the Laboratory Batch Quality Control at the end of each parameter. Tentatively Identified Compounds (TICs), if requested, are reported for compounds identified to be present and are not part of the method/program Target Compound List, even if only a subset of the TCL are being reported. If a sample was re-analyzed or re-extracted due to a required quality control corrective action and if both sets of data are reported, the Laboratory ID of the re-analysis or re-extraction is designated with an "R" or "RE", respectively.

When multiple Batch Quality Control elements are reported (e.g. more than one LCS), the associated samples for each element are noted in the grey shaded header line of each data table. Any Laboratory Batch, Sample Specific % recovery or RPD value that is outside the listed Acceptance Criteria is bolded in the report. In reference to questions H (CAM) or 4 (RCP) when "NO" is checked, the performance criteria for CAM and RCP methods allow for some quality control failures to occur and still be within method compliance. In these instances, the specific failure is not narrated but noted in the associated QC Outlier Summary Report, located directly after the Case Narrative. QC information is also incorporated in the Data Usability Assessment table (Format 11) of our Data Merger tool, where it can be reviewed in conjunction with the sample result, associated regulatory criteria and any associated data usability implications.

Soil/sediments, solids and tissues are reported on a dry weight basis unless otherwise noted. Definitions of all data qualifiers and acronyms used in this report are provided in the Glossary located at the back of the report.

HOLD POLICY - For samples submitted on hold, Alpha's policy is to hold samples (with the exception of Air canisters) free of charge for 21 calendar days from the date the project is completed. After 21 calendar days, we will dispose of all samples submitted including those put on hold unless you have contacted your Alpha Project Manager and made arrangements for Alpha to continue to hold the samples. Air canisters will be disposed after 3 business days from the date the project is completed.

Please contact Project Management at 800-624-9220 with any questions.

Project Name:	LOCKHEED MARTIN	**Lab Number:**	L2104188
Project Number:	60552044.24	**Report Date:**	02/08/21

Case Narrative (continued)

Report Revision

This report replaces the one previously issued on February 3, 2021. The report has been amended to note the ICV outage that was omitted in the orginal submittal.

MCP Related Narratives

Canisters were released from the laboratory on January 25, 2021. The canister certification data is provided as an addendum.

MCP Volatile Organics in Air

In reference to question G:

One or more of the target analytes did not achieve the requested CAM reporting limits.

In reference to question H:

The WG1460965-3 LCS recovery for 1,2,4-trichlorobenzene (161%) is above the upper 130% acceptance limit. All samples associated with this LCS do not have reportable amounts of this analyte.

In reference to question H:

The continuing calibration standard, associated with L2104188-01 through -08, is outside the %D criteria for 1,2,4-Trichlorobenzene (61%D) and Hexachlorobutadiene (33%D); however, these targets are non-detect in the associated samples.

L2104188-01 through -08: The Total Ion Chromatographs were scanned for the ions associated with Methyl Acetate. This compound was not detected in these samples.

SAMPLE NARRATIVES

MCP-TO15-SIM L2104188-01 through -08: The Total Ion Chromatographs were scanned for the ions associated with Methyl Acetate. This compound was not detected in these samples.

I, the undersigned, attest under the pains and penalties of perjury that, to the best of my knowledge and belief and based upon my personal inquiry of those responsible for providing the information contained in this analytical report, such information is accurate and complete. This certificate of analysis is not complete unless this page accompanies any and all pages of this report.

Authorized Signature: Christopher J. Anderson

Title: Technical Director/Representative Date: 02/08/21

QC OUTLIER SUMMARY REPORT

Project Name: LOCKHEED MARTIN
Project Number: 60552044.24

Lab Number: L2104188
Report Date: 02/08/21

Method	Client ID (Native ID)	Lab ID	Parameter	QC Type	Recovery/RPD (%)	QC Limits (%)	Associated Samples	Data Quality Assessment
MCP Volatile Organics in Air by SIM - Mansfield Lab								
TO-15-SIM	Batch QC	WG1460965-3	1,2,4-Trichlorobenzene	LCS	161	50-150	01-08	potential high bias

AIR

Project Name: LOCKHEED MARTIN
Project Number: 60552044.24

Lab Number: L2104188
Report Date: 02/08/21

SAMPLE RESULTS

Lab ID: L2104188-01
Client ID: 21A-AA1-1
Sample Location: WILMINGTON, MA

Date Collected: 01/26/21 16:22
Date Received: 01/27/21
Field Prep: Not Specified

Sample Depth:
Matrix: Air
Anaytical Method: 101,TO-15-SIM
Analytical Date: 02/02/21 17:23
Analyst: RY

	ppbV			ug/m3				
Parameter	**Results**	**RL**	**MDL**	**Results**	**RL**	**MDL**	**Qualifier**	**Dilution Factor**
MCP Volatile Organics in Air by SIM - Mansfield Lab								
Dichlorodifluoromethane	0.407	0.200	--	2.01	0.989	--		1
Chloromethane	0.497	0.200	--	1.03	0.413	--		1
Vinyl chloride	ND	0.020	--	ND	0.051	--		1
Bromomethane	ND	0.020	--	ND	0.078	--		1
Chloroethane	ND	0.100	--	ND	0.264	--		1
Acetone	ND	1.00	--	ND	2.38	--		1
1,1-Dichloroethene	ND	0.020	--	ND	0.079	--		1
Methylene chloride	ND	0.500	--	ND	1.74	--		1
Carbon disulfide	ND	0.200	--	ND	0.623	--		1
Freon-113	0.055	0.050	--	0.422	0.383	--		1
trans-1,2-Dichloroethene	ND	0.020	--	ND	0.079	--		1
1,1-Dichloroethane	ND	0.020	--	ND	0.081	--		1
Methyl tert butyl ether	ND	0.200	--	ND	0.721	--		1
2-Butanone	ND	0.500	--	ND	1.47	--		1
cis-1,2-Dichloroethene	ND	0.020	--	ND	0.079	--		1
Chloroform	ND	0.020	--	ND	0.098	--		1
1,2-Dichloroethane	ND	0.020	--	ND	0.081	--		1
1,1,1-Trichloroethane	ND	0.020	--	ND	0.109	--		1
Benzene	0.133	0.100	--	0.425	0.319	--		1
Carbon tetrachloride	0.060	0.020	--	0.377	0.126	--		1
1,2-Dichloropropane	ND	0.020	--	ND	0.092	--		1
Bromodichloromethane	ND	0.020	--	ND	0.134	--		1
1,4-Dioxane	ND	0.100	--	ND	0.360	--		1

Project Name: LOCKHEED MARTIN
Project Number: 60552044.24

Lab Number: L2104188
Report Date: 02/08/21

SAMPLE RESULTS

Lab ID: L2104188-01
Client ID: 21A-AA1-1
Sample Location: WILMINGTON, MA

Date Collected: 01/26/21 16:22
Date Received: 01/27/21
Field Prep: Not Specified

Sample Depth:

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
MCP Volatile Organics in Air by SIM - Mansfield Lab								
Trichloroethene	ND	0.020	--	ND	0.107	--		1
cis-1,3-Dichloropropene	ND	0.020	--	ND	0.091	--		1
4-Methyl-2-pentanone	ND	0.500	--	ND	2.05	--		1
trans-1,3-Dichloropropene	ND	0.020	--	ND	0.091	--		1
1,1,2-Trichloroethane	ND	0.020	--	ND	0.109	--		1
Toluene	0.144	0.050	--	0.543	0.188	--		1
Dibromochloromethane	ND	0.020	--	ND	0.170	--		1
1,2-Dibromoethane	ND	0.020	--	ND	0.154	--		1
Tetrachloroethene	ND	0.020	--	ND	0.136	--		1
Chlorobenzene	ND	0.100	--	ND	0.461	--		1
Ethylbenzene	ND	0.020	--	ND	0.087	--		1
p/m-Xylene	0.046	0.040	--	0.200	0.174	--		1
Bromoform	ND	0.020	--	ND	0.207	--		1
Styrene	ND	0.020	--	ND	0.085	--		1
1,1,2,2-Tetrachloroethane	ND	0.020	--	ND	0.137	--		1
o-Xylene	ND	0.020	--	ND	0.087	--		1
1,3-Dichlorobenzene	ND	0.020	--	ND	0.120	--		1
1,4-Dichlorobenzene	ND	0.020	--	ND	0.120	--		1
1,2-Dichlorobenzene	ND	0.020	--	ND	0.120	--		1
1,2,4-Trichlorobenzene	ND	0.050	--	ND	0.371	--		1
Naphthalene	ND	0.050	--	ND	0.262	--		1
Hexachlorobutadiene	ND	0.050	--	ND	0.533	--		1

Project Name: LOCKHEED MARTIN
Project Number: 60552044.24

Lab Number: L2104188
Report Date: 02/08/21

SAMPLE RESULTS

Lab ID: L2104188-01
Client ID: 21A-AA1-1
Sample Location: WILMINGTON, MA

Date Collected: 01/26/21 16:22
Date Received: 01/27/21
Field Prep: Not Specified

Sample Depth:

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
MCP Volatile Organics in Air by SIM - Mansfield Lab								

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	102		70-130
Bromofluorobenzene	102		70-130
Toluene-d8	116		70-130

Internal Standard	% Recovery	Qualifier	Acceptance Criteria
1,4-difluorobenzene	95		60-140
bromochloromethane	97		60-140
chlorobenzene-d5	93		60-140

Project Name: LOCKHEED MARTIN
Project Number: 60552044.24

Lab Number: L2104188
Report Date: 02/08/21

SAMPLE RESULTS

Lab ID: L2104188-02
Client ID: 21A-IA2-1
Sample Location: WILMINGTON, MA

Date Collected: 01/26/21 16:54
Date Received: 01/27/21
Field Prep: Not Specified

Sample Depth:
Matrix: Air
Anaytical Method: 101,TO-15-SIM
Analytical Date: 02/02/21 18:08
Analyst: RY

	ppbV			ug/m3				
Parameter	**Results**	**RL**	**MDL**	**Results**	**RL**	**MDL**	**Qualifier**	**Dilution Factor**
MCP Volatile Organics in Air by SIM - Mansfield Lab								
Dichlorodifluoromethane	0.398	0.200	--	1.97	0.989	--		1
Chloromethane	0.486	0.200	--	1.00	0.413	--		1
Vinyl chloride	ND	0.020	--	ND	0.051	--		1
Bromomethane	ND	0.020	--	ND	0.078	--		1
Chloroethane	ND	0.100	--	ND	0.264	--		1
Acetone	12.4	1.00	--	29.5	2.38	--		1
1,1-Dichloroethene	ND	0.020	--	ND	0.079	--		1
Methylene chloride	ND	0.500	--	ND	1.74	--		1
Carbon disulfide	ND	0.200	--	ND	0.623	--		1
Freon-113	0.058	0.050	--	0.445	0.383	--		1
trans-1,2-Dichloroethene	ND	0.020	--	ND	0.079	--		1
1,1-Dichloroethane	ND	0.020	--	ND	0.081	--		1
Methyl tert butyl ether	ND	0.200	--	ND	0.721	--		1
2-Butanone	ND	0.500	--	ND	1.47	--		1
cis-1,2-Dichloroethene	ND	0.020	--	ND	0.079	--		1
Chloroform	ND	0.020	--	ND	0.098	--		1
1,2-Dichloroethane	ND	0.020	--	ND	0.081	--		1
1,1,1-Trichloroethane	ND	0.020	--	ND	0.109	--		1
Benzene	2.81	0.100	--	8.98	0.319	--		1
Carbon tetrachloride	0.065	0.020	--	0.409	0.126	--		1
1,2-Dichloropropane	ND	0.020	--	ND	0.092	--		1
Bromodichloromethane	ND	0.020	--	ND	0.134	--		1
1,4-Dioxane	ND	0.100	--	ND	0.360	--		1

Project Name: LOCKHEED MARTIN
Project Number: 60552044.24

Lab Number: L2104188
Report Date: 02/08/21

SAMPLE RESULTS

Lab ID: L2104188-02
Client ID: 21A-IA2-1
Sample Location: WILMINGTON, MA

Date Collected: 01/26/21 16:54
Date Received: 01/27/21
Field Prep: Not Specified

Sample Depth:

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
MCP Volatile Organics in Air by SIM - Mansfield Lab								
Trichloroethene	ND	0.020	--	ND	0.107	--		1
cis-1,3-Dichloropropene	ND	0.020	--	ND	0.091	--		1
4-Methyl-2-pentanone	ND	0.500	--	ND	2.05	--		1
trans-1,3-Dichloropropene	ND	0.020	--	ND	0.091	--		1
1,1,2-Trichloroethane	ND	0.020	--	ND	0.109	--		1
Toluene	6.88	0.050	--	25.9	0.188	--		1
Dibromochloromethane	ND	0.020	--	ND	0.170	--		1
1,2-Dibromoethane	ND	0.020	--	ND	0.154	--		1
Tetrachloroethene	0.027	0.020	--	0.183	0.136	--		1
Chlorobenzene	ND	0.100	--	ND	0.461	--		1
Ethylbenzene	1.28	0.020	--	5.56	0.087	--		1
p/m-Xylene	4.43	0.040	--	19.2	0.174	--		1
Bromoform	ND	0.020	--	ND	0.207	--		1
Styrene	0.301	0.020	--	1.28	0.085	--		1
1,1,2,2-Tetrachloroethane	ND	0.020	--	ND	0.137	--		1
o-Xylene	1.65	0.020	--	7.17	0.087	--		1
1,3-Dichlorobenzene	ND	0.020	--	ND	0.120	--		1
1,4-Dichlorobenzene	ND	0.020	--	ND	0.120	--		1
1,2-Dichlorobenzene	ND	0.020	--	ND	0.120	--		1
1,2,4-Trichlorobenzene	ND	0.050	--	ND	0.371	--		1
Naphthalene	0.142	0.050	--	0.745	0.262	--		1
Hexachlorobutadiene	ND	0.050	--	ND	0.533	--		1

Project Name: LOCKHEED MARTIN
Project Number: 60552044.24

Lab Number: L2104188
Report Date: 02/08/21

SAMPLE RESULTS

Lab ID: L2104188-02
Client ID: 21A-IA2-1
Sample Location: WILMINGTON, MA

Date Collected: 01/26/21 16:54
Date Received: 01/27/21
Field Prep: Not Specified

Sample Depth:

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
MCP Volatile Organics in Air by SIM - Mansfield Lab								

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	99		70-130
Bromofluorobenzene	105		70-130
Toluene-d8	114		70-130

Internal Standard	% Recovery	Qualifier	Acceptance Criteria
1,4-difluorobenzene	99		60-140
bromochloromethane	98		60-140
chlorobenzene-d5	97		60-140

Project Name: LOCKHEED MARTIN
Project Number: 60552044.24

Lab Number: L2104188
Report Date: 02/08/21

SAMPLE RESULTS

Lab ID: L2104188-03
Client ID: 21A-IA3-1
Sample Location: WILMINGTON, MA

Date Collected: 01/26/21 17:00
Date Received: 01/27/21
Field Prep: Not Specified

Sample Depth:
Matrix: Air
Anaytical Method: 101,TO-15-SIM
Analytical Date: 02/02/21 18:53
Analyst: RY

	ppbV			ug/m3				
Parameter	**Results**	**RL**	**MDL**	**Results**	**RL**	**MDL**	**Qualifier**	**Dilution Factor**
MCP Volatile Organics in Air by SIM - Mansfield Lab								
Dichlorodifluoromethane	0.396	0.200	--	1.96	0.989	--		1
Chloromethane	0.499	0.200	--	1.03	0.413	--		1
Vinyl chloride	ND	0.020	--	ND	0.051	--		1
Bromomethane	ND	0.020	--	ND	0.078	--		1
Chloroethane	ND	0.100	--	ND	0.264	--		1
Acetone	12.6	1.00	--	29.9	2.38	--		1
1,1-Dichloroethene	ND	0.020	--	ND	0.079	--		1
Methylene chloride	ND	0.500	--	ND	1.74	--		1
Carbon disulfide	0.275	0.200	--	0.856	0.623	--		1
Freon-113	0.057	0.050	--	0.437	0.383	--		1
trans-1,2-Dichloroethene	ND	0.020	--	ND	0.079	--		1
1,1-Dichloroethane	ND	0.020	--	ND	0.081	--		1
Methyl tert butyl ether	ND	0.200	--	ND	0.721	--		1
2-Butanone	ND	0.500	--	ND	1.47	--		1
cis-1,2-Dichloroethene	ND	0.020	--	ND	0.079	--		1
Chloroform	ND	0.020	--	ND	0.098	--		1
1,2-Dichloroethane	ND	0.020	--	ND	0.081	--		1
1,1,1-Trichloroethane	ND	0.020	--	ND	0.109	--		1
Benzene	3.30	0.100	--	10.5	0.319	--		1
Carbon tetrachloride	0.065	0.020	--	0.409	0.126	--		1
1,2-Dichloropropane	ND	0.020	--	ND	0.092	--		1
Bromodichloromethane	ND	0.020	--	ND	0.134	--		1
1,4-Dioxane	ND	0.100	--	ND	0.360	--		1

Project Name: LOCKHEED MARTIN
Project Number: 60552044.24

Lab Number: L2104188
Report Date: 02/08/21

SAMPLE RESULTS

Lab ID: L2104188-03
Client ID: 21A-IA3-1
Sample Location: WILMINGTON, MA

Date Collected: 01/26/21 17:00
Date Received: 01/27/21
Field Prep: Not Specified

Sample Depth:

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
MCP Volatile Organics in Air by SIM - Mansfield Lab								
Trichloroethene	ND	0.020	--	ND	0.107	--		1
cis-1,3-Dichloropropene	ND	0.020	--	ND	0.091	--		1
4-Methyl-2-pentanone	ND	0.500	--	ND	2.05	--		1
trans-1,3-Dichloropropene	ND	0.020	--	ND	0.091	--		1
1,1,2-Trichloroethane	ND	0.020	--	ND	0.109	--		1
Toluene	7.82	0.050	--	29.5	0.188	--		1
Dibromochloromethane	ND	0.020	--	ND	0.170	--		1
1,2-Dibromoethane	ND	0.020	--	ND	0.154	--		1
Tetrachloroethene	0.033	0.020	--	0.224	0.136	--		1
Chlorobenzene	ND	0.100	--	ND	0.461	--		1
Ethylbenzene	1.49	0.020	--	6.47	0.087	--		1
p/m-Xylene	5.17	0.040	--	22.5	0.174	--		1
Bromoform	ND	0.020	--	ND	0.207	--		1
Styrene	0.365	0.020	--	1.55	0.085	--		1
1,1,2,2-Tetrachloroethane	ND	0.020	--	ND	0.137	--		1
o-Xylene	1.92	0.020	--	8.34	0.087	--		1
1,3-Dichlorobenzene	ND	0.020	--	ND	0.120	--		1
1,4-Dichlorobenzene	ND	0.020	--	ND	0.120	--		1
1,2-Dichlorobenzene	ND	0.020	--	ND	0.120	--		1
1,2,4-Trichlorobenzene	ND	0.050	--	ND	0.371	--		1
Naphthalene	0.154	0.050	--	0.807	0.262	--		1
Hexachlorobutadiene	ND	0.050	--	ND	0.533	--		1

Project Name: LOCKHEED MARTIN
Project Number: 60552044.24

Lab Number: L2104188
Report Date: 02/08/21

SAMPLE RESULTS

Lab ID: L2104188-03
Client ID: 21A-IA3-1
Sample Location: WILMINGTON, MA

Date Collected: 01/26/21 17:00
Date Received: 01/27/21
Field Prep: Not Specified

Sample Depth:

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
MCP Volatile Organics in Air by SIM - Mansfield Lab								

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	99		70-130
Bromofluorobenzene	103		70-130
Toluene-d8	114		70-130

Internal Standard	% Recovery	Qualifier	Acceptance Criteria
1,4-difluorobenzene	100		60-140
bromochloromethane	100		60-140
chlorobenzene-d5	98		60-140

Project Name: LOCKHEED MARTIN
Project Number: 60552044.24

Lab Number: L2104188
Report Date: 02/08/21

SAMPLE RESULTS

Lab ID: L2104188-04
Client ID: 21A-IA4-1
Sample Location: WILMINGTON, MA

Date Collected: 01/26/21 16:58
Date Received: 01/27/21
Field Prep: Not Specified

Sample Depth:
Matrix: Air
Anaytical Method: 101,TO-15-SIM
Analytical Date: 02/02/21 19:37
Analyst: RY

	ppbV			ug/m3				
Parameter	**Results**	**RL**	**MDL**	**Results**	**RL**	**MDL**	**Qualifier**	**Dilution Factor**
MCP Volatile Organics in Air by SIM - Mansfield Lab								
Dichlorodifluoromethane	0.397	0.200	--	1.96	0.989	--		1
Chloromethane	0.488	0.200	--	1.01	0.413	--		1
Vinyl chloride	ND	0.020	--	ND	0.051	--		1
Bromomethane	ND	0.020	--	ND	0.078	--		1
Chloroethane	ND	0.100	--	ND	0.264	--		1
Acetone	7.62	1.00	--	18.1	2.38	--		1
1,1-Dichloroethene	ND	0.020	--	ND	0.079	--		1
Methylene chloride	ND	0.500	--	ND	1.74	--		1
Carbon disulfide	ND	0.200	--	ND	0.623	--		1
Freon-113	0.057	0.050	--	0.437	0.383	--		1
trans-1,2-Dichloroethene	ND	0.020	--	ND	0.079	--		1
1,1-Dichloroethane	ND	0.020	--	ND	0.081	--		1
Methyl tert butyl ether	ND	0.200	--	ND	0.721	--		1
2-Butanone	ND	0.500	--	ND	1.47	--		1
cis-1,2-Dichloroethene	ND	0.020	--	ND	0.079	--		1
Chloroform	ND	0.020	--	ND	0.098	--		1
1,2-Dichloroethane	ND	0.020	--	ND	0.081	--		1
1,1,1-Trichloroethane	ND	0.020	--	ND	0.109	--		1
Benzene	3.03	0.100	--	9.68	0.319	--		1
Carbon tetrachloride	0.063	0.020	--	0.396	0.126	--		1
1,2-Dichloropropane	ND	0.020	--	ND	0.092	--		1
Bromodichloromethane	ND	0.020	--	ND	0.134	--		1
1,4-Dioxane	ND	0.100	--	ND	0.360	--		1

Project Name: LOCKHEED MARTIN
Project Number: 60552044.24

Lab Number: L2104188
Report Date: 02/08/21

SAMPLE RESULTS

Lab ID: L2104188-04
Client ID: 21A-IA4-1
Sample Location: WILMINGTON, MA

Date Collected: 01/26/21 16:58
Date Received: 01/27/21
Field Prep: Not Specified

Sample Depth:

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
MCP Volatile Organics in Air by SIM - Mansfield Lab								
Trichloroethene	ND	0.020	--	ND	0.107	--		1
cis-1,3-Dichloropropene	ND	0.020	--	ND	0.091	--		1
4-Methyl-2-pentanone	ND	0.500	--	ND	2.05	--		1
trans-1,3-Dichloropropene	ND	0.020	--	ND	0.091	--		1
1,1,2-Trichloroethane	ND	0.020	--	ND	0.109	--		1
Toluene	7.25	0.050	--	27.3	0.188	--		1
Dibromochloromethane	ND	0.020	--	ND	0.170	--		1
1,2-Dibromoethane	ND	0.020	--	ND	0.154	--		1
Tetrachloroethene	0.030	0.020	--	0.203	0.136	--		1
Chlorobenzene	ND	0.100	--	ND	0.461	--		1
Ethylbenzene	1.37	0.020	--	5.95	0.087	--		1
p/m-Xylene	4.68	0.040	--	20.3	0.174	--		1
Bromoform	ND	0.020	--	ND	0.207	--		1
Styrene	0.314	0.020	--	1.34	0.085	--		1
1,1,2,2-Tetrachloroethane	ND	0.020	--	ND	0.137	--		1
o-Xylene	1.76	0.020	--	7.64	0.087	--		1
1,3-Dichlorobenzene	ND	0.020	--	ND	0.120	--		1
1,4-Dichlorobenzene	ND	0.020	--	ND	0.120	--		1
1,2-Dichlorobenzene	ND	0.020	--	ND	0.120	--		1
1,2,4-Trichlorobenzene	ND	0.050	--	ND	0.371	--		1
Naphthalene	0.151	0.050	--	0.792	0.262	--		1
Hexachlorobutadiene	ND	0.050	--	ND	0.533	--		1

Project Name: LOCKHEED MARTIN
Project Number: 60552044.24

Lab Number: L2104188
Report Date: 02/08/21

SAMPLE RESULTS

Lab ID: L2104188-04
Client ID: 21A-IA4-1
Sample Location: WILMINGTON, MA

Date Collected: 01/26/21 16:58
Date Received: 01/27/21
Field Prep: Not Specified

Sample Depth:

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
MCP Volatile Organics in Air by SIM - Mansfield Lab								

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	97		70-130
Bromofluorobenzene	106		70-130
Toluene-d8	113		70-130

Internal Standard	% Recovery	Qualifier	Acceptance Criteria
1,4-difluorobenzene	102		60-140
bromochloromethane	102		60-140
chlorobenzene-d5	99		60-140

Project Name: LOCKHEED MARTIN
Project Number: 60552044.24

Lab Number: L2104188
Report Date: 02/08/21

SAMPLE RESULTS

Lab ID: L2104188-05
Client ID: 21A-IA7-1
Sample Location: WILMINGTON, MA

Date Collected: 01/26/21 16:56
Date Received: 01/27/21
Field Prep: Not Specified

Sample Depth:
Matrix: Air
Anaytical Method: 101,TO-15-SIM
Analytical Date: 02/02/21 20:21
Analyst: RY

	ppbV			ug/m3				
Parameter	**Results**	**RL**	**MDL**	**Results**	**RL**	**MDL**	**Qualifier**	**Dilution Factor**
MCP Volatile Organics in Air by SIM - Mansfield Lab								
Dichlorodifluoromethane	0.392	0.200	--	1.94	0.989	--		1
Chloromethane	0.489	0.200	--	1.01	0.413	--		1
Vinyl chloride	ND	0.020	--	ND	0.051	--		1
Bromomethane	ND	0.020	--	ND	0.078	--		1
Chloroethane	ND	0.100	--	ND	0.264	--		1
Acetone	11.8	1.00	--	28.0	2.38	--		1
1,1-Dichloroethene	ND	0.020	--	ND	0.079	--		1
Methylene chloride	ND	0.500	--	ND	1.74	--		1
Carbon disulfide	ND	0.200	--	ND	0.623	--		1
Freon-113	0.060	0.050	--	0.460	0.383	--		1
trans-1,2-Dichloroethene	ND	0.020	--	ND	0.079	--		1
1,1-Dichloroethane	ND	0.020	--	ND	0.081	--		1
Methyl tert butyl ether	ND	0.200	--	ND	0.721	--		1
2-Butanone	ND	0.500	--	ND	1.47	--		1
cis-1,2-Dichloroethene	ND	0.020	--	ND	0.079	--		1
Chloroform	ND	0.020	--	ND	0.098	--		1
1,2-Dichloroethane	ND	0.020	--	ND	0.081	--		1
1,1,1-Trichloroethane	ND	0.020	--	ND	0.109	--		1
Benzene	2.88	0.100	--	9.20	0.319	--		1
Carbon tetrachloride	0.061	0.020	--	0.384	0.126	--		1
1,2-Dichloropropane	ND	0.020	--	ND	0.092	--		1
Bromodichloromethane	ND	0.020	--	ND	0.134	--		1
1,4-Dioxane	ND	0.100	--	ND	0.360	--		1

Project Name: LOCKHEED MARTIN
Project Number: 60552044.24

Lab Number: L2104188
Report Date: 02/08/21

SAMPLE RESULTS

Lab ID: L2104188-05
Client ID: 21A-IA7-1
Sample Location: WILMINGTON, MA

Date Collected: 01/26/21 16:56
Date Received: 01/27/21
Field Prep: Not Specified

Sample Depth:

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
MCP Volatile Organics in Air by SIM - Mansfield Lab								
Trichloroethene	ND	0.020	--	ND	0.107	--		1
cis-1,3-Dichloropropene	ND	0.020	--	ND	0.091	--		1
4-Methyl-2-pentanone	ND	0.500	--	ND	2.05	--		1
trans-1,3-Dichloropropene	ND	0.020	--	ND	0.091	--		1
1,1,2-Trichloroethane	ND	0.020	--	ND	0.109	--		1
Toluene	6.91	0.050	--	26.0	0.188	--		1
Dibromochloromethane	ND	0.020	--	ND	0.170	--		1
1,2-Dibromoethane	ND	0.020	--	ND	0.154	--		1
Tetrachloroethene	0.035	0.020	--	0.237	0.136	--		1
Chlorobenzene	ND	0.100	--	ND	0.461	--		1
Ethylbenzene	1.31	0.020	--	5.69	0.087	--		1
p/m-Xylene	4.51	0.040	--	19.6	0.174	--		1
Bromoform	ND	0.020	--	ND	0.207	--		1
Styrene	0.313	0.020	--	1.33	0.085	--		1
1,1,2,2-Tetrachloroethane	ND	0.020	--	ND	0.137	--		1
o-Xylene	1.68	0.020	--	7.30	0.087	--		1
1,3-Dichlorobenzene	ND	0.020	--	ND	0.120	--		1
1,4-Dichlorobenzene	ND	0.020	--	ND	0.120	--		1
1,2-Dichlorobenzene	ND	0.020	--	ND	0.120	--		1
1,2,4-Trichlorobenzene	ND	0.050	--	ND	0.371	--		1
Naphthalene	0.093	0.050	--	0.488	0.262	--		1
Hexachlorobutadiene	ND	0.050	--	ND	0.533	--		1

Project Name: LOCKHEED MARTIN
Project Number: 60552044.24

Lab Number: L2104188
Report Date: 02/08/21

SAMPLE RESULTS

Lab ID: L2104188-05
Client ID: 21A-IA7-1
Sample Location: WILMINGTON, MA

Date Collected: 01/26/21 16:56
Date Received: 01/27/21
Field Prep: Not Specified

Sample Depth:

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
MCP Volatile Organics in Air by SIM - Mansfield Lab								

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	94		70-130
Bromofluorobenzene	102		70-130
Toluene-d8	109		70-130

Internal Standard	% Recovery	Qualifier	Acceptance Criteria
1,4-difluorobenzene	104		60-140
bromochloromethane	104		60-140
chlorobenzene-d5	100		60-140

Project Name: LOCKHEED MARTIN
Project Number: 60552044.24

Lab Number: L2104188
Report Date: 02/08/21

SAMPLE RESULTS

Lab ID: L2104188-06
Client ID: 21A-IA8-1
Sample Location: WILMINGTON, MA

Date Collected: 01/26/21 17:02
Date Received: 01/27/21
Field Prep: Not Specified

Sample Depth:
Matrix: Air
Anaytical Method: 101,TO-15-SIM
Analytical Date: 02/02/21 21:05
Analyst: RY

	ppbV			ug/m3				
Parameter	**Results**	**RL**	**MDL**	**Results**	**RL**	**MDL**	**Qualifier**	**Dilution Factor**
MCP Volatile Organics in Air by SIM - Mansfield Lab								
Dichlorodifluoromethane	0.407	0.200	--	2.01	0.989	--		1
Chloromethane	0.500	0.200	--	1.03	0.413	--		1
Vinyl chloride	ND	0.020	--	ND	0.051	--		1
Bromomethane	ND	0.020	--	ND	0.078	--		1
Chloroethane	ND	0.100	--	ND	0.264	--		1
Acetone	5.88	1.00	--	14.0	2.38	--		1
1,1-Dichloroethene	ND	0.020	--	ND	0.079	--		1
Methylene chloride	ND	0.500	--	ND	1.74	--		1
Carbon disulfide	ND	0.200	--	ND	0.623	--		1
Freon-113	0.103	0.050	--	0.789	0.383	--		1
trans-1,2-Dichloroethene	ND	0.020	--	ND	0.079	--		1
1,1-Dichloroethane	ND	0.020	--	ND	0.081	--		1
Methyl tert butyl ether	ND	0.200	--	ND	0.721	--		1
2-Butanone	ND	0.500	--	ND	1.47	--		1
cis-1,2-Dichloroethene	ND	0.020	--	ND	0.079	--		1
Chloroform	ND	0.020	--	ND	0.098	--		1
1,2-Dichloroethane	ND	0.020	--	ND	0.081	--		1
1,1,1-Trichloroethane	ND	0.020	--	ND	0.109	--		1
Benzene	2.30	0.100	--	7.35	0.319	--		1
Carbon tetrachloride	0.063	0.020	--	0.396	0.126	--		1
1,2-Dichloropropane	ND	0.020	--	ND	0.092	--		1
Bromodichloromethane	ND	0.020	--	ND	0.134	--		1
1,4-Dioxane	ND	0.100	--	ND	0.360	--		1

Project Name: LOCKHEED MARTIN
Project Number: 60552044.24

Lab Number: L2104188
Report Date: 02/08/21

SAMPLE RESULTS

Lab ID: L2104188-06
Client ID: 21A-IA8-1
Sample Location: WILMINGTON, MA

Date Collected: 01/26/21 17:02
Date Received: 01/27/21
Field Prep: Not Specified

Sample Depth:

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
MCP Volatile Organics in Air by SIM - Mansfield Lab								
Trichloroethene	ND	0.020	--	ND	0.107	--		1
cis-1,3-Dichloropropene	ND	0.020	--	ND	0.091	--		1
4-Methyl-2-pentanone	ND	0.500	--	ND	2.05	--		1
trans-1,3-Dichloropropene	ND	0.020	--	ND	0.091	--		1
1,1,2-Trichloroethane	ND	0.020	--	ND	0.109	--		1
Toluene	5.44	0.050	--	20.5	0.188	--		1
Dibromochloromethane	ND	0.020	--	ND	0.170	--		1
1,2-Dibromoethane	ND	0.020	--	ND	0.154	--		1
Tetrachloroethene	0.221	0.020	--	1.50	0.136	--		1
Chlorobenzene	ND	0.100	--	ND	0.461	--		1
Ethylbenzene	1.02	0.020	--	4.43	0.087	--		1
p/m-Xylene	3.58	0.040	--	15.5	0.174	--		1
Bromoform	ND	0.020	--	ND	0.207	--		1
Styrene	0.274	0.020	--	1.17	0.085	--		1
1,1,2,2-Tetrachloroethane	ND	0.020	--	ND	0.137	--		1
o-Xylene	1.33	0.020	--	5.78	0.087	--		1
1,3-Dichlorobenzene	ND	0.020	--	ND	0.120	--		1
1,4-Dichlorobenzene	ND	0.020	--	ND	0.120	--		1
1,2-Dichlorobenzene	ND	0.020	--	ND	0.120	--		1
1,2,4-Trichlorobenzene	ND	0.050	--	ND	0.371	--		1
Naphthalene	0.113	0.050	--	0.592	0.262	--		1
Hexachlorobutadiene	ND	0.050	--	ND	0.533	--		1

Project Name: LOCKHEED MARTIN
Project Number: 60552044.24

Lab Number: L2104188
Report Date: 02/08/21

SAMPLE RESULTS

Lab ID: L2104188-06
Client ID: 21A-IA8-1
Sample Location: WILMINGTON, MA

Date Collected: 01/26/21 17:02
Date Received: 01/27/21
Field Prep: Not Specified

Sample Depth:

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
MCP Volatile Organics in Air by SIM - Mansfield Lab								

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	96		70-130
Bromofluorobenzene	103		70-130
Toluene-d8	112		70-130

Internal Standard	% Recovery	Qualifier	Acceptance Criteria
1,4-difluorobenzene	102		60-140
bromochloromethane	102		60-140
chlorobenzene-d5	100		60-140

Project Name: LOCKHEED MARTIN
Project Number: 60552044.24

Lab Number: L2104188
Report Date: 02/08/21

SAMPLE RESULTS

Lab ID: L2104188-07
Client ID: 21A-IA8-2
Sample Location: WILMINGTON, MA

Date Collected: 01/26/21 17:02
Date Received: 01/27/21
Field Prep: Not Specified

Sample Depth:
Matrix: Air
Anaytical Method: 101,TO-15-SIM
Analytical Date: 02/02/21 21:49
Analyst: RY

	ppbV			ug/m3				
Parameter	**Results**	**RL**	**MDL**	**Results**	**RL**	**MDL**	**Qualifier**	**Dilution Factor**
MCP Volatile Organics in Air by SIM - Mansfield Lab								
Dichlorodifluoromethane	0.395	0.200	--	1.95	0.989	--		1
Chloromethane	0.502	0.200	--	1.04	0.413	--		1
Vinyl chloride	ND	0.020	--	ND	0.051	--		1
Bromomethane	ND	0.020	--	ND	0.078	--		1
Chloroethane	ND	0.100	--	ND	0.264	--		1
Acetone	5.65	1.00	--	13.4	2.38	--		1
1,1-Dichloroethene	ND	0.020	--	ND	0.079	--		1
Methylene chloride	ND	0.500	--	ND	1.74	--		1
Carbon disulfide	ND	0.200	--	ND	0.623	--		1
Freon-113	0.093	0.050	--	0.713	0.383	--		1
trans-1,2-Dichloroethene	ND	0.020	--	ND	0.079	--		1
1,1-Dichloroethane	ND	0.020	--	ND	0.081	--		1
Methyl tert butyl ether	ND	0.200	--	ND	0.721	--		1
2-Butanone	ND	0.500	--	ND	1.47	--		1
cis-1,2-Dichloroethene	ND	0.020	--	ND	0.079	--		1
Chloroform	ND	0.020	--	ND	0.098	--		1
1,2-Dichloroethane	ND	0.020	--	ND	0.081	--		1
1,1,1-Trichloroethane	ND	0.020	--	ND	0.109	--		1
Benzene	2.31	0.100	--	7.38	0.319	--		1
Carbon tetrachloride	0.064	0.020	--	0.403	0.126	--		1
1,2-Dichloropropane	ND	0.020	--	ND	0.092	--		1
Bromodichloromethane	ND	0.020	--	ND	0.134	--		1
1,4-Dioxane	ND	0.100	--	ND	0.360	--		1

Project Name: LOCKHEED MARTIN
Project Number: 60552044.24

Lab Number: L2104188
Report Date: 02/08/21

SAMPLE RESULTS

Lab ID: L2104188-07
Client ID: 21A-IA8-2
Sample Location: WILMINGTON, MA

Date Collected: 01/26/21 17:02
Date Received: 01/27/21
Field Prep: Not Specified

Sample Depth:

	ppbV			ug/m3				
Parameter	**Results**	**RL**	**MDL**	**Results**	**RL**	**MDL**	**Qualifier**	**Dilution Factor**
MCP Volatile Organics in Air by SIM - Mansfield Lab								
Trichloroethene	ND	0.020	--	ND	0.107	--		1
cis-1,3-Dichloropropene	ND	0.020	--	ND	0.091	--		1
4-Methyl-2-pentanone	ND	0.500	--	ND	2.05	--		1
trans-1,3-Dichloropropene	ND	0.020	--	ND	0.091	--		1
1,1,2-Trichloroethane	ND	0.020	--	ND	0.109	--		1
Toluene	5.46	0.050	--	20.6	0.188	--		1
Dibromochloromethane	ND	0.020	--	ND	0.170	--		1
1,2-Dibromoethane	ND	0.020	--	ND	0.154	--		1
Tetrachloroethene	0.217	0.020	--	1.47	0.136	--		1
Chlorobenzene	ND	0.100	--	ND	0.461	--		1
Ethylbenzene	1.04	0.020	--	4.52	0.087	--		1
p/m-Xylene	3.62	0.040	--	15.7	0.174	--		1
Bromoform	ND	0.020	--	ND	0.207	--		1
Styrene	0.276	0.020	--	1.18	0.085	--		1
1,1,2,2-Tetrachloroethane	ND	0.020	--	ND	0.137	--		1
o-Xylene	1.34	0.020	--	5.82	0.087	--		1
1,3-Dichlorobenzene	ND	0.020	--	ND	0.120	--		1
1,4-Dichlorobenzene	ND	0.020	--	ND	0.120	--		1
1,2-Dichlorobenzene	ND	0.020	--	ND	0.120	--		1
1,2,4-Trichlorobenzene	ND	0.050	--	ND	0.371	--		1
Naphthalene	0.116	0.050	--	0.608	0.262	--		1
Hexachlorobutadiene	ND	0.050	--	ND	0.533	--		1

Project Name: LOCKHEED MARTIN
Project Number: 60552044.24

Lab Number: L2104188
Report Date: 02/08/21

SAMPLE RESULTS

Lab ID: L2104188-07
Client ID: 21A-IA8-2
Sample Location: WILMINGTON, MA

Date Collected: 01/26/21 17:02
Date Received: 01/27/21
Field Prep: Not Specified

Sample Depth:

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
MCP Volatile Organics in Air by SIM - Mansfield Lab								

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	96		70-130
Bromofluorobenzene	106		70-130
Toluene-d8	113		70-130

Internal Standard	% Recovery	Qualifier	Acceptance Criteria
1,4-difluorobenzene	102		60-140
bromochloromethane	102		60-140
chlorobenzene-d5	100		60-140

Project Name: LOCKHEED MARTIN
Project Number: 60552044.24

Lab Number: L2104188
Report Date: 02/08/21

SAMPLE RESULTS

Lab ID: L2104188-08
Client ID: 21A-IA9-1
Sample Location: WILMINGTON, MA

Date Collected: 01/26/21 17:05
Date Received: 01/27/21
Field Prep: Not Specified

Sample Depth:
Matrix: Air
Anaytical Method: 101,TO-15-SIM
Analytical Date: 02/02/21 22:33
Analyst: RY

	ppbV			ug/m3				
Parameter	**Results**	**RL**	**MDL**	**Results**	**RL**	**MDL**	**Qualifier**	**Dilution Factor**
MCP Volatile Organics in Air by SIM - Mansfield Lab								
Dichlorodifluoromethane	0.389	0.200	--	1.92	0.989	--		1
Chloromethane	0.497	0.200	--	1.03	0.413	--		1
Vinyl chloride	ND	0.020	--	ND	0.051	--		1
Bromomethane	ND	0.020	--	ND	0.078	--		1
Chloroethane	ND	0.100	--	ND	0.264	--		1
Acetone	5.03	1.00	--	11.9	2.38	--		1
1,1-Dichloroethene	ND	0.020	--	ND	0.079	--		1
Methylene chloride	ND	0.500	--	ND	1.74	--		1
Carbon disulfide	ND	0.200	--	ND	0.623	--		1
Freon-113	0.059	0.050	--	0.452	0.383	--		1
trans-1,2-Dichloroethene	ND	0.020	--	ND	0.079	--		1
1,1-Dichloroethane	ND	0.020	--	ND	0.081	--		1
Methyl tert butyl ether	ND	0.200	--	ND	0.721	--		1
2-Butanone	ND	0.500	--	ND	1.47	--		1
cis-1,2-Dichloroethene	ND	0.020	--	ND	0.079	--		1
Chloroform	ND	0.020	--	ND	0.098	--		1
1,2-Dichloroethane	ND	0.020	--	ND	0.081	--		1
1,1,1-Trichloroethane	ND	0.020	--	ND	0.109	--		1
Benzene	2.36	0.100	--	7.54	0.319	--		1
Carbon tetrachloride	0.061	0.020	--	0.384	0.126	--		1
1,2-Dichloropropane	ND	0.020	--	ND	0.092	--		1
Bromodichloromethane	ND	0.020	--	ND	0.134	--		1
1,4-Dioxane	ND	0.100	--	ND	0.360	--		1

Project Name: LOCKHEED MARTIN
Project Number: 60552044.24

Lab Number: L2104188
Report Date: 02/08/21

SAMPLE RESULTS

Lab ID: L2104188-08
Client ID: 21A-IA9-1
Sample Location: WILMINGTON, MA

Date Collected: 01/26/21 17:05
Date Received: 01/27/21
Field Prep: Not Specified

Sample Depth:

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
MCP Volatile Organics in Air by SIM - Mansfield Lab								
Trichloroethene	ND	0.020	--	ND	0.107	--		1
cis-1,3-Dichloropropene	ND	0.020	--	ND	0.091	--		1
4-Methyl-2-pentanone	ND	0.500	--	ND	2.05	--		1
trans-1,3-Dichloropropene	ND	0.020	--	ND	0.091	--		1
1,1,2-Trichloroethane	ND	0.020	--	ND	0.109	--		1
Toluene	5.60	0.050	--	21.1	0.188	--		1
Dibromochloromethane	ND	0.020	--	ND	0.170	--		1
1,2-Dibromoethane	ND	0.020	--	ND	0.154	--		1
Tetrachloroethene	0.071	0.020	--	0.481	0.136	--		1
Chlorobenzene	ND	0.100	--	ND	0.461	--		1
Ethylbenzene	1.03	0.020	--	4.47	0.087	--		1
p/m-Xylene	3.59	0.040	--	15.6	0.174	--		1
Bromoform	ND	0.020	--	ND	0.207	--		1
Styrene	0.274	0.020	--	1.17	0.085	--		1
1,1,2,2-Tetrachloroethane	ND	0.020	--	ND	0.137	--		1
o-Xylene	1.32	0.020	--	5.73	0.087	--		1
1,3-Dichlorobenzene	ND	0.020	--	ND	0.120	--		1
1,4-Dichlorobenzene	ND	0.020	--	ND	0.120	--		1
1,2-Dichlorobenzene	ND	0.020	--	ND	0.120	--		1
1,2,4-Trichlorobenzene	ND	0.050	--	ND	0.371	--		1
Naphthalene	0.078	0.050	--	0.409	0.262	--		1
Hexachlorobutadiene	ND	0.050	--	ND	0.533	--		1

Project Name: LOCKHEED MARTIN
Project Number: 60552044.24

Lab Number: L2104188
Report Date: 02/08/21

SAMPLE RESULTS

Lab ID: L2104188-08
Client ID: 21A-IA9-1
Sample Location: WILMINGTON, MA

Date Collected: 01/26/21 17:05
Date Received: 01/27/21
Field Prep: Not Specified

Sample Depth:

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
MCP Volatile Organics in Air by SIM - Mansfield Lab								

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	96		70-130
Bromofluorobenzene	105		70-130
Toluene-d8	112		70-130

Internal Standard	% Recovery	Qualifier	Acceptance Criteria
1,4-difluorobenzene	102		60-140
bromochloromethane	102		60-140
chlorobenzene-d5	99		60-140

Project Name: LOCKHEED MARTIN
Project Number: 60552044.24
Lab Number: L2104188
Report Date: 02/08/21

Method Blank Analysis
Batch Quality Control

Analytical Method: 101,TO-15-SIM
Analytical Date: 02/02/21 15:13

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
MCP Volatile Organics in Air by SIM - Mansfield Lab for sample(s): 01-08 Batch: WG1460965-4								
Dichlorodifluoromethane	ND	0.200	--	ND	0.989	--		1
Chloromethane	ND	0.200	--	ND	0.413	--		1
Vinyl chloride	ND	0.020	--	ND	0.051	--		1
Bromomethane	ND	0.020	--	ND	0.078	--		1
Chloroethane	ND	0.100	--	ND	0.264	--		1
Acetone	ND	1.00	--	ND	2.38	--		1
1,1-Dichloroethene	ND	0.020	--	ND	0.079	--		1
Methylene chloride	ND	0.500	--	ND	1.74	--		1
Carbon disulfide	ND	0.200	--	ND	0.623	--		1
Freon-113	ND	0.050	--	ND	0.383	--		1
trans-1,2-Dichloroethene	ND	0.020	--	ND	0.079	--		1
1,1-Dichloroethane	ND	0.020	--	ND	0.081	--		1
Methyl tert butyl ether	ND	0.200	--	ND	0.721	--		1
2-Butanone	ND	0.500	--	ND	1.47	--		1
cis-1,2-Dichloroethene	ND	0.020	--	ND	0.079	--		1
Chloroform	ND	0.020	--	ND	0.098	--		1
1,2-Dichloroethane	ND	0.020	--	ND	0.081	--		1
1,1,1-Trichloroethane	ND	0.020	--	ND	0.109	--		1
Benzene	ND	0.100	--	ND	0.319	--		1
Carbon tetrachloride	ND	0.020	--	ND	0.126	--		1
1,2-Dichloropropane	ND	0.020	--	ND	0.092	--		1
Bromodichloromethane	ND	0.020	--	ND	0.134	--		1
1,4-Dioxane	ND	0.100	--	ND	0.360	--		1
Trichloroethene	ND	0.020	--	ND	0.107	--		1
cis-1,3-Dichloropropene	ND	0.020	--	ND	0.091	--		1

Project Name: LOCKHEED MARTIN
Project Number: 60552044.24
Lab Number: L2104188
Report Date: 02/08/21

Method Blank Analysis
Batch Quality Control

Analytical Method: 101,TO-15-SIM
Analytical Date: 02/02/21 15:13

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
MCP Volatile Organics in Air by SIM - Mansfield Lab for sample(s): 01-08 Batch: WG1460965-4								
4-Methyl-2-pentanone	ND	0.500	--	ND	2.05	--		1
trans-1,3-Dichloropropene	ND	0.020	--	ND	0.091	--		1
1,1,2-Trichloroethane	ND	0.020	--	ND	0.109	--		1
Toluene	ND	0.050	--	ND	0.188	--		1
Dibromochloromethane	ND	0.020	--	ND	0.170	--		1
1,2-Dibromoethane	ND	0.020	--	ND	0.154	--		1
Tetrachloroethene	ND	0.020	--	ND	0.136	--		1
Chlorobenzene	ND	0.100	--	ND	0.461	--		1
Ethylbenzene	ND	0.020	--	ND	0.087	--		1
p/m-Xylene	ND	0.040	--	ND	0.174	--		1
Bromoform	ND	0.020	--	ND	0.207	--		1
Styrene	ND	0.020	--	ND	0.085	--		1
1,1,2,2-Tetrachloroethane	ND	0.020	--	ND	0.137	--		1
o-Xylene	ND	0.020	--	ND	0.087	--		1
1,3-Dichlorobenzene	ND	0.020	--	ND	0.120	--		1
1,4-Dichlorobenzene	ND	0.020	--	ND	0.120	--		1
1,2-Dichlorobenzene	ND	0.020	--	ND	0.120	--		1
1,2,4-Trichlorobenzene	ND	0.050	--	ND	0.371	--		1
Naphthalene	ND	0.050	--	ND	0.262	--		1
Hexachlorobutadiene	ND	0.050	--	ND	0.533	--		1

Project Name: LOCKHEED MARTIN
Project Number: 60552044.24
Lab Number: L2104188
Report Date: 02/08/21

Method Blank Analysis
Batch Quality Control

Analytical Method: 101,TO-15-SIM
Analytical Date: 02/02/21 15:13

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
MCP Volatile Organics in Air by SIM - Mansfield Lab for sample(s): 01-08 Batch: WG1460965-4								

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	102		70-130
Bromofluorobenzene	108		70-130
Toluene-d8	113		70-130

Lab Control Sample Analysis
Batch Quality Control

Project Name: LOCKHEED MARTIN
Project Number: 60552044.24

Lab Number: L2104188
Report Date: 02/08/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Volatile Organics in Air by SIM - Mansfield Lab Associated sample(s): 01-08 Batch: WG1460965-3								
Dichlorodifluoromethane	97		-		70-130	-		
Chloromethane	109		-		70-130	-		
Vinyl chloride	79		-		70-130	-		
Bromomethane	79		-		70-130	-		
Chloroethane	81		-		70-130	-		
Acetone	74		-		50-150	-		
1,1-Dichloroethene	81		-		70-130	-		
Methylene chloride	112		-		70-130	-		
Carbon disulfide	97		-		70-130	-		
Freon-113	90		-		70-130	-		
trans-1,2-Dichloroethene	77		-		70-130	-		
1,1-Dichloroethane	83		-		70-130	-		
Methyl tert butyl ether	93		-		70-130	-		
2-Butanone	102		-		70-130	-		
cis-1,2-Dichloroethene	79		-		70-130	-		
Chloroform	85		-		70-130	-		
1,2-Dichloroethane	74		-		70-130	-		
1,1,1-Trichloroethane	93		-		70-130	-		
Benzene	87		-		70-130	-		
Carbon tetrachloride	96		-		70-130	-		
1,2-Dichloropropane	96		-		70-130	-		
Bromodichloromethane	95		-		70-130	-		
1,4-Dioxane	93		-		50-150	-		

Lab Control Sample Analysis

Batch Quality Control

Project Name: LOCKHEED MARTIN

Project Number: 60552044.24

Lab Number: L2104188

Report Date: 02/08/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Volatile Organics in Air by SIM - Mansfield Lab Associated sample(s): 01-08 Batch: WG1460965-3								
Trichloroethene	98		-		70-130	-		
cis-1,3-Dichloropropene	94		-		70-130	-		
4-Methyl-2-pentanone	121		-		70-130	-		
trans-1,3-Dichloropropene	112		-		70-130	-		
1,1,2-Trichloroethane	103		-		70-130	-		
Toluene	93		-		70-130	-		
Dibromochloromethane	110		-		70-130	-		
1,2-Dibromoethane	114		-		70-130	-		
Tetrachloroethene	108		-		70-130	-		
Chlorobenzene	107		-		70-130	-		
Ethylbenzene	102		-		70-130	-		
p/m-Xylene	104		-		70-130	-		
Bromoform	120		-		70-130	-		
Styrene	117		-		70-130	-		
1,1,2,2-Tetrachloroethane	110		-		70-130	-		
o-Xylene	105		-		70-130	-		
1,3-Dichlorobenzene	122		-		70-130	-		
1,4-Dichlorobenzene	123		-		70-130	-		
1,2-Dichlorobenzene	123		-		70-130	-		
1,2,4-Trichlorobenzene	**161**	Q	-		50-150	-		
Naphthalene	98		-		50-150	-		
Hexachlorobutadiene	133		-		50-150	-		

Lab Control Sample Analysis

Batch Quality Control

Project Name: LOCKHEED MARTIN

Project Number: 60552044.24

Lab Number: L2104188

Report Date: 02/08/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Volatile Organics in Air by SIM - Mansfield Lab Associated sample(s): 01-08 Batch: WG1460965-3								

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
1,2-Dichloroethane-d4	98				70-130
Toluene-d8	113				70-130
Bromofluorobenzene	112				70-130

Project Name: LOCKHEED MARTIN

Project Number: 60552044.24

Lab Number: L2104188

Report Date: 02/08/21

Canister and Flow Controller Information

Samplenum	Client ID	Media ID	Media Type	Date Prepared	Bottle Order	Cleaning Batch ID	Can Leak Check	Initial Pressure (in. Hg)	Pressure on Receipt (in. Hg)	Flow Controler Leak Chk	Flow Out mL/min	Flow In mL/min	% RPD
L2104188-01	21A-AA1-1	01629	Flow 4	01/25/21	340693		-	-	-	Pass	10.0	11.3	12
L2104188-01	21A-AA1-1	3478	6.0L Can	01/25/21	340693	L2102590-08	Pass	-29.1	-2.0	-	-	-	-
L2104188-02	21A-IA2-1	01464	Flow 4	01/25/21	340693		-	-	-	Pass	10.0	8.9	12
L2104188-02	21A-IA2-1	3277	6.0L Can	01/25/21	340693	L2102280-07	Pass	-29.3	-7.0	-	-	-	-
L2104188-03	21A-IA3-1	0083	Flow 4	01/25/21	340693		-	-	-	Pass	10.0	8.4	17
L2104188-03	21A-IA3-1	2802	6.0L Can	01/25/21	340693	L2102738-05	Pass	-29.0	-7.8	-	-	-	-
L2104188-04	21A-IA4-1	01650	Flow 4	01/25/21	340693		-	-	-	Pass	10.0	9.8	2
L2104188-04	21A-IA4-1	3468	6.0L Can	01/25/21	340693	L2102280-06	Pass	-29.4	-5.7	-	-	-	-
L2104188-05	21A-IA7-1	0790	Flow 4	01/25/21	340693		-	-	-	Pass	10.0	9.1	9
L2104188-05	21A-IA7-1	3372	6.0L Can	01/25/21	340693	L2102738-05	Pass	-29.1	-6.7	-	-	-	-
L2104188-06	21A-IA8-1	0909	Flow 4	01/25/21	340693		-	-	-	Pass	10.0	9.0	11
L2104188-06	21A-IA8-1	950	6.0L Can	01/25/21	340693	L2102738-05	Pass	-29.3	-6.1	-	-	-	-
L2104188-07	21A-IA8-2	01652	Flow 4	01/25/21	340693		-	-	-	Pass	10.0	9.7	3
L2104188-07	21A-IA8-2	2049	6.0L Can	01/25/21	340693	L2102738-05	Pass	-29.3	-6.0	-	-	-	-
L2104188-08	21A-IA9-1	0622	Flow 3	01/25/21	340693		-	-	-	Pass	10.0	9.5	5

Project Name: LOCKHEED MARTIN

Project Number: 60552044.24

Lab Number: L2104188

Report Date: 02/08/21

Canister and Flow Controller Information

Samplenum	Client ID	Media ID	Media Type	Date Prepared	Bottle Order	Cleaning Batch ID	Can Leak Check	Initial Pressure (in. Hg)	Pressure on Receipt (in. Hg)	Flow Controler Leak Chk	Flow Out mL/min	Flow In mL/min	% RPD
L2104188-08	21A-IA9-1	1564	6.0L Can	01/25/21	340693	L2102590-08	Pass	-29.1	-6.8	-	-	-	-
L2104188-09	UNUSED CAN #3143	01772	Flow 4	01/25/21	340693		-	-	-	Pass	10.0	9.4	6
L2104188-09	UNUSED CAN #3143	3143	6.0L Can	01/25/21	340693	L2102280-07	Pass	-29.4	-29.1	-	-	-	-

Project Name: BATCH CANISTER CERTIFICATION
Project Number: CANISTER QC BAT
Lab Number: L2102280
Report Date: 02/08/21

Air Canister Certification Results

Lab ID: L2102280-06
Client ID: CAN 1712 SHELF 33
Sample Location:

Date Collected: 01/15/21 09:00
Date Received: 01/15/21
Field Prep: Not Specified

Sample Depth:
Matrix: Air
Anaytical Method: 48,TO-15
Analytical Date: 01/20/21 00:06
Analyst: TS

	ppbV			ug/m3				
Parameter	**Results**	**RL**	**MDL**	**Results**	**RL**	**MDL**	**Qualifier**	**Dilution Factor**
Volatile Organics in Air - Mansfield Lab								
Chlorodifluoromethane	ND	0.200	--	ND	0.707	--		1
Propylene	ND	0.500	--	ND	0.861	--		1
Propane	ND	0.500	--	ND	0.902	--		1
Dichlorodifluoromethane	ND	0.200	--	ND	0.989	--		1
Chloromethane	ND	0.200	--	ND	0.413	--		1
Freon-114	ND	0.200	--	ND	1.40	--		1
Methanol	ND	5.00	--	ND	6.55	--		1
Vinyl chloride	ND	0.200	--	ND	0.511	--		1
1,3-Butadiene	ND	0.200	--	ND	0.442	--		1
Bromomethane	ND	0.200	--	ND	0.777	--		1
Chloroethane	ND	0.200	--	ND	0.528	--		1
Ethanol	ND	5.00	--	ND	9.42	--		1
Vinyl bromide	ND	0.200	--	ND	0.874	--		1
Acrolein	ND	0.500	--	ND	1.15	--		1
Acetone	ND	1.00	--	ND	2.38	--		1
Trichlorofluoromethane	ND	0.200	--	ND	1.12	--		1
Isopropanol	ND	0.500	--	ND	1.23	--		1
Acrylonitrile	ND	0.500	--	ND	1.09	--		1
Pentane	ND	0.200	--	ND	0.590	--		1
Ethyl ether	ND	0.200	--	ND	0.606	--		1
1,1-Dichloroethene	ND	0.200	--	ND	0.793	--		1
Tertiary butyl Alcohol	ND	0.500	--	ND	1.52	--		1
Methylene chloride	ND	0.500	--	ND	1.74	--		1
3-Chloropropene	ND	0.200	--	ND	0.626	--		1

Project Name: BATCH CANISTER CERTIFICATION
Project Number: CANISTER QC BAT
Lab Number: L2102280
Report Date: 02/08/21

Air Canister Certification Results

Lab ID: L2102280-06
Client ID: CAN 1712 SHELF 33
Sample Location:

Date Collected: 01/15/21 09:00
Date Received: 01/15/21
Field Prep: Not Specified

Sample Depth:

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
Volatile Organics in Air - Mansfield Lab								
Carbon disulfide	ND	0.200	--	ND	0.623	--		1
Freon-113	ND	0.200	--	ND	1.53	--		1
trans-1,2-Dichloroethene	ND	0.200	--	ND	0.793	--		1
1,1-Dichloroethane	ND	0.200	--	ND	0.809	--		1
Methyl tert butyl ether	ND	0.200	--	ND	0.721	--		1
Vinyl acetate	ND	1.00	--	ND	3.52	--		1
Xylenes, total	ND	0.600	--	ND	0.869	--		1
2-Butanone	ND	0.500	--	ND	1.47	--		1
cis-1,2-Dichloroethene	ND	0.200	--	ND	0.793	--		1
Ethyl Acetate	ND	0.500	--	ND	1.80	--		1
Chloroform	ND	0.200	--	ND	0.977	--		1
Tetrahydrofuran	ND	0.500	--	ND	1.47	--		1
2,2-Dichloropropane	ND	0.200	--	ND	0.924	--		1
1,2-Dichloroethane	ND	0.200	--	ND	0.809	--		1
n-Hexane	ND	0.200	--	ND	0.705	--		1
Diisopropyl ether	ND	0.200	--	ND	0.836	--		1
tert-Butyl Ethyl Ether	ND	0.200	--	ND	0.836	--		1
1,2-Dichloroethene (total)	ND	1.00	--	ND	1.00	--		1
1,1,1-Trichloroethane	ND	0.200	--	ND	1.09	--		1
1,1-Dichloropropene	ND	0.200	--	ND	0.908	--		1
Benzene	ND	0.200	--	ND	0.639	--		1
Carbon tetrachloride	ND	0.200	--	ND	1.26	--		1
Cyclohexane	ND	0.200	--	ND	0.688	--		1
tert-Amyl Methyl Ether	ND	0.200	--	ND	0.836	--		1
Dibromomethane	ND	0.200	--	ND	1.42	--		1
1,2-Dichloropropane	ND	0.200	--	ND	0.924	--		1
Bromodichloromethane	ND	0.200	--	ND	1.34	--		1

Project Name: BATCH CANISTER CERTIFICATION
Project Number: CANISTER QC BAT
Lab Number: L2102280
Report Date: 02/08/21

Air Canister Certification Results

Lab ID: L2102280-06
Client ID: CAN 1712 SHELF 33
Sample Location:

Date Collected: 01/15/21 09:00
Date Received: 01/15/21
Field Prep: Not Specified

Sample Depth:

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
Volatile Organics in Air - Mansfield Lab								
1,4-Dioxane	ND	0.200	--	ND	0.721	--		1
Trichloroethene	ND	0.200	--	ND	1.07	--		1
2,2,4-Trimethylpentane	ND	0.200	--	ND	0.934	--		1
Methyl Methacrylate	ND	0.500	--	ND	2.05	--		1
Heptane	ND	0.200	--	ND	0.820	--		1
cis-1,3-Dichloropropene	ND	0.200	--	ND	0.908	--		1
4-Methyl-2-pentanone	ND	0.500	--	ND	2.05	--		1
trans-1,3-Dichloropropene	ND	0.200	--	ND	0.908	--		1
1,1,2-Trichloroethane	ND	0.200	--	ND	1.09	--		1
Toluene	ND	0.200	--	ND	0.754	--		1
1,3-Dichloropropane	ND	0.200	--	ND	0.924	--		1
2-Hexanone	ND	0.200	--	ND	0.820	--		1
Dibromochloromethane	ND	0.200	--	ND	1.70	--		1
1,2-Dibromoethane	ND	0.200	--	ND	1.54	--		1
Butyl acetate	ND	0.500	--	ND	2.38	--		1
Octane	ND	0.200	--	ND	0.934	--		1
Tetrachloroethene	ND	0.200	--	ND	1.36	--		1
1,1,1,2-Tetrachloroethane	ND	0.200	--	ND	1.37	--		1
Chlorobenzene	ND	0.200	--	ND	0.921	--		1
Ethylbenzene	ND	0.200	--	ND	0.869	--		1
p/m-Xylene	ND	0.400	--	ND	1.74	--		1
Bromoform	ND	0.200	--	ND	2.07	--		1
Styrene	ND	0.200	--	ND	0.852	--		1
1,1,2,2-Tetrachloroethane	ND	0.200	--	ND	1.37	--		1
o-Xylene	ND	0.200	--	ND	0.869	--		1
1,2,3-Trichloropropane	ND	0.200	--	ND	1.21	--		1
Nonane	ND	0.200	--	ND	1.05	--		1

Project Name: BATCH CANISTER CERTIFICATION
Project Number: CANISTER QC BAT
Lab Number: L2102280
Report Date: 02/08/21

Air Canister Certification Results

Lab ID: L2102280-06
Client ID: CAN 1712 SHELF 33
Sample Location:

Date Collected: 01/15/21 09:00
Date Received: 01/15/21
Field Prep: Not Specified

Sample Depth:

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
Volatile Organics in Air - Mansfield Lab								
Isopropylbenzene	ND	0.200	--	ND	0.983	--		1
Bromobenzene	ND	0.200	--	ND	0.793	--		1
2-Chlorotoluene	ND	0.200	--	ND	1.04	--		1
n-Propylbenzene	ND	0.200	--	ND	0.983	--		1
4-Chlorotoluene	ND	0.200	--	ND	1.04	--		1
4-Ethyltoluene	ND	0.200	--	ND	0.983	--		1
1,3,5-Trimethylbenzene	ND	0.200	--	ND	0.983	--		1
tert-Butylbenzene	ND	0.200	--	ND	1.10	--		1
1,2,4-Trimethylbenzene	ND	0.200	--	ND	0.983	--		1
Decane	ND	0.200	--	ND	1.16	--		1
Benzyl chloride	ND	0.200	--	ND	1.04	--		1
1,3-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
1,4-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
sec-Butylbenzene	ND	0.200	--	ND	1.10	--		1
p-Isopropyltoluene	ND	0.200	--	ND	1.10	--		1
1,2-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
n-Butylbenzene	ND	0.200	--	ND	1.10	--		1
1,2-Dibromo-3-chloropropane	ND	0.200	--	ND	1.93	--		1
Undecane	ND	0.200	--	ND	1.28	--		1
Dodecane	ND	0.200	--	ND	1.39	--		1
1,2,4-Trichlorobenzene	ND	0.200	--	ND	1.48	--		1
Naphthalene	ND	0.200	--	ND	1.05	--		1
1,2,3-Trichlorobenzene	ND	0.200	--	ND	1.48	--		1
Hexachlorobutadiene	ND	0.200	--	ND	2.13	--		1

Project Name: BATCH CANISTER CERTIFICATION
Project Number: CANISTER QC BAT
Lab Number: L2102280
Report Date: 02/08/21

Air Canister Certification Results

Lab ID: L2102280-06
Client ID: CAN 1712 SHELF 33
Sample Location:

Date Collected: 01/15/21 09:00
Date Received: 01/15/21
Field Prep: Not Specified

Sample Depth:

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
Volatile Organics in Air - Mansfield Lab								

	Results	Qualifier	Units	RDL	Dilution Factor
Tentatively Identified Compounds					

No Tentatively Identified Compounds

Internal Standard	% Recovery	Qualifier	Acceptance Criteria
1,4-Difluorobenzene	99		60-140
Bromochloromethane	100		60-140
chlorobenzene-d5	94		60-140

Project Name: BATCH CANISTER CERTIFICATION
Project Number: CANISTER QC BAT
Lab Number: L2102280
Report Date: 02/08/21

Air Canister Certification Results

Lab ID: L2102280-06
Client ID: CAN 1712 SHELF 33
Sample Location:

Date Collected: 01/15/21 09:00
Date Received: 01/15/21
Field Prep: Not Specified

Sample Depth:
Matrix: Air
Anaytical Method: 48,TO-15-SIM
Analytical Date: 01/20/21 00:06
Analyst: TS

	ppbV			ug/m3				
Parameter	**Results**	**RL**	**MDL**	**Results**	**RL**	**MDL**	**Qualifier**	**Dilution Factor**
Volatile Organics in Air by SIM - Mansfield Lab								
Dichlorodifluoromethane	ND	0.200	--	ND	0.989	--		1
Chloromethane	ND	0.200	--	ND	0.413	--		1
Freon-114	ND	0.050	--	ND	0.349	--		1
Vinyl chloride	ND	0.020	--	ND	0.051	--		1
1,3-Butadiene	ND	0.020	--	ND	0.044	--		1
Bromomethane	ND	0.020	--	ND	0.078	--		1
Chloroethane	ND	0.100	--	ND	0.264	--		1
Acrolein	ND	0.050	--	ND	0.115	--		1
Acetone	ND	1.00	--	ND	2.38	--		1
Trichlorofluoromethane	ND	0.050	--	ND	0.281	--		1
Acrylonitrile	ND	0.500	--	ND	1.09	--		1
1,1-Dichloroethene	ND	0.020	--	ND	0.079	--		1
Methylene chloride	ND	0.500	--	ND	1.74	--		1
Freon-113	ND	0.050	--	ND	0.383	--		1
trans-1,2-Dichloroethene	ND	0.020	--	ND	0.079	--		1
1,1-Dichloroethane	ND	0.020	--	ND	0.081	--		1
Methyl tert butyl ether	ND	0.200	--	ND	0.721	--		1
2-Butanone	ND	0.500	--	ND	1.47	--		1
cis-1,2-Dichloroethene	ND	0.020	--	ND	0.079	--		1
Chloroform	ND	0.020	--	ND	0.098	--		1
1,2-Dichloroethane	ND	0.020	--	ND	0.081	--		1
1,1,1-Trichloroethane	ND	0.020	--	ND	0.109	--		1
Benzene	ND	0.100	--	ND	0.319	--		1
Carbon tetrachloride	ND	0.020	--	ND	0.126	--		1

Project Name: BATCH CANISTER CERTIFICATION **Lab Number:** L2102280

Project Number: CANISTER QC BAT **Report Date:** 02/08/21

Air Canister Certification Results

Lab ID: L2102280-06
Client ID: CAN 1712 SHELF 33
Sample Location:

Date Collected: 01/15/21 09:00
Date Received: 01/15/21
Field Prep: Not Specified

Sample Depth:

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
Volatile Organics in Air by SIM - Mansfield Lab								
1,2-Dichloropropane	ND	0.020	--	ND	0.092	--		1
Bromodichloromethane	ND	0.020	--	ND	0.134	--		1
1,4-Dioxane	ND	0.100	--	ND	0.360	--		1
Trichloroethene	ND	0.020	--	ND	0.107	--		1
cis-1,3-Dichloropropene	ND	0.020	--	ND	0.091	--		1
4-Methyl-2-pentanone	ND	0.500	--	ND	2.05	--		1
trans-1,3-Dichloropropene	ND	0.020	--	ND	0.091	--		1
1,1,2-Trichloroethane	ND	0.020	--	ND	0.109	--		1
Toluene	ND	0.050	--	ND	0.188	--		1
Dibromochloromethane	ND	0.020	--	ND	0.170	--		1
1,2-Dibromoethane	ND	0.020	--	ND	0.154	--		1
Tetrachloroethene	ND	0.020	--	ND	0.136	--		1
1,1,1,2-Tetrachloroethane	ND	0.020	--	ND	0.137	--		1
Chlorobenzene	ND	0.100	--	ND	0.461	--		1
Ethylbenzene	ND	0.020	--	ND	0.087	--		1
p/m-Xylene	ND	0.040	--	ND	0.174	--		1
Bromoform	ND	0.020	--	ND	0.207	--		1
Styrene	ND	0.020	--	ND	0.085	--		1
1,1,2,2-Tetrachloroethane	ND	0.020	--	ND	0.137	--		1
o-Xylene	ND	0.020	--	ND	0.087	--		1
Isopropylbenzene	ND	0.200	--	ND	0.983	--		1
4-Ethyltoluene	ND	0.020	--	ND	0.098	--		1
1,3,5-Trimethybenzene	ND	0.020	--	ND	0.098	--		1
1,2,4-Trimethylbenzene	ND	0.020	--	ND	0.098	--		1
Benzyl chloride	ND	0.200	--	ND	1.04	--		1
1,3-Dichlorobenzene	ND	0.020	--	ND	0.120	--		1
1,4-Dichlorobenzene	ND	0.020	--	ND	0.120	--		1

Project Name: BATCH CANISTER CERTIFICATION
Project Number: CANISTER QC BAT
Lab Number: L2102280
Report Date: 02/08/21

Air Canister Certification Results

Lab ID: L2102280-06
Client ID: CAN 1712 SHELF 33
Sample Location:

Date Collected: 01/15/21 09:00
Date Received: 01/15/21
Field Prep: Not Specified

Sample Depth:

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
Volatile Organics in Air by SIM - Mansfield Lab								
sec-Butylbenzene	ND	0.200	--	ND	1.10	--		1
p-Isopropyltoluene	ND	0.200	--	ND	1.10	--		1
1,2-Dichlorobenzene	ND	0.020	--	ND	0.120	--		1
n-Butylbenzene	ND	0.200	--	ND	1.10	--		1
1,2,4-Trichlorobenzene	ND	0.050	--	ND	0.371	--		1
Naphthalene	ND	0.050	--	ND	0.262	--		1
1,2,3-Trichlorobenzene	ND	0.050	--	ND	0.371	--		1
Hexachlorobutadiene	ND	0.050	--	ND	0.533	--		1

Internal Standard	% Recovery	Qualifier	Acceptance Criteria
1,4-difluorobenzene	98		60-140
bromochloromethane	101		60-140
chlorobenzene-d5	96		60-140

Project Name: BATCH CANISTER CERTIFICATION
Project Number: CANISTER QC BAT
Lab Number: L2102280
Report Date: 02/08/21

Air Canister Certification Results

Lab ID: L2102280-07
Client ID: CAN 1519 SHELF 34
Sample Location:

Date Collected: 01/15/21 09:00
Date Received: 01/15/21
Field Prep: Not Specified

Sample Depth:
Matrix: Air
Anaytical Method: 48,TO-15
Analytical Date: 01/20/21 00:45
Analyst: TS

	ppbV			ug/m3				
Parameter	**Results**	**RL**	**MDL**	**Results**	**RL**	**MDL**	**Qualifier**	**Dilution Factor**
Volatile Organics in Air - Mansfield Lab								
Chlorodifluoromethane	ND	0.200	--	ND	0.707	--		1
Propylene	ND	0.500	--	ND	0.861	--		1
Propane	ND	0.500	--	ND	0.902	--		1
Dichlorodifluoromethane	ND	0.200	--	ND	0.989	--		1
Chloromethane	ND	0.200	--	ND	0.413	--		1
Freon-114	ND	0.200	--	ND	1.40	--		1
Methanol	ND	5.00	--	ND	6.55	--		1
Vinyl chloride	ND	0.200	--	ND	0.511	--		1
1,3-Butadiene	ND	0.200	--	ND	0.442	--		1
Bromomethane	ND	0.200	--	ND	0.777	--		1
Chloroethane	ND	0.200	--	ND	0.528	--		1
Ethanol	ND	5.00	--	ND	9.42	--		1
Vinyl bromide	ND	0.200	--	ND	0.874	--		1
Acrolein	ND	0.500	--	ND	1.15	--		1
Acetone	ND	1.00	--	ND	2.38	--		1
Trichlorofluoromethane	ND	0.200	--	ND	1.12	--		1
Isopropanol	ND	0.500	--	ND	1.23	--		1
Acrylonitrile	ND	0.500	--	ND	1.09	--		1
Pentane	ND	0.200	--	ND	0.590	--		1
Ethyl ether	ND	0.200	--	ND	0.606	--		1
1,1-Dichloroethene	ND	0.200	--	ND	0.793	--		1
Tertiary butyl Alcohol	ND	0.500	--	ND	1.52	--		1
Methylene chloride	ND	0.500	--	ND	1.74	--		1
3-Chloropropene	ND	0.200	--	ND	0.626	--		1

Project Name: BATCH CANISTER CERTIFICATION
Project Number: CANISTER QC BAT
Lab Number: L2102280
Report Date: 02/08/21

Air Canister Certification Results

Lab ID: L2102280-07
Client ID: CAN 1519 SHELF 34
Sample Location:

Date Collected: 01/15/21 09:00
Date Received: 01/15/21
Field Prep: Not Specified

Sample Depth:

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
Volatile Organics in Air - Mansfield Lab								
Carbon disulfide	ND	0.200	--	ND	0.623	--		1
Freon-113	ND	0.200	--	ND	1.53	--		1
trans-1,2-Dichloroethene	ND	0.200	--	ND	0.793	--		1
1,1-Dichloroethane	ND	0.200	--	ND	0.809	--		1
Methyl tert butyl ether	ND	0.200	--	ND	0.721	--		1
Vinyl acetate	ND	1.00	--	ND	3.52	--		1
Xylenes, total	ND	0.600	--	ND	0.869	--		1
2-Butanone	ND	0.500	--	ND	1.47	--		1
cis-1,2-Dichloroethene	ND	0.200	--	ND	0.793	--		1
Ethyl Acetate	ND	0.500	--	ND	1.80	--		1
Chloroform	ND	0.200	--	ND	0.977	--		1
Tetrahydrofuran	ND	0.500	--	ND	1.47	--		1
2,2-Dichloropropane	ND	0.200	--	ND	0.924	--		1
1,2-Dichloroethane	ND	0.200	--	ND	0.809	--		1
n-Hexane	ND	0.200	--	ND	0.705	--		1
Diisopropyl ether	ND	0.200	--	ND	0.836	--		1
tert-Butyl Ethyl Ether	ND	0.200	--	ND	0.836	--		1
1,2-Dichloroethene (total)	ND	1.00	--	ND	1.00	--		1
1,1,1-Trichloroethane	ND	0.200	--	ND	1.09	--		1
1,1-Dichloropropene	ND	0.200	--	ND	0.908	--		1
Benzene	ND	0.200	--	ND	0.639	--		1
Carbon tetrachloride	ND	0.200	--	ND	1.26	--		1
Cyclohexane	ND	0.200	--	ND	0.688	--		1
tert-Amyl Methyl Ether	ND	0.200	--	ND	0.836	--		1
Dibromomethane	ND	0.200	--	ND	1.42	--		1
1,2-Dichloropropane	ND	0.200	--	ND	0.924	--		1
Bromodichloromethane	ND	0.200	--	ND	1.34	--		1

Project Name: BATCH CANISTER CERTIFICATION
Project Number: CANISTER QC BAT
Lab Number: L2102280
Report Date: 02/08/21

Air Canister Certification Results

Lab ID: L2102280-07
Client ID: CAN 1519 SHELF 34
Sample Location:

Date Collected: 01/15/21 09:00
Date Received: 01/15/21
Field Prep: Not Specified

Sample Depth:

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
Volatile Organics in Air - Mansfield Lab								
1,4-Dioxane	ND	0.200	--	ND	0.721	--		1
Trichloroethene	ND	0.200	--	ND	1.07	--		1
2,2,4-Trimethylpentane	ND	0.200	--	ND	0.934	--		1
Methyl Methacrylate	ND	0.500	--	ND	2.05	--		1
Heptane	ND	0.200	--	ND	0.820	--		1
cis-1,3-Dichloropropene	ND	0.200	--	ND	0.908	--		1
4-Methyl-2-pentanone	ND	0.500	--	ND	2.05	--		1
trans-1,3-Dichloropropene	ND	0.200	--	ND	0.908	--		1
1,1,2-Trichloroethane	ND	0.200	--	ND	1.09	--		1
Toluene	ND	0.200	--	ND	0.754	--		1
1,3-Dichloropropane	ND	0.200	--	ND	0.924	--		1
2-Hexanone	ND	0.200	--	ND	0.820	--		1
Dibromochloromethane	ND	0.200	--	ND	1.70	--		1
1,2-Dibromoethane	ND	0.200	--	ND	1.54	--		1
Butyl acetate	ND	0.500	--	ND	2.38	--		1
Octane	ND	0.200	--	ND	0.934	--		1
Tetrachloroethene	ND	0.200	--	ND	1.36	--		1
1,1,1,2-Tetrachloroethane	ND	0.200	--	ND	1.37	--		1
Chlorobenzene	ND	0.200	--	ND	0.921	--		1
Ethylbenzene	ND	0.200	--	ND	0.869	--		1
p/m-Xylene	ND	0.400	--	ND	1.74	--		1
Bromoform	ND	0.200	--	ND	2.07	--		1
Styrene	ND	0.200	--	ND	0.852	--		1
1,1,2,2-Tetrachloroethane	ND	0.200	--	ND	1.37	--		1
o-Xylene	ND	0.200	--	ND	0.869	--		1
1,2,3-Trichloropropane	ND	0.200	--	ND	1.21	--		1
Nonane	ND	0.200	--	ND	1.05	--		1

Project Name: BATCH CANISTER CERTIFICATION
Project Number: CANISTER QC BAT
Lab Number: L2102280
Report Date: 02/08/21

Air Canister Certification Results

Lab ID: L2102280-07
Client ID: CAN 1519 SHELF 34
Sample Location:

Date Collected: 01/15/21 09:00
Date Received: 01/15/21
Field Prep: Not Specified

Sample Depth:

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
Volatile Organics in Air - Mansfield Lab								
Isopropylbenzene	ND	0.200	--	ND	0.983	--		1
Bromobenzene	ND	0.200	--	ND	0.793	--		1
2-Chlorotoluene	ND	0.200	--	ND	1.04	--		1
n-Propylbenzene	ND	0.200	--	ND	0.983	--		1
4-Chlorotoluene	ND	0.200	--	ND	1.04	--		1
4-Ethyltoluene	ND	0.200	--	ND	0.983	--		1
1,3,5-Trimethylbenzene	ND	0.200	--	ND	0.983	--		1
tert-Butylbenzene	ND	0.200	--	ND	1.10	--		1
1,2,4-Trimethylbenzene	ND	0.200	--	ND	0.983	--		1
Decane	ND	0.200	--	ND	1.16	--		1
Benzyl chloride	ND	0.200	--	ND	1.04	--		1
1,3-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
1,4-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
sec-Butylbenzene	ND	0.200	--	ND	1.10	--		1
p-Isopropyltoluene	ND	0.200	--	ND	1.10	--		1
1,2-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
n-Butylbenzene	ND	0.200	--	ND	1.10	--		1
1,2-Dibromo-3-chloropropane	ND	0.200	--	ND	1.93	--		1
Undecane	ND	0.200	--	ND	1.28	--		1
Dodecane	ND	0.200	--	ND	1.39	--		1
1,2,4-Trichlorobenzene	ND	0.200	--	ND	1.48	--		1
Naphthalene	ND	0.200	--	ND	1.05	--		1
1,2,3-Trichlorobenzene	ND	0.200	--	ND	1.48	--		1
Hexachlorobutadiene	ND	0.200	--	ND	2.13	--		1

Project Name: BATCH CANISTER CERTIFICATION
Project Number: CANISTER QC BAT
Lab Number: L2102280
Report Date: 02/08/21

Air Canister Certification Results

Lab ID: L2102280-07
Client ID: CAN 1519 SHELF 34
Sample Location:

Date Collected: 01/15/21 09:00
Date Received: 01/15/21
Field Prep: Not Specified

Sample Depth:

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
Volatile Organics in Air - Mansfield Lab								

	Results	Qualifier	Units	RDL	Dilution Factor
Tentatively Identified Compounds					

No Tentatively Identified Compounds

Internal Standard	% Recovery	Qualifier	Acceptance Criteria
1,4-Difluorobenzene	100		60-140
Bromochloromethane	101		60-140
chlorobenzene-d5	94		60-140

Project Name: BATCH CANISTER CERTIFICATION
Project Number: CANISTER QC BAT
Lab Number: L2102280
Report Date: 02/08/21

Air Canister Certification Results

Lab ID: L2102280-07
Client ID: CAN 1519 SHELF 34
Sample Location:

Date Collected: 01/15/21 09:00
Date Received: 01/15/21
Field Prep: Not Specified

Sample Depth:
Matrix: Air
Anaytical Method: 48,TO-15-SIM
Analytical Date: 01/20/21 00:45
Analyst: TS

	ppbV			ug/m3				
Parameter	**Results**	**RL**	**MDL**	**Results**	**RL**	**MDL**	**Qualifier**	**Dilution Factor**
Volatile Organics in Air by SIM - Mansfield Lab								
Dichlorodifluoromethane	ND	0.200	--	ND	0.989	--		1
Chloromethane	ND	0.200	--	ND	0.413	--		1
Freon-114	ND	0.050	--	ND	0.349	--		1
Vinyl chloride	ND	0.020	--	ND	0.051	--		1
1,3-Butadiene	ND	0.020	--	ND	0.044	--		1
Bromomethane	ND	0.020	--	ND	0.078	--		1
Chloroethane	ND	0.100	--	ND	0.264	--		1
Acrolein	ND	0.050	--	ND	0.115	--		1
Acetone	ND	1.00	--	ND	2.38	--		1
Trichlorofluoromethane	ND	0.050	--	ND	0.281	--		1
Acrylonitrile	ND	0.500	--	ND	1.09	--		1
1,1-Dichloroethene	ND	0.020	--	ND	0.079	--		1
Methylene chloride	ND	0.500	--	ND	1.74	--		1
Freon-113	ND	0.050	--	ND	0.383	--		1
trans-1,2-Dichloroethene	ND	0.020	--	ND	0.079	--		1
1,1-Dichloroethane	ND	0.020	--	ND	0.081	--		1
Methyl tert butyl ether	ND	0.200	--	ND	0.721	--		1
2-Butanone	ND	0.500	--	ND	1.47	--		1
cis-1,2-Dichloroethene	ND	0.020	--	ND	0.079	--		1
Chloroform	ND	0.020	--	ND	0.098	--		1
1,2-Dichloroethane	ND	0.020	--	ND	0.081	--		1
1,1,1-Trichloroethane	ND	0.020	--	ND	0.109	--		1
Benzene	ND	0.100	--	ND	0.319	--		1
Carbon tetrachloride	ND	0.020	--	ND	0.126	--		1

Project Name: BATCH CANISTER CERTIFICATION **Lab Number:** L2102280

Project Number: CANISTER QC BAT **Report Date:** 02/08/21

Air Canister Certification Results

Lab ID: L2102280-07
Client ID: CAN 1519 SHELF 34
Sample Location:

Date Collected: 01/15/21 09:00
Date Received: 01/15/21
Field Prep: Not Specified

Sample Depth:

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
Volatile Organics in Air by SIM - Mansfield Lab								
1,2-Dichloropropane	ND	0.020	--	ND	0.092	--		1
Bromodichloromethane	ND	0.020	--	ND	0.134	--		1
1,4-Dioxane	ND	0.100	--	ND	0.360	--		1
Trichloroethene	ND	0.020	--	ND	0.107	--		1
cis-1,3-Dichloropropene	ND	0.020	--	ND	0.091	--		1
4-Methyl-2-pentanone	ND	0.500	--	ND	2.05	--		1
trans-1,3-Dichloropropene	ND	0.020	--	ND	0.091	--		1
1,1,2-Trichloroethane	ND	0.020	--	ND	0.109	--		1
Toluene	ND	0.050	--	ND	0.188	--		1
Dibromochloromethane	ND	0.020	--	ND	0.170	--		1
1,2-Dibromoethane	ND	0.020	--	ND	0.154	--		1
Tetrachloroethene	ND	0.020	--	ND	0.136	--		1
1,1,1,2-Tetrachloroethane	ND	0.020	--	ND	0.137	--		1
Chlorobenzene	ND	0.100	--	ND	0.461	--		1
Ethylbenzene	ND	0.020	--	ND	0.087	--		1
p/m-Xylene	ND	0.040	--	ND	0.174	--		1
Bromoform	ND	0.020	--	ND	0.207	--		1
Styrene	ND	0.020	--	ND	0.085	--		1
1,1,2,2-Tetrachloroethane	ND	0.020	--	ND	0.137	--		1
o-Xylene	ND	0.020	--	ND	0.087	--		1
Isopropylbenzene	ND	0.200	--	ND	0.983	--		1
4-Ethyltoluene	ND	0.020	--	ND	0.098	--		1
1,3,5-Trimethybenzene	ND	0.020	--	ND	0.098	--		1
1,2,4-Trimethylbenzene	ND	0.020	--	ND	0.098	--		1
Benzyl chloride	ND	0.200	--	ND	1.04	--		1
1,3-Dichlorobenzene	ND	0.020	--	ND	0.120	--		1
1,4-Dichlorobenzene	ND	0.020	--	ND	0.120	--		1

Project Name: BATCH CANISTER CERTIFICATION **Lab Number:** L2102280

Project Number: CANISTER QC BAT **Report Date:** 02/08/21

Air Canister Certification Results

Lab ID: L2102280-07
Client ID: CAN 1519 SHELF 34
Sample Location:

Date Collected: 01/15/21 09:00
Date Received: 01/15/21
Field Prep: Not Specified

Sample Depth:

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
Volatile Organics in Air by SIM - Mansfield Lab								
sec-Butylbenzene	ND	0.200	--	ND	1.10	--		1
p-Isopropyltoluene	ND	0.200	--	ND	1.10	--		1
1,2-Dichlorobenzene	ND	0.020	--	ND	0.120	--		1
n-Butylbenzene	ND	0.200	--	ND	1.10	--		1
1,2,4-Trichlorobenzene	ND	0.050	--	ND	0.371	--		1
Naphthalene	ND	0.050	--	ND	0.262	--		1
1,2,3-Trichlorobenzene	ND	0.050	--	ND	0.371	--		1
Hexachlorobutadiene	ND	0.050	--	ND	0.533	--		1

Internal Standard	% Recovery	Qualifier	Acceptance Criteria
1,4-difluorobenzene	98		60-140
bromochloromethane	102		60-140
chlorobenzene-d5	96		60-140

Project Name: BATCH CANISTER CERTIFICATION
Project Number: CANISTER QC BAT
Lab Number: L2102590
Report Date: 02/08/21

Air Canister Certification Results

Lab ID: L2102590-08
Client ID: CAN 1843 SHELF 36
Sample Location:

Date Collected: 01/18/21 09:00
Date Received: 01/18/21
Field Prep: Not Specified

Sample Depth:
Matrix: Air
Anaytical Method: 48,TO-15
Analytical Date: 01/20/21 21:24
Analyst: TS

	ppbV			ug/m3				
Parameter	**Results**	**RL**	**MDL**	**Results**	**RL**	**MDL**	**Qualifier**	**Dilution Factor**
Volatile Organics in Air - Mansfield Lab								
Chlorodifluoromethane	ND	0.200	--	ND	0.707	--		1
Propylene	ND	0.500	--	ND	0.861	--		1
Propane	ND	0.500	--	ND	0.902	--		1
Dichlorodifluoromethane	ND	0.200	--	ND	0.989	--		1
Chloromethane	ND	0.200	--	ND	0.413	--		1
Freon-114	ND	0.200	--	ND	1.40	--		1
Methanol	ND	5.00	--	ND	6.55	--		1
Vinyl chloride	ND	0.200	--	ND	0.511	--		1
1,3-Butadiene	ND	0.200	--	ND	0.442	--		1
Butane	ND	0.200	--	ND	0.475	--		1
Bromomethane	ND	0.200	--	ND	0.777	--		1
Chloroethane	ND	0.200	--	ND	0.528	--		1
Ethanol	ND	5.00	--	ND	9.42	--		1
Dichlorofluoromethane	ND	0.200	--	ND	0.842	--		1
Vinyl bromide	ND	0.200	--	ND	0.874	--		1
Acrolein	ND	0.500	--	ND	1.15	--		1
Acetone	ND	1.00	--	ND	2.38	--		1
Acetonitrile	ND	0.200	--	ND	0.336	--		1
Trichlorofluoromethane	ND	0.200	--	ND	1.12	--		1
Isopropanol	ND	0.500	--	ND	1.23	--		1
Acrylonitrile	ND	0.500	--	ND	1.09	--		1
Pentane	ND	0.200	--	ND	0.590	--		1
Ethyl ether	ND	0.200	--	ND	0.606	--		1
1,1-Dichloroethene	ND	0.200	--	ND	0.793	--		1

Project Name: BATCH CANISTER CERTIFICATION
Project Number: CANISTER QC BAT
Lab Number: L2102590
Report Date: 02/08/21

Air Canister Certification Results

Lab ID: L2102590-08
Client ID: CAN 1843 SHELF 36
Sample Location:

Date Collected: 01/18/21 09:00
Date Received: 01/18/21
Field Prep: Not Specified

Sample Depth:

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
Volatile Organics in Air - Mansfield Lab								
Tertiary butyl Alcohol	ND	0.500	--	ND	1.52	--		1
Methylene chloride	ND	0.500	--	ND	1.74	--		1
3-Chloropropene	ND	0.200	--	ND	0.626	--		1
Carbon disulfide	ND	0.200	--	ND	0.623	--		1
Freon-113	ND	0.200	--	ND	1.53	--		1
trans-1,2-Dichloroethene	ND	0.200	--	ND	0.793	--		1
1,1-Dichloroethane	ND	0.200	--	ND	0.809	--		1
Methyl tert butyl ether	ND	0.200	--	ND	0.721	--		1
Vinyl acetate	ND	1.00	--	ND	3.52	--		1
Xylenes, total	ND	0.600	--	ND	0.869	--		1
2-Butanone	ND	0.500	--	ND	1.47	--		1
cis-1,2-Dichloroethene	ND	0.200	--	ND	0.793	--		1
Ethyl Acetate	ND	0.500	--	ND	1.80	--		1
Chloroform	ND	0.200	--	ND	0.977	--		1
Tetrahydrofuran	ND	0.500	--	ND	1.47	--		1
2,2-Dichloropropane	ND	0.200	--	ND	0.924	--		1
1,2-Dichloroethane	ND	0.200	--	ND	0.809	--		1
n-Hexane	ND	0.200	--	ND	0.705	--		1
Diisopropyl ether	ND	0.200	--	ND	0.836	--		1
tert-Butyl Ethyl Ether	ND	0.200	--	ND	0.836	--		1
1,2-Dichloroethene (total)	ND	1.00	--	ND	1.00	--		1
1,1,1-Trichloroethane	ND	0.200	--	ND	1.09	--		1
1,1-Dichloropropene	ND	0.200	--	ND	0.908	--		1
Benzene	ND	0.200	--	ND	0.639	--		1
Carbon tetrachloride	ND	0.200	--	ND	1.26	--		1
Cyclohexane	ND	0.200	--	ND	0.688	--		1
tert-Amyl Methyl Ether	ND	0.200	--	ND	0.836	--		1

Project Name: BATCH CANISTER CERTIFICATION
Project Number: CANISTER QC BAT
Lab Number: L2102590
Report Date: 02/08/21

Air Canister Certification Results

Lab ID: L2102590-08
Client ID: CAN 1843 SHELF 36
Sample Location:

Date Collected: 01/18/21 09:00
Date Received: 01/18/21
Field Prep: Not Specified

Sample Depth:

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
Volatile Organics in Air - Mansfield Lab								
Dibromomethane	ND	0.200	--	ND	1.42	--		1
1,2-Dichloropropane	ND	0.200	--	ND	0.924	--		1
Bromodichloromethane	ND	0.200	--	ND	1.34	--		1
1,4-Dioxane	ND	0.200	--	ND	0.721	--		1
Trichloroethene	ND	0.200	--	ND	1.07	--		1
2,2,4-Trimethylpentane	ND	0.200	--	ND	0.934	--		1
Methyl Methacrylate	ND	0.500	--	ND	2.05	--		1
Heptane	ND	0.200	--	ND	0.820	--		1
cis-1,3-Dichloropropene	ND	0.200	--	ND	0.908	--		1
4-Methyl-2-pentanone	ND	0.500	--	ND	2.05	--		1
trans-1,3-Dichloropropene	ND	0.200	--	ND	0.908	--		1
1,1,2-Trichloroethane	ND	0.200	--	ND	1.09	--		1
Toluene	ND	0.200	--	ND	0.754	--		1
1,3-Dichloropropane	ND	0.200	--	ND	0.924	--		1
2-Hexanone	ND	0.200	--	ND	0.820	--		1
Dibromochloromethane	ND	0.200	--	ND	1.70	--		1
1,2-Dibromoethane	ND	0.200	--	ND	1.54	--		1
Butyl acetate	ND	0.500	--	ND	2.38	--		1
Octane	ND	0.200	--	ND	0.934	--		1
Tetrachloroethene	ND	0.200	--	ND	1.36	--		1
1,1,1,2-Tetrachloroethane	ND	0.200	--	ND	1.37	--		1
Chlorobenzene	ND	0.200	--	ND	0.921	--		1
Ethylbenzene	ND	0.200	--	ND	0.869	--		1
p/m-Xylene	ND	0.400	--	ND	1.74	--		1
Bromoform	ND	0.200	--	ND	2.07	--		1
Styrene	ND	0.200	--	ND	0.852	--		1
1,1,2,2-Tetrachloroethane	ND	0.200	--	ND	1.37	--		1

Project Name: BATCH CANISTER CERTIFICATION
Project Number: CANISTER QC BAT
Lab Number: L2102590
Report Date: 02/08/21

Air Canister Certification Results

Lab ID: L2102590-08
Client ID: CAN 1843 SHELF 36
Sample Location:

Date Collected: 01/18/21 09:00
Date Received: 01/18/21
Field Prep: Not Specified

Sample Depth:

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
Volatile Organics in Air - Mansfield Lab								
o-Xylene	ND	0.200	--	ND	0.869	--		1
1,2,3-Trichloropropane	ND	0.200	--	ND	1.21	--		1
Nonane	ND	0.200	--	ND	1.05	--		1
Isopropylbenzene	ND	0.200	--	ND	0.983	--		1
Bromobenzene	ND	0.200	--	ND	0.793	--		1
2-Chlorotoluene	ND	0.200	--	ND	1.04	--		1
n-Propylbenzene	ND	0.200	--	ND	0.983	--		1
4-Chlorotoluene	ND	0.200	--	ND	1.04	--		1
4-Ethyltoluene	ND	0.200	--	ND	0.983	--		1
1,3,5-Trimethylbenzene	ND	0.200	--	ND	0.983	--		1
tert-Butylbenzene	ND	0.200	--	ND	1.10	--		1
1,2,4-Trimethylbenzene	ND	0.200	--	ND	0.983	--		1
Decane	ND	0.200	--	ND	1.16	--		1
Benzyl chloride	ND	0.200	--	ND	1.04	--		1
1,3-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
1,4-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
sec-Butylbenzene	ND	0.200	--	ND	1.10	--		1
p-Isopropyltoluene	ND	0.200	--	ND	1.10	--		1
1,2-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
n-Butylbenzene	ND	0.200	--	ND	1.10	--		1
1,2-Dibromo-3-chloropropane	ND	0.200	--	ND	1.93	--		1
Undecane	ND	0.200	--	ND	1.28	--		1
Dodecane	ND	0.200	--	ND	1.39	--		1
1,2,4-Trichlorobenzene	ND	0.200	--	ND	1.48	--		1
Naphthalene	ND	0.200	--	ND	1.05	--		1
1,2,3-Trichlorobenzene	ND	0.200	--	ND	1.48	--		1
Hexachlorobutadiene	ND	0.200	--	ND	2.13	--		1

Project Name: BATCH CANISTER CERTIFICATION
Project Number: CANISTER QC BAT
Lab Number: L2102590
Report Date: 02/08/21

Air Canister Certification Results

Lab ID: L2102590-08
Client ID: CAN 1843 SHELF 36
Sample Location:

Date Collected: 01/18/21 09:00
Date Received: 01/18/21
Field Prep: Not Specified

Sample Depth:

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
Volatile Organics in Air - Mansfield Lab								

	Results	Qualifier	Units	RDL	Dilution Factor
Tentatively Identified Compounds					

No Tentatively Identified Compounds

Internal Standard	% Recovery	Qualifier	Acceptance Criteria
1,4-Difluorobenzene	97		60-140
Bromochloromethane	98		60-140
chlorobenzene-d5	95		60-140

Project Name: BATCH CANISTER CERTIFICATION
Project Number: CANISTER QC BAT
Lab Number: L2102590
Report Date: 02/08/21

Air Canister Certification Results

Lab ID: L2102590-08
Client ID: CAN 1843 SHELF 36
Sample Location:

Date Collected: 01/18/21 09:00
Date Received: 01/18/21
Field Prep: Not Specified

Sample Depth:
Matrix: Air
Anaytical Method: 48,TO-15-SIM
Analytical Date: 01/20/21 21:24
Analyst: TS

	ppbV			ug/m3				
Parameter	**Results**	**RL**	**MDL**	**Results**	**RL**	**MDL**	**Qualifier**	**Dilution Factor**
Volatile Organics in Air by SIM - Mansfield Lab								
Dichlorodifluoromethane	ND	0.200	--	ND	0.989	--		1
Chloromethane	ND	0.200	--	ND	0.413	--		1
Freon-114	ND	0.050	--	ND	0.349	--		1
Vinyl chloride	ND	0.020	--	ND	0.051	--		1
1,3-Butadiene	ND	0.020	--	ND	0.044	--		1
Bromomethane	ND	0.020	--	ND	0.078	--		1
Chloroethane	ND	0.100	--	ND	0.264	--		1
Acrolein	ND	0.050	--	ND	0.115	--		1
Acetone	ND	1.00	--	ND	2.38	--		1
Trichlorofluoromethane	ND	0.050	--	ND	0.281	--		1
Acrylonitrile	ND	0.500	--	ND	1.09	--		1
1,1-Dichloroethene	ND	0.020	--	ND	0.079	--		1
Methylene chloride	ND	0.500	--	ND	1.74	--		1
Freon-113	ND	0.050	--	ND	0.383	--		1
trans-1,2-Dichloroethene	ND	0.020	--	ND	0.079	--		1
1,1-Dichloroethane	ND	0.020	--	ND	0.081	--		1
Methyl tert butyl ether	ND	0.200	--	ND	0.721	--		1
2-Butanone	ND	0.500	--	ND	1.47	--		1
cis-1,2-Dichloroethene	ND	0.020	--	ND	0.079	--		1
Chloroform	ND	0.020	--	ND	0.098	--		1
1,2-Dichloroethane	ND	0.020	--	ND	0.081	--		1
1,1,1-Trichloroethane	ND	0.020	--	ND	0.109	--		1
Benzene	ND	0.100	--	ND	0.319	--		1
Carbon tetrachloride	ND	0.020	--	ND	0.126	--		1

Project Name: BATCH CANISTER CERTIFICATION **Lab Number:** L2102590

Project Number: CANISTER QC BAT **Report Date:** 02/08/21

Air Canister Certification Results

Lab ID: L2102590-08
Client ID: CAN 1843 SHELF 36
Sample Location:

Date Collected: 01/18/21 09:00
Date Received: 01/18/21
Field Prep: Not Specified

Sample Depth:

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
Volatile Organics in Air by SIM - Mansfield Lab								
1,2-Dichloropropane	ND	0.020	--	ND	0.092	--		1
Bromodichloromethane	ND	0.020	--	ND	0.134	--		1
1,4-Dioxane	ND	0.100	--	ND	0.360	--		1
Trichloroethene	ND	0.020	--	ND	0.107	--		1
cis-1,3-Dichloropropene	ND	0.020	--	ND	0.091	--		1
4-Methyl-2-pentanone	ND	0.500	--	ND	2.05	--		1
trans-1,3-Dichloropropene	ND	0.020	--	ND	0.091	--		1
1,1,2-Trichloroethane	ND	0.020	--	ND	0.109	--		1
Toluene	ND	0.050	--	ND	0.188	--		1
Dibromochloromethane	ND	0.020	--	ND	0.170	--		1
1,2-Dibromoethane	ND	0.020	--	ND	0.154	--		1
Tetrachloroethene	ND	0.020	--	ND	0.136	--		1
1,1,1,2-Tetrachloroethane	ND	0.020	--	ND	0.137	--		1
Chlorobenzene	ND	0.100	--	ND	0.461	--		1
Ethylbenzene	ND	0.020	--	ND	0.087	--		1
p/m-Xylene	ND	0.040	--	ND	0.174	--		1
Bromoform	ND	0.020	--	ND	0.207	--		1
Styrene	ND	0.020	--	ND	0.085	--		1
1,1,2,2-Tetrachloroethane	ND	0.020	--	ND	0.137	--		1
o-Xylene	ND	0.020	--	ND	0.087	--		1
Isopropylbenzene	ND	0.200	--	ND	0.983	--		1
4-Ethyltoluene	ND	0.020	--	ND	0.098	--		1
1,3,5-Trimethybenzene	ND	0.020	--	ND	0.098	--		1
1,2,4-Trimethylbenzene	ND	0.020	--	ND	0.098	--		1
Benzyl chloride	ND	0.200	--	ND	1.04	--		1
1,3-Dichlorobenzene	ND	0.020	--	ND	0.120	--		1
1,4-Dichlorobenzene	ND	0.020	--	ND	0.120	--		1

Project Name: BATCH CANISTER CERTIFICATION **Lab Number:** L2102590

Project Number: CANISTER QC BAT **Report Date:** 02/08/21

Air Canister Certification Results

Lab ID: L2102590-08
Client ID: CAN 1843 SHELF 36
Sample Location:

Date Collected: 01/18/21 09:00
Date Received: 01/18/21
Field Prep: Not Specified

Sample Depth:

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
Volatile Organics in Air by SIM - Mansfield Lab								
sec-Butylbenzene	ND	0.200	--	ND	1.10	--		1
p-Isopropyltoluene	ND	0.200	--	ND	1.10	--		1
1,2-Dichlorobenzene	ND	0.020	--	ND	0.120	--		1
n-Butylbenzene	ND	0.200	--	ND	1.10	--		1
1,2,4-Trichlorobenzene	ND	0.050	--	ND	0.371	--		1
Naphthalene	ND	0.050	--	ND	0.262	--		1
1,2,3-Trichlorobenzene	ND	0.050	--	ND	0.371	--		1
Hexachlorobutadiene	ND	0.050	--	ND	0.533	--		1

Internal Standard	% Recovery	Qualifier	Acceptance Criteria
1,4-difluorobenzene	99		60-140
bromochloromethane	100		60-140
chlorobenzene-d5	96		60-140

Project Name: BATCH CANISTER CERTIFICATION
Project Number: CANISTER QC BAT
Lab Number: L2102738
Report Date: 02/08/21

Air Canister Certification Results

Lab ID: L2102738-05
Client ID: CAN 1885 SHELF 49
Sample Location:

Date Collected: 01/18/21 16:00
Date Received: 01/19/21
Field Prep: Not Specified

Sample Depth:
Matrix: Air
Anaytical Method: 48,TO-15
Analytical Date: 01/21/21 02:02
Analyst: TS

	ppbV			ug/m3				
Parameter	**Results**	**RL**	**MDL**	**Results**	**RL**	**MDL**	**Qualifier**	**Dilution Factor**
Volatile Organics in Air - Mansfield Lab								
Chlorodifluoromethane	ND	0.200	--	ND	0.707	--		1
Propylene	ND	0.500	--	ND	0.861	--		1
Propane	ND	0.500	--	ND	0.902	--		1
Dichlorodifluoromethane	ND	0.200	--	ND	0.989	--		1
Chloromethane	ND	0.200	--	ND	0.413	--		1
Freon-114	ND	0.200	--	ND	1.40	--		1
Methanol	ND	5.00	--	ND	6.55	--		1
Vinyl chloride	ND	0.200	--	ND	0.511	--		1
1,3-Butadiene	ND	0.200	--	ND	0.442	--		1
Butane	ND	0.200	--	ND	0.475	--		1
Bromomethane	ND	0.200	--	ND	0.777	--		1
Chloroethane	ND	0.200	--	ND	0.528	--		1
Ethanol	ND	5.00	--	ND	9.42	--		1
Dichlorofluoromethane	ND	0.200	--	ND	0.842	--		1
Vinyl bromide	ND	0.200	--	ND	0.874	--		1
Acrolein	ND	0.500	--	ND	1.15	--		1
Acetone	ND	1.00	--	ND	2.38	--		1
Acetonitrile	ND	0.200	--	ND	0.336	--		1
Trichlorofluoromethane	ND	0.200	--	ND	1.12	--		1
Isopropanol	ND	0.500	--	ND	1.23	--		1
Acrylonitrile	ND	0.500	--	ND	1.09	--		1
Pentane	ND	0.200	--	ND	0.590	--		1
Ethyl ether	ND	0.200	--	ND	0.606	--		1
1,1-Dichloroethene	ND	0.200	--	ND	0.793	--		1

Project Name: BATCH CANISTER CERTIFICATION
Project Number: CANISTER QC BAT
Lab Number: L2102738
Report Date: 02/08/21

Air Canister Certification Results

Lab ID: L2102738-05
Client ID: CAN 1885 SHELF 49
Sample Location:

Date Collected: 01/18/21 16:00
Date Received: 01/19/21
Field Prep: Not Specified

Sample Depth:

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
Volatile Organics in Air - Mansfield Lab								
Tertiary butyl Alcohol	ND	0.500	--	ND	1.52	--		1
Methylene chloride	ND	0.500	--	ND	1.74	--		1
3-Chloropropene	ND	0.200	--	ND	0.626	--		1
Carbon disulfide	ND	0.200	--	ND	0.623	--		1
Freon-113	ND	0.200	--	ND	1.53	--		1
trans-1,2-Dichloroethene	ND	0.200	--	ND	0.793	--		1
1,1-Dichloroethane	ND	0.200	--	ND	0.809	--		1
Methyl tert butyl ether	ND	0.200	--	ND	0.721	--		1
Vinyl acetate	ND	1.00	--	ND	3.52	--		1
2-Butanone	ND	0.500	--	ND	1.47	--		1
Xylenes, total	ND	0.600	--	ND	0.869	--		1
cis-1,2-Dichloroethene	ND	0.200	--	ND	0.793	--		1
Ethyl Acetate	ND	0.500	--	ND	1.80	--		1
Chloroform	ND	0.200	--	ND	0.977	--		1
Tetrahydrofuran	ND	0.500	--	ND	1.47	--		1
2,2-Dichloropropane	ND	0.200	--	ND	0.924	--		1
1,2-Dichloroethane	ND	0.200	--	ND	0.809	--		1
n-Hexane	ND	0.200	--	ND	0.705	--		1
Diisopropyl ether	ND	0.200	--	ND	0.836	--		1
tert-Butyl Ethyl Ether	ND	0.200	--	ND	0.836	--		1
1,2-Dichloroethene (total)	ND	1.00	--	ND	1.00	--		1
1,1,1-Trichloroethane	ND	0.200	--	ND	1.09	--		1
1,1-Dichloropropene	ND	0.200	--	ND	0.908	--		1
Benzene	ND	0.200	--	ND	0.639	--		1
Carbon tetrachloride	ND	0.200	--	ND	1.26	--		1
Cyclohexane	ND	0.200	--	ND	0.688	--		1
tert-Amyl Methyl Ether	ND	0.200	--	ND	0.836	--		1

Project Name: BATCH CANISTER CERTIFICATION **Lab Number:** L2102738

Project Number: CANISTER QC BAT **Report Date:** 02/08/21

Air Canister Certification Results

Lab ID: L2102738-05
Client ID: CAN 1885 SHELF 49
Sample Location:

Date Collected: 01/18/21 16:00
Date Received: 01/19/21
Field Prep: Not Specified

Sample Depth:

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
Volatile Organics in Air - Mansfield Lab								
Dibromomethane	ND	0.200	--	ND	1.42	--		1
1,2-Dichloropropane	ND	0.200	--	ND	0.924	--		1
Bromodichloromethane	ND	0.200	--	ND	1.34	--		1
1,4-Dioxane	ND	0.200	--	ND	0.721	--		1
Trichloroethene	ND	0.200	--	ND	1.07	--		1
2,2,4-Trimethylpentane	ND	0.200	--	ND	0.934	--		1
Methyl Methacrylate	ND	0.500	--	ND	2.05	--		1
Heptane	ND	0.200	--	ND	0.820	--		1
cis-1,3-Dichloropropene	ND	0.200	--	ND	0.908	--		1
4-Methyl-2-pentanone	ND	0.500	--	ND	2.05	--		1
trans-1,3-Dichloropropene	ND	0.200	--	ND	0.908	--		1
1,1,2-Trichloroethane	ND	0.200	--	ND	1.09	--		1
Toluene	ND	0.200	--	ND	0.754	--		1
1,3-Dichloropropane	ND	0.200	--	ND	0.924	--		1
2-Hexanone	ND	0.200	--	ND	0.820	--		1
Dibromochloromethane	ND	0.200	--	ND	1.70	--		1
1,2-Dibromoethane	ND	0.200	--	ND	1.54	--		1
Butyl acetate	ND	0.500	--	ND	2.38	--		1
Octane	ND	0.200	--	ND	0.934	--		1
Tetrachloroethene	ND	0.200	--	ND	1.36	--		1
1,1,1,2-Tetrachloroethane	ND	0.200	--	ND	1.37	--		1
Chlorobenzene	ND	0.200	--	ND	0.921	--		1
Ethylbenzene	ND	0.200	--	ND	0.869	--		1
p/m-Xylene	ND	0.400	--	ND	1.74	--		1
Bromoform	ND	0.200	--	ND	2.07	--		1
Styrene	ND	0.200	--	ND	0.852	--		1
1,1,2,2-Tetrachloroethane	ND	0.200	--	ND	1.37	--		1

Project Name: BATCH CANISTER CERTIFICATION
Project Number: CANISTER QC BAT
Lab Number: L2102738
Report Date: 02/08/21

Air Canister Certification Results

Lab ID: L2102738-05
Client ID: CAN 1885 SHELF 49
Sample Location:

Date Collected: 01/18/21 16:00
Date Received: 01/19/21
Field Prep: Not Specified

Sample Depth:

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
Volatile Organics in Air - Mansfield Lab								
o-Xylene	ND	0.200	--	ND	0.869	--		1
1,2,3-Trichloropropane	ND	0.200	--	ND	1.21	--		1
Nonane	ND	0.200	--	ND	1.05	--		1
Isopropylbenzene	ND	0.200	--	ND	0.983	--		1
Bromobenzene	ND	0.200	--	ND	0.793	--		1
2-Chlorotoluene	ND	0.200	--	ND	1.04	--		1
n-Propylbenzene	ND	0.200	--	ND	0.983	--		1
4-Chlorotoluene	ND	0.200	--	ND	1.04	--		1
4-Ethyltoluene	ND	0.200	--	ND	0.983	--		1
1,3,5-Trimethylbenzene	ND	0.200	--	ND	0.983	--		1
tert-Butylbenzene	ND	0.200	--	ND	1.10	--		1
1,2,4-Trimethylbenzene	ND	0.200	--	ND	0.983	--		1
Decane	ND	0.200	--	ND	1.16	--		1
Benzyl chloride	ND	0.200	--	ND	1.04	--		1
1,3-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
1,4-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
sec-Butylbenzene	ND	0.200	--	ND	1.10	--		1
p-Isopropyltoluene	ND	0.200	--	ND	1.10	--		1
1,2-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
n-Butylbenzene	ND	0.200	--	ND	1.10	--		1
1,2-Dibromo-3-chloropropane	ND	0.200	--	ND	1.93	--		1
Undecane	ND	0.200	--	ND	1.28	--		1
Dodecane	ND	0.200	--	ND	1.39	--		1
1,2,4-Trichlorobenzene	ND	0.200	--	ND	1.48	--		1
Naphthalene	ND	0.200	--	ND	1.05	--		1
1,2,3-Trichlorobenzene	ND	0.200	--	ND	1.48	--		1
Hexachlorobutadiene	ND	0.200	--	ND	2.13	--		1

Project Name: BATCH CANISTER CERTIFICATION
Project Number: CANISTER QC BAT
Lab Number: L2102738
Report Date: 02/08/21

Air Canister Certification Results

Lab ID: L2102738-05
Client ID: CAN 1885 SHELF 49
Sample Location:

Date Collected: 01/18/21 16:00
Date Received: 01/19/21
Field Prep: Not Specified

Sample Depth:

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
Volatile Organics in Air - Mansfield Lab								

	Results	Qualifier	Units	RDL	Dilution Factor
Tentatively Identified Compounds					

No Tentatively Identified Compounds

Internal Standard	% Recovery	Qualifier	Acceptance Criteria
1,4-Difluorobenzene	97		60-140
Bromochloromethane	99		60-140
chlorobenzene-d5	95		60-140

Project Name: BATCH CANISTER CERTIFICATION
Project Number: CANISTER QC BAT
Lab Number: L2102738
Report Date: 02/08/21

Air Canister Certification Results

Lab ID: L2102738-05
Client ID: CAN 1885 SHELF 49
Sample Location:

Date Collected: 01/18/21 16:00
Date Received: 01/19/21
Field Prep: Not Specified

Sample Depth:
Matrix: Air
Anaytical Method: 48,TO-15-SIM
Analytical Date: 01/21/21 02:02
Analyst: TS

	ppbV			ug/m3				
Parameter	**Results**	**RL**	**MDL**	**Results**	**RL**	**MDL**	**Qualifier**	**Dilution Factor**
Volatile Organics in Air by SIM - Mansfield Lab								
Dichlorodifluoromethane	ND	0.200	--	ND	0.989	--		1
Chloromethane	ND	0.200	--	ND	0.413	--		1
Freon-114	ND	0.050	--	ND	0.349	--		1
Vinyl chloride	ND	0.020	--	ND	0.051	--		1
1,3-Butadiene	ND	0.020	--	ND	0.044	--		1
Bromomethane	ND	0.020	--	ND	0.078	--		1
Chloroethane	ND	0.100	--	ND	0.264	--		1
Acrolein	ND	0.050	--	ND	0.115	--		1
Acetone	ND	1.00	--	ND	2.38	--		1
Trichlorofluoromethane	ND	0.050	--	ND	0.281	--		1
Acrylonitrile	ND	0.500	--	ND	1.09	--		1
1,1-Dichloroethene	ND	0.020	--	ND	0.079	--		1
Methylene chloride	ND	0.500	--	ND	1.74	--		1
Freon-113	ND	0.050	--	ND	0.383	--		1
trans-1,2-Dichloroethene	ND	0.020	--	ND	0.079	--		1
1,1-Dichloroethane	ND	0.020	--	ND	0.081	--		1
Methyl tert butyl ether	ND	0.200	--	ND	0.721	--		1
2-Butanone	ND	0.500	--	ND	1.47	--		1
cis-1,2-Dichloroethene	ND	0.020	--	ND	0.079	--		1
Chloroform	ND	0.020	--	ND	0.098	--		1
1,2-Dichloroethane	ND	0.020	--	ND	0.081	--		1
1,1,1-Trichloroethane	ND	0.020	--	ND	0.109	--		1
Benzene	ND	0.100	--	ND	0.319	--		1
Carbon tetrachloride	ND	0.020	--	ND	0.126	--		1

Project Name: BATCH CANISTER CERTIFICATION **Lab Number:** L2102738

Project Number: CANISTER QC BAT **Report Date:** 02/08/21

Air Canister Certification Results

Lab ID: L2102738-05
Client ID: CAN 1885 SHELF 49
Sample Location:

Date Collected: 01/18/21 16:00
Date Received: 01/19/21
Field Prep: Not Specified

Sample Depth:

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
Volatile Organics in Air by SIM - Mansfield Lab								
1,2-Dichloropropane	ND	0.020	--	ND	0.092	--		1
Bromodichloromethane	ND	0.020	--	ND	0.134	--		1
1,4-Dioxane	ND	0.100	--	ND	0.360	--		1
Trichloroethene	ND	0.020	--	ND	0.107	--		1
cis-1,3-Dichloropropene	ND	0.020	--	ND	0.091	--		1
4-Methyl-2-pentanone	ND	0.500	--	ND	2.05	--		1
trans-1,3-Dichloropropene	ND	0.020	--	ND	0.091	--		1
1,1,2-Trichloroethane	ND	0.020	--	ND	0.109	--		1
Toluene	ND	0.050	--	ND	0.188	--		1
Dibromochloromethane	ND	0.020	--	ND	0.170	--		1
1,2-Dibromoethane	ND	0.020	--	ND	0.154	--		1
Tetrachloroethene	ND	0.020	--	ND	0.136	--		1
1,1,1,2-Tetrachloroethane	ND	0.020	--	ND	0.137	--		1
Chlorobenzene	ND	0.100	--	ND	0.461	--		1
Ethylbenzene	ND	0.020	--	ND	0.087	--		1
p/m-Xylene	ND	0.040	--	ND	0.174	--		1
Bromoform	ND	0.020	--	ND	0.207	--		1
Styrene	ND	0.020	--	ND	0.085	--		1
1,1,2,2-Tetrachloroethane	ND	0.020	--	ND	0.137	--		1
o-Xylene	ND	0.020	--	ND	0.087	--		1
Isopropylbenzene	ND	0.200	--	ND	0.983	--		1
4-Ethyltoluene	ND	0.020	--	ND	0.098	--		1
1,3,5-Trimethybenzene	ND	0.020	--	ND	0.098	--		1
1,2,4-Trimethylbenzene	ND	0.020	--	ND	0.098	--		1
Benzyl chloride	ND	0.200	--	ND	1.04	--		1
1,3-Dichlorobenzene	ND	0.020	--	ND	0.120	--		1
1,4-Dichlorobenzene	ND	0.020	--	ND	0.120	--		1

Project Name: BATCH CANISTER CERTIFICATION **Lab Number:** L2102738

Project Number: CANISTER QC BAT **Report Date:** 02/08/21

Air Canister Certification Results

Lab ID: L2102738-05
Client ID: CAN 1885 SHELF 49
Sample Location:

Date Collected: 01/18/21 16:00
Date Received: 01/19/21
Field Prep: Not Specified

Sample Depth:

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
Volatile Organics in Air by SIM - Mansfield Lab								
sec-Butylbenzene	ND	0.200	--	ND	1.10	--		1
p-Isopropyltoluene	ND	0.200	--	ND	1.10	--		1
1,2-Dichlorobenzene	ND	0.020	--	ND	0.120	--		1
n-Butylbenzene	ND	0.200	--	ND	1.10	--		1
1,2,4-Trichlorobenzene	ND	0.050	--	ND	0.371	--		1
Naphthalene	ND	0.050	--	ND	0.262	--		1
1,2,3-Trichlorobenzene	ND	0.050	--	ND	0.371	--		1
Hexachlorobutadiene	ND	0.050	--	ND	0.533	--		1

Internal Standard	% Recovery	Qualifier	Acceptance Criteria
1,4-difluorobenzene	99		60-140
bromochloromethane	101		60-140
chlorobenzene-d5	96		60-140

Project Name: LOCKHEED MARTIN
Project Number: 60552044.24

Lab Number: L2104188
Report Date: 02/08/21

Sample Receipt and Container Information

Were project specific reporting limits specified? YES

Cooler Information

Cooler	Custody Seal
NA	Present/Intact

Container Information

Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)
L2104188-01A	Canister - 6 Liter	NA	NA			Y	Absent		MCP-TO15-SIM(30)
L2104188-02A	Canister - 6 Liter	NA	NA			Y	Absent		MCP-TO15-SIM(30)
L2104188-03A	Canister - 6 Liter	NA	NA			Y	Absent		MCP-TO15-SIM(30)
L2104188-04A	Canister - 6 Liter	NA	NA			Y	Absent		MCP-TO15-SIM(30)
L2104188-05A	Canister - 6 Liter	NA	NA			Y	Absent		MCP-TO15-SIM(30)
L2104188-06A	Canister - 6 Liter	NA	NA			Y	Absent		MCP-TO15-SIM(30)
L2104188-07A	Canister - 6 Liter	NA	NA			Y	Absent		MCP-TO15-SIM(30)
L2104188-08A	Canister - 6 Liter	NA	NA			Y	Absent		MCP-TO15-SIM(30)
L2104188-09A	Canister - 6 Liter	NA	NA			Y	Absent		CLEAN-FEE()

*Values in parentheses indicate holding time in days

Project Name:	LOCKHEED MARTIN	**Lab Number:**	L2104188
Project Number:	60552044.24	**Report Date:**	02/08/21

GLOSSARY

Acronyms

DL - Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the limit of quantitation (LOQ). The DL includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)

EDL - Estimated Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The EDL includes any adjustments from dilutions, concentrations or moisture content, where applicable. The use of EDLs is specific to the analysis of PAHs using Solid-Phase Microextraction (SPME).

EMPC - Estimated Maximum Possible Concentration: The concentration that results from the signal present at the retention time of an analyte when the ions meet all of the identification criteria except the ion abundance ratio criteria. An EMPC is a worst-case estimate of the concentration.

EPA - Environmental Protection Agency.

LCS - Laboratory Control Sample: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.

LCSD - Laboratory Control Sample Duplicate: Refer to LCS.

LFB - Laboratory Fortified Blank: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.

LOD - Limit of Detection: This value represents the level to which a target analyte can reliably be detected for a specific analyte in a specific matrix by a specific method. The LOD includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)

LOQ - Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)

Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)

MDL - Method Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The MDL includes any adjustments from dilutions, concentrations or moisture content, where applicable.

MS - Matrix Spike Sample: A sample prepared by adding a known mass of target analyte to a specified amount of matrix sample for which an independent estimate of target analyte concentration is available. For Method 332.0, the spike recovery is calculated using the native concentration, including estimated values.

MSD - Matrix Spike Sample Duplicate: Refer to MS.

NA - Not Applicable.

NC - Not Calculated: Term is utilized when one or more of the results utilized in the calculation are non-detect at the parameter's reporting unit.

NDPA/DPA - N-Nitrosodiphenylamine/Diphenylamine.

NI - Not Ignitable.

NP - Non-Plastic: Term is utilized for the analysis of Atterberg Limits in soil.

NR - No Results: Term is utilized when 'No Target Compounds Requested' is reported for the analysis of Volatile or Semivolatile Organic TIC only requests.

RL - Reporting Limit: The value at which an instrument can accurately measure an analyte at a specific concentration. The RL includes any adjustments from dilutions, concentrations or moisture content, where applicable.

RPD - Relative Percent Difference: The results from matrix and/or matrix spike duplicates are primarily designed to assess the precision of analytical results in a given matrix and are expressed as relative percent difference (RPD). Values which are less than five times the reporting limit for any individual parameter are evaluated by utilizing the absolute difference between the values; although the RPD value will be provided in the report.

SRM - Standard Reference Material: A reference sample of a known or certified value that is of the same or similar matrix as the associated field samples.

STLP - Semi-dynamic Tank Leaching Procedure per EPA Method 1315.

TEF - Toxic Equivalency Factors: The values assigned to each dioxin and furan to evaluate their toxicity relative to 2,3,7,8-TCDD.

TEQ - Toxic Equivalent: The measure of a sample's toxicity derived by multiplying each dioxin and furan by its corresponding TEF and then summing the resulting values.

TIC - Tentatively Identified Compound: A compound that has been identified to be present and is not part of the target compound list (TCL) for the method and/or program. All TICs are qualitatively identified and reported as estimated concentrations.

Report Format: Data Usability Report

Project Name:	LOCKHEED MARTIN	**Lab Number:**	L2104188
Project Number:	60552044.24	**Report Date:**	02/08/21

Footnotes

1 - The reference for this analyte should be considered modified since this analyte is absent from the target analyte list of the original method.

Terms

Analytical Method: Both the document from which the method originates and the analytical reference method. (Example: EPA 8260B is shown as 1,8260B.) The codes for the reference method documents are provided in the References section of the Addendum.

Difference: With respect to Total Oxidizable Precursor (TOP) Assay analysis, the difference is defined as the Post-Treatment value minus the Pre-Treatment value.

Final pH: As it pertains to Sample Receipt & Container Information section of the report, Final pH reflects pH of container determined after adjustment at the laboratory, if applicable. If no adjustment required, value reflects Initial pH.

Frozen Date/Time: With respect to Volatile Organics in soil, Frozen Date/Time reflects the date/time at which associated Reagent Water-preserved vials were initially frozen. Note: If frozen date/time is beyond 48 hours from sample collection, value will be reflected in 'bold'.

Initial pH: As it pertains to Sample Receipt & Container Information section of the report, Initial pH reflects pH of container determined upon receipt, if applicable.

PAH Total: With respect to Alkylated PAH analyses, the 'PAHs, Total' result is defined as the summation of results for all or a subset of the following compounds: Naphthalene, C1-C4 Naphthalenes, 2-Methylnaphthalene, 1-Methylnaphthalene, Biphenyl, Acenaphthylene, Acenaphthene, Fluorene, C1-C3 Fluorenes, Phenanthrene, C1-C4 Phenanthrenes/Anthracenes, Anthracene, Fluoranthene, Pyrene, C1-C4 Fluoranthenes/Pyrenes, Benz(a)anthracene, Chrysene, C1-C4 Chrysenes, Benzo(b)fluoranthene, Benzo(j)+(k)fluoranthene, Benzo(e)pyrene, Benzo(a)pyrene, Perylene, Indeno(1,2,3-cd)pyrene, Dibenz(ah)+(ac)anthracene, Benzo(g,h,i)perylene. If a 'Total' result is requested, the results of its individual components will also be reported.

PFAS Total: With respect to PFAS analyses, the 'PFAS, Total (5)' result is defined as the summation of results for: PFHpA, PFHxS, PFOA, PFNA and PFOS. In addition, the 'PFAS, Total (6)' result is defined as the summation of results at or above the RL for: PFHpA, PFHxS, PFOA, PFNA, PFDA and PFOS. (Note: 'PFAS, Total (6)' is applicable to MassDEP DW compliance analysis only.). If a 'Total' result is requested, the results of its individual components will also be reported.

The target compound Chlordane (CAS No. 57-74-9) is reported for GC ECD analyses. Per EPA,this compound "refers to a mixture of chlordane isomers, other chlorinated hydrocarbons and numerous other components." (Reference: USEPA Toxicological Review of Chlordane, In Support of Summary Information on the Integrated Risk Information System (IRIS), December 1997.)

Total: With respect to Organic analyses, a 'Total' result is defined as the summation of results for individual isomers or Aroclors. If a 'Total' result is requested, the results of its individual components will also be reported. This is applicable to 'Total' results for methods 8260, 8081 and 8082.

Data Qualifiers

A - Spectra identified as "Aldol Condensates" are byproducts of the extraction/concentration procedures when acetone is introduced in the process.

B - The analyte was detected above the reporting limit in the associated method blank. Flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For MCP-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For DOD-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank AND the analyte was detected above one-half the reporting limit (or above the reporting limit for common lab contaminants) in the associated method blank. For NJ-Air-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte above the reporting limit. For NJ-related projects (excluding Air), flag only applies to associated field samples that have detectable concentrations of the analyte, which was detected above the reporting limit in the associated method blank or above five times the reporting limit for common lab contaminants (Phthalates, Acetone, Methylene Chloride, 2-Butanone).

C - Co-elution: The target analyte co-elutes with a known lab standard (i.e. surrogate, internal standards, etc.) for co-extracted analyses.

D - Concentration of analyte was quantified from diluted analysis. Flag only applies to field samples that have detectable concentrations of the analyte.

E - Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument.

F - The ratio of quantifier ion response to qualifier ion response falls outside of the laboratory criteria. Results are considered to be an estimated maximum concentration.

G - The concentration may be biased high due to matrix interferences (i.e, co-elution) with non-target compound(s). The result should be considered estimated.

H - The analysis of pH was performed beyond the regulatory-required holding time of 15 minutes from the time of sample collection.

I - The lower value for the two columns has been reported due to obvious interference.

J - Estimated value. This represents an estimated concentration for Tentatively Identified Compounds (TICs).

M - Reporting Limit (RL) exceeds the MCP CAM Reporting Limit for this analyte.

ND - Not detected at the reporting limit (RL) for the sample.

NJ - Presumptive evidence of compound. This represents an estimated concentration for Tentatively Identified Compounds (TICs), where

Report Format: Data Usability Report

Project Name:	LOCKHEED MARTIN	**Lab Number:**	L2104188
Project Number:	60552044.24	**Report Date:**	02/08/21

Data Qualifiers

the identification is based on a mass spectral library search.

P - The RPD between the results for the two columns exceeds the method-specified criteria.

Q - The quality control sample exceeds the associated acceptance criteria. For DOD-related projects, LCS and/or Continuing Calibration Standard exceedences are also qualified on all associated sample results. Note: This flag is not applicable for matrix spike recoveries when the sample concentration is greater than 4x the spike added or for batch duplicate RPD when the sample concentrations are less than 5x the RL. (Metals only.)

R - Analytical results are from sample re-analysis.

RE - Analytical results are from sample re-extraction.

S - Analytical results are from modified screening analysis.

Report Format: Data Usability Report

Project Name:	LOCKHEED MARTIN	**Lab Number:**	L2104188
Project Number:	60552044.24	**Report Date:**	02/08/21

REFERENCES

101 Compendium of Methods for the Determination of Toxic Organic Compounds in Ambient Air (EPA/625/R-96/010b:January 1999) with QC Requirements & Performance Standards for the Analysis of TO-15 under the Massachusetts Contingency Plan, WSC-CAM-IXB, July 2010.

LIMITATION OF LIABILITIES

Alpha Analytical performs services with reasonable care and diligence normal to the analytical testing laboratory industry. In the event of an error, the sole and exclusive responsibility of Alpha Analytical shall be to re-perform the work at it's own expense. In no event shall Alpha Analytical be held liable for any incidental, consequential or special damages, including but not limited to, damages in any way connected with the use of, interpretation of, information or analysis provided by Alpha Analytical.

We strongly urge our clients to comply with EPA protocol regarding sample volume, preservation, cooling, containers, sampling procedures, holding time and splitting of samples in the field.

Certification Information

The following analytes are not included in our Primary NELAP Scope of Accreditation:

Westborough Facility
EPA 624/624.1: m/p-xylene, o-xylene, Naphthalene
EPA 8260C: NPW: 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene, Azobenzene; SCM: Iodomethane (methyl iodide), 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene.
EPA 8270D: NPW: Dimethylnaphthalene,1,4-Diphenylhydrazine; SCM: Dimethylnaphthalene,1,4-Diphenylhydrazine.
SM4500: NPW: Amenable Cyanide; SCM: Total Phosphorus, TKN, NO2, NO3.

Mansfield Facility
SM 2540D: TSS
EPA 8082A: NPW: PCB: 1, 5, 31, 87,101, 110, 141, 151, 153, 180, 183, 187.
EPA TO-15: Halothane, 2,4,4-Trimethyl-2-pentene, 2,4,4-Trimethyl-1-pentene, Thiophene, 2-Methylthiophene, 3-Methylthiophene, 2-Ethylthiophene, 1,2,3-Trimethylbenzene, Indan, Indene, 1,2,4,5-Tetramethylbenzene, Benzothiophene, 1-Methylnaphthalene.
EPA TO-12 Non-methane organics
EPA 3C Fixed gases
Biological Tissue Matrix: EPA 3050B

The following analytes are included in our Massachusetts DEP Scope of Accreditation

Westborough Facility:

Drinking Water
EPA 300.0: Chloride, Nitrate-N, Fluoride, Sulfate; **EPA 353.2**: Nitrate-N, Nitrite-N; **SM4500NO3-F**: Nitrate-N, Nitrite-N; **SM4500F-C, SM4500CN-CE, EPA 180.1, SM2130B, SM4500Cl-D, SM2320B, SM2540C, SM4500H-B, SM4500NO2-B**
EPA 332: Perchlorate; **EPA 524.2:** THMs and VOCs; **EPA 504.1:** EDB, DBCP.
Microbiology: **SM9215B; SM9223-P/A, SM9223B-Colilert-QT,SM9222D**.

Non-Potable Water
SM4500H,B, EPA 120.1, SM2510B, SM2540C, SM2320B, SM4500CL-E, SM4500F-BC, SM4500NH3-BH: Ammonia-N and Kjeldahl-N, **EPA 350.1**: Ammonia-N, **LACHAT 10-107-06-1-B**: Ammonia-N, **EPA 351.1, SM4500NO3-F, EPA 353.2**: Nitrate-N**, SM4500P-E, SM4500P-B, E, SM4500SO4-E, SM5220D, EPA 410.4, SM5210B, SM5310C, SM4500CL-D, EPA 1664, EPA 420.1, SM4500-CN-CE, SM2540D, EPA 300: Chloride, Sulfate, Nitrate.**
EPA 624.1: Volatile Halocarbons & Aromatics,
EPA 608.3: Chlordane, Toxaphene, Aldrin, alpha-BHC, beta-BHC, gamma-BHC, delta-BHC, Dieldrin, DDD, DDE, DDT, Endosulfan I, Endosulfan II, Endosulfan sulfate, Endrin, Endrin Aldehyde, Heptachlor, Heptachlor Epoxide, PCBs
EPA 625.1: SVOC (Acid/Base/Neutral Extractables), **EPA 600/4-81-045**: PCB-Oil.
Microbiology: **SM9223B-Colilert-QT; Enterolert-QT, SM9221E, EPA 1600, EPA 1603.**

Mansfield Facility:

Drinking Water
EPA 200.7: Al, Ba, Cd, Cr, Cu, Fe, Mn, Ni, Na, Ag, Ca, Zn. **EPA 200.8:** Al, Sb, As, Ba, Be, Cd, Cr, Cu, Pb, Mn, Ni, Se, Ag, TL, Zn. **EPA 245.1** Hg.
EPA 522.

Non-Potable Water
EPA 200.7: Al, Sb, As, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Mo, Ni, K, Se, Ag, Na, Sr, TL, Ti, V, Zn.
EPA 200.8: Al, Sb**,** As, Be, Cd, Cr, Cu, Fe, Pb, Mn, Ni, K, Se, Ag, Na, TL, Zn.
EPA 245.1 Hg.
SM2340B

For a complete listing of analytes and methods, please contact your Alpha Project Manager.

AIR ANALYSIS

PAGE 1 OF 1

ALPHA ANALYTICAL — CHAIN OF CUSTODY

320 Forbes Blvd, Mansfield, MA 02048
TEL: 508-822-9300 FAX: 508-822-3288

Date Rec'd in Lab: 1/27/21

ALPHA Job #: L2104188

Client Information

Client: AECOM

Address: 250 Apollo Drive
Chelmsford, MA 01824

Phone: 978-905-2100

Fax: 978-905-2101

Email: lori.Herberich@aecom.com

☐ These samples have been previously analyzed by Alpha

Project Information

Project Name: Lakheed Martin

Project Location: Wilmington, MA

Project #: 60552044.24

Project Manager: Scott Olson

ALPHA Quote #: 2017-2022

Turn-Around Time

☐ Standard ☐ RUSH (only confirmed if pre-approved)

Date Due: Time:

Report Information - Data Deliverables

☐ FAX
☐ ADEx
Criteria Checker:
(Default based on Regulatory Criteria Indicated)
Other Formats:
☒ EMAIL (standard pdf report)
☐ Additional Deliverables:

Report to: (if different than Project Manager)
Lori Herberich &
Scott Olson

Billing Information

☐ Same as Client info PO #: 131560

Regulatory Requirements/Report Limits

State/Fed	Program	Res / Comm
Mass DEP	CAM	

Other Project Specific Requirements/Comments: TO-15 SIM: RLs must meet thresholds in AECOM Project QAPP (2017)

Project-Specific Target Compound List: ☐

Call Lori Herberich with questions 978-302-2174

All Columns Below Must Be Filled Out

ALPHA Lab ID (Lab Use Only)	Sample ID	COLLECTION End Date	Start Time	End Time	Initial Vacuum	Final Vacuum	Sample Matrix*	Sampler's Initials	Can Size	ID Can	ID - Flow Controller	TO-15	TO-15 SIM + freon 113	APH Solvent Non-petroleum HCs ☐	Fixed Gases	Sulfides & Mercaptans by TO-15	Sample Comments (i.e. PID)
04188-01	21A-AA1-1	1/26/21	0916	1622	-31.47	-4.97	AA	DP	6L	3478	01629	X					
02	~~21A-A~~ 21A-IA2-1	1/26/21	0928	1654	-30.62	-8.53	AA	DP	6L	3277	01464	X					
03	21A-IA3-1	1/26/21	0926	1700	-29.82	-9.15	AA	DP	6L	2302	00583	X					
04	21A-IA4-1	1/26/21	0925	1658	-30.56	-7.11	AA	DP	6L	3466	01650	X					
05	21A-IA7-1	1/26/21	0930	1656	-30.91	-8.63	AA	DP	6L	3372	0790	X					
06	21A-IA8-1	1/26/21	0922	1702	-30.34	-7.29	AA	DP	6L	950	0909	X					
07	21A-IA8-2	1/26/21	0922	1702	-30.30	-7.22	AA	DP	6L	2019	01652	X					
08	21A-IA9-1	1/26/21	0918	1705	-30.45	-7.84	AA	DP	6L	1564	0622	X					

*SAMPLE MATRIX CODES
AA = Ambient Air (Indoor/Outdoor)
SV = Soil Vapor/Landfill Gas/SVE
Other = Please Specify

Container Type: 6S

Please print clearly, legibly and completely. Samples can not be logged in and turnaround time clock will not start until any ambiguities are resolved. All samples submitted are subject to Alpha's Terms and Conditions. See reverse side.

Relinquished By:	Date/Time	Received By:	Date/Time:
	1/26 1823	AECOM Chelmsford	1/26 1823
AAL	1/27/21 1700		1/27/21 1149
	1/27/21 2000	Bezio AAL	1/27/21 1700
			1/27/21 2000 Bezio AAL 1/27/21 2043

1/27/21 2043

AECOM
250 Apollo Drive
Chelmsford, Massachusetts 01824

978.905.2100 tel
978.905.2101 fax

Memorandum

To	Scott Olson	Page	1
Subject	Data Validation Summary Lockheed Martin-Wilmington, MA Site Alpha Analytical SDG L2104188		
From	Lori Herberich		
Reviewed by	Kristin Rutherford		60552044.24
Date	February 8, 2021		

Data validation was performed on the data for seven indoor air samples and one ambient air sample collected at the Lockheed Martin site in Wilmington, MA on January 26, 2021. Alpha Analytical in Mansfield, MA analyzed the samples and reported the data in sample delivery group (SDG) L2104188.

The data review was performed with reference to Massachusetts Department of Environmental Protection (MADEP) document WSC-CAM-VIIA, *Quality Assurance and Quality Control Guidelines for the Acquisition and Reporting of Analytical Data in Support of Response Actions Conducted Under the Massachusetts Contingency Plan (MCP)*, Revision 2, January 19, 2017, MADEP Bureau of Waste Site Cleanup; MADEP *MCP Representativeness Evaluations and Data Usability Assessments*; Policy #WSC-07-350; September 19, 2007; the applicable MADEP Compendium of Analytical Methods performance standards; and the *Work Plan 2017-2022 Post-Temporary Solution Monitoring Program Former General Electric Site, 50 Fordham Road, Wilmington, MA, September 2017.* Current Region 1 data validation guidelines were also used as a reference during review of the data.

Data for the following samples were assessed:

Sample ID	Parameter
21A-AA1-1	VOCs by EPA Method TO-15 SIM
21A-IA2-1	
21A-IA3-1	
21A-IA4-1	
21A-IA7-1	
21A-IA8-1	
21A-IA8-2*	
21A-IA9-1	

*Field duplicate of 21A-IA8-1

DATA REVIEW ELEMENTS

The assessment was based on the following review elements:

- * Chain-of-custody (COC)/sample integrity
- * Holding times and sample preservation
- * Laboratory method blanks
- * Canister certification
- * GC/MS tuning#
- * Initial calibration/initial calibration and continuing calibration verifications#
- * Surrogate recoveries (%Rs)
- * Matrix duplicate (MD) results
- * Laboratory control sample (LCS) results
- * Field duplicate results
- * Internal standard performance
- * General reporting issues

The laboratory is required to completely and accurately narrate all quality control exceptions. The symbol (#) indicates that nonconformances concerning this review element are only described in the SDG case narrative since complete results for these review elements are not a required report deliverable. The symbol (*) indicates that all criteria were met, no issues were narrated, and/or no qualifications were required for these review elements.

General Reporting Issues

The MassDEP Analytical Protocol Certification Form was reviewed and indicates that the data have met the requirements for “Presumptive Certainty” status.

The total ion chromatograms were scanned for the ions associated with methyl acetate. This compound was not detected in the samples.

The Reporting Limits for the following compounds exceed the Project Action Limits, as indicated in the Work Plan:

Dibromochloromethane
1,2-Dibromoethane (Ethylene Dibromide)
Hexachlorobutadiene
1,1,2,2-Tetrachloroethane

APPENDIX I
PUBLIC NOTIFICATION DOCUMENTATION

Olson, Scott (Chelmsford)

From: Olson, Scott (Chelmsford)
Sent: Friday, August 14, 2020 12:54 PM
To: 'Ruben.Byerley@yrcfreight.com'; charles.castelluccio@gmail.com
Cc: Callahan, Nicole A.; Potter, Dylan (Chelmsford)
Subject: Notification of Groundwater Sampling - YRC Freight at 95 Concord Street - North Reading, MA - September-October 2020
Attachments: BWSC-123_Notif GW Sampling_Sept-Oct-2020.pdf

Ruben,

Attached please find a copy of BWSC-123 form providing notification of upcoming water level and groundwater sampling activities to be conducted on the property at 95 Concord Street in North Reading, MA.

- The activities detailed in the form will be conducted onsite between the approximate dates of **September 1 and October 31, 2020**.
- The activities will be conducted per the conditions of the Access Agreement between YRC Freight and Lockheed Martin Corporation.
- Wells that may be sampled include AE-106 S/M/D/R located in the woods/wetlands, and AE-111R located in the paved parking area at the facility.
- We will visit the wells periodically during the sampling event, specifically on **Friday September 4** to pre-purge Flute wells, and **Wednesday September 8** for site-wide water level measurements. We will then conduct the groundwater sampling of the wells on YRC property for 1-2 days [exact dates TBD] between **September 9 and October 1**.
- Access is only needed to the localized area at each well. Our personnel will place cones around the wells but will not disrupt traffic flow at the facility.
- Each visit will include 1-2 people with 1-2 vehicles for durations ranging from 1 to 8 hours.

We would like permission to measure the depth to groundwater in select monitoring wells on the property during our site-wide measurement round on **Wednesday September 8**.
If this is acceptable we can contact Chuck Castelluccio, whom I have copied on this email, to coordinate logistics for water level measurements as we have done in the past.

Dylan Potter (cell 508-333-2316) is the Field Lead for this work. He will notify Mike Day at the YRC Terminal of our work dates, and will coordinate the work directly with the Mike. If Mike Day is no longer the facility Manager, we will introduce ourselves to the new manager and explain the work that we do per the access agreement.

Nicole Callahan and I are available at the office should you have any questions.

Thank you.
Scott

Scott Olson, PG
Project Manager, Project Management Office
D +1-978-905-2351
M +1-978-846-5238
scott.olson@aeom.com

AECOM
250 Apollo Drive
Chelmsford, MA 01824, USA
T +1-978-905-2100
aecom.com

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NOTICE OF ENVIRONMENTAL SAMPLING

As required by 310 CMR 40.1403(10) of the Massachusetts Contingency Plan

BWSC 123

This Notice is Related to Release Tracking Number

03 | 0518

A. The address of the disposal site related to this Notice and Release Tracking Number (provided above):

1. Street Address: 50 Fordham Road

City/Town: Wilmington, MA Zip Code: 01887

B. This notice is being provided to the following party:

1. Name: Ruben Byerly

2. Street Address: 10990 Roe Avenue

City/Town: Overland Park, KS Zip Code: 66211-1213

C. This notice is being given to inform its recipient (the party listed in Section B):

☑ 1. That environmental sampling will be/has been conducted at property owned by the recipient of this notice.

☐ 2. Of the results of environmental sampling conducted at property owned by the recipient of this notice.

☐ 3. Check to indicate if the analytical results are attached. (If item 2. above is checked, the analytical results from the environmental sampling must be attached to this notice.)

D. Location of the property where the environmental sampling will be/has been conducted:

1. Street Address: 95 Concord Street

City/Town: North Reading, MA Zip Code: 01864

2. MCP phase of work during which the sampling will be/has been conducted:

☐ Immediate Response Action
☐ Release Abatement Measure
☐ Utility-related Abatement Measure
☐ Phase I Initial Site Investigation
☐ Phase II Comprehensive Site Assessment
☐ Phase III Feasibility Evaluation
☐ Phase IV Remedy Implementation Plan
☐ Phase V/Remedy Operation Status
☐ Post-Class C Operation, Maintenance and Monitoring
☑ Other Post-Temporary Solution (specify)

3. Description of property where sampling will be/has been conducted:

☐ residential ☑ commerical ☑ industrial ☐ school/playground ☐ Other _____ (specify)

4. Description of the sampling locations and types (e.g., soil, groundwater) to the extent known at the time of this notice.

See attached supplemental page for details of environmental work to be completed ~ September 1- October 31, 2020

E. Contact information related to the party providing this notice:

Contact Name: Scott Olson

Street Address: AECOM - 250 Apollo Drive

City/Town: Chelmsford, MA Zip Code: 01824

Telephone: (978) 846-5238 Email: scott.olson@aecom.com

NOTICE OF ENVIRONMENTAL SAMPLING

As required by 310 CMR 40.1403(10) of the Massachusetts Contingency Plan

MASSACHUSETTS REGULATIONS THAT REQUIRE THIS NOTICE

This notice is being provided pursuant to the Massachusetts Contingency Plan and the notification requirement at 310 CMR 40.1403(10). The Massachusetts Contingency Plan is a state regulation that specifies requirements for parties who are taking actions to address releases of chemicals (oil or hazardous material) to the environment.

THE PERSON(S) PROVIDING THIS NOTICE

This notice has been sent to you by the party who is addressing a release of oil or hazardous material to the environment at the location listed in **Section A** on the reverse side of this form. (The regulations refer to the area where the oil or hazardous material is present as the "disposal site".)

PURPOSE OF THIS NOTICE

When environmental samples are taken as part of an investigation under the Massachusetts Contingency Plan at a property on behalf of someone other than the owner of the property, the regulations require that the property owner (listed in **Section B** on the reverse side of this form) be given notice of the environmental sampling. The regulations also require that the property owner subsequently receive the analytical results following the analysis of the environmental samples.

Section C on the reverse side of this form indicates the circumstance under which you are receiving this notice at this time. If you are receiving this notice to inform you of the analytical results following the analysis of the environmental samples, you should also have received, as an attachment, a copy of analytical results. These results should indicate the number and type(s) of samples (e.g., soil, groundwater) analyzed, any chemicals identified, and the measured concentrations of those chemicals.

Section D on the reverse side of this form identifies the property where the environmental sampling will be/has been conducted, provides a description of the sampling locations within the property, and indicates the phase of work under the Massachusetts Contingency Plan regulatory process during which the samples will be/were collected.

FOR MORE INFORMATION

Information about the general process for addressing releases of oil or hazardous material under the Massachusetts Contingency Plan and related public involvement opportunities may be found at http://www.mass.gov/dep/cleanup/oview.htm. For more information regarding this notice, you may contact the party listed in **Section E** on the reverse side of this form. Information about the disposal site identified in Section A is also available in files at the Massachusetts Department of Environmental Protection. See http://mass.gov/dep/about/region/schedule.htm if you would like to make an appointment to see these files. Please reference the **Release Tracking Number** listed in the upper right hand corner on the reverse side of this form when making file review appointments.

Notice of Environmental Sampling – BWSC 123

As required by 310 CMR 40.1403(10) of the Massachusetts Contingency Plan

This Notice is Related to Release Tracking Number 03-0518

(Supplemental Page to BWSC-123 Form)

D.4. Description of the sampling locations and types (e.g., soil, groundwater) to the extent known at the time of this notice.

The following activities will be conducted onsite between the approximate dates of September 1 and October 31, 2020:

- Groundwater sampling for laboratory analyses from up to four monitoring wells (AE-106 S/M/D/R) located in the woods/wetlands and one well (AE-111R) in the parking lot of the property at 95 Concord Street in North Reading, MA.

- Water level measurements may also be obtained from other existing monitoring wells on the property at 95 Concord Street, with permission from YRC.

Olson, Scott (Chelmsford)

From: Olson, Scott (Chelmsford)
Sent: Friday, August 14, 2020 2:05 PM
To: Patrick St Pierre
Cc: Callahan, Nicole A.; Potter, Dylan (Chelmsford)
Subject: Notification of Groundwater Sampling - 87 Concord Street - North Reading, MA - September - October 2020
Attachments: BWSC123_Notice_GW_Sept-Oct-2020_Howland.pdf

Patrick,

Attached please find a copy of BWSC-123 form providing notification of upcoming water level and groundwater sampling activities to be conducted on the property at 87 Concord Street in North Reading, MA.

- The activities detailed in the form will be conducted onsite between the approximate dates of September 1 and October 31, 2020.
- Activities will be conducted per the conditions of the access agreement in place between Howland Development Corporation and Lockheed Martin Corporation.
- Wells to be sampled include AE-112D and AE-112R, plus water levels from wells MW-2 and MW-3 (AECOM IDs HOW-2 and HOW-3) which are located in the paved parking area around the building.
- We will visit the wells periodically during the sampling event with tentative dates of **September 4 and 8** for water level measurements, **plus 1-2 days (TBD) in September - October** for groundwater sampling.
- Access is only needed to the localized area at each well. Our personnel will place cones around the wells but will not disrupt traffic flow around the building.
- Each visit will include 1-2 people with 1-2 vehicles for durations ranging from 1 to 8 hours.
- We will have no need to enter the building or interact with any of the tenants.

Dylan Potter (cell 508-333-2316) will lead the work in the field and may be contacted, if needed, during the work.

Nicole Callahan (cell 631-806-9411) and I are available at the office should you have any questions.

A copy of this notification is being mailed to your office. Typically I would also fax a copy to Thomas A. Mackie at Mackie Shea O'Brien, P.C. as required per the access agreement; however, due to construction at our office, I do not have access to a fax machine at this time, and I do not have an email for Thomas Mackie.

Regards.
Scott

Scott Olson, PG
Project Manager, Project Management Office
D +1-978-905-2351
M +1-978-846-5238
scott.olson@aeom.com

AECOM
250 Apollo Drive
Chelmsford, MA 01824, USA
T +1-978-905-2100
aecom.com

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NOTICE OF ENVIRONMENTAL SAMPLING

As required by 310 CMR 40.1403(10) of the Massachusetts Contingency Plan

BWSC 123

This Notice is Related to Release Tracking Number

03 | 0518

A. The address of the disposal site related to this Notice and Release Tracking Number (provided above):

1. Street Address: 50 Fordham Road

City/Town: Wilmington, MA Zip Code: 01887

B. This notice is being provided to the following party:

1. Name: Patrick St. Pierre - Howland Development Corp.

2. Street Address: 155 West Street

City/Town: Wilmington, MA Zip Code: 01867

C. This notice is being given to inform its recipient (the party listed in Section B):

☑ 1. That environmental sampling will be/has been conducted at property owned by the recipient of this notice.

☐ 2. Of the results of environmental sampling conducted at property owned by the recipient of this notice.

☐ 3. Check to indicate if the analytical results are attached. (If item 2. above is checked, the analytical results from the environmental sampling must be attached to this notice.)

D. Location of the property where the environmental sampling will be/has been conducted:

1. Street Address: 87 Concord Street

City/Town: North Reading, MA Zip Code: 01864

2. MCP phase of work during which the sampling will be/has been conducted:

☐ Immediate Response Action
☐ Release Abatement Measure
☐ Utility-related Abatement Measure
☐ Phase I Initial Site Investigation
☐ Phase II Comprehensive Site Assessment
☐ Phase III Feasibility Evaluation
☐ Phase IV Remedy Implementation Plan
☐ Phase V/Remedy Operation Status
☐ Post-Class C Operation, Maintenance and Monitoring
☑ Other Post-Temporary Solution OMM (specify)

3. Description of property where sampling will be/has been conducted:

☐ residential ☑ commerical ☑ industrial ☐ school/playground ☐ Other _____ (specify)

4. Description of the sampling locations and types (e.g., soil, groundwater) to the extent known at the time of this notice.

See attached supplemental page for details of environmental work to be completed ~ September 1 - October 31, 2020.

E. Contact information related to the party providing this notice:

Contact Name: Scott Olson

Street Address: AECOM - 250 Apollo Drive

City/Town: Chelmsford, MA Zip Code: 01824

Telephone: (978) 846-5238 Email: scott.olson@aecom.com

NOTICE OF ENVIRONMENTAL SAMPLING

As required by 310 CMR 40.1403(10) of the Massachusetts Contingency Plan

MASSACHUSETTS REGULATIONS THAT REQUIRE THIS NOTICE

This notice is being provided pursuant to the Massachusetts Contingency Plan and the notification requirement at 310 CMR 40.1403(10). The Massachusetts Contingency Plan is a state regulation that specifies requirements for parties who are taking actions to address releases of chemicals (oil or hazardous material) to the environment.

THE PERSON(S) PROVIDING THIS NOTICE

This notice has been sent to you by the party who is addressing a release of oil or hazardous material to the environment at the location listed in **Section A** on the reverse side of this form. (The regulations refer to the area where the oil or hazardous material is present as the "disposal site".)

PURPOSE OF THIS NOTICE

When environmental samples are taken as part of an investigation under the Massachusetts Contingency Plan at a property on behalf of someone other than the owner of the property, the regulations require that the property owner (listed in **Section B** on the reverse side of this form) be given notice of the environmental sampling. The regulations also require that the property owner subsequently receive the analytical results following the analysis of the environmental samples.

Section C on the reverse side of this form indicates the circumstance under which you are receiving this notice at this time. If you are receiving this notice to inform you of the analytical results following the analysis of the environmental samples, you should also have received, as an attachment, a copy of analytical results. These results should indicate the number and type(s) of samples (e.g., soil, groundwater) analyzed, any chemicals identified, and the measured concentrations of those chemicals.

Section D on the reverse side of this form identifies the property where the environmental sampling will be/has been conducted, provides a description of the sampling locations within the property, and indicates the phase of work under the Massachusetts Contingency Plan regulatory process during which the samples will be/were collected.

FOR MORE INFORMATION

Information about the general process for addressing releases of oil or hazardous material under the Massachusetts Contingency Plan and related public involvement opportunities may be found at http://www.mass.gov/dep/cleanup/oview.htm. For more information regarding this notice, you may contact the party listed in **Section E** on the reverse side of this form. Information about the disposal site identified in Section A is also available in files at the Massachusetts Department of Environmental Protection. See http://mass.gov/dep/about/region/schedule.htm if you would like to make an appointment to see these files. Please reference the **Release Tracking Number** listed in the upper right hand corner on the reverse side of this form when making file review appointments.

Notice of Environmental Sampling – BWSC 123

As required by 310 CMR 40.1403(10) of the Massachusetts Contingency Plan

This Notice is Related to Release Tracking Number 03-0518

(Supplemental Page to BWSC-123 Form)

D.4. Description of the sampling locations and types (e.g., soil, groundwater) to the extent known at the time of this notice.

This written notice satisfies the notification requirement from the access agreement in place between Howland Development Corporation and Lockheed Martin Corporation.

The following activities will be conducted onsite between the approximate dates of September 1 and October 31, 2020:

- Groundwater sample collection for laboratory analyses from up to four monitoring wells, AE-112D, AE-112R, plus MW-2 and MW-3 which AECOM has identified as HOW-2 and HOW-3 so as to not confuse them with other MW-2 and MW-3 locations previously existing as part of other sites in the area.

- The wells are located in the paved parking area around the building. AECOM will visit the wells periodically during the sampling event with tentative dates of September 4 and 8 for water level measurements, plus 1-2 days in September - October for groundwater sampling.

- Access is only needed to the localized area at each well. Each visit will include 1-2 people with 1-2 vehicles for durations of 1-8 hours. At no time will we disrupt traffic flow at the property or impede occupants use of the property.

Olson, Scott (Chelmsford)

From: Olson, Scott (Chelmsford)
Sent: Friday, August 14, 2020 12:32 PM
To: 'emysliwy@ci.reading.ma.us'
Cc: Callahan, Nicole A.; Potter, Dylan (Chelmsford)
Subject: Notification of Groundwater Monitoring - Reading Town Forest - September-October 2020

Hi Eric,

It is that time of year again!

This email provides notification of upcoming groundwater monitoring activities to be conducted at monitoring wells in the Reading Town Forest.

- In 2020 we only plan to collect water level measurements from two wells, TRC-402 and TRC-403.
- We should only need to visit the wells one time, on Wednesday September 8 for the water level measurements.
- We do not plan to collect groundwater samples from these wells in 2020.

Dylan Potter (cell 508-333-2316) will be the primary contact in the field and will call you soon to work out logistics for access to the wells on September 8.

Nicole Callahan and I are available at the office should you have any questions.

Dylan or I will follow up with a phone call if don't hear back from you.

Thank you.
Scott

Scott Olson, PG
Project Manager, Project Management Office
D +1-978-905-2351
M +1-978-846-5238
scott.olson@aeom.com

AECOM
250 Apollo Drive
Chelmsford, MA 01824, USA
T +1-978-905-2100
aecom.com

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Olson, Scott (Chelmsford)

From: Olson, Scott (Chelmsford)
Sent: Friday, August 14, 2020 12:22 PM
To: Mark Clark (mclark@northreadingma.gov)
Cc: Callahan, Nicole A.; Potter, Dylan (Chelmsford)
Subject: Notice of Groundwater Sampling Activity September - October 2020
Attachments: BWSC123_NReading_2020 Notif GW Sampling.pdf

Hi Mark,

I just wanted to let you know that we will be conducting our annual groundwater sampling event for the former GE facility in Wilmington and North Reading between the approximate dates of September 1 and October 31, 2020. Attached please find a copy of the BWSC-123 form providing notification of upcoming water level and groundwater sampling activities to be conducted from monitoring wells along the edge of Concord Rd in North Reading.

As in past rounds, we plan to use the Stickney Well road to access the woods and wetlands from Redmond Avenue. Today 8/14/20, Dylan Potter contacted the Water Dept regarding the new lock on the gate. The Water Dept contacted the Highway Dept who provided the combination and the Water Dept opened the lock for us. They allowed us to add our own padlock so that both the Town and AECOM have access to open the chain at the gate, but maintain it locked when not in use. As in past years, our use of the access road will be minimal, just one to two SUVs or pickup trucks with two to four people at a time. No big trucks or heavy equipment. We will contact Water Dept to relock gate when we are done with annual sampling and are ready to remove our lock.

Dylan Potter (cell 508-333-2316) will be the Field Lead for this work. If you have any questions or issues with reports from residents in the area, feel free to contact Dylan or me.

Our crews will be out there on **September 4 and 8** for water level measurements and then for **select days (TBD) in September - October** to conduct the groundwater sampling.

We plan to contact the Fletchers at 3 Furbish Pond Lane to request permission to measure the depth to water from their well on September 8. They have permitted us to measure their well for the past 4-5 years without issue. Other than that, we do not plan to contact any of the other residents.

Any questions, please feel free to call or email.

Thank you.
Scott

Scott Olson, PG
Project Manager, Project Management Office
D +1-978-905-2351
M +1-978-846-5238
scott.olson@aeom.com

AECOM
250 Apollo Drive
Chelmsford, MA 01824, USA
T +1-978-905-2100
aecom.com

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NOTICE OF ENVIRONMENTAL SAMPLING

As required by 310 CMR 40.1403(10) of the Massachusetts Contingency Plan

BWSC 123

This Notice is Related to Release Tracking Number

03 | 0518

A. The address of the disposal site related to this Notice and Release Tracking Number (provided above):

1. Street Address: 50 Fordham Road

City/Town: Wilmington, MA Zip Code: 01887

B. This notice is being provided to the following party:

1. Name: Mark Clark - Town of North Reading

2. Street Address: 235 North Street

City/Town: N. Reading Zip Code: 01864

C. This notice is being given to inform its recipient (the party listed in Section B):

☑ 1. That environmental sampling will be/has been conducted at property owned by the recipient of this notice.

☐ 2. Of the results of environmental sampling conducted at property owned by the recipient of this notice.

☐ 3. Check to indicate if the analytical results are attached. (If item 2. above is checked, the analytical results from the environmental sampling must be attached to this notice.)

D. Location of the property where the environmental sampling will be/has been conducted:

1. Street Address: 51 & 71 Concord Street

City/Town: North Reading, MA Zip Code: 01864

2. MCP phase of work during which the sampling will be/has been conducted:

☐ Immediate Response Action
☐ Release Abatement Measure
☐ Utility-related Abatement Measure
☐ Phase I Initial Site Investigation
☐ Phase II Comprehensive Site Assessment
☐ Phase III Feasibility Evaluation
☐ Phase IV Remedy Implementation Plan
☐ Phase V/Remedy Operation Status
☐ Post-Class C Operation, Maintenance and Monitoring
☑ Other Post-Temporary Solution (specify)

3. Description of property where sampling will be/has been conducted:

☐ residential ☑ commerical ☑ industrial ☐ school/playground ☐ Other _____ (specify)

4. Description of the sampling locations and types (e.g., soil, groundwater) to the extent known at the time of this notice.

See attached supplemental page for details of environmental work to be completed ~ September 1 - October 31, 2020.

E. Contact information related to the party providing this notice:

Contact Name: Scott Olson

Street Address: AECOM - 250 Apollo Drive

City/Town: Chelmsford, MA Zip Code: 01824

Telephone: (978) 846-5238 Email: scott.olson@aecom.com

NOTICE OF ENVIRONMENTAL SAMPLING

As required by 310 CMR 40.1403(10) of the Massachusetts Contingency Plan

MASSACHUSETTS REGULATIONS THAT REQUIRE THIS NOTICE

This notice is being provided pursuant to the Massachusetts Contingency Plan and the notification requirement at 310 CMR 40.1403(10). The Massachusetts Contingency Plan is a state regulation that specifies requirements for parties who are taking actions to address releases of chemicals (oil or hazardous material) to the environment.

THE PERSON(S) PROVIDING THIS NOTICE

This notice has been sent to you by the party who is addressing a release of oil or hazardous material to the environment at the location listed in **Section A** on the reverse side of this form. (The regulations refer to the area where the oil or hazardous material is present as the "disposal site".)

PURPOSE OF THIS NOTICE

When environmental samples are taken as part of an investigation under the Massachusetts Contingency Plan at a property on behalf of someone other than the owner of the property, the regulations require that the property owner (listed in **Section B** on the reverse side of this form) be given notice of the environmental sampling. The regulations also require that the property owner subsequently receive the analytical results following the analysis of the environmental samples.

Section C on the reverse side of this form indicates the circumstance under which you are receiving this notice at this time. If you are receiving this notice to inform you of the analytical results following the analysis of the environmental samples, you should also have received, as an attachment, a copy of analytical results. These results should indicate the number and type(s) of samples (e.g., soil, groundwater) analyzed, any chemicals identified, and the measured concentrations of those chemicals.

Section D on the reverse side of this form identifies the property where the environmental sampling will be/has been conducted, provides a description of the sampling locations within the property, and indicates the phase of work under the Massachusetts Contingency Plan regulatory process during which the samples will be/were collected.

FOR MORE INFORMATION

Information about the general process for addressing releases of oil or hazardous material under the Massachusetts Contingency Plan and related public involvement opportunities may be found at http://www.mass.gov/dep/cleanup/oview.htm. For more information regarding this notice, you may contact the party listed in **Section E** on the reverse side of this form. Information about the disposal site identified in Section A is also available in files at the Massachusetts Department of Environmental Protection. See http://mass.gov/dep/about/region/schedule.htm if you would like to make an appointment to see these files. Please reference the **Release Tracking Number** listed in the upper right hand corner on the reverse side of this form when making file review appointments.

Notice of Environmental Sampling – BWSC 123

As required by 310 CMR 40.1403(10) of the Massachusetts Contingency Plan

This Notice is Related to Release Tracking Number 03-0518

(Supplemental Page to BWSC-123 Form)

D.4. Description of the sampling locations and types (e.g., soil, groundwater) to the extent known at the time of this notice.

The following activities will be conducted onsite between the approximate dates of September 1 and October 31, 2020:

- Groundwater sample collection for laboratory analyses from up to seven monitoring wells, STM-3-S-D-R, and STM-8-S-M-D-R.

- The wells are located along the edge of Concord Rd in North Reading near the DL Maher and Richelieu Hardware properties. AECOM will visit the wells periodically during the sampling event with tentative dates of September 4 and 8 for water level measurements, plus 1-2 days in September - October for groundwater sampling.

- Access is only needed to the localized area at each well. At no time will we disrupt traffic flow along Concord Street, although we typically hire a North Reading Police detail for sampling STM-3 wells as they are close to the edge of the road.

Olson, Scott (Chelmsford)

From: Olson, Scott (Chelmsford)
Sent: Monday, August 17, 2020 9:32 AM
To: gstanieich@aol.com
Subject: RE: [EXTERNAL] RE: Planning for Wilmington Annual Groundwater Sampling - September-October 2020

That works. We can limit the indoor work times to between 10:00 am and when the trucks return in the afternoon.

Scott

From: gstanieich@aol.com <gstanieich@aol.com>
Sent: Saturday, August 15, 2020 9:31 AM
To: Olson, Scott (Chelmsford) <scott.olson@aecom.com>
Subject: [EXTERNAL] RE: Planning for Wilmington Annual Groundwater Sampling - September-October 2020

From Casey; Gary,
That works. The trucks leave by 10am, so any time after 10am.

I will forward to the center team.

Casey

Best Regards,
Gary P Stanieich
Manager
Wilmington Realty Trust
424 Broadway
Somerville, MA 02145-2619
603-860-5508 cell



E-Mail confidentiality disclaimer: The information contained in this message (including attachments) may be privileged and confidential and protected from disclosure. If the reader of this message is not the intended recipient, or an employee or agent responsible for delivering this message to the intended recipient, you are hereby notified that any review, dissemination, distribution or copying of this communication is strictly prohibited. If you have received this communication in error, please notify us immediately by replying to the message, destroying all copies and deleting it from your computer. Thank you

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From: Olson, Scott (Chelmsford) <scott.olson@aecom.com>
Sent: Friday, August 14, 2020 1:42 PM
To: Gary Stanieich (gstanieich@aol.com) <gstanieich@aol.com>
Cc: Calligan, Paul E <paul.e.calligan@lmco.com> (paul.e.calligan@lmco.com) <paul.e.calligan@lmco.com>; Potter, Dylan (Chelmsford) <Dylan.Potter2@aecom.com>; Callahan, Nicole A. <Nicole.Callahan@aecom.com>
Subject: Planning for Wilmington Annual Groundwater Sampling - September-October 2020

Hi Gary,

I hope this email finds you well during these times.

Please see the attached MassDEP form we are required to send to property owners to notify of our upcoming annual groundwater sampling event.

We plan to conduct the work between the dates of **September 1 and October 1, 2020**, with occasional brief site visits in August, and October – November 2020.

Same as in past years, the sampling requires us to access wells within Building 1 (UPS). We understand the need to coordinate work with your schedule. As in the past we will coordinate all indoor work to minimize the time we spend inside the building. We have the following tentative dates for work inside Building 1; please let us know if these dates work.

- water level measurements - **Wednesday September 8** - requires roughly 3 hrs to measure all wells inside
- groundwater sampling - **Monday-Tuesday September 14-15** – requires one full day, and a second day that we can hopefully limit to a partial day depending on the conditions.

I will follow up with a phone call next week to discuss with you the schedule for this sampling event.

Regards.
Scott

Scott Olson, PG
Project Manager, Project Management Office
D +1-978-905-2351
M +1-978-846-5238
scott.olson@aeom.com

AECOM
250 Apollo Drive
Chelmsford, MA 01824, USA
T +1-978-905-2100
aecom.com

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NOTICE OF ENVIRONMENTAL SAMPLING

As required by 310 CMR 40.1403(10) of the Massachusetts Contingency Plan

BWSC 123

This Notice is Related to Release Tracking Number

03 | 0518

A. The address of the disposal site related to this Notice and Release Tracking Number (provided above):

1. Street Address: 50 Fordham Road

City/Town: Wilmington, MA Zip Code: 01887

B. This notice is being provided to the following party:

1. Name: Gary Stanieich

2. Street Address: 424 Broadway

City/Town: Somerville, MA Zip Code: 02145

C. This notice is being given to inform its recipient (the party listed in Section B):

☑ 1. That environmental sampling will be/has been conducted at property owned by the recipient of this notice.

☐ 2. Of the results of environmental sampling conducted at property owned by the recipient of this notice.

☐ 3. Check to indicate if the analytical results are attached. (If item 2. above is checked, the analytical results from the environmental sampling must be attached to this notice.)

D. Location of the property where the environmental sampling will be/has been conducted:

1. Street Address: 40 Fordham Rd (site formerly #50, but is now #40 Fordham Rd)

City/Town: Wilmington, MA Zip Code: 01887

2. MCP phase of work during which the sampling will be/has been conducted:

☐ Immediate Response Action
☐ Release Abatement Measure
☐ Utility-related Abatement Measure
☐ Phase I Initial Site Investigation
☐ Phase II Comprehensive Site Assessment
☐ Phase III Feasibility Evaluation
☐ Phase IV Remedy Implementation Plan
☐ Phase V/Remedy Operation Status
☐ Post-Class C Operation, Maintenance and Monitoring
☑ Other Post-Temporary Solution OM (specify)

3. Description of property where sampling will be/has been conducted:

☐ residential ☑ commerical ☑ industrial ☐ school/playground ☐ Other _____ (specify)

4. Description of the sampling locations and types (e.g., soil, groundwater) to the extent known at the time of this notice.

See attached supplemental page for details of environmental work to be conducted ~ September 1 - October 31, 2020.

E. Contact information related to the party providing this notice:

Contact Name: Scott Olson

Street Address: AECOM - 250 Apollo Drive

City/Town: Chelmsford, MA Zip Code: 01824

Telephone: (978) 846-5238 Email: scott.olson@aecom.com

NOTICE OF ENVIRONMENTAL SAMPLING

As required by 310 CMR 40.1403(10) of the Massachusetts Contingency Plan

MASSACHUSETTS REGULATIONS THAT REQUIRE THIS NOTICE

This notice is being provided pursuant to the Massachusetts Contingency Plan and the notification requirement at 310 CMR 40.1403(10). The Massachusetts Contingency Plan is a state regulation that specifies requirements for parties who are taking actions to address releases of chemicals (oil or hazardous material) to the environment.

THE PERSON(S) PROVIDING THIS NOTICE

This notice has been sent to you by the party who is addressing a release of oil or hazardous material to the environment at the location listed in **Section A** on the reverse side of this form. (The regulations refer to the area where the oil or hazardous material is present as the "disposal site".)

PURPOSE OF THIS NOTICE

When environmental samples are taken as part of an investigation under the Massachusetts Contingency Plan at a property on behalf of someone other than the owner of the property, the regulations require that the property owner (listed in **Section B** on the reverse side of this form) be given notice of the environmental sampling. The regulations also require that the property owner subsequently receive the analytical results following the analysis of the environmental samples.

Section C on the reverse side of this form indicates the circumstance under which you are receiving this notice at this time. If you are receiving this notice to inform you of the analytical results following the analysis of the environmental samples, you should also have received, as an attachment, a copy of analytical results. These results should indicate the number and type(s) of samples (e.g., soil, groundwater) analyzed, any chemicals identified, and the measured concentrations of those chemicals.

Section D on the reverse side of this form identifies the property where the environmental sampling will be/has been conducted, provides a description of the sampling locations within the property, and indicates the phase of work under the Massachusetts Contingency Plan regulatory process during which the samples will be/were collected.

FOR MORE INFORMATION

Information about the general process for addressing releases of oil or hazardous material under the Massachusetts Contingency Plan and related public involvement opportunities may be found at http://www.mass.gov/dep/cleanup/oview.htm. For more information regarding this notice, you may contact the party listed in **Section E** on the reverse side of this form. Information about the disposal site identified in Section A is also available in files at the Massachusetts Department of Environmental Protection. See http://mass.gov/dep/about/region/schedule.htm if you would like to make an appointment to see these files. Please reference the **Release Tracking Number** listed in the upper right hand corner on the reverse side of this form when making file review appointments.

Notice of Environmental Sampling – BWSC 123

As required by 310 CMR 40.1403(10) of the Massachusetts Contingency Plan

This Notice is Related to Release Tracking Number 03-0518

(Supplemental Page to BWSC-123 Form)

D.4. Description of the sampling locations and types (e.g., soil, groundwater) to the extent known at the time of this notice.

The following groundwater monitoring activities will be conducted onsite between the dates of September 1 – October 31, 2020:

- Groundwater sampling for laboratory analyses from numerous overburden and bedrock monitoring wells located at 40 and 50 Fordham Rd at:
    - Up to 11 monitoring locations within Building 1, and
    - Approximately 50-60 monitoring wells outside of the Building at various locations on the property. Approximately 30 of these wells are located within the parking lot.
- Although unlikely, surface water samples may also be collected for laboratory analyses from select locations in the wetland.

Olson, Scott (Chelmsford)

From: Olson, Scott (Chelmsford)
Sent: Friday, August 14, 2020 12:42 PM
To: roland@wilmingtongrain.com
Cc: Callahan, Nicole A.; Potter, Dylan (Chelmsford)
Subject: Notice of Upcoming Environmental Work at 62 Concord Street North Reading - September 1 - October 31, 2020
Attachments: BWSC123_Notice_GW_Sept-Oct-2020_WilmMasonry.pdf

Hi Roland,

I hope this email finds you well during the trying times.

Please see the attached form which we are required to send to property owners as notification of upcoming environmental work to be conducted on your property.
A hard copy of this form is in the mail to you.

We plan to conduct water level measurements on **September 4 and 8** and then conduct groundwater sampling on your property for two days between **September 9 and October 31, 2020**.

Dylan Potter (cell 508-333-2316) will lead the work in the field and will provide you updates regarding specific days that we will be on your property and need to access monitoring well STM-8R1 in your employee parking lot.

Thank you.
Scott

Scott Olson, PG
Project Manager, Project Management Office
D +1-978-905-2351
M +1-978-846-5238
scott.olson@aeom.com

AECOM
250 Apollo Drive
Chelmsford, MA 01824, USA
T +1-978-905-2100
aecom.com

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NOTICE OF ENVIRONMENTAL SAMPLING

As required by 310 CMR 40.1403(10) of the Massachusetts Contingency Plan

BWSC 123

This Notice is Related to Release Tracking Number

03 | 0518

A. The address of the disposal site related to this Notice and Release Tracking Number (provided above):

1. Street Address: 50 Fordham Road

City/Town: Wilmington, MA Zip Code: 01887

B. This notice is being provided to the following party:

1. Name: Roland Gagne - Wilmington Masonry

2. Street Address: 62 Concord Street

City/Town: North Reading, MA Zip Code: 01864

C. This notice is being given to inform its recipient (the party listed in Section B):

☑ 1. That environmental sampling will be/has been conducted at property owned by the recipient of this notice.

☐ 2. Of the results of environmental sampling conducted at property owned by the recipient of this notice.

☐ 3. Check to indicate if the analytical results are attached. (If item 2. above is checked, the analytical results from the environmental sampling must be attached to this notice.)

D. Location of the property where the environmental sampling will be/has been conducted:

1. Street Address: 62 Concord Street

City/Town: North Reading, MA Zip Code: 01864

2. MCP phase of work during which the sampling will be/has been conducted:

☐ Immediate Response Action
☐ Release Abatement Measure
☐ Utility-related Abatement Measure
☐ Phase I Initial Site Investigation
☐ Phase II Comprehensive Site Assessment
☐ Phase III Feasibility Evaluation
☐ Phase IV Remedy Implementation Plan
☐ Phase V/Remedy Operation Status
☐ Post-Class C Operation, Maintenance and Monitoring
☑ Other Post-Temporary Solution (specify)

3. Description of property where sampling will be/has been conducted:

☐ residential ☑ commerical ☑ industrial ☐ school/playground ☐ Other _____ (specify)

4. Description of the sampling locations and types (e.g., soil, groundwater) to the extent known at the time of this notice.

See attached supplemental page for details of environmental work to be completed ~ September 1 - October 31, 2020

E. Contact information related to the party providing this notice:

Contact Name: Scott Olson

Street Address: AECOM - 250 Apollo Drive

City/Town: Chelmsford, MA Zip Code: 01824

Telephone: (978) 846-5238 Email: scott.olson@aecom.com

NOTICE OF ENVIRONMENTAL SAMPLING

As required by 310 CMR 40.1403(10) of the Massachusetts Contingency Plan

MASSACHUSETTS REGULATIONS THAT REQUIRE THIS NOTICE

This notice is being provided pursuant to the Massachusetts Contingency Plan and the notification requirement at 310 CMR 40.1403(10). The Massachusetts Contingency Plan is a state regulation that specifies requirements for parties who are taking actions to address releases of chemicals (oil or hazardous material) to the environment.

THE PERSON(S) PROVIDING THIS NOTICE

This notice has been sent to you by the party who is addressing a release of oil or hazardous material to the environment at the location listed in **Section A** on the reverse side of this form. (The regulations refer to the area where the oil or hazardous material is present as the "disposal site".)

PURPOSE OF THIS NOTICE

When environmental samples are taken as part of an investigation under the Massachusetts Contingency Plan at a property on behalf of someone other than the owner of the property, the regulations require that the property owner (listed in **Section B** on the reverse side of this form) be given notice of the environmental sampling. The regulations also require that the property owner subsequently receive the analytical results following the analysis of the environmental samples.

Section C on the reverse side of this form indicates the circumstance under which you are receiving this notice at this time. If you are receiving this notice to inform you of the analytical results following the analysis of the environmental samples, you should also have received, as an attachment, a copy of analytical results. These results should indicate the number and type(s) of samples (e.g., soil, groundwater) analyzed, any chemicals identified, and the measured concentrations of those chemicals.

Section D on the reverse side of this form identifies the property where the environmental sampling will be/has been conducted, provides a description of the sampling locations within the property, and indicates the phase of work under the Massachusetts Contingency Plan regulatory process during which the samples will be/were collected.

FOR MORE INFORMATION

Information about the general process for addressing releases of oil or hazardous material under the Massachusetts Contingency Plan and related public involvement opportunities may be found at http://www.mass.gov/dep/cleanup/oview.htm. For more information regarding this notice, you may contact the party listed in **Section E** on the reverse side of this form. Information about the disposal site identified in Section A is also available in files at the Massachusetts Department of Environmental Protection. See http://mass.gov/dep/about/region/schedule.htm if you would like to make an appointment to see these files. Please reference the **Release Tracking Number** listed in the upper right hand corner on the reverse side of this form when making file review appointments.

Notice of Environmental Sampling – BWSC 123

As required by 310 CMR 40.1403(10) of the Massachusetts Contingency Plan

This Notice is Related to Release Tracking Number 03-0518

(Supplemental Page to BWSC-123 Form)

D.4. Description of the sampling locations and types (e.g., soil, groundwater) to the extent known at the time of this notice.

The following activities will be conducted onsite between the approximate dates of September 1 and October 31, 2020:

- Groundwater sampling for laboratory analyses from one monitoring well (STM-8R1) located in the parking lot of the property at 62 Concord Street in North Reading, MA.
- Water levels will be obtained at locations along the Ipswich River through the back of the property at 62 Concord Street.
- Although unlikely, surface water samples may also be collected for laboratory analyses from along the Ipswich River during this time.

Olson, Scott (Chelmsford)

From: Olson, Scott (Chelmsford)
Sent: Friday, August 14, 2020 12:54 PM
To: 'Ruben.Byerley@yrcfreight.com'; charles.castelluccio@gmail.com
Cc: Callahan, Nicole A.; Potter, Dylan (Chelmsford)
Subject: Notification of Groundwater Sampling - YRC Freight at 95 Concord Street - North Reading, MA - September-October 2020
Attachments: BWSC-123_Notif GW Sampling_Sept-Oct-2020.pdf

Ruben,

Attached please find a copy of BWSC-123 form providing notification of upcoming water level and groundwater sampling activities to be conducted on the property at 95 Concord Street in North Reading, MA.

- The activities detailed in the form will be conducted onsite between the approximate dates of **September 1 and October 31, 2020**.
- The activities will be conducted per the conditions of the Access Agreement between YRC Freight and Lockheed Martin Corporation.
- Wells that may be sampled include AE-106 S/M/D/R located in the woods/wetlands, and AE-111R located in the paved parking area at the facility.
- We will visit the wells periodically during the sampling event, specifically on **Friday September 4** to pre-purge Flute wells, and **Wednesday September 8** for site-wide water level measurements. We will then conduct the groundwater sampling of the wells on YRC property for 1-2 days [exact dates TBD] between **September 9 and October 1**.
- Access is only needed to the localized area at each well. Our personnel will place cones around the wells but will not disrupt traffic flow at the facility.
- Each visit will include 1-2 people with 1-2 vehicles for durations ranging from 1 to 8 hours.

We would like permission to measure the depth to groundwater in select monitoring wells on the property during our site-wide measurement round on **Wednesday September 8**.
If this is acceptable we can contact Chuck Castelluccio, whom I have copied on this email, to coordinate logistics for water level measurements as we have done in the past.

Dylan Potter (cell 508-333-2316) is the Field Lead for this work. He will notify Mike Day at the YRC Terminal of our work dates, and will coordinate the work directly with the Mike. If Mike Day is no longer the facility Manager, we will introduce ourselves to the new manager and explain the work that we do per the access agreement.

Nicole Callahan and I are available at the office should you have any questions.

Thank you.
Scott

Scott Olson, PG
Project Manager, Project Management Office
D +1-978-905-2351
M +1-978-846-5238
scott.olson@aeom.com

AECOM
250 Apollo Drive
Chelmsford, MA 01824, USA
T +1-978-905-2100
aecom.com

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NOTICE OF ENVIRONMENTAL SAMPLING

As required by 310 CMR 40.1403(10) of the Massachusetts Contingency Plan

BWSC 123

This Notice is Related to Release Tracking Number

03 | 0518

A. The address of the disposal site related to this Notice and Release Tracking Number (provided above):

1. Street Address: 50 Fordham Road

City/Town: Wilmington, MA Zip Code: 01887

B. This notice is being provided to the following party:

1. Name: Ruben Byerly

2. Street Address: 10990 Roe Avenue

City/Town: Overland Park, KS Zip Code: 66211-1213

C. This notice is being given to inform its recipient (the party listed in Section B):

☑ 1. That environmental sampling will be/has been conducted at property owned by the recipient of this notice.

☐ 2. Of the results of environmental sampling conducted at property owned by the recipient of this notice.

☐ 3. Check to indicate if the analytical results are attached. (If item 2. above is checked, the analytical results from the environmental sampling must be attached to this notice.)

D. Location of the property where the environmental sampling will be/has been conducted:

1. Street Address: 95 Concord Street

City/Town: North Reading, MA Zip Code: 01864

2. MCP phase of work during which the sampling will be/has been conducted:

☐ Immediate Response Action
☐ Release Abatement Measure
☐ Utility-related Abatement Measure
☐ Phase I Initial Site Investigation
☐ Phase II Comprehensive Site Assessment
☐ Phase III Feasibility Evaluation
☐ Phase IV Remedy Implementation Plan
☐ Phase V/Remedy Operation Status
☐ Post-Class C Operation, Maintenance and Monitoring
☑ Other Post-Temporary Solution (specify)

3. Description of property where sampling will be/has been conducted:

☐ residential ☑ commerical ☑ industrial ☐ school/playground ☐ Other _____ (specify)

4. Description of the sampling locations and types (e.g., soil, groundwater) to the extent known at the time of this notice.

See attached supplemental page for details of environmental work to be completed ~ September 1- October 31, 2020

E. Contact information related to the party providing this notice:

Contact Name: Scott Olson

Street Address: AECOM - 250 Apollo Drive

City/Town: Chelmsford, MA Zip Code: 01824

Telephone: (978) 846-5238 Email: scott.olson@aecom.com

NOTICE OF ENVIRONMENTAL SAMPLING

As required by 310 CMR 40.1403(10) of the Massachusetts Contingency Plan

MASSACHUSETTS REGULATIONS THAT REQUIRE THIS NOTICE

This notice is being provided pursuant to the Massachusetts Contingency Plan and the notification requirement at 310 CMR 40.1403(10). The Massachusetts Contingency Plan is a state regulation that specifies requirements for parties who are taking actions to address releases of chemicals (oil or hazardous material) to the environment.

THE PERSON(S) PROVIDING THIS NOTICE

This notice has been sent to you by the party who is addressing a release of oil or hazardous material to the environment at the location listed in **Section A** on the reverse side of this form. (The regulations refer to the area where the oil or hazardous material is present as the "disposal site".)

PURPOSE OF THIS NOTICE

When environmental samples are taken as part of an investigation under the Massachusetts Contingency Plan at a property on behalf of someone other than the owner of the property, the regulations require that the property owner (listed in **Section B** on the reverse side of this form) be given notice of the environmental sampling. The regulations also require that the property owner subsequently receive the analytical results following the analysis of the environmental samples.

Section C on the reverse side of this form indicates the circumstance under which you are receiving this notice at this time. If you are receiving this notice to inform you of the analytical results following the analysis of the environmental samples, you should also have received, as an attachment, a copy of analytical results. These results should indicate the number and type(s) of samples (e.g., soil, groundwater) analyzed, any chemicals identified, and the measured concentrations of those chemicals.

Section D on the reverse side of this form identifies the property where the environmental sampling will be/has been conducted, provides a description of the sampling locations within the property, and indicates the phase of work under the Massachusetts Contingency Plan regulatory process during which the samples will be/were collected.

FOR MORE INFORMATION

Information about the general process for addressing releases of oil or hazardous material under the Massachusetts Contingency Plan and related public involvement opportunities may be found at http://www.mass.gov/dep/cleanup/oview.htm. For more information regarding this notice, you may contact the party listed in **Section E** on the reverse side of this form. Information about the disposal site identified in Section A is also available in files at the Massachusetts Department of Environmental Protection. See http://mass.gov/dep/about/region/schedule.htm if you would like to make an appointment to see these files. Please reference the **Release Tracking Number** listed in the upper right hand corner on the reverse side of this form when making file review appointments.

Notice of Environmental Sampling – BWSC 123

As required by 310 CMR 40.1403(10) of the Massachusetts Contingency Plan

This Notice is Related to Release Tracking Number 03-0518

(Supplemental Page to BWSC-123 Form)

D.4. Description of the sampling locations and types (e.g., soil, groundwater) to the extent known at the time of this notice.

The following activities will be conducted onsite between the approximate dates of September 1 and October 31, 2020:

- Groundwater sampling for laboratory analyses from up to four monitoring wells (AE-106 S/M/D/R) located in the woods/wetlands and one well (AE-111R) in the parking lot of the property at 95 Concord Street in North Reading, MA.

- Water level measurements may also be obtained from other existing monitoring wells on the property at 95 Concord Street, with permission from YRC.

AECOM
250 Apollo Drive
Chelmsford, MA 01824

978-905-2100 tel
978-905-2101 fax

December 11, 2020

Nathan and Lindsay Fletcher
3 Furbish Pond Lane
N. Reading, MA 01864

Subject: 2020 Irrigation Well Groundwater Measurement Results

Dear Mr. and Mrs. Fletcher,

On September 8, 2020, AECOM under contract to Lockheed Martin Corporation obtained groundwater elevation data with your permission from the irrigation well located on your property at 3 Furbish Pond Lane. This effort was performed as part of environmental monitoring that is being conducted associated with the former GE Facility at 50 Fordham Road, Wilmington, MA. This letter summarizes the information developed from that event.

Massachusetts environmental regulations require notification to a property owner when environmental data are collected at a property on behalf of someone other than the owner of the property. Therefore, we are providing you with the data that we collected, specifically the depth to groundwater measurements and the calculated groundwater elevations.

Data from irrigation well located at #3 Furbish Pond Lane

Depth to water (from reference elevation) September 8, 2020: 25.26 ft (did not measure total depth)
Groundwater elevation on September 8, 2020 = 103.21 (Ref Elev.) – 25.26 ft = 77.95 ft NAVD29.

The groundwater elevations at your property are higher than those in the nearby wetlands and in the vicinity of the former GE Facility at 50 Fordham Road indicating that it would not be likely that any groundwater impacts from that site would come to be located beneath your property.

Should you be interested in more information, additional public involvement opportunities for this site are available by reviewing documents in the project repository located at the North Reading Flint Memorial Library (147 Park Street), on the Lockheed Martin project-specific website located at http://www.lockheedmartin.com/us/who-we-are/eesh/remediation/wilmington/archive.html., or on the MassDEP's website. If you have any questions or comments regarding the results, please contact me at 978-905-2351 or scott.olson@aecom.com.

Yours sincerely,

Scott Olson
Project Manager

cc: Paul Calligan, Lockheed Martin Corporation

AECOM
250 Apollo Drive
Chelmsford, MA 01824

978-905-2100 tel
978-905-2101 fax

December 11, 2020

Mr. Ken Polk
Facility Manager, International Family Church
99 Concord St
N. Reading, MA 01864

Subject: September 2020 Groundwater Analytical Results
50 Fordham Road, Wilmington, MA

Dear Mr. Polk,

In September 2020, AECOM under contract to Lockheed Martin Corporation (LMC) collected groundwater samples from 16 monitoring wells (MW-5, MW-7, GZA-14A, AE-109D, AE-109R (R1 through R8), and AE-110R (R1-R2-R4-R6) located on your property at 99 Concord Street in N. Reading, MA.

This site is a Tier 1A Site (Permit No. 83052) as regulated by the Massachusetts Department of Environmental Protection (MassDEP). Massachusetts environmental regulations require notification to a property owner when environmental samples are collected at a property on behalf of someone other than the owner of the property. In addition, the property owner must receive a copy of the analytical results following the laboratory analysis of the environmental samples. In accordance with the Massachusetts Contingency Plan, 310 CMR 1403 (10), enclosed is a copy of the analytical results from the September 2020 groundwater sampling, as well as a copy of the required Bureau of Waste Site Cleanup (BWSC) Form 123, and a map of the sampling locations on your property. We have included summary tables of the September 2020 groundwater analytical results, and have included a comparison to the applicable Massachusetts groundwater criteria.

Should you be interested in more information, additional public involvement opportunities are available under 310 CMR 40.1403(9). If you have any questions or comments regarding the results, please contact me at 978-905-2351 or scott.olson@aecom.com.

Yours sincerely



Scott Olson
Project Manager

cc: Paul Calligan, Lockheed Martin Corp.
Attachments

NOTICE OF ENVIRONMENTAL SAMPLING

As required by 310 CMR 40.1403(10) of the Massachusetts Contingency Plan

BWSC 123

This Notice is Related to Release Tracking Number

03 | 0518

A. The address of the disposal site related to this Notice and Release Tracking Number (provided above):

1. Street Address: 50 Fordham Road

City/Town: Wilmington, MA Zip Code: 01887

B. This notice is being provided to the following party:

1. Name: Ken Polk - International Family Church

2. Street Address: 99 Concord Street

City/Town: North Reading, MA Zip Code: 01864

C. This notice is being given to inform its recipient (the party listed in Section B):

☐ 1. That environmental sampling will be/has been conducted at property owned by the recipient of this notice.

☑ 2. Of the results of environmental sampling conducted at property owned by the recipient of this notice.

☑ 3. Check to indicate if the analytical results are attached. (If item 2. above is checked, the analytical results from the environmental sampling must be attached to this notice.)

D. Location of the property where the environmental sampling will be/has been conducted:

1. Street Address: 99 Concord Street

City/Town: North Reading, MA Zip Code: 01864

2. MCP phase of work during which the sampling will be/has been conducted:

☐ Immediate Response Action
☐ Release Abatement Measure
☐ Utility-related Abatement Measure
☐ Phase I Initial Site Investigation
☐ Phase II Comprehensive Site Assessment
☐ Phase III Feasibility Evaluation
☐ Phase IV Remedy Implementation Plan
☐ Phase V/Remedy Operation Status
☐ Post-Class C Operation, Maintenance and Monitoring
☑ Other Post-Temporary Solution OMM (specify)

3. Description of property where sampling will be/has been conducted:

☐ residential ☑ commerical ☐ industrial ☐ school/playground ☐ Other _____ (specify)

4. Description of the sampling locations and types (e.g., soil, groundwater) to the extent known at the time of this notice.

MW-5, MW-7, GZA-14A, AE-109D, AE-109R, and AE-110R

E. Contact information related to the party providing this notice:

Contact Name: Scott Olson

Street Address: AECOM - 250 Apollo Drive

City/Town: Chelmsford, MA Zip Code: 01824

Telephone: (978) 846-5238 Email: scott.olson@aecom.com

AECOM
250 Apollo Drive
Chelmsford, MA 01824

978-905-2100 tel
978-905-2101 fax

December 11, 2020

Mr. Patrick St. Pierre
Howland Development
155 West Street
Wilmington, MA 01887

Subject: September 2020 Groundwater Sampling Analytical Results
Property at 87 Concord Street – North Reading, MA

Dear Mr. St. Pierre,

In September 2020, AECOM under contract to Lockheed Martin Corporation (LMC) collected groundwater samples from five monitoring wells AE-112D and AE-112R (ports R1, R3, R5, R6) located on your property at 87 Concord Road in North Reading, MA. Monitoring wells HOW-2 and HOW-3 (also known as MW-2 and MW-3) were not sampled in September 2020.

This site is a Tier 1A Site (Permit No. 83052) as regulated by the Massachusetts Department of Environmental Protection (MassDEP). Massachusetts environmental regulations require notification to a property owner when environmental samples are collected at a property on behalf of someone other than the property owner. In addition, the property owner must receive a copy of the analytical results following the laboratory analysis of the environmental samples. In accordance with the Massachusetts Contingency Plan, 310 CMR 1403 (10), enclosed is a copy of the analytical results from the September 2020 groundwater sampling, as well as a copy of the required Bureau of Waste Site Cleanup (BWSC) Form 123, and a map of the sampling locations on your property. We have included summary tables of the September 2020 groundwater analytical results, and have included a comparison to the applicable Massachusetts groundwater criteria.

Should you be interested in more information, additional public involvement opportunities are available under 310 CMR 40.1403(9). If you have any questions or comments regarding the results, please contact me at 978-905-2351 or scott.olson@aecom.com.

Yours sincerely,

Scott Olson
Project Manager

cc: Paul Calligan, Lockheed Martin Corporation

Attachments

NOTICE OF ENVIRONMENTAL SAMPLING

As required by 310 CMR 40.1403(10) of the Massachusetts Contingency Plan

BWSC 123

This Notice is Related to Release Tracking Number

03 | 0518

A. The address of the disposal site related to this Notice and Release Tracking Number (provided above):

1. Street Address: 50 Fordham Road

City/Town: Wilmington, MA Zip Code: 01887

B. This notice is being provided to the following party:

1. Name: Patrick St. Pierre - Howland Development Corp.

2. Street Address: 155 West Street

City/Town: Wilmington, MA Zip Code: 01867

C. This notice is being given to inform its recipient (the party listed in Section B):

☐ 1. That environmental sampling will be/has been conducted at property owned by the recipient of this notice.

☑ 2. Of the results of environmental sampling conducted at property owned by the recipient of this notice.

☑ 3. Check to indicate if the analytical results are attached. (If item 2. above is checked, the analytical results from the environmental sampling must be attached to this notice.)

D. Location of the property where the environmental sampling will be/has been conducted:

1. Street Address: 87 Concord Street

City/Town: North Reading, MA Zip Code: 01864

2. MCP phase of work during which the sampling will be/has been conducted:

☐ Immediate Response Action
☐ Release Abatement Measure
☐ Utility-related Abatement Measure
☐ Phase I Initial Site Investigation
☐ Phase II Comprehensive Site Assessment
☐ Phase III Feasibility Evaluation
☐ Phase IV Remedy Implementation Plan
☐ Phase V/Remedy Operation Status
☐ Post-Class C Operation, Maintenance and Monitoring
☑ Other Post-Temporary Solution (specify)

3. Description of property where sampling will be/has been conducted:

☐ residential ☑ commerical ☑ industrial ☐ school/playground ☐ Other _____ (specify)

4. Description of the sampling locations and types (e.g., soil, groundwater) to the extent known at the time of this notice.

Monitoring Wells AE-112D and AE-112R (R1, R3, R5, R6)

E. Contact information related to the party providing this notice:

Contact Name: Scott Olson

Street Address: AECOM - 250 Apollo Drive

City/Town: Chelmsford, MA Zip Code: 01824

Telephone: (978) 846-5238 Email: scott.olson@aecom.com

AECOM
250 Apollo Drive
Chelmsford, MA 01824

978-905-2100 tel
978-905-2101 fax

December 11, 2020

Mr. Mark Clark
Town of N. Reading
235 North Street
N. Reading, MA 01864

Subject: September 2020 Groundwater Analytical Results
Former GE Facility – 50 Fordham Road, Wilmington, MA

Dear Mr. Clark,

In September 2020, AECOM under contract to Lockheed Martin Corporation (LMC) collected groundwater samples from 3 monitoring wells (STM-3D and STM-8D/R) located within the right-of-way along Concord St in North Reading.

This site is a Tier 1A Site (Permit No. 83052) as regulated by the Massachusetts Department of Environmental Protection (MassDEP). Massachusetts environmental regulations require notification to a property owner when environmental samples are collected at a property on behalf of someone other than the property owner. In addition, the property owner must receive a copy of the analytical results following the laboratory analysis of the environmental samples. In accordance with the Massachusetts Contingency Plan, 310 CMR 1403 (10), enclosed is a copy of the analytical results from the groundwater sampling, and a map of the sampling locations close to your property lines. We have included summary tables of the September 2020 groundwater analytical results with a comparison to the applicable Massachusetts groundwater criteria.

Should you be interested in more information, additional public involvement opportunities are available under 310 CMR 40.1403(9). If you have any questions or comments regarding the results, please contact me at 978-905-2351 or scott.olson@aecom.com.

Yours sincerely,

Scott Olson
Senior Technical Specialist

cc:

N. Reading Town Administrator

Paul Calligan, Lockheed Martin Corp.

Attachments

NOTICE OF ENVIRONMENTAL SAMPLING

As required by 310 CMR 40.1403(10) of the Massachusetts Contingency Plan

BWSC 123

This Notice is Related to Release Tracking Number

03 | 0518

A. The address of the disposal site related to this Notice and Release Tracking Number (provided above):

1. Street Address: 50 Fordham Road

City/Town: Wilmington, MA Zip Code: 01887

B. This notice is being provided to the following party:

1. Name: Mark Clark - Town of North Reading

2. Street Address: 235 North Street

City/Town: N. Reading Zip Code: 01864

C. This notice is being given to inform its recipient (the party listed in Section B):

☐ 1. That environmental sampling will be/has been conducted at property owned by the recipient of this notice.

☑ 2. Of the results of environmental sampling conducted at property owned by the recipient of this notice.

☑ 3. Check to indicate if the analytical results are attached. (If item 2. above is checked, the analytical results from the environmental sampling must be attached to this notice.)

D. Location of the property where the environmental sampling will be/has been conducted:

1. Street Address: 51 & 71 Concord Street

City/Town: North Reading, MA Zip Code: 01864

2. MCP phase of work during which the sampling will be/has been conducted:

☐ Immediate Response Action
☐ Release Abatement Measure
☐ Utility-related Abatement Measure
☐ Phase I Initial Site Investigation
☐ Phase II Comprehensive Site Assessment
☐ Phase III Feasibility Evaluation
☐ Phase IV Remedy Implementation Plan
☐ Phase V/Remedy Operation Status
☐ Post-Class C Operation, Maintenance and Monitoring
☑ Other Post-Temporary Solution (specify)

3. Description of property where sampling will be/has been conducted:

☐ residential ☑ commerical ☐ industrial ☐ school/playground ☑ Other municipal right-of-way (specify)

4. Description of the sampling locations and types (e.g., soil, groundwater) to the extent known at the time of this notice.

STM-3D and STM-8D/R

E. Contact information related to the party providing this notice:

Contact Name: Scott Olson

Street Address: AECOM - 250 Apollo Drive

City/Town: Chelmsford, MA Zip Code: 01824

Telephone: (978) 846-5238 Email: scott.olson@aecom.com

AECOM
250 Apollo Drive
Chelmsford, MA 01824

978-905-2100 tel
978-905-2101 fax

December 11, 2020

***** **Via Electronic Mail** *****

Mr. Gary Stanieich
Manager, Wilmington Realty Trust
424 Broadway
Somerville, MA 02145

Subject: September 2020 Groundwater Analytical Results
50 Fordham Road, Wilmington, MA

Dear Mr. Stanieich,

In September 2020, AECOM under contract to Lockheed Martin Corporation (LMC) collected groundwater samples from 72 monitoring well [screen intervals] located on your property at 40-50 Fordham Road in Wilmington and North Reading, MA. This site is a Tier 1A Site (Permit No. 83052) as regulated by the Massachusetts Department of Environmental Protection (MassDEP).

This site is a Tier 1A Site (Permit No. 83052) as regulated by the Massachusetts Department of Environmental Protection (MassDEP). Massachusetts environmental regulations require notification to a property owner when environmental samples are collected at a property on behalf of someone other than the property owner. In addition, the property owner must receive a copy of the analytical results following the laboratory analysis of the environmental samples. In accordance with the Massachusetts Contingency Plan, 310 CMR 1403 (10), enclosed is a copy of the analytical results from the September 2020 groundwater sampling, as well as a copy of the required Bureau of Waste Site Cleanup (BWSC) Form 123, and a map of the sampling locations on your property. We have included summary tables of the September 2020 groundwater analytical results, and have included a comparison to the applicable Massachusetts groundwater criteria.

Should you be interested in more information, additional public involvement opportunities are available under 310 CMR 40.1403(9). If you have any questions or comments regarding the results, please contact me at 978-905-2351 or scott.olson@aecom.com.

Yours sincerely,



Scott Olson
Project Manager

cc: Paul Calligan, Lockheed Martin Corp.
Attachments

NOTICE OF ENVIRONMENTAL SAMPLING

As required by 310 CMR 40.1403(10) of the Massachusetts Contingency Plan

BWSC 123

This Notice is Related to Release Tracking Number

03 | 0518

A. The address of the disposal site related to this Notice and Release Tracking Number (provided above):

1. Street Address: 50 Fordham Road

City/Town: Wilmington, MA Zip Code: 01887

B. This notice is being provided to the following party:

1. Name: Gary Stanieich

2. Street Address: 424 Broadway

City/Town: Somerville, MA Zip Code: 02145

C. This notice is being given to inform its recipient (the party listed in Section B):

☐ 1. That environmental sampling will be/has been conducted at property owned by the recipient of this notice.

☑ 2. Of the results of environmental sampling conducted at property owned by the recipient of this notice.

☑ 3. Check to indicate if the analytical results are attached. (If item 2. above is checked, the analytical results from the environmental sampling must be attached to this notice.)

D. Location of the property where the environmental sampling will be/has been conducted:

1. Street Address: 40 Fordham Rd (site formerly #50, but is now #40 Fordham Rd)

City/Town: Wilmington, MA Zip Code: 01887

2. MCP phase of work during which the sampling will be/has been conducted:

☐ Immediate Response Action
☐ Release Abatement Measure
☐ Utility-related Abatement Measure
☐ Phase I Initial Site Investigation
☐ Phase II Comprehensive Site Assessment
☐ Phase III Feasibility Evaluation
☐ Phase IV Remedy Implementation Plan
☐ Phase V/Remedy Operation Status
☐ Post-Class C Operation, Maintenance and Monitoring
☑ Other Post-Temporary Solution OMM (specify)

3. Description of property where sampling will be/has been conducted:

☐ residential ☑ commerical ☑ industrial ☐ school/playground ☐ Other _____ (specify)

4. Description of the sampling locations and types (e.g., soil, groundwater) to the extent known at the time of this notice.

See attached letter and data sheets for groundwater sample results from 72 wells/screens in September 2020

E. Contact information related to the party providing this notice:

Contact Name: Scott Olson

Street Address: AECOM - 250 Apollo Drive

City/Town: Chelmsford, MA Zip Code: 01824

Telephone: (978) 846-5238 Email: scott.olson@aecom.com

AECOM
250 Apollo Drive
Chelmsford, MA 01824

978-905-2100 tel
978-905-2101 fax

December 11, 2020

Mr. Roland Gagne
Manager, Wilmington Masonry
62 Concord Street
North Reading, MA 01889

Subject: September 2020 Groundwater Analytical Results
62 Concord Street, Wilmington, MA

Dear Mr. Gagne,

In September 2020, AECOM under contract to Lockheed Martin Corporation (LMC) collected a groundwater sample from one monitoring well (STM-8R1) located on your property as part of the ongoing work relating to the former GE facility formerly located at 50 Fordham Rd in Wilmington, MA.

The former GE facility is a Tier 1A Site (Permit No. 83052) as regulated by the Massachusetts Department of Environmental Protection (MassDEP). Massachusetts environmental regulations require notification to a property owner when environmental samples are collected at a property on behalf of someone other than the property owner. In addition, the property owner must receive a copy of the analytical results following the laboratory analysis of the environmental samples. In accordance with the Massachusetts Contingency Plan, 310 CMR 1403 (10), enclosed is a copy of the analytical results from the September 2020 groundwater sampling, as well as a copy of the required Bureau of Waste Site Cleanup (BWSC) Form 123, and a map of the sampling locations on your property. We have included summary tables of the September 2020 groundwater analytical results, and have included a comparison to the applicable Massachusetts groundwater criteria.

Should you be interested in more information, additional public involvement opportunities are available under 310 CMR 40.1403(9). If you have any questions or comments regarding the results, please contact me at 978-905-2351 or scott.olson@aecom.com.

Yours sincerely,

Scott Olson
Project Manager

cc: Paul Calligan, Lockheed Martin Corp.

Attachments

NOTICE OF ENVIRONMENTAL SAMPLING

As required by 310 CMR 40.1403(10) of the Massachusetts Contingency Plan

BWSC 123

This Notice is Related to Release Tracking Number

03 | 0518

A. The address of the disposal site related to this Notice and Release Tracking Number (provided above):

1. Street Address: 50 Fordham Road

City/Town: Wilmington, MA Zip Code: 01887

B. This notice is being provided to the following party:

1. Name: Roland Gagne - Wilmington Masonry

2. Street Address: 62 Concord Street

City/Town: North Reading, MA Zip Code: 01864

C. This notice is being given to inform its recipient (the party listed in Section B):

☐ 1. That environmental sampling will be/has been conducted at property owned by the recipient of this notice.

☑ 2. Of the results of environmental sampling conducted at property owned by the recipient of this notice.

☑ 3. Check to indicate if the analytical results are attached. (If item 2. above is checked, the analytical results from the environmental sampling must be attached to this notice.)

D. Location of the property where the environmental sampling will be/has been conducted:

1. Street Address: 62 Concord Street

City/Town: North Reading, MA Zip Code: 01864

2. MCP phase of work during which the sampling will be/has been conducted:

☐ Immediate Response Action
☐ Release Abatement Measure
☐ Utility-related Abatement Measure
☐ Phase I Initial Site Investigation
☐ Phase II Comprehensive Site Assessment
☐ Phase III Feasibility Evaluation
☐ Phase IV Remedy Implementation Plan
☐ Phase V/Remedy Operation Status
☐ Post-Class C Operation, Maintenance and Monitoring
☑ Other Post-Temporary Solution (specify)

3. Description of property where sampling will be/has been conducted:

☐ residential ☑ commerical ☑ industrial ☐ school/playground ☐ Other _____ (specify)

4. Description of the sampling locations and types (e.g., soil, groundwater) to the extent known at the time of this notice.

STM-8R1, groundwater

E. Contact information related to the party providing this notice:

Contact Name: Scott Olson

Street Address: AECOM - 250 Apollo Drive

City/Town: Chelmsford, MA Zip Code: 01824

Telephone: (978) 846-5238 Email: scott.olson@aecom.com

AECOM
250 Apollo Drive
Chelmsford, MA 01824

978-905-2100 tel
978-905-2101 fax

December 11, 2020

******* Via Electronic Mail *******

Mr. Ruben Byerley
YRC Freight
10990 Roe Avenue
Overland Park, KS 66211-1213

Subject: September 2020 Groundwater Sampling Analytical Results
YRC Freight Property at 95 Concord Street – N. Reading, MA

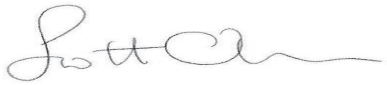
Dear Mr. Byerley,

In September 2020, AECOM under contract to Lockheed Martin Corporation (LMC) collected groundwater samples from nine monitoring wells (AE-106S, AE-106D, AE-106-R1-R3-R5 and AE-111-R1-R3-R5-R7) located on your property at 95 Concord Street in N. Reading, MA.

This site is a Tier 1A Site (Permit No. 83052) as regulated by the Massachusetts Department of Environmental Protection (MassDEP). Massachusetts environmental regulations require notification to a property owner when environmental samples are collected at a property on behalf of someone other than the property owner. In addition, the property owner must receive a copy of the analytical results following the laboratory analysis of the environmental samples. In accordance with the Massachusetts Contingency Plan, 310 CMR 1403 (10), enclosed is a copy of the analytical results from the September 2020 groundwater sampling, as well as a copy of the required Bureau of Waste Site Cleanup (BWSC) Form 123, and a map of the sampling locations on your property. We have included summary tables of the September 2020 groundwater analytical results, and have included a comparison to the applicable Massachusetts groundwater criteria.

Should you be interested in more information, additional public involvement opportunities are available under 310 CMR 40.1403(9). If you have any questions or comments regarding the results, please contact me at 978-905-2351 or scott.olson@aecom.com.

Yours sincerely,



Scott Olson
Project Manager

cc: Paul Calligan, Lockheed Martin Corp.

Attachments

NOTICE OF ENVIRONMENTAL SAMPLING

As required by 310 CMR 40.1403(10) of the Massachusetts Contingency Plan

BWSC 123

This Notice is Related to Release Tracking Number

03 | 0518

A. The address of the disposal site related to this Notice and Release Tracking Number (provided above):

1. Street Address: 50 Fordham Road

City/Town: Wilmington, MA Zip Code: 01887

B. This notice is being provided to the following party:

1. Name: Ruben Byerly

2. Street Address: 10990 Roe Avenue

City/Town: Overland Park, KS Zip Code: 66211-1213

C. This notice is being given to inform its recipient (the party listed in Section B):

☐ 1. That environmental sampling will be/has been conducted at property owned by the recipient of this notice.

☑ 2. Of the results of environmental sampling conducted at property owned by the recipient of this notice.

☑ 3. Check to indicate if the analytical results are attached. (If item 2. above is checked, the analytical results from the environmental sampling must be attached to this notice.)

D. Location of the property where the environmental sampling will be/has been conducted:

1. Street Address: 95 Concord Street

City/Town: North Reading, MA Zip Code: 01864

2. MCP phase of work during which the sampling will be/has been conducted:

☐ Immediate Response Action
☐ Release Abatement Measure
☐ Utility-related Abatement Measure
☐ Phase I Initial Site Investigation
☐ Phase II Comprehensive Site Assessment
☐ Phase III Feasibility Evaluation
☐ Phase IV Remedy Implementation Plan
☐ Phase V/Remedy Operation Status
☐ Post-Class C Operation, Maintenance and Monitoring
☑ Other Post-Temporary Solution OMM (specify)

3. Description of property where sampling will be/has been conducted:

☐ residential ☑ commerical ☑ industrial ☐ school/playground ☐ Other _____ (specify)

4. Description of the sampling locations and types (e.g., soil, groundwater) to the extent known at the time of this notice.

AE-106S, AE-106D, AE-106R1-R3-R5, and AE-111R1-R3-R5-R7

E. Contact information related to the party providing this notice:

Contact Name: Scott Olson

Street Address: AECOM - 250 Apollo Drive

City/Town: Chelmsford, MA Zip Code: 01824

Telephone: (978) 846-5238 Email: scott.olson@aecom.com

NOTICE OF ENVIRONMENTAL SAMPLING

As required by 310 CMR 40.1403(10) of the Massachusetts Contingency Plan

BWSC 123

This Notice is Related to Release Tracking Number

03 | 0518

A. The address of the disposal site related to this Notice and Release Tracking Number (provided above):

1. Street Address: 50 Fordham Road

City/Town: Wilmington, MA Zip Code: 01887

B. This notice is being provided to the following party:

1. Name: Gary Stanieich

2. Street Address: 424 Broadway

City/Town: Somerville, MA Zip Code: 02145

C. This notice is being given to inform its recipient (the party listed in Section B):

☑ 1. That environmental sampling will be/has been conducted at property owned by the recipient of this notice.

☐ 2. Of the results of environmental sampling conducted at property owned by the recipient of this notice.

☐ 3. Check to indicate if the analytical results are attached. (If item 2. above is checked, the analytical results from the environmental sampling must be attached to this notice.)

D. Location of the property where the environmental sampling will be/has been conducted:

1. Street Address: 40 Fordham Rd (site formerly #50, but is now #40 Fordham Rd)

City/Town: Wilmington, MA Zip Code: 01887

2. MCP phase of work during which the sampling will be/has been conducted:

☐ Immediate Response Action
☐ Release Abatement Measure
☐ Utility-related Abatement Measure
☐ Phase I Initial Site Investigation
☐ Phase II Comprehensive Site Assessment
☐ Phase III Feasibility Evaluation
☐ Phase IV Remedy Implementation Plan
☐ Phase V/Remedy Operation Status
☐ Post-Class C Operation, Maintenance and Monitoring
☑ Other post Temporary Solution O&M (specify)

3. Description of property where sampling will be/has been conducted:

☐ residential ☑ commerical ☑ industrial ☐ school/playground ☐ Other _____ (specify)

4. Description of the sampling locations and types (e.g., soil, groundwater) to the extent known at the time of this notice.

Environmental (indoor air) samples to be collected in Building 1 on January 26, 2021; See attached supplemental form.

E. Contact information related to the party providing this notice:

Contact Name: Scott Olson

Street Address: AECOM - 250 Apollo Drive

City/Town: Chelmsford, MA Zip Code: 01824

Telephone: (978) 846-5238 Email: scott.olson@aecom.com

NOTICE OF ENVIRONMENTAL SAMPLING

As required by 310 CMR 40.1403(10) of the Massachusetts Contingency Plan

MASSACHUSETTS REGULATIONS THAT REQUIRE THIS NOTICE

This notice is being provided pursuant to the Massachusetts Contingency Plan and the notification requirement at 310 CMR 40.1403(10). The Massachusetts Contingency Plan is a state regulation that specifies requirements for parties who are taking actions to address releases of chemicals (oil or hazardous material) to the environment.

THE PERSON(S) PROVIDING THIS NOTICE

This notice has been sent to you by the party who is addressing a release of oil or hazardous material to the environment at the location listed in **Section A** on the reverse side of this form. (The regulations refer to the area where the oil or hazardous material is present as the "disposal site".)

PURPOSE OF THIS NOTICE

When environmental samples are taken as part of an investigation under the Massachusetts Contingency Plan at a property on behalf of someone other than the owner of the property, the regulations require that the property owner (listed in **Section B** on the reverse side of this form) be given notice of the environmental sampling. The regulations also require that the property owner subsequently receive the analytical results following the analysis of the environmental samples.

Section C on the reverse side of this form indicates the circumstance under which you are receiving this notice at this time. If you are receiving this notice to inform you of the analytical results following the analysis of the environmental samples, you should also have received, as an attachment, a copy of analytical results. These results should indicate the number and type(s) of samples (e.g., soil, groundwater) analyzed, any chemicals identified, and the measured concentrations of those chemicals.

Section D on the reverse side of this form identifies the property where the environmental sampling will be/has been conducted, provides a description of the sampling locations within the property, and indicates the phase of work under the Massachusetts Contingency Plan regulatory process during which the samples will be/were collected.

FOR MORE INFORMATION

Information about the general process for addressing releases of oil or hazardous material under the Massachusetts Contingency Plan and related public involvement opportunities may be found at http://www.mass.gov/dep/cleanup/oview.htm. For more information regarding this notice, you may contact the party listed in **Section E** on the reverse side of this form. Information about the disposal site identified in Section A is also available in files at the Massachusetts Department of Environmental Protection. See http://mass.gov/dep/about/region/schedule.htm if you would like to make an appointment to see these files. Please reference the **Release Tracking Number** listed in the upper right hand corner on the reverse side of this form when making file review appointments.

Notice of Environmental Sampling – BWSC 123

As required by 310 CMR 40.1403(10) of the Massachusetts Contingency Plan

This Notice is Related to Release Tracking Number 03-0518

(Supplemental Page to BWSC-123 Form)

D.4. Description of the sampling locations and types (e.g., soil, groundwater) to the extent known at the time of this notice.

The following activities will be conducted onsite:

- Indoor air sampling will be conducted at 7 locations within Building 1, with five locations on the main level and one on the second leve. One ambient air sample will be collected outside of Building 1. These samples will be *collected* over an 8-hour duration during normal business day-time hours, between approximately 9:00 or 10:00 am to 5:00 or 6:00 pm. AECOM will conduct one brief (up to one 1 hour) site visit on January 19 to observe current UPS operations, and then conduct the sampling on January 26. We will update you via electronic mail and/or phone call if there is any need to change dates.

- For the indoor air sampling, regulations require the building heating system to be in operation for the 72 hrs prior sample collection. Tenants should operate their heating systems as they normally would during their occupancy in Building 1 at this time of year. We understand that UPS may have the heating system set to maintain temperatures lower than for typical occupancy based on the nature of their operations.