Proactive by Design

Monitoring Report – 2022
642 Allens Avenue
Providence, Rhode Island

June 21, 2023
GZA File No.: 03.0033554.01
RIDEM Case No. 98-004 / File No. SR-28-1152

PREPARED FOR:
Rhode Island Department of Environmental Management (RIDEM)
Providence, Rhode Island

ON BEHALF OF:
Rhode Island Energy™
a PPL company

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June 21, 2023
File No. 03.0033554.01

Via E-Mail and U.S. Mail

Mr. Joseph Martella
Rhode Island Department of Environmental Management (RIDEM)
Office of Land Revitalization and Sustainable Materials Management
235 Promenade Street
Providence, Rhode Island 02908

Re: Monitoring Report – 2022
642 Allens Avenue
Providence, Rhode Island
RIDEM Case No. 98-004 / Site Remediation File No. SR-28-1152

Dear Mr. Martella:

On behalf of The Narragansett Electric Company d/b/a Rhode Island Energy, GZA GeoEnvironmental, Inc. (GZA) is pleased to present to the Rhode Island Department of Environmental Management (RIDEM) the attached *Monitoring Report* for the Former 642 Allens Avenue Manufactured Gas Plant (MGP) located at 642 Allens Avenue in Providence, Rhode Island (the Site). This report describes Site monitoring activities that were performed at the above referenced Site during the 2022 monitoring period. As described in the attached report, these Site monitoring activities include routine shoreline observations, groundwater elevation and non-aqueous phase liquid gauging, and groundwater quality monitoring.

Should you have any questions or comments regarding the information presented herein, please do not hesitate to contact the undersigned at (401) 421-4140 or Ms. Amy Willoughby of The Narragansett Electric Company at AAWillougby@RIEnergy.com.

Very truly yours,
GZA GEOENVIRONMENTAL, INC.

Sara Haupt P.E.
Project Manager

Richard Carlone, P.E.
Consultant/Reviewer

Margaret S. Kilpatrick, P.E.
Principal

Attachment: *Monitoring Report – 2022*

cc: Amy Willoughby, The Narragansett Electric Company

TABLES

FIGURES

APPENDICES

1.0 INTRODUCTION

On behalf of The Narragansett Electric Company (TNEC), d/b/a Rhode Island Energy, GZA GeoEnvironmental Inc. (GZA) has prepared this *Monitoring Report* describing activities performed at the Former 642 Allens Avenue Manufactured Gas Plant (MGP) located at 642 Allens Avenue in Providence, Rhode Island. The Site is also defined as Providence Tax Assessors Plat (A.P.) 101 Lot 1 and A.P. 56 Lot 5, 273, 316 and 317. These properties are collectively referred to herein as the "Site." This report describes monitoring activities that were performed at the Site during the 2022 monitoring period. As described further herein, annual monitoring performed in 2022 consisted of approximately monthly routine shoreline observations, semi-annual groundwater elevation/non-aqueous phase liquid (NAPL) gauging events, and an annual groundwater quality sampling event. **Figure C1** (*Title Sheet and Index to Drawings*) presents the Site Locus Plan and **Figure 2** (*Overall Aerial*) presents the location of the Site. **Figure N1** (*General Notes and Legend)* was prepared to provide the legend and notes for the Site plans.

This report is subject to the Limitations presented in **Appendix A** *(Limitations)***.**

1.1 SITE DESCRIPTION

The Site was the location of the Former 642 Allens Avenue MGP. The Site is now largely occupied with natural gas utility operations, which serve the City of Providence and the State of Rhode Island. The Site is located on the east side of Allens Avenue, northeast of the intersection of Allens Avenue and Terminal Road in the City of Providence, Rhode Island (refer to **Figure C1**). The majority of the Site is secured with a locked perimeter chain-link fence. The configuration of this perimeter fencing is shown on **Figure 3A** (*Exploration Location Plan – Western Side of the Site*) and **Figure 3B** (*Exploration Location Plan – Eastern Side of the Site)*.

The approximately 41-acre Site is identified in the City of Providence Tax Assessor's Office as Assessors Plat (A.P.) 56, Lots 5, 273, 316, and 317, and as A.P. 101, Lot 1. The entirety of the Site is currently owned by The Narragansett Electric Company. National Grid LNG, LLC (NGLNG) holds a lease on A.P. 56 Lot 316 and Lafarge Holcim US, Inc. (Holcim) holds a lease on A.P. 56 Lot 273. The entirety of the Site is zoned by the City of Providence as W-3 (Port/Maritime Industrial Waterfront District). The W-3 Port/Maritime Industrial Waterfront District is intended "to promote maritime industrial and commercial uses within the areas of Providence's waterfront, protect the waterfront as a resource for water-dependent industrial uses, and facilitate the renewed use of a vital waterfront". The current Site layout and key features are shown on **Figure 3A** and **Figure 3B**.

For the purpose of this report, the Site has been subdivided into four areas based on current use. **Figure 3A** and **Figure 3B** presents the location and configuration of the following areas:

- Natural Gas Regulation Facility (portion of A.P. 101 Lot 1 and A.P. 56 Lot 5);
- LNG Facility (A.P. 56 Lot 316); and
- Holcim Cement Facility (A.P. 56 Lots 273 and 317).

The following table summarizes the five parcels that make up these four Site areas. Parcel locations are also shown on **Figure 2**.

A.P.	Lot	Lot Size (Acres)	Current Owner	Address	Current Use(s)
101	1	11.35	TNEC	642 Allens Avenue 670 Allens Avenue	Natural Gas Construction Storage Natural Gas Regulation and Distribution
56	5	8.90	TNEC	642 Allens Avenue	Natural Gas Construction Storage Natural Gas Regulation and Distribution
56	273	3.90	TNEC	139 Terminal Road	Cement Storage and Distribution
56	316	16.36	TNEC	121 Terminal Road	LNG Facility
56	317	0.49	TNEC	121 Terminal Road	Access Road

The Site has frontage on Allens Avenue to the west and is bounded to the east by the Providence River. It is adjoined to the northwest by Triton Terminaling, LLC, and to the south by Terminal Road, the Former Sun Oil/Providence Port facility, and New England Bituminous Terminal Corporation. **Figure 2** presents the location of the Site and these abutting lots. The area surrounding the Site is industrial in nature, with parcels zoned W-3 or M-2 (both industrial type zoning). The nearest residential lot is located over 1,000 feet to the south of the Site.

Based on review of information presented in the Environmental Resource map maintained by RIDEM (http://www.dem.ri.gov/maps/), groundwater in the area of the Site is classified as "GB," which indicates that groundwater may not be suitable for public or private drinking water use without treatment due to known or presumed degradation.

1.2 SITE BACKGROUND

Historical Site operations have included the former MGP, former liquid petroleum gas (LPG)/ propane gas storage and distribution, former compressed natural gas (CNG) operations, and former petroleum storage and distribution. **Figure 3A** and **Figure 3B** present a compilation of relevant historical features and structures associated with past Site operations.

The former MGP operated from 1910 to 1953 and generated gas using the coal carbonization, carbureted water gas, oil gas and producer gas processes. Other by-products, such as tar, ammonia, cyanogen, naphthalene, light oils, hydrogen sulfide, and spent oxides, were removed during the process of gas condensing and purifying in the Former Condenser House (Former Compressor Building No. 1) and the Former Coal Gas Purifier House (present Compressor Building No. 2). Gasification operations were generally conducted proximate to the current LNG facility (**Figure 3B**), with regulating and distribution of the gas closer to the current Natural Gas Regulating Facility (**Figure 3A**).

The LPG plant operated from 1952 to mid-1960s and the propane gas storage and distribution plant operated from the 1960s to the 1980s. These operations supplemented manufactured and natural gas during peak gas demands. LPG/propane operations were generally conducted proximate to the center of the Site near the Former Propane House (**Figure 3A** and **Figure 3B**).

Petroleum products used in the production of manufactured gas was stored in two aboveground storage tanks located at the northeast corner of the Site (proximate to the current LNG tank – **Figure 3B**). Reportedly, Providence Gas Company also constructed an oil or tar storage facility in 1953 (location unknown). Additionally, Gulf Oil Corporation leased a portion of the Site during 1957 and built four aboveground storage tanks (ASTs) for kerosene storage on the premises (exact location of all tanks unknown, although known to be proximate to the existing LNG facility, the location of one of the tanks is shown on **Figure 3B**).

GZA conducted supplemental investigation activities at the Site in 2014, with follow up activities conducted in 2016 and 2017. A summary of these activities, relevant regulatory history of the Site and other background information will be included in an addendum to the April 2003 Site Investigation Report (SIR). This SIR Addendum is expected to be submitted to RIDEM in 2023.

2.0 RESULTS OF MONITORING PROGRAM

This section presents the results of the 2022 monitoring program. As indicated previously, this monitoring program consists of monthly shoreline observations, semi-annual groundwater elevation monitoring and NAPL monitoring/recovery, and annual groundwater quality sampling and analysis.

2.1 SHORELINE OBSERVATIONS

Between January and December 2022, the shoreline adjacent to the Site was inspected for the presence of sheens in the Providence River on at least a monthly basis. Portions of the Site's shoreline are surrounded by both a hard boom and absorbent soft boom to contain any observed sheen. Boom has been maintained in the cove since at least 2002. The current boom configuration is shown on **Figure 3B** with a new segment of soft boom installed inside of the cove area during the summer of 2022**.** Sheens have been observed intermittently proximate to the shoreline in the cove area. More significant sheens were observed at mid-tide and generally consisted of dull to bright plates of sheen. Sheens observed at high or low tide generally consisted of slight and minor dull plates of sheen. During the summer of 2022, a particularly active portion of the shoreline was identified with dull to bright patched of sheen regularly leaching into the water during mid tides. This region was surrounded by an additional layer of soft absorbent boom. A summary of sheen observations proximate to the cove area is presented in **Table 1** (*Summary of Sheen Observations – 2011 to 2022)*.

2.2 NAPL AND GROUNDWATER ELEVATION MONITORING

Comprehensive gauging rounds of the groundwater monitoring well network are conducted semi-annually for the presence of NAPL and collection of groundwater elevation readings. Gauging was performed in June 2022 and November 2022. **Figure 4** (*Groundwater Monitoring Wells)* presents the location of all monitoring wells at the Site and **Figure 5** (*Shallow Groundwater Contours (November 2022))* presents the shallow groundwater elevations contours based on measurements collected in November 2022. In addition, monthly NAPL measurements were collected from GZ-307S, as NAPL is typically observed in this well. GZ-307S is located proximate to the northern property line near the Gas Control Building (refer to **Figure 3A).** During the gauging events, depth to groundwater and measurements of the presence and thickness of NAPL were recorded. NAPL measurements were gauged using an oil-water interface probe. To gauge the presence of light non-aqueous phase liquid (LNAPL), the probe was lowered into the well until the probe's continuous alarm indicated the presence of LNAPL. When the probe passes through the LNAPL into groundwater, an intermittent alarm is triggered. This information was used to gauge the thickness of LNAPL. Gauging for the presence of dense non-aqueous phase liquid (DNAPL) was conducted in the same manner as the LNAPL. Once the continuous alarm of the interface probe was heard, measurements were recorded to the bottom of the well to record product thickness. Note, because the wells serve to collect these materials, NAPL thickness measurements in groundwater monitoring wells are typically greater than the actual thickness of NAPL in the surrounding formation.

Consistent with previous events, Trace NAPL was detected in GZ-307S during this annual monitoring period. Trace NAPL was also detected in wells RCA-17, GZ-501S, ESS RW-3, ESS RW-4, and ESS RW-5. Refer to groundwater sampling logs in **Appendix B** (*Groundwater Sampling Low Flow Logs)* for additional information.

The following tables were prepared to present gauging data collected:

- **Table 2** (*Summary of Groundwater and NAPL Gauging Results);*
- **Table 3** (*Historical Light Non-Aqueous Phase Liquid (LNAPL) Well Gauging Data);*
- **Table 4** (*Historical Dense Non-Aqueous Phase Liquid (DNAPL) Well Gauging Data);* and
- **Table 5** (*LNAPL Gauging and Recovery – GZ-307S*)**.**

2.2.1 LNAPL Observations and Recovery

Observations of LNAPL in groundwater monitoring wells has been limited to certain isolated areas of the Site, generally in areas that were formerly utilized for gas manufacturing. As indicated in **Table 2** and **Table 3**, between November 2001 and November 2022, only fifteen (15) of the wells had product present at greater than or equal to 0.01 feet. These well locations are presented on **Figure 6** (*Historical NAPL Thickness (≥0.01 feet) (2001-2022))*. The majority of LNAPL detections were less than 0.40 feet in thickness.

Wells GZ-307S, RCA-17, GZ-501S, ESS RW-3, ESS RW-4, and ESS RW-5 were found to contain trace LNAPL during the 2022 annual monitoring. As presented in **Table 5**, due to the limited thickness (less than 0.1 feet) of LNAPL, no measurable quantity of LNAPL/groundwater mixture was recovered from GZ-307 during 2022.

2.2.2 DNAPL Observations

As indicated in **Table 2** and **Table 4**, between November 2001 and November 2022, DNAPL was encountered in only one (1) monitoring well (RCA-3), located in the north-central portion of the Site proximate to the cove, as shown on **Figure 3B**. With the exception of 0.17 feet detected in November 2001, DNAPL observations at this location have been limited to trace amounts. In 2014, a deeper monitoring well was installed (GZ-313D) near the location of RCA-3 to assess the vertical extent of DNAPL in this area. DNAPL was not encountered in GZ-313D between 2014 and 2016. Both RCA-3 and GZ-313D were decommissioned in July 2016. DNAPL was not encountered in any remaining monitoring wells in 2022.

2.3 GROUNDWATER FLOW DIRECTION

Comprehensive elevation gauging rounds of the groundwater monitoring well network were performed in June 2022 and November 2022. These depths to groundwater readings were used to calculate the elevation of the groundwater table at each well location. Monitoring well reference elevation and depth to groundwater measurements are presented in **Table 2**. **Table 2** also includes groundwater elevation data collected by GZA since July 2011 during our initial assessment of well conditions at the Site. The comprehensive groundwater elevations recorded during the November 2022 gauging round were used to prepare the shallow groundwater contours presented on **Figure 5.**

Site groundwater elevations are tidally influenced and have been observed to fluctuate approximately 3 feet between mean low and mean high water. Groundwater was encountered in many of the explorations at the Site at depths ranging from approximately 4 to 16 feet bgs (ranging from elevation 7 feet NAVD 88 to 1 feet NAVD 88), with shallower groundwater being encountered close to the Providence River at the LNG Facility. Shallower groundwater was also encountered proximate to the northern Site boundary in the Natural Gas Regulation Facility. Groundwater in this area is likely influenced by utility corridors. As presented on **Figure 5**, groundwater beneath the Site flows from west to east towards the Providence River, consistent with surrounding topography.

2.4 GROUNDWATER SAMPLING TECHNIQUES

As shown on **Figure 4**, the current groundwater monitoring well network consisted of thirty-six (36) groundwater monitoring wells. In November 2022, groundwater quality samples were collected from sixteen (16) monitoring wells: RCA-1, RCA-12R, RCA-15, RCA-22, RCA-31, RCA-36, VHB-1, VHB-20, GZ-301D, GZ-304D, GZ-309D, GZ-319D, GZ-500S, GZ 500D, GZ-501S, and GZ-502S. These well locations were chosen to provide a representative evaluation of overall Site groundwater quality.

During the November 2022 round, groundwater samples were collected in general accordance with EPA's September 19, 2017, Low Stress (low flow) Purging and Sampling Procedure. Prior to sampling, the depth to static groundwater and any NAPL present was measured in each well using an ORS electronic oil/water interface probe. During groundwater sampling, a variable speed peristaltic pump was utilized to control the rate of purging. Dedicated 1/4-inch polyethylene tubing installed in each of the existing wells was utilized as the intake and discharge tubing for the pumps. This tubing has the potential to become brittle when exposed to UV light (sunlight) and where necessary this tubing is typically replaced. No tubing needed replacement

during the November 2022 sampling round. Groundwater sampling logs are included in **Appendix B**. Pharmaceutical grade tubing was utilized as the pump head tubing and connected to the intake and discharge tubing by clamps sufficient to prevent the introduction of air into the sample. If NAPL was noted in the monitoring well prior to sampling, new tubing was installed in the monitoring well. In order to limit the potential for LNAPL to enter the sampling tubing during the collection of the sample, a peristaltic pump was used to force air through the tubing as it passed through the LNAPL/groundwater interface. If DNAPL were to be noted in the well, the sampling tubing would be installed in these wells carefully so that the DNAPL layer would not be intercepted.

During sampling, field readings were recorded for pH, temperature, specific conductance, oxidation reduction potential (ORP) and dissolved oxygen (DO) using a YSI Professional Plus® portable water quality meter with a flow-through cell. A LaMotte Turbidimeter® was used to monitor the turbidity. These field readings are presented in the field sampling logs, attached as **Appendix B**. As indicated on the logs, the monitoring wells were generally pumped until field screening parameters were stabilized prior to collecting the samples.

All recovered groundwater was collected and containerized in an appropriately labeled 55-gallon drum or other equivalent container for off-Site disposal. Copies of disposal documentation are provided in **Appendix C.**

Samples were placed in laboratory-provided, hydrochloric acid-preserved 40 mL glass vials with septa caps for VOC analysis via EPA Method 8260. Samples were then packed in an ice chest and transported under chain-of-custody protocol to ESS Laboratory located in Cranston, Rhode Island.

The analytical results from these groundwater monitoring activities are provided in **Appendix D** (*Laboratory Reports)* and **Table 6 (***Summary of 2022 Groundwater VOC Analytical Results)*.

QA/QC samples were also collected and analyzed during these groundwater sampling activities. These QA/QC procedures and samples are summarized below in Section 2.6.

2.5 QUALITY ASSURANCE/QUALITY CONTROL SAMPLING AND ANALYSIS

During the November 2022 sampling round, all groundwater samples were submitted to ESS Laboratory in Cranston, Rhode Island for analysis. The samples were transported to the laboratory under chain of custody protocol.

Field duplicate samples were collected and analyzed to evaluate the reproducibility of the sampling methods. Duplicate groundwater samples were collected sequentially after achieving stabilization of the geochemical parameters. Duplicate samples were collected at a frequency of 1 duplicate sample per 20 samples collected on average; one field duplicate was collected this round. Duplicate groundwater sampling results are included in the applicable summary table, with a reference to the applicable sample location in the notes section. A VOC trip blank accompanied each cooler of groundwater samples taken on November 22 and 23, 2022 to the laboratory and was analyzed for the presence of VOCs to evaluate potential cross contamination during sample transport.

The analytical results and chain-of-custody forms are presented in **Appendix D** and **Table 7** (*Summary of Groundwater QA/QC VOC Analytical Results)*.

The following summarizes the groundwater QA/QC samples for the 2022 sampling event:

QA/QC Sample Type	Matrix	Number of Samples	Analysis / Comment
Samples	Groundwater	16	VOCs
Field Duplicates	Groundwater	1	VOCs
Trip Blanks	Groundwater	2	VOCs

Upon receipt, GZA audited the analytical data to assess whether the analytical data met the data quality objectives of the project. This audit included evaluation of QA/QC samples (*e.g.*, Lab Control Samples/Lab Control Sample Duplicates, Method Blanks, Field Blanks, and Field Duplicates) to evaluate the representativeness, comparability, completeness, precision, accuracy, and sensitivity of the analytical data.

The groundwater analytical results were useable to meet the project data quality objectives with no unusual observations noted.

2.6 GROUNDWATER ANALYTICAL RESULTS

Analytical data from the sampling event is summarized in **Table 6** and **Figure 7**. The table includes comparisons to Method 1 (or Method 2 as appropriate) GB Groundwater Objectives and Upper Concentration Limits (UCL). In general, the analytical results reported during the 2022 round were consistent with levels detected previously.

Historical groundwater quality at the Site has generally characterized by a few isolated exceedances of the GB Groundwater Objectives for benzene, ethylbenzene and naphthalene[1], primarily in areas of the Site where former MGP features were located. During the 2022 sampling round, all the detected compounds were below the GB Groundwater Objectives. In addition, no GB UCL exceedances were detected.

The following sections discuss the dissolved-phased VOC analytical results for this sampling event as compared to the Method 1 (or Method 2 as appropriate) objectives by Site area.

2.6.1 Former CNG Fueling Station Area

The Former CNG Fueling Station area is primarily grassed with a smaller portion of paved area. The Former CNG fueling station and Former CNG buildings previously located in this area were removed in 2020 as part of the Former CNG Dispensing Station Demolition Project. Four (4) wells are located in this area (RCA-12R, GZ-301D, GZ-302S and GZ-302D). Two (2) monitoring wells (RCA-12R and GZ-301D) were sampled from this area during the 2022 monitoring event, as shown on **Figure 7,** with results presented in **Table 6.**

The following VOCs were detected in the sample collected from RCA-12R in the Former CNG Fueling Station area during the 2022 sampling round: cis-,1,2-dichloroethene (0.0162 mg/L), tetrachloroethylene (0.002mg/L), trichloroethene (0.0072 mg/L), and vinyl chloride (0.0013mg/L). All of the VOC results in the sample collected from GZ-301D were below the method detection limit. No VOCs were detected above the GB Groundwater Objectives.

Historically, exceedances of the Method 1/2 GB Groundwater Objectives in this area have been limited to vinyl chloride in samples collected from RCA-12R and GZ-301D. These monitoring wells are located proximate to Allens Avenue and the property line and groundwater contours (**Figure 5***)* indicate that groundwater flow originates upgradient. Additionally, the above detection of cis-1,2-dichloroethene, tetrachloroethylene, trichloroethene, and vinyl chloride are not compounds typically associated with former MGP operations. Therefore, these chlorinated VOC detections are likely due to upgradient sources.

2.6.2 Natural Gas Regulation Area

The Natural Gas Regulation Area is covered primarily by grasses or crushed stone, with some paved areas such as the parking lot and roadways. The gas operations building, Compressor Building No.2 and a natural gas regulator building are located in this area. Eighteen (18) wells are located in this area (RCA-1, RCA-15, RCA-17, VHB-1, GZ-303S, GZ-303D, GZ-304D, GZ-305S, GZ-306S, GZ-307S, GZ-308S, GZ-309D, Unknown-2, GZ-500S, GZ-500D, GZ-501S, GZ-502S, and GZ-503S). Nine (9) monitoring wells

[1] As noted in previous reports, vinyl chloride was also detected in a few Site wells in excess of the GB Groundwater Objective. Vinyl chloride is not a Site compound of concern and is likely originating upgradient of the Site.

(RCA-1, RCA-15, VHB-1, GZ-304D, GZ-309D, GZ-500S, GZ-500D, GZ-501S, and GZ-502S) were sampled from this area during the November 2022 monitoring event (refer to **Table 6** and **Figure 7**).

VOCs were detected in seven (7/9) samples collected in the Natural Gas Regulation Area during the 2022 sampling round (RCA-1, VHB-1, GZ-304D, GZ-500D, GZ-500S, GZ-501S, and GZ-502S). The following VOCs were detected: benzene, cis-1,2-dichloroethene, vinyl chloride, sec-butylbenzene, 1,2,4-Trimethylbenzene, ethylbenzene, naphthalene, n-propylbenzene, isopropylbenzene, trichloroethene and xylenes. None of the VOCs detected were above the applicable GB Groundwater Objectives.

Historically, few isolated exceedances of the Method 1/2 GB Groundwater Objectives for benzene and naphthalene have been detected in the Natural Gas Regulation Area in areas where former MGP features were located: downgradient of former tar/ammonia pits (VHB-7), proximate to the former gasholder No. 18 (VHB-10) and downgradient of the former ammonia works buildings (VHB-21/GZ-318D). The presence of these compounds in groundwater samples is typical for former MGP sites.

Compounds such as vinyl chloride, 1,2,4-trimethylbenzene, n-propylbenzene, and trichloroethene were mostly detected in wells along the southwest of the Site during the 2022 sampling event at very low concentrations (slightly above the method detection limits). The presence of these compounds in groundwater samples is not typical of former MGP sites. Therefore, these chlorinated VOC detections are likely due to upgradient sources.

2.6.3 LNG Facility

The LNG Facility area is covered with concrete, crushed stone or asphalt areas. The LNG tank, LNG fueling station and LNG facility control buildings are located in this area. Fourteen (14) wells are located in this area (RCA-6, RCA-22, RCA-28, RCA-31, RCA-34, RCA-36, VHB-20, GZ-101, GZ-201, GZ-319D, ESS RW-3, ESS RW-4, ESS RW-5 and ESS RW-6). Six (6) monitoring wells (RCA-22, RCA-31, RCA-36, VHB-20, GZ-201 and GZ-319D) were sampled from this area during the November 2022 monitoring event, as summarized in **Table 6** and presented on **Figure 7**.

VOCs were detected in five (4/5) samples collected in the Natural Gas Regulation Area during the 2022 sampling round (RCA-22, VHB-20, RCA-36 and GZ-319D). The following VOCs were detected: 1,2,4-Trimethylbenzene, benzene, ethylbenzene, isopropylbenzene, naphthalene, n-Propylbenzene, styrene, and xylenes. No wells were had VOCs detected at concentrations that exceed the applicable Method 1/2 GB Groundwater Objectives.

Historically, few isolated exceedances of the GB Groundwater Objectives for benzene, ethylbenzene and naphthalene have been detected in the LNG Facility in areas of the Site where former MGP features were located: proximate to the former purifier building (RCA-28) and proximate to former MGP features (RCA-22, RCA-36, GZ-314S/D and GZ-315D). The presence of these compounds in groundwater samples is typical for former MGP sites.

2.7 INVESTIGATION DERIVED WASTE MANAGEMENT

All groundwater generated during monitoring activities performed in 2022 was placed into a 55-gallon drum for subsequent off-Site disposal. The resulting drum was labeled and temporarily stored on-Site. The IDW was transported off-Site by CHES to their facilities in Bristol, CT and El Dorado, AR. A copy of the shipping record for the IDW are included in **Appendix C**.

3.0 SUMMARY AND CONCLUSIONS

As part of the annual Site monitoring events in 2022, sixteen (16) monitoring wells were sampled in November 2022 for VOCs; all accessible wells were gauged to determine the groundwater elevation and presence of NAPL on an approximate semi-annual basis; and shoreline observations were made on an approximately monthly basis throughout the year. In general, observations made, and the results of analytical testing were consistent with historical results, as summarized below:

- Sheen observations were consistent with historical observations and were limited to the cove in the northwestern portion of the Site. Sheen observations were limited to several localized and immediate areas of the shoreline and were observed at various tidal stages, with most observations at mid-tide.

- NAPL Observations:

    - Trace amounts up to 0.01 feet of LNAPL was detected in GZ-307S during half (6/12) of the monthly gauging rounds throughout 2022. No Trace LNAPL was detected during monthly gauging in January, April, May, June, July and October. NAPL recovery was not attempted at monitoring well GZ-307S during 2022 because of the limited thickness of NAPL detected.

    - Observations of trace LNAPL was also observed in wells RCA-17, GZ-501S, ESS RW-3, ESS RW-4, and ESS RW-5. NAPL recovery was not attempted at any above-mentioned wells during 2022 because of the limited thickness of NAPL detected.

- Groundwater Quality:

    - Historical groundwater quality at the Site is generally characterized by a few isolated exceedances of the GB Groundwater Objectives for benzene, ethylbenzene and naphthalene, primarily in areas of the Site where former MGP features were located. The presence of naphthalene, benzene and ethylbenzene in groundwater samples is typical for former MGP sites.

    - No exceedances of the GB Groundwater Objective were met during the 2022 monitoring period.

    - Several VOCs were detected at low concentrations during the 2022 sampling event, primarily in wells along the southwestern portion of the Site. The detected VOCs included the presence of benzene, cis-1,2-dichloroethene, vinyl chloride, sec-butylbenzene, 1,2,4-Trimethylbenzene, ethylbenzene, naphthalene, n-propylbenzene, isopropylbenzene, trichloroethene, styrene, and xylenes. While detected at low concentrations (generally slightly above the detection limits and well below the applicable criteria), many of these compounds are not typical chemical of concerns at former MGP sites and may be indicative of upgradient groundwater quality. GZA will continue to monitor the presence of these compounds during future sampling events.

TABLES

TABLE 1
SUMMARY OF SHEEN OBSERVATIONS
642 Allens Avenue
Providence, Rhode Island

File No. 03.00033554.01
6/1/2023

Date of Observation	Time of Observation	Approximate Tidal Stage	Approximate Location of Sheen Observed	Description of Sheen Observed
9/22/2011	8:40	Low	Along shoreline stretching from RCA-40 to RCA-3.	Small dull spots.
9/22/2011	9:00	Low	Outfall proximate to Motiva property.	Moderate dull bands.
9/22/2011	9:15	Low	Along shoreline stretching from RCA-40 to RCA-3.	Large dull bands and moderate dull spots.
10/28/2011	9:00	High	No sheens observed. Boom was repaired	
	14:30	Mid-Low	No sheens observed.	
12/22/2011	10:40	Low	Outside of Boom, along shoreline stretching from RCA-5 to RCA-20.	Moderate dull bands and small dull spots.
12/22/2011	10:40	Low	Within the boom, along shoreline stretching from CHES RW-5 to RW-3.	Large dull bands and moderate dull spots.
12/22/2011	11:00	Low	Outfall proximate to Motiva property.	Very small dull spots
2/3/2012	12:00	Low-Mid	Outside of Boom, north of the RIPDES outfall (within cove)	Moderate dull spots
2/8/2012	15:10	Mid	Within the boom, along shoreline stretching from CHES RW-5 to RW-3.	Small dull spots.
2/15/2012	11:55	Mid	Outside of Boom, along shoreline stretching from RCA-5 to RCA-20.	Small dull spots.
2/15/2012	11:55	Mid	Within the boom, along shoreline stretching from CHES RW-5 to RW-3.	Large bright bands.
2/23/2012	15:00	Low	No sheens observed.	
3/2/2012	14:20	High	Within the boom, along shoreline stretching from CHES RW-5 to RW-3.	Minor to moderate dull spots and bands of sheen
3/2/2012	14:30	High	Outfall proximate to Motiva property.	Large bright bands.
3/9/2012	13:10	Low	Outside of boom, along shoreline stretching from CHES RW-5 to RW-3.	Moderate to minor dull spots of sheen
3/9/2012	13:05	Low	Outfall proximate to Motiva property.	Slight bright bands of sheen
4/13/2012	10:53	Mid	Within the boom, along shoreline stretching from CHES RW-5 to RW-3.	Moderate to minor dull spots of sheen
4/13/2012	10:58	Mid	Outfall proximate to Motiva property.	Slight bright bands of sheen
5/16/2012	13:45	Mid-High	Within the boom, along shoreline stretching from CHES RW-5 to RW-3.	Minor to moderate dull bands of sheen

TABLE 1

SUMMARY OF SHEEN OBSERVATIONS

642 Allens Avenue

Providence, Rhode Island

File No. 03.00033554.01

6/1/2023

Date of Observation	Time of Observation	Approximate Tidal Stage	Approximate Location of Sheen Observed	Description of Sheen Observed
5/16/2012	13:45	Mid-High	Outfall proximate to Motiva property.	Moderate bright bands of sheen
6/29/2012	9:35	Low	Outside of boom, near LNG tank	Bright large sheen spot
6/29/2012	9:35	Low	Within the boom, along shoreline stretching from CHES RW-5 to RW-3.	Bright to dull bands of sheen
6/29/2012	9:45	Low	Outfall proximate to Motiva property.	Slight dull spots
7/19/2012	9:50	Low	Outside of Boom, north of the RIPDES outfall (within cove) to Propane House	Bright moderate sheen spots
7/19/2012	9:50	Low	Outfall proximate to Motiva property.	Bright moderate sheen spots
8/2/2012	8:45	High	Within the boom, along shoreline at CHES RW-4. Boom was repaired.	Bright moderate sheen bands
8/24/2012	10:10	Mid	Outside of boom, near CHES RW-4	Bright moderate sheen spot
8/24/2012	10:10	Mid	Within the boom, from CHES RW-4 to Propane House	Bright moderate sheen spots and bands
8/24/2012	10:10	Mid	Outside of boom, from Propane House to RCA-3	Bright slight sheen spots and bands
8/24/2012	10:10	Mid	Outfall proximate to Motiva property.	Bright slight sheen spots and bands
9/6/2012	No sheens observed at high tide.			
9/13/2012	11:20	Low	Within the boom, near CHES RW-4	Bright slight sheen bands
9/13/2012	11:45	Low	Outside of boom, near CHES RW-4	Bright slight sheen spot
9/13/2012	11:45	Low	Within the boom, between CHES RW-3 and CHES RW-4	Bright moderate bands and spots of sheen
9/25/2012	14:00	Mid	Outfall proximate to Motiva property.	Slight bright bands of sheen
10/31/2012	10:15	High	Within the boom, near CHES RW-4	Slight bright spots of sheen
11/19/2012	No sheens observed at high tide.			
11/20/2012	16:20	Mid-High	Within the boom, between CHES RW-3 and CHES RW-4. Boom was repaired.	Moderate long bright bands of sheen
12/20/2012	12:00	Mid-High	No sheens observed.	
1/4/2013	No sheen observed at high tide.			
2/1/2013	No sheens observed at high tide. High wind was also noted.			
2/12/2013	Boom was repaired.			
2/26/2013	12:48	Low	Within the boom, near CHES RW-4	Slight bright spots of sheen
2/26/2013	12:52	Low	Within the boom, between CHES RW-3 and CHES RW-4	Slight bright spots of sheen
2/26/2013	12:56	Low	Outfall proximate to Motiva property.	Moderate long bright bands of sheen
3/22/2013	11:22	Low	Within the boom, between CHES RW-3 and CHES RW-4	Moderate bright bands of sheen

TABLE 1

SUMMARY OF SHEEN OBSERVATIONS

642 Allens Avenue

Providence, Rhode Island

File No. 03.00033554.01

6/1/2023

Date of Observation	Time of Observation	Approximate Tidal Stage	Approximate Location of Sheen Observed	Description of Sheen Observed
3/25/2013	11:00	Low	Within the boom, within sediments exposed at low tide between CHES RW-3 and CHES RW-4	Slight sheen spots
4/2/2013	11:00	Mid	Within the boom, near CHES RW-4	Bright bands of sheen
4/24/2013	No sheens observed at high tide.			
4/30/2013	No sheens observed at high tide.			
5/6/2013	No sheens observed at high tide.			
5/14/2013	8:15	Mid-High	Within the boom, between CHES RW-3 and CHES RW-4	Bands of dull sheen
5/24/2013	No sheens observed at mid-high tide.			
5/31/2013	8:00	Low	Within the boom, between CHES RW-3 and CHES RW-5	Slight dull bands and spots
5/31/2013	9:45	Mid	Within the boom, between CHES RW-3 and CHES RW-5	Slight to moderate dull bands and spots
5/31/2013	9:50	Mid	Within the boom, within sediments exposed at mid tide between CHES RW-3 and CHES RW-4	Bright spots of sheen
6/2/2013	No sheens observed at mid tide. High wind was also noted.			
6/3/2013	9:10	Low	Outside the boom, directly near the repair area (proximate to the gate area) in the LNG portion of the property	Bright to dull spots and blebs of sheen
6/3/2013	9:10	Low	Within the boom, between CHES RW-3 and CHES RW-5	Moderate dull bands of sheen
6/3/2013	12:30	Mid	Within the boom, between CHES RW-3 and CHES RW-5	Slight dull bands of sheen
6/3/2013	13:15	Mid	Outside the boom, along the edge of the LNG portion of the property, directly adjacent to the pathway. The sheen was noted as originating from the western part of the cove.	Slight dull bands of sheen
6/10/2013	No sheens observed at high tide.			
6/11/2013	12:30	Mid-High	Within the boom, between CHES RW-3 and CHES RW-5	Moderate bright bands of sheen
6/13/2013	14:25	Mid	Within the boom, proximate to CHES RW-5	Moderate dull to bright bands and spots
6/19/2013	No sheens observed at high tide.			
6/20/2013	8:30	Mid	Within the boom, between CHES RW-3 and CHES RW-5	Moderate bright bands of sheen
6/25/2013	11:00	High	Within the boom, near CHES RW-4	Slight bright spots of sheen
7/31/2013	No sheens observed at high tide.			

TABLE 1
SUMMARY OF SHEEN OBSERVATIONS
642 Allens Avenue
Providence, Rhode Island

File No. 03.00033554.01
6/1/2023

Date of Observation	Time of Observation	Approximate Tidal Stage	Approximate Location of Sheen Observed	Description of Sheen Observed
8/28/2013	12:30	Mid-High	Within the boom, directly near the repair area (proximate to the gate area) in the LNG portion of the property	Very slight bright spots
9/5/2013	15:06	Low	Within the boom, near CHES RW-4	Bright to dull spots and blebs of sheen
9/27/2013	No sheens observed at high tide. High wind was also noted.			
10/30/2013	8:30	Mid	Within the boom, directly near the repair area (proximate to the gate area) in the LNG portion of the property	Very slight bright spots
11/19/2013	No sheens observed at high tide. High wind was also noted.			
12/20/2013	10:15	Mid - Low	Within the boom, directly near the repair area (proximate to the gate area) in the LNG portion of the property	Very slight bright spots
1/27/2014	9:53	Low	Outfall proximate to Motiva property.	Slight bright bands of sheen
2/25/2014	14:00	Mid - High	Within the boom, between CHES RW-3 and CHES RW-4	Slight dull bands of sheen
3/20/2014	9:15	Mid - High	Within the boom, between CHES RW-3 and CHES RW-5. Boom was repaired.	Moderate long dull bands of sheen
4/29/2014	12:30	Mid-Low	Within the boom, between CHES RW-4 and CHES RW-5	Slight dull bands of sheen
	12:40		Outfall proximate to Motiva property.	Slight bright spots of sheen
5/22/2014	No sheens observed at high tide. High wind and rain were also noted.			
6/3/2014	No sheens observed at high tide.			
7/24/2014	No sheens observed at high tide.			
8/24/2014	No sheens observed at high tide. High wind was also noted.			
9/24/2014	10:25	High-Mid	Within the boom, near CHES RW-3	Slight dull sheen spots and bands
	10:30		Within the boom, near Propane House	Moderate dull to bright bands and spots
10/4/2013	Boom was repaired.			
10/30/2014	7:30	Low	Inside and outside boom, between CHES RW-3 and CHES RW-5	Slight bands of dull sheen
			Within the boom, near CHES RW-3	Strong bright bands of sheen
11/13/2014	No sheens observed at high tide. Boom was repaired.			
12/12/2014	14:00	Mid	Within the boom, near CHES RW-3	Slight dull bands of sheen
1/29/2015	No sheens observed at mid tide.			
2/25/2015	No sheens observed. Cove completely frozen over.			

TABLE 1

SUMMARY OF SHEEN OBSERVATIONS

642 Allens Avenue

Providence, Rhode Island

File No. 03.00033554.01

6/1/2023

Date of Observation	Time of Observation	Approximate Tidal Stage	Approximate Location of Sheen Observed	Description of Sheen Observed
3/23/2015	No sheens observed at high tide. High wind was also noted.			
4/9/2015	No sheens observed at high tide. High wind was also noted. Hard boom and absorbent boom were replaced.			
5/22/2015	7:43	Low	Within the boom, near CHES RW-3	Very slight bright spots
6/17/2015	No sheens observed at mid tide. High wind was also noted.			
7/17/2015	11:29	Mid	Within the boom, between CHES RW-3 and RCA-5	Moderate to bright spots of sheen
8/28/2015	12:20	Low	Inside and outside boom, between CHES RW-3 and CHES RW-5	Moderate dull spots of sheen
9/16/2015	9:40	Mid-High	Within the boom, near CHES RW-3	Slight dull bands of sheen
10/14/2015	No sheens observed at high tide.			
11/17/2015	No sheens observed at high tide. Boom was repaired.			
12/30/2015	No sheens observed at high tide.			
1/29/2016	No sheens observed at mid tide.			
2/22/2016	12:00	Mid-High	Within Boom near CHES RW-3	Slight sheen spots
3/3/2016	Boom was repaired.			
3/16/2016	8:30	Mid-High	Within Boom between CHES RW-3 and CHES RW-5	Minor sheening. Dull to bright streaks of sheen
4/28/2016	3:30	Mid-High	Within Boom near CHES RW-3	Bright Plates/Streaks of Sheen
5/19/2016	11:00	Mid-Low	Within Boom near CHES RW-3	Dull plates of sheen
6/10/2016	No sheens observed at mid-high tide.			
7/13/2016	Boom was repaired.			
7/26/2016	10:00	Low	Within Boom near CHES RW-3	Slight sheen
8/30/2016	13:00	Low	Inside and outside boom, between CHES RW-3 and CHES RW-5	Plates of sheen
9/16/2016	9:00	High	Within Boom	Slight Sheen (Streaks)
10/30/2016	No sheens observed			
11/30/2016	11:00	Mid	Within Boom near CHES RW-3	Platlets of sheen
12/13/2016	11:45	No sheen observed at low tide		
1/31/2017	No sheens observed at mid tide			
2/23/2017	Boom was repaired.			
2/27/2017	9:00	Mid-Low	Within Boom near CHES RW-3	Streaks of sheen
3/24/2017	No sheens observed at high tide			

TABLE 1
SUMMARY OF SHEEN OBSERVATIONS
642 Allens Avenue
Providence, Rhode Island

File No. 03.00033554.01
6/1/2023

Date of Observation	Time of Observation	Approximate Tidal Stage	Approximate Location of Sheen Observed	Description of Sheen Observed
4/28/2017	No sheens observed at high tide			
5/5/2017	No sheens observed at high tide			
6/7/2017	Boom was repaired.			
6/30/2017	No sheens observed at high tide			
7/27/2017	No sheens observed at high tide			
8/1/2017	16:00	High	Within Boom near CHES RW-3	Some plates of sheen
9/1/2017	12:50	Mid	Within Boom near CHES RW-3	Dull streaks of sheen
9/29/2017	11:00	Mid-High	Within Boom near CHES RW-3	Some streaks of sheen
10/6/2017	Boom was repaired.			
10/24/2017	No sheens observed at high tide			
11/21/2017	No sheens observed at high tide			
12/21/2017	No sheens observed at low tide			
1/24/2018	13:00	No sheens observed at high tide		
2/21/2018	12:00	No sheens observed at high tide		
3/20/2018	11:00	No sheens observed at high tide		
4/12/2018	Boom was repaired in response to storm damage.			
4/26/2018	7:00	No sheens observed at high tide		
5/15/2018	14:00	No sheens observed at low tide		
6/28/2018	14:00	No sheens observed at low tide		
7/30/2018	13:00	Mid	Along shoreline.	Some streaks of sheen, dull to bright plates
8/30/2018	9:30	Mid-high	Between hard boom and shore	Dull streaks of sheen
10/1/2018	7:00	Low	Between hard boom and shore	Bright streaks of sheen
10/25/2018	Boom was repaired.			
10/30/2018	10:30	No sheens observed at mid tide		
11/14/2018	7:00	No sheens observed at high tide		
12/19/2018	11:15	Low tide	No sheens observed	
1/30/2019	11:00	Low tide	Between hard boom and shore proximate to former well RW-3	Dull streaks of sheen
2/27/2019	13:00	Mid-high tide	Between hard boom and shore proximate to former well RW-3	Dull plates and streaks of sheen

TABLE 1
SUMMARY OF SHEEN OBSERVATIONS
642 Allens Avenue
Providence, Rhode Island

File No. 03.00033554.01
6/1/2023

Date of Observation	Time of Observation	Approximate Tidal Stage	Approximate Location of Sheen Observed	Description of Sheen Observed
3/20/2019	13:00	Low	Between hard boom and shore proximate to former well RW-3	Dull plates and bright streaks of sheen
4/22/2019	11:00	No sheens observed at high tide		
5/10/2019	Boom was repaired.			
5/31/2019	7:00	No sheens observed at high tide		
6/26/2019	15:00	High	Between hard boom and shore proximate to former well RW-3	Dull plates of sheen
7/25/2019	14:30	High	Between hard boom and shore proximate to former well RW-3	Dull plates of sheen
8/22/2019	13:00	High	Between hard boom and shore proximate to former well RW-3	Dull plates of sheen
9/27/2019	7:00	No sheens observed at high tide		
10/1/2019	Boom was repaired.			
10/21/2019	14:30	No sheens observed at high tide		
11/21/2019	10:00	Mid Tide	Between hard boom and shore proximate to former well RW-3	Dull plates of sheen
12/18/2019	9:00	No sheens observed at mid tide		
1/24/2020	8:30	Mid Tide	Along shoreline proximate to former well RW-3.	Dull to bright plates of sheen
2/24/2020	12:00	No sheens observed at low tide		
3/26/2020	12:45	No sheens observed at mid to high tide		
4/23/2020	8:00	No sheens observed at high tide		
5/21/2020	Boom was repaired.			
5/22/2020	8:45	No sheens observed at high tide		
6/9/2020	15:00	No sheens observed at mid to low tide		
7/17/2020	12:30	Mid-low Tide	Along shoreline proximate to former well RW-3.	Slight dull to bright plates of sheen
8/11/2020	7:15	Mid Tide	Between hard boom and shore proximate to former well RW-3	Large dull to bright plates of sheen
8/20/2020	12:15	No sheens observed at mid to low tide		
9/22/2020	9:00	No sheens observed at mid to high tide		
10/26/2020	12:00	No sheens observed at low tide		
11/6/2020	Boom was repaired.			

TABLE 1
SUMMARY OF SHEEN OBSERVATIONS
642 Allens Avenue
Providence, Rhode Island

File No. 03.00033554.01
6/1/2023

Date of Observation	Time of Observation	Approximate Tidal Stage	Approximate Location of Sheen Observed	Description of Sheen Observed
11/24/2020	7:00	No sheens observed at mid to high tide		
12/11/2020	10:37	Low Tide	Between hard boom and shore proximate to former well RW-3	Minor dull to bright plates of sheen
12/21/2020	Boom was repaired.			
1/22/2021	13:37	No sheens observed at mid tide		
2/9/2021	7:07	High-tide	Between hard boom and shore proximate to former well RW-3	Minor dull plates of sheen
2/24/2021	Boom was repaired.			
3/15/2021	8:54	No sheens observed at mid tide		
4/20/2021	11:50	No sheens observed at mid tide		
5/14/2021	Boom was repaired.			
5/21/2021	13:14	Mid Tide	Between hard boom and shore proximate to former well RW-3	Minor dull plates of sheen
6/23/2021	10:00	Low-tide	Between hard boom and shore proximate to former well RW-3	Minor dull plates of sheen
7/26/2021	7:29	Mid Tide	Between hard boom and shore proximate to former well RW-3	Large bright plates of sheen
8/13/2021	10:39	High-tide	Between hard boom and shore proximate to former well RW-3	Minor dull plates of sheen
9/27/2021	10:11	Mid Tide	Between hard boom and shore proximate to former well RW-3	Minor dull plates of sheen
10/18/2021	10:10	No sheens observed at mid to low tide		
11/1/2021	Boom was repaired.			
11/18/2021	12:10	No sheens observed at low tide		
12/20/2021	10:23	No sheens observed at high tide		
1/21/2022	9:58	No sheens observed at high tide		
2/17/2022	10:34	Mid Tide	Between hard boom and shore proximate to former well RW-3	Minor bright plates of sheen
3/30/2022	9:00	No Sheen observed at Low to Mid Tide		
4/27/2022	15:36	Low Tide	Between hard boom and shore proximate to former well RW-3	Dull plates of sheen

TABLE 1

SUMMARY OF SHEEN OBSERVATIONS

642 Allens Avenue

Providence, Rhode Island

File No. 03.00033554.01

6/1/2023

Date of Observation	Time of Observation	Approximate Tidal Stage	Approximate Location of Sheen Observed	Description of Sheen Observed
5/5/2022	15:26	High Tide	Between hard boom and shore proximate to former well RW-3	Dull plates of sheen
6/2/2022	14:26	High Tide	Between hard boom and shore proximate to former well RW-3	Some Dull plates of sheen
7/7/2022	8:00	No sheen observed at Low Tide		
8/18/2022	9:30	No sheen observed at Mid Tide		
9/15/2022	9:30	No sheen observed at Mid Tide		
10/1/2022	13:00	No sheen observed at Mid Tide		
11/3/2022	12:30	No sheen observed at Mid to Low Tide		

1. This table shows observations that were made along the Site shoreline. Observations were made at least monthly.
2. A water line directly proximate to the Providence River at the LNG facility unexpectedly failed on May 31, 2013. This water line provided fire protection for the LNG facility. Immediate response actions included deploying additional absorbent booms, repairing a rip-rap slope and temporarily repairing the line for fire protection. The water line was replaced in the fall of 2013. Additional boom was deployed on May 31, 2013 and June 3, 2013 after additional sheens were observed outside the original boom configuration.

TABLE 2
SUMMARY OF GROUNDWATER AND NAPL GAUGING RESULTS
642 Allens Avenue
Providence, Rhode Island

Site Area	Well ID	Surveyed Elevations			Well Installation Details					Range of LNAPL Observed (feet)	0.00	June 2022								November 2022							
		Top of Casing Elevation (Feet)	Top of PVC Elevation (Feet)	Grade Elevation (Feet)	Type of Well	Well Depth Modifier	Date of Installation	Measured Well Depth (feet bgs)	Screened Interval (feet bgs)			Depth to LNAPL (ft)	Depth to Water (ft)	Depth to DNAPL (ft)	Total Well Depth (ft)	GW Elevation (feet)	LNAPL Thickness (feet)	DNAPL Thickness (feet)	Corrected Groundwater Elevation (feet)	Depth to LNAPL (ft)	Depth to Water (ft)	Depth to DNAPL (ft)	Total Well Depth (ft)	GW Elevation (feet)	LNAPL Thickness (feet)	DNAPL Thickness (feet)	Corrected Groundwater Elevation (feet)
NG	RCA-12R	17.87	17.33	17.87	Roadbox	Shallow	5/30/2014	15.24	5 - 15	NP	NP	-	9.7	-	14.95	6.97	NP	NP	6.97	-	9.64	-	12.06	7.69	NP	NP	7.69
NG	GZ-301D	17.74	17.33	17.74	Roadbox	Deep	5/30/2014	30.11	20 - 30	NP	NP	-	9.75	-	29.25	6.92	NP	NP	6.92	-	9.7	-	29.35	7.63	NP	NP	7.63
NG	GZ-302S	16.97	16.67	16.97	Roadbox	Shallow	6/3/2014	15.00	5 - 15	NP	NP	-	9.2	-	14.45	7.47	NP	NP	7.47	-	9.23	-	14.53	7.44	NP	NP	7.44
NG	GZ-302D	16.97	16.59	16.97	Roadbox	Deep	5/30/2014	29.88	20 - 30	NP	NP	-	9.1	-	29.25	7.49	NP	NP	7.49	-	9.18	-	29.4	7.41	NP	NP	7.41
NG	RCA-1	12.21	11.82	12.21	Roadbox	Shallow	6/8/1994	15.89	6.5 - 16.5	NP	NP	-	5.45	-	14.65	6.37	NP	NP	6.37	-	5.75	-	14.87	6.07	NP	NP	6.07
NG	RCA-3	11.88	11.44	9.40	Standpipe	Shallow	9/9/1994	15.76	6 - 16	NP	trace	Decommissioned June 2016								Decommissioned June 2016							
NG	RCA-11	13.27	13.04	10.57	Standpipe	Shallow	9/12/1994	12.53	4 - 14	NP	NP	Decommissioned June 2016								Decommissioned June 2016							
NG	RCA-13	11.94	11.61	10.51	Standpipe	Shallow	9/12/1994	13.97	4 - 14	NP	NP	Decommissioned October 2015								Decommissioned October 2015							
NG	RCA-14	13.09	12.75	11.06	Standpipe	Shallow	9/12/1994	13.61	5 - 15	NP	NP	Decommissioned June 2016								Decommissioned June 2016							
NG	RCA-15	NS	14.06	NS	Standpipe	Shallow	12/8/1994	15.97	4 - 14	NP	NP	-	7.97	-	17.95	6.09	NP	NP	6.09	-	7.97	-	17.95	6.09	NP	NP	6.09
NG	RCA-17	NS	13.44	NS	Standpipe	Shallow	12/9/1994	12.80	4 - 14	NP	NP	-	6.5	-	9.2	6.94	NP	NP	6.94	Trace	7.35	-	11.49	6.09	NP	NP	6.09
NG	VHB-1	10.55	10.33	10.55	Roadbox	Shallow	1/15/2002	11.72	2 - 12	NP	NP	-	3.9	-	11.25	6.43	NP	NP	6.43	-	4.12	-	11.31	6.21	NP	NP	6.21
NG	VHB-3	11.84	11.96	9.76	Standpipe	Shallow	1/14/2002	7.90	2 - 10	trace	NP	Decommissioned June 2016								Decommissioned June 2016							
NG	VHB-6	12.91	12.93	10.25	Standpipe	Shallow	1/14/2002	9.77	2 - 12	NP	NP	Decommissioned June 2016								Decommissioned June 2016							
NG	VHB-7	14.30	13.73	11.29	Standpipe	Shallow	1/14/2002	12.66	2 - 12	NP	NP	Decommissioned June 2016								Decommissioned June 2016							
NG	VHB-10	19.45	19.10	15.88	Standpipe	Shallow	1/15/2002	14.77	5 - 15	trace - 0.02	NP	Decommissioned June 2016								Decommissioned June 2016							
NG	VHB-18	15.54	15.35	10.61	Standpipe	Shallow	1/21/2003	12.26	6 - 16	NP	NP	Decommissioned June 2016								Decommissioned June 2016							
NG	VHB-21	13.80	13.65	11.09	Standpipe	Shallow	1/28/2003	15.94	6 - 16	trace - 0.08	NP	Decommissioned June 2016								Decommissioned June 2016							
NG	VHB-22	13.32	13.02	11.21	Standpipe	Shallow	1/28/2003	15.49	6 - 16	0.01 - 0.04	NP	Decommissioned June 2016								Decommissioned June 2016							
NG	VHB-23	12.98	12.80	11.37	Standpipe	Shallow	1/29/2003	16.37	6 - 16	trace - 0.05	NP	Decommissioned June 2016								Decommissioned June 2016							
NG	CHES RW-1	12.94	12.94	11.06	Recovery Well	Shallow	2002	9.42	Unknown	NP	NP	Decommissioned June 2016								Decommissioned June 2016							
NG	CHES RW-2	14.27	14.27	11.09	Recovery Well	Shallow	2002	13.12	Unknown	trace	NP	Decommissioned June 2016								Decommissioned June 2016							
NG	CHES-RWA	NS	NS	NS	Recovery Well	Shallow	2017	9.80	Unknown	0.30 - 0.89	NP	Decommissioned November 2018								Decommissioned November 2018							
NG	U-1	NS	9.67	7.71	Standpipe	Shallow	Unknown	9.08	Unknown	NP	NP	Decommissioned June 2016								Decommissioned June 2016							
NG	VHB-8R	14.85	14.06	12.60	Standpipe	Shallow	6/4/2014	12.29	2 - 12	NP	NP	Decommissioned June 2016								Decommissioned June 2016							
NG	GZ-303S	13.78	13.28	13.78	Roadbox	Shallow	5/28/2014	15.70	5 - 15	NP	NP	-	9.2	-	14.45	4.08	NP	NP	4.08	-	13.11	-	14.84	0.17	NP	NP	0.17
NG	GZ-303D	13.75	13.13	13.75	Roadbox	Deep	6/3/2014	30.32	20 - 30	NP	NP	-	6.1	-	29.95	7.03	NP	NP	7.03	-	6.22	-	29.93	6.91	NP	NP	6.91
NG	GZ-304D	12.41	11.95	12.41	Roadbox	Deep	5/24/2014	30.16	20 - 30	NP	NP	-	5.65	-	29.6	6.3	NP	NP	6.3	-	6.37	-	29.51	5.58	NP	NP	5.58
NG	GZ-305S	11.84	11.64	11.84	Roadbox	Shallow	5/22/2014	14.35	5 - 15	NP	NP	-	5.85	-	19.15	5.79	NP	NP	5.79	-	6.11	-	14.13	5.53	NP	NP	5.53
NG	GZ-306S	11.90	11.49	11.90	Roadbox	Shallow	5/22/2014	15.31	5 - 15	NP	NP	-	5.7	-	19.75	5.79	NP	NP	5.79	-	5.97	-	14.82	5.52	NP	NP	5.52
NG	GZ-307S	10.70	10.18	10.70	Roadbox	Shallow	6/3/2014	14.67	3 - 13	trace - 0.36	NP	-	4.2	-	13.9	5.98	NP	NP	5.98	Trace	4.22	-	13.8	5.96	NP	NP	5.96
NG	GZ-308S	9.71	8.96	9.71	Roadbox	Shallow	6/4/2014	12.33	2 - 12	NP	NP	Unable to access well								Unable to access well							
NG	GZ-309D	10.51	9.83	10.51	Roadbox	Deep	5/20/2014	30.58	20 - 30	NP	NP	-	3.55	-	29.8	6.28	NP	NP	6.28	-	4.08	-	29.88	5.75	NP	NP	5.75
NG	GZ-311D	13.04	12.82	10.03	Standpipe	Deep	5/21/2014	29.91	20 - 30	NP	NP	Decommissioned June 2016								Decommissioned June 2016							
NG	GZ-312S	10.77	10.58	8.64	Standpipe	Shallow	5/23/2014	13.18	3 - 13	NP	NP	Decommissioned June 2016								Decommissioned June 2016							
NG	GZ-312D	10.95	10.79	8.55	Standpipe	Deep	5/23/2014	30.51	20 - 30	NP	NP	Decommissioned June 2016								Decommissioned June 2016							
NG	GZ-313D	11.79	11.64	9.78	Standpipe	Deep	5/27/2014	36.34	26 - 36	NP	NP	Decommissioned June 2016								Decommissioned June 2016							
NG	GZ-318D	13.59	13.48	11.13	Standpipe	Deep	6/2/2014	34.15	20 - 30	NP	NP	Decommissioned June 2016								Decommissioned June 2016							
NG	GZ-320D	19.25	18.94	16.03	Standpipe	Deep	6/5/2014	30.19	20 - 30	NP	NP	Decommissioned June 2016								Decommissioned June 2016							
NG	GZ-401	15.16	14.92	12.01	Standpipe	Shallow	11/2/2015	16.25	5 - 15	NP	NP	Decommissioned June 2016								Decommissioned June 2016							
NG	GZ-403	14.52	14.29	11.45	Standpipe	Shallow	11/2/2015	14.65	3 - 13	NP	NP	Decommissioned June 2016								Decommissioned June 2016							
NG	Unknown-2	10.90	10.87	11.10	Standpipe	Shallow	Unknown	10.95	Unknown	NP	NP	-	4.2	-	6.05	6.67	NP	NP	6.67	-	4.33	-	5	6.54	NP	NP	6.54
NG	GZ-503S	19.71	19.61	16.77	Standpipe	Shallow	9/15/2021	14.84	2 - 12	NP	NP	-	12.75	-	14.4	6.86	NP	NP	6.86	-	13.07	-	14.84	6.54	NP	NP	6.54
NG	GZ-502S	13.93	13.74	11.05	Standpipe	Shallow	9/14/2021	15.68	5 - 15	NP	NP	-	4.5	-	15.6	9.24	NP	NP	9.24	-	16.8	-	15.66	-3.06	NP	NP	-3.06
NG	GZ-501S	15.11	14.92	12.22	Standpipe	Shallow	9/14/2021	16.12	3 - 13	NP	NP	-	7.6	-	16.1	7.32	NP	NP	7.32	Trace	7.79	-	16.16	7.13	NP	NP	7.13
NG	GZ-500S	19.95	19.75	16.80	Standpipe	Shallow	9/14/2021	16.83	5 - 15	NP	NP	-	12.35	-	17.8	7.40	NP	NP	7.40	-	12.32	-	17.83	7.43	NP	NP	7.43
NG	GZ-500D	19.64	19.49	16.80	Standpipe	Deep	9/15/2021	33.06	20- 30	NP	NP	-	12.15	-	32.8	7.34	NP	NP	7.34	-	12.12	-	32.84	7.37	NP	NP	7.37
LNG	RCA-5	12.68	12.27	10.79	Standpipe	Shallow	9/7/1994	15.92	6 - 16	NP	NP	Decommissioned June 2016								Decommissioned June 2016							
LNG	RCA-6	10.90	10.66	10.90	Roadbox	Shallow	9/8/1994	17.44	7 - 17	NP	NP	-	9.40		15.35	1.26	NP	NP	1.26	-	11.22		16.08	-0.56	NP	NP	-0.56
LNG	RCA-20	13.25	12.95	11.01	Standpipe	Shallow	10/18/1995	12.26	3.5 - 13.5	NP	NP	Decommissioned June 2016								Decommissioned June 2016							
LNG	RCA-21	NS	13.72	10.48	Standpipe	Shallow	10/30/1995	11.39	4 - 14	0.91 - 3.58	NP	Well destroyed - replaced with RW-1								Well destroyed - replaced with RW-1							
LNG	RCA-22	NM	12.92	10.33	Standpipe	Shallow	Unknown	10.41	Unknown	NP	NP	-	7.5	-	13.05	5.42	NP	NP	5.42	-	8.79	-	13.01	4.13	NP	NP	4.13
LNG	RCA-28	NS	15.38	13.01	Standpipe	Shallow	1/17/1995	15.43	5 - 15	NP	NP	-	11.45	-	17.65	3.93	NP	NP	3.93	-	11.51	-	17.71	3.87	NP	NP	3.87
LNG	RCA-29	NS	13.45	NS	Standpipe	Shallow	2/13/1996	12.95	2 - 12	trace - 0.17	NP	Decommissioned June 2016								Decommissioned June 2016							
LNG	RCA-31	15.19	14.98	12.78	Standpipe	Shallow	2/23/1996	13.30	5-15	NP	NP	-	12.3	-	12.8	2.68	NP	NP	2.68	-	12.54	-	13.78	2.44	NP	NP	2.44
LNG	RCA-32	NS	12.16	NS	Standpipe	Shallow	2/3/1996	10.98	4 - 14	NP	NP	Decommissioned June 2016								Decommissioned June 2016							
LNG	RCA-33	NS	9.67	NS	Standpipe	Shallow	2/23/1996	11.32	5 - 15	NP	NP	Decommissioned June 2016								Decommissioned June 2016							
LNG	RCA-34	15.08	15.09	12.76	Standpipe	Shallow	2/29/1996	10.77	13 - 18	NP	NP	-	6.1	-	6.2	8.99	NP	NP	8.99	-	8.94	-	13.23	6.15	NP	NP	6.15
LNG	RCA-36	10.72	10.51	10.72	Roadbox	Shallow	3/1/1996	13.37	5 - 15	NP	NP	-	9.85	-	11.1	0.66	NP	NP	0.66	-	11.9	-	12.39	-1.39	NP	NP	-1.39
LNG	RCA-38	NS	9.36	NS	Standpipe	Shallow	5/2/1996	15.65	5 - 15	NP	NP	Decommissioned June 2016								Decommissioned June 2016							
LNG	RCA-39	14.07	13.86	11.43	Standpipe	Shallow	5/3/1996	12.32	3 - 13	NP	NP	Decommissioned Summer 2019								Decommissioned Summer 2019							
LNG	RCA-40	12.76	12.24	10.47	Standpipe	Shallow	5/3/1996	15.15	4 - 14	trace - 0.04	NP	Decommissioned June 2016								Decommissioned June 2016							
LNG	VHB-13	12.88	12.72	13.34	Roadbox	Shallow	1/16/2002	16.56	7 - 17	NP	NP	Decommissioned June 2016								Decommissioned June 2016							
LNG	VHB-20	15.15	14.98	13.01	Standpipe	Shallow	1/22/2002	15.57	6 - 16	NP	NP	-	7.9	-	17.9	7.08	NP	NP	7.08	-	8.39	-	17.41	6.59	NP	NP	6.59
LNG	CHES RW-3	14.30	14.30	11.24	Recovery Well	Shallow	2002	14.84	Unknown	trace	NP	Decommissioned June 2016								Decommissioned June 2016							
LNG	CHES RW-4	13.08	13.08	9.09	Recovery Well	Shallow	2002	8.57	Unknown	trace - 0.03	NP	Decommissioned June 2016								Decommissioned June 2016							
LNG	CHES RW-5	14.32	14.32	11.16	Recovery Well	Shallow	2002	11.34	Unknown	0.01	NP	Decommissioned June 2016								Decommissioned June 2016							
LNG	ESS RW-1	NS	NS	NS	Recovery Well	Shallow	2002	6.70	Unknown	NP	NP	Decommissioned June 2016								Decommissioned June 2016							
LNG	ESS RW-2	NS	NS	NS	Recovery Well	Shallow	2002	9.32	Unknown	NP	NP	Decommissioned June 2016								Decommissioned June 2016							
LNG	ESS RW-3	16.03	16.03	12.99	Recovery Well	Shallow	2002	13.94	Unknown	NP	NP	-	13.15	-	16.9	2.88	NP	NP	2.88	Trace	13.12	-	17.43	2.91	NP	NP	2.91
LNG	ESS RW-4	15.78	15.78	12.69	Recovery Well	Shallow	2002	12.06	Unknown	NP	NP	-	12.9	-	15.1	2.88	NP	NP	2.88	Trace	12.84	-	15.2	2.94	NP	NP	2.94
LNG	ESS RW-5	16.14	16.14	12.86	Recovery Well	Shallow	2002	13.85	Unknown	NP	NP	-	13.15	-	17.3	2.99	NP	NP	2.99	Trace	12.97	-	17.12	3.17	NP	NP	3.17
LNG	ESS RW-6	17.52	17.52	14.65	Recovery Well	Shallow	2002	14.33	Unknown	NP	NP	-	14.55	-	17.5	2.97	NP	NP	2.97	-	14.49	-	15.91	3.03	NP	NP	3.03
LNG	GZ-101	13.43	13.10	13.43	Roadbox	Shallow	4/29/2004	20.21	10 - 20	NP	NP	Unaccessable								-	9.61	-	32.27	3.49	NP	NP	3.49
LNG	GZ-201	9.83	9.53	7.53	Standpipe	Shallow	4/8/2005	18.08	10 - 20	NP	NP	Decommissioned 2022?								Decommissioned 2022?							
LNG	GZ-204A	13.86	12.83	11.30	Standpipe	Shallow	4/12/2005	15.92	4 - 16	NP	NP	Decommissioned June 2016								Decommissioned June 2016							
LNG	GZ-216	12.85	11.61	10.34	Standpipe	Shallow	5/17/2005	16.45	5 - 15	NP	NP	Decommissioned June 2016								Decommissioned June 2016							
LNG	RW-1	14.18	14.18	11.84	Recovery Well	Shallow	6/17/2014	11.66	8 - 13	trace - 0.02	NP	Decommissioned June 2016								Decommissioned June 2016							
LNG	GZ-314S	14.35	14.19	11.13	Standpipe	Shallow	6/3/2014	18.88	4 - 19	NP	NP	Decommissioned June 2016								Decommissioned June 2016							
LNG	GZ-314D	14.24	14.11	11.22	Standpipe	Deep	6/3/2014	34.11	24 - 34	NP	NP	Decommissioned June 2016								Decommissioned June 2016							
LNG	GZ-315D	13.06	12.93	10.17	Standpipe	Deep	6/4/2014	30.29	20 - 30	NP	NP	Decommissioned June 2016								Decommissioned June 2016							
LNG	GZ-319D	15.50	14.90	13.19	Standpipe	Deep	6/2/2014	30.52	20 - 30	NP	NP	-	9.55	-	32.25	5.35	NP	NP	5.35	-	9.39	-	32.27	5.51	NP	NP	5.51

Notes
Well is located in the Natural Gas Regulator portion of the Property
Well is located at the LNG Facility
Elevations are relative to NAVD88
NP - Indicates No Product observed.
NS - Not Surveyed
Blanks indicate no measurement collected on that particular day.
Potentiometric elevations for wells exhibiting LNAPL include 0.85 correction factor.
Note 1 - The readings reported from monitoring wells GZ-401 and GZ-403 in the October 2014 column were collected on November 3, 2015.

TABLE 3
HISTORICAL LIGHT NON-AQUEOUS PHASE LIQUID (LNAPL) WELL GAUGING DATA
642 Allens Avenue
Providence, Rhode Island

Date	November 2001	June 2002	September 2002	October 2002	October 2002	November 2002	December 2002	December 2002	January 2003	February 2003	February 2003	February 2003	September 2003	September 2005
Natural Gas Regulation Facility														
RCA-11	trace	NG	ND	NG	NG	NG	NG	NG	NG	NG	NG	NG	ND	ND
RCA-15	ND	NG	ND	NG	NG	NG	NG	NG	NG	NG	NG	NG	trace	ND
VHB-1	NI	trace	trace	NG	NG	NG	NG	NG	NG	NG	NG	NG	trace	trace
VHB-2	NI	ND	ND	NG	NG	NG	NG	NG	NG	NG	NG	NG	ND	trace
VHB-3	NI	trace	trace	NG	NG	NG	NG	NG	NG	NG	NG	NG	trace	trace
VHB-6	NI	trace	trace	NG	NG	NG	NG	NG	NG	NG	NG	NG	trace	ND
VHB-7	NI	trace	trace	NG	NG	NG	NG	NG	NG	NG	NG	NG	trace	ND
VHB-9	NI	trace	trace	NG	NG	NG	NG	NG	NG	NG	NG	NG	trace	ND
VHB-10	NI	trace	0.01	NG	NG	NG	NG	NG	NG	NG	NG	NG	trace	trace
VHB-18	NI	NI	NI	NG	NG	NG	NG	NG	NG	trace	NG	NG	trace	ND
VHB-21	NI	NI	NI	NG	NG	NG	NG	NG	NG	trace	NG	NG	trace	trace
VHB-22	NI	NI	NI	NG	NG	NG	NG	NG	NG	trace	NG	NG	trace	0.03
VHB-23	NI	NI	NI	NG	NG	NG	NG	NG	NG	trace	NG	NG	trace	ND
CHES RW-1	NI	NI	NI	0.03	0.04	0.08	0.04	0.01	0.02	NG	0.01	ND	NG	0.1
CHES RW-2	NI	NI	NI	ND	ND	ND	ND	ND	ND	NG	ND	ND	NG	ND
CHESRW-A	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
GZ-307S	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
GZ-503S	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
GZ-502S	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
GZ-501S	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
GZ-500S	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
GZ-500D	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
LNG Facility														
RCA-4	0.17	NG	Dest	Dest	Dest	Dest	Dest	Dest	Dest	Dest	Dest	Dest	Dest	Dest
RCA-5	ND	NG	ND	NG	NG	NG	NG	NG	NG	NG	NG	NG	trace	trace
RCA-6	trace	NG	trace	NG	NG	NG	NG	NG	NG	NG	NG	NG	trace	trace
RCA-21	NG	NG	ND	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG
RCA-22	ND	NG	ND	NG	NG	NG	NG	NG	NG	NG	NG	NG	trace	ND
RCA-28	ND	NG	ND	NG	NG	NG	NG	NG	NG	NG	NG	NG	trace	trace
RCA-29	0.33	NG	0.01	NG	NG	NG	NG	NG	NG	NG	NG	NG	0.15	trace
RCA-36	ND	NG	trace	NG	NG	NG	NG	NG	NG	NG	NG	NG	trace	trace
RCA-39	ND	NG	ND	NG	NG	NG	NG	NG	NG	NG	NG	NG	ND	trace
RCA-40	0.25	NG	0.01	NG	NG	NG	NG	NG	NG	NG	NG	NG	trace	trace
CHES RW-3	NI	NI	NI	ND	ND	ND	ND	ND	ND	NG	ND	ND	NG	ND
CHES RW-4	NI	NI	NI	0.03	0.02	0.09	0.08	0.05	0.03	NG	0.03	0.02	NG	2
CHES RW-5	NI	NI	NI	0.05	0.04	0.12	0.09	0.06	0.05	NG	0.02	0.02	NG	0.5
ESS RW-1	NI	NI	NI	NG	NG	NG	NG	NG	NG	NG	NG	NG	ND	ND
ESS RW-2	NI	NI	NI	NG	NG	NG	NG	NG	NG	NG	NG	NG	ND	ND
ESS RW-4	NI	NI	NI	NG	NG	NG	NG	NG	NG	NG	NG	NG	ND	0.5
RW-1	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI

Notes:
Well is located in the Natural Gas Regulator portion of the Property
Well is located at the LNG Facility
NG - Not Gauged
RCA-21 was destroyed in late June 2014 and replaced with RW-1
Please refer to Table 5 for monthly gauging and recovery data for GZ-307S
This table presents LNAPL thickness data for monitoring wells that have exhibited LNAPL thicknesses of at least trace amounts since

Gray shading indicates NAPL thickness of equal to or more than 0.01 feet
ND - Not Detected
NI - Not Installed Yet
Dest - Destroyed
trace - sheen or less than 0.01 feet
Decom - Decommissioned

TABLE 3
HISTORICAL LIGHT NON-AQUEOUS PHASE LIQUID (LNAPL) WELL GAUGING DATA
642 Allens Avenue
Providence, Rhode Island

Date	March 2006	June 2006	July 2006	October 2006	December 2006	March 2008	December 2009	June 2010	January 2011	July 2011	August 2011	February 2012	July 2012	February 2013
Natural Gas Regulation														
RCA-11	NG	NG	NG	NG	NG	NG	NG	NG	NG	ND	ND	ND	ND	ND
RCA-15	NG	NG	NG	NG	NG	NG	NG	NG	NG	ND	ND	ND	ND	ND
VHB-1	NG	NG	NG	NG	NG	NG	NG	NG	NG	ND	ND	ND	ND	ND
VHB-2	NG	NG	NG	NG	NG	NG	Dest	Dest	Dest	Dest	Dest	Dest	Dest	Dest
VHB-3	NG	NG	NG	NG	NG	NG	NG	NG	NG	ND	trace	ND	ND	ND
VHB-6	NG	NG	NG	NG	NG	ND	ND	NG	ND	ND	ND	ND	ND	ND
VHB-7	NG	NG	NG	NG	NG	trace	ND	ND	ND	ND	ND	ND	ND	ND
VHB-9	NG	NG	NG	NG	NG	ND	Dest	Dest	Dest	Dest	Dest	Dest	Dest	Dest
VHB-10	NG	NG	NG	NG	NG	trace	NG	ND	trace	trace	0.01	trace	0.02	ND
VHB-18	ND	ND	ND	ND	NG	ND	ND	ND	NG	ND	ND	ND	ND	ND
VHB-21	NG	NG	NG	NG	NG	trace	trace	ND	ND	ND	ND	ND	0.01	0.01
VHB-22	0.58	0.69	NG	0.33	0.46	0.4	NG	NG	NG	0.01	ND	trace	0.04	ND
VHB-23	0.05	ND	ND	ND	ND	0.01	NG	NG	NG	0.01	0.05	trace	ND	0.01
CHES RW-1	ND	ND	ND	0.02	ND	trace	NG	NG	NG	ND	ND	ND	ND	ND
CHES RW-2	NG	NG	NG	NG	NG	trace	NG	NG	NG	ND	ND	trace	ND	trace
CHESRW-A	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
GZ-307S	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
GZ-503S	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
GZ-502S	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
GZ-501S	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
GZ-500S	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
GZ-500D	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
LNG Facility														
RCA-4	Dest	Dest	Dest	Dest	Dest	Dest	Dest	Dest	Dest	Dest	Dest	Dest	Dest	Dest
RCA-5	NG	NG	NG	NG	NG	NG	NG	NG	NG	ND	ND	ND	ND	ND
RCA-6	NG	NG	NG	NG	NG	NG	NG	NG	NG	ND	ND	ND	ND	ND
RCA-21	NG	NG	NG	NG	NG	NG	NG	NG	NG	3.58	2.94	2.79	1.65	1.44
RCA-22	NG	NG	NG	NG	NG	ND	NG	NG	ND	ND	ND	ND	ND	ND
RCA-28	NG	NG	NG	NG	NG	trace	NG	NG	ND	ND	ND	ND	ND	ND
RCA-29	ND	0.36	0.15	0.11	0.15	0.3	NG	NG	NG	0.08	trace	trace	0.11	trace
RCA-36	NG	NG	NG	NG	NG	ND	NG	NG	NG	ND	ND	ND	ND	ND
RCA-39	NG	NG	NG	NG	NG	NG	NG	NG	NG	ND	ND	ND	ND	ND
RCA-40	0.1	0.21	0.18	0.22	0.01	0.01	NG	NG	NG	ND	ND	trace	trace	trace
CHES RW-3	NG	NG	NG	NG	NG	NG	NG	NG	NG	ND	ND	ND	ND	ND
CHES RW-4	ND	0.18	0.13	0.1	0.08	0.09	NG	NG	NG	0.02	0.03	0.01	trace	trace
CHES RW-5	0.1	ND	ND	0.01	ND	trace	NG	NG	NG	ND	ND	ND	ND	ND
ESS RW-1	NG	NG	NG	NG	NG	NG	NG	NG	NG	ND	ND	ND	ND	ND
ESS RW-2	NG	NG	NG	NG	NG	NG	NG	NG	NG	ND	ND	ND	ND	ND
ESS RW-4	NG	NG	NG	NG	NG	NG	NG	NG	NG	ND	ND	ND	ND	ND
RW-1	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI

Notes:
Well is located in the Natural Gas Regulator portion of the Property
Well is located at the LNG Facility
NG - Not Gauged
RCA-21 was destroyed in late June 2014 and replaced with RW-1
Please refer to Table 5 for monthly gauging and recovery data for GZ-307S
This table presents LNAPL thickness data for monitoring wells that have exhibited LNAPL thicknesses of at least trace amounts since

TABLE 3
HISTORICAL LIGHT NON-AQUEOUS PHASE LIQUID (LNAPL) WELL GAUGING DATA
642 Allens Avenue
Providence, Rhode Island

Date	November 2013	June 2014	July 2, 2014	July 23, 2014	October 2014	April 2015	October 2015	May 2016	October 2016	May 2017	March 2018	November 2018	June 2019	November 2019
Natural Gas Regulation														
RCA-11	ND	ND	NG	NG	ND	ND	ND	ND	Decom	Decom	Decom	Decom	Decom	Decom
RCA-15	ND	ND	NG	NG	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
VHB-1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
VHB-2	Dest	Dest	Dest	Dest	Dest	Dest	Dest	Dest	Dest	Dest	Dest	Dest	Dest	Dest
VHB-3	ND	ND	ND	ND	ND	ND	ND	ND	Decom	Decom	Decom	Decom	Decom	Decom
VHB-6	ND	ND	NG	NG	ND	ND	ND	ND	Decom	Decom	Decom	Decom	Decom	Decom
VHB-7	ND	ND	NG	NG	ND	ND	ND	ND	Decom	Decom	Decom	Decom	Decom	Decom
VHB-9	Dest	Dest	Dest	Dest	Dest	Dest	Dest	Dest	Dest	Dest	Dest	Dest	Dest	Dest
VHB-10	0.01	trace	trace	ND	ND	ND	trace	ND	Decom	Decom	Decom	Decom	Decom	Decom
VHB-18	ND	ND	NG	NG	ND	ND	ND	ND	Decom	Decom	Decom	Decom	Decom	Decom
VHB-21	trace	ND	trace	0.08	ND	0.01	trace	0.01	Decom	Decom	Decom	Decom	Decom	Decom
VHB-22	0.01	trace	NG	NG	0.04	0.01	0..03	ND	Decom	Decom	Decom	Decom	Decom	Decom
VHB-23	ND	0.03	NG	NG	ND	ND	ND	ND	Decom	Decom	Decom	Decom	Decom	Decom
CHES RW-1	ND	ND	NG	NG	ND	ND	ND	ND	Decom	Decom	Decom	Decom	Decom	Decom
CHES RW-2	ND	ND	NG	NG	ND	ND	ND	ND	Decom	Decom	Decom	Decom	Decom	Decom
CHESRW-A	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	0.89	0.3	Decom	Decom
GZ-307S	NI	ND	ND	ND	ND	ND	ND	0.08	0.05	0.02	0.36	trace	trace	trace
GZ-503S	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
GZ-502S	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
GZ-501S	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
GZ-500S	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
GZ-500D	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
LNG Facility														
RCA-4	Dest	Dest	Dest	Dest	Dest	Dest	Dest	Dest	Dest	Dest	Dest	Dest	Dest	Dest
RCA-5	ND	ND	ND	ND	ND	ND	ND	ND	Decom	Decom	Decom	Decom	Decom	Decom
RCA-6	ND	NG	NG	NG	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
RCA-21	1.91	0.91	Dest	Dest	Dest	Dest	Dest	Dest	Dest	Dest	Dest	Dest	Dest	Dest
RCA-22	ND	ND	NG	NG	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
RCA-28	ND	ND	NG	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
RCA-29	ND	0.17	NG	NG	0.08	0.02	0.10	0.01	Decom	Decom	Decom	Decom	Decom	Decom
RCA-36	ND	ND	NG	NG	ND	ND	ND	ND	ND	ND	ND	ND	Damaged	ND
RCA-39	ND	ND	NG	NG	ND	ND	ND	ND	ND	ND	ND	ND	ND	Decom
RCA-40	ND	ND	NG	NG	ND	0.04	trace	0.02	Decom	Decom	Decom	Decom	Decom	Decom
CHES RW-3	ND	ND	NG	NG	ND	trace	ND	ND	Decom	Decom	Decom	Decom	Decom	Decom
CHES RW-4	0.01	ND	NG	trace	trace	trace	ND	ND	Decom	Decom	Decom	Decom	Decom	Decom
CHES RW-5	ND	ND	NG	ND	ND	0.01	ND	ND	Decom	Decom	Decom	Decom	Decom	Decom
ESS RW-1	ND	ND	NG	NG	ND	ND	ND	trace	Decom	Decom	Decom	Decom	Decom	Decom
ESS RW-2	ND	ND	NG	NG	trace	ND	ND	ND	Decom	Decom	Decom	Decom	Decom	Decom
ESS RW-4	ND	ND	NG	NG	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
RW-1	NI	NI	0.02	trace	0.01	trace	trace	trace	Decom	Decom	Decom	Decom	Decom	Decom

Gray shading indicates NAPL thickness of equal to or more than 0.01 feet
ND - Not Detected
NI - Not Installed Yet
Dest - Destroyed
trace - sheen or less than 0.01 feet
Decom - Decommissioned

TABLE 3
HISTORICAL LIGHT NON-AQUEOUS PHASE LIQUID (LNAPL) WELL GAUGING DATA
642 Allens Avenue
Providence, Rhode Island

Date	June 2020	November 2020	June 2021	November 2021	June 2022	November 2022
Natural Gas Regulation						
RCA-11	Decom	Decom	Decom	Decom	Decom	Decom
RCA-15	ND	ND	ND	ND	-	ND
VHB-1	ND	ND	ND	ND	ND	ND
VHB-2	Dest	Dest	Dest	Dest	Dest	Dest
VHB-3	Decom	Decom	Decom	Decom	Decom	Decom
VHB-6	Decom	Decom	Decom	Decom	Decom	Decom
VHB-7	Decom	Decom	Decom	Decom	Decom	Decom
VHB-9	Dest	Dest	Dest	Dest	Dest	Dest
VHB-10	Decom	Decom	Decom	Decom	Decom	Decom
VHB-18	Decom	Decom	Decom	Decom	Decom	Decom
VHB-21	Decom	Decom	Decom	Decom	Decom	Decom
VHB-22	Decom	Decom	Decom	Decom	Decom	Decom
VHB-23	Decom	Decom	Decom	Decom	Decom	Decom
CHES RW-1	Decom	Decom	Decom	Decom	Decom	Decom
CHES RW-2	Decom	Decom	Decom	Decom	Decom	Decom
CHESRW-A	Decom	Decom	Decom	Decom	Decom	Decom
GZ-307S	trace	ND	Trace	ND	ND	Trace
GZ-503S	NI	NI	NI	ND	ND	ND
GZ-502S	NI	NI	NI	ND	ND	ND
GZ-501S	NI	NI	NI	ND	ND	Trace
GZ-500S	NI	NI	NI	ND	ND	ND
GZ-500D	NI	NI	NI	ND	ND	ND
LNG Facility						
RCA-4	Dest	Dest	Dest	Dest	Dest	Dest
RCA-5	Decom	Decom	Decom	Decom	Decom	Decom
RCA-6	ND	ND	Inaccessible	ND	ND	ND
RCA-21	Dest	Dest	Dest	Dest	Dest	Dest
RCA-22	ND	ND	ND	ND	ND	ND
RCA-28	ND	ND	ND	ND	ND	ND
RCA-29	Decom	Decom	Decom	Decom	Decom	Decom
RCA-36	ND	ND	ND	ND	ND	ND
RCA-39	Decom	Decom	Decom	Decom	Decom	Decom
RCA-40	Decom	Decom	Decom	Decom	Decom	Decom
CHES RW-3	Decom	Decom	Decom	Decom	ND	ND
CHES RW-4	Decom	Decom	Decom	Decom	ND	ND
CHES RW-5	Decom	Decom	Decom	Decom	ND	ND
ESS RW-1	Decom	Decom	Decom	Decom	Decom	Decom
ESS RW-2	Decom	Decom	Decom	Decom	Decom	Decom
ESS RW-4	ND	ND	ND	ND	ND	Trace
RW-1	Decom	Decom	Decom	Decom	Decom	Decom

TABLE 4
HISTORICAL DENSE NON-AQUEOUS PHASE LIQUID (DNAPL) WELL GAUGING DATA
642 Allens Avenue
Providence, Rhode Island

Date	November 2001	September 2002	September 2003	September 2005	March 2008	December 2009	June 2010	January 2011	July 2011	August 2011	February 2012	July 2012	February 2013	November 2013	June 2014
RCA-3	0.17	trace	trace	trace	ND	ND	ND	trace	trace	trace	trace	trace	trace	trace	trace

Notes:
Well is located in the Natural Gas Regulator portion of the Property
Well is located at the LNG Facility
NG - Not Gauged
This table presents DNAPL thickness data for monitoring wells that have exhibited DNAPL thicknesses of at least trace amounts sinc

Gray shading indicates NAPL thickness of equal to or more than 0.01 feet
ND - Not Detected
NI - Not Installed Yet
Dest - Destroyed
trace - sheen or less than 0.01 feet
Decom - Decommissioned

TABLE 4
HISTORICAL DENSE NON-AQUEOUS PHASE LIQUID (DNAPL) WELL GAUGING DATA
642 Allens Avenue
Providence, Rhode Island

Date	July 2, 2014	July 23, 2014	October 2014	April 2015	October 2015	May 2016	October 2016	May 2017	March 2018	November 2018	June 2019	November 2019	November 2020	November 2021	November 2022
RCA-3	trace	trace	trace	trace	trace	trace	Decom	Decom	Decom	Decom	Decom	Decom	Decom	Decom	Decom

Notes:
Well is located in the Natural Gas Regulator portion of the Property
Well is located at the LNG Facility
NG - Not Gauged
This table presents DNAPL thickness data for monitoring wells that have exhibited DNAPL thicknesses of at least trace amounts sinc

Gray shading indicates NAPL thickness of equal to or more than 0.01 feet
ND - Not Detected
NI - Not Installed Yet
Dest - Destroyed
trace - sheen or less than 0.01 feet
Decom - Decommissioned

TABLE 5
LNAPL GAUGING AND RECOVERY - GZ-307S
642 Allens Avenue
Providence, Rhode Island

Date	Depth to LNAPL (feet)	Depth to Water (feet)	LNAPL Thickness (feet)	Estimated Volume Purged (gallons)
6/3/2014	ND	4.84	ND	NR
6/6/2014	ND	4.82	ND	NR
6/16/2014	ND	4.73	ND	NR
7/2/2014	ND	4.86	ND	NR
7/23/2014	ND	4.85	ND	NR
10/30/2014	ND	5.09	ND	NR
4/9/2015	ND	3.84	ND	NR
10/14/2015	ND	5.24	ND	NR
5/18/2016	4.47	4.55	0.08	NR
7/26/2016	5.10	5.36	0.26	NR
8/30/2016	3.95	4.00	0.05	NR
9/16/2016	5.26	5.59	0.33	NR
10/28/2016	5.05	5.10	0.05	NR
11/30/2016	4.80	4.84	0.04	NR
12/13/2016	4.95	5.04	0.09	NR
5/30/2017	3.67	3.69	0.02	NR
1/24/2018	3.28	3.50	0.22	NR
2/21/2018	3.23	3.52	0.29	NR
3/20/2018	3.23	3.59	0.36	NR
4/26/2018	5.98	6.98	1.00	NR
5/15/2018	3.97	4.47	0.50	trace
6/28/2018	4.80	4.88	0.08	NR
8/30/2018	4.07	4.54	0.47	NR
9/5/2018	4.67	4.75	0.08	1
10/1/2018	3.19	3.20	0.01	NR
10/30/2018	3.54	3.55	0.01	NR
11/14/2018	2.55	2.55	trace	NR
12/19/2018	3.64	3.64	trace	NR
1/30/2019	3.04	3.04	trace	NR
2/27/2019	3.12	3.15	0.03	NR
3/20/2019	3.14	3.14	trace	NR
4/22/2019	3.70	3.70	trace	NR
5/31/2019	3.75	3.75	trace	NR
6/26/2019	3.72	3.72	trace	NR
7/25/2019	3.70	3.70	trace	NR
8/22/2019	4.34	4.34	trace	NR
9/27/2019	5.57	5.70	0.13	NR
10/21/2019	4.28	4.28	trace	NR
11/21/2019	4.10	4.17	0.07	NR
12/18/2019	2.59	2.68	0.09	NR
1/24/2020	3.95	3.99	0.04	NR
2/24/2020	3.90	3.90	trace	NR
3/26/2020	3.38	3.38	trace	NR
4/23/2020	3.08	3.08	trace	NR
5/22/2020	3.60	3.60	trace	NR
6/9/2020	4.09	4.09	trace	NR
7/17/2020	3.47	3.47	trace	NR
8/20/2020	4.82	4.83	0.01	NR
9/22/2020	4.90	4.90	trace	NR
10/26/2020	4.50	4.50	trace	NR
11/23/2020	ND	4.14	ND	NR
12/11/2020	3.12	3.12	trace	NR
1/22/2021	ND	3.45	trace	NR
2/9/2021	ND	3.85	trace	NR
3/15/2021	ND	4.10	trace	NR
4/20/2021	ND	3.70	trace	NR
5/21/2021	ND	4.00	trace	NR
6/23/2021	ND	3.97	trace	NR
7/26/2021	ND	3.43	trace	NR
8/13/2021	3.80	3.80	trace	NR
9/27/2021	4.10	4.13	0.03	NR
10/18/2021	ND	4.16	trace	NR
11/16/2021	ND	3.45	ND	NR
12/18/2021	4.33	4.33	trace	NR
1/21/2022	ND	4.19	ND	NR
2/17/2022	3.14	3.14	Trace	NR
3/30/2022	ND	3.44	Trace	NR
4/27/2022	ND	4.75	ND	NR

TABLE 5

LNAPL GAUGING AND RECOVERY - GZ-307S

642 Allens Avenue

Providence, Rhode Island

6/13/2022	ND	4.20	ND	NR
7/7/2022	ND	3.80	ND	NR
8/8/2022	4.91	4.91	Trace	NR
9/9/2022	ND	4.91	ND	NR
11/3/2022	4.04	4.04	Trace	NR
6/13/2022	ND	4.20	ND	NR
11/24/2022	4.22	4.22	trace	NR

Notes: ND = Not Detected
NR = Not Recovered
trace = <0.01 feet product

TABLE 6
SUMMARY OF GROUNDWATER VOC ANALYTICAL RESULTS - 2021
642 Allens Avenue
Providence, Rhode Island

	Units	RIDEM GB Groundwater Objective	RIDEM GB Groundwater UCL	RCA-1 21K0904-03 11/22/2022	RCA-12R 21K0904-01 11/22/2022	RCA-15 21K0904-07 11/22/2022	RCA-22 21K0832-07 11/22/2022	RCA-31 21K0832-04 11/22/2022	RCA-36 21K0832-03 11/22/2022	VHB-1 21K0904-06 11/22/2022	VHB-20 21K0832-06 11/22/2022	GZ-201 21K0832-02 11/22/2022	GZA-301D 21K0904-02 11/22/2022	Blind Duplicate 21K0832-01 11/22/2022	GZ-304D 21K0904-04 11/22/2022	GZ-309D 21K0904-05 11/22/2022	GZ-319D 21K0832-05 11/22/2022	GZ-500D 21K0755-01 11/22/2022	GZ-500S 21K0755-02 11/22/2022	GZ-501S 21K0755-03 11/22/2022	GZ-502S 21K0755-04 11/22/2022
EPA Method 8260B VOLATILE ORGANICS																					
1,1,1,2-Tetrachloroethane	mg/L	NE	NE	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	Decom	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001
1,1,1-Trichloroethane	mg/L	3.1	68	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	Decom	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001
1,1,2,2-Tetrachloroethane	mg/L	NE	NE	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	Decom	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005
1,1,2-Trichloroethane	mg/L	NE	NE	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	Decom	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001
1,1-Dichloroethane	mg/L	NE	NE	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	Decom	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001
1,1-Dichloroethene	mg/L	0.007	23	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	Decom	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001
1,1-Dichloropropene	mg/L	NE	NE	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002	Decom	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002
1,2,3-Trichlorobenzene	mg/L	NE	NE	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	Decom	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001
1,2,3-Trichloropropane	mg/L	NE	NE	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	Decom	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001
1,2,4-Trichlorobenzene	mg/L	NE	NE	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	Decom	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001
1,2,4-Trimethylbenzene	mg/L	NE	NE	0.001	0.001	0.001	0.0212	0.001	0.004	0.001	0.001	Decom	0.001	0.001	0.001	0.001	0.001	**0.0086**	0.001	0.001	0.001
1,2-Dibromo-3-Chloropropane	mg/L	0.002	NE	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	Decom	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005
1,2-Dibromoethane	mg/L	NE	NE	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	Decom	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001
1,2-Dichlorobenzene	mg/L	NE	NE	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	Decom	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001
1,2-Dichloroethane	mg/L	0.11	670	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	Decom	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001
1,2-Dichloropropane	mg/L	3	140	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	Decom	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001
1,3,5-Trimethylbenzene	mg/L	NE	NE	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	Decom	0.001	0.001	0.001	0.001	0.001	**0.0026**	0.001	0.001	0.001
1,3-Dichlorobenzene	mg/L	NE	NE	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	Decom	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001
1,3-Dichloropropane	mg/L	NE	NE	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	Decom	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001
1,4-Dichlorobenzene	mg/L	NE	NE	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	Decom	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001
1,4-Dioxane - Screen	mg/L	NE	NE	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	Decom	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
1-Chlorohexane	mg/L	NE	NE	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	Decom	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001
2,2-Dichloropropane	mg/L	NE	NE	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	Decom	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001
2-Butanone	mg/L	NE	NE	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	Decom	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
2-Chlorotoluene	mg/L	NE	NE	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	Decom	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001
2-Hexanone	mg/L	NE	NE	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	Decom	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01

Notes

Well is located in the Natural Gas Regulator portion of the Property

Well is located at the LNG Facility

NE = Not Established

Blue shaded cells indicate that the detection limit exceeds the RIDEM GB Groundwater Objective.

Bold text indicates that the concentration was above the detection limit.

Yellow shaded cells and bolded text indicate the concentration exceeds the GB Groundwater Objective.

Underlined concentrations exceed the RIDEM GB Groundwater Upper Concentration Limit

Method 2 GB Objective criteria for naphthalene developed by GZA in accordance with the methods described in the Remediation Regulations.

TABLE 6
SUMMARY OF GROUNDWATER VOC ANALYTICAL RESULTS - 2021
642 Allens Avenue
Providence, Rhode Island

	Units	RIDEM GB Groundwater Objective	RIDEM GB Groundwater UCL	RCA-1 21K0904-03 11/22/2022	RCA-12R 21K0904-01 11/22/2022	RCA-15 21K0904-07 11/22/2022	RCA-22 21K0832-07 11/22/2022	RCA-31 21K0832-04 11/22/2022	RCA-36 21K0832-03 11/22/2022	VHB-1 21K0904-06 11/22/2022	VHB-20 21K0832-06 11/22/2022	GZ-201 21K0832-02 11/22/2022	GZA-301D 21K0904-02 11/22/2022	Blind Duplicate 21K0832-01 11/22/2022	GZ-304D 21K0904-04 11/22/2022	GZ-309D 21K0904-05 11/22/2022	GZ-319D 21K0832-05 11/22/2022	GZ-500D 21K0755-01 11/22/2022	GZ-500S 21K0755-02 11/22/2022	GZ-501S 21K0755-03 11/22/2022	GZ-502S 21K0755-04 11/22/2022
EPA Method 8260B VOLATILE ORGANICS																					
4-Chlorotoluene	mg/L	NE	NE	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	Decom	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001
4-Isopropyltoluene	mg/L	NE	NE	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	Decom	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001
4-Methyl-2-Pentanone	mg/L	NE	NE	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	Decom	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Acetone	mg/L	NE	NE	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	Decom	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Benzene	mg/L	0.14	18	**0.0014**	0.001	0.001	**0.0108**	0.001	**0.0724**	0.001	**0.0611**	Decom	0.001	**0.0012**	**0.0012**	0.001	**0.0058**	**0.0079**	**0.0192**	0.01	0.001
Bromobenzene	mg/L	NE	NE	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002	Decom	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002
Bromochloromethane	mg/L	NE	NE	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	Decom	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001
Bromodichloromethane	mg/L	NE	NE	0.0006	0.0006	0.0006	0.0006	0.0006	0.0006	0.0006	0.0006	Decom	0.0006	0.0006	0.0006	0.0006	0.0006	0.0006	0.0006	0.0006	0.0006
Bromoform	mg/L	NE	NE	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	Decom	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001
Bromomethane	mg/L	NE	NE	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002	Decom	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002
Carbon Disulfide	mg/L	NE	NE	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	Decom	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001
Carbon Tetrachloride	mg/L	0.07	NE	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	Decom	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001
Chlorobenzene	mg/L	3.2	56	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	Decom	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001
Chloroethane	mg/L	NE	NE	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002	Decom	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002
Chloroform	mg/L	NE	NE	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	Decom	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001
Chloromethane	mg/L	NE	NE	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002	Decom	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002
cis-1,2-Dichloroethene	mg/L	2.4	69	**0.0051**	**0.0162**	0.001	0.001	0.001	0.001	0.001	0.001	Decom	0.001	**0.0077**	**0.0078**	0.001	0.001	0.001	0.001	0.001	0.001
cis-1,3-Dichloropropene	mg/L	NE	NE	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	Decom	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004
Dibromochloromethane	mg/L	NE	NE	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	Decom	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001
Dibromomethane	mg/L	NE	NE	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	Decom	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001
Dichlorodifluoromethane	mg/L	NE	NE	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002	Decom	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002
Diethyl Ether	mg/L	NE	NE	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	Decom	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001
Di-isopropyl ether	mg/L	NE	NE	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	Decom	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001
Ethyl tertiary-butyl ether	mg/L	NE	NE	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	Decom	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001
Ethylbenzene	mg/L	1.6	16	0.001	0.001	0.001	**0.0457**	0.001	0.001	0.001	0.001	Decom	0.001	0.001	0.001	0.001	0.001	**0.002**	0.001	**0.0012**	0.001

Notes

Well is located in the Natural Gas Regulator portion of the Property

Well is located at the LNG Facility

NE = Not Established

Blue shaded cells indicate that the detection limit exceeds the RIDEM GB Groundwater Objective.

Bold text indicates that the concentration was above the detection limit.

Yellow shaded cells and bolded text indicate the concentration exceeds the GB Groundwater Objective.

Underlined concentrations exceed the RIDEM GB Groundwater Upper Concentration Limit

Method 2 GB Objective criteria for naphthalene developed by GZA in accordance with the methods described in the Remediation Regulations.

TABLE 6
SUMMARY OF GROUNDWATER VOC ANALYTICAL RESULTS - 2021
642 Allens Avenue
Providence, Rhode Island

	Units	RIDEM GB Groundwater Objective	RIDEM GB Groundwater UCL	RCA-1 21K0904-03 11/22/2022	RCA-12R 21K0904-01 11/22/2022	RCA-15 21K0904-07 11/22/2022	RCA-22 21K0832-07 11/22/2022	RCA-31 21K0832-04 11/22/2022	RCA-36 21K0832-03 11/22/2022	VHB-1 21K0904-06 11/22/2022	VHB-20 21K0832-06 11/22/2022	GZ-201 21K0832-02 11/22/2022	GZA-301D 21K0904-02 11/22/2022	Blind Duplicate 21K0832-01 11/22/2022	GZ-304D 21K0904-04 11/22/2022	GZ-309D 21K0904-05 11/22/2022	GZ-319D 21K0832-05 11/22/2022	GZ-500D 21K0755-01 11/22/2022	GZ-500S 21K0755-02 11/22/2022	GZ-501S 21K0755-03 11/22/2022	GZ-502S 21K0755-04 11/22/2022
EPA Method 8260B VOLATILE ORGANICS																					
Hexachlorobutadiene	mg/L	NE	NE	0.0006	0.0006	0.0006	0.0006	0.0006	0.0006	0.0006	0.0006	Decom	0.0006	0.001	0.0006	0.0006	0.0006	0.0006	0.0006	0.0006	0.0006
Hexachloroethane	mg/L	NE	NE	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	Decom	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001
Isopropylbenzene	mg/L	NE	NE	0.001	0.001	0.001	**0.0071**	0.001	**0.0037**	0.01	**0.0022**	Decom	0.001	0.001	0.001	0.001	**0.0015**	**0.0017**	0.0023	**0.0032**	0.001
Methyl tert-Butyl Ether	mg/L	5	NE	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	Decom	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001
Methylene Chloride	mg/L	NE	NE	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002	Decom	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002
Naphthalene	mg/L	2.67	NE	**0.0059**	0.001	0.001	**0.724**	0.001	**0.0028**	**0.0012**	0.001	Decom	0.001	0.001	0.001	0.001	0.001	**0.201**	0.0029	**0.0029**	**0.0018**
n-Butylbenzene	mg/L	NE	NE	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	Decom	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001
n-Propylbenzene	mg/L	NE	NE	0.001	0.001	0.001	**0.0012**	0.001	**0.0022**	**0.0011**	0.001	Decom	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001
sec-Butylbenzene	mg/L	NE	NE	0.001	0.001	0.001	0.001	0.001	0.001	**0.0026**	0.001	Decom	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001
Styrene	mg/L	2.2	50	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	Decom	0.001	0.001	0.001	0.001	**0.0017**	0.001	0.001	0.001	0.001
tert-Butylbenzene	mg/L	NE	NE	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	Decom	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001
Tertiary-amyl methyl ether	mg/L	NE	NE	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	Decom	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001
Tetrachloroethene	mg/L	0.15	NE	0.001	**0.002**	0.001	0.001	0.001	0.001	0.001	0.001	Decom	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001
Tetrahydrofuran	mg/L	NE	NE	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	Decom	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005
Toluene	mg/L	1.7	21	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	Decom	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001
trans-1,2-Dichloroethene	mg/L	2.8	79	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	Decom	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001
trans-1,3-Dichloropropene	mg/L	NE	NE	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	Decom	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004
Trichloroethene	mg/L	0.54	87	0.001	**0.0072**	0.001	0.001	0.001	0.001	0.001	0.001	Decom	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001
Trichlorofluoromethane	mg/L	NE	NE	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	Decom	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001
Vinyl Acetate	mg/L	NE	NE	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	Decom	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005
Vinyl Chloride	mg/L	0.002	NE	**0.0017**	**0.0013**	0.001	0.001	0.001	0.001	0.001	0.001	Decom	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001
Xylene O	mg/L	NE	NE	0.001	0.001	0.001	**0.009**	0.001	**0.0013**	0.001	0.001	Decom	0.001	0.001	0.001	0.001	0.001	**0.0028**	0.001	**0.0012**	0.001
Xylene P,M	mg/L	NE	NE	0.002	0.002	0.002	**0.0037**	0.002	0.002	0.002	0.002	Decom	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002
Xylenes (Total)	mg/L	NE	NE	0.002	0.002	0.002	**0.0127**	0.002	0.002	0.002	0.002	Decom	0.002	0.002	0.002	0.002	0.002	**0.00283**	0.002	0.002	0.002

Notes

Well is located in the Natural Gas Regulator portion of the Property

Well is located at the LNG Facility

NE = Not Established

Blue shaded cells indicate that the detection limit exceeds the RIDEM GB Groundwater Objective.

Bold text indicates that the concentration was above the detection limit.

Yellow shaded cells and bolded text indicate the concentration exceeds the GB Groundwater Objective.

Underlined concentrations exceed the RIDEM GB Groundwater Upper Concentration Limit

Method 2 GB Objective criteria for naphthalene developed by GZA in accordance with the methods described in the Remediation Regulations.

FIGURES

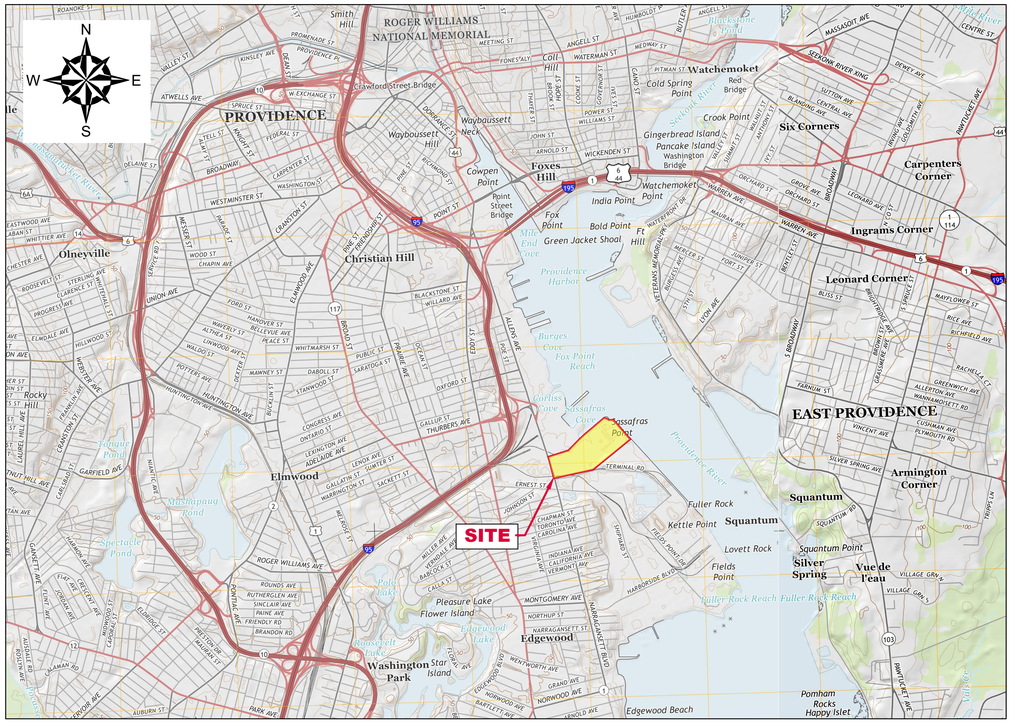
RHODE ISLAND ENERGY
MONITORING REPORT - 2022
FORMER MANUFACTURED GAS PLANT (MGP)
642 ALLENS AVENUE PROVIDENCE, RHODE ISLAND
JUNE 2023

PREPARED FOR:

Rhode Island Energy™
a PPL company

PREPARED BY:

GZA GEOENVIRONMENTAL, INC.
188 VALLEY STREET, SUITE 300
PROVIDENCE, RHODE ISLAND 02909



LOCUS MAP

SOURCE: USGSSTORE.GOV

0 1000' 2000' 4000' 6000'

SCALE: 1 INCH = 2000 FEET

Sheet List Table	
SHEET #	SHEET
C1	TITLE SHEET, LOCUS AND INDEX TO DRAWINGS
N1	GENERAL NOTES AND LEGEND
2	OVERALL AERIAL
3A	EXPLORATION LOCATION PLAN - WESTERN SIDE OF THE SITE
3B	EXPLORATION LOCATION PLAN - EASTERN SIDE OF THE SITE
4	GROUNDWATER MONITORING WELLS
5	SHALLOW GROUNDWATER CONTOURS
6	HISTORICAL NAPL THICKNESS (0.01 FEET) (2001-2021)
7	2022 NAPL AND GW ANALYTICAL DATA

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NOT FOR CONSTRUCTION

LEGEND:

- PROPERTY LINE
- INTERIOR PROPERTY LINE
- EXISTING BUILDING
- UTILITY POLE
- LIGHT POLE
- CATCH BASIN FRAME AND GRATE
- STEEL POST
- PILING
- EDGE OF WATER
- FENCE
- RAILROAD TRACKS
- EXISTING CONTOUR (MAJOR 5 FOOT INTERVAL)
- EXISTING CONTOUR (MINOR 1 FOOT INTERVAL)
- SITE AREA BOUNDARY
- PAVEMENT
- CONCRETE
- HISTORICAL STRUCTURE OR FEATURE
- 200 FOOT CRMC BUFER

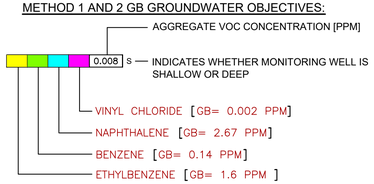
EXPLORATION LEGEND:

- GZ-314 S/D — ENVIRONMENTAL BORING OBSERVED BY GZA IN 2014
- VHB-7 — ENVIRONMENTAL BORING OBSERVED BY VHB IN 2002 AND 2003
- F47 — ENVIRONMENTAL BORING OBSERVED BY ESS IN 1999 AND 2000
- 1 — ENVIRONMENTAL BORING OBSERVED BY ESS IN 1999
- RHB-1 — ENVIRONMENTAL BORING OBSERVED BY ESS IN 1998
- RCA-40 — ENVIRONMENTAL BORING OBSERVED BY RCA BETWEEN 1994-1996
- TP-301 — ENVIRONMENTAL TEST PITS OBSERVED BY GZA IN 2014
- VHB TP-101 — ENVIRONMENTAL TEST PITS OBSERVED BY VHB IN 2008
- TP-1 — ENVIRONMENTAL TEST PITS OBSERVED BY VHB IN 2002
- ETP-4 — ENVIRONMENTAL TEST PITS OBSERVED BY RCA IN 1995 AND 1996
- SS-301 — SURFACE SOIL SAMPLE COLLECTED BY GZA IN 2014
- VHB-SS2 — SURFACE SOIL SAMPLE COLLECTED BY VHB IN 2003
- SU-6 No.9 — SURFACE SOIL SAMPLE COLLECTED BY RCA IN 1994 AND 1995
- RSS-1 — SEDIMENT SAMPLE COLLECTED BY RCA IN 1994 AND 1995
- CHES-RW-A — RECOVERY WELL INSTALLED BY CHES OBSERVED BY GZA IN 2017
- RW-1 — RECOVERY WELL INSTALLED BY CHES OBSERVED BY GZA IN 2014
- CHES-RW-1 — RECOVERY WELL INSTALLED BY CHES OBSERVED BY VHB IN 2002
- ESS-RW-1 — RECOVERY WELL INSTALLED BY ESS IN 1999 AND 2000
- PRV-1 — GEOTECHNICAL BORING PERFORMED BY GEOLOGIC, INC. IN 2019
- B-201 — GEOTECHNICAL BORING PERFORMED BY GOLDER ASSOCIATES IN 2016
- GZ-3 — GEOTECHNICAL BORING BY GZA IN 2016
- PP-1 — GEOTECHNICAL BORING PERFORMED BY PROCESS PIPELINE SERVICES IN 2015
- GZ-401 — GEOTECHNICAL BORING OBSERVED BY GZA IN 2015
- SB-01 — GEOTECHNICAL BORING OBSERVED BY WEIDLINGER ASSOCIATES, INC. (WAI) IN 2015
- GZA-206 — GEOTECHNICAL BORING OBSERVED BY GZA IN 2005
- GZ-1 — GEOTECHNICAL BORING OBSERVED BY GZA IN 2004
- SWBL13 — GEOTECHNICAL BORING OBSERVED BY SWEC IN 1995
- B-207 — GEOTECHNICAL BORING PERFORMED FOR PROVIDENCE GAS COMPANY IN 1973
- B-25 — GEOTECHNICAL BORING OBSERVED BY HALEY & ALDRICH IN 1971 AND 1972
- PGC-8 — GEOTECHNICAL BORING PERFORMED FOR PROVIDENCE GAS COMPANY IN 1912
- ENVIRONMENTAL TEST PIT OBSERVED BY ESS IN 1999 AND 2000

MONITORING WELL LEGEND:

- GZ-500 S/D — MONITORING WELL INSTALLED BY GZA IN 2021
- GZ-401 — MONITORING WELL INSTALLED BY GZA IN 2015
- GZ-314 S/D — MONITORING WELL INSTALLED BY GZA IN 2014
- GZA-206 — MONITORING WELL INSTALLED BY GZA IN 2005
- VHB-7 — MONITORING WELL INSTALLED BY VHB IN 2002 AND 2003
- F47 — TEMPORARY WELL POINT INSTALLED BY ESS IN 1999 AND 2000
- 1 — TEMPORARY WELL POINT INSTALLED BY ESS IN 1999
- RCA-40 — MONITORING WELL INSTALLED BY RCA IN 1996
- CHES-RW-A — RECOVERY WELL INSTALLED BY CHES OBSERVED BY GZA IN 2017
- RW-1 — RECOVERY WELL INSTALLED BY CHES OBSERVED BY GZA IN 2014
- CHES-RW-1 — RECOVERY WELL INSTALLED BY CHES OBSERVED BY VHB IN 2002
- ESS-RW-1 — RECOVERY WELL INSTALLED BY ESS IN 1999 AND 2000
- ACTIVE MONITORING WELLS
- DECOMMISSIONED OR DESTROYED MONITORING WELLS
- 2016 DECOMMISSIONED MONITORING WELLS
- TEMPORARY MONITORING WELL-ASSUMED DESTROYED
- RECOVERY WELLS
- DETECTED LNAPL THICKNESS (≥0.01 FEET)
- DETECTED DNAPL THICKNESS (≥0.01 FEET)
- MONITORING WELL SAMPLED IN 2021
- 5 — SHALLOW GROUNDWATER ELEVATION CONTOUR (NAVD 1988) ON NOVEMBER 23, 2020.
- 4 — INFERRED SHALLOW GROUNDWATER ELEVATION CONTOUR (NAVD 1988) ON NOVEMBER 23, 2020.
- 2.93S / 2.56D — GROUNDWATER ELEVATION OBSERVED ON NOVEMBER 23, 2020 (IN FEET RELATIVE TO NAVD 1988)
- S — INDICATES THE MONITORING WELL SCREEN IS SHALLOW (GENERALLY AT THE NATURAL WATER TABLE)
- D — INDICATES THE MONITORING WELL SCREEN IS DEEP (GENERALLY DEEPER THAN THE NATURAL WATER TABLE)

EXCEEDANCES OF THE RIDEM METHOD 1 AND 2 GB GROUNDWATER OBJECTIVES:



- PRESENCE OF MEASURABLE NAPL (≥0.01 FT)
- [S/D] — INDICATES WHETHER MONITORING WELL IS SHALLOW OR DEEP
- ND — NOT DETECTED

GENERAL NOTES:

1) EXISTING CONDITIONS BASE MAP DEVELOPED FROM THE FOLLOWING:
   - ELECTRONIC CAD FILE "ACAD-7257PL.DWG" PROVIDED BY VANASSE HANGEN BRUSTLIN (VHB) ENTITLED "EXISTING CONDITIONS PLAN," PROJECT TITLE "NATIONAL GRID LNG TERMINAL ROAD LNG FACILITY" DATED MARCH 10, 2014, ORIGINAL SCALE 1" = 50', DRAWING NO. SV-1 THROUGH SV-3 AND AERIAL MAPPING BY WSP TRANSPORTATION AND INFRASTRUCTURE DATED JANUARY 15, 2014 PREPARED FOR NATIONAL GRID LAND SURVEYING DEPARTMENT, WALTHAM, MASSACHUSETTS AND CAD FILE NO. 09303023.052-1.DWG.
   - ELECTRONIC CAD FILE "3654 642 ALLENS AVE ASBUILT.DWG", PREPARED BY A-PLUS CONSTRUCTION SERVICES CORPORATION FOR CHARTER ENVIRONMENTAL, TITLED "AS-BUILT PLAN," SHEET 1 TITLED "SUB GRADE" AND SHEET 2 TITLED "FINISH GRADE," DATED DECEMBER 16, 2016 AND PROVIDED TO GZA ON MARCH 23, 2017.
   - ELECTRONIC CAD FILE 2797-001-DATA-V18-20191204 TITLED "TOPOGRAPHIC SURVEY," PROJECT TITLE "642 ALLENS AVENUE, ANCILLARY BUILDING DEMOLITION PROJECT," PREPARED BY DIPRETE ENGINEERING FOR COSTELLO DISMANTLING COMPANY, INC., ORIGINAL SCALE 1" = 20', SHEET 1 OF 1, DATED DECEMBER 4, 2019 AND PROVIDED TO GZA.
   - ELECTRONIC CAD FILE "19-NG-20_TERMINAL-RD PROVIDENCE.DWG," PREPARED BY TAUPER LAND SURVEY, INC. ON DECEMBER 30, 2019 FOR NATIONAL GRID LAND SURVEYING DEPARTMENT, WALTHAM, MASSACHUSETTS.
   - ON-SITE INVESTIGATIONS AND SURVEYS BY GZA PERSONNEL DURING VARIOUS SITE VISITS BETWEEN 2011 AND 2021.
2) PROPERTY LINES AND LOT INFORMATION ESTABLISHED FROM INFORMATION PROVIDED ON A DRAWING ENTITLED "EXISTING CONDITIONS PLAN," PROJECT TITLE "NATIONAL GRID LNG TERMINAL ROAD LNG FACILITY" DATED MARCH 10, 2014, ORIGINAL SCALE 1" = 50', DRAWING NO. SV-1 THROUGH SV-3.
3) EXPLORATION LOCATION PLANS WERE DEVELOPED FROM THE FOLLOWING:
   - SITE PLANS PROVIDED BY RESOURCE CONTROLS ASSOCIATES (RCA) IN THE RIDEM-SUBMITTED JULY 5, 1994 "SITE CHARACTERIZATION PLAN" PREPARED ON BEHALF OF THE PROVIDENCE GAS COMPANY. PLANS PROVIDED BY NATIONAL GRID.
   - SITE PLANS PROVIDED BY RCA IN THE RIDEM-SUBMITTED JUNE 28, 1996 "PHASE IB FIELD CHARACTERIZATION INVESTIGATION" PREPARED ON BEHALF OF THE PROVIDENCE GAS COMPANY. PLANS PROVIDED BY NATIONAL GRID.
   - SITE PLANS PROVIDED BY ENVIRONMENTAL SCIENCE SERVICES, INC. (ESS) IN THE RIDEM-SUBMITTED DECEMBER 4, 1998 "REMEDIAL ACTION WORK PLAN (RAWP)" PREPARED ON BEHALF OF THE PROVIDENCE GAS COMPANY. PLANS PROVIDED BY NATIONAL GRID.
   - SITE PLANS PROVIDED BY ESS IN THE RIDEM-SUBMITTED OCTOBER 21, 1999 "SUBSURFACE INVESTIGATION AND PROPOSED ALGONQUIN GENERATOR CONSTRUCTION AREA" PREPARED ON BEHALF OF THE PROVIDENCE GAS COMPANY. PLANS PROVIDED BY NATIONAL GRID.
   - SITE PLANS PROVIDED BY VHB IN THE RIDEM-SUBMITTED NOVEMBER 2002 "REMEDIAL ACTION CLOSURE REPORT" PREPARED ON BEHALF OF THE NEW ENGLAND GAS COMPANY. PLANS PROVIDED BY NATIONAL GRID.
   - SITE PLANS PROVIDED BY VHB IN THE RIDEM-SUBMITTED APRIL 2003 "SITE INVESTIGATION REPORT" PREPARED ON BEHALF OF THE NEW ENGLAND GAS COMPANY. PLANS PROVIDED BY NATIONAL GRID.
   - SITE PLANS PROVIDED BY VHB IN THE RIDEM-SUBMITTED JANUARY 26, 2009 "OXIDE BOX INVESTIGATION TECHNICAL MEMORANDUM" PREPARED ON BEHALF OF NATIONAL GRID. PLANS PROVIDED BY NATIONAL GRID.
   - FIGURE 3 "EXPLORATION LOCATION PLAN" PREPARED BY GZA GEOENVIRONMENTAL, INC. (GZA) ON BEHALF OF CHICAGO BRIDGE AND IRON (CB&I) IN JULY 2005. PLANS PROVIDED BY NATIONAL GRID.
   - FIGURE 35 "TEST BORINGS UNDER SASSAFRAS POINT PLAT" DATED JUNE 5, 1912 PREPARED BY THE PROVIDENCE GAS COMPANY. PLANS PROVIDED BY NATIONAL GRID.
   - DRAWING 3 "WHARF FACILITIES - BULKHEAD REBUILDING - CROSS SECTIONS" DATED JANUARY 11, 1973 PREPARED BY PARSONS, BRINCKERHOFF, QUADE AND DOUGLAS ON BEHALF OF THE PROVIDENCE GAS COMPANY. PLANS PROVIDED BY NATIONAL GRID.
   - FIGURE 2 "EXPLORATION LOCATION PLAN," DATED SEPTEMBER 18, 2015, BY WEIDLINGER ASSOCIATES, INC. (WEI) ON BEHALF OF KIEWIT CORPORATION (KIEWIT). PLAN PROVIDED BY NATIONAL GRID.
   - DRAWING 5153_C00_(SENT OUT 05-03-16).DWG BY PROCESS PIPELINE SERVICES OF WALPOLE MASSACHUSETTS TITLED "SITE PLAN" SHEET A02, DATED APRIL 27, 2016 AND PROVIDED BY NATIONAL GRID ON MAY 6, 2016.
   - FIGURE 2 "EXPLORATION LOCATION PLAN," DATED MARCH 22, 2016, BY GOLDER ASSOCIATES ON BEHALF OF CHI ENGINEERING SERVICES, INC. PLAN PROVIDED BY NATIONAL GRID.
   - FIGURE 2 "EXPLORATION LOCATION PLAN" DATED SEPTEMBER 2019 BY GZA ON BEHALF OF HDR, INC. PLANS PROVIDED BY NATIONAL GRID.
   - ELECTRONIC CAD FILE "ACAD-7257PL.DWG" PROVIDED BY VANASSE HANGEN BRUSTLIN (VHB) ENTITLED "EXISTING CONDITIONS PLAN," PROJECT TITLE "NATIONAL GRID LNG TERMINAL ROAD LNG FACILITY" DATED MARCH 10, 2014, ORIGINAL SCALE 1" = 50', DRAWING NO. SV-1 THROUGH SV-3 AND AERIAL MAPPING BY WSP TRANSPORTATION AND INFRASTRUCTURE DATED JANUARY 15, 2014 PREPARED FOR NATIONAL GRID LAND SURVEYING DEPARTMENT, WALTHAM, MASSACHUSETTS AND CAD FILE NO. 09303023.052-1.DWG. PLANS PROVIDED BY NATIONAL GRID.
   - ON-SITE INVESTIGATIONS AND SURVEYS BY GZA PERSONNEL DURING VARIOUS SITE VISITS BETWEEN 2011 AND 2020.
4) THE LOCATION OF THE EXPLORATIONS AND MONITORING WELLS AT THE SITE WERE APPROXIMATELY DETERMINED AND HAVE BEEN ALIGNED AND ADJUSTED FOR THE "BEST FIT" AND THESE DATA SHOULD BE CONSIDERED ACCURATE ONLY TO THE DEGREE IMPLIED BY THE METHOD USED.
5) HORIZONTAL DATUM IS BASED ON NAD 1983 FROM BASE MAPPING PROVIDED BY VHB.
6) VERTICAL DATUM IS BASED ON NAVD 1988 FROM BASE MAPPING PROVIDED BY VHB.
7) APPROXIMATE HISTORICAL STRUCTURE/EQUIPMENT LOCATIONS AND DATES WERE OBTAINED FROM THE FOLLOWING SOURCES:
   - CERTIFIED SANBORN MAPS DATED: 1950, 1956, 1972, 1977 AND 1982
   - AERIAL ORTHOPHOTOGRAPHIC IMAGES OBTAINED FROM RIGIS: 1939, 1951, 1962, 1972, 1976, 1981, 1988, 1992, 1995, 1997, 2002, 2008
   - SITE PLANS PROVIDED BY RESOURCE CONTROLS ASSOCIATES (RCA) IN THE RIDEM-SUBMITTED JULY 5, 1994 "SITE CHARACTERIZATION PLAN" PREPARED ON BEHALF OF THE PROVIDENCE GAS COMPANY. PLANS PROVIDED BY NATIONAL GRID.
   - HISTORIC SITE PLAN "GENERAL PLAN OF WORKS, PROVIDENCE GAS COMPANY, SASSAFRAS POINT PLANT, PROVIDENCE, RHODE ISLAND." UNDATED. PLANS PROVIDED BY NATIONAL GRID.
8) THE SITE HAS BEEN THE LOCATION OF NUMEROUS REMEDIAL ACTIONS. THIS PLAN SET DOES NOT PRESENT THE LOCATIONS OF ANY CONFIRMATORY SAMPLES THAT HAVE BEEN COLLECTED AT THE SITE. THIS PLAN SET MAY INCLUDE LOCATIONS THAT HAVE BEEN FULLY EXCAVATED AND THE PRESENTED EXPLORATIONS MAY NOT BE TRUE TO CURRENT CONDITIONS.
9) THIS PLAN SET DOES NOT PRESENT THE LOCATIONS OF SAMPLES THAT WERE COLLECTED FOR GEOTECHNICAL PURPOSES ONLY. THIS INCLUDES CONE PENETROMETER TESTING SAMPLES AND TEST PITS CONDUCTED WITH NO SOIL DESCRIPTIONS OR ENVIRONMENTAL SAMPLES COLLECTED. HOWEVER, THE LOCATIONS OF KNOWN GEOTECHNICAL BORINGS (PRESENTED ON PLANS PROVIDED BY NATIONAL GRID) ARE PRESENTED IN THIS PLAN SET.
10) LOGS FROM GEOTECHNICAL BORINGS SERIES PGC-1 (1912 GEOTECHNICAL BORINGS PERFORMED FOR THE PROVIDENCE GAS COMPANY) AND SERIES B-200 (1973 GEOTECHNICAL BORINGS PERFORMED FOR THE PROVIDENCE GAS COMPANY) CONSIST OF FENCE DIAGRAMS ONLY.

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RHODE ISLAND ENERGY
MONITORING REPORT - 2022
642 ALLENS AVENUE PROVIDENCE, RHODE ISLAND

GENERAL NOTES AND LEGEND

PREPARED BY:		PREPARED FOR:	
GZA GeoEnvironmental, Inc. Engineers and Scientists www.gza.com		Rhode Island Energy	
PROJ MGR: SH	REVIEWED BY: MSK	CHECKED BY: MSK	DRAWING N1
DESIGNED BY: AB	DRAWN BY: LDT	SCALE: AS NOTED	
DATE: JUNE, 2023	PROJECT NO. 33554.01	REVISION NO. 0	SHEET NO. 2 OF 9

LEGEND:

- PROPERTY LINES
- 642 ALLENS AVENUE FORMER MGP SITE
- CRMC 200-FOOT JURISDICTIONAL LINE
- EASEMENT AREA
- FLOOD ZONE VE (EL. 14) LIMIT
- FLOOD ZONE AE (EL. 12) LIMIT

REFERENCE NOTES:

1. BASE MAP DEVELOPED FROM RHODE ISLAND'S RIGIS AERIAL IMAGERY FLOWN SPRING 2021.
2. PROPERTY LINES AND LOT INFORMATION ESTABLISHED FROM INFORMATION PROVIDED ON A DRAWING ENTITLED "EXISTING CONDITIONS PLAN," PROJECT TITLE "NATIONAL GRID LNG TERMINAL ROAD LNG FACILITY" DATED MARCH 10, 2014, ORIGINAL SCALE 1" = 50', DRAWING NO. SV-1 THROUGH SV-3.
3. EASEMENT LOCATIONS WERE DEVELOPED FROM THE FOLLOWING:
   - ELECTRONIC CAD FILE "ACAD-7257PL.DWG" PROVIDED BY VANASSE HANGEN BRUSTLIN (VHB) ENTITLED "EXISTING CONDITIONS PLAN," PROJECT TITLE "NATIONAL GRID LNG TERMINAL ROAD LNG FACILITY" DATED MARCH 10, 2014, ORIGINAL SCALE 1" = 50', DRAWING NO. SV-1 THROUGH SV-3 AND AERIAL MAPPING BY WSP TRANSPORTATION AND INFRASTRUCTURE DATED JANUARY 15, 2014 PREPARED FOR NATIONAL GRID LAND SURVEYING DEPARTMENT, WALTHAM, MASSACHUSETTS AND CAD FILE NO. 09303023.052-1.DWG. PLANS PROVIDED BY NATIONAL GRID.
   - DESCRIPTIONS PROVIDED IN THE CITY OF PROVIDENCE DEED BOOK (BK) 470 PAGES 224 - 229, BK 561 PAGES 326 - 328, BK 1111 PAGES 752 -756 AND BK 5249 PAGES 219 - 322.
4. FLOOD ZONE HAZARD AREA DATA WERE PROVIDED BY RHODE ISLAND GEOGRAPHIC INFORMATION SYSTEM (RIGIS) AND DERIVED FROM STATEWIDE DIGITAL FLOOD INSURANCE RATE MAP (DFIRM) DATABASE, ORIGINALLY PUBLISHED BY FEMA IN OCTOBER 2015.
5. SITE BOUNDARIES ARE APPROXIMATE.

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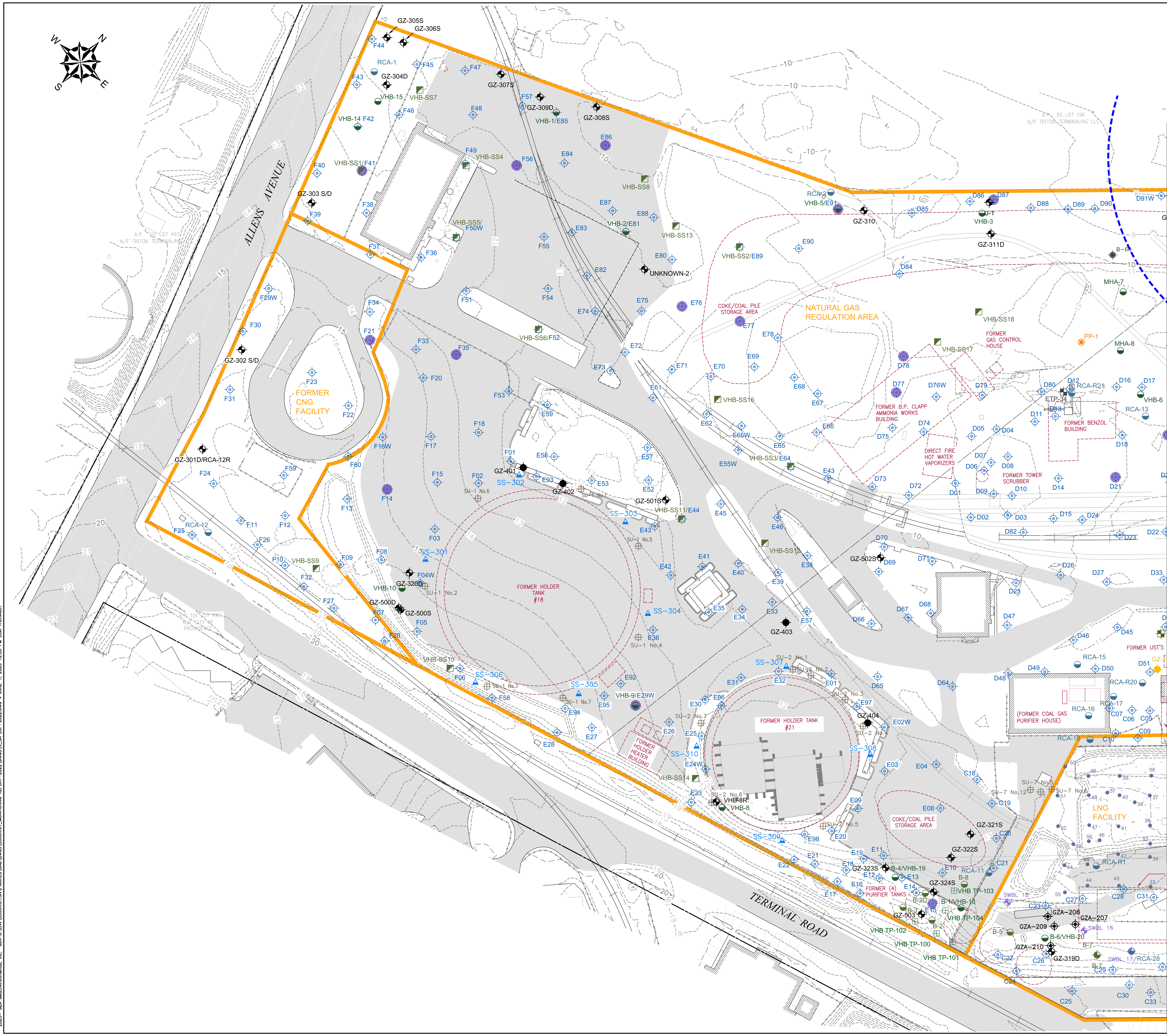
N W E S

0 60' 120' 240' 360'
SCALE IN FEET 1" = 120'

RHODE ISLAND ENERGY
MONITORING REPORT - 2022
642 ALLENS AVENUE PROVIDENCE, RHODE ISLAND

OVERALL AERIAL

PREPARED BY: GZA GeoEnvironmental, Inc. Engineers and Scientists www.gza.com		PREPARED FOR: Rhode Island Energy (a PPL company)	
PROJ MGR: SH	REVIEWED BY: MSK	CHECKED BY: MSK	DRAWING 2
DESIGNED BY: AB	DRAWN BY: LDT	SCALE: AS NOTED	
DATE: JUNE, 2023	PROJECT NO. 33554.01	REVISION NO. 0	SHEET NO. 3 OF 9



EXPLORATION LEGEND:

GZ-500 S/D	ENVIRONMENTAL BORING OBSERVED BY GZA IN 2021
GZ-314 S/D	ENVIRONMENTAL BORING OBSERVED BY GZA IN 2014
VHB-7	ENVIRONMENTAL BORING OBSERVED BY VHB IN 2002 AND 2003
F47	ENVIRONMENTAL BORING OBSERVED BY ESS IN 1999 AND 2000
1	ENVIRONMENTAL BORING OBSERVED BY ESS IN 1999
RHB-1	ENVIRONMENTAL BORING OBSERVED BY ESS IN 1998
RCA-40	ENVIRONMENTAL BORING OBSERVED BY RCA BETWEEN 1994-1996
TP-301	ENVIRONMENTAL TEST PITS OBSERVED BY GZA IN 2014
VHB TP-101	ENVIRONMENTAL TEST PITS OBSERVED BY VHB IN 2008
TP-1	ENVIRONMENTAL TEST PITS OBSERVED BY VHB IN 2002
ETP-4	ENVIRONMENTAL TEST PITS OBSERVED BY RCA IN 1995 AND 1996
SS−301	SURFACE SOIL SAMPLE COLLECTED BY GZA IN 2014
VHB-SS2	SURFACE SOIL SAMPLE COLLECTED BY VHB IN 2003
SU−6 No.9	SURFACE SOIL SAMPLE COLLECTED BY RCA IN 1994 AND 1995
RSS−1	SEDIMENT SAMPLE COLLECTED BY RCA IN 1994 AND 1995
RW-1	RECOVERY WELL INSTALLED BY CHES OBSERVED BY GZA IN 2014
CHES-RW-1	RECOVERY WELL INSTALLED BY CHES OBSERVED BY VHB IN 2002
ESS-RW-1	RECOVERY WELL INSTALLED BY ESS IN 1999 AND 2000
GZ-401	GEOTECHNICAL BORING OBSERVED BY GZA IN 2015
SB-01	GEOTECHNICAL BORING OBSERVED BY WEIDLINGER ASSOCIATES, INC. (WAI) IN 2015
B-201	GEOTECHNICAL BORING PERFORMED BY GOLDER ASSOCIATES IN 2016
GZ-3	GEOTECHNICAL BORING BY GZA IN 2016
PRV-1	GEOTECHNICAL BORING PERFORMED BY GEOLOGIC, INC. IN 2019
PP-1	GEOTECHNICAL BORING PERFORMED BY PROCESS PIPELINE SERVICES IN 2015
GZA−206	GEOTECHNICAL BORING OBSERVED BY GZA IN 2005
GZ−1	GEOTECHNICAL BORING OBSERVED BY GZA IN 2004
SWBL13	GEOTECHNICAL BORING OBSERVED BY SWEC IN 1995
B-207	GEOTECHNICAL BORING PERFORMED FOR PROVIDENCE GAS COMPANY IN 1973
B−25	GEOTECHNICAL BORING OBSERVED BY HALEY & ALDRICH IN 1971 AND 1972
PGC-8	GEOTECHNICAL BORING PERFORMED FOR PROVIDENCE GAS COMPANY IN 1912
	ENVIRONMENTAL TEST PIT OBSERVED BY ESS IN 1999 AND 2000

LEGEND:

- PROPERTY LINE
- SITE AREA BOUNDARY
- INTERIOR PROPERTY LINE
- EXISTING BUILDING
- UTILITY POLE
- STEEL POST
- LIGHT POLE
- PILING
- EDGE OF WATER
- FENCE
- RAILROAD TRACKS
- EXISTING CONTOUR (MAJOR 5 FOOT INTERVAL)
- EXISTING CONTOUR (MINOR 1 FOOT INTERVAL)
- HISTORICAL STRUCTURE OR FEATURE
- PAVEMENT
- CONCRETE
- HYDRANT
- 200 FOOT CRMC SETBACK

NOTE:

THIS SHEET IS SUBJECT TO SHEET N1 GENERAL NOTES.

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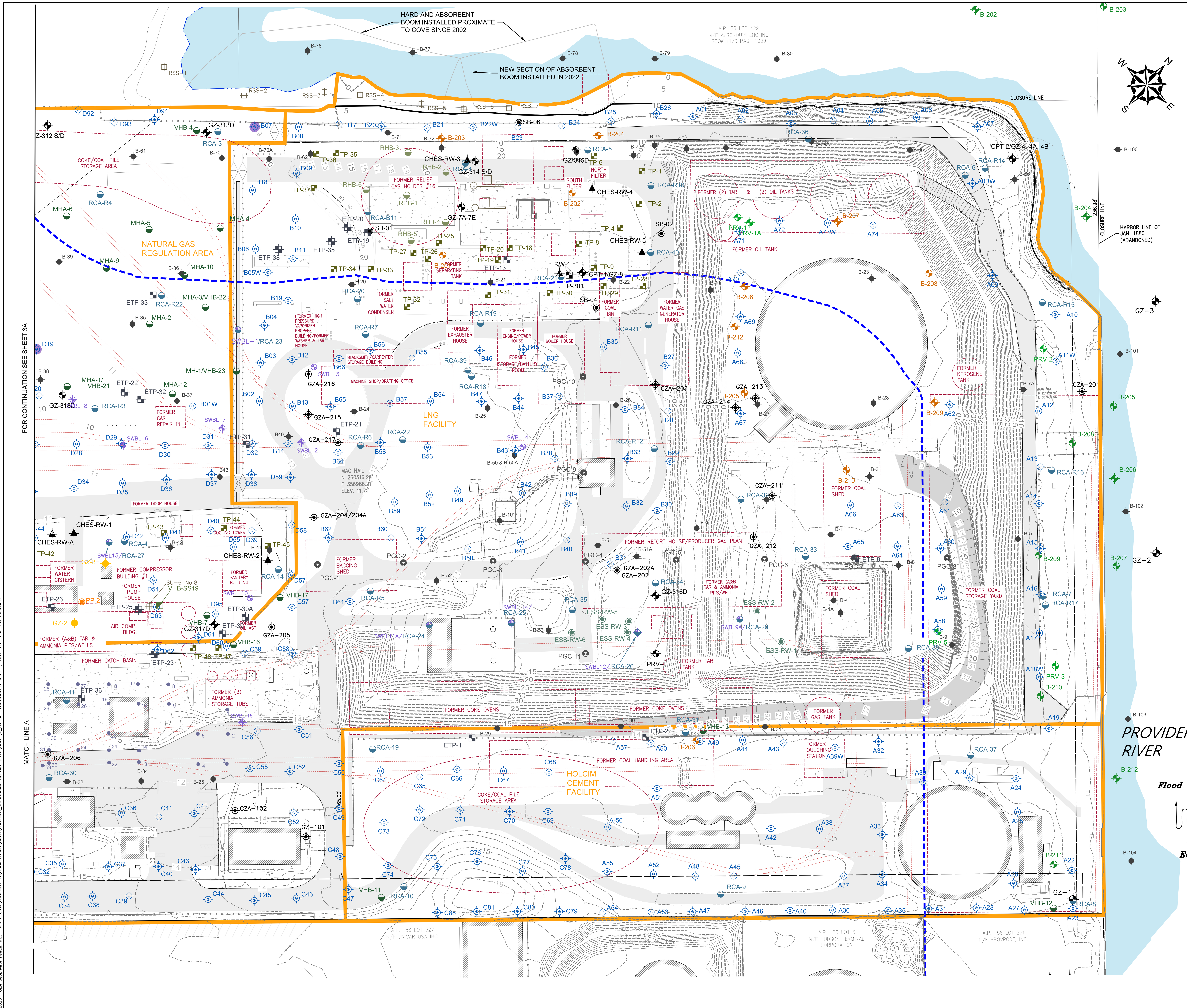
0 25 50 100 150
SCALE IN FEET 1" = 50'

RHODE ISLAND ENERGY
MONITORING REPORT - 2022
642 ALLENS AVENUE PROVIDENCE, RHODE ISLAND

EXPLORATION LOCATION PLAN - WESTERN SIDE OF THE SITE

PREPARED BY: GZA GeoEnvironmental, Inc. Engineers and Scientists www.gza.com		PREPARED FOR: Rhode Island Energy	
PROJ MGR: SH	REVIEWED BY: MSK	CHECKED BY: MSK	DRAWING
DESIGNED BY: AB	DRAWN BY: LDT	SCALE: AS NOTED	3A
DATE: JUNE, 2023	PROJECT NO. 33554.01	REVISION NO. 0	SHEET NO. 4 OF 9



EXPLORATION LEGEND:

GZ-500 S/D	ENVIRONMENTAL BORING OBSERVED BY GZA IN 2021
GZ-314 S/D	ENVIRONMENTAL BORING OBSERVED BY GZA IN 2014
VHB-7	ENVIRONMENTAL BORING OBSERVED BY VHB IN 2002 AND 2003
F47	ENVIRONMENTAL BORING OBSERVED BY ESS IN 1999 AND 2000
1	ENVIRONMENTAL BORING OBSERVED BY ESS IN 1999
RHB-1	ENVIRONMENTAL BORING OBSERVED BY ESS IN 1998
RCA-40	ENVIRONMENTAL BORING OBSERVED BY RCA BETWEEN 1994-1996
TP-301	ENVIRONMENTAL TEST PITS OBSERVED BY GZA IN 2014
VHB TP-101	ENVIRONMENTAL TEST PITS OBSERVED BY VHB IN 2008
TP-1	ENVIRONMENTAL TEST PITS OBSERVED BY VHB IN 2002
ETP-4	ENVIRONMENTAL TEST PITS OBSERVED BY RCA IN 1995 AND 1996
SS−301	SURFACE SOIL SAMPLE COLLECTED BY GZA IN 2014
VHB-SS2	SURFACE SOIL SAMPLE COLLECTED BY VHB IN 2003
SU−6 No.9	SURFACE SOIL SAMPLE COLLECTED BY RCA IN 1994 AND 1995
RSS−1	SEDIMENT SAMPLE COLLECTED BY RCA IN 1994 AND 1995
CHES-RW-A	RECOVERY WELL INSTALLED BY CHES OBSERVED BY GZA IN 2017
RW-1	RECOVERY WELL INSTALLED BY CHES OBSERVED BY GZA IN 2014
CHES-RW-1	RECOVERY WELL INSTALLED BY CHES OBSERVED BY VHB IN 2002
ESS-RW-1	RECOVERY WELL INSTALLED BY ESS IN 1999 AND 2000
GZ-401	GEOTECHNICAL BORING OBSERVED BY GZA IN 2015
SB-01	GEOTECHNICAL BORING OBSERVED BY WEIDLINGER ASSOCIATES, INC. (WAI) IN 2015
B-201	GEOTECHNICAL BORING PERFORMED BY GOLDER ASSOCIATES IN 2016
GZ-3	GEOTECHNICAL BORING BY GZA IN 2016
PP-1	GEOTECHNICAL BORING PERFORMED BY PROCESS PIPELINE SERVICES IN 2015
GZA−206	GEOTECHNICAL BORING OBSERVED BY GZA IN 2005
GZ−1	GEOTECHNICAL BORING OBSERVED BY GZA IN 2004
SWBL13	GEOTECHNICAL BORING OBSERVED BY SWEC IN 1995
B-207	GEOTECHNICAL BORING PERFORMED FOR PROVIDENCE GAS COMPANY IN 1973
B−25	GEOTECHNICAL BORING OBSERVED BY HALEY & ALDRICH IN 1971 AND 1972
PGC-8	GEOTECHNICAL BORING PERFORMED FOR PROVIDENCE GAS COMPANY IN 1912
	ENVIRONMENTAL TEST PIT OBSERVED BY ESS IN 1999 AND 2000

LEGEND:

- PROPERTY LINE
- SITE AREA BOUNDARY
- INTERIOR PROPERTY LINE
- EXISTING BUILDING
- UTILITY POLE
- STEEL POST
- LIGHT POLE
- PILING
- EDGE OF WATER
- FENCE
- RAILROAD TRACKS
- EXISTING CONTOUR (MAJOR 5 FOOT INTERVAL)
- EXISTING CONTOUR (MINOR 1 FOOT INTERVAL)
- HISTORIC STRUCTURE OR FEATURE
- PAVEMENT
- CONCRETE
- HYDRANT
- 200 FOOT CRMC SETBACK

NOTE:

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0 25 50 100 150
SCALE IN FEET 1" = 50'

RHODE ISLAND ENERGY
MONITORING REPORT - 2022
642 ALLENS AVENUE PROVIDENCE, RHODE ISLAND

EXPLORATION LOCATION PLAN - EASTERN SIDE OF THE SITE

PREPARED BY: GZA GeoEnvironmental, Inc. Engineers and Scientists www.gza.com

PREPARED FOR: Rhode Island Energy™ a PPL company

PROJ MGR: SH	REVIEWED BY: MSK	CHECKED BY: MSK	DRAWING
DESIGNED BY: AB	DRAWN BY: LDT	SCALE: AS NOTED	3B
DATE: JUNE, 2023	PROJECT NO. 33554.01	REVISION NO. 0	SHEET NO. 5 OF 9

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0 40 80 160 240
SCALE IN FEET 1" = 80'

LEGEND:

- PROPERTY LINE
- SITE AREA BOUNDARY
- INTERIOR PROPERTY LINE
- EXISTING BUILDING
- UTILITY POLE
- STEEL POST
- LIGHT POLE
- PILING
- EDGE OF WATER
- FENCE
- RAILROAD TRACKS
- EXISTING CONTOUR (MAJOR 5 FOOT INTERVAL)
- EXISTING CONTOUR (MINOR 1 FOOT INTERVAL)
- PAVEMENT
- CONCRETE

MONITORING WELL LEGEND:

GZ-500 S/D	MONITORING WELL INSTALLED BY GZA IN 2021
GZ-401	MONITORING WELL INSTALLED BY GZA IN 2015
GZ-314 S/D	MONITORING WELL INSTALLED BY GZA IN 2014
GZA–206	MONITORING WELL INSTALLED BY GZA IN 2005
VHB-7	MONITORING WELL INSTALLED BY VHB IN 2002 AND 2003
F47	TEMPORARY WELL POINT INSTALLED BY ESS IN 1999 AND 2000
1	TEMPORARY WELL POINT INSTALLED BY ESS IN 1999
RCA-40	MONITORING WELL INSTALLED BY RCA IN 1996
CHES-RW-A	RECOVERY WELL INSTALLED BY CHES OBSERVED BY GZA IN 2017
RW-1	RECOVERY WELL INSTALLED BY CHES OBSERVED BY GZA IN 2014
CHES-RW-1	RECOVERY WELL INSTALLED BY CHES OBSERVED BY VHB IN 2002
ESS-RW-1	RECOVERY WELL INSTALLED BY ESS IN 1999 AND 2000

MONITORING WELL LEGEND CONTINUED:

- ACTIVE MONITORING WELLS
- DECOMMISSIONED OR DESTROYED MONITORING WELLS (PRE-2016)
- 2016 DECOMMISSIONED MONITORING WELLS
- TEMPORARY MONITORING WELL-ASSUMED DESTROYED
- RECOVERY WELLS
- MONITORING WELL SAMPLED IN 2022

NOTES:

THIS SHEET IS SUBJECT TO SHEET N1 GENERAL NOTES.

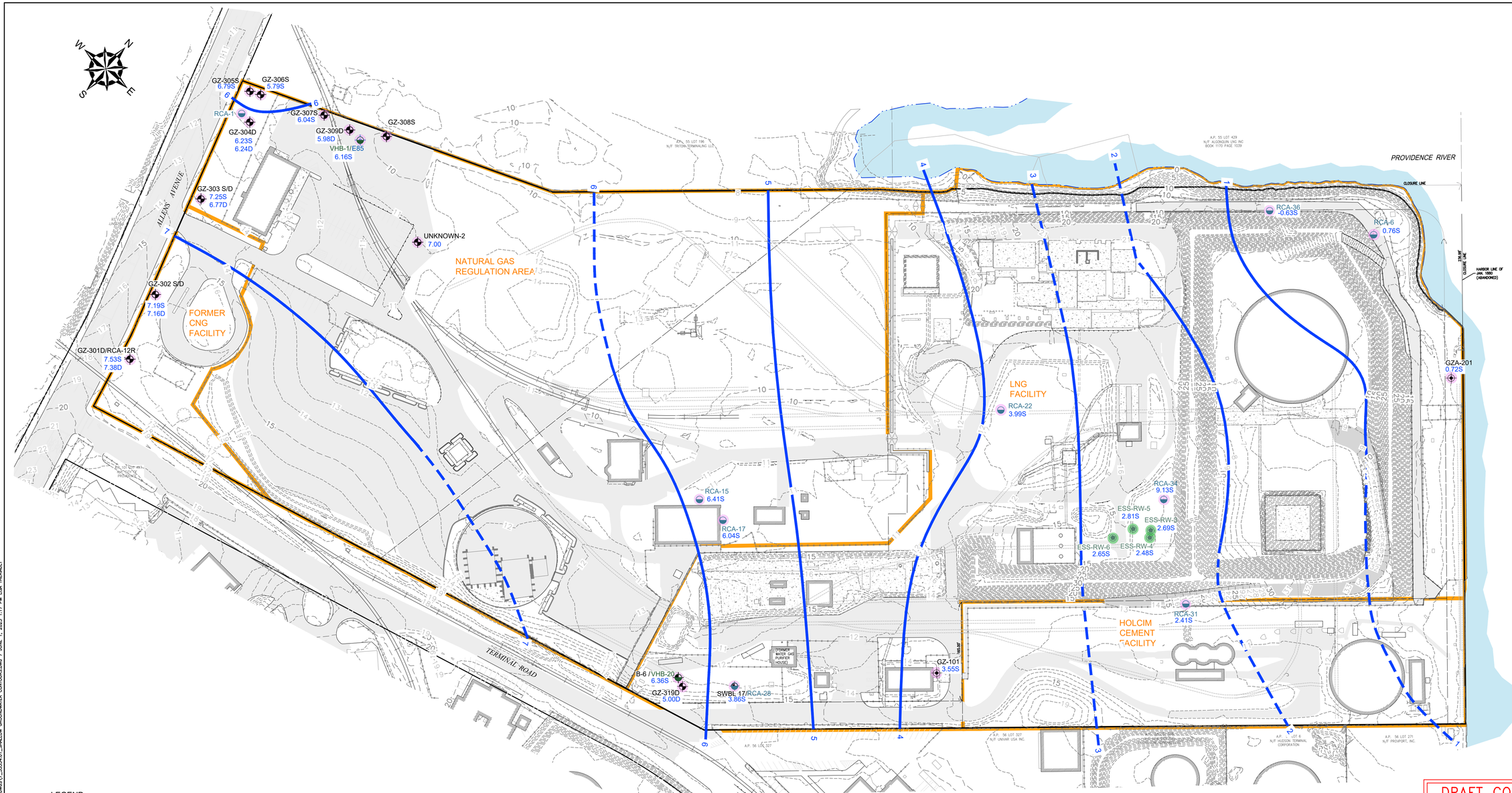
RHODE ISLAND ENERGY
MONITORING REPORT - 2022
642 ALLENS AVENUE PROVIDENCE, RHODE ISLAND

GROUNDWATER MONITORING WELLS

PREPARED BY: GZA GeoEnvironmental, Inc. Engineers and Scientists www.gza.com

PREPARED FOR: Rhode Island Energy

PROJ MGR: SH	REVIEWED BY: MSK	CHECKED BY: MSK	DRAWING
DESIGNED BY: AB	DRAWN BY: LDT	SCALE: AS NOTED	4
DATE: JUNE, 2023	PROJECT NO. 33554.01	REVISION NO. 0	SHEET NO. 4 OF 9



LEGEND:

- PROPERTY LINE
- SITE AREA BOUNDARY
- INTERIOR PROPERTY LINE
- EXISTING BUILDING
- UTILITY POLE / STEEL POST
- LIGHT POLE / PILING
- EDGE OF WATER
- FENCE
- RAILROAD TRACKS
- EXISTING CONTOUR (MAJOR 5 FOOT INTERVAL)
- EXISTING CONTOUR (MINOR 1 FOOT INTERVAL)
- PAVEMENT
- CONCRETE

MONITORING WELL LEGEND:

UNKNOWN-2	MONITORING WELL FOUND IN 2019
GZ-314 S/D	MONITORING WELL INSTALLED BY GZA IN 2014
GZA–206	MONITORING WELL INSTALLED BY GZA IN 2005
VHB-7	MONITORING WELL INSTALLED BY VHB IN 2002 AND 2003
F47	TEMPORARY WELL POINT INSTALLED BY ESS IN 1999 AND 2000
RCA-40	MONITORING WELL INSTALLED BY RCA IN 1996
ESS-RW-1	RECOVERY WELL INSTALLED BY ESS IN 1999 AND 2000
2.93S 2.56D	GROUNDWATER ELEVATION OBSERVED ON NOVEMBER 23, 2020 (IN FEET RELATIVE TO NAVD 1988)
S	INDICATES THE MONITORING WELL SCREEN IS SHALLOW (GENERALLY AT THE NATURAL WATER TABLE)
D	INDICATES THE MONITORING WELL SCREEN IS DEEP (GENERALLY DEEPER THAN THE NATURAL WATER TABLE)

MONITORING WELL LEGEND CONTINUED:

- MONITORING WELLS
- RECOVERY WELLS
- 5 — SHALLOW GROUNDWATER ELEVATION CONTOUR (NAVD 1988) ON NOVEMBER 23, 2020
- 4 — INFERRED SHALLOW GROUNDWATER ELEVATION CONTOUR (NAVD 1988) ON NOVEMBER 23, 2020

GROUNDWATER CONTOUR NOTES:

1. SHALLOW GROUNDWATER CONTOURS (NAVD 1988) ARE BASED ON DATA FROM WIDELY SPACED EXPLORATIONS AND MAY NOT REFLECT ACTUAL SUBSURFACE CONDITIONS. WATER LEVEL READINGS WERE ON NOVEMBER 23, 2020.
2. WATER LEVEL READINGS HAVE BEEN MADE IN THE MONITORING WELLS AT THE TIMES AND UNDER THE CONDITIONS STATED IN THE TEXT OF THIS REPORT. THESE DATA HAVE BEEN REVIEWED AND INTERPRETATIONS MADE IN THE TEXT OF THIS REPORT. HOWEVER, FLUCTUATIONS IN THE LEVEL OF THE GROUNDWATER MAY OCCUR DUE TO VARIATIONS IN RAINFALL, TEMPERATURE AND OTHER FACTORS.

NOTES:

1. THIS SHEET IS SUBJECT TO SHEET N1 GENERAL NOTES.
2. MONITORING WELL GZ-308S WAS UNABLE TO BE GAUGED DURING THE NOVEMBER 2020 GAUGING ROUND DUE TO CONSTRUCTION MATERIALS OBSTRUCTING ACCESS.
3. MONITORING WELL UNKNOWN-2 WAS GAUGED ON DECEMBER 21, 2020.

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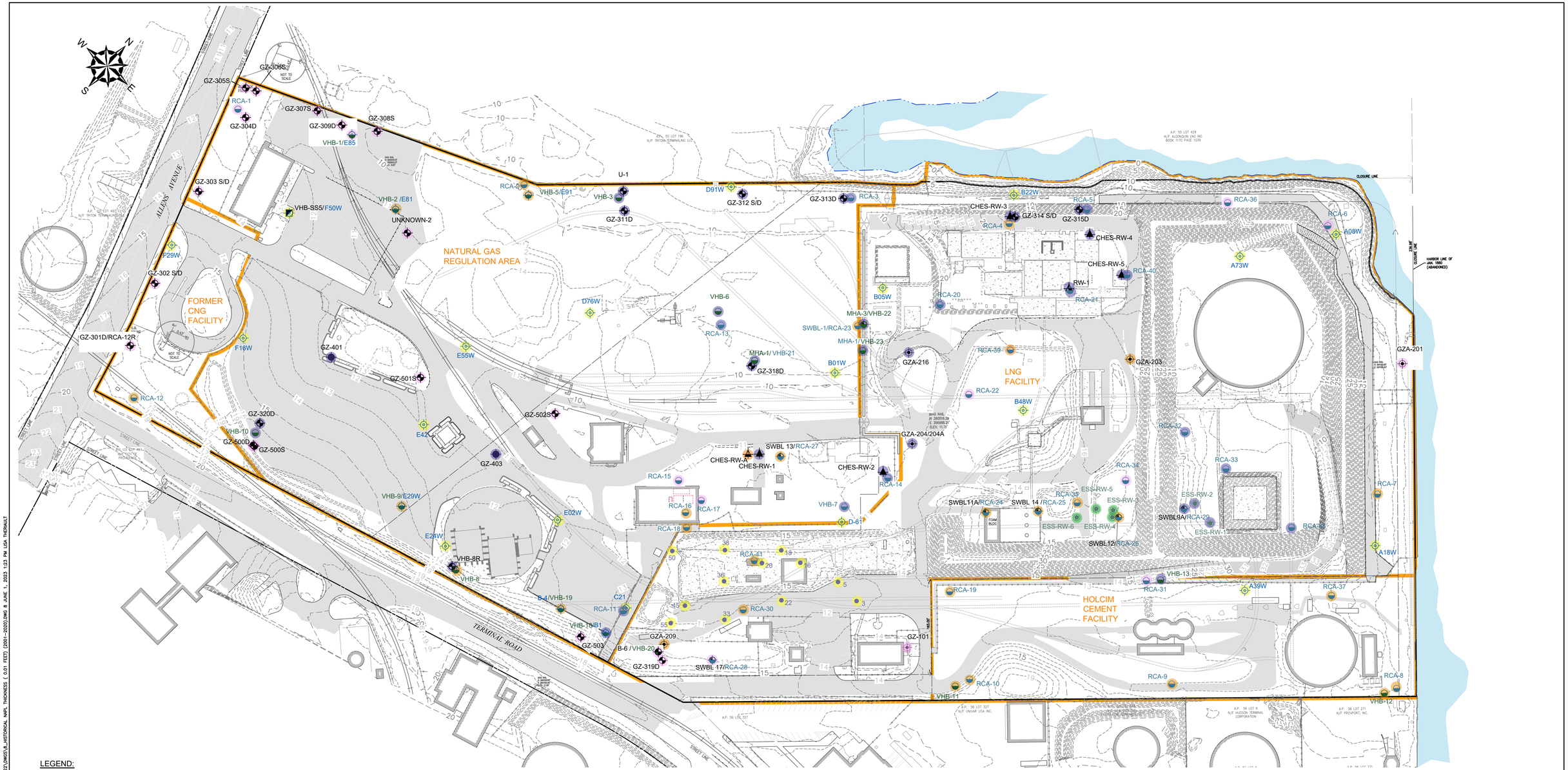
0 40 80 160 240
SCALE IN FEET 1" = 80'

RHODE ISLAND ENERGY
MONITORING REPORT - 2022
642 ALLENS AVENUE PROVIDENCE, RHODE ISLAND

SHALLOW GROUNDWATER CONTOURS

PREPARED BY: GZA GeoEnvironmental, Inc. Engineers and Scientists www.gza.com
PREPARED FOR: Rhode Island Energy

PROJ MGR: SH	REVIEWED BY: MSK	CHECKED BY: MSK	DRAWING 5
DESIGNED BY: AB	DRAWN BY: LDT	SCALE: AS NOTED	
DATE: JUNE, 2023	PROJECT NO. 33554.01	REVISION NO. 0	SHEET NO. 7 OF 9



LEGEND:

- PROPERTY LINE
- SITE AREA BOUNDARY
- INTERIOR PROPERTY LINE
- EXISTING BUILDING
- UTILITY POLE / STEEL POST
- LIGHT POLE / PILING
- EDGE OF WATER
- FENCE
- RAILROAD TRACKS
- EXISTING CONTOUR (MAJOR 5 FOOT INTERVAL)
- EXISTING CONTOUR (MINOR 1 FOOT INTERVAL)
- PAVEMENT
- CONCRETE

MONITORING WELL LEGEND:

GZ-500 S/D	MONITORING WELL INSTALLED BY GZA IN 2021
GZ-401	MONITORING WELL INSTALLED BY GZA IN 2015
GZ-314 S/D	MONITORING WELL INSTALLED BY GZA IN 2014
GZA–206	MONITORING WELL INSTALLED BY GZA IN 2005
VHB-7	MONITORING WELL INSTALLED BY VHB IN 2002 AND 2003
F47	TEMPORARY WELL POINT INSTALLED BY ESS IN 1999 AND 2000
1	TEMPORARY WELL POINT INSTALLED BY ESS IN 1999
RCA-40	MONITORING WELL INSTALLED BY RCA IN 1996
CHES-RW-A	RECOVERY WELL INSTALLED BY CHES OBSERVED BY GZA IN 2017
RW-1	RECOVERY WELL INSTALLED BY CHES OBSERVED BY GZA IN 2014
CHES-RW-1	RECOVERY WELL INSTALLED BY CHES OBSERVED BY VHB IN 2002
ESS-RW-1	RECOVERY WELL INSTALLED BY ESS IN 1999 AND 2000

MONITORING WELL LEGEND CONTINUED:

- ACTIVE MONITORING WELLS
- DECOMMISSIONED OR DESTROYED MONITORING WELLS (PRE-2016)
- 2016 DECOMMISSIONED MONITORING WELLS
- TEMPORARY MONITORING WELL-ASSUMED DESTROYED
- RECOVERY WELLS
- DETECTED LNAPL THICKNESS (≥0.01 FEET)
- DETECTED DNAPL THICKNESS (≥0.01 FEET)

NOTES:

THIS SHEET IS SUBJECT TO SHEET N1 GENERAL NOTES.

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0 40 80 160 240
SCALE IN FEET 1" = 80'

RHODE ISLAND ENERGY
MONITORING REPORT - 2022
642 ALLENS AVENUE PROVIDENCE, RHODE ISLAND

HISTORICAL NAPL THICKNESS (≥0.01 FEET) (2001-2021)

PREPARED BY: GZA GeoEnvironmental, Inc. Engineers and Scientists www.gza.com		PREPARED FOR: Rhode Island Energy	
PROJ MGR: SH	REVIEWED BY: MSK	CHECKED BY: MSK	DRAWING 6
DESIGNED BY: AB	DRAWN BY: LDT	SCALE: AS NOTED	
DATE: JUNE, 2023	PROJECT NO. 33554.01	REVISION NO. 0	SHEET NO. 8 OF 9

0 40 80 160 240
SCALE IN FEET 1" = 80'

LEGEND:

PROPERTY LINE	
SITE AREA BOUNDARY	
INTERIOR PROPERTY LINE	
EXISTING BUILDING	
UTILITY POLE	STEEL POST
LIGHT POLE	PILING
EDGE OF WATER	
FENCE	
RAILROAD TRACKS	
EXISTING CONTOUR (MAJOR 5 FOOT INTERVAL)	
EXISTING CONTOUR (MINOR 1 FOOT INTERVAL)	
PAVEMENT	
CONCRETE	

MONITORING WELL LEGEND:

GZ-500 S/D	MONITORING WELL INSTALLED BY GZA IN 2021
GZ-401	MONITORING WELL INSTALLED BY GZA IN 2015
GZ-314 S/D	MONITORING WELL INSTALLED BY GZA IN 2014
GZA-206	MONITORING WELL INSTALLED BY GZA IN 2005
VHB-7	MONITORING WELL INSTALLED BY VHB IN 2002 AND 2003
F47	TEMPORARY WELL POINT INSTALLED BY ESS IN 1999 AND 2000
1	TEMPORARY WELL POINT INSTALLED BY ESS IN 1999
RCA-40	MONITORING WELL INSTALLED BY RCA IN 1996
CHES-RW-A	RECOVERY WELL INSTALLED BY CHES OBSERVED BY GZA IN 2017
RW-1	RECOVERY WELL INSTALLED BY CHES OBSERVED BY GZA IN 2014
CHES-RW-1	RECOVERY WELL INSTALLED BY CHES OBSERVED BY VHB IN 2002
ESS-RW-1	RECOVERY WELL INSTALLED BY ESS IN 1999 AND 2000

MONITORING WELL LEGEND CONTINUED:

- ACTIVE MONITORING WELLS
- DECOMMISSIONED OR DESTROYED MONITORING WELLS (PRE-2016)
- 2016 DECOMMISSIONED MONITORING WELLS
- TEMPORARY MONITORING WELL-ASSUMED DESTROYED
- RECOVERY WELLS
- MONITORING WELL SAMPLED IN 2022

NOTES:

THIS SHEET IS SUBJECT TO SHEET N1 GENERAL NOTES.

EXCEEDANCES OF THE RIDEM
METHOD 1 AND 2 GB GROUNDWATER OBJECTIVES:

- 0.008 — AGGREGATE VOC CONCENTRATION [PPM]
- S — INDICATES WHETHER MONITORING WELL IS SHALLOW OR DEEP
- VINYL CHLORIDE [GB= 0.002 PPM]
- NAPHTHALENE [GB= 2.67 PPM]
- BENZENE [GB= 0.14 PPM]
- ETHYLBENZENE [GB= 1.6 PPM]
- PRESENCE OF MEASURABLE NAPL (≥0.01 FT) FOR 2022
- [S/D] INDICATES WHETHER MONITORING WELL IS SHALLOW OR DEEP
- ND NOT DETECTED

RHODE ISLAND ENERGY
MONITORING REPORT - 2022
642 ALLENS AVENUE PROVIDENCE, RHODE ISLAND

2022 NAPL AND GW ANALYTICAL DATA

PREPARED BY: GZA GeoEnvironmental, Inc. Engineers and Scientists www.gza.com

PREPARED FOR: Rhode Island Energy™ a PPL company

PROJ MGR: SH	REVIEWED BY: MSK	CHECKED BY: MSK	DRAWING 7
DESIGNED BY: AB	DRAWN BY: LDT	SCALE: AS NOTED	
DATE: JUNE, 2023	PROJECT NO. 33554.01	REVISION NO. 0	SHEET NO. 9 OF 9

APPENDIX A

LIMITATIONS

GEOHYDROLOGICAL LIMITATIONS

1. This *Groundwater Monitoring Report* has been prepared on behalf of and for the exclusive use of The Narragansett Electric Company d/b/a Rhode Island Energy solely for use in documenting the conditions observed at the property located at 642 Allens Avenue in Providence, Rhode Island ("Site"). This report and the findings contained herein shall not, in whole or in part, be disseminated or conveyed to any other party, nor used by any other party in whole or in part, without the prior written consent of GZA or Rhode Island Energy.

2. GZA's work was performed in accordance with generally accepted practices of other consultants undertaking similar studies at the same time and in the same geographical area, and GZA observed that degree of care and skill generally exercised by other consultants under similar circumstances and conditions. GZA's findings and conclusions must be considered not as scientific certainties, but rather as our professional opinion concerning the significance of the limited data gathered during the course of the study. No other warranty, express or implied is made. Specifically, GZA does not and cannot represent that the Site contains no hazardous material, oil, or other latent condition beyond that observed by GZA during the performance of our Site investigations.

3. The observations described in this report were made under the conditions stated therein. The conclusions presented in the report were based upon services performed and observations made by GZA.

4. In the event that Rhode Island Energy or others authorized to use this report obtain information on environmental or hazardous waste issues at the Site not contained in this report, such information shall be brought to GZA's attention forthwith. GZA will evaluate such information and, on the basis of this evaluation, may modify the conclusions stated in this report.

5. The conclusions and recommendations contained in this report are based in part upon the data obtained from environmental samples obtained from relatively widely spread subsurface explorations. The nature and extent of variations between these explorations may not become evident until further exploration. If variations or other latent conditions then appear evident, it will be necessary to reevaluate the conclusions and recommendations of this report.

6. The generalized soil profile described in the text is intended to convey trends in subsurface conditions. The boundaries between strata are approximate and idealized and have been developed by interpretations of widely spaced explorations and samples; actual soil transitions are probably more gradual. For specific information, refer to the boring logs.

7. In the event this work included the collection of water level data, these readings have been made in the test pits, borings and/or observation wells at times and under conditions stated on the exploration logs. These data have been reviewed and interpretations have been made in the text of this report. However, it must be noted that fluctuations in the level of the groundwater may occur due to variations in rainfall and other factors different from those prevailing at the time measurements were made.

8. The conclusions contained in this report are based in part upon various types of chemical data and are contingent upon their validity. These data have been reviewed and interpretations made in the report. Moreover, it should be noted that variations in the types and concentrations of contaminants and variations in their flow paths may occur due to seasonal water table fluctuations, past disposal practices, the passage of time, and other factors. Should additional chemical data become available in the future, these data should be reviewed by GZA and the conclusions and recommendations presented herein modified accordingly.

APPENDIX B

GROUNDWATER SAMPLING LOW FLOW LOGS

GROUNDWATER SAMPLING DATA SHEET

File No. 33554.01
Project: 642 Allens Ave
Location: City: Providence State: Rhode Island
Weather: Sunny 40's

Well ID: GZ-301D
Sample Date: 11/23/2022
Sampler's Name: Anders Brandon

WATER LEVEL OBSERVATIONS

Measurement Date/Time: 11/23/2022 1102

Point of Measurement: PVC Riser [X] Steel Casing [ ] Ground [ ]

Total Well Depth (feet):	29.35	Standing Water in Well (feet):	14.55
Depth to LNAPL (feet):	--	Well Diameter (in.)	2"
Depth to Water (feet):	9.70	Sample Depth (feet BGS):	25
Depth to DNAPL (feet):	--	Standpipe: TPVC to Ground Surface (feet)	-
Well Screened Interval (feet BGS):	20 to 30	Roadbox: TPVC to Ground Surface (feet)	-

Well Condition: **Protective Casing-** [X] Poor [ ] Good **Lock-** [ ] Yes [X] No **Expansion Cap-** [X] Yes [ ] No **Well ID-** [ ] Yes [X] No **Concrete Collar-** [X] Yes [ ] No **Well-** [ ] Poor [X] Good

EQUIPMENT

Sample Method: [ ] Bail [X] Pump / [X] Low Flow

Pump Type: Geopump No. 1 Rental **Flow-Thru Cell Vol (mL):** 250

Meter Type: YSI No. 2 Rental

INSTRUMENT MEASUREMENTS:

Start time: 1105 **Stop time:** 1120

		1	2	3	4	5	6	7	8
Time: (start)	Depth to Water (ft) (drawdown <0.3 or stable)	ORP (mvolts) (± 10)	pH (s.u.) (± 0.1)	Spec. Cond. (µS/cm) (±3%)	DO (mg/L) (±10% or 3 rdgs <0.5)	Temperature (°C) (±3%)	Turbidity (ntu) (±10% or <5ntu)	Flow (ml/min) (<500 ml/min)	Notes
1105	9.70	-37.4	6.25	1423	0.83	15.9	30.80	<200	
1108	9.70	-37.1	6.25	1414	0.75	16.0.	25.22	<200	
1111	9.70	-40.4	6.26	1399	0.63	16.1	23.23	<200	
114	9.70	-49.8	6.30	1374	0.53	16.0	11.94	<200	
1117	9.70	-54.8	6.33	1359	0.50	15.9	9.30	<200	
1120	9.70	-57.4	5.34	1349	0.48	15.8	9.12	<200	

SAMPLE TESTING INFORMATION:

SAMPLE TIME: 11:24:00 AM

Analysis	Method	No. Bottles	Bottle Type	Volume	Preservation	Handling
VOC	8260	3	VOA	40ml	HCL	On Ice

Sample observations:

Color: Clear to slight yellow Odor: None Clarity: Some floating debris, mostly clear

Total Purge Volume: 3 gal **Tubing Volume:** 0.1 gal

2" WELL = 0.163 GAL /FT = 0.617 LITERS/FT
1" WELL = 0.013 GAL /FT = 0.0492 LITERS/FT
3/8" TUBING - 0.0057 GAL/FT - 0.0217 LITERS/FT
1/4" TUBING - 0.0025 GAL/FT - 0.0096 LITERS/FT

Notes:

GROUNDWATER SAMPLING DATA SHEET

File No. 33554.01 | Well ID: GZ-304D
Project: 642 Allens Ave | Sample Date: 11/22/2022
Location: City: Providence State: Rhode Island | Sampler's Name: Ryan Fritz
Weather: Sunny 40's

WATER LEVEL OBSERVATIONS

Measurement Date/Time: 11/22/2022 0952

Point of Measurement: PVC Riser [X] Steel Casing [ ] Ground [ ]

Total Well Depth (feet):	29.51	Standing Water in Well (feet):	23.14
Depth to LNAPL (feet):	--	Well Diameter (in.)	2"
Depth to Water (feet):	6.57	Sample Depth (feet BGS):	25
Depth to DNAPL (feet):	--	Standpipe: TPVC to Ground Surface (feet)	-
Well Screened Interval (feet BGS):	20 to 30	Roadbox: TPVC to Ground Surface (feet)	-

Well Condition: **Protective Casing-** [ ] Poor [X] Good **Lock-** [ ] Yes [X] No **Expansion Cap-** [X] Yes [ ] No **Well ID-** [X] Yes [ ] No **Concrete Collar-** [X] Yes [ ] No **Well-** [ ] Poor [X] Good

EQUIPMENT

Sample Method: [ ] Bail [X] Pump / [X] Low Flow

Pump Type: Geopump No. 2 Rental **Flow-Thru Cell Vol (mL):**

Meter Type: YSI No. 2 Rental

INSTRUMENT MEASUREMENTS:

Start time: 0952 **Stop time:** 1025

		1	2	3	4	5	6	7	8
Time: (start)	Depth to Water (ft) (drawdown <0.3 or stable)	ORP (mvolts) (± 10)	pH (s.u.) (± 0.1)	Spec. Cond. (µS/cm) (±3%)	DO (mg/L) (±10% or 3 rdgs <0.5)	Temperature (°C) (±3%)	Turbidity (ntu) (±10% or <5ntu)	Flow (ml/min) (<500 ml/min)	Notes
0952	6.57	-101.1	7.08	1858	1.04	14.4	<5	250	
0955	-	-100.1	7.04	1603	0.99	14.5	<5	-	
0958	-	-100.3	7.01	1388	0.87	14.5	<5	-	
1001	-	-102.1	6.97	1249	0.66	14.5	<5	-	
1004	-	-103.8	6.95	1158	0.56	14.6	<5	-	
1007	-	-105.5	6.94	1134	0.52	14.6	<5	-	
1010	-	-107.0	6.92	1076	0.48	14.6	<5	-	
1013	-	-107.5	6.92	1052	0.46	14.6	<5	-	
1016	-	-108.30	6.91	1026	0.44	14.6	<5	-	
1019	-	-108.90	6.90	980	0.41	14.6	<5	-	
1022	-	-108.00	6.89	967	0.43	14.6	<5	-	
1025	-	-109.20	6.89	946	0.40	14.6	<5	-	

SAMPLE TESTING INFORMATION:

SAMPLE TIME: **10:25:00 AM**

Analysis	Method	No. Bottles	Bottle Type	Volume	Preservation	Handling
VOC	8260	3	VOA	40ml	HCL	On Ice

Sample observations:
Color: Clear Odor: None Clarity: Slightly Turbid

Total Purge Volume: 7.5 gal **Tubing Volume:** 0.1 gal

2" WELL = 0.163 GAL /FT = 0.617 LITERS/FT
1" WELL = 0.013 GAL /FT = 0.0492 LITERS/FT
3/8" TUBING - 0.0057 GAL/FT - 0.0217 LITERS/FT
1/4" TUBING - 0.0025 GAL/FT - 0.0096 LITERS/FT

Notes:

GROUNDWATER SAMPLING DATA SHEET

File No. 33554.01
Project: 642 Allens Ave
Location: City: Providence State: Rhode Island
Weather: Sunny 40's

Well ID: GZ-309D
Sample Date: 11/22/2022
Sampler's Name: Ryan Fritz

WATER LEVEL OBSERVATIONS

Measurement Date/Time: 11/22/2022 1135

Point of Measurement: PVC Riser [X] Steel Casing [ ] Ground [ ]

Total Well Depth (feet):	11.31	Standing Water in Well (feet):	7.19
Depth to LNAPL (feet):	--	Well Diameter (in.)	2"
Depth to Water (feet):	4.12	Sample Depth (feet BGS):	25
Depth to DNAPL (feet):	--	Standpipe: TPVC to Ground Surface (feet)	-
Well Screened Interval (feet BGS):	20 to 30	Roadbox: TPVC to Ground Surface (feet)	-

Well Condition: **Protective Casing-** [ ] Poor [X] Good **Lock-** [ ] Yes [X] No **Expansion Cap-** [X] Yes [ ] No **Well ID-** [ ] Yes [X] No **Concrete Collar-** [X] Yes [ ] No **Well-** [ ] Poor [X] Good

EQUIPMENT

Sample Method: [ ] Bail [X] Pump / [X] Low Flow

Pump Type: Geopump No. 2 Rental **Flow-Thru Cell Vol (mL):** 250

Meter Type: YSI No. 2 Rental

INSTRUMENT MEASUREMENTS:

Start time: 1135 **Stop time:** 1150

		1	2	3	4	5	6	7	8
Time: (start)	Depth to Water (ft) (drawdown <0.3 or stable)	ORP (mvolts) (± 10)	pH (s.u.) (± 0.1)	Spec. Cond. (µS/cm) (±3%)	DO (mg/L) (±10% or 3 rdgs <0.5)	Temperature (°C) (±3%)	Turbidity (ntu) (±10% or <5ntu)	Flow (ml/min) (<500 ml/min)	Notes
1135	4.08	-134.2	7.36	3063	0.51	16.4	<5	250	
1138	-	-136.5	7.36	3039	0.49	16.4	<5	-	
1141	-	-138.3	7.36	3023	0.47	16.4	<5	-	
1144	8.55	-139.5	7.36	3027	0.45	16.4	<5	-	
1147	-	-140.4	7.36	3028	0.44	16.4	<5	-	
1150	-	-141.1	7.36	3020	0.43	16.3	<5	-	

SAMPLE TESTING INFORMATION:

SAMPLE TIME: 11:50:00 AM

Analysis	Method	No. Bottles	Bottle Type	Volume	Preservation	Handling
VOC	8260	3	VOA	40ml	HCL	On Ice

Sample observations:

Color: Clear Odor: None Clarity: Slightly Turbid

Total Purge Volume: 2.5 gal **Tubing Volume:** 0.1 gal

2" WELL = 0.163 GAL /FT = 0.617 LITERS/FT
1" WELL = 0.013 GAL /FT = 0.0492 LITERS/FT
3/8" TUBING - 0.0057 GAL/FT - 0.0217 LITERS/FT
1/4" TUBING - 0.0025 GAL/FT - 0.0096 LITERS/FT

Notes:

GROUNDWATER SAMPLING DATA SHEET

File No. 33554.01
Project: 642 Allens Ave
Location: City: Providence State: Rhode Island
Weather: Sunny 40's

Well ID: GZ-319D
Sample Date: 11/22/2022
Sampler's Name: Anders Brandon

WATER LEVEL OBSERVATIONS

Measurement Date/Time: 11/22/2022 1052

Point of Measurement: PVC Riser [X] Steel Casing [ ] Ground [ ]

Total Well Depth (feet):	32.27	Standing Water in Well (feet):	22.66
Depth to LNAPL (feet):	--	Well Diameter (in.)	2"
Depth to Water (feet):	9.61	Sample Depth (feet BGS):	25
Depth to DNAPL (feet):	--	Standpipe: TPVC to Ground Surface (feet)	-
Well Screened Interval (feet BGS):	20 to 30	Roadbox: TPVC to Ground Surface (feet)	-

Well Condition: **Protective Casing-** [ ] Poor [X] Good **Lock-** [ ] Yes [X] No **Expansion Cap-** [X] Yes [ ] No **Well ID-** [X] Yes [ ] No **Concrete Collar-** [ ] Yes [X] No **Well-** [ ] Poor [X] Good

EQUIPMENT

Sample Method: [ ] Bail [X] Pump / [X] Low Flow

Pump Type: Geopump No. 1 Rental **Flow-Thru Cell Vol (mL):** 250

Meter Type: YSI No. 2 Rental

INSTRUMENT MEASUREMENTS:

Start time: 1052 **Stop time:** 1103

		1	2	3	4	5	6	7	8
Time: (start)	Depth to Water (ft) (drawdown <0.3 or stable)	ORP (mvolts) (± 10)	pH (s.u.) (± 0.1)	Spec. Cond. (µS/cm) (±3%)	DO (mg/L) (±10% or 3 rdgs <0.5)	Temperature (°C) (±3%)	Turbidity (ntu) (±10% or <5ntu)	Flow (ml/min) (<500 ml/min)	Notes
1051	9.61	-92.9	6.71	850	0.41	15.2	1.18	<250	
1053	9.61	-93.2	6.71	849	0.40	15.2	1.29	<250	
1056	9.61	-94.1	6.71	848	0.39	15.4	1.61	<250	
1059	9.61	-94.9	6.71	847	0.39	15.3	2.14	<250	
1102	9.61	-95.8	6.71	846	0.38	15.4	2.81	<250	

SAMPLE TESTING INFORMATION:

SAMPLE TIME: 11:03:00 AM

Analysis	Method	No. Bottles	Bottle Type	Volume	Preservation	Handling
VOC	8260	3	VOA	40ml	HCL	On Ice

Sample observations:

Color: Clear - some surface debris Odor: Mild oily odor Clarity: Some cloudy material at surface

Total Purge Volume: 2.5 gal **Tubing Volume:** 0.1 gal

2" WELL = 0.163 GAL /FT = 0.617 LITERS/FT
1" WELL = 0.013 GAL /FT = 0.0492 LITERS/FT
3/8" TUBING - 0.0057 GAL/FT - 0.0217 LITERS/FT
1/4" TUBING - 0.0025 GAL/FT - 0.0096 LITERS/FT

Notes:

GROUNDWATER SAMPLING DATA SHEET

File No. 33554.01
Project: 642 Allens Ave
Location: City: Providence State: Rhode Island
Weather: Sunny 40's

Well ID: GZ-500D
Sample Date: 11/22/2022
Sampler's Name: Ryan Fritz

WATER LEVEL OBSERVATIONS

Measurement Date/Time: 1450 11/22/2022

Point of Measurement: PVC Riser [X] Steel Casing [ ] Ground [ ]

Total Well Depth (feet):	32.84	Standing Water in Well (feet):	20.72
Depth to LNAPL (feet):	--	Well Diameter (in.)	2"
Depth to Water (feet):	12.12	Sample Depth (feet BGS):	25
Depth to DNAPL (feet):	--	Standpipe: TPVC to Ground Surface (feet)	-
Well Screened Interval (feet BGS):	20 to 30	Roadbox: TPVC to Ground Surface (feet)	-

Well Condition: **Protective Casing-** [ ] Poor [X] Good **Lock-** [ ] Yes [X] No **Expansion Cap-** [X] Yes [ ] No **Well ID-** [X] Yes [ ] No **Concrete Collar-** [X] Yes [ ] No **Well-** [ ] Poor [X] Good

EQUIPMENT

Sample Method: [ ] Bail [X] Pump / [X] Low Flow

Pump Type: Geopump No. Rental **Flow-Thru Cell Vol (mL):**

Meter Type: YSI No. Rental

INSTRUMENT MEASUREMENTS:

Start time: 1450 **Stop time:** 1506

		1	2	3	4	5	6	7	8
Time: (start)	Depth to Water (ft) (drawdown <0.3 or stable)	ORP (mvolts) (± 10)	pH (s.u.) (± 0.1)	Spec. Cond. (µS/cm) (±3%)	DO (mg/L) (±10% or 3 rdgs <0.5)	Temperature (°C) (±3%)	Turbidity (ntu) (±10% or <5ntu)	Flow (ml/min) (<500 ml/min)	Notes
1450	14.84	-48.9	6.73	2727	1.37	14.3	<5	250	
1453	-	-62.7	6.73	2748	1.18	14.3	<5	-	
1457	-	-72.2	6.73	2771	1.05	14.0	<5	-	
1500	-	-76.0	6.73	2785	0.96	14.0	<5	-	
1503	-	-78.5	6.72	2795	0.91	14.0	<5	-	
1506	-	-80.1	6.72	2801	0.87	13.7	<5	-	

SAMPLE TESTING INFORMATION:

SAMPLE TIME: 3:06:00 PM

Analysis	Method	No. Bottles	Bottle Type	Volume	Preservation	Handling
VOC	8260	3	VOA	40ml	HCL	On Ice

Sample observations:

Color: Clear Odor: None Clarity: Turbid

Total Purge Volume: 2.5 gal **Tubing Volume:** 0.1 gal

2" WELL = 0.163 GAL /FT = 0.617 LITERS/FT
1" WELL = 0.013 GAL /FT = 0.0492 LITERS/FT
3/8" TUBING - 0.0057 GAL/FT - 0.0217 LITERS/FT
1/4" TUBING - 0.0025 GAL/FT - 0.0096 LITERS/FT

Notes:

GROUNDWATER SAMPLING DATA SHEET

File No. 33554.01
Project: 642 Allens Ave
Location: City: Providence State: Rhode Island
Weather: Sunny 40's

Well ID: GZ-500S
Sample Date: 11/22/2022
Sampler's Name: Ryan Fritz

WATER LEVEL OBSERVATIONS

Measurement Date/Time: 11/22/2022 1520

Point of Measurement: PVC Riser [X] Steel Casing [ ] Ground [ ]

Total Well Depth (feet):	17.83	Standing Water in Well (feet):	5.51
Depth to LNAPL (feet):	--	Well Diameter (in.)	2"
Depth to Water (feet):	12.32	Sample Depth (feet BGS):	13
Depth to DNAPL (feet):	--	Standpipe: TPVC to Ground Surface (feet)	-
Well Screened Interval (feet BGS):	5 to 15	Roadbox: TPVC to Ground Surface (feet)	-

Well Condition: **Protective Casing-** [ ] Poor [X] Good **Lock-** [ ] Yes [X] No **Expansion Cap-** [X] Yes [ ] No **Well ID-** [X] Yes [ ] No **Concrete Collar-** [X] Yes [ ] No **Well-** [ ] Poor [X] Good

EQUIPMENT

Sample Method: [ ] Bail [X] Pump / [X] Low Flow

Pump Type: Geopump No. Rental **Flow-Thru Cell Vol (mL):** 250

Meter Type: YSI No. Rental

INSTRUMENT MEASUREMENTS:

Start time: 1520 **Stop time:** 1529

		1	2	3	4	5	6	7	8
Time: (start)	Depth to Water (ft) (drawdown <0.3 or stable)	ORP (mvolts) (± 10)	pH (s.u.) (± 0.1)	Spec. Cond. (µS/cm) (±3%)	DO (mg/L) (±10% or 3 rdgs <0.5)	Temperature (°C) (±3%)	Turbidity (ntu) (±10% or <5ntu)	Flow (ml/min) (<500 ml/min)	Notes
1520	12.32	-53.9	6.61	989	0.77	16.0	<5	250	
1523	12.39	-51.0	6.60	993	0.72	16.0	<5	-	
1526	-	-50.1	6.60	997	0.70	16.0	<5	-	
1529	-	-49.7	6.59	997	0.69	15.9	<5	-	

SAMPLE TESTING INFORMATION:

SAMPLE TIME: **3:29:00 PM**

Analysis	Method	No. Bottles	Bottle Type	Volume	Preservation	Handling
VOC	8260	3	VOA	40ml	HCL	On Ice

Sample observations:

Color: None Odor: Mild Clarity: Slightly turbid

Total Purge Volume: 2 gal **Tubing Volume:** 0.1 gal

2" WELL = 0.163 GAL /FT = 0.617 LITERS/FT
1" WELL = 0.013 GAL /FT = 0.0492 LITERS/FT
3/8" TUBING - 0.0057 GAL/FT - 0.0217 LITERS/FT
1/4" TUBING - 0.0025 GAL/FT - 0.0096 LITERS/FT

Notes:

GROUNDWATER SAMPLING DATA SHEET

File No. 33554.01
Project: 642 Allens Ave
Location: City: Providence State: Rhode Island
Weather: Sunny 40's

Well ID: GZ-501S
Sample Date: 11/23/2022
Sampler's Name: Ryan Fritz

WATER LEVEL OBSERVATIONS

Measurement Date/Time: 11/23/2022 1050

Point of Measurement: PVC Riser [X] Steel Casing [ ] Ground [ ]

Total Well Depth (feet):	16.16	Standing Water in Well (feet):	8.29
Depth to LNAPL (feet):	--	Well Diameter (in.)	2"
Depth to Water (feet):	7.87	Sample Depth (feet BGS):	8
Depth to DNAPL (feet):	--	Standpipe: TPVC to Ground Surface (feet)	-
Well Screened Interval (feet BGS):	3 to 13	Roadbox: TPVC to Ground Surface (feet)	-

Well Condition: **Protective Casing-** [ ] Poor [X] Good **Lock-** [X] Yes [ ] No **Expansion Cap-** [X] Yes [ ] No **Well ID-** [X] Yes [ ] No **Concrete Collar-** [ ] Yes [X] No **Well-** [ ] Poor [X] Good

EQUIPMENT

Sample Method: [ ] Bail [X] Pump / [X] Low Flow

Pump Type: Geopump No. Rental **Flow-Thru Cell Vol (mL):** 250

Meter Type: YSI No. Rental

INSTRUMENT MEASUREMENTS:

Start time: 1050 **Stop time:** **1100**

		1	2	3	4	5	6	7	8
Time: (start)	Depth to Water (ft) (drawdown <0.3 or stable)	ORP (mvolts) (± 10)	pH (s.u.) (± 0.1)	Spec. Cond. (µS/cm) (±3%)	DO (mg/L) (±10% or 3 rdgs <0.5)	Temperature (°C) (±3%)	Turbidity (ntu) (±10% or <5ntu)	Flow (ml/min) (<500 ml/min)	Notes
1051	7.89	-35.7	6.70	646.0	1.04	16.3	<5	<500	
1054	-	-36.8	6.70	647.0	1.04	15.9	<5	<500	
1057	-	-38.9	6.70	651.0	1.02	16.2	<5	<500	
1100	-	-40.0	6.70	656.0	0.99	16.1	<5	<500	

SAMPLE TESTING INFORMATION:

SAMPLE TIME: **11:00:00 AM**

Analysis	Method	No. Bottles	Bottle Type	Volume	Preservation	Handling
VOC	8260	3	VOA	40ml	HCL	On Ice

Sample observations:

Color: Clear Odor: None Clarity: Clear

Total Purge Volume: 4 gal **Tubing Volume:** 0.1 gal

2" WELL = 0.163 GAL /FT = 0.617 LITERS/FT
1" WELL = 0.013 GAL /FT = 0.0492 LITERS/FT
3/8" TUBING - 0.0057 GAL/FT - 0.0217 LITERS/FT
1/4" TUBING - 0.0025 GAL/FT - 0.0096 LITERS/FT

Notes:

GROUNDWATER SAMPLING DATA SHEET

File No. 33554.01
Project: 642 Allens Ave
Location: City: Providence State: Rhode Island
Weather: Sunny 40's

Well ID: GZ-502S
Sample Date: 11/23/2022
Sampler's Name: Ryan Fritz

WATER LEVEL OBSERVATIONS

Measurement Date/Time: 11/23/2022 1012

Point of Measurement: PVC Riser [X] Steel Casing [ ] Ground [ ]

Total Well Depth (feet):	16.66	Standing Water in Well (feet):	9.8
Depth to LNAPL (feet):	--	Well Diameter (in.)	2"
Depth to Water (feet):	6.86	Sample Depth (feet BGS):	12
Depth to DNAPL (feet):	--	Standpipe: TPVC to Ground Surface (feet)	-
Well Screened Interval (feet BGS):	5 to 15	Roadbox: TPVC to Ground Surface (feet)	-

Well Condition: **Protective Casing-** [ ] Poor [X] Good **Lock-** [ ] Yes [X] No **Expansion Cap-** [X] Yes [ ] No **Well ID-** [ ] Yes [X] No **Concrete Collar-** [X] Yes [ ] No **Well-** [ ] Poor [X] Good

EQUIPMENT

Sample Method: [ ] Bail [X] Pump / [X] Low Flow

Pump Type: Geopump No. Rental **Flow-Thru Cell Vol (mL):** 250

Meter Type: YSI No. Rental

INSTRUMENT MEASUREMENTS:

Start time: 1012 **Stop time:** **1024**

		1	2	3	4	5	6	7	8
Time: (start)	Depth to Water (ft) (drawdown <0.3 or stable)	ORP (mvolts) (± 10)	pH (s.u.) (± 0.1)	Spec. Cond. (µS/cm) (±3%)	DO (mg/L) (±10% or 3 rdgs <0.5)	Temperature (°C) (±3%)	Turbidity (ntu) (±10% or <5ntu)	Flow (ml/min) (<500 ml/min)	Notes
1012	6.86	17.7	6.51	652.0	1.05	15.6	<5	<500	
1015	-	11.3	6.51	677.0	1.03	15.6	<5	<500	
1018	-	4.5	6.50	708.0	1.04	15.6	<5	<500	
1021	-	-1.6	6.49	742.0	1.05	15.6	<5	<500	
1024	-	-6.9	6.48	767.0	1.07	15.7	<5	<500	

SAMPLE TESTING INFORMATION:

SAMPLE TIME: **10:24:00 AM**

Analysis	Method	No. Bottles	Bottle Type	Volume	Preservation	Handling
VOC	8260	3	VOA	40ml	HCL	On Ice

Sample observations:

Color: Clear Odor: None Clarity: Clear

Total Purge Volume: 2.5 gal **Tubing Volume:** 0.1 gal

2" WELL = 0.163 GAL /FT = 0.617 LITERS/FT
1" WELL = 0.013 GAL /FT = 0.0492 LITERS/FT
3/8" TUBING - 0.0057 GAL/FT - 0.0217 LITERS/FT
1/4" TUBING - 0.0025 GAL/FT - 0.0096 LITERS/FT

Notes:

GROUNDWATER SAMPLING DATA SHEET

File No. 33554.01
Project: 642 Allens Ave
Location: City: Providence State: Rhode Island
Weather: Sunny 40's

Well ID: RCA-1
Sample Date: 11/22/2022
Sampler's Name: Ryan Fritz

WATER LEVEL OBSERVATIONS

Measurement Date/Time: 11/22/2022 0920

Point of Measurement: PVC Riser [X] Steel Casing [ ] Ground [ ]

Total Well Depth (feet):	14.87	Standing Water in Well (feet):	9.12
Depth to LNAPL (feet):	--	Well Diameter (in.)	2"
Depth to Water (feet):	5.75	Sample Depth (feet BGS):	10
Depth to DNAPL (feet):	--	Standpipe: TPVC to Ground Surface (feet)	-
Well Screened Interval (feet BGS):	6.5 to 16.5	Roadbox: TPVC to Ground Surface (feet)	-

Well Condition: **Protective Casing-** [ ] Poor [X] Good **Lock-** [ ] Yes [X] No **Expansion Cap-** [X] Yes [ ] No **Well ID-** [ ] Yes [X] No **Concrete Collar-** [X] Yes [ ] No **Well-** [ ] Poor [X] Good

EQUIPMENT

Sample Method: [ ] Bail [X] Pump / [X] Low Flow

Pump Type: Geopump No. 2 Rental **Flow-Thru Cell Vol (mL):**

Meter Type: YSI No. 2 Rental

INSTRUMENT MEASUREMENTS:

Start time: 0920 **Stop time:** 936

		1	2	3	4	5	6	7	8
Time: (start)	Depth to Water (ft) (drawdown <0.3 or stable)	ORP (mvolts) (± 10)	pH (s.u.) (± 0.1)	Spec. Cond. (µS/cm) (±3%)	DO (mg/L) (±10% or 3 rdgs <0.5)	Temperature (°C) (±3%)	Turbidity (ntu) (±10% or <5ntu)	Flow (ml/min) (<500 ml/min)	Notes
0920	5.75	-64.7	6.67	737	2.37	15.4	92.75	250	
0927	-	-74.4	6.72	743	1.78	15.4	<5	-	
0930	-	-75.4	6.73	745	1.69	15.4	<5	-	
0933	-	-76.4	6.73	747	1.63	15.4	<5	-	
0936	-	-76.8	6.73	749	1.58	15.4	<5	-	

SAMPLE TESTING INFORMATION:

SAMPLE TIME: 9:36:00 AM

Analysis	Method	No. Bottles	Bottle Type	Volume	Preservation	Handling
VOC	8260	3	VOA	40ml	HCL	On Ice

Sample observations:
Color: Clear Odor: None Clarity: Slightly Turbid

Total Purge Volume: 3 gal **Tubing Volume:** 0.1 gal

2" WELL = 0.163 GAL /FT = 0.617 LITERS/FT
1" WELL = 0.013 GAL /FT = 0.0492 LITERS/FT
3/8" TUBING - 0.0057 GAL/FT - 0.0217 LITERS/FT
1/4" TUBING - 0.0025 GAL/FT - 0.0096 LITERS/FT

Notes:

GROUNDWATER SAMPLING DATA SHEET

File No. 33554.01
Project: 642 Allens Ave
Location: City: Providence State: Rhode Island
Weather: Sunny 40's

Well ID: RCA-12R
Sample Date: 11/23/2022
Sampler's Name: Anders Brandon

WATER LEVEL OBSERVATIONS

Measurement Date/Time: 11/23/2022 1136

Point of Measurement: PVC Riser [X] Steel Casing [ ] Ground [ ]

Total Well Depth (feet):	12.06	Standing Water in Well (feet):	2.42
Depth to LNAPL (feet):	--	Well Diameter (in.)	2"
Depth to Water (feet):	9.64	Sample Depth (feet BGS):	11
Depth to DNAPL (feet):	--	Standpipe: TPVC to Ground Surface (feet)	-
Well Screened Interval (feet BGS):	5 to 15	Roadbox: TPVC to Ground Surface (feet)	-

Well Condition: **Protective Casing-** [ ] Poor [X] Good **Lock-** [ ] Yes [X] No **Expansion Cap-** [X] Yes [ ] No **Well ID-** [ ] Yes [X] No **Concrete Collar-** [X] Yes [ ] No **Well-** [ ] Poor [X] Good

EQUIPMENT

Sample Method: [ ] Bail [X] Pump / [X] Low Flow

Pump Type: Geopump No. 1 Rental **Flow-Thru Cell Vol (mL):**

Meter Type: YSI No. 2 Rental

INSTRUMENT MEASUREMENTS:

Start time: 1136 **Stop time:** 1157

		1	2	3	4	5	6	7	8
Time: (start)	Depth to Water (ft) (drawdown <0.3 or stable)	ORP (mvolts) (± 10)	pH (s.u.) (± 0.1)	Spec. Cond. (µS/cm) (±3%)	DO (mg/L) (±10% or 3 rdgs <0.5)	Temperature (°C) (±3%)	Turbidity (ntu) (±10% or <5ntu)	Flow (ml/min) (<500 ml/min)	Notes
1136	9.63	30.5	6.15	6568	0.44	16.8	2.13	<200	
1139	9.63	40.8	6.15	6539	0.41	16.8	2.52	<200	
1142	9.63	57.6	6.15	6443	0.39	16.7	2.21	<200	
1145	9.63	58.3	6.15	6566	0.40	16.7	9.13	<200	
1148	9.63	61.1	6.15	6538	0.40	16.7	8.97	<200	
1151	9.63	66.9	6.15	6378	0.39	16.8	9.59	<200	

SAMPLE TESTING INFORMATION:

SAMPLE TIME: 11:51:00 AM

Analysis	Method	No. Bottles	Bottle Type	Volume	Preservation	Handling
VOC	8260	3	VOA	40ml	HCL	On Ice

Sample observations:

Color: Mostly Clear Odor: Some oily odor Clarity: Clear, some silt

Total Purge Volume: 2.5 gal **Tubing Volume:** 0.1 gal

2" WELL = 0.163 GAL /FT = 0.617 LITERS/FT
1" WELL = 0.013 GAL /FT = 0.0492 LITERS/FT
3/8" TUBING - 0.0057 GAL/FT - 0.0217 LITERS/FT
1/4" TUBING - 0.0025 GAL/FT - 0.0096 LITERS/FT

Notes:

GROUNDWATER SAMPLING DATA SHEET

File No. 33554.01
Project: 642 Allens Ave
Location: City: Providence State: Rhode Island
Weather: Sunny 40's

Well ID: RCA-15
Sample Date: 11/23/2022
Sampler's Name: Ryan Fritz

WATER LEVEL OBSERVATIONS

Measurement Date/Time: 11/23/2022 1450

Point of Measurement: PVC Riser [X] Steel Casing [ ] Ground [ ]

Total Well Depth (feet):	32.84	Standing Water in Well (feet):	20.72
Depth to LNAPL (feet):	--	Well Diameter (in.)	2"
Depth to Water (feet):	12.14	Sample Depth (feet BGS):	10
Depth to DNAPL (feet):	--	Standpipe: TPVC to Ground Surface (feet)	-
Well Screened Interval (feet BGS):	4 to 14	Roadbox: TPVC to Ground Surface (feet)	-

Well Condition: **Protective Casing-** [ ] Poor [X] Good **Lock-** [ ] Yes [X] No **Expansion Cap-** [X] Yes [ ] No **Well ID-** [ ] Yes [X] No **Concrete Collar-** [X] Yes [ ] No **Well-** [ ] Poor [X] Good

EQUIPMENT

Sample Method: [ ] Bail [X] Pump / [X] Low Flow

Pump Type: Geopump No. 2 Rental **Flow-Thru Cell Vol (mL):** 250

Meter Type: YSI No. 2 Rental

INSTRUMENT MEASUREMENTS:

Start time: 1450 **Stop time:** 1506

		1	2	3	4	5	6	7	8
Time: (start)	Depth to Water (ft) (drawdown <0.3 or stable)	ORP (mvolts) (± 10)	pH (s.u.) (± 0.1)	Spec. Cond. (µS/cm) (±3%)	DO (mg/L) (±10% or 3 rdgs <0.5)	Temperature (°C) (±3%)	Turbidity (ntu) (±10% or <5ntu)	Flow (ml/min) (<500 ml/min)	Notes
1450	14.84	-48.9	6.73	2727	1.37	14.3	<5		
1453		-62.7	6.73	2748	1.18	14.3	<5		
1457		-72.2	6.73	2771	1.05	14.0	<5		
1500		-76.0	6.73	2785	0.96	14.0	<5		
1503		-78.5	6.72	2795	0.91	14.0	<5		
1506		-8.1	6.72	2801	0.82	13.7	<5		

SAMPLE TESTING INFORMATION:

SAMPLE TIME: 4:13:00 PM

Analysis	Method	No. Bottles	Bottle Type	Volume	Preservation	Handling
VOC	8260	3	VOA	40ml	HCL	On Ice

Sample observations:
Color: Rusty/Clear Odor: None Clarity: Turbid

Total Purge Volume: 2.5 gal **Tubing Volume:** 0.025 gal

2" WELL = 0.163 GAL /FT = 0.617 LITERS/FT
1" WELL = 0.013 GAL /FT = 0.0492 LITERS/FT
3/8" TUBING - 0.0057 GAL/FT - 0.0217 LITERS/FT
1/4" TUBING - 0.0025 GAL/FT - 0.0096 LITERS/FT

Notes:
Very turbid reddish water when beginning pumping activities.

GROUNDWATER SAMPLING DATA SHEET

File No. 33554.01
Project: 642 Allens Ave
Location: City: Providence State: Rhode Island
Weather: Sunny 40's

Well ID: RCA-22
Sample Date: 11/22/2022
Sampler's Name: Anders Brandon

WATER LEVEL OBSERVATIONS

Measurement Date/Time: 11/22/2022 1314

Point of Measurement: PVC Riser [X] Steel Casing [ ] Ground [ ]

Total Well Depth (feet):	13.01	Standing Water in Well (feet):	4.13
Depth to LNAPL (feet):	--	Well Diameter (in.)	2"
Depth to Water (feet):	8.88	Sample Depth (feet BGS):	10
Depth to DNAPL (feet):	--	Standpipe: TPVC to Ground Surface (feet)	-
Well Screened Interval (feet BGS):	unknown	Roadbox: TPVC to Ground Surface (feet)	-

Well Condition: **Protective Casing-** [ ] Poor [X] Good **Lock-** [ ] Yes [X] No **Expansion Cap-** [X] Yes [ ] No **Well ID-** [X] Yes [ ] No **Concrete Collar-** [ ] Yes [X] No **Well-** [ ] Poor [X] Good

EQUIPMENT

Sample Method: [ ] Bail [X] Pump / [X] Low Flow

Pump Type: Geopump No. 1 Rental **Flow-Thru Cell Vol (mL):**

Meter Type: YSI No. 2 Rental

INSTRUMENT MEASUREMENTS:

Start time: 1317 **Stop time:** 1326

		1	2	3	4	5	6	7	8
Time: (start)	Depth to Water (ft) (drawdown <0.3 or stable)	ORP (mvolts) (± 10)	pH (s.u.) (± 0.1)	Spec. Cond. (µS/cm) (±3%)	DO (mg/L) (±10% or 3 rdgs <0.5)	Temperature (°C) (±3%)	Turbidity (ntu) (±10% or <5ntu)	Flow (ml/min) (<500 ml/min)	Notes
1317	8.88	-60.1	6.69	2055	2.13	15.6	8.29	<150	
1370	8.89	-62.5	6.68	2082	1.32	15.6	6.98	<150	
1323	8.89	-63.6	6.68	2093	1.16	15.7	5.62	<150	
1326	8.89	-65.2	6.68	2091	1.07	15.7	5.80	<150	

SAMPLE TESTING INFORMATION:

SAMPLE TIME: 1:17:00 PM

Analysis	Method	No. Bottles	Bottle Type	Volume	Preservation	Handling
VOC	8260	3	VOA	40ml	HCL	On Ice

Sample observations:
Color: Clear Odor: Mild odor Clarity: Mostly clear

Total Purge Volume: 4 gal **Tubing Volume:** 0.1 gal

2" WELL = 0.163 GAL /FT = 0.617 LITERS/FT
1" WELL = 0.013 GAL /FT = 0.0492 LITERS/FT
3/8" TUBING - 0.0057 GAL/FT - 0.0217 LITERS/FT
1/4" TUBING - 0.0025 GAL/FT - 0.0096 LITERS/FT

Notes:

GROUNDWATER SAMPLING DATA SHEET

File No. 33554.01
Project: 642 Allens Ave
Location: City: Providence State: Rhode Island
Weather: Sunny 40's

Well ID: RCA-31
Sample Date: 11/22/2022
Sampler's Name: Anders Brandon

WATER LEVEL OBSERVATIONS

Measurement Date/Time: 11/22/2022 1231

Point of Measurement: PVC Riser [X] Steel Casing [ ] Ground [ ]

Total Well Depth (feet):	13.78	Standing Water in Well (feet):	1.24
Depth to LNAPL (feet):	--	Well Diameter (in.)	2"
Depth to Water (feet):	12.54	Sample Depth (feet BGS):	10
Depth to DNAPL (feet):	--	Standpipe: TPVC to Ground Surface (feet)	-
Well Screened Interval (feet BGS):	5 to 15	Roadbox: TPVC to Ground Surface (feet)	-

Well Condition: **Protective Casing-** [ ] Poor [X] Good **Lock-** [X] Yes [ ] No **Expansion Cap-** [ ] Yes [X] No **Well ID-** [X] Yes [ ] No **Concrete Collar-** [ ] Yes [X] No **Well-** [ ] Poor [X] Good

EQUIPMENT

Sample Method: [ ] Bail [X] Pump / [X] Low Flow

Pump Type: Geopump No. 2 Rental **Flow-Thru Cell Vol (mL):**

Meter Type: YSI No. 2 Rental

INSTRUMENT MEASUREMENTS:

Start time: 1231 **Stop time:** 1252

		1	2	3	4	5	6	7	8
Time: (start)	Depth to Water (ft) (drawdown <0.3 or stable)	ORP (mvolts) (± 10)	pH (s.u.) (± 0.1)	Spec. Cond. (µS/cm) (±3%)	DO (mg/L) (±10% or 3 rdgs <0.5)	Temperature (°C) (±3%)	Turbidity (ntu) (±10% or <5ntu)	Flow (ml/min) (<500 ml/min)	Notes
1231	13.71	180.5	7.18	1006	5.60	15.7	11.25	<300	
1234	13.70	187.0	7.18	1006	4.70	15.7	11.30	<300	
1237	13.69	184.7	7.16	1004	3.60	15.7	10.82	<250	
1240	13.70	192.0	7.15	1007	3.61	15.6	9.67	<250	
1243	13.70	206.6	7.15	1004	3.07	15.6	8.75	<250	
1246	13.70	216.70	7.14	1003	3.03	15.6	8.11	<250	
1249	13.70	222.70	7.14	1004	2.98	15.7	7.45	<250	
1252	13.70	224.50	7.14	1009	2.94	15.7	6.77	<250	

SAMPLE TESTING INFORMATION:

SAMPLE TIME: 12:58:00 PM

Analysis	Method	No. Bottles	Bottle Type	Volume	Preservation	Handling
VOC	8260	3	VOA	40ml	HCL	On Ice

Sample observations:
Color: Clear Odor: Mild Clarity: Mostly clear

Total Purge Volume: 4.8 gal **Tubing Volume:** 0.1 gal

2" WELL = 0.163 GAL /FT = 0.617 LITERS/FT
1" WELL = 0.013 GAL /FT = 0.0492 LITERS/FT
3/8" TUBING - 0.0057 GAL/FT - 0.0217 LITERS/FT
1/4" TUBING - 0.0025 GAL/FT - 0.0096 LITERS/FT

Notes:

GROUNDWATER SAMPLING DATA SHEET

File No. 33554.01
Project: 642 Allens Ave
Location: City: Providence State: Rhode Island
Weather: Sunny 40's

Well ID: RCA-36
Sample Date: 11/22/2022
Sampler's Name: Anders Brandon

WATER LEVEL OBSERVATIONS

Measurement Date/Time: 11/22/2022 1522

Point of Measurement: PVC Riser [X] Steel Casing [ ] Ground [ ]

Total Well Depth (feet):	12.39	Standing Water in Well (feet):	0.37
Depth to LNAPL (feet):	--	Well Diameter (in.)	2"
Depth to Water (feet):	12.02	Sample Depth (feet BGS):	12
Depth to DNAPL (feet):	--	Standpipe: TPVC to Ground Surface (feet)	-
Well Screened Interval (feet BGS):	5 to 15	Roadbox: TPVC to Ground Surface (feet)	-

Well Condition: **Protective Casing-** [X] Poor [ ] Good **Lock-** [ ] Yes [X] No **Expansion Cap-** [ ] Yes [X] No **Well ID-** [X] Yes [ ] No **Concrete Collar-** [X] Yes [ ] No **Well-** [X] Poor [ ] Good

EQUIPMENT

Sample Method: [ ] Bail [X] Pump / [X] Low Flow

Pump Type: Geopump No. 2 Rental **Flow-Thru Cell Vol (mL):** 250

Meter Type: YSI No. 2 Rental

INSTRUMENT MEASUREMENTS:

Start time: 1522 **Stop time:** 1537

		1	2	3	4	5	6	7	8
Time: (start)	Depth to Water (ft) (drawdown <0.3 or stable)	ORP (mvolts) (± 10)	pH (s.u.) (± 0.1)	Spec. Cond. (µS/cm) (±3%)	DO (mg/L) (±10% or 3 rdgs <0.5)	Temperature (°C) (±3%)	Turbidity (ntu) (±10% or <5ntu)	Flow (ml/min) (<500 ml/min)	Notes
1522	12.02	16.8	6.28	21373	1.68	14.3	32.07	<200	
1525	12.02	14.9	6.27	21800	1.67	14.2	28.67	<200	
1528	12.03	11.8	6.27	21531	1.62	14.2	14.61	<200	
1531	12.03	8.0	6.29	21424	1.39	14.3	27.50	<200	
1534	12.03	7.1	6.29	21369	1.38	14.3	24.89	<200	
1537	12.03	5.9	6.29	21337	1.24	14.2	24.95	<200	

SAMPLE TESTING INFORMATION:

SAMPLE TIME: 3:37:00 PM

Analysis	Method	No. Bottles	Bottle Type	Volume	Preservation	Handling
VOC	8260	3	VOA	40ml	HCL	On Ice

Sample observations:

Color: None Odor: Some oily odor Clarity: Very silty at start - dark black silt. Clear up

Total Purge Volume: 4.5 gal **Tubing Volume:** 0.1 gal

2" WELL = 0.163 GAL /FT = 0.617 LITERS/FT
1" WELL = 0.013 GAL /FT = 0.0492 LITERS/FT
3/8" TUBING - 0.0057 GAL/FT - 0.0217 LITERS/FT
1/4" TUBING - 0.0025 GAL/FT - 0.0096 LITERS/FT

Notes:

GROUNDWATER SAMPLING DATA SHEET

File No. 33554.01
Project: 642 Allens Ave
Location: City: Providence State: Rhode Island
Weather: Sunny 40's

Well ID: VHB-1
Sample Date: 11/22/2022
Sampler's Name: Ryan Fritz

WATER LEVEL OBSERVATIONS

Measurement Date/Time: 11/22/2022 1209

Point of Measurement: PVC Riser [X] Steel Casing [ ] Ground [ ]

Total Well Depth (feet):	24.88	Standing Water in Well (feet):	25.8
Depth to LNAPL (feet):	--	Well Diameter (in.)	2"
Depth to Water (feet):	4.08	Sample Depth (feet BGS):	7
Depth to DNAPL (feet):	--	Standpipe: TPVC to Ground Surface (feet)	-
Well Screened Interval (feet BGS):	2 to 12	Roadbox: TPVC to Ground Surface (feet)	-

Well Condition: **Protective Casing-** [ ] Poor [X] Good **Lock-** [ ] Yes [X] No **Expansion Cap-** [X] Yes [ ] No **Well ID-** [ ] Yes [X] No **Concrete Collar-** [X] Yes [ ] No **Well-** [ ] Poor [X] Good

EQUIPMENT

Sample Method: [ ] Bail [X] Pump / [X] Low Flow

Pump Type: Geopump No. 2 Rental **Flow-Thru Cell Vol (mL):**

Meter Type: YSI No. 2 Rental

INSTRUMENT MEASUREMENTS:

Start time: 1209 **Stop time:** 1218

		1	2	3	4	5	6	7	8
Time: (start)	Depth to Water (ft) (drawdown <0.3 or stable)	ORP (mvolts) (± 10)	pH (s.u.) (± 0.1)	Spec. Cond. (µS/cm) (±3%)	DO (mg/L) (±10% or 3 rdgs <0.5)	Temperature (°C) (±3%)	Turbidity (ntu) (±10% or <5ntu)	Flow (ml/min) (<500 ml/min)	Notes
1209	4.33	128.4	6.97	2538	0.47	17.8	<5	250	
1212	-	130.4	6.97	2543	0.43	17.9	<5	-	
1215	-	133.4	6.97	2552	0.40	17.9	<5	-	
1218	-	134.9	6.98	2533	0.39	17.8	<5	-	

SAMPLE TESTING INFORMATION:

SAMPLE TIME: 12:18:00 PM

Analysis	Method	No. Bottles	Bottle Type	Volume	Preservation	Handling
VOC	8260	3	VOA	40ml	HCL	On Ice

Sample observations:

Color: Clear Odor: Mild Odor Clarity: Slight Sheen

Total Purge Volume: 3.5 gal **Tubing Volume:** 0.1 gal

2" WELL = 0.163 GAL /FT = 0.617 LITERS/FT
1" WELL = 0.013 GAL /FT = 0.0492 LITERS/FT
3/8" TUBING - 0.0057 GAL/FT - 0.0217 LITERS/FT
1/4" TUBING - 0.0025 GAL/FT - 0.0096 LITERS/FT

Notes:

GROUNDWATER SAMPLING DATA SHEET

File No. 33554.01
Project: 642 Allens Ave
Location: City: Providence State: Rhode Island
Weather: Sunny 40's

Well ID: VHB-20
Sample Date: 11/22/2022
Sampler's Name: Anders Brandon

WATER LEVEL OBSERVATIONS

Measurement Date/Time: 11/22/2022 1018

Point of Measurement: PVC Riser [X] Steel Casing [ ] Ground [ ]

Total Well Depth (feet):	17.41	Standing Water in Well (feet):	9.02
Depth to LNAPL (feet):	--	Well Diameter (in.)	2"
Depth to Water (feet):	8.39	Sample Depth (feet BGS):	11
Depth to DNAPL (feet):	--	Standpipe: TPVC to Ground Surface (feet)	-
Well Screened Interval (feet BGS):	6 to 16	Roadbox: TPVC to Ground Surface (feet)	-

Well Condition: **Protective Casing-** [ ] Poor [X] Good **Lock-** [ ] Yes [X] No **Expansion Cap-** [ ] Yes [X] No **Well ID-** [X] Yes [ ] No **Concrete Collar-** [ ] Yes [X] No **Well-** [ ] Poor [X] Good

EQUIPMENT

Sample Method: [ ] Bail [X] Pump / [X] Low Flow

Pump Type: Geopump No. 1 Rental **Flow-Thru Cell Vol (mL):** 250

Meter Type: YSI No. 2 Rental

INSTRUMENT MEASUREMENTS:

Start time: 1021 **Stop time:** 1033

		1	2	3	4	5	6	7	8
Time: (start)	Depth to Water (ft) (drawdown <0.3 or stable)	ORP (mvolts) (± 10)	pH (s.u.) (± 0.1)	Spec. Cond. (µS/cm) (±3%)	DO (mg/L) (±10% or 3 rdgs <0.5)	Temperature (°C) (±3%)	Turbidity (ntu) (±10% or <5ntu)	Flow (ml/min) (<500 ml/min)	Notes
1021	8.39	179.1	7.13	568	0.73	16.0	1.43	<250	
1023	8.37	177.2	7.13	569	0.62	15.9	1.27	<250	
1025	8.38	181.5	7.13	568	0.59	15.9	1.23	<250	
1028	8.38	177.2	7.13	567	0.56	16.0	1.27	<250	
1031	8.38	172.5	7.12	568	0.55	16.1	1.14	<250	

SAMPLE TESTING INFORMATION:

SAMPLE TIME: 10:33:00 AM

Analysis	Method	No. Bottles	Bottle Type	Volume	Preservation	Handling
VOC	8260	3	VOA	40ml	HCL	On Ice

Sample observations:
Color: Clear Odor: Mild Oily Odor Clarity: Clear

Total Purge Volume: 4.5 gal **Tubing Volume:** 0.1 gal

2" WELL = 0.163 GAL /FT = 0.617 LITERS/FT
1" WELL = 0.013 GAL /FT = 0.0492 LITERS/FT
3/8" TUBING - 0.0057 GAL/FT - 0.0217 LITERS/FT
1/4" TUBING - 0.0025 GAL/FT - 0.0096 LITERS/FT

Notes:
BD-01 Collected at 10:33

LOW FLOW CALIBRATION SHEET

File No. 33554.01 Page: 1 of 2
Project: 642 Allens Ave Date:
Location: City: Providence State: RI

LOW FLOW CALIBRATION:

Intial Reading:

Specific Conductance:	Instrument and Number:	20E101454	Standard Solution:	1000	Reading:	1001
pH (s.u.):	Instrument and Number:	20E101454	Standard Solution:	10 / 7 / 4	Reading:	10.22 / 7.08 / 3.92
DO (mg/L):	Instrument and Number:	20E101454	Standard Solution:	100%	Reading:	99.50%
ORP (mvolts:)	Instrument and Number:	20E101454	Standard Solution:	238	Reading:	235.9
Turbidity (NTU):	Instrument and Number:	20E101454	Standard Solution:	10	Reading:	10

Calibration:

Specific Conductance:	Instrument and Number:	20E101454	Standard Solution:	1000	Reading:	1050
pH (s.u.):	Instrument and Number:	20E101454	Standard Solution:	10 / 7 / 4	Reading:	9.98 / 7.06 / 4.00
DO (mg/L):	Instrument and Number:	20E101454	Standard Solution:	100%	Reading:	98.9
ORP (mvolts:)	Instrument and Number:	20E101454	Standard Solution:	238	Reading:	238
Turbidity (NTU):	Instrument and Number:	20E101454	Standard Solution:	10	Reading:	10

LOW FLOW CALIBRATION SHEET

File No. 33554.01 | Page: 2 of 2
Project: 642 Allens Ave | Date:
Location: City: Providence State: RI

LOW FLOW CALIBRATION:

Intial Reading:

Specific Conductance:	Instrument and Number:	19K100457	Standard Solution:	1000	Reading:	1030
pH (s.u.):	Instrument and Number:	19K100457	Standard Solution:	10 / 7 / 4	Reading:	10.27 / 7.19 / 3.99
DO (mg/L):	Instrument and Number:	19K100457	Standard Solution:	100%	Reading:	98.90%
ORP (mvolts:)	Instrument and Number:	19K100457	Standard Solution:	238	Reading:	240
Turbidity (NTU):	Instrument and Number:	19K100457	Standard Solution:	10	Reading:	10

Calibration:

Specific Conductance:	Instrument and Number:	19K100457	Standard Solution:	1000	Reading:	1075
pH (s.u.):	Instrument and Number:	19K100457	Standard Solution:	10 / 7 / 4	Reading:	10.01 / 7.03 / 3.94
DO (mg/L):	Instrument and Number:	19K100457	Standard Solution:	100%	Reading:	94.7
ORP (mvolts:)	Instrument and Number:	19K100457	Standard Solution:	238	Reading:	244
Turbidity (NTU):	Instrument and Number:	19K100457	Standard Solution:	10	Reading:	10

APPENDIX C

INVESTIGATION DERIVED WASTE (IDW) SHIPPING RECORDS

Please print or type. Generator acknowledges that no material change has occurred either in the characteristics or in the process generating the waste. Form Approved, OMB No. 2050-0039

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator ID Number	2. Page 1 of	3. Emergency Response Phone	4. Manifest Tracking Number
RIDO07918774	1	(800)483-3718	017755703 FLE

GENERATOR

5. Generator's Name and Mailing Address
The Narragansett Electric Company RIERI
280 Melrose Street Attn>Env.Department
Providence, RI 02907
Generator's Phone: (401)258-5410 ATTN:Amy Willoughby

Generator's Site Address (if different than mailing address)
642 Allens Avenue
Providence,RI 02905

6. Transporter 1 Company Name
Clean Harbors Environmental Services, Inc

U.S. EPA ID Number
MAD039322250

7. Transporter 2 Company Name
Clean Harbors Environmental Services Inc

U.S. EPA ID Number
MAD039322250

8. Designated Facility Name and Site Address
Clean Harbors of Connecticut Inc
51 Broderick Road
Bristol, CT 06010
Facility's Phone: (860)583-8917

U.S. EPA ID Number
CTD000604488

9a. HM	9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.	13. Waste Codes
	1. NON DOT REGULATED MATERIAL, (PURGEWATER)	02	DM	65	G	~~CR04~~ ~~R015~~
	2.					
	3.					
	4.					

14. Special Handling Instructions and Additional Information
1.RIE-STR1

authority on initial transporter to add or substitute additional transporters on generator's behalf for purposes of transportation, efficiency, convenience or safety

Contract retained by generator confers agency

15. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: ON BEHALF OF GENERATOR Victor Delgado — Signature — Month: 12 Day: 01 Year: 22

INT'L

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

TRANSPORTER

17. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name: Victor Delgado — Signature — Month: 12 Day: 01 Year: 22

Transporter 2 Printed/Typed Name: Claudio Benitez — Signature — Month: 12 Day: 8 Year: 22

DESIGNATED FACILITY

18. Discrepancy

18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

Manifest Reference Number:

18b. Alternate Facility (or Generator) — U.S. EPA ID Number

Facility's Phone:

18c. Signature of Alternate Facility (or Generator) — Month: Day: Year:

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)

1.	2.	3.	4.
H141			

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

Printed/Typed Name: Steve Boylon — Signature — Month: 12 Day: 9 Year: 22

EPA Form 8700-22 (Rev. 12-17) Previous editions are obsolete.

Clean Harbors has the appropriate permits for and will accept the waste the generator is shipping.

DESIGNATED FACILITY TO EPA's e-MANIFEST SYSTEM

RI 2201835393-001 PPW

APPENDIX D

LABORATORY REPORTS

CERTIFICATE OF ANALYSIS

Meg Kilpatrick
GZA GeoEnvironmental, Inc.
188 Valley Street
Providence, RI 02909

RE: 642 Allens Ave (03.0033554.01)
ESS Laboratory Work Order Number: 22K0897

This signed Certificate of Analysis is our approved release of your analytical results. These results are only representative of sample aliquots received at the laboratory. ESS Laboratory expects its clients to follow all regulatory sampling guidelines. Beginning with this page, the entire report has been paginated. This report should not be copied except in full without the approval of the laboratory. Samples will be disposed of thirty days after the final report has been delivered. If you have any questions or concerns, please feel free to call our Customer Service Department.

Laurel Stoddard
Laboratory Director

REVIEWED
By ESS Laboratory at 1:48 pm, Dec 02, 2022

Analytical Summary
The project as described above has been analyzed in accordance with the ESS Quality Assurance Plan. This plan utilizes the following methodologies: US EPA SW-846, US EPA Methods for Chemical Analysis of Water and Wastes per 40 CFR Part 136, APHA Standard Methods for the Examination of Water and Wastewater, American Society for Testing and Materials (ASTM), and other recognized methodologies. The analyses with these noted observations are in conformance to the Quality Assurance Plan. In chromatographic analysis, manual integration is frequently used instead of automated integration because it produces more accurate results.

The test results present in this report are in compliance with TNI and relative state standards, and/or client Quality Assurance Project Plans (QAPP). The laboratory has reviewed the following: Sample Preservations, Hold Times, Initial Calibrations, Continuing Calibrations, Method Blanks, Blank Spikes, Blank Spike Duplicates, Duplicates, Matrix Spikes, Matrix Spike Duplicates, Surrogates and Internal Standards. Any results which were found to be outside of the recommended ranges stated in our SOPs will be noted in the Project Narrative.

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: 642 Allens Ave

ESS Laboratory Work Order: 22K0897

SAMPLE RECEIPT

The following samples were received on November 23, 2022 for the analyses specified on the enclosed Chain of Custody Record.

Lab Number	Sample Name	Matrix	Analysis
22K0897-01	RCA-12R	Ground Water	8260B
22K0897-02	GZ-501S	Ground Water	8260B
22K0897-03	GZ-301D	Ground Water	8260B
22K0897-04	GZ-502S	Ground Water	8260B
22K0897-05	RCA-15	Ground Water	8260B
22K0897-06	Trip Blank	Aqueous	8260B

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: 642 Allens Ave

ESS Laboratory Work Order: 22K0897

PROJECT NARRATIVE

No unusual observations noted.

End of Project Narrative.

DATA USABILITY LINKS

To ensure you are viewing the most current version of the documents below, please clear your internet cookies for www.ESSLaboratory.com. Consult your IT Support personnel for information on how to clear your internet cookies.

Definitions of Quality Control Parameters

Semivolatile Organics Internal Standard Information

Semivolatile Organics Surrogate Information

Volatile Organics Internal Standard Information

Volatile Organics Surrogate Information

EPH and VPH Alkane Lists

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: 642 Allens Ave

ESS Laboratory Work Order: 22K0897

CURRENT SW-846 METHODOLOGY VERSIONS

Analytical Methods

1010A - Flashpoint
6010C - ICP
6020A - ICP MS
7010 - Graphite Furnace
7196A - Hexavalent Chromium
7470A - Aqueous Mercury
7471B - Solid Mercury
8011 - EDB/DBCP/TCP
8015C - GRO/DRO
8081B - Pesticides
8082A - PCB
8100M - TPH
8151A - Herbicides
8260B - VOA
8270D - SVOA
8270D SIM - SVOA Low Level
9014 - Cyanide
9038 - Sulfate
9040C - Aqueous pH
9045D - Solid pH (Corrosivity)
9050A - Specific Conductance
9056A - Anions (IC)
9060A - TOC
9095B - Paint Filter
MADEP 04-1.1 - EPH
MADEP 18-2.1 - VPH

Prep Methods

3005A - Aqueous ICP Digestion
3020A - Aqueous Graphite Furnace / ICP MS Digestion
3050B - Solid ICP / Graphite Furnace / ICP MS Digestion
3060A - Solid Hexavalent Chromium Digestion
3510C - Separatory Funnel Extraction
3520C - Liquid / Liquid Extraction
3540C - Manual Soxhlet Extraction
3541 - Automated Soxhlet Extraction
3546 - Microwave Extraction
3580A - Waste Dilution
5030B - Aqueous Purge and Trap
5030C - Aqueous Purge and Trap
5035A - Solid Purge and Trap

SW846 Reactivity Methods 7.3.3.2 (Reactive Cyanide) and 7.3.4.1 (Reactive Sulfide) have been withdrawn by EPA. These methods are reported per client request and are not NELAP accredited.

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: 642 Allens Ave
Client Sample ID: RCA-12R
Date Sampled: 11/23/22 11:51
Percent Solids: N/A
Initial Volume: 5ml
Final Volume: 5ml
Extraction Method: 5030B

ESS Laboratory Work Order: 22K0897
ESS Laboratory Sample ID: 22K0897-01
Sample Matrix: Ground Water
Units: mg/L
Analyst: MD

8260B Volatile Organic Compounds

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
1,1,1,2-Tetrachloroethane	ND (0.0010)		8260B		1	11/29/22 2:24	D2K0504	DK22831
1,1,1-Trichloroethane	ND (0.0010)		8260B		1	11/29/22 2:24	D2K0504	DK22831
1,1,2,2-Tetrachloroethane	ND (0.0005)		8260B		1	11/29/22 2:24	D2K0504	DK22831
1,1,2-Trichloroethane	ND (0.0010)		8260B		1	11/29/22 2:24	D2K0504	DK22831
1,1-Dichloroethane	ND (0.0010)		8260B		1	11/29/22 2:24	D2K0504	DK22831
1,1-Dichloroethene	ND (0.0010)		8260B		1	11/29/22 2:24	D2K0504	DK22831
1,1-Dichloropropene	ND (0.0020)		8260B		1	11/29/22 2:24	D2K0504	DK22831
1,2,3-Trichlorobenzene	ND (0.0010)		8260B		1	11/29/22 2:24	D2K0504	DK22831
1,2,3-Trichloropropane	ND (0.0010)		8260B		1	11/29/22 2:24	D2K0504	DK22831
1,2,4-Trichlorobenzene	ND (0.0010)		8260B		1	11/29/22 2:24	D2K0504	DK22831
1,2,4-Trimethylbenzene	ND (0.0010)		8260B		1	11/29/22 2:24	D2K0504	DK22831
1,2-Dibromo-3-Chloropropane	ND (0.0050)		8260B		1	11/29/22 2:24	D2K0504	DK22831
1,2-Dibromoethane	ND (0.0010)		8260B		1	11/29/22 2:24	D2K0504	DK22831
1,2-Dichlorobenzene	ND (0.0010)		8260B		1	11/29/22 2:24	D2K0504	DK22831
1,2-Dichloroethane	ND (0.0010)		8260B		1	11/29/22 2:24	D2K0504	DK22831
1,2-Dichloropropane	ND (0.0010)		8260B		1	11/29/22 2:24	D2K0504	DK22831
1,3,5-Trimethylbenzene	ND (0.0010)		8260B		1	11/29/22 2:24	D2K0504	DK22831
1,3-Dichlorobenzene	ND (0.0010)		8260B		1	11/29/22 2:24	D2K0504	DK22831
1,3-Dichloropropane	ND (0.0010)		8260B		1	11/29/22 2:24	D2K0504	DK22831
1,4-Dichlorobenzene	ND (0.0010)		8260B		1	11/29/22 2:24	D2K0504	DK22831
1,4-Dioxane - Screen	ND (0.500)		8260B		1	11/29/22 2:24	D2K0504	DK22831
1-Chlorohexane	ND (0.0010)		8260B		1	11/29/22 2:24	D2K0504	DK22831
2,2-Dichloropropane	ND (0.0010)		8260B		1	11/29/22 2:24	D2K0504	DK22831
2-Butanone	ND (0.0100)		8260B		1	11/29/22 2:24	D2K0504	DK22831
2-Chlorotoluene	ND (0.0010)		8260B		1	11/29/22 2:24	D2K0504	DK22831
2-Hexanone	ND (0.0100)		8260B		1	11/29/22 2:24	D2K0504	DK22831
4-Chlorotoluene	ND (0.0010)		8260B		1	11/29/22 2:24	D2K0504	DK22831
4-Isopropyltoluene	ND (0.0010)		8260B		1	11/29/22 2:24	D2K0504	DK22831
4-Methyl-2-Pentanone	ND (0.0100)		8260B		1	11/29/22 2:24	D2K0504	DK22831
Acetone	ND (0.0100)		8260B		1	11/29/22 2:24	D2K0504	DK22831
Benzene	ND (0.0010)		8260B		1	11/29/22 2:24	D2K0504	DK22831
Bromobenzene	ND (0.0020)		8260B		1	11/29/22 2:24	D2K0504	DK22831

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: 642 Allens Ave
Client Sample ID: RCA-12R
Date Sampled: 11/23/22 11:51
Percent Solids: N/A
Initial Volume: 5ml
Final Volume: 5ml
Extraction Method: 5030B

ESS Laboratory Work Order: 22K0897
ESS Laboratory Sample ID: 22K0897-01
Sample Matrix: Ground Water
Units: mg/L
Analyst: MD

8260B Volatile Organic Compounds

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
Bromochloromethane	ND (0.0010)		8260B		1	11/29/22 2:24	D2K0504	DK22831
Bromodichloromethane	ND (0.0006)		8260B		1	11/29/22 2:24	D2K0504	DK22831
Bromoform	ND (0.0010)		8260B		1	11/29/22 2:24	D2K0504	DK22831
Bromomethane	ND (0.0020)		8260B		1	11/29/22 2:24	D2K0504	DK22831
Carbon Disulfide	ND (0.0010)		8260B		1	11/29/22 2:24	D2K0504	DK22831
Carbon Tetrachloride	ND (0.0010)		8260B		1	11/29/22 2:24	D2K0504	DK22831
Chlorobenzene	ND (0.0010)		8260B		1	11/29/22 2:24	D2K0504	DK22831
Chloroethane	ND (0.0020)		8260B		1	11/29/22 2:24	D2K0504	DK22831
Chloroform	ND (0.0010)		8260B		1	11/29/22 2:24	D2K0504	DK22831
Chloromethane	ND (0.0020)		8260B		1	11/29/22 2:24	D2K0504	DK22831
cis-1,2-Dichloroethene	**0.0162** (0.0010)		8260B		1	11/29/22 2:24	D2K0504	DK22831
cis-1,3-Dichloropropene	ND (0.0004)		8260B		1	11/29/22 2:24	D2K0504	DK22831
Dibromochloromethane	ND (0.0010)		8260B		1	11/29/22 2:24	D2K0504	DK22831
Dibromomethane	ND (0.0010)		8260B		1	11/29/22 2:24	D2K0504	DK22831
Dichlorodifluoromethane	ND (0.0020)		8260B		1	11/29/22 2:24	D2K0504	DK22831
Diethyl Ether	ND (0.0010)		8260B		1	11/29/22 2:24	D2K0504	DK22831
Di-isopropyl ether	ND (0.0010)		8260B		1	11/29/22 2:24	D2K0504	DK22831
Ethyl tertiary-butyl ether	ND (0.0010)		8260B		1	11/29/22 2:24	D2K0504	DK22831
Ethylbenzene	ND (0.0010)		8260B		1	11/29/22 2:24	D2K0504	DK22831
Hexachlorobutadiene	ND (0.0006)		8260B		1	11/29/22 2:24	D2K0504	DK22831
Hexachloroethane	ND (0.0010)		8260B		1	11/29/22 2:24	D2K0504	DK22831
Isopropylbenzene	ND (0.0010)		8260B		1	11/29/22 2:24	D2K0504	DK22831
Methyl tert-Butyl Ether	ND (0.0010)		8260B		1	11/29/22 2:24	D2K0504	DK22831
Methylene Chloride	ND (0.0020)		8260B		1	11/29/22 2:24	D2K0504	DK22831
Naphthalene	ND (0.0010)		8260B		1	11/29/22 2:24	D2K0504	DK22831
n-Butylbenzene	ND (0.0010)		8260B		1	11/29/22 2:24	D2K0504	DK22831
n-Propylbenzene	ND (0.0010)		8260B		1	11/29/22 2:24	D2K0504	DK22831
sec-Butylbenzene	ND (0.0010)		8260B		1	11/29/22 2:24	D2K0504	DK22831
Styrene	ND (0.0010)		8260B		1	11/29/22 2:24	D2K0504	DK22831
tert-Butylbenzene	ND (0.0010)		8260B		1	11/29/22 2:24	D2K0504	DK22831
Tertiary-amyl methyl ether	ND (0.0010)		8260B		1	11/29/22 2:24	D2K0504	DK22831
Tetrachloroethene	**0.0020** (0.0010)		8260B		1	11/29/22 2:24	D2K0504	DK22831

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: 642 Allens Ave
Client Sample ID: RCA-12R
Date Sampled: 11/23/22 11:51
Percent Solids: N/A
Initial Volume: 5ml
Final Volume: 5ml
Extraction Method: 5030B

ESS Laboratory Work Order: 22K0897
ESS Laboratory Sample ID: 22K0897-01
Sample Matrix: Ground Water
Units: mg/L
Analyst: MD

8260B Volatile Organic Compounds

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
Tetrahydrofuran	ND (0.0050)		8260B		1	11/29/22 2:24	D2K0504	DK22831
Toluene	ND (0.0010)		8260B		1	11/29/22 2:24	D2K0504	DK22831
trans-1,2-Dichloroethene	ND (0.0010)		8260B		1	11/29/22 2:24	D2K0504	DK22831
trans-1,3-Dichloropropene	ND (0.0004)		8260B		1	11/29/22 2:24	D2K0504	DK22831
Trichloroethene	**0.0072** (0.0010)		8260B		1	11/29/22 2:24	D2K0504	DK22831
Trichlorofluoromethane	ND (0.0010)		8260B		1	11/29/22 2:24	D2K0504	DK22831
Vinyl Acetate	ND (0.0050)		8260B		1	11/29/22 2:24	D2K0504	DK22831
Vinyl Chloride	**0.0013** (0.0010)		8260B		1	11/29/22 2:24	D2K0504	DK22831
Xylene O	ND (0.0010)		8260B		1	11/29/22 2:24	D2K0504	DK22831
Xylene P,M	ND (0.0020)		8260B		1	11/29/22 2:24	D2K0504	DK22831
Xylenes (Total)	ND (0.00200)		8260B		1	11/29/22 2:24		[CALC]

	%Recovery	Qualifier	Limits
Surrogate: 1,2-Dichloroethane-d4	*104 %*		*70-130*
Surrogate: 4-Bromofluorobenzene	*95 %*		*70-130*
Surrogate: Dibromofluoromethane	*99 %*		*70-130*
Surrogate: Toluene-d8	*100 %*		*70-130*

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: 642 Allens Ave
Client Sample ID: GZ-501S
Date Sampled: 11/23/22 11:00
Percent Solids: N/A
Initial Volume: 5ml
Final Volume: 5ml
Extraction Method: 5030B

ESS Laboratory Work Order: 22K0897
ESS Laboratory Sample ID: 22K0897-02
Sample Matrix: Ground Water
Units: mg/L
Analyst: MD

8260B Volatile Organic Compounds

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
1,1,1,2-Tetrachloroethane	ND (0.0010)		8260B		1	11/29/22 2:50	D2K0504	DK22831
1,1,1-Trichloroethane	ND (0.0010)		8260B		1	11/29/22 2:50	D2K0504	DK22831
1,1,2,2-Tetrachloroethane	ND (0.0005)		8260B		1	11/29/22 2:50	D2K0504	DK22831
1,1,2-Trichloroethane	ND (0.0010)		8260B		1	11/29/22 2:50	D2K0504	DK22831
1,1-Dichloroethane	ND (0.0010)		8260B		1	11/29/22 2:50	D2K0504	DK22831
1,1-Dichloroethene	ND (0.0010)		8260B		1	11/29/22 2:50	D2K0504	DK22831
1,1-Dichloropropene	ND (0.0020)		8260B		1	11/29/22 2:50	D2K0504	DK22831
1,2,3-Trichlorobenzene	ND (0.0010)		8260B		1	11/29/22 2:50	D2K0504	DK22831
1,2,3-Trichloropropane	ND (0.0010)		8260B		1	11/29/22 2:50	D2K0504	DK22831
1,2,4-Trichlorobenzene	ND (0.0010)		8260B		1	11/29/22 2:50	D2K0504	DK22831
1,2,4-Trimethylbenzene	ND (0.0010)		8260B		1	11/29/22 2:50	D2K0504	DK22831
1,2-Dibromo-3-Chloropropane	ND (0.0050)		8260B		1	11/29/22 2:50	D2K0504	DK22831
1,2-Dibromoethane	ND (0.0010)		8260B		1	11/29/22 2:50	D2K0504	DK22831
1,2-Dichlorobenzene	ND (0.0010)		8260B		1	11/29/22 2:50	D2K0504	DK22831
1,2-Dichloroethane	ND (0.0010)		8260B		1	11/29/22 2:50	D2K0504	DK22831
1,2-Dichloropropane	ND (0.0010)		8260B		1	11/29/22 2:50	D2K0504	DK22831
1,3,5-Trimethylbenzene	ND (0.0010)		8260B		1	11/29/22 2:50	D2K0504	DK22831
1,3-Dichlorobenzene	ND (0.0010)		8260B		1	11/29/22 2:50	D2K0504	DK22831
1,3-Dichloropropane	ND (0.0010)		8260B		1	11/29/22 2:50	D2K0504	DK22831
1,4-Dichlorobenzene	ND (0.0010)		8260B		1	11/29/22 2:50	D2K0504	DK22831
1,4-Dioxane - Screen	ND (0.500)		8260B		1	11/29/22 2:50	D2K0504	DK22831
1-Chlorohexane	ND (0.0010)		8260B		1	11/29/22 2:50	D2K0504	DK22831
2,2-Dichloropropane	ND (0.0010)		8260B		1	11/29/22 2:50	D2K0504	DK22831
2-Butanone	ND (0.0100)		8260B		1	11/29/22 2:50	D2K0504	DK22831
2-Chlorotoluene	ND (0.0010)		8260B		1	11/29/22 2:50	D2K0504	DK22831
2-Hexanone	ND (0.0100)		8260B		1	11/29/22 2:50	D2K0504	DK22831
4-Chlorotoluene	ND (0.0010)		8260B		1	11/29/22 2:50	D2K0504	DK22831
4-Isopropyltoluene	ND (0.0010)		8260B		1	11/29/22 2:50	D2K0504	DK22831
4-Methyl-2-Pentanone	ND (0.0100)		8260B		1	11/29/22 2:50	D2K0504	DK22831
Acetone	ND (0.0100)		8260B		1	11/29/22 2:50	D2K0504	DK22831
Benzene	**0.0100** (0.0010)		8260B		1	11/29/22 2:50	D2K0504	DK22831
Bromobenzene	ND (0.0020)		8260B		1	11/29/22 2:50	D2K0504	DK22831

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: 642 Allens Ave
Client Sample ID: GZ-501S
Date Sampled: 11/23/22 11:00
Percent Solids: N/A
Initial Volume: 5ml
Final Volume: 5ml
Extraction Method: 5030B

ESS Laboratory Work Order: 22K0897
ESS Laboratory Sample ID: 22K0897-02
Sample Matrix: Ground Water
Units: mg/L
Analyst: MD

8260B Volatile Organic Compounds

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
Bromochloromethane	ND (0.0010)		8260B		1	11/29/22 2:50	D2K0504	DK22831
Bromodichloromethane	ND (0.0006)		8260B		1	11/29/22 2:50	D2K0504	DK22831
Bromoform	ND (0.0010)		8260B		1	11/29/22 2:50	D2K0504	DK22831
Bromomethane	ND (0.0020)		8260B		1	11/29/22 2:50	D2K0504	DK22831
Carbon Disulfide	ND (0.0010)		8260B		1	11/29/22 2:50	D2K0504	DK22831
Carbon Tetrachloride	ND (0.0010)		8260B		1	11/29/22 2:50	D2K0504	DK22831
Chlorobenzene	ND (0.0010)		8260B		1	11/29/22 2:50	D2K0504	DK22831
Chloroethane	ND (0.0020)		8260B		1	11/29/22 2:50	D2K0504	DK22831
Chloroform	ND (0.0010)		8260B		1	11/29/22 2:50	D2K0504	DK22831
Chloromethane	ND (0.0020)		8260B		1	11/29/22 2:50	D2K0504	DK22831
cis-1,2-Dichloroethene	ND (0.0010)		8260B		1	11/29/22 2:50	D2K0504	DK22831
cis-1,3-Dichloropropene	ND (0.0004)		8260B		1	11/29/22 2:50	D2K0504	DK22831
Dibromochloromethane	ND (0.0010)		8260B		1	11/29/22 2:50	D2K0504	DK22831
Dibromomethane	ND (0.0010)		8260B		1	11/29/22 2:50	D2K0504	DK22831
Dichlorodifluoromethane	ND (0.0020)		8260B		1	11/29/22 2:50	D2K0504	DK22831
Diethyl Ether	ND (0.0010)		8260B		1	11/29/22 2:50	D2K0504	DK22831
Di-isopropyl ether	ND (0.0010)		8260B		1	11/29/22 2:50	D2K0504	DK22831
Ethyl tertiary-butyl ether	ND (0.0010)		8260B		1	11/29/22 2:50	D2K0504	DK22831
Ethylbenzene	**0.0012** (0.0010)		8260B		1	11/29/22 2:50	D2K0504	DK22831
Hexachlorobutadiene	ND (0.0006)		8260B		1	11/29/22 2:50	D2K0504	DK22831
Hexachloroethane	ND (0.0010)		8260B		1	11/29/22 2:50	D2K0504	DK22831
Isopropylbenzene	**0.0032** (0.0010)		8260B		1	11/29/22 2:50	D2K0504	DK22831
Methyl tert-Butyl Ether	ND (0.0010)		8260B		1	11/29/22 2:50	D2K0504	DK22831
Methylene Chloride	ND (0.0020)		8260B		1	11/29/22 2:50	D2K0504	DK22831
Naphthalene	**0.0029** (0.0010)		8260B		1	11/29/22 2:50	D2K0504	DK22831
n-Butylbenzene	ND (0.0010)		8260B		1	11/29/22 2:50	D2K0504	DK22831
n-Propylbenzene	ND (0.0010)		8260B		1	11/29/22 2:50	D2K0504	DK22831
sec-Butylbenzene	ND (0.0010)		8260B		1	11/29/22 2:50	D2K0504	DK22831
Styrene	ND (0.0010)		8260B		1	11/29/22 2:50	D2K0504	DK22831
tert-Butylbenzene	ND (0.0010)		8260B		1	11/29/22 2:50	D2K0504	DK22831
Tertiary-amyl methyl ether	ND (0.0010)		8260B		1	11/29/22 2:50	D2K0504	DK22831
Tetrachloroethene	ND (0.0010)		8260B		1	11/29/22 2:50	D2K0504	DK22831

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: 642 Allens Ave
Client Sample ID: GZ-501S
Date Sampled: 11/23/22 11:00
Percent Solids: N/A
Initial Volume: 5ml
Final Volume: 5ml
Extraction Method: 5030B

ESS Laboratory Work Order: 22K0897
ESS Laboratory Sample ID: 22K0897-02
Sample Matrix: Ground Water
Units: mg/L
Analyst: MD

8260B Volatile Organic Compounds

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
Tetrahydrofuran	ND (0.0050)		8260B		1	11/29/22 2:50	D2K0504	DK22831
Toluene	ND (0.0010)		8260B		1	11/29/22 2:50	D2K0504	DK22831
trans-1,2-Dichloroethene	ND (0.0010)		8260B		1	11/29/22 2:50	D2K0504	DK22831
trans-1,3-Dichloropropene	ND (0.0004)		8260B		1	11/29/22 2:50	D2K0504	DK22831
Trichloroethene	ND (0.0010)		8260B		1	11/29/22 2:50	D2K0504	DK22831
Trichlorofluoromethane	ND (0.0010)		8260B		1	11/29/22 2:50	D2K0504	DK22831
Vinyl Acetate	ND (0.0050)		8260B		1	11/29/22 2:50	D2K0504	DK22831
Vinyl Chloride	ND (0.0010)		8260B		1	11/29/22 2:50	D2K0504	DK22831
Xylene O	**0.0012** (0.0010)		8260B		1	11/29/22 2:50	D2K0504	DK22831
Xylene P,M	ND (0.0020)		8260B		1	11/29/22 2:50	D2K0504	DK22831
Xylenes (Total)	ND (0.00200)		8260B		1	11/29/22 2:50		[CALC]

	%Recovery	Qualifier	Limits
Surrogate: 1,2-Dichloroethane-d4	*104 %*		*70-130*
Surrogate: 4-Bromofluorobenzene	*100 %*		*70-130*
Surrogate: Dibromofluoromethane	*98 %*		*70-130*
Surrogate: Toluene-d8	*99 %*		*70-130*

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: 642 Allens Ave
Client Sample ID: GZ-301D
Date Sampled: 11/23/22 11:24
Percent Solids: N/A
Initial Volume: 5ml
Final Volume: 5ml
Extraction Method: 5030B

ESS Laboratory Work Order: 22K0897
ESS Laboratory Sample ID: 22K0897-03
Sample Matrix: Ground Water
Units: mg/L
Analyst: MD

8260B Volatile Organic Compounds

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
1,1,1,2-Tetrachloroethane	ND (0.0010)		8260B		1	11/29/22 3:16	D2K0504	DK22831
1,1,1-Trichloroethane	ND (0.0010)		8260B		1	11/29/22 3:16	D2K0504	DK22831
1,1,2,2-Tetrachloroethane	ND (0.0005)		8260B		1	11/29/22 3:16	D2K0504	DK22831
1,1,2-Trichloroethane	ND (0.0010)		8260B		1	11/29/22 3:16	D2K0504	DK22831
1,1-Dichloroethane	ND (0.0010)		8260B		1	11/29/22 3:16	D2K0504	DK22831
1,1-Dichloroethene	ND (0.0010)		8260B		1	11/29/22 3:16	D2K0504	DK22831
1,1-Dichloropropene	ND (0.0020)		8260B		1	11/29/22 3:16	D2K0504	DK22831
1,2,3-Trichlorobenzene	ND (0.0010)		8260B		1	11/29/22 3:16	D2K0504	DK22831
1,2,3-Trichloropropane	ND (0.0010)		8260B		1	11/29/22 3:16	D2K0504	DK22831
1,2,4-Trichlorobenzene	ND (0.0010)		8260B		1	11/29/22 3:16	D2K0504	DK22831
1,2,4-Trimethylbenzene	ND (0.0010)		8260B		1	11/29/22 3:16	D2K0504	DK22831
1,2-Dibromo-3-Chloropropane	ND (0.0050)		8260B		1	11/29/22 3:16	D2K0504	DK22831
1,2-Dibromoethane	ND (0.0010)		8260B		1	11/29/22 3:16	D2K0504	DK22831
1,2-Dichlorobenzene	ND (0.0010)		8260B		1	11/29/22 3:16	D2K0504	DK22831
1,2-Dichloroethane	ND (0.0010)		8260B		1	11/29/22 3:16	D2K0504	DK22831
1,2-Dichloropropane	ND (0.0010)		8260B		1	11/29/22 3:16	D2K0504	DK22831
1,3,5-Trimethylbenzene	ND (0.0010)		8260B		1	11/29/22 3:16	D2K0504	DK22831
1,3-Dichlorobenzene	ND (0.0010)		8260B		1	11/29/22 3:16	D2K0504	DK22831
1,3-Dichloropropane	ND (0.0010)		8260B		1	11/29/22 3:16	D2K0504	DK22831
1,4-Dichlorobenzene	ND (0.0010)		8260B		1	11/29/22 3:16	D2K0504	DK22831
1,4-Dioxane - Screen	ND (0.500)		8260B		1	11/29/22 3:16	D2K0504	DK22831
1-Chlorohexane	ND (0.0010)		8260B		1	11/29/22 3:16	D2K0504	DK22831
2,2-Dichloropropane	ND (0.0010)		8260B		1	11/29/22 3:16	D2K0504	DK22831
2-Butanone	ND (0.0100)		8260B		1	11/29/22 3:16	D2K0504	DK22831
2-Chlorotoluene	ND (0.0010)		8260B		1	11/29/22 3:16	D2K0504	DK22831
2-Hexanone	ND (0.0100)		8260B		1	11/29/22 3:16	D2K0504	DK22831
4-Chlorotoluene	ND (0.0010)		8260B		1	11/29/22 3:16	D2K0504	DK22831
4-Isopropyltoluene	ND (0.0010)		8260B		1	11/29/22 3:16	D2K0504	DK22831
4-Methyl-2-Pentanone	ND (0.0100)		8260B		1	11/29/22 3:16	D2K0504	DK22831
Acetone	ND (0.0100)		8260B		1	11/29/22 3:16	D2K0504	DK22831
Benzene	ND (0.0010)		8260B		1	11/29/22 3:16	D2K0504	DK22831
Bromobenzene	ND (0.0020)		8260B		1	11/29/22 3:16	D2K0504	DK22831

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: 642 Allens Ave
Client Sample ID: GZ-301D
Date Sampled: 11/23/22 11:24
Percent Solids: N/A
Initial Volume: 5ml
Final Volume: 5ml
Extraction Method: 5030B

ESS Laboratory Work Order: 22K0897
ESS Laboratory Sample ID: 22K0897-03
Sample Matrix: Ground Water
Units: mg/L
Analyst: MD

8260B Volatile Organic Compounds

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
Bromochloromethane	ND (0.0010)		8260B		1	11/29/22 3:16	D2K0504	DK22831
Bromodichloromethane	ND (0.0006)		8260B		1	11/29/22 3:16	D2K0504	DK22831
Bromoform	ND (0.0010)		8260B		1	11/29/22 3:16	D2K0504	DK22831
Bromomethane	ND (0.0020)		8260B		1	11/29/22 3:16	D2K0504	DK22831
Carbon Disulfide	ND (0.0010)		8260B		1	11/29/22 3:16	D2K0504	DK22831
Carbon Tetrachloride	ND (0.0010)		8260B		1	11/29/22 3:16	D2K0504	DK22831
Chlorobenzene	ND (0.0010)		8260B		1	11/29/22 3:16	D2K0504	DK22831
Chloroethane	ND (0.0020)		8260B		1	11/29/22 3:16	D2K0504	DK22831
Chloroform	ND (0.0010)		8260B		1	11/29/22 3:16	D2K0504	DK22831
Chloromethane	ND (0.0020)		8260B		1	11/29/22 3:16	D2K0504	DK22831
cis-1,2-Dichloroethene	ND (0.0010)		8260B		1	11/29/22 3:16	D2K0504	DK22831
cis-1,3-Dichloropropene	ND (0.0004)		8260B		1	11/29/22 3:16	D2K0504	DK22831
Dibromochloromethane	ND (0.0010)		8260B		1	11/29/22 3:16	D2K0504	DK22831
Dibromomethane	ND (0.0010)		8260B		1	11/29/22 3:16	D2K0504	DK22831
Dichlorodifluoromethane	ND (0.0020)		8260B		1	11/29/22 3:16	D2K0504	DK22831
Diethyl Ether	ND (0.0010)		8260B		1	11/29/22 3:16	D2K0504	DK22831
Di-isopropyl ether	ND (0.0010)		8260B		1	11/29/22 3:16	D2K0504	DK22831
Ethyl tertiary-butyl ether	ND (0.0010)		8260B		1	11/29/22 3:16	D2K0504	DK22831
Ethylbenzene	ND (0.0010)		8260B		1	11/29/22 3:16	D2K0504	DK22831
Hexachlorobutadiene	ND (0.0006)		8260B		1	11/29/22 3:16	D2K0504	DK22831
Hexachloroethane	ND (0.0010)		8260B		1	11/29/22 3:16	D2K0504	DK22831
Isopropylbenzene	ND (0.0010)		8260B		1	11/29/22 3:16	D2K0504	DK22831
Methyl tert-Butyl Ether	ND (0.0010)		8260B		1	11/29/22 3:16	D2K0504	DK22831
Methylene Chloride	ND (0.0020)		8260B		1	11/29/22 3:16	D2K0504	DK22831
Naphthalene	ND (0.0010)		8260B		1	11/29/22 3:16	D2K0504	DK22831
n-Butylbenzene	ND (0.0010)		8260B		1	11/29/22 3:16	D2K0504	DK22831
n-Propylbenzene	ND (0.0010)		8260B		1	11/29/22 3:16	D2K0504	DK22831
sec-Butylbenzene	ND (0.0010)		8260B		1	11/29/22 3:16	D2K0504	DK22831
Styrene	ND (0.0010)		8260B		1	11/29/22 3:16	D2K0504	DK22831
tert-Butylbenzene	ND (0.0010)		8260B		1	11/29/22 3:16	D2K0504	DK22831
Tertiary-amyl methyl ether	ND (0.0010)		8260B		1	11/29/22 3:16	D2K0504	DK22831
Tetrachloroethene	ND (0.0010)		8260B		1	11/29/22 3:16	D2K0504	DK22831

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: 642 Allens Ave
Client Sample ID: GZ-301D
Date Sampled: 11/23/22 11:24
Percent Solids: N/A
Initial Volume: 5ml
Final Volume: 5ml
Extraction Method: 5030B

ESS Laboratory Work Order: 22K0897
ESS Laboratory Sample ID: 22K0897-03
Sample Matrix: Ground Water
Units: mg/L
Analyst: MD

8260B Volatile Organic Compounds

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
Tetrahydrofuran	ND (0.0050)		8260B		1	11/29/22 3:16	D2K0504	DK22831
Toluene	ND (0.0010)		8260B		1	11/29/22 3:16	D2K0504	DK22831
trans-1,2-Dichloroethene	ND (0.0010)		8260B		1	11/29/22 3:16	D2K0504	DK22831
trans-1,3-Dichloropropene	ND (0.0004)		8260B		1	11/29/22 3:16	D2K0504	DK22831
Trichloroethene	ND (0.0010)		8260B		1	11/29/22 3:16	D2K0504	DK22831
Trichlorofluoromethane	ND (0.0010)		8260B		1	11/29/22 3:16	D2K0504	DK22831
Vinyl Acetate	ND (0.0050)		8260B		1	11/29/22 3:16	D2K0504	DK22831
Vinyl Chloride	ND (0.0010)		8260B		1	11/29/22 3:16	D2K0504	DK22831
Xylene O	ND (0.0010)		8260B		1	11/29/22 3:16	D2K0504	DK22831
Xylene P,M	ND (0.0020)		8260B		1	11/29/22 3:16	D2K0504	DK22831
Xylenes (Total)	ND (0.00200)		8260B		1	11/29/22 3:16		[CALC]

	%Recovery	Qualifier	Limits
Surrogate: 1,2-Dichloroethane-d4	*104 %*		*70-130*
Surrogate: 4-Bromofluorobenzene	*95 %*		*70-130*
Surrogate: Dibromofluoromethane	*99 %*		*70-130*
Surrogate: Toluene-d8	*101 %*		*70-130*

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: 642 Allens Ave
Client Sample ID: GZ-502S
Date Sampled: 11/23/22 10:24
Percent Solids: N/A
Initial Volume: 5ml
Final Volume: 5ml
Extraction Method: 5030B

ESS Laboratory Work Order: 22K0897
ESS Laboratory Sample ID: 22K0897-04
Sample Matrix: Ground Water
Units: mg/L
Analyst: MD

8260B Volatile Organic Compounds

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
1,1,1,2-Tetrachloroethane	ND (0.0010)		8260B		1	11/29/22 3:42	D2K0504	DK22831
1,1,1-Trichloroethane	ND (0.0010)		8260B		1	11/29/22 3:42	D2K0504	DK22831
1,1,2,2-Tetrachloroethane	ND (0.0005)		8260B		1	11/29/22 3:42	D2K0504	DK22831
1,1,2-Trichloroethane	ND (0.0010)		8260B		1	11/29/22 3:42	D2K0504	DK22831
1,1-Dichloroethane	ND (0.0010)		8260B		1	11/29/22 3:42	D2K0504	DK22831
1,1-Dichloroethene	ND (0.0010)		8260B		1	11/29/22 3:42	D2K0504	DK22831
1,1-Dichloropropene	ND (0.0020)		8260B		1	11/29/22 3:42	D2K0504	DK22831
1,2,3-Trichlorobenzene	ND (0.0010)		8260B		1	11/29/22 3:42	D2K0504	DK22831
1,2,3-Trichloropropane	ND (0.0010)		8260B		1	11/29/22 3:42	D2K0504	DK22831
1,2,4-Trichlorobenzene	ND (0.0010)		8260B		1	11/29/22 3:42	D2K0504	DK22831
1,2,4-Trimethylbenzene	ND (0.0010)		8260B		1	11/29/22 3:42	D2K0504	DK22831
1,2-Dibromo-3-Chloropropane	ND (0.0050)		8260B		1	11/29/22 3:42	D2K0504	DK22831
1,2-Dibromoethane	ND (0.0010)		8260B		1	11/29/22 3:42	D2K0504	DK22831
1,2-Dichlorobenzene	ND (0.0010)		8260B		1	11/29/22 3:42	D2K0504	DK22831
1,2-Dichloroethane	ND (0.0010)		8260B		1	11/29/22 3:42	D2K0504	DK22831
1,2-Dichloropropane	ND (0.0010)		8260B		1	11/29/22 3:42	D2K0504	DK22831
1,3,5-Trimethylbenzene	ND (0.0010)		8260B		1	11/29/22 3:42	D2K0504	DK22831
1,3-Dichlorobenzene	ND (0.0010)		8260B		1	11/29/22 3:42	D2K0504	DK22831
1,3-Dichloropropane	ND (0.0010)		8260B		1	11/29/22 3:42	D2K0504	DK22831
1,4-Dichlorobenzene	ND (0.0010)		8260B		1	11/29/22 3:42	D2K0504	DK22831
1,4-Dioxane - Screen	ND (0.500)		8260B		1	11/29/22 3:42	D2K0504	DK22831
1-Chlorohexane	ND (0.0010)		8260B		1	11/29/22 3:42	D2K0504	DK22831
2,2-Dichloropropane	ND (0.0010)		8260B		1	11/29/22 3:42	D2K0504	DK22831
2-Butanone	ND (0.0100)		8260B		1	11/29/22 3:42	D2K0504	DK22831
2-Chlorotoluene	ND (0.0010)		8260B		1	11/29/22 3:42	D2K0504	DK22831
2-Hexanone	ND (0.0100)		8260B		1	11/29/22 3:42	D2K0504	DK22831
4-Chlorotoluene	ND (0.0010)		8260B		1	11/29/22 3:42	D2K0504	DK22831
4-Isopropyltoluene	ND (0.0010)		8260B		1	11/29/22 3:42	D2K0504	DK22831
4-Methyl-2-Pentanone	ND (0.0100)		8260B		1	11/29/22 3:42	D2K0504	DK22831
Acetone	ND (0.0100)		8260B		1	11/29/22 3:42	D2K0504	DK22831
Benzene	ND (0.0010)		8260B		1	11/29/22 3:42	D2K0504	DK22831
Bromobenzene	ND (0.0020)		8260B		1	11/29/22 3:42	D2K0504	DK22831

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: 642 Allens Ave
Client Sample ID: GZ-502S
Date Sampled: 11/23/22 10:24
Percent Solids: N/A
Initial Volume: 5ml
Final Volume: 5ml
Extraction Method: 5030B

ESS Laboratory Work Order: 22K0897
ESS Laboratory Sample ID: 22K0897-04
Sample Matrix: Ground Water
Units: mg/L
Analyst: MD

8260B Volatile Organic Compounds

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
Bromochloromethane	ND (0.0010)		8260B		1	11/29/22 3:42	D2K0504	DK22831
Bromodichloromethane	ND (0.0006)		8260B		1	11/29/22 3:42	D2K0504	DK22831
Bromoform	ND (0.0010)		8260B		1	11/29/22 3:42	D2K0504	DK22831
Bromomethane	ND (0.0020)		8260B		1	11/29/22 3:42	D2K0504	DK22831
Carbon Disulfide	ND (0.0010)		8260B		1	11/29/22 3:42	D2K0504	DK22831
Carbon Tetrachloride	ND (0.0010)		8260B		1	11/29/22 3:42	D2K0504	DK22831
Chlorobenzene	ND (0.0010)		8260B		1	11/29/22 3:42	D2K0504	DK22831
Chloroethane	ND (0.0020)		8260B		1	11/29/22 3:42	D2K0504	DK22831
Chloroform	ND (0.0010)		8260B		1	11/29/22 3:42	D2K0504	DK22831
Chloromethane	ND (0.0020)		8260B		1	11/29/22 3:42	D2K0504	DK22831
cis-1,2-Dichloroethene	ND (0.0010)		8260B		1	11/29/22 3:42	D2K0504	DK22831
cis-1,3-Dichloropropene	ND (0.0004)		8260B		1	11/29/22 3:42	D2K0504	DK22831
Dibromochloromethane	ND (0.0010)		8260B		1	11/29/22 3:42	D2K0504	DK22831
Dibromomethane	ND (0.0010)		8260B		1	11/29/22 3:42	D2K0504	DK22831
Dichlorodifluoromethane	ND (0.0020)		8260B		1	11/29/22 3:42	D2K0504	DK22831
Diethyl Ether	ND (0.0010)		8260B		1	11/29/22 3:42	D2K0504	DK22831
Di-isopropyl ether	ND (0.0010)		8260B		1	11/29/22 3:42	D2K0504	DK22831
Ethyl tertiary-butyl ether	ND (0.0010)		8260B		1	11/29/22 3:42	D2K0504	DK22831
Ethylbenzene	ND (0.0010)		8260B		1	11/29/22 3:42	D2K0504	DK22831
Hexachlorobutadiene	ND (0.0006)		8260B		1	11/29/22 3:42	D2K0504	DK22831
Hexachloroethane	ND (0.0010)		8260B		1	11/29/22 3:42	D2K0504	DK22831
Isopropylbenzene	ND (0.0010)		8260B		1	11/29/22 3:42	D2K0504	DK22831
Methyl tert-Butyl Ether	ND (0.0010)		8260B		1	11/29/22 3:42	D2K0504	DK22831
Methylene Chloride	ND (0.0020)		8260B		1	11/29/22 3:42	D2K0504	DK22831
Naphthalene	**0.0018** (0.0010)		8260B		1	11/29/22 3:42	D2K0504	DK22831
n-Butylbenzene	ND (0.0010)		8260B		1	11/29/22 3:42	D2K0504	DK22831
n-Propylbenzene	ND (0.0010)		8260B		1	11/29/22 3:42	D2K0504	DK22831
sec-Butylbenzene	ND (0.0010)		8260B		1	11/29/22 3:42	D2K0504	DK22831
Styrene	ND (0.0010)		8260B		1	11/29/22 3:42	D2K0504	DK22831
tert-Butylbenzene	ND (0.0010)		8260B		1	11/29/22 3:42	D2K0504	DK22831
Tertiary-amyl methyl ether	ND (0.0010)		8260B		1	11/29/22 3:42	D2K0504	DK22831
Tetrachloroethene	ND (0.0010)		8260B		1	11/29/22 3:42	D2K0504	DK22831

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: 642 Allens Ave
Client Sample ID: GZ-502S
Date Sampled: 11/23/22 10:24
Percent Solids: N/A
Initial Volume: 5ml
Final Volume: 5ml
Extraction Method: 5030B

ESS Laboratory Work Order: 22K0897
ESS Laboratory Sample ID: 22K0897-04
Sample Matrix: Ground Water
Units: mg/L
Analyst: MD

8260B Volatile Organic Compounds

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
Tetrahydrofuran	ND (0.0050)		8260B		1	11/29/22 3:42	D2K0504	DK22831
Toluene	ND (0.0010)		8260B		1	11/29/22 3:42	D2K0504	DK22831
trans-1,2-Dichloroethene	ND (0.0010)		8260B		1	11/29/22 3:42	D2K0504	DK22831
trans-1,3-Dichloropropene	ND (0.0004)		8260B		1	11/29/22 3:42	D2K0504	DK22831
Trichloroethene	ND (0.0010)		8260B		1	11/29/22 3:42	D2K0504	DK22831
Trichlorofluoromethane	ND (0.0010)		8260B		1	11/29/22 3:42	D2K0504	DK22831
Vinyl Acetate	ND (0.0050)		8260B		1	11/29/22 3:42	D2K0504	DK22831
Vinyl Chloride	ND (0.0010)		8260B		1	11/29/22 3:42	D2K0504	DK22831
Xylene O	ND (0.0010)		8260B		1	11/29/22 3:42	D2K0504	DK22831
Xylene P,M	ND (0.0020)		8260B		1	11/29/22 3:42	D2K0504	DK22831
Xylenes (Total)	ND (0.00200)		8260B		1	11/29/22 3:42		[CALC]

	%Recovery	Qualifier	Limits
Surrogate: 1,2-Dichloroethane-d4	*105 %*		*70-130*
Surrogate: 4-Bromofluorobenzene	*96 %*		*70-130*
Surrogate: Dibromofluoromethane	*100 %*		*70-130*
Surrogate: Toluene-d8	*100 %*		*70-130*

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: 642 Allens Ave
Client Sample ID: RCA-15
Date Sampled: 11/23/22 12:50
Percent Solids: N/A
Initial Volume: 5ml
Final Volume: 5ml
Extraction Method: 5030B

ESS Laboratory Work Order: 22K0897
ESS Laboratory Sample ID: 22K0897-05
Sample Matrix: Ground Water
Units: mg/L
Analyst: MD

8260B Volatile Organic Compounds

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
1,1,1,2-Tetrachloroethane	ND (0.0010)		8260B		1	11/29/22 4:08	D2K0504	DK22831
1,1,1-Trichloroethane	ND (0.0010)		8260B		1	11/29/22 4:08	D2K0504	DK22831
1,1,2,2-Tetrachloroethane	ND (0.0005)		8260B		1	11/29/22 4:08	D2K0504	DK22831
1,1,2-Trichloroethane	ND (0.0010)		8260B		1	11/29/22 4:08	D2K0504	DK22831
1,1-Dichloroethane	ND (0.0010)		8260B		1	11/29/22 4:08	D2K0504	DK22831
1,1-Dichloroethene	ND (0.0010)		8260B		1	11/29/22 4:08	D2K0504	DK22831
1,1-Dichloropropene	ND (0.0020)		8260B		1	11/29/22 4:08	D2K0504	DK22831
1,2,3-Trichlorobenzene	ND (0.0010)		8260B		1	11/29/22 4:08	D2K0504	DK22831
1,2,3-Trichloropropane	ND (0.0010)		8260B		1	11/29/22 4:08	D2K0504	DK22831
1,2,4-Trichlorobenzene	ND (0.0010)		8260B		1	11/29/22 4:08	D2K0504	DK22831
1,2,4-Trimethylbenzene	ND (0.0010)		8260B		1	11/29/22 4:08	D2K0504	DK22831
1,2-Dibromo-3-Chloropropane	ND (0.0050)		8260B		1	11/29/22 4:08	D2K0504	DK22831
1,2-Dibromoethane	ND (0.0010)		8260B		1	11/29/22 4:08	D2K0504	DK22831
1,2-Dichlorobenzene	ND (0.0010)		8260B		1	11/29/22 4:08	D2K0504	DK22831
1,2-Dichloroethane	ND (0.0010)		8260B		1	11/29/22 4:08	D2K0504	DK22831
1,2-Dichloropropane	ND (0.0010)		8260B		1	11/29/22 4:08	D2K0504	DK22831
1,3,5-Trimethylbenzene	ND (0.0010)		8260B		1	11/29/22 4:08	D2K0504	DK22831
1,3-Dichlorobenzene	ND (0.0010)		8260B		1	11/29/22 4:08	D2K0504	DK22831
1,3-Dichloropropane	ND (0.0010)		8260B		1	11/29/22 4:08	D2K0504	DK22831
1,4-Dichlorobenzene	ND (0.0010)		8260B		1	11/29/22 4:08	D2K0504	DK22831
1,4-Dioxane - Screen	ND (0.500)		8260B		1	11/29/22 4:08	D2K0504	DK22831
1-Chlorohexane	ND (0.0010)		8260B		1	11/29/22 4:08	D2K0504	DK22831
2,2-Dichloropropane	ND (0.0010)		8260B		1	11/29/22 4:08	D2K0504	DK22831
2-Butanone	ND (0.0100)		8260B		1	11/29/22 4:08	D2K0504	DK22831
2-Chlorotoluene	ND (0.0010)		8260B		1	11/29/22 4:08	D2K0504	DK22831
2-Hexanone	ND (0.0100)		8260B		1	11/29/22 4:08	D2K0504	DK22831
4-Chlorotoluene	ND (0.0010)		8260B		1	11/29/22 4:08	D2K0504	DK22831
4-Isopropyltoluene	ND (0.0010)		8260B		1	11/29/22 4:08	D2K0504	DK22831
4-Methyl-2-Pentanone	ND (0.0100)		8260B		1	11/29/22 4:08	D2K0504	DK22831
Acetone	ND (0.0100)		8260B		1	11/29/22 4:08	D2K0504	DK22831
Benzene	ND (0.0010)		8260B		1	11/29/22 4:08	D2K0504	DK22831
Bromobenzene	ND (0.0020)		8260B		1	11/29/22 4:08	D2K0504	DK22831

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: 642 Allens Ave
Client Sample ID: RCA-15
Date Sampled: 11/23/22 12:50
Percent Solids: N/A
Initial Volume: 5ml
Final Volume: 5ml
Extraction Method: 5030B

ESS Laboratory Work Order: 22K0897
ESS Laboratory Sample ID: 22K0897-05
Sample Matrix: Ground Water
Units: mg/L
Analyst: MD

8260B Volatile Organic Compounds

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
Bromochloromethane	ND (0.0010)		8260B		1	11/29/22 4:08	D2K0504	DK22831
Bromodichloromethane	ND (0.0006)		8260B		1	11/29/22 4:08	D2K0504	DK22831
Bromoform	ND (0.0010)		8260B		1	11/29/22 4:08	D2K0504	DK22831
Bromomethane	ND (0.0020)		8260B		1	11/29/22 4:08	D2K0504	DK22831
Carbon Disulfide	ND (0.0010)		8260B		1	11/29/22 4:08	D2K0504	DK22831
Carbon Tetrachloride	ND (0.0010)		8260B		1	11/29/22 4:08	D2K0504	DK22831
Chlorobenzene	ND (0.0010)		8260B		1	11/29/22 4:08	D2K0504	DK22831
Chloroethane	ND (0.0020)		8260B		1	11/29/22 4:08	D2K0504	DK22831
Chloroform	ND (0.0010)		8260B		1	11/29/22 4:08	D2K0504	DK22831
Chloromethane	ND (0.0020)		8260B		1	11/29/22 4:08	D2K0504	DK22831
cis-1,2-Dichloroethene	ND (0.0010)		8260B		1	11/29/22 4:08	D2K0504	DK22831
cis-1,3-Dichloropropene	ND (0.0004)		8260B		1	11/29/22 4:08	D2K0504	DK22831
Dibromochloromethane	ND (0.0010)		8260B		1	11/29/22 4:08	D2K0504	DK22831
Dibromomethane	ND (0.0010)		8260B		1	11/29/22 4:08	D2K0504	DK22831
Dichlorodifluoromethane	ND (0.0020)		8260B		1	11/29/22 4:08	D2K0504	DK22831
Diethyl Ether	ND (0.0010)		8260B		1	11/29/22 4:08	D2K0504	DK22831
Di-isopropyl ether	ND (0.0010)		8260B		1	11/29/22 4:08	D2K0504	DK22831
Ethyl tertiary-butyl ether	ND (0.0010)		8260B		1	11/29/22 4:08	D2K0504	DK22831
Ethylbenzene	ND (0.0010)		8260B		1	11/29/22 4:08	D2K0504	DK22831
Hexachlorobutadiene	ND (0.0006)		8260B		1	11/29/22 4:08	D2K0504	DK22831
Hexachloroethane	ND (0.0010)		8260B		1	11/29/22 4:08	D2K0504	DK22831
Isopropylbenzene	ND (0.0010)		8260B		1	11/29/22 4:08	D2K0504	DK22831
Methyl tert-Butyl Ether	ND (0.0010)		8260B		1	11/29/22 4:08	D2K0504	DK22831
Methylene Chloride	ND (0.0020)		8260B		1	11/29/22 4:08	D2K0504	DK22831
Naphthalene	ND (0.0010)		8260B		1	11/29/22 4:08	D2K0504	DK22831
n-Butylbenzene	ND (0.0010)		8260B		1	11/29/22 4:08	D2K0504	DK22831
n-Propylbenzene	ND (0.0010)		8260B		1	11/29/22 4:08	D2K0504	DK22831
sec-Butylbenzene	ND (0.0010)		8260B		1	11/29/22 4:08	D2K0504	DK22831
Styrene	ND (0.0010)		8260B		1	11/29/22 4:08	D2K0504	DK22831
tert-Butylbenzene	ND (0.0010)		8260B		1	11/29/22 4:08	D2K0504	DK22831
Tertiary-amyl methyl ether	ND (0.0010)		8260B		1	11/29/22 4:08	D2K0504	DK22831
Tetrachloroethene	ND (0.0010)		8260B		1	11/29/22 4:08	D2K0504	DK22831

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: 642 Allens Ave
Client Sample ID: RCA-15
Date Sampled: 11/23/22 12:50
Percent Solids: N/A
Initial Volume: 5ml
Final Volume: 5ml
Extraction Method: 5030B

ESS Laboratory Work Order: 22K0897
ESS Laboratory Sample ID: 22K0897-05
Sample Matrix: Ground Water
Units: mg/L
Analyst: MD

8260B Volatile Organic Compounds

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
Tetrahydrofuran	ND (0.0050)		8260B		1	11/29/22 4:08	D2K0504	DK22831
Toluene	ND (0.0010)		8260B		1	11/29/22 4:08	D2K0504	DK22831
trans-1,2-Dichloroethene	ND (0.0010)		8260B		1	11/29/22 4:08	D2K0504	DK22831
trans-1,3-Dichloropropene	ND (0.0004)		8260B		1	11/29/22 4:08	D2K0504	DK22831
Trichloroethene	ND (0.0010)		8260B		1	11/29/22 4:08	D2K0504	DK22831
Trichlorofluoromethane	ND (0.0010)		8260B		1	11/29/22 4:08	D2K0504	DK22831
Vinyl Acetate	ND (0.0050)		8260B		1	11/29/22 4:08	D2K0504	DK22831
Vinyl Chloride	ND (0.0010)		8260B		1	11/29/22 4:08	D2K0504	DK22831
Xylene O	ND (0.0010)		8260B		1	11/29/22 4:08	D2K0504	DK22831
Xylene P,M	ND (0.0020)		8260B		1	11/29/22 4:08	D2K0504	DK22831
Xylenes (Total)	ND (0.00200)		8260B		1	11/29/22 4:08		[CALC]

	%Recovery	Qualifier	Limits
Surrogate: 1,2-Dichloroethane-d4	*104 %*		*70-130*
Surrogate: 4-Bromofluorobenzene	*95 %*		*70-130*
Surrogate: Dibromofluoromethane	*98 %*		*70-130*
Surrogate: Toluene-d8	*101 %*		*70-130*

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: 642 Allens Ave
Client Sample ID: Trip Blank
Date Sampled: 11/23/22 00:00
Percent Solids: N/A
Initial Volume: 5ml
Final Volume: 5ml
Extraction Method: 5030B

ESS Laboratory Work Order: 22K0897
ESS Laboratory Sample ID: 22K0897-06
Sample Matrix: Aqueous
Units: mg/L
Analyst: MD

8260B Volatile Organic Compounds

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
1,1,1,2-Tetrachloroethane	ND (0.0010)		8260B		1	11/28/22 12:03	D2K0503	DK22830
1,1,1-Trichloroethane	ND (0.0010)		8260B		1	11/28/22 12:03	D2K0503	DK22830
1,1,2,2-Tetrachloroethane	ND (0.0005)		8260B		1	11/28/22 12:03	D2K0503	DK22830
1,1,2-Trichloroethane	ND (0.0010)		8260B		1	11/28/22 12:03	D2K0503	DK22830
1,1-Dichloroethane	ND (0.0010)		8260B		1	11/28/22 12:03	D2K0503	DK22830
1,1-Dichloroethene	ND (0.0010)		8260B		1	11/28/22 12:03	D2K0503	DK22830
1,1-Dichloropropene	ND (0.0020)		8260B		1	11/28/22 12:03	D2K0503	DK22830
1,2,3-Trichlorobenzene	ND (0.0010)		8260B		1	11/28/22 12:03	D2K0503	DK22830
1,2,3-Trichloropropane	ND (0.0010)		8260B		1	11/28/22 12:03	D2K0503	DK22830
1,2,4-Trichlorobenzene	ND (0.0010)		8260B		1	11/28/22 12:03	D2K0503	DK22830
1,2,4-Trimethylbenzene	ND (0.0010)		8260B		1	11/28/22 12:03	D2K0503	DK22830
1,2-Dibromo-3-Chloropropane	ND (0.0050)		8260B		1	11/28/22 12:03	D2K0503	DK22830
1,2-Dibromoethane	ND (0.0010)		8260B		1	11/28/22 12:03	D2K0503	DK22830
1,2-Dichlorobenzene	ND (0.0010)		8260B		1	11/28/22 12:03	D2K0503	DK22830
1,2-Dichloroethane	ND (0.0010)		8260B		1	11/28/22 12:03	D2K0503	DK22830
1,2-Dichloropropane	ND (0.0010)		8260B		1	11/28/22 12:03	D2K0503	DK22830
1,3,5-Trimethylbenzene	ND (0.0010)		8260B		1	11/28/22 12:03	D2K0503	DK22830
1,3-Dichlorobenzene	ND (0.0010)		8260B		1	11/28/22 12:03	D2K0503	DK22830
1,3-Dichloropropane	ND (0.0010)		8260B		1	11/28/22 12:03	D2K0503	DK22830
1,4-Dichlorobenzene	ND (0.0010)		8260B		1	11/28/22 12:03	D2K0503	DK22830
1,4-Dioxane - Screen	ND (0.500)		8260B		1	11/28/22 12:03	D2K0503	DK22830
1-Chlorohexane	ND (0.0010)		8260B		1	11/28/22 12:03	D2K0503	DK22830
2,2-Dichloropropane	ND (0.0010)		8260B		1	11/28/22 12:03	D2K0503	DK22830
2-Butanone	ND (0.0100)		8260B		1	11/28/22 12:03	D2K0503	DK22830
2-Chlorotoluene	ND (0.0010)		8260B		1	11/28/22 12:03	D2K0503	DK22830
2-Hexanone	ND (0.0100)		8260B		1	11/28/22 12:03	D2K0503	DK22830
4-Chlorotoluene	ND (0.0010)		8260B		1	11/28/22 12:03	D2K0503	DK22830
4-Isopropyltoluene	ND (0.0010)		8260B		1	11/28/22 12:03	D2K0503	DK22830
4-Methyl-2-Pentanone	ND (0.0100)		8260B		1	11/28/22 12:03	D2K0503	DK22830
Acetone	ND (0.0100)		8260B		1	11/28/22 12:03	D2K0503	DK22830
Benzene	ND (0.0010)		8260B		1	11/28/22 12:03	D2K0503	DK22830
Bromobenzene	ND (0.0020)		8260B		1	11/28/22 12:03	D2K0503	DK22830

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: 642 Allens Ave
Client Sample ID: Trip Blank
Date Sampled: 11/23/22 00:00
Percent Solids: N/A
Initial Volume: 5ml
Final Volume: 5ml
Extraction Method: 5030B

ESS Laboratory Work Order: 22K0897
ESS Laboratory Sample ID: 22K0897-06
Sample Matrix: Aqueous
Units: mg/L
Analyst: MD

8260B Volatile Organic Compounds

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
Bromochloromethane	ND (0.0010)		8260B		1	11/28/22 12:03	D2K0503	DK22830
Bromodichloromethane	ND (0.0006)		8260B		1	11/28/22 12:03	D2K0503	DK22830
Bromoform	ND (0.0010)		8260B		1	11/28/22 12:03	D2K0503	DK22830
Bromomethane	ND (0.0020)		8260B		1	11/28/22 12:03	D2K0503	DK22830
Carbon Disulfide	ND (0.0010)		8260B		1	11/28/22 12:03	D2K0503	DK22830
Carbon Tetrachloride	ND (0.0010)		8260B		1	11/28/22 12:03	D2K0503	DK22830
Chlorobenzene	ND (0.0010)		8260B		1	11/28/22 12:03	D2K0503	DK22830
Chloroethane	ND (0.0020)		8260B		1	11/28/22 12:03	D2K0503	DK22830
Chloroform	ND (0.0010)		8260B		1	11/28/22 12:03	D2K0503	DK22830
Chloromethane	ND (0.0020)		8260B		1	11/28/22 12:03	D2K0503	DK22830
cis-1,2-Dichloroethene	ND (0.0010)		8260B		1	11/28/22 12:03	D2K0503	DK22830
cis-1,3-Dichloropropene	ND (0.0004)		8260B		1	11/28/22 12:03	D2K0503	DK22830
Dibromochloromethane	ND (0.0010)		8260B		1	11/28/22 12:03	D2K0503	DK22830
Dibromomethane	ND (0.0010)		8260B		1	11/28/22 12:03	D2K0503	DK22830
Dichlorodifluoromethane	ND (0.0020)		8260B		1	11/28/22 12:03	D2K0503	DK22830
Diethyl Ether	ND (0.0010)		8260B		1	11/28/22 12:03	D2K0503	DK22830
Di-isopropyl ether	ND (0.0010)		8260B		1	11/28/22 12:03	D2K0503	DK22830
Ethyl tertiary-butyl ether	ND (0.0010)		8260B		1	11/28/22 12:03	D2K0503	DK22830
Ethylbenzene	ND (0.0010)		8260B		1	11/28/22 12:03	D2K0503	DK22830
Hexachlorobutadiene	ND (0.0006)		8260B		1	11/28/22 12:03	D2K0503	DK22830
Hexachloroethane	ND (0.0010)		8260B		1	11/28/22 12:03	D2K0503	DK22830
Isopropylbenzene	ND (0.0010)		8260B		1	11/28/22 12:03	D2K0503	DK22830
Methyl tert-Butyl Ether	ND (0.0010)		8260B		1	11/28/22 12:03	D2K0503	DK22830
Methylene Chloride	ND (0.0020)		8260B		1	11/28/22 12:03	D2K0503	DK22830
Naphthalene	ND (0.0010)		8260B		1	11/28/22 12:03	D2K0503	DK22830
n-Butylbenzene	ND (0.0010)		8260B		1	11/28/22 12:03	D2K0503	DK22830
n-Propylbenzene	ND (0.0010)		8260B		1	11/28/22 12:03	D2K0503	DK22830
sec-Butylbenzene	ND (0.0010)		8260B		1	11/28/22 12:03	D2K0503	DK22830
Styrene	ND (0.0010)		8260B		1	11/28/22 12:03	D2K0503	DK22830
tert-Butylbenzene	ND (0.0010)		8260B		1	11/28/22 12:03	D2K0503	DK22830
Tertiary-amyl methyl ether	ND (0.0010)		8260B		1	11/28/22 12:03	D2K0503	DK22830
Tetrachloroethene	ND (0.0010)		8260B		1	11/28/22 12:03	D2K0503	DK22830

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: 642 Allens Ave
Client Sample ID: Trip Blank
Date Sampled: 11/23/22 00:00
Percent Solids: N/A
Initial Volume: 5ml
Final Volume: 5ml
Extraction Method: 5030B

ESS Laboratory Work Order: 22K0897
ESS Laboratory Sample ID: 22K0897-06
Sample Matrix: Aqueous
Units: mg/L
Analyst: MD

8260B Volatile Organic Compounds

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
Tetrahydrofuran	ND (0.0050)		8260B		1	11/28/22 12:03	D2K0503	DK22830
Toluene	ND (0.0010)		8260B		1	11/28/22 12:03	D2K0503	DK22830
trans-1,2-Dichloroethene	ND (0.0010)		8260B		1	11/28/22 12:03	D2K0503	DK22830
trans-1,3-Dichloropropene	ND (0.0004)		8260B		1	11/28/22 12:03	D2K0503	DK22830
Trichloroethene	ND (0.0010)		8260B		1	11/28/22 12:03	D2K0503	DK22830
Trichlorofluoromethane	ND (0.0010)		8260B		1	11/28/22 12:03	D2K0503	DK22830
Vinyl Acetate	ND (0.0050)		8260B		1	11/28/22 12:03	D2K0503	DK22830
Vinyl Chloride	ND (0.0010)		8260B		1	11/28/22 12:03	D2K0503	DK22830
Xylene O	ND (0.0010)		8260B		1	11/28/22 12:03	D2K0503	DK22830
Xylene P,M	ND (0.0020)		8260B		1	11/28/22 12:03	D2K0503	DK22830
Xylenes (Total)	ND (0.00200)		8260B		1	11/28/22 12:03		[CALC]

	%Recovery	Qualifier	Limits
Surrogate: 1,2-Dichloroethane-d4	*110 %*		*70-130*
Surrogate: 4-Bromofluorobenzene	*92 %*		*70-130*
Surrogate: Dibromofluoromethane	*103 %*		*70-130*
Surrogate: Toluene-d8	*102 %*		*70-130*

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: 642 Allens Ave

ESS Laboratory Work Order: 22K0897

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
8260B Volatile Organic Compounds										
Batch DK22830 - 5030B										
Blank										
1,1,1,2-Tetrachloroethane	ND	0.0010	mg/L							
1,1,1-Trichloroethane	ND	0.0010	mg/L							
1,1,2,2-Tetrachloroethane	ND	0.0005	mg/L							
1,1,2-Trichloroethane	ND	0.0010	mg/L							
1,1-Dichloroethane	ND	0.0010	mg/L							
1,1-Dichloroethene	ND	0.0010	mg/L							
1,1-Dichloropropene	ND	0.0020	mg/L							
1,2,3-Trichlorobenzene	ND	0.0010	mg/L							
1,2,3-Trichloropropane	ND	0.0010	mg/L							
1,2,4-Trichlorobenzene	ND	0.0010	mg/L							
1,2,4-Trimethylbenzene	ND	0.0010	mg/L							
1,2-Dibromo-3-Chloropropane	ND	0.0050	mg/L							
1,2-Dibromoethane	ND	0.0010	mg/L							
1,2-Dichlorobenzene	ND	0.0010	mg/L							
1,2-Dichloroethane	ND	0.0010	mg/L							
1,2-Dichloropropane	ND	0.0010	mg/L							
1,3,5-Trimethylbenzene	ND	0.0010	mg/L							
1,3-Dichlorobenzene	ND	0.0010	mg/L							
1,3-Dichloropropane	ND	0.0010	mg/L							
1,4-Dichlorobenzene	ND	0.0010	mg/L							
1,4-Dioxane - Screen	ND	0.500	mg/L							
1-Chlorohexane	ND	0.0010	mg/L							
2,2-Dichloropropane	ND	0.0010	mg/L							
2-Butanone	ND	0.0100	mg/L							
2-Chlorotoluene	ND	0.0010	mg/L							
2-Hexanone	ND	0.0100	mg/L							
4-Chlorotoluene	ND	0.0010	mg/L							
4-Isopropyltoluene	ND	0.0010	mg/L							
4-Methyl-2-Pentanone	ND	0.0100	mg/L							
Acetone	ND	0.0100	mg/L							
Benzene	ND	0.0010	mg/L							
Bromobenzene	ND	0.0020	mg/L							
Bromochloromethane	ND	0.0010	mg/L							
Bromodichloromethane	ND	0.0006	mg/L							
Bromoform	ND	0.0010	mg/L							
Bromomethane	ND	0.0020	mg/L							
Carbon Disulfide	ND	0.0010	mg/L							
Carbon Tetrachloride	ND	0.0010	mg/L							
Chlorobenzene	ND	0.0010	mg/L							
Chloroethane	ND	0.0020	mg/L							
Chloroform	ND	0.0010	mg/L							
Chloromethane	ND	0.0020	mg/L							
cis-1,2-Dichloroethene	ND	0.0010	mg/L							
cis-1,3-Dichloropropene	ND	0.0004	mg/L							

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: 642 Allens Ave

ESS Laboratory Work Order: 22K0897

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
8260B Volatile Organic Compounds										
Batch DK22830 - 5030B										
Dibromochloromethane	ND	0.0010	mg/L							
Dibromomethane	ND	0.0010	mg/L							
Dichlorodifluoromethane	ND	0.0020	mg/L							
Diethyl Ether	ND	0.0010	mg/L							
Di-isopropyl ether	ND	0.0010	mg/L							
Ethyl tertiary-butyl ether	ND	0.0010	mg/L							
Ethylbenzene	ND	0.0010	mg/L							
Hexachlorobutadiene	ND	0.0006	mg/L							
Hexachloroethane	ND	0.0010	mg/L							
Isopropylbenzene	ND	0.0010	mg/L							
Methyl tert-Butyl Ether	ND	0.0010	mg/L							
Methylene Chloride	ND	0.0020	mg/L							
Naphthalene	ND	0.0010	mg/L							
n-Butylbenzene	ND	0.0010	mg/L							
n-Propylbenzene	ND	0.0010	mg/L							
sec-Butylbenzene	ND	0.0010	mg/L							
Styrene	ND	0.0010	mg/L							
tert-Butylbenzene	ND	0.0010	mg/L							
Tertiary-amyl methyl ether	ND	0.0010	mg/L							
Tetrachloroethene	ND	0.0010	mg/L							
Tetrahydrofuran	ND	0.0050	mg/L							
Toluene	ND	0.0010	mg/L							
trans-1,2-Dichloroethene	ND	0.0010	mg/L							
trans-1,3-Dichloropropene	ND	0.0004	mg/L							
Trichloroethene	ND	0.0010	mg/L							
Trichlorofluoromethane	ND	0.0010	mg/L							
Vinyl Acetate	ND	0.0050	mg/L							
Vinyl Chloride	ND	0.0010	mg/L							
Xylene O	ND	0.0010	mg/L							
Xylene P,M	ND	0.0020	mg/L							
Surrogate: 1,2-Dichloroethane-d4	*0.0273*		mg/L	*0.02500*		*109*	*70-130*			
Surrogate: 4-Bromofluorobenzene	*0.0229*		mg/L	*0.02500*		*92*	*70-130*			
Surrogate: Dibromofluoromethane	*0.0256*		mg/L	*0.02500*		*102*	*70-130*			
Surrogate: Toluene-d8	*0.0254*		mg/L	*0.02500*		*102*	*70-130*			
LCS										
1,1,1,2-Tetrachloroethane	0.0102	0.0010	mg/L	0.01000		102	70-130			
1,1,1-Trichloroethane	0.0101	0.0010	mg/L	0.01000		101	70-130			
1,1,2,2-Tetrachloroethane	0.0105	0.0005	mg/L	0.01000		105	70-130			
1,1,2-Trichloroethane	0.0102	0.0010	mg/L	0.01000		102	70-130			
1,1-Dichloroethane	0.0101	0.0010	mg/L	0.01000		101	70-130			
1,1-Dichloroethene	0.0096	0.0010	mg/L	0.01000		96	70-130			
1,1-Dichloropropene	0.0100	0.0020	mg/L	0.01000		100	70-130			
1,2,3-Trichlorobenzene	0.0100	0.0010	mg/L	0.01000		100	70-130			
1,2,3-Trichloropropane	0.0103	0.0010	mg/L	0.01000		103	70-130			
1,2,4-Trichlorobenzene	0.0100	0.0010	mg/L	0.01000		100	70-130			

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: 642 Allens Ave

ESS Laboratory Work Order: 22K0897

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
8260B Volatile Organic Compounds										
Batch DK22830 - 5030B										
1,2,4-Trimethylbenzene	0.0101	0.0010	mg/L	0.01000		101	70-130			
1,2-Dibromo-3-Chloropropane	0.0096	0.0050	mg/L	0.01000		96	70-130			
1,2-Dibromoethane	0.0101	0.0010	mg/L	0.01000		101	70-130			
1,2-Dichlorobenzene	0.0099	0.0010	mg/L	0.01000		99	70-130			
1,2-Dichloroethane	0.0102	0.0010	mg/L	0.01000		102	70-130			
1,2-Dichloropropane	0.0099	0.0010	mg/L	0.01000		99	70-130			
1,3,5-Trimethylbenzene	0.0105	0.0010	mg/L	0.01000		105	70-130			
1,3-Dichlorobenzene	0.0098	0.0010	mg/L	0.01000		98	70-130			
1,3-Dichloropropane	0.0099	0.0010	mg/L	0.01000		99	70-130			
1,4-Dichlorobenzene	0.0100	0.0010	mg/L	0.01000		100	70-130			
1,4-Dioxane - Screen	0.206	0.500	mg/L	0.2000		103	0-332			
1-Chlorohexane	0.0092	0.0010	mg/L	0.01000		92	70-130			
2,2-Dichloropropane	0.0113	0.0010	mg/L	0.01000		113	70-130			
2-Butanone	0.0565	0.0100	mg/L	0.05000		113	70-130			
2-Chlorotoluene	0.0100	0.0010	mg/L	0.01000		100	70-130			
2-Hexanone	0.0503	0.0100	mg/L	0.05000		101	70-130			
4-Chlorotoluene	0.0101	0.0010	mg/L	0.01000		101	70-130			
4-Isopropyltoluene	0.0097	0.0010	mg/L	0.01000		97	70-130			
4-Methyl-2-Pentanone	0.0487	0.0100	mg/L	0.05000		97	70-130			
Acetone	0.0566	0.0100	mg/L	0.05000		113	70-130			
Benzene	0.0102	0.0010	mg/L	0.01000		102	70-130			
Bromobenzene	0.0098	0.0020	mg/L	0.01000		98	70-130			
Bromochloromethane	0.0105	0.0010	mg/L	0.01000		105	70-130			
Bromodichloromethane	0.0112	0.0006	mg/L	0.01000		112	70-130			
Bromoform	0.0106	0.0010	mg/L	0.01000		106	70-130			
Bromomethane	0.0116	0.0020	mg/L	0.01000		116	70-130			
Carbon Disulfide	0.0109	0.0010	mg/L	0.01000		109	70-130			
Carbon Tetrachloride	0.0102	0.0010	mg/L	0.01000		102	70-130			
Chlorobenzene	0.0096	0.0010	mg/L	0.01000		96	70-130			
Chloroethane	0.0112	0.0020	mg/L	0.01000		112	70-130			
Chloroform	0.0104	0.0010	mg/L	0.01000		104	70-130			
Chloromethane	0.0102	0.0020	mg/L	0.01000		102	70-130			
cis-1,2-Dichloroethene	0.0102	0.0010	mg/L	0.01000		102	70-130			
cis-1,3-Dichloropropene	0.0098	0.0004	mg/L	0.01000		98	70-130			
Dibromochloromethane	0.0107	0.0010	mg/L	0.01000		107	70-130			
Dibromomethane	0.0104	0.0010	mg/L	0.01000		104	70-130			
Dichlorodifluoromethane	0.0092	0.0020	mg/L	0.01000		92	70-130			
Diethyl Ether	0.0105	0.0010	mg/L	0.01000		105	70-130			
Di-isopropyl ether	0.0105	0.0010	mg/L	0.01000		105	70-130			
Ethyl tertiary-butyl ether	0.0104	0.0010	mg/L	0.01000		104	70-130			
Ethylbenzene	0.0095	0.0010	mg/L	0.01000		95	70-130			
Hexachlorobutadiene	0.0107	0.0006	mg/L	0.01000		107	70-130			
Hexachloroethane	0.0096	0.0010	mg/L	0.01000		96	70-130			
Isopropylbenzene	0.0100	0.0010	mg/L	0.01000		100	70-130			
Methyl tert-Butyl Ether	0.0103	0.0010	mg/L	0.01000		103	70-130			

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: 642 Allens Ave

ESS Laboratory Work Order: 22K0897

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
8260B Volatile Organic Compounds										
Batch DK22830 - 5030B										
Methylene Chloride	0.0106	0.0020	mg/L	0.01000		106	70-130			
Naphthalene	0.0092	0.0010	mg/L	0.01000		92	70-130			
n-Butylbenzene	0.0103	0.0010	mg/L	0.01000		103	70-130			
n-Propylbenzene	0.0099	0.0010	mg/L	0.01000		99	70-130			
sec-Butylbenzene	0.0098	0.0010	mg/L	0.01000		98	70-130			
Styrene	0.0091	0.0010	mg/L	0.01000		91	70-130			
tert-Butylbenzene	0.0098	0.0010	mg/L	0.01000		98	70-130			
Tertiary-amyl methyl ether	0.0090	0.0010	mg/L	0.01000		90	70-130			
Tetrachloroethene	0.0076	0.0010	mg/L	0.01000		76	70-130			
Tetrahydrofuran	0.0102	0.0050	mg/L	0.01000		102	70-130			
Toluene	0.0099	0.0010	mg/L	0.01000		99	70-130			
trans-1,2-Dichloroethene	0.0102	0.0010	mg/L	0.01000		102	70-130			
trans-1,3-Dichloropropene	0.0092	0.0004	mg/L	0.01000		92	70-130			
Trichloroethene	0.0098	0.0010	mg/L	0.01000		98	70-130			
Trichlorofluoromethane	0.0113	0.0010	mg/L	0.01000		113	70-130			
Vinyl Acetate	0.0118	0.0050	mg/L	0.01000		118	70-130			
Vinyl Chloride	0.0106	0.0010	mg/L	0.01000		106	70-130			
Xylene O	0.0097	0.0010	mg/L	0.01000		97	70-130			
Xylene P,M	0.0199	0.0020	mg/L	0.02000		99	70-130			
Surrogate: 1,2-Dichloroethane-d4	*0.0265*		mg/L	*0.02500*		*106*	*70-130*			
Surrogate: 4-Bromofluorobenzene	*0.0247*		mg/L	*0.02500*		*99*	*70-130*			
Surrogate: Dibromofluoromethane	*0.0261*		mg/L	*0.02500*		*105*	*70-130*			
Surrogate: Toluene-d8	*0.0244*		mg/L	*0.02500*		*98*	*70-130*			
LCS Dup										
1,1,1,2-Tetrachloroethane	0.0110	0.0010	mg/L	0.01000		110	70-130	7	25	
1,1,1-Trichloroethane	0.0104	0.0010	mg/L	0.01000		104	70-130	2	25	
1,1,2,2-Tetrachloroethane	0.0104	0.0005	mg/L	0.01000		104	70-130	1	25	
1,1,2-Trichloroethane	0.0104	0.0010	mg/L	0.01000		104	70-130	2	25	
1,1-Dichloroethane	0.0104	0.0010	mg/L	0.01000		104	70-130	2	25	
1,1-Dichloroethene	0.0106	0.0010	mg/L	0.01000		106	70-130	10	25	
1,1-Dichloropropene	0.0102	0.0020	mg/L	0.01000		102	70-130	2	25	
1,2,3-Trichlorobenzene	0.0099	0.0010	mg/L	0.01000		99	70-130	0.6	25	
1,2,3-Trichloropropane	0.0102	0.0010	mg/L	0.01000		102	70-130	0.6	25	
1,2,4-Trichlorobenzene	0.0100	0.0010	mg/L	0.01000		100	70-130	0.2	25	
1,2,4-Trimethylbenzene	0.0102	0.0010	mg/L	0.01000		102	70-130	2	25	
1,2-Dibromo-3-Chloropropane	0.0096	0.0050	mg/L	0.01000		96	70-130	0.2	25	
1,2-Dibromoethane	0.0101	0.0010	mg/L	0.01000		101	70-130	0.2	25	
1,2-Dichlorobenzene	0.0100	0.0010	mg/L	0.01000		100	70-130	0.7	25	
1,2-Dichloroethane	0.0104	0.0010	mg/L	0.01000		104	70-130	2	25	
1,2-Dichloropropane	0.0104	0.0010	mg/L	0.01000		104	70-130	5	25	
1,3,5-Trimethylbenzene	0.0106	0.0010	mg/L	0.01000		106	70-130	0.9	25	
1,3-Dichlorobenzene	0.0101	0.0010	mg/L	0.01000		101	70-130	2	25	
1,3-Dichloropropane	0.0101	0.0010	mg/L	0.01000		101	70-130	2	25	
1,4-Dichlorobenzene	0.0101	0.0010	mg/L	0.01000		101	70-130	1	25	
1,4-Dioxane - Screen	0.198	0.500	mg/L	0.2000		99	0-332	4	200	

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: 642 Allens Ave

ESS Laboratory Work Order: 22K0897

Quality Control Data

8260B Volatile Organic Compounds

Batch DK22830 - 5030B

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
1-Chlorohexane	0.0096	0.0010	mg/L	0.01000		96	70-130	4	25	
2,2-Dichloropropane	0.0116	0.0010	mg/L	0.01000		116	70-130	3	25	
2-Butanone	0.0560	0.0100	mg/L	0.05000		112	70-130	0.9	25	
2-Chlorotoluene	0.0101	0.0010	mg/L	0.01000		101	70-130	1	25	
2-Hexanone	0.0488	0.0100	mg/L	0.05000		98	70-130	3	25	
4-Chlorotoluene	0.0102	0.0010	mg/L	0.01000		102	70-130	2	25	
4-Isopropyltoluene	0.0098	0.0010	mg/L	0.01000		98	70-130	0.8	25	
4-Methyl-2-Pentanone	0.0489	0.0100	mg/L	0.05000		98	70-130	0.5	25	
Acetone	0.0558	0.0100	mg/L	0.05000		112	70-130	1	25	
Benzene	0.0104	0.0010	mg/L	0.01000		104	70-130	2	25	
Bromobenzene	0.0101	0.0020	mg/L	0.01000		101	70-130	2	25	
Bromochloromethane	0.0112	0.0010	mg/L	0.01000		112	70-130	6	25	
Bromodichloromethane	0.0115	0.0006	mg/L	0.01000		115	70-130	2	25	
Bromoform	0.0109	0.0010	mg/L	0.01000		109	70-130	2	25	
Bromomethane	0.0116	0.0020	mg/L	0.01000		116	70-130	0.3	25	
Carbon Disulfide	0.0112	0.0010	mg/L	0.01000		112	70-130	3	25	
Carbon Tetrachloride	0.0106	0.0010	mg/L	0.01000		106	70-130	4	25	
Chlorobenzene	0.0096	0.0010	mg/L	0.01000		96	70-130	0.1	25	
Chloroethane	0.0111	0.0020	mg/L	0.01000		111	70-130	0.6	25	
Chloroform	0.0107	0.0010	mg/L	0.01000		107	70-130	3	25	
Chloromethane	0.0103	0.0020	mg/L	0.01000		103	70-130	0.4	25	
cis-1,2-Dichloroethene	0.0111	0.0010	mg/L	0.01000		111	70-130	9	25	
cis-1,3-Dichloropropene	0.0101	0.0004	mg/L	0.01000		101	70-130	3	25	
Dibromochloromethane	0.0107	0.0010	mg/L	0.01000		107	70-130	0.4	25	
Dibromomethane	0.0107	0.0010	mg/L	0.01000		107	70-130	2	25	
Dichlorodifluoromethane	0.0094	0.0020	mg/L	0.01000		94	70-130	2	25	
Diethyl Ether	0.0101	0.0010	mg/L	0.01000		101	70-130	3	25	
Di-isopropyl ether	0.0107	0.0010	mg/L	0.01000		107	70-130	2	25	
Ethyl tertiary-butyl ether	0.0107	0.0010	mg/L	0.01000		107	70-130	3	25	
Ethylbenzene	0.0097	0.0010	mg/L	0.01000		97	70-130	2	25	
Hexachlorobutadiene	0.0104	0.0006	mg/L	0.01000		104	70-130	3	25	
Hexachloroethane	0.0097	0.0010	mg/L	0.01000		97	70-130	0.9	25	
Isopropylbenzene	0.0102	0.0010	mg/L	0.01000		102	70-130	2	25	
Methyl tert-Butyl Ether	0.0104	0.0010	mg/L	0.01000		104	70-130	0.6	25	
Methylene Chloride	0.0110	0.0020	mg/L	0.01000		110	70-130	3	25	
Naphthalene	0.0088	0.0010	mg/L	0.01000		88	70-130	4	25	
n-Butylbenzene	0.0104	0.0010	mg/L	0.01000		104	70-130	0.9	25	
n-Propylbenzene	0.0101	0.0010	mg/L	0.01000		101	70-130	2	25	
sec-Butylbenzene	0.0100	0.0010	mg/L	0.01000		100	70-130	2	25	
Styrene	0.0094	0.0010	mg/L	0.01000		94	70-130	4	25	
tert-Butylbenzene	0.0099	0.0010	mg/L	0.01000		99	70-130	2	25	
Tertiary-amyl methyl ether	0.0092	0.0010	mg/L	0.01000		92	70-130	2	25	
Tetrachloroethene	0.0082	0.0010	mg/L	0.01000		82	70-130	9	25	
Tetrahydrofuran	0.0090	0.0050	mg/L	0.01000		90	70-130	12	25	
Toluene	0.0103	0.0010	mg/L	0.01000		103	70-130	3	25	

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: 642 Allens Ave

ESS Laboratory Work Order: 22K0897

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
8260B Volatile Organic Compounds										
Batch DK22830 - 5030B										
trans-1,2-Dichloroethene	0.0105	0.0010	mg/L	0.01000		105	70-130	3	25	
trans-1,3-Dichloropropene	0.0094	0.0004	mg/L	0.01000		94	70-130	2	25	
Trichloroethene	0.0097	0.0010	mg/L	0.01000		97	70-130	0.4	25	
Trichlorofluoromethane	0.0105	0.0010	mg/L	0.01000		105	70-130	7	25	
Vinyl Acetate	0.0118	0.0050	mg/L	0.01000		118	70-130	0	25	
Vinyl Chloride	0.0107	0.0010	mg/L	0.01000		107	70-130	0.8	25	
Xylene O	0.0099	0.0010	mg/L	0.01000		99	70-130	2	25	
Xylene P,M	0.0200	0.0020	mg/L	0.02000		100	70-130	0.8	25	
Surrogate: 1,2-Dichloroethane-d4	*0.0268*		mg/L	*0.02500*		*107*	*70-130*			
Surrogate: 4-Bromofluorobenzene	*0.0246*		mg/L	*0.02500*		*98*	*70-130*			
Surrogate: Dibromofluoromethane	*0.0267*		mg/L	*0.02500*		*107*	*70-130*			
Surrogate: Toluene-d8	*0.0245*		mg/L	*0.02500*		*98*	*70-130*			
Batch DK22831 - 5030B										
Blank										
1,1,1,2-Tetrachloroethane	ND	0.0010	mg/L							
1,1,1-Trichloroethane	ND	0.0010	mg/L							
1,1,2,2-Tetrachloroethane	ND	0.0005	mg/L							
1,1,2-Trichloroethane	ND	0.0010	mg/L							
1,1-Dichloroethane	ND	0.0010	mg/L							
1,1-Dichloroethene	ND	0.0010	mg/L							
1,1-Dichloropropene	ND	0.0020	mg/L							
1,2,3-Trichlorobenzene	ND	0.0010	mg/L							
1,2,3-Trichloropropane	ND	0.0010	mg/L							
1,2,4-Trichlorobenzene	ND	0.0010	mg/L							
1,2,4-Trimethylbenzene	ND	0.0010	mg/L							
1,2-Dibromo-3-Chloropropane	ND	0.0050	mg/L							
1,2-Dibromoethane	ND	0.0010	mg/L							
1,2-Dichlorobenzene	ND	0.0010	mg/L							
1,2-Dichloroethane	ND	0.0010	mg/L							
1,2-Dichloropropane	ND	0.0010	mg/L							
1,3,5-Trimethylbenzene	ND	0.0010	mg/L							
1,3-Dichlorobenzene	ND	0.0010	mg/L							
1,3-Dichloropropane	ND	0.0010	mg/L							
1,4-Dichlorobenzene	ND	0.0010	mg/L							
1,4-Dioxane - Screen	ND	0.500	mg/L							
1-Chlorohexane	ND	0.0010	mg/L							
2,2-Dichloropropane	ND	0.0010	mg/L							
2-Butanone	ND	0.0100	mg/L							
2-Chlorotoluene	ND	0.0010	mg/L							
2-Hexanone	ND	0.0100	mg/L							
4-Chlorotoluene	ND	0.0010	mg/L							
4-Isopropyltoluene	ND	0.0010	mg/L							
4-Methyl-2-Pentanone	ND	0.0100	mg/L							
Acetone	ND	0.0100	mg/L							
Benzene	ND	0.0010	mg/L							

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: 642 Allens Ave

ESS Laboratory Work Order: 22K0897

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
8260B Volatile Organic Compounds										
Batch DK22831 - 5030B										
Bromobenzene	ND	0.0020	mg/L							
Bromochloromethane	ND	0.0010	mg/L							
Bromodichloromethane	ND	0.0006	mg/L							
Bromoform	ND	0.0010	mg/L							
Bromomethane	ND	0.0020	mg/L							
Carbon Disulfide	ND	0.0010	mg/L							
Carbon Tetrachloride	ND	0.0010	mg/L							
Chlorobenzene	ND	0.0010	mg/L							
Chloroethane	ND	0.0020	mg/L							
Chloroform	ND	0.0010	mg/L							
Chloromethane	ND	0.0020	mg/L							
cis-1,2-Dichloroethene	ND	0.0010	mg/L							
cis-1,3-Dichloropropene	ND	0.0004	mg/L							
Dibromochloromethane	ND	0.0010	mg/L							
Dibromomethane	ND	0.0010	mg/L							
Dichlorodifluoromethane	ND	0.0020	mg/L							
Diethyl Ether	ND	0.0010	mg/L							
Di-isopropyl ether	ND	0.0010	mg/L							
Ethyl tertiary-butyl ether	ND	0.0010	mg/L							
Ethylbenzene	ND	0.0010	mg/L							
Hexachlorobutadiene	ND	0.0006	mg/L							
Hexachloroethane	ND	0.0010	mg/L							
Isopropylbenzene	ND	0.0010	mg/L							
Methyl tert-Butyl Ether	ND	0.0010	mg/L							
Methylene Chloride	ND	0.0020	mg/L							
Naphthalene	ND	0.0010	mg/L							
n-Butylbenzene	ND	0.0010	mg/L							
n-Propylbenzene	ND	0.0010	mg/L							
sec-Butylbenzene	ND	0.0010	mg/L							
Styrene	ND	0.0010	mg/L							
tert-Butylbenzene	ND	0.0010	mg/L							
Tertiary-amyl methyl ether	ND	0.0010	mg/L							
Tetrachloroethene	ND	0.0010	mg/L							
Tetrahydrofuran	ND	0.0050	mg/L							
Toluene	ND	0.0010	mg/L							
trans-1,2-Dichloroethene	ND	0.0010	mg/L							
trans-1,3-Dichloropropene	ND	0.0004	mg/L							
Trichloroethene	ND	0.0010	mg/L							
Trichlorofluoromethane	ND	0.0010	mg/L							
Vinyl Acetate	ND	0.0050	mg/L							
Vinyl Chloride	ND	0.0010	mg/L							
Xylene O	ND	0.0010	mg/L							
Xylene P,M	ND	0.0020	mg/L							
Surrogate: 1,2-Dichloroethane-d4	*0.0258*		mg/L	*0.02500*		*103*	*70-130*			
Surrogate: 4-Bromofluorobenzene	*0.0234*		mg/L	*0.02500*		*94*	*70-130*			

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: 642 Allens Ave

ESS Laboratory Work Order: 22K0897

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
8260B Volatile Organic Compounds										
Batch DK22831 - 5030B										
Surrogate: Dibromofluoromethane	*0.0244*		mg/L	*0.02500*		*98*	*70-130*			
Surrogate: Toluene-d8	*0.0251*		mg/L	*0.02500*		*100*	*70-130*			
LCS										
1,1,1,2-Tetrachloroethane	0.0099	0.0010	mg/L	0.01000		99	70-130			
1,1,1-Trichloroethane	0.0097	0.0010	mg/L	0.01000		97	70-130			
1,1,2,2-Tetrachloroethane	0.0094	0.0005	mg/L	0.01000		94	70-130			
1,1,2-Trichloroethane	0.0098	0.0010	mg/L	0.01000		98	70-130			
1,1-Dichloroethane	0.0098	0.0010	mg/L	0.01000		98	70-130			
1,1-Dichloroethene	0.0095	0.0010	mg/L	0.01000		95	70-130			
1,1-Dichloropropene	0.0098	0.0020	mg/L	0.01000		98	70-130			
1,2,3-Trichlorobenzene	0.0098	0.0010	mg/L	0.01000		98	70-130			
1,2,3-Trichloropropane	0.0100	0.0010	mg/L	0.01000		100	70-130			
1,2,4-Trichlorobenzene	0.0098	0.0010	mg/L	0.01000		98	70-130			
1,2,4-Trimethylbenzene	0.0100	0.0010	mg/L	0.01000		100	70-130			
1,2-Dibromo-3-Chloropropane	0.0089	0.0050	mg/L	0.01000		89	70-130			
1,2-Dibromoethane	0.0100	0.0010	mg/L	0.01000		100	70-130			
1,2-Dichlorobenzene	0.0098	0.0010	mg/L	0.01000		98	70-130			
1,2-Dichloroethane	0.0098	0.0010	mg/L	0.01000		98	70-130			
1,2-Dichloropropane	0.0097	0.0010	mg/L	0.01000		97	70-130			
1,3,5-Trimethylbenzene	0.0104	0.0010	mg/L	0.01000		104	70-130			
1,3-Dichlorobenzene	0.0099	0.0010	mg/L	0.01000		99	70-130			
1,3-Dichloropropane	0.0096	0.0010	mg/L	0.01000		96	70-130			
1,4-Dichlorobenzene	0.0097	0.0010	mg/L	0.01000		97	70-130			
1,4-Dioxane - Screen	0.199	0.500	mg/L	0.2000		100	0-332			
1-Chlorohexane	0.0095	0.0010	mg/L	0.01000		95	70-130			
2,2-Dichloropropane	0.0097	0.0010	mg/L	0.01000		97	70-130			
2-Butanone	0.0541	0.0100	mg/L	0.05000		108	70-130			
2-Chlorotoluene	0.0100	0.0010	mg/L	0.01000		100	70-130			
2-Hexanone	0.0494	0.0100	mg/L	0.05000		99	70-130			
4-Chlorotoluene	0.0100	0.0010	mg/L	0.01000		100	70-130			
4-Isopropyltoluene	0.0096	0.0010	mg/L	0.01000		96	70-130			
4-Methyl-2-Pentanone	0.0484	0.0100	mg/L	0.05000		97	70-130			
Acetone	0.0551	0.0100	mg/L	0.05000		110	70-130			
Benzene	0.0098	0.0010	mg/L	0.01000		98	70-130			
Bromobenzene	0.0100	0.0020	mg/L	0.01000		100	70-130			
Bromochloromethane	0.0106	0.0010	mg/L	0.01000		106	70-130			
Bromodichloromethane	0.0105	0.0006	mg/L	0.01000		105	70-130			
Bromoform	0.0102	0.0010	mg/L	0.01000		102	70-130			
Bromomethane	0.0100	0.0020	mg/L	0.01000		100	70-130			
Carbon Disulfide	0.0102	0.0010	mg/L	0.01000		102	70-130			
Carbon Tetrachloride	0.0100	0.0010	mg/L	0.01000		100	70-130			
Chlorobenzene	0.0093	0.0010	mg/L	0.01000		93	70-130			
Chloroethane	0.0104	0.0020	mg/L	0.01000		104	70-130			
Chloroform	0.0098	0.0010	mg/L	0.01000		98	70-130			

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: 642 Allens Ave

ESS Laboratory Work Order: 22K0897

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
8260B Volatile Organic Compounds										
Batch DK22831 - 5030B										
Chloromethane	0.0096	0.0020	mg/L	0.01000		96	70-130			
cis-1,2-Dichloroethene	0.0100	0.0010	mg/L	0.01000		100	70-130			
cis-1,3-Dichloropropene	0.0092	0.0004	mg/L	0.01000		92	70-130			
Dibromochloromethane	0.0100	0.0010	mg/L	0.01000		100	70-130			
Dibromomethane	0.0100	0.0010	mg/L	0.01000		100	70-130			
Dichlorodifluoromethane	0.0089	0.0020	mg/L	0.01000		89	70-130			
Diethyl Ether	0.0109	0.0010	mg/L	0.01000		109	70-130			
Di-isopropyl ether	0.0098	0.0010	mg/L	0.01000		98	70-130			
Ethyl tertiary-butyl ether	0.0103	0.0010	mg/L	0.01000		103	70-130			
Ethylbenzene	0.0095	0.0010	mg/L	0.01000		95	70-130			
Hexachlorobutadiene	0.0104	0.0006	mg/L	0.01000		104	70-130			
Hexachloroethane	0.0090	0.0010	mg/L	0.01000		90	70-130			
Isopropylbenzene	0.0101	0.0010	mg/L	0.01000		101	70-130			
Methyl tert-Butyl Ether	0.0103	0.0010	mg/L	0.01000		103	70-130			
Methylene Chloride	0.0099	0.0020	mg/L	0.01000		99	70-130			
Naphthalene	0.0092	0.0010	mg/L	0.01000		92	70-130			
n-Butylbenzene	0.0100	0.0010	mg/L	0.01000		100	70-130			
n-Propylbenzene	0.0099	0.0010	mg/L	0.01000		99	70-130			
sec-Butylbenzene	0.0099	0.0010	mg/L	0.01000		99	70-130			
Styrene	0.0092	0.0010	mg/L	0.01000		92	70-130			
tert-Butylbenzene	0.0101	0.0010	mg/L	0.01000		101	70-130			
Tertiary-amyl methyl ether	0.0092	0.0010	mg/L	0.01000		92	70-130			
Tetrachloroethene	0.0113	0.0010	mg/L	0.01000		113	70-130			
Tetrahydrofuran	0.0098	0.0050	mg/L	0.01000		98	70-130			
Toluene	0.0097	0.0010	mg/L	0.01000		97	70-130			
trans-1,2-Dichloroethene	0.0102	0.0010	mg/L	0.01000		102	70-130			
trans-1,3-Dichloropropene	0.0087	0.0004	mg/L	0.01000		87	70-130			
Trichloroethene	0.0100	0.0010	mg/L	0.01000		100	70-130			
Trichlorofluoromethane	0.0106	0.0010	mg/L	0.01000		106	70-130			
Vinyl Acetate	0.0079	0.0050	mg/L	0.01000		79	70-130			
Vinyl Chloride	0.0104	0.0010	mg/L	0.01000		104	70-130			
Xylene O	0.0096	0.0010	mg/L	0.01000		96	70-130			
Xylene P,M	0.0197	0.0020	mg/L	0.02000		99	70-130			
Surrogate: 1,2-Dichloroethane-d4	*0.0256*		mg/L	*0.02500*		*103*	*70-130*			
Surrogate: 4-Bromofluorobenzene	*0.0248*		mg/L	*0.02500*		*99*	*70-130*			
Surrogate: Dibromofluoromethane	*0.0256*		mg/L	*0.02500*		*102*	*70-130*			
Surrogate: Toluene-d8	*0.0244*		mg/L	*0.02500*		*97*	*70-130*			
LCS Dup										
1,1,1,2-Tetrachloroethane	0.0101	0.0010	mg/L	0.01000		101	70-130	2	25	
1,1,1-Trichloroethane	0.0099	0.0010	mg/L	0.01000		99	70-130	2	25	
1,1,2,2-Tetrachloroethane	0.0093	0.0005	mg/L	0.01000		93	70-130	1	25	
1,1,2-Trichloroethane	0.0098	0.0010	mg/L	0.01000		98	70-130	0.2	25	
1,1-Dichloroethane	0.0099	0.0010	mg/L	0.01000		99	70-130	0.2	25	
1,1-Dichloroethene	0.0104	0.0010	mg/L	0.01000		104	70-130	9	25	
1,1-Dichloropropene	0.0098	0.0020	mg/L	0.01000		98	70-130	0.5	25	

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: 642 Allens Ave

ESS Laboratory Work Order: 22K0897

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
8260B Volatile Organic Compounds										
Batch DK22831 - 5030B										
1,2,3-Trichlorobenzene	0.0096	0.0010	mg/L	0.01000		96	70-130	2	25	
1,2,3-Trichloropropane	0.0097	0.0010	mg/L	0.01000		97	70-130	4	25	
1,2,4-Trichlorobenzene	0.0097	0.0010	mg/L	0.01000		97	70-130	1	25	
1,2,4-Trimethylbenzene	0.0100	0.0010	mg/L	0.01000		100	70-130	0.2	25	
1,2-Dibromo-3-Chloropropane	0.0090	0.0050	mg/L	0.01000		90	70-130	0.9	25	
1,2-Dibromoethane	0.0099	0.0010	mg/L	0.01000		99	70-130	0.8	25	
1,2-Dichlorobenzene	0.0097	0.0010	mg/L	0.01000		97	70-130	0.5	25	
1,2-Dichloroethane	0.0097	0.0010	mg/L	0.01000		97	70-130	0.3	25	
1,2-Dichloropropane	0.0097	0.0010	mg/L	0.01000		97	70-130	0.1	25	
1,3,5-Trimethylbenzene	0.0105	0.0010	mg/L	0.01000		105	70-130	0.9	25	
1,3-Dichlorobenzene	0.0098	0.0010	mg/L	0.01000		98	70-130	0.8	25	
1,3-Dichloropropane	0.0096	0.0010	mg/L	0.01000		97	70-130	0.1	25	
1,4-Dichlorobenzene	0.0098	0.0010	mg/L	0.01000		98	70-130	0.9	25	
1,4-Dioxane - Screen	0.191	0.500	mg/L	0.2000		96	0-332	4	200	
1-Chlorohexane	0.0097	0.0010	mg/L	0.01000		97	70-130	2	25	
2,2-Dichloropropane	0.0096	0.0010	mg/L	0.01000		96	70-130	1	25	
2-Butanone	0.0521	0.0100	mg/L	0.05000		104	70-130	4	25	
2-Chlorotoluene	0.0101	0.0010	mg/L	0.01000		101	70-130	0.5	25	
2-Hexanone	0.0479	0.0100	mg/L	0.05000		96	70-130	3	25	
4-Chlorotoluene	0.0100	0.0010	mg/L	0.01000		100	70-130	0	25	
4-Isopropyltoluene	0.0096	0.0010	mg/L	0.01000		96	70-130	0.4	25	
4-Methyl-2-Pentanone	0.0470	0.0100	mg/L	0.05000		94	70-130	3	25	
Acetone	0.0528	0.0100	mg/L	0.05000		106	70-130	4	25	
Benzene	0.0097	0.0010	mg/L	0.01000		97	70-130	0.9	25	
Bromobenzene	0.0099	0.0020	mg/L	0.01000		99	70-130	0.7	25	
Bromochloromethane	0.0104	0.0010	mg/L	0.01000		104	70-130	2	25	
Bromodichloromethane	0.0100	0.0006	mg/L	0.01000		100	70-130	5	25	
Bromoform	0.0100	0.0010	mg/L	0.01000		100	70-130	2	25	
Bromomethane	0.0100	0.0020	mg/L	0.01000		100	70-130	0.7	25	
Carbon Disulfide	0.0104	0.0010	mg/L	0.01000		104	70-130	2	25	
Carbon Tetrachloride	0.0100	0.0010	mg/L	0.01000		100	70-130	1	25	
Chlorobenzene	0.0094	0.0010	mg/L	0.01000		94	70-130	0.6	25	
Chloroethane	0.0104	0.0020	mg/L	0.01000		104	70-130	0.3	25	
Chloroform	0.0098	0.0010	mg/L	0.01000		98	70-130	0	25	
Chloromethane	0.0096	0.0020	mg/L	0.01000		96	70-130	0.3	25	
cis-1,2-Dichloroethene	0.0102	0.0010	mg/L	0.01000		102	70-130	1	25	
cis-1,3-Dichloropropene	0.0093	0.0004	mg/L	0.01000		93	70-130	0.4	25	
Dibromochloromethane	0.0101	0.0010	mg/L	0.01000		101	70-130	0.9	25	
Dibromomethane	0.0098	0.0010	mg/L	0.01000		98	70-130	2	25	
Dichlorodifluoromethane	0.0086	0.0020	mg/L	0.01000		86	70-130	4	25	
Diethyl Ether	0.0103	0.0010	mg/L	0.01000		103	70-130	5	25	
Di-isopropyl ether	0.0099	0.0010	mg/L	0.01000		99	70-130	1	25	
Ethyl tertiary-butyl ether	0.0102	0.0010	mg/L	0.01000		102	70-130	1	25	
Ethylbenzene	0.0097	0.0010	mg/L	0.01000		97	70-130	2	25	
Hexachlorobutadiene	0.0100	0.0006	mg/L	0.01000		100	70-130	3	25	

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: 642 Allens Ave

ESS Laboratory Work Order: 22K0897

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
8260B Volatile Organic Compounds										
Batch DK22831 - 5030B										
Hexachloroethane	0.0092	0.0010	mg/L	0.01000		92	70-130	1	25	
Isopropylbenzene	0.0103	0.0010	mg/L	0.01000		103	70-130	2	25	
Methyl tert-Butyl Ether	0.0103	0.0010	mg/L	0.01000		103	70-130	0.2	25	
Methylene Chloride	0.0100	0.0020	mg/L	0.01000		100	70-130	1	25	
Naphthalene	0.0091	0.0010	mg/L	0.01000		91	70-130	2	25	
n-Butylbenzene	0.0099	0.0010	mg/L	0.01000		99	70-130	0.3	25	
n-Propylbenzene	0.0100	0.0010	mg/L	0.01000		100	70-130	0.9	25	
sec-Butylbenzene	0.0099	0.0010	mg/L	0.01000		99	70-130	0.1	25	
Styrene	0.0092	0.0010	mg/L	0.01000		92	70-130	0.9	25	
tert-Butylbenzene	0.0102	0.0010	mg/L	0.01000		102	70-130	0.7	25	
Tertiary-amyl methyl ether	0.0090	0.0010	mg/L	0.01000		90	70-130	2	25	
Tetrachloroethene	0.0114	0.0010	mg/L	0.01000		114	70-130	0.5	25	
Tetrahydrofuran	0.0087	0.0050	mg/L	0.01000		87	70-130	11	25	
Toluene	0.0096	0.0010	mg/L	0.01000		97	70-130	0.1	25	
trans-1,2-Dichloroethene	0.0106	0.0010	mg/L	0.01000		106	70-130	3	25	
trans-1,3-Dichloropropene	0.0088	0.0004	mg/L	0.01000		88	70-130	1	25	
Trichloroethene	0.0100	0.0010	mg/L	0.01000		100	70-130	0	25	
Trichlorofluoromethane	0.0109	0.0010	mg/L	0.01000		109	70-130	3	25	
Vinyl Acetate	0.0078	0.0050	mg/L	0.01000		78	70-130	0.5	25	
Vinyl Chloride	0.0105	0.0010	mg/L	0.01000		105	70-130	1	25	
Xylene O	0.0099	0.0010	mg/L	0.01000		99	70-130	2	25	
Xylene P,M	0.0198	0.0020	mg/L	0.02000		99	70-130	0.6	25	
Surrogate: 1,2-Dichloroethane-d4	*0.0254*		mg/L	*0.02500*		*102*	*70-130*			
Surrogate: 4-Bromofluorobenzene	*0.0250*		mg/L	*0.02500*		*100*	*70-130*			
Surrogate: Dibromofluoromethane	*0.0254*		mg/L	*0.02500*		*101*	*70-130*			
Surrogate: Toluene-d8	*0.0245*		mg/L	*0.02500*		*98*	*70-130*			

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: 642 Allens Ave

ESS Laboratory Work Order: 22K0897

Notes and Definitions

U	Analyte included in the analysis, but not detected
ND	Analyte NOT DETECTED at or above the MRL (LOQ), LOD for DoD Reports, MDL for J-Flagged Analytes
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference
MDL	Method Detection Limit
MRL	Method Reporting Limit
LOD	Limit of Detection
LOQ	Limit of Quantitation
DL	Detection Limit
I/V	Initial Volume
F/V	Final Volume
§	Subcontracted analysis; see attached report
1	Range result excludes concentrations of surrogates and/or internal standards eluting in that range.
2	Range result excludes concentrations of target analytes eluting in that range.
3	Range result excludes the concentration of the C9-C10 aromatic range.
Avg	Results reported as a mathematical average.
NR	No Recovery
[CALC]	Calculated Analyte
SUB	Subcontracted analysis; see attached report
RL	Reporting Limit
EDL	Estimated Detection Limit
MF	Membrane Filtration
MPN	Most Probable Number
TNTC	Too numerous to Count
CFU	Colony Forming Units

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: 642 Allens Ave

ESS Laboratory Work Order: 22K0897

ESS LABORATORY CERTIFICATIONS AND ACCREDITATIONS

ENVIRONMENTAL

Rhode Island Potable and Non Potable Water: LAI00179
http://www.health.ri.gov/find/labs/analytical/ESS.pdf

Connecticut Potable and Non Potable Water, Solid and Hazardous Waste: PH-0750
http://www.ct.gov/dph/lib/dph/environmental_health/environmental_laboratories/pdf/OutofStateCommercialLaboratories.pdf

Maine Potable and Non Potable Water, and Solid and Hazardous Waste: RI00002
http://www.maine.gov/dhhs/mecdc/environmental-health/dwp/partners/labCert.shtml

Massachusetts Potable and Non Potable Water: M-RI002
http://public.dep.state.ma.us/Labcert/Labcert.aspx

New Hampshire (NELAP accredited) Potable and Non Potable Water, Solid and Hazardous Waste: 2424
http://des.nh.gov/organization/divisions/water/dwgb/nhelap/index.htm

New York (NELAP accredited) Non Potable Water, Solid and Hazardous Waste: 11313
http://www.wadsworth.org/labcert/elap/comm.html

New Jersey (NELAP accredited) Non Potable Water, Solid and Hazardous Waste: RI006
http://datamine2.state.nj.us/DEP_OPRA/OpraMain/pi_main?mode=pi_by_site&sort_order=PI_NAMEA&Select+a+Site:=58715

Pennsylvania: 68-01752
http://www.dep.pa.gov/Business/OtherPrograms/Labs/Pages/Laboratory-Accreditation-Program.aspx

ESS Laboratory Sample and Cooler Receipt Checklist

Client: GZA - Providence, RI - GZA/KPB

Shipped/Delivered Via: Client

ESS Project ID: 22K0897
Date Received: 11/23/2022
Project Due Date: 12/2/2022
Days for Project: 5 Day

1. Air bill manifest present? No
   Air No.: NA
2. Were custody seals present? No
3. Is radiation count <100 CPM? Yes
4. Is a Cooler Present? Yes
   Temp: 4.7 Iced with: Ice
5. Was COC signed and dated by client? Yes
6. Does COC match bottles? Yes
7. Is COC complete and correct? Yes
8. Were samples received intact? Yes
9. **Were labs informed about short holds & rushes?** Yes / No / NA
10. Were any analyses received outside of hold time? Yes / No

11. Any Subcontracting needed? Yes / No
    ESS Sample IDs:
    Analysis:
    TAT:
12. Were VOAs received? Yes / No
    a. Air bubbles in aqueous VOAs? Yes / No
    b. Does methanol cover soil completely? Yes / No / NA
13. Are the samples properly preserved? Yes / No
    a. If metals preserved upon receipt: Date: Time: By/Acid Lot#:
    b. Low Level VOA vials frozen: Date: Time: By:

Sample Receiving Notes:

14. Was there a need to contact Project Manager? Yes / No
    a. Was there a need to contact the client? Yes / No
    Who was contacted? Date: Time: By:

Resolution:

Sample Number	Container ID	Proper Container	Air Bubbles Present	Sufficient Volume	Container Type	Preservative	Record pH (Cyanide and 608 Pesticides)
1	369930	Yes	No	Yes	VOA Vial	HCl	
1	369931	Yes	No	Yes	VOA Vial	HCl	
1	369932	Yes	No	Yes	VOA Vial	HCl	
2	369933	Yes	No	Yes	VOA Vial	HCl	
2	369934	Yes	No	Yes	VOA Vial	HCl	
2	369935	Yes	No	Yes	VOA Vial	HCl	
3	369936	Yes	No	Yes	VOA Vial	HCl	
3	369937	Yes	No	Yes	VOA Vial	HCl	
3	369938	Yes	No	Yes	VOA Vial	HCl	
4	369939	Yes	No	Yes	VOA Vial	HCl	
4	369940	Yes	No	Yes	VOA Vial	HCl	
4	369941	Yes	No	Yes	VOA Vial	HCl	
5	369942	Yes	No	Yes	VOA Vial	HCl	
5	369943	Yes	No	Yes	VOA Vial	HCl	
5	369944	Yes	No	Yes	VOA Vial	HCl	
6	369947	Yes	No	Yes	VOA Vial	HCl	

ESS Laboratory Sample and Cooler Receipt Checklist

Client: GZA - Providence, RI - GZA/KPB

ESS Project ID: 22K0897
Date Received: 11/23/2022

2nd Review

Were all containers scanned into storage/lab? Initials TD

Are barcode labels on correct containers?	Yes / No
Are all Flashpoint stickers attached/container ID # circled?	Yes / No / NA
Are all Hex Chrome stickers attached?	Yes / No / NA
Are all QC stickers attached?	Yes / No / NA
Are VOA stickers attached if bubbles noted?	Yes / No / NA

Completed By: Taylor Davis Date & Time: 11/23/22 1730

Reviewed By: DLH Date & Time: 11/23/22 1829

CHAIN OF CUSTODY

185 Frances Avenue
Cranston, RI 02910
Phone: 401-461-7181
Fax: 401-461-4486
www.esslaboratory.com

ESS Lab # 22608897 | Page 1 of 1

Turn Time (Days): ☐ >5 ☑ 5 ☐ 4 ☐ 3 ☐ 2 ☐ 1 ☐ Same Day

Regulatory State: RI Criteria:

Is this project for any of the following?: ☐ CT RCP ☐ MA MCP ☐ RGP ☐ Permit ☐ 401 WQ

ELECTRONIC DELIVERABLES (Final Reports are PDF)

☑ Limit Checker ☐ State Forms ☐ EQuIS
☑ Excel ☐ State Upload ☐ Enviro Data
☐ CLP-Like Package ☑ Other (Specify) → PDF

CLIENT INFORMATION

Client: GZA
Address: 188 Valley St #300
Providence RI 02909
Phone: 401-421-4140
Email Distribution List: Margaret.Kilpatrick@gza.com; Elizabeth.Lux@gza.com

PROJECT INFORMATION

Project Name: 642 Allens Ave
Project Location: 642 Allens Ave Providence RI
Project Number: 33554.01
Project Manager: Margaret Kilpatrick
Bill to:
PO#:
Quote#:

Client acknowledges that sampling is compliant with all EPA / State regulatory programs

REQUESTED ANALYSES

ESS Lab ID	Collection Date	Collection Time	Sample Type	Sample Matrix	Sample ID	VOC via EPA Method 8260D	Total Number of Bottles
1	11/23/22	1151	Grab	GW	RCA-1LR	X	3
2	↓	1100	↓	↓	GZ-501S	X	3
3		1124			GZ-301D	X	3
4		1024			GZ-502S	X	3
5		1250			RCA-15	X	3
6					Trip Blank	X	1
						U	16
						7	
						2	

Container Type: AC-Air Cassette AG-Amber Glass B-BOD Bottle C-Cubitainer J-Jar O-Other P-Poly S-Sterile V-Vial

Container Volume: 1-100 mL 2-2.5 gal 3-250 mL 4-300 mL 5-500 mL 6-1L 7-VOA 8-2 oz 9-4 oz 10-8 oz 11-Other*

Preservation Code: 1-Non Preserved 2-HCl 3-H2SO4 4-HNO3 5-NaOH 6-Methanol 7-Na2S2O3 8-ZnAce, NaOH 9-NH4Cl 10-DI H2O 11-Other*

Sampled by: Anders Braaten / Ryan Fritz

Chain needs to be filled out neatly and completely for on time delivery.

Laboratory Use Only
Cooler Temperature (°C): 4.7 ice

Comments: * Please specify "Other" preservative and containers types in this space
National Grid rates apply

All samples submitted are subject to ESS Laboratory's payment terms and conditions.

Dissolved Filtration ☐ Lab Filter

Relinquished by (Signature)	Date	Time	Received by (Signature)	Relinquished by (Signature)	Date	Time	Received by (Signature)
	11/23/22	1458					

Relinquished by (Signature)	Date	Time	Received by (Signature)	Relinquished by (Signature)	Date	Time	Received by (Signature)

CERTIFICATE OF ANALYSIS

Meg Kilpatrick
GZA GeoEnvironmental, Inc.
188 Valley Street
Providence, RI 02909

RE: 642 Allens Ave (03.0033554.01)
ESS Laboratory Work Order Number: 22K0898

This signed Certificate of Analysis is our approved release of your analytical results. These results are only representative of sample aliquots received at the laboratory. ESS Laboratory expects its clients to follow all regulatory sampling guidelines. Beginning with this page, the entire report has been paginated. This report should not be copied except in full without the approval of the laboratory. Samples will be disposed of thirty days after the final report has been delivered. If you have any questions or concerns, please feel free to call our Customer Service Department.

Laurel Stoddard
Laboratory Director

REVIEWED
By ESS Laboratory at 1:55 pm, Dec 02, 2022

Analytical Summary
The project as described above has been analyzed in accordance with the ESS Quality Assurance Plan. This plan utilizes the following methodologies: US EPA SW-846, US EPA Methods for Chemical Analysis of Water and Wastes per 40 CFR Part 136, APHA Standard Methods for the Examination of Water and Wastewater, American Society for Testing and Materials (ASTM), and other recognized methodologies. The analyses with these noted observations are in conformance to the Quality Assurance Plan. In chromatographic analysis, manual integration is frequently used instead of automated integration because it produces more accurate results.

The test results present in this report are in compliance with TNI and relative state standards, and/or client Quality Assurance Project Plans (QAPP). The laboratory has reviewed the following: Sample Preservations, Hold Times, Initial Calibrations, Continuing Calibrations, Method Blanks, Blank Spikes, Blank Spike Duplicates, Duplicates, Matrix Spikes, Matrix Spike Duplicates, Surrogates and Internal Standards. Any results which were found to be outside of the recommended ranges stated in our SOPs will be noted in the Project Narrative.

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: 642 Allens Ave

ESS Laboratory Work Order: 22K0898

SAMPLE RECEIPT

The following samples were received on November 23, 2022 for the analyses specified on the enclosed Chain of Custody Record.

Lab Number	Sample Name	Matrix	Analysis
22K0898-01	GZ-319D	Ground Water	8260B
22K0898-02	VHB-1	Ground Water	8260B
22K0898-03	RCA-1	Ground Water	8260B
22K0898-04	RCA-27	Ground Water	8260B
22K0898-05	GZ-500S	Ground Water	8260B
22K0898-06	GZ-309D	Ground Water	8260B
22K0898-07	GZ-304D	Ground Water	8260B
22K0898-08	VHB-20	Ground Water	8260B
22K0898-09	RCA-36	Ground Water	8260B
22K0898-10	RCA-31	Ground Water	8260B
22K0898-11	GZ-500D	Ground Water	8260B
22K0898-12	BD-112222	Ground Water	8260B
22K0898-13	Trip Blank	Aqueous	8260B

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: 642 Allens Ave

ESS Laboratory Work Order: 22K0898

PROJECT NARRATIVE

No unusual observations noted.

End of Project Narrative.

DATA USABILITY LINKS

To ensure you are viewing the most current version of the documents below, please clear your internet cookies for www.ESSLaboratory.com. Consult your IT Support personnel for information on how to clear your internet cookies.

Definitions of Quality Control Parameters

Semivolatile Organics Internal Standard Information

Semivolatile Organics Surrogate Information

Volatile Organics Internal Standard Information

Volatile Organics Surrogate Information

EPH and VPH Alkane Lists

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: 642 Allens Ave

ESS Laboratory Work Order: 22K0898

CURRENT SW-846 METHODOLOGY VERSIONS

Analytical Methods

1010A - Flashpoint
6010C - ICP
6020A - ICP MS
7010 - Graphite Furnace
7196A - Hexavalent Chromium
7470A - Aqueous Mercury
7471B - Solid Mercury
8011 - EDB/DBCP/TCP
8015C - GRO/DRO
8081B - Pesticides
8082A - PCB
8100M - TPH
8151A - Herbicides
8260B - VOA
8270D - SVOA
8270D SIM - SVOA Low Level
9014 - Cyanide
9038 - Sulfate
9040C - Aqueous pH
9045D - Solid pH (Corrosivity)
9050A - Specific Conductance
9056A - Anions (IC)
9060A - TOC
9095B - Paint Filter
MADEP 04-1.1 - EPH
MADEP 18-2.1 - VPH

Prep Methods

3005A - Aqueous ICP Digestion
3020A - Aqueous Graphite Furnace / ICP MS Digestion
3050B - Solid ICP / Graphite Furnace / ICP MS Digestion
3060A - Solid Hexavalent Chromium Digestion
3510C - Separatory Funnel Extraction
3520C - Liquid / Liquid Extraction
3540C - Manual Soxhlet Extraction
3541 - Automated Soxhlet Extraction
3546 - Microwave Extraction
3580A - Waste Dilution
5030B - Aqueous Purge and Trap
5030C - Aqueous Purge and Trap
5035A - Solid Purge and Trap

SW846 Reactivity Methods 7.3.3.2 (Reactive Cyanide) and 7.3.4.1 (Reactive Sulfide) have been withdrawn by EPA. These methods are reported per client request and are not NELAP accredited.

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: 642 Allens Ave
Client Sample ID: GZ-319D
Date Sampled: 11/22/22 11:03
Percent Solids: N/A
Initial Volume: 5ml
Final Volume: 5ml
Extraction Method: 5030B

ESS Laboratory Work Order: 22K0898
ESS Laboratory Sample ID: 22K0898-01
Sample Matrix: Ground Water
Units: mg/L
Analyst: MD

8260B Volatile Organic Compounds

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
1,1,1,2-Tetrachloroethane	ND (0.0010)		8260B		1	11/29/22 5:00	D2K0504	DK22831
1,1,1-Trichloroethane	ND (0.0010)		8260B		1	11/29/22 5:00	D2K0504	DK22831
1,1,2,2-Tetrachloroethane	ND (0.0005)		8260B		1	11/29/22 5:00	D2K0504	DK22831
1,1,2-Trichloroethane	ND (0.0010)		8260B		1	11/29/22 5:00	D2K0504	DK22831
1,1-Dichloroethane	ND (0.0010)		8260B		1	11/29/22 5:00	D2K0504	DK22831
1,1-Dichloroethene	ND (0.0010)		8260B		1	11/29/22 5:00	D2K0504	DK22831
1,1-Dichloropropene	ND (0.0020)		8260B		1	11/29/22 5:00	D2K0504	DK22831
1,2,3-Trichlorobenzene	ND (0.0010)		8260B		1	11/29/22 5:00	D2K0504	DK22831
1,2,3-Trichloropropane	ND (0.0010)		8260B		1	11/29/22 5:00	D2K0504	DK22831
1,2,4-Trichlorobenzene	ND (0.0010)		8260B		1	11/29/22 5:00	D2K0504	DK22831
1,2,4-Trimethylbenzene	ND (0.0010)		8260B		1	11/29/22 5:00	D2K0504	DK22831
1,2-Dibromo-3-Chloropropane	ND (0.0050)		8260B		1	11/29/22 5:00	D2K0504	DK22831
1,2-Dibromoethane	ND (0.0010)		8260B		1	11/29/22 5:00	D2K0504	DK22831
1,2-Dichlorobenzene	ND (0.0010)		8260B		1	11/29/22 5:00	D2K0504	DK22831
1,2-Dichloroethane	ND (0.0010)		8260B		1	11/29/22 5:00	D2K0504	DK22831
1,2-Dichloropropane	ND (0.0010)		8260B		1	11/29/22 5:00	D2K0504	DK22831
1,3,5-Trimethylbenzene	ND (0.0010)		8260B		1	11/29/22 5:00	D2K0504	DK22831
1,3-Dichlorobenzene	ND (0.0010)		8260B		1	11/29/22 5:00	D2K0504	DK22831
1,3-Dichloropropane	ND (0.0010)		8260B		1	11/29/22 5:00	D2K0504	DK22831
1,4-Dichlorobenzene	ND (0.0010)		8260B		1	11/29/22 5:00	D2K0504	DK22831
1,4-Dioxane - Screen	ND (0.500)		8260B		1	11/29/22 5:00	D2K0504	DK22831
1-Chlorohexane	ND (0.0010)		8260B		1	11/29/22 5:00	D2K0504	DK22831
2,2-Dichloropropane	ND (0.0010)		8260B		1	11/29/22 5:00	D2K0504	DK22831
2-Butanone	ND (0.0100)		8260B		1	11/29/22 5:00	D2K0504	DK22831
2-Chlorotoluene	ND (0.0010)		8260B		1	11/29/22 5:00	D2K0504	DK22831
2-Hexanone	ND (0.0100)		8260B		1	11/29/22 5:00	D2K0504	DK22831
4-Chlorotoluene	ND (0.0010)		8260B		1	11/29/22 5:00	D2K0504	DK22831
4-Isopropyltoluene	ND (0.0010)		8260B		1	11/29/22 5:00	D2K0504	DK22831
4-Methyl-2-Pentanone	ND (0.0100)		8260B		1	11/29/22 5:00	D2K0504	DK22831
Acetone	ND (0.0100)		8260B		1	11/29/22 5:00	D2K0504	DK22831
Benzene	**0.0058** (0.0010)		8260B		1	11/29/22 5:00	D2K0504	DK22831
Bromobenzene	ND (0.0020)		8260B		1	11/29/22 5:00	D2K0504	DK22831

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: 642 Allens Ave
Client Sample ID: GZ-319D
Date Sampled: 11/22/22 11:03
Percent Solids: N/A
Initial Volume: 5ml
Final Volume: 5ml
Extraction Method: 5030B

ESS Laboratory Work Order: 22K0898
ESS Laboratory Sample ID: 22K0898-01
Sample Matrix: Ground Water
Units: mg/L
Analyst: MD

8260B Volatile Organic Compounds

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
Bromochloromethane	ND (0.0010)		8260B		1	11/29/22 5:00	D2K0504	DK22831
Bromodichloromethane	ND (0.0006)		8260B		1	11/29/22 5:00	D2K0504	DK22831
Bromoform	ND (0.0010)		8260B		1	11/29/22 5:00	D2K0504	DK22831
Bromomethane	ND (0.0020)		8260B		1	11/29/22 5:00	D2K0504	DK22831
Carbon Disulfide	ND (0.0010)		8260B		1	11/29/22 5:00	D2K0504	DK22831
Carbon Tetrachloride	ND (0.0010)		8260B		1	11/29/22 5:00	D2K0504	DK22831
Chlorobenzene	ND (0.0010)		8260B		1	11/29/22 5:00	D2K0504	DK22831
Chloroethane	ND (0.0020)		8260B		1	11/29/22 5:00	D2K0504	DK22831
Chloroform	ND (0.0010)		8260B		1	11/29/22 5:00	D2K0504	DK22831
Chloromethane	ND (0.0020)		8260B		1	11/29/22 5:00	D2K0504	DK22831
cis-1,2-Dichloroethene	ND (0.0010)		8260B		1	11/29/22 5:00	D2K0504	DK22831
cis-1,3-Dichloropropene	ND (0.0004)		8260B		1	11/29/22 5:00	D2K0504	DK22831
Dibromochloromethane	ND (0.0010)		8260B		1	11/29/22 5:00	D2K0504	DK22831
Dibromomethane	ND (0.0010)		8260B		1	11/29/22 5:00	D2K0504	DK22831
Dichlorodifluoromethane	ND (0.0020)		8260B		1	11/29/22 5:00	D2K0504	DK22831
Diethyl Ether	ND (0.0010)		8260B		1	11/29/22 5:00	D2K0504	DK22831
Di-isopropyl ether	ND (0.0010)		8260B		1	11/29/22 5:00	D2K0504	DK22831
Ethyl tertiary-butyl ether	ND (0.0010)		8260B		1	11/29/22 5:00	D2K0504	DK22831
Ethylbenzene	ND (0.0010)		8260B		1	11/29/22 5:00	D2K0504	DK22831
Hexachlorobutadiene	ND (0.0006)		8260B		1	11/29/22 5:00	D2K0504	DK22831
Hexachloroethane	ND (0.0010)		8260B		1	11/29/22 5:00	D2K0504	DK22831
Isopropylbenzene	**0.0015** (0.0010)		8260B		1	11/29/22 5:00	D2K0504	DK22831
Methyl tert-Butyl Ether	ND (0.0010)		8260B		1	11/29/22 5:00	D2K0504	DK22831
Methylene Chloride	ND (0.0020)		8260B		1	11/29/22 5:00	D2K0504	DK22831
Naphthalene	ND (0.0010)		8260B		1	11/29/22 5:00	D2K0504	DK22831
n-Butylbenzene	ND (0.0010)		8260B		1	11/29/22 5:00	D2K0504	DK22831
n-Propylbenzene	ND (0.0010)		8260B		1	11/29/22 5:00	D2K0504	DK22831
sec-Butylbenzene	ND (0.0010)		8260B		1	11/29/22 5:00	D2K0504	DK22831
Styrene	**0.0017** (0.0010)		8260B		1	11/29/22 5:00	D2K0504	DK22831
tert-Butylbenzene	ND (0.0010)		8260B		1	11/29/22 5:00	D2K0504	DK22831
Tertiary-amyl methyl ether	ND (0.0010)		8260B		1	11/29/22 5:00	D2K0504	DK22831
Tetrachloroethene	ND (0.0010)		8260B		1	11/29/22 5:00	D2K0504	DK22831

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: 642 Allens Ave
Client Sample ID: GZ-319D
Date Sampled: 11/22/22 11:03
Percent Solids: N/A
Initial Volume: 5ml
Final Volume: 5ml
Extraction Method: 5030B

ESS Laboratory Work Order: 22K0898
ESS Laboratory Sample ID: 22K0898-01
Sample Matrix: Ground Water
Units: mg/L
Analyst: MD

8260B Volatile Organic Compounds

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
Tetrahydrofuran	ND (0.0050)		8260B		1	11/29/22 5:00	D2K0504	DK22831
Toluene	ND (0.0010)		8260B		1	11/29/22 5:00	D2K0504	DK22831
trans-1,2-Dichloroethene	ND (0.0010)		8260B		1	11/29/22 5:00	D2K0504	DK22831
trans-1,3-Dichloropropene	ND (0.0004)		8260B		1	11/29/22 5:00	D2K0504	DK22831
Trichloroethene	ND (0.0010)		8260B		1	11/29/22 5:00	D2K0504	DK22831
Trichlorofluoromethane	ND (0.0010)		8260B		1	11/29/22 5:00	D2K0504	DK22831
Vinyl Acetate	ND (0.0050)		8260B		1	11/29/22 5:00	D2K0504	DK22831
Vinyl Chloride	ND (0.0010)		8260B		1	11/29/22 5:00	D2K0504	DK22831
Xylene O	ND (0.0010)		8260B		1	11/29/22 5:00	D2K0504	DK22831
Xylene P,M	ND (0.0020)		8260B		1	11/29/22 5:00	D2K0504	DK22831
Xylenes (Total)	ND (0.00200)		8260B		1	11/29/22 5:00		[CALC]

	%Recovery	Qualifier	Limits
Surrogate: 1,2-Dichloroethane-d4	*103 %*		*70-130*
Surrogate: 4-Bromofluorobenzene	*99 %*		*70-130*
Surrogate: Dibromofluoromethane	*99 %*		*70-130*
Surrogate: Toluene-d8	*102 %*		*70-130*

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: 642 Allens Ave
Client Sample ID: VHB-1
Date Sampled: 11/22/22 12:18
Percent Solids: N/A
Initial Volume: 5ml
Final Volume: 5ml
Extraction Method: 5030B

ESS Laboratory Work Order: 22K0898
ESS Laboratory Sample ID: 22K0898-02
Sample Matrix: Ground Water
Units: mg/L
Analyst: MD

8260B Volatile Organic Compounds

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
1,1,1,2-Tetrachloroethane	ND (0.0010)		8260B		1	11/29/22 4:34	D2K0504	DK22831
1,1,1-Trichloroethane	ND (0.0010)		8260B		1	11/29/22 4:34	D2K0504	DK22831
1,1,2,2-Tetrachloroethane	ND (0.0005)		8260B		1	11/29/22 4:34	D2K0504	DK22831
1,1,2-Trichloroethane	ND (0.0010)		8260B		1	11/29/22 4:34	D2K0504	DK22831
1,1-Dichloroethane	ND (0.0010)		8260B		1	11/29/22 4:34	D2K0504	DK22831
1,1-Dichloroethene	ND (0.0010)		8260B		1	11/29/22 4:34	D2K0504	DK22831
1,1-Dichloropropene	ND (0.0020)		8260B		1	11/29/22 4:34	D2K0504	DK22831
1,2,3-Trichlorobenzene	ND (0.0010)		8260B		1	11/29/22 4:34	D2K0504	DK22831
1,2,3-Trichloropropane	ND (0.0010)		8260B		1	11/29/22 4:34	D2K0504	DK22831
1,2,4-Trichlorobenzene	ND (0.0010)		8260B		1	11/29/22 4:34	D2K0504	DK22831
1,2,4-Trimethylbenzene	ND (0.0010)		8260B		1	11/29/22 4:34	D2K0504	DK22831
1,2-Dibromo-3-Chloropropane	ND (0.0050)		8260B		1	11/29/22 4:34	D2K0504	DK22831
1,2-Dibromoethane	ND (0.0010)		8260B		1	11/29/22 4:34	D2K0504	DK22831
1,2-Dichlorobenzene	ND (0.0010)		8260B		1	11/29/22 4:34	D2K0504	DK22831
1,2-Dichloroethane	ND (0.0010)		8260B		1	11/29/22 4:34	D2K0504	DK22831
1,2-Dichloropropane	ND (0.0010)		8260B		1	11/29/22 4:34	D2K0504	DK22831
1,3,5-Trimethylbenzene	ND (0.0010)		8260B		1	11/29/22 4:34	D2K0504	DK22831
1,3-Dichlorobenzene	ND (0.0010)		8260B		1	11/29/22 4:34	D2K0504	DK22831
1,3-Dichloropropane	ND (0.0010)		8260B		1	11/29/22 4:34	D2K0504	DK22831
1,4-Dichlorobenzene	ND (0.0010)		8260B		1	11/29/22 4:34	D2K0504	DK22831
1,4-Dioxane - Screen	ND (0.500)		8260B		1	11/29/22 4:34	D2K0504	DK22831
1-Chlorohexane	ND (0.0010)		8260B		1	11/29/22 4:34	D2K0504	DK22831
2,2-Dichloropropane	ND (0.0010)		8260B		1	11/29/22 4:34	D2K0504	DK22831
2-Butanone	ND (0.0100)		8260B		1	11/29/22 4:34	D2K0504	DK22831
2-Chlorotoluene	ND (0.0010)		8260B		1	11/29/22 4:34	D2K0504	DK22831
2-Hexanone	ND (0.0100)		8260B		1	11/29/22 4:34	D2K0504	DK22831
4-Chlorotoluene	ND (0.0010)		8260B		1	11/29/22 4:34	D2K0504	DK22831
4-Isopropyltoluene	ND (0.0010)		8260B		1	11/29/22 4:34	D2K0504	DK22831
4-Methyl-2-Pentanone	ND (0.0100)		8260B		1	11/29/22 4:34	D2K0504	DK22831
Acetone	ND (0.0100)		8260B		1	11/29/22 4:34	D2K0504	DK22831
Benzene	ND (0.0010)		8260B		1	11/29/22 4:34	D2K0504	DK22831
Bromobenzene	ND (0.0020)		8260B		1	11/29/22 4:34	D2K0504	DK22831

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: 642 Allens Ave
Client Sample ID: VHB-1
Date Sampled: 11/22/22 12:18
Percent Solids: N/A
Initial Volume: 5ml
Final Volume: 5ml
Extraction Method: 5030B

ESS Laboratory Work Order: 22K0898
ESS Laboratory Sample ID: 22K0898-02
Sample Matrix: Ground Water
Units: mg/L
Analyst: MD

8260B Volatile Organic Compounds

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
Bromochloromethane	ND (0.0010)		8260B		1	11/29/22 4:34	D2K0504	DK22831
Bromodichloromethane	ND (0.0006)		8260B		1	11/29/22 4:34	D2K0504	DK22831
Bromoform	ND (0.0010)		8260B		1	11/29/22 4:34	D2K0504	DK22831
Bromomethane	ND (0.0020)		8260B		1	11/29/22 4:34	D2K0504	DK22831
Carbon Disulfide	ND (0.0010)		8260B		1	11/29/22 4:34	D2K0504	DK22831
Carbon Tetrachloride	ND (0.0010)		8260B		1	11/29/22 4:34	D2K0504	DK22831
Chlorobenzene	ND (0.0010)		8260B		1	11/29/22 4:34	D2K0504	DK22831
Chloroethane	ND (0.0020)		8260B		1	11/29/22 4:34	D2K0504	DK22831
Chloroform	ND (0.0010)		8260B		1	11/29/22 4:34	D2K0504	DK22831
Chloromethane	ND (0.0020)		8260B		1	11/29/22 4:34	D2K0504	DK22831
cis-1,2-Dichloroethene	ND (0.0010)		8260B		1	11/29/22 4:34	D2K0504	DK22831
cis-1,3-Dichloropropene	ND (0.0004)		8260B		1	11/29/22 4:34	D2K0504	DK22831
Dibromochloromethane	ND (0.0010)		8260B		1	11/29/22 4:34	D2K0504	DK22831
Dibromomethane	ND (0.0010)		8260B		1	11/29/22 4:34	D2K0504	DK22831
Dichlorodifluoromethane	ND (0.0020)		8260B		1	11/29/22 4:34	D2K0504	DK22831
Diethyl Ether	ND (0.0010)		8260B		1	11/29/22 4:34	D2K0504	DK22831
Di-isopropyl ether	ND (0.0010)		8260B		1	11/29/22 4:34	D2K0504	DK22831
Ethyl tertiary-butyl ether	ND (0.0010)		8260B		1	11/29/22 4:34	D2K0504	DK22831
Ethylbenzene	ND (0.0010)		8260B		1	11/29/22 4:34	D2K0504	DK22831
Hexachlorobutadiene	ND (0.0006)		8260B		1	11/29/22 4:34	D2K0504	DK22831
Hexachloroethane	ND (0.0010)		8260B		1	11/29/22 4:34	D2K0504	DK22831
Isopropylbenzene	**0.0100** (0.0010)		8260B		1	11/29/22 4:34	D2K0504	DK22831
Methyl tert-Butyl Ether	ND (0.0010)		8260B		1	11/29/22 4:34	D2K0504	DK22831
Methylene Chloride	ND (0.0020)		8260B		1	11/29/22 4:34	D2K0504	DK22831
Naphthalene	**0.0012** (0.0010)		8260B		1	11/29/22 4:34	D2K0504	DK22831
n-Butylbenzene	ND (0.0010)		8260B		1	11/29/22 4:34	D2K0504	DK22831
n-Propylbenzene	**0.0011** (0.0010)		8260B		1	11/29/22 4:34	D2K0504	DK22831
sec-Butylbenzene	**0.0026** (0.0010)		8260B		1	11/29/22 4:34	D2K0504	DK22831
Styrene	ND (0.0010)		8260B		1	11/29/22 4:34	D2K0504	DK22831
tert-Butylbenzene	ND (0.0010)		8260B		1	11/29/22 4:34	D2K0504	DK22831
Tertiary-amyl methyl ether	ND (0.0010)		8260B		1	11/29/22 4:34	D2K0504	DK22831
Tetrachloroethene	ND (0.0010)		8260B		1	11/29/22 4:34	D2K0504	DK22831

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: 642 Allens Ave
Client Sample ID: VHB-1
Date Sampled: 11/22/22 12:18
Percent Solids: N/A
Initial Volume: 5ml
Final Volume: 5ml
Extraction Method: 5030B

ESS Laboratory Work Order: 22K0898
ESS Laboratory Sample ID: 22K0898-02
Sample Matrix: Ground Water
Units: mg/L
Analyst: MD

8260B Volatile Organic Compounds

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
Tetrahydrofuran	ND (0.0050)		8260B		1	11/29/22 4:34	D2K0504	DK22831
Toluene	ND (0.0010)		8260B		1	11/29/22 4:34	D2K0504	DK22831
trans-1,2-Dichloroethene	ND (0.0010)		8260B		1	11/29/22 4:34	D2K0504	DK22831
trans-1,3-Dichloropropene	ND (0.0004)		8260B		1	11/29/22 4:34	D2K0504	DK22831
Trichloroethene	ND (0.0010)		8260B		1	11/29/22 4:34	D2K0504	DK22831
Trichlorofluoromethane	ND (0.0010)		8260B		1	11/29/22 4:34	D2K0504	DK22831
Vinyl Acetate	ND (0.0050)		8260B		1	11/29/22 4:34	D2K0504	DK22831
Vinyl Chloride	ND (0.0010)		8260B		1	11/29/22 4:34	D2K0504	DK22831
Xylene O	ND (0.0010)		8260B		1	11/29/22 4:34	D2K0504	DK22831
Xylene P,M	ND (0.0020)		8260B		1	11/29/22 4:34	D2K0504	DK22831
Xylenes (Total)	ND (0.00200)		8260B		1	11/29/22 4:34		[CALC]

	%Recovery	Qualifier	Limits
Surrogate: 1,2-Dichloroethane-d4	*106 %*		*70-130*
Surrogate: 4-Bromofluorobenzene	*104 %*		*70-130*
Surrogate: Dibromofluoromethane	*99 %*		*70-130*
Surrogate: Toluene-d8	*100 %*		*70-130*

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: 642 Allens Ave
Client Sample ID: RCA-1
Date Sampled: 11/22/22 09:36
Percent Solids: N/A
Initial Volume: 5ml
Final Volume: 5ml
Extraction Method: 5030B

ESS Laboratory Work Order: 22K0898
ESS Laboratory Sample ID: 22K0898-03
Sample Matrix: Ground Water
Units: mg/L
Analyst: MD

8260B Volatile Organic Compounds

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
1,1,1,2-Tetrachloroethane	ND (0.0010)		8260B		1	11/28/22 15:58	D2K0503	DK22830
1,1,1-Trichloroethane	ND (0.0010)		8260B		1	11/28/22 15:58	D2K0503	DK22830
1,1,2,2-Tetrachloroethane	ND (0.0005)		8260B		1	11/28/22 15:58	D2K0503	DK22830
1,1,2-Trichloroethane	ND (0.0010)		8260B		1	11/28/22 15:58	D2K0503	DK22830
1,1-Dichloroethane	ND (0.0010)		8260B		1	11/28/22 15:58	D2K0503	DK22830
1,1-Dichloroethene	ND (0.0010)		8260B		1	11/28/22 15:58	D2K0503	DK22830
1,1-Dichloropropene	ND (0.0020)		8260B		1	11/28/22 15:58	D2K0503	DK22830
1,2,3-Trichlorobenzene	ND (0.0010)		8260B		1	11/28/22 15:58	D2K0503	DK22830
1,2,3-Trichloropropane	ND (0.0010)		8260B		1	11/28/22 15:58	D2K0503	DK22830
1,2,4-Trichlorobenzene	ND (0.0010)		8260B		1	11/28/22 15:58	D2K0503	DK22830
1,2,4-Trimethylbenzene	ND (0.0010)		8260B		1	11/28/22 15:58	D2K0503	DK22830
1,2-Dibromo-3-Chloropropane	ND (0.0050)		8260B		1	11/28/22 15:58	D2K0503	DK22830
1,2-Dibromoethane	ND (0.0010)		8260B		1	11/28/22 15:58	D2K0503	DK22830
1,2-Dichlorobenzene	ND (0.0010)		8260B		1	11/28/22 15:58	D2K0503	DK22830
1,2-Dichloroethane	ND (0.0010)		8260B		1	11/28/22 15:58	D2K0503	DK22830
1,2-Dichloropropane	ND (0.0010)		8260B		1	11/28/22 15:58	D2K0503	DK22830
1,3,5-Trimethylbenzene	ND (0.0010)		8260B		1	11/28/22 15:58	D2K0503	DK22830
1,3-Dichlorobenzene	ND (0.0010)		8260B		1	11/28/22 15:58	D2K0503	DK22830
1,3-Dichloropropane	ND (0.0010)		8260B		1	11/28/22 15:58	D2K0503	DK22830
1,4-Dichlorobenzene	ND (0.0010)		8260B		1	11/28/22 15:58	D2K0503	DK22830
1,4-Dioxane - Screen	ND (0.500)		8260B		1	11/28/22 15:58	D2K0503	DK22830
1-Chlorohexane	ND (0.0010)		8260B		1	11/28/22 15:58	D2K0503	DK22830
2,2-Dichloropropane	ND (0.0010)		8260B		1	11/28/22 15:58	D2K0503	DK22830
2-Butanone	ND (0.0100)		8260B		1	11/28/22 15:58	D2K0503	DK22830
2-Chlorotoluene	ND (0.0010)		8260B		1	11/28/22 15:58	D2K0503	DK22830
2-Hexanone	ND (0.0100)		8260B		1	11/28/22 15:58	D2K0503	DK22830
4-Chlorotoluene	ND (0.0010)		8260B		1	11/28/22 15:58	D2K0503	DK22830
4-Isopropyltoluene	ND (0.0010)		8260B		1	11/28/22 15:58	D2K0503	DK22830
4-Methyl-2-Pentanone	ND (0.0100)		8260B		1	11/28/22 15:58	D2K0503	DK22830
Acetone	ND (0.0100)		8260B		1	11/28/22 15:58	D2K0503	DK22830
Benzene	**0.0014** (0.0010)		8260B		1	11/28/22 15:58	D2K0503	DK22830
Bromobenzene	ND (0.0020)		8260B		1	11/28/22 15:58	D2K0503	DK22830

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: 642 Allens Ave
Client Sample ID: RCA-1
Date Sampled: 11/22/22 09:36
Percent Solids: N/A
Initial Volume: 5ml
Final Volume: 5ml
Extraction Method: 5030B

ESS Laboratory Work Order: 22K0898
ESS Laboratory Sample ID: 22K0898-03
Sample Matrix: Ground Water
Units: mg/L
Analyst: MD

8260B Volatile Organic Compounds

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
Bromochloromethane	ND (0.0010)		8260B		1	11/28/22 15:58	D2K0503	DK22830
Bromodichloromethane	ND (0.0006)		8260B		1	11/28/22 15:58	D2K0503	DK22830
Bromoform	ND (0.0010)		8260B		1	11/28/22 15:58	D2K0503	DK22830
Bromomethane	ND (0.0020)		8260B		1	11/28/22 15:58	D2K0503	DK22830
Carbon Disulfide	ND (0.0010)		8260B		1	11/28/22 15:58	D2K0503	DK22830
Carbon Tetrachloride	ND (0.0010)		8260B		1	11/28/22 15:58	D2K0503	DK22830
Chlorobenzene	ND (0.0010)		8260B		1	11/28/22 15:58	D2K0503	DK22830
Chloroethane	ND (0.0020)		8260B		1	11/28/22 15:58	D2K0503	DK22830
Chloroform	ND (0.0010)		8260B		1	11/28/22 15:58	D2K0503	DK22830
Chloromethane	ND (0.0020)		8260B		1	11/28/22 15:58	D2K0503	DK22830
cis-1,2-Dichloroethene	**0.0051** (0.0010)		8260B		1	11/28/22 15:58	D2K0503	DK22830
cis-1,3-Dichloropropene	ND (0.0004)		8260B		1	11/28/22 15:58	D2K0503	DK22830
Dibromochloromethane	ND (0.0010)		8260B		1	11/28/22 15:58	D2K0503	DK22830
Dibromomethane	ND (0.0010)		8260B		1	11/28/22 15:58	D2K0503	DK22830
Dichlorodifluoromethane	ND (0.0020)		8260B		1	11/28/22 15:58	D2K0503	DK22830
Diethyl Ether	ND (0.0010)		8260B		1	11/28/22 15:58	D2K0503	DK22830
Di-isopropyl ether	ND (0.0010)		8260B		1	11/28/22 15:58	D2K0503	DK22830
Ethyl tertiary-butyl ether	ND (0.0010)		8260B		1	11/28/22 15:58	D2K0503	DK22830
Ethylbenzene	ND (0.0010)		8260B		1	11/28/22 15:58	D2K0503	DK22830
Hexachlorobutadiene	ND (0.0006)		8260B		1	11/28/22 15:58	D2K0503	DK22830
Hexachloroethane	ND (0.0010)		8260B		1	11/28/22 15:58	D2K0503	DK22830
Isopropylbenzene	ND (0.0010)		8260B		1	11/28/22 15:58	D2K0503	DK22830
Methyl tert-Butyl Ether	ND (0.0010)		8260B		1	11/28/22 15:58	D2K0503	DK22830
Methylene Chloride	ND (0.0020)		8260B		1	11/28/22 15:58	D2K0503	DK22830
Naphthalene	**0.0059** (0.0010)		8260B		1	11/28/22 15:58	D2K0503	DK22830
n-Butylbenzene	ND (0.0010)		8260B		1	11/28/22 15:58	D2K0503	DK22830
n-Propylbenzene	ND (0.0010)		8260B		1	11/28/22 15:58	D2K0503	DK22830
sec-Butylbenzene	ND (0.0010)		8260B		1	11/28/22 15:58	D2K0503	DK22830
Styrene	ND (0.0010)		8260B		1	11/28/22 15:58	D2K0503	DK22830
tert-Butylbenzene	ND (0.0010)		8260B		1	11/28/22 15:58	D2K0503	DK22830
Tertiary-amyl methyl ether	ND (0.0010)		8260B		1	11/28/22 15:58	D2K0503	DK22830
Tetrachloroethene	ND (0.0010)		8260B		1	11/28/22 15:58	D2K0503	DK22830

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: 642 Allens Ave
Client Sample ID: RCA-1
Date Sampled: 11/22/22 09:36
Percent Solids: N/A
Initial Volume: 5ml
Final Volume: 5ml
Extraction Method: 5030B

ESS Laboratory Work Order: 22K0898
ESS Laboratory Sample ID: 22K0898-03
Sample Matrix: Ground Water
Units: mg/L
Analyst: MD

8260B Volatile Organic Compounds

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
Tetrahydrofuran	ND (0.0050)		8260B		1	11/28/22 15:58	D2K0503	DK22830
Toluene	ND (0.0010)		8260B		1	11/28/22 15:58	D2K0503	DK22830
trans-1,2-Dichloroethene	ND (0.0010)		8260B		1	11/28/22 15:58	D2K0503	DK22830
trans-1,3-Dichloropropene	ND (0.0004)		8260B		1	11/28/22 15:58	D2K0503	DK22830
Trichloroethene	ND (0.0010)		8260B		1	11/28/22 15:58	D2K0503	DK22830
Trichlorofluoromethane	ND (0.0010)		8260B		1	11/28/22 15:58	D2K0503	DK22830
Vinyl Acetate	ND (0.0050)		8260B		1	11/28/22 15:58	D2K0503	DK22830
Vinyl Chloride	**0.0017** (0.0010)		8260B		1	11/28/22 15:58	D2K0503	DK22830
Xylene O	ND (0.0010)		8260B		1	11/28/22 15:58	D2K0503	DK22830
Xylene P,M	ND (0.0020)		8260B		1	11/28/22 15:58	D2K0503	DK22830
Xylenes (Total)	ND (0.00200)		8260B		1	11/28/22 15:58		[CALC]

	%Recovery	Qualifier	Limits
Surrogate: 1,2-Dichloroethane-d4	*109 %*		*70-130*
Surrogate: 4-Bromofluorobenzene	*93 %*		*70-130*
Surrogate: Dibromofluoromethane	*104 %*		*70-130*
Surrogate: Toluene-d8	*101 %*		*70-130*

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: 642 Allens Ave
Client Sample ID: RCA-27
Date Sampled: 11/22/22 13:28
Percent Solids: N/A
Initial Volume: 5ml
Final Volume: 5ml
Extraction Method: 5030B

ESS Laboratory Work Order: 22K0898
ESS Laboratory Sample ID: 22K0898-04
Sample Matrix: Ground Water
Units: mg/L
Analyst: MD

8260B Volatile Organic Compounds

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
1,1,1,2-Tetrachloroethane	ND (0.0010)		8260B		1	11/28/22 16:25	D2K0503	DK22830
1,1,1-Trichloroethane	ND (0.0010)		8260B		1	11/28/22 16:25	D2K0503	DK22830
1,1,2,2-Tetrachloroethane	ND (0.0005)		8260B		1	11/28/22 16:25	D2K0503	DK22830
1,1,2-Trichloroethane	ND (0.0010)		8260B		1	11/28/22 16:25	D2K0503	DK22830
1,1-Dichloroethane	ND (0.0010)		8260B		1	11/28/22 16:25	D2K0503	DK22830
1,1-Dichloroethene	ND (0.0010)		8260B		1	11/28/22 16:25	D2K0503	DK22830
1,1-Dichloropropene	ND (0.0020)		8260B		1	11/28/22 16:25	D2K0503	DK22830
1,2,3-Trichlorobenzene	ND (0.0010)		8260B		1	11/28/22 16:25	D2K0503	DK22830
1,2,3-Trichloropropane	ND (0.0010)		8260B		1	11/28/22 16:25	D2K0503	DK22830
1,2,4-Trichlorobenzene	ND (0.0010)		8260B		1	11/28/22 16:25	D2K0503	DK22830
1,2,4-Trimethylbenzene	**0.0212** (0.0010)		8260B		1	11/28/22 16:25	D2K0503	DK22830
1,2-Dibromo-3-Chloropropane	ND (0.0050)		8260B		1	11/28/22 16:25	D2K0503	DK22830
1,2-Dibromoethane	ND (0.0010)		8260B		1	11/28/22 16:25	D2K0503	DK22830
1,2-Dichlorobenzene	ND (0.0010)		8260B		1	11/28/22 16:25	D2K0503	DK22830
1,2-Dichloroethane	ND (0.0010)		8260B		1	11/28/22 16:25	D2K0503	DK22830
1,2-Dichloropropane	ND (0.0010)		8260B		1	11/28/22 16:25	D2K0503	DK22830
1,3,5-Trimethylbenzene	ND (0.0010)		8260B		1	11/28/22 16:25	D2K0503	DK22830
1,3-Dichlorobenzene	ND (0.0010)		8260B		1	11/28/22 16:25	D2K0503	DK22830
1,3-Dichloropropane	ND (0.0010)		8260B		1	11/28/22 16:25	D2K0503	DK22830
1,4-Dichlorobenzene	ND (0.0010)		8260B		1	11/28/22 16:25	D2K0503	DK22830
1,4-Dioxane - Screen	ND (0.500)		8260B		1	11/28/22 16:25	D2K0503	DK22830
1-Chlorohexane	ND (0.0010)		8260B		1	11/28/22 16:25	D2K0503	DK22830
2,2-Dichloropropane	ND (0.0010)		8260B		1	11/28/22 16:25	D2K0503	DK22830
2-Butanone	ND (0.0100)		8260B		1	11/28/22 16:25	D2K0503	DK22830
2-Chlorotoluene	ND (0.0010)		8260B		1	11/28/22 16:25	D2K0503	DK22830
2-Hexanone	ND (0.0100)		8260B		1	11/28/22 16:25	D2K0503	DK22830
4-Chlorotoluene	ND (0.0010)		8260B		1	11/28/22 16:25	D2K0503	DK22830
4-Isopropyltoluene	ND (0.0010)		8260B		1	11/28/22 16:25	D2K0503	DK22830
4-Methyl-2-Pentanone	ND (0.0100)		8260B		1	11/28/22 16:25	D2K0503	DK22830
Acetone	ND (0.0100)		8260B		1	11/28/22 16:25	D2K0503	DK22830
Benzene	**0.0108** (0.0010)		8260B		1	11/28/22 16:25	D2K0503	DK22830
Bromobenzene	ND (0.0020)		8260B		1	11/28/22 16:25	D2K0503	DK22830

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: 642 Allens Ave
Client Sample ID: RCA-27
Date Sampled: 11/22/22 13:28
Percent Solids: N/A
Initial Volume: 5ml
Final Volume: 5ml
Extraction Method: 5030B

ESS Laboratory Work Order: 22K0898
ESS Laboratory Sample ID: 22K0898-04
Sample Matrix: Ground Water
Units: mg/L
Analyst: MD

8260B Volatile Organic Compounds

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
Bromochloromethane	ND (0.0010)		8260B		1	11/28/22 16:25	D2K0503	DK22830
Bromodichloromethane	ND (0.0006)		8260B		1	11/28/22 16:25	D2K0503	DK22830
Bromoform	ND (0.0010)		8260B		1	11/28/22 16:25	D2K0503	DK22830
Bromomethane	ND (0.0020)		8260B		1	11/28/22 16:25	D2K0503	DK22830
Carbon Disulfide	ND (0.0010)		8260B		1	11/28/22 16:25	D2K0503	DK22830
Carbon Tetrachloride	ND (0.0010)		8260B		1	11/28/22 16:25	D2K0503	DK22830
Chlorobenzene	ND (0.0010)		8260B		1	11/28/22 16:25	D2K0503	DK22830
Chloroethane	ND (0.0020)		8260B		1	11/28/22 16:25	D2K0503	DK22830
Chloroform	ND (0.0010)		8260B		1	11/28/22 16:25	D2K0503	DK22830
Chloromethane	ND (0.0020)		8260B		1	11/28/22 16:25	D2K0503	DK22830
cis-1,2-Dichloroethene	ND (0.0010)		8260B		1	11/28/22 16:25	D2K0503	DK22830
cis-1,3-Dichloropropene	ND (0.0004)		8260B		1	11/28/22 16:25	D2K0503	DK22830
Dibromochloromethane	ND (0.0010)		8260B		1	11/28/22 16:25	D2K0503	DK22830
Dibromomethane	ND (0.0010)		8260B		1	11/28/22 16:25	D2K0503	DK22830
Dichlorodifluoromethane	ND (0.0020)		8260B		1	11/28/22 16:25	D2K0503	DK22830
Diethyl Ether	ND (0.0010)		8260B		1	11/28/22 16:25	D2K0503	DK22830
Di-isopropyl ether	ND (0.0010)		8260B		1	11/28/22 16:25	D2K0503	DK22830
Ethyl tertiary-butyl ether	ND (0.0010)		8260B		1	11/28/22 16:25	D2K0503	DK22830
Ethylbenzene	**0.0457** (0.0010)		8260B		1	11/28/22 16:25	D2K0503	DK22830
Hexachlorobutadiene	ND (0.0006)		8260B		1	11/28/22 16:25	D2K0503	DK22830
Hexachloroethane	ND (0.0010)		8260B		1	11/28/22 16:25	D2K0503	DK22830
Isopropylbenzene	**0.0071** (0.0010)		8260B		1	11/28/22 16:25	D2K0503	DK22830
Methyl tert-Butyl Ether	ND (0.0010)		8260B		1	11/28/22 16:25	D2K0503	DK22830
Methylene Chloride	ND (0.0020)		8260B		1	11/28/22 16:25	D2K0503	DK22830
Naphthalene	**0.724** (0.0200)		8260B		20	11/30/22 14:17	D2K0503	DK22830
n-Butylbenzene	ND (0.0010)		8260B		1	11/28/22 16:25	D2K0503	DK22830
n-Propylbenzene	**0.0012** (0.0010)		8260B		1	11/28/22 16:25	D2K0503	DK22830
sec-Butylbenzene	ND (0.0010)		8260B		1	11/28/22 16:25	D2K0503	DK22830
Styrene	ND (0.0010)		8260B		1	11/28/22 16:25	D2K0503	DK22830
tert-Butylbenzene	ND (0.0010)		8260B		1	11/28/22 16:25	D2K0503	DK22830
Tertiary-amyl methyl ether	ND (0.0010)		8260B		1	11/28/22 16:25	D2K0503	DK22830
Tetrachloroethene	ND (0.0010)		8260B		1	11/28/22 16:25	D2K0503	DK22830

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: 642 Allens Ave
Client Sample ID: RCA-27
Date Sampled: 11/22/22 13:28
Percent Solids: N/A
Initial Volume: 5ml
Final Volume: 5ml
Extraction Method: 5030B

ESS Laboratory Work Order: 22K0898
ESS Laboratory Sample ID: 22K0898-04
Sample Matrix: Ground Water
Units: mg/L
Analyst: MD

8260B Volatile Organic Compounds

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
Tetrahydrofuran	ND (0.0050)		8260B		1	11/28/22 16:25	D2K0503	DK22830
Toluene	ND (0.0010)		8260B		1	11/28/22 16:25	D2K0503	DK22830
trans-1,2-Dichloroethene	ND (0.0010)		8260B		1	11/28/22 16:25	D2K0503	DK22830
trans-1,3-Dichloropropene	ND (0.0004)		8260B		1	11/28/22 16:25	D2K0503	DK22830
Trichloroethene	ND (0.0010)		8260B		1	11/28/22 16:25	D2K0503	DK22830
Trichlorofluoromethane	ND (0.0010)		8260B		1	11/28/22 16:25	D2K0503	DK22830
Vinyl Acetate	ND (0.0050)		8260B		1	11/28/22 16:25	D2K0503	DK22830
Vinyl Chloride	ND (0.0010)		8260B		1	11/28/22 16:25	D2K0503	DK22830
Xylene O	**0.0090** (0.0010)		8260B		1	11/28/22 16:25	D2K0503	DK22830
Xylene P,M	**0.0037** (0.0020)		8260B		1	11/28/22 16:25	D2K0503	DK22830
Xylenes (Total)	**0.0127** (0.00200)		8260B		1	11/28/22 16:25		[CALC]

	%Recovery	Qualifier	Limits
Surrogate: 1,2-Dichloroethane-d4	*112 %*		*70-130*
Surrogate: 4-Bromofluorobenzene	*104 %*		*70-130*
Surrogate: Dibromofluoromethane	*103 %*		*70-130*
Surrogate: Toluene-d8	*100 %*		*70-130*

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: 642 Allens Ave
Client Sample ID: GZ-500S
Date Sampled: 11/22/22 15:29
Percent Solids: N/A
Initial Volume: 5ml
Final Volume: 5ml
Extraction Method: 5030B

ESS Laboratory Work Order: 22K0898
ESS Laboratory Sample ID: 22K0898-05
Sample Matrix: Ground Water
Units: mg/L
Analyst: MD

8260B Volatile Organic Compounds

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
1,1,1,2-Tetrachloroethane	ND (0.0010)		8260B		1	11/29/22 12:11	D2K0534	DK22917
1,1,1-Trichloroethane	ND (0.0010)		8260B		1	11/29/22 12:11	D2K0534	DK22917
1,1,2,2-Tetrachloroethane	ND (0.0005)		8260B		1	11/29/22 12:11	D2K0534	DK22917
1,1,2-Trichloroethane	ND (0.0010)		8260B		1	11/29/22 12:11	D2K0534	DK22917
1,1-Dichloroethane	ND (0.0010)		8260B		1	11/29/22 12:11	D2K0534	DK22917
1,1-Dichloroethene	ND (0.0010)		8260B		1	11/29/22 12:11	D2K0534	DK22917
1,1-Dichloropropene	ND (0.0020)		8260B		1	11/29/22 12:11	D2K0534	DK22917
1,2,3-Trichlorobenzene	ND (0.0010)		8260B		1	11/29/22 12:11	D2K0534	DK22917
1,2,3-Trichloropropane	ND (0.0010)		8260B		1	11/29/22 12:11	D2K0534	DK22917
1,2,4-Trichlorobenzene	ND (0.0010)		8260B		1	11/29/22 12:11	D2K0534	DK22917
1,2,4-Trimethylbenzene	ND (0.0010)		8260B		1	11/29/22 12:11	D2K0534	DK22917
1,2-Dibromo-3-Chloropropane	ND (0.0050)		8260B		1	11/29/22 12:11	D2K0534	DK22917
1,2-Dibromoethane	ND (0.0010)		8260B		1	11/29/22 12:11	D2K0534	DK22917
1,2-Dichlorobenzene	ND (0.0010)		8260B		1	11/29/22 12:11	D2K0534	DK22917
1,2-Dichloroethane	ND (0.0010)		8260B		1	11/29/22 12:11	D2K0534	DK22917
1,2-Dichloropropane	ND (0.0010)		8260B		1	11/29/22 12:11	D2K0534	DK22917
1,3,5-Trimethylbenzene	ND (0.0010)		8260B		1	11/29/22 12:11	D2K0534	DK22917
1,3-Dichlorobenzene	ND (0.0010)		8260B		1	11/29/22 12:11	D2K0534	DK22917
1,3-Dichloropropane	ND (0.0010)		8260B		1	11/29/22 12:11	D2K0534	DK22917
1,4-Dichlorobenzene	ND (0.0010)		8260B		1	11/29/22 12:11	D2K0534	DK22917
1,4-Dioxane - Screen	ND (0.500)		8260B		1	11/29/22 12:11	D2K0534	DK22917
1-Chlorohexane	ND (0.0010)		8260B		1	11/29/22 12:11	D2K0534	DK22917
2,2-Dichloropropane	ND (0.0010)		8260B		1	11/29/22 12:11	D2K0534	DK22917
2-Butanone	ND (0.0100)		8260B		1	11/29/22 12:11	D2K0534	DK22917
2-Chlorotoluene	ND (0.0010)		8260B		1	11/29/22 12:11	D2K0534	DK22917
2-Hexanone	ND (0.0100)		8260B		1	11/29/22 12:11	D2K0534	DK22917
4-Chlorotoluene	ND (0.0010)		8260B		1	11/29/22 12:11	D2K0534	DK22917
4-Isopropyltoluene	ND (0.0010)		8260B		1	11/29/22 12:11	D2K0534	DK22917
4-Methyl-2-Pentanone	ND (0.0100)		8260B		1	11/29/22 12:11	D2K0534	DK22917
Acetone	ND (0.0100)		8260B		1	11/29/22 12:11	D2K0534	DK22917
Benzene	**0.0192** (0.0010)		8260B		1	11/29/22 12:11	D2K0534	DK22917
Bromobenzene	ND (0.0020)		8260B		1	11/29/22 12:11	D2K0534	DK22917

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: 642 Allens Ave
Client Sample ID: GZ-500S
Date Sampled: 11/22/22 15:29
Percent Solids: N/A
Initial Volume: 5ml
Final Volume: 5ml
Extraction Method: 5030B

ESS Laboratory Work Order: 22K0898
ESS Laboratory Sample ID: 22K0898-05
Sample Matrix: Ground Water
Units: mg/L
Analyst: MD

8260B Volatile Organic Compounds

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
Bromochloromethane	ND (0.0010)		8260B		1	11/29/22 12:11	D2K0534	DK22917
Bromodichloromethane	ND (0.0006)		8260B		1	11/29/22 12:11	D2K0534	DK22917
Bromoform	ND (0.0010)		8260B		1	11/29/22 12:11	D2K0534	DK22917
Bromomethane	ND (0.0020)		8260B		1	11/29/22 12:11	D2K0534	DK22917
Carbon Disulfide	ND (0.0010)		8260B		1	11/29/22 12:11	D2K0534	DK22917
Carbon Tetrachloride	ND (0.0010)		8260B		1	11/29/22 12:11	D2K0534	DK22917
Chlorobenzene	ND (0.0010)		8260B		1	11/29/22 12:11	D2K0534	DK22917
Chloroethane	ND (0.0020)		8260B		1	11/29/22 12:11	D2K0534	DK22917
Chloroform	ND (0.0010)		8260B		1	11/29/22 12:11	D2K0534	DK22917
Chloromethane	ND (0.0020)		8260B		1	11/29/22 12:11	D2K0534	DK22917
cis-1,2-Dichloroethene	ND (0.0010)		8260B		1	11/29/22 12:11	D2K0534	DK22917
cis-1,3-Dichloropropene	ND (0.0004)		8260B		1	11/29/22 12:11	D2K0534	DK22917
Dibromochloromethane	ND (0.0010)		8260B		1	11/29/22 12:11	D2K0534	DK22917
Dibromomethane	ND (0.0010)		8260B		1	11/29/22 12:11	D2K0534	DK22917
Dichlorodifluoromethane	ND (0.0020)		8260B		1	11/29/22 12:11	D2K0534	DK22917
Diethyl Ether	ND (0.0010)		8260B		1	11/29/22 12:11	D2K0534	DK22917
Di-isopropyl ether	ND (0.0010)		8260B		1	11/29/22 12:11	D2K0534	DK22917
Ethyl tertiary-butyl ether	ND (0.0010)		8260B		1	11/29/22 12:11	D2K0534	DK22917
Ethylbenzene	ND (0.0010)		8260B		1	11/29/22 12:11	D2K0534	DK22917
Hexachlorobutadiene	ND (0.0006)		8260B		1	11/29/22 12:11	D2K0534	DK22917
Hexachloroethane	ND (0.0010)		8260B		1	11/29/22 12:11	D2K0534	DK22917
Isopropylbenzene	**0.0023** (0.0010)		8260B		1	11/29/22 12:11	D2K0534	DK22917
Methyl tert-Butyl Ether	ND (0.0010)		8260B		1	11/29/22 12:11	D2K0534	DK22917
Methylene Chloride	ND (0.0020)		8260B		1	11/29/22 12:11	D2K0534	DK22917
Naphthalene	**0.0029** (0.0010)		8260B		1	11/29/22 12:11	D2K0534	DK22917
n-Butylbenzene	ND (0.0010)		8260B		1	11/29/22 12:11	D2K0534	DK22917
n-Propylbenzene	ND (0.0010)		8260B		1	11/29/22 12:11	D2K0534	DK22917
sec-Butylbenzene	ND (0.0010)		8260B		1	11/29/22 12:11	D2K0534	DK22917
Styrene	ND (0.0010)		8260B		1	11/29/22 12:11	D2K0534	DK22917
tert-Butylbenzene	ND (0.0010)		8260B		1	11/29/22 12:11	D2K0534	DK22917
Tertiary-amyl methyl ether	ND (0.0010)		8260B		1	11/29/22 12:11	D2K0534	DK22917
Tetrachloroethene	ND (0.0010)		8260B		1	11/29/22 12:11	D2K0534	DK22917

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: 642 Allens Ave
Client Sample ID: GZ-500S
Date Sampled: 11/22/22 15:29
Percent Solids: N/A
Initial Volume: 5ml
Final Volume: 5ml
Extraction Method: 5030B

ESS Laboratory Work Order: 22K0898
ESS Laboratory Sample ID: 22K0898-05
Sample Matrix: Ground Water
Units: mg/L
Analyst: MD

8260B Volatile Organic Compounds

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
Tetrahydrofuran	ND (0.0050)		8260B		1	11/29/22 12:11	D2K0534	DK22917
Toluene	ND (0.0010)		8260B		1	11/29/22 12:11	D2K0534	DK22917
trans-1,2-Dichloroethene	ND (0.0010)		8260B		1	11/29/22 12:11	D2K0534	DK22917
trans-1,3-Dichloropropene	ND (0.0004)		8260B		1	11/29/22 12:11	D2K0534	DK22917
Trichloroethene	ND (0.0010)		8260B		1	11/29/22 12:11	D2K0534	DK22917
Trichlorofluoromethane	ND (0.0010)		8260B		1	11/29/22 12:11	D2K0534	DK22917
Vinyl Acetate	ND (0.0050)		8260B		1	11/29/22 12:11	D2K0534	DK22917
Vinyl Chloride	ND (0.0010)		8260B		1	11/29/22 12:11	D2K0534	DK22917
Xylene O	ND (0.0010)		8260B		1	11/29/22 12:11	D2K0534	DK22917
Xylene P,M	ND (0.0020)		8260B		1	11/29/22 12:11	D2K0534	DK22917
Xylenes (Total)	ND (0.00200)		8260B		1	11/29/22 12:11		[CALC]

	%Recovery	Qualifier	Limits
Surrogate: 1,2-Dichloroethane-d4	*106 %*		*70-130*
Surrogate: 4-Bromofluorobenzene	*97 %*		*70-130*
Surrogate: Dibromofluoromethane	*101 %*		*70-130*
Surrogate: Toluene-d8	*100 %*		*70-130*

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: 642 Allens Ave
Client Sample ID: GZ-309D
Date Sampled: 11/22/22 11:50
Percent Solids: N/A
Initial Volume: 5ml
Final Volume: 5ml
Extraction Method: 5030B

ESS Laboratory Work Order: 22K0898
ESS Laboratory Sample ID: 22K0898-06
Sample Matrix: Ground Water
Units: mg/L
Analyst: MD

8260B Volatile Organic Compounds

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
1,1,1,2-Tetrachloroethane	ND (0.0010)		8260B		1	11/29/22 12:38	D2K0534	DK22917
1,1,1-Trichloroethane	ND (0.0010)		8260B		1	11/29/22 12:38	D2K0534	DK22917
1,1,2,2-Tetrachloroethane	ND (0.0005)		8260B		1	11/29/22 12:38	D2K0534	DK22917
1,1,2-Trichloroethane	ND (0.0010)		8260B		1	11/29/22 12:38	D2K0534	DK22917
1,1-Dichloroethane	ND (0.0010)		8260B		1	11/29/22 12:38	D2K0534	DK22917
1,1-Dichloroethene	ND (0.0010)		8260B		1	11/29/22 12:38	D2K0534	DK22917
1,1-Dichloropropene	ND (0.0020)		8260B		1	11/29/22 12:38	D2K0534	DK22917
1,2,3-Trichlorobenzene	ND (0.0010)		8260B		1	11/29/22 12:38	D2K0534	DK22917
1,2,3-Trichloropropane	ND (0.0010)		8260B		1	11/29/22 12:38	D2K0534	DK22917
1,2,4-Trichlorobenzene	ND (0.0010)		8260B		1	11/29/22 12:38	D2K0534	DK22917
1,2,4-Trimethylbenzene	ND (0.0010)		8260B		1	11/29/22 12:38	D2K0534	DK22917
1,2-Dibromo-3-Chloropropane	ND (0.0050)		8260B		1	11/29/22 12:38	D2K0534	DK22917
1,2-Dibromoethane	ND (0.0010)		8260B		1	11/29/22 12:38	D2K0534	DK22917
1,2-Dichlorobenzene	ND (0.0010)		8260B		1	11/29/22 12:38	D2K0534	DK22917
1,2-Dichloroethane	ND (0.0010)		8260B		1	11/29/22 12:38	D2K0534	DK22917
1,2-Dichloropropane	ND (0.0010)		8260B		1	11/29/22 12:38	D2K0534	DK22917
1,3,5-Trimethylbenzene	ND (0.0010)		8260B		1	11/29/22 12:38	D2K0534	DK22917
1,3-Dichlorobenzene	ND (0.0010)		8260B		1	11/29/22 12:38	D2K0534	DK22917
1,3-Dichloropropane	ND (0.0010)		8260B		1	11/29/22 12:38	D2K0534	DK22917
1,4-Dichlorobenzene	ND (0.0010)		8260B		1	11/29/22 12:38	D2K0534	DK22917
1,4-Dioxane - Screen	ND (0.500)		8260B		1	11/29/22 12:38	D2K0534	DK22917
1-Chlorohexane	ND (0.0010)		8260B		1	11/29/22 12:38	D2K0534	DK22917
2,2-Dichloropropane	ND (0.0010)		8260B		1	11/29/22 12:38	D2K0534	DK22917
2-Butanone	ND (0.0100)		8260B		1	11/29/22 12:38	D2K0534	DK22917
2-Chlorotoluene	ND (0.0010)		8260B		1	11/29/22 12:38	D2K0534	DK22917
2-Hexanone	ND (0.0100)		8260B		1	11/29/22 12:38	D2K0534	DK22917
4-Chlorotoluene	ND (0.0010)		8260B		1	11/29/22 12:38	D2K0534	DK22917
4-Isopropyltoluene	ND (0.0010)		8260B		1	11/29/22 12:38	D2K0534	DK22917
4-Methyl-2-Pentanone	ND (0.0100)		8260B		1	11/29/22 12:38	D2K0534	DK22917
Acetone	ND (0.0100)		8260B		1	11/29/22 12:38	D2K0534	DK22917
Benzene	ND (0.0010)		8260B		1	11/29/22 12:38	D2K0534	DK22917
Bromobenzene	ND (0.0020)		8260B		1	11/29/22 12:38	D2K0534	DK22917

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: 642 Allens Ave
Client Sample ID: GZ-309D
Date Sampled: 11/22/22 11:50
Percent Solids: N/A
Initial Volume: 5ml
Final Volume: 5ml
Extraction Method: 5030B

ESS Laboratory Work Order: 22K0898
ESS Laboratory Sample ID: 22K0898-06
Sample Matrix: Ground Water
Units: mg/L
Analyst: MD

8260B Volatile Organic Compounds

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
Bromochloromethane	ND (0.0010)		8260B		1	11/29/22 12:38	D2K0534	DK22917
Bromodichloromethane	ND (0.0006)		8260B		1	11/29/22 12:38	D2K0534	DK22917
Bromoform	ND (0.0010)		8260B		1	11/29/22 12:38	D2K0534	DK22917
Bromomethane	ND (0.0020)		8260B		1	11/29/22 12:38	D2K0534	DK22917
Carbon Disulfide	ND (0.0010)		8260B		1	11/29/22 12:38	D2K0534	DK22917
Carbon Tetrachloride	ND (0.0010)		8260B		1	11/29/22 12:38	D2K0534	DK22917
Chlorobenzene	ND (0.0010)		8260B		1	11/29/22 12:38	D2K0534	DK22917
Chloroethane	ND (0.0020)		8260B		1	11/29/22 12:38	D2K0534	DK22917
Chloroform	ND (0.0010)		8260B		1	11/29/22 12:38	D2K0534	DK22917
Chloromethane	ND (0.0020)		8260B		1	11/29/22 12:38	D2K0534	DK22917
cis-1,2-Dichloroethene	ND (0.0010)		8260B		1	11/29/22 12:38	D2K0534	DK22917
cis-1,3-Dichloropropene	ND (0.0004)		8260B		1	11/29/22 12:38	D2K0534	DK22917
Dibromochloromethane	ND (0.0010)		8260B		1	11/29/22 12:38	D2K0534	DK22917
Dibromomethane	ND (0.0010)		8260B		1	11/29/22 12:38	D2K0534	DK22917
Dichlorodifluoromethane	ND (0.0020)		8260B		1	11/29/22 12:38	D2K0534	DK22917
Diethyl Ether	ND (0.0010)		8260B		1	11/29/22 12:38	D2K0534	DK22917
Di-isopropyl ether	ND (0.0010)		8260B		1	11/29/22 12:38	D2K0534	DK22917
Ethyl tertiary-butyl ether	ND (0.0010)		8260B		1	11/29/22 12:38	D2K0534	DK22917
Ethylbenzene	ND (0.0010)		8260B		1	11/29/22 12:38	D2K0534	DK22917
Hexachlorobutadiene	ND (0.0006)		8260B		1	11/29/22 12:38	D2K0534	DK22917
Hexachloroethane	ND (0.0010)		8260B		1	11/29/22 12:38	D2K0534	DK22917
Isopropylbenzene	ND (0.0010)		8260B		1	11/29/22 12:38	D2K0534	DK22917
Methyl tert-Butyl Ether	ND (0.0010)		8260B		1	11/29/22 12:38	D2K0534	DK22917
Methylene Chloride	ND (0.0020)		8260B		1	11/29/22 12:38	D2K0534	DK22917
Naphthalene	ND (0.0010)		8260B		1	11/29/22 12:38	D2K0534	DK22917
n-Butylbenzene	ND (0.0010)		8260B		1	11/29/22 12:38	D2K0534	DK22917
n-Propylbenzene	ND (0.0010)		8260B		1	11/29/22 12:38	D2K0534	DK22917
sec-Butylbenzene	ND (0.0010)		8260B		1	11/29/22 12:38	D2K0534	DK22917
Styrene	ND (0.0010)		8260B		1	11/29/22 12:38	D2K0534	DK22917
tert-Butylbenzene	ND (0.0010)		8260B		1	11/29/22 12:38	D2K0534	DK22917
Tertiary-amyl methyl ether	ND (0.0010)		8260B		1	11/29/22 12:38	D2K0534	DK22917
Tetrachloroethene	ND (0.0010)		8260B		1	11/29/22 12:38	D2K0534	DK22917

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: 642 Allens Ave
Client Sample ID: GZ-309D
Date Sampled: 11/22/22 11:50
Percent Solids: N/A
Initial Volume: 5ml
Final Volume: 5ml
Extraction Method: 5030B

ESS Laboratory Work Order: 22K0898
ESS Laboratory Sample ID: 22K0898-06
Sample Matrix: Ground Water
Units: mg/L
Analyst: MD

8260B Volatile Organic Compounds

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
Tetrahydrofuran	ND (0.0050)		8260B		1	11/29/22 12:38	D2K0534	DK22917
Toluene	ND (0.0010)		8260B		1	11/29/22 12:38	D2K0534	DK22917
trans-1,2-Dichloroethene	ND (0.0010)		8260B		1	11/29/22 12:38	D2K0534	DK22917
trans-1,3-Dichloropropene	ND (0.0004)		8260B		1	11/29/22 12:38	D2K0534	DK22917
Trichloroethene	ND (0.0010)		8260B		1	11/29/22 12:38	D2K0534	DK22917
Trichlorofluoromethane	ND (0.0010)		8260B		1	11/29/22 12:38	D2K0534	DK22917
Vinyl Acetate	ND (0.0050)		8260B		1	11/29/22 12:38	D2K0534	DK22917
Vinyl Chloride	ND (0.0010)		8260B		1	11/29/22 12:38	D2K0534	DK22917
Xylene O	ND (0.0010)		8260B		1	11/29/22 12:38	D2K0534	DK22917
Xylene P,M	ND (0.0020)		8260B		1	11/29/22 12:38	D2K0534	DK22917
Xylenes (Total)	ND (0.00200)		8260B		1	11/29/22 12:38		[CALC]

	%Recovery	Qualifier	Limits
Surrogate: 1,2-Dichloroethane-d4	*108 %*		*70-130*
Surrogate: 4-Bromofluorobenzene	*95 %*		*70-130*
Surrogate: Dibromofluoromethane	*101 %*		*70-130*
Surrogate: Toluene-d8	*101 %*		*70-130*

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: 642 Allens Ave
Client Sample ID: GZ-304D
Date Sampled: 11/22/22 10:25
Percent Solids: N/A
Initial Volume: 5ml
Final Volume: 5ml
Extraction Method: 5030B

ESS Laboratory Work Order: 22K0898
ESS Laboratory Sample ID: 22K0898-07
Sample Matrix: Ground Water
Units: mg/L
Analyst: MD

8260B Volatile Organic Compounds

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
1,1,1,2-Tetrachloroethane	ND (0.0010)		8260B		1	11/29/22 13:04	D2K0534	DK22917
1,1,1-Trichloroethane	ND (0.0010)		8260B		1	11/29/22 13:04	D2K0534	DK22917
1,1,2,2-Tetrachloroethane	ND (0.0005)		8260B		1	11/29/22 13:04	D2K0534	DK22917
1,1,2-Trichloroethane	ND (0.0010)		8260B		1	11/29/22 13:04	D2K0534	DK22917
1,1-Dichloroethane	ND (0.0010)		8260B		1	11/29/22 13:04	D2K0534	DK22917
1,1-Dichloroethene	ND (0.0010)		8260B		1	11/29/22 13:04	D2K0534	DK22917
1,1-Dichloropropene	ND (0.0020)		8260B		1	11/29/22 13:04	D2K0534	DK22917
1,2,3-Trichlorobenzene	ND (0.0010)		8260B		1	11/29/22 13:04	D2K0534	DK22917
1,2,3-Trichloropropane	ND (0.0010)		8260B		1	11/29/22 13:04	D2K0534	DK22917
1,2,4-Trichlorobenzene	ND (0.0010)		8260B		1	11/29/22 13:04	D2K0534	DK22917
1,2,4-Trimethylbenzene	ND (0.0010)		8260B		1	11/29/22 13:04	D2K0534	DK22917
1,2-Dibromo-3-Chloropropane	ND (0.0050)		8260B		1	11/29/22 13:04	D2K0534	DK22917
1,2-Dibromoethane	ND (0.0010)		8260B		1	11/29/22 13:04	D2K0534	DK22917
1,2-Dichlorobenzene	ND (0.0010)		8260B		1	11/29/22 13:04	D2K0534	DK22917
1,2-Dichloroethane	ND (0.0010)		8260B		1	11/29/22 13:04	D2K0534	DK22917
1,2-Dichloropropane	ND (0.0010)		8260B		1	11/29/22 13:04	D2K0534	DK22917
1,3,5-Trimethylbenzene	ND (0.0010)		8260B		1	11/29/22 13:04	D2K0534	DK22917
1,3-Dichlorobenzene	ND (0.0010)		8260B		1	11/29/22 13:04	D2K0534	DK22917
1,3-Dichloropropane	ND (0.0010)		8260B		1	11/29/22 13:04	D2K0534	DK22917
1,4-Dichlorobenzene	ND (0.0010)		8260B		1	11/29/22 13:04	D2K0534	DK22917
1,4-Dioxane - Screen	ND (0.500)		8260B		1	11/29/22 13:04	D2K0534	DK22917
1-Chlorohexane	ND (0.0010)		8260B		1	11/29/22 13:04	D2K0534	DK22917
2,2-Dichloropropane	ND (0.0010)		8260B		1	11/29/22 13:04	D2K0534	DK22917
2-Butanone	ND (0.0100)		8260B		1	11/29/22 13:04	D2K0534	DK22917
2-Chlorotoluene	ND (0.0010)		8260B		1	11/29/22 13:04	D2K0534	DK22917
2-Hexanone	ND (0.0100)		8260B		1	11/29/22 13:04	D2K0534	DK22917
4-Chlorotoluene	ND (0.0010)		8260B		1	11/29/22 13:04	D2K0534	DK22917
4-Isopropyltoluene	ND (0.0010)		8260B		1	11/29/22 13:04	D2K0534	DK22917
4-Methyl-2-Pentanone	ND (0.0100)		8260B		1	11/29/22 13:04	D2K0534	DK22917
Acetone	ND (0.0100)		8260B		1	11/29/22 13:04	D2K0534	DK22917
Benzene	**0.0012** (0.0010)		8260B		1	11/29/22 13:04	D2K0534	DK22917
Bromobenzene	ND (0.0020)		8260B		1	11/29/22 13:04	D2K0534	DK22917

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: 642 Allens Ave
Client Sample ID: GZ-304D
Date Sampled: 11/22/22 10:25
Percent Solids: N/A
Initial Volume: 5ml
Final Volume: 5ml
Extraction Method: 5030B

ESS Laboratory Work Order: 22K0898
ESS Laboratory Sample ID: 22K0898-07
Sample Matrix: Ground Water
Units: mg/L
Analyst: MD

8260B Volatile Organic Compounds

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
Bromochloromethane	ND (0.0010)		8260B		1	11/29/22 13:04	D2K0534	DK22917
Bromodichloromethane	ND (0.0006)		8260B		1	11/29/22 13:04	D2K0534	DK22917
Bromoform	ND (0.0010)		8260B		1	11/29/22 13:04	D2K0534	DK22917
Bromomethane	ND (0.0020)		8260B		1	11/29/22 13:04	D2K0534	DK22917
Carbon Disulfide	ND (0.0010)		8260B		1	11/29/22 13:04	D2K0534	DK22917
Carbon Tetrachloride	ND (0.0010)		8260B		1	11/29/22 13:04	D2K0534	DK22917
Chlorobenzene	ND (0.0010)		8260B		1	11/29/22 13:04	D2K0534	DK22917
Chloroethane	ND (0.0020)		8260B		1	11/29/22 13:04	D2K0534	DK22917
Chloroform	ND (0.0010)		8260B		1	11/29/22 13:04	D2K0534	DK22917
Chloromethane	ND (0.0020)		8260B		1	11/29/22 13:04	D2K0534	DK22917
cis-1,2-Dichloroethene	**0.0078** (0.0010)		8260B		1	11/29/22 13:04	D2K0534	DK22917
cis-1,3-Dichloropropene	ND (0.0004)		8260B		1	11/29/22 13:04	D2K0534	DK22917
Dibromochloromethane	ND (0.0010)		8260B		1	11/29/22 13:04	D2K0534	DK22917
Dibromomethane	ND (0.0010)		8260B		1	11/29/22 13:04	D2K0534	DK22917
Dichlorodifluoromethane	ND (0.0020)		8260B		1	11/29/22 13:04	D2K0534	DK22917
Diethyl Ether	ND (0.0010)		8260B		1	11/29/22 13:04	D2K0534	DK22917
Di-isopropyl ether	ND (0.0010)		8260B		1	11/29/22 13:04	D2K0534	DK22917
Ethyl tertiary-butyl ether	ND (0.0010)		8260B		1	11/29/22 13:04	D2K0534	DK22917
Ethylbenzene	ND (0.0010)		8260B		1	11/29/22 13:04	D2K0534	DK22917
Hexachlorobutadiene	ND (0.0006)		8260B		1	11/29/22 13:04	D2K0534	DK22917
Hexachloroethane	ND (0.0010)		8260B		1	11/29/22 13:04	D2K0534	DK22917
Isopropylbenzene	ND (0.0010)		8260B		1	11/29/22 13:04	D2K0534	DK22917
Methyl tert-Butyl Ether	ND (0.0010)		8260B		1	11/29/22 13:04	D2K0534	DK22917
Methylene Chloride	ND (0.0020)		8260B		1	11/29/22 13:04	D2K0534	DK22917
Naphthalene	ND (0.0010)		8260B		1	11/29/22 13:04	D2K0534	DK22917
n-Butylbenzene	ND (0.0010)		8260B		1	11/29/22 13:04	D2K0534	DK22917
n-Propylbenzene	ND (0.0010)		8260B		1	11/29/22 13:04	D2K0534	DK22917
sec-Butylbenzene	ND (0.0010)		8260B		1	11/29/22 13:04	D2K0534	DK22917
Styrene	ND (0.0010)		8260B		1	11/29/22 13:04	D2K0534	DK22917
tert-Butylbenzene	ND (0.0010)		8260B		1	11/29/22 13:04	D2K0534	DK22917
Tertiary-amyl methyl ether	ND (0.0010)		8260B		1	11/29/22 13:04	D2K0534	DK22917
Tetrachloroethene	ND (0.0010)		8260B		1	11/29/22 13:04	D2K0534	DK22917

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: 642 Allens Ave
Client Sample ID: GZ-304D
Date Sampled: 11/22/22 10:25
Percent Solids: N/A
Initial Volume: 5ml
Final Volume: 5ml
Extraction Method: 5030B

ESS Laboratory Work Order: 22K0898
ESS Laboratory Sample ID: 22K0898-07
Sample Matrix: Ground Water
Units: mg/L
Analyst: MD

8260B Volatile Organic Compounds

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
Tetrahydrofuran	ND (0.0050)		8260B		1	11/29/22 13:04	D2K0534	DK22917
Toluene	ND (0.0010)		8260B		1	11/29/22 13:04	D2K0534	DK22917
trans-1,2-Dichloroethene	ND (0.0010)		8260B		1	11/29/22 13:04	D2K0534	DK22917
trans-1,3-Dichloropropene	ND (0.0004)		8260B		1	11/29/22 13:04	D2K0534	DK22917
Trichloroethene	ND (0.0010)		8260B		1	11/29/22 13:04	D2K0534	DK22917
Trichlorofluoromethane	ND (0.0010)		8260B		1	11/29/22 13:04	D2K0534	DK22917
Vinyl Acetate	ND (0.0050)		8260B		1	11/29/22 13:04	D2K0534	DK22917
Vinyl Chloride	ND (0.0010)		8260B		1	11/29/22 13:04	D2K0534	DK22917
Xylene O	ND (0.0010)		8260B		1	11/29/22 13:04	D2K0534	DK22917
Xylene P,M	ND (0.0020)		8260B		1	11/29/22 13:04	D2K0534	DK22917
Xylenes (Total)	ND (0.00200)		8260B		1	11/29/22 13:04		[CALC]

	%Recovery	Qualifier	Limits
Surrogate: 1,2-Dichloroethane-d4	*106 %*		*70-130*
Surrogate: 4-Bromofluorobenzene	*93 %*		*70-130*
Surrogate: Dibromofluoromethane	*101 %*		*70-130*
Surrogate: Toluene-d8	*102 %*		*70-130*

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: 642 Allens Ave
Client Sample ID: VHB-20
Date Sampled: 11/22/22 10:33
Percent Solids: N/A
Initial Volume: 5ml
Final Volume: 5ml
Extraction Method: 5030B

ESS Laboratory Work Order: 22K0898
ESS Laboratory Sample ID: 22K0898-08
Sample Matrix: Ground Water
Units: mg/L
Analyst: MD

8260B Volatile Organic Compounds

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
1,1,1,2-Tetrachloroethane	ND (0.0010)		8260B		1	11/28/22 18:09	D2K0503	DK22830
1,1,1-Trichloroethane	ND (0.0010)		8260B		1	11/28/22 18:09	D2K0503	DK22830
1,1,2,2-Tetrachloroethane	ND (0.0005)		8260B		1	11/28/22 18:09	D2K0503	DK22830
1,1,2-Trichloroethane	ND (0.0010)		8260B		1	11/28/22 18:09	D2K0503	DK22830
1,1-Dichloroethane	ND (0.0010)		8260B		1	11/28/22 18:09	D2K0503	DK22830
1,1-Dichloroethene	ND (0.0010)		8260B		1	11/28/22 18:09	D2K0503	DK22830
1,1-Dichloropropene	ND (0.0020)		8260B		1	11/28/22 18:09	D2K0503	DK22830
1,2,3-Trichlorobenzene	ND (0.0010)		8260B		1	11/28/22 18:09	D2K0503	DK22830
1,2,3-Trichloropropane	ND (0.0010)		8260B		1	11/28/22 18:09	D2K0503	DK22830
1,2,4-Trichlorobenzene	ND (0.0010)		8260B		1	11/28/22 18:09	D2K0503	DK22830
1,2,4-Trimethylbenzene	ND (0.0010)		8260B		1	11/28/22 18:09	D2K0503	DK22830
1,2-Dibromo-3-Chloropropane	ND (0.0050)		8260B		1	11/28/22 18:09	D2K0503	DK22830
1,2-Dibromoethane	ND (0.0010)		8260B		1	11/28/22 18:09	D2K0503	DK22830
1,2-Dichlorobenzene	ND (0.0010)		8260B		1	11/28/22 18:09	D2K0503	DK22830
1,2-Dichloroethane	ND (0.0010)		8260B		1	11/28/22 18:09	D2K0503	DK22830
1,2-Dichloropropane	ND (0.0010)		8260B		1	11/28/22 18:09	D2K0503	DK22830
1,3,5-Trimethylbenzene	ND (0.0010)		8260B		1	11/28/22 18:09	D2K0503	DK22830
1,3-Dichlorobenzene	ND (0.0010)		8260B		1	11/28/22 18:09	D2K0503	DK22830
1,3-Dichloropropane	ND (0.0010)		8260B		1	11/28/22 18:09	D2K0503	DK22830
1,4-Dichlorobenzene	ND (0.0010)		8260B		1	11/28/22 18:09	D2K0503	DK22830
1,4-Dioxane - Screen	ND (0.500)		8260B		1	11/28/22 18:09	D2K0503	DK22830
1-Chlorohexane	ND (0.0010)		8260B		1	11/28/22 18:09	D2K0503	DK22830
2,2-Dichloropropane	ND (0.0010)		8260B		1	11/28/22 18:09	D2K0503	DK22830
2-Butanone	ND (0.0100)		8260B		1	11/28/22 18:09	D2K0503	DK22830
2-Chlorotoluene	ND (0.0010)		8260B		1	11/28/22 18:09	D2K0503	DK22830
2-Hexanone	ND (0.0100)		8260B		1	11/28/22 18:09	D2K0503	DK22830
4-Chlorotoluene	ND (0.0010)		8260B		1	11/28/22 18:09	D2K0503	DK22830
4-Isopropyltoluene	ND (0.0010)		8260B		1	11/28/22 18:09	D2K0503	DK22830
4-Methyl-2-Pentanone	ND (0.0100)		8260B		1	11/28/22 18:09	D2K0503	DK22830
Acetone	ND (0.0100)		8260B		1	11/28/22 18:09	D2K0503	DK22830
Benzene	**0.0611** (0.0010)		8260B		1	11/28/22 18:09	D2K0503	DK22830
Bromobenzene	ND (0.0020)		8260B		1	11/28/22 18:09	D2K0503	DK22830

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: 642 Allens Ave
Client Sample ID: VHB-20
Date Sampled: 11/22/22 10:33
Percent Solids: N/A
Initial Volume: 5ml
Final Volume: 5ml
Extraction Method: 5030B

ESS Laboratory Work Order: 22K0898
ESS Laboratory Sample ID: 22K0898-08
Sample Matrix: Ground Water
Units: mg/L
Analyst: MD

8260B Volatile Organic Compounds

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
Bromochloromethane	ND (0.0010)		8260B		1	11/28/22 18:09	D2K0503	DK22830
Bromodichloromethane	ND (0.0006)		8260B		1	11/28/22 18:09	D2K0503	DK22830
Bromoform	ND (0.0010)		8260B		1	11/28/22 18:09	D2K0503	DK22830
Bromomethane	ND (0.0020)		8260B		1	11/28/22 18:09	D2K0503	DK22830
Carbon Disulfide	ND (0.0010)		8260B		1	11/28/22 18:09	D2K0503	DK22830
Carbon Tetrachloride	ND (0.0010)		8260B		1	11/28/22 18:09	D2K0503	DK22830
Chlorobenzene	ND (0.0010)		8260B		1	11/28/22 18:09	D2K0503	DK22830
Chloroethane	ND (0.0020)		8260B		1	11/28/22 18:09	D2K0503	DK22830
Chloroform	ND (0.0010)		8260B		1	11/28/22 18:09	D2K0503	DK22830
Chloromethane	ND (0.0020)		8260B		1	11/28/22 18:09	D2K0503	DK22830
cis-1,2-Dichloroethene	ND (0.0010)		8260B		1	11/28/22 18:09	D2K0503	DK22830
cis-1,3-Dichloropropene	ND (0.0004)		8260B		1	11/28/22 18:09	D2K0503	DK22830
Dibromochloromethane	ND (0.0010)		8260B		1	11/28/22 18:09	D2K0503	DK22830
Dibromomethane	ND (0.0010)		8260B		1	11/28/22 18:09	D2K0503	DK22830
Dichlorodifluoromethane	ND (0.0020)		8260B		1	11/28/22 18:09	D2K0503	DK22830
Diethyl Ether	ND (0.0010)		8260B		1	11/28/22 18:09	D2K0503	DK22830
Di-isopropyl ether	ND (0.0010)		8260B		1	11/28/22 18:09	D2K0503	DK22830
Ethyl tertiary-butyl ether	ND (0.0010)		8260B		1	11/28/22 18:09	D2K0503	DK22830
Ethylbenzene	ND (0.0010)		8260B		1	11/28/22 18:09	D2K0503	DK22830
Hexachlorobutadiene	ND (0.0006)		8260B		1	11/28/22 18:09	D2K0503	DK22830
Hexachloroethane	ND (0.0010)		8260B		1	11/28/22 18:09	D2K0503	DK22830
Isopropylbenzene	**0.0022** (0.0010)		8260B		1	11/28/22 18:09	D2K0503	DK22830
Methyl tert-Butyl Ether	ND (0.0010)		8260B		1	11/28/22 18:09	D2K0503	DK22830
Methylene Chloride	ND (0.0020)		8260B		1	11/28/22 18:09	D2K0503	DK22830
Naphthalene	ND (0.0010)		8260B		1	11/28/22 18:09	D2K0503	DK22830
n-Butylbenzene	ND (0.0010)		8260B		1	11/28/22 18:09	D2K0503	DK22830
n-Propylbenzene	ND (0.0010)		8260B		1	11/28/22 18:09	D2K0503	DK22830
sec-Butylbenzene	ND (0.0010)		8260B		1	11/28/22 18:09	D2K0503	DK22830
Styrene	ND (0.0010)		8260B		1	11/28/22 18:09	D2K0503	DK22830
tert-Butylbenzene	ND (0.0010)		8260B		1	11/28/22 18:09	D2K0503	DK22830
Tertiary-amyl methyl ether	ND (0.0010)		8260B		1	11/28/22 18:09	D2K0503	DK22830
Tetrachloroethene	ND (0.0010)		8260B		1	11/28/22 18:09	D2K0503	DK22830

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: 642 Allens Ave
Client Sample ID: VHB-20
Date Sampled: 11/22/22 10:33
Percent Solids: N/A
Initial Volume: 5ml
Final Volume: 5ml
Extraction Method: 5030B

ESS Laboratory Work Order: 22K0898
ESS Laboratory Sample ID: 22K0898-08
Sample Matrix: Ground Water
Units: mg/L
Analyst: MD

8260B Volatile Organic Compounds

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
Tetrahydrofuran	ND (0.0050)		8260B		1	11/28/22 18:09	D2K0503	DK22830
Toluene	ND (0.0010)		8260B		1	11/28/22 18:09	D2K0503	DK22830
trans-1,2-Dichloroethene	ND (0.0010)		8260B		1	11/28/22 18:09	D2K0503	DK22830
trans-1,3-Dichloropropene	ND (0.0004)		8260B		1	11/28/22 18:09	D2K0503	DK22830
Trichloroethene	ND (0.0010)		8260B		1	11/28/22 18:09	D2K0503	DK22830
Trichlorofluoromethane	ND (0.0010)		8260B		1	11/28/22 18:09	D2K0503	DK22830
Vinyl Acetate	ND (0.0050)		8260B		1	11/28/22 18:09	D2K0503	DK22830
Vinyl Chloride	ND (0.0010)		8260B		1	11/28/22 18:09	D2K0503	DK22830
Xylene O	ND (0.0010)		8260B		1	11/28/22 18:09	D2K0503	DK22830
Xylene P,M	ND (0.0020)		8260B		1	11/28/22 18:09	D2K0503	DK22830
Xylenes (Total)	ND (0.00200)		8260B		1	11/28/22 18:09		[CALC]

	%Recovery	Qualifier	Limits
Surrogate: 1,2-Dichloroethane-d4	*109 %*		*70-130*
Surrogate: 4-Bromofluorobenzene	*96 %*		*70-130*
Surrogate: Dibromofluoromethane	*104 %*		*70-130*
Surrogate: Toluene-d8	*99 %*		*70-130*

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: 642 Allens Ave
Client Sample ID: RCA-36
Date Sampled: 11/22/22 15:37
Percent Solids: N/A
Initial Volume: 5ml
Final Volume: 5ml
Extraction Method: 5030B

ESS Laboratory Work Order: 22K0898
ESS Laboratory Sample ID: 22K0898-09
Sample Matrix: Ground Water
Units: mg/L
Analyst: MD

8260B Volatile Organic Compounds

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
1,1,1,2-Tetrachloroethane	ND (0.0010)		8260B		1	11/29/22 5:26	D2K0504	DK22831
1,1,1-Trichloroethane	ND (0.0010)		8260B		1	11/29/22 5:26	D2K0504	DK22831
1,1,2,2-Tetrachloroethane	ND (0.0005)		8260B		1	11/29/22 5:26	D2K0504	DK22831
1,1,2-Trichloroethane	ND (0.0010)		8260B		1	11/29/22 5:26	D2K0504	DK22831
1,1-Dichloroethane	ND (0.0010)		8260B		1	11/29/22 5:26	D2K0504	DK22831
1,1-Dichloroethene	ND (0.0010)		8260B		1	11/29/22 5:26	D2K0504	DK22831
1,1-Dichloropropene	ND (0.0020)		8260B		1	11/29/22 5:26	D2K0504	DK22831
1,2,3-Trichlorobenzene	ND (0.0010)		8260B		1	11/29/22 5:26	D2K0504	DK22831
1,2,3-Trichloropropane	ND (0.0010)		8260B		1	11/29/22 5:26	D2K0504	DK22831
1,2,4-Trichlorobenzene	ND (0.0010)		8260B		1	11/29/22 5:26	D2K0504	DK22831
1,2,4-Trimethylbenzene	**0.0040** (0.0010)		8260B		1	11/29/22 5:26	D2K0504	DK22831
1,2-Dibromo-3-Chloropropane	ND (0.0050)		8260B		1	11/29/22 5:26	D2K0504	DK22831
1,2-Dibromoethane	ND (0.0010)		8260B		1	11/29/22 5:26	D2K0504	DK22831
1,2-Dichlorobenzene	ND (0.0010)		8260B		1	11/29/22 5:26	D2K0504	DK22831
1,2-Dichloroethane	ND (0.0010)		8260B		1	11/29/22 5:26	D2K0504	DK22831
1,2-Dichloropropane	ND (0.0010)		8260B		1	11/29/22 5:26	D2K0504	DK22831
1,3,5-Trimethylbenzene	ND (0.0010)		8260B		1	11/29/22 5:26	D2K0504	DK22831
1,3-Dichlorobenzene	ND (0.0010)		8260B		1	11/29/22 5:26	D2K0504	DK22831
1,3-Dichloropropane	ND (0.0010)		8260B		1	11/29/22 5:26	D2K0504	DK22831
1,4-Dichlorobenzene	ND (0.0010)		8260B		1	11/29/22 5:26	D2K0504	DK22831
1,4-Dioxane - Screen	ND (0.500)		8260B		1	11/29/22 5:26	D2K0504	DK22831
1-Chlorohexane	ND (0.0010)		8260B		1	11/29/22 5:26	D2K0504	DK22831
2,2-Dichloropropane	ND (0.0010)		8260B		1	11/29/22 5:26	D2K0504	DK22831
2-Butanone	ND (0.0100)		8260B		1	11/29/22 5:26	D2K0504	DK22831
2-Chlorotoluene	ND (0.0010)		8260B		1	11/29/22 5:26	D2K0504	DK22831
2-Hexanone	ND (0.0100)		8260B		1	11/29/22 5:26	D2K0504	DK22831
4-Chlorotoluene	ND (0.0010)		8260B		1	11/29/22 5:26	D2K0504	DK22831
4-Isopropyltoluene	ND (0.0010)		8260B		1	11/29/22 5:26	D2K0504	DK22831
4-Methyl-2-Pentanone	ND (0.0100)		8260B		1	11/29/22 5:26	D2K0504	DK22831
Acetone	ND (0.0100)		8260B		1	11/29/22 5:26	D2K0504	DK22831
Benzene	**0.0724** (0.0010)		8260B		1	11/29/22 5:26	D2K0504	DK22831
Bromobenzene	ND (0.0020)		8260B		1	11/29/22 5:26	D2K0504	DK22831

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: 642 Allens Ave
Client Sample ID: RCA-36
Date Sampled: 11/22/22 15:37
Percent Solids: N/A
Initial Volume: 5ml
Final Volume: 5ml
Extraction Method: 5030B

ESS Laboratory Work Order: 22K0898
ESS Laboratory Sample ID: 22K0898-09
Sample Matrix: Ground Water
Units: mg/L
Analyst: MD

8260B Volatile Organic Compounds

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
Bromochloromethane	ND (0.0010)		8260B		1	11/29/22 5:26	D2K0504	DK22831
Bromodichloromethane	ND (0.0006)		8260B		1	11/29/22 5:26	D2K0504	DK22831
Bromoform	ND (0.0010)		8260B		1	11/29/22 5:26	D2K0504	DK22831
Bromomethane	ND (0.0020)		8260B		1	11/29/22 5:26	D2K0504	DK22831
Carbon Disulfide	ND (0.0010)		8260B		1	11/29/22 5:26	D2K0504	DK22831
Carbon Tetrachloride	ND (0.0010)		8260B		1	11/29/22 5:26	D2K0504	DK22831
Chlorobenzene	ND (0.0010)		8260B		1	11/29/22 5:26	D2K0504	DK22831
Chloroethane	ND (0.0020)		8260B		1	11/29/22 5:26	D2K0504	DK22831
Chloroform	ND (0.0010)		8260B		1	11/29/22 5:26	D2K0504	DK22831
Chloromethane	ND (0.0020)		8260B		1	11/29/22 5:26	D2K0504	DK22831
cis-1,2-Dichloroethene	ND (0.0010)		8260B		1	11/29/22 5:26	D2K0504	DK22831
cis-1,3-Dichloropropene	ND (0.0004)		8260B		1	11/29/22 5:26	D2K0504	DK22831
Dibromochloromethane	ND (0.0010)		8260B		1	11/29/22 5:26	D2K0504	DK22831
Dibromomethane	ND (0.0010)		8260B		1	11/29/22 5:26	D2K0504	DK22831
Dichlorodifluoromethane	ND (0.0020)		8260B		1	11/29/22 5:26	D2K0504	DK22831
Diethyl Ether	ND (0.0010)		8260B		1	11/29/22 5:26	D2K0504	DK22831
Di-isopropyl ether	ND (0.0010)		8260B		1	11/29/22 5:26	D2K0504	DK22831
Ethyl tertiary-butyl ether	ND (0.0010)		8260B		1	11/29/22 5:26	D2K0504	DK22831
Ethylbenzene	ND (0.0010)		8260B		1	11/29/22 5:26	D2K0504	DK22831
Hexachlorobutadiene	ND (0.0006)		8260B		1	11/29/22 5:26	D2K0504	DK22831
Hexachloroethane	ND (0.0010)		8260B		1	11/29/22 5:26	D2K0504	DK22831
Isopropylbenzene	**0.0037** (0.0010)		8260B		1	11/29/22 5:26	D2K0504	DK22831
Methyl tert-Butyl Ether	ND (0.0010)		8260B		1	11/29/22 5:26	D2K0504	DK22831
Methylene Chloride	ND (0.0020)		8260B		1	11/29/22 5:26	D2K0504	DK22831
Naphthalene	**0.0028** (0.0010)		8260B		1	11/29/22 5:26	D2K0504	DK22831
n-Butylbenzene	ND (0.0010)		8260B		1	11/29/22 5:26	D2K0504	DK22831
n-Propylbenzene	**0.0022** (0.0010)		8260B		1	11/29/22 5:26	D2K0504	DK22831
sec-Butylbenzene	ND (0.0010)		8260B		1	11/29/22 5:26	D2K0504	DK22831
Styrene	ND (0.0010)		8260B		1	11/29/22 5:26	D2K0504	DK22831
tert-Butylbenzene	ND (0.0010)		8260B		1	11/29/22 5:26	D2K0504	DK22831
Tertiary-amyl methyl ether	ND (0.0010)		8260B		1	11/29/22 5:26	D2K0504	DK22831
Tetrachloroethene	ND (0.0010)		8260B		1	11/29/22 5:26	D2K0504	DK22831

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: 642 Allens Ave
Client Sample ID: RCA-36
Date Sampled: 11/22/22 15:37
Percent Solids: N/A
Initial Volume: 5ml
Final Volume: 5ml
Extraction Method: 5030B

ESS Laboratory Work Order: 22K0898
ESS Laboratory Sample ID: 22K0898-09
Sample Matrix: Ground Water
Units: mg/L
Analyst: MD

8260B Volatile Organic Compounds

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
Tetrahydrofuran	ND (0.0050)		8260B		1	11/29/22 5:26	D2K0504	DK22831
Toluene	ND (0.0010)		8260B		1	11/29/22 5:26	D2K0504	DK22831
trans-1,2-Dichloroethene	ND (0.0010)		8260B		1	11/29/22 5:26	D2K0504	DK22831
trans-1,3-Dichloropropene	ND (0.0004)		8260B		1	11/29/22 5:26	D2K0504	DK22831
Trichloroethene	ND (0.0010)		8260B		1	11/29/22 5:26	D2K0504	DK22831
Trichlorofluoromethane	ND (0.0010)		8260B		1	11/29/22 5:26	D2K0504	DK22831
Vinyl Acetate	ND (0.0050)		8260B		1	11/29/22 5:26	D2K0504	DK22831
Vinyl Chloride	ND (0.0010)		8260B		1	11/29/22 5:26	D2K0504	DK22831
Xylene O	**0.0013** (0.0010)		8260B		1	11/29/22 5:26	D2K0504	DK22831
Xylene P,M	ND (0.0020)		8260B		1	11/29/22 5:26	D2K0504	DK22831
Xylenes (Total)	ND (0.00200)		8260B		1	11/29/22 5:26		[CALC]

	%Recovery	Qualifier	Limits
Surrogate: 1,2-Dichloroethane-d4	*107 %*		*70-130*
Surrogate: 4-Bromofluorobenzene	*100 %*		*70-130*
Surrogate: Dibromofluoromethane	*101 %*		*70-130*
Surrogate: Toluene-d8	*99 %*		*70-130*

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: 642 Allens Ave
Client Sample ID: RCA-31
Date Sampled: 11/22/22 12:58
Percent Solids: N/A
Initial Volume: 5ml
Final Volume: 5ml
Extraction Method: 5030B

ESS Laboratory Work Order: 22K0898
ESS Laboratory Sample ID: 22K0898-10
Sample Matrix: Ground Water
Units: mg/L
Analyst: MD

8260B Volatile Organic Compounds

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
1,1,1,2-Tetrachloroethane	ND (0.0010)		8260B		1	11/28/22 18:35	D2K0503	DK22830
1,1,1-Trichloroethane	ND (0.0010)		8260B		1	11/28/22 18:35	D2K0503	DK22830
1,1,2,2-Tetrachloroethane	ND (0.0005)		8260B		1	11/28/22 18:35	D2K0503	DK22830
1,1,2-Trichloroethane	ND (0.0010)		8260B		1	11/28/22 18:35	D2K0503	DK22830
1,1-Dichloroethane	ND (0.0010)		8260B		1	11/28/22 18:35	D2K0503	DK22830
1,1-Dichloroethene	ND (0.0010)		8260B		1	11/28/22 18:35	D2K0503	DK22830
1,1-Dichloropropene	ND (0.0020)		8260B		1	11/28/22 18:35	D2K0503	DK22830
1,2,3-Trichlorobenzene	ND (0.0010)		8260B		1	11/28/22 18:35	D2K0503	DK22830
1,2,3-Trichloropropane	ND (0.0010)		8260B		1	11/28/22 18:35	D2K0503	DK22830
1,2,4-Trichlorobenzene	ND (0.0010)		8260B		1	11/28/22 18:35	D2K0503	DK22830
1,2,4-Trimethylbenzene	ND (0.0010)		8260B		1	11/28/22 18:35	D2K0503	DK22830
1,2-Dibromo-3-Chloropropane	ND (0.0050)		8260B		1	11/28/22 18:35	D2K0503	DK22830
1,2-Dibromoethane	ND (0.0010)		8260B		1	11/28/22 18:35	D2K0503	DK22830
1,2-Dichlorobenzene	ND (0.0010)		8260B		1	11/28/22 18:35	D2K0503	DK22830
1,2-Dichloroethane	ND (0.0010)		8260B		1	11/28/22 18:35	D2K0503	DK22830
1,2-Dichloropropane	ND (0.0010)		8260B		1	11/28/22 18:35	D2K0503	DK22830
1,3,5-Trimethylbenzene	ND (0.0010)		8260B		1	11/28/22 18:35	D2K0503	DK22830
1,3-Dichlorobenzene	ND (0.0010)		8260B		1	11/28/22 18:35	D2K0503	DK22830
1,3-Dichloropropane	ND (0.0010)		8260B		1	11/28/22 18:35	D2K0503	DK22830
1,4-Dichlorobenzene	ND (0.0010)		8260B		1	11/28/22 18:35	D2K0503	DK22830
1,4-Dioxane - Screen	ND (0.500)		8260B		1	11/28/22 18:35	D2K0503	DK22830
1-Chlorohexane	ND (0.0010)		8260B		1	11/28/22 18:35	D2K0503	DK22830
2,2-Dichloropropane	ND (0.0010)		8260B		1	11/28/22 18:35	D2K0503	DK22830
2-Butanone	ND (0.0100)		8260B		1	11/28/22 18:35	D2K0503	DK22830
2-Chlorotoluene	ND (0.0010)		8260B		1	11/28/22 18:35	D2K0503	DK22830
2-Hexanone	ND (0.0100)		8260B		1	11/28/22 18:35	D2K0503	DK22830
4-Chlorotoluene	ND (0.0010)		8260B		1	11/28/22 18:35	D2K0503	DK22830
4-Isopropyltoluene	ND (0.0010)		8260B		1	11/28/22 18:35	D2K0503	DK22830
4-Methyl-2-Pentanone	ND (0.0100)		8260B		1	11/28/22 18:35	D2K0503	DK22830
Acetone	ND (0.0100)		8260B		1	11/28/22 18:35	D2K0503	DK22830
Benzene	ND (0.0010)		8260B		1	11/28/22 18:35	D2K0503	DK22830
Bromobenzene	ND (0.0020)		8260B		1	11/28/22 18:35	D2K0503	DK22830

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: 642 Allens Ave
Client Sample ID: RCA-31
Date Sampled: 11/22/22 12:58
Percent Solids: N/A
Initial Volume: 5ml
Final Volume: 5ml
Extraction Method: 5030B

ESS Laboratory Work Order: 22K0898
ESS Laboratory Sample ID: 22K0898-10
Sample Matrix: Ground Water
Units: mg/L
Analyst: MD

8260B Volatile Organic Compounds

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
Bromochloromethane	ND (0.0010)		8260B		1	11/28/22 18:35	D2K0503	DK22830
Bromodichloromethane	ND (0.0006)		8260B		1	11/28/22 18:35	D2K0503	DK22830
Bromoform	ND (0.0010)		8260B		1	11/28/22 18:35	D2K0503	DK22830
Bromomethane	ND (0.0020)		8260B		1	11/28/22 18:35	D2K0503	DK22830
Carbon Disulfide	ND (0.0010)		8260B		1	11/28/22 18:35	D2K0503	DK22830
Carbon Tetrachloride	ND (0.0010)		8260B		1	11/28/22 18:35	D2K0503	DK22830
Chlorobenzene	ND (0.0010)		8260B		1	11/28/22 18:35	D2K0503	DK22830
Chloroethane	ND (0.0020)		8260B		1	11/28/22 18:35	D2K0503	DK22830
Chloroform	ND (0.0010)		8260B		1	11/28/22 18:35	D2K0503	DK22830
Chloromethane	ND (0.0020)		8260B		1	11/28/22 18:35	D2K0503	DK22830
cis-1,2-Dichloroethene	ND (0.0010)		8260B		1	11/28/22 18:35	D2K0503	DK22830
cis-1,3-Dichloropropene	ND (0.0004)		8260B		1	11/28/22 18:35	D2K0503	DK22830
Dibromochloromethane	ND (0.0010)		8260B		1	11/28/22 18:35	D2K0503	DK22830
Dibromomethane	ND (0.0010)		8260B		1	11/28/22 18:35	D2K0503	DK22830
Dichlorodifluoromethane	ND (0.0020)		8260B		1	11/28/22 18:35	D2K0503	DK22830
Diethyl Ether	ND (0.0010)		8260B		1	11/28/22 18:35	D2K0503	DK22830
Di-isopropyl ether	ND (0.0010)		8260B		1	11/28/22 18:35	D2K0503	DK22830
Ethyl tertiary-butyl ether	ND (0.0010)		8260B		1	11/28/22 18:35	D2K0503	DK22830
Ethylbenzene	ND (0.0010)		8260B		1	11/28/22 18:35	D2K0503	DK22830
Hexachlorobutadiene	ND (0.0006)		8260B		1	11/28/22 18:35	D2K0503	DK22830
Hexachloroethane	ND (0.0010)		8260B		1	11/28/22 18:35	D2K0503	DK22830
Isopropylbenzene	ND (0.0010)		8260B		1	11/28/22 18:35	D2K0503	DK22830
Methyl tert-Butyl Ether	ND (0.0010)		8260B		1	11/28/22 18:35	D2K0503	DK22830
Methylene Chloride	ND (0.0020)		8260B		1	11/28/22 18:35	D2K0503	DK22830
Naphthalene	ND (0.0010)		8260B		1	11/28/22 18:35	D2K0503	DK22830
n-Butylbenzene	ND (0.0010)		8260B		1	11/28/22 18:35	D2K0503	DK22830
n-Propylbenzene	ND (0.0010)		8260B		1	11/28/22 18:35	D2K0503	DK22830
sec-Butylbenzene	ND (0.0010)		8260B		1	11/28/22 18:35	D2K0503	DK22830
Styrene	ND (0.0010)		8260B		1	11/28/22 18:35	D2K0503	DK22830
tert-Butylbenzene	ND (0.0010)		8260B		1	11/28/22 18:35	D2K0503	DK22830
Tertiary-amyl methyl ether	ND (0.0010)		8260B		1	11/28/22 18:35	D2K0503	DK22830
Tetrachloroethene	ND (0.0010)		8260B		1	11/28/22 18:35	D2K0503	DK22830

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: 642 Allens Ave
Client Sample ID: RCA-31
Date Sampled: 11/22/22 12:58
Percent Solids: N/A
Initial Volume: 5ml
Final Volume: 5ml
Extraction Method: 5030B

ESS Laboratory Work Order: 22K0898
ESS Laboratory Sample ID: 22K0898-10
Sample Matrix: Ground Water
Units: mg/L
Analyst: MD

8260B Volatile Organic Compounds

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
Tetrahydrofuran	ND (0.0050)		8260B		1	11/28/22 18:35	D2K0503	DK22830
Toluene	ND (0.0010)		8260B		1	11/28/22 18:35	D2K0503	DK22830
trans-1,2-Dichloroethene	ND (0.0010)		8260B		1	11/28/22 18:35	D2K0503	DK22830
trans-1,3-Dichloropropene	ND (0.0004)		8260B		1	11/28/22 18:35	D2K0503	DK22830
Trichloroethene	ND (0.0010)		8260B		1	11/28/22 18:35	D2K0503	DK22830
Trichlorofluoromethane	ND (0.0010)		8260B		1	11/28/22 18:35	D2K0503	DK22830
Vinyl Acetate	ND (0.0050)		8260B		1	11/28/22 18:35	D2K0503	DK22830
Vinyl Chloride	ND (0.0010)		8260B		1	11/28/22 18:35	D2K0503	DK22830
Xylene O	ND (0.0010)		8260B		1	11/28/22 18:35	D2K0503	DK22830
Xylene P,M	ND (0.0020)		8260B		1	11/28/22 18:35	D2K0503	DK22830
Xylenes (Total)	ND (0.00200)		8260B		1	11/28/22 18:35		[CALC]

	%Recovery	Qualifier	Limits
Surrogate: 1,2-Dichloroethane-d4	*109 %*		*70-130*
Surrogate: 4-Bromofluorobenzene	*93 %*		*70-130*
Surrogate: Dibromofluoromethane	*102 %*		*70-130*
Surrogate: Toluene-d8	*101 %*		*70-130*

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: 642 Allens Ave
Client Sample ID: GZ-500D
Date Sampled: 11/22/22 00:00
Percent Solids: N/A
Initial Volume: 5ml
Final Volume: 5ml
Extraction Method: 5030B

ESS Laboratory Work Order: 22K0898
ESS Laboratory Sample ID: 22K0898-11
Sample Matrix: Ground Water
Units: mg/L
Analyst: MD

8260B Volatile Organic Compounds

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
1,1,1,2-Tetrachloroethane	ND (0.0010)		8260B		1	11/29/22 1:31	D2K0504	DK22831
1,1,1-Trichloroethane	ND (0.0010)		8260B		1	11/29/22 1:31	D2K0504	DK22831
1,1,2,2-Tetrachloroethane	ND (0.0005)		8260B		1	11/29/22 1:31	D2K0504	DK22831
1,1,2-Trichloroethane	ND (0.0010)		8260B		1	11/29/22 1:31	D2K0504	DK22831
1,1-Dichloroethane	ND (0.0010)		8260B		1	11/29/22 1:31	D2K0504	DK22831
1,1-Dichloroethene	ND (0.0010)		8260B		1	11/29/22 1:31	D2K0504	DK22831
1,1-Dichloropropene	ND (0.0020)		8260B		1	11/29/22 1:31	D2K0504	DK22831
1,2,3-Trichlorobenzene	ND (0.0010)		8260B		1	11/29/22 1:31	D2K0504	DK22831
1,2,3-Trichloropropane	ND (0.0010)		8260B		1	11/29/22 1:31	D2K0504	DK22831
1,2,4-Trichlorobenzene	ND (0.0010)		8260B		1	11/29/22 1:31	D2K0504	DK22831
1,2,4-Trimethylbenzene	**0.0086** (0.0010)		8260B		1	11/29/22 1:31	D2K0504	DK22831
1,2-Dibromo-3-Chloropropane	ND (0.0050)		8260B		1	11/29/22 1:31	D2K0504	DK22831
1,2-Dibromoethane	ND (0.0010)		8260B		1	11/29/22 1:31	D2K0504	DK22831
1,2-Dichlorobenzene	ND (0.0010)		8260B		1	11/29/22 1:31	D2K0504	DK22831
1,2-Dichloroethane	ND (0.0010)		8260B		1	11/29/22 1:31	D2K0504	DK22831
1,2-Dichloropropane	ND (0.0010)		8260B		1	11/29/22 1:31	D2K0504	DK22831
1,3,5-Trimethylbenzene	**0.0026** (0.0010)		8260B		1	11/29/22 1:31	D2K0504	DK22831
1,3-Dichlorobenzene	ND (0.0010)		8260B		1	11/29/22 1:31	D2K0504	DK22831
1,3-Dichloropropane	ND (0.0010)		8260B		1	11/29/22 1:31	D2K0504	DK22831
1,4-Dichlorobenzene	ND (0.0010)		8260B		1	11/29/22 1:31	D2K0504	DK22831
1,4-Dioxane - Screen	ND (0.500)		8260B		1	11/29/22 1:31	D2K0504	DK22831
1-Chlorohexane	ND (0.0010)		8260B		1	11/29/22 1:31	D2K0504	DK22831
2,2-Dichloropropane	ND (0.0010)		8260B		1	11/29/22 1:31	D2K0504	DK22831
2-Butanone	ND (0.0100)		8260B		1	11/29/22 1:31	D2K0504	DK22831
2-Chlorotoluene	ND (0.0010)		8260B		1	11/29/22 1:31	D2K0504	DK22831
2-Hexanone	ND (0.0100)		8260B		1	11/29/22 1:31	D2K0504	DK22831
4-Chlorotoluene	ND (0.0010)		8260B		1	11/29/22 1:31	D2K0504	DK22831
4-Isopropyltoluene	ND (0.0010)		8260B		1	11/29/22 1:31	D2K0504	DK22831
4-Methyl-2-Pentanone	ND (0.0100)		8260B		1	11/29/22 1:31	D2K0504	DK22831
Acetone	ND (0.0100)		8260B		1	11/29/22 1:31	D2K0504	DK22831
Benzene	**0.0079** (0.0010)		8260B		1	11/29/22 1:31	D2K0504	DK22831
Bromobenzene	ND (0.0020)		8260B		1	11/29/22 1:31	D2K0504	DK22831

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: 642 Allens Ave
Client Sample ID: GZ-500D
Date Sampled: 11/22/22 00:00
Percent Solids: N/A
Initial Volume: 5ml
Final Volume: 5ml
Extraction Method: 5030B

ESS Laboratory Work Order: 22K0898
ESS Laboratory Sample ID: 22K0898-11
Sample Matrix: Ground Water
Units: mg/L
Analyst: MD

8260B Volatile Organic Compounds

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
Bromochloromethane	ND (0.0010)		8260B		1	11/29/22 1:31	D2K0504	DK22831
Bromodichloromethane	ND (0.0006)		8260B		1	11/29/22 1:31	D2K0504	DK22831
Bromoform	ND (0.0010)		8260B		1	11/29/22 1:31	D2K0504	DK22831
Bromomethane	ND (0.0020)		8260B		1	11/29/22 1:31	D2K0504	DK22831
Carbon Disulfide	ND (0.0010)		8260B		1	11/29/22 1:31	D2K0504	DK22831
Carbon Tetrachloride	ND (0.0010)		8260B		1	11/29/22 1:31	D2K0504	DK22831
Chlorobenzene	ND (0.0010)		8260B		1	11/29/22 1:31	D2K0504	DK22831
Chloroethane	ND (0.0020)		8260B		1	11/29/22 1:31	D2K0504	DK22831
Chloroform	ND (0.0010)		8260B		1	11/29/22 1:31	D2K0504	DK22831
Chloromethane	ND (0.0020)		8260B		1	11/29/22 1:31	D2K0504	DK22831
cis-1,2-Dichloroethene	ND (0.0010)		8260B		1	11/29/22 1:31	D2K0504	DK22831
cis-1,3-Dichloropropene	ND (0.0004)		8260B		1	11/29/22 1:31	D2K0504	DK22831
Dibromochloromethane	ND (0.0010)		8260B		1	11/29/22 1:31	D2K0504	DK22831
Dibromomethane	ND (0.0010)		8260B		1	11/29/22 1:31	D2K0504	DK22831
Dichlorodifluoromethane	ND (0.0020)		8260B		1	11/29/22 1:31	D2K0504	DK22831
Diethyl Ether	ND (0.0010)		8260B		1	11/29/22 1:31	D2K0504	DK22831
Di-isopropyl ether	ND (0.0010)		8260B		1	11/29/22 1:31	D2K0504	DK22831
Ethyl tertiary-butyl ether	ND (0.0010)		8260B		1	11/29/22 1:31	D2K0504	DK22831
Ethylbenzene	**0.0020** (0.0010)		8260B		1	11/29/22 1:31	D2K0504	DK22831
Hexachlorobutadiene	ND (0.0006)		8260B		1	11/29/22 1:31	D2K0504	DK22831
Hexachloroethane	ND (0.0010)		8260B		1	11/29/22 1:31	D2K0504	DK22831
Isopropylbenzene	**0.0017** (0.0010)		8260B		1	11/29/22 1:31	D2K0504	DK22831
Methyl tert-Butyl Ether	ND (0.0010)		8260B		1	11/29/22 1:31	D2K0504	DK22831
Methylene Chloride	ND (0.0020)		8260B		1	11/29/22 1:31	D2K0504	DK22831
Naphthalene	**0.201** (0.0100)		8260B		10	11/30/22 13:51	D2K0504	DK22831
n-Butylbenzene	ND (0.0010)		8260B		1	11/29/22 1:31	D2K0504	DK22831
n-Propylbenzene	ND (0.0010)		8260B		1	11/29/22 1:31	D2K0504	DK22831
sec-Butylbenzene	ND (0.0010)		8260B		1	11/29/22 1:31	D2K0504	DK22831
Styrene	ND (0.0010)		8260B		1	11/29/22 1:31	D2K0504	DK22831
tert-Butylbenzene	ND (0.0010)		8260B		1	11/29/22 1:31	D2K0504	DK22831
Tertiary-amyl methyl ether	ND (0.0010)		8260B		1	11/29/22 1:31	D2K0504	DK22831
Tetrachloroethene	ND (0.0010)		8260B		1	11/29/22 1:31	D2K0504	DK22831

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: 642 Allens Ave
Client Sample ID: GZ-500D
Date Sampled: 11/22/22 00:00
Percent Solids: N/A
Initial Volume: 5ml
Final Volume: 5ml
Extraction Method: 5030B

ESS Laboratory Work Order: 22K0898
ESS Laboratory Sample ID: 22K0898-11
Sample Matrix: Ground Water
Units: mg/L
Analyst: MD

8260B Volatile Organic Compounds

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
Tetrahydrofuran	ND (0.0050)		8260B		1	11/29/22 1:31	D2K0504	DK22831
Toluene	ND (0.0010)		8260B		1	11/29/22 1:31	D2K0504	DK22831
trans-1,2-Dichloroethene	ND (0.0010)		8260B		1	11/29/22 1:31	D2K0504	DK22831
trans-1,3-Dichloropropene	ND (0.0004)		8260B		1	11/29/22 1:31	D2K0504	DK22831
Trichloroethene	ND (0.0010)		8260B		1	11/29/22 1:31	D2K0504	DK22831
Trichlorofluoromethane	ND (0.0010)		8260B		1	11/29/22 1:31	D2K0504	DK22831
Vinyl Acetate	ND (0.0050)		8260B		1	11/29/22 1:31	D2K0504	DK22831
Vinyl Chloride	ND (0.0010)		8260B		1	11/29/22 1:31	D2K0504	DK22831
Xylene O	**0.0028** (0.0010)		8260B		1	11/29/22 1:31	D2K0504	DK22831
Xylene P,M	ND (0.0020)		8260B		1	11/29/22 1:31	D2K0504	DK22831
Xylenes (Total)	**0.00283** (0.00200)		8260B		1	11/29/22 1:31		[CALC]

	%Recovery	Qualifier	Limits
Surrogate: 1,2-Dichloroethane-d4	*106 %*		*70-130*
Surrogate: 4-Bromofluorobenzene	*100 %*		*70-130*
Surrogate: Dibromofluoromethane	*99 %*		*70-130*
Surrogate: Toluene-d8	*98 %*		*70-130*

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: 642 Allens Ave
Client Sample ID: BD-112222
Date Sampled: 11/22/22 00:00
Percent Solids: N/A
Initial Volume: 5ml
Final Volume: 5ml
Extraction Method: 5030B

ESS Laboratory Work Order: 22K0898
ESS Laboratory Sample ID: 22K0898-12
Sample Matrix: Ground Water
Units: mg/L
Analyst: MD

8260B Volatile Organic Compounds

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
1,1,1,2-Tetrachloroethane	ND (0.0010)		8260B		1	11/29/22 13:30	D2K0534	DK22917
1,1,1-Trichloroethane	ND (0.0010)		8260B		1	11/29/22 13:30	D2K0534	DK22917
1,1,2,2-Tetrachloroethane	ND (0.0005)		8260B		1	11/29/22 13:30	D2K0534	DK22917
1,1,2-Trichloroethane	ND (0.0010)		8260B		1	11/29/22 13:30	D2K0534	DK22917
1,1-Dichloroethane	ND (0.0010)		8260B		1	11/29/22 13:30	D2K0534	DK22917
1,1-Dichloroethene	ND (0.0010)		8260B		1	11/29/22 13:30	D2K0534	DK22917
1,1-Dichloropropene	ND (0.0020)		8260B		1	11/29/22 13:30	D2K0534	DK22917
1,2,3-Trichlorobenzene	ND (0.0010)		8260B		1	11/29/22 13:30	D2K0534	DK22917
1,2,3-Trichloropropane	ND (0.0010)		8260B		1	11/29/22 13:30	D2K0534	DK22917
1,2,4-Trichlorobenzene	ND (0.0010)		8260B		1	11/29/22 13:30	D2K0534	DK22917
1,2,4-Trimethylbenzene	ND (0.0010)		8260B		1	11/29/22 13:30	D2K0534	DK22917
1,2-Dibromo-3-Chloropropane	ND (0.0050)		8260B		1	11/29/22 13:30	D2K0534	DK22917
1,2-Dibromoethane	ND (0.0010)		8260B		1	11/29/22 13:30	D2K0534	DK22917
1,2-Dichlorobenzene	ND (0.0010)		8260B		1	11/29/22 13:30	D2K0534	DK22917
1,2-Dichloroethane	ND (0.0010)		8260B		1	11/29/22 13:30	D2K0534	DK22917
1,2-Dichloropropane	ND (0.0010)		8260B		1	11/29/22 13:30	D2K0534	DK22917
1,3,5-Trimethylbenzene	ND (0.0010)		8260B		1	11/29/22 13:30	D2K0534	DK22917
1,3-Dichlorobenzene	ND (0.0010)		8260B		1	11/29/22 13:30	D2K0534	DK22917
1,3-Dichloropropane	ND (0.0010)		8260B		1	11/29/22 13:30	D2K0534	DK22917
1,4-Dichlorobenzene	ND (0.0010)		8260B		1	11/29/22 13:30	D2K0534	DK22917
1,4-Dioxane - Screen	ND (0.500)		8260B		1	11/29/22 13:30	D2K0534	DK22917
1-Chlorohexane	ND (0.0010)		8260B		1	11/29/22 13:30	D2K0534	DK22917
2,2-Dichloropropane	ND (0.0010)		8260B		1	11/29/22 13:30	D2K0534	DK22917
2-Butanone	ND (0.0100)		8260B		1	11/29/22 13:30	D2K0534	DK22917
2-Chlorotoluene	ND (0.0010)		8260B		1	11/29/22 13:30	D2K0534	DK22917
2-Hexanone	ND (0.0100)		8260B		1	11/29/22 13:30	D2K0534	DK22917
4-Chlorotoluene	ND (0.0010)		8260B		1	11/29/22 13:30	D2K0534	DK22917
4-Isopropyltoluene	ND (0.0010)		8260B		1	11/29/22 13:30	D2K0534	DK22917
4-Methyl-2-Pentanone	ND (0.0100)		8260B		1	11/29/22 13:30	D2K0534	DK22917
Acetone	ND (0.0100)		8260B		1	11/29/22 13:30	D2K0534	DK22917
Benzene	**0.0012** (0.0010)		8260B		1	11/29/22 13:30	D2K0534	DK22917
Bromobenzene	ND (0.0020)		8260B		1	11/29/22 13:30	D2K0534	DK22917

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: 642 Allens Ave
Client Sample ID: BD-112222
Date Sampled: 11/22/22 00:00
Percent Solids: N/A
Initial Volume: 5ml
Final Volume: 5ml
Extraction Method: 5030B

ESS Laboratory Work Order: 22K0898
ESS Laboratory Sample ID: 22K0898-12
Sample Matrix: Ground Water
Units: mg/L
Analyst: MD

8260B Volatile Organic Compounds

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
Bromochloromethane	ND (0.0010)		8260B		1	11/29/22 13:30	D2K0534	DK22917
Bromodichloromethane	ND (0.0006)		8260B		1	11/29/22 13:30	D2K0534	DK22917
Bromoform	ND (0.0010)		8260B		1	11/29/22 13:30	D2K0534	DK22917
Bromomethane	ND (0.0020)		8260B		1	11/29/22 13:30	D2K0534	DK22917
Carbon Disulfide	ND (0.0010)		8260B		1	11/29/22 13:30	D2K0534	DK22917
Carbon Tetrachloride	ND (0.0010)		8260B		1	11/29/22 13:30	D2K0534	DK22917
Chlorobenzene	ND (0.0010)		8260B		1	11/29/22 13:30	D2K0534	DK22917
Chloroethane	ND (0.0020)		8260B		1	11/29/22 13:30	D2K0534	DK22917
Chloroform	ND (0.0010)		8260B		1	11/29/22 13:30	D2K0534	DK22917
Chloromethane	ND (0.0020)		8260B		1	11/29/22 13:30	D2K0534	DK22917
cis-1,2-Dichloroethene	**0.0077** (0.0010)		8260B		1	11/29/22 13:30	D2K0534	DK22917
cis-1,3-Dichloropropene	ND (0.0004)		8260B		1	11/29/22 13:30	D2K0534	DK22917
Dibromochloromethane	ND (0.0010)		8260B		1	11/29/22 13:30	D2K0534	DK22917
Dibromomethane	ND (0.0010)		8260B		1	11/29/22 13:30	D2K0534	DK22917
Dichlorodifluoromethane	ND (0.0020)		8260B		1	11/29/22 13:30	D2K0534	DK22917
Diethyl Ether	ND (0.0010)		8260B		1	11/29/22 13:30	D2K0534	DK22917
Di-isopropyl ether	ND (0.0010)		8260B		1	11/29/22 13:30	D2K0534	DK22917
Ethyl tertiary-butyl ether	ND (0.0010)		8260B		1	11/29/22 13:30	D2K0534	DK22917
Ethylbenzene	ND (0.0010)		8260B		1	11/29/22 13:30	D2K0534	DK22917
Hexachlorobutadiene	ND (0.0006)		8260B		1	11/29/22 13:30	D2K0534	DK22917
Hexachloroethane	ND (0.0010)		8260B		1	11/29/22 13:30	D2K0534	DK22917
Isopropylbenzene	ND (0.0010)		8260B		1	11/29/22 13:30	D2K0534	DK22917
Methyl tert-Butyl Ether	ND (0.0010)		8260B		1	11/29/22 13:30	D2K0534	DK22917
Methylene Chloride	ND (0.0020)		8260B		1	11/29/22 13:30	D2K0534	DK22917
Naphthalene	ND (0.0010)		8260B		1	11/29/22 13:30	D2K0534	DK22917
n-Butylbenzene	ND (0.0010)		8260B		1	11/29/22 13:30	D2K0534	DK22917
n-Propylbenzene	ND (0.0010)		8260B		1	11/29/22 13:30	D2K0534	DK22917
sec-Butylbenzene	ND (0.0010)		8260B		1	11/29/22 13:30	D2K0534	DK22917
Styrene	ND (0.0010)		8260B		1	11/29/22 13:30	D2K0534	DK22917
tert-Butylbenzene	ND (0.0010)		8260B		1	11/29/22 13:30	D2K0534	DK22917
Tertiary-amyl methyl ether	ND (0.0010)		8260B		1	11/29/22 13:30	D2K0534	DK22917
Tetrachloroethene	ND (0.0010)		8260B		1	11/29/22 13:30	D2K0534	DK22917

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: 642 Allens Ave
Client Sample ID: BD-112222
Date Sampled: 11/22/22 00:00
Percent Solids: N/A
Initial Volume: 5ml
Final Volume: 5ml
Extraction Method: 5030B

ESS Laboratory Work Order: 22K0898
ESS Laboratory Sample ID: 22K0898-12
Sample Matrix: Ground Water
Units: mg/L
Analyst: MD

8260B Volatile Organic Compounds

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
Tetrahydrofuran	ND (0.0050)		8260B		1	11/29/22 13:30	D2K0534	DK22917
Toluene	ND (0.0010)		8260B		1	11/29/22 13:30	D2K0534	DK22917
trans-1,2-Dichloroethene	ND (0.0010)		8260B		1	11/29/22 13:30	D2K0534	DK22917
trans-1,3-Dichloropropene	ND (0.0004)		8260B		1	11/29/22 13:30	D2K0534	DK22917
Trichloroethene	ND (0.0010)		8260B		1	11/29/22 13:30	D2K0534	DK22917
Trichlorofluoromethane	ND (0.0010)		8260B		1	11/29/22 13:30	D2K0534	DK22917
Vinyl Acetate	ND (0.0050)		8260B		1	11/29/22 13:30	D2K0534	DK22917
Vinyl Chloride	ND (0.0010)		8260B		1	11/29/22 13:30	D2K0534	DK22917
Xylene O	ND (0.0010)		8260B		1	11/29/22 13:30	D2K0534	DK22917
Xylene P,M	ND (0.0020)		8260B		1	11/29/22 13:30	D2K0534	DK22917
Xylenes (Total)	ND (0.00200)		8260B		1	11/29/22 13:30		[CALC]

	%Recovery	Qualifier	Limits
Surrogate: 1,2-Dichloroethane-d4	*106 %*		*70-130*
Surrogate: 4-Bromofluorobenzene	*94 %*		*70-130*
Surrogate: Dibromofluoromethane	*101 %*		*70-130*
Surrogate: Toluene-d8	*102 %*		*70-130*

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: 642 Allens Ave
Client Sample ID: Trip Blank
Date Sampled: 11/22/22 00:00
Percent Solids: N/A
Initial Volume: 5ml
Final Volume: 5ml
Extraction Method: 5030B

ESS Laboratory Work Order: 22K0898
ESS Laboratory Sample ID: 22K0898-13
Sample Matrix: Aqueous
Units: mg/L
Analyst: MD

8260B Volatile Organic Compounds

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
1,1,1,2-Tetrachloroethane	ND (0.0010)		8260B		1	11/28/22 12:29	D2K0503	DK22830
1,1,1-Trichloroethane	ND (0.0010)		8260B		1	11/28/22 12:29	D2K0503	DK22830
1,1,2,2-Tetrachloroethane	ND (0.0005)		8260B		1	11/28/22 12:29	D2K0503	DK22830
1,1,2-Trichloroethane	ND (0.0010)		8260B		1	11/28/22 12:29	D2K0503	DK22830
1,1-Dichloroethane	ND (0.0010)		8260B		1	11/28/22 12:29	D2K0503	DK22830
1,1-Dichloroethene	ND (0.0010)		8260B		1	11/28/22 12:29	D2K0503	DK22830
1,1-Dichloropropene	ND (0.0020)		8260B		1	11/28/22 12:29	D2K0503	DK22830
1,2,3-Trichlorobenzene	ND (0.0010)		8260B		1	11/28/22 12:29	D2K0503	DK22830
1,2,3-Trichloropropane	ND (0.0010)		8260B		1	11/28/22 12:29	D2K0503	DK22830
1,2,4-Trichlorobenzene	ND (0.0010)		8260B		1	11/28/22 12:29	D2K0503	DK22830
1,2,4-Trimethylbenzene	ND (0.0010)		8260B		1	11/28/22 12:29	D2K0503	DK22830
1,2-Dibromo-3-Chloropropane	ND (0.0050)		8260B		1	11/28/22 12:29	D2K0503	DK22830
1,2-Dibromoethane	ND (0.0010)		8260B		1	11/28/22 12:29	D2K0503	DK22830
1,2-Dichlorobenzene	ND (0.0010)		8260B		1	11/28/22 12:29	D2K0503	DK22830
1,2-Dichloroethane	ND (0.0010)		8260B		1	11/28/22 12:29	D2K0503	DK22830
1,2-Dichloropropane	ND (0.0010)		8260B		1	11/28/22 12:29	D2K0503	DK22830
1,3,5-Trimethylbenzene	ND (0.0010)		8260B		1	11/28/22 12:29	D2K0503	DK22830
1,3-Dichlorobenzene	ND (0.0010)		8260B		1	11/28/22 12:29	D2K0503	DK22830
1,3-Dichloropropane	ND (0.0010)		8260B		1	11/28/22 12:29	D2K0503	DK22830
1,4-Dichlorobenzene	ND (0.0010)		8260B		1	11/28/22 12:29	D2K0503	DK22830
1,4-Dioxane - Screen	ND (0.500)		8260B		1	11/28/22 12:29	D2K0503	DK22830
1-Chlorohexane	ND (0.0010)		8260B		1	11/28/22 12:29	D2K0503	DK22830
2,2-Dichloropropane	ND (0.0010)		8260B		1	11/28/22 12:29	D2K0503	DK22830
2-Butanone	ND (0.0100)		8260B		1	11/28/22 12:29	D2K0503	DK22830
2-Chlorotoluene	ND (0.0010)		8260B		1	11/28/22 12:29	D2K0503	DK22830
2-Hexanone	ND (0.0100)		8260B		1	11/28/22 12:29	D2K0503	DK22830
4-Chlorotoluene	ND (0.0010)		8260B		1	11/28/22 12:29	D2K0503	DK22830
4-Isopropyltoluene	ND (0.0010)		8260B		1	11/28/22 12:29	D2K0503	DK22830
4-Methyl-2-Pentanone	ND (0.0100)		8260B		1	11/28/22 12:29	D2K0503	DK22830
Acetone	ND (0.0100)		8260B		1	11/28/22 12:29	D2K0503	DK22830
Benzene	ND (0.0010)		8260B		1	11/28/22 12:29	D2K0503	DK22830
Bromobenzene	ND (0.0020)		8260B		1	11/28/22 12:29	D2K0503	DK22830

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: 642 Allens Ave
Client Sample ID: Trip Blank
Date Sampled: 11/22/22 00:00
Percent Solids: N/A
Initial Volume: 5ml
Final Volume: 5ml
Extraction Method: 5030B

ESS Laboratory Work Order: 22K0898
ESS Laboratory Sample ID: 22K0898-13
Sample Matrix: Aqueous
Units: mg/L
Analyst: MD

8260B Volatile Organic Compounds

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
Bromochloromethane	ND (0.0010)		8260B		1	11/28/22 12:29	D2K0503	DK22830
Bromodichloromethane	ND (0.0006)		8260B		1	11/28/22 12:29	D2K0503	DK22830
Bromoform	ND (0.0010)		8260B		1	11/28/22 12:29	D2K0503	DK22830
Bromomethane	ND (0.0020)		8260B		1	11/28/22 12:29	D2K0503	DK22830
Carbon Disulfide	ND (0.0010)		8260B		1	11/28/22 12:29	D2K0503	DK22830
Carbon Tetrachloride	ND (0.0010)		8260B		1	11/28/22 12:29	D2K0503	DK22830
Chlorobenzene	ND (0.0010)		8260B		1	11/28/22 12:29	D2K0503	DK22830
Chloroethane	ND (0.0020)		8260B		1	11/28/22 12:29	D2K0503	DK22830
Chloroform	ND (0.0010)		8260B		1	11/28/22 12:29	D2K0503	DK22830
Chloromethane	ND (0.0020)		8260B		1	11/28/22 12:29	D2K0503	DK22830
cis-1,2-Dichloroethene	ND (0.0010)		8260B		1	11/28/22 12:29	D2K0503	DK22830
cis-1,3-Dichloropropene	ND (0.0004)		8260B		1	11/28/22 12:29	D2K0503	DK22830
Dibromochloromethane	ND (0.0010)		8260B		1	11/28/22 12:29	D2K0503	DK22830
Dibromomethane	ND (0.0010)		8260B		1	11/28/22 12:29	D2K0503	DK22830
Dichlorodifluoromethane	ND (0.0020)		8260B		1	11/28/22 12:29	D2K0503	DK22830
Diethyl Ether	ND (0.0010)		8260B		1	11/28/22 12:29	D2K0503	DK22830
Di-isopropyl ether	ND (0.0010)		8260B		1	11/28/22 12:29	D2K0503	DK22830
Ethyl tertiary-butyl ether	ND (0.0010)		8260B		1	11/28/22 12:29	D2K0503	DK22830
Ethylbenzene	ND (0.0010)		8260B		1	11/28/22 12:29	D2K0503	DK22830
Hexachlorobutadiene	ND (0.0006)		8260B		1	11/28/22 12:29	D2K0503	DK22830
Hexachloroethane	ND (0.0010)		8260B		1	11/28/22 12:29	D2K0503	DK22830
Isopropylbenzene	ND (0.0010)		8260B		1	11/28/22 12:29	D2K0503	DK22830
Methyl tert-Butyl Ether	ND (0.0010)		8260B		1	11/28/22 12:29	D2K0503	DK22830
Methylene Chloride	ND (0.0020)		8260B		1	11/28/22 12:29	D2K0503	DK22830
Naphthalene	ND (0.0010)		8260B		1	11/28/22 12:29	D2K0503	DK22830
n-Butylbenzene	ND (0.0010)		8260B		1	11/28/22 12:29	D2K0503	DK22830
n-Propylbenzene	ND (0.0010)		8260B		1	11/28/22 12:29	D2K0503	DK22830
sec-Butylbenzene	ND (0.0010)		8260B		1	11/28/22 12:29	D2K0503	DK22830
Styrene	ND (0.0010)		8260B		1	11/28/22 12:29	D2K0503	DK22830
tert-Butylbenzene	ND (0.0010)		8260B		1	11/28/22 12:29	D2K0503	DK22830
Tertiary-amyl methyl ether	ND (0.0010)		8260B		1	11/28/22 12:29	D2K0503	DK22830
Tetrachloroethene	ND (0.0010)		8260B		1	11/28/22 12:29	D2K0503	DK22830

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: 642 Allens Ave
Client Sample ID: Trip Blank
Date Sampled: 11/22/22 00:00
Percent Solids: N/A
Initial Volume: 5ml
Final Volume: 5ml
Extraction Method: 5030B

ESS Laboratory Work Order: 22K0898
ESS Laboratory Sample ID: 22K0898-13
Sample Matrix: Aqueous
Units: mg/L
Analyst: MD

8260B Volatile Organic Compounds

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
Tetrahydrofuran	ND (0.0050)		8260B		1	11/28/22 12:29	D2K0503	DK22830
Toluene	ND (0.0010)		8260B		1	11/28/22 12:29	D2K0503	DK22830
trans-1,2-Dichloroethene	ND (0.0010)		8260B		1	11/28/22 12:29	D2K0503	DK22830
trans-1,3-Dichloropropene	ND (0.0004)		8260B		1	11/28/22 12:29	D2K0503	DK22830
Trichloroethene	ND (0.0010)		8260B		1	11/28/22 12:29	D2K0503	DK22830
Trichlorofluoromethane	ND (0.0010)		8260B		1	11/28/22 12:29	D2K0503	DK22830
Vinyl Acetate	ND (0.0050)		8260B		1	11/28/22 12:29	D2K0503	DK22830
Vinyl Chloride	ND (0.0010)		8260B		1	11/28/22 12:29	D2K0503	DK22830
Xylene O	ND (0.0010)		8260B		1	11/28/22 12:29	D2K0503	DK22830
Xylene P,M	ND (0.0020)		8260B		1	11/28/22 12:29	D2K0503	DK22830
Xylenes (Total)	ND (0.00200)		8260B		1	11/28/22 12:29		[CALC]

	%Recovery	Qualifier	Limits
Surrogate: 1,2-Dichloroethane-d4	*109 %*		*70-130*
Surrogate: 4-Bromofluorobenzene	*91 %*		*70-130*
Surrogate: Dibromofluoromethane	*102 %*		*70-130*
Surrogate: Toluene-d8	*101 %*		*70-130*

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: 642 Allens Ave

ESS Laboratory Work Order: 22K0898

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
8260B Volatile Organic Compounds										
Batch DK22830 - 5030B										
Blank										
1,1,1,2-Tetrachloroethane	ND	0.0010	mg/L							
1,1,1-Trichloroethane	ND	0.0010	mg/L							
1,1,2,2-Tetrachloroethane	ND	0.0005	mg/L							
1,1,2-Trichloroethane	ND	0.0010	mg/L							
1,1-Dichloroethane	ND	0.0010	mg/L							
1,1-Dichloroethene	ND	0.0010	mg/L							
1,1-Dichloropropene	ND	0.0020	mg/L							
1,2,3-Trichlorobenzene	ND	0.0010	mg/L							
1,2,3-Trichloropropane	ND	0.0010	mg/L							
1,2,4-Trichlorobenzene	ND	0.0010	mg/L							
1,2,4-Trimethylbenzene	ND	0.0010	mg/L							
1,2-Dibromo-3-Chloropropane	ND	0.0050	mg/L							
1,2-Dibromoethane	ND	0.0010	mg/L							
1,2-Dichlorobenzene	ND	0.0010	mg/L							
1,2-Dichloroethane	ND	0.0010	mg/L							
1,2-Dichloropropane	ND	0.0010	mg/L							
1,3,5-Trimethylbenzene	ND	0.0010	mg/L							
1,3-Dichlorobenzene	ND	0.0010	mg/L							
1,3-Dichloropropane	ND	0.0010	mg/L							
1,4-Dichlorobenzene	ND	0.0010	mg/L							
1,4-Dioxane - Screen	ND	0.500	mg/L							
1-Chlorohexane	ND	0.0010	mg/L							
2,2-Dichloropropane	ND	0.0010	mg/L							
2-Butanone	ND	0.0100	mg/L							
2-Chlorotoluene	ND	0.0010	mg/L							
2-Hexanone	ND	0.0100	mg/L							
4-Chlorotoluene	ND	0.0010	mg/L							
4-Isopropyltoluene	ND	0.0010	mg/L							
4-Methyl-2-Pentanone	ND	0.0100	mg/L							
Acetone	ND	0.0100	mg/L							
Benzene	ND	0.0010	mg/L							
Bromobenzene	ND	0.0020	mg/L							
Bromochloromethane	ND	0.0010	mg/L							
Bromodichloromethane	ND	0.0006	mg/L							
Bromoform	ND	0.0010	mg/L							
Bromomethane	ND	0.0020	mg/L							
Carbon Disulfide	ND	0.0010	mg/L							
Carbon Tetrachloride	ND	0.0010	mg/L							
Chlorobenzene	ND	0.0010	mg/L							
Chloroethane	ND	0.0020	mg/L							
Chloroform	ND	0.0010	mg/L							
Chloromethane	ND	0.0020	mg/L							
cis-1,2-Dichloroethene	ND	0.0010	mg/L							
cis-1,3-Dichloropropene	ND	0.0004	mg/L							

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: 642 Allens Ave

ESS Laboratory Work Order: 22K0898

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
8260B Volatile Organic Compounds										
Batch DK22830 - 5030B										
Dibromochloromethane	ND	0.0010	mg/L							
Dibromomethane	ND	0.0010	mg/L							
Dichlorodifluoromethane	ND	0.0020	mg/L							
Diethyl Ether	ND	0.0010	mg/L							
Di-isopropyl ether	ND	0.0010	mg/L							
Ethyl tertiary-butyl ether	ND	0.0010	mg/L							
Ethylbenzene	ND	0.0010	mg/L							
Hexachlorobutadiene	ND	0.0006	mg/L							
Hexachloroethane	ND	0.0010	mg/L							
Isopropylbenzene	ND	0.0010	mg/L							
Methyl tert-Butyl Ether	ND	0.0010	mg/L							
Methylene Chloride	ND	0.0020	mg/L							
Naphthalene	ND	0.0010	mg/L							
n-Butylbenzene	ND	0.0010	mg/L							
n-Propylbenzene	ND	0.0010	mg/L							
sec-Butylbenzene	ND	0.0010	mg/L							
Styrene	ND	0.0010	mg/L							
tert-Butylbenzene	ND	0.0010	mg/L							
Tertiary-amyl methyl ether	ND	0.0010	mg/L							
Tetrachloroethene	ND	0.0010	mg/L							
Tetrahydrofuran	ND	0.0050	mg/L							
Toluene	ND	0.0010	mg/L							
trans-1,2-Dichloroethene	ND	0.0010	mg/L							
trans-1,3-Dichloropropene	ND	0.0004	mg/L							
Trichloroethene	ND	0.0010	mg/L							
Trichlorofluoromethane	ND	0.0010	mg/L							
Vinyl Acetate	ND	0.0050	mg/L							
Vinyl Chloride	ND	0.0010	mg/L							
Xylene O	ND	0.0010	mg/L							
Xylene P,M	ND	0.0020	mg/L							
Surrogate: 1,2-Dichloroethane-d4	*0.0273*		mg/L	*0.02500*		*109*	*70-130*			
Surrogate: 4-Bromofluorobenzene	*0.0229*		mg/L	*0.02500*		*92*	*70-130*			
Surrogate: Dibromofluoromethane	*0.0256*		mg/L	*0.02500*		*102*	*70-130*			
Surrogate: Toluene-d8	*0.0254*		mg/L	*0.02500*		*102*	*70-130*			
LCS										
1,1,1,2-Tetrachloroethane	0.0102	0.0010	mg/L	0.01000		102	70-130			
1,1,1-Trichloroethane	0.0101	0.0010	mg/L	0.01000		101	70-130			
1,1,2,2-Tetrachloroethane	0.0105	0.0005	mg/L	0.01000		105	70-130			
1,1,2-Trichloroethane	0.0102	0.0010	mg/L	0.01000		102	70-130			
1,1-Dichloroethane	0.0101	0.0010	mg/L	0.01000		101	70-130			
1,1-Dichloroethene	0.0096	0.0010	mg/L	0.01000		96	70-130			
1,1-Dichloropropene	0.0100	0.0020	mg/L	0.01000		100	70-130			
1,2,3-Trichlorobenzene	0.0100	0.0010	mg/L	0.01000		100	70-130			
1,2,3-Trichloropropane	0.0103	0.0010	mg/L	0.01000		103	70-130			
1,2,4-Trichlorobenzene	0.0100	0.0010	mg/L	0.01000		100	70-130			

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: 642 Allens Ave

ESS Laboratory Work Order: 22K0898

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
8260B Volatile Organic Compounds										
Batch DK22830 - 5030B										
1,2,4-Trimethylbenzene	0.0101	0.0010	mg/L	0.01000		101	70-130			
1,2-Dibromo-3-Chloropropane	0.0096	0.0050	mg/L	0.01000		96	70-130			
1,2-Dibromoethane	0.0101	0.0010	mg/L	0.01000		101	70-130			
1,2-Dichlorobenzene	0.0099	0.0010	mg/L	0.01000		99	70-130			
1,2-Dichloroethane	0.0102	0.0010	mg/L	0.01000		102	70-130			
1,2-Dichloropropane	0.0099	0.0010	mg/L	0.01000		99	70-130			
1,3,5-Trimethylbenzene	0.0105	0.0010	mg/L	0.01000		105	70-130			
1,3-Dichlorobenzene	0.0098	0.0010	mg/L	0.01000		98	70-130			
1,3-Dichloropropane	0.0099	0.0010	mg/L	0.01000		99	70-130			
1,4-Dichlorobenzene	0.0100	0.0010	mg/L	0.01000		100	70-130			
1,4-Dioxane - Screen	0.206	0.500	mg/L	0.2000		103	0-332			
1-Chlorohexane	0.0092	0.0010	mg/L	0.01000		92	70-130			
2,2-Dichloropropane	0.0113	0.0010	mg/L	0.01000		113	70-130			
2-Butanone	0.0565	0.0100	mg/L	0.05000		113	70-130			
2-Chlorotoluene	0.0100	0.0010	mg/L	0.01000		100	70-130			
2-Hexanone	0.0503	0.0100	mg/L	0.05000		101	70-130			
4-Chlorotoluene	0.0101	0.0010	mg/L	0.01000		101	70-130			
4-Isopropyltoluene	0.0097	0.0010	mg/L	0.01000		97	70-130			
4-Methyl-2-Pentanone	0.0487	0.0100	mg/L	0.05000		97	70-130			
Acetone	0.0566	0.0100	mg/L	0.05000		113	70-130			
Benzene	0.0102	0.0010	mg/L	0.01000		102	70-130			
Bromobenzene	0.0098	0.0020	mg/L	0.01000		98	70-130			
Bromochloromethane	0.0105	0.0010	mg/L	0.01000		105	70-130			
Bromodichloromethane	0.0112	0.0006	mg/L	0.01000		112	70-130			
Bromoform	0.0106	0.0010	mg/L	0.01000		106	70-130			
Bromomethane	0.0116	0.0020	mg/L	0.01000		116	70-130			
Carbon Disulfide	0.0109	0.0010	mg/L	0.01000		109	70-130			
Carbon Tetrachloride	0.0102	0.0010	mg/L	0.01000		102	70-130			
Chlorobenzene	0.0096	0.0010	mg/L	0.01000		96	70-130			
Chloroethane	0.0112	0.0020	mg/L	0.01000		112	70-130			
Chloroform	0.0104	0.0010	mg/L	0.01000		104	70-130			
Chloromethane	0.0102	0.0020	mg/L	0.01000		102	70-130			
cis-1,2-Dichloroethene	0.0102	0.0010	mg/L	0.01000		102	70-130			
cis-1,3-Dichloropropene	0.0098	0.0004	mg/L	0.01000		98	70-130			
Dibromochloromethane	0.0107	0.0010	mg/L	0.01000		107	70-130			
Dibromomethane	0.0104	0.0010	mg/L	0.01000		104	70-130			
Dichlorodifluoromethane	0.0092	0.0020	mg/L	0.01000		92	70-130			
Diethyl Ether	0.0105	0.0010	mg/L	0.01000		105	70-130			
Di-isopropyl ether	0.0105	0.0010	mg/L	0.01000		105	70-130			
Ethyl tertiary-butyl ether	0.0104	0.0010	mg/L	0.01000		104	70-130			
Ethylbenzene	0.0095	0.0010	mg/L	0.01000		95	70-130			
Hexachlorobutadiene	0.0107	0.0006	mg/L	0.01000		107	70-130			
Hexachloroethane	0.0096	0.0010	mg/L	0.01000		96	70-130			
Isopropylbenzene	0.0100	0.0010	mg/L	0.01000		100	70-130			
Methyl tert-Butyl Ether	0.0103	0.0010	mg/L	0.01000		103	70-130			

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: 642 Allens Ave

ESS Laboratory Work Order: 22K0898

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
8260B Volatile Organic Compounds										
Batch DK22830 - 5030B										
Methylene Chloride	0.0106	0.0020	mg/L	0.01000		106	70-130			
Naphthalene	0.0092	0.0010	mg/L	0.01000		92	70-130			
n-Butylbenzene	0.0103	0.0010	mg/L	0.01000		103	70-130			
n-Propylbenzene	0.0099	0.0010	mg/L	0.01000		99	70-130			
sec-Butylbenzene	0.0098	0.0010	mg/L	0.01000		98	70-130			
Styrene	0.0091	0.0010	mg/L	0.01000		91	70-130			
tert-Butylbenzene	0.0098	0.0010	mg/L	0.01000		98	70-130			
Tertiary-amyl methyl ether	0.0090	0.0010	mg/L	0.01000		90	70-130			
Tetrachloroethene	0.0076	0.0010	mg/L	0.01000		76	70-130			
Tetrahydrofuran	0.0102	0.0050	mg/L	0.01000		102	70-130			
Toluene	0.0099	0.0010	mg/L	0.01000		99	70-130			
trans-1,2-Dichloroethene	0.0102	0.0010	mg/L	0.01000		102	70-130			
trans-1,3-Dichloropropene	0.0092	0.0004	mg/L	0.01000		92	70-130			
Trichloroethene	0.0098	0.0010	mg/L	0.01000		98	70-130			
Trichlorofluoromethane	0.0113	0.0010	mg/L	0.01000		113	70-130			
Vinyl Acetate	0.0118	0.0050	mg/L	0.01000		118	70-130			
Vinyl Chloride	0.0106	0.0010	mg/L	0.01000		106	70-130			
Xylene O	0.0097	0.0010	mg/L	0.01000		97	70-130			
Xylene P,M	0.0199	0.0020	mg/L	0.02000		99	70-130			
Surrogate: 1,2-Dichloroethane-d4	*0.0265*		mg/L	*0.02500*		*106*	*70-130*			
Surrogate: 4-Bromofluorobenzene	*0.0247*		mg/L	*0.02500*		*99*	*70-130*			
Surrogate: Dibromofluoromethane	*0.0261*		mg/L	*0.02500*		*105*	*70-130*			
Surrogate: Toluene-d8	*0.0244*		mg/L	*0.02500*		*98*	*70-130*			
LCS Dup										
1,1,1,2-Tetrachloroethane	0.0110	0.0010	mg/L	0.01000		110	70-130	7	25	
1,1,1-Trichloroethane	0.0104	0.0010	mg/L	0.01000		104	70-130	2	25	
1,1,2,2-Tetrachloroethane	0.0104	0.0005	mg/L	0.01000		104	70-130	1	25	
1,1,2-Trichloroethane	0.0104	0.0010	mg/L	0.01000		104	70-130	2	25	
1,1-Dichloroethane	0.0104	0.0010	mg/L	0.01000		104	70-130	2	25	
1,1-Dichloroethene	0.0106	0.0010	mg/L	0.01000		106	70-130	10	25	
1,1-Dichloropropene	0.0102	0.0020	mg/L	0.01000		102	70-130	2	25	
1,2,3-Trichlorobenzene	0.0099	0.0010	mg/L	0.01000		99	70-130	0.6	25	
1,2,3-Trichloropropane	0.0102	0.0010	mg/L	0.01000		102	70-130	0.6	25	
1,2,4-Trichlorobenzene	0.0100	0.0010	mg/L	0.01000		100	70-130	0.2	25	
1,2,4-Trimethylbenzene	0.0102	0.0010	mg/L	0.01000		102	70-130	2	25	
1,2-Dibromo-3-Chloropropane	0.0096	0.0050	mg/L	0.01000		96	70-130	0.2	25	
1,2-Dibromoethane	0.0101	0.0010	mg/L	0.01000		101	70-130	0.2	25	
1,2-Dichlorobenzene	0.0100	0.0010	mg/L	0.01000		100	70-130	0.7	25	
1,2-Dichloroethane	0.0104	0.0010	mg/L	0.01000		104	70-130	2	25	
1,2-Dichloropropane	0.0104	0.0010	mg/L	0.01000		104	70-130	5	25	
1,3,5-Trimethylbenzene	0.0106	0.0010	mg/L	0.01000		106	70-130	0.9	25	
1,3-Dichlorobenzene	0.0101	0.0010	mg/L	0.01000		101	70-130	2	25	
1,3-Dichloropropane	0.0101	0.0010	mg/L	0.01000		101	70-130	2	25	
1,4-Dichlorobenzene	0.0101	0.0010	mg/L	0.01000		101	70-130	1	25	
1,4-Dioxane - Screen	0.198	0.500	mg/L	0.2000		99	0-332	4	200	

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: 642 Allens Ave

ESS Laboratory Work Order: 22K0898

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
8260B Volatile Organic Compounds										
Batch DK22830 - 5030B										
1-Chlorohexane	0.0096	0.0010	mg/L	0.01000		96	70-130	4	25	
2,2-Dichloropropane	0.0116	0.0010	mg/L	0.01000		116	70-130	3	25	
2-Butanone	0.0560	0.0100	mg/L	0.05000		112	70-130	0.9	25	
2-Chlorotoluene	0.0101	0.0010	mg/L	0.01000		101	70-130	1	25	
2-Hexanone	0.0488	0.0100	mg/L	0.05000		98	70-130	3	25	
4-Chlorotoluene	0.0102	0.0010	mg/L	0.01000		102	70-130	2	25	
4-Isopropyltoluene	0.0098	0.0010	mg/L	0.01000		98	70-130	0.8	25	
4-Methyl-2-Pentanone	0.0489	0.0100	mg/L	0.05000		98	70-130	0.5	25	
Acetone	0.0558	0.0100	mg/L	0.05000		112	70-130	1	25	
Benzene	0.0104	0.0010	mg/L	0.01000		104	70-130	2	25	
Bromobenzene	0.0101	0.0020	mg/L	0.01000		101	70-130	2	25	
Bromochloromethane	0.0112	0.0010	mg/L	0.01000		112	70-130	6	25	
Bromodichloromethane	0.0115	0.0006	mg/L	0.01000		115	70-130	2	25	
Bromoform	0.0109	0.0010	mg/L	0.01000		109	70-130	2	25	
Bromomethane	0.0116	0.0020	mg/L	0.01000		116	70-130	0.3	25	
Carbon Disulfide	0.0112	0.0010	mg/L	0.01000		112	70-130	3	25	
Carbon Tetrachloride	0.0106	0.0010	mg/L	0.01000		106	70-130	4	25	
Chlorobenzene	0.0096	0.0010	mg/L	0.01000		96	70-130	0.1	25	
Chloroethane	0.0111	0.0020	mg/L	0.01000		111	70-130	0.6	25	
Chloroform	0.0107	0.0010	mg/L	0.01000		107	70-130	3	25	
Chloromethane	0.0103	0.0020	mg/L	0.01000		103	70-130	0.4	25	
cis-1,2-Dichloroethene	0.0111	0.0010	mg/L	0.01000		111	70-130	9	25	
cis-1,3-Dichloropropene	0.0101	0.0004	mg/L	0.01000		101	70-130	3	25	
Dibromochloromethane	0.0107	0.0010	mg/L	0.01000		107	70-130	0.4	25	
Dibromomethane	0.0107	0.0010	mg/L	0.01000		107	70-130	2	25	
Dichlorodifluoromethane	0.0094	0.0020	mg/L	0.01000		94	70-130	2	25	
Diethyl Ether	0.0101	0.0010	mg/L	0.01000		101	70-130	3	25	
Di-isopropyl ether	0.0107	0.0010	mg/L	0.01000		107	70-130	2	25	
Ethyl tertiary-butyl ether	0.0107	0.0010	mg/L	0.01000		107	70-130	3	25	
Ethylbenzene	0.0097	0.0010	mg/L	0.01000		97	70-130	2	25	
Hexachlorobutadiene	0.0104	0.0006	mg/L	0.01000		104	70-130	3	25	
Hexachloroethane	0.0097	0.0010	mg/L	0.01000		97	70-130	0.9	25	
Isopropylbenzene	0.0102	0.0010	mg/L	0.01000		102	70-130	2	25	
Methyl tert-Butyl Ether	0.0104	0.0010	mg/L	0.01000		104	70-130	0.6	25	
Methylene Chloride	0.0110	0.0020	mg/L	0.01000		110	70-130	3	25	
Naphthalene	0.0088	0.0010	mg/L	0.01000		88	70-130	4	25	
n-Butylbenzene	0.0104	0.0010	mg/L	0.01000		104	70-130	0.9	25	
n-Propylbenzene	0.0101	0.0010	mg/L	0.01000		101	70-130	2	25	
sec-Butylbenzene	0.0100	0.0010	mg/L	0.01000		100	70-130	2	25	
Styrene	0.0094	0.0010	mg/L	0.01000		94	70-130	4	25	
tert-Butylbenzene	0.0099	0.0010	mg/L	0.01000		99	70-130	2	25	
Tertiary-amyl methyl ether	0.0092	0.0010	mg/L	0.01000		92	70-130	2	25	
Tetrachloroethene	0.0082	0.0010	mg/L	0.01000		82	70-130	9	25	
Tetrahydrofuran	0.0090	0.0050	mg/L	0.01000		90	70-130	12	25	
Toluene	0.0103	0.0010	mg/L	0.01000		103	70-130	3	25	

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: 642 Allens Ave

ESS Laboratory Work Order: 22K0898

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
8260B Volatile Organic Compounds										
Batch DK22830 - 5030B										
trans-1,2-Dichloroethene	0.0105	0.0010	mg/L	0.01000		105	70-130	3	25	
trans-1,3-Dichloropropene	0.0094	0.0004	mg/L	0.01000		94	70-130	2	25	
Trichloroethene	0.0097	0.0010	mg/L	0.01000		97	70-130	0.4	25	
Trichlorofluoromethane	0.0105	0.0010	mg/L	0.01000		105	70-130	7	25	
Vinyl Acetate	0.0118	0.0050	mg/L	0.01000		118	70-130	0	25	
Vinyl Chloride	0.0107	0.0010	mg/L	0.01000		107	70-130	0.8	25	
Xylene O	0.0099	0.0010	mg/L	0.01000		99	70-130	2	25	
Xylene P,M	0.0200	0.0020	mg/L	0.02000		100	70-130	0.8	25	
Surrogate: 1,2-Dichloroethane-d4	*0.0268*		mg/L	*0.02500*		*107*	*70-130*			
Surrogate: 4-Bromofluorobenzene	*0.0246*		mg/L	*0.02500*		*98*	*70-130*			
Surrogate: Dibromofluoromethane	*0.0267*		mg/L	*0.02500*		*107*	*70-130*			
Surrogate: Toluene-d8	*0.0245*		mg/L	*0.02500*		*98*	*70-130*			
Batch DK22831 - 5030B										
Blank										
1,1,1,2-Tetrachloroethane	ND	0.0010	mg/L							
1,1,1-Trichloroethane	ND	0.0010	mg/L							
1,1,2,2-Tetrachloroethane	ND	0.0005	mg/L							
1,1,2-Trichloroethane	ND	0.0010	mg/L							
1,1-Dichloroethane	ND	0.0010	mg/L							
1,1-Dichloroethene	ND	0.0010	mg/L							
1,1-Dichloropropene	ND	0.0020	mg/L							
1,2,3-Trichlorobenzene	ND	0.0010	mg/L							
1,2,3-Trichloropropane	ND	0.0010	mg/L							
1,2,4-Trichlorobenzene	ND	0.0010	mg/L							
1,2,4-Trimethylbenzene	ND	0.0010	mg/L							
1,2-Dibromo-3-Chloropropane	ND	0.0050	mg/L							
1,2-Dibromoethane	ND	0.0010	mg/L							
1,2-Dichlorobenzene	ND	0.0010	mg/L							
1,2-Dichloroethane	ND	0.0010	mg/L							
1,2-Dichloropropane	ND	0.0010	mg/L							
1,3,5-Trimethylbenzene	ND	0.0010	mg/L							
1,3-Dichlorobenzene	ND	0.0010	mg/L							
1,3-Dichloropropane	ND	0.0010	mg/L							
1,4-Dichlorobenzene	ND	0.0010	mg/L							
1,4-Dioxane - Screen	ND	0.500	mg/L							
1-Chlorohexane	ND	0.0010	mg/L							
2,2-Dichloropropane	ND	0.0010	mg/L							
2-Butanone	ND	0.0100	mg/L							
2-Chlorotoluene	ND	0.0010	mg/L							
2-Hexanone	ND	0.0100	mg/L							
4-Chlorotoluene	ND	0.0010	mg/L							
4-Isopropyltoluene	ND	0.0010	mg/L							
4-Methyl-2-Pentanone	ND	0.0100	mg/L							
Acetone	ND	0.0100	mg/L							
Benzene	ND	0.0010	mg/L							

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: 642 Allens Ave

ESS Laboratory Work Order: 22K0898

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
8260B Volatile Organic Compounds										
Batch DK22831 - 5030B										
Bromobenzene	ND	0.0020	mg/L							
Bromochloromethane	ND	0.0010	mg/L							
Bromodichloromethane	ND	0.0006	mg/L							
Bromoform	ND	0.0010	mg/L							
Bromomethane	ND	0.0020	mg/L							
Carbon Disulfide	ND	0.0010	mg/L							
Carbon Tetrachloride	ND	0.0010	mg/L							
Chlorobenzene	ND	0.0010	mg/L							
Chloroethane	ND	0.0020	mg/L							
Chloroform	ND	0.0010	mg/L							
Chloromethane	ND	0.0020	mg/L							
cis-1,2-Dichloroethene	ND	0.0010	mg/L							
cis-1,3-Dichloropropene	ND	0.0004	mg/L							
Dibromochloromethane	ND	0.0010	mg/L							
Dibromomethane	ND	0.0010	mg/L							
Dichlorodifluoromethane	ND	0.0020	mg/L							
Diethyl Ether	ND	0.0010	mg/L							
Di-isopropyl ether	ND	0.0010	mg/L							
Ethyl tertiary-butyl ether	ND	0.0010	mg/L							
Ethylbenzene	ND	0.0010	mg/L							
Hexachlorobutadiene	ND	0.0006	mg/L							
Hexachloroethane	ND	0.0010	mg/L							
Isopropylbenzene	ND	0.0010	mg/L							
Methyl tert-Butyl Ether	ND	0.0010	mg/L							
Methylene Chloride	ND	0.0020	mg/L							
Naphthalene	ND	0.0010	mg/L							
n-Butylbenzene	ND	0.0010	mg/L							
n-Propylbenzene	ND	0.0010	mg/L							
sec-Butylbenzene	ND	0.0010	mg/L							
Styrene	ND	0.0010	mg/L							
tert-Butylbenzene	ND	0.0010	mg/L							
Tertiary-amyl methyl ether	ND	0.0010	mg/L							
Tetrachloroethene	ND	0.0010	mg/L							
Tetrahydrofuran	ND	0.0050	mg/L							
Toluene	ND	0.0010	mg/L							
trans-1,2-Dichloroethene	ND	0.0010	mg/L							
trans-1,3-Dichloropropene	ND	0.0004	mg/L							
Trichloroethene	ND	0.0010	mg/L							
Trichlorofluoromethane	ND	0.0010	mg/L							
Vinyl Acetate	ND	0.0050	mg/L							
Vinyl Chloride	ND	0.0010	mg/L							
Xylene O	ND	0.0010	mg/L							
Xylene P,M	ND	0.0020	mg/L							
Surrogate: 1,2-Dichloroethane-d4	*0.0258*		mg/L	*0.02500*		*103*	*70-130*			
Surrogate: 4-Bromofluorobenzene	*0.0234*		mg/L	*0.02500*		*94*	*70-130*			

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: 642 Allens Ave

ESS Laboratory Work Order: 22K0898

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
8260B Volatile Organic Compounds										
Batch DK22831 - 5030B										
Surrogate: Dibromofluoromethane	*0.0244*		mg/L	*0.02500*		*98*	*70-130*			
Surrogate: Toluene-d8	*0.0251*		mg/L	*0.02500*		*100*	*70-130*			
LCS										
1,1,1,2-Tetrachloroethane	0.0099	0.0010	mg/L	0.01000		99	70-130			
1,1,1-Trichloroethane	0.0097	0.0010	mg/L	0.01000		97	70-130			
1,1,2,2-Tetrachloroethane	0.0094	0.0005	mg/L	0.01000		94	70-130			
1,1,2-Trichloroethane	0.0098	0.0010	mg/L	0.01000		98	70-130			
1,1-Dichloroethane	0.0098	0.0010	mg/L	0.01000		98	70-130			
1,1-Dichloroethene	0.0095	0.0010	mg/L	0.01000		95	70-130			
1,1-Dichloropropene	0.0098	0.0020	mg/L	0.01000		98	70-130			
1,2,3-Trichlorobenzene	0.0098	0.0010	mg/L	0.01000		98	70-130			
1,2,3-Trichloropropane	0.0100	0.0010	mg/L	0.01000		100	70-130			
1,2,4-Trichlorobenzene	0.0098	0.0010	mg/L	0.01000		98	70-130			
1,2,4-Trimethylbenzene	0.0100	0.0010	mg/L	0.01000		100	70-130			
1,2-Dibromo-3-Chloropropane	0.0089	0.0050	mg/L	0.01000		89	70-130			
1,2-Dibromoethane	0.0100	0.0010	mg/L	0.01000		100	70-130			
1,2-Dichlorobenzene	0.0098	0.0010	mg/L	0.01000		98	70-130			
1,2-Dichloroethane	0.0098	0.0010	mg/L	0.01000		98	70-130			
1,2-Dichloropropane	0.0097	0.0010	mg/L	0.01000		97	70-130			
1,3,5-Trimethylbenzene	0.0104	0.0010	mg/L	0.01000		104	70-130			
1,3-Dichlorobenzene	0.0099	0.0010	mg/L	0.01000		99	70-130			
1,3-Dichloropropane	0.0096	0.0010	mg/L	0.01000		96	70-130			
1,4-Dichlorobenzene	0.0097	0.0010	mg/L	0.01000		97	70-130			
1,4-Dioxane - Screen	0.199	0.500	mg/L	0.2000		100	0-332			
1-Chlorohexane	0.0095	0.0010	mg/L	0.01000		95	70-130			
2,2-Dichloropropane	0.0097	0.0010	mg/L	0.01000		97	70-130			
2-Butanone	0.0541	0.0100	mg/L	0.05000		108	70-130			
2-Chlorotoluene	0.0100	0.0010	mg/L	0.01000		100	70-130			
2-Hexanone	0.0494	0.0100	mg/L	0.05000		99	70-130			
4-Chlorotoluene	0.0100	0.0010	mg/L	0.01000		100	70-130			
4-Isopropyltoluene	0.0096	0.0010	mg/L	0.01000		96	70-130			
4-Methyl-2-Pentanone	0.0484	0.0100	mg/L	0.05000		97	70-130			
Acetone	0.0551	0.0100	mg/L	0.05000		110	70-130			
Benzene	0.0098	0.0010	mg/L	0.01000		98	70-130			
Bromobenzene	0.0100	0.0020	mg/L	0.01000		100	70-130			
Bromochloromethane	0.0106	0.0010	mg/L	0.01000		106	70-130			
Bromodichloromethane	0.0105	0.0006	mg/L	0.01000		105	70-130			
Bromoform	0.0102	0.0010	mg/L	0.01000		102	70-130			
Bromomethane	0.0100	0.0020	mg/L	0.01000		100	70-130			
Carbon Disulfide	0.0102	0.0010	mg/L	0.01000		102	70-130			
Carbon Tetrachloride	0.0100	0.0010	mg/L	0.01000		100	70-130			
Chlorobenzene	0.0093	0.0010	mg/L	0.01000		93	70-130			
Chloroethane	0.0104	0.0020	mg/L	0.01000		104	70-130			
Chloroform	0.0098	0.0010	mg/L	0.01000		98	70-130			

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: 642 Allens Ave

ESS Laboratory Work Order: 22K0898

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
8260B Volatile Organic Compounds										
Batch DK22831 - 5030B										
Chloromethane	0.0096	0.0020	mg/L	0.01000		96	70-130			
cis-1,2-Dichloroethene	0.0100	0.0010	mg/L	0.01000		100	70-130			
cis-1,3-Dichloropropene	0.0092	0.0004	mg/L	0.01000		92	70-130			
Dibromochloromethane	0.0100	0.0010	mg/L	0.01000		100	70-130			
Dibromomethane	0.0100	0.0010	mg/L	0.01000		100	70-130			
Dichlorodifluoromethane	0.0089	0.0020	mg/L	0.01000		89	70-130			
Diethyl Ether	0.0109	0.0010	mg/L	0.01000		109	70-130			
Di-isopropyl ether	0.0098	0.0010	mg/L	0.01000		98	70-130			
Ethyl tertiary-butyl ether	0.0103	0.0010	mg/L	0.01000		103	70-130			
Ethylbenzene	0.0095	0.0010	mg/L	0.01000		95	70-130			
Hexachlorobutadiene	0.0104	0.0006	mg/L	0.01000		104	70-130			
Hexachloroethane	0.0090	0.0010	mg/L	0.01000		90	70-130			
Isopropylbenzene	0.0101	0.0010	mg/L	0.01000		101	70-130			
Methyl tert-Butyl Ether	0.0103	0.0010	mg/L	0.01000		103	70-130			
Methylene Chloride	0.0099	0.0020	mg/L	0.01000		99	70-130			
Naphthalene	0.0092	0.0010	mg/L	0.01000		92	70-130			
n-Butylbenzene	0.0100	0.0010	mg/L	0.01000		100	70-130			
n-Propylbenzene	0.0099	0.0010	mg/L	0.01000		99	70-130			
sec-Butylbenzene	0.0099	0.0010	mg/L	0.01000		99	70-130			
Styrene	0.0092	0.0010	mg/L	0.01000		92	70-130			
tert-Butylbenzene	0.0101	0.0010	mg/L	0.01000		101	70-130			
Tertiary-amyl methyl ether	0.0092	0.0010	mg/L	0.01000		92	70-130			
Tetrachloroethene	0.0113	0.0010	mg/L	0.01000		113	70-130			
Tetrahydrofuran	0.0098	0.0050	mg/L	0.01000		98	70-130			
Toluene	0.0097	0.0010	mg/L	0.01000		97	70-130			
trans-1,2-Dichloroethene	0.0102	0.0010	mg/L	0.01000		102	70-130			
trans-1,3-Dichloropropene	0.0087	0.0004	mg/L	0.01000		87	70-130			
Trichloroethene	0.0100	0.0010	mg/L	0.01000		100	70-130			
Trichlorofluoromethane	0.0106	0.0010	mg/L	0.01000		106	70-130			
Vinyl Acetate	0.0079	0.0050	mg/L	0.01000		79	70-130			
Vinyl Chloride	0.0104	0.0010	mg/L	0.01000		104	70-130			
Xylene O	0.0096	0.0010	mg/L	0.01000		96	70-130			
Xylene P,M	0.0197	0.0020	mg/L	0.02000		99	70-130			
Surrogate: 1,2-Dichloroethane-d4	*0.0256*		mg/L	*0.02500*		*103*	*70-130*			
Surrogate: 4-Bromofluorobenzene	*0.0248*		mg/L	*0.02500*		*99*	*70-130*			
Surrogate: Dibromofluoromethane	*0.0256*		mg/L	*0.02500*		*102*	*70-130*			
Surrogate: Toluene-d8	*0.0244*		mg/L	*0.02500*		*97*	*70-130*			
LCS Dup										
1,1,1,2-Tetrachloroethane	0.0101	0.0010	mg/L	0.01000		101	70-130	2	25	
1,1,1-Trichloroethane	0.0099	0.0010	mg/L	0.01000		99	70-130	2	25	
1,1,2,2-Tetrachloroethane	0.0093	0.0005	mg/L	0.01000		93	70-130	1	25	
1,1,2-Trichloroethane	0.0098	0.0010	mg/L	0.01000		98	70-130	0.2	25	
1,1-Dichloroethane	0.0099	0.0010	mg/L	0.01000		99	70-130	0.2	25	
1,1-Dichloroethene	0.0104	0.0010	mg/L	0.01000		104	70-130	9	25	
1,1-Dichloropropene	0.0098	0.0020	mg/L	0.01000		98	70-130	0.5	25	

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: 642 Allens Ave

ESS Laboratory Work Order: 22K0898

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
8260B Volatile Organic Compounds										
Batch DK22831 - 5030B										
1,2,3-Trichlorobenzene	0.0096	0.0010	mg/L	0.01000		96	70-130	2	25	
1,2,3-Trichloropropane	0.0097	0.0010	mg/L	0.01000		97	70-130	4	25	
1,2,4-Trichlorobenzene	0.0097	0.0010	mg/L	0.01000		97	70-130	1	25	
1,2,4-Trimethylbenzene	0.0100	0.0010	mg/L	0.01000		100	70-130	0.2	25	
1,2-Dibromo-3-Chloropropane	0.0090	0.0050	mg/L	0.01000		90	70-130	0.9	25	
1,2-Dibromoethane	0.0099	0.0010	mg/L	0.01000		99	70-130	0.8	25	
1,2-Dichlorobenzene	0.0097	0.0010	mg/L	0.01000		97	70-130	0.5	25	
1,2-Dichloroethane	0.0097	0.0010	mg/L	0.01000		97	70-130	0.3	25	
1,2-Dichloropropane	0.0097	0.0010	mg/L	0.01000		97	70-130	0.1	25	
1,3,5-Trimethylbenzene	0.0105	0.0010	mg/L	0.01000		105	70-130	0.9	25	
1,3-Dichlorobenzene	0.0098	0.0010	mg/L	0.01000		98	70-130	0.8	25	
1,3-Dichloropropane	0.0096	0.0010	mg/L	0.01000		97	70-130	0.1	25	
1,4-Dichlorobenzene	0.0098	0.0010	mg/L	0.01000		98	70-130	0.9	25	
1,4-Dioxane - Screen	0.191	0.500	mg/L	0.2000		96	0-332	4	200	
1-Chlorohexane	0.0097	0.0010	mg/L	0.01000		97	70-130	2	25	
2,2-Dichloropropane	0.0096	0.0010	mg/L	0.01000		96	70-130	1	25	
2-Butanone	0.0521	0.0100	mg/L	0.05000		104	70-130	4	25	
2-Chlorotoluene	0.0101	0.0010	mg/L	0.01000		101	70-130	0.5	25	
2-Hexanone	0.0479	0.0100	mg/L	0.05000		96	70-130	3	25	
4-Chlorotoluene	0.0100	0.0010	mg/L	0.01000		100	70-130	0	25	
4-Isopropyltoluene	0.0096	0.0010	mg/L	0.01000		96	70-130	0.4	25	
4-Methyl-2-Pentanone	0.0470	0.0100	mg/L	0.05000		94	70-130	3	25	
Acetone	0.0528	0.0100	mg/L	0.05000		106	70-130	4	25	
Benzene	0.0097	0.0010	mg/L	0.01000		97	70-130	0.9	25	
Bromobenzene	0.0099	0.0020	mg/L	0.01000		99	70-130	0.7	25	
Bromochloromethane	0.0104	0.0010	mg/L	0.01000		104	70-130	2	25	
Bromodichloromethane	0.0100	0.0006	mg/L	0.01000		100	70-130	5	25	
Bromoform	0.0100	0.0010	mg/L	0.01000		100	70-130	2	25	
Bromomethane	0.0100	0.0020	mg/L	0.01000		100	70-130	0.7	25	
Carbon Disulfide	0.0104	0.0010	mg/L	0.01000		104	70-130	2	25	
Carbon Tetrachloride	0.0100	0.0010	mg/L	0.01000		100	70-130	1	25	
Chlorobenzene	0.0094	0.0010	mg/L	0.01000		94	70-130	0.6	25	
Chloroethane	0.0104	0.0020	mg/L	0.01000		104	70-130	0.3	25	
Chloroform	0.0098	0.0010	mg/L	0.01000		98	70-130	0	25	
Chloromethane	0.0096	0.0020	mg/L	0.01000		96	70-130	0.3	25	
cis-1,2-Dichloroethene	0.0102	0.0010	mg/L	0.01000		102	70-130	1	25	
cis-1,3-Dichloropropene	0.0093	0.0004	mg/L	0.01000		93	70-130	0.4	25	
Dibromochloromethane	0.0101	0.0010	mg/L	0.01000		101	70-130	0.9	25	
Dibromomethane	0.0098	0.0010	mg/L	0.01000		98	70-130	2	25	
Dichlorodifluoromethane	0.0086	0.0020	mg/L	0.01000		86	70-130	4	25	
Diethyl Ether	0.0103	0.0010	mg/L	0.01000		103	70-130	5	25	
Di-isopropyl ether	0.0099	0.0010	mg/L	0.01000		99	70-130	1	25	
Ethyl tertiary-butyl ether	0.0102	0.0010	mg/L	0.01000		102	70-130	1	25	
Ethylbenzene	0.0097	0.0010	mg/L	0.01000		97	70-130	2	25	
Hexachlorobutadiene	0.0100	0.0006	mg/L	0.01000		100	70-130	3	25	

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: 642 Allens Ave

ESS Laboratory Work Order: 22K0898

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
8260B Volatile Organic Compounds										
Batch DK22831 - 5030B										
Hexachloroethane	0.0092	0.0010	mg/L	0.01000		92	70-130	1	25	
Isopropylbenzene	0.0103	0.0010	mg/L	0.01000		103	70-130	2	25	
Methyl tert-Butyl Ether	0.0103	0.0010	mg/L	0.01000		103	70-130	0.2	25	
Methylene Chloride	0.0100	0.0020	mg/L	0.01000		100	70-130	1	25	
Naphthalene	0.0091	0.0010	mg/L	0.01000		91	70-130	2	25	
n-Butylbenzene	0.0099	0.0010	mg/L	0.01000		99	70-130	0.3	25	
n-Propylbenzene	0.0100	0.0010	mg/L	0.01000		100	70-130	0.9	25	
sec-Butylbenzene	0.0099	0.0010	mg/L	0.01000		99	70-130	0.1	25	
Styrene	0.0092	0.0010	mg/L	0.01000		92	70-130	0.9	25	
tert-Butylbenzene	0.0102	0.0010	mg/L	0.01000		102	70-130	0.7	25	
Tertiary-amyl methyl ether	0.0090	0.0010	mg/L	0.01000		90	70-130	2	25	
Tetrachloroethene	0.0114	0.0010	mg/L	0.01000		114	70-130	0.5	25	
Tetrahydrofuran	0.0087	0.0050	mg/L	0.01000		87	70-130	11	25	
Toluene	0.0096	0.0010	mg/L	0.01000		97	70-130	0.1	25	
trans-1,2-Dichloroethene	0.0106	0.0010	mg/L	0.01000		106	70-130	3	25	
trans-1,3-Dichloropropene	0.0088	0.0004	mg/L	0.01000		88	70-130	1	25	
Trichloroethene	0.0100	0.0010	mg/L	0.01000		100	70-130	0	25	
Trichlorofluoromethane	0.0109	0.0010	mg/L	0.01000		109	70-130	3	25	
Vinyl Acetate	0.0078	0.0050	mg/L	0.01000		78	70-130	0.5	25	
Vinyl Chloride	0.0105	0.0010	mg/L	0.01000		105	70-130	1	25	
Xylene O	0.0099	0.0010	mg/L	0.01000		99	70-130	2	25	
Xylene P,M	0.0198	0.0020	mg/L	0.02000		99	70-130	0.6	25	
Surrogate: 1,2-Dichloroethane-d4	*0.0254*		mg/L	*0.02500*		*102*	*70-130*			
Surrogate: 4-Bromofluorobenzene	*0.0250*		mg/L	*0.02500*		*100*	*70-130*			
Surrogate: Dibromofluoromethane	*0.0254*		mg/L	*0.02500*		*101*	*70-130*			
Surrogate: Toluene-d8	*0.0245*		mg/L	*0.02500*		*98*	*70-130*			
Batch DK22917 - 5030B										
Blank										
1,1,1,2-Tetrachloroethane	ND	0.0010	mg/L							
1,1,1-Trichloroethane	ND	0.0010	mg/L							
1,1,2,2-Tetrachloroethane	ND	0.0005	mg/L							
1,1,2-Trichloroethane	ND	0.0010	mg/L							
1,1-Dichloroethane	ND	0.0010	mg/L							
1,1-Dichloroethene	ND	0.0010	mg/L							
1,1-Dichloropropene	ND	0.0020	mg/L							
1,2,3-Trichlorobenzene	ND	0.0010	mg/L							
1,2,3-Trichloropropane	ND	0.0010	mg/L							
1,2,4-Trichlorobenzene	ND	0.0010	mg/L							
1,2,4-Trimethylbenzene	ND	0.0010	mg/L							
1,2-Dibromo-3-Chloropropane	ND	0.0050	mg/L							
1,2-Dibromoethane	ND	0.0010	mg/L							
1,2-Dichlorobenzene	ND	0.0010	mg/L							
1,2-Dichloroethane	ND	0.0010	mg/L							
1,2-Dichloropropane	ND	0.0010	mg/L							
1,3,5-Trimethylbenzene	ND	0.0010	mg/L							

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: 642 Allens Ave

ESS Laboratory Work Order: 22K0898

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
8260B Volatile Organic Compounds										
Batch DK22917 - 5030B										
1,3-Dichlorobenzene	ND	0.0010	mg/L							
1,3-Dichloropropane	ND	0.0010	mg/L							
1,4-Dichlorobenzene	ND	0.0010	mg/L							
1,4-Dioxane - Screen	ND	0.500	mg/L							
1-Chlorohexane	ND	0.0010	mg/L							
2,2-Dichloropropane	ND	0.0010	mg/L							
2-Butanone	ND	0.0100	mg/L							
2-Chlorotoluene	ND	0.0010	mg/L							
2-Hexanone	ND	0.0100	mg/L							
4-Chlorotoluene	ND	0.0010	mg/L							
4-Isopropyltoluene	ND	0.0010	mg/L							
4-Methyl-2-Pentanone	ND	0.0100	mg/L							
Acetone	ND	0.0100	mg/L							
Benzene	ND	0.0010	mg/L							
Bromobenzene	ND	0.0020	mg/L							
Bromochloromethane	ND	0.0010	mg/L							
Bromodichloromethane	ND	0.0006	mg/L							
Bromoform	ND	0.0010	mg/L							
Bromomethane	ND	0.0020	mg/L							
Carbon Disulfide	ND	0.0010	mg/L							
Carbon Tetrachloride	ND	0.0010	mg/L							
Chlorobenzene	ND	0.0010	mg/L							
Chloroethane	ND	0.0020	mg/L							
Chloroform	ND	0.0010	mg/L							
Chloromethane	ND	0.0020	mg/L							
cis-1,2-Dichloroethene	ND	0.0010	mg/L							
cis-1,3-Dichloropropene	ND	0.0004	mg/L							
Dibromochloromethane	ND	0.0010	mg/L							
Dibromomethane	ND	0.0010	mg/L							
Dichlorodifluoromethane	ND	0.0020	mg/L							
Diethyl Ether	ND	0.0010	mg/L							
Di-isopropyl ether	ND	0.0010	mg/L							
Ethyl tertiary-butyl ether	ND	0.0010	mg/L							
Ethylbenzene	ND	0.0010	mg/L							
Hexachlorobutadiene	ND	0.0006	mg/L							
Hexachloroethane	ND	0.0010	mg/L							
Isopropylbenzene	ND	0.0010	mg/L							
Methyl tert-Butyl Ether	ND	0.0010	mg/L							
Methylene Chloride	ND	0.0020	mg/L							
Naphthalene	ND	0.0010	mg/L							
n-Butylbenzene	ND	0.0010	mg/L							
n-Propylbenzene	ND	0.0010	mg/L							
sec-Butylbenzene	ND	0.0010	mg/L							
Styrene	ND	0.0010	mg/L							
tert-Butylbenzene	ND	0.0010	mg/L							

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: 642 Allens Ave

ESS Laboratory Work Order: 22K0898

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
8260B Volatile Organic Compounds										
Batch DK22917 - 5030B										
Tertiary-amyl methyl ether	ND	0.0010	mg/L							
Tetrachloroethene	ND	0.0010	mg/L							
Tetrahydrofuran	ND	0.0050	mg/L							
Toluene	ND	0.0010	mg/L							
trans-1,2-Dichloroethene	ND	0.0010	mg/L							
trans-1,3-Dichloropropene	ND	0.0004	mg/L							
Trichloroethene	ND	0.0010	mg/L							
Trichlorofluoromethane	ND	0.0010	mg/L							
Vinyl Acetate	ND	0.0050	mg/L							
Vinyl Chloride	ND	0.0010	mg/L							
Xylene O	ND	0.0010	mg/L							
Xylene P,M	ND	0.0020	mg/L							
Surrogate: 1,2-Dichloroethane-d4	*0.0264*		mg/L	*0.02500*		*106*	*70-130*			
Surrogate: 4-Bromofluorobenzene	*0.0231*		mg/L	*0.02500*		*92*	*70-130*			
Surrogate: Dibromofluoromethane	*0.0247*		mg/L	*0.02500*		*99*	*70-130*			
Surrogate: Toluene-d8	*0.0251*		mg/L	*0.02500*		*100*	*70-130*			
LCS										
1,1,1,2-Tetrachloroethane	0.0100	0.0010	mg/L	0.01000		100	70-130			
1,1,1-Trichloroethane	0.0098	0.0010	mg/L	0.01000		98	70-130			
1,1,2,2-Tetrachloroethane	0.0095	0.0005	mg/L	0.01000		95	70-130			
1,1,2-Trichloroethane	0.0096	0.0010	mg/L	0.01000		96	70-130			
1,1-Dichloroethane	0.0100	0.0010	mg/L	0.01000		100	70-130			
1,1-Dichloroethene	0.0099	0.0010	mg/L	0.01000		99	70-130			
1,1-Dichloropropene	0.0101	0.0020	mg/L	0.01000		101	70-130			
1,2,3-Trichlorobenzene	0.0090	0.0010	mg/L	0.01000		90	70-130			
1,2,3-Trichloropropane	0.0092	0.0010	mg/L	0.01000		92	70-130			
1,2,4-Trichlorobenzene	0.0092	0.0010	mg/L	0.01000		92	70-130			
1,2,4-Trimethylbenzene	0.0099	0.0010	mg/L	0.01000		99	70-130			
1,2-Dibromo-3-Chloropropane	0.0079	0.0050	mg/L	0.01000		79	70-130			
1,2-Dibromoethane	0.0096	0.0010	mg/L	0.01000		96	70-130			
1,2-Dichlorobenzene	0.0095	0.0010	mg/L	0.01000		95	70-130			
1,2-Dichloroethane	0.0096	0.0010	mg/L	0.01000		96	70-130			
1,2-Dichloropropane	0.0098	0.0010	mg/L	0.01000		98	70-130			
1,3,5-Trimethylbenzene	0.0103	0.0010	mg/L	0.01000		103	70-130			
1,3-Dichlorobenzene	0.0098	0.0010	mg/L	0.01000		98	70-130			
1,3-Dichloropropane	0.0096	0.0010	mg/L	0.01000		96	70-130			
1,4-Dichlorobenzene	0.0096	0.0010	mg/L	0.01000		96	70-130			
1,4-Dioxane - Screen	ND	0.500	mg/L	0.2000		0	0-332			
1-Chlorohexane	0.0096	0.0010	mg/L	0.01000		96	70-130			
2,2-Dichloropropane	0.0110	0.0010	mg/L	0.01000		110	70-130			
2-Butanone	0.0514	0.0100	mg/L	0.05000		103	70-130			
2-Chlorotoluene	0.0100	0.0010	mg/L	0.01000		100	70-130			
2-Hexanone	0.0449	0.0100	mg/L	0.05000		90	70-130			
4-Chlorotoluene	0.0100	0.0010	mg/L	0.01000		100	70-130			
4-Isopropyltoluene	0.0095	0.0010	mg/L	0.01000		95	70-130			

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: 642 Allens Ave

ESS Laboratory Work Order: 22K0898

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
8260B Volatile Organic Compounds										
Batch DK22917 - 5030B										
4-Methyl-2-Pentanone	0.0438	0.0100	mg/L	0.05000		88	70-130			
Acetone	0.0494	0.0100	mg/L	0.05000		99	70-130			
Benzene	0.0100	0.0010	mg/L	0.01000		100	70-130			
Bromobenzene	0.0097	0.0020	mg/L	0.01000		97	70-130			
Bromochloromethane	0.0103	0.0010	mg/L	0.01000		103	70-130			
Bromodichloromethane	0.0106	0.0006	mg/L	0.01000		106	70-130			
Bromoform	0.0094	0.0010	mg/L	0.01000		94	70-130			
Bromomethane	0.0101	0.0020	mg/L	0.01000		101	70-130			
Carbon Disulfide	0.0107	0.0010	mg/L	0.01000		107	70-130			
Carbon Tetrachloride	0.0101	0.0010	mg/L	0.01000		101	70-130			
Chlorobenzene	0.0095	0.0010	mg/L	0.01000		95	70-130			
Chloroethane	0.0106	0.0020	mg/L	0.01000		106	70-130			
Chloroform	0.0100	0.0010	mg/L	0.01000		100	70-130			
Chloromethane	0.0100	0.0020	mg/L	0.01000		100	70-130			
cis-1,2-Dichloroethene	0.0103	0.0010	mg/L	0.01000		103	70-130			
cis-1,3-Dichloropropene	0.0093	0.0004	mg/L	0.01000		93	70-130			
Dibromochloromethane	0.0099	0.0010	mg/L	0.01000		99	70-130			
Dibromomethane	0.0101	0.0010	mg/L	0.01000		101	70-130			
Dichlorodifluoromethane	0.0091	0.0020	mg/L	0.01000		91	70-130			
Diethyl Ether	0.0100	0.0010	mg/L	0.01000		100	70-130			
Di-isopropyl ether	0.0100	0.0010	mg/L	0.01000		100	70-130			
Ethyl tertiary-butyl ether	0.0102	0.0010	mg/L	0.01000		102	70-130			
Ethylbenzene	0.0096	0.0010	mg/L	0.01000		96	70-130			
Hexachlorobutadiene	0.0100	0.0006	mg/L	0.01000		100	70-130			
Hexachloroethane	0.0088	0.0010	mg/L	0.01000		88	70-130			
Isopropylbenzene	0.0101	0.0010	mg/L	0.01000		101	70-130			
Methyl tert-Butyl Ether	0.0097	0.0010	mg/L	0.01000		97	70-130			
Methylene Chloride	0.0104	0.0020	mg/L	0.01000		104	70-130			
Naphthalene	0.0082	0.0010	mg/L	0.01000		82	70-130			
n-Butylbenzene	0.0100	0.0010	mg/L	0.01000		100	70-130			
n-Propylbenzene	0.0099	0.0010	mg/L	0.01000		99	70-130			
sec-Butylbenzene	0.0098	0.0010	mg/L	0.01000		98	70-130			
Styrene	0.0091	0.0010	mg/L	0.01000		91	70-130			
tert-Butylbenzene	0.0099	0.0010	mg/L	0.01000		99	70-130			
Tertiary-amyl methyl ether	0.0088	0.0010	mg/L	0.01000		88	70-130			
Tetrachloroethene	0.0079	0.0010	mg/L	0.01000		79	70-130			
Tetrahydrofuran	0.0086	0.0050	mg/L	0.01000		86	70-130			
Toluene	0.0098	0.0010	mg/L	0.01000		98	70-130			
trans-1,2-Dichloroethene	0.0096	0.0010	mg/L	0.01000		96	70-130			
trans-1,3-Dichloropropene	0.0085	0.0004	mg/L	0.01000		85	70-130			
Trichloroethene	0.0096	0.0010	mg/L	0.01000		96	70-130			
Trichlorofluoromethane	0.0107	0.0010	mg/L	0.01000		107	70-130			
Vinyl Acetate	0.0108	0.0050	mg/L	0.01000		108	70-130			
Vinyl Chloride	0.0101	0.0010	mg/L	0.01000		101	70-130			
Xylene O	0.0098	0.0010	mg/L	0.01000		98	70-130			

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: 642 Allens Ave

ESS Laboratory Work Order: 22K0898

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
8260B Volatile Organic Compounds										
Batch DK22917 - 5030B										
Xylene P,M	0.0200	0.0020	mg/L	0.02000		100	70-130			
Surrogate: 1,2-Dichloroethane-d4	*0.0259*		mg/L	*0.02500*		*103*	*70-130*			
Surrogate: 4-Bromofluorobenzene	*0.0246*		mg/L	*0.02500*		*99*	*70-130*			
Surrogate: Dibromofluoromethane	*0.0256*		mg/L	*0.02500*		*103*	*70-130*			
Surrogate: Toluene-d8	*0.0247*		mg/L	*0.02500*		*99*	*70-130*			
LCS Dup										
1,1,1,2-Tetrachloroethane	0.0100	0.0010	mg/L	0.01000		100	70-130	0.1	25	
1,1,1-Trichloroethane	0.0097	0.0010	mg/L	0.01000		97	70-130	0.1	25	
1,1,2,2-Tetrachloroethane	0.0097	0.0005	mg/L	0.01000		97	70-130	2	25	
1,1,2-Trichloroethane	0.0098	0.0010	mg/L	0.01000		98	70-130	2	25	
1,1-Dichloroethane	0.0100	0.0010	mg/L	0.01000		100	70-130	0.5	25	
1,1-Dichloroethene	0.0101	0.0010	mg/L	0.01000		101	70-130	2	25	
1,1-Dichloropropene	0.0098	0.0020	mg/L	0.01000		98	70-130	3	25	
1,2,3-Trichlorobenzene	0.0093	0.0010	mg/L	0.01000		93	70-130	3	25	
1,2,3-Trichloropropane	0.0095	0.0010	mg/L	0.01000		95	70-130	3	25	
1,2,4-Trichlorobenzene	0.0093	0.0010	mg/L	0.01000		93	70-130	0.1	25	
1,2,4-Trimethylbenzene	0.0100	0.0010	mg/L	0.01000		100	70-130	1	25	
1,2-Dibromo-3-Chloropropane	0.0085	0.0050	mg/L	0.01000		85	70-130	7	25	
1,2-Dibromoethane	0.0097	0.0010	mg/L	0.01000		97	70-130	2	25	
1,2-Dichlorobenzene	0.0096	0.0010	mg/L	0.01000		96	70-130	0.7	25	
1,2-Dichloroethane	0.0099	0.0010	mg/L	0.01000		99	70-130	2	25	
1,2-Dichloropropane	0.0098	0.0010	mg/L	0.01000		98	70-130	0.3	25	
1,3,5-Trimethylbenzene	0.0104	0.0010	mg/L	0.01000		104	70-130	0.7	25	
1,3-Dichlorobenzene	0.0098	0.0010	mg/L	0.01000		98	70-130	0.7	25	
1,3-Dichloropropane	0.0098	0.0010	mg/L	0.01000		98	70-130	2	25	
1,4-Dichlorobenzene	0.0098	0.0010	mg/L	0.01000		98	70-130	2	25	
1,4-Dioxane - Screen	0.199	0.500	mg/L	0.2000		99	0-332	5	200	
1-Chlorohexane	0.0095	0.0010	mg/L	0.01000		95	70-130	0.7	25	
2,2-Dichloropropane	0.0109	0.0010	mg/L	0.01000		109	70-130	0.5	25	
2-Butanone	0.0534	0.0100	mg/L	0.05000		107	70-130	4	25	
2-Chlorotoluene	0.0101	0.0010	mg/L	0.01000		101	70-130	1	25	
2-Hexanone	0.0477	0.0100	mg/L	0.05000		95	70-130	6	25	
4-Chlorotoluene	0.0100	0.0010	mg/L	0.01000		100	70-130	0.4	25	
4-Isopropyltoluene	0.0096	0.0010	mg/L	0.01000		96	70-130	2	25	
4-Methyl-2-Pentanone	0.0454	0.0100	mg/L	0.05000		91	70-130	4	25	
Acetone	0.0537	0.0100	mg/L	0.05000		107	70-130	8	25	
Benzene	0.0100	0.0010	mg/L	0.01000		100	70-130	0.4	25	
Bromobenzene	0.0098	0.0020	mg/L	0.01000		98	70-130	0.5	25	
Bromochloromethane	0.0103	0.0010	mg/L	0.01000		103	70-130	0.1	25	
Bromodichloromethane	0.0107	0.0006	mg/L	0.01000		107	70-130	1	25	
Bromoform	0.0097	0.0010	mg/L	0.01000		97	70-130	3	25	
Bromomethane	0.0111	0.0020	mg/L	0.01000		111	70-130	9	25	
Carbon Disulfide	0.0105	0.0010	mg/L	0.01000		105	70-130	2	25	
Carbon Tetrachloride	0.0099	0.0010	mg/L	0.01000		99	70-130	2	25	
Chlorobenzene	0.0094	0.0010	mg/L	0.01000		94	70-130	0.6	25	

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: 642 Allens Ave

ESS Laboratory Work Order: 22K0898

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
8260B Volatile Organic Compounds										
Batch DK22917 - 5030B										
Chloroethane	0.0106	0.0020	mg/L	0.01000		106	70-130	0.5	25	
Chloroform	0.0101	0.0010	mg/L	0.01000		101	70-130	0.8	25	
Chloromethane	0.0097	0.0020	mg/L	0.01000		97	70-130	2	25	
cis-1,2-Dichloroethene	0.0103	0.0010	mg/L	0.01000		103	70-130	0.1	25	
cis-1,3-Dichloropropene	0.0094	0.0004	mg/L	0.01000		94	70-130	0.7	25	
Dibromochloromethane	0.0098	0.0010	mg/L	0.01000		98	70-130	0.8	25	
Dibromomethane	0.0099	0.0010	mg/L	0.01000		99	70-130	2	25	
Dichlorodifluoromethane	0.0087	0.0020	mg/L	0.01000		87	70-130	4	25	
Diethyl Ether	0.0105	0.0010	mg/L	0.01000		105	70-130	5	25	
Di-isopropyl ether	0.0101	0.0010	mg/L	0.01000		101	70-130	1	25	
Ethyl tertiary-butyl ether	0.0102	0.0010	mg/L	0.01000		102	70-130	0	25	
Ethylbenzene	0.0095	0.0010	mg/L	0.01000		95	70-130	0.5	25	
Hexachlorobutadiene	0.0098	0.0006	mg/L	0.01000		98	70-130	2	25	
Hexachloroethane	0.0090	0.0010	mg/L	0.01000		90	70-130	1	25	
Isopropylbenzene	0.0102	0.0010	mg/L	0.01000		102	70-130	2	25	
Methyl tert-Butyl Ether	0.0101	0.0010	mg/L	0.01000		101	70-130	4	25	
Methylene Chloride	0.0105	0.0020	mg/L	0.01000		105	70-130	1	25	
Naphthalene	0.0083	0.0010	mg/L	0.01000		83	70-130	2	25	
n-Butylbenzene	0.0099	0.0010	mg/L	0.01000		99	70-130	0.5	25	
n-Propylbenzene	0.0100	0.0010	mg/L	0.01000		100	70-130	0.8	25	
sec-Butylbenzene	0.0098	0.0010	mg/L	0.01000		98	70-130	0.7	25	
Styrene	0.0092	0.0010	mg/L	0.01000		92	70-130	0.9	25	
tert-Butylbenzene	0.0100	0.0010	mg/L	0.01000		100	70-130	1	25	
Tertiary-amyl methyl ether	0.0088	0.0010	mg/L	0.01000		88	70-130	0.9	25	
Tetrachloroethene	0.0086	0.0010	mg/L	0.01000		86	70-130	8	25	
Tetrahydrofuran	0.0093	0.0050	mg/L	0.01000		93	70-130	8	25	
Toluene	0.0098	0.0010	mg/L	0.01000		98	70-130	0.8	25	
trans-1,2-Dichloroethene	0.0099	0.0010	mg/L	0.01000		99	70-130	3	25	
trans-1,3-Dichloropropene	0.0087	0.0004	mg/L	0.01000		87	70-130	2	25	
Trichloroethene	0.0097	0.0010	mg/L	0.01000		97	70-130	1	25	
Trichlorofluoromethane	0.0111	0.0010	mg/L	0.01000		111	70-130	3	25	
Vinyl Acetate	0.0107	0.0050	mg/L	0.01000		107	70-130	1	25	
Vinyl Chloride	0.0109	0.0010	mg/L	0.01000		109	70-130	7	25	
Xylene O	0.0096	0.0010	mg/L	0.01000		97	70-130	1	25	
Xylene P,M	0.0199	0.0020	mg/L	0.02000		99	70-130	0.5	25	
Surrogate: 1,2-Dichloroethane-d4	*0.0258*		mg/L	*0.02500*		*103*	*70-130*			
Surrogate: 4-Bromofluorobenzene	*0.0248*		mg/L	*0.02500*		*99*	*70-130*			
Surrogate: Dibromofluoromethane	*0.0256*		mg/L	*0.02500*		*103*	*70-130*			
Surrogate: Toluene-d8	*0.0244*		mg/L	*0.02500*		*98*	*70-130*			

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: 642 Allens Ave

ESS Laboratory Work Order: 22K0898

Notes and Definitions

U	Analyte included in the analysis, but not detected
D	Diluted.
ND	Analyte NOT DETECTED at or above the MRL (LOQ), LOD for DoD Reports, MDL for J-Flagged Analytes
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference
MDL	Method Detection Limit
MRL	Method Reporting Limit
LOD	Limit of Detection
LOQ	Limit of Quantitation
DL	Detection Limit
I/V	Initial Volume
F/V	Final Volume
§	Subcontracted analysis; see attached report
1	Range result excludes concentrations of surrogates and/or internal standards eluting in that range.
2	Range result excludes concentrations of target analytes eluting in that range.
3	Range result excludes the concentration of the C9-C10 aromatic range.
Avg	Results reported as a mathematical average.
NR	No Recovery
[CALC]	Calculated Analyte
SUB	Subcontracted analysis; see attached report
RL	Reporting Limit
EDL	Estimated Detection Limit
MF	Membrane Filtration
MPN	Most Probable Number
TNTC	Too numerous to Count
CFU	Colony Forming Units

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: 642 Allens Ave

ESS Laboratory Work Order: 22K0898

ESS LABORATORY CERTIFICATIONS AND ACCREDITATIONS

ENVIRONMENTAL

Rhode Island Potable and Non Potable Water: LAI00179
http://www.health.ri.gov/find/labs/analytical/ESS.pdf

Connecticut Potable and Non Potable Water, Solid and Hazardous Waste: PH-0750
http://www.ct.gov/dph/lib/dph/environmental_health/environmental_laboratories/pdf/OutofStateCommercialLaboratories.pdf

Maine Potable and Non Potable Water, and Solid and Hazardous Waste: RI00002
http://www.maine.gov/dhhs/mecdc/environmental-health/dwp/partners/labCert.shtml

Massachusetts Potable and Non Potable Water: M-RI002
http://public.dep.state.ma.us/Labcert/Labcert.aspx

New Hampshire (NELAP accredited) Potable and Non Potable Water, Solid and Hazardous Waste: 2424
http://des.nh.gov/organization/divisions/water/dwgb/nhelap/index.htm

New York (NELAP accredited) Non Potable Water, Solid and Hazardous Waste: 11313
http://www.wadsworth.org/labcert/elap/comm.html

New Jersey (NELAP accredited) Non Potable Water, Solid and Hazardous Waste: RI006
http://datamine2.state.nj.us/DEP_OPRA/OpraMain/pi_main?mode=pi_by_site&sort_order=PI_NAMEA&Select+a+Site:=58715

Pennsylvania: 68-01752
http://www.dep.pa.gov/Business/OtherPrograms/Labs/Pages/Laboratory-Accreditation-Program.aspx

ESS Laboratory Sample and Cooler Receipt Checklist

Client: GZA - Providence, RI - GZA/KPB

Shipped/Delivered Via: Client

ESS Project ID: 22K0898
Date Received: 11/23/2022
Project Due Date: 12/2/2022
Days for Project: 5 Day

1. Air bill manifest present? No
   Air No.: NA
2. Were custody seals present? No
3. Is radiation count <100 CPM? Yes
4. Is a Cooler Present? Yes
   Temp: 5.6 Iced with: Ice
5. Was COC signed and dated by client? Yes
6. Does COC match bottles? Yes
7. Is COC complete and correct? Yes
8. Were samples received intact? Yes
9. **Were labs informed about short holds & rushes?** Yes / No / (NA)
10. Were any analyses received outside of hold time? Yes / (No)

11. Any Subcontracting needed? Yes / (No)
    ESS Sample IDs:
    Analysis:
    TAT:
12. Were VOAs received? (Yes) / No
    a. Air bubbles in aqueous VOAs? (Yes) / No
    b. Does methanol cover soil completely? Yes / No / (NA)

13. Are the samples properly preserved? (Yes) / No
    a. If metals preserved upon receipt: Date: Time: By/Acid Lot#:
    b. Low Level VOA vials frozen: Date: Time: By:

Sample Receiving Notes:

COC = RCA-27 ; Labels = RCA-22 collection time correct

14. Was there a need to contact Project Manager? Yes / (No)
    a. Was there a need to contact the client? Yes / No
    Who was contacted? Date: Time: By:

Resolution:

Sample Number	Container ID	Proper Container	Air Bubbles Present	Sufficient Volume	Container Type	Preservative	Record pH (Cyanide and 608 Pesticides)
1	369948	Yes	No	Yes	VOA Vial	HCl	
1	369949	Yes	No	Yes	VOA Vial	HCl	
1	369950	Yes	No	Yes	VOA Vial	HCl	
2	369951	Yes	No	Yes	VOA Vial	HCl	
2	369952	Yes	No	Yes	VOA Vial	HCl	
2	369953	Yes	~~No~~ Yes 11/23/22	Yes	VOA Vial	HCl	
3	369954	Yes	No	Yes	VOA Vial	HCl	
3	369955	Yes	No	Yes	VOA Vial	HCl	
3	369956	Yes	No	Yes	VOA Vial	HCl	
4	369957	Yes	No	Yes	VOA Vial	HCl	
4	369958	Yes	No	Yes	VOA Vial	HCl	
4	369959	Yes	No	Yes	VOA Vial	HCl	
5	369960	Yes	No	Yes	VOA Vial	HCl	
5	369961	Yes	No	Yes	VOA Vial	HCl	
5	369962	Yes	No	Yes	VOA Vial	HCl	
6	369964	Yes	No	Yes	VOA Vial	HCl	
6	369965	Yes	No	Yes	VOA Vial	HCl	

ESS Laboratory Sample and Cooler Receipt Checklist

Client: GZA - Providence, RI - GZA/KPB

ESS Project ID: 22K0898
Date Received: 11/23/2022

6	369966	Yes	No	Yes	VOA Vial	HCl
7	369967	Yes	No	Yes	VOA Vial	HCl
7	369968	Yes	No	Yes	VOA Vial	HCl
7	369969	Yes	No	Yes	VOA Vial	HCl
8	369970	Yes	No	Yes	VOA Vial	HCl
8	369971	Yes	No	Yes	VOA Vial	HCl
8	369972	Yes	No	Yes	VOA Vial	HCl
9	369973	Yes	No	Yes	VOA Vial	HCl
9	369974	Yes	No	Yes	VOA Vial	HCl
9	369975	Yes	No	Yes	VOA Vial	HCl
10	369976	Yes	No	Yes	VOA Vial	HCl
10	369977	Yes	No	Yes	VOA Vial	HCl
10	369978	Yes	No	Yes	VOA Vial	HCl
11	369979	Yes	No	Yes	VOA Vial	HCl
11	369980	Yes	No	Yes	VOA Vial	HCl
11	369981	Yes	No	Yes	VOA Vial	HCl
12	369982	Yes	No	Yes	VOA Vial	HCl
12	369983	Yes	No	Yes	VOA Vial	HCl
12	369984	Yes	No	Yes	VOA Vial	HCl
13	369987	Yes	No	Yes	VOA Vial	HCl

2nd Review

Were all containers scanned into storage/lab? Initials TD

Are barcode labels on correct containers? Yes / No

Are all Flashpoint stickers attached/container ID # circled? Yes / No / NA

Are all Hex Chrome stickers attached? Yes / No / NA

Are all QC stickers attached? Yes / No / NA

Are VOA stickers attached if bubbles noted? Yes / No / NA

Completed By: [signature] Date & Time: 11/23/22 1733

Reviewed By: [signature] Date & Time: 11/23/22 1826

CHAIN OF CUSTODY

ESS Lab # 22K0898 | Page 1 of 12

185 Frances Avenue
Cranston, RI 02910
Phone: 401-461-7181
Fax: 401-461-4486
www.esslaboratory.com

Turn Time (Days): ☐ >5 ☑ 5 ☐ 4 ☐ 3 ☐ 2 ☐ 1 ☐ Same Day
Regulatory State: RI Criteria:
Is this project for any of the following?: ☐ CT RCP ☐ MA MCP ☐ RGP ☐ Permit ☐ 401 WQ

ELECTRONIC DELIVERABLES (Final Reports are PDF)
☑ Limit Checker ☐ State Forms ☐ EQuIS
☑ Excel ☐ State Upload ☐ Enviro Data
☐ CLP-Like Package ☑ Other (Specify) → PDF

CLIENT INFORMATION

Client: GZA
Address: 188 Valley St #300 Providence RI 02909
Phone: 401-421-4140
Email Distribution List: Margaret.Kilpatrick@gza.com Elizabeth.Lux@gza.com

PROJECT INFORMATION

Project Name: 642 Alleas Ave
Project Location: 642 Alleas Ave Providence RI
Project Number: 33564.01
Project Manager: Margaret Kilpatrick
Bill to:
PO#:
Quote#:

Client acknowledges that sampling is compliant with all EPA / State regulatory programs

REQUESTED ANALYSES

ESS Lab ID	Collection Date	Collection Time	Sample Type	Sample Matrix	Sample ID	UIC via EPA method 8260B	Total Number of Bottles
1	11/22/22	11:03	Grab	GW	GZ-319D	X	3
2	↓	12:18	↓	↓	VHB-1	X	3
3		04:36			RCA-1	X	3
4		13:28			RCA-27	X	3
5		15:29			GZ-500S	X	2
6		11:50			GZ-304D	X	3
7		10:25			GZ-304D	X	3
8		10:33			VHB-20	X	3
9		15:37			RCA-36	X	3
10		12:58			RCA-31	X	3
						U	→
						Y	
						Z	

Container Type: AC-Air Cassette AG-Amber Glass B-BOD Bottle C-Cubitainer J-Jar O-Other P-Poly S-Sterile V-Vial
Container Volume: 1-100 mL 2-2.5 gal 3-250 mL 4-300 mL 5-500 mL 6-1L 7-VOA 8-2 oz 9-4 oz 10-8 oz 11-Other*
Preservation Code: 1-Non Preserved 2-HCl 3-H2SO4 4-HNO3 5-NaOH 6-Methanol 7-Na2S2O3 8-ZnAce, NaOH 9-NH4Cl 10-DI H2O 11-Other*

Sampled by : Robert Brandon / Ryan Fritz / Liz Lux

Chain needs to be filled out neatly and completely for on time delivery.

Laboratory Use Only
Cooler Temperature (°C): 5.1C ice

Comments: * Please specify "Other" preservative and containers types in this space
National Grid Rates Apply

All samples submitted are subject to ESS Laboratory's payment terms and conditions.

Dissolved Filtration
☐ Lab Filter

Relinquished by (Signature)	Date	Time	Received by (Signature)	Relinquished by (Signature)	Date	Time	Received by (Signature)
[signature]	11/22/22	17:42	Fridge	Fridge	11/23/22	0704	[signature]
[signature]	11/23/22	1411	[signature]	[signature]	11/23	1458	[signature]

CHAIN OF CUSTODY

ESS LABORATORY
185 Frances Avenue
Cranston, RI 02910
Phone: 401-461-7181
Fax: 401-461-4486
www.esslaboratory.com

ESS Lab # 22610898 | Page 2 of 2

Turn Time (Days) ☐ >5 ☐ 5 ☐ 4 ☐ 3 ☐ 2 ☐ 1 ☐ Same Day

Regulatory State: Criteria:

Is this project for any of the following?: ☐ CT RCP ☐ MA MCP ☐ RGP ☐ Permit ☐ 401 WQ

ELECTRONIC DELIVERABLES (Final Reports are PDF)

☐ Limit Checker ☐ State Forms ☐ EQuIS
☐ Excel ☐ State Upload ☐ Enviro Data
☐ CLP-Like Package ☐ Other (Specify) →

CLIENT INFORMATION

Client: GZA
Address: 188 Valley St #300 Providence RI 02909
Phone: 401-421-4140
Email Distribution List:

PROJECT INFORMATION

Project Name:
Project Location:
Project Number:
Project Manager:
Bill to:
PO#:
Quote#:

Client acknowledges that sampling is compliant with all EPA / State regulatory programs

REQUESTED ANALYSES

LOC via EA methods 8260B

ESS Lab ID	Collection Date	Collection Time	Sample Type	Sample Matrix	Sample ID	LOC	Total Number of Bottles
11	11/22/22		Grab	GW	EZ-500D	X	3
12	↓		↓	↓	RD-112222	X	3
13					Trip Blank	X	1
						V	
						7	32
						2	

Container Type: AC-Air Cassette AG-Amber Glass B-BOD Bottle C-Cubitainer J-Jar O-Other P-Poly S-Sterile V-Vial

Container Volume: 1-100 mL 2-2.5 gal 3-250 mL 4-300 mL 5-500 mL 6-1L 7-VOA 8-2 oz 9-4 oz 10-8 oz 11-Other*

Preservation Code: 1-Non Preserved 2-HCl 3-H2SO4 4-HNO3 5-NaOH 6-Methanol 7-Na2S2O3 8-ZnAce, NaOH 9-NH4Cl 10-DI H2O 11-Other*

Sampled by : Anders Dendon/ Ryan Fritz/ Liz Lux

Chain needs to be filled out neatly and completely for on time delivery.

Laboratory Use Only

Cooler Temperature (°C): 5.6 / 4.0

Comments: * Please specify "Other" preservative and containers types in this space

National Grid rates apply

All samples submitted are subject to ESS Laboratory's payment terms and conditions.

Dissolved Filtration

☐ Lab Filter

Relinquished by (Signature)	Date	Time	Received by (Signature)	Relinquished by (Signature)	Date	Time	Received by (Signature)
	11/22/22	1742	FridgC	FridgC	11/23/22	0704	
Relinquished by (Signature)	Date	Time	Received by (Signature)	Relinquished by (Signature)	Date	Time	Received by (Signature)
	11/23/22	1411			11/23	1458	

GZA GeoEnvironmental, Inc.