



Proactive by Design



MONITORING REPORT – 2019

**642 Allens Avenue
Providence, Rhode Island**

January 7, 2021
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:

nationalgrid

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January 7, 2021
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 – 2019
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 National Grid (National Grid), 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 2019. 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 National Grid at (781) 907-3644.

Very truly yours,
GZA GEOENVIRONMENTAL, INC.

Sophia Narkiewicz, P.E.
Project Manager

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Attachment: *Monitoring Report – 2019*

cc: Amy Willoughby, National Grid

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1.0 INTRODUCTION

On behalf of The Narragansett Electric Company (TNEC), d/b/a National Grid (National Grid), 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 2019. As described further herein, annual monitoring performed in 2019 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 – CNG Facility and Natural Gas Regulation Facility)** and **Figure 3B (Exploration Location Plan – LNG Facility and Holcim Cement Facility)**.

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 TNEC d/b/a National Grid (National Grid). National Grid LNG, Inc. (NGLNG) holds a lease on A.P. 56 Lot 316 and 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:

- Compressed Natural Gas (CNG) Facility (portion of A.P. 101 Lot 1);
- Natural Gas Regulation Facility (portion of A.P. 101 Lot 1 and A.P. 56 Lot 5);
- Liquefied Natural Gas (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 CNG Fueling Station
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, and former petroleum storage and distribution. **Figure 3A** and **Figure 3B** present a compilation of 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. The 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 a 150,000-gallon oil or tar storage facility in 1953 (location unknown), bringing the total on-Site storage capacity to 2,150,000 gallons, at the time the MGP operations ceased. Additionally, Gulf Oil Corporation leased a portion of the Site during 1957 and built four aboveground storage tanks (ASTs) with an aggregate storage capacity of 420,000 gallons of kerosene 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 2021. In order to accommodate ongoing projects at the Site, forty-four (44) monitoring wells were decommissioned in 2016. Until these projects are complete, an interim groundwater monitoring program will be performed annually.

2.0 RESULTS OF MONITORING PROGRAM

This section presents the results of the 2019 monitoring program. As indicated previously, this monitoring program consists of monthly shoreline observations, semi-annual NAPL and groundwater elevation monitoring, NAPL recovery (if applicable) and annual groundwater quality sampling and analysis.

2.1 SHORELINE OBSERVATIONS

Between January and December 2019, the shoreline adjacent to the Site was inspected for the presence of sheens in the Providence River on an approximately at least monthly basis. Portions of the Site's shoreline are surrounded by both hard boom and absorbent sausage boom to contain any observed sheen. This boom has been in place since at least 2002. The current boom configuration is illustrated on **Figure 3B**. Sheens have been observed intermittently proximate to the shoreline in the cove area. More significant sheens have generally been observed at mid- or low-tide only and generally consisted of dull spots and bands. Sheens observed at high tide were generally less significant and intermittent. A summary of sheen observations proximate to the cove area is presented in **Table 1** (*Summary of Sheen Observations – 2011 to 2019*).

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 2019 and November 2019. **Figure 4** (*Groundwater Monitoring Wells*) presents the location of all monitoring wells at the Site and **Figure 5** (*Shallow Groundwater Contours (November 2019)*) presents the shallow groundwater contours at the Site. In addition, monthly NAPL measurements were collected from GZ-307S to delineate the extents of NAPL observations. 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 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 taken 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.

While measurable NAPL was not detected, evidence of sheen was observed on purge water from monitoring wells GZA-201 and VHB-1 during this groundwater sampling event. 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 4**, between November 2001 and November 2019, 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) (2001-2019))**. The majority of LNAPL detections were less than 0.40 feet in thickness.

GZA-307S was the only monitoring well to contain measurable LNAPL in 2019 as presented on **Figure 7 (2019 NAPL and Groundwater Analytical Data)**.

GZ-307S was installed in 2014 to delineate the extent of LNAPL observed along the northern property line. During 2019, LNAPL was detected in this well at thicknesses ranging from trace to 0.13 feet. No measurable quantity of LNAPL was recovered from GZ-307S during 2019 because of traffic safety concerns in the area during 2019.

2.2.2 DNAPL Observations

As indicated in **Table 2** and **Table 4**, between November 2001 and November 2019, 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 2019.

2.3 MONITORING WELL REPAIR / DECOMMISSIONING ACTIVITIES

Several monitoring wells were repaired by New England Geotech, Inc. on behalf of National Grid during July 2019. These monitoring wells are shown on **Figure 4**. The following is a summary of monitoring well repair activities:

- Roadboxes were replaced for monitoring wells RCA-1, GZ-301S, GZ-302S, GZ-302D, GZ-303S, GZ-303D and RCA-12R;
- The standpipe was replaced for monitoring well RCA-17;
- Excavation activities associated with the Liquefaction STRAP Project uncovered microwell E55, which had been installed in 1999 and not been located or sampled for approximately twenty (20) years. The microwell was decommissioned in accordance with Appendix 1 of the Rhode Island Water Quality Rules (<http://www.dem.ri.gov/pubs/regs/regs/water/gwqual10.pdf>); and
- Monitoring wells RCA-6 and RCA-36 were damaged during a facility project at the Site. Monitoring wells RCA-6 and RCA-36 were developed to remove fines from the monitoring wells.

As described below in Section 2.8, all material generated as part of these repair activities was containerized for off-Site disposal as investigation derived waste (IDW).

Monitoring well RCA-39 (as shown on **Figure 4**) was decommissioned in October 2019 in advance of a phase of work associated with the Liquefaction STRAP Project at the Site. The well was abandoned by Kiewit Corporation of Omaha, Nebraska on behalf of National Grid. Consistent with Appendix 1 of the Rhode Island Water Quality Rules (<http://www.dem.ri.gov/pubs/regs/regs/water/gwqual10.pdf>), the monitoring well was abandoned via removing the PVC well casing and then filling the remaining borehole with grout.



Logs documenting the well abandonment activities are attached as **Appendix C (2019 Well Decommissioning Logs)**.

2.4 GROUNDWATER FLOW DIRECTION

Comprehensive elevation gauging rounds of the groundwater monitoring well network were performed in June 2019 and November 2019. 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 2019 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 high water. Groundwater was encountered in many of the explorations at the Site at depths ranging from approximately 3 to 13 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.

2.5 GROUNDWATER SAMPLING TECHNIQUES

As shown on **Figure 4**, the groundwater monitoring well network consisted of thirty-one (31) groundwater monitoring wells in 2019. In November 2019, groundwater quality samples were collected from twelve (12) monitoring wells: RCA-1, RCA-12R, RCA-15, RCA-31, RCA-36, VHB-1, VHB-20, GZA-201, GZ-301D, GZ-304D, GZ-309D, and GZ-319D. These well locations were chosen to provide a representative evaluation of overall Site groundwater quality.

During the November 2019 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 was replaced, with new dedicated tubing as indicated on the field sampling logs. 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 was noted in the well, the sampling tubing was installed in these wells carefully so that the DNAPL layer was not 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 drums or other equivalent container for off-Site disposal. All IDW was transported off-Site by CHES to their facility in Braintree, Massachusetts or another certified facility. Copies of shipping records for the IDWs are included in **Appendix D (Investigation Derived Waste Shipping Records)**.



Samples were placed in laboratory-provided, hydrochloric acid-preserved 40 mL glass vials with septa caps for VOC analysis via EPA Method 8260B. 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 E (Laboratory Reports)** and **Table 6 (Summary of 2019 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.

2.6 QUALITY ASSURANCE/QUALITY CONTROL SAMPLING AND ANALYSIS

During the November 2019 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. 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 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 E** and **Table 7 (Summary of Groundwater QA/QC VOC Analytical Results)**. Note, the sample collected from GZ-301D is mislabeled in the laboratory report as GZ-307D, due to laboratory error.

The following summarizes the groundwater QA/QC samples for the 2019 sampling event:

QA/QC Sample Type	Matrix	Number of Samples	Analysis / Comment
Samples	Groundwater	12	VOCs
Field Duplicates	Groundwater	1	VOCs
Trip Blanks	Groundwater	1	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 generally useable to meet the project data quality objectives with the following qualifications:

- For 1,4-Dioxane: the Continuing Calibration %Diff/Drift was above the control limit. However, 1,4-Dioxane was not detected in any of the samples, so the higher recovery limit did not affect the results.

2.7 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 2019 round was consistent with levels detected previously.



Groundwater quality at the Site is generally characterized by a few isolated exceedances of the GB Groundwater Objectives for benzene, ethylbenzene and naphthalene¹, primarily in areas of the Site where former MGP features were located: downgradient of former tar/ammonia pits (VHB-7), proximate to the former purifier building (RCA-28), proximate to the former gasholder No. 18 (VHB-10), proximate to former gasholder No. 16 (GZ-314S/D and GZ-315D) 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 and consistent with historical groundwater sampling results for the Site. All of the detected compounds were below the GB Groundwater Objectives during the 2019 sampling round.

No groundwater samples were collected from the Holcim Cement Facility portion of the Site. 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 area².

2.7.1 CNG Fueling Station

The CNG Fueling Station area is primarily grass with a smaller portion of paved area. The CNG fueling station and active CNG buildings are located in this area. 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 2019 monitoring event, as shown on **Figure 7**, with results presented in **Table 6**. Note, the sample collected from GZ-301D is mislabeled in the laboratory reports contained in **Appendix E** as GZ-307D, and the sample collected from VHB-20 is mislabeled in the laboratory report as VHB-2D, due to laboratory error.

The following VOCs were detected in the sample collected from RCA-12R in the CNG Fueling Station area during the 2019 sampling round: cis-1,2-dichloroethene, tetrachloroethene, trichloroethene, and vinyl chloride. 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. The following is a summary of VOCs detected in 2019:

- Cis-1,2-dichlorobenzene was detected in the sample collected from RCA-12R at a concentration of 0.0178 mg/L;
- Tetrachloroethene was detected in the sample collected from RCA-12R at a concentration of 0.002 mg/L;
- Trichloroethene was detected in the sample collected from RCA-12R at a concentration of 0.0066 mg/L; and
- Vinyl chloride was detected in the sample collected from RCA-12R at a concentration of 0.001 mg/L.

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 detections of vinyl chloride, cis-1,2-dichloroethene, tetrachloroethene and trichloroethene are not compounds typically associated with former MGP operations. Therefore, these chlorinated VOC detections are likely due to upgradient sources.

2.7.2 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 active natural gas regulator buildings are located in this area. Thirteen (13) 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, and CHES RW-A). Five (5) monitoring wells (RCA-1, RCA-15, VHB-1, GZ-304D and GZ-309D) were sampled from this area during the November 2019 monitoring event.

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.

² Note that there are no active monitoring wells located within the Holcim Cement Facility.



VOCs were detected in two (2/5) samples collected in the Natural Gas Regulation Area during the 2019 sampling round (VHB-1 and GZ-304D). The following VOCs were detected: benzene, cis-1,2-dichloroethene, isopropylbenzene, naphthalene, n-propylbenzene, and sec-butylbenzene. None of the VOCs detected were above the GB Groundwater Objectives. The following is a summary of VOCs detected in 2019:

- Benzene was detected in the sample collected from GZ-304D at a concentration of 0.0016 mg/L;
- Cis-1,2-dichloroethene was detected in the sample collected from GZ-304D at a concentration of 0.0016 mg/L;
- Isopropylbenzene was detected in the sample collected from VHB-1 at a concentration of 0.0111 mg/L;
- Naphthalene was detected in the sample collected from GZ-304D at a concentration of 0.0232 mg/L;
- N-propylbenzene was detected in the sample collected from VHB-1 at a concentration of 0.0014 mg/L; and
- Sec-butylbenzene was detected in the sample collected from VHB-1 at a concentration of 0.0029 mg/L.

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.

The detection of cis-1,2-dichloroethene at well GZ-3024D is not a compound typically associated with former MGP operations. This well is located proximate to Allens Avenue and the property line and groundwater contours (**Figure 5**) indicate that groundwater flow originates upgradient. Based on anticipated groundwater flow, this chlorinated VOC detection is likely due to upgradient sources.

2.7.3 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. Fifteen (15) wells are located in this area (RCA-6, RCA-22, RCA-28, RCA-31, RCA-34, RCA-36, RCA-39, VHB-20, GZ-101, GZ-201, GZ-319D, ESS RW-3, ESS RW-4, ESS RW-5 and ESS RW-6). Five (5) monitoring wells (RCA-31, RCA-36, VHB-20, GZ-201 and GZ-319D) were sampled from this area during the November 2019 monitoring event. Note, the sample collected from VHB-20 is mislabeled in the laboratory report contained in **Appendix E** as VHB-2D, due to laboratory error.

VOCs were detected in four (4/5) samples collected in the Natural Gas Regulation Area during the 2019 sampling round (VHB-20, RCA-36, GZ-201 and GZ-319D). The following VOCs were detected: 1,2,4-trimethylbenzene, benzene, ethylbenzene, isopropylbenzene, naphthalene, n-butylbenzene, n-propylbenzene, sec-butylbenzene, Styrene, and xylenes. None of the VOCs were detected at concentrations that exceed the applicable Method 1/2 GB Groundwater Objectives. The following is a summary of VOCs detected in 2019:

- 1,2,4-Trimethylbenzene was detected in the sample collected from monitoring well RCA-36 at a concentration of 0.003 mg/L;
- Benzene was detected in samples collected from three (3) monitoring wells (VHB-20, RCA-36 and GZ-319D) at concentrations ranging from 0.0268 to 0.0897 mg/L;
- Ethylbenzene was detected in the sample collected from monitoring well RCA-36 at a concentration of 0.0012 mg/L;
- Isopropylbenzene was detected in samples collected from four (4) monitoring wells (VHB-20, RCA-36, GZ-201 and GZ-319D) at concentrations ranging from 0.0014 to 0.0057 mg/L;
- Naphthalene was detected in the sample collected from monitoring well GZ-201 at a concentration of 0.0015 mg/L;
- N-butylbenzene was detected in the sample collected from monitoring well GZ-201 at a concentration of 0.0019 mg/L;
- N-propylbenzene was detected in the sample collected from monitoring well GZ-201 at a concentration of 0.0031 mg/L;
- Sec-butylbenzene was detected in the sample collected from monitoring well GZ-201 at a concentration of 0.003 mg/L;
- Styrene was detected in the sample collected from GZ-319D at a concentration of 0.0017 mg/L; and



- Ortho-xylene was detected in samples collected from two (2) monitoring wells (GZ-201 and RCA-36) at concentrations ranging from 0.001 to 0.0014 mg/L.

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.

2.8 INVESTIGATION DERIVED WASTE MANAGEMENT

All soil, and groundwater / development water generated during repair and monitoring activities performed in 2019 were placed into 55-gallon drums for subsequent off-Site disposal. The resulting drums were labeled and temporarily stored on-Site. All IDWs were transported off-Site by CHES to their facility in Braintree, Massachusetts. Copies of shipping records for the IDWs are included in **Appendix D**.

3.0 SUMMARY AND CONCLUSIONS

As part of the annual Site monitoring events in 2019, twelve (12) monitoring wells were sampled in November 2019 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 each 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.
- NAPL Observations:
 - Trace amounts up to 0.13 feet of LNAPL was detected in GZ-307S. NAPL recovery was not attempted at monitoring well GZ-307S during 2019 due to because of traffic safety concerns in the area during 2019.
 - Observations of both LNAPL continue to be very localized and do not indicate the presence of significant contiguous source layers in the subsurface. Typical of MGP sites, historical recovery attempts suggest that observed NAPLs are unlikely to be significantly mobile in the subsurface.
- 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.
 - There were no GB groundwater exceedances during the 2019 monitoring period.
 - Certain chlorinated VOCs were detected in wells located proximate to Allens Avenue and the property line. These detections are likely due to upgradient sources.



TABLES

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

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.	
10/28/2011	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
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	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	Moderate long bright bands of sheen
12/20/2012	12:00	Mid-High	No sheens observed.	

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

Date of Observation	Time of Observation	Approximate Tidal Stage	Approximate Location of Sheen Observed	Description of Sheen Observed
1/4/2013			No sheen observed at high tide.	
2/1/2013			No sheens observed at high tide. High wind was also noted.	
2/26/2013	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
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.	
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

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

Date of Observation	Time of Observation	Approximate Tidal Stage	Approximate Location of Sheen Observed	Description of Sheen Observed	
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	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	
10/30/2014	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.				
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.				
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.				
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.				
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	
3/16/2016	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.				
7/26/2016	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				
2/27/2017	9:00	Mid-Low	Within Boom near CHES RW-3	Streaks of sheen	
3/24/2017	No sheens observed at high tide				
4/28/2017	No sheens observed at high tide				
5/5/2017	No sheens observed at high tide				
6/30/2017	No sheens observed at high tide				

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

Date of Observation	Time of Observation	Approximate Tidal Stage	Approximate Location of Sheen Observed	Description of Sheen Observed
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
10/24/2017			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	
4/26/2018	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
10/30/2018	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
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	
5/31/2019	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	
10/21/2019	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. This table shows observations that were made along the Site shoreline. Observations were made least monthly.
2. Observations made on 9/22/2011 were made before containment boom was repaired. Boom was repaired on 10/28/2011.
3. Boom was repaired and the absorbent sausage boom was replaced on 8/2/2012.
4. Boom was repaired and sections of the absorbent sausage boom was replaced on 11/20/12.
5. Boom was repaired and sections of the absorbent sausage boom was replaced on 2/12/2013.
6. 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.
7. Boom was repaired and sections of the absorbent sausage boom was replaced on 10/4/2013.
8. Absorbent boom replaced 3/20/14
9. Absorbent boom replaced 11/13/14
10. Hard Boom and absorbent boom was replaced on 4/9/15
11. Absorbent boom replaced 11/17/15
12. Absorbent boom replaced 3/3/16.
13. Absorbent boom replaced 7/13/16
14. Absorbent boom replaced 2/23/17.
15. Absorbent boom replaced 6/7/17.
16. Absorbent boom replaced 10/6/17.
17. Boom was damaged during a storm in 2018. Absorbent boom replaced 4/12/18.
18. Absorbent boom replaced 10/25/18.
19. Absorbent boom replaced 5/10/19.
20. Absorbent boom replaced 10/1/19.

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)	Range of DNAPL Observed (feet)	December 2009								June 2010								
		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)	
CNG	RCA-12R	17.87	17.33	17.87	Roadbox	Shallow	5/30/2014	15.24	5 - 15	NP	NP																	
CNG	GZ-301D	17.74	17.33	17.74	Roadbox	Deep	5/30/2014	30.11	20 - 30	NP	NP																	
CNG	GZ-302S	16.97	16.67	16.97	Roadbox	Shallow	6/3/2014	15.00	5 - 15	NP	NP																	
CNG	GZ-302D	16.97	16.59	16.97	Roadbox	Deep	5/30/2014	29.88	20 - 30	NP	NP																	
NG	RCA-1	12.21	11.82	12.21	Roadbox	Shallow	6/8/1994	15.89	6.5 - 16.5	NP	NP	-	5.72	-	14.73	6.10	NP	NP	6.10	-	6.67	-	15.39	5.15	NP	NP	5.15	
NG	RCA-3	11.88	11.44	9.40	Standpipe	Shallow	9/9/1994	15.76	6 - 16	NP	trace	-	8.01	-	17.5	3.43	NP	NP	3.43	-	9.45	-	17.41	1.99	NP	NP	1.99	
NG	RCA-11	13.27	13.04	10.57	Standpipe	Shallow	9/12/1994	12.53	4 - 14	NP	NP																	
NG	RCA-13	11.94	11.61	10.51	Standpipe	Shallow	9/12/1994	13.97	4 - 14	NP	NP	-	4.63	-	14.50	6.98	NP	NP	6.98	-	6.51	-	14.52	5.10	NP	NP	5.10	
NG	RCA-14	13.09	12.75	11.06	Standpipe	Shallow	9/12/1994	13.61	5 - 15	NP	NP																	
NG	RCA-15	NS	14.06	NS	Standpipe	Shallow	12/8/1994	15.97	4 - 14	NP	NP																	
NG	RCA-17	NS	13.44	NS	Standpipe	Shallow	12/9/1994	12.80	4 - 14	NP	NP																	
NG	VHB-1	10.55	10.33	10.55	Roadbox	Shallow	1/15/2002	11.72	2 - 12	NP	NP																	
NG	VHB-3	11.84	11.96	9.76	Standpipe	Shallow	1/14/2002	7.90	2 - 10	trace	NP																	
NG	VHB-6	12.91	12.93	10.25	Standpipe	Shallow	1/14/2002	9.77	2 - 12	NP	NP	-	6.03	-	11.6	6.90	NP	NP	6.90									
NG	VHB-7	14.30	13.73	11.29	Standpipe	Shallow	1/14/2002	12.66	2 - 12	NP	NP	-	8.02	-	14.78	5.71	NP	NP	5.71	-	9.06	-	14.85	4.67	NP	NP	4.67	
NG	VHB-10	19.45	19.10	15.88	Standpipe	Shallow	1/15/2002	14.77	5 - 15	trace - 0.02	NP										-	11.62	-	17.04	7.48	NP	NP	7.48
NG	VHB-18	15.54	15.35	10.61	Standpipe	Shallow	1/21/2003	12.26	6 - 16	NP	NP	-	6.13	-	14.7	9.22	NP	NP	9.22	-	6.37	-	15.0	8.98	NP	NP	8.98	
NG	VHB-21	13.80	13.65	11.09	Standpipe	Shallow	1/28/2003	15.94	6 - 16	trace - 0.08	NP	trace	7.18	-	16.51	6.47	trace	NP	6.47	-	8.61	-	16.53	5.04	NP	NP	5.04	
NG	VHB-22	13.32	13.02	11.21	Standpipe	Shallow	1/28/2003	15.49	6 - 16	0.01 - 0.04	NP																	
NG	VHB-23	12.98	12.80	11.37	Standpipe	Shallow	1/29/2003	16.37	6 - 16	trace - 0.05	NP																	
NG	CHES RW-1	12.94	12.94	11.06	Recovery Well	Shallow	2002	9.42	Unknown	NP	NP																	
NG	CHES RW-2	14.27	14.27	11.09	Recovery Well	Shallow	2002	13.12	Unknown	trace	NP																	
NG	CHES-RWA	NS	NS	NS	Recovery Well	Shallow	2017	9.80	Unknown	0.30 - 0.89	NP																	
NG	U-1	NS	9.67	7.71	Standpipe	Shallow	Unknown	9.08	Unknown	NP	NP																	
NG	VHB-8R	14.85	14.06	12.60	Standpipe	Shallow	6/4/2014	12.29	2 - 12	NP	NP									-	4.52	-	11.19	9.54	NP	NP	9.54	
NG	GZ-303S	13.78	13.28	13.78	Roadbox	Shallow	5/28/2014	15.70	5 - 15	NP	NP																	
NG	GZ-303D	13.75	13.13	13.75	Roadbox	Deep	6/3/2014	30.32	20 - 30	NP	NP																	
NG	GZ-304D	12.41	11.95	12.41	Roadbox	Deep	5/24/2014	30.16	20 - 30	NP	NP																	
NG	GZ-305S	11.84	11.64	11.84	Roadbox	Shallow	5/22/2014	14.35	5 - 15	NP	NP																	
NG	GZ-306S	11.90	11.49	11.90	Roadbox	Shallow	5/22/2014	15.31	5 - 15	NP	NP																	
NG	GZ-307S	10.70	10.18	10.70	Roadbox	Shallow	6/3/2014	14.67	3 - 13	trace - 0.36	NP																	
NG	GZ-308S	9.71	8.96	9.71	Roadbox	Shallow	6/4/2014	12.33	2 - 12	NP	NP																	
NG	GZ-309D	10.51	9.83	10.51	Roadbox	Deep	5/20/2014	30.58	20 - 30	NP	NP																	
NG	GZ-311D	13.04	12.82	10.03	Standpipe	Deep	5/21/2014	29.91	20 - 30	NP	NP																	
NG	GZ-312S	10.77	10.58	8.64	Standpipe	Shallow	5/23/2014	13																				

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)	Range of DNAPL Observed (feet)	December 2009								June 2010								
		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)	
LNG	RCA-5	12.68	12.27	10.79	Standpipe	Shallow	9/7/1994	15.92	6 - 16	NP	NP																	
LNG	RCA-6	10.90	10.66	10.90	Roadbox	Shallow	9/8/1994	17.44	7 - 17	NP	NP																	
LNG	RCA-20	13.25	12.95	11.01	Standpipe	Shallow	10/18/1995	12.26	3.5 - 13.5	NP	NP																	
LNG	RCA-21	NS	13.72	10.48	Standpipe	Shallow	10/30/1995	11.39	4 - 14	0.91 - 3.58	NP																	
LNG	RCA-22	NM	12.92	10.33	Standpipe	Shallow	Unknown	10.41	Unknown	NP	NP																	
LNG	RCA-28	NS	15.38	13.01	Standpipe	Shallow	1/17/1995	15.43	5 - 15	NP	NP																	
LNG	RCA-29	NS	13.45	NS	Standpipe	Shallow	2/13/1996	12.95	2 - 12	trace - 0.17	NP																	
LNG	RCA-31	15.19	14.98	12.78	Standpipe	Shallow	2/23/1996	13.30	5-15	NP	NP																	
LNG	RCA-32	NS	12.16	NS	Standpipe	Shallow	2/3/1996	10.98	4 - 14	NP	NP																	
LNG	RCA-33	NS	9.67	NS	Standpipe	Shallow	2/23/1996	11.32	5 - 15	NP	NP																	
LNG	RCA-34	15.08	15.09	12.76	Standpipe	Shallow	2/29/1996	10.77	13 - 18	NP	NP																	
LNG	RCA-36	10.72	10.51	10.72	Roadbox	Shallow	3/1/1996	13.37	5 - 15	NP	NP																	
LNG	RCA-38	NS	9.36	NS	Standpipe	Shallow	5/2/1996	15.65	5 - 15	NP	NP																	
LNG	RCA-39	14.07	13.86	11.43	Standpipe	Shallow	5/3/1996	12.32	3 - 13	NP	NP																	
LNG	RCA-40	12.76	12.24	10.47	Standpipe	Shallow	5/3/1996	15.15	4 - 14	trace - 0.04	NP																	
LNG	VHB-13	12.88	12.72	13.34	Roadbox	Shallow	1/16/2002	16.56	7 - 17	NP	NP																	
LNG	VHB-20	15.15	14.98	13.01	Standpipe	Shallow	1/22/2002	15.57	6 - 16	NP	NP																	
LNG	CHES RW-3	14.30	14.30	11.24	Recovery Well	Shallow	2002	14.84	Unknown	trace	NP																	
LNG	CHES RW-4	13.08	13.08	9.09	Recovery Well	Shallow	2002	8.57	Unknown	trace - 0.03	NP																	
LNG	CHES RW-5	14.32	14.32	11.16	Recovery Well	Shallow	2002	11.34	Unknown	0.01	NP																	
LNG	ESS RW-1	NS	NS	NS	Recovery Well	Shallow	2002	6.70	Unknown	NP	NP																	
LNG	ESS RW-2	NS	NS	NS	Recovery Well	Shallow	2002	9.32	Unknown	NP	NP																	
LNG	ESS RW-3	16.03	16.03	12.99	Recovery Well	Shallow	2002	13.94	Unknown	NP	NP																	
LNG	ESS RW-4	15.78	15.78	12.69	Recovery Well	Shallow	2002	12.06	Unknown	NP	NP																	
LNG	ESS RW-5	16.14	16.14	12.86	Recovery Well	Shallow	2002	13.85	Unknown	NP	NP																	
LNG	ESS RW-6	17.52	17.52	14.65	Recovery Well	Shallow	2002	14.33	Unknown	NP	NP																	
LNG	GZ-101	13.43	13.10	13.43	Roadbox	Shallow	4/29/2004	20.21	10 - 20	NP	NP																	
LNG	GZ-201	9.83	9.53	7.53	Standpipe	Shallow	4/8/2005	18.08	10 - 20	NP	NP																	
LNG	GZ-204A	13.86	12.83	11.30	Standpipe	Shallow	4/12/2005	15.92	4 - 16	NP	NP																	
LNG	GZ-216	12.85	11.61	10.34	Standpipe	Shallow	5/17/2005	16.45	5 - 15	NP	NP																	
LNG	RW-1	14.18	14.18	11.84	Recovery Well	Shallow	6/17/2014	11.66	8 - 13	trace - 0.02	NP																	
LNG	GZ-314S	14.35	14.19	11.13	Standpipe	Shallow	6/3/2014	18.88	4 - 19	NP	NP																	
LNG	GZ-314D	14.24	14.11	11.22	Standpipe	Deep	6/3/2014	34.11	24 - 34	NP	NP																	
LNG	GZ-315D	13.06	12.93	10.17	Standpipe	Deep	6/4/2014	30.29	20 - 30	NP	NP																	
LNG	GZ-319D	15.50	14.90	13.19	Standpipe	Deep	6/2/2014	30.52	20 - 30	NP	NP																	

Notes

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

Well is located at the LNG Facility

Well is located in the CNG Fueling Station portion of the Property

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.

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)	Range of DNAPL Observed (feet)	January 2011								July 2011								
		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)	
CNG	RCA-12R	17.87	17.33	17.87	Roadbox	Shallow	5/30/2014	15.24	5 - 15	NP	NP																	
CNG	GZ-301D	17.74	17.33	17.74	Roadbox	Deep	5/30/2014	30.11	20 - 30	NP	NP																	
CNG	GZ-302S	16.97	16.67	16.97	Roadbox	Shallow	6/3/2014	15.00	5 - 15	NP	NP																	
CNG	GZ-302D	16.97	16.59	16.97	Roadbox	Deep	5/30/2014	29.88	20 - 30	NP	NP																	
NG	RCA-1	12.21	11.82	12.21	Roadbox	Shallow	6/8/1994	15.89	6.5 - 16.5	NP	NP										-	6.45	-	15.4	5.37	NP	NP	5.37
NG	RCA-3	11.88	11.44	9.40	Standpipe	Shallow	9/9/1994	15.76	6 - 16	NP	trace	-	9.95	trace	17.65	1.49	NP	trace	1.49	-	8.51	trace	17.75	2.93	NP	trace	2.93	
NG	RCA-11	13.27	13.04	10.57	Standpipe	Shallow	9/12/1994	12.53	4 - 14	NP	NP										-	6.72	-	14.95	6.32	NP	NP	6.32
NG	RCA-13	11.94	11.61	10.51	Standpipe	Shallow	9/12/1994	13.97	4 - 14	NP	NP	-	6.84	-	15.00	4.77	NP	NP	4.77	-	6.27	-	14.95	5.34	NP	NP	5.34	
NG	RCA-14	13.09	12.75	11.06	Standpipe	Shallow	9/12/1994	13.61	5 - 15	NP	NP										-	8.4	-	15.28	4.35	NP	NP	4.35
NG	RCA-15	NS	14.06	NS	Standpipe	Shallow	12/8/1994	15.97	4 - 14	NP	NP										-	8.11	-	17.95	5.95	NP	NP	5.95
NG	RCA-17	NS	13.44	NS	Standpipe	Shallow	12/9/1994	12.80	4 - 14	NP	NP										-	7.33	-	14.75	6.11	NP	NP	6.11
NG	VHB-1	10.55	10.33	10.55	Roadbox	Shallow	1/15/2002	11.72	2 - 12	NP	NP										-	4.54	-	10.9	5.79	NP	NP	5.79
NG	VHB-3	11.84	11.96	9.76	Standpipe	Shallow	1/14/2002	7.90	2 - 10	trace	NP										-	5.42	-	9.15	6.54	NP	NP	6.54
NG	VHB-6	12.91	12.93	10.25	Standpipe	Shallow	1/14/2002	9.77	2 - 12	NP	NP	-	8.18	-	14	4.75	NP	NP	4.75	-	7.74	-	13.95	5.19	NP	NP	5.19	
NG	VHB-7	14.30	13.73	11.29	Standpipe	Shallow	1/14/2002	12.66	2 - 12	NP	NP	-	9.75	-	14.9	3.98	NP	NP	3.98	-	8.89	-	14.85	4.84	NP	NP	4.84	
NG	VHB-10	19.45	19.10	15.88	Standpipe	Shallow	1/15/2002	14.77	5 - 15	trace - 0.02	NP	trace	12.35	-	17.04	6.75	trace	NP	6.75	trace	11.7	-	17.04	7.40	trace	NP	7.40	
NG	VHB-18	15.54	15.35	10.61	Standpipe	Shallow	1/21/2003	12.26	6 - 16	NP	NP									-	8.93	-	16.92	6.42	NP	NP	6.42	
NG	VHB-21	13.80	13.65	11.09	Standpipe	Shallow	1/28/2003	15.94	6 - 16	trace - 0.08	NP	-	9.05	-	16.55	4.60	NP	NP	4.60	-	8.51	-	16.55	5.14	NP	NP	5.14	
NG	VHB-22	13.32	13.02	11.21	Standpipe	Shallow	1/28/2003	15.49	6 - 16	0.01 - 0.04	NP									8.54	8.55	-	17.67	4.47	0.01	NP	4.48	
NG	VHB-23	12.98	12.80	11.37	Standpipe	Shallow	1/29/2003	16.37	6 - 16	trace - 0.05	NP									-	7.88	7.89	-	17.25	4.91	0.01	NP	4.91
NG	CHES RW-1	12.94	12.94	11.06	Recovery Well	Shallow	2002	9.42	Unknown	NP	NP										-	6.57	-	10.42	6.37	NP	NP	6.37
NG	CHES RW-2	14.27	14.27	11.09	Recovery Well	Shallow	2002	13.12	Unknown	trace	NP										-	9.85	-	16.24	4.42	NP	NP	4.42
NG	CHES-RWA	NS	NS	NS	Recovery Well	Shallow	2017	9.80	Unknown	0.30 - 0.89	NP																	
NG	U-1	NS	9.67	7.71	Standpipe	Shallow	Unknown	9.08	Unknown	NP	NP									-	4.68	-	9.52	4.99	NP	NP	4.99	
NG	VHB-8R	14.85	14.06	12.60	Standpipe	Shallow	6/4/2014	12.29	2 - 12	NP	NP									-	5.21	-	11.5	8.85	NP	NP	8.85	
NG	GZ-303S	13.78	13.28	13.78	Roadbox	Shallow	5/28/2014	15.70	5 - 15	NP	NP																	
NG	GZ-303D	13.75	13.13	13.75	Roadbox	Deep	6/3/2014	30.32	20 - 30	NP	NP																	
NG	GZ-304D	12.41	11.95	12.41	Roadbox	Deep	5/24/2014	30.16	20 - 30	NP	NP																	
NG	GZ-305S	11.84	11.64	11.84	Roadbox	Shallow	5/22/2014	14.35	5 - 15	NP	NP																	
NG	GZ-306S	11.90	11.49	11.90	Roadbox	Shallow	5/22/2014	15.31	5 - 15	NP	NP																	
NG	GZ-307S	10.70	10.18	10.70	Roadbox	Shallow	6/3/2014	14.67	3 - 13	trace - 0.36	NP																	
NG	GZ-308S	9.71	8.96	9.71	Roadbox	Shallow	6/4/2014	12.33	2 - 12	NP	NP																	
NG	GZ-309D	10.51	9.83	10.51	Roadbox	Deep</td																						

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

Notes

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

Well is located at the LNG Facility

Well is located in the CNG Fueling Station portion of the Property

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 LNARI include 0.85 correction.

Potentiometric elevations for wells exhibiting LNAFL include a 0.83 correction factor.

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)	Range of DNAPL Observed (feet)	August 2011								February 2012							
		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 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 Water (ft)	Depth to DNAPL (ft)	Total Well Depth (ft)	GW Elevation (feet)	LNAPL Thickness (feet)	DNAPL Thickness (feet)	Corrected Groundwater Elevation (feet)		
CNG	RCA-12R	17.87	17.33	17.87	Roadbox	Shallow	5/30/2014	15.24	5 - 15	NP	NP																
CNG	GZ-301D	17.74	17.33	17.74	Roadbox	Deep	5/30/2014	30.11	20 - 30	NP	NP																
CNG	GZ-302S	16.97	16.67	16.97	Roadbox	Shallow	6/3/2014	15.00	5 - 15	NP	NP																
CNG	GZ-302D	16.97	16.59	16.97	Roadbox	Deep	5/30/2014	29.88	20 - 30	NP	NP																
NG	RCA-1	12.21	11.82	12.21	Roadbox	Shallow	6/8/1994	15.89	6.5 - 16.5	NP	NP	-	6.66	-	15.4	5.16	NP	NP	5.16	-	6.33	-	15.5	5.49	NP	NP	5.49
NG	RCA-3	11.88	11.44	9.40	Standpipe	Shallow	9/9/1994	15.76	6 - 16	NP	trace	-	8.45	trace	17.75	2.99	NP	trace	2.99	-	9.4	trace	17.55	2.04	NP	trace	2.04
NG	RCA-11	13.27	13.04	10.57	Standpipe	Shallow	9/12/1994	12.53	4 - 14	NP	NP	-	6.92	-	14.95	6.12	NP	NP	6.12	-	6.91	-	15.05	6.13	NP	NP	6.13
NG	RCA-13	11.94	11.61	10.51	Standpipe	Shallow	9/12/1994	13.97	4 - 14	NP	NP	-	6.92	-	14.95	4.69	NP	NP	4.69	-	5.88	-	15.07	5.73	NP	NP	5.73
NG	RCA-14	13.09	12.75	11.06	Standpipe	Shallow	9/12/1994	13.61	5 - 15	NP	NP	-	9.91	-	15.28	2.84	NP	NP	2.84	-	8.81	-	15.35	3.94	NP	NP	3.94
NG	RCA-15	NS	14.06	NS	Standpipe	Shallow	12/8/1994	15.97	4 - 14	NP	NP	-	8.36	-	17.95	5.70	NP	NP	5.70	-	8.36	-	18.02	5.70	NP	NP	5.70
NG	RCA-17	NS	13.44	NS	Standpipe	Shallow	12/9/1994	12.80	4 - 14	NP	NP	-	7.96	-	14.75	5.48	NP	NP	5.48	-	7.37	-	14.86	6.07	NP	NP	6.07
NG	VHB-1	10.55	10.33	10.55	Roadbox	Shallow	1/15/2002	11.72	2 - 12	NP	NP	-	7.56	-	10.9	2.77	NP	NP	2.77	-	4.54	-	10.98	5.79	NP	NP	5.79
NG	VHB-3	11.84	11.96	9.76	Standpipe	Shallow	1/14/2002	7.90	2 - 10	trace	NP	trace	6.41	-	9.15	5.55	trace	NP	5.55	-	5.36	-	9.38	6.60	NP	NP	6.60
NG	VHB-6	12.91	12.93	10.25	Standpipe	Shallow	1/14/2002	9.77	2 - 12	NP	NP	-	8.26	-	13.95	4.67	NP	NP	4.67	-	7.38	-	13.75	5.55	NP	NP	5.55
NG	VHB-7	14.30	13.73	11.29	Standpipe	Shallow	1/14/2002	12.66	2 - 12	NP	NP	-	9.3	-	14.85	4.43	NP	NP	4.43	-	9.29	-	14.98	4.44	NP	NP	4.44
NG	VHB-10	19.45	19.10	15.88	Standpipe	Shallow	1/15/2002	14.77	5 - 15	trace - 0.02	NP	12.22	12.23	-	17.04	6.87	0.01	NP	6.88	trace	11.83	-	17.16	7.27	trace	NP	7.27
NG	VHB-18	15.54	15.35	10.61	Standpipe	Shallow	1/21/2003	12.26	6 - 16	NP	NP	-	9.16	-	16.92	6.19	NP	NP	6.19	-	9.15	-	17.03	6.20	NP	NP	6.20
NG	VHB-21	13.80	13.65	11.09	Standpipe	Shallow	1/28/2003	15.94	6 - 16	trace - 0.08	NP	-	8.99	-	16.55	4.66	NP	NP	4.66	-	8.4	-	16.63	5.25	NP	NP	5.25
NG	VHB-22	13.32	13.02	11.21	Standpipe	Shallow	1/28/2003	15.49	6 - 16	0.01 - 0.04	NP	-	9.06	-	17.67	3.96	NP	NP	3.96	trace	7.94	-	17.31	5.08	trace	NP	5.08
NG	VHB-23	12.98	12.80	11.37	Standpipe	Shallow	1/29/2003	16.37	6 - 16	trace - 0.05	NP	8.50	8.55	-	17.25	4.25	0.05	NP	4.29	trace	8.8	-	17.85	4.00	trace	NP	4.00
NG	CHES RW-1	12.94	12.94	11.06	Recovery Well	Shallow	2002	9.42	Unknown	NP	NP	-	7.22	-	10.42	5.72	NP	NP	5.72	-	6.3	-	10.55	6.64	NP	NP	6.64
NG	CHES RW-2	14.27	14.27	11.09	Recovery Well	Shallow	2002	13.12	Unknown	trace	NP	-	10.41	-	10.24	3.86	NP	NP	3.86	trace	10.24	-	10.35	4.03	trace	NP	4.03
NG	CHES-RWA	NS	NS	NS	Recovery Well	Shallow	2017	9.80	Unknown	0.30 - 0.89	NP																
NG	U-1	NS	9.67	7.71	Standpipe	Shallow	Unknown	9.08	Unknown	NP	NP	-	7.68	-	9.52	1.99	NP	NP	1.99	-	4.6	-	9.55	5.07	NP	NP	5.07
NG	VHB-8R	14.85	14.06	12.60	Standpipe	Shallow	6/4/2014	12.29	2 - 12	NP	NP	-	5.74	-	11.5	8.32	NP	NP	8.32	-	5.4	-	11.6	8.66	NP	NP	8.66
NG	GZ-303S	13.78	13.28	13.78	Roadbox	Shallow	5/28/2014	15.70	5 - 15	NP	NP																
NG	GZ-303D	13.75	13.13	13.75	Roadbox	Deep	6/3/2014	30.32	20 - 30	NP	NP																
NG	GZ-304D	12.41	11.95	12.41	Roadbox	Deep	5/24/2014	30.16	20 - 30	NP	NP																
NG	GZ-305S	11.84	11.64	11.84	Roadbox	Shallow	5/22/2014	14.35	5 - 15	NP	NP																
NG	GZ-306S	11.90	11.49	11.90	Roadbox	Shallow	5/22/2014	15.31	5 - 15	NP	NP																
NG	GZ-307S	10.70	10.18	10.70	Roadbox	Shallow	6/3/2014	14.67	3 - 13	trace - 0.36	NP					</td											

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)	Range of DNAPL Observed (feet)	August 2011								February 2012							
		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 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 Water (ft)	Depth to DNAPL (ft)	Total Well Depth (ft)	GW Elevation (feet)	LNAPL Thickness (feet)	DNAPL Thickness (feet)	Corrected Groundwater Elevation (feet)		
LNG	RCA-5	12.68	12.27	10.79	Standpipe	Shallow	9/7/1994	15.92	6 - 16	NP	NP	-	10.33	-	13.33	1.94	NP	NP	1.94	-	10.75	-	13.45	1.52	NP	NP	1.52
LNG	RCA-6	10.90	10.66	10.90	Roadbox	Shallow	9/8/1994	17.44	7 - 17	NP	NP	-	10.55	-	17.2	0.11	NP	NP	0.11	-	11.2	-	17.27	-0.54	NP	NP	-0.54
LNG	RCA-20	13.25	12.95	11.01	Standpipe	Shallow	10/18/1995	12.26	3.5 - 13.5	NP	NP	-	9.09	-	10.95	3.86	NP	NP	3.86	-	8.85	-	11.07	4.10	NP	NP	4.10
LNG	RCA-21	NS	13.72	10.48	Standpipe	Shallow	10/30/1995	11.39	4 - 14	0.91 - 3.58	NP	10.72	13.66	-	13.75	0.06	2.94	NP	2.56	10.95	13.74	-	13.94	-0.02	2.79	NP	2.35
LNG	RCA-22	NM	12.92	10.33	Standpipe	Shallow	Unknown	10.41	Unknown	NP	NP	-	9.52	-	13	3.40	NP	NP	3.40	-	9.48	-	13.05	3.44	NP	NP	3.44
LNG	RCA-28	NS	15.38	13.01	Standpipe	Shallow	1/17/1995	15.43	5 - 15	NP	NP	-	12	-	17.65	3.38	NP	NP	3.38	-	12.02	-	17.7	3.36	NP	NP	3.36
LNG	RCA-29	NS	13.45	NS	Standpipe	Shallow	2/13/1996	12.95	2 - 12	trace - 0.17	NP	trace	11.31	-	14.79	2.14	trace	NP	2.14	trace	11.73	-	14.79	1.72	trace	NP	1.72
LNG	RCA-31	15.19	14.98	12.78	Standpipe	Shallow	2/23/1996	13.30	5-15	NP	NP	-															
LNG	RCA-32	NS	12.16	NS	Standpipe	Shallow	2/3/1996	10.98	4 - 14	NP	NP	-	9.64	-	15.98	2.52	NP	NP	2.52	-	9.75	-	16.05	2.41	NP	NP	2.41
LNG	RCA-33	NS	9.67	NS	Standpipe	Shallow	2/23/1996	11.32	5 - 15	NP	NP	-	7.74	-	13.12	1.93	NP	NP	1.93	-	8.37	-	13.26	1.30	NP	NP	1.30
LNG	RCA-34	15.08	15.09	12.76	Standpipe	Shallow	2/29/1996	10.77	13 - 18	NP	NP	-	11.59	-	13.55	3.50	NP	NP	3.50	-	8.91	-	13.61	6.18	NP	NP	6.18
LNG	RCA-36	10.72	10.51	10.72	Roadbox	Shallow	3/1/1996	13.37	5 - 15	NP	NP	-	11.82	-	14.05	-1.31	NP	NP	-1.31	-	12.06	-	14.11	-1.55	NP	NP	-1.55
LNG	RCA-38	NS	9.36	NS	Standpipe	Shallow	5/2/1996	15.65	5 - 15	NP	NP	-	8.19	-	16.8	1.17	NP	NP	1.17	-	8.78	-	16.64	0.58	NP	NP	0.58
LNG	RCA-39	14.07	13.86	11.43	Standpipe	Shallow	5/3/1996	12.32	3 - 13	NP	NP	-	9.65	-	14.6	4.21	NP	NP	4.21	-	9.45	-	14.7	4.41	NP	NP	4.41
LNG	RCA-40	12.76	12.24	10.47	Standpipe	Shallow	5/3/1996	15.15	4 - 14	trace - 0.04	NP	-	10.37	-	16.75	1.87	NP	NP	1.87	trace	10.78	-	16.9	1.46	trace	NP	1.46
LNG	VHB-13	12.88	12.72	13.34	Roadbox	Shallow	1/16/2002	16.56	7 - 17	NP	NP	-	10.47	-	15.90	2.25	NP	NP	2.25	-	10.73	-	15.86	1.99	NP	NP	1.99
LNG	VHB-20	15.15	14.98	13.01	Standpipe	Shallow	1/22/2002	15.57	6 - 16	NP	NP	-	8.91	-	17	6.07	NP	NP	6.07	-	8.85	-	17.17	6.13	NP	NP	6.13
LNG	CHES RW-3	14.30	14.30	11.24	Recovery Well	Shallow	2002	14.84	Unknown	trace	NP	-	12.25	-	17.9	2.05	NP	NP	2.05	-	12.35	-	18	1.95	NP	NP	1.95
LNG	CHES RW-4	13.08	13.08	9.09	Recovery Well	Shallow	2002	8.57	Unknown	trace - 0.03	NP	11.27	11.3	-	12.35	1.78	0.03	NP	1.81	11.67	11.68	-	12.45	1.40	0.01	NP	1.41
LNG	CHES RW-5	14.32	14.32	11.16	Recovery Well	Shallow	2002	11.34	Unknown	0.01	NP	-	11.9	-	13.8	2.42	NP	NP	2.42	-	12.3	-	13.8	2.02	NP	NP	2.02
LNG	ESS RW-1	NS	NS	NS	Recovery Well	Shallow	2002	6.70	Unknown	NP	NP	-	6.71	-	8.46	NS	NP	NP	NS	-	5.41	-	8.6	NS	NP	NP	NS
LNG	ESS RW-2	NS	NS	NS	Recovery Well	Shallow	2002	9.32	Unknown	NP	NP	-	8.24	-	11.07	NS	NP	NP	NS	-	8.35	-	11.2	NS	NP	NP	NS
LNG	ESS RW-3	16.03	16.03	12.99	Recovery Well	Shallow	2002	13.94	Unknown	NP	NP	-	13.25	-	16.8	2.78	NP	NP	2.78	-	13.46	-	16.81	2.57	NP	NP	2.57
LNG	ESS RW-4	15.78	15.78	12.69	Recovery Well	Shallow	2002	12.06	Unknown	NP	NP	-	13.02	-	14.95	2.76	NP	NP	2.76	-	13.25	-	15.04	2.53	NP	NP	2.53
LNG	ESS RW-5	16.14	16.14	12.86	Recovery Well	Shallow	2002	13.85	Unknown	NP	NP	-	13.31	-	17	2.83	NP	NP	2.83	-	13.52	-	17.06	2.62	NP	NP	2.62
LNG	ESS RW-6	17.52	17.52	14.65	Recovery Well	Shallow	2002	14.33	Unknown	NP	NP	-	14.77	-	17.09	2.75	NP	NP	2.75	-	14.99	-	17.12	2.53	NP	NP	2.53
LNG	GZ-101	13.43	13.10	13.43	Roadbox	Shallow	4/29/2004	20.21	10 - 20	NP	NP	-															
LNG	GZ-201	9.83	9.53	7.53	Standpipe	Shallow	4/8/2005	18.08	10 - 20	NP	NP	-									9.62	-	20.04	-0.09	NP	NP	-0.09
LNG	GZ-204A	13.86	12.83	11.30	Standpipe	Shallow	4/12/2005	15.92	4 - 16	NP	NP	-	9.4	-	17.3	3.43	NP	NP	3.43	-	9.19	-	17.41	3.64	NP	NP	3.64
LNG	GZ-216	12.85	11.61	10.34	Standpipe																						

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)	Range of DNAPL Observed (feet)	July 2012								February 2013							
		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 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 Water (ft)	Depth to DNAPL (ft)	Total Well Depth (ft)	GW Elevation (feet)	LNAPL Thickness (feet)	DNAPL Thickness (feet)	Corrected Groundwater Elevation (feet)		
CNG	RCA-12R	17.87	17.33	17.87	Roadbox	Shallow	5/30/2014	15.24	5 - 15	NP	NP																
CNG	GZ-301D	17.74	17.33	17.74	Roadbox	Deep	5/30/2014	30.11	20 - 30	NP	NP																
CNG	GZ-302S	16.97	16.67	16.97	Roadbox	Shallow	6/3/2014	15.00	5 - 15	NP	NP																
CNG	GZ-302D	16.97	16.59	16.97	Roadbox	Deep	5/30/2014	29.88	20 - 30	NP	NP																
NG	RCA-1	12.21	11.82	12.21	Roadbox	Shallow	6/8/1994	15.89	6.5 - 16.5	NP	NP	-	6.41	-	15.41	5.41	NP	NP	5.41	-	6.69	-	15.4	5.13	NP	NP	5.13
NG	RCA-3	11.88	11.44	9.40	Standpipe	Shallow	9/9/1994	15.76	6 - 16	NP	trace	-	7.91	trace	17.55	3.53	NP	trace	3.53	-	9.25	trace	17.65	2.19	NP	trace	2.19
NG	RCA-11	13.27	13.04	10.57	Standpipe	Shallow	9/12/1994	12.53	4 - 14	NP	NP	-	6.95	-	14.95	6.09	NP	NP	6.09	-	6.95	-	15	6.09	NP	NP	6.09
NG	RCA-13	11.94	11.61	10.51	Standpipe	Shallow	9/12/1994	13.97	4 - 14	NP	NP	-	7.21	-	15.07	4.40	NP	NP	4.40	-	5.81	-	15.05	5.80	NP	NP	5.80
NG	RCA-14	13.09	12.75	11.06	Standpipe	Shallow	9/12/1994	13.61	5 - 15	NP	NP	-	9.03	-	15.2	3.72	NP	NP	3.72	-	8.71	-	15.3	4.04	NP	NP	4.04
NG	RCA-15	NS	14.06	NS	Standpipe	Shallow	12/8/1994	15.97	4 - 14	NP	NP	-	8.32	-	18.05	5.74	NP	NP	5.74	-	8.4	-	18	5.66	NP	NP	5.66
NG	RCA-17	NS	13.44	NS	Standpipe	Shallow	12/9/1994	12.80	4 - 14	NP	NP	-	7.38	-	14.8	6.06	NP	NP	6.06	-	6.87	-	14.85	6.57	NP	NP	6.57
NG	VHB-1	10.55	10.33	10.55	Roadbox	Shallow	1/15/2002	11.72	2 - 12	NP	NP	-	4.81	-	10.85	5.52	NP	NP	5.52	-	4.88	-	10.88	5.45	NP	NP	5.45
NG	VHB-3	11.84	11.96	9.76	Standpipe	Shallow	1/14/2002	7.90	2 - 10	trace	NP	-	6.49	-	9.11	5.47	NP	NP	5.47	-	4.97	-	9.4	6.99	NP	NP	6.99
NG	VHB-6	12.91	12.93	10.25	Standpipe	Shallow	1/14/2002	9.77	2 - 12	NP	NP	-	8.61	-	12.7	4.32	NP	NP	4.32	-	7.38	-	12.25	5.55	NP	NP	5.55
NG	VHB-7	14.30	13.73	11.29	Standpipe	Shallow	1/14/2002	12.66	2 - 12	NP	NP	-	9.46	-	14.91	4.27	NP	NP	4.27	-	9.38	-	14.9	4.35	NP	NP	4.35
NG	VHB-10	19.45	19.10	15.88	Standpipe	Shallow	1/15/2002	14.77	5 - 15	trace - 0.02	NP	12.45	12.47	-	17.16	6.63	0.02	NP	6.65	-	12.81	-	17.15	6.29	NP	NP	6.29
NG	VHB-18	15.54	15.35	10.61	Standpipe	Shallow	1/21/2003	12.26	6 - 16	NP	NP	-	9.21	-	17	6.14	NP	NP	6.14	-	9.23	-	17	6.12	NP	NP	6.12
NG	VHB-21	13.80	13.65	11.09	Standpipe	Shallow	1/28/2003	15.94	6 - 16	trace - 0.08	NP	9.31	9.32	-	16.63	4.33	0.01	NP	4.33	8.56	8.57	-	17.3	5.08	0.01	NP	5.08
NG	VHB-22	13.32	13.02	11.21	Standpipe	Shallow	1/28/2003	15.49	6 - 16	0.01 - 0.04	NP	8.82	8.86	-	17.31	4.16	0.04	NP	4.19	-	8.88	-	17.8	4.14	NP	NP	4.14
NG	VHB-23	12.98	12.80	11.37	Standpipe	Shallow	1/29/2003	16.37	6 - 16	trace - 0.05	NP	-	9.44	-	17.85	3.36	NP	NP	3.36	8.21	8.22	-	17.8	4.58	0.01	NP	4.58
NG	CHES RW-1	12.94	12.94	11.06	Recovery Well	Shallow	2002	9.42	Unknown	NP	NP	-	7.89	-	10.5	5.05	NP	NP	5.05	-	6.86	-	10.3	6.08	NP	NP	6.08
NG	CHES RW-2	14.27	14.27	11.09	Recovery Well	Shallow	2002	13.12	Unknown	trace	NP	-	10.57	-	10.61	3.70	NP	NP	3.70	trace	10.42	-	16.3	3.85	trace	NP	3.85
NG	CHES-RWA	NS	NS	NS	Recovery Well	Shallow	2017	9.80	Unknown	0.30 - 0.89	NP																
NG	U-1	NS	9.67	7.71	Standpipe	Shallow	Unknown	9.08	Unknown	NP	NP	-	5.75	-	9.14	3.92	NP	NP	3.92	-	4.15	-	9.35	5.52	NP	NP	5.52
NG	VHB-8R	14.85	14.06	12.60	Standpipe	Shallow	6/4/2014	12.29	2 - 12	NP	NP	-	5.9	-	11.6	8.16	NP	NP	8.16	-	5.25	-	10	8.81	NP	NP	8.81
NG	GZ-303S	13.78	13.28	13.78	Roadbox	Shallow	5/28/2014	15.70	5 - 15	NP	NP																
NG	GZ-303D	13.75	13.13	13.75	Roadbox	Deep	6/3/2014	30.32	20 - 30	NP	NP																
NG	GZ-304D	12.41	11.95	12.41	Roadbox	Deep	5/24/2014	30.16	20 - 30	NP	NP																
NG	GZ-305S	11.84	11.64	11.84	Roadbox	Shallow	5/22/2014	14.35	5 - 15	NP	NP																
NG	GZ-306S	11.90	11.49	11.90	Roadbox	Shallow	5/22/2014	15.31	5 - 15	NP	NP																
NG	GZ-307S	10.70	10.18	10.70	Roadbox	Shallow	6/3/2014	14.67	3 - 13	trace - 0.36	NP																

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)	Range of DNAPL Observed (feet)	July 2012								February 2013								
		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 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 Water (ft)	Depth to DNAPL (ft)	Total Well Depth (ft)	GW Elevation (feet)	LNAPL Thickness (feet)	DNAPL Thickness (feet)	Corrected Groundwater Elevation (feet)			
LNG	RCA-5	12.68	12.27	10.79	Standpipe	Shallow	9/7/1994	15.92	6 - 16	NP	NP	-	10.44	-	13.45	1.83	NP	NP	1.83	-	10.59	-	13.55	1.68	NP	NP	1.68	
LNG	RCA-6	10.90	10.66	10.90	Roadbox	Shallow	9/8/1994	17.44	7 - 17	NP	NP	-	10.65	-	17.2	0.01	NP	NP	0.01	-	11.21	-	17.26	-0.55	NP	NP	-0.55	
LNG	RCA-20	13.25	12.95	11.01	Standpipe	Shallow	10/18/1995	12.26	3.5 - 13.5	NP	NP	-	9.1	-	11.07	3.85	NP	NP	3.85	-	8.83	-	14.35	4.12	NP	NP	4.12	
LNG	RCA-21	NS	13.72	10.48	Standpipe	Shallow	10/30/1995	11.39	4 - 14	0.91 - 3.58	NP	11.17	12.82	-	14.35	0.90	1.65	NP	2.30	11.41	12.85	-	14.35	0.87	1.44	NP	2.10	
LNG	RCA-22	NM	12.92	10.33	Standpipe	Shallow	Unknown	10.41	Unknown	NP	NP	-	9.69	-	13.05	3.23	NP	NP	3.23	-	9.77	-	13.2	3.15	NP	NP	3.15	
LNG	RCA-28	NS	15.38	13.01	Standpipe	Shallow	1/17/1995	15.43	5 - 15	NP	NP	-	12.08	-	17.7	3.30	NP	NP	3.30	-	12.28	-	17.75	3.10	NP	NP	3.10	
LNG	RCA-29	NS	13.45	NS	Standpipe	Shallow	2/13/1996	12.95	2 - 12	trace - 0.17	NP	11.50	11.61	-	14.45	1.84	0.11	NP	1.84	trace	11.98	-	14.45	1.47	trace	NP	1.47	
LNG	RCA-31	15.19	14.98	12.78	Standpipe	Shallow	2/23/1996	13.30	5-15	NP	NP	-																
LNG	RCA-32	NS	12.16	NS	Standpipe	Shallow	2/3/1996	10.98	4 - 14	NP	NP	-	10.75	-	16.01	1.41	NP	NP	1.41	-	9.98	-	12.9	2.18	NP	NP	2.18	
LNG	RCA-33	NS	9.67	NS	Standpipe	Shallow	2/23/1996	11.32	5 - 15	NP	NP	-	8.08	-	13.2	1.59	NP	NP	1.59	-	8.51	-	13.3	1.16	NP	NP	1.16	
LNG	RCA-34	15.08	15.09	12.76	Standpipe	Shallow	2/29/1996	10.77	13 - 18	NP	NP	-	7.1	-	13.55	7.99	NP	NP	7.99	-	6.75	-	13.55	8.34	NP	NP	8.34	
LNG	RCA-36	10.72	10.51	10.72	Roadbox	Shallow	3/1/1996	13.37	5 - 15	NP	NP	-	10.24	-	14.1	0.27	NP	NP	0.27	-	11.62	-	14.07	-1.11	NP	NP	-1.11	
LNG	RCA-38	NS	9.36	NS	Standpipe	Shallow	5/2/1996	15.65	5 - 15	NP	NP	-	8.48	-	16.7	0.88	NP	NP	0.88	-	9.05	-	16.7	0.31	NP	NP	0.31	
LNG	RCA-39	14.07	13.86	11.43	Standpipe	Shallow	5/3/1996	12.32	3 - 13	NP	NP	-	9.85	-	14.65	4.01	NP	NP	4.01	-	9.86	-	14.75	4.00	NP	NP	4.00	
LNG	RCA-40	12.76	12.24	10.47	Standpipe	Shallow	5/3/1996	15.15	4 - 14	trace - 0.04	NP	trace	10.47	-	16.8	1.77	trace	NP	1.77	trace	10.85	-	16.8	1.39	trace	NP	1.39	
LNG	VHB-13	12.88	12.72	13.34	Roadbox	Shallow	1/16/2002	16.56	7 - 17	NP	NP	-	10.5	-	15.84	2.22	NP	NP	2.22	-	10.71	-	15.85	2.01	NP	NP	2.01	
LNG	VHB-20	15.15	14.98	13.01	Standpipe	Shallow	1/22/2002	15.57	6 - 16	NP	NP	-	8.91	-	17.05	6.07	NP	NP	6.07	-	9.12	-	17.2	5.86	NP	NP	5.86	
LNG	CHES RW-3	14.30	14.30	11.24	Recovery Well	Shallow	2002	14.84	Unknown	trace	NP	NP	-	12.31	-	17.92	1.99	NP	NP	1.99	-	12.71	-	17.9	1.59	NP	NP	1.59
LNG	CHES RW-4	13.08	13.08	9.09	Recovery Well	Shallow	2002	8.57	Unknown	trace - 0.03	NP	trace	11.4	-	12.4	1.68	trace	NP	1.68	trace	11.77	-	12.5	1.31	trace	NP	1.31	
LNG	CHES RW-5	14.32	14.32	11.16	Recovery Well	Shallow	2002	11.34	Unknown	0.01	NP	-	12.08	-	13.8	2.24	NP	NP	2.24	-	12.4	-	13.8	1.92	NP	NP	1.92	
LNG	ESS RW-1	NS	NS	NS	Recovery Well	Shallow	2002	6.70	Unknown	NP	NP	-	6.59	-	8.46	NS	NP	NP	NS	-	5.27	-	8.55	NS	NP	NP	NS	
LNG	ESS RW-2	NS	NS	NS	Recovery Well	Shallow	2002	9.32	Unknown	NP	NP	-	8.18	-	11.1	NS	NP	NP	NS	-	8.39	-	11.2	NS	NP	NP	NS	
LNG	ESS RW-3	16.03	16.03	12.99	Recovery Well	Shallow	2002	13.94	Unknown	NP	NP	-	13.36	-	16.8	2.67	NP	NP	2.67	-	13.68	-	16.85	2.35	NP	NP	2.35	
LNG	ESS RW-4	15.78	15.78	12.69	Recovery Well	Shallow	2002	12.06	Unknown	NP	NP	-	13.14	-	15	2.64	NP	NP	2.64	-	13.44	-	15.05	2.34	NP	NP	2.34	
LNG	ESS RW-5	16.14	16.14	12.86	Recovery Well	Shallow	2002	13.85	Unknown	NP	NP	-	13.44	-	17.05	2.70	NP	NP	2.70	-	13.74	-	17.05	2.40	NP	NP	2.40	
LNG	ESS RW-6	17.52	17.52	14.65	Recovery Well	Shallow	2002	14.33	Unknown	NP	NP	-	14.86	-	17.1	2.66	NP	NP	2.66	-	15.16	-	17.15	2.36	NP	NP	2.36	
LNG	GZ-101	13.43	13.10	13.43	Roadbox	Shallow	4/29/2004	20.21	10 - 20	NP	NP	-																
LNG	GZ-201	9.83	9.53	7.53	Standpipe	Shallow	4/8/2005	18.08	10 - 20	NP	NP	-	7.7	-	20.05	1.83	NP	NP	1.83	-	8.98	-	20.10	0.55	NP	NP	0.55	
LNG	GZ-204A	13.86	12.83	11.30	Standpipe	Shallow	4/12/2005	15.92	4 - 16	NP	NP	-	9.49	-	17.43	3.34	NP	NP	3.34	-	9.62	-	17.42	3.21	NP	NP	3.21	
LNG	GZ-216	12.85</																										

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)	Range of DNAPL Observed (feet)	November 2013								June 2014							
		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)
CNG	RCA-12R	17.87	17.33	17.87	Roadbox	Shallow	5/30/2014	15.24	5 - 15	NP	NP									-	9.82	-	14.7	7.51	NP	NP	7.51
CNG	GZ-301D	17.74	17.33	17.74	Roadbox	Deep	5/30/2014	30.11	20 - 30	NP	NP									-	10.87	-	29.7	6.46	NP	NP	6.46
CNG	GZ-302S	16.97	16.67	16.97	Roadbox	Shallow	6/3/2014	15.00	5 - 15	NP	NP									-	9.42	-	14.7	7.25	NP	NP	7.25
CNG	GZ-302D	16.97	16.59	16.97	Roadbox	Deep	5/30/2014	29.88	20 - 30	NP	NP									-	9.35	-	29.5	7.24	NP	NP	7.24
NG	RCA-1	12.21	11.82	12.21	Roadbox	Shallow	6/8/1994	15.89	6.5 - 16.5	NP	NP	-	7.19	-	15.45	4.63	NP	NP	4.63	-	6.32	-	15.5	5.50	NP	NP	5.50
NG	RCA-3	11.88	11.44	9.40	Standpipe	Shallow	9/9/1994	15.76	6 - 16	NP	trace	-	9.44	trace	17.7	2.00	NP	trace	2.00	-	8.82	Trace	17.8	2.62	NP	Trace	2.62
NG	RCA-11	13.27	13.04	10.57	Standpipe	Shallow	9/12/1994	12.53	4 - 14	NP	NP	-	7.41	-	14.72	5.63	NP	NP	5.63	-	6.44	-	15	6.60	NP	NP	6.60
NG	RCA-13	11.94	11.61	10.51	Standpipe	Shallow	9/12/1994	13.97	4 - 14	NP	NP	Well pinched - can not gauge								Well pinched - able to sample - can not gauge							
NG	RCA-14	13.09	12.75	11.06	Standpipe	Shallow	9/12/1994	13.61	5 - 15	NP	NP	-	9.76	-	15.35	2.99	NP	NP	2.99	-	8.42	-	15.3	4.33	NP	NP	4.33
NG	RCA-15	NS	14.06	NS	Standpipe	Shallow	12/8/1994	15.97	4 - 14	NP	NP	-	8.77	-	18	5.29	NP	NP	5.29	-	7.92	-	17.97	6.14	NP	NP	6.14
NG	RCA-17	NS	13.44	NS	Standpipe	Shallow	12/9/1994	12.80	4 - 14	NP	NP	-	8.2	-	14.9	5.24	NP	NP	5.24	-	7.07	-	14.8	6.37	NP	NP	6.37
NG	VHB-1	10.55	10.33	10.55	Roadbox	Shallow	1/15/2002	11.72	2 - 12	NP	NP	-	4.81	-	10.9	5.52	NP	NP	5.52	-	4.55	-	11.5	5.78	NP	NP	5.78
NG	VHB-3	11.84	11.96	9.76	Standpipe	Shallow	1/14/2002	7.90	2 - 10	trace	NP	-	6.54	-	9.5	5.42	NP	NP	5.42	-	5.01	-	10.1	6.95	NP	NP	6.95
NG	VHB-6	12.91	12.93	10.25	Standpipe	Shallow	1/14/2002	9.77	2 - 12	NP	NP	-	9.48	-	13.8	3.45	NP	NP	3.45	-	8.08	-	12.45	4.85	NP	NP	4.85
NG	VHB-7	14.30	13.73	11.29	Standpipe	Shallow	1/14/2002	12.66	2 - 12	NP	NP	-	10.07	-	15	3.66	NP	NP	3.66	-	8.94	-	15.1	4.79	NP	NP	4.79
NG	VHB-10	19.45	19.10	15.88	Standpipe	Shallow	1/15/2002	14.77	5 - 15	trace - 0.02	NP	13.24	13.25	-	15.2	5.85	0.01	NP	5.86	Trace	12.08	-	18	7.02	Trace	NP	6.08
NG	VHB-18	15.54	15.35	10.61	Standpipe	Shallow	1/21/2003	12.26	6 - 16	NP	NP	-	9.62	-	16.74	5.73	NP	NP	5.73	-	8.91	-	17	6.44	NP	NP	6.44
NG	VHB-21	13.80	13.65	11.09	Standpipe	Shallow	1/28/2003	15.94	6 - 16	trace - 0.08	NP	trace	10.26	-	16.6	3.39	trace	NP	3.39	-	8.86	-	18.5	4.79	NP	NP	4.79
NG	VHB-22	13.32	13.02	11.21	Standpipe	Shallow	1/28/2003	15.49	6 - 16	0.01 - 0.04	NP	10.35	10.36	-	17.8	2.66	0.01	NP	2.67	Trace	8.51	-	17.3	4.51	Trace	NP	4.51
NG	VHB-23	12.98	12.80	11.37	Standpipe	Shallow	1/29/2003	16.37	6 - 16	trace - 0.05	NP	-	9.86	-	17.3	2.94	NP	NP	2.94	9.22	9.25	-	17.8	3.55	0.03	NP	3.57
NG	CHES RW-1	12.94	12.94	11.06	Recovery Well	Shallow	2002	9.42	Unknown	NP	NP	-	8.97	-	10.5	3.97	NP	NP	3.97	-	7.13	-	11.3	5.81	NP	NP	5.81
NG	CHES RW-2	14.27	14.27	11.09	Recovery Well	Shallow	2002	13.12	Unknown	trace	NP	-	11.22	-	16.2	3.05	NP	NP	3.05	-	9.98	-	16.3	4.29	NP	NP	4.29
NG	CHES-RWA	NS	NS	NS	Recovery Well	Shallow	2017	9.80	Unknown	0.30 - 0.89	NP																
NG	U-1	NS	9.67	7.71	Standpipe	Shallow	Unknown	9.08	Unknown	NP	NP	-	5.78	-	9.5	3.89	NP	NP	3.89	-	4.26	-	9.3	5.41	NP	NP	5.41
NG	VHB-8R	14.85	14.06	12.60	Standpipe	Shallow	6/4/2014	12.29	2 - 12	NP	NP								-	6.74	-	13.75	7.32	NP	NP	7.32	
NG	GZ-303S	13.78	13.28	13.78	Roadbox	Shallow	5/28/2014	15.70	5 - 15	NP	NP								-	6.55	-	15.2	6.73	NP	NP	6.73	
NG	GZ-303D	13.75	13.13	13.75	Roadbox	Deep	6/3/2014	30.32	20 - 30	NP	NP								-	6.18	-	29.7	6.95	NP	NP	6.95	
NG	GZ-304D	12.41	11.95	12.41	Roadbox	Deep	5/24/2014	30.16	20 - 30	NP	NP								-	6.55	-	29.7	5.40	NP	NP	5.40	
NG	GZ-305S	11.84	11.64	11.84	Roadbox	Shallow	5/22/2014	14.35	5 - 15	NP	NP								-	6.8	-	14.15	4.84	NP	NP	4.84	
NG	GZ-306S	11.90	11.49	11.90	Roadbox	Shallow	5/22/2014</td																				

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)	Range of DNAPL Observed (feet)	November 2013								June 2014							
		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)
LNG	RCA-5	12.68	12.27	10.79	Standpipe	Shallow	9/7/1994	15.92	6 - 16	NP	NP	-	10.77	-	13.45	1.50	NP	NP	1.50	-	10.39	-	17.4	1.88	NP	NP	1.88
LNG	RCA-6	10.90	10.66	10.90	Roadbox	Shallow	9/8/1994	17.44	7 - 17	NP	NP	-	10.61	-	17.2	0.05	NP	NP	0.05	Well covered with gravel - can not gauge							
LNG	RCA-20	13.25	12.95	11.01	Standpipe	Shallow	10/18/1995	12.26	3.5 - 13.5	NP	NP	-	10.27	-	11.03	2.68	NP	NP	2.68	-	9.09	-	14.2	3.86	NP	NP	3.86
LNG	RCA-21	NS	13.72	10.48	Standpipe	Shallow	10/30/1995	11.39	4 - 14	0.91 - 3.58	NP	12.26	14.17	-	14.35	-0.45	1.91	NP	1.17	11.04	11.95	-	14.63	1.77	0.91	NP	2.54
LNG	RCA-22	NM	12.92	10.33	Standpipe	Shallow	Unknown	10.41	Unknown	NP	NP	-	10.3	-	13.05	2.62	NP	NP	2.62	-	9.75	-	13	3.17	NP	NP	3.17
LNG	RCA-28	NS	15.38	13.01	Standpipe	Shallow	1/17/1995	15.43	5 - 15	NP	NP	-	12.46	-	17.48	2.92	NP	NP	2.92	-	11.84	-	17.8	3.54	NP	NP	3.54
LNG	RCA-29	NS	13.45	NS	Standpipe	Shallow	2/13/1996	12.95	2 - 12	trace - 0.17	NP	-	11.79	-	14.35	1.66	NP	NP	1.66	11.38	11.55	-	14.95	1.90	0.17	NP	2.04
LNG	RCA-31	15.19	14.98	12.78	Standpipe	Shallow	2/23/1996	13.30	5-15	NP	NP	-															
LNG	RCA-32	NS	12.16	NS	Standpipe	Shallow	2/3/1996	10.98	4 - 14	NP	NP	-	10.39	-	12.8	1.77	NP	NP	1.77	-	9.16	-	12.98	3.00	NP	NP	3.00
LNG	RCA-33	NS	9.67	NS	Standpipe	Shallow	2/23/1996	11.32	5 - 15	NP	NP	-	8.11	-	13.2	1.56	NP	NP	1.56	-	7.75	-	13.32	1.92	NP	NP	1.92
LNG	RCA-34	15.08	15.09	12.76	Standpipe	Shallow	2/29/1996	10.77	13 - 18	NP	NP	-	7.01	-	12.81	8.08	NP	NP	8.08	-	10.13	-	13.1	4.96	NP	NP	4.96
LNG	RCA-36	10.72	10.51	10.72	Roadbox	Shallow	3/1/1996	13.37	5 - 15	NP	NP	-	10.28	-	11.8	0.23	NP	NP	0.23	-	12.15	-	13.16	-1.64	NP	NP	-1.64
LNG	RCA-38	NS	9.36	NS	Standpipe	Shallow	5/2/1996	15.65	5 - 15	NP	NP	-	9.25	-	16.5	0.11	NP	NP	0.11	-	8.7	-	17.65	0.66	NP	NP	0.66
LNG	RCA-39	14.07	13.86	11.43	Standpipe	Shallow	5/3/1996	12.32	3 - 13	NP	NP	-	10.8	-	14.64	3.06	NP	NP	3.06	-	9.42	-	14.75	4.44	NP	NP	4.44
LNG	RCA-40	12.76	12.24	10.47	Standpipe	Shallow	5/3/1996	15.15	4 - 14	trace - 0.04	NP	-	10.7	-	16.85	1.54	NP	NP	1.54	-	10.4	-	16.92	1.84	NP	NP	1.84
LNG	VHB-13	12.88	12.72	13.34	Roadbox	Shallow	1/16/2002	16.56	7 - 17	NP	NP	-	10.9	-	15.86	1.82	NP	NP	1.82	-	10.45	-	15.95	2.27	NP	NP	2.27
LNG	VHB-20	15.15	14.98	13.01	Standpipe	Shallow	1/22/2002	15.57	6 - 16	NP	NP	-	9.26	-	16.88	5.72	NP	NP	5.72	-	8.52	-	17.54	6.46	NP	NP	6.46
LNG	CHES RW-3	14.30	14.30	11.24	Recovery Well	Shallow	2002	14.84	Unknown	trace	NP	-	12.8	-	17.92	1.50	NP	NP	1.50	-	11.98	-	17.9	2.32	NP	NP	2.32
LNG	CHES RW-4	13.08	13.08	9.09	Recovery Well	Shallow	2002	8.57	Unknown	trace - 0.03	NP	11.60	11.61	-	12.4	1.47	0.01	NP	1.48	Trace	11.33	-	12.56	1.75	NP	NP	1.75
LNG	CHES RW-5	14.32	14.32	11.16	Recovery Well	Shallow	2002	11.34	Unknown	0.01	NP	-	12.25	-	13.7	2.07	NP	NP	2.07	-	12.59	-	14.5	1.73	NP	NP	1.73
LNG	ESS RW-1	NS	NS	NS	Recovery Well	Shallow	2002	6.70	Unknown	NP	NP	-	7.35	-	8.45	NS	NP	NP	NS	-	4.94	-	8.7	NS	NP	NP	NS
LNG	ESS RW-2	NS	NS	NS	Recovery Well	Shallow	2002	9.32	Unknown	NP	NP	-	8.68	-	11.1	NS	NP	NP	NS	-	7.9	-	11.32	NS	NP	NP	NS
LNG	ESS RW-3	16.03	16.03	12.99	Recovery Well	Shallow	2002	13.94	Unknown	NP	NP	-	13.94	-	16.8	2.09	NP	NP	2.09	-	13.33	-	16.98	2.70	NP	NP	2.70
LNG	ESS RW-4	15.78	15.78	12.69	Recovery Well	Shallow	2002	12.06	Unknown	NP	NP	-	13.66	-	15	2.12	NP	NP	2.12	-	13.1	-	15.15	2.68	NP	NP	2.68
LNG	ESS RW-5	16.14	16.14	12.86	Recovery Well	Shallow	2002	13.85	Unknown	NP	NP	-	14.01	-	17.03	2.13	NP	NP	2.13	-	13.35	-	17.12	2.79	NP	NP	2.79
LNG	ESS RW-6	17.52	17.52	14.65	Recovery Well	Shallow	2002	14.33	Unknown	NP	NP	-	15.45	-	17.1	2.07	NP	NP	2.07	-	14.81	-	17.2	2.71	NP	NP	2.71
LNG	GZ-101	13.43	13.10	13.43	Roadbox	Shallow	4/29/2004	20.21	10 - 20	NP	NP	-															
LNG	GZ-201	9.83	9.53	7.53	Standpipe	Shallow	4/8/2005	18.08	10 - 20	NP	NP	-	8.1	-	20.08	1.43	NP	NP	1.43	-	7.79	-	20.08	1.74	NP	NP	1.74
LNG	GZ-204A	13.86	12.83	11.30	Standpipe	Shallow	4/12/2005	15.92	4 - 16	NP	NP	-	10.21	-	17.53	2.62	NP	NP	2.62	-	9.27	-</					

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 DNAPL Observed (feet)	Range of LNAPL Observed (feet)	July 2, 2014								July 23, 2014							
		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)
CNG	RCA-12R	17.87	17.33	17.87	Roadbox	Shallow	5/30/2014	15.24	5 - 15	NP	NP	-	10.06	-	14.45	7.27	NP	NP	7.27	-	10.1	-	14.44	7.23	NP	NP	7.23
CNG	GZ-301D	17.74	17.33	17.74	Roadbox	Deep	5/30/2014	30.11	20 - 30	NP	NP	-	10.05	-	29.6	7.28	NP	NP	7.28	-	10.12	-	29.6	7.21	NP	NP	7.21
CNG	GZ-302S	16.97	16.67	16.97	Roadbox	Shallow	6/3/2014	15.00	5 - 15	NP	NP	-	9.59	-	14.56	7.08	NP	NP	7.08	-	9.66	-	14.55	7.01	NP	NP	7.01
CNG	GZ-302D	16.97	16.59	16.97	Roadbox	Deep	5/30/2014	29.88	20 - 30	NP	NP	-	9.48	-	29.44	7.11	NP	NP	7.11	-	9.57	-	29.41	7.02	NP	NP	7.02
NG	RCA-1	12.21	11.82	12.21	Roadbox	Shallow	6/8/1994	15.89	6.5 - 16.5	NP	NP	-	6.3	-	15.45	5.52	NP	NP	5.52	-	6.25	-	15.45	5.57	NP	NP	5.57
NG	RCA-3	11.88	11.44	9.40	Standpipe	Shallow	9/9/1994	15.76	6 - 16	NP	trace	-	8.91	Trace	18.11	2.53	NP	Trace	2.53	-	9.49	Trace	17.91	1.95	NP	Trace	1.95
NG	RCA-11	13.27	13.04	10.57	Standpipe	Shallow	9/12/1994	12.53	4 - 14	NP	NP																
NG	RCA-13	11.94	11.61	10.51	Standpipe	Shallow	9/12/1994	13.97	4 - 14	NP	NP																
NG	RCA-14	13.09	12.75	11.06	Standpipe	Shallow	9/12/1994	13.61	5 - 15	NP	NP																
NG	RCA-15	NS	14.06	NS	Standpipe	Shallow	12/8/1994	15.97	4 - 14	NP	NP																
NG	RCA-17	NS	13.44	NS	Standpipe	Shallow	12/9/1994	12.80	4 - 14	NP	NP																
NG	VHB-1	10.55	10.33	10.55	Roadbox	Shallow	1/15/2002	11.72	2 - 12	NP	NP	-	4.65	-	11.35	5.68	NP	NP	5.68	-	4.65	-	11.31	5.68	NP	NP	5.68
NG	VHB-3	11.84	11.96	9.76	Standpipe	Shallow	1/14/2002	7.90	2 - 10	trace	NP	-	6.27	-	10.2	5.69	NP	NP	5.69	-	6.15	-	10.13	5.81	NP	NP	5.81
NG	VHB-6	12.91	12.93	10.25	Standpipe	Shallow	1/14/2002	9.77	2 - 12	NP	NP																
NG	VHB-7	14.30	13.73	11.29	Standpipe	Shallow	1/14/2002	12.66	2 - 12	NP	NP																
NG	VHB-10	19.45	19.10	15.88	Standpipe	Shallow	1/15/2002	14.77	5 - 15	trace - 0.02	NP	Trace	12.41	-	18	6.69	Trace	NP	6.69	-	12.66	-	17.94	6.44	NP	NP	6.44
NG	VHB-18	15.54	15.35	10.61	Standpipe	Shallow	1/21/2003	12.26	6 - 16	NP	NP																
NG	VHB-21	13.80	13.65	11.09	Standpipe	Shallow	1/28/2003	15.94	6 - 16	trace - 0.08	NP	Trace	9.07	-	18.5	4.58	Trace	NP	4.58	9.41	9.49	-	18.5	4.16	0.08	NP	4.22
NG	VHB-22	13.32	13.02	11.21	Standpipe	Shallow	1/28/2003	15.49	6 - 16	0.01 - 0.04	NP																
NG	VHB-23	12.98	12.80	11.37	Standpipe	Shallow	1/29/2003	16.37	6 - 16	trace - 0.05	NP																
NG	CHES RW-1	12.94	12.94	11.06	Recovery Well	Shallow	2002	9.42	Unknown	NP	NP																
NG	CHES RW-2	14.27	14.27	11.09	Recovery Well	Shallow	2002	13.12	Unknown	trace	NP																
NG	CHES-RWA	NS	NS	NS	Recovery Well	Shallow	2017	9.80	Unknown	0.30 - 0.89	NP																
NG	U-1	NS	9.67	7.71	Standpipe	Shallow	Unknown	9.08	Unknown	NP	NP	-	5.54	-	9.35	4.13	NP	NP	4.13	-	5.42	-	9.3	4.25	NP	NP	4.25
NG	VHB-8R	14.85	14.06	12.60	Standpipe	Shallow	6/4/2014	12.29	2 - 12	NP	NP	-	7.06	-	13.74	7.00	NP	NP	7.00	-	7.41	-	14.00	6.65	NP	NP	6.65
NG	GZ-303S	13.78	13.28	13.78	Roadbox	Shallow	5/28/2014	15.70	5 - 15	NP	NP	-	6.55	-	14.91	6.73	NP	NP	6.73	-	6.62	-	14.91	6.66	NP	NP	6.66
NG	GZ-303D	13.75	13.13	13.75	Roadbox	Deep	6/3/2014	30.32	20 - 30	NP	NP	-	6.3	-	29.67	6.83	NP	NP	6.83	-	6.38	-	29.66	6.75	NP	NP	6.75
NG	GZ-304D	12.41	11.95	12.41	Roadbox	Deep	5/24/2014	30.16	20 - 30	NP	NP	-	6.45	-	29.58	5.50	NP	NP	5.50	-	6.45	-	29.57	5.50	NP	NP	5.50
NG	GZ-305S	11.84	11.64	11.84	Roadbox	Shallow	5/22/2014	14.35	5 - 15	NP	NP	-	6.75	-	14.16	4.89	NP	NP	4.89	-	6.72	-	14.15	4.92	NP	NP	4.92
NG	GZ-306S	11.90	11.49	11.90	Roadbox	Shallow	5/22/2014	15.31	5 - 15	NP	NP	-	6.55	-	14.8	4.94	NP	NP	4.94	-	6.52	-	14.78	4.97	NP	NP	4.97
NG	GZ-307S	10.70	10.18	10.70	Roadbox	Shallow	6/3/2014	14.67	3 - 13	trace - 0.36	NP	-	4.86	-	14.01	5.32	NP	NP	5.32	-	4.85	-	13.98	5.33	NP	NP	5.33
NG	GZ-308S	9.																									

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

Site Area	Well ID	Surveyed Elevations			Well Installation Details					Screened Interval (feet bgs)	Range of DNAPL Observed (feet)	Range of LNAPL Observed (feet)	July 2, 2014								July 23, 2014										
		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)	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)				
LNG	RCA-5	12.68	12.27	10.79	Standpipe	Shallow	9/7/1994	15.92	6 - 16	NP	NP	-	10.55	-	17.25	1.72	NP	NP	1.72	-	10.68	-	17.35	1.59	NP	NP	1.59				
LNG	RCA-6	10.90	10.66	10.90	Roadbox	Shallow	9/8/1994	17.44	7 - 17	NP	NP	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-				
LNG	RCA-20	13.25	12.95	11.01	Standpipe	Shallow	10/18/1995	12.26	3.5 - 13.5	NP	NP	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-				
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	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-				
LNG	RCA-28	NS	15.38	13.01	Standpipe	Shallow	1/17/1995	15.43	5 - 15	NP	NP	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-				
LNG	RCA-29	NS	13.45	NS	Standpipe	Shallow	2/13/1996	12.95	2 - 12	trace - 0.17	NP	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-				
LNG	RCA-31	15.19	14.98	12.78	Standpipe	Shallow	2/23/1996	13.30	5 - 15	NP	NP	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-				
LNG	RCA-32	NS	12.16	NS	Standpipe	Shallow	2/3/1996	10.98	4 - 14	NP	NP	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-				
LNG	RCA-33	NS	9.67	NS	Standpipe	Shallow	2/23/1996	11.32	5 - 15	NP	NP	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-				
LNG	RCA-34	15.08	15.09	12.76	Standpipe	Shallow	2/29/1996	10.77	13 - 18	NP	NP	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-				
LNG	RCA-36	10.72	10.51	10.72	Roadbox	Shallow	3/1/1996	13.37	5 - 15	NP	NP	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-				
LNG	RCA-38	NS	9.36	NS	Standpipe	Shallow	5/2/1996	15.65	5 - 15	NP	NP	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-				
LNG	RCA-39	14.07	13.86	11.43	Standpipe	Shallow	5/3/1996	12.32	3 - 13	NP	NP	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-				
LNG	RCA-40	12.76	12.24	10.47	Standpipe	Shallow	5/3/1996	15.15	4 - 14	trace - 0.04	NP	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-				
LNG	VHB-13	12.88	12.72	13.34	Roadbox	Shallow	1/16/2002	16.56	7 - 17	NP	NP	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-				
LNG	VHB-20	15.15	14.98	13.01	Standpipe	Shallow	1/22/2002	15.57	6 - 16	NP	NP	-	8.66	-	17.55	6.32	NP	NP	6.32	-	8.89	-	17.54	6.09	NP	NP	6.09				
LNG	CHES RW-3	14.30	14.30	11.24	Recovery Well	Shallow	2002	14.84	Unknown	trace	NP	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-				
LNG	CHES RW-4	13.08	13.08	9.09	Recovery Well	Shallow	2002	8.57	Unknown	trace - 0.03	NP	-	-	-	-	-	-	-	-	-	Trace	11.51	-	12.56	1.57	Trace	NP	12.56			
LNG	CHES RW-5	14.32	14.32	11.16	Recovery Well	Shallow	2002	11.34	Unknown	0.01	NP	-	-	-	-	-	-	-	-	-	-	-	-	-	10.68	-	17.35	3.64	NP	NP	3.64
LNG	ESS RW-1	NS	NS	NS	Recovery Well	Shallow	2002	6.70	Unknown	NP	NP	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
LNG	ESS RW-2	NS	NS	NS	Recovery Well	Shallow	2002	9.32	Unknown	NP	NP	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
LNG	ESS RW-3	16.03	16.03	12.99	Recovery Well	Shallow	2002	13.94	Unknown	NP	NP	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
LNG	ESS RW-4	15.78	15.78	12.69	Recovery Well	Shallow	2002	12.06	Unknown	NP	NP	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
LNG	ESS RW-5	16.14	16.14	12.86	Recovery Well	Shallow	2002	13.85	Unknown	NP	NP	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
LNG	ESS RW-6	17.52	17.52	14.65	Recovery Well	Shallow	2002	14.33	Unknown	NP	NP	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
LNG	GZ-101	13.43	13.10	13.43	Roadbox	Shallow	4/29/2004	20.21	10 - 20	NP	NP	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
LNG	GZ-201	9.83	9.53	7.53	Standpipe	Shallow	4/8/2005	18.08	10 - 20	NP	NP	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
LNG	GZ-204A	13.86	12.83	11.30	Standpipe	Shallow	4/12/2005	15.92	4 - 16	NP	NP	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
LNG	GZ-216	12.85	11.61	10.34	Standpipe	Shallow	5/17/2005	16.45	5 - 15	NP	NP	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
LNG	RW-1	14.18	14.18	11.84	Recovery Well	Shallow	6/17/2014	11.66	8 - 13	trace - 0.02	NP	10.24	10.26	-	14	3.92	0.02	NP	3.94	Trace	10.46	-	14.02	3.72	Trace	NP	3.72				
LNG	GZ-314S	14.35	14.19	11.13	Standpipe	Shallow	6/3/2014	18.88	4 - 19	NP	NP	-	12.28	-	21.80	1.91	NP	NP	1.91	-	12.48	-	21.81	1.71	NP	NP	1.71				

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 DNAPL Observed (feet)	Range of LNAPL Observed (feet)	October 2014								April 2015							
		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)
CNG	RCA-12R	17.87	17.33	17.87	Roadbox	Shallow	5/30/2014	15.24	5 - 15	NP	NP	-	10.52	-	14.57	6.81	NP	NP	6.81	-	9.51	-	14.4	7.82	NP	NP	7.82
CNG	GZ-301D	17.74	17.33	17.74	Roadbox	Deep	5/30/2014	30.11	20 - 30	NP	NP	-	10.49	-	29.72	6.84	NP	NP	6.84	-	9.61	-	29.66	7.72	NP	NP	7.72
CNG	GZ-302S	16.97	16.67	16.97	Roadbox	Shallow	6/3/2014	15.00	5 - 15	NP	NP	-	9.99	-	14.56	6.68	NP	NP	6.68	-	9.4	-	14.56	7.27	NP	NP	7.27
CNG	GZ-302D	16.97	16.59	16.97	Roadbox	Deep	5/30/2014	29.88	20 - 30	NP	NP	-	9.9	-	29.45	6.69	NP	NP	6.69	-	9.35	-	29.38	7.24	NP	NP	7.24
NG	RCA-1	12.21	11.82	12.21	Roadbox	Shallow	6/8/1994	15.89	6.5 - 16.5	NP	NP	-	7.57	-	15.43	4.25	NP	NP	4.25	-	6.02	-	14.97	5.80	NP	NP	5.80
NG	RCA-3	11.88	11.44	9.40	Standpipe	Shallow	9/9/1994	15.76	6 - 16	NP	trace	-	9.35	Trace	18.1	2.09	NP	Trace	2.09	-	8.51	trace	18.1	2.93	NP	trace	2.93
NG	RCA-11	13.27	13.04	10.57	Standpipe	Shallow	9/12/1994	12.53	4 - 14	NP	NP	-	7.24	-	14.98	5.80	NP	NP	5.80	-	6.3	-	15.02	6.74	NP	NP	6.74
NG	RCA-13	11.94	11.61	10.51	Standpipe	Shallow	9/12/1994	13.97	4 - 14	NP	NP	Well pinched - can not gauge								Well pinched - can not gauge							
NG	RCA-14	13.09	12.75	11.06	Standpipe	Shallow	9/12/1994	13.61	5 - 15	NP	NP	-	8.84	-	15.25	3.91	NP	NP	3.91	-	8.16	-	15.38	4.59	NP	NP	4.59
NG	RCA-15	NS	14.06	NS	Standpipe	Shallow	12/8/1994	15.97	4 - 14	NP	NP	-	8.33	-	17.9	5.73	NP	NP	5.73	-	7.83	-	17.96	6.23	NP	NP	6.23
NG	RCA-17	NS	13.44	NS	Standpipe	Shallow	12/9/1994	12.80	4 - 14	NP	NP	-	8.29	-	14.78	5.15	NP	NP	5.15	-	6.82	-	14.79	6.62	NP	NP	6.62
NG	VHB-1	10.55	10.33	10.55	Roadbox	Shallow	1/15/2002	11.72	2 - 12	NP	NP	-	4.92	-	11.35	5.41	NP	NP	5.41	-	3.82	-	11.3	6.51	NP	NP	6.51
NG	VHB-3	11.84	11.96	9.76	Standpipe	Shallow	1/14/2002	7.90	2 - 10	trace	NP	-	5.63	-	10.2	6.33	NP	NP	6.33	-	4.32	-	10.19	7.64	NP	NP	7.64
NG	VHB-6	12.91	12.93	10.25	Standpipe	Shallow	1/14/2002	9.77	2 - 12	NP	NP	-	8.77	-	12.95	4.16	NP	NP	4.16	-	6.87	-	12.12	6.06	NP	NP	6.06
NG	VHB-7	14.30	13.73	11.29	Standpipe	Shallow	1/14/2002	12.66	2 - 12	NP	NP	-	9.22	-	15.05	4.51	NP	NP	4.51	-	8.6	-	15.07	5.13	NP	NP	5.13
NG	VHB-10	19.45	19.10	15.88	Standpipe	Shallow	1/15/2002	14.77	5 - 15	trace - 0.02	NP	-	12.88	-	18	6.22	NP	NP	6.22	-	11.29	-	18	7.81	NP	NP	7.81
NG	VHB-18	15.54	15.35	10.61	Standpipe	Shallow	1/21/2003	12.26	6 - 16	NP	NP	-	9.34	-	17	6.01	NP	NP	6.01	-	8.51	-	17	6.84	NP	NP	6.84
NG	VHB-21	13.80	13.65	11.09	Standpipe	Shallow	1/28/2003	15.94	6 - 16	trace - 0.08	NP	-	9.45	-	18.55	4.20	NP	NP	4.20	7.80	7.81	-	18.54	5.84	0.01	NP	5.84
NG	VHB-22	13.32	13.02	11.21	Standpipe	Shallow	1/28/2003	15.49	6 - 16	0.01 - 0.04	NP	9.88	9.92	-	17.3	3.10	0.04	NP	3.13	8.29	8.3	-	17.82	4.72	0.01	NP	4.73
NG	VHB-23	12.98	12.80	11.37	Standpipe	Shallow	1/29/2003	16.37	6 - 16	trace - 0.05	NP	-	9.12	-	17.3	3.68	NP	NP	3.68	-	7.44	-	17.32	5.36	NP	NP	5.36
NG	CHES RW-1	12.94	12.94	11.06	Recovery Well	Shallow	2002	9.42	Unknown	NP	NP	-	7.5	-	10.5	5.44	NP	NP	5.44	-	6.38	-	10.45	6.56	NP	NP	6.56
NG	CHES RW-2	14.27	14.27	11.09	Recovery Well	Shallow	2002	13.12	Unknown	trace	NP	-	10.34	-	18.3	3.93	NP	NP	3.93	-	9.61	-	16.3	4.66	NP	NP	4.66
NG	CHES-RWA	NS	NS	NS	Recovery Well	Shallow	2017	9.80	Unknown	0.30 - 0.89	NP	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
NG	U-1	NS	9.67	7.71	Standpipe	Shallow	Unknown	9.08	Unknown	NP	NP	-	4.87	-	9.3	4.80	NP	NP	4.80	-	3.62	-	9.3	6.05	NP	NP	6.05
NG	VHB-8R	14.85	14.06	12.60	Standpipe	Shallow	6/4/2014	12.29	2 - 12	NP	NP	-	7.74	-	13.75	6.32	NP	NP	6.32	Buried under Snow							
NG	GZ-303S	13.78	13.28	13.78	Roadbox	Shallow	5/28/2014	15.70	5 - 15	NP	NP	-	9.98	-	29.97	3.30	NP	NP	3.30	-	6.44	-	15.01	6.84	NP	NP	6.84
NG	GZ-303D	13.75	13.13	13.75	Roadbox	Deep	6/3/2014	30.32	20 - 30	NP	NP	-	9.93	-	15.05	3.20	NP	NP	3.20	-	6.16	-	29.65	6.97	NP	NP	6.97
NG	GZ-304D	12.41	11.95	12.41	Roadbox	Deep	5/24/2014	30.16	20 - 30	NP	NP	-	7.00	-	29.62	4.95	NP	NP	4.95	-	6.18	-	29.76	5.77	NP	NP	5.77

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

Site Area	Well ID	Surveyed Elevations			Well Installation Details					Screened Interval (feet bgs)	Range of LNAPL Observed (feet)	Range of DNAPL Observed (feet)	October 2014								April 2015							
		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)	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)				
LNG	RCA-5	12.68	12.27	10.79	Standpipe	Shallow	9/7/1994	15.92	6 - 16	NP	NP	-	10.67	-	17.42	1.60	NP	NP	1.60	-	10.76	-	17.28	1.51	NP	NP	1.51	
LNG	RCA-6	10.90	10.66	10.90	Roadbox	Shallow	9/8/1994	17.44	7 - 17	NP	NP	-	11.90	-	16.23	-1.24	NP	NP	-1.24	-	11.04	-	16.20	-0.38	NP	NP	-0.38	
LNG	RCA-20	13.25	12.95	11.01	Standpipe	Shallow	10/18/1995	12.26	3.5 - 13.5	NP	NP	-	9.92	-	14.22	3.03	NP	NP	3.03	-	8.71	-	14	4.24	NP	NP	4.24	
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	-	10	-	13.29	2.92	NP	NP	2.92	-	9.62	-	13	3.30	NP	NP	3.30	
LNG	RCA-28	NS	15.38	13.01	Standpipe	Shallow	1/17/1995	15.43	5 - 15	NP	NP	-	12.28	-	17.81	3.10	NP	NP	3.10	-	11.49	-	17.68	3.89	NP	NP	3.89	
LNG	RCA-29	NS	13.45	NS	Standpipe	Shallow	2/13/1996	12.95	2 - 12	trace - 0.17	NP	11.68	11.76	-	14.95	1.69	0.08	NP	1.76	11.53	11.55	-	14.8	1.90	0.02	NP	1.92	
LNG	RCA-31	15.19	14.98	12.78	Standpipe	Shallow	2/23/1996	13.30	5-15	NP	NP	-																
LNG	RCA-32	NS	12.16	NS	Standpipe	Shallow	2/3/1996	10.98	4 - 14	NP	NP	-	10.3	-	13.05	1.86	NP	NP	1.86	-	9.3	-	12.85	2.86	NP	NP	2.86	
LNG	RCA-33	NS	9.67	NS	Standpipe	Shallow	2/23/1996	11.32	5 - 15	NP	NP	-	8.31	-	13.38	1.36	NP	NP	1.36	-	10.5	-	15.67	-0.83	NP	NP	-0.83	
LNG	RCA-34	15.08	15.09	12.76	Standpipe	Shallow	2/29/1996	10.77	13 - 18	NP	NP	-	12.32	-	13.21	2.77	NP	NP	2.77	-	6.42	-	12.95	8.67	NP	NP	8.67	
LNG	RCA-36	10.72	10.51	10.72	Roadbox	Shallow	3/1/1996	13.37	5 - 15	NP	NP	-	11.94	-	13.15	-1.43	NP	NP	-1.43	-	11.88	-	13.07	-1.37	NP	NP	-1.37	
LNG	RCA-38	NS	9.36	NS	Standpipe	Shallow	5/2/1996	15.65	5 - 15	NP	NP	-	9.02	-	16.33	0.34	NP	NP	0.34	-	8.95	-	16.4	0.41	NP	NP	0.41	
LNG	RCA-39	14.07	13.86	11.43	Standpipe	Shallow	5/3/1996	12.32	3 - 13	NP	NP	-	10.01	-	14.84	3.85	NP	NP	3.85	-	9.23	-	14.6	4.63	NP	NP	4.63	
LNG	RCA-40	12.76	12.24	10.47	Standpipe	Shallow	5/3/1996	15.15	4 - 14	trace - 0.04	NP	-	10.7	-	16.96	1.54	NP	NP	1.54	10.75	10.79	-	16.8	1.45	0.04	NP	1.48	
LNG	VHB-13	12.88	12.72	13.34	Roadbox	Shallow	1/16/2002	16.56	7 - 17	NP	NP	-	10.7	-	15.88	2.02	NP	NP	2.02	-	10.51	-	15.75	2.21	NP	NP	2.21	
LNG	VHB-20	15.15	14.98	13.01	Standpipe	Shallow	1/22/2002	15.57	6 - 16	NP	NP	-	9.15	-	17.6	5.83	NP	NP	5.83	-	8.18	-	17.75	6.80	NP	NP	6.80	
LNG	CHES RW-3	14.30	14.30	11.24	Recovery Well	Shallow	2002	14.84	Unknown	trace	NP	-	11.57	-	12.67	2.73	NP	NP	2.73	trace	12.38	-	17.85	1.92	trace	NP	1.92	
LNG	CHES RW-4	13.08	13.08	9.09	Recovery Well	Shallow	2002	8.57	Unknown	trace - 0.03	NP	Trace	10.71	-	12.55	2.37	Trace	NP	2.37	trace	11.62	-	12.4	1.46	trace	NP	1.46	
LNG	CHES RW-5	14.32	14.32	11.16	Recovery Well	Shallow	2002	11.34	Unknown	0.01	NP	-	12.8	-	14.4	1.52	NP	NP	1.52	12.82	12.83	-	14.1	1.49	0.01	NP	1.50	
LNG	ESS RW-1	NS	NS	NS	Recovery Well	Shallow	2002	6.70	Unknown	NP	NP	-	5.4	-	8.82	NS	NP	NP	NS	-	4.05	-	8.45	NS	NP	NP	NS	
LNG	ESS RW-2	NS	NS	NS	Recovery Well	Shallow	2002	9.32	Unknown	NP	NP	Trace	8.19	-	11.3	NS	Trace	NP	NS	-	7.9	-	11.1	NS	NP	NP	NS	
LNG	ESS RW-3	16.03	16.03	12.99	Recovery Well	Shallow	2002	13.94	Unknown	NP	NP	-	13.49	-	16.98	2.54	NP	NP	2.54	-	13.08	-	16.3	2.95	NP	NP	2.95	
LNG	ESS RW-4	15.78	15.78	12.69	Recovery Well	Shallow	2002	12.06	Unknown	NP	NP	-	13.31	-	18.22	2.47	NP	NP	2.47	-	12.89	-	15	2.89	NP	NP	2.89	
LNG	ESS RW-5	16.14	16.14	12.86	Recovery Well	Shallow	2002	13.85	Unknown	NP	NP	-	13.38	-	17.08	2.76	NP	NP	2.76	-	13.16	-	17	2.98	NP	NP	2.98	
LNG	ESS RW-6	17.52	17.52	14.65	Recovery Well	Shallow	2002	14.33	Unknown	NP	NP	-	14.94	-	17.22	2.58	NP	NP	2.58	-	14.61	-	17	2.91	NP	NP	2.91	
LNG	GZ-101	13.43	13.10	13.43	Roadbox	Shallow	4/29/2004	20.21	10 - 20	NP	NP	-																
LNG	GZ-201	9.83	9.53	7.53	Standpipe	Shallow	4/8/2005	18.08	10 - 20	NP	NP	-	9.89	-	20.17	-0.36	NP	NP	-0.36	-	9.24	-	20.10	0.29	NP	NP	0.29	
LNG	GZ-204A	13.86	12.83	11.30	Standpipe	Shallow	4/12/2005	15.92	4 - 16	NP	NP	-	9.52	-	17.49	3.31	NP	NP	3									

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)	Range of DNAPL Observed (feet)	October 2015								May 2016							
		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)
CNG	RCA-12R	17.87	17.33	17.87	Roadbox	Shallow	5/30/2014	15.24	5 - 15	NP	NP	-	10.89	-	14.73	6.44	NP	NP	6.44	-	10.18	-	14.5	7.15	NP	NP	7.15
CNG	GZ-301D	17.74	17.33	17.74	Roadbox	Deep	5/30/2014	30.11	20 - 30	NP	NP	-	10.84	-	29.64	6.49	NP	NP	6.49	-	10.22	-	29.6	7.11	NP	NP	7.11
CNG	GZ-302S	16.97	16.67	16.97	Roadbox	Shallow	6/3/2014	15.00	5 - 15	NP	NP	-	10.23	-	14.76	6.44	NP	NP	6.44	-	9.9	-	14.54	6.77	NP	NP	6.77
CNG	GZ-302D	16.97	16.59	16.97	Roadbox	Deep	5/30/2014	29.88	20 - 30	NP	NP	-	10.19	-	29.42	6.40	NP	NP	6.40	-	9.83	-	29.38	6.76	NP	NP	6.76
NG	RCA-1	12.21	11.82	12.21	Roadbox	Shallow	6/8/1994	15.89	6.5 - 16.5	NP	NP	-	6.72	-	15.61	5.10	NP	NP	5.10	-	6.1	-	15.4	5.72	NP	NP	5.72
NG	RCA-3	11.88	11.44	9.40	Standpipe	Shallow	9/9/1994	15.76	6 - 16	NP	trace	-	9.24	trace	18	2.20	NP	trace	2.20	-	9.48	trace	17.9	1.96	NP	trace	1.96
NG	RCA-11	13.27	13.04	10.57	Standpipe	Shallow	9/12/1994	12.53	4 - 14	NP	NP	-	7.27	-	15.12	5.77	NP	NP	5.77	-	6.92	-	14.95	6.12	NP	NP	6.12
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	-	9.2	-	15.52	3.55	NP	NP	3.55	-	8.95	-	15.3	3.80	NP	NP	3.80
NG	RCA-15	NS	14.06	NS	Standpipe	Shallow	12/8/1994	15.97	4 - 14	NP	NP	-	8.63	-	18.08	5.43	NP	NP	5.43	-	8.25	-	-	5.81	NP	NP	5.81
NG	RCA-17	NS	13.44	NS	Standpipe	Shallow	12/9/1994	12.80	4 - 14	NP	NP	-	8	-	15	5.44	NP	NP	5.44	-	7.87	-	-	5.57	NP	NP	5.57
NG	VHB-1	10.55	10.33	10.55	Roadbox	Shallow	1/15/2002	11.72	2 - 12	NP	NP	-	5.13	-	11.64	5.20	NP	NP	5.20	-	4.5	-	11.32	5.83	NP	NP	5.83
NG	VHB-3	11.84	11.96	9.76	Standpipe	Shallow	1/14/2002	7.90	2 - 10	trace	NP	-	6.27	-	10.44	5.69	NP	NP	5.69	-	6	-	10.15	5.96	NP	NP	5.96
NG	VHB-6	12.91	12.93	10.25	Standpipe	Shallow	1/14/2002	9.77	2 - 12	NP	NP	-	9.31	-	12.2	3.62	NP	NP	3.62	-	8	-	11.12	4.93	NP	NP	4.93
NG	VHB-7	14.30	13.73	11.29	Standpipe	Shallow	1/14/2002	12.66	2 - 12	NP	NP	-	9.54	-	15.3	4.19	NP	NP	4.19	-	9.18	-	15	4.55	NP	NP	4.55
NG	VHB-10	19.45	19.10	15.88	Standpipe	Shallow	1/15/2002	14.77	5 - 15	trace - 0.02	NP	trace	13.14	-	18.15	5.96	trace	NP	5.96	-	12.32	-	17.95	6.78	NP	NP	6.78
NG	VHB-18	15.54	15.35	10.61	Standpipe	Shallow	1/21/2003	12.26	6 - 16	NP	NP	-	9.58	-	17.18	5.77	NP	NP	5.77	-	9.19	-	17	6.16	NP	NP	6.16
NG	VHB-21	13.80	13.65	11.09	Standpipe	Shallow	1/28/2003	15.94	6 - 16	trace - 0.08	NP	trace	10.07	-	18.62	3.58	trace	NP	3.58	8.78	8.79	-	18.14	4.86	0.01	NP	4.86
NG	VHB-22	13.32	13.02	11.21	Standpipe	Shallow	1/28/2003	15.49	6 - 16	0.01 - 0.04	NP	10.29	10.32	-	17.8	2.70	0.03	NP	2.72	-	8.42	-	17.19	4.60	NP	NP	4.60
NG	VHB-23	12.98	12.80	11.37	Standpipe	Shallow	1/29/2003	16.37	6 - 16	trace - 0.05	NP	-	9.65	-	17.45	3.15	NP	NP	3.15	-	9.11	-	17.68	3.69	NP	NP	3.69
NG	CHES RW-1	12.94	12.94	11.06	Recovery Well	Shallow	2002	9.42	Unknown	NP	NP	-	8.64	-	10.8	4.30	NP	NP	4.30	-	7.66	-	10.31	5.28	NP	NP	5.28
NG	CHES RW-2	14.27	14.27	11.09	Recovery Well	Shallow	2002	13.12	Unknown	trace	NP	-	10.72	-	16.5	3.55	NP	NP	3.55	-	10.34	-	16.32	3.93	NP	NP	3.93
NG	CHES-RWA	NS	NS	NS	Recovery Well	Shallow	2017	9.80	Unknown	0.30 - 0.89	NP	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
NG	U-1	NS	9.67	7.71	Standpipe	Shallow	Unknown	9.08	Unknown	NP	NP	-	5.55	-	9.48	4.12	NP	NP	4.12	-	5.21	-	9.1	4.46	NP	NP	4.46
NG	VHB-8R	14.85	14.06	12.60	Standpipe	Shallow	6/4/2014	12.29	2 - 12	NP	NP	-	8.00	-	14.15	6.06	NP	NP	6.06	-	7.14	-	13.68	6.92	NP	NP	6.92
NG	GZ-303S	13.78	13.28	13.78	Roadbox	Shallow	5/28/2014	15.70	5 - 15	NP	NP	-	7.14	-	15.12	6.14	NP	NP	6.14	-	6.75	-	14.9	6.53	NP	NP	6.53
NG	GZ-303D	13.75	13.13	13.75	Roadbox	Deep	6/3/2014	30.32	20 - 30	NP	NP	-	7.9	-	29.67	5.23	NP	NP	5.23	-	6.49	-	29.62	6.64	NP	NP	6.64
NG	GZ-304D	12.41	11.95	12.41	Roadbox	Deep	5/24/2014	30.16	20 - 30	NP	NP	-	6.45	-	29.6	5.50	NP	NP	5.50	-	6.01	-	29.5	5.94	NP	NP	5.94
NG	GZ-305S	11.84</td																									

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)	Range of DNAPL Observed (feet)	October 2015								May 2016							
		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)
LNG	RCA-5	12.68	12.27	10.79	Standpipe	Shallow	9/7/1994	15.92	6 - 16	NP	NP	-	10.65	-	17.32	1.62	NP	NP	1.62	-	10.8	-	17.32	1.47	NP	NP	1.47
LNG	RCA-6	10.90	10.66	10.90	Roadbox	Shallow	9/8/1994	17.44	7 - 17	NP	NP	-	10.93	-	19.56	-0.03	NP	NP	-0.03	-	10.32	-	15.62	0.34	NP	NP	0.34
LNG	RCA-20	13.25	12.95	11.01	Standpipe	Shallow	10/18/1995	12.26	3.5 - 13.5	NP	NP	-	10.18	-	14.28	2.77	NP	NP	2.77	-	9.17	-	14	3.78	NP	NP	3.78
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	-	10.08	-	13.29	2.84	NP	NP	2.84	-	9.62	-	12.9	3.30	NP	NP	3.30
LNG	RCA-28	NS	15.38	13.01	Standpipe	Shallow	1/17/1995	15.43	5 - 15	NP	NP	-	12.22	-	17.7	3.16	NP	NP	3.16	-	9.78	-	17.65	5.60	NP	NP	5.60
LNG	RCA-29	NS	13.45	NS	Standpipe	Shallow	2/13/1996	12.95	2 - 12	trace - 0.17	NP	11.43	11.53	-	12.62	1.92	0.10	NP	2.01	11.52	11.53	-	12.31	1.92	0.01	NP	1.93
LNG	RCA-31	15.19	14.98	12.78	Standpipe	Shallow	2/23/1996	13.30	5-15	NP	NP	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
LNG	RCA-32	NS	12.16	NS	Standpipe	Shallow	2/3/1996	10.98	4 - 14	NP	NP	-	9.93	-	13.12	2.23	NP	NP	2.23	-	9.69	-	12.84	2.47	NP	NP	2.47
LNG	RCA-33	NS	9.67	NS	Standpipe	Shallow	2/23/1996	11.32	5 - 15	NP	NP	-	7.76	-	13.49	1.91	NP	NP	1.91	-	8	-	13.19	1.67	NP	NP	1.67
LNG	RCA-34	15.08	15.09	12.76	Standpipe	Shallow	2/29/1996	10.77	13 - 18	NP	NP	-	12.78	-	13.17	2.31	NP	NP	2.31	-	12.18	-	12.9	2.91	NP	NP	2.91
LNG	RCA-36	10.72	10.51	10.72	Roadbox	Shallow	3/1/1996	13.37	5 - 15	NP	NP	-	10	-	13.15	0.51	NP	NP	0.51	-	10.71	-	12.92	-0.20	NP	NP	-0.20
LNG	RCA-38	NS	9.36	NS	Standpipe	Shallow	5/2/1996	15.65	5 - 15	NP	NP	-	8.82	-	16.71	0.54	NP	NP	0.54	-	8.95	-	16.5	0.41	NP	NP	0.41
LNG	RCA-39	14.07	13.86	11.43	Standpipe	Shallow	5/3/1996	12.32	3 - 13	NP	NP	-	10.45	-	14.82	3.41	NP	NP	3.41	-	9.65	-	14.55	4.21	NP	NP	4.21
LNG	RCA-40	12.76	12.24	10.47	Standpipe	Shallow	5/3/1996	15.15	4 - 14	trace - 0.04	NP	trace	10.6	-	17.84	1.64	trace	NP	1.64	10.69	10.71	-	16.8	1.53	0.02	NP	1.55
LNG	VHB-13	12.88	12.72	13.34	Roadbox	Shallow	1/16/2002	16.56	7 - 17	NP	NP	-	10.49	-	15.87	2.23	NP	NP	2.23	-	10.58	-	15.85	2.14	NP	NP	2.14
LNG	VHB-20	15.15	14.98	13.01	Standpipe	Shallow	1/22/2002	15.57	6 - 16	NP	NP	-	9.14	-	17.52	5.84	NP	NP	5.84	-	8.82	-	17.43	6.16	NP	NP	6.16
LNG	CHES RW-3	14.30	14.30	11.24	Recovery Well	Shallow	2002	14.84	Unknown	trace	NP	-	12.68	-	18	1.62	NP	NP	1.62	-	11.62	-	12.35	2.68	NP	NP	2.68
LNG	CHES RW-4	13.08	13.08	9.09	Recovery Well	Shallow	2002	8.57	Unknown	trace - 0.03	NP	-	11.35	-	12.44	1.73	NP	NP	1.73	-	11.05	-	0.00	2.03	NP	NP	2.03
LNG	CHES RW-5	14.32	14.32	11.16	Recovery Well	Shallow	2002	11.34	Unknown	0.01	NP	-	12.69	-	14.34	1.63	NP	NP	1.63	-	12.77	-	14.1	1.55	NP	NP	1.55
LNG	ESS RW-1	NS	NS	NS	Recovery Well	Shallow	2002	6.70	Unknown	NP	NP	-	5.99	-	8.27	NS	NP	NP	NS	trace	6.07	-	8.44	NS	trace	NP	NS
LNG	ESS RW-2	NS	NS	NS	Recovery Well	Shallow	2002	9.32	Unknown	NP	NP	-	8.23	-	11.34	NS	NP	NP	NS	trace	8.34	-	11.1	NS	trace	NP	NS
LNG	ESS RW-3	16.03	16.03	12.99	Recovery Well	Shallow	2002	13.94	Unknown	NP	NP	-	13.65	-	16.95	2.38	NP	NP	2.38	-	13.35	-	16.75	2.68	NP	NP	2.68
LNG	ESS RW-4	15.78	15.78	12.69	Recovery Well	Shallow	2002	12.06	Unknown	NP	NP	-	13.4	-	15.19	2.38	NP	NP	2.38	-	13.13	-	14.96	2.65	NP	NP	2.65
LNG	ESS RW-5	16.14	16.14	12.86	Recovery Well	Shallow	2002	13.85	Unknown	NP	NP	-	13.72	-	17.21	2.42	NP	NP	2.42	-	13.31	-	16.9	2.83	NP	NP	2.83
LNG	ESS RW-6	17.52	17.52	14.65	Recovery Well	Shallow	2002	14.33	Unknown	NP	NP	-	15.1	-	17.37	2.42	NP	NP	2.42	-	14.8	-	16.6	2.72	NP	NP	2.72
LNG	GZ-101	13.43	13.10	13.43	Roadbox	Shallow	4/29/2004	20.21	10 - 20	NP	NP	-	9.85	-	20.21	3.25	NP	NP	3.25	-	9.77	-	20.22	3.33	NP	NP	3.33
LNG	GZ-201	9.83	9.53	7.53	Standpipe	Shallow	4/8/2005	18.08	10 - 20	NP	NP	-	7.8	-	20.28	1.73	NP	NP	1.73	-	8.80	-	20.00	0.73	NP	NP	0.73
LNG	GZ-204A	13.86	12.83	11.30	Standpipe	Shallow	4/12/2005	15.92	4 - 16	NP																	

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)	Range of DNAPL Observed (feet)	October 2016								May 2017							
		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)
CNG	RCA-12R	17.87	17.33	17.87	Roadbox	Shallow	5/30/2014	15.24	5 - 15	NP	NP	-	10.54	-	14.5	6.79	NP	NP	6.79	-	9.11	-	14.43	8.22	NP	NP	8.22
CNG	GZ-301D	17.74	17.33	17.74	Roadbox	Deep	5/30/2014	30.11	20 - 30	NP	NP	-	10.55	-	29.8	6.78	NP	NP	6.78	-	9.21	-	29.64	8.12	NP	NP	8.12
CNG	GZ-302S	16.97	16.67	16.97	Roadbox	Shallow	6/3/2014	15.00	5 - 15	NP	NP	-	10.07	-	14.52	6.60	NP	NP	6.60	-	9.06	-	14.53	7.61	NP	NP	7.61
CNG	GZ-302D	16.97	16.59	16.97	Roadbox	Deep	5/30/2014	29.88	20 - 30	NP	NP	-	10	-	29.48	6.59	NP	NP	6.59	-	9.06	-	29.32	7.53	NP	NP	7.53
NG	RCA-1	12.21	11.82	12.21	Roadbox	Shallow	6/8/1994	15.89	6.5 - 16.5	NP	NP	-	6.57	-	15.4	5.25	NP	NP	5.25	-	5.97	-	15.42	5.85	NP	NP	5.85
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	-	8.3	-	17.95	5.76	NP	NP	5.76	-	7.58	-	17.83	6.48	NP	NP	6.48
NG	RCA-17	NS	13.44	NS	Standpipe	Shallow	12/9/1994	12.80	4 - 14	NP	NP	-	7.15	-	14.73	6.29	NP	NP	6.29	-	6.81	-	14.70	6.63	NP	NP	6.63
NG	VHB-1	10.55	10.33	10.55	Roadbox	Shallow	1/15/2002	11.72	2 - 12	NP	NP	-	5.01	-	11.35	5.32	NP	NP	5.32	Unable to open							
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	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
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	-	7	-	14.9	6.28	NP	NP	6.28	-	6.13	-	14.9	7.15	NP	NP	7.15
NG	GZ-303D	13.75	13.13	13.75	Roadbox	Deep	6/3/2014	30.32	20 - 30	NP	NP	-	6.72	-	29.74	6.41	NP	NP	6.41	-	5.91	-	29.71	7.22	NP	NP	7.22
NG	GZ-304D	12.41	11.95	12.41	Roadbox	Deep	5/24/2014	30.16	20 - 30	NP	NP	-	6.52	-	29.57	5.43	NP	NP	5.43	-	7.60	-	29.50	4.35	NP	NP	4.35
NG	GZ-305S	11.84	11.64	11.84	Roadbox	Shallow	5/22/2014	14.35	5 - 15	NP	NP	-	6.88	-	14.15	4.76	NP	NP	4.76	-	5.80	-	14.1	5.84	NP	NP	5.84
NG	GZ-306S	11.90	11.49	11.90	Roadbox	Shallow	5/22/2014	15.31	5 - 15	NP	NP	-	6.66	-	14.72	4.83	NP	NP	4.83	-	5.61	-	14.65	5.88	NP	NP	5.88
NG	GZ-307S	10.70	10.18	10.70	Roadbox	Shallow	6/3/2014	14.67	3 - 13	trace - 0.36	NP	5.05	5.1	-	14	5.08	0.05	NP	5.12	3.67	3.69	-	13.97	6.49	0.02	NP	6.51
NG	GZ-308S	9.71	8.96	9.71	Roadbox	Shallow	6/4/2014	12.33	2 - 12	NP	NP	-	2.62	-	11.45	6.34	NP	NP	6.34	-	1.20	-	11.36	7.76	NP	NP	7.76
NG	GZ-309D	10.51	9.83	10.51	Roadbox	Deep	5/20/2014	30.58	20 - 30	NP	NP	Unable to open								-							
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	-															

Note:

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

Well is located at the LNG Facility

Well is located in the CNG Fueling Station portion of the Property

Well is located in the CNG Fueling
Elevations are relative to NAVD88

Elevations are relative to NAVD88
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Blanks indicate no measurement collected on that particular day.

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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 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)	Range of DNAPL Observed (feet)	October 2016								May 2017										
		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)			
<hr/>																														
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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	-	9.45	-	15.69	1.21	NP	NP	1.21	Could not locate well										
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	-	9.68	-	13.02	3.24	NP	NP	3.24	-	8.93	-	13.02	3.99	NP	NP	3.99			
LNG	RCA-28	NS	15.38	13.01	Standpipe	Shallow	1/17/1995	15.43	5 - 15	NP	NP	-	12.28	-	17.65	3.10	NP	NP	3.10	-	11.14	-	17.70	4.24	NP	NP	4.24			
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	Decommissioned June 2016								Monitoring Well Lost - Found in 2017										
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	Unable to open								-	12.50	-	12.93	2.59	NP	NP	2.59			
LNG	RCA-36	10.72	10.51	10.72	Roadbox	Shallow	3/1/1996	13.37	5 - 15	NP	NP	-	9.51	-	13.17	1.00	NP	NP	1.00	-	11.80	-	13.10	-1.29	NP	NP	-1.29			
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	-	9.81	-	14.65	4.05	NP	NP	4.05	-	8.44	-	14.65	5.42	NP	NP	5.42			
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	-	9.03	-	17.43	5.95	NP	NP	5.95	-	8.10	-	17.47	6.88	NP	NP	6.88			
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	-	13.57	-	16.85	2.46	NP	NP	2.46	-	12.50	-	16.25	3.53	NP	NP	3.53			
LNG	ESS RW-4	15.78	15.78	12.69																										

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

Note:

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

Well is located at the LNG Facility

Well is located in the CNG Fueling Station portion of the Property

Elevations are relative to NAVD88

NP - Indicates No Product observed

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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 Octo

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)	Range of DNAPL Observed (feet)	March 2018								November 2018							
		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)
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	-	10.00	-	15.70	0.66	NP	NP	0.66	-	11.29	-	20.78	-0.63	NP	NP	-0.63
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	-	8.66	-	12.72	4.26	NP	NP	4.26	-	8.35	-	12.98	4.57	NP	NP	4.57
LNG	RCA-28	NS	15.38	13.01	Standpipe	Shallow	1/17/1995	15.43	5 - 15	NP	NP	-	10.80	-	17.71	4.58	NP	NP	4.58	-	10.59	-	17.61	4.79	NP	NP	4.79
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	-	11.95	-	13.75	3.03	NP	NP	-	-	13.22	-	13.78	1.76	NP	NP	-
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	-	8.90	-	13.02	6.19	NP	NP	6.19	-	7.82	-	14.61	7.27	NP	NP	7.27
LNG	RCA-36	10.72	10.51	10.72	Roadbox	Shallow	3/1/1996	13.37	5 - 15	NP	NP	-	9.85	-	13.05	0.66	NP	NP	0.66	Filled with sediment from construction							
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	-	8.45	-	14.62	5.41	NP	NP	5.41	-	6.35	-	12.94	7.51	NP	NP	7.51
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	-	7.88	-	17.47	7.10	NP	NP	7.10	-	7.20	-	17.41	7.78	NP	NP	7.78
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	-	12.46	-	17.5	3.57	NP	NP	3.57	-	11.91	-	16.79	4.12	NP	NP	4.12
LNG	ESS RW-4	15.78	15.78	12.69	Recovery Well	Shallow	2002	12.06	Unknown	NP	NP	-	12.13	-	15.48	3.65	NP	NP	3.65	-	11.67	-	15.04	4.11	NP	NP	4.11
LNG	ESS RW-5	16.14	16.14	12.86	Recovery Well	Shallow	2002	13.85	Unknown	NP	NP	-	12.35	-	17.80	3.79	NP	NP	3.79	-	11.85	-	16.70	4.29	NP	NP	4.29
LNG	ESS RW-6	17.52	17.52	14.65	Recovery Well	Shallow	2002	14.33	Unknown	NP	NP	-	13.75	-	18.33	3.77	NP	NP	3.77	-	13.31	-	16.99	4.21	NP	NP	4.21
LNG	GZ-101	13.43	13.10	13.43	Roadbox	Shallow	4/29/2004	20.21	10 - 20	NP	NP	-	9.00	-	20.00	4.10	NP	NP	4.10	-	8.36	-	20.12	4.74	NP	NP	4.74
LNG	GZ-201	9.83	9.53	7.53	Standpipe	Shallow	4/8/2005	18.08	10 - 20	NP	NP	-	7.75	-	20.80	1.78	NP	NP	1.78	-	10.30	-	20.78	-0.77	NP	NP	-0.77
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	-	9.69	-	32.40	5.21	NP	NP	5.21	-	8.71	-	32.29	6.19	NP	NP	6.19

Notes

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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 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)	Range of DNAPL Observed (feet)	June 2019							November 2019								
		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)
CNG	RCA-12R	17.87	17.33	17.87	Roadbox	Shallow	5/30/2014	15.24	5 - 15	NP	NP	-	9.2	-	14.4	8.13	NP	NP	8.13	-	9.9	-	14.43	7.43	NP	NP	7.43
CNG	GZ-301D	17.74	17.33	17.74	Roadbox	Deep	5/30/2014	30.11	20 - 30	NP	NP	-	9.28	-	29.50	8.05	NP	NP	8.05	-	9.93	-	29.74	7.40	NP	NP	7.40
CNG	GZ-302S	16.97	16.67	16.97	Roadbox	Shallow	6/3/2014	15.00	5 - 15	NP	NP	-	8.89	-	14.5	7.78	NP	NP	7.78	-	9.57	-	14.63	7.10	NP	NP	7.10
CNG	GZ-302D	16.97	16.59	16.97	Roadbox	Deep	5/30/2014	29.88	20 - 30	NP	NP	-	8.79	-	29.45	7.80	NP	NP	7.80	-	9.47	-	29.65	7.12	NP	NP	7.12
NG	RCA-1	12.21	11.82	12.21	Roadbox	Shallow	6/8/1994	15.89	6.5 - 16.5	NP	NP	-	4.96	-	15.45	6.86	NP	NP	6.86	-	5.63	-	15.55	6.19	NP	NP	6.19
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	-	7.43	-	17.87	6.63	NP	NP	6.63	-	8.64	-	18.22	5.42	NP	NP	5.42
NG	RCA-17	NS	13.44	NS	Standpipe	Shallow	12/9/1994	12.80	4 - 14	NP	NP	-	7.09	-	14.73	6.35	NP	NP	6.35	-	7.72	-	15.00	5.72	NP	NP	5.72
NG	VHB-1	10.55	10.33	10.55	Roadbox	Shallow	1/15/2002	11.72	2 - 12	NP	NP	-	3.32	-	11.32	7.01	NP	NP	7.01	-	4.19	-	11.48	6.14	NP	NP	6.14
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	-	5.9	-	14.91	7.38	NP	NP	7.38	-	6.45	-	14.96	6.83	NP	NP	6.83
NG	GZ-303																										

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

Note:

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

Well is located at the LNG Facility

Well is located in the CNG Fueling Station portion of the Property

Elevations are relative to NAVD88

NP - Indicates No Product observed.

NS - Not Surveyed

Blanks indicate no measurement co

Potentiometric elevations for wells exhibiting LNAPL include 0.

Note 1 - The readings reported from monitoring wells GZ-401 and GZ-403 in the October 2010 monitoring report were exhibiting erratic individual site variation factors.

Note 1 - The readings reported from monitoring wells GE-101 and GE-103 in the October, 2017 column were collected on November 3, 2017.

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	March 2006
Natural Gas Regulation Facility															
RCA-11	trace	NG	ND	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	ND	NG
RCA-15	ND	NG	ND	NG	NG	NG	NG	NG	NG	NG	NG	NG	trace	ND	NG
VHB-1	NI	trace	trace	NG	NG	NG	NG	NG	NG	NG	NG	NG	trace	trace	NG
VHB-2	NI	ND	ND	NG	NG	NG	NG	NG	NG	NG	NG	NG	ND	trace	NG
VHB-3	NI	trace	trace	NG	NG	NG	NG	NG	NG	NG	NG	NG	trace	trace	NG
VHB-6	NI	trace	trace	NG	NG	NG	NG	NG	NG	NG	NG	NG	trace	ND	NG
VHB-7	NI	trace	trace	NG	NG	NG	NG	NG	NG	NG	NG	NG	trace	ND	NG
VHB-9	NI	trace	trace	NG	NG	NG	NG	NG	NG	NG	NG	NG	trace	ND	NG
VHB-10	NI	trace	0.01	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	trace	NG
VHB-18	NI	NI	NI	NG	NG	NG	NG	NG	NG	trace	NG	NG	trace	ND	ND
VHB-21	NI	NI	NI	NG	NG	NG	NG	NG	NG	trace	NG	NG	trace	trace	NG
VHB-22	NI	NI	NI	NG	NG	NG	NG	NG	NG	trace	NG	NG	trace	0.03	0.58
VHB-23	NI	NI	NI	NG	NG	NG	NG	NG	NG	trace	NG	NG	trace	ND	0.05
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	ND
CHES RW-2	NI	NI	NI	ND	ND	ND	ND	ND	ND	NG	ND	ND	NG	ND	NG
CHESRW-A	NI	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	NI
LNG Facility															
RCA-4	0.17	NG	Dest	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	NG
RCA-6	trace	NG	trace	NG	NG	NG	NG	NG	NG	NG	NG	NG	trace	trace	NG
RCA-21	NG	NG	ND	NG	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	NG
RCA-28	ND	NG	ND	NG	NG	NG	NG	NG	NG	NG	NG	NG	trace	trace	NG
RCA-29	0.33	NG	0.01	NG	NG	NG	NG	NG	NG	NG	NG	NG	0.15	trace	ND
RCA-36	ND	NG	trace	NG	NG	NG	NG	NG	NG	NG	NG	NG	trace	trace	NG
RCA-39	ND	NG	ND	NG	NG	NG	NG	NG	NG	NG	NG	NG	ND	trace	NG
RCA-40	0.25	NG	0.01	NG	NG	NG	NG	NG	NG	NG	NG	NG	trace	trace	0.1
CHES RW-3	NI	NI	NI	ND	ND	ND	ND	ND	ND	NG	ND	ND	NG	ND	NG
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	ND
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	0.1
ESS RW-1	NI	NI	NI	NG	NG	NG	NG	NG	NG	NG	NG	NG	ND	ND	NG
ESS RW-2	NI	NI	NI	NG	NG	NG	NG	NG	NG	NG	NG	NG	ND	ND	NG
ESS RW-4	NI	NI	NI	NG	NG	NG	NG	NG	NG	NG	NG	NG	ND	0.5	NG
RW-1	NI	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

Well is located in the CNG Fueling Station portion of the Property

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 2001.

Gray shading indicates LNAPL 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 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	November 2013	June 2014
Natural Gas Regulation															
RCA-11	NG	NG	NG	NG	NG	NG	NG	NG	ND	ND	ND	ND	ND	ND	ND
RCA-15	NG	NG	NG	NG	NG	NG	NG	NG	ND	ND	ND	ND	ND	ND	ND
VHB-1	NG	NG	NG	NG	NG	NG	NG	NG	ND	ND	ND	ND	ND	ND	ND
VHB-2	NG	NG	NG	NG	Dest	Dest	Dest	Dest	Dest	Dest	Dest	Dest	Dest	Dest	Dest
VHB-3	NG	NG	NG	NG	NG	NG	NG	NG	ND	trace	ND	ND	ND	ND	ND
VHB-6	NG	NG	NG	NG	ND	ND	NG	ND	ND	ND	ND	ND	ND	ND	ND
VHB-7	NG	NG	NG	NG	trace	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
VHB-9	NG	NG	NG	ND	Dest	Dest	Dest	Dest	Dest	Dest	Dest	Dest	Dest	Dest	Dest
VHB-10	NG	NG	NG	NG	trace	NG	ND	trace	trace	0.01	trace	0.02	ND	0.01	trace
VHB-18	ND	ND	ND	NG	ND	ND	ND	NG	ND	ND	ND	ND	ND	ND	ND
VHB-21	NG	NG	NG	NG	trace	trace	ND	ND	ND	ND	ND	0.01	0.01	trace	ND
VHB-22	0.69	NG	0.33	0.46	0.4	NG	NG	NG	0.01	ND	trace	0.04	ND	0.01	trace
VHB-23	ND	ND	ND	ND	0.01	NG	NG	NG	0.01	0.05	trace	ND	0.01	ND	0.03
CHES RW-1	ND	ND	0.02	ND	trace	NG	NG	NG	ND	ND	ND	ND	ND	ND	ND
CHES RW-2	NG	NG	NG	NG	trace	NG	NG	NG	ND	ND	trace	ND	trace	ND	ND
CHESRW-A	NI	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	ND
LNG Facility															
RCA-4	Dest	Dest	Dest	Dest	Dest	Dest	Dest	Dest	Dest	Dest	Dest	Dest	Dest	Dest	Dest
RCA-5	NG	NG	NG	NG	NG	NG	NG	NG	ND	ND	ND	ND	ND	ND	ND
RCA-6	NG	NG	NG	NG	NG	NG	NG	NG	ND	ND	ND	ND	ND	ND	NG
RCA-21	NG	NG	NG	NG	NG	NG	NG	NG	3.58	2.94	2.79	1.65	1.44	1.91	0.91
RCA-22	NG	NG	NG	NG	ND	NG	NG	ND	ND	ND	ND	ND	ND	ND	ND
RCA-28	NG	NG	NG	NG	trace	NG	NG	ND	ND	ND	ND	ND	ND	ND	ND
RCA-29	0.36	0.15	0.11	0.15	0.3	NG	NG	NG	0.08	trace	trace	0.11	trace	ND	0.17
RCA-36	NG	NG	NG	NG	ND	NG	NG	NG	ND	ND	ND	ND	ND	ND	ND
RCA-39	NG	NG	NG	NG	NG	NG	NG	NG	ND	ND	ND	ND	ND	ND	ND
RCA-40	0.21	0.18	0.22	0.01	0.01	NG	NG	NG	ND	ND	trace	trace	trace	ND	ND
CHES RW-3	NG	NG	NG	NG	NG	NG	NG	NG	ND	ND	ND	ND	ND	ND	ND
CHES RW-4	0.18	0.13	0.1	0.08	0.09	NG	NG	NG	0.02	0.03	0.01	trace	trace	0.01	ND
CHES RW-5	ND	ND	0.01	ND	trace	NG	NG	NG	ND	ND	ND	ND	ND	ND	ND
ESS RW-1	NG	NG	NG	NG	NG	NG	NG	NG	ND	ND	ND	ND	ND	ND	ND
ESS RW-2	NG	NG	NG	NG	NG	NG	NG	NG	ND	ND	ND	ND	ND	ND	ND
ESS RW-4	NG	NG	NG	NG	NG	NG	NG	NG	ND	ND	ND	ND	ND	ND	ND
RW-1	NI	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

Well is located in the CNG Fueling Station portion of the Property

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 2001.

Gray shading indicates LNAPL 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	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	NG	NG	ND	ND	ND	ND	Decom	Decom	Decom	Decom	Decom	Decom
RCA-15	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
VHB-2	Dest	Dest	Dest	Dest	Dest	Dest	Dest	Dest	Dest	Dest	Dest	Dest
VHB-3	ND	ND	ND	ND	ND	ND	Decom	Decom	Decom	Decom	Decom	Decom
VHB-6	NG	NG	ND	ND	ND	ND	Decom	Decom	Decom	Decom	Decom	Decom
VHB-7	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
VHB-10	trace	ND	ND	ND	trace	ND	Decom	Decom	Decom	Decom	Decom	Decom
VHB-18	NG	NG	ND	ND	ND	ND	Decom	Decom	Decom	Decom	Decom	Decom
VHB-21	trace	0.08	ND	0.01	trace	0.01	Decom	Decom	Decom	Decom	Decom	Decom
VHB-22	NG	NG	0.04	0.01	0.03	ND	Decom	Decom	Decom	Decom	Decom	Decom
VHB-23	NG	NG	ND	ND	ND	ND	Decom	Decom	Decom	Decom	Decom	Decom
CHES RW-1	NG	NG	ND	ND	ND	ND	Decom	Decom	Decom	Decom	Decom	Decom
CHES RW-2	NG	NG	ND	ND	ND	ND	Decom	Decom	Decom	Decom	Decom	Decom
CHESRW-A	NI	NI	NI	NI	NI	NI	NI	NI	0.89	0.3	Decom	Decom
GZ-307S	ND	ND	ND	ND	ND	0.08	0.05	0.02	0.36	trace	trace	trace
LNG Facility												
RCA-4	Dest	Dest	Dest	Dest	Dest	Dest	Dest	Dest	Dest	Dest	Dest	Dest
RCA-5	ND	ND	ND	ND	ND	ND	Decom	Decom	Decom	Decom	Decom	Decom
RCA-6	NG	NG	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
RCA-21	Dest	Dest	Dest	Dest	Dest	Dest	Dest	Dest	Dest	Dest	Dest	Dest
RCA-22	NG	NG	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
RCA-28	NG	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
RCA-29	NG	NG	0.08	0.02	0.10	0.01	Decom	Decom	Decom	Decom	Decom	Decom
RCA-36	NG	NG	ND	ND	ND	ND	ND	ND	ND	ND	Damaged	ND
RCA-39	NG	NG	ND	ND	ND	ND	ND	ND	ND	ND	ND	Decom
RCA-40	NG	NG	ND	0.04	trace	0.02	Decom	Decom	Decom	Decom	Decom	Decom
CHES RW-3	NG	NG	ND	trace	ND	ND	Decom	Decom	Decom	Decom	Decom	Decom
CHES RW-4	NG	trace	trace	trace	ND	ND	Decom	Decom	Decom	Decom	Decom	Decom
CHES RW-5	NG	ND	ND	0.01	ND	ND	Decom	Decom	Decom	Decom	Decom	Decom
ESS RW-1	NG	NG	ND	ND	ND	trace	Decom	Decom	Decom	Decom	Decom	Decom
ESS RW-2	NG	NG	trace	ND	ND	ND	Decom	Decom	Decom	Decom	Decom	Decom
ESS RW-4	NG	NG	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
RW-1	0.02	trace	0.01	trace	trace	trace	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

Well is located in the CNG Fueling Station portion of the Property

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 2001.

Gray shading indicates LNAPL 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	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

Gray shading indicates NAPL thickness of equal to or more than 0.01 feet

Well is located at the LNG Facility

ND - Not Detected

Well is located in the CNG Fueling Station portion of the Property

NI - Not Installed Yet

NG - Not Gauged

Dest - Destroyed

This table presents DNAPL thickness data for monitoring wells that have exhibited DNAPL thicknesses of at least trace amounts since 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
RCA-3	trace	trace	trace	trace	trace	trace	Decom	Decom	Decom	Decom	Decom	Decom

Notes:

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

Gray shading indicates NAPL thickness of equal to or more than 0.01 feet

Well is located at the LNG Facility

ND - Not Detected

Well is located in the CNG Fueling Station portion of the Property

NI - Not Installed Yet

NG - Not Gauged

Dest - Destroyed

This table presents DNAPL thickness data for monitoring wells that have exhibited DNAPL thicknesses of at least trace amounts since 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

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

TABLE 6
SUMMARY OF GROUNDWATER VOC ANALYTICAL RESULTS - 2019

642 Allens Avenue
 Providence, Rhode Island

	Units	RIDEM GB Groundwater Objective	RIDEM GB Groundwater UCL	RCA-1 19K0652-08 11/20/2019	RCA-12R 19K0652-11 11/20/2019	RCA-15 19K0652-09 11/20/2019	RCA-31 19K0652-02 11/19/2019	RCA-36 19K0652-05 11/19/2019	VHB-1 19K0652-10 11/20/2019	VHB-20 19K0652-01 11/19/2019	GZ-201 19K0652-04 11/19/2019	GZA-301D 19K0652-07 11/19/2019	GZ-304D 19K0652-06 11/19/2019	GZ-309D 19K0652-12 11/20/2019	GZ-319D 19K0652-03 11/19/2019
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	<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	<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	<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	<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	<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	<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	<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	<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	<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	<0.001	<0.001	<0.001	
1,2,4-Trimethylbenzene	mg/L	NE	NE	<0.001	<0.001	<0.001	0.003	<0.001	<0.001	<0.001	<0.001	<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	<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	<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	<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	<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	<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	<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	<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	<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	<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	<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	<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	<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	<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	<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	<0.01	<0.01	<0.01	

TABLE 6
SUMMARY OF GROUNDWATER VOC ANALYTICAL RESULTS - 2019

642 Allens Avenue
Providence, Rhode Island

	Units	RIDEM GB Groundwater Objective	RIDEM GB Groundwater UCL	RCA-1 19K0652-08 11/20/2019	RCA-12R 19K0652-11 11/20/2019	RCA-15 19K0652-09 11/20/2019	RCA-31 19K0652-02 11/19/2019	RCA-36 19K0652-05 11/19/2019	VHB-1 19K0652-10 11/20/2019	VHB-20 19K0652-01 11/19/2019	GZ-201 19K0652-04 11/19/2019	GZA-301D 19K0652-07 11/19/2019	GZ-304D 19K0652-06 11/19/2019	GZ-309D 19K0652-12 11/20/2019	GZ-319D 19K0652-03 11/19/2019
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	<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	<0.001	<0.001	<0.001	
4-Methyl-2-Pentanone	mg/L	NE	NE	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	
Acetone	mg/L	NE	NE	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	
Benzene	mg/L	0.14	18	<0.001	<0.001	<0.001	<0.001	0.0268	<0.001	0.0897	<0.001	<0.001	0.0016	<0.001	0.053
Bromobenzene	mg/L	NE	NE	<0.002	<0.002	<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	<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	<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	<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	<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	<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	<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	<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	<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	<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	<0.002	<0.002	<0.002	
cis-1,2-Dichloroethene	mg/L	2.4	69	<0.001	0.0178	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.0016	<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	<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	<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	<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	<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	<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	<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	<0.001	<0.001	<0.001	
Ethylbenzene	mg/L	1.6	16	<0.001	<0.001	<0.001	<0.001	<0.001	0.0012	<0.001	<0.001	<0.001	<0.001	<0.001	

TABLE 6
SUMMARY OF GROUNDWATER VOC ANALYTICAL RESULTS - 2019

642 Allens Avenue
 Providence, Rhode Island

	Units	RIDEM GB Groundwater Objective	RIDEM GB Groundwater UCL	RCA-1 19K0652-08 11/20/2019	RCA-12R 19K0652-11 11/20/2019	RCA-15 19K0652-09 11/20/2019	RCA-31 19K0652-02 11/19/2019	RCA-36 19K0652-05 11/19/2019	VHB-1 19K0652-10 11/20/2019	VHB-20 19K0652-01 11/19/2019	GZ-201 19K0652-04 11/19/2019	GZA-301D 19K0652-07 11/19/2019	GZ-304D 19K0652-06 11/19/2019	GZ-309D 19K0652-12 11/20/2019	GZ-319D 19K0652-03 11/19/2019
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	<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	<0.001	<0.001	<0.001	
Isopropylbenzene	mg/L	NE	NE	<0.001	<0.001	<0.001	<0.001	0.0015	0.0111	0.0014	0.0057	<0.001	<0.001	<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	<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	<0.002	<0.002	<0.002	
Naphthalene	mg/L	2.67	NE	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.0015	<0.001	0.0232	<0.001	
n-Butylbenzene	mg/L	NE	NE	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.0019	<0.001	<0.001	<0.001	
n-Propylbenzene	mg/L	NE	NE	<0.001	<0.001	<0.001	<0.001	<0.001	0.0014	<0.001	0.0031	<0.001	<0.001	<0.001	
sec-Butylbenzene	mg/L	NE	NE	<0.001	<0.001	<0.001	<0.001	0.0029	<0.001	0.003	<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	<0.001	<0.001	0.0017	
tert-Butylbenzene	mg/L	NE	NE	<0.001	<0.001	<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	<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	<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	<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	<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	<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	<0.0004	<0.0004	<0.0004	
Trichloroethene	mg/L	0.54	87	<0.001	0.0066	<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	<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	<0.005	<0.005	<0.005	
Vinyl Chloride	mg/L	0.002	NE	<0.001	0.001	<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	<0.001	<0.001	0.0014	<0.001	<0.001	0.001	<0.001	<0.001	
Xylene P,M	mg/L	NE	NE	<0.002	<0.002	<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	<0.002	<0.002	<0.002	<0.002	<0.002	<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

Well is located in the CNG Fueling Station portion of the Property

NE = Not Established

Blue shaded cells indicate that the detection limit exceeds the RIDEM GB

Gray shaded cells and bolded text indicate the concentration exceeds the
GB Groundwater Objective.Underlined concentrations exceed the RIDEM GB Groundwater Upper
Concentration LimitMethod 2 GB Objective criteria for naphthalene developed by GZA in
accordance with the methods described in the Remediation Regulations.

TABLE 7
SUMMARY OF GROUNDWATER QAQC VOC ANALYTICAL RESULTS

642 Allens Avenue
Providence, Rhode Island

	Units	RIDEM GB Groundwater Objective	RIDEM GB Groundwater UCL	RCA-12R 19K0652-11 11/20/2019	BD 112019 19K0652-13 11/20/2019	Trip Blank 19K0652-14 11/20/2019
EPA Method 8260B VOLATILE ORGANICS						
1,1,1,2-Tetrachloroethane	mg/L	NE	NE	<0.001	<0.001	<0.001
1,1,1-Trichloroethane	mg/L	3.1	68	<0.001	<0.001	<0.001
1,1,2,2-Tetrachloroethane	mg/L	NE	NE	<0.0005	<0.0005	<0.0005
1,1,2-Trichloroethane	mg/L	NE	NE	<0.001	<0.001	<0.001
1,1-Dichloroethane	mg/L	NE	NE	<0.001	<0.001	<0.001
1,1-Dichloroethene	mg/L	0.007	23	<0.001	<0.001	<0.001
1,1-Dichloropropene	mg/L	NE	NE	<0.002	<0.002	<0.002
1,2,3-Trichlorobenzene	mg/L	NE	NE	<0.001	<0.001	<0.001
1,2,3-Trichloropropane	mg/L	NE	NE	<0.001	<0.001	<0.001
1,2,4-Trichlorobenzene	mg/L	NE	NE	<0.001	<0.001	<0.001
1,2,4-Trimethylbenzene	mg/L	NE	NE	<0.001	<0.001	<0.001
1,2-Dibromo-3-Chloropropane	mg/L	0.002	NE	<0.005	<0.005	<0.005
1,2-Dibromoethane	mg/L	NE	NE	<0.001	<0.001	<0.001
1,2-Dichlorobenzene	mg/L	NE	NE	<0.001	<0.001	<0.001
1,2-Dichloroethane	mg/L	0.11	670	<0.001	<0.001	<0.001
1,2-Dichloropropane	mg/L	3	140	<0.001	<0.001	<0.001
1,3,5-Trimethylbenzene	mg/L	NE	NE	<0.001	<0.001	<0.001
1,3-Dichlorobenzene	mg/L	NE	NE	<0.001	<0.001	<0.001
1,3-Dichloropropane	mg/L	NE	NE	<0.001	<0.001	<0.001
1,4-Dichlorobenzene	mg/L	NE	NE	<0.001	<0.001	<0.001
1,4-Dioxane - Screen	mg/L	NE	NE	<0.5	<0.5	<0.5
1-Chlorohexane	mg/L	NE	NE	<0.001	<0.001	<0.001
2,2-Dichloropropane	mg/L	NE	NE	<0.001	<0.001	<0.001
2-Butanone	mg/L	NE	NE	<0.01	<0.01	<0.01
2-Chlorotoluene	mg/L	NE	NE	<0.001	<0.001	<0.001
2-Hexanone	mg/L	NE	NE	<0.01	<0.01	<0.01
4-Chlorotoluene	mg/L	NE	NE	<0.001	<0.001	<0.001
4-Isopropyltoluene	mg/L	NE	NE	<0.001	<0.001	<0.001
4-Methyl-2-Pentanone	mg/L	NE	NE	<0.025	<0.025	<0.025
Acetone	mg/L	NE	NE	<0.01	<0.01	<0.01
Benzene	mg/L	0.14	18	<0.001	<0.001	<0.001
Bromobenzene	mg/L	NE	NE	<0.002	<0.002	<0.002
Bromochloromethane	mg/L	NE	NE	<0.001	<0.001	<0.001
Bromodichloromethane	mg/L	NE	NE	<0.0006	<0.0006	<0.0006
Bromoform	mg/L	NE	NE	<0.001	<0.001	<0.001
Bromomethane	mg/L	NE	NE	<0.002	<0.002	<0.002
Carbon Disulfide	mg/L	NE	NE	<0.001	<0.001	<0.001
Carbon Tetrachloride	mg/L	0.07	NE	<0.001	<0.001	<0.001
Chlorobenzene	mg/L	3.2	56	<0.001	<0.001	<0.001
Chloroethane	mg/L	NE	NE	<0.002	<0.002	<0.002
Chloroform	mg/L	NE	NE	<0.001	<0.001	<0.001
Chloromethane	mg/L	NE	NE	<0.002	<0.002	<0.002
cis-1,2-Dichloroethene	mg/L	2.4	69	0.0178	0.0217	<0.001
cis-1,3-Dichloropropene	mg/L	NE	NE	<0.0004	<0.0004	<0.0004
Dibromochloromethane	mg/L	NE	NE	<0.001	<0.001	<0.001
Dibromomethane	mg/L	NE	NE	<0.001	<0.001	<0.001
Dichlorodifluoromethane	mg/L	NE	NE	<0.002	<0.002	<0.002

TABLE 7
SUMMARY OF GROUNDWATER QAQC VOC ANALYTICAL RESULTS

642 Allens Avenue
 Providence, Rhode Island

	Units	RIDEM GB Groundwater Objective	RIDEM GB Groundwater UCL	RCA-12R 19K0652-11 11/20/2019	BD 112019 19K0652-13 11/20/2019	Trip Blank 19K0652-14 11/20/2019
EPA Method 8260B VOLATILE ORGANICS						
Diethyl Ether	mg/L	NE	NE	<0.001	<0.001	<0.001
Di-isopropyl ether	mg/L	NE	NE	<0.001	<0.001	<0.001
Ethyl tertiary-butyl ether	mg/L	NE	NE	<0.001	<0.001	<0.001
Ethylbenzene	mg/L	1.6	16	<0.001	<0.001	<0.001
Hexachlorobutadiene	mg/L	NE	NE	<0.0006	<0.0006	<0.0006
Hexachloroethane	mg/L	NE	NE	<0.001	<0.001	<0.001
Isopropylbenzene	mg/L	NE	NE	<0.001	<0.001	<0.001
Methyl tert-Butyl Ether	mg/L	5	NE	<0.001	<0.001	<0.001
Methylene Chloride	mg/L	NE	NE	<0.002	<0.002	<0.002
Naphthalene	mg/L	2.67	NE	<0.001	<0.001	<0.001
n-Butylbenzene	mg/L	NE	NE	<0.001	<0.001	<0.001
n-Propylbenzene	mg/L	NE	NE	<0.001	<0.001	<0.001
sec-Butylbenzene	mg/L	NE	NE	<0.001	<0.001	<0.001
Styrene	mg/L	2.2	50	<0.001	<0.001	<0.001
tert-Butylbenzene	mg/L	NE	NE	<0.001	<0.001	<0.001
Tertiary-amyl methyl ether	mg/L	NE	NE	<0.001	<0.001	<0.001
Tetrachloroethene	mg/L	0.15	NE	0.002	0.002	<0.001
Tetrahydrofuran	mg/L	NE	NE	<0.005	<0.005	<0.005
Toluene	mg/L	1.7	21	<0.001	<0.001	<0.001
trans-1,2-Dichloroethene	mg/L	2.8	79	<0.001	<0.001	<0.001
trans-1,3-Dichloropropene	mg/L	NE	NE	<0.0004	<0.0004	<0.0004
Trichloroethene	mg/L	0.54	87	0.0066	0.0078	<0.001
Trichlorofluoromethane	mg/L	NE	NE	<0.001	<0.001	<0.001
Vinyl Acetate	mg/L	NE	NE	<0.005	<0.005	<0.005
Vinyl Chloride	mg/L	0.002	NE	0.001	0.0012	<0.001
Xylene O	mg/L	NE	NE	<0.001	<0.001	<0.001
Xylene P,M	mg/L	NE	NE	<0.002	<0.002	<0.002
Xylenes (Total)	mg/L	NE	NE	<0.002	<0.002	<0.002

Notes

NE = Not Established

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

Gray 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.

BD 112019 is a blind duplicate of RCA-12R



FIGURES

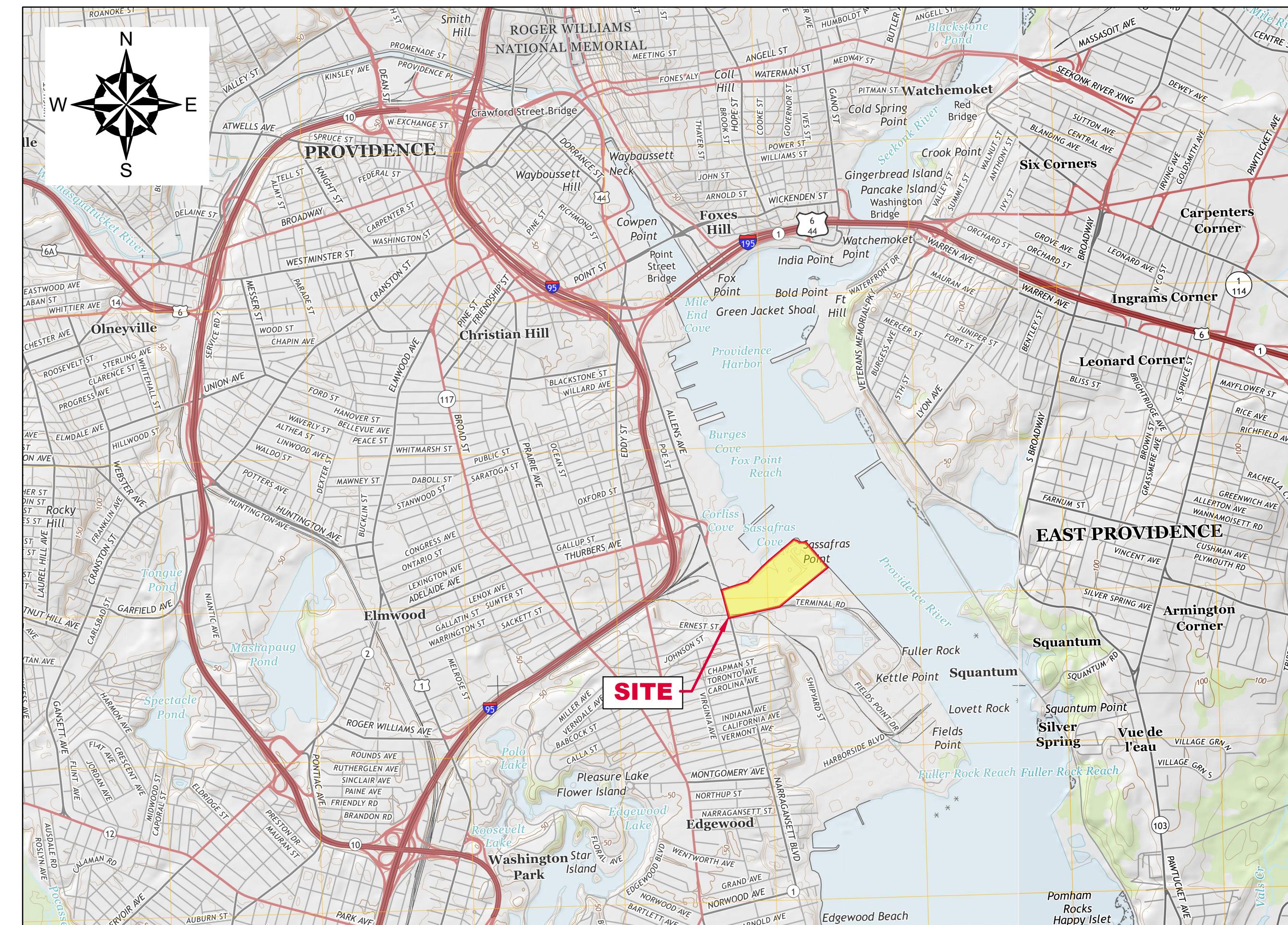
NATIONAL GRID MONITORING REPORT - 2019 FORMER MANUFACTURED GAS PLANT (MGP) 642 ALLENS AVENUE PROVIDENCE, RHODE ISLAND JANUARY 2021

PREPARED FOR:

nationalgrid

PREPARED BY:

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



LOCUS MAP

SOURCE: USGSSTORE.GOV

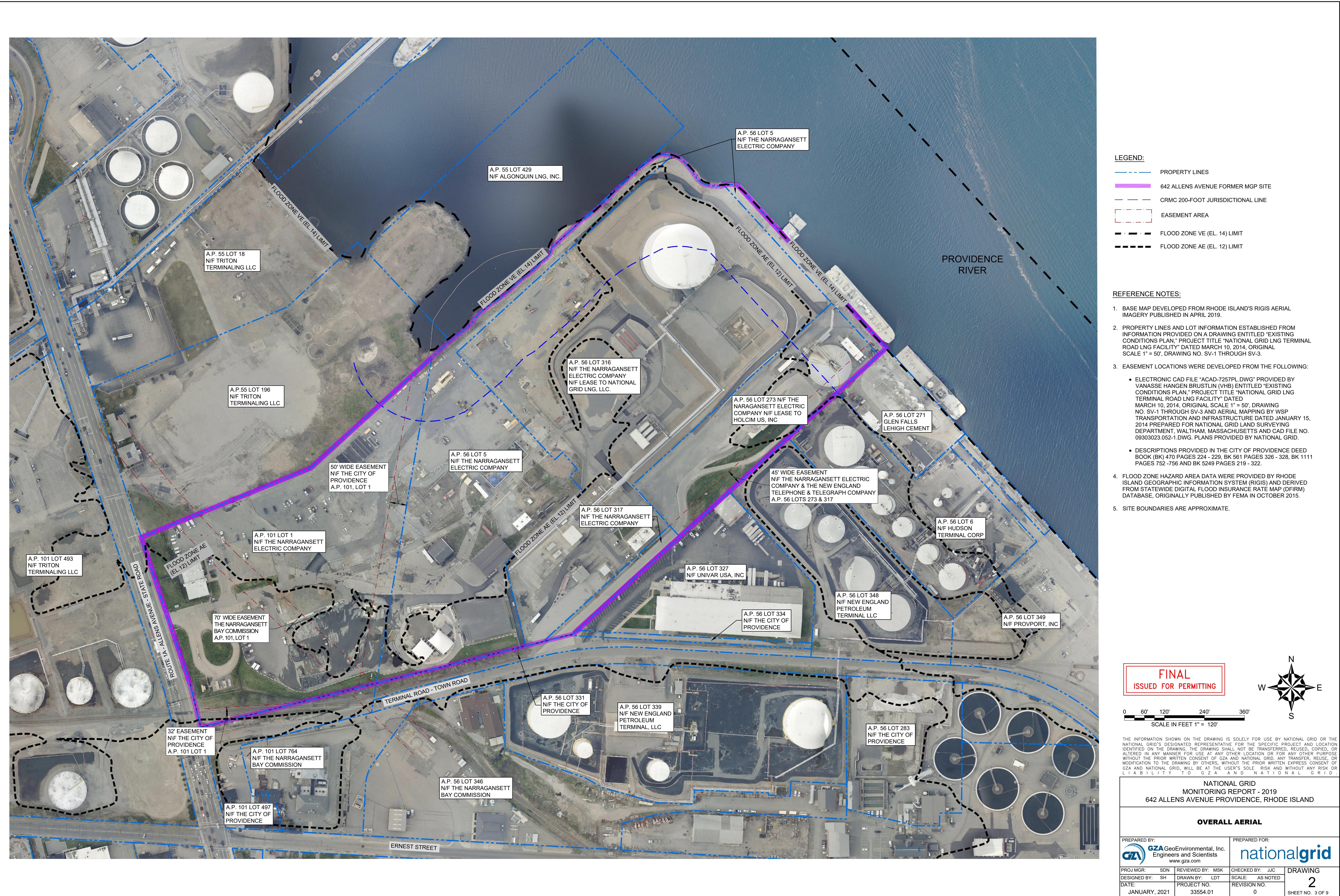
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SCALE: 1 INCH = 2000 FEET

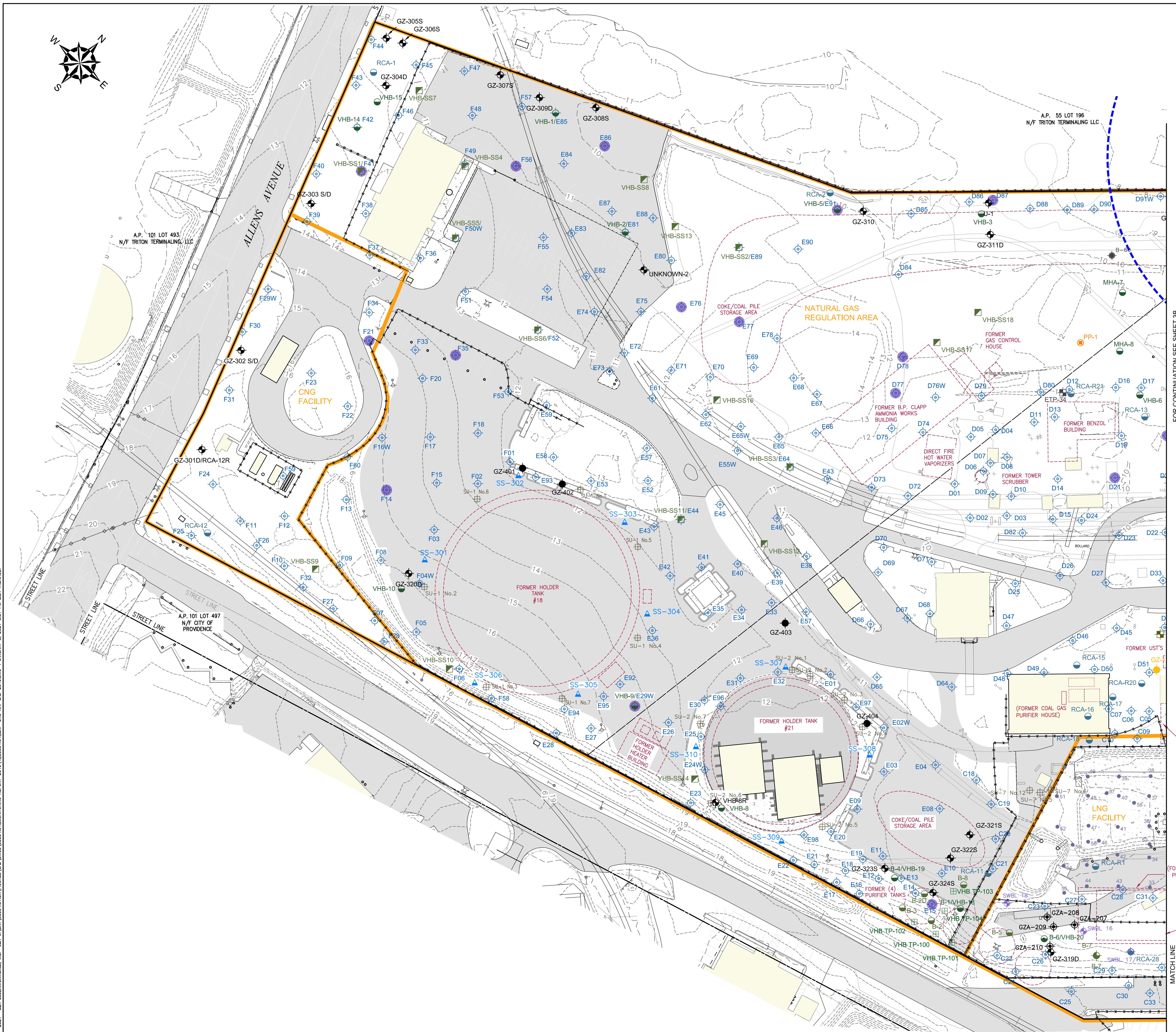
FINAL
ISSUED FOR PERMITTING

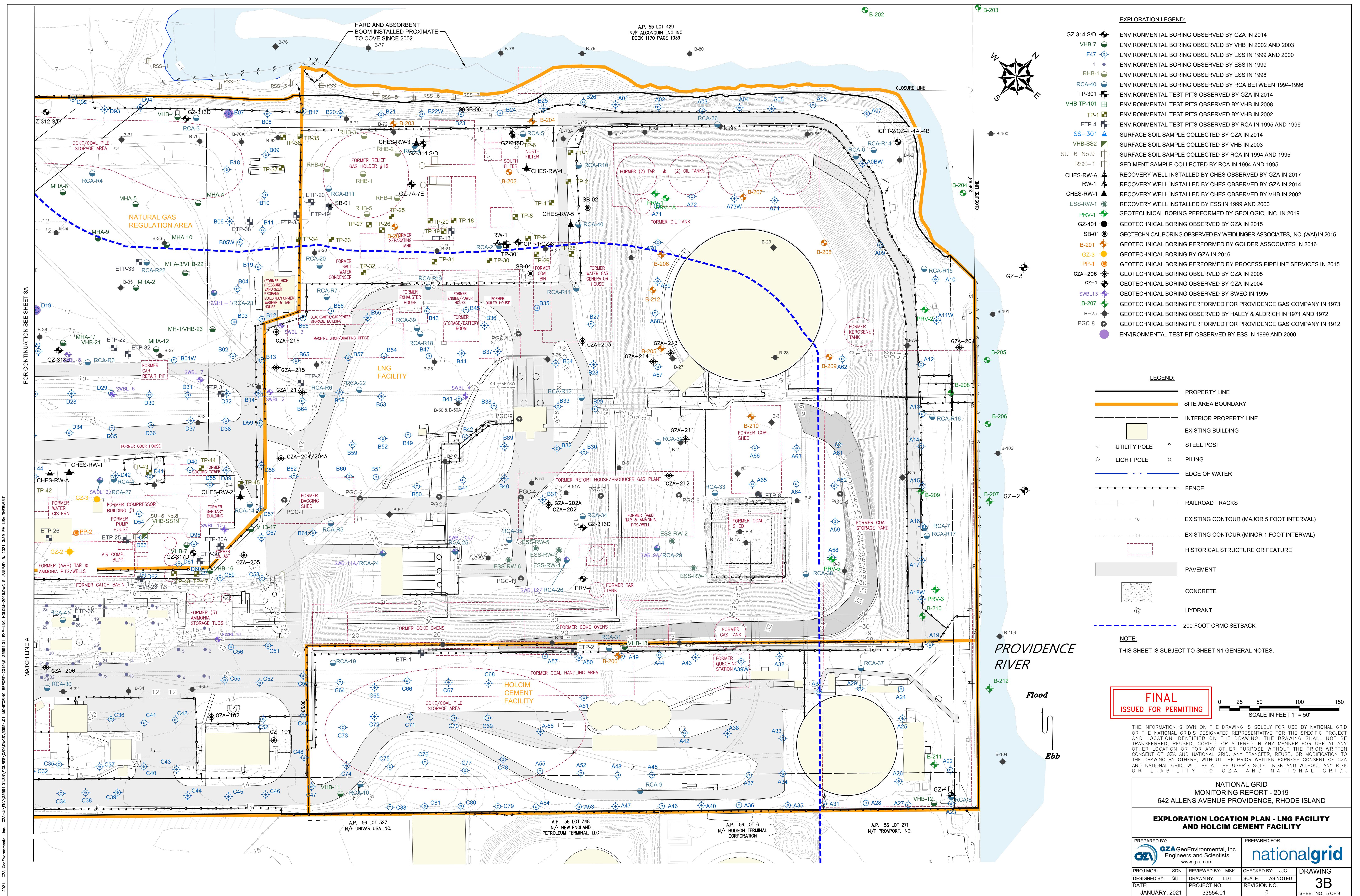
THE INFORMATION SHOWN ON THE DRAWING IS SOLELY FOR USE BY NATIONAL GRID OR THE NATIONAL GRID'S DESIGNATED REPRESENTATIVE FOR THE SPECIFIC PROJECT AND LOCATION IDENTIFIED ON THE DRAWING. THE DRAWING SHOULD NOT BE TRANSFERRED, REUSED, COPIED, OR ALTERED IN ANY MANNER FOR USE AT ANY OTHER LOCATION OR FOR ANY OTHER PURPOSE WITHOUT THE PRIOR WRITTEN CONSENT OF GZA AND NATIONAL GRID. ANY TRANSFER, REUSE, OR MODIFICATION TO THE DRAWING BY OTHERS, WITHOUT THE PRIOR WRITTEN EXPRESS CONSENT OF GZA AND NATIONAL GRID, WILL BE AT THE USER'S SOLE RISK AND WITHOUT ANY RISK OR LIABILITY TO GZA AND NATIONAL GRID.

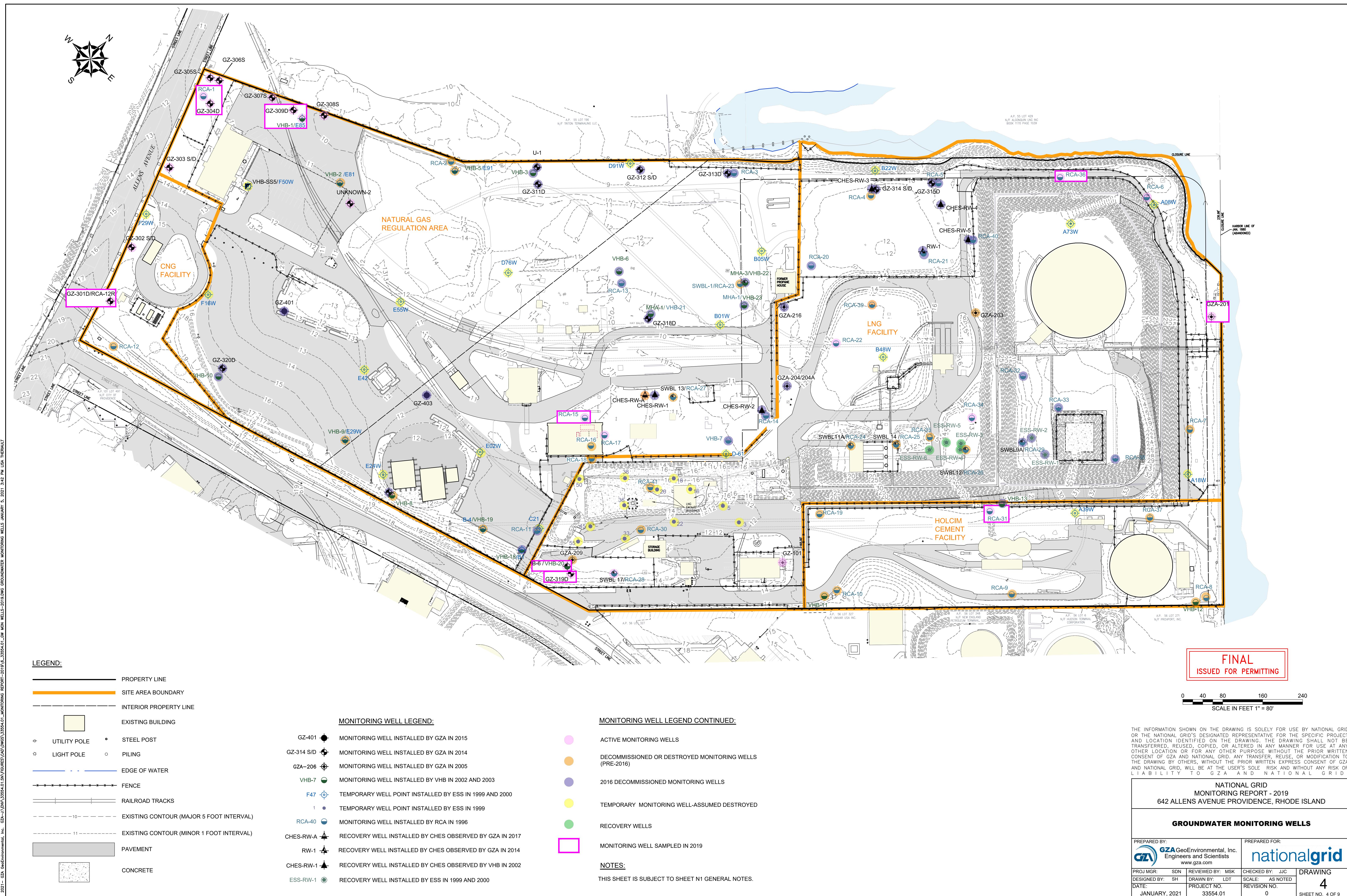
INDEX OF DRAWINGS	
SHEET #	TITLE
C1	TITLE SHEET AND INDEX TO DRAWINGS
N1	GENERAL NOTES AND LEGEND
2	OVERALL AERIAL
3A	EXPLORATION LOCATION PLAN - CNG FACILITY AND NATURAL GAS REGULATION FACILITY
3B	EXPLORATION LOCATION PLAN - LNG FACILITY AND HOLCIM CEMENT FACILITY
4	GROUNDWATER MONITORING WELLS
5	SHALLOW GROUNDWATER CONTOURS (NOVEMBER 2019)
6	HISTORICAL NAPL THICKNESS (>0.01 FEET) (2001-2017)
7	2019 NAPL AND GROUNDWATER ANALYTICAL DATA

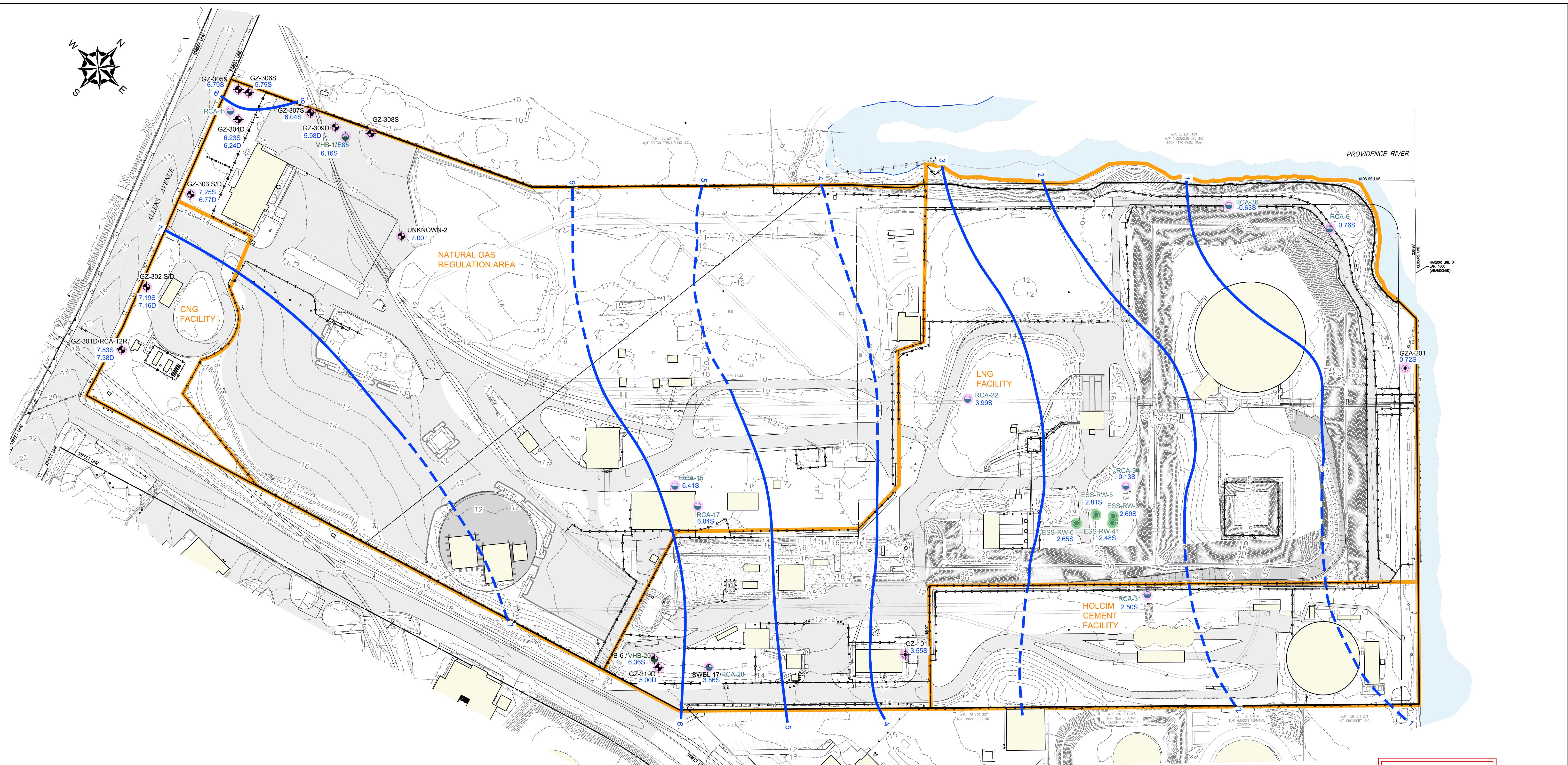












LEGEND

PROPERTY LINE

SITE AREA BOUNDARY

— INTERIOR PROPERTY LINE

EXISTING BUILDING

- STEEL POST

○ PILING

— EDGE OF WATER

—*—*— FENCE

RAILROAD TRACKS

- - - EXISTING CONTOUR

----- EXISTING CONTOUR

PAVEMENT

ANSWER

MONITORING WELL LEGEND

- | | | |
|----------------|--|--|
| 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 19, 2019 (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 19, 2019

4 INFERRRED SHALLOW GROUNDWATER ELEVATION
CONTOUR (NAVD 1988) ON NOVEMBER 19, 2019

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 MAY 18, 2016
 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.

NC

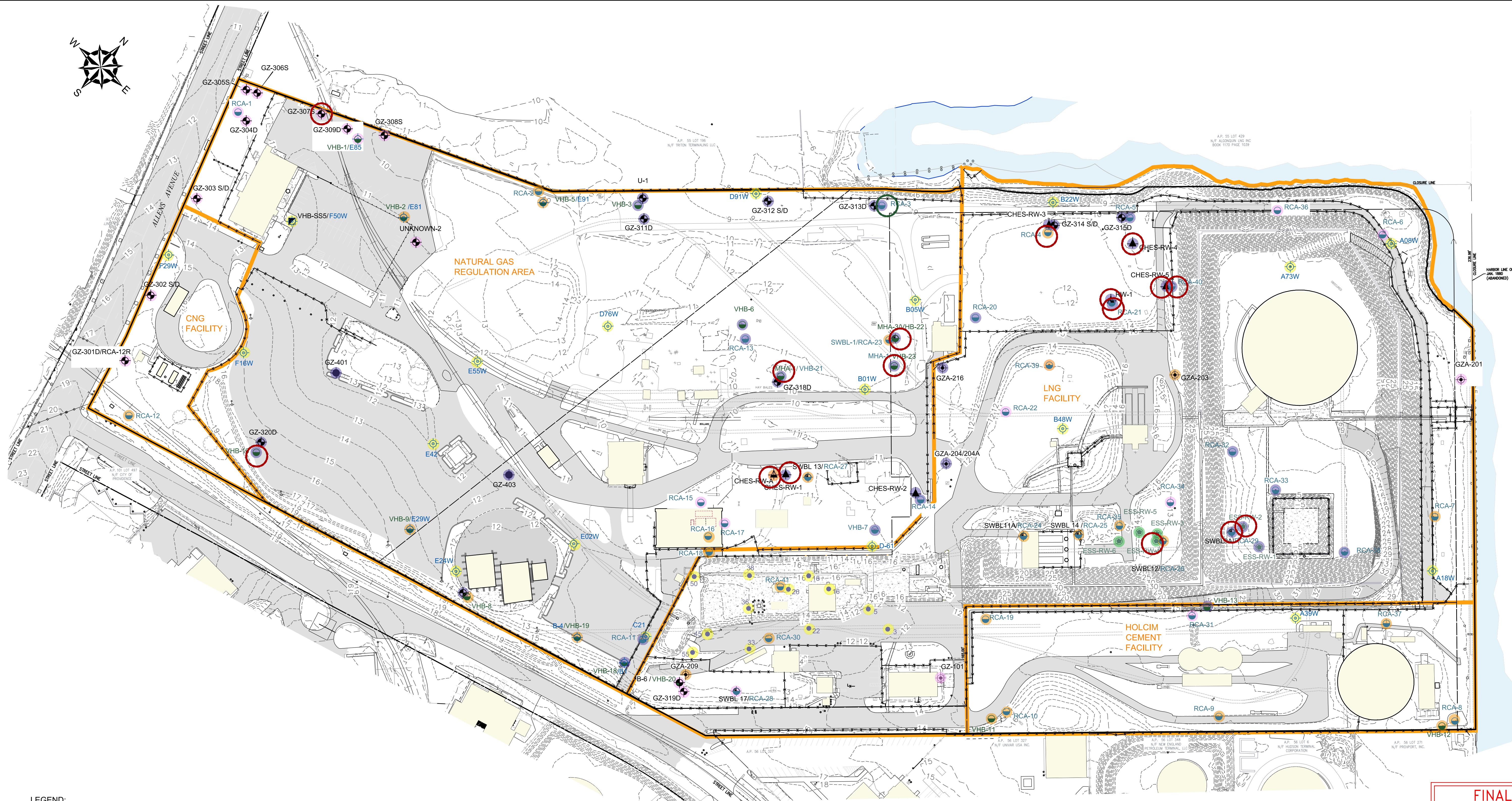
THIS SHEET IS SUBJECT TO SHEET N1 GENERAL NOTES

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D NATIONAL GRID, WILL BE AT THE USER'S SOLE RISK AND WITHOUT ANY RISK OR
A B I L I T Y T O G Z A A N D N A T I O N A L G R I D .

NATIONAL GRID
MONITORING REPORT - 2019

**SHALLOW GROUNDWATER CONTOURS
(NOVEMBER 2019)**

PREPARED BY:  GZA GeoEnvironmental, Inc. Engineers and Scientists www.gza.com			PREPARED FOR: nationalgrid	
PROJ MGR:	SDN	REVIEWED BY:	MSK	CHECKED BY:
DESIGNED BY:	SH	DRAWN BY:	LDT	SCALE:
DATE: JANUARY, 2021	PROJECT NO. 33554.01	REVISION NO. 0		DRAWING 5 SHEET NO. 7 OF 9



LEGEND:

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

MONITORING WELL LEGEND:

- 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-A ▲ 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)

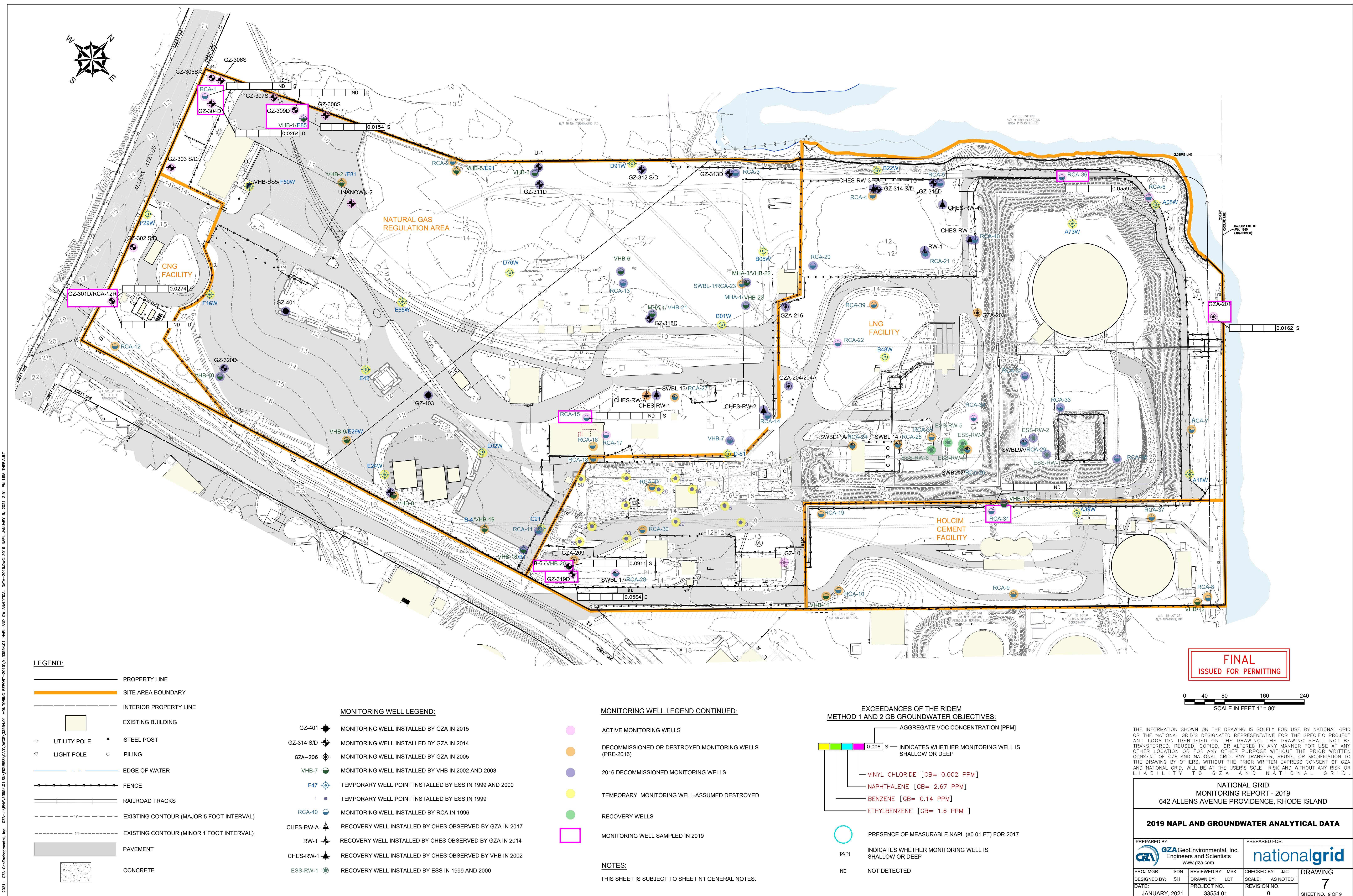
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NATIONAL GRID
MONITORING REPORT - 2019
642 ALLENS AVENUE PROVIDENCE, RHODE ISLAND

HISTORICAL NAPL THICKNESS (>0.01 FEET)
(2001-2019)

PREPARED BY:	REVIEWED BY:	CHECKED BY:	PREPARED FOR:
 GZA GeoEnvironmental, Inc. Engineers and Scientists www.gza.com	SDN	MSK	JJC
DESIGNED BY:	SH	LDT	AS NOTED
DATE:	PROJECT NO.:	REVISION NO.	DRAWING
JANUARY, 2021	33554.01	0	6
			SHEET NO. 8 OF 9

NOTES:
THIS SHEET IS SUBJECT TO SHEET N1 GENERAL NOTES.





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 National Grid, 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 National Grid.
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 National Grid 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

File No. 33554.01
 Project 642 Allens Ave
 Location City: Providence State: RI
Weather: Overcast 40's

Well ID: GZA-201
 Sample Date: 11/19/2019
 Sampler's name: S.McLeod

WATER LEVEL OBSERVATIONS

Point of measurement	PVC Riser <input checked="" type="checkbox"/>	Casing <input type="checkbox"/>	Ground <input type="checkbox"/>	measurement date/time: <u>11/18/19 - 1301</u>		
Total well depth (feet)	<u>21.7</u>			Standing water in well (feet) <u>14.51</u>		
Depth to LNAPL (feet)	<u>-</u>			Well Diamter (in.) <u>2</u>		
Depth to water (feet)	<u>7.19</u>			Sample Depth (feet bgs) <u>15</u>		
Depth to DNAPL (feet)	<u>-</u>			Standpipe TPVC to Ground (feet) <u>-</u>		
Well Screen (feet bgs)	<u>10 to 20</u>			Roadbox TPVC to Ground (feet) <u>-</u>		
Well Condition:	Protective casing <input type="checkbox"/> poor	<input checked="" type="checkbox"/> good	Expansion cap <input type="checkbox"/> yes	<input checked="" type="checkbox"/> no	Well ID <input checked="" type="checkbox"/> yes	<input checked="" type="checkbox"/> no
	lock <input checked="" type="checkbox"/> yes	<input type="checkbox"/> no	Concrete Collar <input checked="" type="checkbox"/> yes	<input type="checkbox"/> no	Well <input type="checkbox"/> poor	<input checked="" type="checkbox"/> good

EQUIPMENT

Sample Method: Bailer Pump / Low Flow

Pump Type: geopump No. 1

Meter Type: YSI No. 1 Flow Thru Cell Vol (mL): 250

INSTRUMENT MEASUREMENTS:

Start time: 0940

Stop time: 1025

Time	Depth to water (ft) (drawdown <0.3 or stable)	ORP (mV) (± 10)	pH (s.u.) (± 0.1)	Spec. Cond ($\mu\text{S}/\text{cm}$) ($\pm 3\%$)	DO (mg/L) ($\pm 10\%$ or 3 rds <0.5)	Temp. ($^{\circ}\text{C}$) ($\pm 3\%$)	Turbidity (ntu) ($\pm 10\%$ or <5 ntu)	Flow (mL/min) (<500)	Notes
1017	8.49	-86.4	6.75	168.7	0.14	14.7	74	200	
1020	8.49	-89.7	6.76	172	0.13	14.7	71	200	
1023	8.49	-91.1	6.76	174.3	0.13	14.8	77	200	

SAMPLE TESTING INFORMATION

Sample time: 1025

Analysis	Method	No. bottles	Bottle type	Volume	Preservation	Handling
VOC	8260	3	VOA	40mL	HCL	on ice

SAMPLE OBSERVATIONS

Color Orange-Brown Odor none Clarity Dull Sheen

Purge Volume: 2.5 gallons

Tubing Volume: 0.1 gallons

Notes: Purge water started out a orangey-brown color.

File No. 33554.01
 Project 642 Allens Ave
 Location City: Providence State: RI
Weather: Overcast 40's

Well ID: GZA-301D
 Sample Date: 11/19/2019
 Sampler's name: T.Adekanye

WATER LEVEL OBSERVATIONS

Point of measurement	PVC Riser <input checked="" type="checkbox"/>	Casing <input type="checkbox"/>	Ground <input type="checkbox"/>	measurement date/time: <u>11/18/19 - 1301</u>
Total well depth (feet)		29.74		Standing water in well (feet) <u>19.81</u>
Depth to LNAPL (feet)		-		Well Diamter (in.) <u>2</u>
Depth to water (feet)		9.93		Sample Depth (feet bgs) <u>25</u>
Depth to DNAPL (feet)		-		Standpipe TPVC to Ground (feet) <u>-</u>
Well Screen (feet bgs)		20 to 30		Roadbox TPVC to Ground (feet) <u>-</u>
Well Condition:	Protective casing <input type="checkbox"/> poor <input checked="" type="checkbox"/> good lock <input type="checkbox"/> yes <input checked="" type="checkbox"/> no		Expansion cap <input checked="" type="checkbox"/> yes <input type="checkbox"/> no	Well ID <input type="checkbox"/> yes <input checked="" type="checkbox"/> no
			Concrete Collar <input checked="" type="checkbox"/> yes <input type="checkbox"/> no	Well <input type="checkbox"/> poor <input checked="" type="checkbox"/> good

EQUIPMENT

		Sample Method: <input type="checkbox"/> Bailer <input checked="" type="checkbox"/> Pump / <input type="checkbox"/> Low Flow
Pump Type:	<u>geopump</u>	No. <u>2</u>
Meter Type:	<u>YSI</u>	No. <u>2</u>

INSTRUMENT MEASUREMENTS:

Time	Depth to water (ft) (drawdown <0.3 or stable)	ORP (mV) (± 10)	pH (s.u.) (± 0.1)	Spec. Cond ($\mu\text{S}/\text{cm}$) ($\pm 3\%$)	DO (mg/L) ($\pm 10\%$ or 3 rds <0.5)	Temp. ($^{\circ}\text{C}$) ($\pm 3\%$)	Turbidity (ntu) ($\pm 10\%$ or <5 ntu)	Flow (mL/min) (<500)	Start time: <u>1538</u>	Stop time: <u>1634</u>
									Notes	
1559	10.32	-34.5	6.37	1304	0.19	14.6	12.4	300		
1614	10.32	-37.9	6.38	1278	0.18	14.4	9.24	300		
1619	10.32	-24.8	6.41	1266	0.29	14.5	<5	300		
1624	10.32	-32.6	6.40	1259	0.19	14.5	<5	300		
1627	10.32	-35.2	6.40	1253	0.17	14.5	<5	300		
1630	10.32	-36.9	6.40	1248	0.16	14.5	<5	300		
1633	10.32	-38.3	6.41	1238	0.15	14.5	<5	300		

SAMPLE TESTING INFORMATION

Analysis	Method	No. bottles	Bottle type	Volume	Preservation	Handling
VOC	8260	3	VOA	40mL	HCL	on ice

SAMPLE OBSERVATIONS

Color none Odor none Clarity clear Purge Volume: 3.5 gallons
 Tubing Volume: 0.2 gallons

Notes:

File No. 33554.01
 Project 642 Allens Ave
 Location City: Providence State: RI
Weather: Overcast 40's

Well ID: GZA-304D
 Sample Date: 11/19/2019
 Sampler's name: S.McLeod

WATER LEVEL OBSERVATIONS

Point of measurement	PVC Riser <input checked="" type="checkbox"/>	Casing <input type="checkbox"/>	Ground <input type="checkbox"/>	measurement date/time: <u>11/19/19 - 1430</u>
Total well depth (feet)		29.84		Standing water in well (feet) <u>24.06</u>
Depth to LNAPL (feet)		-		Well Diamter (in.) <u>2</u>
Depth to water (feet)		5.78		Sample Depth (feet bgs) <u>25</u>
Depth to DNAPL (feet)		-		Standpipe TPVC to Ground (feet) <u>-</u>
Well Screen (feet bgs)		20 to 30		Roadbox TPVC to Ground (feet) <u>-</u>
Well Condition:	Protective casing <input type="checkbox"/> poor <input checked="" type="checkbox"/> good lock <input type="checkbox"/> yes <input checked="" type="checkbox"/> no		Expansion cap <input checked="" type="checkbox"/> yes <input type="checkbox"/> no	Well ID <input checked="" type="checkbox"/> yes <input type="checkbox"/> no
			Concrete Collar <input checked="" type="checkbox"/> yes <input type="checkbox"/> no	Well <input type="checkbox"/> poor <input checked="" type="checkbox"/> good

EQUIPMENT

Sample Method: Bailer Pump / Low Flow

Pump Type: geopump No. 1

Meter Type: YSI No. 1 Flow Thru Cell Vol (mL): 250

INSTRUMENT MEASUREMENTS: Start time: 1455 Stop time: 1621

Time	Depth to water (ft) (drawdown <0.3 or stable)	ORP (mV) (± 10)	pH (s.u.) (± 0.1)	Spec. Cond ($\mu\text{S}/\text{cm}$) ($\pm 3\%$)	DO (mg/L) ($\pm 10\%$ or 3 rds <0.5)	Temp. ($^{\circ}\text{C}$) ($\pm 3\%$)	Turbidity (ntu) ($\pm 10\%$ or <5 ntu)	Flow (mL/min) (<500)	Notes
1537	7.32	-101.5	6.94	1523	0.15	13.7	<5	250	
1540	7.32	-101.0	6.93	1460	0.15	13.6	<5	250	
1543	7.32	-101.0	6.92	1426	0.15	13.7	<5	250	
1546	7.32	-99.9	6.90	1364	0.15	13.7	<5	250	
1549	7.32	-99.5	6.89	1362	0.15	13.7	<5	250	
1601	7.32	-94.9	6.83	1102	0.15	13.7	<5	250	Cleared cell volume
1615	7.32	-85.3	6.74	940	0.14	13.6	<5	250	
1618	7.32	-85.7	6.74	937	0.14	13.7	<5	250	
1621	7.32	-86.1	6.74	937	0.14	13.6	<5	250	

SAMPLE TESTING INFORMATION

Sample time: 1621

Analysis	Method	No. bottles	Bottle type	Volume	Preservation	Handling
VOC	8260	3	VOA	40mL	HCL	on ice

SAMPLE OBSERVATIONS

Color None Odor None Clarity clear

Purge Volume: 6.5 gallons

Tubing Volume: 0.2 gallons

Notes:

File No. 33554.01
 Project 642 Allens Ave
 Location City: Providence State: RI
Weather: Overcast 40's

Well ID: GZA-309D
 Sample Date: 11/20/2019
 Sampler's name: T.Adekanye

WATER LEVEL OBSERVATIONS

Point of measurement	PVC Riser <input checked="" type="checkbox"/>	Casing <input type="checkbox"/>	Ground <input type="checkbox"/>	measurement date/time: <u>11/19/19 - 1347</u>
Total well depth (feet)		30.25		Standing water in well (feet) <u>26.6</u>
Depth to LNAPL (feet)		-		Well Diamter (in.) <u>2</u>
Depth to water (feet)		3.65		Sample Depth (feet bgs) <u>25</u>
Depth to DNAPL (feet)		-		Standpipe TPVC to Ground (feet) <u>-</u>
Well Screen (feet bgs)		20 to 30		Roadbox TPVC to Ground (feet) <u>-</u>
Well Condition:	Protective casing <input type="checkbox"/> poor <input checked="" type="checkbox"/> good lock <input type="checkbox"/> yes <input checked="" type="checkbox"/> no		Expansion cap <input checked="" type="checkbox"/> yes <input type="checkbox"/> no	Well ID <input checked="" type="checkbox"/> yes <input type="checkbox"/> no
			Concrete Collar <input checked="" type="checkbox"/> yes <input type="checkbox"/> no	Well <input type="checkbox"/> poor <input checked="" type="checkbox"/> good

EQUIPMENT

Pump Type:	<u>geopump</u>	No.	<u>2</u>	Sample Method:	<input type="checkbox"/> Bailer <input checked="" type="checkbox"/> Pump / <input type="checkbox"/> Low Flow
Meter Type:	<u>YSI</u>	No.	<u>2</u>	Flow Thru Cell Vol (mL):	<u>250</u>

INSTRUMENT MEASUREMENTS:

Time	Depth to water (ft) (drawdown <0.3 or stable)	ORP (mV) (± 10)	pH (s.u.) (± 0.1)	Spec. Cond ($\mu\text{S}/\text{cm}$) ($\pm 3\%$)	DO (mg/L) ($\pm 10\%$ or 3 rds <0.5)	Temp. ($^{\circ}\text{C}$) ($\pm 3\%$)	Turbidity (ntu) ($\pm 10\%$ or <5 ntu)	Flow (mL/min) (<500)	Start time: <u>0943</u>	Stop time: <u>1150</u>
									Notes	
1033	7.34	-157.6	7.32	2907	0.14	14.4	351.5	300		
1036	7.35	-157.7	7.32	2903	0.14	14.4	386.7	300		
1039	7.45	-158.7	7.33	2894	0.14	14.5	438.5	300		
1101	8.20	-153.2	7.33	2911	0.11	14.1	<5	300		
1104	8.21	-152.2	7.34	2893	0.10	14.2	500	300		
1107	8.31	-151.0	7.34	2892	0.10	14.1	600	300		
1145	11.06	-151.0	7.17	2878	0.05	14.1	400	300		

SAMPLE TESTING INFORMATION

Analysis	Method	No. bottles	Bottle type	Volume	Preservation	Handling
VOC	8260	3	VOA	40mL	HCL	on ice

SAMPLE OBSERVATIONS

Color	None	Odor	None	Clarity	clear	Purge Volume:	<u>7</u>	gallons
						Tubing Volume:	<u>0.2</u>	gallons

Notes: Depth to water constantly increasing. Turbidity and drawdown would not stabilize, sampled after 2 hours.

File No. 33554.01
 Project 642 Allens Ave
 Location City: Providence State: RI
Weather: Overcast 40's

Well ID: GZA-319D
 Sample Date: 11/19/2019
 Sampler's name: S. McLeod

WATER LEVEL OBSERVATIONS

Point of measurement	PVC Riser <input checked="" type="checkbox"/>	Casing <input type="checkbox"/>	Ground <input type="checkbox"/>	measurement date/time: <u>11/18/19 - 1623</u>
Total well depth (feet)		32.55		Standing water in well (feet) <u>22.71</u>
Depth to LNAPL (feet)		-		Well Diamter (in.) <u>2</u>
Depth to water (feet)		9.84		Sample Depth (feet bgs) <u>25</u>
Depth to DNAPL (feet)		-		Standpipe TPVC to Ground (feet) <u>-</u>
Well Screen (feet bgs)		20 to 30		Roadbox TPVC to Ground (feet) <u>-</u>
Well Condition:	Protective casing <input type="checkbox"/> poor <input checked="" type="checkbox"/> good lock <input type="checkbox"/> yes <input checked="" type="checkbox"/> no	Expansion cap <input checked="" type="checkbox"/> yes <input type="checkbox"/> no	Well ID <input checked="" type="checkbox"/> yes <input type="checkbox"/> no	Concrete Collar <input checked="" type="checkbox"/> yes <input type="checkbox"/> no Well <input type="checkbox"/> poor <input checked="" type="checkbox"/> good

EQUIPMENT

Pump Type:	<u>geopump</u>	No.	<u>2</u>	Sample Method: <input type="checkbox"/> Bailer <input checked="" type="checkbox"/> Pump / <input checked="" type="checkbox"/> Low Flow
Meter Type:	<u>YSI</u>	No.	<u>1</u>	Flow Thru Cell Vol (mL): <u>250</u>

INSTRUMENT MEASUREMENTS:

Time	Depth to water (ft) (drawdown <0.3 or stable)	ORP (mV) (± 10)	pH (s.u.) (± 0.1)	Spec. Cond ($\mu\text{S}/\text{cm}$) ($\pm 3\%$)	DO (mg/L) ($\pm 10\%$ or 3 rds <0.5)	Temp. ($^{\circ}\text{C}$) ($\pm 3\%$)	Turbidity (ntu) ($\pm 10\%$ or <5 ntu)	Flow (mL/min) (<500)	Start time: <u>0735</u>	Stop time: <u>0823</u>
									Notes	
0814	10.19	-83.9	6.72	712	0.15	14.1	7.95	300		
0817	10.18	-85.1	6.72	714	0.13	14.1	7.86	300		
0820	10.18	-87	6.72	713	0.11	14.0	8.15	300		

SAMPLE TESTING INFORMATION

Sample time: 0823

Analysis	Method	No. bottles	Bottle type	Volume	Preservation	Handling
VOC	8260	3	VOA	40mL	HCL	on ice

SAMPLE OBSERVATIONS

Color none Odor none Clarity clear

Purge Volume: 2.5 gallons

Tubing Volume: 0.2 gallons

Notes:

File No. 33554.01
Project 642 Allens Ave
Location City: Providence State: RI
Weather: Overcast 40's

Well ID: RCA-1
Sample Date: 11/20/2019
Sampler's name: S. McLeod

WATER LEVEL OBSERVATIONS

measurement date/time: 11/19/19 - 1436

Point of measurement	PVC Riser <input checked="" type="checkbox"/>	Casing <input type="checkbox"/>	Ground <input type="checkbox"/>	Standing water in well (feet)	9.92
Total well depth (feet)	15.55			Well Diamter (in.)	2
Depth to LNAPL (feet)	-			Sample Depth (feet bgs)	10
Depth to water (feet)	5.63			Standpipe TPVC to Ground (feet)	-
Depth to DNAPL (feet)	-			Roadbox TPVC to Ground (feet)	-
Well Screen (feet bgs)	5 to 15				
Well Condition:	Protective casing <input type="checkbox"/> poor <input checked="" type="checkbox"/> good	Expansion cap <input checked="" type="checkbox"/> yes <input type="checkbox"/> no	Well ID <input type="checkbox"/> yes <input checked="" type="checkbox"/> no	Concrete Collar <input checked="" type="checkbox"/> yes <input type="checkbox"/> no	Well <input type="checkbox"/> poor <input checked="" type="checkbox"/> good
	lock <input type="checkbox"/> yes <input checked="" type="checkbox"/> no				

EQUIPMENTSample Method: Bailer Pump / Low Flow

Pump Type: geopump No. 2

Meter Type: YSI No. 2 Flow Thru Cell Vol (mL): 250

INSTRUMENT MEASUREMENTS: Start time: 0717 Stop time: 0753

Time	Depth to water (ft) (drawdown <0.3 or stable)	ORP (mV) (± 10)	pH (s.u.) (± 0.1)	Spec. Cond ($\mu\text{S}/\text{cm}$) ($\pm 3\%$)	DO (mg/L) ($\pm 10\%$ or 3 rds <0.5)	Temp. ($^{\circ}\text{C}$) ($\pm 3\%$)	Turbidity (ntu) ($\pm 10\%$ or <5 ntu)	Flow (mL/min) (<500)	Notes
0717	5.80	32.7	6.51	504	2.70	13.2	50	300	
0745	5.80	8.3	6.23	490.6	1.66	12.9	4	200	
0750	5.80	7.8	6.23	490.4	1.66	12.9	4	200	
0753	5.80	8.3	6.23	470.4	1.70	12.9	4	200	

SAMPLE TESTING INFORMATION

Sample time: 0753

Analysis	Method	No. bottles	Bottle type	Volume	Preservation	Handling
VOC	8260	3	VOA	Vial	HCL	on ice

SAMPLE OBSERVATIONS

Color none Odor none Clarity clear

Purge Volume: 2.5 gallons

Tubing Volume: 0.1 gallons

Notes:

File No. 33554.01
 Project 642 Allens Ave
 Location City: Providence State: RI
Weather: Overcast 40's

Well ID: RCA-12R
 Sample Date: 11/20/2019
 Sampler's name: T.Adekanye

WATER LEVEL OBSERVATIONS

Point of measurement	PVC Riser <input checked="" type="checkbox"/>	Casing <input type="checkbox"/>	Ground <input type="checkbox"/>	measurement date/time: <u>11/19/19 - 1356</u>
Total well depth (feet)		14.43		Standing water in well (feet) <u>4.53</u>
Depth to LNAPL (feet)		-		Well Diamter (in.) <u>2</u>
Depth to water (feet)		9.9		Sample Depth (feet bgs) <u>12</u>
Depth to DNAPL (feet)		-		Standpipe TPVC to Ground (feet) <u>-</u>
Well Screen (feet bgs)		5 to 15		Roadbox TPVC to Ground (feet) <u>-</u>

Well Condition:	Protective casing <input type="checkbox"/> poor <input checked="" type="checkbox"/> good	Expansion cap <input checked="" type="checkbox"/> yes <input type="checkbox"/> no	Well ID <input type="checkbox"/> yes <input checked="" type="checkbox"/> no
	lock <input type="checkbox"/> yes <input checked="" type="checkbox"/> no	Concrete Collar <input checked="" type="checkbox"/> yes <input type="checkbox"/> no	Well <input type="checkbox"/> poor <input checked="" type="checkbox"/> good

EQUIPMENT

Sample Method: Bailer Pump / Low Flow

Pump Type: geopump No. 2

Meter Type: YSI No. 2 Flow Thru Cell Vol (mL): 250

INSTRUMENT MEASUREMENTS: Start time: 0715 Stop time: 0829

Time	Depth to water (ft) (drawdown <0.3 or stable)	ORP (mV) (± 10)	pH (s.u.) (± 0.1)	Spec. Cond ($\mu\text{S}/\text{cm}$) ($\pm 3\%$)	DO (mg/L) ($\pm 10\%$ or 3 rds <0.5)	Temp. (°C) ($\pm 3\%$)	Turbidity (ntu) ($\pm 10\%$ or <5 ntu)	Flow (mL/min) (<500)	Notes
0749	9.94	73.5	6.04	2891	0.27	15	52	300	
0802	9.95	72.6	6.03	3005	0.21	15	89.7	300	
0806	9.95	72.6	6.03	3062	0.21	15.1	81.0	300	
0809	9.95	72.2	6.04	3071	0.20	15	75.4	300	
0820	10	72.7	6.04	3178	0.18	15.2	48	300	
0823	10	72.5	6.04	3183	0.19	15.2	47	300	
0826	10	73.7	6.04	3163	0.18	15.2	50	300	

SAMPLE TESTING INFORMATION

Sample time: 0829

Analysis	Method	No. bottles	Bottle type	Volume	Preservation	Handling
VOC	8260	3	VOA	40mL	HCL	on ice

SAMPLE OBSERVATIONS

Color none Odor none Clarity clear

Purge Volume: 2.5 gallons
Tubing Volume: 0.1 gallons

Notes: BD 112019 NAS collected from this well.

Due to lack of water in the well sample was collected at 12 ft. bgs.

File No. 33554.01
 Project 642 Allens Ave
 Location City: Providence State: RI
 Weather: Overcast 40's

Well ID: RCA-15
 Sample Date: 11/20/2019
 Sampler's name: S. McLeod

WATER LEVEL OBSERVATIONS

Point of measurement	PVC Riser <input checked="" type="checkbox"/>	Casing <input type="checkbox"/>	Ground <input type="checkbox"/>	measurement date/time: 11/19/19 - 1301
Total well depth (feet)		18.22		Standing water in well (feet) 9.58
Depth to LNAPL (feet)		-		Well Diamter (in.) 2
Depth to water (feet)		8.64		Sample Depth (feet bgs) 10
Depth to DNAPL (feet)		-		Standpipe TPVC to Ground (feet) -
Well Screen (feet bgs)		4 to 14		Roadbox TPVC to Ground (feet) -
Well Condition:	Protective casing <input type="checkbox"/> poor <input checked="" type="checkbox"/> good lock <input checked="" type="checkbox"/> yes <input type="checkbox"/> no		Expansion cap <input checked="" type="checkbox"/> yes <input type="checkbox"/> no	Well ID <input type="checkbox"/> yes <input checked="" type="checkbox"/> no
			Concrete Collar <input checked="" type="checkbox"/> yes <input type="checkbox"/> no	Well <input type="checkbox"/> poor <input checked="" type="checkbox"/> good

EQUIPMENT

Sample Method: Bailer Pump / Low Flow

Pump Type: geopump No. 1

Meter Type: YSI No. 1 Flow Thru Cell Vol (mL): 250

INSTRUMENT MEASUREMENTS:		Start time: 0930			Stop time: 1022				
Time	Depth to water (ft) (drawdown <0.3 or stable)	ORP (mV) (± 10)	pH (s.u.) (± 0.1)	Spec. Cond ($\mu\text{S}/\text{cm}$) ($\pm 3\%$)	DO (mg/L) ($\pm 10\%$ or 3 rds <0.5)	Temp. ($^{\circ}\text{C}$) ($\pm 3\%$)	Turbidity (ntu) ($\pm 10\%$ or <5 ntu)	Flow (mL/min) (<500)	Notes
0930	8.70	159.3	5.13	1136	0.70	11.3	71	300	
1016	8.70	109.4	5.54	1188	0.24	11.5	13	200	
1019	8.70	105.6	5.55	1192	0.24	11.5	13	200	
1022	8.70	102.5	5.56	1144	0.24	11.5	13	200	

SAMPLE TESTING INFORMATION

Sample time: 1022

Analysis	Method	No. bottles	Bottle type	Volume	Preservation	Handling
VOC	8260	3	VOA	40mL	HCL	on ice

SAMPLE OBSERVATIONS

Color none Odor none Clarity clear

Purge Volume: 2.5 gallons

Tubing Volume: 0.1 gallons

Notes: Sample collected at 10 ft. bgs due to lack of water in well.

File No. 33554.01
 Project 642 Allens Ave
 Location City: Providence State: RI
Weather: Overcast 40's

Well ID: RCA-31
 Sample Date: 11/19/2019
 Sampler's name: T.Adekanye

WATER LEVEL OBSERVATIONS

Point of measurement	PVC Riser <input checked="" type="checkbox"/>	Casing <input type="checkbox"/>	Ground <input type="checkbox"/>	measurement date/time: <u>11/18/19 - 1142</u>
Total well depth (feet)		13.80		Standing water in well (feet) <u>1.32</u>
Depth to LNAPL (feet)		-		Well Diamter (in.) <u>2</u>
Depth to water (feet)		12.48		Sample Depth (feet bgs) <u>13</u>
Depth to DNAPL (feet)		-		Standpipe TPVC to Ground (feet) <u>-</u>
Well Screen (feet bgs)		5 to 15		Roadbox TPVC to Ground (feet) <u>-</u>
Well Condition:	Protective casing <input type="checkbox"/> poor <input checked="" type="checkbox"/> good lock <input checked="" type="checkbox"/> yes <input type="checkbox"/> no		Expansion cap <input checked="" type="checkbox"/> yes <input type="checkbox"/> no	Well ID <input checked="" type="checkbox"/> yes <input type="checkbox"/> no
			Concrete Collar <input checked="" type="checkbox"/> yes <input type="checkbox"/> no	Well <input type="checkbox"/> poor <input checked="" type="checkbox"/> good

EQUIPMENT

Pump Type:	<u>geopump</u>	No.	<u>2</u>	Sample Method: <input type="checkbox"/> Bailer <input checked="" type="checkbox"/> Pump / <input type="checkbox"/> Low Flow
Meter Type:	<u>YSI</u>	No.	<u>2</u>	Flow Thru Cell Vol (mL): <u>250</u>

INSTRUMENT MEASUREMENTS:

Time	Depth to water (ft) (drawdown <0.3 or stable)	ORP (mV) (± 10)	pH (s.u.) (± 0.1)	Spec. Cond ($\mu\text{S}/\text{cm}$) ($\pm 3\%$)	DO (mg/L) ($\pm 10\%$ or 3 rds <0.5)	Temp. (°C) ($\pm 3\%$)	Turbidity (ntu) ($\pm 10\%$ or <5 ntu)	Flow (mL/min) (<500)	Start time: <u>0814</u>	Stop time: <u>0845</u>
									Notes	
0819	12.48	300.5	7.18	605	3.27	14.4	3.01	250		
0838	12.48	314.8	7.19	641	2.62	14.4	8.11	250		
0841	12.48	315.3	7.19	645	2.64	14.3	8.04	250		
0844	12.48	315.7	7.20	649	2.64	14.4	8.37	250		

SAMPLE TESTING INFORMATION

Analysis	Method	No. bottles	Bottle type	Volume	Preservation	Handling
VOC	8260	3	VOA	40mL	HCL	on ice

SAMPLE OBSERVATIONS

Color	none	Odor	none	Clarity	clear	Purge Volume: <u>2</u> gallons
Notes:	Due to lack of water in the well, well was sampled at 13 ft bgs.					Tubing Volume: <u>0.1</u> gallons

File No. 33554.01
 Project 642 Allens Ave
 Location City: Providence State: RI
 Weather: Overcast 40's

Well ID: RCA-36
 Sample Date: 11/19/2019
 Sampler's name: T.Adekanye

WATER LEVEL OBSERVATIONS

Point of measurement	PVC Riser <input checked="" type="checkbox"/>	Casing <input type="checkbox"/>	Ground <input type="checkbox"/>	measurement date/time:	11/18/19 - 1545
Total well depth (feet)		12.35		Standing water in well (feet)	2.06
Depth to LNAPL (feet)		-		Well Diamter (in.)	2
Depth to water (feet)		10.29		Sample Depth (feet bgs)	11
Depth to DNAPL (feet)		-		Standpipe TPVC to Ground (feet)	-
Well Screen (feet bgs)		5 to 15		Roadbox TPVC to Ground (feet)	-
Well Condition:	Protective casing <input type="checkbox"/>	poor	<input checked="" type="checkbox"/>	good	<input type="checkbox"/> yes <input type="checkbox"/> no
	lock <input type="checkbox"/>	yes	<input type="checkbox"/>	no	<input type="checkbox"/> Well ID <input checked="" type="checkbox"/> yes <input type="checkbox"/> no
				Concrete Collar <input type="checkbox"/>	yes <input type="checkbox"/> no
				Well <input type="checkbox"/>	poor <input checked="" type="checkbox"/> good

EQUIPMENT

Pump Type:	geopump	No.	2	Sample Method:	<input type="checkbox"/> Bailer <input checked="" type="checkbox"/> Pump / <input type="checkbox"/> Low Flow
Meter Type:	YSI	No.	2	Flow Thru Cell Vol (mL):	250

INSTRUMENT MEASUREMENTS:

Time	Depth to water (ft) (drawdown <0.3 or stable)	ORP (mV) (±10)	pH (s.u.) (±0.1)	Spec. Cond (µS/cm) (±3%)	DO (mg/L) (±10% or 3 rds <0.5)	Temp. (°C) (±3%)	Turbidity (ntu) (±10% or <5 ntu)	Flow (mL/min) (<500)	Start time:	1010	Stop time:	1104
1020	10.78	28.9	6.25	17250	1.32	12.3	<5	300				
1033	10.78	37.9	6.26	19556	1.43	12.1	<5	300				
1057	10.78	47.7	6.29	21657	1.70	11.9	<5	300				
1100	10.78	49.0	6.30	21826	1.73	12.0	<5	300				
1103	10.78	50.5	6.30	22075	1.81	12.0	<5	300				

SAMPLE TESTING INFORMATION

Analysis	Method	No. bottles	Bottle type	Volume	Preservation	Handling
VOC	8260	3	VOA	40mL	HCL	on ice

SAMPLE OBSERVATIONS

Color none Odor none Clarity clear

Purge Volume: 2 gallons
 Tubing Volume: 0.1 gallons

Notes:

File No. 33554.01
Project 642 Allens Ave
Location City: Providence State: RI
Weather: Overcast 40's

Well ID: VHB-1
Sample Date: 11/20/2019
Sampler's name: T.Adekanye

WATER LEVEL OBSERVATIONS

measurement date/time: 11/19/19 - 1336

Point of measurement PVC Riser Casing Ground
Total well depth (feet) 11.48
Depth to LNAPL (feet) -
Depth to water (feet) 4.19
Depth to DNAPL (feet) -
Well Screen (feet bgs) 2 to 12

Standing water in well (feet) 7.29
Well Diamter (in.) 2
Sample Depth (feet bgs) 7
Standpipe TPVC to Ground (feet) -
Roadbox TPVC to Ground (feet) -

Well Condition: Protective casing poor good
lock yes no
Expansion cap yes no Well ID yes no
Concrete Collar yes no Well poor good

EQUIPMENTSample Method: Bailer Pump / Low Flow

Pump Type: geopump No. 2

Meter Type: YSI No. 2 Flow Thru Cell Vol (mL): 250

INSTRUMENT MEASUREMENTS:

Start time: 1003

Stop time: 1154

Time	Depth to water (ft) (drawdown <0.3 or stable)	ORP (mV) (±10)	pH (s.u.) (±0.1)	Spec. Cond (µS/cm) (±3%)	DO (mg/L) (±10% or 3 rds <0.5)	Temp. (°C) (±3%)	Turbidity (ntu) (±10% or <5 ntu)	Flow (mL/min) (<500)	Notes
1131	4.33	-164.9	7.06	2612	0.19	15.2	14.40	300	
1146	4.37	-161.8	7.05	2616	<0.5	15.3	14.00	300	
1149	4.37	-163.5	7.06	2619	<0.5	15.3	14.30	300	
1152	4.37	-164.0	7.06	2613	<0.5	15.3	13.36	300	

SAMPLE TESTING INFORMATION

Sample time: 1154

Analysis	Method	No. bottles	Bottle type	Volume	Preservation	Handling
VOC	8260	3	VOA	Vial	HCL	on ice

SAMPLE OBSERVATIONS

Color: none Odor: Petroleum Like Clarity: Dull-moderate plates of Sheen

Purge Volume: 3.5 gallons
Tubing Volume: 0.1 gallons

Notes:

File No.	33554.01		
Project	642 Allens Ave		
Location	City: Providence	State: RI	
Weather:	Overcast 40's		

Well ID: VHB-20
Sample Date: 11/19/2019
Sampler's name: S. McLeod

WATER LEVEL OBSERVATIONS

measurement date/time: 11/18/19 - 1618

Point of measurement	PVC Riser	Casing	Ground		
Total well depth (feet)		17.50		Standing water in well (feet)	8.87
Depth to LNAPL (feet)		-		Well Diamter (in.)	2
Depth to water (feet)		8.63		Sample Depth (feet bgs)	11
Depth to DNAPL (feet)		-		Standpipe TPVC to Ground (feet)	-
Well Screen (feet bgs)		6 to 16		Roadbox TPVC to Ground (feet)	-

Well Condition: **Protective casing** poor good **Expansion cap** yes no Well ID yes no
 lock yes no **Concrete Collar** yes no Well poor good

EQUIPMENT

Sample Method: Bailer Pump / Low Flow

Pump Type: geopump **No.** 1

Meter Type: YSI **No.** 1 **Flow Thru Cell Vol (mL):** 250

INSTRUMENT MEASUREMENTS:

Start time: 0728 Stop time: 0807

SAMPLE TESTING INFORMATION

Sample time: 0807

Analysis	Method	No. bottles	Bottle type	Volume	Preservation	Handling
VOC	8260	3	VOA	40mL	HCL	on ice

SAMPLE OBSERVATIONS

Color none Odor none Clarity clear

Purge Volume: 4 gallons

Tubing Volume: 0.1 gallons

Notes:

LOW FLOW CALIBRATION SHEET

File No. 33554.01
Project: 642 Allens Avenue
Location: City: Providence State: RI

Page: 1 of 2
Date: 11/19/2019

LOW FLOW CALIBRATION: YSI 6820 - SN 19K101410

Initial Reading:

Specific Conductance:	Instrument and Number:	YSI	Standard Solution:	1000	Reading:	1069
pH (s.u.):	Instrument and Number:	YSI	Standard Solution:	4 / 7 / 10	Reading:	4.03 / 7.03 / 9.96
DO (%):	Instrument and Number:	YSI	Standard Solution:	100%	Reading:	100.7
ORP (mvolts):	Instrument and Number:	YSI	Standard Solution:	237.5	Reading:	228
Turbidity (NTU):	Instrument and Number:	Lamotte	Standard Solution:	0 / 126	Reading:	0.9 / 124.8

Calibration:

Specific Conductance:	Instrument and Number:	YSI	Standard Solution:	1000	Reading:	1000
pH (s.u.):	Instrument and Number:	YSI	Standard Solution:	4 / 7 / 10	Reading:	4 / 7 / 10
DO (%):	Instrument and Number:	YSI	Standard Solution:	100%	Reading:	100
ORP (mvolts):	Instrument and Number:	YSI	Standard Solution:	237.5	Reading:	238
Turbidity (NTU):	Instrument and Number:	Lamotte	Standard Solution:	0 / 126	Reading:	0.0 / 124.0

LOW FLOW CALIBRATION SHEET

File No. 33554.01
Project: 642 Allens Avenue
Location: City: Providence State: RI

Page: 2 of 2
Date: 11/19/2019

LOW FLOW CALIBRATION: YSI 6820 - SN 19K101413

Initial Reading:

Specific Conductance:	Instrument and Number:	YSI	Standard Solution:	1000	Reading:	994
pH (s.u.):	Instrument and Number:	YSI	Standard Solution:	4 / 7 / 10	Reading:	4.15 / 7.14 / 10.16
DO (%):	Instrument and Number:	YSI	Standard Solution:	100%	Reading:	99
ORP (mvolts):	Instrument and Number:	YSI	Standard Solution:	237.5	Reading:	219
Turbidity (NTU):	Instrument and Number:	Lamotte	Standard Solution:	0 / 126	Reading:	0.4 / 125

Calibration:

Specific Conductance:	Instrument and Number:	YSI	Standard Solution:	1000	Reading:	1000
pH (s.u.):	Instrument and Number:	YSI	Standard Solution:	4 / 7 / 10	Reading:	4.00 / 7.00 / 10.00
DO (%):	Instrument and Number:	YSI	Standard Solution:	100%	Reading:	100
ORP (mvolts):	Instrument and Number:	YSI	Standard Solution:	237.5	Reading:	238.00
Turbidity (NTU):	Instrument and Number:	Lamotte	Standard Solution:	0 / 126	Reading:	0.0 / 124.0

LOW FLOW CALIBRATION SHEET

File No. 33554.01
Project: 642 Allens Avenue
Location: City: Providence State: RI

Page: 1 of 2
Date: 11/20/2019

LOW FLOW CALIBRATION: YSI 6820 - SN 19K101410

Initial Reading:

Specific Conductance:	Instrument and Number:	YSI	Standard Solution:	1000	Reading:	1039
pH (s.u.):	Instrument and Number:	YSI	Standard Solution:	4 / 7 / 10	Reading:	4.20 / 7.32 / 10.27
DO (%):	Instrument and Number:	YSI	Standard Solution:	100%	Reading:	100.4
ORP (mvolts):	Instrument and Number:	YSI	Standard Solution:	237.5	Reading:	262.2
Turbidity (NTU):	Instrument and Number:	Lamotte	Standard Solution:	0 / 126	Reading:	0 / 126

Calibration:

Specific Conductance:	Instrument and Number:	YSI	Standard Solution:	1000	Reading:	962
pH (s.u.):	Instrument and Number:	YSI	Standard Solution:	4 / 7 / 10	Reading:	4.14 / 7.14 / 10.06
DO (%):	Instrument and Number:	YSI	Standard Solution:	100%	Reading:	102.4
ORP (mvolts):	Instrument and Number:	YSI	Standard Solution:	237.5	Reading:	260.2
Turbidity (NTU):	Instrument and Number:	Lamotte	Standard Solution:	0 / 126	Reading:	0.0 / 126.0

LOW FLOW CALIBRATION SHEET

File No. 33554.01
Project: 642 Allens Avenue
Location: City: Providence State: RI

Page: 2 of 2
Date: 11/20/2019

LOW FLOW CALIBRATION: YSI 6820 - SN 19K101413

Initial Reading:

Specific Conductance:	Instrument and Number:	<u>YSI</u>	Standard Solution:	<u>1000</u>	Reading:	<u>965</u>
pH (s.u.):	Instrument and Number:	<u>YSI</u>	Standard Solution:	<u>4 / 7 / 10</u>	Reading:	<u>4.05 / 7.11 / 10.26</u>
DO (%):	Instrument and Number:	<u>YSI</u>	Standard Solution:	<u>100%</u>	Reading:	<u>100.6</u>
ORP (mvolts):	Instrument and Number:	<u>YSI</u>	Standard Solution:	<u>237.5</u>	Reading:	<u>266.7</u>
Turbidity (NTU):	Instrument and Number:	<u>Lamotte</u>	Standard Solution:	<u>0 / 126</u>	Reading:	<u>0 / 126</u>

Calibration:

Specific Conductance:	Instrument and Number:	<u>YSI</u>	Standard Solution:	<u>1000</u>	Reading:	<u>903</u>
pH (s.u.):	Instrument and Number:	<u>YSI</u>	Standard Solution:	<u>4 / 7 / 10</u>	Reading:	<u>4.00 / 7.05 / 10.00</u>
DO (%):	Instrument and Number:	<u>YSI</u>	Standard Solution:	<u>100%</u>	Reading:	<u>99.6</u>
ORP (mvolts):	Instrument and Number:	<u>YSI</u>	Standard Solution:	<u>237.5</u>	Reading:	<u>260.8</u>
Turbidity (NTU):	Instrument and Number:	<u>Lamotte</u>	Standard Solution:	<u>0 / 126</u>	Reading:	<u>0.0 / 126.0</u>



APPENDIX C

2019 Well Decommissioning Logs



GZA GeoEnvironmental, Inc.

Well Abandonment Form

Well ID: E55

Date Abandoned: 6/25/19

GZA Job Number: 33554.01

Time Started: 1000

Site Address: 642 Allens Ave

Time Finished: 1100

Town, State: Providence, RI

Gauging date: 6/27/16

Gauging Time: 830

Well Diameter: 1"

Depth to LNAPL: -

Depth to Water: Not Encountered

LNAPL Thickness: -

Depth to Bottom of the Well: 6'

Depth to DNAPL: -

Depth to Bottom of Well (BGS): 6'

DNAPL Thickness: -

Method of abandonment (circle one):

Removed Casing Overdrilling Split Casing Other

If other, explain: _____

Abandonment material: Grout

Quantity Used (in gallons): 1

Crew onsite: Dan Regan, NEG

GZA Personnel onsite: Elizabeth Lux

Sarah McLeod



GZA GeoEnvironmental, Inc.

Well Abandonment Form

Well ID: RCA-39

Date Abandoned: 10/1/19

GZA Job Number: 33554.04 **Time Started:** 0900

Site Address: 642 Allens Ave **Time Finished:** 1000

Town, State: Providence, RI

Gauging date: 6/25/19

Gauging Time: 0930

Well Diameter: 2"

Depth to LNAPL: -

Depth to Water: 8.8'

LNAPL Thickness: -

Depth to Bottom of the Well: 14.6'

Depth to DNAPL: -

Depth to Bottom of Well (BGS): 9'

DNAPL Thickness: -

Method of abandonment (circle one):

Removed Casing Overdrilling Split Casing Other

If other, explain: _____

Abandonment material: Grout

Quantity Used (in gallons): 5

Crew onsite: Dave Nascimento

GZA Personnel onsite: Lucas Withers

Sophia Narkiewicz



APPENDIX D

Investigation Derived Waste (IDW) Shipping Records

Please print or type.

RI 1904627555-001

SC PPW 3/12/2019

Form Approved. OMB No. 2050-0339

UNIFORM HAZARDOUS WASTE MANIFEST		1. Generator ID Number R1D007918774	2 Page 1 of 1	3. Emergency Response Phone (800) 483-3718	4. Manifest Tracking Number 013772274 FLE	
5. Generator's Name and Mailing Address Narragansett Electric Company 40 Sylvan Road Waltham, MA 02451 Generator's Phone: (781) 907-3647		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		U.S. EPA ID Number				
8. Designated Facility Name and Site Address Clean Harbors El Dorado LLC 309 American Circle El Dorado, AR 71730 Facility's Phone: (870) 863-7173		U.S. EPA ID Number ARD069748192				
GENERATOR	9a. HM	9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any)) 1. NON DOT REGULATED MATERIAL, (OILY DEBRIS)	10. Containers No. 1	11. Total Quantity Dm 40	12. Unit Wt./Vol. P	13. Waste Codes R015
	2.					
	3.					
	4.					
14. Special Handling Instructions and Additional Information 1.R40179RIR IXSS						
Contract retained by generator covers agency authority on initial transporter to add or substitute additional transporters on generator's behalf for purposes of transportation, delivery, confinement, or sale.						
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.						
Generators/Offeror's Printed/Typed Name JIM DENOLF NARRAGANSETT ELECTRIC			Signature	Month Day Year 8/30/19		
TRANSPORTER INT'L	16. International Shipments <input type="checkbox"/> Import to U.S. <input type="checkbox"/> Export from U.S.		Port of entry/exit Date leaving U.S.			
	Transporter signature (for exports only): Joshua Malone		Joshua Malone	Month Day Year 8/30/19		
	Transporter 1 Printed/Typed Name Joshua Malone		Signature Joshua Malone	Month Day Year 8/30/19		
DESIGNATED FACILITY	18. Discrepancy 18a. Discrepancy Indication Space <input type="checkbox"/> Quantity <input type="checkbox"/> Type <input type="checkbox"/> Residue <input type="checkbox"/> Partial Rejection <input type="checkbox"/> 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) Haylie Tittle		Signature Haylie tittle	Month Day Year 9/18/19		
19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems) H040						
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 Haylie Tittle						

Truck#40158

Please print or type.

UNIFORM HAZARDOUS WASTE MANIFEST		1. Generator ID Number RID007918774	2. Page 1 of 1	3. Emergency Response Phone (800) 483-3718	4. Manifest Tracking Number 013772304 FLE		
5. Generator's Name and Mailing Address Narragansett Electric Company 40 Sylvan Road Waltham, MA 02451 Generator's Phone: (781)907-3647		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		U.S. EPA ID Number					
8. Designated Facility Name and Site Address Clean Harbors of Braintree Inc 1 Hill Avenue Braintree, MA 02184 Facility's Phone: (781)380-7100		U.S. EPA ID Number MAD053452637					
GENERATOR	9a. HM	9b. U.S. DOT Description (Including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any)) 1. NA3082, HAZARDOUS WASTE, LIQUID, N.O.S., (BENZENE), 9. PG III	10. Containers No. 001 Type TT	11. Total Quantity 140	12. Unit Wt/Vol. G	13. Waste Codes D018 R015	
	2.						
	3.						
	4.						
14. Special Handling Instructions and Additional Information 1.CHA4457981D ERG0171							
Contract retained by generator or carrier agency							
NOTIFY ON INITIAL TRANSPORTATION TO ADD OR SUBSTITUTE ADDITIONAL TRANSPORTERS ON GENERATOR'S BEHALF FOR PURPOSES OF TRANSPORTATION, SHIPMENT, CONSIGNMENT OR SALE							
15. GENERATOR/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 MA Deneault Narragansett Electric		Signature	6125 Agent <i>for TNEC</i> Month 10 Day 9 Year 11719				
TRANSPORTER INT'L	16. International Shipments	<input type="checkbox"/> Import to U.S.	<input type="checkbox"/> Export from U.S.	Port of entry/exit _____ Date leaving U.S. _____			
	Transporter signature (for exports only):	<i>Greg Lunn</i>					
	17. Transporter Acknowledgment of Receipt of Materials	Signature Greg Lunn Month 10 Day 9 Year 11719					
DESIGNATED FACILITY	18. Discrepancy						
	18a. Discrepancy Indication Space	<input type="checkbox"/> Quantity	<input type="checkbox"/> Type	<input type="checkbox"/> Residue	<input type="checkbox"/> Partial Rejection	<input type="checkbox"/> 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)	2.	3.	4.				
1. 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 Huyen Hoang	Signature <i>Huyen Hoang</i> Month 10 Day 9 Year 11719						

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



Land Disposal Restriction
Notification Form

Page : 1 of 1

Printed Date : Sep 16, 2019

MANIFEST INFORMATION

Generator : Narragansett Electric Company

Manifest Tracking Info.

Address: 642 Allens Avenue
Providence, RI 02905

013772304FLE

EPA ID #: RID 007918774

Sales Order No: 1900522818-012

LINE ITEM INFORMATION

Line Item:	Page No:	Profile No:	Treatability Group:	LDR Disposal Category
1.	1	CH244579RIB	NON-WASTEWATER	2 (This is subject to LDR.)

EPA Waste Code	EPA Waste SubCategory
D018	NONE

Certification

Applies to
Manifest Line
Items

Pursuant to 40 CFR 268.7(a), I hereby notify that this shipment contains waste restricted under 40 CFR Part 268.

1.

Waste analysis data, where available, is attached.

Signature : J. S. Sander

Print Name

Jim Sander #1215

Title : AGENT FOR JNEC

Date :

09-17-19

Please print or type.

RI 1906268124-001

SC PPW 12/9/2008

Form Approved. OMB No. 2050-0039

UNIFORM HAZARDOUS WASTE MANIFEST		1. Generator ID Number R1D007918774	2. Page 1 of 1	3. Emergency Response Phone (800) 483-3718	4. Manifest Tracking Number 013772476 FLE			
5. Generator's Name and Mailing Address Narragansett Electric Company 40 Sylvan Road Waltham, MA 02451 Generator's Phone: (781) 907-3647		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		U.S. EPA ID Number						
8. Designated Facility Name and Site Address Clean Harbors El Dorado LLC 309 American Circle El Dorado, AR 71730 Facility's Phone: (870) 863-7173		U.S. EPA ID Number ARD069748192						
GENERATOR	9a. HM	9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any)) 1. NON DOT REGULATED MATERIAL, (OILY DEBRIS)	10. Containers No. 03	11. Total Quantity 150	12. Unit Wt./Vol. P.	13. Waste Codes R015		
	2.							
	3.							
	4.							
14. Special Handling Instructions and Additional Information 1.R40179RIR 3x55 metal drums								
Authority of 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 Narragansett Electric Co. Gus Banilla #82912			Signature 	Month 11	Day 26	Year 2019		
INTL	16. International Shipments	<input type="checkbox"/> Import to U.S.	<input type="checkbox"/> 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 Gus Banilla #82912	Signature 	Month 11	Day 26	Year 2019			
	Transporter 2 Printed/Typed Name	Signature 	Month 	Day 	Year 			
18. Discrepancy								
18a. Discrepancy Indication Space		<input type="checkbox"/> Quantity	<input type="checkbox"/> Type	<input type="checkbox"/> Residue	<input type="checkbox"/> Partial Rejection	<input type="checkbox"/> Full Rejection		
Manifest Reference Number: _____								
18b. Alternate Facility (or Generator)								
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. H040	2.	3.	4.					
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 Michelle Blackwell		Signature 	Month 11	Day 18	Year 2019			

Please print or type.

UNIFORM HAZARDOUS WASTE MANIFEST		1. Generator ID Number R1D007918774	2. Page 1 of 1	3. Emergency Response Phone (800) 483-3718	4. Manifest Tracking Number 013772520 FLE	
5. Generator's Name and Mailing Address Narragansett Electric Company 40 Sylvan Road Waltham, MA 02451		Generator's Site Address (if different than mailing address) 642 Allens Avenue Providence, RI 02905				
Generator's Phone: (781) 907-3647 ATTN: Susan Brochu						
6. Transporter 1 Company Name Clean Harbors Environmental Services, Inc.		U.S. EPA ID Number MAD039322250				
7. Transporter 2 Company Name		U.S. EPA ID Number				
8. Designated Facility Name and Site Address Clean Harbors El Dorado LLC 309 American Circle El Dorado, AR 71730		U.S. EPA ID Number ARD069748192				
Facility's Phone: (870) 863-7173						
GENERATOR	9a. HM	9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any)) 1. NON DOT REGULATED MATERIAL, (OILY DEBRIS)	10. Containers No. 06	11. Total Quantity DM 400	12. Unit Wt./Vol. P.	13. Waste Codes R015
	2.					
	3.					
	4.					
14. Special Handling Instructions and Additional Information 6x55 metal drums						
Contract retained by generator confers agency authority on initial transporter to add or substitute additional transporters on generator's behalf for purposes of transportation efficiency, convenience, or safety.						
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/Offeree's Printed/Typed Name Jim Dewolf		Signature	Signature #1215 AGENT FOR NARRAGANSETT ELECT.			
			Month Day Year 12 20 19			
TRANSPORTER INT'L	16. International Shipments	<input type="checkbox"/> Import to U.S.	<input type="checkbox"/> Export from U.S.	Port of entry/exit		
	Transporter signature (for exports only):					
	Date leaving U.S.: _____					
17. Transporter Acknowledgment of Receipt of Materials		Signature	Month Day Year 12 20 19			
Transporter 1 Printed/Typed Name Chris Burilla #083472		Signature	Month Day Year 12 20 19			
Transporter 2 Printed/Typed Name		Signature	Month Day Year			
DESIGNATED FACILITY	18. Discrepancy					
	18a. Discrepancy Indication Space	<input type="checkbox"/> Quantity	<input type="checkbox"/> Type	<input type="checkbox"/> Residue	<input type="checkbox"/> Partial Rejection	<input type="checkbox"/> 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. H040		2.	3.	4.		
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 Linda Goodwin		Signature	Month Day Year 1/9/20			



APPENDIX E

Laboratory Reports



CERTIFICATE OF ANALYSIS

Sophia Narkiewicz
GZA GeoEnvironmental, Inc.
188 Valley Street
Providence, RI 02909

RE: 642 Allens Ave (03.0033554.07)
ESS Laboratory Work Order Number: 19K0652

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 3:37 pm, Nov 27, 2019

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: 19K0652

SAMPLE RECEIPT

The following samples were received on November 20, 2019 for the analyses specified on the enclosed Chain of Custody Record.

Lab Number	Sample Name	Matrix	Analysis
19K0652-01	VHB-2D	Ground Water	8260B
19K0652-02	RCA-31	Ground Water	8260B
19K0652-03	GZ-319D	Ground Water	8260B
19K0652-04	GZ-201	Ground Water	8260B
19K0652-05	RCA-36	Ground Water	8260B
19K0652-06	GZ-304D	Ground Water	8260B
19K0652-07	GZA-307D	Ground Water	8260B
19K0652-08	RCA-1	Ground Water	8260B
19K0652-09	RCA-15	Ground Water	8260B
19K0652-10	VHB-1	Ground Water	8260B
19K0652-11	RCA-12R	Ground Water	8260B
19K0652-12	GZ-309D	Ground Water	8260B
19K0652-13	BD 112019	Ground Water	8260B
19K0652-14	Trip Blank	Aqueous	8260B



CERTIFICATE OF ANALYSIS

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

ESS Laboratory Work Order: 19K0652

PROJECT NARRATIVE

8260B Volatile Organic Compounds

C9K0355-CCV1 **Continuing Calibration %Diff/Drift is above control limit (CD+).**
1,4-Dioxane - Screen (46% @ 30%)

No other 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](#)



ESS Laboratory

Division of Thielsch Engineering, Inc.

BAL Laboratory

*The Microbiology Division
of Thielsch Engineering, Inc.*



CERTIFICATE OF ANALYSIS

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

ESS Laboratory Work Order: 19K0652

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.



ESS Laboratory

Division of Thielsch Engineering, Inc.

BAL Laboratory

*The Microbiology Division
of Thielsch Engineering, Inc.*



CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.

Client Project ID: 642 Allens Ave

Client Sample ID: VHB-2D

Date Sampled: 11/19/19 08:07

Percent Solids: N/A

Initial Volume: 5

Final Volume: 5

Extraction Method: 5030B

ESS Laboratory Work Order: 19K0652

ESS Laboratory Sample ID: 19K0652-01

Sample Matrix: Ground Water

Units: mg/L

Analyst: MD

8260B Volatile Organic Compounds

<u>Analyte</u>	<u>Results (MRL)</u>	<u>MDL</u>	<u>Method</u>	<u>Limit</u>	<u>DF</u>	<u>Analyzed</u>	<u>Sequence</u>	<u>Batch</u>
1,1,1,2-Tetrachloroethane	ND (0.0010)		8260B		1	11/21/19 20:07	C9K0356	CK92130
1,1,1-Trichloroethane	ND (0.0010)		8260B		1	11/21/19 20:07	C9K0356	CK92130
1,1,2,2-Tetrachloroethane	ND (0.0005)		8260B		1	11/21/19 20:07	C9K0356	CK92130
1,1,2-Trichloroethane	ND (0.0010)		8260B		1	11/21/19 20:07	C9K0356	CK92130
1,1-Dichloroethane	ND (0.0010)		8260B		1	11/21/19 20:07	C9K0356	CK92130
1,1-Dichloroethene	ND (0.0010)		8260B		1	11/21/19 20:07	C9K0356	CK92130
1,1-Dichloropropene	ND (0.0020)		8260B		1	11/21/19 20:07	C9K0356	CK92130
1,2,3-Trichlorobenzene	ND (0.0010)		8260B		1	11/21/19 20:07	C9K0356	CK92130
1,2,3-Trichloropropane	ND (0.0010)		8260B		1	11/21/19 20:07	C9K0356	CK92130
1,2,4-Trichlorobenzene	ND (0.0010)		8260B		1	11/21/19 20:07	C9K0356	CK92130
1,2,4-Trimethylbenzene	ND (0.0010)		8260B		1	11/21/19 20:07	C9K0356	CK92130
1,2-Dibromo-3-Chloropropane	ND (0.0050)		8260B		1	11/21/19 20:07	C9K0356	CK92130
1,2-Dibromoethane	ND (0.0010)		8260B		1	11/21/19 20:07	C9K0356	CK92130
1,2-Dichlorobenzene	ND (0.0010)		8260B		1	11/21/19 20:07	C9K0356	CK92130
1,2-Dichloroethane	ND (0.0010)		8260B		1	11/21/19 20:07	C9K0356	CK92130
1,2-Dichloropropane	ND (0.0010)		8260B		1	11/21/19 20:07	C9K0356	CK92130
1,3,5-Trimethylbenzene	ND (0.0010)		8260B		1	11/21/19 20:07	C9K0356	CK92130
1,3-Dichlorobenzene	ND (0.0010)		8260B		1	11/21/19 20:07	C9K0356	CK92130
1,3-Dichloropropane	ND (0.0010)		8260B		1	11/21/19 20:07	C9K0356	CK92130
1,4-Dichlorobenzene	ND (0.0010)		8260B		1	11/21/19 20:07	C9K0356	CK92130
1,4-Dioxane - Screen	ND (0.500)		8260B		1	11/21/19 20:07	C9K0356	CK92130
1-Chlorohexane	ND (0.0010)		8260B		1	11/21/19 20:07	C9K0356	CK92130
2,2-Dichloropropane	ND (0.0010)		8260B		1	11/21/19 20:07	C9K0356	CK92130
2-Butanone	ND (0.0100)		8260B		1	11/21/19 20:07	C9K0356	CK92130
2-Chlorotoluene	ND (0.0010)		8260B		1	11/21/19 20:07	C9K0356	CK92130
2-Hexanone	ND (0.0100)		8260B		1	11/21/19 20:07	C9K0356	CK92130
4-Chlorotoluene	ND (0.0010)		8260B		1	11/21/19 20:07	C9K0356	CK92130
4-Isopropyltoluene	ND (0.0010)		8260B		1	11/21/19 20:07	C9K0356	CK92130
4-Methyl-2-Pentanone	ND (0.0250)		8260B		1	11/21/19 20:07	C9K0356	CK92130
Acetone	ND (0.0100)		8260B		1	11/21/19 20:07	C9K0356	CK92130
Benzene	0.0897 (0.0010)		8260B		1	11/21/19 20:07	C9K0356	CK92130
Bromobenzene	ND (0.0020)		8260B		1	11/21/19 20:07	C9K0356	CK92130



CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.

Client Project ID: 642 Allens Ave

Client Sample ID: VHB-2D

Date Sampled: 11/19/19 08:07

Percent Solids: N/A

Initial Volume: 5

Final Volume: 5

Extraction Method: 5030B

ESS Laboratory Work Order: 19K0652

ESS Laboratory Sample ID: 19K0652-01

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	11/21/19 20:07	C9K0356	CK92130
Bromodichloromethane	ND (0.0006)		8260B		1	11/21/19 20:07	C9K0356	CK92130
Bromoform	ND (0.0010)		8260B		1	11/21/19 20:07	C9K0356	CK92130
Bromomethane	ND (0.0020)		8260B		1	11/21/19 20:07	C9K0356	CK92130
Carbon Disulfide	ND (0.0010)		8260B		1	11/21/19 20:07	C9K0356	CK92130
Carbon Tetrachloride	ND (0.0010)		8260B		1	11/21/19 20:07	C9K0356	CK92130
Chlorobenzene	ND (0.0010)		8260B		1	11/21/19 20:07	C9K0356	CK92130
Chloroethane	ND (0.0020)		8260B		1	11/21/19 20:07	C9K0356	CK92130
Chloroform	ND (0.0010)		8260B		1	11/21/19 20:07	C9K0356	CK92130
Chloromethane	ND (0.0020)		8260B		1	11/21/19 20:07	C9K0356	CK92130
cis-1,2-Dichloroethene	ND (0.0010)		8260B		1	11/21/19 20:07	C9K0356	CK92130
cis-1,3-Dichloropropene	ND (0.0004)		8260B		1	11/21/19 20:07	C9K0356	CK92130
Dibromochloromethane	ND (0.0010)		8260B		1	11/21/19 20:07	C9K0356	CK92130
Dibromomethane	ND (0.0010)		8260B		1	11/21/19 20:07	C9K0356	CK92130
Dichlorodifluoromethane	ND (0.0020)		8260B		1	11/21/19 20:07	C9K0356	CK92130
Diethyl Ether	ND (0.0010)		8260B		1	11/21/19 20:07	C9K0356	CK92130
Di-isopropyl ether	ND (0.0010)		8260B		1	11/21/19 20:07	C9K0356	CK92130
Ethyl tertiary-butyl ether	ND (0.0010)		8260B		1	11/21/19 20:07	C9K0356	CK92130
Ethylbenzene	ND (0.0010)		8260B		1	11/21/19 20:07	C9K0356	CK92130
Hexachlorobutadiene	ND (0.0006)		8260B		1	11/21/19 20:07	C9K0356	CK92130
Hexachloroethane	ND (0.0010)		8260B		1	11/21/19 20:07	C9K0356	CK92130
Isopropylbenzene	0.0014 (0.0010)		8260B		1	11/21/19 20:07	C9K0356	CK92130
Methyl tert-Butyl Ether	ND (0.0010)		8260B		1	11/21/19 20:07	C9K0356	CK92130
Methylene Chloride	ND (0.0020)		8260B		1	11/21/19 20:07	C9K0356	CK92130
Naphthalene	ND (0.0010)		8260B		1	11/21/19 20:07	C9K0356	CK92130
n-Butylbenzene	ND (0.0010)		8260B		1	11/21/19 20:07	C9K0356	CK92130
n-Propylbenzene	ND (0.0010)		8260B		1	11/21/19 20:07	C9K0356	CK92130
sec-Butylbenzene	ND (0.0010)		8260B		1	11/21/19 20:07	C9K0356	CK92130
Styrene	ND (0.0010)		8260B		1	11/21/19 20:07	C9K0356	CK92130
tert-Butylbenzene	ND (0.0010)		8260B		1	11/21/19 20:07	C9K0356	CK92130
Tertiary-amyl methyl ether	ND (0.0010)		8260B		1	11/21/19 20:07	C9K0356	CK92130
Tetrachloroethene	ND (0.0010)		8260B		1	11/21/19 20:07	C9K0356	CK92130



ESS Laboratory

Division of Thielsch Engineering, Inc.

BAL Laboratory

*The Microbiology Division
of Thielsch Engineering, Inc.*



CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.

Client Project ID: 642 Allens Ave

Client Sample ID: VHB-2D

Date Sampled: 11/19/19 08:07

Percent Solids: N/A

Initial Volume: 5

Final Volume: 5

Extraction Method: 5030B

ESS Laboratory Work Order: 19K0652

ESS Laboratory Sample ID: 19K0652-01

Sample Matrix: Ground Water

Units: mg/L

Analyst: MD

8260B Volatile Organic Compounds

<u>Analyte</u>	<u>Results (MRL)</u>	<u>MDL</u>	<u>Method</u>	<u>Limit</u>	<u>DF</u>	<u>Analyzed</u>	<u>Sequence</u>	<u>Batch</u>
Tetrahydrofuran	ND (0.0050)		8260B		1	11/21/19 20:07	C9K0356	CK92130
Toluene	ND (0.0010)		8260B		1	11/21/19 20:07	C9K0356	CK92130
trans-1,2-Dichloroethene	ND (0.0010)		8260B		1	11/21/19 20:07	C9K0356	CK92130
trans-1,3-Dichloropropene	ND (0.0004)		8260B		1	11/21/19 20:07	C9K0356	CK92130
Trichloroethene	ND (0.0010)		8260B		1	11/21/19 20:07	C9K0356	CK92130
Trichlorofluoromethane	ND (0.0010)		8260B		1	11/21/19 20:07	C9K0356	CK92130
Vinyl Acetate	ND (0.0050)		8260B		1	11/21/19 20:07	C9K0356	CK92130
Vinyl Chloride	ND (0.0010)		8260B		1	11/21/19 20:07	C9K0356	CK92130
Xylene O	ND (0.0010)		8260B		1	11/21/19 20:07	C9K0356	CK92130
Xylene P,M	ND (0.0020)		8260B		1	11/21/19 20:07	C9K0356	CK92130
Xylenes (Total)	ND (0.00200)		8260B		1	11/21/19 20:07		[CALC]

	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>
<i>Surrogate: 1,2-Dichloroethane-d4</i>	97 %		70-130
<i>Surrogate: 4-Bromofluorobenzene</i>	96 %		70-130
<i>Surrogate: Dibromofluoromethane</i>	96 %		70-130
<i>Surrogate: Toluene-d8</i>	97 %		70-130



CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.

Client Project ID: 642 Allens Ave

Client Sample ID: RCA-31

Date Sampled: 11/19/19 08:45

Percent Solids: N/A

Initial Volume: 5

Final Volume: 5

Extraction Method: 5030B

ESS Laboratory Work Order: 19K0652

ESS Laboratory Sample ID: 19K0652-02

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	11/21/19 16:39	C9K0356	CK92130
1,1,1-Trichloroethane	ND (0.0010)		8260B		1	11/21/19 16:39	C9K0356	CK92130
1,1,2,2-Tetrachloroethane	ND (0.0005)		8260B		1	11/21/19 16:39	C9K0356	CK92130
1,1,2-Trichloroethane	ND (0.0010)		8260B		1	11/21/19 16:39	C9K0356	CK92130
1,1-Dichloroethane	ND (0.0010)		8260B		1	11/21/19 16:39	C9K0356	CK92130
1,1-Dichloroethene	ND (0.0010)		8260B		1	11/21/19 16:39	C9K0356	CK92130
1,1-Dichloropropene	ND (0.0020)		8260B		1	11/21/19 16:39	C9K0356	CK92130
1,2,3-Trichlorobenzene	ND (0.0010)		8260B		1	11/21/19 16:39	C9K0356	CK92130
1,2,3-Trichloropropane	ND (0.0010)		8260B		1	11/21/19 16:39	C9K0356	CK92130
1,2,4-Trichlorobenzene	ND (0.0010)		8260B		1	11/21/19 16:39	C9K0356	CK92130
1,2,4-Trimethylbenzene	ND (0.0010)		8260B		1	11/21/19 16:39	C9K0356	CK92130
1,2-Dibromo-3-Chloropropane	ND (0.0050)		8260B		1	11/21/19 16:39	C9K0356	CK92130
1,2-Dibromoethane	ND (0.0010)		8260B		1	11/21/19 16:39	C9K0356	CK92130
1,2-Dichlorobenzene	ND (0.0010)		8260B		1	11/21/19 16:39	C9K0356	CK92130
1,2-Dichloroethane	ND (0.0010)		8260B		1	11/21/19 16:39	C9K0356	CK92130
1,2-Dichloropropane	ND (0.0010)		8260B		1	11/21/19 16:39	C9K0356	CK92130
1,3,5-Trimethylbenzene	ND (0.0010)		8260B		1	11/21/19 16:39	C9K0356	CK92130
1,3-Dichlorobenzene	ND (0.0010)		8260B		1	11/21/19 16:39	C9K0356	CK92130
1,3-Dichloropropane	ND (0.0010)		8260B		1	11/21/19 16:39	C9K0356	CK92130
1,4-Dichlorobenzene	ND (0.0010)		8260B		1	11/21/19 16:39	C9K0356	CK92130
1,4-Dioxane - Screen	ND (0.500)		8260B		1	11/21/19 16:39	C9K0356	CK92130
1-Chlorohexane	ND (0.0010)		8260B		1	11/21/19 16:39	C9K0356	CK92130
2,2-Dichloropropane	ND (0.0010)		8260B		1	11/21/19 16:39	C9K0356	CK92130
2-Butanone	ND (0.0100)		8260B		1	11/21/19 16:39	C9K0356	CK92130
2-Chlorotoluene	ND (0.0010)		8260B		1	11/21/19 16:39	C9K0356	CK92130
2-Hexanone	ND (0.0100)		8260B		1	11/21/19 16:39	C9K0356	CK92130
4-Chlorotoluene	ND (0.0010)		8260B		1	11/21/19 16:39	C9K0356	CK92130
4-Isopropyltoluene	ND (0.0010)		8260B		1	11/21/19 16:39	C9K0356	CK92130
4-Methyl-2-Pentanone	ND (0.0250)		8260B		1	11/21/19 16:39	C9K0356	CK92130
Acetone	ND (0.0100)		8260B		1	11/21/19 16:39	C9K0356	CK92130
Benzene	ND (0.0010)		8260B		1	11/21/19 16:39	C9K0356	CK92130
Bromobenzene	ND (0.0020)		8260B		1	11/21/19 16:39	C9K0356	CK92130



CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.

Client Project ID: 642 Allens Ave

Client Sample ID: RCA-31

Date Sampled: 11/19/19 08:45

Percent Solids: N/A

Initial Volume: 5

Final Volume: 5

Extraction Method: 5030B

ESS Laboratory Work Order: 19K0652

ESS Laboratory Sample ID: 19K0652-02

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	11/21/19 16:39	C9K0356	CK92130
Bromodichloromethane	ND (0.0006)		8260B		1	11/21/19 16:39	C9K0356	CK92130
Bromoform	ND (0.0010)		8260B		1	11/21/19 16:39	C9K0356	CK92130
Bromomethane	ND (0.0020)		8260B		1	11/21/19 16:39	C9K0356	CK92130
Carbon Disulfide	ND (0.0010)		8260B		1	11/21/19 16:39	C9K0356	CK92130
Carbon Tetrachloride	ND (0.0010)		8260B		1	11/21/19 16:39	C9K0356	CK92130
Chlorobenzene	ND (0.0010)		8260B		1	11/21/19 16:39	C9K0356	CK92130
Chloroethane	ND (0.0020)		8260B		1	11/21/19 16:39	C9K0356	CK92130
Chloroform	ND (0.0010)		8260B		1	11/21/19 16:39	C9K0356	CK92130
Chloromethane	ND (0.0020)		8260B		1	11/21/19 16:39	C9K0356	CK92130
cis-1,2-Dichloroethene	ND (0.0010)		8260B		1	11/21/19 16:39	C9K0356	CK92130
cis-1,3-Dichloropropene	ND (0.0004)		8260B		1	11/21/19 16:39	C9K0356	CK92130
Dibromochloromethane	ND (0.0010)		8260B		1	11/21/19 16:39	C9K0356	CK92130
Dibromomethane	ND (0.0010)		8260B		1	11/21/19 16:39	C9K0356	CK92130
Dichlorodifluoromethane	ND (0.0020)		8260B		1	11/21/19 16:39	C9K0356	CK92130
Diethyl Ether	ND (0.0010)		8260B		1	11/21/19 16:39	C9K0356	CK92130
Di-isopropyl ether	ND (0.0010)		8260B		1	11/21/19 16:39	C9K0356	CK92130
Ethyl tertiary-butyl ether	ND (0.0010)		8260B		1	11/21/19 16:39	C9K0356	CK92130
Ethylbenzene	ND (0.0010)		8260B		1	11/21/19 16:39	C9K0356	CK92130
Hexachlorobutadiene	ND (0.0006)		8260B		1	11/21/19 16:39	C9K0356	CK92130
Hexachloroethane	ND (0.0010)		8260B		1	11/21/19 16:39	C9K0356	CK92130
Isopropylbenzene	ND (0.0010)		8260B		1	11/21/19 16:39	C9K0356	CK92130
Methyl tert-Butyl Ether	ND (0.0010)		8260B		1	11/21/19 16:39	C9K0356	CK92130
Methylene Chloride	ND (0.0020)		8260B		1	11/21/19 16:39	C9K0356	CK92130
Naphthalene	ND (0.0010)		8260B		1	11/21/19 16:39	C9K0356	CK92130
n-Butylbenzene	ND (0.0010)		8260B		1	11/21/19 16:39	C9K0356	CK92130
n-Propylbenzene	ND (0.0010)		8260B		1	11/21/19 16:39	C9K0356	CK92130
sec-Butylbenzene	ND (0.0010)		8260B		1	11/21/19 16:39	C9K0356	CK92130
Styrene	ND (0.0010)		8260B		1	11/21/19 16:39	C9K0356	CK92130
tert-Butylbenzene	ND (0.0010)		8260B		1	11/21/19 16:39	C9K0356	CK92130
Tertiary-amyl methyl ether	ND (0.0010)		8260B		1	11/21/19 16:39	C9K0356	CK92130
Tetrachloroethene	ND (0.0010)		8260B		1	11/21/19 16:39	C9K0356	CK92130



CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.

Client Project ID: 642 Allens Ave

Client Sample ID: RCA-31

Date Sampled: 11/19/19 08:45

Percent Solids: N/A

Initial Volume: 5

Final Volume: 5

Extraction Method: 5030B

ESS Laboratory Work Order: 19K0652

ESS Laboratory Sample ID: 19K0652-02

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	11/21/19 16:39	C9K0356	CK92130
Toluene	ND (0.0010)		8260B		1	11/21/19 16:39	C9K0356	CK92130
trans-1,2-Dichloroethene	ND (0.0010)		8260B		1	11/21/19 16:39	C9K0356	CK92130
trans-1,3-Dichloropropene	ND (0.0004)		8260B		1	11/21/19 16:39	C9K0356	CK92130
Trichloroethene	ND (0.0010)		8260B		1	11/21/19 16:39	C9K0356	CK92130
Trichlorofluoromethane	ND (0.0010)		8260B		1	11/21/19 16:39	C9K0356	CK92130
Vinyl Acetate	ND (0.0050)		8260B		1	11/21/19 16:39	C9K0356	CK92130
Vinyl Chloride	ND (0.0010)		8260B		1	11/21/19 16:39	C9K0356	CK92130
Xylene O	ND (0.0010)		8260B		1	11/21/19 16:39	C9K0356	CK92130
Xylene P,M	ND (0.0020)		8260B		1	11/21/19 16:39	C9K0356	CK92130
Xylenes (Total)	ND (0.00200)		8260B		1	11/21/19 16:39		[CALC]

	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>
<i>Surrogate: 1,2-Dichloroethane-d4</i>	102 %		70-130
<i>Surrogate: 4-Bromofluorobenzene</i>	96 %		70-130
<i>Surrogate: Dibromofluoromethane</i>	97 %		70-130
<i>Surrogate: Toluene-d8</i>	99 %		70-130



ESS Laboratory

Division of Thielsch Engineering, Inc.

BAL Laboratory

*The Microbiology Division
of Thielsch Engineering, Inc.*



CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.

Client Project ID: 642 Allens Ave

Client Sample ID: GZ-319D

Date Sampled: 11/19/19 08:23

Percent Solids: N/A

Initial Volume: 5

Final Volume: 5

Extraction Method: 5030B

ESS Laboratory Work Order: 19K0652

ESS Laboratory Sample ID: 19K0652-03

Sample Matrix: Ground Water

Units: mg/L

Analyst: MD

8260B Volatile Organic Compounds

<u>Analyte</u>	<u>Results (MRL)</u>	<u>MDL</u>	<u>Method</u>	<u>Limit</u>	<u>DF</u>	<u>Analyzed</u>	<u>Sequence</u>	<u>Batch</u>
1,1,1,2-Tetrachloroethane	ND (0.0010)		8260B		1	11/21/19 20:33	C9K0356	CK92130
1,1,1-Trichloroethane	ND (0.0010)		8260B		1	11/21/19 20:33	C9K0356	CK92130
1,1,2,2-Tetrachloroethane	ND (0.0005)		8260B		1	11/21/19 20:33	C9K0356	CK92130
1,1,2-Trichloroethane	ND (0.0010)		8260B		1	11/21/19 20:33	C9K0356	CK92130
1,1-Dichloroethane	ND (0.0010)		8260B		1	11/21/19 20:33	C9K0356	CK92130
1,1-Dichloroethene	ND (0.0010)		8260B		1	11/21/19 20:33	C9K0356	CK92130
1,1-Dichloropropene	ND (0.0020)		8260B		1	11/21/19 20:33	C9K0356	CK92130
1,2,3-Trichlorobenzene	ND (0.0010)		8260B		1	11/21/19 20:33	C9K0356	CK92130
1,2,3-Trichloropropane	ND (0.0010)		8260B		1	11/21/19 20:33	C9K0356	CK92130
1,2,4-Trichlorobenzene	ND (0.0010)		8260B		1	11/21/19 20:33	C9K0356	CK92130
1,2,4-Trimethylbenzene	ND (0.0010)		8260B		1	11/21/19 20:33	C9K0356	CK92130
1,2-Dibromo-3-Chloropropane	ND (0.0050)		8260B		1	11/21/19 20:33	C9K0356	CK92130
1,2-Dibromoethane	ND (0.0010)		8260B		1	11/21/19 20:33	C9K0356	CK92130
1,2-Dichlorobenzene	ND (0.0010)		8260B		1	11/21/19 20:33	C9K0356	CK92130
1,2-Dichloroethane	ND (0.0010)		8260B		1	11/21/19 20:33	C9K0356	CK92130
1,2-Dichloropropane	ND (0.0010)		8260B		1	11/21/19 20:33	C9K0356	CK92130
1,3,5-Trimethylbenzene	ND (0.0010)		8260B		1	11/21/19 20:33	C9K0356	CK92130
1,3-Dichlorobenzene	ND (0.0010)		8260B		1	11/21/19 20:33	C9K0356	CK92130
1,3-Dichloropropane	ND (0.0010)		8260B		1	11/21/19 20:33	C9K0356	CK92130
1,4-Dichlorobenzene	ND (0.0010)		8260B		1	11/21/19 20:33	C9K0356	CK92130
1,4-Dioxane - Screen	ND (0.500)		8260B		1	11/21/19 20:33	C9K0356	CK92130
1-Chlorohexane	ND (0.0010)		8260B		1	11/21/19 20:33	C9K0356	CK92130
2,2-Dichloropropane	ND (0.0010)		8260B		1	11/21/19 20:33	C9K0356	CK92130
2-Butanone	ND (0.0100)		8260B		1	11/21/19 20:33	C9K0356	CK92130
2-Chlorotoluene	ND (0.0010)		8260B		1	11/21/19 20:33	C9K0356	CK92130
2-Hexanone	ND (0.0100)		8260B		1	11/21/19 20:33	C9K0356	CK92130
4-Chlorotoluene	ND (0.0010)		8260B		1	11/21/19 20:33	C9K0356	CK92130
4-Isopropyltoluene	ND (0.0010)		8260B		1	11/21/19 20:33	C9K0356	CK92130
4-Methyl-2-Pentanone	ND (0.0250)		8260B		1	11/21/19 20:33	C9K0356	CK92130
Acetone	ND (0.0100)		8260B		1	11/21/19 20:33	C9K0356	CK92130
Benzene	0.0530 (0.0010)		8260B		1	11/21/19 20:33	C9K0356	CK92130
Bromobenzene	ND (0.0020)		8260B		1	11/21/19 20:33	C9K0356	CK92130



ESS Laboratory

Division of Thielsch Engineering, Inc.

BAL Laboratory

*The Microbiology Division
of Thielsch Engineering, Inc.*



CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.

Client Project ID: 642 Allens Ave

Client Sample ID: GZ-319D

Date Sampled: 11/19/19 08:23

Percent Solids: N/A

Initial Volume: 5

Final Volume: 5

Extraction Method: 5030B

ESS Laboratory Work Order: 19K0652

ESS Laboratory Sample ID: 19K0652-03

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	11/21/19 20:33	C9K0356	CK92130
Bromodichloromethane	ND (0.0006)		8260B		1	11/21/19 20:33	C9K0356	CK92130
Bromoform	ND (0.0010)		8260B		1	11/21/19 20:33	C9K0356	CK92130
Bromomethane	ND (0.0020)		8260B		1	11/21/19 20:33	C9K0356	CK92130
Carbon Disulfide	ND (0.0010)		8260B		1	11/21/19 20:33	C9K0356	CK92130
Carbon Tetrachloride	ND (0.0010)		8260B		1	11/21/19 20:33	C9K0356	CK92130
Chlorobenzene	ND (0.0010)		8260B		1	11/21/19 20:33	C9K0356	CK92130
Chloroethane	ND (0.0020)		8260B		1	11/21/19 20:33	C9K0356	CK92130
Chloroform	ND (0.0010)		8260B		1	11/21/19 20:33	C9K0356	CK92130
Chloromethane	ND (0.0020)		8260B		1	11/21/19 20:33	C9K0356	CK92130
cis-1,2-Dichloroethene	ND (0.0010)		8260B		1	11/21/19 20:33	C9K0356	CK92130
cis-1,3-Dichloropropene	ND (0.0004)		8260B		1	11/21/19 20:33	C9K0356	CK92130
Dibromochloromethane	ND (0.0010)		8260B		1	11/21/19 20:33	C9K0356	CK92130
Dibromomethane	ND (0.0010)		8260B		1	11/21/19 20:33	C9K0356	CK92130
Dichlorodifluoromethane	ND (0.0020)		8260B		1	11/21/19 20:33	C9K0356	CK92130
Diethyl Ether	ND (0.0010)		8260B		1	11/21/19 20:33	C9K0356	CK92130
Di-isopropyl ether	ND (0.0010)		8260B		1	11/21/19 20:33	C9K0356	CK92130
Ethyl tertiary-butyl ether	ND (0.0010)		8260B		1	11/21/19 20:33	C9K0356	CK92130
Ethylbenzene	ND (0.0010)		8260B		1	11/21/19 20:33	C9K0356	CK92130
Hexachlorobutadiene	ND (0.0006)		8260B		1	11/21/19 20:33	C9K0356	CK92130
Hexachloroethane	ND (0.0010)		8260B		1	11/21/19 20:33	C9K0356	CK92130
Isopropylbenzene	0.0017 (0.0010)		8260B		1	11/21/19 20:33	C9K0356	CK92130
Methyl tert-Butyl Ether	ND (0.0010)		8260B		1	11/21/19 20:33	C9K0356	CK92130
Methylene Chloride	ND (0.0020)		8260B		1	11/21/19 20:33	C9K0356	CK92130
Naphthalene	ND (0.0010)		8260B		1	11/21/19 20:33	C9K0356	CK92130
n-Butylbenzene	ND (0.0010)		8260B		1	11/21/19 20:33	C9K0356	CK92130
n-Propylbenzene	ND (0.0010)		8260B		1	11/21/19 20:33	C9K0356	CK92130
sec-Butylbenzene	ND (0.0010)		8260B		1	11/21/19 20:33	C9K0356	CK92130
Styrene	0.0017 (0.0010)		8260B		1	11/21/19 20:33	C9K0356	CK92130
tert-Butylbenzene	ND (0.0010)		8260B		1	11/21/19 20:33	C9K0356	CK92130
Tertiary-amyl methyl ether	ND (0.0010)		8260B		1	11/21/19 20:33	C9K0356	CK92130
Tetrachloroethene	ND (0.0010)		8260B		1	11/21/19 20:33	C9K0356	CK92130



CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.

Client Project ID: 642 Allens Ave

Client Sample ID: GZ-319D

Date Sampled: 11/19/19 08:23

Percent Solids: N/A

Initial Volume: 5

Final Volume: 5

Extraction Method: 5030B

ESS Laboratory Work Order: 19K0652

ESS Laboratory Sample ID: 19K0652-03

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	11/21/19 20:33	C9K0356	CK92130
Toluene	ND (0.0010)		8260B		1	11/21/19 20:33	C9K0356	CK92130
trans-1,2-Dichloroethene	ND (0.0010)		8260B		1	11/21/19 20:33	C9K0356	CK92130
trans-1,3-Dichloropropene	ND (0.0004)		8260B		1	11/21/19 20:33	C9K0356	CK92130
Trichloroethene	ND (0.0010)		8260B		1	11/21/19 20:33	C9K0356	CK92130
Trichlorofluoromethane	ND (0.0010)		8260B		1	11/21/19 20:33	C9K0356	CK92130
Vinyl Acetate	ND (0.0050)		8260B		1	11/21/19 20:33	C9K0356	CK92130
Vinyl Chloride	ND (0.0010)		8260B		1	11/21/19 20:33	C9K0356	CK92130
Xylene O	ND (0.0010)		8260B		1	11/21/19 20:33	C9K0356	CK92130
Xylene P,M	ND (0.0020)		8260B		1	11/21/19 20:33	C9K0356	CK92130
Xylenes (Total)	ND (0.00200)		8260B		1	11/21/19 20:33		[CALC]

	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>
<i>Surrogate: 1,2-Dichloroethane-d4</i>	98 %		70-130
<i>Surrogate: 4-Bromofluorobenzene</i>	98 %		70-130
<i>Surrogate: Dibromofluoromethane</i>	97 %		70-130
<i>Surrogate: Toluene-d8</i>	98 %		70-130



CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.

Client Project ID: 642 Allens Ave

Client Sample ID: GZ-201

Date Sampled: 11/19/19 10:25

Percent Solids: N/A

Initial Volume: 5

Final Volume: 5

Extraction Method: 5030B

ESS Laboratory Work Order: 19K0652

ESS Laboratory Sample ID: 19K0652-04

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	11/21/19 19:15	C9K0356	CK92130
1,1,1-Trichloroethane	ND (0.0010)		8260B		1	11/21/19 19:15	C9K0356	CK92130
1,1,2,2-Tetrachloroethane	ND (0.0005)		8260B		1	11/21/19 19:15	C9K0356	CK92130
1,1,2-Trichloroethane	ND (0.0010)		8260B		1	11/21/19 19:15	C9K0356	CK92130
1,1-Dichloroethane	ND (0.0010)		8260B		1	11/21/19 19:15	C9K0356	CK92130
1,1-Dichloroethene	ND (0.0010)		8260B		1	11/21/19 19:15	C9K0356	CK92130
1,1-Dichloropropene	ND (0.0020)		8260B		1	11/21/19 19:15	C9K0356	CK92130
1,2,3-Trichlorobenzene	ND (0.0010)		8260B		1	11/21/19 19:15	C9K0356	CK92130
1,2,3-Trichloropropane	ND (0.0010)		8260B		1	11/21/19 19:15	C9K0356	CK92130
1,2,4-Trichlorobenzene	ND (0.0010)		8260B		1	11/21/19 19:15	C9K0356	CK92130
1,2,4-Trimethylbenzene	ND (0.0010)		8260B		1	11/21/19 19:15	C9K0356	CK92130
1,2-Dibromo-3-Chloropropane	ND (0.0050)		8260B		1	11/21/19 19:15	C9K0356	CK92130
1,2-Dibromoethane	ND (0.0010)		8260B		1	11/21/19 19:15	C9K0356	CK92130
1,2-Dichlorobenzene	ND (0.0010)		8260B		1	11/21/19 19:15	C9K0356	CK92130
1,2-Dichloroethane	ND (0.0010)		8260B		1	11/21/19 19:15	C9K0356	CK92130
1,2-Dichloropropane	ND (0.0010)		8260B		1	11/21/19 19:15	C9K0356	CK92130
1,3,5-Trimethylbenzene	ND (0.0010)		8260B		1	11/21/19 19:15	C9K0356	CK92130
1,3-Dichlorobenzene	ND (0.0010)		8260B		1	11/21/19 19:15	C9K0356	CK92130
1,3-Dichloropropane	ND (0.0010)		8260B		1	11/21/19 19:15	C9K0356	CK92130
1,4-Dichlorobenzene	ND (0.0010)		8260B		1	11/21/19 19:15	C9K0356	CK92130
1,4-Dioxane - Screen	ND (0.500)		8260B		1	11/21/19 19:15	C9K0356	CK92130
1-Chlorohexane	ND (0.0010)		8260B		1	11/21/19 19:15	C9K0356	CK92130
2,2-Dichloropropane	ND (0.0010)		8260B		1	11/21/19 19:15	C9K0356	CK92130
2-Butanone	ND (0.0100)		8260B		1	11/21/19 19:15	C9K0356	CK92130
2-Chlorotoluene	ND (0.0010)		8260B		1	11/21/19 19:15	C9K0356	CK92130
2-Hexanone	ND (0.0100)		8260B		1	11/21/19 19:15	C9K0356	CK92130
4-Chlorotoluene	ND (0.0010)		8260B		1	11/21/19 19:15	C9K0356	CK92130
4-Isopropyltoluene	ND (0.0010)		8260B		1	11/21/19 19:15	C9K0356	CK92130
4-Methyl-2-Pentanone	ND (0.0250)		8260B		1	11/21/19 19:15	C9K0356	CK92130
Acetone	ND (0.0100)		8260B		1	11/21/19 19:15	C9K0356	CK92130
Benzene	ND (0.0010)		8260B		1	11/21/19 19:15	C9K0356	CK92130
Bromobenzene	ND (0.0020)		8260B		1	11/21/19 19:15	C9K0356	CK92130



CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.

Client Project ID: 642 Allens Ave

Client Sample ID: GZ-201

Date Sampled: 11/19/19 10:25

Percent Solids: N/A

Initial Volume: 5

Final Volume: 5

Extraction Method: 5030B

ESS Laboratory Work Order: 19K0652

ESS Laboratory Sample ID: 19K0652-04

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	11/21/19 19:15	C9K0356	CK92130
Bromodichloromethane	ND (0.0006)		8260B		1	11/21/19 19:15	C9K0356	CK92130
Bromoform	ND (0.0010)		8260B		1	11/21/19 19:15	C9K0356	CK92130
Bromomethane	ND (0.0020)		8260B		1	11/21/19 19:15	C9K0356	CK92130
Carbon Disulfide	ND (0.0010)		8260B		1	11/21/19 19:15	C9K0356	CK92130
Carbon Tetrachloride	ND (0.0010)		8260B		1	11/21/19 19:15	C9K0356	CK92130
Chlorobenzene	ND (0.0010)		8260B		1	11/21/19 19:15	C9K0356	CK92130
Chloroethane	ND (0.0020)		8260B		1	11/21/19 19:15	C9K0356	CK92130
Chloroform	ND (0.0010)		8260B		1	11/21/19 19:15	C9K0356	CK92130
Chloromethane	ND (0.0020)		8260B		1	11/21/19 19:15	C9K0356	CK92130
cis-1,2-Dichloroethene	ND (0.0010)		8260B		1	11/21/19 19:15	C9K0356	CK92130
cis-1,3-Dichloropropene	ND (0.0004)		8260B		1	11/21/19 19:15	C9K0356	CK92130
Dibromochloromethane	ND (0.0010)		8260B		1	11/21/19 19:15	C9K0356	CK92130
Dibromomethane	ND (0.0010)		8260B		1	11/21/19 19:15	C9K0356	CK92130
Dichlorodifluoromethane	ND (0.0020)		8260B		1	11/21/19 19:15	C9K0356	CK92130
Diethyl Ether	ND (0.0010)		8260B		1	11/21/19 19:15	C9K0356	CK92130
Di-isopropyl ether	ND (0.0010)		8260B		1	11/21/19 19:15	C9K0356	CK92130
Ethyl tertiary-butyl ether	ND (0.0010)		8260B		1	11/21/19 19:15	C9K0356	CK92130
Ethylbenzene	ND (0.0010)		8260B		1	11/21/19 19:15	C9K0356	CK92130
Hexachlorobutadiene	ND (0.0006)		8260B		1	11/21/19 19:15	C9K0356	CK92130
Hexachloroethane	ND (0.0010)		8260B		1	11/21/19 19:15	C9K0356	CK92130
Isopropylbenzene	0.0057 (0.0010)		8260B		1	11/21/19 19:15	C9K0356	CK92130
Methyl tert-Butyl Ether	ND (0.0010)		8260B		1	11/21/19 19:15	C9K0356	CK92130
Methylene Chloride	ND (0.0020)		8260B		1	11/21/19 19:15	C9K0356	CK92130
Naphthalene	0.0015 (0.0010)		8260B		1	11/21/19 19:15	C9K0356	CK92130
n-Butylbenzene	0.0019 (0.0010)		8260B		1	11/21/19 19:15	C9K0356	CK92130
n-Propylbenzene	0.0031 (0.0010)		8260B		1	11/21/19 19:15	C9K0356	CK92130
sec-Butylbenzene	0.0030 (0.0010)		8260B		1	11/21/19 19:15	C9K0356	CK92130
Styrene	ND (0.0010)		8260B		1	11/21/19 19:15	C9K0356	CK92130
tert-Butylbenzene	ND (0.0010)		8260B		1	11/21/19 19:15	C9K0356	CK92130
Tertiary-amyl methyl ether	ND (0.0010)		8260B		1	11/21/19 19:15	C9K0356	CK92130
Tetrachloroethene	ND (0.0010)		8260B		1	11/21/19 19:15	C9K0356	CK92130



ESS Laboratory

Division of Thielsch Engineering, Inc.

BAL Laboratory

*The Microbiology Division
of Thielsch Engineering, Inc.*



CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.

Client Project ID: 642 Allens Ave

Client Sample ID: GZ-201

Date Sampled: 11/19/19 10:25

Percent Solids: N/A

Initial Volume: 5

Final Volume: 5

Extraction Method: 5030B

ESS Laboratory Work Order: 19K0652

ESS Laboratory Sample ID: 19K0652-04

Sample Matrix: Ground Water

Units: mg/L

Analyst: MD

8260B Volatile Organic Compounds

<u>Analyte</u>	<u>Results (MRL)</u>	<u>MDL</u>	<u>Method</u>	<u>Limit</u>	<u>DF</u>	<u>Analyzed</u>	<u>Sequence</u>	<u>Batch</u>
Tetrahydrofuran	ND (0.0050)		8260B		1	11/21/19 19:15	C9K0356	CK92130
Toluene	ND (0.0010)		8260B		1	11/21/19 19:15	C9K0356	CK92130
trans-1,2-Dichloroethene	ND (0.0010)		8260B		1	11/21/19 19:15	C9K0356	CK92130
trans-1,3-Dichloropropene	ND (0.0004)		8260B		1	11/21/19 19:15	C9K0356	CK92130
Trichloroethene	ND (0.0010)		8260B		1	11/21/19 19:15	C9K0356	CK92130
Trichlorofluoromethane	ND (0.0010)		8260B		1	11/21/19 19:15	C9K0356	CK92130
Vinyl Acetate	ND (0.0050)		8260B		1	11/21/19 19:15	C9K0356	CK92130
Vinyl Chloride	ND (0.0010)		8260B		1	11/21/19 19:15	C9K0356	CK92130
Xylene O	0.0010 (0.0010)		8260B		1	11/21/19 19:15	C9K0356	CK92130
Xylene P,M	ND (0.0020)		8260B		1	11/21/19 19:15	C9K0356	CK92130
Xylenes (Total)	ND (0.00200)		8260B		1	11/21/19 19:15		[CALC]

	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>100 %</i>		<i>70-130</i>
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>101 %</i>		<i>70-130</i>
<i>Surrogate: Dibromofluoromethane</i>	<i>98 %</i>		<i>70-130</i>
<i>Surrogate: Toluene-d8</i>	<i>98 %</i>		<i>70-130</i>



CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.

Client Project ID: 642 Allens Ave

Client Sample ID: RCA-36

Date Sampled: 11/19/19 11:04

Percent Solids: N/A

Initial Volume: 5

Final Volume: 5

Extraction Method: 5030B

ESS Laboratory Work Order: 19K0652

ESS Laboratory Sample ID: 19K0652-05

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	11/21/19 17:05	C9K0356	CK92130
1,1,1-Trichloroethane	ND (0.0010)		8260B		1	11/21/19 17:05	C9K0356	CK92130
1,1,2,2-Tetrachloroethane	ND (0.0005)		8260B		1	11/21/19 17:05	C9K0356	CK92130
1,1,2-Trichloroethane	ND (0.0010)		8260B		1	11/21/19 17:05	C9K0356	CK92130
1,1-Dichloroethane	ND (0.0010)		8260B		1	11/21/19 17:05	C9K0356	CK92130
1,1-Dichloroethene	ND (0.0010)		8260B		1	11/21/19 17:05	C9K0356	CK92130
1,1-Dichloropropene	ND (0.0020)		8260B		1	11/21/19 17:05	C9K0356	CK92130
1,2,3-Trichlorobenzene	ND (0.0010)		8260B		1	11/21/19 17:05	C9K0356	CK92130
1,2,3-Trichloropropane	ND (0.0010)		8260B		1	11/21/19 17:05	C9K0356	CK92130
1,2,4-Trichlorobenzene	ND (0.0010)		8260B		1	11/21/19 17:05	C9K0356	CK92130
1,2,4-Trimethylbenzene	0.0030 (0.0010)		8260B		1	11/21/19 17:05	C9K0356	CK92130
1,2-Dibromo-3-Chloropropane	ND (0.0050)		8260B		1	11/21/19 17:05	C9K0356	CK92130
1,2-Dibromoethane	ND (0.0010)		8260B		1	11/21/19 17:05	C9K0356	CK92130
1,2-Dichlorobenzene	ND (0.0010)		8260B		1	11/21/19 17:05	C9K0356	CK92130
1,2-Dichloroethane	ND (0.0010)		8260B		1	11/21/19 17:05	C9K0356	CK92130
1,2-Dichloropropane	ND (0.0010)		8260B		1	11/21/19 17:05	C9K0356	CK92130
1,3,5-Trimethylbenzene	ND (0.0010)		8260B		1	11/21/19 17:05	C9K0356	CK92130
1,3-Dichlorobenzene	ND (0.0010)		8260B		1	11/21/19 17:05	C9K0356	CK92130
1,3-Dichloropropane	ND (0.0010)		8260B		1	11/21/19 17:05	C9K0356	CK92130
1,4-Dichlorobenzene	ND (0.0010)		8260B		1	11/21/19 17:05	C9K0356	CK92130
1,4-Dioxane - Screen	ND (0.500)		8260B		1	11/21/19 17:05	C9K0356	CK92130
1-Chlorohexane	ND (0.0010)		8260B		1	11/21/19 17:05	C9K0356	CK92130
2,2-Dichloropropane	ND (0.0010)		8260B		1	11/21/19 17:05	C9K0356	CK92130
2-Butanone	ND (0.0100)		8260B		1	11/21/19 17:05	C9K0356	CK92130
2-Chlorotoluene	ND (0.0010)		8260B		1	11/21/19 17:05	C9K0356	CK92130
2-Hexanone	ND (0.0100)		8260B		1	11/21/19 17:05	C9K0356	CK92130
4-Chlorotoluene	ND (0.0010)		8260B		1	11/21/19 17:05	C9K0356	CK92130
4-Isopropyltoluene	ND (0.0010)		8260B		1	11/21/19 17:05	C9K0356	CK92130
4-Methyl-2-Pentanone	ND (0.0250)		8260B		1	11/21/19 17:05	C9K0356	CK92130
Acetone	ND (0.0100)		8260B		1	11/21/19 17:05	C9K0356	CK92130
Benzene	0.0268 (0.0010)		8260B		1	11/21/19 17:05	C9K0356	CK92130
Bromobenzene	ND (0.0020)		8260B		1	11/21/19 17:05	C9K0356	CK92130



ESS Laboratory

Division of Thielsch Engineering, Inc.

BAL Laboratory

*The Microbiology Division
of Thielsch Engineering, Inc.*



CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.

Client Project ID: 642 Allens Ave

Client Sample ID: RCA-36

Date Sampled: 11/19/19 11:04

Percent Solids: N/A

Initial Volume: 5

Final Volume: 5

Extraction Method: 5030B

ESS Laboratory Work Order: 19K0652

ESS Laboratory Sample ID: 19K0652-05

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	11/21/19 17:05	C9K0356	CK92130
Bromodichloromethane	ND (0.0006)		8260B		1	11/21/19 17:05	C9K0356	CK92130
Bromoform	ND (0.0010)		8260B		1	11/21/19 17:05	C9K0356	CK92130
Bromomethane	ND (0.0020)		8260B		1	11/21/19 17:05	C9K0356	CK92130
Carbon Disulfide	ND (0.0010)		8260B		1	11/21/19 17:05	C9K0356	CK92130
Carbon Tetrachloride	ND (0.0010)		8260B		1	11/21/19 17:05	C9K0356	CK92130
Chlorobenzene	ND (0.0010)		8260B		1	11/21/19 17:05	C9K0356	CK92130
Chloroethane	ND (0.0020)		8260B		1	11/21/19 17:05	C9K0356	CK92130
Chloroform	ND (0.0010)		8260B		1	11/21/19 17:05	C9K0356	CK92130
Chloromethane	ND (0.0020)		8260B		1	11/21/19 17:05	C9K0356	CK92130
cis-1,2-Dichloroethene	ND (0.0010)		8260B		1	11/21/19 17:05	C9K0356	CK92130
cis-1,3-Dichloropropene	ND (0.0004)		8260B		1	11/21/19 17:05	C9K0356	CK92130
Dibromochloromethane	ND (0.0010)		8260B		1	11/21/19 17:05	C9K0356	CK92130
Dibromomethane	ND (0.0010)		8260B		1	11/21/19 17:05	C9K0356	CK92130
Dichlorodifluoromethane	ND (0.0020)		8260B		1	11/21/19 17:05	C9K0356	CK92130
Diethyl Ether	ND (0.0010)		8260B		1	11/21/19 17:05	C9K0356	CK92130
Di-isopropyl ether	ND (0.0010)		8260B		1	11/21/19 17:05	C9K0356	CK92130
Ethyl tertiary-butyl ether	ND (0.0010)		8260B		1	11/21/19 17:05	C9K0356	CK92130
Ethylbenzene	0.0012 (0.0010)		8260B		1	11/21/19 17:05	C9K0356	CK92130
Hexachlorobutadiene	ND (0.0006)		8260B		1	11/21/19 17:05	C9K0356	CK92130
Hexachloroethane	ND (0.0010)		8260B		1	11/21/19 17:05	C9K0356	CK92130
Isopropylbenzene	0.0015 (0.0010)		8260B		1	11/21/19 17:05	C9K0356	CK92130
Methyl tert-Butyl Ether	ND (0.0010)		8260B		1	11/21/19 17:05	C9K0356	CK92130
Methylene Chloride	ND (0.0020)		8260B		1	11/21/19 17:05	C9K0356	CK92130
Naphthalene	ND (0.0010)		8260B		1	11/21/19 17:05	C9K0356	CK92130
n-Butylbenzene	ND (0.0010)		8260B		1	11/21/19 17:05	C9K0356	CK92130
n-Propylbenzene	ND (0.0010)		8260B		1	11/21/19 17:05	C9K0356	CK92130
sec-Butylbenzene	ND (0.0010)		8260B		1	11/21/19 17:05	C9K0356	CK92130
Styrene	ND (0.0010)		8260B		1	11/21/19 17:05	C9K0356	CK92130
tert-Butylbenzene	ND (0.0010)		8260B		1	11/21/19 17:05	C9K0356	CK92130
Tertiary-amyl methyl ether	ND (0.0010)		8260B		1	11/21/19 17:05	C9K0356	CK92130
Tetrachloroethene	ND (0.0010)		8260B		1	11/21/19 17:05	C9K0356	CK92130



CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.

Client Project ID: 642 Allens Ave

Client Sample ID: RCA-36

Date Sampled: 11/19/19 11:04

Percent Solids: N/A

Initial Volume: 5

Final Volume: 5

Extraction Method: 5030B

ESS Laboratory Work Order: 19K0652

ESS Laboratory Sample ID: 19K0652-05

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	11/21/19 17:05	C9K0356	CK92130
Toluene	ND (0.0010)		8260B		1	11/21/19 17:05	C9K0356	CK92130
trans-1,2-Dichloroethene	ND (0.0010)		8260B		1	11/21/19 17:05	C9K0356	CK92130
trans-1,3-Dichloropropene	ND (0.0004)		8260B		1	11/21/19 17:05	C9K0356	CK92130
Trichloroethene	ND (0.0010)		8260B		1	11/21/19 17:05	C9K0356	CK92130
Trichlorofluoromethane	ND (0.0010)		8260B		1	11/21/19 17:05	C9K0356	CK92130
Vinyl Acetate	ND (0.0050)		8260B		1	11/21/19 17:05	C9K0356	CK92130
Vinyl Chloride	ND (0.0010)		8260B		1	11/21/19 17:05	C9K0356	CK92130
Xylene O	0.0014 (0.0010)		8260B		1	11/21/19 17:05	C9K0356	CK92130
Xylene P,M	ND (0.0020)		8260B		1	11/21/19 17:05	C9K0356	CK92130
Xylenes (Total)	ND (0.00200)		8260B		1	11/21/19 17:05		[CALC]

	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>103 %</i>		<i>70-130</i>
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>99 %</i>		<i>70-130</i>
<i>Surrogate: Dibromofluoromethane</i>	<i>97 %</i>		<i>70-130</i>
<i>Surrogate: Toluene-d8</i>	<i>99 %</i>		<i>70-130</i>



CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.

Client Project ID: 642 Allens Ave

Client Sample ID: GZ-304D

Date Sampled: 11/19/19 16:21

Percent Solids: N/A

Initial Volume: 5

Final Volume: 5

Extraction Method: 5030B

ESS Laboratory Work Order: 19K0652

ESS Laboratory Sample ID: 19K0652-06

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	11/21/19 19:41	C9K0356	CK92130
1,1,1-Trichloroethane	ND (0.0010)		8260B		1	11/21/19 19:41	C9K0356	CK92130
1,1,2,2-Tetrachloroethane	ND (0.0005)		8260B		1	11/21/19 19:41	C9K0356	CK92130
1,1,2-Trichloroethane	ND (0.0010)		8260B		1	11/21/19 19:41	C9K0356	CK92130
1,1-Dichloroethane	ND (0.0010)		8260B		1	11/21/19 19:41	C9K0356	CK92130
1,1-Dichloroethene	ND (0.0010)		8260B		1	11/21/19 19:41	C9K0356	CK92130
1,1-Dichloropropene	ND (0.0020)		8260B		1	11/21/19 19:41	C9K0356	CK92130
1,2,3-Trichlorobenzene	ND (0.0010)		8260B		1	11/21/19 19:41	C9K0356	CK92130
1,2,3-Trichloropropane	ND (0.0010)		8260B		1	11/21/19 19:41	C9K0356	CK92130
1,2,4-Trichlorobenzene	ND (0.0010)		8260B		1	11/21/19 19:41	C9K0356	CK92130
1,2,4-Trimethylbenzene	ND (0.0010)		8260B		1	11/21/19 19:41	C9K0356	CK92130
1,2-Dibromo-3-Chloropropane	ND (0.0050)		8260B		1	11/21/19 19:41	C9K0356	CK92130
1,2-Dibromoethane	ND (0.0010)		8260B		1	11/21/19 19:41	C9K0356	CK92130
1,2-Dichlorobenzene	ND (0.0010)		8260B		1	11/21/19 19:41	C9K0356	CK92130
1,2-Dichloroethane	ND (0.0010)		8260B		1	11/21/19 19:41	C9K0356	CK92130
1,2-Dichloropropane	ND (0.0010)		8260B		1	11/21/19 19:41	C9K0356	CK92130
1,3,5-Trimethylbenzene	ND (0.0010)		8260B		1	11/21/19 19:41	C9K0356	CK92130
1,3-Dichlorobenzene	ND (0.0010)		8260B		1	11/21/19 19:41	C9K0356	CK92130
1,3-Dichloropropane	ND (0.0010)		8260B		1	11/21/19 19:41	C9K0356	CK92130
1,4-Dichlorobenzene	ND (0.0010)		8260B		1	11/21/19 19:41	C9K0356	CK92130
1,4-Dioxane - Screen	ND (0.500)		8260B		1	11/21/19 19:41	C9K0356	CK92130
1-Chlorohexane	ND (0.0010)		8260B		1	11/21/19 19:41	C9K0356	CK92130
2,2-Dichloropropane	ND (0.0010)		8260B		1	11/21/19 19:41	C9K0356	CK92130
2-Butanone	ND (0.0100)		8260B		1	11/21/19 19:41	C9K0356	CK92130
2-Chlorotoluene	ND (0.0010)		8260B		1	11/21/19 19:41	C9K0356	CK92130
2-Hexanone	ND (0.0100)		8260B		1	11/21/19 19:41	C9K0356	CK92130
4-Chlorotoluene	ND (0.0010)		8260B		1	11/21/19 19:41	C9K0356	CK92130
4-Isopropyltoluene	ND (0.0010)		8260B		1	11/21/19 19:41	C9K0356	CK92130
4-Methyl-2-Pentanone	ND (0.0250)		8260B		1	11/21/19 19:41	C9K0356	CK92130
Acetone	ND (0.0100)		8260B		1	11/21/19 19:41	C9K0356	CK92130
Benzene	0.0016 (0.0010)		8260B		1	11/21/19 19:41	C9K0356	CK92130
Bromobenzene	ND (0.0020)		8260B		1	11/21/19 19:41	C9K0356	CK92130



CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.

Client Project ID: 642 Allens Ave

Client Sample ID: GZ-304D

Date Sampled: 11/19/19 16:21

Percent Solids: N/A

Initial Volume: 5

Final Volume: 5

Extraction Method: 5030B

ESS Laboratory Work Order: 19K0652

ESS Laboratory Sample ID: 19K0652-06

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	11/21/19 19:41	C9K0356	CK92130
Bromodichloromethane	ND (0.0006)		8260B		1	11/21/19 19:41	C9K0356	CK92130
Bromoform	ND (0.0010)		8260B		1	11/21/19 19:41	C9K0356	CK92130
Bromomethane	ND (0.0020)		8260B		1	11/21/19 19:41	C9K0356	CK92130
Carbon Disulfide	ND (0.0010)		8260B		1	11/21/19 19:41	C9K0356	CK92130
Carbon Tetrachloride	ND (0.0010)		8260B		1	11/21/19 19:41	C9K0356	CK92130
Chlorobenzene	ND (0.0010)		8260B		1	11/21/19 19:41	C9K0356	CK92130
Chloroethane	ND (0.0020)		8260B		1	11/21/19 19:41	C9K0356	CK92130
Chloroform	ND (0.0010)		8260B		1	11/21/19 19:41	C9K0356	CK92130
Chloromethane	ND (0.0020)		8260B		1	11/21/19 19:41	C9K0356	CK92130
cis-1,2-Dichloroethene	0.0016 (0.0010)		8260B		1	11/21/19 19:41	C9K0356	CK92130
cis-1,3-Dichloropropene	ND (0.0004)		8260B		1	11/21/19 19:41	C9K0356	CK92130
Dibromochloromethane	ND (0.0010)		8260B		1	11/21/19 19:41	C9K0356	CK92130
Dibromomethane	ND (0.0010)		8260B		1	11/21/19 19:41	C9K0356	CK92130
Dichlorodifluoromethane	ND (0.0020)		8260B		1	11/21/19 19:41	C9K0356	CK92130
Diethyl Ether	ND (0.0010)		8260B		1	11/21/19 19:41	C9K0356	CK92130
Di-isopropyl ether	ND (0.0010)		8260B		1	11/21/19 19:41	C9K0356	CK92130
Ethyl tertiary-butyl ether	ND (0.0010)		8260B		1	11/21/19 19:41	C9K0356	CK92130
Ethylbenzene	ND (0.0010)		8260B		1	11/21/19 19:41	C9K0356	CK92130
Hexachlorobutadiene	ND (0.0006)		8260B		1	11/21/19 19:41	C9K0356	CK92130
Hexachloroethane	ND (0.0010)		8260B		1	11/21/19 19:41	C9K0356	CK92130
Isopropylbenzene	ND (0.0010)		8260B		1	11/21/19 19:41	C9K0356	CK92130
Methyl tert-Butyl Ether	ND (0.0010)		8260B		1	11/21/19 19:41	C9K0356	CK92130
Methylene Chloride	ND (0.0020)		8260B		1	11/21/19 19:41	C9K0356	CK92130
Naphthalene	0.0232 (0.0010)		8260B		1	11/21/19 19:41	C9K0356	CK92130
n-Butylbenzene	ND (0.0010)		8260B		1	11/21/19 19:41	C9K0356	CK92130
n-Propylbenzene	ND (0.0010)		8260B		1	11/21/19 19:41	C9K0356	CK92130
sec-Butylbenzene	ND (0.0010)		8260B		1	11/21/19 19:41	C9K0356	CK92130
Styrene	ND (0.0010)		8260B		1	11/21/19 19:41	C9K0356	CK92130
tert-Butylbenzene	ND (0.0010)		8260B		1	11/21/19 19:41	C9K0356	CK92130
Tertiary-amyl methyl ether	ND (0.0010)		8260B		1	11/21/19 19:41	C9K0356	CK92130
Tetrachloroethene	ND (0.0010)		8260B		1	11/21/19 19:41	C9K0356	CK92130



CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.

Client Project ID: 642 Allens Ave

Client Sample ID: GZ-304D

Date Sampled: 11/19/19 16:21

Percent Solids: N/A

Initial Volume: 5

Final Volume: 5

Extraction Method: 5030B

ESS Laboratory Work Order: 19K0652

ESS Laboratory Sample ID: 19K0652-06

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	11/21/19 19:41	C9K0356	CK92130
Toluene	ND (0.0010)		8260B		1	11/21/19 19:41	C9K0356	CK92130
trans-1,2-Dichloroethene	ND (0.0010)		8260B		1	11/21/19 19:41	C9K0356	CK92130
trans-1,3-Dichloropropene	ND (0.0004)		8260B		1	11/21/19 19:41	C9K0356	CK92130
Trichloroethene	ND (0.0010)		8260B		1	11/21/19 19:41	C9K0356	CK92130
Trichlorofluoromethane	ND (0.0010)		8260B		1	11/21/19 19:41	C9K0356	CK92130
Vinyl Acetate	ND (0.0050)		8260B		1	11/21/19 19:41	C9K0356	CK92130
Vinyl Chloride	ND (0.0010)		8260B		1	11/21/19 19:41	C9K0356	CK92130
Xylene O	ND (0.0010)		8260B		1	11/21/19 19:41	C9K0356	CK92130
Xylene P,M	ND (0.0020)		8260B		1	11/21/19 19:41	C9K0356	CK92130
Xylenes (Total)	ND (0.00200)		8260B		1	11/21/19 19:41		[CALC]

	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>
<i>Surrogate: 1,2-Dichloroethane-d4</i>	99 %		70-130
<i>Surrogate: 4-Bromofluorobenzene</i>	98 %		70-130
<i>Surrogate: Dibromofluoromethane</i>	95 %		70-130
<i>Surrogate: Toluene-d8</i>	97 %		70-130



CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.

Client Project ID: 642 Allens Ave

Client Sample ID: GZA-307D

Date Sampled: 11/19/19 16:34

Percent Solids: N/A

Initial Volume: 5

Final Volume: 5

Extraction Method: 5030B

ESS Laboratory Work Order: 19K0652

ESS Laboratory Sample ID: 19K0652-07

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	11/21/19 17:31	C9K0356	CK92130
1,1,1-Trichloroethane	ND (0.0010)		8260B		1	11/21/19 17:31	C9K0356	CK92130
1,1,2,2-Tetrachloroethane	ND (0.0005)		8260B		1	11/21/19 17:31	C9K0356	CK92130
1,1,2-Trichloroethane	ND (0.0010)		8260B		1	11/21/19 17:31	C9K0356	CK92130
1,1-Dichloroethane	ND (0.0010)		8260B		1	11/21/19 17:31	C9K0356	CK92130
1,1-Dichloroethene	ND (0.0010)		8260B		1	11/21/19 17:31	C9K0356	CK92130
1,1-Dichloropropene	ND (0.0020)		8260B		1	11/21/19 17:31	C9K0356	CK92130
1,2,3-Trichlorobenzene	ND (0.0010)		8260B		1	11/21/19 17:31	C9K0356	CK92130
1,2,3-Trichloropropane	ND (0.0010)		8260B		1	11/21/19 17:31	C9K0356	CK92130
1,2,4-Trichlorobenzene	ND (0.0010)		8260B		1	11/21/19 17:31	C9K0356	CK92130
1,2,4-Trimethylbenzene	ND (0.0010)		8260B		1	11/21/19 17:31	C9K0356	CK92130
1,2-Dibromo-3-Chloropropane	ND (0.0050)		8260B		1	11/21/19 17:31	C9K0356	CK92130
1,2-Dibromoethane	ND (0.0010)		8260B		1	11/21/19 17:31	C9K0356	CK92130
1,2-Dichlorobenzene	ND (0.0010)		8260B		1	11/21/19 17:31	C9K0356	CK92130
1,2-Dichloroethane	ND (0.0010)		8260B		1	11/21/19 17:31	C9K0356	CK92130
1,2-Dichloropropane	ND (0.0010)		8260B		1	11/21/19 17:31	C9K0356	CK92130
1,3,5-Trimethylbenzene	ND (0.0010)		8260B		1	11/21/19 17:31	C9K0356	CK92130
1,3-Dichlorobenzene	ND (0.0010)		8260B		1	11/21/19 17:31	C9K0356	CK92130
1,3-Dichloropropane	ND (0.0010)		8260B		1	11/21/19 17:31	C9K0356	CK92130
1,4-Dichlorobenzene	ND (0.0010)		8260B		1	11/21/19 17:31	C9K0356	CK92130
1,4-Dioxane - Screen	ND (0.500)		8260B		1	11/21/19 17:31	C9K0356	CK92130
1-Chlorohexane	ND (0.0010)		8260B		1	11/21/19 17:31	C9K0356	CK92130
2,2-Dichloropropane	ND (0.0010)		8260B		1	11/21/19 17:31	C9K0356	CK92130
2-Butanone	ND (0.0100)		8260B		1	11/21/19 17:31	C9K0356	CK92130
2-Chlorotoluene	ND (0.0010)		8260B		1	11/21/19 17:31	C9K0356	CK92130
2-Hexanone	ND (0.0100)		8260B		1	11/21/19 17:31	C9K0356	CK92130
4-Chlorotoluene	ND (0.0010)		8260B		1	11/21/19 17:31	C9K0356	CK92130
4-Isopropyltoluene	ND (0.0010)		8260B		1	11/21/19 17:31	C9K0356	CK92130
4-Methyl-2-Pentanone	ND (0.0250)		8260B		1	11/21/19 17:31	C9K0356	CK92130
Acetone	ND (0.0100)		8260B		1	11/21/19 17:31	C9K0356	CK92130
Benzene	ND (0.0010)		8260B		1	11/21/19 17:31	C9K0356	CK92130
Bromobenzene	ND (0.0020)		8260B		1	11/21/19 17:31	C9K0356	CK92130



CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.

Client Project ID: 642 Allens Ave

Client Sample ID: GZA-307D

Date Sampled: 11/19/19 16:34

Percent Solids: N/A

Initial Volume: 5

Final Volume: 5

Extraction Method: 5030B

ESS Laboratory Work Order: 19K0652

ESS Laboratory Sample ID: 19K0652-07

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	11/21/19 17:31	C9K0356	CK92130
Bromodichloromethane	ND (0.0006)		8260B		1	11/21/19 17:31	C9K0356	CK92130
Bromoform	ND (0.0010)		8260B		1	11/21/19 17:31	C9K0356	CK92130
Bromomethane	ND (0.0020)		8260B		1	11/21/19 17:31	C9K0356	CK92130
Carbon Disulfide	ND (0.0010)		8260B		1	11/21/19 17:31	C9K0356	CK92130
Carbon Tetrachloride	ND (0.0010)		8260B		1	11/21/19 17:31	C9K0356	CK92130
Chlorobenzene	ND (0.0010)		8260B		1	11/21/19 17:31	C9K0356	CK92130
Chloroethane	ND (0.0020)		8260B		1	11/21/19 17:31	C9K0356	CK92130
Chloroform	ND (0.0010)		8260B		1	11/21/19 17:31	C9K0356	CK92130
Chloromethane	ND (0.0020)		8260B		1	11/21/19 17:31	C9K0356	CK92130
cis-1,2-Dichloroethene	ND (0.0010)		8260B		1	11/21/19 17:31	C9K0356	CK92130
cis-1,3-Dichloropropene	ND (0.0004)		8260B		1	11/21/19 17:31	C9K0356	CK92130
Dibromochloromethane	ND (0.0010)		8260B		1	11/21/19 17:31	C9K0356	CK92130
Dibromomethane	ND (0.0010)		8260B		1	11/21/19 17:31	C9K0356	CK92130
Dichlorodifluoromethane	ND (0.0020)		8260B		1	11/21/19 17:31	C9K0356	CK92130
Diethyl Ether	ND (0.0010)		8260B		1	11/21/19 17:31	C9K0356	CK92130
Di-isopropyl ether	ND (0.0010)		8260B		1	11/21/19 17:31	C9K0356	CK92130
Ethyl tertiary-butyl ether	ND (0.0010)		8260B		1	11/21/19 17:31	C9K0356	CK92130
Ethylbenzene	ND (0.0010)		8260B		1	11/21/19 17:31	C9K0356	CK92130
Hexachlorobutadiene	ND (0.0006)		8260B		1	11/21/19 17:31	C9K0356	CK92130
Hexachloroethane	ND (0.0010)		8260B		1	11/21/19 17:31	C9K0356	CK92130
Isopropylbenzene	ND (0.0010)		8260B		1	11/21/19 17:31	C9K0356	CK92130
Methyl tert-Butyl Ether	ND (0.0010)		8260B		1	11/21/19 17:31	C9K0356	CK92130
Methylene Chloride	ND (0.0020)		8260B		1	11/21/19 17:31	C9K0356	CK92130
Naphthalene	ND (0.0010)		8260B		1	11/21/19 17:31	C9K0356	CK92130
n-Butylbenzene	ND (0.0010)		8260B		1	11/21/19 17:31	C9K0356	CK92130
n-Propylbenzene	ND (0.0010)		8260B		1	11/21/19 17:31	C9K0356	CK92130
sec-Butylbenzene	ND (0.0010)		8260B		1	11/21/19 17:31	C9K0356	CK92130
Styrene	ND (0.0010)		8260B		1	11/21/19 17:31	C9K0356	CK92130
tert-Butylbenzene	ND (0.0010)		8260B		1	11/21/19 17:31	C9K0356	CK92130
Tertiary-amyl methyl ether	ND (0.0010)		8260B		1	11/21/19 17:31	C9K0356	CK92130
Tetrachloroethene	ND (0.0010)		8260B		1	11/21/19 17:31	C9K0356	CK92130



ESS Laboratory

Division of Thielsch Engineering, Inc.

BAL Laboratory

*The Microbiology Division
of Thielsch Engineering, Inc.*



CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.

Client Project ID: 642 Allens Ave

Client Sample ID: GZA-307D

Date Sampled: 11/19/19 16:34

Percent Solids: N/A

Initial Volume: 5

Final Volume: 5

Extraction Method: 5030B

ESS Laboratory Work Order: 19K0652

ESS Laboratory Sample ID: 19K0652-07

Sample Matrix: Ground Water

Units: mg/L

Analyst: MD

8260B Volatile Organic Compounds

<u>Analyte</u>	<u>Results (MRL)</u>	<u>MDL</u>	<u>Method</u>	<u>Limit</u>	<u>DF</u>	<u>Analyzed</u>	<u>Sequence</u>	<u>Batch</u>
Tetrahydrofuran	ND (0.0050)		8260B		1	11/21/19 17:31	C9K0356	CK92130
Toluene	ND (0.0010)		8260B		1	11/21/19 17:31	C9K0356	CK92130
trans-1,2-Dichloroethene	ND (0.0010)		8260B		1	11/21/19 17:31	C9K0356	CK92130
trans-1,3-Dichloropropene	ND (0.0004)		8260B		1	11/21/19 17:31	C9K0356	CK92130
Trichloroethene	ND (0.0010)		8260B		1	11/21/19 17:31	C9K0356	CK92130
Trichlorofluoromethane	ND (0.0010)		8260B		1	11/21/19 17:31	C9K0356	CK92130
Vinyl Acetate	ND (0.0050)		8260B		1	11/21/19 17:31	C9K0356	CK92130
Vinyl Chloride	ND (0.0010)		8260B		1	11/21/19 17:31	C9K0356	CK92130
Xylene O	ND (0.0010)		8260B		1	11/21/19 17:31	C9K0356	CK92130
Xylene P,M	ND (0.0020)		8260B		1	11/21/19 17:31	C9K0356	CK92130
Xylenes (Total)	ND (0.00200)		8260B		1	11/21/19 17:31		[CALC]

	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>
<i>Surrogate: 1,2-Dichloroethane-d4</i>	100 %		70-130
<i>Surrogate: 4-Bromofluorobenzene</i>	96 %		70-130
<i>Surrogate: Dibromofluoromethane</i>	97 %		70-130
<i>Surrogate: Toluene-d8</i>	97 %		70-130



CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.

Client Project ID: 642 Allens Ave

Client Sample ID: RCA-1

Date Sampled: 11/20/19 07:53

Percent Solids: N/A

Initial Volume: 5

Final Volume: 5

Extraction Method: 5030B

ESS Laboratory Work Order: 19K0652

ESS Laboratory Sample ID: 19K0652-08

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	11/21/19 17:57	C9K0356	CK92130
1,1,1-Trichloroethane	ND (0.0010)		8260B		1	11/21/19 17:57	C9K0356	CK92130
1,1,2,2-Tetrachloroethane	ND (0.0005)		8260B		1	11/21/19 17:57	C9K0356	CK92130
1,1,2-Trichloroethane	ND (0.0010)		8260B		1	11/21/19 17:57	C9K0356	CK92130
1,1-Dichloroethane	ND (0.0010)		8260B		1	11/21/19 17:57	C9K0356	CK92130
1,1-Dichloroethene	ND (0.0010)		8260B		1	11/21/19 17:57	C9K0356	CK92130
1,1-Dichloropropene	ND (0.0020)		8260B		1	11/21/19 17:57	C9K0356	CK92130
1,2,3-Trichlorobenzene	ND (0.0010)		8260B		1	11/21/19 17:57	C9K0356	CK92130
1,2,3-Trichloropropane	ND (0.0010)		8260B		1	11/21/19 17:57	C9K0356	CK92130
1,2,4-Trichlorobenzene	ND (0.0010)		8260B		1	11/21/19 17:57	C9K0356	CK92130
1,2,4-Trimethylbenzene	ND (0.0010)		8260B		1	11/21/19 17:57	C9K0356	CK92130
1,2-Dibromo-3-Chloropropane	ND (0.0050)		8260B		1	11/21/19 17:57	C9K0356	CK92130
1,2-Dibromoethane	ND (0.0010)		8260B		1	11/21/19 17:57	C9K0356	CK92130
1,2-Dichlorobenzene	ND (0.0010)		8260B		1	11/21/19 17:57	C9K0356	CK92130
1,2-Dichloroethane	ND (0.0010)		8260B		1	11/21/19 17:57	C9K0356	CK92130
1,2-Dichloropropane	ND (0.0010)		8260B		1	11/21/19 17:57	C9K0356	CK92130
1,3,5-Trimethylbenzene	ND (0.0010)		8260B		1	11/21/19 17:57	C9K0356	CK92130
1,3-Dichlorobenzene	ND (0.0010)		8260B		1	11/21/19 17:57	C9K0356	CK92130
1,3-Dichloropropane	ND (0.0010)		8260B		1	11/21/19 17:57	C9K0356	CK92130
1,4-Dichlorobenzene	ND (0.0010)		8260B		1	11/21/19 17:57	C9K0356	CK92130
1,4-Dioxane - Screen	ND (0.500)		8260B		1	11/21/19 17:57	C9K0356	CK92130
1-Chlorohexane	ND (0.0010)		8260B		1	11/21/19 17:57	C9K0356	CK92130
2,2-Dichloropropane	ND (0.0010)		8260B		1	11/21/19 17:57	C9K0356	CK92130
2-Butanone	ND (0.0100)		8260B		1	11/21/19 17:57	C9K0356	CK92130
2-Chlorotoluene	ND (0.0010)		8260B		1	11/21/19 17:57	C9K0356	CK92130
2-Hexanone	ND (0.0100)		8260B		1	11/21/19 17:57	C9K0356	CK92130
4-Chlorotoluene	ND (0.0010)		8260B		1	11/21/19 17:57	C9K0356	CK92130
4-Isopropyltoluene	ND (0.0010)		8260B		1	11/21/19 17:57	C9K0356	CK92130
4-Methyl-2-Pentanone	ND (0.0250)		8260B		1	11/21/19 17:57	C9K0356	CK92130
Acetone	ND (0.0100)		8260B		1	11/21/19 17:57	C9K0356	CK92130
Benzene	ND (0.0010)		8260B		1	11/21/19 17:57	C9K0356	CK92130
Bromobenzene	ND (0.0020)		8260B		1	11/21/19 17:57	C9K0356	CK92130



CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.

Client Project ID: 642 Allens Ave

Client Sample ID: RCA-1

Date Sampled: 11/20/19 07:53

Percent Solids: N/A

Initial Volume: 5

Final Volume: 5

Extraction Method: 5030B

ESS Laboratory Work Order: 19K0652

ESS Laboratory Sample ID: 19K0652-08

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	11/21/19 17:57	C9K0356	CK92130
Bromodichloromethane	ND (0.0006)		8260B		1	11/21/19 17:57	C9K0356	CK92130
Bromoform	ND (0.0010)		8260B		1	11/21/19 17:57	C9K0356	CK92130
Bromomethane	ND (0.0020)		8260B		1	11/21/19 17:57	C9K0356	CK92130
Carbon Disulfide	ND (0.0010)		8260B		1	11/21/19 17:57	C9K0356	CK92130
Carbon Tetrachloride	ND (0.0010)		8260B		1	11/21/19 17:57	C9K0356	CK92130
Chlorobenzene	ND (0.0010)		8260B		1	11/21/19 17:57	C9K0356	CK92130
Chloroethane	ND (0.0020)		8260B		1	11/21/19 17:57	C9K0356	CK92130
Chloroform	ND (0.0010)		8260B		1	11/21/19 17:57	C9K0356	CK92130
Chloromethane	ND (0.0020)		8260B		1	11/21/19 17:57	C9K0356	CK92130
cis-1,2-Dichloroethene	ND (0.0010)		8260B		1	11/21/19 17:57	C9K0356	CK92130
cis-1,3-Dichloropropene	ND (0.0004)		8260B		1	11/21/19 17:57	C9K0356	CK92130
Dibromochloromethane	ND (0.0010)		8260B		1	11/21/19 17:57	C9K0356	CK92130
Dibromomethane	ND (0.0010)		8260B		1	11/21/19 17:57	C9K0356	CK92130
Dichlorodifluoromethane	ND (0.0020)		8260B		1	11/21/19 17:57	C9K0356	CK92130
Diethyl Ether	ND (0.0010)		8260B		1	11/21/19 17:57	C9K0356	CK92130
Di-isopropyl ether	ND (0.0010)		8260B		1	11/21/19 17:57	C9K0356	CK92130
Ethyl tertiary-butyl ether	ND (0.0010)		8260B		1	11/21/19 17:57	C9K0356	CK92130
Ethylbenzene	ND (0.0010)		8260B		1	11/21/19 17:57	C9K0356	CK92130
Hexachlorobutadiene	ND (0.0006)		8260B		1	11/21/19 17:57	C9K0356	CK92130
Hexachloroethane	ND (0.0010)		8260B		1	11/21/19 17:57	C9K0356	CK92130
Isopropylbenzene	ND (0.0010)		8260B		1	11/21/19 17:57	C9K0356	CK92130
Methyl tert-Butyl Ether	ND (0.0010)		8260B		1	11/21/19 17:57	C9K0356	CK92130
Methylene Chloride	ND (0.0020)		8260B		1	11/21/19 17:57	C9K0356	CK92130
Naphthalene	ND (0.0010)		8260B		1	11/21/19 17:57	C9K0356	CK92130
n-Butylbenzene	ND (0.0010)		8260B		1	11/21/19 17:57	C9K0356	CK92130
n-Propylbenzene	ND (0.0010)		8260B		1	11/21/19 17:57	C9K0356	CK92130
sec-Butylbenzene	ND (0.0010)		8260B		1	11/21/19 17:57	C9K0356	CK92130
Styrene	ND (0.0010)		8260B		1	11/21/19 17:57	C9K0356	CK92130
tert-Butylbenzene	ND (0.0010)		8260B		1	11/21/19 17:57	C9K0356	CK92130
Tertiary-amyl methyl ether	ND (0.0010)		8260B		1	11/21/19 17:57	C9K0356	CK92130
Tetrachloroethene	ND (0.0010)		8260B		1	11/21/19 17:57	C9K0356	CK92130



CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.

Client Project ID: 642 Allens Ave

Client Sample ID: RCA-1

Date Sampled: 11/20/19 07:53

Percent Solids: N/A

Initial Volume: 5

Final Volume: 5

Extraction Method: 5030B

ESS Laboratory Work Order: 19K0652

ESS Laboratory Sample ID: 19K0652-08

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	11/21/19 17:57	C9K0356	CK92130
Toluene	ND (0.0010)		8260B		1	11/21/19 17:57	C9K0356	CK92130
trans-1,2-Dichloroethene	ND (0.0010)		8260B		1	11/21/19 17:57	C9K0356	CK92130
trans-1,3-Dichloropropene	ND (0.0004)		8260B		1	11/21/19 17:57	C9K0356	CK92130
Trichloroethene	ND (0.0010)		8260B		1	11/21/19 17:57	C9K0356	CK92130
Trichlorofluoromethane	ND (0.0010)		8260B		1	11/21/19 17:57	C9K0356	CK92130
Vinyl Acetate	ND (0.0050)		8260B		1	11/21/19 17:57	C9K0356	CK92130
Vinyl Chloride	ND (0.0010)		8260B		1	11/21/19 17:57	C9K0356	CK92130
Xylene O	ND (0.0010)		8260B		1	11/21/19 17:57	C9K0356	CK92130
Xylene P,M	ND (0.0020)		8260B		1	11/21/19 17:57	C9K0356	CK92130
Xylenes (Total)	ND (0.00200)		8260B		1	11/21/19 17:57		[CALC]

	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>
<i>Surrogate: 1,2-Dichloroethane-d4</i>	98 %		70-130
<i>Surrogate: 4-Bromofluorobenzene</i>	96 %		70-130
<i>Surrogate: Dibromofluoromethane</i>	96 %		70-130
<i>Surrogate: Toluene-d8</i>	99 %		70-130



CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.

Client Project ID: 642 Allens Ave

Client Sample ID: RCA-15

Date Sampled: 11/20/19 10:22

Percent Solids: N/A

Initial Volume: 5

Final Volume: 5

Extraction Method: 5030B

ESS Laboratory Work Order: 19K0652

ESS Laboratory Sample ID: 19K0652-09

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	11/21/19 18:24	C9K0356	CK92130
1,1,1-Trichloroethane	ND (0.0010)		8260B		1	11/21/19 18:24	C9K0356	CK92130
1,1,2,2-Tetrachloroethane	ND (0.0005)		8260B		1	11/21/19 18:24	C9K0356	CK92130
1,1,2-Trichloroethane	ND (0.0010)		8260B		1	11/21/19 18:24	C9K0356	CK92130
1,1-Dichloroethane	ND (0.0010)		8260B		1	11/21/19 18:24	C9K0356	CK92130
1,1-Dichloroethene	ND (0.0010)		8260B		1	11/21/19 18:24	C9K0356	CK92130
1,1-Dichloropropene	ND (0.0020)		8260B		1	11/21/19 18:24	C9K0356	CK92130
1,2,3-Trichlorobenzene	ND (0.0010)		8260B		1	11/21/19 18:24	C9K0356	CK92130
1,2,3-Trichloropropane	ND (0.0010)		8260B		1	11/21/19 18:24	C9K0356	CK92130
1,2,4-Trichlorobenzene	ND (0.0010)		8260B		1	11/21/19 18:24	C9K0356	CK92130
1,2,4-Trimethylbenzene	ND (0.0010)		8260B		1	11/21/19 18:24	C9K0356	CK92130
1,2-Dibromo-3-Chloropropane	ND (0.0050)		8260B		1	11/21/19 18:24	C9K0356	CK92130
1,2-Dibromoethane	ND (0.0010)		8260B		1	11/21/19 18:24	C9K0356	CK92130
1,2-Dichlorobenzene	ND (0.0010)		8260B		1	11/21/19 18:24	C9K0356	CK92130
1,2-Dichloroethane	ND (0.0010)		8260B		1	11/21/19 18:24	C9K0356	CK92130
1,2-Dichloropropane	ND (0.0010)		8260B		1	11/21/19 18:24	C9K0356	CK92130
1,3,5-Trimethylbenzene	ND (0.0010)		8260B		1	11/21/19 18:24	C9K0356	CK92130
1,3-Dichlorobenzene	ND (0.0010)		8260B		1	11/21/19 18:24	C9K0356	CK92130
1,3-Dichloropropane	ND (0.0010)		8260B		1	11/21/19 18:24	C9K0356	CK92130
1,4-Dichlorobenzene	ND (0.0010)		8260B		1	11/21/19 18:24	C9K0356	CK92130
1,4-Dioxane - Screen	ND (0.500)		8260B		1	11/21/19 18:24	C9K0356	CK92130
1-Chlorohexane	ND (0.0010)		8260B		1	11/21/19 18:24	C9K0356	CK92130
2,2-Dichloropropane	ND (0.0010)		8260B		1	11/21/19 18:24	C9K0356	CK92130
2-Butanone	ND (0.0100)		8260B		1	11/21/19 18:24	C9K0356	CK92130
2-Chlorotoluene	ND (0.0010)		8260B		1	11/21/19 18:24	C9K0356	CK92130
2-Hexanone	ND (0.0100)		8260B		1	11/21/19 18:24	C9K0356	CK92130
4-Chlorotoluene	ND (0.0010)		8260B		1	11/21/19 18:24	C9K0356	CK92130
4-Isopropyltoluene	ND (0.0010)		8260B		1	11/21/19 18:24	C9K0356	CK92130
4-Methyl-2-Pentanone	ND (0.0250)		8260B		1	11/21/19 18:24	C9K0356	CK92130
Acetone	ND (0.0100)		8260B		1	11/21/19 18:24	C9K0356	CK92130
Benzene	ND (0.0010)		8260B		1	11/21/19 18:24	C9K0356	CK92130
Bromobenzene	ND (0.0020)		8260B		1	11/21/19 18:24	C9K0356	CK92130



CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.

Client Project ID: 642 Allens Ave

Client Sample ID: RCA-15

Date Sampled: 11/20/19 10:22

Percent Solids: N/A

Initial Volume: 5

Final Volume: 5

Extraction Method: 5030B

ESS Laboratory Work Order: 19K0652

ESS Laboratory Sample ID: 19K0652-09

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	11/21/19 18:24	C9K0356	CK92130
Bromodichloromethane	ND (0.0006)		8260B		1	11/21/19 18:24	C9K0356	CK92130
Bromoform	ND (0.0010)		8260B		1	11/21/19 18:24	C9K0356	CK92130
Bromomethane	ND (0.0020)		8260B		1	11/21/19 18:24	C9K0356	CK92130
Carbon Disulfide	ND (0.0010)		8260B		1	11/21/19 18:24	C9K0356	CK92130
Carbon Tetrachloride	ND (0.0010)		8260B		1	11/21/19 18:24	C9K0356	CK92130
Chlorobenzene	ND (0.0010)		8260B		1	11/21/19 18:24	C9K0356	CK92130
Chloroethane	ND (0.0020)		8260B		1	11/21/19 18:24	C9K0356	CK92130
Chloroform	ND (0.0010)		8260B		1	11/21/19 18:24	C9K0356	CK92130
Chloromethane	ND (0.0020)		8260B		1	11/21/19 18:24	C9K0356	CK92130
cis-1,2-Dichloroethene	ND (0.0010)		8260B		1	11/21/19 18:24	C9K0356	CK92130
cis-1,3-Dichloropropene	ND (0.0004)		8260B		1	11/21/19 18:24	C9K0356	CK92130
Dibromochloromethane	ND (0.0010)		8260B		1	11/21/19 18:24	C9K0356	CK92130
Dibromomethane	ND (0.0010)		8260B		1	11/21/19 18:24	C9K0356	CK92130
Dichlorodifluoromethane	ND (0.0020)		8260B		1	11/21/19 18:24	C9K0356	CK92130
Diethyl Ether	ND (0.0010)		8260B		1	11/21/19 18:24	C9K0356	CK92130
Di-isopropyl ether	ND (0.0010)		8260B		1	11/21/19 18:24	C9K0356	CK92130
Ethyl tertiary-butyl ether	ND (0.0010)		8260B		1	11/21/19 18:24	C9K0356	CK92130
Ethylbenzene	ND (0.0010)		8260B		1	11/21/19 18:24	C9K0356	CK92130
Hexachlorobutadiene	ND (0.0006)		8260B		1	11/21/19 18:24	C9K0356	CK92130
Hexachloroethane	ND (0.0010)		8260B		1	11/21/19 18:24	C9K0356	CK92130
Isopropylbenzene	ND (0.0010)		8260B		1	11/21/19 18:24	C9K0356	CK92130
Methyl tert-Butyl Ether	ND (0.0010)		8260B		1	11/21/19 18:24	C9K0356	CK92130
Methylene Chloride	ND (0.0020)		8260B		1	11/21/19 18:24	C9K0356	CK92130
Naphthalene	ND (0.0010)		8260B		1	11/21/19 18:24	C9K0356	CK92130
n-Butylbenzene	ND (0.0010)		8260B		1	11/21/19 18:24	C9K0356	CK92130
n-Propylbenzene	ND (0.0010)		8260B		1	11/21/19 18:24	C9K0356	CK92130
sec-Butylbenzene	ND (0.0010)		8260B		1	11/21/19 18:24	C9K0356	CK92130
Styrene	ND (0.0010)		8260B		1	11/21/19 18:24	C9K0356	CK92130
tert-Butylbenzene	ND (0.0010)		8260B		1	11/21/19 18:24	C9K0356	CK92130
Tertiary-amyl methyl ether	ND (0.0010)		8260B		1	11/21/19 18:24	C9K0356	CK92130
Tetrachloroethene	ND (0.0010)		8260B		1	11/21/19 18:24	C9K0356	CK92130



ESS Laboratory

Division of Thielsch Engineering, Inc.

BAL Laboratory

*The Microbiology Division
of Thielsch Engineering, Inc.*



CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.

Client Project ID: 642 Allens Ave

Client Sample ID: RCA-15

Date Sampled: 11/20/19 10:22

Percent Solids: N/A

Initial Volume: 5

Final Volume: 5

Extraction Method: 5030B

ESS Laboratory Work Order: 19K0652

ESS Laboratory Sample ID: 19K0652-09

Sample Matrix: Ground Water

Units: mg/L

Analyst: MD

8260B Volatile Organic Compounds

<u>Analyte</u>	<u>Results (MRL)</u>	<u>MDL</u>	<u>Method</u>	<u>Limit</u>	<u>DF</u>	<u>Analyzed</u>	<u>Sequence</u>	<u>Batch</u>
Tetrahydrofuran	ND (0.0050)		8260B		1	11/21/19 18:24	C9K0356	CK92130
Toluene	ND (0.0010)		8260B		1	11/21/19 18:24	C9K0356	CK92130
trans-1,2-Dichloroethene	ND (0.0010)		8260B		1	11/21/19 18:24	C9K0356	CK92130
trans-1,3-Dichloropropene	ND (0.0004)		8260B		1	11/21/19 18:24	C9K0356	CK92130
Trichloroethene	ND (0.0010)		8260B		1	11/21/19 18:24	C9K0356	CK92130
Trichlorofluoromethane	ND (0.0010)		8260B		1	11/21/19 18:24	C9K0356	CK92130
Vinyl Acetate	ND (0.0050)		8260B		1	11/21/19 18:24	C9K0356	CK92130
Vinyl Chloride	ND (0.0010)		8260B		1	11/21/19 18:24	C9K0356	CK92130
Xylene O	ND (0.0010)		8260B		1	11/21/19 18:24	C9K0356	CK92130
Xylene P,M	ND (0.0020)		8260B		1	11/21/19 18:24	C9K0356	CK92130
Xylenes (Total)	ND (0.00200)		8260B		1	11/21/19 18:24		[CALC]

	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>
<i>Surrogate: 1,2-Dichloroethane-d4</i>	100 %		70-130
<i>Surrogate: 4-Bromofluorobenzene</i>	97 %		70-130
<i>Surrogate: Dibromofluoromethane</i>	98 %		70-130
<i>Surrogate: Toluene-d8</i>	99 %		70-130



CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.

Client Project ID: 642 Allens Ave

Client Sample ID: VHB-1

Date Sampled: 11/20/19 11:54

Percent Solids: N/A

Initial Volume: 5

Final Volume: 5

Extraction Method: 5030B

ESS Laboratory Work Order: 19K0652

ESS Laboratory Sample ID: 19K0652-10

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	11/21/19 20:59	C9K0356	CK92130
1,1,1-Trichloroethane	ND (0.0010)		8260B		1	11/21/19 20:59	C9K0356	CK92130
1,1,2,2-Tetrachloroethane	ND (0.0005)		8260B		1	11/21/19 20:59	C9K0356	CK92130
1,1,2-Trichloroethane	ND (0.0010)		8260B		1	11/21/19 20:59	C9K0356	CK92130
1,1-Dichloroethane	ND (0.0010)		8260B		1	11/21/19 20:59	C9K0356	CK92130
1,1-Dichloroethene	ND (0.0010)		8260B		1	11/21/19 20:59	C9K0356	CK92130
1,1-Dichloropropene	ND (0.0020)		8260B		1	11/21/19 20:59	C9K0356	CK92130
1,2,3-Trichlorobenzene	ND (0.0010)		8260B		1	11/21/19 20:59	C9K0356	CK92130
1,2,3-Trichloropropane	ND (0.0010)		8260B		1	11/21/19 20:59	C9K0356	CK92130
1,2,4-Trichlorobenzene	ND (0.0010)		8260B		1	11/21/19 20:59	C9K0356	CK92130
1,2,4-Trimethylbenzene	ND (0.0010)		8260B		1	11/21/19 20:59	C9K0356	CK92130
1,2-Dibromo-3-Chloropropane	ND (0.0050)		8260B		1	11/21/19 20:59	C9K0356	CK92130
1,2-Dibromoethane	ND (0.0010)		8260B		1	11/21/19 20:59	C9K0356	CK92130
1,2-Dichlorobenzene	ND (0.0010)		8260B		1	11/21/19 20:59	C9K0356	CK92130
1,2-Dichloroethane	ND (0.0010)		8260B		1	11/21/19 20:59	C9K0356	CK92130
1,2-Dichloropropane	ND (0.0010)		8260B		1	11/21/19 20:59	C9K0356	CK92130
1,3,5-Trimethylbenzene	ND (0.0010)		8260B		1	11/21/19 20:59	C9K0356	CK92130
1,3-Dichlorobenzene	ND (0.0010)		8260B		1	11/21/19 20:59	C9K0356	CK92130
1,3-Dichloropropane	ND (0.0010)		8260B		1	11/21/19 20:59	C9K0356	CK92130
1,4-Dichlorobenzene	ND (0.0010)		8260B		1	11/21/19 20:59	C9K0356	CK92130
1,4-Dioxane - Screen	ND (0.500)		8260B		1	11/21/19 20:59	C9K0356	CK92130
1-Chlorohexane	ND (0.0010)		8260B		1	11/21/19 20:59	C9K0356	CK92130
2,2-Dichloropropane	ND (0.0010)		8260B		1	11/21/19 20:59	C9K0356	CK92130
2-Butanone	ND (0.0100)		8260B		1	11/21/19 20:59	C9K0356	CK92130
2-Chlorotoluene	ND (0.0010)		8260B		1	11/21/19 20:59	C9K0356	CK92130
2-Hexanone	ND (0.0100)		8260B		1	11/21/19 20:59	C9K0356	CK92130
4-Chlorotoluene	ND (0.0010)		8260B		1	11/21/19 20:59	C9K0356	CK92130
4-Isopropyltoluene	ND (0.0010)		8260B		1	11/21/19 20:59	C9K0356	CK92130
4-Methyl-2-Pentanone	ND (0.0250)		8260B		1	11/21/19 20:59	C9K0356	CK92130
Acetone	ND (0.0100)		8260B		1	11/21/19 20:59	C9K0356	CK92130
Benzene	ND (0.0010)		8260B		1	11/21/19 20:59	C9K0356	CK92130
Bromobenzene	ND (0.0020)		8260B		1	11/21/19 20:59	C9K0356	CK92130



CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.

Client Project ID: 642 Allens Ave

Client Sample ID: VHB-1

Date Sampled: 11/20/19 11:54

Percent Solids: N/A

Initial Volume: 5

Final Volume: 5

Extraction Method: 5030B

ESS Laboratory Work Order: 19K0652

ESS Laboratory Sample ID: 19K0652-10

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	11/21/19 20:59	C9K0356	CK92130
Bromodichloromethane	ND (0.0006)		8260B		1	11/21/19 20:59	C9K0356	CK92130
Bromoform	ND (0.0010)		8260B		1	11/21/19 20:59	C9K0356	CK92130
Bromomethane	ND (0.0020)		8260B		1	11/21/19 20:59	C9K0356	CK92130
Carbon Disulfide	ND (0.0010)		8260B		1	11/21/19 20:59	C9K0356	CK92130
Carbon Tetrachloride	ND (0.0010)		8260B		1	11/21/19 20:59	C9K0356	CK92130
Chlorobenzene	ND (0.0010)		8260B		1	11/21/19 20:59	C9K0356	CK92130
Chloroethane	ND (0.0020)		8260B		1	11/21/19 20:59	C9K0356	CK92130
Chloroform	ND (0.0010)		8260B		1	11/21/19 20:59	C9K0356	CK92130
Chloromethane	ND (0.0020)		8260B		1	11/21/19 20:59	C9K0356	CK92130
cis-1,2-Dichloroethene	ND (0.0010)		8260B		1	11/21/19 20:59	C9K0356	CK92130
cis-1,3-Dichloropropene	ND (0.0004)		8260B		1	11/21/19 20:59	C9K0356	CK92130
Dibromochloromethane	ND (0.0010)		8260B		1	11/21/19 20:59	C9K0356	CK92130
Dibromomethane	ND (0.0010)		8260B		1	11/21/19 20:59	C9K0356	CK92130
Dichlorodifluoromethane	ND (0.0020)		8260B		1	11/21/19 20:59	C9K0356	CK92130
Diethyl Ether	ND (0.0010)		8260B		1	11/21/19 20:59	C9K0356	CK92130
Di-isopropyl ether	ND (0.0010)		8260B		1	11/21/19 20:59	C9K0356	CK92130
Ethyl tertiary-butyl ether	ND (0.0010)		8260B		1	11/21/19 20:59	C9K0356	CK92130
Ethylbenzene	ND (0.0010)		8260B		1	11/21/19 20:59	C9K0356	CK92130
Hexachlorobutadiene	ND (0.0006)		8260B		1	11/21/19 20:59	C9K0356	CK92130
Hexachloroethane	ND (0.0010)		8260B		1	11/21/19 20:59	C9K0356	CK92130
Isopropylbenzene	0.0111 (0.0010)		8260B		1	11/21/19 20:59	C9K0356	CK92130
Methyl tert-Butyl Ether	ND (0.0010)		8260B		1	11/21/19 20:59	C9K0356	CK92130
Methylene Chloride	ND (0.0020)		8260B		1	11/21/19 20:59	C9K0356	CK92130
Naphthalene	ND (0.0010)		8260B		1	11/21/19 20:59	C9K0356	CK92130
n-Butylbenzene	ND (0.0010)		8260B		1	11/21/19 20:59	C9K0356	CK92130
n-Propylbenzene	0.0014 (0.0010)		8260B		1	11/21/19 20:59	C9K0356	CK92130
sec-Butylbenzene	0.0029 (0.0010)		8260B		1	11/21/19 20:59	C9K0356	CK92130
Styrene	ND (0.0010)		8260B		1	11/21/19 20:59	C9K0356	CK92130
tert-Butylbenzene	ND (0.0010)		8260B		1	11/21/19 20:59	C9K0356	CK92130
Tertiary-amyl methyl ether	ND (0.0010)		8260B		1	11/21/19 20:59	C9K0356	CK92130
Tetrachloroethene	ND (0.0010)		8260B		1	11/21/19 20:59	C9K0356	CK92130



CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.

Client Project ID: 642 Allens Ave

Client Sample ID: VHB-1

Date Sampled: 11/20/19 11:54

Percent Solids: N/A

Initial Volume: 5

Final Volume: 5

Extraction Method: 5030B

ESS Laboratory Work Order: 19K0652

ESS Laboratory Sample ID: 19K0652-10

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	11/21/19 20:59	C9K0356	CK92130
Toluene	ND (0.0010)		8260B		1	11/21/19 20:59	C9K0356	CK92130
trans-1,2-Dichloroethene	ND (0.0010)		8260B		1	11/21/19 20:59	C9K0356	CK92130
trans-1,3-Dichloropropene	ND (0.0004)		8260B		1	11/21/19 20:59	C9K0356	CK92130
Trichloroethene	ND (0.0010)		8260B		1	11/21/19 20:59	C9K0356	CK92130
Trichlorofluoromethane	ND (0.0010)		8260B		1	11/21/19 20:59	C9K0356	CK92130
Vinyl Acetate	ND (0.0050)		8260B		1	11/21/19 20:59	C9K0356	CK92130
Vinyl Chloride	ND (0.0010)		8260B		1	11/21/19 20:59	C9K0356	CK92130
Xylene O	ND (0.0010)		8260B		1	11/21/19 20:59	C9K0356	CK92130
Xylene P,M	ND (0.0020)		8260B		1	11/21/19 20:59	C9K0356	CK92130
Xylenes (Total)	ND (0.00200)		8260B		1	11/21/19 20:59		[CALC]

	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>
<i>Surrogate: 1,2-Dichloroethane-d4</i>	96 %		70-130
<i>Surrogate: 4-Bromofluorobenzene</i>	100 %		70-130
<i>Surrogate: Dibromofluoromethane</i>	95 %		70-130
<i>Surrogate: Toluene-d8</i>	98 %		70-130



CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.

Client Project ID: 642 Allens Ave

Client Sample ID: RCA-12R

Date Sampled: 11/20/19 08:29

Percent Solids: N/A

Initial Volume: 5

Final Volume: 5

Extraction Method: 5030B

ESS Laboratory Work Order: 19K0652

ESS Laboratory Sample ID: 19K0652-11

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	11/21/19 18:49	C9K0356	CK92130
1,1,1-Trichloroethane	ND (0.0010)		8260B		1	11/21/19 18:49	C9K0356	CK92130
1,1,2,2-Tetrachloroethane	ND (0.0005)		8260B		1	11/21/19 18:49	C9K0356	CK92130
1,1,2-Trichloroethane	ND (0.0010)		8260B		1	11/21/19 18:49	C9K0356	CK92130
1,1-Dichloroethane	ND (0.0010)		8260B		1	11/21/19 18:49	C9K0356	CK92130
1,1-Dichloroethene	ND (0.0010)		8260B		1	11/21/19 18:49	C9K0356	CK92130
1,1-Dichloropropene	ND (0.0020)		8260B		1	11/21/19 18:49	C9K0356	CK92130
1,2,3-Trichlorobenzene	ND (0.0010)		8260B		1	11/21/19 18:49	C9K0356	CK92130
1,2,3-Trichloropropane	ND (0.0010)		8260B		1	11/21/19 18:49	C9K0356	CK92130
1,2,4-Trichlorobenzene	ND (0.0010)		8260B		1	11/21/19 18:49	C9K0356	CK92130
1,2,4-Trimethylbenzene	ND (0.0010)		8260B		1	11/21/19 18:49	C9K0356	CK92130
1,2-Dibromo-3-Chloropropane	ND (0.0050)		8260B		1	11/21/19 18:49	C9K0356	CK92130
1,2-Dibromoethane	ND (0.0010)		8260B		1	11/21/19 18:49	C9K0356	CK92130
1,2-Dichlorobenzene	ND (0.0010)		8260B		1	11/21/19 18:49	C9K0356	CK92130
1,2-Dichloroethane	ND (0.0010)		8260B		1	11/21/19 18:49	C9K0356	CK92130
1,2-Dichloropropane	ND (0.0010)		8260B		1	11/21/19 18:49	C9K0356	CK92130
1,3,5-Trimethylbenzene	ND (0.0010)		8260B		1	11/21/19 18:49	C9K0356	CK92130
1,3-Dichlorobenzene	ND (0.0010)		8260B		1	11/21/19 18:49	C9K0356	CK92130
1,3-Dichloropropane	ND (0.0010)		8260B		1	11/21/19 18:49	C9K0356	CK92130
1,4-Dichlorobenzene	ND (0.0010)		8260B		1	11/21/19 18:49	C9K0356	CK92130
1,4-Dioxane - Screen	ND (0.500)		8260B		1	11/21/19 18:49	C9K0356	CK92130
1-Chlorohexane	ND (0.0010)		8260B		1	11/21/19 18:49	C9K0356	CK92130
2,2-Dichloropropane	ND (0.0010)		8260B		1	11/21/19 18:49	C9K0356	CK92130
2-Butanone	ND (0.0100)		8260B		1	11/21/19 18:49	C9K0356	CK92130
2-Chlorotoluene	ND (0.0010)		8260B		1	11/21/19 18:49	C9K0356	CK92130
2-Hexanone	ND (0.0100)		8260B		1	11/21/19 18:49	C9K0356	CK92130
4-Chlorotoluene	ND (0.0010)		8260B		1	11/21/19 18:49	C9K0356	CK92130
4-Isopropyltoluene	ND (0.0010)		8260B		1	11/21/19 18:49	C9K0356	CK92130
4-Methyl-2-Pentanone	ND (0.0250)		8260B		1	11/21/19 18:49	C9K0356	CK92130
Acetone	ND (0.0100)		8260B		1	11/21/19 18:49	C9K0356	CK92130
Benzene	ND (0.0010)		8260B		1	11/21/19 18:49	C9K0356	CK92130
Bromobenzene	ND (0.0020)		8260B		1	11/21/19 18:49	C9K0356	CK92130



CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.

Client Project ID: 642 Allens Ave

Client Sample ID: RCA-12R

Date Sampled: 11/20/19 08:29

Percent Solids: N/A

Initial Volume: 5

Final Volume: 5

Extraction Method: 5030B

ESS Laboratory Work Order: 19K0652

ESS Laboratory Sample ID: 19K0652-11

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	11/21/19 18:49	C9K0356	CK92130
Bromodichloromethane	ND (0.0006)		8260B		1	11/21/19 18:49	C9K0356	CK92130
Bromoform	ND (0.0010)		8260B		1	11/21/19 18:49	C9K0356	CK92130
Bromomethane	ND (0.0020)		8260B		1	11/21/19 18:49	C9K0356	CK92130
Carbon Disulfide	ND (0.0010)		8260B		1	11/21/19 18:49	C9K0356	CK92130
Carbon Tetrachloride	ND (0.0010)		8260B		1	11/21/19 18:49	C9K0356	CK92130
Chlorobenzene	ND (0.0010)		8260B		1	11/21/19 18:49	C9K0356	CK92130
Chloroethane	ND (0.0020)		8260B		1	11/21/19 18:49	C9K0356	CK92130
Chloroform	ND (0.0010)		8260B		1	11/21/19 18:49	C9K0356	CK92130
Chloromethane	ND (0.0020)		8260B		1	11/21/19 18:49	C9K0356	CK92130
cis-1,2-Dichloroethene	0.0178 (0.0010)		8260B		1	11/21/19 18:49	C9K0356	CK92130
cis-1,3-Dichloropropene	ND (0.0004)		8260B		1	11/21/19 18:49	C9K0356	CK92130
Dibromochloromethane	ND (0.0010)		8260B		1	11/21/19 18:49	C9K0356	CK92130
Dibromomethane	ND (0.0010)		8260B		1	11/21/19 18:49	C9K0356	CK92130
Dichlorodifluoromethane	ND (0.0020)		8260B		1	11/21/19 18:49	C9K0356	CK92130
Diethyl Ether	ND (0.0010)		8260B		1	11/21/19 18:49	C9K0356	CK92130
Di-isopropyl ether	ND (0.0010)		8260B		1	11/21/19 18:49	C9K0356	CK92130
Ethyl tertiary-butyl ether	ND (0.0010)		8260B		1	11/21/19 18:49	C9K0356	CK92130
Ethylbenzene	ND (0.0010)		8260B		1	11/21/19 18:49	C9K0356	CK92130
Hexachlorobutadiene	ND (0.0006)		8260B		1	11/21/19 18:49	C9K0356	CK92130
Hexachloroethane	ND (0.0010)		8260B		1	11/21/19 18:49	C9K0356	CK92130
Isopropylbenzene	ND (0.0010)		8260B		1	11/21/19 18:49	C9K0356	CK92130
Methyl tert-Butyl Ether	ND (0.0010)		8260B		1	11/21/19 18:49	C9K0356	CK92130
Methylene Chloride	ND (0.0020)		8260B		1	11/21/19 18:49	C9K0356	CK92130
Naphthalene	ND (0.0010)		8260B		1	11/21/19 18:49	C9K0356	CK92130
n-Butylbenzene	ND (0.0010)		8260B		1	11/21/19 18:49	C9K0356	CK92130
n-Propylbenzene	ND (0.0010)		8260B		1	11/21/19 18:49	C9K0356	CK92130
sec-Butylbenzene	ND (0.0010)		8260B		1	11/21/19 18:49	C9K0356	CK92130
Styrene	ND (0.0010)		8260B		1	11/21/19 18:49	C9K0356	CK92130
tert-Butylbenzene	ND (0.0010)		8260B		1	11/21/19 18:49	C9K0356	CK92130
Tertiary-amyl methyl ether	ND (0.0010)		8260B		1	11/21/19 18:49	C9K0356	CK92130
Tetrachloroethene	0.0020 (0.0010)		8260B		1	11/21/19 18:49	C9K0356	CK92130



ESS Laboratory

Division of Thielsch Engineering, Inc.

BAL Laboratory

*The Microbiology Division
of Thielsch Engineering, Inc.*



CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.

Client Project ID: 642 Allens Ave

Client Sample ID: RCA-12R

Date Sampled: 11/20/19 08:29

Percent Solids: N/A

Initial Volume: 5

Final Volume: 5

Extraction Method: 5030B

ESS Laboratory Work Order: 19K0652

ESS Laboratory Sample ID: 19K0652-11

Sample Matrix: Ground Water

Units: mg/L

Analyst: MD

8260B Volatile Organic Compounds

<u>Analyte</u>	<u>Results (MRL)</u>	<u>MDL</u>	<u>Method</u>	<u>Limit</u>	<u>DF</u>	<u>Analyzed</u>	<u>Sequence</u>	<u>Batch</u>
Tetrahydrofuran	ND (0.0050)		8260B		1	11/21/19 18:49	C9K0356	CK92130
Toluene	ND (0.0010)		8260B		1	11/21/19 18:49	C9K0356	CK92130
trans-1,2-Dichloroethene	ND (0.0010)		8260B		1	11/21/19 18:49	C9K0356	CK92130
trans-1,3-Dichloropropene	ND (0.0004)		8260B		1	11/21/19 18:49	C9K0356	CK92130
Trichloroethene	0.0066 (0.0010)		8260B		1	11/21/19 18:49	C9K0356	CK92130
Trichlorofluoromethane	ND (0.0010)		8260B		1	11/21/19 18:49	C9K0356	CK92130
Vinyl Acetate	ND (0.0050)		8260B		1	11/21/19 18:49	C9K0356	CK92130
Vinyl Chloride	0.0010 (0.0010)		8260B		1	11/21/19 18:49	C9K0356	CK92130
Xylene O	ND (0.0010)		8260B		1	11/21/19 18:49	C9K0356	CK92130
Xylene P,M	ND (0.0020)		8260B		1	11/21/19 18:49	C9K0356	CK92130
Xylenes (Total)	ND (0.00200)		8260B		1	11/21/19 18:49		[CALC]

	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>100 %</i>		<i>70-130</i>
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>97 %</i>		<i>70-130</i>
<i>Surrogate: Dibromofluoromethane</i>	<i>97 %</i>		<i>70-130</i>
<i>Surrogate: Toluene-d8</i>	<i>98 %</i>		<i>70-130</i>



CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.

Client Project ID: 642 Allens Ave

Client Sample ID: GZ-309D

Date Sampled: 11/20/19 11:50

Percent Solids: N/A

Initial Volume: 5

Final Volume: 5

Extraction Method: 5030B

ESS Laboratory Work Order: 19K0652

ESS Laboratory Sample ID: 19K0652-12

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	11/27/19 12:43	C9K0447	CK92725
1,1,1-Trichloroethane	ND (0.0010)		8260B		1	11/27/19 12:43	C9K0447	CK92725
1,1,2,2-Tetrachloroethane	ND (0.0005)		8260B		1	11/27/19 12:43	C9K0447	CK92725
1,1,2-Trichloroethane	ND (0.0010)		8260B		1	11/27/19 12:43	C9K0447	CK92725
1,1-Dichloroethane	ND (0.0010)		8260B		1	11/27/19 12:43	C9K0447	CK92725
1,1-Dichloroethene	ND (0.0010)		8260B		1	11/27/19 12:43	C9K0447	CK92725
1,1-Dichloropropene	ND (0.0020)		8260B		1	11/27/19 12:43	C9K0447	CK92725
1,2,3-Trichlorobenzene	ND (0.0010)		8260B		1	11/27/19 12:43	C9K0447	CK92725
1,2,3-Trichloropropane	ND (0.0010)		8260B		1	11/27/19 12:43	C9K0447	CK92725
1,2,4-Trichlorobenzene	ND (0.0010)		8260B		1	11/27/19 12:43	C9K0447	CK92725
1,2,4-Trimethylbenzene	ND (0.0010)		8260B		1	11/27/19 12:43	C9K0447	CK92725
1,2-Dibromo-3-Chloropropane	ND (0.0050)		8260B		1	11/27/19 12:43	C9K0447	CK92725
1,2-Dibromoethane	ND (0.0010)		8260B		1	11/27/19 12:43	C9K0447	CK92725
1,2-Dichlorobenzene	ND (0.0010)		8260B		1	11/27/19 12:43	C9K0447	CK92725
1,2-Dichloroethane	ND (0.0010)		8260B		1	11/27/19 12:43	C9K0447	CK92725
1,2-Dichloropropane	ND (0.0010)		8260B		1	11/27/19 12:43	C9K0447	CK92725
1,3,5-Trimethylbenzene	ND (0.0010)		8260B		1	11/27/19 12:43	C9K0447	CK92725
1,3-Dichlorobenzene	ND (0.0010)		8260B		1	11/27/19 12:43	C9K0447	CK92725
1,3-Dichloropropane	ND (0.0010)		8260B		1	11/27/19 12:43	C9K0447	CK92725
1,4-Dichlorobenzene	ND (0.0010)		8260B		1	11/27/19 12:43	C9K0447	CK92725
1,4-Dioxane - Screen	ND (0.500)		8260B		1	11/27/19 12:43	C9K0447	CK92725
1-Chlorohexane	ND (0.0010)		8260B		1	11/27/19 12:43	C9K0447	CK92725
2,2-Dichloropropane	ND (0.0010)		8260B		1	11/27/19 12:43	C9K0447	CK92725
2-Butanone	ND (0.0100)		8260B		1	11/27/19 12:43	C9K0447	CK92725
2-Chlorotoluene	ND (0.0010)		8260B		1	11/27/19 12:43	C9K0447	CK92725
2-Hexanone	ND (0.0100)		8260B		1	11/27/19 12:43	C9K0447	CK92725
4-Chlorotoluene	ND (0.0010)		8260B		1	11/27/19 12:43	C9K0447	CK92725
4-Isopropyltoluene	ND (0.0010)		8260B		1	11/27/19 12:43	C9K0447	CK92725
4-Methyl-2-Pentanone	ND (0.0250)		8260B		1	11/27/19 12:43	C9K0447	CK92725
Acetone	ND (0.0100)		8260B		1	11/27/19 12:43	C9K0447	CK92725
Benzene	ND (0.0010)		8260B		1	11/27/19 12:43	C9K0447	CK92725
Bromobenzene	ND (0.0020)		8260B		1	11/27/19 12:43	C9K0447	CK92725



CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.

Client Project ID: 642 Allens Ave

Client Sample ID: GZ-309D

Date Sampled: 11/20/19 11:50

Percent Solids: N/A

Initial Volume: 5

Final Volume: 5

Extraction Method: 5030B

ESS Laboratory Work Order: 19K0652

ESS Laboratory Sample ID: 19K0652-12

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	11/27/19 12:43	C9K0447	CK92725
Bromodichloromethane	ND (0.0006)		8260B		1	11/27/19 12:43	C9K0447	CK92725
Bromoform	ND (0.0010)		8260B		1	11/27/19 12:43	C9K0447	CK92725
Bromomethane	ND (0.0020)		8260B		1	11/27/19 12:43	C9K0447	CK92725
Carbon Disulfide	ND (0.0010)		8260B		1	11/27/19 12:43	C9K0447	CK92725
Carbon Tetrachloride	ND (0.0010)		8260B		1	11/27/19 12:43	C9K0447	CK92725
Chlorobenzene	ND (0.0010)		8260B		1	11/27/19 12:43	C9K0447	CK92725
Chloroethane	ND (0.0020)		8260B		1	11/27/19 12:43	C9K0447	CK92725
Chloroform	ND (0.0010)		8260B		1	11/27/19 12:43	C9K0447	CK92725
Chloromethane	ND (0.0020)		8260B		1	11/27/19 12:43	C9K0447	CK92725
cis-1,2-Dichloroethene	ND (0.0010)		8260B		1	11/27/19 12:43	C9K0447	CK92725
cis-1,3-Dichloropropene	ND (0.0004)		8260B		1	11/27/19 12:43	C9K0447	CK92725
Dibromochloromethane	ND (0.0010)		8260B		1	11/27/19 12:43	C9K0447	CK92725
Dibromomethane	ND (0.0010)		8260B		1	11/27/19 12:43	C9K0447	CK92725
Dichlorodifluoromethane	ND (0.0020)		8260B		1	11/27/19 12:43	C9K0447	CK92725
Diethyl Ether	ND (0.0010)		8260B		1	11/27/19 12:43	C9K0447	CK92725
Di-isopropyl ether	ND (0.0010)		8260B		1	11/27/19 12:43	C9K0447	CK92725
Ethyl tertiary-butyl ether	ND (0.0010)		8260B		1	11/27/19 12:43	C9K0447	CK92725
Ethylbenzene	ND (0.0010)		8260B		1	11/27/19 12:43	C9K0447	CK92725
Hexachlorobutadiene	ND (0.0006)		8260B		1	11/27/19 12:43	C9K0447	CK92725
Hexachloroethane	ND (0.0010)		8260B		1	11/27/19 12:43	C9K0447	CK92725
Isopropylbenzene	ND (0.0010)		8260B		1	11/27/19 12:43	C9K0447	CK92725
Methyl tert-Butyl Ether	ND (0.0010)		8260B		1	11/27/19 12:43	C9K0447	CK92725
Methylene Chloride	ND (0.0020)		8260B		1	11/27/19 12:43	C9K0447	CK92725
Naphthalene	ND (0.0010)		8260B		1	11/27/19 12:43	C9K0447	CK92725
n-Butylbenzene	ND (0.0010)		8260B		1	11/27/19 12:43	C9K0447	CK92725
n-Propylbenzene	ND (0.0010)		8260B		1	11/27/19 12:43	C9K0447	CK92725
sec-Butylbenzene	ND (0.0010)		8260B		1	11/27/19 12:43	C9K0447	CK92725
Styrene	ND (0.0010)		8260B		1	11/27/19 12:43	C9K0447	CK92725
tert-Butylbenzene	ND (0.0010)		8260B		1	11/27/19 12:43	C9K0447	CK92725
Tertiary-amyl methyl ether	ND (0.0010)		8260B		1	11/27/19 12:43	C9K0447	CK92725
Tetrachloroethene	ND (0.0010)		8260B		1	11/27/19 12:43	C9K0447	CK92725



CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.

Client Project ID: 642 Allens Ave

Client Sample ID: GZ-309D

Date Sampled: 11/20/19 11:50

Percent Solids: N/A

Initial Volume: 5

Final Volume: 5

Extraction Method: 5030B

ESS Laboratory Work Order: 19K0652

ESS Laboratory Sample ID: 19K0652-12

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	11/27/19 12:43	C9K0447	CK92725
Toluene	ND (0.0010)		8260B		1	11/27/19 12:43	C9K0447	CK92725
trans-1,2-Dichloroethene	ND (0.0010)		8260B		1	11/27/19 12:43	C9K0447	CK92725
trans-1,3-Dichloropropene	ND (0.0004)		8260B		1	11/27/19 12:43	C9K0447	CK92725
Trichloroethene	ND (0.0010)		8260B		1	11/27/19 12:43	C9K0447	CK92725
Trichlorofluoromethane	ND (0.0010)		8260B		1	11/27/19 12:43	C9K0447	CK92725
Vinyl Acetate	ND (0.0050)		8260B		1	11/27/19 12:43	C9K0447	CK92725
Vinyl Chloride	ND (0.0010)		8260B		1	11/27/19 12:43	C9K0447	CK92725
Xylene O	ND (0.0010)		8260B		1	11/27/19 12:43	C9K0447	CK92725
Xylene P,M	ND (0.0020)		8260B		1	11/27/19 12:43	C9K0447	CK92725
Xylenes (Total)	ND (0.00200)		8260B		1	11/27/19 12:43		[CALC]

	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>
<i>Surrogate: 1,2-Dichloroethane-d4</i>	94 %		70-130
<i>Surrogate: 4-Bromofluorobenzene</i>	95 %		70-130
<i>Surrogate: Dibromofluoromethane</i>	99 %		70-130
<i>Surrogate: Toluene-d8</i>	101 %		70-130



CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.

Client Project ID: 642 Allens Ave

Client Sample ID: BD 112019

Date Sampled: 11/20/19 00:00

Percent Solids: N/A

Initial Volume: 5

Final Volume: 5

Extraction Method: 5030B

ESS Laboratory Work Order: 19K0652

ESS Laboratory Sample ID: 19K0652-13

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	11/21/19 14:59	C9K0355	CK92129
1,1,1-Trichloroethane	ND (0.0010)		8260B		1	11/21/19 14:59	C9K0355	CK92129
1,1,2,2-Tetrachloroethane	ND (0.0005)		8260B		1	11/21/19 14:59	C9K0355	CK92129
1,1,2-Trichloroethane	ND (0.0010)		8260B		1	11/21/19 14:59	C9K0355	CK92129
1,1-Dichloroethane	ND (0.0010)		8260B		1	11/21/19 14:59	C9K0355	CK92129
1,1-Dichloroethene	ND (0.0010)		8260B		1	11/21/19 14:59	C9K0355	CK92129
1,1-Dichloropropene	ND (0.0020)		8260B		1	11/21/19 14:59	C9K0355	CK92129
1,2,3-Trichlorobenzene	ND (0.0010)		8260B		1	11/21/19 14:59	C9K0355	CK92129
1,2,3-Trichloropropane	ND (0.0010)		8260B		1	11/21/19 14:59	C9K0355	CK92129
1,2,4-Trichlorobenzene	ND (0.0010)		8260B		1	11/21/19 14:59	C9K0355	CK92129
1,2,4-Trimethylbenzene	ND (0.0010)		8260B		1	11/21/19 14:59	C9K0355	CK92129
1,2-Dibromo-3-Chloropropane	ND (0.0050)		8260B		1	11/21/19 14:59	C9K0355	CK92129
1,2-Dibromoethane	ND (0.0010)		8260B		1	11/21/19 14:59	C9K0355	CK92129
1,2-Dichlorobenzene	ND (0.0010)		8260B		1	11/21/19 14:59	C9K0355	CK92129
1,2-Dichloroethane	ND (0.0010)		8260B		1	11/21/19 14:59	C9K0355	CK92129
1,2-Dichloropropane	ND (0.0010)		8260B		1	11/21/19 14:59	C9K0355	CK92129
1,3,5-Trimethylbenzene	ND (0.0010)		8260B		1	11/21/19 14:59	C9K0355	CK92129
1,3-Dichlorobenzene	ND (0.0010)		8260B		1	11/21/19 14:59	C9K0355	CK92129
1,3-Dichloropropane	ND (0.0010)		8260B		1	11/21/19 14:59	C9K0355	CK92129
1,4-Dichlorobenzene	ND (0.0010)		8260B		1	11/21/19 14:59	C9K0355	CK92129
1,4-Dioxane - Screen	ND (0.500)		8260B		1	11/21/19 14:59	C9K0355	CK92129
1-Chlorohexane	ND (0.0010)		8260B		1	11/21/19 14:59	C9K0355	CK92129
2,2-Dichloropropane	ND (0.0010)		8260B		1	11/21/19 14:59	C9K0355	CK92129
2-Butanone	ND (0.0100)		8260B		1	11/21/19 14:59	C9K0355	CK92129
2-Chlorotoluene	ND (0.0010)		8260B		1	11/21/19 14:59	C9K0355	CK92129
2-Hexanone	ND (0.0100)		8260B		1	11/21/19 14:59	C9K0355	CK92129
4-Chlorotoluene	ND (0.0010)		8260B		1	11/21/19 14:59	C9K0355	CK92129
4-Isopropyltoluene	ND (0.0010)		8260B		1	11/21/19 14:59	C9K0355	CK92129
4-Methyl-2-Pentanone	ND (0.0250)		8260B		1	11/21/19 14:59	C9K0355	CK92129
Acetone	ND (0.0100)		8260B		1	11/21/19 14:59	C9K0355	CK92129
Benzene	ND (0.0010)		8260B		1	11/21/19 14:59	C9K0355	CK92129
Bromobenzene	ND (0.0020)		8260B		1	11/21/19 14:59	C9K0355	CK92129



CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.

Client Project ID: 642 Allens Ave

Client Sample ID: BD 112019

Date Sampled: 11/20/19 00:00

Percent Solids: N/A

Initial Volume: 5

Final Volume: 5

Extraction Method: 5030B

ESS Laboratory Work Order: 19K0652

ESS Laboratory Sample ID: 19K0652-13

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	11/21/19 14:59	C9K0355	CK92129
Bromodichloromethane	ND (0.0006)		8260B		1	11/21/19 14:59	C9K0355	CK92129
Bromoform	ND (0.0010)		8260B		1	11/21/19 14:59	C9K0355	CK92129
Bromomethane	ND (0.0020)		8260B		1	11/21/19 14:59	C9K0355	CK92129
Carbon Disulfide	ND (0.0010)		8260B		1	11/21/19 14:59	C9K0355	CK92129
Carbon Tetrachloride	ND (0.0010)		8260B		1	11/21/19 14:59	C9K0355	CK92129
Chlorobenzene	ND (0.0010)		8260B		1	11/21/19 14:59	C9K0355	CK92129
Chloroethane	ND (0.0020)		8260B		1	11/21/19 14:59	C9K0355	CK92129
Chloroform	ND (0.0010)		8260B		1	11/21/19 14:59	C9K0355	CK92129
Chloromethane	ND (0.0020)		8260B		1	11/21/19 14:59	C9K0355	CK92129
cis-1,2-Dichloroethene	0.0217 (0.0010)		8260B		1	11/21/19 14:59	C9K0355	CK92129
cis-1,3-Dichloropropene	ND (0.0004)		8260B		1	11/21/19 14:59	C9K0355	CK92129
Dibromochloromethane	ND (0.0010)		8260B		1	11/21/19 14:59	C9K0355	CK92129
Dibromomethane	ND (0.0010)		8260B		1	11/21/19 14:59	C9K0355	CK92129
Dichlorodifluoromethane	ND (0.0020)		8260B		1	11/21/19 14:59	C9K0355	CK92129
Diethyl Ether	ND (0.0010)		8260B		1	11/21/19 14:59	C9K0355	CK92129
Di-isopropyl ether	ND (0.0010)		8260B		1	11/21/19 14:59	C9K0355	CK92129
Ethyl tertiary-butyl ether	ND (0.0010)		8260B		1	11/21/19 14:59	C9K0355	CK92129
Ethylbenzene	ND (0.0010)		8260B		1	11/21/19 14:59	C9K0355	CK92129
Hexachlorobutadiene	ND (0.0006)		8260B		1	11/21/19 14:59	C9K0355	CK92129
Hexachloroethane	ND (0.0010)		8260B		1	11/21/19 14:59	C9K0355	CK92129
Isopropylbenzene	ND (0.0010)		8260B		1	11/21/19 14:59	C9K0355	CK92129
Methyl tert-Butyl Ether	ND (0.0010)		8260B		1	11/21/19 14:59	C9K0355	CK92129
Methylene Chloride	ND (0.0020)		8260B		1	11/21/19 14:59	C9K0355	CK92129
Naphthalene	ND (0.0010)		8260B		1	11/21/19 14:59	C9K0355	CK92129
n-Butylbenzene	ND (0.0010)		8260B		1	11/21/19 14:59	C9K0355	CK92129
n-Propylbenzene	ND (0.0010)		8260B		1	11/21/19 14:59	C9K0355	CK92129
sec-Butylbenzene	ND (0.0010)		8260B		1	11/21/19 14:59	C9K0355	CK92129
Styrene	ND (0.0010)		8260B		1	11/21/19 14:59	C9K0355	CK92129
tert-Butylbenzene	ND (0.0010)		8260B		1	11/21/19 14:59	C9K0355	CK92129
Tertiary-amyl methyl ether	ND (0.0010)		8260B		1	11/21/19 14:59	C9K0355	CK92129
Tetrachloroethene	0.0020 (0.0010)		8260B		1	11/21/19 14:59	C9K0355	CK92129



CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.

Client Project ID: 642 Allens Ave

Client Sample ID: BD 112019

Date Sampled: 11/20/19 00:00

Percent Solids: N/A

Initial Volume: 5

Final Volume: 5

Extraction Method: 5030B

ESS Laboratory Work Order: 19K0652

ESS Laboratory Sample ID: 19K0652-13

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	11/21/19 14:59	C9K0355	CK92129
Toluene	ND (0.0010)		8260B		1	11/21/19 14:59	C9K0355	CK92129
trans-1,2-Dichloroethene	ND (0.0010)		8260B		1	11/21/19 14:59	C9K0355	CK92129
trans-1,3-Dichloropropene	ND (0.0004)		8260B		1	11/21/19 14:59	C9K0355	CK92129
Trichloroethene	0.0078 (0.0010)		8260B		1	11/21/19 14:59	C9K0355	CK92129
Trichlorofluoromethane	ND (0.0010)		8260B		1	11/21/19 14:59	C9K0355	CK92129
Vinyl Acetate	ND (0.0050)		8260B		1	11/21/19 14:59	C9K0355	CK92129
Vinyl Chloride	0.0012 (0.0010)		8260B		1	11/21/19 14:59	C9K0355	CK92129
Xylene O	ND (0.0010)		8260B		1	11/21/19 14:59	C9K0355	CK92129
Xylene P,M	ND (0.0020)		8260B		1	11/21/19 14:59	C9K0355	CK92129
Xylenes (Total)	ND (0.00200)		8260B		1	11/21/19 14:59		[CALC]

	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>110 %</i>		<i>70-130</i>
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>96 %</i>		<i>70-130</i>
<i>Surrogate: Dibromofluoromethane</i>	<i>110 %</i>		<i>70-130</i>
<i>Surrogate: Toluene-d8</i>	<i>97 %</i>		<i>70-130</i>



ESS Laboratory

Division of Thielsch Engineering, Inc.

BAL Laboratory

*The Microbiology Division
of Thielsch Engineering, Inc.*



CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.

Client Project ID: 642 Allens Ave

Client Sample ID: Trip Blank

Date Sampled: 11/20/19 00:00

Percent Solids: N/A

Initial Volume: 5

Final Volume: 5

Extraction Method: 5030B

ESS Laboratory Work Order: 19K0652

ESS Laboratory Sample ID: 19K0652-14

Sample Matrix: Aqueous

Units: mg/L

Analyst: MD

8260B Volatile Organic Compounds

<u>Analyte</u>	<u>Results (MRL)</u>	<u>MDL</u>	<u>Method</u>	<u>Limit</u>	<u>DF</u>	<u>Analyzed</u>	<u>Sequence</u>	<u>Batch</u>
1,1,1,2-Tetrachloroethane	ND (0.0010)		8260B		1	11/21/19 12:45	C9K0355	CK92129
1,1,1-Trichloroethane	ND (0.0010)		8260B		1	11/21/19 12:45	C9K0355	CK92129
1,1,2,2-Tetrachloroethane	ND (0.0005)		8260B		1	11/21/19 12:45	C9K0355	CK92129
1,1,2-Trichloroethane	ND (0.0010)		8260B		1	11/21/19 12:45	C9K0355	CK92129
1,1-Dichloroethane	ND (0.0010)		8260B		1	11/21/19 12:45	C9K0355	CK92129
1,1-Dichloroethene	ND (0.0010)		8260B		1	11/21/19 12:45	C9K0355	CK92129
1,1-Dichloropropene	ND (0.0020)		8260B		1	11/21/19 12:45	C9K0355	CK92129
1,2,3-Trichlorobenzene	ND (0.0010)		8260B		1	11/21/19 12:45	C9K0355	CK92129
1,2,3-Trichloropropane	ND (0.0010)		8260B		1	11/21/19 12:45	C9K0355	CK92129
1,2,4-Trichlorobenzene	ND (0.0010)		8260B		1	11/21/19 12:45	C9K0355	CK92129
1,2,4-Trimethylbenzene	ND (0.0010)		8260B		1	11/21/19 12:45	C9K0355	CK92129
1,2-Dibromo-3-Chloropropane	ND (0.0050)		8260B		1	11/21/19 12:45	C9K0355	CK92129
1,2-Dibromoethane	ND (0.0010)		8260B		1	11/21/19 12:45	C9K0355	CK92129
1,2-Dichlorobenzene	ND (0.0010)		8260B		1	11/21/19 12:45	C9K0355	CK92129
1,2-Dichloroethane	ND (0.0010)		8260B		1	11/21/19 12:45	C9K0355	CK92129
1,2-Dichloropropane	ND (0.0010)		8260B		1	11/21/19 12:45	C9K0355	CK92129
1,3,5-Trimethylbenzene	ND (0.0010)		8260B		1	11/21/19 12:45	C9K0355	CK92129
1,3-Dichlorobenzene	ND (0.0010)		8260B		1	11/21/19 12:45	C9K0355	CK92129
1,3-Dichloropropane	ND (0.0010)		8260B		1	11/21/19 12:45	C9K0355	CK92129
1,4-Dichlorobenzene	ND (0.0010)		8260B		1	11/21/19 12:45	C9K0355	CK92129
1,4-Dioxane - Screen	ND (0.500)		8260B		1	11/21/19 12:45	C9K0355	CK92129
1-Chlorohexane	ND (0.0010)		8260B		1	11/21/19 12:45	C9K0355	CK92129
2,2-Dichloropropane	ND (0.0010)		8260B		1	11/21/19 12:45	C9K0355	CK92129
2-Butanone	ND (0.0100)		8260B		1	11/21/19 12:45	C9K0355	CK92129
2-Chlorotoluene	ND (0.0010)		8260B		1	11/21/19 12:45	C9K0355	CK92129
2-Hexanone	ND (0.0100)		8260B		1	11/21/19 12:45	C9K0355	CK92129
4-Chlorotoluene	ND (0.0010)		8260B		1	11/21/19 12:45	C9K0355	CK92129
4-Isopropyltoluene	ND (0.0010)		8260B		1	11/21/19 12:45	C9K0355	CK92129
4-Methyl-2-Pentanone	ND (0.0250)		8260B		1	11/21/19 12:45	C9K0355	CK92129
Acetone	ND (0.0100)		8260B		1	11/21/19 12:45	C9K0355	CK92129
Benzene	ND (0.0010)		8260B		1	11/21/19 12:45	C9K0355	CK92129
Bromobenzene	ND (0.0020)		8260B		1	11/21/19 12:45	C9K0355	CK92129



CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.

Client Project ID: 642 Allens Ave

Client Sample ID: Trip Blank

Date Sampled: 11/20/19 00:00

Percent Solids: N/A

Initial Volume: 5

Final Volume: 5

Extraction Method: 5030B

ESS Laboratory Work Order: 19K0652

ESS Laboratory Sample ID: 19K0652-14

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	11/21/19 12:45	C9K0355	CK92129
Bromodichloromethane	ND (0.0006)		8260B		1	11/21/19 12:45	C9K0355	CK92129
Bromoform	ND (0.0010)		8260B		1	11/21/19 12:45	C9K0355	CK92129
Bromomethane	ND (0.0020)		8260B		1	11/21/19 12:45	C9K0355	CK92129
Carbon Disulfide	ND (0.0010)		8260B		1	11/21/19 12:45	C9K0355	CK92129
Carbon Tetrachloride	ND (0.0010)		8260B		1	11/21/19 12:45	C9K0355	CK92129
Chlorobenzene	ND (0.0010)		8260B		1	11/21/19 12:45	C9K0355	CK92129
Chloroethane	ND (0.0020)		8260B		1	11/21/19 12:45	C9K0355	CK92129
Chloroform	ND (0.0010)		8260B		1	11/21/19 12:45	C9K0355	CK92129
Chloromethane	ND (0.0020)		8260B		1	11/21/19 12:45	C9K0355	CK92129
cis-1,2-Dichloroethene	ND (0.0010)		8260B		1	11/21/19 12:45	C9K0355	CK92129
cis-1,3-Dichloropropene	ND (0.0004)		8260B		1	11/21/19 12:45	C9K0355	CK92129
Dibromochloromethane	ND (0.0010)		8260B		1	11/21/19 12:45	C9K0355	CK92129
Dibromomethane	ND (0.0010)		8260B		1	11/21/19 12:45	C9K0355	CK92129
Dichlorodifluoromethane	ND (0.0020)		8260B		1	11/21/19 12:45	C9K0355	CK92129
Diethyl Ether	ND (0.0010)		8260B		1	11/21/19 12:45	C9K0355	CK92129
Di-isopropyl ether	ND (0.0010)		8260B		1	11/21/19 12:45	C9K0355	CK92129
Ethyl tertiary-butyl ether	ND (0.0010)		8260B		1	11/21/19 12:45	C9K0355	CK92129
Ethylbenzene	ND (0.0010)		8260B		1	11/21/19 12:45	C9K0355	CK92129
Hexachlorobutadiene	ND (0.0006)		8260B		1	11/21/19 12:45	C9K0355	CK92129
Hexachloroethane	ND (0.0010)		8260B		1	11/21/19 12:45	C9K0355	CK92129
Isopropylbenzene	ND (0.0010)		8260B		1	11/21/19 12:45	C9K0355	CK92129
Methyl tert-Butyl Ether	ND (0.0010)		8260B		1	11/21/19 12:45	C9K0355	CK92129
Methylene Chloride	ND (0.0020)		8260B		1	11/21/19 12:45	C9K0355	CK92129
Naphthalene	ND (0.0010)		8260B		1	11/21/19 12:45	C9K0355	CK92129
n-Butylbenzene	ND (0.0010)		8260B		1	11/21/19 12:45	C9K0355	CK92129
n-Propylbenzene	ND (0.0010)		8260B		1	11/21/19 12:45	C9K0355	CK92129
sec-Butylbenzene	ND (0.0010)		8260B		1	11/21/19 12:45	C9K0355	CK92129
Styrene	ND (0.0010)		8260B		1	11/21/19 12:45	C9K0355	CK92129
tert-Butylbenzene	ND (0.0010)		8260B		1	11/21/19 12:45	C9K0355	CK92129
Tertiary-amyl methyl ether	ND (0.0010)		8260B		1	11/21/19 12:45	C9K0355	CK92129
Tetrachloroethene	ND (0.0010)		8260B		1	11/21/19 12:45	C9K0355	CK92129



ESS Laboratory

Division of Thielsch Engineering, Inc.

BAL Laboratory

*The Microbiology Division
of Thielsch Engineering, Inc.*



CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.

Client Project ID: 642 Allens Ave

Client Sample ID: Trip Blank

Date Sampled: 11/20/19 00:00

Percent Solids: N/A

Initial Volume: 5

Final Volume: 5

Extraction Method: 5030B

ESS Laboratory Work Order: 19K0652

ESS Laboratory Sample ID: 19K0652-14

Sample Matrix: Aqueous

Units: mg/L

Analyst: MD

8260B Volatile Organic Compounds

<u>Analyte</u>	<u>Results (MRL)</u>	<u>MDL</u>	<u>Method</u>	<u>Limit</u>	<u>DF</u>	<u>Analyzed</u>	<u>Sequence</u>	<u>Batch</u>
Tetrahydrofuran	ND (0.0050)		8260B		1	11/21/19 12:45	C9K0355	CK92129
Toluene	ND (0.0010)		8260B		1	11/21/19 12:45	C9K0355	CK92129
trans-1,2-Dichloroethene	ND (0.0010)		8260B		1	11/21/19 12:45	C9K0355	CK92129
trans-1,3-Dichloropropene	ND (0.0004)		8260B		1	11/21/19 12:45	C9K0355	CK92129
Trichloroethene	ND (0.0010)		8260B		1	11/21/19 12:45	C9K0355	CK92129
Trichlorofluoromethane	ND (0.0010)		8260B		1	11/21/19 12:45	C9K0355	CK92129
Vinyl Acetate	ND (0.0050)		8260B		1	11/21/19 12:45	C9K0355	CK92129
Vinyl Chloride	ND (0.0010)		8260B		1	11/21/19 12:45	C9K0355	CK92129
Xylene O	ND (0.0010)		8260B		1	11/21/19 12:45	C9K0355	CK92129
Xylene P,M	ND (0.0020)		8260B		1	11/21/19 12:45	C9K0355	CK92129
Xylenes (Total)	ND (0.00200)		8260B		1	11/21/19 12:45		[CALC]

	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>113 %</i>		<i>70-130</i>
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>94 %</i>		<i>70-130</i>
<i>Surrogate: Dibromofluoromethane</i>	<i>110 %</i>		<i>70-130</i>
<i>Surrogate: Toluene-d8</i>	<i>95 %</i>		<i>70-130</i>



CERTIFICATE OF ANALYSIS

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

ESS Laboratory Work Order: 19K0652

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
8260B Volatile Organic Compounds										

Batch CK92129 - 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	0.0250	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: 19K0652

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
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8260B Volatile Organic Compounds

Batch CK92129 - 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							
<i>Surrogate: 1,2-Dichloroethane-d4</i>	0.0278		mg/L	0.02500		111	70-130			
<i>Surrogate: 4-Bromofluorobenzene</i>	0.0232		mg/L	0.02500		93	70-130			
<i>Surrogate: Dibromofluoromethane</i>	0.0269		mg/L	0.02500		107	70-130			
<i>Surrogate: Toluene-d8</i>	0.0235		mg/L	0.02500		94	70-130			

LCS

1,1,1,2-Tetrachloroethane	9.52	ug/L	10.00	95	70-130
1,1,1-Trichloroethane	11.0	ug/L	10.00	110	70-130
1,1,2,2-Tetrachloroethane	8.84	ug/L	10.00	88	70-130
1,1,2-Trichloroethane	8.53	ug/L	10.00	85	70-130
1,1-Dichloroethane	10.8	ug/L	10.00	108	70-130
1,1-Dichloroethene	11.4	ug/L	10.00	114	70-130
1,1-Dichloropropene	9.70	ug/L	10.00	97	70-130
1,2,3-Trichlorobenzene	9.77	ug/L	10.00	98	70-130
1,2,3-Trichloropropane	7.14	ug/L	10.00	71	70-130
1,2,4-Trichlorobenzene	9.76	ug/L	10.00	98	70-130



CERTIFICATE OF ANALYSIS

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

ESS Laboratory Work Order: 19K0652

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
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8260B Volatile Organic Compounds

Batch CK92129 - 5030B

1,2,4-Trimethylbenzene	10.8		ug/L	10.00		108	70-130			
1,2-Dibromo-3-Chloropropane	8.77		ug/L	10.00		88	70-130			
1,2-Dibromoethane	9.69		ug/L	10.00		97	70-130			
1,2-Dichlorobenzene	10.1		ug/L	10.00		101	70-130			
1,2-Dichloroethane	10.7		ug/L	10.00		107	70-130			
1,2-Dichloropropane	9.03		ug/L	10.00		90	70-130			
1,3,5-Trimethylbenzene	10.8		ug/L	10.00		108	70-130			
1,3-Dichlorobenzene	10.1		ug/L	10.00		101	70-130			
1,3-Dichloropropane	9.40		ug/L	10.00		94	70-130			
1,4-Dichlorobenzene	10.0		ug/L	10.00		100	70-130			
1,4-Dioxane - Screen	491		ug/L	200.0		245	0-332			
1-Chlorohexane	9.61		ug/L	10.00		96	70-130			
2,2-Dichloropropane	11.1		ug/L	10.00		111	70-130			
2-Butanone	48.0		ug/L	50.00		96	70-130			
2-Chlorotoluene	10.3		ug/L	10.00		103	70-130			
2-Hexanone	37.8		ug/L	50.00		76	70-130			
4-Chlorotoluene	10.1		ug/L	10.00		101	70-130			
4-Isopropyltoluene	10.5		ug/L	10.00		105	70-130			
4-Methyl-2-Pentanone	38.5		ug/L	50.00		77	70-130			
Acetone	48.2		ug/L	50.00		96	70-130			
Benzene	9.57		ug/L	10.00		96	70-130			
Bromobenzene	9.99		ug/L	10.00		100	70-130			
Bromochloromethane	9.57		ug/L	10.00		96	70-130			
Bromodichloromethane	10.0		ug/L	10.00		100	70-130			
Bromoform	7.37		ug/L	10.00		74	70-130			
Bromomethane	8.93		ug/L	10.00		89	70-130			
Carbon Disulfide	10.0		ug/L	10.00		100	70-130			
Carbon Tetrachloride	11.2		ug/L	10.00		112	70-130			
Chlorobenzene	10.4		ug/L	10.00		104	70-130			
Chloroethane	8.77		ug/L	10.00		88	70-130			
Chloroform	11.2		ug/L	10.00		112	70-130			
Chloromethane	9.21		ug/L	10.00		92	70-130			
cis-1,2-Dichloroethene	10.9		ug/L	10.00		109	70-130			
cis-1,3-Dichloropropene	9.12		ug/L	10.00		91	70-130			
Dibromochloromethane	9.41		ug/L	10.00		94	70-130			
Dibromomethane	10.6		ug/L	10.00		106	70-130			
Dichlorodifluoromethane	10.2		ug/L	10.00		102	70-130			
Diethyl Ether	9.20		ug/L	10.00		92	70-130			
Di-isopropyl ether	9.50		ug/L	10.00		95	70-130			
Ethyl tertiary-butyl ether	9.03		ug/L	10.00		90	70-130			
Ethylbenzene	10.2		ug/L	10.00		102	70-130			
Hexachlorobutadiene	10.1		ug/L	10.00		101	70-130			
Hexachloroethane	7.85		ug/L	10.00		78	70-130			
Isopropylbenzene	10.5		ug/L	10.00		105	70-130			
Methyl tert-Butyl Ether	10.5		ug/L	10.00		105	70-130			



ESS Laboratory

Division of Thielsch Engineering, Inc.

BAL Laboratory

*The Microbiology Division
of Thielsch Engineering, Inc.*



CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.

Client Project ID: 642 Allens Ave

ESS Laboratory Work Order: 19K0652

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
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8260B Volatile Organic Compounds

Batch CK92129 - 5030B

Methylene Chloride	9.63	ug/L	10.00		96	70-130				
Naphthalene	9.22	ug/L	10.00		92	70-130				
n-Butylbenzene	10.6	ug/L	10.00		106	70-130				
n-Propylbenzene	10.4	ug/L	10.00		104	70-130				
sec-Butylbenzene	10.8	ug/L	10.00		108	70-130				
Styrene	9.19	ug/L	10.00		92	70-130				
tert-Butylbenzene	10.6	ug/L	10.00		106	70-130				
Tertiary-amyl methyl ether	9.77	ug/L	10.00		98	70-130				
Tetrachloroethene	7.66	ug/L	10.00		77	70-130				
Tetrahydrofuran	8.63	ug/L	10.00		86	70-130				
Toluene	10.5	ug/L	10.00		105	70-130				
trans-1,2-Dichloroethene	11.3	ug/L	10.00		113	70-130				
trans-1,3-Dichloropropene	8.75	ug/L	10.00		88	70-130				
Trichloroethene	10.2	ug/L	10.00		102	70-130				
Trichlorofluoromethane	12.0	ug/L	10.00		120	70-130				
Vinyl Acetate	10.0	ug/L	10.00		100	70-130				
Vinyl Chloride	9.90	ug/L	10.00		99	70-130				
Xylene O	10.0	ug/L	10.00		100	70-130				
Xylene P,M	21.0	ug/L	20.00		105	70-130				
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>0.0262</i>	<i>mg/L</i>	<i>0.02500</i>		<i>105</i>	<i>70-130</i>				
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>0.0246</i>	<i>mg/L</i>	<i>0.02500</i>		<i>98</i>	<i>70-130</i>				
<i>Surrogate: Dibromofluoromethane</i>	<i>0.0269</i>	<i>mg/L</i>	<i>0.02500</i>		<i>107</i>	<i>70-130</i>				
<i>Surrogate: Toluene-d8</i>	<i>0.0233</i>	<i>mg/L</i>	<i>0.02500</i>		<i>93</i>	<i>70-130</i>				

LCS Dup

1,1,1,2-Tetrachloroethane	9.64	ug/L	10.00		96	70-130	1	25		
1,1,1-Trichloroethane	11.8	ug/L	10.00		118	70-130	7	25		
1,1,2,2-Tetrachloroethane	8.86	ug/L	10.00		89	70-130	0.2	25		
1,1,2-Trichloroethane	9.65	ug/L	10.00		96	70-130	12	25		
1,1-Dichloroethane	11.5	ug/L	10.00		115	70-130	6	25		
1,1-Dichloroethene	11.9	ug/L	10.00		119	70-130	4	25		
1,1-Dichloropropene	10.6	ug/L	10.00		106	70-130	9	25		
1,2,3-Trichlorobenzene	9.19	ug/L	10.00		92	70-130	6	25		
1,2,3-Trichloropropane	7.83	ug/L	10.00		78	70-130	9	25		
1,2,4-Trichlorobenzene	10.2	ug/L	10.00		102	70-130	5	25		
1,2,4-Trimethylbenzene	11.2	ug/L	10.00		112	70-130	4	25		
1,2-Dibromo-3-Chloropropane	8.58	ug/L	10.00		86	70-130	2	25		
1,2-Dibromoethane	9.48	ug/L	10.00		95	70-130	2	25		
1,2-Dichlorobenzene	10.6	ug/L	10.00		106	70-130	5	25		
1,2-Dichloroethane	11.0	ug/L	10.00		110	70-130	3	25		
1,2-Dichloropropane	9.09	ug/L	10.00		91	70-130	0.7	25		
1,3,5-Trimethylbenzene	11.3	ug/L	10.00		113	70-130	5	25		
1,3-Dichlorobenzene	10.6	ug/L	10.00		106	70-130	5	25		
1,3-Dichloropropane	9.08	ug/L	10.00		91	70-130	3	25		
1,4-Dichlorobenzene	10.5	ug/L	10.00		105	70-130	4	25		
1,4-Dioxane - Screen	349	ug/L	200.0		174	0-332	34	200		



CERTIFICATE OF ANALYSIS

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

ESS Laboratory Work Order: 19K0652

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
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8260B Volatile Organic Compounds

Batch CK92129 - 50308

1-Chlorohexane	9.98		ug/L	10.00	100	70-130	4	25		
2,2-Dichloropropane	11.7		ug/L	10.00	117	70-130	6	25		
2-Butanone	49.6		ug/L	50.00	99	70-130	3	25		
2-Chlorotoluene	10.6		ug/L	10.00	106	70-130	3	25		
2-Hexanone	38.1		ug/L	50.00	76	70-130	0.6	25		
4-Chlorotoluene	10.5		ug/L	10.00	105	70-130	4	25		
4-Isopropyltoluene	11.1		ug/L	10.00	111	70-130	6	25		
4-Methyl-2-Pentanone	39.0		ug/L	50.00	78	70-130	1	25		
Acetone	50.8		ug/L	50.00	102	70-130	5	25		
Benzene	10.4		ug/L	10.00	104	70-130	8	25		
Bromobenzene	10.3		ug/L	10.00	103	70-130	3	25		
Bromochloromethane	10.2		ug/L	10.00	102	70-130	7	25		
Bromodichloromethane	10.6		ug/L	10.00	106	70-130	5	25		
Bromoform	7.68		ug/L	10.00	77	70-130	4	25		
Bromomethane	8.75		ug/L	10.00	88	70-130	2	25		
Carbon Disulfide	10.7		ug/L	10.00	107	70-130	7	25		
Carbon Tetrachloride	11.3		ug/L	10.00	113	70-130	0.2	25		
Chlorobenzene	9.77		ug/L	10.00	98	70-130	6	25		
Chloroethane	9.18		ug/L	10.00	92	70-130	5	25		
Chloroform	11.9		ug/L	10.00	119	70-130	6	25		
Chloromethane	10.0		ug/L	10.00	100	70-130	9	25		
cis-1,2-Dichloroethene	11.4		ug/L	10.00	114	70-130	5	25		
cis-1,3-Dichloropropene	9.70		ug/L	10.00	97	70-130	6	25		
Dibromochloromethane	9.53		ug/L	10.00	95	70-130	1	25		
Dibromomethane	10.8		ug/L	10.00	108	70-130	2	25		
Dichlorodifluoromethane	11.0		ug/L	10.00	110	70-130	8	25		
Diethyl Ether	9.57		ug/L	10.00	96	70-130	4	25		
Di-isopropyl ether	9.84		ug/L	10.00	98	70-130	4	25		
Ethyl tertiary-butyl ether	9.29		ug/L	10.00	93	70-130	3	25		
Ethylbenzene	10.2		ug/L	10.00	102	70-130	0.3	25		
Hexachlorobutadiene	10.3		ug/L	10.00	103	70-130	2	25		
Hexachloroethane	8.93		ug/L	10.00	89	70-130	13	25		
Isopropylbenzene	11.3		ug/L	10.00	113	70-130	7	25		
Methyl tert-Butyl Ether	10.3		ug/L	10.00	103	70-130	2	25		
Methylene Chloride	10.4		ug/L	10.00	104	70-130	8	25		
Naphthalene	9.66		ug/L	10.00	97	70-130	5	25		
n-Butylbenzene	11.1		ug/L	10.00	111	70-130	5	25		
n-Propylbenzene	10.8		ug/L	10.00	108	70-130	4	25		
sec-Butylbenzene	10.9		ug/L	10.00	109	70-130	0.09	25		
Styrene	9.12		ug/L	10.00	91	70-130	0.8	25		
tert-Butylbenzene	10.5		ug/L	10.00	105	70-130	2	25		
Tertiary-amyl methyl ether	10.2		ug/L	10.00	102	70-130	4	25		
Tetrachloroethene	7.74		ug/L	10.00	77	70-130	1	25		
Tetrahydrofuran	7.85		ug/L	10.00	78	70-130	9	25		
Toluene	10.2		ug/L	10.00	102	70-130	3	25		



CERTIFICATE OF ANALYSIS

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

ESS Laboratory Work Order: 19K0652

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
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8260B Volatile Organic Compounds

Batch CK92129 - 5030B

trans-1,2-Dichloroethene	11.9	ug/L	10.00		119	70-130	5	25		
trans-1,3-Dichloropropene	10.0	ug/L	10.00		100	70-130	13	25		
Trichloroethene	11.0	ug/L	10.00		110	70-130	7	25		
Trichlorofluoromethane	12.1	ug/L	10.00		121	70-130	0.6	25		
Vinyl Acetate	10.2	ug/L	10.00		102	70-130	1	25		
Vinyl Chloride	10.3	ug/L	10.00		103	70-130	4	25		
Xylene O	10.0	ug/L	10.00		100	70-130	0.1	25		
Xylene P,M	20.4	ug/L	20.00		102	70-130	3	25		
<i>Surrogate: 1,2-Dichloroethane-d4</i>	0.0271	mg/L	0.02500		109	70-130				
<i>Surrogate: 4-Bromofluorobenzene</i>	0.0239	mg/L	0.02500		96	70-130				
<i>Surrogate: Dibromofluoromethane</i>	0.0278	mg/L	0.02500		111	70-130				
<i>Surrogate: Toluene-d8</i>	0.0230	mg/L	0.02500		92	70-130				

Batch CK92130 - 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	0.0250	mg/L
Acetone	ND	0.0100	mg/L
Benzene	ND	0.0010	mg/L



CERTIFICATE OF ANALYSIS

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ESS Laboratory Work Order: 19K0652

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC %REC	Limits	RPD RPD	Limit Limit	Qualifier
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8260B Volatile Organic Compounds

Batch CK92130 - 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	0.0249	mg/L	0.02500		100	70-130				
Surrogate: 4-Bromofluorobenzene	0.0243	mg/L	0.02500		97	70-130				



ESS Laboratory

Division of Thielsch Engineering, Inc.

BAL Laboratory

*The Microbiology Division
of Thielsch Engineering, Inc.*



CERTIFICATE OF ANALYSIS

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

ESS Laboratory Work Order: 19K0652

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
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8260B Volatile Organic Compounds

Batch CK92130 - 5030B

<i>Surrogate: Dibromofluoromethane</i>	0.0241		mg/L	0.02500		97	70-130			
<i>Surrogate: Toluene-d8</i>	0.0247		mg/L	0.02500		99	70-130			
LCS										
1,1,1,2-Tetrachloroethane	9.49		ug/L	10.00		95	70-130			
1,1,1-Trichloroethane	9.43		ug/L	10.00		94	70-130			
1,1,2,2-Tetrachloroethane	9.75		ug/L	10.00		98	70-130			
1,1,2-Trichloroethane	9.31		ug/L	10.00		93	70-130			
1,1-Dichloroethane	9.37		ug/L	10.00		94	70-130			
1,1-Dichloroethene	9.90		ug/L	10.00		99	70-130			
1,1-Dichloropropene	9.37		ug/L	10.00		94	70-130			
1,2,3-Trichlorobenzene	9.71		ug/L	10.00		97	70-130			
1,2,3-Trichloropropane	8.91		ug/L	10.00		89	70-130			
1,2,4-Trichlorobenzene	9.74		ug/L	10.00		97	70-130			
1,2,4-Trimethylbenzene	9.86		ug/L	10.00		99	70-130			
1,2-Dibromo-3-Chloropropane	8.16		ug/L	10.00		82	70-130			
1,2-Dibromoethane	9.65		ug/L	10.00		96	70-130			
1,2-Dichlorobenzene	9.40		ug/L	10.00		94	70-130			
1,2-Dichloroethane	9.42		ug/L	10.00		94	70-130			
1,2-Dichloropropane	9.08		ug/L	10.00		91	70-130			
1,3,5-Trimethylbenzene	9.70		ug/L	10.00		97	70-130			
1,3-Dichlorobenzene	9.47		ug/L	10.00		95	70-130			
1,3-Dichloropropane	9.70		ug/L	10.00		97	70-130			
1,4-Dichlorobenzene	9.47		ug/L	10.00		95	70-130			
1,4-Dioxane - Screen	189		ug/L	200.0		95	0-332			
1-Chlorohexane	9.18		ug/L	10.00		92	70-130			
2,2-Dichloropropane	9.61		ug/L	10.00		96	70-130			
2-Butanone	46.0		ug/L	50.00		92	70-130			
2-Chlorotoluene	9.41		ug/L	10.00		94	70-130			
2-Hexanone	46.5		ug/L	50.00		93	70-130			
4-Chlorotoluene	9.46		ug/L	10.00		95	70-130			
4-Isopropyltoluene	9.53		ug/L	10.00		95	70-130			
4-Methyl-2-Pentanone	46.3		ug/L	50.00		93	70-130			
Acetone	46.7		ug/L	50.00		93	70-130			
Benzene	9.32		ug/L	10.00		93	70-130			
Bromobenzene	9.73		ug/L	10.00		97	70-130			
Bromochloromethane	9.46		ug/L	10.00		95	70-130			
Bromodichloromethane	9.31		ug/L	10.00		93	70-130			
Bromoform	9.03		ug/L	10.00		90	70-130			
Bromomethane	8.39		ug/L	10.00		84	70-130			
Carbon Disulfide	9.00		ug/L	10.00		90	70-130			
Carbon Tetrachloride	9.68		ug/L	10.00		97	70-130			
Chlorobenzene	9.60		ug/L	10.00		96	70-130			
Chloroethane	8.43		ug/L	10.00		84	70-130			
Chloroform	9.60		ug/L	10.00		96	70-130			



ESS Laboratory

Division of Thielsch Engineering, Inc.

BAL Laboratory

*The Microbiology Division
of Thielsch Engineering, Inc.*



CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.

Client Project ID: 642 Allens Ave

ESS Laboratory Work Order: 19K0652

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
8260B Volatile Organic Compounds										
Batch CK92130 - 5030B										
Chloromethane	7.89		ug/L	10.00		79	70-130			
cis-1,2-Dichloroethene	9.43		ug/L	10.00		94	70-130			
cis-1,3-Dichloropropene	9.00		ug/L	10.00		90	70-130			
Dibromochloromethane	9.46		ug/L	10.00		95	70-130			
Dibromomethane	9.35		ug/L	10.00		94	70-130			
Dichlorodifluoromethane	8.02		ug/L	10.00		80	70-130			
Diethyl Ether	9.20		ug/L	10.00		92	70-130			
Di-isopropyl ether	9.14		ug/L	10.00		91	70-130			
Ethyl tertiary-butyl ether	8.87		ug/L	10.00		89	70-130			
Ethylbenzene	9.55		ug/L	10.00		96	70-130			
Hexachlorobutadiene	9.89		ug/L	10.00		99	70-130			
Hexachloroethane	8.75		ug/L	10.00		88	70-130			
Isopropylbenzene	9.46		ug/L	10.00		95	70-130			
Methyl tert-Butyl Ether	9.47		ug/L	10.00		95	70-130			
Methylene Chloride	9.55		ug/L	10.00		96	70-130			
Naphthalene	9.39		ug/L	10.00		94	70-130			
n-Butylbenzene	9.73		ug/L	10.00		97	70-130			
n-Propylbenzene	9.44		ug/L	10.00		94	70-130			
sec-Butylbenzene	9.29		ug/L	10.00		93	70-130			
Styrene	9.54		ug/L	10.00		95	70-130			
tert-Butylbenzene	9.25		ug/L	10.00		92	70-130			
Tertiary-amyl methyl ether	9.34		ug/L	10.00		93	70-130			
Tetrachloroethene	8.87		ug/L	10.00		89	70-130			
Tetrahydrofuran	8.81		ug/L	10.00		88	70-130			
Toluene	9.35		ug/L	10.00		94	70-130			
trans-1,2-Dichloroethene	9.44		ug/L	10.00		94	70-130			
trans-1,3-Dichloropropene	9.23		ug/L	10.00		92	70-130			
Trichloroethene	8.96		ug/L	10.00		90	70-130			
Trichlorofluoromethane	9.92		ug/L	10.00		99	70-130			
Vinyl Acetate	8.94		ug/L	10.00		89	70-130			
Vinyl Chloride	7.95		ug/L	10.00		80	70-130			
Xylene O	9.59		ug/L	10.00		96	70-130			
Xylene P,M	19.4		ug/L	20.00		97	70-130			
<i>Surrogate: 1,2-Dichloroethane-d4</i>	0.0246		mg/L	0.02500		98	70-130			
<i>Surrogate: 4-Bromofluorobenzene</i>	0.0247		mg/L	0.02500		99	70-130			
<i>Surrogate: Dibromofluoromethane</i>	0.0247		mg/L	0.02500		99	70-130			
<i>Surrogate: Toluene-d8</i>	0.0245		mg/L	0.02500		98	70-130			
LCS Dup										
1,1,1,2-Tetrachloroethane	10.1		ug/L	10.00		101	70-130	6	25	
1,1,1-Trichloroethane	9.79		ug/L	10.00		98	70-130	4	25	
1,1,2,2-Tetrachloroethane	10.1		ug/L	10.00		101	70-130	4	25	
1,1,2-Trichloroethane	9.61		ug/L	10.00		96	70-130	3	25	
1,1-Dichloroethane	9.82		ug/L	10.00		98	70-130	5	25	
1,1-Dichloroethene	10.4		ug/L	10.00		104	70-130	5	25	
1,1-Dichloropropene	9.70		ug/L	10.00		97	70-130	3	25	



CERTIFICATE OF ANALYSIS

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

ESS Laboratory Work Order: 19K0652

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
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8260B Volatile Organic Compounds

Batch CK92130 - 5030B

1,2,3-Trichlorobenzene	10.0		ug/L	10.00	100	70-130	3	25	
1,2,3-Trichloropropane	9.36		ug/L	10.00	94	70-130	5	25	
1,2,4-Trichlorobenzene	10.0		ug/L	10.00	100	70-130	3	25	
1,2,4-Trimethylbenzene	10.2		ug/L	10.00	102	70-130	3	25	
1,2-Dibromo-3-Chloropropane	8.80		ug/L	10.00	88	70-130	8	25	
1,2-Dibromoethane	10.0		ug/L	10.00	100	70-130	4	25	
1,2-Dichlorobenzene	9.83		ug/L	10.00	98	70-130	4	25	
1,2-Dichloroethane	9.73		ug/L	10.00	97	70-130	3	25	
1,2-Dichloropropane	9.43		ug/L	10.00	94	70-130	4	25	
1,3,5-Trimethylbenzene	10.2		ug/L	10.00	102	70-130	5	25	
1,3-Dichlorobenzene	9.94		ug/L	10.00	99	70-130	5	25	
1,3-Dichloropropane	10.3		ug/L	10.00	103	70-130	6	25	
1,4-Dichlorobenzene	9.90		ug/L	10.00	99	70-130	4	25	
1,4-Dioxane - Screen	199		ug/L	200.0	100	0-332	5	200	
1-Chlorohexane	9.43		ug/L	10.00	94	70-130	3	25	
2,2-Dichloropropane	9.98		ug/L	10.00	100	70-130	4	25	
2-Butanone	46.8		ug/L	50.00	94	70-130	2	25	
2-Chlorotoluene	9.90		ug/L	10.00	99	70-130	5	25	
2-Hexanone	48.9		ug/L	50.00	98	70-130	5	25	
4-Chlorotoluene	9.93		ug/L	10.00	99	70-130	5	25	
4-Isopropyltoluene	9.90		ug/L	10.00	99	70-130	4	25	
4-Methyl-2-Pentanone	47.8		ug/L	50.00	96	70-130	3	25	
Acetone	46.6		ug/L	50.00	93	70-130	0.2	25	
Benzene	9.69		ug/L	10.00	97	70-130	4	25	
Bromobenzene	10.3		ug/L	10.00	103	70-130	5	25	
Bromochloromethane	9.84		ug/L	10.00	98	70-130	4	25	
Bromodichloromethane	9.36		ug/L	10.00	94	70-130	0.5	25	
Bromoform	9.65		ug/L	10.00	96	70-130	7	25	
Bromomethane	9.04		ug/L	10.00	90	70-130	7	25	
Carbon Disulfide	9.51		ug/L	10.00	95	70-130	6	25	
Carbon Tetrachloride	10.0		ug/L	10.00	100	70-130	4	25	
Chlorobenzene	10.1		ug/L	10.00	101	70-130	5	25	
Chloroethane	8.56		ug/L	10.00	86	70-130	2	25	
Chloroform	10.0		ug/L	10.00	100	70-130	4	25	
Chloromethane	8.36		ug/L	10.00	84	70-130	6	25	
cis-1,2-Dichloroethene	9.82		ug/L	10.00	98	70-130	4	25	
cis-1,3-Dichloropropene	9.57		ug/L	10.00	96	70-130	6	25	
Dibromochloromethane	9.93		ug/L	10.00	99	70-130	5	25	
Dibromomethane	9.74		ug/L	10.00	97	70-130	4	25	
Dichlorodifluoromethane	8.34		ug/L	10.00	83	70-130	4	25	
Diethyl Ether	9.31		ug/L	10.00	93	70-130	1	25	
Di-isopropyl ether	9.61		ug/L	10.00	96	70-130	5	25	
Ethyl tertiary-butyl ether	9.19		ug/L	10.00	92	70-130	4	25	
Ethylbenzene	10.1		ug/L	10.00	101	70-130	6	25	
Hexachlorobutadiene	10.1		ug/L	10.00	101	70-130	2	25	



ESS Laboratory

Division of Thielsch Engineering, Inc.

BAL Laboratory

*The Microbiology Division
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CERTIFICATE OF ANALYSIS

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

ESS Laboratory Work Order: 19K0652

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
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8260B Volatile Organic Compounds

Batch CK92130 - 5030B

Hexachloroethane	8.98	ug/L	10.00		90	70-130	3	25		
Isopropylbenzene	10.0	ug/L	10.00		100	70-130	6	25		
Methyl tert-Butyl Ether	9.91	ug/L	10.00		99	70-130	5	25		
Methylene Chloride	9.93	ug/L	10.00		99	70-130	4	25		
Naphthalene	9.80	ug/L	10.00		98	70-130	4	25		
n-Butylbenzene	10.0	ug/L	10.00		100	70-130	3	25		
n-Propylbenzene	9.88	ug/L	10.00		99	70-130	5	25		
sec-Butylbenzene	9.74	ug/L	10.00		97	70-130	5	25		
Styrene	10.0	ug/L	10.00		100	70-130	5	25		
tert-Butylbenzene	9.80	ug/L	10.00		98	70-130	6	25		
Tertiary-amyl methyl ether	9.82	ug/L	10.00		98	70-130	5	25		
Tetrachloroethene	9.23	ug/L	10.00		92	70-130	4	25		
Tetrahydrofuran	9.33	ug/L	10.00		93	70-130	6	25		
Toluene	9.70	ug/L	10.00		97	70-130	4	25		
trans-1,2-Dichloroethene	9.87	ug/L	10.00		99	70-130	4	25		
trans-1,3-Dichloropropene	9.70	ug/L	10.00		97	70-130	5	25		
Trichloroethene	9.46	ug/L	10.00		95	70-130	5	25		
Trichlorofluoromethane	10.3	ug/L	10.00		103	70-130	4	25		
Vinyl Acetate	9.31	ug/L	10.00		93	70-130	4	25		
Vinyl Chloride	8.46	ug/L	10.00		85	70-130	6	25		
Xylene O	10.2	ug/L	10.00		102	70-130	6	25		
Xylene P,M	20.2	ug/L	20.00		101	70-130	4	25		
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>0.0245</i>		<i>mg/L</i>	<i>0.02500</i>	<i>98</i>	<i>70-130</i>				
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>0.0249</i>		<i>mg/L</i>	<i>0.02500</i>	<i>100</i>	<i>70-130</i>				
<i>Surrogate: Dibromofluoromethane</i>	<i>0.0246</i>		<i>mg/L</i>	<i>0.02500</i>	<i>99</i>	<i>70-130</i>				
<i>Surrogate: Toluene-d8</i>	<i>0.0246</i>		<i>mg/L</i>	<i>0.02500</i>	<i>99</i>	<i>70-130</i>				

Batch CK92725 - 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: 19K0652

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC %REC	Limits	RPD RPD	Limit Limit	Qualifier
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8260B Volatile Organic Compounds

Batch CK92725 - 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	0.0250	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.
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Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
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8260B Volatile Organic Compounds

Batch CK92725 - 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							
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>0.0230</i>		mg/L	<i>0.02500</i>		<i>92</i>		<i>70-130</i>		
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>0.0237</i>		mg/L	<i>0.02500</i>		<i>95</i>		<i>70-130</i>		
<i>Surrogate: Dibromofluoromethane</i>	<i>0.0232</i>		mg/L	<i>0.02500</i>		<i>93</i>		<i>70-130</i>		
<i>Surrogate: Toluene-d8</i>	<i>0.0248</i>		mg/L	<i>0.02500</i>		<i>99</i>		<i>70-130</i>		

LCS

1,1,1,2-Tetrachloroethane	0.0085	0.0010	mg/L	0.01000	85	70-130
1,1,1-Trichloroethane	0.0085	0.0010	mg/L	0.01000	85	70-130
1,1,2,2-Tetrachloroethane	0.0082	0.0005	mg/L	0.01000	82	70-130
1,1,2-Trichloroethane	0.0083	0.0010	mg/L	0.01000	83	70-130
1,1-Dichloroethane	0.0098	0.0010	mg/L	0.01000	98	70-130
1,1-Dichloroethene	0.0094	0.0010	mg/L	0.01000	94	70-130
1,1-Dichloropropene	0.0090	0.0020	mg/L	0.01000	90	70-130
1,2,3-Trichlorobenzene	0.0092	0.0010	mg/L	0.01000	92	70-130
1,2,3-Trichloropropane	0.0091	0.0010	mg/L	0.01000	91	70-130
1,2,4-Trichlorobenzene	0.0090	0.0010	mg/L	0.01000	91	70-130
1,2,4-Trimethylbenzene	0.0101	0.0010	mg/L	0.01000	101	70-130
1,2-Dibromo-3-Chloropropane	0.0080	0.0050	mg/L	0.01000	80	70-130
1,2-Dibromoethane	0.0088	0.0010	mg/L	0.01000	88	70-130
1,2-Dichlorobenzene	0.0091	0.0010	mg/L	0.01000	91	70-130
1,2-Dichloroethane	0.0080	0.0010	mg/L	0.01000	80	70-130
1,2-Dichloropropane	0.0091	0.0010	mg/L	0.01000	91	70-130
1,3,5-Trimethylbenzene	0.0098	0.0010	mg/L	0.01000	98	70-130
1,3-Dichlorobenzene	0.0094	0.0010	mg/L	0.01000	94	70-130
1,3-Dichloropropane	0.0096	0.0010	mg/L	0.01000	96	70-130
1,4-Dichlorobenzene	0.0091	0.0010	mg/L	0.01000	91	70-130
1,4-Dioxane - Screen	0.600	0.500	mg/L	0.2000	300	0-332
1-Chlorohexane	0.0095	0.0010	mg/L	0.01000	95	70-130
2,2-Dichloropropane	0.0093	0.0010	mg/L	0.01000	93	70-130
2-Butanone	0.0447	0.0100	mg/L	0.05000	89	70-130
2-Chlorotoluene	0.0097	0.0010	mg/L	0.01000	97	70-130
2-Hexanone	0.0426	0.0100	mg/L	0.05000	85	70-130
4-Chlorotoluene	0.0093	0.0010	mg/L	0.01000	93	70-130
4-Isopropyltoluene	0.0099	0.0010	mg/L	0.01000	99	70-130



CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.

Client Project ID: 642 Allens Ave

ESS Laboratory Work Order: 19K0652

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
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8260B Volatile Organic Compounds

Batch CK92725 - 5030B

4-Methyl-2-Pentanone	0.0446	0.0250	mg/L	0.05000	89	70-130
Acetone	0.0445	0.0100	mg/L	0.05000	89	70-130
Benzene	0.0100	0.0010	mg/L	0.01000	100	70-130
Bromobenzene	0.0095	0.0020	mg/L	0.01000	95	70-130
Bromoform	0.0089	0.0010	mg/L	0.01000	89	70-130
Bromochloromethane	0.0086	0.0006	mg/L	0.01000	86	70-130
Bromodichloromethane	0.0085	0.0010	mg/L	0.01000	85	70-130
Bromomethane	0.0102	0.0020	mg/L	0.01000	102	70-130
Carbon Disulfide	0.0097	0.0010	mg/L	0.01000	97	70-130
Carbon Tetrachloride	0.0089	0.0010	mg/L	0.01000	89	70-130
Chlorobenzene	0.0094	0.0010	mg/L	0.01000	94	70-130
Chloroethane	0.0096	0.0020	mg/L	0.01000	96	70-130
Chloroform	0.0097	0.0010	mg/L	0.01000	97	70-130
Chloromethane	0.0083	0.0020	mg/L	0.01000	83	70-130
cis-1,2-Dichloroethene	0.0089	0.0010	mg/L	0.01000	89	70-130
cis-1,3-Dichloropropene	0.0092	0.0004	mg/L	0.01000	92	70-130
Dibromochloromethane	0.0076	0.0010	mg/L	0.01000	76	70-130
Dibromomethane	0.0092	0.0010	mg/L	0.01000	92	70-130
Dichlorodifluoromethane	0.0081	0.0020	mg/L	0.01000	81	70-130
Diethyl Ether	0.0092	0.0010	mg/L	0.01000	92	70-130
Di-isopropyl ether	0.0099	0.0010	mg/L	0.01000	99	70-130
Ethyl tertiary-butyl ether	0.0093	0.0010	mg/L	0.01000	93	70-130
Ethylbenzene	0.0097	0.0010	mg/L	0.01000	97	70-130
Hexachlorobutadiene	0.0090	0.0006	mg/L	0.01000	90	70-130
Hexachloroethane	0.0095	0.0010	mg/L	0.01000	95	70-130
Isopropylbenzene	0.0097	0.0010	mg/L	0.01000	97	70-130
Methyl tert-Butyl Ether	0.0093	0.0010	mg/L	0.01000	93	70-130
Methylene Chloride	0.0099	0.0020	mg/L	0.01000	99	70-130
Naphthalene	0.0096	0.0010	mg/L	0.01000	96	70-130
n-Butylbenzene	0.0101	0.0010	mg/L	0.01000	101	70-130
n-Propylbenzene	0.0101	0.0010	mg/L	0.01000	101	70-130
sec-Butylbenzene	0.0096	0.0010	mg/L	0.01000	96	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	0.0097	0.0010	mg/L	0.01000	97	70-130
Tetrachloroethene	0.0081	0.0010	mg/L	0.01000	81	70-130
Tetrahydrofuran	0.0098	0.0050	mg/L	0.01000	98	70-130
Toluene	0.0095	0.0010	mg/L	0.01000	95	70-130
trans-1,2-Dichloroethene	0.0092	0.0010	mg/L	0.01000	92	70-130
trans-1,3-Dichloropropene	0.0089	0.0004	mg/L	0.01000	89	70-130
Trichloroethene	0.0085	0.0010	mg/L	0.01000	85	70-130
Trichlorofluoromethane	0.0093	0.0010	mg/L	0.01000	93	70-130
Vinyl Acetate	0.0096	0.0050	mg/L	0.01000	96	70-130
Vinyl Chloride	0.0081	0.0010	mg/L	0.01000	81	70-130
Xylene O	0.0098	0.0010	mg/L	0.01000	98	70-130



ESS Laboratory

Division of Thielsch Engineering, Inc.

BAL Laboratory

*The Microbiology Division
of Thielsch Engineering, Inc.*



CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.

Client Project ID: 642 Allens Ave

ESS Laboratory Work Order: 19K0652

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
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8260B Volatile Organic Compounds

Batch CK92725 - 5030B

Xylene P,M	0.0193	0.0020	mg/L	0.02000	97	70-130				
Surrogate: 1,2-Dichloroethane-d4	0.0228		mg/L	0.02500	91	70-130				
Surrogate: 4-Bromofluorobenzene	0.0248		mg/L	0.02500	99	70-130				
Surrogate: Dibromofluoromethane	0.0239		mg/L	0.02500	96	70-130				
Surrogate: Toluene-d8	0.0263		mg/L	0.02500	105	70-130				
LCS Dup										
1,1,1,2-Tetrachloroethane	0.0086	0.0010	mg/L	0.01000	86	70-130	2	25		
1,1,1-Trichloroethane	0.0089	0.0010	mg/L	0.01000	89	70-130	5	25		
1,1,2,2-Tetrachloroethane	0.0084	0.0005	mg/L	0.01000	84	70-130	2	25		
1,1,2-Trichloroethane	0.0090	0.0010	mg/L	0.01000	90	70-130	8	25		
1,1-Dichloroethane	0.0101	0.0010	mg/L	0.01000	101	70-130	2	25		
1,1-Dichloroethene	0.0098	0.0010	mg/L	0.01000	98	70-130	3	25		
1,1-Dichloropropene	0.0096	0.0020	mg/L	0.01000	96	70-130	7	25		
1,2,3-Trichlorobenzene	0.0086	0.0010	mg/L	0.01000	86	70-130	7	25		
1,2,3-Trichloropropane	0.0092	0.0010	mg/L	0.01000	92	70-130	0.8	25		
1,2,4-Trichlorobenzene	0.0087	0.0010	mg/L	0.01000	87	70-130	4	25		
1,2,4-Trimethylbenzene	0.0102	0.0010	mg/L	0.01000	102	70-130	1	25		
1,2-Dibromo-3-Chloropropane	0.0079	0.0050	mg/L	0.01000	79	70-130	2	25		
1,2-Dibromoethane	0.0086	0.0010	mg/L	0.01000	86	70-130	2	25		
1,2-Dichlorobenzene	0.0091	0.0010	mg/L	0.01000	91	70-130	0.2	25		
1,2-Dichloroethane	0.0082	0.0010	mg/L	0.01000	82	70-130	3	25		
1,2-Dichloropropane	0.0095	0.0010	mg/L	0.01000	95	70-130	4	25		
1,3,5-Trimethylbenzene	0.0102	0.0010	mg/L	0.01000	102	70-130	3	25		
1,3-Dichlorobenzene	0.0093	0.0010	mg/L	0.01000	93	70-130	1	25		
1,3-Dichloropropane	0.0092	0.0010	mg/L	0.01000	92	70-130	4	25		
1,4-Dichlorobenzene	0.0093	0.0010	mg/L	0.01000	93	70-130	3	25		
1,4-Dioxane - Screen	0.296	0.500	mg/L	0.2000	148	0-332	68	200		
1-Chlorohexane	0.0099	0.0010	mg/L	0.01000	99	70-130	4	25		
2,2-Dichloropropane	0.0094	0.0010	mg/L	0.01000	94	70-130	1	25		
2-Butanone	0.0461	0.0100	mg/L	0.05000	92	70-130	3	25		
2-Chlorotoluene	0.0096	0.0010	mg/L	0.01000	96	70-130	1	25		
2-Hexanone	0.0413	0.0100	mg/L	0.05000	83	70-130	3	25		
4-Chlorotoluene	0.0099	0.0010	mg/L	0.01000	99	70-130	6	25		
4-Isopropyltoluene	0.0098	0.0010	mg/L	0.01000	98	70-130	0.3	25		
4-Methyl-2-Pentanone	0.0439	0.0250	mg/L	0.05000	88	70-130	1	25		
Acetone	0.0433	0.0100	mg/L	0.05000	87	70-130	3	25		
Benzene	0.0102	0.0010	mg/L	0.01000	102	70-130	2	25		
Bromobenzene	0.0093	0.0020	mg/L	0.01000	93	70-130	2	25		
Bromochloromethane	0.0087	0.0010	mg/L	0.01000	87	70-130	2	25		
Bromodichloromethane	0.0091	0.0006	mg/L	0.01000	91	70-130	6	25		
Bromoform	0.0078	0.0010	mg/L	0.01000	78	70-130	8	25		
Bromomethane	0.0105	0.0020	mg/L	0.01000	105	70-130	3	25		
Carbon Disulfide	0.0105	0.0010	mg/L	0.01000	105	70-130	7	25		
Carbon Tetrachloride	0.0092	0.0010	mg/L	0.01000	92	70-130	3	25		
Chlorobenzene	0.0096	0.0010	mg/L	0.01000	96	70-130	2	25		



ESS Laboratory

Division of Thielsch Engineering, Inc.

BAL Laboratory

*The Microbiology Division
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CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.

Client Project ID: 642 Allens Ave

ESS Laboratory Work Order: 19K0652

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
8260B Volatile Organic Compounds										
Batch CK92725 - 5030B										
Chloroethane	0.0103	0.0020	mg/L	0.01000	103	70-130	7	25		
Chloroform	0.0096	0.0010	mg/L	0.01000	96	70-130	1	25		
Chloromethane	0.0086	0.0020	mg/L	0.01000	86	70-130	4	25		
cis-1,2-Dichloroethene	0.0097	0.0010	mg/L	0.01000	97	70-130	8	25		
cis-1,3-Dichloropropene	0.0095	0.0004	mg/L	0.01000	95	70-130	3	25		
Dibromochloromethane	0.0074	0.0010	mg/L	0.01000	74	70-130	3	25		
Dibromomethane	0.0098	0.0010	mg/L	0.01000	98	70-130	6	25		
Dichlorodifluoromethane	0.0088	0.0020	mg/L	0.01000	88	70-130	9	25		
Diethyl Ether	0.0093	0.0010	mg/L	0.01000	93	70-130	1	25		
Di-isopropyl ether	0.0108	0.0010	mg/L	0.01000	108	70-130	9	25		
Ethyl tertiary-butyl ether	0.0097	0.0010	mg/L	0.01000	97	70-130	5	25		
Ethylbenzene	0.0101	0.0010	mg/L	0.01000	101	70-130	4	25		
Hexachlorobutadiene	0.0090	0.0006	mg/L	0.01000	90	70-130	0.6	25		
Hexachloroethane	0.0098	0.0010	mg/L	0.01000	98	70-130	3	25		
Isopropylbenzene	0.0099	0.0010	mg/L	0.01000	99	70-130	2	25		
Methyl tert-Butyl Ether	0.0095	0.0010	mg/L	0.01000	95	70-130	2	25		
Methylene Chloride	0.0101	0.0020	mg/L	0.01000	101	70-130	3	25		
Naphthalene	0.0086	0.0010	mg/L	0.01000	86	70-130	11	25		
n-Butylbenzene	0.0104	0.0010	mg/L	0.01000	104	70-130	3	25		
n-Propylbenzene	0.0103	0.0010	mg/L	0.01000	103	70-130	2	25		
sec-Butylbenzene	0.0098	0.0010	mg/L	0.01000	98	70-130	2	25		
Styrene	0.0092	0.0010	mg/L	0.01000	92	70-130	1	25		
tert-Butylbenzene	0.0099	0.0010	mg/L	0.01000	99	70-130	1	25		
Tertiary-amyl methyl ether	0.0097	0.0010	mg/L	0.01000	97	70-130	0	25		
Tetrachloroethene	0.0082	0.0010	mg/L	0.01000	82	70-130	0.6	25		
Tetrahydrofuran	0.0095	0.0050	mg/L	0.01000	95	70-130	4	25		
Toluene	0.0102	0.0010	mg/L	0.01000	102	70-130	7	25		
trans-1,2-Dichloroethene	0.0100	0.0010	mg/L	0.01000	100	70-130	8	25		
trans-1,3-Dichloropropene	0.0091	0.0004	mg/L	0.01000	91	70-130	2	25		
Trichloroethene	0.0092	0.0010	mg/L	0.01000	92	70-130	8	25		
Trichlorofluoromethane	0.0100	0.0010	mg/L	0.01000	100	70-130	7	25		
Vinyl Acetate	0.0098	0.0050	mg/L	0.01000	98	70-130	3	25		
Vinyl Chloride	0.0085	0.0010	mg/L	0.01000	85	70-130	4	25		
Xylene O	0.0096	0.0010	mg/L	0.01000	96	70-130	2	25		
Xylene P,M	0.0198	0.0020	mg/L	0.02000	99	70-130	3	25		
Surrogate: 1,2-Dichloroethane-d4	0.0224		mg/L	0.02500	90	70-130				
Surrogate: 4-Bromofluorobenzene	0.0251		mg/L	0.02500	100	70-130				
Surrogate: Dibromofluoromethane	0.0234		mg/L	0.02500	94	70-130				
Surrogate: Toluene-d8	0.0254		mg/L	0.02500	102	70-130				



ESS Laboratory

Division of Thielsch Engineering, Inc.

BAL Laboratory

*The Microbiology Division
of Thielsch Engineering, Inc.*



CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.

Client Project ID: 642 Allens Ave

ESS Laboratory Work Order: 19K0652

Notes and Definitions

U	Analyte included in the analysis, but not detected
CD+	Continuing Calibration %Diff/Drift is above control limit (CD+).
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 Probably 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: 19K0652

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

United States Department of Agriculture Soil Permit: P330-12-00139

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

ESS Laboratory Sample and Cooler Receipt Checklist

Client: <u>GZA - Providence, RI - GZA/HDM</u>	ESS Project ID: <u>19K0652</u>
Shipped/Delivered Via: <u>Client</u>	Date Received: <u>11/20/2019</u>
	Project Due Date: <u>11/27/2019</u>
	Days for Project: <u>5 Day</u>
<p>1. Air bill manifest present? <input type="checkbox"/> No <input checked="" type="checkbox"/> NA</p> <p>2. Were custody seals present? <input type="checkbox"/> No</p> <p>3. Is radiation count <100 CPM? <input type="checkbox"/> Yes</p> <p>4. Is a Cooler Present? <input type="checkbox"/> Yes Temp: <u>2.8</u> Iced with: <u>Ice</u></p> <p>5. Was COC signed and dated by client? <input type="checkbox"/> Yes</p>	
<p>6. Does COC match bottles? <input type="checkbox"/> Yes</p> <p>7. Is COC complete and correct? <input type="checkbox"/> Yes</p> <p>8. Were samples received intact? <input type="checkbox"/> Yes</p> <p>9. Were labs informed about short holds & rushes? <input type="checkbox"/> Yes / No / NA</p> <p>10. Were any analyses received outside of hold time? <input type="checkbox"/> Yes / No</p>	
<p>11. Any Subcontracting needed? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No ESS Sample IDs: Analysis: _____ TAT: _____</p> <p>12. Were VOAs received? <input type="checkbox"/> Yes / No a. Air bubbles in aqueous VOAs? b. Does methanol cover soil completely?</p>	
<p>13. Are the samples properly preserved? <input checked="" type="checkbox"/> Yes / No a. If metals preserved upon receipt: b. Low Level VOA vials frozen:</p> <p>Date: _____ Time: _____ By: _____ Date: _____ Time: _____ By: _____</p> <p>Sample Receiving Notes: _____ _____</p>	
<p>14. Was there a need to contact Project Manager? <input type="checkbox"/> Yes / <input checked="" type="checkbox"/> No a. Was there a need to contact the client? Who was contacted? _____ Date: _____ Time: _____ By: _____</p> <p>_____ _____</p>	

Sample Number	Container ID	Proper Container	Air Bubbles Present	Sufficient Volume	Container Type	Preservative	Record pH (Cyanide and 608 Pesticides)
01	414550	Yes	No	Yes	VOA Vial - HCl	HCl	
01	414551	Yes	No	Yes	VOA Vial - HCl	HCl	
01	414552	Yes	No	Yes	VOA Vial - HCl	HCl	
02	414547	Yes	No	Yes	VOA Vial - HCl	HCl	
02	414548	Yes	No	Yes	VOA Vial - HCl	HCl	
02	414549	Yes	No	Yes	VOA Vial - HCl	HCl	
03	414544	Yes	No	Yes	VOA Vial - HCl	HCl	
03	414545	Yes	No	Yes	VOA Vial - HCl	HCl	
03	414546	Yes	No	Yes	VOA Vial - HCl	HCl	
04	414541	Yes	No	Yes	VOA Vial - HCl	HCl	
04	414542	Yes	No	Yes	VOA Vial - HCl	HCl	
04	414543	Yes	No	Yes	VOA Vial - HCl	HCl	
05	414538	Yes	No	Yes	VOA Vial - HCl	HCl	
05	414539	Yes	No	Yes	VOA Vial - HCl	HCl	
05	414540	Yes	No	Yes	VOA Vial - HCl	HCl	
06	414535	Yes	No	Yes	VOA Vial - HCl	HCl	
06	414536	Yes	No	Yes	VOA Vial - HCl	HCl	
06	414537	Yes	No	Yes	VOA Vial - HCl	HCl	
07	414532	Yes	No	Yes	VOA Vial - HCl	HCl	
07	414533	Yes	No	Yes	VOA Vial - HCl	HCl	
07	414534	Yes	No	Yes	VOA Vial - HCl	HCl	
08	414529	Yes	No	Yes	VOA Vial - HCl	HCl	
08	414530	Yes	No	Yes	VOA Vial - HCl	HCl	

ESS Laboratory Sample and Cooler Receipt Checklist

Client:	GZA - Providence, RI - GZA/HDM				ESS Project ID:	19K0652
					Date Received:	11/20/2019
08	414531	Yes	No	Yes	VOA Vial - HCl	HCl
09	414526	Yes	No	Yes	VOA Vial - HCl	HCl
09	414527	Yes	No	Yes	VOA Vial - HCl	HCl
09	414528	Yes	No	Yes	VOA Vial - HCl	HCl
10	414523	Yes	No	Yes	VOA Vial - HCl	HCl
10	414524	Yes	No	Yes	VOA Vial - HCl	HCl
10	414525	Yes	No	Yes	VOA Vial - HCl	HCl
11	414520	Yes	No	Yes	VOA Vial - HCl	HCl
11	414521	Yes	No	Yes	VOA Vial - HCl	HCl
11	414522	Yes	No	Yes	VOA Vial - HCl	HCl
12	414517	Yes	No	Yes	VOA Vial - HCl	HCl
12	414518	Yes	No	Yes	VOA Vial - HCl	HCl
13	414514	Yes	No	Yes	VOA Vial - HCl	HCl
13	414515	Yes	No	Yes	VOA Vial - HCl	HCl
13	414516	Yes	No	Yes	VOA Vial - HCl	HCl
14	414511	Yes	No	Yes	VOA Vial - HCl	HCl
14	414512	Yes	No	Yes	VOA Vial - HCl	HCl

2nd Review

Were all containers scanned into storage/lab?

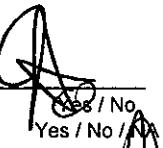
Are barcode labels on correct containers?

Are all Flashpoint stickers attached/container ID # circled?

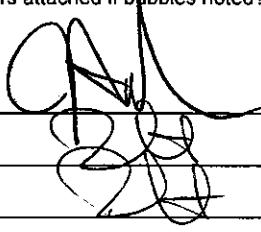
Are all Hex Chrome stickers attached?

Are all QC stickers attached?

Are VOA stickers attached if bubbles noted?

Initials 

Yes / No 
Yes / No 
Yes / No 
Yes / No 

Completed
By: 

Date & Time: 11/20/19 1845

Reviewed
By:

Date & Time: 11/20/19 1917

Delivered
By:

11/20/19 1917

ESS Laboratory

Division of Thielsch Engineering, Inc.
 185 Frances Avenue, Cranston RI 02910
 Tel. (401) 461-7181 Fax (401) 461-4486
www.esslaboratory.com

CHAIN OF CUSTODY

ESS Lab #

19K0652

		Turn Time	5	Days											
		Regulatory State	RI												
		Is this project for any of the following?: <input type="radio"/> CT RCP <input type="radio"/> MA MCP <input type="radio"/> RGP													
Company Name GZA ENVIRONMENTAL INC		Project # 33554-01	Project Name 642 ALLEN'S AVENUE												
Contact Person SOPHIA NARKIEWICZ		Address 188 VALLEY STREET													
City PROVIDENCE		State RI	Zip Code D2908	PO # 33554-01											
Telephone Number 401 447 8161		FAX Number	Email Address sophia.narkiewicz@gza.com												
ESS Lab ID	Collection Date	Collection Time	Sample Type	Sample Matrix	Sample ID										
1	11/19/19	0807	GRAB	GW	VHB-2D										
2	11/19/19	0845			RCA-31										
3	11/19/19	0823			GZ-319D										
4	11/19/19	1025			GZ-201										
5	11/19/19	1154			RCA-36										
6	11/19/19	1621			GZ-304D										
7	11/19/19	1634			GZA-307D										
8	11/20/19	0753			RCA-1										
9	11/20/19	1022			RCA-15										
Container Type: AC-Air Cassette AG-Amber Glass B-BOD Bottle C-Cubitainer J-Jar O-Other P-Poly S-Sterile V-Vial												V			
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*												7			
Preservation Code: 1-Non Preserved 2-HCl 3-H ₂ SO ₄ 4-HNO ₃ 5-NaOH 6-Methanol 7-Na ₂ SO ₄ 8-ZnAc, NaOH 9-NH ₄ Cl 10-DI H ₂ O 11-Other*												2			
Number of Containers per Sample:												3			
Laboratory Use Only					Sampled by: TOMI ADEKANYE SARAH HAUPT.										
Cooler Present:	<input type="radio"/> Drop Off				Comments: Please specify "Other" preservative and containers types in this space										
Seals Intact:	<input type="radio"/> Pickup				NATIONAL GRD RATES APPLY.										
Cooler Temperature:	2.6 °C														
Relinquished by: (Signature, Date & Time)			Received By: (Signature, Date & Time)			Relinquished By: (Signature, Date & Time)			Received By: (Signature, Date & Time)						
Paul Doyle 11/20/19 10:06			11/20/19 16:06												
Relinquished by: (Signature, Date & Time)			Received By: (Signature, Date & Time)			Relinquished By: (Signature, Date & Time)			Received By: (Signature, Date & Time)						

ESS Laboratory

Division of Thielsch Engineering, Inc.
 185 Frances Avenue, Cranston RI 02910
 Tel. (401) 461-7181 Fax (401) 461-4486
www.esslaboratory.com

CHAIN OF CUSTODY

ESS Lab #

1910652

		Turn Time	5	Days			Reporting Limits				
		Regulatory State	RI					Electronic	<input checked="" type="checkbox"/> Data Checker	<input checked="" type="checkbox"/> Excel	
		Is this project for any of the following?: <input type="radio"/> CT RCP <input type="radio"/> MA MCP <input type="radio"/> RGP					Deliverables		<input checked="" type="checkbox"/> Other (Please Specify →) PDF		
Company Name GZA GE ENVIRONMENTAL INC.		Project # 33554-51	Project Name 642 ALLEN ST AVE			Analysis VOC (8288)					
Contact Person SOPHIA NARKIEWICZ		Address 188 VALLEY STREET			Zip Code 62908			PO # 33554-51			
City PROVIDENCE		State RI	FAX Number		Email Address sophia.narkiewicz@gza.com						
ESS Lab ID	Collection Date	Collection Time	Sample Type	Sample Matrix	Sample ID						
110	11/20/19	1154	GRAB	GW	VHB-1						x
120	11/20/19	0829	GRAB	GW	RCA-12R						x
130	11/20/19	1150	GRAB	GW	T.A GZA 3041 GZ-309D						x
140	11/20/19		GRAB	GW	BD 112019						x
150	11/19/19				TRIP BLANK						x
150	11/20/19				TRIP BLANK						x
Container Type: AC-Air Cassette AG-Amber Glass B-BOD Bottle C-Cubitainer J-Jar O-Other P-Poly S-Sterile V-Vial <input checked="" type="checkbox"/>											
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* <input checked="" type="checkbox"/>											
Preservation Code: 1-Non Preserved 2-HCl 3-H2SO4 4-HNO3 5-NaOH 6-Methanol 7-Na2S2O3 8-ZnAc, NaOH 9-NH4Cl 10-DI H2O 11-Other* <input checked="" type="checkbox"/>											
Number of Containers per Sample: 3											
Laboratory Use Only				Sampled by: TOLU ADEKANYE, SARAH MCLEOD							
Cooler Present:	<input checked="" type="checkbox"/> Drop Off			Comments: Please specify "Other" preservative and containers types in this space							
Seals Intact:	<input checked="" type="checkbox"/> Pickup			NATIONAL GRID RATES APPLY ONLY TWO VIALS PROVIDED FOR GZ-309D							
Cooler Temperature:	2.8 °C			Relinquished By: (Signature, Date & Time)						Received By: (Signature, Date & Time)	
Relinquished by: (Signature, Date & Time) SD 11/20/19 1606				Received By: (Signature, Date & Time) ON 11/20/19 1606			Relinquished By: (Signature, Date & Time)			Received By: (Signature, Date & Time)	
Relinquished by: (Signature, Date & Time)				Received By: (Signature, Date & Time)			Relinquished By: (Signature, Date & Time)			Received By: (Signature, Date & Time)	

