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2017 ANNUAL GROUNDWATER MONITORING REPORT
FORMER TIDEWATER FACILITY

200 Taft Street
Pawtucket, Rhode Island

February 2018
GZA File No.: 05.0043654.00

PREPARED FOR:
Rhode Island
Department of Environmental Management (RIDEM)
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February 8, 2018
File No. 05.0043654.00

Via E-Mail and U.S. Mail

Mr. Joseph Martella
Rhode Island Department of Environmental Management (RIDEM)
Office of Waste Management
235 Promenade Street
Providence, Rhode Island 02908

Re: 2017 Annual Groundwater Monitoring Report
Former Tidewater Facility
200 Taft Street
Pawtucket, Rhode Island
RIDEM Case No. 95-022 / Site Remediation File No. SR-26-0934

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 *2017 Annual Groundwater Monitoring Report*. This report describes groundwater monitoring activities performed at the above-referenced Site during the 2017 calendar year. These monitoring activities include quarterly groundwater elevation measurements, quarterly Non-Aqueous Phase Liquid (NAPL) gauging and recovery, annual groundwater sampling and analyses, and twice-monthly surface water observations.

Should you have any questions or comments regarding the information presented herein, please do not hesitate to contact the undersigned or Jesse Edmands from National Grid at (781) 907-3682.

Very truly yours,

GZA GEOENVIRONMENTAL, INC.

David Rusczyk, P.E.
Associate Principal

James J. Clark, P.E.
Senior Principal

Attachment: *2017 Annual Groundwater Monitoring Report*

cc: Michele Leone, National Grid

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1.0 INTRODUCTION

On behalf of our client, The Narragansett Electric Company, d/b/a National Grid (National Grid), GZA GeoEnvironmental, Inc. (GZA) is pleased to provide this *2017 Annual Groundwater Monitoring Report* for the former Tidewater facility located at 200 Taft Street at the terminus of Tidewater and Merry Streets in Pawtucket, Rhode Island ("the Site"). This report summarizes the following Site monitoring activities, which were performed in 2017 consistent with the July 2011 *Remedial Alternative Evaluation (RAE)* submitted to the Rhode Island Department of Environmental Management (RIDEM):

- Twice-monthly surface water observations for the presence of sheens;
- Quarterly Non-Aqueous Phase Liquid (NAPL) gauging and recovery;
- Quarterly monitoring well gauging; and
- Annual groundwater sampling and analyses.

The groundwater analytical results were compared to applicable and available Method 1 (or Method 2 as appropriate) Groundwater Objectives (GOs) as established in RIDEM's Rules and Regulations for the Investigation and Remediation of Hazardous Material Releases (Remediation Regulations, DEM-DSR-01-93, last amended November 2011). Portions of this report include information and data presented in reports prepared by Vanasse Hangen Brustlin, Inc. (VHB), on behalf of National Grid and Atlantic Environmental Services, Inc. (AES), on behalf of predecessors of National Grid and submitted to RIDEM.

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

1.1 SITE DESCRIPTION

The Site is located at 200 Taft Street at the terminus of Tidewater Street and Merry Street in the City of Pawtucket, Rhode Island. A *Locus Map* is included on the cover sheet to the figures and an aerial Site plan is included as Figure 1. The Site was the location of the Tidewater Manufactured Gas Plant (MGP) and the Pawtucket No. 1 Power Station. It is now largely vacant with the exception of an active natural gas regulating station located on the northwest portion of the Site and the use of certain areas of the former Power Plant Area as an active switching station and electric substation. The Site is secured with a locked perimeter chain-link fence along the western, northern and southern sides. The Seekonk River borders the eastern side of the Site.

The Site is situated between Taft Street, an extension of Tidewater Street and Thornton Street to the west, the Seekonk River to the east, and consists of approximately 23 acres across eight separate lots. The majority of the Site is owned by National Grid and a small portion of the Site (part of the South Fill Area) is owned by the City of Pawtucket. As described in previous reports, the Site includes the following four areas, as shown on Figure 1:

- North Fill Area (NFA) (northern portions of Assessors Plat (A.P.) 54B Lot 826);
- Former Gas Plant Area (FGPA) (southern portions of A.P. 54B Lot 826 and A.P. 65B Lot 662);
- Former Power Plant Area (FPPA) (A.P. 65B Lot 645); and
- South Fill Area (SFA) (A.P. 65B Lots 647 and 649, portions of Lot 648 [owned by the City of Pawtucket], and portions of A.P. 67B Lots 11 and 21 [both owned by the City of Pawtucket]).

1.2 SITE BACKGROUND

The former MGP operated from the 1880s until 1954 with peak shaving operations continuing until the late 1960s. The former MGP generated gas using the coal carbonization and carbureted water gas processes. Coal was used as the principal fuel to produce coal gas in the coal carbonization process, while coke (enriched with fuel oil) was used to produce carbureted water gas. In the later years of operation (1954 until the late 1960s), the MGP produced gas using oil and propane for peak shaving purposes.

Power plant operations were conducted for approximately 85 years, between sometime in the early 1890s when construction of the power plant began, until the facility ceased operation in 1975. During this timeframe, the plant used coal and petroleum based products for electricity generation.

GZA prepared and submitted to RIDEM a January 2011 *Site Investigation Data Report* (SIDR) and a July 2011 RAE. These reports served to complete the *Site Investigation Report* (SIR) for the Site consistent with the requirements of Section 7.08 of the Remediation Regulations. RIDEM subsequently issued a Program Letter dated May 25, 2017 indicating that the Site investigation was complete and describing the proposed remedy. National Grid performed the public notice consistent with the Program Letter and the Site-Specific Public Involvement Plan (PIP) in the summer of 2017. National Grid anticipates preparation of a Remedial Action Work Plan (RAWP) for RIDEM review and approval following receipt of the Remedial Decision Letter (RDL) from RIDEM.

As described in the RAE, groundwater elevation and NAPL gauging and groundwater quality monitoring are anticipated to be part of the final remedy for this Site. The following sections describe shoreline observations, groundwater elevation and NAPL gauging/recovery, and groundwater quality monitoring performed in 2017. As described further herein, the results of this 2017 monitoring were generally consistent with previous data and do not alter the information presented or recommendations made in the January 2011 SIDR, the July 2011 RAE, and the May 2017 Program Letter.

2.0 SHORELINE OBSERVATIONS

The Site is visited on an at least a twice-monthly basis to record observations of any sheens along the shoreline. The shoreline of the Site is approximately 2,280 feet long and consists largely of manmade bulkheads. Certain portions of the shoreline, primarily the southern extents, consist of natural slopes to the adjacent Seekonk River. Between January 2017 and December 2017, localized sheens on the surface water were intermittently observed in limited areas of the Seekonk River adjacent to the shoreline of the FGPA and the FPPA. Sheen observations have been limited to the following two general shoreline areas:

- an approximate 10-foot section of the southern shoreline portion of the FGPA near MW-326S and TB-12/MW-3 (refer to Figure 2A); and
- an approximate 10-foot section of the FPPA proximate to the Narragansett Bay Commission (NBC) Combined Sewer Outfall (CSO) near MW-103 (refer to Figure 2B).

Sheens observed in the FGPA near MW-326S and TB-12/MW-3 are bright to dull localized spots less than 2 feet in width located between the shoreline and remnants of wooden sheet piling (associated with a former dock). Sheens observed in the FPPA proximate to the NBC CSO near MW-103 are bright to dull localized bands and spots less than 3 feet in diameter

located very close to the shoreline. Sheens at the Site have generally been observed at mid- or low-tide only; however, sheens were observed in May, June and August 2017 at high tide proximate to the NBC CSO and MW-103. Sheen observations are limited in extent and occurrence and could be the result of the existing CSO and other drainage outfalls, subsurface impact or a combination of both.

Sheens observed during 2017 were generally consistent with those documented in the January 2011 SIDR, the July 2011 RAE and previous groundwater monitoring reports. There were no sheens observed proximate to MW-4 where the cap was installed in 2009[1], the SFA or the bulkhead area proximate to the FPPA in 2017. Sheen observations from the 2017 calendar year are summarized in Table 1.

3.0 GROUNDWATER AND NAPL MONITORING PROGRAM

The 2017 monitoring program consisted of gauging the operable monitoring well network for groundwater elevation and the presence of NAPL (total of sixty-six (66) wells) and the collection of groundwater samples from select monitoring wells for volatile organic compound (VOC) laboratory analysis. Monitoring well groundwater elevation gauging and NAPL gauging/recovery was conducted on a quarterly basis in 2017 (January 2017; April 2017; July 2017; and October 2017). Twenty-seven (27) monitoring wells are included in the annual groundwater quality sampling round. As described further herein, due to lack of water in two wells (wells MW-5 and MW-316S), twenty-five (25) wells were sampled during the October 2017 groundwater sampling round. All well locations are shown on the attached Figures 2A and 2B, *Exploration Location Plans*. Monitoring wells that were included in the October 2017 groundwater sampling round are highlighted on Figures 2A and 2B.

3.1 OBSERVATIONS OF NAPL

A comprehensive gauging round of the groundwater monitoring well network was completed during each of the quarterly monitoring events. Groundwater elevation and NAPL gauging data are included in Tables 2A and 2B, respectively, for the period from January 2017 through December 2017. A summary of wells exhibiting Light Non-Aqueous Phase Liquid (LNAPL) and Dense Non-Aqueous Phase Liquids (DNAPL) thicknesses since April 2009 are presented in Tables 2C and 2D, respectively. Figures 4A and 4B, *2017 NAPL and Groundwater Analytical Data,* depict well locations where either measurable LNAPL or DNAPL (greater than 0.01 feet) were observed during the 2017 groundwater monitoring activities. Wells exhibiting LNAPL in 2017 (greater than 0.01 feet) are observed in the FGPA and FPPA and wells exhibiting DNAPL (greater than 0.01 feet) are observed in the FGPA and SFA. Observations of LNAPL and DNAPL thicknesses within these monitoring wells during 2017 were generally consistent with previous observations, as described below.

During the 2017 monitoring events, in certain wells where measurable levels of NAPL were present, an effort was made to recover NAPL and monitor its rate of return (if any). LNAPL and DNAPL recovery was performed using a peristaltic pump with dedicated tubing positioned below the top of the NAPL surface. The LNAPL and/or DNAPL was extracted from the well until groundwater was observed within the tubing, at which point the pump was deactivated. The recovery was then monitored with an ORS electronic oil/water interface probe. Tables 3A and 3B summarize the results of LNAPL and DNAPL recovery efforts, respectively. Consistent with previous years, GZA removed approximately 10.5 gallons of a NAPL/groundwater mixture in 2017. As described further in this section, NAPL recovery was not practical in certain wells due to the viscosity of the material. The NAPL/groundwater was containerized in an appropriately labeled 55-gallon drum which was stored in a secure on-Site location prior to off-Site disposal.

[1] A shoreline cap was installed during 2009 in response to a sheen outbreak in this area. This work is documented in the February 2010 *Short Term Response Action Summary Report* which was prepared by GZA and submitted to the Department.

In addition to the NAPL thicknesses shown in Tables 2C and 2D, evidence of sheen was observed on purge water from monitoring wells MW-312D, MW-326S, MW-339D, during the October 2017 groundwater sampling event. Purge waters generated from wells MW-109, MW-312D, MW-201, and MW-326S were observed to exhibit a fuel oil-like odor and purge waters from MW-339D were observed to exhibit a coal-tar like odor during the October 2017 groundwater sampling event. Refer to groundwater sampling logs in Appendix B for additional information.

LNAPL

During the quarterly gauging events in 2017, measurable levels of LNAPL (defined as equal to or greater than 0.01 feet) were detected in only three (3) of the sixty-six (66) monitoring wells gauged: two (2) in the FGPA and one (1) in the FPPA. As presented in Table 2C, LNAPL thicknesses were limited and varied by well location. In the FGPA, MW-210 contained 0.9 to 2.06 feet of LNAPL and MW-312S contained 0.1 to 1.05 feet of LNAPL; and in the FPPA, M&E MW-5 contained 0.68 to 0.99 feet of LNAPL. There have been no new wells exhibiting measurable thicknesses of LNAPL since the January 2011 SIDR. The well locations where LNAPL was detected in the FGPA are in the area of the former MGP processes and the former piping raceway footprint. In the FPPA, LNAPL was detected in the well located in the vicinity of the former service underground storage tanks or USTs (M&E MW-5).

During the quarterly gauging events in 2017, LNAPL recovery evaluations were attempted at three (3) wells: MW-210, MW-312S, and M&E MW-5. Consistent with historic observations, LNAPL appears to recover relatively slowly. In addition, observed LNAPL thicknesses appear to be highly dependent upon the tidal cycle at the time of gauging. As presented in Table 3A, the rate of LNAPL recovery appears to be on the order of 1 to 2 months (or more) (timeframe over which recorded thickness appears to return to original measurement). In general, LNAPL thicknesses and recoverability observed in 2017 are consistent with historic observations. LNAPL in monitoring wells MW-103, MW-326S, MW-313S and MW-3 have decreased from measurable thicknesses of several feet in January 2011 to less than 0.01 feet since October 2011, suggesting that only localized LNAPL may have collected in these wells.

DNAPL

During the quarterly gauging events in 2017, measurable levels of DNAPL (defined as equal to or greater than 0.01 feet) were detected in only four (4) of the sixty-six (66) monitoring wells gauged: two (2) in the FGPA and two (2) in the SFA. As presented in Table 2D, DNAPL thicknesses varied by well location. In the FGPA, MW-303 contained 1.45 to 5.74 feet and MW-341 contained 0.31 to 0.76 feet of DNAPL; and in the SFA, MW-320S contained 0.15 to 1.15 feet and MW-320D contained trace to 14.52 feet of DNAPL. MW-303 and MW-341 are located proximate to former MGP processes. Monitoring wells MW-320 S/D are located on the southern portion of the Site where coal waste from the gasification process was received. It should be noted that monitoring well MW-103 (located in the FPPA), which was the only well on the FPPA where measurable DNAPL was detected during the 2010 Site investigations, has not shown evidence of DNAPL since 2011.

Based on the measurable quantities, physical characteristics of the DNAPL, and results of historic DNAPL recovery attempts, recovery evaluations were attempted at two (2) well locations in 2017 (MW-303 and MW-341 installed on the FGPA portion of the Site[2]). During the 2017 recovery rounds, a total of 3.2 gallons of DNAPL was recovered from MW-341 and a total of 0.75 gallons of DNAPL was recovered from MW-303. In general, DNAPL thicknesses and recoverability rates observed during 2017 are consistent with historic observations.

[2] Recovery was not attempted for the DNAPL observed in the SFA due to the viscosity of the DNAPL observed.

DNAPL thickness in MW-320D (located in the SFA) ranged from 1.05 and 10 feet between 2009 and 2013, compared to DNAPL thicknesses ranging from 13.01 and 14.5 feet in 2015, 2016 and 2017. Similar to observations of LNAPL, DNAPL is observed in only certain wells suggesting the presence of localized pockets and not a contiguous layer. Based on the results of attempted recovery and the viscous nature of the materials, DNAPL is unlikely to be significantly mobile. In addition, groundwater monitoring wells act as collection points for NAPL and therefore the thicknesses measured within the wells are often significantly greater than what is actually present in the subsurface. This also results in observations of increased thicknesses of NAPL in a monitoring well when recovery is not feasible, such as in the case of MW-320D. GZA has not observed the presence of sheen in the waterfront area adjacent to MW-320D, indicating that the DNAPL in this well may not be particularly mobile.

3.2 GROUNDWATER FLOW DIRECTION

Between April 2009 and October 2017, GZA recorded depth to groundwater readings at Site monitoring wells on a quarterly basis. Depths to groundwater measurements were obtained using an electronic water level/oil water interface probe accurate to within 0.01 feet. The groundwater elevations at each monitoring well were subsequently calculated using the casing and PVC elevations. Table 2A presents the depth to groundwater readings for each well gauged in 2017. The groundwater elevations recorded during the October 3, 2017 gauging round were used to prepare the *Shallow Groundwater Contour Plan* presented as Figure 3**.** Groundwater elevations during the 2017 gauging events are generally consistent with those recorded during previous monitoring events. As expected, review of groundwater elevations recorded during the 2017 reporting period indicated that the groundwater beneath the Site generally flows from west to east towards the Seekonk River. In general, the groundwater table was encountered between elevation 0 and 10 feet (NAVD 1988), which is predominantly within the fill unit. As indicated on Figure 3 and consistent with Site topography, groundwater elevations decline steeply from west to east on the northern side of the Site. In general, groundwater elevation contours flatten along the eastern side of the Site closer to the Seekonk River.

3.3 GROUNDWATER SAMPLING TECHNIQUES

Twenty-seven (27) monitoring wells are included in the groundwater sampling program at the Site: four (4) in the NFA (MW-5, MW-7, MW-310S and MW-310D), ten (10) in the FGPA (MW-201, MW-208, MW-312S, MW-312D, MW-326S, MW-326D, MW-333S, MW-333D, MW-339S, and MW-339D), eight (8) in the FPPA (M&E MW-2, MW-6, MW-109, MW-314S, MW-314D, MW-316S, MW-316D, and MW-337) and five (5) in the SFA (MW-107, MW-318S, MW-318D, MW-334S and MW-334D).[3] These well locations were chosen to provide a representative evaluation of overall Site groundwater quality. Figures 2A and 2B, *Exploration Location Plans*, identify the wells included in the October 2017 groundwater sampling round.

Groundwater samples were collected in general accordance with EPA's September 2017 *Low Stress (low flow) Purging and Sampling Procedure* (Low Flow Standard Operating Procedure). Prior to sampling, the depth to static groundwater and NAPL present was measured in each well using an ORS electronic oil/water interface probe. During groundwater sampling, a variable speed peristaltic pump or submersible pump was utilized to control the rate of purging. Dedicated 3/8-inch polyethylene tubing installed in each of the wells was utilized as the intake and discharge tubing for the pump. Pharmaceutical grade (silicone) 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

[3] MW-5 and MW-316S are included in the sampling program; however, due to low water levels and insufficient recovery, there was not enough water present within the well to collect samples during the October 2017 monitoring event.

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 in Appendix B. As indicated on the logs, the monitoring wells were pumped until field screening parameters were stabilized prior to collecting the samples.

Samples were placed in laboratory-provided, hydrochloric acid-preserved 40 milliliter (mL) glass vials with septa caps for volatile organic compound (VOC) analysis via EPA Method 8260B.[4] Samples were then packed in an ice chest and transported under chain-of-custody protocol to ESS Laboratory located in Cranston, Rhode Island.

3.4 INVESTIGATION-DERIVED WASTE MANAGEMENT

As described previously, NAPL/groundwater that was collected during the 2017 monitoring program was containerized in a labeled 55-gallon steel drum and stored securely on-Site for subsequent off-Site disposal. Two (2) drums of purge water and one (1) drum of oily debris (used personal protective equipment (PPE)) were generated during the 2017 monitoring program. The purge water and oily debris drums were removed from the Site by Clean Harbors Environmental Services, Inc. (CHES) of East Providence, Rhode Island for off-Site disposal. A copy of the disposal manifests is included in Appendix C[5].

3.5 QUALITY ASSURANCE/QUALITY CONTROL SAMPLING AND ANALYSIS

During the 2017 sampling round, twenty-five (25) groundwater samples, two (2) blind duplicate samples and one (1) trip blank were submitted to ESS Laboratory in Cranston, Rhode Island for analysis. The samples were transported to the laboratory under chain of custody protocol. As indicated in each laboratory report, the samples were received intact, within the proper temperature range and appropriately preserved. Analytical results for the trip blank were below the laboratory reporting limit for all target compounds.

Two duplicate sample sets (Set #1 – MW-312S and BD-10032017 and Set #2 –MW-326D and BD-10042017) were also submitted for VOC analysis to evaluate sample reproducibility. The relative percent difference (RPD) was calculated for each compound. Elevated RPDs (more than 40% difference) were not noted in either duplicate sample set.

These results are shown in Tables 4A (VOCs) and 4B (QA/QC Results). Copies of the original laboratory data, laboratory quality assurance/quality control (QA/QC) methods, and chain-of-custody forms are provided in Appendix D.

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[4] Previous groundwater sampling rounds have included analysis for VOCs via EPA Method 8260B, total petroleum hydrocarbons (TPH) via EPA Method 8100M, polycyclic aromatic hydrocarbons (PAHs) via EPA Method 8270C, total cyanide and dissolved free cyanide via EPA Method 9014. The 2017 groundwater monitoring program was modified to not include TPH, PAHs, or cyanide to be consistent with the RIDEM-submitted July 2011 RAE.

[5] Disposal manifest #010906048 tracks the disposal of two (2) oily debris drums generated during LDI work, in addition to the one (1) purge water and one (1) oily debris drums generated during the 2017 monitoring program. Disposal manifest #010906177 tracks the disposal of three (3) purge water and sixteen (16) soil drums generated during LDI work, in addition to the one (1) purge water drum generated during the 2017 monitoring program.

3.6 GROUNDWATER ANALYTICAL RESULTS

Analytical data from the 2017 sampling event is summarized in Table 4A (VOCs), which includes comparisons to RIDEM Method 1 (or Method 2 as appropriate) GB Groundwater Objectives and Upper Concentration Limits (UCLs). A summary of the 2017 data is described below. Historical groundwater quality results by monitoring well dating back to 1996 are presented in Tables 5A through 5AA.

Groundwater quality at the Site is generally characterized by a few isolated exceedances (five (5) wells total) of the GB Groundwater Objectives for benzene, ethylbenzene and naphthalene, primarily in areas of the Site where former MGP features were historically located. Figures 4A and 4B, *2017 NAPL and Groundwater Analytical Data,* present the total VOC concentrations detected in groundwater samples during the October 2017 sampling round and highlight wells exhibiting specific analyte GB Groundwater Objective exceedances. As indicated on these figures, exceedances of the GB Groundwater Objectives are limited to sporadic detections of the following compounds: ethylbenzene, benzene and naphthalene.

As indicated in Table 4A, VOCs were detected in sixteen (16) of the twenty-five (25) groundwater samples submitted for analysis in 2017. The total VOC concentrations detected during the 2017 monitoring event ranged from 0.0013 milligrams per Liter (mg/L) to 16.95 mg/L. Five samples (5/25) exceeded the GB Groundwater Objective for one or more VOCs. Three (3/25) samples exceeded the Method 2 GB Groundwater Objective for naphthalene, four (4/25) samples exceeded the Method 1 GB Groundwater Objective for benzene, and one (1/25) sample exceeded the Method 1 GB Groundwater Objective for ethylbenzene.[6]

The presence of these compounds in groundwater samples is typical for former MGP and power plant sites and consistent with historical sampling results for the Tidewater Site. None of the VOCs detected in groundwater in 2017 exceeded UCLs. The following sections discuss the dissolved-phased VOC analytical results for the 2017 sampling event as compared to the Method 1 (or Method 2 as appropriate) objectives by Site area.

NFA (Northern Portions of A.P. 54B Lot 826)

Three (3) groundwater samples (MW-7, MW-310S, and MW-310D) were collected in this area during the 2017 monitoring event and submitted for analysis of VOCs. The groundwater sample from MW-310D exhibited exceedances of the GB Groundwater Objectives for benzene and naphthalene. Benzene was detected in MW-310D at a concentration of 0.713 mg/L, in excess of the GB Groundwater Objective of 0.14 mg/L. Naphthalene was detected in MW-310D at a concentration of 8.44 mg/L, in excess of the Method 2 derived[7] GB Groundwater Objective of 2.67 mg/L. The groundwater samples collected from MW-7 and MW-310S had no detection of VOCs.

The concentrations of both benzene and naphthalene have exceeded the GB Groundwater Objectives in MW-310D (refer to Table 5D) during the previous sampling rounds (June 2010, July 2011, July 2012, August 2013, October 2014, November 2015 and November 2016), consistent with the 2017 monitoring event. This well is located in the historic cove of the NFA and visual/olfactory impacts have been previously observed in this area.

[6] The laboratory detection limit for 1,2-dibromo-3-chloropropane is above the GB groundwater objective. However, 1,2-dibromo-3-chloropropane is not a typical contaminant of concern for former MGP or former power plant sites, therefore we do not anticipate that 1,2-dibromo-3-chloropropane is impacting soil or groundwater at the Site.

[7] Derivation of this Method 2 GB Groundwater Objective can be provided upon request.

FGPA (Southern Portions of A.P. 54B Lot 826 and A.P. 65B Lot 662)

Ten (10) groundwater samples (MW-201, MW-208, MW-312S, MW-312D, MW-326S, MW-326D, MW-333S, MW-333D, MW-339S, and MW-339D) were collected in this area during the 2017 monitoring event and submitted for analysis of VOCs. Exceedances of the GB Groundwater Objectives for VOCs were detected in four (4) monitoring wells: MW-312D[8], MW-326S, MW-333D, and MW-339D. Benzene was detected in seven samples (7/10) at concentrations ranging from 0.0028 mg/L to 6.67 mg/L, with three samples (3/10) exceeding the GB Groundwater Objective of 0.14 mg/L (MW-312D, 6.67 mg/L; MW-326S, 0.981 mg/L; and MW-333D, 0.842 mg/L). Naphthalene was detected in seven samples (7/10) at concentrations ranging from 0.003 mg/L to 6.9 mg/L, with two samples (2/10) exceeding the Method 2 derived GB Groundwater Objective of 2.67 mg/L (MW-312D, 6.9 mg/L; and MW-339D, 4.36 mg/L). Ethylbenzene was detected in six samples (6/10) at concentrations ranging from 0.0145 mg/L to 2.18 mg/L, with one sample (1/10) exceeding the GB Groundwater Objective of 1.6 mg/L (MW-312S, 2.18 mg/L).

Analytical VOC results for the FGPA in 2017 were consistent with historic groundwater results, with exceedances of the GB Groundwater Objectives limited to naphthalene, ethylbenzene and benzene. All wells exhibiting GB Groundwater Objective Exceedances are located in the southeastern portion of the FGPA in the vicinity of the former processing houses for the MGP (*i.e.*, MW-312D, MW-326S, MW-333D), with the exception of MW-339D, which is located east of the location of former Gasholders No. 7 and 8.

FPPA (A.P. 65B Lot 645)

Seven (7) groundwater samples (M&E MW-2, MW-6, MW-109, MW-314S, MW-314D, MW-316D and MW-337) were collected in this area during the 2017 monitoring event and submitted for VOC analysis. The groundwater samples collected from M&E MW-2, MW-337, MW-314S and MW-314D had no VOCs detected during the 2017 event. Benzene was detected in two samples (2/7) at concentration ranging from 0.023 mg/L to 0.137 mg/L, with no exceedances of the GB Groundwater Objective of 0.14 mg/L. Ethylbenzene was detected in two (2/7) samples at concentrations ranging from 0.0168 mg/L to 0.0198 mg/L, with no exceedances of the GB Groundwater Objective of 1.6 mg/L. Naphthalene was detected in two (2/7) samples at concentrations ranging from 0.0028 mg/L to 0.0779 mg/L, with no exceedances of the Method 2 derived GB Groundwater Objective of 2.67 mg/L.

Historically, exceedances of the GB Groundwater Objectives have not been detected in the FPPA with the exception of the detected concentration of benzene from MW-109. As indicated in Table 5Q, benzene was detected at concentrations of 0.171 mg/L and 0.312 mg/L in November 2015 and November 2016, respectively, exceeding the GB Groundwater Objective of 0.14 mg/L. Consistent with results from 2006 and 2012, the benzene concentration observed at MW-109 in 2017 was below the GB Groundwater Objective. MW-109 is located near the existing switching station (former power plant building) and a former UST.

SFA (A.P. 65B Lots 647 and 649, portions of A.P. 65B Lot 648 and portions of A.P. 67B Lot 11 and 21)

Five (5) groundwater samples were collected from this area during the 2017 sampling event (MW-107, MW-318S, MW-318D, MW-334S, MW-334D) and analyzed for VOCs. The groundwater samples collected from MW-107 and MW-318D had no VOCs detected during the 2017 event. Benzene was detected in three samples (3/5) at concentrations ranging from 0.0012 mg/L to 0.0817 mg/L, with no exceedances of the GB Groundwater Objective of 0.14 mg/L. Ethylbenzene

[8] Lab results and recorded sampling times indicate a strong likelihood that samples taken from MW-312S were incorrectly labeled as MW-312D and samples taken from MW-312D were incorrectly labeled as MW-312S. The results shown in Tables 4A-4B have been corrected accordingly.

was detected in one (1/5) sample, MW-318S, at a concentration of 0.0082 mg/L with no exceedances of the GB Groundwater Objective of 1.6 mg/L. Naphthalene was detected in three (3/5) samples at concentrations ranging from 0.01 mg/L to 0.766 mg/L, with no exceedances of the Method 2 derived GB Groundwater Objective of 2.67 mg/L.

Consistent with historic data, no VOCs were detected in excess of the GB Groundwater Objectives in the SFA during the 2017 sampling event.

4.0 CONCLUSIONS

As part of the annual groundwater monitoring for 2017, twenty-five (25) monitoring wells were sampled in October 2017 for VOCs, all accessible wells were gauged for the elevation of groundwater and the presence of NAPL on a quarterly basis, NAPL recovery was performed at certain well locations, and inspections for sheens in the Seekonk River adjacent to the Site were made at least twice-monthly throughout the year. In general, observations made and the results of analytical testing during 2017 were consistent with historic results as summarized below:

- Sheen observations were consistent with historic observations and were limited to the bulkhead area in the central portion of the shoreline in the FPPA and FGPA. Sheen observations were limited to several localized and immediate areas of the shoreline and were observed at various tidal stages.
- Measurable NAPL (greater than 0.01 feet) was limited to seven (7) monitoring well locations in 2017. LNAPL was observed in three (3) monitoring wells (2 in the FGPA and 1 in the FPPA) and DNAPL was observed in four (4) monitoring wells (2 in the FGPA and 2 in the SFA). LNAPL thicknesses ranged from 0.1 to 2.06 feet and DNAPL thicknesses ranged from 0.15 to 14.52 feet. Approximately 10.5 gallons of NAPL/groundwater were recovered from Site monitoring wells and was containerized for subsequent off-Site disposal. Observations of both LNAPL and DNAPL continue to be localized and do not indicate the presence of significant contiguous layers in the subsurface. Typical of MGP sites, recovery attempts suggest that observed NAPLs are unlikely to be significantly mobile in the subsurface.
- Exceedances of the GB Groundwater Objectives were limited to five (5/25) wells sampled during the 2017 monitoring round. Compounds detected in excess of the GB Groundwater Objectives were limited to naphthalene, benzene and ethylbenzene. The presence of these compounds in groundwater samples is typical for former MGP and power plant sites. The most significant dissolved phase groundwater impacts were generally detected in the FGPA.

The 2018 monitoring program will be performed consistent with the 2017 program.

TABLES

TABLE 1
SUMMARY OF SHEEN OBSERVATIONS

Former Tidewater Facility
Pawtucket, Rhode Island

Date	Approximate Tidal Stage	Sheen Observation Location	Sheen Characteristics
1/6/2017	Low	No sheens observed	
1/27/2017	Low	54" CSO pipe outfall washout adjacent to MW-103	Streaks of sheen
2/17/2017	Mid-Low	No sheens observed	
2/27/2017	Low	No sheens observed	
3/7/2017	Mid	No sheens observed	
3/20/2017	Mid	No sheens observed	
4/11/2017	High	No sheens observed	
4/27/2017	Mid	54" CSO pipe outfall washout adjacent to MW-103	Dull bands of sheen
5/18/2017	Low	54" CSO pipe outfall washout adjacent to MW-103	Dull bands of sheen
5/31/2017	High	54" CSO pipe outfall washout adjacent to MW-103	Dull bands of sheen
6/20/2017	Low	54" CSO pipe outfall washout adjacent to MW-103	Moderate bands of sheen
6/30/2017	High	54" CSO pipe outfall washout adjacent to MW-103	Dull bands of sheen
7/13/2017	Mid-Low	54" CSO pipe outfall washout adjacent to MW-103	Dull bands of sheen
7/26/2017	High	54" CSO pipe outfall washout adjacent to MW-103	Dull bands of sheen
8/9/2017	High	54" CSO pipe outfall washout adjacent to MW-103	Dull bands of sheen
8/22/2017	High	54" CSO pipe outfall washout adjacent to MW-103	Dull bands of sheen
9/11/2017	Mid	54" CSO pipe outfall washout adjacent to MW-103	Dull bands of sheen
9/29/2017	Low	No sheens observed	
10/19/2017	Mid	No sheens observed	
10/31/2017	Mid	CSO outfall adjacent to MW-103 and adjacent to MW-326 S/D	Dull bands of sheen
11/6/2017	Mid	No sheens observed	
11/29/2017	Mid-Low	No sheens observed	
12/13/2017	Mid-Low	No sheens observed	
12/28/2017	Mid	No sheens observed (ice present along shoreline)	

Notes:
1. SFA refers to the South Fill Area.
2. FPPA refers to the Former Power Plant Area.
3. FGPA refers to the Former Gas Plant Area.
4. NFA refers to the North Fill Area.
5. This table shows observations that were made along the Site shoreline. Observations were made at least twice a month.
6. This table shows observations that were made during 2017. The January 2011 SIDR, July 2011 RAE and previous groundwater monitoring reports presents sheen observations between 2009 and 2016.

TABLE 2A
SUMMARY OF GROUNDWATER MEASUREMENTS
Former Tidewater Facility
Pawtucket, Rhode Island

Site Area	Well ID	Measured Well Depth (Feet below Top of PVC)	Top of PVC Elevation (Feet)	Range of LNAPL Observed (feet)	Range of DNAPL Observed (feet)	January 2017 Groundwater Gauging Information						April 2017 Groundwater Gauging Information					
						Depth To Water (ft)	Total Well Depth (ft)	GW Elevation (feet) (NAVD 88)	LNAPL Thickness (feet)	DNAPL Thickness (feet)	Corrected Groundwater Elevation (feet)	Depth To Water (ft)	Total Well Depth (ft)	GW Elevation (feet) (NAVD 88)	LNAPL Thickness (feet)	DNAPL Thickness (feet)	Corrected Groundwater Elevation (feet)
NFA	MW-5	11.60	31.31	NP	NP	5.44	11.88	25.87	NP	NP	25.87	5.03	11.9	26.28	NP	NP	26.28
NFA	MW-7	27.45	31.14	NP	NP	20.67	27.62	10.47	NP	NP	10.47	17.91	27.5	13.23	NP	NP	13.23
NFA	MW-204	16.77	8.60	NP	NP	6.11	16.8	2.49	NP	NP	2.49	8.76	16.8	-0.16	NP	NP	-0.16
NFA	MW-205	15.00	11.47	NP	NP	2.20	15.01	9.27	NP	NP	9.27	1.45	15.05	10.02	NP	NP	10.02
NFA	MW-206	28.77	36.28	NP	NP	27.00	29.34	9.28	NP	NP	9.28	25.56	29.3	10.72	NP	NP	10.72
NFA	MW-310S	17.35	8.76	NP	NP	5.95	16.61	2.81	NP	NP	2.81	8.84	16.55	-0.08	NP	NP	-0.08
NFA	MW-310D	36.20	8.31	NP	NP	5.54	36.28	2.77	NP	NP	2.77	6.47	36.25	1.84	NP	NP	1.84
NFA	MW-311	22.00	9.35	NP	NP	6.62	21.79	2.73	NP	NP	2.73	9.56	21.8	-0.21	NP	NP	-0.21
FGPA	MW-201	15.00	13.01	NP	NP	7.05	15.05	5.96	NP	NP	5.96	8.63	14.95	4.38	NP	NP	4.38
FGPA	MW-202	13.80	13.61	NP	NP	3.49	13.82	10.12	NP	NP	10.12	2.57	13.85	11.04	NP	NP	11.04
FGPA	MW-203	14.80	9.45	NP	NP	5.93	14.8	3.52	NP	NP	3.52	8.09	14.75	1.36	NP	NP	1.36
FGPA	MW-207 (2)	11.75	13.70	NP	NP	Destroyed						Destroyed					
FGPA	MW-208	21.75	27.33	NP	NP	16.26	21.8	11.07	NP	NP	11.07	13.30	21.8	14.03	NP	NP	14.03
FGPA	MW-209	21.05	23.90	NP	NP	12.92	21.05	10.98	NP	NP	10.98	10.38	21.1	13.52	NP	NP	13.52
FGPA	MW-210	17.28	10.61	NP-2.06	NP	9.70	17.4	0.91	1.95	NP	2.57	10.20	18.15	0.41	2.06	NP	2.16
FGPA	MW-3	17.00	10.59	NP-trace	NP	9.40	16.73	1.19	trace	NP	1.19	9.04	16.78	1.55	NP	NP	1.55
FGPA	MW-4	17.65	9.92	NP	trace	10.65	16.41	-0.73	NP	trace	-0.73	11.24	16.25	-1.32	NP	trace	-1.32
FGPA	MW-303	41.85	8.48	NP	1.45 - 5.74	9.03	41.88	-0.55	NP	5.25	-0.55	9.44	42.05	-0.96	NP	5.74	-0.96
FGPA	MW-312S	23.55	9.94	0.1 - 1.05	NP	9.80	23.82	0.14	1.05	NP	1.03	9.49	20.1	0.45	0.1	NP	0.53
FGPA	MW-312D	31.90	9.82	NP	NP	7.31	31.96	2.51	NP	NP	2.51	10.43	32.05	-0.61	NP	NP	-0.61
FGPA	MW-313S	24.90	11.14	NP-trace	NP	9.71	24.7	1.43	trace	NP	1.43	9.90	24.7	1.24	trace	NP	1.24
FGPA	MW-313D	47.35	11.33	NP	NP	8.89	47.45	2.44	NP	NP	2.44	11.69	47.4	-0.36	NP	NP	-0.36
FGPA	MW-326S	26.60	11.90	NP-trace	NP	9.90	26.69	2.00	NP	NP	2.00	12.73	26.55	-0.83	trace	NP	-0.83
FGPA	MW-326D	45.05	11.26	NP	NP	9.10	45.28	2.16	NP	NP	2.16	11.95	45.05	-0.69	NP	NP	-0.69
FGPA	MW-333S	18.30	11.67	NP	NP	9.21	17.55	2.46	NP	NP	2.46	12.08	17.6	-0.41	NP	NP	-0.41
FGPA	MW-333D	45.20	11.56	NP	NP	9.54	44.95	2.02	NP	NP	2.02	12.16	45.15	-0.60	NP	NP	-0.60
FGPA	MW-335S	15.75	10.75	NP-0.01	NP	7.32	15.63	3.43	NP	NP	3.43	9.19	15.63	1.56	NP	NP	1.56
FGPA	MW-335D	36.50	11.24	NP	NP	8.62	35.96	2.62	NP	NP	2.62	11.38	36	-0.14	NP	NP	-0.14
FGPA	MW-336	15.00	11.87	NP	NP	9.14	15.11	2.73	NP	NP	2.73	10.74	15.15	1.13	NP	NP	1.13
FGPA	MW-339S	12.35	14.52	NP	NP-trace	5.79	12.32	8.73	NP	trace	8.73	5.15	12.35	9.37	NP	NP	9.37
FGPA	MW-339D	20.95	14.80	NP	trace	5.98	27.2	8.82	NP	trace	8.82	8.14	25.1	6.66	NP	trace	6.66
FGPA	MW-341	30.10	18.70	NP	0.31 - 0.76	9.81	30.01	8.89	NP	0.76	8.89	6.93	30.6	11.77	NP	0.35	11.77
FPPA	M&E MW-1	15.05	8.39	NP	NP	7.10	15.13	1.29	NP	NP	1.29	7.36	15.2	1.03	NP	NP	1.03
FPPA	M&E MW-2	13.85	9.97	NP	NP	8.70	13.7	1.27	NP	NP	1.27	10.58	13.75	-0.61	NP	NP	-0.61
FPPA	M&E MW-4 (1)	7.81		NP	NP	Not Found						Not Found					
FPPA	M&E MW-5 (3)	16.88	8.14	NP-0.99	NP	7.09	14.48	1.05	0.68	NP	1.63	8.85	14.5	-0.71	0.99	NP	0.13
FPPA	MW-6	19.03	12.73	NP	NP	11.56	19.08	1.17	NP	NP	1.17	11.88	18.8	0.85	NP	NP	0.85
FPPA	MW-101	16.00	10.15	NP	NP	9.26	16.06	0.89	NP	NP	0.89	9.90	16	0.25	NP	NP	0.25
FPPA	MW-102	26.80	18.86	NP	NP	17.66	26.65	1.20	NP	NP	1.20	18.26	26.48	0.60	NP	NP	0.60
FPPA	MW-103	16.90	10.56	NP	NP	9.52	16.9	1.04	NP	NP	1.04	9.98	16.8	0.58	NP	NP	0.58
FPPA	MW-104	14.90	10.72	NP	NP	9.91	14.8	0.81	NP	NP	0.81	9.96	14.7	0.76	NP	NP	0.76
FPPA	MW-105	27.55	21.35	NP	NP	20.09	27.53	1.26	NP	NP	1.26	20.04	27.6	1.31	NP	NP	1.31
FPPA	MW-109	19.30	13.33	NP	NP	10.95	19.32	2.38	NP	NP	2.38	11.51	19.3	1.82	NP	NP	1.82
FPPA	MW-314S	24.50	9.58	NP	NP	8.74	24.3	0.84	NP	NP	0.84	9.98	24.35	-0.40	NP	NP	-0.40
FPPA	MW-314D	43.40	9.59	NP	NP	8.90	43.46	0.69	NP	NP	0.69	10.20	43.4	-0.61	NP	NP	-0.61
FPPA	MW-315S	26.40	10.15	NP	NP	9.06	25.39	1.09	NP	NP	1.09	10.84	24.55	-0.69	NP	NP	-0.69
FPPA	MW-315D	41.70	9.82	NP	NP	9.00	41.56	0.82	NP	NP	0.82	10.84	41.6	-1.02	NP	NP	-1.02
FPPA	MW-316S	22.30	23.81	NP	NP	22.04	22.45	1.77	NP	NP	1.77	21.14	22.5	2.67	NP	NP	2.67
FPPA	MW-316D	31.55	23.97	NP	NP	22.06	31.45	1.91	NP	NP	1.91	21.39	31.15	2.58	NP	NP	2.58
FPPA	MW-317S	27.40	24.65	NP	NP	23.40	27.25	1.25	NP	NP	1.25	23.28	27.5	1.37	NP	NP	1.37
FPPA	MW-317D	36.20	24.72	NP	NP	22.11	36.19	2.61	NP	NP	2.61	22.06	36.3	2.66	NP	NP	2.66
FPPA	MW-337	20.00	12.75	NP	NP	11.55	19.85	1.20	NP	NP	1.20	11.86	19.9	0.89	NP	NP	0.89

TABLE 2A
SUMMARY OF GROUNDWATER MEASUREMENTS
Former Tidewater Facility
Pawtucket, Rhode Island

Site Area	Well ID	Measured Well Depth (Feet below Top of PVC)	Top of PVC Elevation (Feet)	Range of LNAPL Observed (feet)	Range of DNAPL Observed (feet)	January 2017 Groundwater Gauging Information						April 2017 Groundwater Gauging Information					
						Depth To Water (ft)	Total Well Depth (ft)	GW Elevation (feet) (NAVD 88)	LNAPL Thickness (feet)	DNAPL Thickness (feet)	Corrected Groundwater Elevation (feet)	Depth To Water (ft)	Total Well Depth (ft)	GW Elevation (feet) (NAVD 88)	LNAPL Thickness (feet)	DNAPL Thickness (feet)	Corrected Groundwater Elevation (feet)
FPPA	MW-338S	18.45	13.18	NP	NP	12.02	18.26	1.16	NP	NP	1.16	12.04	18.45	1.14	NP	NP	1.14
FPPA	MW-338D	39.65	12.73	NP	NP	11.02	39.57	1.71	NP	NP	1.71	12.99	39.45	-0.26	NP	NP	-0.26
FPPA	MW-400 (5)	24.30	28.85	NP	NP	19.36	24.3	9.49	NP	NP	9.49	17.02	24.1	11.83	NP	NP	11.83
FPPA	MW-401 (5)	19.30	24.18	NP	NP	14.71	19.28	9.47	NP	NP	9.47	12.40	19.1	11.78	NP	NP	11.78
SFA	MW-1	23.20	18.88	NP	trace	17.55	23.33	1.33	NP	trace	1.33	17.69	23.2	1.19	NP	trace	NP
SFA	MW-107	27.35	21.08	NP	NP	19.81	27.71	1.27	NP	NP	1.27	19.73	27.55	1.35	NP	NP	1.35
SFA	MW-318S	27.00	18.14	NP	NP	15.90	22.05	2.24	NP	NP	2.24	17.22	26.9	0.92	NP	NP	0.92
SFA	MW-318D (4)	43.60	17.80	NP	NP	Well Clogged with roots - Unable to Gauge						Well Clogged with roots - Unable to Gauge					
SFA	MW-319S	27.10	19.12	NP	NP	17.80	27.18	1.32	NP	NP	1.32	18.29	27.1	0.83	NP	NP	0.83
SFA	MW-319D	43.85	19.56	NP	NP	17.39	44.1	2.17	NP	NP	2.17	19.61	43.7	-0.05	NP	NP	-0.05
SFA	MW-320S	10.95	7.05	NP	0.15 - 1.15	5.56	11.2	1.49	NP	1.15	1.49	5.99	11.2	1.06	NP	0.43	1.06
SFA	MW-320D	25.70	8.02	NP	trace - 14.52	7.46	25.7	0.56	NP	14.52	0.56	7.88	25.7	0.14	NP	trace	0.14
SFA	MW-321S	12.55	5.87	NP	NP	4.54	12.44	1.33	NP	NP	1.33	4.93	12.55	0.94	NP	NP	0.94
SFA	MW-321D	29.10	5.89	NP	NP	4.72	14.68	1.17	NP	NP	1.17	4.90	29.15	0.99	NP	NP	0.99
SFA	MW-334S	28.80	20.54	NP	NP	19.37	28.7	1.17	NP	NP	1.17	19.32	28.8	1.22	NP	NP	1.22
SFA	MW-334D	43.20	20.74	NP	NP	18.70	43	2.04	NP	NP	2.04	20.92	43.15	-0.18	NP	NP	-0.18

Notes
NFA = North Fill Area
FGPA = Former Gas Plant Area
FPPA = Former Power Plant Area
SFA = South Fill Area
NP - Indicates No Product observed. NM = Not Measured
Blanks indicate no measurement collected during the event.
Potentiometric elevations for wells exhibiting LNAPL include 0.85 correction factor.
1. Not found after June 16, 2010.
2. Buried during gasholders Nos. 7 and 8 decommissioning and demolition.
3. Found to have casing broken on December 3, 2010.
4. Well was found to be damaged in April 2014.
5. Well was installed in April 2014.
6. This table presents gauging results from 2017. The January 2011 SIDR, July 2011 RAE and previous Groundwater Monitoring Reports presents historical guaging results collected between 2009 and 2016.
7. This table presents top of PVC Elevations surveyed December 2017 using the NAVD 88 Datum.

TABLE 2A
SUMMARY OF GROUNDWATER MEASUREMENTS
Former Tidewater Facility
Pawtucket, Rhode Island

Site Area	Well ID	Measured Well Depth (Feet below Top of PVC)	Top of PVC Elevation (Feet)	Range of LNAPL Observed (feet)	Range of DNAPL Observed (feet)	July 2017 Groundwater Gauging Information						October 2017 Groundwater Gauging Information					
						Depth To Water (ft)	Total Well Depth (ft)	GW Elevation (feet) (NAVD 88)	LNAPL Thickness (feet)	DNAPL Thickness (feet)	Corrected Groundwater Elevation (feet)	Depth To Water (ft)	Total Well Depth (ft)	GW Elevation (feet) (NAVD 88)	LNAPL Thickness (feet)	DNAPL Thickness (feet)	Corrected Groundwater Elevation (feet)
NFA	MW-5	11.60	31.31	NP	NP	dry	12.05	dry	NP	NP	dry	dry	11.87	dry	NP	NP	dry
NFA	MW-7	27.45	31.14	NP	NP	18.03	27.94	13.11	NP	NP	13.11	21.03	27.42	10.11	NP	NP	10.11
NFA	MW-204	16.77	8.60	NP	NP	6.03	16.82	2.57	NP	NP	2.57	7.84	16.72	0.76	NP	NP	0.76
NFA	MW-205	15.00	11.47	NP	NP	1.62	15.10	9.85	NP	NP	9.85	2.53	14.93	8.94	NP	NP	8.94
NFA	MW-206	28.77	36.28	NP	NP	25.64	29.73	10.64	NP	NP	10.64	27.33	29.34	8.95	NP	NP	8.95
NFA	MW-310S	17.35	8.76	NP	NP	6.11	16.21	2.65	NP	NP	2.65	8.04	17	0.72	NP	NP	0.72
NFA	MW-310D	36.20	8.31	NP	NP	5.52	36.56	2.79	NP	NP	2.79	7.5	36.15	0.81	NP	NP	0.81
NFA	MW-311	22.00	9.35	NP	NP	6.81	21.93	2.54	NP	NP	2.54	8.78	21.89	0.57	NP	NP	0.57
FGPA	MW-201	15.00	13.01	NP	NP	8.27	15.20	4.74	NP	NP	4.74	11.67	15.12	1.34	NP	NP	1.34
FGPA	MW-202	13.80	13.61	NP	NP	2.23	14.01	11.38	NP	NP	11.38	4.88	13.8	8.73	NP	NP	8.73
FGPA	MW-203	14.80	9.45	NP	NP	8.10	14.73	1.35	NP	NP	1.35	8.63	14.71	0.82	NP	NP	0.82
FGPA	MW-207 (2)	11.75	13.70	NP	NP	Destroyed						Destroyed					
FGPA	MW-208	21.75	27.33	NP	NP	13.10	22.13	14.23	NP	NP	14.23	15.55	21.7	11.78	NP	NP	11.78
FGPA	MW-209	21.05	23.90	NP	NP	7.98	21.35	15.92	NP	NP	15.92	13.15	21.02	10.75	NP	NP	10.75
FGPA	MW-210	17.28	10.61	NP-2.06	NP	8.20	17.35	2.41	0.90	NP	3.18	9.9	17.29	0.71	NP	NP	0.71
FGPA	MW-3	17.00	10.59	NP-trace	NP	8.92	16.74	1.67	trace	NP	1.67	10.77	16.71	-0.18	NP	NP	-0.18
FGPA	MW-4	17.65	9.92	NP	trace	9.06	16.09	0.86	NP	trace	0.86	10.19	16	-0.27	NP	trace	-0.27
FGPA	MW-303	41.85	8.48	NP	1.45 - 5.74	7.18	42.14	1.30	NP	3.00	1.30	8.43	41.95	0.05	NP	1.45	0.05
FGPA	MW-312S	23.55	9.94	0.1 - 1.05	NP	9.15	23.45	0.79	0.80	NP	1.47	10.13	23.49	-0.19	0.93	NP	0.60
FGPA	MW-312D	31.90	9.82	NP	NP	7.31	32.00	2.51	NP	NP	2.51	9.9	31.93	-0.08	NP	NP	-0.08
FGPA	MW-313S	24.90	11.14	NP-trace	NP	8.83	24.70	2.31	NP	NP	2.31	11.26	24.7	-0.12	trace	NP	-0.12
FGPA	MW-313D	47.35	11.33	NP	NP	8.97	47.66	2.36	NP	NP	2.36	11.28	47.2	0.05	NP	NP	0.05
FGPA	MW-326S	26.60	11.90	NP-trace	NP	10.58	26.82	1.32	NP	NP	1.32	12.31	26	-0.41	trace	NP	-0.41
FGPA	MW-326D	45.05	11.26	NP	NP	9.60	45.50	1.66	NP	NP	1.66	11.49	45.05	-0.23	NP	NP	-0.23
FGPA	MW-333S	18.30	11.67	NP	NP	9.43	17.35	2.24	NP	NP	2.24	11.47	17.35	0.20	NP	NP	0.20
FGPA	MW-333D	45.20	11.56	NP	NP	9.28	45.34	2.28	NP	NP	2.28	10.97	44.9	0.59	NP	NP	0.59
FGPA	MW-335S	15.75	10.75	NP-0.01	NP	9.31	15.60	1.44	0.01	NP	1.45	9.9	15.67	0.85	trace	NP	0.85
FGPA	MW-335D	36.50	11.24	NP	NP	8.63	36.00	2.61	NP	NP	2.61	10.32	35.45	0.92	NP	NP	0.92
FGPA	MW-336	15.00	11.87	NP	NP	10.46	15.07	1.41	NP	NP	1.41	11.2	15.05	0.67	NP	NP	0.67
FGPA	MW-339S	12.35	14.52	NP	NP-trace	4.50	12.45	10.02	NP	NP	10.02	7.32	12.3	7.20	NP	NP	7.20
FGPA	MW-339D	20.95	14.80	NP	trace	4.50	21.45	10.30	NP	trace	10.30	7.23	21.2	7.57	NP	trace	7.57
FGPA	MW-341	30.10	18.70	NP	0.31 - 0.76	6.90	30.16	11.80	NP	0.61	11.80	9.8	29.96	8.90	NP	0.31	8.90
FPPA	M&E MW-1	15.05	8.39	NP	NP	7.50	17.30	0.89	NP	NP	0.89	8.12	15.2	0.27	NP	NP	0.27
FPPA	M&E MW-2	13.85	9.97	NP	NP	9.22	13.60	0.75	NP	NP	0.75	9.2	13.7	0.77	NP	NP	0.77
FPPA	M&E MW-4 (1)	7.81		NP	NP	Not Found						Not Found					
FPPA	M&E MW-5 (3)	16.88	8.14	NP-0.99	NP	7.74	14.55	0.40	NP	NP	0.40	8.25	14.45	-0.11	NP	NP	-0.11
FPPA	MW-6	19.03	12.73	NP	NP	11.60	19.27	1.13	NP	NP	1.13	11.85	18.68	0.88	NP	NP	0.88
FPPA	MW-101	16.00	10.15	NP	NP	9.33	16.02	0.82	NP	NP	0.82	9.54	15.92	0.61	NP	NP	0.61
FPPA	MW-102	26.80	18.86	NP	NP	17.70	27.03	1.16	NP	NP	1.16	18.14	26.49	0.72	NP	NP	0.72
FPPA	MW-103	16.90	10.56	NP	NP	9.48	16.85	1.08	NP	NP	1.08	10	14.88	0.56	NP	NP	0.56
FPPA	MW-104	14.90	10.72	NP	NP	9.82	15.20	0.90	NP	NP	0.90	9.43	16.75	1.29	NP	NP	1.29
FPPA	MW-105	27.55	21.35	NP	NP	19.83	28.12	1.52	NP	NP	1.52	20.35	27.5	1.00	NP	NP	1.00
FPPA	MW-109	19.30	13.33	NP	NP	10.60	19.67	2.73	NP	NP	2.73	11.95	19.3	1.38	NP	NP	1.38
FPPA	MW-314S	24.50	9.58	NP	NP	8.20	24.73	1.38	NP	NP	1.38	9.14	24.39	0.44	NP	NP	0.44
FPPA	MW-314D	43.40	9.59	NP	NP	8.25	43.95	1.34	NP	NP	1.34	9.3	43.58	0.29	NP	NP	0.29
FPPA	MW-315S	26.40	10.15	NP	NP	8.72	25.63	1.43	NP	NP	1.43	9.75	25.33	0.40	NP	NP	0.40
FPPA	MW-315D	41.70	9.82	NP	NP	8.50	42.25	1.32	NP	NP	1.32	9.5	41.6	0.32	NP	NP	0.32
FPPA	MW-316S	22.30	23.81	NP	NP	21.05	22.63	2.76	NP	NP	2.76	22.03	22.62	1.78	NP	NP	1.78
FPPA	MW-316D	31.55	23.97	NP	NP	20.98	31.33	2.99	NP	NP	2.99	22	31.6	1.97	NP	NP	1.97
FPPA	MW-317S	27.40	24.65	NP	NP	23.10	27.55	1.55	NP	NP	1.55	23.64	27.35	1.01	NP	NP	1.01
FPPA	MW-317D	36.20	24.72	NP	NP	21.14	36.65	3.58	NP	NP	3.58	22.2	36.35	2.52	NP	NP	2.52
FPPA	MW-337	20.00	12.75	NP	NP	11.54	20.24	1.21	NP	NP	1.21	11.95	19.92	0.80	NP	NP	0.80

TABLE 2A
SUMMARY OF GROUNDWATER MEASUREMENTS
Former Tidewater Facility
Pawtucket, Rhode Island

Site Area	Well ID	Measured Well Depth (Feet below Top of PVC)	Top of PVC Elevation (Feet)	Range of LNAPL Observed (feet)	Range of DNAPL Observed (feet)	July 2017 Groundwater Gauging Information						October 2017 Groundwater Gauging Information					
						Depth To Water (ft)	Total Well Depth (ft)	GW Elevation (feet) (NAVD 88)	LNAPL Thickness (feet)	DNAPL Thickness (feet)	Corrected Groundwater Elevation (feet)	Depth To Water (ft)	Total Well Depth (ft)	GW Elevation (feet) (NAVD 88)	LNAPL Thickness (feet)	DNAPL Thickness (feet)	Corrected Groundwater Elevation (feet)
FPPA	MW-338S	18.45	13.18	NP	NP	11.91	18.38	1.27	NP	NP	1.27	12.4	18.42	0.78	NP	NP	0.78
FPPA	MW-338D	39.65	12.73	NP	NP	10.69	40.10	2.04	NP	NP	2.04	11.64	39.83	1.09	NP	NP	1.09
FPPA	MW-400 (5)	24.30	28.85	NP	NP	16.15	24.65	12.70	NP	NP	12.70	18.3	24.18	10.55	NP	NP	10.55
FPPA	MW-401 (5)	19.30	24.18	NP	NP	11.60	19.45	12.58	NP	NP	12.58	13.74	19.2	10.44	NP	NP	10.44
SFA	MW-1	23.20	18.88	NP	trace	17.35	23.20	1.53	NP	trace	1.53	17.84	22.64	1.04	NP	trace	1.04
SFA	MW-107	27.35	21.08	NP	NP	19.52	26.65	1.56	NP	NP	1.56	20.04	27.73	1.04	NP	NP	1.04
SFA	MW-318S	27.00	18.14	NP	NP	16.72	27.09	1.42	NP	NP	1.42	17.09	26.94	1.05	NP	NP	1.05
SFA	MW-318D (4)	43.60	17.80	NP	NP	Well Clogged with roots - Unable to Gauge						Well Clogged with roots - Unable to Gauge					
SFA	MW-319S	27.10	19.12	NP	NP	17.68	27.36	1.44	NP	NP	1.44	18.05	27.21	1.07	NP	NP	1.07
SFA	MW-319D	43.85	19.56	NP	NP	17.18	44.25	2.38	NP	NP	2.38	18.14	43.62	1.42	NP	NP	1.42
SFA	MW-320S	10.95	7.05	NP	0.15 - 1.15	5.72	11.20	1.33	NP	0.25	1.33	6.08	11.20	0.97	NP	0.15	0.97
SFA	MW-320D	25.70	8.02	NP	trace - 14.52	7.55	25.70	0.47	NP	14.00	0.47	8	25.70	0.02	NP	14.2	0.02
SFA	MW-321S	12.55	5.87	NP	NP	4.45	11.35	1.42	NP	NP	1.42	5	12.47	0.87	NP	NP	0.87
SFA	MW-321D	29.10	5.89	NP	NP	4.78	29.25	1.11	NP	NP	1.11	5.39	14.68	0.50	NP	NP	0.50
SFA	MW-334S	28.80	20.54	NP	NP	19.10	29.12	1.44	NP	NP	1.44	19.6	28.78	0.94	NP	NP	0.94
SFA	MW-334D	43.20	20.74	NP	NP	17.18	44.25	3.56	NP	NP	3.56	19.3	41.9	1.44	NP	NP	1.44

Notes
NFA = North Fill Area
FGPA = Former Gas Plant Area
FPPA = Former Power Plant Area
SFA = South Fill Area
NP - Indicates No Product observed. NM = Not Measured
Blanks indicate no measurement collected during the event.
Potentiometric elevations for wells exhibiting LNAPL include 0.85 correction factor.
1. Not found after June 16, 2010.
2. Buried during gasholders Nos. 7 and 8 decommissioning and demolition.
3. Found to have casing broken on December 3, 2010.
4. Well was found to be damaged in April 2014.
5. Well was installed in April 2014.
6. This table presents gauging results from 2017. The January 2011 SIDR, July 2011 RAE and previous Groundwater Monitoring Reports presents historical guaging results collected between 2009 and 2016.
7. This table presents top of PVC Elevations surveyed December 2017 using the NAVD 88 Datum.

TABLE 2B
SUMMARY OF NAPL MEASUREMENTS
Former Tidewater Facility
Pawtucket, Rhode Island

Site Area	Well ID	Measured Well Depth (Feet below Top of PVC)	Top of PVC Elevation (Feet)	Range of LNAPL Observed (feet)	Range of DNAPL Observed (feet)	January 2017					April 2017				
						Depth to Water (feet)	Depth to LNAPL (feet)	LNAPL Thickness (feet)	Depth to DNAPL (feet)	DNAPL Thickness (feet)	Depth to Water (feet)	Depth to LNAPL (feet)	LNAPL Thickness (feet)	Depth to DNAPL (feet)	DNAPL Thickness (feet)
NFA	MW-5	11.60	31.31	NP	NP	5.44	-	NP	-	NP	5.03	-	NP	-	NP
NFA	MW-7	27.45	31.14	NP	NP	20.67	-	NP	-	NP	17.91	-	NP	-	NP
NFA	MW-204	16.77	8.60	NP	NP	6.11	-	NP	-	NP	8.76	-	NP	-	NP
NFA	MW-205	15.00	11.47	NP	NP	2.20	-	NP	-	NP	1.45	-	NP	-	NP
NFA	MW-206	28.77	36.28	NP	NP	27.00	-	NP	-	NP	25.56	-	NP	-	NP
NFA	MW-310S	17.35	8.76	NP	NP	5.95	-	NP	-	NP	8.84	-	NP	-	NP
NFA	MW-310D	36.20	8.31	NP	NP	5.54	-	NP	-	NP	6.47	-	NP	-	NP
NFA	MW-311	22.00	9.35	NP	NP	6.62	-	NP	-	NP	9.56	-	NP	-	NP
FGPA	MW-201	15.00	13.01	NP	NP	7.05	-	NP	-	NP	8.63	-	NP	-	NP
FGPA	MW-202	13.80	13.61	NP	NP	3.49	-	NP	-	NP	2.57	-	NP	-	NP
FGPA	MW-203	14.80	9.45	NP	NP	5.93	-	NP	-	NP	8.09	-	NP	-	NP
FGPA	MW-207 (2)	11.75	13.70	NP	NP	Destroyed					Destroyed				
FGPA	MW-208	21.75	27.33	NP	NP	16.26	-	NP	-	NP	13.30	-	NP	-	NP
FGPA	MW-209	21.05	23.90	NP	NP	12.92	-	NP	-	NP	10.38	-	NP	-	NP
FGPA	MW-210	17.28	10.61	NP-2.06	NP	9.70	7.75	1.95	-	NP	10.20	8.14	2.06	-	NP
FGPA	MW-3	17.00	10.59	NP-trace	NP	9.40	trace	trace	-	NP	9.04	-	NP	-	NP
FGPA	MW-4	17.65	9.92	NP	trace	10.65	-	NP	trace	trace	11.24	-	NP	trace	trace
FGPA	MW-303	41.85	8.48	NP	1.45 - 5.74	9.03	-	NP	36.63	5.25	9.44	-	NP	36.31	5.74
FGPA	MW-312S	23.55	9.94	0.1 - 1.05	NP	9.80	8.75	1.05	-	NP	9.49	9.39	0.1	-	NP
FGPA	MW-312D	31.90	9.82	NP	NP	7.31	-	NP	-	NP	10.43	-	NP	-	NP
FGPA	MW-313S	24.90	11.14	NP-trace	NP	9.71	trace	trace	-	NP	9.90	trace	trace	-	NP
FGPA	MW-313D	47.35	11.33	NP	NP	8.89	-	NP	-	NP	11.69	-	NP	-	NP
FGPA	MW-326S	26.60	11.90	NP-trace	NP	9.90	-	NP	-	NP	12.73	trace	trace	-	NP
FGPA	MW-326D	45.05	11.26	NP	NP	9.10	-	NP	-	NP	11.95	-	NP	-	NP
FGPA	MW-333S	18.30	11.67	NP	NP	9.21	-	NP	-	NP	12.08	-	NP	-	NP
FGPA	MW-333D	45.20	11.56	NP	NP	9.54	-	NP	-	NP	12.16	-	NP	-	NP
FGPA	MW-335S	15.75	10.75	NP-0.01	NP	7.32	-	NP	-	NP	9.19	-	NP	-	NP
FGPA	MW-335D	36.50	11.24	NP	NP	8.62	-	NP	-	NP	11.38	-	NP	-	NP
FGPA	MW-336	15.00	11.87	NP	NP	9.14	-	NP	-	NP	10.74	-	NP	-	NP
FGPA	MW-339S	12.35	14.52	NP	NP-trace	5.79	-	NP	trace	trace	5.15	-	NP	-	NP
FGPA	MW-339D	20.95	14.80	NP	trace	5.98	-	NP	trace	trace	8.14	-	NP	trace	trace
FGPA	MW-341	30.10	18.70	NP	0.31 - 0.76	9.81	-	NP	29.25	0.76	6.93	-	NP	30.25	0.35

TABLE 2B
SUMMARY OF NAPL MEASUREMENTS
Former Tidewater Facility
Pawtucket, Rhode Island

Site Area	Well ID	Measured Well Depth (Feet below Top of PVC)	Top of PVC Elevation (Feet)	Range of LNAPL Observed (feet)	Range of DNAPL Observed (feet)	January 2017					April 2017				
						Depth to Water (feet)	Depth to LNAPL (feet)	LNAPL Thickness (feet)	Depth to DNAPL (feet)	DNAPL Thickness (feet)	Depth to Water (feet)	Depth to LNAPL (feet)	LNAPL Thickness (feet)	Depth to DNAPL (feet)	DNAPL Thickness (feet)
FPPA	M&E MW-1	15.05	8.39	NP	NP	7.10	-	NP	-	NP	7.36	-	NP	-	NP
FPPA	M&E MW-2	13.85	9.97	NP	NP	8.70	-	NP	-	NP	10.58	-	NP	-	NP
FPPA	M&E MW-4 (1)	7.81		NP	NP	Not Found					Not Found				
FPPA	M&E MW-5 (3)	16.88	8.14	NP-0.99	NP	7.09	6.41	0.68	-	NP	8.85	7.86	0.99	-	NP
FPPA	MW-6	19.03	12.73	NP	NP	11.56	-	NP	-	NP	11.88	-	NP	-	NP
FPPA	MW-101	16.00	10.15	NP	NP	9.26	-	NP	-	NP	9.90	-	NP	-	NP
FPPA	MW-102	26.80	18.86	NP	NP	17.66	-	NP	-	NP	18.26	-	NP	-	NP
FPPA	MW-103	16.90	10.56	NP	NP	9.52	-	NP	-	NP	9.98	-	NP	-	NP
FPPA	MW-104	14.90	10.72	NP	NP	9.91	-	NP	-	NP	9.96	-	NP	-	NP
FPPA	MW-105	27.55	21.35	NP	NP	20.09	-	NP	-	NP	20.04	-	NP	-	NP
FPPA	MW-109	19.30	13.33	NP	NP	10.95	-	NP	-	NP	11.51	-	NP	-	NP
FPPA	MW-314S	24.50	9.58	NP	NP	8.74	-	NP	-	NP	9.98	-	NP	-	NP
FPPA	MW-314D	43.40	9.59	NP	NP	8.90	-	NP	-	NP	10.20	-	NP	-	NP
FPPA	MW-315S	26.40	10.15	NP	NP	9.06	-	NP	-	NP	10.84	-	NP	-	NP
FPPA	MW-315D	41.70	9.82	NP	NP	9.00	-	NP	-	NP	10.84	-	NP	-	NP
FPPA	MW-316S	22.30	23.81	NP	NP	22.04	-	NP	-	NP	21.14	-	NP	-	NP
FPPA	MW-316D	31.55	23.97	NP	NP	22.06	-	NP	-	NP	21.39	-	NP	-	NP
FPPA	MW-317S	27.40	24.65	NP	NP	23.40	-	NP	-	NP	23.28	-	NP	-	NP
FPPA	MW-317D	36.20	24.72	NP	NP	22.11	-	NP	-	NP	22.06	-	NP	-	NP
FPPA	MW-337	20.00	12.75	NP	NP	11.55	-	NP	-	NP	11.86	-	NP	-	NP
FPPA	MW-338S	18.45	13.18	NP	NP	12.02	-	NP	-	NP	12.04	-	NP	-	NP
FPPA	MW-338D	39.65	12.73	NP	NP	11.02	-	NP	-	NP	12.99	-	NP	-	NP
FPPA	MW-400 (5)	24.30	28.85	NP	NP	19.36	-	NP	-	NP	17.02	-	NP	-	NP
FPPA	MW-401 (5)	19.30	24.18	NP	NP	14.71	-	NP	-	NP	12.40	-	NP	-	NP
SFA	MW-1	23.20	18.88	NP	trace	17.55	-	NP	trace	trace	17.69	-	NP	trace	trace
SFA	MW-107	27.35	21.08	NP	NP	19.81	-	NP	-	NP	19.73	-	NP	-	NP
SFA	MW-318S	27.00	18.14	NP	NP	15.90	-	NP	-	NP	17.22	-	NP	-	NP
SFA	MW-318D (4)	43.60	17.80	NP	NP	Well Clogged with roots- Unable to Gauge					Well Clogged with roots- Unable to Gauge				
SFA	MW-319S	27.10	19.12	NP	NP	17.80	-	NP	-	NP	18.29	-	NP	-	NP
SFA	MW-319D	43.85	19.56	NP	NP	17.39	-	NP	-	NP	19.61	-	NP	-	NP
SFA	MW-320S	10.95	7.05	NP	0.15 - 1.15	5.56	-	NP	10.05	1.15	5.99	-	NP	10.77	0.43
SFA	MW-320D	25.70	8.02	NP	trace - 14.52	7.46	-	NP	11.18	14.52	7.88	-	NP	trace	trace
SFA	MW-321S	12.55	5.87	NP	NP	4.54	-	NP	-	NP	4.93	-	NP	-	NP
SFA	MW-321D	29.10	5.89	NP	NP	4.72	-	NP	-	NP	4.90	-	NP	-	NP
SFA	MW-334S	28.80	20.54	NP	NP	19.37	-	NP	-	NP	19.32	-	NP	-	NP
SFA	MW-334D	43.20	20.74	NP	NP	18.70	-	NP	-	NP	20.92	-	NP	-	NP

Notes

NFA = North Fill Area
FGPA = Former Gas Plant Area
FPPA = Former Power Plant Area
SFA = South Fill Area

NP - Indicates No Product observed. NM = Not Measured

Blanks indicate no measurement collected during the event.

1. Not found after June 16, 2010.
2. Buried during gasholders Nos. 7 and 8 decommissioning and demolition.
3. Found to have casing broken on December 3, 2010.
4. Well was found to be damaged in April 2014.
5. Well was installed in April 2014.
6. This table presents gauging results from 2017. The January 2011 SIDR, July 2011 RAE and previous Groundwater Monitoring Reports presents historical guaging results collected between 2009 and 2016.
7. This table presents top of PVC Elevations surveyed December 2017 using the NAVD 88 Datum

TABLE 2B
SUMMARY OF NAPL MEASUREMENTS
Former Tidewater Facility
Pawtucket, Rhode Island

Site Area	Well ID	Measured Well Depth (Feet below Top of PVC)	Top of PVC Elevation (Feet)	Range of LNAPL Observed (feet)	Range of DNAPL Observed (feet)	July 2017					October 2017				
						Depth to Water (feet)	Depth to LNAPL (feet)	LNAPL Thickness (feet)	Depth to DNAPL (feet)	DNAPL Thickness (feet)	Depth to Water (feet)	Depth to LNAPL (feet)	LNAPL Thickness (feet)	Depth to DNAPL (feet)	DNAPL Thickness (feet)
NFA	MW-5	11.60	31.31	NP	NP	dry	-	NP	-	NP	dry	-	NP	-	NP
NFA	MW-7	27.45	31.14	NP	NP	18.03	-	NP	-	NP	21.03	-	NP	-	NP
NFA	MW-204	16.77	8.60	NP	NP	6.03	-	NP	-	NP	7.84	-	NP	-	NP
NFA	MW-205	15.00	11.47	NP	NP	1.62	-	NP	-	NP	2.53	-	NP	-	NP
NFA	MW-206	28.77	36.28	NP	NP	25.64	-	NP	-	NP	27.33	-	NP	-	NP
NFA	MW-310S	17.35	8.76	NP	NP	6.11	-	NP	-	NP	8.04	-	NP	-	NP
NFA	MW-310D	36.20	8.31	NP	NP	5.52	-	NP	-	NP	7.5	-	NP	-	NP
NFA	MW-311	22.00	9.35	NP	NP	6.81	-	NP	-	NP	8.78	-	NP	-	NP
FGPA	MW-201	15.00	13.01	NP	NP	8.27	-	NP	-	NP	11.67	-	NP	-	NP
FGPA	MW-202	13.80	13.61	NP	NP	2.23	-	NP	-	NP	4.88	-	NP	-	NP
FGPA	MW-203	14.80	9.45	NP	NP	8.10	-	NP	-	NP	8.63	-	NP	-	NP
FGPA	MW-207 (2)	11.75	13.70	NP	NP	Destroyed					Destroyed				
FGPA	MW-208	21.75	27.33	NP	NP	13.10	-	NP	-	NP	15.55	-	NP	-	NP
FGPA	MW-209	21.05	23.90	NP	NP	7.98	-	NP	-	NP	13.15	-	NP	-	NP
FGPA	MW-210	17.28	10.61	NP-2.06	NP	8.20	7.3	0.9	-	NP	9.9	-	NP	-	NP
FGPA	MW-3	17.00	10.59	NP-trace	NP	8.92	trace	trace	-	NP	10.77	-	NP	-	NP
FGPA	MW-4	17.65	9.92	NP	trace	9.06	-	NP	trace	trace	10.19	-	NP	trace	trace
FGPA	MW-303	41.85	8.48	NP	1.45 - 5.74	7.18	-	NP	39.14	3	8.43	-	NP	40.5	1.45
FGPA	MW-312S	23.55	9.94	0.1 - 1.05	NP	9.15	8.35	0.8	-	NP	10.13	9.2	0.93	-	NP
FGPA	MW-312D	31.90	9.82	NP	NP	7.31	-	NP	-	NP	9.9	-	NP	-	NP
FGPA	MW-313S	24.90	11.14	NP-trace	NP	8.83	-	NP	-	NP	11.26	trace	trace	-	NP
FGPA	MW-313D	47.35	11.33	NP	NP	8.97	-	NP	-	NP	11.28	-	NP	-	NP
FGPA	MW-326S	26.60	11.90	NP-trace	NP	10.58	-	NP	-	NP	12.31	trace	trace	-	NP
FGPA	MW-326D	45.05	11.26	NP	NP	9.60	-	NP	-	NP	11.49	-	NP	-	NP
FGPA	MW-333S	18.30	11.67	NP	NP	9.43	-	NP	-	NP	11.47	-	NP	-	NP
FGPA	MW-333D	45.20	11.56	NP	NP	9.28	-	NP	-	NP	10.97	-	NP	-	NP
FGPA	MW-335S	15.75	10.75	NP-0.01	NP	9.31	9.3	0.01	-	NP	9.9	trace	trace	-	NP
FGPA	MW-335D	36.50	11.24	NP	NP	8.63	-	NP	-	NP	10.32	-	NP	-	NP
FGPA	MW-336	15.00	11.87	NP	NP	10.46	-	NP	-	NP	11.2	-	NP	-	NP
FGPA	MW-339S	12.35	14.52	NP	NP-trace	4.50	-	NP	-	NP	7.32	-	NP	-	NP
FGPA	MW-339D	20.95	14.80	NP	trace	4.50	-	NP	trace	trace	7.23	-	NP	trace	trace
FGPA	MW-341	30.10	18.70	NP	0.31 - 0.76	6.90	-	NP	29.55	0.61	9.8	-	NP	29.65	0.31

TABLE 2B
SUMMARY OF NAPL MEASUREMENTS
Former Tidewater Facility
Pawtucket, Rhode Island

Site Area	Well ID	Measured Well Depth (Feet below Top of PVC)	Top of PVC Elevation (Feet)	Range of LNAPL Observed (feet)	Range of DNAPL Observed (feet)	July 2017					October 2017				
						Depth to Water (feet)	Depth to LNAPL (feet)	LNAPL Thickness (feet)	Depth to DNAPL (feet)	DNAPL Thickness (feet)	Depth to Water (feet)	Depth to LNAPL (feet)	LNAPL Thickness (feet)	Depth to DNAPL (feet)	DNAPL Thickness (feet)
FPPA	M&E MW-1	15.05	8.39	NP	NP	7.50	-	NP	-	NP	8.12	-	NP	-	NP
FPPA	M&E MW-2	13.85	9.97	NP	NP	9.22	-	NP	-	NP	9.2	-	NP	-	NP
FPPA	M&E MW-4 (1)	7.81		NP	NP	Not Found					Not Found				
FPPA	M&E MW-5 (3)	16.88	8.14	NP-0.99	NP	7.74	-	NP	-	NP	8.25	-	NP	-	NP
FPPA	MW-6	19.03	12.73	NP	NP	11.60	-	NP	-	NP	11.85	-	NP	-	NP
FPPA	MW-101	16.00	10.15	NP	NP	9.33	-	NP	-	NP	9.54	-	NP	-	NP
FPPA	MW-102	26.80	18.86	NP	NP	17.70	-	NP	-	NP	18.14	-	NP	-	NP
FPPA	MW-103	16.90	10.56	NP	NP	9.48	-	NP	-	NP	10	-	NP	-	NP
FPPA	MW-104	14.90	10.72	NP	NP	9.82	-	NP	-	NP	9.43	-	NP	-	NP
FPPA	MW-105	27.55	21.35	NP	NP	19.83	-	NP	-	NP	20.35	-	NP	-	NP
FPPA	MW-109	19.30	13.33	NP	NP	10.60	-	NP	-	NP	11.95	-	NP	-	NP
FPPA	MW-314S	24.50	9.58	NP	NP	8.20	-	NP	-	NP	9.14	-	NP	-	NP
FPPA	MW-314D	43.40	9.59	NP	NP	8.25	-	NP	-	NP	9.3	-	NP	-	NP
FPPA	MW-315S	26.40	10.15	NP	NP	8.72	-	NP	-	NP	9.75	-	NP	-	NP
FPPA	MW-315D	41.70	9.82	NP	NP	8.50	-	NP	-	NP	9.5	-	NP	-	NP
FPPA	MW-316S	22.30	23.81	NP	NP	21.05	-	NP	-	NP	22.03	-	NP	-	NP
FPPA	MW-316D	31.55	23.97	NP	NP	20.98	-	NP	-	NP	22	-	NP	-	NP
FPPA	MW-317S	27.40	24.65	NP	NP	23.10	-	NP	-	NP	23.64	-	NP	-	NP
FPPA	MW-317D	36.20	24.72	NP	NP	21.14	-	NP	-	NP	22.2	-	NP	-	NP
FPPA	MW-337	20.00	12.75	NP	NP	11.54	-	NP	-	NP	11.95	-	NP	-	NP
FPPA	MW-338S	18.45	13.18	NP	NP	11.91	-	NP	-	NP	12.4	-	NP	-	NP
FPPA	MW-338D	39.65	12.73	NP	NP	10.69	-	NP	-	NP	11.64	-	NP	-	NP
FPPA	MW-400 (5)	24.30	28.85	NP	NP	16.15	-	NP	-	NP	18.3	-	NP	-	NP
FPPA	MW-401 (5)	19.30	24.18	NP	NP	11.60	-	NP	-	NP	13.74	-	NP	-	NP
SFA	MW-1	23.20	18.88	NP	trace	17.35	-	NP	trace	trace	17.84	-	NP	trace	trace
SFA	MW-107	27.35	21.08	NP	NP	19.52	-	NP	-	NP	20.04	-	NP	-	NP
SFA	MW-318S	27.00	18.14	NP	NP	16.72	-	NP	-	NP	17.09	-	NP	-	NP
SFA	MW-318D (4)	43.60	17.80	NP	NP	Well Clogged with roots- Unable to Gauge					Well Clogged with roots- Unable to Gauge				
SFA	MW-319S	27.10	19.12	NP	NP	17.68	-	NP	-	NP	18.05	-	NP	-	NP
SFA	MW-319D	43.85	19.56	NP	NP	17.18	-	NP	-	NP	18.14	-	NP	-	NP
SFA	MW-320S	10.95	7.05	NP	0.15 - 1.15	5.72	-	NP	10.95	0.25	6.08	-	NP	11.05	0.15
SFA	MW-320D	25.70	8.02	NP	trace - 14.52	7.55	-	NP	11.7	14	8	-	NP	11.5	14.2
SFA	MW-321S	12.55	5.87	NP	NP	4.45	-	NP	-	NP	5	-	NP	-	NP
SFA	MW-321D	29.10	5.89	NP	NP	4.78	-	NP	-	NP	5.39	-	NP	-	NP
SFA	MW-334S	28.80	20.54	NP	NP	19.10	-	NP	-	NP	19.6	-	NP	-	NP
SFA	MW-334D	43.20	20.74	NP	NP	17.18	-	NP	-	NP	19.3	-	NP	-	NP

Notes

NFA = North Fill Area
FGPA = Former Gas Plant Area
FPPA = Former Power Plant Area
SFA = South Fill Area

NP - Indicates No Product observed. NM = Not Measured

Blanks indicate no measurement collected during the event.

1. Not found after June 16, 2010.
2. Buried during gasholders Nos. 7 and 8 decommissioning and demolition.
3. Found to have casing broken on December 3, 2010.
4. Well was found to be damaged in April 2014.
5. Well was installed in April 2014.
6. This table presents gauging results from 2017. The January 2011 SIDR, July 2011 RAE and previous Groundwater Monitoring Reports presents historical guaging results collected between 2009 and 2016.
7. This table presents top of PVC Elevations surveyed December 2017 using the NAVD 88 Datum

TABLE 2C
LIGHT NON-AQUEOUS PHASE LIQUID (LNAPL) WELL GAUGING DATA

Former Tidewater Facility
Pawtucket, Rhode Island

	LNAPL Thickness (feet)																
Date	4/23/2009	6/18/2009	5/17/2010	5/20/2010	6/16/2010	6/23/2010	11/2/2010	11/19/2010	12/3/2010	1/24/2011	2/17/2011	3/29/2011	4/26/2011	5/4/2011	6/3/2011	6/29/2011	7/26/2011
	Former Gas Plant Area																
MW-3 (1) (3)		0.02			trace		trace	**0.05**	trace	**5.57**	**0.80**	**1.71**	**1.64**	**0.27**	**0.80**	**0.03**	**0.15**
MW-4 (2) (3)		NP			NP		NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP
MW-210 (3)		0.05			**0.05**		NP		NP	**0.23**	**0.92**	**2.54**	**2.48**	**2.02**	**1.00**	**0.33**	**0.13**
MW-312S				NP	NP		**0.45**	**0.13**	trace	trace	trace	trace	**0.20**	**0.28**	**0.01**	**0.14**	**0.25**
MW-313S			0.10		trace		NP	NP	NP	**4.52**	**0.22**	**0.04**	**0.05**	**0.02**	trace	**0.01**	**0.02**
MW-326S					NP		trace	**0.30**	trace	NP	trace	trace	**0.03**	**0.01**	trace	**0.01**	**0.02**
MW-335S	NP	NP	NP	NP	NP		NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP
	Former Power Plant Area																
M&E MW-5 (5)	1.35	0.44			NP		**0.04**	**1.17**				**3.24**	**3.16**	**1.12**	**1.20**	**0.40**	**0.13**
MW-102 (4) (6)	NP	NP			NP		NP		NP	NP			NP				NP
MW-103 (4)	NP	NP			NP		**0.01**	NP	trace	**0.31**	trace	trace	**0.02**	**0.18**	**0.09**	**0.01**	**0.02**
MW-109 (4)	NP	NP			NP		NP		NP		NP		NP				NP
MW-314S			0.01	NP	NP		NP	NP	NP	NP		NP	NP	NP	NP	NP	NP

Notes: Blank cells indicate well was not gauged during the event.
trace - trace amounts of NAPL were found on the probe
NP - No Product was detected
Well is Located in Former Gas Plant Area
Well is Located in Former Power Plant Area
Well is Located in South Fill Area

(1) Well was guaged by AES as part of their 1996 Site Investigation activities. Sheens were noted.
(2) Well was gauged by AES as part of their 1996 Site Investigation activities. Floating product was noted.
(3) Well was gauged by VHB as part of their 2006 Site Investigation activities. Inconsistent, but measurable LNAPL was present.
(4) Well was gauged by VHB as part of their 2006 Site Investigation activities. Sheens were noted.
(5) Casing was found broken on December 3, 2010. Repairs were made in March 2011.
(6) Well was not located on January 29, 2013 due to snow.

TABLE 2C
LIGHT NON-AQUEOUS PHASE LIQUID (LNAPL) WELL GAUGING DATA

Former Tidewater Facility
Pawtucket, Rhode Island

	LNAPL Thickness (feet)																
Date	10/18/2011	1/19/2012	4/18/2012	7/10/2012	10/15/2012	1/29/2013	4/26/2013	8/6/2013	10/29/2013	1/27/2014	4/24/2014	7/30/2014	10/22/2014	1/22/2015	4/27/2015	7/29/2015	11/11/2015
	Former Gas Plant Area																
MW-3 (1) (3)	**0.05**	**0.02**	**0.03**	**0.02**	trace	NP	NP	**0.05**	trace	NP	**0.01**	**0.01**	**0.01**	trace	trace	**0.03**	trace
MW-4 (2) (3)	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP
MW-210 (3)	**1.03**	**2.25**	NP	**0.11**	NP	**0.04**	**1.44**	**0.08**	trace	**0.8**	**2.43**	**0.01**	NP	**0.02**	**2.55**	**0.01**	trace
MW-312S	**0.48**	**0.12**	**0.46**	**1.1**	**0.01**	**0.04**	**0.76**	**0.93**	**0.07**	**0.03**	**0.24**	**1.38**	**0.39**	**0.38**	**0.43**	**1.2**	**0.4**
MW-313S	**0.09**	NP	NP	trace	NP	NP	NP	trace	NP	trace	**0.05**	**0.01**	NP	trace	**0.06**	**0.03**	trace
MW-326S	**0.03**	NP	NP	NP	NP	NP	NP	NP	trace	trace	**0.02**	NP	NP	NP	NP	NP	trace
MW-335S	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP
	Former Power Plant Area																
M&E MW-5 (5)	**0.05**	**0.08**	**0.04**	**0.05**	**0.29**	**0.02**	**0.14**	**0.01**	**0.33**	trace	**1.97**	**0.05**	**0.04**	**0.41**	**0.2**	**0.03**	NP
MW-102 (4) (6)	NP	NP	NP	NP	NP		NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP
MW-103 (4)	trace	**0.02**	trace	trace	trace	trace	trace	trace	trace	NP	NP	NP	trace	NP	NP	NP	NP
MW-109 (4)	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP
MW-314S	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP

Notes: Blank cells indicate well was not gauged during the event.
trace - trace amounts of NAPL were found on the probe
NP - No Product was detected
Well is Located in Former Gas Plant Area
Well is Located in Former Power Plant Area
Well is Located in South Fill Area

(1) Well was guaged by AES as part of their 1996 Site Investigation activities. Sheens were noted.
(2) Well was gauged by AES as part of their 1996 Site Investigation activities. Floating product was noted.
(3) Well was gauged by VHB as part of their 2006 Site Investigation activities. Inconsistent, but measurable LNAPL was present.
(4) Well was gauged by VHB as part of their 2006 Site Investigation activities. Sheens were noted.
(5) Casing was found broken on December 3, 2010. Repairs were made in March 2011.
(6) Well was not located on January 29, 2013 due to snow.

TABLE 2C
LIGHT NON-AQUEOUS PHASE LIQUID (LNAPL) WELL GAUGING DATA

Former Tidewater Facility
Pawtucket, Rhode Island

	LNAPL Thickness (feet)							
Date	1/21/2016	4/30/2016	7/20/2016	11/1/2016	1/27/2017	4/21/2017	7/12/2017	10/3/2017
	Former Gas Plant Area							
MW-3 (1) (3)	trace	**0.01**	NP	NP	trace	NP	trace	NP
MW-4 (2) (3)	NP	NP	NP	NP	NP	NP	NP	NP
MW-210 (3)	**1.83**	**1.93**	trace	NP	**1.95**	**2.06**	**0.9**	NP
MW-312S	**1.65**	**3.06**	**1.39**	NP	**1.05**	**0.1**	**0.8**	**0.93**
MW-313S	trace	**0.06**	NP	trace	trace	trace	NP	trace
MW-326S	trace	NP	NP	trace	NP	trace	NP	trace
MW-335S	NP	NP	NP	NP	NP	NP	**0.01**	trace
M&E MW-5 (5)	**0.02**	**2.95**	NP	trace	**0.68**	**0.99**	NP	NP
MW-102 (4) (6)	NP	NP	NP	NP	NP	NP	NP	NP
MW-103 (4)	NP	NP	NP	NP	NP	NP	NP	NP
MW-109 (4)	NP	NP	NP	NP	NP	NP	NP	NP
MW-314S	NP	NP	NP	NP	NP	NP	NP	NP

Notes: Blank cells indicate well was not gauged during the event.
trace - trace amounts of NAPL were found on the probe
NP - No Product was detected
Well is Located in Former Gas Plant Area
Well is Located in Former Power Plant Area
Well is Located in South Fill Area

(1) Well was guaged by AES as part of their 1996 Site Investigation activities. Sheens were noted.
(2) Well was gauged by AES as part of their 1996 Site Investigation activities. Floating product was noted.
(3) Well was gauged by VHB as part of their 2006 Site Investigation activities. Inconsistent, but measurable LNAPL was present.
(4) Well was gauged by VHB as part of their 2006 Site Investigation activities. Sheens were noted.
(5) Casing was found broken on December 3, 2010. Repairs were made in March 2011.
(6) Well was not located on January 29, 2013 due to snow.

TABLE 2D
DENSE NON-AQUEOUS PHASE LIQUID (DNAPL) WELL GAUGING DATA

Former Tidewater Facility
Pawtucket, Rhode Island

	DNAPL Thickness (feet)																
Date	4/23/2009	6/18/2009	5/17/2010	5/20/2010	6/16/2010	11/2/2010	11/19/2010	12/3/2010	1/24/2011	2/17/2011	3/29/2011	4/26/2011	5/4/2011	6/3/2011	6/29/2011	7/26/2011	10/18/2011
	Former Gas Plant Area																
MW-4 (1) (4)		NP			trace	trace	trace	trace	**1.15**	trace	trace	trace	trace	trace	trace	trace	trace
MW-303			NP		trace	**2.53**	**0.55**	**0.50**	trace	**0.88**	**0.15**	**0.55**	**0.75**	**0.13**	**0.30**	trace	**0.80**
MW-312S				NP	trace	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP
MW-312D				NP	trace	NP		NP	NP		NP	NP	NP	NP	NP	NP	NP
MW-313S			NP		NP	trace	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP
MW-339S								NP	NP	NP	NP	NP	NP	NP	NP	NP	NP
MW-339D								NP	NP	NP	trace	trace	NP	NP	NP	NP	trace
MW-341								trace	**1.45**	**1.00**	**1.75**	**1.45**	**1.95**	**1.50**	**1.25**	**0.95**	**1.68**
	Former Power Plant Area																
MW-103	NP	NP			NP	trace	**0.08**	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP
	South Fill Area																
MW-1 (2) (3)	**0.29**	**0.80**			trace	trace	NP	**0.50**	trace	NP	**0.40**	**0.67**		**0.15**	**0.60**	trace	trace
MW-320S			**0.18**		NP	**1.88**	NP	**0.20**	trace	trace	trace	trace		trace	trace	trace	**0.98**
MW-320D			**3.70**		**1.10**	**8.98**	**1.50**	**10.00**	**3.20**	**2.15**	**4.15**	**3.38**		**4.50**	**4.50**	**2.50**	**7.05**

Notes: Blank cells indicate well was not gauged during the event.
trace - trace amounts of NAPL were found on the probe
NP - No Product was detected
Well is Located in Former Gas Plant Area
Well is Located in Former Power Plant Area
Well is Located in South Fill Area

(1) Well was gauged by AES as part of their 1996 Site Investigation activities. "Thick tar product" was noted at the bottom of the well.
(2) Well was guaged by AES as part of their 1996 Site Investigation activities. "Tar" was noted on bailer and tubing.
(3) Well was gauged by VHB as part of their 2006 Site Investigation activities. Inconsistent, but measurable DNAPL was present, with thicknesses of up to 2.5 feet.
(4) MW-4 was periodically gauged between October 2009 and January 2010 to assess thickness of DNAPL:

Date	Depth to Water (feet below ground surface)	DNAPL Thickness (feet)
10/30/2009	11.25	**0.2**
11/3/2009	11.29	NP
11/4/2009	11.46	**0.1**
11/12/2009	11.3	**0.27**
1/21/2010	8.75	**0.15**

TABLE 2D
DENSE NON-AQUEOUS PHASE LIQUID (DNAPL) WELL GAUGING DATA

Former Tidewater Facility
Pawtucket, Rhode Island

	DNAPL Thickness (feet)															
Date	1/19/2012	4/18/2012	7/10/2012	10/15/2012	1/29/2013	4/26/2013	8/6/2013	10/29/2013	1/27/2014	4/24/2014	7/30/2014	10/22/2014	1/22/2015	4/27/2015	7/29/2015	11/11/2015
	Former Gas Plant Area															
MW-4 (1) (4)	NP	NP	**0.25**	trace	trace	trace	**0.7**	NP	**2.25**	trace	**0.05**	**0.05**	trace	trace	trace	NP
MW-303	**0.32**	**1.35**	**1.19**	**3.74**	**2.29**	**5.55**	**5.25**	**4.6**	**3.85**	**5.59**	**1.5**	**4.8**	**3.75**	**3**	**5.1**	**4.9**
MW-312S	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP
MW-312D	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP
MW-313S	NP	trace	NP	trace	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP
MW-339S	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP
MW-339D	trace	trace	trace	NP	trace	trace	NP	trace	trace	trace	trace	trace	trace	NP	trace	trace
MW-341	**1.48**	**1.38**	**1.08**	**1.5**	**1.4**	**1.95**	**2.57**	**2**	**1.85**	**1.25**	**3**	**2.65**	**2.43**	**1.25**	**3**	**2.45**
	Former Power Plant Area															
MW-103	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP
	South Fill Area															
MW-1 (2) (3)	trace	trace	NP	NP	trace	trace	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP
MW-320S	**0.1**	**0.05**	trace	**0.75**	trace	trace	trace	**0.18**	trace	**0.15**	trace	**1.15**	**1.7**	**0.05**	**0.15**	**1.07**
MW-320D	**1.1**	**8.67**	**1.05**	**2.56**	**8.45**	**8.15**	**7.85**	**8.14**	**13.72**	**13.9**	**13.7**	**13.4**	**13.7**	**13.2**	**13.6**	**13.9**

Notes: Blank cells indicate well was not gauged during the event.
trace - trace amounts of NAPL were found on the probe
NP - No Product was detected
Well is Located in Former Gas Plant Area
Well is Located in Former Power Plant Area
Well is Located in South Fill Area

(1) Well was gauged by AES as part of their 1996 Site Investigation activities. "Thick tar product" was noted at the bottom of the well.
(2) Well was guaged by AES as part of their 1996 Site Investigation activities. "Tar" was noted on bailer and tubing.
(3) Well was gauged by VHB as part of their 2006 Site Investigation activities. Inconsistent, but measurable DNAPL was present, with thicknesses of up to 2.5 feet.
(4) MW-4 was periodically gauged between October 2009 and January 2010 to assess thickness of DNAPL:

Date	Depth to Water (feet below ground surface)	Thickness (feet)
10/30/2009	11.25	**0.2**
11/3/2009	11.29	NP
11/4/2009	11.46	**0.1**
11/12/2009	11.3	**0.27**
1/21/2010	8.75	**0.15**

TABLE 2D
DENSE NON-AQUEOUS PHASE LIQUID (DNAPL) WELL GAUGING DATA

Former Tidewater Facility
Pawtucket, Rhode Island

	DNAPL Thickness (feet)							
Date	1/21/2016	4/30/2016	7/20/2016	11/1/2016	1/27/2017	4/21/2017	7/12/2017	10/3/2017
	Former Gas Plant Area							
MW-4 (1) (4)	trace	trace	trace	**0.9**	trace	trace	trace	trace
MW-303	**6.34**	**5.4**	**4.77**	**4.35**	**5.25**	**5.74**	**3.0**	**1.45**
MW-312S	NP	NP	NP	NP	NP	NP	NP	NP
MW-312D	NP	NP	NP	NP	NP	NP	NP	NP
MW-313S	NP	NP	NP	NP	NP	NP	NP	NP
MW-339S	NP	NP	NP	NP	trace	NP	NP	NP
MW-339D	trace	**0.2**	trace	NP	trace	trace	trace	trace
MW-341	**2.55**	**2.35**	**2.35**	**1.95**	**0.76**	**0.35**	**0.61**	**0.31**
	Former Power Plant Area							
MW-103	NP	NP	NP	NP	NP	NP	NP	NP
	South Fill Area							
MW-1 (2) (3)	trace	trace	trace	NP	trace	trace	trace	trace
MW-320S	**0.2**	**2.45**	trace	**1.3**	**1.15**	**0.43**	**0.25**	**0.15**
MW-320D	**14**	**13.01**	**13.6**	**14.2**	**14.52**	trace	**14.0**	**14.2**

Notes: Blank cells indicate well was not gauged during the event.
trace - trace amounts of NAPL were found on the probe
NP - No Product was detected
Well is Located in Former Gas Plant Area
Well is Located in Former Power Plant Area
Well is Located in South Fill Area

(1) Well was gauged by AES as part of their 1996 Site Investigation activities. "Thick tar product" was noted at the bottom of the well.
(2) Well was guaged by AES as part of their 1996 Site Investigation activities. "Tar" was noted on bailer and tubing.
(3) Well was gauged by VHB as part of their 2006 Site Investigation activities. Inconsistent, but measurable DNAPL was present, with thicknesses of up to 2.5 feet.
(4) MW-4 was periodically gauged between October 2009 and January 2010 to assess thickness of DNAPL:

Date	Depth to Water (feet below ground	Thickness (feet)
10/30/2009	11.25	**0.2**
11/3/2009	11.29	NP
11/4/2009	11.46	**0.1**
11/12/2009	11.3	**0.27**
1/21/2010	8.75	**0.15**

TABLE 3A
SUMMARY OF LNAPL RECOVERY
Former Tidewater Facility
Pawtucket, Rhode Island

Well ID	Date	Start Pumping	Depth to LNAPL (feet)	Depth to Water (feet)	Depth to Bottom (feet)	Estimated Volume Purged (gallons)	Tide Condition	Notes
MW-3	11/19/2010	9:22	10.47	10.54	17	0.20	Mid	
	2/17/2011	10:40	9.21	10.01	16.72	0.50	Mid	
	3/29/2011	11:59	10.6	12.31	17.05	0.25	Low	
	5/5/2011	13:31	9.22	9.49	17.1	0.20	Mid	
	6/3/2011	12:37	9.63	10.43	17.1	0.10	Mid	
MW-210	7/2/2010		9.6	9.75	17.3	0.05		
	2/17/2011	12:14	8.42	9.34	17.15	0.5	Low	
	3/29/2011	11:25	7.82	10.36	17.3	0.5	Low	
	5/5/2011	11:10	7.01	9.03	17.3	0.5	High	
	6/3/2011	11:50	8.05	9.05	17.3	0.5	Mid	
	6/29/2011	10:45	8.65	8.98	17.3	0.10	Mid	
	10/20/2011	11:14	7.12	8.22	17.3	1	Mid	
	1/20/2012	11:05	8.14	10.3	17.3	1	Low	
	4/26/2013	13:30	7.88	9.32	17.3	0.75	Low	
	8/8/2013	10:15	9.17	9.25	17.3	0.05	High	
	1/30/2014	12:30	9.48	10.28	17.3	0.50	Low	
	4/24/2014	13:40	6.57	9	17.3	1	High	
	4/27/2015	14:00	7.21	9.76	17.3	1	Low	
	1/21/2016	14:15	9.32	11.15	17.3	1.50	Low	
	4/30/2016	8:15	8.57	10.5	17.9	1.00	Low	
	1/27/2017	10:30	7.75	9.7	17.4	1.50	Low	
	4/21/2017	10:15	8.14	10.2	18.15	0.25	Low	
	7/13/2017	14:11	7.30	8.20	17.35	1.50	Mid	
MW-312S	7/2/2010		10.02	10.11	23.5	0.05		
	11/2/2010	14:45	10.85	11.25	23.5	0.5	Mid	
	11/19/2010	9:40	9.45	9.58	23.5	0.25	Mid	
	5/5/2011	12:45	8.24	8.52	23.5	0.10	Mid	
	7/27/2011	16:30	10.25	10.35	23.5	0.25	Mid/High	
	10/20/2011	10:21	8.49	8.97	23.5	0.50	Mid	
	1/20/2012	9:40	9.19	9.66	23.5	0.25	Mid	
	4/19/2012	11:09	8.76	9.22	23.5	0.50	Low/Mid	
	7/12/2012	11:18	9.98	10.6	23.5	0.75	Mid	
	4/26/2013	14:30	8.42	9.18	23.5	1.00	Low	
	8/8/2013	10:00	8.4	9.38	23.5	0.75	High	
	4/24/2014	13:20	7.79	8.03	23.5	0.50	High	
	7/30/2014	14:00	8.99	10.37	23.5	1.50	High	
	10/24/2014	13:00	8.61	9	23.5	0.50	Low	
	1/22/2015	12:13		9.92	23.5	0.15	Low	
	4/27/2015	12:30	9.09	9.52	23.5	0.50	Low	
	7/29/2015	14:00	9.08	10.28	23.5	1.00	Low	
	1/22/2015	14:00	9.54	9.92	23.5	0.25	Low	
	4/29/2015	15:00	9.09	9.52	23.5	0.50	Low	
	7/29/2015	14:00	9.08	10.28	23.5	1.00	Low	
	11/13/2015	12:00	8.1	8.5	23.5	1.00	Low	
	1/21/2016	14:30	10.45	12.1	23.5	1.50	Low	
	4/30/2016	8:40	9.35	12.41	23.5	1.00	Low	
	7/20/2016	15:08	10.1	11.49	23.52	0.50	Low	
	1/27/2017	10:30	8.75	9.8	23.82	0.50	Low	
	4/21/2017	10:45	9.39	9.49	20.1	0.25	Low	
	7/13/2017	14:04	8.35	9.15	23.45	1.00	Mid	
	10/3/2017	10:52	9.2	10.13	23.49	1.00	Mid/High	
MW-313S	2/17/2011	11:56	9.59	9.81	24.76	0.10	Low	
	10/20/2011	12:35	8.85	8.9	24.76	0.10	Mid/High	
MW-326S	11/19/2010	9:20	11.61	11.91	26.6	0.25	Mid	
M&E MW-5	7/2/2010		6.43	6.6	14.6	0.05		
	11/19/2010	11:20	8.03	9.2	14.6	0.35	Low	
	3/29/2011	15:28	10.29	13.53	16.88	0.75	Mid	elevations adjusted for broken PVC
	5/5/2011	9:32	9.63	10.75	16.88	0.50	High	elevations adjusted for broken PVC
	6/3/2011	14:15	7.20	8.4	14.65	0.50	Low	elevations adjusted for broken PVC
	6/29/2011	13:05	8.00	8.4	14.65	0.50	Low	elevations adjusted for broken PVC
	10/20/2011	9:22	7.33	7.75	14.65	0.25	Low	elevations adjusted for broken PVC
	1/20/2012	8:12	6.73	6.95	14.65	0.10	Mid	elevations adjusted for broken PVC
	10/24/2012	14:27	8.05	8.22	14.65	0.20	Mid	elevations adjusted for broken PVC
	4/26/2013	13:00	6.99	7.13	14.65	0.25	Low	elevations adjusted for broken PVC
	10/30/2013	8:00	7.97	8.30	14.65	0.50	Mid	elevations adjusted for broken PVC
	4/24/2014	14:00	7.58	9.55	14.65	1.50	High	elevations adjusted for broken PVC
	1/22/2015	12:30	7.64	8.05	14.64	0.50	Low	elevations adjusted for broken PVC
	4/27/2015	12:00	7.9	8.10	14.64	0.50	Low	elevations adjusted for broken PVC
	4/30/2016	9:30	8.1	11.05	14.5	0.50	Low	elevations adjusted for broken PVC
	1/27/2017	10:30	6.41	7.09	14.48	0.25	Low	elevations adjusted for broken PVC
	4/21/2017	11:00	7.86	8.85	14.5	0.25	Low	elevations adjusted for broken PVC
MW-103	7/2/2010		10.31	10.32	16.82	trace		
	11/19/2010	12:00	10.35	10.36	16.85	trace	Low	Blebs in purge water

Notes:

Depth to bottom in this table are from 11/2/2010 gauging round, if not recorded
Well is located in Former Gas Plant Area
Well is located in Former Power Plant Area

TABLE 3B
SUMMARY OF DNAPL RECOVERY
Former Tidewater Facility
Pawtucket, Rhode Island

Well ID	Date	Start Pumping	Depth to Water (feet)	Depth to DNAPL (feet)	Depth to Bottom (feet)	Estimated Volume Purged (gallons)	Tide Condition	Notes
MW-4	7/2/2010		10.85	trace	15.5	0.05		
	11/19/2010	10:12	10.73	trace	15.95		Mid	
MW-303	7/2/2010		8.8	41.18	42	Trace		
	11/2/2010	14:10	10.12	39.32	42	0.75	Mid	Measured thickness of DNAPL from probe, was not able to get to bottom, so estimate by probe
	11/19/2010	10:15	8.74	41.6	42	0.10	Low	DNAPL is very viscous
	2/17/2011	12:44	6.99	40.97	42.02	0.10	Low	DNAPL is very viscous
	5/5/2011	10:32	6.12	41.1	41.7	0.05	High	DNAPL is very viscous
	6/29/2011	10:02	7.1	41.55	41.7	Trace	Mid	Was not able to recover any DNAPL due to extreme viscosity
	10/20/2011	11:00	6.78	40.94	41.8	Trace	Mid	Was not able to recover any DNAPL due to extreme viscosity
	1/20/2012	10:42	7.69	41.37	41.8	Trace	Low	Was not able to recover any DNAPL due to extreme viscosity
	4/19/2012	10:45	6.54	40.65	41.8	0.15	Low/Mid	DNAPL is very viscous
	8/8/2013	11:30	6.43	36.7	41.8	0.25	High	Pumped for approximately 30 minutes. Was not able to recover all the DNAPL due to extreme viscosity.
	10/30/2013	10:00	9.10	35.2	41.8	Trace	Mid	Pumped for approximately 20 minutes. Was not able to recover all the DNAPL due to extreme viscosity.
	4/24/2014	12:00	5.64	36.31	41.9	<0.1 gallons	High	Pumped for approximately 20 minutes. Was not able to recover all the DNAPL due to extreme viscosity.
	7/29/2015	14:00	6.46	36.9	42	Trace	Low	Was not able to recover all the DNAPL due to extreme viscosity.
	7/20/2016	15:20	10.02	37.1	41.87	1.25	Low	
	11/2/2016	14:30	9.68	37.85	42.2	<.1	Low	
	4/21/2017	11:15	9.44	36.31	42.05	0.75	Low	Pumped for approximately 30 minutes. Was not able to recover all the DNAPL due to extreme viscosity.
MW-312D	7/2/2010		10.37	trace	31.87	Trace		
MW-313S	7/2/2010		dry		24.8	Trace		
	11/19/2010	9:30	10.86	trace	24.9		Mid	Did not pump
MW-341	3/29/2011	10:38	6.88	28.35	30.15	0.25	Low	
	5/5/2011	10:27	8.45	28.15	30.15	0.5	High	
	6/3/2011	10:54	7.28	28.6	30.15	0.5	High	
	6/17/2011	9:50	7.56	28.55	30.15	0.1	High	
	6/29/2011	9:24	8.1	28.85	30.15	0.5	Mid/High	
	7/25/2011	15:00				0.5	High	Did not gauge, recover only.
	7/27/2011	17:07	8.93	29.15	30.15	1	High	
	7/28/2011	15:00	9.11	29.15	30.15	0.5	Mid	
	10/20/2011	10:05	7.77	29	30.15	0.5	Low/Mid	
	1/20/2012	9:18	7.21	28.82	30.15	0.5	Low/Mid	
	4/19/2012	10:38	9.26	28.77	30.15	0.5	Low/Mid	
	7/12/2012	11:50		28.72	30.15	1	Mid	
	10/24/2012	15:02	10.45	28.45	30.15	0.75	Mid	
	1/30/2013	12:45	6.79	28.75	30.15	1.5	Low/Mid	
	4/26/2013	15:15	7.1	28.2	30.15	1.5	Low	
	8/8/2013	11:00	8.08	27.58	30.15	1.25	High	
	10/30/2013	9:30	10.10	28.15	30.15	1	Mid	
	1/30/2014	12:00	10.15	28.3	30.15	1	Low	
	4/24/2014	13:00	6.08	28.24	30.15	1	High	
	7/30/2014	13:30	9.10	28.05	30.15	0.5	High	
	10/24/2014	13:30	11.18	27.51	30.15	1	Low	
	1/22/2015	16:00	8.2	27.72	30.15	1	Low	
	4/27/2015	14:00	6.45	28.9	30.15	1	Low	
	7/29/2015	14:00	9.44	27.15	30.15	1	Low	
	11/13/2015	12:00	10.73	27.7	30.15	1	Low	
	1/21/2016	14:00	9.62	27.6	30.15	1.50	Low	
	4/30/2016	9:15	7.42	27.8	30.15	1	Low	
	7/20/2016	15:35	9.66	27.71	30.06	0.5	Low	
	11/2/2016	15:40	10.92	28.2	30.15	1	Low	
	1/27/2017	10:30	9.81	29.25	30.01	1	Low	
	4/21/2017	11:45	6.93	30.25	30.6	0.2	Low	
	7/13/2017	8:02	6.90	29.55	30.16	1	High	
	10/3/2017	10:33	9.80	29.65	29.96	1	Mid	
MW-1	7/2/2010		17.99	22.9	22.72	0.25		
	11/19/2010	12:30	17.86	trace	22.75		Low	DNAPL on probe (0.25")
MW-320S	7/2/2010		6.4	9.23	10.8	Trace		
	11/19/2010	13:00	6.28	9.68	10.9		Low	Did not pump due to viscosity of DNAPL.
MW-320D	7/2/2010		8.15	15.6	23.2	0.25		
	11/2/2010	15:20	8.77	16.72	23.3		Mid	Was not able to recover any DNAPL due to extreme viscosity
	11/19/2010	13:15	10	24.2	26.4	0.1	Low	Measured from top of casing, DNAPL is very viscous

Notes:

Depth to bottom in this table are from 11/2/2010 gauging round, if not recorded

Well is located in Former Gas Plant Area

Well is located in South Fill Area

TABLE 4A
SUMMARY OF GROUNDWATER VOC ANALYTICAL RESULTS
Former Tidewater Facility
Pawtucket, Rhode Island

		Units	RIDEM GB Groundwater UCL	RIDEM GB Groundwater Objective	MW-7 10/4/2017 1710103-09 Aqueous	MW-310S 10/4/2017 1710103-12 Aqueous	MW-310D 10/4/2017 1710103-14 Aqueous	MW-201 10/3/2017 1710102-04 Aqueous	MW-312S 10/3/2017 1710102-06 Aqueous	MW-312D 10/3/2017 1710102-05 Aqueous	MW-339S 10/3/2017 1710102-10 Aqueous	MW-339D 10/3/2017 1710103-01 Aqueous	MW-326S 10/4/2017 1710103-10 Aqueous	MW-326D 10/4/2017 1710103-11 Aqueous	MW-208 10/4/2017 1710103-13 Aqueous	MW-333S 10/4/2017 1710103-15 Aqueous	MW-333D 10/4/2017 1710103-16 Aqueous	MW-109 10/3/2017 1710102-01 Aqueous	MW-314D 10/3/2017 1710102-02 Aqueous
EPA 8260	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	<0.001	<0.001	<0.001	<0.001
	1,1,1-Trichloroethane	mg/L	68	3.1	<0.001	<0.001	<0.001	<0.001	<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	<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	<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	<0.001	<0.001	<0.001	<0.001
	1,1-Dichloroethene	mg/L	23	0.007	<0.001	<0.001	<0.001	<0.001	<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	<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	<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	<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	<0.001	<0.001	<0.001	<0.001
	1,2,4-Trimethylbenzene	mg/L	NE	NE	<0.001	<0.001	**0.593 D**	**0.0025**	**0.0876**	**0.357 D**	**0.0038**	**0.486 D**	**0.0839**	<0.001	<0.001	<0.001	**0.133 D**	**0.0398**	<0.001
	1,2-Dibromo-3-Chloropropane	mg/L	NE	0.002	<0.005	<0.005	<0.005	<0.005	<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	<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	<0.001	<0.001	<0.001	<0.001
	1,2-Dichloroethane	mg/L	670	0.11	<0.001	<0.001	<0.001	<0.001	<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	140	3	<0.001	<0.001	<0.001	<0.001	<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	**0.149 D**	<0.001	**0.0106**	**0.0206**	**0.0015**	**0.132 D**	<0.001	<0.001	<0.001	<0.001	**0.0806**	**0.0015**	<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	<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	<0.001	<0.000	<0.000	<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	<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	<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	<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	<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	<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	<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	<0.01	<0.01	<0.01	<0.01
	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	<0.001	<0.001	<0.001	<0.001
	4-Isopropyltoluene	mg/L	NE	NE	<0.001	<0.001	**0.0138**	<0.001	**0.0026**	**0.0096**	<0.001	**0.0103**	<0.001	<0.001	<0.001	<0.001	<0.001	**0.0014**	<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	<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	<0.01	<0.01	<0.01	<0.01
	Benzene	mg/L	18	0.14	<0.001	<0.001	**0.713 D**	**0.0962**	**0.021**	**6.67 D**	<0.001	**0.0164**	**0.981 D**	<0.001	<0.001	**0.0028**	**0.842 D**	**0.137 D**	<0.001
	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	<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	<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	<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	<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	<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	<0.001	<0.001	<0.001	<0.001
	Carbon Tetrachloride	mg/L	NE	0.07	<0.001	<0.001	<0.001	<0.001	<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	56	3.2	<0.001	<0.001	<0.001	<0.001	<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	<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	**0.0045**	<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	<0.002	<0.002	<0.002	<0.002
	cis-1,2-Dichloroethene	mg/L	69	2.4	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
	cis-1,3-Dichloropropene	mg/L	NE	NE	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	<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	<0.001	<0.001	<0.001	<0.001

TABLE 4A
SUMMARY OF GROUNDWATER VOC ANALYTICAL RESULTS
Former Tidewater Facility
Pawtucket, Rhode Island

		Units	RIDEM GB Groundwater UCL	RIDEM GB Groundwater Objective	MW-7 10/4/2017 1710103-09 Aqueous	MW-310S 10/4/2017 1710103-12 Aqueous	MW-310D 10/4/2017 1710103-14 Aqueous	MW-201 10/3/2017 1710102-04 Aqueous	MW-312S 10/3/2017 1710102-06 Aqueous	MW-312D 10/3/2017 1710102-05 Aqueous	MW-339S 10/3/2017 1710102-10 Aqueous	MW-339D 10/3/2017 1710103-01 Aqueous	MW-326S 10/4/2017 1710103-10 Aqueous	MW-326D 10/4/2017 1710103-11 Aqueous	MW-208 10/4/2017 1710103-13 Aqueous	MW-333S 10/4/2017 1710103-15 Aqueous	MW-333D 10/4/2017 1710103-16 Aqueous	MW-109 10/3/2017 1710102-01 Aqueous	MW-314D 10/3/2017 1710102-02 Aqueous
EPA 8260	VOLATILE ORGANICS																		
	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	<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	<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	<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	<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	<0.001	<0.001	<0.001	<0.001
	Ethylbenzene	mg/L	16	1.6	<0.001	<0.001	**0.792 D**	**0.0145**	**0.346 D**	**2.18 D**	<0.001	**0.112 D**	**0.210 D**	<0.001	<0.001	<0.001	**0.364 D**	**0.0168**	<0.001
	Hexachlorobutadiene	mg/L	NE	NE	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0007	<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	<0.002	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
	Isopropylbenzene	mg/L	NE	NE	<0.001	<0.001	**0.0922**	**0.011**	**0.0189**	**0.0911**	<0.001	**0.061**	**0.049**	<0.001	<0.001	<0.001	**0.0543**	**0.0172**	<0.001
	Methyl tert-Butyl Ether	mg/L	NE	5	<0.001	<0.001	<0.001	<0.001	<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	<0.002	<0.002	<0.002	<0.002
	Naphthalene	mg/L	NE	2.67	<0.001	<0.001	**8.44 D**	**0.003**	**0.807 D**	**6.9 D**	**0.165 D**	**4.36 D**	**0.197 D**	<0.001	<0.001	<0.001	**0.913 D**	**0.0779**	<0.001
	n-Butylbenzene	mg/L	NE	NE	<0.001	<0.001	**0.012**	**0.0023**	**0.0028**	<0.001	<0.001	**0.0115**	<0.001	<0.001	<0.001	<0.001	<0.001	**0.0056**	<0.001
	n-Propylbenzene	mg/L	NE	NE	<0.001	<0.001	**0.0396**	**0.0085**	**0.0086**	**0.037**	<0.001	**0.0383**	**0.0156**	<0.001	<0.001	<0.001	**0.0221**	**0.0091**	<0.001
	sec-Butylbenzene	mg/L	NE	NE	<0.001	<0.001	**0.0014**	<0.001	**0.0011**	<0.001	<0.001	**0.0016**	<0.001	<0.001	**0.0033**	<0.001	<0.001	**0.002**	<0.001
	Styrene	mg/L	50	2.2	<0.001	<0.001	**0.0173**	**0.0032**	0.001	**0.0017**	<0.001	**0.0124**	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
	tert-Butylbenzene	mg/L	NE	NE	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<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	<0.001	<0.001	<0.001	<0.001
	Tetrachloroethene	mg/L	NE	0.15	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<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	<0.005	<0.005	<0.005	<0.005
	Toluene	mg/L	21	1.7	<0.001	<0.001	**0.178 D**	<0.001	**0.0034**	**0.0094**	<0.001	**0.042**	**0.0026**	<0.001	<0.001	<0.001	**0.0032**	**0.0015**	<0.001
	trans-1,2-Dichloroethene	mg/L	79	2.8	<0.001	<0.001	<0.001	<0.001	<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	<0.0004	<0.0004	<0.0004	<0.0004
	Trichloroethene	mg/L	87	0.54	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<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	<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	<0.005	<0.005	<0.005	<0.005
	Vinyl Chloride	mg/L	NE	0.002	<0.001	<0.001	<0.001	<0.001	<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	**0.574 D**	**0.002**	**0.0705**	**0.613 D**	<0.001	**0.311 D**	**0.0618**	<0.001	<0.001	<0.001	**0.0806**	**0.0114**	<0.001
	Xylene P,M	mg/L	NE	NE	<0.002	<0.002	**0.573 D**	<0.002	**0.0109**	**0.0571**	<0.002	**0.312 D**	**0.0131**	<0.002	<0.002	<0.002	**0.0109**	**0.0044**	<0.002
	Xylenes (Total)	mg/L	NE	NE	<0.002	<0.002	**1.15 D**	**0.002**	**0.0813**	**0.67 D**	<0.002	**0.623 D**	**0.0749**	<0.002	<0.002	<0.002	**0.0915**	**0.0158**	<0.002
	Total VOCs	mg/L	NE	NE	ND	ND	12.1883	0.1432	1.391	16.9465	0.1748	5.9065	1.615	ND	0.0033	0.0028	2.5037	0.3256	ND

Notes
ND indicates note detected above reporting limit
"B" qualifier indicates that the analyte was present in the method blank
"D" qualifier indicates analytes reported from a diluted run of the original analysis.
"J" qualifier indicates analyte value was below the Method reporting Limit; Estimated value.
"E" qualifier indicates that the analyte was reported above the quantitation limit; Estimated value
S = Shallow Screened Well
D = Deep Screened Well
NFA = North Fill Area
FGPA = Former Gas Plant Area
FPPA = Former Power Plant Area
SFA = South Fill Area
Bold values indicate that the concentration was detected above method reporting limits
Blue shaded cells indicate detection limits equal to or exceeds the GB Groundwater Objective.
Gray shaded cells 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.
This table presents analytical results from 2017. The January 2011 SIDR, the July 2011 RAE and previous groundwater monitoring reports presents historical analytical results.
Lab results and recorded sampling times indicate a strong likelihood that samples taken from MW-312S were incorrectly labeled as MW-312D and samples taken from MW-312D were incorrectly labeled as MW-312S. The results shown in this table have been corrected accordingly.

TABLE 4A
SUMMARY OF GROUNDWATER VOC ANALYTICAL RESULTS
Former Tidewater Facility
Pawtucket, Rhode Island

		Units	RIDEM GB Groundwater UCL	RIDEM GB Groundwater Objective	MW-314S 10/3/2017 1710102-03 Aqueous	MW-337 10/3/2017 1710102-07 Aqueous	MW-6 10/3/2017 1710102-08 Aqueous	M&E MW-2 10/3/2017 1710102-09 Aqueous	MW-316D 10/4/2017 1710103-08 Aqueous	MW-318D 10/3/2017 1710103-02 Aqueous	MW-318S 10/3/2017 1710103-03 Aqueous	MW-107 10/3/2017 1710103-04 Aqueous	MW-334S 10/4/2017 1710103-06 Aqueous	MW-334D 10/4/2017 1710103-07 Aqueous
EPA 8260	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
	1,1,1-Trichloroethane	mg/L	68	3.1	<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
	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
	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
	1,1-Dichloroethene	mg/L	23	0.007	<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
	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
	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
	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
	1,2,4-Trimethylbenzene	mg/L	NE	NE	<0.001	<0.001	**0.0022**	<0.001	<0.001	<0.001	**0.0327**	<0.001	**0.001**	<0.001
	1,2-Dibromo-3-Chloropropane	mg/L	NE	0.002	<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
	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
	1,2-Dichloroethane	mg/L	670	0.11	<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	140	3	<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	**0.0139**	<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
	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
	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
	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
	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
	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
	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
	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
	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
	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
	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
	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
	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
	Benzene	mg/L	18	0.14	<0.001	<0.001	**0.023**	<0.001	<0.001	<0.001	**0.0817**	<0.001	**0.0026**	**0.0012**
	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
	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
	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
	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
	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
	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
	Carbon Tetrachloride	mg/L	NE	0.07	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
	Chlorobenzene	mg/L	56	3.2	<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
	Chloroform	mg/L	NE	NE	<0.001	<0.001	<0.001	<0.001	**0.0013**	<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
	cis-1,2-Dichloroethene	mg/L	69	2.4	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
	cis-1,3-Dichloropropene	mg/L	NE	NE	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	<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

TABLE 4A
SUMMARY OF GROUNDWATER VOC ANALYTICAL RESULTS
Former Tidewater Facility
Pawtucket, Rhode Island

		Units	RIDEM GB Groundwater UCL	RIDEM GB Groundwater Objective	MW-314S 10/3/2017 1710102-03 Aqueous	MW-337 10/3/2017 1710102-07 Aqueous	MW-6 10/3/2017 1710102-08 Aqueous	M&E MW-2 10/3/2017 1710102-09 Aqueous	MW-316D 10/4/2017 1710103-08 Aqueous	MW-318D 10/3/2017 1710103-02 Aqueous	MW-318S 10/3/2017 1710103-03 Aqueous	MW-107 10/3/2017 1710103-04 Aqueous	MW-334S 10/4/2017 1710103-06 Aqueous	MW-334D 10/4/2017 1710103-07 Aqueous
EPA 8260	VOLATILE ORGANICS													
	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
	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
	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
	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
	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
	Ethylbenzene	mg/L	16	1.6	<0.001	<0.001	**0.0198**	<0.001	<0.001	<0.001	**0.0082**	<0.001	<0.001	<0.001
	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
	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
	Isopropylbenzene	mg/L	NE	NE	<0.001	<0.001	**0.0042**	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
	Methyl tert-Butyl Ether	mg/L	NE	5	<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
	Naphthalene	mg/L	NE	2.67	<0.001	<0.001	**0.0028**	<0.001	<0.001	<0.001	**0.766 D**	<0.001	**0.0265**	**0.01**
	n-Butylbenzene	mg/L	NE	NE	<0.001	<0.001	**0.0012**	<0.001	<0.001	<0.001	**0.0019**	<0.001	<0.001	<0.001
	n-Propylbenzene	mg/L	NE	NE	<0.001	<0.001	**0.0026**	<0.001	<0.001	<0.001	**0.0018**	<0.001	<0.001	<0.001
	sec-Butylbenzene	mg/L	NE	NE	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
	Styrene	mg/L	50	2.2	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	**0.0043**	<0.001	<0.001	<0.001
	tert-Butylbenzene	mg/L	NE	NE	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<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
	Tetrachloroethene	mg/L	NE	0.15	<0.001	<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
	Toluene	mg/L	21	1.7	<0.001	<0.001	**0.001**	<0.001	<0.001	<0.001	**0.0666**	<0.001	**0.0012**	<0.001
	trans-1,2-Dichloroethene	mg/L	79	2.8	<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
	Trichloroethene	mg/L	87	0.54	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	**0.0013**
	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
	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
	Vinyl Chloride	mg/L	NE	0.002	<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	**0.0152**	<0.001	<0.001	<0.001	**0.033**	<0.001	<0.001	<0.001
	Xylene P,M	mg/L	NE	NE	<0.002	<0.002	**0.0049**	<0.002	<0.002	<0.002	**0.0695**	<0.002	<0.002	<0.002
	Xylenes (Total)	mg/L	NE	NE	<0.002	<0.002	**0.0202**	<0.002	<0.002	<0.002	**0.102**	<0.002	<0.002	<0.002
	Total VOCs	mg/L	NE	NE	ND	ND	0.0769	ND	0.0013	ND	1.0796	ND	0.0313	0.0125

Notes
ND indicates note detected above reporting limit
"B" qualifier indicates that the analyte was present in the method blank
"D" qualifier indicates analytes reported from a diluted run of the original analysis.
"J" qualifier indicates analyte value was below the Method reporting Limit; Estimated value.
"E" qualifier indicates that the analyte was reported above the quantitation limit; Estimated value
S = Shallow Screened Well
D = Deep Screened Well
NFA = North Fill Area
FGPA = Former Gas Plant Area
FPPA = Former Power Plant Area
SFA = South Fill Area
Bold values indicate that the concentration was detected above method reporting limits
Blue shaded cells indicate detection limits equal to or exceeds the GB Groundwater Objective.
Gray shaded cells 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.
This table presents analytical results from 2017. The January 2011 SIDR, the July 2011 RAE and previous groundwater monitoring reports presents historical analytical results.
Lab results and recorded sampling times indicate a strong likelihood that samples taken from MW-312S were incorrectly labeled as MW-312D and samples taken from MW-312D were incorrectly labeled as MW-312S. The results shown in this table have been corrected accordingly.

TABLE 4B
SUMMARY OF GROUNDWATER VOC QA/QC ANALYTICAL RESULTS
Former Tidewater Facility
Pawtucket, Rhode Island

		Units	RIDEM GB Groundwater UCL	RIDEM GB Groundwater Objective	MW-312S 10/3/2017 1710102-06 Aqueous	BD-10032017 10/3/2017 1710103-05 Aqueous	MW-326D 10/4/2017 1710103-11 Aqueous	BD-10042017 10/4/2017 1710103-17 Aqueous	Trip Blank 10/3/2017 1710103-18 Aqueous
EPA 8260	VOLATILE ORGANICS								
	1,1,1,2-Tetrachloroethane	mg/L	NE	NE	<0.001	<0.001	<0.001	<0.001	<0.001
	1,1,1-Trichloroethane	mg/L	68	3.1	<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
	1,1,2-Trichloroethane	mg/L	NE	NE	<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
	1,1-Dichloroethene	mg/L	23	0.007	<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
	1,2,3-Trichlorobenzene	mg/L	NE	NE	<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
	1,2,4-Trichlorobenzene	mg/L	NE	NE	<0.001	<0.001	<0.001	<0.001	<0.001
	1,2,4-Trimethylbenzene	mg/L	NE	NE	**0.0876**	**0.0971**	<0.001	<0.001	<0.001
	1,2-Dibromo-3-Chloropropane	mg/L	NE	0.002	<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
	1,2-Dichlorobenzene	mg/L	NE	NE	<0.001	<0.001	<0.001	<0.001	<0.001
	1,2-Dichloroethane	mg/L	670	0.11	<0.001	<0.001	<0.001	<0.001	<0.001
	1,2-Dichloropropane	mg/L	140	3	<0.001	<0.001	<0.001	<0.001	<0.001
	1,3,5-Trimethylbenzene	mg/L	NE	NE	**0.0106**	**0.0103**	<0.001	<0.001	<0.001
	1,3-Dichlorobenzene	mg/L	NE	NE	<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
	1,4-Dichlorobenzene	mg/L	NE	NE	<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
	1-Chlorohexane	mg/L	NE	NE	<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
	2-Butanone	mg/L	NE	NE	<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
	2-Hexanone	mg/L	NE	NE	<0.01	<0.01	<0.01	<0.01	<0.01
	4-Chlorotoluene	mg/L	NE	NE	<0.001	<0.001	<0.001	<0.001	<0.001
	4-Isopropyltoluene	mg/L	NE	NE	**0.0026**	**0.0026**	<0.001	<0.001	<0.001
	4-Methyl-2-Pentanone	mg/L	NE	NE	<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
	Benzene	mg/L	18	0.14	**0.021**	**0.0254**	<0.001	<0.001	<0.001
	Bromobenzene	mg/L	NE	NE	<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
	Bromodichloromethane	mg/L	NE	NE	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006
	Bromoform	mg/L	NE	NE	<0.001	<0.0010	<0.001	<0.0010	<0.0010
	Bromomethane	mg/L	NE	NE	<0.002	<0.0020	<0.002	<0.0020	<0.0020
	Carbon Disulfide	mg/L	NE	NE	<0.001	<0.0010	<0.001	<0.0010	<0.0010
	Carbon Tetrachloride	mg/L	NE	0.07	<0.001	<0.0010	<0.001	<0.0010	<0.0010
	Chlorobenzene	mg/L	56	3.2	<0.001	<0.0010	<0.001	<0.0010	<0.0010
	Chloroethane	mg/L	NE	NE	<0.002	<0.0020	<0.002	<0.0020	<0.0020
	Chloroform	mg/L	NE	NE	<0.001	<0.0010	<0.001	<0.0010	<0.0010
	Chloromethane	mg/L	NE	NE	<0.002	<0.0020	<0.002	<0.0020	<0.0020
	cis-1,2-Dichloroethene	mg/L	69	2.4	<0.001	<0.0010	<0.001	<0.0010	<0.0010
	cis-1,3-Dichloropropene	mg/L	NE	NE	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004
	Dibromochloromethane	mg/L	NE	NE	<0.001	<0.0010	<0.001	<0.0010	<0.0010
	Dibromomethane	mg/L	NE	NE	<0.001	<0.0010	<0.001	<0.0010	<0.0010
	Dichlorodifluoromethane	mg/L	NE	NE	<0.002	<0.0020	<0.002	<0.0020	<0.0020
	Diethyl Ether	mg/L	NE	NE	<0.001	<0.0010	<0.001	<0.0010	<0.0010
	Di-isopropyl ether	mg/L	NE	NE	<0.001	<0.0010	<0.001	<0.0010	<0.0010
	Ethyl tertiary-butyl ether	mg/L	NE	NE	<0.001	<0.0010	<0.001	<0.0010	<0.0010
	Ethylbenzene	mg/L	16	1.6	**0.346 D**	**0.318 D**	<0.001	<0.001	<0.001
	Hexachlorobutadiene	mg/L	NE	NE	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006
	Hexachloroethane	mg/L	NE	NE	<0.001	<0.0010	<0.001	<0.0010	<0.0010
	Isopropylbenzene	mg/L	NE	NE	**0.0189**	**0.0206**	<0.001	<0.001	<0.001
	Methyl tert-Butyl Ether	mg/L	NE	5	<0.001	<0.0010	<0.001	<0.0010	<0.0010
	Methylene Chloride	mg/L	NE	NE	<0.002	<0.002	<0.002	<0.002	<0.002
	Naphthalene	mg/L	NE	2.67	**0.807 D**	**0.775 D**	<0.001	<0.001	<0.001
	n-Butylbenzene	mg/L	NE	NE	**0.0028**	<0.001	<0.001	<0.001	<0.001
	n-Propylbenzene	mg/L	NE	NE	**0.0086**	**0.0093**	<0.001	<0.001	<0.001
	sec-Butylbenzene	mg/L	NE	NE	**0.0011**	**0.0013**	<0.001	<0.001	<0.001
	Styrene	mg/L	50	2.2	0.001	<0.001	<0.001	<0.001	<0.001

TABLE 4B
SUMMARY OF GROUNDWATER VOC QA/QC ANALYTICAL RESULTS
Former Tidewater Facility
Pawtucket, Rhode Island

		Units	RIDEM GB Groundwater UCL	RIDEM GB Groundwater Objective	MW-312S 10/3/2017 1710102-06 Aqueous	BD-10032017 10/3/2017 1710103-05 Aqueous	MW-326D 10/4/2017 1710103-11 Aqueous	BD-10042017 10/4/2017 1710103-17 Aqueous	Trip Blank 10/3/2017 1710103-18 Aqueous
EPA 8260	VOLATILE ORGANICS								
	tert-Butylbenzene	mg/L	NE	NE	<0.001	<0.0010	<0.001	<0.0010	<0.0010
	Tertiary-amyl methyl ether	mg/L	NE	NE	<0.001	<0.0010	<0.001	<0.0010	<0.0010
	Tetrachloroethene	mg/L	NE	0.15	<0.001	<0.0010	<0.001	<0.0010	<0.0010
	Tetrahydrofuran	mg/L	NE	NE	<0.005	<0.0050	<0.005	<0.0050	<0.0050
	Toluene	mg/L	21	1.7	**0.0034**	**0.0041**	<0.001	<0.0010	<0.0010
	trans-1,2-Dichloroethene	mg/L	79	2.8	<0.001	<0.0010	<0.001	<0.0010	<0.0010
	trans-1,3-Dichloropropene	mg/L	NE	NE	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004
	Trichloroethene	mg/L	87	0.54	<0.001	<0.0010	<0.001	<0.0010	<0.0010
	Trichlorofluoromethane	mg/L	NE	NE	<0.001	<0.0010	<0.001	<0.0010	<0.0010
	Vinyl Acetate	mg/L	NE	NE	<0.005	<0.0050	<0.005	<0.0050	<0.0050
	Vinyl Chloride	mg/L	NE	0.002	<0.001	<0.0010	<0.001	<0.0010	<0.0010
	Xylene O	mg/L	NE	NE	**0.0705**	**0.0749**	<0.001	<0.0010	<0.0010
	Xylene P,M	mg/L	NE	NE	**0.0109**	**0.0117**	<0.002	<0.0020	<0.0020
	Xylenes (Total)	mg/L	NE	NE	**0.0813**	**0.0866**	<0.002	<0.0020	<0.0020
	Total VOCs	mg/L	NE	NE	1.391	1.3503	ND	ND	ND

Notes
ND indicates note detected above reporting limit
"B" qualifier indicates that the analyte was present in the method blank
"D" qualifier indicates analytes reported from a diluted run of the original analysis.
"J" qualifier indicates analyte value was below the Method reporting Limit; Estimated value.
S = Shallow Screened Well
D = Deep Screened Well
NFA = North Fill Area
FGPA = Former Gas Plant Area
FPPA = Former Power Plant Area
SFA = South Fill Area
Bold values indicate that the concentration was detected above method reporting limits
Blue shaded cells indicate detection limits equal to or exceeds the GB Groundwater Objective.
Gray shaded cells indicate the concentration exceeds the GB Groundwater Objective.
Underlined concentrations exceed the RIDEM GB Groundwater Upper Concentration Limit
Method 2 GB Objective criteria for naphthalene developed by GZA in accordance with the methods described in the Remediation Regulations.

TABLE 5AA
GROUNDWATER MONITORING DATA
South Fill Area
Former Tidewater Facility
Pawtucket, Rhode Island

ANALYTICAL	Sample ID:		MW-334D													
	Collected By:		AES	VHB	GZA	GZA	GZA		GZA		GZA	GZA	GZA	GZA	GZA	GZA
	Sample Date:		1996	2006	Jan 2010	June 2010	Dec 2010		July 2011		July 2012	Aug 2013	Oct 2014	Nov 2015	Nov 2016	Oct 2017
	RIDEM GB GW UCL	RIDEM GB GW-O	Note (4)	Note (4)	Note (4)	Note (4)	Result	DL	Result	DL	Result	Result	Result	Result	Result	
VOCs (ppm)																
1,1,1,2-Tetrachloroethane	NE	NE					<	0.001	<	0.001	<0.001	<0.001	<0.0010	<0.0010	<0.0010	<0.0010
1,1-Dichloroethene	23	0.007					<	0.001	<	0.001	<0.001	<0.001	<0.0010	<0.0010	<0.0010	<0.0010
1,2,4-Trimethylbenzene	NE	NE					**0.0042**	0.001	<	0.001	<0.001	<0.001	<0.0010	J 0.0002	<0.0010	<0.0010
1,2-Dibromo-3-Chloropropane	NE	0.002					<	0.002	<	0.002	<0.005	<0.005	<0.0050	<0.0050	<0.0050	<0.0050
1,3,5-Trimethylbenzene	NE	NE					**0.0014**	0.001	<	0.001	<0.001	<0.001	<0.0010	<0.0010	<0.0010	<0.0010
4-Isopropyltoluene	NE	NE									<0.001	<0.001	<0.0010	<0.0010	<0.0010	<0.0010
Acetone	NE	NE					<	0.010	<	0.010	<0.01	<0.01	<0.0100	<0.0100	<0.0010	<0.0010
Benzene	18	0.14					**0.0030**	0.001	**0.0013**	0.001	**0.0013**	**0.0015**	**0.0084**	**0.0012**	**0.0022**	**0.0012**
Carbon Disulfide	NE	NE							<	0.001	<0.001	<0.001	<0.0010	<0.0010	<0.0010	<0.0010
Carbon Tetrachloride	NE	0.07					<	0.001	<	0.001	<0.001	<0.001	<0.0010	<0.0010	<0.0010	<0.0010
Chloroform	NE	NE					<	0.001	<	0.001	<0.001	<0.001	<0.0010	<0.0010	<0.0010	<0.0010
cis-1,2-Dichloroethene	69	2.4					**0.0024**	0.001	**0.0011**	0.001	**0.0012**	**0.0012**	**0.0013**	J 0.0007	**0.0011**	<0.0010
Ethylbenzene	16	1.6					**0.0011**	0.001	<	0.001	<0.001	<0.001	<0.0010	<0.0010	<0.0010	<0.0010
Isopropylbenzene	NE	NE					<	0.001	<	0.001	<0.001	<0.001	<0.0010	<0.0010	<0.0010	<0.0010
Methyl tert-Butyl Ether	NE	5					<	0.001	<	0.001	<0.001	<0.001	<0.0010	<0.0010	<0.0010	<0.0010
Methylene Chloride	NE	NE					<	0.002	<	0.002	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
Naphthalene	NE	2.67					**0.11**	0.002	**0.0097**	0.002	**0.0213**	**0.0132**	**0.0178**	**0.0096**	**0.0302**	**0.01**
n-Butylbenzene	NE	NE					<	0.001	<	0.001	<0.001	<0.001	<0.0010	<0.0010	<0.0010	<0.0010
n-Propylbenzene	NE	NE					<	0.001	<	0.001	<0.001	<0.001	<0.0010	<0.0010	<0.0010	<0.0010
sec-Butylbenzene	NE	NE					<	0.001	<	0.001	<0.001	<0.001	<0.0010	<0.0010	<0.0010	<0.0010
Styrene	50	2.2					<	0.001	<	0.001	<0.001	<0.001	<0.0010	<0.0010	<0.0010	<0.0010
tert-Butylbenzene	NE	NE					<	0.001	<	0.001	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Tertiary-amyl methyl ether	NE	NE									<0.001	<0.001	<0.0010	<0.0010	<0.0010	<0.0010
Tetrachloroethene	NE	0.15					<	0.001	<	0.001	<0.001	<0.001	<0.0010	<0.0010	<0.0010	<0.0010
Toluene	21	1.7					**0.0018**	0.001	<	0.001	<0.001	<0.001	**0.0012**	J 0.0004	**0.0012**	<0.0010
Trichloroethene	87	0.54					**0.0045**	0.001	**0.0014**	0.001	**0.0023**	**0.0021**	**0.0024**	**0.0015**	**0.0018**	**0.0013**
Vinyl Chloride	NE	0.002					<	0.001	<	0.001	<0.001	<0.001	<0.0010	<0.0010	<0.0010	<0.0010
Xylene O	NE	NE					**0.0036**	0.001	<	0.001	<0.001	<0.001	<0.0010	J 0.0001	<0.0010	<0.0010
Xylene P,M	NE	NE					**0.0040**	0.002	<	0.002	<0.002	<0.002	<0.0020	J 0.0002	<0.0020	<0.0020
Xylenes (Total)	NE	NE					**0.0076**	0	<	0.003	<0.003	<0.003	<0.0030	<0.0020	<0.0020	<0.0020
Total VOCs	NE	NE					**0.136**		**0.0135**		**0.0261**	**0.018**	**0.0311**	**0.0139**	**0.01**	**0.0125**
TOTAL PETROLEUM HYDROCARBON (ppm)																
Hydrocarbon Content	NE	NE					**0.47**	0.2	<	0.2	**0.45**	**0.33**	**0.2**			
PAHS BY GCMS (ppm)																
2-Methylnaphthalene	NE	NE					**0.0099**	0.002	<	0.002	**0.002**	**0.0013 D**	**0.0007**			
Acenaphthene	NE	NE					<	0.002	<	0.002	**0.0008**	<0.0009 D	**0.0004**			
Acenaphthylene	NE	NE					<	0.002	<	0.002	<0.0002	<0.0009 D	<0.0002			
Anthracene	NE	NE					<	0.002	<	0.002	**0.0005**	<0.0009 D	**0.0004**			
Benzo [a] Anthracene	NE	NE					<	0.002	<	0.002	<0.0002	<0.0002 D	**0.00006**			
Benzo [a] Pyrene	NE	NE					<	0.002	<	0.002	<0.0002	<0.0002 D	<0.00005			
Benzo [b] Fluoranthene	NE	NE					<	0.002	<	0.002	<0.0002	<0.0002 D	<0.00005			
Benzo [g,h,i] Perylene	NE	NE					<	0.002	<	0.002	<0.0002	<0.0009 D	<0.0002			
Benzo [k] Fluoranthene	NE	NE					<	0.002	<	0.002	<0.0002	<0.0002 D	<0.00005			
Chrysene	NE	NE					<	0.002	<	0.002	<0.0002	<0.0002 D	<0.00005			
Dibenzo [a,h] Anthracene	NE	NE					<	0.002	<	0.002	<0.0002	<0.0002 D	<0.00005			
Fluoranthene	NE	NE					<	0.002	<	0.002	**0.0007**	<0.0009 D	**0.0005**			
Fluorene	NE	NE					<	0.002	<	0.002	**0.001**	<0.0009 D	**0.0006**			
Indeno [1,2,3-cd] Pyrene	NE	NE					<	0.002	<	0.002	<0.0002	<0.0002 D	<0.00005			
Naphthalene	NE	2.67					<	0.002	**0.0036**	0.002	**0.008**	**0.0067 D**	**0.0044**			
Phenanthrene	NE	NE					**0.002**	0.002	<	0.002	**0.003**	**0.0029 D**	**0.0027**			
Pyrene	NE	NE					<	0.002	<	0.002	**0.0005**	<0.0009 D	**0.0004**			
INORGANICS (ppm)																
Total Cyanide	NE	NE					**0.35**	0.010	**0.02**	0.010	**0.0326**	**0.0256**	**0.0229**			
Dissolved Free Cyanide	NE	NE					**0.060**	0.010	<	0.010	<0.005	**0.0245**	**0.013**			
Physiologically Available Cyanide	NE	NE														
Arsenic	NE	NE														
Beryllium	NE	NE														
Chromium	NE	NE														
Copper	NE	NE														
Lead	NE	NE														
Nickel	NE	NE														
Zinc	NE	NE														
Dissolved Arsenic	NE	NE														
Dissolved Beryllium	NE	NE														
Dissolved Chromium	NE	NE														
Dissolved Copper	NE	NE														
Dissolved Lead	NE	NE														
Dissolved Nickel	NE	NE														
Dissolved Zinc	NE	NE														

Notes:

	Blank cells indicate that the parameter was not analyzed during this sampling round
D	"D" qualifier indicates analytes reported from a diluted run of the original analysis.
E	"E" qualifier indicates that the analyte was reported above the quantitation limit; Estimated value
J	"J" qualifier indicates analyte value was below the Method reporting Limit; Estimated value.
B	"B" qualifier indicates that the analyte was present in the method blank
NE	Regulatory Limit is not established
Bold Value	= concentration detected above the Method Reporting Limit.
	= concentration equals or exceeds the RIDEM GB Groundwater Objective (RIDEM GB GW Objectives)
	=detection limit equals or exceeds the RIDEM GB Groundwater Objective
(1)	Method 2 GB Objective criteria for naphthalene developed by GZA in accordance with the methods described in the Remediation Regulations.
(2)	Well was not sampled because there was limited water
(3)	NAPL was noted to be present
(4)	Well was not sampled because it had not been installed yet.
(5)	Well was not sampled because of an unknown reason
(6)	Well was not included in this sampling round

Please note that this table only includes compounds that have been detected or have detection limits that exceeded the RIDEM GB Groundwater Objective during groundwater monitoring at the Site between 1996 and present.

TABLE 5A
GROUNDWATER MONITORING DATA
North Fill Area
Former Tidewater Facility
Pawtucket, Rhode Island

ANALYTICAL	Sample ID:		MW-5													
	Collected By:		AES	VHB	GZA		GZA		GZA		GZA	GZA	GZA	GZA	GZA	GZA
	Sample Date:		1996	2006	Jan 2010		July 2010		Dec 2010		July 2011	July 2012	Aug 2013	Oct 2014	Nov 2015	Nov 2016	Oct 2017
	RIDEM GB GW UCL	RIDEM GB GW-O	Note (5)	Note (5)			Note (2)		Note (6)		Note (2)	Note (2)	Note (2)	Note (2)	Note (2)	Note (2)	Note (2)
VOCs (ppm)					Result	DL											
1,1,1,2-Tetrachloroethane	NE	NE			<	0.001											
1,1-Dichloroethene	23	0.007			<	0.001											
1,2,4-Trimethylbenzene	NE	NE			<	0.001											
1,2-Dibromo-3-Chloropropane	NE	0.002			<	0.005											
1,3,5-Trimethylbenzene	NE	NE			<	0.001											
4-Isopropyltoluene	NE	NE															
Acetone	NE	NE			<	0.025											
Benzene	18	0.14			<	0.001											
Carbon Disulfide	NE	NE															
Carbon Tetrachloride	NE	0.07			<	0.001											
Chloroform	NE	NE			<	0.001											
cis-1,2-Dichloroethene	69	2.4			<	0.001											
Ethylbenzene	16	1.6			<	0.001											
Isopropylbenzene	NE	NE			<	0.001											
Methyl tert-Butyl Ether	NE	5			<	0.001											
Methylene Chloride	NE	NE			<	0.002											
Naphthalene	NE	2.67			<	0.002											
n-Butylbenzene	NE	NE			<	0.001											
n-Propylbenzene	NE	NE			<	0.001											
sec-Butylbenzene	NE	NE			<	0.001											
Styrene	50	2.2			<	0.001											
tert-Butylbenzene	NE	NE			<	0.001											
Tertiary-amyl methyl ether	NE	NE			<	0.001											
Tetrachloroethene	NE	0.15			<	0.001											
Toluene	21	1.7			<	0.001											
Trichloroethene	87	0.54			<	0.001											
Vinyl Chloride	NE	0.002			<	0.001											
Xylene O	NE	NE			<	0.001											
Xylene P,M	NE	NE			<	0.002											
Xylenes (Total)	NE	NE			<	0.003											
Total VOCs	NE	NE			<	0.122											
TOTAL PETROLEUM HYDROCARBON (ppm)																	
Hydrocarbon Content	NE	NE			<	0.2											
PAHS BY GCMS (ppm)																	
2-Methylnaphthalene	NE	NE			<	0.002											
Acenaphthene	NE	NE			<	0.002											
Acenaphthylene	NE	NE			<	0.002											
Anthracene	NE	NE			<	0.002											
Benzo [a] Anthracene	NE	NE			<	0.002											
Benzo [a] Pyrene	NE	NE			<	0.002											
Benzo [b] Fluoranthene	NE	NE			<	0.002											
Benzo [g,h,i] Perylene	NE	NE			<	0.002											
Benzo [k] Fluoranthene	NE	NE			<	0.002											
Chrysene	NE	NE			<	0.002											
Dibenzo [a,h] Anthracene	NE	NE			<	0.002											
Fluoranthene	NE	NE			<	0.002											
Fluorene	NE	NE			<	0.002											
Indeno [1,2,3-cd] Pyrene	NE	NE			<	0.002											
Naphthalene	NE	2.67			<	0.002											
Phenanthrene	NE	NE			<	0.002											
Pyrene	NE	NE			<	0.002											
INORGANICS (ppm)																	
Total Cyanide	NE	NE			**0.020**	0.010											
Dissolved Free Cyanide	NE	NE			<	0.010											
Physiologically Available Cyanide	NE	NE															
Arsenic	NE	NE															
Beryllium	NE	NE															
Chromium	NE	NE															
Copper	NE	NE															
Lead	NE	NE															
Nickel	NE	NE															
Zinc	NE	NE															
Dissolved Arsenic	NE	NE															
Dissolved Beryllium	NE	NE															
Dissolved Chromium	NE	NE															
Dissolved Copper	NE	NE															
Dissolved Lead	NE	NE															
Dissolved Nickel	NE	NE															
Dissolved Zinc	NE	NE															

Notes:

	Blank cells indicate that the parameter was not analyzed during this sampling round
D	"D" qualifier indicates analytes reported from a diluted run of the original analysis.
E	"E" qualifier indicates that the analyte was reported above the quantitation limit; Estimated value
J	"J" qualifier indicates analyte value was below the Method reporting Limit; Estimated value.
B	"B" qualifier indicates that the analyte was present in the method blank
NE	Regulatory Limit is not established
Bold Value	= concentration detected above the Method Reporting Limit.
	= concentration equals or exceeds the RIDEM GB Groundwater Objective (RIDEM GB GW Objectives)
	=detection limit equals or exceeds the RIDEM GB Groundwater Objective
(1)	Method 2 GB Objective criteria for naphthalene developed by GZA in accordance with the methods described in the Remediation Regulations.
(2)	Well was not sampled because there was limited water
(3)	NAPL was noted to be present
(4)	Well was not sampled because it had not been installed yet.
(5)	Well was not sampled because of an unknown reason
(6)	Well was not included in this sampling round

Please note that this table only includes compounds that have been detected or have detection limits that exceeded the RIDEM GB Groundwater Objective during groundwater monitoring at the Site between 1996 and present.

TABLE 5B
GROUNDWATER MONITORING DATA
North Fill Area
Former Tidewater Facility
Pawtucket, Rhode Island

ANALYTICAL	Sample ID:		MW-7															
	Collected By:		AES	VHB	GZA		GZA		GZA	GZA		GZA	GZA	GZA	GZA	GZA	GZA	GZA
	Sample Date:		1996	2006	Jan 2010		July 2010		Dec 2010	July 2011			July 2012	Aug 2013	Oct 2014	Nov 2015	Nov 2016	Oct 2017
	RIDEM GB GW UCL	RIDEM GB GW-O							Note (6)									
VOCs (ppm)			Result	Result	Result	DL	Result	DL		Result	DL		Result	Result	Result	Result	Result	Result
1,1,1,2-Tetrachloroethane	NE	NE			<	0.001	<	0.001		<	0.001		<0.001	<0.001	<0.001	<0.001	<0.0010	<0.0010
1,1-Dichloroethene	23	0.007			<	0.001	<	0.001		<	0.001		<0.001	<0.001	<0.001	<0.001	<0.0010	<0.0010
1,2,4-Trimethylbenzene	NE	NE	<0.02	<0.001	<	0.001	<	0.001		<	0.001		<0.001	<0.001	<0.001	<0.001	<0.0010	<0.0010
1,2-Dibromo-3-Chloropropane	NE	0.002			<	0.005	<	0.002		<	0.002		<0.005	<0.005	<0.005	<0.005	<0.0050	<0.0050
1,3,5-Trimethylbenzene	NE	NE		<0.001	<	0.001	<	0.001		<	0.001		<0.001	<0.001	<0.001	<0.001	<0.0010	<0.0010
4-Isopropyltoluene	NE	NE											<0.001	<0.001	<0.001	<0.001	<0.0010	<0.0010
Acetone	NE	NE			<	0.025	<	0.010		<	0.010		<0.01	<0.01	<0.01	<0.01	<0.0100	<0.0100
Benzene	18	0.14	<0.02	<0.001	<	0.001	<	0.001		<	0.001		<0.001	<0.001	<0.001	<0.001	<0.0010	<0.0010
Carbon Disulfide	NE	NE								<	0.001		<0.001	<0.001	<0.001	<0.001	<0.0010	<0.0010
Carbon Tetrachloride	NE	0.07			<	0.001	<	0.001		<	0.001		<0.001	<0.001	<0.001	<0.001	<0.0010	<0.0010
Chloroform	NE	NE		**0.0048**	<	0.001	<	0.001		<	0.001		<0.001	**0.0018**	<0.001	J 0.0005	<0.0010	<0.0010
cis-1,2-Dichloroethene	69	2.4			<	0.001	<	0.001		<	0.001		<0.001	<0.001	<0.001	<0.001	<0.0010	<0.0010
Ethylbenzene	16	1.6	<0.02	<0.001	<	0.001	<	0.001		<	0.001		<0.001	<0.001	<0.001	<0.001	<0.0010	<0.0010
Isopropylbenzene	NE	NE		<0.001	<	0.001	<	0.001		<	0.001		<0.001	<0.001	<0.001	<0.001	<0.0010	<0.0010
Methyl tert-Butyl Ether	NE	5		<0.001	<	0.001	<	0.001		<	0.001		<0.001	<0.001	<0.001	<0.001	<0.0010	<0.0010
Methylene Chloride	NE	NE			<	0.002	<	0.002		<	0.002		<0.002	<0.002	<0.002	<0.002	<0.0020	<0.0020
Naphthalene	NE	2.67		<0.001	<	0.002	**0.0035**	0.002		<	0.002		<0.001	<0.001	<0.001	<0.001	<0.0010	<0.0010
n-Butylbenzene	NE	NE		<0.001	<	0.001	<	0.001		<	0.001		<0.001	<0.001	<0.001	<0.001	<0.0010	<0.0010
n-Propylbenzene	NE	NE		<0.001	<	0.001	<	0.001		<	0.001		<0.001	<0.001	<0.001	<0.001	<0.0010	<0.0010
sec-Butylbenzene	NE	NE		<0.001	<	0.001	<	0.001		<	0.001		<0.001	<0.001	<0.001	<0.001	<0.0010	<0.0010
Styrene	50	2.2	<0.02		<	0.001	<	0.001		<	0.001		<0.001	<0.001	<0.001	<0.001	<0.0010	<0.0010
tert-Butylbenzene	NE	NE			<	0.001	<	0.001		<	0.001		<0.001	<0.001	<0.001	<0.001	<0.0010	<0.0010
Tertiary-amyl methyl ether	NE	NE											<0.001	<0.001	<0.001	<0.001	<0.0010	<0.0010
Tetrachloroethene	NE	0.15			<	0.001	<	0.001		<	0.001		<0.001	<0.001	<0.001	J 0.0003	<0.0010	<0.0010
Toluene	21	1.7	<0.02		<	0.001	<	0.001		<	0.001		<0.001	<0.001	<0.001	<0.001	<0.0010	<0.0010
Trichloroethene	87	0.54			<	0.001	<	0.001		<	0.001		<0.001	0.0003 J	<0.001	<0.001	<0.0010	<0.0010
Vinyl Chloride	NE	0.002			<	0.001	<	0.001		<	0.001		<0.001	<0.001	<0.001	<0.001	<0.0010	<0.0010
Xylene O	NE	NE	<0.02	<0.001	<	0.001	<	0.001		<	0.001		<0.001	<0.001	<0.001	<0.001	<0.0010	<0.0010
Xylene P,M	NE	NE	<0.02	<0.002	<	0.002	<	0.002		<	0.002		<0.002	<0.002	<0.002	<0.002	<0.0020	<0.0020
Xylenes (Total)	NE	NE	<0.04	<0.03	<	0.003	<	0.003		<	0.003		<0.003	<0.002	<0.003	<0.002	<0.0020	<0.0020
Total VOCs	NE	NE	ND	**0.0048**		ND	**0.0035**				ND		ND	**0.0021**	ND	**0.0008**	ND	ND
TOTAL PETROLEUM HYDROCARBON (ppm)																		
Hydrocarbon Content	NE	NE			<	0.2	<	0.2		<	0.2		<0.2	<0.19	<0.19			
PAHS BY GCMS (ppm)																		
2-Methylnaphthalene	NE	NE	<0.02	<0.0002	<	0.002	<	0.002		<	0.002		<0.0002	<0.0002	<0.0002			
Acenaphthene	NE	NE	<0.02	<0.0002	<	0.002	<	0.002		<	0.002		<0.0002	<0.0002	<0.0002			
Acenaphthylene	NE	NE	<0.02	<0.0002	<	0.002	<	0.002		<	0.002		<0.0002	<0.0002	<0.0002			
Anthracene	NE	NE	<0.02	<0.0002	<	0.002	<	0.002		<	0.002		<0.0002	<0.0002	<0.0002			
Benzo [a] Anthracene	NE	NE	<0.02	<0.0002	<	0.002	<	0.002		<	0.002		<0.0002	<0.00005	<0.00005			
Benzo [a] Pyrene	NE	NE	<0.02	<0.0002	<	0.002	<	0.002		<	0.002		<0.0002	<0.00005	<0.00005			
Benzo [b] Fluoranthene	NE	NE	<0.02	<0.0002	<	0.002	<	0.002		<	0.002		<0.0002	<0.00005	<0.00005			
Benzo [g,h,i] Perylene	NE	NE	<0.02	<0.0002	<	0.002	<	0.002		<	0.002		<0.0002	<0.0002	<0.0002			
Benzo [k] Fluoranthene	NE	NE	<0.02	<0.0002	<	0.002	<	0.002		<	0.002		<0.0002	<0.00005	<0.00005			
Chrysene	NE	NE	<0.02	<0.0002	<	0.002	<	0.002		<	0.002		<0.0002	<0.00005	<0.00005			
Dibenzo [a,h] Anthracene	NE	NE	<0.02	<0.0002	<	0.002	<	0.002		<	0.002		<0.0002	<0.00005	<0.00005			
Fluoranthene	NE	NE	<0.02	<0.0002	<	0.002	<	0.002		<	0.002		<0.0002	<0.0002	<0.0002			
Fluorene	NE	NE	<0.02	<0.0003	<	0.002	<	0.002		<	0.002		<0.0002	<0.0002	<0.0002			
Indeno [1,2,3-cd] Pyrene	NE	NE	<0.02	<0.0002	<	0.002	<	0.002		<	0.002		<0.0002	<0.00005	<0.00005			
Naphthalene	NE	2.67	<0.02	<0.0003	<	0.002	<	0.002		<	0.002		**0.001**	**0.0004**	**0.0012**			
Phenanthrene	NE	NE	<0.02	<0.0002	<	0.002	<	0.002		<	0.002		<0.0002	<0.0002	<0.0002			
Pyrene	NE	NE	<0.02	<0.0002	<	0.002	<	0.002		<	0.002		<0.0002	<0.0002	<0.0002			
INORGANICS (ppm)																		
Total Cyanide	NE	NE	<0.02	<0.05	<	0.010	<	0.010		**0.02**	0.010		**0.0205**	**0.0316**	**0.0454**			
Dissolved Free Cyanide	NE	NE		<0.05	<	0.010	<	0.010		<	0.010		<0.005	**0.0239**	**0.02**			
Physiologically Available Cyanide	NE	NE		<0.05														
Arsenic	NE	NE	<0.002	<0.0025														
Beryllium	NE	NE	<0.002	<0.0005														
Chromium	NE	NE	<0.024	<0.010														
Copper	NE	NE	<0.024	<0.010														
Lead	NE	NE	<0.05	<0.0025														
Nickel	NE	NE	<0.024	<0.025														
Zinc	NE	NE	**0.023**	<0.025														
Dissolved Arsenic	NE	NE		<0.0025														
Dissolved Beryllium	NE	NE		<0.0005														
Dissolved Chromium	NE	NE		<0.010														
Dissolved Copper	NE	NE		<0.010														
Dissolved Lead	NE	NE		<0.0025														
Dissolved Nickel	NE	NE		<0.025														
Dissolved Zinc	NE	NE		<0.025														

Notes:

	Blank cells indicate that the parameter was not analyzed during this sampling round
D	"D" qualifier indicates analytes reported from a diluted run of the original analysis.
E	"E" qualifier indicates that the analyte was reported above the quantitation limit; Estimated value
J	"J" qualifier indicates analyte value was below the Method reporting Limit; Estimated value.
B	"B" qualifier indicates that the analyte was present in the method blank
NE	Regulatory Limit is not established
Bold Value	= concentration detected above the Method Reporting Limit.
	= concentration equals or exceeds the RIDEM GB Groundwater Objective (RIDEM GB GW Objectives)
	=detection limit equals or exceeds the RIDEM GB Groundwater Objective
(1)	Method 2 GB Objective criteria for naphthalene developed by GZA in accordance with the methods described in the Remediation Regulations.
(2)	Well was not sampled because there was limited water
(3)	NAPL was noted to be present
(4)	Well was not sampled because it had not been installed yet.
(5)	Well was not sampled because of an unknown reason
(6)	Well was not included in this sampling round

Please note that this table only includes compounds that have been detected or have detection limits that exceeded the RIDEM GB Groundwater Objective during groundwater monitoring at the Site between 1996 and present.

TABLE 5C
GROUNDWATER MONITORING DATA
North Fill Area
Former Tidewater Facility
Pawtucket, Rhode Island

ANALYTICAL	Sample ID:		MW-310S														
	Collected By:		AES	VHB	GZA		GZA		GZA	GZA			GZA	GZA	GZA	GZA	GZA
	Sample Date:		1996	2006	Jan 2010		June 2010		Dec 2010	July 2011			July 2012	Aug 2013	Oct 2014	Nov 2015	Nov 2016	Oct 2017
	RIDEM GB GW UCL	RIDEM GB GW-O	Note (4)	Note (4)	Note (4)				Note (6)									
VOCs (ppm)							Result	DL		Result	DL							
1,1,1,2-Tetrachloroethane	NE	NE					<	0.001		<	0.001		<0.001	<0.001	<0.0010	<0.0010	<0.0010	<0.0010
1,1-Dichloroethene	23	0.007					<	0.001		<	0.001		<0.001	<0.001	<0.0010	<0.0010	<0.0010	<0.0010
1,2,4-Trimethylbenzene	NE	NE					<	0.001		<	0.001		<0.001	<0.001	<0.0010	<0.0010	<0.0010	<0.0010
1,2-Dibromo-3-Chloropropane	NE	0.002					<	0.002		<	0.002		<0.005	<0.005	<0.0050	<0.0050	<0.0050	<0.0050
1,3,5-Trimethylbenzene	NE	NE					<	0.001		<	0.001		<0.001	<0.001	<0.0010	<0.0010	<0.0010	<0.0010
4-Isopropyltoluene	NE	NE											<0.001	<0.001	<0.0010	<0.0010	<0.0010	<0.0010
Acetone	NE	NE					<	0.01		<	0.01		<0.01	<0.01	<0.0100	<0.0100	<0.0010	<0.0010
Benzene	18	0.14					<	0.001		<	0.001		**0.0029**	**0.0035**	**0.002**	J 0.0005	<0.0010	<0.0010
Carbon Disulfide	NE	NE								<	0.001		<0.001	<0.001	<0.0010	<0.0010	<0.0010	<0.0010
Carbon Tetrachloride	NE	0.07					<	0.001		<	0.001		<0.001	<0.001	<0.0010	<0.0010	<0.0010	<0.0010
Chloroform	NE	NE					<	0.001		<	0.001		<0.001	<0.001	<0.0010	<0.0010	<0.0010	<0.0010
cis-1,2-Dichloroethene	69	2.4					<	0.001		<	0.001		<0.001	<0.001	<0.0010	<0.0010	<0.0010	<0.0010
Ethylbenzene	16	1.6					<	0.001		<	0.001		**0.0012**	0.0004 J	<0.0010	<0.0010	<0.0010	<0.0010
Isopropylbenzene	NE	NE					<	0.001		<	0.001		<0.001	0.0004 J	<0.0010	<0.0010	<0.0010	<0.0010
Methyl tert-Butyl Ether	NE	5					<	0.001		<	0.001		<0.001	<0.001	<0.0010	<0.0010	<0.0010	<0.0010
Methylene Chloride	NE	NE					<	0.002		<	0.002		<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
Naphthalene	NE	2.67					<	0.002		<	0.002		<0.001	<0.001	<0.0010	B <0.0020	<0.0010	<0.0010
n-Butylbenzene	NE	NE					<	0.001		<	0.001		<0.001	<0.001	<0.0010	<0.0010	<0.0010	<0.0010
n-Propylbenzene	NE	NE					<	0.001		<	0.001		<0.001	<0.001	<0.0010	<0.0010	<0.0010	<0.0010
sec-Butylbenzene	NE	NE					<	0.001		<	0.001		<0.001	<0.001	<0.0010	<0.0010	<0.0010	<0.0010
Styrene	50	2.2					<	0.001		<	0.001		<0.001	<0.001	<0.0010	<0.0010	<0.0010	<0.0010
tert-Butylbenzene	NE	NE					<	0.001		<	0.001		<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Tertiary-amyl methyl ether	NE	NE											<0.001	<0.001	<0.0010	<0.0010	<0.0010	<0.0010
Tetrachloroethene	NE	0.15					<	0.001		<	0.001		<0.001	<0.001	<0.0010	<0.0010	<0.0010	<0.0010
Toluene	21	1.7					<	0.001		<	0.001		<0.001	<0.001	<0.0010	<0.0010	<0.0010	<0.0010
Trichloroethene	87	0.54					<	0.001		<	0.001		<0.001	<0.001	<0.0010	<0.0010	<0.0010	<0.0010
Vinyl Chloride	NE	0.002					<	0.001		<	0.001		<0.001	<0.001	<0.0010	<0.0010	<0.0010	<0.0010
Xylene O	NE	NE					<	0.001		<	0.001		<0.001	0.0006 J	<0.0010	<0.0010	<0.0010	<0.0010
Xylene P,M	NE	NE					<	0.002		<	0.002		<0.002	<0.002	<0.0020	<0.0020	<0.0020	<0.0020
Xylenes (Total)	NE	NE					<	0.003		<	0.003		<0.003	0.0006 J	<0.003	<0.0020	<0.0020	<0.0020
Total VOCs	NE	NE						ND			ND		**0.0041**	**0.0049**	**0.0033**	**0.0005**	ND	ND
TOTAL PETROLEUM HYDROCARBON (ppm)																		
Hydrocarbon Content	NE	NE					**0.41**	0.2		<	0.2		<0.2	<0.19	<0.19			
PAHS BY GCMS (ppm)																		
2-Methylnaphthalene	NE	NE					<	0.002		<	0.002		<0.0002	<0.0002	<0.0002			
Acenaphthene	NE	NE					<	0.002		<	0.002		**0.0004**	**0.0008**	**0.0021**			
Acenaphthylene	NE	NE					<	0.002		<	0.002		<0.0002	<0.0002	**0.0003**			
Anthracene	NE	NE					<	0.002		<	0.002		<0.0002	<0.0002	<0.0002			
Benzo [a] Anthracene	NE	NE					<	0.002		<	0.002		<0.0002	<0.00005	<0.00005			
Benzo [a] Pyrene	NE	NE					<	0.002		<	0.002		<0.0002	<0.00005	<0.00005			
Benzo [b] Fluoranthene	NE	NE					<	0.002		<	0.002		<0.0002	<0.00005	<0.00005			
Benzo [g,h,i] Perylene	NE	NE					<	0.002		<	0.002		<0.0002	<0.0002	<0.0002			
Benzo [k] Fluoranthene	NE	NE					<	0.002		<	0.002		<0.0002	<0.00005	<0.00005			
Chrysene	NE	NE					<	0.002		<	0.002		<0.0002	<0.00005	<0.00005			
Dibenzo [a,h] Anthracene	NE	NE					<	0.002		<	0.002		<0.0002	<0.00005	<0.00005			
Fluoranthene	NE	NE					<	0.002		<	0.002		<0.0002	<0.0002	<0.0002			
Fluorene	NE	NE					<	0.002		<	0.002		<0.0002	**0.0002**	**0.0006**			
Indeno [1,2,3-cd] Pyrene	NE	NE					<	0.002		<	0.002		<0.0002	<0.00005	<0.00005			
Naphthalene	NE	2.67					<	0.002		<	0.002		**0.0004**	**0.0002**	**0.0002**			
Phenanthrene	NE	NE					<	0.002		<	0.002		<0.0002	<0.0002	<0.0002			
Pyrene	NE	NE					<	0.002		<	0.002		<0.0002	<0.0002	<0.0002			
INORGANICS (ppm)																		
Total Cyanide	NE	NE					**0.090**	0.010		**0.06**	0.010		**0.0531**	**0.0548**	**0.069**			
Dissolved Free Cyanide	NE	NE					<	0.010		<	0.010		<0.005	**0.0414**	**0.0685**			
Physiologically Available Cyanide	NE	NE																
Arsenic	NE	NE																
Beryllium	NE	NE																
Chromium	NE	NE																
Copper	NE	NE																
Lead	NE	NE																
Nickel	NE	NE																
Zinc	NE	NE																
Dissolved Arsenic	NE	NE																
Dissolved Beryllium	NE	NE																
Dissolved Chromium	NE	NE																
Dissolved Copper	NE	NE																
Dissolved Lead	NE	NE																
Dissolved Nickel	NE	NE																
Dissolved Zinc	NE	NE																

Notes:

	Blank cells indicate that the parameter was not analyzed during this sampling round
D	"D" qualifier indicates analytes reported from a diluted run of the original analysis.
E	"E" qualifier indicates that the analyte was reported above the quantitation limit; Estimated value
J	"J" qualifier indicates analyte value was below the Method reporting Limit; Estimated value.
B	"B" qualifier indicates that the analyte was present in the method blank
NE	Regulatory Limit is not established
Bold Value	= concentration detected above the Method Reporting Limit.
	= concentration equals or exceeds the RIDEM GB Groundwater Objective (RIDEM GB GW Objectives)
	=detection limit equals or exceeds the RIDEM GB Groundwater Objective
(1)	Method 2 GB Objective criteria for naphthalene developed by GZA in accordance with the methods described in the Remediation Regulations.
(2)	Well was not sampled because there was limited water
(3)	NAPL was noted to be present
(4)	Well was not sampled because it had not been installed yet.
(5)	Well was not sampled because of an unknown reason
(6)	Well was not included in this sampling round

Please note that this table only includes compounds that have been detected or have detection limits that exceeded the RIDEM GB Groundwater Objective during groundwater monitoring at the Site between 1996 and present.

TABLE 5D
GROUNDWATER MONITORING DATA
North Fill Area
Former Tidewater Facility
Pawtucket, Rhode Island

ANALYTICAL	Sample ID:		MW-310D															
	Collected By:		AES	VHB	GZA		GZA		GZA	GZA		GZA	GZA	GZA	GZA	GZA	GZA	GZA
	Sample Date:		1996	2006	Jan 2010		June 2010		Dec 2010	July 2011		July 2012	Aug 2013	Oct 2014	Nov 2015	Nov 2016	Oct 2017	
	RIDEM GB GW UCL	RIDEM GB GW-O	Note (4)	Note (4)	Note (4)				Note (6)									
VOCs (ppm)							Result	DL		Result	DL	Result	Result	Result	Result	Result	Result	
1,1,1,2-Tetrachloroethane	NE	NE					<	0.025		<	0.05	<0.001	**0.13 D**	<0.100	<0.100	<0.0010	<0.0010	
1,1-Dichloroethene	23	0.007					<	0.025		<	0.05	<0.001	<0.1 D	<0.100	<0.100	<0.0010	<0.0010	
1,2,4-Trimethylbenzene	NE	NE					**0.32**	0.025		**0.64**	0.05	**0.712**	**0.473 D**	**0.652**	**0.577**	**0.554**	**0.593 D**	
1,2-Dibromo-3-Chloropropane	NE	0.002					<	0.050		<	0.10	<0.005	<0.5 D	<0.500	<0.500	<0.0050	<0.0050	
1,3,5-Trimethylbenzene	NE	NE					**0.84**	0.025		**0.17**	0.05	**0.18**	**0.102 D**	**0.162**	**0.148**	**0.147**	**0.149**	
4-Isopropyltoluene	NE	NE										**0.017**	<0.1 D	<0.100	**0.015**	**0.013**	**0.0138**	
Acetone	NE	NE					<	0.250		<	0.50	<0.01	<1 D	<1.00	<1.00	<0.0100	<0.0100	
Benzene	18	0.14					**0.29**	0.025		**0.65**	0.05	**0.618**	**0.678 D**	**0.652**	**0.739**	**0.617**	**0.713 D**	
Carbon Disulfide	NE	NE								<	0.05	<0.001	<0.1 D	<0.100	<0.100	<0.0010	<0.0010	
Carbon Tetrachloride	NE	0.07					<	0.025		<	0.05	<0.001	<0.1 D	<0.100	<0.100	<0.0010	<0.0010	
Chloroform	NE	NE					<	0.025		<	0.05	<0.001	<0.1 D	<0.100	<0.100	<0.0010	<0.0010	
cis-1,2-Dichloroethene	69	2.4					<	0.025		<	0.05	<0.001	<0.1 D	<0.100	<0.100	<0.0010	<0.0010	
Ethylbenzene	16	1.6					**0.4**	0.025		**0.92**	0.05	**1.07**	**0.72 D**	**0.918**	**0.975**	**0.882**	**0.792 D**	
Isopropylbenzene	NE	NE					**0.05**	0.025		**0.092**	0.05	**0.101**	**0.063 J D**	<0.100	**E 0.108**	**0.0899**	**0.0922**	
Methyl tert-Butyl Ether	NE	5					<	0.025		<	0.05	<0.001	<0.1 D	<0.100	<0.100	<0.100	<0.100	
Methylene Chloride	NE	NE					<	0.050		<	0.10	<0.002	<0.2 D	<0.200	<0.200	<0.200	<0.200	
Naphthalene	NE	2.67					**3.9**	0.050		**6.8**	0.10	**9.8**	**6.6 D**	**8.96**	**9.75**	**7.38**	**8.44 D**	
n-Butylbenzene	NE	NE					<	0.025		<	0.05	<0.001	<0.1 D	<0.100	<0.100	<0.0010	**0.012**	
n-Propylbenzene	NE	NE					<	0.025		<	0.05	**0.0524**	<0.1 D	<0.100	**0.0438**	**0.0347**	**0.0396**	
sec-Butylbenzene	NE	NE					<	0.025		<	0.05	**0.005**	<0.1 D	<0.100	**0.0019**	<0.0010	**0.0014**	
Styrene	50	2.2					<	0.025		<	0.05	<0.001	<0.1 D	<0.100	**0.0235**	**0.0176**	**0.0173**	
tert-Butylbenzene	NE	NE					<	0.025		<	0.05	<0.100	<0.1 D	<0.100	<0.100	<0.0010	<0.0010	
Tertiary-amyl methyl ether	NE	NE										<0.001	<0.1 D	<0.100	<0.100	<0.100	<0.100	
Tetrachloroethene	NE	0.15					<	0.025		<	0.05	<0.001	<0.1 D	<0.100	<0.100	<0.100	<0.100	
Toluene	21	1.7					**0.061**	0.025		**0.19**	0.05	**0.198**	**0.174 D**	**0.173**	**0.213**	**0.154**	**0.178 D**	
Trichloroethene	87	0.54					<	0.025		<	0.05	<0.001	<0.1 D	<0.100	<0.100	<0.0010	<0.0010	
Vinyl Chloride	NE	0.002					<	0.025		<	0.05	<0.001	<0.1 D	<0.100	<0.100	<0.0010	<0.0010	
Xylene O	NE	NE					**0.33**	0.025		**0.66**	0.05	**0.735**	**0.489 D**	**0.646**	**0.64**	**0.604**	**0.574 D**	
Xylene P,M	NE	NE					**0.29**	0.050		**0.67**	0.10	**0.775**	**0.478 D**	**0.659**	**0.709**	**0.608**	**0.573 D**	
Xylenes (Total)	NE	NE					**0.62**	0.075		**1.33**	0.15	**1.51**	**0.967 D**	**1.3**	**1.35**	**1.21**	**1.15 D**	
Total VOCs	NE	NE					**6.480**			**10.790**		**14.263**	**9.907**	**12.822**	**13.943**	**12.311**	**12.188**	
TOTAL PETROLEUM HYDROCARBON (ppm)																		
Hydrocarbon Content	NE	NE					**6.8**	1		**8.7**	0.2	**11.6**	**13.5**	**11.6**				
PAHS BY GCMS (ppm)																		
2-Methylnaphthalene	NE	NE					**0.17 D**	0.05		**0.2**	0.01	**0.394**	**0.403 D**	**0.319**				
Acenaphthene	NE	NE					**0.088**	0.002		**0.054**	0.002	**0.158**	**0.0914 D**	**0.115**				
Acenaphthylene	NE	NE					**0.027**	0.002		**0.023**	0.002	**0.064**	**0.0454 D**	**0.0436**				
Anthracene	NE	NE					**0.010**	0.002		<	0.002	<0.02	**0.0024 D**	<0.0093				
Benzo [a] Anthracene	NE	NE					<	0.002		<	0.002	<0.02	<0.0005 D	<0.0023				
Benzo [a] Pyrene	NE	NE					<	0.002		<	0.002	<0.02	<0.0005 D	<0.0023				
Benzo [b] Fluoranthene	NE	NE					<	0.002		<	0.002	<0.02	<0.0005 D	<0.0023				
Benzo [g,h,i] Perylene	NE	NE					<	0.002		<	0.002	<0.02	<0.0019 D	<0.0093				
Benzo [k] Fluoranthene	NE	NE					<	0.002		<	0.002	<0.02	<0.0005 D	<0.0023				
Chrysene	NE	NE					<	0.002		<	0.002	<0.02	<0.0005 D	<0.0023				
Dibenzo [a,h] Anthracene	NE	NE					<	0.002		<	0.002	<0.02	<0.0005 D	<0.0023				
Fluoranthene	NE	NE					<	0.002		<	0.002	<0.02	<0.0019 D	<0.0093				
Fluorene	NE	NE					**0.022**	0.002		**0.018**	0.002	**0.047**	**0.0311 D**	**0.0354**				
Indeno [1,2,3-cd] Pyrene	NE	NE					<	0.002		<	0.002	<0.02	<0.0005 D	<0.0023				
Naphthalene	NE	2.67					**2.2 D**	0.05		**2.5**	0.04	**5.76**	**4.57 D**	**4.87**				
Phenanthrene	NE	NE					**0.010**	0.002		**0.012**	0.002	**0.029**	**0.0207 D**	**0.0205**				
Pyrene	NE	NE					<	0.002		<	0.002	<0.02	<0.0019 D	<0.0093				
INORGANICS (ppm)																		
Total Cyanide	NE	NE					**0.18**	0.010		**0.12**	0.010	**0.132**	**0.139**	**0.136**				
Dissolved Free Cyanide	NE	NE					**0.070**	0.010		**0.15**	0.010	**0.0293**	**0.133**	**0.135**				
Physiologically Available Cyanide	NE	NE																
Arsenic	NE	NE																
Beryllium	NE	NE																
Chromium	NE	NE																
Copper	NE	NE																
Lead	NE	NE																
Nickel	NE	NE																
Zinc	NE	NE																
Dissolved Arsenic	NE	NE																
Dissolved Beryllium	NE	NE																
Dissolved Chromium	NE	NE																
Dissolved Copper	NE	NE																
Dissolved Lead	NE	NE																
Dissolved Nickel	NE	NE																
Dissolved Zinc	NE	NE																

Notes:

	Blank cells indicate that the parameter was not analyzed during this sampling round
D	"D" qualifier indicates analytes reported from a diluted run of the original analysis.
E	"E" qualifier indicates that the analyte was reported above the quantitation limit; Estimated value
J	"J" qualifier indicates analyte value was below the Method reporting Limit; Estimated value.
B	"B" qualifier indicates that the analyte was present in the method blank
NE	Regulatory Limit is not established
Bold Value	= concentration detected above the Method Reporting Limit.
	= concentration equals or exceeds the RIDEM GB Groundwater Objective (RIDEM GB GW Objectives)
	=detection limit equals or exceeds the RIDEM GB Groundwater Objective
(1)	Method 2 GB Objective criteria for naphthalene developed by GZA in accordance with the methods described in the Remediation Regulations.
(2)	Well was not sampled because there was limited water
(3)	NAPL was noted to be present
(4)	Well was not sampled because it had not been installed yet.
(5)	Well was not sampled because of an unknown reason
(6)	Well was not included in this sampling round

Please note that this table only includes compounds that have been detected or have detection limits that exceeded the RIDEM GB Groundwater Objective during groundwater monitoring at the Site between 1996 and present.

TABLE 5E
GROUNDWATER MONITORING DATA
Former Gas Plant Area
Former Tidewater Facility
Pawtucket, Rhode Island

ANALYTICAL	Sample ID:		MW-201															
	Collected By:		AES	VHB	GZA		GZA		GZA	GZA		GZA	GZA	GZA	GZA	GZA	GZA	GZA
	Sample Date:		1996	2006	Jan 2010		June 2010		Dec 2010	July 2011		July 2012	Aug 2013	Oct 2014	Nov 2015	Nov 2016	Oct 2017	
	RIDEM GB GW UCL	RIDEM GB GW-O	Note (4)						Note (6)									
VOCs (ppm)				Result	Result	DL	Result	DL		Result	DL	Result	Result	Result	Result	Result	Result	
1,1,1,2-Tetrachloroethane	NE	NE			<	0.001	<	0.001		<	0.001	<0.001	<0.001	<0.001	<0.001	<0.0010	<0.0010	
1,1-Dichloroethene	23	0.007			<	0.001	<	0.001		<	0.001	<0.001	<0.001	<0.001	<0.001	<0.0010	<0.0010	
1,2,4-Trimethylbenzene	NE	NE		**0.0907**	**0.017**	0.001	**0.0094**	0.001		**0.0047**	0.001	**0.0019**	**0.0248**	**0.0066**	**0.0219**	**0.0051**	**0.0025**	
1,2-Dibromo-3-Chloropropane	NE	0.002			<	0.005	<	0.005		<	0.005	<0.005	<0.005	<0.005	<0.005	<0.0050	<0.0050	
1,3,5-Trimethylbenzene	NE	NE		**0.0024**	<	0.001	<	0.001		<	0.001	<0.001	**0.0024**	<0.001	**0.0012**	<0.0010	<0.0010	
4-Isopropyltoluene	NE	NE										<0.001	<0.001	<0.001	J 0.0007	<0.0010	<0.0010	
Acetone	NE	NE			<	0.025	<	0.025		<	0.025	<0.01	<0.01	<0.01	**0.0239**	<0.0100	<0.0100	
Benzene	18	0.14		**0.0047**	**0.032**	0.001	**0.050**	0.001		**0.050**	0.001	**0.0397**	**0.0948 D**	**0.133**	**0.133**	**0.0686**	**0.0962**	
Carbon Disulfide	NE	NE								<	0.001	<0.001	<0.001	**0.0094**	**0.0019**	<0.0010	<0.0010	
Carbon Tetrachloride	NE	0.07			<	0.001	<	0.001		<	0.001	<0.001	<0.001	<0.001	<0.001	<0.0010	<0.0010	
Chloroform	NE	NE		<0.001	<	0.001	<	0.001		<	0.001	<0.001	<0.001	<0.001	<0.001	<0.0010	<0.0010	
cis-1,2-Dichloroethene	69	2.4			<	0.001	<	0.001		<	0.001	<0.001	<0.001	<0.001	<0.001	<0.0010	<0.0010	
Ethylbenzene	16	1.6		**0.0228**	**0.055**	0.001	**0.064**	0.001		**0.035**	0.001	**0.0163**	**0.0658**	**0.0166**	**0.0346**	**0.0061**	**0.0145**	
Isopropylbenzene	NE	NE		**0.0164**	**0.025**	0.001	**0.020**	0.001		**0.017**	0.001	**0.0129**	**0.0274**	**0.0172**	**0.0252**	**0.0151**	**0.011**	
Methyl tert-Butyl Ether	NE	5		<0.001	<	0.001	<	0.001		<	0.001	<0.001	<0.001	<0.001	<0.001	<0.0010	<0.0010	
Methylene Chloride	NE	NE			<	0.002	<	0.002		<	0.002	<0.002	<0.002	<0.002	<0.002	<0.0020	<0.0020	
Naphthalene	NE	2.67		**0.0028**	**0.019**	0.002	**0.020**	0.002		**0.010**	0.002	**0.0032**	**0.0781**	**0.0115**	**0.0198**	**0.0028**	**0.003**	
n-Butylbenzene	NE	NE		<0.001	**0.0067**	0.001	**0.0062**	0.001		**0.0056**	0.001	**0.0056**	**0.0068**	**0.0048**	**0.007**	**0.0041**	**0.0023**	
n-Propylbenzene	NE	NE		**0.0149**	**0.018**	0.001	**0.018**	0.001		**0.015**	0.001	**0.0124**	**0.0227**	**0.0142**	**0.02**	**0.012**	**0.0085**	
sec-Butylbenzene	NE	NE		**0.0031**	**0.0024**	0.001	**0.0024**	0.001		**0.0021**	0.001	**0.0018**	**0.0026**	**0.0016**	**0.0024**	**0.0016**	<0.0010	
Styrene	50	2.2			<	0.001	<	0.001		<	0.001	<0.001	**0.0043**	**0.0015**	**0.0042**	<0.0010	**0.0032**	
tert-Butylbenzene	NE	NE			<	0.001	<	0.001		<	0.001	<0.001	<0.001	<0.001	J 0.0003	<0.0010	<0.0010	
Tertiary-amyl methyl ether	NE	NE										<0.001	<0.001	<0.001	<0.001	<0.0010	<0.0010	
Tetrachloroethene	NE	0.15			<	0.001	<	0.001		<	0.001	<0.001	<0.001	<0.001	<0.001	<0.0010	<0.0010	
Toluene	21	1.7		**0.0018**	<	0.001	**0.0024**	0.001		<	0.001	<0.001	<0.001	**0.0012**	**0.0026**	<0.0010	<0.0010	
Trichloroethene	87	0.54			<	0.001	<	0.001		<	0.001	<0.001	<0.001	<0.001	<0.001	<0.0010	<0.0010	
Vinyl Chloride	NE	0.002			<	0.001	<	0.001		<	0.001	<0.001	<0.001	<0.001	<0.001	<0.0010	<0.0010	
Xylene O	NE	NE		**0.0113**	**0.021**	0.001	**0.0062**	0.001		**0.0053**	0.001	**0.0021**	**0.0252**	**0.0056**	**0.0239**	**0.0026**	**0.002**	
Xylene P,M	NE	NE		**0.0024**	<	0.002	<	0.002		<	0.002	<0.002	**0.0051**	<0.002	B <0.0040	<0.0020	<0.0020	
Xylenes (Total)	NE	NE		**0.0137**	**0.021**	0.003	**0.0062**	0.003		**0.0053**	0.003	**0.0021**	**0.0303**	**0.0056**	**0.0265**	**0.0026**	**0.002**	
Total VOCs	NE	NE		**0.1733**	**0.1961**		**0.1986**			**0.1447**		**0.0959**	**0.3987**	**0.2232**	**0.3226**	**0.1206**	**0.1432**	
TOTAL PETROLEUM HYDROCARBON (ppm)																		
Hydrocarbon Content	NE	NE			**0.66**	0.2	<	0.2		**0.6**	0.2	**1.77**	**1.86**	**1.65**				
PAHS BY GCMS (ppm)																		
2-Methylnaphthalene	NE	NE		**0.00076**	<	0.002	**0.0068**	0.002		<	0.002	<0.0002	**0.0004**	**0.0002**				
Acenaphthene	NE	NE		**0.0088**	**0.0052**	0.002	<	0.002		**0.0053 D**	0.002	**0.006**	**0.0061**	**0.0052**				
Acenaphthylene	NE	NE		**0.00209**	<	0.002	<	0.002		<	0.002	**0.002**	**0.0019**	**0.0011**				
Anthracene	NE	NE		**0.0035**	<	0.002	<	0.002		<	0.002	**0.004**	**0.003**	**0.0025**				
Benzo [a] Anthracene	NE	NE		**0.00102**	<	0.002	<	0.002		<	0.002	**0.0004**	**0.0005**	**0.0003**				
Benzo [a] Pyrene	NE	NE		**0.00085**	<	0.002	<	0.002		<	0.002	**0.0003**	**0.0003**	**0.0001**				
Benzo [b] Fluoranthene	NE	NE		**0.00051**	<	0.002	<	0.002		<	0.002	**0.0003**	**0.0003**	**0.0001**				
Benzo [g,h,i] Perylene	NE	NE		**0.00035**	<	0.002	<	0.002		<	0.002	<0.0002	<0.0002	<0.0002				
Benzo [k] Fluoranthene	NE	NE		**0.00063**	<	0.002	<	0.002		<	0.002	<0.0002	**0.0001**	<0.00005				
Chrysene	NE	NE		**0.00112**	<	0.002	<	0.002		<	0.002	**0.0004**	**0.0005**	**0.0002**				
Dibenzo [a,h] Anthracene	NE	NE		**0.00023**	<	0.002	<	0.002		<	0.002	<0.0002	**0.00006**	<0.00005				
Fluoranthene	NE	NE		**0.00503**	<	0.002	<	0.002		<	0.002	**0.002**	**0.0014**	**0.0015**				
Fluorene	NE	NE		**0.014**	**0.011**	0.002	<	0.002		**0.011 D**	0.002	**0.012**	**0.0108**	**0.0103**				
Indeno [1,2,3-cd] Pyrene	NE	NE		**0.00039**	<	0.002	<	0.002		<	0.002	<0.0002	**0.0002**	**0.00008**				
Naphthalene	NE	2.67		**0.012**	**0.0069**	0.002	<	0.002		**0.0042 D**	0.002	**0.002**	**0.0306 D**	**0.0065**				
Phenanthrene	NE	NE		**0.012**	**0.085**	0.002	<	0.002		**0.086 D**	0.002	**0.012**	**0.0094**	**0.0075**				
Pyrene	NE	NE		**0.00356**	<	0.002	<	0.002		<	0.002	**0.003**	**0.0024**	**0.0019**				
INORGANICS (ppm)																		
Total Cyanide	NE	NE		**2.52**	**4.1**	0.010	**3.5**	0.010		**4.0**	0.010	**0.0075**	**3.68 D**	**1.16**				
Dissolved Free Cyanide	NE	NE		<0.05	**0.020**	0.010	**0.15**	0.010		**0.13**	0.010	**0.0067**	**2.37 D**	**1**				
Physiologically Available Cyanide	NE	NE		**0.215**														
Arsenic	NE	NE		<0.0050														
Beryllium	NE	NE		<0.001														
Chromium	NE	NE		<0.020														
Copper	NE	NE		<0.020														
Lead	NE	NE		**0.0181**														
Nickel	NE	NE		<0.050														
Zinc	NE	NE		<0.050														
Dissolved Arsenic	NE	NE		<0.0050														
Dissolved Beryllium	NE	NE		<0.001														
Dissolved Chromium	NE	NE		<0.020														
Dissolved Copper	NE	NE		<0.020														
Dissolved Lead	NE	NE		<0.0050														
Dissolved Nickel	NE	NE		<0.050														
Dissolved Zinc	NE	NE		<0.050														

Notes:

	Blank cells indicate that the parameter was not analyzed during this sampling round
D	"D" qualifier indicates analytes reported from a diluted run of the original analysis.
E	"E" qualifier indicates that the analyte was reported above the quantitation limit; Estimated value
J	"J" qualifier indicates analyte value was below the Method reporting Limit; Estimated value.
B	"B" qualifier indicates that the analyte was present in the method blank
NE	Regulatory Limit is not established
Bold Value	= concentration detected above the Method Reporting Limit.
	= concentration equals or exceeds the RIDEM GB Groundwater Objective (RIDEM GB GW Objectives)
	=detection limit equals or exceeds the RIDEM GB Groundwater Objective
(1)	Method 2 GB Objective criteria for naphthalene developed by GZA in accordance with the methods described in the Remediation Regulations.
(2)	Well was not sampled because there was limited water
(3)	NAPL was noted to be present
(4)	Well was not sampled because it had not been installed yet.
(5)	Well was not sampled because of an unknown reason
(6)	Well was not included in this sampling round

Please note that this table only includes compounds that have been detected or have detection limits that exceeded the RIDEM GB Groundwater Objective during groundwater monitoring at the Site between 1996 and present.

TABLE 5F
GROUNDWATER MONITORING DATA
Former Gas Plant Area
Former Tidewater Facility
Pawtucket, Rhode Island

ANALYTICAL	Sample ID:		MW-208														
	Collected By:		AES	VHB	GZA		GZA		GZA	GZA		GZA	GZA	GZA	GZA	GZA	GZA
	Sample Date:		1996	2006	Jan 2010		June 2010		Dec 2010	July 2011		July 2012	Aug 2013	Oct 2014	Nov 2015	Nov 2016	Oct 2017
	RIDEM GB GW UCL	RIDEM GB GW-O	Note (4)						Note (6)								
VOCs (ppm)				Result	Result	DL	Result	DL		Result	DL	Result	Result	Result	Result	Result	Result
1,1,1,2-Tetrachloroethane	NE	NE			<	0.001	<	0.001		<	0.001	<0.001	<0.001	<0.001	<0.001	<0.0010	<0.0010
1,1-Dichloroethene	23	0.007			<	0.001	<	0.001		<	0.001	<0.001	<0.001	<0.001	<0.001	<0.0010	<0.0010
1,2,4-Trimethylbenzene	NE	NE		<0.001	<	0.001	<	0.001		<	0.001	<0.001	<0.001	<0.001	**0.0012**	<0.0010	<0.0010
1,2-Dibromo-3-Chloropropane	NE	0.002			<	0.002	<	0.002		<	0.002	<0.005	<0.005	<0.005	<0.005	<0.0050	<0.0050
1,3,5-Trimethylbenzene	NE	NE		<0.001	<	0.001	<	0.001		<	0.001	<0.001	<0.001	<0.001	J 0.0003	<0.0010	<0.0010
4-Isopropyltoluene	NE	NE										<0.001	0.0009 J	<0.001	J 0.0003	<0.0010	<0.0010
Acetone	NE	NE			<	0.025	<	0.01		<	0.01	<0.01	<0.01	<0.01	J 0.0080	<0.0100	<0.0100
Benzene	18	0.14		**0.0016**	**0.004**	0.001	<	0.001		<	0.001	**0.0017**	0.0006 J	**0.0016**	**0.0032**	**0.001**	<0.0010
Carbon Disulfide	NE	NE			<	0.001	<	0.001		<	0.001	<0.001	<0.001	<0.001	<0.001	<0.0010	<0.0010
Carbon Tetrachloride	NE	0.07			<	0.001	<	0.001		<	0.001	<0.001	<0.001	<0.001	<0.001	<0.0010	<0.0010
Chloroform	NE	NE		<0.001	<	0.001	<	0.001		<	0.001	<0.001	<0.001	<0.001	<0.001	<0.0010	<0.0010
cis-1,2-Dichloroethene	69	2.4			<	0.001	<	0.001		<	0.001	<0.001	<0.001	<0.001	<0.001	<0.0010	<0.0010
Ethylbenzene	16	1.6		**0.0012**	**0.0033**	0.001	<	0.001		**0.0037**	0.001	**0.005**	**0.0096**	<0.001	**0.0012**	<0.0010	<0.0010
Isopropylbenzene	NE	NE		**0.0126**	**0.011**	0.001	<	0.001		**0.0037**	0.001	**0.0037**	**0.0027**	<0.001	J 0.0004	<0.0010	<0.0010
Methyl tert-Butyl Ether	NE	5		<0.001	<	0.001	<	0.001		<	0.001	<0.001	<0.001	<0.001	<0.001	<0.0010	<0.0010
Methylene Chloride	NE	NE													<0.002	<0.0020	<0.0020
Naphthalene	NE	2.67		**0.0014**	**0.0023**	0.002	<	0.002		**0.0021**	0.002	**0.0028**	<0.001	<0.001	**0.0187**	<0.0010	<0.0010
n-Butylbenzene	NE	NE		<0.001	**0.015**	0.001	**0.0012**	0.001		**0.0076**	0.001	**0.0154**	**0.0132**	<0.001	<0.001	**0.0034**	<0.0010
n-Propylbenzene	NE	NE		**0.0075**	**0.0090**	0.001	<	0.001		**0.0021**	0.001	**0.0019**	**0.0012**	<0.001	<0.001	<0.0010	<0.0010
sec-Butylbenzene	NE	NE		**0.0092**	**0.0074**	0.001	<	0.001		**0.0068**	0.001	**0.0077**	**0.0066**	**0.0032**	**0.0024**	**0.0026**	**0.0033**
Styrene	50	2.2			<	0.001	<	0.001		<	0.001	<0.001	<0.001	<0.001	J 0.0001	<0.0010	<0.0010
tert-Butylbenzene	NE	NE			<	0.001	<	0.001		<	0.001	<0.001	<0.001	<0.001	<0.001	<0.0010	<0.0010
Tertiary-amyl methyl ether	NE	NE										<0.001	<0.001	<0.001	<0.001	<0.0010	<0.0010
Tetrachloroethene	NE	0.15			<	0.001	<	0.001		<	0.001	<0.001	<0.001	<0.001	<0.001	<0.0010	<0.0010
Toluene	21	1.7		<0.001	**0.0017**	0.001	<	0.001		<	0.001	<0.001	0.0004 J	<0.001	J 0.0004	<0.0010	<0.0010
Trichloroethene	87	0.54			<	0.001	<	0.001		<	0.001	<0.001	<0.001	<0.001	<0.001	<0.0010	<0.0010
Vinyl Chloride	NE	0.002			<	0.001	<	0.001		<	0.001	<0.001	<0.001	<0.001	<0.001	<0.0010	<0.0010
Xylene O	NE	NE		**0.0036**	**0.0025**	0.001	<	0.001		**0.002**	0.001	**0.0039**	**0.0044**	<0.001	**0.001**	<0.0010	<0.0010
Xylene P,M	NE	NE		<0.002	<	0.002	<	0.002		<	0.002	<0.002	0.0009 J	<0.002	J 0.0011	<0.0020	<0.0020
Xylenes (Total)	NE	NE		**0.0036**	**0.0025**	0.003	<	0.003		**0.002**	0.003	**0.0039**	**0.0053**	<0.003	**0.0021**	<0.0020	<0.0020
Total VOCs	NE	NE		**0.0371**	**0.0560**		**0.0012**			**0.0280**		**0.0421**	**0.0405**	**0.0048**	**0.0383**	**0.0070**	**0.0033**
TOTAL PETROLEUM HYDROCARBON (ppm)																	
Hydrocarbon Content	NE	NE			**0.57**	0.2	**0.8**	0.2		**0.31**	0.2	**1**	**0.9**	**0.48**			
PAHS BY GCMS (ppm)																	
2-Methylnaphthalene	NE	NE		<0.0002	<	0.002	**0.033**	0.002		<	0.002	<0.0002	<0.0002	**0.0002**			
Acenaphthene	NE	NE		**0.00156**	<	0.002	**0.0067**	0.002		<	0.002	**0.003**	**0.0023**	**0.0014**			
Acenaphthylene	NE	NE		**0.0013**	<	0.002	<	0.002		<	0.002	**0.002**	**0.002**	**0.0005**			
Anthracene	NE	NE		<0.0002	<	0.002	<	0.002		<	0.002	**0.0005**	**0.0005**	**0.0002**			
Benzo [a] Anthracene	NE	NE		<0.0002	<	0.002	<	0.002		<	0.002	<0.0002	<0.00005	<0.00005			
Benzo [a] Pyrene	NE	NE		<0.0002	<	0.002	<	0.002		<	0.002	<0.0002	<0.00005	<0.00005			
Benzo [b] Fluoranthene	NE	NE		<0.0002	<	0.002	<	0.002		<	0.002	<0.0002	<0.00005	<0.00005			
Benzo [g,h,i] Perylene	NE	NE		<0.0002	<	0.002	<	0.002		<	0.002	<0.0002	<0.0002	<0.0002			
Benzo [k] Fluoranthene	NE	NE		<0.0002	<	0.002	<	0.002		<	0.002	<0.0002	<0.00005	<0.00005			
Chrysene	NE	NE		<0.0002	<	0.002	<	0.002		<	0.002	<0.0002	<0.00005	<0.00005			
Dibenzo [a,h] Anthracene	NE	NE		<0.0002	<	0.002	<	0.002		<	0.002	<0.0002	<0.00005	<0.00005			
Fluoranthene	NE	NE		<0.0002	<	0.002	<	0.002		<	0.002	**0.0003**	**0.0002**	<0.0002			
Fluorene	NE	NE		**0.00139**	<	0.002	**0.011**	0.002		<	0.002	**0.002**	**0.0015**	**0.002**			
Indeno [1,2,3-cd] Pyrene	NE	NE		<0.0003	<	0.002	<	0.002		<	0.002	<0.0002	<0.00005	<0.00005			
Naphthalene	NE	2.67		**0.00094**	<	0.002	**0.0076**	0.002		<	0.002	**0.002**	**0.0013**	**0.0047**			
Phenanthrene	NE	NE		**0.00074**	<	0.002	**0.01**	0.002		<	0.002	**0.002**	**0.002**	**0.0012**			
Pyrene	NE	NE		**0.00027**	<	0.002	<	0.002		<	0.002	**0.0005**	**0.0003**	**0.0002**			
INORGANICS (ppm)																	
Total Cyanide	NE	NE		**0.17**	**0.010**	0.010	**0.050**	0.010		**0.030**	0.010	**0.0299**	**0.0302**	**0.108**			
Dissolved Free Cyanide	NE	NE		<0.06	<	0.010	<	0.010		<	0.010	<0.005	**0.0237**	**0.09**			
Physiologically Available Cyanide	NE	NE		**0.073**													
Arsenic	NE	NE		**0.0155**													
Beryllium	NE	NE		<0.001													
Chromium	NE	NE		<0.020													
Copper	NE	NE		<0.020													
Lead	NE	NE		<0.0050													
Nickel	NE	NE		<0.050													
Zinc	NE	NE		<0.050													
Dissolved Arsenic	NE	NE		<0.0050													
Dissolved Beryllium	NE	NE		<0.001													
Dissolved Chromium	NE	NE		<0.020													
Dissolved Copper	NE	NE		<0.020													
Dissolved Lead	NE	NE		<0.0050													
Dissolved Nickel	NE	NE		<0.050													
Dissolved Zinc	NE	NE		<0.050													

Notes:

	Blank cells indicate that the parameter was not analyzed during this sampling round
D	"D" qualifier indicates analytes reported from a diluted run of the original analysis.
E	"E" qualifier indicates that the analyte was reported above the quantitation limit; Estimated value
J	"J" qualifier indicates analyte value was below the Method reporting Limit; Estimated value.
B	"B" qualifier indicates that the analyte was present in the method blank
NE	Regulatory Limit is not established
Bold Value	= concentration detected above the Method Reporting Limit.
	= concentration equals or exceeds the RIDEM GB Groundwater Objective (RIDEM GB GW Objectives)
	=detection limit equals or exceeds the RIDEM GB Groundwater Objective
(1)	Method 2 GB Objective criteria for naphthalene developed by GZA in accordance with the methods described in the Remediation Regulations.
(2)	Well was not sampled because there was limited water
(3)	NAPL was noted to be present
(4)	Well was not sampled because it had not been installed yet.
(5)	Well was not sampled because of an unknown reason
(6)	Well was not included in this sampling round

Please note that this table only includes compounds that have been detected or have detection limits that exceeded the RIDEM GB Groundwater Objective during groundwater monitoring at the Site between 1996 and present.

TABLE 5G
GROUNDWATER MONITORING DATA
Former Gas Plant Area
Former Tidewater Facility
Pawtucket, Rhode Island

ANALYTICAL	Sample ID:		MW-312S														
	Collected By:		AES	VHB	GZA	GZA	GZA	GZA		GZA	GZA	GZA	GZA	GZA	GZA	GZA	GZA
	Sample Date:		1996	2006	Jan 2010	July 2010	Dec 2010	July 2011		July 2012	Aug 2013	Oct 2014	Nov 2015	Nov 2016	Oct 2017		
	RIDEM GB GW UCL	RIDEM GB GW-O	Note (4)	Note (4)	Note (4)	Note (3)	Note (6)	Note (3)		Note (3)	Note (3)	Note (3)	Note (3)	Note (3)	Note (3)		
VOCs (ppm)						Result	DL		Result	DL	Result	Result	Result	Result	Result	Result	Result
1,1,1,2-Tetrachloroethane	NE	NE				<	0.025		<	0.05	<0.05	<0.1 D	<0.001	<0.001	<0.0010	<0.0010	
1,1-Dichloroethene	23	0.007				<	0.025		<	0.05	<0.05	<0.1 D	<0.001	<0.001	<0.0010	<0.0010	
1,2,4-Trimethylbenzene	NE	NE				**0.18**	0.025		**0.26**	0.05	**0.186**	**0.104 D**	**0.114**	**0.093**	**0.348**	**0.0876**	
1,2-Dibromo-3-Chloropropane	NE	0.002				<	0.050		<	0.10	<0.1	<0.5 D	<0.005	<0.005	<0.0050	<0.0050	
1,3,5-Trimethylbenzene	NE	NE				**0.05**	0.025		**0.063**	0.05	<0.05	**0.024 J D**	**0.0131**	**0.0177**	**0.0055**	**0.0106**	
4-Isopropyltoluene	NE	NE									<0.05	<0.1 D	**0.0026**	**0.0036**	**0.0023**	**0.0026**	
Acetone	NE	NE				<	0.250		<	0.50	<0.5	<1 D	**0.0347**	J 0.0031	<0.0100	<0.010	
Benzene	18	0.14				**0.052**	0.025		**0.13**	0.05	**0.0685**	<0.1 D	**0.0437**	**0.0295**	**0.0241**	**0.021**	
Carbon Disulfide	NE	NE							<	0.05	<0.05	<0.1 D	**0.0097**	<0.0010	<0.0010	<0.0010	
Carbon Tetrachloride	NE	0.07				<	0.025		<	0.05	<0.05	<0.1 D	<0.001	<0.001	<0.0010	<0.0010	
Chloroform	NE	NE				<	0.025		<	0.05	<0.05	<0.1 D	<0.001	<0.001	<0.0010	<0.0010	
cis-1,2-Dichloroethene	69	2.4				<	0.025		<	0.05	<0.05	<0.1 D	<0.001	<0.001	<0.0010	<0.0010	
Ethylbenzene	16	1.6				**0.84**	0.025		**1.1**	0.05	**0.856**	**0.546 D**	**0.588**	**0.606**	**0.466**	**0.346 D**	
Isopropylbenzene	NE	NE				**0.04**	0.025		**0.053**	0.05	<0.05	**0.022 J D**	**0.0235**	**0.0333**	**0.0249**	**0.0189**	
Methyl tert-Butyl Ether	NE	5				<	0.025		<	0.05	<0.05	<0.1 D	<0.001	<0.001	<0.0010	<0.0010	
Methylene Chloride	NE	NE				<	0.025		<	0.05	<0.05	<0.1 D	<0.002	<0.002	<0.0020	<0.0020	
Naphthalene	NE	2.67				**2.8**	0.050		**4.3**	0.10	**2.85**	**2.03 D**	**2.03**	**1.93**	**0.565**	**0.807 D**	
n-Butylbenzene	NE	NE				<	0.025		<	0.05	<0.05	<0.1 D	<0.001	**0.005**	<0.0010	**0.0028**	
n-Propylbenzene	NE	NE				<	0.025		<	0.05	<0.05	<0.1 D	**0.0102**	**0.0133**	**0.0102**	**0.0086**	
sec-Butylbenzene	NE	NE				<	0.025		<	0.05	<0.05	<0.1 D	**0.0013**	**0.0018**	**0.0013**	**0.0011**	
Styrene	50	2.2				<	0.025		<	0.05	<0.05	<0.1 D	<0.001	**0.0018**	<0.0010	<0.0010	
tert-Butylbenzene	NE	NE				<	0.025		<	0.05	<0.1	<0.1 D	<0.001	J 0.0002	<0.0010	<0.0010	
Tertiary-amyl methyl ether	NE	NE									<0.1	<0.1 D	<0.001	<0.001	<0.0010	<0.0010	
Tetrachloroethene	NE	0.15				<	0.025		<	0.05	<0.05	<0.1 D	<0.001	<0.001	<0.0010	<0.0010	
Toluene	21	1.7				<	0.025		<	0.05	<0.05	<0.1 D	**0.0069**	**0.0057**	**0.0048**	**0.0034**	
Trichloroethene	87	0.54				<	0.025		<	0.05	<0.05	<0.1 D	<0.001	<0.001	<0.0010	<0.0010	
Vinyl Chloride	NE	0.002				<	0.025		<	0.05	<0.05	<0.1 D	<0.001	<0.001	<0.0010	<0.0010	
Xylene O	NE	NE				**0.22**	0.025		**0.24**	0.05	**0.119**	**0.088 J D**	**0.0935**	**0.088**	**0.0867**	**0.0705**	
Xylene P,M	NE	NE				<	0.050		<	0.10	<0.1	**0.027 J D**	**0.0263**	**0.0285**	**0.0154**	**0.0109**	
Xylenes (Total)	NE	NE				**0.22**	0.750		**0.24**	0.150	**0.119**	**0.115 J D**	**0.12**	**0.117**	**0.102**	**0.0813**	
Total VOCs	NE	NE				**4.1800**			**6.1500**		**4.0795**	**2.8410**	**2.9975**	**2.8605**	**1.1902**	**1.391**	
TOTAL PETROLEUM HYDROCARBON (ppm)																	
Hydrocarbon Content	NE	NE				**5.2**	1		**48**	0.2	**8.61**	**8.84**	**6.22**				
PAHS BY GCMS (ppm)																	
2-Methylnaphthalene	NE	NE				**0.11**	0.002		**3.1 D**	0.2	**0.068**	**0.101 D**	**0.0309**				
Acenaphthene	NE	NE				**0.094**	0.002		**3.9 D**	0.2	**0.214**	**0.221 D**	**0.134**				
Acenaphthylene	NE	NE				**0.028**	0.002		**0.4 D**	0.2	**0.026**	**0.0336 D**	**0.0087**				
Anthracene	NE	NE				**0.025**	0.002		**1.7 D**	0.2	**0.032**	**0.0377 D**	**0.0207**				
Benzo [a] Anthracene	NE	NE				**0.0091**	0.002		**0.8 D**	0.2	<0.02	**0.0145 D**	**0.0056**				
Benzo [a] Pyrene	NE	NE				**0.0073**	0.002		**0.45 D**	0.2	<0.02	**0.0123 D**	**0.0044**				
Benzo [b] Fluoranthene	NE	NE				**0.006**	0.002		**0.41 D**	0.2	<0.02	**0.009 D**	**0.0032**				
Benzo [g,h,i] Perylene	NE	NE				**0.0027**	0.002		<	0.2	<0.02	**0.0043 D**	**0.002**				
Benzo [k] Fluoranthene	NE	NE				<	0.002		<	0.2	<0.02	**0.0033 D**	**0.0011**				
Chrysene	NE	NE				**0.009**	0.002		**0.64 D**	0.2	<0.02	**0.0137 D**	**0.0051**				
Dibenzo [a,h] Anthracene	NE	NE				<	0.002		<	0.2	<0.02	**0.0012 D**	**0.0005**				
Fluoranthene	NE	NE				**0.026**	0.002		**1.8 D**	0.2	**0.022**	**0.0327 D**	**0.0128**				
Fluorene	NE	NE				**0.047**	0.002		**2 D**	0.2	**0.078**	**0.0811 D**	**0.0443**				
Indeno [1,2,3-cd] Pyrene	NE	NE				**0.0025**	0.002		<	0.2	<0.02	**0.0045 D**	**0.002**				
Naphthalene	NE	2.67				**1 D**	0.02		**10 D**	0.2	**2.58**	**1.78 D**	**0.742**				
Phenanthrene	NE	NE				**0.088**	0.002		**5.6 D**	0.2	**0.115**	**0.114 D**	**0.0817**				
Pyrene	NE	NE				**0.035**	0.002		**2.5 D**	0.2	**0.031**	**0.0439 D**	**0.0186**				
INORGANICS (ppm)																	
Total Cyanide	NE	NE				**0.51**	0.010		**0.33**	0.010	**0.319**	**0.307 D**	**0.638**				
Dissolved Free Cyanide	NE	NE				<	0.010		**0.040**	0.010	<0.005	**0.3 D**	**0.5**				
Physiologically Available Cyanide	NE	NE															
Arsenic	NE	NE															
Beryllium	NE	NE															
Chromium	NE	NE															
Copper	NE	NE															
Lead	NE	NE															
Nickel	NE	NE															
Zinc	NE	NE															
Dissolved Arsenic	NE	NE															
Dissolved Beryllium	NE	NE															
Dissolved Chromium	NE	NE															
Dissolved Copper	NE	NE															
Dissolved Lead	NE	NE															
Dissolved Nickel	NE	NE															
Dissolved Zinc	NE	NE															

Notes:

	Blank cells indicate that the parameter was not analyzed during this sampling round
D	"D" qualifier indicates analytes reported from a diluted run of the original analysis.
E	"E" qualifier indicates that the analyte was reported above the quantitation limit; Estimated value
J	"J" qualifier indicates analyte value was below the Method reporting Limit; Estimated value.
B	"B" qualifier indicates that the analyte was present in the method blank
NE	Regulatory Limit is not established
Bold Value	= concentration detected above the Method Reporting Limit.
	= concentration equals or exceeds the RIDEM GB Groundwater Objective (RIDEM GB GW Objectives)
	=detection limit equals or exceeds the RIDEM GB Groundwater Objective
(1)	Method 2 GB Objective criteria for naphthalene developed by GZA in accordance with the methods described in the Remediation Regulations.
(2)	Well was not sampled because there was limited water
(3)	NAPL was noted to be present
(4)	Well was not sampled because it had not been installed yet.
(5)	Well was not sampled because of an unknown reason
(6)	Well was not included in this sampling round

Please note that this table only includes compounds that have been detected or have detection limits that exceeded the RIDEM GB Groundwater Objective during groundwater monitoring at the Site between 1996 and present.

TABLE 5H
GROUNDWATER MONITORING DATA
Former Gas Plant Area
Former Tidewater Facility
Pawtucket, Rhode Island

ANALYTICAL	Sample ID:		MW-312D														
	Collected By:		AES	VHB	GZA		GZA		GZA	GZA		GZA	GZA	GZA	GZA	GZA	GZA
	Sample Date:		1996	2006	Jan 2010		July 2010		Dec 2010	July 2011		July 2012	Aug 2013	Oct 2014	Nov 2015	Nov 2016	Oct 2017
	RIDEM GB GW UCL	RIDEM GB GW-O	Note (4)	Note (4)	Note (4)				Note (6)								
VOCs (ppm)							Result	DL		Result	DL	Result	Result	Result	Result	Result	Result
1,1,1,2-Tetrachloroethane	NE	NE					<	0.025		<	0.05	<0.1	<0.1 D	<0.001	<0.001	<0.0010	<0.0010
1,1-Dichloroethene	23	0.007					<	0.025		<	0.05	<0.1	<0.1 D	<0.001	<0.001	<0.0010	<0.0010
1,2,4-Trimethylbenzene	NE	NE					**0.31**	0.025		**0.42**	0.05	**0.432**	<0.1 D	**0.378**	**0.321**	**0.348**	**0.357 D**
1,2-Dibromo-3-Chloropropane	NE	0.002					<	0.050		<	0.10	<0.5	<0.5 D	<0.005	<0.005	<0.0050	<0.0050
1,3,5-Trimethylbenzene	NE	NE					**0.055**	0.025		<	0.05	<0.1	**0.026 J D**	**0.0182**	**0.0272**	**0.0177**	**0.0206**
4-Isopropyltoluene	NE	NE										<0.1	<0.1 D	**0.0063**	**0.0097**	**0.008**	**0.0096**
Acetone	NE	NE					<	0.250		<	0.50	<1	<1 D	<0.01	**0.0216**	**0.0164**	<0.0100
Benzene	18	0.14					**2.5**	0.025		**2.8**	0.05	**2.29**	**3.56 D**	**5.98**	**5.55**	**5.97**	**6.67 D**
Carbon Disulfide	NE	NE								<	0.05	<0.1	<0.1 D	<0.001	<0.001	<0.0010	<0.0010
Carbon Tetrachloride	NE	0.07					<	0.025		<	0.05	<0.1	<0.1 D	<0.001	<0.001	<0.0010	<0.0010
Chloroform	NE	NE					<	0.025		<	0.05	<0.1	<0.1 D	<0.001	<0.001	<0.0010	<0.0010
cis-1,2-Dichloroethene	69	2.4					<	0.025		<	0.05	<0.1	<0.1 D	<0.001	<0.001	<0.0010	<0.0010
Ethylbenzene	16	1.6					**1.2**	0.025		**1.5**	0.05	**1.63**	**1.26 D**	**1.93**	**2.13**	**1.95**	**2.18 D**
Isopropylbenzene	NE	NE					**0.062**	0.025		**0.085**	0.05	<0.1	**0.054 J D**	**0.056**	**E 0.102**	**0.0788**	**0.0911**
Methyl tert-Butyl Ether	NE	5					<	0.025		<	0.05	<0.1	<0.1 D	<0.001	<0.001	<0.0010	<0.0010
Methylene Chloride	NE	NE					<	0.025		<	0.05	<0.1	<0.1 D	<0.002	<0.002	<0.0020	<0.0020
Naphthalene	NE	2.67					**3.4**	0.050		**5.3**	0.10	**6.75**	**4.3 D**	**8.17**	**7.68**	**6.41**	**6.9 D**
n-Butylbenzene	NE	NE					<	0.025		<	0.05	<0.1	<0.1 D	<0.001	<0.001	<0.0010	<0.0010
n-Propylbenzene	NE	NE					<	0.025		<	0.05	<0.1	**0.022 J D**	**0.0219**	**0.0389**	**0.0289**	**0.037**
sec-Butylbenzene	NE	NE					<	0.025		<	0.05	<0.1	<0.1 D	<0.001	**0.0013**	<0.0010	<0.0010
Styrene	50	2.2					<	0.025		<	0.05	<0.1	<0.1 D	**0.0015**	B <0.0020	<0.0010	**0.0017**
tert-Butylbenzene	NE	NE					<	0.025		<	0.05	<0.1	<0.1 D	<0.001	<0.001	<0.0010	<0.0010
Tertiary-amyl methyl ether	NE	NE										<0.1	<0.1 D	<0.001	<0.001	<0.0010	<0.0010
Tetrachloroethene	NE	0.15					<	0.025		<	0.05	<0.1	<0.1 D	<0.001	<0.001	<0.0010	<0.0010
Toluene	21	1.7					<	0.025		<	0.05	<0.1	<0.1 D	**0.0088**	**0.0093**	**0.0066**	**0.0094**
Trichloroethene	87	0.54					<	0.025		<	0.05	<0.1	<0.1 D	<0.001	<0.001	<0.0010	<0.0010
Vinyl Chloride	NE	0.002					<	0.025		<	0.05	<0.1	<0.1 D	<0.001	<0.001	<0.0010	<0.0010
Xylene O	NE	NE					**0.3**	0.025		**0.41**	0.05	**0.422**	**0.309 D**	**0.515**	**0.494**	**0.542**	**0.613 D**
Xylene P,M	NE	NE					<	0.050		<	0.10	<0.2	**0.03 J D**	**0.0448**	**0.052**	**0.043**	**0.0571**
Xylenes (Total)	NE	NE					**0.3**	0.750		**0.41**	0.150	**0.422**	**0.339 D**	**0.56**	**0.546**	**0.585**	**0.67 D**
Total VOCs	NE	NE					**7.8**			**10.52**		**11.524**	**9.561**	**17.1305**	**16.437**	**15.987**	**16.9465**
TOTAL PETROLEUM HYDROCARBON (ppm)																	
Hydrocarbon Content	NE	NE					**4.6**	2.0		**6.5**	0.2	**10.7**	**9.42**	**8.39**			
PAHS BY GCMS (ppm)																	
2-Methylnaphthalene	NE	NE					**0.14**	0.002		**0.091**	0.002	**0.172**	**0.189 D**	**0.13**			
Acenaphthene	NE	NE					**0.07**	0.002		**0.051**	0.002	**0.108**	**0.0771 D**	**0.0905**			
Acenaphthylene	NE	NE					**0.0075**	0.002		<	0.002	<0.02	**0.0033 D**	<0.0095			
Anthracene	NE	NE					**0.0064**	0.002		**0.0035**	0.002	<0.02	**0.005 D**	**0.0219**			
Benzo [a] Anthracene	NE	NE					<	0.002		<	0.002	<0.02	<0.0005 D	<0.0024			
Benzo [a] Pyrene	NE	NE					<	0.002		<	0.002	<0.02	<0.0005 D	<0.0024			
Benzo [b] Fluoranthene	NE	NE					<	0.002		<	0.002	<0.02	<0.0005 D	<0.0024			
Benzo [g,h,i] Perylene	NE	NE					<	0.002		<	0.002	<0.02	<0.0019 D	<0.0095			
Benzo [k] Fluoranthene	NE	NE					<	0.002		<	0.002	<0.02	<0.0005 D	<0.0024			
Chrysene	NE	NE					<	0.002		<	0.002	<0.02	<0.0005 D	<0.0024			
Dibenzo [a,h] Anthracene	NE	NE					<	0.002		<	0.002	<0.02	<0.0005 D	<0.0024			
Fluoranthene	NE	NE					**0.003**	0.002		**0.0024**	0.002	<0.02	**0.0023 D**	<0.0095			
Fluorene	NE	NE					**0.025**	0.002		**0.019**	0.002	**0.031**	**0.0255 D**	**0.0233**			
Indeno [1,2,3-cd] Pyrene	NE	NE					<	0.002		<	0.002	<0.02	<0.0005 D	<0.0024			
Naphthalene	NE	2.67					**2 D**	0.05		**0.9**	0.02	**2.98**	**2.98 D**	**3.02**			
Phenanthrene	NE	NE					**0.032**	0.002		**0.018**	0.002	**0.033**	**0.0246 D**	**0.0218**			
Pyrene	NE	NE					**0.0036**	0.002		**0.003**	0.002	<0.02	**0.0028 D**	<0.0095			
INORGANICS (ppm)																	
Total Cyanide	NE	NE					**0.62**	0.010		**0.74**	0.010	**0.48**	**0.531 D**	**0.875**			
Dissolved Free Cyanide	NE	NE					<	0.010		**0.020**	0.010	<0.005	**0.523 D**	**0.8**			
Physiologically Available Cyanide	NE	NE															
Arsenic	NE	NE															
Beryllium	NE	NE															
Chromium	NE	NE															
Copper	NE	NE															
Lead	NE	NE															
Nickel	NE	NE															
Zinc	NE	NE															
Dissolved Arsenic	NE	NE															
Dissolved Beryllium	NE	NE															
Dissolved Chromium	NE	NE															
Dissolved Copper	NE	NE															
Dissolved Lead	NE	NE															
Dissolved Nickel	NE	NE															
Dissolved Zinc	NE	NE															

Notes:

	Blank cells indicate that the parameter was not analyzed during this sampling round
D	"D" qualifier indicates analytes reported from a diluted run of the original analysis.
E	"E" qualifier indicates that the analyte was reported above the quantitation limit; Estimated value
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NE	Regulatory Limit is not established
Bold Value	= concentration detected above the Method Reporting Limit.
	= concentration equals or exceeds the RIDEM GB Groundwater Objective (RIDEM GB GW Objectives)
	=detection limit equals or exceeds the RIDEM GB Groundwater Objective
(1)	Method 2 GB Objective criteria for naphthalene developed by GZA in accordance with the methods described in the Remediation Regulations.
(2)	Well was not sampled because there was limited water
(3)	NAPL was noted to be present
(4)	Well was not sampled because it had not been installed yet.
(5)	Well was not sampled because of an unknown reason
(6)	Well was not included in this sampling round

Please note that this table only includes compounds that have been detected or have detection limits that exceeded the RIDEM GB Groundwater Objective during groundwater monitoring at the Site between 1996 and present.

TABLE 5I
GROUNDWATER MONITORING DATA
Former Gas Plant Area
Former Tidewater Facility
Pawtucket, Rhode Island

ANALYTICAL	Sample ID:		MW-326S													
	Collected By:		AES	VHB	GZA	GZA		GZA	GZA		GZA	GZA	GZA	GZA	GZA	GZA
	Sample Date:		1996	2006	Jan 2010	June 2010		Dec 2010	July 2011		July 2012	Aug 2013	Oct 2014	Nov 2015	Nov 2016	Oct 2017
	RIDEM GB GW UCL	RIDEM GB GW-O	Note (4)	Note (4)	Note (4)			Note (6)	Note (3)							
VOCs (ppm)						Result	DL		Result	DL	Result	Result	Result	Result	Result	Result
1,1,1,2-Tetrachloroethane	NE	NE				<	0.005		<	0.005	<0.001	<0.001	<0.0010	<0.0010	<0.0010	<0.0010
1,1-Dichloroethene	23	0.007				<	0.005		<	0.005	<0.001	<0.001	<0.0010	<0.0010	<0.0010	<0.0010
1,2,4-Trimethylbenzene	NE	NE				**0.073**	0.005		**0.140**	0.005	**0.0674**	**0.0478**	**0.0183**	**0.0113**	**0.0103**	**0.0839**
1,2-Dibromo-3-Chloropropane	NE	0.002				<	0.010		<	0.010	<0.005	<0.005	<0.0050	<0.0050	<0.0050	<0.0050
1,3,5-Trimethylbenzene	NE	NE				**0.012**	0.005		**0.022**	0.005	**0.0098**	**0.0112**	**0.0082**	**0.0044**	**0.0044**	**0.011**
4-Isopropyltoluene	NE	NE									**0.0019**	<0.001	<0.0010	J 0.0004	<0.0010	<0.0010
Acetone	NE	NE				<	0.050		<	0.050	<0.01	<0.01	<0.0100	<0.0100	<0.0100	<0.0100
Benzene	18	0.14				**0.36**	0.005		**0.47**	0.005	**0.368**	**0.444 D**	**0.352**	**0.516**	**0.335**	**0.981 D**
Carbon Disulfide	NE	NE							<	0.005	<0.001	<0.001	<0.0010	<0.0010	<0.0010	<0.0010
Carbon Tetrachloride	NE	0.07				<	0.005		<	0.005	<0.001	<0.001	<0.0010	<0.0010	<0.0010	<0.0010
Chloroform	NE	NE				<	0.005		<	0.005	<0.001	<0.001	<0.0010	<0.0010	<0.0010	<0.0010
cis-1,2-Dichloroethene	69	2.4				<	0.005		<	0.005	<0.001	<0.001	<0.0010	<0.0010	<0.0010	<0.0010
Ethylbenzene	16	1.6				**0.2**	0.005		**0.3**	0.005	**0.186**	**0.154 D**	**0.0574**	**0.0544**	**0.0294**	**0.2 D**
Isopropylbenzene	NE	NE				**0.026**	0.005		**0.051**	0.005	**0.0419**	**0.037**	**0.0287**	**0.034**	**0.0339**	**0.049**
Methyl tert-Butyl Ether	NE	5				<	0.005		<	0.005	<0.001	<0.001	<0.0010	<0.0010	<0.0010	<0.0010
Methylene Chloride	NE	NE				<	0.005		<	0.005	<0.001	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
Naphthalene	NE	2.67				**0.27**	0.010		**0.13**	0.010	**0.0474**	**0.0516**	**0.0239**	**0.012**	**0.0043**	**0.197**
n-Butylbenzene	NE	NE				<	0.005		<	0.005	<0.001	<0.001	<0.0010	<0.0010	<0.0010	<0.0010
n-Propylbenzene	NE	NE				**0.007**	0.005		**0.018**	0.005	**0.0152**	**0.0128**	**0.0098**	**0.0103**	**0.0113**	**0.0156**
sec-Butylbenzene	NE	NE				<	0.005		<	0.005	**0.0015**	<0.001	<0.0010	J 0.0007	<0.0010	<0.0010
Styrene	50	2.2				<	0.005		<	0.005	<0.001	**0.0018**	<0.0010	J 0.0002	<0.0010	<0.0010
tert-Butylbenzene	NE	NE				<	0.005		<	0.005	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Tertiary-amyl methyl ether	NE	NE									<0.001	<0.001	<0.0010	<0.0010	<0.0010	<0.0010
Tetrachloroethene	NE	0.15				<	0.005		<	0.005	<0.001	<0.001	<0.0010	<0.0010	<0.0010	<0.0010
Toluene	21	1.7				<	0.005		**0.006**	0.005	**0.0022**	**0.0025**	**0.0011**	**0.0012**	<0.0010	**0.0026**
Trichloroethene	87	0.54				<	0.005		<	0.005	<0.001	<0.001	<0.0010	<0.0010	<0.0010	<0.0010
Vinyl Chloride	NE	0.002				<	0.005		<	0.005	<0.001	<0.001	<0.0010	<0.0010	<0.0010	<0.0010
Xylene O	NE	NE				**0.13**	0.005		**0.16**	0.005	**0.0735**	**0.0509**	**0.0126**	**0.0071**	**0.0044**	**0.0618**
Xylene P,M	NE	NE				**0.015**	0.010		**0.021**	0.010	**0.012**	**0.0132**	**0.0059**	**0.005**	**0.0031**	**0.0131**
Xylenes (Total)	NE	NE				**0.145**	0.015		**0.181**	0.015	**0.0855**	**0.0641**	**0.0186**	**0.0121**	**0.0075**	**0.0749**
Total VOCs	NE	NE				**1.093**			**1.318**		**0.8268**	**0.8268**	**0.5179**	**0.657**	**0.4449**	**1.615**
TOTAL PETROLEUM HYDROCARBON (ppm)																
Hydrocarbon Content	NE	NE				**2.7**	0.2		**2.3**	0.2	**6.43**	**11.1**	**5.85**			
PAHS BY GCMS (ppm)																
2-Methylnaphthalene	NE	NE				**0.023**	0.002		**0.017**	0.002	**0.024**	**0.0407 D**	**0.0205**			
Acenaphthene	NE	NE				**0.029**	0.002		**0.025**	0.002	**0.038**	**0.0545 D**	**0.0447**			
Acenaphthylene	NE	NE				<	0.002		<	0.002	**0.0008**	**0.0006**	**0.0003**			
Anthracene	NE	NE				<	0.002		<	0.002	**0.001**	**0.0018**	**0.0009**			
Benzo [a] Anthracene	NE	NE				<	0.002		<	0.002	**0.0003**	**0.0014**	**0.0006**			
Benzo [a] Pyrene	NE	NE				<	0.002		<	0.002	**0.0003**	**0.0012**	**0.0008**			
Benzo [b] Fluoranthene	NE	NE				<	0.002		<	0.002	**0.0003**	**0.0009**	**0.0006**			
Benzo [g,h,i] Perylene	NE	NE				<	0.002		<	0.002	<0.0002	**0.0006**	**0.0005**			
Benzo [k] Fluoranthene	NE	NE				<	0.002		<	0.002	<0.0002	**0.0009**	**0.0002**			
Chrysene	NE	NE				<	0.002		<	0.002	**0.0003**	**0.0013**	**0.0007**			
Dibenzo [a,h] Anthracene	NE	NE				<	0.002		<	0.002	<0.0002	**0.0002**	**0.0001**			
Fluoranthene	NE	NE				<	0.002		<	0.002	**0.001**	**0.0027**	**0.0013**			
Fluorene	NE	NE				**0.0054**	0.002		**0.0043**	0.002	**0.006**	**0.0058**	**0.004**			
Indeno [1,2,3-cd] Pyrene	NE	NE				<	0.002		<	0.002	<0.0002	**0.0006**	**0.0004**			
Naphthalene	NE	2.67				**0.099**	0.002		**0.026**	0.002	**0.008**	**0.0068**	**0.0042**			
Phenanthrene	NE	NE				**0.0037**	0.002		<	0.002	**0.002**	**0.0031**	**0.0021**			
Pyrene	NE	NE				<	0.002		<	0.002	**0.002**	**0.0037**	**0.0025**			
INORGANICS (ppm)																
Total Cyanide	NE	NE				**0.69**	0.010		**0.49**	0.010	**0.297**	**0.339 D**	**0.338**			
Dissolved Free Cyanide	NE	NE				**0.010**	0.010		<	0.010	<0.005	**0.337 D**	**0.3**			
Physiologically Available Cyanide	NE	NE														
Arsenic	NE	NE														
Beryllium	NE	NE														
Chromium	NE	NE														
Copper	NE	NE														
Lead	NE	NE														
Nickel	NE	NE														
Zinc	NE	NE														
Dissolved Arsenic	NE	NE														
Dissolved Beryllium	NE	NE														
Dissolved Chromium	NE	NE														
Dissolved Copper	NE	NE														
Dissolved Lead	NE	NE														
Dissolved Nickel	NE	NE														
Dissolved Zinc	NE	NE														

Notes:

	Blank cells indicate that the parameter was not analyzed during this sampling round
D	"D" qualifier indicates analytes reported from a diluted run of the original analysis.
E	"E" qualifier indicates that the analyte was reported above the quantitation limit; Estimated value
J	"J" qualifier indicates analyte value was below the Method reporting Limit; Estimated value.
B	"B" qualifier indicates that the analyte was present in the method blank
NE	Regulatory Limit is not established
Bold Value	= concentration detected above the Method Reporting Limit.
	= concentration equals or exceeds the RIDEM GB Groundwater Objective (RIDEM GB GW Objectives)
	=detection limit equals or exceeds the RIDEM GB Groundwater Objective
(1)	Method 2 GB Objective criteria for naphthalene developed by GZA in accordance with the methods described in the Remediation Regulations.
(2)	Well was not sampled because there was limited water
(3)	NAPL was noted to be present
(4)	Well was not sampled because it had not been installed yet.
(5)	Well was not sampled because of an unknown reason
(6)	Well was not included in this sampling round

Please note that this table only includes compounds that have been detected or have detection limits that exceeded the RIDEM GB Groundwater Objective during groundwater monitoring at the Site between 1996 and present.

TABLE 5J
GROUNDWATER MONITORING DATA
Former Gas Plant Area
Former Tidewater Facility
Pawtucket, Rhode Island

ANALYTICAL	Sample ID:		MW-326D															
	Collected By:		AES	VHB	GZA		GZA		GZA		GZA		GZA	GZA	GZA	GZA	GZA	GZA
	Sample Date:		1996	2006	Jan 2010		June 2010		Dec 2010		July 2011		July 2012	Aug 2013	Oct 2014	Nov 2015	Nov 2016	Oct 2017
	RIDEM GB GW UCL	RIDEM GB GW-O	Note (4)	Note (4)	Note (4)				Note (6)									
VOCs (ppm)							Result	DL		Result	DL	Result	Result	Result	Result	Result	Result	Result
1,1,1,2-Tetrachloroethane	NE	NE					<	0.0025		<	0.001	<0.001	<0.001	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
1,1-Dichloroethene	23	0.007					<	0.0025		<	0.001	<0.001	<0.001	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
1,2,4-Trimethylbenzene	NE	NE					**0.022**	0.0025		**0.0027**	0.001	**0.0023**	**0.0086**	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
1,2-Dibromo-3-Chloropropane	NE	0.002					<	0.0050		<	0.002	<0.005	<0.005	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
1,3,5-Trimethylbenzene	NE	NE					**0.0073**	0.0025		<	0.001	<0.001	<0.001	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
4-Isopropyltoluene	NE	NE										<0.001	<0.001	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Acetone	NE	NE					<	0.0250		<	0.010	<0.01	<0.01	<0.0010	<0.0100	**0.0115**	<0.0010	<0.0010
Benzene	18	0.14					**0.26**	0.0025		**0.057**	0.001	**0.0588**	**0.0809**	**0.0049**	**0.002**	**0.0024**	<0.0010	<0.0010
Carbon Disulfide	NE	NE								<	0.001	<0.001	<0.001	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Carbon Tetrachloride	NE	0.07					<	0.0025		<	0.001	<0.001	<0.001	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Chloroform	NE	NE					<	0.0025		<	0.001	<0.001	<0.001	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
cis-1,2-Dichloroethene	69	2.4					<	0.0025		<	0.001	<0.001	<0.001	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Ethylbenzene	16	1.6					**0.13**	0.0025		**0.017**	0.001	**0.0201**	**0.0401**	**0.0012**	**0.001**	<0.0010	<0.0010	<0.0010
Isopropylbenzene	NE	NE					**0.016**	0.0025		**0.0038**	0.001	**0.0022**	**0.0026**	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Methyl tert-Butyl Ether	NE	5					<	0.0025		<	0.001	<0.001	<0.001	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Methylene Chloride	NE	NE					<	0.0025		<	0.001	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
Naphthalene	NE	2.67					**0.32**	0.0050		**0.052**	0.002	**0.0448**	**0.123 D**	**0.0026**	B <0.0020	<0.0010	<0.0010	<0.0010
n-Butylbenzene	NE	NE					<	0.0025		<	0.001	<0.001	<0.001	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
n-Propylbenzene	NE	NE					**0.0051**	0.0025		**0.0014**	0.001	<0.001	<0.001	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
sec-Butylbenzene	NE	NE					<	0.0025		<	0.001	<0.001	<0.001	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Styrene	50	2.2					<	0.0025		<	0.001	<0.001	<0.001	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
tert-Butylbenzene	NE	NE					<	0.0025		<	0.001	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Tertiary-amyl methyl ether	NE	NE										<0.001	<0.001	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Tetrachloroethene	NE	0.15					<	0.0025		<	0.001	<0.001	<0.001	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Toluene	21	1.7					<	0.0025		<	0.001	<0.001	<0.001	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Trichloroethene	87	0.54					<	0.0025		<	0.001	<0.001	<0.001	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Vinyl Chloride	NE	0.002					<	0.0025		<	0.001	<0.001	<0.001	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Xylene O	NE	NE					**0.034**	0.0025		**0.0029**	0.001	**0.0038**	**0.01**	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Xylene P,M	NE	NE					**0.0068**	0.0050		<	0.002	<0.002	<0.002	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
Xylenes (Total)	NE	NE					**0.0408**	0.0075		**0.0029**	0.003	**0.0038**	**0.01**	<0.0030	<0.0020	<0.0020	<0.0020	<0.0020
Total VOCs	NE	NE					**0.8012**			**0.1368**		**0.132**	**0.2652**	**0.0087**	**0.003**	**0.0139**	ND	
TOTAL PETROLEUM HYDROCARBON (ppm)																		
Hydrocarbon Content	NE	NE					**1.2**	0.2		**0.27**	0.2	**0.45**	**0.66**	<0.19				
PAHS BY GCMS (ppm)																		
2-Methylnaphthalene	NE	NE					**0.0038**	0.002		<	0.002	<0.0002	**0.0009**	<0.0002				
Acenaphthene	NE	NE					**0.0063**	0.002		**0.0022**	0.002	**0.001**	**0.0016**	<0.0002				
Acenaphthylene	NE	NE					<	0.002		<	0.002	<0.0002	<0.0002	<0.0002				
Anthracene	NE	NE					<	0.002		<	0.002	<0.0002	<0.0002	<0.0002				
Benzo [a] Anthracene	NE	NE					<	0.002		<	0.002	<0.0002	<0.00005	<0.00005				
Benzo [a] Pyrene	NE	NE					<	0.002		<	0.002	<0.0002	<0.00005	<0.00005				
Benzo [b] Fluoranthene	NE	NE					<	0.002		<	0.002	<0.0002	<0.00005	<0.00005				
Benzo [g,h,i] Perylene	NE	NE					<	0.002		<	0.002	<0.0002	<0.0002	<0.0002				
Benzo [k] Fluoranthene	NE	NE					<	0.002		<	0.002	<0.0002	<0.00005	<0.00005				
Chrysene	NE	NE					<	0.002		<	0.002	<0.0002	<0.00005	<0.00005				
Dibenzo [a,h] Anthracene	NE	NE					<	0.002		<	0.002	<0.0002	<0.00005	<0.00005				
Fluoranthene	NE	NE					<	0.002		<	0.002	<0.0002	<0.0002	<0.0002				
Fluorene	NE	NE					<	0.002		<	0.002	**0.0002**	<0.0002	<0.0002				
Indeno [1,2,3-cd] Pyrene	NE	NE					<	0.002		<	0.002	<0.0002	<0.00005	<0.00005				
Naphthalene	NE	2.67					**0.042**	0.002		**0.02**	0.002	**0.012**	**0.0644 D**	**0.0003**				
Phenanthrene	NE	NE					**0.0026**	0.002		<	0.002	**0.0004**	<0.0002	<0.0002				
Pyrene	NE	NE					<	0.002		<	0.002	<0.0002	<0.0002	<0.0002				
INORGANICS (ppm)																		
Total Cyanide	NE	NE					**0.54**	0.010		**0.67**	0.010	**0.665**	**0.808 D**	**0.709**				
Dissolved Free Cyanide	NE	NE					**0.080**	0.010		**0.010**	0.010	<0.005	**0.766 D**	**0.71**				
Physiologically Available Cyanide	NE	NE																
Arsenic	NE	NE																
Beryllium	NE	NE																
Chromium	NE	NE																
Copper	NE	NE																
Lead	NE	NE																
Nickel	NE	NE																
Zinc	NE	NE																
Dissolved Arsenic	NE	NE																
Dissolved Beryllium	NE	NE																
Dissolved Chromium	NE	NE																
Dissolved Copper	NE	NE																
Dissolved Lead	NE	NE																
Dissolved Nickel	NE	NE																
Dissolved Zinc	NE	NE																

Notes:

	Blank cells indicate that the parameter was not analyzed during this sampling round
D	"D" qualifier indicates analytes reported from a diluted run of the original analysis.
E	"E" qualifier indicates that the analyte was reported above the quantitation limit; Estimated value
J	"J" qualifier indicates analyte value was below the Method reporting Limit; Estimated value.
B	"B" qualifier indicates that the analyte was present in the method blank
NE	Regulatory Limit is not established
Bold Value	= concentration detected above the Method Reporting Limit.
	= concentration equals or exceeds the RIDEM GB Groundwater Objective (RIDEM GB GW Objectives)
	=detection limit equals or exceeds the RIDEM GB Groundwater Objective
(1)	Method 2 GB Objective criteria for naphthalene developed by GZA in accordance with the methods described in the Remediation Regulations.
(2)	Well was not sampled because there was limited water
(3)	NAPL was noted to be present
(4)	Well was not sampled because it had not been installed yet.
(5)	Well was not sampled because of an unknown reason
(6)	Well was not included in this sampling round

Please note that this table only includes compounds that have been detected or have detection limits that exceeded the RIDEM GB Groundwater Objective during groundwater monitoring at the Site between 1996 and present.

TABLE 5K
GROUNDWATER MONITORING DATA
Former Gas Plant Area
Former Tidewater Facility
Pawtucket, Rhode Island

ANALYTICAL	Sample ID:		MW-333S													
	Collected By:		AES	VHB	GZA		GZA	GZA			GZA	GZA	GZA	GZA	GZA	GZA
	Sample Date:		1996	2006	Jan 2010		June 2010	Dec 2010		July 2011		July 2012	Aug 2013	Oct 2014	Nov 2015	Nov 2016	Oct 2017
	RIDEM GB GW UCL	RIDEM GB GW-O	Note (4)	Note (4)	Note (4)		Note (4)										
VOCs (ppm)								Result	DL	Result	DL	Result	Result	Result	Result	Result	Result
1,1,1,2-Tetrachloroethane	NE	NE						<	0.001	<	0.001	<0.001	<0.001	<0.0010	<0.0010	<0.0010	<0.0010
1,1-Dichloroethene	23	0.007						<	0.001	<	0.001	<0.001	<0.001	<0.0010	<0.0010	<0.0010	<0.0010
1,2,4-Trimethylbenzene	NE	NE						<	0.001	**0.0097**	0.001	**0.0136**	<0.001	<0.0010	<0.0010	<0.0010	<0.0010
1,2-Dibromo-3-Chloropropane	NE	0.002						<	0.002	<	0.002	<0.005	<0.005	<0.0050	<0.0050	<0.0050	<0.0050
1,3,5-Trimethylbenzene	NE	NE						<	0.001	<	0.001	<0.001	<0.001	<0.0010	<0.0010	<0.0010	<0.0010
4-Isopropyltoluene	NE	NE										<0.001	<0.001	<0.0010	<0.0010	<0.0010	<0.0010
Acetone	NE	NE						<	0.010	<	0.010	<0.01	<0.01	<0.0100	<0.0100	<0.0100	<0.0100
Benzene	18	0.14						<	0.001	**0.039**	0.001	**0.0287**	<0.001	<0.0010	<0.0010	<0.0010	**0.0028**
Carbon Disulfide	NE	NE								<	0.001	<0.001	<0.001	**0.0071**	<0.0010	<0.0010	<0.0010
Carbon Tetrachloride	NE	0.07						<	0.001	<	0.001	<0.001	<0.001	<0.0010	<0.0010	<0.0010	<0.0010
Chloroform	NE	NE						<	0.001	<	0.001	<0.001	<0.001	<0.0010	<0.0010	<0.0010	<0.0010
cis-1,2-Dichloroethene	69	2.4						<	0.001	<	0.001	<0.001	<0.001	<0.0010	<0.0010	<0.0010	<0.0010
Ethylbenzene	16	1.6						<	0.001	**0.13**	0.001	**0.212**	<0.001	<0.0010	<0.0010	<0.0010	<0.0010
Isopropylbenzene	NE	NE						<	0.001	**0.005**	0.001	**0.0068**	<0.001	<0.0010	<0.0010	<0.0010	<0.0010
Methyl tert-Butyl Ether	NE	5						<	0.001	<	0.001	<0.001	<0.001	<0.0010	<0.0010	<0.0010	<0.0010
Methylene Chloride	NE	NE						<	0.002	<	0.002	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
Naphthalene	NE	2.67						<	0.002	**0.042**	0.002	**0.0122**	<0.001	<0.0010	<0.0010	<0.0010	<0.0010
n-Butylbenzene	NE	NE						<	0.001	<	0.001	<0.001	<0.001	<0.0010	<0.0010	<0.0010	<0.0010
n-Propylbenzene	NE	NE						<	0.001	**0.0015**	0.001	**0.0024**	<0.001	<0.0010	<0.0010	<0.0010	<0.0010
sec-Butylbenzene	NE	NE						<	0.001	<	0.001	<0.001	<0.001	<0.0010	<0.0010	<0.0010	<0.0010
Styrene	50	2.2						<	0.001	<	0.001	<0.001	<0.001	<0.0010	<0.0010	<0.0010	<0.0010
tert-Butylbenzene	NE	NE						<	0.001	<	0.001	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Tertiary-amyl methyl ether	NE	NE										<0.001	<0.001	<0.0010	<0.0010	<0.0010	<0.0010
Tetrachloroethene	NE	0.15						<	0.001	<	0.001	<0.001	<0.001	<0.0010	<0.0010	<0.0010	<0.0010
Toluene	21	1.7						<	0.001	**0.0026**	0.001	**0.0014**	<0.001	<0.0010	<0.0010	<0.0010	<0.0010
Trichloroethene	87	0.54						<	0.001	<	0.001	<0.001	<0.001	<0.0010	<0.0010	<0.0010	<0.0010
Vinyl Chloride	NE	0.002						<	0.001	<	0.001	<0.001	<0.001	<0.0010	<0.0010	<0.0010	<0.0010
Xylene O	NE	NE						<	0.001	**0.024**	0.001	**0.0144**	<0.001	<0.0010	<0.0010	**0.0356**	<0.0010
Xylene P,M	NE	NE						<	0.002	**0.0048**	0.002	**0.0023**	<0.002	<0.0020	<0.0020	**0.0052**	<0.0020
Xylenes (Total)	NE	NE						<	0	**0.029**	0.003	**0.0167**	<0.003	<0.0030	<0.0020	**0.0408**	<0.0020
Total VOCs	NE	NE							ND	**0.2586**		**0.2938**	ND	**0.0071**	ND	**1.274**	**0.0028**
TOTAL PETROLEUM HYDROCARBON (ppm)																	
Hydrocarbon Content	NE	NE						**0.31**	0.2	**0.32**	0.2	**1.07**	<0.19	<0.19			
PAHS BY GCMS (ppm)																	
2-Methylnaphthalene	NE	NE						<	0.002	<	0.002	<0.0002	<0.0002	<0.0002			
Acenaphthene	NE	NE						<	0.002	<	0.002	**0.002**	<0.0002	**0.0005**			
Acenaphthylene	NE	NE						<	0.002	<	0.002	**0.001**	<0.0002	**0.0003**			
Anthracene	NE	NE						<	0.002	<	0.002	**0.0002**	<0.0002	<0.0002			
Benzo [a] Anthracene	NE	NE						<	0.002	<	0.002	<0.0002	<0.00005	<0.00005			
Benzo [a] Pyrene	NE	NE						<	0.002	<	0.002	<0.0002	<0.00005	<0.00005			
Benzo [b] Fluoranthene	NE	NE						<	0.002	<	0.002	<0.0002	<0.00005	<0.00005			
Benzo [g,h,i] Perylene	NE	NE						<	0.002	<	0.002	<0.0002	<0.0002	<0.0002			
Benzo [k] Fluoranthene	NE	NE						<	0.002	<	0.002	<0.0002	<0.00005	<0.00005			
Chrysene	NE	NE						<	0.002	<	0.002	<0.0002	<0.00005	<0.00005			
Dibenzo [a,h] Anthracene	NE	NE						<	0.002	<	0.002	<0.0002	<0.00005	<0.00005			
Fluoranthene	NE	NE						<	0.002	<	0.002	**0.0002**	<0.0002	<0.0002			
Fluorene	NE	NE						<	0.002	<	0.002	**0.0006**	<0.0002	<0.0002			
Indeno [1,2,3-cd] Pyrene	NE	NE						<	0.002	<	0.002	<0.0002	<0.00005	<0.00005			
Naphthalene	NE	2.67						<	0.002	**0.013**	0.002	**0.005**	**0.0012**	**0.0002**			
Phenanthrene	NE	NE						<	0.002	<	0.002	**0.0005**	<0.0002	<0.0002			
Pyrene	NE	NE						<	0.002	<	0.002	**0.0003**	<0.0002	<0.0002			
INORGANICS (ppm)																	
Total Cyanide	NE	NE						**0.050**	0.01	**0.150**	0.01	**0.0815**	**0.014**	**0.028**			
Dissolved Free Cyanide	NE	NE						<	0.01	**0.010**	0.01	<0.005	**0.0137**	**0.02**			
Physiologically Available Cyanide	NE	NE															
Arsenic	NE	NE															
Beryllium	NE	NE															
Chromium	NE	NE															
Copper	NE	NE															
Lead	NE	NE															
Nickel	NE	NE															
Zinc	NE	NE															
Dissolved Arsenic	NE	NE															
Dissolved Beryllium	NE	NE															
Dissolved Chromium	NE	NE															
Dissolved Copper	NE	NE															
Dissolved Lead	NE	NE															
Dissolved Nickel	NE	NE															
Dissolved Zinc	NE	NE															

Notes:

	Blank cells indicate that the parameter was not analyzed during this sampling round
D	"D" qualifier indicates analytes reported from a diluted run of the original analysis.
E	"E" qualifier indicates that the analyte was reported above the quantitation limit; Estimated value
J	"J" qualifier indicates analyte value was below the Method reporting Limit; Estimated value.
B	"B" qualifier indicates that the analyte was present in the method blank
NE	Regulatory Limit is not established
Bold Value	= concentration detected above the Method Reporting Limit.
	= concentration equals or exceeds the RIDEM GB Groundwater Objective (RIDEM GB GW Objectives)
	=detection limit equals or exceeds the RIDEM GB Groundwater Objective
(1)	Method 2 GB Objective criteria for naphthalene developed by GZA in accordance with the methods described in the Remediation Regulations.
(2)	Well was not sampled because there was limited water
(3)	NAPL was noted to be present
(4)	Well was not sampled because it had not been installed yet.
(5)	Well was not sampled because of an unknown reason
(6)	Well was not included in this sampling round

Please note that this table only includes compounds that have been detected or have detection limits that exceeded the RIDEM GB Groundwater Objective during groundwater monitoring at the Site between 1996 and present.

TABLE 5L
GROUNDWATER MONITORING DATA
Former Gas Plant Area
Former Tidewater Facility
Pawtucket, Rhode Island

ANALYTICAL	Sample ID:		MW-333D														
	Collected By:		AES	VHB	GZA		GZA	GZA		GZA		GZA	GZA	GZA	GZA	GZA	GZA
	Sample Date:		1996	2006	Jan 2010		June 2010	Dec 2010		July 2011		July 2012	Aug 2013	Oct 2014	Nov 2015	Nov 2016	Oct 2017
	RIDEM GB GW UCL	RIDEM GB GW-O	Note (4)	Note (4)	Note (4)		Note (4)										
VOCs (ppm)								Result	DL	Result	DL	Result	Result	Result	Result	Result	
1,1,1,2-Tetrachloroethane	NE	NE						<	0.025	<	0.025	<0.1	<0.001	<0.0010	<0.0010	<0.0010	<0.0010
1,1-Dichloroethene	23	0.007						<	0.025	<	0.025	<0.1	<0.001	<0.0010	<0.0010	<0.0010	<0.0010
1,2,4-Trimethylbenzene	NE	NE						**0.19**	0.025	**0.43**	0.025	**0.344**	**0.353 D**	**0.155**	**0.076**	**0.103**	**0.133 D**
1,2-Dibromo-3-Chloropropane	NE	0.002						<	0.050	<	0.050	<0.5	<0.005	<0.0050	<0.0050	<0.0050	<0.0050
1,3,5-Trimethylbenzene	NE	NE						<	0.025	<	0.025	<0.1	<0.001	**0.0024**	J 0.001	<0.0010	**0.0806**
4-Isopropyltoluene	NE	NE										<0.1	<0.001	**0.0022**	J 0.0008	<0.0010	<0.0010
Acetone	NE	NE						<	0.250	<	0.250	<1	<0.01	<0.0100	J 0.0038	<0.0100	<0.0100
Benzene	18	0.14						**1.2**	0.025	**1.6**	0.025	**1.77**	**2.67 D**	**1.76**	**0.902**	**0.327**	**0.842**
Carbon Disulfide	NE	NE								<	0.025	<0.1	<0.001	<0.0010	<0.0010	<0.0010	<0.0010
Carbon Tetrachloride	NE	0.07						<	0.025	<	0.025	<0.1	<0.001	<0.0010	<0.0010	<0.0010	<0.0010
Chloroform	NE	NE						<	0.025	<	0.025	<0.1	<0.001	<0.0010	<0.0010	<0.0010	<0.0010
cis-1,2-Dichloroethene	69	2.4						<	0.025	<	0.025	<0.1	<0.001	<0.0010	<0.0010	<0.0010	<0.0010
Ethylbenzene	16	1.6						**0.91**	0.025	**0.98**	0.025	**0.981**	**1.14 D**	**0.58**	**0.233**	**0.17**	**0.364 D**
Isopropylbenzene	NE	NE						**0.041**	0.025	**0.080**	0.025	<0.1	**0.09**	**0.0647**	**0.0517**	**0.0352**	**0.0543**
Methyl tert-Butyl Ether	NE	5						<	0.025	<	0.025	<0.1	<0.001	<0.0010	<0.0010	<0.0010	<0.0010
Methylene Chloride	NE	NE						<	0.025	<	0.025	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
Naphthalene	NE	2.67						**1.8**	0.050	**3**	0.050	**3.55**	**3.96 D**	**2.3**	**0.861**	**0.545**	**0.913 D**
n-Butylbenzene	NE	NE						<	0.025	<	0.025	<0.1	<0.001	<0.0010	<0.0010	<0.0010	<0.0010
n-Propylbenzene	NE	NE						<	0.025	**0.035**	0.025	<0.1	**0.0346**	**0.0226**	**0.0165**	**0.0126**	**0.0221**
sec-Butylbenzene	NE	NE						<	0.025	<	0.025	<0.1	<0.001	**0.001**	J 0.0009	<0.0010	<0.0010
Styrene	50	2.2						<	0.025	<	0.025	<0.1	**0.0039**	**0.0014**	B <0.0020	<0.0010	<0.0010
tert-Butylbenzene	NE	NE						<	0.025	<	0.025	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Tertiary-amyl methyl ether	NE	NE										<0.1	<0.001	<0.0010	<0.0010	<0.0010	<0.0010
Tetrachloroethene	NE	0.15						<	0.025	<	0.025	<0.1	<0.001	<0.0010	<0.0010	<0.0010	<0.0010
Toluene	21	1.7						**0.065**	0.025	<	0.025	<0.1	**0.0152**	**0.0055**	**0.0015**	<0.0010	**0.0032**
Trichloroethene	87	0.54						<	0.025	<	0.025	<0.1	<0.001	<0.0010	<0.0010	<0.0010	<0.0010
Vinyl Chloride	NE	0.002						<	0.025	<	0.025	<0.1	<0.001	<0.0010	<0.0010	<0.0010	<0.0010
Xylene O	NE	NE						**0.36**	0.025	**0.34**	0.025	**0.205**	**0.163 D**	**0.089**	**0.0419**	<0.0010	**0.0806**
Xylene P,M	NE	NE						**0.27**	0.050	**0.093**	0.050	<0.2	**0.0393**	**0.0143**	**0.0429**	<0.0020	**0.0109**
Xylenes (Total)	NE	NE						**0.63**	0.08	**0.433**	0.075	**0.205**	**0.202 D**	**0.103**	**0.0848**	<0.0020	**0.0915**
Total VOCs	NE	NE						**4.84**		**6.558**		**6.85**	**8.469**	**4.9981**	**2.233**	**0.037**	**2.5037**
TOTAL PETROLEUM HYDROCARBON (ppm)																	
Hydrocarbon Content	NE	NE						**3.5**	0.2	**2**	0.2	**7.82**	**6.6**	**3.54**			
PAHS BY GCMS (ppm)																	
2-Methylnaphthalene	NE	NE						**0.13**	0.04	**0.046**	0.002	**0.066**	**0.0755 D**	**0.0145**			
Acenaphthene	NE	NE						**0.059**	0.04	**0.039**	0.002	**0.073**	**0.0584 D**	**0.038**			
Acenaphthylene	NE	NE						<	0.04	<	0.002	<0.02	**0.0024 D**	**0.001**			
Anthracene	NE	NE						<	0.04	**0.0027**	0.002	<0.02	**0.0037 D**	**0.0013**			
Benzo [a] Anthracene	NE	NE						<	0.04	<	0.002	<0.02	<0.0005 D	**0.0003**			
Benzo [a] Pyrene	NE	NE						<	0.04	<	0.002	<0.02	<0.0005 D	**0.0002**			
Benzo [b] Fluoranthene	NE	NE						<	0.04	<	0.002	<0.02	<0.0005 D	**0.0002**			
Benzo [g,h,i] Perylene	NE	NE						<	0.04	<	0.002	<0.02	<0.0021 D	<0.0002			
Benzo [k] Fluoranthene	NE	NE						<	0.04	<	0.002	<0.02	<0.0005 D	**0.00006**			
Chrysene	NE	NE						<	0.04	<	0.002	<0.02	<0.0005 D	**0.0003**			
Dibenzo [a,h] Anthracene	NE	NE						<	0.04	<	0.002	<0.02	<0.0005 D	<0.00005			
Fluoranthene	NE	NE						<	0.04	<	0.002	<0.02	<0.0021 D	**0.001**			
Fluorene	NE	NE						<	0.04	**0.014**	0.002	<0.02	**0.0153 D**	**0.0061**			
Indeno [1,2,3-cd] Pyrene	NE	NE						<	0.04	<	0.002	<0.02	<0.0005 D	**0.0001**			
Naphthalene	NE	2.67						**0.96**	0.04	**0.98**	0.02	**2.07**	**1.98 D**	**0.433**			
Phenanthrene	NE	NE						<	0.04	**0.013**	0.002	**0.022**	**0.0169 D**	**0.0067**			
Pyrene	NE	NE						<	0.04	<	0.002	<0.02	<0.0021 D	**0.0011**			
INORGANICS (ppm)																	
Total Cyanide	NE	NE						**0.72**	0.010	**1.1**	0.010	**0.742**	**4.05 D**	**0.725**			
Dissolved Free Cyanide	NE	NE						<	0.010	**0.020**	0.010	<0.005	**3.95 D**	**0.732**			
Physiologically Available Cyanide	NE	NE															
Arsenic	NE	NE															
Beryllium	NE	NE															
Chromium	NE	NE															
Copper	NE	NE															
Lead	NE	NE															
Nickel	NE	NE															
Zinc	NE	NE															
Dissolved Arsenic	NE	NE															
Dissolved Beryllium	NE	NE															
Dissolved Chromium	NE	NE															
Dissolved Copper	NE	NE															
Dissolved Lead	NE	NE															
Dissolved Nickel	NE	NE															
Dissolved Zinc	NE	NE															

Notes:

	Blank cells indicate that the parameter was not analyzed during this sampling round
D	"D" qualifier indicates analytes reported from a diluted run of the original analysis.
E	"E" qualifier indicates that the analyte was reported above the quantitation limit; Estimated value
J	"J" qualifier indicates analyte value was below the Method reporting Limit; Estimated value.
B	"B" qualifier indicates that the analyte was present in the method blank
NE	Regulatory Limit is not established
Bold Value	= concentration detected above the Method Reporting Limit.
	= concentration equals or exceeds the RIDEM GB Groundwater Objective (RIDEM GB GW Objectives)
	=detection limit equals or exceeds the RIDEM GB Groundwater Objective
(1)	Method 2 GB Objective criteria for naphthalene developed by GZA in accordance with the methods described in the Remediation Regulations.
(2)	Well was not sampled because there was limited water
(3)	NAPL was noted to be present
(4)	Well was not sampled because it had not been installed yet.
(5)	Well was not sampled because of an unknown reason
(6)	Well was not included in this sampling round

Please note that this table only includes compounds that have been detected or have detection limits that exceeded the RIDEM GB Groundwater Objective during groundwater monitoring at the Site between 1996 and present.

TABLE 5M
GROUNDWATER MONITORING DATA
Former Gas Plant Area
Former Tidewater Facility
Pawtucket, Rhode Island

ANALYTICAL	Sample ID:		MW-339S													
	Collected By:		AES	VHB	GZA		GZA	GZA			GZA	GZA	GZA	GZA	GZA	GZA
	Sample Date:		1996	2006	Jan 2010		June 2010	Dec 2010		July 2011	July 2012	Aug 2013	Oct 2014	Nov 2015	Nov 2016	Oct 2017
	RIDEM GB GW UCL	RIDEM GB GW-O	Note (4)	Note (4)	Note (4)		Note (4)									
VOCs (ppm)								Result	DL	Result	DL	Result	Result	Result	Result	Result	Result
1,1,1,2-Tetrachloroethane	NE	NE						<	0.1	<	0.005	<0.005	<0.001	<0.001	<0.001	<0.0010	<0.0010
1,1-Dichloroethene	23	0.007						<	0.1	<	0.005	<0.005	<0.001	<0.001	<0.001	<0.0010	<0.0010
1,2,4-Trimethylbenzene	NE	NE						**0.41**	0.1	**0.02**	0.005	**0.0092**	**0.0092**	**0.0082**	**0.0035**	**0.0248**	**0.0038**
1,2-Dibromo-3-Chloropropane	NE	0.002						<	0.2	<	0.010	<0.01	<0.005	<0.005	<0.005	<0.0050	<0.0050
1,3,5-Trimethylbenzene	NE	NE						**0.13**	0.1	**0.0068**	0.005	<0.005	**0.0032**	**0.0026**	**0.0012**	**0.0114**	**0.0015**
4-Isopropyltoluene	NE	NE										<0.005	<0.001	<0.001	<0.001	<0.0010	<0.0010
Acetone	NE	NE						<	1.0	<	0.050	<0.05	<0.01	**0.0546**	J 0.0051	**0.0148**	<0.01
Benzene	18	0.14						<	0.1	<	0.005	<0.005	**0.0011**	<0.001	J 0.0002	<0.0010	<0.0010
Carbon Disulfide	NE	NE								<	0.005	<0.005	<0.001	<0.001	<0.001	<0.0010	<0.0010
Carbon Tetrachloride	NE	0.07						<	0.1	<	0.005	<0.005	<0.001	<0.001	<0.001	<0.0010	<0.0010
Chloroform	NE	NE						<	0.1	<	0.005	<0.005	<0.001	<0.001	**0.0021**	<0.0010	**0.0045**
cis-1,2-Dichloroethene	69	2.4						<	0.1	<	0.005	<0.005	<0.001	<0.001	<0.001	<0.0010	<0.0010
Ethylbenzene	16	1.6						<	0.1	<	0.005	<0.005	<0.001	<0.001	<0.001	<0.0010	<0.0010
Isopropylbenzene	NE	NE						<	0.1	<	0.005	<0.005	<0.001	<0.001	<0.001	<0.0010	<0.0010
Methyl tert-Butyl Ether	NE	5						<	0.1	<	0.005	<0.005	<0.001	<0.001	<0.001	<0.0010	<0.0010
Methylene Chloride	NE	NE						<	0.1	<	0.005	<0.005	<0.002	<0.002	<0.002	<0.0020	<0.0020
Naphthalene	NE	2.67						**10**	0.2	**0.76**	0.010	**0.35**	**0.286 D**	**0.3**	**0.235**	**1.31**	**0.165**
n-Butylbenzene	NE	NE						<	0.1	<	0.005	<0.005	<0.001	<0.001	<0.001	<0.0010	<0.0010
n-Propylbenzene	NE	NE						<	0.1	<	0.005	<0.005	<0.001	<0.001	<0.001	<0.0010	<0.0010
sec-Butylbenzene	NE	NE						<	0.1	<	0.005	<0.005	<0.001	<0.001	<0.001	<0.0010	<0.0010
Styrene	50	2.2						<	0.1	<	0.005	<0.005	**0.0016**	<0.001	J 0.0001	**0.0029**	<0.0010
tert-Butylbenzene	NE	NE						<	0.1	<	0.005	<0.005	<0.001	<0.001	<0.001	<0.0010	<0.0010
Tertiary-amyl methyl ether	NE	NE										<0.01	<0.001	<0.001	<0.001	<0.0010	<0.0010
Tetrachloroethene	NE	0.15						<	0.1	<	0.005	<0.005	<0.001	<0.001	<0.001	<0.0010	<0.0010
Toluene	21	1.7						<	0.1	<	0.005	<0.005	<0.001	<0.001	J 0.0003	**0.0018**	<0.0010
Trichloroethene	87	0.54						<	0.1	<	0.005	<0.005	<0.001	<0.001	<0.001	<0.0010	<0.0010
Vinyl Chloride	NE	0.002						<	0.1	<	0.005	<0.005	<0.001	<0.001	<0.001	<0.0010	<0.0010
Xylene O	NE	NE						<	0.1	<	0.005	<0.005	**0.0013**	**0.001**	J 0.0003	**0.008**	<0.0010
Xylene P,M	NE	NE						<	0.2	<	0.010	<0.01	**0.0021**	<0.002	J 0.0005	**0.0056**	<0.002
Xylenes (Total)	NE	NE						<	0.3	<	0.015	<0.015	**0.0034**	**0.001**	<0.002	**0.0136**	<0.002
Total VOCs	NE	NE						**10.54**		**0.7868**		**0.3592**	**0.3045**	**0.3664**	**0.2504**	**1.394**	**0.1748**
TOTAL PETROLEUM HYDROCARBON (ppm)																	
Hydrocarbon Content	NE	NE						**15**	10	**1.1**	0.2	**0.83**	**0.61**	**1.03**			
PAHS BY GCMS (ppm)																	
2-Methylnaphthalene	NE	NE						**0.3**	0.04	**0.075**	0.002	**0.066**	**0.0323 D**	**0.0276**			
Acenaphthene	NE	NE						<	0.04	<	0.002	<0.002	**0.0004**	**0.0005**			
Acenaphthylene	NE	NE						<	0.04	<	0.002	<0.002	<0.0002	**0.0006**			
Anthracene	NE	NE						<	0.04	<	0.002	<0.002	**0.0003**	**0.0005**			
Benzo [a] Anthracene	NE	NE						<	0.04	<	0.002	<0.002	<0.00005	**0.0001**			
Benzo [a] Pyrene	NE	NE						<	0.04	<	0.002	<0.002	<0.00005	<0.00005			
Benzo [b] Fluoranthene	NE	NE						<	0.04	<	0.002	<0.002	<0.00005	**0.00007**			
Benzo [g,h,i] Perylene	NE	NE						<	0.04	<	0.002	<0.002	<0.0002	<0.0002			
Benzo [k] Fluoranthene	NE	NE						<	0.04	<	0.002	<0.002	<0.00005	<0.00005			
Chrysene	NE	NE						<	0.04	<	0.002	<0.002	<0.00005	**0.0001**			
Dibenzo [a,h] Anthracene	NE	NE						<	0.04	<	0.002	<0.002	<0.00005	<0.00005			
Fluoranthene	NE	NE						<	0.04	<	0.002	<0.002	**0.0002**	**0.0004**			
Fluorene	NE	NE						<	0.04	**0.0029**	0.002	**0.002**	**0.0009**	**0.0011**			
Indeno [1,2,3-cd] Pyrene	NE	NE						<	0.04	<	0.002	<0.002	<0.00005	<0.00005			
Naphthalene	NE	2.67						**5.5 D**	0.2	**0.35**	0.010	**0.287**	**0.129 D**	**0.101**			
Phenanthrene	NE	NE						<	0.04	**0.005**	0.002	**0.003**	**0.0014**	**0.0014**			
Pyrene	NE	NE						<	0.04	<	0.002	<0.002	**0.0002**	**0.0005**			
INORGANICS (ppm)																	
Total Cyanide	NE	NE						**0.84**	0.010	**0.44**	0.010	**0.52**	**0.364 D**	**0.218**			
Dissolved Free Cyanide	NE	NE						<	0.010	**0.080**	0.010	<0.005	**0.335 D**	**0.2**			
Physiologically Available Cyanide	NE	NE															
Arsenic	NE	NE															
Beryllium	NE	NE															
Chromium	NE	NE															
Copper	NE	NE															
Lead	NE	NE															
Nickel	NE	NE															
Zinc	NE	NE															
Dissolved Arsenic	NE	NE															
Dissolved Beryllium	NE	NE															
Dissolved Chromium	NE	NE															
Dissolved Copper	NE	NE															
Dissolved Lead	NE	NE															
Dissolved Nickel	NE	NE															
Dissolved Zinc	NE	NE															

Notes:

	Blank cells indicate that the parameter was not analyzed during this sampling round
D	"D" qualifier indicates analytes reported from a diluted run of the original analysis.
E	"E" qualifier indicates that the analyte was reported above the quantitation limit; Estimated value
J	"J" qualifier indicates analyte value was below the Method reporting Limit; Estimated value.
B	"B" qualifier indicates that the analyte was present in the method blank
NE	Regulatory Limit is not established
Bold Value	= concentration detected above the Method Reporting Limit.
	= concentration equals or exceeds the RIDEM GB Groundwater Objective (RIDEM GB GW Objectives)
	=detection limit equals or exceeds the RIDEM GB Groundwater Objective
(1)	Method 2 GB Objective criteria for naphthalene developed by GZA in accordance with the methods described in the Remediation Regulations.
(2)	Well was not sampled because there was limited water
(3)	NAPL was noted to be present
(4)	Well was not sampled because it had not been installed yet.
(5)	Well was not sampled because of an unknown reason
(6)	Well was not included in this sampling round

Please note that this table only includes compounds that have been detected or have detection limits that exceeded the RIDEM GB Groundwater Objective during groundwater monitoring at the Site between 1996 and present.

TABLE 5N
GROUNDWATER MONITORING DATA
Former Gas Plant Area
Former Tidewater Facility
Pawtucket, Rhode Island

ANALYTICAL		Sample ID:	MW-339D													
		Collected By:	AES	VHB	GZA	GZA	GZA		GZA		GZA	GZA	GZA	GZA	GZA	GZA
		Sample Date:	1996	2006	Jan 2010	June 2010	Dec 2010		July 2011		July 2012	Aug 2013	Oct 2014	Nov 2015	Nov 2016	Oct 2017
	RIDEM GB GW UCL	RIDEM GB GW-O	Note (4)	Note (4)	Note (4)	Note (4)					Note (3)	Note (3)	Note (3)	Note (3)	Note (3)	Note (3)
VOCs (ppm)							Result	DL	Result	DL	Result	Result	Result	Result	Result	Result
1,1,1,2-Tetrachloroethane	NE	NE					<	0.05	<	0.025	<0.05	<0.001	<0.001	<0.001	<0.0010	<0.0010
1,1-Dichloroethene	23	0.007					<	0.05	<	0.025	<0.05	<0.001	<0.001	<0.001	<0.0010	<0.0010
1,2,4-Trimethylbenzene	NE	NE					**0.38**	0.05	**0.41**	0.025	**0.449**	**0.437 D**	**0.4**	**0.48**	**0.437**	**0.486 D**
1,2-Dibromo-3-Chloropropane	NE	0.002					<	0.10	<	0.050	<0.1	<0.005	<0.005	<0.005	<0.005	<0.005
1,3,5-Trimethylbenzene	NE	NE					**0.11**	0.05	**0.11**	0.025	**0.122**	**0.1 D**	**0.0855**	**0.113**	**0.121**	**0.132 D**
4-Isopropyltoluene	NE	NE									<0.05	**0.0087**	**0.0073**	**0.0117**	**0.0098**	**0.0103**
Acetone	NE	NE					<	0.50	<	0.250	<0.5	<0.01	<0.01	J 0.0042	<0.0100	<0.0100
Benzene	18	0.14					<	0.05	**0.036**	0.025	**0.066**	**0.0232**	**0.0265**	**0.0186**	**0.0129**	**0.0164**
Carbon Disulfide	NE	NE							<	0.025	<0.05	<0.001	<0.001	<0.001	<0.0010	<0.0010
Carbon Tetrachloride	NE	0.07					<	0.05	<	0.025	<0.05	<0.001	<0.001	<0.001	<0.0010	<0.0010
Chloroform	NE	NE					<	0.05	<	0.025	<0.05	<0.001	<0.001	<0.001	<0.0010	<0.0010
cis-1,2-Dichloroethene	69	2.4					<	0.05	<	0.025	<0.05	<0.001	<0.001	<0.001	<0.0010	<0.0010
Ethylbenzene	16	1.6					**0.20**	0.05	**0.24**	0.025	**0.26**	**0.19 D**	**0.183**	**0.155**	**0.13**	**0.112**
Isopropylbenzene	NE	NE					<	0.05	**0.046**	0.025	<0.05	**0.0472**	**0.0437**	**0.0744**	**0.0591**	**0.061**
Methyl tert-Butyl Ether	NE	5					<	0.05	<	0.025	<0.05	<0.001	<0.001	<0.001	<0.0010	<0.0010
Methylene Chloride	NE	NE					<	0.05	<	0.025	<0.05	<0.001	<0.001	J 0.0003	<0.0020	<0.0020
Naphthalene	NE	2.67					**3.3**	0.10	**2.7**	0.050	**3.13**	**3.91 D**	**4.29**	**3.6**	**3.88**	**4.36 D**
n-Butylbenzene	NE	NE					<	0.05	<	0.025	<0.05	<0.001	<0.001	<0.001	**0.01**	**0.0115**
n-Propylbenzene	NE	NE					<	0.05	**0.034**	0.025	<0.05	**0.034**	**0.026**	**0.0424**	**0.0341**	**0.0383**
sec-Butylbenzene	NE	NE					<	0.05	<	0.025	<0.05	<0.001	**0.0013**	**0.0019**	**0.0019**	**0.0016**
Styrene	50	2.2					<	0.05	**0.044**	0.025	<0.05	**0.0342**	**0.0158**	**0.018**	**0.0124**	**0.0124**
tert-Butylbenzene	NE	NE					<	0.05	<	0.025	<0.05	<0.001	<0.001	J 0.0002	<0.0010	<0.0010
Tertiary-amyl methyl ether	NE	NE									<0.1	<0.001	<0.001	<0.001	<0.0010	<0.0010
Tetrachloroethene	NE	0.15					<	0.05	<	0.025	<0.05	<0.001	<0.001	<0.001	<0.0010	<0.0010
Toluene	21	1.7					**0.058**	0.05	**0.041**	0.025	**0.05**	**0.0471**	**0.0398**	**0.0448**	**0.0351**	**0.042**
Trichloroethene	87	0.54					<	0.05	<	0.025	<0.05	<0.001	<0.001	<0.001	<0.0010	<0.0010
Vinyl Chloride	NE	0.002					<	0.05	<	0.025	<0.05	<0.001	<0.001	<0.001	<0.0010	<0.0010
Xylene O	NE	NE					**0.41**	0.05	**0.038**	0.025	**0.418**	**0.344 D**	**0.344**	**0.354**	**0.321**	**0.311**
Xylene P,M	NE	NE					**0.46**	0.10	**0.047**	0.050	**0.446**	**0.33 D**	**0.317**	**0.362**	**0.326**	**0.312**
Xylenes (Total)	NE	NE					**0.87**	0.15	**0.085**	0.075	**0.864**	**0.674 D**	**0.661**	**0.716**	**0.647**	**0.623**
Total VOCs	NE	NE					**4.92**		**3.746**		**4.941**	**5.5054**	**5.7799**	**5.2805**	**6.037**	**5.9065**
TOTAL PETROLEUM HYDROCARBON (ppm)																
Hydrocarbon Content	NE	NE					**10**	2.0	**5.4**	0.2	**8.4**	**9.78**	**7.04**			
PAHS BY GCMS (ppm)																
2-Methylnaphthalene	NE	NE					**0.41**	0.04	**0.23**	0.01	**0.275**	**0.303 D**	**0.19**			
Acenaphthene	NE	NE					**0.042**	0.04	**0.052**	0.002	**0.09**	**0.0591 D**	**0.0564**			
Acenaphthylene	NE	NE					**0.079**	0.04	**0.069**	0.002	**0.105**	**0.0789 D**	**0.0696**			
Anthracene	NE	NE					<	0.04	**0.0029**	0.002	<0.02	**0.0041 D**	**0.0037**			
Benzo [a] Anthracene	NE	NE					<	0.04	<	0.002	<0.02	<0.0005 D	<0.0002			
Benzo [a] Pyrene	NE	NE					<	0.04	<	0.002	<0.02	<0.0005 D	<0.0002			
Benzo [b] Fluoranthene	NE	NE					<	0.04	<	0.002	<0.02	<0.0005 D	<0.0002			
Benzo [g,h,i] Perylene	NE	NE					<	0.04	<	0.002	<0.02	<0.0021 D	<0.0009			
Benzo [k] Fluoranthene	NE	NE					<	0.04	<	0.002	<0.02	<0.0005 D	<0.0002			
Chrysene	NE	NE					<	0.04	<	0.002	<0.02	<0.0005 D	<0.0002			
Dibenzo [a,h] Anthracene	NE	NE					<	0.04	<	0.002	<0.02	<0.0005 D	<0.0002			
Fluoranthene	NE	NE					<	0.04	<	0.002	<0.02	<0.0021 D	**0.001**			
Fluorene	NE	NE					<	0.04	**0.024**	0.002	**0.04**	**0.0314 D**	**0.0287**			
Indeno [1,2,3-cd] Pyrene	NE	NE					<	0.04	<	0.002	<0.02	<0.0005 D	<0.0002			
Naphthalene	NE	2.67					**1.7**	0.04	**1.1**	0.04	**2.13**	**1.63 D**	**1.42**			
Phenanthrene	NE	NE					<	0.04	**0.023**	0.002	**0.041**	**0.0271 D**	**0.0259**			
Pyrene	NE	NE					<	0.04	<	0.002	<0.02	<0.0021 D	**0.0012**			
INORGANICS (ppm)																
Total Cyanide	NE	NE					**0.29**	0.010	**0.13**	0.010	**0.0925**	**0.0777**	**0.09**			
Dissolved Free Cyanide	NE	NE					**0.020**	0.010	**0.010**	0.010	<0.005	**0.0761**	**0.144**			
Physiologically Available Cyanide	NE	NE														
Arsenic	NE	NE														
Beryllium	NE	NE														
Chromium	NE	NE														
Copper	NE	NE														
Lead	NE	NE														
Nickel	NE	NE														
Zinc	NE	NE														
Dissolved Arsenic	NE	NE														
Dissolved Beryllium	NE	NE														
Dissolved Chromium	NE	NE														
Dissolved Copper	NE	NE														
Dissolved Lead	NE	NE														
Dissolved Nickel	NE	NE														
Dissolved Zinc	NE	NE														

Notes:

	Blank cells indicate that the parameter was not analyzed during this sampling round
D	"D" qualifier indicates analytes reported from a diluted run of the original analysis.
E	"E" qualifier indicates that the analyte was reported above the quantitation limit; Estimated value
J	"J" qualifier indicates analyte value was below the Method reporting Limit; Estimated value.
B	"B" qualifier indicates that the analyte was present in the method blank
NE	Regulatory Limit is not established
Bold Value	= concentration detected above the Method Reporting Limit.
	= concentration equals or exceeds the RIDEM GB Groundwater Objective (RIDEM GB GW Objectives)
	=detection limit equals or exceeds the RIDEM GB Groundwater Objective
(1)	Method 2 GB Objective criteria for naphthalene developed by GZA in accordance with the methods described in the Remediation Regulations.
(2)	Well was not sampled because there was limited water
(3)	NAPL was noted to be present
(4)	Well was not sampled because it had not been installed yet.
(5)	Well was not sampled because of an unknown reason
(6)	Well was not included in this sampling round

Please note that this table only includes compounds that have been detected or have detection limits that exceeded the RIDEM GB Groundwater Objective during groundwater monitoring at the Site between 1996 and present.

TABLE 5O
GROUNDWATER MONITORING DATA
Former Power Plant Area
Former Tidewater Facility
Pawtucket, Rhode Island

ANALYTICAL	Sample ID:		M&E MW-2														
	Collected By:		AES	VHB	GZA		GZA		GZA	GZA		GZA	GZA	GZA	GZA	GZA	GZA
	Sample Date:		1996	2006	Jan 2010		June 2010		Dec 2010	July 2011		July 2012	Aug 2013	Oct 2014	Nov 2015	Nov 2016	Oct 2017
	RIDEM GB GW UCL	RIDEM GB GW-O	Note (5)						Note (6)								
VOCs (ppm)				Result	Result	DL	Result	DL		Result	DL	Result	Result	Result	Result	Result	Result
1,1,1,2-Tetrachloroethane	NE	NE			<	0.001	<	0.001		<	0.001	<0.001	<0.001	<0.0010	<0.0010	<0.0010	<0.0010
1,1-Dichloroethene	23	0.007			<	0.001	<	0.001		<	0.001	<0.001	<0.001	<0.0010	<0.0010	<0.0010	<0.0010
1,2,4-Trimethylbenzene	NE	NE		<0.001	<	0.001	<	0.001		<	0.001	<0.001	<0.001	<0.0010	<0.0010	<0.0010	<0.0010
1,2-Dibromo-3-Chloropropane	NE	0.002			<	0.002	<	0.002		<	0.002	<0.002	<0.005	<0.0050	<0.0050	<0.0050	<0.0050
1,3,5-Trimethylbenzene	NE	NE		<0.001	<	0.001	<	0.001		<	0.001	<0.001	<0.001	<0.0010	<0.0010	<0.0010	<0.0010
4-Isopropyltoluene	NE	NE										<0.001	<0.001	<0.0010	<0.0010	<0.0010	<0.0010
Acetone	NE	NE			<	0.010	<	0.010		<	0.010	<0.01	<0.01	<0.0100	<0.0100	<0.0100	<0.0100
Benzene	18	0.14		<0.001	<	0.001	<	0.001		<	0.001	<0.001	<0.001	<0.0010	<0.0010	<0.0010	<0.0010
Carbon Disulfide	NE	NE								<	0.001	<0.001	<0.001	<0.0010	<0.0010	<0.0010	<0.0010
Carbon Tetrachloride	NE	0.07			<	0.001	<	0.001		<	0.001	<0.001	<0.001	<0.0010	<0.0010	<0.0010	<0.0010
Chloroform	NE	NE		<0.001	<	0.001	<	0.001		<	0.001	<0.001	<0.001	<0.0010	<0.0010	<0.0010	<0.0010
cis-1,2-Dichloroethene	69	2.4			<	0.001	<	0.001		<	0.001	<0.001	<0.001	<0.0010	<0.0010	<0.0010	<0.0010
Ethylbenzene	16	1.6		<0.001	<	0.001	<	0.001		<	0.001	<0.001	<0.001	<0.0010	<0.0010	<0.0010	<0.0010
Isopropylbenzene	NE	NE		<0.001	<	0.001	<	0.001		<	0.001	<0.001	<0.001	<0.0010	<0.0010	<0.0010	<0.0010
Methyl tert-Butyl Ether	NE	5		<0.001	<	0.001	<	0.001		<	0.001	<0.001	<0.001	<0.0010	<0.0010	<0.0010	<0.0010
Methylene Chloride	NE	NE			<	0.002	<	0.002		<	0.002	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
Naphthalene	NE	2.67		<0.001	<	0.002	<	0.002		<	0.002	<0.001	<0.001	**0.0112**	<0.0010	<0.0010	<0.0010
n-Butylbenzene	NE	NE		<0.001	<	0.001	<	0.001		<	0.001	<0.001	<0.001	<0.0010	<0.0010	<0.0010	<0.0010
n-Propylbenzene	NE	NE		<0.001	<	0.001	<	0.001		<	0.001	<0.001	<0.001	<0.0010	<0.0010	<0.0010	<0.0010
sec-Butylbenzene	NE	NE		<0.001	<	0.001	<	0.001		<	0.001	<0.001	<0.001	<0.0010	<0.0010	<0.0010	<0.0010
Styrene	50	2.2			<	0.001	<	0.001		<	0.001	<0.001	<0.001	<0.0010	<0.0010	<0.0010	<0.0010
tert-Butylbenzene	NE	NE			<	0.001	<	0.001		<	0.001	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Tertiary-amyl methyl ether	NE	NE										<0.002	<0.001	<0.0010	<0.0010	<0.0010	<0.0010
Tetrachloroethene	NE	0.15			<	0.001	<	0.001		<	0.001	<0.001	<0.001	<0.0010	<0.0010	<0.0010	<0.0010
Toluene	21	1.7			<	0.001	<	0.001		<	0.001	<0.001	<0.001	<0.0010	<0.0010	<0.0010	<0.0010
Trichloroethene	87	0.54			<	0.001	<	0.001		<	0.001	<0.001	<0.001	<0.0010	<0.0010	<0.0010	<0.0010
Vinyl Chloride	NE	0.002			<	0.001	<	0.001		<	0.001	<0.001	<0.001	<0.0010	<0.0010	<0.0010	<0.0010
Xylene O	NE	NE		<0.001	<	0.001	<	0.001		<	0.001	<0.001	<0.001	<0.0010	<0.0010	<0.0010	<0.0010
Xylene P,M	NE	NE		<0.002	<	0.002	<	0.002		<	0.002	<0.002	<0.002	<0.0020	<0.0020	<0.0020	<0.0020
Xylenes (Total)	NE	NE		<0.003	<	0.003	<	0.003		<	0.003	<0.003	<0.003	<0.0030	<0.0020	<0.0020	<0.0020
Total VOCs	NE	NE		ND		ND		ND			ND	ND	ND	**0.0112**	ND	ND	ND
TOTAL PETROLEUM HYDROCARBON (ppm)																	
Hydrocarbon Content	NE	NE			<	0.2	<	0.2		<	0.2	**0.27**	<0.19	<0.19			
PAHS BY GCMS (ppm)																	
2-Methylnaphthalene	NE	NE		<0.0002	<	0.002	<	0.002		<	0.002	<0.0002	<0.0002	<0.0002			
Acenaphthene	NE	NE		<0.0002	<	0.002	<	0.002		<	0.002	<0.0002	<0.0002	<0.0002			
Acenaphthylene	NE	NE		<0.0002	<	0.002	<	0.002		<	0.002	<0.0002	<0.0002	<0.0002			
Anthracene	NE	NE		<0.0002	<	0.002	<	0.002		<	0.002	<0.0002	<0.0002	<0.0002			
Benzo [a] Anthracene	NE	NE		<0.0002	<	0.002	<	0.002		<	0.002	<0.0002	<0.00005	<0.00005			
Benzo [a] Pyrene	NE	NE		<0.0002	<	0.002	<	0.002		<	0.002	<0.0002	<0.00005	<0.00005			
Benzo [b] Fluoranthene	NE	NE		<0.0002	<	0.002	<	0.002		<	0.002	<0.0002	<0.00005	<0.00005			
Benzo [g,h,i] Perylene	NE	NE		<0.0002	<	0.002	<	0.002		<	0.002	<0.0002	<0.0002	<0.0002			
Benzo [k] Fluoranthene	NE	NE		<0.0002	<	0.002	<	0.002		<	0.002	<0.0002	<0.00005	<0.00005			
Chrysene	NE	NE		<0.0002	<	0.002	<	0.002		<	0.002	<0.0002	<0.00005	<0.00005			
Dibenzo [a,h] Anthracene	NE	NE		<0.0002	<	0.002	<	0.002		<	0.002	<0.0002	<0.00005	<0.00005			
Fluoranthene	NE	NE		<0.0002	<	0.002	<	0.002		<	0.002	<0.0002	<0.0002	<0.0002			
Fluorene	NE	NE		<0.0002	<	0.002	<	0.002		<	0.002	<0.0002	<0.0002	<0.0002			
Indeno [1,2,3-cd] Pyrene	NE	NE		<0.0002	<	0.002	<	0.002		<	0.002	<0.0002	<0.00005	<0.00005			
Naphthalene	NE	2.67		<0.0002	<	0.002	<	0.002		<	0.002	**0.001**	<0.0002	**0.0003**			
Phenanthrene	NE	NE		<0.0002	<	0.002	<	0.002		<	0.002	<0.0002	<0.0002	<0.0002			
Pyrene	NE	NE		<0.0002	<	0.002	<	0.002		<	0.002	<0.0002	<0.0002	<0.0002			
INORGANICS (ppm)																	
Total Cyanide	NE	NE		**0.07**	**0.050**	0.010	**0.12**	0.010		**0.010**	0.010	**0.48**	**0.045**	**0.0734**			
Dissolved Free Cyanide	NE	NE		<0.05	<	0.010	<	0.010		<	0.010	<0.005	**0.0395**	**0.058**			
Physiologically Available Cyanide	NE	NE		<0.05													
Arsenic	NE	NE		<0.0050													
Beryllium	NE	NE		<0.001													
Chromium	NE	NE		<0.020													
Copper	NE	NE		<0.020													
Lead	NE	NE		<0.0050													
Nickel	NE	NE		<0.050													
Zinc	NE	NE		<0.050													
Dissolved Arsenic	NE	NE		<0.0060													
Dissolved Beryllium	NE	NE		<0.001													
Dissolved Chromium	NE	NE		<0.020													
Dissolved Copper	NE	NE		<0.020													
Dissolved Lead	NE	NE		<0.0050													
Dissolved Nickel	NE	NE		<0.050													
Dissolved Zinc	NE	NE		<0.050													

Notes:

	Blank cells indicate that the parameter was not analyzed during this sampling round
D	"D" qualifier indicates analytes reported from a diluted run of the original analysis.
E	"E" qualifier indicates that the analyte was reported above the quantitation limit; Estimated value
J	"J" qualifier indicates analyte value was below the Method reporting Limit; Estimated value.
B	"B" qualifier indicates that the analyte was present in the method blank
NE	Regulatory Limit is not established
Bold Value	= concentration detected above the Method Reporting Limit.
	= concentration equals or exceeds the RIDEM GB Groundwater Objective (RIDEM GB GW Objectives)
	=detection limit equals or exceeds the RIDEM GB Groundwater Objective
(1)	Method 2 GB Objective criteria for naphthalene developed by GZA in accordance with the methods described in the Remediation Regulations.
(2)	Well was not sampled because there was limited water
(3)	NAPL was noted to be present
(4)	Well was not sampled because it had not been installed yet.
(5)	Well was not sampled because of an unknown reason
(6)	Well was not included in this sampling round

Please note that this table only includes compounds that have been detected or have detection limits that exceeded the RIDEM GB Groundwater Objective during groundwater monitoring at the Site between 1996 and present.

TABLE 5P
GROUNDWATER MONITORING DATA
Former Power Plant Area
Former Tidewater Facility
Pawtucket, Rhode Island

ANALYTICAL	Sample ID:		TB-1 / MW-6															
	Collected By:		AES	VHB	GZA		GZA		GZA	GZA		GZA	GZA	GZA	GZA	GZA	GZA	GZA
	Sample Date:		1996	2006	Jan 2010		July 2010		Dec 2010	July 2011		July 2012	Aug 2013	Oct 2014	Nov 2015	Nov 2016	Oct 2017	
	RIDEM GB GW UCL	RIDEM GB GW-O							Note (6)									
VOCs (ppm)			Result	Result	Result	DL	Result	DL		Result	DL	Result	Result	Result	Result	Result	Result	
1,1,1,2-Tetrachloroethane	NE	NE			<	0.001	<	0.001		<	0.001	<0.001	<0.001	<0.0010	<0.0010	<0.0010	<0.0010	
1,1-Dichloroethene	23	0.007			<	0.001	<	0.001		<	0.001	<0.001	<0.001	<0.0010	<0.0010	<0.0010	<0.0010	
1,2,4-Trimethylbenzene	NE	NE	0.01 J	**0.0054**	**0.0074**	0.001	**0.0031**	0.001		**0.0032**	0.001	<0.001	**0.0012**	<0.0010	J 0.0001	<0.0010	**0.0022**	
1,2-Dibromo-3-Chloropropane	NE	0.002			<	0.005	<	0.002		<	0.002	<0.005	<0.005	<0.0050	<0.0050	<0.0050	<0.0050	
1,3,5-Trimethylbenzene	NE	NE		**0.01**	**0.0046**	0.001	**0.0003**	0.001		<	0.001	<0.001	<0.001	<0.0010	**0.0053**	<0.0010	<0.0010	
4-Isopropyltoluene	NE	NE										<0.001	<0.001	<0.0010	<0.0010	<0.0010	<0.0010	
Acetone	NE	NE			<	0.025	<	0.010		**0.003**	0.010	<0.01	<0.01	<0.0100	B <0.035	<0.0100	<0.0100	
Benzene	18	0.14	**0.02**	**0.0495**	**0.0035**	0.001	**0.0031**	0.001		**0.0034**	0.001	**0.0213**	**0.0263**	**0.0115**	**0.0095**	**0.0185**	**0.023**	
Carbon Disulfide	NE	NE								<	0.001	<0.001	<0.001	<0.0010	<0.0010	<0.0010	<0.0010	
Carbon Tetrachloride	NE	0.07			<	0.001	<	0.001		<	0.001	<0.001	<0.001	<0.0010	<0.0010	<0.0010	<0.0010	
Chloroform	NE	NE		<0.001	<	0.001	<	0.001		<	0.001	<0.001	<0.001	<0.0010	<0.0010	<0.0010	<0.0010	
cis-1,2-Dichloroethene	69	2.4			<	0.001	<	0.001		<	0.001	<0.001	<0.001	<0.0010	<0.0010	<0.0010	<0.0010	
Ethylbenzene	16	1.6	**0.03**	**0.0849**	**0.0016**	0.001	**0.068**	0.001		**0.0360**	0.001	**0.0243**	**0.0193**	**0.0079**	**0.0055**	**0.0119**	**0.0198**	
Isopropylbenzene	NE	NE		**0.0074**	<	0.001	**0.008**	0.001		**0.0049**	0.001	**0.0033**	**0.0037**	**0.002**	J 0.0010	**0.0022**	**0.0042**	
Methyl tert-Butyl Ether	NE	5		<0.001	**0.005**	0.001	<	0.002		<	0.001	<0.001	<0.001	<0.0010	<0.0010	<0.0010	<0.0010	
Methylene Chloride	NE	NE			<	0.002	<	0.002				<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	
Naphthalene	NE	2.67		**0.0328**	**0.00267**	0.002	**0.14**	0.001		**0.011**	0.002	**0.0035**	**0.0045**	**0.0024**	**0.0015**	**0.0019**	**0.0028**	
n-Butylbenzene	NE	NE		**0.0027**	<	0.001	<	0.001		**0.0012**	0.001	<0.001	<0.001	<0.0010	J 0.0006	**0.0011**	**0.0012**	
n-Propylbenzene	NE	NE		**0.0079**	<	0.001	**0.008**	0.001		**0.0043**	0.001	**0.0027**	**0.0027**	**0.001**	J 0.0007	**0.0016**	**0.0026**	
sec-Butylbenzene	NE	NE		<0.001	<	0.001	<	0.001		<	0.001	<0.001	<0.001	<0.0010	J 0.0001	<0.0010	<0.0010	
Styrene	50	2.2	<0.02		**0.0022**	0.001	<	0.001		<	0.001	<0.001	<0.001	<0.0010	<0.0010	<0.0010	<0.0010	
tert-Butylbenzene	NE	NE			<	0.001	<	0.001		<	0.001	<0.001	<0.001	<0.001	<0.0010	<0.0010	<0.0010	
Tertiary-amyl methyl ether	NE	NE										<0.001	<0.001	<0.0010	<0.0010	<0.0010	<0.0010	
Tetrachloroethene	NE	0.15			**0.00015**	0.001	<	0.001		<	0.001	<0.001	<0.001	<0.0010	<0.0010	<0.0010	<0.0010	
Toluene	21	1.7	<0.02	**0.0057**	**0.0017**	0.001	**0.004**	0.001		**0.0025**	0.001	**0.0011**	**0.0012**	<0.0010	J 0.0005	**0.0015**	**0.001**	
Trichloroethene	87	0.54			<	0.001	<	0.001		<	0.001	<0.001	<0.001	<0.0010	<0.0010	<0.0010	<0.0010	
Vinyl Chloride	NE	0.002			<	0.001	<	0.001		<	0.001	<0.001	<0.001	<0.0010	<0.0010	<0.0010	<0.0010	
Xylene O	NE	NE	**0.02**	**0.082**	<	0.001	**0.079**	0.001		**0.042**	0.001	**0.0212**	**0.0186**	**0.0073**	**0.0057**	**0.0105**	**0.0152**	
Xylene P,M	NE	NE	<0.02	**0.0079**	<	0.002	**0.026**	0.001		**0.0055**	0.002	**0.0028**	**0.0028**	<0.0020	J 0.0009	<0.0020	**0.0049**	
Xylenes (Total)	NE	NE	**0.02**	**0.0899**	<	0.003	**0.105**	0.002		**0.048**	0.003	**0.024**	**0.0213**	**0.0073**	**0.0065**	**0.0105**	**0.0202**	
Total VOCs	NE	NE	**0.08**	**0.2962**	**0.02882**		**0.340**			**0.117**		**0.0802**	**0.0803**	**0.0321**	**0.0357**	**0.0597**	**0.0769**	
TOTAL PETROLEUM HYDROCARBON (ppm)																		
Hydrocarbon Content	NE	NE			**2.6**	0.2	**3.7**	0.2		**1.8**	0.2	**3.65**	**2.98**	**1.47**				
PAHS BY GCMS (ppm)																		
2-Methylnaphthalene	NE	NE	**0.04**	<0.0002	<	0.002	**0.034**	0.002		<	0.002	<0.0002	<0.0002	<0.0002				
Acenaphthene	NE	NE	**0.004**	**0.0315**	**0.017**	0.002	**0.013**	0.002		**0.0082**	0.002	**0.01**	**0.0067**	**0.0052**				
Acenaphthylene	NE	NE	**0.013**	**0.1435**	**0.071**	0.002	**0.057**	0.002		**0.038**	0.002	**0.057**	**0.0414 D**	**0.0317**				
Anthracene	NE	NE	<0.02	**0.00134**	<	0.002	**0.012**	0.002		<	0.002	**0.0006**	**0.0005**	**0.0003**				
Benzo [a] Anthracene	NE	NE	**0.06**	<0.0002	<	0.002	<	0.002		<	0.002	<0.0002	<0.00005	**0.00006**				
Benzo [a] Pyrene	NE	NE	<0.02	<0.0002	<	0.002	<	0.002		<	0.002	<0.0002	<0.00005	<0.00005				
Benzo [b] Fluoranthene	NE	NE	<0.02	<0.0002	<	0.002	<	0.002		<	0.002	<0.0002	<0.00005	<0.00005				
Benzo [g,h,i] Perylene	NE	NE	<0.02	<0.0002	<	0.002	<	0.002		<	0.002	<0.0002	<0.0002	<0.0002				
Benzo [k] Fluoranthene	NE	NE	<0.02	<0.0002	<	0.002	<	0.002		<	0.002	<0.0002	<0.00005	<0.00005				
Chrysene	NE	NE	<0.02	<0.0002	<	0.002	<	0.002		<	0.002	<0.0002	<0.00005	<0.00005				
Dibenzo [a,h] Anthracene	NE	NE	<0.02	<0.0002	<	0.002	<	0.002		<	0.002	<0.0002	<0.00005	<0.00005				
Fluoranthene	NE	NE	<0.02	**0.00203**	<	0.002	<	0.002		<	0.002	**0.0007**	**0.0004**	**0.0003**				
Fluorene	NE	NE	**0.003**	**0.0364**	**0.019**	0.002	**0.013**	0.002		**0.0081**	0.002	**0.01**	**0.0063**	**0.0058**				
Indeno [1,2,3-cd] Pyrene	NE	NE	<0.02	<0.0003	<	0.002	<	0.002		<	0.002	<0.0002	<0.00005	<0.00005				
Naphthalene	NE	2.67	<0.02	**0.0269**	**0.0077**	0.002	**0.042**	0.002		**0.0038**	0.002	**0.002**	**0.0018**	**0.0003**				
Phenanthrene	NE	NE	**0.004**	**0.0306**	**0.014**	0.002	**0.012**	0.002		**0.0031**	0.002	**0.007**	**0.0037**	**0.0029**				
Pyrene	NE	NE	0.01 J	**0.00104**	<	0.002	<	0.002		<	0.002	**0.0004**	**0.0003**	**0.0002**				
INORGANICS (ppm)																		
Total Cyanide	NE	NE	**0.18**	**0.2**	**0.21**	0.010	**0.13**	0.010		**0.21**	0.010	**0.174**	**0.271 D**	**0.178**				
Dissolved Free Cyanide	NE	NE		<0.05	**0.01**	0.010	<	0.010		**0.040**	0.010	**0.0063**	**0.263 D**	**0.153**				
Physiologically Available Cyanide	NE	NE		<0.05														
Arsenic	NE	NE	<0.002	<0.0025														
Beryllium	NE	NE	<0.002	<0.0005														
Chromium	NE	NE	<0.024	<0.010														
Copper	NE	NE	<0.024	<0.010														
Lead	NE	NE	<0.050	<0.0025														
Nickel	NE	NE	<0.024	<0.025														
Zinc	NE	NE	**0.023**	<0.025														
Dissolved Arsenic	NE	NE		<0.0025														
Dissolved Beryllium	NE	NE		<0.0005														
Dissolved Chromium	NE	NE		<0.010														
Dissolved Copper	NE	NE		<0.010														
Dissolved Lead	NE	NE		<0.0025														
Dissolved Nickel	NE	NE		<0.025														
Dissolved Zinc	NE	NE		**0.025**														

Notes:

	Blank cells indicate that the parameter was not analyzed during this sampling round
D	"D" qualifier indicates analytes reported from a diluted run of the original analysis.
E	"E" qualifier indicates that the analyte was reported above the quantitation limit; Estimated value
J	"J" qualifier indicates analyte value was below the Method reporting Limit; Estimated value.
B	"B" qualifier indicates that the analyte was present in the method blank
NE	Regulatory Limit is not established
Bold Value	= concentration detected above the Method Reporting Limit.
	= concentration equals or exceeds the RIDEM GB Groundwater Objective (RIDEM GB GW Objectives)
	=detection limit equals or exceeds the RIDEM GB Groundwater Objective
(1)	Method 2 GB Objective criteria for naphthalene developed by GZA in accordance with the methods described in the Remediation Regulations.
(2)	Well was not sampled because there was limited water
(3)	NAPL was noted to be present
(4)	Well was not sampled because it had not been installed yet.
(5)	Well was not sampled because of an unknown reason
(6)	Well was not included in this sampling round

Please note that this table only includes compounds that have been detected or have detection limits that exceeded the RIDEM GB Groundwater Objective during groundwater monitoring at the Site between 1996 and present.

TABLE 5Q
GROUNDWATER MONITORING DATA
Former Power Plant Area
Former Tidewater Facility
Pawtucket, Rhode Island

ANALYTICAL	Sample ID:		MW-109														
	Collected By:		AES	VHB	GZA		GZA		GZA	GZA		GZA	GZA	GZA	GZA	GZA	GZA
	Sample Date:		1996	2006	Jan 2010		July 2010		Dec 2010	July 2011		July 2012	Aug 2013	Oct 2014	Nov 2015	Nov 2016	Oct 2017
	RIDEM GB GW UCL	RIDEM GB GW-O	Note (4)						Note (6)								
VOCs (ppm)				Result	Result	DL	Result	DL		Result	DL	Result	Result	Result	Result	Result	Result
1,1,1,2-Tetrachloroethane	NE	NE			<	0.0025	<	0.001		<	0.0025	<0.01	<0.001	<0.0010	<0.0010	<0.0010	<0.0010
1,1-Dichloroethene	23	0.007			<	0.0025	<	0.001		<	0.0025	<0.01	<0.001	<0.0010	<0.0010	<0.0010	<0.0010
1,2,4-Trimethylbenzene	NE	NE		**0.454**	**0.27**	0.0025	**0.26**	0.010		**0.21**	0.0025	**0.295**	**0.126 D**	**0.14**	**0.0259**	**0.0058**	**0.0398**
1,2-Dibromo-3-Chloropropane	NE	0.002			<	0.0130	<	0.002		<	0.0050	<0.05	<0.005	<0.0050	<0.0050	<0.0050	<0.0050
1,3,5-Trimethylbenzene	NE	NE		**0.047**	**0.017**	0.0025	**0.02**	0.001		**0.0097**	0.0025	**0.0172**	**0.0057**	**0.005**	J 0.0004	<0.0010	**0.0015**
4-Isopropyltoluene	NE	NE										**0.0104**	**0.0046**	**0.0037**	J 0.0004	<0.0010	**0.0014**
Acetone	NE	NE			<	0.0630	<	0.010		<	0.0250	<0.1	<0.01	<0.0100	J 0.0037	<0.0100	<0.0100
Benzene	18	0.14		**0.0352**	**0.039**	0.0025	**0.024**	0.001		**0.03**	0.0025	**0.0402**	**0.115 D**	**0.135**	**0.171**	**0.312**	**0.137 D**
Carbon Disulfide	NE	NE								<	0.0025	<0.01	<0.001	**0.0015**	<0.0010	<0.0010	<0.0010
Carbon Tetrachloride	NE	0.07			<	0.0025	<	0.001		<	0.0025	<0.01	<0.001	<0.0010	<0.0010	<0.0010	<0.0010
Chloroform	NE	NE		<0.001	<	0.0025	<	0.001		<	0.0025	<0.01	<0.001	<0.0010	<0.0010	<0.0010	<0.0010
cis-1,2-Dichloroethene	69	2.4			<	0.0025	<	0.001		<	0.0025	<0.01	<0.001	<0.0010	<0.0010	<0.0010	<0.0010
Ethylbenzene	16	1.6		**0.177**	**0.086**	0.0025	<	0.001		**0.057**	0.0025	**0.0928**	**0.0404**	**0.0349**	**0.0338**	**0.0182**	**0.0168**
Isopropylbenzene	NE	NE		**0.0418**	**0.038**	0.0025	**0.028**	0.001		**0.026**	0.0025	**0.0337**	**0.0194**	**0.022**	**0.0233**	**0.016**	**0.0172**
Methyl tert-Butyl Ether	NE	5		<0.001	<	0.0025	<	0.002		<	0.0025	<0.01	<0.001	<0.0010	<0.0010	<0.0010	<0.0010
Methylene Chloride	NE	NE			<	0.0025	<	0.002		<	0.0050	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
Naphthalene	NE	2.67		**0.724**	**0.41**	0.0050	**0.3**	0.001		**0.3**	0.0050	**0.559**	**0.163 D**	**0.248**	**0.0288**	**0.0255**	**0.0779**
n-Butylbenzene	NE	NE		<0.001	**0.009**	0.0025	<	0.001		**0.0075**	0.0025	<0.01	<0.001	<0.0010	**0.0067**	**0.0052**	**0.0056**
n-Propylbenzene	NE	NE		**0.0217**	**0.017**	0.0025	**0.015**	0.001		**0.014**	0.0025	**0.0189**	**0.0101**	**0.0117**	**0.0124**	**0.0083**	**0.0091**
sec-Butylbenzene	NE	NE		**0.0056**	**0.0025**	0.0025	<	0.001		**0.0025**	0.0025	<0.01	<0.001	**0.0025**	**0.0024**	**0.0018**	**0.002**
Styrene	50	2.2			<	0.0025	<	0.001		<	0.0025	<0.01	<0.001	<0.0010	B <0.0020	<0.0010	<0.0010
tert-Butylbenzene	NE	NE			<	0.0025	<	0.001		<	0.0025	<0.01	<0.001	<0.0010	J 0.0004	<0.0010	<0.0010
Tertiary-amyl methyl ether	NE	NE			<	0.0025	<	0.001		<	0.0025	<0.01	<0.001	<0.0010	<0.0010	<0.0010	<0.0010
Tetrachloroethene	NE	0.15			<	0.0025	<	0.001		<	0.0025	<0.01	<0.001	<0.0010	<0.0010	<0.0010	<0.0010
Toluene	21	1.7		**0.0058**	**0.0028**	0.0025	**0.003**	0.001		**0.0025**	0.0025	<0.01	**0.003**	**0.003**	**0.0033**	**0.002**	**0.0015**
Trichloroethene	87	0.54			<	0.0025	<	0.001		<	0.0025	<0.01	<0.001	<0.0010	<0.0010	<0.0010	<0.0010
Vinyl Chloride	NE	0.002			<	0.0025	<	0.001		<	0.0025	<0.01	<0.001	<0.0010	<0.0010	<0.0010	<0.0010
Xylene O	NE	NE		**0.0875**	**0.031**	0.0025	**0.033**	0.001		**0.026**	0.0025	**0.0457**	**0.0183**	**0.0185**	**0.0176**	**0.0124**	**0.0114**
Xylene P,M	NE	NE		**0.0875**	**0.026**	0.0050	**0.034**	0.001		**0.019**	0.0050	**0.0415**	**0.0128**	**0.0082**	B <0.0040	**0.0021**	**0.0044**
Xylenes (Total)	NE	NE		**0.175**	**0.057**	0.0075	**0.067**	0.002		**0.045**	0.0075	**0.0872**	**0.0311**	**0.0266**	**0.021**	**0.0144**	**0.0158**
Total VOCs	NE	NE		**1.6871**	**0.9483**		**0.717**			**0.7042**		**1.1544**	**0.5494**	**0.634**	**0.3306**	**0.418**	**0.3256**
TOTAL PETROLEUM HYDROCARBON (ppm)																	
Hydrocarbon Content	NE	NE			**1.1**	0.2	**1.5**	0.2		**0.66**	0.2	**3.62**	**2.79**	**1.81**			
PAHS BY GCMS (ppm)																	
2-Methylnaphthalene	NE	NE		**0.073**	**0.026**	0.002	**0.04**	0.002		**0.021**	0.002	**0.026**	**0.0309 D**	**0.0105**			
Acenaphthene	NE	NE		**0.00583**	**0.0027**	0.002	**0.0028**	0.002		**0.0023**	0.002	**0.004**	**0.0033**	**0.0024**			
Acenaphthylene	NE	NE		**0.00124**	<	0.002	<	0.002		<	0.002	<0.002	**0.0004**	**0.0003**			
Anthracene	NE	NE		**0.00065**	<	0.002	<	0.002		<	0.002	<0.002	**0.0004**	**0.0003**			
Benzo [a] Anthracene	NE	NE		<0.0002	<	0.002	<	0.002		<	0.002	<0.002	<0.00005	<0.00005			
Benzo [a] Pyrene	NE	NE		<0.0002	<	0.002	<	0.002		<	0.002	<0.002	<0.00005	<0.00005			
Benzo [b] Fluoranthene	NE	NE		<0.0002	<	0.002	<	0.002		<	0.002	<0.002	<0.00005	<0.00005			
Benzo [g,h,i] Perylene	NE	NE		<0.0002	<	0.002	<	0.002		<	0.002	<0.002	<0.0002	<0.0002			
Benzo [k] Fluoranthene	NE	NE		<0.0003	<	0.002	<	0.002		<	0.002	<0.002	<0.00005	<0.00005			
Chrysene	NE	NE		<0.0002	<	0.002	<	0.002		<	0.002	<0.002	<0.00005	<0.00005			
Dibenzo [a,h] Anthracene	NE	NE		<0.0002	<	0.002	<	0.002		<	0.002	<0.002	<0.00005	<0.00005			
Fluoranthene	NE	NE		**0.00033**	<	0.002	<	0.002		<	0.002	<0.002	<0.0002	<0.0002			
Fluorene	NE	NE		**0.00336**	<	0.002	<	0.002		<	0.002	**0.002**	**0.0019**	**0.0015**			
Indeno [1,2,3-cd] Pyrene	NE	NE		<0.0003	<	0.002	<	0.002		<	0.002	<0.002	<0.00005	<0.00005			
Naphthalene	NE	2.67		**0.602**	**0.1**	0.002	**0.12**	0.002		**0.096**	0.002	**0.204**	**0.0965 D**	**0.0727**			
Phenanthrene	NE	NE		**0.00317**	<	0.002	<	0.002		<	0.002	**0.002**	**0.0019**	**0.0015**			
Pyrene	NE	NE		**0.00031**	<	0.002	<	0.002		<	0.002	<0.002	**0.0002**	**0.0002**			
INORGANICS (ppm)																	
Total Cyanide	NE	NE		**0.222**	**0.28**	0.010	**0.17**	0.010		**0.180**	0.010	**0.235**	**0.143**	**0.212**			
Dissolved Free Cyanide	NE	NE		**0.06**	<	0.010	<	0.010		<	0.010	<0.005	**0.132**	**0.213**			
Physiologically Available Cyanide	NE	NE		<0.05													
Arsenic	NE	NE		**0.0103**													
Beryllium	NE	NE		<0.001													
Chromium	NE	NE		<0.020													
Copper	NE	NE		<0.020													
Lead	NE	NE		<0.0050													
Nickel	NE	NE		<0.050													
Zinc	NE	NE		<0.050													
Dissolved Arsenic	NE	NE		**0.0085**													
Dissolved Beryllium	NE	NE		<0.001													
Dissolved Chromium	NE	NE		<0.020													
Dissolved Copper	NE	NE		<0.020													
Dissolved Lead	NE	NE		<0.0050													
Dissolved Nickel	NE	NE		<0.050													
Dissolved Zinc	NE	NE		**0.051**													

Notes:

	Blank cells indicate that the parameter was not analyzed during this sampling round
D	"D" qualifier indicates analytes reported from a diluted run of the original analysis.
E	"E" qualifier indicates that the analyte was reported above the quantitation limit; Estimated value
J	"J" qualifier indicates analyte value was below the Method reporting Limit; Estimated value.
B	"B" qualifier indicates that the analyte was present in the method blank
NE	Regulatory Limit is not established
Bold Value	= concentration detected above the Method Reporting Limit.
	= concentration equals or exceeds the RIDEM GB Groundwater Objective (RIDEM GB GW Objectives)
	=detection limit equals or exceeds the RIDEM GB Groundwater Objective
(1)	Method 2 GB Objective criteria for naphthalene developed by GZA in accordance with the methods described in the Remediation Regulations.
(2)	Well was not sampled because there was limited water
(3)	NAPL was noted to be present
(4)	Well was not sampled because it had not been installed yet.
(5)	Well was not sampled because of an unknown reason
(6)	Well was not included in this sampling round

Please note that this table only includes compounds that have been detected or have detection limits that exceeded the RIDEM GB Groundwater Objective during groundwater monitoring at the Site between 1996 and present.

TABLE 5R
GROUNDWATER MONITORING DATA
Former Power Plant Area
Former Tidewater Facility
Pawtucket, Rhode Island

ANALYTICAL	Sample ID:		MW-314S															
	Collected By:		AES	VHB	GZA		GZA		GZA		GZA		GZA	GZA	GZA	GZA	GZA	GZA
	Sample Date:		1996	2006	Jan 2010		June 2010		Dec 2010		July 2011		July 2012	Aug 2013	Oct 2014	Nov 2015	Nov 2016	Oct 2017
	RIDEM GB GW UCL	RIDEM GB GW-O	Note (4)	Note (4)	Note (4)				Note (6)									
VOCs (ppm)							Result	DL		Result	DL		Result	Result	Result	Result	Result	Result
1,1,1,2-Tetrachloroethane	NE	NE					<	0.001		<	0.001		<0.0025	<0.001	<0.0010	<0.0010	<0.0010	<0.0010
1,1-Dichloroethene	23	0.007					<	0.001		<	0.001		<0.0025	<0.001	<0.0010	<0.0010	<0.0010	<0.0010
1,2,4-Trimethylbenzene	NE	NE					**0.0017**	0.001		<	0.001		**0.0053**	<0.001	<0.0010	<0.0010	<0.0010	<0.0010
1,2-Dibromo-3-Chloropropane	NE	0.002					<	0.002		<	0.002		<0.005	<0.005	<0.0050	<0.0050	<0.0050	<0.0050
1,3,5-Trimethylbenzene	NE	NE					<	0.001		<	0.001		<0.0025	<0.001	<0.0010	<0.0010	<0.0010	<0.0010
4-Isopropyltoluene	NE	NE											<0.0025	<0.001	<0.0010	<0.0010	<0.0010	<0.0010
Acetone	NE	NE					<	0.010		<	0.010		<0.025	<0.01	<0.0100	<0.0100	<0.0100	<0.0100
Benzene	18	0.14					<	0.001		<	0.001		<0.0025	<0.001	<0.0010	<0.0010	<0.0010	<0.0010
Carbon Disulfide	NE	NE								<	0.001		<0.0025	<0.001	<0.0010	<0.0010	<0.0010	<0.0010
Carbon Tetrachloride	NE	0.07					<	0.001		<	0.001		<0.0025	<0.001	<0.0010	<0.0010	<0.0010	<0.0010
Chloroform	NE	NE					<	0.001		<	0.001		<0.0025	<0.001	<0.0010	<0.0010	<0.0010	<0.0010
cis-1,2-Dichloroethene	69	2.4					<	0.001		<	0.001		<0.0025	<0.001	<0.0010	<0.0010	<0.0010	<0.0010
Ethylbenzene	16	1.6					<	0.001		<	0.001		<0.0025	<0.001	<0.0010	J 0.0002	<0.0010	<0.0010
Isopropylbenzene	NE	NE					**0.0016**	0.001		**0.0016**	0.001		**0.0028**	0.0007 J	<0.0010	J 0.0004	<0.0010	<0.0010
Methyl tert-Butyl Ether	NE	5					<	0.001		<	0.001		<0.0025	<0.001	<0.0010	<0.0010	<0.0010	<0.0010
Methylene Chloride	NE	NE					<	0.002		<	0.002		<0.0025	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
Naphthalene	NE	2.67					**0.0041**	0.002		<	0.002		**0.0083**	<0.001	**0.0014**	<0.001	<0.001	<0.001
n-Butylbenzene	NE	NE					<	0.001		<	0.001		<0.0025	<0.001	<0.0010	<0.0010	<0.0010	<0.0010
n-Propylbenzene	NE	NE					<	0.001		<	0.001		<0.0025	<0.001	<0.0010	<0.0010	<0.0010	<0.0010
sec-Butylbenzene	NE	NE					<	0.001		<	0.001		<0.0025	<0.001	<0.0010	<0.0010	<0.0010	<0.0010
Styrene	50	2.2					<	0.001		<	0.001		<0.0025	<0.001	<0.0010	<0.0010	<0.0010	<0.0010
tert-Butylbenzene	NE	NE					<	0.001		<	0.001		<0.0025	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Tertiary-amyl methyl ether	NE	NE											<0.005	<0.001	<0.0010	<0.0010	<0.0010	<0.0010
Tetrachloroethene	NE	0.15					<	0.001		<	0.001		<0.0025	<0.001	<0.0010	<0.0010	<0.0010	<0.0010
Toluene	21	1.7					<	0.001		<	0.001		<0.0025	<0.001	<0.0010	<0.0010	<0.0010	<0.0010
Trichloroethene	87	0.54					<	0.001		<	0.001		<0.0025	<0.001	<0.0010	<0.0010	<0.0010	<0.0010
Vinyl Chloride	NE	0.002					<	0.001		<	0.001		<0.0025	<0.001	<0.0010	<0.0010	<0.0010	<0.0010
Xylene O	NE	NE					**0.0041**	0.001		<	0.001		**0.0052**	<0.001	<0.0010	J 0.0003	<0.0010	<0.0010
Xylene P,M	NE	NE					<	0.002		<	0.002		<0.005	<0.002	<0.0020	<0.0020	<0.0020	<0.0020
Xylenes (Total)	NE	NE					**0.0041**	0.003		<	0.003		**0.0052**	<0.003	<0.0030	<0.0020	<0.0020	<0.0020
Total VOCs	NE	NE					**0.0115**			**0.0016**			**0.0216**	**0.0007**	**0.0014**	**0.0009**	ND	ND
TOTAL PETROLEUM HYDROCARBON (ppm)																		
Hydrocarbon Content	NE	NE					**1.2**	0.2		**1.4**	0.2		**4.65**	**2.08**	**0.57**			
PAHS BY GCMS (ppm)																		
2-Methylnaphthalene	NE	NE					<	0.002		<	0.002		**0.0003**	<0.0002	<0.0002			
Acenaphthene	NE	NE					**0.0029**	0.002		<	0.002		**0.003**	**0.0025**	**0.0013**			
Acenaphthylene	NE	NE					<	0.002		<	0.002		**0.0006**	**0.0004**	<0.0002			
Anthracene	NE	NE					<	0.002		<	0.002		**0.0005**	**0.0004**	<0.0002			
Benzo [a] Anthracene	NE	NE					<	0.002		<	0.002		<0.0002	<0.00005	<0.00005			
Benzo [a] Pyrene	NE	NE					<	0.002		<	0.002		<0.0002	<0.00005	<0.00005			
Benzo [b] Fluoranthene	NE	NE					<	0.002		<	0.002		<0.0002	<0.00005	<0.00005			
Benzo [g,h,i] Perylene	NE	NE					<	0.002		<	0.002		<0.0002	<0.0002	<0.0002			
Benzo [k] Fluoranthene	NE	NE					<	0.002		<	0.002		<0.0002	<0.00005	<0.00005			
Chrysene	NE	NE					<	0.002		<	0.002		<0.0002	<0.00005	<0.00005			
Dibenzo [a,h] Anthracene	NE	NE					<	0.002		<	0.002		<0.0002	<0.00005	<0.00005			
Fluoranthene	NE	NE					<	0.002		<	0.002		**0.0002**	**0.0003**	<0.0002			
Fluorene	NE	NE					<	0.002		<	0.002		**0.001**	**0.0008**	**0.0003**			
Indeno [1,2,3-cd] Pyrene	NE	NE					<	0.002		<	0.002		<0.0002	<0.00005	<0.00005			
Naphthalene	NE	2.67					<	0.002		<	0.002		**0.004**	**0.0003**	<0.0002			
Phenanthrene	NE	NE					<	0.002		<	0.002		**0.0005**	<0.0002	<0.0002			
Pyrene	NE	NE					<	0.002		<	0.002		**0.0003**	**0.0004**	**0.0003**			
INORGANICS (ppm)																		
Total Cyanide	NE	NE					**0.20**	0.010		**0.10**	0.010		**0.0637**	**0.0902**	**0.176**			
Dissolved Free Cyanide	NE	NE					<	0.010		**0.010**	0.010		<0.005	**0.0894**	**0.128**			
Physiologically Available Cyanide	NE	NE																
Arsenic	NE	NE																
Beryllium	NE	NE																
Chromium	NE	NE																
Copper	NE	NE																
Lead	NE	NE																
Nickel	NE	NE																
Zinc	NE	NE																
Dissolved Arsenic	NE	NE																
Dissolved Beryllium	NE	NE																
Dissolved Chromium	NE	NE																
Dissolved Copper	NE	NE																
Dissolved Lead	NE	NE																
Dissolved Nickel	NE	NE																
Dissolved Zinc	NE	NE																

Notes:

	Blank cells indicate that the parameter was not analyzed during this sampling round
D	"D" qualifier indicates analytes reported from a diluted run of the original analysis.
E	"E" qualifier indicates that the analyte was reported above the quantitation limit; Estimated value
J	"J" qualifier indicates analyte value was below the Method reporting Limit; Estimated value.
B	"B" qualifier indicates that the analyte was present in the method blank
NE	Regulatory Limit is not established
Bold Value	= concentration detected above the Method Reporting Limit.
	= concentration equals or exceeds the RIDEM GB Groundwater Objective (RIDEM GB GW Objectives)
	=detection limit equals or exceeds the RIDEM GB Groundwater Objective
(1)	Method 2 GB Objective criteria for naphthalene developed by GZA in accordance with the methods described in the Remediation Regulations.
(2)	Well was not sampled because there was limited water
(3)	NAPL was noted to be present
(4)	Well was not sampled because it had not been installed yet.
(5)	Well was not sampled because of an unknown reason
(6)	Well was not included in this sampling round

Please note that this table only includes compounds that have been detected or have detection limits that exceeded the RIDEM GB Groundwater Objective during groundwater monitoring at the Site between 1996 and present.

TABLE 5S
GROUNDWATER MONITORING DATA
Former Power Plant Area
Former Tidewater Facility
Pawtucket, Rhode Island

ANALYTICAL	Sample ID:		MW-314D														
	Collected By:		AES	VHB	GZA		GZA		GZA	GZA		GZA	GZA	GZA	GZA	GZA	GZA
	Sample Date:		1996	2006	Jan 2010		June 2010		Dec 2010	July 2011		July 2012	Aug 2013	Oct 2014	Nov 2015	Nov 2016	Oct 2017
	RIDEM GB GW UCL	RIDEM GB GW-O	Note (4)	Note (4)	Note (4)				Note (6)								
VOCs (ppm)							Result	DL		Result	DL	Result	Result	Result	Result	Result	Result
1,1,1,2-Tetrachloroethane	NE	NE					<	0.001		<	0.001	<0.001	<0.001	<0.0010	<0.0010	<0.0010	<0.0010
1,1-Dichloroethene	23	0.007					<	0.001		<	0.001	<0.001	<0.001	<0.0010	<0.0010	<0.0010	<0.0010
1,2,4-Trimethylbenzene	NE	NE					<	0.001		<	0.001	<0.001	<0.001	<0.0010	<0.0010	<0.0010	<0.0010
1,2-Dibromo-3-Chloropropane	NE	0.002					<	0.002		<	0.002	<0.002	<0.005	<0.0050	<0.0050	<0.0050	<0.0050
1,3,5-Trimethylbenzene	NE	NE					<	0.001		<	0.001	<0.001	<0.001	<0.0010	<0.0010	<0.0010	<0.0010
4-Isopropyltoluene	NE	NE										<0.001	<0.001	<0.0010	<0.0010	<0.0010	<0.0010
Acetone	NE	NE					<	0.010		<	0.010	<0.01	<0.01	<0.0100	<0.0100	<0.0100	<0.0100
Benzene	18	0.14					**0.0016**	0.001		**0.001**	0.001	<0.001	<0.001	<0.0010	<0.0010	<0.0010	<0.0010
Carbon Disulfide	NE	NE								<	0.001	<0.001	<0.001	<0.0010	<0.0010	<0.0010	<0.0010
Carbon Tetrachloride	NE	0.07					<	0.001		<	0.001	<0.001	<0.001	<0.0010	<0.0010	<0.0010	<0.0010
Chloroform	NE	NE					<	0.001		<	0.001	<0.001	<0.001	<0.0010	<0.0010	<0.0010	<0.0010
cis-1,2-Dichloroethene	69	2.4					<	0.001		<	0.001	<0.001	<0.001	<0.0010	<0.0010	<0.0010	<0.0010
Ethylbenzene	16	1.6					<	0.001		<	0.001	<0.001	<0.001	<0.0010	B <0.0020	<0.0010	<0.0010
Isopropylbenzene	NE	NE					<	0.001		<	0.001	<0.001	<0.001	<0.0010	<0.0010	<0.0010	<0.0010
Methyl tert-Butyl Ether	NE	5					<	0.001		<	0.001	<0.001	<0.001	<0.0010	<0.0010	<0.0010	<0.0010
Methylene Chloride	NE	NE					<	0.002		<	0.002	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
Naphthalene	NE	2.67					**0.0023**	0.002		<	0.002	<0.001	<0.001	<0.0010	<0.0010	<0.0010	<0.0010
n-Butylbenzene	NE	NE					<	0.001		<	0.001	<0.001	<0.001	<0.0010	<0.0010	<0.0010	<0.0010
n-Propylbenzene	NE	NE					<	0.001		<	0.001	<0.001	<0.001	<0.0010	<0.0010	<0.0010	<0.0010
sec-Butylbenzene	NE	NE					<	0.001		<	0.001	<0.001	<0.001	<0.0010	<0.0010	<0.0010	<0.0010
Styrene	50	2.2					<	0.001		<	0.001	<0.001	<0.001	<0.0010	B <0.0020	<0.0010	<0.0010
tert-Butylbenzene	NE	NE					<	0.001		<	0.001	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Tertiary-amyl methyl ether	NE	NE										<0.002	0.0004 J	<0.0010	<0.0010	<0.0010	<0.0010
Tetrachloroethene	NE	0.15					<	0.001		<	0.001	<0.001	<0.001	<0.0010	<0.0010	<0.0010	<0.0010
Toluene	21	1.7					<	0.001		<	0.001	<0.001	<0.001	<0.0010	J 0.0003	<0.0010	<0.0010
Trichloroethene	87	0.54					<	0.001		<	0.001	<0.001	<0.001	<0.0010	<0.0010	<0.0010	<0.0010
Vinyl Chloride	NE	0.002					<	0.001		<	0.001	<0.001	<0.001	<0.0010	<0.0010	<0.0010	<0.0010
Xylene O	NE	NE					<	0.001		<	0.001	<0.001	<0.001	<0.0010	<0.0010	**0.0165**	<0.0010
Xylene P,M	NE	NE					<	0.002		<	0.002	<0.002	<0.002	<0.0020	B <0.0040	**0.0366**	<0.0020
Xylenes (Total)	NE	NE					<	0.003		<	0.003	<0.003	<0.003	<0.0030	<0.0020	**0.0531**	<0.0020
Total VOCs	NE	NE					**0.0039**			**0.001**		ND	**0.0004**	ND	**0.0003**	**0.718**	ND
TOTAL PETROLEUM HYDROCARBON (ppm)																	
Hydrocarbon Content	NE	NE					<	0.2		**0.33**	0.2	**1.69**	**0.53**	**0.37**			
PAHS BY GCMS (ppm)																	
2-Methylnaphthalene	NE	NE					<	0.002		<	0.002	<0.0002	<0.0002	<0.0002			
Acenaphthene	NE	NE					**0.0037**	0.002		**0.0027**	0.002	**0.003**	**0.0031**	**0.0013**			
Acenaphthylene	NE	NE					<	0.002		<	0.002	**0.0003**	**0.0002**	<0.0002			
Anthracene	NE	NE					<	0.002		<	0.002	<0.0002	<0.0002	<0.0002			
Benzo [a] Anthracene	NE	NE					<	0.002		<	0.002	<0.0002	<0.00005	<0.00005			
Benzo [a] Pyrene	NE	NE					<	0.002		<	0.002	<0.0002	<0.00005	<0.00005			
Benzo [b] Fluoranthene	NE	NE					<	0.002		<	0.002	<0.0002	<0.00005	<0.00005			
Benzo [g,h,i] Perylene	NE	NE					<	0.002		<	0.002	<0.0002	<0.0002	<0.0002			
Benzo [k] Fluoranthene	NE	NE					<	0.002		<	0.002	<0.0002	<0.00005	<0.00005			
Chrysene	NE	NE					<	0.002		<	0.002	<0.0002	<0.00005	<0.00005			
Dibenzo [a,h] Anthracene	NE	NE					<	0.002		<	0.002	<0.0002	<0.00005	<0.00005			
Fluoranthene	NE	NE					<	0.002		<	0.002	**0.0002**	<0.0002	<0.0002			
Fluorene	NE	NE					<	0.002		<	0.002	**0.0004**	<0.0002	<0.0002			
Indeno [1,2,3-cd] Pyrene	NE	NE					<	0.002		<	0.002	<0.0002	<0.00005	<0.00005			
Naphthalene	NE	2.67					<	0.002		<	0.002	**0.004**	**0.0004**	<0.0002			
Phenanthrene	NE	NE					**0.002**	0.002		<	0.002	**0.0002**	<0.0002	<0.0002			
Pyrene	NE	NE					<	0.002		<	0.002	**0.0003**	**0.0002**	<0.0002			
INORGANICS (ppm)																	
Total Cyanide	NE	NE					**0.46**	0.010		**0.32**	0.010	**0.144**	**0.317 D**	**0.16**			
Dissolved Free Cyanide	NE	NE					<	0.010		**0.050**	0.010	<0.005	**0.154**	**0.162**			
Physiologically Available Cyanide	NE	NE															
Arsenic	NE	NE															
Beryllium	NE	NE															
Chromium	NE	NE															
Copper	NE	NE															
Lead	NE	NE															
Nickel	NE	NE															
Zinc	NE	NE															
Dissolved Arsenic	NE	NE															
Dissolved Beryllium	NE	NE															
Dissolved Chromium	NE	NE															
Dissolved Copper	NE	NE															
Dissolved Lead	NE	NE															
Dissolved Nickel	NE	NE															
Dissolved Zinc	NE	NE															

Notes:

	Blank cells indicate that the parameter was not analyzed during this sampling round
D	"D" qualifier indicates analytes reported from a diluted run of the original analysis.
E	"E" qualifier indicates that the analyte was reported above the quantitation limit; Estimated value
J	"J" qualifier indicates analyte value was below the Method reporting Limit; Estimated value.
B	"B" qualifier indicates that the analyte was present in the method blank
NE	Regulatory Limit is not established
Bold Value	= concentration detected above the Method Reporting Limit.
	= concentration equals or exceeds the RIDEM GB Groundwater Objective (RIDEM GB GW Objectives)
	=detection limit equals or exceeds the RIDEM GB Groundwater Objective
(1)	Method 2 GB Objective criteria for naphthalene developed by GZA in accordance with the methods described in the Remediation Regulations.
(2)	Well was not sampled because there was limited water
(3)	NAPL was noted to be present
(4)	Well was not sampled because it had not been installed yet.
(5)	Well was not sampled because of an unknown reason
(6)	Well was not included in this sampling round

Please note that this table only includes compounds that have been detected or have detection limits that exceeded the RIDEM GB Groundwater Objective during groundwater monitoring at the Site between 1996 and present.

TABLE 5T
GROUNDWATER MONITORING DATA
Former Power Plant Area
Former Tidewater Facility
Pawtucket, Rhode Island

ANALYTICAL	Sample ID:		MW-316S														
	Collected By:		AES	VHB	GZA		GZA		GZA	GZA		GZA	GZA	GZA	GZA	GZA	GZA
	Sample Date:		1996	2006	Jan 2010		June 2010		Dec 2010	July 2011		July 2012	Aug 2013	Oct 2014	Nov 2015	Nov 2016	
	RIDEM GB GW UCL	RIDEM GB GW-O	Note (4)	Note (4)	Note (4)				Note (6)					Note (2)	Note (2)	Note (2)	Note (2)
VOCs (ppm)							Result	DL		Result	DL	Result	Result	Result	Result	Result	Result
1,1,1,2-Tetrachloroethane	NE	NE								<	0.001	<0.001	<0.001				
1,1-Dichloroethene	23	0.007								<	0.001	<0.001	<0.001				
1,2,4-Trimethylbenzene	NE	NE								<	0.001	<0.001	<0.001				
1,2-Dibromo-3-Chloropropane	NE	0.002								<	0.002	<0.005	<0.005				
1,3,5-Trimethylbenzene	NE	NE								<	0.001	<0.001	<0.001				
4-Isopropyltoluene	NE	NE										<0.001	<0.001				
Acetone	NE	NE								**0.012**	0.010	<0.01	<0.01				
Benzene	18	0.14								<	0.001	<0.001	<0.001				
Carbon Disulfide	NE	NE								<	0.001	<0.001	<0.001				
Carbon Tetrachloride	NE	0.07								<	0.001	<0.001	<0.001				
Chloroform	NE	NE								<	0.001	<0.001	<0.001				
cis-1,2-Dichloroethene	69	2.4								<	0.001	<0.001	<0.001				
Ethylbenzene	16	1.6								<	0.001	<0.001	<0.001				
Isopropylbenzene	NE	NE								<	0.001	<0.001	<0.001				
Methyl tert-Butyl Ether	NE	5								<	0.001	<0.001	<0.001				
Methylene Chloride	NE	NE								<	0.002	<0.002	<0.002				
Naphthalene	NE	2.67								<	0.002	<0.001	<0.001				
n-Butylbenzene	NE	NE								<	0.001	<0.001	<0.001				
n-Propylbenzene	NE	NE								<	0.001	<0.001	<0.001				
sec-Butylbenzene	NE	NE								<	0.001	<0.001	<0.001				
Styrene	50	2.2								<	0.001	<0.001	<0.001				
tert-Butylbenzene	NE	NE								<	0.001	<0.001	<0.001				
Tertiary-amyl methyl ether	NE	NE										<0.001	<0.001				
Tetrachloroethene	NE	0.15								<	0.001	<0.001	<0.001				
Toluene	21	1.7								<	0.001	<0.001	<0.001				
Trichloroethene	87	0.54								<	0.001	<0.001	<0.001				
Vinyl Chloride	NE	0.002								<	0.001	<0.001	<0.001				
Xylene O	NE	NE								<	0.001	<0.001	<0.001				
Xylene P,M	NE	NE								<	0.002	<0.002	<0.002				
Xylenes (Total)	NE	NE								<	0.003	<0.003	<0.003				
Total VOCs	NE	NE								**0.012**		<0.6415	<0.6415				
TOTAL PETROLEUM HYDROCARBON (ppm)																	
Hydrocarbon Content	NE	NE															
PAHS BY GCMS (ppm)																	
2-Methylnaphthalene	NE	NE															
Acenaphthene	NE	NE															
Acenaphthylene	NE	NE															
Anthracene	NE	NE															
Benzo [a] Anthracene	NE	NE															
Benzo [a] Pyrene	NE	NE															
Benzo [b] Fluoranthene	NE	NE															
Benzo [g,h,i] Perylene	NE	NE															
Benzo [k] Fluoranthene	NE	NE															
Chrysene	NE	NE															
Dibenzo [a,h] Anthracene	NE	NE															
Fluoranthene	NE	NE															
Fluorene	NE	NE															
Indeno [1,2,3-cd] Pyrene	NE	NE															
Naphthalene	NE	2.67															
Phenanthrene	NE	NE															
Pyrene	NE	NE															
INORGANICS (ppm)																	
Total Cyanide	NE	NE															
Dissolved Free Cyanide	NE	NE					**0.11**	0.010									
Physiologically Available Cyanide	NE	NE															
Arsenic	NE	NE															
Beryllium	NE	NE															
Chromium	NE	NE															
Copper	NE	NE															
Lead	NE	NE															
Nickel	NE	NE															
Zinc	NE	NE															
Dissolved Arsenic	NE	NE															
Dissolved Beryllium	NE	NE															
Dissolved Chromium	NE	NE															
Dissolved Copper	NE	NE															
Dissolved Lead	NE	NE															
Dissolved Nickel	NE	NE															
Dissolved Zinc	NE	NE															

Notes:

	Blank cells indicate that the parameter was not analyzed during this sampling round
D	"D" qualifier indicates analytes reported from a diluted run of the original analysis.
E	"E" qualifier indicates that the analyte was reported above the quantitation limit; Estimated value
J	"J" qualifier indicates analyte value was below the Method reporting Limit; Estimated value.
B	"B" qualifier indicates that the analyte was present in the method blank
NE	Regulatory Limit is not established
Bold Value	= concentration detected above the Method Reporting Limit.
	= concentration equals or exceeds the RIDEM GB Groundwater Objective (RIDEM GB GW Objectives)
	=detection limit equals or exceeds the RIDEM GB Groundwater Objective
(1)	Method 2 GB Objective criteria for naphthalene developed by GZA in accordance with the methods described in the Remediation Regulations.
(2)	Well was not sampled because there was limited water
(3)	NAPL was noted to be present
(4)	Well was not sampled because it had not been installed yet.
(5)	Well was not sampled because of an unknown reason
(6)	Well was not included in this sampling round

Please note that this table only includes compounds that have been detected or have detection limits that exceeded the RIDEM GB Groundwater Objective during groundwater monitoring at the Site between 1996 and present.

TABLE 5U
GROUNDWATER MONITORING DATA
Former Power Plant Area
Former Tidewater Facility
Pawtucket, Rhode Island

ANALYTICAL	Sample ID:		MW-316D														
	Collected By:		AES	VHB	GZA		GZA		GZA	GZA		GZA	GZA	GZA	GZA	GZA	GZA
	Sample Date:		1996	2006	Jan 2010		June 2010		Dec 2010	July 2011		July 2012	Aug 2013	Oct 2014	Nov 2015	Nov 2016	Oct 2017
	RIDEM GB GW UCL	RIDEM GB GW-O	Note (4)	Note (4)	Note (4)				Note (6)								
VOCs (ppm)							Result	DL		Result	DL	Result	Result	Result	Result	Result	Result
1,1,1,2-Tetrachloroethane	NE	NE					<	0.001		<	0.001	<0.001	<0.001	<0.0010	<0.0010	<0.0010	<0.0010
1,1-Dichloroethene	23	0.007					<	0.001		<	0.001	<0.001	<0.001	<0.0010	<0.0010	<0.0010	<0.0010
1,2,4-Trimethylbenzene	NE	NE					<	0.001		<	0.001	<0.001	<0.001	<0.0010	<0.0010	<0.0010	<0.0010
1,2-Dibromo-3-Chloropropane	NE	0.002					<	0.002		<	0.002	<0.005	<0.005	<0.0050	<0.0050	<0.0050	<0.0050
1,3,5-Trimethylbenzene	NE	NE					<	0.001		<	0.001	<0.001	<0.001	<0.0010	<0.0010	<0.0010	<0.0010
4-Isopropyltoluene	NE	NE										<0.001	<0.001	<0.0010	<0.0010	<0.0010	<0.0010
Acetone	NE	NE					<	0.010		<	0.010	<0.01	<0.01	<0.0100	J 0.0033	<0.0100	<0.0100
Benzene	18	0.14					<	0.001		<	0.001	<0.001	<0.001	<0.0010	<0.0010	<0.0010	<0.0010
Carbon Disulfide	NE	NE								<	0.001	<0.001	<0.001	<0.0010	<0.0010	<0.0010	<0.0010
Carbon Tetrachloride	NE	0.07					<	0.001		<	0.001	<0.001	<0.001	<0.0010	<0.0010	<0.0010	<0.0010
Chloroform	NE	NE					<	0.001		<	0.001	<0.001	<0.001	<0.0010	<0.0010	<0.0010	**0.0013**
cis-1,2-Dichloroethene	69	2.4					<	0.001		<	0.001	<0.001	<0.001	<0.0010	<0.0010	<0.0010	<0.0010
Ethylbenzene	16	1.6					<	0.001		<	0.001	<0.001	<0.001	<0.0010	<0.0010	<0.0010	<0.0010
Isopropylbenzene	NE	NE					<	0.001		<	0.001	<0.001	<0.001	<0.0010	<0.0010	<0.0010	<0.0010
Methyl tert-Butyl Ether	NE	5					<	0.001		<	0.001	<0.001	<0.001	<0.0010	<0.0010	<0.0010	<0.0010
Methylene Chloride	NE	NE					<	0.002		<	0.002	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
Naphthalene	NE	2.67					<	0.002		<	0.002	<0.001	<0.001	<0.0010	<0.0010	<0.0010	<0.0010
n-Butylbenzene	NE	NE					<	0.001		<	0.001	<0.001	<0.001	<0.0010	<0.0010	<0.0010	<0.0010
n-Propylbenzene	NE	NE					<	0.001		<	0.001	<0.001	<0.001	<0.0010	<0.0010	<0.0010	<0.0010
sec-Butylbenzene	NE	NE					<	0.001		<	0.001	<0.001	<0.001	<0.0010	<0.0010	<0.0010	<0.0010
Styrene	50	2.2					<	0.001		<	0.001	<0.001	<0.001	<0.0010	<0.0010	<0.0010	<0.0010
tert-Butylbenzene	NE	NE					<	0.001		<	0.001	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Tertiary-amyl methyl ether	NE	NE										<0.001	<0.001	<0.0010	<0.0010	<0.0010	<0.0010
Tetrachloroethene	NE	0.15					<	0.001		<	0.001	<0.001	<0.001	<0.0010	<0.0010	<0.0010	<0.0010
Toluene	21	1.7					<	0.001		<	0.001	<0.001	<0.001	<0.0010	<0.0010	<0.0010	<0.0010
Trichloroethene	87	0.54					<	0.001		<	0.001	<0.001	<0.001	<0.0010	<0.0010	<0.0010	<0.0010
Vinyl Chloride	NE	0.002					<	0.001		<	0.001	<0.001	<0.001	<0.0010	<0.0010	<0.0010	<0.0010
Xylene O	NE	NE					<	0.001		<	0.001	<0.001	<0.001	<0.0010	<0.0010	<0.0010	<0.0010
Xylene P,M	NE	NE					<	0.002		<	0.002	<0.002	<0.002	<0.0020	<0.0020	<0.0020	<0.0020
Xylenes (Total)	NE	NE					<	0.003		<	0.003	<0.003	<0.003	<0.0030	<0.0020	<0.0020	<0.0020
Total VOCs	NE	NE						ND			ND	ND	ND	ND	**0.0033**	ND	**0.0013**
TOTAL PETROLEUM HYDROCARBON (ppm)																	
Hydrocarbon Content	NE	NE					<	0.2		<	0.2	<0.2	<0.19	<0.19			
PAHS BY GCMS (ppm)																	
2-Methylnaphthalene	NE	NE					<	0.002		<	0.002	<0.0002	<0.0009 D	<0.0002			
Acenaphthene	NE	NE					<	0.002		<	0.002	<0.0002	<0.0009 D	<0.0002			
Acenaphthylene	NE	NE					<	0.002		<	0.002	<0.0002	<0.0009 D	<0.0002			
Anthracene	NE	NE					<	0.002		<	0.002	<0.0002	<0.0009 D	<0.0002			
Benzo [a] Anthracene	NE	NE					<	0.002		<	0.002	<0.0002	<0.0002 D	<0.00005			
Benzo [a] Pyrene	NE	NE					<	0.002		<	0.002	<0.0002	<0.0002 D	<0.00005			
Benzo [b] Fluoranthene	NE	NE					<	0.002		<	0.002	<0.0002	<0.0002 D	<0.00005			
Benzo [g,h,i] Perylene	NE	NE					<	0.002		<	0.002	<0.0002	<0.0009 D	<0.0002			
Benzo [k] Fluoranthene	NE	NE					<	0.002		<	0.002	<0.0002	<0.0002 D	<0.00005			
Chrysene	NE	NE					<	0.002		<	0.002	<0.0002	<0.0002 D	<0.00005			
Dibenzo [a,h] Anthracene	NE	NE					<	0.002		<	0.002	<0.0002	<0.0002 D	<0.00005			
Fluoranthene	NE	NE					<	0.002		<	0.002	<0.0002	<0.0009 D	<0.0002			
Fluorene	NE	NE					<	0.002		<	0.002	<0.0002	<0.0009 D	<0.0002			
Indeno [1,2,3-cd] Pyrene	NE	NE					<	0.002		<	0.002	<0.0002	<0.0002 D	<0.00005			
Naphthalene	NE	2.67					<	0.002		<	0.002	**0.0004**	<0.0009 D	<0.0002			
Phenanthrene	NE	NE					<	0.002		<	0.002	<0.0002	<0.0009 D	<0.0002			
Pyrene	NE	NE					<	0.002		<	0.002	<0.0002	<0.0009 D	<0.0002			
INORGANICS (ppm)																	
Total Cyanide	NE	NE					**0.020**	0.010		**0.010**	0.010	**0.0083**	**0.0129**	**0.011**			
Dissolved Free Cyanide	NE	NE					<	0.010		<	0.010	<0.005	**0.0129**	<0.005			
Physiologically Available Cyanide	NE	NE															
Arsenic	NE	NE															
Beryllium	NE	NE															
Chromium	NE	NE															
Copper	NE	NE															
Lead	NE	NE															
Nickel	NE	NE															
Zinc	NE	NE															
Dissolved Arsenic	NE	NE															
Dissolved Beryllium	NE	NE															
Dissolved Chromium	NE	NE															
Dissolved Copper	NE	NE															
Dissolved Lead	NE	NE															
Dissolved Nickel	NE	NE															
Dissolved Zinc	NE	NE															

Notes:

	Blank cells indicate that the parameter was not analyzed during this sampling round
D	"D" qualifier indicates analytes reported from a diluted run of the original analysis.
E	"E" qualifier indicates that the analyte was reported above the quantitation limit; Estimated value
J	"J" qualifier indicates analyte value was below the Method reporting Limit; Estimated value.
B	"B" qualifier indicates that the analyte was present in the method blank
NE	Regulatory Limit is not established
Bold Value	= concentration detected above the Method Reporting Limit.
	= concentration equals or exceeds the RIDEM GB Groundwater Objective (RIDEM GB GW Objectives)
	=detection limit equals or exceeds the RIDEM GB Groundwater Objective
(1)	Method 2 GB Objective criteria for naphthalene developed by GZA in accordance with the methods described in the Remediation Regulations.
(2)	Well was not sampled because there was limited water
(3)	NAPL was noted to be present
(4)	Well was not sampled because it had not been installed yet.
(5)	Well was not sampled because of an unknown reason
(6)	Well was not included in this sampling round

Please note that this table only includes compounds that have been detected or have detection limits that exceeded the RIDEM GB Groundwater Objective during groundwater monitoring at the Site between 1996 and present.

TABLE 5V
GROUNDWATER MONITORING DATA
Former Power Plant Area
Former Tidewater Facility
Pawtucket, Rhode Island

ANALYTICAL	Sample ID:		MW-337														
	Collected By:		AES	VHB	GZA		GZA	GZA		GZA		GZA	GZA	GZA	GZA	GZA	GZA
	Sample Date:		1996	2006	Jan 2010		June 2010	Dec 2010		July 2011		July 2012	Aug 2013	Oct 2014	Nov 2015	Nov 2016	Oct 2017
	RIDEM GB GW UCL	RIDEM GB GW-O	Note (4)	Note (4)	Note (4)		Note (4)										
VOCs (ppm)								Result	DL	Result	DL	Result	Result	Result	Result	Result	Result
1,1,1,2-Tetrachloroethane	NE	NE						<	0.001	<	0.001	<0.001	<0.001	<0.0010	<0.0010	<0.0010	<0.0010
1,1-Dichloroethene	23	0.007						<	0.001	<	0.001	<0.001	<0.001	<0.0010	<0.0010	<0.0010	<0.0010
1,2,4-Trimethylbenzene	NE	NE						<	0.001	<	0.001	<0.001	<0.001	<0.0010	J 0.0004	<0.0010	<0.0010
1,2-Dibromo-3-Chloropropane	NE	0.002						<	0.002	<	0.002	<0.005	<0.005	<0.0050	<0.0050	<0.0050	<0.0050
1,3,5-Trimethylbenzene	NE	NE						<	0.001	<	0.001	<0.001	<0.001	<0.0010	<0.0010	<0.0010	<0.0010
4-Isopropyltoluene	NE	NE										<0.001	<0.001	<0.0010	<0.0010	<0.0010	<0.0010
Acetone	NE	NE						<	0.010	<	0.010	<0.01	<0.01	<0.0100	<0.0100	<0.0100	<0.0100
Benzene	18	0.14						<	0.001	<	0.001	<0.001	<0.001	**0.0036**	**0.0039**	**0.008**	<0.0010
Carbon Disulfide	NE	NE								<	0.001	<0.001	<0.001	<0.0010	<0.0010	<0.0010	<0.0010
Carbon Tetrachloride	NE	0.07						<	0.001	<	0.001	<0.001	<0.001	<0.0010	<0.0010	<0.0010	<0.0010
Chloroform	NE	NE						<	0.001	<	0.001	<0.001	<0.001	<0.0010	<0.0010	<0.0010	<0.0010
cis-1,2-Dichloroethene	69	2.4						<	0.001	<	0.001	<0.001	<0.001	<0.0010	<0.0010	<0.0010	<0.0010
Ethylbenzene	16	1.6						<	0.001	<	0.001	<0.001	<0.001	<0.0010	J 0.0008	**0.0018**	<0.0010
Isopropylbenzene	NE	NE						<	0.001	<	0.001	<0.001	<0.001	<0.0010	J 0.0003	<0.0010	<0.0010
Methyl tert-Butyl Ether	NE	5						<	0.001	<	0.001	<0.001	<0.001	<0.0010	<0.0010	<0.0010	<0.0010
Methylene Chloride	NE	NE						<	0.002	<	0.002	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
Naphthalene	NE	2.67						<	0.002	<	0.002	<0.001	<0.001	<0.0010	**0.0033**	<0.0010	<0.0010
n-Butylbenzene	NE	NE						<	0.001	<	0.001	<0.001	<0.001	<0.0010	<0.0010	<0.0010	<0.0010
n-Propylbenzene	NE	NE						<	0.001	<	0.001	<0.001	<0.001	<0.0010	<0.0010	<0.0010	<0.0010
sec-Butylbenzene	NE	NE						<	0.001	<	0.001	<0.001	<0.001	<0.0010	<0.0010	<0.0010	<0.0010
Styrene	50	2.2						<	0.001	<	0.001	<0.001	<0.001	<0.0010	<0.0010	<0.0010	<0.0010
tert-Butylbenzene	NE	NE						<	0.001	<	0.001	<0.001	<0.001	<0.0010	<0.0010	<0.0010	<0.0010
Tertiary-amyl methyl ether	NE	NE										<0.001	<0.001	<0.0010	<0.0010	<0.0010	<0.0010
Tetrachloroethene	NE	0.15						<	0.001	<	0.001	<0.001	<0.001	<0.0010	<0.0010	<0.0010	<0.0010
Toluene	21	1.7						<	0.001	<	0.001	<0.001	<0.001	<0.0010	J 0.0001	<0.0010	<0.0010
Trichloroethene	87	0.54						<	0.001	<	0.001	<0.001	<0.001	<0.0010	<0.0010	<0.0010	<0.0010
Vinyl Chloride	NE	0.002						<	0.001	<	0.001	<0.001	<0.001	<0.0010	<0.0010	<0.0010	<0.0010
Xylene O	NE	NE						<	0.001	<	0.001	<0.001	<0.001	<0.0010	J 0.0002	<0.0010	<0.0010
Xylene P,M	NE	NE						<	0.002	<	0.002	<0.002	<0.002	<0.0020	<0.0020	<0.0020	<0.0020
Xylenes (Total)	NE	NE						<	0	<	0.003	<0.003	<0.003	<0.0030	<0.0020	<0.0020	<0.0020
Total VOCs	NE	NE							ND		ND	ND	ND	**0.0036**	**0.0057**	**0.01**	ND
TOTAL PETROLEUM HYDROCARBON (ppm)																	
Hydrocarbon Content	NE	NE						**0.69**	0.2	**0.46**	0.2	**0.91**	**1.36**	**1.32**			
PAHS BY GCMS (ppm)																	
2-Methylnaphthalene	NE	NE						<	0.002	<	0.002	<0.0002	<0.0009 D	<0.0002			
Acenaphthene	NE	NE						<	0.002	<	0.002	**0.0004**	<0.0009 D	**0.0015**			
Acenaphthylene	NE	NE						<	0.002	<	0.002	**0.0004**	<0.001 D	**0.0021**			
Anthracene	NE	NE						<	0.002	<	0.002	<0.0002	<0.0009 D	<0.0002			
Benzo [a] Anthracene	NE	NE						<	0.002	<	0.002	<0.0002	<0.0002 D	**0.00007**			
Benzo [a] Pyrene	NE	NE						<	0.002	<	0.002	<0.0002	<0.0002 D	<0.00005			
Benzo [b] Fluoranthene	NE	NE						<	0.002	<	0.002	<0.0002	<0.0002 D	<0.00005			
Benzo [g,h,i] Perylene	NE	NE						<	0.002	<	0.002	<0.0002	<0.0009 D	<0.0002			
Benzo [k] Fluoranthene	NE	NE						<	0.002	<	0.002	<0.0002	<0.0002 D	<0.00005			
Chrysene	NE	NE						<	0.002	<	0.002	<0.0002	<0.0002 D	**0.00006**			
Dibenzo [a,h] Anthracene	NE	NE						<	0.002	<	0.002	<0.0002	<0.0002 D	<0.00005			
Fluoranthene	NE	NE						<	0.002	<	0.002	**0.001**	**0.0012 D**	**0.0011**			
Fluorene	NE	NE						<	0.002	<	0.002	**0.0009**	**0.0016 D**	**0.0021**			
Indeno [1,2,3-cd] Pyrene	NE	NE						<	0.002	<	0.002	<0.0002	<0.0002 D	<0.00005			
Naphthalene	NE	2.67						<	0.002	<	0.002	**0.0002**	**0.0014 D**	**0.0003**			
Phenanthrene	NE	NE						<	0.002	<	0.002	<0.0002	<0.0009 D	<0.0002			
Pyrene	NE	NE						<	0.002	<	0.002	**0.001**	**0.0012 D**	**0.0012**			
INORGANICS (ppm)																	
Total Cyanide	NE	NE						**0.20**	0.010	**0.19**	0.010	**0.127**	**0.282 D**	**0.328**			
Dissolved Free Cyanide	NE	NE						<	0.010	<	0.010	**0.0099**	**0.267 D**	**0.237**			
Physiologically Available Cyanide	NE	NE															
Arsenic	NE	NE															
Beryllium	NE	NE															
Chromium	NE	NE															
Copper	NE	NE															
Lead	NE	NE															
Nickel	NE	NE															
Zinc	NE	NE															
Dissolved Arsenic	NE	NE															
Dissolved Beryllium	NE	NE															
Dissolved Chromium	NE	NE															
Dissolved Copper	NE	NE															
Dissolved Lead	NE	NE															
Dissolved Nickel	NE	NE															
Dissolved Zinc	NE	NE															

Notes:

	Blank cells indicate that the parameter was not analyzed during this sampling round
D	"D" qualifier indicates analytes reported from a diluted run of the original analysis.
E	"E" qualifier indicates that the analyte was reported above the quantitation limit; Estimated value
J	"J" qualifier indicates analyte value was below the Method reporting Limit; Estimated value.
B	"B" qualifier indicates that the analyte was present in the method blank
NE	Regulatory Limit is not established
Bold Value	= concentration detected above the Method Reporting Limit.
	= concentration equals or exceeds the RIDEM GB Groundwater Objective (RIDEM GB GW Objectives)
	=detection limit equals or exceeds the RIDEM GB Groundwater Objective
(1)	Method 2 GB Objective criteria for naphthalene developed by GZA in accordance with the methods described in the Remediation Regulations.
(2)	Well was not sampled because there was limited water
(3)	NAPL was noted to be present
(4)	Well was not sampled because it had not been installed yet.
(5)	Well was not sampled because of an unknown reason
(6)	Well was not included in this sampling round

Please note that this table only includes compounds that have been detected or have detection limits that exceeded the RIDEM GB Groundwater Objective during groundwater monitoring at the Site between 1996 and present.

TABLE 5W
GROUNDWATER MONITORING DATA
South Fill Area
Former Tidewater Facility
Pawtucket, Rhode Island

ANALYTICAL	Sample ID:		MW-107														
	Collected By:		AES	VHB	GZA		GZA		GZA	GZA		GZA	GZA	GZA	GZA	GZA	GZA
	Sample Date:		1996	2006	Jan 2010		July 2010		Dec 2010	July 2011		July 2012	Aug 2013	Oct 2014	Nov 2015	Nov 2016	Oct 2017
	RIDEM GB GW UCL	RIDEM GB GW-O	Note (4)						Note (6)								
VOCs (ppm)				Result	Result	DL	Result	DL		Result	DL	Result	Result	Result	Result	Result	Result
1,1,1,2-Tetrachloroethane	NE	NE			<	0.001	<	0.001		<	0.001	<0.001	<0.001	<0.0010	<0.0010	<0.0010	<0.0010
1,1-Dichloroethene	23	0.007			<	0.001	<	0.001		<	0.001	<0.001	<0.001	<0.0010	<0.0010	<0.0010	<0.0010
1,2,4-Trimethylbenzene	NE	NE		<0.001	<	0.001	<	0.001		<	0.001	<0.001	<0.001	<0.0010	<0.0010	<0.0010	<0.0010
1,2-Dibromo-3-Chloropropane	NE	0.002			<	0.005	<	0.002		<	0.002	<0.005	<0.005	<0.0050	<0.0050	<0.0050	<0.0050
1,3,5-Trimethylbenzene	NE	NE		<0.001	<	0.001	<	0.001		<	0.001	<0.001	<0.001	<0.0010	<0.0010	<0.0010	<0.0010
4-Isopropyltoluene	NE	NE										<0.001	<0.001	<0.0010	<0.0010	<0.0010	<0.0010
Acetone	NE	NE			<	0.025	<	0.010		<	0.010	<0.01	<0.01	<0.0100	<0.0100	<0.0100	<0.0100
Benzene	18	0.14		<0.001	<	0.001	<	0.001		<	0.001	<0.001	<0.001	<0.0010	J 0.0002	<0.0010	<0.0010
Carbon Disulfide	NE	NE								<	0.001	<0.001	<0.001	<0.0010	<0.0010	<0.0010	<0.0010
Carbon Tetrachloride	NE	0.07			<	0.001	<	0.001		<	0.001	<0.001	<0.001	<0.0010	<0.0010	<0.0010	<0.0010
Chloroform	NE	NE		<0.001	<	0.001	<	0.001		<	0.001	<0.001	<0.001	<0.0010	J 0.0003	<0.0010	<0.0010
cis-1,2-Dichloroethene	69	2.4			<	0.001	<	0.001		<	0.001	<0.001	<0.001	<0.0010	<0.0010	<0.0010	<0.0010
Ethylbenzene	16	1.6		<0.001	<	0.001	<	0.001		<	0.001	<0.001	<0.001	<0.0010	<0.0010	<0.0010	<0.0010
Isopropylbenzene	NE	NE		<0.001	<	0.001	<	0.001		<	0.001	<0.001	<0.001	<0.0010	<0.0010	<0.0010	<0.0010
Methyl tert-Butyl Ether	NE	5		<0.001	<	0.001	<	0.002		<	0.001	<0.001	<0.001	<0.0010	<0.0010	<0.0010	<0.0010
Methylene Chloride	NE	NE			<	0.002	<	0.002		<	0.002	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
Naphthalene	NE	2.67		<0.001	<	0.002	<	0.002		<	0.002	<0.001	<0.001	<0.0010	<0.0010	<0.0010	<0.0010
n-Butylbenzene	NE	NE		<0.001	<	0.001	<	0.001		<	0.001	<0.001	<0.001	<0.0010	<0.0010	<0.0010	<0.0010
n-Propylbenzene	NE	NE		<0.001	<	0.001	<	0.001		<	0.001	<0.001	<0.001	<0.0010	<0.0010	<0.0010	<0.0010
sec-Butylbenzene	NE	NE		<0.001	<	0.001	<	0.001		<	0.001	<0.001	<0.001	<0.0010	<0.0010	<0.0010	<0.0010
Styrene	50	2.2			<	0.001	<	0.001		<	0.001	<0.001	<0.001	<0.0010	<0.0010	<0.0010	<0.0010
tert-Butylbenzene	NE	NE			<	0.001	<	0.001		<	0.001	<0.001	<0.001	<0.0010	<0.0010	<0.0010	<0.0010
Tertiary-amyl methyl ether	NE	NE										<0.001	<0.001	<0.0010	<0.0010	<0.0010	<0.0010
Tetrachloroethene	NE	0.15			<	0.001	<	0.001		<	0.001	<0.001	<0.001	<0.0010	J 0.0002	<0.0010	<0.0010
Toluene	21	1.7		<0.001	<	0.001	<	0.001		<	0.001	<0.001	<0.001	<0.0010	<0.0010	<0.0010	<0.0010
Trichloroethene	87	0.54			<	0.001	<	0.001		<	0.001	<0.001	<0.001	<0.0010	J 0.0004	<0.0010	<0.0010
Vinyl Chloride	NE	0.002			<	0.001	<	0.001		<	0.001	<0.001	<0.001	<0.0010	<0.0010	<0.0010	<0.0010
Xylene O	NE	NE		<0.001	<	0.001	<	0.001		<	0.001	<0.001	<0.001	<0.0010	<0.0010	<0.0010	<0.0010
Xylene P,M	NE	NE		<0.002	<	0.002	<	0.001		<	0.002	<0.002	<0.002	<0.0020	<0.0020	<0.0020	<0.0020
Xylenes (Total)	NE	NE		<0.003	<	0.003	<	0.002		<	0.003	<0.003	<0.003	<0.0030	<0.0020	<0.0020	<0.0020
Total VOCs	NE	NE		<0.02	<	0.122	<	0.122			ND	ND	ND	ND	**0.0011**	ND	ND
TOTAL PETROLEUM HYDROCARBON (ppm)																	
Hydrocarbon Content	NE	NE			<	0.2	<	0.2		<	0.2	<0.21	<0.19	<0.19			
PAHS BY GCMS (ppm)																	
2-Methylnaphthalene	NE	NE		<0.0002	<	0.002	<	0.002		<	0.002	<0.0002	<0.0009 D	<0.0002			
Acenaphthene	NE	NE		<0.0002	<	0.002	<	0.002		<	0.002	<0.0002	<0.0009 D	<0.0002			
Acenaphthylene	NE	NE		<0.0002	<	0.002	<	0.002		<	0.002	<0.0002	<0.0009 D	<0.0002			
Anthracene	NE	NE		<0.0002	<	0.002	<	0.002		<	0.002	<0.0002	<0.0009 D	<0.0002			
Benzo [a] Anthracene	NE	NE		<0.0002	<	0.002	<	0.002		<	0.002	<0.0002	<0.0002 D	<0.00005			
Benzo [a] Pyrene	NE	NE		<0.0002	<	0.002	<	0.002		<	0.002	<0.0002	<0.0002 D	<0.00005			
Benzo [b] Fluoranthene	NE	NE		<0.0002	<	0.002	<	0.002		<	0.002	<0.0002	<0.0002 D	<0.00005			
Benzo [g,h,i] Perylene	NE	NE		<0.0002	<	0.002	<	0.002		<	0.002	<0.0002	<0.0009 D	<0.0002			
Benzo [k] Fluoranthene	NE	NE		<0.0003	<	0.002	<	0.002		<	0.002	<0.0002	<0.0002 D	<0.00005			
Chrysene	NE	NE		<0.0002	<	0.002	<	0.002		<	0.002	<0.0002	<0.0002 D	<0.00005			
Dibenzo [a,h] Anthracene	NE	NE		<0.0002	<	0.002	<	0.002		<	0.002	<0.0002	<0.0002 D	<0.00005			
Fluoranthene	NE	NE		<0.0002	<	0.002	<	0.002		<	0.002	<0.0002	<0.0009 D	<0.0002			
Fluorene	NE	NE		<0.0002	<	0.002	<	0.002		<	0.002	<0.0002	<0.0009 D	<0.0002			
Indeno [1,2,3-cd] Pyrene	NE	NE		<0.0003	<	0.002	<	0.002		<	0.002	<0.0002	<0.0002 D	<0.00005			
Naphthalene	NE	2.67		<0.0002	<	0.002	<	0.002		<	0.002	**0.002**	<0.0009 D	<0.0002			
Phenanthrene	NE	NE		<0.0002	<	0.002	<	0.002		<	0.002	<0.0002	<0.0009 D	<0.0002			
Pyrene	NE	NE		<0.0002	<	0.002	<	0.002		<	0.002	<0.0002	<0.0009 D	<0.0002			
INORGANICS (ppm)																	
Total Cyanide	NE	NE		**0.07**	**0.020**	0.010	**0.052**	0.010		**0.040**	0.010	**0.0306**	**0.0472**	**0.0458**			
Dissolved Free Cyanide	NE	NE		<0.05	<	0.010	<	0.010		<	0.010	<0.005	**0.0445**	**0.031**			
Physiologically Available Cyanide	NE	NE		<0.05													
Arsenic	NE	NE		<0.0050													
Beryllium	NE	NE		**0.003**													
Chromium	NE	NE		**0.038**													
Copper	NE	NE		**0.12**													
Lead	NE	NE		**0.0075**													
Nickel	NE	NE		**0.092**													
Zinc	NE	NE		**0.255**													
Dissolved Arsenic	NE	NE		<0.0050													
Dissolved Beryllium	NE	NE		**0.003**													
Dissolved Chromium	NE	NE		**0.037**													
Dissolved Copper	NE	NE		**0.119**													
Dissolved Lead	NE	NE		**0.0075**													
Dissolved Nickel	NE	NE		**0.093**													
Dissolved Zinc	NE	NE		**0.259**													

Notes:

	Blank cells indicate that the parameter was not analyzed during this sampling round
D	"D" qualifier indicates analytes reported from a diluted run of the original analysis.
E	"E" qualifier indicates that the analyte was reported above the quantitation limit; Estimated value
J	"J" qualifier indicates analyte value was below the Method reporting Limit; Estimated value.
B	"B" qualifier indicates that the analyte was present in the method blank
NE	Regulatory Limit is not established
Bold Value	= concentration detected above the Method Reporting Limit.
	= concentration equals or exceeds the RIDEM GB Groundwater Objective (RIDEM GB GW Objectives)
	=detection limit equals or exceeds the RIDEM GB Groundwater Objective
(1)	Method 2 GB Objective criteria for naphthalene developed by GZA in accordance with the methods described in the Remediation Regulations.
(2)	Well was not sampled because there was limited water
(3)	NAPL was noted to be present
(4)	Well was not sampled because it had not been installed yet.
(5)	Well was not sampled because of an unknown reason
(6)	Well was not included in this sampling round

Please note that this table only includes compounds that have been detected or have detection limits that exceeded the RIDEM GB Groundwater Objective during groundwater monitoring at the Site between 1996 and present.

TABLE 5X
GROUNDWATER MONITORING DATA
South Fill Area
Former Tidewater Facility
Pawtucket, Rhode Island

ANALYTICAL	Sample ID:		MW-318S															
	Collected By:		AES	VHB	GZA		GZA		GZA	GZA		GZA	GZA	GZA	GZA	GZA	GZA	GZA
	Sample Date:		1996	2006	Jan 2010		June 2010		Dec 2010	July 2011		July 2012	Aug 2013	Oct 2014	Nov 2015	Nov 2016	Oct 2017	
	RIDEM GB GW UCL	RIDEM GB GW-O	Note (4)	Note (4)	Note (4)				Note (6)									
VOCs (ppm)							Result	DL		Result	DL	Result	Result	Result	Result	Result	Result	
1,1,1,2-Tetrachloroethane	NE	NE					<	0.01		<	0.01	<0.05	<0.001	<0.0010	<0.0010	<0.0010	<0.0010	
1,1-Dichloroethene	23	0.007					<	0.01		<	0.01	<0.05	<0.001	<0.0010	<0.0010	<0.0010	<0.0010	
1,2,4-Trimethylbenzene	NE	NE					**0.052**	0.01		**0.04**	0.01	<0.05	**0.043**	**0.0303**	**0.0255**	**0.0183**	**0.0327**	
1,2-Dibromo-3-Chloropropane	NE	0.002					<	0.02		<	0.02	<0.25	<0.005	<0.0050	<0.0050	<0.0050	<0.0050	
1,3,5-Trimethylbenzene	NE	NE					**0.023**	0.01		**0.017**	0.01	<0.05	**0.0177**	**0.0124**	**0.0108**	**0.0075**	**0.0139**	
4-Isopropyltoluene	NE	NE										<0.05	**0.0012**	<0.0010	J 0.0008	<0.0010	<0.0010	
Acetone	NE	NE					<	0.10		<	0.10	<0.5	<0.01	<0.0100	J 0.0033	<0.0100	<0.0100	
Benzene	18	0.14					**0.088**	0.01		**0.089**	0.01	**0.063**	**0.0733**	**0.0516**	**0.0408**	**0.0426**	**0.0817**	
Carbon Disulfide	NE	NE								<	0.01	<0.05	<0.001	<0.0010	<0.0010	<0.0010	<0.0010	
Carbon Tetrachloride	NE	0.07					<	0.01		<	0.01	<0.05	<0.001	<0.0010	<0.0010	<0.0010	<0.0010	
Chloroform	NE	NE					<	0.01		<	0.01	<0.05	<0.001	<0.0010	<0.0010	<0.0010	<0.0010	
cis-1,2-Dichloroethene	69	2.4					<	0.01		<	0.01	<0.05	<0.001	<0.0010	<0.0010	<0.0010	<0.0010	
Ethylbenzene	16	1.6					**0.012**	0.01		**0.01**	0.01	<0.05	**0.0099**	**0.0062**	**0.0061**	**0.0046**	**0.0082**	
Isopropylbenzene	NE	NE					<	0.01		<	0.01	<0.05	<0.001	<0.0010	J 0.0007	<0.0010	<0.0010	
Methyl tert-Butyl Ether	NE	5					<	0.01		<	0.01	<0.05	<0.001	<0.0010	<0.0010	<0.0010	<0.0010	
Methylene Chloride	NE	NE					<	0.01		<	0.01	<0.05	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	
Naphthalene	NE	2.67					**1.2**	0.02		**1.1**	0.02	**1.22**	**0.988 D**	**0.883**	**0.755**	**0.504**	**0.766 D**	
n-Butylbenzene	NE	NE					<	0.01		<	0.01	<0.05	<0.001	<0.0010	**0.0016**	**0.0014**	**0.0019**	
n-Propylbenzene	NE	NE					<	0.01		<	0.01	<0.05	**0.002**	**0.0012**	**0.0013**	<0.0010	**0.0018**	
sec-Butylbenzene	NE	NE					<	0.01		<	0.01	<0.05	<0.001	<0.0010	J 0.0003	<0.0010	<0.0010	
Styrene	50	2.2					<	0.01		<	0.01	<0.05	**0.0051**	**0.0024**	**0.0025**	**0.0024**	**0.0043**	
tert-Butylbenzene	NE	NE					<	0.01		<	0.01	<0.05	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	
Tertiary-amyl methyl ether	NE	NE										<0.05	<0.001	<0.0010	<0.0010	<0.0010	<0.0010	
Tetrachloroethene	NE	0.15					<	0.01		<	0.01	<0.05	<0.001	<0.0010	<0.0010	<0.0010	<0.0010	
Toluene	21	1.7					**0.076**	0.01		**0.072**	0.01	**0.0575**	**0.0659**	**0.0441**	**0.037**	**0.0314**	**0.0666**	
Trichloroethene	87	0.54					<	0.01		<	0.01	<0.05	<0.001	<0.0010	<0.0010	<0.0010	<0.0010	
Vinyl Chloride	NE	0.002					<	0.01		<	0.01	<0.05	<0.001	<0.0010	<0.0010	<0.0010	<0.0010	
Xylene O	NE	NE					**0.046**	0.01		**0.039**	0.01	<0.05	**0.0374**	**0.0253**	**0.022**	<0.0010	**0.033**	
Xylene P,M	NE	NE					**0.11**	0.02		**0.082**	0.02	<0.1	**0.083**	**0.0556**	**0.0486**	<0.0020	**0.0695**	
Xylenes (Total)	NE	NE					**0.156**	0.03		**0.121**	0.03	<0.15	**0.12**	**0.0809**	**0.0706**	<0.0020	**0.102**	
Total VOCs	NE	NE					**1.61**			**1.449**		**1.3405**	**1.3265**	**1.1121**	**0.9563**	**0.6047**	**1.0796**	
TOTAL PETROLEUM HYDROCARBON (ppm)																		
Hydrocarbon Content	NE	NE					**1**	1.0		**2.9**	0.2	**4.13**	**3.42**	**1.51**				
PAHS BY GCMS (ppm)																		
2-Methylnaphthalene	NE	NE					**0.048**	0.002		**0.044**	0.01	**0.06**	**0.0397 D**	**0.0544**				
Acenaphthene	NE	NE					**0.006**	0.002		<	0.01	**0.009**	**0.0046 D**	**0.0057**				
Acenaphthylene	NE	NE					**0.021**	0.002		**0.014**	0.01	**0.024**	**0.0129 D**	**0.022**				
Anthracene	NE	NE					**0.019**	0.002		<	0.01	**0.007**	**0.0036 D**	**0.005**				
Benzo [a] Anthracene	NE	NE					<	0.002		<	0.01	<0.002	<0.0002 D	**0.0006**				
Benzo [a] Pyrene	NE	NE					<	0.002		<	0.01	<0.002	<0.0002 D	**0.0006**				
Benzo [b] Fluoranthene	NE	NE					<	0.002		<	0.01	<0.002	<0.0002 D	**0.0007**				
Benzo [g,h,i] Perylene	NE	NE					<	0.002		<	0.01	<0.002	<0.0009 D	**0.0004**				
Benzo [k] Fluoranthene	NE	NE					<	0.002		<	0.01	<0.002	<0.0002 D	**0.0003**				
Chrysene	NE	NE					<	0.002		<	0.01	<0.002	<0.0002 D	**0.0005**				
Dibenzo [a,h] Anthracene	NE	NE					<	0.002		<	0.01	<0.002	<0.0002 D	**0.00009**				
Fluoranthene	NE	NE					**0.004**	0.002		<	0.01	<0.002	**0.001 D**	**0.0027**				
Fluorene	NE	NE					**0.014**	0.002		**0.012**	0.01	**0.02**	**0.0111 D**	**0.0228**				
Indeno [1,2,3-cd] Pyrene	NE	NE					<	0.002		<	0.01	<0.002	<0.0002 D	**0.0005**				
Naphthalene	NE	2.67					**0.21**	0.002		**0.38**	0.01	**0.753**	**0.351 D**	**0.43**				
Phenanthrene	NE	NE					**0.018**	0.002		<	0.01	**0.019**	**0.0106 D**	**0.0235**				
Pyrene	NE	NE					**0.003**	0.002		<	0.01	<0.002	<0.0009 D	**0.0017**				
INORGANICS (ppm)																		
Total Cyanide	NE	NE					**0.50**	0.010		**0.01**	0.010	**0.0359**	**0.0125**	**0.027**				
Dissolved Free Cyanide	NE	NE					**0.020**	0.010		**0.01**	0.010	<0.005	**0.0119**	**0.01**				
Physiologically Available Cyanide	NE	NE																
Arsenic	NE	NE																
Beryllium	NE	NE																
Chromium	NE	NE																
Copper	NE	NE																
Lead	NE	NE																
Nickel	NE	NE																
Zinc	NE	NE																
Dissolved Arsenic	NE	NE																
Dissolved Beryllium	NE	NE																
Dissolved Chromium	NE	NE																
Dissolved Copper	NE	NE																
Dissolved Lead	NE	NE																
Dissolved Nickel	NE	NE																
Dissolved Zinc	NE	NE																

Notes:

	Blank cells indicate that the parameter was not analyzed during this sampling round
D	"D" qualifier indicates analytes reported from a diluted run of the original analysis.
E	"E" qualifier indicates that the analyte was reported above the quantitation limit; Estimated value
J	"J" qualifier indicates analyte value was below the Method reporting Limit; Estimated value.
B	"B" qualifier indicates that the analyte was present in the method blank
NE	Regulatory Limit is not established
Bold Value	= concentration detected above the Method Reporting Limit.
	= concentration equals or exceeds the RIDEM GB Groundwater Objective (RIDEM GB GW Objectives)
	=detection limit equals or exceeds the RIDEM GB Groundwater Objective
(1)	Method 2 GB Objective criteria for naphthalene developed by GZA in accordance with the methods described in the Remediation Regulations.
(2)	Well was not sampled because there was limited water
(3)	NAPL was noted to be present
(4)	Well was not sampled because it had not been installed yet.
(5)	Well was not sampled because of an unknown reason
(6)	Well was not included in this sampling round

Please note that this table only includes compounds that have been detected or have detection limits that exceeded the RIDEM GB Groundwater Objective during groundwater monitoring at the Site between 1996 and present.

TABLE 5Y
GROUNDWATER MONITORING DATA
South Fill Area
Former Tidewater Facility
Pawtucket, Rhode Island

ANALYTICAL	Sample ID:		MW-318D														
	Collected By:		AES	VHB	GZA		GZA		GZA	GZA			GZA	GZA	GZA	GZA	GZA	GZA
	Sample Date:		1996	2006	Jan 2010		June 2010		Dec 2010	July 2011			July 2012	Aug 2013	Oct 2014	Nov 2015	Nov 2016	
	RIDEM GB GW UCL	RIDEM GB GW-O	Note (4)	Note (4)	Note (4)				Note (6)									
VOCs (ppm)							Result	DL		Result	DL		Result	Result	Result	Result	Result	
1,1,1,2-Tetrachloroethane	NE	NE					<	0.001		<	0.001		<0.001	<0.001	<0.0010	<0.0010	<0.0010	<0.0010
1,1-Dichloroethene	23	0.007					<	0.001		<	0.001		<0.001	<0.001	<0.0010	<0.0010	<0.0010	<0.0010
1,2,4-Trimethylbenzene	NE	NE					<	0.001		<	0.001		<0.001	<0.001	<0.0010	<0.0010	<0.0010	<0.0010
1,2-Dibromo-3-Chloropropane	NE	0.002					<	0.002		<	0.002		<0.005	<0.005	<0.0050	<0.0050	<0.0050	<0.0050
1,3,5-Trimethylbenzene	NE	NE					<	0.001		<	0.001		<0.001	<0.001	<0.0010	<0.0010	<0.0010	<0.0010
4-Isopropyltoluene	NE	NE											<0.001	<0.001	<0.0010	<0.0010	<0.0010	<0.0010
Acetone	NE	NE					<	0.010		<	0.010		<0.01	<0.01	<0.0100	<0.0100	<0.0100	<0.0100
Benzene	18	0.14					<	0.001		<	0.001		<0.001	<0.001	<0.0010	<0.0010	<0.0010	<0.0010
Carbon Disulfide	NE	NE								<	0.001		<0.001	<0.001	<0.0010	<0.0010	<0.0010	<0.0010
Carbon Tetrachloride	NE	0.07					<	0.001		<	0.001		<0.001	<0.001	<0.0010	<0.0010	<0.0010	<0.0010
Chloroform	NE	NE					<	0.001		<	0.001		<0.001	<0.001	<0.0010	<0.0010	<0.0010	<0.0010
cis-1,2-Dichloroethene	69	2.4					<	0.001		<	0.001		<0.001	<0.001	<0.0010	<0.0010	<0.0010	<0.0010
Ethylbenzene	16	1.6					<	0.001		<	0.001		<0.001	<0.001	<0.0010	<0.0010	<0.0010	<0.0010
Isopropylbenzene	NE	NE					<	0.001		<	0.001		<0.001	<0.001	<0.0010	<0.0010	<0.0010	<0.0010
Methyl tert-Butyl Ether	NE	5					<	0.001		<	0.001		<0.001	<0.001	<0.0010	<0.0010	<0.0010	<0.0010
Methylene Chloride	NE	NE					<	0.002		<	0.002		<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
Naphthalene	NE	2.67					**0.0043**	0.002		<	0.002		<0.001	<0.001	**0.0013**	<0.0010	<0.0010	<0.0010
n-Butylbenzene	NE	NE					<	0.001		<	0.001		<0.001	<0.001	<0.0010	<0.0010	<0.0010	<0.0010
n-Propylbenzene	NE	NE					<	0.001		<	0.001		<0.001	<0.001	<0.0010	<0.0010	<0.0010	<0.0010
sec-Butylbenzene	NE	NE					<	0.001		<	0.001		<0.001	<0.001	<0.0010	<0.0010	<0.0010	<0.0010
Styrene	50	2.2					<	0.001		<	0.001		<0.001	<0.001	<0.0010	<0.0010	<0.0010	<0.0010
tert-Butylbenzene	NE	NE					<	0.001		<	0.001		<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Tertiary-amyl methyl ether	NE	NE											<0.001	<0.001	<0.0010	<0.0010	<0.0010	<0.0010
Tetrachloroethene	NE	0.15					<	0.001		<	0.001		<0.001	<0.001	<0.0010	J 0.0002	<0.0010	<0.0010
Toluene	21	1.7					<	0.001		<	0.001		<0.001	<0.001	<0.0010	<0.0010	<0.0010	<0.0010
Trichloroethene	87	0.54					<	0.001		<	0.001		<0.001	<0.001	<0.0010	<0.0010	<0.0010	<0.0010
Vinyl Chloride	NE	0.002					<	0.001		<	0.001		<0.001	<0.001	<0.0010	<0.0010	<0.0010	<0.0010
Xylene O	NE	NE					<	0.001		<	0.001		<0.001	<0.001	<0.0010	<0.0010	<0.0010	<0.0010
Xylene P,M	NE	NE					<	0.002		<	0.002		<0.002	<0.002	<0.0020	<0.0020	<0.0020	<0.0020
Xylenes (Total)	NE	NE					<	0.003		<	0.003		<0.003	<0.003	<0.0030	<0.0020	<0.0020	<0.0020
Total VOCs	NE	NE						ND			ND		ND	ND	**0.0013**	**0.0002**	ND	ND
TOTAL PETROLEUM HYDROCARBON (ppm)																		
Hydrocarbon Content	NE	NE					<	0.2		<	0.2		<0.21	<0.19	<0.19			
PAHS BY GCMS (ppm)																		
2-Methylnaphthalene	NE	NE					<	0.002		<	0.002		**0.0008**	<0.0009 D	<0.0002			
Acenaphthene	NE	NE					<	0.002		<	0.002		<0.0002	<0.0009 D	<0.0002			
Acenaphthylene	NE	NE					<	0.002		<	0.002		<0.0002	<0.0009 D	<0.0002			
Anthracene	NE	NE					<	0.002		<	0.002		<0.0002	<0.0009 D	<0.0002			
Benzo [a] Anthracene	NE	NE					<	0.002		<	0.002		<0.0002	<0.0002 D	<0.00005			
Benzo [a] Pyrene	NE	NE					<	0.002		<	0.002		<0.0002	<0.0002 D	<0.00005			
Benzo [b] Fluoranthene	NE	NE					<	0.002		<	0.002		<0.0002	<0.0002 D	<0.00005			
Benzo [g,h,i] Perylene	NE	NE					<	0.002		<	0.002		<0.0002	<0.0009 D	<0.0002			
Benzo [k] Fluoranthene	NE	NE					<	0.002		<	0.002		<0.0002	<0.0002 D	<0.00005			
Chrysene	NE	NE					<	0.002		<	0.002		<0.0002	<0.0002 D	<0.00005			
Dibenzo [a,h] Anthracene	NE	NE					<	0.002		<	0.002		<0.0002	<0.0002 D	<0.00005			
Fluoranthene	NE	NE					<	0.002		<	0.002		<0.0002	<0.0009 D	<0.0002			
Fluorene	NE	NE					<	0.002		<	0.002		<0.0002	<0.0009 D	<0.0002			
Indeno [1,2,3-cd] Pyrene	NE	NE					<	0.002		<	0.002		<0.0002	<0.0002 D	<0.00005			
Naphthalene	NE	2.67					<	0.002		<	0.002		**0.01**	<0.0009 D	<0.0002			
Phenanthrene	NE	NE					**0.002**	0.002		<	0.002		<0.0002	<0.0009 D	<0.0002			
Pyrene	NE	NE					<	0.002		<	0.002		<0.0002	<0.0009 D	<0.0002			
INORGANICS (ppm)																		
Total Cyanide	NE	NE					<	0.010		<	0.010		<0.005	**0.0163**	**0.0234**			
Dissolved Free Cyanide	NE	NE					<	0.010		<	0.010		<0.005	**0.0138**	**0.015**			
Physiologically Available Cyanide	NE	NE																
Arsenic	NE	NE																
Beryllium	NE	NE																
Chromium	NE	NE																
Copper	NE	NE																
Lead	NE	NE																
Nickel	NE	NE																
Zinc	NE	NE																
Dissolved Arsenic	NE	NE																
Dissolved Beryllium	NE	NE																
Dissolved Chromium	NE	NE																
Dissolved Copper	NE	NE																
Dissolved Lead	NE	NE																
Dissolved Nickel	NE	NE																
Dissolved Zinc	NE	NE																

Notes:

	Blank cells indicate that the parameter was not analyzed during this sampling round
D	"D" qualifier indicates analytes reported from a diluted run of the original analysis.
E	"E" qualifier indicates that the analyte was reported above the quantitation limit; Estimated value
J	"J" qualifier indicates analyte value was below the Method reporting Limit; Estimated value.
B	"B" qualifier indicates that the analyte was present in the method blank
NE	Regulatory Limit is not established
Bold Value	= concentration detected above the Method Reporting Limit.
	= concentration equals or exceeds the RIDEM GB Groundwater Objective (RIDEM GB GW Objectives)
	=detection limit equals or exceeds the RIDEM GB Groundwater Objective
(1)	Method 2 GB Objective criteria for naphthalene developed by GZA in accordance with the methods described in the Remediation Regulations.
(2)	Well was not sampled because there was limited water
(3)	NAPL was noted to be present
(4)	Well was not sampled because it had not been installed yet.
(5)	Well was not sampled because of an unknown reason
(6)	Well was not included in this sampling round

Please note that this table only includes compounds that have been detected or have detection limits that exceeded the RIDEM GB Groundwater Objective during groundwater monitoring at the Site between 1996 and present.

TABLE 5Z
GROUNDWATER MONITORING DATA
South Fill Area
Former Tidewater Facility
Pawtucket, Rhode Island

ANALYTICAL	Sample ID:		MW-334S													
	Collected By:		AES	VHB	GZA		GZA	GZA			GZA	GZA	GZA	GZA	GZA	GZA
	Sample Date:		1996	2006	Jan 2010		June 2010	Dec 2010		July 2011		July 2012	Aug 2013	Oct 2014	Nov 2015	Nov 2016	Oct 2017
	RIDEM GB GW UCL	RIDEM GB GW-O	Note (4)	Note (4)	Note (4)		Note (4)										
VOCs (ppm)								Result	DL	Result	DL	Result	Result	Result	Result	Result	Result
1,1,1,2-Tetrachloroethane	NE	NE						<	0.001	<	0.001	<0.001	<0.001	<0.0010	<0.0010	<0.0010	<0.0010
1,1-Dichloroethene	23	0.007						<	0.001	<	0.001	<0.001	<0.001	<0.0010	<0.0010	<0.0010	<0.0010
1,2,4-Trimethylbenzene	NE	NE						**0.0034**	0.001	<	0.001	**0.0016**	**0.0011**	**0.0015**	J 0.0005	**0.0014**	**0.001**
1,2-Dibromo-3-Chloropropane	NE	0.002						<	0.002	<	0.002	<0.005	<0.005	<0.0050	<0.0050	<0.0050	<0.0050
1,3,5-Trimethylbenzene	NE	NE						**0.0013**	0.001	<	0.001	<0.001	<0.001	<0.0010	J 0.0002	<0.0010	<0.0010
4-Isopropyltoluene	NE	NE										<0.001	<0.001	<0.0010	<0.0010	<0.0010	<0.0010
Acetone	NE	NE						<	0.010	<	0.010	<0.01	<0.01	<0.0100	J 0.0032	<0.0100	<0.0100
Benzene	18	0.14						**0.0032**	0.001	**0.001**	0.001	**0.0021**	**0.002**	**0.0032**	**0.0019**	**0.0028**	**0.0026**
Carbon Disulfide	NE	NE								<	0.001	<0.001	<0.001	<0.0010	<0.0010	<0.0010	<0.0010
Carbon Tetrachloride	NE	0.07						<	0.001	<	0.001	<0.001	<0.001	<0.0010	<0.0010	<0.0010	<0.0010
Chloroform	NE	NE						<	0.001	<	0.001	<0.001	<0.001	<0.0010	<0.0010	<0.0010	<0.0010
cis-1,2-Dichloroethene	69	2.4						<	0.001	<	0.001	<0.001	<0.001	<0.0010	<0.0010	<0.0010	<0.0010
Ethylbenzene	16	1.6						<	0.001	<	0.001	<0.001	<0.001	<0.0010	J 0.0002	<0.0010	<0.0010
Isopropylbenzene	NE	NE						<	0.001	<	0.001	<0.001	<0.001	<0.0010	<0.0010	<0.0010	<0.0010
Methyl tert-Butyl Ether	NE	5						<	0.001	<	0.001	<0.001	<0.001	<0.0010	<0.0010	<0.0010	<0.0010
Methylene Chloride	NE	NE						<	0.002	<	0.002	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
Naphthalene	NE	2.67						**0.071**	0.002	**0.014**	0.002	**0.0429**	**0.0334**	**0.0692**	**0.0246**	**0.0447**	**0.0265**
n-Butylbenzene	NE	NE						<	0.001	<	0.001	<0.001	<0.001	<0.0010	<0.0010	<0.0010	<0.0010
n-Propylbenzene	NE	NE						<	0.001	<	0.001	<0.001	<0.001	<0.0010	<0.0010	<0.0010	<0.0010
sec-Butylbenzene	NE	NE						<	0.001	<	0.001	<0.001	<0.001	<0.0010	<0.0010	<0.0010	<0.0010
Styrene	50	2.2						<	0.001	<	0.001	<0.001	<0.001	<0.0010	<0.0010	<0.0010	<0.0010
tert-Butylbenzene	NE	NE						<	0.001	<	0.001	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Tertiary-amyl methyl ether	NE	NE										<0.001	<0.001	<0.0010	<0.0010	<0.0010	<0.0010
Tetrachloroethene	NE	0.15						<	0.001	<	0.001	<0.001	<0.001	<0.0010	<0.0010	<0.0010	<0.0010
Toluene	21	1.7						**0.0018**	0.001	**0.0011**	0.001	**0.0012**	**0.001**	**0.0016**	J 0.0009	**0.0016**	**0.0012**
Trichloroethene	87	0.54						<	0.001	<	0.001	<0.001	<0.001	<0.0010	<0.0010	<0.0010	<0.0010
Vinyl Chloride	NE	0.002						<	0.001	<	0.001	<0.001	<0.001	<0.0010	<0.0010	<0.0010	<0.0010
Xylene O	NE	NE						**0.0025**	0.001	<	0.001	**0.0013**	<0.001	**0.0013**	J 0.0004	**0.0011**	<0.0010
Xylene P,M	NE	NE						**0.0042**	0.002	<	0.002	<0.002	<0.002	**0.0022**	J 0.0008	<0.0020	<0.0020
Xylenes (Total)	NE	NE						**0.0067**	0	<	0.003	**0.0013**	<0.003	**0.0035**	<0.0020	<0.0020	<0.0020
Total VOCs	NE	NE						**0.0874**		**0.0161**		**0.0491**	**0.0375**	**0.079**	**0.0327**	**0.0516**	**0.0313**
TOTAL PETROLEUM HYDROCARBON (ppm)																	
Hydrocarbon Content	NE	NE						**0.5**	0.2	**0.22**	0.2	**0.55**	**0.52**	<0.19			
PAHS BY GCMS (ppm)																	
2-Methylnaphthalene	NE	NE						**0.0028**	0.002	<	0.002	**0.003**	**0.0019 D**	**0.0007**			
Acenaphthene	NE	NE						<	0.002	<	0.002	**0.001**	<0.001 D	**0.0004**			
Acenaphthylene	NE	NE						<	0.002	<	0.002	**0.0002**	<0.001 D	<0.0002			
Anthracene	NE	NE						<	0.002	<	0.002	**0.0005**	<0.001 D	**0.0004**			
Benzo [a] Anthracene	NE	NE						<	0.002	<	0.002	<0.0002	<0.0002 D	**0.00006**			
Benzo [a] Pyrene	NE	NE						<	0.002	<	0.002	<0.0002	<0.0002 D	<0.00005			
Benzo [b] Fluoranthene	NE	NE						<	0.002	<	0.002	<0.0002	<0.0002 D	<0.00005			
Benzo [g,h,i] Perylene	NE	NE						<	0.002	<	0.002	<0.0002	<0.001 D	<0.0002			
Benzo [k] Fluoranthene	NE	NE						<	0.002	<	0.002	<0.0002	<0.0002 D	<0.00005			
Chrysene	NE	NE						<	0.002	<	0.002	<0.0002	<0.0002 D	<0.00005			
Dibenzo [a,h] Anthracene	NE	NE						<	0.002	<	0.002	<0.0002	<0.0002 D	<0.00005			
Fluoranthene	NE	NE						<	0.002	<	0.002	**0.0006**	<0.001 D	**0.0005**			
Fluorene	NE	NE						<	0.002	<	0.002	**0.001**	<0.001 D	**0.0006**			
Indeno [1,2,3-cd] Pyrene	NE	NE						<	0.002	<	0.002	<0.0002	<0.0002 D	<0.00005			
Naphthalene	NE	2.67						**0.018**	0.002	**0.0075**	0.002	**0.023**	**0.0142 D**	**0.0044**			
Phenanthrene	NE	NE						**0.0021**	0.002	<	0.002	**0.003**	**0.0027 D**	**0.0027**			
Pyrene	NE	NE						<	0.002	<	0.002	**0.0004**	<0.001 D	**0.0004**			
INORGANICS (ppm)																	
Total Cyanide	NE	NE						**0.040**	0.010	**0.02**	0.010	**0.0564**	**0.0352**	**0.0127**			
Dissolved Free Cyanide	NE	NE						<	0.010	<	0.010	<0.005	**0.0286**	**0.011**			
Physiologically Available Cyanide	NE	NE															
Arsenic	NE	NE															
Beryllium	NE	NE															
Chromium	NE	NE															
Copper	NE	NE															
Lead	NE	NE															
Nickel	NE	NE															
Zinc	NE	NE															
Dissolved Arsenic	NE	NE															
Dissolved Beryllium	NE	NE															
Dissolved Chromium	NE	NE															
Dissolved Copper	NE	NE															
Dissolved Lead	NE	NE															
Dissolved Nickel	NE	NE															
Dissolved Zinc	NE	NE															

Notes:

	Blank cells indicate that the parameter was not analyzed during this sampling round
D	"D" qualifier indicates analytes reported from a diluted run of the original analysis.
E	"E" qualifier indicates that the analyte was reported above the quantitation limit; Estimated value
J	"J" qualifier indicates analyte value was below the Method reporting Limit; Estimated value.
B	"B" qualifier indicates that the analyte was present in the method blank
NE	Regulatory Limit is not established
Bold Value	= concentration detected above the Method Reporting Limit.
	= concentration equals or exceeds the RIDEM GB Groundwater Objective (RIDEM GB GW Objectives)
	=detection limit equals or exceeds the RIDEM GB Groundwater Objective
(1)	Method 2 GB Objective criteria for naphthalene developed by GZA in accordance with the methods described in the Remediation Regulations.
(2)	Well was not sampled because there was limited water
(3)	NAPL was noted to be present
(4)	Well was not sampled because it had not been installed yet.
(5)	Well was not sampled because of an unknown reason
(6)	Well was not included in this sampling round

Please note that this table only includes compounds that have been detected or have detection limits that exceeded the RIDEM GB Groundwater Objective during groundwater monitoring at the Site between 1996 and present.

FIGURES

2017 GROUNDWATER MONITORING REPORT
FORMER TIDEWATER FACILITY
PAWTUCKET, RHODE ISLAND

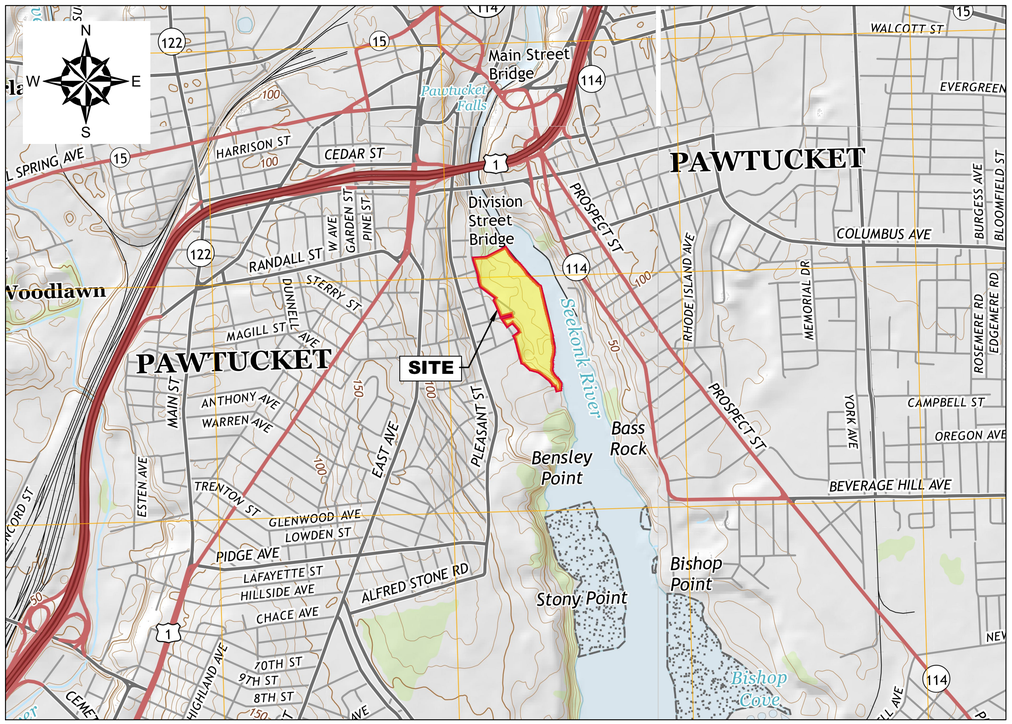
FEBRUARY 2018

PREPARED FOR:

nationalgrid

PREPARED BY:

GZA
GZA GEOENVIRONMENTAL, INC.
530 BROADWAY
PROVIDENCE, RHODE ISLAND 02909



PROJECT LOCUS MAP

SOURCE: USGSSTORE.GOV

0 500' 1000' 2000' 3000'
SCALE IN FEET

Sheet List Table	
Sheet Number	Sheet Title
C	COVER SHEET AND SITE LOCUS PLAN
1	AERIAL SITE PLAN
2A	EXPLORATION LOCATION PLAN - NORTH FILL AREA AND FORMER GAS PLANT AREA
2B	EXPLORATION LOCATION PLAN FORMER POWER PLANT AREA AND SOUTH FILL AREA
3	SHALLOW GROUNDWATER CONTOUR PLAN OCTOBER 3, 2017
4A	2017 NAPL & GROUNDWATER ANALYTICAL DATA NORTH FILL AREA AND FORMER GAS PLANT AREA
4B	2017 NAPL & GROUNDWATER ANALYTICAL DATA FORMER POWER PLANT AREA AND SOUTH FILL AREA

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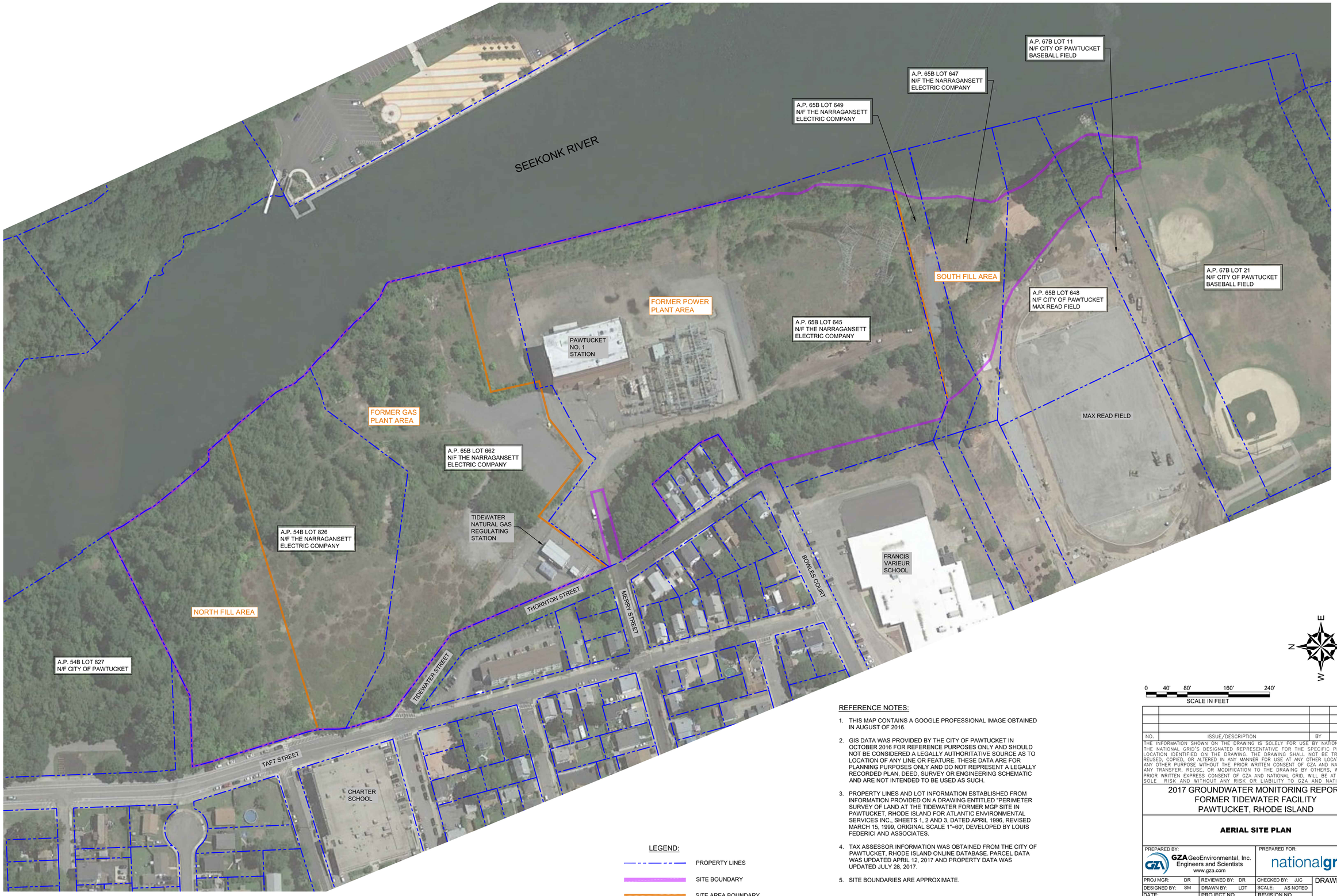

LEGEND:

- PROPERTY LINES
- SITE BOUNDARY
- SITE AREA BOUNDARY

REFERENCE NOTES:

1. THIS MAP CONTAINS A GOOGLE PROFESSIONAL IMAGE OBTAINED IN AUGUST OF 2016.
2. GIS DATA WAS PROVIDED BY THE CITY OF PAWTUCKET IN OCTOBER 2016 FOR REFERENCE PURPOSES ONLY AND SHOULD NOT BE CONSIDERED A LEGALLY AUTHORITATIVE SOURCE AS TO LOCATION OF ANY LINE OR FEATURE. THESE DATA ARE FOR PLANNING PURPOSES ONLY AND DO NOT REPRESENT A LEGALLY RECORDED PLAN, DEED, SURVEY OR ENGINEERING SCHEMATIC AND ARE NOT INTENDED TO BE USED AS SUCH.
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4. TAX ASSESSOR INFORMATION WAS OBTAINED FROM THE CITY OF PAWTUCKET, RHODE ISLAND ONLINE DATABASE. PARCEL DATA WAS UPDATED APRIL 12, 2017 AND PROPERTY DATA WAS UPDATED JULY 28, 2017.
5. SITE BOUNDARIES ARE APPROXIMATE.

NO.	ISSUE/DESCRIPTION	BY	DATE

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2017 GROUNDWATER MONITORING REPORT
FORMER TIDEWATER FACILITY
PAWTUCKET, RHODE ISLAND

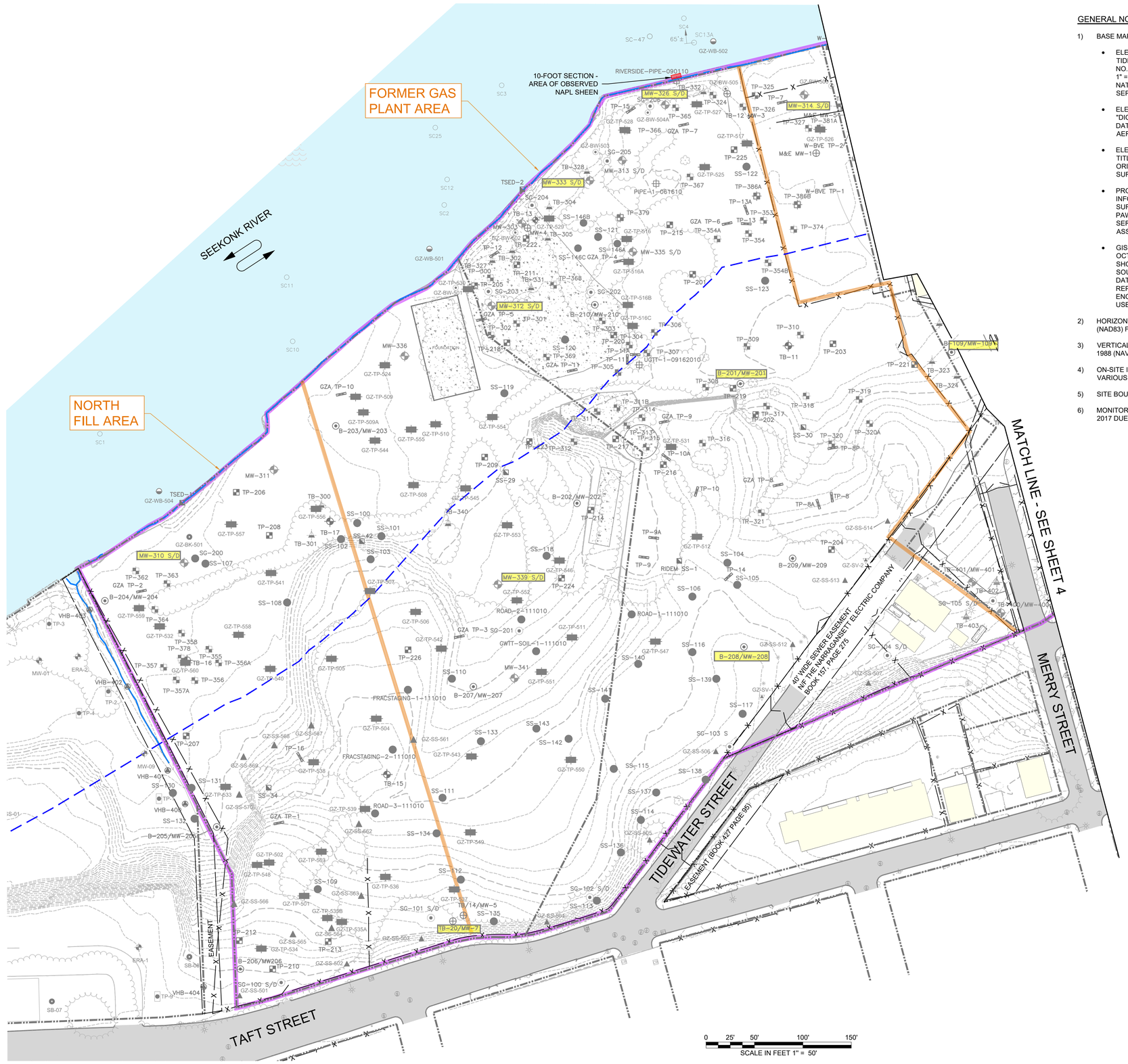
AERIAL SITE PLAN

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

PREPARED FOR: nationalgrid

PROJ MGR: DR	REVIEWED BY: DR	CHECKED BY: JJC	DRAWING
DESIGNED BY: SM	DRAWN BY: LDT	SCALE: AS NOTED	1
DATE: FEBRUARY 2018	PROJECT NO. 43654.00	REVISION NO. 0	SHEET NO. 2 OF 7

©2018– GZA GeoEnvironmental, Inc. GZA–J:\ENV\43654.MSK\FIGURES\CAD\DWGS\43654_AERIAL SITE_2017-6-27.DWG AERIAL SITE PLAN (2) FEBRUARY 8, 2018 12:02 PM LISA THERIAULT



GENERAL NOTES:

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5) SITE BOUNDARIES ARE APPROXIMATE.
6) MONITORING WELLS MW-5 AND MW-316 S WERE NOT SAMPLED IN 2017 DUE TO AN INSUFFICIENT VOLUME OF WATER.

LEGEND:

- EXISTING CONTOUR (MAJOR 5 FOOT INTERVAL)
- EXISTING CONTOUR (MINOR 1 FOOT INTERVAL)
- PROPERTY LINE
- EDGE OF WATER
- EXISTING FENCE
- SITE BOUNDARY
- SITE AREA BOUNDARY
- 200 FOOT CRMC SETBACK
- CATCH BASIN
- MANHOLE
- UTILITY POLE
- LIGHT POLE
- LIGHT POST
- HYDRANT
- EXISTING BUILDING
- EXISTING CONCRETE SURFACE
- EXISTING PAVEMENT
- EASEMENT AREA

SAMPLE LEGEND

SS-9	ATLANTIC SURFACE SOIL SAMPLE LOCATION
TSED-6	ATLANTIC SEDIMENT SAMPLE LOCATION
W-BVE SS-3	WESTON/BLACKSTONE VALLEY ELECTRIC SEDIMENT SAMPLE LOCATION
RIDEM SS-3	RIDEM SURFACE SOIL SAMPLE LOCATION
B-109/ MW-109	MONITORING WELL/BORING (VHB) SURVEYED
TP-3A	ATLANTIC TEST PIT LOCATION
W-BVE	WESTON/BLACKSTONE VALLEY ELECTRIC TEST PIT LOCATION
GZA TP-8	GZA/VALLEY GAS TEST PIT LOCATION
TB-15	ATLANTIC SOIL BORING LOCATION
MW-3	ATLANTIC MONITORING WELL LOCATION
M&E MW-1	METCALF & EDDY MONITORING WELL LOCATION
VHB-400	VHB SURFACE SOIL SAMPLE LOCATION NON-SURVEYED
TP-204	VHB TEST PIT (2006)
GZ-01	GZA TEST PIT (2009)
TB-300	GZA TEST BORING LOCATION (2010-2011)
MW-320 S/D	GZA MONITORING WELL LOCATION (2010-2011)
TP-306	GZA TEST PIT LOCATION (2010)
SS-100	GZA SURFACE SOIL SAMPLE LOCATION (2010)
SC31	ARCADIS SEDIMENT SAMPLE LOCATION (2008)
PIPE-1-061610	GZA RESIDUAL MATERIAL SAMPLE (2010)
SG-200	INTERIOR SOIL GAS SAMPLING LOCATION
SG-100	PERIMETER SOIL GAS SAMPLING LOCATION
TB-400	GZA BORING LOCATION (2014)
MW-400	GZA MONITORING WELL LOCATION (2014)
MW-01	F & O MONITORING WELL LOCATION (2011-2012)
SB-08	F & O SOIL BORING LOCATION (2011-2012)
SS-01	F & O SURFACE SOIL SAMPLE LOCATION (2011-2012)
SB-101	F & O PRE-DISPOSAL SOIL CHARACTERIZATION SAMPLE LOCATION (2011-2012)
TP-4	ERA TEST PIT LOCATION (1988)
ERA-2	ERA MONITORING WELL LOCATION (1988)
GZ-TP-519	GZA TEST PIT LOCATION (2017)
GZ-SS-518	GZA SURFACE SOIL SAMPLE LOCATION (2017)
GZ-SS-FT-502	GZA SURFACE SOIL SAMPLE LOCATION (FORMER TRANSFORMER AREA) (2017)
GZ-BK-501	GZA BULKHEAD SOIL BORING LOCATION (2017)
GZ-BW-507	GZA BARRIER WALL SOIL BORING LOCATION (2017)
GZ-SB-515	GZA SHALLOW SOIL BORING LOCATION (2017)
GZ-SV-1	GZA SOIL VAC LOCATION (2017)
GZ-WB-501	GZA WATER BORING LOCATION (2017)
	INDICATES THAT MONITORING WELL WAS SAMPLED AS PART OF THE 2017 GROUNDWATER MONITORING PROGRAM

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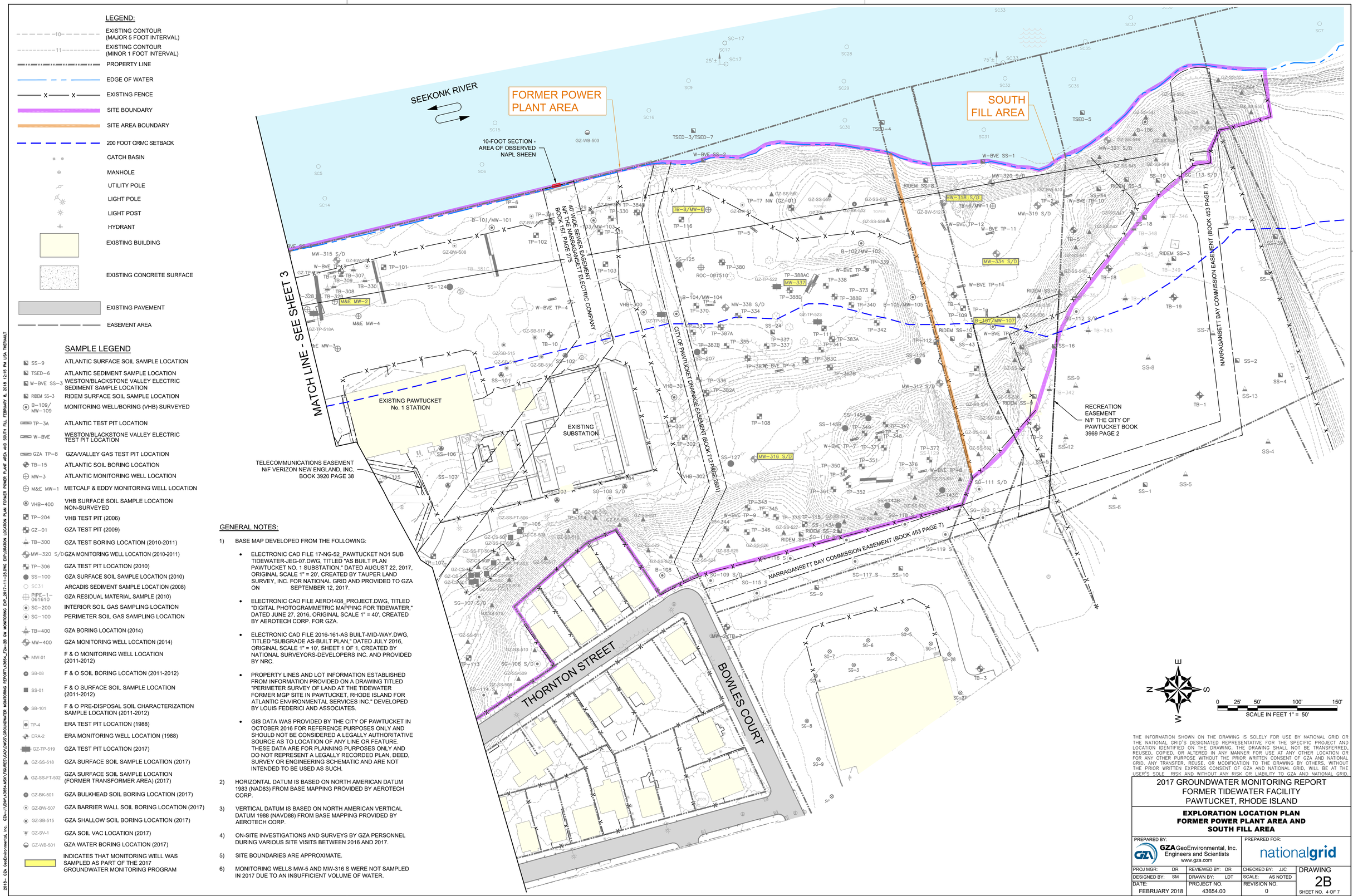
2017 GROUNDWATER MONITORING REPORT
FORMER TIDEWATER FACILITY
PAWTUCKET, RHODE ISLAND

EXPLORATION LOCATION PLAN - NORTH FILL AREA AND FORMER GAS PLANT AREA

PREPARED BY: GZA GeoEnvironmental, Inc. Engineers and Scientists www.gza.com		PREPARED FOR: nationalgrid	
PROJ MGR: DR	REVIEWED BY: DR	CHECKED BY: JJC	DRAWING 2A
DESIGNED BY: SM	DRAWN BY: LDT	SCALE: AS NOTED	
DATE: FEBRUARY 2018	PROJECT NO. 43654.00	REVISION NO. 0	SHEET NO. 3 OF 7

2018 - GZA GeoEnvironmental, Inc. G:\ENV\43654.WSK\FIGURES\CAD\DWGS\GROUNDWATER MONITORING REPORT\43654_F2A-2B GW MONITORING EXP_2017-11-28.DWG EXPLORATION LOCATION PLAN - NORTH FILL AREA AND FORMER GAS PLANT FEBRUARY 8, 2018 12:07 PM LDA THERAULT



LEGEND:

- EXISTING CONTOUR (MAJOR 5 FOOT INTERVAL)
- EXISTING CONTOUR (MINOR 1 FOOT INTERVAL)
- PROPERTY LINE
- EDGE OF WATER
- EXISTING FENCE
- SITE BOUNDARY
- SITE AREA BOUNDARY
- 200 FOOT CRMC SETBACK
- CATCH BASIN
- MANHOLE
- UTILITY POLE
- LIGHT POLE
- LIGHT POST
- HYDRANT
- EXISTING BUILDING
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- EXISTING PAVEMENT
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SAMPLE LEGEND

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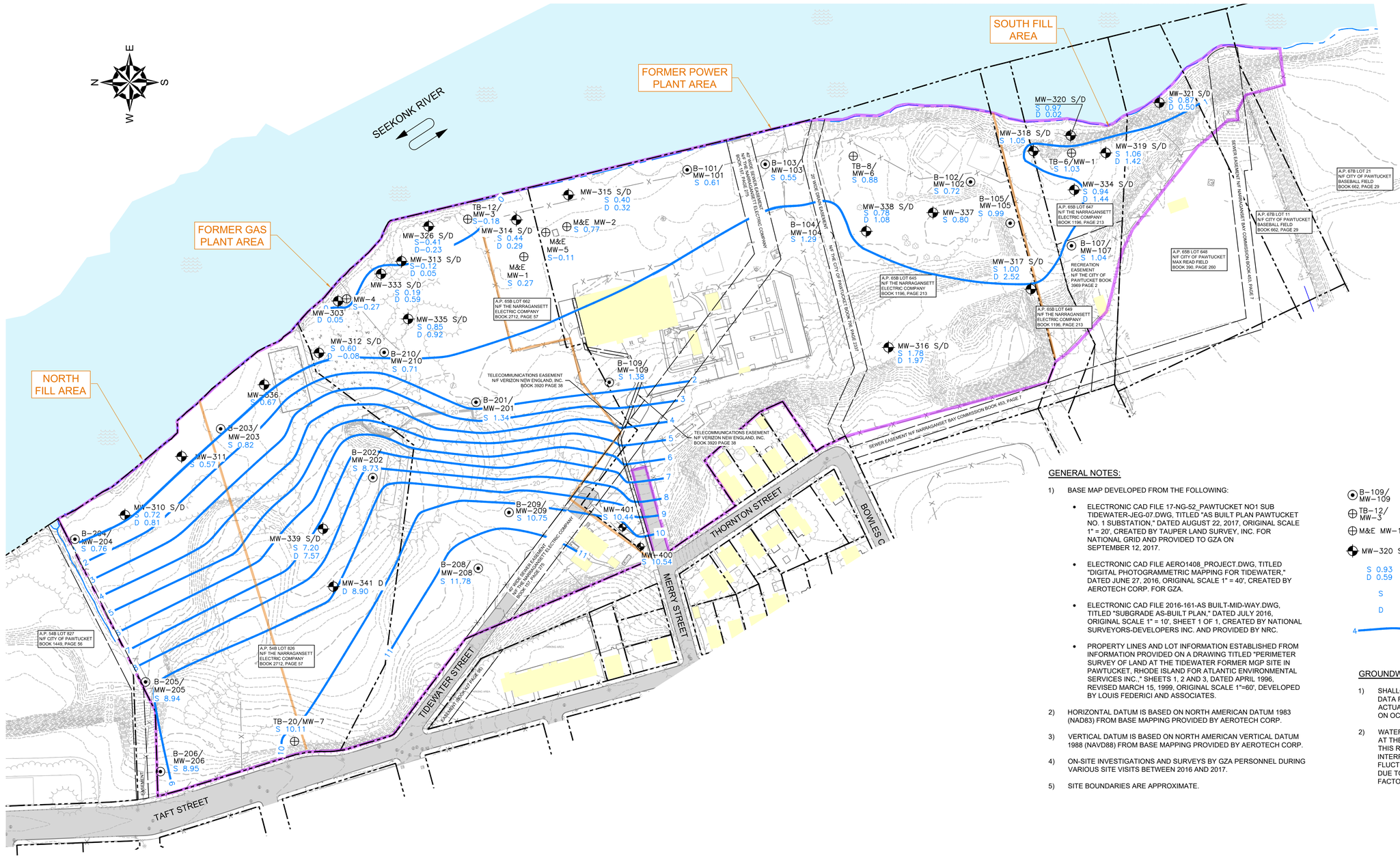
2017 GROUNDWATER MONITORING REPORT
FORMER TIDEWATER FACILITY
PAWTUCKET, RHODE ISLAND

EXPLORATION LOCATION PLAN
FORMER POWER PLANT AREA AND SOUTH FILL AREA

PREPARED BY:			PREPARED FOR:
GZA GeoEnvironmental, Inc. Engineers and Scientists www.gza.com			nationalgrid
PROJ MGR: DR	REVIEWED BY: DR	CHECKED BY: JJC	DRAWING 2B
DESIGNED BY: SM	DRAWN BY: LDT	SCALE: AS NOTED	
DATE: FEBRUARY 2018	PROJECT NO. 43654.00	REVISION NO. 0	SHEET NO. 4 OF 7

2018 - GZA GeoEnvironmental, Inc. - G:\ENV\43654.MSK\FIGURES\CAD\DWGS\GROUNDWATER MONITORING REPORT\43654_F2A-2B GW MONITORING EXP_2017-11-28.DWG EXPLORATION LOCATION PLAN FORMER POWER PLANT AREA AND SOUTH FILL FEBRUARY 8, 2018 12:15 PM LISA THERRAULT



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5) SITE BOUNDARIES ARE APPROXIMATE.

SAMPLE LEGEND

- B-109/MW-109 — MONITORING WELL/BORING (VHB) SURVEYED
- TB-12/MW-3 — ATLANTIC MONITORING WELL LOCATION
- M&E MW-1 — METCALF & EDDY MONITORING WELL LOCATION
- MW-320 S/D — GZA MONITORING WELL LOCATION (2010-2014)
- S 0.93 D 0.59 — GROUNDWATER ELEVATION OBSERVED ON OCTOBER 3, 2017 (IN FEET RELATIVE TO NAVD 1988).
- S — INDICATES THE MONITORING WELL SCREEN IS SHALLOW
- D — INDICATES THE MONITORING WELL SCREEN IS DEEP
- 4 — 4 — SHALLOW GROUNDWATER ELEVATION CONTOUR ON OCTOBER 3, 2017

GROUNDWATER CONTOUR NOTES:

1) SHALLOW GROUNDWATER CONTOURS (NAVD 88 MSL) ARE BASED ON DATA FROM WIDELY SPACED EXPLORATIONS AND MAY NOT REFLECT ACTUAL SUBSURFACE CONDITIONS. WATER LEVEL READINGS WERE ON OCTOBER 3, 2017.
2) WATER LEVEL READINGS HAVE BEEN MADE IN 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.

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

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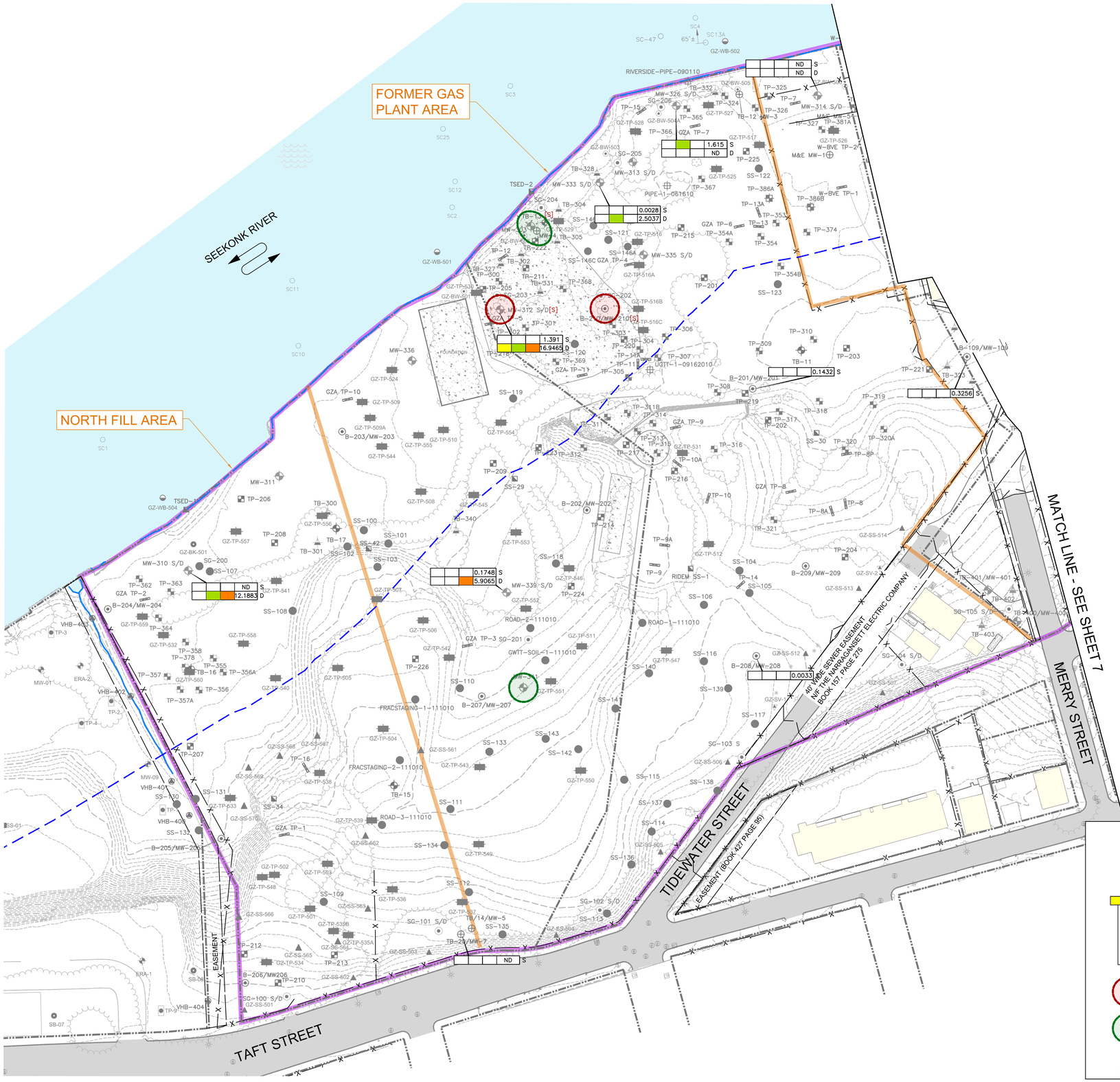
2017 GROUNDWATER MONITORING REPORT
FORMER TIDEWATER FACILITY
PAWTUCKET, RHODE ISLAND

SHALLOW GROUNDWATER CONTOUR PLAN OCTOBER 3, 2017

PREPARED BY: GZA GeoEnvironmental, Inc. Engineers and Scientists www.gza.com		PREPARED FOR: nationalgrid	
PROJ MGR: DR	REVIEWED BY: DR	CHECKED BY: JJC	DRAWING 3
DESIGNED BY: SM	DRAWN BY: LDT	SCALE: AS NOTED	
DATE: FEBRUARY 2018	PROJECT NO. 43654.00	REVISION NO. 0	SHEET NO. 5 OF 7

2018 - GZA GeoEnvironmental, Inc. - GZA-I:\ENVY\43654.MRK\FIGURES\CAD\DWGS\GROUNDWATER MONITORING REPORT\43654_2017 GW MON REPORT.DWG SHALLOW GROUNDWATER CONTOUR PLAN OCTOBER 3 2017 FEBRUARY 8, 2018 12:24 PM LISA THERIAULT



GENERAL NOTES:

1) BASE MAP DEVELOPED FROM THE FOLLOWING:
   - ELECTRONIC CAD FILE 17-NG-52_PAWTUCKET NO1 SUB TIDEWATER-JEG-07.DWG, TITLED "AS BUILT PLAN PAWTUCKET NO. 1 SUBSTATION," DATED AUGUST 22, 2017, ORIGINAL SCALE 1" = 20', CREATED BY TAUPER LAND SURVEY, INC. FOR NATIONAL GRID AND PROVIDED TO GZA ON SEPTEMBER 12, 2017.
   - ELECTRONIC CAD FILE AERO1408_PROJECT.DWG, TITLED "DIGITAL PHOTOGRAMMETRIC MAPPING FOR TIDEWATER," DATED JUNE 27, 2016, ORIGINAL SCALE 1" = 40', CREATED BY AEROTECH CORP. FOR GZA.
   - ELECTRONIC CAD FILE 2016-161-AS BUILT-MID-WAY.DWG, TITLED "SUBGRADE AS-BUILT PLAN," DATED JULY 2016, ORIGINAL SCALE 1" = 10', SHEET 1 OF 1, CREATED BY NATIONAL SURVEYORS-DEVELOPERS INC. AND PROVIDED BY NRC.
   - PROPERTY LINES AND LOT INFORMATION ESTABLISHED FROM INFORMATION PROVIDED ON A DRAWING TITLED "PERIMETER SURVEY OF LAND AT THE TIDEWATER FORMER MGP SITE IN PAWTUCKET, RHODE ISLAND FOR ATLANTIC ENVIRONMENTAL SERVICES INC." DEVELOPED BY LOUIS FEDERICI AND ASSOCIATES.
   - GIS DATA WAS PROVIDED BY THE CITY OF PAWTUCKET IN OCTOBER 2016 FOR REFERENCE PURPOSES ONLY AND SHOULD NOT BE CONSIDERED A LEGALLY AUTHORITATIVE SOURCE AS TO LOCATION OF ANY LINE OR FEATURE. THESE DATA ARE FOR PLANNING PURPOSES ONLY AND DO NOT REPRESENT A LEGALLY RECORDED PLAN, DEED, SURVEY OR ENGINEERING SCHEMATIC AND ARE NOT INTENDED TO BE USED AS SUCH.
2) HORIZONTAL DATUM IS BASED ON NORTH AMERICAN DATUM 1983 (NAD83) FROM BASE MAPPING PROVIDED BY AEROTECH CORP.
3) VERTICAL DATUM IS BASED ON NORTH AMERICAN VERTICAL DATUM 1988 (NAVD88) FROM BASE MAPPING PROVIDED BY AEROTECH CORP.
4) ON-SITE INVESTIGATIONS AND SURVEYS BY GZA PERSONNEL DURING VARIOUS SITE VISITS BETWEEN 2016 AND 2017.
5) SITE BOUNDARIES ARE APPROXIMATE.
6) CONCENTRATIONS SHOWN ARE THE 2017 ANALYTICAL RESULTS.

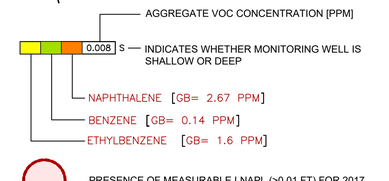
LEGEND:

- EXISTING CONTOUR (MAJOR 5 FOOT INTERVAL)
- EXISTING CONTOUR (MINOR 1 FOOT INTERVAL)
- PROPERTY LINE
- EDGE OF WATER
- EXISTING FENCE
- CRMC 200-FOOT JURISDICTION LIMIT
- SITE BOUNDARY
- SITE AREA BOUNDARY
- CATCH BASIN
- MANHOLE
- UTILITY POLE
- LIGHT POLE
- LIGHT POST
- HYDRANT
- EXISTING BUILDING
- EXISTING CONCRETE SURFACE
- EXISTING PAVEMENT
- EASEMENT AREA

SAMPLE LEGEND

SS-9	ATLANTIC SURFACE SOIL SAMPLE LOCATION
TSED-6	ATLANTIC SEDIMENT SAMPLE LOCATION
W-BVE SS-3	WESTON/BLACKSTONE VALLEY ELECTRIC SEDIMENT SAMPLE LOCATION
RIDEM SS-3	RIDEM SURFACE SOIL SAMPLE LOCATION
B-109/ MW-109	MONITORING WELL/BORING (VHB) SURVEYED
TP-3A	ATLANTIC TEST PIT LOCATION
W-BVE	WESTON/BLACKSTONE VALLEY ELECTRIC TEST PIT LOCATION
GZA TP-8	GZA/VALLEY GAS TEST PIT LOCATION
TB-15	ATLANTIC SOIL BORING LOCATION
MW-3	ATLANTIC MONITORING WELL LOCATION
M&E MW-1	METCALF & EDDY MONITORING WELL LOCATION
VHB-400	VHB SURFACE SOIL SAMPLE LOCATION NON-SURVEYED
TP-204	VHB TEST PIT (2006)
GZ-01	GZA TEST PIT (2009)
TB-300	GZA TEST BORING LOCATION (2010-2011)
MW-320 S/D	GZA MONITORING WELL LOCATION (2010-2011)
TP-306	GZA TEST PIT LOCATION (2010)
SS-100	GZA SURFACE SOIL SAMPLE LOCATION (2010)
SC31	ARCADIS SEDIMENT SAMPLE LOCATION (2008)
PIPE-1-061610	GZA RESIDUAL MATERIAL SAMPLE (2010)
SG-200	INTERIOR SOIL GAS SAMPLING LOCATION
SG-100	PERIMETER SOIL GAS SAMPLING LOCATION
TB-400	GZA BORING LOCATION (2014)
MW-400	GZA MONITORING WELL LOCATION (2014)
MW-01	F & O MONITORING WELL LOCATION (2011-2012)
SB-08	F & O SOIL BORING LOCATION (2011-2012)
SS-01	F & O SURFACE SOIL SAMPLE LOCATION (2011-2012)
SB-101	F & O PRE-DISPOSAL SOIL CHARACTERIZATION SAMPLE LOCATION (2011-2012)
TP-4	ERA TEST PIT LOCATION (1988)
ERA-2	ERA MONITORING WELL LOCATION (1988)
GZ-TP-519	GZA TEST PIT LOCATION (2017)
GZ-SS-518	GZA SURFACE SOIL SAMPLE LOCATION (2017)
GZ-SS-FT-502	GZA SURFACE SOIL SAMPLE LOCATION (FORMER TRANSFORMER AREA) (2017)
GZ-BK-501	GZA BULKHEAD SOIL BORING LOCATION (2017)
GZ-BW-507	GZA BARRIER WALL SOIL BORING LOCATION (2017)
GZ-SB-515	GZA SHALLOW SOIL BORING LOCATION (2017)
GZ-SV-1	GZA SOIL VAC LOCATION (2017)
GZ-WB-501	GZA WATER BORING LOCATION (2017)

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

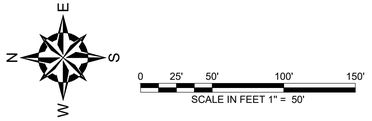


PRESENCE OF MEASURABLE LNAPL (>0.01 FT) FOR 2017

PRESENCE OF MEASURABLE DNAPL (>0.01 FT) FOR 2017

ND — NOT DETECTED

[S/D] — INDICATES WHETHER MONITORING WELL IS SHALLOW OR DEEP



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 SHALL 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.

2017 GROUNDWATER MONITORING REPORT
FORMER TIDEWATER FACILITY
PAWTUCKET, RHODE ISLAND

2017 NAPL & GROUNDWATER ANALYTICAL DATA NORTH FILL AREA AND FORMER GAS PLANT AREA

PREPARED BY: GZA GeoEnvironmental, Inc. Engineers and Scientists www.gza.com		PREPARED FOR: nationalgrid	
PROJ MGR: DR	REVIEWED BY: DR	CHECKED BY: JJC	DRAWING 4A
DESIGNED BY: SM	DRAWN BY: LDT	SCALE: AS NOTED	
DATE: FEBRUARY 2018	PROJECT NO. 43654.00	REVISION NO. 0	SHEET NO. 6 OF 7

2018 - GZA GeoEnvironmental, Inc. G:\ENV\43654.MKY\FIGURES\CAD\UWGS\GROUNDWATER MONITORING REPORT\43654_F2A-2B GW MONITORING EXP_2017-11-28.DWG 2017 NAPL & GROUNDWATER ANALYTICAL DATA NORTH FILL AREA AND FORM FEBRUARY 8, 2018 12:27 PM LISA THERNAULT

LEGEND:

- EXISTING CONTOUR (MAJOR 5 FOOT INTERVAL)
- EXISTING CONTOUR (MINOR 1 FOOT INTERVAL)
- PROPERTY LINE
- EDGE OF WATER
- EXISTING FENCE
- SITE BOUNDARY
- SITE AREA BOUNDARY
- 200 FOOT CRMC SETBACK
- CATCH BASIN
- MANHOLE
- UTILITY POLE
- LIGHT POLE
- LIGHT POST
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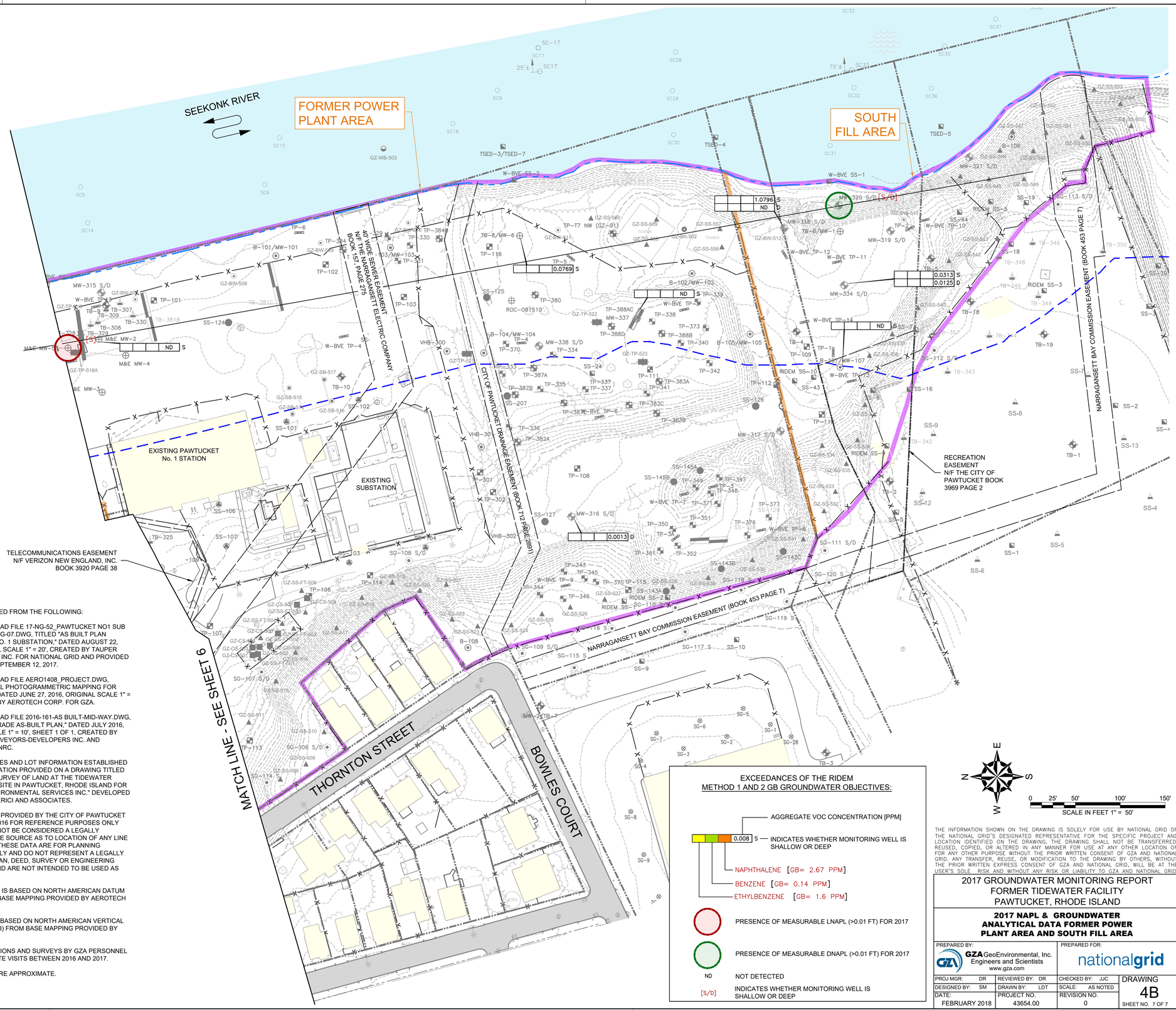
INDICATES THAT MONITORING WELL WAS SAMPLED AS PART OF THE 2017 GROUNDWATER MONITORING PROGRAM



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5) SITE BOUNDARIES ARE APPROXIMATE.

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

- 0.008 S — AGGREGATE VOC CONCENTRATION [PPM]; INDICATES WHETHER MONITORING WELL IS SHALLOW OR DEEP
- NAPHTHALENE [GB= 2.67 PPM]
- BENZENE [GB= 0.14 PPM]
- ETHYLBENZENE [GB= 1.6 PPM]
- PRESENCE OF MEASURABLE LNAPL (>0.01 FT) FOR 2017
- PRESENCE OF MEASURABLE DNAPL (>0.01 FT) FOR 2017
- ND — NOT DETECTED
- [S/D] — INDICATES WHETHER MONITORING WELL IS SHALLOW OR DEEP

N E S W

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

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 SHALL 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.

2017 GROUNDWATER MONITORING REPORT
FORMER TIDEWATER FACILITY
PAWTUCKET, RHODE ISLAND

2017 NAPL & GROUNDWATER ANALYTICAL DATA FORMER POWER PLANT AREA AND SOUTH FILL AREA

PREPARED BY: GZA GeoEnvironmental, Inc. Engineers and Scientists www.gza.com			PREPARED FOR: nationalgrid
PROJ MGR: DR	REVIEWED BY: DR	CHECKED BY: JJC	DRAWING 4B
DESIGNED BY: SM	DRAWN BY: LDT	SCALE: AS NOTED	
DATE: FEBRUARY 2018	PROJECT NO. 43654.00	REVISION NO. 0	SHEET NO. 7 OF 7

2018 - GZA GeoEnvironmental, Inc. G:\ZA-JOBS\43654.MSK\FIGURES\CAD\DWGS\GROUNDWATER MONITORING REPORT\43654_F2A-2B GW MONITORING EXP_2017-11-28.DWG 2017 NAPL & GROUNDWATER ANALYTICAL DATA FORMER POWER PLANT AREA FEBRUARY 6, 2018 12:29 PM LISA THERAULT

APPENDIX A
LIMITATIONS

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 (National Grid), solely for use in summarizing field activities and findings from an groundwater monitoring event completed at the Former Tidewater MGP and Power Plant Site ("Site") under the applicable provisions of the State of Rhode Island Department of Environmental Management Rules and Regulations for the Investigation and Remediation of Hazardous Material Releases (Remediation Regulations). 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 GeoEnvironmental, Inc.(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 work described herein.

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
GROUNDWAER SAMPLING DATA SHEETS

Groundwater Sampling Data Sheet

File No. 43654 | Well ID: MW-7
Project Tidewater | Sample Date: 10/4/2017
Location city: Pawtucket State: RI | Sampler's name: Rowan Hayes
Weather: Sunny 60's

WATER LEVEL OBSERVATIONS measurement date/time: 10/3/2017 9:02

Point of measurement: PVC Riser [X] Casing [ ] Ground [ ]

Total well depth (feet)	27.42	Standing water in well (feet)	6.39
Depth to LNAPL (feet)	-	Well Diameter (in.)	2
Depth to water (feet)	4.03	Sample Depth (feet bgs)	25
Depth to DNAPL (feet)	-	Standpipe TPVC to Ground (feet)	-
Well Screen (feet bgs)	19.5 to 29.5	Roadbox TPVC to Ground (feet)	-

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

EQUIPMENT

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

Pump Type: Dedicated Submersible No. 1

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

INSTRUMENT MEASUREMENTS: Start time: 938 Stop time: 1024

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
1018	21	290.5	5.84	1386	8.60	9.6	1.66		
1021	21	291.2	5.84	1357	7.92	9.5	1.70		
1024	21	292.4	5.84	1319	7.59	9.4	2.43		

SAMPLE TESTING INFORMATION **Sample time:** 1025

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

SAMPLE OBSERVATIONS

Color n/a Odor none Clarity Clear

Purge Volume: 2 gal
Tubing Volume: 0.3 gals

Notes:

Groundwater Sampling Data Sheet

File No. 43654 | Well ID: MW-310S
Project Tidewater | Sample Date: 10/4/2017
Location City: Pawtucket State: RI | Sampler's name: Sara Haupt
Weather: Sunny 60's

WATER LEVEL OBSERVATIONS measurement date/time: 10/3/2017 9:49

Point of measurement: PVC Riser [X] Casing [ ] Ground [ ]

Total well depth (feet)	17.00	Standing water in well (feet)	8.96
Depth to LNAPL (feet)	-	Well Diameter (in.)	2
Depth to water (feet)	8.04	Sample Depth (feet bgs)	12
Depth to DNAPL (feet)	-	Standpipe TPVC to Ground (feet)	-
Well Screen (feet bgs)	7 to 17	Roadbox TPVC to Ground (feet)	-

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

EQUIPMENT

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

Pump Type: geopump No. 3

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

INSTRUMENT MEASUREMENTS: Start time: 13:35 Stop time: 1430

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
1348	8.5	6.5	6.39	640	1.09	14.5	4	250	
1351	8.5	5.5	6.25	642	0.98	14.4	4	250	
1354	8.5	3.5	6.25	642	0.84	14.4	4	250	
1414	8.5	-8.0	6.24	639	0.38	14.1	4	250	
1417	8.5	-10.9	6.24	639	0.37	14.1	4	250	
1420	8.5	-11.1	6.23	638	0.35	14.1	4	250	

SAMPLE TESTING INFORMATION **Sample time:** 1430

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

SAMPLE OBSERVATIONS

Color Orange/ Rust Odor n/a Clarity Clear **Purge Volume:** 2 gal
Tubing Volume: 0.2 gallons

Notes:

Groundwater Sampling Data Sheet

File No. 43654 | Well ID: MW-310D
Project Tidewater | Sample Date: 10/4/2017
Location city: Pawtucket State: RI | Sampler's name: Rowan Hayes
Weather: Sunny 60's

WATER LEVEL OBSERVATIONS measurement date/time: 10/5/2017 950

Point of measurement: PVC Riser [X] Casing [ ] Ground [ ]

Total well depth (feet)	36.15	Standing water in well (feet)	28.65
Depth to LNAPL (feet)	-	Well Diameter (in.)	2
Depth to water (feet)	7.5	Sample Depth (feet bgs)	32
Depth to DNAPL (feet)	-	Standpipe TPVC to Ground (feet)	-
Well Screen (feet bgs)	27 to 37	Roadbox TPVC to Ground (feet)	-

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

EQUIPMENT

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

Pump Type: geopump No. 1

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

INSTRUMENT MEASUREMENTS: Start time: 1335 Stop time: 1408

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
1345	36.15	-246.4	8.52	902	1.56	13.9	1.20		
1350	36.15	-291.2	8.80	896	0.99	13.8	1.31		
1355	36.15	-306.3	9.03	891	0.72	13.7	1.42		
1358	36.15	-299.9	9.19	887	0.57	13.6	1.73		
1401	36.15	-281.7	9.26	884	0.48	13.6	1.62		
1404	36.15	-280.4	9.24	880	0.47	13.6	1.99		
1407	36.15	-287.0	9.21	877	0.46	13.6	1.81		

SAMPLE TESTING INFORMATION **Sample time:**

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

SAMPLE OBSERVATIONS

Color none Odor none Clarity clear

Purge Volume: 2gal
Tubing Volume: 0.3 gals

Notes:

Groundwater Sampling Data Sheet

File No. 43654 | Well ID: MW-201
Project Tidewater | Sample Date: 10/3/2017
Location city: Pawtucket State: RI | Sampler's name: Sara Haupt
Weather: Sunny 60's

WATER LEVEL OBSERVATIONS measurement date/time: 10/3/2017 930

Point of measurement: PVC Riser [X] Casing [ ] Ground [ ]

Total well depth (feet)	15.12	Standing water in well (feet)	3.45
Depth to LNAPL (feet)	-	Well Diameter (in.)	2
Depth to water (feet)	11.67	Sample Depth (feet bgs)	12
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 [ ] poor [X] good **Expansion cap** [X] yes [ ] no **Well ID** [X] yes [ ] no
lock [X] yes [ ] no **Concrete Collar** [ ] yes [X] no **Well** [ ] poor [X] good

EQUIPMENT

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

Pump Type: geopump No. 1

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

INSTRUMENT MEASUREMENTS: Start time: 14:30 Stop time: 1525

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
15:14	12	-184.1	7.01	758	5.25	17.4	4	250	
15:17	12	-185.2	7.01	755	5.19	17.4	4	250	
15:20	12	-185.6	7.01	757	5.17	17.3	4	250	
15:23	12	-185.7	7.01	759	5.18	17.3	4	250	

SAMPLE TESTING INFORMATION **Sample time:** 15:30

Analysis	Method	No. bottles	Bottle type	Volume	Preservation	Handling
VOC	8260	3	VOA	40	HCL	None

SAMPLE OBSERVATIONS

Color n/a Odor Petroleum like Clarity clear

Purge Volume: 2 gals
Tubing Volume: 0.2 gals

Notes:

Groundwater Sampling Data Sheet

File No. 43654 | Well ID: MW-208
Project Tidewater | Sample Date: 10/4/2017
Location city: Pawtucket State: RI | Sampler's name: Sarah McLeod
Weather: Sunny 70's

WATER LEVEL OBSERVATIONS measurement date/time: 10/3/2017 850

Point of measurement PVC Riser [X] Casing [ ] Ground [ ]

Total well depth (feet)	21.70	Standing water in well (feet)	5.15
Depth to LNAPL (feet)	-	Well Diameter (in.)	2
Depth to water (feet)	16.55	Sample Depth (feet bgs)	13
Depth to DNAPL (feet)	-	Standpipe TPVC to Ground (feet)	-
Well Screen (feet bgs)	10 to 20	Roadbox TPVC to Ground (feet)	-

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

EQUIPMENT

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

Pump Type: geopump No.

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

INSTRUMENT MEASUREMENTS: Start time: 1410 Stop time: 1505

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
1430	12.1	5.0	5.20	138	4.93	16.7	2.05	300	
1438	12.1	15.8	4.57	66	5.37	17.1	2.00	300	
1442	12.1	17.3	4.96	55	4.33	17.2	1.95	300	
1444	12.1	17.3	4.93	52	4.50	17.4	1.65	300	
1446	12.1	22.3	5.04	50	4.71	17.4	1.55	300	
1448	12.1	22.4	5.08	49	4.86	17.4	1.60	300	
1450	12.1	23.5	5.25	49	5.71	17.7	1.60	300	
1455	12.1	30.6	5.50	41.5	5.58	17.9	1.50	300	
1457	12.1	33.3	5.45	39.4	5.77	18.0	1.50	300	
1459	12.1	36.1	5.45	39.6	5.90	18.0	1.55	300	

SAMPLE TESTING INFORMATION **Sample time:** 1500

Analysis	Method	No. bottles	Bottle type	Volume	Preservation	Handling
VOC	8260	3	VOA	40	HCL	None

SAMPLE OBSERVATIONS

Color None Odor None Clarity Clear

Purge Volume: 2 gal
Tubing Volume: 0. gals

Notes:

Groundwater Sampling Data Sheet

File No. 43654 | Well ID: MW-312S
Project Tidewater | Sample Date: 10/3/2017
Location city: Pawtucket State: RI | Sampler's name: Sara Haupt/Rowan Hayes
Weather: Sunny 60's

WATER LEVEL OBSERVATIONS measurement date/time: 10/3/2017 1052

Point of measurement: PVC Riser [X] Casing [ ] Ground [ ]

Total well depth (feet)	23.49	Standing water in well (feet)	13.36
Depth to LNAPL (feet)	9.2	Well Diameter (in.)	2
Depth to water (feet)	10.13	Sample Depth (feet bgs)	12
Depth to DNAPL (feet)	-	Standpipe TPVC to Ground (feet)	-
Well Screen (feet bgs)	5 to 20	Roadbox TPVC to Ground (feet)	-

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

EQUIPMENT

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

Pump Type: geopump No. 1

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

INSTRUMENT MEASUREMENTS: Start time: 1500 Stop time: 1524

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
1512	10.13	102.3	6.31	8601	1.21	10.9	6.75		
1516	10.13	97.0	6.29	8556	0.76	11.0	5.03		
1519	10.13	95.4	6.22	8512	0.49	11.0	4.12		
1521	10.13	94.4	6.24	8459	0.24	11.0	2.72		
1524	10.13	90.3	6.24	8551	0.21	11.0	2.67		

SAMPLE TESTING INFORMATION **Sample time:** 1525

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

SAMPLE OBSERVATIONS

Color None Odor Petroleum like Clarity: Oilly Sheen **Purge Volume:** 2 gal
Tubing Volume: 0.2 gals

Notes: BD10032017 blind duplicate replaced tubing before sampling
purge has sheen. LNAPL in well do not measure depth to water during sampling

Groundwater Sampling Data Sheet

File No. 43654 | Well ID: MW-312D
Project Tidewater | Sample Date: 10/3/2017
Location city: Pawtucket State: RI | Sampler's name: Rowan Hayes/Sara Haupt
Weather: Sunny 60's

WATER LEVEL OBSERVATIONS measurement date/time: 10/3/2017 1046

Point of measurement: PVC Riser [X] Casing [ ] Ground [ ]

Total well depth (feet)	31.93	Standing water in well (feet)	22.03
Depth to LNAPL (feet)	-	Well Diameter (in.)	2
Depth to water (feet)	9.9	Sample Depth (feet bgs)	27
Depth to DNAPL (feet)	-	Standpipe TPVC to Ground (feet)	-
Well Screen (feet bgs)	22 to 32	Roadbox TPVC to Ground (feet)	-

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

EQUIPMENT

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

Pump Type: geopump No. 1

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

INSTRUMENT MEASUREMENTS: Start time: 1535 Stop time: 1533

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
1542	9.90	-112.2	7.43	948	1.15	15.2	6.9		
1547	9.90	-128.7	7.43	925	0.73	15.1	4.8		
1550	9.90	-135.0	7.42	903	0.66	15.1	4.3		
1553	9.90	-142.0	7.40	888	0.65	15.1	3.6		

SAMPLE TESTING INFORMATION **Sample time:** 1555

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

SAMPLE OBSERVATIONS

Color black specks Odor none Clarity Cloudy

Purge Volume: 2gal
Tubing Volume: 0.3 gals

Notes:

Groundwater Sampling Data Sheet

File No. 43654 | Well ID: MW-326S
Project Tidewater | Sample Date: 10/4/2017
Location city: Pawtucket State: RI | Sampler's name: Sarah McLeod
Weather: Sunny 70's

WATER LEVEL OBSERVATIONS measurement date/time: 10/3/2017 1130

Point of measurement: PVC Riser [X] Casing [ ] Ground [ ]

Total well depth (feet)	26.00	Standing water in well (feet)	14.29
Depth to LNAPL (feet)	-	Well Diameter (in.)	2
Depth to water (feet)	12.31	Sample Depth (feet bgs)	15
Depth to DNAPL (feet)	-	Standpipe TPVC to Ground (feet)	-
Well Screen (feet bgs)	5 to 25	Roadbox TPVC to Ground (feet)	-

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

EQUIPMENT

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

Pump Type: geopump No.

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

INSTRUMENT MEASUREMENTS: Start time: 1300 Stop time: 1355

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
1327	12.31	84.3	7.03	1089	9.53	8.2	2.29	300	
1345	12.31	73.4	6.74	937	9.49	8.2	2.25	300	
1347	12.31	73.3	6.74	931	9.55	8.2	2.05	300	
1349	12.31	72.0	6.75	917	9.47	8.2	2.00	300	

SAMPLE TESTING INFORMATION **Sample time:** 1350

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

SAMPLE OBSERVATIONS

Color None Odor Slight petroleum like Clarity Clear

Purge Volume: 2 gals
Tubing Volume: 0.1 gals

Notes: Dull plates of sheen in water

Groundwater Sampling Data Sheet

File No. 43654 | Well ID: MW-326D
Project Tidewater | Sample Date: 10/4/2017
Location city: Pawtucket State: RI | Sampler's name: Sarah McLeod
Weather:

WATER LEVEL OBSERVATIONS measurement date/time: 10/3/2017 1128

Point of measurement: PVC Riser [X] Casing [ ] Ground [ ]

Total well depth (feet)	45.05	Standing water in well (feet)	33.56
Depth to LNAPL (feet)	-	Well Diameter (in.)	2
Depth to water (feet)	11.49	Sample Depth (feet bgs)	32
Depth to DNAPL (feet)	-	Standpipe TPVC to Ground (feet)	-
Well Screen (feet bgs)	23 to 43	Roadbox TPVC to Ground (feet)	-

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

EQUIPMENT

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

Pump Type: geopump No.

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

INSTRUMENT MEASUREMENTS: Start time: 1230 Stop time: 1345

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
1315	11.50	-62.5	7.69	10909	9.73	17.4	3.26		
1320	11.50	-53.5	7.25	10555	9.60	17.1	3.24		
1325	11.50	-43.4	6.92	10329	9.00	17.5	2.78		
1330	11.50	-33.7	6.83	10247	8.83	17.8	2.78		
1332	11.50	-35.7	6.80	10046	8.90	17.7	2.76		
1334	11.50	-34.3	6.78	10069	9.06	17.4	2.05		
1336	11.50	-30.5	6.77	10048	8.86	17.5	2.01		

SAMPLE TESTING INFORMATION **Sample time:** 1337

Analysis	Method	No. bottles	Bottle type	Volume	Preservation	Handling
VOC	8260	3	VOA	40	HCL	None

SAMPLE OBSERVATIONS

Color None Odor None Clarity Clear

Purge Volume: 2.5 gals
Tubing Volume: 0.3 gals

Notes: BDI0042017 blind duplicate for MW-326D

Groundwater Sampling Data Sheet

File No.	43654	Well ID:	MW-333S
Project	Tidewater	Sample Date:	10/4/2017
Location	city: Pawtucket State: RI	Sampler's name:	Rowan Hayes
Weather:	Sunny 60's		

WATER LEVEL OBSERVATIONS measurement date/time: 10/6/2017 10:18

Point of measurement	PVC Riser [X] Casing [ ] Ground [ ]		
Total well depth (feet)	17.35	Standing water in well (feet)	5.88
Depth to LNAPL (feet)	-	Well Diameter (in.)	2
Depth to water (feet)	11.47	Sample Depth (feet bgs)	15
Depth to DNAPL (feet)	-	Standpipe TPVC to Ground (feet)	-
Well Screen (feet bgs)	8 to 18	Roadbox TPVC to Ground (feet)	-

Well Condition: **Protective casing** [ ] poor [X] good **Expansion cap** [X] yes [ ] no **Well ID** [X] yes [ ] no

lock [X] yes [ ] no **Concrete Collar** [X] yes [ ] no **Well** [ ] poor [X] good

EQUIPMENT

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

Pump Type: geopump No. 1

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

INSTRUMENT MEASUREMENTS: Start time: 1230 Stop time: 1307

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
1235	11.47	-175.4	7.05	19750	1.90	18.9	4.0		
1245	11.47	-225.9	7.37	18213	0.67	18.8	4.0		
1250	11.47	-239.8	7.45	17166	0.49	18.8	4.0		
1255	11.47	-247.6	7.49	14097	0.42	18.9	4.0		
1300	11.47	-254.4	7.52	118300	0.37	18.9	4.0		
1303	11.47	-258.6	7.53	115707	0.36	18.9	4.0		
1306	11.47	-261.3	7.55	11383	0.34	18.9	4.0		

SAMPLE TESTING INFORMATION **Sample time:** 1310

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

SAMPLE OBSERVATIONS

Color none Odor none Clarity clear

Purge Volume: 2gal

Tubing Volume: 0.1 gals

Notes:

Groundwater Sampling Data Sheet

File No. 43654 | Well ID: MW-333D
Project Tidewater | Sample Date: 10/4/2017
Location city: Pawtucket State: RI | Sampler's name: Sara Haupt
Weather: Sunny 60's

WATER LEVEL OBSERVATIONS measurement date/time: 10/3/2017 1020

Point of measurement PVC Riser [X] Casing [ ] Ground [ ]

Total well depth (feet)	44.9	Standing water in well (feet)	33.93
Depth to LNAPL (feet)	-	Well Diameter (in.)	2
Depth to water (feet)	10.97	Sample Depth (feet bgs)	40
Depth to DNAPL (feet)	-	Standpipe TPVC to Ground (feet)	-
Well Screen (feet bgs)	35 to 45	Roadbox TPVC to Ground (feet)	-

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

EQUIPMENT

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

Pump Type: geopump No. 2

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

INSTRUMENT MEASUREMENTS: Start time: 12:27 Stop time: 1315

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
12:36	10.32	-85.4	7.37	6630	1.60	14.7	4	250	
12:54	10.32	-88.2	7.40	6304	0.72	14.3	4	250	
13:04	10.32	-91.3	7.41	6141	0.50	14.1	4	250	
13:07	10.32	-92.0	7.41	6027	0.48	14.2	4	250	
13:10	10.32	-92.2	7.41	6022	0.45	14.1	4	250	

SAMPLE TESTING INFORMATION **Sample time:** 13:20

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

SAMPLE OBSERVATIONS

Color none Odor none Clarity clear

Purge Volume: 2 gal
Tubing Volume: 0.3 gals

Notes:

Groundwater Sampling Data Sheet

File No. 43654 | Well ID: MW-339S
Project Tidewater | Sample Date: 10/3/2017
Location city: Pawtucket State: RI | Sampler's name: Sarah McLeod
Weather: Sunny 70's

WATER LEVEL OBSERVATIONS measurement date/time: 10/03/2017 0920

Point of measurement PVC Riser [X] Casing [ ] Ground [ ]

Total well depth (feet)	12.30	Standing water in well (feet)	4.98
Depth to LNAPL (feet)	-	Well Diameter (in.)	2
Depth to water (feet)	7.32	Sample Depth (feet bgs)	10.5
Depth to DNAPL (feet)	-	Standpipe TPVC to Ground (feet)	-
Well Screen (feet bgs)	3 to 10	Roadbox TPVC to Ground (feet)	-

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

EQUIPMENT

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

Pump Type: geopump No.

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

INSTRUMENT MEASUREMENTS: Start time: 1520 Stop time: 1610

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
1530	7.60	120	4.16	640	0.56	16.2	1.1	300	
1543	7.63	91.6	4.10	644	0.37	16.2	1.5	300	
1551	7.64	79	4.06	646	0.35	16.1	1.05	300	
1602	7.64	74.4	4.05	647	0.32	16.0	1.46	300	
1604	7.64	71.1	4.05	647	0.30	16	1.4	300	

SAMPLE TESTING INFORMATION **Sample time:** 1065

Analysis	Method	No. bottles	Bottle type	Volume	Preservation	Handling
VOC	8260 B	3	VOA	40	HCL	None

SAMPLE OBSERVATIONS

Color None Odor None Clarity Clear

Purge Volume: 3 gals
Tubing Volume: 0.1 gals

Notes:

Groundwater Sampling Data Sheet

File No. 43654 | Well ID: MW-339D
Project Tidewater | Sample Date: 10/3/2017
Location city: Pawtucket State: RI | Sampler's name: Sarah McLeod
Weather: Sunny 70's

WATER LEVEL OBSERVATIONS measurement date/time: 10/03/2017 1038

Point of measurement PVC Riser [X] Casing [ ] Ground [ ]

Total well depth (feet)	21.2	Standing water in well (feet)	13.97
Depth to LNAPL (feet)	-	Well Diameter (in.)	2
Depth to water (feet)	7.23	Sample Depth (feet bgs)	15
Depth to DNAPL (feet)	21.20 (trace)	Standpipe TPVC to Ground (feet)	-
Well Screen (feet bgs)	12 to 17	Roadbox TPVC to Ground (feet)	-

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

EQUIPMENT

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

Pump Type: geopump No.

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

INSTRUMENT MEASUREMENTS: Start time: 1537 Stop time: 1637

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
1600	7.80	-107	6.55	638	0.53	16.2	2.45	250	
1610	7.81	-132.7	6.73	645	0.34	16.0	1.81	250	
1624	7.77	-147	6.81	658	0.27	15.9	1.8	250	
1631	7.77	-151	6.91	658	0.27	15.9	1.8	250	
1633	7.77	-155	6.91	660	0.27	15.9	1.8	250	

SAMPLE TESTING INFORMATION **Sample time:** 1633

Analysis	Method	No. bottles	Bottle type	Volume	Preservation	Handling
VOC	8260	3	VOA	40	HCL	None

SAMPLE OBSERVATIONS

Color Odor Mod. Petroleum like Clarity

Purge Volume: 1.5 gals
Tubing Volume: 0.1 gals

Notes: Slight sheen, trace oil blebs at start of pump but cleared

Groundwater Sampling Data Sheet

File No. 43654 | Well ID: M&E MW-2
Project Tidewater | Sample Date: 10/3/2014
Location city: Pawtucket State: RI | Sampler's name: Rowan Hayes
Weather: Sunny 60's

WATER LEVEL OBSERVATIONS measurement date/time: 10/3/2017 9:58

Point of measurement: PVC Riser [X] Casing [ ] Ground [ ]

Total well depth (feet)	13.70	Standing water in well (feet)	4.50
Depth to LNAPL (feet)	-	Well Diameter (in.)	2
Depth to water (feet)	9.20	Sample Depth (feet bgs)	12.5
Depth to DNAPL (feet)	-	Standpipe TPVC to Ground (feet)	-
Well Screen (feet bgs)	10 to 15	Roadbox TPVC to Ground (feet)	-

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

EQUIPMENT

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

Pump Type: geopump No. 1

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

INSTRUMENT MEASUREMENTS: Start time: 1309 Stop time: 1336

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
1327	9.20	164.7	6.99	19830	0.35	13.8	4.34		
1330	9.20	165.4	7.00	19823	0.27	13.8	4.21		
1333	9.20	166	7.00	19782	0.29	13.8	4.17		
1336	9.20	165.5	7.00	19700	0.21	13.8	4.03		

SAMPLE TESTING INFORMATION **Sample time:** 1340

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

SAMPLE OBSERVATIONS

Color None Odor None Clarity Clear

Purge Volume: 2 gal
Tubing Volume: 0.2 gals

Notes:

File No. 43654 | Well ID: MW-5
Project Tidewater | Sample Date: 10/4/2014
Location city: Pawtucket State: RI | Sampler's name: Rowan Hayes/ Sarah Mcleod
Weather:

WATER LEVEL OBSERVATIONS measurement date/time: 10/3/2017 0856

Point of measurement	PVC Riser [X] Casing [ ] Ground [ ]		
Total well depth (feet)	1.87	Standing water in well (feet)	-
Depth to LNAPL (feet)	-	Well Diameter (in.)	2
Depth to water (feet)	0	Sample Depth (feet bgs)	-
Depth to DNAPL (feet)	-	Standpipe TPVC to Ground (feet)	-
Well Screen (feet bgs)	5.5 to 15.5	Roadbox TPVC to Ground (feet)	-

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

EQUIPMENT

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

Pump Type: geopump No.

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

INSTRUMENT MEASUREMENTS: Start time: Stop time:

Time	Depth to water (ft) (drawdown <0.3 or	ORP (mV) (±10)	pH (s.u.) (±0.1)	Spec. Cond (µS/cm)	DO (mg/L) (±10% or 3	Temp. (°C) (±3%)	Turbidity (ntu) (±10% or <5	Flow (mL/min)	Notes

SAMPLE TESTING INFORMATION **Sample time:**

Analysis	Method	No. bottles	Bottle type	Volume	Preservation	Handling

SAMPLE OBSERVATIONS

Color Odor Clarity **Purge Volume:**
Tubing Volume:

Notes: At 0924 well is dry. Will check again in a couple hours.
At 1130 well is still dry- Cannot Sample

Groundwater Sampling Data Sheet

File No. 43654 | Well ID: MW-6
Project Tidewater | Sample Date: 10/3/2017
Location city: Pawtucket State: RI | Sampler's name: Rowan Hayes
Weather: Sunny 60's

WATER LEVEL OBSERVATIONS measurement date/time: 10/3/2017 925

Point of measurement PVC Riser [X] Casing [ ] Ground [ ]

Total well depth (feet)	18.68	Standing water in well (feet)	6.83
Depth to LNAPL (feet)	-	Well Diameter (in.)	2
Depth to water (feet)	11.85	Sample Depth (feet bgs)	15
Depth to DNAPL (feet)	-	Standpipe TPVC to Ground (feet)	-
Well Screen (feet bgs)	10 to 20	Roadbox TPVC to Ground (feet)	-

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

EQUIPMENT

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

Pump Type: geopump No. 1

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

INSTRUMENT MEASUREMENTS: Start time: 1347 Stop time: 1411

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
1351	11.85	-42.4	6.06	3875	1.19	14.6	5.9		
1359	11.85	-46.6	6.06	3835	0.53	14.6	4.7		
1405	11.85	-46.6	6.07	3767	0.43	14.5	3.6		
1408	11.85	-46.5	6.07	3760	0.42	14.6	3.2		
1411	11.85	-46.5	6.07	3757	0.43	14.5	2.7		

SAMPLE TESTING INFORMATION **Sample time:** 1415

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

SAMPLE OBSERVATIONS

Color None Odor None Clarity Clear

Purge Volume: 2 gal
Tubing Volume: 0.1 gals

Notes:

Groundwater Sampling Data Sheet

File No. 43654 | Well ID: MW-109
Project Tidewater | Sample Date: 10/3/2017
Location city: Pawtucket State: RI | Sampler's name: Rowan Hayes
Weather: Sunny 60's

WATER LEVEL OBSERVATIONS measurement date/time: 10/3/2017 10:08

Point of measurement: PVC Riser [X] Casing [ ] Ground [ ]

Total well depth (feet)	19.30	Standing water in well (feet)	7.35
Depth to LNAPL (feet)	-	Well Diameter (in.)	2
Depth to water (feet)	11.95	Sample Depth (feet bgs)	15
Depth to DNAPL (feet)	-	Standpipe TPVC to Ground (feet)	-
Well Screen (feet bgs)	10 to 20	Roadbox TPVC to Ground (feet)	-

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

EQUIPMENT

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

Pump Type: geopump No. 1

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

INSTRUMENT MEASUREMENTS: Start time: 10:27 Stop time: 10:57

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
10:42	11.95	109.6	6.50	644.3	0.43	11.4	5.88		
10:51	11.95	104.0	6.50	649.6	0.40	11.3	4.77		
10:54	11.95	103.1	6.51	653.0	0.41	11.2	4.88		
10:57	11.95	103.9	6.50	659.3	0.42	11.2	4.93		

SAMPLE TESTING INFORMATION **Sample time:** 11:00

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

SAMPLE OBSERVATIONS

Color no color Odor slight Petroleum like Clarity clear

Purge Volume: 2 gal
Tubing Volume: 0.2 gals

Notes:

Groundwater Sampling Data Sheet

File No. 43654 | Well ID: MW-314S
Project Tidewater | Sample Date: 10/3/2017
Location city: Pawtucket State: RI | Sampler's name: Rowan Hayes
Weather: Sunny 60's

WATER LEVEL OBSERVATIONS measurement date/time: 10/3/2017 1000

Point of measurement: PVC Riser [X] Casing [ ] Ground [ ]

Total well depth (feet)	24.39	Standing water in well (feet)	15.25
Depth to LNAPL (feet)	-	Well Diameter (in.)	2
Depth to water (feet)	9.14	Sample Depth (feet bgs)	17.5
Depth to DNAPL (feet)	-	Standpipe TPVC to Ground (feet)	-
Well Screen (feet bgs)	10 to 25	Roadbox TPVC to Ground (feet)	-

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

EQUIPMENT

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

Pump Type: geopump No. 1

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

INSTRUMENT MEASUREMENTS: Start time: 12:40 Stop time: 1319

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
1310	9.14	130.2	6.45	13548	0.42	10.0	4.89		
1313	9.14	129.3	6.42	13419	0.38	10.0	4.76		
1316	9.14	128.4	6.42	13475	0.35	10.0	4.91		
1319	9.14	127.7	6.42	13491	0.36	10.0	4.80		

SAMPLE TESTING INFORMATION **Sample time:** 1320

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

SAMPLE OBSERVATIONS

Color NONE Odor NONE Clarity CLEAR

Purge Volume: 2 gal
Tubing Volume: 0.2 gals

Notes:

Groundwater Sampling Data Sheet

File No. 43654 | Well ID: MW-314D
Project Tidewater | Sample Date: 10/3/2017
Location city: Pawtucket State: RI | Sampler's name: Sara Haupt/ Rowan Hayes
Weather: Sunny 60's

WATER LEVEL OBSERVATIONS measurement date/time: 10/03/2017 1004

Point of measurement PVC Riser [X] Casing [ ] Ground [ ]

Total well depth (feet)	43.50	Standing water in well (feet)	34.28
Depth to LNAPL (feet)	-	Well Diameter (in.)	2
Depth to water (feet)	9.30	Sample Depth (feet bgs)	25
Depth to DNAPL (feet)	-	Standpipe TPVC to Ground (feet)	-
Well Screen (feet bgs)	10 to 40	Roadbox TPVC to Ground (feet)	-

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

EQUIPMENT

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

Pump Type: geopump No.

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

INSTRUMENT MEASUREMENTS: Start time: 12.35 Stop time: 1302

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
1252	9.30	86.8	7.04	30495	0.47	8.8	4.97		
1256	9.30	91.6	7.03	28076	0.39	8.6	4.88		
1259	9.30	92	7.03	28242	0.41	8.6	3.92		
1302	9.30	92.4	7.02	27606	0.33	8.6	3.9		

SAMPLE TESTING INFORMATION **Sample time:** 1305

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

SAMPLE OBSERVATIONS

Color NONE Odor NONE Clarity CLEAR

Purge Volume: 2 gal
Tubing Volume: 0.3 gals

Notes:

Groundwater Sampling Data Sheet

File No. 43654 | Well ID: MW-316D
Project Tidewater | Sample Date: 10/4/2017
Location city: Pawtucket State: RI | Sampler's name: Sarah McLeod
Weather: Sunny 70's

WATER LEVEL OBSERVATIONS measurement date/time: 10/3/2017 840

Point of measurement: PVC Riser [X] Casing [ ] Ground [ ]

Total well depth (feet)	31.6	Standing water in well (feet)	9.6
Depth to LNAPL (feet)	-	Well Diameter (in.)	2
Depth to water (feet)	22.0	Sample Depth (feet bgs)	25
Depth to DNAPL (feet)	-	Standpipe TPVC to Ground (feet)	-
Well Screen (feet bgs)	22 to 27	Roadbox TPVC to Ground (feet)	-

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

EQUIPMENT

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

Pump Type: Dedicated Submersible No.

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

INSTRUMENT MEASUREMENTS: Start time: 1010 Stop time: 1140

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
1032	22.0	37.6	7.15	61	11.36	15.2	3.2	300	
1045	22.0	1.8	7.11	11.7	10.30	16.3	2.8	300	
1121	22.0	-109	7.10	18.6	10.47	16.3	1.96	300	
1125	22.0	-119	7.11	18.7	10.36	16.3	1.72	300	
1127	22.0	-118	7.10	18.4	10.37	16.3	1.75	300	
1129	22.0	-121	7.13	18.3	10.36	16.3	1.73	300	

SAMPLE TESTING INFORMATION **Sample time:** 1130

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

SAMPLE OBSERVATIONS

Color none Odor none Clarity Clear

Purge Volume: 3 gal
Tubing Volume: 0.2 gals

Notes:

File No. 43654 | Well ID: MW-316S
Project Tidewater | Sample Date: 10/4/2017
Location city: Pawtucket State: RI | Sampler's name: Sarah McLeod
Weather:

WATER LEVEL OBSERVATIONS measurement date/time: 10/3/2017 841

Point of measurement	PVC Riser [X] Casing [ ] Ground [ ]		
Total well depth (feet)	22.62	Standing water in well (feet)	-
Depth to LNAPL (feet)	-	Well Diameter (in.)	2
Depth to water (feet)	22.03	Sample Depth (feet bgs)	-
Depth to DNAPL (feet)	-	Standpipe TPVC to Ground (feet)	-
Well Screen (feet bgs)	10 to 20	Roadbox TPVC to Ground (feet)	-

Well Condition: **Protective casing** [ ] poor [ ] good **Expansion cap** [ ] yes no **Well ID** [ ] yes [ ] no

lock [X] yes [ ] no **Concrete Collar** [ ] yes no **Well** [ ] poor [ ] good

EQUIPMENT

Sample Method: [ ] Bailer [ ] Pump [X] Low Flow

Pump Type: geopump No.

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

INSTRUMENT MEASUREMENTS: Start time: 1015 Stop time: 1245

Time	Depth to water (ft) (drawdown	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

SAMPLE TESTING INFORMATION **Sample time:**

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

SAMPLE OBSERVATIONS

Color Odor Clarity

Purge Volume: 3 gal

Tubing Volume: 0.2 gals

Notes: Turned pump off at 1025 to let recharge for 2 hours because well was pumped dry
pump turned back on at 1244, pumped dry at 1245- cannot sample

Groundwater Sampling Data Sheet

File No. 43654 | Well ID: MW-337
Project Tidewater | Sample Date: 10/3/2017
Location city: Pawtucket State: RI | Sampler's name: Rowan Hayes
Weather: Sunny 60's

WATER LEVEL OBSERVATIONS measurement date/time: 10/3/2017 922

Point of measurement: PVC Riser [X] Casing [ ] Ground [ ]

Total well depth (feet)	19.92	Standing water in well (feet)	7.97
Depth to LNAPL (feet)	-	Well Diameter (in.)	2
Depth to water (feet)	11.95	Sample Depth (feet bgs)	15
Depth to DNAPL (feet)	-	Standpipe TPVC to Ground (feet)	-
Well Screen (feet bgs)	10 to 20	Roadbox TPVC to Ground (feet)	-

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

EQUIPMENT

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

Pump Type: geopump No. 1

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

INSTRUMENT MEASUREMENTS: Start time: 1400 Stop time: 1426

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
1415	11.95	148.3	6.29	1042	0.92	9.5	3.95		
1420	11.95	148.5	6.28	1038	0.47	9.5	2.89		
1423	11.95	149.6	6.26	1037	0.38	9.5	2.74		
1426	11.95	149.0	6.26	1037	0.36	9.5	2.54		

SAMPLE TESTING INFORMATION **Sample time:** 1430

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

SAMPLE OBSERVATIONS

Color none Odor none Clarity clear

Purge Volume: 2gal
Tubing Volume: 0.2 gals

Notes:

Groundwater Sampling Data Sheet

File No. 43654 | Well ID: MW-107
Project Tidewater | Sample Date: 10/3/2017
Location city: Pawtucket State: RI | Sampler's name: Sarah McLeod
Weather: Sunny 70's

WATER LEVEL OBSERVATIONS measurement date/time: 10/5/17 849

Point of measurement: PVC Riser [X] Casing [ ] Ground [ ]

Total well depth (feet)	27.73	Standing water in well (feet)	0.96
Depth to LNAPL (feet)	-	Well Diameter (in.)	2
Depth to water (feet)	20.04	Sample Depth (feet bgs)	21
Depth to DNAPL (feet)	-	Standpipe TPVC to Ground (feet)	-
Well Screen (feet bgs)	16 to 26	Roadbox TPVC to Ground (feet)	-

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

EQUIPMENT

Sample Method: [ ] Bailer [ ] Pump / [ ] Low Flow

Pump Type: geopump No.

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

INSTRUMENT MEASUREMENTS: Start time: 1250 Stop time: 1427

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
1322	20.02	488	3.14	779	1.92	13.3	1.46	400	
1335	20.03	504	3.14	765	0.75	13.3	1.03	400	
1400	20.03	504	3.24	781	0.61	13.5	1.0	400	
1406	20.04	499	3.29	774	0.55	13.7	1.0	400	
1412	20.05	503	3.25	780	0.69	13.8	1.0	400	
1422	20.04	507	3.28	781	0.65	13.7	1.0	400	
1424	20.04	505	3.26	787	0.70	13.8	1.0	400	

SAMPLE TESTING INFORMATION **Sample time:** 1424

Analysis	Method	No. bottles	Bottle type	Volume	Preservation	Handling
VOC	8260 B	3	VOA	40	HCL	None

SAMPLE OBSERVATIONS

Color None Odor None Clarity clear

Purge Volume: 6 gals
Tubing Volume: 0.2 gals

Notes:

Groundwater Sampling Data Sheet

File No. 43654 | Well ID: MW-318S
Project Tidewater | Sample Date: 10/3/2017
Location city: Pawtucket State: RI | Sampler's name: Sarah McLeod
Weather: Sunny 70

WATER LEVEL OBSERVATIONS measurement date/time: 10/03/2017 908

Point of measurement PVC Riser [X] Casing [ ] Ground [ ]

Total well depth (feet)	26.94	Standing water in well (feet)	7.91
Depth to LNAPL (feet)	-	Well Diameter (in.)	2
Depth to water (feet)	17.09	Sample Depth (feet bgs)	25
Depth to DNAPL (feet)	-	Standpipe TPVC to Ground (feet)	-
Well Screen (feet bgs)	20 to 30	Roadbox TPVC to Ground (feet)	-

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

EQUIPMENT

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

Pump Type: geopump No.

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

INSTRUMENT MEASUREMENTS: Start time: 1245 Stop time: 1350

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
1300	17.47	356	3.67	1340	2.05	14.1	1.51	300	
1310	17.49	363	3.82	1339	1.01	14.0	1.69	300	
1325	17.49	365	3.89	1348	0.83	14.0	1.47	300	
1340	17.49	367	3.88	1357	0.78	14.0	1.37	300	
1342	17.49	365	3.89	1358	0.82	14.0	1.55	300	
1344	17.49	365	3.91	1355	0.83	14.0	1.50	300	

SAMPLE TESTING INFORMATION **Sample time:** 1345

Analysis	Method	No. bottles	Bottle type	Volume	Preservation	Handling
VOC	8260	3	VOA	40	HCL	None

SAMPLE OBSERVATIONS

Color None Odor None Clarity Clear

Purge Volume: 4 gal
Tubing Volume: 0.1 gals

Notes:

Groundwater Sampling Data Sheet

File No. 43654 | Well ID: MW-318D
Project Tidewater | Sample Date: 10/3/2017
Location city: Pawtucket State: RI | Sampler's name: Sarah McLeod
Weather:

WATER LEVEL OBSERVATIONS measurement date/time: 10/03/2017 906

Point of measurement: PVC Riser [X] Casing [ ] Ground [ ]

Total well depth (feet)	23.16	Standing water in well (feet)	-
Depth to LNAPL (feet)	-	Well Diameter (in.)	2
Depth to water (feet)	17.84	Sample Depth (feet bgs)	35
Depth to DNAPL (feet)	-	Standpipe TPVC to Ground (feet)	-
Well Screen (feet bgs)	30 to 40	Roadbox TPVC to Ground (feet)	-

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

EQUIPMENT

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

Pump Type: geopump No.

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

INSTRUMENT MEASUREMENTS: Start time: 1330 Stop time: 1456

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
1352	19.01	115	5.99	539	1.02	14.0	4.59	350	
1404	18.90	53	6.32	535	0.84	14.0	2.6	350	
1415	18.74	-9	6.41	636	0.84	13.9	2.5	350	
1430	18.63	-50	6.46	636	0.84	13.9	2.5	350	
1436	18.60	-64	6.46	634	0.86	13.9	2.5	350	
1443	18.51	-85	6.50	533	0.88	13.9	2.5	350	
1451	18.51	-96	6.52	523	0.87	14.0	2.5	350	
1453	18.51	-96	6.52	533	0.89	14.0	2.5	350	

SAMPLE TESTING INFORMATION **Sample time:** 1453

Analysis	Method	No. bottles	Bottle type	Volume	Preservation	Handling
VOC	8260	3	VOA	40	HCL	None

SAMPLE OBSERVATIONS

Color None Odor None Clarity Clear

Purge Volume: 3 gal
Tubing Volume: 0.3 gals

Notes:

Groundwater Sampling Data Sheet

File No.	43654	Well ID:	MW-334S
Project	Tidewater	Sample Date:	10/4/2017
Location	city: Pawtucket State: RI	Sampler's name:	Rowan Hayes
Weather:	Sunny 60's		

WATER LEVEL OBSERVATIONS measurement date/time: 10/3/2017 853

Point of measurement: PVC Riser [X] Casing [ ] Ground [ ]

Total well depth (feet)	28.78	Standing water in well (feet)	9.18
Depth to LNAPL (feet)	-	Well Diameter (in.)	2
Depth to water (feet)	19.6	Sample Depth (feet bgs)	25
Depth to DNAPL (feet)	-	Standpipe TPVC to Ground (feet)	-
Well Screen (feet bgs)	20 to 30	Roadbox TPVC to Ground (feet)	-

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

EQUIPMENT

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

Pump Type: Dedicated Submersible No. 1

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

INSTRUMENT MEASUREMENTS: Start time: 1110 Stop time: 1138

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
1125	19.6	539.4	2.58	2251	1.15	8.3	4.0		
1128	19.6	539.9	2.60	2144	1.29	8.3	4.0		
1131	19.6	540.6	2.62	2102	1.17	8.3	4.0		
1136	19.6	541.3	2.67	2058	1.21	8.3	4.0		

SAMPLE TESTING INFORMATION **Sample time:** 1140

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

SAMPLE OBSERVATIONS

Color none Odor none Clarity clear

Purge Volume: 2gal

Tubing Volume: 0.2 gals

Notes:

Groundwater Sampling Data Sheet

File No.	43654	Well ID:	MW-334D
Project	Tidewater	Sample Date:	10/4/2017
Location	city: Pawtucket State: RI	Sampler's name:	Sara Haupt
Weather:	Sunny 60's		

WATER LEVEL OBSERVATIONS measurement date/time: 10/3/2017 8:51

Point of measurement	PVC Riser [X] Casing [ ] Ground [ ]		
Total well depth (feet)	41.9	Standing water in well (feet)	22.6
Depth to LNAPL (feet)	-	Well Diameter (in.)	2
Depth to water (feet)	19.3	Sample Depth (feet bgs)	37
Depth to DNAPL (feet)	-	Standpipe TPVC to Ground (feet)	-
Well Screen (feet bgs)	32 to 42	Roadbox TPVC to Ground (feet)	-

Well Condition: **Protective casing** [ ] poor [X] good **Expansion cap** [X] yes [ ] no **Well ID** [X] yes [ ] no

lock [ ] yes [X] no **Concrete Collar** [X] yes [ ] no **Well** [ ] poor [X] good

EQUIPMENT

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

Pump Type: Dedicated Submersible No. MW-339D

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

INSTRUMENT MEASUREMENTS: Start time: 1110 Stop time:

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
1124	19.3	415.5	2.90	1385	1.27	20.7	4	250	
1131	19.3	419.2	2.90	1395	1.17	22.0	4	250	
1134	19.3	419.6	2.90	1901	1.15	22.2	4	250	
1137	19.3	419.7	2.90	1403	1.12	22.2	4	250	

SAMPLE TESTING INFORMATION **Sample time:** 1140

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

SAMPLE OBSERVATIONS

Color none Odor none Clarity clear

Purge Volume: 2gal

Tubing Volume: 0.3 gals

Notes:

LOW FLOW CALIBRATION SHEET

File No. 43654 | Page: 1 of 2
Project: Former Tidewater Facility | Date: 10/3/2017
Location: City: Pawtucket State: RI

LOW FLOW CALIBRATION:

Intial Calibration:

Specific Conductance:	Instrument and Number:	YSI	Standard Solution:	1000	Reading:	1004
pH (s.u.):	Instrument and Number:	YSI	Standard Solution:	4/7	Reading:	3.98/7.03
DO (mg/L):	Instrument and Number:	YSI	Standard Solution:	100%	Reading:	99%
ORP (mvolts:)	Instrument and Number:	YSI	Standard Solution:	244	Reading:	244.2
Turbidity (NTU):	Instrument and Number:	Lamotte	Standard Solution:	0/1	Reading:	0 / 0.9

Bump Check:

Specific Conductance:	Instrument and Number:	YSI	Standard Solution:	1000	Reading:	995
pH (s.u.):	Instrument and Number:	YSI	Standard Solution:	4/7	Reading:	3.94/7.03
DO (mg/L):	Instrument and Number:	YSI	Standard Solution:	100%	Reading:	100%
ORP (mvolts:)	Instrument and Number:	YSI	Standard Solution:	244	Reading:	241
Turbidity (NTU):	Instrument and Number:	Lamotte	Standard Solution:	0/1	Reading:	0/1

LOW FLOW CALIBRATION SHEET

File No. 43654 | Page: 2 of 2
Project: Former Tidewater Facility | Date: 10/3/2017
Location: City: Pawtucket State: RI

LOW FLOW CALIBRATION:

Intial Calibration:

Specific Conductance:	Instrument and Number:	YSI	Standard Solution:	1000	Reading:	1080
pH (s.u.):	Instrument and Number:	YSI	Standard Solution:	4/7	Reading:	4.07/7.00
DO (mg/L):	Instrument and Number:	YSI	Standard Solution:	100	Reading:	110.1
ORP (mvolts:)	Instrument and Number:	YSI	Standard Solution:	237.5	Reading:	240.1
Turbidity (NTU):	Instrument and Number:	Lamotte	Standard Solution:	0/1	Reading:	0/1

Bump Check:

Specific Conductance:	Instrument and Number:	YSI	Standard Solution:	1000	Reading:	1078
pH (s.u.):	Instrument and Number:	YSI	Standard Solution:	4/7	Reading:	4.17/7.14
DO (mg/L):	Instrument and Number:	YSI	Standard Solution:	100	Reading:	92.9
ORP (mvolts:)	Instrument and Number:	YSI	Standard Solution:	237.5	Reading:	232.6
Turbidity (NTU):	Instrument and Number:	Lamotte	Standard Solution:	0/1	Reading:	0/0.9

LOW FLOW CALIBRATION SHEET

File No. 43654 | Page: 2 of 2
Project: Former Tidewater Facility | Date: 10/3/2017
Location: City: Pawtucket State: RI

LOW FLOW CALIBRATION:

Intial Calibration:

Specific Conductance:	Instrument and Number:	YSI	Standard Solution:	1000	Reading:	1006
pH (s.u.):	Instrument and Number:	YSI	Standard Solution:	4/7	Reading:	4.01/7.00
DO (mg/L):	Instrument and Number:	YSI	Standard Solution:	100	Reading:	105%
ORP (mvolts:)	Instrument and Number:	YSI	Standard Solution:	237.5	Reading:	240.1
Turbidity (NTU):	Instrument and Number:	Lamotte	Standard Solution:	0/1	Reading:	0/1

Bump Check:

Specific Conductance:	Instrument and Number:	YSI	Standard Solution:	1000	Reading:	997
pH (s.u.):	Instrument and Number:	YSI	Standard Solution:	4/7	Reading:	4.05/7.02
DO (mg/L):	Instrument and Number:	YSI	Standard Solution:	100	Reading:	100%
ORP (mvolts:)	Instrument and Number:	YSI	Standard Solution:	237.5	Reading:	240.3
Turbidity (NTU):	Instrument and Number:	Lamotte	Standard Solution:	0/1	Reading:	0/0.9

APPENDIX C
INVESTIGATION-DERIVED WASTE DISPOSAL DOCUMENTATION

TRUCK #

RI 1705033735-001 SC PPW 8/28/2017

Please print or type. (Form designed for use on elite (12-pitch) typewriter.) Form Approved. OMB No. 2050-0039

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator ID Number	2. Page 1 of	3. Emergency Response Phone	4. Manifest Tracking Number
RIP000036462	1	(800) 483-3718	010906048 FLE

GENERATOR

5. Generator's Name and Mailing Address
Narragansett Electric company
40 Sylvan Road
Waltham, MA 02451
Generator's Phone: (781) 907-3647 ATTN: Susan Brochu

Generator's Site Address (if different than mailing address)
200 Taft Street
Pawtucket, RI 02862

6. Transporter 1 Company Name: Clean Harbors Environmental Services, Inc. — U.S. EPA ID Number: MAD039322250

7. Transporter 2 Company Name: Robbie D Wood, Inc — U.S. EPA ID Number: ALD067138891

8. Designated Facility Name and Site Address
Clean Harbors Environmental Services, Inc.
2900 Rockefeller Avenue
Cleveland, OH 44115
Facility's Phone: (216) 429-2402
U.S. EPA ID Number: OHD000724153

9a. HM	9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.	13. Waste Codes		
	1. NON DOT REGULATED MATERIAL, (PURGEWATER)	01	DM	55	G	R015		
	2.							
	3.							
	4.							

14. Special Handling Instructions and Additional Information
1. T26781RIR

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: Jim DeWolf #1215 AGENT FOR NARRAGANSETT ELECTRIC — Signature: Jim DeWolf #1215 AGENT FOR TNEC — Month 10 Day 13 Year 17

INT'L

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

TRANSPORTER

17. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name: Francisco Brito — Signature: — Month 10 Day 13 Year 17

Transporter 2 Printed/Typed Name: Robert Taylor — Signature: — Month 10 Day 25 Year 17

DESIGNATED FACILITY

18. Discrepancy

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

Manifest Reference Number:

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

Facility's Phone:

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

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

1.	2.	3.	4.
H070			

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: JOHN MERRITT — Signature: — Month 11 Day 08 Year 17

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete.

DESIGNATED FACILITY TO DESTINATION STATE (IF REQUIRED)

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

Truck # 621134

RI 1705033735-001 SC PPW 8/28/2017

Please print or type. (Form designed for use on elite (12-pitch) typewriter.) Form Approved. OMB No. 2050-0039

UNIFORM HAZARDOUS WASTE MANIFEST	1. Generator ID Number	2. Page 1 of	3. Emergency Response Phone	4. Manifest Tracking Number
	RIP000036462	1	(800) 483-3718	010906049 FLE

GENERATOR

5. Generator's Name and Mailing Address
Narragansett Electric company
40 Sylvan Road
Waltham, MA 02451
Generator's Phone: (781) 907-3647 ATTN: Susan Brochu

Generator's Site Address (if different than mailing address)
200 Taft Street
Pawtucket, RI 02862

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

9a. HM	9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.	13. Waste Codes		
	1. NON DOT REGULATED MATERIAL, (OILY DEBRIS)	63	DM	180	P	R015		
	2.							
	3.							
	4.							

14. Special Handling Instructions and Additional Information
1.R40179RIR 3X55

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: #1295 AGENT FOR Jim DeWolf NARRAGANSETT ELECTRIC — Signature: Jim DeWolf #1215 AGENT FOR TNEC — Month 10 Day 13 Year 17

INT'L

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

TRANSPORTER

17. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name: FRANCISCO BRITO — Signature: BRITO — Month 10 Day 13 Year 17

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

DESIGNATED FACILITY

18. Discrepancy

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

Manifest Reference Number:

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

Facility's Phone:

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

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

1.	2.	3.	4.
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: Candace Seguin — Signature: Candace Seguin — Month 11 Day 6 Year 17

EPA Form 8700-22 (Rev. 3-06) Previous editions are obsolete. DESIGNATED FACILITY TO DESTINATION STATE (IF REQUIRED)

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

Truck # 621134

Please print or type. (Form designed for use on elite (12-pitch) typewriter) RI 1705033735-001 SC PPW 10/10/2017 Form Approved. OMB No. 2050-0039

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator ID Number: RIP000036462
2. Page 1 of: 1
3. Emergency Response Phone: (800) 483-3718
4. Manifest Tracking Number: 010906177 FLE

5. Generator's Name and Mailing Address
Narragansett Electric company
40 Sylvan Road
Waltham, MA 02451
Generator's Phone: (781) 907-3647 ATTN: Susan Brochu

Generator's Site Address (if different than mailing address)
200 Taft Street
Pawtucket, RI 02862

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 Connecticut Inc
51 Broderick Road
Bristol, CT 06010
Facility's Phone: (860) 583-8917
U.S. EPA ID Number: CTD000604488

9a. HM	9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.	13. Waste Codes		
	1. NON DOT REGULATED MATERIAL, (PURGEWATER)	4	DM	220	G	CR04	R015	
	2. NON DOT REGULATED MATERIAL, (SOIL CUTTINGS)	16	Dm	4,800	P	CR02	R015	
	3.							
	4.							

14. Special Handling Instructions and Additional Information
1. U57442A 4X55
2. U57441RIR 16X55

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: Jim Dewolf #1215 AGENT FOR NARRAGANSETT ELECTRIC
Signature: [signature] #1215 AGENT FOR TNEC.
Month 11 Day 22 Year 17

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

17. Transporter Acknowledgment of Receipt of Materials
Transporter 1 Printed/Typed Name: Joshua Malama
Signature: [signature]
Month 11 Day 22 Year 17
Transporter 2 Printed/Typed Name:
Signature:
Month Day Year

18. Discrepancy
18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection
Manifest Reference Number:
18b. Alternate Facility (or Generator)
U.S. EPA ID Number
Facility's Phone:
18c. Signature of Alternate Facility (or Generator)
Month Day Year

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)
1. H070 2. H141 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: Denise Bush
Signature: Denise Bush
Month 12 Day 7 Year 17

GENERATOR | INT'L | TRANSPORTER | DESIGNATED FACILITY

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete. DESIGNATED FACILITY TO DESTINATION STATE (IF REQUIRED)
Clean Harbors has the appropriate permits for and will accept the waste the generator is shipping.

APPENDIX D
LABORATORY REPORTS

CERTIFICATE OF ANALYSIS

Sarah McLeod
GZA GeoEnvironmental, Inc.
530 Broadway
Providence, RI 02909

RE: Former Tidewater Facility (05.0043654.00)
ESS Laboratory Work Order Number: 1710102

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 5:31 pm, Oct 12, 2017

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: Former Tidewater Facility

ESS Laboratory Work Order: 1710102

SAMPLE RECEIPT

The following samples were received on October 04, 2017 for the analyses specified on the enclosed Chain of Custody Record.

Lab Number	Sample Name	Matrix	Analysis
1710102-01	MW-109	Ground Water	8260B
1710102-02	MW-314D	Ground Water	8260B
1710102-03	MW-314S	Ground Water	8260B
1710102-04	MW-201	Ground Water	8260B
1710102-05	MW-312S	Ground Water	8260B
1710102-06	MW-312D	Ground Water	8260B
1710102-07	MW-337	Ground Water	8260B
1710102-08	MW-6	Ground Water	8260B
1710102-09	M & E MW-2	Ground Water	8260B
1710102-10	MW-339S	Ground Water	8260B

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Former Tidewater Facility ESS Laboratory Work Order: 1710102

PROJECT NARRATIVE

8260B Volatile Organic Compounds

C7J0108-CCV1	**Continuing Calibration %Diff/Drift is above control limit (CD+).**
	Bromomethane (45% @ 30%)
C7J0108-CCV1	**Continuing Calibration %Diff/Drift is below control limit (CD-).**
	Hexachloroethane (32% @ 30%)
CJ70630-BS1	**Blank Spike recovery is above upper control limit (B+).**
	Bromomethane (153% @ 70-130%)
CJ70630-BS1	**Blank Spike recovery is below lower control limit (B-).**
	Dibromochloromethane (68% @ 70-130%), Hexachloroethane (62% @ 70-130%)
CJ70630-BSD1	**Blank Spike recovery is above upper control limit (B+).**
	Bromomethane (148% @ 70-130%)
CJ70630-BSD1	**Blank Spike recovery is below lower control limit (B-).**
	Dibromochloromethane (68% @ 70-130%), Hexachloroethane (62% @ 70-130%), trans-1,3-Dichloropropene (68% @ 70-130%)
CJ71041-BS1	**Blank Spike recovery is below lower control limit (B-).**
	Hexachloroethane (68% @ 70-130%)
CJ71041-BSD1	**Blank Spike recovery is below lower control limit (B-).**
	Dibromochloromethane (69% @ 70-130%), Hexachloroethane (65% @ 70-130%)

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

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Former Tidewater Facility

ESS Laboratory Work Order: 1710102

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 / 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
5035 - Solid Purge and Trap

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

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Former Tidewater Facility
Client Sample ID: MW-109
Date Sampled: 10/03/17 11:00
Percent Solids: N/A
Initial Volume: 5
Final Volume: 5
Extraction Method: 5030B

ESS Laboratory Work Order: 1710102
ESS Laboratory Sample ID: 1710102-01
Sample Matrix: Ground Water
Units: mg/L
Analyst: MD

8260B Volatile Organic Compounds

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
1,1,1,2-Tetrachloroethane	ND (0.0010)		8260B		1	10/06/17 21:41	C7J0108	CJ70630
1,1,1-Trichloroethane	ND (0.0010)		8260B		1	10/06/17 21:41	C7J0108	CJ70630
1,1,2,2-Tetrachloroethane	ND (0.0005)		8260B		1	10/06/17 21:41	C7J0108	CJ70630
1,1,2-Trichloroethane	ND (0.0010)		8260B		1	10/06/17 21:41	C7J0108	CJ70630
1,1-Dichloroethane	ND (0.0010)		8260B		1	10/06/17 21:41	C7J0108	CJ70630
1,1-Dichloroethene	ND (0.0010)		8260B		1	10/06/17 21:41	C7J0108	CJ70630
1,1-Dichloropropene	ND (0.0020)		8260B		1	10/06/17 21:41	C7J0108	CJ70630
1,2,3-Trichlorobenzene	ND (0.0010)		8260B		1	10/06/17 21:41	C7J0108	CJ70630
1,2,3-Trichloropropane	ND (0.0010)		8260B		1	10/06/17 21:41	C7J0108	CJ70630
1,2,4-Trichlorobenzene	ND (0.0010)		8260B		1	10/06/17 21:41	C7J0108	CJ70630
1,2,4-Trimethylbenzene	**0.0398** (0.0010)		8260B		1	10/06/17 21:41	C7J0108	CJ70630
1,2-Dibromo-3-Chloropropane	ND (0.0050)		8260B		1	10/06/17 21:41	C7J0108	CJ70630
1,2-Dibromoethane	ND (0.0010)		8260B		1	10/06/17 21:41	C7J0108	CJ70630
1,2-Dichlorobenzene	ND (0.0010)		8260B		1	10/06/17 21:41	C7J0108	CJ70630
1,2-Dichloroethane	ND (0.0010)		8260B		1	10/06/17 21:41	C7J0108	CJ70630
1,2-Dichloropropane	ND (0.0010)		8260B		1	10/06/17 21:41	C7J0108	CJ70630
1,3,5-Trimethylbenzene	**0.0015** (0.0010)		8260B		1	10/06/17 21:41	C7J0108	CJ70630
1,3-Dichlorobenzene	ND (0.0010)		8260B		1	10/06/17 21:41	C7J0108	CJ70630
1,3-Dichloropropane	ND (0.0010)		8260B		1	10/06/17 21:41	C7J0108	CJ70630
1,4-Dichlorobenzene	ND (0.0010)		8260B		1	10/06/17 21:41	C7J0108	CJ70630
1,4-Dioxane - Screen	ND (0.500)		8260B		1	10/06/17 21:41	C7J0108	CJ70630
1-Chlorohexane	ND (0.0010)		8260B		1	10/06/17 21:41	C7J0108	CJ70630
2,2-Dichloropropane	ND (0.0010)		8260B		1	10/06/17 21:41	C7J0108	CJ70630
2-Butanone	ND (0.0100)		8260B		1	10/06/17 21:41	C7J0108	CJ70630
2-Chlorotoluene	ND (0.0010)		8260B		1	10/06/17 21:41	C7J0108	CJ70630
2-Hexanone	ND (0.0100)		8260B		1	10/06/17 21:41	C7J0108	CJ70630
4-Chlorotoluene	ND (0.0010)		8260B		1	10/06/17 21:41	C7J0108	CJ70630
4-Isopropyltoluene	**0.0014** (0.0010)		8260B		1	10/06/17 21:41	C7J0108	CJ70630
4-Methyl-2-Pentanone	ND (0.0250)		8260B		1	10/06/17 21:41	C7J0108	CJ70630
Acetone	ND (0.0100)		8260B		1	10/06/17 21:41	C7J0108	CJ70630
Benzene	**0.137** (0.0100)		8260B		10	10/10/17 20:06	C7J0108	CJ70630
Bromobenzene	ND (0.0020)		8260B		1	10/06/17 21:41	C7J0108	CJ70630

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Former Tidewater Facility
Client Sample ID: MW-109
Date Sampled: 10/03/17 11:00
Percent Solids: N/A
Initial Volume: 5
Final Volume: 5
Extraction Method: 5030B

ESS Laboratory Work Order: 1710102
ESS Laboratory Sample ID: 1710102-01
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	10/06/17 21:41	C7J0108	CJ70630
Bromodichloromethane	ND (0.0006)		8260B		1	10/06/17 21:41	C7J0108	CJ70630
Bromoform	ND (0.0010)		8260B		1	10/06/17 21:41	C7J0108	CJ70630
Bromomethane	ND (0.0020)		8260B		1	10/06/17 21:41	C7J0108	CJ70630
Carbon Disulfide	ND (0.0010)		8260B		1	10/06/17 21:41	C7J0108	CJ70630
Carbon Tetrachloride	ND (0.0010)		8260B		1	10/06/17 21:41	C7J0108	CJ70630
Chlorobenzene	ND (0.0010)		8260B		1	10/06/17 21:41	C7J0108	CJ70630
Chloroethane	ND (0.0020)		8260B		1	10/06/17 21:41	C7J0108	CJ70630
Chloroform	ND (0.0010)		8260B		1	10/06/17 21:41	C7J0108	CJ70630
Chloromethane	ND (0.0020)		8260B		1	10/06/17 21:41	C7J0108	CJ70630
cis-1,2-Dichloroethene	ND (0.0010)		8260B		1	10/06/17 21:41	C7J0108	CJ70630
cis-1,3-Dichloropropene	ND (0.0004)		8260B		1	10/06/17 21:41	C7J0108	CJ70630
Dibromochloromethane	ND (0.0010)		8260B		1	10/06/17 21:41	C7J0108	CJ70630
Dibromomethane	ND (0.0010)		8260B		1	10/06/17 21:41	C7J0108	CJ70630
Dichlorodifluoromethane	ND (0.0020)		8260B		1	10/06/17 21:41	C7J0108	CJ70630
Diethyl Ether	ND (0.0010)		8260B		1	10/06/17 21:41	C7J0108	CJ70630
Di-isopropyl ether	ND (0.0010)		8260B		1	10/06/17 21:41	C7J0108	CJ70630
Ethyl tertiary-butyl ether	ND (0.0010)		8260B		1	10/06/17 21:41	C7J0108	CJ70630
Ethylbenzene	**0.0168** (0.0010)		8260B		1	10/06/17 21:41	C7J0108	CJ70630
Hexachlorobutadiene	ND (0.0006)		8260B		1	10/06/17 21:41	C7J0108	CJ70630
Hexachloroethane	ND (0.0010)		8260B		1	10/06/17 21:41	C7J0108	CJ70630
Isopropylbenzene	**0.0172** (0.0010)		8260B		1	10/06/17 21:41	C7J0108	CJ70630
Methyl tert-Butyl Ether	ND (0.0010)		8260B		1	10/06/17 21:41	C7J0108	CJ70630
Methylene Chloride	ND (0.0020)		8260B		1	10/06/17 21:41	C7J0108	CJ70630
Naphthalene	**0.0779** (0.0010)		8260B		1	10/06/17 21:41	C7J0108	CJ70630
n-Butylbenzene	**0.0056** (0.0010)		8260B		1	10/06/17 21:41	C7J0108	CJ70630
n-Propylbenzene	**0.0091** (0.0010)		8260B		1	10/06/17 21:41	C7J0108	CJ70630
sec-Butylbenzene	**0.0020** (0.0010)		8260B		1	10/06/17 21:41	C7J0108	CJ70630
Styrene	ND (0.0010)		8260B		1	10/06/17 21:41	C7J0108	CJ70630
tert-Butylbenzene	ND (0.0010)		8260B		1	10/06/17 21:41	C7J0108	CJ70630
Tertiary-amyl methyl ether	ND (0.0010)		8260B		1	10/06/17 21:41	C7J0108	CJ70630
Tetrachloroethene	ND (0.0010)		8260B		1	10/06/17 21:41	C7J0108	CJ70630

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Former Tidewater Facility
Client Sample ID: MW-109
Date Sampled: 10/03/17 11:00
Percent Solids: N/A
Initial Volume: 5
Final Volume: 5
Extraction Method: 5030B

ESS Laboratory Work Order: 1710102
ESS Laboratory Sample ID: 1710102-01
Sample Matrix: Ground Water
Units: mg/L
Analyst: MD

8260B Volatile Organic Compounds

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
Tetrahydrofuran	ND (0.0050)		8260B		1	10/06/17 21:41	C7J0108	CJ70630
Toluene	**0.0015** (0.0010)		8260B		1	10/06/17 21:41	C7J0108	CJ70630
trans-1,2-Dichloroethene	ND (0.0010)		8260B		1	10/06/17 21:41	C7J0108	CJ70630
trans-1,3-Dichloropropene	ND (0.0004)		8260B		1	10/06/17 21:41	C7J0108	CJ70630
Trichloroethene	ND (0.0010)		8260B		1	10/06/17 21:41	C7J0108	CJ70630
Trichlorofluoromethane	ND (0.0010)		8260B		1	10/06/17 21:41	C7J0108	CJ70630
Vinyl Acetate	ND (0.0050)		8260B		1	10/06/17 21:41	C7J0108	CJ70630
Vinyl Chloride	ND (0.0010)		8260B		1	10/06/17 21:41	C7J0108	CJ70630
Xylene O	**0.0114** (0.0010)		8260B		1	10/06/17 21:41	C7J0108	CJ70630
Xylene P,M	**0.0044** (0.0020)		8260B		1	10/06/17 21:41	C7J0108	CJ70630
Xylenes (Total)	**0.0158** (0.0020)		8260B		1	10/06/17 21:41		[CALC]

	%Recovery	Qualifier	Limits
Surrogate: 1,2-Dichloroethane-d4	*88 %*		*70-130*
Surrogate: 4-Bromofluorobenzene	*92 %*		*70-130*
Surrogate: Dibromofluoromethane	*89 %*		*70-130*
Surrogate: Toluene-d8	*95 %*		*70-130*

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Former Tidewater Facility
Client Sample ID: MW-314D
Date Sampled: 10/03/17 13:05
Percent Solids: N/A
Initial Volume: 5
Final Volume: 5
Extraction Method: 5030B

ESS Laboratory Work Order: 1710102
ESS Laboratory Sample ID: 1710102-02
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	10/06/17 18:28	C7J0108	CJ70630
1,1,1-Trichloroethane	ND (0.0010)		8260B		1	10/06/17 18:28	C7J0108	CJ70630
1,1,2,2-Tetrachloroethane	ND (0.0005)		8260B		1	10/06/17 18:28	C7J0108	CJ70630
1,1,2-Trichloroethane	ND (0.0010)		8260B		1	10/06/17 18:28	C7J0108	CJ70630
1,1-Dichloroethane	ND (0.0010)		8260B		1	10/06/17 18:28	C7J0108	CJ70630
1,1-Dichloroethene	ND (0.0010)		8260B		1	10/06/17 18:28	C7J0108	CJ70630
1,1-Dichloropropene	ND (0.0020)		8260B		1	10/06/17 18:28	C7J0108	CJ70630
1,2,3-Trichlorobenzene	ND (0.0010)		8260B		1	10/06/17 18:28	C7J0108	CJ70630
1,2,3-Trichloropropane	ND (0.0010)		8260B		1	10/06/17 18:28	C7J0108	CJ70630
1,2,4-Trichlorobenzene	ND (0.0010)		8260B		1	10/06/17 18:28	C7J0108	CJ70630
1,2,4-Trimethylbenzene	ND (0.0010)		8260B		1	10/06/17 18:28	C7J0108	CJ70630
1,2-Dibromo-3-Chloropropane	ND (0.0050)		8260B		1	10/06/17 18:28	C7J0108	CJ70630
1,2-Dibromoethane	ND (0.0010)		8260B		1	10/06/17 18:28	C7J0108	CJ70630
1,2-Dichlorobenzene	ND (0.0010)		8260B		1	10/06/17 18:28	C7J0108	CJ70630
1,2-Dichloroethane	ND (0.0010)		8260B		1	10/06/17 18:28	C7J0108	CJ70630
1,2-Dichloropropane	ND (0.0010)		8260B		1	10/06/17 18:28	C7J0108	CJ70630
1,3,5-Trimethylbenzene	ND (0.0010)		8260B		1	10/06/17 18:28	C7J0108	CJ70630
1,3-Dichlorobenzene	ND (0.0010)		8260B		1	10/06/17 18:28	C7J0108	CJ70630
1,3-Dichloropropane	ND (0.0010)		8260B		1	10/06/17 18:28	C7J0108	CJ70630
1,4-Dichlorobenzene	ND (0.0010)		8260B		1	10/06/17 18:28	C7J0108	CJ70630
1,4-Dioxane - Screen	ND (0.500)		8260B		1	10/06/17 18:28	C7J0108	CJ70630
1-Chlorohexane	ND (0.0010)		8260B		1	10/06/17 18:28	C7J0108	CJ70630
2,2-Dichloropropane	ND (0.0010)		8260B		1	10/06/17 18:28	C7J0108	CJ70630
2-Butanone	ND (0.0100)		8260B		1	10/06/17 18:28	C7J0108	CJ70630
2-Chlorotoluene	ND (0.0010)		8260B		1	10/06/17 18:28	C7J0108	CJ70630
2-Hexanone	ND (0.0100)		8260B		1	10/06/17 18:28	C7J0108	CJ70630
4-Chlorotoluene	ND (0.0010)		8260B		1	10/06/17 18:28	C7J0108	CJ70630
4-Isopropyltoluene	ND (0.0010)		8260B		1	10/06/17 18:28	C7J0108	CJ70630
4-Methyl-2-Pentanone	ND (0.0250)		8260B		1	10/06/17 18:28	C7J0108	CJ70630
Acetone	ND (0.0100)		8260B		1	10/06/17 18:28	C7J0108	CJ70630
Benzene	ND (0.0010)		8260B		1	10/06/17 18:28	C7J0108	CJ70630
Bromobenzene	ND (0.0020)		8260B		1	10/06/17 18:28	C7J0108	CJ70630

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Former Tidewater Facility
Client Sample ID: MW-314D
Date Sampled: 10/03/17 13:05
Percent Solids: N/A
Initial Volume: 5
Final Volume: 5
Extraction Method: 5030B

ESS Laboratory Work Order: 1710102
ESS Laboratory Sample ID: 1710102-02
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	10/06/17 18:28	C7J0108	CJ70630
Bromodichloromethane	ND (0.0006)		8260B		1	10/06/17 18:28	C7J0108	CJ70630
Bromoform	ND (0.0010)		8260B		1	10/06/17 18:28	C7J0108	CJ70630
Bromomethane	ND (0.0020)		8260B		1	10/06/17 18:28	C7J0108	CJ70630
Carbon Disulfide	ND (0.0010)		8260B		1	10/06/17 18:28	C7J0108	CJ70630
Carbon Tetrachloride	ND (0.0010)		8260B		1	10/06/17 18:28	C7J0108	CJ70630
Chlorobenzene	ND (0.0010)		8260B		1	10/06/17 18:28	C7J0108	CJ70630
Chloroethane	ND (0.0020)		8260B		1	10/06/17 18:28	C7J0108	CJ70630
Chloroform	ND (0.0010)		8260B		1	10/06/17 18:28	C7J0108	CJ70630
Chloromethane	ND (0.0020)		8260B		1	10/06/17 18:28	C7J0108	CJ70630
cis-1,2-Dichloroethene	ND (0.0010)		8260B		1	10/06/17 18:28	C7J0108	CJ70630
cis-1,3-Dichloropropene	ND (0.0004)		8260B		1	10/06/17 18:28	C7J0108	CJ70630
Dibromochloromethane	ND (0.0010)		8260B		1	10/06/17 18:28	C7J0108	CJ70630
Dibromomethane	ND (0.0010)		8260B		1	10/06/17 18:28	C7J0108	CJ70630
Dichlorodifluoromethane	ND (0.0020)		8260B		1	10/06/17 18:28	C7J0108	CJ70630
Diethyl Ether	ND (0.0010)		8260B		1	10/06/17 18:28	C7J0108	CJ70630
Di-isopropyl ether	ND (0.0010)		8260B		1	10/06/17 18:28	C7J0108	CJ70630
Ethyl tertiary-butyl ether	ND (0.0010)		8260B		1	10/06/17 18:28	C7J0108	CJ70630
Ethylbenzene	ND (0.0010)		8260B		1	10/06/17 18:28	C7J0108	CJ70630
Hexachlorobutadiene	ND (0.0006)		8260B		1	10/06/17 18:28	C7J0108	CJ70630
Hexachloroethane	ND (0.0010)		8260B		1	10/06/17 18:28	C7J0108	CJ70630
Isopropylbenzene	ND (0.0010)		8260B		1	10/06/17 18:28	C7J0108	CJ70630
Methyl tert-Butyl Ether	ND (0.0010)		8260B		1	10/06/17 18:28	C7J0108	CJ70630
Methylene Chloride	ND (0.0020)		8260B		1	10/06/17 18:28	C7J0108	CJ70630
Naphthalene	ND (0.0010)		8260B		1	10/06/17 18:28	C7J0108	CJ70630
n-Butylbenzene	ND (0.0010)		8260B		1	10/06/17 18:28	C7J0108	CJ70630
n-Propylbenzene	ND (0.0010)		8260B		1	10/06/17 18:28	C7J0108	CJ70630
sec-Butylbenzene	ND (0.0010)		8260B		1	10/06/17 18:28	C7J0108	CJ70630
Styrene	ND (0.0010)		8260B		1	10/06/17 18:28	C7J0108	CJ70630
tert-Butylbenzene	ND (0.0010)		8260B		1	10/06/17 18:28	C7J0108	CJ70630
Tertiary-amyl methyl ether	ND (0.0010)		8260B		1	10/06/17 18:28	C7J0108	CJ70630
Tetrachloroethene	ND (0.0010)		8260B		1	10/06/17 18:28	C7J0108	CJ70630

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Former Tidewater Facility
Client Sample ID: MW-314D
Date Sampled: 10/03/17 13:05
Percent Solids: N/A
Initial Volume: 5
Final Volume: 5
Extraction Method: 5030B

ESS Laboratory Work Order: 1710102
ESS Laboratory Sample ID: 1710102-02
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	10/06/17 18:28	C7J0108	CJ70630
Toluene	ND (0.0010)		8260B		1	10/06/17 18:28	C7J0108	CJ70630
trans-1,2-Dichloroethene	ND (0.0010)		8260B		1	10/06/17 18:28	C7J0108	CJ70630
trans-1,3-Dichloropropene	ND (0.0004)		8260B		1	10/06/17 18:28	C7J0108	CJ70630
Trichloroethene	ND (0.0010)		8260B		1	10/06/17 18:28	C7J0108	CJ70630
Trichlorofluoromethane	ND (0.0010)		8260B		1	10/06/17 18:28	C7J0108	CJ70630
Vinyl Acetate	ND (0.0050)		8260B		1	10/06/17 18:28	C7J0108	CJ70630
Vinyl Chloride	ND (0.0010)		8260B		1	10/06/17 18:28	C7J0108	CJ70630
Xylene O	ND (0.0010)		8260B		1	10/06/17 18:28	C7J0108	CJ70630
Xylene P,M	ND (0.0020)		8260B		1	10/06/17 18:28	C7J0108	CJ70630
Xylenes (Total)	ND (0.0020)		8260B		1	10/06/17 18:28		[CALC]

	%Recovery	Qualifier	Limits
Surrogate: 1,2-Dichloroethane-d4	*117 %*		*70-130*
Surrogate: 4-Bromofluorobenzene	*92 %*		*70-130*
Surrogate: Dibromofluoromethane	*104 %*		*70-130*
Surrogate: Toluene-d8	*94 %*		*70-130*

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Former Tidewater Facility
Client Sample ID: MW-314S
Date Sampled: 10/03/17 13:20
Percent Solids: N/A
Initial Volume: 5
Final Volume: 5
Extraction Method: 5030B

ESS Laboratory Work Order: 1710102
ESS Laboratory Sample ID: 1710102-03
Sample Matrix: Ground Water
Units: mg/L
Analyst: MD

8260B Volatile Organic Compounds

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
1,1,1,2-Tetrachloroethane	ND (0.0010)		8260B		1	10/10/17 12:42	C7J0140	CJ71041
1,1,1-Trichloroethane	ND (0.0010)		8260B		1	10/10/17 12:42	C7J0140	CJ71041
1,1,2,2-Tetrachloroethane	ND (0.0005)		8260B		1	10/10/17 12:42	C7J0140	CJ71041
1,1,2-Trichloroethane	ND (0.0010)		8260B		1	10/10/17 12:42	C7J0140	CJ71041
1,1-Dichloroethane	ND (0.0010)		8260B		1	10/10/17 12:42	C7J0140	CJ71041
1,1-Dichloroethene	ND (0.0010)		8260B		1	10/10/17 12:42	C7J0140	CJ71041
1,1-Dichloropropene	ND (0.0020)		8260B		1	10/10/17 12:42	C7J0140	CJ71041
1,2,3-Trichlorobenzene	ND (0.0010)		8260B		1	10/10/17 12:42	C7J0140	CJ71041
1,2,3-Trichloropropane	ND (0.0010)		8260B		1	10/10/17 12:42	C7J0140	CJ71041
1,2,4-Trichlorobenzene	ND (0.0010)		8260B		1	10/10/17 12:42	C7J0140	CJ71041
1,2,4-Trimethylbenzene	ND (0.0010)		8260B		1	10/10/17 12:42	C7J0140	CJ71041
1,2-Dibromo-3-Chloropropane	ND (0.0050)		8260B		1	10/10/17 12:42	C7J0140	CJ71041
1,2-Dibromoethane	ND (0.0010)		8260B		1	10/10/17 12:42	C7J0140	CJ71041
1,2-Dichlorobenzene	ND (0.0010)		8260B		1	10/10/17 12:42	C7J0140	CJ71041
1,2-Dichloroethane	ND (0.0010)		8260B		1	10/10/17 12:42	C7J0140	CJ71041
1,2-Dichloropropane	ND (0.0010)		8260B		1	10/10/17 12:42	C7J0140	CJ71041
1,3,5-Trimethylbenzene	ND (0.0010)		8260B		1	10/10/17 12:42	C7J0140	CJ71041
1,3-Dichlorobenzene	ND (0.0010)		8260B		1	10/10/17 12:42	C7J0140	CJ71041
1,3-Dichloropropane	ND (0.0010)		8260B		1	10/10/17 12:42	C7J0140	CJ71041
1,4-Dichlorobenzene	ND (0.0010)		8260B		1	10/10/17 12:42	C7J0140	CJ71041
1,4-Dioxane - Screen	ND (0.500)		8260B		1	10/10/17 12:42	C7J0140	CJ71041
1-Chlorohexane	ND (0.0010)		8260B		1	10/10/17 12:42	C7J0140	CJ71041
2,2-Dichloropropane	ND (0.0010)		8260B		1	10/10/17 12:42	C7J0140	CJ71041
2-Butanone	ND (0.0100)		8260B		1	10/10/17 12:42	C7J0140	CJ71041
2-Chlorotoluene	ND (0.0010)		8260B		1	10/10/17 12:42	C7J0140	CJ71041
2-Hexanone	ND (0.0100)		8260B		1	10/10/17 12:42	C7J0140	CJ71041
4-Chlorotoluene	ND (0.0010)		8260B		1	10/10/17 12:42	C7J0140	CJ71041
4-Isopropyltoluene	ND (0.0010)		8260B		1	10/10/17 12:42	C7J0140	CJ71041
4-Methyl-2-Pentanone	ND (0.0250)		8260B		1	10/10/17 12:42	C7J0140	CJ71041
Acetone	ND (0.0100)		8260B		1	10/10/17 12:42	C7J0140	CJ71041
Benzene	ND (0.0010)		8260B		1	10/10/17 12:42	C7J0140	CJ71041
Bromobenzene	ND (0.0020)		8260B		1	10/10/17 12:42	C7J0140	CJ71041

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Former Tidewater Facility
Client Sample ID: MW-314S
Date Sampled: 10/03/17 13:20
Percent Solids: N/A
Initial Volume: 5
Final Volume: 5
Extraction Method: 5030B

ESS Laboratory Work Order: 1710102
ESS Laboratory Sample ID: 1710102-03
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	10/10/17 12:42	C7J0140	CJ71041
Bromodichloromethane	ND (0.0006)		8260B		1	10/10/17 12:42	C7J0140	CJ71041
Bromoform	ND (0.0010)		8260B		1	10/10/17 12:42	C7J0140	CJ71041
Bromomethane	ND (0.0020)		8260B		1	10/10/17 12:42	C7J0140	CJ71041
Carbon Disulfide	ND (0.0010)		8260B		1	10/10/17 12:42	C7J0140	CJ71041
Carbon Tetrachloride	ND (0.0010)		8260B		1	10/10/17 12:42	C7J0140	CJ71041
Chlorobenzene	ND (0.0010)		8260B		1	10/10/17 12:42	C7J0140	CJ71041
Chloroethane	ND (0.0020)		8260B		1	10/10/17 12:42	C7J0140	CJ71041
Chloroform	ND (0.0010)		8260B		1	10/10/17 12:42	C7J0140	CJ71041
Chloromethane	ND (0.0020)		8260B		1	10/10/17 12:42	C7J0140	CJ71041
cis-1,2-Dichloroethene	ND (0.0010)		8260B		1	10/10/17 12:42	C7J0140	CJ71041
cis-1,3-Dichloropropene	ND (0.0004)		8260B		1	10/10/17 12:42	C7J0140	CJ71041
Dibromochloromethane	ND (0.0010)		8260B		1	10/10/17 12:42	C7J0140	CJ71041
Dibromomethane	ND (0.0010)		8260B		1	10/10/17 12:42	C7J0140	CJ71041
Dichlorodifluoromethane	ND (0.0020)		8260B		1	10/10/17 12:42	C7J0140	CJ71041
Diethyl Ether	ND (0.0010)		8260B		1	10/10/17 12:42	C7J0140	CJ71041
Di-isopropyl ether	ND (0.0010)		8260B		1	10/10/17 12:42	C7J0140	CJ71041
Ethyl tertiary-butyl ether	ND (0.0010)		8260B		1	10/10/17 12:42	C7J0140	CJ71041
Ethylbenzene	ND (0.0010)		8260B		1	10/10/17 12:42	C7J0140	CJ71041
Hexachlorobutadiene	ND (0.0006)		8260B		1	10/10/17 12:42	C7J0140	CJ71041
Hexachloroethane	ND (0.0010)		8260B		1	10/10/17 12:42	C7J0140	CJ71041
Isopropylbenzene	ND (0.0010)		8260B		1	10/10/17 12:42	C7J0140	CJ71041
Methyl tert-Butyl Ether	ND (0.0010)		8260B		1	10/10/17 12:42	C7J0140	CJ71041
Methylene Chloride	ND (0.0020)		8260B		1	10/10/17 12:42	C7J0140	CJ71041
Naphthalene	ND (0.0010)		8260B		1	10/10/17 12:42	C7J0140	CJ71041
n-Butylbenzene	ND (0.0010)		8260B		1	10/10/17 12:42	C7J0140	CJ71041
n-Propylbenzene	ND (0.0010)		8260B		1	10/10/17 12:42	C7J0140	CJ71041
sec-Butylbenzene	ND (0.0010)		8260B		1	10/10/17 12:42	C7J0140	CJ71041
Styrene	ND (0.0010)		8260B		1	10/10/17 12:42	C7J0140	CJ71041
tert-Butylbenzene	ND (0.0010)		8260B		1	10/10/17 12:42	C7J0140	CJ71041
Tertiary-amyl methyl ether	ND (0.0010)		8260B		1	10/10/17 12:42	C7J0140	CJ71041
Tetrachloroethene	ND (0.0010)		8260B		1	10/10/17 12:42	C7J0140	CJ71041

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Former Tidewater Facility
Client Sample ID: MW-314S
Date Sampled: 10/03/17 13:20
Percent Solids: N/A
Initial Volume: 5
Final Volume: 5
Extraction Method: 5030B

ESS Laboratory Work Order: 1710102
ESS Laboratory Sample ID: 1710102-03
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	10/10/17 12:42	C7J0140	CJ71041
Toluene	ND (0.0010)		8260B		1	10/10/17 12:42	C7J0140	CJ71041
trans-1,2-Dichloroethene	ND (0.0010)		8260B		1	10/10/17 12:42	C7J0140	CJ71041
trans-1,3-Dichloropropene	ND (0.0004)		8260B		1	10/10/17 12:42	C7J0140	CJ71041
Trichloroethene	ND (0.0010)		8260B		1	10/10/17 12:42	C7J0140	CJ71041
Trichlorofluoromethane	ND (0.0010)		8260B		1	10/10/17 12:42	C7J0140	CJ71041
Vinyl Acetate	ND (0.0050)		8260B		1	10/10/17 12:42	C7J0140	CJ71041
Vinyl Chloride	ND (0.0010)		8260B		1	10/10/17 12:42	C7J0140	CJ71041
Xylene O	ND (0.0010)		8260B		1	10/10/17 12:42	C7J0140	CJ71041
Xylene P,M	ND (0.0020)		8260B		1	10/10/17 12:42	C7J0140	CJ71041
Xylenes (Total)	ND (0.0020)		8260B		1	10/10/17 12:42		[CALC]

	%Recovery	Qualifier	Limits
Surrogate: 1,2-Dichloroethane-d4	*94 %*		*70-130*
Surrogate: 4-Bromofluorobenzene	*94 %*		*70-130*
Surrogate: Dibromofluoromethane	*92 %*		*70-130*
Surrogate: Toluene-d8	*95 %*		*70-130*

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Former Tidewater Facility
Client Sample ID: MW-201
Date Sampled: 10/03/17 15:30
Percent Solids: N/A
Initial Volume: 5
Final Volume: 5
Extraction Method: 5030B

ESS Laboratory Work Order: 1710102
ESS Laboratory Sample ID: 1710102-04
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	10/10/17 13:38	C7J0140	CJ71041
1,1,1-Trichloroethane	ND (0.0010)		8260B		1	10/10/17 13:38	C7J0140	CJ71041
1,1,2,2-Tetrachloroethane	ND (0.0005)		8260B		1	10/10/17 13:38	C7J0140	CJ71041
1,1,2-Trichloroethane	ND (0.0010)		8260B		1	10/10/17 13:38	C7J0140	CJ71041
1,1-Dichloroethane	ND (0.0010)		8260B		1	10/10/17 13:38	C7J0140	CJ71041
1,1-Dichloroethene	ND (0.0010)		8260B		1	10/10/17 13:38	C7J0140	CJ71041
1,1-Dichloropropene	ND (0.0020)		8260B		1	10/10/17 13:38	C7J0140	CJ71041
1,2,3-Trichlorobenzene	ND (0.0010)		8260B		1	10/10/17 13:38	C7J0140	CJ71041
1,2,3-Trichloropropane	ND (0.0010)		8260B		1	10/10/17 13:38	C7J0140	CJ71041
1,2,4-Trichlorobenzene	ND (0.0010)		8260B		1	10/10/17 13:38	C7J0140	CJ71041
1,2,4-Trimethylbenzene	**0.0025** (0.0010)		8260B		1	10/10/17 13:38	C7J0140	CJ71041
1,2-Dibromo-3-Chloropropane	ND (0.0050)		8260B		1	10/10/17 13:38	C7J0140	CJ71041
1,2-Dibromoethane	ND (0.0010)		8260B		1	10/10/17 13:38	C7J0140	CJ71041
1,2-Dichlorobenzene	ND (0.0010)		8260B		1	10/10/17 13:38	C7J0140	CJ71041
1,2-Dichloroethane	ND (0.0010)		8260B		1	10/10/17 13:38	C7J0140	CJ71041
1,2-Dichloropropane	ND (0.0010)		8260B		1	10/10/17 13:38	C7J0140	CJ71041
1,3,5-Trimethylbenzene	ND (0.0010)		8260B		1	10/10/17 13:38	C7J0140	CJ71041
1,3-Dichlorobenzene	ND (0.0010)		8260B		1	10/10/17 13:38	C7J0140	CJ71041
1,3-Dichloropropane	ND (0.0010)		8260B		1	10/10/17 13:38	C7J0140	CJ71041
1,4-Dichlorobenzene	ND (0.0010)		8260B		1	10/10/17 13:38	C7J0140	CJ71041
1,4-Dioxane - Screen	ND (0.500)		8260B		1	10/10/17 13:38	C7J0140	CJ71041
1-Chlorohexane	ND (0.0010)		8260B		1	10/10/17 13:38	C7J0140	CJ71041
2,2-Dichloropropane	ND (0.0010)		8260B		1	10/10/17 13:38	C7J0140	CJ71041
2-Butanone	ND (0.0100)		8260B		1	10/10/17 13:38	C7J0140	CJ71041
2-Chlorotoluene	ND (0.0010)		8260B		1	10/10/17 13:38	C7J0140	CJ71041
2-Hexanone	ND (0.0100)		8260B		1	10/10/17 13:38	C7J0140	CJ71041
4-Chlorotoluene	ND (0.0010)		8260B		1	10/10/17 13:38	C7J0140	CJ71041
4-Isopropyltoluene	ND (0.0010)		8260B		1	10/10/17 13:38	C7J0140	CJ71041
4-Methyl-2-Pentanone	ND (0.0250)		8260B		1	10/10/17 13:38	C7J0140	CJ71041
Acetone	ND (0.0100)		8260B		1	10/10/17 13:38	C7J0140	CJ71041
Benzene	**0.0962** (0.0010)		8260B		1	10/10/17 13:38	C7J0140	CJ71041
Bromobenzene	ND (0.0020)		8260B		1	10/10/17 13:38	C7J0140	CJ71041

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Former Tidewater Facility
Client Sample ID: MW-201
Date Sampled: 10/03/17 15:30
Percent Solids: N/A
Initial Volume: 5
Final Volume: 5
Extraction Method: 5030B

ESS Laboratory Work Order: 1710102
ESS Laboratory Sample ID: 1710102-04
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	10/10/17 13:38	C7J0140	CJ71041
Bromodichloromethane	ND (0.0006)		8260B		1	10/10/17 13:38	C7J0140	CJ71041
Bromoform	ND (0.0010)		8260B		1	10/10/17 13:38	C7J0140	CJ71041
Bromomethane	ND (0.0020)		8260B		1	10/10/17 13:38	C7J0140	CJ71041
Carbon Disulfide	ND (0.0010)		8260B		1	10/10/17 13:38	C7J0140	CJ71041
Carbon Tetrachloride	ND (0.0010)		8260B		1	10/10/17 13:38	C7J0140	CJ71041
Chlorobenzene	ND (0.0010)		8260B		1	10/10/17 13:38	C7J0140	CJ71041
Chloroethane	ND (0.0020)		8260B		1	10/10/17 13:38	C7J0140	CJ71041
Chloroform	ND (0.0010)		8260B		1	10/10/17 13:38	C7J0140	CJ71041
Chloromethane	ND (0.0020)		8260B		1	10/10/17 13:38	C7J0140	CJ71041
cis-1,2-Dichloroethene	ND (0.0010)		8260B		1	10/10/17 13:38	C7J0140	CJ71041
cis-1,3-Dichloropropene	ND (0.0004)		8260B		1	10/10/17 13:38	C7J0140	CJ71041
Dibromochloromethane	ND (0.0010)		8260B		1	10/10/17 13:38	C7J0140	CJ71041
Dibromomethane	ND (0.0010)		8260B		1	10/10/17 13:38	C7J0140	CJ71041
Dichlorodifluoromethane	ND (0.0020)		8260B		1	10/10/17 13:38	C7J0140	CJ71041
Diethyl Ether	ND (0.0010)		8260B		1	10/10/17 13:38	C7J0140	CJ71041
Di-isopropyl ether	ND (0.0010)		8260B		1	10/10/17 13:38	C7J0140	CJ71041
Ethyl tertiary-butyl ether	ND (0.0010)		8260B		1	10/10/17 13:38	C7J0140	CJ71041
Ethylbenzene	**0.0145** (0.0010)		8260B		1	10/10/17 13:38	C7J0140	CJ71041
Hexachlorobutadiene	ND (0.0006)		8260B		1	10/10/17 13:38	C7J0140	CJ71041
Hexachloroethane	ND (0.0010)		8260B		1	10/10/17 13:38	C7J0140	CJ71041
Isopropylbenzene	**0.0110** (0.0010)		8260B		1	10/10/17 13:38	C7J0140	CJ71041
Methyl tert-Butyl Ether	ND (0.0010)		8260B		1	10/10/17 13:38	C7J0140	CJ71041
Methylene Chloride	ND (0.0020)		8260B		1	10/10/17 13:38	C7J0140	CJ71041
Naphthalene	**0.0030** (0.0010)		8260B		1	10/10/17 13:38	C7J0140	CJ71041
n-Butylbenzene	**0.0023** (0.0010)		8260B		1	10/10/17 13:38	C7J0140	CJ71041
n-Propylbenzene	**0.0085** (0.0010)		8260B		1	10/10/17 13:38	C7J0140	CJ71041
sec-Butylbenzene	ND (0.0010)		8260B		1	10/10/17 13:38	C7J0140	CJ71041
Styrene	**0.0032** (0.0010)		8260B		1	10/10/17 13:38	C7J0140	CJ71041
tert-Butylbenzene	ND (0.0010)		8260B		1	10/10/17 13:38	C7J0140	CJ71041
Tertiary-amyl methyl ether	ND (0.0010)		8260B		1	10/10/17 13:38	C7J0140	CJ71041
Tetrachloroethene	ND (0.0010)		8260B		1	10/10/17 13:38	C7J0140	CJ71041

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Former Tidewater Facility
Client Sample ID: MW-201
Date Sampled: 10/03/17 15:30
Percent Solids: N/A
Initial Volume: 5
Final Volume: 5
Extraction Method: 5030B

ESS Laboratory Work Order: 1710102
ESS Laboratory Sample ID: 1710102-04
Sample Matrix: Ground Water
Units: mg/L
Analyst: MD

8260B Volatile Organic Compounds

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
Tetrahydrofuran	ND (0.0050)		8260B		1	10/10/17 13:38	C7J0140	CJ71041
Toluene	ND (0.0010)		8260B		1	10/10/17 13:38	C7J0140	CJ71041
trans-1,2-Dichloroethene	ND (0.0010)		8260B		1	10/10/17 13:38	C7J0140	CJ71041
trans-1,3-Dichloropropene	ND (0.0004)		8260B		1	10/10/17 13:38	C7J0140	CJ71041
Trichloroethene	ND (0.0010)		8260B		1	10/10/17 13:38	C7J0140	CJ71041
Trichlorofluoromethane	ND (0.0010)		8260B		1	10/10/17 13:38	C7J0140	CJ71041
Vinyl Acetate	ND (0.0050)		8260B		1	10/10/17 13:38	C7J0140	CJ71041
Vinyl Chloride	ND (0.0010)		8260B		1	10/10/17 13:38	C7J0140	CJ71041
Xylene O	**0.0020** (0.0010)		8260B		1	10/10/17 13:38	C7J0140	CJ71041
Xylene P,M	ND (0.0020)		8260B		1	10/10/17 13:38	C7J0140	CJ71041
Xylenes (Total)	**0.0020** (0.0020)		8260B		1	10/10/17 13:38		[CALC]

	%Recovery	Qualifier	Limits
Surrogate: 1,2-Dichloroethane-d4	*93 %*		*70-130*
Surrogate: 4-Bromofluorobenzene	*95 %*		*70-130*
Surrogate: Dibromofluoromethane	*94 %*		*70-130*
Surrogate: Toluene-d8	*95 %*		*70-130*

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Former Tidewater Facility
Client Sample ID: MW-312S
Date Sampled: 10/03/17 15:55
Percent Solids: N/A
Initial Volume: 5
Final Volume: 5
Extraction Method: 5030B

ESS Laboratory Work Order: 1710102
ESS Laboratory Sample ID: 1710102-05
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	10/06/17 20:46	C7J0108	CJ70630
1,1,1-Trichloroethane	ND (0.0010)		8260B		1	10/06/17 20:46	C7J0108	CJ70630
1,1,2,2-Tetrachloroethane	ND (0.0005)		8260B		1	10/06/17 20:46	C7J0108	CJ70630
1,1,2-Trichloroethane	ND (0.0010)		8260B		1	10/06/17 20:46	C7J0108	CJ70630
1,1-Dichloroethane	ND (0.0010)		8260B		1	10/06/17 20:46	C7J0108	CJ70630
1,1-Dichloroethene	ND (0.0010)		8260B		1	10/06/17 20:46	C7J0108	CJ70630
1,1-Dichloropropene	ND (0.0020)		8260B		1	10/06/17 20:46	C7J0108	CJ70630
1,2,3-Trichlorobenzene	ND (0.0010)		8260B		1	10/06/17 20:46	C7J0108	CJ70630
1,2,3-Trichloropropane	ND (0.0010)		8260B		1	10/06/17 20:46	C7J0108	CJ70630
1,2,4-Trichlorobenzene	ND (0.0010)		8260B		1	10/06/17 20:46	C7J0108	CJ70630
1,2,4-Trimethylbenzene	**0.357** (0.100)		8260B		100	10/10/17 21:29	C7J0108	CJ70630
1,2-Dibromo-3-Chloropropane	ND (0.0050)		8260B		1	10/06/17 20:46	C7J0108	CJ70630
1,2-Dibromoethane	ND (0.0010)		8260B		1	10/06/17 20:46	C7J0108	CJ70630
1,2-Dichlorobenzene	ND (0.0010)		8260B		1	10/06/17 20:46	C7J0108	CJ70630
1,2-Dichloroethane	ND (0.0010)		8260B		1	10/06/17 20:46	C7J0108	CJ70630
1,2-Dichloropropane	ND (0.0010)		8260B		1	10/06/17 20:46	C7J0108	CJ70630
1,3,5-Trimethylbenzene	**0.0206** (0.0010)		8260B		1	10/06/17 20:46	C7J0108	CJ70630
1,3-Dichlorobenzene	ND (0.0010)		8260B		1	10/06/17 20:46	C7J0108	CJ70630
1,3-Dichloropropane	ND (0.0010)		8260B		1	10/06/17 20:46	C7J0108	CJ70630
1,4-Dichlorobenzene	ND (0.0010)		8260B		1	10/06/17 20:46	C7J0108	CJ70630
1,4-Dioxane - Screen	ND (0.500)		8260B		1	10/06/17 20:46	C7J0108	CJ70630
1-Chlorohexane	ND (0.0010)		8260B		1	10/06/17 20:46	C7J0108	CJ70630
2,2-Dichloropropane	ND (0.0010)		8260B		1	10/06/17 20:46	C7J0108	CJ70630
2-Butanone	ND (0.0100)		8260B		1	10/06/17 20:46	C7J0108	CJ70630
2-Chlorotoluene	ND (0.0010)		8260B		1	10/06/17 20:46	C7J0108	CJ70630
2-Hexanone	ND (0.0100)		8260B		1	10/06/17 20:46	C7J0108	CJ70630
4-Chlorotoluene	ND (0.0010)		8260B		1	10/06/17 20:46	C7J0108	CJ70630
4-Isopropyltoluene	**0.0096** (0.0010)		8260B		1	10/06/17 20:46	C7J0108	CJ70630
4-Methyl-2-Pentanone	ND (0.0250)		8260B		1	10/06/17 20:46	C7J0108	CJ70630
Acetone	ND (0.0100)		8260B		1	10/06/17 20:46	C7J0108	CJ70630
Benzene	**6.67** (0.100)		8260B		100	10/10/17 21:29	C7J0108	CJ70630
Bromobenzene	ND (0.0020)		8260B		1	10/06/17 20:46	C7J0108	CJ70630

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Former Tidewater Facility
Client Sample ID: MW-312S
Date Sampled: 10/03/17 15:55
Percent Solids: N/A
Initial Volume: 5
Final Volume: 5
Extraction Method: 5030B

ESS Laboratory Work Order: 1710102
ESS Laboratory Sample ID: 1710102-05
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	10/06/17 20:46	C7J0108	CJ70630
Bromodichloromethane	ND (0.0006)		8260B		1	10/06/17 20:46	C7J0108	CJ70630
Bromoform	ND (0.0010)		8260B		1	10/06/17 20:46	C7J0108	CJ70630
Bromomethane	ND (0.0020)		8260B		1	10/06/17 20:46	C7J0108	CJ70630
Carbon Disulfide	ND (0.0010)		8260B		1	10/06/17 20:46	C7J0108	CJ70630
Carbon Tetrachloride	ND (0.0010)		8260B		1	10/06/17 20:46	C7J0108	CJ70630
Chlorobenzene	ND (0.0010)		8260B		1	10/06/17 20:46	C7J0108	CJ70630
Chloroethane	ND (0.0020)		8260B		1	10/06/17 20:46	C7J0108	CJ70630
Chloroform	ND (0.0010)		8260B		1	10/06/17 20:46	C7J0108	CJ70630
Chloromethane	ND (0.0020)		8260B		1	10/06/17 20:46	C7J0108	CJ70630
cis-1,2-Dichloroethene	ND (0.0010)		8260B		1	10/06/17 20:46	C7J0108	CJ70630
cis-1,3-Dichloropropene	ND (0.0004)		8260B		1	10/06/17 20:46	C7J0108	CJ70630
Dibromochloromethane	ND (0.0010)		8260B		1	10/06/17 20:46	C7J0108	CJ70630
Dibromomethane	ND (0.0010)		8260B		1	10/06/17 20:46	C7J0108	CJ70630
Dichlorodifluoromethane	ND (0.0020)		8260B		1	10/06/17 20:46	C7J0108	CJ70630
Diethyl Ether	ND (0.0010)		8260B		1	10/06/17 20:46	C7J0108	CJ70630
Di-isopropyl ether	ND (0.0010)		8260B		1	10/06/17 20:46	C7J0108	CJ70630
Ethyl tertiary-butyl ether	ND (0.0010)		8260B		1	10/06/17 20:46	C7J0108	CJ70630
Ethylbenzene	**2.18** (0.100)		8260B		100	10/10/17 21:29	C7J0108	CJ70630
Hexachlorobutadiene	ND (0.0006)		8260B		1	10/06/17 20:46	C7J0108	CJ70630
Hexachloroethane	ND (0.0010)		8260B		1	10/06/17 20:46	C7J0108	CJ70630
Isopropylbenzene	**0.0911** (0.0010)		8260B		1	10/06/17 20:46	C7J0108	CJ70630
Methyl tert-Butyl Ether	ND (0.0010)		8260B		1	10/06/17 20:46	C7J0108	CJ70630
Methylene Chloride	ND (0.0020)		8260B		1	10/06/17 20:46	C7J0108	CJ70630
Naphthalene	**6.90** (0.100)		8260B		100	10/10/17 21:29	C7J0108	CJ70630
n-Butylbenzene	ND (0.0010)		8260B		1	10/06/17 20:46	C7J0108	CJ70630
n-Propylbenzene	**0.0370** (0.0010)		8260B		1	10/06/17 20:46	C7J0108	CJ70630
sec-Butylbenzene	ND (0.0010)		8260B		1	10/06/17 20:46	C7J0108	CJ70630
Styrene	**0.0017** (0.0010)		8260B		1	10/06/17 20:46	C7J0108	CJ70630
tert-Butylbenzene	ND (0.0010)		8260B		1	10/06/17 20:46	C7J0108	CJ70630
Tertiary-amyl methyl ether	ND (0.0010)		8260B		1	10/06/17 20:46	C7J0108	CJ70630
Tetrachloroethene	ND (0.0010)		8260B		1	10/06/17 20:46	C7J0108	CJ70630

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Former Tidewater Facility
Client Sample ID: MW-312S
Date Sampled: 10/03/17 15:55
Percent Solids: N/A
Initial Volume: 5
Final Volume: 5
Extraction Method: 5030B

ESS Laboratory Work Order: 1710102
ESS Laboratory Sample ID: 1710102-05
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	10/06/17 20:46	C7J0108	CJ70630
Toluene	**0.0094** (0.0010)		8260B		1	10/06/17 20:46	C7J0108	CJ70630
trans-1,2-Dichloroethene	ND (0.0010)		8260B		1	10/06/17 20:46	C7J0108	CJ70630
trans-1,3-Dichloropropene	ND (0.0004)		8260B		1	10/06/17 20:46	C7J0108	CJ70630
Trichloroethene	ND (0.0010)		8260B		1	10/06/17 20:46	C7J0108	CJ70630
Trichlorofluoromethane	ND (0.0010)		8260B		1	10/06/17 20:46	C7J0108	CJ70630
Vinyl Acetate	ND (0.0050)		8260B		1	10/06/17 20:46	C7J0108	CJ70630
Vinyl Chloride	ND (0.0010)		8260B		1	10/06/17 20:46	C7J0108	CJ70630
Xylene O	**0.613** (0.100)		8260B		100	10/10/17 21:29	C7J0108	CJ70630
Xylene P,M	**0.0571** (0.0020)		8260B		1	10/06/17 20:46	C7J0108	CJ70630
Xylenes (Total)	**0.670** (0.100)		8260B		100	10/10/17 21:29		[CALC]

	%Recovery	Qualifier	Limits
Surrogate: 1,2-Dichloroethane-d4	*99 %*		*70-130*
Surrogate: 4-Bromofluorobenzene	*99 %*		*70-130*
Surrogate: Dibromofluoromethane	*93 %*		*70-130*
Surrogate: Toluene-d8	*92 %*		*70-130*

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Former Tidewater Facility
Client Sample ID: MW-312D
Date Sampled: 10/03/17 15:25
Percent Solids: N/A
Initial Volume: 5
Final Volume: 5
Extraction Method: 5030B

ESS Laboratory Work Order: 1710102
ESS Laboratory Sample ID: 1710102-06
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	10/06/17 22:37	C7J0108	CJ70630
1,1,1-Trichloroethane	ND (0.0010)		8260B		1	10/06/17 22:37	C7J0108	CJ70630
1,1,2,2-Tetrachloroethane	ND (0.0005)		8260B		1	10/06/17 22:37	C7J0108	CJ70630
1,1,2-Trichloroethane	ND (0.0010)		8260B		1	10/06/17 22:37	C7J0108	CJ70630
1,1-Dichloroethane	ND (0.0010)		8260B		1	10/06/17 22:37	C7J0108	CJ70630
1,1-Dichloroethene	ND (0.0010)		8260B		1	10/06/17 22:37	C7J0108	CJ70630
1,1-Dichloropropene	ND (0.0020)		8260B		1	10/06/17 22:37	C7J0108	CJ70630
1,2,3-Trichlorobenzene	ND (0.0010)		8260B		1	10/06/17 22:37	C7J0108	CJ70630
1,2,3-Trichloropropane	ND (0.0010)		8260B		1	10/06/17 22:37	C7J0108	CJ70630
1,2,4-Trichlorobenzene	ND (0.0010)		8260B		1	10/06/17 22:37	C7J0108	CJ70630
1,2,4-Trimethylbenzene	**0.0876** (0.0010)		8260B		1	10/06/17 22:37	C7J0108	CJ70630
1,2-Dibromo-3-Chloropropane	ND (0.0050)		8260B		1	10/06/17 22:37	C7J0108	CJ70630
1,2-Dibromoethane	ND (0.0010)		8260B		1	10/06/17 22:37	C7J0108	CJ70630
1,2-Dichlorobenzene	ND (0.0010)		8260B		1	10/06/17 22:37	C7J0108	CJ70630
1,2-Dichloroethane	ND (0.0010)		8260B		1	10/06/17 22:37	C7J0108	CJ70630
1,2-Dichloropropane	ND (0.0010)		8260B		1	10/06/17 22:37	C7J0108	CJ70630
1,3,5-Trimethylbenzene	**0.0106** (0.0010)		8260B		1	10/06/17 22:37	C7J0108	CJ70630
1,3-Dichlorobenzene	ND (0.0010)		8260B		1	10/06/17 22:37	C7J0108	CJ70630
1,3-Dichloropropane	ND (0.0010)		8260B		1	10/06/17 22:37	C7J0108	CJ70630
1,4-Dichlorobenzene	ND (0.0010)		8260B		1	10/06/17 22:37	C7J0108	CJ70630
1,4-Dioxane - Screen	ND (0.500)		8260B		1	10/06/17 22:37	C7J0108	CJ70630
1-Chlorohexane	ND (0.0010)		8260B		1	10/06/17 22:37	C7J0108	CJ70630
2,2-Dichloropropane	ND (0.0010)		8260B		1	10/06/17 22:37	C7J0108	CJ70630
2-Butanone	ND (0.0100)		8260B		1	10/06/17 22:37	C7J0108	CJ70630
2-Chlorotoluene	ND (0.0010)		8260B		1	10/06/17 22:37	C7J0108	CJ70630
2-Hexanone	ND (0.0100)		8260B		1	10/06/17 22:37	C7J0108	CJ70630
4-Chlorotoluene	ND (0.0010)		8260B		1	10/06/17 22:37	C7J0108	CJ70630
4-Isopropyltoluene	**0.0026** (0.0010)		8260B		1	10/06/17 22:37	C7J0108	CJ70630
4-Methyl-2-Pentanone	ND (0.0250)		8260B		1	10/06/17 22:37	C7J0108	CJ70630
Acetone	ND (0.0100)		8260B		1	10/06/17 22:37	C7J0108	CJ70630
Benzene	**0.0210** (0.0010)		8260B		1	10/06/17 22:37	C7J0108	CJ70630
Bromobenzene	ND (0.0020)		8260B		1	10/06/17 22:37	C7J0108	CJ70630

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Former Tidewater Facility
Client Sample ID: MW-312D
Date Sampled: 10/03/17 15:25
Percent Solids: N/A
Initial Volume: 5
Final Volume: 5
Extraction Method: 5030B

ESS Laboratory Work Order: 1710102
ESS Laboratory Sample ID: 1710102-06
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	10/06/17 22:37	C7J0108	CJ70630
Bromodichloromethane	ND (0.0006)		8260B		1	10/06/17 22:37	C7J0108	CJ70630
Bromoform	ND (0.0010)		8260B		1	10/06/17 22:37	C7J0108	CJ70630
Bromomethane	ND (0.0020)		8260B		1	10/06/17 22:37	C7J0108	CJ70630
Carbon Disulfide	ND (0.0010)		8260B		1	10/06/17 22:37	C7J0108	CJ70630
Carbon Tetrachloride	ND (0.0010)		8260B		1	10/06/17 22:37	C7J0108	CJ70630
Chlorobenzene	ND (0.0010)		8260B		1	10/06/17 22:37	C7J0108	CJ70630
Chloroethane	ND (0.0020)		8260B		1	10/06/17 22:37	C7J0108	CJ70630
Chloroform	ND (0.0010)		8260B		1	10/06/17 22:37	C7J0108	CJ70630
Chloromethane	ND (0.0020)		8260B		1	10/06/17 22:37	C7J0108	CJ70630
cis-1,2-Dichloroethene	ND (0.0010)		8260B		1	10/06/17 22:37	C7J0108	CJ70630
cis-1,3-Dichloropropene	ND (0.0004)		8260B		1	10/06/17 22:37	C7J0108	CJ70630
Dibromochloromethane	ND (0.0010)		8260B		1	10/06/17 22:37	C7J0108	CJ70630
Dibromomethane	ND (0.0010)		8260B		1	10/06/17 22:37	C7J0108	CJ70630
Dichlorodifluoromethane	ND (0.0020)		8260B		1	10/06/17 22:37	C7J0108	CJ70630
Diethyl Ether	ND (0.0010)		8260B		1	10/06/17 22:37	C7J0108	CJ70630
Di-isopropyl ether	ND (0.0010)		8260B		1	10/06/17 22:37	C7J0108	CJ70630
Ethyl tertiary-butyl ether	ND (0.0010)		8260B		1	10/06/17 22:37	C7J0108	CJ70630
Ethylbenzene	**0.346** (0.0500)		8260B		50	10/10/17 21:02	C7J0108	CJ70630
Hexachlorobutadiene	ND (0.0006)		8260B		1	10/06/17 22:37	C7J0108	CJ70630
Hexachloroethane	ND (0.0010)		8260B		1	10/06/17 22:37	C7J0108	CJ70630
Isopropylbenzene	**0.0189** (0.0010)		8260B		1	10/06/17 22:37	C7J0108	CJ70630
Methyl tert-Butyl Ether	ND (0.0010)		8260B		1	10/06/17 22:37	C7J0108	CJ70630
Methylene Chloride	ND (0.0020)		8260B		1	10/06/17 22:37	C7J0108	CJ70630
Naphthalene	**0.807** (0.0500)		8260B		50	10/10/17 21:02	C7J0108	CJ70630
n-Butylbenzene	**0.0028** (0.0010)		8260B		1	10/06/17 22:37	C7J0108	CJ70630
n-Propylbenzene	**0.0086** (0.0010)		8260B		1	10/06/17 22:37	C7J0108	CJ70630
sec-Butylbenzene	**0.0011** (0.0010)		8260B		1	10/06/17 22:37	C7J0108	CJ70630
Styrene	ND (0.0010)		8260B		1	10/06/17 22:37	C7J0108	CJ70630
tert-Butylbenzene	ND (0.0010)		8260B		1	10/06/17 22:37	C7J0108	CJ70630
Tertiary-amyl methyl ether	ND (0.0010)		8260B		1	10/06/17 22:37	C7J0108	CJ70630
Tetrachloroethene	ND (0.0010)		8260B		1	10/06/17 22:37	C7J0108	CJ70630

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Former Tidewater Facility
Client Sample ID: MW-312D
Date Sampled: 10/03/17 15:25
Percent Solids: N/A
Initial Volume: 5
Final Volume: 5
Extraction Method: 5030B

ESS Laboratory Work Order: 1710102
ESS Laboratory Sample ID: 1710102-06
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	10/06/17 22:37	C7J0108	CJ70630
Toluene	**0.0034** (0.0010)		8260B		1	10/06/17 22:37	C7J0108	CJ70630
trans-1,2-Dichloroethene	ND (0.0010)		8260B		1	10/06/17 22:37	C7J0108	CJ70630
trans-1,3-Dichloropropene	ND (0.0004)		8260B		1	10/06/17 22:37	C7J0108	CJ70630
Trichloroethene	ND (0.0010)		8260B		1	10/06/17 22:37	C7J0108	CJ70630
Trichlorofluoromethane	ND (0.0010)		8260B		1	10/06/17 22:37	C7J0108	CJ70630
Vinyl Acetate	ND (0.0050)		8260B		1	10/06/17 22:37	C7J0108	CJ70630
Vinyl Chloride	ND (0.0010)		8260B		1	10/06/17 22:37	C7J0108	CJ70630
Xylene O	**0.0705** (0.0010)		8260B		1	10/06/17 22:37	C7J0108	CJ70630
Xylene P,M	**0.0109** (0.0020)		8260B		1	10/06/17 22:37	C7J0108	CJ70630
Xylenes (Total)	**0.0813** (0.0020)		8260B		1	10/06/17 22:37		[CALC]

	%Recovery	Qualifier	Limits
Surrogate: 1,2-Dichloroethane-d4	*88 %*		*70-130*
Surrogate: 4-Bromofluorobenzene	*90 %*		*70-130*
Surrogate: Dibromofluoromethane	*94 %*		*70-130*
Surrogate: Toluene-d8	*95 %*		*70-130*

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Former Tidewater Facility
Client Sample ID: MW-337
Date Sampled: 10/03/17 14:30
Percent Solids: N/A
Initial Volume: 5
Final Volume: 5
Extraction Method: 5030B

ESS Laboratory Work Order: 1710102
ESS Laboratory Sample ID: 1710102-07
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	10/06/17 18:55	C7J0108	CJ70630
1,1,1-Trichloroethane	ND (0.0010)		8260B		1	10/06/17 18:55	C7J0108	CJ70630
1,1,2,2-Tetrachloroethane	ND (0.0005)		8260B		1	10/06/17 18:55	C7J0108	CJ70630
1,1,2-Trichloroethane	ND (0.0010)		8260B		1	10/06/17 18:55	C7J0108	CJ70630
1,1-Dichloroethane	ND (0.0010)		8260B		1	10/06/17 18:55	C7J0108	CJ70630
1,1-Dichloroethene	ND (0.0010)		8260B		1	10/06/17 18:55	C7J0108	CJ70630
1,1-Dichloropropene	ND (0.0020)		8260B		1	10/06/17 18:55	C7J0108	CJ70630
1,2,3-Trichlorobenzene	ND (0.0010)		8260B		1	10/06/17 18:55	C7J0108	CJ70630
1,2,3-Trichloropropane	ND (0.0010)		8260B		1	10/06/17 18:55	C7J0108	CJ70630
1,2,4-Trichlorobenzene	ND (0.0010)		8260B		1	10/06/17 18:55	C7J0108	CJ70630
1,2,4-Trimethylbenzene	ND (0.0010)		8260B		1	10/06/17 18:55	C7J0108	CJ70630
1,2-Dibromo-3-Chloropropane	ND (0.0050)		8260B		1	10/06/17 18:55	C7J0108	CJ70630
1,2-Dibromoethane	ND (0.0010)		8260B		1	10/06/17 18:55	C7J0108	CJ70630
1,2-Dichlorobenzene	ND (0.0010)		8260B		1	10/06/17 18:55	C7J0108	CJ70630
1,2-Dichloroethane	ND (0.0010)		8260B		1	10/06/17 18:55	C7J0108	CJ70630
1,2-Dichloropropane	ND (0.0010)		8260B		1	10/06/17 18:55	C7J0108	CJ70630
1,3,5-Trimethylbenzene	ND (0.0010)		8260B		1	10/06/17 18:55	C7J0108	CJ70630
1,3-Dichlorobenzene	ND (0.0010)		8260B		1	10/06/17 18:55	C7J0108	CJ70630
1,3-Dichloropropane	ND (0.0010)		8260B		1	10/06/17 18:55	C7J0108	CJ70630
1,4-Dichlorobenzene	ND (0.0010)		8260B		1	10/06/17 18:55	C7J0108	CJ70630
1,4-Dioxane - Screen	ND (0.500)		8260B		1	10/06/17 18:55	C7J0108	CJ70630
1-Chlorohexane	ND (0.0010)		8260B		1	10/06/17 18:55	C7J0108	CJ70630
2,2-Dichloropropane	ND (0.0010)		8260B		1	10/06/17 18:55	C7J0108	CJ70630
2-Butanone	ND (0.0100)		8260B		1	10/06/17 18:55	C7J0108	CJ70630
2-Chlorotoluene	ND (0.0010)		8260B		1	10/06/17 18:55	C7J0108	CJ70630
2-Hexanone	ND (0.0100)		8260B		1	10/06/17 18:55	C7J0108	CJ70630
4-Chlorotoluene	ND (0.0010)		8260B		1	10/06/17 18:55	C7J0108	CJ70630
4-Isopropyltoluene	ND (0.0010)		8260B		1	10/06/17 18:55	C7J0108	CJ70630
4-Methyl-2-Pentanone	ND (0.0250)		8260B		1	10/06/17 18:55	C7J0108	CJ70630
Acetone	ND (0.0100)		8260B		1	10/06/17 18:55	C7J0108	CJ70630
Benzene	ND (0.0010)		8260B		1	10/06/17 18:55	C7J0108	CJ70630
Bromobenzene	ND (0.0020)		8260B		1	10/06/17 18:55	C7J0108	CJ70630

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Former Tidewater Facility
Client Sample ID: MW-337
Date Sampled: 10/03/17 14:30
Percent Solids: N/A
Initial Volume: 5
Final Volume: 5
Extraction Method: 5030B

ESS Laboratory Work Order: 1710102
ESS Laboratory Sample ID: 1710102-07
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	10/06/17 18:55	C7J0108	CJ70630
Bromodichloromethane	ND (0.0006)		8260B		1	10/06/17 18:55	C7J0108	CJ70630
Bromoform	ND (0.0010)		8260B		1	10/06/17 18:55	C7J0108	CJ70630
Bromomethane	ND (0.0020)		8260B		1	10/06/17 18:55	C7J0108	CJ70630
Carbon Disulfide	ND (0.0010)		8260B		1	10/06/17 18:55	C7J0108	CJ70630
Carbon Tetrachloride	ND (0.0010)		8260B		1	10/06/17 18:55	C7J0108	CJ70630
Chlorobenzene	ND (0.0010)		8260B		1	10/06/17 18:55	C7J0108	CJ70630
Chloroethane	ND (0.0020)		8260B		1	10/06/17 18:55	C7J0108	CJ70630
Chloroform	ND (0.0010)		8260B		1	10/06/17 18:55	C7J0108	CJ70630
Chloromethane	ND (0.0020)		8260B		1	10/06/17 18:55	C7J0108	CJ70630
cis-1,2-Dichloroethene	ND (0.0010)		8260B		1	10/06/17 18:55	C7J0108	CJ70630
cis-1,3-Dichloropropene	ND (0.0004)		8260B		1	10/06/17 18:55	C7J0108	CJ70630
Dibromochloromethane	ND (0.0010)		8260B		1	10/06/17 18:55	C7J0108	CJ70630
Dibromomethane	ND (0.0010)		8260B		1	10/06/17 18:55	C7J0108	CJ70630
Dichlorodifluoromethane	ND (0.0020)		8260B		1	10/06/17 18:55	C7J0108	CJ70630
Diethyl Ether	ND (0.0010)		8260B		1	10/06/17 18:55	C7J0108	CJ70630
Di-isopropyl ether	ND (0.0010)		8260B		1	10/06/17 18:55	C7J0108	CJ70630
Ethyl tertiary-butyl ether	ND (0.0010)		8260B		1	10/06/17 18:55	C7J0108	CJ70630
Ethylbenzene	ND (0.0010)		8260B		1	10/06/17 18:55	C7J0108	CJ70630
Hexachlorobutadiene	ND (0.0006)		8260B		1	10/06/17 18:55	C7J0108	CJ70630
Hexachloroethane	ND (0.0010)		8260B		1	10/06/17 18:55	C7J0108	CJ70630
Isopropylbenzene	ND (0.0010)		8260B		1	10/06/17 18:55	C7J0108	CJ70630
Methyl tert-Butyl Ether	ND (0.0010)		8260B		1	10/06/17 18:55	C7J0108	CJ70630
Methylene Chloride	ND (0.0020)		8260B		1	10/06/17 18:55	C7J0108	CJ70630
Naphthalene	ND (0.0010)		8260B		1	10/06/17 18:55	C7J0108	CJ70630
n-Butylbenzene	ND (0.0010)		8260B		1	10/06/17 18:55	C7J0108	CJ70630
n-Propylbenzene	ND (0.0010)		8260B		1	10/06/17 18:55	C7J0108	CJ70630
sec-Butylbenzene	ND (0.0010)		8260B		1	10/06/17 18:55	C7J0108	CJ70630
Styrene	ND (0.0010)		8260B		1	10/06/17 18:55	C7J0108	CJ70630
tert-Butylbenzene	ND (0.0010)		8260B		1	10/06/17 18:55	C7J0108	CJ70630
Tertiary-amyl methyl ether	ND (0.0010)		8260B		1	10/06/17 18:55	C7J0108	CJ70630
Tetrachloroethene	ND (0.0010)		8260B		1	10/06/17 18:55	C7J0108	CJ70630

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Former Tidewater Facility
Client Sample ID: MW-337
Date Sampled: 10/03/17 14:30
Percent Solids: N/A
Initial Volume: 5
Final Volume: 5
Extraction Method: 5030B

ESS Laboratory Work Order: 1710102
ESS Laboratory Sample ID: 1710102-07
Sample Matrix: Ground Water
Units: mg/L
Analyst: MD

8260B Volatile Organic Compounds

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
Tetrahydrofuran	ND (0.0050)		8260B		1	10/06/17 18:55	C7J0108	CJ70630
Toluene	ND (0.0010)		8260B		1	10/06/17 18:55	C7J0108	CJ70630
trans-1,2-Dichloroethene	ND (0.0010)		8260B		1	10/06/17 18:55	C7J0108	CJ70630
trans-1,3-Dichloropropene	ND (0.0004)		8260B		1	10/06/17 18:55	C7J0108	CJ70630
Trichloroethene	ND (0.0010)		8260B		1	10/06/17 18:55	C7J0108	CJ70630
Trichlorofluoromethane	ND (0.0010)		8260B		1	10/06/17 18:55	C7J0108	CJ70630
Vinyl Acetate	ND (0.0050)		8260B		1	10/06/17 18:55	C7J0108	CJ70630
Vinyl Chloride	ND (0.0010)		8260B		1	10/06/17 18:55	C7J0108	CJ70630
Xylene O	ND (0.0010)		8260B		1	10/06/17 18:55	C7J0108	CJ70630
Xylene P,M	ND (0.0020)		8260B		1	10/06/17 18:55	C7J0108	CJ70630
Xylenes (Total)	ND (0.0020)		8260B		1	10/06/17 18:55		[CALC]

	%Recovery	Qualifier	Limits
Surrogate: 1,2-Dichloroethane-d4	*116 %*		*70-130*
Surrogate: 4-Bromofluorobenzene	*93 %*		*70-130*
Surrogate: Dibromofluoromethane	*105 %*		*70-130*
Surrogate: Toluene-d8	*94 %*		*70-130*

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Former Tidewater Facility
Client Sample ID: MW-6
Date Sampled: 10/03/17 14:15
Percent Solids: N/A
Initial Volume: 5
Final Volume: 5
Extraction Method: 5030B

ESS Laboratory Work Order: 1710102
ESS Laboratory Sample ID: 1710102-08
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	10/10/17 13:10	C7J0140	CJ71041
1,1,1-Trichloroethane	ND (0.0010)		8260B		1	10/10/17 13:10	C7J0140	CJ71041
1,1,2,2-Tetrachloroethane	ND (0.0005)		8260B		1	10/10/17 13:10	C7J0140	CJ71041
1,1,2-Trichloroethane	ND (0.0010)		8260B		1	10/10/17 13:10	C7J0140	CJ71041
1,1-Dichloroethane	ND (0.0010)		8260B		1	10/10/17 13:10	C7J0140	CJ71041
1,1-Dichloroethene	ND (0.0010)		8260B		1	10/10/17 13:10	C7J0140	CJ71041
1,1-Dichloropropene	ND (0.0020)		8260B		1	10/10/17 13:10	C7J0140	CJ71041
1,2,3-Trichlorobenzene	ND (0.0010)		8260B		1	10/10/17 13:10	C7J0140	CJ71041
1,2,3-Trichloropropane	ND (0.0010)		8260B		1	10/10/17 13:10	C7J0140	CJ71041
1,2,4-Trichlorobenzene	ND (0.0010)		8260B		1	10/10/17 13:10	C7J0140	CJ71041
1,2,4-Trimethylbenzene	**0.0022** (0.0010)		8260B		1	10/10/17 13:10	C7J0140	CJ71041
1,2-Dibromo-3-Chloropropane	ND (0.0050)		8260B		1	10/10/17 13:10	C7J0140	CJ71041
1,2-Dibromoethane	ND (0.0010)		8260B		1	10/10/17 13:10	C7J0140	CJ71041
1,2-Dichlorobenzene	ND (0.0010)		8260B		1	10/10/17 13:10	C7J0140	CJ71041
1,2-Dichloroethane	ND (0.0010)		8260B		1	10/10/17 13:10	C7J0140	CJ71041
1,2-Dichloropropane	ND (0.0010)		8260B		1	10/10/17 13:10	C7J0140	CJ71041
1,3,5-Trimethylbenzene	ND (0.0010)		8260B		1	10/10/17 13:10	C7J0140	CJ71041
1,3-Dichlorobenzene	ND (0.0010)		8260B		1	10/10/17 13:10	C7J0140	CJ71041
1,3-Dichloropropane	ND (0.0010)		8260B		1	10/10/17 13:10	C7J0140	CJ71041
1,4-Dichlorobenzene	ND (0.0010)		8260B		1	10/10/17 13:10	C7J0140	CJ71041
1,4-Dioxane - Screen	ND (0.500)		8260B		1	10/10/17 13:10	C7J0140	CJ71041
1-Chlorohexane	ND (0.0010)		8260B		1	10/10/17 13:10	C7J0140	CJ71041
2,2-Dichloropropane	ND (0.0010)		8260B		1	10/10/17 13:10	C7J0140	CJ71041
2-Butanone	ND (0.0100)		8260B		1	10/10/17 13:10	C7J0140	CJ71041
2-Chlorotoluene	ND (0.0010)		8260B		1	10/10/17 13:10	C7J0140	CJ71041
2-Hexanone	ND (0.0100)		8260B		1	10/10/17 13:10	C7J0140	CJ71041
4-Chlorotoluene	ND (0.0010)		8260B		1	10/10/17 13:10	C7J0140	CJ71041
4-Isopropyltoluene	ND (0.0010)		8260B		1	10/10/17 13:10	C7J0140	CJ71041
4-Methyl-2-Pentanone	ND (0.0250)		8260B		1	10/10/17 13:10	C7J0140	CJ71041
Acetone	ND (0.0100)		8260B		1	10/10/17 13:10	C7J0140	CJ71041
Benzene	**0.0230** (0.0010)		8260B		1	10/10/17 13:10	C7J0140	CJ71041
Bromobenzene	ND (0.0020)		8260B		1	10/10/17 13:10	C7J0140	CJ71041

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Former Tidewater Facility
Client Sample ID: MW-6
Date Sampled: 10/03/17 14:15
Percent Solids: N/A
Initial Volume: 5
Final Volume: 5
Extraction Method: 5030B

ESS Laboratory Work Order: 1710102
ESS Laboratory Sample ID: 1710102-08
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	10/10/17 13:10	C7J0140	CJ71041
Bromodichloromethane	ND (0.0006)		8260B		1	10/10/17 13:10	C7J0140	CJ71041
Bromoform	ND (0.0010)		8260B		1	10/10/17 13:10	C7J0140	CJ71041
Bromomethane	ND (0.0020)		8260B		1	10/10/17 13:10	C7J0140	CJ71041
Carbon Disulfide	ND (0.0010)		8260B		1	10/10/17 13:10	C7J0140	CJ71041
Carbon Tetrachloride	ND (0.0010)		8260B		1	10/10/17 13:10	C7J0140	CJ71041
Chlorobenzene	ND (0.0010)		8260B		1	10/10/17 13:10	C7J0140	CJ71041
Chloroethane	ND (0.0020)		8260B		1	10/10/17 13:10	C7J0140	CJ71041
Chloroform	ND (0.0010)		8260B		1	10/10/17 13:10	C7J0140	CJ71041
Chloromethane	ND (0.0020)		8260B		1	10/10/17 13:10	C7J0140	CJ71041
cis-1,2-Dichloroethene	ND (0.0010)		8260B		1	10/10/17 13:10	C7J0140	CJ71041
cis-1,3-Dichloropropene	ND (0.0004)		8260B		1	10/10/17 13:10	C7J0140	CJ71041
Dibromochloromethane	ND (0.0010)		8260B		1	10/10/17 13:10	C7J0140	CJ71041
Dibromomethane	ND (0.0010)		8260B		1	10/10/17 13:10	C7J0140	CJ71041
Dichlorodifluoromethane	ND (0.0020)		8260B		1	10/10/17 13:10	C7J0140	CJ71041
Diethyl Ether	ND (0.0010)		8260B		1	10/10/17 13:10	C7J0140	CJ71041
Di-isopropyl ether	ND (0.0010)		8260B		1	10/10/17 13:10	C7J0140	CJ71041
Ethyl tertiary-butyl ether	ND (0.0010)		8260B		1	10/10/17 13:10	C7J0140	CJ71041
Ethylbenzene	**0.0198** (0.0010)		8260B		1	10/10/17 13:10	C7J0140	CJ71041
Hexachlorobutadiene	ND (0.0006)		8260B		1	10/10/17 13:10	C7J0140	CJ71041
Hexachloroethane	ND (0.0010)		8260B		1	10/10/17 13:10	C7J0140	CJ71041
Isopropylbenzene	**0.0042** (0.0010)		8260B		1	10/10/17 13:10	C7J0140	CJ71041
Methyl tert-Butyl Ether	ND (0.0010)		8260B		1	10/10/17 13:10	C7J0140	CJ71041
Methylene Chloride	ND (0.0020)		8260B		1	10/10/17 13:10	C7J0140	CJ71041
Naphthalene	**0.0028** (0.0010)		8260B		1	10/10/17 13:10	C7J0140	CJ71041
n-Butylbenzene	**0.0012** (0.0010)		8260B		1	10/10/17 13:10	C7J0140	CJ71041
n-Propylbenzene	**0.0026** (0.0010)		8260B		1	10/10/17 13:10	C7J0140	CJ71041
sec-Butylbenzene	ND (0.0010)		8260B		1	10/10/17 13:10	C7J0140	CJ71041
Styrene	ND (0.0010)		8260B		1	10/10/17 13:10	C7J0140	CJ71041
tert-Butylbenzene	ND (0.0010)		8260B		1	10/10/17 13:10	C7J0140	CJ71041
Tertiary-amyl methyl ether	ND (0.0010)		8260B		1	10/10/17 13:10	C7J0140	CJ71041
Tetrachloroethene	ND (0.0010)		8260B		1	10/10/17 13:10	C7J0140	CJ71041

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Former Tidewater Facility
Client Sample ID: MW-6
Date Sampled: 10/03/17 14:15
Percent Solids: N/A
Initial Volume: 5
Final Volume: 5
Extraction Method: 5030B

ESS Laboratory Work Order: 1710102
ESS Laboratory Sample ID: 1710102-08
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	10/10/17 13:10	C7J0140	CJ71041
Toluene	**0.0010** (0.0010)		8260B		1	10/10/17 13:10	C7J0140	CJ71041
trans-1,2-Dichloroethene	ND (0.0010)		8260B		1	10/10/17 13:10	C7J0140	CJ71041
trans-1,3-Dichloropropene	ND (0.0004)		8260B		1	10/10/17 13:10	C7J0140	CJ71041
Trichloroethene	ND (0.0010)		8260B		1	10/10/17 13:10	C7J0140	CJ71041
Trichlorofluoromethane	ND (0.0010)		8260B		1	10/10/17 13:10	C7J0140	CJ71041
Vinyl Acetate	ND (0.0050)		8260B		1	10/10/17 13:10	C7J0140	CJ71041
Vinyl Chloride	ND (0.0010)		8260B		1	10/10/17 13:10	C7J0140	CJ71041
Xylene O	**0.0152** (0.0010)		8260B		1	10/10/17 13:10	C7J0140	CJ71041
Xylene P,M	**0.0049** (0.0020)		8260B		1	10/10/17 13:10	C7J0140	CJ71041
Xylenes (Total)	**0.0202** (0.0020)		8260B		1	10/10/17 13:10		[CALC]

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

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Former Tidewater Facility
Client Sample ID: M & E MW-2
Date Sampled: 10/03/17 13:40
Percent Solids: N/A
Initial Volume: 5
Final Volume: 5
Extraction Method: 5030B

ESS Laboratory Work Order: 1710102
ESS Laboratory Sample ID: 1710102-09
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	10/06/17 19:23	C7J0108	CJ70630
1,1,1-Trichloroethane	ND (0.0010)		8260B		1	10/06/17 19:23	C7J0108	CJ70630
1,1,2,2-Tetrachloroethane	ND (0.0005)		8260B		1	10/06/17 19:23	C7J0108	CJ70630
1,1,2-Trichloroethane	ND (0.0010)		8260B		1	10/06/17 19:23	C7J0108	CJ70630
1,1-Dichloroethane	ND (0.0010)		8260B		1	10/06/17 19:23	C7J0108	CJ70630
1,1-Dichloroethene	ND (0.0010)		8260B		1	10/06/17 19:23	C7J0108	CJ70630
1,1-Dichloropropene	ND (0.0020)		8260B		1	10/06/17 19:23	C7J0108	CJ70630
1,2,3-Trichlorobenzene	ND (0.0010)		8260B		1	10/06/17 19:23	C7J0108	CJ70630
1,2,3-Trichloropropane	ND (0.0010)		8260B		1	10/06/17 19:23	C7J0108	CJ70630
1,2,4-Trichlorobenzene	ND (0.0010)		8260B		1	10/06/17 19:23	C7J0108	CJ70630
1,2,4-Trimethylbenzene	ND (0.0010)		8260B		1	10/06/17 19:23	C7J0108	CJ70630
1,2-Dibromo-3-Chloropropane	ND (0.0050)		8260B		1	10/06/17 19:23	C7J0108	CJ70630
1,2-Dibromoethane	ND (0.0010)		8260B		1	10/06/17 19:23	C7J0108	CJ70630
1,2-Dichlorobenzene	ND (0.0010)		8260B		1	10/06/17 19:23	C7J0108	CJ70630
1,2-Dichloroethane	ND (0.0010)		8260B		1	10/06/17 19:23	C7J0108	CJ70630
1,2-Dichloropropane	ND (0.0010)		8260B		1	10/06/17 19:23	C7J0108	CJ70630
1,3,5-Trimethylbenzene	ND (0.0010)		8260B		1	10/06/17 19:23	C7J0108	CJ70630
1,3-Dichlorobenzene	ND (0.0010)		8260B		1	10/06/17 19:23	C7J0108	CJ70630
1,3-Dichloropropane	ND (0.0010)		8260B		1	10/06/17 19:23	C7J0108	CJ70630
1,4-Dichlorobenzene	ND (0.0010)		8260B		1	10/06/17 19:23	C7J0108	CJ70630
1,4-Dioxane - Screen	ND (0.500)		8260B		1	10/06/17 19:23	C7J0108	CJ70630
1-Chlorohexane	ND (0.0010)		8260B		1	10/06/17 19:23	C7J0108	CJ70630
2,2-Dichloropropane	ND (0.0010)		8260B		1	10/06/17 19:23	C7J0108	CJ70630
2-Butanone	ND (0.0100)		8260B		1	10/06/17 19:23	C7J0108	CJ70630
2-Chlorotoluene	ND (0.0010)		8260B		1	10/06/17 19:23	C7J0108	CJ70630
2-Hexanone	ND (0.0100)		8260B		1	10/06/17 19:23	C7J0108	CJ70630
4-Chlorotoluene	ND (0.0010)		8260B		1	10/06/17 19:23	C7J0108	CJ70630
4-Isopropyltoluene	ND (0.0010)		8260B		1	10/06/17 19:23	C7J0108	CJ70630
4-Methyl-2-Pentanone	ND (0.0250)		8260B		1	10/06/17 19:23	C7J0108	CJ70630
Acetone	ND (0.0100)		8260B		1	10/06/17 19:23	C7J0108	CJ70630
Benzene	ND (0.0010)		8260B		1	10/06/17 19:23	C7J0108	CJ70630
Bromobenzene	ND (0.0020)		8260B		1	10/06/17 19:23	C7J0108	CJ70630

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Former Tidewater Facility
Client Sample ID: M & E MW-2
Date Sampled: 10/03/17 13:40
Percent Solids: N/A
Initial Volume: 5
Final Volume: 5
Extraction Method: 5030B

ESS Laboratory Work Order: 1710102
ESS Laboratory Sample ID: 1710102-09
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	10/06/17 19:23	C7J0108	CJ70630
Bromodichloromethane	ND (0.0006)		8260B		1	10/06/17 19:23	C7J0108	CJ70630
Bromoform	ND (0.0010)		8260B		1	10/06/17 19:23	C7J0108	CJ70630
Bromomethane	ND (0.0020)		8260B		1	10/06/17 19:23	C7J0108	CJ70630
Carbon Disulfide	ND (0.0010)		8260B		1	10/06/17 19:23	C7J0108	CJ70630
Carbon Tetrachloride	ND (0.0010)		8260B		1	10/06/17 19:23	C7J0108	CJ70630
Chlorobenzene	ND (0.0010)		8260B		1	10/06/17 19:23	C7J0108	CJ70630
Chloroethane	ND (0.0020)		8260B		1	10/06/17 19:23	C7J0108	CJ70630
Chloroform	ND (0.0010)		8260B		1	10/06/17 19:23	C7J0108	CJ70630
Chloromethane	ND (0.0020)		8260B		1	10/06/17 19:23	C7J0108	CJ70630
cis-1,2-Dichloroethene	ND (0.0010)		8260B		1	10/06/17 19:23	C7J0108	CJ70630
cis-1,3-Dichloropropene	ND (0.0004)		8260B		1	10/06/17 19:23	C7J0108	CJ70630
Dibromochloromethane	ND (0.0010)		8260B		1	10/06/17 19:23	C7J0108	CJ70630
Dibromomethane	ND (0.0010)		8260B		1	10/06/17 19:23	C7J0108	CJ70630
Dichlorodifluoromethane	ND (0.0020)		8260B		1	10/06/17 19:23	C7J0108	CJ70630
Diethyl Ether	ND (0.0010)		8260B		1	10/06/17 19:23	C7J0108	CJ70630
Di-isopropyl ether	ND (0.0010)		8260B		1	10/06/17 19:23	C7J0108	CJ70630
Ethyl tertiary-butyl ether	ND (0.0010)		8260B		1	10/06/17 19:23	C7J0108	CJ70630
Ethylbenzene	ND (0.0010)		8260B		1	10/06/17 19:23	C7J0108	CJ70630
Hexachlorobutadiene	ND (0.0006)		8260B		1	10/06/17 19:23	C7J0108	CJ70630
Hexachloroethane	ND (0.0010)		8260B		1	10/06/17 19:23	C7J0108	CJ70630
Isopropylbenzene	ND (0.0010)		8260B		1	10/06/17 19:23	C7J0108	CJ70630
Methyl tert-Butyl Ether	ND (0.0010)		8260B		1	10/06/17 19:23	C7J0108	CJ70630
Methylene Chloride	ND (0.0020)		8260B		1	10/06/17 19:23	C7J0108	CJ70630
Naphthalene	ND (0.0010)		8260B		1	10/06/17 19:23	C7J0108	CJ70630
n-Butylbenzene	ND (0.0010)		8260B		1	10/06/17 19:23	C7J0108	CJ70630
n-Propylbenzene	ND (0.0010)		8260B		1	10/06/17 19:23	C7J0108	CJ70630
sec-Butylbenzene	ND (0.0010)		8260B		1	10/06/17 19:23	C7J0108	CJ70630
Styrene	ND (0.0010)		8260B		1	10/06/17 19:23	C7J0108	CJ70630
tert-Butylbenzene	ND (0.0010)		8260B		1	10/06/17 19:23	C7J0108	CJ70630
Tertiary-amyl methyl ether	ND (0.0010)		8260B		1	10/06/17 19:23	C7J0108	CJ70630
Tetrachloroethene	ND (0.0010)		8260B		1	10/06/17 19:23	C7J0108	CJ70630

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Former Tidewater Facility
Client Sample ID: M & E MW-2
Date Sampled: 10/03/17 13:40
Percent Solids: N/A
Initial Volume: 5
Final Volume: 5
Extraction Method: 5030B

ESS Laboratory Work Order: 1710102
ESS Laboratory Sample ID: 1710102-09
Sample Matrix: Ground Water
Units: mg/L
Analyst: MD

8260B Volatile Organic Compounds

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
Tetrahydrofuran	ND (0.0050)		8260B		1	10/06/17 19:23	C7J0108	CJ70630
Toluene	ND (0.0010)		8260B		1	10/06/17 19:23	C7J0108	CJ70630
trans-1,2-Dichloroethene	ND (0.0010)		8260B		1	10/06/17 19:23	C7J0108	CJ70630
trans-1,3-Dichloropropene	ND (0.0004)		8260B		1	10/06/17 19:23	C7J0108	CJ70630
Trichloroethene	ND (0.0010)		8260B		1	10/06/17 19:23	C7J0108	CJ70630
Trichlorofluoromethane	ND (0.0010)		8260B		1	10/06/17 19:23	C7J0108	CJ70630
Vinyl Acetate	ND (0.0050)		8260B		1	10/06/17 19:23	C7J0108	CJ70630
Vinyl Chloride	ND (0.0010)		8260B		1	10/06/17 19:23	C7J0108	CJ70630
Xylene O	ND (0.0010)		8260B		1	10/06/17 19:23	C7J0108	CJ70630
Xylene P,M	ND (0.0020)		8260B		1	10/06/17 19:23	C7J0108	CJ70630
Xylenes (Total)	ND (0.0020)		8260B		1	10/06/17 19:23		[CALC]

	%Recovery	*Qualifier*	*Limits*
Surrogate: 1,2-Dichloroethane-d4	*116 %*		*70-130*
Surrogate: 4-Bromofluorobenzene	*92 %*		*70-130*
Surrogate: Dibromofluoromethane	*104 %*		*70-130*
Surrogate: Toluene-d8	*93 %*		*70-130*

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Former Tidewater Facility
Client Sample ID: MW-339S
Date Sampled: 10/03/17 16:05
Percent Solids: N/A
Initial Volume: 5
Final Volume: 5
Extraction Method: 5030B

ESS Laboratory Work Order: 1710102
ESS Laboratory Sample ID: 1710102-10
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	10/06/17 19:51	C7J0108	CJ70630
1,1,1-Trichloroethane	ND (0.0010)		8260B		1	10/06/17 19:51	C7J0108	CJ70630
1,1,2,2-Tetrachloroethane	ND (0.0005)		8260B		1	10/06/17 19:51	C7J0108	CJ70630
1,1,2-Trichloroethane	ND (0.0010)		8260B		1	10/06/17 19:51	C7J0108	CJ70630
1,1-Dichloroethane	ND (0.0010)		8260B		1	10/06/17 19:51	C7J0108	CJ70630
1,1-Dichloroethene	ND (0.0010)		8260B		1	10/06/17 19:51	C7J0108	CJ70630
1,1-Dichloropropene	ND (0.0020)		8260B		1	10/06/17 19:51	C7J0108	CJ70630
1,2,3-Trichlorobenzene	ND (0.0010)		8260B		1	10/06/17 19:51	C7J0108	CJ70630
1,2,3-Trichloropropane	ND (0.0010)		8260B		1	10/06/17 19:51	C7J0108	CJ70630
1,2,4-Trichlorobenzene	ND (0.0010)		8260B		1	10/06/17 19:51	C7J0108	CJ70630
1,2,4-Trimethylbenzene	**0.0038** (0.0010)		8260B		1	10/06/17 19:51	C7J0108	CJ70630
1,2-Dibromo-3-Chloropropane	ND (0.0050)		8260B		1	10/06/17 19:51	C7J0108	CJ70630
1,2-Dibromoethane	ND (0.0010)		8260B		1	10/06/17 19:51	C7J0108	CJ70630
1,2-Dichlorobenzene	ND (0.0010)		8260B		1	10/06/17 19:51	C7J0108	CJ70630
1,2-Dichloroethane	ND (0.0010)		8260B		1	10/06/17 19:51	C7J0108	CJ70630
1,2-Dichloropropane	ND (0.0010)		8260B		1	10/06/17 19:51	C7J0108	CJ70630
1,3,5-Trimethylbenzene	**0.0015** (0.0010)		8260B		1	10/06/17 19:51	C7J0108	CJ70630
1,3-Dichlorobenzene	ND (0.0010)		8260B		1	10/06/17 19:51	C7J0108	CJ70630
1,3-Dichloropropane	ND (0.0010)		8260B		1	10/06/17 19:51	C7J0108	CJ70630
1,4-Dichlorobenzene	ND (0.0010)		8260B		1	10/06/17 19:51	C7J0108	CJ70630
1,4-Dioxane - Screen	ND (0.500)		8260B		1	10/06/17 19:51	C7J0108	CJ70630
1-Chlorohexane	ND (0.0010)		8260B		1	10/06/17 19:51	C7J0108	CJ70630
2,2-Dichloropropane	ND (0.0010)		8260B		1	10/06/17 19:51	C7J0108	CJ70630
2-Butanone	ND (0.0100)		8260B		1	10/06/17 19:51	C7J0108	CJ70630
2-Chlorotoluene	ND (0.0010)		8260B		1	10/06/17 19:51	C7J0108	CJ70630
2-Hexanone	ND (0.0100)		8260B		1	10/06/17 19:51	C7J0108	CJ70630
4-Chlorotoluene	ND (0.0010)		8260B		1	10/06/17 19:51	C7J0108	CJ70630
4-Isopropyltoluene	ND (0.0010)		8260B		1	10/06/17 19:51	C7J0108	CJ70630
4-Methyl-2-Pentanone	ND (0.0250)		8260B		1	10/06/17 19:51	C7J0108	CJ70630
Acetone	ND (0.0100)		8260B		1	10/06/17 19:51	C7J0108	CJ70630
Benzene	ND (0.0010)		8260B		1	10/06/17 19:51	C7J0108	CJ70630
Bromobenzene	ND (0.0020)		8260B		1	10/06/17 19:51	C7J0108	CJ70630

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Former Tidewater Facility
Client Sample ID: MW-339S
Date Sampled: 10/03/17 16:05
Percent Solids: N/A
Initial Volume: 5
Final Volume: 5
Extraction Method: 5030B

ESS Laboratory Work Order: 1710102
ESS Laboratory Sample ID: 1710102-10
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	10/06/17 19:51	C7J0108	CJ70630
Bromodichloromethane	ND (0.0006)		8260B		1	10/06/17 19:51	C7J0108	CJ70630
Bromoform	ND (0.0010)		8260B		1	10/06/17 19:51	C7J0108	CJ70630
Bromomethane	ND (0.0020)		8260B		1	10/06/17 19:51	C7J0108	CJ70630
Carbon Disulfide	ND (0.0010)		8260B		1	10/06/17 19:51	C7J0108	CJ70630
Carbon Tetrachloride	ND (0.0010)		8260B		1	10/06/17 19:51	C7J0108	CJ70630
Chlorobenzene	ND (0.0010)		8260B		1	10/06/17 19:51	C7J0108	CJ70630
Chloroethane	ND (0.0020)		8260B		1	10/06/17 19:51	C7J0108	CJ70630
Chloroform	**0.0045** (0.0010)		8260B		1	10/06/17 19:51	C7J0108	CJ70630
Chloromethane	ND (0.0020)		8260B		1	10/06/17 19:51	C7J0108	CJ70630
cis-1,2-Dichloroethene	ND (0.0010)		8260B		1	10/06/17 19:51	C7J0108	CJ70630
cis-1,3-Dichloropropene	ND (0.0004)		8260B		1	10/06/17 19:51	C7J0108	CJ70630
Dibromochloromethane	ND (0.0010)		8260B		1	10/06/17 19:51	C7J0108	CJ70630
Dibromomethane	ND (0.0010)		8260B		1	10/06/17 19:51	C7J0108	CJ70630
Dichlorodifluoromethane	ND (0.0020)		8260B		1	10/06/17 19:51	C7J0108	CJ70630
Diethyl Ether	ND (0.0010)		8260B		1	10/06/17 19:51	C7J0108	CJ70630
Di-isopropyl ether	ND (0.0010)		8260B		1	10/06/17 19:51	C7J0108	CJ70630
Ethyl tertiary-butyl ether	ND (0.0010)		8260B		1	10/06/17 19:51	C7J0108	CJ70630
Ethylbenzene	ND (0.0010)		8260B		1	10/06/17 19:51	C7J0108	CJ70630
Hexachlorobutadiene	ND (0.0006)		8260B		1	10/06/17 19:51	C7J0108	CJ70630
Hexachloroethane	ND (0.0010)		8260B		1	10/06/17 19:51	C7J0108	CJ70630
Isopropylbenzene	ND (0.0010)		8260B		1	10/06/17 19:51	C7J0108	CJ70630
Methyl tert-Butyl Ether	ND (0.0010)		8260B		1	10/06/17 19:51	C7J0108	CJ70630
Methylene Chloride	ND (0.0020)		8260B		1	10/06/17 19:51	C7J0108	CJ70630
Naphthalene	**0.165** (0.0100)		8260B		10	10/10/17 20:34	C7J0108	CJ70630
n-Butylbenzene	ND (0.0010)		8260B		1	10/06/17 19:51	C7J0108	CJ70630
n-Propylbenzene	ND (0.0010)		8260B		1	10/06/17 19:51	C7J0108	CJ70630
sec-Butylbenzene	ND (0.0010)		8260B		1	10/06/17 19:51	C7J0108	CJ70630
Styrene	ND (0.0010)		8260B		1	10/06/17 19:51	C7J0108	CJ70630
tert-Butylbenzene	ND (0.0010)		8260B		1	10/06/17 19:51	C7J0108	CJ70630
Tertiary-amyl methyl ether	ND (0.0010)		8260B		1	10/06/17 19:51	C7J0108	CJ70630
Tetrachloroethene	ND (0.0010)		8260B		1	10/06/17 19:51	C7J0108	CJ70630

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Former Tidewater Facility
Client Sample ID: MW-339S
Date Sampled: 10/03/17 16:05
Percent Solids: N/A
Initial Volume: 5
Final Volume: 5
Extraction Method: 5030B

ESS Laboratory Work Order: 1710102
ESS Laboratory Sample ID: 1710102-10
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	10/06/17 19:51	C7J0108	CJ70630
Toluene	ND (0.0010)		8260B		1	10/06/17 19:51	C7J0108	CJ70630
trans-1,2-Dichloroethene	ND (0.0010)		8260B		1	10/06/17 19:51	C7J0108	CJ70630
trans-1,3-Dichloropropene	ND (0.0004)		8260B		1	10/06/17 19:51	C7J0108	CJ70630
Trichloroethene	ND (0.0010)		8260B		1	10/06/17 19:51	C7J0108	CJ70630
Trichlorofluoromethane	ND (0.0010)		8260B		1	10/06/17 19:51	C7J0108	CJ70630
Vinyl Acetate	ND (0.0050)		8260B		1	10/06/17 19:51	C7J0108	CJ70630
Vinyl Chloride	ND (0.0010)		8260B		1	10/06/17 19:51	C7J0108	CJ70630
Xylene O	ND (0.0010)		8260B		1	10/06/17 19:51	C7J0108	CJ70630
Xylene P,M	ND (0.0020)		8260B		1	10/06/17 19:51	C7J0108	CJ70630
Xylenes (Total)	ND (0.0020)		8260B		1	10/06/17 19:51		[CALC]

	%Recovery	Qualifier	Limits
Surrogate: 1,2-Dichloroethane-d4	*113 %*		*70-130*
Surrogate: 4-Bromofluorobenzene	*92 %*		*70-130*
Surrogate: Dibromofluoromethane	*103 %*		*70-130*
Surrogate: Toluene-d8	*94 %*		*70-130*

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Former Tidewater Facility

ESS Laboratory Work Order: 1710102

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
8260B Volatile Organic Compounds										
Batch CJ70630 - 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: Former Tidewater Facility

ESS Laboratory Work Order: 1710102

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
8260B Volatile Organic Compounds										
Batch CJ70630 - 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							
Xylenes (Total)	ND	0.0020	mg/L							
Surrogate: 1,2-Dichloroethane-d4	*0.0279*		mg/L	*0.02500*		*112*	*70-130*			
Surrogate: 4-Bromofluorobenzene	*0.0231*		mg/L	*0.02500*		*92*	*70-130*			
Surrogate: Dibromofluoromethane	*0.0248*		mg/L	*0.02500*		*99*	*70-130*			
Surrogate: Toluene-d8	*0.0234*		mg/L	*0.02500*		*94*	*70-130*			
LCS										
1,1,1,2-Tetrachloroethane	8.81		ug/L	10.00		88	70-130			
1,1,1-Trichloroethane	9.94		ug/L	10.00		99	70-130			
1,1,2,2-Tetrachloroethane	9.10		ug/L	10.00		91	70-130			
1,1,2-Trichloroethane	9.84		ug/L	10.00		98	70-130			
1,1-Dichloroethane	9.47		ug/L	10.00		95	70-130			
1,1-Dichloroethene	8.87		ug/L	10.00		89	70-130			
1,1-Dichloropropene	9.66		ug/L	10.00		97	70-130			
1,2,3-Trichlorobenzene	9.31		ug/L	10.00		93	70-130			
1,2,3-Trichloropropane	8.25		ug/L	10.00		82	70-130			

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Former Tidewater Facility

ESS Laboratory Work Order: 1710102

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
8260B Volatile Organic Compounds										
Batch CJ70630 - 5030B										
1,2,4-Trichlorobenzene	9.03		ug/L	10.00		90	70-130			
1,2,4-Trimethylbenzene	9.19		ug/L	10.00		92	70-130			
1,2-Dibromo-3-Chloropropane	7.27		ug/L	10.00		73	70-130			
1,2-Dibromoethane	8.94		ug/L	10.00		89	70-130			
1,2-Dichlorobenzene	9.37		ug/L	10.00		94	70-130			
1,2-Dichloroethane	11.1		ug/L	10.00		111	70-130			
1,2-Dichloropropane	9.64		ug/L	10.00		96	70-130			
1,3,5-Trimethylbenzene	9.14		ug/L	10.00		91	70-130			
1,3-Dichlorobenzene	9.50		ug/L	10.00		95	70-130			
1,3-Dichloropropane	9.70		ug/L	10.00		97	70-130			
1,4-Dichlorobenzene	9.39		ug/L	10.00		94	70-130			
1,4-Dioxane - Screen	190		ug/L	200.0		95	0-332			
1-Chlorohexane	7.50		ug/L	10.00		75	70-130			
2,2-Dichloropropane	9.32		ug/L	10.00		93	70-130			
2-Butanone	48.8		ug/L	50.00		98	70-130			
2-Chlorotoluene	9.06		ug/L	10.00		91	70-130			
2-Hexanone	45.3		ug/L	50.00		91	70-130			
4-Chlorotoluene	9.32		ug/L	10.00		93	70-130			
4-Isopropyltoluene	9.30		ug/L	10.00		93	70-130			
4-Methyl-2-Pentanone	46.0		ug/L	50.00		92	70-130			
Acetone	50.2		ug/L	50.00		100	70-130			
Benzene	9.67		ug/L	10.00		97	70-130			
Bromobenzene	9.14		ug/L	10.00		91	70-130			
Bromochloromethane	9.69		ug/L	10.00		97	70-130			
Bromodichloromethane	9.56		ug/L	10.00		96	70-130			
Bromoform	8.17		ug/L	10.00		82	70-130			
Bromomethane	15.3		ug/L	10.00		153	70-130			B+
Carbon Disulfide	7.67		ug/L	10.00		77	70-130			
Carbon Tetrachloride	8.93		ug/L	10.00		89	70-130			
Chlorobenzene	9.43		ug/L	10.00		94	70-130			
Chloroethane	10.1		ug/L	10.00		101	70-130			
Chloroform	10.1		ug/L	10.00		101	70-130			
Chloromethane	10.8		ug/L	10.00		108	70-130			
cis-1,2-Dichloroethene	9.29		ug/L	10.00		93	70-130			
cis-1,3-Dichloropropene	8.91		ug/L	10.00		89	70-130			
Dibromochloromethane	6.77		ug/L	10.00		68	70-130			B-
Dibromomethane	9.61		ug/L	10.00		96	70-130			
Dichlorodifluoromethane	9.35		ug/L	10.00		94	70-130			
Diethyl Ether	8.99		ug/L	10.00		90	70-130			
Di-isopropyl ether	9.25		ug/L	10.00		92	70-130			
Ethyl tertiary-butyl ether	8.48		ug/L	10.00		85	70-130			
Ethylbenzene	9.21		ug/L	10.00		92	70-130			
Hexachlorobutadiene	9.83		ug/L	10.00		98	70-130			
Hexachloroethane	6.23		ug/L	10.00		62	70-130			B-
Isopropylbenzene	8.56		ug/L	10.00		86	70-130			

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Former Tidewater Facility

ESS Laboratory Work Order: 1710102

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
8260B Volatile Organic Compounds										
Batch CJ70630 - 5030B										
Methyl tert-Butyl Ether	8.86		ug/L	10.00		89	70-130			
Methylene Chloride	9.40		ug/L	10.00		94	70-130			
Naphthalene	8.53		ug/L	10.00		85	70-130			
n-Butylbenzene	9.10		ug/L	10.00		91	70-130			
n-Propylbenzene	9.22		ug/L	10.00		92	70-130			
sec-Butylbenzene	9.06		ug/L	10.00		91	70-130			
Styrene	8.94		ug/L	10.00		89	70-130			
tert-Butylbenzene	9.15		ug/L	10.00		92	70-130			
Tertiary-amyl methyl ether	7.87		ug/L	10.00		79	70-130			
Tetrachloroethene	8.92		ug/L	10.00		89	70-130			
Tetrahydrofuran	8.95		ug/L	10.00		90	70-130			
Toluene	9.42		ug/L	10.00		94	70-130			
trans-1,2-Dichloroethene	9.37		ug/L	10.00		94	70-130			
trans-1,3-Dichloropropene	7.14		ug/L	10.00		71	70-130			
Trichloroethene	10.2		ug/L	10.00		102	70-130			
Trichlorofluoromethane	10.6		ug/L	10.00		106	70-130			
Vinyl Acetate	8.94		ug/L	10.00		89	70-130			
Vinyl Chloride	10.1		ug/L	10.00		101	70-130			
Xylene O	9.38		ug/L	10.00		94	70-130			
Xylene P,M	18.5		ug/L	20.00		92	70-130			
Xylenes (Total)	27.8		mg/L							
Surrogate: 1,2-Dichloroethane-d4	*0.0263*		mg/L	*0.02500*		*105*	*70-130*			
Surrogate: 4-Bromofluorobenzene	*0.0232*		mg/L	*0.02500*		*93*	*70-130*			
Surrogate: Dibromofluoromethane	*0.0256*		mg/L	*0.02500*		*102*	*70-130*			
Surrogate: Toluene-d8	*0.0221*		mg/L	*0.02500*		*88*	*70-130*			
LCS Dup										
1,1,1,2-Tetrachloroethane	8.64		ug/L	10.00		86	70-130	2	25	
1,1,1-Trichloroethane	9.74		ug/L	10.00		97	70-130	2	25	
1,1,2,2-Tetrachloroethane	9.03		ug/L	10.00		90	70-130	0.8	25	
1,1,2-Trichloroethane	9.90		ug/L	10.00		99	70-130	0.6	25	
1,1-Dichloroethane	9.45		ug/L	10.00		94	70-130	0.2	25	
1,1-Dichloroethene	8.90		ug/L	10.00		89	70-130	0.3	25	
1,1-Dichloropropene	9.54		ug/L	10.00		95	70-130	1	25	
1,2,3-Trichlorobenzene	9.23		ug/L	10.00		92	70-130	0.9	25	
1,2,3-Trichloropropane	8.21		ug/L	10.00		82	70-130	0.5	25	
1,2,4-Trichlorobenzene	8.95		ug/L	10.00		90	70-130	0.9	25	
1,2,4-Trimethylbenzene	9.09		ug/L	10.00		91	70-130	1	25	
1,2-Dibromo-3-Chloropropane	7.18		ug/L	10.00		72	70-130	1	25	
1,2-Dibromoethane	8.97		ug/L	10.00		90	70-130	0.3	25	
1,2-Dichlorobenzene	9.24		ug/L	10.00		92	70-130	1	25	
1,2-Dichloroethane	10.9		ug/L	10.00		109	70-130	2	25	
1,2-Dichloropropane	9.46		ug/L	10.00		95	70-130	2	25	
1,3,5-Trimethylbenzene	9.08		ug/L	10.00		91	70-130	0.7	25	
1,3-Dichlorobenzene	9.29		ug/L	10.00		93	70-130	2	25	
1,3-Dichloropropane	9.74		ug/L	10.00		97	70-130	0.4	25	

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Former Tidewater Facility

ESS Laboratory Work Order: 1710102

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
8260B Volatile Organic Compounds										
Batch CJ70630 - 5030B										
1,4-Dichlorobenzene	9.43		ug/L	10.00		94	70-130	0.4	25	
1,4-Dioxane - Screen	191		ug/L	200.0		96	0-332	0.7	200	
1-Chlorohexane	7.59		ug/L	10.00		76	70-130	1	25	
2,2-Dichloropropane	8.77		ug/L	10.00		88	70-130	6	25	
2-Butanone	49.7		ug/L	50.00		99	70-130	2	25	
2-Chlorotoluene	9.10		ug/L	10.00		91	70-130	0.4	25	
2-Hexanone	47.1		ug/L	50.00		94	70-130	4	25	
4-Chlorotoluene	8.99		ug/L	10.00		90	70-130	4	25	
4-Isopropyltoluene	9.32		ug/L	10.00		93	70-130	0.2	25	
4-Methyl-2-Pentanone	46.2		ug/L	50.00		92	70-130	0.4	25	
Acetone	57.9		ug/L	50.00		116	70-130	14	25	
Benzene	9.52		ug/L	10.00		95	70-130	2	25	
Bromobenzene	9.16		ug/L	10.00		92	70-130	0.2	25	
Bromochloromethane	9.45		ug/L	10.00		94	70-130	3	25	
Bromodichloromethane	9.37		ug/L	10.00		94	70-130	2	25	
Bromoform	8.28		ug/L	10.00		83	70-130	1	25	
Bromomethane	14.8		ug/L	10.00		148	70-130	3	25	B+
Carbon Disulfide	7.30		ug/L	10.00		73	70-130	5	25	
Carbon Tetrachloride	8.87		ug/L	10.00		89	70-130	0.7	25	
Chlorobenzene	9.40		ug/L	10.00		94	70-130	0.3	25	
Chloroethane	10.1		ug/L	10.00		101	70-130	0.7	25	
Chloroform	10.1		ug/L	10.00		101	70-130	0.3	25	
Chloromethane	10.2		ug/L	10.00		102	70-130	6	25	
cis-1,2-Dichloroethene	9.07		ug/L	10.00		91	70-130	2	25	
cis-1,3-Dichloropropene	8.71		ug/L	10.00		87	70-130	2	25	
Dibromochloromethane	6.78		ug/L	10.00		68	70-130	0.1	25	B-
Dibromomethane	9.52		ug/L	10.00		95	70-130	0.9	25	
Dichlorodifluoromethane	9.09		ug/L	10.00		91	70-130	3	25	
Diethyl Ether	9.01		ug/L	10.00		90	70-130	0.2	25	
Di-isopropyl ether	9.27		ug/L	10.00		93	70-130	0.2	25	
Ethyl tertiary-butyl ether	8.46		ug/L	10.00		85	70-130	0.2	25	
Ethylbenzene	9.19		ug/L	10.00		92	70-130	0.2	25	
Hexachlorobutadiene	9.76		ug/L	10.00		98	70-130	0.7	25	
Hexachloroethane	6.23		ug/L	10.00		62	70-130	0	25	B-
Isopropylbenzene	8.51		ug/L	10.00		85	70-130	0.6	25	
Methyl tert-Butyl Ether	8.63		ug/L	10.00		86	70-130	3	25	
Methylene Chloride	9.04		ug/L	10.00		90	70-130	4	25	
Naphthalene	8.47		ug/L	10.00		85	70-130	0.7	25	
n-Butylbenzene	9.17		ug/L	10.00		92	70-130	0.8	25	
n-Propylbenzene	9.21		ug/L	10.00		92	70-130	0.1	25	
sec-Butylbenzene	9.07		ug/L	10.00		91	70-130	0.1	25	
Styrene	8.79		ug/L	10.00		88	70-130	2	25	
tert-Butylbenzene	9.02		ug/L	10.00		90	70-130	1	25	
Tertiary-amyl methyl ether	7.72		ug/L	10.00		77	70-130	2	25	
Tetrachloroethene	9.00		ug/L	10.00		90	70-130	0.9	25	

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Former Tidewater Facility

ESS Laboratory Work Order: 1710102

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
8260B Volatile Organic Compounds										
Batch CJ70630 - 5030B										
Tetrahydrofuran	8.86		ug/L	10.00		89	70-130	1	25	
Toluene	9.26		ug/L	10.00		93	70-130	2	25	
trans-1,2-Dichloroethene	9.19		ug/L	10.00		92	70-130	2	25	
trans-1,3-Dichloropropene	6.83		ug/L	10.00		68	70-130	4	25	B-
Trichloroethene	9.73		ug/L	10.00		97	70-130	5	25	
Trichlorofluoromethane	10.4		ug/L	10.00		104	70-130	2	25	
Vinyl Acetate	8.62		ug/L	10.00		86	70-130	4	25	
Vinyl Chloride	9.73		ug/L	10.00		97	70-130	4	25	
Xylene O	9.45		ug/L	10.00		94	70-130	0.7	25	
Xylene P,M	18.5		ug/L	20.00		92	70-130	0	25	
Xylenes (Total)	27.9		mg/L							
Surrogate: 1,2-Dichloroethane-d4	*0.0260*		mg/L	*0.02500*		*104*	*70-130*			
Surrogate: 4-Bromofluorobenzene	*0.0231*		mg/L	*0.02500*		*92*	*70-130*			
Surrogate: Dibromofluoromethane	*0.0252*		mg/L	*0.02500*		*101*	*70-130*			
Surrogate: Toluene-d8	*0.0221*		mg/L	*0.02500*		*89*	*70-130*			
Batch CJ71041 - 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							

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Former Tidewater Facility

ESS Laboratory Work Order: 1710102

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
8260B Volatile Organic Compounds										
Batch CJ71041 - 5030B										
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							
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							

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Former Tidewater Facility

ESS Laboratory Work Order: 1710102

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
8260B Volatile Organic Compounds										
Batch CJ71041 - 5030B										
Xylene P,M	ND	0.0020	mg/L							
Xylenes (Total)	ND	0.0020	mg/L							
Surrogate: 1,2-Dichloroethane-d4	*0.0229*		mg/L	*0.02500*		*92*	*70-130*			
Surrogate: 4-Bromofluorobenzene	*0.0232*		mg/L	*0.02500*		*93*	*70-130*			
Surrogate: Dibromofluoromethane	*0.0223*		mg/L	*0.02500*		*89*	*70-130*			
Surrogate: Toluene-d8	*0.0234*		mg/L	*0.02500*		*94*	*70-130*			
LCS										
1,1,1,2-Tetrachloroethane	8.85		ug/L	10.00		88	70-130			
1,1,1-Trichloroethane	9.24		ug/L	10.00		92	70-130			
1,1,2,2-Tetrachloroethane	9.46		ug/L	10.00		95	70-130			
1,1,2-Trichloroethane	9.84		ug/L	10.00		98	70-130			
1,1-Dichloroethane	9.58		ug/L	10.00		96	70-130			
1,1-Dichloroethene	9.34		ug/L	10.00		93	70-130			
1,1-Dichloropropene	9.73		ug/L	10.00		97	70-130			
1,2,3-Trichlorobenzene	9.49		ug/L	10.00		95	70-130			
1,2,3-Trichloropropane	8.76		ug/L	10.00		88	70-130			
1,2,4-Trichlorobenzene	9.41		ug/L	10.00		94	70-130			
1,2,4-Trimethylbenzene	9.57		ug/L	10.00		96	70-130			
1,2-Dibromo-3-Chloropropane	7.62		ug/L	10.00		76	70-130			
1,2-Dibromoethane	9.18		ug/L	10.00		92	70-130			
1,2-Dichlorobenzene	9.59		ug/L	10.00		96	70-130			
1,2-Dichloroethane	9.81		ug/L	10.00		98	70-130			
1,2-Dichloropropane	10.0		ug/L	10.00		100	70-130			
1,3,5-Trimethylbenzene	9.55		ug/L	10.00		96	70-130			
1,3-Dichlorobenzene	9.61		ug/L	10.00		96	70-130			
1,3-Dichloropropane	9.72		ug/L	10.00		97	70-130			
1,4-Dichlorobenzene	9.77		ug/L	10.00		98	70-130			
1,4-Dioxane - Screen	197		ug/L	200.0		98	0-332			
1-Chlorohexane	8.61		ug/L	10.00		86	70-130			
2,2-Dichloropropane	9.13		ug/L	10.00		91	70-130			
2-Butanone	48.6		ug/L	50.00		97	70-130			
2-Chlorotoluene	9.67		ug/L	10.00		97	70-130			
2-Hexanone	47.5		ug/L	50.00		95	70-130			
4-Chlorotoluene	9.66		ug/L	10.00		97	70-130			
4-Isopropyltoluene	9.52		ug/L	10.00		95	70-130			
4-Methyl-2-Pentanone	48.4		ug/L	50.00		97	70-130			
Acetone	46.9		ug/L	50.00		94	70-130			
Benzene	9.96		ug/L	10.00		100	70-130			
Bromobenzene	9.58		ug/L	10.00		96	70-130			
Bromochloromethane	9.34		ug/L	10.00		93	70-130			
Bromodichloromethane	9.20		ug/L	10.00		92	70-130			
Bromoform	8.34		ug/L	10.00		83	70-130			
Bromomethane	8.72		ug/L	10.00		87	70-130			
Carbon Disulfide	9.26		ug/L	10.00		93	70-130			
Carbon Tetrachloride	8.41		ug/L	10.00		84	70-130			

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Former Tidewater Facility

ESS Laboratory Work Order: 1710102

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
8260B Volatile Organic Compounds										
Batch CJ71041 - 5030B										
Chlorobenzene	9.60		ug/L	10.00		96	70-130			
Chloroethane	11.6		ug/L	10.00		116	70-130			
Chloroform	9.70		ug/L	10.00		97	70-130			
Chloromethane	10.6		ug/L	10.00		106	70-130			
cis-1,2-Dichloroethene	9.58		ug/L	10.00		96	70-130			
cis-1,3-Dichloropropene	9.65		ug/L	10.00		96	70-130			
Dibromochloromethane	7.01		ug/L	10.00		70	70-130			
Dibromomethane	9.32		ug/L	10.00		93	70-130			
Dichlorodifluoromethane	7.92		ug/L	10.00		79	70-130			
Diethyl Ether	9.88		ug/L	10.00		99	70-130			
Di-isopropyl ether	9.58		ug/L	10.00		96	70-130			
Ethyl tertiary-butyl ether	8.96		ug/L	10.00		90	70-130			
Ethylbenzene	9.55		ug/L	10.00		96	70-130			
Hexachlorobutadiene	9.41		ug/L	10.00		94	70-130			
Hexachloroethane	6.75		ug/L	10.00		68	70-130			B-
Isopropylbenzene	9.25		ug/L	10.00		92	70-130			
Methyl tert-Butyl Ether	9.14		ug/L	10.00		91	70-130			
Methylene Chloride	9.62		ug/L	10.00		96	70-130			
Naphthalene	9.27		ug/L	10.00		93	70-130			
n-Butylbenzene	9.52		ug/L	10.00		95	70-130			
n-Propylbenzene	9.86		ug/L	10.00		99	70-130			
sec-Butylbenzene	9.56		ug/L	10.00		96	70-130			
Styrene	9.46		ug/L	10.00		95	70-130			
tert-Butylbenzene	9.51		ug/L	10.00		95	70-130			
Tertiary-amyl methyl ether	8.49		ug/L	10.00		85	70-130			
Tetrachloroethene	8.84		ug/L	10.00		88	70-130			
Tetrahydrofuran	9.65		ug/L	10.00		96	70-130			
Toluene	9.69		ug/L	10.00		97	70-130			
trans-1,2-Dichloroethene	9.66		ug/L	10.00		97	70-130			
trans-1,3-Dichloropropene	7.56		ug/L	10.00		76	70-130			
Trichloroethene	9.94		ug/L	10.00		99	70-130			
Trichlorofluoromethane	9.06		ug/L	10.00		91	70-130			
Vinyl Acetate	9.80		ug/L	10.00		98	70-130			
Vinyl Chloride	10.2		ug/L	10.00		102	70-130			
Xylene O	9.62		ug/L	10.00		96	70-130			
Xylene P,M	19.5		ug/L	20.00		98	70-130			
Xylenes (Total)	29.1		mg/L							
Surrogate: 1,2-Dichloroethane-d4	*0.0225*		mg/L	*0.02500*		*90*	*70-130*			
Surrogate: 4-Bromofluorobenzene	*0.0225*		mg/L	*0.02500*		*90*	*70-130*			
Surrogate: Dibromofluoromethane	*0.0240*		mg/L	*0.02500*		*96*	*70-130*			
Surrogate: Toluene-d8	*0.0223*		mg/L	*0.02500*		*89*	*70-130*			
LCS Dup										
1,1,1,2-Tetrachloroethane	8.70		ug/L	10.00		87	70-130	2	25	
1,1,1-Trichloroethane	9.18		ug/L	10.00		92	70-130	0.7	25	
1,1,2,2-Tetrachloroethane	9.25		ug/L	10.00		92	70-130	2	25	

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Former Tidewater Facility

ESS Laboratory Work Order: 1710102

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
8260B Volatile Organic Compounds										
Batch CJ71041 - 5030B										
1,1,2-Trichloroethane	9.57		ug/L	10.00		96	70-130	3	25	
1,1-Dichloroethane	9.56		ug/L	10.00		96	70-130	0.2	25	
1,1-Dichloroethene	9.56		ug/L	10.00		96	70-130	2	25	
1,1-Dichloropropene	10.1		ug/L	10.00		101	70-130	4	25	
1,2,3-Trichlorobenzene	9.28		ug/L	10.00		93	70-130	2	25	
1,2,3-Trichloropropane	8.54		ug/L	10.00		85	70-130	3	25	
1,2,4-Trichlorobenzene	9.21		ug/L	10.00		92	70-130	2	25	
1,2,4-Trimethylbenzene	9.42		ug/L	10.00		94	70-130	2	25	
1,2-Dibromo-3-Chloropropane	7.72		ug/L	10.00		77	70-130	1	25	
1,2-Dibromoethane	9.03		ug/L	10.00		90	70-130	2	25	
1,2-Dichlorobenzene	9.48		ug/L	10.00		95	70-130	1	25	
1,2-Dichloroethane	9.67		ug/L	10.00		97	70-130	1	25	
1,2-Dichloropropane	9.97		ug/L	10.00		100	70-130	0.3	25	
1,3,5-Trimethylbenzene	9.44		ug/L	10.00		94	70-130	1	25	
1,3-Dichlorobenzene	9.52		ug/L	10.00		95	70-130	0.9	25	
1,3-Dichloropropane	9.53		ug/L	10.00		95	70-130	2	25	
1,4-Dichlorobenzene	9.70		ug/L	10.00		97	70-130	0.7	25	
1,4-Dioxane - Screen	192		ug/L	200.0		96	0-332	3	200	
1-Chlorohexane	8.49		ug/L	10.00		85	70-130	1	25	
2,2-Dichloropropane	9.03		ug/L	10.00		90	70-130	1	25	
2-Butanone	47.1		ug/L	50.00		94	70-130	3	25	
2-Chlorotoluene	9.57		ug/L	10.00		96	70-130	1	25	
2-Hexanone	45.8		ug/L	50.00		92	70-130	4	25	
4-Chlorotoluene	9.68		ug/L	10.00		97	70-130	0.2	25	
4-Isopropyltoluene	9.45		ug/L	10.00		94	70-130	0.7	25	
4-Methyl-2-Pentanone	47.6		ug/L	50.00		95	70-130	1	25	
Acetone	45.5		ug/L	50.00		91	70-130	3	25	
Benzene	9.90		ug/L	10.00		99	70-130	0.6	25	
Bromobenzene	9.62		ug/L	10.00		96	70-130	0.4	25	
Bromochloromethane	9.41		ug/L	10.00		94	70-130	0.7	25	
Bromodichloromethane	9.23		ug/L	10.00		92	70-130	0.3	25	
Bromoform	8.10		ug/L	10.00		81	70-130	3	25	
Bromomethane	9.50		ug/L	10.00		95	70-130	9	25	
Carbon Disulfide	9.06		ug/L	10.00		91	70-130	2	25	
Carbon Tetrachloride	8.53		ug/L	10.00		85	70-130	1	25	
Chlorobenzene	9.50		ug/L	10.00		95	70-130	1	25	
Chloroethane	10.1		ug/L	10.00		101	70-130	13	25	
Chloroform	9.74		ug/L	10.00		97	70-130	0.4	25	
Chloromethane	10.5		ug/L	10.00		105	70-130	0.09	25	
cis-1,2-Dichloroethene	9.49		ug/L	10.00		95	70-130	0.9	25	
cis-1,3-Dichloropropene	9.54		ug/L	10.00		95	70-130	1	25	
Dibromochloromethane	6.92		ug/L	10.00		69	70-130	1	25	B-
Dibromomethane	9.30		ug/L	10.00		93	70-130	0.2	25	
Dichlorodifluoromethane	7.95		ug/L	10.00		80	70-130	0.4	25	
Diethyl Ether	9.70		ug/L	10.00		97	70-130	2	25	

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Former Tidewater Facility

ESS Laboratory Work Order: 1710102

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
8260B Volatile Organic Compounds										
Batch CJ71041 - 5030B										
Di-isopropyl ether	9.43		ug/L	10.00		94	70-130	2	25	
Ethyl tertiary-butyl ether	8.77		ug/L	10.00		88	70-130	2	25	
Ethylbenzene	9.45		ug/L	10.00		94	70-130	1	25	
Hexachlorobutadiene	9.24		ug/L	10.00		92	70-130	2	25	
Hexachloroethane	6.52		ug/L	10.00		65	70-130	3	25	B-
Isopropylbenzene	9.08		ug/L	10.00		91	70-130	2	25	
Methyl tert-Butyl Ether	9.00		ug/L	10.00		90	70-130	2	25	
Methylene Chloride	9.53		ug/L	10.00		95	70-130	0.9	25	
Naphthalene	9.00		ug/L	10.00		90	70-130	3	25	
n-Butylbenzene	9.44		ug/L	10.00		94	70-130	0.8	25	
n-Propylbenzene	9.82		ug/L	10.00		98	70-130	0.4	25	
sec-Butylbenzene	9.42		ug/L	10.00		94	70-130	1	25	
Styrene	9.39		ug/L	10.00		94	70-130	0.7	25	
tert-Butylbenzene	9.43		ug/L	10.00		94	70-130	0.8	25	
Tertiary-amyl methyl ether	8.32		ug/L	10.00		83	70-130	2	25	
Tetrachloroethene	8.60		ug/L	10.00		86	70-130	3	25	
Tetrahydrofuran	8.79		ug/L	10.00		88	70-130	9	25	
Toluene	9.64		ug/L	10.00		96	70-130	0.5	25	
trans-1,2-Dichloroethene	9.62		ug/L	10.00		96	70-130	0.4	25	
trans-1,3-Dichloropropene	7.41		ug/L	10.00		74	70-130	2	25	
Trichloroethene	9.94		ug/L	10.00		99	70-130	0	25	
Trichlorofluoromethane	9.16		ug/L	10.00		92	70-130	1	25	
Vinyl Acetate	9.54		ug/L	10.00		95	70-130	3	25	
Vinyl Chloride	10.4		ug/L	10.00		104	70-130	2	25	
Xylene O	9.41		ug/L	10.00		94	70-130	2	25	
Xylene P,M	19.1		ug/L	20.00		95	70-130	2	25	
Xylenes (Total)	28.5		mg/L							
Surrogate: 1,2-Dichloroethane-d4	*0.0230*		mg/L	*0.02500*		*92*	*70-130*			
Surrogate: 4-Bromofluorobenzene	*0.0225*		mg/L	*0.02500*		*90*	*70-130*			
Surrogate: Dibromofluoromethane	*0.0243*		mg/L	*0.02500*		*97*	*70-130*			
Surrogate: Toluene-d8	*0.0224*		mg/L	*0.02500*		*90*	*70-130*			

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Former Tidewater Facility ESS Laboratory Work Order: 1710102

Notes and Definitions

U	Analyte included in the analysis, but not detected
D	Diluted.
CD+	Continuing Calibration %Diff/Drift is above control limit (CD+).
CD-	Continuing Calibration %Diff/Drift is below control limit (CD-).
B+	Blank Spike recovery is above upper control limit (B+).
B-	Blank Spike recovery is below lower control limit (B-).
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

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Former Tidewater Facility

ESS Laboratory Work Order: 1710102

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: GZA - Providence, RI - GZA/HDM

Shipped/Delivered Via: Client

ESS Project ID: 1710102
Date Received: 10/4/2017
Project Due Date: 10/12/2017
Days for Project: 5 Day

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

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

Sample Receiving Notes:

COC= MW-312S collected@1555, Rec'd 1vial(918) Label=MW-312D collected@1555

COC=MW-337 collected@1430, Rec'd 1vial(910) Label=MW334 collected@1430 10-4-17 JA

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

Sample Number	Container ID	Proper Container	Air Bubbles Present	Sufficient Volume	Container Type	Preservative	Record pH (Cyanide and 608 Pesticides)
01	169928	Yes	No	Yes	VOA Vial - HCl	HCl	
01	169929	Yes	No	Yes	VOA Vial - HCl	HCl	
01	169930	Yes	No	Yes	VOA Vial - HCl	HCl	
02	169925	Yes	No	Yes	VOA Vial - HCl	HCl	
02	169926	Yes	No	Yes	VOA Vial - HCl	HCl	
02	169927	Yes	No	Yes	VOA Vial - HCl	HCl	
03	169922	Yes	No	Yes	VOA Vial - HCl	HCl	
03	169923	Yes	No	Yes	VOA Vial - HCl	HCl	
03	169924	Yes	No	Yes	VOA Vial - HCl	HCl	
04	169919	Yes	No	Yes	VOA Vial - HCl	HCl	
04	169920	Yes	No	Yes	VOA Vial - HCl	HCl	
04	169921	Yes	No	Yes	VOA Vial - HCl	HCl	
05	169916	Yes	No	Yes	VOA Vial - HCl	HCl	
05	169917	Yes	No	Yes	VOA Vial - HCl	HCl	
05	169918	Yes	No	Yes	VOA Vial - HCl	HCl	
06	169913	Yes	No	Yes	VOA Vial - HCl	HCl	
06	169914	Yes	No	Yes	VOA Vial - HCl	HCl	
06	169915	Yes	No	Yes	VOA Vial - HCl	HCl	
07	169910	Yes	No	Yes	VOA Vial - HCl	HCl	
07	169911	Yes	No	Yes	VOA Vial - HCl	HCl	
07	169912	Yes	No	Yes	VOA Vial - HCl	HCl	
08	169907	Yes	No	Yes	VOA Vial - HCl	HCl	
08	169908	Yes	No	Yes	VOA Vial - HCl	HCl	

ESS Laboratory Sample and Cooler Receipt Checklist

Client: GZA - Providence, RI - GZA/HDM

ESS Project ID: 1710102

Date Received: 10/4/2017

08	169909	Yes	No	Yes	VOA Vial - HCl	HCl
09	169904	Yes	No	Yes	VOA Vial - HCl	HCl
09	169905	Yes	No	Yes	VOA Vial - HCl	HCl
09	169906	Yes	No	Yes	VOA Vial - HCl	HCl
10	169901	Yes	No	Yes	VOA Vial - HCl	HCl
10	169902	Yes	No	Yes	VOA Vial - HCl	HCl
10	169903	Yes	No	Yes	VOA Vial - HCl	HCl

2nd Review

Are barcode labels on correct containers? (Yes) No

Completed By: [signature] Date & Time: 10/4/17 1801

Reviewed By: [signature] Date & Time: 10/4/17 1829

Delivered By: [signature] 10/4/17 1829

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 # 710102

Turn Time ✓ 5-Day Rush

Regulatory State RI

Reporting Limits

Is this project for any of the following?: ○CT RCP ○MA MCP ○RGP

Electonic Deliverables ☑ Limit Checker ☒ Standard Excel ☒ Other (Please Specify →) PDF

Company Name	Project #	Project Name
GZA	43654.00	TIDEWATER

Contact Person	Address
SOPHIA NARKIEWICZ	530 BROADWAY

City	State	Zip Code	PO #
PROVIDENCE	RI	02909	

Telephone Number	FAX Number	Email Address
		sophia.narkiewicz@gza.com

ESS Lab ID	Collection Date	Collection Time	Sample Type	Sample Matrix	Sample ID	Analysis: VOC 8260
1	10/3	400	G	GW	MW-109	X
2	10/3	1305	G	GW	MW-314D	X
3	10/3	1320	G	GW	MW-314S	X
4	10/3	1530	G	GW	MW-201	X
5	10/3	1555	G	GW	MW-312S	X
6	10/3	1525	G	GW	MW-312D	X
4	10/3	1430	G	GW	MW-337	X
8	10/3	1415	G	GW	MW-6	X
9	10/3	1340	G	GW	M&E MW-2	X
10	10/3	1605	G	GW	MW-339S	X

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

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

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

Number of Containers per Sample: 3

Laboratory Use Only

Cooler Present: Y

Seals Intact: NA

Cooler Temperature: 5.6 °C Ice

Sampled by : SARA HAUPT, ROWAN HAYES, SARAH MCLOED, Erik Beloff

Comments: RUSH

Please specify "Other" preservative and containers types in this space

Relinquished by: (Signature, Date & Time)	Received By: (Signature, Date & Time)	Relinquished By: (Signature, Date & Time)	Received By: (Signature, Date & Time)
10/4/17 1645	10/4/17 1648		
Relinquished by: (Signature, Date & Time)	Received By: (Signature, Date & Time)	Relinquished By: (Signature, Date & Time)	Received By: (Signature, Date & Time)

CERTIFICATE OF ANALYSIS

Sarah McLeod
GZA GeoEnvironmental, Inc.
530 Broadway
Providence, RI 02909

RE: Former Tidewater Facility (05.0043654.00)
ESS Laboratory Work Order Number: 1710103

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 5:06 pm, Oct 13, 2017

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: Former Tidewater Facility

ESS Laboratory Work Order: 1710103

SAMPLE RECEIPT

The following samples were received on October 04, 2017 for the analyses specified on the enclosed Chain of Custody Record.

Lab Number	Sample Name	Matrix	Analysis
1710103-01	MW-339D	Ground Water	8260B
1710103-02	MW-318D	Ground Water	8260B
1710103-03	MW-318S	Ground Water	8260B
1710103-04	MW-107	Ground Water	8260B
1710103-05	BD10032017	Ground Water	8260B
1710103-06	MW-334S	Ground Water	8260B
1710103-07	MW-334D	Ground Water	8260B
1710103-08	MW-316D	Ground Water	8260B
1710103-09	MW-7	Ground Water	8260B
1710103-10	MW-326S	Ground Water	8260B
1710103-11	MW-326D	Ground Water	8260B
1710103-12	MW-310S	Ground Water	8260B
1710103-13	MW-208	Ground Water	8260B
1710103-14	MW-310D	Ground Water	8260B
1710103-15	MW-333S	Ground Water	8260B
1710103-16	MW-333D	Ground Water	8260B
1710103-17	BD10042017	Ground Water	8260B
1710103-18	Trip Blank	Aqueous	8260B

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Former Tidewater Facility

ESS Laboratory Work Order: 1710103

PROJECT NARRATIVE

8260B Volatile Organic Compounds

C7J0154-CCV1	**Continuing Calibration %Diff/Drift is above control limit (CD+).**
	Vinyl Acetate (32% @ 30%)
C7J0154-CCV1	**Continuing Calibration %Diff/Drift is below control limit (CD-).**
	Tetrachloroethene (38% @ 30%)
C7J0197-CCV1	**Continuing Calibration %Diff/Drift is above control limit (CD+).**
	Vinyl Acetate (36% @ 30%)
C7J0197-CCV1	**Continuing Calibration %Diff/Drift is below control limit (CD-).**
	Bromomethane (54% @ 30%), Tetrachloroethene (39% @ 30%)
CJ71126-BS1	**Blank Spike recovery is below lower control limit (B-).**
	Tetrachloroethene (59% @ 70-130%)
CJ71126-BSD1	**Blank Spike recovery is below lower control limit (B-).**
	Tetrachloroethene (58% @ 70-130%)
CJ71126-BSD1	**Relative percent difference for duplicate is outside of criteria (D+).**
	Acetone (27% @ 25%)
CJ71249-BS1	**Blank Spike recovery is below lower control limit (B-).**
	Bromoform (65% @ 70-130%), Bromomethane (62% @ 70-130%), Tetrachloroethene (60% @ 70-130%)
CJ71249-BSD1	**Blank Spike recovery is below lower control limit (B-).**
	Bromoform (65% @ 70-130%), Bromomethane (64% @ 70-130%), Tetrachloroethene (60% @ 70-130%)

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

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Former Tidewater Facility

ESS Laboratory Work Order: 1710103

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 / 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
5035 - Solid Purge and Trap

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

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Former Tidewater Facility
Client Sample ID: MW-339D
Date Sampled: 10/03/17 16:33
Percent Solids: N/A
Initial Volume: 5
Final Volume: 5
Extraction Method: 5030B

ESS Laboratory Work Order: 1710103
ESS Laboratory Sample ID: 1710103-01
Sample Matrix: Ground Water
Units: mg/L
Analyst: DMC

8260B Volatile Organic Compounds

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
1,1,1,2-Tetrachloroethane	ND (0.0010)		8260B		1	10/12/17 20:46	C7J0197	CJ71249
1,1,1-Trichloroethane	ND (0.0010)		8260B		1	10/12/17 20:46	C7J0197	CJ71249
1,1,2,2-Tetrachloroethane	ND (0.0005)		8260B		1	10/12/17 20:46	C7J0197	CJ71249
1,1,2-Trichloroethane	ND (0.0010)		8260B		1	10/12/17 20:46	C7J0197	CJ71249
1,1-Dichloroethane	ND (0.0010)		8260B		1	10/12/17 20:46	C7J0197	CJ71249
1,1-Dichloroethene	ND (0.0010)		8260B		1	10/12/17 20:46	C7J0197	CJ71249
1,1-Dichloropropene	ND (0.0020)		8260B		1	10/12/17 20:46	C7J0197	CJ71249
1,2,3-Trichlorobenzene	ND (0.0010)		8260B		1	10/12/17 20:46	C7J0197	CJ71249
1,2,3-Trichloropropane	ND (0.0010)		8260B		1	10/12/17 20:46	C7J0197	CJ71249
1,2,4-Trichlorobenzene	ND (0.0010)		8260B		1	10/12/17 20:46	C7J0197	CJ71249
1,2,4-Trimethylbenzene	**0.486** (0.100)		8260B		100	10/12/17 17:38	C7J0197	CJ71249
1,2-Dibromo-3-Chloropropane	ND (0.0050)		8260B		1	10/12/17 20:46	C7J0197	CJ71249
1,2-Dibromoethane	ND (0.0010)		8260B		1	10/12/17 20:46	C7J0197	CJ71249
1,2-Dichlorobenzene	ND (0.0010)		8260B		1	10/12/17 20:46	C7J0197	CJ71249
1,2-Dichloroethane	ND (0.0010)		8260B		1	10/12/17 20:46	C7J0197	CJ71249
1,2-Dichloropropane	ND (0.0010)		8260B		1	10/12/17 20:46	C7J0197	CJ71249
1,3,5-Trimethylbenzene	**0.132** (0.100)		8260B		100	10/12/17 17:38	C7J0197	CJ71249
1,3-Dichlorobenzene	ND (0.0010)		8260B		1	10/12/17 20:46	C7J0197	CJ71249
1,3-Dichloropropane	ND (0.0010)		8260B		1	10/12/17 20:46	C7J0197	CJ71249
1,4-Dichlorobenzene	ND (0.0010)		8260B		1	10/12/17 20:46	C7J0197	CJ71249
1,4-Dioxane - Screen	ND (0.500)		8260B		1	10/12/17 20:46	C7J0197	CJ71249
1-Chlorohexane	ND (0.0010)		8260B		1	10/12/17 20:46	C7J0197	CJ71249
2,2-Dichloropropane	ND (0.0010)		8260B		1	10/12/17 20:46	C7J0197	CJ71249
2-Butanone	ND (0.0100)		8260B		1	10/12/17 20:46	C7J0197	CJ71249
2-Chlorotoluene	ND (0.0010)		8260B		1	10/12/17 20:46	C7J0197	CJ71249
2-Hexanone	ND (0.0100)		8260B		1	10/12/17 20:46	C7J0197	CJ71249
4-Chlorotoluene	ND (0.0010)		8260B		1	10/12/17 20:46	C7J0197	CJ71249
4-Isopropyltoluene	**0.0103** (0.0010)		8260B		1	10/12/17 20:46	C7J0197	CJ71249
4-Methyl-2-Pentanone	ND (0.0250)		8260B		1	10/12/17 20:46	C7J0197	CJ71249
Acetone	ND (0.0100)		8260B		1	10/12/17 20:46	C7J0197	CJ71249
Benzene	**0.0164** (0.0010)		8260B		1	10/12/17 20:46	C7J0197	CJ71249
Bromobenzene	ND (0.0020)		8260B		1	10/12/17 20:46	C7J0197	CJ71249

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Former Tidewater Facility
Client Sample ID: MW-339D
Date Sampled: 10/03/17 16:33
Percent Solids: N/A
Initial Volume: 5
Final Volume: 5
Extraction Method: 5030B

ESS Laboratory Work Order: 1710103
ESS Laboratory Sample ID: 1710103-01
Sample Matrix: Ground Water
Units: mg/L
Analyst: DMC

8260B Volatile Organic Compounds

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
Bromochloromethane	ND (0.0010)		8260B		1	10/12/17 20:46	C7J0197	CJ71249
Bromodichloromethane	ND (0.0006)		8260B		1	10/12/17 20:46	C7J0197	CJ71249
Bromoform	ND (0.0010)		8260B		1	10/12/17 20:46	C7J0197	CJ71249
Bromomethane	ND (0.0020)		8260B		1	10/12/17 20:46	C7J0197	CJ71249
Carbon Disulfide	ND (0.0010)		8260B		1	10/12/17 20:46	C7J0197	CJ71249
Carbon Tetrachloride	ND (0.0010)		8260B		1	10/12/17 20:46	C7J0197	CJ71249
Chlorobenzene	ND (0.0010)		8260B		1	10/12/17 20:46	C7J0197	CJ71249
Chloroethane	ND (0.0020)		8260B		1	10/12/17 20:46	C7J0197	CJ71249
Chloroform	ND (0.0010)		8260B		1	10/12/17 20:46	C7J0197	CJ71249
Chloromethane	ND (0.0020)		8260B		1	10/12/17 20:46	C7J0197	CJ71249
cis-1,2-Dichloroethene	ND (0.0010)		8260B		1	10/12/17 20:46	C7J0197	CJ71249
cis-1,3-Dichloropropene	ND (0.0004)		8260B		1	10/12/17 20:46	C7J0197	CJ71249
Dibromochloromethane	ND (0.0010)		8260B		1	10/12/17 20:46	C7J0197	CJ71249
Dibromomethane	ND (0.0010)		8260B		1	10/12/17 20:46	C7J0197	CJ71249
Dichlorodifluoromethane	ND (0.0020)		8260B		1	10/12/17 20:46	C7J0197	CJ71249
Diethyl Ether	ND (0.0010)		8260B		1	10/12/17 20:46	C7J0197	CJ71249
Di-isopropyl ether	ND (0.0010)		8260B		1	10/12/17 20:46	C7J0197	CJ71249
Ethyl tertiary-butyl ether	ND (0.0010)		8260B		1	10/12/17 20:46	C7J0197	CJ71249
Ethylbenzene	**0.112** (0.100)		8260B		100	10/12/17 17:38	C7J0197	CJ71249
Hexachlorobutadiene	ND (0.0006)		8260B		1	10/12/17 20:46	C7J0197	CJ71249
Hexachloroethane	ND (0.0010)		8260B		1	10/12/17 20:46	C7J0197	CJ71249
Isopropylbenzene	**0.0610** (0.0010)		8260B		1	10/12/17 20:46	C7J0197	CJ71249
Methyl tert-Butyl Ether	ND (0.0010)		8260B		1	10/12/17 20:46	C7J0197	CJ71249
Methylene Chloride	ND (0.0020)		8260B		1	10/12/17 20:46	C7J0197	CJ71249
Naphthalene	**4.36** (0.100)		8260B		100	10/12/17 17:38	C7J0197	CJ71249
n-Butylbenzene	**0.0115** (0.0010)		8260B		1	10/12/17 20:46	C7J0197	CJ71249
n-Propylbenzene	**0.0383** (0.0010)		8260B		1	10/12/17 20:46	C7J0197	CJ71249
sec-Butylbenzene	**0.0016** (0.0010)		8260B		1	10/12/17 20:46	C7J0197	CJ71249
Styrene	**0.0124** (0.0010)		8260B		1	10/12/17 20:46	C7J0197	CJ71249
tert-Butylbenzene	ND (0.0010)		8260B		1	10/12/17 20:46	C7J0197	CJ71249
Tertiary-amyl methyl ether	ND (0.0010)		8260B		1	10/12/17 20:46	C7J0197	CJ71249
Tetrachloroethene	ND (0.0010)		8260B		1	10/12/17 20:46	C7J0197	CJ71249

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Former Tidewater Facility
Client Sample ID: MW-339D
Date Sampled: 10/03/17 16:33
Percent Solids: N/A
Initial Volume: 5
Final Volume: 5
Extraction Method: 5030B

ESS Laboratory Work Order: 1710103
ESS Laboratory Sample ID: 1710103-01
Sample Matrix: Ground Water
Units: mg/L
Analyst: DMC

8260B Volatile Organic Compounds

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
Tetrahydrofuran	ND (0.0050)		8260B		1	10/12/17 20:46	C7J0197	CJ71249
Toluene	**0.0420** (0.0010)		8260B		1	10/12/17 20:46	C7J0197	CJ71249
trans-1,2-Dichloroethene	ND (0.0010)		8260B		1	10/12/17 20:46	C7J0197	CJ71249
trans-1,3-Dichloropropene	ND (0.0004)		8260B		1	10/12/17 20:46	C7J0197	CJ71249
Trichloroethene	ND (0.0010)		8260B		1	10/12/17 20:46	C7J0197	CJ71249
Trichlorofluoromethane	ND (0.0010)		8260B		1	10/12/17 20:46	C7J0197	CJ71249
Vinyl Acetate	ND (0.0050)		8260B		1	10/12/17 20:46	C7J0197	CJ71249
Vinyl Chloride	ND (0.0010)		8260B		1	10/12/17 20:46	C7J0197	CJ71249
Xylene O	**0.311** (0.100)		8260B		100	10/12/17 17:38	C7J0197	CJ71249
Xylene P,M	**0.312** (0.200)		8260B		100	10/12/17 17:38	C7J0197	CJ71249
Xylenes (Total)	**0.623** (0.200)		8260B		100	10/12/17 17:38		[CALC]

	%Recovery	Qualifier	Limits
Surrogate: 1,2-Dichloroethane-d4	*116 %*		*70-130*
Surrogate: 4-Bromofluorobenzene	*116 %*		*70-130*
Surrogate: Dibromofluoromethane	*115 %*		*70-130*
Surrogate: Toluene-d8	*103 %*		*70-130*

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Former Tidewater Facility
Client Sample ID: MW-318D
Date Sampled: 10/03/17 14:53
Percent Solids: N/A
Initial Volume: 5
Final Volume: 5
Extraction Method: 5030B

ESS Laboratory Work Order: 1710103
ESS Laboratory Sample ID: 1710103-02
Sample Matrix: Ground Water
Units: mg/L
Analyst: DMC

8260B Volatile Organic Compounds

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
1,1,1,2-Tetrachloroethane	ND (0.0010)		8260B		1	10/10/17 20:46	C7J0154	CJ71126
1,1,1-Trichloroethane	ND (0.0010)		8260B		1	10/10/17 20:46	C7J0154	CJ71126
1,1,2,2-Tetrachloroethane	ND (0.0005)		8260B		1	10/10/17 20:46	C7J0154	CJ71126
1,1,2-Trichloroethane	ND (0.0010)		8260B		1	10/10/17 20:46	C7J0154	CJ71126
1,1-Dichloroethane	ND (0.0010)		8260B		1	10/10/17 20:46	C7J0154	CJ71126
1,1-Dichloroethene	ND (0.0010)		8260B		1	10/10/17 20:46	C7J0154	CJ71126
1,1-Dichloropropene	ND (0.0020)		8260B		1	10/10/17 20:46	C7J0154	CJ71126
1,2,3-Trichlorobenzene	ND (0.0010)		8260B		1	10/10/17 20:46	C7J0154	CJ71126
1,2,3-Trichloropropane	ND (0.0010)		8260B		1	10/10/17 20:46	C7J0154	CJ71126
1,2,4-Trichlorobenzene	ND (0.0010)		8260B		1	10/10/17 20:46	C7J0154	CJ71126
1,2,4-Trimethylbenzene	ND (0.0010)		8260B		1	10/10/17 20:46	C7J0154	CJ71126
1,2-Dibromo-3-Chloropropane	ND (0.0050)		8260B		1	10/10/17 20:46	C7J0154	CJ71126
1,2-Dibromoethane	ND (0.0010)		8260B		1	10/10/17 20:46	C7J0154	CJ71126
1,2-Dichlorobenzene	ND (0.0010)		8260B		1	10/10/17 20:46	C7J0154	CJ71126
1,2-Dichloroethane	ND (0.0010)		8260B		1	10/10/17 20:46	C7J0154	CJ71126
1,2-Dichloropropane	ND (0.0010)		8260B		1	10/10/17 20:46	C7J0154	CJ71126
1,3,5-Trimethylbenzene	ND (0.0010)		8260B		1	10/10/17 20:46	C7J0154	CJ71126
1,3-Dichlorobenzene	ND (0.0010)		8260B		1	10/10/17 20:46	C7J0154	CJ71126
1,3-Dichloropropane	ND (0.0010)		8260B		1	10/10/17 20:46	C7J0154	CJ71126
1,4-Dichlorobenzene	ND (0.0010)		8260B		1	10/10/17 20:46	C7J0154	CJ71126
1,4-Dioxane - Screen	ND (0.500)		8260B		1	10/10/17 20:46	C7J0154	CJ71126
1-Chlorohexane	ND (0.0010)		8260B		1	10/10/17 20:46	C7J0154	CJ71126
2,2-Dichloropropane	ND (0.0010)		8260B		1	10/10/17 20:46	C7J0154	CJ71126
2-Butanone	ND (0.0100)		8260B		1	10/10/17 20:46	C7J0154	CJ71126
2-Chlorotoluene	ND (0.0010)		8260B		1	10/10/17 20:46	C7J0154	CJ71126
2-Hexanone	ND (0.0100)		8260B		1	10/10/17 20:46	C7J0154	CJ71126
4-Chlorotoluene	ND (0.0010)		8260B		1	10/10/17 20:46	C7J0154	CJ71126
4-Isopropyltoluene	ND (0.0010)		8260B		1	10/10/17 20:46	C7J0154	CJ71126
4-Methyl-2-Pentanone	ND (0.0250)		8260B		1	10/10/17 20:46	C7J0154	CJ71126
Acetone	ND (0.0100)		8260B		1	10/10/17 20:46	C7J0154	CJ71126
Benzene	ND (0.0010)		8260B		1	10/10/17 20:46	C7J0154	CJ71126
Bromobenzene	ND (0.0020)		8260B		1	10/10/17 20:46	C7J0154	CJ71126

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Former Tidewater Facility
Client Sample ID: MW-318D
Date Sampled: 10/03/17 14:53
Percent Solids: N/A
Initial Volume: 5
Final Volume: 5
Extraction Method: 5030B

ESS Laboratory Work Order: 1710103
ESS Laboratory Sample ID: 1710103-02
Sample Matrix: Ground Water
Units: mg/L
Analyst: DMC

8260B Volatile Organic Compounds

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
Bromochloromethane	ND (0.0010)		8260B		1	10/10/17 20:46	C7J0154	CJ71126
Bromodichloromethane	ND (0.0006)		8260B		1	10/10/17 20:46	C7J0154	CJ71126
Bromoform	ND (0.0010)		8260B		1	10/10/17 20:46	C7J0154	CJ71126
Bromomethane	ND (0.0020)		8260B		1	10/10/17 20:46	C7J0154	CJ71126
Carbon Disulfide	ND (0.0010)		8260B		1	10/10/17 20:46	C7J0154	CJ71126
Carbon Tetrachloride	ND (0.0010)		8260B		1	10/10/17 20:46	C7J0154	CJ71126
Chlorobenzene	ND (0.0010)		8260B		1	10/10/17 20:46	C7J0154	CJ71126
Chloroethane	ND (0.0020)		8260B		1	10/10/17 20:46	C7J0154	CJ71126
Chloroform	ND (0.0010)		8260B		1	10/10/17 20:46	C7J0154	CJ71126
Chloromethane	ND (0.0020)		8260B		1	10/10/17 20:46	C7J0154	CJ71126
cis-1,2-Dichloroethene	ND (0.0010)		8260B		1	10/10/17 20:46	C7J0154	CJ71126
cis-1,3-Dichloropropene	ND (0.0004)		8260B		1	10/10/17 20:46	C7J0154	CJ71126
Dibromochloromethane	ND (0.0010)		8260B		1	10/10/17 20:46	C7J0154	CJ71126
Dibromomethane	ND (0.0010)		8260B		1	10/10/17 20:46	C7J0154	CJ71126
Dichlorodifluoromethane	ND (0.0020)		8260B		1	10/10/17 20:46	C7J0154	CJ71126
Diethyl Ether	ND (0.0010)		8260B		1	10/10/17 20:46	C7J0154	CJ71126
Di-isopropyl ether	ND (0.0010)		8260B		1	10/10/17 20:46	C7J0154	CJ71126
Ethyl tertiary-butyl ether	ND (0.0010)		8260B		1	10/10/17 20:46	C7J0154	CJ71126
Ethylbenzene	ND (0.0010)		8260B		1	10/10/17 20:46	C7J0154	CJ71126
Hexachlorobutadiene	ND (0.0006)		8260B		1	10/10/17 20:46	C7J0154	CJ71126
Hexachloroethane	ND (0.0010)		8260B		1	10/10/17 20:46	C7J0154	CJ71126
Isopropylbenzene	ND (0.0010)		8260B		1	10/10/17 20:46	C7J0154	CJ71126
Methyl tert-Butyl Ether	ND (0.0010)		8260B		1	10/10/17 20:46	C7J0154	CJ71126
Methylene Chloride	ND (0.0020)		8260B		1	10/10/17 20:46	C7J0154	CJ71126
Naphthalene	ND (0.0010)		8260B		1	10/10/17 20:46	C7J0154	CJ71126
n-Butylbenzene	ND (0.0010)		8260B		1	10/10/17 20:46	C7J0154	CJ71126
n-Propylbenzene	ND (0.0010)		8260B		1	10/10/17 20:46	C7J0154	CJ71126
sec-Butylbenzene	ND (0.0010)		8260B		1	10/10/17 20:46	C7J0154	CJ71126
Styrene	ND (0.0010)		8260B		1	10/10/17 20:46	C7J0154	CJ71126
tert-Butylbenzene	ND (0.0010)		8260B		1	10/10/17 20:46	C7J0154	CJ71126
Tertiary-amyl methyl ether	ND (0.0010)		8260B		1	10/10/17 20:46	C7J0154	CJ71126
Tetrachloroethene	ND (0.0010)		8260B		1	10/10/17 20:46	C7J0154	CJ71126

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Former Tidewater Facility
Client Sample ID: MW-318D
Date Sampled: 10/03/17 14:53
Percent Solids: N/A
Initial Volume: 5
Final Volume: 5
Extraction Method: 5030B

ESS Laboratory Work Order: 1710103
ESS Laboratory Sample ID: 1710103-02
Sample Matrix: Ground Water
Units: mg/L
Analyst: DMC

8260B Volatile Organic Compounds

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
Tetrahydrofuran	ND (0.0050)		8260B		1	10/10/17 20:46	C7J0154	CJ71126
Toluene	ND (0.0010)		8260B		1	10/10/17 20:46	C7J0154	CJ71126
trans-1,2-Dichloroethene	ND (0.0010)		8260B		1	10/10/17 20:46	C7J0154	CJ71126
trans-1,3-Dichloropropene	ND (0.0004)		8260B		1	10/10/17 20:46	C7J0154	CJ71126
Trichloroethene	ND (0.0010)		8260B		1	10/10/17 20:46	C7J0154	CJ71126
Trichlorofluoromethane	ND (0.0010)		8260B		1	10/10/17 20:46	C7J0154	CJ71126
Vinyl Acetate	ND (0.0050)		8260B		1	10/10/17 20:46	C7J0154	CJ71126
Vinyl Chloride	ND (0.0010)		8260B		1	10/10/17 20:46	C7J0154	CJ71126
Xylene O	ND (0.0010)		8260B		1	10/10/17 20:46	C7J0154	CJ71126
Xylene P,M	ND (0.0020)		8260B		1	10/10/17 20:46	C7J0154	CJ71126
Xylenes (Total)	ND (0.0020)		8260B		1	10/10/17 20:46		[CALC]

	%Recovery	Qualifier	Limits
Surrogate: 1,2-Dichloroethane-d4	*109 %*		*70-130*
Surrogate: 4-Bromofluorobenzene	*105 %*		*70-130*
Surrogate: Dibromofluoromethane	*113 %*		*70-130*
Surrogate: Toluene-d8	*104 %*		*70-130*

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Former Tidewater Facility
Client Sample ID: MW-318S
Date Sampled: 10/03/17 14:35
Percent Solids: N/A
Initial Volume: 5
Final Volume: 5
Extraction Method: 5030B

ESS Laboratory Work Order: 1710103
ESS Laboratory Sample ID: 1710103-03
Sample Matrix: Ground Water
Units: mg/L
Analyst: DMC

8260B Volatile Organic Compounds

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
1,1,1,2-Tetrachloroethane	ND (0.0010)		8260B		1	10/11/17 0:49	C7J0154	CJ71126
1,1,1-Trichloroethane	ND (0.0010)		8260B		1	10/11/17 0:49	C7J0154	CJ71126
1,1,2,2-Tetrachloroethane	ND (0.0005)		8260B		1	10/11/17 0:49	C7J0154	CJ71126
1,1,2-Trichloroethane	ND (0.0010)		8260B		1	10/11/17 0:49	C7J0154	CJ71126
1,1-Dichloroethane	ND (0.0010)		8260B		1	10/11/17 0:49	C7J0154	CJ71126
1,1-Dichloroethene	ND (0.0010)		8260B		1	10/11/17 0:49	C7J0154	CJ71126
1,1-Dichloropropene	ND (0.0020)		8260B		1	10/11/17 0:49	C7J0154	CJ71126
1,2,3-Trichlorobenzene	ND (0.0010)		8260B		1	10/11/17 0:49	C7J0154	CJ71126
1,2,3-Trichloropropane	ND (0.0010)		8260B		1	10/11/17 0:49	C7J0154	CJ71126
1,2,4-Trichlorobenzene	ND (0.0010)		8260B		1	10/11/17 0:49	C7J0154	CJ71126
1,2,4-Trimethylbenzene	**0.0327** (0.0010)		8260B		1	10/11/17 0:49	C7J0154	CJ71126
1,2-Dibromo-3-Chloropropane	ND (0.0050)		8260B		1	10/11/17 0:49	C7J0154	CJ71126
1,2-Dibromoethane	ND (0.0010)		8260B		1	10/11/17 0:49	C7J0154	CJ71126
1,2-Dichlorobenzene	ND (0.0010)		8260B		1	10/11/17 0:49	C7J0154	CJ71126
1,2-Dichloroethane	ND (0.0010)		8260B		1	10/11/17 0:49	C7J0154	CJ71126
1,2-Dichloropropane	ND (0.0010)		8260B		1	10/11/17 0:49	C7J0154	CJ71126
1,3,5-Trimethylbenzene	**0.0139** (0.0010)		8260B		1	10/11/17 0:49	C7J0154	CJ71126
1,3-Dichlorobenzene	ND (0.0010)		8260B		1	10/11/17 0:49	C7J0154	CJ71126
1,3-Dichloropropane	ND (0.0010)		8260B		1	10/11/17 0:49	C7J0154	CJ71126
1,4-Dichlorobenzene	ND (0.0010)		8260B		1	10/11/17 0:49	C7J0154	CJ71126
1,4-Dioxane - Screen	ND (0.500)		8260B		1	10/11/17 0:49	C7J0154	CJ71126
1-Chlorohexane	ND (0.0010)		8260B		1	10/11/17 0:49	C7J0154	CJ71126
2,2-Dichloropropane	ND (0.0010)		8260B		1	10/11/17 0:49	C7J0154	CJ71126
2-Butanone	ND (0.0100)		8260B		1	10/11/17 0:49	C7J0154	CJ71126
2-Chlorotoluene	ND (0.0010)		8260B		1	10/11/17 0:49	C7J0154	CJ71126
2-Hexanone	ND (0.0100)		8260B		1	10/11/17 0:49	C7J0154	CJ71126
4-Chlorotoluene	ND (0.0010)		8260B		1	10/11/17 0:49	C7J0154	CJ71126
4-Isopropyltoluene	ND (0.0010)		8260B		1	10/11/17 0:49	C7J0154	CJ71126
4-Methyl-2-Pentanone	ND (0.0250)		8260B		1	10/11/17 0:49	C7J0154	CJ71126
Acetone	ND (0.0100)		8260B		1	10/11/17 0:49	C7J0154	CJ71126
Benzene	**0.0817** (0.0010)		8260B		1	10/11/17 0:49	C7J0154	CJ71126
Bromobenzene	ND (0.0020)		8260B		1	10/11/17 0:49	C7J0154	CJ71126

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Former Tidewater Facility
Client Sample ID: MW-318S
Date Sampled: 10/03/17 14:35
Percent Solids: N/A
Initial Volume: 5
Final Volume: 5
Extraction Method: 5030B

ESS Laboratory Work Order: 1710103
ESS Laboratory Sample ID: 1710103-03
Sample Matrix: Ground Water
Units: mg/L
Analyst: DMC

8260B Volatile Organic Compounds

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
Bromochloromethane	ND (0.0010)		8260B		1	10/11/17 0:49	C7J0154	CJ71126
Bromodichloromethane	ND (0.0006)		8260B		1	10/11/17 0:49	C7J0154	CJ71126
Bromoform	ND (0.0010)		8260B		1	10/11/17 0:49	C7J0154	CJ71126
Bromomethane	ND (0.0020)		8260B		1	10/11/17 0:49	C7J0154	CJ71126
Carbon Disulfide	ND (0.0010)		8260B		1	10/11/17 0:49	C7J0154	CJ71126
Carbon Tetrachloride	ND (0.0010)		8260B		1	10/11/17 0:49	C7J0154	CJ71126
Chlorobenzene	ND (0.0010)		8260B		1	10/11/17 0:49	C7J0154	CJ71126
Chloroethane	ND (0.0020)		8260B		1	10/11/17 0:49	C7J0154	CJ71126
Chloroform	ND (0.0010)		8260B		1	10/11/17 0:49	C7J0154	CJ71126
Chloromethane	ND (0.0020)		8260B		1	10/11/17 0:49	C7J0154	CJ71126
cis-1,2-Dichloroethene	ND (0.0010)		8260B		1	10/11/17 0:49	C7J0154	CJ71126
cis-1,3-Dichloropropene	ND (0.0004)		8260B		1	10/11/17 0:49	C7J0154	CJ71126
Dibromochloromethane	ND (0.0010)		8260B		1	10/11/17 0:49	C7J0154	CJ71126
Dibromomethane	ND (0.0010)		8260B		1	10/11/17 0:49	C7J0154	CJ71126
Dichlorodifluoromethane	ND (0.0020)		8260B		1	10/11/17 0:49	C7J0154	CJ71126
Diethyl Ether	ND (0.0010)		8260B		1	10/11/17 0:49	C7J0154	CJ71126
Di-isopropyl ether	ND (0.0010)		8260B		1	10/11/17 0:49	C7J0154	CJ71126
Ethyl tertiary-butyl ether	ND (0.0010)		8260B		1	10/11/17 0:49	C7J0154	CJ71126
Ethylbenzene	**0.0082** (0.0010)		8260B		1	10/11/17 0:49	C7J0154	CJ71126
Hexachlorobutadiene	ND (0.0006)		8260B		1	10/11/17 0:49	C7J0154	CJ71126
Hexachloroethane	ND (0.0010)		8260B		1	10/11/17 0:49	C7J0154	CJ71126
Isopropylbenzene	ND (0.0010)		8260B		1	10/11/17 0:49	C7J0154	CJ71126
Methyl tert-Butyl Ether	ND (0.0010)		8260B		1	10/11/17 0:49	C7J0154	CJ71126
Methylene Chloride	ND (0.0020)		8260B		1	10/11/17 0:49	C7J0154	CJ71126
Naphthalene	**0.766** (0.0500)		8260B		50	10/12/17 16:17	C7J0154	CJ71126
n-Butylbenzene	**0.0019** (0.0010)		8260B		1	10/11/17 0:49	C7J0154	CJ71126
n-Propylbenzene	**0.0018** (0.0010)		8260B		1	10/11/17 0:49	C7J0154	CJ71126
sec-Butylbenzene	ND (0.0010)		8260B		1	10/11/17 0:49	C7J0154	CJ71126
Styrene	**0.0043** (0.0010)		8260B		1	10/11/17 0:49	C7J0154	CJ71126
tert-Butylbenzene	ND (0.0010)		8260B		1	10/11/17 0:49	C7J0154	CJ71126
Tertiary-amyl methyl ether	ND (0.0010)		8260B		1	10/11/17 0:49	C7J0154	CJ71126
Tetrachloroethene	ND (0.0010)		8260B		1	10/11/17 0:49	C7J0154	CJ71126

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Former Tidewater Facility
Client Sample ID: MW-318S
Date Sampled: 10/03/17 14:35
Percent Solids: N/A
Initial Volume: 5
Final Volume: 5
Extraction Method: 5030B

ESS Laboratory Work Order: 1710103
ESS Laboratory Sample ID: 1710103-03
Sample Matrix: Ground Water
Units: mg/L
Analyst: DMC

8260B Volatile Organic Compounds

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
Tetrahydrofuran	ND (0.0050)		8260B		1	10/11/17 0:49	C7J0154	CJ71126
Toluene	**0.0666** (0.0010)		8260B		1	10/11/17 0:49	C7J0154	CJ71126
trans-1,2-Dichloroethene	ND (0.0010)		8260B		1	10/11/17 0:49	C7J0154	CJ71126
trans-1,3-Dichloropropene	ND (0.0004)		8260B		1	10/11/17 0:49	C7J0154	CJ71126
Trichloroethene	ND (0.0010)		8260B		1	10/11/17 0:49	C7J0154	CJ71126
Trichlorofluoromethane	ND (0.0010)		8260B		1	10/11/17 0:49	C7J0154	CJ71126
Vinyl Acetate	ND (0.0050)		8260B		1	10/11/17 0:49	C7J0154	CJ71126
Vinyl Chloride	ND (0.0010)		8260B		1	10/11/17 0:49	C7J0154	CJ71126
Xylene O	**0.0330** (0.0010)		8260B		1	10/11/17 0:49	C7J0154	CJ71126
Xylene P,M	**0.0695** (0.0020)		8260B		1	10/11/17 0:49	C7J0154	CJ71126
Xylenes (Total)	**0.102** (0.0020)		8260B		1	10/11/17 0:49		[CALC]

	%Recovery	Qualifier	Limits
Surrogate: 1,2-Dichloroethane-d4	*110 %*		*70-130*
Surrogate: 4-Bromofluorobenzene	*110 %*		*70-130*
Surrogate: Dibromofluoromethane	*114 %*		*70-130*
Surrogate: Toluene-d8	*107 %*		*70-130*

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Former Tidewater Facility
Client Sample ID: MW-107
Date Sampled: 10/03/17 14:24
Percent Solids: N/A
Initial Volume: 5
Final Volume: 5
Extraction Method: 5030B

ESS Laboratory Work Order: 1710103
ESS Laboratory Sample ID: 1710103-04
Sample Matrix: Ground Water
Units: mg/L
Analyst: DMC

8260B Volatile Organic Compounds

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
1,1,1,2-Tetrachloroethane	ND (0.0010)		8260B		1	10/10/17 21:13	C7J0154	CJ71126
1,1,1-Trichloroethane	ND (0.0010)		8260B		1	10/10/17 21:13	C7J0154	CJ71126
1,1,2,2-Tetrachloroethane	ND (0.0005)		8260B		1	10/10/17 21:13	C7J0154	CJ71126
1,1,2-Trichloroethane	ND (0.0010)		8260B		1	10/10/17 21:13	C7J0154	CJ71126
1,1-Dichloroethane	ND (0.0010)		8260B		1	10/10/17 21:13	C7J0154	CJ71126
1,1-Dichloroethene	ND (0.0010)		8260B		1	10/10/17 21:13	C7J0154	CJ71126
1,1-Dichloropropene	ND (0.0020)		8260B		1	10/10/17 21:13	C7J0154	CJ71126
1,2,3-Trichlorobenzene	ND (0.0010)		8260B		1	10/10/17 21:13	C7J0154	CJ71126
1,2,3-Trichloropropane	ND (0.0010)		8260B		1	10/10/17 21:13	C7J0154	CJ71126
1,2,4-Trichlorobenzene	ND (0.0010)		8260B		1	10/10/17 21:13	C7J0154	CJ71126
1,2,4-Trimethylbenzene	ND (0.0010)		8260B		1	10/10/17 21:13	C7J0154	CJ71126
1,2-Dibromo-3-Chloropropane	ND (0.0050)		8260B		1	10/10/17 21:13	C7J0154	CJ71126
1,2-Dibromoethane	ND (0.0010)		8260B		1	10/10/17 21:13	C7J0154	CJ71126
1,2-Dichlorobenzene	ND (0.0010)		8260B		1	10/10/17 21:13	C7J0154	CJ71126
1,2-Dichloroethane	ND (0.0010)		8260B		1	10/10/17 21:13	C7J0154	CJ71126
1,2-Dichloropropane	ND (0.0010)		8260B		1	10/10/17 21:13	C7J0154	CJ71126
1,3,5-Trimethylbenzene	ND (0.0010)		8260B		1	10/10/17 21:13	C7J0154	CJ71126
1,3-Dichlorobenzene	ND (0.0010)		8260B		1	10/10/17 21:13	C7J0154	CJ71126
1,3-Dichloropropane	ND (0.0010)		8260B		1	10/10/17 21:13	C7J0154	CJ71126
1,4-Dichlorobenzene	ND (0.0010)		8260B		1	10/10/17 21:13	C7J0154	CJ71126
1,4-Dioxane - Screen	ND (0.500)		8260B		1	10/10/17 21:13	C7J0154	CJ71126
1-Chlorohexane	ND (0.0010)		8260B		1	10/10/17 21:13	C7J0154	CJ71126
2,2-Dichloropropane	ND (0.0010)		8260B		1	10/10/17 21:13	C7J0154	CJ71126
2-Butanone	ND (0.0100)		8260B		1	10/10/17 21:13	C7J0154	CJ71126
2-Chlorotoluene	ND (0.0010)		8260B		1	10/10/17 21:13	C7J0154	CJ71126
2-Hexanone	ND (0.0100)		8260B		1	10/10/17 21:13	C7J0154	CJ71126
4-Chlorotoluene	ND (0.0010)		8260B		1	10/10/17 21:13	C7J0154	CJ71126
4-Isopropyltoluene	ND (0.0010)		8260B		1	10/10/17 21:13	C7J0154	CJ71126
4-Methyl-2-Pentanone	ND (0.0250)		8260B		1	10/10/17 21:13	C7J0154	CJ71126
Acetone	ND (0.0100)		8260B		1	10/10/17 21:13	C7J0154	CJ71126
Benzene	ND (0.0010)		8260B		1	10/10/17 21:13	C7J0154	CJ71126
Bromobenzene	ND (0.0020)		8260B		1	10/10/17 21:13	C7J0154	CJ71126

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Former Tidewater Facility
Client Sample ID: MW-107
Date Sampled: 10/03/17 14:24
Percent Solids: N/A
Initial Volume: 5
Final Volume: 5
Extraction Method: 5030B

ESS Laboratory Work Order: 1710103
ESS Laboratory Sample ID: 1710103-04
Sample Matrix: Ground Water
Units: mg/L
Analyst: DMC

8260B Volatile Organic Compounds

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
Bromochloromethane	ND (0.0010)		8260B		1	10/10/17 21:13	C7J0154	CJ71126
Bromodichloromethane	ND (0.0006)		8260B		1	10/10/17 21:13	C7J0154	CJ71126
Bromoform	ND (0.0010)		8260B		1	10/10/17 21:13	C7J0154	CJ71126
Bromomethane	ND (0.0020)		8260B		1	10/10/17 21:13	C7J0154	CJ71126
Carbon Disulfide	ND (0.0010)		8260B		1	10/10/17 21:13	C7J0154	CJ71126
Carbon Tetrachloride	ND (0.0010)		8260B		1	10/10/17 21:13	C7J0154	CJ71126
Chlorobenzene	ND (0.0010)		8260B		1	10/10/17 21:13	C7J0154	CJ71126
Chloroethane	ND (0.0020)		8260B		1	10/10/17 21:13	C7J0154	CJ71126
Chloroform	ND (0.0010)		8260B		1	10/10/17 21:13	C7J0154	CJ71126
Chloromethane	ND (0.0020)		8260B		1	10/10/17 21:13	C7J0154	CJ71126
cis-1,2-Dichloroethene	ND (0.0010)		8260B		1	10/10/17 21:13	C7J0154	CJ71126
cis-1,3-Dichloropropene	ND (0.0004)		8260B		1	10/10/17 21:13	C7J0154	CJ71126
Dibromochloromethane	ND (0.0010)		8260B		1	10/10/17 21:13	C7J0154	CJ71126
Dibromomethane	ND (0.0010)		8260B		1	10/10/17 21:13	C7J0154	CJ71126
Dichlorodifluoromethane	ND (0.0020)		8260B		1	10/10/17 21:13	C7J0154	CJ71126
Diethyl Ether	ND (0.0010)		8260B		1	10/10/17 21:13	C7J0154	CJ71126
Di-isopropyl ether	ND (0.0010)		8260B		1	10/10/17 21:13	C7J0154	CJ71126
Ethyl tertiary-butyl ether	ND (0.0010)		8260B		1	10/10/17 21:13	C7J0154	CJ71126
Ethylbenzene	ND (0.0010)		8260B		1	10/10/17 21:13	C7J0154	CJ71126
Hexachlorobutadiene	ND (0.0006)		8260B		1	10/10/17 21:13	C7J0154	CJ71126
Hexachloroethane	ND (0.0010)		8260B		1	10/10/17 21:13	C7J0154	CJ71126
Isopropylbenzene	ND (0.0010)		8260B		1	10/10/17 21:13	C7J0154	CJ71126
Methyl tert-Butyl Ether	ND (0.0010)		8260B		1	10/10/17 21:13	C7J0154	CJ71126
Methylene Chloride	ND (0.0020)		8260B		1	10/10/17 21:13	C7J0154	CJ71126
Naphthalene	ND (0.0010)		8260B		1	10/10/17 21:13	C7J0154	CJ71126
n-Butylbenzene	ND (0.0010)		8260B		1	10/10/17 21:13	C7J0154	CJ71126
n-Propylbenzene	ND (0.0010)		8260B		1	10/10/17 21:13	C7J0154	CJ71126
sec-Butylbenzene	ND (0.0010)		8260B		1	10/10/17 21:13	C7J0154	CJ71126
Styrene	ND (0.0010)		8260B		1	10/10/17 21:13	C7J0154	CJ71126
tert-Butylbenzene	ND (0.0010)		8260B		1	10/10/17 21:13	C7J0154	CJ71126
Tertiary-amyl methyl ether	ND (0.0010)		8260B		1	10/10/17 21:13	C7J0154	CJ71126
Tetrachloroethene	ND (0.0010)		8260B		1	10/10/17 21:13	C7J0154	CJ71126

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Former Tidewater Facility
Client Sample ID: MW-107
Date Sampled: 10/03/17 14:24
Percent Solids: N/A
Initial Volume: 5
Final Volume: 5
Extraction Method: 5030B

ESS Laboratory Work Order: 1710103
ESS Laboratory Sample ID: 1710103-04
Sample Matrix: Ground Water
Units: mg/L
Analyst: DMC

8260B Volatile Organic Compounds

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
Tetrahydrofuran	ND (0.0050)		8260B		1	10/10/17 21:13	C7J0154	CJ71126
Toluene	ND (0.0010)		8260B		1	10/10/17 21:13	C7J0154	CJ71126
trans-1,2-Dichloroethene	ND (0.0010)		8260B		1	10/10/17 21:13	C7J0154	CJ71126
trans-1,3-Dichloropropene	ND (0.0004)		8260B		1	10/10/17 21:13	C7J0154	CJ71126
Trichloroethene	ND (0.0010)		8260B		1	10/10/17 21:13	C7J0154	CJ71126
Trichlorofluoromethane	ND (0.0010)		8260B		1	10/10/17 21:13	C7J0154	CJ71126
Vinyl Acetate	ND (0.0050)		8260B		1	10/10/17 21:13	C7J0154	CJ71126
Vinyl Chloride	ND (0.0010)		8260B		1	10/10/17 21:13	C7J0154	CJ71126
Xylene O	ND (0.0010)		8260B		1	10/10/17 21:13	C7J0154	CJ71126
Xylene P,M	ND (0.0020)		8260B		1	10/10/17 21:13	C7J0154	CJ71126
Xylenes (Total)	ND (0.0020)		8260B		1	10/10/17 21:13		[CALC]

	%Recovery	Qualifier	Limits
Surrogate: 1,2-Dichloroethane-d4	*106 %*		*70-130*
Surrogate: 4-Bromofluorobenzene	*109 %*		*70-130*
Surrogate: Dibromofluoromethane	*109 %*		*70-130*
Surrogate: Toluene-d8	*106 %*		*70-130*

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Former Tidewater Facility
Client Sample ID: BD10032017
Date Sampled: 10/03/17 08:00
Percent Solids: N/A
Initial Volume: 5
Final Volume: 5
Extraction Method: 5030B

ESS Laboratory Work Order: 1710103
ESS Laboratory Sample ID: 1710103-05
Sample Matrix: Ground Water
Units: mg/L
Analyst: DMC

8260B Volatile Organic Compounds

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
1,1,1,2-Tetrachloroethane	ND (0.0010)		8260B		1	10/12/17 20:19	C7J0197	CJ71249
1,1,1-Trichloroethane	ND (0.0010)		8260B		1	10/12/17 20:19	C7J0197	CJ71249
1,1,2,2-Tetrachloroethane	ND (0.0005)		8260B		1	10/12/17 20:19	C7J0197	CJ71249
1,1,2-Trichloroethane	ND (0.0010)		8260B		1	10/12/17 20:19	C7J0197	CJ71249
1,1-Dichloroethane	ND (0.0010)		8260B		1	10/12/17 20:19	C7J0197	CJ71249
1,1-Dichloroethene	ND (0.0010)		8260B		1	10/12/17 20:19	C7J0197	CJ71249
1,1-Dichloropropene	ND (0.0020)		8260B		1	10/12/17 20:19	C7J0197	CJ71249
1,2,3-Trichlorobenzene	ND (0.0010)		8260B		1	10/12/17 20:19	C7J0197	CJ71249
1,2,3-Trichloropropane	ND (0.0010)		8260B		1	10/12/17 20:19	C7J0197	CJ71249
1,2,4-Trichlorobenzene	ND (0.0010)		8260B		1	10/12/17 20:19	C7J0197	CJ71249
1,2,4-Trimethylbenzene	**0.0971** (0.0010)		8260B		1	10/12/17 20:19	C7J0197	CJ71249
1,2-Dibromo-3-Chloropropane	ND (0.0050)		8260B		1	10/12/17 20:19	C7J0197	CJ71249
1,2-Dibromoethane	ND (0.0010)		8260B		1	10/12/17 20:19	C7J0197	CJ71249
1,2-Dichlorobenzene	ND (0.0010)		8260B		1	10/12/17 20:19	C7J0197	CJ71249
1,2-Dichloroethane	ND (0.0010)		8260B		1	10/12/17 20:19	C7J0197	CJ71249
1,2-Dichloropropane	ND (0.0010)		8260B		1	10/12/17 20:19	C7J0197	CJ71249
1,3,5-Trimethylbenzene	**0.0103** (0.0010)		8260B		1	10/12/17 20:19	C7J0197	CJ71249
1,3-Dichlorobenzene	ND (0.0010)		8260B		1	10/12/17 20:19	C7J0197	CJ71249
1,3-Dichloropropane	ND (0.0010)		8260B		1	10/12/17 20:19	C7J0197	CJ71249
1,4-Dichlorobenzene	ND (0.0010)		8260B		1	10/12/17 20:19	C7J0197	CJ71249
1,4-Dioxane - Screen	ND (0.500)		8260B		1	10/12/17 20:19	C7J0197	CJ71249
1-Chlorohexane	ND (0.0010)		8260B		1	10/12/17 20:19	C7J0197	CJ71249
2,2-Dichloropropane	ND (0.0010)		8260B		1	10/12/17 20:19	C7J0197	CJ71249
2-Butanone	ND (0.0100)		8260B		1	10/12/17 20:19	C7J0197	CJ71249
2-Chlorotoluene	ND (0.0010)		8260B		1	10/12/17 20:19	C7J0197	CJ71249
2-Hexanone	ND (0.0100)		8260B		1	10/12/17 20:19	C7J0197	CJ71249
4-Chlorotoluene	ND (0.0010)		8260B		1	10/12/17 20:19	C7J0197	CJ71249
4-Isopropyltoluene	**0.0026** (0.0010)		8260B		1	10/12/17 20:19	C7J0197	CJ71249
4-Methyl-2-Pentanone	ND (0.0250)		8260B		1	10/12/17 20:19	C7J0197	CJ71249
Acetone	ND (0.0100)		8260B		1	10/12/17 20:19	C7J0197	CJ71249
Benzene	**0.0254** (0.0010)		8260B		1	10/12/17 20:19	C7J0197	CJ71249
Bromobenzene	ND (0.0020)		8260B		1	10/12/17 20:19	C7J0197	CJ71249

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Former Tidewater Facility
Client Sample ID: BD10032017
Date Sampled: 10/03/17 08:00
Percent Solids: N/A
Initial Volume: 5
Final Volume: 5
Extraction Method: 5030B

ESS Laboratory Work Order: 1710103
ESS Laboratory Sample ID: 1710103-05
Sample Matrix: Ground Water
Units: mg/L
Analyst: DMC

8260B Volatile Organic Compounds

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
Bromochloromethane	ND (0.0010)		8260B		1	10/12/17 20:19	C7J0197	CJ71249
Bromodichloromethane	ND (0.0006)		8260B		1	10/12/17 20:19	C7J0197	CJ71249
Bromoform	ND (0.0010)		8260B		1	10/12/17 20:19	C7J0197	CJ71249
Bromomethane	ND (0.0020)		8260B		1	10/12/17 20:19	C7J0197	CJ71249
Carbon Disulfide	ND (0.0010)		8260B		1	10/12/17 20:19	C7J0197	CJ71249
Carbon Tetrachloride	ND (0.0010)		8260B		1	10/12/17 20:19	C7J0197	CJ71249
Chlorobenzene	ND (0.0010)		8260B		1	10/12/17 20:19	C7J0197	CJ71249
Chloroethane	ND (0.0020)		8260B		1	10/12/17 20:19	C7J0197	CJ71249
Chloroform	ND (0.0010)		8260B		1	10/12/17 20:19	C7J0197	CJ71249
Chloromethane	ND (0.0020)		8260B		1	10/12/17 20:19	C7J0197	CJ71249
cis-1,2-Dichloroethene	ND (0.0010)		8260B		1	10/12/17 20:19	C7J0197	CJ71249
cis-1,3-Dichloropropene	ND (0.0004)		8260B		1	10/12/17 20:19	C7J0197	CJ71249
Dibromochloromethane	ND (0.0010)		8260B		1	10/12/17 20:19	C7J0197	CJ71249
Dibromomethane	ND (0.0010)		8260B		1	10/12/17 20:19	C7J0197	CJ71249
Dichlorodifluoromethane	ND (0.0020)		8260B		1	10/12/17 20:19	C7J0197	CJ71249
Diethyl Ether	ND (0.0010)		8260B		1	10/12/17 20:19	C7J0197	CJ71249
Di-isopropyl ether	ND (0.0010)		8260B		1	10/12/17 20:19	C7J0197	CJ71249
Ethyl tertiary-butyl ether	ND (0.0010)		8260B		1	10/12/17 20:19	C7J0197	CJ71249
Ethylbenzene	**0.318** (0.0500)		8260B		50	10/12/17 17:11	C7J0197	CJ71249
Hexachlorobutadiene	ND (0.0006)		8260B		1	10/12/17 20:19	C7J0197	CJ71249
Hexachloroethane	ND (0.0010)		8260B		1	10/12/17 20:19	C7J0197	CJ71249
Isopropylbenzene	**0.0206** (0.0010)		8260B		1	10/12/17 20:19	C7J0197	CJ71249
Methyl tert-Butyl Ether	ND (0.0010)		8260B		1	10/12/17 20:19	C7J0197	CJ71249
Methylene Chloride	ND (0.0020)		8260B		1	10/12/17 20:19	C7J0197	CJ71249
Naphthalene	**0.775** (0.0500)		8260B		50	10/12/17 17:11	C7J0197	CJ71249
n-Butylbenzene	ND (0.0010)		8260B		1	10/12/17 20:19	C7J0197	CJ71249
n-Propylbenzene	**0.0093** (0.0010)		8260B		1	10/12/17 20:19	C7J0197	CJ71249
sec-Butylbenzene	**0.0013** (0.0010)		8260B		1	10/12/17 20:19	C7J0197	CJ71249
Styrene	ND (0.0010)		8260B		1	10/12/17 20:19	C7J0197	CJ71249
tert-Butylbenzene	ND (0.0010)		8260B		1	10/12/17 20:19	C7J0197	CJ71249
Tertiary-amyl methyl ether	ND (0.0010)		8260B		1	10/12/17 20:19	C7J0197	CJ71249
Tetrachloroethene	ND (0.0010)		8260B		1	10/12/17 20:19	C7J0197	CJ71249

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Former Tidewater Facility
Client Sample ID: BD10032017
Date Sampled: 10/03/17 08:00
Percent Solids: N/A
Initial Volume: 5
Final Volume: 5
Extraction Method: 5030B

ESS Laboratory Work Order: 1710103
ESS Laboratory Sample ID: 1710103-05
Sample Matrix: Ground Water
Units: mg/L
Analyst: DMC

8260B Volatile Organic Compounds

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
Tetrahydrofuran	ND (0.0050)		8260B		1	10/12/17 20:19	C7J0197	CJ71249
Toluene	**0.0041** (0.0010)		8260B		1	10/12/17 20:19	C7J0197	CJ71249
trans-1,2-Dichloroethene	ND (0.0010)		8260B		1	10/12/17 20:19	C7J0197	CJ71249
trans-1,3-Dichloropropene	ND (0.0004)		8260B		1	10/12/17 20:19	C7J0197	CJ71249
Trichloroethene	ND (0.0010)		8260B		1	10/12/17 20:19	C7J0197	CJ71249
Trichlorofluoromethane	ND (0.0010)		8260B		1	10/12/17 20:19	C7J0197	CJ71249
Vinyl Acetate	ND (0.0050)		8260B		1	10/12/17 20:19	C7J0197	CJ71249
Vinyl Chloride	ND (0.0010)		8260B		1	10/12/17 20:19	C7J0197	CJ71249
Xylene O	**0.0749** (0.0010)		8260B		1	10/12/17 20:19	C7J0197	CJ71249
Xylene P,M	**0.0117** (0.0020)		8260B		1	10/12/17 20:19	C7J0197	CJ71249
Xylenes (Total)	**0.0866** (0.0020)		8260B		1	10/12/17 20:19		[CALC]

	%Recovery	Qualifier	Limits
Surrogate: 1,2-Dichloroethane-d4	*115 %*		*70-130*
Surrogate: 4-Bromofluorobenzene	*112 %*		*70-130*
Surrogate: Dibromofluoromethane	*113 %*		*70-130*
Surrogate: Toluene-d8	*106 %*		*70-130*

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Former Tidewater Facility
Client Sample ID: MW-334S
Date Sampled: 10/04/17 11:40
Percent Solids: N/A
Initial Volume: 5
Final Volume: 5
Extraction Method: 5030B

ESS Laboratory Work Order: 1710103
ESS Laboratory Sample ID: 1710103-06
Sample Matrix: Ground Water
Units: mg/L
Analyst: DMC

8260B Volatile Organic Compounds

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
1,1,1,2-Tetrachloroethane	ND (0.0010)		8260B		1	10/10/17 21:40	C7J0154	CJ71126
1,1,1-Trichloroethane	ND (0.0010)		8260B		1	10/10/17 21:40	C7J0154	CJ71126
1,1,2,2-Tetrachloroethane	ND (0.0005)		8260B		1	10/10/17 21:40	C7J0154	CJ71126
1,1,2-Trichloroethane	ND (0.0010)		8260B		1	10/10/17 21:40	C7J0154	CJ71126
1,1-Dichloroethane	ND (0.0010)		8260B		1	10/10/17 21:40	C7J0154	CJ71126
1,1-Dichloroethene	ND (0.0010)		8260B		1	10/10/17 21:40	C7J0154	CJ71126
1,1-Dichloropropene	ND (0.0020)		8260B		1	10/10/17 21:40	C7J0154	CJ71126
1,2,3-Trichlorobenzene	ND (0.0010)		8260B		1	10/10/17 21:40	C7J0154	CJ71126
1,2,3-Trichloropropane	ND (0.0010)		8260B		1	10/10/17 21:40	C7J0154	CJ71126
1,2,4-Trichlorobenzene	ND (0.0010)		8260B		1	10/10/17 21:40	C7J0154	CJ71126
1,2,4-Trimethylbenzene	**0.0010** (0.0010)		8260B		1	10/10/17 21:40	C7J0154	CJ71126
1,2-Dibromo-3-Chloropropane	ND (0.0050)		8260B		1	10/10/17 21:40	C7J0154	CJ71126
1,2-Dibromoethane	ND (0.0010)		8260B		1	10/10/17 21:40	C7J0154	CJ71126
1,2-Dichlorobenzene	ND (0.0010)		8260B		1	10/10/17 21:40	C7J0154	CJ71126
1,2-Dichloroethane	ND (0.0010)		8260B		1	10/10/17 21:40	C7J0154	CJ71126
1,2-Dichloropropane	ND (0.0010)		8260B		1	10/10/17 21:40	C7J0154	CJ71126
1,3,5-Trimethylbenzene	ND (0.0010)		8260B		1	10/10/17 21:40	C7J0154	CJ71126
1,3-Dichlorobenzene	ND (0.0010)		8260B		1	10/10/17 21:40	C7J0154	CJ71126
1,3-Dichloropropane	ND (0.0010)		8260B		1	10/10/17 21:40	C7J0154	CJ71126
1,4-Dichlorobenzene	ND (0.0010)		8260B		1	10/10/17 21:40	C7J0154	CJ71126
1,4-Dioxane - Screen	ND (0.500)		8260B		1	10/10/17 21:40	C7J0154	CJ71126
1-Chlorohexane	ND (0.0010)		8260B		1	10/10/17 21:40	C7J0154	CJ71126
2,2-Dichloropropane	ND (0.0010)		8260B		1	10/10/17 21:40	C7J0154	CJ71126
2-Butanone	ND (0.0100)		8260B		1	10/10/17 21:40	C7J0154	CJ71126
2-Chlorotoluene	ND (0.0010)		8260B		1	10/10/17 21:40	C7J0154	CJ71126
2-Hexanone	ND (0.0100)		8260B		1	10/10/17 21:40	C7J0154	CJ71126
4-Chlorotoluene	ND (0.0010)		8260B		1	10/10/17 21:40	C7J0154	CJ71126
4-Isopropyltoluene	ND (0.0010)		8260B		1	10/10/17 21:40	C7J0154	CJ71126
4-Methyl-2-Pentanone	ND (0.0250)		8260B		1	10/10/17 21:40	C7J0154	CJ71126
Acetone	ND (0.0100)		8260B		1	10/10/17 21:40	C7J0154	CJ71126
Benzene	**0.0026** (0.0010)		8260B		1	10/10/17 21:40	C7J0154	CJ71126
Bromobenzene	ND (0.0020)		8260B		1	10/10/17 21:40	C7J0154	CJ71126

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Former Tidewater Facility
Client Sample ID: MW-334S
Date Sampled: 10/04/17 11:40
Percent Solids: N/A
Initial Volume: 5
Final Volume: 5
Extraction Method: 5030B

ESS Laboratory Work Order: 1710103
ESS Laboratory Sample ID: 1710103-06
Sample Matrix: Ground Water
Units: mg/L
Analyst: DMC

8260B Volatile Organic Compounds

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
Bromochloromethane	ND (0.0010)		8260B		1	10/10/17 21:40	C7J0154	CJ71126
Bromodichloromethane	ND (0.0006)		8260B		1	10/10/17 21:40	C7J0154	CJ71126
Bromoform	ND (0.0010)		8260B		1	10/10/17 21:40	C7J0154	CJ71126
Bromomethane	ND (0.0020)		8260B		1	10/10/17 21:40	C7J0154	CJ71126
Carbon Disulfide	ND (0.0010)		8260B		1	10/10/17 21:40	C7J0154	CJ71126
Carbon Tetrachloride	ND (0.0010)		8260B		1	10/10/17 21:40	C7J0154	CJ71126
Chlorobenzene	ND (0.0010)		8260B		1	10/10/17 21:40	C7J0154	CJ71126
Chloroethane	ND (0.0020)		8260B		1	10/10/17 21:40	C7J0154	CJ71126
Chloroform	ND (0.0010)		8260B		1	10/10/17 21:40	C7J0154	CJ71126
Chloromethane	ND (0.0020)		8260B		1	10/10/17 21:40	C7J0154	CJ71126
cis-1,2-Dichloroethene	ND (0.0010)		8260B		1	10/10/17 21:40	C7J0154	CJ71126
cis-1,3-Dichloropropene	ND (0.0004)		8260B		1	10/10/17 21:40	C7J0154	CJ71126
Dibromochloromethane	ND (0.0010)		8260B		1	10/10/17 21:40	C7J0154	CJ71126
Dibromomethane	ND (0.0010)		8260B		1	10/10/17 21:40	C7J0154	CJ71126
Dichlorodifluoromethane	ND (0.0020)		8260B		1	10/10/17 21:40	C7J0154	CJ71126
Diethyl Ether	ND (0.0010)		8260B		1	10/10/17 21:40	C7J0154	CJ71126
Di-isopropyl ether	ND (0.0010)		8260B		1	10/10/17 21:40	C7J0154	CJ71126
Ethyl tertiary-butyl ether	ND (0.0010)		8260B		1	10/10/17 21:40	C7J0154	CJ71126
Ethylbenzene	ND (0.0010)		8260B		1	10/10/17 21:40	C7J0154	CJ71126
Hexachlorobutadiene	ND (0.0006)		8260B		1	10/10/17 21:40	C7J0154	CJ71126
Hexachloroethane	ND (0.0010)		8260B		1	10/10/17 21:40	C7J0154	CJ71126
Isopropylbenzene	ND (0.0010)		8260B		1	10/10/17 21:40	C7J0154	CJ71126
Methyl tert-Butyl Ether	ND (0.0010)		8260B		1	10/10/17 21:40	C7J0154	CJ71126
Methylene Chloride	ND (0.0020)		8260B		1	10/10/17 21:40	C7J0154	CJ71126
Naphthalene	**0.0265** (0.0010)		8260B		1	10/10/17 21:40	C7J0154	CJ71126
n-Butylbenzene	ND (0.0010)		8260B		1	10/10/17 21:40	C7J0154	CJ71126
n-Propylbenzene	ND (0.0010)		8260B		1	10/10/17 21:40	C7J0154	CJ71126
sec-Butylbenzene	ND (0.0010)		8260B		1	10/10/17 21:40	C7J0154	CJ71126
Styrene	ND (0.0010)		8260B		1	10/10/17 21:40	C7J0154	CJ71126
tert-Butylbenzene	ND (0.0010)		8260B		1	10/10/17 21:40	C7J0154	CJ71126
Tertiary-amyl methyl ether	ND (0.0010)		8260B		1	10/10/17 21:40	C7J0154	CJ71126
Tetrachloroethene	ND (0.0010)		8260B		1	10/10/17 21:40	C7J0154	CJ71126

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Former Tidewater Facility
Client Sample ID: MW-334S
Date Sampled: 10/04/17 11:40
Percent Solids: N/A
Initial Volume: 5
Final Volume: 5
Extraction Method: 5030B

ESS Laboratory Work Order: 1710103
ESS Laboratory Sample ID: 1710103-06
Sample Matrix: Ground Water
Units: mg/L
Analyst: DMC

8260B Volatile Organic Compounds

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
Tetrahydrofuran	ND (0.0050)		8260B		1	10/10/17 21:40	C7J0154	CJ71126
Toluene	**0.0012** (0.0010)		8260B		1	10/10/17 21:40	C7J0154	CJ71126
trans-1,2-Dichloroethene	ND (0.0010)		8260B		1	10/10/17 21:40	C7J0154	CJ71126
trans-1,3-Dichloropropene	ND (0.0004)		8260B		1	10/10/17 21:40	C7J0154	CJ71126
Trichloroethene	ND (0.0010)		8260B		1	10/10/17 21:40	C7J0154	CJ71126
Trichlorofluoromethane	ND (0.0010)		8260B		1	10/10/17 21:40	C7J0154	CJ71126
Vinyl Acetate	ND (0.0050)		8260B		1	10/10/17 21:40	C7J0154	CJ71126
Vinyl Chloride	ND (0.0010)		8260B		1	10/10/17 21:40	C7J0154	CJ71126
Xylene O	ND (0.0010)		8260B		1	10/10/17 21:40	C7J0154	CJ71126
Xylene P,M	ND (0.0020)		8260B		1	10/10/17 21:40	C7J0154	CJ71126
Xylenes (Total)	ND (0.0020)		8260B		1	10/10/17 21:40		[CALC]

	%Recovery	Qualifier	Limits
Surrogate: 1,2-Dichloroethane-d4	*105 %*		*70-130*
Surrogate: 4-Bromofluorobenzene	*107 %*		*70-130*
Surrogate: Dibromofluoromethane	*111 %*		*70-130*
Surrogate: Toluene-d8	*104 %*		*70-130*

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Former Tidewater Facility
Client Sample ID: MW-334D
Date Sampled: 10/04/17 11:40
Percent Solids: N/A
Initial Volume: 5
Final Volume: 5
Extraction Method: 5030B

ESS Laboratory Work Order: 1710103
ESS Laboratory Sample ID: 1710103-07
Sample Matrix: Ground Water
Units: mg/L
Analyst: DMC

8260B Volatile Organic Compounds

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
1,1,1,2-Tetrachloroethane	ND (0.0010)		8260B		1	10/10/17 22:07	C7J0154	CJ71126
1,1,1-Trichloroethane	ND (0.0010)		8260B		1	10/10/17 22:07	C7J0154	CJ71126
1,1,2,2-Tetrachloroethane	ND (0.0005)		8260B		1	10/10/17 22:07	C7J0154	CJ71126
1,1,2-Trichloroethane	ND (0.0010)		8260B		1	10/10/17 22:07	C7J0154	CJ71126
1,1-Dichloroethane	ND (0.0010)		8260B		1	10/10/17 22:07	C7J0154	CJ71126
1,1-Dichloroethene	ND (0.0010)		8260B		1	10/10/17 22:07	C7J0154	CJ71126
1,1-Dichloropropene	ND (0.0020)		8260B		1	10/10/17 22:07	C7J0154	CJ71126
1,2,3-Trichlorobenzene	ND (0.0010)		8260B		1	10/10/17 22:07	C7J0154	CJ71126
1,2,3-Trichloropropane	ND (0.0010)		8260B		1	10/10/17 22:07	C7J0154	CJ71126
1,2,4-Trichlorobenzene	ND (0.0010)		8260B		1	10/10/17 22:07	C7J0154	CJ71126
1,2,4-Trimethylbenzene	ND (0.0010)		8260B		1	10/10/17 22:07	C7J0154	CJ71126
1,2-Dibromo-3-Chloropropane	ND (0.0050)		8260B		1	10/10/17 22:07	C7J0154	CJ71126
1,2-Dibromoethane	ND (0.0010)		8260B		1	10/10/17 22:07	C7J0154	CJ71126
1,2-Dichlorobenzene	ND (0.0010)		8260B		1	10/10/17 22:07	C7J0154	CJ71126
1,2-Dichloroethane	ND (0.0010)		8260B		1	10/10/17 22:07	C7J0154	CJ71126
1,2-Dichloropropane	ND (0.0010)		8260B		1	10/10/17 22:07	C7J0154	CJ71126
1,3,5-Trimethylbenzene	ND (0.0010)		8260B		1	10/10/17 22:07	C7J0154	CJ71126
1,3-Dichlorobenzene	ND (0.0010)		8260B		1	10/10/17 22:07	C7J0154	CJ71126
1,3-Dichloropropane	ND (0.0010)		8260B		1	10/10/17 22:07	C7J0154	CJ71126
1,4-Dichlorobenzene	ND (0.0010)		8260B		1	10/10/17 22:07	C7J0154	CJ71126
1,4-Dioxane - Screen	ND (0.500)		8260B		1	10/10/17 22:07	C7J0154	CJ71126
1-Chlorohexane	ND (0.0010)		8260B		1	10/10/17 22:07	C7J0154	CJ71126
2,2-Dichloropropane	ND (0.0010)		8260B		1	10/10/17 22:07	C7J0154	CJ71126
2-Butanone	ND (0.0100)		8260B		1	10/10/17 22:07	C7J0154	CJ71126
2-Chlorotoluene	ND (0.0010)		8260B		1	10/10/17 22:07	C7J0154	CJ71126
2-Hexanone	ND (0.0100)		8260B		1	10/10/17 22:07	C7J0154	CJ71126
4-Chlorotoluene	ND (0.0010)		8260B		1	10/10/17 22:07	C7J0154	CJ71126
4-Isopropyltoluene	ND (0.0010)		8260B		1	10/10/17 22:07	C7J0154	CJ71126
4-Methyl-2-Pentanone	ND (0.0250)		8260B		1	10/10/17 22:07	C7J0154	CJ71126
Acetone	ND (0.0100)		8260B		1	10/10/17 22:07	C7J0154	CJ71126
Benzene	**0.0012** (0.0010)		8260B		1	10/10/17 22:07	C7J0154	CJ71126
Bromobenzene	ND (0.0020)		8260B		1	10/10/17 22:07	C7J0154	CJ71126

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Former Tidewater Facility
Client Sample ID: MW-334D
Date Sampled: 10/04/17 11:40
Percent Solids: N/A
Initial Volume: 5
Final Volume: 5
Extraction Method: 5030B

ESS Laboratory Work Order: 1710103
ESS Laboratory Sample ID: 1710103-07
Sample Matrix: Ground Water
Units: mg/L
Analyst: DMC

8260B Volatile Organic Compounds

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
Bromochloromethane	ND (0.0010)		8260B		1	10/10/17 22:07	C7J0154	CJ71126
Bromodichloromethane	ND (0.0006)		8260B		1	10/10/17 22:07	C7J0154	CJ71126
Bromoform	ND (0.0010)		8260B		1	10/10/17 22:07	C7J0154	CJ71126
Bromomethane	ND (0.0020)		8260B		1	10/10/17 22:07	C7J0154	CJ71126
Carbon Disulfide	ND (0.0010)		8260B		1	10/10/17 22:07	C7J0154	CJ71126
Carbon Tetrachloride	ND (0.0010)		8260B		1	10/10/17 22:07	C7J0154	CJ71126
Chlorobenzene	ND (0.0010)		8260B		1	10/10/17 22:07	C7J0154	CJ71126
Chloroethane	ND (0.0020)		8260B		1	10/10/17 22:07	C7J0154	CJ71126
Chloroform	ND (0.0010)		8260B		1	10/10/17 22:07	C7J0154	CJ71126
Chloromethane	ND (0.0020)		8260B		1	10/10/17 22:07	C7J0154	CJ71126
cis-1,2-Dichloroethene	ND (0.0010)		8260B		1	10/10/17 22:07	C7J0154	CJ71126
cis-1,3-Dichloropropene	ND (0.0004)		8260B		1	10/10/17 22:07	C7J0154	CJ71126
Dibromochloromethane	ND (0.0010)		8260B		1	10/10/17 22:07	C7J0154	CJ71126
Dibromomethane	ND (0.0010)		8260B		1	10/10/17 22:07	C7J0154	CJ71126
Dichlorodifluoromethane	ND (0.0020)		8260B		1	10/10/17 22:07	C7J0154	CJ71126
Diethyl Ether	ND (0.0010)		8260B		1	10/10/17 22:07	C7J0154	CJ71126
Di-isopropyl ether	ND (0.0010)		8260B		1	10/10/17 22:07	C7J0154	CJ71126
Ethyl tertiary-butyl ether	ND (0.0010)		8260B		1	10/10/17 22:07	C7J0154	CJ71126
Ethylbenzene	ND (0.0010)		8260B		1	10/10/17 22:07	C7J0154	CJ71126
Hexachlorobutadiene	ND (0.0006)		8260B		1	10/10/17 22:07	C7J0154	CJ71126
Hexachloroethane	ND (0.0010)		8260B		1	10/10/17 22:07	C7J0154	CJ71126
Isopropylbenzene	ND (0.0010)		8260B		1	10/10/17 22:07	C7J0154	CJ71126
Methyl tert-Butyl Ether	ND (0.0010)		8260B		1	10/10/17 22:07	C7J0154	CJ71126
Methylene Chloride	ND (0.0020)		8260B		1	10/10/17 22:07	C7J0154	CJ71126
Naphthalene	**0.0100** (0.0010)		8260B		1	10/10/17 22:07	C7J0154	CJ71126
n-Butylbenzene	ND (0.0010)		8260B		1	10/10/17 22:07	C7J0154	CJ71126
n-Propylbenzene	ND (0.0010)		8260B		1	10/10/17 22:07	C7J0154	CJ71126
sec-Butylbenzene	ND (0.0010)		8260B		1	10/10/17 22:07	C7J0154	CJ71126
Styrene	ND (0.0010)		8260B		1	10/10/17 22:07	C7J0154	CJ71126
tert-Butylbenzene	ND (0.0010)		8260B		1	10/10/17 22:07	C7J0154	CJ71126
Tertiary-amyl methyl ether	ND (0.0010)		8260B		1	10/10/17 22:07	C7J0154	CJ71126
Tetrachloroethene	ND (0.0010)		8260B		1	10/10/17 22:07	C7J0154	CJ71126

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Former Tidewater Facility
Client Sample ID: MW-334D
Date Sampled: 10/04/17 11:40
Percent Solids: N/A
Initial Volume: 5
Final Volume: 5
Extraction Method: 5030B

ESS Laboratory Work Order: 1710103
ESS Laboratory Sample ID: 1710103-07
Sample Matrix: Ground Water
Units: mg/L
Analyst: DMC

8260B Volatile Organic Compounds

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
Tetrahydrofuran	ND (0.0050)		8260B		1	10/10/17 22:07	C7J0154	CJ71126
Toluene	ND (0.0010)		8260B		1	10/10/17 22:07	C7J0154	CJ71126
trans-1,2-Dichloroethene	ND (0.0010)		8260B		1	10/10/17 22:07	C7J0154	CJ71126
trans-1,3-Dichloropropene	ND (0.0004)		8260B		1	10/10/17 22:07	C7J0154	CJ71126
Trichloroethene	**0.0013** (0.0010)		8260B		1	10/10/17 22:07	C7J0154	CJ71126
Trichlorofluoromethane	ND (0.0010)		8260B		1	10/10/17 22:07	C7J0154	CJ71126
Vinyl Acetate	ND (0.0050)		8260B		1	10/10/17 22:07	C7J0154	CJ71126
Vinyl Chloride	ND (0.0010)		8260B		1	10/10/17 22:07	C7J0154	CJ71126
Xylene O	ND (0.0010)		8260B		1	10/10/17 22:07	C7J0154	CJ71126
Xylene P,M	ND (0.0020)		8260B		1	10/10/17 22:07	C7J0154	CJ71126
Xylenes (Total)	ND (0.0020)		8260B		1	10/10/17 22:07		[CALC]

	%Recovery	Qualifier	Limits
Surrogate: 1,2-Dichloroethane-d4	*108 %*		*70-130*
Surrogate: 4-Bromofluorobenzene	*108 %*		*70-130*
Surrogate: Dibromofluoromethane	*112 %*		*70-130*
Surrogate: Toluene-d8	*107 %*		*70-130*

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Former Tidewater Facility
Client Sample ID: MW-316D
Date Sampled: 10/04/17 11:30
Percent Solids: N/A
Initial Volume: 5
Final Volume: 5
Extraction Method: 5030B

ESS Laboratory Work Order: 1710103
ESS Laboratory Sample ID: 1710103-08
Sample Matrix: Ground Water
Units: mg/L
Analyst: DMC

8260B Volatile Organic Compounds

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
1,1,1,2-Tetrachloroethane	ND (0.0010)		8260B		1	10/10/17 22:34	C7J0154	CJ71126
1,1,1-Trichloroethane	ND (0.0010)		8260B		1	10/10/17 22:34	C7J0154	CJ71126
1,1,2,2-Tetrachloroethane	ND (0.0005)		8260B		1	10/10/17 22:34	C7J0154	CJ71126
1,1,2-Trichloroethane	ND (0.0010)		8260B		1	10/10/17 22:34	C7J0154	CJ71126
1,1-Dichloroethane	ND (0.0010)		8260B		1	10/10/17 22:34	C7J0154	CJ71126
1,1-Dichloroethene	ND (0.0010)		8260B		1	10/10/17 22:34	C7J0154	CJ71126
1,1-Dichloropropene	ND (0.0020)		8260B		1	10/10/17 22:34	C7J0154	CJ71126
1,2,3-Trichlorobenzene	ND (0.0010)		8260B		1	10/10/17 22:34	C7J0154	CJ71126
1,2,3-Trichloropropane	ND (0.0010)		8260B		1	10/10/17 22:34	C7J0154	CJ71126
1,2,4-Trichlorobenzene	ND (0.0010)		8260B		1	10/10/17 22:34	C7J0154	CJ71126
1,2,4-Trimethylbenzene	ND (0.0010)		8260B		1	10/10/17 22:34	C7J0154	CJ71126
1,2-Dibromo-3-Chloropropane	ND (0.0050)		8260B		1	10/10/17 22:34	C7J0154	CJ71126
1,2-Dibromoethane	ND (0.0010)		8260B		1	10/10/17 22:34	C7J0154	CJ71126
1,2-Dichlorobenzene	ND (0.0010)		8260B		1	10/10/17 22:34	C7J0154	CJ71126
1,2-Dichloroethane	ND (0.0010)		8260B		1	10/10/17 22:34	C7J0154	CJ71126
1,2-Dichloropropane	ND (0.0010)		8260B		1	10/10/17 22:34	C7J0154	CJ71126
1,3,5-Trimethylbenzene	ND (0.0010)		8260B		1	10/10/17 22:34	C7J0154	CJ71126
1,3-Dichlorobenzene	ND (0.0010)		8260B		1	10/10/17 22:34	C7J0154	CJ71126
1,3-Dichloropropane	ND (0.0010)		8260B		1	10/10/17 22:34	C7J0154	CJ71126
1,4-Dichlorobenzene	ND (0.0010)		8260B		1	10/10/17 22:34	C7J0154	CJ71126
1,4-Dioxane - Screen	ND (0.500)		8260B		1	10/10/17 22:34	C7J0154	CJ71126
1-Chlorohexane	ND (0.0010)		8260B		1	10/10/17 22:34	C7J0154	CJ71126
2,2-Dichloropropane	ND (0.0010)		8260B		1	10/10/17 22:34	C7J0154	CJ71126
2-Butanone	ND (0.0100)		8260B		1	10/10/17 22:34	C7J0154	CJ71126
2-Chlorotoluene	ND (0.0010)		8260B		1	10/10/17 22:34	C7J0154	CJ71126
2-Hexanone	ND (0.0100)		8260B		1	10/10/17 22:34	C7J0154	CJ71126
4-Chlorotoluene	ND (0.0010)		8260B		1	10/10/17 22:34	C7J0154	CJ71126
4-Isopropyltoluene	ND (0.0010)		8260B		1	10/10/17 22:34	C7J0154	CJ71126
4-Methyl-2-Pentanone	ND (0.0250)		8260B		1	10/10/17 22:34	C7J0154	CJ71126
Acetone	ND (0.0100)		8260B		1	10/10/17 22:34	C7J0154	CJ71126
Benzene	ND (0.0010)		8260B		1	10/10/17 22:34	C7J0154	CJ71126
Bromobenzene	ND (0.0020)		8260B		1	10/10/17 22:34	C7J0154	CJ71126

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Former Tidewater Facility
Client Sample ID: MW-316D
Date Sampled: 10/04/17 11:30
Percent Solids: N/A
Initial Volume: 5
Final Volume: 5
Extraction Method: 5030B

ESS Laboratory Work Order: 1710103
ESS Laboratory Sample ID: 1710103-08
Sample Matrix: Ground Water
Units: mg/L
Analyst: DMC

8260B Volatile Organic Compounds

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
Bromochloromethane	ND (0.0010)		8260B		1	10/10/17 22:34	C7J0154	CJ71126
Bromodichloromethane	ND (0.0006)		8260B		1	10/10/17 22:34	C7J0154	CJ71126
Bromoform	ND (0.0010)		8260B		1	10/10/17 22:34	C7J0154	CJ71126
Bromomethane	ND (0.0020)		8260B		1	10/10/17 22:34	C7J0154	CJ71126
Carbon Disulfide	ND (0.0010)		8260B		1	10/10/17 22:34	C7J0154	CJ71126
Carbon Tetrachloride	ND (0.0010)		8260B		1	10/10/17 22:34	C7J0154	CJ71126
Chlorobenzene	ND (0.0010)		8260B		1	10/10/17 22:34	C7J0154	CJ71126
Chloroethane	ND (0.0020)		8260B		1	10/10/17 22:34	C7J0154	CJ71126
Chloroform	**0.0013** (0.0010)		8260B		1	10/10/17 22:34	C7J0154	CJ71126
Chloromethane	ND (0.0020)		8260B		1	10/10/17 22:34	C7J0154	CJ71126
cis-1,2-Dichloroethene	ND (0.0010)		8260B		1	10/10/17 22:34	C7J0154	CJ71126
cis-1,3-Dichloropropene	ND (0.0004)		8260B		1	10/10/17 22:34	C7J0154	CJ71126
Dibromochloromethane	ND (0.0010)		8260B		1	10/10/17 22:34	C7J0154	CJ71126
Dibromomethane	ND (0.0010)		8260B		1	10/10/17 22:34	C7J0154	CJ71126
Dichlorodifluoromethane	ND (0.0020)		8260B		1	10/10/17 22:34	C7J0154	CJ71126
Diethyl Ether	ND (0.0010)		8260B		1	10/10/17 22:34	C7J0154	CJ71126
Di-isopropyl ether	ND (0.0010)		8260B		1	10/10/17 22:34	C7J0154	CJ71126
Ethyl tertiary-butyl ether	ND (0.0010)		8260B		1	10/10/17 22:34	C7J0154	CJ71126
Ethylbenzene	ND (0.0010)		8260B		1	10/10/17 22:34	C7J0154	CJ71126
Hexachlorobutadiene	ND (0.0006)		8260B		1	10/10/17 22:34	C7J0154	CJ71126
Hexachloroethane	ND (0.0010)		8260B		1	10/10/17 22:34	C7J0154	CJ71126
Isopropylbenzene	ND (0.0010)		8260B		1	10/10/17 22:34	C7J0154	CJ71126
Methyl tert-Butyl Ether	ND (0.0010)		8260B		1	10/10/17 22:34	C7J0154	CJ71126
Methylene Chloride	ND (0.0020)		8260B		1	10/10/17 22:34	C7J0154	CJ71126
Naphthalene	ND (0.0010)		8260B		1	10/10/17 22:34	C7J0154	CJ71126
n-Butylbenzene	ND (0.0010)		8260B		1	10/10/17 22:34	C7J0154	CJ71126
n-Propylbenzene	ND (0.0010)		8260B		1	10/10/17 22:34	C7J0154	CJ71126
sec-Butylbenzene	ND (0.0010)		8260B		1	10/10/17 22:34	C7J0154	CJ71126
Styrene	ND (0.0010)		8260B		1	10/10/17 22:34	C7J0154	CJ71126
tert-Butylbenzene	ND (0.0010)		8260B		1	10/10/17 22:34	C7J0154	CJ71126
Tertiary-amyl methyl ether	ND (0.0010)		8260B		1	10/10/17 22:34	C7J0154	CJ71126
Tetrachloroethene	ND (0.0010)		8260B		1	10/10/17 22:34	C7J0154	CJ71126

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Former Tidewater Facility
Client Sample ID: MW-316D
Date Sampled: 10/04/17 11:30
Percent Solids: N/A
Initial Volume: 5
Final Volume: 5
Extraction Method: 5030B

ESS Laboratory Work Order: 1710103
ESS Laboratory Sample ID: 1710103-08
Sample Matrix: Ground Water
Units: mg/L
Analyst: DMC

8260B Volatile Organic Compounds

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
Tetrahydrofuran	ND (0.0050)		8260B		1	10/10/17 22:34	C7J0154	CJ71126
Toluene	ND (0.0010)		8260B		1	10/10/17 22:34	C7J0154	CJ71126
trans-1,2-Dichloroethene	ND (0.0010)		8260B		1	10/10/17 22:34	C7J0154	CJ71126
trans-1,3-Dichloropropene	ND (0.0004)		8260B		1	10/10/17 22:34	C7J0154	CJ71126
Trichloroethene	ND (0.0010)		8260B		1	10/10/17 22:34	C7J0154	CJ71126
Trichlorofluoromethane	ND (0.0010)		8260B		1	10/10/17 22:34	C7J0154	CJ71126
Vinyl Acetate	ND (0.0050)		8260B		1	10/10/17 22:34	C7J0154	CJ71126
Vinyl Chloride	ND (0.0010)		8260B		1	10/10/17 22:34	C7J0154	CJ71126
Xylene O	ND (0.0010)		8260B		1	10/10/17 22:34	C7J0154	CJ71126
Xylene P,M	ND (0.0020)		8260B		1	10/10/17 22:34	C7J0154	CJ71126
Xylenes (Total)	ND (0.0020)		8260B		1	10/10/17 22:34		[CALC]

	%Recovery	Qualifier	Limits
Surrogate: 1,2-Dichloroethane-d4	*109 %*		*70-130*
Surrogate: 4-Bromofluorobenzene	*108 %*		*70-130*
Surrogate: Dibromofluoromethane	*112 %*		*70-130*
Surrogate: Toluene-d8	*108 %*		*70-130*

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Former Tidewater Facility
Client Sample ID: MW-7
Date Sampled: 10/04/17 10:25
Percent Solids: N/A
Initial Volume: 5
Final Volume: 5
Extraction Method: 5030B

ESS Laboratory Work Order: 1710103
ESS Laboratory Sample ID: 1710103-09
Sample Matrix: Ground Water
Units: mg/L
Analyst: DMC

8260B Volatile Organic Compounds

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
1,1,1,2-Tetrachloroethane	ND (0.0010)		8260B		1	10/10/17 23:01	C7J0154	CJ71126
1,1,1-Trichloroethane	ND (0.0010)		8260B		1	10/10/17 23:01	C7J0154	CJ71126
1,1,2,2-Tetrachloroethane	ND (0.0005)		8260B		1	10/10/17 23:01	C7J0154	CJ71126
1,1,2-Trichloroethane	ND (0.0010)		8260B		1	10/10/17 23:01	C7J0154	CJ71126
1,1-Dichloroethane	ND (0.0010)		8260B		1	10/10/17 23:01	C7J0154	CJ71126
1,1-Dichloroethene	ND (0.0010)		8260B		1	10/10/17 23:01	C7J0154	CJ71126
1,1-Dichloropropene	ND (0.0020)		8260B		1	10/10/17 23:01	C7J0154	CJ71126
1,2,3-Trichlorobenzene	ND (0.0010)		8260B		1	10/10/17 23:01	C7J0154	CJ71126
1,2,3-Trichloropropane	ND (0.0010)		8260B		1	10/10/17 23:01	C7J0154	CJ71126
1,2,4-Trichlorobenzene	ND (0.0010)		8260B		1	10/10/17 23:01	C7J0154	CJ71126
1,2,4-Trimethylbenzene	ND (0.0010)		8260B		1	10/10/17 23:01	C7J0154	CJ71126
1,2-Dibromo-3-Chloropropane	ND (0.0050)		8260B		1	10/10/17 23:01	C7J0154	CJ71126
1,2-Dibromoethane	ND (0.0010)		8260B		1	10/10/17 23:01	C7J0154	CJ71126
1,2-Dichlorobenzene	ND (0.0010)		8260B		1	10/10/17 23:01	C7J0154	CJ71126
1,2-Dichloroethane	ND (0.0010)		8260B		1	10/10/17 23:01	C7J0154	CJ71126
1,2-Dichloropropane	ND (0.0010)		8260B		1	10/10/17 23:01	C7J0154	CJ71126
1,3,5-Trimethylbenzene	ND (0.0010)		8260B		1	10/10/17 23:01	C7J0154	CJ71126
1,3-Dichlorobenzene	ND (0.0010)		8260B		1	10/10/17 23:01	C7J0154	CJ71126
1,3-Dichloropropane	ND (0.0010)		8260B		1	10/10/17 23:01	C7J0154	CJ71126
1,4-Dichlorobenzene	ND (0.0010)		8260B		1	10/10/17 23:01	C7J0154	CJ71126
1,4-Dioxane - Screen	ND (0.500)		8260B		1	10/10/17 23:01	C7J0154	CJ71126
1-Chlorohexane	ND (0.0010)		8260B		1	10/10/17 23:01	C7J0154	CJ71126
2,2-Dichloropropane	ND (0.0010)		8260B		1	10/10/17 23:01	C7J0154	CJ71126
2-Butanone	ND (0.0100)		8260B		1	10/10/17 23:01	C7J0154	CJ71126
2-Chlorotoluene	ND (0.0010)		8260B		1	10/10/17 23:01	C7J0154	CJ71126
2-Hexanone	ND (0.0100)		8260B		1	10/10/17 23:01	C7J0154	CJ71126
4-Chlorotoluene	ND (0.0010)		8260B		1	10/10/17 23:01	C7J0154	CJ71126
4-Isopropyltoluene	ND (0.0010)		8260B		1	10/10/17 23:01	C7J0154	CJ71126
4-Methyl-2-Pentanone	ND (0.0250)		8260B		1	10/10/17 23:01	C7J0154	CJ71126
Acetone	ND (0.0100)		8260B		1	10/10/17 23:01	C7J0154	CJ71126
Benzene	ND (0.0010)		8260B		1	10/10/17 23:01	C7J0154	CJ71126
Bromobenzene	ND (0.0020)		8260B		1	10/10/17 23:01	C7J0154	CJ71126

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Former Tidewater Facility
Client Sample ID: MW-7
Date Sampled: 10/04/17 10:25
Percent Solids: N/A
Initial Volume: 5
Final Volume: 5
Extraction Method: 5030B

ESS Laboratory Work Order: 1710103
ESS Laboratory Sample ID: 1710103-09
Sample Matrix: Ground Water
Units: mg/L
Analyst: DMC

8260B Volatile Organic Compounds

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
Bromochloromethane	ND (0.0010)		8260B		1	10/10/17 23:01	C7J0154	CJ71126
Bromodichloromethane	ND (0.0006)		8260B		1	10/10/17 23:01	C7J0154	CJ71126
Bromoform	ND (0.0010)		8260B		1	10/10/17 23:01	C7J0154	CJ71126
Bromomethane	ND (0.0020)		8260B		1	10/10/17 23:01	C7J0154	CJ71126
Carbon Disulfide	ND (0.0010)		8260B		1	10/10/17 23:01	C7J0154	CJ71126
Carbon Tetrachloride	ND (0.0010)		8260B		1	10/10/17 23:01	C7J0154	CJ71126
Chlorobenzene	ND (0.0010)		8260B		1	10/10/17 23:01	C7J0154	CJ71126
Chloroethane	ND (0.0020)		8260B		1	10/10/17 23:01	C7J0154	CJ71126
Chloroform	ND (0.0010)		8260B		1	10/10/17 23:01	C7J0154	CJ71126
Chloromethane	ND (0.0020)		8260B		1	10/10/17 23:01	C7J0154	CJ71126
cis-1,2-Dichloroethene	ND (0.0010)		8260B		1	10/10/17 23:01	C7J0154	CJ71126
cis-1,3-Dichloropropene	ND (0.0004)		8260B		1	10/10/17 23:01	C7J0154	CJ71126
Dibromochloromethane	ND (0.0010)		8260B		1	10/10/17 23:01	C7J0154	CJ71126
Dibromomethane	ND (0.0010)		8260B		1	10/10/17 23:01	C7J0154	CJ71126
Dichlorodifluoromethane	ND (0.0020)		8260B		1	10/10/17 23:01	C7J0154	CJ71126
Diethyl Ether	ND (0.0010)		8260B		1	10/10/17 23:01	C7J0154	CJ71126
Di-isopropyl ether	ND (0.0010)		8260B		1	10/10/17 23:01	C7J0154	CJ71126
Ethyl tertiary-butyl ether	ND (0.0010)		8260B		1	10/10/17 23:01	C7J0154	CJ71126
Ethylbenzene	ND (0.0010)		8260B		1	10/10/17 23:01	C7J0154	CJ71126
Hexachlorobutadiene	ND (0.0006)		8260B		1	10/10/17 23:01	C7J0154	CJ71126
Hexachloroethane	ND (0.0010)		8260B		1	10/10/17 23:01	C7J0154	CJ71126
Isopropylbenzene	ND (0.0010)		8260B		1	10/10/17 23:01	C7J0154	CJ71126
Methyl tert-Butyl Ether	ND (0.0010)		8260B		1	10/10/17 23:01	C7J0154	CJ71126
Methylene Chloride	ND (0.0020)		8260B		1	10/10/17 23:01	C7J0154	CJ71126
Naphthalene	ND (0.0010)		8260B		1	10/10/17 23:01	C7J0154	CJ71126
n-Butylbenzene	ND (0.0010)		8260B		1	10/10/17 23:01	C7J0154	CJ71126
n-Propylbenzene	ND (0.0010)		8260B		1	10/10/17 23:01	C7J0154	CJ71126
sec-Butylbenzene	ND (0.0010)		8260B		1	10/10/17 23:01	C7J0154	CJ71126
Styrene	ND (0.0010)		8260B		1	10/10/17 23:01	C7J0154	CJ71126
tert-Butylbenzene	ND (0.0010)		8260B		1	10/10/17 23:01	C7J0154	CJ71126
Tertiary-amyl methyl ether	ND (0.0010)		8260B		1	10/10/17 23:01	C7J0154	CJ71126
Tetrachloroethene	ND (0.0010)		8260B		1	10/10/17 23:01	C7J0154	CJ71126

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Former Tidewater Facility
Client Sample ID: MW-7
Date Sampled: 10/04/17 10:25
Percent Solids: N/A
Initial Volume: 5
Final Volume: 5
Extraction Method: 5030B

ESS Laboratory Work Order: 1710103
ESS Laboratory Sample ID: 1710103-09
Sample Matrix: Ground Water
Units: mg/L
Analyst: DMC

8260B Volatile Organic Compounds

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
Tetrahydrofuran	ND (0.0050)		8260B		1	10/10/17 23:01	C7J0154	CJ71126
Toluene	ND (0.0010)		8260B		1	10/10/17 23:01	C7J0154	CJ71126
trans-1,2-Dichloroethene	ND (0.0010)		8260B		1	10/10/17 23:01	C7J0154	CJ71126
trans-1,3-Dichloropropene	ND (0.0004)		8260B		1	10/10/17 23:01	C7J0154	CJ71126
Trichloroethene	ND (0.0010)		8260B		1	10/10/17 23:01	C7J0154	CJ71126
Trichlorofluoromethane	ND (0.0010)		8260B		1	10/10/17 23:01	C7J0154	CJ71126
Vinyl Acetate	ND (0.0050)		8260B		1	10/10/17 23:01	C7J0154	CJ71126
Vinyl Chloride	ND (0.0010)		8260B		1	10/10/17 23:01	C7J0154	CJ71126
Xylene O	ND (0.0010)		8260B		1	10/10/17 23:01	C7J0154	CJ71126
Xylene P,M	ND (0.0020)		8260B		1	10/10/17 23:01	C7J0154	CJ71126
Xylenes (Total)	ND (0.0020)		8260B		1	10/10/17 23:01		[CALC]

	%Recovery	Qualifier	Limits
Surrogate: 1,2-Dichloroethane-d4	*106 %*		*70-130*
Surrogate: 4-Bromofluorobenzene	*108 %*		*70-130*
Surrogate: Dibromofluoromethane	*110 %*		*70-130*
Surrogate: Toluene-d8	*108 %*		*70-130*

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Former Tidewater Facility
Client Sample ID: MW-326S
Date Sampled: 10/04/17 13:50
Percent Solids: N/A
Initial Volume: 5
Final Volume: 5
Extraction Method: 5030B

ESS Laboratory Work Order: 1710103
ESS Laboratory Sample ID: 1710103-10
Sample Matrix: Ground Water
Units: mg/L
Analyst: DMC

8260B Volatile Organic Compounds

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
1,1,1,2-Tetrachloroethane	ND (0.0010)		8260B		1	10/12/17 19:26	C7J0197	CJ71249
1,1,1-Trichloroethane	ND (0.0010)		8260B		1	10/12/17 19:26	C7J0197	CJ71249
1,1,2,2-Tetrachloroethane	ND (0.0005)		8260B		1	10/12/17 19:26	C7J0197	CJ71249
1,1,2-Trichloroethane	ND (0.0010)		8260B		1	10/12/17 19:26	C7J0197	CJ71249
1,1-Dichloroethane	ND (0.0010)		8260B		1	10/12/17 19:26	C7J0197	CJ71249
1,1-Dichloroethene	ND (0.0010)		8260B		1	10/12/17 19:26	C7J0197	CJ71249
1,1-Dichloropropene	ND (0.0020)		8260B		1	10/12/17 19:26	C7J0197	CJ71249
1,2,3-Trichlorobenzene	ND (0.0010)		8260B		1	10/12/17 19:26	C7J0197	CJ71249
1,2,3-Trichloropropane	ND (0.0010)		8260B		1	10/12/17 19:26	C7J0197	CJ71249
1,2,4-Trichlorobenzene	ND (0.0010)		8260B		1	10/12/17 19:26	C7J0197	CJ71249
1,2,4-Trimethylbenzene	**0.0839** (0.0010)		8260B		1	10/12/17 19:26	C7J0197	CJ71249
1,2-Dibromo-3-Chloropropane	ND (0.0050)		8260B		1	10/12/17 19:26	C7J0197	CJ71249
1,2-Dibromoethane	ND (0.0010)		8260B		1	10/12/17 19:26	C7J0197	CJ71249
1,2-Dichlorobenzene	ND (0.0010)		8260B		1	10/12/17 19:26	C7J0197	CJ71249
1,2-Dichloroethane	ND (0.0010)		8260B		1	10/12/17 19:26	C7J0197	CJ71249
1,2-Dichloropropane	ND (0.0010)		8260B		1	10/12/17 19:26	C7J0197	CJ71249
1,3,5-Trimethylbenzene	**0.0110** (0.0010)		8260B		1	10/12/17 19:26	C7J0197	CJ71249
1,3-Dichlorobenzene	ND (0.0010)		8260B		1	10/12/17 19:26	C7J0197	CJ71249
1,3-Dichloropropane	ND (0.0010)		8260B		1	10/12/17 19:26	C7J0197	CJ71249
1,4-Dichlorobenzene	ND (0.0010)		8260B		1	10/12/17 19:26	C7J0197	CJ71249
1,4-Dioxane - Screen	ND (0.500)		8260B		1	10/12/17 19:26	C7J0197	CJ71249
1-Chlorohexane	ND (0.0010)		8260B		1	10/12/17 19:26	C7J0197	CJ71249
2,2-Dichloropropane	ND (0.0010)		8260B		1	10/12/17 19:26	C7J0197	CJ71249
2-Butanone	ND (0.0100)		8260B		1	10/12/17 19:26	C7J0197	CJ71249
2-Chlorotoluene	ND (0.0010)		8260B		1	10/12/17 19:26	C7J0197	CJ71249
2-Hexanone	ND (0.0100)		8260B		1	10/12/17 19:26	C7J0197	CJ71249
4-Chlorotoluene	ND (0.0010)		8260B		1	10/12/17 19:26	C7J0197	CJ71249
4-Isopropyltoluene	ND (0.0010)		8260B		1	10/12/17 19:26	C7J0197	CJ71249
4-Methyl-2-Pentanone	ND (0.0250)		8260B		1	10/12/17 19:26	C7J0197	CJ71249
Acetone	ND (0.0100)		8260B		1	10/12/17 19:26	C7J0197	CJ71249
Benzene	**0.981** (0.0100)		8260B		10	10/12/17 15:23	C7J0197	CJ71249
Bromobenzene	ND (0.0020)		8260B		1	10/12/17 19:26	C7J0197	CJ71249

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Former Tidewater Facility
Client Sample ID: MW-326S
Date Sampled: 10/04/17 13:50
Percent Solids: N/A
Initial Volume: 5
Final Volume: 5
Extraction Method: 5030B

ESS Laboratory Work Order: 1710103
ESS Laboratory Sample ID: 1710103-10
Sample Matrix: Ground Water
Units: mg/L
Analyst: DMC

8260B Volatile Organic Compounds

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
Bromochloromethane	ND (0.0010)		8260B		1	10/12/17 19:26	C7J0197	CJ71249
Bromodichloromethane	ND (0.0006)		8260B		1	10/12/17 19:26	C7J0197	CJ71249
Bromoform	ND (0.0010)		8260B		1	10/12/17 19:26	C7J0197	CJ71249
Bromomethane	ND (0.0020)		8260B		1	10/12/17 19:26	C7J0197	CJ71249
Carbon Disulfide	ND (0.0010)		8260B		1	10/12/17 19:26	C7J0197	CJ71249
Carbon Tetrachloride	ND (0.0010)		8260B		1	10/12/17 19:26	C7J0197	CJ71249
Chlorobenzene	ND (0.0010)		8260B		1	10/12/17 19:26	C7J0197	CJ71249
Chloroethane	ND (0.0020)		8260B		1	10/12/17 19:26	C7J0197	CJ71249
Chloroform	ND (0.0010)		8260B		1	10/12/17 19:26	C7J0197	CJ71249
Chloromethane	ND (0.0020)		8260B		1	10/12/17 19:26	C7J0197	CJ71249
cis-1,2-Dichloroethene	ND (0.0010)		8260B		1	10/12/17 19:26	C7J0197	CJ71249
cis-1,3-Dichloropropene	ND (0.0004)		8260B		1	10/12/17 19:26	C7J0197	CJ71249
Dibromochloromethane	ND (0.0010)		8260B		1	10/12/17 19:26	C7J0197	CJ71249
Dibromomethane	ND (0.0010)		8260B		1	10/12/17 19:26	C7J0197	CJ71249
Dichlorodifluoromethane	ND (0.0020)		8260B		1	10/12/17 19:26	C7J0197	CJ71249
Diethyl Ether	ND (0.0010)		8260B		1	10/12/17 19:26	C7J0197	CJ71249
Di-isopropyl ether	ND (0.0010)		8260B		1	10/12/17 19:26	C7J0197	CJ71249
Ethyl tertiary-butyl ether	ND (0.0010)		8260B		1	10/12/17 19:26	C7J0197	CJ71249
Ethylbenzene	**0.210** (0.0100)		8260B		10	10/12/17 15:23	C7J0197	CJ71249
Hexachlorobutadiene	ND (0.0006)		8260B		1	10/12/17 19:26	C7J0197	CJ71249
Hexachloroethane	ND (0.0010)		8260B		1	10/12/17 19:26	C7J0197	CJ71249
Isopropylbenzene	**0.0490** (0.0010)		8260B		1	10/12/17 19:26	C7J0197	CJ71249
Methyl tert-Butyl Ether	ND (0.0010)		8260B		1	10/12/17 19:26	C7J0197	CJ71249
Methylene Chloride	ND (0.0020)		8260B		1	10/12/17 19:26	C7J0197	CJ71249
Naphthalene	**0.197** (0.0100)		8260B		10	10/12/17 15:23	C7J0197	CJ71249
n-Butylbenzene	ND (0.0010)		8260B		1	10/12/17 19:26	C7J0197	CJ71249
n-Propylbenzene	**0.0156** (0.0010)		8260B		1	10/12/17 19:26	C7J0197	CJ71249
sec-Butylbenzene	ND (0.0010)		8260B		1	10/12/17 19:26	C7J0197	CJ71249
Styrene	ND (0.0010)		8260B		1	10/12/17 19:26	C7J0197	CJ71249
tert-Butylbenzene	ND (0.0010)		8260B		1	10/12/17 19:26	C7J0197	CJ71249
Tertiary-amyl methyl ether	ND (0.0010)		8260B		1	10/12/17 19:26	C7J0197	CJ71249
Tetrachloroethene	ND (0.0010)		8260B		1	10/12/17 19:26	C7J0197	CJ71249

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Former Tidewater Facility
Client Sample ID: MW-326S
Date Sampled: 10/04/17 13:50
Percent Solids: N/A
Initial Volume: 5
Final Volume: 5
Extraction Method: 5030B

ESS Laboratory Work Order: 1710103
ESS Laboratory Sample ID: 1710103-10
Sample Matrix: Ground Water
Units: mg/L
Analyst: DMC

8260B Volatile Organic Compounds

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
Tetrahydrofuran	ND (0.0050)		8260B		1	10/12/17 19:26	C7J0197	CJ71249
Toluene	**0.0026** (0.0010)		8260B		1	10/12/17 19:26	C7J0197	CJ71249
trans-1,2-Dichloroethene	ND (0.0010)		8260B		1	10/12/17 19:26	C7J0197	CJ71249
trans-1,3-Dichloropropene	ND (0.0004)		8260B		1	10/12/17 19:26	C7J0197	CJ71249
Trichloroethene	ND (0.0010)		8260B		1	10/12/17 19:26	C7J0197	CJ71249
Trichlorofluoromethane	ND (0.0010)		8260B		1	10/12/17 19:26	C7J0197	CJ71249
Vinyl Acetate	ND (0.0050)		8260B		1	10/12/17 19:26	C7J0197	CJ71249
Vinyl Chloride	ND (0.0010)		8260B		1	10/12/17 19:26	C7J0197	CJ71249
Xylene O	**0.0618** (0.0010)		8260B		1	10/12/17 19:26	C7J0197	CJ71249
Xylene P,M	**0.0131** (0.0020)		8260B		1	10/12/17 19:26	C7J0197	CJ71249
Xylenes (Total)	**0.0749** (0.0020)		8260B		1	10/12/17 19:26		[CALC]

	%Recovery	Qualifier	Limits
Surrogate: 1,2-Dichloroethane-d4	*113 %*		*70-130*
Surrogate: 4-Bromofluorobenzene	*111 %*		*70-130*
Surrogate: Dibromofluoromethane	*118 %*		*70-130*
Surrogate: Toluene-d8	*109 %*		*70-130*

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Former Tidewater Facility
Client Sample ID: MW-326D
Date Sampled: 10/04/17 13:37
Percent Solids: N/A
Initial Volume: 5
Final Volume: 5
Extraction Method: 5030B

ESS Laboratory Work Order: 1710103
ESS Laboratory Sample ID: 1710103-11
Sample Matrix: Ground Water
Units: mg/L
Analyst: DMC

8260B Volatile Organic Compounds

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
1,1,1,2-Tetrachloroethane	ND (0.0010)		8260B		1	10/10/17 23:28	C7J0154	CJ71126
1,1,1-Trichloroethane	ND (0.0010)		8260B		1	10/10/17 23:28	C7J0154	CJ71126
1,1,2,2-Tetrachloroethane	ND (0.0005)		8260B		1	10/10/17 23:28	C7J0154	CJ71126
1,1,2-Trichloroethane	ND (0.0010)		8260B		1	10/10/17 23:28	C7J0154	CJ71126
1,1-Dichloroethane	ND (0.0010)		8260B		1	10/10/17 23:28	C7J0154	CJ71126
1,1-Dichloroethene	ND (0.0010)		8260B		1	10/10/17 23:28	C7J0154	CJ71126
1,1-Dichloropropene	ND (0.0020)		8260B		1	10/10/17 23:28	C7J0154	CJ71126
1,2,3-Trichlorobenzene	ND (0.0010)		8260B		1	10/10/17 23:28	C7J0154	CJ71126
1,2,3-Trichloropropane	ND (0.0010)		8260B		1	10/10/17 23:28	C7J0154	CJ71126
1,2,4-Trichlorobenzene	ND (0.0010)		8260B		1	10/10/17 23:28	C7J0154	CJ71126
1,2,4-Trimethylbenzene	ND (0.0010)		8260B		1	10/10/17 23:28	C7J0154	CJ71126
1,2-Dibromo-3-Chloropropane	ND (0.0050)		8260B		1	10/10/17 23:28	C7J0154	CJ71126
1,2-Dibromoethane	ND (0.0010)		8260B		1	10/10/17 23:28	C7J0154	CJ71126
1,2-Dichlorobenzene	ND (0.0010)		8260B		1	10/10/17 23:28	C7J0154	CJ71126
1,2-Dichloroethane	ND (0.0010)		8260B		1	10/10/17 23:28	C7J0154	CJ71126
1,2-Dichloropropane	ND (0.0010)		8260B		1	10/10/17 23:28	C7J0154	CJ71126
1,3,5-Trimethylbenzene	ND (0.0010)		8260B		1	10/10/17 23:28	C7J0154	CJ71126
1,3-Dichlorobenzene	ND (0.0010)		8260B		1	10/10/17 23:28	C7J0154	CJ71126
1,3-Dichloropropane	ND (0.0010)		8260B		1	10/10/17 23:28	C7J0154	CJ71126
1,4-Dichlorobenzene	ND (0.0010)		8260B		1	10/10/17 23:28	C7J0154	CJ71126
1,4-Dioxane - Screen	ND (0.500)		8260B		1	10/10/17 23:28	C7J0154	CJ71126
1-Chlorohexane	ND (0.0010)		8260B		1	10/10/17 23:28	C7J0154	CJ71126
2,2-Dichloropropane	ND (0.0010)		8260B		1	10/10/17 23:28	C7J0154	CJ71126
2-Butanone	ND (0.0100)		8260B		1	10/10/17 23:28	C7J0154	CJ71126
2-Chlorotoluene	ND (0.0010)		8260B		1	10/10/17 23:28	C7J0154	CJ71126
2-Hexanone	ND (0.0100)		8260B		1	10/10/17 23:28	C7J0154	CJ71126
4-Chlorotoluene	ND (0.0010)		8260B		1	10/10/17 23:28	C7J0154	CJ71126
4-Isopropyltoluene	ND (0.0010)		8260B		1	10/10/17 23:28	C7J0154	CJ71126
4-Methyl-2-Pentanone	ND (0.0250)		8260B		1	10/10/17 23:28	C7J0154	CJ71126
Acetone	ND (0.0100)		8260B		1	10/10/17 23:28	C7J0154	CJ71126
Benzene	ND (0.0010)		8260B		1	10/10/17 23:28	C7J0154	CJ71126
Bromobenzene	ND (0.0020)		8260B		1	10/10/17 23:28	C7J0154	CJ71126

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Former Tidewater Facility
Client Sample ID: MW-326D
Date Sampled: 10/04/17 13:37
Percent Solids: N/A
Initial Volume: 5
Final Volume: 5
Extraction Method: 5030B

ESS Laboratory Work Order: 1710103
ESS Laboratory Sample ID: 1710103-11
Sample Matrix: Ground Water
Units: mg/L
Analyst: DMC

8260B Volatile Organic Compounds

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
Bromochloromethane	ND (0.0010)		8260B		1	10/10/17 23:28	C7J0154	CJ71126
Bromodichloromethane	ND (0.0006)		8260B		1	10/10/17 23:28	C7J0154	CJ71126
Bromoform	ND (0.0010)		8260B		1	10/10/17 23:28	C7J0154	CJ71126
Bromomethane	ND (0.0020)		8260B		1	10/10/17 23:28	C7J0154	CJ71126
Carbon Disulfide	ND (0.0010)		8260B		1	10/10/17 23:28	C7J0154	CJ71126
Carbon Tetrachloride	ND (0.0010)		8260B		1	10/10/17 23:28	C7J0154	CJ71126
Chlorobenzene	ND (0.0010)		8260B		1	10/10/17 23:28	C7J0154	CJ71126
Chloroethane	ND (0.0020)		8260B		1	10/10/17 23:28	C7J0154	CJ71126
Chloroform	ND (0.0010)		8260B		1	10/10/17 23:28	C7J0154	CJ71126
Chloromethane	ND (0.0020)		8260B		1	10/10/17 23:28	C7J0154	CJ71126
cis-1,2-Dichloroethene	ND (0.0010)		8260B		1	10/10/17 23:28	C7J0154	CJ71126
cis-1,3-Dichloropropene	ND (0.0004)		8260B		1	10/10/17 23:28	C7J0154	CJ71126
Dibromochloromethane	ND (0.0010)		8260B		1	10/10/17 23:28	C7J0154	CJ71126
Dibromomethane	ND (0.0010)		8260B		1	10/10/17 23:28	C7J0154	CJ71126
Dichlorodifluoromethane	ND (0.0020)		8260B		1	10/10/17 23:28	C7J0154	CJ71126
Diethyl Ether	ND (0.0010)		8260B		1	10/10/17 23:28	C7J0154	CJ71126
Di-isopropyl ether	ND (0.0010)		8260B		1	10/10/17 23:28	C7J0154	CJ71126
Ethyl tertiary-butyl ether	ND (0.0010)		8260B		1	10/10/17 23:28	C7J0154	CJ71126
Ethylbenzene	ND (0.0010)		8260B		1	10/10/17 23:28	C7J0154	CJ71126
Hexachlorobutadiene	ND (0.0006)		8260B		1	10/10/17 23:28	C7J0154	CJ71126
Hexachloroethane	ND (0.0010)		8260B		1	10/10/17 23:28	C7J0154	CJ71126
Isopropylbenzene	ND (0.0010)		8260B		1	10/10/17 23:28	C7J0154	CJ71126
Methyl tert-Butyl Ether	ND (0.0010)		8260B		1	10/10/17 23:28	C7J0154	CJ71126
Methylene Chloride	ND (0.0020)		8260B		1	10/10/17 23:28	C7J0154	CJ71126
Naphthalene	ND (0.0010)		8260B		1	10/10/17 23:28	C7J0154	CJ71126
n-Butylbenzene	ND (0.0010)		8260B		1	10/10/17 23:28	C7J0154	CJ71126
n-Propylbenzene	ND (0.0010)		8260B		1	10/10/17 23:28	C7J0154	CJ71126
sec-Butylbenzene	ND (0.0010)		8260B		1	10/10/17 23:28	C7J0154	CJ71126
Styrene	ND (0.0010)		8260B		1	10/10/17 23:28	C7J0154	CJ71126
tert-Butylbenzene	ND (0.0010)		8260B		1	10/10/17 23:28	C7J0154	CJ71126
Tertiary-amyl methyl ether	ND (0.0010)		8260B		1	10/10/17 23:28	C7J0154	CJ71126
Tetrachloroethene	ND (0.0010)		8260B		1	10/10/17 23:28	C7J0154	CJ71126

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Former Tidewater Facility
Client Sample ID: MW-326D
Date Sampled: 10/04/17 13:37
Percent Solids: N/A
Initial Volume: 5
Final Volume: 5
Extraction Method: 5030B

ESS Laboratory Work Order: 1710103
ESS Laboratory Sample ID: 1710103-11
Sample Matrix: Ground Water
Units: mg/L
Analyst: DMC

8260B Volatile Organic Compounds

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
Tetrahydrofuran	ND (0.0050)		8260B		1	10/10/17 23:28	C7J0154	CJ71126
Toluene	ND (0.0010)		8260B		1	10/10/17 23:28	C7J0154	CJ71126
trans-1,2-Dichloroethene	ND (0.0010)		8260B		1	10/10/17 23:28	C7J0154	CJ71126
trans-1,3-Dichloropropene	ND (0.0004)		8260B		1	10/10/17 23:28	C7J0154	CJ71126
Trichloroethene	ND (0.0010)		8260B		1	10/10/17 23:28	C7J0154	CJ71126
Trichlorofluoromethane	ND (0.0010)		8260B		1	10/10/17 23:28	C7J0154	CJ71126
Vinyl Acetate	ND (0.0050)		8260B		1	10/10/17 23:28	C7J0154	CJ71126
Vinyl Chloride	ND (0.0010)		8260B		1	10/10/17 23:28	C7J0154	CJ71126
Xylene O	ND (0.0010)		8260B		1	10/10/17 23:28	C7J0154	CJ71126
Xylene P,M	ND (0.0020)		8260B		1	10/10/17 23:28	C7J0154	CJ71126
Xylenes (Total)	ND (0.0020)		8260B		1	10/10/17 23:28		[CALC]

	%Recovery	Qualifier	Limits
Surrogate: 1,2-Dichloroethane-d4	*110 %*		*70-130*
Surrogate: 4-Bromofluorobenzene	*107 %*		*70-130*
Surrogate: Dibromofluoromethane	*114 %*		*70-130*
Surrogate: Toluene-d8	*109 %*		*70-130*

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Former Tidewater Facility
Client Sample ID: MW-310S
Date Sampled: 10/04/17 14:30
Percent Solids: N/A
Initial Volume: 5
Final Volume: 5
Extraction Method: 5030B

ESS Laboratory Work Order: 1710103
ESS Laboratory Sample ID: 1710103-12
Sample Matrix: Ground Water
Units: mg/L
Analyst: DMC

8260B Volatile Organic Compounds

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
1,1,1,2-Tetrachloroethane	ND (0.0010)		8260B		1	10/11/17 0:22	C7J0154	CJ71126
1,1,1-Trichloroethane	ND (0.0010)		8260B		1	10/11/17 0:22	C7J0154	CJ71126
1,1,2,2-Tetrachloroethane	ND (0.0005)		8260B		1	10/11/17 0:22	C7J0154	CJ71126
1,1,2-Trichloroethane	ND (0.0010)		8260B		1	10/11/17 0:22	C7J0154	CJ71126
1,1-Dichloroethane	ND (0.0010)		8260B		1	10/11/17 0:22	C7J0154	CJ71126
1,1-Dichloroethene	ND (0.0010)		8260B		1	10/11/17 0:22	C7J0154	CJ71126
1,1-Dichloropropene	ND (0.0020)		8260B		1	10/11/17 0:22	C7J0154	CJ71126
1,2,3-Trichlorobenzene	ND (0.0010)		8260B		1	10/11/17 0:22	C7J0154	CJ71126
1,2,3-Trichloropropane	ND (0.0010)		8260B		1	10/11/17 0:22	C7J0154	CJ71126
1,2,4-Trichlorobenzene	ND (0.0010)		8260B		1	10/11/17 0:22	C7J0154	CJ71126
1,2,4-Trimethylbenzene	ND (0.0010)		8260B		1	10/11/17 0:22	C7J0154	CJ71126
1,2-Dibromo-3-Chloropropane	ND (0.0050)		8260B		1	10/11/17 0:22	C7J0154	CJ71126
1,2-Dibromoethane	ND (0.0010)		8260B		1	10/11/17 0:22	C7J0154	CJ71126
1,2-Dichlorobenzene	ND (0.0010)		8260B		1	10/11/17 0:22	C7J0154	CJ71126
1,2-Dichloroethane	ND (0.0010)		8260B		1	10/11/17 0:22	C7J0154	CJ71126
1,2-Dichloropropane	ND (0.0010)		8260B		1	10/11/17 0:22	C7J0154	CJ71126
1,3,5-Trimethylbenzene	ND (0.0010)		8260B		1	10/11/17 0:22	C7J0154	CJ71126
1,3-Dichlorobenzene	ND (0.0010)		8260B		1	10/11/17 0:22	C7J0154	CJ71126
1,3-Dichloropropane	ND (0.0010)		8260B		1	10/11/17 0:22	C7J0154	CJ71126
1,4-Dichlorobenzene	ND (0.0010)		8260B		1	10/11/17 0:22	C7J0154	CJ71126
1,4-Dioxane - Screen	ND (0.500)		8260B		1	10/11/17 0:22	C7J0154	CJ71126
1-Chlorohexane	ND (0.0010)		8260B		1	10/11/17 0:22	C7J0154	CJ71126
2,2-Dichloropropane	ND (0.0010)		8260B		1	10/11/17 0:22	C7J0154	CJ71126
2-Butanone	ND (0.0100)		8260B		1	10/11/17 0:22	C7J0154	CJ71126
2-Chlorotoluene	ND (0.0010)		8260B		1	10/11/17 0:22	C7J0154	CJ71126
2-Hexanone	ND (0.0100)		8260B		1	10/11/17 0:22	C7J0154	CJ71126
4-Chlorotoluene	ND (0.0010)		8260B		1	10/11/17 0:22	C7J0154	CJ71126
4-Isopropyltoluene	ND (0.0010)		8260B		1	10/11/17 0:22	C7J0154	CJ71126
4-Methyl-2-Pentanone	ND (0.0250)		8260B		1	10/11/17 0:22	C7J0154	CJ71126
Acetone	ND (0.0100)		8260B		1	10/11/17 0:22	C7J0154	CJ71126
Benzene	ND (0.0010)		8260B		1	10/11/17 0:22	C7J0154	CJ71126
Bromobenzene	ND (0.0020)		8260B		1	10/11/17 0:22	C7J0154	CJ71126

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Former Tidewater Facility
Client Sample ID: MW-310S
Date Sampled: 10/04/17 14:30
Percent Solids: N/A
Initial Volume: 5
Final Volume: 5
Extraction Method: 5030B

ESS Laboratory Work Order: 1710103
ESS Laboratory Sample ID: 1710103-12
Sample Matrix: Ground Water
Units: mg/L
Analyst: DMC

8260B Volatile Organic Compounds

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
Bromochloromethane	ND (0.0010)		8260B		1	10/11/17 0:22	C7J0154	CJ71126
Bromodichloromethane	ND (0.0006)		8260B		1	10/11/17 0:22	C7J0154	CJ71126
Bromoform	ND (0.0010)		8260B		1	10/11/17 0:22	C7J0154	CJ71126
Bromomethane	ND (0.0020)		8260B		1	10/11/17 0:22	C7J0154	CJ71126
Carbon Disulfide	ND (0.0010)		8260B		1	10/11/17 0:22	C7J0154	CJ71126
Carbon Tetrachloride	ND (0.0010)		8260B		1	10/11/17 0:22	C7J0154	CJ71126
Chlorobenzene	ND (0.0010)		8260B		1	10/11/17 0:22	C7J0154	CJ71126
Chloroethane	ND (0.0020)		8260B		1	10/11/17 0:22	C7J0154	CJ71126
Chloroform	ND (0.0010)		8260B		1	10/11/17 0:22	C7J0154	CJ71126
Chloromethane	ND (0.0020)		8260B		1	10/11/17 0:22	C7J0154	CJ71126
cis-1,2-Dichloroethene	ND (0.0010)		8260B		1	10/11/17 0:22	C7J0154	CJ71126
cis-1,3-Dichloropropene	ND (0.0004)		8260B		1	10/11/17 0:22	C7J0154	CJ71126
Dibromochloromethane	ND (0.0010)		8260B		1	10/11/17 0:22	C7J0154	CJ71126
Dibromomethane	ND (0.0010)		8260B		1	10/11/17 0:22	C7J0154	CJ71126
Dichlorodifluoromethane	ND (0.0020)		8260B		1	10/11/17 0:22	C7J0154	CJ71126
Diethyl Ether	ND (0.0010)		8260B		1	10/11/17 0:22	C7J0154	CJ71126
Di-isopropyl ether	ND (0.0010)		8260B		1	10/11/17 0:22	C7J0154	CJ71126
Ethyl tertiary-butyl ether	ND (0.0010)		8260B		1	10/11/17 0:22	C7J0154	CJ71126
Ethylbenzene	ND (0.0010)		8260B		1	10/11/17 0:22	C7J0154	CJ71126
Hexachlorobutadiene	ND (0.0006)		8260B		1	10/11/17 0:22	C7J0154	CJ71126
Hexachloroethane	ND (0.0010)		8260B		1	10/11/17 0:22	C7J0154	CJ71126
Isopropylbenzene	ND (0.0010)		8260B		1	10/11/17 0:22	C7J0154	CJ71126
Methyl tert-Butyl Ether	ND (0.0010)		8260B		1	10/11/17 0:22	C7J0154	CJ71126
Methylene Chloride	ND (0.0020)		8260B		1	10/11/17 0:22	C7J0154	CJ71126
Naphthalene	ND (0.0010)		8260B		1	10/11/17 0:22	C7J0154	CJ71126
n-Butylbenzene	ND (0.0010)		8260B		1	10/11/17 0:22	C7J0154	CJ71126
n-Propylbenzene	ND (0.0010)		8260B		1	10/11/17 0:22	C7J0154	CJ71126
sec-Butylbenzene	ND (0.0010)		8260B		1	10/11/17 0:22	C7J0154	CJ71126
Styrene	ND (0.0010)		8260B		1	10/11/17 0:22	C7J0154	CJ71126
tert-Butylbenzene	ND (0.0010)		8260B		1	10/11/17 0:22	C7J0154	CJ71126
Tertiary-amyl methyl ether	ND (0.0010)		8260B		1	10/11/17 0:22	C7J0154	CJ71126
Tetrachloroethene	ND (0.0010)		8260B		1	10/11/17 0:22	C7J0154	CJ71126

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Former Tidewater Facility
Client Sample ID: MW-310S
Date Sampled: 10/04/17 14:30
Percent Solids: N/A
Initial Volume: 5
Final Volume: 5
Extraction Method: 5030B

ESS Laboratory Work Order: 1710103
ESS Laboratory Sample ID: 1710103-12
Sample Matrix: Ground Water
Units: mg/L
Analyst: DMC

8260B Volatile Organic Compounds

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
Tetrahydrofuran	ND (0.0050)		8260B		1	10/11/17 0:22	C7J0154	CJ71126
Toluene	ND (0.0010)		8260B		1	10/11/17 0:22	C7J0154	CJ71126
trans-1,2-Dichloroethene	ND (0.0010)		8260B		1	10/11/17 0:22	C7J0154	CJ71126
trans-1,3-Dichloropropene	ND (0.0004)		8260B		1	10/11/17 0:22	C7J0154	CJ71126
Trichloroethene	ND (0.0010)		8260B		1	10/11/17 0:22	C7J0154	CJ71126
Trichlorofluoromethane	ND (0.0010)		8260B		1	10/11/17 0:22	C7J0154	CJ71126
Vinyl Acetate	ND (0.0050)		8260B		1	10/11/17 0:22	C7J0154	CJ71126
Vinyl Chloride	ND (0.0010)		8260B		1	10/11/17 0:22	C7J0154	CJ71126
Xylene O	ND (0.0010)		8260B		1	10/11/17 0:22	C7J0154	CJ71126
Xylene P,M	ND (0.0020)		8260B		1	10/11/17 0:22	C7J0154	CJ71126
Xylenes (Total)	ND (0.0020)		8260B		1	10/11/17 0:22		[CALC]

	%Recovery	Qualifier	Limits
Surrogate: 1,2-Dichloroethane-d4	*107 %*		*70-130*
Surrogate: 4-Bromofluorobenzene	*109 %*		*70-130*
Surrogate: Dibromofluoromethane	*114 %*		*70-130*
Surrogate: Toluene-d8	*107 %*		*70-130*

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Former Tidewater Facility
Client Sample ID: MW-208
Date Sampled: 10/04/17 15:00
Percent Solids: N/A
Initial Volume: 5
Final Volume: 5
Extraction Method: 5030B

ESS Laboratory Work Order: 1710103
ESS Laboratory Sample ID: 1710103-13
Sample Matrix: Ground Water
Units: mg/L
Analyst: DMC

8260B Volatile Organic Compounds

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
1,1,1,2-Tetrachloroethane	ND (0.0010)		8260B		1	10/10/17 23:55	C7J0154	CJ71126
1,1,1-Trichloroethane	ND (0.0010)		8260B		1	10/10/17 23:55	C7J0154	CJ71126
1,1,2,2-Tetrachloroethane	ND (0.0005)		8260B		1	10/10/17 23:55	C7J0154	CJ71126
1,1,2-Trichloroethane	ND (0.0010)		8260B		1	10/10/17 23:55	C7J0154	CJ71126
1,1-Dichloroethane	ND (0.0010)		8260B		1	10/10/17 23:55	C7J0154	CJ71126
1,1-Dichloroethene	ND (0.0010)		8260B		1	10/10/17 23:55	C7J0154	CJ71126
1,1-Dichloropropene	ND (0.0020)		8260B		1	10/10/17 23:55	C7J0154	CJ71126
1,2,3-Trichlorobenzene	ND (0.0010)		8260B		1	10/10/17 23:55	C7J0154	CJ71126
1,2,3-Trichloropropane	ND (0.0010)		8260B		1	10/10/17 23:55	C7J0154	CJ71126
1,2,4-Trichlorobenzene	ND (0.0010)		8260B		1	10/10/17 23:55	C7J0154	CJ71126
1,2,4-Trimethylbenzene	ND (0.0010)		8260B		1	10/10/17 23:55	C7J0154	CJ71126
1,2-Dibromo-3-Chloropropane	ND (0.0050)		8260B		1	10/10/17 23:55	C7J0154	CJ71126
1,2-Dibromoethane	ND (0.0010)		8260B		1	10/10/17 23:55	C7J0154	CJ71126
1,2-Dichlorobenzene	ND (0.0010)		8260B		1	10/10/17 23:55	C7J0154	CJ71126
1,2-Dichloroethane	ND (0.0010)		8260B		1	10/10/17 23:55	C7J0154	CJ71126
1,2-Dichloropropane	ND (0.0010)		8260B		1	10/10/17 23:55	C7J0154	CJ71126
1,3,5-Trimethylbenzene	ND (0.0010)		8260B		1	10/10/17 23:55	C7J0154	CJ71126
1,3-Dichlorobenzene	ND (0.0010)		8260B		1	10/10/17 23:55	C7J0154	CJ71126
1,3-Dichloropropane	ND (0.0010)		8260B		1	10/10/17 23:55	C7J0154	CJ71126
1,4-Dichlorobenzene	ND (0.0010)		8260B		1	10/10/17 23:55	C7J0154	CJ71126
1,4-Dioxane - Screen	ND (0.500)		8260B		1	10/10/17 23:55	C7J0154	CJ71126
1-Chlorohexane	ND (0.0010)		8260B		1	10/10/17 23:55	C7J0154	CJ71126
2,2-Dichloropropane	ND (0.0010)		8260B		1	10/10/17 23:55	C7J0154	CJ71126
2-Butanone	ND (0.0100)		8260B		1	10/10/17 23:55	C7J0154	CJ71126
2-Chlorotoluene	ND (0.0010)		8260B		1	10/10/17 23:55	C7J0154	CJ71126
2-Hexanone	ND (0.0100)		8260B		1	10/10/17 23:55	C7J0154	CJ71126
4-Chlorotoluene	ND (0.0010)		8260B		1	10/10/17 23:55	C7J0154	CJ71126
4-Isopropyltoluene	ND (0.0010)		8260B		1	10/10/17 23:55	C7J0154	CJ71126
4-Methyl-2-Pentanone	ND (0.0250)		8260B		1	10/10/17 23:55	C7J0154	CJ71126
Acetone	ND (0.0100)		8260B		1	10/10/17 23:55	C7J0154	CJ71126
Benzene	ND (0.0010)		8260B		1	10/10/17 23:55	C7J0154	CJ71126
Bromobenzene	ND (0.0020)		8260B		1	10/10/17 23:55	C7J0154	CJ71126

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Former Tidewater Facility
Client Sample ID: MW-208
Date Sampled: 10/04/17 15:00
Percent Solids: N/A
Initial Volume: 5
Final Volume: 5
Extraction Method: 5030B

ESS Laboratory Work Order: 1710103
ESS Laboratory Sample ID: 1710103-13
Sample Matrix: Ground Water
Units: mg/L
Analyst: DMC

8260B Volatile Organic Compounds

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
Bromochloromethane	ND (0.0010)		8260B		1	10/10/17 23:55	C7J0154	CJ71126
Bromodichloromethane	ND (0.0006)		8260B		1	10/10/17 23:55	C7J0154	CJ71126
Bromoform	ND (0.0010)		8260B		1	10/10/17 23:55	C7J0154	CJ71126
Bromomethane	ND (0.0020)		8260B		1	10/10/17 23:55	C7J0154	CJ71126
Carbon Disulfide	ND (0.0010)		8260B		1	10/10/17 23:55	C7J0154	CJ71126
Carbon Tetrachloride	ND (0.0010)		8260B		1	10/10/17 23:55	C7J0154	CJ71126
Chlorobenzene	ND (0.0010)		8260B		1	10/10/17 23:55	C7J0154	CJ71126
Chloroethane	ND (0.0020)		8260B		1	10/10/17 23:55	C7J0154	CJ71126
Chloroform	ND (0.0010)		8260B		1	10/10/17 23:55	C7J0154	CJ71126
Chloromethane	ND (0.0020)		8260B		1	10/10/17 23:55	C7J0154	CJ71126
cis-1,2-Dichloroethene	ND (0.0010)		8260B		1	10/10/17 23:55	C7J0154	CJ71126
cis-1,3-Dichloropropene	ND (0.0004)		8260B		1	10/10/17 23:55	C7J0154	CJ71126
Dibromochloromethane	ND (0.0010)		8260B		1	10/10/17 23:55	C7J0154	CJ71126
Dibromomethane	ND (0.0010)		8260B		1	10/10/17 23:55	C7J0154	CJ71126
Dichlorodifluoromethane	ND (0.0020)		8260B		1	10/10/17 23:55	C7J0154	CJ71126
Diethyl Ether	ND (0.0010)		8260B		1	10/10/17 23:55	C7J0154	CJ71126
Di-isopropyl ether	ND (0.0010)		8260B		1	10/10/17 23:55	C7J0154	CJ71126
Ethyl tertiary-butyl ether	ND (0.0010)		8260B		1	10/10/17 23:55	C7J0154	CJ71126
Ethylbenzene	ND (0.0010)		8260B		1	10/10/17 23:55	C7J0154	CJ71126
Hexachlorobutadiene	ND (0.0006)		8260B		1	10/10/17 23:55	C7J0154	CJ71126
Hexachloroethane	ND (0.0010)		8260B		1	10/10/17 23:55	C7J0154	CJ71126
Isopropylbenzene	ND (0.0010)		8260B		1	10/10/17 23:55	C7J0154	CJ71126
Methyl tert-Butyl Ether	ND (0.0010)		8260B		1	10/10/17 23:55	C7J0154	CJ71126
Methylene Chloride	ND (0.0020)		8260B		1	10/10/17 23:55	C7J0154	CJ71126
Naphthalene	ND (0.0010)		8260B		1	10/10/17 23:55	C7J0154	CJ71126
n-Butylbenzene	ND (0.0010)		8260B		1	10/10/17 23:55	C7J0154	CJ71126
n-Propylbenzene	ND (0.0010)		8260B		1	10/10/17 23:55	C7J0154	CJ71126
sec-Butylbenzene	**0.0033** (0.0010)		8260B		1	10/10/17 23:55	C7J0154	CJ71126
Styrene	ND (0.0010)		8260B		1	10/10/17 23:55	C7J0154	CJ71126
tert-Butylbenzene	ND (0.0010)		8260B		1	10/10/17 23:55	C7J0154	CJ71126
Tertiary-amyl methyl ether	ND (0.0010)		8260B		1	10/10/17 23:55	C7J0154	CJ71126
Tetrachloroethene	ND (0.0010)		8260B		1	10/10/17 23:55	C7J0154	CJ71126

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Former Tidewater Facility
Client Sample ID: MW-208
Date Sampled: 10/04/17 15:00
Percent Solids: N/A
Initial Volume: 5
Final Volume: 5
Extraction Method: 5030B

ESS Laboratory Work Order: 1710103
ESS Laboratory Sample ID: 1710103-13
Sample Matrix: Ground Water
Units: mg/L
Analyst: DMC

8260B Volatile Organic Compounds

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
Tetrahydrofuran	ND (0.0050)		8260B		1	10/10/17 23:55	C7J0154	CJ71126
Toluene	ND (0.0010)		8260B		1	10/10/17 23:55	C7J0154	CJ71126
trans-1,2-Dichloroethene	ND (0.0010)		8260B		1	10/10/17 23:55	C7J0154	CJ71126
trans-1,3-Dichloropropene	ND (0.0004)		8260B		1	10/10/17 23:55	C7J0154	CJ71126
Trichloroethene	ND (0.0010)		8260B		1	10/10/17 23:55	C7J0154	CJ71126
Trichlorofluoromethane	ND (0.0010)		8260B		1	10/10/17 23:55	C7J0154	CJ71126
Vinyl Acetate	ND (0.0050)		8260B		1	10/10/17 23:55	C7J0154	CJ71126
Vinyl Chloride	ND (0.0010)		8260B		1	10/10/17 23:55	C7J0154	CJ71126
Xylene O	ND (0.0010)		8260B		1	10/10/17 23:55	C7J0154	CJ71126
Xylene P,M	ND (0.0020)		8260B		1	10/10/17 23:55	C7J0154	CJ71126
Xylenes (Total)	ND (0.0020)		8260B		1	10/10/17 23:55		[CALC]

	%Recovery	Qualifier	Limits
Surrogate: 1,2-Dichloroethane-d4	*108 %*		*70-130*
Surrogate: 4-Bromofluorobenzene	*119 %*		*70-130*
Surrogate: Dibromofluoromethane	*112 %*		*70-130*
Surrogate: Toluene-d8	*107 %*		*70-130*

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Former Tidewater Facility
Client Sample ID: MW-310D
Date Sampled: 10/04/17 14:10
Percent Solids: N/A
Initial Volume: 5
Final Volume: 5
Extraction Method: 5030B

ESS Laboratory Work Order: 1710103
ESS Laboratory Sample ID: 1710103-14
Sample Matrix: Ground Water
Units: mg/L
Analyst: DMC

8260B Volatile Organic Compounds

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
1,1,1,2-Tetrachloroethane	ND (0.0010)		8260B		1	10/12/17 21:13	C7J0197	CJ71249
1,1,1-Trichloroethane	ND (0.0010)		8260B		1	10/12/17 21:13	C7J0197	CJ71249
1,1,2,2-Tetrachloroethane	ND (0.0005)		8260B		1	10/12/17 21:13	C7J0197	CJ71249
1,1,2-Trichloroethane	ND (0.0010)		8260B		1	10/12/17 21:13	C7J0197	CJ71249
1,1-Dichloroethane	ND (0.0010)		8260B		1	10/12/17 21:13	C7J0197	CJ71249
1,1-Dichloroethene	ND (0.0010)		8260B		1	10/12/17 21:13	C7J0197	CJ71249
1,1-Dichloropropene	ND (0.0020)		8260B		1	10/12/17 21:13	C7J0197	CJ71249
1,2,3-Trichlorobenzene	ND (0.0010)		8260B		1	10/12/17 21:13	C7J0197	CJ71249
1,2,3-Trichloropropane	ND (0.0010)		8260B		1	10/12/17 21:13	C7J0197	CJ71249
1,2,4-Trichlorobenzene	ND (0.0010)		8260B		1	10/12/17 21:13	C7J0197	CJ71249
1,2,4-Trimethylbenzene	**0.593** (0.100)		8260B		100	10/12/17 18:05	C7J0197	CJ71249
1,2-Dibromo-3-Chloropropane	ND (0.0050)		8260B		1	10/12/17 21:13	C7J0197	CJ71249
1,2-Dibromoethane	ND (0.0010)		8260B		1	10/12/17 21:13	C7J0197	CJ71249
1,2-Dichlorobenzene	ND (0.0010)		8260B		1	10/12/17 21:13	C7J0197	CJ71249
1,2-Dichloroethane	ND (0.0010)		8260B		1	10/12/17 21:13	C7J0197	CJ71249
1,2-Dichloropropane	ND (0.0010)		8260B		1	10/12/17 21:13	C7J0197	CJ71249
1,3,5-Trimethylbenzene	**0.149** (0.100)		8260B		100	10/12/17 18:05	C7J0197	CJ71249
1,3-Dichlorobenzene	ND (0.0010)		8260B		1	10/12/17 21:13	C7J0197	CJ71249
1,3-Dichloropropane	ND (0.0010)		8260B		1	10/12/17 21:13	C7J0197	CJ71249
1,4-Dichlorobenzene	ND (0.0010)		8260B		1	10/12/17 21:13	C7J0197	CJ71249
1,4-Dioxane - Screen	ND (0.500)		8260B		1	10/12/17 21:13	C7J0197	CJ71249
1-Chlorohexane	ND (0.0010)		8260B		1	10/12/17 21:13	C7J0197	CJ71249
2,2-Dichloropropane	ND (0.0010)		8260B		1	10/12/17 21:13	C7J0197	CJ71249
2-Butanone	ND (0.0100)		8260B		1	10/12/17 21:13	C7J0197	CJ71249
2-Chlorotoluene	ND (0.0010)		8260B		1	10/12/17 21:13	C7J0197	CJ71249
2-Hexanone	ND (0.0100)		8260B		1	10/12/17 21:13	C7J0197	CJ71249
4-Chlorotoluene	ND (0.0010)		8260B		1	10/12/17 21:13	C7J0197	CJ71249
4-Isopropyltoluene	**0.0138** (0.0010)		8260B		1	10/12/17 21:13	C7J0197	CJ71249
4-Methyl-2-Pentanone	ND (0.0250)		8260B		1	10/12/17 21:13	C7J0197	CJ71249
Acetone	ND (0.0100)		8260B		1	10/12/17 21:13	C7J0197	CJ71249
Benzene	**0.713** (0.100)		8260B		100	10/12/17 18:05	C7J0197	CJ71249
Bromobenzene	ND (0.0020)		8260B		1	10/12/17 21:13	C7J0197	CJ71249

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Former Tidewater Facility
Client Sample ID: MW-310D
Date Sampled: 10/04/17 14:10
Percent Solids: N/A
Initial Volume: 5
Final Volume: 5
Extraction Method: 5030B

ESS Laboratory Work Order: 1710103
ESS Laboratory Sample ID: 1710103-14
Sample Matrix: Ground Water
Units: mg/L
Analyst: DMC

8260B Volatile Organic Compounds

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
Bromochloromethane	ND (0.0010)		8260B		1	10/12/17 21:13	C7J0197	CJ71249
Bromodichloromethane	ND (0.0006)		8260B		1	10/12/17 21:13	C7J0197	CJ71249
Bromoform	ND (0.0010)		8260B		1	10/12/17 21:13	C7J0197	CJ71249
Bromomethane	ND (0.0020)		8260B		1	10/12/17 21:13	C7J0197	CJ71249
Carbon Disulfide	ND (0.0010)		8260B		1	10/12/17 21:13	C7J0197	CJ71249
Carbon Tetrachloride	ND (0.0010)		8260B		1	10/12/17 21:13	C7J0197	CJ71249
Chlorobenzene	ND (0.0010)		8260B		1	10/12/17 21:13	C7J0197	CJ71249
Chloroethane	ND (0.0020)		8260B		1	10/12/17 21:13	C7J0197	CJ71249
Chloroform	ND (0.0010)		8260B		1	10/12/17 21:13	C7J0197	CJ71249
Chloromethane	ND (0.0020)		8260B		1	10/12/17 21:13	C7J0197	CJ71249
cis-1,2-Dichloroethene	ND (0.0010)		8260B		1	10/12/17 21:13	C7J0197	CJ71249
cis-1,3-Dichloropropene	ND (0.0004)		8260B		1	10/12/17 21:13	C7J0197	CJ71249
Dibromochloromethane	ND (0.0010)		8260B		1	10/12/17 21:13	C7J0197	CJ71249
Dibromomethane	ND (0.0010)		8260B		1	10/12/17 21:13	C7J0197	CJ71249
Dichlorodifluoromethane	ND (0.0020)		8260B		1	10/12/17 21:13	C7J0197	CJ71249
Diethyl Ether	ND (0.0010)		8260B		1	10/12/17 21:13	C7J0197	CJ71249
Di-isopropyl ether	ND (0.0010)		8260B		1	10/12/17 21:13	C7J0197	CJ71249
Ethyl tertiary-butyl ether	ND (0.0010)		8260B		1	10/12/17 21:13	C7J0197	CJ71249
Ethylbenzene	**0.792** (0.100)		8260B		100	10/12/17 18:05	C7J0197	CJ71249
Hexachlorobutadiene	ND (0.0006)		8260B		1	10/12/17 21:13	C7J0197	CJ71249
Hexachloroethane	ND (0.0010)		8260B		1	10/12/17 21:13	C7J0197	CJ71249
Isopropylbenzene	**0.0922** (0.0010)		8260B		1	10/12/17 21:13	C7J0197	CJ71249
Methyl tert-Butyl Ether	ND (0.0010)		8260B		1	10/12/17 21:13	C7J0197	CJ71249
Methylene Chloride	ND (0.0020)		8260B		1	10/12/17 21:13	C7J0197	CJ71249
Naphthalene	**8.44** (0.100)		8260B		100	10/12/17 18:05	C7J0197	CJ71249
n-Butylbenzene	**0.0120** (0.0010)		8260B		1	10/12/17 21:13	C7J0197	CJ71249
n-Propylbenzene	**0.0396** (0.0010)		8260B		1	10/12/17 21:13	C7J0197	CJ71249
sec-Butylbenzene	**0.0014** (0.0010)		8260B		1	10/12/17 21:13	C7J0197	CJ71249
Styrene	**0.0173** (0.0010)		8260B		1	10/12/17 21:13	C7J0197	CJ71249
tert-Butylbenzene	ND (0.0010)		8260B		1	10/12/17 21:13	C7J0197	CJ71249
Tertiary-amyl methyl ether	ND (0.0010)		8260B		1	10/12/17 21:13	C7J0197	CJ71249
Tetrachloroethene	ND (0.0010)		8260B		1	10/12/17 21:13	C7J0197	CJ71249

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Former Tidewater Facility
Client Sample ID: MW-310D
Date Sampled: 10/04/17 14:10
Percent Solids: N/A
Initial Volume: 5
Final Volume: 5
Extraction Method: 5030B

ESS Laboratory Work Order: 1710103
ESS Laboratory Sample ID: 1710103-14
Sample Matrix: Ground Water
Units: mg/L
Analyst: DMC

8260B Volatile Organic Compounds

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
Tetrahydrofuran	ND (0.0050)		8260B		1	10/12/17 21:13	C7J0197	CJ71249
Toluene	**0.178** (0.100)		8260B		100	10/12/17 18:05	C7J0197	CJ71249
trans-1,2-Dichloroethene	ND (0.0010)		8260B		1	10/12/17 21:13	C7J0197	CJ71249
trans-1,3-Dichloropropene	ND (0.0004)		8260B		1	10/12/17 21:13	C7J0197	CJ71249
Trichloroethene	ND (0.0010)		8260B		1	10/12/17 21:13	C7J0197	CJ71249
Trichlorofluoromethane	ND (0.0010)		8260B		1	10/12/17 21:13	C7J0197	CJ71249
Vinyl Acetate	ND (0.0050)		8260B		1	10/12/17 21:13	C7J0197	CJ71249
Vinyl Chloride	ND (0.0010)		8260B		1	10/12/17 21:13	C7J0197	CJ71249
Xylene O	**0.574** (0.100)		8260B		100	10/12/17 18:05	C7J0197	CJ71249
Xylene P,M	**0.573** (0.200)		8260B		100	10/12/17 18:05	C7J0197	CJ71249
Xylenes (Total)	**1.15** (0.200)		8260B		100	10/12/17 18:05		[CALC]

	%Recovery	Qualifier	Limits
Surrogate: 1,2-Dichloroethane-d4	*115 %*		*70-130*
Surrogate: 4-Bromofluorobenzene	*119 %*		*70-130*
Surrogate: Dibromofluoromethane	*112 %*		*70-130*
Surrogate: Toluene-d8	*105 %*		*70-130*

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Former Tidewater Facility
Client Sample ID: MW-333S
Date Sampled: 10/04/17 13:10
Percent Solids: N/A
Initial Volume: 5
Final Volume: 5
Extraction Method: 5030B

ESS Laboratory Work Order: 1710103
ESS Laboratory Sample ID: 1710103-15
Sample Matrix: Ground Water
Units: mg/L
Analyst: DMC

8260B Volatile Organic Compounds

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
1,1,1,2-Tetrachloroethane	ND (0.0010)		8260B		1	10/12/17 14:03	C7J0197	CJ71249
1,1,1-Trichloroethane	ND (0.0010)		8260B		1	10/12/17 14:03	C7J0197	CJ71249
1,1,2,2-Tetrachloroethane	ND (0.0005)		8260B		1	10/12/17 14:03	C7J0197	CJ71249
1,1,2-Trichloroethane	ND (0.0010)		8260B		1	10/12/17 14:03	C7J0197	CJ71249
1,1-Dichloroethane	ND (0.0010)		8260B		1	10/12/17 14:03	C7J0197	CJ71249
1,1-Dichloroethene	ND (0.0010)		8260B		1	10/12/17 14:03	C7J0197	CJ71249
1,1-Dichloropropene	ND (0.0020)		8260B		1	10/12/17 14:03	C7J0197	CJ71249
1,2,3-Trichlorobenzene	ND (0.0010)		8260B		1	10/12/17 14:03	C7J0197	CJ71249
1,2,3-Trichloropropane	ND (0.0010)		8260B		1	10/12/17 14:03	C7J0197	CJ71249
1,2,4-Trichlorobenzene	ND (0.0010)		8260B		1	10/12/17 14:03	C7J0197	CJ71249
1,2,4-Trimethylbenzene	ND (0.0010)		8260B		1	10/12/17 14:03	C7J0197	CJ71249
1,2-Dibromo-3-Chloropropane	ND (0.0050)		8260B		1	10/12/17 14:03	C7J0197	CJ71249
1,2-Dibromoethane	ND (0.0010)		8260B		1	10/12/17 14:03	C7J0197	CJ71249
1,2-Dichlorobenzene	ND (0.0010)		8260B		1	10/12/17 14:03	C7J0197	CJ71249
1,2-Dichloroethane	ND (0.0010)		8260B		1	10/12/17 14:03	C7J0197	CJ71249
1,2-Dichloropropane	ND (0.0010)		8260B		1	10/12/17 14:03	C7J0197	CJ71249
1,3,5-Trimethylbenzene	ND (0.0010)		8260B		1	10/12/17 14:03	C7J0197	CJ71249
1,3-Dichlorobenzene	ND (0.0010)		8260B		1	10/12/17 14:03	C7J0197	CJ71249
1,3-Dichloropropane	ND (0.0010)		8260B		1	10/12/17 14:03	C7J0197	CJ71249
1,4-Dichlorobenzene	ND (0.0010)		8260B		1	10/12/17 14:03	C7J0197	CJ71249
1,4-Dioxane - Screen	ND (0.500)		8260B		1	10/12/17 14:03	C7J0197	CJ71249
1-Chlorohexane	ND (0.0010)		8260B		1	10/12/17 14:03	C7J0197	CJ71249
2,2-Dichloropropane	ND (0.0010)		8260B		1	10/12/17 14:03	C7J0197	CJ71249
2-Butanone	ND (0.0100)		8260B		1	10/12/17 14:03	C7J0197	CJ71249
2-Chlorotoluene	ND (0.0010)		8260B		1	10/12/17 14:03	C7J0197	CJ71249
2-Hexanone	ND (0.0100)		8260B		1	10/12/17 14:03	C7J0197	CJ71249
4-Chlorotoluene	ND (0.0010)		8260B		1	10/12/17 14:03	C7J0197	CJ71249
4-Isopropyltoluene	ND (0.0010)		8260B		1	10/12/17 14:03	C7J0197	CJ71249
4-Methyl-2-Pentanone	ND (0.0250)		8260B		1	10/12/17 14:03	C7J0197	CJ71249
Acetone	ND (0.0100)		8260B		1	10/12/17 14:03	C7J0197	CJ71249
Benzene	**0.0028** (0.0010)		8260B		1	10/12/17 14:03	C7J0197	CJ71249
Bromobenzene	ND (0.0020)		8260B		1	10/12/17 14:03	C7J0197	CJ71249

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Former Tidewater Facility
Client Sample ID: MW-333S
Date Sampled: 10/04/17 13:10
Percent Solids: N/A
Initial Volume: 5
Final Volume: 5
Extraction Method: 5030B

ESS Laboratory Work Order: 1710103
ESS Laboratory Sample ID: 1710103-15
Sample Matrix: Ground Water
Units: mg/L
Analyst: DMC

8260B Volatile Organic Compounds

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
Bromochloromethane	ND (0.0010)		8260B		1	10/12/17 14:03	C7J0197	CJ71249
Bromodichloromethane	ND (0.0006)		8260B		1	10/12/17 14:03	C7J0197	CJ71249
Bromoform	ND (0.0010)		8260B		1	10/12/17 14:03	C7J0197	CJ71249
Bromomethane	ND (0.0020)		8260B		1	10/12/17 14:03	C7J0197	CJ71249
Carbon Disulfide	ND (0.0010)		8260B		1	10/12/17 14:03	C7J0197	CJ71249
Carbon Tetrachloride	ND (0.0010)		8260B		1	10/12/17 14:03	C7J0197	CJ71249
Chlorobenzene	ND (0.0010)		8260B		1	10/12/17 14:03	C7J0197	CJ71249
Chloroethane	ND (0.0020)		8260B		1	10/12/17 14:03	C7J0197	CJ71249
Chloroform	ND (0.0010)		8260B		1	10/12/17 14:03	C7J0197	CJ71249
Chloromethane	ND (0.0020)		8260B		1	10/12/17 14:03	C7J0197	CJ71249
cis-1,2-Dichloroethene	ND (0.0010)		8260B		1	10/12/17 14:03	C7J0197	CJ71249
cis-1,3-Dichloropropene	ND (0.0004)		8260B		1	10/12/17 14:03	C7J0197	CJ71249
Dibromochloromethane	ND (0.0010)		8260B		1	10/12/17 14:03	C7J0197	CJ71249
Dibromomethane	ND (0.0010)		8260B		1	10/12/17 14:03	C7J0197	CJ71249
Dichlorodifluoromethane	ND (0.0020)		8260B		1	10/12/17 14:03	C7J0197	CJ71249
Diethyl Ether	ND (0.0010)		8260B		1	10/12/17 14:03	C7J0197	CJ71249
Di-isopropyl ether	ND (0.0010)		8260B		1	10/12/17 14:03	C7J0197	CJ71249
Ethyl tertiary-butyl ether	ND (0.0010)		8260B		1	10/12/17 14:03	C7J0197	CJ71249
Ethylbenzene	ND (0.0010)		8260B		1	10/12/17 14:03	C7J0197	CJ71249
Hexachlorobutadiene	ND (0.0006)		8260B		1	10/12/17 14:03	C7J0197	CJ71249
Hexachloroethane	ND (0.0010)		8260B		1	10/12/17 14:03	C7J0197	CJ71249
Isopropylbenzene	ND (0.0010)		8260B		1	10/12/17 14:03	C7J0197	CJ71249
Methyl tert-Butyl Ether	ND (0.0010)		8260B		1	10/12/17 14:03	C7J0197	CJ71249
Methylene Chloride	ND (0.0020)		8260B		1	10/12/17 14:03	C7J0197	CJ71249
Naphthalene	ND (0.0010)		8260B		1	10/12/17 14:03	C7J0197	CJ71249
n-Butylbenzene	ND (0.0010)		8260B		1	10/12/17 14:03	C7J0197	CJ71249
n-Propylbenzene	ND (0.0010)		8260B		1	10/12/17 14:03	C7J0197	CJ71249
sec-Butylbenzene	ND (0.0010)		8260B		1	10/12/17 14:03	C7J0197	CJ71249
Styrene	ND (0.0010)		8260B		1	10/12/17 14:03	C7J0197	CJ71249
tert-Butylbenzene	ND (0.0010)		8260B		1	10/12/17 14:03	C7J0197	CJ71249
Tertiary-amyl methyl ether	ND (0.0010)		8260B		1	10/12/17 14:03	C7J0197	CJ71249
Tetrachloroethene	ND (0.0010)		8260B		1	10/12/17 14:03	C7J0197	CJ71249

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Former Tidewater Facility
Client Sample ID: MW-333S
Date Sampled: 10/04/17 13:10
Percent Solids: N/A
Initial Volume: 5
Final Volume: 5
Extraction Method: 5030B

ESS Laboratory Work Order: 1710103
ESS Laboratory Sample ID: 1710103-15
Sample Matrix: Ground Water
Units: mg/L
Analyst: DMC

8260B Volatile Organic Compounds

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
Tetrahydrofuran	ND (0.0050)		8260B		1	10/12/17 14:03	C7J0197	CJ71249
Toluene	ND (0.0010)		8260B		1	10/12/17 14:03	C7J0197	CJ71249
trans-1,2-Dichloroethene	ND (0.0010)		8260B		1	10/12/17 14:03	C7J0197	CJ71249
trans-1,3-Dichloropropene	ND (0.0004)		8260B		1	10/12/17 14:03	C7J0197	CJ71249
Trichloroethene	ND (0.0010)		8260B		1	10/12/17 14:03	C7J0197	CJ71249
Trichlorofluoromethane	ND (0.0010)		8260B		1	10/12/17 14:03	C7J0197	CJ71249
Vinyl Acetate	ND (0.0050)		8260B		1	10/12/17 14:03	C7J0197	CJ71249
Vinyl Chloride	ND (0.0010)		8260B		1	10/12/17 14:03	C7J0197	CJ71249
Xylene O	ND (0.0010)		8260B		1	10/12/17 14:03	C7J0197	CJ71249
Xylene P,M	ND (0.0020)		8260B		1	10/12/17 14:03	C7J0197	CJ71249
Xylenes (Total)	ND (0.0020)		8260B		1	10/12/17 14:03		[CALC]

	%Recovery	Qualifier	Limits
Surrogate: 1,2-Dichloroethane-d4	*116 %*		*70-130*
Surrogate: 4-Bromofluorobenzene	*108 %*		*70-130*
Surrogate: Dibromofluoromethane	*117 %*		*70-130*
Surrogate: Toluene-d8	*108 %*		*70-130*

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Former Tidewater Facility
Client Sample ID: MW-333D
Date Sampled: 10/04/17 13:20
Percent Solids: N/A
Initial Volume: 5
Final Volume: 5
Extraction Method: 5030B

ESS Laboratory Work Order: 1710103
ESS Laboratory Sample ID: 1710103-16
Sample Matrix: Ground Water
Units: mg/L
Analyst: DMC

8260B Volatile Organic Compounds

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
1,1,1,2-Tetrachloroethane	ND (0.0010)		8260B		1	10/12/17 19:52	C7J0197	CJ71249
1,1,1-Trichloroethane	ND (0.0010)		8260B		1	10/12/17 19:52	C7J0197	CJ71249
1,1,2,2-Tetrachloroethane	ND (0.0005)		8260B		1	10/12/17 19:52	C7J0197	CJ71249
1,1,2-Trichloroethane	ND (0.0010)		8260B		1	10/12/17 19:52	C7J0197	CJ71249
1,1-Dichloroethane	ND (0.0010)		8260B		1	10/12/17 19:52	C7J0197	CJ71249
1,1-Dichloroethene	ND (0.0010)		8260B		1	10/12/17 19:52	C7J0197	CJ71249
1,1-Dichloropropene	ND (0.0020)		8260B		1	10/12/17 19:52	C7J0197	CJ71249
1,2,3-Trichlorobenzene	ND (0.0010)		8260B		1	10/12/17 19:52	C7J0197	CJ71249
1,2,3-Trichloropropane	ND (0.0010)		8260B		1	10/12/17 19:52	C7J0197	CJ71249
1,2,4-Trichlorobenzene	ND (0.0010)		8260B		1	10/12/17 19:52	C7J0197	CJ71249
1,2,4-Trimethylbenzene	**0.133** (0.0500)		8260B		50	10/12/17 16:44	C7J0197	CJ71249
1,2-Dibromo-3-Chloropropane	ND (0.0050)		8260B		1	10/12/17 19:52	C7J0197	CJ71249
1,2-Dibromoethane	ND (0.0010)		8260B		1	10/12/17 19:52	C7J0197	CJ71249
1,2-Dichlorobenzene	ND (0.0010)		8260B		1	10/12/17 19:52	C7J0197	CJ71249
1,2-Dichloroethane	ND (0.0010)		8260B		1	10/12/17 19:52	C7J0197	CJ71249
1,2-Dichloropropane	ND (0.0010)		8260B		1	10/12/17 19:52	C7J0197	CJ71249
1,3,5-Trimethylbenzene	**0.0806** (0.0010)		8260B		1	10/12/17 19:52	C7J0197	CJ71249
1,3-Dichlorobenzene	ND (0.0010)		8260B		1	10/12/17 19:52	C7J0197	CJ71249
1,3-Dichloropropane	ND (0.0010)		8260B		1	10/12/17 19:52	C7J0197	CJ71249
1,4-Dichlorobenzene	ND (0.0010)		8260B		1	10/12/17 19:52	C7J0197	CJ71249
1,4-Dioxane - Screen	ND (0.500)		8260B		1	10/12/17 19:52	C7J0197	CJ71249
1-Chlorohexane	ND (0.0010)		8260B		1	10/12/17 19:52	C7J0197	CJ71249
2,2-Dichloropropane	ND (0.0010)		8260B		1	10/12/17 19:52	C7J0197	CJ71249
2-Butanone	ND (0.0100)		8260B		1	10/12/17 19:52	C7J0197	CJ71249
2-Chlorotoluene	ND (0.0010)		8260B		1	10/12/17 19:52	C7J0197	CJ71249
2-Hexanone	ND (0.0100)		8260B		1	10/12/17 19:52	C7J0197	CJ71249
4-Chlorotoluene	ND (0.0010)		8260B		1	10/12/17 19:52	C7J0197	CJ71249
4-Isopropyltoluene	ND (0.0010)		8260B		1	10/12/17 19:52	C7J0197	CJ71249
4-Methyl-2-Pentanone	ND (0.0250)		8260B		1	10/12/17 19:52	C7J0197	CJ71249
Acetone	ND (0.0100)		8260B		1	10/12/17 19:52	C7J0197	CJ71249
Benzene	**0.842** (0.0500)		8260B		50	10/12/17 16:44	C7J0197	CJ71249
Bromobenzene	ND (0.0020)		8260B		1	10/12/17 19:52	C7J0197	CJ71249

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Former Tidewater Facility
Client Sample ID: MW-333D
Date Sampled: 10/04/17 13:20
Percent Solids: N/A
Initial Volume: 5
Final Volume: 5
Extraction Method: 5030B

ESS Laboratory Work Order: 1710103
ESS Laboratory Sample ID: 1710103-16
Sample Matrix: Ground Water
Units: mg/L
Analyst: DMC

8260B Volatile Organic Compounds

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
Bromochloromethane	ND (0.0010)		8260B		1	10/12/17 19:52	C7J0197	CJ71249
Bromodichloromethane	ND (0.0006)		8260B		1	10/12/17 19:52	C7J0197	CJ71249
Bromoform	ND (0.0010)		8260B		1	10/12/17 19:52	C7J0197	CJ71249
Bromomethane	ND (0.0020)		8260B		1	10/12/17 19:52	C7J0197	CJ71249
Carbon Disulfide	ND (0.0010)		8260B		1	10/12/17 19:52	C7J0197	CJ71249
Carbon Tetrachloride	ND (0.0010)		8260B		1	10/12/17 19:52	C7J0197	CJ71249
Chlorobenzene	ND (0.0010)		8260B		1	10/12/17 19:52	C7J0197	CJ71249
Chloroethane	ND (0.0020)		8260B		1	10/12/17 19:52	C7J0197	CJ71249
Chloroform	ND (0.0010)		8260B		1	10/12/17 19:52	C7J0197	CJ71249
Chloromethane	ND (0.0020)		8260B		1	10/12/17 19:52	C7J0197	CJ71249
cis-1,2-Dichloroethene	ND (0.0010)		8260B		1	10/12/17 19:52	C7J0197	CJ71249
cis-1,3-Dichloropropene	ND (0.0004)		8260B		1	10/12/17 19:52	C7J0197	CJ71249
Dibromochloromethane	ND (0.0010)		8260B		1	10/12/17 19:52	C7J0197	CJ71249
Dibromomethane	ND (0.0010)		8260B		1	10/12/17 19:52	C7J0197	CJ71249
Dichlorodifluoromethane	ND (0.0020)		8260B		1	10/12/17 19:52	C7J0197	CJ71249
Diethyl Ether	ND (0.0010)		8260B		1	10/12/17 19:52	C7J0197	CJ71249
Di-isopropyl ether	ND (0.0010)		8260B		1	10/12/17 19:52	C7J0197	CJ71249
Ethyl tertiary-butyl ether	ND (0.0010)		8260B		1	10/12/17 19:52	C7J0197	CJ71249
Ethylbenzene	**0.364** (0.0500)		8260B		50	10/12/17 16:44	C7J0197	CJ71249
Hexachlorobutadiene	ND (0.0006)		8260B		1	10/12/17 19:52	C7J0197	CJ71249
Hexachloroethane	ND (0.0010)		8260B		1	10/12/17 19:52	C7J0197	CJ71249
Isopropylbenzene	**0.0543** (0.0010)		8260B		1	10/12/17 19:52	C7J0197	CJ71249
Methyl tert-Butyl Ether	ND (0.0010)		8260B		1	10/12/17 19:52	C7J0197	CJ71249
Methylene Chloride	ND (0.0020)		8260B		1	10/12/17 19:52	C7J0197	CJ71249
Naphthalene	**0.913** (0.0500)		8260B		50	10/12/17 16:44	C7J0197	CJ71249
n-Butylbenzene	ND (0.0010)		8260B		1	10/12/17 19:52	C7J0197	CJ71249
n-Propylbenzene	**0.0221** (0.0010)		8260B		1	10/12/17 19:52	C7J0197	CJ71249
sec-Butylbenzene	ND (0.0010)		8260B		1	10/12/17 19:52	C7J0197	CJ71249
Styrene	ND (0.0010)		8260B		1	10/12/17 19:52	C7J0197	CJ71249
tert-Butylbenzene	ND (0.0010)		8260B		1	10/12/17 19:52	C7J0197	CJ71249
Tertiary-amyl methyl ether	ND (0.0010)		8260B		1	10/12/17 19:52	C7J0197	CJ71249
Tetrachloroethene	ND (0.0010)		8260B		1	10/12/17 19:52	C7J0197	CJ71249

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Former Tidewater Facility
Client Sample ID: MW-333D
Date Sampled: 10/04/17 13:20
Percent Solids: N/A
Initial Volume: 5
Final Volume: 5
Extraction Method: 5030B

ESS Laboratory Work Order: 1710103
ESS Laboratory Sample ID: 1710103-16
Sample Matrix: Ground Water
Units: mg/L
Analyst: DMC

8260B Volatile Organic Compounds

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
Tetrahydrofuran	ND (0.0050)		8260B		1	10/12/17 19:52	C7J0197	CJ71249
Toluene	**0.0032** (0.0010)		8260B		1	10/12/17 19:52	C7J0197	CJ71249
trans-1,2-Dichloroethene	ND (0.0010)		8260B		1	10/12/17 19:52	C7J0197	CJ71249
trans-1,3-Dichloropropene	ND (0.0004)		8260B		1	10/12/17 19:52	C7J0197	CJ71249
Trichloroethene	ND (0.0010)		8260B		1	10/12/17 19:52	C7J0197	CJ71249
Trichlorofluoromethane	ND (0.0010)		8260B		1	10/12/17 19:52	C7J0197	CJ71249
Vinyl Acetate	ND (0.0050)		8260B		1	10/12/17 19:52	C7J0197	CJ71249
Vinyl Chloride	ND (0.0010)		8260B		1	10/12/17 19:52	C7J0197	CJ71249
Xylene O	**0.0806** (0.0010)		8260B		1	10/12/17 19:52	C7J0197	CJ71249
Xylene P,M	**0.0109** (0.0020)		8260B		1	10/12/17 19:52	C7J0197	CJ71249
Xylenes (Total)	**0.0915** (0.0020)		8260B		1	10/12/17 19:52		[CALC]

	%Recovery	Qualifier	Limits
Surrogate: 1,2-Dichloroethane-d4	*110 %*		*70-130*
Surrogate: 4-Bromofluorobenzene	*109 %*		*70-130*
Surrogate: Dibromofluoromethane	*114 %*		*70-130*
Surrogate: Toluene-d8	*108 %*		*70-130*

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Former Tidewater Facility
Client Sample ID: BD10042017
Date Sampled: 10/04/17 08:00
Percent Solids: N/A
Initial Volume: 5
Final Volume: 5
Extraction Method: 5030B

ESS Laboratory Work Order: 1710103
ESS Laboratory Sample ID: 1710103-17
Sample Matrix: Ground Water
Units: mg/L
Analyst: DMC

8260B Volatile Organic Compounds

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
1,1,1,2-Tetrachloroethane	ND (0.0010)		8260B		1	10/10/17 19:25	C7J0154	CJ71126
1,1,1-Trichloroethane	ND (0.0010)		8260B		1	10/10/17 19:25	C7J0154	CJ71126
1,1,2,2-Tetrachloroethane	ND (0.0005)		8260B		1	10/10/17 19:25	C7J0154	CJ71126
1,1,2-Trichloroethane	ND (0.0010)		8260B		1	10/10/17 19:25	C7J0154	CJ71126
1,1-Dichloroethane	ND (0.0010)		8260B		1	10/10/17 19:25	C7J0154	CJ71126
1,1-Dichloroethene	ND (0.0010)		8260B		1	10/10/17 19:25	C7J0154	CJ71126
1,1-Dichloropropene	ND (0.0020)		8260B		1	10/10/17 19:25	C7J0154	CJ71126
1,2,3-Trichlorobenzene	ND (0.0010)		8260B		1	10/10/17 19:25	C7J0154	CJ71126
1,2,3-Trichloropropane	ND (0.0010)		8260B		1	10/10/17 19:25	C7J0154	CJ71126
1,2,4-Trichlorobenzene	ND (0.0010)		8260B		1	10/10/17 19:25	C7J0154	CJ71126
1,2,4-Trimethylbenzene	ND (0.0010)		8260B		1	10/10/17 19:25	C7J0154	CJ71126
1,2-Dibromo-3-Chloropropane	ND (0.0050)		8260B		1	10/10/17 19:25	C7J0154	CJ71126
1,2-Dibromoethane	ND (0.0010)		8260B		1	10/10/17 19:25	C7J0154	CJ71126
1,2-Dichlorobenzene	ND (0.0010)		8260B		1	10/10/17 19:25	C7J0154	CJ71126
1,2-Dichloroethane	ND (0.0010)		8260B		1	10/10/17 19:25	C7J0154	CJ71126
1,2-Dichloropropane	ND (0.0010)		8260B		1	10/10/17 19:25	C7J0154	CJ71126
1,3,5-Trimethylbenzene	ND (0.0010)		8260B		1	10/10/17 19:25	C7J0154	CJ71126
1,3-Dichlorobenzene	ND (0.0010)		8260B		1	10/10/17 19:25	C7J0154	CJ71126
1,3-Dichloropropane	ND (0.0010)		8260B		1	10/10/17 19:25	C7J0154	CJ71126
1,4-Dichlorobenzene	ND (0.0010)		8260B		1	10/10/17 19:25	C7J0154	CJ71126
1,4-Dioxane - Screen	ND (0.500)		8260B		1	10/10/17 19:25	C7J0154	CJ71126
1-Chlorohexane	ND (0.0010)		8260B		1	10/10/17 19:25	C7J0154	CJ71126
2,2-Dichloropropane	ND (0.0010)		8260B		1	10/10/17 19:25	C7J0154	CJ71126
2-Butanone	ND (0.0100)		8260B		1	10/10/17 19:25	C7J0154	CJ71126
2-Chlorotoluene	ND (0.0010)		8260B		1	10/10/17 19:25	C7J0154	CJ71126
2-Hexanone	ND (0.0100)		8260B		1	10/10/17 19:25	C7J0154	CJ71126
4-Chlorotoluene	ND (0.0010)		8260B		1	10/10/17 19:25	C7J0154	CJ71126
4-Isopropyltoluene	ND (0.0010)		8260B		1	10/10/17 19:25	C7J0154	CJ71126
4-Methyl-2-Pentanone	ND (0.0250)		8260B		1	10/10/17 19:25	C7J0154	CJ71126
Acetone	ND (0.0100)		8260B		1	10/10/17 19:25	C7J0154	CJ71126
Benzene	ND (0.0010)		8260B		1	10/10/17 19:25	C7J0154	CJ71126
Bromobenzene	ND (0.0020)		8260B		1	10/10/17 19:25	C7J0154	CJ71126

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Former Tidewater Facility
Client Sample ID: BD10042017
Date Sampled: 10/04/17 08:00
Percent Solids: N/A
Initial Volume: 5
Final Volume: 5
Extraction Method: 5030B

ESS Laboratory Work Order: 1710103
ESS Laboratory Sample ID: 1710103-17
Sample Matrix: Ground Water
Units: mg/L
Analyst: DMC

8260B Volatile Organic Compounds

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
Bromochloromethane	ND (0.0010)		8260B		1	10/10/17 19:25	C7J0154	CJ71126
Bromodichloromethane	ND (0.0006)		8260B		1	10/10/17 19:25	C7J0154	CJ71126
Bromoform	ND (0.0010)		8260B		1	10/10/17 19:25	C7J0154	CJ71126
Bromomethane	ND (0.0020)		8260B		1	10/10/17 19:25	C7J0154	CJ71126
Carbon Disulfide	ND (0.0010)		8260B		1	10/10/17 19:25	C7J0154	CJ71126
Carbon Tetrachloride	ND (0.0010)		8260B		1	10/10/17 19:25	C7J0154	CJ71126
Chlorobenzene	ND (0.0010)		8260B		1	10/10/17 19:25	C7J0154	CJ71126
Chloroethane	ND (0.0020)		8260B		1	10/10/17 19:25	C7J0154	CJ71126
Chloroform	ND (0.0010)		8260B		1	10/10/17 19:25	C7J0154	CJ71126
Chloromethane	ND (0.0020)		8260B		1	10/10/17 19:25	C7J0154	CJ71126
cis-1,2-Dichloroethene	ND (0.0010)		8260B		1	10/10/17 19:25	C7J0154	CJ71126
cis-1,3-Dichloropropene	ND (0.0004)		8260B		1	10/10/17 19:25	C7J0154	CJ71126
Dibromochloromethane	ND (0.0010)		8260B		1	10/10/17 19:25	C7J0154	CJ71126
Dibromomethane	ND (0.0010)		8260B		1	10/10/17 19:25	C7J0154	CJ71126
Dichlorodifluoromethane	ND (0.0020)		8260B		1	10/10/17 19:25	C7J0154	CJ71126
Diethyl Ether	ND (0.0010)		8260B		1	10/10/17 19:25	C7J0154	CJ71126
Di-isopropyl ether	ND (0.0010)		8260B		1	10/10/17 19:25	C7J0154	CJ71126
Ethyl tertiary-butyl ether	ND (0.0010)		8260B		1	10/10/17 19:25	C7J0154	CJ71126
Ethylbenzene	ND (0.0010)		8260B		1	10/10/17 19:25	C7J0154	CJ71126
Hexachlorobutadiene	ND (0.0006)		8260B		1	10/10/17 19:25	C7J0154	CJ71126
Hexachloroethane	ND (0.0010)		8260B		1	10/10/17 19:25	C7J0154	CJ71126
Isopropylbenzene	ND (0.0010)		8260B		1	10/10/17 19:25	C7J0154	CJ71126
Methyl tert-Butyl Ether	ND (0.0010)		8260B		1	10/10/17 19:25	C7J0154	CJ71126
Methylene Chloride	ND (0.0020)		8260B		1	10/10/17 19:25	C7J0154	CJ71126
Naphthalene	ND (0.0010)		8260B		1	10/10/17 19:25	C7J0154	CJ71126
n-Butylbenzene	ND (0.0010)		8260B		1	10/10/17 19:25	C7J0154	CJ71126
n-Propylbenzene	ND (0.0010)		8260B		1	10/10/17 19:25	C7J0154	CJ71126
sec-Butylbenzene	ND (0.0010)		8260B		1	10/10/17 19:25	C7J0154	CJ71126
Styrene	ND (0.0010)		8260B		1	10/10/17 19:25	C7J0154	CJ71126
tert-Butylbenzene	ND (0.0010)		8260B		1	10/10/17 19:25	C7J0154	CJ71126
Tertiary-amyl methyl ether	ND (0.0010)		8260B		1	10/10/17 19:25	C7J0154	CJ71126
Tetrachloroethene	ND (0.0010)		8260B		1	10/10/17 19:25	C7J0154	CJ71126

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Former Tidewater Facility
Client Sample ID: BD10042017
Date Sampled: 10/04/17 08:00
Percent Solids: N/A
Initial Volume: 5
Final Volume: 5
Extraction Method: 5030B

ESS Laboratory Work Order: 1710103
ESS Laboratory Sample ID: 1710103-17
Sample Matrix: Ground Water
Units: mg/L
Analyst: DMC

8260B Volatile Organic Compounds

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
Tetrahydrofuran	ND (0.0050)		8260B		1	10/10/17 19:25	C7J0154	CJ71126
Toluene	ND (0.0010)		8260B		1	10/10/17 19:25	C7J0154	CJ71126
trans-1,2-Dichloroethene	ND (0.0010)		8260B		1	10/10/17 19:25	C7J0154	CJ71126
trans-1,3-Dichloropropene	ND (0.0004)		8260B		1	10/10/17 19:25	C7J0154	CJ71126
Trichloroethene	ND (0.0010)		8260B		1	10/10/17 19:25	C7J0154	CJ71126
Trichlorofluoromethane	ND (0.0010)		8260B		1	10/10/17 19:25	C7J0154	CJ71126
Vinyl Acetate	ND (0.0050)		8260B		1	10/10/17 19:25	C7J0154	CJ71126
Vinyl Chloride	ND (0.0010)		8260B		1	10/10/17 19:25	C7J0154	CJ71126
Xylene O	ND (0.0010)		8260B		1	10/10/17 19:25	C7J0154	CJ71126
Xylene P,M	ND (0.0020)		8260B		1	10/10/17 19:25	C7J0154	CJ71126
Xylenes (Total)	ND (0.0020)		8260B		1	10/10/17 19:25		[CALC]

	%Recovery	Qualifier	Limits
Surrogate: 1,2-Dichloroethane-d4	*108 %*		*70-130*
Surrogate: 4-Bromofluorobenzene	*108 %*		*70-130*
Surrogate: Dibromofluoromethane	*110 %*		*70-130*
Surrogate: Toluene-d8	*105 %*		*70-130*

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Former Tidewater Facility
Client Sample ID: Trip Blank
Date Sampled: 10/03/17 00:00
Percent Solids: N/A
Initial Volume: 5
Final Volume: 5
Extraction Method: 5030B

ESS Laboratory Work Order: 1710103
ESS Laboratory Sample ID: 1710103-18
Sample Matrix: Aqueous
Units: mg/L
Analyst: DMC

8260B Volatile Organic Compounds

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
1,1,1,2-Tetrachloroethane	ND (0.0010)		8260B		1	10/10/17 18:58	C7J0154	CJ71126
1,1,1-Trichloroethane	ND (0.0010)		8260B		1	10/10/17 18:58	C7J0154	CJ71126
1,1,2,2-Tetrachloroethane	ND (0.0005)		8260B		1	10/10/17 18:58	C7J0154	CJ71126
1,1,2-Trichloroethane	ND (0.0010)		8260B		1	10/10/17 18:58	C7J0154	CJ71126
1,1-Dichloroethane	ND (0.0010)		8260B		1	10/10/17 18:58	C7J0154	CJ71126
1,1-Dichloroethene	ND (0.0010)		8260B		1	10/10/17 18:58	C7J0154	CJ71126
1,1-Dichloropropene	ND (0.0020)		8260B		1	10/10/17 18:58	C7J0154	CJ71126
1,2,3-Trichlorobenzene	ND (0.0010)		8260B		1	10/10/17 18:58	C7J0154	CJ71126
1,2,3-Trichloropropane	ND (0.0010)		8260B		1	10/10/17 18:58	C7J0154	CJ71126
1,2,4-Trichlorobenzene	ND (0.0010)		8260B		1	10/10/17 18:58	C7J0154	CJ71126
1,2,4-Trimethylbenzene	ND (0.0010)		8260B		1	10/10/17 18:58	C7J0154	CJ71126
1,2-Dibromo-3-Chloropropane	ND (0.0050)		8260B		1	10/10/17 18:58	C7J0154	CJ71126
1,2-Dibromoethane	ND (0.0010)		8260B		1	10/10/17 18:58	C7J0154	CJ71126
1,2-Dichlorobenzene	ND (0.0010)		8260B		1	10/10/17 18:58	C7J0154	CJ71126
1,2-Dichloroethane	ND (0.0010)		8260B		1	10/10/17 18:58	C7J0154	CJ71126
1,2-Dichloropropane	ND (0.0010)		8260B		1	10/10/17 18:58	C7J0154	CJ71126
1,3,5-Trimethylbenzene	ND (0.0010)		8260B		1	10/10/17 18:58	C7J0154	CJ71126
1,3-Dichlorobenzene	ND (0.0010)		8260B		1	10/10/17 18:58	C7J0154	CJ71126
1,3-Dichloropropane	ND (0.0010)		8260B		1	10/10/17 18:58	C7J0154	CJ71126
1,4-Dichlorobenzene	ND (0.0010)		8260B		1	10/10/17 18:58	C7J0154	CJ71126
1,4-Dioxane - Screen	ND (0.500)		8260B		1	10/10/17 18:58	C7J0154	CJ71126
1-Chlorohexane	ND (0.0010)		8260B		1	10/10/17 18:58	C7J0154	CJ71126
2,2-Dichloropropane	ND (0.0010)		8260B		1	10/10/17 18:58	C7J0154	CJ71126
2-Butanone	ND (0.0100)		8260B		1	10/10/17 18:58	C7J0154	CJ71126
2-Chlorotoluene	ND (0.0010)		8260B		1	10/10/17 18:58	C7J0154	CJ71126
2-Hexanone	ND (0.0100)		8260B		1	10/10/17 18:58	C7J0154	CJ71126
4-Chlorotoluene	ND (0.0010)		8260B		1	10/10/17 18:58	C7J0154	CJ71126
4-Isopropyltoluene	ND (0.0010)		8260B		1	10/10/17 18:58	C7J0154	CJ71126
4-Methyl-2-Pentanone	ND (0.0250)		8260B		1	10/10/17 18:58	C7J0154	CJ71126
Acetone	ND (0.0100)		8260B		1	10/10/17 18:58	C7J0154	CJ71126
Benzene	ND (0.0010)		8260B		1	10/10/17 18:58	C7J0154	CJ71126
Bromobenzene	ND (0.0020)		8260B		1	10/10/17 18:58	C7J0154	CJ71126

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Former Tidewater Facility
Client Sample ID: Trip Blank
Date Sampled: 10/03/17 00:00
Percent Solids: N/A
Initial Volume: 5
Final Volume: 5
Extraction Method: 5030B

ESS Laboratory Work Order: 1710103
ESS Laboratory Sample ID: 1710103-18
Sample Matrix: Aqueous
Units: mg/L
Analyst: DMC

8260B Volatile Organic Compounds

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
Bromochloromethane	ND (0.0010)		8260B		1	10/10/17 18:58	C7J0154	CJ71126
Bromodichloromethane	ND (0.0006)		8260B		1	10/10/17 18:58	C7J0154	CJ71126
Bromoform	ND (0.0010)		8260B		1	10/10/17 18:58	C7J0154	CJ71126
Bromomethane	ND (0.0020)		8260B		1	10/10/17 18:58	C7J0154	CJ71126
Carbon Disulfide	ND (0.0010)		8260B		1	10/10/17 18:58	C7J0154	CJ71126
Carbon Tetrachloride	ND (0.0010)		8260B		1	10/10/17 18:58	C7J0154	CJ71126
Chlorobenzene	ND (0.0010)		8260B		1	10/10/17 18:58	C7J0154	CJ71126
Chloroethane	ND (0.0020)		8260B		1	10/10/17 18:58	C7J0154	CJ71126
Chloroform	ND (0.0010)		8260B		1	10/10/17 18:58	C7J0154	CJ71126
Chloromethane	ND (0.0020)		8260B		1	10/10/17 18:58	C7J0154	CJ71126
cis-1,2-Dichloroethene	ND (0.0010)		8260B		1	10/10/17 18:58	C7J0154	CJ71126
cis-1,3-Dichloropropene	ND (0.0004)		8260B		1	10/10/17 18:58	C7J0154	CJ71126
Dibromochloromethane	ND (0.0010)		8260B		1	10/10/17 18:58	C7J0154	CJ71126
Dibromomethane	ND (0.0010)		8260B		1	10/10/17 18:58	C7J0154	CJ71126
Dichlorodifluoromethane	ND (0.0020)		8260B		1	10/10/17 18:58	C7J0154	CJ71126
Diethyl Ether	ND (0.0010)		8260B		1	10/10/17 18:58	C7J0154	CJ71126
Di-isopropyl ether	ND (0.0010)		8260B		1	10/10/17 18:58	C7J0154	CJ71126
Ethyl tertiary-butyl ether	ND (0.0010)		8260B		1	10/10/17 18:58	C7J0154	CJ71126
Ethylbenzene	ND (0.0010)		8260B		1	10/10/17 18:58	C7J0154	CJ71126
Hexachlorobutadiene	ND (0.0006)		8260B		1	10/10/17 18:58	C7J0154	CJ71126
Hexachloroethane	ND (0.0010)		8260B		1	10/10/17 18:58	C7J0154	CJ71126
Isopropylbenzene	ND (0.0010)		8260B		1	10/10/17 18:58	C7J0154	CJ71126
Methyl tert-Butyl Ether	ND (0.0010)		8260B		1	10/10/17 18:58	C7J0154	CJ71126
Methylene Chloride	ND (0.0020)		8260B		1	10/10/17 18:58	C7J0154	CJ71126
Naphthalene	ND (0.0010)		8260B		1	10/10/17 18:58	C7J0154	CJ71126
n-Butylbenzene	ND (0.0010)		8260B		1	10/10/17 18:58	C7J0154	CJ71126
n-Propylbenzene	ND (0.0010)		8260B		1	10/10/17 18:58	C7J0154	CJ71126
sec-Butylbenzene	ND (0.0010)		8260B		1	10/10/17 18:58	C7J0154	CJ71126
Styrene	ND (0.0010)		8260B		1	10/10/17 18:58	C7J0154	CJ71126
tert-Butylbenzene	ND (0.0010)		8260B		1	10/10/17 18:58	C7J0154	CJ71126
Tertiary-amyl methyl ether	ND (0.0010)		8260B		1	10/10/17 18:58	C7J0154	CJ71126
Tetrachloroethene	ND (0.0010)		8260B		1	10/10/17 18:58	C7J0154	CJ71126

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Former Tidewater Facility
Client Sample ID: Trip Blank
Date Sampled: 10/03/17 00:00
Percent Solids: N/A
Initial Volume: 5
Final Volume: 5
Extraction Method: 5030B

ESS Laboratory Work Order: 1710103
ESS Laboratory Sample ID: 1710103-18
Sample Matrix: Aqueous
Units: mg/L
Analyst: DMC

8260B Volatile Organic Compounds

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
Tetrahydrofuran	ND (0.0050)		8260B		1	10/10/17 18:58	C7J0154	CJ71126
Toluene	ND (0.0010)		8260B		1	10/10/17 18:58	C7J0154	CJ71126
trans-1,2-Dichloroethene	ND (0.0010)		8260B		1	10/10/17 18:58	C7J0154	CJ71126
trans-1,3-Dichloropropene	ND (0.0004)		8260B		1	10/10/17 18:58	C7J0154	CJ71126
Trichloroethene	ND (0.0010)		8260B		1	10/10/17 18:58	C7J0154	CJ71126
Trichlorofluoromethane	ND (0.0010)		8260B		1	10/10/17 18:58	C7J0154	CJ71126
Vinyl Acetate	ND (0.0050)		8260B		1	10/10/17 18:58	C7J0154	CJ71126
Vinyl Chloride	ND (0.0010)		8260B		1	10/10/17 18:58	C7J0154	CJ71126
Xylene O	ND (0.0010)		8260B		1	10/10/17 18:58	C7J0154	CJ71126
Xylene P,M	ND (0.0020)		8260B		1	10/10/17 18:58	C7J0154	CJ71126
Xylenes (Total)	ND (0.0020)		8260B		1	10/10/17 18:58		[CALC]

	%Recovery	Qualifier	Limits
Surrogate: 1,2-Dichloroethane-d4	*106 %*		*70-130*
Surrogate: 4-Bromofluorobenzene	*109 %*		*70-130*
Surrogate: Dibromofluoromethane	*111 %*		*70-130*
Surrogate: Toluene-d8	*107 %*		*70-130*

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Former Tidewater Facility

ESS Laboratory Work Order: 1710103

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
8260B Volatile Organic Compounds										
Batch CJ71126 - 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: Former Tidewater Facility

ESS Laboratory Work Order: 1710103

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
8260B Volatile Organic Compounds										
Batch CJ71126 - 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							
Xylenes (Total)	ND	0.0020	mg/L							
Surrogate: 1,2-Dichloroethane-d4	*0.0262*		mg/L	*0.02500*		*105*	*70-130*			
Surrogate: 4-Bromofluorobenzene	*0.0273*		mg/L	*0.02500*		*109*	*70-130*			
Surrogate: Dibromofluoromethane	*0.0271*		mg/L	*0.02500*		*108*	*70-130*			
Surrogate: Toluene-d8	*0.0271*		mg/L	*0.02500*		*108*	*70-130*			
LCS										
1,1,1,2-Tetrachloroethane	9.22		ug/L	10.00		92	70-130			
1,1,1-Trichloroethane	10.2		ug/L	10.00		102	70-130			
1,1,2,2-Tetrachloroethane	10.1		ug/L	10.00		101	70-130			
1,1,2-Trichloroethane	9.70		ug/L	10.00		97	70-130			
1,1-Dichloroethane	9.85		ug/L	10.00		98	70-130			
1,1-Dichloroethene	9.91		ug/L	10.00		99	70-130			
1,1-Dichloropropene	10.9		ug/L	10.00		109	70-130			
1,2,3-Trichlorobenzene	10.3		ug/L	10.00		103	70-130			
1,2,3-Trichloropropane	9.74		ug/L	10.00		97	70-130			

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Former Tidewater Facility

ESS Laboratory Work Order: 1710103

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
8260B Volatile Organic Compounds										
Batch CJ71126 - 5030B										
1,2,4-Trichlorobenzene	10.1		ug/L	10.00		101	70-130			
1,2,4-Trimethylbenzene	9.95		ug/L	10.00		100	70-130			
1,2-Dibromo-3-Chloropropane	8.86		ug/L	10.00		89	70-130			
1,2-Dibromoethane	8.99		ug/L	10.00		90	70-130			
1,2-Dichlorobenzene	10.2		ug/L	10.00		102	70-130			
1,2-Dichloroethane	10.4		ug/L	10.00		104	70-130			
1,2-Dichloropropane	9.90		ug/L	10.00		99	70-130			
1,3,5-Trimethylbenzene	10.1		ug/L	10.00		101	70-130			
1,3-Dichlorobenzene	10.3		ug/L	10.00		103	70-130			
1,3-Dichloropropane	9.83		ug/L	10.00		98	70-130			
1,4-Dichlorobenzene	10.4		ug/L	10.00		104	70-130			
1,4-Dioxane - Screen	224		ug/L	200.0		112	0-332			
1-Chlorohexane	9.13		ug/L	10.00		91	70-130			
2,2-Dichloropropane	9.84		ug/L	10.00		98	70-130			
2-Butanone	48.8		ug/L	50.00		98	70-130			
2-Chlorotoluene	9.85		ug/L	10.00		98	70-130			
2-Hexanone	47.5		ug/L	50.00		95	70-130			
4-Chlorotoluene	9.73		ug/L	10.00		97	70-130			
4-Isopropyltoluene	10.3		ug/L	10.00		103	70-130			
4-Methyl-2-Pentanone	49.2		ug/L	50.00		98	70-130			
Acetone	44.4		ug/L	50.00		89	70-130			
Benzene	10.0		ug/L	10.00		100	70-130			
Bromobenzene	10.4		ug/L	10.00		104	70-130			
Bromochloromethane	9.69		ug/L	10.00		97	70-130			
Bromodichloromethane	9.97		ug/L	10.00		100	70-130			
Bromoform	8.36		ug/L	10.00		84	70-130			
Bromomethane	11.1		ug/L	10.00		111	70-130			
Carbon Disulfide	10.6		ug/L	10.00		106	70-130			
Carbon Tetrachloride	9.88		ug/L	10.00		99	70-130			
Chlorobenzene	9.96		ug/L	10.00		100	70-130			
Chloroethane	9.76		ug/L	10.00		98	70-130			
Chloroform	10.2		ug/L	10.00		102	70-130			
Chloromethane	9.32		ug/L	10.00		93	70-130			
cis-1,2-Dichloroethene	9.87		ug/L	10.00		99	70-130			
cis-1,3-Dichloropropene	10.3		ug/L	10.00		103	70-130			
Dibromochloromethane	9.45		ug/L	10.00		94	70-130			
Dibromomethane	9.92		ug/L	10.00		99	70-130			
Dichlorodifluoromethane	8.36		ug/L	10.00		84	70-130			
Diethyl Ether	8.83		ug/L	10.00		88	70-130			
Di-isopropyl ether	10.0		ug/L	10.00		100	70-130			
Ethyl tertiary-butyl ether	9.71		ug/L	10.00		97	70-130			
Ethylbenzene	9.47		ug/L	10.00		95	70-130			
Hexachlorobutadiene	10.8		ug/L	10.00		108	70-130			
Hexachloroethane	9.79		ug/L	10.00		98	70-130			
Isopropylbenzene	9.77		ug/L	10.00		98	70-130			

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Former Tidewater Facility

ESS Laboratory Work Order: 1710103

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
8260B Volatile Organic Compounds										
Batch CJ71126 - 5030B										
Methyl tert-Butyl Ether	9.80		ug/L	10.00		98	70-130			
Methylene Chloride	9.66		ug/L	10.00		97	70-130			
Naphthalene	9.93		ug/L	10.00		99	70-130			
n-Butylbenzene	10.3		ug/L	10.00		103	70-130			
n-Propylbenzene	10.3		ug/L	10.00		103	70-130			
sec-Butylbenzene	10.2		ug/L	10.00		102	70-130			
Styrene	9.44		ug/L	10.00		94	70-130			
tert-Butylbenzene	10.3		ug/L	10.00		103	70-130			
Tertiary-amyl methyl ether	9.47		ug/L	10.00		95	70-130			
Tetrachloroethene	5.93		ug/L	10.00		59	70-130			B-
Tetrahydrofuran	8.90		ug/L	10.00		89	70-130			
Toluene	9.93		ug/L	10.00		99	70-130			
trans-1,2-Dichloroethene	10.0		ug/L	10.00		100	70-130			
trans-1,3-Dichloropropene	9.90		ug/L	10.00		99	70-130			
Trichloroethene	9.86		ug/L	10.00		99	70-130			
Trichlorofluoromethane	10.1		ug/L	10.00		101	70-130			
Vinyl Acetate	12.2		ug/L	10.00		122	70-130			
Vinyl Chloride	10.0		ug/L	10.00		100	70-130			
Xylene O	9.98		ug/L	10.00		100	70-130			
Xylene P,M	19.4		ug/L	20.00		97	70-130			
Xylenes (Total)	29.4		mg/L							
Surrogate: 1,2-Dichloroethane-d4	*0.0245*		mg/L	*0.02500*		*98*	*70-130*			
Surrogate: 4-Bromofluorobenzene	*0.0230*		mg/L	*0.02500*		*92*	*70-130*			
Surrogate: Dibromofluoromethane	*0.0256*		mg/L	*0.02500*		*102*	*70-130*			
Surrogate: Toluene-d8	*0.0241*		mg/L	*0.02500*		*97*	*70-130*			
LCS Dup										
1,1,1,2-Tetrachloroethane	9.23		ug/L	10.00		92	70-130	0.1	25	
1,1,1-Trichloroethane	10.0		ug/L	10.00		100	70-130	1	25	
1,1,2,2-Tetrachloroethane	10.2		ug/L	10.00		102	70-130	1	25	
1,1,2-Trichloroethane	9.91		ug/L	10.00		99	70-130	2	25	
1,1-Dichloroethane	9.88		ug/L	10.00		99	70-130	0.3	25	
1,1-Dichloroethene	10.0		ug/L	10.00		100	70-130	0.9	25	
1,1-Dichloropropene	10.8		ug/L	10.00		108	70-130	0.4	25	
1,2,3-Trichlorobenzene	10.1		ug/L	10.00		101	70-130	2	25	
1,2,3-Trichloropropane	9.91		ug/L	10.00		99	70-130	2	25	
1,2,4-Trichlorobenzene	10.1		ug/L	10.00		101	70-130	0.3	25	
1,2,4-Trimethylbenzene	10.1		ug/L	10.00		101	70-130	2	25	
1,2-Dibromo-3-Chloropropane	9.28		ug/L	10.00		93	70-130	5	25	
1,2-Dibromoethane	9.16		ug/L	10.00		92	70-130	2	25	
1,2-Dichlorobenzene	9.99		ug/L	10.00		100	70-130	2	25	
1,2-Dichloroethane	10.4		ug/L	10.00		104	70-130	0.2	25	
1,2-Dichloropropane	9.99		ug/L	10.00		100	70-130	0.9	25	
1,3,5-Trimethylbenzene	9.98		ug/L	10.00		100	70-130	1	25	
1,3-Dichlorobenzene	9.95		ug/L	10.00		100	70-130	3	25	
1,3-Dichloropropane	9.82		ug/L	10.00		98	70-130	0.1	25	

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Former Tidewater Facility

ESS Laboratory Work Order: 1710103

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
8260B Volatile Organic Compounds										
Batch CJ71126 - 5030B										
1,4-Dichlorobenzene	10.6		ug/L	10.00		106	70-130	2	25	
1,4-Dioxane - Screen	224		ug/L	200.0		112	0-332	0.009	200	
1-Chlorohexane	8.94		ug/L	10.00		89	70-130	2	25	
2,2-Dichloropropane	9.89		ug/L	10.00		99	70-130	0.5	25	
2-Butanone	55.5		ug/L	50.00		111	70-130	13	25	
2-Chlorotoluene	10.0		ug/L	10.00		100	70-130	2	25	
2-Hexanone	53.1		ug/L	50.00		106	70-130	11	25	
4-Chlorotoluene	9.84		ug/L	10.00		98	70-130	1	25	
4-Isopropyltoluene	10.2		ug/L	10.00		102	70-130	1	25	
4-Methyl-2-Pentanone	49.3		ug/L	50.00		99	70-130	0.4	25	
Acetone	58.4		ug/L	50.00		117	70-130	27	25	D+
Benzene	10.1		ug/L	10.00		101	70-130	0.3	25	
Bromobenzene	10.2		ug/L	10.00		102	70-130	1	25	
Bromochloromethane	9.92		ug/L	10.00		99	70-130	2	25	
Bromodichloromethane	9.86		ug/L	10.00		99	70-130	1	25	
Bromoform	8.16		ug/L	10.00		82	70-130	2	25	
Bromomethane	11.3		ug/L	10.00		113	70-130	2	25	
Carbon Disulfide	10.5		ug/L	10.00		105	70-130	0.5	25	
Carbon Tetrachloride	9.88		ug/L	10.00		99	70-130	0	25	
Chlorobenzene	9.69		ug/L	10.00		97	70-130	3	25	
Chloroethane	10.4		ug/L	10.00		104	70-130	6	25	
Chloroform	10.2		ug/L	10.00		102	70-130	0.6	25	
Chloromethane	9.29		ug/L	10.00		93	70-130	0.3	25	
cis-1,2-Dichloroethene	10.0		ug/L	10.00		100	70-130	2	25	
cis-1,3-Dichloropropene	10.5		ug/L	10.00		105	70-130	2	25	
Dibromochloromethane	9.48		ug/L	10.00		95	70-130	0.3	25	
Dibromomethane	9.85		ug/L	10.00		98	70-130	0.7	25	
Dichlorodifluoromethane	8.25		ug/L	10.00		82	70-130	1	25	
Diethyl Ether	10.6		ug/L	10.00		106	70-130	18	25	
Di-isopropyl ether	10.2		ug/L	10.00		102	70-130	2	25	
Ethyl tertiary-butyl ether	9.98		ug/L	10.00		100	70-130	3	25	
Ethylbenzene	9.37		ug/L	10.00		94	70-130	1	25	
Hexachlorobutadiene	10.1		ug/L	10.00		101	70-130	6	25	
Hexachloroethane	9.24		ug/L	10.00		92	70-130	6	25	
Isopropylbenzene	9.72		ug/L	10.00		97	70-130	0.5	25	
Methyl tert-Butyl Ether	10.2		ug/L	10.00		102	70-130	4	25	
Methylene Chloride	9.72		ug/L	10.00		97	70-130	0.6	25	
Naphthalene	10.2		ug/L	10.00		102	70-130	2	25	
n-Butylbenzene	10.2		ug/L	10.00		102	70-130	2	25	
n-Propylbenzene	10.3		ug/L	10.00		103	70-130	0.1	25	
sec-Butylbenzene	10.1		ug/L	10.00		101	70-130	1	25	
Styrene	9.69		ug/L	10.00		97	70-130	3	25	
tert-Butylbenzene	9.87		ug/L	10.00		99	70-130	4	25	
Tertiary-amyl methyl ether	9.60		ug/L	10.00		96	70-130	1	25	
Tetrachloroethene	5.82		ug/L	10.00		58	70-130	2	25	B-

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Former Tidewater Facility

ESS Laboratory Work Order: 1710103

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
8260B Volatile Organic Compounds										
Batch CJ71126 - 5030B										
Tetrahydrofuran	9.01		ug/L	10.00		90	70-130	1	25	
Toluene	9.86		ug/L	10.00		99	70-130	0.7	25	
trans-1,2-Dichloroethene	10.0		ug/L	10.00		100	70-130	0.2	25	
trans-1,3-Dichloropropene	10.2		ug/L	10.00		102	70-130	3	25	
Trichloroethene	9.61		ug/L	10.00		96	70-130	3	25	
Trichlorofluoromethane	9.69		ug/L	10.00		97	70-130	4	25	
Vinyl Acetate	12.6		ug/L	10.00		126	70-130	3	25	
Vinyl Chloride	9.97		ug/L	10.00		100	70-130	0.6	25	
Xylene O	9.65		ug/L	10.00		96	70-130	3	25	
Xylene P,M	19.4		ug/L	20.00		97	70-130	0	25	
Xylenes (Total)	29.1		mg/L							
Surrogate: 1,2-Dichloroethane-d4	*0.0249*		mg/L	*0.02500*		*100*	*70-130*			
Surrogate: 4-Bromofluorobenzene	*0.0226*		mg/L	*0.02500*		*91*	*70-130*			
Surrogate: Dibromofluoromethane	*0.0252*		mg/L	*0.02500*		*101*	*70-130*			
Surrogate: Toluene-d8	*0.0239*		mg/L	*0.02500*		*96*	*70-130*			
Batch CJ71249 - 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							

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Former Tidewater Facility

ESS Laboratory Work Order: 1710103

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
8260B Volatile Organic Compounds										
Batch CJ71249 - 5030B										
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							
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							

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Former Tidewater Facility

ESS Laboratory Work Order: 1710103

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
8260B Volatile Organic Compounds										
Batch CJ71249 - 5030B										
Xylene P,M	ND	0.0020	mg/L							
Xylenes (Total)	ND	0.0020	mg/L							
Surrogate: 1,2-Dichloroethane-d4	*0.0284*		mg/L	*0.02500*		*114*	*70-130*			
Surrogate: 4-Bromofluorobenzene	*0.0265*		mg/L	*0.02500*		*106*	*70-130*			
Surrogate: Dibromofluoromethane	*0.0286*		mg/L	*0.02500*		*114*	*70-130*			
Surrogate: Toluene-d8	*0.0261*		mg/L	*0.02500*		*105*	*70-130*			
LCS										
1,1,1,2-Tetrachloroethane	8.52		ug/L	10.00		85	70-130			
1,1,1-Trichloroethane	9.87		ug/L	10.00		99	70-130			
1,1,2,2-Tetrachloroethane	10.5		ug/L	10.00		105	70-130			
1,1,2-Trichloroethane	10.3		ug/L	10.00		103	70-130			
1,1-Dichloroethane	10.6		ug/L	10.00		106	70-130			
1,1-Dichloroethene	9.96		ug/L	10.00		100	70-130			
1,1-Dichloropropene	11.1		ug/L	10.00		111	70-130			
1,2,3-Trichlorobenzene	9.62		ug/L	10.00		96	70-130			
1,2,3-Trichloropropane	10.0		ug/L	10.00		100	70-130			
1,2,4-Trichlorobenzene	9.64		ug/L	10.00		96	70-130			
1,2,4-Trimethylbenzene	10.2		ug/L	10.00		102	70-130			
1,2-Dibromo-3-Chloropropane	8.27		ug/L	10.00		83	70-130			
1,2-Dibromoethane	9.58		ug/L	10.00		96	70-130			
1,2-Dichlorobenzene	9.97		ug/L	10.00		100	70-130			
1,2-Dichloroethane	11.1		ug/L	10.00		111	70-130			
1,2-Dichloropropane	10.5		ug/L	10.00		105	70-130			
1,3,5-Trimethylbenzene	10.0		ug/L	10.00		100	70-130			
1,3-Dichlorobenzene	9.92		ug/L	10.00		99	70-130			
1,3-Dichloropropane	10.3		ug/L	10.00		103	70-130			
1,4-Dichlorobenzene	10.4		ug/L	10.00		104	70-130			
1,4-Dioxane - Screen	244		ug/L	200.0		122	0-332			
1-Chlorohexane	8.86		ug/L	10.00		89	70-130			
2,2-Dichloropropane	9.99		ug/L	10.00		100	70-130			
2-Butanone	56.9		ug/L	50.00		114	70-130			
2-Chlorotoluene	10.3		ug/L	10.00		103	70-130			
2-Hexanone	54.6		ug/L	50.00		109	70-130			
4-Chlorotoluene	10.2		ug/L	10.00		102	70-130			
4-Isopropyltoluene	10.2		ug/L	10.00		102	70-130			
4-Methyl-2-Pentanone	51.2		ug/L	50.00		102	70-130			
Acetone	59.7		ug/L	50.00		119	70-130			
Benzene	10.5		ug/L	10.00		105	70-130			
Bromobenzene	9.97		ug/L	10.00		100	70-130			
Bromochloromethane	9.86		ug/L	10.00		99	70-130			
Bromodichloromethane	9.89		ug/L	10.00		99	70-130			
Bromoform	6.46		ug/L	10.00		65	70-130			B-
Bromomethane	6.25		ug/L	10.00		62	70-130			B-
Carbon Disulfide	10.2		ug/L	10.00		102	70-130			
Carbon Tetrachloride	9.23		ug/L	10.00		92	70-130			

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Former Tidewater Facility

ESS Laboratory Work Order: 1710103

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
8260B Volatile Organic Compounds										
Batch CJ71249 - 5030B										
Chlorobenzene	9.93		ug/L	10.00		99	70-130			
Chloroethane	10.4		ug/L	10.00		104	70-130			
Chloroform	10.4		ug/L	10.00		104	70-130			
Chloromethane	9.09		ug/L	10.00		91	70-130			
cis-1,2-Dichloroethene	10.2		ug/L	10.00		102	70-130			
cis-1,3-Dichloropropene	10.4		ug/L	10.00		104	70-130			
Dibromochloromethane	8.22		ug/L	10.00		82	70-130			
Dibromomethane	10.0		ug/L	10.00		100	70-130			
Dichlorodifluoromethane	8.60		ug/L	10.00		86	70-130			
Diethyl Ether	8.68		ug/L	10.00		87	70-130			
Di-isopropyl ether	10.7		ug/L	10.00		107	70-130			
Ethyl tertiary-butyl ether	10.1		ug/L	10.00		101	70-130			
Ethylbenzene	9.56		ug/L	10.00		96	70-130			
Hexachlorobutadiene	9.68		ug/L	10.00		97	70-130			
Hexachloroethane	7.74		ug/L	10.00		77	70-130			
Isopropylbenzene	9.96		ug/L	10.00		100	70-130			
Methyl tert-Butyl Ether	10.1		ug/L	10.00		101	70-130			
Methylene Chloride	10.2		ug/L	10.00		102	70-130			
Naphthalene	9.93		ug/L	10.00		99	70-130			
n-Butylbenzene	10.3		ug/L	10.00		103	70-130			
n-Propylbenzene	10.7		ug/L	10.00		107	70-130			
sec-Butylbenzene	10.4		ug/L	10.00		104	70-130			
Styrene	9.36		ug/L	10.00		94	70-130			
tert-Butylbenzene	10.2		ug/L	10.00		102	70-130			
Tertiary-amyl methyl ether	9.28		ug/L	10.00		93	70-130			
Tetrachloroethene	5.95		ug/L	10.00		60	70-130			B-
Tetrahydrofuran	10.4		ug/L	10.00		104	70-130			
Toluene	9.98		ug/L	10.00		100	70-130			
trans-1,2-Dichloroethene	10.1		ug/L	10.00		101	70-130			
trans-1,3-Dichloropropene	9.61		ug/L	10.00		96	70-130			
Trichloroethene	9.89		ug/L	10.00		99	70-130			
Trichlorofluoromethane	10.2		ug/L	10.00		102	70-130			
Vinyl Acetate	12.6		ug/L	10.00		126	70-130			
Vinyl Chloride	10.4		ug/L	10.00		104	70-130			
Xylene O	9.93		ug/L	10.00		99	70-130			
Xylene P,M	19.7		ug/L	20.00		98	70-130			
Xylenes (Total)	29.6		mg/L							
Surrogate: 1,2-Dichloroethane-d4	*0.0267*		mg/L	*0.02500*		*107*	*70-130*			
Surrogate: 4-Bromofluorobenzene	*0.0229*		mg/L	*0.02500*		*91*	*70-130*			
Surrogate: Dibromofluoromethane	*0.0262*		mg/L	*0.02500*		*105*	*70-130*			
Surrogate: Toluene-d8	*0.0240*		mg/L	*0.02500*		*96*	*70-130*			
LCS Dup										
1,1,1,2-Tetrachloroethane	8.43		ug/L	10.00		84	70-130	1	25	
1,1,1-Trichloroethane	10.1		ug/L	10.00		101	70-130	2	25	
1,1,2,2-Tetrachloroethane	11.1		ug/L	10.00		111	70-130	5	25	

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Former Tidewater Facility

ESS Laboratory Work Order: 1710103

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
8260B Volatile Organic Compounds										
Batch CJ71249 - 5030B										
1,1,2-Trichloroethane	9.83		ug/L	10.00		98	70-130	5	25	
1,1-Dichloroethane	10.3		ug/L	10.00		103	70-130	2	25	
1,1-Dichloroethene	9.81		ug/L	10.00		98	70-130	2	25	
1,1-Dichloropropene	11.0		ug/L	10.00		110	70-130	1	25	
1,2,3-Trichlorobenzene	9.47		ug/L	10.00		95	70-130	2	25	
1,2,3-Trichloropropane	10.2		ug/L	10.00		102	70-130	1	25	
1,2,4-Trichlorobenzene	9.43		ug/L	10.00		94	70-130	2	25	
1,2,4-Trimethylbenzene	10.4		ug/L	10.00		104	70-130	2	25	
1,2-Dibromo-3-Chloropropane	8.15		ug/L	10.00		82	70-130	1	25	
1,2-Dibromoethane	9.24		ug/L	10.00		92	70-130	4	25	
1,2-Dichlorobenzene	10.3		ug/L	10.00		103	70-130	3	25	
1,2-Dichloroethane	11.1		ug/L	10.00		111	70-130	0.4	25	
1,2-Dichloropropane	10.3		ug/L	10.00		103	70-130	2	25	
1,3,5-Trimethylbenzene	10.4		ug/L	10.00		104	70-130	3	25	
1,3-Dichlorobenzene	10.2		ug/L	10.00		102	70-130	3	25	
1,3-Dichloropropane	10.2		ug/L	10.00		102	70-130	0.9	25	
1,4-Dichlorobenzene	10.7		ug/L	10.00		107	70-130	3	25	
1,4-Dioxane - Screen	237		ug/L	200.0		118	0-332	3	200	
1-Chlorohexane	8.70		ug/L	10.00		87	70-130	2	25	
2,2-Dichloropropane	9.77		ug/L	10.00		98	70-130	2	25	
2-Butanone	52.2		ug/L	50.00		104	70-130	9	25	
2-Chlorotoluene	10.8		ug/L	10.00		108	70-130	4	25	
2-Hexanone	49.9		ug/L	50.00		100	70-130	9	25	
4-Chlorotoluene	10.5		ug/L	10.00		105	70-130	3	25	
4-Isopropyltoluene	10.4		ug/L	10.00		104	70-130	2	25	
4-Methyl-2-Pentanone	49.4		ug/L	50.00		99	70-130	3	25	
Acetone	50.0		ug/L	50.00		100	70-130	18	25	
Benzene	10.5		ug/L	10.00		105	70-130	0.4	25	
Bromobenzene	10.2		ug/L	10.00		102	70-130	2	25	
Bromochloromethane	9.45		ug/L	10.00		94	70-130	4	25	
Bromodichloromethane	9.78		ug/L	10.00		98	70-130	1	25	
Bromoform	6.47		ug/L	10.00		65	70-130	0.2	25	B-
Bromomethane	6.43		ug/L	10.00		64	70-130	3	25	B-
Carbon Disulfide	10.2		ug/L	10.00		102	70-130	0.5	25	
Carbon Tetrachloride	9.36		ug/L	10.00		94	70-130	1	25	
Chlorobenzene	10.1		ug/L	10.00		101	70-130	2	25	
Chloroethane	10.5		ug/L	10.00		105	70-130	0.7	25	
Chloroform	10.6		ug/L	10.00		106	70-130	2	25	
Chloromethane	9.35		ug/L	10.00		94	70-130	3	25	
cis-1,2-Dichloroethene	10.0		ug/L	10.00		100	70-130	2	25	
cis-1,3-Dichloropropene	10.2		ug/L	10.00		102	70-130	2	25	
Dibromochloromethane	8.24		ug/L	10.00		82	70-130	0.2	25	
Dibromomethane	10.1		ug/L	10.00		101	70-130	0.2	25	
Dichlorodifluoromethane	8.97		ug/L	10.00		90	70-130	4	25	
Diethyl Ether	8.04		ug/L	10.00		80	70-130	8	25	

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Former Tidewater Facility

ESS Laboratory Work Order: 1710103

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
8260B Volatile Organic Compounds										
Batch CJ71249 - 5030B										
Di-isopropyl ether	10.6		ug/L	10.00		106	70-130	0.5	25	
Ethyl tertiary-butyl ether	10.1		ug/L	10.00		101	70-130	0.5	25	
Ethylbenzene	9.55		ug/L	10.00		96	70-130	0.1	25	
Hexachlorobutadiene	9.69		ug/L	10.00		97	70-130	0.1	25	
Hexachloroethane	7.75		ug/L	10.00		78	70-130	0.1	25	
Isopropylbenzene	10.4		ug/L	10.00		104	70-130	4	25	
Methyl tert-Butyl Ether	9.96		ug/L	10.00		100	70-130	1	25	
Methylene Chloride	10.0		ug/L	10.00		100	70-130	1	25	
Naphthalene	9.83		ug/L	10.00		98	70-130	1	25	
n-Butylbenzene	10.7		ug/L	10.00		107	70-130	4	25	
n-Propylbenzene	11.0		ug/L	10.00		110	70-130	3	25	
sec-Butylbenzene	10.4		ug/L	10.00		104	70-130	0.2	25	
Styrene	9.15		ug/L	10.00		92	70-130	2	25	
tert-Butylbenzene	10.5		ug/L	10.00		105	70-130	3	25	
Tertiary-amyl methyl ether	9.33		ug/L	10.00		93	70-130	0.5	25	
Tetrachloroethene	5.95		ug/L	10.00		60	70-130	0	25	B-
Tetrahydrofuran	9.88		ug/L	10.00		99	70-130	6	25	
Toluene	9.99		ug/L	10.00		100	70-130	0.1	25	
trans-1,2-Dichloroethene	10.2		ug/L	10.00		102	70-130	1	25	
trans-1,3-Dichloropropene	9.41		ug/L	10.00		94	70-130	2	25	
Trichloroethene	9.90		ug/L	10.00		99	70-130	0.1	25	
Trichlorofluoromethane	10.6		ug/L	10.00		106	70-130	5	25	
Vinyl Acetate	12.3		ug/L	10.00		123	70-130	2	25	
Vinyl Chloride	10.4		ug/L	10.00		104	70-130	0.5	25	
Xylene O	10.1		ug/L	10.00		101	70-130	2	25	
Xylene P,M	19.5		ug/L	20.00		97	70-130	1	25	
Xylenes (Total)	29.6		mg/L							
Surrogate: 1,2-Dichloroethane-d4	*0.0259*		mg/L	*0.02500*		*104*	*70-130*			
Surrogate: 4-Bromofluorobenzene	*0.0221*		mg/L	*0.02500*		*88*	*70-130*			
Surrogate: Dibromofluoromethane	*0.0256*		mg/L	*0.02500*		*102*	*70-130*			
Surrogate: Toluene-d8	*0.0236*		mg/L	*0.02500*		*94*	*70-130*			

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Former Tidewater Facility ESS Laboratory Work Order: 1710103

Notes and Definitions

U	Analyte included in the analysis, but not detected
D+	Relative percent difference for duplicate is outside of criteria (D+).
D	Diluted.
CD+	Continuing Calibration %Diff/Drift is above control limit (CD+).
CD-	Continuing Calibration %Diff/Drift is below control limit (CD-).
B-	Blank Spike recovery is below lower control limit (B-).
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

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Former Tidewater Facility

ESS Laboratory Work Order: 1710103

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: GZA - Providence, RI - GZA/HDM

Shipped/Delivered Via: Client

ESS Project ID: 1710103
Date Received: 10/4/2017
Project Due Date: 10/12/2017
Days for Project: 5 Day

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

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

Sample Receiving Notes:

Only 1 vial rec'd for BD 10042017 AL 10/4/17

COC = BD10032017, BD 10042017 ; Labels = BD 10031?, BD 10042017

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

Sample Number	Container ID	Proper Container	Air Bubbles Present	Sufficient Volume	Container Type	Preservative	Record pH (Cyanide and 608 Pesticides)
01	169976	Yes	No	Yes	VOA Vial - HCl	HCl	
01	169977	Yes	No	Yes	VOA Vial - HCl	HCl	
01	169978	Yes	No	Yes	VOA Vial - HCl	HCl	
02	169973	Yes	No	Yes	VOA Vial - HCl	HCl	
02	169974	Yes	No	Yes	VOA Vial - HCl	HCl	
02	169975	Yes	No	Yes	VOA Vial - HCl	HCl	
03	169970	Yes	No	Yes	VOA Vial - HCl	HCl	
03	169971	Yes	No	Yes	VOA Vial - HCl	HCl	
03	169972	Yes	No	Yes	VOA Vial - HCl	HCl	
04	169967	Yes	No	Yes	VOA Vial - HCl	HCl	
04	169968	Yes	No	Yes	VOA Vial - HCl	HCl	
04	169969	Yes	No	Yes	VOA Vial - HCl	HCl	
05	169964	Yes	No	Yes	VOA Vial - HCl	HCl	
05	169965	Yes	No	Yes	VOA Vial - HCl	HCl	
05	169966	Yes	No	Yes	VOA Vial - HCl	HCl	
06	169961	Yes	No	Yes	VOA Vial - HCl	HCl	
06	169962	Yes	No	Yes	VOA Vial - HCl	HCl	
06	169963	Yes	No	Yes	VOA Vial - HCl	HCl	
07	169958	Yes	Yes	Yes	VOA Vial - HCl	HCl	
07	169959	Yes	No	Yes	VOA Vial - HCl	HCl	
07	169960	Yes	No	Yes	VOA Vial - HCl	HCl	
08	169955	Yes	No	Yes	VOA Vial - HCl	HCl	
08	169956	Yes	No	Yes	VOA Vial - HCl	HCl	
08	169957	Yes	No	Yes	VOA Vial - HCl	HCl	

ESS Laboratory Sample and Cooler Receipt Checklist

Client: GZA - Providence, RI - GZA/HDM

ESS Project ID: 1710103
Date Received: 10/4/2017

09	169952	Yes	No	Yes	VOA Vial - HCl	HCl
09	169953	Yes	No	Yes	VOA Vial - HCl	HCl
09	169954	Yes	No	Yes	VOA Vial - HCl	HCl
10	169949	Yes	No	Yes	VOA Vial - HCl	HCl
10	169950	Yes	No	Yes	VOA Vial - HCl	HCl
10	169951	Yes	No	Yes	VOA Vial - HCl	HCl
11	169946	Yes	No	Yes	VOA Vial - HCl	HCl
11	169947	Yes	No	Yes	VOA Vial - HCl	HCl
11	169948	Yes	No	Yes	VOA Vial - HCl	HCl
12	169943	Yes	No	Yes	VOA Vial - HCl	HCl
12	169944	Yes	No	Yes	VOA Vial - HCl	HCl
12	169945	Yes	No	Yes	VOA Vial - HCl	HCl
13	169940	Yes	No	Yes	VOA Vial - HCl	HCl
13	169941	Yes	No	Yes	VOA Vial - HCl	HCl
13	169942	Yes	No	Yes	VOA Vial - HCl	HCl
14	169937	Yes	No	Yes	VOA Vial - HCl	HCl
14	169938	Yes	No	Yes	VOA Vial - HCl	HCl
14	169939	Yes	No	Yes	VOA Vial - HCl	HCl
15	169934	Yes	No	Yes	VOA Vial - HCl	HCl
15	169935	Yes	No	Yes	VOA Vial - HCl	HCl
15	169936	Yes	No	Yes	VOA Vial - HCl	HCl
16	169931	Yes	No	Yes	VOA Vial - HCl	HCl
16	169932	Yes	No	Yes	VOA Vial - HCl	HCl
16	169933	Yes	No	Yes	VOA Vial - HCl	HCl
17	169980	Yes	No	Yes	VOA Vial - HCl	HCl
18	169979	Yes	No	Yes	VOA Vial - HCl	HCl

2nd Review
Are barcode labels on correct containers? (Yes) No

Completed By: _____ Date & Time: 10/4/17 1825

Reviewed By: _____ Date & Time: 10/4/17 1833

Delivered By: _____ 10/4/17 1833

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 # 171013

Turn Time: X 5-Day Rush
Regulatory State
Is this project for any of the following?: ○CT RCP ○MA MCP ○RGP
Reporting Limits
Electonic Deliverables: ☒Limit Checker ☒Standard Excel ☒Other (Please Specify →) PDF

Company Name	Project #	Project Name
GZA	43654.00	Tidewater
Contact Person	**Address**	
Sophia Narkiewicz	530 Broad Way	
City	**State**	**Zip Code** / **PO #**
Providence	RI	02909
Telephone Number	**FAX Number**	**Email Address**

| | ESS Lab ID | Collection Date | Collection Time | Sample Type | Sample Matrix | Sample ID | Analysis: VOCs 8260 | | |

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www.esslaboratory.com

CHAIN OF CUSTOD

ESS Lab # 710103

Turn Time: X 5-Day Rush
Regulatory State: RI
Is this project for any of the following?: ○CT RCP ○MA MCP ○RCP
Reporting Limits
Electonic Deliverables: ☒Limit Checker ☑Standard Excel ☒Other (Please Specify →) PDF

Company Name	Project #	Project Name
GZA	436540.00	Tidewater
Contact Person	**Address**	
	530 Broadway	
City	**State**	**Zip Code** / **PO #**
Providence	RI	02909
Telephone Number	**FAX Number**	**Email Addre**
		sophia.nartie@gza.com

ESS Lab ID	Collection Date	Collection Time	Sample Type	Sample Matrix	Sample ID	Analysis: VOC 8260
10 21	10/4/17	1350	G	GW	MW-326S	X
11 22	10/4/17	1337	G	GW	MW-326D	X
12 23	10/4/17	1430	G	GW	MW-310S	X
13 24	10/4/17	1500	G	GW	MW-208	X
14 25	10/4/17	1410	G	GW	MW-310D	X
15 26	10/4/17	1340	G	GW	MW-333S	X
16 27	10/4/17	1320	G	GW	MW-333D	X
17 28	10/4/17	800	G	GW	BD100Y2017	X

Container Type: AC-Air Cassette AG-Amber Glass B-BOD Bottle C-Cubitainer G - Glass 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* — A
Preservation Code: 1-Non Preserved 2-HCl 3-H2SO4 4-HNO3 5-NaOH 6-Methanol 7-Na2S2O3 8-ZnAce, NaOH 9-NH4Cl 10-DI H2O 11-Other* — 2
Number of Containers per Sample: 3

Laboratory Use Only
Cooler Present: Y
Seals Intact: N/A
Cooler Temperature: 5.6 °C lee

Sampled by : Sara Haupt, Roman Hauer, Sarah McLeod
Comments: Please specify "Other" preservative and containers types in this space

Relinquished by: (Signature, Date & Time)	Received By: (Signature, Date & Time)	Relinquished By: (Signature, Date & Time)	Received By: (Signature, Date & Time)
10/4/17/1646	10/4/17 1648		
Relinquished by: (Signature, Date & Time)	Received By: (Signature, Date & Time)	Relinquished By: (Signature, Date & Time)	Received By: (Signature, Date & Time)

GZA GeoEnvironmental, Inc.