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March 30, 2016
File No. 33175.06-C

Ms. Cynthia Gianfrancesco
Rhode Island Department of Environmental Management
Office of Waste Management
235 Promenade Street
Providence, Rhode Island 02908-5767

Re: Interim Remedial Action Closure Report for Riverside Square Remediation (revised)
336 and 348 Bullocks Point Avenue and 12 Fenner Avenue
East Providence, Rhode Island 02914
Case No. 2009-010

Dear Mr. Gianfrancesco:

On behalf of our Client, the City of East Providence, GZA GeoEnvironmental, Inc. (GZA) prepared this revised *Interim Remedial Action Closure Report* for the completion of the active remediation of the identified chlorinated volatile organic compound (CVOC) release at the above referenced Site. A Site locus is provided as Figure 1. The remediation was completed by the operation of a Soil Vapor Extraction (SVE) system to treat source area soil over a period of a little over 1 year. With the Department's approval, system operation was halted in December 2014 and post-shutdown testing was performed in 2015. This report presents the results of post-shutdown monitoring, which included soil vapor testing, groundwater, and soil sampling and analysis. The findings and conclusions of this report are subject to the Limitations presented in Appendix A.

The work described herein was performed in accordance with the RIDEM-approved *Remedial Action Work Plan* (RAWP), which was prepared by GZA and dated June 4, 2013. RIDEM's approval of the RAWP was presented in the June 19, 2013 *Order of Approval.*

BACKGROUND

The Site commercial building and two residential houses were abated of asbestos and other identified regulated building materials, and above ground portions demolished between March and May 2013, in accordance with the Rhode Island Department of Health and the City of East Providence approvals. As proposed in the RAWP, a 6 foot high chain link fence with privacy vinyl slats was installed in August 2013 on the perimeter of the property to restrict access to the Site and limit the visual impact on the area surrounding the Site. Pre-demolition Site features and former exploration and testing locations are shown on the attached *Exploration Location Plan*, presented as Figure 2.

Based on a combination of field screening and laboratory testing, the June 2009 SIR and April 2012 SIR Addendum conservatively identified a 45 by 90 foot area of soil that was impacted with CVOCs, primarily trichloroethene [TCE], tetrachloroethene [PCE], and 1,1,1-trichloroethane [TCA]) beneath the former plating area of the commercial building. A limited number of the soil samples, which were collected from this area and tested in the laboratory, had TCE and PCE at concentrations above RIDEM Method 1 Residential Direct Exposure Criteria (RDEC). As shown in Tables 1 and 4 of the April

2012 SIR Addendum, for CVOCs one soil sample (GP-1 [0-2']) exceeded the RDEC (for TCE) and two samples exceeded the current RIDEM Method 1 GB-Leachability Criterion (GB-L). Prior to remediation, these two soil samples, GP-1 and GP-107, exceeded the GB-L for one CVOC, PCE. However, a significant percentage of the samples, which were tested in the laboratory, exceeded the December 2007 Massachusetts Contingency Plan (MCP) S-3/GW-2 standard of 2 mg/kg for TCE (the standard in effect at the time RIDEM approved the RAWP). This standard is associated with protection of indoor air quality and was used as a reference value in the absence of RIDEM criteria. The laboratory and screening data also showed that these CVOC impacts to shallow sub-slab soil extended to depths of less than 4 to 6 feet over most of the delineated area, with the possible exception of the immediate area below GP-108 where impacts appeared to extend to a depth of 8 feet.

As was indicated in the original SIR, on June 11, 2009 there were no identified CVOCs in groundwater above GB Groundwater Objectives. This condition was consistent with the soil data; detection of only TCE in one soil sample (GP-1) and PCE in one other sample (GP-107) at concentrations that slightly exceeded the GB-L, and that these soils were present below the building and remain below the retained building concrete floor slab (i.e., little potential for rainfall infiltration and CVOC leaching to groundwater under past and current conditions).

The remedial alternative selected in the RAWP, and subsequently approved by RIDEM in the June 19, 2013 *Order of Approval,* involved the installation of a SVE system within the identified 45 by 90 foot area of impacted soil beneath the commercial building. The remedial objective was to reduce CVOC levels to below the Method 1 GB-L. In addition, in the absence of similar standards, GZA proposed to reduce, to the extent practical and feasible, soil concentrations to below a level that would require the operation of an active sub-slab ventilation (SSV) system beneath future occupied buildings. If this reduction were not feasible, operation of a sub-slab depressurization system below a future occupied building would be required. The approved plan called for an Environmental Land Use Restriction (ELUR) and associated Soil Management Plan (SMP) to be recorded for the property, after completion of remedial actions.

A draft ELUR and SMP was submitted with the RAWP and has been reviewed and approved by RIDEM. The ELUR and SMP were developed to address the initial observed soil conditions and post-SVE treatment soil conditions (i.e., exceedances of RIDEM's Method 1 soil criteria for direct exposure), and assure that the Site soil remains capped to address the presence of lead, arsenic and total petroleum hydrocarbons.

As presented in GZA's November 1, 2013 *Monitoring Report #1*, installation of the closed loop SVE System was completed between July 1 and September 1, 2013. Installation was completed over the identified 45 by 90 foot area of impacted soil beneath the former plating area, in accordance with the approved RAWP. Eighteen SVE wells (SVE-1 to SVE-18) were installed with alternating well screen depths of 1 to 6 feet and 3 to 8 feet below the existing concrete floor in a grid pattern over the 45 by 90 foot impacted soil area. Figure 3 shows the locations of the SVE wells and above grade piping. The system piping and valves were configured to allow for either extraction or injection of soil vapor to occur within each row of vent wells (sets of three SVE wells). The SVE blower, inline particle filter, and inline muffler (for noise reduction) are housed in a small steel storage chest (to protect the blower from the elements and for further noise reduction). The 180 pound activated carbon vessel is located adjacent to the chest on the existing concrete slab (on grade) of the former plating area. System operation began on September 5, 2013.

As summarized in past status reports, Monitoring Reports #1 through #3, over the first month of SVE operation, the system was estimated to have removed a total of 15.6 pounds (or ~1.3 gallons) of CVOCs from the subsurface. Most of this removal occurred in the first couple of weeks of operation. By the end of the first month, the rate of removal and estimated residual mass had declined significantly, with a total of 1.2 pounds of CVOCs (or ~0.1 gallons) removed in the second month of operation. During the second month of operation, the SVE well valves were adjusted so that the vapor was withdrawn from the set of wells that were used as vapor injection wells during the first month and the treated return vapor went to the other wells that were used as extraction wells in the first month. Only low TVOC PID readings

were observed in any of the SVE wells during the second month of operation. Given this, the system valves were adjusted to return to the configuration used during the first month. The record of use of wells as SVE wells or return vapor (air) injection wells (AI) are indicated on the second column of Tables B1 through B18, in Appendix B.

As stated in prior reports, GZA believed that most of the original residual mass had been removed by the end of the second month of operation, but recommended continued operation and soil vapor monitoring to confirm that the rate of removal would continue to slowly decline before completing the required confirmation testing of the soil. As stated in the March 2015 Status Report #3, by December 2014, the results of monitoring of the SVE system operation, in our opinion, indicated that over 95% of the original source CVOC mass was removed in the first couple of months of SVE operation and that the source area had subsequently been reduced to the extent practical and feasible (further SVE system operation would only result in limited additional mass removal). TVOC PID readings remained low and the mass rate of CVOC removal had declined markedly from those observed in the first month. The rate of removal had dropped from 0.85 to 0.05 to 0.01 pounds per day over the three respective reporting periods, with total estimated CVOC removal at 21.1 pounds by the end of operation. We believed these declines in VOC mass removal rate reflected the removal of a significant portion of the original residual CVOC mass in the unsaturated soil zone.

While CVOC soil vapor concentrations had been significantly lowered, as discussed in the March 2015 report, there appeared to still be residual mass that was capable of causing soil vapor concentrations to be above MassDEP sub-slab soil vapor screening values if a residential or a commercial building were placed directly over the impacted soil area. In other words, if a building were to be placed over the former source area, a sub-slab ventilation system might still be needed to prevent VOC vapor intrusion into indoor air, if we conservatively applied MassDEP soil vapor criteria.

POST-SHUTDOWN TESTING PROGRAM

With the Department's approval of the program, we completed the following testing to confirm that remedial goals had been met at the Site:

- On April 28, 2015, over 30 days after SVE system shutdown, a combined system influent soil vapor sample was collected in Summa canisters for VOC analysis via Method TO-15. Appendix B summarizes the past and most recent system monitoring data, including the data collected on April 28th. As proposed, the sample was collected after operating the SVE system for two hours (approximately one purge volume) to obtain a representative sample of the soil vapor in the treatment area. Table 1 provides a comparison of the soil vapor VOC test results to MassDEP and CTDEEP soil vapor screening levels to judge if it appeared that shutdown will allow for building construction over the impacted soil in the future without the need to convert to an active Sub-Slab Depressurization (SSD) System. Appendix C includes the soil vapor laboratory data sheets.

- On June 4, 2015, as proposed in the RAWP and as shown on Figure 4, ten soil borings (GP-200 to GP-209), were completed by New England Geotech on approximately a 20 foot grid spacing thru the existing building floor slab. Borings were extended to depths of 8 feet with continuous soil sampling in two-foot intervals, using a Geoprobe® type rig. Borings advanced through the temporary engineered controls at the Site were backfilled with the excess soil cuttings and capped with a 4-inch thick concrete plug.

  GZA field screened the collected soil samples for visual/olfactory evidence of contamination; as well as for total volatile organic compounds (TVOCs) headspace readings using a photo-ionization detector (PID). Appendix D presents the boring logs for each of the explorations.

The approved program called for GZA to select two soil samples per boring location for laboratory analysis based on the visual or olfactory evidence of potential contamination and/or elevated PID screening results; in cases where visual/olfactory impacts were either not present or inconclusive, samples with the highest PID readings from each boring were to be submitted for laboratory analysis. In cases where neither visual/olfactory impacts nor PID readings above background (+1 ppmv) were present, the soil samples selected for laboratory analysis were to be evenly spaced horizontally/vertically over the sampling area. A total of twenty soil samples were submitted for subsequent laboratory analysis, consistent with RIDEM's regulatory requirement (Rule 8.10).

As GZA did not observed visual or olfactory evidence of potential significant contamination in the collected soil samples, GZA selected the samples from the borings based on either the samples with the highest TVOC PID readings or, lacking PID readings above 1 ppmv, to provide data from evenly distributed samples, as summarized below:

- The samples with the highest TVOC PID, where readings exceeded 1 ppmv, were selected from the following borings: GP-200 through GP-203, GP-206, and GP-207; and
- The samples from the following borings were selected to provide even distribution: GP-204, GP-205, GP-208, and GP-209, as these samples did not have TVOC PID readings above 1 ppmv.

The TVOC PID readings for the selected samples are provided in the boring logs in Appendix D. Table 2 also compares the soil results to RIDEM's Direct Exposure Criteria (DECs), GB Leachability Criterion (GB-L), and the MassDEP S-3/GW-2 standards. Note: The remedial goal was to reduce VOCs to below GB-L per Rule 8.10 of RIDEM regulations, and to the extent practical and feasible, reduce VOCs to below the 2007 MassDEP S-3/GW-2 standards to eliminate the need for an active sub-slab ventilation system (under the assumption soil vapor data also are below required criteria). Appendix E presents the laboratory data sheets.

- Groundwater samples were collected by GZA using EPA's low flow protocol from monitoring wells GZ-2D, GZ-3D, and GZ-4 on April 28, 2015, though the approved RAWP allowed for collection any time prior to redevelopment of the Site for comparison to GB Groundwater Objectives. All groundwater samples were laboratory analyzed for CVOCs to confirm that concentrations of CVOCs in the groundwater continue to remain below the GB Groundwater Objectives. Appendix F provides the laboratory data sheets and Table 3 summarizes the test results with a comparison to RIDEM Method 1 groundwater objectives. Table 4 presents the groundwater table depth and elevation data generated on April 28, 2015 along with the previously collected Site data.

RESULTS

The results of the post-closure testing indicate the following conditions had been achieved at the Site through the operation of the SVE system:

- Soil TCE and PCE concentrations: Table 2 shows that all CVOCs had been reduced to below the RIDEM Method 1 soil criteria, including the RDEC, I/C DEC, and GB-L, with most much lower than the applicable criteria. Table 2 also shows that almost all of soil samples (eighteen of the twenty) tested in 2015 had TCE present below the lower MassDEP S-3/GW-2 soil standard. This is a significant improvement over the pre-remedial (2011) testing of borings GP-100 to GP-109 in which the reverse was the case; 12 of the 17 samples tested had detected TCE

above the MassDEP criteria. The soil samples that continue to exceed this criteria were limited to the immediate area of GP-206 and GP-207;

- Groundwater Concentrations: Table 3 shows that the groundwater TCE and PCE concentrations at the post-shutdown monitoring wells (GZ-2D, GZ-3D, and GZ-4) were all well below the Method 1 GB Objectives, with concentrations at least an order of magnitude lower than pre-remedial levels, which were all already below the GB Objectives. No CVOCs were present above GB Objectives; and

- Soil Vapor: The results of the VOC analysis of the soil vapor sample collected on April 28, 2015 yielded a TCE and PCE concentration of 88.1 and 124.8 micro grams/cubic meter (ug/m^3), which is slightly over the MassDEP sub-slab screening levels of 56 and 98 ug/m^3, respectively. Under MassDEP regulations, if a building were to be constructed over this soil and the sub-slab readings were above the screening level, additional testing would be needed to show there was no vapor intrusion risk, or a SSD system would need to be installed and operated.

CONCLUSION/RECOMMENDATIONS

In GZA's opinion, the remedial goals have been achieved at the Site, as CVOC concentrations in the soil have been reduced to below RIDEM's Method 1 Criteria and groundwater concentrations, which had already been below Objectives, were reduced to even lower concentrations well below Objectives. However, in accordance with the approved RAWP, measures still need to be taken to ensure that future Site development is completed in a manner to address the constituents that remain in the soil at the Site. This includes the low levels of TCE and PCE that are present in the soil under a portion of the former plating area above MassDEP screening threshold for potential vapor intrusion issues and the lead, arsenic and TPH in the soil at the Site that are present above RIDEM Method 1 RDECs.

GZA recommends that the above described conditions be addressed as follows:

- Potential vapor intrusion: Any new building on the property need to be constructed with a sub-slab depressurization system installed and capable of operation (essentially with a permeable sub-slab soil/stone layer and standard construction vapor barrier with connection to above slab piping and potential for future connection to a radon type fan or fans). Then, prior to occupancy either testing needs to be performed to show that soil vapor levels do not exceed (tests under winter and summer conditions) applicable soil vapor criteria for protection against vapor intrusion or the radon-type fan needs to be installed and operated (maintain vacuum under building) until it is shown that it is no longer needed to remove the potential for significant vapor intrusion into the future building. We note that a properly designed radon type system should be able to be operated at very low annual costs (on the order of hundreds of dollars).

  The observed levels in the soil and soil vapor should not require treatment of the vented soil vapor. Therefore, continuous operation of the SSD with only vacuum testing, rather than spending money on repeated sub-slab testing of the extracted soil vapor to assess when below thresholds, may be the simplest and least costly approach for a number of years. Then, we believe testing to show that levels are below thresholds are likely to be successful.

- Lead, arsenic, and TPH in soil: Per the approved RAWP, the ELUR and SMP will need to be recorded for the property and the future Site developed and maintained in accordance with these documents into the future. In brief, human contact with the soil currently at the Site is to be restricted by maintaining and/or placing clean soil caps and/or other engineered controls (e.g., buildings, pavement) over the soil and following standard health and safety protocols whenever soil is excavated.

Attached in Appendix G is the final draft of the ELUR and SMP to be recorded in the City of East Providence Land Evidence Records for the property. It is our understanding that once a stamped, certified copy is returned to the Department, the OWM will issue an Interim Letter of Compliance.

We trust this report satisfies the Department's current needs. Please do not hesitate to contact us if you have any questions at (401) 421-4140 or via email at aflori@gza.com and/or jspirito@gza.com.

Very truly yours,

GZA GEOENVIRONMENTAL, INC.

Albert I. Flori, P.E.
Senior Project Manager

Edward A. Summerly, P.G.
Consultant/Reviewer

John J. Spirito, P.E.
Principal

Attachments:	Table 1	Combine Soil Vapor Concentration
	Table 2	Confirmatory Soil Sampling
	Table 3	Groundwater Sampling Results (2006 to 2015)
	Table 4	Groundwater Depth & Elevations (2006 to 2015)
	Figure 1	*Locus Plan*
	Figure 2	*Exploration Location Plan*
	Figure 3	*Soil Vapor Extraction Well Location Plan*
	Figure 4	*Confirmatory Soil Sampling Location Plan*
	Appendix A	Limitations
	Appendix B	System Monitoring Data Tables B1 through B19
	Appendix C	Soil Vapor Laboratory Data
	Appendix D	Boring Logs
	Appendix E	Confirmatory Soil Sampling Laboratory Analysis
	Appendix F	Groundwater Laboratory Analysis
	Appendix G	Final Draft ELUR and SMP

cc: David Bachrach, City of East Providence (pdf)
Jessica Dominguez, EPA – New England (pdf)

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TABLES

TABLE 1

Combined Soil Vapor Concentrations

336 and 348 Bullocks Point Ave and 12 Fenner Ave
East Providence, Rhode Island

Detected Constituent of Concern	Connecticut June 27, 2013 Soil Vapor VC Residential	Connecticut June 27, 2013 Soil Vapor VC I/C	Massachusetts March 2013 Sub-Slab Soil Gas Screening Residential	Massachusetts March 2013 Sub-Slab Soil Gas Screening Commercial	September 6, 2013 Combined Results	September 6, 2013 Combined RDL	October 4, 2013 Combined Results	October 4, 2013 Combined RDL	December 9, 2013 Combined Results	December 9, 2013 Combined RDL	January 28, 2014 Combined Results	January 28, 2014 Combined RDL	March 28, 2014 Combined Results	March 28, 2014 Combined RDL	October 2, 2014 Combined Results	October 2, 2014 Combined RDL	April 28, 2015 Combined Results	April 28, 2015 Combined RDL
Method EPA TO-15	(ppbv)				(ppbv)		(ppbv)		(ppbv)		(ppbv)		(ppbv)		(ppbv)		(ppbv)	
Acetone	2400000	8250000	2700	21000	**34.6**	10	**12.8**	6.25	**28.0**	2.5	**5.64**	2.0	**23.3**	1.0	**4.22**	1.00	**56.4**	10.0
Acrylonitrile	NA	NA	NA	NA	BRL	10	BRL	6.25	BRL	2.5	BRL	2.0	BRL	1.0	BRL	1.00	BRL	10.0
Benzene	1000	113000	50	250	BRL	10	BRL	6.25	BRL	2.5	BRL	2.0	BRL	1.0	BRL	1.00	BRL	10.0
Bromodichloromethane	NA	NA	1.4	6.8	**52.8**	10	BRL	6.25	BRL	2.5	BRL	2.0	BRL	1.0	BRL	1.00	BRL	10.0
2-Butanone (MEK)	2400000	8285000	290	110000	BRL	10	BRL	6.25	BRL	2.5	BRL	2.0	BRL	1.0	BRL	1.00	BRL	10.0
Carbon disulfide	NA	NA	NA	NA	BRL	10	BRL	6.25	BRL	2.5	BRL	2.0	BRL	1.0	BRL	1.00	**317**	10.0
Chloroform	4500	10400	27	43	BRL	10	BRL	6.25	BRL	2.5	BRL	2.0	BRL	1.0	BRL	1.00	BRL	10.0
1,1-Dichloroethane	850000	3037000	14	7700	BRL	10	BRL	6.25	BRL	2.5	BRL	2.0	BRL	1.0	BRL	1.00	BRL	10.0
1,1-Dichloroethene	1000	1000	14	3200	BRL	10	BRL	6.25	BRL	2.5	BRL	2.0	BRL	1.0	BRL	1.00	BRL	10.0
cis-1,2-Dichloroethene	NA	NA	14	550	BRL	10	BRL	6.25	BRL	2.5	BRL	2.0	BRL	1.0	BRL	1.00	BRL	10.0
trans-1,2-Dichloroethene	NA	NA	14	1100	BRL	10	BRL	6.25	BRL	2.5	BRL	2.0	BRL	1.0	BRL	1.00	BRL	10.0
Ethanol	NA	NA	NA	NA	**11.8**	10	**29.2**	6.25	**10.5**	2.5	**9.92**	2.0	**9.10**	1.0	**4.32**	1.00	**1,700**	32.2
Ethyl acetate	NA	NA	NA	NA	BRL	10	BRL	6.25	BRL	2.5	BRL	2.0	BRL	1.0	BRL	1.00	**365**	10.0
Ethylbenzene	1650000	5672000	120	14000	BRL	10	BRL	6.25	BRL	2.5	BRL	2.0	BRL	1.0	BRL	1.00	BRL	10.0
Hexane	NA	NA	NA	NA	BRL	10	BRL	6.25	BRL	2.5	BRL	2.0	BRL	1.0	**1.08**	1.00	BRL	10.0
Isopropyl alcohol	NA	NA	NA	NA	BRL	10	BRL	6.25	**9.5**	2.5	BRL	2.0	BRL	1.0	BRL	1.00	**2,390**	32.2
Methyl tert-butyl ether	1000000	3415000	750	52000	BRL	10	BRL	6.25	BRL	2.5	BRL	2.0	BRL	1.0	BRL	1.00	BRL	10.0
Naphthalene	NA	NA	8.0	36	BRL	10	BRL	6.25	BRL	2.5	BRL	2.0	BRL	1.0	BRL	1.00	BRL	10.0
Styrene	8000	28000	23	330	BRL	10	BRL	6.25	BRL	2.5	BRL	2.0	BRL	1.0	BRL	1.00	BRL	10.0
Tetrachloroethene	11000	27000	14	42	**895**	10	**115**	6.25	**18.8**	2.5	**13.0**	2.0	**13.6**	1.0	**26.7**	1.00	**18.4**	10.0
Tetrahydrofuran	NA	NA	NA	NA	**90.2**	10	BRL	6.25	BRL	2.5	BRL	2.0	BRL	1.0	BRL	1.00	BRL	10.0
Toluene	760000	2615000	1000	84000	BRL	10	BRL	6.25	BRL	2.5	BRL	2.0	BRL	1.0	BRL	1.00	**10.4**	10.0
1,1,1-Trichloroethane	1310000	4520000	39	60000	**24.2**	10	BRL	6.25	BRL	2.5	BRL	2.0	BRL	1.0	**1.02**	1.00	BRL	10.0
Trichloroethene	7000	16000	5.2	23	**7040**	10	**805**	6.25	**299**	2.5	**147**	2.0	**195**	1.0	**195**	2.50	**16.4**	10.0
1,1,2-Trichlorotrifluoroethane (Freon 113)	NA	NA	NA	NA	**45.4**	10	**14.0**	6.25	**41.6**	2.5	**3.60**	2.0	**6.78**	1.0	**5.02**	1.00	BRL	10.0
Vinyl chloride	1000	1000	7.4	36	BRL	10	BRL	6.25	BRL	2.5	BRL	2.0	BRL	1.0	BRL	1.00	BRL	10.0
Xylene	500000	1702000	320	1400	BRL	20	BRL	12.5	BRL	5.0	BRL	4.0	BRL	2.0	BRL	2.00	BRL	20.0
				Aggregate VOCs:	**8,194** ppbv		**976** ppbv		**407.4** ppbv		**179.2** ppbv		**247.8** ppbv		**237.36** ppbv		**4,873.6** ppbv	
				TVOC PID Field Screening:	**28** ppmv		**1.3** ppmv		**0.3** ppmv		**0.2** ppmv		**0.4** ppmv		**0.7** ppmv		**0.5** ppmv	

Notes:

1. NA - indicates that the CTDEEP and MassDEP has not established a sub-slab soil gas screening value for the parameter.
2. BRL - Below Reportable Limit.
3. Samples were collected in Summa Canisters and analyzed by Method TO-15.
4. TVOC PID Field Screening - Total Volatile Organic Compound screened using a Photoionization Detector (PID), equipped with a 10.6 ev lamp.
5. June 27, 2013 RSRs - State of Connecticut Regulation of Department of Energy & Environmental Protection concerning Remediation Standard Regulations (RSR) Volatilization Criteria regarding Residential & Industrial/Commercial Soil Vapor Volatilization Criteria.
6. The Massachusetts Department of Environmental Protection (MassDEP) developed sub-slab soil gas screening values in March 2013.
7. The Combined Influent Soil Vapor sample collected on September 6, 2013, December 9, 2013, January 28, 2014, March 28, 2014, and October 2, 2014 include SVE wells VW-4 through VW-6, VW-10 through VW-12, and VW-16 through VW-18.
8. The Combined Influent Soil Vapor sample collected on October 4, 2013 include SVE wells VW-1 through VW-3, VW-7 through VW-9, and VW-13 through VW-15.
9. The Combined Influent Soil Vapor sample collected on April 28, 2015 include SVE wells VW-4 through VW-6, VW-10 through VW-12, and VW-16 through VW-18, the SVE System operated for two hours (approx. one purge volume) prior to obtaining a representative sample, as the SVE System had been shutdown since December 23, 2014.

Indicates an exceedance of the Massachusetts (March 2013) Residential Sub-Slab Soil Gas Screening Criteria.

Indicates an exceedance of the Massachusetts (March 2013) Residential & Commercial Sub-Slab Soil Gas Screening Criteria.

Indicates an exceedance of the Connecticut (June 27, 2013) Residential Soil Vapor Volatilization Criteria and the Massachusetts (March 2013) Residential & Commercial Sub-Slab Soil Gas Screening Criteria.

TABLE 2
CONFIRMATORY SOIL SAMPLING RESULTS WITHIN THE FORMER PLATING AREA

Riverside Square Project
336 and 348 Bullocks Point Ave and 12 Fenner Ave
East Providence, Rhode Island

				Summary of Soil Analytical Data (mg/kg) June 4, 2015																					
	Direct Exposure Criteria (mg/kg)		GB	GP-200		GP-200		GP-201		GP-201		GP-202		GP-202		GP-203		GP-203 (Dup)		GP-203		GP-204		GP-204	
Soil Contaminant	**Residential**	**Industrial/Commercial**	**Leachability (mg/kg)**	**(0-2')**		**(6-8')**		**(0-2')**		**(2-4')**		**(0-2')**		**(2-4')**		**(0-2')**		**(0-2')**		**(2-4')**		**(2-4')**		**(4-6')**	
VOC's EPA Method 8260																									
1,1,1-Trichloroethane	540	10000	160	**0.0651**		0.0454	U	**0.0798**		**0.0625**		**0.028**	J	**0.0285**	J	0.0454	U	0.0467	U	0.0076	U	0.0467	U	0.0452	U
1,1,2-Trichloroethane	3.6	100	NA	0.0493	U	0.0454	U	0.0525	U	0.0512	U	0.0539	U	0.0492	U	0.0454	U	0.0467	U	0.0076	U	0.0467	U	0.0452	U
1,2,4-Trimethylbenzene	NA	NA	NA	**0.0158**	J	0.0454	U	**0.0137**	J	0.0512	U	0.0539	U	0.0492	U	0.0454	U	0.0467	U	0.0076	U	0.0467	U	0.0452	U
Acetone	7800	10000	NA	1.23	U	1.14	U	1.31	U	1.28	U	1.35	U	1.23	U	1.13	U	1.17	U	0.19	U	1.17	U	1.13	U
Naphthalene	54	10000	NA	**0.0365**	J	0.0454	U	0.0525	U	0.0512	U	0.0539	U	0.0492	U	0.0454	U	0.0467	U	0.0076	U	0.0467	U	0.0452	U
Tetrachloroethene	12	110	4.2	**0.114**		0.0454	U	**0.191**		**0.196**		**0.461**		**0.407**		**0.0917**		**0.072**		**0.0427**		**0.115**		**0.0353**	J
Trichloroethene	13	520	20	**0.538**		**0.0463**		**0.685**		**0.441**		**0.822**		**0.817**		**0.158**		**0.128**		**0.0579**		**0.373**		**0.0624**	
Xylene O	110	10000	NA	**0.0237**	J	0.0454	U	0.0525	U	0.0512	U	0.0539	U	0.0492	U	0.0454	U	0.0467	U	0.0076	U	0.0467	U	0.0452	U
Xylene P,M	110	10000	NA	**0.0533**	J	0.0908	U	0.105	U	0.102	U	0.108	U	0.0984	U	0.0908	U	0.0935	U	0.0152	U	0.0934	U	0.0905	U
Xylenes (Total)	110	10000	NA	0.0986	U, D	0.0908	U, D	0.105	U, D	0.102	U, D	0.108	U, D	0.0984	U, D	0.0908	U, D	0.0935	U, D	0.0152	U, D	0.0934	U, D	0.0905	U, D

				Summary of Soil Analytical Data (mg/kg) June 4, 2015																			
	Direct Exposure Criteria (mg/kg)		GB	GP-205		GP-205		GP-206		GP-206		GP-207		GP-207		GP-208		GP-208		GP-209		GP-209	
Soil Contaminant	**Residential**	**Industrial/Commercial**	**Leachability (mg/kg)**	**(0-2')**		**(4-6')**		**(0-2')**		**(2-4')**		**(0-2')**		**(4-6')**		**(2-4')**		**(6-8')**		**(2-4')**		**(6-8')**	
VOC's EPA Method 8260																							
1,1,1-Trichloroethane	540	10000	160	0.0439	U	0.042	U	**0.0531**		**0.0339**	J	**0.0883**		0.0443	U	**0.0975**		**0.0189**	J	**0.0253**	J	**0.0335**	J
1,1,2-Trichloroethane	3.6	100	NA	0.0439	U	0.042	U	**0.018**	J	0.0435	U	0.0552	U	0.0443	U	0.0483	U	0.0555	U	0.0469	U	0.0479	U
1,2,4-Trimethylbenzene	NA	NA	NA	0.0439	U	0.042	U	0.045	U	0.0435	U	**0.0143**	J	0.0443	U	0.0483	U	0.0555	U	0.0469	U	0.0479	U
Acetone	7800	10000	NA	1.1	U	**0.326**	J	1.12	U	**0.337**	J	1.38	U	**0.419**	J	1.21	U	1.39	U	1.17	U	**0.398**	J
Naphthalene	54	10000	NA	0.0439	U	0.042	U	0.045	U	0.0435	U	0.0552	U	0.0443	U	0.0483	U	0.0555	U	0.0469	U	0.0479	U
Tetrachloroethene	12	110	4.2	**0.106**		**0.0185**	J	**3.94**		**0.736**		**1.41**		**0.157**		**0.49**		**0.0433**	J	0.0469	U	0.0479	U
Trichloroethene	13	520	20	**0.192**		**0.0403**	J	**5.3**		**0.844**		**7.31**		**0.381**		**0.929**		**0.0977**		**0.0525**		**0.023**	J
Xylene O	110	10000	NA	0.0439	U	0.042	U	0.045	U	0.0435	U	0.0552	U	0.0443	U	0.0483	U	0.0555	U	0.0469	U	0.0479	U
Xylene P,M	110	10000	NA	0.0878	U	0.0839	U	0.09	U	0.087	U	0.11	U	0.0886	U	0.0965	U	0.111	U	0.0938	U	0.0958	U
Xylenes (Total)	110	10000	NA	0.0878	U, D	0.0839	U, D	0.09	U, D	0.087	U, D	0.11	U, D	0.0886	U, D	0.0965	U, D	0.111	U, D	0.0938	U, D	0.0958	U, D

Notes: 1. NA means Direct Exposure Criteria or GB Leachability was not established by the Rhode Island Department of Environmental Management.
2. D = Sample was diluted in order to obtain a value within the calibration range.
3. J = Value below the Method reporting Limit; Estimated value.
4. U = Not Detected

Indicates an exceedance of the Residential Direct Exposure Criteria.

Indicates an exceedance of the Residential Direct Exposure and Industrial/Commercial Criteria.

Indicates an exceedance of the GB Leachability Criteria.

TABLE 3
GROUNDWATER SAMPLING RESULTS
(2006 to 2015)

336 and 348 Bullocks Point Ave and 12 Fenner Ave
East Providence, Rhode Island

SOIL CONTAMINANTS	GB Groundwater Objective	VOC CONCENTRATION (ug/l)									
		GZ-1		GZ-2	GZ-2D			GZ-3	GZ-3D		
		(11/27/06)	(6/10/08)	(12/7/06)	(6/25/08)	(7/9/08)	(4/28/15)	(12/14/06)	(6/25/08)	(7/9/08)	(4/28/15)
VOC's EPA Method 8260											
Benzene	140	<1	<1	<1	<1	<1	-	<1	<1	<1	-
Toluene	1700	<1	<1	<1	<1	<1	-	<1	<1	<1	-
Ethylbenzene	1600	<1	<1	<1	<1	<1	-	<1	<1	<1	-
Total Xylene	NE	<1	<2	<1	<1	<1	-	<1	<1	<1	-
MTBE	5000	<1	<1	**3.1**	<2	<2	-	<1	<2	<2	-
1, 1 - Dichloroethane	NE	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
cis-1, 2 - Dichloroethylene	2400	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Chloroform	NE	<1	<1	<1	**3**	**3**	<1	<1	**1**	**2**	<1
1,1,1 Trichloroethane	3100	**2**	**1.6**	<1	**6**	**6**	<1	<1	**2**	**4**	<1
Trichloroethylene	540	**100**	**150**	**16**	**300**	**260**	**2.9**	**16**	**110**	**160**	<1
Tetrachloroethylene	150	**20**	**16**	**3.1**	**55**	**49**	<1	**4.4**	**25**	**40**	<1
1,1-Dichloroethylene	7	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
trans,-1,2-Dichloroethylene	2800	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Styrene	2.2	<1	<1	<1	<1	<1	-	**4.1**	<1	<1	-

SOIL CONTAMINANTS	GB Groundwater Objective	VOC CONCENTRATION (ug/l)						
		GZ-4			GZ-5S		GZ-5D	
		(12/28/06)	(6/10/08)	(4/28/15)	(6/26/08)	(7/9/08)	(6/26/08)	(7/9/08)
VOC's EPA Method 8260								
Benzene	140	<1	<1	-	<1	<1	<1	<1
Toluene	1700	<1	<1	-	**4**	**<1**	**1**	<1
Ethylbenzene	1600	<1	<1	-	<1	<1	<1	<1
Total Xylene	NE	<1	<1	-	<1	<1	<1	<1
MTBE	5000	**5**	<1	-	<2	<2	<2	<2
1, 1 - Dichloroethane	NE	<1	<1	<1	<1	<1	<1	<1
cis-1, 2 - Dichloroethylene	2400	<1	<1	<1	<1	<1	<1	<1
Chloroform	NE	**2**	<1	<1	**11**	**3**	**14**	**4**
1,1,1 Trichloroethane	3100	**3**	**3.6**	<1	<1	<1	<1	<1
Trichloroethylene	540	**370**	**410**	**25.4**	<1	**6**	<1	**9**
Tetrachloroethylene	150	**46**	**37**	**1.4**	<1	<1	<1	<1
1,1-Dichloroethylene	7	<1	<1	<1	<1	<1	<1	<1
trans,-1,2-Dichloroethylene	2800	<1	<1	<1	<1	<1	<1	<1
Styrene	2.2	<1	<1	-	<1	<1	<1	<1

Notes:

1. NE means the GB Groundwater Objective was not established by the Rhode Island Department of Environmental Management.
2. Data in **bold** indicates that constituent was detected above method detection limit.

Shaded data indicates an exceedance of the GB Groundwater Objective.

TABLE 4
GROUNDWATER DEPTHS AND ELEVATIONS
(2006 to 2015)

336 and 348 Bullocks Point Ave and 12 Fenner Ave
East Providence, Rhode Island

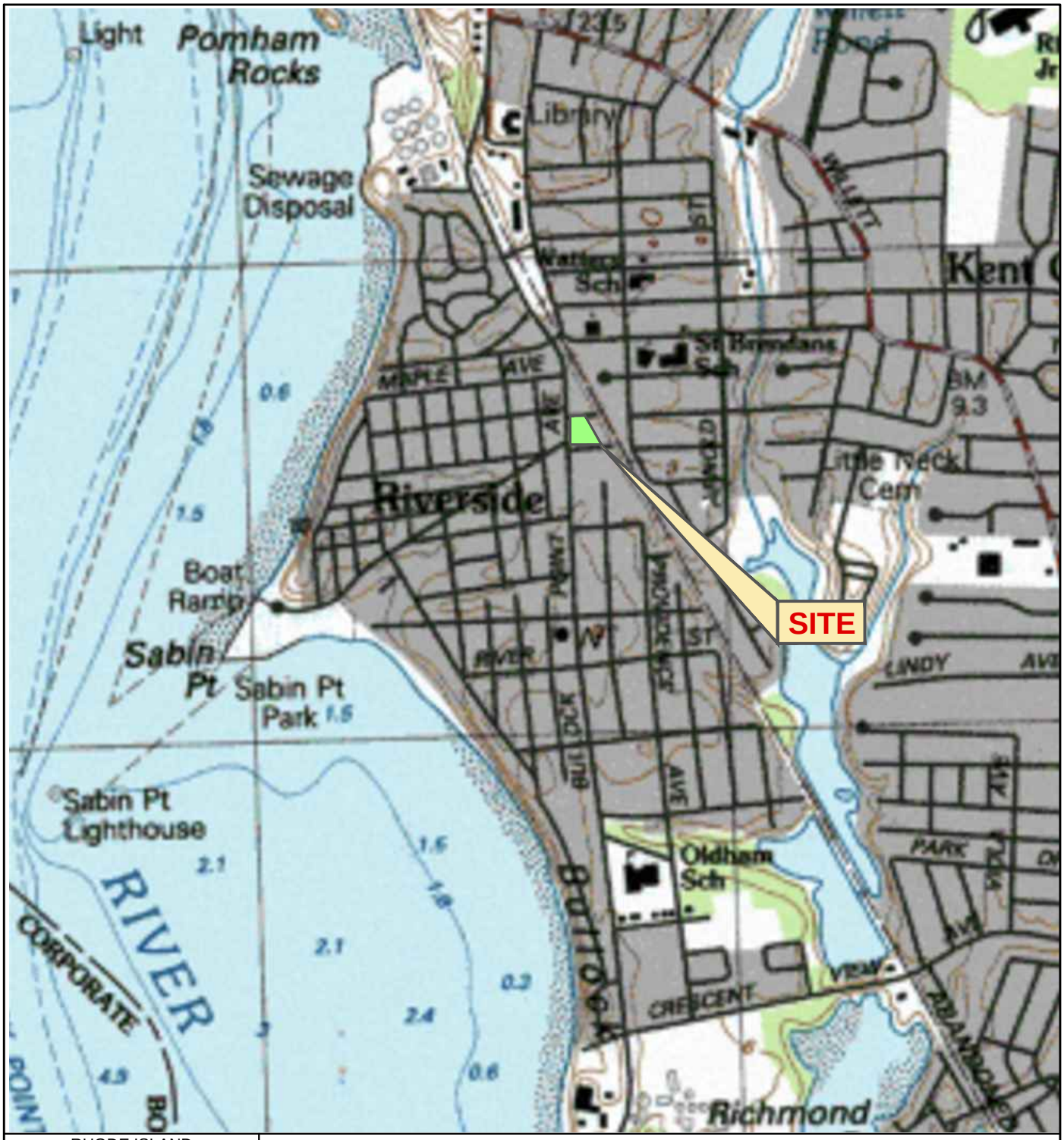
Location	Elevation of PVC Casing (ft)	Elevation of Steel Casing (ft)	December 11, 2006		December 12, 2006		December 14, 2006		December 15, 2006		December 28, 2006	
			Depth to Water (ft)	Groundwater Elevation (ft)	Depth to Water (ft)	Groundwater Elevation (ft)	Depth to Water (ft)	Groundwater Elevation (ft)	Depth to Water (ft)	Groundwater Elevation (ft)	Depth to Water (ft)	Groundwater Elevation (ft)
GZ-1	98.22*	98.60	17.02	81.30	17.13	81.19	17.18	81.14	17.22	81.10	17.94	80.38
GZ-2	98.27	98.76	16.90	81.37	16.96	81.31	17.03	81.24	17.06	81.21	>17.21	<81.06
GZ-2D	98.70	98.84	-	-	-	-	-	-	-	-	-	-
GZ-3	98.67	99.12	15.79 (2)	83.10 (2)	16.43 (2)	82.46	16.75 (2)	82.14	17.44 (2)	81.45	17.68	80.99
GZ-3D	98.76	98.99	-	-	-	-	-	-	-	-	-	-
GZ-4	98.32	98.86	-	-	-	-	-	-	-	-	18.09	80.23
GZ-5S	98.42S	98.86	-	-	-	-	-	-	-	-	-	-
GZ-5D	98.44D	98.86	-	-	-	-	-	-	-	-	-	-

Location	Elevation of PVC Casing (ft)	Elevation of Steel Casing (ft)	June 10, 2008		June 27, 2008		July 1, 2008		July 9, 2008		April 28, 2015	
			Depth to Water (ft)	Groundwater Elevation (ft)	Depth to Water (ft)	Groundwater Elevation (ft)	Depth to Water (ft)	Groundwater Elevation (ft)	Depth to Water (ft)	Groundwater Elevation (ft)	Depth to Water (ft)	Groundwater Elevation (ft)
GZ-1	98.22*	98.60	18.81	79.41	19.51	78.71	19.37	78.85	19.56	78.85	-	-
GZ-2	98.27	98.76	>16.9	<81.4	dry	--	>17.30	<80.97	>17.23	<81.04	-	-
GZ-2D	98.70	98.84	-	-	20.02	78.68	20.31	78.39	20.45	78.25	18.31	80.39
GZ-3	98.67	99.12	18.01	80.66	17.92	80.75	18.12	80.55	17.89	80.78	-	-
GZ-3D	98.76	98.99	-	-	20.05	78.71	20.33	78.43	20.50	78.16	18.81	79.95
GZ-4	98.32	98.86	19.05	79.27	19.75	78.57	20.07	78.25	20.16	78.16	18.10	80.22
GZ-5S	98.42S	98.86	-	-	19.60	78.82	19.97	78.45	20.50	77.92	-	-
GZ-5D	98.44D	98.86	-	-	19.67	78.77	20.03	78.41	20.15	78.29	-	-

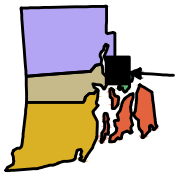
Notes:

1. Elevation survey completed by GZA on December 28, 2006. *GZ-1 measuring point elevation at 98.32 based on the 12/28/06 survey was found at 98.22 on 6/27/08 (believed to have settled).
2. Elevation survey completed by GZA on December 15, 2006 to establish elevations of temporary steel point in GZ-3 well. Steel well point set in GZ-3 on 12/11/06 and reset on 12/14/06 to remove Silt. Point removed and well redrilled by New Hampshire Boring on 12/23/06.
3. Elevation Survey on all wells (GZ-1, GZ-2, GZ-2D, GZ-3, GZ-3D, GZ-4, GZ-5D/S) and water levels conducted on June 27, 2008. Corrected elevation of PVC at GZ-1 from 98.32 to 98.22.
4. Note: Measurements of depths at GZ-1 were also recorded on 11/10/06, 11/21/06, 11/27/06 and 12/7/06 with readings of 17.96, 17.55, 16.09 and 17.13, respectively.

FIGURES



RHODE ISLAND



QUADRANGLE LOCATION

SOURCE: BASE MAP FROM THE FOLLOWING USGS QUADRANGLE MAP:
PROVIDENCE, RHODE ISLAND MASSACHUSETTS (41071-G3-TM-025)

DIGITAL TOPOGRAPHIC MAPS PROVIDED BY MAPTECH. INC.
CONTOUR ELEVATIONS REFERENCE NGVD 29,
CONTOURS ARE SHOWN IN METERS AT 3 INTERVALS

APPROXIMATE SCALE IN FEET

0' 500' 1,000' 2,000'

N W E S

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RIVERSIDE SQUARE
336 & 348 BULLOCKS POINT AVENUE &
12 FENNER AVENUE
EAST PROVIDENCE, RHODE ISLAND

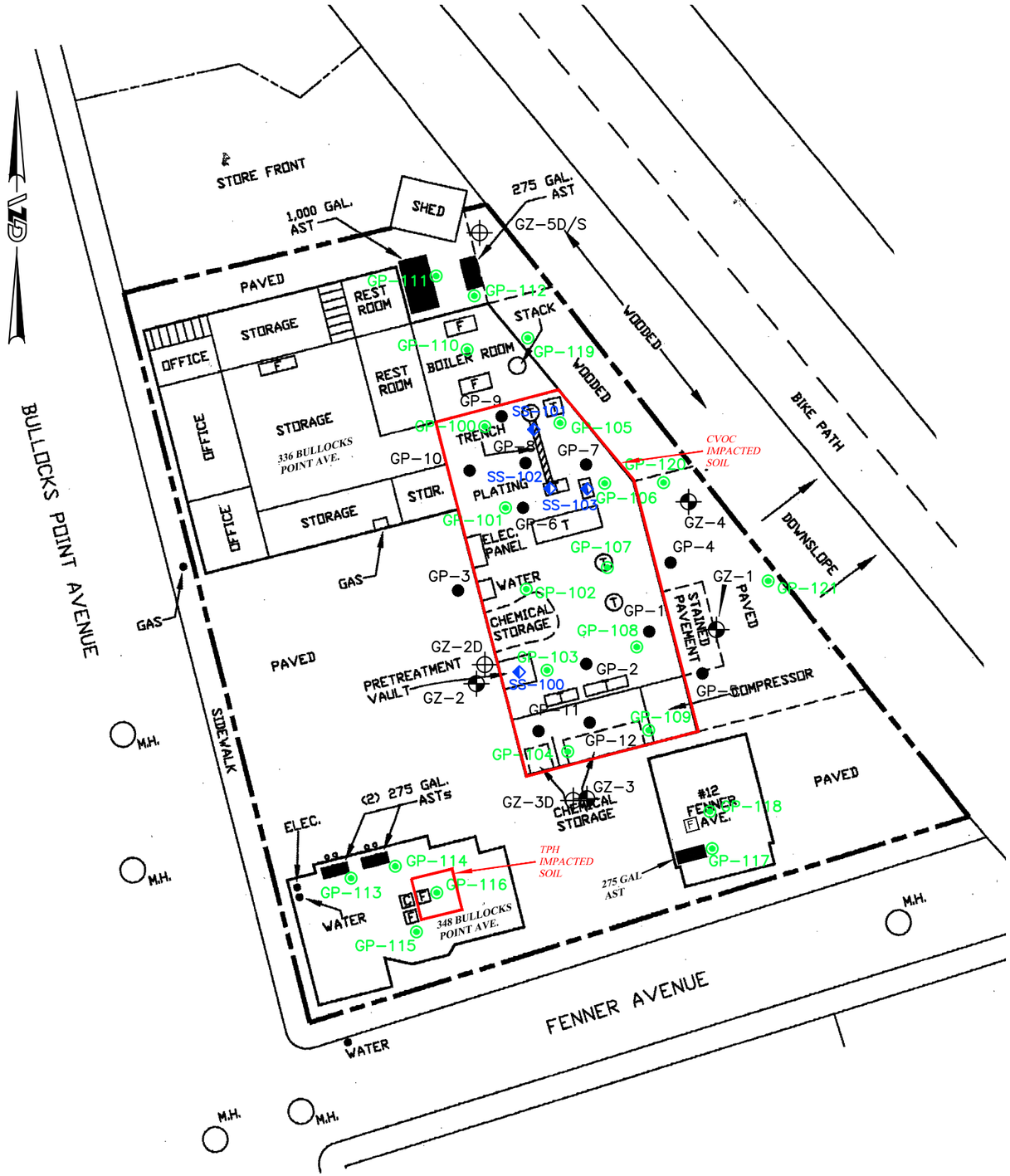
PREPARED BY:
GZA GeoEnvironmental, Inc.
Engineers and Scientists
www.gza.com

PREPARED FOR:
CITY OF EAST PROVIDENCE
145 TAUNTON AVENUE
EAST PROVIDENCE, RHODE ISLAND

LOCUS PLAN

PROJ MGR: AIF	REVIEWED BY: JJS	CHECKED BY:	FIGURE 1
DESIGNED BY:	DRAWN BY: CRD	SCALE: AS NOTED	
DATE: 10/10/2013	PROJECT NO. 33175.06	REVISION NO. 0	SHEET NO. 1 OF 1

© 2011 - GZA GeoEnvironmental, Inc. GZA-J:\RIDEM TAC\33175.06.jjs\CADD\33175.04-LOCUS-5-18-11.dwg [8.5x11-QUAD] October 10, 2013 - 11:12am albert.flori



LEGEND:

GP-1	GEOPROBE BORING LOCATIONS PERFORMED BY NEW ENGLAND GEOTECH ON NOVEMBER 21, 2006, OBSERVED BY GZA PERSONNEL
GZ-1	MONITORING WELLS INSTALLED BY NEW HAMPSHIRE BORING IN NOVEMBER & DECEMBER 2006, OBSERVED BY GZA PERSONNEL
GZ-2D	MONITORING WELLS INSTALLED BY NEW HAMPSHIRE BORING IN JUNE 2008, OBSERVED BY GZA PERSONNEL
GP-100	GEOPROBE BORING LOCATIONS PERFORMED BY NEW ENGLAND GEOTECH BETWEEN SEPTEMBER 20-22, 2011, OBSERVED BY GZA PERSONNEL
SS-100	SUMP/PIT LOCATIONS

NOTES:

1. THE BASE PLAN WAS DEVELOPED FROM A PLAN PREPARED BY LINCOLN ENVIRONMENTAL, INC. ENTITLED "PHASE I ENVIRONMENTAL SITE ASSESSMENT 336 AND 348 BULLOCKS POINT AVE & 12 FENNER AVE, EAST PROVIDENCE, RHODE ISLAND", DATED MAY 31, 2005, ORIGINAL SCALE: 1"=30'.

2. THE LOCATIONS OF THE EXPLORATIONS WERE APPROXIMATELY DETERMINED BY TAPE AND MEASUREMENTS AND LINE OF SIGHT FROM EXISTING TOPOGRAPHIC AND MAN-MADE FEATURES, THIS DATA SHOULD BE CONSIDERED ACCURATE ONLY TO THE DEGREE IMPLIED BY THE METHOD USED.

3. WATER LEVEL READINGS HAVE BEEN MADE IN THE MONITORING WELLS AT THE TIMES AND UNDER CONDITIONS STATED ON THE LOGS. THIS DATA HAS BEEN REVIEWED AND INTERPRETATIONS MADE IN THE TEXT OF THE REPROT. HOWEVER, IT MUST BE STATED THAT FLUCTUATIONS IN THE LEVEL OF THE GROUNDWATER MAY OCCUR DUE TO VARATIONS IN RAINFALL, TEMPERATURE AND OTHER FACTORS DIFFERENT FROM THOSE PRESENT AT THE TIME MEASUREMENTS WERE MADE.

REV. NO.	DESCRIPTION	BY	DATE

PROJ MGR: AIF
DESIGNED BY: AIF
REVIEWED BY: JJS

OPERATOR: AIF
DATE: MAY 2013

GZA GeoEnvironmental, Inc.
Engineers and Scientists
530 BROADWAY
PROVIDENCE, RI 02909
(401) 421-4140
(401) 751-8613

SCALE IN FEET 0 15 30 60

336 & 348 BULLOCKS POINT AVE AND 12 FENNER AVENUE
EAST PROVIDENCE, RHODE ISLAND

EXPLORATION LOCATION PLAN

JOB NO. 33175.04

FIGURE NO. 2

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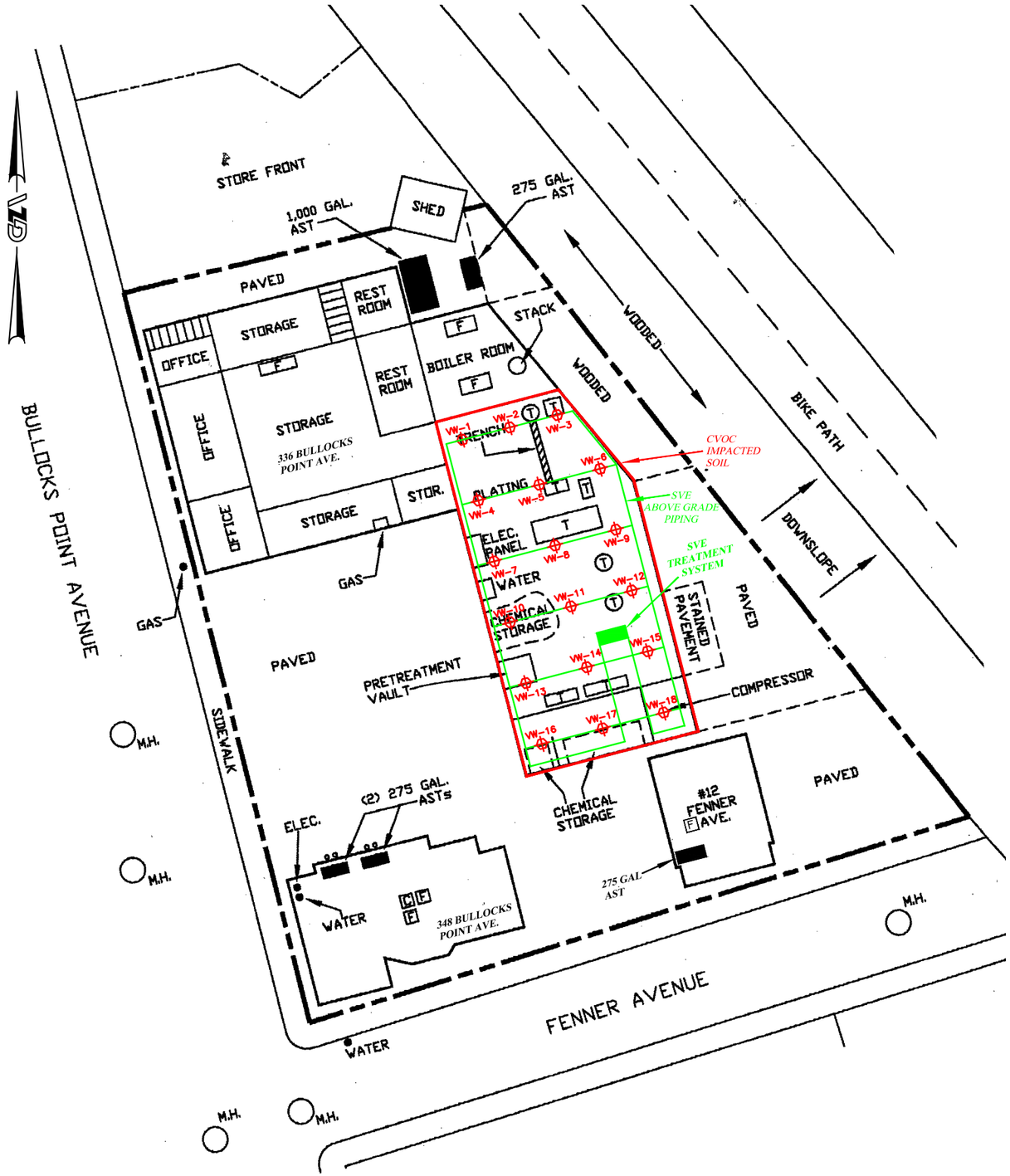
GZA-J:\RIDEM TAC\33175.04.jjs\CAD\FIGURE\33175.04-Exp Loc Plan May 2013.dwg [Expl Loc Plan Oct 2011] May 17, 2013 - 10:24am albert.fiori



LEGEND:

VW-1 — SOIL VAPOR EXTRACTION (SVE) WELLS INSTALLED BY NEW ENGLAND GEOTECH ON JULY 18 & 22, 2013, OBSERVED BY GZA PERSONNEL.

NOTES:

1. THE BASE PLAN WAS DEVELOPED FROM A PLAN PREPARED BY LINCOLN ENVIRONMENTAL, INC. ENTITLED "PHASE I ENVIRONMENTAL SITE ASSESSMENT 336 AND 348 BULLOCKS POINT AVE & 12 FENNER AVE, EAST PROVIDENCE, RHODE ISLAND", DATED MAY 31, 2005, ORIGINAL SCALE: 1"=30'.

2. THE LOCATIONS OF THE EXPLORATIONS WERE APPROXIMATELY DETERMINED BY TAPE AND MEASUREMENTS AND LINE OF SIGHT FROM EXISTING TOPOGRAPHIC AND MAN-MADE FEATURES, THIS DATA SHOULD BE CONSIDERED ACCURATE ONLY TO THE DEGREE IMPLIED BY THE METHOD USED.

3. WATER LEVEL READINGS HAVE BEEN MADE IN THE MONITORING WELLS AT THE TIMES AND UNDER CONDITIONS STATED ON THE LOGS. THIS DATA HAS BEEN REVIEWED AND INTERPRETATIONS MADE IN THE TEXT OF THE REPROT. HOWEVER, IT MUST BE STATED THAT FLUCTUATIONS IN THE LEVEL OF THE GROUNDWATER MAY OCCUR DUE TO VARATIONS IN RAINFALL, TEMPERATURE AND OTHER FACTORS DIFFERENT FROM THOSE PRESENT AT THE TIME MEASUREMENTS WERE MADE.

REV. NO.	DESCRIPTION	BY	DATE

SCALE IN FEET: 0 15 30 60

PROJ MGR: AIF
DESIGNED BY: AIF
REVIEWED BY: JJS

OPERATOR: AIF
DATE: OCT 2013

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336 & 348 BULLOCKS POINT AVE AND 12 FENNER AVENUE
EAST PROVIDENCE, RHODE ISLAND

SOIL VAPOR EXTRACTION WELL LOCATION PLAN

JOB NO. 33175.06

FIGURE NO. 3

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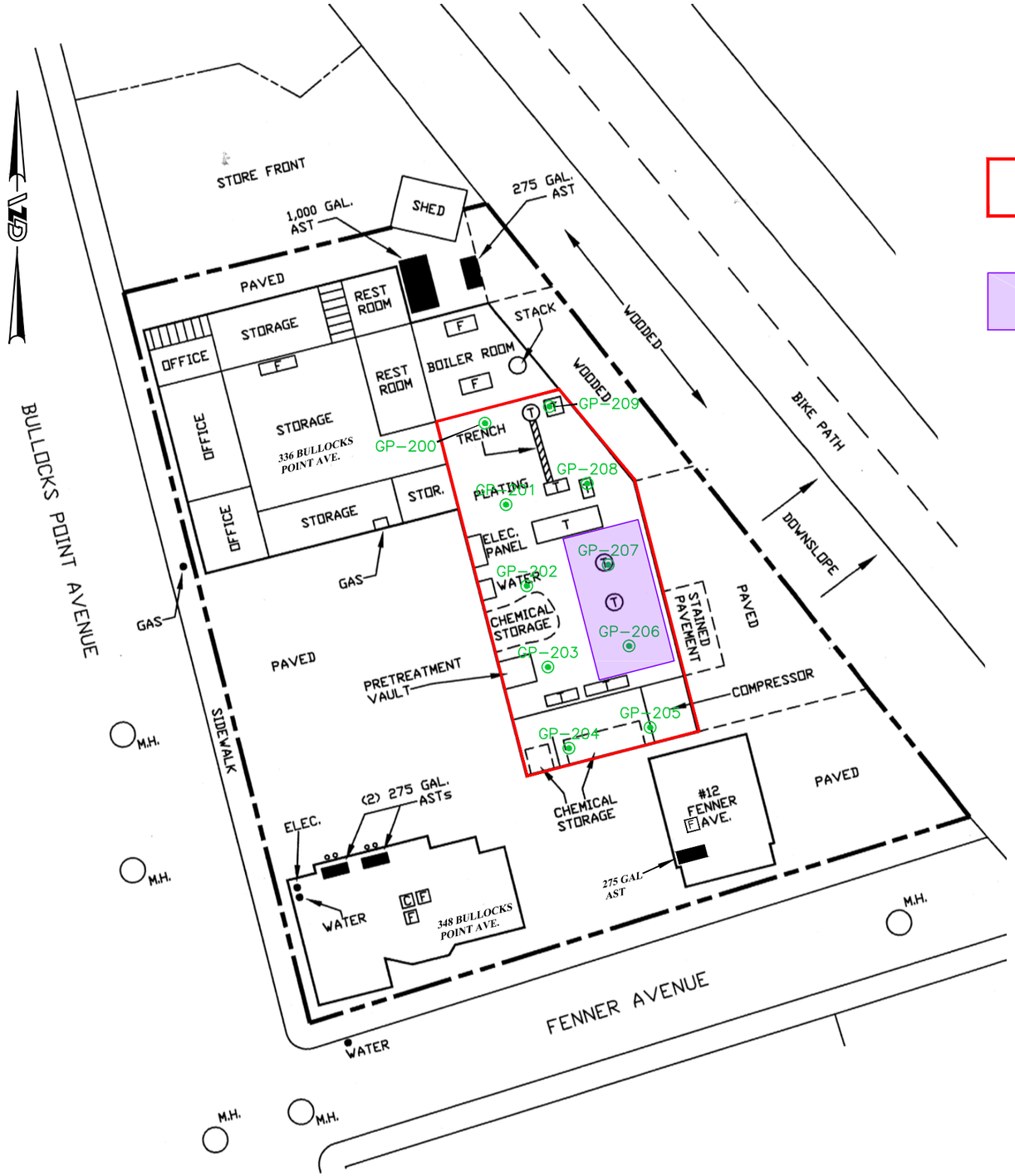
GZA-J:\RIDEM TAC\33175.06.jjs\CADD\33175.04-Exp Loc Plan Oct 2013.dwg [SVE Well Location Plan] October 30, 2013 - 2:59pm albert.fiori



LEGEND:

GP-200 — CONFIRMATORY SOIL SAMPLING BORINGS BY NEW ENGLAND GEOTECH ON JUNE 4, 2015, OBSERVED BY GZA PERSONNEL.

PRE-REMEDIATION (2012) CVOC "IMPACTED SOIL LIMITS"

POST-REMEDIATION ESTIMATED LIMITS CVOC "IMPACTED SOIL" MAY EXCEED MASSACHUSETTS DEP STANDARDS AS LISTED IN APPROVED RAWP, THOUGH ALL SOIL TESTED IN 2015 AT GP-200 TO GP-209 WERE BELOW RIDEM METHOD 1 CRITERIA FOR CVOCS.

NOTES:

1. THE BASE PLAN WAS DEVELOPED FROM A PLAN PREPARED BY LINCOLN ENVIRONMENTAL, INC. ENTITLED "PHASE I ENVIRONMENTAL SITE ASSESSMENT 336 AND 348 BULLOCKS POINT AVE & 12 FENNER AVE, EAST PROVIDENCE, RHODE ISLAND", DATED MAY 31, 2005, ORIGINAL SCALE: 1"=30'.

2. THE LOCATIONS OF THE EXPLORATIONS WERE APPROXIMATELY DETERMINED BY TAPE AND MEASUREMENTS AND LINE OF SIGHT FROM EXISTING TOPOGRAPHIC AND MAN-MADE FEATURES, THIS DATA SHOULD BE CONSIDERED ACCURATE ONLY TO THE DEGREE IMPLIED BY THE METHOD USED.

3. WATER LEVEL READINGS HAVE BEEN MADE IN THE MONITORING WELLS AT THE TIMES AND UNDER CONDITIONS STATED ON THE LOGS. THIS DATA HAS BEEN REVIEWED AND INTERPRETATIONS MADE IN THE TEXT OF THE REPROT. HOWEVER, IT MUST BE STATED THAT FLUCTUATIONS IN THE LEVEL OF THE GROUNDWATER MAY OCCUR DUE TO VARATIONS IN RAINFALL, TEMPERATURE AND OTHER FACTORS DIFFERENT FROM THOSE PRESENT AT THE TIME MEASUREMENTS WERE MADE.

REV. NO.	DESCRIPTION	BY	DATE

PROJ MGR: AIF
DESIGNED BY: AIF
REVIEWED BY: JJS

OPERATOR: AIF
DATE: JUNE 2015

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SCALE IN FEET 0 15 30 60

336 & 348 BULLOCKS POINT AVE AND 12 FENNER AVENUE
EAST PROVIDENCE, RHODE ISLAND

CONFIRMATORY SOIL SAMPLING LOCATION PLAN

JOB NO. 33175.06

FIGURE NO. 4

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GZA-J:\RIDEM TAC\33175.06.jjs\CADD\33175.04-Exp Loc Plan QAPP June 2012] October 22, 2015 - 10:45am carl.bergden

Plan Oct 2013.dwg [Expl Loc

APPENDIX A

LIMITATIONS

GEOHYDROLOGICAL LIMITATIONS

Use of Report

1. GZA GeoEnvironmental, Inc. (GZA) prepared this report on behalf of, and for the exclusive use of our Client for the stated purpose(s) and location(s) identified in the Proposal for Services and/or Report. Use of this report, in whole or in part, at other locations, or for other purposes, may lead to inappropriate conclusions; and we do not accept any responsibility for the consequences of such use(s). Further, reliance by any party not expressly identified in the agreement, for any use, without our prior written permission, shall be at that party's sole risk, and without any liability to GZA.

Standard of Care

2. GZA's findings and conclusions are based on the work conducted as part of the Scope of Services set forth in the Proposal for Services and/or Report and reflect our professional judgment. These findings and conclusions must be considered not as scientific or engineering certainties, but rather as our professional opinions concerning the limited data gathered during the course of our work. Conditions other than described in this report may be found at the subject location(s).

3. GZA's services were performed using the degree of skill and care ordinarily exercised by qualified professionals performing the same type of services, at the same time, under similar conditions, at the same or a similar property. No warranty, expressed 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 its study. Additionally, GZA makes no warranty that any response action or recommended action will achieve all of its objectives or that the findings of this study will be upheld by a local, state or federal agency.

4. In conducting our work, GZA relied upon certain information made available by public agencies, Client and/or others. GZA did not attempt to independently verify the accuracy or completeness of that information. Inconsistencies in this information which we have noted, if any, are discussed in the Report.

Subsurface Conditions

5. The generalized soil profile(s) provided in our Report are based on widely-spaced subsurface explorations and are intended only to convey trends in subsurface conditions. The boundaries between strata are approximate and idealized, and were based on our assessment of subsurface conditions. The composition of strata, and the transitions between strata, may be more variable and more complex than indicated. For more specific information on soil conditions at a specific location refer to the exploration logs.

6. Water level readings have been made in test holes (as described in the Report) and monitoring wells at the specified times and under the stated conditions. These data have been reviewed and interpretations have been made in this report. Fluctuations in the level of the groundwater however occur due to temporal or spatial variations in areal recharge rates, soil heterogeneities, the presence of subsurface utilities, and/or natural or artificially induced perturbations. The observed water table may be other than indicated in the Report.

Compliance with Codes and Regulations

7. We used reasonable care in identifying and interpreting applicable codes and regulations necessary to execute our scope of work. These codes and regulations are subject to various, and possibly contradictory, interpretations. Interpretations and compliance with codes and regulations by other parties is beyond our control.

Screening and Analytical Testing

8. GZA collected environmental samples at the locations identified in the Report. These samples were analyzed for the specific parameters identified in the report. Additional constituents, for which analyses were not conducted, may be present in soil, groundwater, surface water, sediment and/or air. Future Site activities and uses may result in a requirement for additional testing.

9. Our interpretation of field screening and laboratory data is presented in the Report. Unless otherwise noted, we relied upon the laboratory's QA/QC program to validate these data.

10. Variations in the types and concentrations of contaminants observed at a given location or time may occur due to release mechanisms, disposal practices, changes in flow paths, and/or the influence of various physical, chemical, biological or radiological processes. Subsequently observed concentrations may be other than indicated in the Report.

Interpretation of Data

11. Our opinions are based on available information as described in the Report, and on our professional judgment. Additional observations made over time, and/or space, may not support the opinions provided in the Report.

Additional Information

12. In the event that the Client 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.

Additional Services

13. GZA recommends that we be retained to provide services during any future investigations, design, implementation activities, construction, and/or property development/ redevelopment at the Site. This will allow us the opportunity to: i) observe conditions and compliance with our design concepts and opinions; ii) allow for changes in the event that conditions are other than anticipated; iii) provide modifications to our design; and iv) assess the consequences of changes in technologies and/or regulations.

APPENDIX B

SYSTEM MONITORING DATA TABLES B1 THROUGH B19

Table B1

VW-1
Summary of Soil Vapor Extraction/Reinjection Monitoring
September 5, 2013 to present

336 and 348 Bullocks Point Ave and 12 Fenner Ave
East Providence, Rhode Island

Date	**SVE** or Air Injection (**AI**)	**Vacuum** (in. of H_2O)	**Pressure** (in. of H_2O)	**Flow** (scfm)	**TVOC** (ppmv)	**O_2** (%)	**CO_2** (%)	**LEL** (%)
9/5/2013	AI	-	8.1	5.8	-	-	-	-
9/6/2013	AI	-	9.5	7.2	-	-	-	-
9/9/2013	AI	-	8.1	7.0	-	-	-	-
9/13/2013	AI	-	9.0	6.8	-	-	-	-
9/19/2013	AI	-	7.2	5.7	-	-	-	-
9/24/2013	AI	-	9.9	7.0	-	-	-	-
9/24/2013	SVE	7.5	-	6.8	0.1	20.6	0.2	0.0
9/25/2013	SVE	7.4	-	6.8	2.5	20.6	0.2	0.0
10/4/2013	SVE	9.6	-	6.8	0.8	20.5	0.5	0.0
10/25/2013	SVE	8.8	-	6.3	0.8	20.4	0.4	0.0
11/5/2013	SVE	8.7	-	6.3	0.0	20.7	0.2	0.0
11/5/2013	AI	-	8.2	5.5	-	-	-	-
11/6/2013	AI	-	8.2	5.5	-	-	-	-
11/21/2013	AI	-	8.1	5.5	-	-	-	-
12/9/2013	AI	-	7.8	5.3	-	-	-	-
12/27/2013	AI	-	7.4	5.3	-	-	-	-
1/13/2014	AI	-	7.8	5.3	-	-	-	-
1/27/2014	AI	-	8.7	5.0	-	-	-	-
2/12/2014	AI	-	8.3	5.3	-	-	-	-
2/25/2014	AI	-	9.9	5.3	-	-	-	-
3/14/2014	AI	-	9.6	5.3	-	-	-	-
3/28/2014	AI	-	8.6	5.3	-	-	-	-
4/25/2014	AI	-	9.8	5.3	-	-	-	-
5/13/2014	AI	-	9.4	5.3	-	-	-	-
6/9/2014	AI	-	8.2	6.8	-	-	-	-
7/31/2014	AI	-	11.6	7.0	-	-	-	-
8/25/2014	AI	-	10.9	6.8	-	-	-	-
9/30/2014	AI	-	10.4	6.8	-	-	-	-
11/18/2014	AI	-	12.7	6.8	-	-	-	-
4/28/2015	AI	-	9.7	6.8	-	-	-	-

Date	**Average**							**Total Run Time**
	SVE or Air Injection (**AI**)	**Vacuum** (in. of H_2O)	**Pressure** (in. of H_2O)	**Flow** (scfm)	**TVOC** (ppmv)	**O_2** (%)	**CO_2** (%)	(days)
9/5/13 to 9/24/13	AI	-	8.6	6.6	-	-	-	19
9/24/13 to 10/4/13	SVE	8.2	-	6.8	1.1	20.6	0.3	10
10/4/13 to 11/5/13	SVE	9.0	-	6.5	0.5	20.5	0.4	32
11/5/13 to 11/21/13	AI	-	8.2	5.5	-	-	-	8
11/21/13 to 11/18/14	AI	-	9.3	5.8	-	-	-	298

Notes:
1. TVOC means Total Volatile Organic Compounds. Readings are in parts per million on volume to volume basis (ppmv).
2. TVOC concentrations were determined using a Photoionization Detector (PID), equipped with a 10.6 ev lamp.
3. O_2, CO_2, and LEL measurements were determined using a LANDTEC GA90 - Infrared gas analyzer.
4. Flow measurements were determined using a Pitot Tube DS-300 Flow Sensor.
5. "-" means not monitored
6. System operated 24 hours per day from 9/5/13 through 11/5/13; 12 hours/day from 11/5/13 through 3/28/14; and 24 hours/day from 3/28/14 through 12/23/14.

Table B2

VW-2
Summary of Soil Vapor Extraction/Reinjection Monitoring
September 5, 2013 to present

336 and 348 Bullocks Point Ave and 12 Fenner Ave
East Providence, Rhode Island

Date	**SVE** or Air Injection (**AI**)	**Vacuum** (in. of H_2O)	**Pressure** (in. of H_2O)	**Flow** (scfm)	**TVOC** (ppmv)	**O_2** (%)	**CO_2** (%)	**LEL** (%)
9/5/2013	AI	-	8.1	5.5	-	-	-	-
9/6/2013	AI	-	9.4	6.8	-	-	-	-
9/9/2013	AI	-	8.1	6.8	-	-	-	-
9/13/2013	AI	-	9.2	7.0	-	-	-	-
9/19/2013	AI	-	6.6	5.9	-	-	-	-
9/24/2013	AI	-	8.5	6.8	-	-	-	-
9/24/2013	SVE	7.6	-	6.8	0.8	20.6	0.2	0.0
9/25/2013	SVE	7.7	-	6.8	3.4	20.7	0.1	0.0
10/4/2013	SVE	9.0	-	6.6	0.9	20.6	0.3	0.0
10/25/2013	SVE	8.5	-	6.3	1.4	20.1	0.6	0.0
11/5/2013	SVE	8.4	-	6.1	0.0	20.0	0.9	0.0
11/5/2013	AI	-	8.3	6.3	-	-	-	-
11/6/2013	AI	-	8.3	6.3	-	-	-	-
11/21/2013	AI	-	8.2	6.3	-	-	-	-
12/9/2013	AI	-	7.8	6.1	-	-	-	-
12/27/2013	AI	-	7.5	6.3	-	-	-	-
1/13/2014	AI	-	7.8	6.6	-	-	-	-
1/27/2014	AI	-	8.8	6.6	-	-	-	-
2/12/2014	AI	-	8.4	6.6	-	-	-	-
2/25/2014	AI	-	9.6	6.6	-	-	-	-
3/14/2014	AI	-	9.4	6.6	-	-	-	-
3/28/2014	AI	-	8.7	6.8	-	-	-	-
4/25/2014	AI	-	9.9	6.8	-	-	-	-
5/13/2014	AI	-	9.5	6.6	-	-	-	-
6/9/2014	AI	-	8.4	7.0	-	-	-	-
7/31/2014	AI	-	9.1	6.8	-	-	-	-
8/25/2014	AI	-	8.6	6.8	-	-	-	-
9/30/2014	AI	-	8.0	7.0	-	-	-	-
11/18/2014	AI	-	8.1	6.8	-	-	-	-
4/28/2015	AI	-	9.7	6.8	-	-	-	-

Date	**Average**							**Total Run Time**
	SVE or Air Injection (**AI**)	**Vacuum** (in. of H_2O)	**Pressure** (in. of H_2O)	**Flow** (scfm)	**TVOC** (ppmv)	**O_2** (%)	**CO_2** (%)	(days)
9/5/13 to 9/24/13	AI	-	8.3	6.5	-	-	-	19
9/24/13 to 10/4/13	SVE	8.1	-	6.7	1.7	20.6	0.2	10
10/4/13 to 11/5/13	SVE	8.6	-	6.3	0.8	20.2	0.6	32
11/5/13 to 11/21/13	AI	-	8.3	6.3	-	-	-	8
11/21/13 to 11/18/14	AI	-	8.6	6.6	-	-	-	298

Notes:
1. TVOC means Total Volatile Organic Compounds. Readings are in parts per million on volume to volume basis (ppmv).
2. TVOC concentrations were determined using a Photoionization Detector (PID), equipped with a 10.6 ev lamp.
3. O_2, CO_2, and LEL measurements were determined using a LANDTEC GA90 - Infrared gas analyzer.
4. Flow measurements were determined using a Pitot Tube DS-300 Flow Sensor.
5. "-" means not monitored
6. System operated 24 hours per day from 9/5/13 through 11/5/13; 12 hours/day from 11/5/13 through 3/28/14; and 24 hours/day from 3/28/14 through 12/23/14.

Table B3

VW-3
Summary of Soil Vapor Extraction/Reinjection Monitoring
September 5, 2013 to present

336 and 348 Bullocks Point Ave and 12 Fenner Ave
East Providence, Rhode Island

Date	**SVE** or Air Injection (**AI**)	**Vacuum** (in. of H_2O)	**Pressure** (in. of H_2O)	**Flow** (scfm)	**TVOC** (ppmv)	**O_2** (%)	**CO_2** (%)	**LEL** (%)
9/5/2013	AI	-	3.7	7.6	-	-	-	-
9/6/2013	AI	-	2.1	6.8	-	-	-	-
9/9/2013	AI	-	1.9	6.8	-	-	-	-
9/13/2013	AI	-	2.5	7.0	-	-	-	-
9/19/2013	AI	-	2.0	5.5	-	-	-	-
9/24/2013	AI	-	2.3	6.8	-	-	-	-
9/24/2013	SVE	2.5	-	6.8	0.2	20.7	0.1	0.0
9/25/2013	SVE	2.6	-	6.8	1.0	20.6	0.2	0.0
10/4/2013	SVE	2.7	-	6.6	0.1	20.8	0.1	0.0
10/25/2013	SVE	2.6	-	6.1	0.1	20.8	0.1	0.0
11/5/2013	SVE	2.5	-	6.1	0.1	20.7	0.2	0.0
11/5/2013	AI	-	2.5	6.8	-	-	-	-
11/6/2013	AI	-	2.5	6.8	-	-	-	-
11/21/2013	AI	-	2.4	6.8	-	-	-	-
12/9/2013	AI	-	2.2	6.6	-	-	-	-
12/27/2013	AI	-	2.1	6.6	-	-	-	-
1/13/2014	AI	-	2.7	6.6	-	-	-	-
1/27/2014	AI	-	2.8	6.8	-	-	-	-
2/12/2014	AI	-	2.4	6.6	-	-	-	-
2/25/2014	AI	-	3.2	6.8	-	-	-	-
3/14/2014	AI	-	2.9	6.8	-	-	-	-
3/28/2014	AI	-	2.4	6.8	-	-	-	-
4/25/2014	AI	-	3.2	6.8	-	-	-	-
5/13/2014	AI	-	3.1	6.8	-	-	-	-
6/9/2014	AI	-	2.9	6.8	-	-	-	-
7/31/2014	AI	-	2.2	6.8	-	-	-	-
8/25/2014	AI	-	2.0	7.0	-	-	-	-
9/30/2014	AI	-	1.6	6.8	-	-	-	-
11/18/2014	AI	-	2.6	6.8	-	-	-	-
4/28/2015	AI	-	3.0	6.8	-	-	-	-

Date	**Average**							**Total Run Time** (days)
	SVE or Air Injection (**AI**)	**Vacuum** (in. of H_2O)	**Pressure** (in. of H_2O)	**Flow** (scfm)	**TVOC** (ppmv)	**O_2** (%)	**CO_2** (%)	
9/5/13 to 9/24/13	AI	-	2.4	6.8	-	-	-	19
9/24/13 to 10/4/13	SVE	2.6	-	6.7	0.4	20.7	0.1	10
10/4/13 to 11/5/13	SVE	2.6	-	6.3	0.1	20.8	0.1	32
11/5/13 to 11/21/13	AI	-	2.5	6.8	-	-	-	8
11/21/13 to 11/18/14	AI	-	2.5	6.8	-	-	-	298

Notes:
1. TVOC means Total Volatile Organic Compounds. Readings are in parts per million on volume to volume basis (ppmv).
2. TVOC concentrations were determined using a Photoionization Detector (PID), equipped with a 10.6 ev lamp.
3. O_2, CO_2, and LEL measurements were determined using a LANDTEC GA90 - Infrared gas analyzer.
4. Flow measurements were determined using a Pitot Tube DS-300 Flow Sensor.
5. "--" means not monitored
6. System operated 24 hours per day from 9/5/13 through 11/5/13; 12 hours/day from 11/5/13 through 3/28/14; and 24 hours/day from 3/28/14 through 12/23/14.

Table B4

VW-4
Summary of Soil Vapor Extraction/Reinjection Monitoring
September 5, 2013 to present

336 and 348 Bullocks Point Ave and 12 Fenner Ave
East Providence, Rhode Island

Date	**SVE** or Air Injection (**AI**)	**Vacuum** (in. of H_2O)	**Pressure** (in. of H_2O)	**Flow** (scfm)	**TVOC** (ppmv)	**O_2** (%)	**CO_2** (%)	**LEL** (%)
9/5/2013	SVE	10.7	-	5.0	16.6	19.5	1.1	0
9/6/2013	SVE	8.7	-	5.0	6.8	19.9	0.9	0
9/9/2013	SVE	8.7	-	3.9	2.8	20.5	0.3	0
9/13/2013	SVE	10.0	-	3.9	2.6	20.5	0.3	0
9/19/2013	SVE	6.5	-	6.1	2.4	20.4	0.2	0
9/24/2013	SVE	11.2	-	6.8	1.9	20.6	0.3	0
9/24/2013	AI	-	11.8	6.8	-	-	-	-
9/25/2013	AI	-	11.8	6.8	-	-	-	-
10/4/2013	AI	-	10.3	6.6	-	-	-	-
10/25/2013	AI	-	9.2	6.1	-	-	-	-
11/5/2013	AI	-	9.2	6.3	-	-	-	-
11/5/2013	SVE	7.8	-	5.5	0.5	20.6	0.1	0
11/6/2013	SVE	7.8	-	5.5	0.1	20.6	0.1	0
11/21/2013	SVE	9.6	-	6.1	0.1	20.8	0.2	0
12/9/2013	SVE	13.8	-	5.3	0.0	20.7	0.2	0
12/27/2013	SVE	17.1	-	5.3	0.0	20.9	0.0	0
1/13/2014	SVE	14.9	-	7.0	0.0	20.6	0.1	0
1/27/2014	SVE	15.2	-	5.0	0.1	20.6	0.1	0
2/12/2014	SVE	13.4	-	6.8	0.1	20.9	0.0	0
2/25/2014	SVE	13.5	-	6.6	0.1	20.8	0.1	0
3/14/2014	SVE	12.8	-	6.6	0.0	20.8	0.1	0
3/28/2014	SVE	11.8	-	6.6	0.0	20.5	0.1	0
4/25/2014	SVE	11.9	-	6.6	0.1	20.6	0.1	0
5/13/2014	SVE	12.3	-	6.8	0.1	20.7	0.0	0
6/9/2014	SVE	14.2	-	6.6	0.2	20.6	0.1	0
7/31/2014	SVE	13.8	-	7.0	0.1	-	-	-
8/25/2014	SVE	14.1	-	6.6	0.3	-	-	-
9/30/2014	SVE	14.8	-	6.8	0.0	20.6	0.1	0
11/18/2014	SVE	15.1	-	6.8	0.1	20.8	0.0	0
4/28/2015	SVE	9.1	-	6.8	0.1	20.6	0.2	0

Date	**Average**							**Total Run Time**
	SVE or Air Injection (**AI**)	**Vacuum** (in. of H_2O)	**Pressure** (in. of H_2O)	**Flow** (scfm)	**TVOC** (ppmv)	**O_2** (%)	**CO_2** (%)	(days)
9/5/13 to 9/24/13	SVE	9.3	-	5.1	5.5	20.2	0.5	19
9/24/13 to 10/4/13	AI	-	11.3	6.7	-	-	-	10
10/4/13 to 11/5/13	AI	-	9.6	6.3	-	-	-	32
11/5/13 to 11/21/13	SVE	8.4	-	5.7	0.2	20.7	0.1	8
11/21/13 to 11/18/14	SVE	13.7	-	6.4	0.1	20.7	0.1	298

Notes:
1. TVOC means Total Volatile Organic Compounds. Readings are in parts per million on volume to volume basis (ppmv).
2. TVOC concentrations were determined using a Photoionization Detector (PID), equipped with a 10.6 ev lamp.
3. O_2, CO_2, and LEL measurements were determined using a LANDTEC GA90 - Infrared gas analyzer.
4. Flow measurements were determined using a Pitot Tube DS-300 Flow Sensor.
5. "--" means not monitored
6. System operated 24 hours per day from 9/5/13 through 11/5/13; 12 hours/day from 11/5/13 through 3/28/14; and 24 hours/day from 3/28/14 through 12/23/14.

Table B5

VW-5
Summary of Soil Vapor Extraction/Reinjection Monitoring
September 5, 2013 to present

336 and 348 Bullocks Point Ave and 12 Fenner Ave
East Providence, Rhode Island

Date	**SVE** or Air Injection (**AI**)	**Vacuum** (in. of H_2O)	**Pressure** (in. of H_2O)	**Flow** (scfm)	**TVOC** (ppmv)	**O_2** (%)	**CO_2** (%)	**LEL** (%)
9/5/2013	SVE	0.1	-	6.8	29.7	19.2	1.2	0
9/6/2013	SVE	0.4	-	7.0	13.7	20.0	0.8	0
9/9/2013	SVE	1.1	-	6.8	2.8	20.4	0.3	0
9/13/2013	SVE	0.6	-	6.8	4.0	20.5	0.3	0
9/19/2013	SVE	0.3	-	5.7	3.0	20.4	0.2	0
9/24/2013	SVE	0.3	-	6.8	2.6	20.7	0.2	0
9/24/2013	AI	-	0.2	6.8	-	-	-	-
9/25/2013	AI	-	0.3	6.8	-	-	-	-
10/4/2013	AI	-	0.3	6.8	-	-	-	-
10/25/2013	AI	-	0.3	6.6	-	-	-	-
11/5/2013	AI	-	0.4	6.1	-	-	-	-
11/5/2013	SVE	0.4	-	7.0	0.4	20.6	0.1	0
11/6/2013	SVE	0.4	-	7.0	1.1	20.6	0.1	0
11/21/2013	SVE	0.4	-	6.8	0.1	20.8	0.1	0
12/9/2013	SVE	0.6	-	6.1	0.1	20.6	0.2	0
12/27/2013	SVE	0.7	-	6.3	0.0	20.8	0.0	0
1/13/2014	SVE	0.5	-	6.1	0.1	20.7	0.0	0
1/27/2014	SVE	0.5	-	6.8	0.1	20.5	0.2	0
2/12/2014	SVE	0.4	-	6.3	0.1	20.9	0.0	0
2/25/2014	SVE	0.6	-	6.8	0.1	20.8	0.1	0
3/14/2014	SVE	0.5	-	6.8	0.0	20.8	0.1	0
3/28/2014	SVE	0.8	-	6.6	0.0	20.5	0.1	0
4/25/2014	SVE	0.8	-	6.6	0.0	20.7	0.1	0
5/13/2014	SVE	0.9	-	6.8	0.2	20.8	0.0	0
6/9/2014	SVE	0.5	-	7.0	0.1	20.8	0.0	0
7/31/2014	SVE	0.4	-	6.8	0.1	-	-	-
8/25/2014	SVE	0.4	-	6.8	0.4	-	-	-
9/30/2014	SVE	0.5	-	6.4	0.0	20.7	0.0	0
11/18/2014	SVE	0.4	-	6.0	0.1	20.8	0.0	0
4/28/2015	SVE	1.0	-	6.0	0.2	20.7	0.1	0

Date	**Average**							**Total Run Time**
	SVE or Air Injection (**AI**)	**Vacuum** (in. of H_2O)	**Pressure** (in. of H_2O)	**Flow** (scfm)	**TVOC** (ppmv)	**O_2** (%)	**CO_2** (%)	(days)
9/5/13 to 9/24/13	SVE	0.5	-	6.7	9.3	20.2	0.5	19
9/24/13 to 10/4/13	AI	-	0.3	6.8	-	-	-	10
10/4/13 to 11/5/13	AI	-	0.3	6.5	-	-	-	32
11/5/13 to 11/21/13	SVE	0.4	-	6.9	0.5	20.7	0.1	8
11/21/13 to 11/18/14	SVE	0.6	-	6.6	0.1	20.7	0.1	298

Notes:
1. TVOC means Total Volatile Organic Compounds. Readings are in parts per million on volume to volume basis (ppmv).
2. TVOC concentrations were determined using a Photoionization Detector (PID), equipped with a 10.6 ev lamp.
3. O_2, CO_2, and LEL measurements were determined using a LANDTEC GA90 - Infrared gas analyzer.
4. Flow measurements were determined using a Pitot Tube DS-300 Flow Sensor.
5. "--" means not monitored
6. System operated 24 hours per day from 9/5/13 through 11/5/13; 12 hours/day from 11/5/13 through 3/28/14; and 24 hours/day from 3/28/14 through 12/23/14.

Table B6

VW-6
Summary of Soil Vapor Extraction/Reinjection Monitoring
September 5, 2013 to present

336 and 348 Bullocks Point Ave and 12 Fenner Ave
East Providence, Rhode Island

Date	**SVE** or Air Injection (**AI**)	**Vacuum** (in. of H_2O)	**Pressure** (in. of H_2O)	**Flow** (scfm)	**TVOC** (ppmv)	**O_2** (%)	**CO_2** (%)	**LEL** (%)
9/5/2013	SVE	9.3	-	6.6	7.5	19.4	1.0	0
9/6/2013	SVE	8.5	-	6.8	7.5	20.0	0.7	0
9/9/2013	SVE	9.3	-	6.3	4.1	20.4	0.3	0
9/13/2013	SVE	9.5	-	6.6	2.4	20.5	0.3	0
9/19/2013	SVE	8.8	-	4.6	1.2	20.5	0.2	0
9/24/2013	SVE	7.2	-	7.0	1.1	20.6	0.2	0
9/24/2013	AI	-	7.2	6.8	-	-	-	-
9/25/2013	AI	-	7.0	6.8	-	-	-	-
10/4/2013	AI	-	6.5	6.8	-	-	-	-
10/25/2013	AI	-	5.6	5.5	-	-	-	-
11/5/2013	AI	-	5.5	5.5	-	-	-	-
11/5/2013	SVE	6.5	-	7.0	0.0	20.5	0.2	0
11/6/2013	SVE	6.5	-	7.0	0.7	20.5	0.2	0
11/21/2013	SVE	7.6	-	7.0	0.1	20.7	0.1	0
12/9/2013	SVE	7.7	-	6.1	0.0	20.8	0.0	0
12/27/2013	SVE	7.9	-	6.3	0.0	20.8	0.0	0
1/13/2014	SVE	8.2	-	6.3	0.0	20.6	0.0	0
1/27/2014	SVE	7.3	-	6.8	0.1	20.5	0.2	0
2/12/2014	SVE	6.4	-	6.1	0.0	20.8	0.0	0
2/25/2014	SVE	6.9	-	6.1	0.1	20.6	0.2	0
3/14/2014	SVE	6.6	-	6.1	0.0	20.8	0.1	0
3/28/2014	SVE	6.0	-	6.1	0.0	20.5	0.0	0
4/25/2014	SVE	6.5	-	6.1	0.0	20.7	0.1	0
5/13/2014	SVE	6.4	-	6.6	0.1	20.7	0.0	0
6/9/2014	SVE	7.6	-	6.8	0.2	20.6	0.1	0
7/31/2014	SVE	6.9	-	6.8	0.1	-	-	-
8/25/2014	SVE	7.3	-	6.8	0.3	-	-	-
9/30/2014	SVE	6.9	-	6.8	0.0	20.6	0.0	0
11/18/2014	SVE	8.2	-	6.6	0.2	20.7	0.1	0
4/28/2015	SVE	8.7	-	6.6	0.1	20.8	0.0	0

Date	**Average**							**Total Run Time**
	SVE or Air Injection (**AI**)	**Vacuum** (in. of H_2O)	**Pressure** (in. of H_2O)	**Flow** (scfm)	**TVOC** (ppmv)	**O_2** (%)	**CO_2** (%)	(days)
9/5/13 to 9/24/13	SVE	8.8	-	6.3	4.0	20.2	0.5	19
9/24/13 to 10/4/13	AI	-	6.9	6.8	-	-	-	10
10/4/13 to 11/5/13	AI	-	5.9	5.9	-	-	-	32
11/5/13 to 11/21/13	SVE	6.9	-	7.0	0.3	20.6	0.2	8
11/21/13 to 11/18/14	SVE	7.1	-	6.5	0.1	20.7	0.1	298

Notes:
1. TVOC means Total Volatile Organic Compounds. Readings are in parts per million on volume to volume basis (ppmv).
2. TVOC concentrations were determined using a Photoionization Detector (PID), equipped with a 10.6 ev lamp.
3. O_2, CO_2, and LEL measurements were determined using a LANDTEC GA90 - Infrared gas analyzer.
4. Flow measurements were determined using a Pitot Tube DS-300 Flow Sensor.
5. "--" means not monitored
6. System operated 24 hours per day from 9/5/13 through 11/5/13; 12 hours/day from 11/5/13 through 3/28/14; and 24 hours/day from 3/28/14 through 12/23/14.

Table B7

VW-7
Summary of Soil Vapor Extraction/Reinjection Monitoring
September 5, 2013 to present

336 and 348 Bullocks Point Ave and 12 Fenner Ave
East Providence, Rhode Island

Date	**SVE** or Air Injection (**AI**)	**Vacuum** (in. of H_2O)	**Pressure** (in. of H_2O)	**Flow** (scfm)	**TVOC** (ppmv)	**O_2** (%)	**CO_2** (%)	**LEL** (%)
9/5/2013	AI	-	7.8	7.2	-	-	-	-
9/6/2013	AI	-	6.6	7.0	-	-	-	-
9/9/2013	AI	-	5.5	6.8	-	-	-	-
9/13/2013	AI	-	7.0	7.0	-	-	-	-
9/19/2013	AI	-	6.1	5.5	-	-	-	-
9/24/2013	AI	-	4.6	6.8	-	-	-	-
9/24/2013	SVE	6.3	-	6.8	0.4	20.6	0.2	0.0
9/25/2013	SVE	6.5	-	6.8	3.1	20.6	0.2	0.0
10/4/2013	SVE	6.7	-	6.8	1.1	20.7	0.2	0.0
10/25/2013	SVE	6.3	-	7.0	1.5	20.6	0.3	0.0
11/5/2013	SVE	7.1	-	6.8	0.6	20.7	0.2	0.0
11/5/2013	AI	-	6.4	6.8	-	-	-	-
11/6/2013	AI	-	6.4	6.8	-	-	-	-
11/21/2013	AI	-	6.5	6.8	-	-	-	-
12/9/2013	AI	-	6.6	6.6	-	-	-	-
12/27/2013	AI	-	6.2	6.6	-	-	-	-
1/13/2014	AI	-	6.8	6.8	-	-	-	-
1/27/2014	AI	-	7.5	6.6	-	-	-	-
2/12/2014	AI	-	7.1	6.8	-	-	-	-
2/25/2014	AI	-	7.9	6.8	-	-	-	-
3/14/2014	AI	-	7.7	6.8	-	-	-	-
3/28/2014	AI	-	7.1	6.8	-	-	-	-
4/25/2014	AI	-	8.6	6.8	-	-	-	-
5/13/2014	AI	-	8.3	6.6	-	-	-	-
6/9/2014	AI	-	7.5	6.6	-	-	-	-
7/31/2014	AI	-	6.6	6.6	-	-	-	-
8/25/2014	AI	-	6.2	6.6	-	-	-	-
9/30/2014	AI	-	5.7	6.6	-	-	-	-
11/18/2014	AI	-	6.4	6.6	-	-	-	-
4/28/2015	AI	-	8.3	6.6	-	-	-	-

Date	**Average**							**Total Run Time**
	SVE or Air Injection (**AI**)	**Vacuum** (in. of H_2O)	**Pressure** (in. of H_2O)	**Flow** (scfm)	**TVOC** (ppmv)	**O_2** (%)	**CO_2** (%)	(days)
9/5/13 to 9/24/13	AI	-	6.3	6.7	-	-	-	19
9/24/13 to 10/4/13	SVE	6.5	-	6.8	1.5	20.6	0.2	10
10/4/13 to 11/5/13	SVE	6.7	-	6.9	1.1	20.7	0.2	32
11/5/13 to 11/21/13	AI	-	6.4	6.8	-	-	-	8
11/21/13 to 11/18/14	AI	-	7.0	6.7	-	-	-	298

Notes:
1. TVOC means Total Volatile Organic Compounds. Readings are in parts per million on volume to volume basis (ppmv).
2. TVOC concentrations were determined using a Photoionization Detector (PID), equipped with a 10.6 ev lamp.
3. O_2, CO_2, and LEL measurements were determined using a LANDTEC GA90 - Infrared gas analyzer.
4. Flow measurements were determined using a Pitot Tube DS-300 Flow Sensor.
5. "--" means not monitored
6. System operated 24 hours per day from 9/5/13 through 11/5/13; 12 hours/day from 11/5/13 through 3/28/14; and 24 hours/day from 3/28/14 through 12/23/14.

Table B8

VW-8
Summary of Soil Vapor Extraction/Reinjection Monitoring
September 5, 2013 to present

336 and 348 Bullocks Point Ave and 12 Fenner Ave
East Providence, Rhode Island

Date	**SVE** or Air Injection (**AI**)	**Vacuum** (in. of H_2O)	**Pressure** (in. of H_2O)	**Flow** (scfm)	**TVOC** (ppmv)	**O_2** (%)	**CO_2** (%)	**LEL** (%)
9/5/2013	AI	-	2.0	7.2	-	-	-	-
9/6/2013	AI	-	1.5	6.8	-	-	-	-
9/9/2013	AI	-	0.8	6.6	-	-	-	-
9/13/2013	AI	-	1.7	7.0	-	-	-	-
9/19/2013	AI	-	0.9	5.7	-	-	-	-
9/24/2013	AI	-	1.0	6.8	-	-	-	-
9/24/2013	SVE	1.5	-	6.8	2.9	20.6	0.2	0.0
9/25/2013	SVE	1.4	-	6.8	8.2	20.6	0.2	0.0
10/4/2013	SVE	1.7	-	6.8	3.2	20.6	0.3	0.0
10/25/2013	SVE	1.5	-	7.0	3.0	20.6	0.3	0.0
11/5/2013	SVE	2.2	-	7.0	1.2	20.6	0.3	0.0
11/5/2013	AI	-	1.5	6.8	-	-	-	-
11/6/2013	AI	-	1.5	6.8	-	-	-	-
11/21/2013	AI	-	1.4	6.8	-	-	-	-
12/9/2013	AI	-	1.7	6.8	-	-	-	-
12/27/2013	AI	-	1.1	6.8	-	-	-	-
1/13/2014	AI	-	1.9	6.8	-	-	-	-
1/27/2014	AI	-	2.0	6.6	-	-	-	-
2/12/2014	AI	-	1.3	6.6	-	-	-	-
2/25/2014	AI	-	2.6	6.6	-	-	-	-
3/14/2014	AI	-	2.3	6.8	-	-	-	-
3/28/2014	AI	-	1.2	6.8	-	-	-	-
4/25/2014	AI	-	2.1	6.8	-	-	-	-
5/13/2014	AI	-	1.8	6.8	-	-	-	-
6/9/2014	AI	-	1.4	6.6	-	-	-	-
7/31/2014	AI	-	1.2	6.8	-	-	-	-
8/25/2014	AI	-	1.1	6.8	-	-	-	-
9/30/2014	AI	-	0.7	6.6	-	-	-	-
11/18/2014	AI	-	1.6	6.6	-	-	-	-
4/28/2015	AI	-	2.0	6.6	-	-	-	-

Date	**Average**							**Total Run Time**
	SVE or Air Injection (**AI**)	**Vacuum** (in. of H_2O)	**Pressure** (in. of H_2O)	**Flow** (scfm)	**TVOC** (ppmv)	**O_2** (%)	**CO_2** (%)	(days)
9/5/13 to 9/24/13	AI	-	1.3	6.7	-	-	-	19
9/24/13 to 10/4/13	SVE	1.5	-	6.8	4.8	20.6	0.2	10
10/4/13 to 11/5/13	SVE	1.8	-	6.9	2.5	20.6	0.3	32
11/5/13 to 11/21/13	AI	-	1.5	6.8	-	-	-	8
11/21/13 to 11/18/14	AI	-	1.6	6.7	-	-	-	298

Notes:
1. TVOC means Total Volatile Organic Compounds. Readings are in parts per million on volume to volume basis (ppmv).
2. TVOC concentrations were determined using a Photoionization Detector (PID), equipped with a 10.6 ev lamp.
3. O_2, CO_2, and LEL measurements were determined using a LANDTEC GA90 - Infrared gas analyzer.
4. Flow measurements were determined using a Pitot Tube DS-300 Flow Sensor.
5. "--" means not monitored
6. System operated 24 hours per day from 9/5/13 through 11/5/13; 12 hours/day from 11/5/13 through 3/28/14; and 24 hours/day from 3/28/14 through 12/23/14.

Table B9

VW-9
Summary of Soil Vapor Extraction/Reinjection Monitoring
September 5, 2013 to present

336 and 348 Bullocks Point Ave and 12 Fenner Ave
East Providence, Rhode Island

Date	**SVE** or Air Injection (**AI**)	**Vacuum** (in. of H_2O)	**Pressure** (in. of H_2O)	**Flow** (scfm)	**TVOC** (ppmv)	**O_2** (%)	**CO_2** (%)	**LEL** (%)
9/5/2013	AI	-	4.6	6.8	-	-	-	-
9/6/2013	AI	-	3.9	7.0	-	-	-	-
9/9/2013	AI	-	3.0	6.6	-	-	-	-
9/13/2013	AI	-	4.2	7.0	-	-	-	-
9/19/2013	AI	-	2.7	6.1	-	-	-	-
9/24/2013	AI	-	2.8	7.0	-	-	-	-
9/24/2013	SVE	3.5	-	6.8	0.8	20.6	0.2	0.0
9/25/2013	SVE	3.4	-	6.8	5.9	20.6	0.2	0.0
10/4/2013	SVE	4.3	-	6.8	2.3	20.7	0.2	0.0
10/25/2013	SVE	4.3	-	7.0	2.3	20.5	0.3	0.0
11/5/2013	SVE	5.1	-	7.0	0.1	20.7	0.2	0.0
11/5/2013	AI	-	6.9	6.8	-	-	-	-
11/6/2013	AI	-	3.9	6.8	-	-	-	-
11/21/2013	AI	-	3.7	6.8	-	-	-	-
12/9/2013	AI	-	3.7	6.6	-	-	-	-
12/27/2013	AI	-	3.2	6.8	-	-	-	-
1/13/2014	AI	-	3.8	6.6	-	-	-	-
1/27/2014	AI	-	4.1	6.3	-	-	-	-
2/12/2014	AI	-	3.6	6.8	-	-	-	-
2/25/2014	AI	-	4.4	6.6	-	-	-	-
3/14/2014	AI	-	4.1	6.6	-	-	-	-
3/28/2014	AI	-	3.6	6.8	-	-	-	-
4/25/2014	AI	-	4.4	6.8	-	-	-	-
5/13/2014	AI	-	4.3	6.8	-	-	-	-
6/9/2014	AI	-	4.2	6.8	-	-	-	-
7/31/2014	AI	-	2.9	6.8	-	-	-	-
8/25/2014	AI	-	2.7	6.8	-	-	-	-
9/30/2014	AI	-	2.4	6.6	-	-	-	-
11/18/2014	AI	-	2.1	6.4	-	-	-	-
4/28/2015	AI	-	2.0	6.6	-	-	-	-

Date	**Average**							**Total Run Time**
	SVE or Air Injection (**AI**)	**Vacuum** (in. of H_2O)	**Pressure** (in. of H_2O)	**Flow** (scfm)	**TVOC** (ppmv)	**O_2** (%)	**CO_2** (%)	(days)
9/5/13 to 9/24/13	AI	-	3.5	6.8	-	-	-	19
9/24/13 to 10/4/13	SVE	3.7	-	6.8	3.0	20.6	0.2	10
10/4/13 to 11/5/13	SVE	4.6	-	6.9	1.6	20.6	0.2	32
11/5/13 to 11/21/13	AI	-	4.8	6.8	-	-	-	8
11/21/13 to 11/18/14	AI	-	3.6	6.7	-	-	-	298

Notes:
1. TVOC means Total Volatile Organic Compounds. Readings are in parts per million on volume to volume basis (ppmv).
2. TVOC concentrations were determined using a Photoionization Detector (PID), equipped with a 10.6 ev lamp.
3. O_2, CO_2, and LEL measurements were determined using a LANDTEC GA90 - Infrared gas analyzer.
4. Flow measurements were determined using a Pitot Tube DS-300 Flow Sensor.
5. "--" means not monitored
6. System operated 24 hours per day from 9/5/13 through 11/5/13; 12 hours/day from 11/5/13 through 3/28/14; and 24 hours/day from 3/28/14 through 12/23/14.

Table B10

VW-10
Summary of Soil Vapor Extraction/Reinjection Monitoring
September 5, 2013 to present

336 and 348 Bullocks Point Ave and 12 Fenner Ave
East Providence, Rhode Island

Date	**SVE** or Air Injection (**AI**)	**Vacuum** (in. of H_2O)	**Pressure** (in. of H_2O)	**Flow** (scfm)	**TVOC** (ppmv)	**O_2** (%)	**CO_2** (%)	**LEL** (%)
9/5/2013	SVE	10.3	-	4.6	26	18.9	1.4	0
9/6/2013	SVE	10.5	-	5.3	9.0	20.0	0.7	0
9/9/2013	SVE	9.6	-	4.3	6.9	20.5	0.3	0
9/13/2013	SVE	10.3	-	5.3	5.4	20.4	0.4	0
9/19/2013	SVE	8.1	-	5.5	2.8	20.6	0.2	0
9/24/2013	SVE	11.5	-	6.3	1.7	20.7	0.2	0
9/24/2013	AI	-	12.7	6.8	-	-	-	-
9/25/2013	AI	-	12.6	6.8	-	-	-	-
10/4/2013	AI	-	10.6	4.6	-	-	-	-
10/25/2013	AI	-	10.0	7.0	-	-	-	-
11/5/2013	AI	-	10.0	6.8	-	-	-	-
11/5/2013	SVE	8.1	-	5.5	0.0	20.5	0.1	0
11/6/2013	SVE	8.1	-	5.5	0.0	20.5	0.1	0
11/21/2013	SVE	10.1	-	5.5	0.1	20.6	0.1	0
12/9/2013	SVE	16.1	-	5.8	0.0	20.8	0.0	0
12/27/2013	SVE	17.3	-	6.1	0.1	20.8	0.0	0
1/13/2014	SVE	18.9	-	6.1	0.0	20.7	0.1	0
1/27/2014	SVE	12.9	-	7.0	0.2	20.5	0.1	0
2/12/2014	SVE	11.3	-	6.1	0.1	20.8	0.0	0
2/25/2014	SVE	12.0	-	6.1	0.1	20.8	0.1	0
3/14/2014	SVE	11.7	-	6.1	0.0	20.8	0.1	0
3/28/2014	SVE	10.4	-	6.1	0.0	20.6	0.0	0
4/25/2014	SVE	10.9	-	6.1	0.0	20.7	0.0	0
5/13/2014	SVE	10.7	-	6.8	0.2	20.8	0.1	0
6/9/2014	SVE	12.1	-	6.8	0.3	20.8	0.0	0
7/31/2014	SVE	11.0	-	6.8	0.6	-	-	-
8/25/2014	SVE	12.0	-	6.8	0.2	-	-	-
9/30/2014	SVE	11.3	-	7.0	0.0	20.7	0.0	0
11/18/2014	SVE	12.3	-	6.8	0.3	20.8	0.0	0
4/28/2015	SVE	9.8	-	6.8	0.0	20.8	0.0	0

Date	**Average**							**Total Run Time**
	SVE or Air Injection (**AI**)	**Vacuum** (in. of H_2O)	**Pressure** (in. of H_2O)	**Flow** (scfm)	**TVOC** (ppmv)	**O_2** (%)	**CO_2** (%)	(days)
9/5/13 to 9/24/13	SVE	10.1	-	5.2	8.6	20.2	0.5	19
9/24/13 to 10/4/13	AI	-	12.0	6.1	-	-	-	10
10/4/13 to 11/5/13	AI	-	10.2	6.1	-	-	-	32
11/5/13 to 11/21/13	SVE	8.8	-	5.5	<0.1	20.5	0.1	8
11/21/13 to 11/18/14	SVE	12.6	-	6.4	0.1	20.7	0.0	298

Notes:
1. TVOC means Total Volatile Organic Compounds. Readings are in parts per million on volume to volume basis (ppmv).
2. TVOC concentrations were determined using a Photoionization Detector (PID), equipped with a 10.6 ev lamp.
3. O_2, CO_2, and LEL measurements were determined using a LANDTEC GA90 - Infrared gas analyzer.
4. Flow measurements were determined using a Pitot Tube DS-300 Flow Sensor.
5. "--" means not monitored
6. System operated 24 hours per day from 9/5/13 through 11/5/13; 12 hours/day from 11/5/13 through 3/28/14; and 24 hours/day from 3/28/14 through 12/23/14.

Table B11

VW-11
Summary of Soil Vapor Extraction/Reinjection Monitoring
September 5, 2013 to present

336 and 348 Bullocks Point Ave and 12 Fenner Ave
East Providence, Rhode Island

Date	**SVE** or Air Injection (**AI**)	**Vacuum** (in. of H_2O)	**Pressure** (in. of H_2O)	**Flow** (scfm)	**TVOC** (ppmv)	**O_2** (%)	**CO_2** (%)	**LEL** (%)
9/5/2013	SVE	9.1	-	7.0	279	16.4	3.6	0
9/6/2013	SVE	9.2	-	7.0	62	19.4	1.3	0
9/9/2013	SVE	9.3	-	6.6	37	20.2	0.6	0
9/13/2013	SVE	10.1	-	6.8	21	20.2	0.4	0
9/19/2013	SVE	7.6	-	5.9	5.2	20.4	0.3	0
9/24/2013	SVE	8.9	-	6.8	5.5	20.4	0.3	0
9/24/2013	AI	-	9.6	6.8	-	-	-	-
9/25/2013	AI	-	9.4	6.8	-	-	-	-
10/4/2013	AI	-	10.6	6.1	-	-	-	-
10/25/2013	AI	-	9.8	7.0	-	-	-	-
11/5/2013	AI	-	10.0	7.0	-	-	-	-
11/5/2013	SVE	8.0	-	6.6	0.0	20.4	0.3	0
11/6/2013	SVE	8.0	-	6.6	0.3	20.4	0.2	0
11/21/2013	SVE	9.9	-	6.8	2.0	20.5	0.6	0
12/9/2013	SVE	13.5	-	6.8	1.1	20.2	0.6	0
12/27/2013	SVE	14.7	-	6.8	0.9	20.8	0.0	0
1/13/2014	SVE	10.1	-	6.8	0.0	20.2	0.5	0
1/27/2014	SVE	12.3	-	7.0	1.3	20.3	0.4	0
2/12/2014	SVE	12.8	-	6.6	0.4	20.5	0.2	0
2/25/2014	SVE	14.4	-	6.8	0.7	20.7	0.2	0
3/14/2014	SVE	14.1	-	6.8	0.0	20.7	0.1	0
3/28/2014	SVE	12.2	-	6.8	1.7	20.4	0.3	0
4/25/2014	SVE	12.5	-	6.8	3.2	20.6	0.1	0
5/13/2014	SVE	12.5	-	7.0	3.0	20.6	0.2	0
6/9/2014	SVE	11.1	-	6.8	3.6	20.3	0.3	0
7/31/2014	SVE	10.3	-	6.8	2.2	-	-	-
8/25/2014	SVE	10.8	-	6.6	3.3	-	-	-
9/30/2014	SVE	10.9	-	6.6	1.6	20.6	0.2	0
11/18/2014	SVE	12.3	-	6.6	1.4	20.2	0.7	0
4/28/2015	SVE	9.7	-	6.6	4.2	18.5	1.2	0

Date	**Average**							**Total Run Time**
	SVE or Air Injection (**AI**)	**Vacuum** (in. of H_2O)	**Pressure** (in. of H_2O)	**Flow** (scfm)	**TVOC** (ppmv)	**O_2** (%)	**CO_2** (%)	(days)
9/5/13 to 9/24/13	SVE	9.0	-	6.7	68.2	19.5	1.1	19
9/24/13 to 10/4/13	AI	-	9.9	6.6	-	-	-	10
10/4/13 to 11/5/13	AI	-	10.1	6.7	-	-	-	32
11/5/13 to 11/21/13	SVE	8.6	-	6.7	0.8	20.4	0.4	8
11/21/13 to 11/18/14	SVE	12.1	-	6.8	1.7	20.5	0.3	298

Notes:
1. TVOC means Total Volatile Organic Compounds. Readings are in parts per million on volume to volume basis (ppmv).
2. TVOC concentrations were determined using a Photoionization Detector (PID), equipped with a 10.6 ev lamp.
3. O_2, CO_2, and LEL measurements were determined using a LANDTEC GA90 - Infrared gas analyzer.
4. Flow measurements were determined using a Pitot Tube DS-300 Flow Sensor.
5. "--" means not monitored
6. System operated 24 hours per day from 9/5/13 through 11/5/13; 12 hours/day from 11/5/13 through 3/28/14; and 24 hours/day from 3/28/14 through 12/23/14.

Table B12

VW-12
Summary of Soil Vapor Extraction/Reinjection Monitoring
September 5, 2013 to present

336 and 348 Bullocks Point Ave and 12 Fenner Ave
East Providence, Rhode Island

Date	**SVE** or Air Injection (**AI**)	**Vacuum** (in. of H_2O)	**Pressure** (in. of H_2O)	**Flow** (scfm)	**TVOC** (ppmv)	**O_2** (%)	**CO_2** (%)	**LEL** (%)
9/5/2013	SVE	7.8	-	6.8	362	16.6	3.7	0
9/6/2013	SVE	7.4	-	6.8	69	19.2	1.2	0
9/9/2013	SVE	8.6	-	6.8	43	20.3	0.6	0
9/13/2013	SVE	7.9	-	6.8	23	20.3	0.5	0
9/19/2013	SVE	6.7	-	5.9	10.4	20.5	0.3	0
9/24/2013	SVE	7.7	-	6.8	10.6	20.5	0.3	0
9/24/2013	AI	-	7.6	6.8	-	-	-	-
9/25/2013	AI	-	7.7	6.8	-	-	-	-
10/4/2013	AI	-	8.3	6.8	-	-	-	-
10/25/2013	AI	-	7.4	7.2	-	-	-	-
11/5/2013	AI	-	7.4	7.0	-	-	-	-
11/5/2013	SVE	6.6	-	6.8	0.0	20.3	0.4	0
11/6/2013	SVE	6.6	-	6.8	5.4	20.3	0.4	0
11/21/2013	SVE	8.2	-	6.6	2.2	20.5	0.4	0
12/9/2013	SVE	14.2	-	6.6	1.0	20.3	0.5	0
12/27/2013	SVE	9.9	-	6.8	1.0	20.8	0.0	0
1/13/2014	SVE	6.6	-	6.8	0.0	20.4	0.3	0
1/27/2014	SVE	9.0	-	6.6	1.7	20.5	0.3	0
2/12/2014	SVE	12.8	-	6.8	0.1	20.5	0.2	0
2/25/2014	SVE	14.0	-	6.6	1.0	20.7	0.2	0
3/14/2014	SVE	13.5	-	6.8	0.1	20.7	0.1	0
3/28/2014	SVE	11.8	-	6.8	1.9	20.5	0.2	0
4/25/2014	SVE	12.1	-	6.8	2.9	20.8	0.0	0
5/13/2014	SVE	12.1	-	7.0	2.5	20.6	0.2	0
6/9/2014	SVE	8.0	-	6.6	3.1	20.7	0.1	0
7/31/2014	SVE	8.2	-	6.8	1.7	-	-	-
8/25/2014	SVE	8.7	-	7.0	2.7	-	-	-
9/30/2014	SVE	8.5	-	6.8	0.5	20.6	0.0	0
11/18/2014	SVE	8.4	-	6.6	1.7	20.4	0.4	0
4/28/2015	SVE	9.7	-	6.6	4.0	19.4	1.0	0

Date	**Average**							**Total Run Time**
	SVE or Air Injection (**AI**)	**Vacuum** (in. of H_2O)	**Pressure** (in. of H_2O)	**Flow** (scfm)	**TVOC** (ppmv)	**O_2** (%)	**CO_2** (%)	(days)
9/5/13 to 9/24/13	SVE	7.7	-	6.7	86.3	19.6	1.1	19
9/24/13 to 10/4/13	AI	-	7.9	6.8	-	-	-	10
10/4/13 to 11/5/13	AI	-	7.7	7.0	-	-	-	32
11/5/13 to 11/21/13	SVE	7.1	-	6.7	2.5	20.4	0.4	8
11/21/13 to 11/18/14	SVE	10.4	-	6.8	1.5	20.6	0.2	298

Notes:
1. TVOC means Total Volatile Organic Compounds. Readings are in parts per million on volume to volume basis (ppmv).
2. TVOC concentrations were determined using a Photoionization Detector (PID), equipped with a 10.6 ev lamp.
3. O_2, CO_2, and LEL measurements were determined using a LANDTEC GA90 - Infrared gas analyzer.
4. Flow measurements were determined using a Pitot Tube DS-300 Flow Sensor.
5. "--" means not monitored
6. System operated 24 hours per day from 9/5/13 through 11/5/13; 12 hours/day from 11/5/13 through 3/28/14; and 24 hours/day from 3/28/14 through 12/23/14.

Table B13

VW-13
Summary of Soil Vapor Extraction/Reinjection Monitoring
September 5, 2013 to present

336 and 348 Bullocks Point Ave and 12 Fenner Ave
East Providence, Rhode Island

Date	**SVE** or Air Injection (**AI**)	**Vacuum** (in. of H_2O)	**Pressure** (in. of H_2O)	**Flow** (scfm)	**TVOC** (ppmv)	**O_2** (%)	**CO_2** (%)	**LEL** (%)
9/5/2013	AI	-	9.3	3.5	-	-	-	-
9/6/2013	AI	-	10.5	3.9	-	-	-	-
9/9/2013	AI	-	9.5	3.9	-	-	-	-
9/13/2013	AI	-	11.6	5.3	-	-	-	-
9/19/2013	AI	-	13.1	5.5	-	-	-	-
9/24/2013	AI	-	15.2	7.2	-	-	-	-
9/24/2013	SVE	11.3	-	5.5	0.3	20.6	0.3	0.0
9/25/2013	SVE	11.2	-	5.9	2.7	20.7	0.2	0.0
10/4/2013	SVE	11.1	-	3.5	0.8	20.6	0.1	0.0
10/25/2013	SVE	10.9	-	3.9	1.1	20.5	0.4	0.0
11/5/2013	SVE	11.3	-	3.9	0.1	20.4	0.4	0.0
11/5/2013	AI	-	9.2	3.9	-	-	-	-
11/6/2013	AI	-	9.2	3.9	-	-	-	-
11/21/2013	AI	-	9.6	3.9	-	-	-	-
12/9/2013	AI	-	9.1	3.9	-	-	-	-
12/27/2013	AI	-	8.7	3.9	-	-	-	-
1/13/2014	AI	-	9.1	3.9	-	-	-	-
1/27/2014	AI	-	10.4	3.9	-	-	-	-
2/12/2014	AI	-	10.4	3.9	-	-	-	-
2/25/2014	AI	-	10.7	3.9	-	-	-	-
3/14/2014	AI	-	10.3	3.9	-	-	-	-
3/28/2014	AI	-	10.5	3.9	-	-	-	-
4/25/2014	AI	-	11.4	3.9	-	-	-	-
5/13/2014	AI	-	10.8	4.3	-	-	-	-
6/9/2014	AI	-	10.1	4.3	-	-	-	-
7/31/2014	AI	-	17.1	6.8	-	-	-	-
8/25/2014	AI	-	15.9	6.8	-	-	-	-
9/30/2014	AI	-	16.2	5.0	-	-	-	-
11/18/2014	AI	-	14.2	5.2	-	-	-	-
4/28/2015	AI	-	11.2	5.2	-	-	-	-

Date	**Average**							**Total Run Time** (days)
	SVE or Air Injection (**AI**)	**Vacuum** (in. of H_2O)	**Pressure** (in. of H_2O)	**Flow** (scfm)	**TVOC** (ppmv)	**O_2** (%)	**CO_2** (%)	
9/5/13 to 9/24/13	AI	-	11.5	4.9	-	-	-	19
9/24/13 to 10/4/13	SVE	11.2	-	5.0	1.3	20.6	0.2	10
10/4/13 to 11/5/13	SVE	11.1	-	3.8	0.7	20.5	0.3	32
11/5/13 to 11/21/13	AI	-	9.3	3.9	-	-	-	8
11/21/13 to 11/18/14	AI	-	11.5	4.5	-	-	-	298

Notes:
1. TVOC means Total Volatile Organic Compounds. Readings are in parts per million on volume to volume basis (ppmv).
2. TVOC concentrations were determined using a Photoionization Detector (PID), equipped with a 10.6 ev lamp.
3. O_2, CO_2, and LEL measurements were determined using a LANDTEC GA90 - Infrared gas analyzer.
4. Flow measurements were determined using a Pitot Tube DS-300 Flow Sensor.
5. "--" means not monitored
6. System operated 24 hours per day from 9/5/13 through 11/5/13; 12 hours/day from 11/5/13 through 3/28/14; and 24 hours/day from 3/28/14 through 12/23/14.

Table B14

VW-14
Summary of Soil Vapor Extraction/Reinjection Monitoring
September 5, 2013 to present

336 and 348 Bullocks Point Ave and 12 Fenner Ave
East Providence, Rhode Island

Date	**SVE** or Air Injection (**AI**)	**Vacuum** (in. of H_2O)	**Pressure** (in. of H_2O)	**Flow** (scfm)	**TVOC** (ppmv)	**O_2** (%)	**CO_2** (%)	**LEL** (%)
9/5/2013	AI	-	9.3	6.6	-	-	-	-
9/6/2013	AI	-	9.8	6.8	-	-	-	-
9/9/2013	AI	-	9.5	7.0	-	-	-	-
9/13/2013	AI	-	8.6	6.6	-	-	-	-
9/19/2013	AI	-	8.0	5.9	-	-	-	-
9/24/2013	AI	-	8.6	7.0	-	-	-	-
9/24/2013	SVE	8.1	-	6.8	0.4	20.7	0.2	0.0
9/25/2013	SVE	8.2	-	6.8	2.8	20.6	0.3	0.0
10/4/2013	SVE	9.8	-	6.8	1.5	20.4	0.4	0.0
10/25/2013	SVE	10.0	-	6.6	1.4	20.5	0.4	0.0
11/5/2013	SVE	11.1	-	6.6	0.0	20.0	0.8	0.0
11/5/2013	AI	-	9.4	6.8	-	-	-	-
11/6/2013	AI	-	9.4	6.8	-	-	-	-
11/21/2013	AI	-	9.5	6.6	-	-	-	-
12/9/2013	AI	-	8.9	6.3	-	-	-	-
12/27/2013	AI	-	8.6	6.3	-	-	-	-
1/13/2014	AI	-	9.0	6.8	-	-	-	-
1/27/2014	AI	-	10.3	6.8	-	-	-	-
2/12/2014	AI	-	8.4	6.8	-	-	-	-
2/25/2014	AI	-	10.6	6.8	-	-	-	-
3/14/2014	AI	-	10.2	6.6	-	-	-	-
3/28/2014	AI	-	10.3	6.6	-	-	-	-
4/25/2014	AI	-	11.3	6.8	-	-	-	-
5/13/2014	AI	-	10.7	6.8	-	-	-	-
6/9/2014	AI	-	10.0	6.8	-	-	-	-
7/31/2014	AI	-	8.7	7.0	-	-	-	-
8/25/2014	AI	-	8.7	6.6	-	-	-	-
9/30/2014	AI	-	8.3	6.8	-	-	-	-
11/18/2014	AI	-	8.2	6.8	-	-	-	-
4/28/2015	AI	-	11.1	6.8	-	-	-	-

Date	**Average**							**Total Run Time**
	SVE or Air Injection (**AI**)	**Vacuum** (in. of H_2O)	**Pressure** (in. of H_2O)	**Flow** (scfm)	**TVOC** (ppmv)	**O_2** (%)	**CO_2** (%)	(days)
9/5/13 to 9/24/13	AI	-	9.0	6.7	-	-	-	19
9/24/13 to 10/4/13	SVE	8.7	-	6.8	1.6	20.6	0.3	10
10/4/13 to 11/5/13	SVE	10.3	-	6.7	1.0	20.3	0.5	32
11/5/13 to 11/21/13	AI	-	9.4	6.7	-	-	-	8
11/21/13 to 11/18/14	AI	-	9.5	6.7	-	-	-	298

Notes:
1. TVOC means Total Volatile Organic Compounds. Readings are in parts per million on volume to volume basis (ppmv).
2. TVOC concentrations were determined using a Photoionization Detector (PID), equipped with a 10.6 ev lamp.
3. O_2, CO_2, and LEL measurements were determined using a LANDTEC GA90 - Infrared gas analyzer.
4. Flow measurements were determined using a Pitot Tube DS-300 Flow Sensor.
5. "--" means not monitored
6. System operated 24 hours per day from 9/5/13 through 11/5/13; 12 hours/day from 11/5/13 through 3/28/14; and 24 hours/day from 3/28/14 through 12/23/14.

Table B15

VW-15
Summary of Soil Vapor Extraction/Reinjection Monitoring
September 5, 2013 to present

336 and 348 Bullocks Point Ave and 12 Fenner Ave
East Providence, Rhode Island

Date	**SVE** or Air Injection (**AI**)	**Vacuum** (in. of H_2O)	**Pressure** (in. of H_2O)	**Flow** (scfm)	**TVOC** (ppmv)	**O_2** (%)	**CO_2** (%)	**LEL** (%)
9/5/2013	AI	-	7.5	6.8	-	-	-	-
9/6/2013	AI	-	6.3	7.0	-	-	-	-
9/9/2013	AI	-	6.1	6.8	-	-	-	-
9/13/2013	AI	-	6.2	6.6	-	-	-	-
9/19/2013	AI	-	4.9	5.7	-	-	-	-
9/24/2013	AI	-	5.0	6.6	-	-	-	-
9/24/2013	SVE	6.5	-	6.8	0.8	20.6	0.2	0.0
9/25/2013	SVE	6.5	-	6.8	4.3	20.6	0.2	0.0
10/4/2013	SVE	7.5	-	6.8	1.5	20.8	0.1	0.0
10/25/2013	SVE	7.6	-	7.0	1.7	20.4	0.4	0.0
11/5/2013	SVE	8.2	-	6.8	0.0	20.7	0.2	0.0
11/5/2013	AI	-	5.8	7.0	-	-	-	-
11/6/2013	AI	-	5.8	7.0	-	-	-	-
11/21/2013	AI	-	5.4	7.0	-	-	-	-
12/9/2013	AI	-	5.4	6.8	-	-	-	-
12/27/2013	AI	-	5.0	6.6	-	-	-	-
1/13/2014	AI	-	5.6	6.8	-	-	-	-
1/27/2014	AI	-	6.1	6.8	-	-	-	-
2/12/2014	AI	-	5.8	6.8	-	-	-	-
2/25/2014	AI	-	6.3	6.6	-	-	-	-
3/14/2014	AI	-	6.0	6.8	-	-	-	-
3/28/2014	AI	-	5.4	6.8	-	-	-	-
4/25/2014	AI	-	6.6	6.8	-	-	-	-
5/13/2014	AI	-	6.5	6.6	-	-	-	-
6/9/2014	AI	-	6.2	6.1	-	-	-	-
7/31/2014	AI	-	5.6	6.8	-	-	-	-
8/25/2014	AI	-	5.3	6.6	-	-	-	-
9/30/2014	AI	-	4.9	6.1	-	-	-	-
11/18/2014	AI	-	6.0	6.8	-	-	-	-
4/28/2015	AI	-	6.5	6.8	-	-	-	-

Date	**Average**							**Total Run Time**
	SVE or Air Injection (**AI**)	**Vacuum** (in. of H_2O)	**Pressure** (in. of H_2O)	**Flow** (scfm)	**TVOC** (ppmv)	**O_2** (%)	**CO_2** (%)	(days)
9/5/13 to 9/24/13	AI	-	6.0	6.6	-	-	-	19
9/24/13 to 10/4/13	SVE	6.8	-	6.8	2.2	20.7	0.2	10
10/4/13 to 11/5/13	SVE	7.8	-	6.9	1.1	20.6	0.2	32
11/5/13 to 11/21/13	AI	-	5.7	7.0	-	-	-	8
11/21/13 to 11/18/14	AI	-	5.8	6.7	-	-	-	298

Notes:
1. TVOC means Total Volatile Organic Compounds. Readings are in parts per million on volume to volume basis (ppmv).
2. TVOC concentrations were determined using a Photoionization Detector (PID), equipped with a 10.6 ev lamp.
3. O_2, CO_2, and LEL measurements were determined using a LANDTEC GA90 - Infrared gas analyzer.
4. Flow measurements were determined using a Pitot Tube DS-300 Flow Sensor.
5. "--" means not monitored
6. System operated 24 hours per day from 9/5/13 through 11/5/13; 12 hours/day from 11/5/13 through 3/28/14; and 24 hours/day from 3/28/14 through 12/23/14.

Table B16

VW-16
Summary of Soil Vapor Extraction/Reinjection Monitoring
September 5, 2013 to present

336 and 348 Bullocks Point Ave and 12 Fenner Ave
East Providence, Rhode Island

Date	**SVE** or Air Injection (**AI**)	**Vacuum** (in. of H_2O)	**Pressure** (in. of H_2O)	**Flow** (scfm)	**TVOC** (ppmv)	**O_2** (%)	**CO_2** (%)	**LEL** (%)
9/5/2013	SVE	11.3	-	5.0	43	17.3	3.2	0
9/6/2013	SVE	11.2	-	6.6	13.7	19.3	1.2	0
9/9/2013	SVE	10.7	-	3.9	7.3	20.2	0.6	0
9/13/2013	SVE	11.2	-	5.3	4.3	20.3	0.6	0
9/19/2013	SVE	10.4	-	4.6	3.2	20.5	0.3	0
9/24/2013	SVE	12.3	-	6.3	2.4	20.6	0.3	0
9/24/2013	AI	-	13.1	6.8	-	-	-	-
9/25/2013	AI	-	13.0	6.8	-	-	-	-
10/4/2013	AI	-	10.8	5.5	-	-	-	-
10/25/2013	AI	-	10.6	5.5	-	-	-	-
11/5/2013	AI	-	10.5	5.5	-	-	-	-
11/5/2013	SVE	8.9	-	5.3	0.0	20.2	0.3	0
11/6/2013	SVE	8.9	-	5.3	1.1	20.2	0.3	0
11/21/2013	SVE	11.3	-	5.3	0.2	20.4	0.5	0
12/9/2013	SVE	17.1	-	6.6	0.1	20.5	0.4	0
12/27/2013	SVE	18.5	-	6.8	0.0	20.8	0.0	0
1/13/2014	SVE	13.2	-	7.0	0.0	20.5	0.3	0
1/27/2014	SVE	16.7	-	6.3	0.1	20.5	0.3	0
2/12/2014	SVE	15.5	-	7.0	0.1	20.8	0.1	0
2/25/2014	SVE	16.5	-	6.8	0.1	20.7	0.2	0
3/14/2014	SVE	16.0	-	6.6	0.0	20.7	0.1	0
3/28/2014	SVE	14.3	-	6.8	0.0	20.4	0.2	0
4/25/2014	SVE	14.0	-	6.8	0.3	20.5	0.2	0
5/13/2014	SVE	14.0	-	7.0	0.2	20.6	0.2	0
6/9/2014	SVE	15.1	-	6.8	0.3	20.6	0.2	0
7/31/2014	SVE	15.7	-	6.8	0.1	-	-	-
8/25/2014	SVE	17.5	-	6.8	0.3	-	-	-
9/30/2014	SVE	13.7	-	6.8	0.1	20.6	0.2	0
11/18/2014	SVE	16.7	-	6.8	0.1	20.4	0.4	0
4/28/2015	SVE	11.2	-	6.8	0.3	19.3	1.3	0

Date	**Average**							**Total Run Time**
	SVE or Air Injection (**AI**)	**Vacuum** (in. of H_2O)	**Pressure** (in. of H_2O)	**Flow** (scfm)	**TVOC** (ppmv)	**O_2** (%)	**CO_2** (%)	(days)
9/5/13 to 9/24/13	SVE	11.2	-	5.3	12.3	19.7	1.0	19
9/24/13 to 10/4/13	AI	-	12.3	6.4	-	-	-	10
10/4/13 to 11/5/13	AI	-	10.6	5.5	-	-	-	32
11/5/13 to 11/21/13	SVE	9.7	-	5.3	0.4	20.3	0.4	8
11/21/13 to 11/18/14	SVE	15.4	-	6.7	0.1	20.6	0.2	298

Notes:
1. TVOC means Total Volatile Organic Compounds. Readings are in parts per million on volume to volume basis (ppmv).
2. TVOC concentrations were determined using a Photoionization Detector (PID), equipped with a 10.6 ev lamp.
3. O_2, CO_2, and LEL measurements were determined using a LANDTEC GA90 - Infrared gas analyzer.
4. Flow measurements were determined using a Pitot Tube DS-300 Flow Sensor.
5. "--" means not monitored
6. System operated 24 hours per day from 9/5/13 through 11/5/13; 12 hours/day from 11/5/13 through 3/28/14; and 24 hours/day from 3/28/14 through 12/23/14.

Table B17

VW-17
Summary of Soil Vapor Extraction/Reinjection Monitoring
September 5, 2013 to present

336 and 348 Bullocks Point Ave and 12 Fenner Ave
East Providence, Rhode Island

Date	**SVE** or Air Injection (**AI**)	**Vacuum** (in. of H_2O)	**Pressure** (in. of H_2O)	**Flow** (scfm)	**TVOC** (ppmv)	**O_2** (%)	**CO_2** (%)	**LEL** (%)
9/5/2013	SVE	8.0	-	6.8	64	15.9	4.3	0
9/6/2013	SVE	6.9	-	6.6	20	19.5	1.5	0
9/9/2013	SVE	7.7	-	6.8	10.5	20.0	0.7	0
9/13/2013	SVE	8.4	-	7.2	7.0	20.3	0.6	0
9/19/2013	SVE	6.9	-	5.5	5.2	20.5	0.4	0
9/24/2013	SVE	6.4	-	6.6	3.7	20.6	0.3	0
9/24/2013	AI	-	7.3	6.8	-	-	-	-
9/25/2013	AI	-	7.4	6.8	-	-	-	-
10/4/2013	AI	-	7.2	6.8	-	-	-	-
10/25/2013	AI	-	6.8	7.0	-	-	-	-
11/5/2013	AI	-	7.0	7.0	-	-	-	-
11/5/2013	SVE	7.2	-	7.0	0.0	20.3	0.2	0
11/6/2013	SVE	7.2	-	7.0	0.1	20.3	0.2	0
11/21/2013	SVE	9.1	-	6.8	0.5	20.2	0.4	0
12/9/2013	SVE	8.9	-	7.2	0.2	20.3	0.6	0
12/27/2013	SVE	7.1	-	7.0	0.1	20.8	0.0	0
1/13/2014	SVE	7.0	-	6.6	0.0	20.3	0.5	0
1/27/2014	SVE	9.0	-	7.0	0.4	20.2	0.6	0
2/12/2014	SVE	8.4	-	6.6	0.3	20.8	0.1	0
2/25/2014	SVE	9.5	-	6.6	0.3	20.5	0.3	0
3/14/2014	SVE	9.1	-	6.8	0.0	20.8	0.1	0
3/28/2014	SVE	8.4	-	6.8	0.2	20.4	0.3	0
4/25/2014	SVE	8.4	-	6.8	0.5	20.6	0.1	0
5/13/2014	SVE	8.4	-	7.0	0.5	20.4	0.3	0
6/9/2014	SVE	8.6	-	6.8	0.7	20.4	0.3	0
7/31/2014	SVE	8.4	-	6.8	0.3	-	-	-
8/25/2014	SVE	7.2	-	6.6	0.6	-	-	-
9/30/2014	SVE	6.7	-	6.4	0.0	20.5	0.3	0
11/18/2014	SVE	7.8	-	6.4	0.2	20.8	0.0	0
4/28/2015	SVE	11.1	-	6.4	0.4	18.6	1.2	0

Date	**Average**							**Total Run Time**
	SVE or Air Injection (**AI**)	**Vacuum** (in. of H_2O)	**Pressure** (in. of H_2O)	**Flow** (scfm)	**TVOC** (ppmv)	**O_2** (%)	**CO_2** (%)	(days)
9/5/13 to 9/24/13	SVE	7.4	-	6.6	18.4	19.5	1.3	19
9/24/13 to 10/4/13	AI	-	7.3	6.8	-	-	-	10
10/4/13 to 11/5/13	AI	-	7.0	6.9	-	-	-	32
11/5/13 to 11/21/13	SVE	7.8	-	6.9	0.2	20.3	0.3	8
11/21/13 to 11/18/14	SVE	8.2	-	6.8	0.3	20.5	0.3	298

Notes:
1. TVOC means Total Volatile Organic Compounds. Readings are in parts per million on volume to volume basis (ppmv).
2. TVOC concentrations were determined using a Photoionization Detector (PID), equipped with a 10.6 ev lamp.
3. O_2, CO_2, and LEL measurements were determined using a LANDTEC GA90 - Infrared gas analyzer.
4. Flow measurements were determined using a Pitot Tube DS-300 Flow Sensor.
5. "--" means not monitored
6. System operated 24 hours per day from 9/5/13 through 11/5/13; 12 hours/day from 11/5/13 through 3/28/14; and 24 hours/day from 3/28/14 through 12/23/14.

Table B18

VW-18
Summary of Soil Vapor Extraction/Reinjection Monitoring
September 5, 2013 to present

336 and 348 Bullocks Point Ave and 12 Fenner Ave
East Providence, Rhode Island

Date	**SVE** or Air Injection (**AI**)	**Vacuum** (in. of H_2O)	**Pressure** (in. of H_2O)	**Flow** (scfm)	**TVOC** (ppmv)	**O_2** (%)	**CO_2** (%)	**LEL** (%)
9/5/2013	SVE	10.6	-	6.6	65	17.3	3.7	0
9/6/2013	SVE	9.8	-	7.0	12.5	19.5	1.2	0
9/9/2013	SVE	9.8	-	6.8	6.2	20.1	0.7	0
9/13/2013	SVE	10.9	-	7.0	3.4	20.2	0.6	0
9/19/2013	SVE	8.6	-	6.6	2.7	20.6	0.4	0
9/24/2013	SVE	8.7	-	6.8	2.5	20.4	0.4	0
9/24/2013	AI	-	8.0	6.8	-	-	-	-
9/25/2013	AI	-	7.8	6.8	-	-	-	-
10/4/2013	AI	-	7.9	6.8	-	-	-	-
10/25/2013	AI	-	7.3	7.0	-	-	-	-
11/5/2013	AI	-	7.5	7.0	-	-	-	-
11/5/2013	SVE	7.9	-	7.0	0.5	20.3	0.1	0
11/6/2013	SVE	7.9	-	7.0	0.4	20.3	0.1	0
11/21/2013	SVE	9.7	-	6.6	0.1	20.4	0.3	0
12/9/2013	SVE	8.4	-	6.8	0.1	20.8	0.0	0
12/27/2013	SVE	9.8	-	6.8	0.0	20.8	0.0	0
1/13/2014	SVE	7.1	-	6.1	0.1	20.5	0.2	0
1/27/2014	SVE	9.9	-	6.8	0.1	20.5	0.3	0
2/12/2014	SVE	9.0	-	6.1	0.1	20.8	0.2	0
2/25/2014	SVE	10.0	-	6.1	0.1	20.7	0.2	0
3/14/2014	SVE	9.7	-	6.1	0.0	20.7	0.1	0
3/28/2014	SVE	8.5	-	6.1	0.0	20.5	0.2	0
4/25/2014	SVE	8.6	-	6.1	0.2	20.6	0.1	0
5/13/2014	SVE	8.8	-	6.8	0.1	20.5	0.2	0
6/9/2014	SVE	7.8	-	6.6	0.2	20.7	0.2	0
7/31/2014	SVE	8.5	-	6.8	0.0	-	-	-
8/25/2014	SVE	7.2	-	6.6	0.3	-	-	-
9/30/2014	SVE	6.9	-	6.6	0.1	20.6	0.2	0
11/18/2014	SVE	7.7	-	6.6	0.1	20.4	0.4	0
4/28/2015	SVE	11.1	-	6.6	0.2	19.7	1.1	0

Date	**Average**							**Total Run Time**
	SVE or Air Injection (**AI**)	**Vacuum** (in. of H_2O)	**Pressure** (in. of H_2O)	**Flow** (scfm)	**TVOC** (ppmv)	**O_2** (%)	**CO_2** (%)	(days)
9/5/13 to 9/24/13	SVE	9.7	-	6.8	15.3	19.7	1.2	19
9/24/13 to 10/4/13	AI	-	7.9	6.8	-	-	-	10
10/4/13 to 11/5/13	AI	-	7.6	6.9	-	-	-	32
11/5/13 to 11/21/13	SVE	8.5	-	6.9	0.3	20.3	0.2	8
11/21/13 to 11/18/14	SVE	8.6	-	6.5	0.1	20.6	0.2	298

Notes:
1. TVOC means Total Volatile Organic Compounds. Readings are in parts per million on volume to volume basis (ppmv).
2. TVOC concentrations were determined using a Photoionization Detector (PID), equipped with a 10.6 ev lamp.
3. O_2, CO_2, and LEL measurements were determined using a LANDTEC GA90 - Infrared gas analyzer.
4. Flow measurements were determined using a Pitot Tube DS-300 Flow Sensor.
5. "--" means not monitored
6. System operated 24 hours per day from 9/5/13 through 11/5/13; 12 hours/day from 11/5/13 through 3/28/14; and 24 hours/day from 3/28/14 through 12/23/14.

Table B19

COMBINED
Summary of Soil Vapor Extraction/Reinjection Monitoring
September 5, 2013 to present

336 and 348 Bullocks Point Ave and 12 Fenner Ave
East Providence, Rhode Island

Date	Total Combine Influent				Effluent			Notes
	Flow (scfm)	Vacuum (in. of H_2O)	Temp (°F)	TVOC (ppmv)	Temp (°F)	Pressure (in. of H_2O)	TVOC (ppmv)	
9/5/2013	60	16.0	90	103	125	12.1	<0.1	System Start-up @ 12:50 on 9/5/2013. Soil Vapor Extraction from VW-4, 5, 6, 10, 11, 12, 16, 17, and 18; and Soil Vapor Reinjection to VW-1, 2, 3, 7, 8, 9, 13, 14, and 15; from 9/5/13 to 9/24/13. System operation 24 hours per day.
9/6/2013	60	16.0	90	28	126	13.3	<0.1	
9/9/2013	58	16.3	72	14	117	12.4	<0.1	
9/13/2013	57	15.7	72	7.5	120	14.4	0.6	
9/19/2013	50	13.8	80	3.4	128	16.1	5.1	
9/24/2013	60	16.7	82	2.8	125	17.8	<0.1	Vapor Phase Activated carbon change-out 180 lbs.
9/24/2013	60	16.3	82	0.6	125	15.5	<0.1	Soil Vapor Extraction from VW-1, 2, 3, 7, 8, 9, 13, 14, and 15; and Soil Vapor Reinjection to VW-4, 5, 6, 10, 11, 12, 16, 17, and 18; from 9/24/13 to 11/5/13. System operation 24 hours per day.
9/25/2013	60	16.2	83	3.1	128	15.7	<0.1	
10/4/2013	58	17.1	68	1.3	118	13.3	<0.1	
10/25/2013	58	17.6	54	1.3	120	13.0	0.5	
11/5/2013	58	17.9	65	0.1	115	12.9	<0.1	
11/5/2013	57	13.4	60	<0.1	102	10.5	<0.1	Soil Vapor Extraction from VW-4, 5, 6, 10, 11, 12, 16, 17, and 18; and Soil Vapor Reinjection to VW-1, 2, 3, 7, 8, 9, 13, 14, and 15; from 11/5/13 to 3/28/14. System operation 12 hours per day.
11/6/2013	57	13.4	56	0.1	102	12.5	<0.1	
11/21/2013	58	17.5	58	0.6	89	12.3	<0.1	
12/9/2013	60	22.8	40	0.3	96	11.5	<0.1	
12/27/2013	60	23.9	36	0.1	86	11.1	<0.1	
1/13/2014	58	25.2	38	<0.1	84	11.7	<0.1	
1/27/2014	62	23.5	38	0.2	98	13.4	<0.1	
2/12/2014	60	22.1	30	0.1	66	13.9	<0.1	
2/25/2014	60	25.7	34	0.3	86	14.2	<0.1	
3/14/2014	60	25.3	38	<0.1	80	13.5	<0.1	
3/28/2014	58	23.9	45	0.4	85	13.5	<0.1	Soil Vapor Extraction from VW-4, 5, 6, 10, 11, 12, 16, 17, and 18; and Soil Vapor Reinjection to VW-1, 2, 3, 7, 8, 9, 13, 14, and 15; from 3/28/14 to 12/23/14. System operation 24 hours per day.
4/25/2014	59	22.2	58	0.8	96	14.1	<0.1	
5/13/2014	62	22.5	66	0.6	102	13.5	<0.1	
6/9/2014	62	25.5	71	1.0	114	13.5	<0.1	
7/31/2014	61	25.8	73	1.4	116	18.8	<0.1	
8/25/2014	60	23.1	83	0.9	132	18.3	<0.1	
9/30/2014	60	22.3	64	0.9	114	18.8	<0.1	
11/18/2014	58	19.3	46	0.4	138	15.1	<0.1	
12/23/2014	SVE System Shutdown							
4/28/2015	58	17.9	56	0.5	90	13.0	<0.1	Rebound Monitoring with TO-15 Lab Analysis

Notes:
1. TVOC means Total Volatile Organic Compounds. Readings are in parts per million on volume to volume basis (ppmv).
2. TVOC concentrations were determined using a Photoionization Detector (PID), equipped with a 10.6 ev lamp.
3. Flow measurements were determined using a Pitot Tube DS-300 Flow Sensor.
4. "--" means not monitored
5. System operated 24 hours per day from 9/5/13 through 11/5/13; 12 hours/day from 11/5/13 through 3/28/14; and 24 hours/day from 3/28/14 through 12/23/14.

APPENDIX C

SOIL VAPOR LABORATORY DATA

Report Date:
13-May-15 13:56

☑ Final Report
☐ Re-Issued Report
☐ Revised Report

SPECTRUM ANALYTICAL, INC.

Laboratory Report

GZA Geoenvironmental, Inc.
530 Broadway
Providence, RI 02909
Attn: Albert Flori

Project: Riverside Square - East Providence, RI
Project #: 33175.06

Laboratory ID	Client Sample ID	Container	Matrix	Date Sampled	Date Received
SC06738-01	SVE Combine	Summa canister 3.2 liter	Soil Gas	28-Apr-15 13:08	29-Apr-15 17:25

I attest that the information contained within the report has been reviewed for accuracy and checked against the quality control requirements for each method. These results relate only to the sample(s) as received.
All applicable NELAC requirements have been met.

Massachusetts # M-MA138/MA1110
Connecticut # PH-0777
Florida # E87936
Maine # MA138
New Hampshire # 2538
New Jersey # MA011
New York # 11393
Pennsylvania # 68-04426/68-02924
Rhode Island # LAO00098
USDA # S-51435

Authorized by:

Nicole Leja
Laboratory Director

Spectrum Analytical holds certification in the State of New York for the analytes as indicated with an X in the "Cert." column within this report. Please note that the State of New York does not offer certification for all analytes. Please refer to our website for specific certification holdings in each state.
Please note that this report contains 14 pages of analytical data plus Chain of Custody document(s). When the Laboratory Report is indicated as revised, this report supersedes any previously dated reports for the laboratory ID(s) referenced above. Where this report identifies subcontracted analyses, copies of the subcontractor's test report are available upon request. This report may not be reproduced, except in full, without written approval from Spectrum Analytical, Inc.

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Please contact the Laboratory or Technical Director at 800-789-9115 with any questions regarding the data contained in this laboratory report.

CASE NARRATIVE:

Data has been reported to the RDL. This report excludes estimated concentrations detected below the RDL and above the MDL (J-Flag).

All non-detects and all results below the reporting limit are reported as "<" (less than) the reporting limit in this report.

Samples are received and the pressure is recorded from the gauge on the canister. If a canister does not have a gauge, a vacuum gauge is attached to the valve and pressure is recorded. If the canister is below -10 psig, the can must be pressurized to 0 psig. Tedlar bags do not have the pressure recorded. The can pressure can be located within this report in the sample header information.

If a Duplicate (DUP) was not requested on the Chain of Custody, method criteria may have been fulfilled with a source sample not of this Sample Delivery Group.

See below for any non-conformances and issues relating to quality control samples and/or sample analysis/matrix.

EPA TO-15

Calibration:

1505023

Analyte quantified by quadratic equation type calibration.

1,1,2,2-Tetrachloroethane
1,2,4-Trichlorobenzene
1,3-Dichlorobenzene
Acrylonitrile
Dichlorodifluoromethane (Freon12)
Naphthalene

This affected the following samples:

1509141-BLK1
1509141-BS1
1509237-BLK1
1509237-BS1
S504240-ICV1
S504409-CCV1
S504471-CCV1
SVE Combine

S504240-ICV1

Analyte percent recovery is outside individual acceptance criteria (70-130).

1,2,4-Trichlorobenzene (69%)
Naphthalene (148%)

This affected the following samples:

1509141-BLK1
1509141-BS1
1509237-BLK1
1509237-BS1
S504409-CCV1
S504471-CCV1
SVE Combine

Laboratory Control Samples:

1509237-BS1

passes in CCV

Methylene chloride

EPA TO-15

Samples:

S504409-CCV1

Analyte percent difference is outside individual acceptance criteria (30), but within overall method allowances.

Methylene chloride (-32.6%)

This affected the following samples:

1509141-BLK1
1509141-BS1
SVE Combine

SC06738-01 *SVE Combine*

Sample dilution required for high concentration of target analytes to be within the instrument calibration range.

This flag indicates the concentration for this analyte is an estimated value due to exceeding the calibration range or interferences resulting in a biased final concentration.

Ethanol
Isopropyl alcohol

SC06738-01RE1 *SVE Combine*

Sample dilution required for high concentration of target analytes to be within the instrument calibration range.

Sample Acceptance Check Form

Client:	GZA Geoenvironmental, Inc. - Providence, RI
Project:	Riverside Square - East Providence, RI / 33175.06
Work Order:	SC06738
Sample(s) received on:	4/29/2015

The following outlines the condition of samples for the attached Chain of Custody upon receipt.

	Yes	No	N/A
Were custody seals present?	☐	☑	☐
Were custody seals intact?	☐	☐	☑
Were samples received at a temperature of ≤ 6°C?	☐	☐	☑
Were samples cooled on ice upon transfer to laboratory representative?	☐	☐	☑
Were samples refrigerated upon transfer to laboratory representative?	☐	☐	☑
Were sample containers received intact?	☑	☐	☐
Were samples properly labeled (labels affixed to sample containers and include sample ID, site location, and/or project number and the collection date)?	☑	☐	☐
Were samples accompanied by a Chain of Custody document?	☑	☐	☐
Does Chain of Custody document include proper, full, and complete documentation, which shall include sample ID, site location, and/or project number, date and time of collection, collector's name, preservation type, sample matrix and any special remarks concerning the sample?	☑	☐	☐
Did sample container labels agree with Chain of Custody document?	☑	☐	☐
Were samples received within method-specific holding times?	☑	☐	☐

Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
SVE Combine	33175.06	Soil Gas	28-Apr-15 13:08	29-Apr-15
SC06738-01				

Air Quality Analyses

Volatile Organics in Air — ppbv — Prepared 11-May-15 — Dilution: 20 — GS1 — Can pressure: -3 — Can ID: 0141

CAS No.	Analyte(s)	Result/Units	*RDL	Result ug/m³	*RDL	Flag	Method Ref.	Analyzed	Analyst	Batch	Cert.
115-07-1	Propene	< 10.0	10.0	< 17.21	17.21	D	EPA TO-15	11-May-15	NAA	1509141	
75-71-8	Dichlorodifluoromethane (Freon12)	< 10.0	10.0	< 49.45	49.45	D	"	"	"	"	X
74-87-3	Chloromethane	< 10.0	10.0	< 20.65	20.65	D	"	"	"	"	X
76-14-2	1,2-Dichlorotetrafluoroethane (Freon 114)	< 10.0	10.0	< 69.90	69.90	D	"	"	"	"	X
75-01-4	Vinyl chloride	< 10.0	10.0	< 25.56	25.56	D	"	"	"	"	X
106-99-0	1,3-Butadiene	< 10.0	10.0	< 22.09	22.09	D	"	"	"	"	X
74-83-9	Bromomethane	< 10.0	10.0	< 38.81	38.81	D	"	"	"	"	X
75-00-3	Chloroethane	< 10.0	10.0	< 26.38	26.38	D	"	"	"	"	X
67-64-1	Acetone	**56.4**	10.0	**134.02**	23.76	D	"	"	"	"	X
75-69-4	Trichlorofluoromethane (Freon 11)	< 10.0	10.0	< 56.20	56.20	D	"	"	"	"	X
64-17-5	Ethanol	**1990**	10.0	**3752.11**	18.85	D, E	"	"	"	"	
107-13-1	Acrylonitrile	< 10.0	10.0	< 21.68	21.68	D	"	"	"	"	X
75-35-4	1,1-Dichloroethene	< 10.0	10.0	< 39.67	39.67	D	"	"	"	"	X
75-09-2	Methylene chloride	< 10.0	10.0	< 34.72	34.72	D	"	"	"	"	X
76-13-1	1,1,2-Trichlorotrifluoroethane (Freon 113)	**317**	10.0	**2429.68**	76.65	D	"	"	"	"	X
75-15-0	Carbon disulfide	< 10.0	10.0	< 31.12	31.12	D	"	"	"	"	X
156-60-5	trans-1,2-Dichloroethene	< 10.0	10.0	< 39.65	39.65	D	"	"	"	"	X
75-34-3	1,1-Dichloroethane	< 10.0	10.0	< 40.49	40.49	D	"	"	"	"	X
1634-04-4	Methyl tert-butyl ether	< 10.0	10.0	< 36.07	36.07	D	"	"	"	"	X
67-63-0	Isopropyl alcohol	**2990**	10.0	**7337.42**	24.54	D, E	"	"	"	"	X
78-93-3	2-Butanone (MEK)	< 10.0	10.0	< 29.49	29.49	D	"	"	"	"	X
156-59-2	cis-1,2-Dichloroethene	< 10.0	10.0	< 39.65	39.65	D	"	"	"	"	X
110-54-3	Hexane	< 10.0	10.0	< 35.26	35.26	D	"	"	"	"	X
141-78-6	Ethyl acetate	**365**	10.0	**1315.19**	36.03	D	"	"	"	"	
67-66-3	Chloroform	< 10.0	10.0	< 48.67	48.67	D	"	"	"	"	X
109-99-9	Tetrahydrofuran	< 10.0	10.0	< 29.49	29.49	D	"	"	"	"	
107-06-2	1,2-Dichloroethane	< 10.0	10.0	< 40.49	40.49	D	"	"	"	"	X
71-55-6	1,1,1-Trichloroethane	< 10.0	10.0	< 54.56	54.56	D	"	"	"	"	X
71-43-2	Benzene	< 10.0	10.0	< 31.90	31.90	D	"	"	"	"	X
56-23-5	Carbon tetrachloride	< 10.0	10.0	< 62.90	62.90	D	"	"	"	"	X
110-82-7	Cyclohexane	< 10.0	10.0	< 34.42	34.42	D	"	"	"	"	X
78-87-5	1,2-Dichloropropane	< 10.0	10.0	< 46.22	46.22	D	"	"	"	"	X
75-27-4	Bromodichloromethane	< 10.0	10.0	< 66.99	66.99	D	"	"	"	"	X
79-01-6	Trichloroethene	**16.4**	10.0	**88.14**	53.74	D	"	"	"	"	X
123-91-1	1,4-Dioxane	< 10.0	10.0	< 35.99	35.99	D	"	"	"	"	X
142-82-5	n-Heptane	< 10.0	10.0	< 40.98	40.98	D	"	"	"	"	X
108-10-1	4-Methyl-2-pentanone (MIBK)	< 10.0	10.0	< 40.98	40.98	D	"	"	"	"	X
10061-01-5	cis-1,3-Dichloropropene	< 10.0	10.0	< 45.40	45.40	D	"	"	"	"	X
10061-02-6	trans-1,3-Dichloropropene	< 10.0	10.0	< 45.40	45.40	D	"	"	"	"	X
79-00-5	1,1,2-Trichloroethane	< 10.0	10.0	< 54.56	54.56	D	"	"	"	"	X
108-88-3	Toluene	**10.4**	10.0	**39.13**	37.63	D	"	"	"	"	X
591-78-6	2-Hexanone (MBK)	< 10.0	10.0	< 40.98	40.98	D	"	"	"	"	
124-48-1	Dibromochloromethane	< 10.0	10.0	< 85.19	85.19	D	"	"	"	"	X

This laboratory report is not valid without an authorized signature on the cover page.

Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
SVE Combine	33175.06	Soil Gas	28-Apr-15 13:08	29-Apr-15
SC06738-01				

CAS No.	*Analyte(s)*	*Result/Units*	**RDL*	*Result ug/m³*	**RDL*	*Flag*	*Method Ref.*	*Analyzed*	*Analyst*	*Batch*	*Cert.*
Air Quality Analyses											
Volatile Organics in Air		ppbv	Prepared 11-May-15 Dilution: 20			GS1		Can pressure: -3 Can ID: 0141			
106-93-4	1,2-Dibromoethane (EDB)	< 10.0	10.0	< 76.85	76.85	D	EPA TO-15	11-May-15	NAA	1509141	
127-18-4	Tetrachloroethene	**18.4**	10.0	**124.77**	67.81	D	"	"	"	"	X
108-90-7	Chlorobenzene	< 10.0	10.0	< 46.05	46.05	D	"	"	"	"	X
630-20-6	1,1,1,2-Tetrachloroethane	< 10.0	10.0	< 68.71	68.71	D	"	"	"	"	
100-41-4	Ethylbenzene	< 10.0	10.0	< 43.35	43.35	D	"	"	"	"	X
179601-23-1	m,p-Xylene	< 20.0	20.0	< 86.71	86.71	D	"	"	"	"	X
75-25-2	Bromoform	< 10.0	10.0	< 103.35	103.35	D	"	"	"	"	X
100-42-5	Styrene	< 10.0	10.0	< 42.54	42.54	D	"	"	"	"	X
95-47-6	o-Xylene	< 10.0	10.0	< 43.35	43.35	D	"	"	"	"	X
79-34-5	1,1,2,2-Tetrachloroethane	< 10.0	10.0	< 68.67	68.67	D	"	"	"	"	X
98-82-8	Isopropylbenzene	< 10.0	10.0	< 49.16	49.16	D	"	"	"	"	X
108-67-8	1,3,5-Trimethylbenzene	< 10.0	10.0	< 49.16	49.16	D	"	"	"	"	X
622-96-8	4-Ethyltoluene	< 10.0	10.0	< 49.16	49.16	D	"	"	"	"	
95-63-6	1,2,4-Trimethylbenzene	< 10.0	10.0	< 49.16	49.16	D	"	"	"	"	X
91-20-3	Naphthalene	< 10.0	10.0	< 52.35	52.35	D	"	"	"	"	X
541-73-1	1,3-Dichlorobenzene	< 10.0	10.0	< 60.12	60.12	D	"	"	"	"	X
100-44-7	Benzyl chloride	< 10.0	10.0	< 51.53	51.53	D	"	"	"	"	X
106-46-7	1,4-Dichlorobenzene	< 10.0	10.0	< 60.12	60.12	D	"	"	"	"	X
135-98-8	sec-Butylbenzene	< 10.0	10.0	< 54.89	54.89	D	"	"	"	"	
99-87-6	4-Isopropyltoluene	< 10.0	10.0	< 53.66	53.66	D	"	"	"	"	
95-50-1	1,2-Dichlorobenzene	< 10.0	10.0	< 60.12	60.12	D	"	"	"	"	X
104-51-8	n-Butylbenzene	< 10.0	10.0	< 54.89	54.89	D	"	"	"	"	
120-82-1	1,2,4-Trichlorobenzene	< 10.0	10.0	< 74.23	74.23	D	"	"	"	"	X
87-68-3	Hexachlorobutadiene	< 10.0	10.0	< 106.63	106.63	D	"	"	"	"	X
Surrogate recoveries:											
460-00-4	*4-Bromofluorobenzene*	*96*		*70-130 %*			"	"	"	"	
Re-analysis of Volatile Organics in Air			Dilution: 64.5			GS1					
64-17-5	Ethanol	**1700**	32.2	**3205.32**	60.71	D	EPA TO-15	12-May-15	NAA	1509237	
67-63-0	Isopropyl alcohol	**2390**	32.2	**5865.03**	79.02	D	"	"	"	"	X
Surrogate recoveries:											
460-00-4	*4-Bromofluorobenzene*	*101*		*70-130 %*			"	"	"	"	

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch 1509141 - General Air Prep										
Blank (1509141-BLK1)					Prepared & Analyzed: 11-May-15					
Propene	< 0.500		ppbv	0.500						
Dichlorodifluoromethane (Freon12)	< 0.500		ppbv	0.500						
Chloromethane	< 0.500		ppbv	0.500						
1,2-Dichlorotetrafluoroethane (Freon 114)	< 0.500		ppbv	0.500						
Vinyl chloride	< 0.500		ppbv	0.500						
1,3-Butadiene	< 0.500		ppbv	0.500						
Bromomethane	< 0.500		ppbv	0.500						
Chloroethane	< 0.500		ppbv	0.500						
Acetone	< 0.500		ppbv	0.500						
Trichlorofluoromethane (Freon 11)	< 0.500		ppbv	0.500						
Ethanol	< 0.500		ppbv	0.500						
Acrylonitrile	< 0.500		ppbv	0.500						
1,1-Dichloroethene	< 0.500		ppbv	0.500						
Methylene chloride	< 0.500		ppbv	0.500						
1,1,2-Trichlorotrifluoroethane (Freon 113)	< 0.500		ppbv	0.500						
Carbon disulfide	< 0.500		ppbv	0.500						
trans-1,2-Dichloroethene	< 0.500		ppbv	0.500						
1,1-Dichloroethane	< 0.500		ppbv	0.500						
Methyl tert-butyl ether	< 0.500		ppbv	0.500						
Isopropyl alcohol	< 0.500		ppbv	0.500						
2-Butanone (MEK)	< 0.500		ppbv	0.500						
cis-1,2-Dichloroethene	< 0.500		ppbv	0.500						
Hexane	< 0.500		ppbv	0.500						
Ethyl acetate	< 0.500		ppbv	0.500						
Chloroform	< 0.500		ppbv	0.500						
Tetrahydrofuran	< 0.500		ppbv	0.500						
1,2-Dichloroethane	< 0.500		ppbv	0.500						
1,1,1-Trichloroethane	< 0.500		ppbv	0.500						
Benzene	< 0.500		ppbv	0.500						
Carbon tetrachloride	< 0.500		ppbv	0.500						
Cyclohexane	< 0.500		ppbv	0.500						
1,2-Dichloropropane	< 0.500		ppbv	0.500						
Bromodichloromethane	< 0.500		ppbv	0.500						
Trichloroethene	< 0.500		ppbv	0.500						
1,4-Dioxane	< 0.500		ppbv	0.500						
n-Heptane	< 0.500		ppbv	0.500						
4-Methyl-2-pentanone (MIBK)	< 0.500		ppbv	0.500						
cis-1,3-Dichloropropene	< 0.500		ppbv	0.500						
trans-1,3-Dichloropropene	< 0.500		ppbv	0.500						
1,1,2-Trichloroethane	< 0.500		ppbv	0.500						
Toluene	< 0.500		ppbv	0.500						
2-Hexanone (MBK)	< 0.500		ppbv	0.500						
Dibromochloromethane	< 0.500		ppbv	0.500						
1,2-Dibromoethane (EDB)	< 0.500		ppbv	0.500						
Tetrachloroethene	< 0.500		ppbv	0.500						
Chlorobenzene	< 0.500		ppbv	0.500						
1,1,1,2-Tetrachloroethane	< 0.500		ppbv	0.500						
Ethylbenzene	< 0.500		ppbv	0.500						
m,p-Xylene	< 1.00		ppbv	1.00						
Bromoform	< 0.500		ppbv	0.500						
Styrene	< 0.500		ppbv	0.500						
o-Xylene	< 0.500		ppbv	0.500						

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch 1509141 - General Air Prep										
Blank (1509141-BLK1)					Prepared & Analyzed: 11-May-15					
1,1,2,2-Tetrachloroethane	< 0.500		ppbv	0.500						
Isopropylbenzene	< 0.500		ppbv	0.500						
1,3,5-Trimethylbenzene	< 0.500		ppbv	0.500						
4-Ethyltoluene	< 0.500		ppbv	0.500						
1,2,4-Trimethylbenzene	< 0.500		ppbv	0.500						
Naphthalene	< 0.500		ppbv	0.500						
1,3-Dichlorobenzene	< 0.500		ppbv	0.500						
Benzyl chloride	< 0.500		ppbv	0.500						
1,4-Dichlorobenzene	< 0.500		ppbv	0.500						
sec-Butylbenzene	< 0.500		ppbv	0.500						
4-Isopropyltoluene	< 0.500		ppbv	0.500						
1,2-Dichlorobenzene	< 0.500		ppbv	0.500						
n-Butylbenzene	< 0.500		ppbv	0.500						
1,2,4-Trichlorobenzene	< 0.500		ppbv	0.500						
Hexachlorobutadiene	< 0.500		ppbv	0.500						
Surrogate: 4-Bromofluorobenzene	*9.44*		ppbv		*10.0*		*94*	*70-130*		
LCS (1509141-BS1)					Prepared & Analyzed: 11-May-15					
Propene	**10.3**		ppbv		10.0		103	70-130		
Dichlorodifluoromethane (Freon12)	**11.0**		ppbv		10.0		110	70-130		
Chloromethane	**9.86**		ppbv		10.0		99	70-130		
1,2-Dichlorotetrafluoroethane (Freon 114)	**8.66**		ppbv		10.0		87	70-130		
Vinyl chloride	**7.89**		ppbv		10.0		79	70-130		
1,3-Butadiene	**8.53**		ppbv		10.0		85	70-130		
Bromomethane	**8.52**		ppbv		10.0		85	70-130		
Chloroethane	**8.45**		ppbv		10.0		84	70-130		
Acetone	**9.02**		ppbv		10.0		90	70-130		
Trichlorofluoromethane (Freon 11)	**9.44**		ppbv		10.0		94	70-130		
Ethanol	**8.40**		ppbv		10.0		84	70-130		
Acrylonitrile	**9.67**		ppbv		10.0		97	50-150		
1,1-Dichloroethene	**9.03**		ppbv		10.0		90	70-130		
Methylene chloride	**7.11**		ppbv		10.0		71	70-130		
1,1,2-Trichlorotrifluoroethane (Freon 113)	**11.5**		ppbv		10.0		115	70-130		
Carbon disulfide	**10.3**		ppbv		10.0		103	70-130		
trans-1,2-Dichloroethene	**10.2**		ppbv		10.0		102	70-130		
1,1-Dichloroethane	**10.2**		ppbv		10.0		102	70-130		
Methyl tert-butyl ether	**10.6**		ppbv		10.0		106	70-130		
Isopropyl alcohol	**9.05**		ppbv		10.0		90	70-130		
2-Butanone (MEK)	**10.7**		ppbv		10.0		107	70-130		
cis-1,2-Dichloroethene	**10.7**		ppbv		10.0		107	70-130		
Hexane	**11.0**		ppbv		10.0		110	70-130		
Ethyl acetate	**11.1**		ppbv		10.0		111	70-130		
Chloroform	**10.2**		ppbv		10.0		102	70-130		
Tetrahydrofuran	**11.3**		ppbv		10.0		113	70-130		
1,2-Dichloroethane	**10.2**		ppbv		10.0		102	70-130		
1,1,1-Trichloroethane	**10.2**		ppbv		10.0		102	70-130		
Benzene	**10.5**		ppbv		10.0		105	70-130		
Carbon tetrachloride	**9.97**		ppbv		10.0		100	70-130		
Cyclohexane	**11.2**		ppbv		10.0		112	70-130		
1,2-Dichloropropane	**9.88**		ppbv		10.0		99	70-130		
Bromodichloromethane	**9.98**		ppbv		10.0		100	70-130		
Trichloroethene	**10.2**		ppbv		10.0		102	70-130		

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch 1509141 - General Air Prep										
LCS (1509141-BS1)					Prepared & Analyzed: 11-May-15					
1,4-Dioxane	**11.3**		ppbv		10.0		113	50-150		
n-Heptane	**10.2**		ppbv		10.0		102	70-130		
4-Methyl-2-pentanone (MIBK)	**11.1**		ppbv		10.0		111	70-130		
cis-1,3-Dichloropropene	**10.5**		ppbv		10.0		105	70-130		
trans-1,3-Dichloropropene	**10.2**		ppbv		10.0		102	70-130		
1,1,2-Trichloroethane	**9.99**		ppbv		10.0		100	70-130		
Toluene	**10.8**		ppbv		10.0		108	70-130		
2-Hexanone (MBK)	**11.6**		ppbv		10.0		116	70-130		
Dibromochloromethane	**10.0**		ppbv		10.0		100	70-130		
1,2-Dibromoethane (EDB)	**10.1**		ppbv		10.0		101	70-130		
Tetrachloroethene	**10.3**		ppbv		10.0		103	70-130		
Chlorobenzene	**8.58**		ppbv		10.0		86	70-130		
1,1,1,2-Tetrachloroethane	**8.78**		ppbv		10.0		88	50-150		
Ethylbenzene	**10.2**		ppbv		10.0		102	70-130		
m,p-Xylene	**19.6**		ppbv		20.0		98	70-130		
Bromoform	**9.19**		ppbv		10.0		92	70-130		
Styrene	**10.3**		ppbv		10.0		103	70-130		
o-Xylene	**9.56**		ppbv		10.0		96	70-130		
1,1,2,2-Tetrachloroethane	**8.66**		ppbv		10.0		87	70-130		
Isopropylbenzene	**9.77**		ppbv		10.0		98	50-150		
1,3,5-Trimethylbenzene	**10.0**		ppbv		10.0		100	70-130		
4-Ethyltoluene	**10.4**		ppbv		10.0		104	70-130		
1,2,4-Trimethylbenzene	**10.8**		ppbv		10.0		108	70-130		
Naphthalene	**8.79**		ppbv		10.0		88	50-150		
1,3-Dichlorobenzene	**9.15**		ppbv		10.0		92	70-130		
Benzyl chloride	**8.86**		ppbv		10.0		89	70-130		
1,4-Dichlorobenzene	**8.92**		ppbv		10.0		89	70-130		
sec-Butylbenzene	**9.67**		ppbv		10.0		97	50-150		
4-Isopropyltoluene	**10.2**		ppbv		10.0		102	50-150		
1,2-Dichlorobenzene	**9.26**		ppbv		10.0		93	70-130		
n-Butylbenzene	**10.6**		ppbv		10.0		106	50-150		
1,2,4-Trichlorobenzene	**9.15**		ppbv		10.0		92	70-130		
Hexachlorobutadiene	**10.9**		ppbv		10.0		109	70-130		
Surrogate: 4-Bromofluorobenzene	*10.7*		ppbv		*10.0*		*107*	*70-130*		
Batch 1509237 - General Air Prep										
Blank (1509237-BLK1)					Prepared & Analyzed: 12-May-15					
Propene	< 0.500		ppbv	0.500						
Dichlorodifluoromethane (Freon12)	< 0.500		ppbv	0.500						
Chloromethane	< 0.500		ppbv	0.500						
1,2-Dichlorotetrafluoroethane (Freon 114)	< 0.500		ppbv	0.500						
Vinyl chloride	< 0.500		ppbv	0.500						
1,3-Butadiene	< 0.500		ppbv	0.500						
Bromomethane	< 0.500		ppbv	0.500						
Chloroethane	< 0.500		ppbv	0.500						
Acetone	< 0.500		ppbv	0.500						
Trichlorofluoromethane (Freon 11)	< 0.500		ppbv	0.500						
Ethanol	< 0.500		ppbv	0.500						
Acrylonitrile	< 0.500		ppbv	0.500						
1,1-Dichloroethene	< 0.500		ppbv	0.500						
Methylene chloride	< 0.500		ppbv	0.500						
1,1,2-Trichlorotrifluoroethane (Freon 113)	< 0.500		ppbv	0.500						

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch 1509237 - General Air Prep										
Blank (1509237-BLK1)					Prepared & Analyzed: 12-May-15					
Carbon disulfide	< 0.500		ppbv	0.500						
trans-1,2-Dichloroethene	< 0.500		ppbv	0.500						
1,1-Dichloroethane	< 0.500		ppbv	0.500						
Methyl tert-butyl ether	< 0.500		ppbv	0.500						
Isopropyl alcohol	< 0.500		ppbv	0.500						
2-Butanone (MEK)	< 0.500		ppbv	0.500						
cis-1,2-Dichloroethene	< 0.500		ppbv	0.500						
Hexane	< 0.500		ppbv	0.500						
Ethyl acetate	< 0.500		ppbv	0.500						
Chloroform	< 0.500		ppbv	0.500						
Tetrahydrofuran	< 0.500		ppbv	0.500						
1,2-Dichloroethane	< 0.500		ppbv	0.500						
1,1,1-Trichloroethane	< 0.500		ppbv	0.500						
Benzene	< 0.500		ppbv	0.500						
Carbon tetrachloride	< 0.500		ppbv	0.500						
Cyclohexane	< 0.500		ppbv	0.500						
1,2-Dichloropropane	< 0.500		ppbv	0.500						
Bromodichloromethane	< 0.500		ppbv	0.500						
Trichloroethene	< 0.500		ppbv	0.500						
1,4-Dioxane	< 0.500		ppbv	0.500						
n-Heptane	< 0.500		ppbv	0.500						
4-Methyl-2-pentanone (MIBK)	< 0.500		ppbv	0.500						
cis-1,3-Dichloropropene	< 0.500		ppbv	0.500						
trans-1,3-Dichloropropene	< 0.500		ppbv	0.500						
1,1,2-Trichloroethane	< 0.500		ppbv	0.500						
Toluene	< 0.500		ppbv	0.500						
2-Hexanone (MBK)	< 0.500		ppbv	0.500						
Dibromochloromethane	< 0.500		ppbv	0.500						
1,2-Dibromoethane (EDB)	< 0.500		ppbv	0.500						
Tetrachloroethene	< 0.500		ppbv	0.500						
Chlorobenzene	< 0.500		ppbv	0.500						
1,1,1,2-Tetrachloroethane	< 0.500		ppbv	0.500						
Ethylbenzene	< 0.500		ppbv	0.500						
m,p-Xylene	< 1.00		ppbv	1.00						
Bromoform	< 0.500		ppbv	0.500						
Styrene	< 0.500		ppbv	0.500						
o-Xylene	< 0.500		ppbv	0.500						
1,1,2,2-Tetrachloroethane	< 0.500		ppbv	0.500						
Isopropylbenzene	< 0.500		ppbv	0.500						
1,3,5-Trimethylbenzene	< 0.500		ppbv	0.500						
4-Ethyltoluene	< 0.500		ppbv	0.500						
1,2,4-Trimethylbenzene	< 0.500		ppbv	0.500						
Naphthalene	< 0.500		ppbv	0.500						
1,3-Dichlorobenzene	< 0.500		ppbv	0.500						
Benzyl chloride	< 0.500		ppbv	0.500						
1,4-Dichlorobenzene	< 0.500		ppbv	0.500						
sec-Butylbenzene	< 0.500		ppbv	0.500						
4-Isopropyltoluene	< 0.500		ppbv	0.500						
1,2-Dichlorobenzene	< 0.500		ppbv	0.500						
n-Butylbenzene	< 0.500		ppbv	0.500						
1,2,4-Trichlorobenzene	< 0.500		ppbv	0.500						
Hexachlorobutadiene	< 0.500		ppbv	0.500						

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch 1509237 - General Air Prep										
Blank (1509237-BLK1)						Prepared & Analyzed: 12-May-15				
Surrogate: 4-Bromofluorobenzene	*9.68*		ppbv		*10.0*		*97*	*70-130*		
LCS (1509237-BS1)						Prepared & Analyzed: 12-May-15				
Propene	**9.37**		ppbv		10.0		94	70-130		
Dichlorodifluoromethane (Freon12)	**9.94**		ppbv		10.0		99	70-130		
Chloromethane	**9.09**		ppbv		10.0		91	70-130		
1,2-Dichlorotetrafluoroethane (Freon 114)	**8.01**		ppbv		10.0		80	70-130		
Vinyl chloride	**7.79**		ppbv		10.0		78	70-130		
1,3-Butadiene	**7.71**		ppbv		10.0		77	70-130		
Bromomethane	**7.46**		ppbv		10.0		75	70-130		
Chloroethane	**7.47**		ppbv		10.0		75	70-130		
Acetone	**7.94**		ppbv		10.0		79	70-130		
Trichlorofluoromethane (Freon 11)	**8.73**		ppbv		10.0		87	70-130		
Ethanol	**7.71**		ppbv		10.0		77	70-130		
Acrylonitrile	**8.63**		ppbv		10.0		86	50-150		
1,1-Dichloroethene	**8.04**		ppbv		10.0		80	70-130		
Methylene chloride	**6.73**	Z-2	ppbv		10.0		67	70-130		
1,1,2-Trichlorotrifluoroethane (Freon 113)	**10.3**		ppbv		10.0		103	70-130		
Carbon disulfide	**9.32**		ppbv		10.0		93	70-130		
trans-1,2-Dichloroethene	**9.10**		ppbv		10.0		91	70-130		
1,1-Dichloroethane	**9.05**		ppbv		10.0		90	70-130		
Methyl tert-butyl ether	**9.23**		ppbv		10.0		92	70-130		
Isopropyl alcohol	**8.22**		ppbv		10.0		82	70-130		
2-Butanone (MEK)	**9.86**		ppbv		10.0		99	70-130		
cis-1,2-Dichloroethene	**9.55**		ppbv		10.0		96	70-130		
Hexane	**9.92**		ppbv		10.0		99	70-130		
Ethyl acetate	**9.87**		ppbv		10.0		99	70-130		
Chloroform	**9.12**		ppbv		10.0		91	70-130		
Tetrahydrofuran	**10.1**		ppbv		10.0		101	70-130		
1,2-Dichloroethane	**9.29**		ppbv		10.0		93	70-130		
1,1,1-Trichloroethane	**9.25**		ppbv		10.0		92	70-130		
Benzene	**9.42**		ppbv		10.0		94	70-130		
Carbon tetrachloride	**9.09**		ppbv		10.0		91	70-130		
Cyclohexane	**10.1**		ppbv		10.0		101	70-130		
1,2-Dichloropropane	**9.37**		ppbv		10.0		94	70-130		
Bromodichloromethane	**9.13**		ppbv		10.0		91	70-130		
Trichloroethene	**9.66**		ppbv		10.0		97	70-130		
1,4-Dioxane	**10.3**		ppbv		10.0		103	50-150		
n-Heptane	**9.51**		ppbv		10.0		95	70-130		
4-Methyl-2-pentanone (MIBK)	**10.6**		ppbv		10.0		106	70-130		
cis-1,3-Dichloropropene	**9.94**		ppbv		10.0		99	70-130		
trans-1,3-Dichloropropene	**9.60**		ppbv		10.0		96	70-130		
1,1,2-Trichloroethane	**9.56**		ppbv		10.0		96	70-130		
Toluene	**10.3**		ppbv		10.0		103	70-130		
2-Hexanone (MBK)	**10.9**		ppbv		10.0		109	70-130		
Dibromochloromethane	**9.57**		ppbv		10.0		96	70-130		
1,2-Dibromoethane (EDB)	**9.56**		ppbv		10.0		96	70-130		
Tetrachloroethene	**9.91**		ppbv		10.0		99	70-130		
Chlorobenzene	**7.87**		ppbv		10.0		79	70-130		
1,1,1,2-Tetrachloroethane	**8.06**		ppbv		10.0		81	50-150		
Ethylbenzene	**9.45**		ppbv		10.0		94	70-130		
m,p-Xylene	**18.0**		ppbv		20.0		90	70-130		

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch 1509237 - General Air Prep										
LCS (1509237-BS1)					Prepared & Analyzed: 12-May-15					
Bromoform	**8.34**		ppbv		10.0		83	70-130		
Styrene	**9.37**		ppbv		10.0		94	70-130		
o-Xylene	**9.07**		ppbv		10.0		91	70-130		
1,1,2,2-Tetrachloroethane	**7.76**		ppbv		10.0		78	70-130		
Isopropylbenzene	**9.01**		ppbv		10.0		90	50-150		
1,3,5-Trimethylbenzene	**9.36**		ppbv		10.0		94	70-130		
4-Ethyltoluene	**9.69**		ppbv		10.0		97	70-130		
1,2,4-Trimethylbenzene	**9.90**		ppbv		10.0		99	70-130		
Naphthalene	**7.37**		ppbv		10.0		74	50-150		
1,3-Dichlorobenzene	**8.25**		ppbv		10.0		82	70-130		
Benzyl chloride	**8.01**		ppbv		10.0		80	70-130		
1,4-Dichlorobenzene	**8.13**		ppbv		10.0		81	70-130		
sec-Butylbenzene	**8.97**		ppbv		10.0		90	50-150		
4-Isopropyltoluene	**9.45**		ppbv		10.0		94	50-150		
1,2-Dichlorobenzene	**8.56**		ppbv		10.0		86	70-130		
n-Butylbenzene	**9.74**		ppbv		10.0		97	50-150		
1,2,4-Trichlorobenzene	**7.95**		ppbv		10.0		80	70-130		
Hexachlorobutadiene	**10.0**		ppbv		10.0		100	70-130		
Surrogate: 4-Bromofluorobenzene	*10.7*		ppbv		*10.0*		*107*	*70-130*		

Certificate of Analysis

Container Type: Summa canister 3.2 liter **Date of Analysis:** 4/23/2015

Canister ID: 0141 **Analyst's Initials:** BRF

The sampling device detailed above has been tested and is certified to the limits for the target compounds as listed below.

Analyte	*Quantitation Limit (ppbv)*	*Analyte*	*Quantitation Limit (ppbv)*
Acetone	<0.2	Ethanol	<0.2
Acrylonitrile	<0.2	4-Isopropyl Toluene	<0.2
Benzene	<0.2	Ethyl acetate	<0.2
Benzyl chloride	<0.2	Ethylbenzene	<0.2
Bromodichloromethane	<0.2	4-Ethyltoluene	<0.2
Bromoform	<0.2	n-Heptane	<0.2
Bromomethane	<0.2	Hexachlorobutadiene	<0.2
1,3-Butadiene	<0.2	Hexane	<0.2
2-Butanone (MEK)	<0.2	2-Hexanone (MBK)	<0.2
Carbon disulfide	<0.2	Isopropyl alcohol	<0.2
Carbon tetrachloride	<0.2	4-Methyl-2-pentanone (MIBK)	<0.2
Chlorobenzene	<0.2	Methyl tert-butyl ether	<0.2
Chloroethane	<0.2	Methylene chloride	<0.2
1,4-Dioxane	<0.2	Naphthalene	<0.2
n-Butylbenzene	<0.2	1,1,1,2-Tetrachlorethane	<0.2
Chloroform	<0.2	Propene	<0.2
Chloromethane	<0.2	Styrene	<0.2
Cyclohexane	<0.2	1,1,2,2-Tetrachloroethane	<0.2
Dibromochloromethane	<0.2	Tetrachloroethene	<0.2
1,2-Dibromoethane (EDB)	<0.2	Tetrahydrofuran	<0.2
1,2-Dichlorobenzene	<0.2	Toluene	<0.2
1,3-Dichlorobenzene	<0.2	1,2,4-Trichlorobenzene	<0.2
1,4-Dichlorobenzene	<0.2	1,1,1-Trichloroethane	<0.2
Dichlorodifluoromethane (Freon12)	<0.2	1,1,2-Trichloroethane	<0.2
1,1-Dichloroethane	<0.2	Trichloroethene	<0.2
1,2-Dichloroethane	<0.2	1,1,2-Trichlorotrifluoroethane (Freon 113)	<0.2
1,1-Dichloroethene	<0.2	Trichlorofluoromethane (Freon 11)	<0.2
cis-1,2-Dichloroethene	<0.2	1,2,4-Trimethylbenzene	<0.2
trans-1,2-Dichloroethene	<0.2	1,3,5-Trimethylbenzene	<0.2
1,2-Dichloropropane	<0.2	Vinyl chloride	<0.2
cis-1,3-Dichloropropene	<0.2	m,p-Xylene	<0.2
trans-1,3-Dichloropropene	<0.2	o-Xylene	<0.2
1,2-Dichlorotetrafluoroethane (Freon 114)	<0.2	sec-Butylbenzene	<0.2
Isopropylbenzene	<0.2		

This certification applies to the following sampling devices:

0141

Notes and Definitions

D	Data reported from a dilution
E	This flag indicates the concentration for this analyte is an estimated value due to exceeding the calibration range or interferences resulting in a biased final concentration.
GS1	Sample dilution required for high concentration of target analytes to be within the instrument calibration range.
Z-2	passes in CCV
dry	Sample results reported on a dry weight basis
NR	Not Reported
RPD	Relative Percent Difference

Laboratory Control Sample (LCS): A known matrix spiked with compound(s) representative of the target analytes, which is used to document laboratory performance.

Matrix Duplicate: An intra-laboratory split sample which is used to document the precision of a method in a given sample matrix.

Matrix Spike: An aliquot of a sample spiked with a known concentration of target analyte(s). The spiking occurs prior to sample preparation and analysis. A matrix spike is used to document the bias of a method in a given sample matrix.

Method Blank: An analyte-free matrix to which all reagents are added in the same volumes or proportions as used in sample processing. The method blank should be carried through the complete sample preparation and analytical procedure. The method blank is used to document contamination resulting from the analytical process.

Method Detection Limit (MDL): The minimum concentration of a substance that can be measured and reported with 99% confidence that the analyte concentration is greater than zero and is determined from analysis of a sample in a given matrix type containing the analyte.

Reportable Detection Limit (RDL): The lowest concentration that can be reliably achieved within specified limits of precision and accuracy during routine laboratory operating conditions. For many analytes the RDL analyte concentration is selected as the lowest non-zero standard in the calibration curve. While the RDL is approximately 5 to 10 times the MDL, the RDL for each sample takes into account the sample volume/weight, extract/digestate volume, cleanup procedures and, if applicable, dry weight correction. Sample RDLs are highly matrix-dependent.

Surrogate: An organic compound which is similar to the target analyte(s) in chemical composition and behavior in the analytical process, but which is not normally found in environmental samples. These compounds are spiked into all blanks, standards, and samples prior to analysis. Percent recoveries are calculated for each surrogate.

Continuing Calibration Verification: The calibration relationship established during the initial calibration must be verified at periodic intervals. Concentrations, intervals, and criteria are method specific.

Validated by:
Rebecca Merz

SPECTRUM ANALYTICAL, INC.
Featuring
HANIBAL TECHNOLOGY

Chain of Custody Record/Field Test Data Sheets for Air Analyses

Page 1 of 1 SC06738 BY

Special Handling:
☐ Standard TAT - 7 to 10 business days
☐ Rush TAT - Date Needed: _____

· All TATs subject to laboratory approval.
· Min. 24-hour notification needed for rushes.

Report To: GZA
530 Broadway
Providence, RI 02909

Tel #: 401-421-4140
Project Manager: Albert Flori

Invoice To: same
Attn: Albert Flori
P.O. No.: 33175.06 **RQN:**

Project No.: 33175.06
Site Name: Riverside
Location: East Providence **State:** RI
Sampler(s): Albert Flori

Can ID	Can Size (L)	Outgoing Canister Pressure ("Hg) (Lab)	Incoming Canister Pressure ("Hg) (Lab)	Flow Reg. ID	Flow Controller Readout (ml/min)	Lab Id:	Sample Id:	Sample Date(s)	Time Start (24 hr clock)	Time Stop (24 hr clock)	Canister Pressure in Field ("Hg) (Start)	Canister Pressure in Field ("Hg) (Stop)	Interior Temp. (F) (Start)	Interior Temp. (F) (Stop)	Analysis: TO-15	Analysis	Analysis	Analysis	Matrix: Indoor/Ambient Air	Matrix: Soil Gas	Matrix	Check box if canister is returned unused
LABORATORY USE ONLY																						
0141	3.2	-30		2988	95.7	SC06738-01	SVE Combine	4/28/15	12:41	13:08	30	3	55	55	+					✓		

Date of Request: 4/24/15	Total # Canisters: 1	**QA/QC Reporting Level:**	
Requested by: Albert Flori	# LL Canisters: —	☑ Standard	☐ NY ASP A* ☐ TIER II* ☐ MA DEP CAM
Company: GZA GeoEnvironment	# Flow Controllers: 1	☐ NO QC	☐ NY ASP B* ☐ TIER IV* ☐ CT DPH RCP
Location: Providence RI	Flow Rate/Setting: 20mL/m	☐ DQA*	* additional charges may apply contact SA's QA Department for further info.
Date Needed: 4/27/15 Order #: 35608	Prepared by: RRF GMA		

Client Use	Ambient Temperature (Fahrenheit)	Ambient Pressure (inches of Hg)
Start		
Stop		

I attest that all media relinquished from Spectrum Analytical, Inc. have been received in good working condition, based on visual observation, and agree to the terms and conditions as listed on the back of this document.

Signed: Date:

Printed:

Special Instructions/QC Requirements & Comments:
TVOC ≥ 0.5 ppmv
20.3 | 0 | 20.3 1201 JLH 4/29

Please contact SA's Air Department immediately at (800) 789-9115 if you experience any technical difficulties or suspect any QC issue(s) with air media.

Relinquished by:	Received by:	Date:	Time:
[signature]	[signature] 4/29/15 1305	4-28-15	13:30
[signature]	JLH	4/29/15	1705

☐ EDD Format pdf
☐ E-mail Results to aflori@gza.com

SPECTRUM ANALYTICAL, INC.
Featuring
HANIBAL TECHNOLOGY

Chain of Custody Record/Field Test Data Sheets for Air Analyses

Page of SC06738

Special Handling:
☐ Standard TAT - Six (6) business days
☐ Rush TAT - Date Needed: _____

All TATs subject to laboratory approval.
Min. 24-hour notification needed for rushes.

Report To:
Tel #:
Project Manager:

Invoice To:
Attn:
P.O. No.: RQN:

Project No.:
Site Name:
Location: State:
Sample(s):

Analysis: TO-15
Matrix: Indoor/Ambient Air; Soil Gas

Can ID	Can Size (L)	Outgoing Canister Pressure ("Hg) (Lab)	Incoming Canister Pressure ("Hg) (Lab)	Flow Reg. ID	Flow Controller Readout (ml/min)	Lab Id	Sample Id	Sample Date/Time	Date Start (24 hr clock)	Date Stop (24 hr clock)	Canister Pressure in Field ("Hg) (Start)	Canister Pressure in Field ("Hg) (Stop)	Interior Temp (F) (Start)	Interior Temp (F) (Stop)	TO-15	Indoor/Ambient Air	Soil Gas	Check box if canister is returned unused
			LABORATORY USE ONLY															
0141	3.2	-30	-3	2988	95.7	SC06738-01	[illegible]		[illegible]	[illegible]	30	3	55	55	✓		✓	

Date of Request: 4/24/15
Requested by: Albert Fiori
Company: GZA GeoEnvironmental
Location: Providence RI
Date Needed: 4/27/15 Order #: 35608 Prepared by: BRF GMA

Total # Canisters: 1
I.L. Canisters: —
Flow Controllers: 1
Flow Rate/Setting: 20min

I attest that all media relinquished from Spectrum Analytical, Inc. have been received in good working condition, based on visual observation, and agree to the terms and conditions as listed on the back of this document.

Signed: Date:
Printed:

QA/QC Reporting Level:
☐ Standard ☐ NY ASP A* ☐ TIER II* ☐ MA DEP CAM
☐ NO QC ☐ NY ASP B* ☐ TIER IV* ☐ CT DPH RCP
☐ DQA*
* additional charges may apply contact SA's QA Department for further info

Client Use	Ambient Temperature (Fahrenheit)	Ambient Pressure (inches of Hg)
Start		
Stop		

Special Instructions/QC Requirements & Comments:
TVOC 20.5 ppmv
20.3 | 0 | 20.3 1201 JGH 4/29

Please contact SA's Air Department immediately at (800) 789-9115 if you experience any technical difficulties or suspect any QC issue(s) with air media.

Relinquished by:	Received by:	Date:	Time:
[signature]	[signature] 4-24-15	4-23-15	[illegible]
[signature]	JGH	4/29/15	1725

☐ EDD Format
☐ E-mail Results to

APPENDIX D

BORING LOGS

GZA GEOENVIRONMENTAL INC. 530 BROADWAY, PROVIDENCE, RHODE ISLAND GEOTECH/GEOHYDROLOGICAL CONSULTANTS HYDROLOGICAL BORING LOG	PROJECT Riverside Square East Providence, Rhode Island	REPORT OF BORING NO. GP-200 SHEET 1 of 1 FILE NO. 33175.06 CHKD BY

BORING CO.	New England Geotech	BORING LOCATION	See Exploration Location Plan		
FOREMAN	Keith	GROUND SURFACE ELEV.		DATUM	
GZA ENGINEER	Marissa Kelly	DATE START	6/4/15	DATE END	6/4/15

GROUNDWATER READINGS

DATE	TIME	WATER	CASING	STABILIZATION TIME

CASING SIZE: OTHER: GeoProbe

DPTH (FT)	CASING BLOWS	SAMPLE NO	PEN/REC	DEPTH (FT)	BLOWS/6"	SAMPLE DESCRIPTION BURMISTER CLASSIFICATION	STRATUM DESCRIPTION	EQUIPMENT INSTALLED	FIELD TESTING	R K
		S-1	24/6	0-2'		S-1: (0-2") Concrete; (2-6") Brown, fine to medium SAND, trace fine Gravel, trace Silt			86 ppmv	
		S-2	24/16	2-4'		S-2: Brown to tan, fine to medium SAND, trace fine Gravel, trace Silt			3.6 ppmv	
5		S-3	24/16	4-6'		S-3: Tan, fine to medium SAND, trace Silt			1.0 ppmv	
		S-4	24/20	6-8'		S-4: Tan, fine to medium SAND, trace fine Gravel, trace Silt			31 ppmv	
						Bottom of Exploration at 8'				
10										
15										
20										
25										
30										
35										

REMARKS:

1. The headspace of soil samples was screened for Total Volatile Organic Compounds (TVOCs) using and OVM Model 580B photoionization detector equipped with a 10.6 eV lamp. ND indicates reading below the instruments detection limit of approximately 0.1 ppmv.

NOTES:
1) STRATIFICATION LINES REPRESENT APPROXIMATE BOUNDARY BETWEEN SOIL TYPES; TRANSITIONS MAY BE GRADUAL.
2) WATER LEVEL READINGS HAVE BEEN MADE AT TIMES AND UNDER CONDITIONS STATED; FLUCTUATIONS OF GROUNDWATER TABLE MAY OCCUR DUE TO OTHER FACTORS THAN THOSE PRESENT AT THE TIME MEASUREMENTS WERE MADE.

GZA GEOENVIRONMENTAL INC. 530 BROADWAY, PROVIDENCE, RHODE ISLAND GEOTECH/GEOHYDROLOGICAL CONSULTANTS HYDROLOGICAL BORING LOG	PROJECT Riverside Square East Providence, Rhode Island	REPORT OF BORING NO. GP-201 SHEET 1 of 1 FILE NO. 33175.06 CHKD BY

BORING CO.	New England Geotech	BORING LOCATION	See Exploration Location Plan		
FOREMAN	Keith	GROUND SURFACE ELEV.		DATUM	
GZA ENGINEER	Marissa Kelly	DATE START	6/4/15	DATE END	6/4/15

GROUNDWATER READINGS

DATE	TIME	WATER	CASING	STABILIZATION TIME

CASING SIZE: OTHER: GeoProbe

DPTH (FT)	CASING BLOWS	SAMPLE NO	PEN/REC	DEPTH (FT)	BLOWS/6"	SAMPLE DESCRIPTION BURMISTER CLASSIFICATION	STRATUM DESCRIPTION	EQUIPMENT INSTALLED	FIELD TESTING	RK
		S-1	24/12	0-2'		S-1: (0-2") Concrete; (2-12") Brown,			5.1 ppmv	
						fine to medium SAND, trace Silt				
		S-2	24/7	2-4'		S-2: Brown, f-m SAND, little f-c Gravel, little			8.0 ppmv	
						Concrete, trace Brick,trace Silt				
5		S-3	24/15	4-6'		S-3: (0-3") Dark brown, f-m SAND, little f-c			2.0 ppmv	
						Gravel, trace Brick, trace Silt				
		S-4	24/13	6-8'		(3-15") Tan, fine to coarse SAND			0.7 ppmv	
						S-4: Brown, fine to coarse SAND, trace fine				
						Gravel, trace Silt				
10						Bottom of Exploration at 8'				
15										
20										
25										
30										
35										

REMARKS:

1. The headspace of soil samples was screened for Total Volatile Organic Compounds (TVOCs) using and OVM Model 580B photoionization detector equipped with a 10.6 eV lamp. ND indicates reading below the instruments detection limit of approximately 0.1 ppmv.

NOTES:
1) STRATIFICATION LINES REPRESENT APPROXIMATE BOUNDARY BETWEEN SOIL TYPES; TRANSITIONS MAY BE GRADUAL.
2) WATER LEVEL READINGS HAVE BEEN MADE AT TIMES AND UNDER CONDITIONS STATED; FLUCTUATIONS OF GROUNDWATER TABLE MAY OCCUR DUE TO OTHER FACTORS THAN THOSE PRESENT AT THE TIME MEASUREMENTS WERE MADE.

GZA GEOENVIRONMENTAL INC. 530 BROADWAY, PROVIDENCE, RHODE ISLAND GEOTECH/GEOHYDROLOGICAL CONSULTANTS HYDROLOGICAL BORING LOG	PROJECT Riverside Square East Providence, Rhode Island	REPORT OF BORING NO. GP-202 SHEET 1 of 1 FILE NO. 33175.06 CHKD BY

BORING CO.	New England Geotech	BORING LOCATION	See Exploration Location Plan		
FOREMAN	Keith	GROUND SURFACE ELEV.		DATUM	
GZA ENGINEER	Marissa Kelly	DATE START	6/4/15	DATE END	6/4/15

GROUNDWATER READINGS

DATE	TIME	WATER	CASING	STABILIZATION TIME

CASING SIZE: OTHER: GeoProbe

DPTH (FT)	CASING BLOWS	SAMPLE NO	PEN/REC	DEPTH (FT)	BLOWS/6"	SAMPLE DESCRIPTION BURMISTER CLASSIFICATION	STRATUM DESCRIPTION	EQUIPMENT INSTALLED	FIELD TESTING	R K
		S-1	24/16	0-2'		S-1: (0-4") Concrete			3.7 ppmv	
						(4-16") Dark brown, fine to coarse SAND				
		S-2	24/10	2-4'		S-2: Dark brown to tan, fine to coarse SAND,			4.4 ppmv	
						trace fine to coarse Gravel, trace Silt				
5		S-3	24/13	4-6'		S-3: Tan, fine to coarse SAND, trace fine			1.1 ppmv	
						Gravel, trace Silt				
		S-4	24/18	6-8'		S-4: Brown, fine to coarse SAND, little fine to			0.8 ppmv	
						coarse Gravel, trace Silt				
						Bottom of Exploration at 8'				
10										
15										
20										
25										
30										
35										

REMARKS:

1. The headspace of soil samples was screened for Total Volatile Organic Compounds (TVOCs) using and OVM Model 580B photoionization detector equipped with a 10.6 eV lamp. ND indicates reading below the instruments detection limit of approximately 0.1 ppmv.

NOTES: 1) STRATIFICATION LINES REPRESENT APPROXIMATE BOUNDARY BETWEEN SOIL TYPES; TRANSITIONS MAY BE GRADUAL.
2) WATER LEVEL READINGS HAVE BEEN MADE AT TIMES AND UNDER CONDITIONS STATED; FLUCTUATIONS OF GROUNDWATER TABLE MAY OCCUR DUE TO OTHER FACTORS THAN THOSE PRESENT AT THE TIME MEASUREMENTS WERE MADE.

GZA GEOENVIRONMENTAL INC. 530 BROADWAY, PROVIDENCE, RHODE ISLAND GEOTECH/GEOHYDROLOGICAL CONSULTANTS HYDROLOGICAL BORING LOG	PROJECT Riverside Square East Providence, Rhode Island	REPORT OF BORING NO. GP-203 SHEET 1 of 1 FILE NO. 33175.06 CHKD BY

BORING CO.	New England Geotech	BORING LOCATION	See Exploration Location Plan		
FOREMAN	Keith	GROUND SURFACE ELEV.		DATUM	
GZA ENGINEER	Marissa Kelly	DATE START	6/4/15	DATE END	6/4/15

GROUNDWATER READINGS

DATE	TIME	WATER	CASING	STABILIZATION TIME

CASING SIZE: OTHER: GeoProbe

DPTH (FT)	CASING BLOWS	SAMPLE NO	PEN/REC	DEPTH (FT)	BLOWS/6"	SAMPLE DESCRIPTION BURMISTER CLASSIFICATION	STRATUM DESCRIPTION	EQUIPMENT INSTALLED	FIELD TESTING	R K
		S-1	24/11	0-2'		S-1: (0-1") Concrete; (1-11") Orange-brown,			3.3 ppmv	
						fine to medium SAND, trace Silt				
		S-2	24/14	2-4'		S-2: Brown, fine to coarse SAND, trace roots			0.9 ppmv	
5		S-3	24/16	4-6'		S-3: Brown, fine to medium SAND, trace			0.4 ppmv	
						fine gravel				
		S-4	24/18	6-8'		S-4: Gray to brown, fine SAND, little Silt, trace			0.2 ppmv	
						fine to coarse Gravel				
						Bottom of Exploration at 8'				
10										
15										
20										
25										
30										
35										

REMARKS:

1. The headspace of soil samples was screened for Total Volatile Organic Compounds (TVOCs) using and OVM Model 580B photoionization detector equipped with a 10.6 eV lamp. ND indicates reading below the instruments detection limit of approximately 0.1 ppmv.

NOTES:
1) STRATIFICATION LINES REPRESENT APPROXIMATE BOUNDARY BETWEEN SOIL TYPES; TRANSITIONS MAY BE GRADUAL.
2) WATER LEVEL READINGS HAVE BEEN MADE AT TIMES AND UNDER CONDITIONS STATED; FLUCTUATIONS OF GROUNDWATER TABLE MAY OCCUR DUE TO OTHER FACTORS THAN THOSE PRESENT AT THE TIME MEASUREMENTS WERE MADE.

GZA GEOENVIRONMENTAL INC. 530 BROADWAY, PROVIDENCE, RHODE ISLAND GEOTECH/GEOHYDROLOGICAL CONSULTANTS HYDROLOGICAL BORING LOG	PROJECT Riverside Square East Providence, Rhode Island	REPORT OF BORING NO. GP-204 SHEET 1 of 1 FILE NO. 33175.06 CHKD BY

BORING CO.	New England Geotech	BORING LOCATION	See Exploration Location Plan		
FOREMAN	Keith	GROUND SURFACE ELEV.		DATUM	
GZA ENGINEER	Marissa Kelly	DATE START	6/4/15	DATE END	6/4/15

GROUNDWATER READINGS

DATE	TIME	WATER	CASING	STABILIZATION TIME

CASING SIZE: OTHER: GeoProbe

DPTH (FT)	CASING BLOWS	SAMPLE NO	PEN/REC	DEPTH (FT)	BLOWS/6"	SAMPLE DESCRIPTION BURMISTER CLASSIFICATION	STRATUM DESCRIPTION	EQUIPMENT INSTALLED	FIELD TESTING	R K
		S-1	24/14	0-2'		S-1: (0-1") Concrete; (1-14") Brown, fine			1.0 ppmv	
						to coarse SAND, trace fine Gravel, trace Silt				
		S-2	24/16	2-4'		S-2: Dark brown, fine to coarse SAND, trace			1.6 ppmv	
						Roots, trace Silt				
5		S-3	24/17	4-6'		S-3: (0-3") Dark brown, f-c SAND, trace Silt			0.5 ppmv	
						(3-17") Tan, fine to medium SAND, trace Silt				
		S-4	24/14	6-8'		S-4: Brown, fine to coarse SAND, trace fine			0.5 ppmv	
						to coarse Gravel				
						Bottom of Exploration at 8'				
10										
15										
20										
25										
30										
35										

REMARKS:

1. The headspace of soil samples was screened for Total Volatile Organic Compounds (TVOCs) using and OVM Model 580B photoionization detector equipped with a 10.6 eV lamp. ND indicates reading below the instruments detection limit of approximately 0.1 ppmv.

NOTES:
1) STRATIFICATION LINES REPRESENT APPROXIMATE BOUNDARY BETWEEN SOIL TYPES; TRANSITIONS MAY BE GRADUAL.
2) WATER LEVEL READINGS HAVE BEEN MADE AT TIMES AND UNDER CONDITIONS STATED; FLUCTUATIONS OF GROUNDWATER TABLE MAY OCCUR DUE TO OTHER FACTORS THAN THOSE PRESENT AT THE TIME MEASUREMENTS WERE MADE.

GZA GEOENVIRONMENTAL INC. 530 BROADWAY, PROVIDENCE, RHODE ISLAND GEOTECH/GEOHYDROLOGICAL CONSULTANTS HYDROLOGICAL BORING LOG	PROJECT Riverside Square East Providence, Rhode Island	REPORT OF BORING NO. GP-205 SHEET 1 of 1 FILE NO. 33175.06 CHKD BY

BORING CO.	New England Geotech	BORING LOCATION	See Exploration Location Plan		
FOREMAN	Keith	GROUND SURFACE ELEV.		DATUM	
GZA ENGINEER	Marissa Kelly	DATE START	6/4/15	DATE END	6/4/15

GROUNDWATER READINGS

DATE	TIME	WATER	CASING	STABILIZATION TIME

CASING SIZE: OTHER: GeoProbe

DPTH (FT)	CASING BLOWS	SAMPLE NO	PEN/REC	DEPTH (FT)	BLOWS/6"	SAMPLE DESCRIPTION BURMISTER CLASSIFICATION	STRATUM DESCRIPTION	EQUIPMENT INSTALLED	FIELD TESTING	R K
		S-1	24/15	0-2'		S-1: (0-1") Concrete			0.5 ppmv	
						(1-15") Brown, fine to coarse SAND				
		S-2	24/11	2-4'		S-2: Orange-brown, fine to medium SAND			0.5 ppmv	
5		S-3	24/14	4-6'		S-3: (0-4") Brown, fine to coarse SAND,			0.6 ppmv	
						trace f-c Gravel; (4-14") Tan, f-m SAND				
		S-4	24/12	6-8'		S-4: Brown to gray, fine to coarse SAND,			0.5 ppmv	
						little fine to coarse Gravel				
						Bottom of Exploration at 8'				
10										
15										
20										
25										
30										
35										

REMARKS:

1. The headspace of soil samples was screened for Total Volatile Organic Compounds (TVOCs) using and OVM Model 580B photoionization detector equipped with a 10.6 eV lamp. ND indicates reading below the instruments detection limit of approximately 0.1 ppmv.

NOTES:
1) STRATIFICATION LINES REPRESENT APPROXIMATE BOUNDARY BETWEEN SOIL TYPES; TRANSITIONS MAY BE GRADUAL.
2) WATER LEVEL READINGS HAVE BEEN MADE AT TIMES AND UNDER CONDITIONS STATED; FLUCTUATIONS OF GROUNDWATER TABLE MAY OCCUR DUE TO OTHER FACTORS THAN THOSE PRESENT AT THE TIME MEASUREMENTS WERE MADE.

GZA GEOENVIRONMENTAL INC. 530 BROADWAY, PROVIDENCE, RHODE ISLAND GEOTECH/GEOHYDROLOGICAL CONSULTANTS HYDROLOGICAL BORING LOG	PROJECT Riverside Square East Providence, Rhode Island	REPORT OF BORING NO. GP-206 SHEET 1 of 1 FILE NO. 33175.06 CHKD BY

BORING CO.	New England Geotech	BORING LOCATION	See Exploration Location Plan		
FOREMAN	Keith	GROUND SURFACE ELEV.		DATUM	
GZA ENGINEER	Marissa Kelly	DATE START	6/4/15	DATE END	6/4/15

GROUNDWATER READINGS

DATE	TIME	WATER	CASING	STABILIZATION TIME

CASING SIZE: OTHER: GeoProbe

DPTH (FT)	CASING BLOWS	SAMPLE NO	PEN/REC	DEPTH (FT)	BLOWS/6"	SAMPLE DESCRIPTION BURMISTER CLASSIFICATION	STRATUM DESCRIPTION	EQUIPMENT INSTALLED	FIELD TESTING	R K
		S-1	24/17	0-2'		S-1: (0-1") Concrete; (1-17") Brown, fine			4.6 ppmv	
						to coarse SAND, trace Roots, trace Silt				
		S-2	24/10	2-4'		S-2: Tan, fine to medium SAND			1.8 ppmv	
5		S-3	24/8	4-6'		S-3: Light brown, fine to medium SAND,			1.0 ppmv	
						trace fine to coarse Gravel				
		S-4	24/12	6-8'		S-4: Brown to gray, fine to coarse SAND and			1.6 ppmv	
						fine to coarse GRAVEL				
						Bottom of Exploration at 8'				
10										
15										
20										
25										
30										
35										

REMARKS:

1. The headspace of soil samples was screened for Total Volatile Organic Compounds (TVOCs) using and OVM Model 580B photoionization detector equipped with a 10.6 eV lamp. ND indicates reading below the instruments detection limit of approximately 0.1 ppmv.

NOTES:
1) STRATIFICATION LINES REPRESENT APPROXIMATE BOUNDARY BETWEEN SOIL TYPES; TRANSITIONS MAY BE GRADUAL.
2) WATER LEVEL READINGS HAVE BEEN MADE AT TIMES AND UNDER CONDITIONS STATED; FLUCTUATIONS OF GROUNDWATER TABLE MAY OCCUR DUE TO OTHER FACTORS THAN THOSE PRESENT AT THE TIME MEASUREMENTS WERE MADE.

GZA GEOENVIRONMENTAL INC. 530 BROADWAY, PROVIDENCE, RHODE ISLAND GEOTECH/GEOHYDROLOGICAL CONSULTANTS HYDROLOGICAL BORING LOG	PROJECT Riverside Square East Providence, Rhode Island	REPORT OF BORING NO. GP-207 SHEET 1 of 1 FILE NO. 33175.06 CHKD BY

BORING CO.	New England Geotech	BORING LOCATION	See Exploration Location Plan		
FOREMAN	Keith	GROUND SURFACE ELEV.		DATUM	
GZA ENGINEER	Marissa Kelly	DATE START	6/4/15	DATE END	6/4/15

GROUNDWATER READINGS

DATE	TIME	WATER	CASING	STABILIZATION TIME

CASING SIZE: OTHER: GeoProbe

DPTH (FT)	CASING BLOWS	SAMPLE NO	PEN/REC	DEPTH (FT)	BLOWS/6"	SAMPLE DESCRIPTION BURMISTER CLASSIFICATION	STRATUM DESCRIPTION	EQUIPMENT INSTALLED	FIELD TESTING	R K
		S-1	24/9	0-2'		S-1: (0-2") Concrete; (2-9") Brown to tan, fine to medium SAND, trace fine Gravel, trace Silt			22 ppmv	
		S-2	24/14	2-4'		S-2: Reddish brown, fine to coarse SAND, trace Silt			16 ppmv	
5		S-3	24/13	4-6'		S-3: Light brown, fine to medium SAND			46 ppmv	
		S-4	24/10	6-8'		S-4: Brown, fine to coarse SAND, trace fine to coarse Gravel			15 ppmv	
						Bottom of Exploration at 8'				
10										
15										
20										
25										
30										
35										

REMARKS:

1. The headspace of soil samples was screened for Total Volatile Organic Compounds (TVOCs) using and OVM Model 580B photoionization detector equipped with a 10.6 eV lamp. ND indicates reading below the instruments detection limit of approximately 0.1 ppmv.

NOTES:
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GZA GEOENVIRONMENTAL INC. 530 BROADWAY, PROVIDENCE, RHODE ISLAND GEOTECH/GEOHYDROLOGICAL CONSULTANTS HYDROLOGICAL BORING LOG	PROJECT Riverside Square East Providence, Rhode Island	REPORT OF BORING NO. GP-208 SHEET 1 of 1 FILE NO. 33175.06 CHKD BY

BORING CO.	New England Geotech	BORING LOCATION	See Exploration Location Plan		
FOREMAN	Keith	GROUND SURFACE ELEV.		DATUM	
GZA ENGINEER	Marissa Kelly	DATE START	6/4/15	DATE END	6/4/15

GROUNDWATER READINGS

DATE	TIME	WATER	CASING	STABILIZATION TIME

CASING SIZE: OTHER: GeoProbe

DPTH (FT)	CASING BLOWS	SAMPLE NO	PEN/REC	DEPTH (FT)	BLOWS/6"	SAMPLE DESCRIPTION BURMISTER CLASSIFICATION	STRATUM DESCRIPTION	EQUIPMENT INSTALLED	FIELD TESTING	RK
		S-1	24/14	0-2'		S-1: (0-5") Concrete			0.1 ppmv	
						(5-14") Dark brown, fine to coarse SAND				
		S-2	24/11	2-4'		S-2: Gray to brown, fine to coarse SAND,			0.2 ppmv	
						trace fine Gravel, trace Silt				
5		S-3	24/15	4-6'		S-3: (0-9") Gray to dark brown, f-c SAND, little			0.3 ppmv	
						f-c Gravel; (9-15") Tan, f-m SAND, trace Silt				
		S-4	24/14	6-8'		S-4: Tan to gray, fine to coarse SAND and			0.6ppmv	
						fine to coarse GRAVEL, trace Silt				
						Bottom of Exploration at 8'				
10										
15										
20										
25										
30										
35										

REMARKS:

1. The headspace of soil samples was screened for Total Volatile Organic Compounds (TVOCs) using and OVM Model 580B photoionization detector equipped with a 10.6 eV lamp. ND indicates reading below the instruments detection limit of approximately 0.1 ppmv.

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GZA GEOENVIRONMENTAL INC. 530 BROADWAY, PROVIDENCE, RHODE ISLAND GEOTECH/GEOHYDROLOGICAL CONSULTANTS HYDROLOGICAL BORING LOG	PROJECT Riverside Square East Providence, Rhode Island	REPORT OF BORING NO. GP-209 SHEET 1 of 1 FILE NO. 33175.06 CHKD BY

BORING CO.	New England Geotech	BORING LOCATION	See Exploration Location Plan		
FOREMAN	Keith	GROUND SURFACE ELEV.		DATUM	
GZA ENGINEER	Marissa Kelly	DATE START	6/4/15	DATE END	6/4/15

GROUNDWATER READINGS

DATE	TIME	WATER	CASING	STABILIZATION TIME

CASING SIZE: OTHER: GeoProbe

DPTH (FT)	CASING BLOWS	SAMPLE NO	PEN/REC	DEPTH (FT)	BLOWS/6"	SAMPLE DESCRIPTION BURMISTER CLASSIFICATION	STRATUM DESCRIPTION	EQUIPMENT INSTALLED	FIELD TESTING	R K
		S-1	24/15	0-2'		S-1: (0-8") Dark brown, f-m SAND, little fine Gravel,			0.2 ppmv	
						trace Silt, trace Roots; (8-15") Tan, f-c SAND				
		S-2	24/9	2-4'		S-2: Brown, fine to medium SAND, little fine			0.5 ppmv	
						to coarse Gravel, trace Silt				
5		S-3	24/18	4-6'		S-3: (0-2") Dark brown, f-m SAND, some fine			0.4 ppmv	
						Gravel, trace Silt; (2-18") Tan, fine SAND, trace Silt				
		S-4	24/14	6-8'		S-4: Dark brown to brown, f-m SAND, little			1.1 ppmv	
						fine to coarse Gravel, little Silt				
						Bottom of Exploration at 8'				
10										
15										
20										
25										
30										
35										

REMARKS:

1. The headspace of soil samples was screened for Total Volatile Organic Compounds (TVOCs) using and OVM Model 580B photoionization detector equipped with a 10.6 eV lamp. ND indicates reading below the instruments detection limit of approximately 0.1 ppmv.

NOTES:
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APPENDIX E

SOIL LABORATORY ANALYSIS

CERTIFICATE OF ANALYSIS

Al Flori
GZA GeoEnvironmental, Inc.
530 Broadway
Providence, RI 02909

RE: Riverside Square (03.0033175.06)
ESS Laboratory Work Order Number: 1506154

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 4:09 pm, Jun 11, 2015

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 NELAC Standards, A2LA 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: Riverside Square

ESS Laboratory Work Order: 1506154

SAMPLE RECEIPT

The following samples were received on June 04, 2015 for the analyses specified on the enclosed Chain of Custody Record.

Lab Number	Sample Name	Matrix	Analysis
1506154-01	GP-200 0-2	Soil	8260B
1506154-02	GP-200 6-8	Soil	8260B
1506154-03	GP-201 0-2	Soil	8260B
1506154-04	GP-201 2-4	Soil	8260B
1506154-05	GP-202 0-2	Soil	8260B
1506154-06	GP-202 2-4	Soil	8260B
1506154-07	GP-203 0-2	Soil	8260B
1506154-08	GP-203 0-2 BD	Soil	8260B
1506154-09	GP-203 2-4	Soil	8260B
1506154-10	GP-204 2-4	Soil	8260B
1506154-11	GP-204 4-6	Soil	8260B
1506154-12	GP-205 0-2	Soil	8260B
1506154-13	GP-205 4-6	Soil	8260B
1506154-14	GP-206 0-2	Soil	8260B
1506154-15	GP-206 2-4	Soil	8260B
1506154-16	GP-207 0-2	Soil	8260B
1506154-17	GP-207 4-6	Soil	8260B
1506154-18	GP-208 2-4	Soil	8260B
1506154-19	GP-208 6-8	Soil	8260B
1506154-20	GP-209 2-4	Soil	8260B
1506154-21	GP-209 6-8	Soil	8260B
1506154-22	TP060415M	Solid	8260B

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Riverside Square

ESS Laboratory Work Order: 1506154

PROJECT NARRATIVE

5035/8260B Volatile Organic Compounds / Methanol

CF50535-BS1 **Blank Spike recovery is above upper control limit (B+).**
Acetone (146% @ 70-130%)

CF50535-BSD1 **Blank Spike recovery is above upper control limit (B+).**
Acetone (152% @ 70-130%), Bromomethane (148% @ 70-130%), Vinyl Acetate (143% @ 70-130%)

CF50846-BS1 **Blank Spike recovery is above upper control limit (B+).**
2,2-Dichloropropane (136% @ 70-130%), 2-Butanone (160% @ 70-130%), 2-Hexanone (131% @ 70-130%), Acetone (262% @ 70-130%), Bromomethane (163% @ 70-130%), Diethyl Ether (132% @ 70-130%), Vinyl Acetate (144% @ 70-130%)

CF50846-BSD1 **Blank Spike recovery is above upper control limit (B+).**
Acetone (163% @ 70-130%), Bromomethane (144% @ 70-130%)

CF50846-BSD1 **Relative percent difference for duplicate is outside of criteria (D+).**
Acetone (47% @ 25%)

No other observations noted.

End of Project Narrative.

DATA USABILITY LINKS

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: Riverside Square

ESS Laboratory Work Order: 1506154

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
8015D - 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: Riverside Square
Client Sample ID: GP-200 0-2
Date Sampled: 06/04/15 08:22
Percent Solids: 96
Initial Volume: 16.6
Final Volume: 15
Extraction Method: 5035

ESS Laboratory Work Order: 1506154
ESS Laboratory Sample ID: 1506154-01
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MD

5035/8260B Volatile Organic Compounds / Methanol

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
1,1,1,2-Tetrachloroethane	ND (0.0986)	0.0086	8260B		1	06/05/15 14:24	CYF0086	CF50535
1,1,1-Trichloroethane	**0.0651** (0.0493)	0.0087	8260B		1	06/05/15 14:24	CYF0086	CF50535
1,1,2,2-Tetrachloroethane	ND (0.0493)	0.0134	8260B		1	06/05/15 14:24	CYF0086	CF50535
1,1,2-Trichloroethane	ND (0.0493)	0.0123	8260B		1	06/05/15 14:24	CYF0086	CF50535
1,1-Dichloroethane	ND (0.0493)	0.0079	8260B		1	06/05/15 14:24	CYF0086	CF50535
1,1-Dichloroethene	ND (0.0493)	0.0121	8260B		1	06/05/15 14:24	CYF0086	CF50535
1,1-Dichloropropene	ND (0.0493)	0.0076	8260B		1	06/05/15 14:24	CYF0086	CF50535
1,2,3-Trichlorobenzene	ND (0.0493)	0.0165	8260B		1	06/05/15 14:24	CYF0086	CF50535
1,2,3-Trichloropropane	ND (0.0493)	0.0122	8260B		1	06/05/15 14:24	CYF0086	CF50535
1,2,4-Trichlorobenzene	ND (0.0493)	0.0108	8260B		1	06/05/15 14:24	CYF0086	CF50535
1,2,4-Trimethylbenzene	**J 0.0158** (0.0493)	0.0095	8260B		1	06/05/15 14:24	CYF0086	CF50535
1,2-Dibromo-3-Chloropropane	ND (0.296)	0.0986	8260B		1	06/05/15 14:24	CYF0086	CF50535
1,2-Dibromoethane	ND (0.0493)	0.0125	8260B		1	06/05/15 14:24	CYF0086	CF50535
1,2-Dichlorobenzene	ND (0.0493)	0.0070	8260B		1	06/05/15 14:24	CYF0086	CF50535
1,2-Dichloroethane	ND (0.0493)	0.0132	8260B		1	06/05/15 14:24	CYF0086	CF50535
1,2-Dichloropropane	ND (0.0493)	0.0129	8260B		1	06/05/15 14:24	CYF0086	CF50535
1,3,5-Trimethylbenzene	ND (0.0493)	0.0087	8260B		1	06/05/15 14:24	CYF0086	CF50535
1,3-Dichlorobenzene	ND (0.0493)	0.0062	8260B		1	06/05/15 14:24	CYF0086	CF50535
1,3-Dichloropropane	ND (0.0493)	0.0110	8260B		1	06/05/15 14:24	CYF0086	CF50535
1,4-Dichlorobenzene	ND (0.0493)	0.0131	8260B		1	06/05/15 14:24	CYF0086	CF50535
1,4-Dioxane - Screen	ND (4.93)	1.65	8260B		1	06/05/15 14:24	CYF0086	CF50535
1-Chlorohexane	ND (0.0493)	0.0094	8260B		1	06/05/15 14:24	CYF0086	CF50535
2,2-Dichloropropane	ND (0.0986)	0.0169	8260B		1	06/05/15 14:24	CYF0086	CF50535
2-Butanone	ND (1.23)	0.285	8260B		1	06/05/15 14:24	CYF0086	CF50535
2-Chlorotoluene	ND (0.0493)	0.0139	8260B		1	06/05/15 14:24	CYF0086	CF50535
2-Hexanone	ND (0.493)	0.0849	8260B		1	06/05/15 14:24	CYF0086	CF50535
4-Chlorotoluene	ND (0.0493)	0.0064	8260B		1	06/05/15 14:24	CYF0086	CF50535
4-Isopropyltoluene	ND (0.0493)	0.0088	8260B		1	06/05/15 14:24	CYF0086	CF50535
4-Methyl-2-Pentanone	ND (0.493)	0.0594	8260B		1	06/05/15 14:24	CYF0086	CF50535
Acetone	ND (1.23)	0.365	8260B		1	06/05/15 14:24	CYF0086	CF50535
Benzene	ND (0.0493)	0.0080	8260B		1	06/05/15 14:24	CYF0086	CF50535
Bromobenzene	ND (0.0493)	0.0135	8260B		1	06/05/15 14:24	CYF0086	CF50535

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Riverside Square
Client Sample ID: GP-200 0-2
Date Sampled: 06/04/15 08:22
Percent Solids: 96
Initial Volume: 16.6
Final Volume: 15
Extraction Method: 5035

ESS Laboratory Work Order: 1506154
ESS Laboratory Sample ID: 1506154-01
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MD

5035/8260B Volatile Organic Compounds / Methanol

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
Bromochloromethane	ND (0.0493)	0.0160	8260B		1	06/05/15 14:24	CYF0086	CF50535
Bromodichloromethane	ND (0.0493)	0.0068	8260B		1	06/05/15 14:24	CYF0086	CF50535
Bromoform	ND (0.0493)	0.0142	8260B		1	06/05/15 14:24	CYF0086	CF50535
Bromomethane	ND (0.0986)	0.0329	8260B		1	06/05/15 14:24	CYF0086	CF50535
Carbon Disulfide	ND (0.0493)	0.0073	8260B		1	06/05/15 14:24	CYF0086	CF50535
Carbon Tetrachloride	ND (0.0493)	0.0086	8260B		1	06/05/15 14:24	CYF0086	CF50535
Chlorobenzene	ND (0.0493)	0.0078	8260B		1	06/05/15 14:24	CYF0086	CF50535
Chloroethane	ND (0.0986)	0.0328	8260B		1	06/05/15 14:24	CYF0086	CF50535
Chloroform	ND (0.0493)	0.0102	8260B		1	06/05/15 14:24	CYF0086	CF50535
Chloromethane	ND (0.0986)	0.0125	8260B		1	06/05/15 14:24	CYF0086	CF50535
cis-1,2-Dichloroethene	ND (0.0493)	0.0122	8260B		1	06/05/15 14:24	CYF0086	CF50535
cis-1,3-Dichloropropene	ND (0.0493)	0.0111	8260B		1	06/05/15 14:24	CYF0086	CF50535
Dibromochloromethane	ND (0.0493)	0.0124	8260B		1	06/05/15 14:24	CYF0086	CF50535
Dibromomethane	ND (0.0493)	0.0156	8260B		1	06/05/15 14:24	CYF0086	CF50535
Dichlorodifluoromethane	ND (0.0493)	0.0086	8260B		1	06/05/15 14:24	CYF0086	CF50535
Diethyl Ether	ND (0.0493)	0.0125	8260B		1	06/05/15 14:24	CYF0086	CF50535
Di-isopropyl ether	ND (0.0493)	0.0093	8260B		1	06/05/15 14:24	CYF0086	CF50535
Ethyl tertiary-butyl ether	ND (0.0493)	0.0124	8260B		1	06/05/15 14:24	CYF0086	CF50535
Ethylbenzene	ND (0.0493)	0.0064	8260B		1	06/05/15 14:24	CYF0086	CF50535
Hexachlorobutadiene	ND (0.0493)	0.0165	8260B		1	06/05/15 14:24	CYF0086	CF50535
Isopropylbenzene	ND (0.0493)	0.0087	8260B		1	06/05/15 14:24	CYF0086	CF50535
Methyl tert-Butyl Ether	ND (0.0493)	0.0079	8260B		1	06/05/15 14:24	CYF0086	CF50535
Methylene Chloride	ND (0.247)	0.0129	8260B		1	06/05/15 14:24	CYF0086	CF50535
Naphthalene	**J 0.0365** (0.0493)	0.0129	8260B		1	06/05/15 14:24	CYF0086	CF50535
n-Butylbenzene	ND (0.0493)	0.0121	8260B		1	06/05/15 14:24	CYF0086	CF50535
n-Propylbenzene	ND (0.0493)	0.0120	8260B		1	06/05/15 14:24	CYF0086	CF50535
sec-Butylbenzene	ND (0.0493)	0.0066	8260B		1	06/05/15 14:24	CYF0086	CF50535
Styrene	ND (0.0493)	0.0065	8260B		1	06/05/15 14:24	CYF0086	CF50535
tert-Butylbenzene	ND (0.0493)	0.0115	8260B		1	06/05/15 14:24	CYF0086	CF50535
Tertiary-amyl methyl ether	ND (0.0493)	0.0071	8260B		1	06/05/15 14:24	CYF0086	CF50535
Tetrachloroethene	**0.114** (0.0493)	0.0165	8260B		1	06/05/15 14:24	CYF0086	CF50535
Tetrahydrofuran	ND (0.493)	0.127	8260B		1	06/05/15 14:24	CYF0086	CF50535

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Riverside Square
Client Sample ID: GP-200 0-2
Date Sampled: 06/04/15 08:22
Percent Solids: 96
Initial Volume: 16.6
Final Volume: 15
Extraction Method: 5035

ESS Laboratory Work Order: 1506154
ESS Laboratory Sample ID: 1506154-01
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MD

5035/8260B Volatile Organic Compounds / Methanol

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
Toluene	ND (0.0493)	0.0125	8260B		1	06/05/15 14:24	CYF0086	CF50535
trans-1,2-Dichloroethene	ND (0.0493)	0.0162	8260B		1	06/05/15 14:24	CYF0086	CF50535
trans-1,3-Dichloropropene	ND (0.0493)	0.0152	8260B		1	06/05/15 14:24	CYF0086	CF50535
Trichloroethene	**0.538** (0.0493)	0.0102	8260B		1	06/05/15 14:24	CYF0086	CF50535
Trichlorofluoromethane	ND (0.0493)	0.0130	8260B		1	06/05/15 14:24	CYF0086	CF50535
Vinyl Acetate	ND (0.247)	0.0102	8260B		1	06/05/15 14:24	CYF0086	CF50535
Vinyl Chloride	ND (0.0493)	0.0163	8260B		1	06/05/15 14:24	CYF0086	CF50535
Xylene O	**J 0.0237** (0.0493)	0.0095	8260B		1	06/05/15 14:24	CYF0086	CF50535
Xylene P,M	**J 0.0533** (0.0986)	0.0191	8260B		1	06/05/15 14:24	CYF0086	CF50535
Xylenes (Total)	ND (0.0986)		8260B		1	06/05/15 14:24		[CALC]

	%Recovery	*Qualifier*	*Limits*
Surrogate: 1,2-Dichloroethane-d4	*101 %*		*70-130*
Surrogate: 4-Bromofluorobenzene	*92 %*		*70-130*
Surrogate: Dibromofluoromethane	*100 %*		*70-130*
Surrogate: Toluene-d8	*87 %*		*70-130*

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Riverside Square
Client Sample ID: GP-200 6-8
Date Sampled: 06/04/15 08:24
Percent Solids: 95
Initial Volume: 18.3
Final Volume: 15
Extraction Method: 5035

ESS Laboratory Work Order: 1506154
ESS Laboratory Sample ID: 1506154-02
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MD

5035/8260B Volatile Organic Compounds / Methanol

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
1,1,1,2-Tetrachloroethane	ND (0.0908)	0.0079	8260B		1	06/05/15 14:52	CYF0086	CF50535
1,1,1-Trichloroethane	ND (0.0454)	0.0080	8260B		1	06/05/15 14:52	CYF0086	CF50535
1,1,2,2-Tetrachloroethane	ND (0.0454)	0.0123	8260B		1	06/05/15 14:52	CYF0086	CF50535
1,1,2-Trichloroethane	ND (0.0454)	0.0114	8260B		1	06/05/15 14:52	CYF0086	CF50535
1,1-Dichloroethane	ND (0.0454)	0.0073	8260B		1	06/05/15 14:52	CYF0086	CF50535
1,1-Dichloroethene	ND (0.0454)	0.0112	8260B		1	06/05/15 14:52	CYF0086	CF50535
1,1-Dichloropropene	ND (0.0454)	0.0070	8260B		1	06/05/15 14:52	CYF0086	CF50535
1,2,3-Trichlorobenzene	ND (0.0454)	0.0152	8260B		1	06/05/15 14:52	CYF0086	CF50535
1,2,3-Trichloropropane	ND (0.0454)	0.0113	8260B		1	06/05/15 14:52	CYF0086	CF50535
1,2,4-Trichlorobenzene	ND (0.0454)	0.0100	8260B		1	06/05/15 14:52	CYF0086	CF50535
1,2,4-Trimethylbenzene	ND (0.0454)	0.0087	8260B		1	06/05/15 14:52	CYF0086	CF50535
1,2-Dibromo-3-Chloropropane	ND (0.272)	0.0908	8260B		1	06/05/15 14:52	CYF0086	CF50535
1,2-Dibromoethane	ND (0.0454)	0.0115	8260B		1	06/05/15 14:52	CYF0086	CF50535
1,2-Dichlorobenzene	ND (0.0454)	0.0064	8260B		1	06/05/15 14:52	CYF0086	CF50535
1,2-Dichloroethane	ND (0.0454)	0.0122	8260B		1	06/05/15 14:52	CYF0086	CF50535
1,2-Dichloropropane	ND (0.0454)	0.0119	8260B		1	06/05/15 14:52	CYF0086	CF50535
1,3,5-Trimethylbenzene	ND (0.0454)	0.0080	8260B		1	06/05/15 14:52	CYF0086	CF50535
1,3-Dichlorobenzene	ND (0.0454)	0.0057	8260B		1	06/05/15 14:52	CYF0086	CF50535
1,3-Dichloropropane	ND (0.0454)	0.0102	8260B		1	06/05/15 14:52	CYF0086	CF50535
1,4-Dichlorobenzene	ND (0.0454)	0.0121	8260B		1	06/05/15 14:52	CYF0086	CF50535
1,4-Dioxane - Screen	ND (4.54)	1.52	8260B		1	06/05/15 14:52	CYF0086	CF50535
1-Chlorohexane	ND (0.0454)	0.0086	8260B		1	06/05/15 14:52	CYF0086	CF50535
2,2-Dichloropropane	ND (0.0908)	0.0155	8260B		1	06/05/15 14:52	CYF0086	CF50535
2-Butanone	ND (1.14)	0.262	8260B		1	06/05/15 14:52	CYF0086	CF50535
2-Chlorotoluene	ND (0.0454)	0.0128	8260B		1	06/05/15 14:52	CYF0086	CF50535
2-Hexanone	ND (0.454)	0.0782	8260B		1	06/05/15 14:52	CYF0086	CF50535
4-Chlorotoluene	ND (0.0454)	0.0059	8260B		1	06/05/15 14:52	CYF0086	CF50535
4-Isopropyltoluene	ND (0.0454)	0.0081	8260B		1	06/05/15 14:52	CYF0086	CF50535
4-Methyl-2-Pentanone	ND (0.454)	0.0547	8260B		1	06/05/15 14:52	CYF0086	CF50535
Acetone	ND (1.14)	0.336	8260B		1	06/05/15 14:52	CYF0086	CF50535
Benzene	ND (0.0454)	0.0074	8260B		1	06/05/15 14:52	CYF0086	CF50535
Bromobenzene	ND (0.0454)	0.0124	8260B		1	06/05/15 14:52	CYF0086	CF50535

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Riverside Square
Client Sample ID: GP-200 6-8
Date Sampled: 06/04/15 08:24
Percent Solids: 95
Initial Volume: 18.3
Final Volume: 15
Extraction Method: 5035

ESS Laboratory Work Order: 1506154
ESS Laboratory Sample ID: 1506154-02
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MD

5035/8260B Volatile Organic Compounds / Methanol

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
Bromochloromethane	ND (0.0454)	0.0147	8260B		1	06/05/15 14:52	CYF0086	CF50535
Bromodichloromethane	ND (0.0454)	0.0063	8260B		1	06/05/15 14:52	CYF0086	CF50535
Bromoform	ND (0.0454)	0.0131	8260B		1	06/05/15 14:52	CYF0086	CF50535
Bromomethane	ND (0.0908)	0.0303	8260B		1	06/05/15 14:52	CYF0086	CF50535
Carbon Disulfide	ND (0.0454)	0.0067	8260B		1	06/05/15 14:52	CYF0086	CF50535
Carbon Tetrachloride	ND (0.0454)	0.0079	8260B		1	06/05/15 14:52	CYF0086	CF50535
Chlorobenzene	ND (0.0454)	0.0072	8260B		1	06/05/15 14:52	CYF0086	CF50535
Chloroethane	ND (0.0908)	0.0302	8260B		1	06/05/15 14:52	CYF0086	CF50535
Chloroform	ND (0.0454)	0.0094	8260B		1	06/05/15 14:52	CYF0086	CF50535
Chloromethane	ND (0.0908)	0.0115	8260B		1	06/05/15 14:52	CYF0086	CF50535
cis-1,2-Dichloroethene	ND (0.0454)	0.0113	8260B		1	06/05/15 14:52	CYF0086	CF50535
cis-1,3-Dichloropropene	ND (0.0454)	0.0103	8260B		1	06/05/15 14:52	CYF0086	CF50535
Dibromochloromethane	ND (0.0454)	0.0114	8260B		1	06/05/15 14:52	CYF0086	CF50535
Dibromomethane	ND (0.0454)	0.0143	8260B		1	06/05/15 14:52	CYF0086	CF50535
Dichlorodifluoromethane	ND (0.0454)	0.0079	8260B		1	06/05/15 14:52	CYF0086	CF50535
Diethyl Ether	ND (0.0454)	0.0115	8260B		1	06/05/15 14:52	CYF0086	CF50535
Di-isopropyl ether	ND (0.0454)	0.0085	8260B		1	06/05/15 14:52	CYF0086	CF50535
Ethyl tertiary-butyl ether	ND (0.0454)	0.0114	8260B		1	06/05/15 14:52	CYF0086	CF50535
Ethylbenzene	ND (0.0454)	0.0059	8260B		1	06/05/15 14:52	CYF0086	CF50535
Hexachlorobutadiene	ND (0.0454)	0.0152	8260B		1	06/05/15 14:52	CYF0086	CF50535
Isopropylbenzene	ND (0.0454)	0.0080	8260B		1	06/05/15 14:52	CYF0086	CF50535
Methyl tert-Butyl Ether	ND (0.0454)	0.0073	8260B		1	06/05/15 14:52	CYF0086	CF50535
Methylene Chloride	ND (0.227)	0.0119	8260B		1	06/05/15 14:52	CYF0086	CF50535
Naphthalene	ND (0.0454)	0.0119	8260B		1	06/05/15 14:52	CYF0086	CF50535
n-Butylbenzene	ND (0.0454)	0.0112	8260B		1	06/05/15 14:52	CYF0086	CF50535
n-Propylbenzene	ND (0.0454)	0.0111	8260B		1	06/05/15 14:52	CYF0086	CF50535
sec-Butylbenzene	ND (0.0454)	0.0061	8260B		1	06/05/15 14:52	CYF0086	CF50535
Styrene	ND (0.0454)	0.0060	8260B		1	06/05/15 14:52	CYF0086	CF50535
tert-Butylbenzene	ND (0.0454)	0.0106	8260B		1	06/05/15 14:52	CYF0086	CF50535
Tertiary-amyl methyl ether	ND (0.0454)	0.0065	8260B		1	06/05/15 14:52	CYF0086	CF50535
Tetrachloroethene	ND (0.0454)	0.0152	8260B		1	06/05/15 14:52	CYF0086	CF50535
Tetrahydrofuran	ND (0.454)	0.117	8260B		1	06/05/15 14:52	CYF0086	CF50535

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Riverside Square
Client Sample ID: GP-200 6-8
Date Sampled: 06/04/15 08:24
Percent Solids: 95
Initial Volume: 18.3
Final Volume: 15
Extraction Method: 5035

ESS Laboratory Work Order: 1506154
ESS Laboratory Sample ID: 1506154-02
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MD

5035/8260B Volatile Organic Compounds / Methanol

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
Toluene	ND (0.0454)	0.0115	8260B		1	06/05/15 14:52	CYF0086	CF50535
trans-1,2-Dichloroethene	ND (0.0454)	0.0149	8260B		1	06/05/15 14:52	CYF0086	CF50535
trans-1,3-Dichloropropene	ND (0.0454)	0.0140	8260B		1	06/05/15 14:52	CYF0086	CF50535
Trichloroethene	**0.0463** (0.0454)	0.0094	8260B		1	06/05/15 14:52	CYF0086	CF50535
Trichlorofluoromethane	ND (0.0454)	0.0120	8260B		1	06/05/15 14:52	CYF0086	CF50535
Vinyl Acetate	ND (0.227)	0.0094	8260B		1	06/05/15 14:52	CYF0086	CF50535
Vinyl Chloride	ND (0.0454)	0.0150	8260B		1	06/05/15 14:52	CYF0086	CF50535
Xylene O	ND (0.0454)	0.0087	8260B		1	06/05/15 14:52	CYF0086	CF50535
Xylene P,M	ND (0.0908)	0.0176	8260B		1	06/05/15 14:52	CYF0086	CF50535
Xylenes (Total)	ND (0.0908)		8260B		1	06/05/15 14:52		[CALC]

	%Recovery	*Qualifier*	*Limits*
Surrogate: 1,2-Dichloroethane-d4	*99 %*		*70-130*
Surrogate: 4-Bromofluorobenzene	*93 %*		*70-130*
Surrogate: Dibromofluoromethane	*106 %*		*70-130*
Surrogate: Toluene-d8	*115 %*		*70-130*

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Riverside Square
Client Sample ID: GP-201 0-2
Date Sampled: 06/04/15 08:34
Percent Solids: 89
Initial Volume: 18
Final Volume: 15
Extraction Method: 5035

ESS Laboratory Work Order: 1506154
ESS Laboratory Sample ID: 1506154-03
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MD

5035/8260B Volatile Organic Compounds / Methanol

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
1,1,1,2-Tetrachloroethane	ND (0.105)	0.0091	8260B		1	06/05/15 15:20	CYF0086	CF50535
1,1,1-Trichloroethane	**0.0798** (0.0525)	0.0092	8260B		1	06/05/15 15:20	CYF0086	CF50535
1,1,2,2-Tetrachloroethane	ND (0.0525)	0.0143	8260B		1	06/05/15 15:20	CYF0086	CF50535
1,1,2-Trichloroethane	ND (0.0525)	0.0131	8260B		1	06/05/15 15:20	CYF0086	CF50535
1,1-Dichloroethane	ND (0.0525)	0.0084	8260B		1	06/05/15 15:20	CYF0086	CF50535
1,1-Dichloroethene	ND (0.0525)	0.0129	8260B		1	06/05/15 15:20	CYF0086	CF50535
1,1-Dichloropropene	ND (0.0525)	0.0081	8260B		1	06/05/15 15:20	CYF0086	CF50535
1,2,3-Trichlorobenzene	ND (0.0525)	0.0175	8260B		1	06/05/15 15:20	CYF0086	CF50535
1,2,3-Trichloropropane	ND (0.0525)	0.0130	8260B		1	06/05/15 15:20	CYF0086	CF50535
1,2,4-Trichlorobenzene	ND (0.0525)	0.0116	8260B		1	06/05/15 15:20	CYF0086	CF50535
1,2,4-Trimethylbenzene	**J 0.0137** (0.0525)	0.0101	8260B		1	06/05/15 15:20	CYF0086	CF50535
1,2-Dibromo-3-Chloropropane	ND (0.315)	0.105	8260B		1	06/05/15 15:20	CYF0086	CF50535
1,2-Dibromoethane	ND (0.0525)	0.0133	8260B		1	06/05/15 15:20	CYF0086	CF50535
1,2-Dichlorobenzene	ND (0.0525)	0.0075	8260B		1	06/05/15 15:20	CYF0086	CF50535
1,2-Dichloroethane	ND (0.0525)	0.0141	8260B		1	06/05/15 15:20	CYF0086	CF50535
1,2-Dichloropropane	ND (0.0525)	0.0138	8260B		1	06/05/15 15:20	CYF0086	CF50535
1,3,5-Trimethylbenzene	ND (0.0525)	0.0092	8260B		1	06/05/15 15:20	CYF0086	CF50535
1,3-Dichlorobenzene	ND (0.0525)	0.0066	8260B		1	06/05/15 15:20	CYF0086	CF50535
1,3-Dichloropropane	ND (0.0525)	0.0118	8260B		1	06/05/15 15:20	CYF0086	CF50535
1,4-Dichlorobenzene	ND (0.0525)	0.0140	8260B		1	06/05/15 15:20	CYF0086	CF50535
1,4-Dioxane - Screen	ND (5.25)	1.75	8260B		1	06/05/15 15:20	CYF0086	CF50535
1-Chlorohexane	ND (0.0525)	0.0100	8260B		1	06/05/15 15:20	CYF0086	CF50535
2,2-Dichloropropane	ND (0.105)	0.0180	8260B		1	06/05/15 15:20	CYF0086	CF50535
2-Butanone	ND (1.31)	0.304	8260B		1	06/05/15 15:20	CYF0086	CF50535
2-Chlorotoluene	ND (0.0525)	0.0148	8260B		1	06/05/15 15:20	CYF0086	CF50535
2-Hexanone	ND (0.525)	0.0905	8260B		1	06/05/15 15:20	CYF0086	CF50535
4-Chlorotoluene	ND (0.0525)	0.0068	8260B		1	06/05/15 15:20	CYF0086	CF50535
4-Isopropyltoluene	ND (0.0525)	0.0093	8260B		1	06/05/15 15:20	CYF0086	CF50535
4-Methyl-2-Pentanone	ND (0.525)	0.0632	8260B		1	06/05/15 15:20	CYF0086	CF50535
Acetone	ND (1.31)	0.389	8260B		1	06/05/15 15:20	CYF0086	CF50535
Benzene	ND (0.0525)	0.0085	8260B		1	06/05/15 15:20	CYF0086	CF50535
Bromobenzene	ND (0.0525)	0.0144	8260B		1	06/05/15 15:20	CYF0086	CF50535

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Riverside Square
Client Sample ID: GP-201 0-2
Date Sampled: 06/04/15 08:34
Percent Solids: 89
Initial Volume: 18
Final Volume: 15
Extraction Method: 5035

ESS Laboratory Work Order: 1506154
ESS Laboratory Sample ID: 1506154-03
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MD

5035/8260B Volatile Organic Compounds / Methanol

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
Bromochloromethane	ND (0.0525)	0.0170	8260B		1	06/05/15 15:20	CYF0086	CF50535
Bromodichloromethane	ND (0.0525)	0.0072	8260B		1	06/05/15 15:20	CYF0086	CF50535
Bromoform	ND (0.0525)	0.0151	8260B		1	06/05/15 15:20	CYF0086	CF50535
Bromomethane	ND (0.105)	0.0351	8260B		1	06/05/15 15:20	CYF0086	CF50535
Carbon Disulfide	ND (0.0525)	0.0078	8260B		1	06/05/15 15:20	CYF0086	CF50535
Carbon Tetrachloride	ND (0.0525)	0.0091	8260B		1	06/05/15 15:20	CYF0086	CF50535
Chlorobenzene	ND (0.0525)	0.0083	8260B		1	06/05/15 15:20	CYF0086	CF50535
Chloroethane	ND (0.105)	0.0350	8260B		1	06/05/15 15:20	CYF0086	CF50535
Chloroform	ND (0.0525)	0.0108	8260B		1	06/05/15 15:20	CYF0086	CF50535
Chloromethane	ND (0.105)	0.0133	8260B		1	06/05/15 15:20	CYF0086	CF50535
cis-1,2-Dichloroethene	ND (0.0525)	0.0130	8260B		1	06/05/15 15:20	CYF0086	CF50535
cis-1,3-Dichloropropene	ND (0.0525)	0.0119	8260B		1	06/05/15 15:20	CYF0086	CF50535
Dibromochloromethane	ND (0.0525)	0.0132	8260B		1	06/05/15 15:20	CYF0086	CF50535
Dibromomethane	ND (0.0525)	0.0166	8260B		1	06/05/15 15:20	CYF0086	CF50535
Dichlorodifluoromethane	ND (0.0525)	0.0091	8260B		1	06/05/15 15:20	CYF0086	CF50535
Diethyl Ether	ND (0.0525)	0.0133	8260B		1	06/05/15 15:20	CYF0086	CF50535
Di-isopropyl ether	ND (0.0525)	0.0099	8260B		1	06/05/15 15:20	CYF0086	CF50535
Ethyl tertiary-butyl ether	ND (0.0525)	0.0132	8260B		1	06/05/15 15:20	CYF0086	CF50535
Ethylbenzene	ND (0.0525)	0.0068	8260B		1	06/05/15 15:20	CYF0086	CF50535
Hexachlorobutadiene	ND (0.0525)	0.0175	8260B		1	06/05/15 15:20	CYF0086	CF50535
Isopropylbenzene	ND (0.0525)	0.0092	8260B		1	06/05/15 15:20	CYF0086	CF50535
Methyl tert-Butyl Ether	ND (0.0525)	0.0084	8260B		1	06/05/15 15:20	CYF0086	CF50535
Methylene Chloride	ND (0.263)	0.0138	8260B		1	06/05/15 15:20	CYF0086	CF50535
Naphthalene	ND (0.0525)	0.0138	8260B		1	06/05/15 15:20	CYF0086	CF50535
n-Butylbenzene	ND (0.0525)	0.0129	8260B		1	06/05/15 15:20	CYF0086	CF50535
n-Propylbenzene	ND (0.0525)	0.0128	8260B		1	06/05/15 15:20	CYF0086	CF50535
sec-Butylbenzene	ND (0.0525)	0.0070	8260B		1	06/05/15 15:20	CYF0086	CF50535
Styrene	ND (0.0525)	0.0069	8260B		1	06/05/15 15:20	CYF0086	CF50535
tert-Butylbenzene	ND (0.0525)	0.0123	8260B		1	06/05/15 15:20	CYF0086	CF50535
Tertiary-amyl methyl ether	ND (0.0525)	0.0076	8260B		1	06/05/15 15:20	CYF0086	CF50535
Tetrachloroethene	**0.191** (0.0525)	0.0175	8260B		1	06/05/15 15:20	CYF0086	CF50535
Tetrahydrofuran	ND (0.525)	0.136	8260B		1	06/05/15 15:20	CYF0086	CF50535

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Riverside Square
Client Sample ID: GP-201 0-2
Date Sampled: 06/04/15 08:34
Percent Solids: 89
Initial Volume: 18
Final Volume: 15
Extraction Method: 5035

ESS Laboratory Work Order: 1506154
ESS Laboratory Sample ID: 1506154-03
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MD

5035/8260B Volatile Organic Compounds / Methanol

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
Toluene	ND (0.0525)	0.0133	8260B		1	06/05/15 15:20	CYF0086	CF50535
trans-1,2-Dichloroethene	ND (0.0525)	0.0172	8260B		1	06/05/15 15:20	CYF0086	CF50535
trans-1,3-Dichloropropene	ND (0.0525)	0.0162	8260B		1	06/05/15 15:20	CYF0086	CF50535
Trichloroethene	**0.685** (0.0525)	0.0108	8260B		1	06/05/15 15:20	CYF0086	CF50535
Trichlorofluoromethane	ND (0.0525)	0.0139	8260B		1	06/05/15 15:20	CYF0086	CF50535
Vinyl Acetate	ND (0.263)	0.0108	8260B		1	06/05/15 15:20	CYF0086	CF50535
Vinyl Chloride	ND (0.0525)	0.0173	8260B		1	06/05/15 15:20	CYF0086	CF50535
Xylene O	ND (0.0525)	0.0101	8260B		1	06/05/15 15:20	CYF0086	CF50535
Xylene P,M	ND (0.105)	0.0204	8260B		1	06/05/15 15:20	CYF0086	CF50535
Xylenes (Total)	ND (0.105)		8260B		1	06/05/15 15:20		[CALC]

	%Recovery	*Qualifier*	*Limits*
Surrogate: 1,2-Dichloroethane-d4	*100 %*		*70-130*
Surrogate: 4-Bromofluorobenzene	*95 %*		*70-130*
Surrogate: Dibromofluoromethane	*99 %*		*70-130*
Surrogate: Toluene-d8	*89 %*		*70-130*

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Riverside Square
Client Sample ID: GP-201 2-4
Date Sampled: 06/04/15 08:36
Percent Solids: 95
Initial Volume: 16.3
Final Volume: 15
Extraction Method: 5035

ESS Laboratory Work Order: 1506154
ESS Laboratory Sample ID: 1506154-04
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MD

5035/8260B Volatile Organic Compounds / Methanol

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
1,1,1,2-Tetrachloroethane	ND (0.102)	0.0089	8260B		1	06/05/15 15:48	CYF0086	CF50535
1,1,1-Trichloroethane	**0.0625** (0.0512)	0.0090	8260B		1	06/05/15 15:48	CYF0086	CF50535
1,1,2,2-Tetrachloroethane	ND (0.0512)	0.0139	8260B		1	06/05/15 15:48	CYF0086	CF50535
1,1,2-Trichloroethane	ND (0.0512)	0.0128	8260B		1	06/05/15 15:48	CYF0086	CF50535
1,1-Dichloroethane	ND (0.0512)	0.0082	8260B		1	06/05/15 15:48	CYF0086	CF50535
1,1-Dichloroethene	ND (0.0512)	0.0126	8260B		1	06/05/15 15:48	CYF0086	CF50535
1,1-Dichloropropene	ND (0.0512)	0.0079	8260B		1	06/05/15 15:48	CYF0086	CF50535
1,2,3-Trichlorobenzene	ND (0.0512)	0.0171	8260B		1	06/05/15 15:48	CYF0086	CF50535
1,2,3-Trichloropropane	ND (0.0512)	0.0127	8260B		1	06/05/15 15:48	CYF0086	CF50535
1,2,4-Trichlorobenzene	ND (0.0512)	0.0113	8260B		1	06/05/15 15:48	CYF0086	CF50535
1,2,4-Trimethylbenzene	ND (0.0512)	0.0098	8260B		1	06/05/15 15:48	CYF0086	CF50535
1,2-Dibromo-3-Chloropropane	ND (0.307)	0.102	8260B		1	06/05/15 15:48	CYF0086	CF50535
1,2-Dibromoethane	ND (0.0512)	0.0130	8260B		1	06/05/15 15:48	CYF0086	CF50535
1,2-Dichlorobenzene	ND (0.0512)	0.0073	8260B		1	06/05/15 15:48	CYF0086	CF50535
1,2-Dichloroethane	ND (0.0512)	0.0137	8260B		1	06/05/15 15:48	CYF0086	CF50535
1,2-Dichloropropane	ND (0.0512)	0.0134	8260B		1	06/05/15 15:48	CYF0086	CF50535
1,3,5-Trimethylbenzene	ND (0.0512)	0.0090	8260B		1	06/05/15 15:48	CYF0086	CF50535
1,3-Dichlorobenzene	ND (0.0512)	0.0065	8260B		1	06/05/15 15:48	CYF0086	CF50535
1,3-Dichloropropane	ND (0.0512)	0.0115	8260B		1	06/05/15 15:48	CYF0086	CF50535
1,4-Dichlorobenzene	ND (0.0512)	0.0136	8260B		1	06/05/15 15:48	CYF0086	CF50535
1,4-Dioxane - Screen	ND (5.12)	1.71	8260B		1	06/05/15 15:48	CYF0086	CF50535
1-Chlorohexane	ND (0.0512)	0.0097	8260B		1	06/05/15 15:48	CYF0086	CF50535
2,2-Dichloropropane	ND (0.102)	0.0175	8260B		1	06/05/15 15:48	CYF0086	CF50535
2-Butanone	ND (1.28)	0.296	8260B		1	06/05/15 15:48	CYF0086	CF50535
2-Chlorotoluene	ND (0.0512)	0.0145	8260B		1	06/05/15 15:48	CYF0086	CF50535
2-Hexanone	ND (0.512)	0.0882	8260B		1	06/05/15 15:48	CYF0086	CF50535
4-Chlorotoluene	ND (0.0512)	0.0067	8260B		1	06/05/15 15:48	CYF0086	CF50535
4-Isopropyltoluene	ND (0.0512)	0.0091	8260B		1	06/05/15 15:48	CYF0086	CF50535
4-Methyl-2-Pentanone	ND (0.512)	0.0617	8260B		1	06/05/15 15:48	CYF0086	CF50535
Acetone	ND (1.28)	0.379	8260B		1	06/05/15 15:48	CYF0086	CF50535
Benzene	ND (0.0512)	0.0083	8260B		1	06/05/15 15:48	CYF0086	CF50535
Bromobenzene	ND (0.0512)	0.0140	8260B		1	06/05/15 15:48	CYF0086	CF50535

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Riverside Square
Client Sample ID: GP-201 2-4
Date Sampled: 06/04/15 08:36
Percent Solids: 95
Initial Volume: 16.3
Final Volume: 15
Extraction Method: 5035

ESS Laboratory Work Order: 1506154
ESS Laboratory Sample ID: 1506154-04
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MD

5035/8260B Volatile Organic Compounds / Methanol

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
Bromochloromethane	ND (0.0512)	0.0166	8260B		1	06/05/15 15:48	CYF0086	CF50535
Bromodichloromethane	ND (0.0512)	0.0071	8260B		1	06/05/15 15:48	CYF0086	CF50535
Bromoform	ND (0.0512)	0.0148	8260B		1	06/05/15 15:48	CYF0086	CF50535
Bromomethane	ND (0.102)	0.0342	8260B		1	06/05/15 15:48	CYF0086	CF50535
Carbon Disulfide	ND (0.0512)	0.0076	8260B		1	06/05/15 15:48	CYF0086	CF50535
Carbon Tetrachloride	ND (0.0512)	0.0089	8260B		1	06/05/15 15:48	CYF0086	CF50535
Chlorobenzene	ND (0.0512)	0.0081	8260B		1	06/05/15 15:48	CYF0086	CF50535
Chloroethane	ND (0.102)	0.0341	8260B		1	06/05/15 15:48	CYF0086	CF50535
Chloroform	ND (0.0512)	0.0106	8260B		1	06/05/15 15:48	CYF0086	CF50535
Chloromethane	ND (0.102)	0.0130	8260B		1	06/05/15 15:48	CYF0086	CF50535
cis-1,2-Dichloroethene	ND (0.0512)	0.0127	8260B		1	06/05/15 15:48	CYF0086	CF50535
cis-1,3-Dichloropropene	ND (0.0512)	0.0116	8260B		1	06/05/15 15:48	CYF0086	CF50535
Dibromochloromethane	ND (0.0512)	0.0129	8260B		1	06/05/15 15:48	CYF0086	CF50535
Dibromomethane	ND (0.0512)	0.0162	8260B		1	06/05/15 15:48	CYF0086	CF50535
Dichlorodifluoromethane	ND (0.0512)	0.0089	8260B		1	06/05/15 15:48	CYF0086	CF50535
Diethyl Ether	ND (0.0512)	0.0130	8260B		1	06/05/15 15:48	CYF0086	CF50535
Di-isopropyl ether	ND (0.0512)	0.0096	8260B		1	06/05/15 15:48	CYF0086	CF50535
Ethyl tertiary-butyl ether	ND (0.0512)	0.0129	8260B		1	06/05/15 15:48	CYF0086	CF50535
Ethylbenzene	ND (0.0512)	0.0067	8260B		1	06/05/15 15:48	CYF0086	CF50535
Hexachlorobutadiene	ND (0.0512)	0.0171	8260B		1	06/05/15 15:48	CYF0086	CF50535
Isopropylbenzene	ND (0.0512)	0.0090	8260B		1	06/05/15 15:48	CYF0086	CF50535
Methyl tert-Butyl Ether	ND (0.0512)	0.0082	8260B		1	06/05/15 15:48	CYF0086	CF50535
Methylene Chloride	ND (0.256)	0.0134	8260B		1	06/05/15 15:48	CYF0086	CF50535
Naphthalene	ND (0.0512)	0.0134	8260B		1	06/05/15 15:48	CYF0086	CF50535
n-Butylbenzene	ND (0.0512)	0.0126	8260B		1	06/05/15 15:48	CYF0086	CF50535
n-Propylbenzene	ND (0.0512)	0.0125	8260B		1	06/05/15 15:48	CYF0086	CF50535
sec-Butylbenzene	ND (0.0512)	0.0069	8260B		1	06/05/15 15:48	CYF0086	CF50535
Styrene	ND (0.0512)	0.0068	8260B		1	06/05/15 15:48	CYF0086	CF50535
tert-Butylbenzene	ND (0.0512)	0.0120	8260B		1	06/05/15 15:48	CYF0086	CF50535
Tertiary-amyl methyl ether	ND (0.0512)	0.0074	8260B		1	06/05/15 15:48	CYF0086	CF50535
Tetrachloroethene	**0.196** (0.0512)	0.0171	8260B		1	06/05/15 15:48	CYF0086	CF50535
Tetrahydrofuran	ND (0.512)	0.132	8260B		1	06/05/15 15:48	CYF0086	CF50535

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Riverside Square
Client Sample ID: GP-201 2-4
Date Sampled: 06/04/15 08:36
Percent Solids: 95
Initial Volume: 16.3
Final Volume: 15
Extraction Method: 5035

ESS Laboratory Work Order: 1506154
ESS Laboratory Sample ID: 1506154-04
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MD

5035/8260B Volatile Organic Compounds / Methanol

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
Toluene	ND (0.0512)	0.0130	8260B		1	06/05/15 15:48	CYF0086	CF50535
trans-1,2-Dichloroethene	ND (0.0512)	0.0168	8260B		1	06/05/15 15:48	CYF0086	CF50535
trans-1,3-Dichloropropene	ND (0.0512)	0.0158	8260B		1	06/05/15 15:48	CYF0086	CF50535
Trichloroethene	**0.441** (0.0512)	0.0106	8260B		1	06/05/15 15:48	CYF0086	CF50535
Trichlorofluoromethane	ND (0.0512)	0.0135	8260B		1	06/05/15 15:48	CYF0086	CF50535
Vinyl Acetate	ND (0.256)	0.0106	8260B		1	06/05/15 15:48	CYF0086	CF50535
Vinyl Chloride	ND (0.0512)	0.0169	8260B		1	06/05/15 15:48	CYF0086	CF50535
Xylene O	ND (0.0512)	0.0098	8260B		1	06/05/15 15:48	CYF0086	CF50535
Xylene P,M	ND (0.102)	0.0199	8260B		1	06/05/15 15:48	CYF0086	CF50535
Xylenes (Total)	ND (0.102)		8260B		1	06/05/15 15:48		[CALC]

	%Recovery	*Qualifier*	*Limits*
Surrogate: 1,2-Dichloroethane-d4	*101 %*		*70-130*
Surrogate: 4-Bromofluorobenzene	*92 %*		*70-130*
Surrogate: Dibromofluoromethane	*98 %*		*70-130*
Surrogate: Toluene-d8	*90 %*		*70-130*

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Riverside Square
Client Sample ID: GP-202 0-2
Date Sampled: 06/04/15 08:47
Percent Solids: 85
Initial Volume: 19.7
Final Volume: 15
Extraction Method: 5035

ESS Laboratory Work Order: 1506154
ESS Laboratory Sample ID: 1506154-05
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MD

5035/8260B Volatile Organic Compounds / Methanol

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
1,1,1,2-Tetrachloroethane	ND (0.108)	0.0094	8260B		1	06/05/15 16:16	CYF0086	CF50535
1,1,1-Trichloroethane	**J 0.0280** (0.0539)	0.0095	8260B		1	06/05/15 16:16	CYF0086	CF50535
1,1,2,2-Tetrachloroethane	ND (0.0539)	0.0147	8260B		1	06/05/15 16:16	CYF0086	CF50535
1,1,2-Trichloroethane	ND (0.0539)	0.0135	8260B		1	06/05/15 16:16	CYF0086	CF50535
1,1-Dichloroethane	ND (0.0539)	0.0086	8260B		1	06/05/15 16:16	CYF0086	CF50535
1,1-Dichloroethene	ND (0.0539)	0.0133	8260B		1	06/05/15 16:16	CYF0086	CF50535
1,1-Dichloropropene	ND (0.0539)	0.0083	8260B		1	06/05/15 16:16	CYF0086	CF50535
1,2,3-Trichlorobenzene	ND (0.0539)	0.0180	8260B		1	06/05/15 16:16	CYF0086	CF50535
1,2,3-Trichloropropane	ND (0.0539)	0.0134	8260B		1	06/05/15 16:16	CYF0086	CF50535
1,2,4-Trichlorobenzene	ND (0.0539)	0.0119	8260B		1	06/05/15 16:16	CYF0086	CF50535
1,2,4-Trimethylbenzene	ND (0.0539)	0.0104	8260B		1	06/05/15 16:16	CYF0086	CF50535
1,2-Dibromo-3-Chloropropane	ND (0.324)	0.108	8260B		1	06/05/15 16:16	CYF0086	CF50535
1,2-Dibromoethane	ND (0.0539)	0.0137	8260B		1	06/05/15 16:16	CYF0086	CF50535
1,2-Dichlorobenzene	ND (0.0539)	0.0077	8260B		1	06/05/15 16:16	CYF0086	CF50535
1,2-Dichloroethane	ND (0.0539)	0.0145	8260B		1	06/05/15 16:16	CYF0086	CF50535
1,2-Dichloropropane	ND (0.0539)	0.0141	8260B		1	06/05/15 16:16	CYF0086	CF50535
1,3,5-Trimethylbenzene	ND (0.0539)	0.0095	8260B		1	06/05/15 16:16	CYF0086	CF50535
1,3-Dichlorobenzene	ND (0.0539)	0.0068	8260B		1	06/05/15 16:16	CYF0086	CF50535
1,3-Dichloropropane	ND (0.0539)	0.0121	8260B		1	06/05/15 16:16	CYF0086	CF50535
1,4-Dichlorobenzene	ND (0.0539)	0.0143	8260B		1	06/05/15 16:16	CYF0086	CF50535
1,4-Dioxane - Screen	ND (5.39)	1.80	8260B		1	06/05/15 16:16	CYF0086	CF50535
1-Chlorohexane	ND (0.0539)	0.0102	8260B		1	06/05/15 16:16	CYF0086	CF50535
2,2-Dichloropropane	ND (0.108)	0.0184	8260B		1	06/05/15 16:16	CYF0086	CF50535
2-Butanone	ND (1.35)	0.312	8260B		1	06/05/15 16:16	CYF0086	CF50535
2-Chlorotoluene	ND (0.0539)	0.0152	8260B		1	06/05/15 16:16	CYF0086	CF50535
2-Hexanone	ND (0.539)	0.0929	8260B		1	06/05/15 16:16	CYF0086	CF50535
4-Chlorotoluene	ND (0.0539)	0.0070	8260B		1	06/05/15 16:16	CYF0086	CF50535
4-Isopropyltoluene	ND (0.0539)	0.0096	8260B		1	06/05/15 16:16	CYF0086	CF50535
4-Methyl-2-Pentanone	ND (0.539)	0.0649	8260B		1	06/05/15 16:16	CYF0086	CF50535
Acetone	ND (1.35)	0.399	8260B		1	06/05/15 16:16	CYF0086	CF50535
Benzene	ND (0.0539)	0.0087	8260B		1	06/05/15 16:16	CYF0086	CF50535
Bromobenzene	ND (0.0539)	0.0148	8260B		1	06/05/15 16:16	CYF0086	CF50535

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Riverside Square
Client Sample ID: GP-202 0-2
Date Sampled: 06/04/15 08:47
Percent Solids: 85
Initial Volume: 19.7
Final Volume: 15
Extraction Method: 5035

ESS Laboratory Work Order: 1506154
ESS Laboratory Sample ID: 1506154-05
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MD

5035/8260B Volatile Organic Compounds / Methanol

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
Bromochloromethane	ND (0.0539)	0.0175	8260B		1	06/05/15 16:16	CYF0086	CF50535
Bromodichloromethane	ND (0.0539)	0.0074	8260B		1	06/05/15 16:16	CYF0086	CF50535
Bromoform	ND (0.0539)	0.0155	8260B		1	06/05/15 16:16	CYF0086	CF50535
Bromomethane	ND (0.108)	0.0360	8260B		1	06/05/15 16:16	CYF0086	CF50535
Carbon Disulfide	ND (0.0539)	0.0080	8260B		1	06/05/15 16:16	CYF0086	CF50535
Carbon Tetrachloride	ND (0.0539)	0.0094	8260B		1	06/05/15 16:16	CYF0086	CF50535
Chlorobenzene	ND (0.0539)	0.0085	8260B		1	06/05/15 16:16	CYF0086	CF50535
Chloroethane	ND (0.108)	0.0359	8260B		1	06/05/15 16:16	CYF0086	CF50535
Chloroform	ND (0.0539)	0.0111	8260B		1	06/05/15 16:16	CYF0086	CF50535
Chloromethane	ND (0.108)	0.0137	8260B		1	06/05/15 16:16	CYF0086	CF50535
cis-1,2-Dichloroethene	ND (0.0539)	0.0134	8260B		1	06/05/15 16:16	CYF0086	CF50535
cis-1,3-Dichloropropene	ND (0.0539)	0.0122	8260B		1	06/05/15 16:16	CYF0086	CF50535
Dibromochloromethane	ND (0.0539)	0.0136	8260B		1	06/05/15 16:16	CYF0086	CF50535
Dibromomethane	ND (0.0539)	0.0170	8260B		1	06/05/15 16:16	CYF0086	CF50535
Dichlorodifluoromethane	ND (0.0539)	0.0094	8260B		1	06/05/15 16:16	CYF0086	CF50535
Diethyl Ether	ND (0.0539)	0.0137	8260B		1	06/05/15 16:16	CYF0086	CF50535
Di-isopropyl ether	ND (0.0539)	0.0101	8260B		1	06/05/15 16:16	CYF0086	CF50535
Ethyl tertiary-butyl ether	ND (0.0539)	0.0136	8260B		1	06/05/15 16:16	CYF0086	CF50535
Ethylbenzene	ND (0.0539)	0.0070	8260B		1	06/05/15 16:16	CYF0086	CF50535
Hexachlorobutadiene	ND (0.0539)	0.0180	8260B		1	06/05/15 16:16	CYF0086	CF50535
Isopropylbenzene	ND (0.0539)	0.0095	8260B		1	06/05/15 16:16	CYF0086	CF50535
Methyl tert-Butyl Ether	ND (0.0539)	0.0086	8260B		1	06/05/15 16:16	CYF0086	CF50535
Methylene Chloride	ND (0.270)	0.0141	8260B		1	06/05/15 16:16	CYF0086	CF50535
Naphthalene	ND (0.0539)	0.0141	8260B		1	06/05/15 16:16	CYF0086	CF50535
n-Butylbenzene	ND (0.0539)	0.0133	8260B		1	06/05/15 16:16	CYF0086	CF50535
n-Propylbenzene	ND (0.0539)	0.0132	8260B		1	06/05/15 16:16	CYF0086	CF50535
sec-Butylbenzene	ND (0.0539)	0.0072	8260B		1	06/05/15 16:16	CYF0086	CF50535
Styrene	ND (0.0539)	0.0071	8260B		1	06/05/15 16:16	CYF0086	CF50535
tert-Butylbenzene	ND (0.0539)	0.0126	8260B		1	06/05/15 16:16	CYF0086	CF50535
Tertiary-amyl methyl ether	ND (0.0539)	0.0078	8260B		1	06/05/15 16:16	CYF0086	CF50535
Tetrachloroethene	**0.461** (0.0539)	0.0180	8260B		1	06/05/15 16:16	CYF0086	CF50535
Tetrahydrofuran	ND (0.539)	0.139	8260B		1	06/05/15 16:16	CYF0086	CF50535

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Riverside Square
Client Sample ID: GP-202 0-2
Date Sampled: 06/04/15 08:47
Percent Solids: 85
Initial Volume: 19.7
Final Volume: 15
Extraction Method: 5035

ESS Laboratory Work Order: 1506154
ESS Laboratory Sample ID: 1506154-05
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MD

5035/8260B Volatile Organic Compounds / Methanol

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
Toluene	ND (0.0539)	0.0137	8260B		1	06/05/15 16:16	CYF0086	CF50535
trans-1,2-Dichloroethene	ND (0.0539)	0.0177	8260B		1	06/05/15 16:16	CYF0086	CF50535
trans-1,3-Dichloropropene	ND (0.0539)	0.0166	8260B		1	06/05/15 16:16	CYF0086	CF50535
Trichloroethene	**0.822** (0.0539)	0.0111	8260B		1	06/05/15 16:16	CYF0086	CF50535
Trichlorofluoromethane	ND (0.0539)	0.0142	8260B		1	06/05/15 16:16	CYF0086	CF50535
Vinyl Acetate	ND (0.270)	0.0111	8260B		1	06/05/15 16:16	CYF0086	CF50535
Vinyl Chloride	ND (0.0539)	0.0178	8260B		1	06/05/15 16:16	CYF0086	CF50535
Xylene O	ND (0.0539)	0.0104	8260B		1	06/05/15 16:16	CYF0086	CF50535
Xylene P,M	ND (0.108)	0.0209	8260B		1	06/05/15 16:16	CYF0086	CF50535
Xylenes (Total)	ND (0.108)		8260B		1	06/05/15 16:16		[CALC]

	%Recovery	*Qualifier*	*Limits*
Surrogate: 1,2-Dichloroethane-d4	*104 %*		*70-130*
Surrogate: 4-Bromofluorobenzene	*101 %*		*70-130*
Surrogate: Dibromofluoromethane	*106 %*		*70-130*
Surrogate: Toluene-d8	*115 %*		*70-130*

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Riverside Square
Client Sample ID: GP-202 2-4
Date Sampled: 06/04/15 08:49
Percent Solids: 85
Initial Volume: 22
Final Volume: 15
Extraction Method: 5035

ESS Laboratory Work Order: 1506154
ESS Laboratory Sample ID: 1506154-06
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MD

5035/8260B Volatile Organic Compounds / Methanol

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
1,1,1,2-Tetrachloroethane	ND (0.0984)	0.0086	8260B		1	06/05/15 16:44	CYF0086	CF50535
1,1,1-Trichloroethane	**J 0.0285** (0.0492)	0.0087	8260B		1	06/05/15 16:44	CYF0086	CF50535
1,1,2,2-Tetrachloroethane	ND (0.0492)	0.0134	8260B		1	06/05/15 16:44	CYF0086	CF50535
1,1,2-Trichloroethane	ND (0.0492)	0.0123	8260B		1	06/05/15 16:44	CYF0086	CF50535
1,1-Dichloroethane	ND (0.0492)	0.0079	8260B		1	06/05/15 16:44	CYF0086	CF50535
1,1-Dichloroethene	ND (0.0492)	0.0121	8260B		1	06/05/15 16:44	CYF0086	CF50535
1,1-Dichloropropene	ND (0.0492)	0.0076	8260B		1	06/05/15 16:44	CYF0086	CF50535
1,2,3-Trichlorobenzene	ND (0.0492)	0.0164	8260B		1	06/05/15 16:44	CYF0086	CF50535
1,2,3-Trichloropropane	ND (0.0492)	0.0122	8260B		1	06/05/15 16:44	CYF0086	CF50535
1,2,4-Trichlorobenzene	ND (0.0492)	0.0108	8260B		1	06/05/15 16:44	CYF0086	CF50535
1,2,4-Trimethylbenzene	ND (0.0492)	0.0094	8260B		1	06/05/15 16:44	CYF0086	CF50535
1,2-Dibromo-3-Chloropropane	ND (0.295)	0.0984	8260B		1	06/05/15 16:44	CYF0086	CF50535
1,2-Dibromoethane	ND (0.0492)	0.0125	8260B		1	06/05/15 16:44	CYF0086	CF50535
1,2-Dichlorobenzene	ND (0.0492)	0.0070	8260B		1	06/05/15 16:44	CYF0086	CF50535
1,2-Dichloroethane	ND (0.0492)	0.0132	8260B		1	06/05/15 16:44	CYF0086	CF50535
1,2-Dichloropropane	ND (0.0492)	0.0129	8260B		1	06/05/15 16:44	CYF0086	CF50535
1,3,5-Trimethylbenzene	ND (0.0492)	0.0087	8260B		1	06/05/15 16:44	CYF0086	CF50535
1,3-Dichlorobenzene	ND (0.0492)	0.0062	8260B		1	06/05/15 16:44	CYF0086	CF50535
1,3-Dichloropropane	ND (0.0492)	0.0110	8260B		1	06/05/15 16:44	CYF0086	CF50535
1,4-Dichlorobenzene	ND (0.0492)	0.0131	8260B		1	06/05/15 16:44	CYF0086	CF50535
1,4-Dioxane - Screen	ND (4.92)	1.64	8260B		1	06/05/15 16:44	CYF0086	CF50535
1-Chlorohexane	ND (0.0492)	0.0093	8260B		1	06/05/15 16:44	CYF0086	CF50535
2,2-Dichloropropane	ND (0.0984)	0.0168	8260B		1	06/05/15 16:44	CYF0086	CF50535
2-Butanone	ND (1.23)	0.284	8260B		1	06/05/15 16:44	CYF0086	CF50535
2-Chlorotoluene	ND (0.0492)	0.0139	8260B		1	06/05/15 16:44	CYF0086	CF50535
2-Hexanone	ND (0.492)	0.0847	8260B		1	06/05/15 16:44	CYF0086	CF50535
4-Chlorotoluene	ND (0.0492)	0.0064	8260B		1	06/05/15 16:44	CYF0086	CF50535
4-Isopropyltoluene	ND (0.0492)	0.0088	8260B		1	06/05/15 16:44	CYF0086	CF50535
4-Methyl-2-Pentanone	ND (0.492)	0.0592	8260B		1	06/05/15 16:44	CYF0086	CF50535
Acetone	ND (1.23)	0.364	8260B		1	06/05/15 16:44	CYF0086	CF50535
Benzene	ND (0.0492)	0.0080	8260B		1	06/05/15 16:44	CYF0086	CF50535
Bromobenzene	ND (0.0492)	0.0135	8260B		1	06/05/15 16:44	CYF0086	CF50535

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Riverside Square
Client Sample ID: GP-202 2-4
Date Sampled: 06/04/15 08:49
Percent Solids: 85
Initial Volume: 22
Final Volume: 15
Extraction Method: 5035

ESS Laboratory Work Order: 1506154
ESS Laboratory Sample ID: 1506154-06
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MD

5035/8260B Volatile Organic Compounds / Methanol

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
Bromochloromethane	ND (0.0492)	0.0159	8260B		1	06/05/15 16:44	CYF0086	CF50535
Bromodichloromethane	ND (0.0492)	0.0068	8260B		1	06/05/15 16:44	CYF0086	CF50535
Bromoform	ND (0.0492)	0.0142	8260B		1	06/05/15 16:44	CYF0086	CF50535
Bromomethane	ND (0.0984)	0.0329	8260B		1	06/05/15 16:44	CYF0086	CF50535
Carbon Disulfide	ND (0.0492)	0.0073	8260B		1	06/05/15 16:44	CYF0086	CF50535
Carbon Tetrachloride	ND (0.0492)	0.0086	8260B		1	06/05/15 16:44	CYF0086	CF50535
Chlorobenzene	ND (0.0492)	0.0078	8260B		1	06/05/15 16:44	CYF0086	CF50535
Chloroethane	ND (0.0984)	0.0328	8260B		1	06/05/15 16:44	CYF0086	CF50535
Chloroform	ND (0.0492)	0.0101	8260B		1	06/05/15 16:44	CYF0086	CF50535
Chloromethane	ND (0.0984)	0.0125	8260B		1	06/05/15 16:44	CYF0086	CF50535
cis-1,2-Dichloroethene	ND (0.0492)	0.0122	8260B		1	06/05/15 16:44	CYF0086	CF50535
cis-1,3-Dichloropropene	ND (0.0492)	0.0111	8260B		1	06/05/15 16:44	CYF0086	CF50535
Dibromochloromethane	ND (0.0492)	0.0124	8260B		1	06/05/15 16:44	CYF0086	CF50535
Dibromomethane	ND (0.0492)	0.0156	8260B		1	06/05/15 16:44	CYF0086	CF50535
Dichlorodifluoromethane	ND (0.0492)	0.0086	8260B		1	06/05/15 16:44	CYF0086	CF50535
Diethyl Ether	ND (0.0492)	0.0125	8260B		1	06/05/15 16:44	CYF0086	CF50535
Di-isopropyl ether	ND (0.0492)	0.0093	8260B		1	06/05/15 16:44	CYF0086	CF50535
Ethyl tertiary-butyl ether	ND (0.0492)	0.0124	8260B		1	06/05/15 16:44	CYF0086	CF50535
Ethylbenzene	ND (0.0492)	0.0064	8260B		1	06/05/15 16:44	CYF0086	CF50535
Hexachlorobutadiene	ND (0.0492)	0.0164	8260B		1	06/05/15 16:44	CYF0086	CF50535
Isopropylbenzene	ND (0.0492)	0.0087	8260B		1	06/05/15 16:44	CYF0086	CF50535
Methyl tert-Butyl Ether	ND (0.0492)	0.0079	8260B		1	06/05/15 16:44	CYF0086	CF50535
Methylene Chloride	ND (0.246)	0.0129	8260B		1	06/05/15 16:44	CYF0086	CF50535
Naphthalene	ND (0.0492)	0.0129	8260B		1	06/05/15 16:44	CYF0086	CF50535
n-Butylbenzene	ND (0.0492)	0.0121	8260B		1	06/05/15 16:44	CYF0086	CF50535
n-Propylbenzene	ND (0.0492)	0.0120	8260B		1	06/05/15 16:44	CYF0086	CF50535
sec-Butylbenzene	ND (0.0492)	0.0066	8260B		1	06/05/15 16:44	CYF0086	CF50535
Styrene	ND (0.0492)	0.0065	8260B		1	06/05/15 16:44	CYF0086	CF50535
tert-Butylbenzene	ND (0.0492)	0.0115	8260B		1	06/05/15 16:44	CYF0086	CF50535
Tertiary-amyl methyl ether	ND (0.0492)	0.0071	8260B		1	06/05/15 16:44	CYF0086	CF50535
Tetrachloroethene	**0.407** (0.0492)	0.0164	8260B		1	06/05/15 16:44	CYF0086	CF50535
Tetrahydrofuran	ND (0.492)	0.127	8260B		1	06/05/15 16:44	CYF0086	CF50535

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Riverside Square
Client Sample ID: GP-202 2-4
Date Sampled: 06/04/15 08:49
Percent Solids: 85
Initial Volume: 22
Final Volume: 15
Extraction Method: 5035

ESS Laboratory Work Order: 1506154
ESS Laboratory Sample ID: 1506154-06
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MD

5035/8260B Volatile Organic Compounds / Methanol

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
Toluene	ND (0.0492)	0.0125	8260B		1	06/05/15 16:44	CYF0086	CF50535
trans-1,2-Dichloroethene	ND (0.0492)	0.0161	8260B		1	06/05/15 16:44	CYF0086	CF50535
trans-1,3-Dichloropropene	ND (0.0492)	0.0152	8260B		1	06/05/15 16:44	CYF0086	CF50535
Trichloroethene	**0.817** (0.0492)	0.0101	8260B		1	06/05/15 16:44	CYF0086	CF50535
Trichlorofluoromethane	ND (0.0492)	0.0130	8260B		1	06/05/15 16:44	CYF0086	CF50535
Vinyl Acetate	ND (0.246)	0.0101	8260B		1	06/05/15 16:44	CYF0086	CF50535
Vinyl Chloride	ND (0.0492)	0.0162	8260B		1	06/05/15 16:44	CYF0086	CF50535
Xylene O	ND (0.0492)	0.0094	8260B		1	06/05/15 16:44	CYF0086	CF50535
Xylene P,M	ND (0.0984)	0.0191	8260B		1	06/05/15 16:44	CYF0086	CF50535
Xylenes (Total)	ND (0.0984)		8260B		1	06/05/15 16:44		[CALC]

	%Recovery	Qualifier	Limits
Surrogate: 1,2-Dichloroethane-d4	*102 %*		*70-130*
Surrogate: 4-Bromofluorobenzene	*93 %*		*70-130*
Surrogate: Dibromofluoromethane	*109 %*		*70-130*
Surrogate: Toluene-d8	*95 %*		*70-130*

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Riverside Square
Client Sample ID: GP-203 0-2
Date Sampled: 06/04/15 08:56
Percent Solids: 92
Initial Volume: 20.1
Final Volume: 15
Extraction Method: 5035

ESS Laboratory Work Order: 1506154
ESS Laboratory Sample ID: 1506154-07
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MD

5035/8260B Volatile Organic Compounds / Methanol

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
1,1,1,2-Tetrachloroethane	ND (0.0908)	0.0079	8260B		1	06/05/15 17:12	CYF0086	CF50535
1,1,1-Trichloroethane	ND (0.0454)	0.0080	8260B		1	06/05/15 17:12	CYF0086	CF50535
1,1,2,2-Tetrachloroethane	ND (0.0454)	0.0123	8260B		1	06/05/15 17:12	CYF0086	CF50535
1,1,2-Trichloroethane	ND (0.0454)	0.0113	8260B		1	06/05/15 17:12	CYF0086	CF50535
1,1-Dichloroethane	ND (0.0454)	0.0073	8260B		1	06/05/15 17:12	CYF0086	CF50535
1,1-Dichloroethene	ND (0.0454)	0.0112	8260B		1	06/05/15 17:12	CYF0086	CF50535
1,1-Dichloropropene	ND (0.0454)	0.0070	8260B		1	06/05/15 17:12	CYF0086	CF50535
1,2,3-Trichlorobenzene	ND (0.0454)	0.0152	8260B		1	06/05/15 17:12	CYF0086	CF50535
1,2,3-Trichloropropane	ND (0.0454)	0.0113	8260B		1	06/05/15 17:12	CYF0086	CF50535
1,2,4-Trichlorobenzene	ND (0.0454)	0.0100	8260B		1	06/05/15 17:12	CYF0086	CF50535
1,2,4-Trimethylbenzene	ND (0.0454)	0.0087	8260B		1	06/05/15 17:12	CYF0086	CF50535
1,2-Dibromo-3-Chloropropane	ND (0.272)	0.0908	8260B		1	06/05/15 17:12	CYF0086	CF50535
1,2-Dibromoethane	ND (0.0454)	0.0115	8260B		1	06/05/15 17:12	CYF0086	CF50535
1,2-Dichlorobenzene	ND (0.0454)	0.0064	8260B		1	06/05/15 17:12	CYF0086	CF50535
1,2-Dichloroethane	ND (0.0454)	0.0122	8260B		1	06/05/15 17:12	CYF0086	CF50535
1,2-Dichloropropane	ND (0.0454)	0.0119	8260B		1	06/05/15 17:12	CYF0086	CF50535
1,3,5-Trimethylbenzene	ND (0.0454)	0.0080	8260B		1	06/05/15 17:12	CYF0086	CF50535
1,3-Dichlorobenzene	ND (0.0454)	0.0057	8260B		1	06/05/15 17:12	CYF0086	CF50535
1,3-Dichloropropane	ND (0.0454)	0.0102	8260B		1	06/05/15 17:12	CYF0086	CF50535
1,4-Dichlorobenzene	ND (0.0454)	0.0121	8260B		1	06/05/15 17:12	CYF0086	CF50535
1,4-Dioxane - Screen	ND (4.54)	1.52	8260B		1	06/05/15 17:12	CYF0086	CF50535
1-Chlorohexane	ND (0.0454)	0.0086	8260B		1	06/05/15 17:12	CYF0086	CF50535
2,2-Dichloropropane	ND (0.0908)	0.0155	8260B		1	06/05/15 17:12	CYF0086	CF50535
2-Butanone	ND (1.13)	0.262	8260B		1	06/05/15 17:12	CYF0086	CF50535
2-Chlorotoluene	ND (0.0454)	0.0128	8260B		1	06/05/15 17:12	CYF0086	CF50535
2-Hexanone	ND (0.454)	0.0782	8260B		1	06/05/15 17:12	CYF0086	CF50535
4-Chlorotoluene	ND (0.0454)	0.0059	8260B		1	06/05/15 17:12	CYF0086	CF50535
4-Isopropyltoluene	ND (0.0454)	0.0081	8260B		1	06/05/15 17:12	CYF0086	CF50535
4-Methyl-2-Pentanone	ND (0.454)	0.0547	8260B		1	06/05/15 17:12	CYF0086	CF50535
Acetone	ND (1.13)	0.336	8260B		1	06/05/15 17:12	CYF0086	CF50535
Benzene	ND (0.0454)	0.0074	8260B		1	06/05/15 17:12	CYF0086	CF50535
Bromobenzene	ND (0.0454)	0.0124	8260B		1	06/05/15 17:12	CYF0086	CF50535

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Riverside Square
Client Sample ID: GP-203 0-2
Date Sampled: 06/04/15 08:56
Percent Solids: 92
Initial Volume: 20.1
Final Volume: 15
Extraction Method: 5035

ESS Laboratory Work Order: 1506154
ESS Laboratory Sample ID: 1506154-07
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MD

5035/8260B Volatile Organic Compounds / Methanol

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
Bromochloromethane	ND (0.0454)	0.0147	8260B		1	06/05/15 17:12	CYF0086	CF50535
Bromodichloromethane	ND (0.0454)	0.0063	8260B		1	06/05/15 17:12	CYF0086	CF50535
Bromoform	ND (0.0454)	0.0131	8260B		1	06/05/15 17:12	CYF0086	CF50535
Bromomethane	ND (0.0908)	0.0303	8260B		1	06/05/15 17:12	CYF0086	CF50535
Carbon Disulfide	ND (0.0454)	0.0067	8260B		1	06/05/15 17:12	CYF0086	CF50535
Carbon Tetrachloride	ND (0.0454)	0.0079	8260B		1	06/05/15 17:12	CYF0086	CF50535
Chlorobenzene	ND (0.0454)	0.0072	8260B		1	06/05/15 17:12	CYF0086	CF50535
Chloroethane	ND (0.0908)	0.0302	8260B		1	06/05/15 17:12	CYF0086	CF50535
Chloroform	ND (0.0454)	0.0094	8260B		1	06/05/15 17:12	CYF0086	CF50535
Chloromethane	ND (0.0908)	0.0115	8260B		1	06/05/15 17:12	CYF0086	CF50535
cis-1,2-Dichloroethene	ND (0.0454)	0.0113	8260B		1	06/05/15 17:12	CYF0086	CF50535
cis-1,3-Dichloropropene	ND (0.0454)	0.0103	8260B		1	06/05/15 17:12	CYF0086	CF50535
Dibromochloromethane	ND (0.0454)	0.0114	8260B		1	06/05/15 17:12	CYF0086	CF50535
Dibromomethane	ND (0.0454)	0.0143	8260B		1	06/05/15 17:12	CYF0086	CF50535
Dichlorodifluoromethane	ND (0.0454)	0.0079	8260B		1	06/05/15 17:12	CYF0086	CF50535
Diethyl Ether	ND (0.0454)	0.0115	8260B		1	06/05/15 17:12	CYF0086	CF50535
Di-isopropyl ether	ND (0.0454)	0.0085	8260B		1	06/05/15 17:12	CYF0086	CF50535
Ethyl tertiary-butyl ether	ND (0.0454)	0.0114	8260B		1	06/05/15 17:12	CYF0086	CF50535
Ethylbenzene	ND (0.0454)	0.0059	8260B		1	06/05/15 17:12	CYF0086	CF50535
Hexachlorobutadiene	ND (0.0454)	0.0152	8260B		1	06/05/15 17:12	CYF0086	CF50535
Isopropylbenzene	ND (0.0454)	0.0080	8260B		1	06/05/15 17:12	CYF0086	CF50535
Methyl tert-Butyl Ether	ND (0.0454)	0.0073	8260B		1	06/05/15 17:12	CYF0086	CF50535
Methylene Chloride	ND (0.227)	0.0119	8260B		1	06/05/15 17:12	CYF0086	CF50535
Naphthalene	ND (0.0454)	0.0119	8260B		1	06/05/15 17:12	CYF0086	CF50535
n-Butylbenzene	ND (0.0454)	0.0112	8260B		1	06/05/15 17:12	CYF0086	CF50535
n-Propylbenzene	ND (0.0454)	0.0111	8260B		1	06/05/15 17:12	CYF0086	CF50535
sec-Butylbenzene	ND (0.0454)	0.0061	8260B		1	06/05/15 17:12	CYF0086	CF50535
Styrene	ND (0.0454)	0.0060	8260B		1	06/05/15 17:12	CYF0086	CF50535
tert-Butylbenzene	ND (0.0454)	0.0106	8260B		1	06/05/15 17:12	CYF0086	CF50535
Tertiary-amyl methyl ether	ND (0.0454)	0.0065	8260B		1	06/05/15 17:12	CYF0086	CF50535
Tetrachloroethene	**0.0917** (0.0454)	0.0152	8260B		1	06/05/15 17:12	CYF0086	CF50535
Tetrahydrofuran	ND (0.454)	0.117	8260B		1	06/05/15 17:12	CYF0086	CF50535

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Riverside Square
Client Sample ID: GP-203 0-2
Date Sampled: 06/04/15 08:56
Percent Solids: 92
Initial Volume: 20.1
Final Volume: 15
Extraction Method: 5035

ESS Laboratory Work Order: 1506154
ESS Laboratory Sample ID: 1506154-07
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MD

5035/8260B Volatile Organic Compounds / Methanol

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
Toluene	ND (0.0454)	0.0115	8260B		1	06/05/15 17:12	CYF0086	CF50535
trans-1,2-Dichloroethene	ND (0.0454)	0.0149	8260B		1	06/05/15 17:12	CYF0086	CF50535
trans-1,3-Dichloropropene	ND (0.0454)	0.0140	8260B		1	06/05/15 17:12	CYF0086	CF50535
Trichloroethene	**0.158** (0.0454)	0.0094	8260B		1	06/05/15 17:12	CYF0086	CF50535
Trichlorofluoromethane	ND (0.0454)	0.0120	8260B		1	06/05/15 17:12	CYF0086	CF50535
Vinyl Acetate	ND (0.227)	0.0094	8260B		1	06/05/15 17:12	CYF0086	CF50535
Vinyl Chloride	ND (0.0454)	0.0150	8260B		1	06/05/15 17:12	CYF0086	CF50535
Xylene O	ND (0.0454)	0.0087	8260B		1	06/05/15 17:12	CYF0086	CF50535
Xylene P,M	ND (0.0908)	0.0176	8260B		1	06/05/15 17:12	CYF0086	CF50535
Xylenes (Total)	ND (0.0908)		8260B		1	06/05/15 17:12		[CALC]

	%Recovery	Qualifier	Limits
Surrogate: 1,2-Dichloroethane-d4	*102 %*		*70-130*
Surrogate: 4-Bromofluorobenzene	*93 %*		*70-130*
Surrogate: Dibromofluoromethane	*106 %*		*70-130*
Surrogate: Toluene-d8	*90 %*		*70-130*

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Riverside Square
Client Sample ID: GP-203 0-2 BD
Date Sampled: 06/04/15 08:57
Percent Solids: 92
Initial Volume: 19.2
Final Volume: 15
Extraction Method: 5035

ESS Laboratory Work Order: 1506154
ESS Laboratory Sample ID: 1506154-08
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MD

5035/8260B Volatile Organic Compounds / Methanol

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
1,1,1,2-Tetrachloroethane	ND (0.0935)	0.0081	8260B		1	06/05/15 17:40	CYF0086	CF50535
1,1,1-Trichloroethane	ND (0.0467)	0.0082	8260B		1	06/05/15 17:40	CYF0086	CF50535
1,1,2,2-Tetrachloroethane	ND (0.0467)	0.0127	8260B		1	06/05/15 17:40	CYF0086	CF50535
1,1,2-Trichloroethane	ND (0.0467)	0.0117	8260B		1	06/05/15 17:40	CYF0086	CF50535
1,1-Dichloroethane	ND (0.0467)	0.0075	8260B		1	06/05/15 17:40	CYF0086	CF50535
1,1-Dichloroethene	ND (0.0467)	0.0115	8260B		1	06/05/15 17:40	CYF0086	CF50535
1,1-Dichloropropene	ND (0.0467)	0.0072	8260B		1	06/05/15 17:40	CYF0086	CF50535
1,2,3-Trichlorobenzene	ND (0.0467)	0.0156	8260B		1	06/05/15 17:40	CYF0086	CF50535
1,2,3-Trichloropropane	ND (0.0467)	0.0116	8260B		1	06/05/15 17:40	CYF0086	CF50535
1,2,4-Trichlorobenzene	ND (0.0467)	0.0103	8260B		1	06/05/15 17:40	CYF0086	CF50535
1,2,4-Trimethylbenzene	ND (0.0467)	0.0090	8260B		1	06/05/15 17:40	CYF0086	CF50535
1,2-Dibromo-3-Chloropropane	ND (0.280)	0.0935	8260B		1	06/05/15 17:40	CYF0086	CF50535
1,2-Dibromoethane	ND (0.0467)	0.0119	8260B		1	06/05/15 17:40	CYF0086	CF50535
1,2-Dichlorobenzene	ND (0.0467)	0.0066	8260B		1	06/05/15 17:40	CYF0086	CF50535
1,2-Dichloroethane	ND (0.0467)	0.0125	8260B		1	06/05/15 17:40	CYF0086	CF50535
1,2-Dichloropropane	ND (0.0467)	0.0122	8260B		1	06/05/15 17:40	CYF0086	CF50535
1,3,5-Trimethylbenzene	ND (0.0467)	0.0082	8260B		1	06/05/15 17:40	CYF0086	CF50535
1,3-Dichlorobenzene	ND (0.0467)	0.0059	8260B		1	06/05/15 17:40	CYF0086	CF50535
1,3-Dichloropropane	ND (0.0467)	0.0105	8260B		1	06/05/15 17:40	CYF0086	CF50535
1,4-Dichlorobenzene	ND (0.0467)	0.0124	8260B		1	06/05/15 17:40	CYF0086	CF50535
1,4-Dioxane - Screen	ND (4.67)	1.56	8260B		1	06/05/15 17:40	CYF0086	CF50535
1-Chlorohexane	ND (0.0467)	0.0089	8260B		1	06/05/15 17:40	CYF0086	CF50535
2,2-Dichloropropane	ND (0.0935)	0.0160	8260B		1	06/05/15 17:40	CYF0086	CF50535
2-Butanone	ND (1.17)	0.270	8260B		1	06/05/15 17:40	CYF0086	CF50535
2-Chlorotoluene	ND (0.0467)	0.0132	8260B		1	06/05/15 17:40	CYF0086	CF50535
2-Hexanone	ND (0.467)	0.0805	8260B		1	06/05/15 17:40	CYF0086	CF50535
4-Chlorotoluene	ND (0.0467)	0.0061	8260B		1	06/05/15 17:40	CYF0086	CF50535
4-Isopropyltoluene	ND (0.0467)	0.0083	8260B		1	06/05/15 17:40	CYF0086	CF50535
4-Methyl-2-Pentanone	ND (0.467)	0.0563	8260B		1	06/05/15 17:40	CYF0086	CF50535
Acetone	ND (1.17)	0.346	8260B		1	06/05/15 17:40	CYF0086	CF50535
Benzene	ND (0.0467)	0.0076	8260B		1	06/05/15 17:40	CYF0086	CF50535
Bromobenzene	ND (0.0467)	0.0128	8260B		1	06/05/15 17:40	CYF0086	CF50535

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Riverside Square
Client Sample ID: GP-203 0-2 BD
Date Sampled: 06/04/15 08:57
Percent Solids: 92
Initial Volume: 19.2
Final Volume: 15
Extraction Method: 5035

ESS Laboratory Work Order: 1506154
ESS Laboratory Sample ID: 1506154-08
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MD

5035/8260B Volatile Organic Compounds / Methanol

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
Bromochloromethane	ND (0.0467)	0.0151	8260B		1	06/05/15 17:40	CYF0086	CF50535
Bromodichloromethane	ND (0.0467)	0.0065	8260B		1	06/05/15 17:40	CYF0086	CF50535
Bromoform	ND (0.0467)	0.0135	8260B		1	06/05/15 17:40	CYF0086	CF50535
Bromomethane	ND (0.0935)	0.0312	8260B		1	06/05/15 17:40	CYF0086	CF50535
Carbon Disulfide	ND (0.0467)	0.0069	8260B		1	06/05/15 17:40	CYF0086	CF50535
Carbon Tetrachloride	ND (0.0467)	0.0081	8260B		1	06/05/15 17:40	CYF0086	CF50535
Chlorobenzene	ND (0.0467)	0.0074	8260B		1	06/05/15 17:40	CYF0086	CF50535
Chloroethane	ND (0.0935)	0.0311	8260B		1	06/05/15 17:40	CYF0086	CF50535
Chloroform	ND (0.0467)	0.0096	8260B		1	06/05/15 17:40	CYF0086	CF50535
Chloromethane	ND (0.0935)	0.0119	8260B		1	06/05/15 17:40	CYF0086	CF50535
cis-1,2-Dichloroethene	ND (0.0467)	0.0116	8260B		1	06/05/15 17:40	CYF0086	CF50535
cis-1,3-Dichloropropene	ND (0.0467)	0.0106	8260B		1	06/05/15 17:40	CYF0086	CF50535
Dibromochloromethane	ND (0.0467)	0.0118	8260B		1	06/05/15 17:40	CYF0086	CF50535
Dibromomethane	ND (0.0467)	0.0148	8260B		1	06/05/15 17:40	CYF0086	CF50535
Dichlorodifluoromethane	ND (0.0467)	0.0081	8260B		1	06/05/15 17:40	CYF0086	CF50535
Diethyl Ether	ND (0.0467)	0.0119	8260B		1	06/05/15 17:40	CYF0086	CF50535
Di-isopropyl ether	ND (0.0467)	0.0088	8260B		1	06/05/15 17:40	CYF0086	CF50535
Ethyl tertiary-butyl ether	ND (0.0467)	0.0118	8260B		1	06/05/15 17:40	CYF0086	CF50535
Ethylbenzene	ND (0.0467)	0.0061	8260B		1	06/05/15 17:40	CYF0086	CF50535
Hexachlorobutadiene	ND (0.0467)	0.0156	8260B		1	06/05/15 17:40	CYF0086	CF50535
Isopropylbenzene	ND (0.0467)	0.0082	8260B		1	06/05/15 17:40	CYF0086	CF50535
Methyl tert-Butyl Ether	ND (0.0467)	0.0075	8260B		1	06/05/15 17:40	CYF0086	CF50535
Methylene Chloride	ND (0.234)	0.0122	8260B		1	06/05/15 17:40	CYF0086	CF50535
Naphthalene	ND (0.0467)	0.0122	8260B		1	06/05/15 17:40	CYF0086	CF50535
n-Butylbenzene	ND (0.0467)	0.0115	8260B		1	06/05/15 17:40	CYF0086	CF50535
n-Propylbenzene	ND (0.0467)	0.0114	8260B		1	06/05/15 17:40	CYF0086	CF50535
sec-Butylbenzene	ND (0.0467)	0.0063	8260B		1	06/05/15 17:40	CYF0086	CF50535
Styrene	ND (0.0467)	0.0062	8260B		1	06/05/15 17:40	CYF0086	CF50535
tert-Butylbenzene	ND (0.0467)	0.0109	8260B		1	06/05/15 17:40	CYF0086	CF50535
Tertiary-amyl methyl ether	ND (0.0467)	0.0067	8260B		1	06/05/15 17:40	CYF0086	CF50535
Tetrachloroethene	**0.0720** (0.0467)	0.0156	8260B		1	06/05/15 17:40	CYF0086	CF50535
Tetrahydrofuran	ND (0.467)	0.121	8260B		1	06/05/15 17:40	CYF0086	CF50535

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Riverside Square
Client Sample ID: GP-203 0-2 BD
Date Sampled: 06/04/15 08:57
Percent Solids: 92
Initial Volume: 19.2
Final Volume: 15
Extraction Method: 5035

ESS Laboratory Work Order: 1506154
ESS Laboratory Sample ID: 1506154-08
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MD

5035/8260B Volatile Organic Compounds / Methanol

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
Toluene	ND (0.0467)	0.0119	8260B		1	06/05/15 17:40	CYF0086	CF50535
trans-1,2-Dichloroethene	ND (0.0467)	0.0153	8260B		1	06/05/15 17:40	CYF0086	CF50535
trans-1,3-Dichloropropene	ND (0.0467)	0.0144	8260B		1	06/05/15 17:40	CYF0086	CF50535
Trichloroethene	**0.128** (0.0467)	0.0096	8260B		1	06/05/15 17:40	CYF0086	CF50535
Trichlorofluoromethane	ND (0.0467)	0.0123	8260B		1	06/05/15 17:40	CYF0086	CF50535
Vinyl Acetate	ND (0.234)	0.0096	8260B		1	06/05/15 17:40	CYF0086	CF50535
Vinyl Chloride	ND (0.0467)	0.0154	8260B		1	06/05/15 17:40	CYF0086	CF50535
Xylene O	ND (0.0467)	0.0090	8260B		1	06/05/15 17:40	CYF0086	CF50535
Xylene P,M	ND (0.0935)	0.0181	8260B		1	06/05/15 17:40	CYF0086	CF50535
Xylenes (Total)	ND (0.0935)		8260B		1	06/05/15 17:40		[CALC]

	%Recovery	Qualifier	Limits
Surrogate: 1,2-Dichloroethane-d4	*98 %*		*70-130*
Surrogate: 4-Bromofluorobenzene	*94 %*		*70-130*
Surrogate: Dibromofluoromethane	*99 %*		*70-130*
Surrogate: Toluene-d8	*88 %*		*70-130*

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Riverside Square
Client Sample ID: GP-203 2-4
Date Sampled: 06/04/15 08:59
Percent Solids: 91
Initial Volume: 18.9
Final Volume: 1
Extraction Method: 5035

ESS Laboratory Work Order: 1506154
ESS Laboratory Sample ID: 1506154-09
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MD

5035/8260B Volatile Organic Compounds / Methanol

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
1,1,1,2-Tetrachloroethane	ND (0.0152)	0.0013	8260B		1	06/05/15 18:07	CYF0086	CF50535
1,1,1-Trichloroethane	ND (0.0076)	0.0013	8260B		1	06/05/15 18:07	CYF0086	CF50535
1,1,2,2-Tetrachloroethane	ND (0.0076)	0.0021	8260B		1	06/05/15 18:07	CYF0086	CF50535
1,1,2-Trichloroethane	ND (0.0076)	0.0019	8260B		1	06/05/15 18:07	CYF0086	CF50535
1,1-Dichloroethane	ND (0.0076)	0.0012	8260B		1	06/05/15 18:07	CYF0086	CF50535
1,1-Dichloroethene	ND (0.0076)	0.0019	8260B		1	06/05/15 18:07	CYF0086	CF50535
1,1-Dichloropropene	ND (0.0076)	0.0012	8260B		1	06/05/15 18:07	CYF0086	CF50535
1,2,3-Trichlorobenzene	ND (0.0076)	0.0025	8260B		1	06/05/15 18:07	CYF0086	CF50535
1,2,3-Trichloropropane	ND (0.0076)	0.0019	8260B		1	06/05/15 18:07	CYF0086	CF50535
1,2,4-Trichlorobenzene	ND (0.0076)	0.0017	8260B		1	06/05/15 18:07	CYF0086	CF50535
1,2,4-Trimethylbenzene	ND (0.0076)	0.0015	8260B		1	06/05/15 18:07	CYF0086	CF50535
1,2-Dibromo-3-Chloropropane	ND (0.0456)	0.0152	8260B		1	06/05/15 18:07	CYF0086	CF50535
1,2-Dibromoethane	ND (0.0076)	0.0019	8260B		1	06/05/15 18:07	CYF0086	CF50535
1,2-Dichlorobenzene	ND (0.0076)	0.0011	8260B		1	06/05/15 18:07	CYF0086	CF50535
1,2-Dichloroethane	ND (0.0076)	0.0020	8260B		1	06/05/15 18:07	CYF0086	CF50535
1,2-Dichloropropane	ND (0.0076)	0.0020	8260B		1	06/05/15 18:07	CYF0086	CF50535
1,3,5-Trimethylbenzene	ND (0.0076)	0.0013	8260B		1	06/05/15 18:07	CYF0086	CF50535
1,3-Dichlorobenzene	ND (0.0076)	0.0010	8260B		1	06/05/15 18:07	CYF0086	CF50535
1,3-Dichloropropane	ND (0.0076)	0.0017	8260B		1	06/05/15 18:07	CYF0086	CF50535
1,4-Dichlorobenzene	ND (0.0076)	0.0020	8260B		1	06/05/15 18:07	CYF0086	CF50535
1,4-Dioxane - Screen	ND (0.760)	0.254	8260B		1	06/05/15 18:07	CYF0086	CF50535
1-Chlorohexane	ND (0.0076)	0.0014	8260B		1	06/05/15 18:07	CYF0086	CF50535
2,2-Dichloropropane	ND (0.0152)	0.0026	8260B		1	06/05/15 18:07	CYF0086	CF50535
2-Butanone	ND (0.190)	0.0439	8260B		1	06/05/15 18:07	CYF0086	CF50535
2-Chlorotoluene	ND (0.0076)	0.0021	8260B		1	06/05/15 18:07	CYF0086	CF50535
2-Hexanone	ND (0.0760)	0.0131	8260B		1	06/05/15 18:07	CYF0086	CF50535
4-Chlorotoluene	ND (0.0076)	0.0010	8260B		1	06/05/15 18:07	CYF0086	CF50535
4-Isopropyltoluene	ND (0.0076)	0.0014	8260B		1	06/05/15 18:07	CYF0086	CF50535
4-Methyl-2-Pentanone	ND (0.0760)	0.0091	8260B		1	06/05/15 18:07	CYF0086	CF50535
Acetone	ND (0.190)	0.0562	8260B		1	06/05/15 18:07	CYF0086	CF50535
Benzene	ND (0.0076)	0.0012	8260B		1	06/05/15 18:07	CYF0086	CF50535
Bromobenzene	ND (0.0076)	0.0021	8260B		1	06/05/15 18:07	CYF0086	CF50535

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Riverside Square
Client Sample ID: GP-203 2-4
Date Sampled: 06/04/15 08:59
Percent Solids: 91
Initial Volume: 18.9
Final Volume: 1
Extraction Method: 5035

ESS Laboratory Work Order: 1506154
ESS Laboratory Sample ID: 1506154-09
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MD

5035/8260B Volatile Organic Compounds / Methanol

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
Bromochloromethane	ND (0.0076)	0.0025	8260B		1	06/05/15 18:07	CYF0086	CF50535
Bromodichloromethane	ND (0.0076)	0.0010	8260B		1	06/05/15 18:07	CYF0086	CF50535
Bromoform	ND (0.0076)	0.0022	8260B		1	06/05/15 18:07	CYF0086	CF50535
Bromomethane	ND (0.0152)	0.0051	8260B		1	06/05/15 18:07	CYF0086	CF50535
Carbon Disulfide	ND (0.0076)	0.0011	8260B		1	06/05/15 18:07	CYF0086	CF50535
Carbon Tetrachloride	ND (0.0076)	0.0013	8260B		1	06/05/15 18:07	CYF0086	CF50535
Chlorobenzene	ND (0.0076)	0.0012	8260B		1	06/05/15 18:07	CYF0086	CF50535
Chloroethane	ND (0.0152)	0.0051	8260B		1	06/05/15 18:07	CYF0086	CF50535
Chloroform	ND (0.0076)	0.0016	8260B		1	06/05/15 18:07	CYF0086	CF50535
Chloromethane	ND (0.0152)	0.0019	8260B		1	06/05/15 18:07	CYF0086	CF50535
cis-1,2-Dichloroethene	ND (0.0076)	0.0019	8260B		1	06/05/15 18:07	CYF0086	CF50535
cis-1,3-Dichloropropene	ND (0.0076)	0.0017	8260B		1	06/05/15 18:07	CYF0086	CF50535
Dibromochloromethane	ND (0.0076)	0.0019	8260B		1	06/05/15 18:07	CYF0086	CF50535
Dibromomethane	ND (0.0076)	0.0024	8260B		1	06/05/15 18:07	CYF0086	CF50535
Dichlorodifluoromethane	ND (0.0076)	0.0013	8260B		1	06/05/15 18:07	CYF0086	CF50535
Diethyl Ether	ND (0.0076)	0.0019	8260B		1	06/05/15 18:07	CYF0086	CF50535
Di-isopropyl ether	ND (0.0076)	0.0014	8260B		1	06/05/15 18:07	CYF0086	CF50535
Ethyl tertiary-butyl ether	ND (0.0076)	0.0019	8260B		1	06/05/15 18:07	CYF0086	CF50535
Ethylbenzene	ND (0.0076)	0.0010	8260B		1	06/05/15 18:07	CYF0086	CF50535
Hexachlorobutadiene	ND (0.0076)	0.0025	8260B		1	06/05/15 18:07	CYF0086	CF50535
Isopropylbenzene	ND (0.0076)	0.0013	8260B		1	06/05/15 18:07	CYF0086	CF50535
Methyl tert-Butyl Ether	ND (0.0076)	0.0012	8260B		1	06/05/15 18:07	CYF0086	CF50535
Methylene Chloride	ND (0.0380)	0.0020	8260B		1	06/05/15 18:07	CYF0086	CF50535
Naphthalene	ND (0.0076)	0.0020	8260B		1	06/05/15 18:07	CYF0086	CF50535
n-Butylbenzene	ND (0.0076)	0.0019	8260B		1	06/05/15 18:07	CYF0086	CF50535
n-Propylbenzene	ND (0.0076)	0.0019	8260B		1	06/05/15 18:07	CYF0086	CF50535
sec-Butylbenzene	ND (0.0076)	0.0010	8260B		1	06/05/15 18:07	CYF0086	CF50535
Styrene	ND (0.0076)	0.0010	8260B		1	06/05/15 18:07	CYF0086	CF50535
tert-Butylbenzene	ND (0.0076)	0.0018	8260B		1	06/05/15 18:07	CYF0086	CF50535
Tertiary-amyl methyl ether	ND (0.0076)	0.0011	8260B		1	06/05/15 18:07	CYF0086	CF50535
Tetrachloroethene	**0.0427** (0.0076)	0.0025	8260B		1	06/05/15 18:07	CYF0086	CF50535
Tetrahydrofuran	ND (0.0760)	0.0196	8260B		1	06/05/15 18:07	CYF0086	CF50535

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Riverside Square
Client Sample ID: GP-203 2-4
Date Sampled: 06/04/15 08:59
Percent Solids: 91
Initial Volume: 18.9
Final Volume: 1
Extraction Method: 5035

ESS Laboratory Work Order: 1506154
ESS Laboratory Sample ID: 1506154-09
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MD

5035/8260B Volatile Organic Compounds / Methanol

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
Toluene	ND (0.0076)	0.0019	8260B		1	06/05/15 18:07	CYF0086	CF50535
trans-1,2-Dichloroethene	ND (0.0076)	0.0025	8260B		1	06/05/15 18:07	CYF0086	CF50535
trans-1,3-Dichloropropene	ND (0.0076)	0.0023	8260B		1	06/05/15 18:07	CYF0086	CF50535
Trichloroethene	**0.0579** (0.0076)	0.0016	8260B		1	06/05/15 18:07	CYF0086	CF50535
Trichlorofluoromethane	ND (0.0076)	0.0020	8260B		1	06/05/15 18:07	CYF0086	CF50535
Vinyl Acetate	ND (0.0380)	0.0016	8260B		1	06/05/15 18:07	CYF0086	CF50535
Vinyl Chloride	ND (0.0076)	0.0025	8260B		1	06/05/15 18:07	CYF0086	CF50535
Xylene O	ND (0.0076)	0.0015	8260B		1	06/05/15 18:07	CYF0086	CF50535
Xylene P,M	ND (0.0152)	0.0029	8260B		1	06/05/15 18:07	CYF0086	CF50535
Xylenes (Total)	ND (0.0152)		8260B		1	06/05/15 18:07		[CALC]

	%Recovery	*Qualifier*	*Limits*
Surrogate: 1,2-Dichloroethane-d4	*16 %*		*70-130*
Surrogate: 4-Bromofluorobenzene	*15 %*		*70-130*
Surrogate: Dibromofluoromethane	*17 %*		*70-130*
Surrogate: Toluene-d8	*14 %*		*70-130*

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Riverside Square
Client Sample ID: GP-204 2-4
Date Sampled: 06/04/15 09:22
Percent Solids: 90
Initial Volume: 20.1
Final Volume: 15
Extraction Method: 5035

ESS Laboratory Work Order: 1506154
ESS Laboratory Sample ID: 1506154-10
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MD

5035/8260B Volatile Organic Compounds / Methanol

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
1,1,1,2-Tetrachloroethane	ND (0.0934)	0.0081	8260B		1	06/05/15 18:35	CYF0086	CF50535
1,1,1-Trichloroethane	ND (0.0467)	0.0082	8260B		1	06/05/15 18:35	CYF0086	CF50535
1,1,2,2-Tetrachloroethane	ND (0.0467)	0.0127	8260B		1	06/05/15 18:35	CYF0086	CF50535
1,1,2-Trichloroethane	ND (0.0467)	0.0117	8260B		1	06/05/15 18:35	CYF0086	CF50535
1,1-Dichloroethane	ND (0.0467)	0.0075	8260B		1	06/05/15 18:35	CYF0086	CF50535
1,1-Dichloroethene	ND (0.0467)	0.0115	8260B		1	06/05/15 18:35	CYF0086	CF50535
1,1-Dichloropropene	ND (0.0467)	0.0072	8260B		1	06/05/15 18:35	CYF0086	CF50535
1,2,3-Trichlorobenzene	ND (0.0467)	0.0156	8260B		1	06/05/15 18:35	CYF0086	CF50535
1,2,3-Trichloropropane	ND (0.0467)	0.0116	8260B		1	06/05/15 18:35	CYF0086	CF50535
1,2,4-Trichlorobenzene	ND (0.0467)	0.0103	8260B		1	06/05/15 18:35	CYF0086	CF50535
1,2,4-Trimethylbenzene	ND (0.0467)	0.0090	8260B		1	06/05/15 18:35	CYF0086	CF50535
1,2-Dibromo-3-Chloropropane	ND (0.280)	0.0934	8260B		1	06/05/15 18:35	CYF0086	CF50535
1,2-Dibromoethane	ND (0.0467)	0.0119	8260B		1	06/05/15 18:35	CYF0086	CF50535
1,2-Dichlorobenzene	ND (0.0467)	0.0066	8260B		1	06/05/15 18:35	CYF0086	CF50535
1,2-Dichloroethane	ND (0.0467)	0.0125	8260B		1	06/05/15 18:35	CYF0086	CF50535
1,2-Dichloropropane	ND (0.0467)	0.0122	8260B		1	06/05/15 18:35	CYF0086	CF50535
1,3,5-Trimethylbenzene	ND (0.0467)	0.0082	8260B		1	06/05/15 18:35	CYF0086	CF50535
1,3-Dichlorobenzene	ND (0.0467)	0.0059	8260B		1	06/05/15 18:35	CYF0086	CF50535
1,3-Dichloropropane	ND (0.0467)	0.0105	8260B		1	06/05/15 18:35	CYF0086	CF50535
1,4-Dichlorobenzene	ND (0.0467)	0.0124	8260B		1	06/05/15 18:35	CYF0086	CF50535
1,4-Dioxane - Screen	ND (4.67)	1.56	8260B		1	06/05/15 18:35	CYF0086	CF50535
1-Chlorohexane	ND (0.0467)	0.0089	8260B		1	06/05/15 18:35	CYF0086	CF50535
2,2-Dichloropropane	ND (0.0934)	0.0160	8260B		1	06/05/15 18:35	CYF0086	CF50535
2-Butanone	ND (1.17)	0.270	8260B		1	06/05/15 18:35	CYF0086	CF50535
2-Chlorotoluene	ND (0.0467)	0.0132	8260B		1	06/05/15 18:35	CYF0086	CF50535
2-Hexanone	ND (0.467)	0.0804	8260B		1	06/05/15 18:35	CYF0086	CF50535
4-Chlorotoluene	ND (0.0467)	0.0061	8260B		1	06/05/15 18:35	CYF0086	CF50535
4-Isopropyltoluene	ND (0.0467)	0.0083	8260B		1	06/05/15 18:35	CYF0086	CF50535
4-Methyl-2-Pentanone	ND (0.467)	0.0562	8260B		1	06/05/15 18:35	CYF0086	CF50535
Acetone	ND (1.17)	0.346	8260B		1	06/05/15 18:35	CYF0086	CF50535
Benzene	ND (0.0467)	0.0076	8260B		1	06/05/15 18:35	CYF0086	CF50535
Bromobenzene	ND (0.0467)	0.0128	8260B		1	06/05/15 18:35	CYF0086	CF50535

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Riverside Square
Client Sample ID: GP-204 2-4
Date Sampled: 06/04/15 09:22
Percent Solids: 90
Initial Volume: 20.1
Final Volume: 15
Extraction Method: 5035

ESS Laboratory Work Order: 1506154
ESS Laboratory Sample ID: 1506154-10
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MD

5035/8260B Volatile Organic Compounds / Methanol

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
Bromochloromethane	ND (0.0467)	0.0151	8260B		1	06/05/15 18:35	CYF0086	CF50535
Bromodichloromethane	ND (0.0467)	0.0064	8260B		1	06/05/15 18:35	CYF0086	CF50535
Bromoform	ND (0.0467)	0.0135	8260B		1	06/05/15 18:35	CYF0086	CF50535
Bromomethane	ND (0.0934)	0.0312	8260B		1	06/05/15 18:35	CYF0086	CF50535
Carbon Disulfide	ND (0.0467)	0.0069	8260B		1	06/05/15 18:35	CYF0086	CF50535
Carbon Tetrachloride	ND (0.0467)	0.0081	8260B		1	06/05/15 18:35	CYF0086	CF50535
Chlorobenzene	ND (0.0467)	0.0074	8260B		1	06/05/15 18:35	CYF0086	CF50535
Chloroethane	ND (0.0934)	0.0311	8260B		1	06/05/15 18:35	CYF0086	CF50535
Chloroform	ND (0.0467)	0.0096	8260B		1	06/05/15 18:35	CYF0086	CF50535
Chloromethane	ND (0.0934)	0.0119	8260B		1	06/05/15 18:35	CYF0086	CF50535
cis-1,2-Dichloroethene	ND (0.0467)	0.0116	8260B		1	06/05/15 18:35	CYF0086	CF50535
cis-1,3-Dichloropropene	ND (0.0467)	0.0106	8260B		1	06/05/15 18:35	CYF0086	CF50535
Dibromochloromethane	ND (0.0467)	0.0118	8260B		1	06/05/15 18:35	CYF0086	CF50535
Dibromomethane	ND (0.0467)	0.0148	8260B		1	06/05/15 18:35	CYF0086	CF50535
Dichlorodifluoromethane	ND (0.0467)	0.0081	8260B		1	06/05/15 18:35	CYF0086	CF50535
Diethyl Ether	ND (0.0467)	0.0119	8260B		1	06/05/15 18:35	CYF0086	CF50535
Di-isopropyl ether	ND (0.0467)	0.0088	8260B		1	06/05/15 18:35	CYF0086	CF50535
Ethyl tertiary-butyl ether	ND (0.0467)	0.0118	8260B		1	06/05/15 18:35	CYF0086	CF50535
Ethylbenzene	ND (0.0467)	0.0061	8260B		1	06/05/15 18:35	CYF0086	CF50535
Hexachlorobutadiene	ND (0.0467)	0.0156	8260B		1	06/05/15 18:35	CYF0086	CF50535
Isopropylbenzene	ND (0.0467)	0.0082	8260B		1	06/05/15 18:35	CYF0086	CF50535
Methyl tert-Butyl Ether	ND (0.0467)	0.0075	8260B		1	06/05/15 18:35	CYF0086	CF50535
Methylene Chloride	ND (0.234)	0.0122	8260B		1	06/05/15 18:35	CYF0086	CF50535
Naphthalene	ND (0.0467)	0.0122	8260B		1	06/05/15 18:35	CYF0086	CF50535
n-Butylbenzene	ND (0.0467)	0.0115	8260B		1	06/05/15 18:35	CYF0086	CF50535
n-Propylbenzene	ND (0.0467)	0.0114	8260B		1	06/05/15 18:35	CYF0086	CF50535
sec-Butylbenzene	ND (0.0467)	0.0063	8260B		1	06/05/15 18:35	CYF0086	CF50535
Styrene	ND (0.0467)	0.0062	8260B		1	06/05/15 18:35	CYF0086	CF50535
tert-Butylbenzene	ND (0.0467)	0.0109	8260B		1	06/05/15 18:35	CYF0086	CF50535
Tertiary-amyl methyl ether	ND (0.0467)	0.0067	8260B		1	06/05/15 18:35	CYF0086	CF50535
Tetrachloroethene	**0.115** (0.0467)	0.0156	8260B		1	06/05/15 18:35	CYF0086	CF50535
Tetrahydrofuran	ND (0.467)	0.121	8260B		1	06/05/15 18:35	CYF0086	CF50535

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Riverside Square
Client Sample ID: GP-204 2-4
Date Sampled: 06/04/15 09:22
Percent Solids: 90
Initial Volume: 20.1
Final Volume: 15
Extraction Method: 5035

ESS Laboratory Work Order: 1506154
ESS Laboratory Sample ID: 1506154-10
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MD

5035/8260B Volatile Organic Compounds / Methanol

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
Toluene	ND (0.0467)	0.0119	8260B		1	06/05/15 18:35	CYF0086	CF50535
trans-1,2-Dichloroethene	ND (0.0467)	0.0153	8260B		1	06/05/15 18:35	CYF0086	CF50535
trans-1,3-Dichloropropene	ND (0.0467)	0.0144	8260B		1	06/05/15 18:35	CYF0086	CF50535
Trichloroethene	**0.373** (0.0467)	0.0096	8260B		1	06/05/15 18:35	CYF0086	CF50535
Trichlorofluoromethane	ND (0.0467)	0.0123	8260B		1	06/05/15 18:35	CYF0086	CF50535
Vinyl Acetate	ND (0.234)	0.0096	8260B		1	06/05/15 18:35	CYF0086	CF50535
Vinyl Chloride	ND (0.0467)	0.0154	8260B		1	06/05/15 18:35	CYF0086	CF50535
Xylene O	ND (0.0467)	0.0090	8260B		1	06/05/15 18:35	CYF0086	CF50535
Xylene P,M	ND (0.0934)	0.0181	8260B		1	06/05/15 18:35	CYF0086	CF50535
Xylenes (Total)	ND (0.0934)		8260B		1	06/05/15 18:35		[CALC]

	%Recovery	Qualifier	Limits
Surrogate: 1,2-Dichloroethane-d4	*100 %*		*70-130*
Surrogate: 4-Bromofluorobenzene	*93 %*		*70-130*
Surrogate: Dibromofluoromethane	*99 %*		*70-130*
Surrogate: Toluene-d8	*89 %*		*70-130*

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Riverside Square
Client Sample ID: GP-204 4-6
Date Sampled: 06/04/15 09:24
Percent Solids: 94
Initial Volume: 18.9
Final Volume: 15
Extraction Method: 5035

ESS Laboratory Work Order: 1506154
ESS Laboratory Sample ID: 1506154-11
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MD

5035/8260B Volatile Organic Compounds / Methanol

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
1,1,1,2-Tetrachloroethane	ND (0.0905)	0.0079	8260B		1	06/05/15 19:03	CYF0086	CF50535
1,1,1-Trichloroethane	ND (0.0452)	0.0080	8260B		1	06/05/15 19:03	CYF0086	CF50535
1,1,2,2-Tetrachloroethane	ND (0.0452)	0.0123	8260B		1	06/05/15 19:03	CYF0086	CF50535
1,1,2-Trichloroethane	ND (0.0452)	0.0113	8260B		1	06/05/15 19:03	CYF0086	CF50535
1,1-Dichloroethane	ND (0.0452)	0.0072	8260B		1	06/05/15 19:03	CYF0086	CF50535
1,1-Dichloroethene	ND (0.0452)	0.0111	8260B		1	06/05/15 19:03	CYF0086	CF50535
1,1-Dichloropropene	ND (0.0452)	0.0070	8260B		1	06/05/15 19:03	CYF0086	CF50535
1,2,3-Trichlorobenzene	ND (0.0452)	0.0151	8260B		1	06/05/15 19:03	CYF0086	CF50535
1,2,3-Trichloropropane	ND (0.0452)	0.0112	8260B		1	06/05/15 19:03	CYF0086	CF50535
1,2,4-Trichlorobenzene	ND (0.0452)	0.0100	8260B		1	06/05/15 19:03	CYF0086	CF50535
1,2,4-Trimethylbenzene	ND (0.0452)	0.0087	8260B		1	06/05/15 19:03	CYF0086	CF50535
1,2-Dibromo-3-Chloropropane	ND (0.271)	0.0905	8260B		1	06/05/15 19:03	CYF0086	CF50535
1,2-Dibromoethane	ND (0.0452)	0.0115	8260B		1	06/05/15 19:03	CYF0086	CF50535
1,2-Dichlorobenzene	ND (0.0452)	0.0064	8260B		1	06/05/15 19:03	CYF0086	CF50535
1,2-Dichloroethane	ND (0.0452)	0.0121	8260B		1	06/05/15 19:03	CYF0086	CF50535
1,2-Dichloropropane	ND (0.0452)	0.0119	8260B		1	06/05/15 19:03	CYF0086	CF50535
1,3,5-Trimethylbenzene	ND (0.0452)	0.0080	8260B		1	06/05/15 19:03	CYF0086	CF50535
1,3-Dichlorobenzene	ND (0.0452)	0.0057	8260B		1	06/05/15 19:03	CYF0086	CF50535
1,3-Dichloropropane	ND (0.0452)	0.0101	8260B		1	06/05/15 19:03	CYF0086	CF50535
1,4-Dichlorobenzene	ND (0.0452)	0.0120	8260B		1	06/05/15 19:03	CYF0086	CF50535
1,4-Dioxane - Screen	ND (4.52)	1.51	8260B		1	06/05/15 19:03	CYF0086	CF50535
1-Chlorohexane	ND (0.0452)	0.0086	8260B		1	06/05/15 19:03	CYF0086	CF50535
2,2-Dichloropropane	ND (0.0905)	0.0155	8260B		1	06/05/15 19:03	CYF0086	CF50535
2-Butanone	ND (1.13)	0.262	8260B		1	06/05/15 19:03	CYF0086	CF50535
2-Chlorotoluene	ND (0.0452)	0.0128	8260B		1	06/05/15 19:03	CYF0086	CF50535
2-Hexanone	ND (0.452)	0.0779	8260B		1	06/05/15 19:03	CYF0086	CF50535
4-Chlorotoluene	ND (0.0452)	0.0059	8260B		1	06/05/15 19:03	CYF0086	CF50535
4-Isopropyltoluene	ND (0.0452)	0.0081	8260B		1	06/05/15 19:03	CYF0086	CF50535
4-Methyl-2-Pentanone	ND (0.452)	0.0545	8260B		1	06/05/15 19:03	CYF0086	CF50535
Acetone	ND (1.13)	0.335	8260B		1	06/05/15 19:03	CYF0086	CF50535
Benzene	ND (0.0452)	0.0073	8260B		1	06/05/15 19:03	CYF0086	CF50535
Bromobenzene	ND (0.0452)	0.0124	8260B		1	06/05/15 19:03	CYF0086	CF50535

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Riverside Square
Client Sample ID: GP-204 4-6
Date Sampled: 06/04/15 09:24
Percent Solids: 94
Initial Volume: 18.9
Final Volume: 15
Extraction Method: 5035

ESS Laboratory Work Order: 1506154
ESS Laboratory Sample ID: 1506154-11
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MD

5035/8260B Volatile Organic Compounds / Methanol

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
Bromochloromethane	ND (0.0452)	0.0147	8260B		1	06/05/15 19:03	CYF0086	CF50535
Bromodichloromethane	ND (0.0452)	0.0062	8260B		1	06/05/15 19:03	CYF0086	CF50535
Bromoform	ND (0.0452)	0.0130	8260B		1	06/05/15 19:03	CYF0086	CF50535
Bromomethane	ND (0.0905)	0.0302	8260B		1	06/05/15 19:03	CYF0086	CF50535
Carbon Disulfide	ND (0.0452)	0.0067	8260B		1	06/05/15 19:03	CYF0086	CF50535
Carbon Tetrachloride	ND (0.0452)	0.0079	8260B		1	06/05/15 19:03	CYF0086	CF50535
Chlorobenzene	ND (0.0452)	0.0071	8260B		1	06/05/15 19:03	CYF0086	CF50535
Chloroethane	ND (0.0905)	0.0301	8260B		1	06/05/15 19:03	CYF0086	CF50535
Chloroform	ND (0.0452)	0.0093	8260B		1	06/05/15 19:03	CYF0086	CF50535
Chloromethane	ND (0.0905)	0.0115	8260B		1	06/05/15 19:03	CYF0086	CF50535
cis-1,2-Dichloroethene	ND (0.0452)	0.0112	8260B		1	06/05/15 19:03	CYF0086	CF50535
cis-1,3-Dichloropropene	ND (0.0452)	0.0102	8260B		1	06/05/15 19:03	CYF0086	CF50535
Dibromochloromethane	ND (0.0452)	0.0114	8260B		1	06/05/15 19:03	CYF0086	CF50535
Dibromomethane	ND (0.0452)	0.0143	8260B		1	06/05/15 19:03	CYF0086	CF50535
Dichlorodifluoromethane	ND (0.0452)	0.0079	8260B		1	06/05/15 19:03	CYF0086	CF50535
Diethyl Ether	ND (0.0452)	0.0115	8260B		1	06/05/15 19:03	CYF0086	CF50535
Di-isopropyl ether	ND (0.0452)	0.0085	8260B		1	06/05/15 19:03	CYF0086	CF50535
Ethyl tertiary-butyl ether	ND (0.0452)	0.0114	8260B		1	06/05/15 19:03	CYF0086	CF50535
Ethylbenzene	ND (0.0452)	0.0059	8260B		1	06/05/15 19:03	CYF0086	CF50535
Hexachlorobutadiene	ND (0.0452)	0.0151	8260B		1	06/05/15 19:03	CYF0086	CF50535
Isopropylbenzene	ND (0.0452)	0.0080	8260B		1	06/05/15 19:03	CYF0086	CF50535
Methyl tert-Butyl Ether	ND (0.0452)	0.0072	8260B		1	06/05/15 19:03	CYF0086	CF50535
Methylene Chloride	ND (0.226)	0.0119	8260B		1	06/05/15 19:03	CYF0086	CF50535
Naphthalene	ND (0.0452)	0.0119	8260B		1	06/05/15 19:03	CYF0086	CF50535
n-Butylbenzene	ND (0.0452)	0.0111	8260B		1	06/05/15 19:03	CYF0086	CF50535
n-Propylbenzene	ND (0.0452)	0.0110	8260B		1	06/05/15 19:03	CYF0086	CF50535
sec-Butylbenzene	ND (0.0452)	0.0061	8260B		1	06/05/15 19:03	CYF0086	CF50535
Styrene	ND (0.0452)	0.0060	8260B		1	06/05/15 19:03	CYF0086	CF50535
tert-Butylbenzene	ND (0.0452)	0.0106	8260B		1	06/05/15 19:03	CYF0086	CF50535
Tertiary-amyl methyl ether	ND (0.0452)	0.0065	8260B		1	06/05/15 19:03	CYF0086	CF50535
Tetrachloroethene	**J 0.0353** (0.0452)	0.0151	8260B		1	06/05/15 19:03	CYF0086	CF50535
Tetrahydrofuran	ND (0.452)	0.117	8260B		1	06/05/15 19:03	CYF0086	CF50535

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Riverside Square
Client Sample ID: GP-204 4-6
Date Sampled: 06/04/15 09:24
Percent Solids: 94
Initial Volume: 18.9
Final Volume: 15
Extraction Method: 5035

ESS Laboratory Work Order: 1506154
ESS Laboratory Sample ID: 1506154-11
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MD

5035/8260B Volatile Organic Compounds / Methanol

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
Toluene	ND (0.0452)	0.0115	8260B		1	06/05/15 19:03	CYF0086	CF50535
trans-1,2-Dichloroethene	ND (0.0452)	0.0148	8260B		1	06/05/15 19:03	CYF0086	CF50535
trans-1,3-Dichloropropene	ND (0.0452)	0.0139	8260B		1	06/05/15 19:03	CYF0086	CF50535
Trichloroethene	**0.0624** (0.0452)	0.0093	8260B		1	06/05/15 19:03	CYF0086	CF50535
Trichlorofluoromethane	ND (0.0452)	0.0119	8260B		1	06/05/15 19:03	CYF0086	CF50535
Vinyl Acetate	ND (0.226)	0.0093	8260B		1	06/05/15 19:03	CYF0086	CF50535
Vinyl Chloride	ND (0.0452)	0.0149	8260B		1	06/05/15 19:03	CYF0086	CF50535
Xylene O	ND (0.0452)	0.0087	8260B		1	06/05/15 19:03	CYF0086	CF50535
Xylene P,M	ND (0.0905)	0.0176	8260B		1	06/05/15 19:03	CYF0086	CF50535
Xylenes (Total)	ND (0.0905)		8260B		1	06/05/15 19:03		[CALC]

	%Recovery	Qualifier	Limits
Surrogate: 1,2-Dichloroethane-d4	*97 %*		*70-130*
Surrogate: 4-Bromofluorobenzene	*90 %*		*70-130*
Surrogate: Dibromofluoromethane	*102 %*		*70-130*
Surrogate: Toluene-d8	*87 %*		*70-130*

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Riverside Square
Client Sample ID: GP-205 0-2
Date Sampled: 06/04/15 09:44
Percent Solids: 94
Initial Volume: 19.8
Final Volume: 15
Extraction Method: 5035

ESS Laboratory Work Order: 1506154
ESS Laboratory Sample ID: 1506154-12
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MD

5035/8260B Volatile Organic Compounds / Methanol

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
1,1,1,2-Tetrachloroethane	ND (0.0878)	0.0076	8260B		1	06/08/15 13:42	CYF0114	CF50846
1,1,1-Trichloroethane	ND (0.0439)	0.0077	8260B		1	06/08/15 13:42	CYF0114	CF50846
1,1,2,2-Tetrachloroethane	ND (0.0439)	0.0119	8260B		1	06/08/15 13:42	CYF0114	CF50846
1,1,2-Trichloroethane	ND (0.0439)	0.0110	8260B		1	06/08/15 13:42	CYF0114	CF50846
1,1-Dichloroethane	ND (0.0439)	0.0070	8260B		1	06/08/15 13:42	CYF0114	CF50846
1,1-Dichloroethene	ND (0.0439)	0.0108	8260B		1	06/08/15 13:42	CYF0114	CF50846
1,1-Dichloropropene	ND (0.0439)	0.0068	8260B		1	06/08/15 13:42	CYF0114	CF50846
1,2,3-Trichlorobenzene	ND (0.0439)	0.0147	8260B		1	06/08/15 13:42	CYF0114	CF50846
1,2,3-Trichloropropane	ND (0.0439)	0.0109	8260B		1	06/08/15 13:42	CYF0114	CF50846
1,2,4-Trichlorobenzene	ND (0.0439)	0.0097	8260B		1	06/08/15 13:42	CYF0114	CF50846
1,2,4-Trimethylbenzene	ND (0.0439)	0.0084	8260B		1	06/08/15 13:42	CYF0114	CF50846
1,2-Dibromo-3-Chloropropane	ND (0.263)	0.0878	8260B		1	06/08/15 13:42	CYF0114	CF50846
1,2-Dibromoethane	ND (0.0439)	0.0112	8260B		1	06/08/15 13:42	CYF0114	CF50846
1,2-Dichlorobenzene	ND (0.0439)	0.0062	8260B		1	06/08/15 13:42	CYF0114	CF50846
1,2-Dichloroethane	ND (0.0439)	0.0118	8260B		1	06/08/15 13:42	CYF0114	CF50846
1,2-Dichloropropane	ND (0.0439)	0.0115	8260B		1	06/08/15 13:42	CYF0114	CF50846
1,3,5-Trimethylbenzene	ND (0.0439)	0.0077	8260B		1	06/08/15 13:42	CYF0114	CF50846
1,3-Dichlorobenzene	ND (0.0439)	0.0055	8260B		1	06/08/15 13:42	CYF0114	CF50846
1,3-Dichloropropane	ND (0.0439)	0.0098	8260B		1	06/08/15 13:42	CYF0114	CF50846
1,4-Dichlorobenzene	ND (0.0439)	0.0117	8260B		1	06/08/15 13:42	CYF0114	CF50846
1,4-Dioxane - Screen	ND (4.39)	1.47	8260B		1	06/08/15 13:42	CYF0114	CF50846
1-Chlorohexane	ND (0.0439)	0.0083	8260B		1	06/08/15 13:42	CYF0114	CF50846
2,2-Dichloropropane	ND (0.0878)	0.0150	8260B		1	06/08/15 13:42	CYF0114	CF50846
2-Butanone	ND (1.10)	0.254	8260B		1	06/08/15 13:42	CYF0114	CF50846
2-Chlorotoluene	ND (0.0439)	0.0124	8260B		1	06/08/15 13:42	CYF0114	CF50846
2-Hexanone	ND (0.439)	0.0756	8260B		1	06/08/15 13:42	CYF0114	CF50846
4-Chlorotoluene	ND (0.0439)	0.0057	8260B		1	06/08/15 13:42	CYF0114	CF50846
4-Isopropyltoluene	ND (0.0439)	0.0078	8260B		1	06/08/15 13:42	CYF0114	CF50846
4-Methyl-2-Pentanone	ND (0.439)	0.0529	8260B		1	06/08/15 13:42	CYF0114	CF50846
Acetone	ND (1.10)	0.325	8260B		1	06/08/15 13:42	CYF0114	CF50846
Benzene	ND (0.0439)	0.0071	8260B		1	06/08/15 13:42	CYF0114	CF50846
Bromobenzene	ND (0.0439)	0.0120	8260B		1	06/08/15 13:42	CYF0114	CF50846

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Riverside Square
Client Sample ID: GP-205 0-2
Date Sampled: 06/04/15 09:44
Percent Solids: 94
Initial Volume: 19.8
Final Volume: 15
Extraction Method: 5035

ESS Laboratory Work Order: 1506154
ESS Laboratory Sample ID: 1506154-12
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MD

5035/8260B Volatile Organic Compounds / Methanol

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
Bromochloromethane	ND (0.0439)	0.0142	8260B		1	06/08/15 13:42	CYF0114	CF50846
Bromodichloromethane	ND (0.0439)	0.0061	8260B		1	06/08/15 13:42	CYF0114	CF50846
Bromoform	ND (0.0439)	0.0126	8260B		1	06/08/15 13:42	CYF0114	CF50846
Bromomethane	ND (0.0878)	0.0293	8260B		1	06/08/15 13:42	CYF0114	CF50846
Carbon Disulfide	ND (0.0439)	0.0065	8260B		1	06/08/15 13:42	CYF0114	CF50846
Carbon Tetrachloride	ND (0.0439)	0.0076	8260B		1	06/08/15 13:42	CYF0114	CF50846
Chlorobenzene	ND (0.0439)	0.0069	8260B		1	06/08/15 13:42	CYF0114	CF50846
Chloroethane	ND (0.0878)	0.0292	8260B		1	06/08/15 13:42	CYF0114	CF50846
Chloroform	ND (0.0439)	0.0090	8260B		1	06/08/15 13:42	CYF0114	CF50846
Chloromethane	ND (0.0878)	0.0112	8260B		1	06/08/15 13:42	CYF0114	CF50846
cis-1,2-Dichloroethene	ND (0.0439)	0.0109	8260B		1	06/08/15 13:42	CYF0114	CF50846
cis-1,3-Dichloropropene	ND (0.0439)	0.0099	8260B		1	06/08/15 13:42	CYF0114	CF50846
Dibromochloromethane	ND (0.0439)	0.0111	8260B		1	06/08/15 13:42	CYF0114	CF50846
Dibromomethane	ND (0.0439)	0.0139	8260B		1	06/08/15 13:42	CYF0114	CF50846
Dichlorodifluoromethane	ND (0.0439)	0.0076	8260B		1	06/08/15 13:42	CYF0114	CF50846
Diethyl Ether	ND (0.0439)	0.0112	8260B		1	06/08/15 13:42	CYF0114	CF50846
Di-isopropyl ether	ND (0.0439)	0.0083	8260B		1	06/08/15 13:42	CYF0114	CF50846
Ethyl tertiary-butyl ether	ND (0.0439)	0.0111	8260B		1	06/08/15 13:42	CYF0114	CF50846
Ethylbenzene	ND (0.0439)	0.0057	8260B		1	06/08/15 13:42	CYF0114	CF50846
Hexachlorobutadiene	ND (0.0439)	0.0147	8260B		1	06/08/15 13:42	CYF0114	CF50846
Isopropylbenzene	ND (0.0439)	0.0077	8260B		1	06/08/15 13:42	CYF0114	CF50846
Methyl tert-Butyl Ether	ND (0.0439)	0.0070	8260B		1	06/08/15 13:42	CYF0114	CF50846
Methylene Chloride	ND (0.220)	0.0115	8260B		1	06/08/15 13:42	CYF0114	CF50846
Naphthalene	ND (0.0439)	0.0115	8260B		1	06/08/15 13:42	CYF0114	CF50846
n-Butylbenzene	ND (0.0439)	0.0108	8260B		1	06/08/15 13:42	CYF0114	CF50846
n-Propylbenzene	ND (0.0439)	0.0107	8260B		1	06/08/15 13:42	CYF0114	CF50846
sec-Butylbenzene	ND (0.0439)	0.0059	8260B		1	06/08/15 13:42	CYF0114	CF50846
Styrene	ND (0.0439)	0.0058	8260B		1	06/08/15 13:42	CYF0114	CF50846
tert-Butylbenzene	ND (0.0439)	0.0103	8260B		1	06/08/15 13:42	CYF0114	CF50846
Tertiary-amyl methyl ether	ND (0.0439)	0.0063	8260B		1	06/08/15 13:42	CYF0114	CF50846
Tetrachloroethene	**0.106** (0.0439)	0.0147	8260B		1	06/08/15 13:42	CYF0114	CF50846
Tetrahydrofuran	ND (0.439)	0.113	8260B		1	06/08/15 13:42	CYF0114	CF50846

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Riverside Square
Client Sample ID: GP-205 0-2
Date Sampled: 06/04/15 09:44
Percent Solids: 94
Initial Volume: 19.8
Final Volume: 15
Extraction Method: 5035

ESS Laboratory Work Order: 1506154
ESS Laboratory Sample ID: 1506154-12
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MD

5035/8260B Volatile Organic Compounds / Methanol

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
Toluene	ND (0.0439)	0.0112	8260B		1	06/08/15 13:42	CYF0114	CF50846
trans-1,2-Dichloroethene	ND (0.0439)	0.0144	8260B		1	06/08/15 13:42	CYF0114	CF50846
trans-1,3-Dichloropropene	ND (0.0439)	0.0135	8260B		1	06/08/15 13:42	CYF0114	CF50846
Trichloroethene	**0.192** (0.0439)	0.0090	8260B		1	06/08/15 13:42	CYF0114	CF50846
Trichlorofluoromethane	ND (0.0439)	0.0116	8260B		1	06/08/15 13:42	CYF0114	CF50846
Vinyl Acetate	ND (0.220)	0.0090	8260B		1	06/08/15 13:42	CYF0114	CF50846
Vinyl Chloride	ND (0.0439)	0.0145	8260B		1	06/08/15 13:42	CYF0114	CF50846
Xylene O	ND (0.0439)	0.0084	8260B		1	06/08/15 13:42	CYF0114	CF50846
Xylene P,M	ND (0.0878)	0.0170	8260B		1	06/08/15 13:42	CYF0114	CF50846
Xylenes (Total)	ND (0.0878)		8260B		1	06/08/15 13:42		[CALC]

	%Recovery	*Qualifier*	*Limits*
Surrogate: 1,2-Dichloroethane-d4	*99 %*		*70-130*
Surrogate: 4-Bromofluorobenzene	*91 %*		*70-130*
Surrogate: Dibromofluoromethane	*100 %*		*70-130*
Surrogate: Toluene-d8	*86 %*		*70-130*

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Riverside Square
Client Sample ID: GP-205 4-6
Date Sampled: 06/04/15 09:46
Percent Solids: 96
Initial Volume: 19.5
Final Volume: 15
Extraction Method: 5035

ESS Laboratory Work Order: 1506154
ESS Laboratory Sample ID: 1506154-13
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MD

5035/8260B Volatile Organic Compounds / Methanol

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
1,1,1,2-Tetrachloroethane	ND (0.0839)	0.0073	8260B		1	06/08/15 14:10	CYF0114	CF50846
1,1,1-Trichloroethane	ND (0.0420)	0.0074	8260B		1	06/08/15 14:10	CYF0114	CF50846
1,1,2,2-Tetrachloroethane	ND (0.0420)	0.0114	8260B		1	06/08/15 14:10	CYF0114	CF50846
1,1,2-Trichloroethane	ND (0.0420)	0.0105	8260B		1	06/08/15 14:10	CYF0114	CF50846
1,1-Dichloroethane	ND (0.0420)	0.0067	8260B		1	06/08/15 14:10	CYF0114	CF50846
1,1-Dichloroethene	ND (0.0420)	0.0103	8260B		1	06/08/15 14:10	CYF0114	CF50846
1,1-Dichloropropene	ND (0.0420)	0.0065	8260B		1	06/08/15 14:10	CYF0114	CF50846
1,2,3-Trichlorobenzene	ND (0.0420)	0.0140	8260B		1	06/08/15 14:10	CYF0114	CF50846
1,2,3-Trichloropropane	ND (0.0420)	0.0104	8260B		1	06/08/15 14:10	CYF0114	CF50846
1,2,4-Trichlorobenzene	ND (0.0420)	0.0092	8260B		1	06/08/15 14:10	CYF0114	CF50846
1,2,4-Trimethylbenzene	ND (0.0420)	0.0081	8260B		1	06/08/15 14:10	CYF0114	CF50846
1,2-Dibromo-3-Chloropropane	ND (0.252)	0.0839	8260B		1	06/08/15 14:10	CYF0114	CF50846
1,2-Dibromoethane	ND (0.0420)	0.0107	8260B		1	06/08/15 14:10	CYF0114	CF50846
1,2-Dichlorobenzene	ND (0.0420)	0.0060	8260B		1	06/08/15 14:10	CYF0114	CF50846
1,2-Dichloroethane	ND (0.0420)	0.0112	8260B		1	06/08/15 14:10	CYF0114	CF50846
1,2-Dichloropropane	ND (0.0420)	0.0110	8260B		1	06/08/15 14:10	CYF0114	CF50846
1,3,5-Trimethylbenzene	ND (0.0420)	0.0074	8260B		1	06/08/15 14:10	CYF0114	CF50846
1,3-Dichlorobenzene	ND (0.0420)	0.0053	8260B		1	06/08/15 14:10	CYF0114	CF50846
1,3-Dichloropropane	ND (0.0420)	0.0094	8260B		1	06/08/15 14:10	CYF0114	CF50846
1,4-Dichlorobenzene	ND (0.0420)	0.0112	8260B		1	06/08/15 14:10	CYF0114	CF50846
1,4-Dioxane - Screen	ND (4.20)	1.40	8260B		1	06/08/15 14:10	CYF0114	CF50846
1-Chlorohexane	ND (0.0420)	0.0080	8260B		1	06/08/15 14:10	CYF0114	CF50846
2,2-Dichloropropane	ND (0.0839)	0.0144	8260B		1	06/08/15 14:10	CYF0114	CF50846
2-Butanone	ND (1.05)	0.243	8260B		1	06/08/15 14:10	CYF0114	CF50846
2-Chlorotoluene	ND (0.0420)	0.0118	8260B		1	06/08/15 14:10	CYF0114	CF50846
2-Hexanone	ND (0.420)	0.0723	8260B		1	06/08/15 14:10	CYF0114	CF50846
4-Chlorotoluene	ND (0.0420)	0.0055	8260B		1	06/08/15 14:10	CYF0114	CF50846
4-Isopropyltoluene	ND (0.0420)	0.0075	8260B		1	06/08/15 14:10	CYF0114	CF50846
4-Methyl-2-Pentanone	ND (0.420)	0.0505	8260B		1	06/08/15 14:10	CYF0114	CF50846
Acetone	**J 0.326** (1.05)	0.311	8260B		1	06/08/15 14:10	CYF0114	CF50846
Benzene	ND (0.0420)	0.0068	8260B		1	06/08/15 14:10	CYF0114	CF50846
Bromobenzene	ND (0.0420)	0.0115	8260B		1	06/08/15 14:10	CYF0114	CF50846

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Riverside Square
Client Sample ID: GP-205 4-6
Date Sampled: 06/04/15 09:46
Percent Solids: 96
Initial Volume: 19.5
Final Volume: 15
Extraction Method: 5035

ESS Laboratory Work Order: 1506154
ESS Laboratory Sample ID: 1506154-13
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MD

5035/8260B Volatile Organic Compounds / Methanol

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
Bromochloromethane	ND (0.0420)	0.0136	8260B		1	06/08/15 14:10	CYF0114	CF50846
Bromodichloromethane	ND (0.0420)	0.0058	8260B		1	06/08/15 14:10	CYF0114	CF50846
Bromoform	ND (0.0420)	0.0121	8260B		1	06/08/15 14:10	CYF0114	CF50846
Bromomethane	ND (0.0839)	0.0280	8260B		1	06/08/15 14:10	CYF0114	CF50846
Carbon Disulfide	ND (0.0420)	0.0062	8260B		1	06/08/15 14:10	CYF0114	CF50846
Carbon Tetrachloride	ND (0.0420)	0.0073	8260B		1	06/08/15 14:10	CYF0114	CF50846
Chlorobenzene	ND (0.0420)	0.0066	8260B		1	06/08/15 14:10	CYF0114	CF50846
Chloroethane	ND (0.0839)	0.0279	8260B		1	06/08/15 14:10	CYF0114	CF50846
Chloroform	ND (0.0420)	0.0086	8260B		1	06/08/15 14:10	CYF0114	CF50846
Chloromethane	ND (0.0839)	0.0107	8260B		1	06/08/15 14:10	CYF0114	CF50846
cis-1,2-Dichloroethene	ND (0.0420)	0.0104	8260B		1	06/08/15 14:10	CYF0114	CF50846
cis-1,3-Dichloropropene	ND (0.0420)	0.0095	8260B		1	06/08/15 14:10	CYF0114	CF50846
Dibromochloromethane	ND (0.0420)	0.0106	8260B		1	06/08/15 14:10	CYF0114	CF50846
Dibromomethane	ND (0.0420)	0.0133	8260B		1	06/08/15 14:10	CYF0114	CF50846
Dichlorodifluoromethane	ND (0.0420)	0.0073	8260B		1	06/08/15 14:10	CYF0114	CF50846
Diethyl Ether	ND (0.0420)	0.0107	8260B		1	06/08/15 14:10	CYF0114	CF50846
Di-isopropyl ether	ND (0.0420)	0.0079	8260B		1	06/08/15 14:10	CYF0114	CF50846
Ethyl tertiary-butyl ether	ND (0.0420)	0.0106	8260B		1	06/08/15 14:10	CYF0114	CF50846
Ethylbenzene	ND (0.0420)	0.0055	8260B		1	06/08/15 14:10	CYF0114	CF50846
Hexachlorobutadiene	ND (0.0420)	0.0140	8260B		1	06/08/15 14:10	CYF0114	CF50846
Isopropylbenzene	ND (0.0420)	0.0074	8260B		1	06/08/15 14:10	CYF0114	CF50846
Methyl tert-Butyl Ether	ND (0.0420)	0.0067	8260B		1	06/08/15 14:10	CYF0114	CF50846
Methylene Chloride	ND (0.210)	0.0110	8260B		1	06/08/15 14:10	CYF0114	CF50846
Naphthalene	ND (0.0420)	0.0110	8260B		1	06/08/15 14:10	CYF0114	CF50846
n-Butylbenzene	ND (0.0420)	0.0103	8260B		1	06/08/15 14:10	CYF0114	CF50846
n-Propylbenzene	ND (0.0420)	0.0102	8260B		1	06/08/15 14:10	CYF0114	CF50846
sec-Butylbenzene	ND (0.0420)	0.0056	8260B		1	06/08/15 14:10	CYF0114	CF50846
Styrene	ND (0.0420)	0.0055	8260B		1	06/08/15 14:10	CYF0114	CF50846
tert-Butylbenzene	ND (0.0420)	0.0098	8260B		1	06/08/15 14:10	CYF0114	CF50846
Tertiary-amyl methyl ether	ND (0.0420)	0.0060	8260B		1	06/08/15 14:10	CYF0114	CF50846
Tetrachloroethene	**J 0.0185** (0.0420)	0.0140	8260B		1	06/08/15 14:10	CYF0114	CF50846
Tetrahydrofuran	ND (0.420)	0.108	8260B		1	06/08/15 14:10	CYF0114	CF50846

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Riverside Square
Client Sample ID: GP-205 4-6
Date Sampled: 06/04/15 09:46
Percent Solids: 96
Initial Volume: 19.5
Final Volume: 15
Extraction Method: 5035

ESS Laboratory Work Order: 1506154
ESS Laboratory Sample ID: 1506154-13
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MD

5035/8260B Volatile Organic Compounds / Methanol

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
Toluene	ND (0.0420)	0.0107	8260B		1	06/08/15 14:10	CYF0114	CF50846
trans-1,2-Dichloroethene	ND (0.0420)	0.0138	8260B		1	06/08/15 14:10	CYF0114	CF50846
trans-1,3-Dichloropropene	ND (0.0420)	0.0129	8260B		1	06/08/15 14:10	CYF0114	CF50846
Trichloroethene	**J 0.0403** (0.0420)	0.0086	8260B		1	06/08/15 14:10	CYF0114	CF50846
Trichlorofluoromethane	ND (0.0420)	0.0111	8260B		1	06/08/15 14:10	CYF0114	CF50846
Vinyl Acetate	ND (0.210)	0.0086	8260B		1	06/08/15 14:10	CYF0114	CF50846
Vinyl Chloride	ND (0.0420)	0.0138	8260B		1	06/08/15 14:10	CYF0114	CF50846
Xylene O	ND (0.0420)	0.0081	8260B		1	06/08/15 14:10	CYF0114	CF50846
Xylene P,M	ND (0.0839)	0.0163	8260B		1	06/08/15 14:10	CYF0114	CF50846
Xylenes (Total)	ND (0.0839)		8260B		1	06/08/15 14:10		[CALC]

	%Recovery	*Qualifier*	*Limits*
Surrogate: 1,2-Dichloroethane-d4	*112 %*		*70-130*
Surrogate: 4-Bromofluorobenzene	*104 %*		*70-130*
Surrogate: Dibromofluoromethane	*118 %*		*70-130*
Surrogate: Toluene-d8	*95 %*		*70-130*

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Riverside Square
Client Sample ID: GP-206 0-2
Date Sampled: 06/04/15 09:52
Percent Solids: 93
Initial Volume: 19.4
Final Volume: 15
Extraction Method: 5035

ESS Laboratory Work Order: 1506154
ESS Laboratory Sample ID: 1506154-14
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MD

5035/8260B Volatile Organic Compounds / Methanol

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
1,1,1,2-Tetrachloroethane	ND (0.0900)	0.0078	8260B		1	06/08/15 14:38	CYF0114	CF50846
1,1,1-Trichloroethane	**0.0531** (0.0450)	0.0079	8260B		1	06/08/15 14:38	CYF0114	CF50846
1,1,2,2-Tetrachloroethane	ND (0.0450)	0.0122	8260B		1	06/08/15 14:38	CYF0114	CF50846
1,1,2-Trichloroethane	**J 0.0180** (0.0450)	0.0112	8260B		1	06/08/15 14:38	CYF0114	CF50846
1,1-Dichloroethane	ND (0.0450)	0.0072	8260B		1	06/08/15 14:38	CYF0114	CF50846
1,1-Dichloroethene	ND (0.0450)	0.0111	8260B		1	06/08/15 14:38	CYF0114	CF50846
1,1-Dichloropropene	ND (0.0450)	0.0069	8260B		1	06/08/15 14:38	CYF0114	CF50846
1,2,3-Trichlorobenzene	ND (0.0450)	0.0150	8260B		1	06/08/15 14:38	CYF0114	CF50846
1,2,3-Trichloropropane	ND (0.0450)	0.0112	8260B		1	06/08/15 14:38	CYF0114	CF50846
1,2,4-Trichlorobenzene	ND (0.0450)	0.0099	8260B		1	06/08/15 14:38	CYF0114	CF50846
1,2,4-Trimethylbenzene	ND (0.0450)	0.0086	8260B		1	06/08/15 14:38	CYF0114	CF50846
1,2-Dibromo-3-Chloropropane	ND (0.270)	0.0900	8260B		1	06/08/15 14:38	CYF0114	CF50846
1,2-Dibromoethane	ND (0.0450)	0.0114	8260B		1	06/08/15 14:38	CYF0114	CF50846
1,2-Dichlorobenzene	ND (0.0450)	0.0064	8260B		1	06/08/15 14:38	CYF0114	CF50846
1,2-Dichloroethane	ND (0.0450)	0.0121	8260B		1	06/08/15 14:38	CYF0114	CF50846
1,2-Dichloropropane	ND (0.0450)	0.0118	8260B		1	06/08/15 14:38	CYF0114	CF50846
1,3,5-Trimethylbenzene	ND (0.0450)	0.0079	8260B		1	06/08/15 14:38	CYF0114	CF50846
1,3-Dichlorobenzene	ND (0.0450)	0.0057	8260B		1	06/08/15 14:38	CYF0114	CF50846
1,3-Dichloropropane	ND (0.0450)	0.0101	8260B		1	06/08/15 14:38	CYF0114	CF50846
1,4-Dichlorobenzene	ND (0.0450)	0.0120	8260B		1	06/08/15 14:38	CYF0114	CF50846
1,4-Dioxane - Screen	ND (4.50)	1.50	8260B		1	06/08/15 14:38	CYF0114	CF50846
1-Chlorohexane	ND (0.0450)	0.0085	8260B		1	06/08/15 14:38	CYF0114	CF50846
2,2-Dichloropropane	ND (0.0900)	0.0154	8260B		1	06/08/15 14:38	CYF0114	CF50846
2-Butanone	ND (1.12)	0.260	8260B		1	06/08/15 14:38	CYF0114	CF50846
2-Chlorotoluene	ND (0.0450)	0.0127	8260B		1	06/08/15 14:38	CYF0114	CF50846
2-Hexanone	ND (0.450)	0.0775	8260B		1	06/08/15 14:38	CYF0114	CF50846
4-Chlorotoluene	ND (0.0450)	0.0058	8260B		1	06/08/15 14:38	CYF0114	CF50846
4-Isopropyltoluene	ND (0.0450)	0.0080	8260B		1	06/08/15 14:38	CYF0114	CF50846
4-Methyl-2-Pentanone	ND (0.450)	0.0542	8260B		1	06/08/15 14:38	CYF0114	CF50846
Acetone	ND (1.12)	0.333	8260B		1	06/08/15 14:38	CYF0114	CF50846
Benzene	ND (0.0450)	0.0073	8260B		1	06/08/15 14:38	CYF0114	CF50846
Bromobenzene	ND (0.0450)	0.0123	8260B		1	06/08/15 14:38	CYF0114	CF50846

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Riverside Square
Client Sample ID: GP-206 0-2
Date Sampled: 06/04/15 09:52
Percent Solids: 93
Initial Volume: 19.4
Final Volume: 15
Extraction Method: 5035

ESS Laboratory Work Order: 1506154
ESS Laboratory Sample ID: 1506154-14
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MD

5035/8260B Volatile Organic Compounds / Methanol

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
Bromochloromethane	ND (0.0450)	0.0146	8260B		1	06/08/15 14:38	CYF0114	CF50846
Bromodichloromethane	ND (0.0450)	0.0062	8260B		1	06/08/15 14:38	CYF0114	CF50846
Bromoform	ND (0.0450)	0.0130	8260B		1	06/08/15 14:38	CYF0114	CF50846
Bromomethane	ND (0.0900)	0.0301	8260B		1	06/08/15 14:38	CYF0114	CF50846
Carbon Disulfide	ND (0.0450)	0.0067	8260B		1	06/08/15 14:38	CYF0114	CF50846
Carbon Tetrachloride	ND (0.0450)	0.0078	8260B		1	06/08/15 14:38	CYF0114	CF50846
Chlorobenzene	ND (0.0450)	0.0071	8260B		1	06/08/15 14:38	CYF0114	CF50846
Chloroethane	ND (0.0900)	0.0300	8260B		1	06/08/15 14:38	CYF0114	CF50846
Chloroform	ND (0.0450)	0.0093	8260B		1	06/08/15 14:38	CYF0114	CF50846
Chloromethane	ND (0.0900)	0.0114	8260B		1	06/08/15 14:38	CYF0114	CF50846
cis-1,2-Dichloroethene	ND (0.0450)	0.0112	8260B		1	06/08/15 14:38	CYF0114	CF50846
cis-1,3-Dichloropropene	ND (0.0450)	0.0102	8260B		1	06/08/15 14:38	CYF0114	CF50846
Dibromochloromethane	ND (0.0450)	0.0113	8260B		1	06/08/15 14:38	CYF0114	CF50846
Dibromomethane	ND (0.0450)	0.0142	8260B		1	06/08/15 14:38	CYF0114	CF50846
Dichlorodifluoromethane	ND (0.0450)	0.0078	8260B		1	06/08/15 14:38	CYF0114	CF50846
Diethyl Ether	ND (0.0450)	0.0114	8260B		1	06/08/15 14:38	CYF0114	CF50846
Di-isopropyl ether	ND (0.0450)	0.0085	8260B		1	06/08/15 14:38	CYF0114	CF50846
Ethyl tertiary-butyl ether	ND (0.0450)	0.0113	8260B		1	06/08/15 14:38	CYF0114	CF50846
Ethylbenzene	ND (0.0450)	0.0058	8260B		1	06/08/15 14:38	CYF0114	CF50846
Hexachlorobutadiene	ND (0.0450)	0.0150	8260B		1	06/08/15 14:38	CYF0114	CF50846
Isopropylbenzene	ND (0.0450)	0.0079	8260B		1	06/08/15 14:38	CYF0114	CF50846
Methyl tert-Butyl Ether	ND (0.0450)	0.0072	8260B		1	06/08/15 14:38	CYF0114	CF50846
Methylene Chloride	ND (0.225)	0.0118	8260B		1	06/08/15 14:38	CYF0114	CF50846
Naphthalene	ND (0.0450)	0.0118	8260B		1	06/08/15 14:38	CYF0114	CF50846
n-Butylbenzene	ND (0.0450)	0.0111	8260B		1	06/08/15 14:38	CYF0114	CF50846
n-Propylbenzene	ND (0.0450)	0.0110	8260B		1	06/08/15 14:38	CYF0114	CF50846
sec-Butylbenzene	ND (0.0450)	0.0060	8260B		1	06/08/15 14:38	CYF0114	CF50846
Styrene	ND (0.0450)	0.0059	8260B		1	06/08/15 14:38	CYF0114	CF50846
tert-Butylbenzene	ND (0.0450)	0.0105	8260B		1	06/08/15 14:38	CYF0114	CF50846
Tertiary-amyl methyl ether	ND (0.0450)	0.0065	8260B		1	06/08/15 14:38	CYF0114	CF50846
Tetrachloroethene	**3.94** (0.0450)	0.0150	8260B		1	06/08/15 14:38	CYF0114	CF50846
Tetrahydrofuran	ND (0.450)	0.116	8260B		1	06/08/15 14:38	CYF0114	CF50846

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Riverside Square
Client Sample ID: GP-206 0-2
Date Sampled: 06/04/15 09:52
Percent Solids: 93
Initial Volume: 19.4
Final Volume: 15
Extraction Method: 5035

ESS Laboratory Work Order: 1506154
ESS Laboratory Sample ID: 1506154-14
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MD

5035/8260B Volatile Organic Compounds / Methanol

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
Toluene	ND (0.0450)	0.0114	8260B		1	06/08/15 14:38	CYF0114	CF50846
trans-1,2-Dichloroethene	ND (0.0450)	0.0148	8260B		1	06/08/15 14:38	CYF0114	CF50846
trans-1,3-Dichloropropene	ND (0.0450)	0.0139	8260B		1	06/08/15 14:38	CYF0114	CF50846
Trichloroethene	**5.30** (0.0450)	0.0093	8260B		1	06/08/15 14:38	CYF0114	CF50846
Trichlorofluoromethane	ND (0.0450)	0.0119	8260B		1	06/08/15 14:38	CYF0114	CF50846
Vinyl Acetate	ND (0.225)	0.0093	8260B		1	06/08/15 14:38	CYF0114	CF50846
Vinyl Chloride	ND (0.0450)	0.0148	8260B		1	06/08/15 14:38	CYF0114	CF50846
Xylene O	ND (0.0450)	0.0086	8260B		1	06/08/15 14:38	CYF0114	CF50846
Xylene P,M	ND (0.0900)	0.0175	8260B		1	06/08/15 14:38	CYF0114	CF50846
Xylenes (Total)	ND (0.0900)		8260B		1	06/08/15 14:38		[CALC]

	%Recovery	*Qualifier*	*Limits*
Surrogate: 1,2-Dichloroethane-d4	*103 %*		*70-130*
Surrogate: 4-Bromofluorobenzene	*92 %*		*70-130*
Surrogate: Dibromofluoromethane	*107 %*		*70-130*
Surrogate: Toluene-d8	*107 %*		*70-130*

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Riverside Square
Client Sample ID: GP-206 2-4
Date Sampled: 06/04/15 09:54
Percent Solids: 95
Initial Volume: 19.1
Final Volume: 15
Extraction Method: 5035

ESS Laboratory Work Order: 1506154
ESS Laboratory Sample ID: 1506154-15
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MD

5035/8260B Volatile Organic Compounds / Methanol

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
1,1,1,2-Tetrachloroethane	ND (0.0870)	0.0076	8260B		1	06/08/15 15:06	CYF0114	CF50846
1,1,1-Trichloroethane	**J 0.0339** (0.0435)	0.0077	8260B		1	06/08/15 15:06	CYF0114	CF50846
1,1,2,2-Tetrachloroethane	ND (0.0435)	0.0118	8260B		1	06/08/15 15:06	CYF0114	CF50846
1,1,2-Trichloroethane	ND (0.0435)	0.0109	8260B		1	06/08/15 15:06	CYF0114	CF50846
1,1-Dichloroethane	ND (0.0435)	0.0070	8260B		1	06/08/15 15:06	CYF0114	CF50846
1,1-Dichloroethene	ND (0.0435)	0.0107	8260B		1	06/08/15 15:06	CYF0114	CF50846
1,1-Dichloropropene	ND (0.0435)	0.0067	8260B		1	06/08/15 15:06	CYF0114	CF50846
1,2,3-Trichlorobenzene	ND (0.0435)	0.0145	8260B		1	06/08/15 15:06	CYF0114	CF50846
1,2,3-Trichloropropane	ND (0.0435)	0.0108	8260B		1	06/08/15 15:06	CYF0114	CF50846
1,2,4-Trichlorobenzene	ND (0.0435)	0.0096	8260B		1	06/08/15 15:06	CYF0114	CF50846
1,2,4-Trimethylbenzene	ND (0.0435)	0.0084	8260B		1	06/08/15 15:06	CYF0114	CF50846
1,2-Dibromo-3-Chloropropane	ND (0.261)	0.0870	8260B		1	06/08/15 15:06	CYF0114	CF50846
1,2-Dibromoethane	ND (0.0435)	0.0110	8260B		1	06/08/15 15:06	CYF0114	CF50846
1,2-Dichlorobenzene	ND (0.0435)	0.0062	8260B		1	06/08/15 15:06	CYF0114	CF50846
1,2-Dichloroethane	ND (0.0435)	0.0117	8260B		1	06/08/15 15:06	CYF0114	CF50846
1,2-Dichloropropane	ND (0.0435)	0.0114	8260B		1	06/08/15 15:06	CYF0114	CF50846
1,3,5-Trimethylbenzene	ND (0.0435)	0.0077	8260B		1	06/08/15 15:06	CYF0114	CF50846
1,3-Dichlorobenzene	ND (0.0435)	0.0055	8260B		1	06/08/15 15:06	CYF0114	CF50846
1,3-Dichloropropane	ND (0.0435)	0.0097	8260B		1	06/08/15 15:06	CYF0114	CF50846
1,4-Dichlorobenzene	ND (0.0435)	0.0116	8260B		1	06/08/15 15:06	CYF0114	CF50846
1,4-Dioxane - Screen	ND (4.35)	1.45	8260B		1	06/08/15 15:06	CYF0114	CF50846
1-Chlorohexane	ND (0.0435)	0.0083	8260B		1	06/08/15 15:06	CYF0114	CF50846
2,2-Dichloropropane	ND (0.0870)	0.0149	8260B		1	06/08/15 15:06	CYF0114	CF50846
2-Butanone	ND (1.09)	0.251	8260B		1	06/08/15 15:06	CYF0114	CF50846
2-Chlorotoluene	ND (0.0435)	0.0123	8260B		1	06/08/15 15:06	CYF0114	CF50846
2-Hexanone	ND (0.435)	0.0749	8260B		1	06/08/15 15:06	CYF0114	CF50846
4-Chlorotoluene	ND (0.0435)	0.0057	8260B		1	06/08/15 15:06	CYF0114	CF50846
4-Isopropyltoluene	ND (0.0435)	0.0077	8260B		1	06/08/15 15:06	CYF0114	CF50846
4-Methyl-2-Pentanone	ND (0.435)	0.0524	8260B		1	06/08/15 15:06	CYF0114	CF50846
Acetone	**J 0.337** (1.09)	0.322	8260B		1	06/08/15 15:06	CYF0114	CF50846
Benzene	ND (0.0435)	0.0070	8260B		1	06/08/15 15:06	CYF0114	CF50846
Bromobenzene	ND (0.0435)	0.0119	8260B		1	06/08/15 15:06	CYF0114	CF50846

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Riverside Square
Client Sample ID: GP-206 2-4
Date Sampled: 06/04/15 09:54
Percent Solids: 95
Initial Volume: 19.1
Final Volume: 15
Extraction Method: 5035

ESS Laboratory Work Order: 1506154
ESS Laboratory Sample ID: 1506154-15
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MD

5035/8260B Volatile Organic Compounds / Methanol

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
Bromochloromethane	ND (0.0435)	0.0141	8260B		1	06/08/15 15:06	CYF0114	CF50846
Bromodichloromethane	ND (0.0435)	0.0060	8260B		1	06/08/15 15:06	CYF0114	CF50846
Bromoform	ND (0.0435)	0.0125	8260B		1	06/08/15 15:06	CYF0114	CF50846
Bromomethane	ND (0.0870)	0.0291	8260B		1	06/08/15 15:06	CYF0114	CF50846
Carbon Disulfide	ND (0.0435)	0.0064	8260B		1	06/08/15 15:06	CYF0114	CF50846
Carbon Tetrachloride	ND (0.0435)	0.0076	8260B		1	06/08/15 15:06	CYF0114	CF50846
Chlorobenzene	ND (0.0435)	0.0069	8260B		1	06/08/15 15:06	CYF0114	CF50846
Chloroethane	ND (0.0870)	0.0290	8260B		1	06/08/15 15:06	CYF0114	CF50846
Chloroform	ND (0.0435)	0.0090	8260B		1	06/08/15 15:06	CYF0114	CF50846
Chloromethane	ND (0.0870)	0.0110	8260B		1	06/08/15 15:06	CYF0114	CF50846
cis-1,2-Dichloroethene	ND (0.0435)	0.0108	8260B		1	06/08/15 15:06	CYF0114	CF50846
cis-1,3-Dichloropropene	ND (0.0435)	0.0098	8260B		1	06/08/15 15:06	CYF0114	CF50846
Dibromochloromethane	ND (0.0435)	0.0110	8260B		1	06/08/15 15:06	CYF0114	CF50846
Dibromomethane	ND (0.0435)	0.0137	8260B		1	06/08/15 15:06	CYF0114	CF50846
Dichlorodifluoromethane	ND (0.0435)	0.0076	8260B		1	06/08/15 15:06	CYF0114	CF50846
Diethyl Ether	ND (0.0435)	0.0110	8260B		1	06/08/15 15:06	CYF0114	CF50846
Di-isopropyl ether	ND (0.0435)	0.0082	8260B		1	06/08/15 15:06	CYF0114	CF50846
Ethyl tertiary-butyl ether	ND (0.0435)	0.0110	8260B		1	06/08/15 15:06	CYF0114	CF50846
Ethylbenzene	ND (0.0435)	0.0057	8260B		1	06/08/15 15:06	CYF0114	CF50846
Hexachlorobutadiene	ND (0.0435)	0.0145	8260B		1	06/08/15 15:06	CYF0114	CF50846
Isopropylbenzene	ND (0.0435)	0.0077	8260B		1	06/08/15 15:06	CYF0114	CF50846
Methyl tert-Butyl Ether	ND (0.0435)	0.0070	8260B		1	06/08/15 15:06	CYF0114	CF50846
Methylene Chloride	ND (0.217)	0.0114	8260B		1	06/08/15 15:06	CYF0114	CF50846
Naphthalene	ND (0.0435)	0.0114	8260B		1	06/08/15 15:06	CYF0114	CF50846
n-Butylbenzene	ND (0.0435)	0.0107	8260B		1	06/08/15 15:06	CYF0114	CF50846
n-Propylbenzene	ND (0.0435)	0.0106	8260B		1	06/08/15 15:06	CYF0114	CF50846
sec-Butylbenzene	ND (0.0435)	0.0058	8260B		1	06/08/15 15:06	CYF0114	CF50846
Styrene	ND (0.0435)	0.0057	8260B		1	06/08/15 15:06	CYF0114	CF50846
tert-Butylbenzene	ND (0.0435)	0.0102	8260B		1	06/08/15 15:06	CYF0114	CF50846
Tertiary-amyl methyl ether	ND (0.0435)	0.0063	8260B		1	06/08/15 15:06	CYF0114	CF50846
Tetrachloroethene	**0.736** (0.0435)	0.0145	8260B		1	06/08/15 15:06	CYF0114	CF50846
Tetrahydrofuran	ND (0.435)	0.112	8260B		1	06/08/15 15:06	CYF0114	CF50846

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Riverside Square
Client Sample ID: GP-206 2-4
Date Sampled: 06/04/15 09:54
Percent Solids: 95
Initial Volume: 19.1
Final Volume: 15
Extraction Method: 5035

ESS Laboratory Work Order: 1506154
ESS Laboratory Sample ID: 1506154-15
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MD

5035/8260B Volatile Organic Compounds / Methanol

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
Toluene	ND (0.0435)	0.0110	8260B		1	06/08/15 15:06	CYF0114	CF50846
trans-1,2-Dichloroethene	ND (0.0435)	0.0143	8260B		1	06/08/15 15:06	CYF0114	CF50846
trans-1,3-Dichloropropene	ND (0.0435)	0.0134	8260B		1	06/08/15 15:06	CYF0114	CF50846
Trichloroethene	**0.844** (0.0435)	0.0090	8260B		1	06/08/15 15:06	CYF0114	CF50846
Trichlorofluoromethane	ND (0.0435)	0.0115	8260B		1	06/08/15 15:06	CYF0114	CF50846
Vinyl Acetate	ND (0.217)	0.0090	8260B		1	06/08/15 15:06	CYF0114	CF50846
Vinyl Chloride	ND (0.0435)	0.0144	8260B		1	06/08/15 15:06	CYF0114	CF50846
Xylene O	ND (0.0435)	0.0084	8260B		1	06/08/15 15:06	CYF0114	CF50846
Xylene P,M	ND (0.0870)	0.0169	8260B		1	06/08/15 15:06	CYF0114	CF50846
Xylenes (Total)	ND (0.0870)		8260B		1	06/08/15 15:06		[CALC]

	%Recovery	*Qualifier*	*Limits*
Surrogate: 1,2-Dichloroethane-d4	*103 %*		*70-130*
Surrogate: 4-Bromofluorobenzene	*94 %*		*70-130*
Surrogate: Dibromofluoromethane	*109 %*		*70-130*
Surrogate: Toluene-d8	*88 %*		*70-130*

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Riverside Square
Client Sample ID: GP-207 0-2
Date Sampled: 06/04/15 10:03
Percent Solids: 85
Initial Volume: 19.1
Final Volume: 15
Extraction Method: 5035

ESS Laboratory Work Order: 1506154
ESS Laboratory Sample ID: 1506154-16
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MD

5035/8260B Volatile Organic Compounds / Methanol

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
1,1,1,2-Tetrachloroethane	ND (0.110)	0.0096	8260B		1	06/08/15 15:34	CYF0114	CF50846
1,1,1-Trichloroethane	**0.0883** (0.0552)	0.0097	8260B		1	06/08/15 15:34	CYF0114	CF50846
1,1,2,2-Tetrachloroethane	ND (0.0552)	0.0150	8260B		1	06/08/15 15:34	CYF0114	CF50846
1,1,2-Trichloroethane	ND (0.0552)	0.0138	8260B		1	06/08/15 15:34	CYF0114	CF50846
1,1-Dichloroethane	ND (0.0552)	0.0088	8260B		1	06/08/15 15:34	CYF0114	CF50846
1,1-Dichloroethene	ND (0.0552)	0.0136	8260B		1	06/08/15 15:34	CYF0114	CF50846
1,1-Dichloropropene	ND (0.0552)	0.0085	8260B		1	06/08/15 15:34	CYF0114	CF50846
1,2,3-Trichlorobenzene	ND (0.0552)	0.0184	8260B		1	06/08/15 15:34	CYF0114	CF50846
1,2,3-Trichloropropane	ND (0.0552)	0.0137	8260B		1	06/08/15 15:34	CYF0114	CF50846
1,2,4-Trichlorobenzene	ND (0.0552)	0.0121	8260B		1	06/08/15 15:34	CYF0114	CF50846
1,2,4-Trimethylbenzene	**J 0.0143** (0.0552)	0.0106	8260B		1	06/08/15 15:34	CYF0114	CF50846
1,2-Dibromo-3-Chloropropane	ND (0.331)	0.110	8260B		1	06/08/15 15:34	CYF0114	CF50846
1,2-Dibromoethane	ND (0.0552)	0.0140	8260B		1	06/08/15 15:34	CYF0114	CF50846
1,2-Dichlorobenzene	**J 0.0375** (0.0552)	0.0078	8260B		1	06/08/15 15:34	CYF0114	CF50846
1,2-Dichloroethane	ND (0.0552)	0.0148	8260B		1	06/08/15 15:34	CYF0114	CF50846
1,2-Dichloropropane	ND (0.0552)	0.0145	8260B		1	06/08/15 15:34	CYF0114	CF50846
1,3,5-Trimethylbenzene	ND (0.0552)	0.0097	8260B		1	06/08/15 15:34	CYF0114	CF50846
1,3-Dichlorobenzene	ND (0.0552)	0.0070	8260B		1	06/08/15 15:34	CYF0114	CF50846
1,3-Dichloropropane	ND (0.0552)	0.0124	8260B		1	06/08/15 15:34	CYF0114	CF50846
1,4-Dichlorobenzene	ND (0.0552)	0.0147	8260B		1	06/08/15 15:34	CYF0114	CF50846
1,4-Dioxane - Screen	ND (5.52)	1.84	8260B		1	06/08/15 15:34	CYF0114	CF50846
1-Chlorohexane	ND (0.0552)	0.0105	8260B		1	06/08/15 15:34	CYF0114	CF50846
2,2-Dichloropropane	ND (0.110)	0.0189	8260B		1	06/08/15 15:34	CYF0114	CF50846
2-Butanone	ND (1.38)	0.319	8260B		1	06/08/15 15:34	CYF0114	CF50846
2-Chlorotoluene	ND (0.0552)	0.0156	8260B		1	06/08/15 15:34	CYF0114	CF50846
2-Hexanone	ND (0.552)	0.0950	8260B		1	06/08/15 15:34	CYF0114	CF50846
4-Chlorotoluene	ND (0.0552)	0.0072	8260B		1	06/08/15 15:34	CYF0114	CF50846
4-Isopropyltoluene	ND (0.0552)	0.0098	8260B		1	06/08/15 15:34	CYF0114	CF50846
4-Methyl-2-Pentanone	ND (0.552)	0.0664	8260B		1	06/08/15 15:34	CYF0114	CF50846
Acetone	ND (1.38)	0.408	8260B		1	06/08/15 15:34	CYF0114	CF50846
Benzene	ND (0.0552)	0.0089	8260B		1	06/08/15 15:34	CYF0114	CF50846
Bromobenzene	ND (0.0552)	0.0151	8260B		1	06/08/15 15:34	CYF0114	CF50846

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Riverside Square
Client Sample ID: GP-207 0-2
Date Sampled: 06/04/15 10:03
Percent Solids: 85
Initial Volume: 19.1
Final Volume: 15
Extraction Method: 5035

ESS Laboratory Work Order: 1506154
ESS Laboratory Sample ID: 1506154-16
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MD

5035/8260B Volatile Organic Compounds / Methanol

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
Bromochloromethane	ND (0.0552)	0.0179	8260B		1	06/08/15 15:34	CYF0114	CF50846
Bromodichloromethane	ND (0.0552)	0.0076	8260B		1	06/08/15 15:34	CYF0114	CF50846
Bromoform	ND (0.0552)	0.0159	8260B		1	06/08/15 15:34	CYF0114	CF50846
Bromomethane	ND (0.110)	0.0369	8260B		1	06/08/15 15:34	CYF0114	CF50846
Carbon Disulfide	ND (0.0552)	0.0082	8260B		1	06/08/15 15:34	CYF0114	CF50846
Carbon Tetrachloride	ND (0.0552)	0.0096	8260B		1	06/08/15 15:34	CYF0114	CF50846
Chlorobenzene	ND (0.0552)	0.0087	8260B		1	06/08/15 15:34	CYF0114	CF50846
Chloroethane	ND (0.110)	0.0368	8260B		1	06/08/15 15:34	CYF0114	CF50846
Chloroform	ND (0.0552)	0.0114	8260B		1	06/08/15 15:34	CYF0114	CF50846
Chloromethane	ND (0.110)	0.0140	8260B		1	06/08/15 15:34	CYF0114	CF50846
cis-1,2-Dichloroethene	ND (0.0552)	0.0137	8260B		1	06/08/15 15:34	CYF0114	CF50846
cis-1,3-Dichloropropene	ND (0.0552)	0.0125	8260B		1	06/08/15 15:34	CYF0114	CF50846
Dibromochloromethane	ND (0.0552)	0.0139	8260B		1	06/08/15 15:34	CYF0114	CF50846
Dibromomethane	ND (0.0552)	0.0174	8260B		1	06/08/15 15:34	CYF0114	CF50846
Dichlorodifluoromethane	ND (0.0552)	0.0096	8260B		1	06/08/15 15:34	CYF0114	CF50846
Diethyl Ether	ND (0.0552)	0.0140	8260B		1	06/08/15 15:34	CYF0114	CF50846
Di-isopropyl ether	ND (0.0552)	0.0104	8260B		1	06/08/15 15:34	CYF0114	CF50846
Ethyl tertiary-butyl ether	ND (0.0552)	0.0139	8260B		1	06/08/15 15:34	CYF0114	CF50846
Ethylbenzene	ND (0.0552)	0.0072	8260B		1	06/08/15 15:34	CYF0114	CF50846
Hexachlorobutadiene	ND (0.0552)	0.0184	8260B		1	06/08/15 15:34	CYF0114	CF50846
Isopropylbenzene	ND (0.0552)	0.0097	8260B		1	06/08/15 15:34	CYF0114	CF50846
Methyl tert-Butyl Ether	ND (0.0552)	0.0088	8260B		1	06/08/15 15:34	CYF0114	CF50846
Methylene Chloride	ND (0.276)	0.0145	8260B		1	06/08/15 15:34	CYF0114	CF50846
Naphthalene	ND (0.0552)	0.0145	8260B		1	06/08/15 15:34	CYF0114	CF50846
n-Butylbenzene	ND (0.0552)	0.0136	8260B		1	06/08/15 15:34	CYF0114	CF50846
n-Propylbenzene	ND (0.0552)	0.0135	8260B		1	06/08/15 15:34	CYF0114	CF50846
sec-Butylbenzene	ND (0.0552)	0.0074	8260B		1	06/08/15 15:34	CYF0114	CF50846
Styrene	ND (0.0552)	0.0073	8260B		1	06/08/15 15:34	CYF0114	CF50846
tert-Butylbenzene	ND (0.0552)	0.0129	8260B		1	06/08/15 15:34	CYF0114	CF50846
Tertiary-amyl methyl ether	ND (0.0552)	0.0079	8260B		1	06/08/15 15:34	CYF0114	CF50846
Tetrachloroethene	**1.41** (0.0552)	0.0184	8260B		1	06/08/15 15:34	CYF0114	CF50846
Tetrahydrofuran	ND (0.552)	0.142	8260B		1	06/08/15 15:34	CYF0114	CF50846

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Riverside Square
Client Sample ID: GP-207 0-2
Date Sampled: 06/04/15 10:03
Percent Solids: 85
Initial Volume: 19.1
Final Volume: 15
Extraction Method: 5035

ESS Laboratory Work Order: 1506154
ESS Laboratory Sample ID: 1506154-16
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MD

5035/8260B Volatile Organic Compounds / Methanol

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
Toluene	ND (0.0552)	0.0140	8260B		1	06/08/15 15:34	CYF0114	CF50846
trans-1,2-Dichloroethene	ND (0.0552)	0.0181	8260B		1	06/08/15 15:34	CYF0114	CF50846
trans-1,3-Dichloropropene	ND (0.0552)	0.0170	8260B		1	06/08/15 15:34	CYF0114	CF50846
Trichloroethene	**7.31** (0.0552)	0.0114	8260B		1	06/08/15 15:34	CYF0114	CF50846
Trichlorofluoromethane	ND (0.0552)	0.0146	8260B		1	06/08/15 15:34	CYF0114	CF50846
Vinyl Acetate	ND (0.276)	0.0114	8260B		1	06/08/15 15:34	CYF0114	CF50846
Vinyl Chloride	ND (0.0552)	0.0182	8260B		1	06/08/15 15:34	CYF0114	CF50846
Xylene O	ND (0.0552)	0.0106	8260B		1	06/08/15 15:34	CYF0114	CF50846
Xylene P,M	ND (0.110)	0.0214	8260B		1	06/08/15 15:34	CYF0114	CF50846
Xylenes (Total)	ND (0.110)		8260B		1	06/08/15 15:34		[CALC]

	%Recovery	*Qualifier*	*Limits*
Surrogate: 1,2-Dichloroethane-d4	*109 %*		*70-130*
Surrogate: 4-Bromofluorobenzene	*99 %*		*70-130*
Surrogate: Dibromofluoromethane	*125 %*		*70-130*
Surrogate: Toluene-d8	*94 %*		*70-130*

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Riverside Square
Client Sample ID: GP-207 4-6
Date Sampled: 06/04/15 10:05
Percent Solids: 96
Initial Volume: 18.5
Final Volume: 15
Extraction Method: 5035

ESS Laboratory Work Order: 1506154
ESS Laboratory Sample ID: 1506154-17
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MD

5035/8260B Volatile Organic Compounds / Methanol

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
1,1,1,2-Tetrachloroethane	ND (0.0886)	0.0077	8260B		1	06/08/15 16:02	CYF0114	CF50846
1,1,1-Trichloroethane	ND (0.0443)	0.0078	8260B		1	06/08/15 16:02	CYF0114	CF50846
1,1,2,2-Tetrachloroethane	ND (0.0443)	0.0120	8260B		1	06/08/15 16:02	CYF0114	CF50846
1,1,2-Trichloroethane	ND (0.0443)	0.0111	8260B		1	06/08/15 16:02	CYF0114	CF50846
1,1-Dichloroethane	ND (0.0443)	0.0071	8260B		1	06/08/15 16:02	CYF0114	CF50846
1,1-Dichloroethene	ND (0.0443)	0.0109	8260B		1	06/08/15 16:02	CYF0114	CF50846
1,1-Dichloropropene	ND (0.0443)	0.0068	8260B		1	06/08/15 16:02	CYF0114	CF50846
1,2,3-Trichlorobenzene	ND (0.0443)	0.0148	8260B		1	06/08/15 16:02	CYF0114	CF50846
1,2,3-Trichloropropane	ND (0.0443)	0.0110	8260B		1	06/08/15 16:02	CYF0114	CF50846
1,2,4-Trichlorobenzene	ND (0.0443)	0.0097	8260B		1	06/08/15 16:02	CYF0114	CF50846
1,2,4-Trimethylbenzene	ND (0.0443)	0.0085	8260B		1	06/08/15 16:02	CYF0114	CF50846
1,2-Dibromo-3-Chloropropane	ND (0.266)	0.0886	8260B		1	06/08/15 16:02	CYF0114	CF50846
1,2-Dibromoethane	ND (0.0443)	0.0112	8260B		1	06/08/15 16:02	CYF0114	CF50846
1,2-Dichlorobenzene	ND (0.0443)	0.0063	8260B		1	06/08/15 16:02	CYF0114	CF50846
1,2-Dichloroethane	ND (0.0443)	0.0119	8260B		1	06/08/15 16:02	CYF0114	CF50846
1,2-Dichloropropane	ND (0.0443)	0.0116	8260B		1	06/08/15 16:02	CYF0114	CF50846
1,3,5-Trimethylbenzene	ND (0.0443)	0.0078	8260B		1	06/08/15 16:02	CYF0114	CF50846
1,3-Dichlorobenzene	ND (0.0443)	0.0056	8260B		1	06/08/15 16:02	CYF0114	CF50846
1,3-Dichloropropane	ND (0.0443)	0.0099	8260B		1	06/08/15 16:02	CYF0114	CF50846
1,4-Dichlorobenzene	ND (0.0443)	0.0118	8260B		1	06/08/15 16:02	CYF0114	CF50846
1,4-Dioxane - Screen	ND (4.43)	1.48	8260B		1	06/08/15 16:02	CYF0114	CF50846
1-Chlorohexane	ND (0.0443)	0.0084	8260B		1	06/08/15 16:02	CYF0114	CF50846
2,2-Dichloropropane	ND (0.0886)	0.0151	8260B		1	06/08/15 16:02	CYF0114	CF50846
2-Butanone	ND (1.11)	0.256	8260B		1	06/08/15 16:02	CYF0114	CF50846
2-Chlorotoluene	ND (0.0443)	0.0125	8260B		1	06/08/15 16:02	CYF0114	CF50846
2-Hexanone	ND (0.443)	0.0762	8260B		1	06/08/15 16:02	CYF0114	CF50846
4-Chlorotoluene	ND (0.0443)	0.0058	8260B		1	06/08/15 16:02	CYF0114	CF50846
4-Isopropyltoluene	ND (0.0443)	0.0079	8260B		1	06/08/15 16:02	CYF0114	CF50846
4-Methyl-2-Pentanone	ND (0.443)	0.0533	8260B		1	06/08/15 16:02	CYF0114	CF50846
Acetone	**J 0.419** (1.11)	0.328	8260B		1	06/08/15 16:02	CYF0114	CF50846
Benzene	ND (0.0443)	0.0072	8260B		1	06/08/15 16:02	CYF0114	CF50846
Bromobenzene	ND (0.0443)	0.0121	8260B		1	06/08/15 16:02	CYF0114	CF50846

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Riverside Square
Client Sample ID: GP-207 4-6
Date Sampled: 06/04/15 10:05
Percent Solids: 96
Initial Volume: 18.5
Final Volume: 15
Extraction Method: 5035

ESS Laboratory Work Order: 1506154
ESS Laboratory Sample ID: 1506154-17
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MD

5035/8260B Volatile Organic Compounds / Methanol

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
Bromochloromethane	ND (0.0443)	0.0143	8260B		1	06/08/15 16:02	CYF0114	CF50846
Bromodichloromethane	ND (0.0443)	0.0061	8260B		1	06/08/15 16:02	CYF0114	CF50846
Bromoform	ND (0.0443)	0.0128	8260B		1	06/08/15 16:02	CYF0114	CF50846
Bromomethane	ND (0.0886)	0.0296	8260B		1	06/08/15 16:02	CYF0114	CF50846
Carbon Disulfide	ND (0.0443)	0.0066	8260B		1	06/08/15 16:02	CYF0114	CF50846
Carbon Tetrachloride	ND (0.0443)	0.0077	8260B		1	06/08/15 16:02	CYF0114	CF50846
Chlorobenzene	ND (0.0443)	0.0070	8260B		1	06/08/15 16:02	CYF0114	CF50846
Chloroethane	ND (0.0886)	0.0295	8260B		1	06/08/15 16:02	CYF0114	CF50846
Chloroform	ND (0.0443)	0.0091	8260B		1	06/08/15 16:02	CYF0114	CF50846
Chloromethane	ND (0.0886)	0.0112	8260B		1	06/08/15 16:02	CYF0114	CF50846
cis-1,2-Dichloroethene	ND (0.0443)	0.0110	8260B		1	06/08/15 16:02	CYF0114	CF50846
cis-1,3-Dichloropropene	ND (0.0443)	0.0100	8260B		1	06/08/15 16:02	CYF0114	CF50846
Dibromochloromethane	ND (0.0443)	0.0112	8260B		1	06/08/15 16:02	CYF0114	CF50846
Dibromomethane	ND (0.0443)	0.0140	8260B		1	06/08/15 16:02	CYF0114	CF50846
Dichlorodifluoromethane	ND (0.0443)	0.0077	8260B		1	06/08/15 16:02	CYF0114	CF50846
Diethyl Ether	ND (0.0443)	0.0112	8260B		1	06/08/15 16:02	CYF0114	CF50846
Di-isopropyl ether	ND (0.0443)	0.0083	8260B		1	06/08/15 16:02	CYF0114	CF50846
Ethyl tertiary-butyl ether	ND (0.0443)	0.0112	8260B		1	06/08/15 16:02	CYF0114	CF50846
Ethylbenzene	ND (0.0443)	0.0058	8260B		1	06/08/15 16:02	CYF0114	CF50846
Hexachlorobutadiene	ND (0.0443)	0.0148	8260B		1	06/08/15 16:02	CYF0114	CF50846
Isopropylbenzene	ND (0.0443)	0.0078	8260B		1	06/08/15 16:02	CYF0114	CF50846
Methyl tert-Butyl Ether	ND (0.0443)	0.0071	8260B		1	06/08/15 16:02	CYF0114	CF50846
Methylene Chloride	ND (0.221)	0.0116	8260B		1	06/08/15 16:02	CYF0114	CF50846
Naphthalene	ND (0.0443)	0.0116	8260B		1	06/08/15 16:02	CYF0114	CF50846
n-Butylbenzene	ND (0.0443)	0.0109	8260B		1	06/08/15 16:02	CYF0114	CF50846
n-Propylbenzene	ND (0.0443)	0.0108	8260B		1	06/08/15 16:02	CYF0114	CF50846
sec-Butylbenzene	ND (0.0443)	0.0059	8260B		1	06/08/15 16:02	CYF0114	CF50846
Styrene	ND (0.0443)	0.0058	8260B		1	06/08/15 16:02	CYF0114	CF50846
tert-Butylbenzene	ND (0.0443)	0.0104	8260B		1	06/08/15 16:02	CYF0114	CF50846
Tertiary-amyl methyl ether	ND (0.0443)	0.0064	8260B		1	06/08/15 16:02	CYF0114	CF50846
Tetrachloroethene	**0.157** (0.0443)	0.0148	8260B		1	06/08/15 16:02	CYF0114	CF50846
Tetrahydrofuran	ND (0.443)	0.114	8260B		1	06/08/15 16:02	CYF0114	CF50846

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Riverside Square
Client Sample ID: GP-207 4-6
Date Sampled: 06/04/15 10:05
Percent Solids: 96
Initial Volume: 18.5
Final Volume: 15
Extraction Method: 5035

ESS Laboratory Work Order: 1506154
ESS Laboratory Sample ID: 1506154-17
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MD

5035/8260B Volatile Organic Compounds / Methanol

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
Toluene	ND (0.0443)	0.0112	8260B		1	06/08/15 16:02	CYF0114	CF50846
trans-1,2-Dichloroethene	ND (0.0443)	0.0145	8260B		1	06/08/15 16:02	CYF0114	CF50846
trans-1,3-Dichloropropene	ND (0.0443)	0.0136	8260B		1	06/08/15 16:02	CYF0114	CF50846
Trichloroethene	**0.381** (0.0443)	0.0091	8260B		1	06/08/15 16:02	CYF0114	CF50846
Trichlorofluoromethane	ND (0.0443)	0.0117	8260B		1	06/08/15 16:02	CYF0114	CF50846
Vinyl Acetate	ND (0.221)	0.0091	8260B		1	06/08/15 16:02	CYF0114	CF50846
Vinyl Chloride	ND (0.0443)	0.0146	8260B		1	06/08/15 16:02	CYF0114	CF50846
Xylene O	ND (0.0443)	0.0085	8260B		1	06/08/15 16:02	CYF0114	CF50846
Xylene P,M	ND (0.0886)	0.0172	8260B		1	06/08/15 16:02	CYF0114	CF50846
Xylenes (Total)	ND (0.0886)		8260B		1	06/08/15 16:02		[CALC]

	%Recovery	*Qualifier*	*Limits*
Surrogate: 1,2-Dichloroethane-d4	*101 %*		*70-130*
Surrogate: 4-Bromofluorobenzene	*93 %*		*70-130*
Surrogate: Dibromofluoromethane	*108 %*		*70-130*
Surrogate: Toluene-d8	*99 %*		*70-130*

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Riverside Square
Client Sample ID: GP-208 2-4
Date Sampled: 06/04/15 10:17
Percent Solids: 91
Initial Volume: 19.2
Final Volume: 15
Extraction Method: 5035

ESS Laboratory Work Order: 1506154
ESS Laboratory Sample ID: 1506154-18
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MD

5035/8260B Volatile Organic Compounds / Methanol

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
1,1,1,2-Tetrachloroethane	ND (0.0965)	0.0084	8260B		1	06/08/15 16:29	CYF0114	CF50846
1,1,1-Trichloroethane	**0.0975** (0.0483)	0.0085	8260B		1	06/08/15 16:29	CYF0114	CF50846
1,1,2,2-Tetrachloroethane	ND (0.0483)	0.0131	8260B		1	06/08/15 16:29	CYF0114	CF50846
1,1,2-Trichloroethane	ND (0.0483)	0.0121	8260B		1	06/08/15 16:29	CYF0114	CF50846
1,1-Dichloroethane	ND (0.0483)	0.0077	8260B		1	06/08/15 16:29	CYF0114	CF50846
1,1-Dichloroethene	ND (0.0483)	0.0119	8260B		1	06/08/15 16:29	CYF0114	CF50846
1,1-Dichloropropene	ND (0.0483)	0.0074	8260B		1	06/08/15 16:29	CYF0114	CF50846
1,2,3-Trichlorobenzene	ND (0.0483)	0.0161	8260B		1	06/08/15 16:29	CYF0114	CF50846
1,2,3-Trichloropropane	ND (0.0483)	0.0120	8260B		1	06/08/15 16:29	CYF0114	CF50846
1,2,4-Trichlorobenzene	ND (0.0483)	0.0106	8260B		1	06/08/15 16:29	CYF0114	CF50846
1,2,4-Trimethylbenzene	ND (0.0483)	0.0093	8260B		1	06/08/15 16:29	CYF0114	CF50846
1,2-Dibromo-3-Chloropropane	ND (0.290)	0.0965	8260B		1	06/08/15 16:29	CYF0114	CF50846
1,2-Dibromoethane	ND (0.0483)	0.0123	8260B		1	06/08/15 16:29	CYF0114	CF50846
1,2-Dichlorobenzene	ND (0.0483)	0.0069	8260B		1	06/08/15 16:29	CYF0114	CF50846
1,2-Dichloroethane	ND (0.0483)	0.0129	8260B		1	06/08/15 16:29	CYF0114	CF50846
1,2-Dichloropropane	ND (0.0483)	0.0126	8260B		1	06/08/15 16:29	CYF0114	CF50846
1,3,5-Trimethylbenzene	ND (0.0483)	0.0085	8260B		1	06/08/15 16:29	CYF0114	CF50846
1,3-Dichlorobenzene	ND (0.0483)	0.0061	8260B		1	06/08/15 16:29	CYF0114	CF50846
1,3-Dichloropropane	ND (0.0483)	0.0108	8260B		1	06/08/15 16:29	CYF0114	CF50846
1,4-Dichlorobenzene	ND (0.0483)	0.0128	8260B		1	06/08/15 16:29	CYF0114	CF50846
1,4-Dioxane - Screen	ND (4.83)	1.61	8260B		1	06/08/15 16:29	CYF0114	CF50846
1-Chlorohexane	ND (0.0483)	0.0092	8260B		1	06/08/15 16:29	CYF0114	CF50846
2,2-Dichloropropane	ND (0.0965)	0.0165	8260B		1	06/08/15 16:29	CYF0114	CF50846
2-Butanone	ND (1.21)	0.279	8260B		1	06/08/15 16:29	CYF0114	CF50846
2-Chlorotoluene	ND (0.0483)	0.0136	8260B		1	06/08/15 16:29	CYF0114	CF50846
2-Hexanone	ND (0.483)	0.0831	8260B		1	06/08/15 16:29	CYF0114	CF50846
4-Chlorotoluene	ND (0.0483)	0.0063	8260B		1	06/08/15 16:29	CYF0114	CF50846
4-Isopropyltoluene	ND (0.0483)	0.0086	8260B		1	06/08/15 16:29	CYF0114	CF50846
4-Methyl-2-Pentanone	ND (0.483)	0.0581	8260B		1	06/08/15 16:29	CYF0114	CF50846
Acetone	ND (1.21)	0.357	8260B		1	06/08/15 16:29	CYF0114	CF50846
Benzene	ND (0.0483)	0.0078	8260B		1	06/08/15 16:29	CYF0114	CF50846
Bromobenzene	ND (0.0483)	0.0132	8260B		1	06/08/15 16:29	CYF0114	CF50846

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Riverside Square
Client Sample ID: GP-208 2-4
Date Sampled: 06/04/15 10:17
Percent Solids: 91
Initial Volume: 19.2
Final Volume: 15
Extraction Method: 5035

ESS Laboratory Work Order: 1506154
ESS Laboratory Sample ID: 1506154-18
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MD

5035/8260B Volatile Organic Compounds / Methanol

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
Bromochloromethane	ND (0.0483)	0.0156	8260B		1	06/08/15 16:29	CYF0114	CF50846
Bromodichloromethane	ND (0.0483)	0.0067	8260B		1	06/08/15 16:29	CYF0114	CF50846
Bromoform	ND (0.0483)	0.0139	8260B		1	06/08/15 16:29	CYF0114	CF50846
Bromomethane	ND (0.0965)	0.0322	8260B		1	06/08/15 16:29	CYF0114	CF50846
Carbon Disulfide	ND (0.0483)	0.0071	8260B		1	06/08/15 16:29	CYF0114	CF50846
Carbon Tetrachloride	ND (0.0483)	0.0084	8260B		1	06/08/15 16:29	CYF0114	CF50846
Chlorobenzene	ND (0.0483)	0.0076	8260B		1	06/08/15 16:29	CYF0114	CF50846
Chloroethane	ND (0.0965)	0.0321	8260B		1	06/08/15 16:29	CYF0114	CF50846
Chloroform	ND (0.0483)	0.0099	8260B		1	06/08/15 16:29	CYF0114	CF50846
Chloromethane	ND (0.0965)	0.0123	8260B		1	06/08/15 16:29	CYF0114	CF50846
cis-1,2-Dichloroethene	ND (0.0483)	0.0120	8260B		1	06/08/15 16:29	CYF0114	CF50846
cis-1,3-Dichloropropene	ND (0.0483)	0.0109	8260B		1	06/08/15 16:29	CYF0114	CF50846
Dibromochloromethane	ND (0.0483)	0.0122	8260B		1	06/08/15 16:29	CYF0114	CF50846
Dibromomethane	ND (0.0483)	0.0153	8260B		1	06/08/15 16:29	CYF0114	CF50846
Dichlorodifluoromethane	ND (0.0483)	0.0084	8260B		1	06/08/15 16:29	CYF0114	CF50846
Diethyl Ether	ND (0.0483)	0.0123	8260B		1	06/08/15 16:29	CYF0114	CF50846
Di-isopropyl ether	ND (0.0483)	0.0091	8260B		1	06/08/15 16:29	CYF0114	CF50846
Ethyl tertiary-butyl ether	ND (0.0483)	0.0122	8260B		1	06/08/15 16:29	CYF0114	CF50846
Ethylbenzene	ND (0.0483)	0.0063	8260B		1	06/08/15 16:29	CYF0114	CF50846
Hexachlorobutadiene	ND (0.0483)	0.0161	8260B		1	06/08/15 16:29	CYF0114	CF50846
Isopropylbenzene	ND (0.0483)	0.0085	8260B		1	06/08/15 16:29	CYF0114	CF50846
Methyl tert-Butyl Ether	ND (0.0483)	0.0077	8260B		1	06/08/15 16:29	CYF0114	CF50846
Methylene Chloride	ND (0.241)	0.0126	8260B		1	06/08/15 16:29	CYF0114	CF50846
Naphthalene	ND (0.0483)	0.0126	8260B		1	06/08/15 16:29	CYF0114	CF50846
n-Butylbenzene	ND (0.0483)	0.0119	8260B		1	06/08/15 16:29	CYF0114	CF50846
n-Propylbenzene	ND (0.0483)	0.0118	8260B		1	06/08/15 16:29	CYF0114	CF50846
sec-Butylbenzene	ND (0.0483)	0.0065	8260B		1	06/08/15 16:29	CYF0114	CF50846
Styrene	ND (0.0483)	0.0064	8260B		1	06/08/15 16:29	CYF0114	CF50846
tert-Butylbenzene	ND (0.0483)	0.0113	8260B		1	06/08/15 16:29	CYF0114	CF50846
Tertiary-amyl methyl ether	ND (0.0483)	0.0070	8260B		1	06/08/15 16:29	CYF0114	CF50846
Tetrachloroethene	**0.490** (0.0483)	0.0161	8260B		1	06/08/15 16:29	CYF0114	CF50846
Tetrahydrofuran	ND (0.483)	0.125	8260B		1	06/08/15 16:29	CYF0114	CF50846

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Riverside Square
Client Sample ID: GP-208 2-4
Date Sampled: 06/04/15 10:17
Percent Solids: 91
Initial Volume: 19.2
Final Volume: 15
Extraction Method: 5035

ESS Laboratory Work Order: 1506154
ESS Laboratory Sample ID: 1506154-18
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MD

5035/8260B Volatile Organic Compounds / Methanol

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
Toluene	ND (0.0483)	0.0123	8260B		1	06/08/15 16:29	CYF0114	CF50846
trans-1,2-Dichloroethene	ND (0.0483)	0.0158	8260B		1	06/08/15 16:29	CYF0114	CF50846
trans-1,3-Dichloropropene	ND (0.0483)	0.0149	8260B		1	06/08/15 16:29	CYF0114	CF50846
Trichloroethene	**0.929** (0.0483)	0.0099	8260B		1	06/08/15 16:29	CYF0114	CF50846
Trichlorofluoromethane	ND (0.0483)	0.0127	8260B		1	06/08/15 16:29	CYF0114	CF50846
Vinyl Acetate	ND (0.241)	0.0099	8260B		1	06/08/15 16:29	CYF0114	CF50846
Vinyl Chloride	ND (0.0483)	0.0159	8260B		1	06/08/15 16:29	CYF0114	CF50846
Xylene O	ND (0.0483)	0.0093	8260B		1	06/08/15 16:29	CYF0114	CF50846
Xylene P,M	ND (0.0965)	0.0187	8260B		1	06/08/15 16:29	CYF0114	CF50846
Xylenes (Total)	ND (0.0965)		8260B		1	06/08/15 16:29		[CALC]

	%Recovery	*Qualifier*	*Limits*
Surrogate: 1,2-Dichloroethane-d4	*100 %*		*70-130*
Surrogate: 4-Bromofluorobenzene	*94 %*		*70-130*
Surrogate: Dibromofluoromethane	*109 %*		*70-130*
Surrogate: Toluene-d8	*91 %*		*70-130*

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Riverside Square
Client Sample ID: GP-208 6-8
Date Sampled: 06/04/15 10:19
Percent Solids: 95
Initial Volume: 15
Final Volume: 15
Extraction Method: 5035

ESS Laboratory Work Order: 1506154
ESS Laboratory Sample ID: 1506154-19
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MD

5035/8260B Volatile Organic Compounds / Methanol

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
1,1,1,2-Tetrachloroethane	ND (0.111)	0.0097	8260B		1	06/08/15 16:57	CYF0114	CF50846
1,1,1-Trichloroethane	**J 0.0189** (0.0555)	0.0098	8260B		1	06/08/15 16:57	CYF0114	CF50846
1,1,2,2-Tetrachloroethane	ND (0.0555)	0.0151	8260B		1	06/08/15 16:57	CYF0114	CF50846
1,1,2-Trichloroethane	ND (0.0555)	0.0139	8260B		1	06/08/15 16:57	CYF0114	CF50846
1,1-Dichloroethane	ND (0.0555)	0.0089	8260B		1	06/08/15 16:57	CYF0114	CF50846
1,1-Dichloroethene	ND (0.0555)	0.0137	8260B		1	06/08/15 16:57	CYF0114	CF50846
1,1-Dichloropropene	ND (0.0555)	0.0086	8260B		1	06/08/15 16:57	CYF0114	CF50846
1,2,3-Trichlorobenzene	ND (0.0555)	0.0185	8260B		1	06/08/15 16:57	CYF0114	CF50846
1,2,3-Trichloropropane	ND (0.0555)	0.0138	8260B		1	06/08/15 16:57	CYF0114	CF50846
1,2,4-Trichlorobenzene	ND (0.0555)	0.0122	8260B		1	06/08/15 16:57	CYF0114	CF50846
1,2,4-Trimethylbenzene	ND (0.0555)	0.0107	8260B		1	06/08/15 16:57	CYF0114	CF50846
1,2-Dibromo-3-Chloropropane	ND (0.333)	0.111	8260B		1	06/08/15 16:57	CYF0114	CF50846
1,2-Dibromoethane	ND (0.0555)	0.0141	8260B		1	06/08/15 16:57	CYF0114	CF50846
1,2-Dichlorobenzene	ND (0.0555)	0.0079	8260B		1	06/08/15 16:57	CYF0114	CF50846
1,2-Dichloroethane	ND (0.0555)	0.0149	8260B		1	06/08/15 16:57	CYF0114	CF50846
1,2-Dichloropropane	ND (0.0555)	0.0145	8260B		1	06/08/15 16:57	CYF0114	CF50846
1,3,5-Trimethylbenzene	ND (0.0555)	0.0098	8260B		1	06/08/15 16:57	CYF0114	CF50846
1,3-Dichlorobenzene	ND (0.0555)	0.0070	8260B		1	06/08/15 16:57	CYF0114	CF50846
1,3-Dichloropropane	ND (0.0555)	0.0124	8260B		1	06/08/15 16:57	CYF0114	CF50846
1,4-Dichlorobenzene	ND (0.0555)	0.0148	8260B		1	06/08/15 16:57	CYF0114	CF50846
1,4-Dioxane - Screen	ND (5.55)	1.85	8260B		1	06/08/15 16:57	CYF0114	CF50846
1-Chlorohexane	ND (0.0555)	0.0106	8260B		1	06/08/15 16:57	CYF0114	CF50846
2,2-Dichloropropane	ND (0.111)	0.0190	8260B		1	06/08/15 16:57	CYF0114	CF50846
2-Butanone	ND (1.39)	0.321	8260B		1	06/08/15 16:57	CYF0114	CF50846
2-Chlorotoluene	ND (0.0555)	0.0157	8260B		1	06/08/15 16:57	CYF0114	CF50846
2-Hexanone	ND (0.555)	0.0956	8260B		1	06/08/15 16:57	CYF0114	CF50846
4-Chlorotoluene	ND (0.0555)	0.0072	8260B		1	06/08/15 16:57	CYF0114	CF50846
4-Isopropyltoluene	ND (0.0555)	0.0099	8260B		1	06/08/15 16:57	CYF0114	CF50846
4-Methyl-2-Pentanone	ND (0.555)	0.0669	8260B		1	06/08/15 16:57	CYF0114	CF50846
Acetone	ND (1.39)	0.411	8260B		1	06/08/15 16:57	CYF0114	CF50846
Benzene	ND (0.0555)	0.0090	8260B		1	06/08/15 16:57	CYF0114	CF50846
Bromobenzene	ND (0.0555)	0.0152	8260B		1	06/08/15 16:57	CYF0114	CF50846

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Riverside Square
Client Sample ID: GP-208 6-8
Date Sampled: 06/04/15 10:19
Percent Solids: 95
Initial Volume: 15
Final Volume: 15
Extraction Method: 5035

ESS Laboratory Work Order: 1506154
ESS Laboratory Sample ID: 1506154-19
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MD

5035/8260B Volatile Organic Compounds / Methanol

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
Bromochloromethane	ND (0.0555)	0.0180	8260B		1	06/08/15 16:57	CYF0114	CF50846
Bromodichloromethane	ND (0.0555)	0.0077	8260B		1	06/08/15 16:57	CYF0114	CF50846
Bromoform	ND (0.0555)	0.0160	8260B		1	06/08/15 16:57	CYF0114	CF50846
Bromomethane	ND (0.111)	0.0371	8260B		1	06/08/15 16:57	CYF0114	CF50846
Carbon Disulfide	ND (0.0555)	0.0082	8260B		1	06/08/15 16:57	CYF0114	CF50846
Carbon Tetrachloride	ND (0.0555)	0.0097	8260B		1	06/08/15 16:57	CYF0114	CF50846
Chlorobenzene	ND (0.0555)	0.0088	8260B		1	06/08/15 16:57	CYF0114	CF50846
Chloroethane	ND (0.111)	0.0370	8260B		1	06/08/15 16:57	CYF0114	CF50846
Chloroform	ND (0.0555)	0.0114	8260B		1	06/08/15 16:57	CYF0114	CF50846
Chloromethane	ND (0.111)	0.0141	8260B		1	06/08/15 16:57	CYF0114	CF50846
cis-1,2-Dichloroethene	ND (0.0555)	0.0138	8260B		1	06/08/15 16:57	CYF0114	CF50846
cis-1,3-Dichloropropene	ND (0.0555)	0.0125	8260B		1	06/08/15 16:57	CYF0114	CF50846
Dibromochloromethane	ND (0.0555)	0.0140	8260B		1	06/08/15 16:57	CYF0114	CF50846
Dibromomethane	ND (0.0555)	0.0175	8260B		1	06/08/15 16:57	CYF0114	CF50846
Dichlorodifluoromethane	ND (0.0555)	0.0097	8260B		1	06/08/15 16:57	CYF0114	CF50846
Diethyl Ether	ND (0.0555)	0.0141	8260B		1	06/08/15 16:57	CYF0114	CF50846
Di-isopropyl ether	ND (0.0555)	0.0104	8260B		1	06/08/15 16:57	CYF0114	CF50846
Ethyl tertiary-butyl ether	ND (0.0555)	0.0140	8260B		1	06/08/15 16:57	CYF0114	CF50846
Ethylbenzene	ND (0.0555)	0.0072	8260B		1	06/08/15 16:57	CYF0114	CF50846
Hexachlorobutadiene	ND (0.0555)	0.0185	8260B		1	06/08/15 16:57	CYF0114	CF50846
Isopropylbenzene	ND (0.0555)	0.0098	8260B		1	06/08/15 16:57	CYF0114	CF50846
Methyl tert-Butyl Ether	ND (0.0555)	0.0089	8260B		1	06/08/15 16:57	CYF0114	CF50846
Methylene Chloride	ND (0.278)	0.0145	8260B		1	06/08/15 16:57	CYF0114	CF50846
Naphthalene	ND (0.0555)	0.0145	8260B		1	06/08/15 16:57	CYF0114	CF50846
n-Butylbenzene	ND (0.0555)	0.0137	8260B		1	06/08/15 16:57	CYF0114	CF50846
n-Propylbenzene	ND (0.0555)	0.0135	8260B		1	06/08/15 16:57	CYF0114	CF50846
sec-Butylbenzene	ND (0.0555)	0.0074	8260B		1	06/08/15 16:57	CYF0114	CF50846
Styrene	ND (0.0555)	0.0073	8260B		1	06/08/15 16:57	CYF0114	CF50846
tert-Butylbenzene	ND (0.0555)	0.0130	8260B		1	06/08/15 16:57	CYF0114	CF50846
Tertiary-amyl methyl ether	ND (0.0555)	0.0080	8260B		1	06/08/15 16:57	CYF0114	CF50846
Tetrachloroethene	**J 0.0433** (0.0555)	0.0185	8260B		1	06/08/15 16:57	CYF0114	CF50846
Tetrahydrofuran	ND (0.555)	0.143	8260B		1	06/08/15 16:57	CYF0114	CF50846

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Riverside Square
Client Sample ID: GP-208 6-8
Date Sampled: 06/04/15 10:19
Percent Solids: 95
Initial Volume: 15
Final Volume: 15
Extraction Method: 5035

ESS Laboratory Work Order: 1506154
ESS Laboratory Sample ID: 1506154-19
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MD

5035/8260B Volatile Organic Compounds / Methanol

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
Toluene	ND (0.0555)	0.0141	8260B		1	06/08/15 16:57	CYF0114	CF50846
trans-1,2-Dichloroethene	ND (0.0555)	0.0182	8260B		1	06/08/15 16:57	CYF0114	CF50846
trans-1,3-Dichloropropene	ND (0.0555)	0.0171	8260B		1	06/08/15 16:57	CYF0114	CF50846
Trichloroethene	**0.0977** (0.0555)	0.0114	8260B		1	06/08/15 16:57	CYF0114	CF50846
Trichlorofluoromethane	ND (0.0555)	0.0147	8260B		1	06/08/15 16:57	CYF0114	CF50846
Vinyl Acetate	ND (0.278)	0.0114	8260B		1	06/08/15 16:57	CYF0114	CF50846
Vinyl Chloride	ND (0.0555)	0.0183	8260B		1	06/08/15 16:57	CYF0114	CF50846
Xylene O	ND (0.0555)	0.0107	8260B		1	06/08/15 16:57	CYF0114	CF50846
Xylene P,M	ND (0.111)	0.0215	8260B		1	06/08/15 16:57	CYF0114	CF50846
Xylenes (Total)	ND (0.111)		8260B		1	06/08/15 16:57		[CALC]

	%Recovery	*Qualifier*	*Limits*
Surrogate: 1,2-Dichloroethane-d4	*102 %*		*70-130*
Surrogate: 4-Bromofluorobenzene	*83 %*		*70-130*
Surrogate: Dibromofluoromethane	*110 %*		*70-130*
Surrogate: Toluene-d8	*89 %*		*70-130*

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Riverside Square
Client Sample ID: GP-209 2-4
Date Sampled: 06/04/15 10:28
Percent Solids: 96
Initial Volume: 17.5
Final Volume: 15
Extraction Method: 5035

ESS Laboratory Work Order: 1506154
ESS Laboratory Sample ID: 1506154-20
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MD

5035/8260B Volatile Organic Compounds / Methanol

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
1,1,1,2-Tetrachloroethane	ND (0.0938)	0.0082	8260B		1	06/08/15 17:25	CYF0114	CF50846
1,1,1-Trichloroethane	**J 0.0253** (0.0469)	0.0083	8260B		1	06/08/15 17:25	CYF0114	CF50846
1,1,2,2-Tetrachloroethane	ND (0.0469)	0.0128	8260B		1	06/08/15 17:25	CYF0114	CF50846
1,1,2-Trichloroethane	ND (0.0469)	0.0117	8260B		1	06/08/15 17:25	CYF0114	CF50846
1,1-Dichloroethane	ND (0.0469)	0.0075	8260B		1	06/08/15 17:25	CYF0114	CF50846
1,1-Dichloroethene	ND (0.0469)	0.0115	8260B		1	06/08/15 17:25	CYF0114	CF50846
1,1-Dichloropropene	ND (0.0469)	0.0072	8260B		1	06/08/15 17:25	CYF0114	CF50846
1,2,3-Trichlorobenzene	ND (0.0469)	0.0157	8260B		1	06/08/15 17:25	CYF0114	CF50846
1,2,3-Trichloropropane	ND (0.0469)	0.0116	8260B		1	06/08/15 17:25	CYF0114	CF50846
1,2,4-Trichlorobenzene	ND (0.0469)	0.0103	8260B		1	06/08/15 17:25	CYF0114	CF50846
1,2,4-Trimethylbenzene	ND (0.0469)	0.0090	8260B		1	06/08/15 17:25	CYF0114	CF50846
1,2-Dibromo-3-Chloropropane	ND (0.281)	0.0938	8260B		1	06/08/15 17:25	CYF0114	CF50846
1,2-Dibromoethane	ND (0.0469)	0.0119	8260B		1	06/08/15 17:25	CYF0114	CF50846
1,2-Dichlorobenzene	ND (0.0469)	0.0067	8260B		1	06/08/15 17:25	CYF0114	CF50846
1,2-Dichloroethane	ND (0.0469)	0.0126	8260B		1	06/08/15 17:25	CYF0114	CF50846
1,2-Dichloropropane	ND (0.0469)	0.0123	8260B		1	06/08/15 17:25	CYF0114	CF50846
1,3,5-Trimethylbenzene	ND (0.0469)	0.0083	8260B		1	06/08/15 17:25	CYF0114	CF50846
1,3-Dichlorobenzene	ND (0.0469)	0.0059	8260B		1	06/08/15 17:25	CYF0114	CF50846
1,3-Dichloropropane	ND (0.0469)	0.0105	8260B		1	06/08/15 17:25	CYF0114	CF50846
1,4-Dichlorobenzene	ND (0.0469)	0.0125	8260B		1	06/08/15 17:25	CYF0114	CF50846
1,4-Dioxane - Screen	ND (4.69)	1.57	8260B		1	06/08/15 17:25	CYF0114	CF50846
1-Chlorohexane	ND (0.0469)	0.0089	8260B		1	06/08/15 17:25	CYF0114	CF50846
2,2-Dichloropropane	ND (0.0938)	0.0160	8260B		1	06/08/15 17:25	CYF0114	CF50846
2-Butanone	ND (1.17)	0.271	8260B		1	06/08/15 17:25	CYF0114	CF50846
2-Chlorotoluene	ND (0.0469)	0.0132	8260B		1	06/08/15 17:25	CYF0114	CF50846
2-Hexanone	ND (0.469)	0.0807	8260B		1	06/08/15 17:25	CYF0114	CF50846
4-Chlorotoluene	ND (0.0469)	0.0061	8260B		1	06/08/15 17:25	CYF0114	CF50846
4-Isopropyltoluene	ND (0.0469)	0.0083	8260B		1	06/08/15 17:25	CYF0114	CF50846
4-Methyl-2-Pentanone	ND (0.469)	0.0564	8260B		1	06/08/15 17:25	CYF0114	CF50846
Acetone	ND (1.17)	0.347	8260B		1	06/08/15 17:25	CYF0114	CF50846
Benzene	ND (0.0469)	0.0076	8260B		1	06/08/15 17:25	CYF0114	CF50846
Bromobenzene	ND (0.0469)	0.0128	8260B		1	06/08/15 17:25	CYF0114	CF50846

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Riverside Square
Client Sample ID: GP-209 2-4
Date Sampled: 06/04/15 10:28
Percent Solids: 96
Initial Volume: 17.5
Final Volume: 15
Extraction Method: 5035

ESS Laboratory Work Order: 1506154
ESS Laboratory Sample ID: 1506154-20
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MD

5035/8260B Volatile Organic Compounds / Methanol

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
Bromochloromethane	ND (0.0469)	0.0152	8260B		1	06/08/15 17:25	CYF0114	CF50846
Bromodichloromethane	ND (0.0469)	0.0065	8260B		1	06/08/15 17:25	CYF0114	CF50846
Bromoform	ND (0.0469)	0.0135	8260B		1	06/08/15 17:25	CYF0114	CF50846
Bromomethane	ND (0.0938)	0.0313	8260B		1	06/08/15 17:25	CYF0114	CF50846
Carbon Disulfide	ND (0.0469)	0.0069	8260B		1	06/08/15 17:25	CYF0114	CF50846
Carbon Tetrachloride	ND (0.0469)	0.0082	8260B		1	06/08/15 17:25	CYF0114	CF50846
Chlorobenzene	ND (0.0469)	0.0074	8260B		1	06/08/15 17:25	CYF0114	CF50846
Chloroethane	ND (0.0938)	0.0312	8260B		1	06/08/15 17:25	CYF0114	CF50846
Chloroform	ND (0.0469)	0.0097	8260B		1	06/08/15 17:25	CYF0114	CF50846
Chloromethane	ND (0.0938)	0.0119	8260B		1	06/08/15 17:25	CYF0114	CF50846
cis-1,2-Dichloroethene	ND (0.0469)	0.0116	8260B		1	06/08/15 17:25	CYF0114	CF50846
cis-1,3-Dichloropropene	ND (0.0469)	0.0106	8260B		1	06/08/15 17:25	CYF0114	CF50846
Dibromochloromethane	ND (0.0469)	0.0118	8260B		1	06/08/15 17:25	CYF0114	CF50846
Dibromomethane	ND (0.0469)	0.0148	8260B		1	06/08/15 17:25	CYF0114	CF50846
Dichlorodifluoromethane	ND (0.0469)	0.0082	8260B		1	06/08/15 17:25	CYF0114	CF50846
Diethyl Ether	ND (0.0469)	0.0119	8260B		1	06/08/15 17:25	CYF0114	CF50846
Di-isopropyl ether	ND (0.0469)	0.0088	8260B		1	06/08/15 17:25	CYF0114	CF50846
Ethyl tertiary-butyl ether	ND (0.0469)	0.0118	8260B		1	06/08/15 17:25	CYF0114	CF50846
Ethylbenzene	ND (0.0469)	0.0061	8260B		1	06/08/15 17:25	CYF0114	CF50846
Hexachlorobutadiene	ND (0.0469)	0.0157	8260B		1	06/08/15 17:25	CYF0114	CF50846
Isopropylbenzene	ND (0.0469)	0.0083	8260B		1	06/08/15 17:25	CYF0114	CF50846
Methyl tert-Butyl Ether	ND (0.0469)	0.0075	8260B		1	06/08/15 17:25	CYF0114	CF50846
Methylene Chloride	ND (0.234)	0.0123	8260B		1	06/08/15 17:25	CYF0114	CF50846
Naphthalene	ND (0.0469)	0.0123	8260B		1	06/08/15 17:25	CYF0114	CF50846
n-Butylbenzene	ND (0.0469)	0.0115	8260B		1	06/08/15 17:25	CYF0114	CF50846
n-Propylbenzene	ND (0.0469)	0.0114	8260B		1	06/08/15 17:25	CYF0114	CF50846
sec-Butylbenzene	ND (0.0469)	0.0063	8260B		1	06/08/15 17:25	CYF0114	CF50846
Styrene	ND (0.0469)	0.0062	8260B		1	06/08/15 17:25	CYF0114	CF50846
tert-Butylbenzene	ND (0.0469)	0.0110	8260B		1	06/08/15 17:25	CYF0114	CF50846
Tertiary-amyl methyl ether	ND (0.0469)	0.0068	8260B		1	06/08/15 17:25	CYF0114	CF50846
Tetrachloroethene	ND (0.0469)	0.0157	8260B		1	06/08/15 17:25	CYF0114	CF50846
Tetrahydrofuran	ND (0.469)	0.121	8260B		1	06/08/15 17:25	CYF0114	CF50846

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Riverside Square
Client Sample ID: GP-209 2-4
Date Sampled: 06/04/15 10:28
Percent Solids: 96
Initial Volume: 17.5
Final Volume: 15
Extraction Method: 5035

ESS Laboratory Work Order: 1506154
ESS Laboratory Sample ID: 1506154-20
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MD

5035/8260B Volatile Organic Compounds / Methanol

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
Toluene	ND (0.0469)	0.0119	8260B		1	06/08/15 17:25	CYF0114	CF50846
trans-1,2-Dichloroethene	ND (0.0469)	0.0154	8260B		1	06/08/15 17:25	CYF0114	CF50846
trans-1,3-Dichloropropene	ND (0.0469)	0.0144	8260B		1	06/08/15 17:25	CYF0114	CF50846
Trichloroethene	**0.0525** (0.0469)	0.0097	8260B		1	06/08/15 17:25	CYF0114	CF50846
Trichlorofluoromethane	ND (0.0469)	0.0124	8260B		1	06/08/15 17:25	CYF0114	CF50846
Vinyl Acetate	ND (0.234)	0.0097	8260B		1	06/08/15 17:25	CYF0114	CF50846
Vinyl Chloride	ND (0.0469)	0.0155	8260B		1	06/08/15 17:25	CYF0114	CF50846
Xylene O	ND (0.0469)	0.0090	8260B		1	06/08/15 17:25	CYF0114	CF50846
Xylene P,M	ND (0.0938)	0.0182	8260B		1	06/08/15 17:25	CYF0114	CF50846
Xylenes (Total)	ND (0.0938)		8260B		1	06/08/15 17:25		[CALC]

	%Recovery	*Qualifier*	*Limits*
Surrogate: 1,2-Dichloroethane-d4	*96 %*		*70-130*
Surrogate: 4-Bromofluorobenzene	*91 %*		*70-130*
Surrogate: Dibromofluoromethane	*98 %*		*70-130*
Surrogate: Toluene-d8	*105 %*		*70-130*

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Riverside Square
Client Sample ID: GP-209 6-8
Date Sampled: 06/04/15 10:30
Percent Solids: 90
Initial Volume: 19.9
Final Volume: 15
Extraction Method: 5035

ESS Laboratory Work Order: 1506154
ESS Laboratory Sample ID: 1506154-21
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MD

5035/8260B Volatile Organic Compounds / Methanol

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
1,1,1,2-Tetrachloroethane	ND (0.0958)	0.0083	8260B		1	06/08/15 17:53	CYF0114	CF50846
1,1,1-Trichloroethane	**J 0.0335** (0.0479)	0.0084	8260B		1	06/08/15 17:53	CYF0114	CF50846
1,1,2,2-Tetrachloroethane	ND (0.0479)	0.0130	8260B		1	06/08/15 17:53	CYF0114	CF50846
1,1,2-Trichloroethane	ND (0.0479)	0.0120	8260B		1	06/08/15 17:53	CYF0114	CF50846
1,1-Dichloroethane	ND (0.0479)	0.0077	8260B		1	06/08/15 17:53	CYF0114	CF50846
1,1-Dichloroethene	ND (0.0479)	0.0118	8260B		1	06/08/15 17:53	CYF0114	CF50846
1,1-Dichloropropene	ND (0.0479)	0.0074	8260B		1	06/08/15 17:53	CYF0114	CF50846
1,2,3-Trichlorobenzene	ND (0.0479)	0.0160	8260B		1	06/08/15 17:53	CYF0114	CF50846
1,2,3-Trichloropropane	ND (0.0479)	0.0119	8260B		1	06/08/15 17:53	CYF0114	CF50846
1,2,4-Trichlorobenzene	ND (0.0479)	0.0105	8260B		1	06/08/15 17:53	CYF0114	CF50846
1,2,4-Trimethylbenzene	ND (0.0479)	0.0092	8260B		1	06/08/15 17:53	CYF0114	CF50846
1,2-Dibromo-3-Chloropropane	ND (0.287)	0.0958	8260B		1	06/08/15 17:53	CYF0114	CF50846
1,2-Dibromoethane	ND (0.0479)	0.0122	8260B		1	06/08/15 17:53	CYF0114	CF50846
1,2-Dichlorobenzene	ND (0.0479)	0.0068	8260B		1	06/08/15 17:53	CYF0114	CF50846
1,2-Dichloroethane	ND (0.0479)	0.0128	8260B		1	06/08/15 17:53	CYF0114	CF50846
1,2-Dichloropropane	ND (0.0479)	0.0125	8260B		1	06/08/15 17:53	CYF0114	CF50846
1,3,5-Trimethylbenzene	ND (0.0479)	0.0084	8260B		1	06/08/15 17:53	CYF0114	CF50846
1,3-Dichlorobenzene	ND (0.0479)	0.0060	8260B		1	06/08/15 17:53	CYF0114	CF50846
1,3-Dichloropropane	ND (0.0479)	0.0107	8260B		1	06/08/15 17:53	CYF0114	CF50846
1,4-Dichlorobenzene	ND (0.0479)	0.0127	8260B		1	06/08/15 17:53	CYF0114	CF50846
1,4-Dioxane - Screen	ND (4.79)	1.60	8260B		1	06/08/15 17:53	CYF0114	CF50846
1-Chlorohexane	ND (0.0479)	0.0091	8260B		1	06/08/15 17:53	CYF0114	CF50846
2,2-Dichloropropane	ND (0.0958)	0.0164	8260B		1	06/08/15 17:53	CYF0114	CF50846
2-Butanone	ND (1.20)	0.277	8260B		1	06/08/15 17:53	CYF0114	CF50846
2-Chlorotoluene	ND (0.0479)	0.0135	8260B		1	06/08/15 17:53	CYF0114	CF50846
2-Hexanone	ND (0.479)	0.0824	8260B		1	06/08/15 17:53	CYF0114	CF50846
4-Chlorotoluene	ND (0.0479)	0.0062	8260B		1	06/08/15 17:53	CYF0114	CF50846
4-Isopropyltoluene	ND (0.0479)	0.0085	8260B		1	06/08/15 17:53	CYF0114	CF50846
4-Methyl-2-Pentanone	ND (0.479)	0.0576	8260B		1	06/08/15 17:53	CYF0114	CF50846
Acetone	**J 0.398** (1.20)	0.354	8260B		1	06/08/15 17:53	CYF0114	CF50846
Benzene	ND (0.0479)	0.0078	8260B		1	06/08/15 17:53	CYF0114	CF50846
Bromobenzene	ND (0.0479)	0.0131	8260B		1	06/08/15 17:53	CYF0114	CF50846

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Riverside Square
Client Sample ID: GP-209 6-8
Date Sampled: 06/04/15 10:30
Percent Solids: 90
Initial Volume: 19.9
Final Volume: 15
Extraction Method: 5035

ESS Laboratory Work Order: 1506154
ESS Laboratory Sample ID: 1506154-21
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MD

5035/8260B Volatile Organic Compounds / Methanol

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
Bromochloromethane	ND (0.0479)	0.0155	8260B		1	06/08/15 17:53	CYF0114	CF50846
Bromodichloromethane	ND (0.0479)	0.0066	8260B		1	06/08/15 17:53	CYF0114	CF50846
Bromoform	ND (0.0479)	0.0138	8260B		1	06/08/15 17:53	CYF0114	CF50846
Bromomethane	ND (0.0958)	0.0320	8260B		1	06/08/15 17:53	CYF0114	CF50846
Carbon Disulfide	ND (0.0479)	0.0071	8260B		1	06/08/15 17:53	CYF0114	CF50846
Carbon Tetrachloride	ND (0.0479)	0.0083	8260B		1	06/08/15 17:53	CYF0114	CF50846
Chlorobenzene	ND (0.0479)	0.0076	8260B		1	06/08/15 17:53	CYF0114	CF50846
Chloroethane	ND (0.0958)	0.0319	8260B		1	06/08/15 17:53	CYF0114	CF50846
Chloroform	ND (0.0479)	0.0099	8260B		1	06/08/15 17:53	CYF0114	CF50846
Chloromethane	ND (0.0958)	0.0122	8260B		1	06/08/15 17:53	CYF0114	CF50846
cis-1,2-Dichloroethene	ND (0.0479)	0.0119	8260B		1	06/08/15 17:53	CYF0114	CF50846
cis-1,3-Dichloropropene	ND (0.0479)	0.0108	8260B		1	06/08/15 17:53	CYF0114	CF50846
Dibromochloromethane	ND (0.0479)	0.0121	8260B		1	06/08/15 17:53	CYF0114	CF50846
Dibromomethane	ND (0.0479)	0.0151	8260B		1	06/08/15 17:53	CYF0114	CF50846
Dichlorodifluoromethane	ND (0.0479)	0.0083	8260B		1	06/08/15 17:53	CYF0114	CF50846
Diethyl Ether	ND (0.0479)	0.0122	8260B		1	06/08/15 17:53	CYF0114	CF50846
Di-isopropyl ether	ND (0.0479)	0.0090	8260B		1	06/08/15 17:53	CYF0114	CF50846
Ethyl tertiary-butyl ether	ND (0.0479)	0.0121	8260B		1	06/08/15 17:53	CYF0114	CF50846
Ethylbenzene	ND (0.0479)	0.0062	8260B		1	06/08/15 17:53	CYF0114	CF50846
Hexachlorobutadiene	ND (0.0479)	0.0160	8260B		1	06/08/15 17:53	CYF0114	CF50846
Isopropylbenzene	ND (0.0479)	0.0084	8260B		1	06/08/15 17:53	CYF0114	CF50846
Methyl tert-Butyl Ether	ND (0.0479)	0.0077	8260B		1	06/08/15 17:53	CYF0114	CF50846
Methylene Chloride	ND (0.239)	0.0125	8260B		1	06/08/15 17:53	CYF0114	CF50846
Naphthalene	ND (0.0479)	0.0125	8260B		1	06/08/15 17:53	CYF0114	CF50846
n-Butylbenzene	ND (0.0479)	0.0118	8260B		1	06/08/15 17:53	CYF0114	CF50846
n-Propylbenzene	ND (0.0479)	0.0117	8260B		1	06/08/15 17:53	CYF0114	CF50846
sec-Butylbenzene	ND (0.0479)	0.0064	8260B		1	06/08/15 17:53	CYF0114	CF50846
Styrene	ND (0.0479)	0.0063	8260B		1	06/08/15 17:53	CYF0114	CF50846
tert-Butylbenzene	ND (0.0479)	0.0112	8260B		1	06/08/15 17:53	CYF0114	CF50846
Tertiary-amyl methyl ether	ND (0.0479)	0.0069	8260B		1	06/08/15 17:53	CYF0114	CF50846
Tetrachloroethene	ND (0.0479)	0.0160	8260B		1	06/08/15 17:53	CYF0114	CF50846
Tetrahydrofuran	ND (0.479)	0.124	8260B		1	06/08/15 17:53	CYF0114	CF50846

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Riverside Square
Client Sample ID: GP-209 6-8
Date Sampled: 06/04/15 10:30
Percent Solids: 90
Initial Volume: 19.9
Final Volume: 15
Extraction Method: 5035

ESS Laboratory Work Order: 1506154
ESS Laboratory Sample ID: 1506154-21
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MD

5035/8260B Volatile Organic Compounds / Methanol

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
Toluene	ND (0.0479)	0.0122	8260B		1	06/08/15 17:53	CYF0114	CF50846
trans-1,2-Dichloroethene	ND (0.0479)	0.0157	8260B		1	06/08/15 17:53	CYF0114	CF50846
trans-1,3-Dichloropropene	ND (0.0479)	0.0147	8260B		1	06/08/15 17:53	CYF0114	CF50846
Trichloroethene	**J 0.0230** (0.0479)	0.0099	8260B		1	06/08/15 17:53	CYF0114	CF50846
Trichlorofluoromethane	ND (0.0479)	0.0126	8260B		1	06/08/15 17:53	CYF0114	CF50846
Vinyl Acetate	ND (0.239)	0.0099	8260B		1	06/08/15 17:53	CYF0114	CF50846
Vinyl Chloride	ND (0.0479)	0.0158	8260B		1	06/08/15 17:53	CYF0114	CF50846
Xylene O	ND (0.0479)	0.0092	8260B		1	06/08/15 17:53	CYF0114	CF50846
Xylene P,M	ND (0.0958)	0.0186	8260B		1	06/08/15 17:53	CYF0114	CF50846
Xylenes (Total)	ND (0.0958)		8260B		1	06/08/15 17:53		[CALC]

	%Recovery	*Qualifier*	*Limits*
Surrogate: 1,2-Dichloroethane-d4	*104 %*		*70-130*
Surrogate: 4-Bromofluorobenzene	*94 %*		*70-130*
Surrogate: Dibromofluoromethane	*112 %*		*70-130*
Surrogate: Toluene-d8	*93 %*		*70-130*

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Riverside Square
Client Sample ID: TP060415M
Date Sampled: 06/04/15 00:00
Percent Solids: N/A
Initial Volume: 15
Final Volume: 15
Extraction Method: 5035

ESS Laboratory Work Order: 1506154
ESS Laboratory Sample ID: 1506154-22
Sample Matrix: Solid
Units: mg/kg wet
Analyst: MD

5035/8260B Volatile Organic Compounds / Methanol

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
1,1,1,2-Tetrachloroethane	ND (0.100)	0.0087	8260B		1	06/08/15 13:14	CYF0114	CF50846
1,1,1-Trichloroethane	ND (0.0500)	0.0088	8260B		1	06/08/15 13:14	CYF0114	CF50846
1,1,2,2-Tetrachloroethane	ND (0.0500)	0.0136	8260B		1	06/08/15 13:14	CYF0114	CF50846
1,1,2-Trichloroethane	ND (0.0500)	0.0125	8260B		1	06/08/15 13:14	CYF0114	CF50846
1,1-Dichloroethane	ND (0.0500)	0.0080	8260B		1	06/08/15 13:14	CYF0114	CF50846
1,1-Dichloroethene	ND (0.0500)	0.0123	8260B		1	06/08/15 13:14	CYF0114	CF50846
1,1-Dichloropropene	ND (0.0500)	0.0077	8260B		1	06/08/15 13:14	CYF0114	CF50846
1,2,3-Trichlorobenzene	ND (0.0500)	0.0167	8260B		1	06/08/15 13:14	CYF0114	CF50846
1,2,3-Trichloropropane	ND (0.0500)	0.0124	8260B		1	06/08/15 13:14	CYF0114	CF50846
1,2,4-Trichlorobenzene	ND (0.0500)	0.0110	8260B		1	06/08/15 13:14	CYF0114	CF50846
1,2,4-Trimethylbenzene	ND (0.0500)	0.0096	8260B		1	06/08/15 13:14	CYF0114	CF50846
1,2-Dibromo-3-Chloropropane	ND (0.300)	0.100	8260B		1	06/08/15 13:14	CYF0114	CF50846
1,2-Dibromoethane	ND (0.0500)	0.0127	8260B		1	06/08/15 13:14	CYF0114	CF50846
1,2-Dichlorobenzene	ND (0.0500)	0.0071	8260B		1	06/08/15 13:14	CYF0114	CF50846
1,2-Dichloroethane	ND (0.0500)	0.0134	8260B		1	06/08/15 13:14	CYF0114	CF50846
1,2-Dichloropropane	ND (0.0500)	0.0131	8260B		1	06/08/15 13:14	CYF0114	CF50846
1,3,5-Trimethylbenzene	ND (0.0500)	0.0088	8260B		1	06/08/15 13:14	CYF0114	CF50846
1,3-Dichlorobenzene	ND (0.0500)	0.0063	8260B		1	06/08/15 13:14	CYF0114	CF50846
1,3-Dichloropropane	ND (0.0500)	0.0112	8260B		1	06/08/15 13:14	CYF0114	CF50846
1,4-Dichlorobenzene	ND (0.0500)	0.0133	8260B		1	06/08/15 13:14	CYF0114	CF50846
1,4-Dioxane - Screen	ND (5.00)	1.67	8260B		1	06/08/15 13:14	CYF0114	CF50846
1-Chlorohexane	ND (0.0500)	0.0095	8260B		1	06/08/15 13:14	CYF0114	CF50846
2,2-Dichloropropane	ND (0.100)	0.0171	8260B		1	06/08/15 13:14	CYF0114	CF50846
2-Butanone	ND (1.25)	0.289	8260B		1	06/08/15 13:14	CYF0114	CF50846
2-Chlorotoluene	ND (0.0500)	0.0141	8260B		1	06/08/15 13:14	CYF0114	CF50846
2-Hexanone	ND (0.500)	0.0861	8260B		1	06/08/15 13:14	CYF0114	CF50846
4-Chlorotoluene	ND (0.0500)	0.0065	8260B		1	06/08/15 13:14	CYF0114	CF50846
4-Isopropyltoluene	ND (0.0500)	0.0089	8260B		1	06/08/15 13:14	CYF0114	CF50846
4-Methyl-2-Pentanone	ND (0.500)	0.0602	8260B		1	06/08/15 13:14	CYF0114	CF50846
Acetone	ND (1.25)	0.370	8260B		1	06/08/15 13:14	CYF0114	CF50846
Benzene	ND (0.0500)	0.0081	8260B		1	06/08/15 13:14	CYF0114	CF50846
Bromobenzene	ND (0.0500)	0.0137	8260B		1	06/08/15 13:14	CYF0114	CF50846

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Riverside Square
Client Sample ID: TP060415M
Date Sampled: 06/04/15 00:00
Percent Solids: N/A
Initial Volume: 15
Final Volume: 15
Extraction Method: 5035

ESS Laboratory Work Order: 1506154
ESS Laboratory Sample ID: 1506154-22
Sample Matrix: Solid
Units: mg/kg wet
Analyst: MD

5035/8260B Volatile Organic Compounds / Methanol

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
Bromochloromethane	ND (0.0500)	0.0162	8260B		1	06/08/15 13:14	CYF0114	CF50846
Bromodichloromethane	ND (0.0500)	0.0069	8260B		1	06/08/15 13:14	CYF0114	CF50846
Bromoform	ND (0.0500)	0.0144	8260B		1	06/08/15 13:14	CYF0114	CF50846
Bromomethane	ND (0.100)	0.0334	8260B		1	06/08/15 13:14	CYF0114	CF50846
Carbon Disulfide	ND (0.0500)	0.0074	8260B		1	06/08/15 13:14	CYF0114	CF50846
Carbon Tetrachloride	ND (0.0500)	0.0087	8260B		1	06/08/15 13:14	CYF0114	CF50846
Chlorobenzene	ND (0.0500)	0.0079	8260B		1	06/08/15 13:14	CYF0114	CF50846
Chloroethane	ND (0.100)	0.0333	8260B		1	06/08/15 13:14	CYF0114	CF50846
Chloroform	ND (0.0500)	0.0103	8260B		1	06/08/15 13:14	CYF0114	CF50846
Chloromethane	ND (0.100)	0.0127	8260B		1	06/08/15 13:14	CYF0114	CF50846
cis-1,2-Dichloroethene	ND (0.0500)	0.0124	8260B		1	06/08/15 13:14	CYF0114	CF50846
cis-1,3-Dichloropropene	ND (0.0500)	0.0113	8260B		1	06/08/15 13:14	CYF0114	CF50846
Dibromochloromethane	ND (0.0500)	0.0126	8260B		1	06/08/15 13:14	CYF0114	CF50846
Dibromomethane	ND (0.0500)	0.0158	8260B		1	06/08/15 13:14	CYF0114	CF50846
Dichlorodifluoromethane	ND (0.0500)	0.0087	8260B		1	06/08/15 13:14	CYF0114	CF50846
Diethyl Ether	ND (0.0500)	0.0127	8260B		1	06/08/15 13:14	CYF0114	CF50846
Di-isopropyl ether	ND (0.0500)	0.0094	8260B		1	06/08/15 13:14	CYF0114	CF50846
Ethyl tertiary-butyl ether	ND (0.0500)	0.0126	8260B		1	06/08/15 13:14	CYF0114	CF50846
Ethylbenzene	ND (0.0500)	0.0065	8260B		1	06/08/15 13:14	CYF0114	CF50846
Hexachlorobutadiene	ND (0.0500)	0.0167	8260B		1	06/08/15 13:14	CYF0114	CF50846
Isopropylbenzene	ND (0.0500)	0.0088	8260B		1	06/08/15 13:14	CYF0114	CF50846
Methyl tert-Butyl Ether	ND (0.0500)	0.0080	8260B		1	06/08/15 13:14	CYF0114	CF50846
Methylene Chloride	ND (0.250)	0.0131	8260B		1	06/08/15 13:14	CYF0114	CF50846
Naphthalene	ND (0.0500)	0.0131	8260B		1	06/08/15 13:14	CYF0114	CF50846
n-Butylbenzene	ND (0.0500)	0.0123	8260B		1	06/08/15 13:14	CYF0114	CF50846
n-Propylbenzene	ND (0.0500)	0.0122	8260B		1	06/08/15 13:14	CYF0114	CF50846
sec-Butylbenzene	ND (0.0500)	0.0067	8260B		1	06/08/15 13:14	CYF0114	CF50846
Styrene	ND (0.0500)	0.0066	8260B		1	06/08/15 13:14	CYF0114	CF50846
tert-Butylbenzene	ND (0.0500)	0.0117	8260B		1	06/08/15 13:14	CYF0114	CF50846
Tertiary-amyl methyl ether	ND (0.0500)	0.0072	8260B		1	06/08/15 13:14	CYF0114	CF50846
Tetrachloroethene	ND (0.0500)	0.0167	8260B		1	06/08/15 13:14	CYF0114	CF50846
Tetrahydrofuran	ND (0.500)	0.129	8260B		1	06/08/15 13:14	CYF0114	CF50846

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Riverside Square
Client Sample ID: TP060415M
Date Sampled: 06/04/15 00:00
Percent Solids: N/A
Initial Volume: 15
Final Volume: 15
Extraction Method: 5035

ESS Laboratory Work Order: 1506154
ESS Laboratory Sample ID: 1506154-22
Sample Matrix: Solid
Units: mg/kg wet
Analyst: MD

5035/8260B Volatile Organic Compounds / Methanol

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
Toluene	ND (0.0500)	0.0127	8260B		1	06/08/15 13:14	CYF0114	CF50846
trans-1,2-Dichloroethene	ND (0.0500)	0.0164	8260B		1	06/08/15 13:14	CYF0114	CF50846
trans-1,3-Dichloropropene	ND (0.0500)	0.0154	8260B		1	06/08/15 13:14	CYF0114	CF50846
Trichloroethene	ND (0.0500)	0.0103	8260B		1	06/08/15 13:14	CYF0114	CF50846
Trichlorofluoromethane	ND (0.0500)	0.0132	8260B		1	06/08/15 13:14	CYF0114	CF50846
Vinyl Acetate	ND (0.250)	0.0103	8260B		1	06/08/15 13:14	CYF0114	CF50846
Vinyl Chloride	ND (0.0500)	0.0165	8260B		1	06/08/15 13:14	CYF0114	CF50846
Xylene O	ND (0.0500)	0.0096	8260B		1	06/08/15 13:14	CYF0114	CF50846
Xylene P,M	ND (0.100)	0.0194	8260B		1	06/08/15 13:14	CYF0114	CF50846
Xylenes (Total)	ND (0.100)		8260B		1	06/08/15 13:14		[CALC]

	%Recovery	*Qualifier*	*Limits*
Surrogate: 1,2-Dichloroethane-d4	*105 %*		*70-130*
Surrogate: 4-Bromofluorobenzene	*96 %*		*70-130*
Surrogate: Dibromofluoromethane	*114 %*		*70-130*
Surrogate: Toluene-d8	*93 %*		*70-130*

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Riverside Square

ESS Laboratory Work Order: 1506154

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
5035/8260B Volatile Organic Compounds / Methanol										
Batch CF50535 - 5035										
Blank										
1,1,1,2-Tetrachloroethane	ND	0.100	mg/kg wet							
1,1,1-Trichloroethane	ND	0.0500	mg/kg wet							
1,1,2,2-Tetrachloroethane	ND	0.0500	mg/kg wet							
1,1,2-Trichloroethane	ND	0.0500	mg/kg wet							
1,1-Dichloroethane	ND	0.0500	mg/kg wet							
1,1-Dichloroethene	ND	0.0500	mg/kg wet							
1,1-Dichloropropene	ND	0.0500	mg/kg wet							
1,2,3-Trichlorobenzene	ND	0.0500	mg/kg wet							
1,2,3-Trichloropropane	ND	0.0500	mg/kg wet							
1,2,4-Trichlorobenzene	ND	0.0500	mg/kg wet							
1,2,4-Trimethylbenzene	ND	0.0500	mg/kg wet							
1,2-Dibromo-3-Chloropropane	ND	0.300	mg/kg wet							
1,2-Dibromoethane	ND	0.0500	mg/kg wet							
1,2-Dichlorobenzene	ND	0.0500	mg/kg wet							
1,2-Dichloroethane	ND	0.0500	mg/kg wet							
1,2-Dichloropropane	ND	0.0500	mg/kg wet							
1,3,5-Trimethylbenzene	ND	0.0500	mg/kg wet							
1,3-Dichlorobenzene	ND	0.0500	mg/kg wet							
1,3-Dichloropropane	ND	0.0500	mg/kg wet							
1,4-Dichlorobenzene	ND	0.0500	mg/kg wet							
1,4-Dioxane - Screen	ND	5.00	mg/kg wet							
1-Chlorohexane	ND	0.0500	mg/kg wet							
2,2-Dichloropropane	ND	0.100	mg/kg wet							
2-Butanone	ND	1.25	mg/kg wet							
2-Chlorotoluene	ND	0.0500	mg/kg wet							
2-Hexanone	ND	0.500	mg/kg wet							
4-Chlorotoluene	ND	0.0500	mg/kg wet							
4-Isopropyltoluene	ND	0.0500	mg/kg wet							
4-Methyl-2-Pentanone	ND	0.500	mg/kg wet							
Acetone	ND	1.25	mg/kg wet							
Benzene	ND	0.0500	mg/kg wet							
Bromobenzene	ND	0.0500	mg/kg wet							
Bromochloromethane	ND	0.0500	mg/kg wet							
Bromodichloromethane	ND	0.0500	mg/kg wet							
Bromoform	ND	0.0500	mg/kg wet							
Bromomethane	ND	0.100	mg/kg wet							
Carbon Disulfide	ND	0.0500	mg/kg wet							
Carbon Tetrachloride	ND	0.0500	mg/kg wet							
Chlorobenzene	ND	0.0500	mg/kg wet							
Chloroethane	ND	0.100	mg/kg wet							
Chloroform	ND	0.0500	mg/kg wet							
Chloromethane	ND	0.100	mg/kg wet							
cis-1,2-Dichloroethene	ND	0.0500	mg/kg wet							
cis-1,3-Dichloropropene	ND	0.0500	mg/kg wet							

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Riverside Square

ESS Laboratory Work Order: 1506154

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
5035/8260B Volatile Organic Compounds / Methanol										
Batch CF50535 - 5035										
Dibromochloromethane	ND	0.0500	mg/kg wet							
Dibromomethane	ND	0.0500	mg/kg wet							
Dichlorodifluoromethane	ND	0.0500	mg/kg wet							
Diethyl Ether	ND	0.0500	mg/kg wet							
Di-isopropyl ether	ND	0.0500	mg/kg wet							
Ethyl tertiary-butyl ether	ND	0.0500	mg/kg wet							
Ethylbenzene	ND	0.0500	mg/kg wet							
Hexachlorobutadiene	ND	0.0500	mg/kg wet							
Isopropylbenzene	ND	0.0500	mg/kg wet							
Methyl tert-Butyl Ether	ND	0.0500	mg/kg wet							
Methylene Chloride	ND	0.250	mg/kg wet							
Naphthalene	ND	0.0500	mg/kg wet							
n-Butylbenzene	ND	0.0500	mg/kg wet							
n-Propylbenzene	ND	0.0500	mg/kg wet							
sec-Butylbenzene	ND	0.0500	mg/kg wet							
Styrene	ND	0.0500	mg/kg wet							
tert-Butylbenzene	ND	0.0500	mg/kg wet							
Tertiary-amyl methyl ether	ND	0.0500	mg/kg wet							
Tetrachloroethene	ND	0.0500	mg/kg wet							
Tetrahydrofuran	ND	0.500	mg/kg wet							
Toluene	ND	0.0500	mg/kg wet							
trans-1,2-Dichloroethene	ND	0.0500	mg/kg wet							
trans-1,3-Dichloropropene	ND	0.0500	mg/kg wet							
Trichloroethene	ND	0.0500	mg/kg wet							
Vinyl Acetate	ND	0.250	mg/kg wet							
Vinyl Chloride	ND	0.0500	mg/kg wet							
Xylene O	ND	0.0500	mg/kg wet							
Xylene P,M	ND	0.100	mg/kg wet							
Surrogate: 1,2-Dichloroethane-d4	*2.40*		mg/kg wet	*2.500*		*96*	*70-130*			
Surrogate: 4-Bromofluorobenzene	*2.24*		mg/kg wet	*2.500*		*89*	*70-130*			
Surrogate: Dibromofluoromethane	*2.45*		mg/kg wet	*2.500*		*98*	*70-130*			
Surrogate: Toluene-d8	*2.14*		mg/kg wet	*2.500*		*86*	*70-130*			
LCS										
1,1,1,2-Tetrachloroethane	2.73	0.100	mg/kg wet	2.500		109	70-130			
1,1,1-Trichloroethane	2.77	0.0500	mg/kg wet	2.500		111	70-130			
1,1,2,2-Tetrachloroethane	2.35	0.0500	mg/kg wet	2.500		94	70-130			
1,1,2-Trichloroethane	2.17	0.0500	mg/kg wet	2.500		87	70-130			
1,1-Dichloroethane	2.65	0.0500	mg/kg wet	2.500		106	70-130			
1,1-Dichloroethene	2.40	0.0500	mg/kg wet	2.500		96	70-130			
1,1-Dichloropropene	2.51	0.0500	mg/kg wet	2.500		100	70-130			
1,2,3-Trichlorobenzene	2.59	0.0500	mg/kg wet	2.500		103	70-130			
1,2,3-Trichloropropane	2.33	0.0500	mg/kg wet	2.500		93	70-130			
1,2,4-Trichlorobenzene	2.60	0.0500	mg/kg wet	2.500		104	70-130			
1,2,4-Trimethylbenzene	2.19	0.0500	mg/kg wet	2.500		88	70-130			
1,2-Dibromo-3-Chloropropane	2.45	0.300	mg/kg wet	2.500		98	70-130			

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Riverside Square

ESS Laboratory Work Order: 1506154

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
5035/8260B Volatile Organic Compounds / Methanol										
Batch CF50535 - 5035										
1,2-Dibromoethane	2.48	0.0500	mg/kg wet	2.500		99	70-130			
1,2-Dichlorobenzene	2.36	0.0500	mg/kg wet	2.500		95	70-130			
1,2-Dichloroethane	2.64	0.0500	mg/kg wet	2.500		106	70-130			
1,2-Dichloropropane	2.13	0.0500	mg/kg wet	2.500		85	70-130			
1,3,5-Trimethylbenzene	2.27	0.0500	mg/kg wet	2.500		91	70-130			
1,3-Dichlorobenzene	2.36	0.0500	mg/kg wet	2.500		94	70-130			
1,3-Dichloropropane	2.56	0.0500	mg/kg wet	2.500		103	70-130			
1,4-Dichlorobenzene	2.33	0.0500	mg/kg wet	2.500		93	70-130			
1,4-Dioxane - Screen	44.9	5.00	mg/kg wet	50.00		90	44-241			
1-Chlorohexane	2.18	0.0500	mg/kg wet	2.500		87	70-130			
2,2-Dichloropropane	3.09	0.100	mg/kg wet	2.500		124	70-130			
2-Butanone	14.6	1.25	mg/kg wet	12.50		117	70-130			
2-Chlorotoluene	2.20	0.0500	mg/kg wet	2.500		88	70-130			
2-Hexanone	13.0	0.500	mg/kg wet	12.50		104	70-130			
4-Chlorotoluene	2.26	0.0500	mg/kg wet	2.500		90	70-130			
4-Isopropyltoluene	2.18	0.0500	mg/kg wet	2.500		87	70-130			
4-Methyl-2-Pentanone	10.6	0.500	mg/kg wet	12.50		85	70-130			
Acetone	18.3	1.25	mg/kg wet	12.50		146	70-130			B+
Benzene	2.43	0.0500	mg/kg wet	2.500		97	70-130			
Bromobenzene	2.38	0.0500	mg/kg wet	2.500		95	70-130			
Bromochloromethane	2.76	0.0500	mg/kg wet	2.500		110	70-130			
Bromodichloromethane	2.13	0.0500	mg/kg wet	2.500		85	70-130			
Bromoform	2.86	0.0500	mg/kg wet	2.500		114	70-130			
Bromomethane	3.18	0.100	mg/kg wet	2.500		127	70-130			
Carbon Disulfide	2.30	0.0500	mg/kg wet	2.500		92	70-130			
Carbon Tetrachloride	2.92	0.0500	mg/kg wet	2.500		117	70-130			
Chlorobenzene	2.40	0.0500	mg/kg wet	2.500		96	70-130			
Chloroethane	2.67	0.100	mg/kg wet	2.500		107	70-130			
Chloroform	2.61	0.0500	mg/kg wet	2.500		105	70-130			
Chloromethane	2.40	0.100	mg/kg wet	2.500		96	70-130			
cis-1,2-Dichloroethene	2.52	0.0500	mg/kg wet	2.500		101	70-130			
cis-1,3-Dichloropropene	2.26	0.0500	mg/kg wet	2.500		91	70-130			
Dibromochloromethane	2.49	0.0500	mg/kg wet	2.500		99	70-130			
Dibromomethane	2.06	0.0500	mg/kg wet	2.500		83	70-130			
Dichlorodifluoromethane	2.40	0.0500	mg/kg wet	2.500		96	70-130			
Diethyl Ether	2.82	0.0500	mg/kg wet	2.500		113	70-130			
Di-isopropyl ether	2.64	0.0500	mg/kg wet	2.500		105	70-130			
Ethyl tertiary-butyl ether	2.61	0.0500	mg/kg wet	2.500		104	70-130			
Ethylbenzene	2.33	0.0500	mg/kg wet	2.500		93	70-130			
Hexachlorobutadiene	2.70	0.0500	mg/kg wet	2.500		108	70-130			
Isopropylbenzene	2.18	0.0500	mg/kg wet	2.500		87	70-130			
Methyl tert-Butyl Ether	2.71	0.0500	mg/kg wet	2.500		108	70-130			
Methylene Chloride	2.51	0.250	mg/kg wet	2.500		100	70-130			
Naphthalene	2.75	0.0500	mg/kg wet	2.500		110	70-130			
n-Butylbenzene	2.29	0.0500	mg/kg wet	2.500		92	70-130			

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Riverside Square

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Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
5035/8260B Volatile Organic Compounds / Methanol										
Batch CF50535 - 5035										
n-Propylbenzene	2.11	0.0500	mg/kg wet	2.500		84	70-130			
sec-Butylbenzene	2.18	0.0500	mg/kg wet	2.500		87	70-130			
Styrene	2.40	0.0500	mg/kg wet	2.500		96	70-130			
tert-Butylbenzene	2.30	0.0500	mg/kg wet	2.500		92	70-130			
Tertiary-amyl methyl ether	2.44	0.0500	mg/kg wet	2.500		98	70-130			
Tetrachloroethene	2.20	0.0500	mg/kg wet	2.500		88	70-130			
Tetrahydrofuran	2.84	0.500	mg/kg wet	2.500		114	70-130			
Toluene	2.06	0.0500	mg/kg wet	2.500		82	70-130			
trans-1,2-Dichloroethene	2.46	0.0500	mg/kg wet	2.500		99	70-130			
trans-1,3-Dichloropropene	2.35	0.0500	mg/kg wet	2.500		94	70-130			
Trichloroethene	2.18	0.0500	mg/kg wet	2.500		87	70-130			
Vinyl Acetate	3.19	0.250	mg/kg wet	2.500		128	70-130			
Vinyl Chloride	2.38	0.0500	mg/kg wet	2.500		95	70-130			
Xylene O	2.32	0.0500	mg/kg wet	2.500		93	70-130			
Xylene P,M	4.72	0.100	mg/kg wet	5.000		94	70-130			
Surrogate: 1,2-Dichloroethane-d4	*2.57*		mg/kg wet	*2.500*		*103*	*70-130*			
Surrogate: 4-Bromofluorobenzene	*2.26*		mg/kg wet	*2.500*		*90*	*70-130*			
Surrogate: Dibromofluoromethane	*2.46*		mg/kg wet	*2.500*		*98*	*70-130*			
Surrogate: Toluene-d8	*2.19*		mg/kg wet	*2.500*		*88*	*70-130*			
LCS Dup										
1,1,1,2-Tetrachloroethane	2.76	0.100	mg/kg wet	2.500		110	70-130	0.9	25	
1,1,1-Trichloroethane	2.76	0.0500	mg/kg wet	2.500		110	70-130	0.4	25	
1,1,2,2-Tetrachloroethane	2.49	0.0500	mg/kg wet	2.500		99	70-130	5	25	
1,1,2-Trichloroethane	2.47	0.0500	mg/kg wet	2.500		99	70-130	13	25	
1,1-Dichloroethane	2.90	0.0500	mg/kg wet	2.500		116	70-130	9	25	
1,1-Dichloroethene	2.63	0.0500	mg/kg wet	2.500		105	70-130	9	25	
1,1-Dichloropropene	2.38	0.0500	mg/kg wet	2.500		95	70-130	6	25	
1,2,3-Trichlorobenzene	2.70	0.0500	mg/kg wet	2.500		108	70-130	4	25	
1,2,3-Trichloropropane	2.60	0.0500	mg/kg wet	2.500		104	70-130	11	25	
1,2,4-Trichlorobenzene	2.77	0.0500	mg/kg wet	2.500		111	70-130	6	25	
1,2,4-Trimethylbenzene	2.25	0.0500	mg/kg wet	2.500		90	70-130	2	25	
1,2-Dibromo-3-Chloropropane	2.50	0.300	mg/kg wet	2.500		100	70-130	2	25	
1,2-Dibromoethane	2.50	0.0500	mg/kg wet	2.500		100	70-130	0.5	25	
1,2-Dichlorobenzene	2.44	0.0500	mg/kg wet	2.500		98	70-130	3	25	
1,2-Dichloroethane	2.55	0.0500	mg/kg wet	2.500		102	70-130	4	25	
1,2-Dichloropropane	2.42	0.0500	mg/kg wet	2.500		97	70-130	13	25	
1,3,5-Trimethylbenzene	2.34	0.0500	mg/kg wet	2.500		93	70-130	3	25	
1,3-Dichlorobenzene	2.40	0.0500	mg/kg wet	2.500		96	70-130	2	25	
1,3-Dichloropropane	2.62	0.0500	mg/kg wet	2.500		105	70-130	2	25	
1,4-Dichlorobenzene	2.49	0.0500	mg/kg wet	2.500		99	70-130	6	25	
1,4-Dioxane - Screen	48.2	5.00	mg/kg wet	50.00		96	44-241	7	200	
1-Chlorohexane	2.27	0.0500	mg/kg wet	2.500		91	70-130	4	25	
2,2-Dichloropropane	3.26	0.100	mg/kg wet	2.500		130	70-130	5	25	
2-Butanone	15.2	1.25	mg/kg wet	12.50		122	70-130	4	25	
2-Chlorotoluene	2.18	0.0500	mg/kg wet	2.500		87	70-130	1	25	

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
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ESS Laboratory Work Order: 1506154

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
5035/8260B Volatile Organic Compounds / Methanol										
Batch CF50535 - 5035										
2-Hexanone	12.5	0.500	mg/kg wet	12.50		100	70-130	4	25	
4-Chlorotoluene	2.37	0.0500	mg/kg wet	2.500		95	70-130	4	25	
4-Isopropyltoluene	2.26	0.0500	mg/kg wet	2.500		91	70-130	4	25	
4-Methyl-2-Pentanone	11.9	0.500	mg/kg wet	12.50		95	70-130	12	25	
Acetone	19.0	1.25	mg/kg wet	12.50		152	70-130	4	25	B+
Benzene	2.24	0.0500	mg/kg wet	2.500		90	70-130	8	25	
Bromobenzene	2.45	0.0500	mg/kg wet	2.500		98	70-130	3	25	
Bromochloromethane	2.92	0.0500	mg/kg wet	2.500		117	70-130	6	25	
Bromodichloromethane	2.36	0.0500	mg/kg wet	2.500		94	70-130	10	25	
Bromoform	2.86	0.0500	mg/kg wet	2.500		114	70-130	0.03	25	
Bromomethane	3.69	0.100	mg/kg wet	2.500		148	70-130	15	25	B+
Carbon Disulfide	2.64	0.0500	mg/kg wet	2.500		105	70-130	14	25	
Carbon Tetrachloride	2.82	0.0500	mg/kg wet	2.500		113	70-130	4	25	
Chlorobenzene	2.41	0.0500	mg/kg wet	2.500		97	70-130	0.4	25	
Chloroethane	2.94	0.100	mg/kg wet	2.500		117	70-130	10	25	
Chloroform	2.72	0.0500	mg/kg wet	2.500		109	70-130	4	25	
Chloromethane	2.64	0.100	mg/kg wet	2.500		106	70-130	9	25	
cis-1,2-Dichloroethene	2.72	0.0500	mg/kg wet	2.500		109	70-130	8	25	
cis-1,3-Dichloropropene	2.52	0.0500	mg/kg wet	2.500		101	70-130	11	25	
Dibromochloromethane	2.52	0.0500	mg/kg wet	2.500		101	70-130	1	25	
Dibromomethane	2.25	0.0500	mg/kg wet	2.500		90	70-130	9	25	
Dichlorodifluoromethane	2.66	0.0500	mg/kg wet	2.500		106	70-130	10	25	
Diethyl Ether	3.04	0.0500	mg/kg wet	2.500		122	70-130	8	25	
Di-isopropyl ether	2.95	0.0500	mg/kg wet	2.500		118	70-130	11	25	
Ethyl tertiary-butyl ether	2.90	0.0500	mg/kg wet	2.500		116	70-130	11	25	
Ethylbenzene	2.36	0.0500	mg/kg wet	2.500		94	70-130	0.9	25	
Hexachlorobutadiene	3.03	0.0500	mg/kg wet	2.500		121	70-130	12	25	
Isopropylbenzene	2.26	0.0500	mg/kg wet	2.500		91	70-130	4	25	
Methyl tert-Butyl Ether	3.01	0.0500	mg/kg wet	2.500		120	70-130	10	25	
Methylene Chloride	2.72	0.250	mg/kg wet	2.500		109	70-130	8	25	
Naphthalene	2.79	0.0500	mg/kg wet	2.500		112	70-130	2	25	
n-Butylbenzene	2.40	0.0500	mg/kg wet	2.500		96	70-130	5	25	
n-Propylbenzene	2.24	0.0500	mg/kg wet	2.500		90	70-130	6	25	
sec-Butylbenzene	2.28	0.0500	mg/kg wet	2.500		91	70-130	5	25	
Styrene	2.44	0.0500	mg/kg wet	2.500		98	70-130	2	25	
tert-Butylbenzene	2.41	0.0500	mg/kg wet	2.500		96	70-130	5	25	
Tertiary-amyl methyl ether	2.46	0.0500	mg/kg wet	2.500		99	70-130	0.8	25	
Tetrachloroethene	2.24	0.0500	mg/kg wet	2.500		90	70-130	2	25	
Tetrahydrofuran	2.98	0.500	mg/kg wet	2.500		119	70-130	5	25	
Toluene	2.34	0.0500	mg/kg wet	2.500		94	70-130	13	25	
trans-1,2-Dichloroethene	2.68	0.0500	mg/kg wet	2.500		107	70-130	9	25	
trans-1,3-Dichloropropene	2.59	0.0500	mg/kg wet	2.500		104	70-130	10	25	
Trichloroethene	2.47	0.0500	mg/kg wet	2.500		99	70-130	13	25	
Vinyl Acetate	3.57	0.250	mg/kg wet	2.500		143	70-130	11	25	B+
Vinyl Chloride	2.65	0.0500	mg/kg wet	2.500		106	70-130	11	25	

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
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Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
5035/8260B Volatile Organic Compounds / Methanol										
Batch CF50535 - 5035										
Xylene O	2.38	0.0500	mg/kg wet	2.500		95	70-130	3	25	
Xylene P,M	4.77	0.100	mg/kg wet	5.000		95	70-130	1	25	
Surrogate: 1,2-Dichloroethane-d4	*2.43*		mg/kg wet	*2.500*		*97*	*70-130*			
Surrogate: 4-Bromofluorobenzene	*2.28*		mg/kg wet	*2.500*		*91*	*70-130*			
Surrogate: Dibromofluoromethane	*2.43*		mg/kg wet	*2.500*		*97*	*70-130*			
Surrogate: Toluene-d8	*2.24*		mg/kg wet	*2.500*		*90*	*70-130*			
Batch CF50846 - 5035										
Blank										
1,1,1,2-Tetrachloroethane	ND	0.100	mg/kg wet							
1,1,1-Trichloroethane	ND	0.0500	mg/kg wet							
1,1,2,2-Tetrachloroethane	ND	0.0500	mg/kg wet							
1,1,2-Trichloroethane	ND	0.0500	mg/kg wet							
1,1-Dichloroethane	ND	0.0500	mg/kg wet							
1,1-Dichloroethene	ND	0.0500	mg/kg wet							
1,1-Dichloropropene	ND	0.0500	mg/kg wet							
1,2,3-Trichlorobenzene	ND	0.0500	mg/kg wet							
1,2,3-Trichloropropane	ND	0.0500	mg/kg wet							
1,2,4-Trichlorobenzene	ND	0.0500	mg/kg wet							
1,2,4-Trimethylbenzene	ND	0.0500	mg/kg wet							
1,2-Dibromo-3-Chloropropane	ND	0.300	mg/kg wet							
1,2-Dibromoethane	ND	0.0500	mg/kg wet							
1,2-Dichlorobenzene	ND	0.0500	mg/kg wet							
1,2-Dichloroethane	ND	0.0500	mg/kg wet							
1,2-Dichloropropane	ND	0.0500	mg/kg wet							
1,3,5-Trimethylbenzene	ND	0.0500	mg/kg wet							
1,3-Dichlorobenzene	ND	0.0500	mg/kg wet							
1,3-Dichloropropane	ND	0.0500	mg/kg wet							
1,4-Dichlorobenzene	ND	0.0500	mg/kg wet							
1,4-Dioxane - Screen	ND	5.00	mg/kg wet							
1-Chlorohexane	ND	0.0500	mg/kg wet							
2,2-Dichloropropane	ND	0.100	mg/kg wet							
2-Butanone	ND	1.25	mg/kg wet							
2-Chlorotoluene	ND	0.0500	mg/kg wet							
2-Hexanone	ND	0.500	mg/kg wet							
4-Chlorotoluene	ND	0.0500	mg/kg wet							
4-Isopropyltoluene	ND	0.0500	mg/kg wet							
4-Methyl-2-Pentanone	ND	0.500	mg/kg wet							
Acetone	ND	1.25	mg/kg wet							
Benzene	ND	0.0500	mg/kg wet							
Bromobenzene	ND	0.0500	mg/kg wet							
Bromochloromethane	ND	0.0500	mg/kg wet							
Bromodichloromethane	ND	0.0500	mg/kg wet							
Bromoform	ND	0.0500	mg/kg wet							
Bromomethane	ND	0.100	mg/kg wet							
Carbon Disulfide	ND	0.0500	mg/kg wet							

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Riverside Square

ESS Laboratory Work Order: 1506154

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
5035/8260B Volatile Organic Compounds / Methanol										
Batch CF50846 - 5035										
Carbon Tetrachloride	ND	0.0500	mg/kg wet							
Chlorobenzene	ND	0.0500	mg/kg wet							
Chloroethane	ND	0.100	mg/kg wet							
Chloroform	ND	0.0500	mg/kg wet							
Chloromethane	ND	0.100	mg/kg wet							
cis-1,2-Dichloroethene	ND	0.0500	mg/kg wet							
cis-1,3-Dichloropropene	ND	0.0500	mg/kg wet							
Dibromochloromethane	ND	0.0500	mg/kg wet							
Dibromomethane	ND	0.0500	mg/kg wet							
Dichlorodifluoromethane	ND	0.0500	mg/kg wet							
Diethyl Ether	ND	0.0500	mg/kg wet							
Di-isopropyl ether	ND	0.0500	mg/kg wet							
Ethyl tertiary-butyl ether	ND	0.0500	mg/kg wet							
Ethylbenzene	ND	0.0500	mg/kg wet							
Hexachlorobutadiene	ND	0.0500	mg/kg wet							
Isopropylbenzene	ND	0.0500	mg/kg wet							
Methyl tert-Butyl Ether	ND	0.0500	mg/kg wet							
Methylene Chloride	ND	0.250	mg/kg wet							
Naphthalene	ND	0.0500	mg/kg wet							
n-Butylbenzene	ND	0.0500	mg/kg wet							
n-Propylbenzene	ND	0.0500	mg/kg wet							
sec-Butylbenzene	ND	0.0500	mg/kg wet							
Styrene	ND	0.0500	mg/kg wet							
tert-Butylbenzene	ND	0.0500	mg/kg wet							
Tertiary-amyl methyl ether	ND	0.0500	mg/kg wet							
Tetrachloroethene	ND	0.0500	mg/kg wet							
Tetrahydrofuran	ND	0.500	mg/kg wet							
Toluene	ND	0.0500	mg/kg wet							
trans-1,2-Dichloroethene	ND	0.0500	mg/kg wet							
trans-1,3-Dichloropropene	ND	0.0500	mg/kg wet							
Trichloroethene	ND	0.0500	mg/kg wet							
Vinyl Acetate	ND	0.250	mg/kg wet							
Vinyl Chloride	ND	0.0500	mg/kg wet							
Xylene O	ND	0.0500	mg/kg wet							
Xylene P,M	ND	0.100	mg/kg wet							
Surrogate: 1,2-Dichloroethane-d4	*2.39*		mg/kg wet	*2.500*		*95*	*70-130*			
Surrogate: 4-Bromofluorobenzene	*2.16*		mg/kg wet	*2.500*		*86*	*70-130*			
Surrogate: Dibromofluoromethane	*2.60*		mg/kg wet	*2.500*		*104*	*70-130*			
Surrogate: Toluene-d8	*1.96*		mg/kg wet	*2.500*		*78*	*70-130*			
LCS										
1,1,1,2-Tetrachloroethane	2.66	0.100	mg/kg wet	2.500		106	70-130			
1,1,1-Trichloroethane	2.64	0.0500	mg/kg wet	2.500		105	70-130			
1,1,2,2-Tetrachloroethane	2.34	0.0500	mg/kg wet	2.500		94	70-130			
1,1,2-Trichloroethane	2.39	0.0500	mg/kg wet	2.500		96	70-130			
1,1-Dichloroethane	3.14	0.0500	mg/kg wet	2.500		126	70-130			

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Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
5035/8260B Volatile Organic Compounds / Methanol										
Batch CF50846 - 5035										
1,1-Dichloroethene	2.98	0.0500	mg/kg wet	2.500		119	70-130			
1,1-Dichloropropene	2.30	0.0500	mg/kg wet	2.500		92	70-130			
1,2,3-Trichlorobenzene	2.71	0.0500	mg/kg wet	2.500		108	70-130			
1,2,3-Trichloropropane	2.54	0.0500	mg/kg wet	2.500		102	70-130			
1,2,4-Trichlorobenzene	2.77	0.0500	mg/kg wet	2.500		111	70-130			
1,2,4-Trimethylbenzene	2.25	0.0500	mg/kg wet	2.500		90	70-130			
1,2-Dibromo-3-Chloropropane	2.44	0.300	mg/kg wet	2.500		97	70-130			
1,2-Dibromoethane	2.43	0.0500	mg/kg wet	2.500		97	70-130			
1,2-Dichlorobenzene	2.38	0.0500	mg/kg wet	2.500		95	70-130			
1,2-Dichloroethane	2.58	0.0500	mg/kg wet	2.500		103	70-130			
1,2-Dichloropropane	2.39	0.0500	mg/kg wet	2.500		96	70-130			
1,3,5-Trimethylbenzene	2.33	0.0500	mg/kg wet	2.500		93	70-130			
1,3-Dichlorobenzene	2.38	0.0500	mg/kg wet	2.500		95	70-130			
1,3-Dichloropropane	2.51	0.0500	mg/kg wet	2.500		100	70-130			
1,4-Dichlorobenzene	2.44	0.0500	mg/kg wet	2.500		97	70-130			
1,4-Dioxane - Screen	49.1	5.00	mg/kg wet	50.00		98	44-241			
1-Chlorohexane	2.18	0.0500	mg/kg wet	2.500		87	70-130			
2,2-Dichloropropane	3.40	0.100	mg/kg wet	2.500		136	70-130			B+
2-Butanone	20.0	1.25	mg/kg wet	12.50		160	70-130			B+
2-Chlorotoluene	2.13	0.0500	mg/kg wet	2.500		85	70-130			
2-Hexanone	16.4	0.500	mg/kg wet	12.50		131	70-130			B+
4-Chlorotoluene	2.33	0.0500	mg/kg wet	2.500		93	70-130			
4-Isopropyltoluene	2.24	0.0500	mg/kg wet	2.500		89	70-130			
4-Methyl-2-Pentanone	11.7	0.500	mg/kg wet	12.50		93	70-130			
Acetone	32.7	1.25	mg/kg wet	12.50		262	70-130			B+
Benzene	2.26	0.0500	mg/kg wet	2.500		91	70-130			
Bromobenzene	2.43	0.0500	mg/kg wet	2.500		97	70-130			
Bromochloromethane	2.64	0.0500	mg/kg wet	2.500		106	70-130			
Bromodichloromethane	2.38	0.0500	mg/kg wet	2.500		95	70-130			
Bromoform	2.71	0.0500	mg/kg wet	2.500		108	70-130			
Bromomethane	4.07	0.100	mg/kg wet	2.500		163	70-130			B+
Carbon Disulfide	2.87	0.0500	mg/kg wet	2.500		115	70-130			
Carbon Tetrachloride	2.83	0.0500	mg/kg wet	2.500		113	70-130			
Chlorobenzene	2.34	0.0500	mg/kg wet	2.500		94	70-130			
Chloroethane	3.01	0.100	mg/kg wet	2.500		121	70-130			
Chloroform	2.44	0.0500	mg/kg wet	2.500		98	70-130			
Chloromethane	2.74	0.100	mg/kg wet	2.500		110	70-130			
cis-1,2-Dichloroethene	2.69	0.0500	mg/kg wet	2.500		108	70-130			
cis-1,3-Dichloropropene	2.55	0.0500	mg/kg wet	2.500		102	70-130			
Dibromochloromethane	2.44	0.0500	mg/kg wet	2.500		98	70-130			
Dibromomethane	2.29	0.0500	mg/kg wet	2.500		92	70-130			
Dichlorodifluoromethane	2.92	0.0500	mg/kg wet	2.500		117	70-130			
Diethyl Ether	3.30	0.0500	mg/kg wet	2.500		132	70-130			B+
Di-isopropyl ether	3.05	0.0500	mg/kg wet	2.500		122	70-130			
Ethyl tertiary-butyl ether	2.86	0.0500	mg/kg wet	2.500		114	70-130			

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Riverside Square

ESS Laboratory Work Order: 1506154

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
5035/8260B Volatile Organic Compounds / Methanol										
Batch CF50846 - 5035										
Ethylbenzene	2.27	0.0500	mg/kg wet	2.500		91	70-130			
Hexachlorobutadiene	3.07	0.0500	mg/kg wet	2.500		123	70-130			
Isopropylbenzene	2.22	0.0500	mg/kg wet	2.500		89	70-130			
Methyl tert-Butyl Ether	3.15	0.0500	mg/kg wet	2.500		126	70-130			
Methylene Chloride	3.11	0.250	mg/kg wet	2.500		124	70-130			
Naphthalene	2.78	0.0500	mg/kg wet	2.500		111	70-130			
n-Butylbenzene	2.39	0.0500	mg/kg wet	2.500		95	70-130			
n-Propylbenzene	2.22	0.0500	mg/kg wet	2.500		89	70-130			
sec-Butylbenzene	2.25	0.0500	mg/kg wet	2.500		90	70-130			
Styrene	2.34	0.0500	mg/kg wet	2.500		93	70-130			
tert-Butylbenzene	2.41	0.0500	mg/kg wet	2.500		96	70-130			
Tertiary-amyl methyl ether	2.38	0.0500	mg/kg wet	2.500		95	70-130			
Tetrachloroethene	2.17	0.0500	mg/kg wet	2.500		87	70-130			
Tetrahydrofuran	2.54	0.500	mg/kg wet	2.500		102	70-130			
Toluene	2.33	0.0500	mg/kg wet	2.500		93	70-130			
trans-1,2-Dichloroethene	3.04	0.0500	mg/kg wet	2.500		122	70-130			
trans-1,3-Dichloropropene	2.58	0.0500	mg/kg wet	2.500		103	70-130			
Trichloroethene	2.45	0.0500	mg/kg wet	2.500		98	70-130			
Vinyl Acetate	3.60	0.250	mg/kg wet	2.500		144	70-130			B+
Vinyl Chloride	2.66	0.0500	mg/kg wet	2.500		106	70-130			
Xylene O	2.26	0.0500	mg/kg wet	2.500		90	70-130			
Xylene P,M	4.64	0.100	mg/kg wet	5.000		93	70-130			
Surrogate: 1,2-Dichloroethane-d4	*2.48*		mg/kg wet	*2.500*		*99*	*70-130*			
Surrogate: 4-Bromofluorobenzene	*2.16*		mg/kg wet	*2.500*		*86*	*70-130*			
Surrogate: Dibromofluoromethane	*2.33*		mg/kg wet	*2.500*		*93*	*70-130*			
Surrogate: Toluene-d8	*2.16*		mg/kg wet	*2.500*		*86*	*70-130*			
LCS Dup										
1,1,1,2-Tetrachloroethane	2.67	0.100	mg/kg wet	2.500		107	70-130	0.4	25	
1,1,1-Trichloroethane	2.75	0.0500	mg/kg wet	2.500		110	70-130	4	25	
1,1,2,2-Tetrachloroethane	2.35	0.0500	mg/kg wet	2.500		94	70-130	0.6	25	
1,1,2-Trichloroethane	2.03	0.0500	mg/kg wet	2.500		81	70-130	16	25	
1,1-Dichloroethane	2.72	0.0500	mg/kg wet	2.500		109	70-130	14	25	
1,1-Dichloroethene	2.45	0.0500	mg/kg wet	2.500		98	70-130	20	25	
1,1-Dichloropropene	2.55	0.0500	mg/kg wet	2.500		102	70-130	10	25	
1,2,3-Trichlorobenzene	2.63	0.0500	mg/kg wet	2.500		105	70-130	3	25	
1,2,3-Trichloropropane	2.44	0.0500	mg/kg wet	2.500		98	70-130	4	25	
1,2,4-Trichlorobenzene	2.68	0.0500	mg/kg wet	2.500		107	70-130	3	25	
1,2,4-Trimethylbenzene	2.20	0.0500	mg/kg wet	2.500		88	70-130	2	25	
1,2-Dibromo-3-Chloropropane	2.48	0.300	mg/kg wet	2.500		99	70-130	2	25	
1,2-Dibromoethane	2.45	0.0500	mg/kg wet	2.500		98	70-130	1	25	
1,2-Dichlorobenzene	2.36	0.0500	mg/kg wet	2.500		94	70-130	1	25	
1,2-Dichloroethane	2.67	0.0500	mg/kg wet	2.500		107	70-130	3	25	
1,2-Dichloropropane	2.62	0.0500	mg/kg wet	2.500		105	70-130	9	25	
1,3,5-Trimethylbenzene	2.27	0.0500	mg/kg wet	2.500		91	70-130	3	25	
1,3-Dichlorobenzene	2.36	0.0500	mg/kg wet	2.500		95	70-130	0.6	25	

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Client Name: GZA GeoEnvironmental, Inc.
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Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
5035/8260B Volatile Organic Compounds / Methanol										
Batch CF50846 - 5035										
1,3-Dichloropropane	2.54	0.0500	mg/kg wet	2.500		102	70-130	1	25	
1,4-Dichlorobenzene	2.39	0.0500	mg/kg wet	2.500		96	70-130	2	25	
1,4-Dioxane - Screen	54.0	5.00	mg/kg wet	50.00		108	44-241	10	200	
1-Chlorohexane	2.15	0.0500	mg/kg wet	2.500		86	70-130	2	25	
2,2-Dichloropropane	3.12	0.100	mg/kg wet	2.500		125	70-130	9	25	
2-Butanone	15.5	1.25	mg/kg wet	12.50		124	70-130	25	25	
2-Chlorotoluene	2.30	0.0500	mg/kg wet	2.500		92	70-130	8	25	
2-Hexanone	13.6	0.500	mg/kg wet	12.50		109	70-130	19	25	
4-Chlorotoluene	2.29	0.0500	mg/kg wet	2.500		92	70-130	2	25	
4-Isopropyltoluene	2.20	0.0500	mg/kg wet	2.500		88	70-130	2	25	
4-Methyl-2-Pentanone	9.86	0.500	mg/kg wet	12.50		79	70-130	17	25	
Acetone	20.4	1.25	mg/kg wet	12.50		163	70-130	47	25	B+, D+
Benzene	2.55	0.0500	mg/kg wet	2.500		102	70-130	12	25	
Bromobenzene	2.38	0.0500	mg/kg wet	2.500		95	70-130	2	25	
Bromochloromethane	2.89	0.0500	mg/kg wet	2.500		116	70-130	9	25	
Bromodichloromethane	2.49	0.0500	mg/kg wet	2.500		100	70-130	5	25	
Bromoform	2.81	0.0500	mg/kg wet	2.500		112	70-130	4	25	
Bromomethane	3.61	0.100	mg/kg wet	2.500		144	70-130	12	25	B+
Carbon Disulfide	2.30	0.0500	mg/kg wet	2.500		92	70-130	22	25	
Carbon Tetrachloride	2.93	0.0500	mg/kg wet	2.500		117	70-130	4	25	
Chlorobenzene	2.36	0.0500	mg/kg wet	2.500		94	70-130	0.9	25	
Chloroethane	2.71	0.100	mg/kg wet	2.500		109	70-130	10	25	
Chloroform	2.64	0.0500	mg/kg wet	2.500		105	70-130	8	25	
Chloromethane	2.43	0.100	mg/kg wet	2.500		97	70-130	12	25	
cis-1,2-Dichloroethene	2.63	0.0500	mg/kg wet	2.500		105	70-130	2	25	
cis-1,3-Dichloropropene	2.36	0.0500	mg/kg wet	2.500		94	70-130	8	25	
Dibromochloromethane	2.47	0.0500	mg/kg wet	2.500		99	70-130	1	25	
Dibromomethane	2.48	0.0500	mg/kg wet	2.500		99	70-130	8	25	
Dichlorodifluoromethane	2.36	0.0500	mg/kg wet	2.500		94	70-130	21	25	
Diethyl Ether	2.78	0.0500	mg/kg wet	2.500		111	70-130	17	25	
Di-isopropyl ether	2.60	0.0500	mg/kg wet	2.500		104	70-130	16	25	
Ethyl tertiary-butyl ether	2.57	0.0500	mg/kg wet	2.500		103	70-130	11	25	
Ethylbenzene	2.30	0.0500	mg/kg wet	2.500		92	70-130	1	25	
Hexachlorobutadiene	3.02	0.0500	mg/kg wet	2.500		121	70-130	2	25	
Isopropylbenzene	2.20	0.0500	mg/kg wet	2.500		88	70-130	0.6	25	
Methyl tert-Butyl Ether	2.70	0.0500	mg/kg wet	2.500		108	70-130	15	25	
Methylene Chloride	2.70	0.250	mg/kg wet	2.500		108	70-130	14	25	
Naphthalene	2.67	0.0500	mg/kg wet	2.500		107	70-130	4	25	
n-Butylbenzene	2.36	0.0500	mg/kg wet	2.500		95	70-130	0.9	25	
n-Propylbenzene	2.05	0.0500	mg/kg wet	2.500		82	70-130	8	25	
sec-Butylbenzene	2.21	0.0500	mg/kg wet	2.500		88	70-130	2	25	
Styrene	2.40	0.0500	mg/kg wet	2.500		96	70-130	3	25	
tert-Butylbenzene	2.32	0.0500	mg/kg wet	2.500		93	70-130	4	25	
Tertiary-amyl methyl ether	2.62	0.0500	mg/kg wet	2.500		105	70-130	10	25	
Tetrachloroethene	2.20	0.0500	mg/kg wet	2.500		88	70-130	1	25	

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Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
5035/8260B Volatile Organic Compounds / Methanol										
Batch CF50846 - 5035										
Tetrahydrofuran	2.65	0.500	mg/kg wet	2.500		106	70-130	4	25	
Toluene	1.93	0.0500	mg/kg wet	2.500		77	70-130	19	25	
trans-1,2-Dichloroethene	2.65	0.0500	mg/kg wet	2.500		106	70-130	14	25	
trans-1,3-Dichloropropene	2.16	0.0500	mg/kg wet	2.500		87	70-130	18	25	
Trichloroethene	2.62	0.0500	mg/kg wet	2.500		105	70-130	7	25	
Vinyl Acetate	3.18	0.250	mg/kg wet	2.500		127	70-130	12	25	
Vinyl Chloride	2.45	0.0500	mg/kg wet	2.500		98	70-130	8	25	
Xylene O	2.34	0.0500	mg/kg wet	2.500		94	70-130	4	25	
Xylene P,M	4.68	0.100	mg/kg wet	5.000		94	70-130	0.8	25	
Surrogate: 1,2-Dichloroethane-d4	*2.48*		mg/kg wet	*2.500*		*99*	*70-130*			
Surrogate: 4-Bromofluorobenzene	*2.16*		mg/kg wet	*2.500*		*86*	*70-130*			
Surrogate: Dibromofluoromethane	*2.49*		mg/kg wet	*2.500*		*100*	*70-130*			
Surrogate: Toluene-d8	*2.17*		mg/kg wet	*2.500*		*87*	*70-130*			

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
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Notes and Definitions

U	Analyte included in the analysis, but not detected
J	Reported between MDL and MRL
D+	Relative percent difference for duplicate is outside of criteria (D+).
D	Diluted.
B+	Blank Spike recovery is above upper 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

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Riverside Square

ESS Laboratory Work Order: 1506154

ESS LABORATORY CERTIFICATIONS AND ACCREDITATIONS

ENVIRONMENTAL

Department of Defense (DoD) Environmental Laboratory Accreditation Program (ELAP)
A2LA Accredited: Testing Cert# 2864.01
http://www.a2la.org/scopepdf/2864-01.pdf

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: RI0002
http://www.maine.gov/dhhs/mecdc/environmental-health/water/dwp-services/labcert/documents/AllLabs.xls

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.depweb.state.pa.us/portal/server.pt/community/labs/13780/laboratory_accreditation_program/590095

CHEMISTRY

A2LA Accredited: Testing Cert # 2864.01
Lead in Paint, Phthalates, Lead in Children's Metals Products (Including Jewelry)
http://www.A2LA.org/dirsearchnew/newsearch.cfm

CPSC ID# 1141
Lead Paint, Lead in Children's Metals Jewelry
http://www.cpsc.gov/cgi-bin/labapplist.aspx

Sample and Cooler Receipt Checklist

Client: GZA GeoEnvironmental, Inc.
Client Project ID: _____
Shipped/Delivered Via: Client

ESS Project ID: 15060154
Date Project Due: 6/11/15
Days For Project: 5 Day

Items to be checked upon receipt:

1. Air Bill Manifest Present? * No
   Air No.:
2. Were Custody Seals Present? No
3. Were Custody Seals Intact? N/A
4. Is Radiation count < 100 CPM? Yes
5. Is a cooler present? Yes
   Cooler Temp: **3.9**
   Iced With: **Ice**
6. Was COC included with samples? Yes
7. Was COC signed and dated by client? Yes
8. Does the COC match the sample Yes
9. Is COC complete and correct? Yes
10. Are the samples properly preserved? Yes
11. Proper sample containers used? Yes
12. Any air bubbles in the VOA vials? N/A
13. Holding times exceeded? No
14. Sufficient sample volumes? Yes
15. Any Subcontracting needed? No
16. Are ESS labels on correct containers? Yes|No
17. Were samples received intact? Yes|No

ESS Sample IDs: _____
Sub Lab: _____
Analysis: _____
TAT: _____

18. Was there need to call project manager to discuss status? If yes, please explain.

_____

_____

_____

Who was called?: _____ By whom? _____

Sample Number	Properly Preserved	Container Type	# of Containers	Preservative
1	Yes	2 oz Soil Jar	1	NP
1	Yes	40 ml - VOA	1	MeOH
2	Yes	2 oz Soil Jar	1	NP
2	Yes	40 ml - VOA	1	MeOH
3	Yes	2 oz Soil Jar	1	NP
3	Yes	40 ml - VOA	1	MeOH
4	Yes	2 oz Soil Jar	1	NP
4	Yes	40 ml - VOA	1	MeOH
5	Yes	2 oz Soil Jar	1	NP
5	Yes	40 ml - VOA	1	MeOH
6	Yes	2 oz Soil Jar	1	NP
6	Yes	40 ml - VOA	1	MeOH
7	Yes	40 ml - VOA	1	MeOH
7	Yes	8 oz Soil Jar	1	NP
8	Yes	4 oz Soil Jar	1	NP
8	Yes	40 ml - VOA	1	MeOH
9	Yes	40 ml - VOA	1	MeOH
9	Yes	8 oz Soil Jar	1	NP
10	Yes	40 ml - VOA	1	MeOH
10	Yes	8 oz Soil Jar	1	NP
11	Yes	40 ml - VOA	1	MeOH
11	Yes	8 oz Soil Jar	1	NP
12	Yes	40 ml - VOA	1	MeOH
12	Yes	8 oz Soil Jar	1	NP
13	Yes	40 ml - VOA	1	MeOH

Sample and Cooler Receipt Checklist

Client: GZA GeoEnvironmental, Inc. ESS Project ID: 15060154

13	Yes	8 oz Soil Jar	1	NP
14	Yes	40 ml - VOA	1	MeOH
14	Yes	8 oz Soil Jar	1	NP
15	Yes	40 ml - VOA	1	MeOH
15	Yes	8 oz Soil Jar	1	NP
16	Yes	2 oz Soil Jar	1	NP
16	Yes	40 ml - VOA	1	MeOH
17	Yes	2 oz Soil Jar	1	NP
17	Yes	40 ml - VOA	1	MeOH
18	Yes	2 oz Soil Jar	1	NP
18	Yes	40 ml - VOA	1	MeOH
19	Yes	2 oz Soil Jar	1	NP
19	Yes	40 ml - VOA	1	MeOH
20	Yes	2 oz Soil Jar	1	NP
20	Yes	40 ml - VOA	1	MeOH
21	Yes	2 oz Soil Jar	1	NP
21	Yes	40 ml - VOA	1	MeOH
22	Yes	40 ml - VOA	1	MeOH

Completed By: [signature] Date/Time: 6/4/15 1559

Reviewed By: [signature] Date/Time: 6/4/15 1610

ESS Laboratory

Division of Thielsch Engineering, Inc.
185 Frances Avenue, Cranston, RI 02910-2211
Tel. (401) 461-7181 Fax (401) 461-4486
www.esslaboratory.com

CHAIN OF CUSTODY

Turn Time ✓ Standard Other _____
If faster than 5 days, prior approval by laboratory is required # _____

State where samples were collected from:
MA (RI) CT NH NJ NY ME Other _____

Is this project for any of the following:
MA-MCP Navy USACE Other _____

Reporting Limits

ESS LAB PROJECT ID: 1506154

Electronic Deliverable Yes ✓ No ____
Format: Excel ✓ Access ___ PDF ✓ Other _____

Co. Name	Project #	Project Name (20 Char. or less)
GZA	33175.06	Riverside Square

Contact Person	Address
Albert Flori	East Prov, RI

City	State	Zip	PO#
Providence	RI	02909	33175.06

Telephone #	Fax #	Email Address
401-421-4140		aflori@gza.com

Circle and/or Write Required Analysis

ESS LAB Sample #	Date	Collection Time	COMP	GRAB	MATRIX	Sample Identification (20 Char. or less)	Pres Code	Number of Containers	Type of Containers	8260 VOA (circled)	624	524.2	8021 MTBE/BTEX	8015 GRO	VPH w/targets	8100 TPH	8015 DRO	EPH w/o PAHs	EPH w/PAHs	EPH 4 Diesel	8081 Pesticides	8082 PCB	608 Pesticides	608 PCB	8270 SVOA	625	PAH 8270	RCRA5	RCRA8	PP13	TAL23	TCLP-RCRA8	NBC7	MCP-METALS (13)	MCP-METALS (13) w/Hg					
1	6-4-15	8:22	✓		S	GP-200 0-2	1 (6)	2	G	✓																														
2	↓	8:24	↓		↓	GP-200 6-8	↓	↓	↓	↓																														
3		8:34				GP-201 0-2																																		
4		8:36				GP-201 2-4																																		
5		8:47				GP-202 0-2																																		
6		8:49				GP-202 2-4																																		
7		8:56				GP-203 0-2																																		
8		8:57				GP-203 0-2 BD																																		
9		8:59				GP-203 2-4																																		
10	↓	9:22	↓		↓	GP-204 2-4	↓	↓	↓	↓																														

Container Type: P-Poly G-Glass S-Sterile V-VOA | Matrix: S-Soil SD-Solid D-Sludge WW-Waste Water GW-Ground Water SW-Surface Water DW-Drinking Water O-Oil W-Wipes F-Filters

Cooler Present ✓ Yes ___ No
Seals Intact ___ Yes ___ No NA: ____
Cooler Temp: 3.9 ICE OUT

Internal Use Only
[ ] Pickup
[ ] Technicians _____

Preservation Code 1- NP, 2- HC1, 3- H_2SO_4, 4- HNO_3, 5- NaOH, 6- MeOH, 7- Asorbic Acid, 8- ZnAct, 9- _____

Sampled by: Marissa Kelly

Comments:

Relinquished by: (Signature)	Date/Time	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Date/Time	Received by: (Signature)	Date/Time
[signature]	6/4/15 13:22	[signature]	6/4/15 1324				
Relinquished by: (Signature)	Date/Time	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Date/Time	Received by: (Signature)	Date/Time

*By circling MA-MCP, client acknowledges samples were collected in accordance with MADEP CAM VII A

Please fax all changes to Chain of Custody in writing.

1 (White) Lab Copy 2 (Yellow) Client Receipt

10/26/04 A

ESS Laboratory

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185 Frances Avenue, Cranston, RI 02910-2211
Tel. (401) 461-7181 Fax (401) 461-4486
www.esslaboratory.com

CHAIN OF CUSTODY

Turn Time ✓ Standard Other _____
If faster than 5 days, prior approval by laboratory is required # _____

State where samples were collected from:
MA (RI) CT NH NJ NY ME Other _____

Is this project for any of the following:
MA-MCP Navy USACE Other _____

Reporting Limits

ESS LAB PROJECT ID: 1506154

Electronic Deliverable Yes ✓ No ____
Format: Excel ✓ Access ___ PDF ✓ Other _____

Co. Name	Project #	Project Name (20 Char. or less)
GZA	33175.06	Riverside Square

Contact Person	Address
Albert Flori	East Prov, RI

City	State	Zip	PO#
Providence	RI	02909	33175.06

Telephone #	Fax #	Email Address
401-421-4140		aflori@gza.com

Circle and/or Write Required Analysis

ESS LAB Sample #	Date	Collection Time	COMP	GRAB	MATRIX	Sample Identification (20 Char. or less)	Pres Code	Number of Containers	Type of Containers	8260 VOA / 624 / 524.2	8021 MTBE/BTEX / 8015 GRO / VPH w/targets	8100 TPH / 8015 DRO	EPH w/o PAHs w/PAHs / EPH 4 Diesel	8081 Pesticides / 8082 PCB / 608 Pesticides / 608 PCB	8270 SVOA / 625 / PAH 8270	RCRA5 / RCRA8 / PP13 / TAL23	TCLP-RCRA8 / NBC7	MCP-METALS (13) / MCP-METALS (13) w/Hg					
11	6-4-15	9:24	X		S	GP-204 4-6	1 (6)	2	G/N	X													
12	↓	9:44	↓		↓	GP-205 0-2	↓	↓	↓	↓													
13		9:46				GP-205 4-6																	
14		9:52				GP-206 0-2																	
15		9:54				GP-206 2-4																	
16		10:03				GP-207 0-2																	
17		10:05				GP-207 4-6																	
18		10:17				GP-208 2-4																	
19		10:19				GP-208 6-8																	
20	↓	10:28	↓		↓	GP-209 2-4	↓	↓	↓	↓													

Container Type: P-Poly G-Glass S-Sterile V-VOA | Matrix: S-Soil SD-Solid D-Sludge WW-Waste Water GW-Ground Water SW-Surface Water DW-Drinking Water O-Oil W-Wipes F-Filters

Cooler Present ✓ Yes ___ No
Seals Intact ___ Yes ___ No NA: ___
Cooler Temp: 3.9 ICE ON

Internal Use Only
[ ] Pickup
[ ] Technicians _____

Preservation Code 1- NP, 2- HC1, 3- H_2SO_4, 4- HNO_3, 5- NaOH, 6- MeOH, 7- Asorbic Acid, 8- ZnAct, 9- _____

Sampled by: Marissa Kelly

Comments:

Relinquished by: (Signature)	Date/Time	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Date/Time	Received by: (Signature)	Date/Time
[signature]	6/4/15 13:22	[signature]	6/4/15 15:34				
Relinquished by: (Signature)	Date/Time	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Date/Time	Received by: (Signature)	Date/Time

*By circling MA-MCP, client acknowledges samples were collected in accordance with MADEP CAM VII A

Please fax all changes to Chain of Custody in writing.

1 (White) Lab Copy 2 (Yellow) Client Receipt

10/26/04 A

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Tel. (401) 461-7181 Fax (401) 461-4486
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CHAIN OF CUSTODY

Turn Time ✓ Standard Other _____
If faster than 5 days, prior approval by laboratory is required # _____

State where samples were collected from:
MA (RI) CT NH NJ NY ME Other _____

Is this project for any of the following:
MA-MCP Navy USACE Other _____

Reporting Limits

ESS LAB PROJECT ID: 1506154

Electronic Deliverable Yes ✓ No ____
Format: Excel ✓ Access ___ PDF ✓ Other _____

Co. Name	Project #	Project Name (20 Char. or less)
GZA	33175.06	Riverside Square

Contact Person	Address
Albert Flori	East Prov. RI

City	State	Zip	PO#
Providence	RI	02909	33175.06

Telephone #	Fax #	Email Address
401-421-4140		aflori@gza.com

Circle and/or Write Required Analysis

ESS LAB Sample #	Date	Collection Time	COMP	GRAB	MATRIX	Sample Identification (20 Char. or less)	Pres Code	Number of Containers	Type of Containers	8260 VOA / 624 / 524.2	8021 MTBE/BTEX / 8015 GRO / VPH w/targets	8100 TPH / 8015 DRO	EPH w/o PAHs / EPH w/PAHs / EPH 4 Diesel	8081 Pesticides / 8082 PCB / 608 Pesticides / 608 PCB	8270 SVOA / 625 / PAH 8270	RCRA5 / RCRA8 / PP13 / TAL23	TCLP-RCRA8 / NBC7	MCP-METALS (13) / MCP-METALS (13) w/Hg					
21	6-4-15	10:30	X		S	GP-209 6-8	1 (6)	2	6/u	X													
	↓	8:10		X	DI	TP060415DI	2	1	↓	↓													
22		8:12		X	Meat	TP060415M	6	1															
		9:30		X	DI	EB060415GP	2	3															

Container Type: P-Poly G-Glass S-Sterile V-VOA

Matrix: S-Soil SD-Solid D-Sludge WW-Waste Water GW-Ground Water SW-Surface Water DW-Drinking Water O-Oil W-Wipes F-Filters

Cooler Present ✓ Yes ___ No

Seals Intact ___ Yes ___ No NA: ____

Cooler Temp: ✓ 3.9 ICE CHT

Internal Use Only
[ ] Pickup
[ ] Technicians ____

Preservation Code 1- NP, 2- HCl, 3- H_2SO_4, 4- HNO_3, 5- NaOH, 6- MeOH, 7- Asorbic Acid, 8- ZnAct, 9- _____

Sampled by: Marissa Kelly

Comments:

Relinquished by: (Signature)	Date/Time	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Date/Time	Received by: (Signature)	Date/Time
[signature]	6/4/15 13:22	[signature]	6/4/15 1324				
Relinquished by: (Signature)	Date/Time	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Date/Time	Received by: (Signature)	Date/Time

*By circling MA-MCP, client acknowledges samples were collected in accordance with MADEP CAM VII A

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1 (White) Lab Copy 2 (Yellow) Client Receipt

10/26/04 A

CERTIFICATE OF ANALYSIS

Al Flori
GZA GeoEnvironmental, Inc.
530 Broadway
Providence, RI 02909

RE: Riverside Square (03.0033175.06)
ESS Laboratory Work Order Number: 1506153

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 4:04 pm, Jun 11, 2015

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 NELAC Standards, A2LA 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: Riverside Square

ESS Laboratory Work Order: 1506153

SAMPLE RECEIPT

The following samples were received on June 04, 2015 for the analyses specified on the enclosed Chain of Custody Record.

Lab Number	Sample Name	Matrix	Analysis
1506153-01	EB060415GP	Ground Water	8260B
1506153-02	TP060415DI	Aqueous	8260B

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Riverside Square

ESS Laboratory Work Order: 1506153

PROJECT NARRATIVE

No unusual observations noted.

End of Project Narrative.

DATA USABILITY LINKS

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: Riverside Square

ESS Laboratory Work Order: 1506153

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
8015D - 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: Riverside Square
Client Sample ID: EB060415GP
Date Sampled: 06/04/15 09:30
Percent Solids: N/A
Initial Volume: 5
Final Volume: 5
Extraction Method: 5030B

ESS Laboratory Work Order: 1506153
ESS Laboratory Sample ID: 1506153-01
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	06/09/15 11:37	CYF0113	CF50844
1,1,1-Trichloroethane	ND (0.0010)		8260B		1	06/09/15 11:37	CYF0113	CF50844
1,1,2,2-Tetrachloroethane	ND (0.0005)		8260B		1	06/09/15 11:37	CYF0113	CF50844
1,1,2-Trichloroethane	ND (0.0010)		8260B		1	06/09/15 11:37	CYF0113	CF50844
1,1-Dichloroethane	ND (0.0010)		8260B		1	06/09/15 11:37	CYF0113	CF50844
1,1-Dichloroethene	ND (0.0010)		8260B		1	06/09/15 11:37	CYF0113	CF50844
1,1-Dichloropropene	ND (0.0020)		8260B		1	06/09/15 11:37	CYF0113	CF50844
1,2,3-Trichlorobenzene	ND (0.0010)		8260B		1	06/09/15 11:37	CYF0113	CF50844
1,2,3-Trichloropropane	ND (0.0010)		8260B		1	06/09/15 11:37	CYF0113	CF50844
1,2,4-Trichlorobenzene	ND (0.0010)		8260B		1	06/09/15 11:37	CYF0113	CF50844
1,2,4-Trimethylbenzene	ND (0.0010)		8260B		1	06/09/15 11:37	CYF0113	CF50844
1,2-Dibromo-3-Chloropropane	ND (0.0050)		8260B		1	06/09/15 11:37	CYF0113	CF50844
1,2-Dibromoethane	ND (0.0010)		8260B		1	06/09/15 11:37	CYF0113	CF50844
1,2-Dichlorobenzene	ND (0.0010)		8260B		1	06/09/15 11:37	CYF0113	CF50844
1,2-Dichloroethane	ND (0.0010)		8260B		1	06/09/15 11:37	CYF0113	CF50844
1,2-Dichloropropane	ND (0.0010)		8260B		1	06/09/15 11:37	CYF0113	CF50844
1,3,5-Trimethylbenzene	ND (0.0010)		8260B		1	06/09/15 11:37	CYF0113	CF50844
1,3-Dichlorobenzene	ND (0.0010)		8260B		1	06/09/15 11:37	CYF0113	CF50844
1,3-Dichloropropane	ND (0.0010)		8260B		1	06/09/15 11:37	CYF0113	CF50844
1,4-Dichlorobenzene	ND (0.0010)		8260B		1	06/09/15 11:37	CYF0113	CF50844
1,4-Dioxane - Screen	ND (0.500)		8260B		1	06/09/15 11:37	CYF0113	CF50844
1-Chlorohexane	ND (0.0010)		8260B		1	06/09/15 11:37	CYF0113	CF50844
2,2-Dichloropropane	ND (0.0010)		8260B		1	06/09/15 11:37	CYF0113	CF50844
2-Butanone	ND (0.0100)		8260B		1	06/09/15 11:37	CYF0113	CF50844
2-Chlorotoluene	ND (0.0010)		8260B		1	06/09/15 11:37	CYF0113	CF50844
2-Hexanone	ND (0.0100)		8260B		1	06/09/15 11:37	CYF0113	CF50844
4-Chlorotoluene	ND (0.0010)		8260B		1	06/09/15 11:37	CYF0113	CF50844
4-Isopropyltoluene	ND (0.0010)		8260B		1	06/09/15 11:37	CYF0113	CF50844
4-Methyl-2-Pentanone	ND (0.0250)		8260B		1	06/09/15 11:37	CYF0113	CF50844
Acetone	ND (0.0100)		8260B		1	06/09/15 11:37	CYF0113	CF50844
Benzene	ND (0.0010)		8260B		1	06/09/15 11:37	CYF0113	CF50844
Bromobenzene	ND (0.0020)		8260B		1	06/09/15 11:37	CYF0113	CF50844

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Riverside Square
Client Sample ID: EB060415GP
Date Sampled: 06/04/15 09:30
Percent Solids: N/A
Initial Volume: 5
Final Volume: 5
Extraction Method: 5030B

ESS Laboratory Work Order: 1506153
ESS Laboratory Sample ID: 1506153-01
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	06/09/15 11:37	CYF0113	CF50844
Bromodichloromethane	ND (0.0006)		8260B		1	06/09/15 11:37	CYF0113	CF50844
Bromoform	ND (0.0010)		8260B		1	06/09/15 11:37	CYF0113	CF50844
Bromomethane	ND (0.0020)		8260B		1	06/09/15 11:37	CYF0113	CF50844
Carbon Disulfide	ND (0.0010)		8260B		1	06/09/15 11:37	CYF0113	CF50844
Carbon Tetrachloride	ND (0.0010)		8260B		1	06/09/15 11:37	CYF0113	CF50844
Chlorobenzene	ND (0.0010)		8260B		1	06/09/15 11:37	CYF0113	CF50844
Chloroethane	ND (0.0020)		8260B		1	06/09/15 11:37	CYF0113	CF50844
Chloroform	ND (0.0010)		8260B		1	06/09/15 11:37	CYF0113	CF50844
Chloromethane	ND (0.0020)		8260B		1	06/09/15 11:37	CYF0113	CF50844
cis-1,2-Dichloroethene	ND (0.0010)		8260B		1	06/09/15 11:37	CYF0113	CF50844
cis-1,3-Dichloropropene	ND (0.0004)		8260B		1	06/09/15 11:37	CYF0113	CF50844
Dibromochloromethane	ND (0.0010)		8260B		1	06/09/15 11:37	CYF0113	CF50844
Dibromomethane	ND (0.0010)		8260B		1	06/09/15 11:37	CYF0113	CF50844
Dichlorodifluoromethane	ND (0.0020)		8260B		1	06/09/15 11:37	CYF0113	CF50844
Diethyl Ether	ND (0.0010)		8260B		1	06/09/15 11:37	CYF0113	CF50844
Di-isopropyl ether	ND (0.0010)		8260B		1	06/09/15 11:37	CYF0113	CF50844
Ethyl tertiary-butyl ether	ND (0.0010)		8260B		1	06/09/15 11:37	CYF0113	CF50844
Ethylbenzene	ND (0.0010)		8260B		1	06/09/15 11:37	CYF0113	CF50844
Hexachlorobutadiene	ND (0.0006)		8260B		1	06/09/15 11:37	CYF0113	CF50844
Hexachloroethane	ND (0.0010)		8260B		1	06/09/15 11:37	CYF0113	CF50844
Isopropylbenzene	ND (0.0010)		8260B		1	06/09/15 11:37	CYF0113	CF50844
Methyl tert-Butyl Ether	ND (0.0010)		8260B		1	06/09/15 11:37	CYF0113	CF50844
Methylene Chloride	ND (0.0020)		8260B		1	06/09/15 11:37	CYF0113	CF50844
Naphthalene	ND (0.0010)		8260B		1	06/09/15 11:37	CYF0113	CF50844
n-Butylbenzene	ND (0.0010)		8260B		1	06/09/15 11:37	CYF0113	CF50844
n-Propylbenzene	ND (0.0010)		8260B		1	06/09/15 11:37	CYF0113	CF50844
sec-Butylbenzene	ND (0.0010)		8260B		1	06/09/15 11:37	CYF0113	CF50844
Styrene	ND (0.0010)		8260B		1	06/09/15 11:37	CYF0113	CF50844
tert-Butylbenzene	ND (0.0010)		8260B		1	06/09/15 11:37	CYF0113	CF50844
Tertiary-amyl methyl ether	ND (0.0010)		8260B		1	06/09/15 11:37	CYF0113	CF50844
Tetrachloroethene	ND (0.0010)		8260B		1	06/09/15 11:37	CYF0113	CF50844

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Riverside Square
Client Sample ID: EB060415GP
Date Sampled: 06/04/15 09:30
Percent Solids: N/A
Initial Volume: 5
Final Volume: 5
Extraction Method: 5030B

ESS Laboratory Work Order: 1506153
ESS Laboratory Sample ID: 1506153-01
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	06/09/15 11:37	CYF0113	CF50844
Toluene	ND (0.0010)		8260B		1	06/09/15 11:37	CYF0113	CF50844
trans-1,2-Dichloroethene	ND (0.0010)		8260B		1	06/09/15 11:37	CYF0113	CF50844
trans-1,3-Dichloropropene	ND (0.0004)		8260B		1	06/09/15 11:37	CYF0113	CF50844
Trichloroethene	ND (0.0010)		8260B		1	06/09/15 11:37	CYF0113	CF50844
Trichlorofluoromethane	ND (0.0010)		8260B		1	06/09/15 11:37	CYF0113	CF50844
Vinyl Acetate	ND (0.0050)		8260B		1	06/09/15 11:37	CYF0113	CF50844
Vinyl Chloride	ND (0.0010)		8260B		1	06/09/15 11:37	CYF0113	CF50844
Xylene O	ND (0.0010)		8260B		1	06/09/15 11:37	CYF0113	CF50844
Xylene P,M	ND (0.0020)		8260B		1	06/09/15 11:37	CYF0113	CF50844
Xylenes (Total)	ND (0.0020)		8260B		1	06/09/15 11:37		[CALC]
Trihalomethanes (Total)	ND (0.0010)		8260B			06/09/15 11:37		[CALC]

	%Recovery	*Qualifier*	*Limits*
Surrogate: 1,2-Dichloroethane-d4	*107 %*		*70-130*
Surrogate: 4-Bromofluorobenzene	*83 %*		*70-130*
Surrogate: Dibromofluoromethane	*97 %*		*70-130*
Surrogate: Toluene-d8	*78 %*		*70-130*

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Riverside Square
Client Sample ID: TP060415DI
Date Sampled: 06/04/15 00:00
Percent Solids: N/A
Initial Volume: 5
Final Volume: 5
Extraction Method: 5030B

ESS Laboratory Work Order: 1506153
ESS Laboratory Sample ID: 1506153-02
Sample Matrix: Aqueous
Units: mg/L
Analyst: MD

8260B Volatile Organic Compounds

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
1,1,1,2-Tetrachloroethane	ND (0.0010)		8260B		1	06/09/15 4:18	CYF0113	CF50844
1,1,1-Trichloroethane	ND (0.0010)		8260B		1	06/09/15 4:18	CYF0113	CF50844
1,1,2,2-Tetrachloroethane	ND (0.0005)		8260B		1	06/09/15 4:18	CYF0113	CF50844
1,1,2-Trichloroethane	ND (0.0010)		8260B		1	06/09/15 4:18	CYF0113	CF50844
1,1-Dichloroethane	ND (0.0010)		8260B		1	06/09/15 4:18	CYF0113	CF50844
1,1-Dichloroethene	ND (0.0010)		8260B		1	06/09/15 4:18	CYF0113	CF50844
1,1-Dichloropropene	ND (0.0020)		8260B		1	06/09/15 4:18	CYF0113	CF50844
1,2,3-Trichlorobenzene	ND (0.0010)		8260B		1	06/09/15 4:18	CYF0113	CF50844
1,2,3-Trichloropropane	ND (0.0010)		8260B		1	06/09/15 4:18	CYF0113	CF50844
1,2,4-Trichlorobenzene	ND (0.0010)		8260B		1	06/09/15 4:18	CYF0113	CF50844
1,2,4-Trimethylbenzene	ND (0.0010)		8260B		1	06/09/15 4:18	CYF0113	CF50844
1,2-Dibromo-3-Chloropropane	ND (0.0050)		8260B		1	06/09/15 4:18	CYF0113	CF50844
1,2-Dibromoethane	ND (0.0010)		8260B		1	06/09/15 4:18	CYF0113	CF50844
1,2-Dichlorobenzene	ND (0.0010)		8260B		1	06/09/15 4:18	CYF0113	CF50844
1,2-Dichloroethane	ND (0.0010)		8260B		1	06/09/15 4:18	CYF0113	CF50844
1,2-Dichloropropane	ND (0.0010)		8260B		1	06/09/15 4:18	CYF0113	CF50844
1,3,5-Trimethylbenzene	ND (0.0010)		8260B		1	06/09/15 4:18	CYF0113	CF50844
1,3-Dichlorobenzene	ND (0.0010)		8260B		1	06/09/15 4:18	CYF0113	CF50844
1,3-Dichloropropane	ND (0.0010)		8260B		1	06/09/15 4:18	CYF0113	CF50844
1,4-Dichlorobenzene	ND (0.0010)		8260B		1	06/09/15 4:18	CYF0113	CF50844
1,4-Dioxane - Screen	ND (0.500)		8260B		1	06/09/15 4:18	CYF0113	CF50844
1-Chlorohexane	ND (0.0010)		8260B		1	06/09/15 4:18	CYF0113	CF50844
2,2-Dichloropropane	ND (0.0010)		8260B		1	06/09/15 4:18	CYF0113	CF50844
2-Butanone	ND (0.0100)		8260B		1	06/09/15 4:18	CYF0113	CF50844
2-Chlorotoluene	ND (0.0010)		8260B		1	06/09/15 4:18	CYF0113	CF50844
2-Hexanone	ND (0.0100)		8260B		1	06/09/15 4:18	CYF0113	CF50844
4-Chlorotoluene	ND (0.0010)		8260B		1	06/09/15 4:18	CYF0113	CF50844
4-Isopropyltoluene	ND (0.0010)		8260B		1	06/09/15 4:18	CYF0113	CF50844
4-Methyl-2-Pentanone	ND (0.0250)		8260B		1	06/09/15 4:18	CYF0113	CF50844
Acetone	ND (0.0100)		8260B		1	06/09/15 4:18	CYF0113	CF50844
Benzene	ND (0.0010)		8260B		1	06/09/15 4:18	CYF0113	CF50844
Bromobenzene	ND (0.0020)		8260B		1	06/09/15 4:18	CYF0113	CF50844

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Riverside Square
Client Sample ID: TP060415DI
Date Sampled: 06/04/15 00:00
Percent Solids: N/A
Initial Volume: 5
Final Volume: 5
Extraction Method: 5030B

ESS Laboratory Work Order: 1506153
ESS Laboratory Sample ID: 1506153-02
Sample Matrix: Aqueous
Units: mg/L
Analyst: MD

8260B Volatile Organic Compounds

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
Bromochloromethane	ND (0.0010)		8260B		1	06/09/15 4:18	CYF0113	CF50844
Bromodichloromethane	ND (0.0006)		8260B		1	06/09/15 4:18	CYF0113	CF50844
Bromoform	ND (0.0010)		8260B		1	06/09/15 4:18	CYF0113	CF50844
Bromomethane	ND (0.0020)		8260B		1	06/09/15 4:18	CYF0113	CF50844
Carbon Disulfide	ND (0.0010)		8260B		1	06/09/15 4:18	CYF0113	CF50844
Carbon Tetrachloride	ND (0.0010)		8260B		1	06/09/15 4:18	CYF0113	CF50844
Chlorobenzene	ND (0.0010)		8260B		1	06/09/15 4:18	CYF0113	CF50844
Chloroethane	ND (0.0020)		8260B		1	06/09/15 4:18	CYF0113	CF50844
Chloroform	ND (0.0010)		8260B		1	06/09/15 4:18	CYF0113	CF50844
Chloromethane	ND (0.0020)		8260B		1	06/09/15 4:18	CYF0113	CF50844
cis-1,2-Dichloroethene	ND (0.0010)		8260B		1	06/09/15 4:18	CYF0113	CF50844
cis-1,3-Dichloropropene	ND (0.0004)		8260B		1	06/09/15 4:18	CYF0113	CF50844
Dibromochloromethane	ND (0.0010)		8260B		1	06/09/15 4:18	CYF0113	CF50844
Dibromomethane	ND (0.0010)		8260B		1	06/09/15 4:18	CYF0113	CF50844
Dichlorodifluoromethane	ND (0.0020)		8260B		1	06/09/15 4:18	CYF0113	CF50844
Diethyl Ether	ND (0.0010)		8260B		1	06/09/15 4:18	CYF0113	CF50844
Di-isopropyl ether	ND (0.0010)		8260B		1	06/09/15 4:18	CYF0113	CF50844
Ethyl tertiary-butyl ether	ND (0.0010)		8260B		1	06/09/15 4:18	CYF0113	CF50844
Ethylbenzene	ND (0.0010)		8260B		1	06/09/15 4:18	CYF0113	CF50844
Hexachlorobutadiene	ND (0.0006)		8260B		1	06/09/15 4:18	CYF0113	CF50844
Hexachloroethane	ND (0.0010)		8260B		1	06/09/15 4:18	CYF0113	CF50844
Isopropylbenzene	ND (0.0010)		8260B		1	06/09/15 4:18	CYF0113	CF50844
Methyl tert-Butyl Ether	ND (0.0010)		8260B		1	06/09/15 4:18	CYF0113	CF50844
Methylene Chloride	ND (0.0020)		8260B		1	06/09/15 4:18	CYF0113	CF50844
Naphthalene	ND (0.0010)		8260B		1	06/09/15 4:18	CYF0113	CF50844
n-Butylbenzene	ND (0.0010)		8260B		1	06/09/15 4:18	CYF0113	CF50844
n-Propylbenzene	ND (0.0010)		8260B		1	06/09/15 4:18	CYF0113	CF50844
sec-Butylbenzene	ND (0.0010)		8260B		1	06/09/15 4:18	CYF0113	CF50844
Styrene	ND (0.0010)		8260B		1	06/09/15 4:18	CYF0113	CF50844
tert-Butylbenzene	ND (0.0010)		8260B		1	06/09/15 4:18	CYF0113	CF50844
Tertiary-amyl methyl ether	ND (0.0010)		8260B		1	06/09/15 4:18	CYF0113	CF50844
Tetrachloroethene	ND (0.0010)		8260B		1	06/09/15 4:18	CYF0113	CF50844

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Riverside Square
Client Sample ID: TP060415DI
Date Sampled: 06/04/15 00:00
Percent Solids: N/A
Initial Volume: 5
Final Volume: 5
Extraction Method: 5030B

ESS Laboratory Work Order: 1506153
ESS Laboratory Sample ID: 1506153-02
Sample Matrix: Aqueous
Units: mg/L
Analyst: MD

8260B Volatile Organic Compounds

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
Tetrahydrofuran	ND (0.0050)		8260B		1	06/09/15 4:18	CYF0113	CF50844
Toluene	ND (0.0010)		8260B		1	06/09/15 4:18	CYF0113	CF50844
trans-1,2-Dichloroethene	ND (0.0010)		8260B		1	06/09/15 4:18	CYF0113	CF50844
trans-1,3-Dichloropropene	ND (0.0004)		8260B		1	06/09/15 4:18	CYF0113	CF50844
Trichloroethene	ND (0.0010)		8260B		1	06/09/15 4:18	CYF0113	CF50844
Trichlorofluoromethane	ND (0.0010)		8260B		1	06/09/15 4:18	CYF0113	CF50844
Vinyl Acetate	ND (0.0050)		8260B		1	06/09/15 4:18	CYF0113	CF50844
Vinyl Chloride	ND (0.0010)		8260B		1	06/09/15 4:18	CYF0113	CF50844
Xylene O	ND (0.0010)		8260B		1	06/09/15 4:18	CYF0113	CF50844
Xylene P,M	ND (0.0020)		8260B		1	06/09/15 4:18	CYF0113	CF50844
Xylenes (Total)	ND (0.0020)		8260B		1	06/09/15 4:18		[CALC]
Trihalomethanes (Total)	ND (0.0010)		8260B			06/09/15 4:18		[CALC]

	%Recovery	*Qualifier*	*Limits*
Surrogate: 1,2-Dichloroethane-d4	*108 %*		*70-130*
Surrogate: 4-Bromofluorobenzene	*81 %*		*70-130*
Surrogate: Dibromofluoromethane	*99 %*		*70-130*
Surrogate: Toluene-d8	*78 %*		*70-130*

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Riverside Square

ESS Laboratory Work Order: 1506153

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
8260B Volatile Organic Compounds										
Batch CF50844 - 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: Riverside Square

ESS Laboratory Work Order: 1506153

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
8260B Volatile Organic Compounds										
Batch CF50844 - 5030B										
Dibromochloromethane	ND	0.0010	mg/L							
Dibromomethane	ND	0.0010	mg/L							
Dichlorodifluoromethane	ND	0.0020	mg/L							
Diethyl Ether	ND	0.0010	mg/L							
Di-isopropyl ether	ND	0.0010	mg/L							
Ethyl tertiary-butyl ether	ND	0.0010	mg/L							
Ethylbenzene	ND	0.0010	mg/L							
Hexachlorobutadiene	ND	0.0006	mg/L							
Hexachloroethane	ND	0.0010	mg/L							
Isopropylbenzene	ND	0.0010	mg/L							
Methyl tert-Butyl Ether	ND	0.0010	mg/L							
Methylene Chloride	ND	0.0020	mg/L							
Naphthalene	ND	0.0010	mg/L							
n-Butylbenzene	ND	0.0010	mg/L							
n-Propylbenzene	ND	0.0010	mg/L							
sec-Butylbenzene	ND	0.0010	mg/L							
Styrene	ND	0.0010	mg/L							
tert-Butylbenzene	ND	0.0010	mg/L							
Tertiary-amyl methyl ether	ND	0.0010	mg/L							
Tetrachloroethene	ND	0.0010	mg/L							
Tetrahydrofuran	ND	0.0050	mg/L							
Toluene	ND	0.0010	mg/L							
trans-1,2-Dichloroethene	ND	0.0010	mg/L							
trans-1,3-Dichloropropene	ND	0.0004	mg/L							
Trichloroethene	ND	0.0010	mg/L							
Trichlorofluoromethane	ND	0.0010	mg/L							
Vinyl Acetate	ND	0.0050	mg/L							
Vinyl Chloride	ND	0.0010	mg/L							
Xylene O	ND	0.0010	mg/L							
Xylene P,M	ND	0.0020	mg/L							
Surrogate: 1,2-Dichloroethane-d4	*0.0264*		mg/L	*0.02500*		*105*	*70-130*			
Surrogate: 4-Bromofluorobenzene	*0.0207*		mg/L	*0.02500*		*83*	*70-130*			
Surrogate: Dibromofluoromethane	*0.0243*		mg/L	*0.02500*		*97*	*70-130*			
Surrogate: Toluene-d8	*0.0197*		mg/L	*0.02500*		*79*	*70-130*			
LCS										
1,1,1,2-Tetrachloroethane	9.68		ug/L	10.00		97	70-130			
1,1,1-Trichloroethane	10.8		ug/L	10.00		108	70-130			
1,1,2,2-Tetrachloroethane	8.97		ug/L	10.00		90	70-130			
1,1,2-Trichloroethane	9.68		ug/L	10.00		97	70-130			
1,1-Dichloroethane	9.93		ug/L	10.00		99	70-130			
1,1-Dichloroethene	9.02		ug/L	10.00		90	70-130			
1,1-Dichloropropene	9.50		ug/L	10.00		95	70-130			
1,2,3-Trichlorobenzene	8.33		ug/L	10.00		83	70-130			
1,2,3-Trichloropropane	8.41		ug/L	10.00		84	70-130			
1,2,4-Trichlorobenzene	8.03		ug/L	10.00		80	70-130			

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Riverside Square

ESS Laboratory Work Order: 1506153

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
8260B Volatile Organic Compounds										
Batch CF50844 - 5030B										
1,2,4-Trimethylbenzene	9.52		ug/L	10.00		95	70-130			
1,2-Dibromo-3-Chloropropane	8.58		ug/L	10.00		86	70-130			
1,2-Dibromoethane	9.67		ug/L	10.00		97	70-130			
1,2-Dichlorobenzene	9.18		ug/L	10.00		92	70-130			
1,2-Dichloroethane	10.9		ug/L	10.00		109	70-130			
1,2-Dichloropropane	9.20		ug/L	10.00		92	70-130			
1,3,5-Trimethylbenzene	10.2		ug/L	10.00		102	70-130			
1,3-Dichlorobenzene	9.45		ug/L	10.00		94	70-130			
1,3-Dichloropropane	9.65		ug/L	10.00		96	70-130			
1,4-Dichlorobenzene	9.75		ug/L	10.00		98	70-130			
1,4-Dioxane - Screen	157		ug/L	200.0		78	0-332			
1-Chlorohexane	8.31		ug/L	10.00		83	70-130			
2,2-Dichloropropane	9.10		ug/L	10.00		91	70-130			
2-Butanone	43.0		ug/L	50.00		86	70-130			
2-Chlorotoluene	9.68		ug/L	10.00		97	70-130			
2-Hexanone	43.9		ug/L	50.00		88	70-130			
4-Chlorotoluene	9.80		ug/L	10.00		98	70-130			
4-Isopropyltoluene	9.69		ug/L	10.00		97	70-130			
4-Methyl-2-Pentanone	42.9		ug/L	50.00		86	70-130			
Acetone	46.3		ug/L	50.00		93	70-130			
Benzene	9.57		ug/L	10.00		96	70-130			
Bromobenzene	9.18		ug/L	10.00		92	70-130			
Bromochloromethane	10.3		ug/L	10.00		103	70-130			
Bromodichloromethane	9.88		ug/L	10.00		99	70-130			
Bromoform	9.24		ug/L	10.00		92	70-130			
Bromomethane	9.32		ug/L	10.00		93	70-130			
Carbon Disulfide	9.23		ug/L	10.00		92	70-130			
Carbon Tetrachloride	10.8		ug/L	10.00		108	70-130			
Chlorobenzene	9.18		ug/L	10.00		92	70-130			
Chloroethane	9.85		ug/L	10.00		98	70-130			
Chloroform	10.5		ug/L	10.00		105	70-130			
Chloromethane	10.8		ug/L	10.00		108	70-130			
cis-1,2-Dichloroethene	9.80		ug/L	10.00		98	70-130			
cis-1,3-Dichloropropene	9.48		ug/L	10.00		95	70-130			
Dibromochloromethane	9.47		ug/L	10.00		95	70-130			
Dibromomethane	10.2		ug/L	10.00		102	70-130			
Dichlorodifluoromethane	12.1		ug/L	10.00		121	70-130			
Diethyl Ether	9.29		ug/L	10.00		93	70-130			
Di-isopropyl ether	8.56		ug/L	10.00		86	70-130			
Ethyl tertiary-butyl ether	9.00		ug/L	10.00		90	70-130			
Ethylbenzene	9.23		ug/L	10.00		92	70-130			
Hexachlorobutadiene	10.3		ug/L	10.00		103	70-130			
Hexachloroethane	8.66		ug/L	10.00		87	70-130			
Isopropylbenzene	9.31		ug/L	10.00		93	70-130			
Methyl tert-Butyl Ether	9.08		ug/L	10.00		91	70-130			

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Riverside Square

ESS Laboratory Work Order: 1506153

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
8260B Volatile Organic Compounds										
Batch CF50844 - 5030B										
Methylene Chloride	9.38		ug/L	10.00		94	70-130			
Naphthalene	9.18		ug/L	10.00		92	70-130			
n-Butylbenzene	9.24		ug/L	10.00		92	70-130			
n-Propylbenzene	9.38		ug/L	10.00		94	70-130			
sec-Butylbenzene	9.92		ug/L	10.00		99	70-130			
Styrene	8.86		ug/L	10.00		89	70-130			
tert-Butylbenzene	9.53		ug/L	10.00		95	70-130			
Tertiary-amyl methyl ether	8.98		ug/L	10.00		90	70-130			
Tetrachloroethene	8.93		ug/L	10.00		89	70-130			
Tetrahydrofuran	8.94		ug/L	10.00		89	70-130			
Toluene	10.2		ug/L	10.00		102	70-130			
trans-1,2-Dichloroethene	8.35		ug/L	10.00		84	70-130			
trans-1,3-Dichloropropene	9.25		ug/L	10.00		92	70-130			
Trichloroethene	10.5		ug/L	10.00		105	70-130			
Trichlorofluoromethane	9.80		ug/L	10.00		98	70-130			
Vinyl Acetate	10.6		ug/L	10.00		106	70-130			
Vinyl Chloride	11.4		ug/L	10.00		114	70-130			
Xylene O	9.72		ug/L	10.00		97	70-130			
Xylene P,M	19.1		ug/L	20.00		95	70-130			
Surrogate: 1,2-Dichloroethane-d4	*0.0304*		mg/L	*0.02500*		*122*	*70-130*			
Surrogate: 4-Bromofluorobenzene	*0.0284*		mg/L	*0.02500*		*114*	*70-130*			
Surrogate: Dibromofluoromethane	*0.0295*		mg/L	*0.02500*		*118*	*70-130*			
Surrogate: Toluene-d8	*0.0268*		mg/L	*0.02500*		*107*	*70-130*			
LCS Dup										
1,1,1,2-Tetrachloroethane	9.74		ug/L	10.00		97	70-130	0.6	25	
1,1,1-Trichloroethane	11.0		ug/L	10.00		110	70-130	1	25	
1,1,2,2-Tetrachloroethane	9.06		ug/L	10.00		91	70-130	1	25	
1,1,2-Trichloroethane	9.66		ug/L	10.00		97	70-130	0.2	25	
1,1-Dichloroethane	10.0		ug/L	10.00		100	70-130	0.7	25	
1,1-Dichloroethene	9.20		ug/L	10.00		92	70-130	2	25	
1,1-Dichloropropene	9.35		ug/L	10.00		94	70-130	2	25	
1,2,3-Trichlorobenzene	8.17		ug/L	10.00		82	70-130	2	25	
1,2,3-Trichloropropane	8.66		ug/L	10.00		87	70-130	3	25	
1,2,4-Trichlorobenzene	7.89		ug/L	10.00		79	70-130	2	25	
1,2,4-Trimethylbenzene	9.52		ug/L	10.00		95	70-130	0	25	
1,2-Dibromo-3-Chloropropane	9.13		ug/L	10.00		91	70-130	6	25	
1,2-Dibromoethane	9.42		ug/L	10.00		94	70-130	3	25	
1,2-Dichlorobenzene	9.05		ug/L	10.00		90	70-130	1	25	
1,2-Dichloroethane	11.0		ug/L	10.00		110	70-130	0.5	25	
1,2-Dichloropropane	9.20		ug/L	10.00		92	70-130	0	25	
1,3,5-Trimethylbenzene	10.2		ug/L	10.00		102	70-130	0.1	25	
1,3-Dichlorobenzene	9.40		ug/L	10.00		94	70-130	0.5	25	
1,3-Dichloropropane	9.83		ug/L	10.00		98	70-130	2	25	
1,4-Dichlorobenzene	9.50		ug/L	10.00		95	70-130	3	25	
1,4-Dioxane - Screen	162		ug/L	200.0		81	0-332	3	200	

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Riverside Square

ESS Laboratory Work Order: 1506153

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
8260B Volatile Organic Compounds										
Batch CF50844 - 5030B										
1-Chlorohexane	8.55		ug/L	10.00		86	70-130	3	25	
2,2-Dichloropropane	9.25		ug/L	10.00		92	70-130	2	25	
2-Butanone	44.8		ug/L	50.00		90	70-130	4	25	
2-Chlorotoluene	9.55		ug/L	10.00		96	70-130	1	25	
2-Hexanone	45.1		ug/L	50.00		90	70-130	3	25	
4-Chlorotoluene	9.92		ug/L	10.00		99	70-130	1	25	
4-Isopropyltoluene	9.66		ug/L	10.00		97	70-130	0.3	25	
4-Methyl-2-Pentanone	44.7		ug/L	50.00		89	70-130	4	25	
Acetone	48.9		ug/L	50.00		98	70-130	5	25	
Benzene	9.61		ug/L	10.00		96	70-130	0.4	25	
Bromobenzene	9.17		ug/L	10.00		92	70-130	0.1	25	
Bromochloromethane	10.5		ug/L	10.00		105	70-130	2	25	
Bromodichloromethane	10.1		ug/L	10.00		101	70-130	2	25	
Bromoform	9.13		ug/L	10.00		91	70-130	1	25	
Bromomethane	8.87		ug/L	10.00		89	70-130	5	25	
Carbon Disulfide	9.29		ug/L	10.00		93	70-130	0.6	25	
Carbon Tetrachloride	11.1		ug/L	10.00		111	70-130	3	25	
Chlorobenzene	9.08		ug/L	10.00		91	70-130	1	25	
Chloroethane	9.52		ug/L	10.00		95	70-130	3	25	
Chloroform	10.6		ug/L	10.00		106	70-130	0.6	25	
Chloromethane	10.9		ug/L	10.00		109	70-130	1	25	
cis-1,2-Dichloroethene	9.98		ug/L	10.00		100	70-130	2	25	
cis-1,3-Dichloropropene	9.52		ug/L	10.00		95	70-130	0.4	25	
Dibromochloromethane	9.59		ug/L	10.00		96	70-130	1	25	
Dibromomethane	10.6		ug/L	10.00		106	70-130	4	25	
Dichlorodifluoromethane	12.0		ug/L	10.00		120	70-130	0.2	25	
Diethyl Ether	9.44		ug/L	10.00		94	70-130	2	25	
Di-isopropyl ether	8.58		ug/L	10.00		86	70-130	0.2	25	
Ethyl tertiary-butyl ether	9.25		ug/L	10.00		92	70-130	3	25	
Ethylbenzene	9.35		ug/L	10.00		94	70-130	1	25	
Hexachlorobutadiene	10.0		ug/L	10.00		100	70-130	3	25	
Hexachloroethane	9.06		ug/L	10.00		91	70-130	5	25	
Isopropylbenzene	9.34		ug/L	10.00		93	70-130	0.3	25	
Methyl tert-Butyl Ether	9.20		ug/L	10.00		92	70-130	1	25	
Methylene Chloride	9.51		ug/L	10.00		95	70-130	1	25	
Naphthalene	9.01		ug/L	10.00		90	70-130	2	25	
n-Butylbenzene	9.09		ug/L	10.00		91	70-130	2	25	
n-Propylbenzene	9.33		ug/L	10.00		93	70-130	0.5	25	
sec-Butylbenzene	9.73		ug/L	10.00		97	70-130	2	25	
Styrene	8.84		ug/L	10.00		88	70-130	0.2	25	
tert-Butylbenzene	9.37		ug/L	10.00		94	70-130	2	25	
Tertiary-amyl methyl ether	9.00		ug/L	10.00		90	70-130	0.2	25	
Tetrachloroethene	9.01		ug/L	10.00		90	70-130	0.9	25	
Tetrahydrofuran	8.97		ug/L	10.00		90	70-130	0.3	25	
Toluene	10.2		ug/L	10.00		102	70-130	0.8	25	

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Riverside Square

ESS Laboratory Work Order: 1506153

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
8260B Volatile Organic Compounds										
Batch CF50844 - 5030B										
trans-1,2-Dichloroethene	8.55		ug/L	10.00		86	70-130	2	25	
trans-1,3-Dichloropropene	9.61		ug/L	10.00		96	70-130	4	25	
Trichloroethene	10.3		ug/L	10.00		103	70-130	2	25	
Trichlorofluoromethane	9.94		ug/L	10.00		99	70-130	1	25	
Vinyl Acetate	11.0		ug/L	10.00		110	70-130	3	25	
Vinyl Chloride	11.3		ug/L	10.00		113	70-130	0.9	25	
Xylene O	9.89		ug/L	10.00		99	70-130	2	25	
Xylene P,M	19.2		ug/L	20.00		96	70-130	0.6	25	
Surrogate: 1,2-Dichloroethane-d4	*0.0306*		mg/L	*0.02500*		*123*	*70-130*			
Surrogate: 4-Bromofluorobenzene	*0.0280*		mg/L	*0.02500*		*112*	*70-130*			
Surrogate: Dibromofluoromethane	*0.0291*		mg/L	*0.02500*		*116*	*70-130*			
Surrogate: Toluene-d8	*0.0266*		mg/L	*0.02500*		*106*	*70-130*			

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Riverside Square ESS Laboratory Work Order: 1506153

Notes and Definitions

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

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Riverside Square

ESS Laboratory Work Order: 1506153

ESS LABORATORY CERTIFICATIONS AND ACCREDITATIONS

ENVIRONMENTAL

Department of Defense (DoD) Environmental Laboratory Accreditation Program (ELAP)
A2LA Accredited: Testing Cert# 2864.01
http://www.a2la.org/scopepdf/2864-01.pdf

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: RI0002
http://www.maine.gov/dhhs/mecdc/environmental-health/water/dwp-services/labcert/documents/AllLabs.xls

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.depweb.state.pa.us/portal/server.pt/community/labs/13780/laboratory_accreditation_program/590095

CHEMISTRY

A2LA Accredited: Testing Cert # 2864.01
Lead in Paint, Phthalates, Lead in Children's Metals Products (Including Jewelry)
http://www.A2LA.org/dirsearchnew/newsearch.cfm

CPSC ID# 1141
Lead Paint, Lead in Children's Metals Jewelry
http://www.cpsc.gov/cgi-bin/labapplist.aspx

Sample and Cooler Receipt Checklist

Client: GZA GeoEnvironmental, Inc.
Client Project ID: _____
Shipped/Delivered Via: Client

ESS Project ID: 15060153
Date Project Due: 6/11/15
Days For Project: 5 Day

Items to be checked upon receipt:

1. Air Bill Manifest Present? *** No**
   Air No.:
2. Were Custody Seals Present? **No**
3. Were Custody Seals Intact? **N/A**
4. Is Radiation count < 100 CPM? **Yes**
5. Is a cooler present? **Yes**
   Cooler Temp: **3.9**
   Iced With: **Ice**
6. Was COC included with samples? **Yes**
7. Was COC signed and dated by client? **Yes**
8. Does the COC match the sample **Yes**
9. Is COC complete and correct? **Yes**
10. Are the samples properly preserved? **Yes**
11. Proper sample containers used? **Yes**
12. Any air bubbles in the VOA vials? **No**
13. Holding times exceeded? **No**
14. Sufficient sample volumes? **Yes**
15. Any Subcontracting needed? **No**
16. Are ESS labels on correct containers? **Yes | No**
17. Were samples received intact? **Yes | No**

ESS Sample IDs: _____
Sub Lab: _____
Analysis: _____
TAT: _____

18. Was there need to call project manager to discuss status? If yes, please explain.

_____

_____

_____

Who was called?: _____ By whom? _____

Sample Number	Properly Preserved	Container Type	# of Containers	Preservative
1	Yes	40 ml - VOA	3	HCL
2	Yes	40 ml - VOA	1	HCL

Completed By: [signature] Date/Time: 6/4/15 1530
Reviewed By: [signature] Date/Time: 6/4/15 1610

ESS Laboratory

Division of Thielsch Engineering, Inc.
185 Frances Avenue, Cranston, RI 02910-2211
Tel. (401) 461-7181 Fax (401) 461-4486
www.esslaboratory.com

CHAIN OF CUSTODY

Page ~~3~~ 1 of ~~3~~ 1 6/4/15

Turn Time ✓ Standard Other _____
If faster than 5 days, prior approval by laboratory is required # _____

State where samples were collected from:
MA (RI) CT NH NJ NY ME Other _____

Is this project for any of the following:
MA-MCP Navy USACE Other _____

Reporting Limits

ESS LAB PROJECT ID: 1506153

Electronic Deliverable Yes ✓ No ____
Format: Excel ✓ Access ___ PDF ✓ Other _____

Co. Name	Project #	Project Name (20 Char. or less)
GZA	33175.06	Riverside Square

Contact Person	Address
Albert Flori	East Prov. RI

City	State	Zip	PO#
Providence	RI	02909	33175.06

Telephone #	Fax #	Email Address
401-421-4140		aflori@gza.com

Circle and/or Write Required Analysis

ESS LAB Sample #	Date	Collection Time	COMP	GRAB	MATRIX	Sample Identification (20 Char. or less)	Pres Code	Number of Containers	Type of Containers	624 / 524.2 / 8260 VOA	VPH w/targets / 8015 GRO / 8021 MTBE/BTEX	8015 DRO / 8100 TPH	EPH 4 Diesel / EPH w/PAHs / EPH w/o PAHs	608 PCB / 608 Pesticides / 8081 Pesticides	PAH 8270 / 625 / 8270 SVOA	TAL23 / PP13 / RCRA8 / RCRA5	NBC7 / TCLP-RCRA8	MCP-METALS (13) w/Hg / MCP-METALS (13)					
	6-4-15	10:30	X		S	GP-209 6-8	1 (6)	2	6/4	X													
2	↓	8:10		X	DI	TP060415DI	2	1	↓	↓													
		8:12		X	Acid	TP060415M	6	1															
1	↓	9:30		X	DI	EB060415GP	2	3	↓	↓													

Container Type: P-Poly G-Glass S-Sterile V-VOA | Matrix: S-Soil SD-Solid D-Sludge WW-Waste Water GW-Ground Water SW-Surface Water DW-Drinking Water O-Oil W-Wipes F-Filters

Cooler Present ✓ Yes ___ No
Seals Intact ___ Yes ___ No NA: ____
Cooler Temp: ✓ 3.9 ICE CHT

Internal Use Only
[ ] Pickup
[ ] Technicians ____

Preservation Code 1- NP, 2- HC1, 3- H_2SO_4, 4- HNO_3, 5- NaOH, 6- MeOH, 7- Asorbic Acid, 8- ZnAct, 9- _____

Sampled by: Marissa Kelly

Comments:

Relinquished by: (Signature)	Date/Time	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Date/Time	Received by: (Signature)	Date/Time
[signature]	6/4/15 13:22	[signature]	6/4/15 1324				
Relinquished by: (Signature)	Date/Time	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Date/Time	Received by: (Signature)	Date/Time

*By circling MA-MCP, client acknowledges samples were collected in accordance with MADEP CAM VII A

Please fax all changes to Chain of Custody in writing.

1 (White) Lab Copy 2 (Yellow) Client Receipt

10/26/04 A

APPENDIX F

GROUNDWATER LABORATORY ANALYSIS

CERTIFICATE OF ANALYSIS

Al Flori
GZA GeoEnvironmental, Inc.
530 Broadway
Providence, RI 02909

RE: Riverside Square (03.0033175.04)
ESS Laboratory Work Order Number: 1504687

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

Laurel Stoddard
Laboratory Director

REVIEWED
By ESS Laboratory at 3:32 pm, May 06, 2015

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 NELAC Standards, A2LA 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: Riverside Square

ESS Laboratory Work Order: 1504687

SAMPLE RECEIPT

The following samples were received on April 29, 2015 for the analyses specified on the enclosed Chain of Custody Record.

Lab Number	Sample Name	Matrix	Analysis
1504687-01	GZ-2D	Ground Water	8260B
1504687-02	GZ-3D	Ground Water	8260B
1504687-03	GZ-4	Ground Water	8260B

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Riverside Square

ESS Laboratory Work Order: 1504687

PROJECT NARRATIVE

8021B by 8260B Volatile Halogenated Compounds

CE50427-BS1	**Blank Spike recovery is above upper control limit (B+).**
	Bromomethane (141% @ 70-130%)
CE50427-BSD1	**Blank Spike recovery is above upper control limit (B+).**
	Bromomethane (138% @ 70-130%)
CYE0045-CCV1	**Continuing Calibration recovery is above upper control limit (C+).**
	Bromomethane (138% @ 70-130%)

No other observations noted.

End of Project Narrative.

DATA USABILITY LINKS

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: Riverside Square

ESS Laboratory Work Order: 1504687

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
8015D - 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 and Graphite Furnace Digestion
3020A - Aqueous 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

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Riverside Square
Client Sample ID: GZ-2D
Date Sampled: 04/28/15 13:02
Percent Solids: N/A
Initial Volume: 5
Final Volume: 5
Extraction Method: 5030B

ESS Laboratory Work Order: 1504687
ESS Laboratory Sample ID: 1504687-01
Sample Matrix: Ground Water
Units: mg/L
Analyst: ZLC

8021B by 8260B Volatile Halogenated Compounds

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
1,1,1-Trichloroethane	ND (0.0010)		8260B		1	05/04/15 16:39	CYE0045	CE50427
1,1,2,2-Tetrachloroethane	ND (0.0005)		8260B		1	05/04/15 16:39	CYE0045	CE50427
1,1,2-Trichloro-1,2,2-trifluoroethane	ND (0.0010)		8260B		1	05/04/15 16:39	CYE0045	CE50427
1,1,2-Trichloroethane	ND (0.0010)		8260B		1	05/04/15 16:39	CYE0045	CE50427
1,1-Dichloroethane	ND (0.0010)		8260B		1	05/04/15 16:39	CYE0045	CE50427
1,1-Dichloroethene	ND (0.0010)		8260B		1	05/04/15 16:39	CYE0045	CE50427
1,2-Dichlorobenzene	ND (0.0010)		8260B		1	05/04/15 16:39	CYE0045	CE50427
1,2-Dichloroethane	ND (0.0010)		8260B		1	05/04/15 16:39	CYE0045	CE50427
1,2-Dichloropropane	ND (0.0010)		8260B		1	05/04/15 16:39	CYE0045	CE50427
1,3-Dichlorobenzene	ND (0.0010)		8260B		1	05/04/15 16:39	CYE0045	CE50427
1,4-Dichlorobenzene	ND (0.0010)		8260B		1	05/04/15 16:39	CYE0045	CE50427
Bromodichloromethane	ND (0.0006)		8260B		1	05/04/15 16:39	CYE0045	CE50427
Bromoform	ND (0.0010)		8260B		1	05/04/15 16:39	CYE0045	CE50427
Bromomethane	ND (0.0020)		8260B		1	05/04/15 16:39	CYE0045	CE50427
Carbon Tetrachloride	ND (0.0010)		8260B		1	05/04/15 16:39	CYE0045	CE50427
Chlorobenzene	ND (0.0010)		8260B		1	05/04/15 16:39	CYE0045	CE50427
Chloroethane	ND (0.0020)		8260B		1	05/04/15 16:39	CYE0045	CE50427
Chloroform	ND (0.0010)		8260B		1	05/04/15 16:39	CYE0045	CE50427
Chloromethane	ND (0.0020)		8260B		1	05/04/15 16:39	CYE0045	CE50427
cis-1,2-Dichloroethene	ND (0.0010)		8260B		1	05/04/15 16:39	CYE0045	CE50427
cis-1,3-Dichloropropene	ND (0.0004)		8260B		1	05/04/15 16:39	CYE0045	CE50427
Dibromochloromethane	ND (0.0010)		8260B		1	05/04/15 16:39	CYE0045	CE50427
Dibromomethane	ND (0.0010)		8260B		1	05/04/15 16:39	CYE0045	CE50427
Dichlorodifluoromethane	ND (0.0020)		8260B		1	05/04/15 16:39	CYE0045	CE50427
Tetrachloroethene	ND (0.0010)		8260B		1	05/04/15 16:39	CYE0045	CE50427
trans-1,2-Dichloroethene	ND (0.0010)		8260B		1	05/04/15 16:39	CYE0045	CE50427
trans-1,3-Dichloropropene	ND (0.0004)		8260B		1	05/04/15 16:39	CYE0045	CE50427
Trichloroethene	**0.0029** (0.0010)		8260B		1	05/04/15 16:39	CYE0045	CE50427
Trichlorofluoromethane	ND (0.0010)		8260B		1	05/04/15 16:39	CYE0045	CE50427
Vinyl Chloride	ND (0.0010)		8260B		1	05/04/15 16:39	CYE0045	CE50427

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Riverside Square
Client Sample ID: GZ-2D
Date Sampled: 04/28/15 13:02
Percent Solids: N/A
Initial Volume: 5
Final Volume: 5
Extraction Method: 5030B

ESS Laboratory Work Order: 1504687
ESS Laboratory Sample ID: 1504687-01
Sample Matrix: Ground Water
Units: mg/L
Analyst: ZLC

8021B by 8260B Volatile Halogenated Compounds

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
		%Recovery	*Qualifier*	*Limits*				
Surrogate: 1,2-Dichloroethane-d4		*88 %*		*70-130*				
Surrogate: 4-Bromofluorobenzene		*91 %*		*70-130*				
Surrogate: Dibromofluoromethane		*100 %*		*70-130*				
Surrogate: Toluene-d8		*94 %*		*70-130*				

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Riverside Square
Client Sample ID: GZ-3D
Date Sampled: 04/28/15 16:19
Percent Solids: N/A
Initial Volume: 5
Final Volume: 5
Extraction Method: 5030B

ESS Laboratory Work Order: 1504687
ESS Laboratory Sample ID: 1504687-02
Sample Matrix: Ground Water
Units: mg/L
Analyst: ZLC

8021B by 8260B Volatile Halogenated Compounds

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
1,1,1-Trichloroethane	ND (0.0010)		8260B		1	05/04/15 17:06	CYE0045	CE50427
1,1,2,2-Tetrachloroethane	ND (0.0005)		8260B		1	05/04/15 17:06	CYE0045	CE50427
1,1,2-Trichloro-1,2,2-trifluoroethane	ND (0.0010)		8260B		1	05/04/15 17:06	CYE0045	CE50427
1,1,2-Trichloroethane	ND (0.0010)		8260B		1	05/04/15 17:06	CYE0045	CE50427
1,1-Dichloroethane	ND (0.0010)		8260B		1	05/04/15 17:06	CYE0045	CE50427
1,1-Dichloroethene	ND (0.0010)		8260B		1	05/04/15 17:06	CYE0045	CE50427
1,2-Dichlorobenzene	ND (0.0010)		8260B		1	05/04/15 17:06	CYE0045	CE50427
1,2-Dichloroethane	ND (0.0010)		8260B		1	05/04/15 17:06	CYE0045	CE50427
1,2-Dichloropropane	ND (0.0010)		8260B		1	05/04/15 17:06	CYE0045	CE50427
1,3-Dichlorobenzene	ND (0.0010)		8260B		1	05/04/15 17:06	CYE0045	CE50427
1,4-Dichlorobenzene	ND (0.0010)		8260B		1	05/04/15 17:06	CYE0045	CE50427
Bromodichloromethane	ND (0.0006)		8260B		1	05/04/15 17:06	CYE0045	CE50427
Bromoform	ND (0.0010)		8260B		1	05/04/15 17:06	CYE0045	CE50427
Bromomethane	ND (0.0020)		8260B		1	05/04/15 17:06	CYE0045	CE50427
Carbon Tetrachloride	ND (0.0010)		8260B		1	05/04/15 17:06	CYE0045	CE50427
Chlorobenzene	ND (0.0010)		8260B		1	05/04/15 17:06	CYE0045	CE50427
Chloroethane	ND (0.0020)		8260B		1	05/04/15 17:06	CYE0045	CE50427
Chloroform	ND (0.0010)		8260B		1	05/04/15 17:06	CYE0045	CE50427
Chloromethane	ND (0.0020)		8260B		1	05/04/15 17:06	CYE0045	CE50427
cis-1,2-Dichloroethene	ND (0.0010)		8260B		1	05/04/15 17:06	CYE0045	CE50427
cis-1,3-Dichloropropene	ND (0.0004)		8260B		1	05/04/15 17:06	CYE0045	CE50427
Dibromochloromethane	ND (0.0010)		8260B		1	05/04/15 17:06	CYE0045	CE50427
Dibromomethane	ND (0.0010)		8260B		1	05/04/15 17:06	CYE0045	CE50427
Dichlorodifluoromethane	ND (0.0020)		8260B		1	05/04/15 17:06	CYE0045	CE50427
Tetrachloroethene	ND (0.0010)		8260B		1	05/04/15 17:06	CYE0045	CE50427
trans-1,2-Dichloroethene	ND (0.0010)		8260B		1	05/04/15 17:06	CYE0045	CE50427
trans-1,3-Dichloropropene	ND (0.0004)		8260B		1	05/04/15 17:06	CYE0045	CE50427
Trichloroethene	ND (0.0010)		8260B		1	05/04/15 17:06	CYE0045	CE50427
Trichlorofluoromethane	ND (0.0010)		8260B		1	05/04/15 17:06	CYE0045	CE50427
Vinyl Chloride	ND (0.0010)		8260B		1	05/04/15 17:06	CYE0045	CE50427

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Riverside Square
Client Sample ID: GZ-3D
Date Sampled: 04/28/15 16:19
Percent Solids: N/A
Initial Volume: 5
Final Volume: 5
Extraction Method: 5030B

ESS Laboratory Work Order: 1504687
ESS Laboratory Sample ID: 1504687-02
Sample Matrix: Ground Water
Units: mg/L
Analyst: ZLC

8021B by 8260B Volatile Halogenated Compounds

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
		%Recovery	*Qualifier*	*Limits*				
Surrogate: 1,2-Dichloroethane-d4		*91 %*		*70-130*				
Surrogate: 4-Bromofluorobenzene		*96 %*		*70-130*				
Surrogate: Dibromofluoromethane		*99 %*		*70-130*				
Surrogate: Toluene-d8		*97 %*		*70-130*				

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Riverside Square
Client Sample ID: GZ-4
Date Sampled: 04/28/15 12:46
Percent Solids: N/A
Initial Volume: 5
Final Volume: 5
Extraction Method: 5030B

ESS Laboratory Work Order: 1504687
ESS Laboratory Sample ID: 1504687-03
Sample Matrix: Ground Water
Units: mg/L
Analyst: ZLC

8021B by 8260B Volatile Halogenated Compounds

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
1,1,1-Trichloroethane	ND (0.0010)		8260B		1	05/04/15 17:33	CYE0045	CE50427
1,1,2,2-Tetrachloroethane	ND (0.0005)		8260B		1	05/04/15 17:33	CYE0045	CE50427
1,1,2-Trichloro-1,2,2-trifluoroethane	ND (0.0010)		8260B		1	05/04/15 17:33	CYE0045	CE50427
1,1,2-Trichloroethane	ND (0.0010)		8260B		1	05/04/15 17:33	CYE0045	CE50427
1,1-Dichloroethane	ND (0.0010)		8260B		1	05/04/15 17:33	CYE0045	CE50427
1,1-Dichloroethene	ND (0.0010)		8260B		1	05/04/15 17:33	CYE0045	CE50427
1,2-Dichlorobenzene	ND (0.0010)		8260B		1	05/04/15 17:33	CYE0045	CE50427
1,2-Dichloroethane	ND (0.0010)		8260B		1	05/04/15 17:33	CYE0045	CE50427
1,2-Dichloropropane	ND (0.0010)		8260B		1	05/04/15 17:33	CYE0045	CE50427
1,3-Dichlorobenzene	ND (0.0010)		8260B		1	05/04/15 17:33	CYE0045	CE50427
1,4-Dichlorobenzene	ND (0.0010)		8260B		1	05/04/15 17:33	CYE0045	CE50427
Bromodichloromethane	ND (0.0006)		8260B		1	05/04/15 17:33	CYE0045	CE50427
Bromoform	ND (0.0010)		8260B		1	05/04/15 17:33	CYE0045	CE50427
Bromomethane	ND (0.0020)		8260B		1	05/04/15 17:33	CYE0045	CE50427
Carbon Tetrachloride	ND (0.0010)		8260B		1	05/04/15 17:33	CYE0045	CE50427
Chlorobenzene	ND (0.0010)		8260B		1	05/04/15 17:33	CYE0045	CE50427
Chloroethane	ND (0.0020)		8260B		1	05/04/15 17:33	CYE0045	CE50427
Chloroform	ND (0.0010)		8260B		1	05/04/15 17:33	CYE0045	CE50427
Chloromethane	ND (0.0020)		8260B		1	05/04/15 17:33	CYE0045	CE50427
cis-1,2-Dichloroethene	ND (0.0010)		8260B		1	05/04/15 17:33	CYE0045	CE50427
cis-1,3-Dichloropropene	ND (0.0004)		8260B		1	05/04/15 17:33	CYE0045	CE50427
Dibromochloromethane	ND (0.0010)		8260B		1	05/04/15 17:33	CYE0045	CE50427
Dibromomethane	ND (0.0010)		8260B		1	05/04/15 17:33	CYE0045	CE50427
Dichlorodifluoromethane	ND (0.0020)		8260B		1	05/04/15 17:33	CYE0045	CE50427
Tetrachloroethene	**0.0014** (0.0010)		8260B		1	05/04/15 17:33	CYE0045	CE50427
trans-1,2-Dichloroethene	ND (0.0010)		8260B		1	05/04/15 17:33	CYE0045	CE50427
trans-1,3-Dichloropropene	ND (0.0004)		8260B		1	05/04/15 17:33	CYE0045	CE50427
Trichloroethene	**0.0254** (0.0010)		8260B		1	05/04/15 17:33	CYE0045	CE50427
Trichlorofluoromethane	ND (0.0010)		8260B		1	05/04/15 17:33	CYE0045	CE50427
Vinyl Chloride	ND (0.0010)		8260B		1	05/04/15 17:33	CYE0045	CE50427

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Riverside Square
Client Sample ID: GZ-4
Date Sampled: 04/28/15 12:46
Percent Solids: N/A
Initial Volume: 5
Final Volume: 5
Extraction Method: 5030B

ESS Laboratory Work Order: 1504687
ESS Laboratory Sample ID: 1504687-03
Sample Matrix: Ground Water
Units: mg/L
Analyst: ZLC

8021B by 8260B Volatile Halogenated Compounds

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
		%Recovery	Qualifier	Limits				
Surrogate: 1,2-Dichloroethane-d4		*91 %*		*70-130*				
Surrogate: 4-Bromofluorobenzene		*92 %*		*70-130*				
Surrogate: Dibromofluoromethane		*100 %*		*70-130*				
Surrogate: Toluene-d8		*98 %*		*70-130*				

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Riverside Square

ESS Laboratory Work Order: 1504687

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
8021B by 8260B Volatile Halogenated Compounds										
Batch CE50427 - 5030B										
Blank										
1,1,1-Trichloroethane	ND	0.0010	mg/L							
1,1,2,2-Tetrachloroethane	ND	0.0005	mg/L							
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	0.0010	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							
1,2-Dichlorobenzene	ND	0.0010	mg/L							
1,2-Dichloroethane	ND	0.0010	mg/L							
1,2-Dichloropropane	ND	0.0010	mg/L							
1,3-Dichlorobenzene	ND	0.0010	mg/L							
1,4-Dichlorobenzene	ND	0.0010	mg/L							
Bromodichloromethane	ND	0.0006	mg/L							
Bromoform	ND	0.0010	mg/L							
Bromomethane	ND	0.0020	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							
Tetrachloroethene	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 Chloride	ND	0.0010	mg/L							
Surrogate: 1,2-Dichloroethane-d4	*0.0237*		mg/L	*0.02500*		*95*	*70-130*			
Surrogate: 4-Bromofluorobenzene	*0.0225*		mg/L	*0.02500*		*90*	*70-130*			
Surrogate: Dibromofluoromethane	*0.0258*		mg/L	*0.02500*		*103*	*70-130*			
Surrogate: Toluene-d8	*0.0246*		mg/L	*0.02500*		*98*	*70-130*			
LCS										
1,1,1-Trichloroethane	11.4		ug/L	10.00		114	70-130			
1,1,2,2-Tetrachloroethane	9.53		ug/L	10.00		95	70-130			
1,1,2-Trichloro-1,2,2-trifluoroethane	9.94		ug/L	10.00		99	70-130			
1,1,2-Trichloroethane	10.2		ug/L	10.00		102	70-130			
1,1-Dichloroethane	10.5		ug/L	10.00		105	70-130			
1,1-Dichloroethene	9.98		ug/L	10.00		100	70-130			
1,2-Dichlorobenzene	10.6		ug/L	10.00		106	70-130			
1,2-Dichloroethane	10.3		ug/L	10.00		103	70-130			
1,2-Dichloropropane	9.55		ug/L	10.00		96	70-130			

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Riverside Square

ESS Laboratory Work Order: 1504687

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
8021B by 8260B Volatile Halogenated Compounds										
Batch CE50427 - 5030B										
1,3-Dichlorobenzene	10.4		ug/L	10.00		104	70-130			
1,4-Dichlorobenzene	11.1		ug/L	10.00		111	70-130			
Bromodichloromethane	10.4		ug/L	10.00		104	70-130			
Bromoform	10.7		ug/L	10.00		107	70-130			
Bromomethane	14.1		ug/L	10.00		141	70-130			B+
Carbon Tetrachloride	10.8		ug/L	10.00		108	70-130			
Chlorobenzene	10.6		ug/L	10.00		106	70-130			
Chloroethane	12.7		ug/L	10.00		127	70-130			
Chloroform	10.0		ug/L	10.00		100	70-130			
Chloromethane	8.54		ug/L	10.00		85	70-130			
cis-1,2-Dichloroethene	11.5		ug/L	10.00		115	70-130			
cis-1,3-Dichloropropene	9.47		ug/L	10.00		95	70-130			
Dibromochloromethane	10.9		ug/L	10.00		109	70-130			
Dibromomethane	10.0		ug/L	10.00		100	70-130			
Dichlorodifluoromethane	10.8		ug/L	10.00		108	70-130			
Tetrachloroethene	10.9		ug/L	10.00		109	70-130			
trans-1,2-Dichloroethene	9.51		ug/L	10.00		95	70-130			
trans-1,3-Dichloropropene	8.93		ug/L	10.00		89	70-130			
Trichloroethene	10.1		ug/L	10.00		101	70-130			
Trichlorofluoromethane	9.66		ug/L	10.00		97	70-130			
Vinyl Chloride	11.8		ug/L	10.00		118	70-130			
Surrogate: 1,2-Dichloroethane-d4	*0.0254*		mg/L	*0.02500*		*102*	*70-130*			
Surrogate: 4-Bromofluorobenzene	*0.0244*		mg/L	*0.02500*		*98*	*70-130*			
Surrogate: Dibromofluoromethane	*0.0279*		mg/L	*0.02500*		*111*	*70-130*			
Surrogate: Toluene-d8	*0.0249*		mg/L	*0.02500*		*99*	*70-130*			
LCS Dup										
1,1,1-Trichloroethane	11.0		ug/L	10.00		110	70-130	3	25	
1,1,2,2-Tetrachloroethane	10.5		ug/L	10.00		105	70-130	10	25	
1,1,2-Trichloro-1,2,2-trifluoroethane	9.55		ug/L	10.00		96	70-130	4	25	
1,1,2-Trichloroethane	9.83		ug/L	10.00		98	70-130	3	25	
1,1-Dichloroethane	10.5		ug/L	10.00		105	70-130	0.2	25	
1,1-Dichloroethene	9.54		ug/L	10.00		95	70-130	5	25	
1,2-Dichlorobenzene	11.0		ug/L	10.00		110	70-130	3	25	
1,2-Dichloroethane	10.1		ug/L	10.00		101	70-130	1	25	
1,2-Dichloropropane	9.99		ug/L	10.00		100	70-130	5	25	
1,3-Dichlorobenzene	10.4		ug/L	10.00		104	70-130	0.2	25	
1,4-Dichlorobenzene	10.9		ug/L	10.00		109	70-130	2	25	
Bromodichloromethane	10.2		ug/L	10.00		102	70-130	2	25	
Bromoform	10.2		ug/L	10.00		102	70-130	5	25	
Bromomethane	13.8		ug/L	10.00		138	70-130	2	25	B+
Carbon Tetrachloride	10.2		ug/L	10.00		102	70-130	6	25	
Chlorobenzene	10.2		ug/L	10.00		102	70-130	4	25	
Chloroethane	12.3		ug/L	10.00		123	70-130	3	25	
Chloroform	10.1		ug/L	10.00		101	70-130	1	25	
Chloromethane	8.47		ug/L	10.00		85	70-130	0.8	25	

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Riverside Square

ESS Laboratory Work Order: 1504687

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
8021B by 8260B Volatile Halogenated Compounds										
Batch CE50427 - 5030B										
cis-1,2-Dichloroethene	10.9		ug/L	10.00		109	70-130	6	25	
cis-1,3-Dichloropropene	9.37		ug/L	10.00		94	70-130	1	25	
Dibromochloromethane	10.5		ug/L	10.00		105	70-130	4	25	
Dibromomethane	9.92		ug/L	10.00		99	70-130	1	25	
Dichlorodifluoromethane	10.2		ug/L	10.00		102	70-130	6	25	
Tetrachloroethene	11.7		ug/L	10.00		117	70-130	7	25	
trans-1,2-Dichloroethene	9.38		ug/L	10.00		94	70-130	1	25	
trans-1,3-Dichloropropene	9.24		ug/L	10.00		92	70-130	3	25	
Trichloroethene	10.5		ug/L	10.00		105	70-130	4	25	
Trichlorofluoromethane	9.52		ug/L	10.00		95	70-130	1	25	
Vinyl Chloride	11.3		ug/L	10.00		113	70-130	4	25	
Surrogate: 1,2-Dichloroethane-d4	*0.0264*		mg/L	*0.02500*		*106*	*70-130*			
Surrogate: 4-Bromofluorobenzene	*0.0242*		mg/L	*0.02500*		*97*	*70-130*			
Surrogate: Dibromofluoromethane	*0.0282*		mg/L	*0.02500*		*113*	*70-130*			
Surrogate: Toluene-d8	*0.0241*		mg/L	*0.02500*		*96*	*70-130*			

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Riverside Square
ESS Laboratory Work Order: 1504687

Notes and Definitions

U	Analyte included in the analysis, but not detected
C+	Continuing Calibration recovery is above upper control limit (C+).
B+	Blank Spike recovery is above upper 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
[2C]	Result was taken from the second column. Dual column analysis.

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Riverside Square

ESS Laboratory Work Order: 1504687

ESS LABORATORY CERTIFICATIONS AND ACCREDITATIONS

ENVIRONMENTAL

Department of Defense (DoD) Environmental Laboratory Accreditation Program (ELAP)
A2LA Accredited: Testing Cert# 2864.01
http://www.a2la.org/scopepdf/2864-01.pdf

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: RI0002
http://www.maine.gov/dhhs/mecdc/environmental-health/water/dwp-services/labcert/documents/AllLabs.xls

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.depweb.state.pa.us/portal/server.pt/community/labs/13780/laboratory_accreditation_program/590095

CHEMISTRY

A2LA Accredited: Testing Cert # 2864.01
Lead in Paint, Phthalates, Lead in Children's Metals Products (Including Jewelry)
http://www.A2LA.org/dirsearchnew/newsearch.cfm

CPSC ID# 1141
Lead Paint, Lead in Children's Metals Jewelry
http://www.cpsc.gov/cgi-bin/labapplist.aspx

ESS Laboratory

Division of Thielsch Engineering, Inc.
185 Frances Avenue, Cranston, RI 02910-2211
Tel. (401) 461-7181 Fax (401) 461-4486
www.esslaboratory.com

CHAIN OF CUSTODY

Page 1 of 1

Turn Time ✓ Standard Other _____
If faster than 5 days, prior approval by laboratory is required # _____

State where samples were collected from:
MA (RI) CT NH NJ NY ME Other _____

Is this project for any of the following:
MA-MCP* Navy USACE Other _____

Reporting Limits

ESS LAB PROJECT ID: 1504687

Electronic Deliverable ✓ Yes ___ No Format PDF

Co. Name	Project #	Project Name (20 Char. or less)
GZA GeoEnvironmental	33175.06	Riverside

Contact Person	Address
Al Flori	530 Broadway

City	State	Zip	PO#
Providence	RI	02909	

Telephone #	Fax #	Email Address
401-421-4140	401-751-8613	aflori@gza.com

Circle and/or Write Required Analysis

ESS LAB Sample#	Date	Collection Time	COMP	GRAB	MATRIX	Sample Identification (20 Char. or less)	Number of Containers	Type of Containers	8260 / 524.2	624 / VPH	8021 MTBE/BTEX / 8015 GRO	8100 TPH / 8015 DRO / EPH	8081 Pesticides / 8082 PCB / No Targets	8270 / 625 / 608 Pesticides / 608 PCB	RCRA5 / RCRA8 / PAH only	TCLP8 / MCP / MCP-w/Hg / PP13 / NBC7 / TAL23	VOC 8010						
1	4/28/15	13:02		X	GW	GZ-2D	3	✓									X						
2	4/28/15	16:19		X	GW	GZ-3D	3	✓									X						
3	4/28/15	12:46		X	GW	GZ-4	3	✓									X						

Container Type: P-Poly G-Glass S-Sterile V-VOA | Matrix: S-Soil SD-Solid D-Sludge WW-Waste Water GW-Ground Water SW-Surface Water DW-Drinking Water O-Oil W-Wipes F-Filters

Cooler Present ✓ Yes ___ No
Seals Intact ___ Yes ___ No NA: _____
Cooler Temp: 1.0°C TB
Bagged
Internal Use Only [ ] Pickup [ ] Technicians _____
BB 4/29/15 1450

Comments:

Relinquished by: (Signature)	Date/Time	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Date/Time	Received by: (Signature)	Date/Time
[signature]	4/28/15	GZA Fedex		GZA Fedex	4/29/15 0930	[signature]	4/29/15 0930
Relinquished by: (Signature)	Date/Time	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Date/Time	Received by: (Signature)	Date/Time
[signature]	4/29/15 1450	[signature]	4/29/15 1542				

*MADEP requires that all additional calibrated analytes found during analysis be disclosed.

Please fax all changes to Chain of Custody in writing.

1 (White) Lab Copy 2 (Yellow) Client Receipt

APPENDIX G

FINAL DRAFT ELUR AND SMP

~~**Appendix G**~~

ENVIRONMENTAL LAND USAGE RESTRICTION

This Declaration of Environmental Land Usage Restriction ("Restriction") is made on this _____ day of _____, 20___ by the City of East Providence ~~**[property owner]**~~, and its successors and/or assigns (hereinafter, the "Grantor").

WITNESSETH:

WHEREAS, the Grantor ~~_____ (name)~~City of East Providence is the Owner in fee simple of certain real property identified as ~~**[specify Plat, Lot(s), address and Town or City]**~~Assessors Map 312, Parcel 12, Lot 20, Lot 21 and Lot22, 336 and 348 Bullocks Point Avenue and 12 Fenner Avenue, in East Providence, Rhode Island (the "Property"), more particularly described in Exhibit A (Legal Description) which is attached hereto and made a part hereof;

WHEREAS, the Property ~~(or portion thereof identified in the Class I survey which is attached hereto as Exhibit 2A and is made a part hereof)~~ (Site map is attached hereto as Exhibit B and is made a part hereof) has been determined to contain soil ~~and/or groundwater~~ which is contaminated with certain Hazardous Materials and/or petroleum in excess of applicable ~~[~~residential ~~or industrial/commercial~~ Direct Exposure Criteria, ~~and/or applicable groundwater objective] criteria~~ pursuant to the Rules and Regulations for the Investigation and Remediation of Hazardous Material Releases ("Remediation Regulations");

WHEREAS, the Grantor and the Department have determined that the environmental land use restrictions set forth below are consistent with the regulations adopted by the Rhode Island Department of Environmental Management ("Department") pursuant to R.I.G.L. § 23-19.14-1 and that this restriction shall be a Conservation Restriction pursuant to R.I.G.L. § 34-39--1 et. seq. and shall not be subject to the 30 year limitation provided in R.I.G.L. § 34-4-21;

WHEREAS, the Department's written approval of this Restriction is contained in the document entitled: ~~**[Remedial Decision Letter/ Settlement Agreement/**~~ Order of Approval~~/ **Remedial Approval Letter]**~~ issued pursuant to the Remediation Regulations;

WHEREAS, to prevent exposure to or migration of Hazardous Substances and to abate hazards to human health and/or the environment, and in accordance with the ~~**[Remedial Decision Letter/ Remedial Agreement/**~~ Order of Approval~~/ **Remedial Approval Letter]**~~, the Grantor desires to impose certain restrictions upon the use, occupancy, and activities of and at the ~~[~~Property~~/**Contaminated Site]**~~;

WHEREAS, the Grantor believes that this Restriction will effectively protect public health and the environment from such contamination; and

WHEREAS, the Grantor intends that such restrictions shall run with the land and be

binding upon and enforceable against the Grantor and the Grantor's successors and assigns.

NOW, THEREFORE, Grantor agrees as follows:

A. Restrictions Applicable to the [Property/Contaminated Site]: In accordance with the **[Remedial Decision Letter/ Remedial Agreement/** Order of Approval**/ Remedial Approval Letter]**, the use, occupancy and activity of and at the [Property**/ Contaminated Site]** is restricted as follows:

i. No (unrestricted) single family dwelling residential use of the [Property**/Contaminated Site]** shall be permitted that is contrary to Department approvals and restrictions contained herein;

ii. No groundwater at the [Property**/Contaminated Site]** shall be used as potable water;

iii. No soil at the [Property**/Contaminated Site]** shall be disturbed in any manner without written permission of the Department's Office of Waste Management, except as permitted in the Remedial Action Work Plan (RAWP) or Soil Management Plan (SMP) approved by the Department in a written approval letter dated _____(date) Exhibit B C and attached hereto;

[iv. Humans engaged in activities at the [Property**/Contaminated Site]** shall not be exposed to soils containing Hazardous Materials and/or petroleum in concentrations exceeding the applicable Department approved Direct Exposure Criteria set forth in the Remediation Regulations;

[v. Water at the **[Property/Contaminated Site]** shall be prohibited from infiltrating soils containing Hazardous Materials and/or petroleum in concentrations exceeding the applicable Department approved leachability criteria set forth in the Remediation Regulations;

[vi. No subsurface structures shall be constructed on the **[Property/Contaminated Site]** over groundwater containing Hazardous Materials and/or petroleum in concentrations exceeding the applicable Department approved GA or GB Groundwater Objectives set forth in the Remediation Regulations;

[vii. [v. The engineered controls at the [Property**/ Contaminated Site]** described in the **[**RAWP **or** SMP**]** contained in Exhibit B C attached hereto shall not be disturbed and shall be properly maintained to prevent humans engaged in [residential**/ or industrial/commercial]** activity from being exposed to soils containing Hazardous Materials and/or petroleum in concentrations exceeding the applicable Department-approved [residential**/ or industrial/commercial]** Direct Exposure Criteria in accordance with the Remediation Regulations; and

[viii. The engineered controls at the **[Property/ Contaminated Site]** described in the **[RAWP or Soil Management Plan SMP]** contained in Exhibit B attached hereto

~~shall not be disturbed and shall be properly maintained so that water does not infiltrate soils containing Hazardous Materials and/or petroleum in concentrations exceeding the applicable Department-approved leachability criteria set forth in the Remediation Regulations.~~

B. No action shall be taken, allowed, suffered, or omitted at the ~~[~~Property~~/ Contaminated Site]~~ if such action or omission is reasonably likely to:

i. Create a risk of migration of Hazardous Materials and/or petroleum;
ii. Create a potential hazard to human health or the environment; or
iii. Result in the disturbance of any engineering controls utilized at the ~~[~~Property~~/Contaminated Site]~~, except as permitted in the Department-approved ~~[RAWP or~~ **SMP~~]~~** contained in Exhibit ~~B~~C.

C. Emergencies: In the event of any emergency which presents a significant risk to human health or to the environment, including but not limited to, maintenance and repair of utility lines or a response to emergencies such as fire or flood, the application of Paragraphs A (iii.-v~~iii~~.) and B above may be suspended, provided such risk cannot be abated without suspending such Paragraphs and the Grantor complies with the following:

i. Grantor shall notify the Department's Office of Waste Management in writing of the emergency as soon as possible but no more than three (3) business days after Grantor's having learned of the emergency. (This does not remove Grantor's obligation to notify any other necessary state, local or federal agencies.);

ii. Grantor shall limit both the extent and duration of the suspension to the minimum period reasonable and necessary to adequately respond to the emergency;

iii. Grantor shall implement reasonable measures necessary to prevent actual, potential, present and future risk to human health and the environment resulting from such suspension;

iv. Grantor shall communicate at the time of written notification to the Department its intention to conduct the Emergency Response Actions and provide a schedule to complete the Emergency Response Actions;

v. Grantor shall continue to implement the Emergency Response Actions, on the schedule submitted to the Department, to ensure that the ~~[~~Property~~/Contaminated Site]~~ is remediated in accordance with the Remediation Regulations (or applicable variance) or restored to its condition prior to such emergency. Based upon information submitted to the Department at the time the ELUR was recorded pertaining to known environmental conditions at the ~~[~~Property~~/Contaminated Site]~~, emergency maintenance and repair of utility lines shall only require restoration of the ~~[~~Property~~/Contaminated Site]~~ to its condition prior to the maintenance and repair of the utility lines; and

vi. Grantor shall submit to the Department, within ten (10) days after the completion of the Emergency Response Action, a status report describing the emergency activities that have been completed.

D. Release of Restriction; Alterations of Subject Area: The Grantor shall not make, or allow or suffer to be made, any alteration of any kind in, to, or about any portion of the ~~[~~Property~~/Contaminated Site]~~ inconsistent with this Restriction unless the Grantor has received the Department's prior written approval for such alteration. If the Department determines that the proposed alteration is significant, the Department may require the amendment of this Restriction. Alterations deemed insignificant by the Department will be approved via a letter from the Department. The Department shall not approve any such alteration and shall not release the ~~[~~Property~~/Contaminated Site]~~ from the provisions of this Restriction unless the Grantor demonstrates to the Department's satisfaction that Grantor has managed the ~~[~~Property~~/Contaminated Site]~~ in accordance with applicable regulations.

E. Notice of Lessees and Other Holders of Interests in the ~~[~~Property~~/Contaminated Site]~~: The Grantor, or any future holder of any interest in the ~~[~~Property~~/Contaminated Site]~~, shall cause any lease, grant, or other transfer of any interest in the ~~[~~Property~~/Contaminated Site]~~ to include a provision expressly requiring the lessee, grantee, or transferee to comply with this Restriction. The failure to include such provision shall not affect the validity or applicability of this Restriction to the ~~[~~Property~~/Contaminated Site]~~.

F. Enforceability: If any court of competent jurisdiction determines that any provision of this Restriction is invalid or unenforceable, the Grantor shall notify the Department in writing within fourteen (14) days of such determination.

G. Binding Effect: All of the terms, covenants, and conditions of this Restriction shall run with the land and shall be binding on the Grantor, its successors and assigns, and each Owner and any other party entitled to control, possession or use of the ~~[~~Property~~/Contaminated Site]~~ during such period of Ownership or possession.

H. Inspection & Non-Compliance: It shall be the obligation of the Grantor, or any future holder of any interest in the ~~[~~Property~~/Contaminated Site]~~, to provide for annual inspections of the ~~[~~Property~~/Contaminated Site]~~ for compliance with the ELUR in accordance with Department requirements.

~~[~~An officer or Director of the ~~company~~ Grantor (City of East Providence) with direct knowledge of past and present conditions of the ~~[~~Property~~/Contaminated Site]~~ (the "~~Company~~ Grantor Representative"), or~~]~~ a~~A~~ qualified environmental professional will, on behalf of the Grantor or future holder of any interest in the ~~[~~Property~~/Contaminated Site]~~, evaluate the compliance status of the ~~[~~Property~~/Contaminated Site]~~ on an annual basis. Upon completion of the evaluation, the ~~[Company~~ Grantor Representative or~~]~~ environmental professional will prepare and simultaneously submit to the Department and to the Grantor or future holder of any interest in the ~~[~~Property~~/Contaminated Site]~~ an evaluation report detailing the findings of the inspection , and noting any compliance violations at the ~~[~~Property~~/Contaminated Site]~~. If the ~~[~~Property~~/Contaminated Site]~~ is determined to be out of compliance with the terms of the ELUR, the Grantor or future holder of any interest in the

~~[~~Property~~/Contaminated Site]~~ shall submit a corrective action plan in writing to the Department within ten (10) days of receipt of the evaluation report, indicating the plans to bring the ~~[~~Property~~/Contaminated Site]~~ into compliance with the ELUR, including, at a minimum, a schedule for implementation of the plan.

In the event of any violation of the terms of this Restriction, which remains uncured more than ninety (90) days after written notice of violation, all Department approvals and agreements relating to the ~~[~~Property~~/Contaminated Site]~~ may be voided at the sole discretion of the Department.

I. Terms Used Herein: The definitions of terms used herein shall be the same as the definitions contained in Section 3 (DEFINITIONS) of the Remediation Regulations.

IN WITNESS WHEREOF, the Grantor has hereunto set (his/her) hand and seal on the day and year set forth above.

~~[**Name of Person(s), company, LLC or LLP**]~~CITY OF EAST PROVIDENCE

By: _____ _____
Grantor (signature)_____ _____Grantor (typed name)

STATE OF RHODE ISLAND
COUNTY OF _____

In (CITY/TOWN), in said County and State, on the _____ day of _____, 20___, before me Personally appeared _____, to me known and known by me to be the party executing the foregoing instrument and (he/she) acknowledged said instrument by (him/her) executed to be (his/her) free act and deed.

Notary Public: _____

My Comm. Expires: _____

Exhibits: A – Legal Description
B – Site Plan
C – Soils Management Plan

EXHIBIT C
(To the Environmental Land Use Restriction)

SOILS MANAGEMENT PLAN

Map 312/Parcel 12/Lot 20, 21 & 22
336 and 348 Bullock Point Avenue, and 12 Fenner Avenue
East Providence, Rhode Island
(RIDEM Case #2009-010)

As part of RIDEM-approved remedial activities completed at 336 and 348 Bullock Point Avenue, and 12 Fenner Avenue identified as Assessor's Map 312, Parcel 12, Lots 20, 21 and 22, East Providence, RI (the "Property"), an Environmental Land Use Restriction (ELUR) has been recorded to help prevent humans engaged in activities at the Property (as defined in the ELUR) from being exposed to soils containing hazardous substances in concentrations exceeding the RIDEM-approved residential direct exposure criteria pursuant to the Rules and Regulations for the Investigation and Remediation of Hazardous Material Releases (Remediation Regulations). Specifically, the ELUR requires that the:

- Site use will be limited to restricted residential and/or commercial use. Restricted residential includes all residential uses with the exception of single family dwellings;
- Groundwater at the Property shall not be used as drinking water; and
- This *Soil Management Plan* will be implemented should disturbances of on-site soils be required on the Property.

This *Soils Management Plan* has been prepared to establish procedures that will be followed should future construction/maintenance activities at the Property require the need to manage the excavation of subsurface soils. The plan serves to supplement, and will be initiated by the RIDEM notification requirement established by the recorded ELUR for the Property.

Potential future construction/maintenance activities at the Property that could result in the excavation of subsurface soils may include the installation and/or maintenance of subsurface utilities, the construction of site structures, and/or surface pavement. Accordingly, this plan will be implemented whenever soils are disturbed within the Property.

A *Site Plan* depicting the relevant features of the Property is attached as Exhibit B. In accordance with Section A iii of the ELUR, no soil at the Property is to be disturbed in any manner without prior permission of the RIDEM's Office of Waste Management, except for emergencies; minor inspections; maintenance; and other activities if such other activities do not disturb the contaminated soil at the Property. As part of the notification process, the Property owner shall provide a brief written description of the anticipated activities involving soil excavation. The notification should be submitted to the RIDEM no later than 30 days prior to the proposed initiation of the activities. The description shall include an estimate of the volume of soil to be excavated, a list of the known and anticipated contaminants of concern, a Site figure clearly identifying the proposed areas to be excavated/disturbed, the duration of the project and the proposed disposal location of the soil.

Following written Notification, the RIDEM will determine the post-closure reporting requirements. Significant disturbances of regulated soil will require submission of a Closure Report for RIDEM review documenting that the activities were performed in accordance with this SMP and the RIDEM approved ELUR. Minor disturbances of regulated soil may be documented through the annual certification submitted in accordance with Section H (Inspection & Non-Compliance) of the RIDEM approved ELUR. The RIDEM will also make a determination regarding the necessity of performing Public Notice to abutting property owners/tenants concerning the proposed activities. Work associated with the Notification will not commence until written RIDEM approval has been issued. Once RIDEM approval has been issued, the RIDEM will be notified a minimum of two (2) days prior to the start of activities at the Property. If any significant alterations to the RIDEM approved plan be necessary, a written description of the proposed deviation will be submitted to the RIDEM for review and written approval shall be granted prior to initiating such changes.

In accordance with the ELUR, emergency work/utility repairs which require disturbing Property soils can be performed without prior written notification to RIDEM. Such work is subject to the requirements outlined in Section C of the ELUR. In addition to the RIDEM notification requirements and environmental considerations presented in that section, it is important that the contractor performing the emergency work/utility repairs be made aware of the Site conditions and provided with a copy of this Soil Management Plan.

CONTAMINANTS OF CONCERN

Chlorinated volatile organic compounds (CVOCs, primarily trichloroethene (TCE), tetrachloroethene (PCE), and 1,1,1- trichloroethane) have been identified as the contaminants of concern within subsurface soils beneath the "Former Plating Area" portion of the Property (north central). In a limited number of samples these compounds were detected at concentrations above the RIDEM Method 1 GB Leachability Criteria (GB-L) and/or Residential Direct Exposure Criteria. In addition, a significant percentage of the soil samples tested from this area exceeded the Massachusetts Department of Environmental Protection's (MassDEP's) S-3/GW-2 standard for TCE. This standard is associated with protection of indoor air quality, as discussed in the RAWP, and was used, therefore, because RIDEM has not yet developed an analogous soil standard.

There were no identified CVOCs in groundwater above Method 1 GB Groundwater Objectives.

Direct contact with surficial soil is anticipated as a long-term exposure pathway of concern at the Site due to the assumed presence of some metals and low level fuel oil constituents in some Site soil. Lead and arsenic were detected above the RDEC and/or Industrial/Commercial (I/C) DEC in a significant percentage of the limited number (six) of soil samples tested for metals. These two metals are fairly common contaminants in the urban environment, although they may also be present as a result of historical use of the Site as a plating/jewelry manufacturer. Fuel oil related constituents (as total petroleum hydrocarbons (TPH)) were also observed in soil samples at TPH concentrations above the RDEC in samples collected from one boring location below the former fuel oil line in one of the residential basements. The TPH is believed associated with the use and storage of fuel oil at the former residences.

To address the concerns associated with the CVOCs in soil above GB-L standards, the soils within the "Former Plating Area" were treated using soil vapor extraction (SVE). The presence of some metals above RDECs and I/C DECs, and TPH above RDECs will be addressed by the maintenance/installation of engineered barriers (buildings, pavement and/or soil capping landscaped areas).

DESCRIPTION AND MAINTENANCE OF TEMPORARY ENGINEERED CONTROLS

The engineered controls are an integral part of the ELUR and SMP and must be maintained to prevent potential significant human exposure to contaminated soils remaining at the Property. During the time period between building demolition and Property redevelopment, estimated to be approximately two years, the engineered controls on the Property will consist of following components:

- The existing concrete basement and slab on grade floors, and existing asphalt pavement coupled with a 6 foot high chain link perimeter fence with privacy fabric to restrict contact with Property.

- Asphalt patching to restore incidental damage to the asphalt pavement and/or asphalt capping of landscaped areas (i.e., exposed gravel/grassed areas around the residential buildings). The patch is to be at least 4 inches thick.

- If asphalt patching of exposed soil areas is not practical, these exposed soil areas will be capped with either two feet of clean soil, or a combination of permeable geosynthetic material (with minimum puncture strength of 120 lbs) followed by 4-inches of clean soil and 4-inches of natural bark mulch or adequate vegetation, or a combination of permeable geosynthetic material (with minimum puncture strength of 120 lbs) followed by 4-inches of ¾ inch crushed stone.

If disturbance of the structural integrity of the temporary engineered controls (within the perimeter fence, prior to final engineered controls in place as part of development), or any other activity inconsistent with the requirements of the ELUR is required at the Site (e.g., utility maintenance and/or repair, emergencies, etc.) which is inconsistent with the approved RAWP, RIDEM will be notified in writing prior to scheduled maintenance or repair, or in the case of an emergency, as soon as possible but no more than three (3) business days after Owner/Operator learns of the emergency. As previously discussed, and stated in Paragraph C of the ELUR, in the case of an emergency, the restrictions detailed in Paragraphs A (items iii thru v) and B of the ELUR may be temporarily suspended without first notifying RIDEM. In the case of scheduled excavation and/or maintenance or repair of subsurface utilities; RIDEM will be notified in writing, and a construction plan will be provided, prior to the proposed work. The basic health and safety procedures outlined in this SMP will be followed for excavation work conducted within the ELUR area.

ENGINEERED CONTROLS FOR FUTURE PROPERTY DEVELOPMENT

Following the completion of the SVE treatment of CVOCs soil to reduce concentrations to below GB-Ls, the potential for low level CVOC vapor intrusion from impacted soil into future occupied buildings and direct contact with Site soils has been identified as the primary potential exposure risks at the Site. Accordingly, the implementation of engineered controls, supported through the

establishment of the ELUR, has been selected as an appropriate remedial alternative for the low level CVOCs, metals and/or TPH in some of the soil on the Property. The majority of the final development land surfaces on the Property will consist of a concrete building slab, asphalt pavement, and vegetated landscaping. Surface areas of the Property, not located beneath the Property buildings, will have been prepared in accordance with one of the specifications summarized below or an equivalent engineered control approved by RIDEM:

- **Asphalt pavement** – Access and parking areas will be completed with a minimum ±4-inch thick asphalt pavement poured in-place over a minimum ±8-inch of clean sub-base of compacted gravel. (Note: If asphalt pavement is poured in lifts, as an example, two – 2 inch lifts (i.e., 2" binder and 2" finish) the cold seams of the upper and lower lifts must not overlap, and must have at least 2 feet of lateral separation.)
- **Concrete pavement/floors** – Walkways will be completed with minimum ±4-inch thick concrete pavement poured in-place over a minimum ±8-inch of clean sub-base of compacted gravel. The slab of the buildings will be completed with concrete at a nominal thickness of 4-inches or as specified by the architectural design.
- **Landscaped areas** – Soils in landscaped areas considered accessible will be capped with a combination of permeable geosynthetic material (with minimum puncture strength of 120 lbs) and ±1-foot of clean soil or two feet of clean soil. Note that landscaped areas selected to receive plantings will be prepared by pre-excavating trenches and/or holes to a minimum depth of ±2 feet and backfilling with clean, imported material. For shallower plantings (between ±1 and ±2 feet), the geosynthetic textile material will be placed at the bottom of the excavation, with a ±1-foot minimum cover.

In addition, to address the potential for CVOC vapor intrusion, new building (occupied structures) construction, shall include placement of a standard construction vapor barrier and underlying permeable soil/stone layer below the floor. The piping is to extend from below the floor to above the roof line to allow for future connection of a fan or fans to this piping, if needed. The stone/soil layer is to be of relatively high permeability to allow for use of low energy consuming fan(s) to achieve vacuums below the entire floor slab, if subsequent testing of soil vapor indicates the need for the fans. Strategically placed soil gas monitoring points are to be installed through the floor slab to allow for the below testing to be completed prior to occupancy of the building.

To confirm GZA's belief that the concentrations in soil vapor below the newly constructed future building will not require the conversion of the installed soil/stone layer into an active sub-slab depressurization (SSD) system, samples of soil gas will be collected from the soil gas monitoring points and these samples will be tested for Site CVOCs to confirm the concentrations are below levels of concern for protection of indoor air quality. Test results will be compared to RIDEM soil gas screening values (if these are adopted in the future) or, in the absence of RIDEM screening values, to MassDEP sub-slab screening values for protection of indoor air quality. If the levels are above the screening values, either of the following options may be followed:

1. SSD Operation and Monitoring: A fan(s) will be installed to the SSD piping outside of the building on the discharge pipe extended to above the rooftop and away from building air intakes. The fan(s) will be operated to maintain a vacuum below the building prior to and during occupancy. A plan for operation and monitoring of the SSD system will be submitted to RIDEM for review and approval. As discussed with RIDEM this plan is to require alarm notification of the tenant and owner if the blower is not achieving the

required vacuum (e.g., due to fan failure or power failure). Measures are to be described for prompt restoration of the fan operation. At least, annual checks that the system is operating and achieving vacuums are also to be included in the plan. If, after operating the SSD system for a period of time, it is evident that the VOC concentrations below the floor are too low to cause an indoor air issue, a report may be submitted to RIDEM requesting cessation of SSD operation; or

2. Indoor Air Testing: As an alternate means of demonstrating that an active SSD system is not required or to show the SSD system may be shut down, indoor air sampling and analysis may be performed. Under this approach, samples will be collected on multiple dates and under appropriate heating and ventilation operating conditions, to show that the concentrations in indoor air are below applicable RIDEM indoor air Criteria and therefore SSD operation is not required. The results of this testing are to be provided to RIDEM prior to shut down of the active system or prior to building occupancy.

If disturbance of the structural integrity of the engineered controls (including the SSD system and Site caps), or any other activity inconsistent with the requirements of the ELUR is required at the Site (e.g., utility maintenance and/or repair, emergencies, etc.), RIDEM will be notified in writing prior to scheduled maintenance or repair, or in the case of an emergency, as soon as possible but no more than three (3) business days after Owner/Operator learns of the emergency. As previously discussed, and stated in Paragraph C of the ELUR, in the case of an emergency, the restrictions detailed in Paragraphs A (items iii thru v) and B of the ELUR may be temporarily suspended without first notifying RIDEM. In the case of scheduled excavation and/or maintenance or repair of subsurface utilities; RIDEM will be notified in writing, and a construction plan will be provided, prior to the proposed work. The basic health and safety procedures outlined below in this SMP will be followed for excavation work conducted within the ELUR area.

SOIL MANAGEMENT GUIDELINES

The following presents the course of action that will be followed should soil disturbance within the Property occur:

1. As part of the RIDEM notification, the Property owner will provide a brief written description of the anticipated activity(ies) involving soil excavation. The description will include an estimate of the volume of soil to be excavated/disturbed and the duration of the construction project.

2. The selected contractor will be provided with a copy of this *Soil Management Plan* to ensure proper soil management.

3. Prior to the initiation of soil excavation, the selected contractor or any other personnel performing subsurface work at the Property will contact DIGSAFE and appropriate utility companies to identify and mark the location of below grade utilities.

4. Persons involved in the excavation and handling of the contaminated soil on the Property are to take appropriate health and safety precautions. Workers should wear, at a minimum, Level D personal protection equipment (PPE), including gloves and eye protection. Workers should also wash their hands with soap and water prior to eating, drinking, smoking, or leaving the site. Worker's safety boots are required to be brushed with a stiff bristle brush or similar instrument to remove residual soil. Used and disposable PPE is required to be disposed of

according to applicable local, State and Federal Regulations. All vehicles utilized during work shall be properly decontaminated as appropriate prior to leaving the site.

5. In the event that an unexpected observation or situation arises (of an environmental nature) during the work, construction activities will immediately cease. Workers will not attempt to handle the situation themselves, but will contact an environmental professional for further evaluation and direction.

6. During all earthwork activities and dust suppression (e.g. watering, etc) techniques will be employed.

7. Excavated soils will be staged and temporarily stored in a designated area of the property. Within reason, the storage location will be selected to limit the unauthorized access to the materials (i.e., away from public roadways/walkways). No regulated soil will be stockpiled on-site for more than 60 days without prior RIDEM approval.

8. Excavated regulated soils will be either stockpiled on polyethylene sheeting, or stored in roll-off type containers. In either case, the material in storage will be covered with secured polyethylene sheeting at the end of each workday. Stockpiled materials will be maintained with appropriate controls to limit the loss of the cover and protect against rainfall runoff and stormwater erosion.

9. Soils excavated from the Property may not be used off-site for use as fill on residential properties. Excavated material will not be re-used off-site as fill on industrial/commercial properties unless it meets the Method 1 Residential Direct Exposure Criteria for all constituents listed in the Remediation Regulations. Prior to leaving the Property, soil must be sampled by an environmental professional, at a frequency of one sample per 500 cubic yards for the constituents identified in Item 10 below. In the event that the soil does not meet these criteria, the material must be properly managed and recycled or disposed of off-site at an appropriately licensed facility. Copies of the laboratory analysis results will be maintained by the Property owner and included in the annual *ELUR Evaluation Report* for the Property, or the *Closure Report*, if applicable.

10. All clean fill, including sub-grade material and loam from native sources, imported to the Property must be sampled and analyzed prior to delivery and placement. Clean fill and loam brought on to the Property must be subjected to the following analytical program:

Analyte	EPA Test Method
Total Petroleum Hydrocarbons	8100M
Volatile Organic Compounds	8260
Semi-Volatile Organic Compounds	8270
Priority Pollutant Metals (PP-13)	6010 & 7471A

The frequency of sampling and testing will be:

- Full suite of analysis for up to 2,000 cubic yards, with an additional full suite for each subsequent 2,000 cubic yards of material; and
- Arsenic each 500 cubic yards of material

All soil that is to be utilized on-site must meet the Residential Direct Exposure Criteria and the GB Leachability Criteria (as defined in the Remediation Regulations) for all constituents or be certified to be non-jurisdictional by an environmental professional. Also be advised that the *Closure Report/Annual Evaluation Report* for the Property must include all original laboratory analytical data and a statement from the facility that provides the clean fill and/or loam attesting to the materials origin and suitability for use at the Site.

11. Best soil management practices should be employed at all times and regulated soils should be segregated into separate piles (or cells or containers) as appropriate based upon the results of analytical testing, when multiple reuse options are planned (e.g., reuse on-site, reuse at a RIDEM approved Industrial/Commercial property, or reuse/disposal at a RIDEM approved licensed facility). Best management practices also include the managing and minimizing of the migration and/or surface run-off of hazardous materials at the Property during the remedial actions and/or future disturbances. This should be achieved via the installation of hay bales, silt fencing and any other appropriate measures during the entire duration of the earthwork.

12. Following completion of the construction/earthwork project, a *Closure Report* will be prepared and submitted to RIDEM as required. The report will demonstrate that following completion of construction activities, the Property is in compliance with the ELUR. Copies of the material shipping records, bills of lading and receiving facility receipts associated with the disposal of the excavated soil will be maintained by the Property owner and will be summarized in the *Closure Report* and in the annual property inspection reports to be completed by the Property Owner Representative and submitted to RIDEM.

BASIC HEALTH AND SAFETY PROCEDURES

The basic health and safety procedures outlined below will be implemented while performing excavation work at the Site. The procedures are intended as a general guideline for basic, short-term excavation and maintenance activities. The contractor conducting the work will be required to follow a health and safety plan developed for their specific activities and personnel in accordance with the OSHA requirements contained in 29 CFR Part 1910.120.

Based on the documented Site conditions, the potential routes of exposure to on-site excavation or utility repair workers include dermal contact (absorption), accidental ingestion of impacted soil and/or dust inhalation. Utilization of the appropriate personal protective equipment (PPE) and the general safety guidelines provided below will minimize the potential for worker exposure while performing work within the Property.

<u>Personal Protective Equipment (PPE)</u>

In general, the level of protection that will be used by workers will be determined by the task that the person is performing; however, at a minimum Level D PPE will be worn at all times while performing excavation activities within the ELUR area. Level D PPE will, at a minimum, consist of the following PPE:

1. Steel-toe work boots with over-boots as needed;
2. Eye protection (safety glasses or chemical splash goggles);
3. Work gloves; and
4. Hard hat.

Site Operating Procedures/Safety Guidelines

Regardless of the level of PPE necessary to complete work in the ELUR area, the following general health and safety guidelines will be followed during the performance of any excavation activities. Adherence to these guidelines will reduce the potential for worker exposure to impacted media.

1. All work conducted on-site shall be coordinated through a designated City of East Providence employee responsible for the implementation of the requirements of this SMP (including all health and safety procedures);
2. The location of all utilities in the vicinity of the excavation will be established prior to beginning work;
3. Spectators will not be allowed on the Property;
4. A pre-work meeting will be conducted at the beginning of each day to discuss the health and safety procedures;
5. Practice contamination avoidance: never sit down or kneel in an excavation; never lay equipment on the ground; avoid obvious sources of contamination such as puddles; and avoid unnecessary contact with objects in an excavation;
6. Be alert to any unusual changes in your physical condition; never ignore warning signs. Notify the responsible City employee as to suspected exposures;
7. All equipment used in an excavation will be properly cleaned and maintained in good working order. Equipment will be inspected for signs of defect and/or contamination before use and prior to demobilization from the Property;
8. Eating, drinking, chewing gum, and smoking are prohibited in active excavation areas; and
9. The discovery of any condition that would suggest the existence of a situation more hazardous than anticipated shall result in the evacuation of site personnel from the excavation and the re-evaluation of the hazard and the required level of protection.

In Case of Serious Exposure or Injury

In the event of serious chemical exposure or worker injury, the responsible City employee will immediately be alerted. This person will follow the steps indicated below:

1. Summon appropriate emergency response agency by using the emergency phone numbers provided below. Convey the following information:

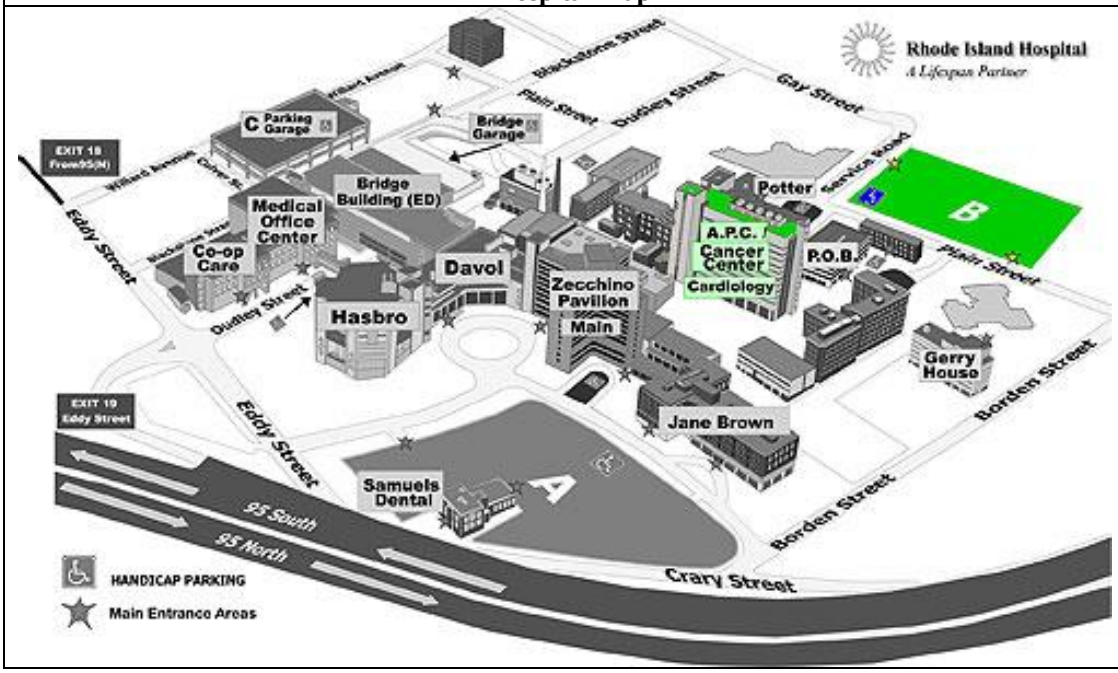
    a. Nature of emergency,
    b. Location of victim,
    c. Specific information about exposure or accident (gases, chemical, asphyxiation, etc.),
    d. Length of exposure, and
    e. Hazards which may be involved in rescue or treatment;

2. If taken to a hospital, notify the hospital of the background of the problem:

    a. Potential for hospital contamination,
    b. Any contaminated items and the nature of the contamination, and
    c. Estimated arrival time.

3. Follow additional documented City of East Providence procedures for reporting injuries or accidents.

Emergency Phone Numbers

Emergency telephone numbers and the directions to the nearest hospital are included below. User is cautioned that this information should be checked and updated, if necessary.

Response Agency	Phone Number
Ambulance	911
Police	911
Fire	911
RIDEM/Office of Compliance & Inspection/Emergency Response Program	(401) 222-1360 or (401) 222-3070 (non-business hours)
USEPA/Hazardous Materials Spills	(800) 424-8802
Poison Control Center	(800) 222-1222
Dig Safe (Utility Clearance)	1-888-DIGSAFE
Hospital	
Rhode Island Hospital 593 Eddy Street Providence, RI	401-444-4000
Hospital Map