GEI Consultants

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Geotechnical
Environmental
Water Resources
Ecological

Mr. Damianos T. Skaros, P.E.
Professional Engineer 1
New York State Department of Environmental Conservation
Division of Environmental Remediation
270 Michigan Avenue
Buffalo, New York 14203

Subject: **Groundwater and Surface Water Monitoring Results**
Second Semiannual Event - August 2019
Mineral Springs Road MGP Site (NYSDEC Site #V00195)

Dear Mr. Skaros:

On behalf of National Fuel Gas Distribution Corporation (NFG), please find enclosed results of the groundwater and surface water sampling event completed on August 20, 21 and 22, 2019 at the Mineral Springs Road Former Manufactured Gas Plant (MGP) Site.

The work at the Mineral Springs Site is being conducted under a New York State Department of Environmental Conservation (NYSDEC) Voluntary Cleanup Agreement (number B9-0538-98-08) as described in the Remedial Design, dated February 10, 1999, and the Final Engineering Report, Volume II – Operations and Maintenance (O&M) Plan, dated May 2002.

Please contact Mr. Brad Walker of NFG at 716-857-7247 if you have any questions.

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Enclosure

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2019 Second Semiannual Groundwater/Surface Water Quality Monitoring Report

Mineral Springs Road Former MGP Site (NYSDEC #V00195)
West Seneca, New York

Submitted to:
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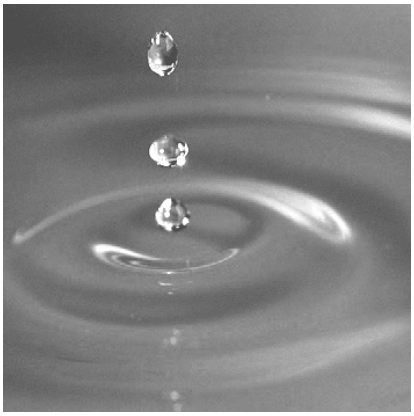

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1. INTRODUCTION

This report presents a summary of groundwater and surface water quality monitoring results for the 2019 second semiannual monitoring event at the National Fuel Gas Mineral Springs facility at 365 Mineral Springs Road in West Seneca, New York (Site). The site is a former manufactured gas plant (MGP) and implements ongoing operations and maintenance which includes groundwater and surface water quality monitoring.

1.1 Background

The Site is currently an active National Fuel Gas service center consisting of approximately 81 acres and includes seven active buildings, numerous parking areas, pipeline equipment and staging areas, and undeveloped areas. The site location and site layout are shown in Figures 1 and 2, respectively.

National Fuel completed remedial construction which included source removal and containment in 2001 under a Voluntary Cleanup Agreement (VCA) No. B9-0538-98-08 between National Fuel and the New York State Department of Environmental Conservation (NYSDEC). Remedial and engineering control features include perimeter fencing, six asphalt caps, a clay cap, an HDPE cap, and a capped drainage feature consisting of both clay and HDPE caps. National Fuel performs operations and maintenance (O&M) activities for the remedy in accordance with the Final Engineering Report, Volume II – Operations and Maintenance (O&M) Plan, dated May 2002 (O&M Plan). The O&M Plan specifies groundwater and surface water quality monitoring conducted on a semiannual basis. An assessment of institutional and engineering controls is summarized each year in a Site Management Periodic Review Report (PRR). The most recent PRR was submitted to the NYSDEC on October 16, 2018.

1.2 Site Conditions

The Site is relatively flat lying. An unnamed surface water drainage feature, designated as a Class D stream, is situated along the southern site boundary and flows in a westward direction. The stratigraphy of the site in order of occurrence is:

- soil fill (4 to 8 feet in thickness)
- approximately 10 feet of a laterally extensive clay (referred to as the upper confining clay layer {UCL})
- silt, sand, and gravel

- a lower confining clay layer (LCL), and bedrock.

Overburden groundwater is typically encountered 5 to 12 feet below ground surface and fluctuates approximately 2 feet seasonally. Overburden groundwater flow is generally to the north and northwest toward Mineral Springs Road, Calais Street, and the Buffalo River. Average overburden groundwater velocity across the site was calculated to be approximately 0.06 feet per day (22 feet per year).

2. MONITORING NETWORK AND SAMPLING METHODS

Groundwater monitoring well and surface water sampling locations are shown on Figure 2. The groundwater monitoring wells were installed during and following completion of remedial construction and are screened to monitor groundwater flowing in the lower UCL and the silt, sand, and gravel layer. The O&M Plan specifies groundwater sample collection and analysis from 13 on-site and off-site monitoring wells. In addition, the determination for accumulated DNAPL in Recovery Well #1 (RTW-1) and purging of accumulated liquid, if present, is included in the groundwater monitoring program. Consistent with the O&M Plan, groundwater samples were collected using low-flow sampling methods with peristaltic pumps.

Surface water sample locations identified in the O&M Plan include SW-01 and SW-02 situated upstream and downstream of the facility. In 2017, three additional surface water sampling locations (SW-03, SW-04, and SW-05) were added to the monitoring program to assess the distribution of possible MGP-related constituents of concern (COCs) in surface water (total and free cyanide).

Groundwater and surface water samples for the 2019 Second Semiannual monitoring event were collected on August 20, 21 and 22, 2019 by a GEI sampling team. Monitoring was consistent with sampling procedures described in the O&M Plan. Table 1 summarizes sampling location, sample analysis, and Quality Control sample analysis, and current reference elevations. A synoptic round of water levels was measured in monitoring wells on August 20, 2019 and water levels were recorded prior to purging and sampling. Groundwater elevations are summarized in Table 2. Groundwater elevations were generally 1 to 2 feet lower during the August 2019 sampling event when compared to the 2019 spring sampling event and most groundwater elevations were higher this Second Semiannual monitoring event than groundwater elevations determined during the fall of 2018.

Field measured parameters were taken periodically during purging and include temperature, pH, Oxidation-Reduction Potential (ORP), electrical conductance, and turbidity. A summary of final field measured parameters is included in Table 3. All samples were placed in coolers and iced during same day transport under chain-of-custody to the analytical laboratory (Test America) located in Amherst, New York. Final laboratory analytical data reports were made available to GEI on September 6, 2019.

3. LABORATORY METHODS AND QUALITY CONTROL

3.1 Laboratory Methods

Samples were analyzed for BTEX volatile organic compounds (VOCs) by SW-846 method 8260C, polycyclic aromatic hydrocarbon (PAH) semi-volatile organic compounds (SVOCs) by SW-846 Method 8270D, total cyanide by SW-846 Method 9012B, free cyanide by SW-846 Method 9016, total dissolved solids (TDS) by Method SM2540C, and total suspended solids (TSS) by Standard Methods. Except for free cyanide, water samples were analyzed by Test America Laboratories, Inc. (Test America) of Amherst, New York. Free cyanide analyses were performed by Test America of Edison, New Jersey. Each laboratory maintains NYSDOH ELAP certifications.

3.2 Laboratory Quality Control

The laboratory data package (Level 2) is included in Appendix A. A Level 4 data package was also provided and was reviewed during GEI data validation. Overall quality assurance and quality control (QA/QC) measures were taken to ensure the reliability of the data generated during the sampling event. These measures include the submittal of trip blanks and the collection of a blind duplicate sample. Equipment blanks were not required since dedicated sampling equipment was used.

The specific methodologies employed in obtaining the analytical results refer to the following USEPA references.

- "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods" (SW-846), Third Edition, September 1994, USEPA Office of Solid Waste.
- 40CFR Part 136 "Guidelines Establishing Test Procedures for the Analysis of Pollutants Under the Clean Water Act", October 26, 1984 USEPA.

The data validation was performed on the Level 4 data package based on the Standard Operating Procedure (SOP) HW-33 (Revision 3) Low/Medium Volatile Data Validation (March 2013), SOP HW-35 (Revision 2) Semivolatile Data Validation (March 2013), and SOP 2c (Revision 15), SOP for the Evaluation of Cyanide for the Contract Laboratory Program (December 2012), modified for the SW-846 methodologies utilized.

The data were evaluated based on the following parameters:

- Data Completeness
- Holding Times and Sample Preservation
- Initial and Continuing Calibrations
- Blanks
- Surrogate Recoveries
- Matrix Spike/Matrix Spike Duplicate (MS/MSD) Results
- Laboratory Duplicate Results
- Internal Standard Results
- Laboratory Control Sample (LCS) Results
- Field Duplicate Results
- Quantitation Limits and Data Assessment
- Sample Quantitation and Compound Identification

Blind duplicate samples were collected at sampling location well MW-23 and submitted for analyses with the sample delivery group to assess laboratory precision. Laboratory accuracy was assessed through analysis of surrogate spike recoveries.

A data usability review is provided in Appendix B. In general, the data appear usable as reported or usable with minor qualification due to sample matrix or laboratory quality control outliers. No deviations from analytic protocol that affected the acceptability of the results were reported by the laboratories. Where laboratory quality control results necessitated a need for data qualification, the laboratory flagged the analytical result with an appropriate data qualifier. No results were rejected.

4. EVALUATION OF MONITORING RESULTS

The groundwater analytical results for the August 2019 sampling event are summarized in Tables 4A and 4B. Surface water sample results are summarized in Table 5. Results for the monitoring event are compared to the NYSDEC Technical Operational and Guidance Series (TOGS) 1.1.1, Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations (June 1998) (herein referred to as groundwater standards or water quality comparison criteria). Sampling results are discussed below.

4.1 Groundwater Elevations and Flow

A potentiometric surface map of groundwater elevations for the upper water-bearing zone at the site is provided on Figure 3. The groundwater flow direction occurs predominantly to the north and northwest. The surface water elevation in the Class D stream at SW-02 was higher than the head in nearby wells MW-11A (582.51 FASL and 582.11 FASL, respectively) indicating "losing stream conditions" where groundwater is recharged by surface water infiltrating at the base grade of the stream at this location. The surface water elevation in the stream at SW-01 was similar to nearby well MW-16 (581.90 FASL and 581.94 FASL, respectively) indicating neither "losing or gaining stream conditions".

4.2 Constituents Detected in Groundwater

Monitoring well locations provide groundwater quality data for on-site areas near former MGP residual remediation areas and near the site perimeter at both on-site and off-site monitoring locations. Groundwater quality in each of these areas is described below.

On-Site Areas

Monitoring wells MW-07, MW-10, MW-11A, and MW-19 assess on-site groundwater quality downgradient of subsurface soils impacted with hydrocarbon MGP residuals. BTEX compounds were not detected at MW-10. BTEX compounds were detected above the NYSDEC Groundwater Standards in MW-07, MW-11A and MW-19. BTEX compound detections were consistent with historical levels at MW-11A and MW-19 and were lower than historical average concentrations at location MW-07.

PAH compounds were detected in well MW-07 (2-methylnaphthalene, naphthalene and acenaphthene) and well MW-19 (naphthalene) at concentrations above water quality comparison criteria. Laboratory dilutions were required for naphthalene analysis due to part per million level detected concentrations resulting in elevated reporting limits for other PAHs in these two samples.

Well MW-11A includes analysis for total and free cyanide, plus analysis for TDS and TSS in support of the assessment of past cyanide detections in surface water. Total cyanide was detected at 250 µg/L which is above the NYS groundwater standard of 200 µg/L. The result is lower than the April 2019 event (330 ug/L) and was detected between the range of concentrations detected during the 2018 sampling events. Free cyanide was also detected in the sample (12.4 µg/L). A groundwater standard does not exist. TDS and TSS concentrations in well MW-11A were 778 mg/L and 45.6 mg/L, respectively. These concentrations were about 16% and 41% higher than the April 2019 sampling event, respectively. Interpretation of these concentrations is described with surface water sample results in Section 4.3.

Monitoring wells MW-12 and MW-16 assess on-site groundwater quality at locations of capped areas with known subsurface deposits of MGP purifier box residuals. Groundwater samples from these two wells were analyzed for total and free cyanide. Total cyanide concentrations were 832 µg/L at MW-12 and 3,550 µg/L at MW-16, each is above water quality comparison criteria. The concentration detected during this event at MW-12 was lower than the prior event and is within the historic range of detected concentrations. The concentration at MW-16 was higher than prior sampling events and concentrations exhibit an increasing trend. Free cyanide concentrations were 16.5 µg/L at MW-12 and 79.6 µg/L at MW-16 (a NYSDEC Groundwater Standard for free cyanide does not exist). Concentrations in both wells were lower when compared to the April 2019 sampling event but remain elevated compared to historical concentrations. An assessment of the data trends will be discussed in the 2019 Periodic Review Report (PRR).

Site Perimeter

Monitoring well MW-17 assesses upgradient groundwater quality and wells MW-13, MW-14, MW-20, MW-21, MW-22, and MW-23 monitor downgradient water quality with MW-20 and MW-21 monitoring cyanide concentrations at off-site locations.

BTEX and PAHs were not detected in the wells tested.

Total cyanide was detected at a concentration of 146 µg/L in upgradient well MW-17 and is considered representative of background. Total cyanide was detected in downgradient wells MW-13, MW-14, MW-20, MW-21, MW-22, and MW-23 at concentrations above water quality comparison criteria (200 µg/L) at concentrations ranging from 225 µg/L to 900 µg/L. The total cyanide concentrations detected in wells MW-14, MW-20, MW-21, MW-22, and MW-23 were similar to historic detections. Total cyanide concentrations in monitoring well MW-13 was higher than the previous four sampling events but lower than concentrations detected between 2010 and 2016.

Free cyanide was detected in downgradient perimeter wells MW-13 (14 ug/L) and MW-21 (6.6 ug/L). Free cyanide was not detected in upgradient well MW-17. In the remaining wells, free cyanide concentrations ranged from 8.8 µg/L (MW-23) to 41.9 µg/L (MW-22). A distinct correlation between detected total cyanide concentrations and free cyanide concentrations was not observed. An assessment of the data trends will be discussed in the 2019 Periodic Review Report (PRR).

4.3 Constituents Detected in Surface Water

Two surface water samples (SW-01 and SW-02) were collected from the NYSDEC Class D Stream flowing along the south side of the site. These surface water sampling locations monitor the effectiveness of the containment engineering controls of the Eastern Drainage Ditch Cap and monitor the concentrations of constituents of concern in surface water downstream of the Site. The collected samples were analyzed for BTEX and PAH compounds, as well as total and free cyanide. Samples were also collected at each surface water sampling location and analyzed for total dissolved solids (TDS) and total suspended solids (TSS) to evaluate a potential correlation between TDS/TSS and total/free cyanide results. Surface water samples were also collected from supplemental sampling locations (SW-03, SW-04, and SW-05) and analyzed for total and free cyanide to assess distribution in areas upstream from SW-02.

BTEX and PAH compounds were not detected in the surface water samples.

Total and free cyanide concentrations were below comparison criteria in each of the surface water samples and concentrations were lower or similar to recent sampling events. Total and free cyanide was detected in downstream surface water sample SW-01 at 15.4 ug/L and 5.2 ug/L, respectively.

The TDS concentration was higher in the downstream surface water sample than the upstream sample. Similar to the conclusion for the April 2019 sampling event, a correlation between detected cyanide concentration and TDS/TSS levels was not identified.

4.4 DNAPL Recovery Test Well

On August 22, 2019, the Recovery System at RTW-1 was gauged using a threaded steel rod to assess whether DNAPL had accumulated since the April 2019 sampling event. No visual staining was observed on the rod bottom. Rigid tubing was lowered to the base of the well and pumped using peristaltic methods. Approximately two liters of water were evacuated. The water contained only trace DNAPL in the form of “blebs”, visually estimated to be less than 1% of total volume. Based on the testing performed, DNAPL accumulation was not identified during August 2019 monitoring event.

5. Summary

A summary of August 2019 field testing and water quality monitoring in on-site remediated areas, perimeter areas and on-site surface water is provided below:

Groundwater:

- Groundwater elevations were generally 1 to 2 feet lower during the August 2019 sampling event when compared to the April 2019 sampling event and most groundwater elevations were approximately one foot higher than elevations measured during the fall of 2018.

On-Site Areas:

- BTEX compounds were detected above comparison criteria in wells MW-07, MW-11A and MW-19. The detected concentrations were consistent with historical analytical data.

- Low concentrations of PAHs were detected above water quality comparison criteria in MW-7 and MW-19. The detected concentrations were consistent with historical analytical data.

- Total cyanide concentrations were lower in monitoring wells MW-11A and MW-12 when compared with the April 2019 sampling event. Monitoring well MW-11A has only been analyzed for total cyanide since August 2017 and a long-term concentration trend cannot yet be evaluated. The total cyanide concentration at MW-16 (3,550 µg/L) was higher than the April 2019 sampling event and is above the historical range of detected concentrations. Free cyanide was detected at a slightly lower concentration (79.6 ug/L) when compared with the April 2019 event but is above the long term historical concentrations. Long term concentration trends will continue to be assessed.

Perimeter Areas:

- BTEX and PAH compounds were not detected in perimeter wells tested.

- Total cyanide was detected in downgradient wells MW-13, MW-14, MW-20, MW-21, MW-22, and MW-23 at concentrations above water quality comparison criteria (200 µg/L) ranging from 225 µg/L to 900 µg/L. The total cyanide concentrations detected in wells MW-14, MW-20, MW-21, MW-22, and MW-23 were similar to historic detections. The total cyanide concentrations in monitoring well MW-13

was higher than prior the previous four detections but lower than historical peak concentration detected in 2001.

- Free cyanide was not detected at upgradient well MW-17 but was detected in each of the six downgradient perimeter wells tested. Water quality comparison criteria do not exist for free cyanide and free cyanide concentrations did not proportionately correlate with total cyanide concentrations this event.

Surface Water:

- Surface water elevations were higher than groundwater elevations in the vicinity of SW-02, indicating "losing stream conditions." At downstream surface water sample location SW-01, the surface water elevation was similar to the groundwater elevation indicating neither "losing or gaining stream conditions" in August.

- BTEX and PAH compounds were not detected in surface water samples.

- Total and free cyanide concentrations detected at downstream surface water sample location SW-01 were below water quality comparison criteria.

DNAPL accumulation was not identified in RTW-1 during the August 2019 monitoring event.

A discussion of historical concentration trends will be presented with the 2019 PRR. No immediate response actions appear to be warranted. GEI recommends eliminating analysis for TDS and TSS in surface water as no correlation with cyanide concentrations has been identified.

Tables

Table 1. 2019 Second Semiannual Monitoring Water Sampling Summary
Mineral Springs Road MGP Site
National Fuel Gas Distribution Corporation
West Seneca, New York

Location	Cyanide, Total USEPA SW846 9014	Cyanide, Free USEPA SW846 9016	BTEX USEPA SW846 8260C	PAHs USEPA SW846 8270D	TDS/TSS SM 2540C/2540D	Specific Conductivity Field Measurement	Water Elevation	Benchmark Elevation (ft. MSL, top of PVC casing)
Upgradient Site Perimeter								
MW-17	x	x	x	x		x	x	587.28
Downgradient Site Perimeter								
MW-13	x	x	x	x		x	x	591.85
MW-14	x	x				x	x	589.53
MW-15							x	590.93
MW-20	x	x				x	x	587.06
MW-21	x	x				x	x	587.84
MW-22	x	x				x	x	592.50
MW-23	x	x	x	x		x	x	589.28
Onsite Purifier Residuals Impacted Areas								
MW-12	x	x				x	x	591.40
MW-16	x	x				x	x	588.99
Onsite Hydrocarbon Impacted Areas								
MW-07			x	x		x	x	587.01
MW-10			x	x		x	x	587.61
MW-11A [2]	x [2]	x [2]	x	x	x [2]	x	x	589.78
MW-19			x	x		x	x	589.83
Onsite Surface Water								
SW-01 [2]	x	x	x	x	x [2]	x [2]	x	top of headwall = 587.0
SW-02 [2]	x	x	x	x	x [2]	x [2]	x [2]	MW-11A ref. pt
SW-03 [2]	x [2]	x [2]			x [2]	x [2]		
SW-04 [2]	x [2]	x [2]			x [2]	x [2]		
SW-05 [2]	x [2]	x [2]			x [2]	x [2]		
QA/QC Samples (frequency)								
Trip Blank			x					(one per shipment)
Field Duplicate	x	x	x	x				(one per event)
Equipment Blank	x	x	x	x				(one per event)
DNAPL Recovery								
RTW-1	No Sample Collection							(purge well of accumulated DNAPL)
Total	17	17	12	11	12	18	16	
Container, Preservative	250 mL plastic, NaOH	250 mL plastic amber, NaOH	40 mL VOA vial, HCl (x3)	250 mL glass amber, NP (x2)	500 mL plastic, unpreserved			

Notes:

1. Elevations are from the 2007 survey, except for MW-20, which was resurveyed in August 2009 due to a repair.
2. Supplemental sampling at this location was conducted in August 2017, April 2018, August 2018, April 2019 and August 2019.

Table 2. Groundwater and Surface Water Elevations
Mineral Springs Road MGP Site
National Fuel Gas Distribution Corporation
West Seneca, New York

Well ID	TOR Elevation[1]	April 17, 2018 (FIRST SEMIANNUAL 2018)		August 15, 2018 (SECOND SEMIANNUAL 2018)		April 17, 2019 (FIRST SEMIANNUAL 2019)		August 20, 2019 (SECOND SEMIANNUAL 2019)	
		Depth	Elevation	Depth	Elevation	Depth	Elevation	Depth	Elevation
MW-07	587.01	4.80	582.21	7.15	579.86	4.48	582.53	6.12	580.89
MW-10	587.61	6.40	581.21	7.64	579.97	6.28	581.33	7.09	580.52
MW-11A	589.78	8.15	581.63	9.02	580.76	6.43	583.35	7.67	582.11
MW-12	591.40	10.06	581.34	11.65	579.75	11.63	579.77	10.80	580.60
MW-13	591.85	10.56	581.29	13.54	578.31	11.40	580.45	13.20	578.65
MW-14	589.53	10.70	578.83	11.93	577.60	10.48	579.05	11.77	577.76
MW-15	590.93	10.40	580.53	11.60	579.33	9.37	581.56	10.79	580.14
MW-16	588.99	8.70	580.29	9.65	579.34	5.80	583.19	7.05	581.94
MW-17	587.28	3.98	583.30	6.69	580.59	3.98	583.30	5.28	582.00
MW-19	589.83	7.58	582.25	9.80	580.03	7.73	582.10	8.94	580.89
MW-20	587.06	6.38	580.68	10.16	576.90	7.14	579.92	9.70	577.36
MW-21	587.84	8.42	579.42	11.06	576.78	9.27	578.57	10.85	576.99
MW-22	592.50	10.41	582.09	12.95	579.55	11.42	581.08	12.24	580.26
MW-23	589.28	10.22	579.06	11.53	577.75	10.18	579.10	11.22	578.06
SW-01	587.0 (Top Headwall)	3.08	583.92	na[2]	na	3.28	583.72	5.10	581.90
SW-02	From Ref. point Well 11A	1.89	583.52	0.82	581.58	0.86	583.95	0.40	582.51
RTW-1	na	8.98	na	10.52	na	8.35	na	10.28	na

Notes:
[1] TOR (top of riser for monitoring wells) measured in feet; distance above sea level.
[2] location inaccessible due to debris at headwall measurement point.

Table 3. Field Measured Parameters
Mineral Springs Road MGP Site
National Fuel Gas Distribution Corporation
West Seneca, New York

Well ID	Sampling Date	Sampling Time	pH (standard units)	Specific Conductance (mS/cm)	Temperature (°C)	Turbidity (ntu)	Oxidation Reduction Potential (mV)	Dissolved Oxygen (ppm)	Comments
Groundwater Monitoring Wells									
MW-07	08/21/19	10:50	6.52	3.34	15.10	3.90	64.9	0.27	
MW-10	08/21/19	9:30	6.92	2.07	18.50	4.80	236.0	0.19	
MW-11A	08/21/19	12:20	6.61	1.37	12.50	4.70	58.2	0.25	
MW-12	08/22/19	9:45	6.86	5.35	13.20	4.20	1.7	0.19	
MW-13	08/20/19	11:40	6.38	0.57	13.22	4.80	214.9	0.19	
MW-14	08/20/19	12:30	5.25	4.02	12.05	5.00	-29.6	0.09	
MW-16	08/22/19	12:30	5.83	3.93	12.10	4.10	-112.7	0.64	
MW-17	08/22/19	11:00	6.17	1.95	12.00	4.80	137.6	1.84	
MW-19	08/21/19	13:30	6.82	1.32	14.00	4.90	114.7	0.17	
MW-20	08/20/19	9:40	7.80	1.95	18.10	4.80	-50.6	1.37	
MW-21	08/20/19	10:40	5.90	3.04	15.80	5.00	-41.7	0.15	
MW-22	08/21/19	14:30	6.26	2.22	14.30	5.00	-29.7	0.64	
MW-23	08/22/19	13:20	7.05	6.11	14.80	3.80	-36.4	0.68	Field Duplicate
Surface Water Sampling Locations*									
SW-01	08/20/19	15:00	--	0.87	--	--	--	--	
SW-02	08/20/19	13:00	--	0.59	--	--	--	--	
SW-03	08/20/19	13:30	--	0.74	--	--	--	--	
SW-04	08/20/19	14:00	--	0.47	--	--	--	--	
SW-05	08/20/19	14:30	--	0.53	--	--	--	--	

Notes:
* Surface water sampling locations are field measured for specific conductance concentrations only.

Table 4A. Groundwater Analytical Summary - On-Site Areas
Mineral Springs Road MGP Site
National Fuel Gas Distribution Corporation
West Seneca, New York

			Location Name	MW-07	MW-10	MW-11A	MW-12	MW-16	MW-19
			Sample Name	MW-7	MW-10	MW-11A	MW-12	MW-16	MW-19
			Sample Date	8/21/2019	8/21/2019	8/21/2019	8/22/2019	8/22/2019	8/21/2019
			Parent Sample						
Analyte	**Units**	**CAS No.**	**NYS AWQS**						
BTEX	ug/L								
Benzene		71-43-2	1	**580**	1 U	**6.8**			**4600**
Toluene		108-88-3	5	20 U	1 U	2 U			100 U
Ethylbenzene		100-41-4	5	**940**	1 U	2 U			**450**
Total Xylene		1330-20-7	5	**450**	2 U	4 U			200 U
Total BTEX (ND=0)		TBTEX_ND0	NE	**1970**	ND	**6.8**			**5050**
NYSDEC PAH17	ug/L								
Acenaphthene		83-32-9	20*	**81**	0.5 U	**2.1**			100 U
Acenaphthylene		208-96-8	NE	50 U	0.5 U	**1.6**			100 U
Anthracene		120-12-7	50*	50 U	0.5 U	0.5 U			100 U
Benzo(a)anthracene		56-55-3	0.002*	50 U	0.5 U	0.5 U			100 U
Benzo(b)fluoranthene		205-99-2	0.002*	50 U	0.5 U	0.5 U			100 U
Benzo(k)fluoranthene		207-08-9	0.002*	50 U	0.5 U	0.5 U			100 U
Benzo(g,h,i)perylene		191-24-2	NE	50 U	0.5 U	0.5 U			100 U
Benzo(a)pyrene		50-32-8	ND	50 U	0.5 U	0.5 U			100 U
Chrysene		218-01-9	0.002*	50 U	0.5 U	0.5 U			100 U
Dibenz(a,h)anthracene		53-70-3	NE	50 U	0.5 U	0.5 U			100 U
Fluoranthene		206-44-0	50*	50 U	0.5 U	**0.36 J**			100 U
Fluorene		86-73-7	50*	50 U	0.5 U	0.5 U			100 U
Indeno(1,2,3-cd)pyrene		193-39-5	0.002*	50 U	0.5 U	0.5 U			100 U
2-Methylnaphthalene		91-57-6	NE	**140**	0.5 U	0.5 U			100 U
Naphthalene		91-20-3	10*	**1600**	0.5 U	1.6 U			**5600**
Phenanthrene		85-01-8	50*	50 U	0.72 U	0.68 U			100 U
Pyrene		129-00-0	50*	50 U	0.5 U	**0.37 J**			100 U
Total PAH (17) (ND=0)		TPAH17_ND0	NE	**1821**	ND	**4.43**			**5600**
Cyanides	ug/L								
Free Cyanide		FREECN	NE			**12.4**	**16.5**	**79.6**	
Total Cyanide		57-12-5	200			**250**	**832**	**3550**	
Other									
Total Dissolved Solids	ug/L	TDS	NE			**778000**			
Total Suspended Solids	ug/L	TSS	NE			**45600**			

Table 4B. Groundwater Analytical Summary - Perimeter Areas
Mineral Springs Road MGP Site
National Fuel Gas Distribution Corporation
West Seneca, New York

			Location Name	MW-13	MW-14	MW-17	MW-20	MW-21	MW-22	MW-23	MW-23
			Sample Name	MW-13	MW-14	MW-17	MW-20	MW-21	MW-22	MW-23	Duplicate
			Sample Date	8/20/2019	8/20/2019	8/22/2019	8/20/2019	8/20/2019	8/21/2019	8/22/2019	8/22/2019
			Parent Sample								MW-23
Analyte	Units	CAS No.	NYS AWQS								
BTEX	ug/L										
Benzene		71-43-2	1	1 U		2 U				1 U	1 U
Toluene		108-88-3	5	1 U		2 U				1 U	1 U
Ethylbenzene		100-41-4	5	1 U		2 U				1 U	1 U
Total Xylene		1330-20-7	5	2 U		4 U				2 U	2 U
Total BTEX (ND=0)		TBTEX_ND0	NE	ND		ND				ND	ND
NYSDEC PAH17	ug/L										
Acenaphthene		83-32-9	20*	0.5 U		2.5 U				0.5 U	0.5 U
Acenaphthylene		208-96-8	NE	0.5 U		2.5 U				0.5 U	0.5 U
Anthracene		120-12-7	50*	0.5 U		2.5 U				0.5 U	0.5 U
Benzo(a)anthracene		56-55-3	0.002*	0.5 U		2.5 U				0.5 U	0.5 U
Benzo(b)fluoranthene		205-99-2	0.002*	0.5 U		2.5 U				0.5 U	0.5 U
Benzo(k)fluoranthene		207-08-9	0.002*	0.5 U		2.5 U				0.5 U	0.5 U
Benzo(g,h,i)perylene		191-24-2	NE	0.5 U		2.5 U				0.5 U	0.5 U
Benzo(a)pyrene		50-32-8	ND	0.5 U		2.5 U				0.5 U	0.5 U
Chrysene		218-01-9	0.002*	0.5 U		2.5 U				0.5 U	0.5 U
Dibenz(a,h)anthracene		53-70-3	NE	0.5 U		2.5 U				0.5 U	0.5 U
Fluoranthene		206-44-0	50*	0.5 U		2.5 U				0.5 U	0.5 U
Fluorene		86-73-7	50*	0.5 U		2.5 U				0.5 U	0.5 U
Indeno(1,2,3-cd)pyrene		193-39-5	0.002*	0.5 U		2.5 U				0.5 U	0.5 U
2-Methylnaphthalene		91-57-6	NE	0.5 U		2.5 U				0.5 U	0.5 U
Naphthalene		91-20-3	10*	0.5 U		2.5 U				1.2 U	1.6 U
Phenanthrene		85-01-8	50*	0.69 U		2.5 U				0.7 U	0.71 U
Pyrene		129-00-0	50*	0.5 U		2.5 U				0.5 U	0.5 U
Total PAH (17) (ND=0)		TPAH17_ND0	NE	ND		ND				ND	ND
Cyanides	ug/L										
Free Cyanide		FREECN	NE	**14**	**21**	5 U	**10.2**	**6.6**	**41.9**	**8.8**	**11.3**
Total Cyanide		57-12-5	200	**225**	**625 J**	**146**	**900**	**475**	**800 J**	**317 J**	**322**

Tables 4A and 4B. Groundwater Analytical Summary - Notes
Mineral Springs Road MGP Site
National Fuel Gas Distribution Corporation
West Seneca, New York

Notes:
Analytes in blue are not detected in any sample
ug/L = micrograms per liter or parts per billion (ppb)

BTEX = Benzene, Toluene, Ethylbenzene, and Xylenes
PAH = Polycyclic Aromatic Hydrocarbon

Total BTEX and Total PAHs are calculated using detects only.
Total PAH17 is calculated using the list of analytes: Acenaphthene, Acenaphthylene, Anthracene, Benz[a]anthracene, Benzo[a]pyrene, Benzo[b]fluoranthene, Benzo[g,h,i]perylene, Benzo[k]fluoranthene, Chrysene, Dibenz[a,h]anthracene, Fluoranthene, Fluorene, Indeno[1,2,3-cd]pyrene, Naphthalene, 2-Methylnaphthalene, Phenanthrene, and Pyrene

NYS AWQS = New York State Ambient Water Quality Standards and Guidance Values for GA groundwater
* indicates the value is a guidance value and not a standard

CAS No. = Chemical Abstracts Service Number
MGP = Manufactured Gas Plant
ND = Not Detected
NE = Not Established

Bolding indicates a detected result concentration
Gray shading and bolding indicates that the detected result value exceeds the NYS AWQS

Validation Qualifiers:
J = The result is an estimated value.
U = The result was not detected above the reporting limit.

Table 5. Surface Water Analytical Summary
Mineral Springs Road MGP Site
National Fuel Gas Distribution Corporation
West Seneca, New York

			Location Name	SW-01	SW-02	SW-03	SW-04	SW-05
			Sample Name	SW-01	SW-02	SW-03	SW-04	SW-05
			Sample Date	8/20/2019	8/20/2019	8/20/2019	8/20/2019	8/20/2019
Analyte	**Units**	**CAS No.**	**CLASS D STREAM**					
BTEX	ug/L							
Benzene		71-43-2	10	2 U	1 U			
Toluene		108-88-3	6000	2 U	1 U			
Ethylbenzene		100-41-4	150*	2 U	1 U			
Total Xylene		1330-20-7	590*	4 U	2 U			
Total BTEX (ND=0)		TBTEX_ND0	NE	ND	ND			
NYSDEC PAH17	ug/L							
Acenaphthene		83-32-9	48*	0.5 U	0.5 U			
Acenaphthylene		208-96-8	NE	0.5 U	0.5 U			
Anthracene		120-12-7	35*	0.5 U	0.5 U			
Benzo(a)anthracene		56-55-3	0.23*	0.5 U	0.5 U			
Benzo(b)fluoranthene		205-99-2	NE	0.5 U	0.5 U			
Benzo(k)fluoranthene		207-08-9	NE	0.5 U	0.5 U			
Benzo(g,h,i)perylene		191-24-2	NE	0.5 U	0.5 U			
Benzo(a)pyrene		50-32-8	0.0012*	0.5 U	0.5 U			
Chrysene		218-01-9	NE	0.5 U	0.5 U			
Dibenz(a,h)anthracene		53-70-3	NE	0.5 U	0.5 U			
Fluoranthene		206-44-0	NE	0.5 U	0.5 U			
Fluorene		86-73-7	4.8*	0.5 U	0.5 U			
Indeno(1,2,3-cd)pyrene		193-39-5	NE	0.5 U	0.5 U			
2-Methylnaphthalene		91-57-6	42*	0.5 U	0.5 U			
Naphthalene		91-20-3	110*	1.6 U	0.5 U			
Phenanthrene		85-01-8	45*	0.72 U	0.67 U			
Pyrene		129-00-0	42*	0.5 U	0.5 U			
Total PAH (17) (ND=0)		TPAH17_ND0	NE	ND	ND			
Cyanides	ug/L							
Free Cyanide		FREECN	22	**5.2**	**9.9**	**18.3**	**1.8 J**	**1.8 J**
Total Cyanide		57-12-5	9000	**15.4**	**161 J**	**229**	**11**	**5.3 J**
Other								
Total Dissolved Solids	ug/L	TDS	NE	**627000**	**358000**			
Total Suspended Solids	ug/L	TSS	NE	4000 U	**6400**			

Table 5. Surface Water Analytical Summary - Notes
Mineral Springs Road MGP Site
National Fuel Gas Distribution Corporation
West Seneca, New York

Notes:
Analytes in blue are not detected in any sample
ug/L = micrograms per liter or parts per billion (ppb)

BTEX = Benzene, Toluene, Ethylbenzene, and Xylenes
PAH = Polycyclic Aromatic Hydrocarbon

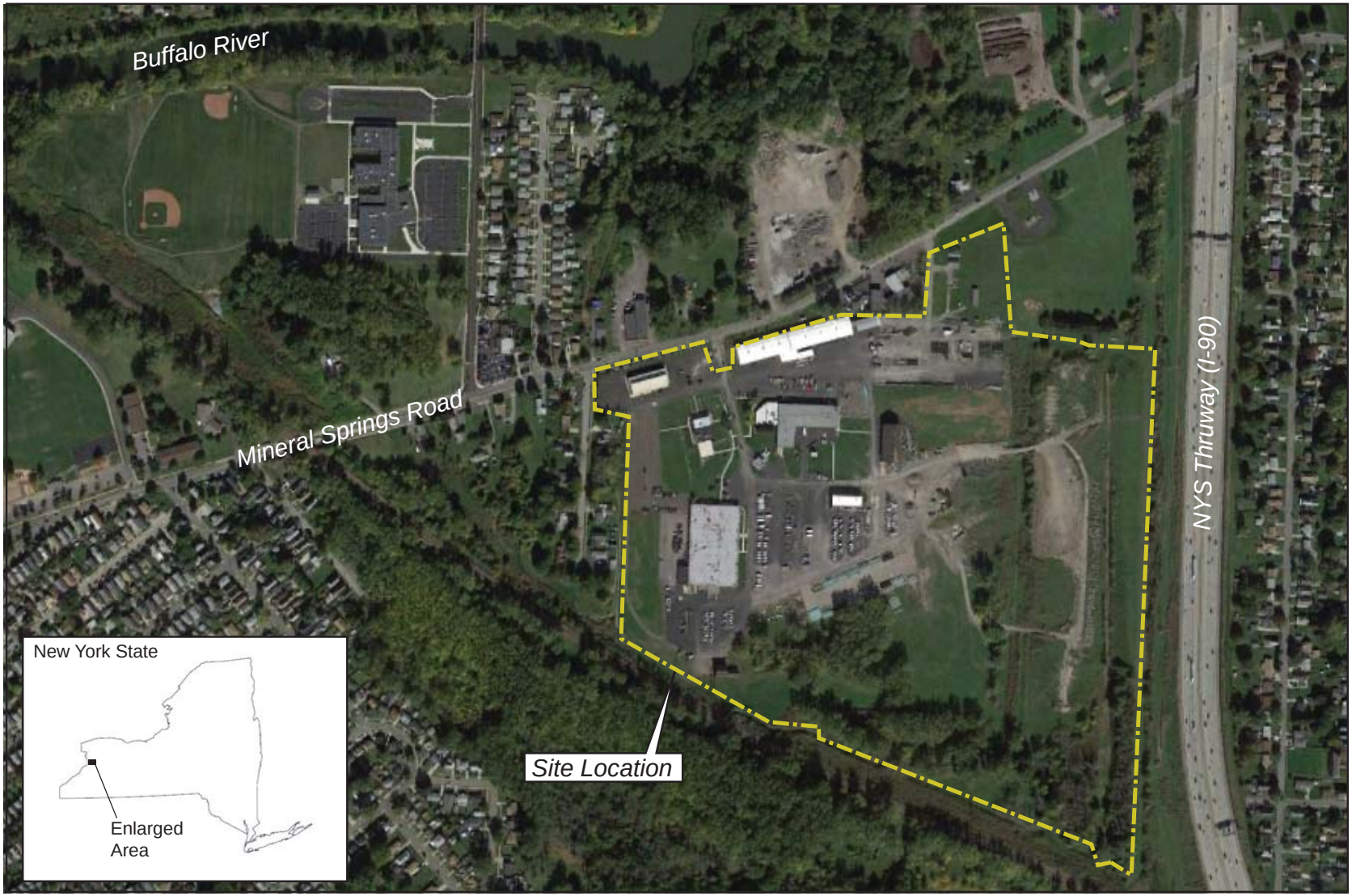
Total BTEX and Total PAHs are calculated using detects only.
Total PAH17 is calculated using the EPA16 list of analytes: Acenaphthene, Acenaphthylene, Anthracene, Benz[a]anthracene, Benzo[a]pyrene, Benzo[b]fluoranthene, Benzo[g,h,i]perylene, Benzo[k]fluoranthene, Chrysene, Dibenz[a,h]anthracene, Fluoranthene, Fluorene, Indeno[1,2,3-cd]pyrene, 2-Methylnaphthalene, Naphthalene, Phenanthrene, and Pyrene

NYSDEC Division of Water Technical and Operational Guidance Series (1.1.1)
NYS AWQS = New York State Ambient Water Quality Standards and Guidance Values for GA groundwater
* indicates the value is a guidance value and not a standard

CAS No. = Chemical Abstracts Service Number
MGP = Manufactured Gas Plant
ND = Not Detected
NE = Not Established
NYSDEC = New York State Department of Environmental Conservation
Bolding indicates a detected result concentration
Shading and bolding indicates that the detected concentration is above the NYSDOH guidance it was compared to

Validation Qualifiers:
J = The result is an estimated value.
U = The result was not detected above the reporting limit.

Figures



N

0 250 500 1000 Feet

Notes:
Aerial Imagery Sourced from Google Maps (http://www.maps.google.com) dated 2016.

National Fuel Gas Corporation Mineral Springs Facility	GEI Consultants	SITE LOCATION
West Seneca, New York	Project #1801042	September 2019 Figure 1

PROPERTY LINE
PERIMETER FENCE
MW-17
SW-05
SW-04
SOIL PLACEMENT AREA
MW-18
NORTH CULVERT
EDD
SW-03
SW-02
MW-12
RTW1
ETBE
MW-11A
SOUTH CULVERT
CLASS D STREAM
ESNAC
ESHC
FORMER BLDG 11
MW-19
SETLE
MW-22
ESSAC
NTBE
CTBE
BLDG 10
B10AC
BLDG 9
SPE
WTBE
FORMER BLDG 8
PERIMETER FENCE
MW-13
BLDG 2
B8WAC
MW-10
MW-7
CC
B3EAC
APRE
MW-16
SW-01
BLDG 1
MINERAL SPRINGS ROAD
DPE
BLDG 14
BLDG 5
BLDG 3
B3SAC
COLLAPSED/SEPARATED STORM SEWER AREA
MW-23
OVERHEAD TRANSMISSION TOWER
BLDG 4
SWPRE
MW-15
BURIED ELECTRIC LINE
MW-14
CM
CALAIS STREET
MW-21
MW-20
PERIMETER FENCE

LEGEND

	EXISTING STRUCTURE
	REMEDIAL CONSTRUCTION
	FORMER STRUCTURE
	EXISTING EXCAVATION LIMITS
MW-7	MONITORING WELLS
SW-01	SURFACE WATER SAMPLE LOCATION
APRE	ADDITIONAL PURIFIER RESIDUALS EXCAVATION
B3EAC	BUILDING 3 EAST ASPHALT CAP
B3SAC	BUILDING 3 SOUTH ASPHALT CAP
B8WAC	BUILDING 8 WEST ASPHALT CAP
B10AC	BUILDING 10 ASPHALT CAP
CC	CLAY CAP
CM	CORRECTIVE MEASURE WEST PROPERTY LINE
CTBE	CENTRAL TAR BOILS EXCAVATION
DPE	DIESEL PAD EXCAVATION
EDD	EASTERN DRAINAGE DITCH
ESHC	EASTERN SWALE HDPE CAP
ESNAC	EASTERN SWALE NORTH ASPHALT CAP
ESSAC	EASTERN SWALE SOUTH ASPHALT CAP
ETBE	EASTERN TAR BOILS EXCAVATION
NTBE	NORTHERN TAR BOILS EXCAVATION
RTW1	RECOVERY TEST WELL AND DNAPL SHED
SETLE	SOUTHEASTERN TAR LENSES EXCAVATION
SPE	SEPARATOR PITS EXCAVATION
SWPRE	SOUTHWEST RESIDUALS EXCAVATION
WTBE	WESTERN TAR BOILS EXCAVATION
	CLAY CAP
	ASPHALT CAP
	HDPE CAP
	REMEDIAL EXCAVATION

PREVIOUSLY REMEDIATED AREAS ARE SHADED RED

150 0 300

GRAPHIC SCALE IN FEET

Figure modified from original presented by AECOM titled “Site Figure- Mineral Springs Road Facility, National Fuel Gas:” dated 6/23/15.

National Fuel Gas Corporation
Mineral Springs Facility

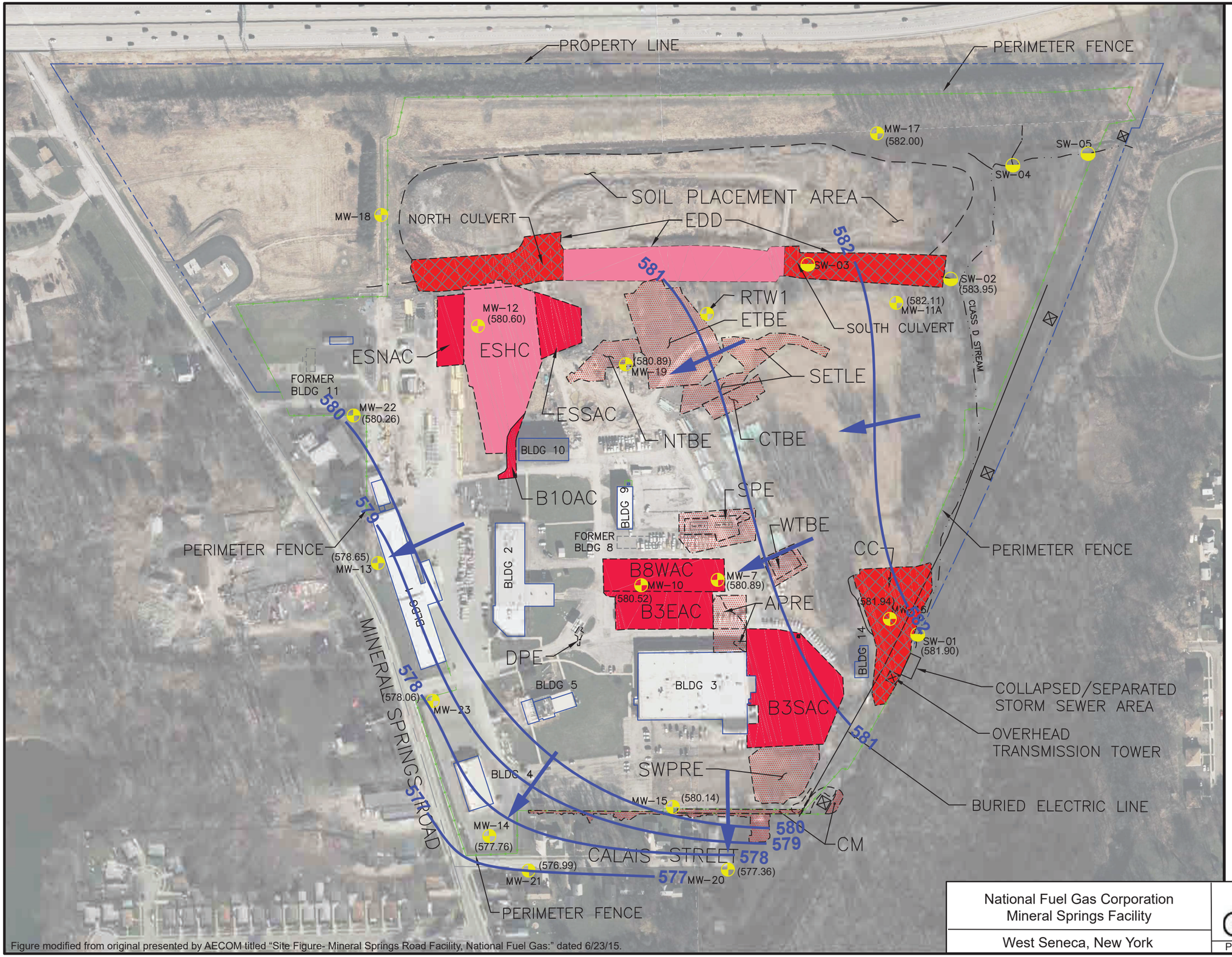
West Seneca, New York

GEI

Project #1801042

SITE LAYOUT

September 2019 Figure 2



LEGEND

	EXISTING STRUCTURE
	REMEDIAL CONSTRUCTION
	FORMER STRUCTURE
	EXISTING EXCAVATION LIMITS
MW–7	MONITORING WELLS
SW–01	SURFACE WATER SAMPLE LOCATION
(583.52)	GROUNDWATER ELEVATION (FASL, 8/20/2019)
	GROUNDWATER ELEVATION CONTOUR (DASHED WHERE INFERRED)
	GROUNDWATER FLOW DIRECTION
APRE	ADDITIONAL PURIFIER RESIDUALS EXCAVATION
B3EAC	BUILDING 3 EAST ASPHALT CAP
B3SAC	BUILDING 3 SOUTH ASPHALT CAP
B8WAC	BUILDING 8 WEST ASPHALT CAP
B10AC	BUILDING 10 ASPHALT CAP
CC	CLAY CAP
CM	CORRECTIVE MEASURE WEST PROPERTY LINE
CTBE	CENTRAL TAR BOILS EXCAVATION
DPE	DIESEL PAD EXCAVATION
EDD	EASTERN DRAINAGE DITCH
ESHC	EASTERN SWALE HDPE CAP
ESNAC	EASTERN SWALE NORTH ASPHALT CAP
ESSAC	EASTERN SWALE SOUTH ASPHALT CAP
ETBE	EASTERN TAR BOILS EXCAVATION
NTBE	NORTHERN TAR BOILS EXCAVATION
RTW1	RECOVERY TEST WELL AND DNAPL SHED
SETLE	SOUTHEASTERN TAR LENSES EXCAVATION
SPE	SEPARATOR PITS EXCAVATION
SWPRE	SOUTHWEST RESIDUALS EXCAVATION
WTBE	WESTERN TAR BOILS EXCAVATION
	CLAY CAP
	ASPHALT CAP
	HDPE CAP
	REMEDIAL EXCAVATION

PREVIOUSLY REMEDIATED AREAS ARE SHADED RED

150 0 300

GRAPHIC SCALE IN FEET

Figure modified from original presented by AECOM titled “Site Figure- Mineral Springs Road Facility, National Fuel Gas:” dated 6/23/15.

National Fuel Gas Corporation
Mineral Springs Facility

West Seneca, New York

GEI Consultants

GROUNDWATER POTENTIOMETRIC SURFACE MAP-SUMMER 2019

Project #1801042 | September 2019 | Figure 3

Appendix A

Laboratory Data Package (Level 2)

eurofins | Environment Testing TestAmerica

ANALYTICAL REPORT

Eurofins TestAmerica, Buffalo
10 Hazelwood Drive
Amherst, NY 14228-2298
Tel: (716)691-2600

Laboratory Job ID: 480-157974-1
Laboratory Sample Delivery Group: 480-157974-1
Client Project/Site: GEI, Mineral Springs
Sampling Event: Semi Annual Sampling (April)

For:
GEI Consultants, Inc.
100 Sylvan Parkway
Suite 400
Amherst, New York 14228

Attn: Richard Frappa

Authorized for release by:
9/6/2019 1:02:51 PM
Rebecca Jones, Project Management Assistant I
rebecca.jones@testamericainc.com

Designee for

John Schove, Project Manager II
(716)504-9838
john.schove@testamericainc.com

Table of Contents

Definitions/Glossary

Client: GEI Consultants, Inc.
Project/Site: GEI, Mineral Springs

Job ID: 480-157974-1
SDG: 480-157974-1

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.

GC/MS Semi VOA

Qualifier	Qualifier Description
B	Compound was found in the blank and sample.
H	Sample was prepped or analyzed beyond the specified holding time
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
U	Indicates the analyte was analyzed for but not detected.
X	Surrogate is outside control limits

General Chemistry

Qualifier	Qualifier Description
F1	MS and/or MSD Recovery is outside acceptance limits.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
U	Indicates the analyte was analyzed for but not detected.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Job ID: 480-157974-1

Laboratory: Eurofins TestAmerica, Buffalo

Narrative

Job Narrative
480-157974-1

Receipt
The samples were received on 8/21/2019 2:25 PM and 8/22/2019 2:35 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 3 coolers at receipt time were 2.2º C, 2.9º C and 3.8º C.

Receipt Exceptions

The container label for the following samples did not match the information listed on the Chain-of-Custody (COC): SW-03 (480-157974-14), SW-04 (480-157974-15) and SW-05 (480-157974-16).

GC/MS VOA
Method(s) 8260C: The following samples were diluted to bring the concentration of target analytes within the calibration range: MW-7 (480-157974-6) and MW-19 (480-157974-8). Elevated reporting limits (RLs) are provided.

Method(s) 8260C: The following volatiles samples were diluted due to foaming at the time of purging during the original sample analysis: MW-11A (480-157974-7) and SW-01 (480-157974-12). Elevated reporting limits (RLs) are provided.

Method(s) 8260C: The following volatiles sample was diluted due to foaming at the time of purging during the original sample analysis: MW-17 (480-158037-4). Elevated reporting limits (RLs) are provided.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

GC/MS Semi VOA
Method(s) 8270D_LL_PAH: The following sample was diluted due to the abundance of target analytes: MW-19 (480-157974-8). As such, surrogate recoveries are below the calibration range or are not reported, and elevated reporting limits (RLs) are provided.

Method(s) 8270D, 8270D_LL_PAH: The following samples were diluted to bring the concentration of target analytes within the calibration range: MW-7 (480-157974-6) and MW-19 (480-157974-8). Elevated reporting limits (RLs) are provided.

Method(s) 8270D_LL_PAH: The method blank for preparation batch 480-488745 contained Phenanthrene above the reporting limit (RL). None of the samples associated with this method blank contained the target compound; therefore, re-extraction and/or re-analysis of samples were not performed. The following samples are impacted:MW-7 (480-157974-6) and MW-19 (480-157974-8).

Method(s) 8270D, 8270D_LL_PAH: The following sample required a dilution due to the nature of the sample matrix: MW-7 (480-157974-6). Because of this dilution, the surrogate spike concentration in the sample was reduced to a level where the recovery calculation does not provide useful information.

Method(s) 8270D, 8270D_LL_PAH: The following sample was diluted due to the nature of the sample matrix: MW-17 (480-158037-4). Elevated reporting limits (RLs) are provided.

Method(s) 8270D_LL_PAH: The method blank for preparation batch 480-489844 contained Phenanthrene above the reporting limit (RL). The following affected samples contained Phenanthrene above the reporting limit: MW-13 (480-157974-3), MW-10 (480-157974-5), MW-11A (480-157974-7), EB-1 (480-157974-10), SW-01 (480-157974-12), SW-02 (480-157974-13), Duplicate (480-158037-1) and MW-23 (480-158037-5). No additional volume remains for further re-extraction. Therefore, the data has been reported.

Method(s) 8270D_LL_PAH: The method blank for preparation batch 480-488745 contained Phenanthrene above the reporting limit (RL). The following affected samples contained Phenanthrene above the reporting limit: MW-13 (480-157974-3), MW-10 (480-157974-5), MW-11A (480-157974-7), EB-1 (480-157974-10), SW-01 (480-157974-12), SW-02 (480-157974-13), Duplicate (480-158037-1) and MW-23 (480-158037-5). These samples were re-extracted outside of holding time, with similar results. No further volume remains for re-extraction, and the contamination is suspected to be caused by the laboratory. Both sets of data have been reported.

Method(s) 8270D_LL_PAH: The method blank for preparation batch 480-488745 contained Phenanthrene above the reporting limit (RL). None of the samples associated with this method blank contained the target compound; therefore, re-extraction and/or re-analysis of

Job ID: 480-157974-1 (Continued)

Laboratory: Eurofins TestAmerica, Buffalo (Continued)

samples were not performed. The following sample is impacted:MW-17 (480-158037-4).

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

General Chemistry
Method(s) 9012B: The results reported for the following sample do not concur with results previously reported for this site: SW-02 (480-157974-13). Reanalysis was performed, and the result(s) confirmed.

Method(s) 9016: The matrix spike duplicate (MSD) recovery for preparation batch 460-634977 and analytical batch 460-635076 was outside control limits. Sample matrix interference is suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Organic Prep
Method(s) 3510C: Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate/sample duplicate (MS/MSD/DUP) associated with preparation batch 480-488745.

Method(s) 3510C: Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate/sample duplicate (MS/MSD/DUP) associated with preparation batch 480-489844.

Method(s) 3510C: The following samples were re-prepared outside of preparation holding time due to contamination in the samples: MW-13 (480-157974-3), MW-10 (480-157974-5), MW-11A (480-157974-7), EB-1 (480-157974-10), SW-01 (480-157974-12), SW-02 (480-157974-13), Duplicate (480-158037-1) and MW-23 (480-158037-5).

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Detection Summary

Client: GEI Consultants, Inc.
Project/Site: GEI, Mineral Springs

Job ID: 480-157974-1
SDG: 480-157974-1

Client Sample ID: MW-20 — Lab Sample ID: 480-157974-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Cyanide, Total	900		20.0	10.0	ug/L	2		9012B	Total/NA
Cyanide, Free	10.2		5.0	1.5	ug/L	1		9016	Total/NA

Client Sample ID: MW-21 — Lab Sample ID: 480-157974-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Cyanide, Total	475		10.0	5.0	ug/L	1		9012B	Total/NA
Cyanide, Free	6.6		5.0	1.5	ug/L	1		9016	Total/NA

Client Sample ID: MW-13 — Lab Sample ID: 480-157974-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Phenanthrene	0.69	B	0.50	0.38	ug/L	1		8270D_LL_PAH	Total/NA
Phenanthrene - RE	0.93	H B	0.50	0.38	ug/L	1		8270D_LL_PAH	Total/NA
Cyanide, Total	225		10.0	5.0	ug/L	1		9012B	Total/NA
Cyanide, Free	14.0		5.0	1.5	ug/L	1		9016	Total/NA

Client Sample ID: MW-14 — Lab Sample ID: 480-157974-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Cyanide, Total	625		50.0	25.0	ug/L	5		9012B	Total/NA
Cyanide, Free	21.0		5.0	1.5	ug/L	1		9016	Total/NA

Client Sample ID: MW-10 — Lab Sample ID: 480-157974-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Phenanthrene	0.72	B	0.50	0.38	ug/L	1		8270D_LL_PAH	Total/NA
Phenanthrene - RE	0.95	H B	0.50	0.38	ug/L	1		8270D_LL_PAH	Total/NA

Client Sample ID: MW-7 — Lab Sample ID: 480-157974-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	580		20	8.2	ug/L	20		8260C	Total/NA
Ethylbenzene	940		20	15	ug/L	20		8260C	Total/NA
Xylenes, Total	450		40	13	ug/L	20		8260C	Total/NA
2-Methylnaphthalene	140		50	38	ug/L	100		8270D_LL_PAH	Total/NA
Acenaphthene	81		50	30	ug/L	100		8270D_LL_PAH	Total/NA
Naphthalene	1600		50	42	ug/L	100		8270D_LL_PAH	Total/NA

Client Sample ID: MW-11A — Lab Sample ID: 480-157974-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	6.8		2.0	0.82	ug/L	2		8260C	Total/NA
Acenaphthene	2.1		0.50	0.30	ug/L	1		8270D_LL_PAH	Total/NA
Acenaphthylene	1.6		0.50	0.34	ug/L	1		8270D_LL_PAH	Total/NA
Fluoranthene	0.36	J	0.50	0.36	ug/L	1		8270D_LL_PAH	Total/NA
Naphthalene	1.6		0.50	0.42	ug/L	1		8270D_LL_PAH	Total/NA
Phenanthrene	0.68	B	0.50	0.38	ug/L	1		8270D_LL_PAH	Total/NA
Pyrene	0.37	J	0.50	0.36	ug/L	1		8270D_LL_PAH	Total/NA
Acenaphthene - RE	2.0	H	0.50	0.30	ug/L	1		8270D_LL_PAH	Total/NA
Acenaphthylene - RE	0.96	H	0.50	0.34	ug/L	1		8270D_LL_PAH	Total/NA
Fluoranthene - RE	0.38	J H	0.50	0.36	ug/L	1		8270D_LL_PAH	Total/NA
Phenanthrene - RE	0.90	H B	0.50	0.38	ug/L	1		8270D_LL_PAH	Total/NA
Cyanide, Total	250		10.0	5.0	ug/L	1		9012B	Total/NA

This Detection Summary does not include radiochemical test results.

Detection Summary

Client: GEI Consultants, Inc.
Project/Site: GEI, Mineral Springs

Job ID: 480-157974-1
SDG: 480-157974-1

Client Sample ID: MW-11A (Continued) — Lab Sample ID: 480-157974-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Cyanide, Free	12.4		5.0	1.5	ug/L	1		9016	Total/NA
Total Dissolved Solids	778		10.0	4.0	mg/L	1		SM 2540C	Total/NA
Total Suspended Solids	45.6		4.0	4.0	mg/L	1		SM 2540D	Total/NA

Client Sample ID: MW-19 — Lab Sample ID: 480-157974-8

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	4600		100	41	ug/L	100		8260C	Total/NA
Ethylbenzene	450		100	74	ug/L	100		8260C	Total/NA
Naphthalene	5600		100	84	ug/L	200		8270D_LL_PAH	Total/NA

Client Sample ID: MW-22 — Lab Sample ID: 480-157974-9

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Cyanide, Total	800		50.0	25.0	ug/L	5		9012B	Total/NA
Cyanide, Free	41.9		5.0	1.5	ug/L	1		9016	Total/NA

Client Sample ID: EB-1 — Lab Sample ID: 480-157974-10

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Naphthalene	1.2		0.50	0.42	ug/L	1		8270D_LL_PAH	Total/NA
Phenanthrene	0.69	B	0.50	0.38	ug/L	1		8270D_LL_PAH	Total/NA
Phenanthrene - RE	0.91	H B	0.50	0.38	ug/L	1		8270D_LL_PAH	Total/NA

Client Sample ID: TRIP BLANK — Lab Sample ID: 480-157974-11

No Detections.

Client Sample ID: SW-01 — Lab Sample ID: 480-157974-12

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Naphthalene	1.6		0.50	0.42	ug/L	1		8270D_LL_PAH	Total/NA
Phenanthrene	0.72	B	0.50	0.38	ug/L	1		8270D_LL_PAH	Total/NA
Phenanthrene - RE	0.91	H B	0.50	0.38	ug/L	1		8270D_LL_PAH	Total/NA
Cyanide, Total	15.4		10.0	5.0	ug/L	1		9012B	Total/NA
Cyanide, Free	5.2		5.0	1.5	ug/L	1		9016	Total/NA
Total Dissolved Solids	627		10.0	4.0	mg/L	1		SM 2540C	Total/NA

Client Sample ID: SW-02 — Lab Sample ID: 480-157974-13

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Phenanthrene	0.67	B	0.50	0.38	ug/L	1		8270D_LL_PAH	Total/NA
Phenanthrene - RE	0.89	H B	0.50	0.38	ug/L	1		8270D_LL_PAH	Total/NA
Cyanide, Total	161	F1	10.0	5.0	ug/L	1		9012B	Total/NA
Cyanide, Free	9.9		5.0	1.5	ug/L	1		9016	Total/NA
Total Dissolved Solids	358		10.0	4.0	mg/L	1		SM 2540C	Total/NA
Total Suspended Solids	6.4		4.0	4.0	mg/L	1		SM 2540D	Total/NA

Client Sample ID: SW-03 — Lab Sample ID: 480-157974-14

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Cyanide, Total	229		10.0	5.0	ug/L	1		9012B	Total/NA
Cyanide, Free	18.3		5.0	1.5	ug/L	1		9016	Total/NA

This Detection Summary does not include radiochemical test results.

Detection Summary

Client: GEI Consultants, Inc.
Project/Site: GEI, Mineral Springs

Job ID: 480-157974-1
SDG: 480-157974-1

Client Sample ID: SW-04 — Lab Sample ID: 480-157974-15

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Cyanide, Total	11.0		10.0	5.0	ug/L	1		9012B	Total/NA
Cyanide, Free	1.8	J	5.0	1.5	ug/L	1		9016	Total/NA

Client Sample ID: SW-05 — Lab Sample ID: 480-157974-16

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Cyanide, Total	5.3	J	10.0	5.0	ug/L	1		9012B	Total/NA
Cyanide, Free	1.8	J	5.0	1.5	ug/L	1		9016	Total/NA

Client Sample ID: Duplicate — Lab Sample ID: 480-158037-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Naphthalene	1.6		0.50	0.42	ug/L	1		8270D_LL_PAH	Total/NA
Phenanthrene	0.71	B	0.50	0.38	ug/L	1		8270D_LL_PAH	Total/NA
Phenanthrene - RE	0.91	H B	0.50	0.38	ug/L	1		8270D_LL_PAH	Total/NA
Cyanide, Total	322		10.0	5.0	ug/L	1		9012B	Total/NA
Cyanide, Free	11.3		5.0	1.5	ug/L	1		9016	Total/NA

Client Sample ID: MW-12 — Lab Sample ID: 480-158037-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Cyanide, Total	832		40.0	20.0	ug/L	4		9012B	Total/NA
Cyanide, Free	16.5		5.0	1.5	ug/L	1		9016	Total/NA

Client Sample ID: MW-16 — Lab Sample ID: 480-158037-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Cyanide, Total	3550		100	50.0	ug/L	10		9012B	Total/NA
Cyanide, Free	79.6		25.0	7.7	ug/L	5		9016	Total/NA

Client Sample ID: MW-17 — Lab Sample ID: 480-158037-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Cyanide, Total	146		10.0	5.0	ug/L	1		9012B	Total/NA

Client Sample ID: MW-23 — Lab Sample ID: 480-158037-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Naphthalene	1.2		0.50	0.42	ug/L	1		8270D_LL_PAH	Total/NA
Phenanthrene	0.70	B	0.50	0.38	ug/L	1		8270D_LL_PAH	Total/NA
Phenanthrene - RE	0.87	H B	0.50	0.38	ug/L	1		8270D_LL_PAH	Total/NA
Cyanide, Total	317		10.0	5.0	ug/L	1		9012B	Total/NA
Cyanide, Free	8.8		5.0	1.5	ug/L	1		9016	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample Results

Client: GEI Consultants, Inc.
Project/Site: GEI, Mineral Springs

Job ID: 480-157974-1
SDG: 480-157974-1

Client Sample ID: MW-20
Date Collected: 08/20/19 09:40
Date Received: 08/21/19 14:25

Lab Sample ID: 480-157974-1
Matrix: Water

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	900		20.0	10.0	ug/L		08/26/19 16:21	08/27/19 15:04	2
Cyanide, Free	10.2		5.0	1.5	ug/L		08/26/19 10:15	08/26/19 18:10	1

Client Sample Results

Client: GEI Consultants, Inc.
Project/Site: GEI, Mineral Springs

Job ID: 480-157974-1
SDG: 480-157974-1

Client Sample ID: MW-21

Date Collected: 08/20/19 10:40
Date Received: 08/21/19 14:25

Lab Sample ID: 480-157974-2

Matrix: Water

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	475		10.0	5.0	ug/L		08/26/19 16:21	08/27/19 13:12	1
Cyanide, Free	6.6		5.0	1.5	ug/L		08/26/19 10:15	08/26/19 18:10	1

Client: GEI Consultants, Inc.
Project/Site: GEI, Mineral Springs

Job ID: 480-157974-1
SDG: 480-157974-1

Client Sample ID: MW-13

Date Collected: 08/20/19 11:40
Date Received: 08/21/19 14:25

Lab Sample ID: 480-157974-3

Matrix: Water

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	1.0	U	1.0	0.41	ug/L			08/22/19 13:21	1
Ethylbenzene	1.0	U	1.0	0.74	ug/L			08/22/19 13:21	1
Toluene	1.0	U	1.0	0.51	ug/L			08/22/19 13:21	1
Xylenes, Total	2.0	U	2.0	0.66	ug/L			08/22/19 13:21	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*97*		*77 - 120*		*08/22/19 13:21*	*1*
4-Bromofluorobenzene (Surr)	*106*		*73 - 120*		*08/22/19 13:21*	*1*
Dibromofluoromethane (Surr)	*99*		*75 - 123*		*08/22/19 13:21*	*1*
Toluene-d8 (Surr)	*94*		*80 - 120*		*08/22/19 13:21*	*1*

Method: 8270D_LL_PAH - Semivolatile Organic Compounds (GC/MS) Low level PAH

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2-Methylnaphthalene	0.50	U	0.50	0.38	ug/L		08/26/19 08:14	08/29/19 18:36	1
Acenaphthene	0.50	U	0.50	0.30	ug/L		08/26/19 08:14	08/29/19 18:36	1
Acenaphthylene	0.50	U	0.50	0.34	ug/L		08/26/19 08:14	08/29/19 18:36	1
Anthracene	0.50	U	0.50	0.39	ug/L		08/26/19 08:14	08/29/19 18:36	1
Benzo(a)anthracene	0.50	U	0.50	0.40	ug/L		08/26/19 08:14	08/29/19 18:36	1
Benzo(a)pyrene	0.50	U	0.50	0.33	ug/L		08/26/19 08:14	08/29/19 18:36	1
Benzo(b)fluoranthene	0.50	U	0.50	0.30	ug/L		08/26/19 08:14	08/29/19 18:36	1
Benzo(g,h,i)perylene	0.50	U	0.50	0.37	ug/L		08/26/19 08:14	08/29/19 18:36	1
Benzo(k)fluoranthene	0.50	U	0.50	0.085	ug/L		08/26/19 08:14	08/29/19 18:36	1
Chrysene	0.50	U	0.50	0.32	ug/L		08/26/19 08:14	08/29/19 18:36	1
Dibenz(a,h)anthracene	0.50	U	0.50	0.33	ug/L		08/26/19 08:14	08/29/19 18:36	1
Fluoranthene	0.50	U	0.50	0.36	ug/L		08/26/19 08:14	08/29/19 18:36	1
Fluorene	0.50	U	0.50	0.37	ug/L		08/26/19 08:14	08/29/19 18:36	1
Indeno(1,2,3-cd)pyrene	0.50	U	0.50	0.44	ug/L		08/26/19 08:14	08/29/19 18:36	1
Naphthalene	0.50	U	0.50	0.42	ug/L		08/26/19 08:14	08/29/19 18:36	1
Phenanthrene	**0.69**	**B**	0.50	0.38	ug/L		08/26/19 08:14	08/29/19 18:36	1
Pyrene	0.50	U	0.50	0.36	ug/L		08/26/19 08:14	08/29/19 18:36	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*94*		*48 - 120*	*08/26/19 08:14*	*08/29/19 18:36*	*1*
Nitrobenzene-d5	*81*		*46 - 120*	*08/26/19 08:14*	*08/29/19 18:36*	*1*
p-Terphenyl-d14	*48*		*24 - 136*	*08/26/19 08:14*	*08/29/19 18:36*	*1*

Method: 8270D_LL_PAH - Semivolatile Organic Compounds (GC/MS) Low level PAH - RE

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2-Methylnaphthalene	0.50	U H	0.50	0.38	ug/L		09/03/19 08:29	09/04/19 20:44	1
Acenaphthene	0.50	U H	0.50	0.30	ug/L		09/03/19 08:29	09/04/19 20:44	1
Acenaphthylene	0.50	U H	0.50	0.34	ug/L		09/03/19 08:29	09/04/19 20:44	1
Anthracene	0.50	U H	0.50	0.39	ug/L		09/03/19 08:29	09/04/19 20:44	1
Benzo(a)anthracene	0.50	U H	0.50	0.40	ug/L		09/03/19 08:29	09/04/19 20:44	1
Benzo(a)pyrene	0.50	U H	0.50	0.33	ug/L		09/03/19 08:29	09/04/19 20:44	1
Benzo(b)fluoranthene	0.50	U H	0.50	0.30	ug/L		09/03/19 08:29	09/04/19 20:44	1
Benzo(g,h,i)perylene	0.50	U H	0.50	0.37	ug/L		09/03/19 08:29	09/04/19 20:44	1
Benzo(k)fluoranthene	0.50	U H	0.50	0.085	ug/L		09/03/19 08:29	09/04/19 20:44	1
Chrysene	0.50	U H	0.50	0.32	ug/L		09/03/19 08:29	09/04/19 20:44	1
Dibenz(a,h)anthracene	0.50	U H	0.50	0.33	ug/L		09/03/19 08:29	09/04/19 20:44	1
Fluoranthene	0.50	U H	0.50	0.36	ug/L		09/03/19 08:29	09/04/19 20:44	1

Client: GEI Consultants, Inc.
Project/Site: GEI, Mineral Springs

Job ID: 480-157974-1
SDG: 480-157974-1

Client Sample ID: MW-13

Date Collected: 08/20/19 11:40
Date Received: 08/21/19 14:25

Lab Sample ID: 480-157974-3

Matrix: Water

Method: 8270D_LL_PAH - Semivolatile Organic Compounds (GC/MS) Low level PAH - RE (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluorene	0.50	U H	0.50	0.37	ug/L		09/03/19 08:29	09/04/19 20:44	1
Indeno(1,2,3-cd)pyrene	0.50	U H	0.50	0.44	ug/L		09/03/19 08:29	09/04/19 20:44	1
Naphthalene	0.50	U H	0.50	0.42	ug/L		09/03/19 08:29	09/04/19 20:44	1
Phenanthrene	**0.93**	**H B**	0.50	0.38	ug/L		09/03/19 08:29	09/04/19 20:44	1
Pyrene	0.50	U H	0.50	0.36	ug/L		09/03/19 08:29	09/04/19 20:44	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*92*		*48 - 120*	*09/03/19 08:29*	*09/04/19 20:44*	*1*
Nitrobenzene-d5	*87*		*46 - 120*	*09/03/19 08:29*	*09/04/19 20:44*	*1*
p-Terphenyl-d14	*52*		*24 - 136*	*09/03/19 08:29*	*09/04/19 20:44*	*1*

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	**225**		10.0	5.0	ug/L		08/26/19 16:21	08/27/19 13:14	1
Cyanide, Free	**14.0**		5.0	1.5	ug/L		08/26/19 10:15	08/26/19 18:10	1

Client Sample Results

Client: GEI Consultants, Inc.
Project/Site: GEI, Mineral Springs

Job ID: 480-157974-1
SDG: 480-157974-1

Client Sample ID: MW-14

Date Collected: 08/20/19 12:30
Date Received: 08/21/19 14:25

Lab Sample ID: 480-157974-4

Matrix: Water

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	625		50.0	25.0	ug/L		09/01/19 16:11	09/03/19 13:20	5
Cyanide, Free	21.0		5.0	1.5	ug/L		08/26/19 10:15	08/26/19 18:10	1

Client: GEI Consultants, Inc.
Project/Site: GEI, Mineral Springs

Job ID: 480-157974-1
SDG: 480-157974-1

Client Sample ID: MW-10

Date Collected: 08/21/19 09:30
Date Received: 08/21/19 14:25

Lab Sample ID: 480-157974-5

Matrix: Water

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	1.0	U	1.0	0.41	ug/L			08/22/19 13:44	1
Ethylbenzene	1.0	U	1.0	0.74	ug/L			08/22/19 13:44	1
Toluene	1.0	U	1.0	0.51	ug/L			08/22/19 13:44	1
Xylenes, Total	2.0	U	2.0	0.66	ug/L			08/22/19 13:44	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*95*		*77 - 120*		*08/22/19 13:44*	*1*
4-Bromofluorobenzene (Surr)	*109*		*73 - 120*		*08/22/19 13:44*	*1*
Dibromofluoromethane (Surr)	*98*		*75 - 123*		*08/22/19 13:44*	*1*
Toluene-d8 (Surr)	*95*		*80 - 120*		*08/22/19 13:44*	*1*

Method: 8270D_LL_PAH - Semivolatile Organic Compounds (GC/MS) Low level PAH

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2-Methylnaphthalene	0.50	U	0.50	0.38	ug/L		08/26/19 08:14	08/29/19 19:05	1
Acenaphthene	0.50	U	0.50	0.30	ug/L		08/26/19 08:14	08/29/19 19:05	1
Acenaphthylene	0.50	U	0.50	0.34	ug/L		08/26/19 08:14	08/29/19 19:05	1
Anthracene	0.50	U	0.50	0.39	ug/L		08/26/19 08:14	08/29/19 19:05	1
Benzo(a)anthracene	0.50	U	0.50	0.40	ug/L		08/26/19 08:14	08/29/19 19:05	1
Benzo(a)pyrene	0.50	U	0.50	0.33	ug/L		08/26/19 08:14	08/29/19 19:05	1
Benzo(b)fluoranthene	0.50	U	0.50	0.30	ug/L		08/26/19 08:14	08/29/19 19:05	1
Benzo(g,h,i)perylene	0.50	U	0.50	0.37	ug/L		08/26/19 08:14	08/29/19 19:05	1
Benzo(k)fluoranthene	0.50	U	0.50	0.085	ug/L		08/26/19 08:14	08/29/19 19:05	1
Chrysene	0.50	U	0.50	0.32	ug/L		08/26/19 08:14	08/29/19 19:05	1
Dibenz(a,h)anthracene	0.50	U	0.50	0.33	ug/L		08/26/19 08:14	08/29/19 19:05	1
Fluoranthene	0.50	U	0.50	0.36	ug/L		08/26/19 08:14	08/29/19 19:05	1
Fluorene	0.50	U	0.50	0.37	ug/L		08/26/19 08:14	08/29/19 19:05	1
Indeno(1,2,3-cd)pyrene	0.50	U	0.50	0.44	ug/L		08/26/19 08:14	08/29/19 19:05	1
Naphthalene	0.50	U	0.50	0.42	ug/L		08/26/19 08:14	08/29/19 19:05	1
Phenanthrene	**0.72**	**B**	0.50	0.38	ug/L		08/26/19 08:14	08/29/19 19:05	1
Pyrene	0.50	U	0.50	0.36	ug/L		08/26/19 08:14	08/29/19 19:05	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*95*		*48 - 120*	*08/26/19 08:14*	*08/29/19 19:05*	*1*
Nitrobenzene-d5	*84*		*46 - 120*	*08/26/19 08:14*	*08/29/19 19:05*	*1*
p-Terphenyl-d14	*52*		*24 - 136*	*08/26/19 08:14*	*08/29/19 19:05*	*1*

Method: 8270D_LL_PAH - Semivolatile Organic Compounds (GC/MS) Low level PAH - RE

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2-Methylnaphthalene	0.50	U H	0.50	0.38	ug/L		09/03/19 08:29	09/04/19 21:13	1
Acenaphthene	0.50	U H	0.50	0.30	ug/L		09/03/19 08:29	09/04/19 21:13	1
Acenaphthylene	0.50	U H	0.50	0.34	ug/L		09/03/19 08:29	09/04/19 21:13	1
Anthracene	0.50	U H	0.50	0.39	ug/L		09/03/19 08:29	09/04/19 21:13	1
Benzo(a)anthracene	0.50	U H	0.50	0.40	ug/L		09/03/19 08:29	09/04/19 21:13	1
Benzo(a)pyrene	0.50	U H	0.50	0.33	ug/L		09/03/19 08:29	09/04/19 21:13	1
Benzo(b)fluoranthene	0.50	U H	0.50	0.30	ug/L		09/03/19 08:29	09/04/19 21:13	1
Benzo(g,h,i)perylene	0.50	U H	0.50	0.37	ug/L		09/03/19 08:29	09/04/19 21:13	1
Benzo(k)fluoranthene	0.50	U H	0.50	0.085	ug/L		09/03/19 08:29	09/04/19 21:13	1
Chrysene	0.50	U H	0.50	0.32	ug/L		09/03/19 08:29	09/04/19 21:13	1
Dibenz(a,h)anthracene	0.50	U H	0.50	0.33	ug/L		09/03/19 08:29	09/04/19 21:13	1
Fluoranthene	0.50	U H	0.50	0.36	ug/L		09/03/19 08:29	09/04/19 21:13	1

Client Sample ID: MW-10

Date Collected: 08/21/19 09:30
Date Received: 08/21/19 14:25

Lab Sample ID: 480-157974-5

Matrix: Water

Method: 8270D_LL_PAH - Semivolatile Organic Compounds (GC/MS) Low level PAH - RE (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluorene	0.50	U H	0.50	0.37	ug/L		09/03/19 08:29	09/04/19 21:13	1
Indeno(1,2,3-cd)pyrene	0.50	U H	0.50	0.44	ug/L		09/03/19 08:29	09/04/19 21:13	1
Naphthalene	0.50	U H	0.50	0.42	ug/L		09/03/19 08:29	09/04/19 21:13	1
Phenanthrene	**0.95**	**H B**	0.50	0.38	ug/L		09/03/19 08:29	09/04/19 21:13	1
Pyrene	0.50	U H	0.50	0.36	ug/L		09/03/19 08:29	09/04/19 21:13	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*91*		*48 - 120*	*09/03/19 08:29*	*09/04/19 21:13*	*1*
Nitrobenzene-d5	*88*		*46 - 120*	*09/03/19 08:29*	*09/04/19 21:13*	*1*
p-Terphenyl-d14	*54*		*24 - 136*	*09/03/19 08:29*	*09/04/19 21:13*	*1*

Client Sample ID: MW-7

Date Collected: 08/21/19 10:50
Date Received: 08/21/19 14:25

Lab Sample ID: 480-157974-6

Matrix: Water

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	**580**		20	8.2	ug/L			08/22/19 14:07	20
Ethylbenzene	**940**		20	15	ug/L			08/22/19 14:07	20
Toluene	20	U	20	10	ug/L			08/22/19 14:07	20
Xylenes, Total	**450**		40	13	ug/L			08/22/19 14:07	20

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*97*		*77 - 120*		*08/22/19 14:07*	*20*
4-Bromofluorobenzene (Surr)	*107*		*73 - 120*		*08/22/19 14:07*	*20*
Dibromofluoromethane (Surr)	*95*		*75 - 123*		*08/22/19 14:07*	*20*
Toluene-d8 (Surr)	*93*		*80 - 120*		*08/22/19 14:07*	*20*

Method: 8270D_LL_PAH - Semivolatile Organic Compounds (GC/MS) Low level PAH

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2-Methylnaphthalene	**140**		50	38	ug/L		08/26/19 08:14	08/29/19 19:33	100
Acenaphthene	**81**		50	30	ug/L		08/26/19 08:14	08/29/19 19:33	100
Acenaphthylene	50	U	50	34	ug/L		08/26/19 08:14	08/29/19 19:33	100
Anthracene	50	U	50	39	ug/L		08/26/19 08:14	08/29/19 19:33	100
Benzo(a)anthracene	50	U	50	40	ug/L		08/26/19 08:14	08/29/19 19:33	100
Benzo(a)pyrene	50	U	50	33	ug/L		08/26/19 08:14	08/29/19 19:33	100
Benzo(b)fluoranthene	50	U	50	30	ug/L		08/26/19 08:14	08/29/19 19:33	100
Benzo(g,h,i)perylene	50	U	50	37	ug/L		08/26/19 08:14	08/29/19 19:33	100
Benzo(k)fluoranthene	50	U	50	8.5	ug/L		08/26/19 08:14	08/29/19 19:33	100
Chrysene	50	U	50	32	ug/L		08/26/19 08:14	08/29/19 19:33	100
Dibenz(a,h)anthracene	50	U	50	33	ug/L		08/26/19 08:14	08/29/19 19:33	100
Fluoranthene	50	U	50	36	ug/L		08/26/19 08:14	08/29/19 19:33	100
Fluorene	50	U	50	37	ug/L		08/26/19 08:14	08/29/19 19:33	100
Indeno(1,2,3-cd)pyrene	50	U	50	44	ug/L		08/26/19 08:14	08/29/19 19:33	100
Naphthalene	**1600**		50	42	ug/L		08/26/19 08:14	08/29/19 19:33	100
Phenanthrene	50	U	50	38	ug/L		08/26/19 08:14	08/29/19 19:33	100
Pyrene	50	U	50	36	ug/L		08/26/19 08:14	08/29/19 19:33	100

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*78*		*48 - 120*	*08/26/19 08:14*	*08/29/19 19:33*	*100*
Nitrobenzene-d5	*62*		*46 - 120*	*08/26/19 08:14*	*08/29/19 19:33*	*100*
p-Terphenyl-d14	*48*		*24 - 136*	*08/26/19 08:14*	*08/29/19 19:33*	*100*

Client Sample ID: MW-11A

Date Collected: 08/21/19 12:20
Date Received: 08/21/19 14:25

Lab Sample ID: 480-157974-7

Matrix: Water

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	**6.8**		2.0	0.82	ug/L			08/22/19 14:30	2
Ethylbenzene	2.0	U	2.0	1.5	ug/L			08/22/19 14:30	2
Toluene	2.0	U	2.0	1.0	ug/L			08/22/19 14:30	2
Xylenes, Total	4.0	U	4.0	1.3	ug/L			08/22/19 14:30	2

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*97*		*77 - 120*		*08/22/19 14:30*	*2*
4-Bromofluorobenzene (Surr)	*108*		*73 - 120*		*08/22/19 14:30*	*2*
Dibromofluoromethane (Surr)	*95*		*75 - 123*		*08/22/19 14:30*	*2*
Toluene-d8 (Surr)	*96*		*80 - 120*		*08/22/19 14:30*	*2*

Method: 8270D_LL_PAH - Semivolatile Organic Compounds (GC/MS) Low level PAH

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2-Methylnaphthalene	0.50	U	0.50	0.38	ug/L		08/26/19 08:14	08/29/19 20:01	1
Acenaphthene	**2.1**		0.50	0.30	ug/L		08/26/19 08:14	08/29/19 20:01	1
Acenaphthylene	**1.6**		0.50	0.34	ug/L		08/26/19 08:14	08/29/19 20:01	1
Anthracene	0.50	U	0.50	0.39	ug/L		08/26/19 08:14	08/29/19 20:01	1
Benzo(a)anthracene	0.50	U	0.50	0.40	ug/L		08/26/19 08:14	08/29/19 20:01	1
Benzo(a)pyrene	0.50	U	0.50	0.33	ug/L		08/26/19 08:14	08/29/19 20:01	1
Benzo(b)fluoranthene	0.50	U	0.50	0.30	ug/L		08/26/19 08:14	08/29/19 20:01	1
Benzo(g,h,i)perylene	0.50	U	0.50	0.37	ug/L		08/26/19 08:14	08/29/19 20:01	1
Benzo(k)fluoranthene	0.50	U	0.50	0.085	ug/L		08/26/19 08:14	08/29/19 20:01	1
Chrysene	0.50	U	0.50	0.32	ug/L		08/26/19 08:14	08/29/19 20:01	1
Dibenz(a,h)anthracene	0.50	U	0.50	0.33	ug/L		08/26/19 08:14	08/29/19 20:01	1
Fluoranthene	**0.36**	**J**	0.50	0.36	ug/L		08/26/19 08:14	08/29/19 20:01	1
Fluorene	0.50	U	0.50	0.37	ug/L		08/26/19 08:14	08/29/19 20:01	1
Indeno(1,2,3-cd)pyrene	0.50	U	0.50	0.44	ug/L		08/26/19 08:14	08/29/19 20:01	1
Naphthalene	**1.6**		0.50	0.42	ug/L		08/26/19 08:14	08/29/19 20:01	1
Phenanthrene	**0.68**	**B**	0.50	0.38	ug/L		08/26/19 08:14	08/29/19 20:01	1
Pyrene	**0.37**	**J**	0.50	0.36	ug/L		08/26/19 08:14	08/29/19 20:01	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*93*		*48 - 120*	*08/26/19 08:14*	*08/29/19 20:01*	*1*
Nitrobenzene-d5	*79*		*46 - 120*	*08/26/19 08:14*	*08/29/19 20:01*	*1*
p-Terphenyl-d14	*55*		*24 - 136*	*08/26/19 08:14*	*08/29/19 20:01*	*1*

Method: 8270D_LL_PAH - Semivolatile Organic Compounds (GC/MS) Low level PAH - RE

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2-Methylnaphthalene	0.50	U H	0.50	0.38	ug/L		09/03/19 08:29	09/04/19 21:42	1
Acenaphthene	**2.0**	**H**	0.50	0.30	ug/L		09/03/19 08:29	09/04/19 21:42	1
Acenaphthylene	**0.96**	**H**	0.50	0.34	ug/L		09/03/19 08:29	09/04/19 21:42	1
Anthracene	0.50	U H	0.50	0.39	ug/L		09/03/19 08:29	09/04/19 21:42	1
Benzo(a)anthracene	0.50	U H	0.50	0.40	ug/L		09/03/19 08:29	09/04/19 21:42	1
Benzo(a)pyrene	0.50	U H	0.50	0.33	ug/L		09/03/19 08:29	09/04/19 21:42	1
Benzo(b)fluoranthene	0.50	U H	0.50	0.30	ug/L		09/03/19 08:29	09/04/19 21:42	1
Benzo(g,h,i)perylene	0.50	U H	0.50	0.37	ug/L		09/03/19 08:29	09/04/19 21:42	1
Benzo(k)fluoranthene	0.50	U H	0.50	0.085	ug/L		09/03/19 08:29	09/04/19 21:42	1
Chrysene	0.50	U H	0.50	0.32	ug/L		09/03/19 08:29	09/04/19 21:42	1
Dibenz(a,h)anthracene	0.50	U H	0.50	0.33	ug/L		09/03/19 08:29	09/04/19 21:42	1
Fluoranthene	**0.38**	**J H**	0.50	0.36	ug/L		09/03/19 08:29	09/04/19 21:42	1

Client: GEI Consultants, Inc.
Project/Site: GEI, Mineral Springs

Job ID: 480-157974-1
SDG: 480-157974-1

Client Sample ID: MW-11A
Date Collected: 08/21/19 12:20
Date Received: 08/21/19 14:25

Lab Sample ID: 480-157974-7
Matrix: Water

Method: 8270D_LL_PAH - Semivolatile Organic Compounds (GC/MS) Low level PAH - RE (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluorene	0.50	U H	0.50	0.37	ug/L		09/03/19 08:29	09/04/19 21:42	1
Indeno(1,2,3-cd)pyrene	0.50	U H	0.50	0.44	ug/L		09/03/19 08:29	09/04/19 21:42	1
Naphthalene	0.50	U H	0.50	0.42	ug/L		09/03/19 08:29	09/04/19 21:42	1
Phenanthrene	**0.90**	**H B**	0.50	0.38	ug/L		09/03/19 08:29	09/04/19 21:42	1
Pyrene	0.50	U H	0.50	0.36	ug/L		09/03/19 08:29	09/04/19 21:42	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*93*		*48 - 120*	*09/03/19 08:29*	*09/04/19 21:42*	*1*
Nitrobenzene-d5	*90*		*46 - 120*	*09/03/19 08:29*	*09/04/19 21:42*	*1*
p-Terphenyl-d14	*60*		*24 - 136*	*09/03/19 08:29*	*09/04/19 21:42*	*1*

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	**250**		10.0	5.0	ug/L		08/26/19 16:21	08/27/19 13:20	1
Cyanide, Free	**12.4**		5.0	1.5	ug/L		08/26/19 10:15	08/26/19 18:10	1
Total Dissolved Solids	**778**		10.0	4.0	mg/L			08/23/19 08:29	1

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids	**45.6**		4.0	4.0	mg/L			08/22/19 13:19	1

Client Sample ID: MW-19

Date Collected: 08/21/19 13:30
Date Received: 08/21/19 14:25

Lab Sample ID: 480-157974-8

Matrix: Water

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	**4600**		100	41	ug/L			08/22/19 14:53	100
Ethylbenzene	**450**		100	74	ug/L			08/22/19 14:53	100
Toluene	100	U	100	51	ug/L			08/22/19 14:53	100
Xylenes, Total	200	U	200	66	ug/L			08/22/19 14:53	100

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*95*		*77 - 120*		*08/22/19 14:53*	*100*
4-Bromofluorobenzene (Surr)	*106*		*73 - 120*		*08/22/19 14:53*	*100*
Dibromofluoromethane (Surr)	*93*		*75 - 123*		*08/22/19 14:53*	*100*
Toluene-d8 (Surr)	*94*		*80 - 120*		*08/22/19 14:53*	*100*

Method: 8270D_LL_PAH - Semivolatile Organic Compounds (GC/MS) Low level PAH

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2-Methylnaphthalene	100	U	100	76	ug/L		08/26/19 08:14	08/29/19 20:28	200
Acenaphthene	100	U	100	60	ug/L		08/26/19 08:14	08/29/19 20:28	200
Acenaphthylene	100	U	100	68	ug/L		08/26/19 08:14	08/29/19 20:28	200
Anthracene	100	U	100	78	ug/L		08/26/19 08:14	08/29/19 20:28	200
Benzo(a)anthracene	100	U	100	80	ug/L		08/26/19 08:14	08/29/19 20:28	200
Benzo(a)pyrene	100	U	100	66	ug/L		08/26/19 08:14	08/29/19 20:28	200
Benzo(b)fluoranthene	100	U	100	60	ug/L		08/26/19 08:14	08/29/19 20:28	200
Benzo(g,h,i)perylene	100	U	100	74	ug/L		08/26/19 08:14	08/29/19 20:28	200
Benzo(k)fluoranthene	100	U	100	17	ug/L		08/26/19 08:14	08/29/19 20:28	200
Chrysene	100	U	100	64	ug/L		08/26/19 08:14	08/29/19 20:28	200
Dibenz(a,h)anthracene	100	U	100	66	ug/L		08/26/19 08:14	08/29/19 20:28	200
Fluoranthene	100	U	100	72	ug/L		08/26/19 08:14	08/29/19 20:28	200
Fluorene	100	U	100	74	ug/L		08/26/19 08:14	08/29/19 20:28	200
Indeno(1,2,3-cd)pyrene	100	U	100	88	ug/L		08/26/19 08:14	08/29/19 20:28	200
Naphthalene	**5600**		100	84	ug/L		08/26/19 08:14	08/29/19 20:28	200
Phenanthrene	100	U	100	76	ug/L		08/26/19 08:14	08/29/19 20:28	200
Pyrene	100	U	100	72	ug/L		08/26/19 08:14	08/29/19 20:28	200

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*101*		*48 - 120*	*08/26/19 08:14*	*08/29/19 20:28*	*200*
Nitrobenzene-d5	*0*	*X*	*46 - 120*	*08/26/19 08:14*	*08/29/19 20:28*	*200*
p-Terphenyl-d14	*58*		*24 - 136*	*08/26/19 08:14*	*08/29/19 20:28*	*200*

Client Sample Results

Client: GEI Consultants, Inc.
Project/Site: GEI, Mineral Springs

Job ID: 480-157974-1
SDG: 480-157974-1

Client Sample ID: MW-22

Date Collected: 08/21/19 14:20
Date Received: 08/21/19 14:25

Lab Sample ID: 480-157974-9

Matrix: Water

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	800		50.0	25.0	ug/L		09/01/19 16:11	09/03/19 13:23	5
Cyanide, Free	41.9		5.0	1.5	ug/L		08/26/19 10:15	08/26/19 18:10	1

Client Sample ID: EB-1

Date Collected: 08/20/19 11:33
Date Received: 08/21/19 14:25

Lab Sample ID: 480-157974-10

Matrix: Water

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	1.0	U	1.0	0.41	ug/L			08/23/19 12:22	1
Ethylbenzene	1.0	U	1.0	0.74	ug/L			08/23/19 12:22	1
Toluene	1.0	U	1.0	0.51	ug/L			08/23/19 12:22	1
Xylenes, Total	2.0	U	2.0	0.66	ug/L			08/23/19 12:22	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*91*		*77 - 120*		*08/23/19 12:22*	*1*
4-Bromofluorobenzene (Surr)	*111*		*73 - 120*		*08/23/19 12:22*	*1*
Dibromofluoromethane (Surr)	*92*		*75 - 123*		*08/23/19 12:22*	*1*
Toluene-d8 (Surr)	*90*		*80 - 120*		*08/23/19 12:22*	*1*

Method: 8270D_LL_PAH - Semivolatile Organic Compounds (GC/MS) Low level PAH

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2-Methylnaphthalene	0.50	U	0.50	0.38	ug/L		08/26/19 08:14	08/29/19 20:56	1
Acenaphthene	0.50	U	0.50	0.30	ug/L		08/26/19 08:14	08/29/19 20:56	1
Acenaphthylene	0.50	U	0.50	0.34	ug/L		08/26/19 08:14	08/29/19 20:56	1
Anthracene	0.50	U	0.50	0.39	ug/L		08/26/19 08:14	08/29/19 20:56	1
Benzo(a)anthracene	0.50	U	0.50	0.40	ug/L		08/26/19 08:14	08/29/19 20:56	1
Benzo(a)pyrene	0.50	U	0.50	0.33	ug/L		08/26/19 08:14	08/29/19 20:56	1
Benzo(b)fluoranthene	0.50	U	0.50	0.30	ug/L		08/26/19 08:14	08/29/19 20:56	1
Benzo(g,h,i)perylene	0.50	U	0.50	0.37	ug/L		08/26/19 08:14	08/29/19 20:56	1
Benzo(k)fluoranthene	0.50	U	0.50	0.085	ug/L		08/26/19 08:14	08/29/19 20:56	1
Chrysene	0.50	U	0.50	0.32	ug/L		08/26/19 08:14	08/29/19 20:56	1
Dibenz(a,h)anthracene	0.50	U	0.50	0.33	ug/L		08/26/19 08:14	08/29/19 20:56	1
Fluoranthene	0.50	U	0.50	0.36	ug/L		08/26/19 08:14	08/29/19 20:56	1
Fluorene	0.50	U	0.50	0.37	ug/L		08/26/19 08:14	08/29/19 20:56	1
Indeno(1,2,3-cd)pyrene	0.50	U	0.50	0.44	ug/L		08/26/19 08:14	08/29/19 20:56	1
Naphthalene	**1.2**		0.50	0.42	ug/L		08/26/19 08:14	08/29/19 20:56	1
Phenanthrene	**0.69**	**B**	0.50	0.38	ug/L		08/26/19 08:14	08/29/19 20:56	1
Pyrene	0.50	U	0.50	0.36	ug/L		08/26/19 08:14	08/29/19 20:56	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*97*		*48 - 120*	*08/26/19 08:14*	*08/29/19 20:56*	*1*
Nitrobenzene-d5	*85*		*46 - 120*	*08/26/19 08:14*	*08/29/19 20:56*	*1*
p-Terphenyl-d14	*79*		*24 - 136*	*08/26/19 08:14*	*08/29/19 20:56*	*1*

Method: 8270D_LL_PAH - Semivolatile Organic Compounds (GC/MS) Low level PAH - RE

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2-Methylnaphthalene	0.50	U H	0.50	0.38	ug/L		09/03/19 08:29	09/04/19 22:11	1
Acenaphthene	0.50	U H	0.50	0.30	ug/L		09/03/19 08:29	09/04/19 22:11	1
Acenaphthylene	0.50	U H	0.50	0.34	ug/L		09/03/19 08:29	09/04/19 22:11	1
Anthracene	0.50	U H	0.50	0.39	ug/L		09/03/19 08:29	09/04/19 22:11	1
Benzo(a)anthracene	0.50	U H	0.50	0.40	ug/L		09/03/19 08:29	09/04/19 22:11	1
Benzo(a)pyrene	0.50	U H	0.50	0.33	ug/L		09/03/19 08:29	09/04/19 22:11	1
Benzo(b)fluoranthene	0.50	U H	0.50	0.30	ug/L		09/03/19 08:29	09/04/19 22:11	1
Benzo(g,h,i)perylene	0.50	U H	0.50	0.37	ug/L		09/03/19 08:29	09/04/19 22:11	1
Benzo(k)fluoranthene	0.50	U H	0.50	0.085	ug/L		09/03/19 08:29	09/04/19 22:11	1
Chrysene	0.50	U H	0.50	0.32	ug/L		09/03/19 08:29	09/04/19 22:11	1
Dibenz(a,h)anthracene	0.50	U H	0.50	0.33	ug/L		09/03/19 08:29	09/04/19 22:11	1
Fluoranthene	0.50	U H	0.50	0.36	ug/L		09/03/19 08:29	09/04/19 22:11	1

Client Sample ID: EB-1

Date Collected: 08/20/19 11:33
Date Received: 08/21/19 14:25

Lab Sample ID: 480-157974-10

Matrix: Water

Method: 8270D_LL_PAH - Semivolatile Organic Compounds (GC/MS) Low level PAH - RE (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluorene	0.50	U H	0.50	0.37	ug/L		09/03/19 08:29	09/04/19 22:11	1
Indeno(1,2,3-cd)pyrene	0.50	U H	0.50	0.44	ug/L		09/03/19 08:29	09/04/19 22:11	1
Naphthalene	0.50	U H	0.50	0.42	ug/L		09/03/19 08:29	09/04/19 22:11	1
Phenanthrene	**0.91**	**H B**	0.50	0.38	ug/L		09/03/19 08:29	09/04/19 22:11	1
Pyrene	0.50	U H	0.50	0.36	ug/L		09/03/19 08:29	09/04/19 22:11	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*93*		*48 - 120*	*09/03/19 08:29*	*09/04/19 22:11*	*1*
Nitrobenzene-d5	*91*		*46 - 120*	*09/03/19 08:29*	*09/04/19 22:11*	*1*
p-Terphenyl-d14	*83*		*24 - 136*	*09/03/19 08:29*	*09/04/19 22:11*	*1*

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	10.0	U	10.0	5.0	ug/L		08/26/19 16:21	08/27/19 13:22	1
Cyanide, Free	5.0	U	5.0	1.5	ug/L		08/26/19 10:15	08/26/19 18:10	1

Client: GEI Consultants, Inc.
Project/Site: GEI, Mineral Springs

Job ID: 480-157974-1
SDG: 480-157974-1

Client Sample ID: TRIP BLANK

Date Collected: 08/20/19 00:00
Date Received: 08/21/19 14:25

Lab Sample ID: 480-157974-11

Matrix: Water

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	1.0	U	1.0	0.41	ug/L			08/23/19 12:45	1
Ethylbenzene	1.0	U	1.0	0.74	ug/L			08/23/19 12:45	1
Toluene	1.0	U	1.0	0.51	ug/L			08/23/19 12:45	1
Xylenes, Total	2.0	U	2.0	0.66	ug/L			08/23/19 12:45	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*89*		*77 - 120*		*08/23/19 12:45*	*1*
4-Bromofluorobenzene (Surr)	*104*		*73 - 120*		*08/23/19 12:45*	*1*
Dibromofluoromethane (Surr)	*89*		*75 - 123*		*08/23/19 12:45*	*1*
Toluene-d8 (Surr)	*92*		*80 - 120*		*08/23/19 12:45*	*1*

Client Sample ID: SW-01

Date Collected: 08/20/19 15:00
Date Received: 08/21/19 14:25

Lab Sample ID: 480-157974-12

Matrix: Water

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	2.0	U	2.0	0.82	ug/L			08/22/19 15:16	2
Ethylbenzene	2.0	U	2.0	1.5	ug/L			08/22/19 15:16	2
Toluene	2.0	U	2.0	1.0	ug/L			08/22/19 15:16	2
Xylenes, Total	4.0	U	4.0	1.3	ug/L			08/22/19 15:16	2

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*95*		*77 - 120*		*08/22/19 15:16*	*2*
4-Bromofluorobenzene (Surr)	*109*		*73 - 120*		*08/22/19 15:16*	*2*
Dibromofluoromethane (Surr)	*94*		*75 - 123*		*08/22/19 15:16*	*2*
Toluene-d8 (Surr)	*95*		*80 - 120*		*08/22/19 15:16*	*2*

Method: 8270D_LL_PAH - Semivolatile Organic Compounds (GC/MS) Low level PAH

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2-Methylnaphthalene	0.50	U	0.50	0.38	ug/L		08/26/19 08:14	08/29/19 21:24	1
Acenaphthene	0.50	U	0.50	0.30	ug/L		08/26/19 08:14	08/29/19 21:24	1
Acenaphthylene	0.50	U	0.50	0.34	ug/L		08/26/19 08:14	08/29/19 21:24	1
Anthracene	0.50	U	0.50	0.39	ug/L		08/26/19 08:14	08/29/19 21:24	1
Benzo(a)anthracene	0.50	U	0.50	0.40	ug/L		08/26/19 08:14	08/29/19 21:24	1
Benzo(a)pyrene	0.50	U	0.50	0.33	ug/L		08/26/19 08:14	08/29/19 21:24	1
Benzo(b)fluoranthene	0.50	U	0.50	0.30	ug/L		08/26/19 08:14	08/29/19 21:24	1
Benzo(g,h,i)perylene	0.50	U	0.50	0.37	ug/L		08/26/19 08:14	08/29/19 21:24	1
Benzo(k)fluoranthene	0.50	U	0.50	0.085	ug/L		08/26/19 08:14	08/29/19 21:24	1
Chrysene	0.50	U	0.50	0.32	ug/L		08/26/19 08:14	08/29/19 21:24	1
Dibenz(a,h)anthracene	0.50	U	0.50	0.33	ug/L		08/26/19 08:14	08/29/19 21:24	1
Fluoranthene	0.50	U	0.50	0.36	ug/L		08/26/19 08:14	08/29/19 21:24	1
Fluorene	0.50	U	0.50	0.37	ug/L		08/26/19 08:14	08/29/19 21:24	1
Indeno(1,2,3-cd)pyrene	0.50	U	0.50	0.44	ug/L		08/26/19 08:14	08/29/19 21:24	1
Naphthalene	**1.6**		0.50	0.42	ug/L		08/26/19 08:14	08/29/19 21:24	1
Phenanthrene	**0.72**	**B**	0.50	0.38	ug/L		08/26/19 08:14	08/29/19 21:24	1
Pyrene	0.50	U	0.50	0.36	ug/L		08/26/19 08:14	08/29/19 21:24	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*96*		*48 - 120*	*08/26/19 08:14*	*08/29/19 21:24*	*1*
Nitrobenzene-d5	*87*		*46 - 120*	*08/26/19 08:14*	*08/29/19 21:24*	*1*
p-Terphenyl-d14	*57*		*24 - 136*	*08/26/19 08:14*	*08/29/19 21:24*	*1*

Method: 8270D_LL_PAH - Semivolatile Organic Compounds (GC/MS) Low level PAH - RE

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2-Methylnaphthalene	0.50	U H	0.50	0.38	ug/L		09/03/19 08:29	09/04/19 22:39	1
Acenaphthene	0.50	U H	0.50	0.30	ug/L		09/03/19 08:29	09/04/19 22:39	1
Acenaphthylene	0.50	U H	0.50	0.34	ug/L		09/03/19 08:29	09/04/19 22:39	1
Anthracene	0.50	U H	0.50	0.39	ug/L		09/03/19 08:29	09/04/19 22:39	1
Benzo(a)anthracene	0.50	U H	0.50	0.40	ug/L		09/03/19 08:29	09/04/19 22:39	1
Benzo(a)pyrene	0.50	U H	0.50	0.33	ug/L		09/03/19 08:29	09/04/19 22:39	1
Benzo(b)fluoranthene	0.50	U H	0.50	0.30	ug/L		09/03/19 08:29	09/04/19 22:39	1
Benzo(g,h,i)perylene	0.50	U H	0.50	0.37	ug/L		09/03/19 08:29	09/04/19 22:39	1
Benzo(k)fluoranthene	0.50	U H	0.50	0.085	ug/L		09/03/19 08:29	09/04/19 22:39	1
Chrysene	0.50	U H	0.50	0.32	ug/L		09/03/19 08:29	09/04/19 22:39	1
Dibenz(a,h)anthracene	0.50	U H	0.50	0.33	ug/L		09/03/19 08:29	09/04/19 22:39	1
Fluoranthene	0.50	U H	0.50	0.36	ug/L		09/03/19 08:29	09/04/19 22:39	1

Client Sample ID: SW-01

Date Collected: 08/20/19 15:00
Date Received: 08/21/19 14:25

Lab Sample ID: 480-157974-12

Matrix: Water

Method: 8270D_LL_PAH - Semivolatile Organic Compounds (GC/MS) Low level PAH - RE (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluorene	0.50	U H	0.50	0.37	ug/L		09/03/19 08:29	09/04/19 22:39	1
Indeno(1,2,3-cd)pyrene	0.50	U H	0.50	0.44	ug/L		09/03/19 08:29	09/04/19 22:39	1
Naphthalene	0.50	U H	0.50	0.42	ug/L		09/03/19 08:29	09/04/19 22:39	1
Phenanthrene	**0.91**	**H B**	0.50	0.38	ug/L		09/03/19 08:29	09/04/19 22:39	1
Pyrene	0.50	U H	0.50	0.36	ug/L		09/03/19 08:29	09/04/19 22:39	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*95*		*48 - 120*	*09/03/19 08:29*	*09/04/19 22:39*	*1*
Nitrobenzene-d5	*88*		*46 - 120*	*09/03/19 08:29*	*09/04/19 22:39*	*1*
p-Terphenyl-d14	*65*		*24 - 136*	*09/03/19 08:29*	*09/04/19 22:39*	*1*

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	**15.4**		10.0	5.0	ug/L		08/26/19 16:21	08/27/19 13:24	1
Cyanide, Free	**5.2**		5.0	1.5	ug/L		08/26/19 10:15	08/26/19 18:10	1
Total Dissolved Solids	**627**		10.0	4.0	mg/L			08/22/19 15:36	1

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids	4.0	U	4.0	4.0	mg/L			08/22/19 13:19	1

Client Sample ID: SW-02

Date Collected: 08/20/19 13:00
Date Received: 08/21/19 14:25

Lab Sample ID: 480-157974-13

Matrix: Water

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	1.0	U	1.0	0.41	ug/L			08/22/19 15:39	1
Ethylbenzene	1.0	U	1.0	0.74	ug/L			08/22/19 15:39	1
Toluene	1.0	U	1.0	0.51	ug/L			08/22/19 15:39	1
Xylenes, Total	2.0	U	2.0	0.66	ug/L			08/22/19 15:39	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*93*		*77 - 120*		*08/22/19 15:39*	*1*
4-Bromofluorobenzene (Surr)	*104*		*73 - 120*		*08/22/19 15:39*	*1*
Dibromofluoromethane (Surr)	*93*		*75 - 123*		*08/22/19 15:39*	*1*
Toluene-d8 (Surr)	*93*		*80 - 120*		*08/22/19 15:39*	*1*

Method: 8270D_LL_PAH - Semivolatile Organic Compounds (GC/MS) Low level PAH

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2-Methylnaphthalene	0.50	U	0.50	0.38	ug/L		08/26/19 08:14	08/29/19 21:52	1
Acenaphthene	0.50	U	0.50	0.30	ug/L		08/26/19 08:14	08/29/19 21:52	1
Acenaphthylene	0.50	U	0.50	0.34	ug/L		08/26/19 08:14	08/29/19 21:52	1
Anthracene	0.50	U	0.50	0.39	ug/L		08/26/19 08:14	08/29/19 21:52	1
Benzo(a)anthracene	0.50	U	0.50	0.40	ug/L		08/26/19 08:14	08/29/19 21:52	1
Benzo(a)pyrene	0.50	U	0.50	0.33	ug/L		08/26/19 08:14	08/29/19 21:52	1
Benzo(b)fluoranthene	0.50	U	0.50	0.30	ug/L		08/26/19 08:14	08/29/19 21:52	1
Benzo(g,h,i)perylene	0.50	U	0.50	0.37	ug/L		08/26/19 08:14	08/29/19 21:52	1
Benzo(k)fluoranthene	0.50	U	0.50	0.085	ug/L		08/26/19 08:14	08/29/19 21:52	1
Chrysene	0.50	U	0.50	0.32	ug/L		08/26/19 08:14	08/29/19 21:52	1
Dibenz(a,h)anthracene	0.50	U	0.50	0.33	ug/L		08/26/19 08:14	08/29/19 21:52	1
Fluoranthene	0.50	U	0.50	0.36	ug/L		08/26/19 08:14	08/29/19 21:52	1
Fluorene	0.50	U	0.50	0.37	ug/L		08/26/19 08:14	08/29/19 21:52	1
Indeno(1,2,3-cd)pyrene	0.50	U	0.50	0.44	ug/L		08/26/19 08:14	08/29/19 21:52	1
Naphthalene	0.50	U	0.50	0.42	ug/L		08/26/19 08:14	08/29/19 21:52	1
Phenanthrene	**0.67**	**B**	0.50	0.38	ug/L		08/26/19 08:14	08/29/19 21:52	1
Pyrene	0.50	U	0.50	0.36	ug/L		08/26/19 08:14	08/29/19 21:52	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*97*		*48 - 120*	*08/26/19 08:14*	*08/29/19 21:52*	*1*
Nitrobenzene-d5	*83*		*46 - 120*	*08/26/19 08:14*	*08/29/19 21:52*	*1*
p-Terphenyl-d14	*56*		*24 - 136*	*08/26/19 08:14*	*08/29/19 21:52*	*1*

Method: 8270D_LL_PAH - Semivolatile Organic Compounds (GC/MS) Low level PAH - RE

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2-Methylnaphthalene	0.50	U H	0.50	0.38	ug/L		09/03/19 08:29	09/04/19 23:07	1
Acenaphthene	0.50	U H	0.50	0.30	ug/L		09/03/19 08:29	09/04/19 23:07	1
Acenaphthylene	0.50	U H	0.50	0.34	ug/L		09/03/19 08:29	09/04/19 23:07	1
Anthracene	0.50	U H	0.50	0.39	ug/L		09/03/19 08:29	09/04/19 23:07	1
Benzo(a)anthracene	0.50	U H	0.50	0.40	ug/L		09/03/19 08:29	09/04/19 23:07	1
Benzo(a)pyrene	0.50	U H	0.50	0.33	ug/L		09/03/19 08:29	09/04/19 23:07	1
Benzo(b)fluoranthene	0.50	U H	0.50	0.30	ug/L		09/03/19 08:29	09/04/19 23:07	1
Benzo(g,h,i)perylene	0.50	U H	0.50	0.37	ug/L		09/03/19 08:29	09/04/19 23:07	1
Benzo(k)fluoranthene	0.50	U H	0.50	0.085	ug/L		09/03/19 08:29	09/04/19 23:07	1
Chrysene	0.50	U H	0.50	0.32	ug/L		09/03/19 08:29	09/04/19 23:07	1
Dibenz(a,h)anthracene	0.50	U H	0.50	0.33	ug/L		09/03/19 08:29	09/04/19 23:07	1
Fluoranthene	0.50	U H	0.50	0.36	ug/L		09/03/19 08:29	09/04/19 23:07	1

Client Sample ID: SW-02

Date Collected: 08/20/19 13:00
Date Received: 08/21/19 14:25

Lab Sample ID: 480-157974-13

Matrix: Water

Method: 8270D_LL_PAH - Semivolatile Organic Compounds (GC/MS) Low level PAH - RE (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluorene	0.50	U H	0.50	0.37	ug/L		09/03/19 08:29	09/04/19 23:07	1
Indeno(1,2,3-cd)pyrene	0.50	U H	0.50	0.44	ug/L		09/03/19 08:29	09/04/19 23:07	1
Naphthalene	0.50	U H	0.50	0.42	ug/L		09/03/19 08:29	09/04/19 23:07	1
Phenanthrene	**0.89**	**H B**	0.50	0.38	ug/L		09/03/19 08:29	09/04/19 23:07	1
Pyrene	0.50	U H	0.50	0.36	ug/L		09/03/19 08:29	09/04/19 23:07	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*85*		*48 - 120*	*09/03/19 08:29*	*09/04/19 23:07*	*1*
Nitrobenzene-d5	*81*		*46 - 120*	*09/03/19 08:29*	*09/04/19 23:07*	*1*
p-Terphenyl-d14	*56*		*24 - 136*	*09/03/19 08:29*	*09/04/19 23:07*	*1*

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	**161**	**F1**	10.0	5.0	ug/L		09/01/19 16:11	09/03/19 12:50	1
Cyanide, Free	**9.9**		5.0	1.5	ug/L		08/26/19 10:15	08/26/19 18:10	1
Total Dissolved Solids	**358**		10.0	4.0	mg/L			08/22/19 15:36	1

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids	**6.4**		4.0	4.0	mg/L			08/22/19 13:19	1

Client Sample Results

Client: GEI Consultants, Inc.
Project/Site: GEI, Mineral Springs

Job ID: 480-157974-1
SDG: 480-157974-1

Client Sample ID: SW-03
Date Collected: 08/20/19 13:30
Date Received: 08/21/19 14:25

Lab Sample ID: 480-157974-14
Matrix: Water

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	229		10.0	5.0	ug/L		08/26/19 16:21	08/27/19 13:28	1
Cyanide, Free	18.3		5.0	1.5	ug/L		08/26/19 10:15	08/26/19 18:10	1

Client Sample Results

Client: GEI Consultants, Inc.
Project/Site: GEI, Mineral Springs

Job ID: 480-157974-1
SDG: 480-157974-1

Client Sample ID: SW-04

Date Collected: 08/20/19 14:00
Date Received: 08/21/19 14:25

Lab Sample ID: 480-157974-15

Matrix: Water

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	11.0		10.0	5.0	ug/L		08/26/19 16:21	08/27/19 13:30	1
Cyanide, Free	1.8	J	5.0	1.5	ug/L		08/26/19 10:15	08/26/19 18:10	1

Client Sample Results

Client: GEI Consultants, Inc.
Project/Site: GEI, Mineral Springs

Job ID: 480-157974-1
SDG: 480-157974-1

Client Sample ID: SW-05
Date Collected: 08/20/19 14:30
Date Received: 08/21/19 14:25

Lab Sample ID: 480-157974-16
Matrix: Water

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	5.3	J	10.0	5.0	ug/L		08/26/19 16:21	08/27/19 13:31	1
Cyanide, Free	1.8	J	5.0	1.5	ug/L		08/26/19 10:15	08/26/19 18:10	1

Client Sample ID: Duplicate

Date Collected: 08/22/19 00:00
Date Received: 08/22/19 14:35

Lab Sample ID: 480-158037-1

Matrix: Ground Water

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	1.0	U	1.0	0.41	ug/L			08/26/19 13:13	1
Ethylbenzene	1.0	U	1.0	0.74	ug/L			08/26/19 13:13	1
Toluene	1.0	U	1.0	0.51	ug/L			08/26/19 13:13	1
Xylenes, Total	2.0	U	2.0	0.66	ug/L			08/26/19 13:13	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*96*		*77 - 120*		*08/26/19 13:13*	*1*
4-Bromofluorobenzene (Surr)	*109*		*73 - 120*		*08/26/19 13:13*	*1*
Dibromofluoromethane (Surr)	*98*		*75 - 123*		*08/26/19 13:13*	*1*
Toluene-d8 (Surr)	*93*		*80 - 120*		*08/26/19 13:13*	*1*

Method: 8270D_LL_PAH - Semivolatile Organic Compounds (GC/MS) Low level PAH

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2-Methylnaphthalene	0.50	U	0.50	0.38	ug/L		08/26/19 08:14	08/29/19 22:20	1
Acenaphthene	0.50	U	0.50	0.30	ug/L		08/26/19 08:14	08/29/19 22:20	1
Acenaphthylene	0.50	U	0.50	0.34	ug/L		08/26/19 08:14	08/29/19 22:20	1
Anthracene	0.50	U	0.50	0.39	ug/L		08/26/19 08:14	08/29/19 22:20	1
Benzo(a)anthracene	0.50	U	0.50	0.40	ug/L		08/26/19 08:14	08/29/19 22:20	1
Benzo(a)pyrene	0.50	U	0.50	0.33	ug/L		08/26/19 08:14	08/29/19 22:20	1
Benzo(b)fluoranthene	0.50	U	0.50	0.30	ug/L		08/26/19 08:14	08/29/19 22:20	1
Benzo(g,h,i)perylene	0.50	U	0.50	0.37	ug/L		08/26/19 08:14	08/29/19 22:20	1
Benzo(k)fluoranthene	0.50	U	0.50	0.085	ug/L		08/26/19 08:14	08/29/19 22:20	1
Chrysene	0.50	U	0.50	0.32	ug/L		08/26/19 08:14	08/29/19 22:20	1
Dibenz(a,h)anthracene	0.50	U	0.50	0.33	ug/L		08/26/19 08:14	08/29/19 22:20	1
Fluoranthene	0.50	U	0.50	0.36	ug/L		08/26/19 08:14	08/29/19 22:20	1
Fluorene	0.50	U	0.50	0.37	ug/L		08/26/19 08:14	08/29/19 22:20	1
Indeno(1,2,3-cd)pyrene	0.50	U	0.50	0.44	ug/L		08/26/19 08:14	08/29/19 22:20	1
Naphthalene	**1.6**		0.50	0.42	ug/L		08/26/19 08:14	08/29/19 22:20	1
Phenanthrene	**0.71**	**B**	0.50	0.38	ug/L		08/26/19 08:14	08/29/19 22:20	1
Pyrene	0.50	U	0.50	0.36	ug/L		08/26/19 08:14	08/29/19 22:20	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*97*		*48 - 120*	*08/26/19 08:14*	*08/29/19 22:20*	*1*
Nitrobenzene-d5	*83*		*46 - 120*	*08/26/19 08:14*	*08/29/19 22:20*	*1*
p-Terphenyl-d14	*47*		*24 - 136*	*08/26/19 08:14*	*08/29/19 22:20*	*1*

Method: 8270D_LL_PAH - Semivolatile Organic Compounds (GC/MS) Low level PAH - RE

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2-Methylnaphthalene	0.50	U H	0.50	0.38	ug/L		09/03/19 08:29	09/04/19 23:36	1
Acenaphthene	0.50	U H	0.50	0.30	ug/L		09/03/19 08:29	09/04/19 23:36	1
Acenaphthylene	0.50	U H	0.50	0.34	ug/L		09/03/19 08:29	09/04/19 23:36	1
Anthracene	0.50	U H	0.50	0.39	ug/L		09/03/19 08:29	09/04/19 23:36	1
Benzo(a)anthracene	0.50	U H	0.50	0.40	ug/L		09/03/19 08:29	09/04/19 23:36	1
Benzo(a)pyrene	0.50	U H	0.50	0.33	ug/L		09/03/19 08:29	09/04/19 23:36	1
Benzo(b)fluoranthene	0.50	U H	0.50	0.30	ug/L		09/03/19 08:29	09/04/19 23:36	1
Benzo(g,h,i)perylene	0.50	U H	0.50	0.37	ug/L		09/03/19 08:29	09/04/19 23:36	1
Benzo(k)fluoranthene	0.50	U H	0.50	0.085	ug/L		09/03/19 08:29	09/04/19 23:36	1
Chrysene	0.50	U H	0.50	0.32	ug/L		09/03/19 08:29	09/04/19 23:36	1
Dibenz(a,h)anthracene	0.50	U H	0.50	0.33	ug/L		09/03/19 08:29	09/04/19 23:36	1
Fluoranthene	0.50	U H	0.50	0.36	ug/L		09/03/19 08:29	09/04/19 23:36	1

Client Sample ID: Duplicate

Date Collected: 08/22/19 00:00
Date Received: 08/22/19 14:35

Lab Sample ID: 480-158037-1

Matrix: Ground Water

Method: 8270D_LL_PAH - Semivolatile Organic Compounds (GC/MS) Low level PAH - RE (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluorene	0.50	U H	0.50	0.37	ug/L		09/03/19 08:29	09/04/19 23:36	1
Indeno(1,2,3-cd)pyrene	0.50	U H	0.50	0.44	ug/L		09/03/19 08:29	09/04/19 23:36	1
Naphthalene	0.50	U H	0.50	0.42	ug/L		09/03/19 08:29	09/04/19 23:36	1
Phenanthrene	**0.91**	**H B**	0.50	0.38	ug/L		09/03/19 08:29	09/04/19 23:36	1
Pyrene	0.50	U H	0.50	0.36	ug/L		09/03/19 08:29	09/04/19 23:36	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*92*		*48 - 120*	*09/03/19 08:29*	*09/04/19 23:36*	*1*
Nitrobenzene-d5	*88*		*46 - 120*	*09/03/19 08:29*	*09/04/19 23:36*	*1*
p-Terphenyl-d14	*51*		*24 - 136*	*09/03/19 08:29*	*09/04/19 23:36*	*1*

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	**322**		10.0	5.0	ug/L		09/01/19 16:04	09/03/19 12:03	1
Cyanide, Free	**11.3**		5.0	1.5	ug/L		08/29/19 10:17	08/29/19 16:30	1

Client Sample Results

Client: GEI Consultants, Inc.
Project/Site: GEI, Mineral Springs

Job ID: 480-157974-1
SDG: 480-157974-1

Client Sample ID: MW-12

Date Collected: 08/22/19 09:45
Date Received: 08/22/19 14:35

Lab Sample ID: 480-158037-2

Matrix: Ground Water

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	832		40.0	20.0	ug/L		09/01/19 16:04	09/03/19 12:27	4
Cyanide, Free	16.5		5.0	1.5	ug/L		08/29/19 10:17	08/29/19 16:30	1

Client Sample Results

Client: GEI Consultants, Inc.
Project/Site: GEI, Mineral Springs

Job ID: 480-157974-1
SDG: 480-157974-1

Client Sample ID: MW-16

Date Collected: 08/22/19 12:30
Date Received: 08/22/19 14:35

Lab Sample ID: 480-158037-3

Matrix: Ground Water

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	3550		100	50.0	ug/L		09/01/19 16:04	09/03/19 12:16	10
Cyanide, Free	79.6		25.0	7.7	ug/L		08/29/19 10:17	08/29/19 16:30	5

Client Sample ID: MW-17

Date Collected: 08/22/19 11:00
Date Received: 08/22/19 14:35

Lab Sample ID: 480-158037-4

Matrix: Ground Water

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	2.0	U	2.0	0.82	ug/L			08/26/19 13:36	2
Ethylbenzene	2.0	U	2.0	1.5	ug/L			08/26/19 13:36	2
Toluene	2.0	U	2.0	1.0	ug/L			08/26/19 13:36	2
Xylenes, Total	4.0	U	4.0	1.3	ug/L			08/26/19 13:36	2

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*96*		*77 - 120*		*08/26/19 13:36*	*2*
4-Bromofluorobenzene (Surr)	*106*		*73 - 120*		*08/26/19 13:36*	*2*
Dibromofluoromethane (Surr)	*95*		*75 - 123*		*08/26/19 13:36*	*2*
Toluene-d8 (Surr)	*94*		*80 - 120*		*08/26/19 13:36*	*2*

Method: 8270D_LL_PAH - Semivolatile Organic Compounds (GC/MS) Low level PAH

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2-Methylnaphthalene	2.5	U	2.5	1.9	ug/L		08/26/19 08:14	08/30/19 20:34	5
Acenaphthene	2.5	U	2.5	1.5	ug/L		08/26/19 08:14	08/30/19 20:34	5
Acenaphthylene	2.5	U	2.5	1.7	ug/L		08/26/19 08:14	08/30/19 20:34	5
Anthracene	2.5	U	2.5	2.0	ug/L		08/26/19 08:14	08/30/19 20:34	5
Benzo(a)anthracene	2.5	U	2.5	2.0	ug/L		08/26/19 08:14	08/30/19 20:34	5
Benzo(a)pyrene	2.5	U	2.5	1.7	ug/L		08/26/19 08:14	08/30/19 20:34	5
Benzo(b)fluoranthene	2.5	U	2.5	1.5	ug/L		08/26/19 08:14	08/30/19 20:34	5
Benzo(g,h,i)perylene	2.5	U	2.5	1.9	ug/L		08/26/19 08:14	08/30/19 20:34	5
Benzo(k)fluoranthene	2.5	U	2.5	0.43	ug/L		08/26/19 08:14	08/30/19 20:34	5
Chrysene	2.5	U	2.5	1.6	ug/L		08/26/19 08:14	08/30/19 20:34	5
Dibenz(a,h)anthracene	2.5	U	2.5	1.7	ug/L		08/26/19 08:14	08/30/19 20:34	5
Fluoranthene	2.5	U	2.5	1.8	ug/L		08/26/19 08:14	08/30/19 20:34	5
Fluorene	2.5	U	2.5	1.9	ug/L		08/26/19 08:14	08/30/19 20:34	5
Indeno(1,2,3-cd)pyrene	2.5	U	2.5	2.2	ug/L		08/26/19 08:14	08/30/19 20:34	5
Naphthalene	2.5	U	2.5	2.1	ug/L		08/26/19 08:14	08/30/19 20:34	5
Phenanthrene	2.5	U	2.5	1.9	ug/L		08/26/19 08:14	08/30/19 20:34	5
Pyrene	2.5	U	2.5	1.8	ug/L		08/26/19 08:14	08/30/19 20:34	5

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*98*		*48 - 120*	*08/26/19 08:14*	*08/30/19 20:34*	*5*
Nitrobenzene-d5	*85*		*46 - 120*	*08/26/19 08:14*	*08/30/19 20:34*	*5*
p-Terphenyl-d14	*57*		*24 - 136*	*08/26/19 08:14*	*08/30/19 20:34*	*5*

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	**146**		10.0	5.0	ug/L		09/01/19 16:04	09/03/19 12:10	1
Cyanide, Free	5.0	U	5.0	1.5	ug/L		08/29/19 10:17	08/29/19 16:30	1

Client Sample ID: MW-23

Date Collected: 08/22/19 13:20
Date Received: 08/22/19 14:35

Lab Sample ID: 480-158037-5

Matrix: Ground Water

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	1.0	U	1.0	0.41	ug/L			08/26/19 13:59	1
Ethylbenzene	1.0	U	1.0	0.74	ug/L			08/26/19 13:59	1
Toluene	1.0	U	1.0	0.51	ug/L			08/26/19 13:59	1
Xylenes, Total	2.0	U	2.0	0.66	ug/L			08/26/19 13:59	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*97*		*77 - 120*		*08/26/19 13:59*	*1*
4-Bromofluorobenzene (Surr)	*104*		*73 - 120*		*08/26/19 13:59*	*1*
Dibromofluoromethane (Surr)	*100*		*75 - 123*		*08/26/19 13:59*	*1*
Toluene-d8 (Surr)	*89*		*80 - 120*		*08/26/19 13:59*	*1*

Method: 8270D_LL_PAH - Semivolatile Organic Compounds (GC/MS) Low level PAH

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2-Methylnaphthalene	0.50	U	0.50	0.38	ug/L		08/26/19 08:14	08/29/19 23:17	1
Acenaphthene	0.50	U	0.50	0.30	ug/L		08/26/19 08:14	08/29/19 23:17	1
Acenaphthylene	0.50	U	0.50	0.34	ug/L		08/26/19 08:14	08/29/19 23:17	1
Anthracene	0.50	U	0.50	0.39	ug/L		08/26/19 08:14	08/29/19 23:17	1
Benzo(a)anthracene	0.50	U	0.50	0.40	ug/L		08/26/19 08:14	08/29/19 23:17	1
Benzo(a)pyrene	0.50	U	0.50	0.33	ug/L		08/26/19 08:14	08/29/19 23:17	1
Benzo(b)fluoranthene	0.50	U	0.50	0.30	ug/L		08/26/19 08:14	08/29/19 23:17	1
Benzo(g,h,i)perylene	0.50	U	0.50	0.37	ug/L		08/26/19 08:14	08/29/19 23:17	1
Benzo(k)fluoranthene	0.50	U	0.50	0.085	ug/L		08/26/19 08:14	08/29/19 23:17	1
Chrysene	0.50	U	0.50	0.32	ug/L		08/26/19 08:14	08/29/19 23:17	1
Dibenz(a,h)anthracene	0.50	U	0.50	0.33	ug/L		08/26/19 08:14	08/29/19 23:17	1
Fluoranthene	0.50	U	0.50	0.36	ug/L		08/26/19 08:14	08/29/19 23:17	1
Fluorene	0.50	U	0.50	0.37	ug/L		08/26/19 08:14	08/29/19 23:17	1
Indeno(1,2,3-cd)pyrene	0.50	U	0.50	0.44	ug/L		08/26/19 08:14	08/29/19 23:17	1
Naphthalene	**1.2**		0.50	0.42	ug/L		08/26/19 08:14	08/29/19 23:17	1
Phenanthrene	**0.70**	**B**	0.50	0.38	ug/L		08/26/19 08:14	08/29/19 23:17	1
Pyrene	0.50	U	0.50	0.36	ug/L		08/26/19 08:14	08/29/19 23:17	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*99*		*48 - 120*	*08/26/19 08:14*	*08/29/19 23:17*	*1*
Nitrobenzene-d5	*85*		*46 - 120*	*08/26/19 08:14*	*08/29/19 23:17*	*1*
p-Terphenyl-d14	*47*		*24 - 136*	*08/26/19 08:14*	*08/29/19 23:17*	*1*

Method: 8270D_LL_PAH - Semivolatile Organic Compounds (GC/MS) Low level PAH - RE

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2-Methylnaphthalene	0.50	U H	0.50	0.38	ug/L		09/03/19 08:29	09/05/19 00:04	1
Acenaphthene	0.50	U H	0.50	0.30	ug/L		09/03/19 08:29	09/05/19 00:04	1
Acenaphthylene	0.50	U H	0.50	0.34	ug/L		09/03/19 08:29	09/05/19 00:04	1
Anthracene	0.50	U H	0.50	0.39	ug/L		09/03/19 08:29	09/05/19 00:04	1
Benzo(a)anthracene	0.50	U H	0.50	0.40	ug/L		09/03/19 08:29	09/05/19 00:04	1
Benzo(a)pyrene	0.50	U H	0.50	0.33	ug/L		09/03/19 08:29	09/05/19 00:04	1
Benzo(b)fluoranthene	0.50	U H	0.50	0.30	ug/L		09/03/19 08:29	09/05/19 00:04	1
Benzo(g,h,i)perylene	0.50	U H	0.50	0.37	ug/L		09/03/19 08:29	09/05/19 00:04	1
Benzo(k)fluoranthene	0.50	U H	0.50	0.085	ug/L		09/03/19 08:29	09/05/19 00:04	1
Chrysene	0.50	U H	0.50	0.32	ug/L		09/03/19 08:29	09/05/19 00:04	1
Dibenz(a,h)anthracene	0.50	U H	0.50	0.33	ug/L		09/03/19 08:29	09/05/19 00:04	1
Fluoranthene	0.50	U H	0.50	0.36	ug/L		09/03/19 08:29	09/05/19 00:04	1

Client: GEI Consultants, Inc.
Project/Site: GEI, Mineral Springs

Job ID: 480-157974-1
SDG: 480-157974-1

Client Sample ID: MW-23
Date Collected: 08/22/19 13:20
Date Received: 08/22/19 14:35

Lab Sample ID: 480-158037-5
Matrix: Ground Water

Method: 8270D_LL_PAH - Semivolatile Organic Compounds (GC/MS) Low level PAH - RE (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluorene	0.50	U H	0.50	0.37	ug/L		09/03/19 08:29	09/05/19 00:04	1
Indeno(1,2,3-cd)pyrene	0.50	U H	0.50	0.44	ug/L		09/03/19 08:29	09/05/19 00:04	1
Naphthalene	0.50	U H	0.50	0.42	ug/L		09/03/19 08:29	09/05/19 00:04	1
Phenanthrene	**0.87**	**H B**	0.50	0.38	ug/L		09/03/19 08:29	09/05/19 00:04	1
Pyrene	0.50	U H	0.50	0.36	ug/L		09/03/19 08:29	09/05/19 00:04	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*94*		*48 - 120*	*09/03/19 08:29*	*09/05/19 00:04*	*1*
Nitrobenzene-d5	*92*		*46 - 120*	*09/03/19 08:29*	*09/05/19 00:04*	*1*
p-Terphenyl-d14	*46*		*24 - 136*	*09/03/19 08:29*	*09/05/19 00:04*	*1*

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	**317**		10.0	5.0	ug/L		09/01/19 16:11	09/03/19 12:53	1
Cyanide, Free	**8.8**		5.0	1.5	ug/L		08/29/19 10:17	08/29/19 16:30	1

Surrogate Summary

Client: GEI Consultants, Inc.
Project/Site: GEI, Mineral Springs

Job ID: 480-157974-1
SDG: 480-157974-1

Method: 8260C - Volatile Organic Compounds by GC/MS

Matrix: Ground Water — **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)			
		DCA	BFB	DBFM	TOL
Lab Sample ID	Client Sample ID	(77-120)	(73-120)	(75-123)	(80-120)
480-158037-1	Duplicate	96	109	98	93
480-158037-4	MW-17	96	106	95	94
480-158037-5	MW-23	97	104	100	89

Surrogate Legend

DCA = 1,2-Dichloroethane-d4 (Surr)
BFB = 4-Bromofluorobenzene (Surr)
DBFM = Dibromofluoromethane (Surr)
TOL = Toluene-d8 (Surr)

Method: 8260C - Volatile Organic Compounds by GC/MS

Matrix: Water — **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)			
		DCA	BFB	DBFM	TOL
Lab Sample ID	Client Sample ID	(77-120)	(73-120)	(75-123)	(80-120)
480-157974-3	MW-13	97	106	99	94
480-157974-5	MW-10	95	109	98	95
480-157974-6	MW-7	97	107	95	93
480-157974-7	MW-11A	97	108	95	96
480-157974-8	MW-19	95	106	93	94
480-157974-10	EB-1	91	111	92	90
480-157974-11	TRIP BLANK	89	104	89	92
480-157974-12	SW-01	95	109	94	95
480-157974-13	SW-02	93	104	93	93
LCS 480-488233/5	Lab Control Sample	97	105	95	95
LCS 480-488466/5	Lab Control Sample	88	109	89	93
LCS 480-488740/5	Lab Control Sample	94	108	95	97
MB 480-488233/7	Method Blank	92	103	90	94
MB 480-488466/7	Method Blank	90	105	92	90
MB 480-488740/7	Method Blank	96	106	97	94

Surrogate Legend

DCA = 1,2-Dichloroethane-d4 (Surr)
BFB = 4-Bromofluorobenzene (Surr)
DBFM = Dibromofluoromethane (Surr)
TOL = Toluene-d8 (Surr)

Method: 8270D_LL_PAH - Semivolatile Organic Compounds (GC/MS) Low level PAH

Matrix: Ground Water — **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)		
		FBP	NBZ	TPHd14
Lab Sample ID	Client Sample ID	(48-120)	(46-120)	(24-136)
480-158037-1	Duplicate	97	83	47
480-158037-1 - RE	Duplicate	92	88	51
480-158037-4	MW-17	98	85	57
480-158037-5	MW-23	99	85	47
480-158037-5 - RE	MW-23	94	92	46

Surrogate Legend

FBP = 2-Fluorobiphenyl

Surrogate Summary

Client: GEI Consultants, Inc.
Project/Site: GEI, Mineral Springs

Job ID: 480-157974-1
SDG: 480-157974-1

NBZ = Nitrobenzene-d5
TPHd14 = p-Terphenyl-d14

Method: 8270D_LL_PAH - Semivolatile Organic Compounds (GC/MS) Low level PAH

Matrix: Water **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)		
		FBP	NBZ	TPHd14
Lab Sample ID	Client Sample ID	(48-120)	(46-120)	(24-136)
480-157974-3	MW-13	94	81	48
480-157974-3 - RE	MW-13	92	87	52
480-157974-5	MW-10	95	84	52
480-157974-5 - RE	MW-10	91	88	54
480-157974-6	MW-7	78	62	48
480-157974-7	MW-11A	93	79	55
480-157974-7 - RE	MW-11A	93	90	60
480-157974-8	MW-19	101	0 X	58
480-157974-10	EB-1	97	85	79
480-157974-10 - RE	EB-1	93	91	83
480-157974-12	SW-01	96	87	57
480-157974-12 - RE	SW-01	95	88	65
480-157974-13	SW-02	97	83	56
480-157974-13 - RE	SW-02	85	81	56
LCS 480-488745/2-A	Lab Control Sample	90	91	87
LCS 480-489844/2-A	Lab Control Sample	91	89	88
LCSD 480-488745/3-A	Lab Control Sample Dup	97	97	85
LCSD 480-489844/3-A	Lab Control Sample Dup	88	85	80
MB 480-488745/1-A	Method Blank	96	82	87
MB 480-489844/1-A	Method Blank	76	76	76

Surrogate Legend

FBP = 2-Fluorobiphenyl
NBZ = Nitrobenzene-d5
TPHd14 = p-Terphenyl-d14

Method: 8260C - Volatile Organic Compounds by GC/MS

Lab Sample ID: MB 480-488233/7
Matrix: Water
Analysis Batch: 488233

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	1.0	U	1.0	0.41	ug/L			08/22/19 09:41	1
Ethylbenzene	1.0	U	1.0	0.74	ug/L			08/22/19 09:41	1
Toluene	1.0	U	1.0	0.51	ug/L			08/22/19 09:41	1
Xylenes, Total	2.0	U	2.0	0.66	ug/L			08/22/19 09:41	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*92*		*77 - 120*		*08/22/19 09:41*	*1*
4-Bromofluorobenzene (Surr)	*103*		*73 - 120*		*08/22/19 09:41*	*1*
Dibromofluoromethane (Surr)	*90*		*75 - 123*		*08/22/19 09:41*	*1*
Toluene-d8 (Surr)	*94*		*80 - 120*		*08/22/19 09:41*	*1*

Lab Sample ID: LCS 480-488233/5
Matrix: Water
Analysis Batch: 488233

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	25.0	24.3		ug/L		97	71 - 124
Ethylbenzene	25.0	23.7		ug/L		95	77 - 123
Toluene	25.0	22.9		ug/L		92	80 - 122
Xylenes, Total	50.0	49.2		ug/L		98	76 - 122

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*97*		*77 - 120*
4-Bromofluorobenzene (Surr)	*105*		*73 - 120*
Dibromofluoromethane (Surr)	*95*		*75 - 123*
Toluene-d8 (Surr)	*95*		*80 - 120*

Lab Sample ID: MB 480-488466/7
Matrix: Water
Analysis Batch: 488466

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	1.0	U	1.0	0.41	ug/L			08/23/19 11:12	1
Ethylbenzene	1.0	U	1.0	0.74	ug/L			08/23/19 11:12	1
Toluene	1.0	U	1.0	0.51	ug/L			08/23/19 11:12	1
Xylenes, Total	2.0	U	2.0	0.66	ug/L			08/23/19 11:12	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*90*		*77 - 120*		*08/23/19 11:12*	*1*
4-Bromofluorobenzene (Surr)	*105*		*73 - 120*		*08/23/19 11:12*	*1*
Dibromofluoromethane (Surr)	*92*		*75 - 123*		*08/23/19 11:12*	*1*
Toluene-d8 (Surr)	*90*		*80 - 120*		*08/23/19 11:12*	*1*

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: LCS 480-488466/5
Matrix: Water
Analysis Batch: 488466

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Benzene			25.0	22.3		ug/L		89	71 - 124		
Ethylbenzene			25.0	22.9		ug/L		92	77 - 123		
Toluene			25.0	22.2		ug/L		89	80 - 122		
Xylenes, Total			50.0	46.9		ug/L		94	76 - 122		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*88*		*77 - 120*
4-Bromofluorobenzene (Surr)	*109*		*73 - 120*
Dibromofluoromethane (Surr)	*89*		*75 - 123*
Toluene-d8 (Surr)	*93*		*80 - 120*

Lab Sample ID: MB 480-488740/7
Matrix: Water
Analysis Batch: 488740

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	1.0	U	1.0	0.41	ug/L			08/26/19 10:39	1
Ethylbenzene	1.0	U	1.0	0.74	ug/L			08/26/19 10:39	1
Toluene	1.0	U	1.0	0.51	ug/L			08/26/19 10:39	1
Xylenes, Total	2.0	U	2.0	0.66	ug/L			08/26/19 10:39	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*96*		*77 - 120*		*08/26/19 10:39*	*1*
4-Bromofluorobenzene (Surr)	*106*		*73 - 120*		*08/26/19 10:39*	*1*
Dibromofluoromethane (Surr)	*97*		*75 - 123*		*08/26/19 10:39*	*1*
Toluene-d8 (Surr)	*94*		*80 - 120*		*08/26/19 10:39*	*1*

Lab Sample ID: LCS 480-488740/5
Matrix: Water
Analysis Batch: 488740

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Benzene			25.0	23.8		ug/L		95	71 - 124		
Ethylbenzene			25.0	24.9		ug/L		99	77 - 123		
Toluene			25.0	24.3		ug/L		97	80 - 122		
Xylenes, Total			50.0	49.9		ug/L		100	76 - 122		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*94*		*77 - 120*
4-Bromofluorobenzene (Surr)	*108*		*73 - 120*
Dibromofluoromethane (Surr)	*95*		*75 - 123*
Toluene-d8 (Surr)	*97*		*80 - 120*

Method: 8270D_LL_PAH - Semivolatile Organic Compounds (GC/MS) Low level PAH

Lab Sample ID: MB 480-488745/1-A
Matrix: Water
Analysis Batch: 489369

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 488745

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2-Methylnaphthalene	0.50	U	0.50	0.38	ug/L		08/26/19 08:14	08/29/19 17:12	1
Acenaphthene	0.50	U	0.50	0.30	ug/L		08/26/19 08:14	08/29/19 17:12	1
Acenaphthylene	0.50	U	0.50	0.34	ug/L		08/26/19 08:14	08/29/19 17:12	1
Anthracene	0.50	U	0.50	0.39	ug/L		08/26/19 08:14	08/29/19 17:12	1
Benzo(a)anthracene	0.50	U	0.50	0.40	ug/L		08/26/19 08:14	08/29/19 17:12	1
Benzo(a)pyrene	0.50	U	0.50	0.33	ug/L		08/26/19 08:14	08/29/19 17:12	1
Benzo(b)fluoranthene	0.50	U	0.50	0.30	ug/L		08/26/19 08:14	08/29/19 17:12	1
Benzo(g,h,i)perylene	0.50	U	0.50	0.37	ug/L		08/26/19 08:14	08/29/19 17:12	1
Benzo(k)fluoranthene	0.50	U	0.50	0.085	ug/L		08/26/19 08:14	08/29/19 17:12	1
Chrysene	0.50	U	0.50	0.32	ug/L		08/26/19 08:14	08/29/19 17:12	1
Dibenz(a,h)anthracene	0.50	U	0.50	0.33	ug/L		08/26/19 08:14	08/29/19 17:12	1
Fluoranthene	0.50	U	0.50	0.36	ug/L		08/26/19 08:14	08/29/19 17:12	1
Fluorene	0.50	U	0.50	0.37	ug/L		08/26/19 08:14	08/29/19 17:12	1
Indeno(1,2,3-cd)pyrene	0.50	U	0.50	0.44	ug/L		08/26/19 08:14	08/29/19 17:12	1
Naphthalene	0.50	U	0.50	0.42	ug/L		08/26/19 08:14	08/29/19 17:12	1
Phenanthrene	0.799		0.50	0.38	ug/L		08/26/19 08:14	08/29/19 17:12	1
Pyrene	0.50	U	0.50	0.36	ug/L		08/26/19 08:14	08/29/19 17:12	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*96*		*48 - 120*	*08/26/19 08:14*	*08/29/19 17:12*	*1*
Nitrobenzene-d5	*82*		*46 - 120*	*08/26/19 08:14*	*08/29/19 17:12*	*1*
p-Terphenyl-d14	*87*		*24 - 136*	*08/26/19 08:14*	*08/29/19 17:12*	*1*

Lab Sample ID: LCS 480-488745/2-A
Matrix: Water
Analysis Batch: 489369

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 488745

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
2-Methylnaphthalene	32.0	28.9		ug/L		90	48 - 120
Acenaphthene	32.0	29.5		ug/L		92	60 - 120
Acenaphthylene	32.0	30.4		ug/L		95	63 - 120
Anthracene	32.0	32.7		ug/L		102	69 - 131
Benzo(a)anthracene	32.0	29.9		ug/L		93	62 - 142
Benzo(a)pyrene	32.0	29.5		ug/L		92	46 - 156
Benzo(b)fluoranthene	32.0	31.7		ug/L		99	50 - 149
Benzo(g,h,i)perylene	32.0	32.6		ug/L		102	34 - 189
Benzo(k)fluoranthene	32.0	31.7		ug/L		99	47 - 147
Chrysene	32.0	30.6		ug/L		95	69 - 140
Dibenz(a,h)anthracene	32.0	33.4		ug/L		104	35 - 176
Fluoranthene	32.0	33.8		ug/L		106	67 - 133
Fluorene	32.0	32.4		ug/L		101	66 - 129
Indeno(1,2,3-cd)pyrene	32.0	32.3		ug/L		101	57 - 161
Naphthalene	32.0	28.7		ug/L		90	48 - 120
Phenanthrene	32.0	33.4		ug/L		104	67 - 130
Pyrene	32.0	31.1		ug/L		97	58 - 136

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
2-Fluorobiphenyl	*90*		*48 - 120*

Method: 8270D_LL_PAH - Semivolatile Organic Compounds (GC/MS) Low level PAH (Continued)

Lab Sample ID: LCS 480-488745/2-A
Matrix: Water
Analysis Batch: 489369

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 488745

Surrogate	LCS %Recovery	LCS Qualifier	Limits
Nitrobenzene-d5	*91*		*46 - 120*
p-Terphenyl-d14	*87*		*24 - 136*

Lab Sample ID: LCSD 480-488745/3-A
Matrix: Water
Analysis Batch: 489369

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 488745

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
2-Methylnaphthalene			32.0	31.7		ug/L		99	48 - 120	9	21
Acenaphthene			32.0	31.8		ug/L		99	60 - 120	8	24
Acenaphthylene			32.0	32.5		ug/L		102	63 - 120	7	18
Anthracene			32.0	32.8		ug/L		102	69 - 131	0	15
Benzo(a)anthracene			32.0	29.7		ug/L		93	62 - 142	1	15
Benzo(a)pyrene			32.0	29.2		ug/L		91	46 - 156	1	15
Benzo(b)fluoranthene			32.0	31.4		ug/L		98	50 - 149	1	15
Benzo(g,h,i)perylene			32.0	32.1		ug/L		100	34 - 189	2	15
Benzo(k)fluoranthene			32.0	31.5		ug/L		98	47 - 147	0	22
Chrysene			32.0	30.2		ug/L		94	69 - 140	1	15
Dibenz(a,h)anthracene			32.0	32.4		ug/L		101	35 - 176	3	15
Fluoranthene			32.0	34.6		ug/L		108	67 - 133	2	15
Fluorene			32.0	34.7		ug/L		108	66 - 129	7	15
Indeno(1,2,3-cd)pyrene			32.0	32.1		ug/L		100	57 - 161	1	15
Naphthalene			32.0	31.5		ug/L		98	48 - 120	9	29
Phenanthrene			32.0	33.7		ug/L		105	67 - 130	1	15
Pyrene			32.0	31.8		ug/L		99	58 - 136	2	25

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
2-Fluorobiphenyl	*97*		*48 - 120*
Nitrobenzene-d5	*97*		*46 - 120*
p-Terphenyl-d14	*85*		*24 - 136*

Lab Sample ID: MB 480-489844/1-A
Matrix: Water
Analysis Batch: 490150

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 489844

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2-Methylnaphthalene	0.50	U	0.50	0.38	ug/L		09/03/19 08:29	09/04/19 19:19	1
Acenaphthene	0.50	U	0.50	0.30	ug/L		09/03/19 08:29	09/04/19 19:19	1
Acenaphthylene	0.50	U	0.50	0.34	ug/L		09/03/19 08:29	09/04/19 19:19	1
Anthracene	0.50	U	0.50	0.39	ug/L		09/03/19 08:29	09/04/19 19:19	1
Benzo(a)anthracene	0.50	U	0.50	0.40	ug/L		09/03/19 08:29	09/04/19 19:19	1
Benzo(a)pyrene	0.50	U	0.50	0.33	ug/L		09/03/19 08:29	09/04/19 19:19	1
Benzo(b)fluoranthene	0.50	U	0.50	0.30	ug/L		09/03/19 08:29	09/04/19 19:19	1
Benzo(g,h,i)perylene	0.50	U	0.50	0.37	ug/L		09/03/19 08:29	09/04/19 19:19	1
Benzo(k)fluoranthene	0.50	U	0.50	0.085	ug/L		09/03/19 08:29	09/04/19 19:19	1
Chrysene	0.50	U	0.50	0.32	ug/L		09/03/19 08:29	09/04/19 19:19	1
Dibenz(a,h)anthracene	0.50	U	0.50	0.33	ug/L		09/03/19 08:29	09/04/19 19:19	1
Fluoranthene	0.50	U	0.50	0.36	ug/L		09/03/19 08:29	09/04/19 19:19	1

Method: 8270D_LL_PAH - Semivolatile Organic Compounds (GC/MS) Low level PAH (Continued)

Lab Sample ID: MB 480-489844/1-A
Matrix: Water
Analysis Batch: 490150

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 489844

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluorene	0.50	U	0.50	0.37	ug/L		09/03/19 08:29	09/04/19 19:19	1
Indeno(1,2,3-cd)pyrene	0.50	U	0.50	0.44	ug/L		09/03/19 08:29	09/04/19 19:19	1
Naphthalene	0.50	U	0.50	0.42	ug/L		09/03/19 08:29	09/04/19 19:19	1
Phenanthrene	0.865		0.50	0.38	ug/L		09/03/19 08:29	09/04/19 19:19	1
Pyrene	0.50	U	0.50	0.36	ug/L		09/03/19 08:29	09/04/19 19:19	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*76*		*48 - 120*	*09/03/19 08:29*	*09/04/19 19:19*	*1*
Nitrobenzene-d5	*76*		*46 - 120*	*09/03/19 08:29*	*09/04/19 19:19*	*1*
p-Terphenyl-d14	*76*		*24 - 136*	*09/03/19 08:29*	*09/04/19 19:19*	*1*

Lab Sample ID: LCS 480-489844/2-A
Matrix: Water
Analysis Batch: 490150

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 489844

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
2-Methylnaphthalene	32.0	29.1		ug/L		91	48 - 120
Acenaphthene	32.0	29.7		ug/L		93	60 - 120
Acenaphthylene	32.0	30.8		ug/L		96	63 - 120
Anthracene	32.0	32.8		ug/L		102	69 - 131
Benzo(a)anthracene	32.0	30.4		ug/L		95	62 - 142
Benzo(a)pyrene	32.0	29.8		ug/L		93	46 - 156
Benzo(b)fluoranthene	32.0	33.7		ug/L		105	50 - 149
Benzo(g,h,i)perylene	32.0	32.2		ug/L		101	34 - 189
Benzo(k)fluoranthene	32.0	32.6		ug/L		102	47 - 147
Chrysene	32.0	31.5		ug/L		99	69 - 140
Dibenz(a,h)anthracene	32.0	32.5		ug/L		101	35 - 176
Fluoranthene	32.0	33.9		ug/L		106	67 - 133
Fluorene	32.0	31.1		ug/L		97	66 - 129
Indeno(1,2,3-cd)pyrene	32.0	32.1		ug/L		100	57 - 161
Naphthalene	32.0	29.6		ug/L		92	48 - 120
Phenanthrene	32.0	32.3		ug/L		101	67 - 130
Pyrene	32.0	31.4		ug/L		98	58 - 136

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
2-Fluorobiphenyl	*91*		*48 - 120*
Nitrobenzene-d5	*89*		*46 - 120*
p-Terphenyl-d14	*88*		*24 - 136*

Lab Sample ID: LCSD 480-489844/3-A
Matrix: Water
Analysis Batch: 490150

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 489844

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
2-Methylnaphthalene	32.0	28.4		ug/L		89	48 - 120	3	21
Acenaphthene	32.0	29.2		ug/L		91	60 - 120	2	24
Acenaphthylene	32.0	30.8		ug/L		96	63 - 120	0	18
Anthracene	32.0	31.1		ug/L		97	69 - 131	5	15

Method: 8270D_LL_PAH - Semivolatile Organic Compounds (GC/MS) Low level PAH (Continued)

Lab Sample ID: LCSD 480-489844/3-A
Matrix: Water
Analysis Batch: 490150

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 489844

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzo(a)anthracene			32.0	28.8		ug/L		90	62 - 142	5	15
Benzo(a)pyrene			32.0	27.9		ug/L		87	46 - 156	7	15
Benzo(b)fluoranthene			32.0	31.4		ug/L		98	50 - 149	7	15
Benzo(g,h,i)perylene			32.0	29.6		ug/L		92	34 - 189	9	15
Benzo(k)fluoranthene			32.0	30.5		ug/L		95	47 - 147	7	22
Chrysene			32.0	29.1		ug/L		91	69 - 140	8	15
Dibenz(a,h)anthracene			32.0	29.5		ug/L		92	35 - 176	10	15
Fluoranthene			32.0	32.0		ug/L		100	67 - 133	6	15
Fluorene			32.0	30.5		ug/L		95	66 - 129	2	15
Indeno(1,2,3-cd)pyrene			32.0	29.9		ug/L		94	57 - 161	7	15
Naphthalene			32.0	28.1		ug/L		88	48 - 120	5	29
Phenanthrene			32.0	30.4		ug/L		95	67 - 130	6	15
Pyrene			32.0	30.0		ug/L		94	58 - 136	4	25

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
2-Fluorobiphenyl	*88*		*48 - 120*
Nitrobenzene-d5	*85*		*46 - 120*
p-Terphenyl-d14	*80*		*24 - 136*

Method: 9012B - Cyanide, Total andor Amenable

Lab Sample ID: MB 480-488877/1-A
Matrix: Water
Analysis Batch: 489046

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 488877

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	10.0	U	10.0	5.0	ug/L		08/26/19 16:21	08/27/19 13:01	1

Lab Sample ID: LCS 480-488877/2-A
Matrix: Water
Analysis Batch: 489046

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 488877

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Cyanide, Total			250	252.0		ug/L		101	90 - 110		

Lab Sample ID: 480-157974-12 MS
Matrix: Water
Analysis Batch: 489046

Client Sample ID: SW-01
Prep Type: Total/NA
Prep Batch: 488877

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Cyanide, Total	15.4		100	123.0		ug/L		108	90 - 110		

Lab Sample ID: MB 480-489794/1-A
Matrix: Water
Analysis Batch: 489906

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 489794

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	10.0	U	10.0	5.0	ug/L		09/01/19 16:04	09/03/19 11:05	1

Method: 9012B - Cyanide, Total andor Amenable (Continued)

Lab Sample ID: LCS 480-489794/2-A
Matrix: Water
Analysis Batch: 489911

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 489794

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Cyanide, Total	400	382.0		ug/L		96	90 - 110

Lab Sample ID: LCS 480-489794/3-A
Matrix: Water
Analysis Batch: 489906

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 489794

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Cyanide, Total	250	225.0		ug/L		90	90 - 110

Lab Sample ID: 480-158037-4 MS
Matrix: Ground Water
Analysis Batch: 489911

Client Sample ID: MW-17
Prep Type: Total/NA
Prep Batch: 489794

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Cyanide, Total	146		100	256.0		ug/L		110	90 - 110

Lab Sample ID: MB 480-489795/1-A
Matrix: Water
Analysis Batch: 489929

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 489795

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	10.0	U	10.0	5.0	ug/L		09/01/19 16:11	09/03/19 12:41	1

Lab Sample ID: LCS 480-489795/2-A
Matrix: Water
Analysis Batch: 489929

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 489795

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Cyanide, Total	250	227.0		ug/L		91	90 - 110

Lab Sample ID: 480-157974-13 MS
Matrix: Water
Analysis Batch: 489929

Client Sample ID: SW-02
Prep Type: Total/NA
Prep Batch: 489795

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Cyanide, Total	161	F1	100	243.0	F1	ug/L		82	90 - 110

Lab Sample ID: 480-157974-4 DU
Matrix: Water
Analysis Batch: 489929

Client Sample ID: MW-14
Prep Type: Total/NA
Prep Batch: 489795

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Cyanide, Total	625		695.0		ug/L		11	15

Method: 9016 - Cyanide, Free

Lab Sample ID: MB 460-634977/1-A
Matrix: Water
Analysis Batch: 635076

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 634977

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Free	5.0	U	5.0	1.5	ug/L		08/26/19 10:15	08/26/19 18:10	1

Lab Sample ID: LCS 460-634977/2-A
Matrix: Water
Analysis Batch: 635076

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 634977

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Cyanide, Free	50.0	45.51		ug/L		91	78 - 110

Lab Sample ID: DLCK 460-635076/10
Matrix: Water
Analysis Batch: 635076

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	DLCK Result	DLCK Qualifier	Unit	D	%Rec	%Rec. Limits
Cyanide, Free	2.00	1.61	J	ug/L		80	50 - 150

Lab Sample ID: MB 460-635833/1-A
Matrix: Water
Analysis Batch: 635870

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 635833

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Free	5.0	U	5.0	1.5	ug/L		08/29/19 10:17	08/29/19 16:30	1

Lab Sample ID: LCS 460-635833/2-A
Matrix: Water
Analysis Batch: 635870

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 635833

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Cyanide, Free	50.0	49.35		ug/L		99	78 - 110

Lab Sample ID: DLCK 460-635870/10
Matrix: Water
Analysis Batch: 635870

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	DLCK Result	DLCK Qualifier	Unit	D	%Rec	%Rec. Limits
Cyanide, Free	2.00	2.27	J	ug/L		113	50 - 150

Method: SM 2540C - Solids, Total Dissolved (TDS)

Lab Sample ID: MB 480-488403/1
Matrix: Water
Analysis Batch: 488403

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	10.0	U	10.0	4.0	mg/L			08/22/19 15:36	1

Method: SM 2540C - Solids, Total Dissolved (TDS) (Continued)

Lab Sample ID: LCS 480-488403/2
Matrix: Water
Analysis Batch: 488403

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Total Dissolved Solids			500	489.0		mg/L		98	85 - 115		

Lab Sample ID: 480-157974-A-16 DU
Matrix: Water
Analysis Batch: 488403

Client Sample ID: 480-157974-A-16 DU
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
Total Dissolved Solids	623			624.0		mg/L				0.2	10

Lab Sample ID: MB 480-488496/1
Matrix: Water
Analysis Batch: 488496

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	10.0	U	10.0	4.0	mg/L			08/23/19 08:29	1

Lab Sample ID: LCS 480-488496/2
Matrix: Water
Analysis Batch: 488496

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Total Dissolved Solids			500	510.0		mg/L		102	85 - 115		

Method: SM 2540D - Solids, Total Suspended (TSS)

Lab Sample ID: MB 480-488366/1
Matrix: Water
Analysis Batch: 488366

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids	1.0	U	1.0	1.0	mg/L			08/22/19 13:19	1

Lab Sample ID: LCS 480-488366/2
Matrix: Water
Analysis Batch: 488366

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Total Suspended Solids			241	225.6		mg/L		94	88 - 110		

QC Association Summary

Client: GEI Consultants, Inc.
Project/Site: GEI, Mineral Springs

Job ID: 480-157974-1
SDG: 480-157974-1

GC/MS VOA

Analysis Batch: 488233

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-157974-3	MW-13	Total/NA	Water	8260C	
480-157974-5	MW-10	Total/NA	Water	8260C	
480-157974-6	MW-7	Total/NA	Water	8260C	
480-157974-7	MW-11A	Total/NA	Water	8260C	
480-157974-8	MW-19	Total/NA	Water	8260C	
480-157974-12	SW-01	Total/NA	Water	8260C	
480-157974-13	SW-02	Total/NA	Water	8260C	
MB 480-488233/7	Method Blank	Total/NA	Water	8260C	
LCS 480-488233/5	Lab Control Sample	Total/NA	Water	8260C	

Analysis Batch: 488466

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-157974-10	EB-1	Total/NA	Water	8260C	
480-157974-11	TRIP BLANK	Total/NA	Water	8260C	
MB 480-488466/7	Method Blank	Total/NA	Water	8260C	
LCS 480-488466/5	Lab Control Sample	Total/NA	Water	8260C	

Analysis Batch: 488740

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-158037-1	Duplicate	Total/NA	Ground Water	8260C	
480-158037-4	MW-17	Total/NA	Ground Water	8260C	
480-158037-5	MW-23	Total/NA	Ground Water	8260C	
MB 480-488740/7	Method Blank	Total/NA	Water	8260C	
LCS 480-488740/5	Lab Control Sample	Total/NA	Water	8260C	

GC/MS Semi VOA

Prep Batch: 488745

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-157974-3	MW-13	Total/NA	Water	3510C	
480-157974-5	MW-10	Total/NA	Water	3510C	
480-157974-6	MW-7	Total/NA	Water	3510C	
480-157974-7	MW-11A	Total/NA	Water	3510C	
480-157974-8	MW-19	Total/NA	Water	3510C	
480-157974-10	EB-1	Total/NA	Water	3510C	
480-157974-12	SW-01	Total/NA	Water	3510C	
480-157974-13	SW-02	Total/NA	Water	3510C	
480-158037-1	Duplicate	Total/NA	Ground Water	3510C	
480-158037-4	MW-17	Total/NA	Ground Water	3510C	
480-158037-5	MW-23	Total/NA	Ground Water	3510C	
MB 480-488745/1-A	Method Blank	Total/NA	Water	3510C	
LCS 480-488745/2-A	Lab Control Sample	Total/NA	Water	3510C	
LCSD 480-488745/3-A	Lab Control Sample Dup	Total/NA	Water	3510C	

Analysis Batch: 489369

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-157974-3	MW-13	Total/NA	Water	8270D_LL_PAH	488745
480-157974-5	MW-10	Total/NA	Water	8270D_LL_PAH	488745
480-157974-6	MW-7	Total/NA	Water	8270D_LL_PAH	488745
480-157974-7	MW-11A	Total/NA	Water	8270D_LL_PAH	488745
480-157974-8	MW-19	Total/NA	Water	8270D_LL_PAH	488745

GC/MS Semi VOA (Continued)

Analysis Batch: 489369 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-157974-10	EB-1	Total/NA	Water	8270D_LL_PAH	488745
480-157974-12	SW-01	Total/NA	Water	8270D_LL_PAH	488745
480-157974-13	SW-02	Total/NA	Water	8270D_LL_PAH	488745
480-158037-1	Duplicate	Total/NA	Ground Water	8270D_LL_PAH	488745
480-158037-5	MW-23	Total/NA	Ground Water	8270D_LL_PAH	488745
MB 480-488745/1-A	Method Blank	Total/NA	Water	8270D_LL_PAH	488745
LCS 480-488745/2-A	Lab Control Sample	Total/NA	Water	8270D_LL_PAH	488745
LCSD 480-488745/3-A	Lab Control Sample Dup	Total/NA	Water	8270D_LL_PAH	488745

Analysis Batch: 489617

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-158037-4	MW-17	Total/NA	Ground Water	8270D_LL_PAH	488745

Prep Batch: 489844

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-157974-3 - RE	MW-13	Total/NA	Water	3510C	
480-157974-5 - RE	MW-10	Total/NA	Water	3510C	
480-157974-7 - RE	MW-11A	Total/NA	Water	3510C	
480-157974-10 - RE	EB-1	Total/NA	Water	3510C	
480-157974-12 - RE	SW-01	Total/NA	Water	3510C	
480-157974-13 - RE	SW-02	Total/NA	Water	3510C	
480-158037-1 - RE	Duplicate	Total/NA	Ground Water	3510C	
480-158037-5 - RE	MW-23	Total/NA	Ground Water	3510C	
MB 480-489844/1-A	Method Blank	Total/NA	Water	3510C	
LCS 480-489844/2-A	Lab Control Sample	Total/NA	Water	3510C	
LCSD 480-489844/3-A	Lab Control Sample Dup	Total/NA	Water	3510C	

Analysis Batch: 490150

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-157974-3 - RE	MW-13	Total/NA	Water	8270D_LL_PAH	489844
480-157974-5 - RE	MW-10	Total/NA	Water	8270D_LL_PAH	489844
480-157974-7 - RE	MW-11A	Total/NA	Water	8270D_LL_PAH	489844
480-157974-10 - RE	EB-1	Total/NA	Water	8270D_LL_PAH	489844
480-157974-12 - RE	SW-01	Total/NA	Water	8270D_LL_PAH	489844
480-157974-13 - RE	SW-02	Total/NA	Water	8270D_LL_PAH	489844
480-158037-1 - RE	Duplicate	Total/NA	Ground Water	8270D_LL_PAH	489844
480-158037-5 - RE	MW-23	Total/NA	Ground Water	8270D_LL_PAH	489844
MB 480-489844/1-A	Method Blank	Total/NA	Water	8270D_LL_PAH	489844
LCS 480-489844/2-A	Lab Control Sample	Total/NA	Water	8270D_LL_PAH	489844
LCSD 480-489844/3-A	Lab Control Sample Dup	Total/NA	Water	8270D_LL_PAH	489844

General Chemistry

Analysis Batch: 488366

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-157974-7	MW-11A	Total/NA	Water	SM 2540D	
480-157974-12	SW-01	Total/NA	Water	SM 2540D	
480-157974-13	SW-02	Total/NA	Water	SM 2540D	
MB 480-488366/1	Method Blank	Total/NA	Water	SM 2540D	
LCS 480-488366/2	Lab Control Sample	Total/NA	Water	SM 2540D	

General Chemistry

Analysis Batch: 488403

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-157974-12	SW-01	Total/NA	Water	SM 2540C	
480-157974-13	SW-02	Total/NA	Water	SM 2540C	
MB 480-488403/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 480-488403/2	Lab Control Sample	Total/NA	Water	SM 2540C	
480-157974-A-16 DU	480-157974-A-16 DU	Total/NA	Water	SM 2540C	

Analysis Batch: 488496

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-157974-7	MW-11A	Total/NA	Water	SM 2540C	
MB 480-488496/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 480-488496/2	Lab Control Sample	Total/NA	Water	SM 2540C	

Prep Batch: 488877

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-157974-1	MW-20	Total/NA	Water	9012B	
480-157974-2	MW-21	Total/NA	Water	9012B	
480-157974-3	MW-13	Total/NA	Water	9012B	
480-157974-7	MW-11A	Total/NA	Water	9012B	
480-157974-10	EB-1	Total/NA	Water	9012B	
480-157974-12	SW-01	Total/NA	Water	9012B	
480-157974-14	SW-03	Total/NA	Water	9012B	
480-157974-15	SW-04	Total/NA	Water	9012B	
480-157974-16	SW-05	Total/NA	Water	9012B	
MB 480-488877/1-A	Method Blank	Total/NA	Water	9012B	
LCS 480-488877/2-A	Lab Control Sample	Total/NA	Water	9012B	
480-157974-12 MS	SW-01	Total/NA	Water	9012B	

Analysis Batch: 489046

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-157974-2	MW-21	Total/NA	Water	9012B	488877
480-157974-3	MW-13	Total/NA	Water	9012B	488877
480-157974-7	MW-11A	Total/NA	Water	9012B	488877
480-157974-10	EB-1	Total/NA	Water	9012B	488877
480-157974-12	SW-01	Total/NA	Water	9012B	488877
480-157974-14	SW-03	Total/NA	Water	9012B	488877
480-157974-15	SW-04	Total/NA	Water	9012B	488877
480-157974-16	SW-05	Total/NA	Water	9012B	488877
MB 480-488877/1-A	Method Blank	Total/NA	Water	9012B	488877
LCS 480-488877/2-A	Lab Control Sample	Total/NA	Water	9012B	488877
480-157974-12 MS	SW-01	Total/NA	Water	9012B	488877

Analysis Batch: 489070

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-157974-1	MW-20	Total/NA	Water	9012B	488877

Prep Batch: 489794

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-158037-1	Duplicate	Total/NA	Ground Water	9012B	
480-158037-2	MW-12	Total/NA	Ground Water	9012B	
480-158037-3	MW-16	Total/NA	Ground Water	9012B	
480-158037-4	MW-17	Total/NA	Ground Water	9012B	

General Chemistry (Continued)

Prep Batch: 489794 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 480-489794/1-A	Method Blank	Total/NA	Water	9012B	
LCS 480-489794/2-A	Lab Control Sample	Total/NA	Water	9012B	
LCS 480-489794/3-A	Lab Control Sample	Total/NA	Water	9012B	
480-158037-4 MS	MW-17	Total/NA	Ground Water	9012B	

Prep Batch: 489795

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-157974-4	MW-14	Total/NA	Water	9012B	
480-157974-9	MW-22	Total/NA	Water	9012B	
480-157974-13	SW-02	Total/NA	Water	9012B	
480-158037-5	MW-23	Total/NA	Ground Water	9012B	
MB 480-489795/1-A	Method Blank	Total/NA	Water	9012B	
LCS 480-489795/2-A	Lab Control Sample	Total/NA	Water	9012B	
480-157974-13 MS	SW-02	Total/NA	Water	9012B	
480-157974-4 DU	MW-14	Total/NA	Water	9012B	

Analysis Batch: 489906

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 480-489794/1-A	Method Blank	Total/NA	Water	9012B	489794
LCS 480-489794/3-A	Lab Control Sample	Total/NA	Water	9012B	489794

Analysis Batch: 489911

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-158037-1	Duplicate	Total/NA	Ground Water	9012B	489794
480-158037-3	MW-16	Total/NA	Ground Water	9012B	489794
480-158037-4	MW-17	Total/NA	Ground Water	9012B	489794
LCS 480-489794/2-A	Lab Control Sample	Total/NA	Water	9012B	489794
480-158037-4 MS	MW-17	Total/NA	Ground Water	9012B	489794

Analysis Batch: 489912

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-158037-2	MW-12	Total/NA	Ground Water	9012B	489794

Analysis Batch: 489929

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-157974-4	MW-14	Total/NA	Water	9012B	489795
480-157974-9	MW-22	Total/NA	Water	9012B	489795
480-157974-13	SW-02	Total/NA	Water	9012B	489795
480-158037-5	MW-23	Total/NA	Ground Water	9012B	489795
MB 480-489795/1-A	Method Blank	Total/NA	Water	9012B	489795
LCS 480-489795/2-A	Lab Control Sample	Total/NA	Water	9012B	489795
480-157974-13 MS	SW-02	Total/NA	Water	9012B	489795
480-157974-4 DU	MW-14	Total/NA	Water	9012B	489795

Prep Batch: 634977

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-157974-1	MW-20	Total/NA	Water	9016	
480-157974-2	MW-21	Total/NA	Water	9016	
480-157974-3	MW-13	Total/NA	Water	9016	
480-157974-4	MW-14	Total/NA	Water	9016	
480-157974-7	MW-11A	Total/NA	Water	9016	

General Chemistry (Continued)

Prep Batch: 634977 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-157974-9	MW-22	Total/NA	Water	9016	
480-157974-10	EB-1	Total/NA	Water	9016	
480-157974-12	SW-01	Total/NA	Water	9016	
480-157974-13	SW-02	Total/NA	Water	9016	
480-157974-14	SW-03	Total/NA	Water	9016	
480-157974-15	SW-04	Total/NA	Water	9016	
480-157974-16	SW-05	Total/NA	Water	9016	
MB 460-634977/1-A	Method Blank	Total/NA	Water	9016	
LCS 460-634977/2-A	Lab Control Sample	Total/NA	Water	9016	

Analysis Batch: 635076

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-157974-1	MW-20	Total/NA	Water	9016	634977
480-157974-2	MW-21	Total/NA	Water	9016	634977
480-157974-3	MW-13	Total/NA	Water	9016	634977
480-157974-4	MW-14	Total/NA	Water	9016	634977
480-157974-7	MW-11A	Total/NA	Water	9016	634977
480-157974-9	MW-22	Total/NA	Water	9016	634977
480-157974-10	EB-1	Total/NA	Water	9016	634977
480-157974-12	SW-01	Total/NA	Water	9016	634977
480-157974-13	SW-02	Total/NA	Water	9016	634977
480-157974-14	SW-03	Total/NA	Water	9016	634977
480-157974-15	SW-04	Total/NA	Water	9016	634977
480-157974-16	SW-05	Total/NA	Water	9016	634977
MB 460-634977/1-A	Method Blank	Total/NA	Water	9016	634977
DLCK 460-635076/10	Lab Control Sample	Total/NA	Water	9016	
LCS 460-634977/2-A	Lab Control Sample	Total/NA	Water	9016	634977

Prep Batch: 635833

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-158037-1	Duplicate	Total/NA	Ground Water	9016	
480-158037-2	MW-12	Total/NA	Ground Water	9016	
480-158037-3	MW-16	Total/NA	Ground Water	9016	
480-158037-4	MW-17	Total/NA	Ground Water	9016	
480-158037-5	MW-23	Total/NA	Ground Water	9016	
MB 460-635833/1-A	Method Blank	Total/NA	Water	9016	
LCS 460-635833/2-A	Lab Control Sample	Total/NA	Water	9016	

Analysis Batch: 635870

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-158037-1	Duplicate	Total/NA	Ground Water	9016	635833
480-158037-2	MW-12	Total/NA	Ground Water	9016	635833
480-158037-3	MW-16	Total/NA	Ground Water	9016	635833
480-158037-4	MW-17	Total/NA	Ground Water	9016	635833
480-158037-5	MW-23	Total/NA	Ground Water	9016	635833
MB 460-635833/1-A	Method Blank	Total/NA	Water	9016	635833
DLCK 460-635870/10	Lab Control Sample	Total/NA	Water	9016	
LCS 460-635833/2-A	Lab Control Sample	Total/NA	Water	9016	635833

Lab Chronicle

Client: GEI Consultants, Inc.
Project/Site: GEI, Mineral Springs

Job ID: 480-157974-1
SDG: 480-157974-1

Client Sample ID: MW-20
Date Collected: 08/20/19 09:40
Date Received: 08/21/19 14:25

Lab Sample ID: 480-157974-1
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	9012B			488877	08/26/19 16:21	AJL	TAL BUF
Total/NA	Analysis	9012B		2	489070	08/27/19 15:04	MDL	TAL BUF
Total/NA	Prep	9016			634977	08/26/19 10:15	IAA	TAL EDI
Total/NA	Analysis	9016		1	635076	08/26/19 18:10	EMS	TAL EDI

Client Sample ID: MW-21
Date Collected: 08/20/19 10:40
Date Received: 08/21/19 14:25

Lab Sample ID: 480-157974-2
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	9012B			488877	08/26/19 16:21	AJL	TAL BUF
Total/NA	Analysis	9012B		1	489046	08/27/19 13:12	MDL	TAL BUF
Total/NA	Prep	9016			634977	08/26/19 10:15	IAA	TAL EDI
Total/NA	Analysis	9016		1	635076	08/26/19 18:10	EMS	TAL EDI

Client Sample ID: MW-13
Date Collected: 08/20/19 11:40
Date Received: 08/21/19 14:25

Lab Sample ID: 480-157974-3
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	488233	08/22/19 13:21	S1V	TAL BUF
Total/NA	Prep	3510C	RE		489844	09/03/19 08:29	JMP	TAL BUF
Total/NA	Analysis	8270D_LL_PAH	RE	1	490150	09/04/19 20:44	PJQ	TAL BUF
Total/NA	Prep	3510C			488745	08/26/19 08:14	JMP	TAL BUF
Total/NA	Analysis	8270D_LL_PAH		1	489369	08/29/19 18:36	RJS	TAL BUF
Total/NA	Prep	9012B			488877	08/26/19 16:21	AJL	TAL BUF
Total/NA	Analysis	9012B		1	489046	08/27/19 13:14	MDL	TAL BUF
Total/NA	Prep	9016			634977	08/26/19 10:15	IAA	TAL EDI
Total/NA	Analysis	9016		1	635076	08/26/19 18:10	EMS	TAL EDI

Client Sample ID: MW-14
Date Collected: 08/20/19 12:30
Date Received: 08/21/19 14:25

Lab Sample ID: 480-157974-4
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	9012B			489795	09/01/19 16:11	MDL	TAL BUF
Total/NA	Analysis	9012B		5	489929	09/03/19 13:20	MDL	TAL BUF
Total/NA	Prep	9016			634977	08/26/19 10:15	IAA	TAL EDI
Total/NA	Analysis	9016		1	635076	08/26/19 18:10	EMS	TAL EDI

Client Sample ID: MW-10
Date Collected: 08/21/19 09:30
Date Received: 08/21/19 14:25

Lab Sample ID: 480-157974-5
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	488233	08/22/19 13:44	S1V	TAL BUF

Lab Chronicle

Client: GEI Consultants, Inc.
Project/Site: GEI, Mineral Springs

Job ID: 480-157974-1
SDG: 480-157974-1

Client Sample ID: MW-10
Date Collected: 08/21/19 09:30
Date Received: 08/21/19 14:25

Lab Sample ID: 480-157974-5
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C	RE		489844	09/03/19 08:29	JMP	TAL BUF
Total/NA	Analysis	8270D_LL_PAH	RE	1	490150	09/04/19 21:13	PJQ	TAL BUF
Total/NA	Prep	3510C			488745	08/26/19 08:14	JMP	TAL BUF
Total/NA	Analysis	8270D_LL_PAH		1	489369	08/29/19 19:05	RJS	TAL BUF

Client Sample ID: MW-7
Date Collected: 08/21/19 10:50
Date Received: 08/21/19 14:25

Lab Sample ID: 480-157974-6
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		20	488233	08/22/19 14:07	S1V	TAL BUF
Total/NA	Prep	3510C			488745	08/26/19 08:14	JMP	TAL BUF
Total/NA	Analysis	8270D_LL_PAH		100	489369	08/29/19 19:33	RJS	TAL BUF

Client Sample ID: MW-11A
Date Collected: 08/21/19 12:20
Date Received: 08/21/19 14:25

Lab Sample ID: 480-157974-7
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		2	488233	08/22/19 14:30	S1V	TAL BUF
Total/NA	Prep	3510C	RE		489844	09/03/19 08:29	JMP	TAL BUF
Total/NA	Analysis	8270D_LL_PAH	RE	1	490150	09/04/19 21:42	PJQ	TAL BUF
Total/NA	Prep	3510C			488745	08/26/19 08:14	JMP	TAL BUF
Total/NA	Analysis	8270D_LL_PAH		1	489369	08/29/19 20:01	RJS	TAL BUF
Total/NA	Prep	9012B			488877	08/26/19 16:21	AJL	TAL BUF
Total/NA	Analysis	9012B		1	489046	08/27/19 13:20	MDL	TAL BUF
Total/NA	Prep	9016			634977	08/26/19 10:15	IAA	TAL EDI
Total/NA	Analysis	9016		1	635076	08/26/19 18:10	EMS	TAL EDI
Total/NA	Analysis	SM 2540C		1	488496	08/23/19 08:29	BBB	TAL BUF
Total/NA	Analysis	SM 2540D		1	488366	08/22/19 13:19	CSS	TAL BUF

Client Sample ID: MW-19
Date Collected: 08/21/19 13:30
Date Received: 08/21/19 14:25

Lab Sample ID: 480-157974-8
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		100	488233	08/22/19 14:53	S1V	TAL BUF
Total/NA	Prep	3510C			488745	08/26/19 08:14	JMP	TAL BUF
Total/NA	Analysis	8270D_LL_PAH		200	489369	08/29/19 20:28	RJS	TAL BUF

Lab Chronicle

Client: GEI Consultants, Inc.
Project/Site: GEI, Mineral Springs

Job ID: 480-157974-1
SDG: 480-157974-1

Client Sample ID: MW-22
Date Collected: 08/21/19 14:20
Date Received: 08/21/19 14:25

Lab Sample ID: 480-157974-9
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	9012B			489795	09/01/19 16:11	MDL	TAL BUF
Total/NA	Analysis	9012B		5	489929	09/03/19 13:23	MDL	TAL BUF
Total/NA	Prep	9016			634977	08/26/19 10:15	IAA	TAL EDI
Total/NA	Analysis	9016		1	635076	08/26/19 18:10	EMS	TAL EDI

Client Sample ID: EB-1
Date Collected: 08/20/19 11:33
Date Received: 08/21/19 14:25

Lab Sample ID: 480-157974-10
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	488466	08/23/19 12:22	OMI	TAL BUF
Total/NA	Prep	3510C	RE		489844	09/03/19 08:29	JMP	TAL BUF
Total/NA	Analysis	8270D_LL_PAH	RE	1	490150	09/04/19 22:11	PJQ	TAL BUF
Total/NA	Prep	3510C			488745	08/26/19 08:14	JMP	TAL BUF
Total/NA	Analysis	8270D_LL_PAH		1	489369	08/29/19 20:56	RJS	TAL BUF
Total/NA	Prep	9012B			488877	08/26/19 16:21	AJL	TAL BUF
Total/NA	Analysis	9012B		1	489046	08/27/19 13:22	MDL	TAL BUF
Total/NA	Prep	9016			634977	08/26/19 10:15	IAA	TAL EDI
Total/NA	Analysis	9016		1	635076	08/26/19 18:10	EMS	TAL EDI

Client Sample ID: TRIP BLANK
Date Collected: 08/20/19 00:00
Date Received: 08/21/19 14:25

Lab Sample ID: 480-157974-11
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	488466	08/23/19 12:45	OMI	TAL BUF

Client Sample ID: SW-01
Date Collected: 08/20/19 15:00
Date Received: 08/21/19 14:25

Lab Sample ID: 480-157974-12
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		2	488233	08/22/19 15:16	S1V	TAL BUF
Total/NA	Prep	3510C	RE		489844	09/03/19 08:29	JMP	TAL BUF
Total/NA	Analysis	8270D_LL_PAH	RE	1	490150	09/04/19 22:39	PJQ	TAL BUF
Total/NA	Prep	3510C			488745	08/26/19 08:14	JMP	TAL BUF
Total/NA	Analysis	8270D_LL_PAH		1	489369	08/29/19 21:24	RJS	TAL BUF
Total/NA	Prep	9012B			488877	08/26/19 16:21	AJL	TAL BUF
Total/NA	Analysis	9012B		1	489046	08/27/19 13:24	MDL	TAL BUF
Total/NA	Prep	9016			634977	08/26/19 10:15	IAA	TAL EDI
Total/NA	Analysis	9016		1	635076	08/26/19 18:10	EMS	TAL EDI
Total/NA	Analysis	SM 2540C		1	488403	08/22/19 15:36	ZFM	TAL BUF
Total/NA	Analysis	SM 2540D		1	488366	08/22/19 13:19	CSS	TAL BUF

Lab Chronicle

Client: GEI Consultants, Inc.
Project/Site: GEI, Mineral Springs

Job ID: 480-157974-1
SDG: 480-157974-1

Client Sample ID: SW-02
Date Collected: 08/20/19 13:00
Date Received: 08/21/19 14:25

Lab Sample ID: 480-157974-13
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	488233	08/22/19 15:39	S1V	TAL BUF
Total/NA	Prep	3510C	RE		489844	09/03/19 08:29	JMP	TAL BUF
Total/NA	Analysis	8270D_LL_PAH	RE	1	490150	09/04/19 23:07	PJQ	TAL BUF
Total/NA	Prep	3510C			488745	08/26/19 08:14	JMP	TAL BUF
Total/NA	Analysis	8270D_LL_PAH		1	489369	08/29/19 21:52	RJS	TAL BUF
Total/NA	Prep	9012B			489795	09/01/19 16:11	MDL	TAL BUF
Total/NA	Analysis	9012B		1	489929	09/03/19 12:50	MDL	TAL BUF
Total/NA	Prep	9016			634977	08/26/19 10:15	IAA	TAL EDI
Total/NA	Analysis	9016		1	635076	08/26/19 18:10	EMS	TAL EDI
Total/NA	Analysis	SM 2540C		1	488403	08/22/19 15:36	ZFM	TAL BUF
Total/NA	Analysis	SM 2540D		1	488366	08/22/19 13:19	CSS	TAL BUF

Client Sample ID: SW-03
Date Collected: 08/20/19 13:30
Date Received: 08/21/19 14:25

Lab Sample ID: 480-157974-14
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	9012B			488877	08/26/19 16:21	AJL	TAL BUF
Total/NA	Analysis	9012B		1	489046	08/27/19 13:28	MDL	TAL BUF
Total/NA	Prep	9016			634977	08/26/19 10:15	IAA	TAL EDI
Total/NA	Analysis	9016		1	635076	08/26/19 18:10	EMS	TAL EDI

Client Sample ID: SW-04
Date Collected: 08/20/19 14:00
Date Received: 08/21/19 14:25

Lab Sample ID: 480-157974-15
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	9012B			488877	08/26/19 16:21	AJL	TAL BUF
Total/NA	Analysis	9012B		1	489046	08/27/19 13:30	MDL	TAL BUF
Total/NA	Prep	9016			634977	08/26/19 10:15	IAA	TAL EDI
Total/NA	Analysis	9016		1	635076	08/26/19 18:10	EMS	TAL EDI

Client Sample ID: SW-05
Date Collected: 08/20/19 14:30
Date Received: 08/21/19 14:25

Lab Sample ID: 480-157974-16
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	9012B			488877	08/26/19 16:21	AJL	TAL BUF
Total/NA	Analysis	9012B		1	489046	08/27/19 13:31	MDL	TAL BUF
Total/NA	Prep	9016			634977	08/26/19 10:15	IAA	TAL EDI
Total/NA	Analysis	9016		1	635076	08/26/19 18:10	EMS	TAL EDI

Lab Chronicle

Client: GEI Consultants, Inc.
Project/Site: GEI, Mineral Springs

Job ID: 480-157974-1
SDG: 480-157974-1

Client Sample ID: Duplicate
Date Collected: 08/22/19 00:00
Date Received: 08/22/19 14:35

Lab Sample ID: 480-158037-1
Matrix: Ground Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	488740	08/26/19 13:13	KMN	TAL BUF
Total/NA	Prep	3510C	RE		489844	09/03/19 08:29	JMP	TAL BUF
Total/NA	Analysis	8270D_LL_PAH	RE	1	490150	09/04/19 23:36	PJQ	TAL BUF
Total/NA	Prep	3510C			488745	08/26/19 08:14	JMP	TAL BUF
Total/NA	Analysis	8270D_LL_PAH		1	489369	08/29/19 22:20	RJS	TAL BUF
Total/NA	Prep	9012B			489794	09/01/19 16:04	MDL	TAL BUF
Total/NA	Analysis	9012B		1	489911	09/03/19 12:03	MDL	TAL BUF
Total/NA	Prep	9016			635833	08/29/19 10:17	IAA	TAL EDI
Total/NA	Analysis	9016		1	635870	08/29/19 16:30	EMS	TAL EDI

Client Sample ID: MW-12
Date Collected: 08/22/19 09:45
Date Received: 08/22/19 14:35

Lab Sample ID: 480-158037-2
Matrix: Ground Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	9012B			489794	09/01/19 16:04	MDL	TAL BUF
Total/NA	Analysis	9012B		4	489912	09/03/19 12:27	MDL	TAL BUF
Total/NA	Prep	9016			635833	08/29/19 10:17	IAA	TAL EDI
Total/NA	Analysis	9016		1	635870	08/29/19 16:30	EMS	TAL EDI

Client Sample ID: MW-16
Date Collected: 08/22/19 12:30
Date Received: 08/22/19 14:35

Lab Sample ID: 480-158037-3
Matrix: Ground Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	9012B			489794	09/01/19 16:04	MDL	TAL BUF
Total/NA	Analysis	9012B		10	489911	09/03/19 12:16	MDL	TAL BUF
Total/NA	Prep	9016			635833	08/29/19 10:17	IAA	TAL EDI
Total/NA	Analysis	9016		5	635870	08/29/19 16:30	EMS	TAL EDI

Client Sample ID: MW-17
Date Collected: 08/22/19 11:00
Date Received: 08/22/19 14:35

Lab Sample ID: 480-158037-4
Matrix: Ground Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		2	488740	08/26/19 13:36	KMN	TAL BUF
Total/NA	Prep	3510C			488745	08/26/19 08:14	JMP	TAL BUF
Total/NA	Analysis	8270D_LL_PAH		5	489617	08/30/19 20:34	RJS	TAL BUF
Total/NA	Prep	9012B			489794	09/01/19 16:04	MDL	TAL BUF
Total/NA	Analysis	9012B		1	489911	09/03/19 12:10	MDL	TAL BUF
Total/NA	Prep	9016			635833	08/29/19 10:17	IAA	TAL EDI
Total/NA	Analysis	9016		1	635870	08/29/19 16:30	EMS	TAL EDI

Lab Chronicle

Client: GEI Consultants, Inc.
Project/Site: GEI, Mineral Springs

Job ID: 480-157974-1
SDG: 480-157974-1

Client Sample ID: MW-23
Date Collected: 08/22/19 13:20
Date Received: 08/22/19 14:35

Lab Sample ID: 480-158037-5
Matrix: Ground Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	488740	08/26/19 13:59	KMN	TAL BUF
Total/NA	Prep	3510C	RE		489844	09/03/19 08:29	JMP	TAL BUF
Total/NA	Analysis	8270D_LL_PAH	RE	1	490150	09/05/19 00:04	PJQ	TAL BUF
Total/NA	Prep	3510C			488745	08/26/19 08:14	JMP	TAL BUF
Total/NA	Analysis	8270D_LL_PAH		1	489369	08/29/19 23:17	RJS	TAL BUF
Total/NA	Prep	9012B			489795	09/01/19 16:11	MDL	TAL BUF
Total/NA	Analysis	9012B		1	489929	09/03/19 12:53	MDL	TAL BUF
Total/NA	Prep	9016			635833	08/29/19 10:17	IAA	TAL EDI
Total/NA	Analysis	9016		1	635870	08/29/19 16:30	EMS	TAL EDI

Laboratory References:

TAL BUF = Eurofins TestAmerica, Buffalo, 10 Hazelwood Drive, Amherst, NY 14228-2298, TEL (716)691-2600

TAL EDI = Eurofins TestAmerica, Edison, 777 New Durham Road, Edison, NJ 08817, TEL (732)549-3900

Accreditation/Certification Summary

Client: GEI Consultants, Inc.
Project/Site: GEI, Mineral Springs

Job ID: 480-157974-1
SDG: 480-157974-1

Laboratory: Eurofins TestAmerica, Buffalo

The accreditations/certifications listed below are applicable to this report.

Authority	Program	Identification Number	Expiration Date
New York	NELAP	10026	03-31-20

Laboratory: Eurofins TestAmerica, Edison

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Connecticut	State	PH-0200	09-30-20
Connecticut	State Program	PH-0200	09-30-20
DE Haz. Subst. Cleanup Act (HSCA)	State	<cert No.>	12-31-21
DE Haz. Subst. Cleanup Act (HSCA)	State Program	N/A	12-31-19
New Jersey	NELAP	12028	06-30-20
New Jersey	NELAP	12028	06-30-20
New York	NELAP	11452	04-01-20
New York	NELAP	11452	04-01-20
Pennsylvania	NELAP	68-00522	02-28-20
Pennsylvania	NELAP	68-00522	02-28-20
Rhode Island	State	LAO00132	12-30-19
Rhode Island	State Program	LAO00132	12-30-19
USDA	Federal	NJCA-003-08	05-03-21
USDA	US Federal Programs	P330-18-00135	05-03-21

Method Summary

Client: GEI Consultants, Inc.
Project/Site: GEI, Mineral Springs

Job ID: 480-157974-1
SDG: 480-157974-1

Method	Method Description	Protocol	Laboratory
8260C	Volatile Organic Compounds by GC/MS	SW846	TAL BUF
8270D_LL_PAH	Semivolatile Organic Compounds (GC/MS) Low level PAH	SW846	TAL BUF
9012B	Cyanide, Total andor Amenable	SW846	TAL BUF
9016	Cyanide, Free	SW846	TAL EDI
SM 2540C	Solids, Total Dissolved (TDS)	SM	TAL BUF
SM 2540D	Solids, Total Suspended (TSS)	SM	TAL BUF
3510C	Liquid-Liquid Extraction (Separatory Funnel)	SW846	TAL BUF
5030C	Purge and Trap	SW846	TAL BUF
9012B	Cyanide, Total and/or Amenable, Distillation	SW846	TAL BUF
9016	Cyanide, Preparation	SW846	TAL EDI

Protocol References:

SM = "Standard Methods For The Examination Of Water And Wastewater"

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL BUF = Eurofins TestAmerica, Buffalo, 10 Hazelwood Drive, Amherst, NY 14228-2298, TEL (716)691-2600

TAL EDI = Eurofins TestAmerica, Edison, 777 New Durham Road, Edison, NJ 08817, TEL (732)549-3900

Sample Summary

Client: GEI Consultants, Inc.
Project/Site: GEI, Mineral Springs

Job ID: 480-157974-1
SDG: 480-157974-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
480-157974-1	MW-20	Water	08/20/19 09:40	08/21/19 14:25	
480-157974-2	MW-21	Water	08/20/19 10:40	08/21/19 14:25	
480-157974-3	MW-13	Water	08/20/19 11:40	08/21/19 14:25	
480-157974-4	MW-14	Water	08/20/19 12:30	08/21/19 14:25	
480-157974-5	MW-10	Water	08/21/19 09:30	08/21/19 14:25	
480-157974-6	MW-7	Water	08/21/19 10:50	08/21/19 14:25	
480-157974-7	MW-11A	Water	08/21/19 12:20	08/21/19 14:25	
480-157974-8	MW-19	Water	08/21/19 13:30	08/21/19 14:25	
480-157974-9	MW-22	Water	08/21/19 14:20	08/21/19 14:25	
480-157974-10	EB-1	Water	08/20/19 11:33	08/21/19 14:25	
480-157974-11	TRIP BLANK	Water	08/20/19 00:00	08/21/19 14:25	
480-157974-12	SW-01	Water	08/20/19 15:00	08/21/19 14:25	
480-157974-13	SW-02	Water	08/20/19 13:00	08/21/19 14:25	
480-157974-14	SW-03	Water	08/20/19 13:30	08/21/19 14:25	
480-157974-15	SW-04	Water	08/20/19 14:00	08/21/19 14:25	
480-157974-16	SW-05	Water	08/20/19 14:30	08/21/19 14:25	
480-158037-1	Duplicate	Ground Water	08/22/19 00:00	08/22/19 14:35	
480-158037-2	MW-12	Ground Water	08/22/19 09:45	08/22/19 14:35	
480-158037-3	MW-16	Ground Water	08/22/19 12:30	08/22/19 14:35	
480-158037-4	MW-17	Ground Water	08/22/19 11:00	08/22/19 14:35	
480-158037-5	MW-23	Ground Water	08/22/19 13:20	08/22/19 14:35	

Chain of Custody Record 315524

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING
TestAmerica Laboratories, Inc.
TAL-8210 (0713)

Regulatory Program: ☐ DW ☐ NPDES ☐ RCRA ☐ Other:

Client Contact	Project Manager: Rick FRAPPA	Site Contact: M. Cummings	Date: 8/21/19	COC No: 1 of 2 COCs
Company Name: GEL Consultants, INC	Tel/Fax:	Lab Contact: JOHN SHOVE	Carrier: HAND DEL.	Sampler:
Address: 100 Sylvan Parkway Suite 400	Analysis Turnaround Time			For Lab Use Only:
City/State/Zip: Amherst, NY 14228	☐ CALENDAR DAYS ☐ WORKING DAYS			Walk-in Client:
Phone: 716-204-7256	TAT if different from Below			
Fax:	☒ 2 weeks			
Project Name: NFG MINERAL SPRINGS	☐ 1 week			
Site:	☐ 2 days			
PO #	☐ 1 day			

480-157974 Chain of Custody

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=Grab)	Matrix	# of Cont.	Filtered Sample (Y/N)	Perform MS / MSD (Y/N)	FREE CYANIDE 9016	8270 SL PARK	8260 C VOCs	2540 C TSS	2540 C TDS	9012 B TOTAL CN	Sample Specific Notes:
MW-20	8/20/19	9:40	G	W				X					X	
MW-21		10:40						X					X	
MW-13		11:40						X	X	X			X	
MW-14		12:30						X					X	
MW-10	8/21/19	9:30								X	X			
MW-7		10:50								X	X			
MW-11A		12:20						X	X	X	X	X	X	
MW-19		13:30								X	X			
MW-22		14:30						X					X	
EB-1	8/20/19	11:30						X	X	X			X	
TRIP BLANK	—	—								X				
SW-01	8/20/19	15:00						X	X	X	X	X	X	

Preservation Used: 1= Ice, 2= HCl; 3= H2SO4; 4=HNO3; 5=NaOH; 6= Other _____

Possible Hazard Identification:
Are any samples from a listed EPA Hazardous Waste? Please List any EPA Waste Codes for the sample in the Comments Section if the lab is to dispose of the sample.

☒ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)

☐ Return to Client ☒ Disposal by Lab ☐ Archive for _____ Months

Special Instructions/QC Requirements & Comments:

2.2 2.9 #1

Custody Seals Intact: ☐ Yes ☐ No	Custody Seal No.:		Cooler Temp. (°C): Obs'd:	Corr'd:	Therm ID No.:
Relinquished by:	Company: GEL	Date/Time:	Received by:	Company: FED	Date/Time: 8/21/19 1925
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
Relinquished by:	Company:	Date/Time:	Received in Laboratory by:	Company:	Date/Time:

Chain of Custody Record 315523

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING
TestAmerica Laboratories, Inc.
TAL-8210 (0713)

Regulatory Program: ☐ DW ☐ NPDES ☐ RCRA ☐ Other:

Client Contact	Project Manager: Nick FRAPPA	Site Contact: M. Cummings	Date: 8/21/19	COC No: 2 of 2 COCs
Company Name: GEI Consultants	Tel/Fax: 716-204-7150	Lab Contact: John Schuve	Carrier: HAND DEL.	Sampler:
Address: 100 Sylvan Suite 400	Analysis Turnaround Time			For Lab Use Only:
City/State/Zip: Amherst, NY	☐ CALENDAR DAYS ☐ WORKING DAYS			Walk-in Client:
Phone:	TAT if different from Below _____			Lab Sampling:
Fax:	☒ 2 weeks			Job / SDG No.:
Project Name: NFG/WENRAL SPRINGS	☐ 1 week			
Site:	☐ 2 days			
P O #	☐ 1 day			

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=Grab)	Matrix	# of Cont.	Filtered Sample (Y/N)	Perform MS/MSD (Y/N)	FREE Cyanide 9016	8270D LL PAHs	8260C VOCs	2540D TSS	2540C TDS	9012B TOTAL CN	Sample Specific Notes:
SW-02	8/20/19	1300	G	W				X	X	X	X	X	X	
SW-03		1330						X					X	
SW-04		1400						X					X	
SW-05		1430						X					X	

Preservation Used: 1= Ice, 2= HCl; 3= H2SO4; 4=HNO3; 5=NaOH; 6= Other _____

Possible Hazard Identification:
Are any samples from a listed EPA Hazardous Waste? Please List any EPA Waste Codes for the sample in the Comments Section if the lab is to dispose of the sample.

☒ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)

☐ Return to Client ☒ Disposal by Lab ☐ Archive for _____ Months

Special Instructions/QC Requirements & Comments:

Custody Seals Intact: ☐ Yes ☐ No | Custody Seal No.: | Cooler Temp. (°C): Obs'd: _____ Corr'd: _____ | Therm ID No.: _____

	Company:	Date/Time:	Received by:	Company:	Date/Time:
Relinquished by:	GEI			TAS	8/21/19 1425
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
Relinquished by:	Company:	Date/Time:	Received in Laboratory by:	Company:	Date/Time:

Chain of Custody Record 315522

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING
TestAmerica Laboratories, Inc.
TAL-8210 (0713)

Regulatory Program: ☐ DW ☐ NPDES ☐ RCRA ☐ Other:

Client Contact	Project Manager: Rick Frappa	Site Contact: M. Cummings	Date: 8/22/19	COC No: 1 of 1 COCs
Company Name: GEI Consultants	Tel/Fax: 716-204-7156	Lab Contact: S. Schoue	Carrier: Hand. Del.	Sampler:
Address: 100 Sylvan Pkwy Suite 400	Analysis Turnaround Time			For Lab Use Only:
City/State/Zip: Amherst NY 14228	☐ CALENDAR DAYS ☐ WORKING DAYS			
Phone: 716-204-7156	TAT if different from Below			
Fax:	☒ 2 weeks			
Project Name: MINERAL SPRINGS	☐ 1 week			
Site:	☐ 2 days			
P O #	☐ 1 day			

480-158037 Chain of Custody

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=Grab)	Matrix	# of Cont.	Filtered Sample (Y/N)	Perform MS / MSD (Y/N)	6010 FREE CN	8270D LL PAH	8260C BTEX	2540D TSS	2540C TDS	9012B TOTAL CN	Sample Specific Notes:
MW-12	8/22/19	9:45	G	W				X					X	
MW-16		12:30						X					X	
MW-17		11:00						X	X				X	
MW-23		13:20						X	X	X			X	
DUP		—						X	X				X	

Preservation Used: 1= Ice, 2= HCl; 3= H2SO4; 4=HNO3; 5=NaOH; 6= Other _____

Possible Hazard Identification:
Are any samples from a listed EPA Hazardous Waste? Please List any EPA Waste Codes for the sample in the Comments Section if the lab is to dispose of the sample.

☒ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)

☐ Return to Client ☒ Disposal by Lab ☐ Archive for _____ Months

Special Instructions/QC Requirements & Comments:

3.6 #1 ICE

Custody Seals Intact: ☐ Yes ☐ No | Custody Seal No.: | Cooler Temp. (°C): Obs'd: _____ Corr'd: _____ Therm ID No.: _____

Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
	GEI	8/22 1435		TAS	8/22/19 14:35
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
Relinquished by:	Company:	Date/Time:	Received in Laboratory by:	Company:	Date/Time:

Eurofins TestAmerica, Buffalo
10 Hazelwood Drive
Amherst, NY 14228-2298
Phone: 716-691-2600 Fax: 716-691-7991

Chain of Custody Record

eurofins | Environment Testing TestAmerica

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Schove, John R	Carrier Tracking No(s):	COC No: 480-51223.1
Client Contact: Shipping/Receiving	Phone:	E-Mail: john.schove@testamericainc.com	State of Origin: New York	Page: Page 1 of 2
Company: TestAmerica Laboratories, Inc.		Accreditations Required (See note): NELAP - New York		Job #: 480-157974-1
Address: 777 New Durham Road, ,	Due Date Requested: 9/3/2019			
City: Edison	TAT Requested (days):			
State, Zip: NJ, 08817				
Phone: 732-549-3900(Tel) 732-549-3679(Fax)	PO #:			
Email:	WO #:			
Project Name: GEI, Mineral Springs	Project #: 48008324			
Site: AECOM, Mineral Springs	SSOW#:			

Analysis Requested

Preservation Codes:

A - HCL	M - Hexane
B - NaOH	N - None
C - Zn Acetate	O - AsNaO2
D - Nitric Acid	P - Na2O4S
E - NaHSO4	Q - Na2SO3
F - MeOH	R - Na2S2O3
G - Amchlor	S - H2SO4
H - Ascorbic Acid	T - TSP Dodecahydrate
I - Ice	U - Acetone
J - DI Water	V - MCAA
K - EDTA	W - pH 4-5
L - EDA	Z - other (specify)

Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	9016/9016_Prep Cyanide, Free	Total Number of containers	Special Instructions/Note:
			Preservation Code:						
MW-20 (480-157974-1)	8/20/19	09:40 Eastern		Water			X	1	
MW-21 (480-157974-2)	8/20/19	10:40 Eastern		Water			X	1	
MW-13 (480-157974-3)	8/20/19	11:40 Eastern		Water			X	1	
MW-14 (480-157974-4)	8/20/19	12:30 Eastern		Water			X	1	
MW-11A (480-157974-7)	8/21/19	12:20 Eastern		Water			X	1	
MW-22 (480-157974-9)	8/21/19	14:30 Eastern		Water			X	1	
EB-1 (480-157974-10)	8/20/19	11:33 Eastern		Water			X	1	
SW-01 (480-157974-12)	8/20/19	15:00 Eastern		Water			X	1	
SW-02 (480-157974-13)	8/20/19	13:00 Eastern		Water			X	1	

Note: Since laboratory accreditations are subject to change, TestAmerica Laboratories, Inc. places the ownership of method, analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the TestAmerica laboratory or other instructions will be provided. Any changes to accreditation status should be brought to TestAmerica Laboratories, Inc. attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said complicance to TestAmerica Laboratories, Inc.

Possible Hazard Identification	Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
Unconfirmed	☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months
Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2	Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
1	Matthew Linch	08/22/19 1700	TA	Angela Pinilla via FEDEX	8/23/19 9:20	TA Edison
2	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
3	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

CS 993178 993179 3.8, 1.2 °C IR #9

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9/6/2019

Eurofins TestAmerica, Buffalo
10 Hazelwood Drive
Amherst, NY 14228-2298
Phone: 716-691-2600 Fax: 716-691-7991

Chain of Custody Record

eurofins | Environment Testing TestAmerica

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Schove, John R	Carrier Tracking No(s):	COC No: 480-51223.2
Client Contact: Shipping/Receiving	Phone:	E-Mail: john.schove@testamericainc.com	State of Origin: New York	Page: Page 2 of 2
Company: TestAmerica Laboratories, Inc.		Accreditations Required (See note): NELAP - New York		Job #: 480-157974-1
Address: 777 New Durham Road, ,	Due Date Requested: 9/3/2019			
City: Edison	TAT Requested (days):			
State, Zip: NJ, 08817				
Phone: 732-549-3900(Tel) 732-549-3679(Fax)	PO #:			
Email:	WO #:			
Project Name: GEI, Mineral Springs	Project #: 48008324			
Site: AECOM, Mineral Springs	SSOW#:			

Analysis Requested

Preservation Codes:

A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Z - other (specify)

Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	9016/9016_Prep Cyanide, Free	Total Number of containers	Special Instructions/Note:
			Preservation Code:						
SW-03 (480-157974-14)	8/20/19	13:30 Eastern		Water			X	1	
SW-04 (480-157974-15)	8/20/19	14:00 Eastern		Water			X	1	
SW-05 (480-157974-16)	8/20/19	14:30 Eastern		Water			X	1	

Note: Since laboratory accreditations are subject to change, TestAmerica Laboratories, Inc. places the ownership of method, analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody.

Possible Hazard Identification	Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
Unconfirmed	☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months
Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2	Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:				
Relinquished by: Tim Mowbray	Date/Time: 8/22/19 1700	Company: TA	Received by: Angela Pinilla via FEDEX	Date/Time: 8/23/19 9:20	Company: TA Edison		
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company		
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company		
Custody Seals Intact: ∆ Yes ∆ No	Custody Seal No.: 993178, 993179		Cooler Temperature(s) °C and Other Remarks: 3.8, 1.2°C IR#9				

Ver: 01/16/2019

9/6/2019

Login Sample Receipt Checklist

Client: GEI Consultants, Inc.

Job Number: 480-157974-1
SDG Number: 480-157974-1

Login Number: 157974
List Number: 1
Creator: Harper, Marcus D

List Source: Eurofins TestAmerica, Buffalo

Question	Answer	Comment
Radioactivity either was not measured or, if measured, is at or below background	True	
The cooler's custody seal, if present, is intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the sample IDs on the containers and the COC.	True	
Samples are received within Holding Time (Excluding tests with immediate HTs)..	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
VOA sample vials do not have headspace or bubble is <6mm (1/4") in diameter.	True	
If necessary, staff have been informed of any short hold time or quick TAT needs	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Sampling Company provided.	True	GEI
Samples received within 48 hours of sampling.	True	
Samples requiring field filtration have been filtered in the field.	N/A	
Chlorine Residual checked.	N/A	

Login Sample Receipt Checklist

Client: GEI Consultants, Inc.

Job Number: 480-157974-1
SDG Number: 480-157974-1

Login Number: 157974
List Number: 2
Creator: Armbruster, Chris

List Source: Eurofins TestAmerica, Edison
List Creation: 08/23/19 11:37 AM

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	993178, 993179
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	3.8, 1.2°C IR9
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Login Sample Receipt Checklist

Client: GEI Consultants, Inc.

Job Number: 480-157974-1
SDG Number: 480-157974-1

Login Number: 158037
List Number: 1
Creator: Stopa, Erik S

List Source: Eurofins TestAmerica, Buffalo

Question	Answer	Comment
Radioactivity either was not measured or, if measured, is at or below background	True	
The cooler's custody seal, if present, is intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the sample IDs on the containers and the COC.	True	
Samples are received within Holding Time (Excluding tests with immediate HTs)..	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
VOA sample vials do not have headspace or bubble is <6mm (1/4") in diameter.	True	
If necessary, staff have been informed of any short hold time or quick TAT needs	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Sampling Company provided.	True	GEI
Samples received within 48 hours of sampling.	True	
Samples requiring field filtration have been filtered in the field.	N/A	
Chlorine Residual checked.	N/A	

Login Sample Receipt Checklist

Client: GEI Consultants, Inc.

Job Number: 480-157974-1
SDG Number: 480-157974-1

Login Number: 158037
List Number: 2
Creator: Rivera, Kenneth

List Source: Eurofins TestAmerica, Edison
List Creation: 08/24/19 05:42 PM

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	993185
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	4.8°C, IR #9
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Appendix B

Data Usability Review

Site: Mineral Springs MGP
Laboratory: Test America, Amherst, NY
Report Nos.: 480-157974 and 480-158037
Reviewer: Lorie MacKinnon/GEI Consultants
Date: September 16, 2019

Samples Reviewed and Evaluation Summary

FIELD ID	LAB ID	FRACTIONS VALIDATED
MW-20	480-157974-01	Total/Free Cyanide
MW-21	480-157974-02	Total/Free Cyanide
MW-13	480-157974-03	BTEX, PAH, Total/Free Cyanide
MW-14	480-157974-04	Total/Free Cyanide
MW-10	480-157974-05	BTEX, PAH
MW-7	480-157974-06	BTEX, PAH
MW-11A	480-157974-07	BTEX, PAH, Total/Free Cyanide, TDS, TSS
MW-19	480-157974-08	BTEX, PAH
MW-22	480-157974-09	Total/Free Cyanide
EB-1	480-157974-10	BTEX, PAH, Total/Free Cyanide
TRIP BLANK	480-157974-11	BTEX
SW-01	480-157974-12	BTEX, PAH, Total/Free Cyanide, TDS, TSS
SW-02	480-157974-13	BTEX, PAH, Total/Free Cyanide, TDS, TSS
SW-03	480-157974-14	Total/Free Cyanide
SW-04	480-157974-15	Total/Free Cyanide
SW-05	480-157974-16	Total/Free Cyanide
Duplicate	480-158037-01	BTEX, PAH, Total/Free Cyanide
MW-12	480-158037-02	Total/Free Cyanide
MW-16	480-158037-03	Total/Free Cyanide
MW-17	480-158037-04	BTEX, PAH, Total/Free Cyanide
MW-23	480-158037-05	BTEX, PAH, Total/Free Cyanide

Associated QC Samples:
Equipment blank/Trip blanks: EB-1, TRIP BLANK
Field duplicate pair: MW-23/Duplicate

The above-listed aqueous samples, equipment blank, and trip blank sample were collected on August 20, 21, and 22, 2019 and were analyzed for BTEX volatile organic compounds (VOCs) by SW-846 method 8260C, polynuclear aromatic hydrocarbon (PAH) semivolatile organic compounds (SVOCs) by SW-846 method 8270D, total cyanide by SW-846 method 9012B, free cyanide by SW-846 method 9016, total dissolved solids (TDS) by Standard Methods SM2540C, and total suspended solids (TSS) by Standard Methods SM2540D. The data validation was performed based on the Standard Operating Procedure (SOP) HW-33 (Revision 3) *Low/Medium Volatile Data Validation* (March 2013), SOP HW-35 (Revision 2) *Semivolatile Data Validation* (March 2013), and SOP 2c (Revision 15), *SOP for the Evaluation of Cyanide (Inorganics) for*

the Contract Laboratory Program (December 2012), as well as by the methods referenced by the data package and professional and technical judgment.

The data were evaluated based on the following parameters:

- Data Completeness
- Holding Times and Sample Preservation
- Initial and Continuing Calibrations
- Blanks
- Surrogate Recoveries
- Matrix Spike/Matrix Spike Duplicate (MS/MSD) Results
- Laboratory Duplicate Results
- Internal Standard Results
- Laboratory Control Sample (LCS) Results
- Field Duplicate Results
- Quantitation Limits
- Sample Quantitation and Compound Identification

In general, the data appear usable as reported or usable with minor qualification due to sample matrix or laboratory quality control outliers.

No results in this sample set were qualified as rejected. All results were considered valid; even though some were qualified as discussed above.

The validation findings were based on the following information.

Data Completeness

The data package was complete as received by the laboratory.

Holding Times and Sample Preservation

All holding time and preservative criteria were met except where noted below.

SVOCs

Phenanthrene was detected in the method blank associated with all samples. The laboratory re-extracted the affected samples which had detections for phenanthrene, MW-13, MW-10, MW-11A, EB-1, SW-01, SW-02, Duplicate, and MW-23, five to seven days outside of the method hold time with similar blank contamination results. As the samples were depleted, re-extraction could not be performed again. Validation actions were not required on the basis of hold time exceedance as the initial analyses of the affected samples were used for reporting.

Initial and Continuing Calibrations

All initial and continuing calibration criteria were met.

Blanks

Contaminants were not detected in the associated trip blank sample. Contamination was not detected in the associated method and instrument blank samples except where noted below.

Analyte	Blank ID/ Associated Samples	Maximum Concentration	2X Action Level	10X Action Level	Validation Actions
Phenanthrene	Method MB 480-488745: MW-13, MW-10, MW-7, MW-11A, MW-19, EB-1, SW-01, SW-02, Duplicate, MW-17, MW-23	0.799 ug/L	1.6 ug/L	7.99 ug/L	Qualify the results for phenanthrene in samples MW-13, MW-10, MW-11A, EB-1, SW-01, SW-02, Duplicate, and MW-23 as nondetect (U) at the reported values.
Phenanthrene	Method MB 480-489844: Re-extraction of samples MW-13, MW-10, MW-11A, EB-1, SW-01, SW-02, Duplicate, MW-23	0.865 ug/L	1.73 ug/L	8.65 ug/L	Validation actions were not required as the original analysis was reported for these samples.
Naphthalene	Equipment blank EB-1: MW-13, MW-10, MW-7, MW-11A, MW-19, EB-1, SW-01, SW-02, Duplicate, MW-17, MW-23	1.2 ug/L	2.4 ug/L	12.0 ug/L	Qualify the results for naphthalene in samples MW-11A, SW-01, Duplicate, and MW-23 as nondetect (U) at the reported values.
Total cyanide	08/27 14:59 Instrument blank: MW-20, MW-14, MW-22	0.00739 mg/L	0.014 mg/L	0.074 mg/L	Validation actions were not required.

Blank Actions: If the sample result is < RL (<2xRL for common contaminants); report the result as nondetect (U) at the reporting limit (RL) or reported value.
If the sample result is ≥ RL and <2X blank contamination detected; professional judgment was taken to report the result as nondetect (U) at the reported value.
If the sample result is ≥ RL and < 10x Action Level; professional judgment was taken to report the sample result as estimated (J); biased high.
If the sample result is nondetect or > 10x Action Level; validation action is not required.

Surrogate Recoveries

All surrogate recovery criteria were met for samples analyzed at dilutions less than 200.

MS/MSD Results

MS analyses were performed on samples SW-01, SW-02, and MW-17 for total cyanide. All recovery criteria, except where noted below.

MS Sample	Analyte	MS (%)	Control Limits (%)	Validation Action/Bias
SW-02	Cyanide	82	90-110	Estimate (J/UJ) the positive and nondetect results for cyanide in associated samples MW-14, MW-22, SW-02, and MW-23; Low bias.
Associated samples: MW-14, MW-22, SW-02, MW-23				

Project MS/MSD analyses were not associated with the VOC, SVOC, and free cyanide analyses. Validation action was not taken on this basis.

Laboratory Duplicate Results

Laboratory duplicate analyses were performed on sample MW-14 for total cyanide and sample SW-05 (although this sample was not requested) for TDS.

Internal Standard Results

All criteria were met.

LCS/LCSD Results

All criteria were met.

Field Duplicate Results

Samples MW-23 and Duplicate were submitted as the field duplicate pair with this sample set. The following table summarizes the RPDs of the detected analytes in the field duplicate pair, which were within the acceptance criteria.

Analyte	MW-23 (ug/L)	Duplicate (ug/L)	RPD (%)
Total Cyanide	317	322	1.6
Free Cyanide	8.8	11.3	24.9
NC – Not calculable Criteria: When both results are ≥5x the RL, RPDs must be <30%. When results are < 5x the RL, professional judgement was taken to estimate results if the absolute difference between the original and field duplicate >RL.			

Quantitation Limits

Results were reported which were below the reporting limit (RL) and above the method detection limit (MDL). These results were qualified as estimated (J) by the laboratory.

The following table lists the sample dilutions which were performed.

Sample	VOC Analysis Reported	SVOC Analysis Reported	Cyanide Analysis Reported
MW-14	NR	NR	A 5-fold dilution was performed for total cyanide.
MW-7	A 20-fold dilution was performed due to high sample levels. All results were detected.	A 100-fold dilution was performed due to high sample levels. RLs are elevated in this sample.	NR
MW-11A	A 2-fold dilution was performed due to sample foaming. RLs are elevated in this sample.	NR	NR
MW-19	A 100-fold dilution was performed due to high sample levels. RLs are elevated in this sample.	A 200-fold dilution was performed due to high sample levels. RLs are elevated in this sample.	NR
MW-22	NR	NR	A 5-fold dilution was performed for total cyanide.
SW-01	A 2-fold dilution was performed due to sample foaming. RLs are elevated in this sample.	NR	NR
MW-16	NR	NR	A 10-fold dilution was performed for total cyanide and 5-fold dilution was performed for free cyanide.
MW-17	A 2-fold dilution was performed due to sample foaming. RLs are elevated in this sample.	A 5-fold dilution was performed due to high sample levels. RLs are elevated in this sample.	NR
NR – Dilution was not required.			

Sample Quantitation and Compound Identification

Calculations were spot-checked; no discrepancies were noted. A comparison of total and free cyanide results was performed. All sample total cyanide results exceeded those of the free cyanide.

DATA VALIDATION QUALIFIERS

U - The analyte was analyzed for, but due to blank contamination was flagged as nondetect (U). The result is usable as a nondetect.

J - Data are flagged (J) when a QC analysis fails outside the primary acceptance limits. The qualified "J" data are not excluded from further review or consideration. However, only one flag (J) is applied to a sample result, even though several associated QC analyses may fail. The 'J' data may be biased high or low or the direction of the bias may be indeterminable.

UJ - The analyte was not detected above the reported sample quantitation limit. Data are flagged (UJ) when a QC analysis fails outside the primary acceptance limits. The qualified "UJ" data are not excluded from further review or consideration. However, only one flag is applied to a sample result, even though several associated QC analyses may fail. The 'UJ' data may be biased low.

NJ - The analysis indicates the presence of a compound that has been "tentatively identified" (N) and the associated numerical value represents its approximate (J) concentration.

R - Data rejected (R) on the basis of an unacceptable QC analysis should be excluded from further review or consideration. Data are rejected when associated QC analysis results exceed the expanded control limits of the QC criteria. The rejected data are known to contain significant errors based on documented information. The data user must not use the rejected data to make environmental decisions. The presence or absence of the analyte cannot be verified.

Client Sample Results

Client: GEI Consultants, Inc.
Project/Site: GEI, Mineral Springs

Job ID: 480-157974-1
SDG: 480-157974-1

Client Sample ID: MW-20
Date Collected: 08/20/19 09:40
Date Received: 08/21/19 14:25

Lab Sample ID: 480-157974-1
Matrix: Water

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	900		20.0	10.0	ug/L		08/26/19 16:21	08/27/19 15:04	2
Cyanide, Free	10.2		5.0	1.5	ug/L		08/26/19 10:15	08/26/19 18:10	1

AM 9/11/19

Client: GEI Consultants, Inc.
Project/Site: GEI, Mineral Springs

Job ID: 480-157974-1
SDG: 480-157974-1

Client Sample ID: MW-21
Date Collected: 08/20/19 10:40
Date Received: 08/21/19 14:25

Lab Sample ID: 480-157974-2
Matrix: Water

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	475		10.0	5.0	ug/L		08/26/19 16:21	08/27/19 13:12	1
Cyanide, Free	6.6		5.0	1.5	ug/L		08/26/19 10:15	08/26/19 18:10	1

Client Sample ID: MW-13
Date Collected: 08/20/19 11:40
Date Received: 08/21/19 14:25

Lab Sample ID: 480-157974-3
Matrix: Water

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	1.0	U	1.0	0.41	ug/L			08/22/19 13:21	1
Ethylbenzene	1.0	U	1.0	0.74	ug/L			08/22/19 13:21	1
Toluene	1.0	U	1.0	0.51	ug/L			08/22/19 13:21	1
Xylenes, Total	2.0	U	2.0	0.66	ug/L			08/22/19 13:21	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*97*		*77 - 120*		*08/22/19 13:21*	*1*
4-Bromofluorobenzene (Surr)	*106*		*73 - 120*		*08/22/19 13:21*	*1*
Dibromofluoromethane (Surr)	*99*		*75 - 123*		*08/22/19 13:21*	*1*
Toluene-d8 (Surr)	*94*		*80 - 120*		*08/22/19 13:21*	*1*

Method: 8270D_LL_PAH - Semivolatile Organic Compounds (GC/MS) Low level PAH

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2-Methylnaphthalene	0.50	U	0.50	0.38	ug/L		08/26/19 08:14	08/29/19 18:36	1
Acenaphthene	0.50	U	0.50	0.30	ug/L		08/26/19 08:14	08/29/19 18:36	1
Acenaphthylene	0.50	U	0.50	0.34	ug/L		08/26/19 08:14	08/29/19 18:36	1
Anthracene	0.50	U	0.50	0.39	ug/L		08/26/19 08:14	08/29/19 18:36	1
Benzo(a)anthracene	0.50	U	0.50	0.40	ug/L		08/26/19 08:14	08/29/19 18:36	1
Benzo(a)pyrene	0.50	U	0.50	0.33	ug/L		08/26/19 08:14	08/29/19 18:36	1
Benzo(b)fluoranthene	0.50	U	0.50	0.30	ug/L		08/26/19 08:14	08/29/19 18:36	1
Benzo(g,h,i)perylene	0.50	U	0.50	0.37	ug/L		08/26/19 08:14	08/29/19 18:36	1
Benzo(k)fluoranthene	0.50	U	0.50	0.085	ug/L		08/26/19 08:14	08/29/19 18:36	1
Chrysene	0.50	U	0.50	0.32	ug/L		08/26/19 08:14	08/29/19 18:36	1
Dibenz(a,h)anthracene	0.50	U	0.50	0.33	ug/L		08/26/19 08:14	08/29/19 18:36	1
Fluoranthene	0.50	U	0.50	0.36	ug/L		08/26/19 08:14	08/29/19 18:36	1
Fluorene	0.50	U	0.50	0.37	ug/L		08/26/19 08:14	08/29/19 18:36	1
Indeno(1,2,3-cd)pyrene	0.50	U	0.50	0.44	ug/L		08/26/19 08:14	08/29/19 18:36	1
Naphthalene	0.50	U	0.50	0.42	ug/L		08/26/19 08:14	08/29/19 18:36	1
Phenanthrene	**0.69**	~~B~~ U	0.50	0.38	ug/L		08/26/19 08:14	08/29/19 18:36	1
Pyrene	0.50	U	0.50	0.36	ug/L		08/26/19 08:14	08/29/19 18:36	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*94*		*48 - 120*	*08/26/19 08:14*	*08/29/19 18:36*	*1*
Nitrobenzene-d5	*81*		*46 - 120*	*08/26/19 08:14*	*08/29/19 18:36*	*1*
p-Terphenyl-d14	*48*		*24 - 136*	*08/26/19 08:14*	*08/29/19 18:36*	*1*

Method: 8270D_LL_PAH - Semivolatile Organic Compounds (GC/MS) Low level PAH - RE

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2-Methylnaphthalene	0.50	~~U H~~ UJ	0.50	0.38	ug/L		09/03/19 08:29	09/04/19 20:44	1
Acenaphthene	0.50	U H	0.50	0.30	ug/L		09/03/19 08:29	09/04/19 20:44	1
Acenaphthylene	0.50	U H	0.50	0.34	ug/L		09/03/19 08:29	09/04/19 20:44	1
Anthracene	0.50	U H	0.50	0.39	ug/L		09/03/19 08:29	09/04/19 20:44	1
Benzo(a)anthracene	0.50	U H	0.50	0.40	ug/L		09/03/19 08:29	09/04/19 20:44	1
Benzo(a)pyrene	0.50	U H	0.50	0.33	ug/L		09/03/19 08:29	09/04/19 20:44	1
Benzo(b)fluoranthene	0.50	U H	0.50	0.30	ug/L		09/03/19 08:29	09/04/19 20:44	1
Benzo(g,h,i)perylene	0.50	U H	0.50	0.37	ug/L		09/03/19 08:29	09/04/19 20:44	1
Benzo(k)fluoranthene	0.50	U H	0.50	0.085	ug/L		09/03/19 08:29	09/04/19 20:44	1
Chrysene	0.50	U H	0.50	0.32	ug/L		09/03/19 08:29	09/04/19 20:44	1
Dibenz(a,h)anthracene	0.50	U H	0.50	0.33	ug/L		09/03/19 08:29	09/04/19 20:44	1
Fluoranthene	0.50	~~U H~~ UJ	0.50	0.36	ug/L		09/03/19 08:29	09/04/19 20:44	1

do not report

Client: GEI Consultants, Inc.
Project/Site: GEI, Mineral Springs

Job ID: 480-157974-1
SDG: 480-157974-1

Client Sample ID: MW-13
Date Collected: 08/20/19 11:40
Date Received: 08/21/19 14:25

Lab Sample ID: 480-157974-3
Matrix: Water

Method: 8270D_LL_PAH - Semivolatile Organic Compounds (GC/MS) Low level PAH - RE (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluorene	0.50	~~U H~~ UJ	0.50	0.37	ug/L		09/03/19 08:29	09/04/19 20:44	1
Indeno(1,2,3-cd)pyrene	0.50	U ~~H~~	0.50	0.44	ug/L		09/03/19 08:29	09/04/19 20:44	1
Naphthalene	0.50	U ~~H~~ UJ	0.50	0.42	ug/L		09/03/19 08:29	09/04/19 20:44	1
Phenanthrene	**0.93**	~~H B~~ UJ	0.50	0.38	ug/L		09/03/19 08:29	09/04/19 20:44	1
Pyrene	0.50	~~U H~~ UJ	0.50	0.36	ug/L		09/03/19 08:29	09/04/19 20:44	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*92*		*48 - 120*	*09/03/19 08:29*	*09/04/19 20:44*	*1*
Nitrobenzene-d5	*87*		*46 - 120*	*09/03/19 08:29*	*09/04/19 20:44*	*1*
p-Terphenyl-d14	*52*		*24 - 136*	*09/03/19 08:29*	*09/04/19 20:44*	*1*

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	**225**		10.0	5.0	ug/L		08/26/19 16:21	08/27/19 13:14	1
Cyanide, Free	**14.0**		5.0	1.5	ug/L		08/26/19 10:15	08/26/19 18:10	1

Client: GEI Consultants, Inc.
Project/Site: GEI, Mineral Springs

Job ID: 480-157974-1
SDG: 480-157974-1

Client Sample ID: MW-14
Date Collected: 08/20/19 12:30
Date Received: 08/21/19 14:25

Lab Sample ID: 480-157974-4
Matrix: Water

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	625	J	50.0	25.0	ug/L		09/01/19 16:11	09/03/19 13:20	5
Cyanide, Free	21.0		5.0	1.5	ug/L		08/26/19 10:15	08/26/19 18:10	1

Client Sample ID: MW-10
Date Collected: 08/21/19 09:30
Date Received: 08/21/19 14:25

Lab Sample ID: 480-157974-5
Matrix: Water

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	1.0	U	1.0	0.41	ug/L			08/22/19 13:44	1
Ethylbenzene	1.0	U	1.0	0.74	ug/L			08/22/19 13:44	1
Toluene	1.0	U	1.0	0.51	ug/L			08/22/19 13:44	1
Xylenes, Total	2.0	U	2.0	0.66	ug/L			08/22/19 13:44	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*95*		*77 - 120*		*08/22/19 13:44*	*1*
4-Bromofluorobenzene (Surr)	*109*		*73 - 120*		*08/22/19 13:44*	*1*
Dibromofluoromethane (Surr)	*98*		*75 - 123*		*08/22/19 13:44*	*1*
Toluene-d8 (Surr)	*95*		*80 - 120*		*08/22/19 13:44*	*1*

Method: 8270D_LL_PAH - Semivolatile Organic Compounds (GC/MS) Low level PAH

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2-Methylnaphthalene	0.50	U	0.50	0.38	ug/L		08/26/19 08:14	08/29/19 19:05	1
Acenaphthene	0.50	U	0.50	0.30	ug/L		08/26/19 08:14	08/29/19 19:05	1
Acenaphthylene	0.50	U	0.50	0.34	ug/L		08/26/19 08:14	08/29/19 19:05	1
Anthracene	0.50	U	0.50	0.39	ug/L		08/26/19 08:14	08/29/19 19:05	1
Benzo(a)anthracene	0.50	U	0.50	0.40	ug/L		08/26/19 08:14	08/29/19 19:05	1
Benzo(a)pyrene	0.50	U	0.50	0.33	ug/L		08/26/19 08:14	08/29/19 19:05	1
Benzo(b)fluoranthene	0.50	U	0.50	0.30	ug/L		08/26/19 08:14	08/29/19 19:05	1
Benzo(g,h,i)perylene	0.50	U	0.50	0.37	ug/L		08/26/19 08:14	08/29/19 19:05	1
Benzo(k)fluoranthene	0.50	U	0.50	0.085	ug/L		08/26/19 08:14	08/29/19 19:05	1
Chrysene	0.50	U	0.50	0.32	ug/L		08/26/19 08:14	08/29/19 19:05	1
Dibenz(a,h)anthracene	0.50	U	0.50	0.33	ug/L		08/26/19 08:14	08/29/19 19:05	1
Fluoranthene	0.50	U	0.50	0.36	ug/L		08/26/19 08:14	08/29/19 19:05	1
Fluorene	0.50	U	0.50	0.37	ug/L		08/26/19 08:14	08/29/19 19:05	1
Indeno(1,2,3-cd)pyrene	0.50	U	0.50	0.44	ug/L		08/26/19 08:14	08/29/19 19:05	1
Naphthalene	0.50	U	0.50	0.42	ug/L		08/26/19 08:14	08/29/19 19:05	1
Phenanthrene	**0.72**	~~B~~ U	0.50	0.38	ug/L		08/26/19 08:14	08/29/19 19:05	1
Pyrene	0.50	U	0.50	0.36	ug/L		08/26/19 08:14	08/29/19 19:05	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*95*		*48 - 120*	*08/26/19 08:14*	*08/29/19 19:05*	*1*
Nitrobenzene-d5	*84*		*46 - 120*	*08/26/19 08:14*	*08/29/19 19:05*	*1*
p-Terphenyl-d14	*52*		*24 - 136*	*08/26/19 08:14*	*08/29/19 19:05*	*1*

Method: 8270D_LL_PAH - Semivolatile Organic Compounds (GC/MS) Low level PAH - RE

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2-Methylnaphthalene	0.50	~~U H~~ UJ	0.50	0.38	ug/L		09/03/19 08:29	09/04/19 21:13	1
Acenaphthene	0.50	U H	0.50	0.30	ug/L		09/03/19 08:29	09/04/19 21:13	1
Acenaphthylene	0.50	U H	0.50	0.34	ug/L		09/03/19 08:29	09/04/19 21:13	1
Anthracene	0.50	U H	0.50	0.39	ug/L		09/03/19 08:29	09/04/19 21:13	1
Benzo(a)anthracene	0.50	U H	0.50	0.40	ug/L		09/03/19 08:29	09/04/19 21:13	1
Benzo(a)pyrene	0.50	U H	0.50	0.33	ug/L		09/03/19 08:29	09/04/19 21:13	1
Benzo(b)fluoranthene	0.50	U H	0.50	0.30	ug/L		09/03/19 08:29	09/04/19 21:13	1
Benzo(g,h,i)perylene	0.50	U H	0.50	0.37	ug/L		09/03/19 08:29	09/04/19 21:13	1
Benzo(k)fluoranthene	0.50	U H	0.50	0.085	ug/L		09/03/19 08:29	09/04/19 21:13	1
Chrysene	0.50	U H	0.50	0.32	ug/L		09/03/19 08:29	09/04/19 21:13	1
Dibenz(a,h)anthracene	0.50	U H	0.50	0.33	ug/L		09/03/19 08:29	09/04/19 21:13	1
Fluoranthene	0.50	~~U H~~ UJ	0.50	0.36	ug/L		09/03/19 08:29	09/04/19 21:13	1

Client: GEI Consultants, Inc.
Project/Site: GEI, Mineral Springs

Job ID: 480-157974-1
SDG: 480-157974-1

Client Sample ID: MW-10
Date Collected: 08/21/19 09:30
Date Received: 08/21/19 14:25

Lab Sample ID: 480-157974-5
Matrix: Water

Method: 8270D_LL_PAH - Semivolatile Organic Compounds (GC/MS) Low level PAH - RE (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluorene	0.50	U H	0.50	0.37	ug/L		09/03/19 08:29	09/04/19 21:13	1
Indeno(1,2,3-cd)pyrene	0.50	U H	0.50	0.44	ug/L		09/03/19 08:29	09/04/19 21:13	1
Naphthalene	0.50	U H	0.50	0.42	ug/L		09/03/19 08:29	09/04/19 21:13	1
Phenanthrene	**0.95**	**H B**	0.50	0.38	ug/L		09/03/19 08:29	09/04/19 21:13	1
Pyrene	0.50	U H	0.50	0.36	ug/L		09/03/19 08:29	09/04/19 21:13	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*91*		*48 - 120*	*09/03/19 08:29*	*09/04/19 21:13*	*1*
Nitrobenzene-d5	*88*		*46 - 120*	*09/03/19 08:29*	*09/04/19 21:13*	*1*
p-Terphenyl-d14	*54*		*24 - 136*	*09/03/19 08:29*	*09/04/19 21:13*	*1*

Client Sample ID: MW-7

Date Collected: 08/21/19 10:50
Date Received: 08/21/19 14:25

Lab Sample ID: 480-157974-6

Matrix: Water

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	**580**		20	8.2	ug/L			08/22/19 14:07	20
Ethylbenzene	**940**		20	15	ug/L			08/22/19 14:07	20
Toluene	20	U	20	10	ug/L			08/22/19 14:07	20
Xylenes, Total	**450**		40	13	ug/L			08/22/19 14:07	20

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*97*		*77 - 120*		*08/22/19 14:07*	*20*
4-Bromofluorobenzene (Surr)	*107*		*73 - 120*		*08/22/19 14:07*	*20*
Dibromofluoromethane (Surr)	*95*		*75 - 123*		*08/22/19 14:07*	*20*
Toluene-d8 (Surr)	*93*		*80 - 120*		*08/22/19 14:07*	*20*

Method: 8270D_LL_PAH - Semivolatile Organic Compounds (GC/MS) Low level PAH

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2-Methylnaphthalene	**140**		50	38	ug/L		08/26/19 08:14	08/29/19 19:33	100
Acenaphthene	**81**		50	30	ug/L		08/26/19 08:14	08/29/19 19:33	100
Acenaphthylene	50	U	50	34	ug/L		08/26/19 08:14	08/29/19 19:33	100
Anthracene	50	U	50	39	ug/L		08/26/19 08:14	08/29/19 19:33	100
Benzo(a)anthracene	50	U	50	40	ug/L		08/26/19 08:14	08/29/19 19:33	100
Benzo(a)pyrene	50	U	50	33	ug/L		08/26/19 08:14	08/29/19 19:33	100
Benzo(b)fluoranthene	50	U	50	30	ug/L		08/26/19 08:14	08/29/19 19:33	100
Benzo(g,h,i)perylene	50	U	50	37	ug/L		08/26/19 08:14	08/29/19 19:33	100
Benzo(k)fluoranthene	50	U	50	8.5	ug/L		08/26/19 08:14	08/29/19 19:33	100
Chrysene	50	U	50	32	ug/L		08/26/19 08:14	08/29/19 19:33	100
Dibenz(a,h)anthracene	50	U	50	33	ug/L		08/26/19 08:14	08/29/19 19:33	100
Fluoranthene	50	U	50	36	ug/L		08/26/19 08:14	08/29/19 19:33	100
Fluorene	50	U	50	37	ug/L		08/26/19 08:14	08/29/19 19:33	100
Indeno(1,2,3-cd)pyrene	50	U	50	44	ug/L		08/26/19 08:14	08/29/19 19:33	100
Naphthalene	**1600**		50	42	ug/L		08/26/19 08:14	08/29/19 19:33	100
Phenanthrene	50	U	50	38	ug/L		08/26/19 08:14	08/29/19 19:33	100
Pyrene	50	U	50	36	ug/L		08/26/19 08:14	08/29/19 19:33	100

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*78*		*48 - 120*	*08/26/19 08:14*	*08/29/19 19:33*	*100*
Nitrobenzene-d5	*62*		*46 - 120*	*08/26/19 08:14*	*08/29/19 19:33*	*100*
p-Terphenyl-d14	*48*		*24 - 136*	*08/26/19 08:14*	*08/29/19 19:33*	*100*

Client Sample ID: MW-11A

Date Collected: 08/21/19 12:20
Date Received: 08/21/19 14:25

Lab Sample ID: 480-157974-7

Matrix: Water

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	**6.8**		2.0	0.82	ug/L			08/22/19 14:30	2
Ethylbenzene	2.0	U	2.0	1.5	ug/L			08/22/19 14:30	2
Toluene	2.0	U	2.0	1.0	ug/L			08/22/19 14:30	2
Xylenes, Total	4.0	U	4.0	1.3	ug/L			08/22/19 14:30	2

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*97*		*77 - 120*		*08/22/19 14:30*	*2*
4-Bromofluorobenzene (Surr)	*108*		*73 - 120*		*08/22/19 14:30*	*2*
Dibromofluoromethane (Surr)	*95*		*75 - 123*		*08/22/19 14:30*	*2*
Toluene-d8 (Surr)	*96*		*80 - 120*		*08/22/19 14:30*	*2*

Method: 8270D_LL_PAH - Semivolatile Organic Compounds (GC/MS) Low level PAH

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2-Methylnaphthalene	0.50	U	0.50	0.38	ug/L		08/26/19 08:14	08/29/19 20:01	1
Acenaphthene	**2.1**		0.50	0.30	ug/L		08/26/19 08:14	08/29/19 20:01	1
Acenaphthylene	**1.6**		0.50	0.34	ug/L		08/26/19 08:14	08/29/19 20:01	1
Anthracene	0.50	U	0.50	0.39	ug/L		08/26/19 08:14	08/29/19 20:01	1
Benzo(a)anthracene	0.50	U	0.50	0.40	ug/L		08/26/19 08:14	08/29/19 20:01	1
Benzo(a)pyrene	0.50	U	0.50	0.33	ug/L		08/26/19 08:14	08/29/19 20:01	1
Benzo(b)fluoranthene	0.50	U	0.50	0.30	ug/L		08/26/19 08:14	08/29/19 20:01	1
Benzo(g,h,i)perylene	0.50	U	0.50	0.37	ug/L		08/26/19 08:14	08/29/19 20:01	1
Benzo(k)fluoranthene	0.50	U	0.50	0.085	ug/L		08/26/19 08:14	08/29/19 20:01	1
Chrysene	0.50	U	0.50	0.32	ug/L		08/26/19 08:14	08/29/19 20:01	1
Dibenz(a,h)anthracene	0.50	U	0.50	0.33	ug/L		08/26/19 08:14	08/29/19 20:01	1
Fluoranthene	**0.36**	J	0.50	0.36	ug/L		08/26/19 08:14	08/29/19 20:01	1
Fluorene	0.50	U	0.50	0.37	ug/L		08/26/19 08:14	08/29/19 20:01	1
Indeno(1,2,3-cd)pyrene	0.50	U	0.50	0.44	ug/L		08/26/19 08:14	08/29/19 20:01	1
Naphthalene	**1.6**	U·	0.50	0.42	ug/L		08/26/19 08:14	08/29/19 20:01	1
Phenanthrene	**0.68**	~~B~~ U·	0.50	0.38	ug/L		08/26/19 08:14	08/29/19 20:01	1
Pyrene	**0.37**	J	0.50	0.36	ug/L		08/26/19 08:14	08/29/19 20:01	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*93*		*48 - 120*	*08/26/19 08:14*	*08/29/19 20:01*	*1*
Nitrobenzene-d5	*79*		*46 - 120*	*08/26/19 08:14*	*08/29/19 20:01*	*1*
p-Terphenyl-d14	*55*		*24 - 136*	*08/26/19 08:14*	*08/29/19 20:01*	*1*

Method: 8270D_LL_PAH - Semivolatile Organic Compounds (GC/MS) Low level PAH - RE

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2-Methylnaphthalene	0.50	~~U H~~ UJ	0.50	0.38	ug/L		09/03/19 08:29	09/04/19 21:42	1
Acenaphthene	**2.0**	H J	0.50	0.30	ug/L		09/03/19 08:29	09/04/19 21:42	1
Acenaphthylene	**0.96**	H J	0.50	0.34	ug/L		09/03/19 08:29	09/04/19 21:42	1
Anthracene	0.50	U H UJ	0.50	0.39	ug/L		09/03/19 08:29	09/04/19 21:42	1
Benzo(a)anthracene	0.50	U H	0.50	0.40	ug/L		09/03/19 08:29	09/04/19 21:42	1
Benzo(a)pyrene	0.50	U H	0.50	0.33	ug/L		09/03/19 08:29	09/04/19 21:42	1
Benzo(b)fluoranthene	0.50	U H	0.50	0.30	ug/L		09/03/19 08:29	09/04/19 21:42	1
Benzo(g,h,i)perylene	0.50	U H	0.50	0.37	ug/L		09/03/19 08:29	09/04/19 21:42	1
Benzo(k)fluoranthene	0.50	U H	0.50	0.085	ug/L		09/03/19 08:29	09/04/19 21:42	1
Chrysene	0.50	U H	0.50	0.32	ug/L		09/03/19 08:29	09/04/19 21:42	1
Dibenz(a,h)anthracene	0.50	U H UJ	0.50	0.33	ug/L		09/03/19 08:29	09/04/19 21:42	1
Fluoranthene	**0.38**	J ~~H~~ J	0.50	0.36	ug/L		09/03/19 08:29	09/04/19 21:42	1

do not report

Client: GEI Consultants, Inc.
Project/Site: GEI, Mineral Springs

Job ID: 480-157974-1
SDG: 480-157974-1

Client Sample ID: MW-11A
Date Collected: 08/21/19 12:20
Date Received: 08/21/19 14:25

Lab Sample ID: 480-157974-7
Matrix: Water

Method: 8270D_LL_PAH - Semivolatile Organic Compounds (GC/MS) Low level PAH - RE (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluorene	0.50	U H UJ	0.50	0.37	ug/L		09/03/19 08:29	09/04/19 21:42	1
Indeno(1,2,3-cd)pyrene	0.50	U H UJ	0.50	0.44	ug/L		09/03/19 08:29	09/04/19 21:42	1
Naphthalene	0.50	U H UJ	0.50	0.42	ug/L		09/03/19 08:29	09/04/19 21:42	1
Phenanthrene	**0.90**	**H B UJ**	0.50	0.38	ug/L		09/03/19 08:29	09/04/19 21:42	1
Pyrene	0.50	U H UJ	0.50	0.36	ug/L		09/03/19 08:29	09/04/19 21:42	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*93*		*48 - 120*	*09/03/19 08:29*	*09/04/19 21:42*	*1*
Nitrobenzene-d5	*90*		*46 - 120*	*09/03/19 08:29*	*09/04/19 21:42*	*1*
p-Terphenyl-d14	*60*		*24 - 136*	*09/03/19 08:29*	*09/04/19 21:42*	*1*

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	**250**		10.0	5.0	ug/L		08/26/19 16:21	08/27/19 13:20	1
Cyanide, Free	**12.4**		5.0	1.5	ug/L		08/26/19 10:15	08/26/19 18:10	1
Total Dissolved Solids	**778**		10.0	4.0	mg/L			08/23/19 08:29	1

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids	**45.6**		4.0	4.0	mg/L			08/22/19 13:19	1

Client: GEI Consultants, Inc.
Project/Site: GEI, Mineral Springs

Job ID: 480-157974-1
SDG: 480-157974-1

Client Sample ID: MW-19
Date Collected: 08/21/19 13:30
Date Received: 08/21/19 14:25

Lab Sample ID: 480-157974-8
Matrix: Water

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	**4600**		100	41	ug/L			08/22/19 14:53	100
Ethylbenzene	**450**		100	74	ug/L			08/22/19 14:53	100
Toluene	100	U	100	51	ug/L			08/22/19 14:53	100
Xylenes, Total	200	U	200	66	ug/L			08/22/19 14:53	100

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*95*		*77 - 120*		*08/22/19 14:53*	*100*
4-Bromofluorobenzene (Surr)	*106*		*73 - 120*		*08/22/19 14:53*	*100*
Dibromofluoromethane (Surr)	*93*		*75 - 123*		*08/22/19 14:53*	*100*
Toluene-d8 (Surr)	*94*		*80 - 120*		*08/22/19 14:53*	*100*

Method: 8270D_LL_PAH - Semivolatile Organic Compounds (GC/MS) Low level PAH

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2-Methylnaphthalene	100	U	100	76	ug/L		08/26/19 08:14	08/29/19 20:28	200
Acenaphthene	100	U	100	60	ug/L		08/26/19 08:14	08/29/19 20:28	200
Acenaphthylene	100	U	100	68	ug/L		08/26/19 08:14	08/29/19 20:28	200
Anthracene	100	U	100	78	ug/L		08/26/19 08:14	08/29/19 20:28	200
Benzo(a)anthracene	100	U	100	80	ug/L		08/26/19 08:14	08/29/19 20:28	200
Benzo(a)pyrene	100	U	100	66	ug/L		08/26/19 08:14	08/29/19 20:28	200
Benzo(b)fluoranthene	100	U	100	60	ug/L		08/26/19 08:14	08/29/19 20:28	200
Benzo(g,h,i)perylene	100	U	100	74	ug/L		08/26/19 08:14	08/29/19 20:28	200
Benzo(k)fluoranthene	100	U	100	17	ug/L		08/26/19 08:14	08/29/19 20:28	200
Chrysene	100	U	100	64	ug/L		08/26/19 08:14	08/29/19 20:28	200
Dibenz(a,h)anthracene	100	U	100	66	ug/L		08/26/19 08:14	08/29/19 20:28	200
Fluoranthene	100	U	100	72	ug/L		08/26/19 08:14	08/29/19 20:28	200
Fluorene	100	U	100	74	ug/L		08/26/19 08:14	08/29/19 20:28	200
Indeno(1,2,3-cd)pyrene	100	U	100	88	ug/L		08/26/19 08:14	08/29/19 20:28	200
Naphthalene	**5600**		100	84	ug/L		08/26/19 08:14	08/29/19 20:28	200
Phenanthrene	100	U	100	76	ug/L		08/26/19 08:14	08/29/19 20:28	200
Pyrene	100	U	100	72	ug/L		08/26/19 08:14	08/29/19 20:28	200

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*101*		*48 - 120*	*08/26/19 08:14*	*08/29/19 20:28*	*200*
Nitrobenzene-d5	*0*	*X*	*46 - 120*	*08/26/19 08:14*	*08/29/19 20:28*	*200*
p-Terphenyl-d14	*58*		*24 - 136*	*08/26/19 08:14*	*08/29/19 20:28*	*200*

Client Sample Results

Client: GEI Consultants, Inc.
Project/Site: GEI, Mineral Springs

Job ID: 480-157974-1
SDG: 480-157974-1

Client Sample ID: MW-22
Date Collected: 08/21/19 14:20
Date Received: 08/21/19 14:25

Lab Sample ID: 480-157974-9
Matrix: Water

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	800	J.	50.0	25.0	ug/L		09/01/19 16:11	09/03/19 13:23	5
Cyanide, Free	41.9		5.0	1.5	ug/L		08/26/19 10:15	08/26/19 18:10	1

Client Sample Results

Client: GEI Consultants, Inc.
Project/Site: GEI, Mineral Springs

Job ID: 480-157974-1
SDG: 480-157974-1

Client Sample ID: EB-1
Date Collected: 08/20/19 11:33
Date Received: 08/21/19 14:25

Lab Sample ID: 480-157974-10
Matrix: Water

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	1.0	U	1.0	0.41	ug/L			08/23/19 12:22	1
Ethylbenzene	1.0	U	1.0	0.74	ug/L			08/23/19 12:22	1
Toluene	1.0	U	1.0	0.51	ug/L			08/23/19 12:22	1
Xylenes, Total	2.0	U	2.0	0.66	ug/L			08/23/19 12:22	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*91*		*77 - 120*		*08/23/19 12:22*	*1*
4-Bromofluorobenzene (Surr)	*111*		*73 - 120*		*08/23/19 12:22*	*1*
Dibromofluoromethane (Surr)	*92*		*75 - 123*		*08/23/19 12:22*	*1*
Toluene-d8 (Surr)	*90*		*80 - 120*		*08/23/19 12:22*	*1*

Method: 8270D_LL_PAH - Semivolatile Organic Compounds (GC/MS) Low level PAH

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2-Methylnaphthalene	0.50	U	0.50	0.38	ug/L		08/26/19 08:14	08/29/19 20:56	1
Acenaphthene	0.50	U	0.50	0.30	ug/L		08/26/19 08:14	08/29/19 20:56	1
Acenaphthylene	0.50	U	0.50	0.34	ug/L		08/26/19 08:14	08/29/19 20:56	1
Anthracene	0.50	U	0.50	0.39	ug/L		08/26/19 08:14	08/29/19 20:56	1
Benzo(a)anthracene	0.50	U	0.50	0.40	ug/L		08/26/19 08:14	08/29/19 20:56	1
Benzo(a)pyrene	0.50	U	0.50	0.33	ug/L		08/26/19 08:14	08/29/19 20:56	1
Benzo(b)fluoranthene	0.50	U	0.50	0.30	ug/L		08/26/19 08:14	08/29/19 20:56	1
Benzo(g,h,i)perylene	0.50	U	0.50	0.37	ug/L		08/26/19 08:14	08/29/19 20:56	1
Benzo(k)fluoranthene	0.50	U	0.50	0.085	ug/L		08/26/19 08:14	08/29/19 20:56	1
Chrysene	0.50	U	0.50	0.32	ug/L		08/26/19 08:14	08/29/19 20:56	1
Dibenz(a,h)anthracene	0.50	U	0.50	0.33	ug/L		08/26/19 08:14	08/29/19 20:56	1
Fluoranthene	0.50	U	0.50	0.36	ug/L		08/26/19 08:14	08/29/19 20:56	1
Fluorene	0.50	U	0.50	0.37	ug/L		08/26/19 08:14	08/29/19 20:56	1
Indeno(1,2,3-cd)pyrene	0.50	U	0.50	0.44	ug/L		08/26/19 08:14	08/29/19 20:56	1
Naphthalene	**1.2**		0.50	0.42	ug/L		08/26/19 08:14	08/29/19 20:56	1
Phenanthrene	**0.69**	~~B~~ U	0.50	0.38	ug/L		08/26/19 08:14	08/29/19 20:56	1
Pyrene	0.50	U	0.50	0.36	ug/L		08/26/19 08:14	08/29/19 20:56	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*97*		*48 - 120*	*08/26/19 08:14*	*08/29/19 20:56*	*1*
Nitrobenzene-d5	*85*		*46 - 120*	*08/26/19 08:14*	*08/29/19 20:56*	*1*
p-Terphenyl-d14	*79*		*24 - 136*	*08/26/19 08:14*	*08/29/19 20:56*	*1*

Method: 8270D_LL_PAH - Semivolatile Organic Compounds (GC/MS) Low level PAH - RE

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2-Methylnaphthalene	0.50	~~U~~ H	UJ 0.50	0.38	ug/L		09/03/19 08:29	09/04/19 22:11	1
Acenaphthene	0.50	U H	0.50	0.30	ug/L		09/03/19 08:29	09/04/19 22:11	1
Acenaphthylene	0.50	U H	0.50	0.34	ug/L		09/03/19 08:29	09/04/19 22:11	1
Anthracene	0.50	U H	0.50	0.39	ug/L		09/03/19 08:29	09/04/19 22:11	1
Benzo(a)anthracene	0.50	U H	0.50	0.40	ug/L		09/03/19 08:29	09/04/19 22:11	1
Benzo(a)pyrene	0.50	U H	0.50	0.33	ug/L		09/03/19 08:29	09/04/19 22:11	1
Benzo(b)fluoranthene	0.50	U H	0.50	0.30	ug/L		09/03/19 08:29	09/04/19 22:11	1
Benzo(g,h,i)perylene	0.50	U H	0.50	0.37	ug/L		09/03/19 08:29	09/04/19 22:11	1
Benzo(k)fluoranthene	0.50	U H	0.50	0.085	ug/L		09/03/19 08:29	09/04/19 22:11	1
Chrysene	0.50	U H	0.50	0.32	ug/L		09/03/19 08:29	09/04/19 22:11	1
Dibenz(a,h)anthracene	0.50	U H	0.50	0.33	ug/L		09/03/19 08:29	09/04/19 22:11	1
Fluoranthene	0.50	U H	UJ 0.50	0.36	ug/L		09/03/19 08:29	09/04/19 22:11	1

do not report

Client: GEI Consultants, Inc.
Project/Site: GEI, Mineral Springs

Job ID: 480-157974-1
SDG: 480-157974-1

Client Sample ID: EB-1
Date Collected: 08/20/19 11:33
Date Received: 08/21/19 14:25

Lab Sample ID: 480-157974-10
Matrix: Water

Method: 8270D_LL_PAH - Semivolatile Organic Compounds (GC/MS) Low level PAH - RE (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluorene	0.50	U H UJ	0.50	0.37	ug/L		09/03/19 08:29	09/04/19 22:11	1
Indeno(1,2,3-cd)pyrene	0.50	U H UJ	0.50	0.44	ug/L		09/03/19 08:29	09/04/19 22:11	1
Naphthalene	0.50	U H UJ	0.50	0.42	ug/L		09/03/19 08:29	09/04/19 22:11	1
Phenanthrene	**0.91**	**H B** UJ	0.50	0.38	ug/L		09/03/19 08:29	09/04/19 22:11	1
Pyrene	0.50	U H UJ	0.50	0.36	ug/L		09/03/19 08:29	09/04/19 22:11	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*93*		*48 - 120*	*09/03/19 08:29*	*09/04/19 22:11*	*1*
Nitrobenzene-d5	*91*		*46 - 120*	*09/03/19 08:29*	*09/04/19 22:11*	*1*
p-Terphenyl-d14	*83*		*24 - 136*	*09/03/19 08:29*	*09/04/19 22:11*	*1*

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	10.0	U	10.0	5.0	ug/L		08/26/19 16:21	08/27/19 13:22	1
Cyanide, Free	5.0	U	5.0	1.5	ug/L		08/26/19 10:15	08/26/19 18:10	1

Client: GEI Consultants, Inc.
Project/Site: GEI, Mineral Springs

Job ID: 480-157974-1
SDG: 480-157974-1

Client Sample ID: TRIP BLANK
Date Collected: 08/20/19 00:00
Date Received: 08/21/19 14:25

Lab Sample ID: 480-157974-11
Matrix: Water

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	1.0	U	1.0	0.41	ug/L			08/23/19 12:45	1
Ethylbenzene	1.0	U	1.0	0.74	ug/L			08/23/19 12:45	1
Toluene	1.0	U	1.0	0.51	ug/L			08/23/19 12:45	1
Xylenes, Total	2.0	U	2.0	0.66	ug/L			08/23/19 12:45	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*89*		*77 - 120*		*08/23/19 12:45*	*1*
4-Bromofluorobenzene (Surr)	*104*		*73 - 120*		*08/23/19 12:45*	*1*
Dibromofluoromethane (Surr)	*89*		*75 - 123*		*08/23/19 12:45*	*1*
Toluene-d8 (Surr)	*92*		*80 - 120*		*08/23/19 12:45*	*1*

Client Sample Results

Client: GEI Consultants, Inc.
Project/Site: GEI, Mineral Springs

Job ID: 480-157974-1
SDG: 480-157974-1

Client Sample ID: SW-01
Date Collected: 08/20/19 15:00
Date Received: 08/21/19 14:25

Lab Sample ID: 480-157974-12
Matrix: Water

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	2.0	U	2.0	0.82	ug/L			08/22/19 15:16	2
Ethylbenzene	2.0	U	2.0	1.5	ug/L			08/22/19 15:16	2
Toluene	2.0	U	2.0	1.0	ug/L			08/22/19 15:16	2
Xylenes, Total	4.0	U	4.0	1.3	ug/L			08/22/19 15:16	2

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*95*		*77 - 120*		*08/22/19 15:16*	*2*
4-Bromofluorobenzene (Surr)	*109*		*73 - 120*		*08/22/19 15:16*	*2*
Dibromofluoromethane (Surr)	*94*		*75 - 123*		*08/22/19 15:16*	*2*
Toluene-d8 (Surr)	*95*		*80 - 120*		*08/22/19 15:16*	*2*

Method: 8270D_LL_PAH - Semivolatile Organic Compounds (GC/MS) Low level PAH

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2-Methylnaphthalene	0.50	U	0.50	0.38	ug/L		08/26/19 08:14	08/29/19 21:24	1
Acenaphthene	0.50	U	0.50	0.30	ug/L		08/26/19 08:14	08/29/19 21:24	1
Acenaphthylene	0.50	U	0.50	0.34	ug/L		08/26/19 08:14	08/29/19 21:24	1
Anthracene	0.50	U	0.50	0.39	ug/L		08/26/19 08:14	08/29/19 21:24	1
Benzo(a)anthracene	0.50	U	0.50	0.40	ug/L		08/26/19 08:14	08/29/19 21:24	1
Benzo(a)pyrene	0.50	U	0.50	0.33	ug/L		08/26/19 08:14	08/29/19 21:24	1
Benzo(b)fluoranthene	0.50	U	0.50	0.30	ug/L		08/26/19 08:14	08/29/19 21:24	1
Benzo(g,h,i)perylene	0.50	U	0.50	0.37	ug/L		08/26/19 08:14	08/29/19 21:24	1
Benzo(k)fluoranthene	0.50	U	0.50	0.085	ug/L		08/26/19 08:14	08/29/19 21:24	1
Chrysene	0.50	U	0.50	0.32	ug/L		08/26/19 08:14	08/29/19 21:24	1
Dibenz(a,h)anthracene	0.50	U	0.50	0.33	ug/L		08/26/19 08:14	08/29/19 21:24	1
Fluoranthene	0.50	U	0.50	0.36	ug/L		08/26/19 08:14	08/29/19 21:24	1
Fluorene	0.50	U	0.50	0.37	ug/L		08/26/19 08:14	08/29/19 21:24	1
Indeno(1,2,3-cd)pyrene	0.50	U	0.50	0.44	ug/L		08/26/19 08:14	08/29/19 21:24	1
Naphthalene	**1.6**	U	0.50	0.42	ug/L		08/26/19 08:14	08/29/19 21:24	1
Phenanthrene	**0.72**	~~B~~ U	0.50	0.38	ug/L		08/26/19 08:14	08/29/19 21:24	1
Pyrene	0.50	U	0.50	0.36	ug/L		08/26/19 08:14	08/29/19 21:24	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*96*		*48 - 120*	*08/26/19 08:14*	*08/29/19 21:24*	*1*
Nitrobenzene-d5	*87*		*46 - 120*	*08/26/19 08:14*	*08/29/19 21:24*	*1*
p-Terphenyl-d14	*57*		*24 - 136*	*08/26/19 08:14*	*08/29/19 21:24*	*1*

Method: 8270D_LL_PAH - Semivolatile Organic Compounds (GC/MS) Low level PAH - RE

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2-Methylnaphthalene	0.50	~~U H~~ UJ	0.50	0.38	ug/L		09/03/19 08:29	09/04/19 22:39	1
Acenaphthene	0.50	U H	0.50	0.30	ug/L		09/03/19 08:29	09/04/19 22:39	1
Acenaphthylene	0.50	U H	0.50	0.34	ug/L		09/03/19 08:29	09/04/19 22:39	1
Anthracene	0.50	U H	0.50	0.39	ug/L		09/03/19 08:29	09/04/19 22:39	1
Benzo(a)anthracene	0.50	U H	0.50	0.40	ug/L		09/03/19 08:29	09/04/19 22:39	1
Benzo(a)pyrene	0.50	U H	0.50	0.33	ug/L		09/03/19 08:29	09/04/19 22:39	1
Benzo(b)fluoranthene	0.50	U H	0.50	0.30	ug/L		09/03/19 08:29	09/04/19 22:39	1
Benzo(g,h,i)perylene	0.50	U H	0.50	0.37	ug/L		09/03/19 08:29	09/04/19 22:39	1
Benzo(k)fluoranthene	0.50	U H	0.50	0.085	ug/L		09/03/19 08:29	09/04/19 22:39	1
Chrysene	0.50	U H	0.50	0.32	ug/L		09/03/19 08:29	09/04/19 22:39	1
Dibenz(a,h)anthracene	0.50	U H	0.50	0.33	ug/L		09/03/19 08:29	09/04/19 22:39	1
Fluoranthene	0.50	~~U H~~ UJ	0.50	0.36	ug/L		09/03/19 08:29	09/04/19 22:39	1

do not report

Client: GEI Consultants, Inc.
Project/Site: GEI, Mineral Springs

Job ID: 480-157974-1
SDG: 480-157974-1

Client Sample ID: SW-01
Date Collected: 08/20/19 15:00
Date Received: 08/21/19 14:25

Lab Sample ID: 480-157974-12
Matrix: Water

Method: 8270D_LL_PAH - Semivolatile Organic Compounds (GC/MS) Low level PAH - RE (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluorene	0.50	U H UJ	0.50	0.37	ug/L		09/03/19 08:29	09/04/19 22:39	1
Indeno(1,2,3-cd)pyrene	0.50	U H UJ	0.50	0.44	ug/L		09/03/19 08:29	09/04/19 22:39	1
Naphthalene	0.50	U H UJ	0.50	0.42	ug/L		09/03/19 08:29	09/04/19 22:39	1
Phenanthrene	**0.91**	~~H B~~ UJ	0.50	0.38	ug/L		09/03/19 08:29	09/04/19 22:39	1
Pyrene	0.50	U H UJ	0.50	0.36	ug/L		09/03/19 08:29	09/04/19 22:39	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*95*		*48 - 120*	*09/03/19 08:29*	*09/04/19 22:39*	*1*
Nitrobenzene-d5	*88*		*46 - 120*	*09/03/19 08:29*	*09/04/19 22:39*	*1*
p-Terphenyl-d14	*65*		*24 - 136*	*09/03/19 08:29*	*09/04/19 22:39*	*1*

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	**15.4**		10.0	5.0	ug/L		08/26/19 16:21	08/27/19 13:24	1
Cyanide, Free	**5.2**		5.0	1.5	ug/L		08/26/19 10:15	08/26/19 18:10	1
Total Dissolved Solids	**627**		10.0	4.0	mg/L			08/22/19 15:36	1

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids	4.0	U	4.0	4.0	mg/L			08/22/19 13:19	1

Client: GEI Consultants, Inc.
Project/Site: GEI, Mineral Springs

Job ID: 480-157974-1
SDG: 480-157974-1

Client Sample ID: SW-02
Date Collected: 08/20/19 13:00
Date Received: 08/21/19 14:25

Lab Sample ID: 480-157974-13
Matrix: Water

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	1.0	U	1.0	0.41	ug/L			08/22/19 15:39	1
Ethylbenzene	1.0	U	1.0	0.74	ug/L			08/22/19 15:39	1
Toluene	1.0	U	1.0	0.51	ug/L			08/22/19 15:39	1
Xylenes, Total	2.0	U	2.0	0.66	ug/L			08/22/19 15:39	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*93*		*77 - 120*		*08/22/19 15:39*	*1*
4-Bromofluorobenzene (Surr)	*104*		*73 - 120*		*08/22/19 15:39*	*1*
Dibromofluoromethane (Surr)	*93*		*75 - 123*		*08/22/19 15:39*	*1*
Toluene-d8 (Surr)	*93*		*80 - 120*		*08/22/19 15:39*	*1*

Method: 8270D_LL_PAH - Semivolatile Organic Compounds (GC/MS) Low level PAH

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2-Methylnaphthalene	0.50	U	0.50	0.38	ug/L		08/26/19 08:14	08/29/19 21:52	1
Acenaphthene	0.50	U	0.50	0.30	ug/L		08/26/19 08:14	08/29/19 21:52	1
Acenaphthylene	0.50	U	0.50	0.34	ug/L		08/26/19 08:14	08/29/19 21:52	1
Anthracene	0.50	U	0.50	0.39	ug/L		08/26/19 08:14	08/29/19 21:52	1
Benzo(a)anthracene	0.50	U	0.50	0.40	ug/L		08/26/19 08:14	08/29/19 21:52	1
Benzo(a)pyrene	0.50	U	0.50	0.33	ug/L		08/26/19 08:14	08/29/19 21:52	1
Benzo(b)fluoranthene	0.50	U	0.50	0.30	ug/L		08/26/19 08:14	08/29/19 21:52	1
Benzo(g,h,i)perylene	0.50	U	0.50	0.37	ug/L		08/26/19 08:14	08/29/19 21:52	1
Benzo(k)fluoranthene	0.50	U	0.50	0.085	ug/L		08/26/19 08:14	08/29/19 21:52	1
Chrysene	0.50	U	0.50	0.32	ug/L		08/26/19 08:14	08/29/19 21:52	1
Dibenz(a,h)anthracene	0.50	U	0.50	0.33	ug/L		08/26/19 08:14	08/29/19 21:52	1
Fluoranthene	0.50	U	0.50	0.36	ug/L		08/26/19 08:14	08/29/19 21:52	1
Fluorene	0.50	U	0.50	0.37	ug/L		08/26/19 08:14	08/29/19 21:52	1
Indeno(1,2,3-cd)pyrene	0.50	U	0.50	0.44	ug/L		08/26/19 08:14	08/29/19 21:52	1
Naphthalene	0.50	U	0.50	0.42	ug/L		08/26/19 08:14	08/29/19 21:52	1
Phenanthrene	**0.67**	~~B~~ U	0.50	0.38	ug/L		08/26/19 08:14	08/29/19 21:52	1
Pyrene	0.50	U	0.50	0.36	ug/L		08/26/19 08:14	08/29/19 21:52	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*97*		*48 - 120*	*08/26/19 08:14*	*08/29/19 21:52*	*1*
Nitrobenzene-d5	*83*		*46 - 120*	*08/26/19 08:14*	*08/29/19 21:52*	*1*
p-Terphenyl-d14	*56*		*24 - 136*	*08/26/19 08:14*	*08/29/19 21:52*	*1*

Method: 8270D_LL_PAH - Semivolatile Organic Compounds (GC/MS) Low level PAH - RE

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2-Methylnaphthalene	0.50	~~U H~~ UJ	0.50	0.38	ug/L		09/03/19 08:29	09/04/19 23:07	1
Acenaphthene	0.50	U H	0.50	0.30	ug/L		09/03/19 08:29	09/04/19 23:07	1
Acenaphthylene	0.50	U H	0.50	0.34	ug/L		09/03/19 08:29	09/04/19 23:07	1
Anthracene	0.50	U H	0.50	0.39	ug/L		09/03/19 08:29	09/04/19 23:07	1
Benzo(a)anthracene	0.50	U H	0.50	0.40	ug/L		09/03/19 08:29	09/04/19 23:07	1
Benzo(a)pyrene	0.50	U H	0.50	0.33	ug/L		09/03/19 08:29	09/04/19 23:07	1
Benzo(b)fluoranthene	0.50	U H	0.50	0.30	ug/L		09/03/19 08:29	09/04/19 23:07	1
Benzo(g,h,i)perylene	0.50	U H	0.50	0.37	ug/L		09/03/19 08:29	09/04/19 23:07	1
Benzo(k)fluoranthene	0.50	U H	0.50	0.085	ug/L		09/03/19 08:29	09/04/19 23:07	1
Chrysene	0.50	U H	0.50	0.32	ug/L		09/03/19 08:29	09/04/19 23:07	1
Dibenz(a,h)anthracene	0.50	U H	0.50	0.33	ug/L		09/03/19 08:29	09/04/19 23:07	1
Fluoranthene	0.50	U H	0.50	0.36	ug/L		09/03/19 08:29	09/04/19 23:07	1

do not report

Client: GEI Consultants, Inc.
Project/Site: GEI, Mineral Springs

Job ID: 480-157974-1
SDG: 480-157974-1

Client Sample ID: SW-02
Date Collected: 08/20/19 13:00
Date Received: 08/21/19 14:25

Lab Sample ID: 480-157974-13
Matrix: Water

Method: 8270D_LL_PAH - Semivolatile Organic Compounds (GC/MS) Low level PAH - RE (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluorene	0.50	U H	0.50	0.37	ug/L		09/03/19 08:29	09/04/19 23:07	1
Indeno(1,2,3-cd)pyrene	0.50	U H	0.50	0.44	ug/L		09/03/19 08:29	09/04/19 23:07	1
Naphthalene	0.50	U H	0.50	0.42	ug/L		09/03/19 08:29	09/04/19 23:07	1
Phenanthrene	**0.89**	**H B**	0.50	0.38	ug/L		09/03/19 08:29	09/04/19 23:07	1
Pyrene	0.50	U H	0.50	0.36	ug/L		09/03/19 08:29	09/04/19 23:07	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*85*		*48 - 120*	*09/03/19 08:29*	*09/04/19 23:07*	*1*
Nitrobenzene-d5	*81*		*46 - 120*	*09/03/19 08:29*	*09/04/19 23:07*	*1*
p-Terphenyl-d14	*56*		*24 - 136*	*09/03/19 08:29*	*09/04/19 23:07*	*1*

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	**161**	**F1**	10.0	5.0	ug/L		09/01/19 16:11	09/03/19 12:50	1
Cyanide, Free	**9.9**		5.0	1.5	ug/L		08/26/19 10:15	08/26/19 18:10	1
Total Dissolved Solids	**358**		10.0	4.0	mg/L			08/22/19 15:36	1

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids	**6.4**		4.0	4.0	mg/L			08/22/19 13:19	1

Client: GEI Consultants, Inc.
Project/Site: GEI, Mineral Springs

Job ID: 480-157974-1
SDG: 480-157974-1

Client Sample ID: SW-03
Date Collected: 08/20/19 13:30
Date Received: 08/21/19 14:25

Lab Sample ID: 480-157974-14
Matrix: Water

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	229		10.0	5.0	ug/L		08/26/19 16:21	08/27/19 13:28	1
Cyanide, Free	18.3		5.0	1.5	ug/L		08/26/19 10:15	08/26/19 18:10	1

Client: GEI Consultants, Inc.
Project/Site: GEI, Mineral Springs

Job ID: 480-157974-1
SDG: 480-157974-1

Client Sample ID: SW-04
Date Collected: 08/20/19 14:00
Date Received: 08/21/19 14:25

Lab Sample ID: 480-157974-15
Matrix: Water

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	11.0		10.0	5.0	ug/L		08/26/19 16:21	08/27/19 13:30	1
Cyanide, Free	1.8	J	5.0	1.5	ug/L		08/26/19 10:15	08/26/19 18:10	1

Client: GEI Consultants, Inc.
Project/Site: GEI, Mineral Springs

Job ID: 480-157974-1
SDG: 480-157974-1

Client Sample ID: SW-05
Date Collected: 08/20/19 14:30
Date Received: 08/21/19 14:25

Lab Sample ID: 480-157974-16
Matrix: Water

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	5.3	J	10.0	5.0	ug/L		08/26/19 16:21	08/27/19 13:31	1
Cyanide, Free	1.8	J	5.0	1.5	ug/L		08/26/19 10:15	08/26/19 18:10	1

Client: GEI Consultants, Inc.
Project/Site: GEI, Mineral Springs

Job ID: 480-157974-1
SDG: 480-157974-1

Client Sample ID: Duplicate
Date Collected: 08/22/19 00:00
Date Received: 08/22/19 14:35

Lab Sample ID: 480-158037-1
Matrix: Ground Water

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	1.0	U	1.0	0.41	ug/L			08/26/19 13:13	1
Ethylbenzene	1.0	U	1.0	0.74	ug/L			08/26/19 13:13	1
Toluene	1.0	U	1.0	0.51	ug/L			08/26/19 13:13	1
Xylenes, Total	2.0	U	2.0	0.66	ug/L			08/26/19 13:13	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*96*		*77 - 120*		*08/26/19 13:13*	*1*
4-Bromofluorobenzene (Surr)	*109*		*73 - 120*		*08/26/19 13:13*	*1*
Dibromofluoromethane (Surr)	*98*		*75 - 123*		*08/26/19 13:13*	*1*
Toluene-d8 (Surr)	*93*		*80 - 120*		*08/26/19 13:13*	*1*

Method: 8270D_LL_PAH - Semivolatile Organic Compounds (GC/MS) Low level PAH

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2-Methylnaphthalene	0.50	U	0.50	0.38	ug/L		08/26/19 08:14	08/29/19 22:20	1
Acenaphthene	0.50	U	0.50	0.30	ug/L		08/26/19 08:14	08/29/19 22:20	1
Acenaphthylene	0.50	U	0.50	0.34	ug/L		08/26/19 08:14	08/29/19 22:20	1
Anthracene	0.50	U	0.50	0.39	ug/L		08/26/19 08:14	08/29/19 22:20	1
Benzo(a)anthracene	0.50	U	0.50	0.40	ug/L		08/26/19 08:14	08/29/19 22:20	1
Benzo(a)pyrene	0.50	U	0.50	0.33	ug/L		08/26/19 08:14	08/29/19 22:20	1
Benzo(b)fluoranthene	0.50	U	0.50	0.30	ug/L		08/26/19 08:14	08/29/19 22:20	1
Benzo(g,h,i)perylene	0.50	U	0.50	0.37	ug/L		08/26/19 08:14	08/29/19 22:20	1
Benzo(k)fluoranthene	0.50	U	0.50	0.085	ug/L		08/26/19 08:14	08/29/19 22:20	1
Chrysene	0.50	U	0.50	0.32	ug/L		08/26/19 08:14	08/29/19 22:20	1
Dibenz(a,h)anthracene	0.50	U	0.50	0.33	ug/L		08/26/19 08:14	08/29/19 22:20	1
Fluoranthene	0.50	U	0.50	0.36	ug/L		08/26/19 08:14	08/29/19 22:20	1
Fluorene	0.50	U	0.50	0.37	ug/L		08/26/19 08:14	08/29/19 22:20	1
Indeno(1,2,3-cd)pyrene	0.50	U	0.50	0.44	ug/L		08/26/19 08:14	08/29/19 22:20	1
Naphthalene	**1.6**	U	0.50	0.42	ug/L		08/26/19 08:14	08/29/19 22:20	1
Phenanthrene	**0.71**	~~B~~ U	0.50	0.38	ug/L		08/26/19 08:14	08/29/19 22:20	1
Pyrene	0.50	U	0.50	0.36	ug/L		08/26/19 08:14	08/29/19 22:20	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*97*		*48 - 120*	*08/26/19 08:14*	*08/29/19 22:20*	*1*
Nitrobenzene-d5	*83*		*46 - 120*	*08/26/19 08:14*	*08/29/19 22:20*	*1*
p-Terphenyl-d14	*47*		*24 - 136*	*08/26/19 08:14*	*08/29/19 22:20*	*1*

Method: 8270D_LL_PAH - Semivolatile Organic Compounds (GC/MS) Low level PAH - RE

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2-Methylnaphthalene	0.50	~~U H~~ UJ	0.50	0.38	ug/L		09/03/19 08:29	09/04/19 23:36	1
Acenaphthene	0.50	U H	0.50	0.30	ug/L		09/03/19 08:29	09/04/19 23:36	1
Acenaphthylene	0.50	U H	0.50	0.34	ug/L		09/03/19 08:29	09/04/19 23:36	1
Anthracene	0.50	U H	0.50	0.39	ug/L		09/03/19 08:29	09/04/19 23:36	1
Benzo(a)anthracene	0.50	U H	0.50	0.40	ug/L		09/03/19 08:29	09/04/19 23:36	1
Benzo(a)pyrene	0.50	U H	0.50	0.33	ug/L		09/03/19 08:29	09/04/19 23:36	1
Benzo(b)fluoranthene	0.50	U H	0.50	0.30	ug/L		09/03/19 08:29	09/04/19 23:36	1
Benzo(g,h,i)perylene	0.50	U H	0.50	0.37	ug/L		09/03/19 08:29	09/04/19 23:36	1
Benzo(k)fluoranthene	0.50	U H	0.50	0.085	ug/L		09/03/19 08:29	09/04/19 23:36	1
Chrysene	0.50	U H	0.50	0.32	ug/L		09/03/19 08:29	09/04/19 23:36	1
Dibenz(a,h)anthracene	0.50	U H	0.50	0.33	ug/L		09/03/19 08:29	09/04/19 23:36	1
Fluoranthene	0.50	~~U H~~ UJ	0.50	0.36	ug/L		09/03/19 08:29	09/04/19 23:36	1

do not report

Client: GEI Consultants, Inc.
Project/Site: GEI, Mineral Springs

Job ID: 480-157974-1
SDG: 480-157974-1

Client Sample ID: Duplicate
Date Collected: 08/22/19 00:00
Date Received: 08/22/19 14:35

Lab Sample ID: 480-158037-1
Matrix: Ground Water

Method: 8270D_LL_PAH - Semivolatile Organic Compounds (GC/MS) Low level PAH - RE (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluorene	0.50	U H UJ	0.50	0.37	ug/L		09/03/19 08:29	09/04/19 23:36	1
Indeno(1,2,3-cd)pyrene	0.50	U H	0.50	0.44	ug/L		09/03/19 08:29	09/04/19 23:36	1
Naphthalene	0.50	U H	0.50	0.42	ug/L		09/03/19 08:29	09/04/19 23:36	1
Phenanthrene	**0.91**	**H B**	0.50	0.38	ug/L		09/03/19 08:29	09/04/19 23:36	1
Pyrene	0.50	U H UJ	0.50	0.36	ug/L		09/03/19 08:29	09/04/19 23:36	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*92*		*48 - 120*	*09/03/19 08:29*	*09/04/19 23:36*	*1*
Nitrobenzene-d5	*88*		*46 - 120*	*09/03/19 08:29*	*09/04/19 23:36*	*1*
p-Terphenyl-d14	*51*		*24 - 136*	*09/03/19 08:29*	*09/04/19 23:36*	*1*

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	**322**		10.0	5.0	ug/L		09/01/19 16:04	09/03/19 12:03	1
Cyanide, Free	**11.3**		5.0	1.5	ug/L		08/29/19 10:17	08/29/19 16:30	1

Client: GEI Consultants, Inc.
Project/Site: GEI, Mineral Springs

Job ID: 480-157974-1
SDG: 480-157974-1

Client Sample ID: MW-12
Date Collected: 08/22/19 09:45
Date Received: 08/22/19 14:35

Lab Sample ID: 480-158037-2
Matrix: Ground Water

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	832		40.0	20.0	ug/L		09/01/19 16:04	09/03/19 12:27	4
Cyanide, Free	16.5		5.0	1.5	ug/L		08/29/19 10:17	08/29/19 16:30	1

Client: GEI Consultants, Inc.
Project/Site: GEI, Mineral Springs

Job ID: 480-157974-1
SDG: 480-157974-1

Client Sample ID: MW-16
Date Collected: 08/22/19 12:30
Date Received: 08/22/19 14:35

Lab Sample ID: 480-158037-3
Matrix: Ground Water

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	3550		100	50.0	ug/L		09/01/19 16:04	09/03/19 12:16	10
Cyanide, Free	79.6		25.0	7.7	ug/L		08/29/19 10:17	08/29/19 16:30	5

Client Sample ID: MW-17
Date Collected: 08/22/19 11:00
Date Received: 08/22/19 14:35

Lab Sample ID: 480-158037-4
Matrix: Ground Water

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	2.0	U	2.0	0.82	ug/L			08/26/19 13:36	2
Ethylbenzene	2.0	U	2.0	1.5	ug/L			08/26/19 13:36	2
Toluene	2.0	U	2.0	1.0	ug/L			08/26/19 13:36	2
Xylenes, Total	4.0	U	4.0	1.3	ug/L			08/26/19 13:36	2

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*96*		*77 - 120*		*08/26/19 13:36*	*2*
4-Bromofluorobenzene (Surr)	*106*		*73 - 120*		*08/26/19 13:36*	*2*
Dibromofluoromethane (Surr)	*95*		*75 - 123*		*08/26/19 13:36*	*2*
Toluene-d8 (Surr)	*94*		*80 - 120*		*08/26/19 13:36*	*2*

Method: 8270D_LL_PAH - Semivolatile Organic Compounds (GC/MS) Low level PAH

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2-Methylnaphthalene	2.5	U	2.5	1.9	ug/L		08/26/19 08:14	08/30/19 20:34	5
Acenaphthene	2.5	U	2.5	1.5	ug/L		08/26/19 08:14	08/30/19 20:34	5
Acenaphthylene	2.5	U	2.5	1.7	ug/L		08/26/19 08:14	08/30/19 20:34	5
Anthracene	2.5	U	2.5	2.0	ug/L		08/26/19 08:14	08/30/19 20:34	5
Benzo(a)anthracene	2.5	U	2.5	2.0	ug/L		08/26/19 08:14	08/30/19 20:34	5
Benzo(a)pyrene	2.5	U	2.5	1.7	ug/L		08/26/19 08:14	08/30/19 20:34	5
Benzo(b)fluoranthene	2.5	U	2.5	1.5	ug/L		08/26/19 08:14	08/30/19 20:34	5
Benzo(g,h,i)perylene	2.5	U	2.5	1.9	ug/L		08/26/19 08:14	08/30/19 20:34	5
Benzo(k)fluoranthene	2.5	U	2.5	0.43	ug/L		08/26/19 08:14	08/30/19 20:34	5
Chrysene	2.5	U	2.5	1.6	ug/L		08/26/19 08:14	08/30/19 20:34	5
Dibenz(a,h)anthracene	2.5	U	2.5	1.7	ug/L		08/26/19 08:14	08/30/19 20:34	5
Fluoranthene	2.5	U	2.5	1.8	ug/L		08/26/19 08:14	08/30/19 20:34	5
Fluorene	2.5	U	2.5	1.9	ug/L		08/26/19 08:14	08/30/19 20:34	5
Indeno(1,2,3-cd)pyrene	2.5	U	2.5	2.2	ug/L		08/26/19 08:14	08/30/19 20:34	5
Naphthalene	2.5	U	2.5	2.1	ug/L		08/26/19 08:14	08/30/19 20:34	5
Phenanthrene	2.5	U	2.5	1.9	ug/L		08/26/19 08:14	08/30/19 20:34	5
Pyrene	2.5	U	2.5	1.8	ug/L		08/26/19 08:14	08/30/19 20:34	5

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*98*		*48 - 120*	*08/26/19 08:14*	*08/30/19 20:34*	*5*
Nitrobenzene-d5	*85*		*46 - 120*	*08/26/19 08:14*	*08/30/19 20:34*	*5*
p-Terphenyl-d14	*57*		*24 - 136*	*08/26/19 08:14*	*08/30/19 20:34*	*5*

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	**146**		10.0	5.0	ug/L		09/01/19 16:04	09/03/19 12:10	1
Cyanide, Free	5.0	U	5.0	1.5	ug/L		08/29/19 10:17	08/29/19 16:30	1

Client: GEI Consultants, Inc.
Project/Site: GEI, Mineral Springs

Job ID: 480-157974-1
SDG: 480-157974-1

Client Sample ID: MW-23
Date Collected: 08/22/19 13:20
Date Received: 08/22/19 14:35

Lab Sample ID: 480-158037-5
Matrix: Ground Water

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	1.0	U	1.0	0.41	ug/L			08/26/19 13:59	1
Ethylbenzene	1.0	U	1.0	0.74	ug/L			08/26/19 13:59	1
Toluene	1.0	U	1.0	0.51	ug/L			08/26/19 13:59	1
Xylenes, Total	2.0	U	2.0	0.66	ug/L			08/26/19 13:59	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*97*		*77 - 120*		*08/26/19 13:59*	*1*
4-Bromofluorobenzene (Surr)	*104*		*73 - 120*		*08/26/19 13:59*	*1*
Dibromofluoromethane (Surr)	*100*		*75 - 123*		*08/26/19 13:59*	*1*
Toluene-d8 (Surr)	*89*		*80 - 120*		*08/26/19 13:59*	*1*

Method: 8270D_LL_PAH - Semivolatile Organic Compounds (GC/MS) Low level PAH

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2-Methylnaphthalene	0.50	U	0.50	0.38	ug/L		08/26/19 08:14	08/29/19 23:17	1
Acenaphthene	0.50	U	0.50	0.30	ug/L		08/26/19 08:14	08/29/19 23:17	1
Acenaphthylene	0.50	U	0.50	0.34	ug/L		08/26/19 08:14	08/29/19 23:17	1
Anthracene	0.50	U	0.50	0.39	ug/L		08/26/19 08:14	08/29/19 23:17	1
Benzo(a)anthracene	0.50	U	0.50	0.40	ug/L		08/26/19 08:14	08/29/19 23:17	1
Benzo(a)pyrene	0.50	U	0.50	0.33	ug/L		08/26/19 08:14	08/29/19 23:17	1
Benzo(b)fluoranthene	0.50	U	0.50	0.30	ug/L		08/26/19 08:14	08/29/19 23:17	1
Benzo(g,h,i)perylene	0.50	U	0.50	0.37	ug/L		08/26/19 08:14	08/29/19 23:17	1
Benzo(k)fluoranthene	0.50	U	0.50	0.085	ug/L		08/26/19 08:14	08/29/19 23:17	1
Chrysene	0.50	U	0.50	0.32	ug/L		08/26/19 08:14	08/29/19 23:17	1
Dibenz(a,h)anthracene	0.50	U	0.50	0.33	ug/L		08/26/19 08:14	08/29/19 23:17	1
Fluoranthene	0.50	U	0.50	0.36	ug/L		08/26/19 08:14	08/29/19 23:17	1
Fluorene	0.50	U	0.50	0.37	ug/L		08/26/19 08:14	08/29/19 23:17	1
Indeno(1,2,3-cd)pyrene	0.50	U	0.50	0.44	ug/L		08/26/19 08:14	08/29/19 23:17	1
Naphthalene	**1.2**	U ·	0.50	0.42	ug/L		08/26/19 08:14	08/29/19 23:17	1
Phenanthrene	**0.70**	~~B~~ U ·	0.50	0.38	ug/L		08/26/19 08:14	08/29/19 23:17	1
Pyrene	0.50	U	0.50	0.36	ug/L		08/26/19 08:14	08/29/19 23:17	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*99*		*48 - 120*	*08/26/19 08:14*	*08/29/19 23:17*	*1*
Nitrobenzene-d5	*85*		*46 - 120*	*08/26/19 08:14*	*08/29/19 23:17*	*1*
p-Terphenyl-d14	*47*		*24 - 136*	*08/26/19 08:14*	*08/29/19 23:17*	*1*

Method: 8270D_LL_PAH - Semivolatile Organic Compounds (GC/MS) Low level PAH - RE

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2-Methylnaphthalene	0.50	~~U~~ H	0.50	0.38	ug/L		09/03/19 08:29	09/05/19 00:04	1
Acenaphthene	0.50	U H	0.50	0.30	ug/L		09/03/19 08:29	09/05/19 00:04	1
Acenaphthylene	0.50	U H	0.50	0.34	ug/L		09/03/19 08:29	09/05/19 00:04	1
Anthracene	0.50	U H	0.50	0.39	ug/L		09/03/19 08:29	09/05/19 00:04	1
Benzo(a)anthracene	0.50	U H	0.50	0.40	ug/L		09/03/19 08:29	09/05/19 00:04	1
Benzo(a)pyrene	0.50	U H	0.50	0.33	ug/L		09/03/19 08:29	09/05/19 00:04	1
Benzo(b)fluoranthene	0.50	U H	0.50	0.30	ug/L		09/03/19 08:29	09/05/19 00:04	1
Benzo(g,h,i)perylene	0.50	U H	0.50	0.37	ug/L		09/03/19 08:29	09/05/19 00:04	1
Benzo(k)fluoranthene	0.50	U H	0.50	0.085	ug/L		09/03/19 08:29	09/05/19 00:04	1
Chrysene	0.50	U H	0.50	0.32	ug/L		09/03/19 08:29	09/05/19 00:04	1
Dibenz(a,h)anthracene	0.50	U H	0.50	0.33	ug/L		09/03/19 08:29	09/05/19 00:04	1
Fluoranthene	0.50	~~U~~ H	0.50	0.36	ug/L		09/03/19 08:29	09/05/19 00:04	1

UJ
UJ
donot report

Client: GEI Consultants, Inc.
Project/Site: GEI, Mineral Springs

Job ID: 480-157974-1
SDG: 480-157974-1

Client Sample ID: MW-23
Date Collected: 08/22/19 13:20
Date Received: 08/22/19 14:35

Lab Sample ID: 480-158037-5
Matrix: Ground Water

Method: 8270D_LL_PAH - Semivolatile Organic Compounds (GC/MS) Low level PAH - RE (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluorene	0.50	U H UJ	0.50	0.37	ug/L		09/03/19 08:29	09/05/19 00:04	1
Indeno(1,2,3-cd)pyrene	0.50	U H	0.50	0.44	ug/L		09/03/19 08:29	09/05/19 00:04	1
Naphthalene	0.50	U H	0.50	0.42	ug/L		09/03/19 08:29	09/05/19 00:04	1
Phenanthrene	0.87	H B	0.50	0.38	ug/L		09/03/19 08:29	09/05/19 00:04	1
Pyrene	0.50	U H UJ	0.50	0.36	ug/L		09/03/19 08:29	09/05/19 00:04	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*94*		*48 - 120*	*09/03/19 08:29*	*09/05/19 00:04*	*1*
Nitrobenzene-d5	*92*		*46 - 120*	*09/03/19 08:29*	*09/05/19 00:04*	*1*
p-Terphenyl-d14	*46*		*24 - 136*	*09/03/19 08:29*	*09/05/19 00:04*	*1*

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	317	J	10.0	5.0	ug/L		09/01/19 16:11	09/03/19 12:53	1
Cyanide, Free	8.8		5.0	1.5	ug/L		08/29/19 10:17	08/29/19 16:30	1

Chain of Custody Record 315524

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING
TestAmerica Laboratories, Inc.
TAL-8210 (0713)

Regulatory Program: ☐ DW ☐ NPDES ☐ RCRA ☐ Other:

Client Contact	Project Manager: Kyle FRAPPA	Site Contact: M. Cummings	Date: 8/21/19	COC No: 1 of 2 COCs
Company Name: GEI Consultants, INC	Tel/Fax:	Lab Contact: JOHN SHOVE	Carrier: FAD DEL.	Sampler:
Address: 100 Sylvan Parkway Suite 400	Analysis Turnaround Time			For Lab Use Only:
City/State/Zip: Amherst NY 14228	☐ CALENDAR DAYS ☐ WORKING DAYS			Walk-in Client:
Phone: 716-204-7156	TAT if different from Below			
Fax:	☒ 2 weeks			
Project Name: NFG MINERAL SPRINGS	☐ 1 week			
Site:	☐ 2 days			
PO #	☐ 1 day			

480-157974 Chain of Custody

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=Grab)	Matrix	# of Cont.	Filtered Sample (Y / N)	Perform MS / MSD (Y / N)	FREE CYANIDE 9016	8270 SVOC PAHs	8260 VOCs	TSS 2540 D	TDS 2540 C	9012 B TOTAL CN	Sample Specific Notes:
-01 MW-20	8/20/19	9:40	G	W				X					X	
-02 MW-21		10:40						X					X	
-03 MW-13		11:40						X	X	X			X	
-04 MW-14		12:30						X					X	
-05 MW-10	8/21/19	9:30							X	X				
-06 MW-7		10:50							X	X				
-07 MW-11A		12:20						X	X	X	X	X	X	
-08 MW-19		13:30							X	X				
-09 MW-22		14:30						X					X	
-10 EB-1	8/20/19	11:30						X	X	X			X	
-11 TRIP BLANK	-	-								X				
-12 SW-01	8/20/19	15:10						X	X	X	X	X	X	

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Preservation Used: 1= Ice, 2= HCl; 3= H2SO4; 4=HNO3; 5=NaOH; 6= Other

Possible Hazard Identification:
Are any samples from a listed EPA Hazardous Waste? Please List any EPA Waste Codes for the sample in the Comments Section if the lab is to dispose of the sample.
☒ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return to Client ☒ Disposal by Lab ☐ Archive for _____ Months

Special Instructions/QC Requirements & Comments:

2.2 2.9 #1

Custody Seals Intact: ☐ Yes ☐ No	Custody Seal No.:		Cooler Temp. (°C): Obs'd:	Corr'd:	Therm ID No.:
Relinquished by:	Company: GEI	Date/Time:	Received by:	Company: FAD	Date/Time: 8/21/19 1425
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
Relinquished by:	Company:	Date/Time:	Received in Laboratory by:	Company:	Date/Time:

8/9/2019

Chain of Custody Record

315523

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING
TestAmerica Laboratories, Inc.
TAL-8210 (0713)

Regulatory Program: ☐ DW ☐ NPDES ☐ RCRA ☐ Other:

Client Contact		Project Manager:	Rob Fraser	Site Contact:	M. Cummings	Date:	8/21/19	COC No:	2 of 2 COCs
Company Name:	GEI Consultants	Tel/Fax:	716-204-7158	Lab Contact:	John Schove	Carrier:	Hand Del.	Sampler:	
Address:	100 Sylvan Pkwy Suite 400	Analysis Turnaround Time						For Lab Use Only:	
City/State/Zip:	Amherst, NY	☐ CALENDAR DAYS ☐ WORKING DAYS						Walk-in Client:	
Phone:		TAT if different from Below						Lab Sampling:	
Fax:		X 2 weeks							
Project Name:	NF Mineral Springs	☐ 1 week						Job / SDG No.:	
Site:		☐ 2 days							
P O #		☐ 1 day							

	Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=Grab)	Matrix	# of Cont.	Filtered Sample (Y / N)	Perform MS / MSD (Y / N)	Free Cyanide 9016	8270D LL PAHs	8260C VOCs	2540D TSS	2540C TDS	9012B Total CN	Sample Specific Notes:
-13	SW-02	8/20/19	1300	G	W				X	X	X	X	X	X	
-14	SW-03	↓	1330	↓	↓				X					X	
-15	SW-04	↓	1400	↓	↓				X					X	
-16	SW-05	↓	1430	↓	↓				X					X	

Preservation Used: 1= Ice, 2= HCl; 3= H2SO4; 4=HNO3; 5=NaOH; 6= Other

Possible Hazard Identification:
Are any samples from a listed EPA Hazardous Waste? Please List any EPA Waste Codes for the sample in the Comments Section if the lab is to dispose of the sample.

☒ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)

☐ Return to Client ☒ Disposal by Lab ☐ Archive for ____ Months

Special Instructions/QC Requirements & Comments:

Custody Seals Intact: ☐ Yes ☐ No	Custody Seal No.:		Cooler Temp. (°C): Obs'd:	Corr'd:		Therm ID No.:
Relinquished by: [signature]	Company: GEI	Date/Time:	Received by: [signature]	Company: TAS		Date/Time: 8/21/19 1925
Relinquished by:	Company:	Date/Time:	Received by:	Company:		Date/Time:
Relinquished by:	Company:	Date/Time:	Received in Laboratory by:	Company:		Date/Time:

Chain of Custody Record 315522

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING
TestAmerica Laboratories, Inc.
TAL-8210 (0713)

Regulatory Program: ☐ DW ☐ NPDES ☐ RCRA ☐ Other:

Client Contact	Project Manager: Rick Frappa	Site Contact: M. Cummings	Date: 8/22/19	COC No: 1 of 1 COCs
Company Name: GEI Consultants	Tel/Fax: 716-204-7156	Lab Contact: S. Schopf	Carrier: FAS. DEL.	Sampler:
Address: 100 Sylvan Pkwy Suite 400	Analysis Turnaround Time			For Lab Use Only:
City/State/Zip: Amherst NY 14228	☐ CALENDAR DAYS ☐ WORKING DAYS			
Phone: 716-204-7156	TAT if different from Below			
Fax:	☐ 2 weeks			
Project Name: MINERAL SPRINGS	☐ 1 week			
Site:	☐ 2 days			
PO #	☐ 1 day			

480-158037 Chain of Custody

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=Grab)	Matrix	# of Cont.	Filtered Sample (Y/N)	Perform MS / MSD (Y/N)	6010B FREE CN	8270D LL PAH	8260C BTEX	2540D TSS	2540C TDS	9012B TOTAL CN	Sample Specific Notes:
-02 MW-12	8/22/19	9:45	G	W				X					X	
-03 MW-16		12:30						X					X	
-04 MW-17		11:00						X	X	X			X	
-05 MW-23		13:20						X	X	X			X	
-01 DUP		~						X	X	X			X	

Preservation Used: 1= Ice, 2= HCl; 3= H2SO4; 4=HNO3; 5=NaOH; 6= Other

Possible Hazard Identification:
Are any samples from a listed EPA Hazardous Waste? Please List any EPA Waste Codes for the sample in the Comments Section if the lab is to dispose of the sample.

☒ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)

☐ Return to Client ☒ Disposal by Lab ☐ Archive for ____ Months

Special Instructions/QC Requirements & Comments:

3.6 #1 ICE

Custody Seals Intact: ☐ Yes ☐ No	Custody Seal No.:	Cooler Temp. (°C): Obs'd:	Corr'd:	Therm ID No.:

Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
	GEI	8/22 1435		TAS	8/22/19 14:35
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
Relinquished by:	Company:	Date/Time:	Received in Laboratory by:	Company:	Date/Time:

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