

July 17, 2019

Geotechnical Environmental Water Resources Ecological

Mr. David Szymanski Project Manager New York State Department of Environmental Conservation Division of Environmental Remediation 270 Michigan Avenue – 3rd Floor Buffalo, New York 14203

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

Dear Mr. Szymanski:

On behalf of National Fuel Gas Distribution Corporation (NFG), please find enclosed results of the groundwater and surface water sampling event completed on April 17 and 18, 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.

GEI CONSULTANTS, INC., P.C.

/ Killyr

Richard H. Frappa, P.G. Senior Professional/Hydrogeologist

cc: Brad Walker – NFG Bryan Kowalewski – NYSDEC (eCopy) Enclosure

Kelly R. McIntosh, P.E., Ph.D. Senior Consultant





Consulting Engineers and Scientists

2019 First Semiannual Groundwater/Surfacewater Quality Monitoring Report

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

Submitted to:

National Fuel Gas Distribution Corporation 6363 Main St, Williamsville, New York 14221

Submitted by:

GEI Consultants, Inc., P.C. 100 Sylvan Pkwy, Suite 400 Amherst, New York 14228

July 2019 Project 1801042



Kill

Richard H. Frappa, P.G. Senior Consultant

MARKE

Michael Cummings, P.G. Project Hydrogeologist

Table of Contents

1.	INTR	INTRODUCTION						
	1.1	Background	1					
	1.2	Site Conditions	1					
2.	MON	IITORING NETWORK AND SAMPLING METHODS	3					
3.	LAB	ORATORY METHODS AND QUALITY CONTROL	4					
	3.1	Laboratory Methods	4					
	3.2	Laboratory Quality Control	4					
4.	EVA	LUATION OF MONITORING RESULTS	6					
	4.1	Groundwater Elevations and Flow	6					
	4.2	Constituents Detected in Groundwater	6					
	4.3	Constituents Detected in Surface Water	8					
	4.4	DNAPL Recovery Test Well	8					
5.	Sum	mary	9					

Tables

1	Semiannual Monitoring Water Sampling Summary
2	Groundwater and Surface Water Elevations
3	Field Measured Parameters
4A	Groundwater Analytical Summary – On-Site Areas
4B	Groundwater Analytical Summary – Perimeter Areas

5 Surface Water Analytical Summary

FIGURES

- 1 Site Location Map
- 2 Site Layout
- 3 Potentiometric Surface Map

APPENDICES

- A Laboratory Data Package (Level 2)
- B Data Usability Review

1. INTRODUCTION

This report presents a summary of groundwater and surface water quality monitoring results for the 2019 first 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. 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 April 17 and 18, 2018 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 April 17, 2019 and water levels were recorded prior to purging and sampling. Groundwater elevations are summarized in Table 2. Groundwater elevations were approximately 2 feet higher during the April 2019 sampling event when compared to the 2018 fall sampling event and most groundwater elevations were higher this spring monitoring event than groundwater elevations determined during the spring 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 June 11, 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. All non-detect results for toluene and total xylenes in sample MW-19 were rejected (R) due to holding time exceedance. No other results were rejected.

4. EVALUATION OF MONITORING RESULTS

The groundwater analytical results for the April 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 elevations in the Class D stream at SW-02 and SW-01 was higher than heads in nearby wells MW-11A and MW-16, respectively indicating "losing stream conditions" where groundwater is recharged by surface water infiltrating at the base grade of the stream.

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 or MW-11A. BTEX compounds were detected above the NYSDEC Groundwater Standards in MW-07 and MW-19. BTEX compounds were detected at their lowest concentrations in the past 5 years at MW-07 and were consistent with historic detections at MW-19.

PAH compounds were detected in well MW-07 (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 330 μ g/L which is above the NYS groundwater standard of 200 μ g/L. The result is higher than the three prior events but a limited database exists for the well as this was only the fourth sampling event for the well. Free cyanide was also detected in the sample (19.5 μ g/L). A groundwater standard does not exist. TDS and TSS concentrations in well MW-11A were 653 mg/L and 26.8 mg/L, respectively. These concentrations were about 15% lower than the prior event. 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 1,000 μ g/L at MW-12 and 3,100 μ g/L at MW-16, each is above water quality comparison criteria. The concentration detected during this event at MW-12 was high than the prior event, but 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 34.8 μ g/L at MW-12 and as 149 μ g/L at MW-16 (a NYSDEC Groundwater Standard for free cyanide does not exist). Concentrations are elevated compared to prior concentrations. An assessment of the data trends will be discussed in the 2019 Periodic Review Report (PRR) following the fall sampling event.

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 was not detected in the wells tested and trace level concentrations of PAHs were only detected in well MW-23. The detected concentrations were similar to concentrations detected in 2018.

Total cyanide was detected at a concentration of 160 J μ g/L in upgradient well MW-17 and is considered representative of background. Total cyanide was detected in downgradient wells MW-14, MW-20, MW-21, MW-22, and MW-23 at concentrations above water quality comparison criteria (200 μ g/L) at concentrations ranging from 320 μ g/L to 1300 μ g/L. The total cyanide concentrations detected in wells MW-21, MW-22, and MW-22, and MW-22, and MW-23 were similar to historic detections. Total cyanide concentrations in monitoring wells MW-14 and MW-20 were somewhat higher than prior detections.

Free cyanide was not detected in downgradient perimeter wells MW13 and MW-21. Free cyanide was detected in upgradient well MW-17 at 3.3 J. In the remaining wells, free cyanide concentrations ranged from 5.9 μ g/L (MW-14) and 1,300 μ g/L (MW-20). 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) following the fall sampling event.

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) analysis 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 either not detected or detected at trace level concentrations below NYSDEC Ambient Surface Water Quality Standards for Class D Streams (comparison criteria) 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 not detected in downstream surface water sample SW-01.

Unlike the prior sampling event, the TDS concentration was higher in the downstream surface water sample than the upstream sample. Similar to last the conclusion for the August 2018 sampling event, a correlation between detected cyanide concentration and TDS/TSS levels was not identified.

4.4 DNAPL Recovery Test Well

On April 17, 2018, the Recovery System at RTW-1 was gauged using a threaded steel rod to assess whether DNAPL had accumulated since the August 2018 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 April 2019 monitoring event.

5. Summary

A summary of April 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 approximately 2 feet higher during the April 2019 sampling event when compared to the 2018 fall sampling event and most groundwater elevations were higher this spring than elevations determined during the spring of 2018.

On-Site Areas:

- BTEX compounds were detected above comparison criteria in wells MW-07 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 higher in monitoring wells MW-11A, MW-12, and MW-16 when compared with the August 2018 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 (3,100 μ g/L) is above the historical range of detected concentrations as is free cyanide (149 μ g/L). Long term concentration trends will continue to be assessed.

Perimeter Areas:

- BTEX compounds were not detected in perimeter wells tested. Trace level concentrations of PAH compounds were detected above water quality comparison criteria in well MW-23. PAHs were not detected in other wells tested.
- Total cyanide was detected in downgradient wells MW-14, MW-20, MW-21, MW-22, and MW-23 at concentrations above water quality comparison criteria (200 µg/L) ranging from 320 µg/L to 1,300 µg/L. Total cyanide concentrations in monitoring wells MW-14 and MW-20 were higher in April 2019 than during prior events.

• Free cyanide was detected at upgradient well MW-17 and five of the six downgradient perimeter wells tested. Free cyanide concentrations did not proportionately correlate with total cyanide concentrations this event.

Surface Water:

- Surface water elevations were higher than groundwater elevations indicating "losing stream conditions."
- BTEX and PAH compounds were not detected in surface water samples.
- Total and free cyanide were not detected in downstream surface water sample SW-01.

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

A discussion of historical concentration trends will be presented with the 2019 PRR. No immediate response actions appear to be warranted and modifications to the sampling program are not currently recommended.

Tables

Table 1. 2019 First Semiannual Monitoring Water Sampling SummaryMineral Springs Road MGP SiteNational Fuel Gas Distribution CorporationWest Seneca, New York

Location	Cyanide, Total USEPA	Cyanide, Free USEPA	BTEX USEPA	PAHs USEPA	TDS/TSS	Specific Conductivity Field	Water Elevation	Benchmark Elevation
	SW846 9014	SW846 9016	SW846 8260C	SW846 8270D	SM 2540C/2540D	Measurement		(ft. MSL, top of PVC casing)
Upgradient S	ite Perimete	r						
MW-17	х	х	х	х		х	х	587.28
Downgradien	t Site Perim	eter						
MW-13	х	х	х	х		х	х	591.85
MW-14	х	х				х	х	589.53
MW-15							х	590.93
MW-20	х	х				х	х	587.06
MW-21	х	х				х	х	587.84
MW-22	х	х				х	х	592.50
MW-23	х	х	х	х		х	х	589.28
Onsite Purifie	r Residuals	Impacted Ar	eas					
MW-12	х	х				х	х	591.40
MW-16	х	х				х	х	588.99
Onsite Hydro	carbon Impa	acted Areas						
MW-07			х	х		х	х	587.01
MW-10			х	х		х	х	587.61
MW-11A ²	x ²	x ²	х	х	x ²	х	х	589.78
MW-19			Х	Х		х	х	589.83
Onsite Surfac	e Water							
SW-01 ²	х	x	х	x	X ²	x ²	x	top of headwall = 587.0
SW-02 ²	х	х	х	х	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 Samp	les (frequen	су)						
Trip Blank			Х					(one per shipment)
Field Duplicate	х	х	х	x				(one per event)
Equipment Blank	х	х	х	х				(one per event)
DNAPL Recov	very							
RTW-1					ample Collection		accu	(purge well of ımulated 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 and April 2019.

Table 2. Groundwater and Surface Water ElevationsMineral Springs Road MGP SiteNational Fuel Gas Distribution CorporationWest Seneca, New York

Well ID	TOR Elevation ⁽¹⁾		7, 2018 NNUAL 2018)		15, 2018 IANNUAL 2018)	April 17, 2019 (FIRST SEMIANNUAL 2019)		
	Elevation	Depth	Elevation	Depth	Elevation	Depth	Elevation	
MW-07	587.01	4.80	582.21	7.15	579.86	4.48	582.53	
MW-10	587.61	6.40	581.21	7.64	579.97	6.28	581.33	
MW-11A	589.78	8.15	581.63	9.02	580.76	6.43	583.35	
MW-12	591.40	10.06	581.34	11.65	579.75	11.63	579.77	
MW-13	591.85	10.56	581.29	13.54	578.31	11.40	580.45	
MW-14	589.53	10.70	578.83	11.93	577.60	10.48	579.05	
MW-15	590.93	10.40	580.53	11.60	579.33	9.37	581.56	
MW-16	588.99	8.70	580.29	9.65	579.34	5.80	583.19	
MW-17	587.28	3.98	583.30	6.69	580.59	3.98	583.30	
MW-19	589.83	7.58	582.25	9.80	580.03	7.73	582.10	
MW-20	587.06	6.38	580.68	10.16	576.90	7.14	579.92	
MW-21	587.84	8.42	579.42	11.06	576.78	9.27	578.57	
MW-22	592.50	10.41	582.09	12.95	579.55	11.42	581.08	
MW-23	589.28	10.22	579.06	11.53	577.75	10.18	579.10	
SW-01	587.0 (Top Headwall)	3.08	583.92	na ⁽²⁾	na	3.28	583.72	
SW-02	From Ref. point Well 11A	1.89	583.52	0.82	581.58	0.86	583.95	
RTW-1	na	8.98	na	10.52	na	8.35	na	

Notes:

 $^{\left(1\right)}$ TOR (top of riser for monitoring wells) measured

in feet; distance above sea level.

 $^{\left(2\right) }$ location inaccessible due to debris at headwall measurement point.

Table 3. Field Measured ParametersMineral Springs Road MGP SiteNational Fuel Gas Distribution CorporationWest Seneca, New York

Well ID	Sampling Date	Sampling Time	рН (standard units)	Specific Conductance (mS/cm)	Temperature (°C)	Turbidity (ntu)	Oxidation Reduction Potential (mV)	Dissolved Oxygen (ppm)	Comments
Groundwater	Monitoring V	Vells							
MW-07	04/17/19	11:05	6.45	3.93	10.80	2.04	-51.6	0.76	
MW-10	04/17/19	10:25	6.59	2.00	11.70	5.40	-2.7	2.15	
MW-11A	04/17/19	13:20	6.97	1.35	10.20	4.30	-45.7	0.54	
MW-12	04/17/19	12:10	6.30	4.26	11.20	10.70	-36.4	0.48	
MW-13	04/17/19	10:25	6.86	0.539	11.30	4.74	100.2	1.14	
MW-14	04/17/19	9:30	6.50	2.42	11.40	5.80	-75.4	0.21	
MW-16	04/17/19	12:20	4.36	3.75	12.50	2.70	37.8	1.39	
MW-17	04/17/19	14:40	6.82	2.32	9.10	2.70	-64.8	0.21	
MW-19	04/17/19	13:10	6.86	1.17	11.20	2.74	-80.9	0.31	
MW-20	04/17/19	15:30	6.68	1.86	10.10	4.11	-82.8	0.28	
MW-21	04/17/19	14:35	6.70	2.64	10.60	16.20	-67.5	0.27	
MW-22	04/17/19	11:20	6.81	1.87	11.80	3.15	-87.4	0.85	
MW-23	04/17/19	9:20	6.88	6.00	11.70	5.07	202	3.97	Field Duplicate
Surface Wate	r Sampling L	ocations*							
SW-01	04/18/19	9:10		1.48					
SW-02	04/18/19	8:00		0.574					
SW-03	04/18/19	8:30		1.20					
SW-04	04/18/19	8:40		3.13					
SW-05	04/18/19	9:00		4.50					

Notes:

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

Table 4A. Groundwater Analytical Summary - On-Site AreasMineral Springs Road MGP SiteNational Fuel Gas Distribution CorporationWest Seneca, New York

	1	S	cation Name ample Name Sample Date	MW-07 MW-07 4/17/2019	MW-10 MW-10 4/17/2019	MW-11A MW-11A 4/17/2019	MW-12 MW-12 4/17/2019	MW-16 MW-16 4/17/2019	MW-19 MW-19 4/17/2019
Analyte	Units	CAS No.	NYS AWQS						
BTEX	ug/L								
Benzene		71-43-2	1	320	1 U	2 U			4100 J
Toluene		108-88-3	5	20 U	1 U	2 U			100 R
Ethylbenzene		100-41-4	5	590 J	1 U	2 U			430 J
Total Xylene		1330-20-7	5	290	2 U	4 U			200 R
Total BTEX (ND=0)		TBTEX_ND0	NE	1200	ND	ND			4530
NYSDEC PAH17	ug/L								
Acenaphthene		83-32-9	20*	57	0.5 U	0.5 U			100 U
Acenaphthylene		208-96-8	NE	50 U	0.5 U	0.5 U			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	0.5 U			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	100	0.5 U	0.5 U			100 U
Naphthalene		91-20-3	10*	1000	0.5 U	0.5 U			3600
Phenanthrene		85-01-8	50*	50 U	0.5 U	0.5 U			100 U
Pyrene		129-00-0	50*	50 U	0.5 U	0.5 U			100 U
Total PAH (17) (ND=0)		TPAH17 ND0	NE	1157	ND	ND			3600
Cyanides	ug/L			-					
Free Cyanide	Ŭ	FREECN	NE			19.5	34.8	149	
Total Cyanide		57-12-5	200			330	1000	3100	
Other									
Total Dissolved Solids	ug/L	TDS	NE			653000			
Total Suspended Solids	ug/L	TSS	NE			26800			

Table 4B. Groundwater Analytical Summary - Perimeter AreasMineral Springs Road MGP SiteNational Fuel Gas Distribution CorporationWest Seneca, New York

	Γ	:	ocation Name Sample Name Sample Date Sample Code	MW-13 MW-13 4/17/2019	MW-14 MW-14 4/17/2019	MW-17 MW-17 4/17/2019	MW-20 MW-20 4/17/2019	MW-21 MW-21 4/17/2019	MW-22 MW-22 4/17/2019	MW-23 MW-23 4/17/2019	MW-23 Duplicate 4/17/2019 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		10 U				0.5 U	0.5 U
Acenaphthylene		208-96-8	NE	0.5 U		10 U				0.5 U	0.5 U
Anthracene		120-12-7	50*	0.5 U		10 U				0.5 U	0.5 U
Benzo(a)anthracene		56-55-3	0.002*	0.5 U		10 U				0.5 U	0.5 U
Benzo(b)fluoranthene		205-99-2	0.002*	0.5 U		10 U				0.51	0.5 U
Benzo(k)fluoranthene		207-08-9	0.002*	0.5 U		10 U				0.5 U	0.5 U
Benzo(g,h,i)perylene		191-24-2	NE	0.5 U		10 U				0.38 J	0.5 U
Benzo(a)pyrene		50-32-8	ND	0.5 U		10 U				0.51	0.5 U
Chrysene		218-01-9	0.002*	0.5 U		10 U				0.37 J	0.5 U
Dibenz(a,h)anthracene		53-70-3	NE	0.5 U		10 U				0.5 U	0.5 U
Fluoranthene		206-44-0	50*	0.5 U		10 U				0.94	0.39 J
Fluorene		86-73-7	50*	0.5 U		10 U				0.5 U	0.5 U
Indeno(1,2,3-cd)pyrene		193-39-5	0.002*	0.5 U		10 U				0.5 U	0.5 U
2-Methylnaphthalene		91-57-6	NE	0.5 U		10 U				0.5 U	0.5 U
Naphthalene		91-20-3	10*	0.5 U		10 U				0.5 U	0.5 U
Phenanthrene		85-01-8	50*	0.5 U		10 U				0.61	0.5 U
Pyrene		129-00-0	50*	0.5 U		10 U				0.7	0.5 U
Total PAH (17) (ND=0)		TPAH17_ND0	NE	ND		ND				4.02	0.39
Cyanides	ug/L										
Free Cyanide		FREECN	NE	5 U	5.9	3.3 J	15.2	5 U	25	38.6	52
Total Cyanide		57-12-5	200	12	890	160	1300	480	850	320	320

Tables 4A and 4B. Groundwater Analytical Summary - NotesMineral Springs Road MGP SiteNational Fuel Gas Distribution CorporationWest 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 NYSDEC = New York State Department of Environmental Conservation

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.

R = The result is rejected.

U = The result was not detected above the reporting limit.

Table 5. Surface Water Analytical SummaryMineral Springs Road MGP SiteNational Fuel Gas Distribution CorporationWest Seneca, New York

		Sa	ation Name mple Name ample Date	SW-01 SW-01 4/18/2019	SW-02 SW-02 4/18/2019	SW-03 SW-03 4/18/2019	SW-04 SW-04 4/18/2019	SW-05 SW-05 4/18/2019
Analyte	Units	CAS No.	CLASS D STREAM					
BTEX	ug/L							
Benzene		71-43-2	10	1 U	1 U			
Toluene		108-88-3	6000	1 U	1 U			
Ethylbenzene		100-41-4	150*	1 U	1 U			
Total Xylene		1330-20-7	590*	2 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	NE	0.5 U	0.5 U			
Naphthalene		91-20-3	110*	0.5 U	0.5 U			
Phenanthrene		85-01-8	45*	0.5 U	0.5 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 U	9.5	6.6	5 U	5 U
Total Cyanide		57-12-5	9000	10 UJ	40 J	200 J	10 UJ	10 UJ
Other								
Total Dissolved Solids	ug/L	TDS	NE	771 J	363 J			
Total Suspended Solids	ug/L	TSS	NE	4 U	4 U			

Table 5. Surface Water Analytical Summary - NotesMineral Springs Road MGP SiteNational Fuel Gas Distribution CorporationWest 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 PAH16 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, Naphthalene, Total PAH17 is calculated using the EPA16 list of analytes plus 2-Methylnaphthalene

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

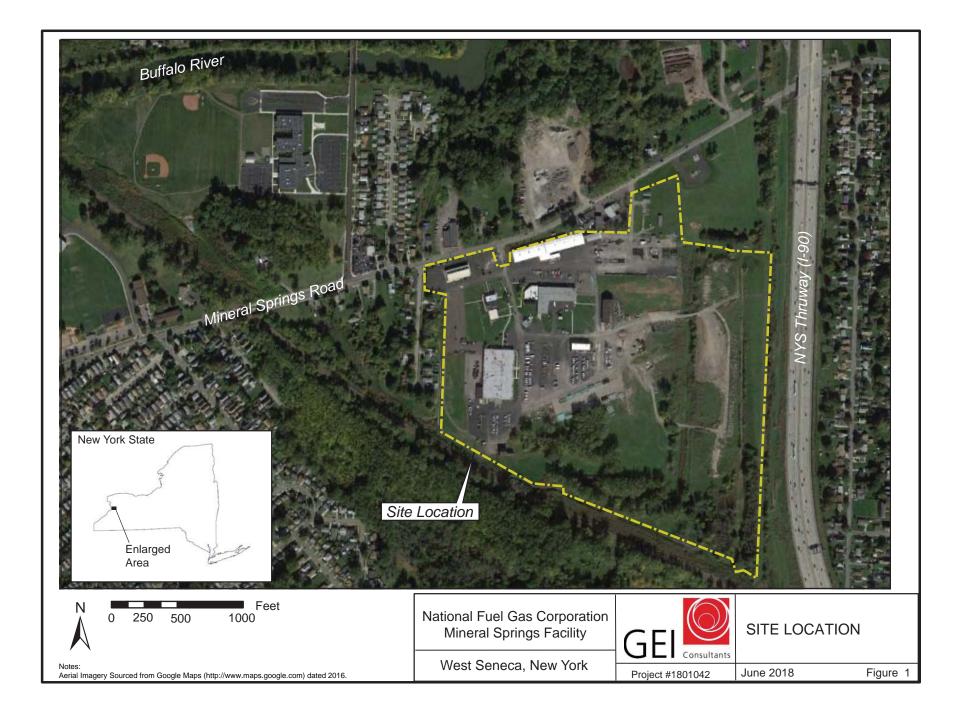
Bolding indicates a detected result concentration Shading and bolding indicates that the detected concentration is above the NYSDOH guidance it was

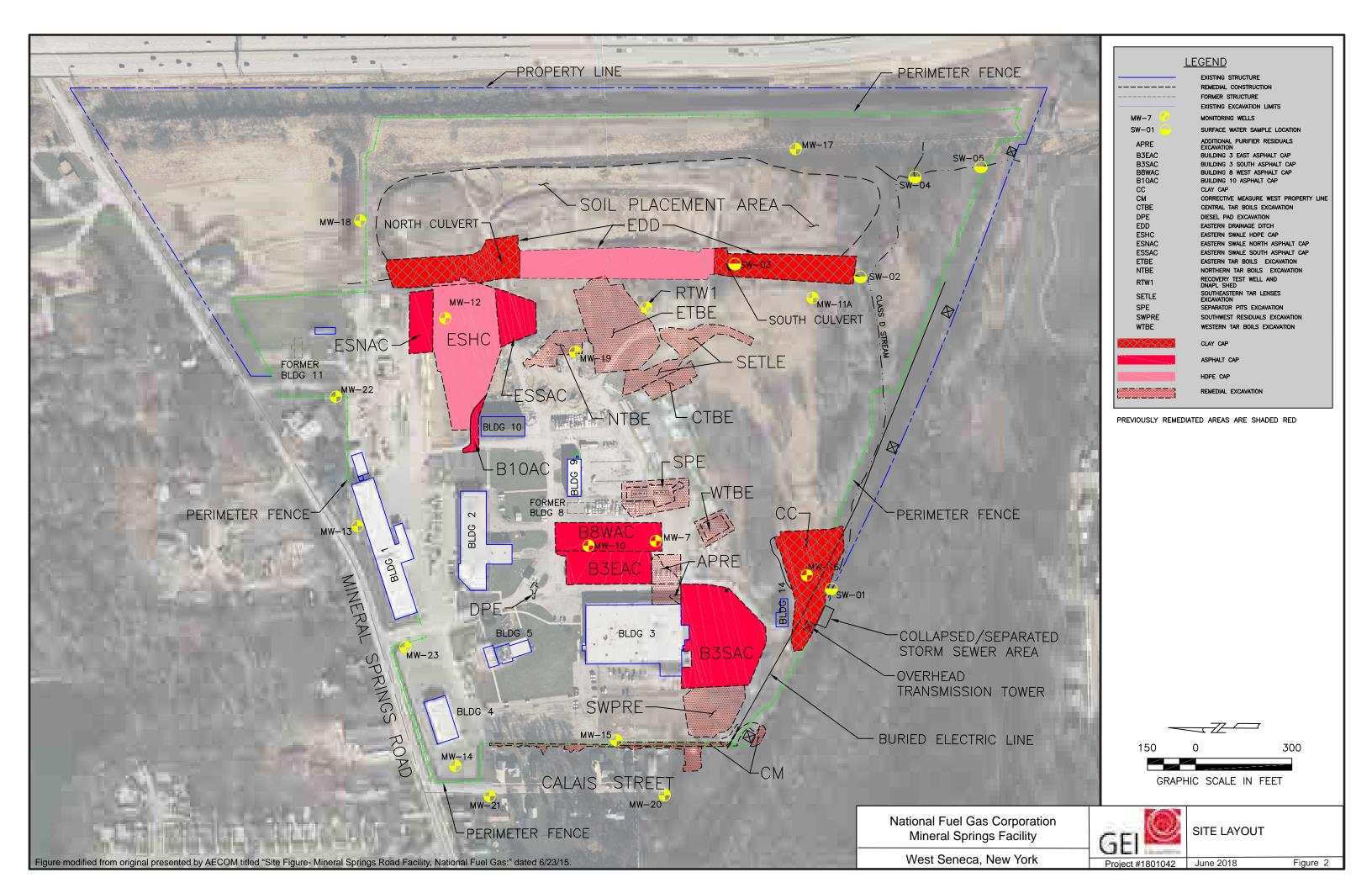
Validation Qualifiers:

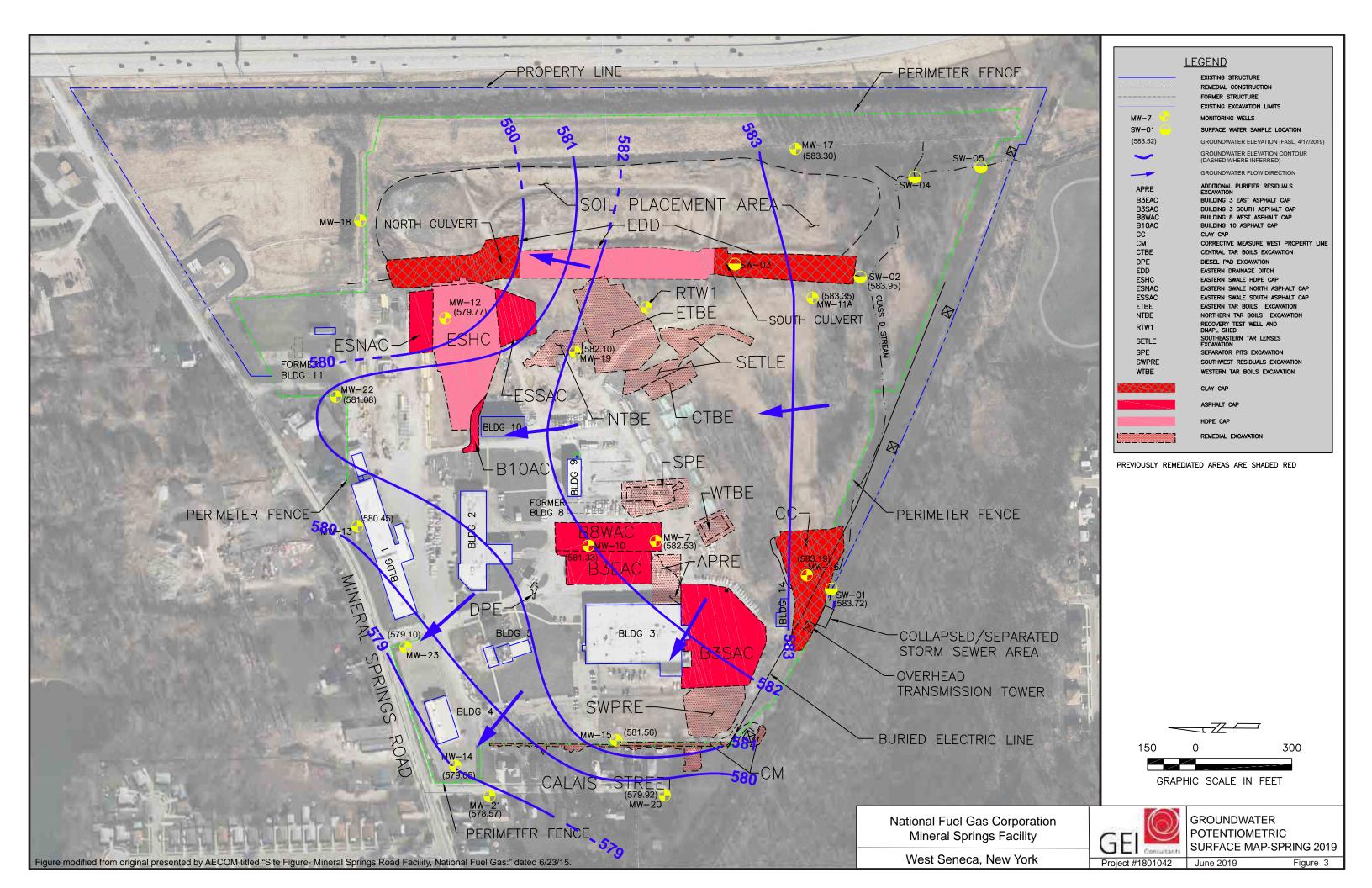
J = The result is an estimated value.

U = The result was not detected above the reporting limit.

Figures







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: 480-152317-1

Client Project/Site: GEI, Mineral Springs Sampling Event: Semi Annual Sampling (April) Revision: 1

For:

GEI Consultants, Inc. 90B John Muir Drive Suite 104 Amherst, New York 14228

Attn: Richard Frappa



Authorized for release by: 5/31/2019 7:02:14 PM Rebecca Jones, Project Management Assistant I rebecca.jones@testamericainc.com

Designee for

..... Links

Review your project results through

Total Access

Have a Question?

Ask-

The

www.testamericainc.com

Visit us at:

Expert

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

The test results in this report meet all 2003 NELAC and 2009 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

Table of Contents

Cover Page	1
Table of Contents	2
Definitions/Glossary	3
Case Narrative	4
Detection Summary	6
Client Sample Results	8
Surrogate Summary	24
QC Sample Results	26
QC Association Summary	33
Lab Chronicle	37
Certification Summary	41
Method Summary	42
Sample Summary	43
Chain of Custody	44
Receipt Checklists	51

3

Qualifiers

Quanners	
GC/MS VOA Qualifier	Qualifier Description
F1	MS and/or MSD Recovery is outside acceptance limits.
U	Indicates the analyte was analyzed for but not detected.
Х	Surrogate is outside control limits
GC/MS Semi	VOA
Qualifier	Qualifier Description
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.
х	Surrogate is outside control limits
General Che	Mistry Qualifier Description

Qualifier	Qualifier Description
4	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not
	applicable.
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.	
a	Listed under the "D" column to designate that the result is reported on a dry weight basis	
%R	Percent Recovery	13
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: 480-152317-1

Laboratory: Eurofins TestAmerica, Buffalo

Narrative

Job Narrative 480-152317-1

Revision

This report has been revised to remove results that were not requested.

Receipt

The samples were received on 4/17/2019 4:10 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 3.8° C.

GC/MS VOA

Method(s) 8260C: The following samples were diluted to bring the concentration of target analytes within the calibration range: MW-07 (480-152317-11), (480-152317-C-11 MS) and (480-152317-C-11 MSD). Elevated reporting limits (RLs) are provided.

Method(s) 8260C: Surrogate recovery for the following sample was outside the upper control limit: MW-23 (480-152317-7). These samples did not contain any target analytes; therefore, re-extraction and/or re-analysis was not performed.

Method(s) 8260C: The following sample was diluted to bring the concentration of target analytes within the calibration range: MW-19 (480-152317-10). Elevated reporting limits (RLs) are provided.

Method(s) 8260C: Surrogate recovery for the following samples were outside the upper control limit: (CCVIS 480-469666/3), (LCS 480-469666/5) and (MB 480-469666/7). Due to holding time limitations the samples were not reanalyzed.

Method(s) 8260C: The sample was collected in properly preserved vials for analysis of volatile organic compounds (VOCs). However, when verified by the laboratory, the pH was greater than 2 and the following sample was analyzed after 7 days from sampling: MW-19 (480-152317-10).

Method(s) 8260C: Surrogate recovery for the following samples were outside the upper control limit: MW-17 (480-152317-9), MW-11A (480-152317-13), (CCVIS 480-469873/4), (LCS 480-469873/6) and (MB 480-469873/8). Due to holding time limitations the samples were not reanalyzed.

Method(s) 8260C: The following volatiles samples were diluted due to foaming at the time of purging during the original sample analysis: MW-17 (480-152317-9) and MW-11A (480-152317-13). Elevated reporting limits (RLs) are provided.

Method(s) 8260C: The surrogate 4-Bromofluorobenzene (Surr) and Dibromofluoromethane (Surr) were outside the 20%D limits on the continuing calibration verification (CCV) but was within laboratory limits. The following sample is impacted: (CCVIS 480-469873/4).

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 nature of the sample matrix: MW-17 (480-152317-9). Elevated reporting limits (RLs) are provided.

Method(s) 8270D_LL_PAH: The following samples were diluted to bring the concentration of target analytes within the calibration range: MW-19 (480-152317-10) and MW-07 (480-152317-11). Elevated reporting limits (RLs) are provided.

Method(s) 8270D_LL_PAH: The following samples required a dilution due to the nature of the sample matrix: MW-17 (480-152317-9) and MW-07 (480-152317-11). 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_LL_PAH: The following sample was diluted due to the abundance of target analytes: MW-19 (480-152317-10). As such, surrogate recoveries are below the calibration range or are not reported, and 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.

Job ID: 480-152317-1 (Continued)

Laboratory: Eurofins TestAmerica, Buffalo (Continued)

General Chemistry

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

Organic Prep

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

Detection Summary

lient: GEI Consultants, Inc.		Bottoo	tion Su	, initial j				Job ID: 48	0-152317-1
Project/Site: GEI, Mineral Springs									
Client Sample ID: MW-16						Lab Sa	am	ple ID: 480-	152317-1
Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Cyanide, Total	3.1		0.10	0.050	-	10	_	9012B	Total/NA
Cyanide, Free	149		25.0	7.7	ug/L	5		9016	Total/NA
Client Sample ID: MW-20						Lab Sa	am	ple ID: 480-	152317-2
Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Cyanide, Total	1.3		0.050	0.025	mg/L	5	_	9012B	Total/NA
Cyanide, Free	15.2		5.0	1.5	ug/L	1		9016	Total/NA
Client Sample ID: Duplicate						Lab Sa	am	ple ID: 480-	152317-3
_ Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Fluoranthene	0.39	J	0.50	0.36	ug/L	1	_	8270D_LL_PAH	Total/NA
Cyanide, Total	0.32		0.010	0.0050	mg/L	1		9012B	Total/NA
Cyanide, Free	52.0		5.0	1.5	ug/L	1		9016	Total/NA
Client Sample ID: MW-14						Lab Sa	am	ple ID: 480-	152317-4
Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Cyanide, Total	0.89		0.050	0.025		5	_	9012B	Total/NA
Cyanide, Free	5.9		5.0		ug/L	1		9016	Total/NA
Client Sample ID: MW-10					-	Lab Sa	am	ple ID: 480-	152317-5
No Detections									
No Detections.									
						Lab Sa	am	ple ID: 480-	152317-6
Client Sample ID: MW-22		Qualifier	RL		Unit	Dil Fac		Method	Prep Type
Client Sample ID: MW-22 Analyte Cyanide, Total	0.85	Qualifier	0.050	0.025	mg/L	Dil Fac		Method 9012B	Prep Type Total/NA
Client Sample ID: MW-22		Qualifier		0.025		Dil Fac		Method	Prep Type
Client Sample ID: MW-22 Analyte Cyanide, Total Cyanide, Free	0.85	Qualifier	0.050	0.025	mg/L	Dil Fac 5 1	D 	Method 9012B	Prep Type Total/NA Total/NA
Client Sample ID: MW-22 Analyte Cyanide, Total Cyanide, Free Client Sample ID: MW-23	0.85 25.0	Qualifier	0.050	0.025	mg/L	Dil Fac 5 1	D	Method 9012B 9016	Prep Type Total/NA Total/NA
Client Sample ID: MW-22 Analyte Cyanide, Total Cyanide, Free	0.85 25.0		0.050 5.0	0.025 1.5 MDL	mg/L ug/L	Dil Fac 5 1 Lab Sa	D	Method 9012B 9016 ple ID: 480-	Prep Type Total/NA Total/NA 152317-7
Client Sample ID: MW-22 Analyte Cyanide, Total Cyanide, Free Client Sample ID: MW-23 Analyte	0.85 25.0 Result		0.050 5.0 RL	0.025 1.5 MDL 0.33	mg/L ug/L Unit	Dil Fac 5 1 Lab Sa Dil Fac	D	Method 9012B 9016 Ple ID: 480- Method	Prep Type Total/NA Total/NA 152317-7 Prep Type
Client Sample ID: MW-22 Analyte Cyanide, Total Cyanide, Free Client Sample ID: MW-23 Analyte Benzo(a)pyrene	0.85 25.0 Result 0.51	Qualifier	0.050 5.0 RL 0.50	0.025 1.5 MDL 0.33 0.30	mg/L ug/L Unit ug/L	Dil Fac 5 1 Lab Sa Dil Fac 1	D am D	Method 9012B 9016 9016 9016 9016 9016 9016 9016 8270D_LL_PAH 8270D_LL_PAH 8270D_LL_PAH	Prep Type Total/NA Total/NA 152317-7 Prep Type Total/NA
Client Sample ID: MW-22 Analyte Cyanide, Total Cyanide, Free Client Sample ID: MW-23 Analyte Benzo(a)pyrene Benzo(b)fluoranthene	0.85 25.0 Result 0.51 0.38 0.37	Qualifier	0.050 5.0 RL 0.50 0.50 0.50 0.50	0.025 1.5 MDL 0.33 0.30 0.37 0.32	mg/L ug/L Unit ug/L ug/L ug/L ug/L	Dil Fac 5 1 Lab Sa Dil Fac 1 1	D am	Method 9012B 9016 ple ID: 480- Method 8270D_LL_PAH 8270D_LL_PAH 8270D_LL_PAH 8270D_LL_PAH 8270D_LL_PAH	Prep Type Total/NA Total/NA 152317-7 Prep Type Total/NA Total/NA Total/NA
Client Sample ID: MW-22 Analyte Cyanide, Total Cyanide, Free Client Sample ID: MW-23 Analyte Benzo(a)pyrene Benzo(b)fluoranthene Benzo(g,h,i)perylene	0.85 25.0 Result 0.51 0.38	Qualifier	0.050 5.0 RL 0.50 0.50 0.50	0.025 1.5 MDL 0.33 0.30 0.37 0.32 0.36	mg/L ug/L Unit ug/L ug/L ug/L ug/L ug/L	Dil Fac 5 1 Lab Sa Dil Fac 1 1	D am	Method 9012B 9016 9016 9016 9016 9016 9016 9016 8270D_LL_PAH 8270D_LL_PAH 8270D_LL_PAH	Prep Type Total/NA Total/NA 152317-7 Prep Type Total/NA Total/NA Total/NA
Client Sample ID: MW-22 Analyte Cyanide, Total Cyanide, Free Client Sample ID: MW-23 Analyte Benzo(a)pyrene Benzo(g,h,i)perylene Chrysene Fluoranthene Phenanthrene	0.85 25.0 Result 0.51 0.51 0.38 0.37 0.94 0.61	Qualifier	0.050 5.0 RL 0.50 0.50 0.50 0.50 0.50 0.50 0.50	0.025 1.5 MDL 0.33 0.30 0.37 0.32 0.36 0.38	mg/L ug/L Unit ug/L ug/L ug/L ug/L ug/L	Dil Fac 5 1 Lab Sa Dil Fac 1 1 1 1 1 1 1 1 1 1 1		Method 9012B 9016 ple ID: 480- Method 8270D_LL_PAH 8270D_LL_PAH 8270D_LL_PAH 8270D_LL_PAH 8270D_LL_PAH 8270D_LL_PAH 8270D_LL_PAH 8270D_LL_PAH	Prep Type Total/NA Total/NA 152317-7 Prep Type Total/NA Total/NA Total/NA Total/NA Total/NA
Client Sample ID: MW-22 Analyte Cyanide, Total Cyanide, Free Client Sample ID: MW-23 Analyte Benzo(a)pyrene Benzo(b)fluoranthene Benzo(g,h,i)perylene Chrysene Fluoranthene	0.85 25.0 Result 0.51 0.51 0.38 0.37 0.94 0.61 0.70	Qualifier	0.050 5.0 RL 0.50 0.50 0.50 0.50 0.50 0.50 0.50 0.5	0.025 1.5 MDL 0.33 0.30 0.37 0.32 0.36 0.38 0.36	mg/L ug/L ug/L ug/L ug/L ug/L ug/L ug/L u	Dil Fac 5 1 Lab Sa Dil Fac 1 1 1 1 1		Method 9012B 9016 ple ID: 480- Method 8270D_LL_PAH	Prep Type Total/NA Total/NA 152317-7 Prep Type Total/NA Total/NA Total/NA Total/NA Total/NA Total/NA
Client Sample ID: MW-22 Analyte Cyanide, Total Cyanide, Free Client Sample ID: MW-23 Analyte Benzo(a)pyrene Benzo(b)fluoranthene Benzo(g,h,i)perylene Chrysene Fluoranthene Phenanthrene Pyrene Cyanide, Total	0.85 25.0 Result 0.51 0.51 0.38 0.37 0.94 0.61 0.70 0.32	Qualifier	0.050 5.0 RL 0.50 0.50 0.50 0.50 0.50 0.50 0.50 0.5	0.025 1.5 MDL 0.33 0.30 0.37 0.32 0.36 0.38 0.36 0.0050	mg/L ug/L ug/L ug/L ug/L ug/L ug/L ug/L u	Dil Fac 5 1 Lab Sa Dil Fac 1 1 1 1 1 1 1 1 1		Method 9012B 9016 ple ID: 480- Method 8270D_LL_PAH	Prep Type Total/NA Total/NA 152317-7 Prep Type Total/NA Total/NA Total/NA Total/NA Total/NA Total/NA Total/NA
Client Sample ID: MW-22 Analyte Cyanide, Total Cyanide, Free Client Sample ID: MW-23 Analyte Benzo(a)pyrene Benzo(b)fluoranthene Benzo(g,h,i)perylene Chrysene Fluoranthene Phenanthrene Pyrene	0.85 25.0 Result 0.51 0.51 0.38 0.37 0.94 0.61 0.70	Qualifier	0.050 5.0 RL 0.50 0.50 0.50 0.50 0.50 0.50 0.50 0.5	0.025 1.5 MDL 0.33 0.30 0.37 0.32 0.36 0.38 0.36 0.0050	mg/L ug/L ug/L ug/L ug/L ug/L ug/L ug/L u	Dil Fac 5 1 Lab Sa Dil Fac 1 1 1 1 1 1 1		Method 9012B 9016 ple ID: 480- Method 8270D_LL_PAH	Prep Type Total/NA Total/NA 152317-7 Prep Type Total/NA Total/NA Total/NA Total/NA Total/NA Total/NA
Client Sample ID: MW-22 Analyte Cyanide, Total Cyanide, Free Client Sample ID: MW-23 Analyte Benzo(a)pyrene Benzo(b)fluoranthene Benzo(g,h,i)perylene Chrysene Fluoranthene Phenanthrene Pyrene Cyanide, Total Cyanide, Free	0.85 25.0 Result 0.51 0.51 0.38 0.37 0.94 0.61 0.70 0.32	Qualifier	0.050 5.0 RL 0.50 0.50 0.50 0.50 0.50 0.50 0.50 0.5	0.025 1.5 MDL 0.33 0.30 0.37 0.32 0.36 0.38 0.36 0.0050	mg/L ug/L ug/L ug/L ug/L ug/L ug/L ug/L u	Dil Fac 5 1 Lab Sa Dil Fac 1 1 1 1 1 1 1 1 1 1 1 1		Method 9012B 9016 ple ID: 480- Method 8270D_LL_PAH	Prep Type Total/NA Total/NA 152317-7 Prep Type Total/NA Total/NA Total/NA Total/NA Total/NA Total/NA Total/NA Total/NA
Client Sample ID: MW-22 Analyte Cyanide, Total Cyanide, Free Client Sample ID: MW-23 Analyte Benzo(a)pyrene Benzo(b)fluoranthene Benzo(g,h,i)perylene Chrysene Fluoranthene Phenanthrene Pyrene Cyanide, Total	0.85 25.0 Result 0.51 0.51 0.38 0.37 0.94 0.61 0.70 0.32 38.6	Qualifier	0.050 5.0 RL 0.50 0.50 0.50 0.50 0.50 0.50 0.50 0.5	0.025 1.5 MDL 0.33 0.30 0.37 0.32 0.36 0.38 0.36 0.0050 1.5	mg/L ug/L ug/L ug/L ug/L ug/L ug/L ug/L u	Dil Fac 5 1 Lab Sa Dil Fac 1 1 1 1 1 1 1 1 1 1 1 1		Method 9012B 9016 ple ID: 480- Method 8270D_LL_PAH 9012B 9016 ple ID: 480-	Prep Type Total/NA Total/NA 152317-7 Prep Type Total/NA Total/NA Total/NA Total/NA Total/NA Total/NA Total/NA Total/NA
Client Sample ID: MW-22 Analyte Cyanide, Total Cyanide, Free Client Sample ID: MW-23 Analyte Benzo(a)pyrene Benzo(b)fluoranthene Benzo(g,h,i)perylene Chrysene Fluoranthene Phenanthrene Pyrene Cyanide, Total Cyanide, Free Client Sample ID: MW-13	0.85 25.0 Result 0.51 0.51 0.38 0.37 0.94 0.61 0.70 0.32 38.6	Qualifier J J	0.050 5.0 RL 0.50 0.50 0.50 0.50 0.50 0.50 0.50 0.5	0.025 1.5 MDL 0.33 0.30 0.37 0.32 0.36 0.38 0.36 0.0050 1.5	mg/L ug/L ug/L ug/L ug/L ug/L ug/L ug/L u	Dil Fac 5 1 Lab Sa Dil Fac 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1		Method 9012B 9016 ple ID: 480- Method 8270D_LL_PAH 9012B 9016 ple ID: 480-	Prep Type Total/NA Total/NA 152317-7 Prep Type Total/NA Total/NA Total/NA Total/NA Total/NA Total/NA Total/NA Total/NA Total/NA
Client Sample ID: MW-22 Analyte Cyanide, Total Cyanide, Free Client Sample ID: MW-23 Analyte Benzo(a)pyrene Benzo(a)pyrene Benzo(a)pyrene Benzo(g,h,i)perylene Chrysene Fluoranthene Phenanthrene Pyrene Cyanide, Total Cyanide, Total Cyanide, Total Cyanide, Total Cyanide, Total Cyanide, Total	0.85 25.0 Result 0.51 0.51 0.38 0.37 0.94 0.61 0.70 0.32 38.6 Result	Qualifier J J	0.050 5.0 RL 0.50 0.50 0.50 0.50 0.50 0.50 0.50 0.5	0.025 1.5 MDL 0.33 0.30 0.37 0.32 0.36 0.38 0.36 0.0050 1.5 MDL	mg/L ug/L ug/L ug/L ug/L ug/L ug/L ug/L u	Dil Fac 5 1 Lab Sa Dil Fac 1		Method 9012B 9016 ple ID: 480- Method 8270D_LL_PAH 9012B 9016 ple ID: 480- Method	Prep Type Total/NA Total/NA 152317-7 Prep Type Total/NA Total/NA Total/NA Total/NA Total/NA Total/NA Total/NA Total/NA Total/NA Total/NA Total/NA Total/NA Total/NA
Client Sample ID: MW-22 Analyte Cyanide, Total Cyanide, Free Client Sample ID: MW-23 Analyte Benzo(a)pyrene Benzo(b)fluoranthene Benzo(g,h,i)perylene Chrysene Fluoranthene Phenanthrene Pyrene Cyanide, Total Cyanide, Free Client Sample ID: MW-13 Analyte	0.85 25.0 Result 0.51 0.51 0.38 0.37 0.94 0.61 0.70 0.32 38.6 Result 0.012	Qualifier J J	0.050 5.0 RL 0.50 0.50 0.50 0.50 0.50 0.50 0.50 0.5	0.025 1.5 MDL 0.33 0.30 0.37 0.32 0.36 0.38 0.36 0.0050 1.5 MDL 0.0050	mg/L ug/L ug/L ug/L ug/L ug/L ug/L ug/L u	Dil Fac 5 1 Lab Sa Dil Fac 1		Method 9012B 9016 ple ID: 480- Method 8270D_LL_PAH 9012B 9012B ple ID: 480- 9012B	Prep Type Total/NA Total/NA 152317-7 Prep Type Total/NA Total/NA Total/NA Total/NA Total/NA Total/NA Total/NA Total/NA Total/NA Total/NA Total/NA Total/NA Total/NA Total/NA
Client Sample ID: MW-22 Analyte Cyanide, Total Cyanide, Free Client Sample ID: MW-23 Analyte Benzo(a)pyrene Benzo(b)fluoranthene Benzo(g,h,i)perylene Chrysene Fluoranthene Phenanthrene Pyrene Cyanide, Total Cyanide, Free Client Sample ID: MW-13 Analyte Cyanide, Total Client Sample ID: MW-17	0.85 25.0 Result 0.51 0.51 0.38 0.37 0.94 0.61 0.70 0.32 38.6 Result 0.012	Qualifier J J Qualifier	0.050 5.0 RL 0.50 0.50 0.50 0.50 0.50 0.50 0.50 0.5	0.025 1.5 MDL 0.33 0.30 0.37 0.32 0.36 0.38 0.36 0.0050 1.5 MDL 0.0050	mg/L ug/L ug/L ug/L ug/L ug/L ug/L ug/L u	Dil Fac 5 1 Lab Sa Dil Fac 1		Method 9012B 9016 ple ID: 480- Method 8270D_LL_PAH 9012B 9012B ple ID: 480- 9012B	Prep Type Total/NA Total/NA 152317-7 Prep Type Total/NA Total/NA Total/NA Total/NA Total/NA Total/NA Total/NA Total/NA Total/NA Total/NA Total/NA Total/NA Total/NA 152317-8 Prep Type Total/NA

Eurofins TestAmerica, Buffalo

Detection Summary

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

Client Sample ID: MW-19

· · · · · · · · · · · · · · · · · · ·							
Analyte	Result Qualifier	RL	MDL	Unit	Dil Fac D	Method	Prep Type
Benzene	4100	100	41	ug/L	100	8260C	Total/NA
Ethylbenzene	430	100	74	ug/L	100	8260C	Total/NA
Naphthalene	3600	100	84	ug/L	200	8270D_LL_PAH	Total/NA

Client Sample ID: MW-07

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	Method	Prep Type
Benzene	320		20	8.2	ug/L	20	8260C	Total/NA
Ethylbenzene	590	F1	20	15	ug/L	20	8260C	Total/NA
Xylenes, Total	290		40	13	ug/L	20	8260C	Total/NA
2-Methylnaphthalene	100		50	38	ug/L	100	8270D_LL_PAH	Total/NA
Acenaphthene	57		50	30	ug/L	100	8270D_LL_PAH	Total/NA
Naphthalene	1000		50	42	ug/L	100	8270D_LL_PAH	Total/NA

Client Sample ID: MW-12

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac D	Method	Prep Type
Cyanide, Total	1.0		0.050	0.025	mg/L	5	9012B	Total/NA
Cyanide, Free	34.8		5.0	1.5	ug/L	1	9016	Total/NA

Client Sample ID: MW-11A

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac D	Method	Prep Type
Cyanide, Total	0.33		0.010	0.0050	mg/L	1	9012B	Total/NA
Cyanide, Free	19.5		5.0	1.5	ug/L	1	9016	Total/NA
Total Dissolved Solids	653		10.0	4.0	mg/L	1	SM 2540C	Total/NA
Total Suspended Solids	26.8		4.0	4.0	mg/L	1	SM 2540D	Total/NA

Client Sample ID: EB

No Detections.

Client Sample ID: TB

No Detections.

Client Sample ID: MW-21

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Cyanide, Total	0.48		0.010	0.0050	mg/L	1	_	9012B	Total/NA

Lab Sample ID: 480-152317-14

Lab Sample ID: 480-152317-15

Lab Sample ID: 480-152317-16

5 6 7

Job ID: 480-152317-1

Lab Sample ID: 480-152317-10

Lab Sample ID: 480-152317-11

Lab Sample ID: 480-152317-12

Lab Sample ID: 480-152317-13

13

Client Sample Results

Job ID: 480-152317-1

Project/Site: GEI, Mineral Springs

Client: GEI Consultants, Inc.

Client Sample ID: MW-16 Date Collected: 04/17/19 12:20 Date Received: 04/17/19 16:10

Lab Sample ID: 480-152317-1

Matrix: Ground Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	3.1		0.10	0.050	mg/L		04/30/19 11:30	05/01/19 11:40	10
Cyanide, Free	149		25.0	7.7	ug/L		04/27/19 16:33	04/27/19 17:30	5

Eurofins TestAmerica, Buffalo

Job ID: 480-152317-1

Client: GEI Consultants, Inc. Project/Site: GEI, Mineral Springs **Client Sample ID: MW-20**

Lab Sample ID: 480-152317-2

Date Collected: 04/17/19 15:3 Date Received: 04/17/19 16:1							latrix: Ground	d Water
General Chemistry Analyte	Result Qual	lifier RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	1.3	0.050	0.025	mg/L		04/30/19 11:30	05/01/19 11:43	5
Cyanide, Free	15.2	5.0	1.5	ug/L		04/27/19 16:33	04/27/19 17:30	1

6

RL

1.0

1.0

1.0

2.0

Limits

77 - 120

73 - 120

75 - 123

80 - 120

MDL Unit

0.41 ug/L

0.74 ug/L

0.51 ug/L

0.66 ug/L

D

Prepared

Prepared

Client Sample ID: Duplicate Date Collected: 04/17/19 00:00 Date Received: 04/17/19 16:10

Analyte

Benzene

Toluene

Ethylbenzene

Xylenes, Total

Toluene-d8 (Surr)

1,2-Dichloroethane-d4 (Surr)

4-Bromofluorobenzene (Surr)

Dibromofluoromethane (Surr)

Surrogate

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

Job	ID:	480-	1523	17-1

Lab Sample ID: 480-152317-3 Matrix: Ground Water

Analyzed

04/25/19 14:10

04/25/19 14:10

04/25/19 14:10

04/25/19 14:10

Analyzed

04/25/19 14:10

04/25/19 14:10

04/25/19 14:10

04/25/19 14:10

3

Dil Fac

Dil Fac

1

1

1

1

1

1

1

1

Method: 8270D_LL_PAH - Semivolatile Organic Compounds (GC/MS) Low level PAH Analyte Result Qualifier RL MDL Unit D

Result Qualifier

1.0 U

1.0 U

1.0 U

2.0 U

%Recovery Qualifier

108

102

98

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2-Methylnaphthalene	0.50	U	0.50	0.38	ug/L		04/23/19 15:08	04/24/19 19:09	1
Acenaphthene	0.50	U	0.50	0.30	ug/L		04/23/19 15:08	04/24/19 19:09	1
Acenaphthylene	0.50	U	0.50	0.34	ug/L		04/23/19 15:08	04/24/19 19:09	1
Anthracene	0.50	U	0.50	0.39	ug/L		04/23/19 15:08	04/24/19 19:09	1
Benzo(a)anthracene	0.50	U	0.50	0.40	ug/L		04/23/19 15:08	04/24/19 19:09	1
Benzo(a)pyrene	0.50	U	0.50	0.33	ug/L		04/23/19 15:08	04/24/19 19:09	1
Benzo(b)fluoranthene	0.50	U	0.50	0.30	ug/L		04/23/19 15:08	04/24/19 19:09	1
Benzo(g,h,i)perylene	0.50	U	0.50	0.37	ug/L		04/23/19 15:08	04/24/19 19:09	1
Benzo(k)fluoranthene	0.50	U	0.50	0.085	ug/L		04/23/19 15:08	04/24/19 19:09	1
Chrysene	0.50	U	0.50	0.32	ug/L		04/23/19 15:08	04/24/19 19:09	1
Dibenz(a,h)anthracene	0.50	U	0.50	0.33	ug/L		04/23/19 15:08	04/24/19 19:09	1
Fluoranthene	0.39	J	0.50	0.36	ug/L		04/23/19 15:08	04/24/19 19:09	1
Fluorene	0.50	U	0.50	0.37	ug/L		04/23/19 15:08	04/24/19 19:09	1
Indeno(1,2,3-cd)pyrene	0.50	U	0.50	0.44	ug/L		04/23/19 15:08	04/24/19 19:09	1
Naphthalene	0.50	U	0.50	0.42	ug/L		04/23/19 15:08	04/24/19 19:09	1
Phenanthrene	0.50	U	0.50	0.38	ug/L		04/23/19 15:08	04/24/19 19:09	1
Pyrene	0.50	U	0.50	0.36	ug/L		04/23/19 15:08	04/24/19 19:09	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
2-Fluorobiphenyl	107		48 - 120				04/23/19 15:08	04/24/19 19:09	1
Nitrobenzene-d5	101		46 - 120				04/23/19 15:08	04/24/19 19:09	1
p-Terphenyl-d14	68		24 - 136				04/23/19 15:08	04/24/19 19:09	1
 General Chemistry									
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	0.32		0.010	0.0050	mg/L		04/30/19 11:30	05/01/19 10:56	1
Cyanide, Free	52.0		5.0	1.5	ug/L		04/27/19 16:33	04/27/19 17:30	1

RL

5.0

0.050

MDL Unit

0.025 mg/L

1.5 ug/L

Result Qualifier

0.89

5.9

Job ID: 480-152317-1

Project/Site: GEI, Mineral Springs

Client: GEI Consultants, Inc.

General Chemistry

Analyte

Cyanide, Total

Cyanide, Free

Client Sample ID: MW-14 Date Collected: 04/17/19 09:30 Date Received: 04/17/19 16:10

Lab Sample ID: 480-152317-4

	- M	atrix: Ground	d Water)
				4
D	Prepared	Analyzed	Dil Fac	5
	04/30/19 11:30	05/01/19 11:44	5	
	04/27/19 16:33	04/27/19 17:30	1	6
				7
				8
				9

Client Sample ID: MW-10 Date Collected: 04/17/19 10:30 **Date Received:**

Toluene

Date Received: 04/17/19 16:10									
Method: 8260C - Volatile Orga		-				_	_		
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	1.0	U	1.0	0.41	ug/L			04/25/19 14:36	1
Ethylbenzene	1.0	U	1.0	0.74	ug/L			04/25/19 14:36	1

0.51 ug/L

Xylenes, Total	2.0	U	2.0	0.66 ug/L		04/25/19 14:36	1
Surrogate	%Recovery	Qualifier	Limits		Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	105		77 - 120			04/25/19 14:36	1
4-Bromofluorobenzene (Surr)	103		73 - 120			04/25/19 14:36	1
Dibromofluoromethane (Surr)	101		75 - 123			04/25/19 14:36	1
Toluene-d8 (Surr)	100		80 - 120			04/25/19 14:36	1

1.0

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

1.0 U

Analyte –	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac	
2-Methylnaphthalene	0.50	U	0.50	0.38	ug/L		04/23/19 15:08	04/24/19 19:38	1	
Acenaphthene	0.50	U	0.50	0.30	ug/L		04/23/19 15:08	04/24/19 19:38	1	
Acenaphthylene	0.50	U	0.50	0.34	ug/L		04/23/19 15:08	04/24/19 19:38	1	
Anthracene	0.50	U	0.50	0.39	ug/L		04/23/19 15:08	04/24/19 19:38	1	
Benzo(a)anthracene	0.50	U	0.50	0.40	ug/L		04/23/19 15:08	04/24/19 19:38	1	
Benzo(a)pyrene	0.50	U	0.50	0.33	ug/L		04/23/19 15:08	04/24/19 19:38	1	
Benzo(b)fluoranthene	0.50	U	0.50	0.30	ug/L		04/23/19 15:08	04/24/19 19:38	1	
Benzo(g,h,i)perylene	0.50	U	0.50	0.37	ug/L		04/23/19 15:08	04/24/19 19:38	1	
Benzo(k)fluoranthene	0.50	U	0.50	0.085	ug/L		04/23/19 15:08	04/24/19 19:38	1	
Chrysene	0.50	U	0.50	0.32	ug/L		04/23/19 15:08	04/24/19 19:38	1	
Dibenz(a,h)anthracene	0.50	U	0.50	0.33	ug/L		04/23/19 15:08	04/24/19 19:38	1	
Fluoranthene	0.50	U	0.50	0.36	ug/L		04/23/19 15:08	04/24/19 19:38	1	
Fluorene	0.50	U	0.50	0.37	ug/L		04/23/19 15:08	04/24/19 19:38	1	
Indeno(1,2,3-cd)pyrene	0.50	U	0.50	0.44	ug/L		04/23/19 15:08	04/24/19 19:38	1	
Naphthalene	0.50	U	0.50	0.42	ug/L		04/23/19 15:08	04/24/19 19:38	1	
Phenanthrene	0.50	U	0.50	0.38	ug/L		04/23/19 15:08	04/24/19 19:38	1	
Pyrene	0.50	U	0.50	0.36	ug/L		04/23/19 15:08	04/24/19 19:38	1	
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac	
2-Fluorobiphenyl	99		48 - 120				04/23/19 15:08	04/24/19 19:38	1	
Nitrobenzene-d5	98		46 - 120				04/23/19 15:08	04/24/19 19:38	1	
p-Terphenyl-d14	69		24 - 136				04/23/19 15:08	04/24/19 19:38	1	

Job ID: 480-152317-1

Lab Sample ID: 480-152317-5 Matrix: Ground Water

04/25/19 14:36

6

Job ID: 480-152317-1

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

Lab Sample ID: 480-152317-6

Client Sample ID: MW-22 Date Collected: 04/17/19 11:20 Date Received: 04/17/19 16:10

Matrix:	Ground	Water

General Chemistry Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	0.85		0.050	0.025	mg/L		04/30/19 11:30	05/01/19 11:46	5
Cyanide, Free	25.0		5.0	1.5	ug/L		04/27/19 16:33	04/27/19 17:30	1

Client Sample ID: MW-23 Date Collected: 04/17/19 09:25 Date Received: 04/17/19 16:10

Method: 8260C - Volatile O Analyte		Qualifier	C/IVIS RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	1.0	U	1.0	0.41	ug/L			04/25/19 16:45	1
Ethylbenzene	1.0	U	1.0	0.74	ug/L			04/25/19 16:45	1
Toluene	1.0	U	1.0	0.51	ug/L			04/25/19 16:45	1
Xylenes, Total	2.0	U	2.0	0.66	ug/L			04/25/19 16:45	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1.2-Dichloroethane-d4 (Surr)			77 - 120			-		04/25/19 16:45	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac	
1,2-Dichloroethane-d4 (Surr)	116		77 - 120		04/25/19 16:45	1	
4-Bromofluorobenzene (Surr)	122	X	73 - 120		04/25/19 16:45	1	
Dibromofluoromethane (Surr)	126	X	75 - 123		04/25/19 16:45	1	
Toluene-d8 (Surr)	104		80 - 120		04/25/19 16:45	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		04/23/19 15:08	04/24/19 20:08	1
Acenaphthene	0.50	U	0.50	0.30	ug/L		04/23/19 15:08	04/24/19 20:08	1
Acenaphthylene	0.50	U	0.50	0.34	ug/L		04/23/19 15:08	04/24/19 20:08	1
Anthracene	0.50	U	0.50	0.39	ug/L		04/23/19 15:08	04/24/19 20:08	1
Benzo(a)anthracene	0.50	U	0.50	0.40	ug/L		04/23/19 15:08	04/24/19 20:08	1
Benzo(a)pyrene	0.51		0.50	0.33	ug/L		04/23/19 15:08	04/24/19 20:08	1
Benzo(b)fluoranthene	0.51		0.50	0.30	ug/L		04/23/19 15:08	04/24/19 20:08	1
Benzo(g,h,i)perylene	0.38	J	0.50	0.37	ug/L		04/23/19 15:08	04/24/19 20:08	1
Benzo(k)fluoranthene	0.50	U	0.50	0.085	ug/L		04/23/19 15:08	04/24/19 20:08	1
Chrysene	0.37	J	0.50	0.32	ug/L		04/23/19 15:08	04/24/19 20:08	1
Dibenz(a,h)anthracene	0.50	U	0.50	0.33	ug/L		04/23/19 15:08	04/24/19 20:08	1
Fluoranthene	0.94		0.50	0.36	ug/L		04/23/19 15:08	04/24/19 20:08	1
Fluorene	0.50	U	0.50	0.37	ug/L		04/23/19 15:08	04/24/19 20:08	1
Indeno(1,2,3-cd)pyrene	0.50	U	0.50	0.44	ug/L		04/23/19 15:08	04/24/19 20:08	1
Naphthalene	0.50	U	0.50	0.42	ug/L		04/23/19 15:08	04/24/19 20:08	1
Phenanthrene	0.61		0.50	0.38	ug/L		04/23/19 15:08	04/24/19 20:08	1
Pyrene	0.70		0.50	0.36	ug/L		04/23/19 15:08	04/24/19 20:08	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
2-Fluorobiphenyl	116		48 - 120				04/23/19 15:08	04/24/19 20:08	1
Nitrobenzene-d5	119		46 - 120				04/23/19 15:08	04/24/19 20:08	1
p-Terphenyl-d14	86		24 - 136				04/23/19 15:08	04/24/19 20:08	1
General Chemistry									
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	0.32		0.010	0.0050	mg/L		04/30/19 11:30	05/01/19 11:03	1
Cyanide, Free	38.6		5.0	1.5	ug/L		04/27/19 16:33	04/27/19 17:30	1
					-				

Job ID: 480-152317-1

Matrix: Ground Water

Lab Sample ID: 480-152317-7

Client Sample ID: MW-13 Date Collected: 04/17/19 10:30 Date Received: 04/17/19 16:10

Lab Sample ID: 480-152317-8
Matrix: Ground Water

Method: 8260C - Volatile O	rganic Compo	unds by G	C/MS						
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	1.0	U	1.0	0.41	ug/L			04/25/19 17:09	1
Ethylbenzene	1.0	U	1.0	0.74	ug/L			04/25/19 17:09	1
Toluene	1.0	U	1.0	0.51	ug/L			04/25/19 17:09	1
Xylenes, Total	2.0	U	2.0	0.66	ug/L			04/25/19 17:09	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)			77 - 120					04/25/19 17:09	1
4-Bromofluorobenzene (Surr)	119		73 - 120					04/25/19 17:09	1
Dibromofluoromethane (Surr)	118		75 - 123					04/25/19 17:09	1
Toluene-d8 (Surr)	103		80 - 120					04/25/19 17:09	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		04/23/19 15:08	04/24/19 20:37	1
Acenaphthene	0.50	U	0.50	0.30	ug/L		04/23/19 15:08	04/24/19 20:37	1
Acenaphthylene	0.50	U	0.50	0.34	ug/L		04/23/19 15:08	04/24/19 20:37	1
Anthracene	0.50	U	0.50	0.39	ug/L		04/23/19 15:08	04/24/19 20:37	1
Benzo(a)anthracene	0.50	U	0.50	0.40	ug/L		04/23/19 15:08	04/24/19 20:37	1
Benzo(a)pyrene	0.50	U	0.50	0.33	ug/L		04/23/19 15:08	04/24/19 20:37	1
Benzo(b)fluoranthene	0.50	U	0.50	0.30	ug/L		04/23/19 15:08	04/24/19 20:37	1
Benzo(g,h,i)perylene	0.50	U	0.50	0.37	ug/L		04/23/19 15:08	04/24/19 20:37	1
Benzo(k)fluoranthene	0.50	U	0.50	0.085	ug/L		04/23/19 15:08	04/24/19 20:37	1
Chrysene	0.50	U	0.50	0.32	ug/L		04/23/19 15:08	04/24/19 20:37	1
Dibenz(a,h)anthracene	0.50	U	0.50	0.33	ug/L		04/23/19 15:08	04/24/19 20:37	1
Fluoranthene	0.50	U	0.50	0.36	ug/L		04/23/19 15:08	04/24/19 20:37	1
Fluorene	0.50	U	0.50	0.37	ug/L		04/23/19 15:08	04/24/19 20:37	1
Indeno(1,2,3-cd)pyrene	0.50	U	0.50	0.44	ug/L		04/23/19 15:08	04/24/19 20:37	1
Naphthalene	0.50	U	0.50	0.42	ug/L		04/23/19 15:08	04/24/19 20:37	1
Phenanthrene	0.50	U	0.50	0.38	ug/L		04/23/19 15:08	04/24/19 20:37	1
Pyrene	0.50	U	0.50	0.36	ug/L		04/23/19 15:08	04/24/19 20:37	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
2-Fluorobiphenyl	100		48 - 120				04/23/19 15:08	04/24/19 20:37	1
Nitrobenzene-d5	98		46 - 120				04/23/19 15:08	04/24/19 20:37	1
p-Terphenyl-d14	67		24 - 136				04/23/19 15:08	04/24/19 20:37	1
_ General Chemistry									
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	0.012		0.010	0.0050	mg/L		04/30/19 12:50	05/01/19 12:05	1
Cyanide, Free	5.0	U	5.0	1.5	ug/L		04/27/19 16:33	04/27/19 17:30	1
					-				

5/31/2019 (Rev. 1)

6

Client Sample ID: MW-17 Date Collected: 04/17/19 14:40 Date Received: 04/17/19 16:10

Toluene-d8 (Surr)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	2.0	U	2.0	0.82	ug/L			04/26/19 12:14	2
Ethylbenzene	2.0	U	2.0	1.5	ug/L			04/26/19 12:14	2
Toluene	2.0	U	2.0	1.0	ug/L			04/26/19 12:14	2
Xylenes, Total	4.0	U	4.0	1.3	ug/L			04/26/19 12:14	2
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	115		77 - 120			-		04/26/19 12:14	2
4-Bromofluorobenzene (Surr)	117		73 - 120					04/26/19 12:14	2
Dibromofluoromethane (Surr)	124	Х	75 - 123					04/26/19 12:14	2

80 - 120

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

104

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2-Methylnaphthalene	10	U	10	7.6	ug/L		04/23/19 15:08	04/24/19 21:07	20
Acenaphthene	10	U	10	6.0	ug/L		04/23/19 15:08	04/24/19 21:07	20
Acenaphthylene	10	U	10	6.8	ug/L		04/23/19 15:08	04/24/19 21:07	20
Anthracene	10	U	10	7.8	ug/L		04/23/19 15:08	04/24/19 21:07	20
Benzo(a)anthracene	10	U	10	8.0	ug/L		04/23/19 15:08	04/24/19 21:07	20
Benzo(a)pyrene	10	U	10	6.6	ug/L		04/23/19 15:08	04/24/19 21:07	20
Benzo(b)fluoranthene	10	U	10	6.0	ug/L		04/23/19 15:08	04/24/19 21:07	20
Benzo(g,h,i)perylene	10	U	10	7.4	ug/L		04/23/19 15:08	04/24/19 21:07	20
Benzo(k)fluoranthene	10	U	10	1.7	ug/L		04/23/19 15:08	04/24/19 21:07	20
Chrysene	10	U	10	6.4	ug/L		04/23/19 15:08	04/24/19 21:07	20
Dibenz(a,h)anthracene	10	U	10	6.6	ug/L		04/23/19 15:08	04/24/19 21:07	20
Fluoranthene	10	U	10	7.2	ug/L		04/23/19 15:08	04/24/19 21:07	20
Fluorene	10	U	10	7.4	ug/L		04/23/19 15:08	04/24/19 21:07	20
Indeno(1,2,3-cd)pyrene	10	U	10	8.8	ug/L		04/23/19 15:08	04/24/19 21:07	20
Naphthalene	10	U	10	8.4	ug/L		04/23/19 15:08	04/24/19 21:07	20
Phenanthrene	10	U	10	7.6	ug/L		04/23/19 15:08	04/24/19 21:07	20
Pyrene	10	U	10	7.2	ug/L		04/23/19 15:08	04/24/19 21:07	20
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
2-Fluorobiphenyl	93		48 - 120				04/23/19 15:08	04/24/19 21:07	20
Nitrobenzene-d5	76		46 - 120				04/23/19 15:08	04/24/19 21:07	20
p-Terphenyl-d14	74		24 - 136				04/23/19 15:08	04/24/19 21:07	20
General Chemistry									
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	0.16		0.010	0.0050	mg/L		04/30/19 12:50	05/01/19 12:06	1
Cyanide, Free	3.3	J	5.0	1.5	ug/L		04/27/19 16:33	04/27/19 17:30	1

Page 16 of 52

5

6

2

Lab Sample ID: 480-152317-9 Matrix: Ground Water

04/26/19 12:14

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

Client Sample ID: MW-19 Date Collected: 04/17/19 13:10 Date Received: 04/17/19 16:10

Dibromofluoromethane (Surr)

Toluene-d8 (Surr)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	4100		100	41	ug/L			04/25/19 17:57	100
Ethylbenzene	430		100	74	ug/L			04/25/19 17:57	100
Toluene	100	U	100	51	ug/L			04/25/19 17:57	100
Xylenes, Total	200	U	200	66	ug/L			04/25/19 17:57	100
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)			77 - 120					04/25/19 17:57	100
4-Bromofluorobenzene (Surr)	118		73 - 120					04/25/19 17:57	100

75 - 123

80 - 120

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

118

102

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2-Methylnaphthalene	100	U	100	76	ug/L		04/23/19 15:08	04/24/19 21:36	200
Acenaphthene	100	U	100	60	ug/L		04/23/19 15:08	04/24/19 21:36	200
Acenaphthylene	100	U	100	68	ug/L		04/23/19 15:08	04/24/19 21:36	200
Anthracene	100	U	100	78	ug/L		04/23/19 15:08	04/24/19 21:36	200
Benzo(a)anthracene	100	U	100	80	ug/L		04/23/19 15:08	04/24/19 21:36	200
Benzo(a)pyrene	100	U	100	66	ug/L		04/23/19 15:08	04/24/19 21:36	200
Benzo(b)fluoranthene	100	U	100	60	ug/L		04/23/19 15:08	04/24/19 21:36	200
Benzo(g,h,i)perylene	100	U	100	74	ug/L		04/23/19 15:08	04/24/19 21:36	200
Benzo(k)fluoranthene	100	U	100	17	ug/L		04/23/19 15:08	04/24/19 21:36	200
Chrysene	100	U	100	64	ug/L		04/23/19 15:08	04/24/19 21:36	200
Dibenz(a,h)anthracene	100	U	100	66	ug/L		04/23/19 15:08	04/24/19 21:36	200
Fluoranthene	100	U	100	72	ug/L		04/23/19 15:08	04/24/19 21:36	200
Fluorene	100	U	100	74	ug/L		04/23/19 15:08	04/24/19 21:36	200
Indeno(1,2,3-cd)pyrene	100	U	100	88	ug/L		04/23/19 15:08	04/24/19 21:36	200
Naphthalene	3600		100	84	ug/L		04/23/19 15:08	04/24/19 21:36	200
Phenanthrene	100	U	100	76	ug/L		04/23/19 15:08	04/24/19 21:36	200
Pyrene	100	U	100	72	ug/L		04/23/19 15:08	04/24/19 21:36	200
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
2-Fluorobiphenyl	92		48 - 120				04/23/19 15:08	04/24/19 21:36	200
Nitrobenzene-d5	0	X	46 - 120				04/23/19 15:08	04/24/19 21:36	200
p-Terphenyl-d14	62		24 - 136				04/23/19 15:08	04/24/19 21:36	200

Job ID: 480-152317-1

04/25/19 17:57

04/25/19 17:57

Lab Sample ID: 480-152317-10 **Matrix: Ground Water**

Eurofins TestAmerica, Buffalo

5 6

100

100

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

Client Sample ID: MW-07 Date Collected: 04/17/19 11:10 Date Received: 04/17/19 16:10

Toluene-d8 (Surr)

Method: 8260C - Volatile O	rganic Compo	unds by G	C/MS						
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	320		20	8.2	ug/L			04/25/19 15:03	20
Ethylbenzene	590	F1	20	15	ug/L			04/25/19 15:03	20
Toluene	20	U	20	10	ug/L			04/25/19 15:03	20
Xylenes, Total	290		40	13	ug/L			04/25/19 15:03	20
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	108		77 - 120			-		04/25/19 15:03	20
4-Bromofluorobenzene (Surr)	103		73 - 120					04/25/19 15:03	20
Dibromofluoromethane (Surr)	99		75 - 123					04/25/19 15:03	20

80 - 120

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

99

Analyte		Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2-Methylnaphthalene	100		50	38	ug/L		04/23/19 15:08	04/24/19 22:06	100
Acenaphthene	57		50	30	ug/L		04/23/19 15:08	04/24/19 22:06	100
Acenaphthylene	50	U	50	34	ug/L		04/23/19 15:08	04/24/19 22:06	100
Anthracene	50	U	50	39	ug/L		04/23/19 15:08	04/24/19 22:06	100
Benzo(a)anthracene	50	U	50	40	ug/L		04/23/19 15:08	04/24/19 22:06	100
Benzo(a)pyrene	50	U	50	33	ug/L		04/23/19 15:08	04/24/19 22:06	100
Benzo(b)fluoranthene	50	U	50	30	ug/L		04/23/19 15:08	04/24/19 22:06	100
Benzo(g,h,i)perylene	50	U	50	37	ug/L		04/23/19 15:08	04/24/19 22:06	100
Benzo(k)fluoranthene	50	U	50	8.5	ug/L		04/23/19 15:08	04/24/19 22:06	100
Chrysene	50	U	50	32	ug/L		04/23/19 15:08	04/24/19 22:06	100
Dibenz(a,h)anthracene	50	U	50	33	ug/L		04/23/19 15:08	04/24/19 22:06	100
Fluoranthene	50	U	50	36	ug/L		04/23/19 15:08	04/24/19 22:06	100
Fluorene	50	U	50	37	ug/L		04/23/19 15:08	04/24/19 22:06	100
Indeno(1,2,3-cd)pyrene	50	U	50	44	ug/L		04/23/19 15:08	04/24/19 22:06	100
Naphthalene	1000		50	42	ug/L		04/23/19 15:08	04/24/19 22:06	100
Phenanthrene	50	U	50	38	ug/L		04/23/19 15:08	04/24/19 22:06	100
Pyrene	50	U	50	36	ug/L		04/23/19 15:08	04/24/19 22:06	100
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
2-Fluorobiphenyl	79		48 - 120				04/23/19 15:08	04/24/19 22:06	100
Nitrobenzene-d5	62		46 - 120				04/23/19 15:08	04/24/19 22:06	100
p-Terphenyl-d14	51		24 - 136				04/23/19 15:08	04/24/19 22:06	100

5

6

20

Lab Sample ID: 480-152317-11 Matrix: Ground Water

04/25/19 15:03

Job ID: 480-152317-1

Project/Site: GEI, Mineral Springs **Client Sample ID: MW-12** Lab Sample ID: 480-152317-12 Date Collected: 04/17/19 12:15 **Matrix: Ground Water** Date Received: 04/17/19 16:10 **General Chemistry** Analyte Result Qualifier RL MDL Unit Prepared D Analyzed Cyanide, Total 0.050 0.025 mg/L 04/30/19 12:50 05/01/19 12:38 1.0 5.0 1.5 ug/L 04/27/19 16:33 04/27/19 17:30 Cyanide, Free 34.8

Client: GEI Consultants, Inc.

6

Dil Fac

5

1

Client Sample ID: MW-11A Date Collected: 04/17/19 13:30 Date Received: 04/17/19 16:10

Dibromofluoromethane (Surr)

Toluene-d8 (Surr)

Method: 8260C - Volatile O	rganic Compo	unds by G	C/MS						
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	2.0	U	2.0	0.82	ug/L			04/26/19 12:38	2
Ethylbenzene	2.0	U	2.0	1.5	ug/L			04/26/19 12:38	2
Toluene	2.0	U	2.0	1.0	ug/L			04/26/19 12:38	2
Xylenes, Total	4.0	U	4.0	1.3	ug/L			04/26/19 12:38	2
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	118		77 - 120			-		04/26/19 12:38	2
4-Bromofluorobenzene (Surr)	123	X	73 - 120					04/26/19 12:38	2

75 - 123

80 - 120

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

125 X

103

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2-Methylnaphthalene	0.50	U	0.50	0.38	ug/L		04/23/19 15:08	04/24/19 22:35	1
Acenaphthene	0.50	U	0.50	0.30	ug/L		04/23/19 15:08	04/24/19 22:35	1
Acenaphthylene	0.50	U	0.50	0.34	ug/L		04/23/19 15:08	04/24/19 22:35	1
Anthracene	0.50	U	0.50	0.39	ug/L		04/23/19 15:08	04/24/19 22:35	1
Benzo(a)anthracene	0.50	U	0.50	0.40	ug/L		04/23/19 15:08	04/24/19 22:35	1
Benzo(a)pyrene	0.50	U	0.50	0.33	ug/L		04/23/19 15:08	04/24/19 22:35	1
Benzo(b)fluoranthene	0.50	U	0.50	0.30	ug/L		04/23/19 15:08	04/24/19 22:35	1
Benzo(g,h,i)perylene	0.50	U	0.50	0.37	ug/L		04/23/19 15:08	04/24/19 22:35	1
Benzo(k)fluoranthene	0.50	U	0.50	0.085	ug/L		04/23/19 15:08	04/24/19 22:35	1
Chrysene	0.50	U	0.50	0.32	ug/L		04/23/19 15:08	04/24/19 22:35	1
Dibenz(a,h)anthracene	0.50	U	0.50	0.33	ug/L		04/23/19 15:08	04/24/19 22:35	1
Fluoranthene	0.50	U	0.50	0.36	ug/L		04/23/19 15:08	04/24/19 22:35	1
Fluorene	0.50	U	0.50	0.37	ug/L		04/23/19 15:08	04/24/19 22:35	1
Indeno(1,2,3-cd)pyrene	0.50	U	0.50	0.44	ug/L		04/23/19 15:08	04/24/19 22:35	1
Naphthalene	0.50	U	0.50	0.42	ug/L		04/23/19 15:08	04/24/19 22:35	1
Phenanthrene	0.50	U	0.50	0.38	ug/L		04/23/19 15:08	04/24/19 22:35	1
Pyrene	0.50	U	0.50	0.36	ug/L		04/23/19 15:08	04/24/19 22:35	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
2-Fluorobiphenyl	101		48 - 120				04/23/19 15:08	04/24/19 22:35	1
Nitrobenzene-d5	100		46 - 120				04/23/19 15:08	04/24/19 22:35	1
p-Terphenyl-d14 _	72		24 - 136				04/23/19 15:08	04/24/19 22:35	1
_ General Chemistry									
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	0.33		0.010	0.0050	mg/L		04/30/19 12:50	05/01/19 12:12	1
Cyanide, Free	19.5		5.0	1.5	ug/L		04/27/19 16:33	04/27/19 17:30	1
Total Dissolved Solids	653		10.0	4.0	mg/L			04/24/19 22:16	1
Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids	26.8		4.0	4.0	mg/L			04/24/19 22:38	1

5

6

12 13

2

2

Lab Sample ID: 480-152317-13 Matrix: Ground Water

04/26/19 12:38

04/26/19 12:38

Job ID: 480-152317-1

5

6

Lab Sample ID: 480-152317-14 Matrix: Water

Date Collected: 04/17/19 13:15 Date Received: 04/17/19 16:10

Client Sample ID: EB

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	1.0	U	1.0	0.41	ug/L			04/25/19 18:44	1
Ethylbenzene	1.0	U	1.0	0.74	ug/L			04/25/19 18:44	1
Toluene	1.0	U	1.0	0.51	ug/L			04/25/19 18:44	1
Xylenes, Total	2.0	U	2.0	0.66	ug/L			04/25/19 18:44	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	109		77 - 120					04/25/19 18:44	1
4-Bromofluorobenzene (Surr)	116		73 - 120					04/25/19 18:44	1
Dibromofluoromethane (Surr)	113		75 - 123					04/25/19 18:44	1
Toluene-d8 (Surr)	101		80 - 120					04/25/19 18:44	

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

Analyte		Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2-Methylnaphthalene	0.50	U	0.50	0.38	ug/L		04/23/19 15:08	04/24/19 23:05	1
Acenaphthene	0.50	U	0.50	0.30	ug/L		04/23/19 15:08	04/24/19 23:05	1
Acenaphthylene	0.50	U	0.50	0.34	ug/L		04/23/19 15:08	04/24/19 23:05	1
Anthracene	0.50	U	0.50	0.39	ug/L		04/23/19 15:08	04/24/19 23:05	1
Benzo(a)anthracene	0.50	U	0.50	0.40	ug/L		04/23/19 15:08	04/24/19 23:05	1
Benzo(a)pyrene	0.50	U	0.50	0.33	ug/L		04/23/19 15:08	04/24/19 23:05	1
Benzo(b)fluoranthene	0.50	U	0.50	0.30	ug/L		04/23/19 15:08	04/24/19 23:05	1
Benzo(g,h,i)perylene	0.50	U	0.50	0.37	ug/L		04/23/19 15:08	04/24/19 23:05	1
Benzo(k)fluoranthene	0.50	U	0.50	0.085	ug/L		04/23/19 15:08	04/24/19 23:05	1
Chrysene	0.50	U	0.50	0.32	ug/L		04/23/19 15:08	04/24/19 23:05	1
Dibenz(a,h)anthracene	0.50	U	0.50	0.33	ug/L		04/23/19 15:08	04/24/19 23:05	1
Fluoranthene	0.50	U	0.50	0.36	ug/L		04/23/19 15:08	04/24/19 23:05	1
Fluorene	0.50	U	0.50	0.37	ug/L		04/23/19 15:08	04/24/19 23:05	1
Indeno(1,2,3-cd)pyrene	0.50	U	0.50	0.44	ug/L		04/23/19 15:08	04/24/19 23:05	1
Naphthalene	0.50	U	0.50	0.42	ug/L		04/23/19 15:08	04/24/19 23:05	1
Phenanthrene	0.50	U	0.50	0.38	ug/L		04/23/19 15:08	04/24/19 23:05	1
Pyrene	0.50	U	0.50	0.36	ug/L		04/23/19 15:08	04/24/19 23:05	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
2-Fluorobiphenyl	82		48 - 120				04/23/19 15:08	04/24/19 23:05	1
Nitrobenzene-d5	73		46 - 120				04/23/19 15:08	04/24/19 23:05	1
p-Terphenyl-d14	73		24 - 136				04/23/19 15:08	04/24/19 23:05	1
General Chemistry									
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	0.010	U	0.010	0.0050	mg/L		04/30/19 12:50	05/01/19 12:13	1
Cyanide, Free	5.0	U	5.0	1.5	ug/L		04/27/19 16:33	04/27/19 17:30	1
Cyanide, Free	5.0	U	5.0	1.5	ug/L		04/27/19 16:33	04/27/	19 17:30

Job ID: 480-152317-1

Client Sample ID: TB Date Collected: 04/17/19 00:00 Date Received: 04/17/19 16:10

Lab Sample ID: 480-152317-15 Matrix: Water

5

6

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	1.0	U	1.0	0.41	ug/L			04/25/19 19:08	1
Ethylbenzene	1.0	U	1.0	0.74	ug/L			04/25/19 19:08	1
Toluene	1.0	U	1.0	0.51	ug/L			04/25/19 19:08	1
Xylenes, Total	2.0	U	2.0	0.66	ug/L			04/25/19 19:08	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)			77 - 120					04/25/19 19:08	1
4-Bromofluorobenzene (Surr)	120		73 - 120					04/25/19 19:08	1
Dibromofluoromethane (Surr)	119		75 - 123					04/25/19 19:08	1
Toluene-d8 (Surr)	100		80 - 120					04/25/19 19:08	1

Job ID: 480-152317-1

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

Client Sample ID: MW-21 Date Collected: 04/17/19 14:35 Date Received: 04/17/19 16:10

Lab Sample ID: 480-152317-16 Matrix: Ground Water

Date Received. 04/17/19 16.10									
General Chemistry Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	0.48		0.010	0.0050	mg/L		04/30/19 12:50	05/01/19 12:18	1
Cyanide, Free	5.0	U	5.0	1.5	ug/L		04/27/19 16:33	04/27/19 17:30	1

Surrogate Summary

BFB

(73-120)

102

103

122 X

119

117

118

103

103

103

123 X

DCA

(77-120)

108

105

116

111

115

112

108

108

107

118

Method: 8260C - Volatile Organic Compounds by GC/MS **Matrix: Ground Water**

Client Sample ID

Duplicate

MW-10

MW-23

MW-13

MW-17

MW-19

MW-07

MW-07

MW-07

MW-11A

M'	S			
			Prep Type: Total/NA	
Pe	ercent Surro	ogate Recovery	(Acceptance Limits)	
	DBFM	TOL		
0)	(75-123)	(80-120)		5
	98	98		
	101	100		6
<	126 X	104		
	118	103		7
	124 X	104		_
	118	102		9
	99	99		
	105	99		0
	102	100		3
<	125 X	103		

Job ID: 480-152317-1

Prep Type: Total/NA

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

Matrix: Water

Lab Sample ID 480-152317-3

480-152317-5

480-152317-7

480-152317-8

480-152317-9

480-152317-10

480-152317-11

480-152317-13

480-152317-11 MS

480-152317-11 MSD

Surrogate Legend

TOL = Toluene-d8 (Surr)

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

_			Pe	ercent Surro	ogate Reco
		DCA	BFB	DBFM	TOL
Lab Sample ID	Client Sample ID	(77-120)	(73-120)	(75-123)	(80-120)
480-152317-14	EB	109	116	113	101
480-152317-15	ТВ	113	120	119	100
LCS 480-469659/5	Lab Control Sample	101	106	98	101
LCS 480-469666/5	Lab Control Sample	121 X	127 X	122	112
LCS 480-469873/6	Lab Control Sample	111	127 X	122	109
MB 480-469659/9	Method Blank	109	98	103	98
MB 480-469666/7	Method Blank	118	124 X	123	107
MB 480-469873/8	Method Blank	117	117	126 X	102

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

			Pe	ercent Surro
		FBP	NBZ	TPHd14
Lab Sample ID	Client Sample ID	(48-120)	(46-120)	(24-136)
480-152317-3	Duplicate	107	101	68
480-152317-5	MW-10	99	98	69
480-152317-7	MW-23	116	119	86
480-152317-8	MW-13	100	98	67
480-152317-9	MW-17	93	76	74
480-152317-10	MW-19	92	0 X	62
480-152317-11	MW-07	79	62	51

Eurofins TestAmerica, Buffalo

5/31/2019 (Rev. 1)

Surrogate Summary

Client: GEI Consultants, Inc. Project/Site: GEI, Mineral Springs Job ID: 480-152317-1

			Pe	rcent Surrogate	Recovery (Acceptance Limits)
		FBP	NBZ	TPHd14	
Lab Sample ID	Client Sample ID	(48-120)	(46-120)	(24-136)	
480-152317-13	 MW-11A	101	100	72	
Surrogate Legend					
FBP = 2-Fluorobipheny	/				—
NBZ = Nitrobenzene-d	5				
INDZ - INITIODEIIZEIIE-U;					
TPHd14 = p-Terphenyl	-d14				
TPHd14 = p-Terphenyl	L_PAH - Semivolatile	• Organic	Compo	unds (GC/N	S) Low level PAH
TPHd14 = p-Terphenyl ethod: 8270D_L		e Organic	Compo	unds (GC/N	IS) Low level PAH Prep Type: Total/NA
TPHd14 = p-Terphenyl lethod: 8270D_L		e Organic			Prep Type: Total/NA
TPHd14 = p-Terphenyl			Pe	rcent Surrogate	
TPHd14 = p-Terphenyl lethod: 8270D_L latrix: Water	L_PAH - Semivolatile	FBP	PeNBZ	rcent Surrogate TPHd14	Prep Type: Total/NA
TPHd14 = p-Terphenyl Iethod: 8270D_L Iatrix: Water Lab Sample ID	L_PAH - Semivolatile	FBP (48-120)	Pe NBZ (46-120)	rcent Surrogate TPHd14 (24-136)	Prep Type: Total/NA
TPHd14 = p-Terphenyl lethod: 8270D_L latrix: Water Lab Sample ID 480-152317-14	L_PAH - Semivolatile	FBP (48-120) 82	Pe NBZ (46-120) 73	rcent Surrogate TPHd14 (24-136) 73	Prep Type: Total/NA
TPHd14 = p-Terphenyl	L_PAH - Semivolatile	FBP (48-120) 82 92	Pe NBZ (46-120) 73 85	rcent Surrogate TPHd14 (24-136) 73 103	Prep Type: Total/NA
TPHd14 = p-Terphenyl lethod: 8270D_L latrix: Water Lab Sample ID 480-152317-14 LCS 480-469336/2-A	L_PAH - Semivolatile	FBP (48-120) 82	Pe NBZ (46-120) 73	rcent Surrogate TPHd14 (24-136) 73	Prep Type: Total/NA
TPHd14 = p-Terphenyl lethod: 8270D_L atrix: Water Lab Sample ID 180-152317-14 _CS 480-469336/2-A _CSD 480-469336/3-A	L_PAH - Semivolatile	FBP (48-120) 82 92 100	Pe NBZ (46-120) 73 85 82	rcent Surrogate TPHd14 (24-136) 73 103 86	Prep Type: Total/NA

TPHd14 = p-Terphenyl-d14

Prep Type: Total/NA

Client Sample ID: Method Blank

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

Lab Sample ID: MB 480-469659/9 Matrix: Water

Analysis Batch: 469659

ME	B MB							
Analyte Resul	t Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene 1.0	0 U	1.0	0.41	ug/L			04/25/19 11:45	1
Ethylbenzene 1.0) U	1.0	0.74	ug/L			04/25/19 11:45	1
Toluene 1.0) U	1.0	0.51	ug/L			04/25/19 11:45	1
Xylenes, Total 2.0) U	2.0	0.66	ug/L			04/25/19 11:45	1

	MB	MB				
Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	109		77 - 120		04/25/19 11:45	1
4-Bromofluorobenzene (Surr)	98		73 - 120		04/25/19 11:45	1
Dibromofluoromethane (Surr)	103		75 - 123		04/25/19 11:45	1
Toluene-d8 (Surr)	98		80 - 120		04/25/19 11:45	1

Lab Sample ID: LCS 480-469659/5 Matrix: Water

Analysis Batch: 469659

	Spike	LCS	LCS				%Rec.	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Benzene	25.0	25.9		ug/L		104	71 - 124	_
Ethylbenzene	25.0	25.4		ug/L		102	77 - 123	
Toluene	25.0	26.7		ug/L		107	80 - 122	
Xylenes, Total	50.0	49.4		ug/L		99	76 - 122	

	LCS	LCS	
Surrogate	%Recovery	Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	101		77 - 120
4-Bromofluorobenzene (Surr)	106		73 - 120
Dibromofluoromethane (Surr)	98		75 - 123
Toluene-d8 (Surr)	101		80 - 120

Lab Sample ID: 480-152317-11 MS Matrix: Ground Water Analysis Batch: 469659

Analysis Daten. 409039	Sample	Sample	Spike	MS	MS				%Rec.	
Analyte	•	Qualifier	Added	-	Qualifier	Unit	D	%Rec	Limits	
Benzene	320		500	806		ug/L		97	71 - 124	
Ethylbenzene	590	F1	500	1000		ug/L		82	77 - 123	
Toluene	20	U	500	531		ug/L		106	80 - 122	
Xylenes, Total	290		1000	1220		ug/L		93	76 - 122	
	MS	MS								
Surrogate	%Recovery	Qualifier	Limits							
1,2-Dichloroethane-d4 (Surr)	108		77 - 120							
4-Bromofluorobenzene (Surr)	103		73 - 120							
Dibromofluoromethane (Surr)	105		75 - 123							
Toluene-d8 (Surr)	99		80 - 120							

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

Client Sample ID: MW-07

Prep Type: Total/NA

Prep Type: Total/NA

Client Sample ID: MW-07

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

Lab Sample ID: 480-152317-11 MSD **Matrix: Ground Water** Detel

Analysis Batch: 469659	Sample	Sample	Spike	MSD	MSD				%Rec.		RPD
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Benzene	320		500	790		ug/L		94	71 - 124	2	13
Ethylbenzene	590	F1	500	966	F1	ug/L		75	77 - 123	4	15
Toluene	20	U	500	510		ug/L		102	80 - 122	4	15
Xylenes, Total	290		1000	1190		ug/L		90	76 - 122	2	16
	MSD	MSD									

	INISD	WISD	
Surrogate	%Recovery	Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	107		77 - 120
4-Bromofluorobenzene (Surr)	103		73 - 120
Dibromofluoromethane (Surr)	102		75 - 123
Toluene-d8 (Surr)	100		80 - 120

Lab Sample ID: MB 480-469666/7 **Matrix: Water**

Analysis Batch: 469666

MB MB Analyte **Result Qualifier** RL MDL Unit Prepared Analyzed Dil Fac D Benzene 1.0 U 1.0 0.41 ug/L 04/25/19 12:05 1 Ethylbenzene 1.0 U 1.0 04/25/19 12:05 0.74 ug/L 1 Toluene 1.0 U 1.0 0.51 ug/L 04/25/19 12:05 1 Xylenes, Total 2.0 U 2.0 0.66 ug/L

	MB	МВ				
Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	118		77 - 120		04/25/19 12:05	1
4-Bromofluorobenzene (Surr)	124	X	73 - 120		04/25/19 12:05	1
Dibromofluoromethane (Surr)	123		75 - 123		04/25/19 12:05	1
Toluene-d8 (Surr)	107		80 - 120		04/25/19 12:05	1

Lab Sample ID: LCS 480-469666/5 **Matrix: Water**

Xylenes, Total

Analysis Batch: 469666 LCS LCS Spike Analyte Added **Result Qualifier** Unit D %Rec Benzene 25.0 23.2 93 ug/L Ethylbenzene 25.0 24.4 ug/L 97 Toluene 25.0 25.0 ug/L 100

50.0

48.3

ug/L

	LCS	LCS	
Surrogate	%Recovery	Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	121	X	77 - 120
4-Bromofluorobenzene (Surr)	127	X	73 - 120
Dibromofluoromethane (Surr)	122		75 - 123
Toluene-d8 (Surr)	112		80 - 120

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

04/25/19 12:05

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

%Rec.

Limits

71 - 124

77 - 123

80 - 122

76 - 122

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

Lab Sample ID: MB 480-469873/8

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

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Matrix: Water

MB	MB							
Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1.0	U	1.0	0.41	ug/L			04/26/19 11:21	1
1.0	U	1.0	0.74	ug/L			04/26/19 11:21	1
1.0	U	1.0	0.51	ug/L			04/26/19 11:21	1
2.0	U	2.0	0.66	ug/L			04/26/19 11:21	1
		MB MB Result Qualifier 1.0 U 1.0 U 1.0 U 2.0 U	Result Qualifier RL 1.0 U 1.0 1.0 U 1.0 1.0 U 1.0 1.0 U 1.0	Result Qualifier RL MDL 1.0 U 1.0 0.41 1.0 U 1.0 0.74 1.0 U 1.0 0.51	Result Qualifier RL MDL Unit 1.0 U 1.0 0.41 ug/L 1.0 U 1.0 0.74 ug/L 1.0 U 1.0 0.51 ug/L	Result Qualifier RL MDL Unit D 1.0 U 1.0 0.41 ug/L - 1.0 U 1.0 0.74 ug/L - 1.0 U 1.0 0.51 ug/L -	Result Qualifier RL MDL Unit D Prepared 1.0 U 1.0 0.41 ug/L -	MB MB Result Qualifier RL MDL Unit D Prepared Analyzed 1.0 U 1.0 0.41 ug/L 04/26/19 11:21 04/26/19 11:21 1.0 U 1.0 0.74 ug/L 04/26/19 11:21 1.0 U 1.0 0.51 ug/L 04/26/19 11:21

	MB	MB				
Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	117		77 - 120		04/26/19 11:21	1
4-Bromofluorobenzene (Surr)	117		73 - 120		04/26/19 11:21	1
Dibromofluoromethane (Surr)	126 2	x	75 - 123		04/26/19 11:21	1
Toluene-d8 (Surr)	102		80 - 120		04/26/19 11:21	1

Lab Sample ID: LCS 480-469873/6 Matrix: Water Analysis Batch: 469873

· ····· / ··· · ··· · · · · · · · · · · · · · ·	Spike	LCS	LCS				%Rec.	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Benzene	25.0	22.6		ug/L		90	71 - 124	
Ethylbenzene	25.0	24.1		ug/L		96	77 - 123	
Toluene	25.0	24.0		ug/L		96	80 - 122	
Xylenes, Total	50.0	47.5		ug/L		95	76 - 122	

	LCS	LCS	
Surrogate	%Recovery	Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	111		77 - 120
4-Bromofluorobenzene (Surr)	127	X	73 - 120
Dibromofluoromethane (Surr)	122		75 - 123
Toluene-d8 (Surr)	109		80 - 120

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

Lab Sample ID: MB 480-469336/1-A
Matrix: Water
Analysis Batch: 469510

	MB	MB						-	
Analyte Re	sult	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2-Methylnaphthalene (0.50	U –	0.50	0.38	ug/L		04/23/19 15:08	04/24/19 16:42	1
Acenaphthene	0.50	U	0.50	0.30	ug/L		04/23/19 15:08	04/24/19 16:42	1
Acenaphthylene (0.50	U	0.50	0.34	ug/L		04/23/19 15:08	04/24/19 16:42	1
Anthracene (0.50	U	0.50	0.39	ug/L		04/23/19 15:08	04/24/19 16:42	1
Benzo(a)anthracene	0.50	U	0.50	0.40	ug/L		04/23/19 15:08	04/24/19 16:42	1
Benzo(a)pyrene (0.50	U	0.50	0.33	ug/L		04/23/19 15:08	04/24/19 16:42	1
Benzo(b)fluoranthene (0.50	U	0.50	0.30	ug/L		04/23/19 15:08	04/24/19 16:42	1
Benzo(g,h,i)perylene (0.50	U	0.50	0.37	ug/L		04/23/19 15:08	04/24/19 16:42	1
Benzo(k)fluoranthene (0.50	U	0.50	0.085	ug/L		04/23/19 15:08	04/24/19 16:42	1
Chrysene (0.50	U	0.50	0.32	ug/L		04/23/19 15:08	04/24/19 16:42	1
Dibenz(a,h)anthracene (0.50	U	0.50	0.33	ug/L		04/23/19 15:08	04/24/19 16:42	1
Fluoranthene	0.50	U	0.50	0.36	ug/L		04/23/19 15:08	04/24/19 16:42	1
Fluorene (0.50	U	0.50	0.37	ug/L		04/23/19 15:08	04/24/19 16:42	1
Indeno(1,2,3-cd)pyrene (0.50	U	0.50	0.44	ug/L		04/23/19 15:08	04/24/19 16:42	1

Eurofins TestAmerica, Buffalo

Client Sample ID: Method Blank

Prep Type: Total/NA Prep Batch: 469336

QC Sample Results

Lab Sample ID: MB 480-469 Matrix: Water Analysis Batch: 469510							Clie		le ID: Method Prep Type: To Prep Batch:	otal/NA
		MB								
Analyte		Qualifier	RL		Unit			repared	Analyzed	Dil Fa
Naphthalene	0.50		0.50		ug/L				04/24/19 16:42	•
Phenanthrene	0.50		0.50		ug/L				04/24/19 16:42	
Pyrene	0.50	0	0.50	0.30	ug/L		04/2	3/19 15.00	04/24/19 16:42	
	MB	MB								
Surrogate	%Recovery	Qualifier	Limits				Р	repared	Analyzed	Dil Fa
2-Fluorobiphenyl	95		48 - 120				04/2	3/19 15:08	04/24/19 16:42	
Nitrobenzene-d5	95		46 - 120				04/2	3/19 15:08	04/24/19 16:42	
p-Terphenyl-d14	92		24 - 136				04/2	3/19 15:08	04/24/19 16:42	
Lab Sample ID: LCS 480-469	9336/2-A					Clie	nt Sai		Lab Control S	
Matrix: Water									Prep Type: To	
Analysis Batch: 469510									Prep Batch:	469330
			Spike	LCS LC			_		%Rec.	
Analyte			Added	Result Qu	alifier	Unit	D	%Rec	Limits	
2-Methylnaphthalene			32.0	30.0		ug/L		94	48 - 120	
Acenaphthene			32.0	30.0		ug/L		94	60 - 120	
Acenaphthylene			32.0	32.6		ug/L		102	63 - 120	
Anthracene			32.0	32.7		ug/L		102	69 - 131	
Benzo(a)anthracene			32.0	30.0		ug/L		94	62 - 142	
Benzo(a)pyrene			32.0	31.9		ug/L		100	46 - 156	
Benzo(b)fluoranthene			32.0	31.8		ug/L		99	50 - 149	
			32.0	32.5		ug/L		102	34 - 189	
Benzo(g,n,i)perviene			32.0	30.7		ug/L		96	47 ₋ 147	
Benzo(k)fluoranthene			32.0	30.4		ug/L		95	69 - 140	
Benzo(k)fluoranthene Chrysene				30.4 31.8		ug/L		95 99	69 - 140 35 - 176	
Benzo(k)fluoranthene Chrysene Dibenz(a,h)anthracene			32.0			0				
Benzo(k)fluoranthene Chrysene Dibenz(a,h)anthracene Fluoranthene			32.0 32.0	31.8		ug/L		99	35 - 176	
Benzo(k)fluoranthene Chrysene Dibenz(a,h)anthracene Fluoranthene Fluorene			32.0 32.0 32.0	31.8 37.9		ug/L ug/L		99 118	35 - 176 67 - 133	
Benzo(g,h,i)perylene Benzo(k)fluoranthene Chrysene Dibenz(a,h)anthracene Fluoranthene Fluorene Indeno(1,2,3-cd)pyrene Naphthalene			32.0 32.0 32.0 32.0	31.8 37.9 34.0		ug/L ug/L ug/L		99 118 106	35 - 176 67 - 133 66 - 129	
Benzo(k)fluoranthene Chrysene Dibenz(a,h)anthracene Fluoranthene Fluorene Indeno(1,2,3-cd)pyrene			32.0 32.0 32.0 32.0 32.0 32.0	31.8 37.9 34.0 31.7		ug/L ug/L ug/L ug/L		99 118 106 99	35 - 176 67 - 133 66 - 129 57 - 161	

	200	200	
Surrogate	%Recovery	Qualifier	Limits
2-Fluorobiphenyl	92		48 - 120
Nitrobenzene-d5	85		46 - 120
p-Terphenyl-d14	103		24 - 136

Lab Sample ID: LCSD 480-469336/3-A Matrix: Water Analysis Batch: 469510

Matrix: Water Analysis Batch: 469510							Prep Ty Prep Ba	pe: Tot	al/NA
	Spike	LCSD	LCSD				%Rec.		RPD
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
2-Methylnaphthalene	32.0	28.5		ug/L		89	48 - 120	5	21
Acenaphthene	32.0	28.2		ug/L		88	60 - 120	6	24
Acenaphthylene	32.0	28.6		ug/L		89	63 - 120	13	18
Anthracene	32.0	31.7		ug/L		99	69 - 131	3	15
Benzo(a)anthracene	32.0	29.2		ug/L		91	62 - 142	3	15
Benzo(a)pyrene	32.0	27.4		ug/L		86	46 - 156	15	15

Eurofins TestAmerica, Buffalo

Client Sample ID: Lab Control Sample Dup

p-Terphenyl-d14

3 4 5

8 9

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

Lab Sample ID: LCSD 480-469336/3 Matrix: Water Analysis Batch: 469510	3-A			C	Client Sa	ample	ID: Lat	Control Prep Ty Prep Ba	pe: Tot	al/NA
		Spike	LCSD	LCSD				%Rec.		RPD
Analyte		Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Benzo(b)fluoranthene		32.0	29.3		ug/L		92	50 - 149	8	15
Benzo(g,h,i)perylene		32.0	28.5		ug/L		89	34 - 189	13	15
Benzo(k)fluoranthene		32.0	27.9		ug/L		87	47 _ 147	10	22
Chrysene		32.0	29.0		ug/L		91	69 - 140	5	15
Dibenz(a,h)anthracene		32.0	28.1		ug/L		88	35 - 176	12	15
Fluoranthene		32.0	35.2		ug/L		110	67 - 133	7	15
Fluorene		32.0	33.9		ug/L		106	66 - 129	0	15
Indeno(1,2,3-cd)pyrene		32.0	28.4		ug/L		89	57 - 161	11	15
Naphthalene		32.0	28.2		ug/L		88	48 - 120	4	29
Phenanthrene		32.0	31.0		ug/L		97	67 - 130	3	15
Pyrene		32.0	31.8		ug/L		99	58 - 136	8	25
LC	SD LCSD									
Surrogate %Recove	ery Qualifier	Limits								
2-Fluorobiphenyl 1	00	48 - 120								
Nitrobenzene-d5	82	46 - 120								

24 - 136

Method: 9012B - Cyanide, Total andor Amenable

86

Lab Sample ID: MB 480-4705	47/1-A										Clie	nt Sam	ole ID: Method	d Blank
Matrix: Water													Prep Type: T	
Analysis Batch: 470677													Prep Batch:	470547
		MB	MB											
Analyte	Re	esult	Qualifier		RL		MDL			D	Pr	repared	Analyzed	Dil Fac
Cyanide, Total	0	.010	U		0.010	0.0	0050	mg/L		_	04/30	0/19 11:30	05/01/19 10:28	1
Lab Sample ID: LCS 480-470	547/2-A								Cli	ent	San	nple ID:	Lab Control	Sample
Matrix: Water													Prep Type: T	otal/NA
Analysis Batch: 470677													Prep Batch:	
				Spike		LCS	LCS						%Rec.	
Analyte				Added		Result	Qua	lifier	Unit		D	%Rec	Limits	
Cyanide, Total				0.250		0.227			mg/L		· _	91	90 - 110	
Lab Sample ID: 480-152317-1	MS											Clier	nt Sample ID:	MW-16
Matrix: Ground Water													Prep Type: T	
Analysis Batch: 470679													Prep Batch:	
·····,	Sample	Sam	nple	Spike		MS	MS						%Rec.	
Analyte	Result	Qua	lifier	Added		Result	Qua	lifier	Unit		D	%Rec	Limits	
Cyanide, Total	3.1			0.100		2.93	4		mg/L			-120	90 - 110	
												Clier	nt Sample ID:	
Lab Sample ID: 480-152317-7	MS												it oumple ib.	MW-23
Lab Sample ID: 480-152317-7 Matrix: Ground Water	' MS													
Matrix: Ground Water	' MS												Prep Type: T Prep Batch:	otal/NA
Matrix: Ground Water	Y MS Sample	Sam	nple	Spike		MS	MS						Prep Type: T	otal/NA
			•	Spike Added		MS Result		lifier	Unit		D		Prep Type: T Prep Batch:	otal/NA

QC Sample Results

Job ID: 480-152317-1

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

Lab Sample ID: MB 480-470 Matrix: Water	0548/1-A							C	Clie		ole ID: Metho Prep Type: T	
Analysis Batch: 470690											Prep Batch:	
		MB MB										
Analyte	Re	sult Qualifier		RL	I	MDL Unit		D	Р	repared	Analyzed	Dil Fac
Cyanide, Total	0.	.010 U		0.010	0.0	0050 mg/l	-	_ 0	4/3	0/19 12:50	05/01/19 12:00	1
Lab Sample ID: LCS 480-47	70548/2-A						Cli	ent S	Sar	nple ID:	Lab Control	Sample
Matrix: Water											Prep Type: T	otal/NA
Analysis Batch: 470690											Prep Batch:	470548
			Spike		LCS	LCS					%Rec.	
Analyte			Added			Qualifier	Unit		D	%Rec	Limits	
Cyanide, Total			0.250		0.238		mg/L			95	90 - 110	
Lab Sample ID: 480-152317	7-12 MS									Clien	nt Sample ID:	MW-12
Matrix: Ground Water											Prep Type: T	
Analysis Batch: 470690											Prep Batch:	470548
	Sample	•	Spike		-	MS					%Rec.	
Analyte		Qualifier	Added			Qualifier			D	%Rec	Limits	
Cyanide, Total	1.0		0.100		1.27	4	mg/L			250	90 - 110	
Lab Sample ID: 480-152317	′-9 DU										nt Sample ID:	
Matrix: Ground Water											Prep Type: T	
Analysis Batch: 470690	. .	<u> </u>									Prep Batch:	
	Sample					DU			_			RPD
Analyte		Qualifier				Qualifier			D		RPI	
Cyanide, Total	0.16				0.163		mg/L					1 15
Method: 9016 - Cyanide	, Free											
Lab Sample ID: MB 460-60	5761/1-A							C	Clie		ole ID: Method	
Matrix: Water											Prep Type: T	
Analysis Batch: 605936											Prep Batch:	605761
		MB MB										
Analyte	Re	sult Qualifier		RL	I	MDL Unit		D		repared	Analyzed	Dil Fac
Cyanide, Free		5.0 U		5.0		1.5 ug/L		0	94/2	7/19 16:33	04/27/19 17:30	1
Lab Sample ID: LCS 460-60)5761/2-A						Cli	ent S	Sar	nple ID:	Lab Control	Sample
Matrix: Water										-	Prep Type: T	
Analysis Batch: 605936											Prep Batch:	
Ē			Spike		LCS	LCS					%Rec.	
Analyte			Spike Added			LCS Qualifier	Unit		D	%Rec	%Rec. Limits	
-			•				Unit ug/L		D	%Rec		
Analyte	7-13 MS		Added		Result				D	91	Limits	 IW-11A
Analyte Cyanide, Free	7-13 MS		Added		Result				D	91 Client	Limits	
Analyte Cyanide, Free Lab Sample ID: 480-152317	7-13 MS		Added		Result				D	91 Client	Limits 78 - 110 Sample ID: M	otal/NA
Analyte Cyanide, Free Lab Sample ID: 480-152317 Matrix: Ground Water	7-13 MS Sample	Sample	Added		Result 45.53				D	91 Client	Limits 78 - 110 Sample ID: M Prep Type: T	otal/NA
Analyte Cyanide, Free Lab Sample ID: 480-152317 Matrix: Ground Water	Sample	Sample Qualifier	Added 50.0		Result 45.53 MS	Qualifier	ug/L		D	91 Client	Limits 78 - 110 Sample ID: M Prep Type: T Prep Batch:	otal/NA

Job ID: 480-152317-1

Prep Type: Total/NA

Prep Batch: 605761

Prep Type: Total/NA

Prep Type: Total/NA

Prep Type: Total/NA

Analyzed

04/24/19 22:16

RPD

3

Client Sample ID: MW-11A

%Rec.

Limits

%Rec.

Limits

50 - 150

78 - 110

%Rec

89

132

Prepared

Method: 9016 - Cyanide, Free (Continued) Lab Sample ID: 480-152317-13 MSD **Matrix: Ground Water** Analysis Batch: 605936 Sample Sample MSD MSD Spike Analyte **Result Qualifier** Added Result Qualifier Unit D Cyanide, Free 19.5 50.0 63.90 ug/L Lab Sample ID: DLCK 460-605936/10 **Client Sample ID: Lab Control Sample Matrix: Water** Analysis Batch: 605936 Spike DLCK DLCK Analyte Added Result Qualifier Unit D %Rec 2.00 Cyanide, Free 2.63 J ug/L Method: SM 2540C - Solids, Total Dissolved (TDS) Lab Sample ID: MB 480-469623/1 **Client Sample ID: Method Blank Matrix: Water** Analysis Batch: 469623 MB MB MDL Unit Analvte **Result Qualifier** RL D 4.0 mg/L Total Dissolved Solids 10.0 U 10.0 Lab Sample ID: LCS 480-469623/2 **Client Sample ID: Lab Control Sample Matrix: Water** Analysis Batch: 469623

	Spike	e LCS	LCS			%Rec.	
Analyte	Addeo	l Result	Qualifier	Unit D	%Rec	Limits	
Total Dissolved Solids	500	497.0		mg/L	99	85 - 115	

Lab Sample ID: 480-15231 Matrix: Ground Water Analysis Batch: 469623	7-13 DU						Clien	t Sample Prep Ty		
	Sample	Sample	DU	DU						RPD
Analyte	Result	Qualifier	Result	Qualifier	Unit	D			RPD	Limit
Total Dissolved Solids	653		 650.0		mg/L				0.5	10

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

Lab Sample ID: MB 480-469624/1 Matrix: Water Analysis Batch: 469624							Clie	ent Sam	ple ID: Metho Prep Type: T	
· ····· · ·····························	MB	МВ								
Analyte	Result	Qualifier		RL	RL Unit	D	Р	repared	Analyzed	Dil Fac
Total Suspended Solids	1.0	U		1.0	1.0 mg/L				04/24/19 22:38	1
Lab Sample ID: LCS 480-469624/2						Clien	t Sa	mple ID	: Lab Control	Sample
Matrix: Water									Prep Type: T	otal/NA
Analysis Batch: 469624										
			Spike	LCS	LCS				%Rec.	
Analyte			Added	Result	Qualifier	Unit	D	%Rec	Limits	
Total Suspended Solids			253	224.4		mg/L		89	88 - 110	

Page 32 of 52

Eurofins TestAmerica, Buffalo

RPD

Limit

Dil Fac

1

9

GC/MS VOA

Analysis Batch: 469659

Lab Sample ID	Client Sample ID	Ргер Туре	Matrix	Method	Prep Batch
480-152317-3	Duplicate	Total/NA	Ground Water	8260C	
480-152317-5	MW-10	Total/NA	Ground Water	8260C	
480-152317-11	MW-07	Total/NA	Ground Water	8260C	
MB 480-469659/9	Method Blank	Total/NA	Water	8260C	
LCS 480-469659/5	Lab Control Sample	Total/NA	Water	8260C	
480-152317-11 MS	MW-07	Total/NA	Ground Water	8260C	
480-152317-11 MSD	MW-07	Total/NA	Ground Water	8260C	

Analysis Batch: 469666

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-152317-7	MW-23	Total/NA	Ground Water	8260C	I
480-152317-8	MW-13	Total/NA	Ground Water	8260C	
480-152317-10	MW-19	Total/NA	Ground Water	8260C	
480-152317-14	EB	Total/NA	Water	8260C	
480-152317-15	ТВ	Total/NA	Water	8260C	
MB 480-469666/7	Method Blank	Total/NA	Water	8260C	
LCS 480-469666/5	Lab Control Sample	Total/NA	Water	8260C	

Analysis Batch: 469873

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-152317-9	MW-17	Total/NA	Ground Water	8260C	
480-152317-13	MW-11A	Total/NA	Ground Water	8260C	
MB 480-469873/8	Method Blank	Total/NA	Water	8260C	
LCS 480-469873/6	Lab Control Sample	Total/NA	Water	8260C	

GC/MS Semi VOA

Prep Batch: 469336

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-152317-3	Duplicate	Total/NA	Ground Water	3510C	
480-152317-5	MW-10	Total/NA	Ground Water	3510C	
480-152317-7	MW-23	Total/NA	Ground Water	3510C	
480-152317-8	MW-13	Total/NA	Ground Water	3510C	
480-152317-9	MW-17	Total/NA	Ground Water	3510C	
480-152317-10	MW-19	Total/NA	Ground Water	3510C	
480-152317-11	MW-07	Total/NA	Ground Water	3510C	
480-152317-13	MW-11A	Total/NA	Ground Water	3510C	
480-152317-14	EB	Total/NA	Water	3510C	
MB 480-469336/1-A	Method Blank	Total/NA	Water	3510C	
LCS 480-469336/2-A	Lab Control Sample	Total/NA	Water	3510C	
LCSD 480-469336/3-A	Lab Control Sample Dup	Total/NA	Water	3510C	

Analysis Batch: 469510

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-152317-3	Duplicate	Total/NA	Ground Water	8270D_LL_PAH	469336
480-152317-5	MW-10	Total/NA	Ground Water	8270D_LL_PAH	469336
480-152317-7	MW-23	Total/NA	Ground Water	8270D_LL_PAH	469336
480-152317-8	MW-13	Total/NA	Ground Water	8270D_LL_PAH	469336
480-152317-9	MW-17	Total/NA	Ground Water	8270D_LL_PAH	469336
480-152317-10	MW-19	Total/NA	Ground Water	8270D_LL_PAH	469336
480-152317-11	MW-07	Total/NA	Ground Water	8270D_LL_PAH	469336

QC Association Summary

GC/MS Semi VOA (Continued)

Analysis Batch: 469510 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-152317-13	MW-11A	Total/NA	Ground Water	8270D_LL_PAH	469336
480-152317-14	EB	Total/NA	Water	8270D_LL_PAH	469336
MB 480-469336/1-A	Method Blank	Total/NA	Water	8270D_LL_PAH	469336
LCS 480-469336/2-A	Lab Control Sample	Total/NA	Water	8270D_LL_PAH	469336
LCSD 480-469336/3-A	Lab Control Sample Dup	Total/NA	Water	8270D_LL_PAH	469336

General Chemistry

Analysis Batch: 469623

Lab Sample ID	Client Sample ID	Ргер Туре	Matrix	Method	Prep Batch
480-152317-13	MW-11A	Total/NA	Ground Water	SM 2540C	
MB 480-469623/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 480-469623/2	Lab Control Sample	Total/NA	Water	SM 2540C	
480-152317-13 DU	MW-11A	Total/NA	Ground Water	SM 2540C	

Analysis Batch: 469624

Lab Sample ID	Client Sample ID	Prep Туре	Matrix	Method	Prep Batch	
480-152317-13	MW-11A	Total/NA	Ground Water	SM 2540D		
MB 480-469624/1	Method Blank	Total/NA	Water	SM 2540D		
LCS 480-469624/2	Lab Control Sample	Total/NA	Water	SM 2540D		

Prep Batch: 470547

Lab Sample ID	Client Sample ID	Ргер Туре	Matrix	Method	Prep Batch
480-152317-1	MW-16	Total/NA	Ground Water	9012B	
480-152317-2	MW-20	Total/NA	Ground Water	9012B	
480-152317-3	Duplicate	Total/NA	Ground Water	9012B	
480-152317-4	MW-14	Total/NA	Ground Water	9012B	
480-152317-6	MW-22	Total/NA	Ground Water	9012B	
480-152317-7	MW-23	Total/NA	Ground Water	9012B	
MB 480-470547/1-A	Method Blank	Total/NA	Water	9012B	
LCS 480-470547/2-A	Lab Control Sample	Total/NA	Water	9012B	
480-152317-1 MS	MW-16	Total/NA	Ground Water	9012B	
480-152317-7 MS	MW-23	Total/NA	Ground Water	9012B	

Prep Batch: 470548

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-152317-8	MW-13	Total/NA	Ground Water	9012B	
480-152317-9	MW-17	Total/NA	Ground Water	9012B	
480-152317-12	MW-12	Total/NA	Ground Water	9012B	
480-152317-13	MW-11A	Total/NA	Ground Water	9012B	
480-152317-14	EB	Total/NA	Water	9012B	
480-152317-16	MW-21	Total/NA	Ground Water	9012B	
MB 480-470548/1-A	Method Blank	Total/NA	Water	9012B	
LCS 480-470548/2-A	Lab Control Sample	Total/NA	Water	9012B	
480-152317-12 MS	MW-12	Total/NA	Ground Water	9012B	
480-152317-9 DU	MW-17	Total/NA	Ground Water	9012B	

Analysis Batch: 470677

Lab Sample ID	Client Sample ID	Prep Туре	Matrix	Method	Prep Batch
480-152317-3	Duplicate	Total/NA	Ground Water	9012B	470547
480-152317-7	MW-23	Total/NA	Ground Water	9012B	470547

Job ID: 480-152317-1

QC Association Summary

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

General Chemistry (Continued)

Analysis Batch: 470677 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 480-470547/1-A	Method Blank	Total/NA	Water	9012B	470547
LCS 480-470547/2-A	Lab Control Sample	Total/NA	Water	9012B	470547
480-152317-7 MS	MW-23	Total/NA	Ground Water	9012B	470547

Analysis Batch: 470679

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-152317-1	MW-16	Total/NA	Ground Water	9012B	470547
480-152317-2	MW-20	Total/NA	Ground Water	9012B	470547
480-152317-4	MW-14	Total/NA	Ground Water	9012B	470547
480-152317-6	MW-22	Total/NA	Ground Water	9012B	470547
480-152317-1 MS	MW-16	Total/NA	Ground Water	9012B	470547

Analysis Batch: 470690

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-152317-8	MW-13	Total/NA	Ground Water	9012B	470548
480-152317-9	MW-17	Total/NA	Ground Water	9012B	470548
480-152317-12	MW-12	Total/NA	Ground Water	9012B	470548
480-152317-13	MW-11A	Total/NA	Ground Water	9012B	470548
480-152317-14	EB	Total/NA	Water	9012B	470548
480-152317-16	MW-21	Total/NA	Ground Water	9012B	470548
MB 480-470548/1-A	Method Blank	Total/NA	Water	9012B	470548
LCS 480-470548/2-A	Lab Control Sample	Total/NA	Water	9012B	470548
480-152317-12 MS	MW-12	Total/NA	Ground Water	9012B	470548
480-152317-9 DU	MW-17	Total/NA	Ground Water	9012B	470548

Prep Batch: 605761

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-152317-1	MW-16	Total/NA	Ground Water	9016	
480-152317-2	MW-20	Total/NA	Ground Water	9016	
480-152317-3	Duplicate	Total/NA	Ground Water	9016	
480-152317-4	MW-14	Total/NA	Ground Water	9016	
480-152317-6	MW-22	Total/NA	Ground Water	9016	
480-152317-7	MW-23	Total/NA	Ground Water	9016	
480-152317-8	MW-13	Total/NA	Ground Water	9016	
480-152317-9	MW-17	Total/NA	Ground Water	9016	
480-152317-12	MW-12	Total/NA	Ground Water	9016	
480-152317-13	MW-11A	Total/NA	Ground Water	9016	
480-152317-14	EB	Total/NA	Water	9016	
480-152317-16	MW-21	Total/NA	Ground Water	9016	
MB 460-605761/1-A	Method Blank	Total/NA	Water	9016	
LCS 460-605761/2-A	Lab Control Sample	Total/NA	Water	9016	
480-152317-13 MS	MW-11A	Total/NA	Ground Water	9016	
480-152317-13 MSD	MW-11A	Total/NA	Ground Water	9016	

Analysis Batch: 605936

Lab Sample ID	Client Sample ID	Ргер Туре	Matrix	Method	Prep Batch
480-152317-1	MW-16	Total/NA	Ground Water	9016	605761
480-152317-2	MW-20	Total/NA	Ground Water	9016	605761
480-152317-3	Duplicate	Total/NA	Ground Water	9016	605761
480-152317-4	MW-14	Total/NA	Ground Water	9016	605761
480-152317-6	MW-22	Total/NA	Ground Water	9016	605761

Eurofins TestAmerica, Buffalo

9

Job ID: 480-152317-1

QC Association Summary

General Chemistry (Continued)

Analysis Batch: 605936 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-152317-7	MW-23	Total/NA	Ground Water	9016	605761
480-152317-8	MW-13	Total/NA	Ground Water	9016	605761
480-152317-9	MW-17	Total/NA	Ground Water	9016	605761
480-152317-12	MW-12	Total/NA	Ground Water	9016	605761
480-152317-13	MW-11A	Total/NA	Ground Water	9016	605761
480-152317-14	EB	Total/NA	Water	9016	605761
480-152317-16	MW-21	Total/NA	Ground Water	9016	605761
MB 460-605761/1-A	Method Blank	Total/NA	Water	9016	605761
DLCK 460-605936/10	Lab Control Sample	Total/NA	Water	9016	
LCS 460-605761/2-A	Lab Control Sample	Total/NA	Water	9016	605761
480-152317-13 MS	MW-11A	Total/NA	Ground Water	9016	605761
480-152317-13 MSD	MW-11A	Total/NA	Ground Water	9016	605761

Client Sample ID: MW-16 Date Collected: 04/17/19 12:20 Date Received: 04/17/19 16:10

	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	9012B			470547	04/30/19 11:30	MDL	TAL BUF
Total/NA	Analysis	9012B		10	470679	05/01/19 11:40	MDL	TAL BUF
Total/NA	Prep	9016			605761	04/27/19 16:33	KYN	TAL EDI
Total/NA	Analysis	9016		5	605936	04/27/19 17:30	EMS	TAL EDI

Client Sample ID: MW-20 Date Collected: 04/17/19 15:30 Date Received: 04/17/19 16:10

	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	9012B			470547	04/30/19 11:30	MDL	TAL BUF
Total/NA	Analysis	9012B		5	470679	05/01/19 11:43	MDL	TAL BUF
Total/NA	Prep	9016			605761	04/27/19 16:33	KYN	TAL EDI
Total/NA	Analysis	9016		1	605936	04/27/19 17:30	EMS	TAL EDI

Client Sample ID: Duplicate Date Collected: 04/17/19 00:00 Date Received: 04/17/19 16:10

	Batch	Batch		Dilution	Batch	Prepared		
Prep Туре	Туре	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	469659	04/25/19 14:10	AEM	TAL BUF
Total/NA	Prep	3510C			469336	04/23/19 15:08	ATG	TAL BUF
Total/NA	Analysis	8270D_LL_PAH		1	469510	04/24/19 19:09	RJS	TAL BUF
Total/NA	Prep	9012B			470547	04/30/19 11:30	MDL	TAL BUF
Total/NA	Analysis	9012B		1	470677	05/01/19 10:56	MDL	TAL BUF
Total/NA	Prep	9016			605761	04/27/19 16:33	KYN	TAL EDI
Total/NA	Analysis	9016		1	605936	04/27/19 17:30	EMS	TAL EDI

Client Sample ID: MW-14 Date Collected: 04/17/19 09:30 Date Received: 04/17/19 16:10

_	Batch	Batch		Dilution	Batch	Prepared		
Prep Туре	Туре	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	9012B			470547	04/30/19 11:30	MDL	TAL BUF
Total/NA	Analysis	9012B		5	470679	05/01/19 11:44	MDL	TAL BUF
Total/NA	Prep	9016			605761	04/27/19 16:33	KYN	TAL EDI
Total/NA	Analysis	9016		1	605936	04/27/19 17:30	EMS	TAL EDI

Client Sample ID: MW-10 Date Collected: 04/17/19 10:30 Date Received: 04/17/19 16:10

	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	469659	04/25/19 14:36	AEM	TAL BUF
Total/NA	Prep	3510C			469336	04/23/19 15:08	ATG	TAL BUF
Total/NA	Analysis	8270D_LL_PAH		1	469510	04/24/19 19:38	RJS	TAL BUF

Job ID: 480-152317-1

Lab Sample ID: 480-152317-1 Matrix: Ground Water

Lab Sample ID: 480-152317-2

Lab Sample ID: 480-152317-3

Lab Sample ID: 480-152317-4

Lab Sample ID: 480-152317-5

Matrix: Ground Water

Matrix: Ground Water

Matrix: Ground Water

Matrix: Ground Water

Matrix: Ground Water

Client Sample ID: MW-22 Date Collected: 04/17/19 11:20 Date Received: 04/17/19 16:10

_	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	9012B			470547	04/30/19 11:30	MDL	TAL BUF
Total/NA	Analysis	9012B		5	470679	05/01/19 11:46	MDL	TAL BUF
Total/NA	Prep	9016			605761	04/27/19 16:33	KYN	TAL EDI
Total/NA	Analysis	9016		1	605936	04/27/19 17:30	EMS	TAL EDI

Client Sample ID: MW-23 Date Collected: 04/17/19 09:25 Date Received: 04/17/19 16:10

_	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	469666	04/25/19 16:45	OMI	TAL BUF
Total/NA	Prep	3510C			469336	04/23/19 15:08	ATG	TAL BUF
Total/NA	Analysis	8270D_LL_PAH		1	469510	04/24/19 20:08	RJS	TAL BUF
Total/NA	Prep	9012B			470547	04/30/19 11:30	MDL	TAL BUF
Total/NA	Analysis	9012B		1	470677	05/01/19 11:03	MDL	TAL BUF
Total/NA	Prep	9016			605761	04/27/19 16:33	KYN	TAL EDI
Total/NA	Analysis	9016		1	605936	04/27/19 17:30	EMS	TAL EDI

Client Sample ID: MW-13 Date Collected: 04/17/19 10:30 Date Received: 04/17/19 16:10

Lab Sample ID: 480-152317-8

Lab Sample ID: 480-152317-9

Matrix: Ground Water

Matrix: Ground Water

Γ	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	469666	04/25/19 17:09	OMI	TAL BUF
Total/NA	Prep	3510C			469336	04/23/19 15:08	ATG	TAL BUF
Total/NA	Analysis	8270D_LL_PAH		1	469510	04/24/19 20:37	RJS	TAL BUF
Total/NA	Prep	9012B			470548	04/30/19 12:50	MDL	TAL BUF
Total/NA	Analysis	9012B		1	470690	05/01/19 12:05	MDL	TAL BUF
Total/NA	Prep	9016			605761	04/27/19 16:33	KYN	TAL EDI
Total/NA	Analysis	9016		1	605936	04/27/19 17:30	EMS	TAL EDI

Client Sample ID: MW-17 Date Collected: 04/17/19 14:40 Date Received: 04/17/19 16:10

	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		2	469873	04/26/19 12:14	RJF	TAL BUF
Total/NA	Prep	3510C			469336	04/23/19 15:08	ATG	TAL BUF
Total/NA	Analysis	8270D_LL_PAH		20	469510	04/24/19 21:07	RJS	TAL BUF
Total/NA	Prep	9012B			470548	04/30/19 12:50	MDL	TAL BUF
Total/NA	Analysis	9012B		1	470690	05/01/19 12:06	MDL	TAL BUF
Total/NA	Prep	9016			605761	04/27/19 16:33	KYN	TAL EDI
Total/NA	Analysis	9016		1	605936	04/27/19 17:30	EMS	TAL EDI

Eurofins TestAmerica, Buffalo

Matrix: Ground Water

Matrix: Ground Water

Lab Sample ID: 480-152317-6

Lab Sample ID: 480-152317-7

Client Sample ID: MW-19 Date Collected: 04/17/19 13:10 Date Received: 04/17/19 16:10

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	
Total/NA Total/NA	Analysis Prep	8260C 3510C		100		04/25/19 17:57 04/23/19 15:08		TAL BUF TAL BUF
Total/NA	Analysis	8270D_LL_PAH		200		04/24/19 21:36		TAL BUF

Client Sample ID: MW-07 Date Collected: 04/17/19 11:10 Date Received: 04/17/19 16:10

	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		20	469659	04/25/19 15:03	AEM	TAL BUF
Total/NA	Prep	3510C			469336	04/23/19 15:08	ATG	TAL BUF
Total/NA	Analysis	8270D_LL_PAH		100	469510	04/24/19 22:06	RJS	TAL BUF

Client Sample ID: MW-12 Date Collected: 04/17/19 12:15 Date Received: 04/17/19 16:10

_	Batch	Batch		Dilution	Batch	Prepared		
Prep Туре	Туре	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	9012B			470548	04/30/19 12:50	MDL	TAL BUF
Total/NA	Analysis	9012B		5	470690	05/01/19 12:38	MDL	TAL BUF
Total/NA	Prep	9016			605761	04/27/19 16:33	KYN	TAL EDI
Total/NA	Analysis	9016		1	605936	04/27/19 17:30	EMS	TAL EDI

Client Sample ID: MW-11A Date Collected: 04/17/19 13:30 Date Received: 04/17/19 16:10

Lab Sample ID: 480-152317-13 Matrix: Ground Water

Lab Sample ID: 480-152317-14

	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		2	469873	04/26/19 12:38	RJF	TAL BUF
Total/NA	Prep	3510C			469336	04/23/19 15:08	ATG	TAL BUF
Total/NA	Analysis	8270D_LL_PAH		1	469510	04/24/19 22:35	RJS	TAL BUF
Total/NA	Prep	9012B			470548	04/30/19 12:50	MDL	TAL BUF
Total/NA	Analysis	9012B		1	470690	05/01/19 12:12	MDL	TAL BUF
Total/NA	Prep	9016			605761	04/27/19 16:33	KYN	TAL EDI
Total/NA	Analysis	9016		1	605936	04/27/19 17:30	EMS	TAL EDI
Total/NA	Analysis	SM 2540C		1	469623	04/24/19 22:16	SMH	TAL BUF
Total/NA	Analysis	SM 2540D		1	469624	04/24/19 22:38	SMH	TAL BUF

Client Sample ID: EB Date Collected: 04/17/19 13:15 Date Received: 04/17/19 16:10

	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	469666	04/25/19 18:44	OMI	TAL BUF

Job ID: 480-152317-1

Lab Sample ID: 480-152317-10 Matrix: Ground Water

Lab Sample ID: 480-152317-11

Lab Sample ID: 480-152317-12

Matrix: Ground Water

Matrix: Ground Water

Matrix: Ground Water

12 13 14

Eurofins TestAmerica, Buffalo

Matrix: Water

Client Sample ID: EB Date Collected: 04/17/19 13:15 Date Received: 04/17/19 16:10

	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			469336	04/23/19 15:08	ATG	TAL BUF
Total/NA	Analysis	8270D_LL_PAH		1	469510	04/24/19 23:05	RJS	TAL BUF
Total/NA	Prep	9012B			470548	04/30/19 12:50	MDL	TAL BUF
Total/NA	Analysis	9012B		1	470690	05/01/19 12:13	MDL	TAL BUF
Total/NA	Prep	9016			605761	04/27/19 16:33	KYN	TAL EDI
Total/NA	Analysis	9016		1	605936	04/27/19 17:30	EMS	TAL EDI

Client Sample ID: TB Date Collected: 04/17/19 00:00 Date Received: 04/17/19 16:10

	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	469666	04/25/19 19:08	OMI	TAL BUF

Client Sample ID: MW-21 Date Collected: 04/17/19 14:35 Date Received: 04/17/19 16:10

	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	9012B			470548	04/30/19 12:50	MDL	TAL BUF
Total/NA	Analysis	9012B		1	470690	05/01/19 12:18	MDL	TAL BUF
Total/NA	Prep	9016			605761	04/27/19 16:33	KYN	TAL EDI
Total/NA	Analysis	9016		1	605936	04/27/19 17:30	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

Job ID: 480-152317-1

Lab Sample ID: 480-152317-14

Lab Sample ID: 480-152317-15

Lab Sample ID: 480-152317-16

Matrix: Ground Water

Matrix: Water

Matrix: Water

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

5

Laboratory: Eurofins TestAmerica, Buffalo

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

Authority	Program	EPA Region	Identification Number	Expiration Date
New York	NELAP	2	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	EPA Region	Identification Number	Expiration Date
Connecticut	State Program	1	PH-0200	09-30-20
DE Haz. Subst. Cleanup Act (HSCA)	State Program	3	N/A	12-31-19
New Jersey	NELAP	2	12028	06-30-19
New York	NELAP	2	11452	04-01-20
Pennsylvania	NELAP	3	68-00522	02-28-20
Rhode Island	State Program	1	LAO00132	12-30-19
USDA	Federal		NJCA-003-08	05-03-21

Method Summary

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

Method	Method Description	Protocol	Laboratory
3260C	Volatile Organic Compounds by GC/MS	SW846	TAL BUF
3270D_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

5/31/2019 (Rev. 1)

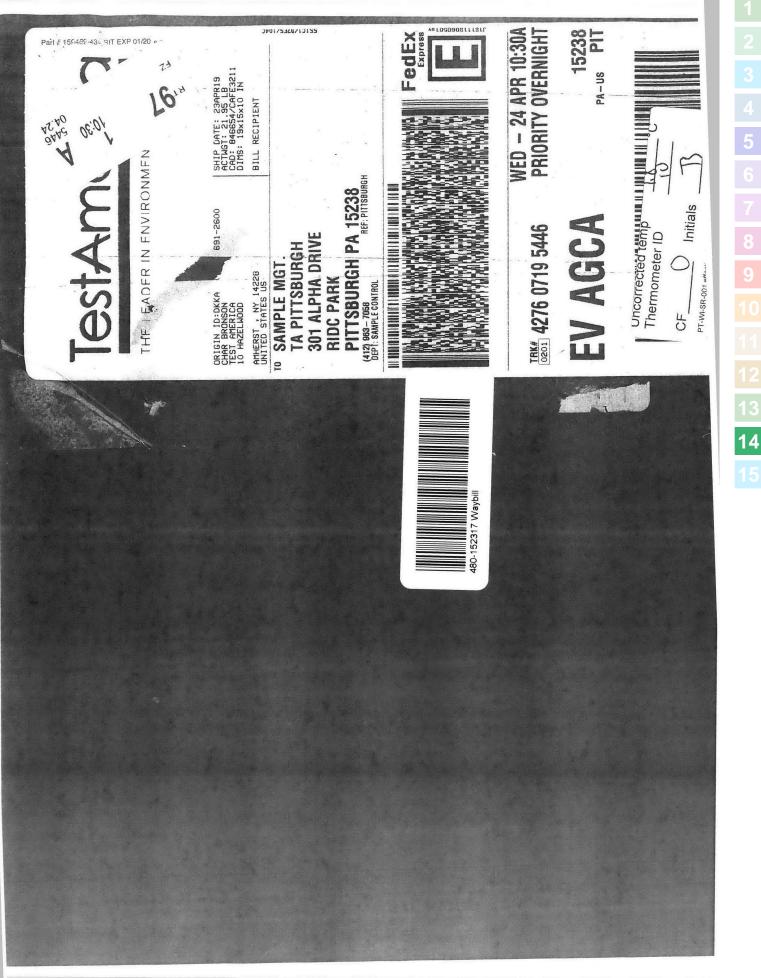
Sample Summary

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

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
180-152317-1	MW-16	Ground Water	04/17/19 12:20	04/17/19 16:10
80-152317-2	MW-20	Ground Water	04/17/19 15:30	04/17/19 16:10
480-152317-3	Duplicate	Ground Water	04/17/19 00:00	04/17/19 16:10
480-152317-4	MW-14	Ground Water	04/17/19 09:30	04/17/19 16:10
80-152317-5	MW-10	Ground Water	04/17/19 10:30	04/17/19 16:10
80-152317-6	MW-22	Ground Water	04/17/19 11:20	04/17/19 16:10
80-152317-7	MW-23	Ground Water	04/17/19 09:25	04/17/19 16:10
480-152317-8	MW-13	Ground Water	04/17/19 10:30	04/17/19 16:10
80-152317-9	MW-17	Ground Water	04/17/19 14:40	04/17/19 16:10
80-152317-10	MW-19	Ground Water	04/17/19 13:10	04/17/19 16:10
80-152317-11	MW-07	Ground Water	04/17/19 11:10	04/17/19 16:10
80-152317-12	MW-12	Ground Water	04/17/19 12:15	04/17/19 16:10
480-152317-13	MW-11A	Ground Water	04/17/19 13:30	04/17/19 16:10
480-152317-14	EB	Water	04/17/19 13:15	04/17/19 16:10
80-152317-15	ТВ	Water	04/17/19 00:00	04/17/19 16:10
80-152317-16	MW-21	Ground Water	04/17/19 14:35	04/17/19 16:10

10 Hazelwood Drive	r 83 24	Chair	Chain of Custody Record	304422	TestAmerico
HADRFEL, NY 14228 Phone: 716.691.2600 Fax: 716.691.7991	Regulatory Program:		es 🗌 R.C.R.A 🗌 Other:		THE LEADER IN ENVIRONMENTAL TESTING TestAmerica Laboratories, Inc. TAL-8210 (0713)
1 I	Project Manager: Rick	Ferrer	Site Contact: M. (JMM) MA	4171	COC No:
y Name: CET CONSULTANK	Tel/Fax:		Lab Contact: 5. Suhave Ca	Carrier: HANS DET-INUN	
City/State/Zip: Muhy with NY 1428	Analysis Iurnarou CALENDAR DAYS TAT If different from Below	ound Time WORKING DAYS	(LL91 HM (2) (4) (4) (4) (4) (4) (4) (4) (4		Sampler: For Lab Use Only: Walk-in Client:
Name: MINERA,	2 weeks 1 week 2 days		2 01.28) 2 01.52) 01.28) 000000000000000000000000000000000000		
Sample Identification	Sample Sample (c=comp. Date Time c=cab)	pe omp. (# of matrix cont.	1	480-152317 Chain of Custody	tody
LI-MW	4/17/16 1440 G	M	X XXXX		
MW -13		-	XXXXX		
MW-14	0620 /		XX		
MW-20	153		X XX		
MW- 21	1435	_	X XX		
MW-22	11 20		X XX		
MW -23	0925		XXXX		
MW- 12	1215		× ××		
d1-lb	1280		XXX		
MW-07	1110		XX		
01 - MW	CE01 /		XX		
411.	0	V V	XXXXXX		
eservation Used: 1= Ice, 2= HCI; 3= H2SO4; 4=HNO3; 5=NaOH; 6= Other	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.	se List any EPA Waste Code	s for the sample in t	Sample Disposal (A fee may be assessed if samples are retained longer than 1 month) he	ssessed if samples are retai	ned longer than 1 month)
Non-Hazard Elammable Skin Irritant	Doison B	Unknown	Return to Client	Disposal by Lab	Months
Special Instructions/QC Requirements & Comments:				1# 22	
Custody Seals Intact: 746 No	Custody Seal No.:		Cooler Temp. (°C): Obs'd:	Corr'd:	Therm ID No.:
yell	Company: GET	Date/Time:	Received by:	Company:	Date/Time:
Relinquished by	Company:	Date/Time:	Received by:	Company:	Date/Time;
Belinquished by:	Company:	Date/Time:	Received in Laboratory by U. 14010	10 Company 7	Date Filmer 17/19/16/6

	* 8204				THE LEADER IN ENVIRONMENTAL TESTING
Phone: 716.691.2600 Fax: 716.691.7991	Regulatory Program:	DW NPDES	🗌 RCRA 👘 Other:	- 1	TestAmerica Laboratories, Inc. TAL-8210 (0713)
Client	Project Manager: Riul	Frank S	Site Contact: M. (Almmidde	Date: UIT/10	COC No:
all Solth mule	Analysis Turnar		T T T T T T		
City/State/Zip: Amherent NY 1428	TATH different from Below	WORKING DAYS	(A) (A) (A) (A)		Valk-in Client:
Fax: Project Name: Mission Sonishon MIAP	2 weeks	(N/)			Lab Sampling:
A. A mark	2 days	() alu	2) 8) 8) 9) 1,3(0,5%)		Job / SDG No.:
Sample Identification	Sample Sample (c=comp. Date Time c=comp.	# of Matrix Cont.	Filtered Sam Perform MS CYANIC CYANIC FFAT FOS FOS FOS FOS FOS FOS FOS FOS FOS FOS		Sample Specific Notes:
MUN-19	4/17/19 13:0 G	3	XX		
TRUD BLANK		-	X		
EB	1315		X XXX		
DUPLICATE)		XXXXX		
	5	>			
F	5=NaOH; 6= Other		Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)	assessed if samples are retai	ed longer than 1 month)
Are any samples from a listed EPA Hazardous Waste? Pleas Commonts Section if the lab is to dispose of the sample.	Please List any EPA Waste Codes for the sample in the	or the sample in the			
Non-Hazard Elammable Skin Irritant	Poison B	Unknown	Return to Client	Disposal by Lab	Months
Special Instructions/QC Requirements & Comments:					
Custody Seals Intact: Tes No	Custody Seal No.:	1	Cooler Temp. (°C): Obs'd		Therm ID No.:
Relinquished by. U	Company. ED	Pater Ting 610	Received by:	Company:	Date/Time:
nquished by	Company:	Date/Time:	Received by:	Company:	Date/Time:
nquished by:	Company:	Date/Time:	Received in Laboratory by 100	olb company. A	Date Burge 17/19 1616



Amherst, NY 14228-2298)	hain	Chain of Custody Record	dy R	ecord				🐝 eurofins	ns Environment Testing TestAmerica
	Sampler:			Lab PM:	V:		Carrier Tracking No(s)	No(s):	COC No:	
Client Contact:	Dhone			SCHOV	SCHOVE, JOHN K		Ctato of Origin:		480-49129.1	
Shipping/Receiving				john.	schove@te	john schove@testamericainc.com	New York		Page 1 of 1	
Company: TestAmerica Laboratories, Inc.					Accreditations NELAP - N	Accreditations Required (See note): NELAP - New York			Job #: 480-152317-1	
Address: 301 Alpha Drive, RIDC Park,	Due Date Requested: 4/29/2019	÷				Vsis	Requested		Preservation Codes:	
City Prittsburgh State, Zp:	TAT Requested (days):	ys):							A - HCL B - NaOH C - Zn Acetate D - Nitric Acid	M - Hexane N - None O - AsNaO2 P - Na2O4S
PA, 15238					(E - NaHSO4	
Phone: 412-963-7058(Tel) 412-963-2468(Fax)	#0d								G - Amchlor H - Ascorbic A	
Email:	:# OM				(ON					
Project Name: GEI, Mineral Springs	Project #: 48008324				10 50				2010/2019/10/10	W - pH 4-5 Z - other (specify)
Site: AECOM, Mineral Springs	SSOW#:				r) asi				of col	
Samole Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, o G=grab)	Matrix (w=water, s=solid, O=waste/oli, BTETIssue A=Ait)	Field Filtered Perform MS/W I677/ Cyanide,		÷ 3.		rotal Number	48
	X	X	07	n Code:	X					
MW-16 (480-152317-1)	4/17/19	12:20 Eastern		Water	×				-	523
MW-20 (480-152317-2)	4/17/19	15:30 Fastern		Water	×				-	17 CI
Duplicate (480-152317-3)	4/17/19	Eastern		Water	×				1	nain
MW-14 (480-152317-4)	4/17/19	09:30 Fastern		Water	×				1	of Cu
MW-22 (480-152317-6)	4/17/19	11:20 Fastern		Water	×				~	ustod
MW-23 (480-152317-7)	4/17/19	09:25 Eastern		Water	×				+	
MW-13 (480-152317-8)	4/17/19	10:30 Eastern		Water	×				-	
MW-17 (480-152317-9)	4/17/19	14:40 Eastern		Water	×		-		1	
MW-12 (480-152317-12)	4/17/19	12:15 Eastern		Water	×				-	
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/lests/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 laboratory or other instructions will be provided. Any changes to accreditation same structure to date, return the signed Chain of Custody attesting to said complicance to TestAmerica Laboratores. Inc. attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said complicance to TestAmerica Laboratores. Inc.	boratories, Inc. places the c s/tests/matrix being analyze urrent to date, return the sig	wnership of n ed, the sample ined Chain of	hethod, analyte & a is must be shipped Custody attesting t	ccreditation back to the o said comp	compliance u TestAmerica I licance to Tes	pon out subcontract laboratories. laboratory or other instructions wi stAmerica Laboratories, Inc.	This sample shipm III be provided. Any	nent is forwarded un changes to accred	nder chain-of-custod litation status should	 If the laboratory does not be brought to TestAmerica
Possible Hazard Identification					Sample	Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)	e assessed if s	amples are re	tained longer ti	ian 1 month)
Uncommed Deliverable Requested: I, II, III, IV, Other (specify)	Primary Delivera	iverable Rank:	2		Special	Special Instructions/QC Requirements:	Disposal By Lab nents:] de	Archive For	Months
Empty Kit Relinguished by:		Date:			Time:		Method of	Method of Shipment:		
Relinquished by	Date/Time: 4.23-79		545 Cor	Company	Rece	Received by: D (N B)	Siv	Date/Time:	24-10	Company H
Relinquished by:			Cor	Company	Rec	Received by:	>	Date/Time:	5	06 Company
Relinquished by:	Date/Time:		Cor	Company	Rece	Received by:		Date/Time;		Company
Custody Seals Intact: Custody Seal No.:	-				Cool	Cooler Temperature(s) °C and Other Remarks	Remarks:			

301 Alpha Drive, RIDC Park, City Pittsburgh State, Zip: PA, 15238 Phone:	Sampler: Phone: Due Date Requested: 4/29/2019 TAT Requested (days): PO #:		Lab PM Schov E Maiit john.s	Lab PM: Schove, John R E-Mait: john.schove@testt Accreditations R Accreditations R	Lab PM: Schove, John R E-Mail: john.schove@testamericainc.com Accreditations Required (See note): NELAP - New York Analysis	Carrier Tracking No(s) State of Origin: New York S Requested	(s):	COC No: 460-54691.1 Page: Page: Page 1 of 1 Jub# Jub# A - HCL M M B - Nacht R - Ancetate D - Nitric Actid F - MedoH S R F - MedoH S R F - Methor F - Amchor S R F - Amchor S R R F - Amcho	vdes: M - Haxane M - Haxane N - None O - ANNaO2 P - Na2C045 Q - Na22O3 R - Na22O3 S - H22C03 S - H22C03 S - H22C03	
412-963-7058(Tel) 412-963-2468(Fax) Email. Eroject Name: GEI, Mineral Springs Site: AECOM, Mineral Springs AECOM, Mineral Springs AECOM, Mineral Springs MW-13 (480-152317-8)	W0 #: Project #: 4008324 Ssow#: 5ample A/17/19 10:30 4/17/19 Eastern		Sample Matrix Type (Wavater, Saolia, Carcomp, Carcomp, Carcomp, Carcomp, Carcomp, Carcomp, Carcomb, Anal Preservation Code: Preservation Code: Water	Field Filtered Sample (Yes or No) Perform MS/MSD (Yes or No) × 1677/ Cyanide, Available (Flow Injection)				Amenior Amenior Amenior 		
Nee: Since laboratory accreditations are subject to change, TestAmerica Laboratories, fine laboratories, fine laboratories, fine laboratory does not accorditations are subject to change. TestAmerica Laboratories, fine laboratory does not careford in the change. TestAmerica Laboratories, fine labor	Primary Deliverable Rank: 2 Date/Time: Date/Time: Date/	hip of method, samples must thain of Custod	Company Company Company Company	tion compliance upon conternance upo	Sample Disposal (A fee may be assess Section To Client Received by: Received by: Received by: Received by: Cooler Temperature(s) °C and Other Remarks	Sample Disposal (A fee may be assessed if samples shipment is forwarded under chain-of-custody. If the lest merica laboratory or other instructions will be provided. Any changes to accreditation status should be brough estomerica laboratories, inc. Sample Disposal (A fee may be assessed if samples are retained longer than 1 month). Companies (A fee may be assessed if samples are retained longer than 1 month). Sample Disposal (A fee may be assessed if samples are retained longer than 1 month). Companies (A fee may be assessed if samples are retained longer than 1 month). Return To Client Disposal By Lab Archive For Month Return To Client Disposal By Lab Received by: Method of Shipment: Received by: Date/Time: Received by: Date/Time: Received by: Date/Time:	s sample shipment is forward provided. Any changes to a provided. Any changes to a see of f samples are retended for the samples are retended for the samples are retended. Any changes to a provided. Any changes	rided under chain-of-cus accreditation status shou accreditation status shou	ady. If the laboratory does no id be brought to TestAmerica 1 month) Months Company Company Company	t

Ĭ

Client Information (Sub Contract Lab)	Sampler:			Lab PM: Schove,	e, John R		Carrier Tracking No(s)	king No(s):	COC No: 480-49130.1	
Client Contact Shipping/Receiving	Phone:			E-Mail: john.so	hove@test	E-Mail: john.schove@testamericainc.com	State of Origin: New York	gin:	Page: Page 1 of 2	
company: TestAmerica Laboratories, Inc.				₹Z	creditations R ELAP - Nev	Accreditations Required (See note): NELAP - New York			Job # 480-152317-1	
Address: 777 New Durham Road,	Due Date Requested: 4/29/2019	ų				Analys	Analysis Requested		Preservation Codes	ğ
City. Edison State, Zip:	TAT Requested (days):	iys):							B - NaCH B - NaCH C - Zn Acetate D - Nitic Acetate	N - NORE N - ASNAC P - ASNAC2 P - N22045
NJ, U8817 Phone: 2549-39000Tel) 732-549-3679(Fax)	i# Od								F - MeOH G - Amchlor	
1	жож			-N 10 8	(@3				н - Ascorbic I - Ice J - Di Water	0
Project Name: GEI, Mineral Springs	Project #: 48008324				ക്രം					W - pH 4-5 Z - other (specify)
Site: AECOM, Mineral Springs	SSOW#:			1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	e(0)(a[=				of Other:	
и - 1 Sto - 2 Соц - 5 (9 Ац 				Matrix (W-water, Snsolid, Eliteted	016_Prep				19dmuN	
Sample Identification - Client ID (Lab ID)	Sample Date	Sample (6.5		ល់របះរ					Special Instructions/Note:
		\mathbf{t}	Preservation Code:	1	X					
MW-16 (480-152317-1)	4/17/19	12:20 Fastern		Water	×				-	
MW-20 (480-152317-2)	4/17/19	15:30 Eastern		Water	×				-	
Duplicate (480-152317-3)	4/17/19	Eastern		Water	×				-	
MW-14 (480-152317-4)	4/17/19	09:30 Eastern		Water	×				۲ ۳ -	
MW-22 (480-152317-6)	4/17/19	11:20 Fastern		Water	×				F	
MW-23 (480-152317-7)	4/17/19	09:25 Fastern		Water	×					
MW-13 (480-152317-8)	4/17/19	10:30 Fastern		Water	×				-	
MW-17 (480-152317-9)	4/17/19	14:40 Eastern		Water	×				T	r F
MW-12 (480-152317-12)	4/17/19	12:15 Eastern		Water	×				-	3
Note: Since laboratory accreditations are subject to change, TestAmenca 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 Ohgin listed above for analysis/restamative being analyzed, the samples must be shipped back to the TestAmenca laboratory or other instructions will be provided. Any changes to accreditation status should be brought to TestAmenca Laboratories, Inc. attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said complicance to TestAmenca Laboratories, Inc.	Laboratories, Inc. places the ysis/tests/matrix being analyz e current to date, return the s	s ownership of m red, the samples signed Chain of C	ethod, analyte must be shipp Custody attesti	& accreditation bed back to the ng to said comp	compliance up FestAmerica la licance to Test	on out subcontract lat soratory or other instru America Laboratories,	ioratories. This sample actions will be provided Inc.	e shipment is forw: I. Any changes to	arded under chain-of-cus accreditation status sho	tody. If the laboratory does rule be brought to TestAmeric
Possible Hazard Identification					Sample L	isposal (A fee n	ay be assessed i	if samples are	Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)	ian 1 month)
unconnimed Deliverable Requested: I, II, III, IV, Other (specify)	Primary Deliverable Rank:	able Rank: 2			Special In	Special Instructions/QC Requirements	Disposal By Lab quirements:	y Lab	Archive For	Months
Empty Kit Relinquisbed by:		Date:			Time:		Metho	Method of Shipment:		
Relinquistred by	Date/Time:	7	5 J	Company	Received by:	d by:		Date/Time:		Company
Relinquished by Peol Ex	Date/The: 1/2-3/19		0	Company	Received by:	devi-		24723	119 0930	Contract.
Relinquished by:	Date/Time:		<u>o</u>	Company	Received by:	d by:		Date/Time:		Company
	J-	<i>)° 0</i>	4	6-		CS = 6	CS=607702			

ca, Buffalo		
ns TestAmerica	10 Hazelwood Drive	NY 14228-2298
Eurofins 1	10 Hazelw	Amherst,

Chain of Custody Record

💸 eurofins | Environment Testing | TestAmerica

Phone (716) 691-2600 Fax (716) 691-7991	, L			ľ	,				ĺ		
Client Information (Sub Contract Lab)	Sampler			Schove	Lap PM: Schove, John R		Came	Carner Tracking No(s):		COC No: 480-49130.2	
	Phone:			E-Mail	chow@testamori	incipal com	State c	State of Origin:		Page: Dogo 2 of 2	
Gilippilig/Receiving					Actreditations Require	id (See note)	MENI			r aye z u z Ioh#:	
, Inc.		-			NELAP - New York	k				480-152317-1	
Address: 777 New Durham Road,	Due Date Requested: 4/29/2019	ed:				Analysi	Analysis Requested	pa		Preservation Codes	des: M . Hevane
	TAT Requested (days):	ays):								B - NaOH C - Zn Acetate	
State, Zip. NJ, 08817					· · · ·					D - Nitric Acid E - NaHSO4	P - Na204S Q - Na203
Phone: 732-549-3900(Tel) 732-549-3679(Fax)	;#Od				. (0					F - MeOH G - Amchlor H - Ascorbic Acid	
Email:	#OM				(68)					l - Ice J - Di Water	
Project Name: GEI, Mineral Springs	Project #: 48008324				.લંગ્રેલ્સ)				enistr	K - EDTA L - EDA	W - pH 4-5 Z - other (specify)
Site: AECOM, Mineral Springs	SSOW#:				w)@FA				100 10	Other:	
Samula Identification (Tient ID (I ah ID)	Samnie Date	Sample Time	Sample Type (C=comp,	Matrix (wwater, S=solid, Orwaste/oli,	(1년)(1116)(1116) (1년)(1116)(1116) (1년)(1116)(1116) (1116)(1116)(1116)(1116) (1116)(116)(1116)(1116)(1116)(1116)(1116)(1116)(1116)(1116)(1116)(1116)(1116)(1116)(1116)(1116)(1116)(1116)(1116)(redmuvi leto	A A A A A A A A A A A A A A A A A A A	en e
		X	-1 03	_	X		-				
MW-11A (480-152317-13)	4/17/19	13:30 Fastern		Water	×						
EB (480-152317-14)	4/17/19	13:15 Fastern		Water	×				-		
MW-21 (480-152317-16)	4/17/19	14:35 Fastern		Water	×				-		
									-		
	<u>+</u>						, ,			• •	
											:
									-		
Note: Since laboratory accreditations are subject to change, TestAmenca Laboratories, Inc. places the	ratories, Inc. places th		method, analyt	e & accreditatio	ownership of method, analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody. I	t subcontract labo	pratories. This s	ample shipment is fo	orwarded und	ter chain-of-custody	
Possible Hazard Identification					Sample Dispo	sal (A fee ma	ay be assess	Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)	are retaine	d longer than 1	month)
Unconfirmed					Return To Client Disc	o Client		Disposal By Lab		ve For	Months
Deliverable Requested: I, II, III, IV, Other (specify)	Primary Delivera	able Rank: 2			Special Instruct	tions/QC Req	uirements:				
Empty Kit Relinquished by:		Date:			Time:			Method of Shipment:	.,		
	Date/Time: 4-23- 19		15 25	Company	Received by:			Date/Time:	.e:		Company
Reinand F	241/25/1°	0		Company	Received	Å		Cate/10	4/2X19	0260	Company Col ;
Relinduished by:	Date Time:		<u> </u>	Company	Received by:			Date/Time:	le:		Company
Custody Seals Intact: Custody Seal No.:					Cooler Tempe	Cooler Temperature(s) °C and Other Remarks:	Other Remarks:	-			

Ver: 01/16/2019

5 6

13 14

Client: GEI Consultants, Inc.

Login Number: 152317 List Number: 1 Creator: Velickovic, Zoran

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.	False	04/17/19
Samples requiring field filtration have been filtered in the field.	N/A	
Chlorine Residual checked.	N/A	

List Source: Eurofins TestAmerica, Buffalo

Client: GEI Consultants, Inc.

Login Number: 152317 List Number: 3 0 Creator: Armh . .

Creator: Armbruster, Chris		
Question	Answer	Comment
Radioactivity wasn't checked or is = background as measured by a survey meter.</td <td>N/A</td> <td></td>	N/A	
The cooler's custody seal, if present, is intact.	True	609702
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	4.0°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	

🛟 eurofins

Environment Testing TestAmerica

ANALYTICAL REPORT

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

Laboratory Job ID: 480-152316-1

Client Project/Site: GEI, Mineral Springs Revision: 1

For:

GEI Consultants, Inc. 90B John Muir Drive Suite 104 Amherst, New York 14228

Attn: Richard Frappa

Authorized for release by: 6/11/2019 10:27:10 AM John Schove, Project Manager II (716)504-9838 john.schove@testamericainc.com

The test results in this report meet all 2003 NELAC and 2009 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.



Table of Contents

Cover Page	1
Table of Contents	2
Definitions/Glossary	3
Case Narrative	4
Detection Summary	5
Client Sample Results	6
Surrogate Summary	12
QC Sample Results	14
QC Association Summary	19
Lab Chronicle	21
Certification Summary	23
Method Summary	24
Sample Summary	25
Chain of Custody	26
Receipt Checklists	30

3

Qualifiers

GC/MS VOA	
Qualifiar	<u></u> .

GC/MS VOA Qualifier	Qualifier Description	
U	Indicates the analyte was analyzed for but not detected.	
х	Surrogate is outside control limits	5
GC/MS Semi	i VOA	
Qualifier	Qualifier Description	
U	Indicates the analyte was analyzed for but not detected.	
General Che	mistry	
Qualifier	Qualifier Description	_
*	LCS or LCSD is outside acceptance limits.	8
۸	ICV,CCV,ICB,CCB, ISA, ISB, CRI, CRA, DLCK or MRL standard: Instrument related QC is outside acceptance limits.	
В	Compound was found in the blank and sample.	
F1	MS and/or MSD Recovery is outside acceptance limits.	e e
Н	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.	
Glossary		
Abbreviation	These commonly used abbreviations may or may not be present in this report.	1
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis	
%R	Percent Recovery	
~		

¤	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: 480-152316-1

Laboratory: Eurofins TestAmerica, Buffalo

Narrative

Job Narrative 480-152316-1

Revision

This report has been revised to remove results that were not requested.

Receipt

The samples were received on 4/18/2019 11:38 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 3.2° C.

GC/MS VOA

Method(s) 8260C: Surrogate recovery for the following samples were outside the upper control limit: (CCVIS 480-469666/3), (LCS 480-469666/5), (MB 480-469666/7), SW-02 (480-152316-2), (CCVIS 480-469873/4), (LCS 480-469873/6) and (MB 480-469873/8). Due to holding time limitations the associated samples were not reanalyzed.

Method(s) 8260C: The surrogate 4-Bromofluorobenzene (Surr) and Dibromofluoromethane (Surr) were outside the 20%D limits on the continuing calibration verification (CCV) but was within laboratory limits. The following sample is impacted: (CCVIS 480-469873/4) and : (CCVIS 480-469666/3).

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

GC/MS Semi VOA

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

General Chemistry

Method(s) 9012B: The LCS for preparation batch 480-470844 and analytical batch 480-470909 recovered outside of the method acceptable limits of 90-110%. The LCS recovery was 87%. Due to results being within historical limits and holding time constraints the results are being reported. SW-01 (480-152316-1), SW-02 (480-152316-2), SW-03 (480-152316-3), SW-04 (480-152316-4) and SW-05 (480-152316-5)

Method(s) 9012B: A continuing calibration verification (CCV) associated with batch 480-470909 recovered above the upper control limit for Cyanide. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported. The following samples are impacted: SW-01 (480-152316-1) and SW-04 (480-152316-4).

Method(s) SM 2540C: Reanalysis of the following samples were performed outside of the analytical holding time due to analyst error, initial analysis non-reportable : SW-01 (480-152316-1) and SW-02 (480-152316-2).

Method(s) 9012B: A continuing calibration verification (CCV) associated with batch 480-470909 recovered above the upper control limit for Cyanide. Samples associated with this CCV were detected for the affected analyte due to holding time constraints the data have been qualified and reported. The following samples are impacted: SW-02 (480-152316-2), SW-03 (480-152316-3) and SW-04 (480-152316-4).

Method(s) 9012B: A continuing calibration blank (CCB) associated with batch 480-470909 contained Cyanide above the reporting limit (RL). Samples associated with this CCB were not non-detect nor 10X the analyte concentration in the CCB. Due to holding time constraints the results are qualified and reported. The following samples are impacted: SW-02 (480-152316-2), SW-03 (480-152316-3) and SW-04 (480-152316-4).

Method(s) 9012B: A continuing calibration blank (CCB) associated with batch 480-470909 contained Cyanide above the reporting limit (RL). The samples associated with this CCB were non-detects for the affected analyte; therefore, re-extraction and/or reanalysis of the samples were not performed and the data have been reported. The following samples are impacted: SW-01 (480-152316-1) and SW-05 (480-152316-5).

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

Organic Prep

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

Detection Summary

Client: GEI Consultants, Inc. Project/Site: GEI, Mineral Springs Job ID: 480-152316-1

Client Sample ID: SW-01						Lab Sa	am	ple ID: 48	30-152316-1
Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Total Dissolved Solids	771	H	10.0	4.0	mg/L	1	_	SM 2540C	Total/NA
Client Sample ID: SW-02						Lab Sa	arr	ple ID: 48	30-152316-2
Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Cyanide, Total	0.040	B*^	0.010	0.0050	mg/L	1	—	9012B	Total/NA
Cyanide, Free	9.5		5.0	1.5	ug/L	1		9016	Total/NA
Total Dissolved Solids	363	Н	10.0	4.0	mg/L	1		SM 2540C	Total/NA
Client Sample ID: SW-03						Lab Sa	arr	ple ID: 48	30-152316-3
Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Cyanide, Total	0.20	B * ^	0.010	0.0050	mg/L	1	-	9012B	Total/NA
Cyanide, Free	6.6		5.0	1.5	ug/L	1		9016	Total/NA
Client Sample ID: SW-04						Lab Sa	arr	ple ID: 48	30-152316-4
Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Cyanide, Total	0.010	B * F1 ^	0.010	0.0050	mg/L	1	_	9012B	Total/NA
Client Sample ID: SW-05						Lab Sa	am	ple ID: 48	30-152316-5
No Detections.									
Client Sample ID: TB						Lab Sa	an	nple ID: 48	30-152316-6
No Detections.								-	

This Detection Summary does not include radiochemical test results.

Client Sample ID: SW-01 Date Collected: 04/18/19 09:10 Date Received: 04/18/19 11:38

Dibromofluoromethane (Surr)

Toluene-d8 (Surr)

Method: 8260C - Volatile O	rganic Compo	unds by G	C/MS						
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	1.0	U	1.0	0.41	ug/L			04/25/19 15:33	1
Ethylbenzene	1.0	U	1.0	0.74	ug/L			04/25/19 15:33	1
Toluene	1.0	U	1.0	0.51	ug/L			04/25/19 15:33	1
Xylenes, Total	2.0	U	2.0	0.66	ug/L			04/25/19 15:33	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)			77 - 120			-		04/25/19 15:33	1
4-Bromofluorobenzene (Surr)	118		73 - 120					04/25/19 15:33	1

75 - 123

80 - 120

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

122

101

Analyte	Result	Qualifier	RL	MDL		D	Prepared	Analyzed	Dil Fac
2-Methylnaphthalene	0.50	U	0.50	0.38	ug/L		04/23/19 15:08	04/24/19 18:10	1
Acenaphthene	0.50	U	0.50	0.30	ug/L		04/23/19 15:08	04/24/19 18:10	1
Acenaphthylene	0.50	U	0.50	0.34	ug/L		04/23/19 15:08	04/24/19 18:10	1
Anthracene	0.50	U	0.50	0.39	ug/L		04/23/19 15:08	04/24/19 18:10	1
Benzo(a)anthracene	0.50	U	0.50	0.40	ug/L		04/23/19 15:08	04/24/19 18:10	1
Benzo(a)pyrene	0.50	U	0.50	0.33	ug/L		04/23/19 15:08	04/24/19 18:10	1
Benzo(b)fluoranthene	0.50	U	0.50	0.30	ug/L		04/23/19 15:08	04/24/19 18:10	1
Benzo(g,h,i)perylene	0.50	U	0.50	0.37	ug/L		04/23/19 15:08	04/24/19 18:10	1
Benzo(k)fluoranthene	0.50	U	0.50	0.085	ug/L		04/23/19 15:08	04/24/19 18:10	1
Chrysene	0.50	U	0.50	0.32	ug/L		04/23/19 15:08	04/24/19 18:10	1
Dibenz(a,h)anthracene	0.50	U	0.50	0.33	ug/L		04/23/19 15:08	04/24/19 18:10	1
Fluoranthene	0.50	U	0.50	0.36	ug/L		04/23/19 15:08	04/24/19 18:10	1
Fluorene	0.50	U	0.50	0.37	ug/L		04/23/19 15:08	04/24/19 18:10	1
Indeno(1,2,3-cd)pyrene	0.50	U	0.50	0.44	ug/L		04/23/19 15:08	04/24/19 18:10	1
Naphthalene	0.50	U	0.50	0.42	ug/L		04/23/19 15:08	04/24/19 18:10	1
Phenanthrene	0.50	U	0.50	0.38	ug/L		04/23/19 15:08	04/24/19 18:10	1
Pyrene	0.50	U	0.50	0.36	ug/L		04/23/19 15:08	04/24/19 18:10	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
2-Fluorobiphenyl	92		48 - 120				04/23/19 15:08	04/24/19 18:10	1
Nitrobenzene-d5	90		46 - 120				04/23/19 15:08	04/24/19 18:10	1
p-Terphenyl-d14	70		24 - 136				04/23/19 15:08	04/24/19 18:10	1
General Chemistry									
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	0.010	U * ^	0.010	0.0050	mg/L		05/01/19 10:30	05/02/19 12:03	1
Cyanide, Free	5.0	U	5.0	1.5	ug/L		04/27/19 16:33	04/27/19 17:30	1
Total Dissolved Solids	771	н	10.0	4.0	mg/L			05/30/19 16:05	1
Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids	4.0	U	4.0	4.0	mg/L			04/25/19 12:04	1

Lab Sample ID: 480-152316-1 Matrix: Surface Water

04/25/19 15:33

04/25/19 15:33

Client Sample ID: SW-02 Date Collected: 04/18/19 08:00 Date Received: 04/18/19 11:38

Toluene-d8 (Surr)

Method: 8260C - Volatile O	rganic Compo	unds by G	C/MS						
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	1.0	U	1.0	0.41	ug/L			04/26/19 13:01	1
Ethylbenzene	1.0	U	1.0	0.74	ug/L			04/26/19 13:01	1
Toluene	1.0	U	1.0	0.51	ug/L			04/26/19 13:01	1
Xylenes, Total	2.0	U	2.0	0.66	ug/L			04/26/19 13:01	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	117		77 - 120			-		04/26/19 13:01	1
4-Bromofluorobenzene (Surr)	122	X	73 - 120					04/26/19 13:01	1
Dibromofluoromethane (Surr)	124	x	75 - 123					04/26/19 13:01	1

80 - 120

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

102

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2-Methylnaphthalene	0.50	U	0.50	0.38	ug/L		04/23/19 15:08	04/24/19 18:40	1
Acenaphthene	0.50	U	0.50	0.30	ug/L		04/23/19 15:08	04/24/19 18:40	1
Acenaphthylene	0.50	U	0.50	0.34	ug/L		04/23/19 15:08	04/24/19 18:40	1
Anthracene	0.50	U	0.50	0.39	ug/L		04/23/19 15:08	04/24/19 18:40	1
Benzo(a)anthracene	0.50	U	0.50	0.40	ug/L		04/23/19 15:08	04/24/19 18:40	1
Benzo(a)pyrene	0.50	U	0.50	0.33	ug/L		04/23/19 15:08	04/24/19 18:40	1
Benzo(b)fluoranthene	0.50	U	0.50	0.30	ug/L		04/23/19 15:08	04/24/19 18:40	1
Benzo(g,h,i)perylene	0.50	U	0.50	0.37	ug/L		04/23/19 15:08	04/24/19 18:40	1
Benzo(k)fluoranthene	0.50	U	0.50	0.085	ug/L		04/23/19 15:08	04/24/19 18:40	1
Chrysene	0.50	U	0.50	0.32	ug/L		04/23/19 15:08	04/24/19 18:40	1
Dibenz(a,h)anthracene	0.50	U	0.50	0.33	ug/L		04/23/19 15:08	04/24/19 18:40	1
Fluoranthene	0.50	U	0.50	0.36	ug/L		04/23/19 15:08	04/24/19 18:40	1
Fluorene	0.50	U	0.50	0.37	ug/L		04/23/19 15:08	04/24/19 18:40	1
Indeno(1,2,3-cd)pyrene	0.50	U	0.50	0.44	ug/L		04/23/19 15:08	04/24/19 18:40	1
Naphthalene	0.50	U	0.50	0.42	ug/L		04/23/19 15:08	04/24/19 18:40	1
Phenanthrene	0.50	U	0.50	0.38	ug/L		04/23/19 15:08	04/24/19 18:40	1
Pyrene	0.50	U	0.50	0.36	ug/L		04/23/19 15:08	04/24/19 18:40	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
2-Fluorobiphenyl	100		48 - 120				04/23/19 15:08	04/24/19 18:40	1
Nitrobenzene-d5	90		46 - 120				04/23/19 15:08	04/24/19 18:40	1
p-Terphenyl-d14	71		24 - 136				04/23/19 15:08	04/24/19 18:40	1
General Chemistry									
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	0.040	B * ^	0.010	0.0050	mg/L		05/01/19 10:30	05/02/19 12:04	1
Cyanide, Free	9.5		5.0	1.5	ug/L		04/27/19 16:33	04/27/19 17:30	1
Total Dissolved Solids	363	н	10.0	4.0	mg/L			05/30/19 16:05	1
Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids	4.0	U	4.0	4.0	mg/L			04/25/19 12:04	1

Lab Sample ID: 480-152316-2 **Matrix: Surface Water**

04/26/19 13:01

Eurofins TestAmerica, Buffalo

5 6

Client Sample Results

Client: GEI Consultants, Inc.

Job ID: 480-152316-1

Project/Site: GEI, Mineral Springs Lab Sample ID: 480-152316-3 **Client Sample ID: SW-03** Date Collected: 04/18/19 08:30 **Matrix: Water** Date Received: 04/18/19 11:38 **General Chemistry** Analyte Result Qualifier RL MDL Unit Prepared Analyzed Dil Fac D Cyanide, Total 0.20 B*^ 0.010 0.0050 mg/L 05/01/19 10:30 05/02/19 12:06 1 Cyanide, Free 5.0 04/27/19 16:33 04/27/19 17:30 1 6.6 1.5 ug/L

Client Sample Results

Job ID: 480-152316-1

Project/Site: GEI, Mineral Springs Client Sample ID: SW-04 Date Collected: 04/18/19 08:40

Date Received: 04/18/19 11:38

_

Client: GEI Consultants, Inc.

Lab Sample ID: 480-152316-4

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	0.010	B * F1 ^	0.010	0.0050	mg/L		05/01/19 10:30	05/02/19 12:07	1
Cyanide, Free	5.0	U	5.0	1.5	ug/L		04/27/19 16:33	04/27/19 17:30	1

Client Sample Results

Job ID: 480-152316-1

Matrix: Water

Lab Sample ID: 480-152316-5

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

Client Sample ID: SW-05 Date Collected: 04/18/19 09:00 Date Received: 04/18/19 11:38

General Chemistry Analyte Result Qualifier RL MDL Unit Prepared Analyzed Dil Fac D Cyanide, Total 0.010 U*^ 0.010 0.0050 mg/L 05/01/19 10:30 05/02/19 12:10 Cyanide, Free 5.0 U 5.0 04/27/19 16:33 04/27/19 17:30 1.5 ug/L

1

1

Client Sample ID: TB Date Collected: 04/18/19 00:00 Date Received: 04/18/19 11:38

.lob	١D·	480-152316-1
000	ю.	400-102010-1

Lab Sample ID: 480-152316-6

Matrix: Water

Method: 8260C - Volatile O	rganic Compo	unds by G	C/MS						
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	1.0	U	1.0	0.41	ug/L			04/25/19 16:21	1
Ethylbenzene	1.0	U	1.0	0.74	ug/L			04/25/19 16:21	1
Toluene	1.0	U	1.0	0.51	ug/L			04/25/19 16:21	1
Xylenes, Total	2.0	U	2.0	0.66	ug/L			04/25/19 16:21	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)			77 - 120			-		04/25/19 16:21	1
4-Bromofluorobenzene (Surr)	118		73 - 120					04/25/19 16:21	1
Dibromofluoromethane (Surr)	118		75 - 123					04/25/19 16:21	1
Toluene-d8 (Surr)	101		80 - 120					04/25/19 16:21	1

Surrogate Summary

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

		_

Prep Type: Total/NA

			Pe	ercent Surro	ogate Recove	ry (Acceptance Lir	nits)	
Lab Sampla ID	Client Sample ID	DCA (77-120)	BFB (73-120)	DBFM (75-123)	TOL (80-120)			
Lab Sample ID 480-152316-1	SW-01	$\frac{(77-120)}{114}$	118	122	101			
480-152316-2	SW-02	117	122 X	124 X	102			

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

			Pe	ercent Surro	ogate Recovery	(Acceptance Lin	nits)
		DCA	BFB	DBFM	TOL		
Lab Sample ID	Client Sample ID	(77-120)	(73-120)	(75-123)	(80-120)		
480-152316-6	ТВ	116	118	118	101		
LCS 480-469666/5	Lab Control Sample	121 X	127 X	122	112		
LCS 480-469873/6	Lab Control Sample	111	127 X	122	109		
MB 480-469666/7	Method Blank	118	124 X	123	107		
MB 480-469873/8	Method Blank	117	117	126 X	102		
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: Surface Water Prep

Prep Type: Total/NA

			Pe	ercent Surrog	ate Recovery (Ac	ceptance Limit
		FBP	NBZ	TPHd14		
Lab Sample ID	Client Sample ID	(48-120)	(46-120)	(24-136)		
480-152316-1	SW-01	92	90	70		
480-152316-2	SW-02	100	90	71		

FBP = 2-Fluorobiphenyl 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 (48-120) (46-120) (24-136) Lab Sample ID **Client Sample ID** LCS 480-469336/2-A Lab Control Sample 92 85 103 LCSD 480-469336/3-A Lab Control Sample Dup 100 82 86 MB 480-469336/1-A Method Blank 95 95 92 Surrogate Legend FBP = 2-Fluorobiphenyl

Surrogate Summary

Client: GEI Consultants, Inc. Project/Site: GEI, Mineral Springs NBZ = Nitrobenzene-d5 TPHd14 = p-Terphenyl-d14

Prep Type: Total/NA

Prep Type: Total/NA

Client Sample ID: Method Blank

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

Lab Sample ID: MB 480-469666/7

Matrix: Water Analysis Batch: 469666

	MB	МВ							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	1.0	U	1.0	0.41	ug/L			04/25/19 12:05	1
Ethylbenzene	1.0	U	1.0	0.74	ug/L			04/25/19 12:05	1
Toluene	1.0	U	1.0	0.51	ug/L			04/25/19 12:05	1
Xylenes, Total	2.0	U	2.0	0.66	ug/L			04/25/19 12:05	1

	MB MB				
Surrogate	%Recovery Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	118	77 - 120		04/25/19 12:05	1
4-Bromofluorobenzene (Surr)	124 X	73 - 120		04/25/19 12:05	1
Dibromofluoromethane (Surr)	123	75 - 123		04/25/19 12:05	1
Toluene-d8 (Surr)	107	80 - 120		04/25/19 12:05	1

Lab Sample ID: LCS 480-469666/5 Matrix: Water

Analysis Batch: 469666

	Spike	LCS	LCS				%Rec.	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Benzene	25.0	23.2		ug/L		93	71 - 124	
Ethylbenzene	25.0	24.4		ug/L		97	77 - 123	
Toluene	25.0	25.0		ug/L		100	80 - 122	
Xylenes, Total	50.0	48.3		ug/L		97	76 - 122	

	LCS	LCS	
Surrogate	%Recovery	Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	121	X	77 - 120
4-Bromofluorobenzene (Surr)	127	X	73 - 120
Dibromofluoromethane (Surr)	122		75 - 123
Toluene-d8 (Surr)	112		80 - 120

Lab Sample ID: MB 480-469873/8 **Matrix: Water** Analysis Batch: 469873

	MB	MB					
Analyte	Result	Qualifier	RL	MDL Unit	D Prepared	Analyzed	Dil Fac
Benzene	1.0	U	1.0	0.41 ug/L		04/26/19 11:21	1
Ethylbenzene	1.0	U	1.0	0.74 ug/L		04/26/19 11:21	1
Toluene	1.0	U	1.0	0.51 ug/L		04/26/19 11:21	1
Xylenes, Total	2.0	U	2.0	0.66 ug/L		04/26/19 11:21	1

	MB MB				
Surrogate	%Recovery Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	117	77 - 120		04/26/19 11:21	1
4-Bromofluorobenzene (Surr)	117	73 - 120		04/26/19 11:21	1
Dibromofluoromethane (Surr)	126 X	75 - 123		04/26/19 11:21	1
Toluene-d8 (Surr)	102	80 - 120		04/26/19 11:21	1

....

Eurofins TestAmerica, Buffalo

Client Sample ID: Method Blank

Prep Type: Total/NA

Client Sample ID: Lab Control Sample

6/11/2019 (Rev. 1)

QC Sample Results

Prep Type: Total/NA

Prep Batch: 469336

8

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

Lab Sample ID: LCS 480-469873/6 Matrix: Water						Client Sample ID: Lab Control Samp Prep Type: Total/N				
Analysis Batch: 469873										
			Spike	LCS	LCS				%Rec.	
Analyte			Added	Result	Qualifier	Unit	D	%Rec	Limits	
Benzene			25.0	22.6		ug/L		90	71 - 124	
Ethylbenzene			25.0	24.1		ug/L		96	77 - 123	
Toluene			25.0	24.0		ug/L		96	80 - 122	
Xylenes, Total			50.0	47.5		ug/L		95	76 - 122	
	LCS	LCS								
Surrogate	%Recovery	Qualifier	Limits							
1,2-Dichloroethane-d4 (Surr)			77 - 120							
4-Bromofluorobenzene (Surr)	127	X	73 - 120							
Dibromofluoromethane (Surr)	122		75 - 123							
Toluene-d8 (Surr)	109		80 - 120							
_ /lethod: 8270D_LL_P	AH - Semiv	volatile C	Organic Co	mpoun	ds (GC	/MS) L	ow le	evel P	AH	
Lab Sample ID: MB 480-4	469336/1-A						Clie	ent Sam	ple ID: Method Bla	

Lab Sample ID: MB 480-469336/1-A Matrix: Water Analysis Batch: 469510

							Frep Batch.	403330
MB	MB							
Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
0.50	U	0.50	0.38	ug/L		04/23/19 15:08	04/24/19 16:42	1
0.50	U	0.50	0.30	ug/L		04/23/19 15:08	04/24/19 16:42	1
0.50	U	0.50	0.34	ug/L		04/23/19 15:08	04/24/19 16:42	1
0.50	U	0.50	0.39	ug/L		04/23/19 15:08	04/24/19 16:42	1
0.50	U	0.50	0.40	ug/L		04/23/19 15:08	04/24/19 16:42	1
0.50	U	0.50	0.33	ug/L		04/23/19 15:08	04/24/19 16:42	1
0.50	U	0.50	0.30	ug/L		04/23/19 15:08	04/24/19 16:42	1
0.50	U	0.50	0.37	ug/L		04/23/19 15:08	04/24/19 16:42	1
0.50	U	0.50	0.085	ug/L		04/23/19 15:08	04/24/19 16:42	1
0.50	U	0.50	0.32	ug/L		04/23/19 15:08	04/24/19 16:42	1
0.50	U	0.50	0.33	ug/L		04/23/19 15:08	04/24/19 16:42	1
0.50	U	0.50	0.36	ug/L		04/23/19 15:08	04/24/19 16:42	1
0.50	U	0.50	0.37	ug/L		04/23/19 15:08	04/24/19 16:42	1
0.50	U	0.50	0.44	ug/L		04/23/19 15:08	04/24/19 16:42	1
0.50	U	0.50	0.42	ug/L		04/23/19 15:08	04/24/19 16:42	1
0.50	U	0.50	0.38	ug/L		04/23/19 15:08	04/24/19 16:42	1
0.50	U	0.50	0.36	ug/L		04/23/19 15:08	04/24/19 16:42	1
MB	МВ							
%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
	Result 0.50	Result Qualifier 0.50 U 0.50 U	Result Qualifier RL 0.50 U 0.50 0.50 U 0.50 </td <td>Result Qualifier RL MDL 0.50 U 0.50 0.38 0.50 U 0.50 0.38 0.50 U 0.50 0.30 0.50 U 0.50 0.31 0.50 U 0.50 0.34 0.50 U 0.50 0.39 0.50 U 0.50 0.39 0.50 U 0.50 0.39 0.50 U 0.50 0.33 0.50 U 0.50 0.33 0.50 U 0.50 0.33 0.50 U 0.50 0.31 0.50 U 0.50 0.32 0.50 U 0.50 0.33 0.50 U 0.50 0.33 0.50 U 0.50 0.33 0.50 U 0.50 0.37 0.50 U 0.50 0.44 0.50 U <td< td=""><td>Result Qualifier RL MDL Unit 0.50 U 0.50 0.38 ug/L 0.50 U 0.50 0.38 ug/L 0.50 U 0.50 0.30 ug/L 0.50 U 0.50 0.34 ug/L 0.50 U 0.50 0.34 ug/L 0.50 U 0.50 0.39 ug/L 0.50 U 0.50 0.39 ug/L 0.50 U 0.50 0.39 ug/L 0.50 U 0.50 0.33 ug/L</td><td>Result Qualifier RL MDL Unit D 0.50 U 0.50 0.38 ug/L 0 0.50 U 0.50 0.38 ug/L 0 0.50 U 0.50 0.30 ug/L 0 0.50 U 0.50 0.34 ug/L 0 0.50 U 0.50 0.39 ug/L 0 0.50 U 0.50 0.40 ug/L 0 0.50 U 0.50 0.40 ug/L 0 0.50 U 0.50 0.33 ug/L 0 0</td></td<><td>Result Qualifier RL MDL Unit P Prepared 0.50 U 0.50 0.38 ug/L 04/23/19 15:08 0.50 U 0.50 0.30 ug/L 04/23/19 15:08 0.50 U 0.50 0.34 ug/L 04/23/19 15:08 0.50 U 0.50 0.34 ug/L 04/23/19 15:08 0.50 U 0.50 0.39 ug/L 04/23/19 15:08 0.50 U 0.50 0.39 ug/L 04/23/19 15:08 0.50 U 0.50 0.33 ug/L 04/23/19 15:08 0.50 U 0.50 0.33 ug/L 04/23/19 15:08 0.50 U 0.50 0.30 ug/L 04/23/19 15:08 0.50 U 0.50 0.33 ug/L 04/23/19 15:08 0.50 U 0.50 0.33 ug/L 04/23/19 15:08 0.50 U 0.50 0.33 ug/L</td><td>MB MB Result Qualifier RL MDL Unit D Prepared Analyzed 0.50 U 0.50 0.38 ug/L 04/23/19 15:08 04/24/19 16:42 0.50 U 0.50 0.30 ug/L 04/23/19 15:08 04/24/19 16:42 0.50 U 0.50 0.34 ug/L 04/23/19 15:08 04/24/19 16:42 0.50 U 0.50 0.39 ug/L 04/23/19 15:08 04/24/19 16:42 0.50 U 0.50 0.39 ug/L 04/23/19 15:08 04/24/19 16:42 0.50 U 0.50 0.33 ug/L 04/23/19 15:08 04/24/19 16:42 0.50 U 0.50 0.33 ug/L 04/23/19 15:08 04/24/19 16:42 0.50 U 0.50 0.37 ug/L 04/23/19 15:08 04/24/19 16:42 0.50 U 0.50 0.33 ug/L 04/23/19 15:08 04/24/19 16:42 0.50 U 0.50</td></td>	Result Qualifier RL MDL 0.50 U 0.50 0.38 0.50 U 0.50 0.38 0.50 U 0.50 0.30 0.50 U 0.50 0.31 0.50 U 0.50 0.34 0.50 U 0.50 0.39 0.50 U 0.50 0.39 0.50 U 0.50 0.39 0.50 U 0.50 0.33 0.50 U 0.50 0.33 0.50 U 0.50 0.33 0.50 U 0.50 0.31 0.50 U 0.50 0.32 0.50 U 0.50 0.33 0.50 U 0.50 0.33 0.50 U 0.50 0.33 0.50 U 0.50 0.37 0.50 U 0.50 0.44 0.50 U <td< td=""><td>Result Qualifier RL MDL Unit 0.50 U 0.50 0.38 ug/L 0.50 U 0.50 0.38 ug/L 0.50 U 0.50 0.30 ug/L 0.50 U 0.50 0.34 ug/L 0.50 U 0.50 0.34 ug/L 0.50 U 0.50 0.39 ug/L 0.50 U 0.50 0.39 ug/L 0.50 U 0.50 0.39 ug/L 0.50 U 0.50 0.33 ug/L</td><td>Result Qualifier RL MDL Unit D 0.50 U 0.50 0.38 ug/L 0 0.50 U 0.50 0.38 ug/L 0 0.50 U 0.50 0.30 ug/L 0 0.50 U 0.50 0.34 ug/L 0 0.50 U 0.50 0.39 ug/L 0 0.50 U 0.50 0.40 ug/L 0 0.50 U 0.50 0.40 ug/L 0 0.50 U 0.50 0.33 ug/L 0 0</td></td<> <td>Result Qualifier RL MDL Unit P Prepared 0.50 U 0.50 0.38 ug/L 04/23/19 15:08 0.50 U 0.50 0.30 ug/L 04/23/19 15:08 0.50 U 0.50 0.34 ug/L 04/23/19 15:08 0.50 U 0.50 0.34 ug/L 04/23/19 15:08 0.50 U 0.50 0.39 ug/L 04/23/19 15:08 0.50 U 0.50 0.39 ug/L 04/23/19 15:08 0.50 U 0.50 0.33 ug/L 04/23/19 15:08 0.50 U 0.50 0.33 ug/L 04/23/19 15:08 0.50 U 0.50 0.30 ug/L 04/23/19 15:08 0.50 U 0.50 0.33 ug/L 04/23/19 15:08 0.50 U 0.50 0.33 ug/L 04/23/19 15:08 0.50 U 0.50 0.33 ug/L</td> <td>MB MB Result Qualifier RL MDL Unit D Prepared Analyzed 0.50 U 0.50 0.38 ug/L 04/23/19 15:08 04/24/19 16:42 0.50 U 0.50 0.30 ug/L 04/23/19 15:08 04/24/19 16:42 0.50 U 0.50 0.34 ug/L 04/23/19 15:08 04/24/19 16:42 0.50 U 0.50 0.39 ug/L 04/23/19 15:08 04/24/19 16:42 0.50 U 0.50 0.39 ug/L 04/23/19 15:08 04/24/19 16:42 0.50 U 0.50 0.33 ug/L 04/23/19 15:08 04/24/19 16:42 0.50 U 0.50 0.33 ug/L 04/23/19 15:08 04/24/19 16:42 0.50 U 0.50 0.37 ug/L 04/23/19 15:08 04/24/19 16:42 0.50 U 0.50 0.33 ug/L 04/23/19 15:08 04/24/19 16:42 0.50 U 0.50</td>	Result Qualifier RL MDL Unit 0.50 U 0.50 0.38 ug/L 0.50 U 0.50 0.38 ug/L 0.50 U 0.50 0.30 ug/L 0.50 U 0.50 0.34 ug/L 0.50 U 0.50 0.34 ug/L 0.50 U 0.50 0.39 ug/L 0.50 U 0.50 0.39 ug/L 0.50 U 0.50 0.39 ug/L 0.50 U 0.50 0.33 ug/L	Result Qualifier RL MDL Unit D 0.50 U 0.50 0.38 ug/L 0 0.50 U 0.50 0.38 ug/L 0 0.50 U 0.50 0.30 ug/L 0 0.50 U 0.50 0.34 ug/L 0 0.50 U 0.50 0.39 ug/L 0 0.50 U 0.50 0.40 ug/L 0 0.50 U 0.50 0.40 ug/L 0 0.50 U 0.50 0.33 ug/L 0 0	Result Qualifier RL MDL Unit P Prepared 0.50 U 0.50 0.38 ug/L 04/23/19 15:08 0.50 U 0.50 0.30 ug/L 04/23/19 15:08 0.50 U 0.50 0.34 ug/L 04/23/19 15:08 0.50 U 0.50 0.34 ug/L 04/23/19 15:08 0.50 U 0.50 0.39 ug/L 04/23/19 15:08 0.50 U 0.50 0.39 ug/L 04/23/19 15:08 0.50 U 0.50 0.33 ug/L 04/23/19 15:08 0.50 U 0.50 0.33 ug/L 04/23/19 15:08 0.50 U 0.50 0.30 ug/L 04/23/19 15:08 0.50 U 0.50 0.33 ug/L 04/23/19 15:08 0.50 U 0.50 0.33 ug/L 04/23/19 15:08 0.50 U 0.50 0.33 ug/L	MB MB Result Qualifier RL MDL Unit D Prepared Analyzed 0.50 U 0.50 0.38 ug/L 04/23/19 15:08 04/24/19 16:42 0.50 U 0.50 0.30 ug/L 04/23/19 15:08 04/24/19 16:42 0.50 U 0.50 0.34 ug/L 04/23/19 15:08 04/24/19 16:42 0.50 U 0.50 0.39 ug/L 04/23/19 15:08 04/24/19 16:42 0.50 U 0.50 0.39 ug/L 04/23/19 15:08 04/24/19 16:42 0.50 U 0.50 0.33 ug/L 04/23/19 15:08 04/24/19 16:42 0.50 U 0.50 0.33 ug/L 04/23/19 15:08 04/24/19 16:42 0.50 U 0.50 0.37 ug/L 04/23/19 15:08 04/24/19 16:42 0.50 U 0.50 0.33 ug/L 04/23/19 15:08 04/24/19 16:42 0.50 U 0.50

Surrogate	%Recovery	Qualifier	Limits
2-Fluorobiphenyl	95		48 - 120
Nitrobenzene-d5	95		46 - 120
p-Terphenyl-d14	92		24 - 136

Lab Sample ID: LCS 480-469336/2-A Matrix: Water Analysis Batch: 469510

Analysis Batch: 469510	Spike	1.05	LCS				Prep Batch: 469336 %Rec.
Analyte	Added	-	Qualifier	Unit	D	%Rec	Limits
2-Methylnaphthalene	32.0	30.0		ug/L		94	48 - 120
Acenaphthene	32.0	30.0		ug/L		94	60 - 120

Page 15 of 32

Prep Type: Total/NA

Eurofins TestAmerica, Buffalo

04/23/19 15:08 04/24/19 16:42

04/23/19 15:08 04/24/19 16:42

04/23/19 15:08 04/24/19 16:42

Client Sample ID: Lab Control Sample

1

1

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

Lab Sample ID: LCS 480-469336/2-A Matrix: Water

Client Sample ID: Lab Control Sample Prep Type: Total/NA Prep Batch: 469336

Analysis Batch: 469510	Spike	LCS	LCS				Prep Batch: 469336 %Rec.
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits
Acenaphthylene	32.0	32.6		ug/L		102	63 - 120
Anthracene	32.0	32.7		ug/L		102	69 - 131
Benzo(a)anthracene	32.0	30.0		ug/L		94	62 - 142
Benzo(a)pyrene	32.0	31.9		ug/L		100	46 - 156
Benzo(b)fluoranthene	32.0	31.8		ug/L		99	50 - 149
Benzo(g,h,i)perylene	32.0	32.5		ug/L		102	34 - 189
Benzo(k)fluoranthene	32.0	30.7		ug/L		96	47 - 147
Chrysene	32.0	30.4		ug/L		95	69 - 140
Dibenz(a,h)anthracene	32.0	31.8		ug/L		99	35 - 176
Fluoranthene	32.0	37.9		ug/L		118	67 - 133
Fluorene	32.0	34.0		ug/L		106	66 - 129
Indeno(1,2,3-cd)pyrene	32.0	31.7		ug/L		99	57 - 161
Naphthalene	32.0	27.2		ug/L		85	48 - 120
Phenanthrene	32.0	30.2		ug/L		94	67 - 130
Pyrene	32.0	34.4		ug/L		108	58 - 136

	LCS LCS	
Surrogate	%Recovery Qua	lifier Limits
2-Fluorobiphenyl	92	48 - 120
Nitrobenzene-d5	85	46 - 120
p-Terphenyl-d14	103	24 - 136

Lab Sample ID: LCSD 480-469336/3-A Matrix: Water

Analysis Batch: 469510 **Prep Batch: 469336** LCSD LCSD RPD Spike %Rec. Analyte Added **Result Qualifier** Unit D %Rec Limits RPD Limit 2-Methylnaphthalene 32.0 28.5 48 - 120 21 ug/L 89 5 Acenaphthene 32.0 28.2 ug/L 88 60 - 120 6 24 ug/L Acenaphthylene 32.0 28.6 89 63 - 120 18 13 32.0 Anthracene 31.7 ug/L 99 69 - 131 3 15 Benzo(a)anthracene 32.0 29.2 ug/L 91 62 - 142 3 15 32.0 86 15 Benzo(a)pyrene 27.4 ug/L 46 - 156 15 32.0 Benzo(b)fluoranthene 29.3 ug/L 92 50 - 149 8 15 Benzo(g,h,i)perylene 32.0 28.5 ug/L 89 34 - 189 13 15 32.0 27.9 ug/L 87 47 - 147 10 22 Benzo(k)fluoranthene 32.0 29.0 ug/L 91 5 Chrysene 69 - 140 15 Dibenz(a,h)anthracene 32.0 28.1 88 35 - 176 12 15 ug/L Fluoranthene 32.0 35.2 7 ug/L 110 67 - 133 15 Fluorene 32.0 33.9 ug/L 106 66 - 129 0 15 32.0 28.4 89 15 ug/L 57 - 161 Indeno(1,2,3-cd)pyrene 11 88 29 Naphthalene 32.0 28.2 ug/L 48 - 120 4 Phenanthrene 32.0 31.0 ug/L 97 67 - 130 3 15 32.0 25 Pyrene 31.8 ug/L 99 58 - 136 8

	LCSD LC	SD	
Surrogate	%Recovery Qu	alifier	Limits
2-Fluorobiphenyl	100		48 - 120
Nitrobenzene-d5	82		46 - 120
p-Terphenyl-d14	86		24 - 136

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

Eurofins TestAmerica, Buffalo

QC Sample Results

Job ID: 480-152316-1

Method: 9012B - Cyanide, Total andor Amenable

Lab Sample ID: MB 480-47084 Matrix: Water	4/1-A									С	lier	nt Samp	ple ID: Metho Prep Type: T	
Analysis Batch: 470909		мв	мр										Prep Batch:	4/0844
Analyta	Ba		Qualifier		ы			l lmit		D	Dre	nored	Analyzad	
Analyte					RL		MDL			D		epared	Analyzed	Dil Fac
Cyanide, Total	0.00	0581	J		0.010	0.0	0050	mg/L		0	5/01	/19 10:30	05/02/19 11:44	1
Lab Sample ID: LCS 480-47084	44/2-A								Clie	ent S	am	ple ID:	Lab Control	Sample
Matrix: Water												· · · ·	Prep Type: T	
Analysis Batch: 470909													Prep Batch:	
				Spike		LCS	LCS						%Rec.	
Analyte				Added		Result	Qual	lifier	Unit		D	%Rec	Limits	
Cyanide, Total				0.250		0.218	* ٨		mg/L			87	90 - 110	
Lah Comple ID: 490 452246 4 (MC											Clie	nt Comple ID	
Lab Sample ID: 480-152316-4 I	113											Cile	nt Sample ID	
Matrix: Water													Prep Type: T	
Analysis Batch: 470909	Comments	6		Owline			MO						Prep Batch:	4/084
Analysis	Sample		•	Spike			MS	1 6 1 e	l lm!+		_	0/ De -	%Rec.	
Analyte	Result			Added		Result			Unit		D	%Rec	Limits	
Cyanide, Total	0.010	R . H	1 ^	0.100		0.0925	F1 ^		mg/L			83	90 - 110	
Method: 9016 - Cyanide, F	ree													
Lab Sample ID: MB 460-60576	1/1_0									C	رما	nt Samr	ple ID: Metho	d Blan
	1/ 1-A									Ŭ			Prep Type: T	
Matrix: Water														
		MB	MB										Prep Batch:	
Matrix: Water Analysis Batch: 605936	Re	MB			RI		мпі	Unit		п	Pre		Prep Batch:	60576 [°]
Matrix: Water Analysis Batch: 605936 Analyte	Re	sult	Qualifier		RL	I	MDL 1.5			D - 04		epared	Prep Batch: Analyzed	60576 Dil Fa
Matrix: Water	Re		Qualifier		RL 5.0	I		Unit ug/L				epared	Prep Batch:	60576 Dil Fa
Matrix: Water Analysis Batch: 605936 Analyte Cyanide, Free		sult	Qualifier			I			Clie	- 04	4/27	epared /19 16:33	Analyzed 04/27/19 17:30	60576 Dil Fa
Matrix: Water Analysis Batch: 605936 Analyte Cyanide, Free Lab Sample ID: LCS 460-60576		sult	Qualifier						Clie	- 04	4/27	epared /19 16:33	Prep Batch: Analyzed 04/27/19 17:30 Lab Control	60576 Dil Fa
Matrix: Water Analysis Batch: 605936 Analyte Cyanide, Free Lab Sample ID: LCS 460-60576 Matrix: Water		sult	Qualifier			I			Clie	- 04	4/27	epared /19 16:33	Prep Batch: Analyzed 04/27/19 17:30 Lab Control Prep Type: T	60576 Dil Fa Sample otal/N/
Matrix: Water Analysis Batch: 605936 Analyte Cyanide, Free Lab Sample ID: LCS 460-60576		sult	Qualifier	Spike					Clie	- 04	4/27	epared /19 16:33	Prep Batch: Analyzed 04/27/19 17:30 Lab Control	60576 Dil Fa Sample otal/N/
Matrix: Water Analysis Batch: 605936 Analyte Cyanide, Free Lab Sample ID: LCS 460-60576 Matrix: Water Analysis Batch: 605936		sult	Qualifier	Spike Added			1.5 LCS	ug/L	Clie	- 04 ent S	4/27 Sam	epared /19 16:33	Prep Batch: Analyzed 04/27/19 17:30 Lab Control Prep Type: T Prep Batch:	60576 Dil Fa Sample otal/N
Matrix: Water Analysis Batch: 605936 Analyte Cyanide, Free Lab Sample ID: LCS 460-60576 Matrix: Water Analysis Batch: 605936 Analyte		sult	Qualifier	•		LCS	1.5 LCS	ug/L		- 04 ent S	4/27 Sam	epared /19 16:33 aple ID:	Prep Batch: Analyzed 04/27/19 17:30 Lab Control Prep Type: T Prep Batch: %Rec.	60576 Dil Fa Sample otal/N/
Matrix: Water Analysis Batch: 605936 Analyte Cyanide, Free Lab Sample ID: LCS 460-60576 Matrix: Water Analysis Batch: 605936 Analyte Cyanide, Free	61/2-A	sult	Qualifier	Added		LCS Result	1.5 LCS	ug/L	Unit ug/L	ent S	4/27 Sam	2pared /19 16:33 2ple ID: %Rec 91 -	Prep Batch: Analyzed 04/27/19 17:30 Lab Control Prep Type: T Prep Batch: %Rec. Limits 78-110	60576 Dil Fa Sample otal/N/ 60576
Matrix: Water Analysis Batch: 605936 Analyte Cyanide, Free Lab Sample ID: LCS 460-60576 Matrix: Water Analysis Batch: 605936 Analyte Cyanide, Free Lab Sample ID: DLCK 460-605	61/2-A	sult	Qualifier	Added		LCS Result	1.5 LCS	ug/L	Unit ug/L	ent S	4/27 Sam	2pared /19 16:33 2ple ID: %Rec 91 -	Prep Batch: Analyzed 04/27/19 17:30 Lab Control Prep Type: T Prep Batch: %Rec. Limits 78 - 110 Lab Control	60576 Dil Fa Sample otal/N/ 60576 Sample
Matrix: Water Analysis Batch: 605936 Analyte Cyanide, Free Lab Sample ID: LCS 460-60576 Matrix: Water Analysis Batch: 605936 Analyte Cyanide, Free Lab Sample ID: DLCK 460-605 Matrix: Water	61/2-A	sult	Qualifier	Added		LCS Result	1.5 LCS	ug/L	Unit ug/L	ent S	4/27 Sam	2pared /19 16:33 2ple ID: %Rec 91 -	Prep Batch: Analyzed 04/27/19 17:30 Lab Control Prep Type: T Prep Batch: %Rec. Limits 78-110	60576 Dil Fa Sample otal/N/ 60576 Sample
Matrix: Water Analysis Batch: 605936 Analyte Cyanide, Free Lab Sample ID: LCS 460-60576 Matrix: Water Analysis Batch: 605936 Analyte Cyanide, Free Lab Sample ID: DLCK 460-605	61/2-A	sult	Qualifier	Added 50.0		LCS Result 45.53	1.5 LCS Qual	ug/L	Unit ug/L	ent S	4/27 Sam	2pared /19 16:33 2ple ID: %Rec 91 -	Prep Batch: Analyzed 04/27/19 17:30 Lab Control Prep Type: T Prep Batch: %Rec. Limits 78 - 110 Lab Control Prep Type: T	60576 Dil Fa Sample otal/N/ 60576 Sample
Matrix: Water Analysis Batch: 605936 Analyte Cyanide, Free Lab Sample ID: LCS 460-60576 Matrix: Water Analysis Batch: 605936 Analyte Cyanide, Free Lab Sample ID: DLCK 460-605 Matrix: Water Analysis Batch: 605936	61/2-A	sult	Qualifier	Added 50.0 Spike		LCS Result 45.53 DLCK	1.5 LCS Qual	ug/L lifier	Unit ug/L Clie	ent S	4/27 Sam	epared /19 16:33 eple ID: %Rec 91 91 - eple ID:	Prep Batch: Analyzed 04/27/19 17:30 Lab Control Prep Type: T Prep Batch: %Rec. Limits 78-110 Lab Control Prep Type: T %Rec.	60576 Dil Fa Sample otal/N/ 60576 Sample
Matrix: Water Analysis Batch: 605936 Analyte Cyanide, Free Lab Sample ID: LCS 460-60576 Matrix: Water Analysis Batch: 605936 Analyte Cyanide, Free Lab Sample ID: DLCK 460-605 Matrix: Water Analysis Batch: 605936 Analyte	61/2-A	sult	Qualifier	Added 50.0 Spike Added		LCS Result 45.53 DLCK Result	1.5 Qual	ug/L lifier	Unit ug/L Clie	ent S	4/27 Sam	%pared /19 16:33 %ple ID: %Rec 91 %ple ID: %Rec 91	Prep Batch: Analyzed 04/27/19 17:30 Lab Control Prep Type: T Prep Batch: %Rec. Limits 78-110 Lab Control Prep Type: T %Rec. Limits	60576 ⁴ Dil Fa Sample otal/N/ 60576 ⁴ Sample
Matrix: Water Analysis Batch: 605936 Analyte Cyanide, Free Lab Sample ID: LCS 460-60576 Matrix: Water Analysis Batch: 605936 Analyte Cyanide, Free Lab Sample ID: DLCK 460-605 Matrix: Water Analysis Batch: 605936	61/2-A	sult	Qualifier	Added 50.0 Spike		LCS Result 45.53 DLCK	1.5 Qual	ug/L lifier	Unit ug/L Clie	ent S	4/27 Sam	epared /19 16:33 eple ID: %Rec 91 91 - eple ID:	Prep Batch: Analyzed 04/27/19 17:30 Lab Control Prep Type: T Prep Batch: %Rec. Limits 78-110 Lab Control Prep Type: T %Rec.	60576 Dil Fa Sample otal/N/ 60576 Sample
Matrix: Water Analysis Batch: 605936 Analyte Cyanide, Free Lab Sample ID: LCS 460-60576 Matrix: Water Analysis Batch: 605936 Analyte Cyanide, Free Lab Sample ID: DLCK 460-605 Matrix: Water Analysis Batch: 605936 Analyte Cyanide, Free	61/2-A 936/10	<u></u>	Qualifier U	Added 50.0 Spike Added 2.00	5.0	LCS Result 45.53 DLCK Result	1.5 Qual	ug/L lifier	Unit ug/L Clie	ent S	4/27 Sam	%pared /19 16:33 %ple ID: %Rec 91 %ple ID: %Rec 91	Prep Batch: Analyzed 04/27/19 17:30 Lab Control Prep Type: T Prep Batch: %Rec. Limits 78-110 Lab Control Prep Type: T %Rec. Limits	60576 Dil Fa Sample otal/N/ 60576 Sample
Matrix: Water Analysis Batch: 605936 Analyte Cyanide, Free Lab Sample ID: LCS 460-60576 Matrix: Water Analysis Batch: 605936 Analyte Cyanide, Free Lab Sample ID: DLCK 460-605 Matrix: Water Analysis Batch: 605936 Analyte Cyanide, Free Analysis Batch: 605936	61/2-A 936/10 s, Tota	<u></u>	Qualifier U	Added 50.0 Spike Added 2.00	5.0	LCS Result 45.53 DLCK Result	1.5 Qual	ug/L lifier	Unit ug/L Clie	ent S	4/27 ≩am ≩am	appared /19 16:33 aple ID: %Rec 91 aple ID: %Rec 132	Prep Batch: Analyzed 04/27/19 17:30 Lab Control Prep Type: T Prep Batch: %Rec. Limits 78 - 110 Lab Control Prep Type: T %Rec. Limits 50 - 150	60576 Dil Fa Sampl- otal/N/ 60576 Sampl- otal/N/
Matrix: Water Analysis Batch: 605936 Analyte Cyanide, Free Lab Sample ID: LCS 460-60576 Matrix: Water Analysis Batch: 605936 Analyte Cyanide, Free Lab Sample ID: DLCK 460-605 Matrix: Water Analysis Batch: 605936 Analyte Cyanide, Free Analysis Batch: 605936 Analyte Cyanide, Free Method: SM 2540C - Solids	61/2-A 936/10 s, Tota	<u></u>	Qualifier U	Added 50.0 Spike Added 2.00	5.0	LCS Result 45.53 DLCK Result	1.5 Qual	ug/L lifier	Unit ug/L Clie	ent S	4/27 ≩am ≩am	appared /19 16:33 aple ID: %Rec 91 aple ID: %Rec 132	Prep Batch: Analyzed 04/27/19 17:30 Lab Control Prep Type: T Prep Batch: %Rec. Limits 78 - 110 Lab Control Prep Type: T %Rec. Limits 50 - 150 ple ID: Metho	60576 Dil Fa Sample otal/N/ 60576 Sample otal/N/
Matrix: Water Analysis Batch: 605936 Analyte Cyanide, Free Lab Sample ID: LCS 460-60576 Matrix: Water Analysis Batch: 605936 Analyte Cyanide, Free Lab Sample ID: DLCK 460-605 Matrix: Water Analysis Batch: 605936 Analyte Cyanide, Free Analysis Batch: 605936 Analyte Cyanide, Free Method: SM 2540C - Solids Lab Sample ID: MB 480-475415	61/2-A 936/10 s, Tota	<u></u>	Qualifier U	Added 50.0 Spike Added 2.00	5.0	LCS Result 45.53 DLCK Result	1.5 Qual	ug/L lifier	Unit ug/L Clie	ent S	4/27 ≩am ≩am	appared /19 16:33 aple ID: %Rec 91 aple ID: %Rec 132	Prep Batch: Analyzed 04/27/19 17:30 Lab Control Prep Type: T Prep Batch: %Rec. Limits 78 - 110 Lab Control Prep Type: T %Rec. Limits 50 - 150	60576 Dil Fa Samplo otal/N/ 60576 Samplo otal/N/
Matrix: Water Analysis Batch: 605936 Analyte Cyanide, Free Lab Sample ID: LCS 460-60576 Matrix: Water Analysis Batch: 605936 Analyte Cyanide, Free Lab Sample ID: DLCK 460-605 Matrix: Water Analysis Batch: 605936 Analyte Cyanide, Free Method: SM 2540C - Solids	61/2-A 936/10 s, Tota	<u></u>	Qualifier U	Added 50.0 Spike Added 2.00	5.0	LCS Result 45.53 DLCK Result	1.5 Qual	ug/L lifier	Unit ug/L Clie	ent S	4/27 ≩am ≩am	appared /19 16:33 aple ID: %Rec 91 aple ID: %Rec 132	Prep Batch: Analyzed 04/27/19 17:30 Lab Control Prep Type: T Prep Batch: %Rec. Limits 78 - 110 Lab Control Prep Type: T %Rec. Limits 50 - 150 ple ID: Metho	60576 ⁴ Dil Fa Sample otal/N/ 60576 ⁴ Sample otal/N/
Matrix: Water Analysis Batch: 605936 Analyte Cyanide, Free Lab Sample ID: LCS 460-60576 Matrix: Water Analysis Batch: 605936 Analyte Cyanide, Free Lab Sample ID: DLCK 460-605 Matrix: Water Analysis Batch: 605936 Analyte Cyanide, Free Vethod: SM 2540C - Solids Lab Sample ID: MB 480-475415 Matrix: Water	61/2-A 936/10 s, Tota 9/1	<u>ssult</u> 5.0 <u>al Di</u> MB	Qualifier U	Added 50.0 Spike Added 2.00	5.0	LCS Result 45.53 DLCK Result 2.63	1.5 Qual	ifier K	Unit ug/L Clie	ent S	4/27 ≩am D Sam D Iier	appared /19 16:33 aple ID: %Rec 91 aple ID: %Rec 132	Prep Batch: Analyzed 04/27/19 17:30 Lab Control Prep Type: T Prep Batch: %Rec. Limits 78 - 110 Lab Control Prep Type: T %Rec. Limits 50 - 150 ple ID: Metho	605761 Sample Total/NA 605761 Sample Total/NA d Blank

Job ID: 480-152316-1

3 4 5

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

Lab Sample ID: LCS 480-475419/2 Matrix: Water Analysis Batch: 475419								Cli	ient Sa	mple ID	: Lab Control Prep Type: ⁻	
			Spike		LCS	LCS					%Rec.	
Analyte			Added		Result	Qual	ifier	Unit	D	%Rec	Limits	
Total Dissolved Solids			500		492.0			mg/L		98	85 - 115	
Nethod: SM 2540D - Solids, To	otal S	uspenc	led (TS	SS)								
Lab Sample ID: MB 480-469747/1									Cli	ent Sam	ple ID: Metho	d Blank
Matrix: Water									•		Prep Type:	
Analysis Batch: 469747												
······,	МВ	MB										
Analyte	Result	Qualifier		RL		RL	Unit		DF	Prepared	Analyzed	Dil Fac
Total Suspended Solids	1.0	U		1.0		1.0	mg/L				04/25/19 12:04	1 1
Lab Sample ID: LCS 480-469747/2								Cli	ent Sa	mple ID	: Lab Control	Sample
Matrix: Water										•	Prep Type: ⁻	
Analysis Batch: 469747												
-			Spike		LCS	LCS					%Rec.	
Analyte			Added		Result	Qual	ifier	Unit	D	%Rec	Limits	
Total Suspended Solids			253		246.0			mg/L		97	88 - 110	

Prep Type

Total/NA

Total/NA

Total/NA

Total/NA

Prep Type

Total/NA

Total/NA

Total/NA

Matrix

Water

Water

Water

Matrix

Water

Water

Surface Water

Surface Water

Client Sample ID

Lab Control Sample

Client Sample ID

Lab Control Sample

Method Blank

Method Blank

SW-01

SW-02

ТΒ

GC/MS VOA

Lab Sample ID

480-152316-1

480-152316-6

MB 480-469666/7

LCS 480-469666/5

Lab Sample ID

MB 480-469873/8

LCS 480-469873/6

480-152316-2

Analysis Batch: 469666

Analysis Batch: 469873

Method

8260C

8260C

8260C

8260C

Method

8260C

8260C

8260C

	9
Prep Batch	8
Dron Botch	
	5
Prep Batch	
-152316-1	
450040 4	

GC/MS Semi VOA Prep Batch: 469336

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-152316-1	SW-01	Total/NA	Surface Water	3510C	
480-152316-2	SW-02	Total/NA	Surface Water	3510C	
MB 480-469336/1-A	Method Blank	Total/NA	Water	3510C	
LCS 480-469336/2-A	Lab Control Sample	Total/NA	Water	3510C	
LCSD 480-469336/3-A	Lab Control Sample Dup	Total/NA	Water	3510C	

Analysis Batch: 469510

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-152316-1	SW-01	Total/NA	Surface Water	8270D_LL_PAH	469336
480-152316-2	SW-02	Total/NA	Surface Water	8270D_LL_PAH	469336
MB 480-469336/1-A	Method Blank	Total/NA	Water	8270D_LL_PAH	469336
LCS 480-469336/2-A	Lab Control Sample	Total/NA	Water	8270D_LL_PAH	469336
LCSD 480-469336/3-A	Lab Control Sample Dup	Total/NA	Water	8270D_LL_PAH	469336

General Chemistry

Analysis Batch: 469747

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-152316-1	SW-01	Total/NA	Surface Water	SM 2540D	
480-152316-2	SW-02	Total/NA	Surface Water	SM 2540D	
MB 480-469747/1	Method Blank	Total/NA	Water	SM 2540D	
LCS 480-469747/2	Lab Control Sample	Total/NA	Water	SM 2540D	

Prep Batch: 470844

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-152316-1	SW-01	Total/NA	Surface Water	9012B	
480-152316-2	SW-02	Total/NA	Surface Water	9012B	
480-152316-3	SW-03	Total/NA	Water	9012B	
480-152316-4	SW-04	Total/NA	Water	9012B	
480-152316-5	SW-05	Total/NA	Water	9012B	
MB 480-470844/1-A	Method Blank	Total/NA	Water	9012B	
LCS 480-470844/2-A	Lab Control Sample	Total/NA	Water	9012B	
480-152316-4 MS	SW-04	Total/NA	Water	9012B	

Analysis Batch: 470909

Lab Sample ID	Client Sample ID	Ргер Туре	Matrix	Method	Prep Batch
480-152316-1	SW-01	Total/NA	Surface Water	9012B	470844

QC Association Summary

General Chemistry (Continued)

Analysis Batch: 470909 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-152316-2	SW-02	Total/NA	Surface Water	9012B	470844
480-152316-3	SW-03	Total/NA	Water	9012B	470844
480-152316-4	SW-04	Total/NA	Water	9012B	470844
480-152316-5	SW-05	Total/NA	Water	9012B	470844
MB 480-470844/1-A	Method Blank	Total/NA	Water	9012B	470844
LCS 480-470844/2-A	Lab Control Sample	Total/NA	Water	9012B	470844
480-152316-4 MS	SW-04	Total/NA	Water	9012B	470844

Analysis Batch: 475419

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-152316-1	SW-01	Total/NA	Surface Water	SM 2540C	
480-152316-2	SW-02	Total/NA	Surface Water	SM 2540C	
MB 480-475419/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 480-475419/2	Lab Control Sample	Total/NA	Water	SM 2540C	

Prep Batch: 605761

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch	
480-152316-1	SW-01	Total/NA	Surface Water	9016		
480-152316-2	SW-02	Total/NA	Surface Water	9016		
480-152316-3	SW-03	Total/NA	Water	9016		
480-152316-4	SW-04	Total/NA	Water	9016		
480-152316-5	SW-05	Total/NA	Water	9016		
MB 460-605761/1-A	Method Blank	Total/NA	Water	9016		
LCS 460-605761/2-A	Lab Control Sample	Total/NA	Water	9016		

Analysis Batch: 605936

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-152316-1	SW-01	Total/NA	Surface Water	9016	605761
480-152316-2	SW-02	Total/NA	Surface Water	9016	605761
480-152316-3	SW-03	Total/NA	Water	9016	605761
480-152316-4	SW-04	Total/NA	Water	9016	605761
480-152316-5	SW-05	Total/NA	Water	9016	605761
MB 460-605761/1-A	Method Blank	Total/NA	Water	9016	605761
DLCK 460-605936/10	Lab Control Sample	Total/NA	Water	9016	
LCS 460-605761/2-A	Lab Control Sample	Total/NA	Water	9016	605761

6/11/2019 (Rev. 1)

Dilution

Factor

1

1

1

1

1

1

Run

Batch

Number

469666

Prepared

or Analyzed

04/25/19 15:33

469336 04/23/19 15:08 ATG

469510 04/24/19 18:10 RJS

470844 05/01/19 10:30 MDL

470909 05/02/19 12:03 MDL

605761 04/27/19 16:33 KYN

605936 04/27/19 17:30 EMS

Analyst

OMI

Lab

TAL BUF

TAL BUF

TAL BUF

TAL BUF

TAL BUF

TAL EDI

TAL EDI

Client Sample ID: SW-01 Date Collected: 04/18/19 09:10 Date Received: 04/18/19 11:38

Prep Type

Total/NA

Total/NA

Total/NA

Total/NA

Total/NA

Total/NA

Total/NA

Total/NA

Total/NA

Batch

Туре

Prep

Prep

Prep

Analysis

Analysis

Analysis

Analysis

Analysis

Analysis

Batch

8260C

3510C

9012B

9012B

9016

9016

SM 2540C

SM 2540D

8270D_LL_PAH

Method

Lab Sample ID: 480-152316-1 Matrix: Surface Water

475419 05/30/19 16:05 CSS TAL BUF 469747 04/25/19 12:04 RAF TAL BUF

Lab Sample ID: 480-152316-2

Lab Sample ID: 480-152316-3

Lab Sample ID: 480-152316-4

Matrix: Water

Matrix: Water

Matrix: Surface Water

Client Sample ID: SW-02 Date Collected: 04/18/19 08:00 Date Received: 04/18/19 11:38

	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	469873	04/26/19 13:01	RJF	TAL BUF
Total/NA	Prep	3510C			469336	04/23/19 15:08	ATG	TAL BUF
Total/NA	Analysis	8270D_LL_PAH		1	469510	04/24/19 18:40	RJS	TAL BUF
Total/NA	Prep	9012B			470844	05/01/19 10:30	MDL	TAL BUF
Total/NA	Analysis	9012B		1	470909	05/02/19 12:04	MDL	TAL BUF
Total/NA	Prep	9016			605761	04/27/19 16:33	KYN	TAL EDI
Total/NA	Analysis	9016		1	605936	04/27/19 17:30	EMS	TAL EDI
Total/NA	Analysis	SM 2540C		1	475419	05/30/19 16:05	CSS	TAL BUF
Total/NA	Analysis	SM 2540D		1	469747	04/25/19 12:04	RAF	TAL BUF

Client Sample ID: SW-03 Date Collected: 04/18/19 08:30 Date Received: 04/18/19 11:38

_	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	9012B			470844	05/01/19 10:30	MDL	TAL BUF
Total/NA	Analysis	9012B		1	470909	05/02/19 12:06	MDL	TAL BUF
Total/NA	Prep	9016			605761	04/27/19 16:33	KYN	TAL EDI
Total/NA	Analysis	9016		1	605936	04/27/19 17:30	EMS	TAL EDI

Client Sample ID: SW-04 Date Collected: 04/18/19 08:40 Date Received: 04/18/19 11:38

Ргер Туре	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	9012B			470844	05/01/19 10:30	MDL	TAL BUF
Total/NA	Analysis	9012B		1	470909	05/02/19 12:07	MDL	TAL BUF
Total/NA	Prep	9016			605761	04/27/19 16:33	KYN	TAL EDI
Total/NA	Analysis	9016		1	605936	04/27/19 17:30	EMS	TAL EDI

Client Sample ID: SW-05 Date Collected: 04/18/19 09:00 Date Received: 04/18/19 11:38

-	Batch	Batch		Dilution	Batch	Prepared		
Ргер Туре	Туре	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	9012B			470844	05/01/19 10:30	MDL	TAL BUF
Total/NA	Analysis	9012B		1	470909	05/02/19 12:10	MDL	TAL BUF
Total/NA	Prep	9016			605761	04/27/19 16:33	KYN	TAL EDI
Total/NA	Analysis	9016		1	605936	04/27/19 17:30	EMS	TAL EDI
lient Sam	ple ID: TB						Lab Sa	ample ID: 480-152316-6
ate Collecte	d: 04/18/19 0	0:00						Matrix: Water
ate Receive	d: 04/18/19 1	1:38						

Γ		Batch	Batch		Dilution	Batch	Prepared		
	Prep Туре	Туре	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
=	Total/NA	Analysis	8260C		1	469666	04/25/19 16:21	OMI	TAL BUF

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 Job ID: 480-152316-1

Matrix: Water

Lab Sample ID: 480-152316-5

Accreditation/Certification Summary

Client: GEI Consultants, Inc. Project/Site: GEI, Mineral Springs Job ID: 480-152316-1

Laboratory: Eurofins TestAmerica, Buffalo The accreditations/certifications listed below are applicable to this report.

Authority Program **EPA Region** Identification Number **Expiration Date** New York NELAP 2 10026 03-31-20 Laboratory: Eurofins TestAmerica, Edison Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below. Authority **Identification Number Expiration Date** Program EPA Region New York NELAP 04-01-20 2 11452 The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte	
9016	9016	Surface Water	Cyanide, Free	
9016	9016	Water	Cyanide, Free	

Method Summary

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

Nethod	Method Description	Protocol	Laboratory
3260C	Volatile Organic Compounds by GC/MS	SW846	TAL BUF
3270D_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
510C	Liquid-Liquid Extraction (Separatory Funnel)	SW846	TAL BUF
6030C	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

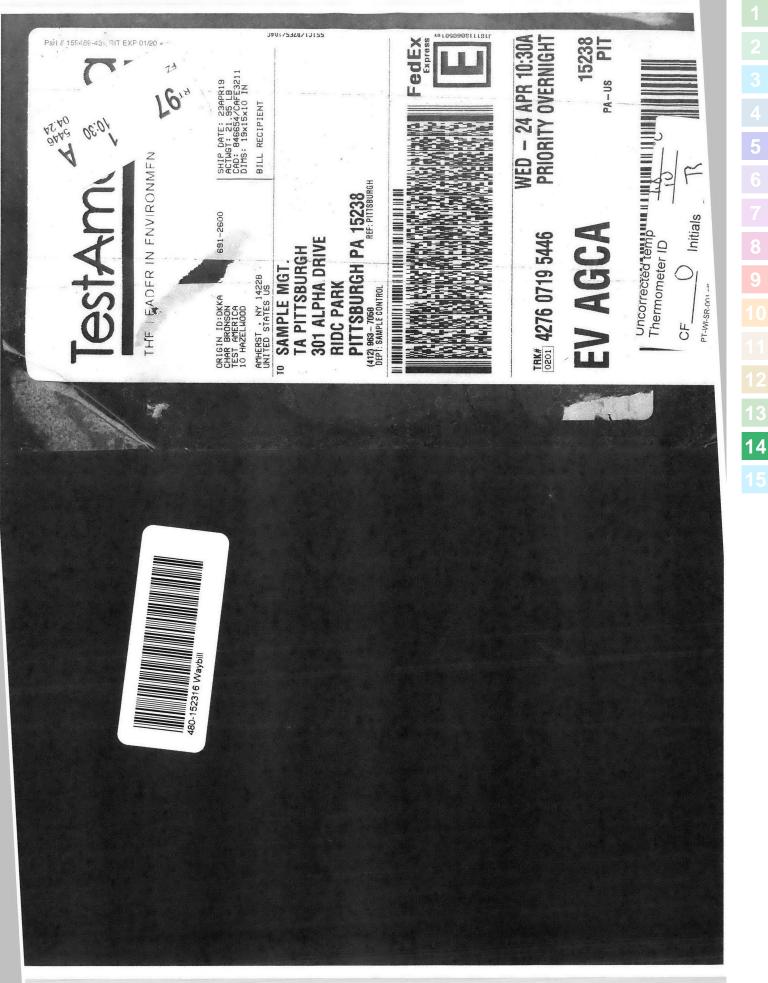
Sample Summary

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

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
480-152316-1	SW-01	Surface Water	04/18/19 09:10	04/18/19 11:38
480-152316-2	SW-02	Surface Water	04/18/19 08:00	04/18/19 11:38
480-152316-3	SW-03	Water	04/18/19 08:30	04/18/19 11:38
480-152316-4	SW-04	Water	04/18/19 08:40	04/18/19 11:38
480-152316-5	SW-05	Water	04/18/19 09:00	04/18/19 11:38
480-152316-6	ТВ	Water	04/18/19 00:00	04/18/19 11:38

rd 304419 TestAmerico		O Date: 4/18/10 COC No: 1	Trivo Jeducy + 0	MA			480-152316 Chain of Custody	Sample Specific Notes:											Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)		Archive for Months	e 2	(°C): Obs'd: Corr'd: Therm ID No.;	Company: Date/Time:	Company: Date/Time:	Company: Date/Time: 113K
Chain of Custody Record	NPDES CRA Other:	Site Contact: M.		AYS 100	(N	11.) 0		Co # Filtered Sar Perform MS	XXXXXXX	XXXXXXX	X X X	X X X	XXX	X					for the sample in the		Return to Client		Cooler Temp. (°C):	Date/Time: Received by:	Time:	Date/Time: Received in Laboratory by:
0	FPS24 Regulatory Program:	CK.	Analysis Turnaround Time	CALENDAR DAYS	TAT if different from Below	2 weeks 1 week	1 day	Sample Sample (c=comp. Date Time G=Grab) Matrix	4/18/16 910 6 W	800 1	830 1	840	000	1			A N/ N		te Codes		Unknown Unknown		Custody Seal No .:	Company Company Date/	Company: Date/	Company: Date/
TestAmerica Buffalo	Amberst, NV 14228 Phone: 716.691.2600 Fax: 716.691.7991	Client Contact	Address: and The The address	e/Zip: And (HERA')	116 - 204-7155	ect Name: M. N.	Site: PO#	Sample Identification	5w-01	~	SW1-03			7114718 d184 260	- 32 			Deconstructions (Lond: 4 - Los 2 - UC): 3 - U2SOA: 4 - HNO3: 5 - NaOH: 6 - Other	Possible Hazard Identification: Are any samples from a listed EPA Hazardous Waste? Please	Comments Section if the lab is to dispose of the sample.	Contraction Provintements Commenter	opecial rish actions/act requirements & continuents.	s Intact:	it has	100	Helinquished by:

I



1, 1, P.		hain o	f Cust	Chain of Custody Record	PCOLO					🐝 eurofins	1919 - 100 -	
міппегк, NY 14228-2298 Phone (716) 691-2600 Fax (716) 691-7991				(n.,							TestAmerica	
Client Information (Sub Contract Lab)	Sampler:			Lab PM: Schov	Lab PM: Schove, John R		0	Carrier Tracking No(s)		COC No: 480-49161.1		
Client Contact: Shipping/Receiving	Phone:			E-Mail: john.s	schove@t	E-Mail: john.schove@testamericainc.com	0 2	State of Origin: New York		Page: Page 1 of 1		
Company: TestAmerica Laboratories, Inc.					Accreditation	Accreditations Required (See note): NELAP - New York				Job #: 480-152316-1		
Address: 301 Alpha Drive. RIDC Park.	Due Date Requested: 4/30/2019					Analy	Analveis Reduested	actar		Preservation Codes:		
	TAT Requested (days):	:5								A - HCL B - NaOH C - Zn Acetate D - Nitric Acid E - NaHSO4	M - Hexane N - None O - AsNaO2 P - Na2045 Q - Na2203	
Phone: 412-963-7058(Tel) 412-963-2468(Fax)	PO#;									F - MeOH G - Amchlor H - Ascorbic Aci		
Email:	WO #:				(on							
Project Name: GEI, Mineral Springs	Project #: 48008324				JO SO,					K - EDTA L - EDA	W - pH 4-5 Z - other (specify)	
Site: AECOM, Mineral Springs	SSOW#:				N) asi					Other:		
Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=orab)	Matrix (w=water, s=solid, o=waste/oll, BTETiscue a=air)	Field Filtered Perform MS/N 1677/ Cyanide,							
	X	X	20 1-	ion Code:	X					and		_
SW-01 (480-152316-1)	4/18/19	09:10 Fastern		Water	×					+	λpo'	
SW-02 (480-152316-2)	4/18/19	08:00 Fastern		Water	×					-	Cre	
SW-03 (480-152316-3)	4/18/19	08:30 Fastern		Water	×					-	fo ni	
SW-04 (480-152316-4)	4/18/19	08:40 Eastern		Water	×					-	C Us	
SW-05 (480-152316-5)	4/18/19	09:00 Eastern		Water	×					-	25316	-
											1-084	
											\	
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 custom 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 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.	atories, Inc. places the ov sts/matrix being analyzed nt to date, return the sign	vnership of me I, the samples ied Chain of C	thod, analyte { must be shipp ustody attestin	k accreditation ed back to the g to said comp	compliance u TestAmerica icance to Te	pon out subcontract labc laboratory or other instru stAmerica Laboratories, l	oratories. This totions will be Inc.	s sample shipment is provided. Any chang	forwarded und jes to accredita	er chain-of-custody. Ition status should b	If the laboratory does not e brought to TestAmerica	
Possible Hazard Identification					Sampl	Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)	may be as	sessed if samp	les are reta	ined longer the	in 1 month)	
Deliverable Requested: I, II, III, IV, Other (specify)	Primary Deliverable	ole Rank: 2			Specia	Special Instructions/QC Requirements:	equirement	UISPOSAI BY LAD ents:	A	Archive For	Months	_
Empty Kit Relinquished by:		Date:			Time:	1		Method of Shipmer	nenț:		<	1
Relinquished by Relinquished by Relinquished by	Date/Time: UD3-15 Date/Time:	154	5	Company P 40 Company	Rec	Received by: WK	Cho	Date	DateThe:	67-6	Company MV	F
Reinquished by:	Date/Time:			Company	Rec	Received by:		Date	Date/Time:	20	C Company Company	
0					Coo	Cooler Temperature(s) °C and Other Remarks	nd Other Rem	arks:			_	
A Yes A No					-							

suffalo	
merica, E	
s TestA	ood Drive
Eurofin	10 Hazelwo

Amherst, NY 14228-2298

Chain of Custody Record



Phone (716) 691-2600 Fax (716) 691-7991														
Client Information (Sub Contract Lab)	Sampler:			Lab PM: Schov	Lab PM: Schove, John R				Carrier Tracking No(s)	icking No(:(s):		COC No: 480-49149.1	
	Phone:			E-Mail: john.s	E-Mail: john.schove@testamericainc.com	stameric	ainc.com		State of Origin: New York	ii iii y			Page: Page 1 of 1	
Company: Company: Taeta Marica I aboratorias Inc					Accreditations Required (See note) NFI AP - New York	s Required	(See note):	1					Job #: 480-152316-1	
Address: 777 New Dirtham Road	Due Date Requested: 4/30/2019	ed:						Analvsis Requested	uested				Preservation Codes	1 · · ·
	TAT Requested (days):	ays):							-			-	A - HCL B - NaOH C - 7n Acetate	M - Hexane N - None O - AsNaOO
Edisori State, Zip NJ. 08817		`											D - Nitric Acid E - NaHSO4	
Phone: 732-549-3900(Tel) 732-549-3679(Fax)	PO#				- (o							-	F - MeOH G - Amchlor H - Ascorbic Acic	
1	# OM				(03							έī		
Project Name: GEI, Mineral Springs	Project #: 48008324				10 ED							enistn		w - pH 4-5 Z - other (specify)
site: AECOM, Mineral Springs	SSOW#:				y)@B!	·						00 10.	Other:	
			Sample Type		016_Pre MSMMS/M		,					iedmijN		
زرت کو بندی (زرجیکو بندی) Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	(C=comp, G=grab)	S¤solid, O¤vasta/oli, BT=Tissue, A=Air)	ugyo (1		• •				•	LisioT		Special Instructions/Note:
	N N	X	Preserva	<u> </u>	X	- - - -		- 54	3 A 14 -		-	X		
SW-01 (480-152316-1)	4/18/19	09:10 Eastern		Water	×									
SW-02 (480-152316-2)	4/18/19	08:00 Eastern		Water	×							<u> </u>		
SW-03 (480-152316-3)	4/18/19	08:30 Eastern		Water	×							-		
SW-04 (480-152316-4)	4/18/19	08:40 Eastern	,	Water	×									
SW-05 (480-152316-5)	4/18/19	09:00 Eastern		Water	×							ر .		
			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/ests/matrix being analysed, 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 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.	Laboratories, Inc. places the ysis/tests/matrix being analyz a current to date, retum the si	ownership of m zed, the sample: igned Chain of (tethod, analyte s must be shif Custody attest	e & accreditation c sped back to the T ing to said compli	compliance u cestAmerica cance to Tes	lpon out sut laboratory c stAmerica L	ocontract labo. or other instruc aboratones, ir	ratories. Th ctions will b no.	is sample e provided	shipment Any cha	is forward inges to a	ded unde Iccreditat	r chain-of-custody. Ion status should be	If the laboratory does not brought to TestAmerica
Possible Hazard Identification					Sampl	e Dispos	al (A fee r	nay be a	ssessec	l if sam	ples ar	e retai	Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)	n 1 month)
Unconfirmed]	Return To Client	Client]	Disposal By Lab	By Lab	'	¥ ۱	Archive For	Months
Deliverable Requested: I, II, III, IV, Other (specify)	Primary Deliverable Rank: 2	rable Rank: ;	2		Specia	Instructi	Special Instructions/QC Requirements:	squiremer	ıts:					
Empty Kit Relinquished by:		Date:			Time:				Meth	Method of Shipment:	pment:			
Relinquished by	Date/Time:		1525	Company	Rec	Received by				ů	Date/Time:			Company
Religenting the second s	Pater Times	, Q	0930	Company	Rec	Received by		1		<u>ö</u> .	Date/Time: (19	1/19	0{10	"THE L
Relinquished by:	Date/Time:			Company	Rec	Received by:				ő	ate/Time:			Company

Custody Seal No.:

Ver: 01/16/2019

CS=609702

14

4.0°C

Cooler Temperature(s) °C and Other Remarks:

Company

Login Number: 152316 List Number: 1 Creator: Velickovic, Zoran

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.	False	04/18/19
Samples requiring field filtration have been filtered in the field.	N/A	
Chlorine Residual checked.	N/A	

Job Number: 480-152316-1

List Source: Eurofins TestAmerica, Buffalo

Login Number: 152316 List Number: 3 Creator: Armbruster. Chris

Job Number: 480-152316-1

List Source: Eurofins TestAmerica, Edison

Login Number: 152316 List Number: 3		List Source: Eurofins TestAmerica, Edison List Creation: 04/25/19 12:26 PM	E
Creator: Armbruster, Chris			5
Question	Answer	Comment	
Radioactivity wasn't checked or is = background as measured by a survey meter.</td <td>N/A</td> <td></td> <td></td>	N/A		
The cooler's custody seal, if present, is intact.	True	609702	
Sample custody seals, if present, are intact.	N/A		8
The cooler or samples do not appear to have been compromised or tampered with.	True		9
Samples were received on ice.	True		
Cooler Temperature is acceptable.	True		
Cooler Temperature is recorded.	True	4.0°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		13
There are no discrepancies between the containers received and the COC.	True		
Samples are received within Holding Time (excluding tests with immediate HTs)	True		14
Sample containers have legible labels.	True		15
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 Number: 152316 List Number: 4 Creator: Rivera, Kenneth

Question	Answer	Comment
Radioactivity wasn't checked or is = background as measured by a survey meter.</td <td>N/A</td> <td></td>	N/A	
The cooler's custody seal, if present, is intact.	True	
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	
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	

Job Number: 480-152316-1

List Creation: 05/03/19 04:59 PM

List Source: Eurofins TestAmerica, Edison

2019 First Semiannual Groundwater/Surfacewater Quality Monitoring Report Mineral Springs Road Former MGP Site (NYSDEC #V00195) West Seneca, New York July 2019

Appendix B

Data Usability Review



Site:	Mineral Springs MGP
Laboratory:	Test America, Amherst, NY
Report No.:	480-152317
Reviewer:	Lorie MacKinnon/GEI Consultants
Date:	June 6, 2019

Samples Reviewed and Evaluation Summary

FIELD ID	LAB ID	FRACTIONS VALIDATED
MW-16	480-152317-01	Total/Free Cyanide
MW-20	480-152317-02	Total/Free Cyanide
Duplicate	480-152317-03	BTEX, PAH, Total/Free Cyanide
MW-14	480-152317-04	Total/Free Cyanide
MW-10	480-152317-05	BTEX, PAH
MW-22	480-152317-06	Total/Free Cyanide
MW-23	480-152317-07	BTEX, PAH, Total/Free Cyanide
MW-13	480-152317-08	BTEX, PAH, Total/Free Cyanide
MW-17	480-152317-09	BTEX, PAH, Total/Free Cyanide
MW-19	480-152317-10	BTEX, PAH
MW-07	480-152317-11	BTEX, PAH
MW-12	480-152317-12	Total/Free Cyanide
MW-11A	480-152317-13	BTEX, PAH, Total/Free Cyanide, TDS, TSS
EB	480-152317-14	BTEX, PAH, Total/Free Cyanide
TB	480-152317-15	BTEX
MW-21	480-152317-16	Total/Free Cyanide
QC Samples:	Field/Trip blanks:	EB, TB
~ 1	Field Duplicate pair:	

The above-listed ground water samples, field blank sample, and trip blank samples were collected on April 17, 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 and Data Assessment
- 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. However, the following issue was noted which may have a significant impact on the data usability:

• The nondetect results for toluene and total xylenes in sample MW-19 were rejected (R) due to holding time exceedance. These results should not be used for decision-making purposes.

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.

VOCs

Although sample MW-19 was collected in the correct preserved vials, at the time of analysis the pH was noted to be greater than 2. The sample was analyzed eight days after sample collection, one day past the required hold time of seven days for unpreserved samples. The positive results for benzene and ethylbenzene were qualified as estimated (J) and the nondetect results for toluene and xylene were rejected (R) in sample MW-19 due to the hold time exceedance.

Initial and Continuing Calibrations

All initial and continuing calibration criteria were met.

<u>Blanks</u>

Contamination was not detected in the associated method and instrument blank samples. Contamination was not detected in the associated field and trip blank samples.

Surrogate Recoveries

SVOC

All criteria were met for samples analyzed at dilutions less than 20.

VOCs

The following table summarizes the surrogates recovered outside of the laboratory control limits.

Sample	Surrogate	Recovery (%)	Control Limits (%)	Validation Actions
	Dibromofluoromethane	126	75-123	Validation actions were not required as all results were
MW-23	4-Bromofluorobenzene	122	73-120	nondetect in sample MW-23 and therefore not affected by the potential high bias.
MW-17	Dibromofluoromethane	124	75-123	Validation actions were not required as all results were nondetect in sample MW-17 and therefore not affected by the potential high bias.
	Dibromofluoromethane	125	75-123	Validation actions were not required as all results were
MW-11A	4-Bromofluorobenzene	123	73-120	nondetect in sample MW-11A and therefore not affected by the potential high bias.

MS/MSD Results

MS analyses were performed on samples MW-16, MW12, and MW-23 for total cyanide. MS/MSDs were performed on samples MW-7 for VOCs and sample MW-11A for free cyanide. All recovery and precision criteria were met, except where noted below.

VOCs

				MW-07	
Analyte	MS	MSD	RPD	QC Limits	Validation Actions
	(%)	(%)	(%)	(%)	
				VOCs	
Ethylbenzene	-	75	-	77-123	Estimate (J) the positive result for ethylbenzene in sample MW-07; Low bias.
- criterion met					

Laboratory Duplicate Results

Laboratory duplicate analyses were performed on sample MW-17 for total cyanide and sample MW-11A for TDS. Precision criteria was met.

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 (%)
Benzo(a)pyrene	0.51	0.50 U	NC, Within the RL
Benzo(b)fluoranthene	0.51	0.50 U	NC, Within the RL
Benzo(ghi)perylene	0.38 J	0.50 U	NC, Within the RL
Chrysene	0.37 J	0.50 U	NC, Within the RL
Fluoranthene	0.94	0.39 J	82.7, Within the RL
Phenanthrene	0.61	0.50 U	NC, Within the RL
Pyrene	0.70	0.50 U	NC, Within the RL
Free Cyanide	38.6	52.0	29.6
Total Cyanide	320	320	0
	NC – Not c	alculable	
Criteria: V	When both results are ≥ 5	x the RL, RPDs must be $<$	30%.
When results are $< 5x$ the RL, y			ts if the absolute difference
	between the original and	l field duplicate >RL.	

Quantitation Limits and Data Assessment

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	Free Cyanide Analysis Reported	Total Cyanide Analysis Reported
MW-16	NR	NR	A 5-fold dilution was performed.	A 10-fold dilution was performed.
MW-20	NR	NR	NR	A 5-fold dilution was performed.
MW-14	NR	NR	NR	A 5-fold dilution was performed.

Sample	VOC Analysis Reported	SVOC Analysis Reported	Free Cyanide Analysis Reported	Total Cyanide Analysis Reported
MW-22	NR	NR	NR	A 5-fold dilution was performed.
MW-12	NR	NR	NR	A 5-fold dilution was performed.
MW-17	A 2-fold dilution was performed due to sample foaming. RLs are elevated in this sample.	A 20-fold dilution was performed due to sample nature. RLs are elevated in this sample.	NR	NR
MW-19	A 100-fold dilution was performed due to high target compound levels. RLs are elevated in this sample.	A 200-fold dilution was performed due to high target compound levels. RLs are elevated in this sample.	NR	NR
MW-07	A 20-fold dilution was performed due to high target compound levels. RLs are elevated in this sample.	A 100-fold dilution was performed due to high target compound levels. RLs are elevated in this sample.	NR	NR
MW- 11A	A 2-fold dilution was performed due to sample foaming. RLs are elevated in this sample.	NR	NR	NR
NR – Dilu	tion 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.

Job ID: 480-152317-1

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

Client Sample ID: MW-16 Date Collected: 04/17/19 12:20 Date Received: 04/17/19 16:10

Lab Sample ID: 480-152317-1 Matrix: Ground Water

General Chemistry Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	3.1		0.10	0.050	mg/L		04/30/19 11:30	05/01/19 11:40	10
Cyanide, Free	149		25.0	7.7	ug/L		04/27/19 16:33	04/27/19 17:30	5

6

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

Client Sample ID: MW-20 Date Collected: 04/17/19 15:30 Date Received: 04/17/19 16:10

Lab Sample ID: 480-152317-2 Matrix: Ground Water

General Chemistry Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	1.3		0.050	0.025	mg/L		04/30/19 11:30	05/01/19 11:43	5
Cyanide, Free	15.2		5.0	1.5	ug/L		04/27/19 16:33	04/27/19 17:30	1

6

Client Sample ID: Duplicate Date Collected: 04/17/19 00:00 Date Received: 04/17/19 16:10

Lab Sample ID: 480-152317-3 Matrix: Ground Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	1.0	U	1.0	0.41	ug/L			04/25/19 14:10	1
Ethylbenzene	1.0	U	1.0	0.74	ug/L			04/25/19 14:10	1
Toluene	1.0	U	1.0	0.51	ug/L			04/25/19 14:10	1
Xylenes, Total	2.0	U	2.0	0.66	ug/L			04/25/19 14:10	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	108		77 - 120			1	Charles and Constant	04/25/19 14:10	1
4-Bromofluorobenzene (Surr)	102		73 - 120					04/25/19 14:10	1
Dibromofluoromethane (Surr)	98		75-123					04/25/19 14:10	1
Toluene-d8 (Surr)	98		80 - 120					04/25/19 14:10	1

Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
0.50	U	0.50	0.38	ug/L		04/23/19 15:08	04/24/19 19:09	1
0.50	U	0.50	0.30	ug/L		04/23/19 15:08	04/24/19 19:09	1
0.50	U	0.50	0.34	ug/L		04/23/19 15:08	04/24/19 19:09	1
0.50	U	0.50	0.39	ug/L		04/23/19 15:08	04/24/19 19:09	1
0.50	U	0.50	0.40	ug/L		04/23/19 15:08	04/24/19 19:09	1
0.50	U	0.50	0.33	ug/L		04/23/19 15:08	04/24/19 19:09	1
0.50	U	0.50	0.30	ug/L		04/23/19 15:08	04/24/19 19:09	1
0.50	U	0.50	0.37	ug/L		04/23/19 15:08	04/24/19 19:09	1
0.50	U	0.50	0.085	ug/L		04/23/19 15:08	04/24/19 19:09	1
0.50	U	0.50	0.32	ug/L		04/23/19 15:08	04/24/19 19:09	1
0.50	υ	0.50	0.33	ug/L		04/23/19 15:08	04/24/19 19:09	1
0.39	5.	0.50	0.36	ug/L		04/23/19 15:08	04/24/19 19:09	1
0.50	U	0.50	0.37	ug/L		04/23/19 15:08	04/24/19 19:09	1
0.50	U	0.50	0.44	ug/L		04/23/19 15:08	04/24/19 19:09	1
0.50	U	0.50	0.42	ug/L		04/23/19 15:08	04/24/19 19:09	1
0.50	U	0.50	0.38	ug/L		04/23/19 15:08	04/24/19 19:09	1
0.50	U	0.50				04/23/19 15:08	04/24/19 19:09	1
%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
107		48-120				04/23/19 15:08	04/24/19 19:09	1
101		46-120				04/23/19 15:08	04/24/19 19:09	1
68		24 - 136				04/23/19 15:08	04/24/19 19:09	1
Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
0.32		0.010	0.0050	mg/L		04/30/19 11:30	05/01/19 10:56	1
52.0		5.0	1.5	ug/L		04/27/19 16:33	04/27/19 17:30	1
	0.50 0.50 0.50 0.50 0.50 0.50 0.50 0.50	0.50 U 0.50 U	0.50 U 0.50 0.50 24.136 24.136 <td>0.50 U 0.50 0.38 0.50 U 0.50 0.30 0.50 U 0.50 0.30 0.50 U 0.50 0.34 0.50 U 0.50 0.39 0.50 U 0.50 0.33 0.50 U 0.50 0.33 0.50 U 0.50 0.33 0.50 U 0.50 0.33 0.50 U 0.50 0.30 0.50 U 0.50 0.33 0.50 U 0.50 0.37 0.50 U 0.50 0.32 0.50 U 0.50 0.33 0.39 J 0.50 0.33 0.50 U 0.50 0.37 0.50 U 0.50 0.34 0.50 U 0.50 0.42 0.50 U 0.50 0.38 0.50 U 0.50<!--</td--><td>0.50 U 0.50 0.38 ug/L 0.50 U 0.50 0.30 ug/L 0.50 U 0.50 0.34 ug/L 0.50 U 0.50 0.39 ug/L 0.50 U 0.50 0.39 ug/L 0.50 U 0.50 0.33 ug/L 0.50 U 0.50 0.37 ug/L 0.50 U 0.50 0.32 ug/L 0.50 U 0.50 0.33 ug/L 0.50 U 0.50 0.33 ug/L 0.50 U 0.50 0.33 ug/L 0.50 U 0.50 0.38 ug/L 0.50<td>0.50 U 0.50 0.38 ug/L 0.50 U 0.50 0.30 ug/L 0.50 U 0.50 0.34 ug/L 0.50 U 0.50 0.34 ug/L 0.50 U 0.50 0.39 ug/L 0.50 U 0.50 0.40 ug/L 0.50 U 0.50 0.33 ug/L 0.50 U 0.50 0.34 ug/L 0.50 U 0.50 0.38 ug/L 0.50<td>0.50 U 0.50 0.38 ug/L 04/23/19 15:08 0.50 U 0.50 0.30 ug/L 04/23/19 15:08 0.50 U 0.50 0.34 ug/L 04/23/19 15:08 0.50 U 0.50 0.34 ug/L 04/23/19 15:08 0.50 U 0.50 0.39 ug/L 04/23/19 15:08 0.50 U 0.50 0.39 ug/L 04/23/19 15:08 0.50 U 0.50 0.31 ug/L 04/23/19 15:08 0.50 U 0.50 0.33 ug/L 04/23/19 15:08 0.50 U 0.50 0.37 ug/L 04/23/19 15:08 0.50 U 0.50 0.32 ug/L 04/23/19 15:08 0.50 U 0.50 0.33 ug/L 04/23/19 15:08 0.50 U 0.50 0.36 ug/L</td><td>0.50 U 0.50 0.38 ug/L 04/23/19 15:08 04/24/19 19:09 0.50 U 0.50 0.50 0.50 0.50 0.4/24/19 19:09 0.50 U 0.50 0.30 ug/L 04/23/19 15:08 04/24/19 19:09 0.50 U 0.50 0.34 ug/L 04/23/19 15:08 04/24/19 19:09 0.50 U 0.50 0.34 ug/L 04/23/19 15:08 04/24/19 19:09 0.50 U 0.50 0.33 ug/L 04/23/19 15:08 04/24/19 19:09 0.50 U 0.50 0.33 ug/L 04/23/19 15:08 04/24/19 19:09 0.50 U 0.50 0.33 ug/L 04/23/19 15:08 04/24/19 19:09 0.50 U 0.50 0.33 ug/L 04/23/19 15:08 04/24/19 19:09 0.50 U</td></td></td></td>	0.50 U 0.50 0.38 0.50 U 0.50 0.30 0.50 U 0.50 0.30 0.50 U 0.50 0.34 0.50 U 0.50 0.39 0.50 U 0.50 0.33 0.50 U 0.50 0.33 0.50 U 0.50 0.33 0.50 U 0.50 0.33 0.50 U 0.50 0.30 0.50 U 0.50 0.33 0.50 U 0.50 0.37 0.50 U 0.50 0.32 0.50 U 0.50 0.33 0.39 J 0.50 0.33 0.50 U 0.50 0.37 0.50 U 0.50 0.34 0.50 U 0.50 0.42 0.50 U 0.50 0.38 0.50 U 0.50 </td <td>0.50 U 0.50 0.38 ug/L 0.50 U 0.50 0.30 ug/L 0.50 U 0.50 0.34 ug/L 0.50 U 0.50 0.39 ug/L 0.50 U 0.50 0.39 ug/L 0.50 U 0.50 0.33 ug/L 0.50 U 0.50 0.37 ug/L 0.50 U 0.50 0.32 ug/L 0.50 U 0.50 0.33 ug/L 0.50 U 0.50 0.33 ug/L 0.50 U 0.50 0.33 ug/L 0.50 U 0.50 0.38 ug/L 0.50<td>0.50 U 0.50 0.38 ug/L 0.50 U 0.50 0.30 ug/L 0.50 U 0.50 0.34 ug/L 0.50 U 0.50 0.34 ug/L 0.50 U 0.50 0.39 ug/L 0.50 U 0.50 0.40 ug/L 0.50 U 0.50 0.33 ug/L 0.50 U 0.50 0.34 ug/L 0.50 U 0.50 0.38 ug/L 0.50<td>0.50 U 0.50 0.38 ug/L 04/23/19 15:08 0.50 U 0.50 0.30 ug/L 04/23/19 15:08 0.50 U 0.50 0.34 ug/L 04/23/19 15:08 0.50 U 0.50 0.34 ug/L 04/23/19 15:08 0.50 U 0.50 0.39 ug/L 04/23/19 15:08 0.50 U 0.50 0.39 ug/L 04/23/19 15:08 0.50 U 0.50 0.31 ug/L 04/23/19 15:08 0.50 U 0.50 0.33 ug/L 04/23/19 15:08 0.50 U 0.50 0.37 ug/L 04/23/19 15:08 0.50 U 0.50 0.32 ug/L 04/23/19 15:08 0.50 U 0.50 0.33 ug/L 04/23/19 15:08 0.50 U 0.50 0.36 ug/L</td><td>0.50 U 0.50 0.38 ug/L 04/23/19 15:08 04/24/19 19:09 0.50 U 0.50 0.50 0.50 0.50 0.4/24/19 19:09 0.50 U 0.50 0.30 ug/L 04/23/19 15:08 04/24/19 19:09 0.50 U 0.50 0.34 ug/L 04/23/19 15:08 04/24/19 19:09 0.50 U 0.50 0.34 ug/L 04/23/19 15:08 04/24/19 19:09 0.50 U 0.50 0.33 ug/L 04/23/19 15:08 04/24/19 19:09 0.50 U 0.50 0.33 ug/L 04/23/19 15:08 04/24/19 19:09 0.50 U 0.50 0.33 ug/L 04/23/19 15:08 04/24/19 19:09 0.50 U 0.50 0.33 ug/L 04/23/19 15:08 04/24/19 19:09 0.50 U</td></td></td>	0.50 U 0.50 0.38 ug/L 0.50 U 0.50 0.30 ug/L 0.50 U 0.50 0.34 ug/L 0.50 U 0.50 0.39 ug/L 0.50 U 0.50 0.39 ug/L 0.50 U 0.50 0.33 ug/L 0.50 U 0.50 0.37 ug/L 0.50 U 0.50 0.32 ug/L 0.50 U 0.50 0.33 ug/L 0.50 U 0.50 0.33 ug/L 0.50 U 0.50 0.33 ug/L 0.50 U 0.50 0.38 ug/L 0.50 <td>0.50 U 0.50 0.38 ug/L 0.50 U 0.50 0.30 ug/L 0.50 U 0.50 0.34 ug/L 0.50 U 0.50 0.34 ug/L 0.50 U 0.50 0.39 ug/L 0.50 U 0.50 0.40 ug/L 0.50 U 0.50 0.33 ug/L 0.50 U 0.50 0.34 ug/L 0.50 U 0.50 0.38 ug/L 0.50<td>0.50 U 0.50 0.38 ug/L 04/23/19 15:08 0.50 U 0.50 0.30 ug/L 04/23/19 15:08 0.50 U 0.50 0.34 ug/L 04/23/19 15:08 0.50 U 0.50 0.34 ug/L 04/23/19 15:08 0.50 U 0.50 0.39 ug/L 04/23/19 15:08 0.50 U 0.50 0.39 ug/L 04/23/19 15:08 0.50 U 0.50 0.31 ug/L 04/23/19 15:08 0.50 U 0.50 0.33 ug/L 04/23/19 15:08 0.50 U 0.50 0.37 ug/L 04/23/19 15:08 0.50 U 0.50 0.32 ug/L 04/23/19 15:08 0.50 U 0.50 0.33 ug/L 04/23/19 15:08 0.50 U 0.50 0.36 ug/L</td><td>0.50 U 0.50 0.38 ug/L 04/23/19 15:08 04/24/19 19:09 0.50 U 0.50 0.50 0.50 0.50 0.4/24/19 19:09 0.50 U 0.50 0.30 ug/L 04/23/19 15:08 04/24/19 19:09 0.50 U 0.50 0.34 ug/L 04/23/19 15:08 04/24/19 19:09 0.50 U 0.50 0.34 ug/L 04/23/19 15:08 04/24/19 19:09 0.50 U 0.50 0.33 ug/L 04/23/19 15:08 04/24/19 19:09 0.50 U 0.50 0.33 ug/L 04/23/19 15:08 04/24/19 19:09 0.50 U 0.50 0.33 ug/L 04/23/19 15:08 04/24/19 19:09 0.50 U 0.50 0.33 ug/L 04/23/19 15:08 04/24/19 19:09 0.50 U</td></td>	0.50 U 0.50 0.38 ug/L 0.50 U 0.50 0.30 ug/L 0.50 U 0.50 0.34 ug/L 0.50 U 0.50 0.34 ug/L 0.50 U 0.50 0.39 ug/L 0.50 U 0.50 0.40 ug/L 0.50 U 0.50 0.33 ug/L 0.50 U 0.50 0.34 ug/L 0.50 U 0.50 0.38 ug/L 0.50 <td>0.50 U 0.50 0.38 ug/L 04/23/19 15:08 0.50 U 0.50 0.30 ug/L 04/23/19 15:08 0.50 U 0.50 0.34 ug/L 04/23/19 15:08 0.50 U 0.50 0.34 ug/L 04/23/19 15:08 0.50 U 0.50 0.39 ug/L 04/23/19 15:08 0.50 U 0.50 0.39 ug/L 04/23/19 15:08 0.50 U 0.50 0.31 ug/L 04/23/19 15:08 0.50 U 0.50 0.33 ug/L 04/23/19 15:08 0.50 U 0.50 0.37 ug/L 04/23/19 15:08 0.50 U 0.50 0.32 ug/L 04/23/19 15:08 0.50 U 0.50 0.33 ug/L 04/23/19 15:08 0.50 U 0.50 0.36 ug/L</td> <td>0.50 U 0.50 0.38 ug/L 04/23/19 15:08 04/24/19 19:09 0.50 U 0.50 0.50 0.50 0.50 0.4/24/19 19:09 0.50 U 0.50 0.30 ug/L 04/23/19 15:08 04/24/19 19:09 0.50 U 0.50 0.34 ug/L 04/23/19 15:08 04/24/19 19:09 0.50 U 0.50 0.34 ug/L 04/23/19 15:08 04/24/19 19:09 0.50 U 0.50 0.33 ug/L 04/23/19 15:08 04/24/19 19:09 0.50 U 0.50 0.33 ug/L 04/23/19 15:08 04/24/19 19:09 0.50 U 0.50 0.33 ug/L 04/23/19 15:08 04/24/19 19:09 0.50 U 0.50 0.33 ug/L 04/23/19 15:08 04/24/19 19:09 0.50 U</td>	0.50 U 0.50 0.38 ug/L 04/23/19 15:08 0.50 U 0.50 0.30 ug/L 04/23/19 15:08 0.50 U 0.50 0.34 ug/L 04/23/19 15:08 0.50 U 0.50 0.34 ug/L 04/23/19 15:08 0.50 U 0.50 0.39 ug/L 04/23/19 15:08 0.50 U 0.50 0.39 ug/L 04/23/19 15:08 0.50 U 0.50 0.31 ug/L 04/23/19 15:08 0.50 U 0.50 0.33 ug/L 04/23/19 15:08 0.50 U 0.50 0.37 ug/L 04/23/19 15:08 0.50 U 0.50 0.32 ug/L 04/23/19 15:08 0.50 U 0.50 0.33 ug/L 04/23/19 15:08 0.50 U 0.50 0.36 ug/L	0.50 U 0.50 0.38 ug/L 04/23/19 15:08 04/24/19 19:09 0.50 U 0.50 0.50 0.50 0.50 0.4/24/19 19:09 0.50 U 0.50 0.30 ug/L 04/23/19 15:08 04/24/19 19:09 0.50 U 0.50 0.34 ug/L 04/23/19 15:08 04/24/19 19:09 0.50 U 0.50 0.34 ug/L 04/23/19 15:08 04/24/19 19:09 0.50 U 0.50 0.33 ug/L 04/23/19 15:08 04/24/19 19:09 0.50 U 0.50 0.33 ug/L 04/23/19 15:08 04/24/19 19:09 0.50 U 0.50 0.33 ug/L 04/23/19 15:08 04/24/19 19:09 0.50 U 0.50 0.33 ug/L 04/23/19 15:08 04/24/19 19:09 0.50 U

Job ID: 480-152317-1

6

Project/Site: GEI, Mineral Springs Client Sample ID: MW-14 Date Collected: 04/17/19 09:30 Date Received: 04/17/19 16:10 General Chemistry Analytic

Analyte	Result Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	0.89	0.050	0.025	mg/L		04/30/19 11:30	05/01/19 11:44	5
Cyanide, Free	5.9	5.0	1.5	ug/L		04/27/19 16:33	04/27/19 17:30	1

Job ID: 480-152317-1

Client Sample ID: MW-10 Date Collected: 04/17/19 10:30 Date Received: 04/17/19 16:10

Lab Sample ID: 480-152317-5 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 04/25/19 14:36 1 Ethylbenzene 1.0 U 1.0 0.74 ug/L 04/25/19 14:36 1 Toluene 1.0 U 1.0 0.51 ug/L 04/25/19 14:36 1 Xylenes, Total 2.0 U 2.0 0.66 ug/L 04/25/19 14:36 1 Surrogate %Recovery Qualifier Limits Prepared Analyzed Dil Fac 1,2-Dichloroethane-d4 (Surr) 105 77-120 04/25/19 14:36 1 4-Bromofluorobenzene (Surr) 103 73-120 04/25/19 14:36 1 Dibromofluoromethane (Surr) 101 75-123 04/25/19 14:36 1 Toluene-d8 (Surr) 100 80 - 120 04/25/19 14:36 1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2-Methylnaphthalene	0.50	U	0.50	0.38	ug/L		04/23/19 15:08		1
Acenaphthene	0.50	U	0.50	0.30	1000		04/23/19 15:08		-
Acenaphthylene	0.50	U	0.50	0.34	100 D 10		04/23/19 15:08	04/24/19 19:38	
Anthracene	0.50	U	0.50	0.39	ug/L		04/23/19 15:08		1
Benzo(a)anthracene	0.50	U	0.50	0.40	ug/L		04/23/19 15:08		1
Benzo(a)pyrene	0.50	U	0.50	0.33	ug/L		04/23/19 15:08	04/24/19 19:38	1
Benzo(b)fluoranthene	0.50	U	0.50	0.30	ug/L			04/24/19 19:38	1
Benzo(g,h,i)perylene	0.50	U	0.50	0.37	ug/L			04/24/19 19:38	1
Benzo(k)fluoranthene	0.50	U	0.50	0.085	ug/L			04/24/19 19:38	1
Chrysene	0.50	U	0.50		ug/L			04/24/19 19:38	1
Dibenz(a,h)anthracene	0.50	U	0.50		ug/L			04/24/19 19:38	1
Fluoranthene	0.50	U	0.50	0.36	ug/L			04/24/19 19:38	1
Fluorene	0.50	U	0.50		ug/L		04/23/19 15:08	04/24/19 19:38	1
Indeno(1,2,3-cd)pyrene	0.50	U	0.50	0.44	ug/L		04/23/19 15:08	04/24/19 19:38	1
Naphthalene	0.50	U	0.50		ug/L			04/24/19 19:38	1
Phenanthrene	0.50	U	0.50		ug/L			04/24/19 19:38	1
Pyrene	0.50	U	0.50		ug/L			04/24/19 19:38	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
2-Fluorobiphenyl	99		48 - 120				04/23/19 15:08	04/24/19 19:38	1
Nitrobenzene-d5	98		46-120				04/23/19 15:08	04/24/19 19:38	1
p-Terphenyl-d14	69		24-136				04/23/19 15:08		1

5

6

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

Client Sample ID: MW-22 Date Collected: 04/17/19 11:20 Date Received: 04/17/19 16:10

Lab Sample ID: 480-152317-6 Matrix: Ground Water

General Chemistry Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	0.85		0.050	0.025	mg/L		04/30/19 11:30	05/01/19 11:46	5
Cyanide, Free	25.0		5.0	1.5	ug/L		04/27/19 16:33	04/27/19 17:30	1

Client Sample ID: MW-23 Date Collected: 04/17/19 09:25 Date Received: 04/17/19 16:10

Lab Sample ID: 480-152317-7 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 04/25/19 16:45 1 Ethylbenzene 1.0 U 1.0 0.74 ug/L 04/25/19 16:45 1 Toluene 1.0 U 1.0 0.51 ug/L 04/25/19 16:45 1 Xylenes, Total 2.0 U 2.0 0.66 ug/L 04/25/19 16:45 1 Surrogate %Recovery Qualifier Limits Prepared Analyzed Dil Fac 1,2-Dichloroethane-d4 (Surr) 116 77-120 04/25/19 16:45 4-Bromofluorobenzene (Surr) 122 X 73-120 04/25/19 16:45 1 Dibromofluoromethane (Surr) 126 X 75-123 04/25/19 16:45 1 Toluene-d8 (Surr) 104 80-120 04/25/19 16:45 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	100.00	04/23/19 15:08	04/24/19 20:08	1
Acenaphthene	0.50	U	0.50	0.30	ug/L		04/23/19 15:08	04/24/19 20:08	1
Acenaphthylene	0.50	U	0.50	0.34	ug/L		04/23/19 15:08	04/24/19 20:08	1
Anthracene	0.50	U	0.50	0.39	ug/L		04/23/19 15:08	04/24/19 20:08	1
Benzo(a)anthracene	0.50	U	0.50	0.40	ug/L		04/23/19 15:08	04/24/19 20:08	1
Benzo(a)pyrene	0.51		0.50	0.33	ug/L		04/23/19 15:08	04/24/19 20:08	1
Benzo(b)fluoranthene	0.51		0.50	0.30	ug/L		04/23/19 15:08	04/24/19 20:08	1
Benzo(g,h,i)perylene	0.38	1.	0.50	0.37	ug/L		04/23/19 15:08	04/24/19 20:08	1
Benzo(k)fluoranthene	0.50	U	0.50	0.085	ug/L		04/23/19 15:08	04/24/19 20:08	1
Chrysene	0.37	J .	0.50	0.32	ug/L		04/23/19 15:08	04/24/19 20:08	1
Dibenz(a,h)anthracene	0.50	U	0.50	0.33	ug/L		04/23/19 15:08	04/24/19 20:08	1
Fluoranthene	0.94		0.50	0.36	ug/L		04/23/19 15:08	04/24/19 20:08	31
Fluorene	0.50	U	0.50	0.37	ug/L		04/23/19 15:08	04/24/19 20:08	1
Indeno(1,2,3-cd)pyrene	0.50	U	0.50	0.44	ug/L		04/23/19 15:08	04/24/19 20:08	1
Naphthalene	0.50	U	0.50	0.42	ug/L		04/23/19 15:08	04/24/19 20:08	1
Phenanthrene	0.61		0.50	0.38	ug/L		04/23/19 15:08	04/24/19 20:08	1
Pyrene	0.70		0.50	0.36	ug/L		04/23/19 15:08	04/24/19 20:08	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
2-Fluorobiphenyl	116		48 - 120				04/23/19 15:08	04/24/19 20:08	1
Nitrobenzene-d5	119		46-120				04/23/19 15:08	04/24/19 20:08	1
p-Terphenyl-d14	86		24-136				04/23/19 15:08	04/24/19 20:08	1
General Chemistry									
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	0.32		0.010	0.0050	mg/L	and the second	04/30/19 11:30	05/01/19 11:03	1
Cyanide, Free	38.6		5.0	1.5	ug/L		04/27/19 16:33	04/27/19 17:30	1

1

6

Client Sample ID: MW-13 Date Collected: 04/17/19 10:30 Date Received: 04/17/19 16:10

Lab Sample ID: 480-152317-8 Matrix: Ground Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	1.0	U	1.0	0.41	ug/L			04/25/19 17:09	1
Ethylbenzene	1.0	U	1.0	0.74	ug/L			04/25/19 17:09	1
Toluene	1.0	U	1.0	0.51	ug/L			04/25/19 17:09	- 31
Xylenes, Total	2.0	U	2.0	0.66	ug/L			04/25/19 17:09	्रा
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	111		77 - 120				- Interface and a second	04/25/19 17:09	1
4-Bromofluorobenzene (Surr)	119		73-120					04/25/19 17:09	1
Dibromofluoromethane (Surr)	118		75-123					04/25/19 17:09	1
Toluene-d8 (Surr)	103		80-120					04/25/19 17:09	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		04/23/19 15:08	04/24/19 20:37	1
Acenaphthene	0.50	U	0.50	0.30	ug/L		04/23/19 15:08	04/24/19 20:37	1
Acenaphthylene	0.50	U	0.50	0.34	ug/L		04/23/19 15:08	04/24/19 20:37	1
Anthracene	0.50	U	0.50	0.39	ug/L		04/23/19 15:08	04/24/19 20:37	1
Benzo(a)anthracene	0.50	U	0.50	0.40	ug/L		04/23/19 15:08	04/24/19 20:37	1
Benzo(a)pyrene	0.50	U	0.50	0.33	ug/L		04/23/19 15:08	04/24/19 20:37	1
Benzo(b)fluoranthene	0.50	U	0.50	0.30	ug/L		04/23/19 15:08	04/24/19 20:37	1
Benzo(g,h,i)perylene	0.50	U	0.50	0.37	ug/L		04/23/19 15:08	04/24/19 20:37	1
Benzo(k)fluoranthene	0.50	U	0.50	0.085	ug/L		04/23/19 15:08	04/24/19 20:37	1
Chrysene	0.50	U	0.50	0.32	ug/L		04/23/19 15:08	04/24/19 20:37	1
Dibenz(a,h)anthracene	0.50	U	0.50	0.33	ug/L		04/23/19 15:08	04/24/19 20:37	1
Fluoranthene	0.50	U	0.50	0.36	ug/L		04/23/19 15:08	04/24/19 20:37	1
Fluorene	0.50	U	0.50	0.37	ug/L		04/23/19 15:08	04/24/19 20:37	1
Indeno(1,2,3-cd)pyrene	0.50	U	0.50	0.44	ug/L		04/23/19 15:08	04/24/19 20:37	1
Naphthalene	0.50	U	0.50	0.42	ug/L		04/23/19 15:08	04/24/19 20:37	1
Phenanthrene	0.50	U	0.50	0.38	ug/L		04/23/19 15:08	04/24/19 20:37	1
Pyrene	0.50	U	0.50	0.36	ug/L		04/23/19 15:08	04/24/19 20:37	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
2-Fluorobiphenyl	100		48-120				04/23/19 15:08	04/24/19 20:37	1
Nitrobenzene-d5	98		46 - 120				04/23/19 15:08	04/24/19 20:37	1
p-Terphenyl-d14	67		24 - 136				04/23/19 15:08	04/24/19 20:37	1
General Chemistry									
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	0.012		0.010	0.0050	mg/L		04/30/19 12:50	05/01/19 12:05	1
Cyanide, Free	5.0	U	5.0	1.5	ug/L		04/27/19 16:33	04/27/19 17:30	1

5/31/2019 (Rev. 1)

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

Job ID: 480-152317-1

6

Client Sample ID: MW-17 Date Collected: 04/17/19 14:40 Date Received: 04/17/19 16:10

Lab Sample ID: 480-152317-9 Matrix: Ground Water

Method: 8260C - Volatile Organic Compounds by GC/MS Analyte Result Qualifier RL MDL Unit

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	2.0	U	2.0	0.82	ug/L			04/26/19 12:14	2
Ethylbenzene	2.0	U	2.0	1.5	ug/L			04/26/19 12:14	2
Toluene	2.0	U	2.0	1.0	ug/L			04/26/19 12:14	2
Xylenes, Total	4.0	U	4.0	1.3	ug/L			04/26/19 12:14	2
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	115		77 - 120				- hand -	04/26/19 12:14	2
4-Bromofluorobenzene (Surr)	117		73-120					04/26/19 12:14	2
Dibromofluoromethane (Surr)	124	×	75-123					04/26/19 12:14	2
Toluene-d8 (Surr)	104		80 - 120					04/26/19 12:14	2

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2-Methylnaphthalene	10	U	10	7.6	ug/L		04/23/19 15:08	04/24/19 21:07	20
Acenaphthene	10	U	10	6.0	ug/L		04/23/19 15:08	04/24/19 21:07	20
Acenaphthylene	10	U	10	6.8	ug/L		04/23/19 15:08	04/24/19 21:07	20
Anthracene	10	U	10	7.8	ug/L		04/23/19 15:08	04/24/19 21:07	20
Benzo(a)anthracene	10	U	10	8.0	ug/L		04/23/19 15:08	04/24/19 21:07	20
Benzo(a)pyrene	10	U	10	6.6	ug/L		04/23/19 15:08	04/24/19 21:07	20
Benzo(b)fluoranthene	10	U	10	6.0	ug/L		04/23/19 15:08	04/24/19 21:07	20
Benzo(g,h,i)perylene	10	U	10	7.4	ug/L		04/23/19 15:08	04/24/19 21:07	20
Benzo(k)fluoranthene	10	U	10	1.7	ug/L		04/23/19 15:08	04/24/19 21:07	20
Chrysene	10	U	10	6.4	ug/L		04/23/19 15:08	04/24/19 21:07	20
Dibenz(a,h)anthracene	10	U	10	6.6	ug/L		04/23/19 15:08	04/24/19 21:07	20
Fluoranthene	10	U	10	7.2	ug/L		04/23/19 15:08	04/24/19 21:07	20
Fluorene	10	U	10	7.4	ug/L		04/23/19 15:08	04/24/19 21:07	20
Indeno(1,2,3-cd)pyrene	10	U	10	8.8	ug/L		04/23/19 15:08	04/24/19 21:07	20
Naphthalene	10	U	10	8.4	ug/L		04/23/19 15:08	04/24/19 21:07	20
Phenanthrene	10	U	10	7.6	ug/L		04/23/19 15:08	04/24/19 21:07	20
Pyrene	10	U	10	7.2	ug/L		04/23/19 15:08	04/24/19 21:07	20
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
2-Fluorobiphenyl	93		48 - 120				04/23/19 15:08	04/24/19 21:07	20
Nitrobenzene-d5	76		46-120				04/23/19 15:08	04/24/19 21:07	20
p-Terphenyl-d14	74		24-136				04/23/19 15:08	04/24/19 21:07	20
General Chemistry									
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	0.16		0.010	0.0050	mg/L		04/30/19 12:50	05/01/19 12:06	1
Cyanide, Free	3.3	J .	5.0	1.5	ug/L		04/27/19 16:33	04/27/19 17:30	1

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

Job ID: 480-152317-1

5 6

Client Sample ID: MW-19 Date Collected: 04/17/19 13:10 Date Received: 04/17/19 16:10

Lab Sample ID: 480-152317-10 Matrix: Ground Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	4100	J	100	41	ug/L			04/25/19 17:57	100
Ethylbenzene	430	J .	100	74	ug/L			04/25/19 17:57	100
Toluene	-100	UR.	100	51	ug/L			04/25/19 17:57	100
Xylenes, Total	200	WR.	200	66	ug/L			04/25/19 17:57	100
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	112	-	77 - 120				- constant and	04/25/19 17:57	100
4-Bromofluorobenzene (Surr)	118		73-120					04/25/19 17:57	100
Dibromofluoromethane (Surr)	118		75-123					04/25/19 17:57	100
Toluene-d8 (Surr)	102		80 - 120					04/25/19 17:57	100

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2-Methylnaphthalene	100	U	100	76	ug/L	10.00	04/23/19 15:08	04/24/19 21:36	200
Acenaphthene	100	U	100	60	ug/L		04/23/19 15:08	04/24/19 21:36	200
Acenaphthylene	100	U	100	68	ug/L		04/23/19 15:08	04/24/19 21:36	200
Anthracene	100	U	100	78	ug/L		04/23/19 15:08	04/24/19 21:36	200
Benzo(a)anthracene	100	U	100	80	ug/L		04/23/19 15:08	04/24/19 21:36	200
Benzo(a)pyrene	100	U	100	66	ug/L		04/23/19 15:08	04/24/19 21:36	200
Benzo(b)fluoranthene	100	U	100	60	ug/L		04/23/19 15:08	04/24/19 21:36	200
Benzo(g,h,i)perylene	100	U	100	74	ug/L		04/23/19 15:08	04/24/19 21:36	200
Benzo(k)fluoranthene	100	U	100	17	ug/L		04/23/19 15:08	04/24/19 21:36	200
Chrysene	100	U	100	64	ug/L		04/23/19 15:08	04/24/19 21:36	200
Dibenz(a,h)anthracene	100	U	100	66	ug/L		04/23/19 15:08	04/24/19 21:36	200
Fluoranthene	100	U	100	72	ug/L		04/23/19 15:08	04/24/19 21:36	200
Fluorene	100	U	100	74	ug/L		04/23/19 15:08	04/24/19 21:36	200
Indeno(1,2,3-cd)pyrene	100	U	100	88	ug/L		04/23/19 15:08	04/24/19 21:36	200
Naphthalene	3600		100	84	ug/L		04/23/19 15:08	04/24/19 21:36	200
Phenanthrene	100	U	100	76	ug/L		04/23/19 15:08	04/24/19 21:36	200
Pyrene	100	U	100	72	ug/L		04/23/19 15:08	04/24/19 21:36	200
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
2-Fluorobiphenyl	92		48 - 120				04/23/19 15:08	04/24/19 21:36	200
Nitrobenzene-d5	0	X	46 - 120				04/23/19 15:08	04/24/19 21:36	200
p-Terphenyl-d14	62		24-136				04/23/19 15:08	04/24/19 21:36	200

Client Sample Results

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

Job ID: 480-152317-1

Client Sample ID: MW-07 Date Collected: 04/17/19 11:10 Date Received: 04/17/19 16:10

Lab Sample ID: 480-152317-11 Matrix: Ground Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	320		20	8.2	ug/L			04/25/19 15:03	20
Ethylbenzene	590	F+ J .	20	15	ug/L			04/25/19 15:03	20
Toluene	20	U	20	10	ug/L			04/25/19 15:03	20
Xylenes, Total	290		40	13	ug/L			04/25/19 15:03	20
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	108		77 - 120			8		04/25/19 15:03	20
4-Bromofluorobenzene (Surr)	103		73-120					04/25/19 15:03	20
Dibromofluoromethane (Surr)	99		75-123					04/25/19 15:03	20
Toluene-d8 (Surr)	99		80 - 120					04/25/19 15:03	20

Analyte		Qualifier	RL	100 March 100 Ma	Unit	D	Prepared	Analyzed	Dil Fac
2-Methylnaphthalene	100		50	38	ug/L		04/23/19 15:08	04/24/19 22:06	100
Acenaphthene	57		50	30	ug/L		04/23/19 15:08	04/24/19 22:06	100
Acenaphthylene	50	U	50	34	ug/L		04/23/19 15:08	04/24/19 22:06	100
Anthracene	50	U	50	39	ug/L		04/23/19 15:08	04/24/19 22:06	100
Benzo(a)anthracene	50	U	50	40	ug/L		04/23/19 15:08	04/24/19 22:06	100
Benzo(a)pyrene	50	U	50	33	ug/L		04/23/19 15:08	04/24/19 22:06	100
Benzo(b)fluoranthene	50	U	50	30	ug/L		04/23/19 15:08	04/24/19 22:06	100
Benzo(g.h,i)perylene	50	U	50	37	ug/L		04/23/19 15:08	04/24/19 22:06	100
Benzo(k)fluoranthene	50	U	50	8.5	ug/L		04/23/19 15:08	04/24/19 22:06	100
Chrysene	50	U	50	32	ug/L		04/23/19 15:08	04/24/19 22:06	100
Dibenz(a,h)anthracene	50	U	50	33	ug/L		04/23/19 15:08	04/24/19 22:06	100
Fluoranthene	50	U	50	36	ug/L		04/23/19 15:08	04/24/19 22:06	100
Fluorene	50	U	50	37	ug/L		04/23/19 15:08	04/24/19 22:06	100
Indeno(1,2,3-cd)pyrene	50	U	50	44	ug/L		04/23/19 15:08	04/24/19 22:06	100
Naphthalene	1000		50	42	ug/L		04/23/19 15:08	04/24/19 22:06	100
Phenanthrene	50	U	50	38	ug/L		04/23/19 15:08	04/24/19 22:06	100
Pyrene	50	U	50	36	ug/L		04/23/19 15:08	04/24/19 22:06	100
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
2-Fluorobiphenyl	79		48-120				04/23/19 15:08	04/24/19 22:06	100
Nitrobenzene-d5	62		46-120				04/23/19 15:08	04/24/19 22:06	100
p-Terphenyl-d14	51		24-136				04/23/19 15:08	04/24/19 22:06	100

Job ID: 480-152317-1

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

Client Sample ID: MW-12 Date Collected: 04/17/19 12:15 Date Received: 04/17/19 16:10						Lal	2.7	D: 480-1523 latrix: Ground	
General Chemistry Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	1.0		0.050	0.025	mg/L		04/30/19 12:50	05/01/19 12:38	5
Cyanide, Free	34.8		5.0	1.5	ug/L		04/27/19 16:33	04/27/19 17:30	1

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

Client Sample ID: MW-11A Date Collected: 04/17/19 13:30 Date Received: 04/17/19 16:10

Job ID: 480-152317-1

5 6

Lab Sample ID: 480-152317-13 Matrix: Ground Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	2.0	U	2.0	0.82	ug/L			04/26/19 12:38	2
Ethylbenzene	2.0	U	2.0	1.5	ug/L			04/26/19 12:38	2
Toluene	2.0	U	2.0	1.0	ug/L			04/26/19 12:38	2
Xylenes, Total	4.0	U	4.0	1.3	ug/L			04/26/19 12:38	2
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	118		77 - 120					04/26/19 12:38	2
4-Bromofluorobenzene (Surr)	123	x	73-120					04/26/19 12:38	2
Dibromofluoromethane (Surr)	125	x	75-123					04/26/19 12:38	2
Toluene-d8 (Surr)	103		80-120					04/26/19 12:38	2

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2-Methylnaphthalene	0.50	U	0.50	0.38	ug/L		04/23/19 15:08	04/24/19 22:35	1
Acenaphthene	0.50	U	0.50	0.30	ug/L		04/23/19 15:08	04/24/19 22:35	1
Acenaphthylene	0.50	U	0.50	0.34	ug/L		04/23/19 15:08	04/24/19 22:35	1
Anthracene	0.50	U	0.50	0.39	ug/L		04/23/19 15:08	04/24/19 22:35	1
Benzo(a)anthracene	0.50	U	0.50	0.40	ug/L		04/23/19 15:08	04/24/19 22:35	1
Benzo(a)pyrene	0.50	U	0.50	0.33	ug/L		04/23/19 15:08	04/24/19 22:35	1
Benzo(b)fluoranthene	0.50	U	0.50	0.30	ug/L		04/23/19 15:08	04/24/19 22:35	1
Benzo(g,h,i)perylene	0.50	U	0.50	0.37	ug/L		04/23/19 15:08	04/24/19 22:35	1
Benzo(k)fluoranthene	0.50	U	0.50	0.085	ug/L		04/23/19 15:08	04/24/19 22:35	1
Chrysene	0.50	U	0.50	0.32	ug/L		04/23/19 15:08	04/24/19 22:35	1
Dibenz(a,h)anthracene	0.50	U	0.50	0.33	ug/L		04/23/19 15:08	04/24/19 22:35	1
Fluoranthene	0.50	υ	0.50	0.36	ug/L		04/23/19 15:08	04/24/19 22:35	1
Fluorene	0.50	U	0.50	0.37	ug/L		04/23/19 15:08	04/24/19 22:35	1
Indeno(1,2,3-cd)pyrene	0.50	U	0.50	0.44	ug/L		04/23/19 15:08	04/24/19 22:35	1
Naphthalene	0.50	U	0.50	0.42	ug/L		04/23/19 15:08	04/24/19 22:35	1
Phenanthrene	0.50	υ	0.50	0.38	ug/L		04/23/19 15:08	04/24/19 22:35	1
Pyrene	0.50	U	0.50	0.36	ug/L	25	04/23/19 15:08	04/24/19 22:35	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
2-Fluorobiphenyl	101		48 - 120				04/23/19 15:08	04/24/19 22:35	1
Nitrobenzene-d5	100		46 - 120				04/23/19 15:08	04/24/19 22:35	1
p-Terphenyl-d14	72		24 - 136				04/23/19 15:08	04/24/19 22:35	1
General Chemistry									
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	0.33		0.010	0.0050	mg/L		04/30/19 12:50	05/01/19 12:12	1
Cyanide, Free	19.5		5.0	1.5	ug/L		04/27/19 16:33	04/27/19 17:30	1
Total Dissolved Solids	653		10.0	4.0	mg/L			04/24/19 22:16	1
Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids	26.8		4.0	4.0	mg/L			04/24/19 22:38	1

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

Job ID: 480-152317-1

Client Sample ID: EB Date Collected: 04/17/19 13:15 Date Received: 04/17/19 16:10

Lab Sample ID: 480-152317-14 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 04/25/19 18:44 1 Ethylbenzene 1.0 U 0.74 ug/L 1.0 04/25/19 18:44 1 Toluene 1.0 U 1.0 0.51 ug/L 04/25/19 18:44 1 Xylenes, Total 2.0 U 2.0 0.66 ug/L 04/25/19 18:44 1 Surrogate %Recovery Qualifier Limits Dil Fac Prepared Analyzed 1,2-Dichloroethane-d4 (Surr) 109 77-120 04/25/19 18:44 1 4-Bromofluorobenzene (Surr) 116 73-120 04/25/19 18:44 1 Dibromofluoromethane (Surr) 113 75-123 04/25/19 18:44 1 Toluene-d8 (Surr) 101 80-120 04/25/19 18:44 1

Analyte		Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
2-Methylnaphthalene	0.50	U	0.50	0.38	ug/L	1.5	04/23/19 15:08	04/24/19 23:05	1
Acenaphthene	0.50	U	0.50	0.30	ug/L		04/23/19 15:08	04/24/19 23:05	1
Acenaphthylene	0.50	U	0.50	0.34	ug/L		04/23/19 15:08	04/24/19 23:05	1
Anthracene	0.50	U	0.50	0.39	ug/L		04/23/19 15:08	04/24/19 23:05	1
Benzo(a)anthracene	0.50	U	0.50	0.40	ug/L		04/23/19 15:08	04/24/19 23:05	1
Benzo(a)pyrene	0.50	U	0.50	0.33	ug/L		04/23/19 15:08	04/24/19 23:05	1
Benzo(b)fluoranthene	0.50	U	0.50	0.30	ug/L		04/23/19 15:08	04/24/19 23:05	1
Benzo(g,h,i)perylene	0.50	U	0.50	0.37	ug/L		04/23/19 15:08	04/24/19 23:05	1
Benzo(k)fluoranthene	0.50	U	0.50	0.085	ug/L		04/23/19 15:08	04/24/19 23:05	1
Chrysene	0.50	U	0.50	0.32	ug/L		04/23/19 15:08	04/24/19 23:05	1
Dibenz(a,h)anthracene	0.50	U	0.50	0.33	ug/L		04/23/19 15:08	04/24/19 23:05	1
Fluoranthene	0.50	U	0.50	0.36	ug/L		04/23/19 15:08	04/24/19 23:05	1
Fluorene	0.50	U	0.50	0.37	ug/L		04/23/19 15:08	04/24/19 23:05	1
Indeno(1,2,3-cd)pyrene	0.50	U	0.50	0.44	ug/L		04/23/19 15:08	04/24/19 23:05	1
Naphthalene	0.50	U	0.50	0.42	ug/L		04/23/19 15:08	04/24/19 23:05	1
Phenanthrene	0.50	U	0.50	0.38	ug/L		04/23/19 15:08	04/24/19 23:05	1
Pyrene	0.50	U	0.50	0.36	ug/L		04/23/19 15:08	04/24/19 23:05	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
2-Fluorobiphenyl	82		48 - 120				04/23/19 15:08	04/24/19 23:05	1
Nitrobenzene-d5	73		46 - 120				04/23/19 15:08	04/24/19 23:05	1
p-Terphenyl-d14	73		24 - 136				04/23/19 15:08	04/24/19 23:05	1
General Chemistry									
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	0.010	U	0.010	0.0050	mg/L		04/30/19 12:50	05/01/19 12:13	1
Cyanide, Free	5.0	U	5.0	1.5	ug/L		04/27/19 16:33	04/27/19 17:30	1
					0			0 1121110 11100	

Client Sample Results

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

Client Sample ID: TB Date Collected: 04/17/19 00:00 Date Received: 04/17/19 16:10

Lab Sample ID: 480-152317-15

Matrix: Water

5 6

Job ID: 480-152317-1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	1.0	U	1.0	0.41	ug/L			04/25/19 19:08	1
Ethylbenzene	1.0	U	1.0	0.74	ug/L			04/25/19 19:08	1
Toluene	1.0	U	1.0	0.51	ug/L			04/25/19 19:08	1
Xylenes, Total	2.0	U	2.0	0.66	ug/L			04/25/19 19:08	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	113		77 - 120				Martin A. La Contra	04/25/19 19:08	1
4-Bromofluorobenzene (Surr)	120		73-120					04/25/19 19:08	1
Dibromofluoromethane (Surr)	119		75-123					04/25/19 19:08	1
Toluene-d8 (Surr)	100		80-120					04/25/19 19:08	+

Eurofins TestAmerica, Buffalo

5/31/2019 (Rev. 1)

Job ID: 480-152317-1

Matrix: Ground Water

Lab Sample ID: 480-152317-16

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

Client Sample ID: N	IW-21	
Date Collected: 04/17/1	9 14:35	
Date Received: 04/17/1	9 16:10	
Convert Objection		

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	0.48		0.010	0.0050	mg/L		04/30/19 12:50	05/01/19 12:18	1
Cyanide, Free	5.0	U	5.0	1.5	ug/L		04/27/19 16:33	04/27/19 17:30	1

Amberst, MY 14228 Phone: 716.691.2600 Fax: 716.691.7991	Regulatory Program:	- True Datase	C Darias Totaur	The LEADER IN ENVIRONMENTAL TESTING TestAmerica Laboratories, Inc. Tal. 4340 (0713)
Client	Project Manager: Ruck	Ferre	Site Contact: M. (UMMiup)	Hirling coc No.
/ Nam	Tel/Fax:			Carrier: HAND DELIVERY 1 01 2000
131	Analysis Turnaround Time CoteNDAR DAVS WORKING D TAT disferent from Butow	working DAYS	(0) (0) (0) (0) (0) (0) (0) (0) (0) (0)	For Lab Use Only: Walk-in Client
Fax: Project Name: MINERA SPRINGS M6P She PO#	2 Apress 2 Apres 2 Apres 2 Apres 2 Apres 2 Apres 2 Apress 2 Apress 2 Apres		46 6106; 52-13 65-23 76-25 785 76-25 785 76-25 76-	
Sample Identification	Sample Sample Ty Date Time con	Type Type (-com. G-cont. Matrix Cont.	Perform MS Perform MS	480-152317 Chain of Custody
AnW-17	4/17/16/ 1440 G	N	X XXXX	
MMI -13			XXXX X	
MW - 14	0620 /		XX	
	15%		XXXX	
16 MW- 21	1435	_	X XX	Augustable CN MPT regurd
MW	11 20	_	XXX	domini
	1 0925	-	XXXX	61/s/m
<	1 12 15		XX	
d1- INW	1 1220		XXX	
MW-07	1110		XX	
01 - MW	CE01		XX	
13 MW-11A W 133	V 1333	1 1	XXXXXX	
Preservation Used: 1= Ice., 2= HCI; 3= H2SO4; 4=HNO3; Possible Hazard Identification: Are any samples from a listed EPA Hazardous Waste? Plea	O e	ode's for the sample in the	10	Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
Commercial Section if the tab is to dispose of the sample.	Poison B	Uniersown	Return to Client	spool by Lab Archive for Months
ctions/OC Re			1	12
Custody Seals Intact: 745 100	Custody Seal No :		Cooler Temp. ("C). Obs'd	Corrd. Therm ID No.
telinquished by M C C C	Company GET	Date/Time:	Received by:	Company, Date/Time:
Reinquished tu	Company.	Date/Time:	Received by	Company. Date/Time:
Ard persentium of the second s	Company:	Date/Time:	Received Lateration Pyl 1401D	0 Company TA Date Time 11 11 11 10 10

IESTHMETICA BUFFAID 10 Mazelwood Drive	+ 2324		Chain of Custody Record	304425	TestAmerica
Anherst, NY 14228 Phone: 716,691.2600 Fax: 716.691.7991	Regulatory Program:	ma la	Inercis Coner.	1.000	The LEADER IN ENVIRONMENTAL TESTING TestAmerica Laboratories, Inc. TAL-820 (0713)
Client Contact	Project Manager:	Fray	Site Contact: M. C. I. M. B.	Date: UITIG	COC No:
all John Mule	Analysis Turnaround Time	around Time			
Phone 716 - 204 7155	TATA definerent from Below	Performer	2754 () () () () () ()		Walk-In Client
Project Name Minual Spring MbP		2 * .	HSZ) 0HSZ) 128) 128) 128) 128) 128) 128) 128) 138)		Job / SDG No :
Sample Identification	Sample Sample po	Irype Scono, Matrix	CAMUS Last CAMUS Last CAMUS CA		Sample: Specific Notes:
+ 10 MUN-19	4/17/19 13.10	G W	XX		
- IS TRIP BLANK	- 1	1 1	X		
	1315		X XXX X		
DUPLICATE)		XXXXX		
ge 471		-			
01.56					
		-			
	->				
Preservation Used: 1= ice, 2= HCi, 3= H2SO4, 4=HNO3, 5=NaOH, 6= Other	; 5=NaOH; 6= Other	8			A MAN AND A SAME AND A SAME AND A
Possible Hazard Identification: Are any samples from a listed EPA Hazardous Waste? Please List any EPA Waste Codos for the sample in the Comments Section if the lab is to dispose of the sample.	tse List any EPA Waste Co	des for the sample	Sample Disposal (A fee may be assessed if samples are retained longer than 1 month) in the	assessed if samples are reta	ned longer than 1 month)
Mon-Hazard Alammable Skin Imitant	Preson B	Unknown	Return to Client	sposal by Lab	Marchs
Spectal Instructions/QC Requirements & Comments:					
Custody Seals Intact.	Custody Seal No.:		Cooler Temp. ("C): Obs/d		Them ID No.
Relinquished by U S	Comfay EZ	Bane Tane	610 Received by	Company.	Date/Time:
Relinquished by	Company	DateTime	Received by:	Company:	Date/Time.
Relinquished by:	Company	Date/Time	Received In Lapy and by I well	10 company A	0101 11/11/11/1010
19					



Site:	Mineral Springs MGP
Laboratory:	Test America, Amherst, NY
Report No.:	480-152316
Reviewer:	Lorie MacKinnon/GEI Consultants
Date:	June 24, 2019

Samples Reviewed and Evaluation Summary

FIELD ID	LAB ID	FRACTIONS VALIDATED
SW-01 SW-02 SW-03 SW-04 SW-05 TB	480-152316-01 480-152316-02 480-152316-03 480-152316-04 480-152316-05 480-152316-06	BTEX, PAH, Total/Free Cyanide, TDS, TSS BTEX, PAH, Total/Free Cyanide, TDS, TSS Total/Free Cyanide Total/Free Cyanide Total/Free Cyanide BTEX

Associated QC Samples: Trip blanks: TB

The above-listed aqueous samples and trip blank sample were collected on April 18, 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
- Quantitation Limits and Data Assessment
- 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.

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.

TDS

Due to laboratory error, the total dissolved solids analysis for samples SW-01 and SW-02 was performed five days outside of method hold time of seven days. The positive results for TDS in samples SW-01 and SW-02 were qualified as estimated (J). Results may be biased low.

Initial and Continuing Calibrations

All initial and continuing calibration criteria were met except where noted below.

Total Cyanide

Calibration Standard	Analyte	Calibration Exceedance	Validation Qualifier
CCV 05/02/19 12:16	Total Cyanide	115 %	Estimate (J) the positive results for total cyanide in samples SW-02 and SW-03; High bias. Validation actions were not required for the remaining samples as results were nondetect and therefore not affected by the potential high bias.
Associated sample	es: SW-01, SW-02,	SW-03, SW-04,	SW-05

Continuing calibration verification (CCV) recovery (%R) outside of the laboratory control limits of 90-110; estimate (J/UJ) positive and nondetect results dependent of recovery.

<u>Blanks</u>

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	10X Action Level	Validation Actions
Total cyanide	05/02 Method/Instrument blanks: SW-01, SW-02, SW- 03, SW-04, SW-05	0.0113 mg/L	0.113 mg/L	Qualify the result for total cyanide as nondetect (U) at the RL in sample SW-04. Estimate (J) the positive result for total cyanide in sample SW-02; High bias.

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 \geq RL and \leq blank contamination detected; report the result as nondetect (U) at the reported value. If the sample result is \geq 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 except where noted below.

VOCs

The following table summarizes the surrogates recovered outside of the laboratory control limits.

Sample	Surrogate	Recovery (%)	Control Limits (%)	Validation Actions
	Dibromofluoromethane	124	75-123	Validation actions were not required as all results were
SW-02	4-Bromofluorobenzene	122	73-120	nondetect in sample SW-02 and therefore not affected by the potential high bias.

MS/MSD Results

An MS analysis was performed on sample SW-04 for total cyanide.

MS Sample	Analyte	MS (%)	Control Limits (%)	Validation Action/Bias
SW-04	Cyanide	83	90-110	Estimate (J/UJ) the positive and nondetect results for cyanide in the associated samples; Low bias.
Associated samp	les: SW-01,	SW-02, SV	W-03, SW-04,	, SW-05

Laboratory Duplicate Results

A Project laboratory duplicate analysis was not associated with this sample set.

Internal Standard Results

All criteria were met.

LCS/LCSD Results

All criteria were met except where noted below.

Total Cyanide

LCS ID	Compound	Recovery (%)	Control Limits (%)	Validation Action/Bias
LCS 480- 470844	Total cyanide	87	90-110	Estimate (J/UJ) the positive and nondetect results for total cyanide in the associated samples; Low bias.
Associated s	samples: SW-01, SW-	02, SW-03, S	W-04, SW-0	5

Quantitation Limits and Data Assessment

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.

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

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

Job ID: 480-152316-1

Client Sample ID: SW-01 Date Collected: 04/18/19 09:10 Date Received: 04/18/19 11:38

Lab Sample ID: 480-152316-1 Matrix: Surface 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 04/25/19 15:33 1 Ethylbenzene 1.0 U 1.0 0.74 ug/L 04/25/19 15:33 1 Toluene 1.0 U 1.0 0.51 ug/L 04/25/19 15:33 1 Xylenes, Total 2.0 U 2.0 0.66 ug/L 04/25/19 15:33 1 Surrogate %Recovery Qualifier Limits Prepared Analyzed Dil Fac 1,2-Dichloroethane-d4 (Surr) 114 77-120 04/25/19 15:33 4-Bromofluorobenzene (Surr) 118 73-120 04/25/19 15:33 Dibromofluoromethane (Surr) 122 75-123 04/25/19 15:33 1 Toluene-d8 (Surr) 101 80-120 04/25/19 15:33 1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2-Methylnaphthalene	0.50	U	0.50	0.38	ug/L	200	04/23/19 15:08	04/24/19 18:10	1
Acenaphthene	0.50	U	0.50	0.30	ug/L		04/23/19 15:08	04/24/19 18:10	1
Acenaphthylene	0.50	υ	0.50	0.34	ug/L		04/23/19 15:08	04/24/19 18:10	1
Anthracene	0.50	U	0.50	0.39	ug/L		04/23/19 15:08	04/24/19 18:10	1
Benzo(a)anthracene	0.50	U	0.50	0.40	ug/L		04/23/19 15:08	04/24/19 18:10	1
Benzo(a)pyrene	0.50	U	0.50	0.33	ug/L		04/23/19 15:08	04/24/19 18:10	1
Benzo(b)fluoranthene	0.50	U	0.50	0.30	ug/L		04/23/19 15:08	04/24/19 18:10	1
Benzo(g.h.i)perylene	0.50	U	0.50	0.37	ug/L		04/23/19 15:08	04/24/19 18:10	1
Benzo(k)fluoranthene	0.50	U	0.50	0.085	ug/L		04/23/19 15:08	04/24/19 18:10	1
Chrysene	0.50	υ.	0.50	0.32	ug/L		04/23/19 15:08	04/24/19 18:10	1
Dibenz(a,h)anthracene	0.50	U	0.50	0.33	ug/L		04/23/19 15:08	04/24/19 18:10	1
Fluoranthene	0.50	U	0.50	0.36	ug/L		04/23/19 15:08	04/24/19 18:10	1
Fluorene	0.50	U	0.50	0.37	ug/L		04/23/19 15:08	04/24/19 18:10	1
Indeno(1,2,3-cd)pyrene	0.50	U	0.50		ug/L		04/23/19 15:08	04/24/19 18:10	1
Naphthalene	0.50	U	0.50	0.42	ug/L		04/23/19 15:08	04/24/19 18:10	1
Phenanthrene	0.50	U	0.50	0.38	ug/L		04/23/19 15:08	04/24/19 18:10	1
Pyrene	0.50	υ	0.50	0.36	ug/L		04/23/19 15:08	04/24/19 18:10	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
2-Fluorobiphenyl	92	1997 - C	48 - 120				04/23/19 15:08	04/24/19 18:10	1
Nitrobenzene-d5	90		46 - 120				04/23/19 15:08	04/24/19 18:10	1
p-Terphenyl-d14	70		24 - 136				04/23/19 15:08	04/24/19 18:10	1
General Chemistry									
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	0.010	HAA UJ .	0.010	0.0050	mg/L	and the second	05/01/19 10:30	05/02/19 12:03	1
Cyanide, Free	5.0	U	5.0	1.5	ug/L		04/27/19 16:33	04/27/19 17:30	1
Total Dissolved Solids	771	++ J.	10.0	4.0	mg/L			05/30/19 16:05	1
Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids	4.0	U	4.0	4.0	mg/L	-	Contraction of the second second	04/25/19 12:04	1

Job ID: 480-152316-1

Client Sample ID: SW-02 Date Collected: 04/18/19 08:00 Date Received: 04/18/19 11:38

Total Suspended Solids

Lab Sample ID: 480-152316-2 Matrix: Surface 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			04/26/19 13:01	1
Ethylbenzene	1.0	U		1.0	0.74	ug/L			04/26/19 13:01	1
Toluene	1.0	U	*	1.0	0.51	ug/L			04/26/19 13:01	1
Xylenes, Total	2.0	U		2.0	0.66	ug/L			04/26/19 13:01	- 1
Surrogate	%Recovery	Qualifier		Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	117	land a state of the state of th		77 - 120				and the second state of the second state	04/26/19 13:01	1
4-Bromofluorobenzene (Surr)	122	x		73-120					04/26/19 13:01	1
Dibromofluoromethane (Surr)	124	X		75-123					04/26/19 13:01	1
Toluene-d8 (Surr)	102			80 - 120					04/26/19 13:01	1

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

4.0 U

Analyte	Result	Qualifier		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2-Methylnaphthalene	0.50	U		0.50	0.38	ug/L	-	04/23/19 15:08	04/24/19 18:40	1
Acenaphthene	0.50	U		0.50	0.30	ug/L		04/23/19 15:08	04/24/19 18:40	1
Acenaphthylene	0.50	U		0.50	0.34	ug/L		04/23/19 15:08	04/24/19 18:40	1
Anthracene	0.50	U		0.50	0.39	ug/L		04/23/19 15:08	04/24/19 18:40	1
Benzo(a)anthracene	0.50	U		0.50	0.40	ug/L		04/23/19 15:08	04/24/19 18:40	1
Benzo(a)pyrene	0.50	U		0.50	0.33	ug/L		04/23/19 15:08	04/24/19 18:40	1
Benzo(b)fluoranthene	0.50	U		0.50	0.30	ug/L		04/23/19 15:08	04/24/19 18:40	1
Benzo(g,h,i)perylene	0.50	U		0.50	0.37	ug/L		04/23/19 15:08	04/24/19 18:40	1
Benzo(k)fluoranthene	0.50	U	*	0.50	0.085	ug/L		04/23/19 15:08	04/24/19 18:40	1
Chrysene	0.50	U		0.50	0.32	ug/L		04/23/19 15:08	04/24/19 18:40	1
Dibenz(a,h)anthracene	0.50	U		0.50	0.33	ug/L		04/23/19 15:08	04/24/19 18:40	1
Fluoranthene	0.50	U		0.50	0.36	ug/L		04/23/19 15:08	04/24/19 18:40	1
Fluorene	0.50	U		0.50	0.37	ug/L		04/23/19 15:08	04/24/19 18:40	1
Indeno(1,2,3-cd)pyrene	0.50	U		0.50	0.44	ug/L		04/23/19 15:08	04/24/19 18:40	1
Naphthalene	0.50	U		0.50	0.42	ug/L		04/23/19 15:08	04/24/19 18:40	1
Phenanthrene	0.50	U		0.50	0.38	ug/L		04/23/19 15:08	04/24/19 18:40	1
Pyrene	0.50	υ		0.50	0.36	ug/L		04/23/19 15:08	04/24/19 18:40	1
Surrogate	%Recovery	Qualifier		Limits				Prepared	Analyzed	Dil Fac
2-Fluorobiphenyl	100	1		48-120				04/23/19 15:08	04/24/19 18:40	1
Nitrobenzene-d5	90			46-120				04/23/19 15:08	04/24/19 18:40	1
p-Terphenyl-d14	71			24-136				04/23/19 15:08	04/24/19 18:40	1
General Chemistry										
Analyte	Result	Qualifier		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	0.040	Bra J	1	0.010	0.0050	mg/L		05/01/19 10:30	05/02/19 12:04	1
Cyanide, Free	9.5			5.0	1.5	ug/L		04/27/19 16:33	04/27/19 17:30	1
Total Dissolved Solids	363	#J ·		10.0	4.0	mg/L			05/30/19 16:05	1
Analyte	Result	Qualifier		RL	RL	Unit	D	Prepared	Analyzed	Dil Fac

04/25/19 12:04

1

4.0

4.0 mg/L

Job ID: 480-152316-1

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

Client Sample ID: SW-03 Date Collected: 04/18/19 08:30							La	ab Sample	ID: 480-152 Matrix	2316-3 : Water
Date Received: 04/18/19 11:38			_	_					015000089	10.003-3053
General Chemistry Analyte	Result	Qualifi	ier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	0.20	BA	J.	0.010	0.0050	mg/L		05/01/19 10:30	05/02/19 12:06	1
Cyanide, Free	6.6			5.0	1.5	ug/L		04/27/19 16:33	04/27/19 17:30	1

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

Job ID: 480-152316-1

Client Sample ID: SW-04 Date Collected: 04/18/19 08:40 Date Received: 04/18/19 11:38

Lab Sample ID: 480-152316-4 Matrix: Water

General Chemistry

General Chemistry Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac	
Cyanide, Total	0.010	B*FI* UT.		0.0050		-		05/02/19 12:07	1	0.10
Cyanide, Free	5.0	U	5.0	1.5	ug/L			04/27/19 17:30	1	6

Job ID: 480-152316-1

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

Client Sample ID: SW-05 Date Collected: 04/18/19 09:00 Date Received: 04/18/19 11:38

Lab Sample ID: 480-152316-5 Matrix: Water

General Chemistry Analyte	Result	Qualifi	er	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	0.010	U**	UT.	0.010	0.0050	mg/L			05/02/19 12:10	1
Cyanide, Free	5.0	U		5.0		ug/L			04/27/19 17:30	1

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

Job ID: 480-152316-1

Client Sample ID: TB Date Collected: 04/18/19 00:00 Date Received: 04/18/19 11:38

Lab Sample ID: 480-152316-6 Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	1.0	U	1.0	0.41	ug/L			04/25/19 16:21	1
Ethylbenzene	1.0	U	1.0	0.74	ug/L			04/25/19 16:21	1
Toluene	1.0	U *	1.0	0.51	ug/L			04/25/19 16:21	1
Xylenes, Total	2.0	U	2.0	0.66	ug/L			04/25/19 16:21	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	116		77-120				No. Instantine and	04/25/19 16:21	1
4-Bromofluorobenzene (Surr)	118		73-120					04/25/19 16:21	1
Dibromofluoromethane (Surr)	118		75-123					04/25/19 16:21	1
Toluene-d8 (Surr)	101		80 - 120					04/25/19 16:21	1

Ogram: Dw INFORS Ogram: Dw INFORS Cogram: Dw INFORS Cogram: Dw INFORS Item Barre WORKG GAVS Item Barre Sample C W Ratrix Contin Effected Sample (V/V)	ACONTACT A Contact A LUMMIN OTAL Contact A LUMMIN OTAL Contact A Scryp Of Contact A Scryp O Date: 25540 C Contact A Contact A Scryp O Date: 25540 C C Contact A Scryp O Date: 25540 C C Contact A Scryp O Date: 25540 C C C C C C C C C C C C C C C C C C C	The LEADER IN CONROLMENTAL TESTING TestAmerica Laboratories, Inc. TALERING (0713) HAVE DEJULING COC NO COC S TALERING (0713)
Clear Contact Froject Manager: ALA RARP Si 2. The Mark Land Reveal Si 2. The Mark Land Reveal Simple Contact Reveal Simple M. Hard R. Mild G. Mild Contact 2. Super Simple Simple Contact Reveal Simple 2. Super Simple Contact Reveal Simple Contact Reveal Simple 2. Super Simple Simple Contact Reveal Simple Contact Reveal Simple 2. Super Simple Simple Contact Reveal Simple Contact Reveal Simple 2. Super Simple Simple Contact Reveal Simple Contact Reveal Simple 2. Super Simple Simple Contact Reveal Simple Contact Reveal Simple 2. Super Simple Simple Contact Reveal Simple Contact Reveal Simple 2. Super Simple Simple Contact Reveal Simple Contact Reveal Simple 2. Super Simple Simple Contact Reveal Simple Contact Reveal Simple 2. Super Simple Simple Contact Reveal Simple Contact Reveal Simple 2. Super Simple Simple Contact Reveal Simple Simple Contact Reveal Simple Simple Contact Reveal Simple Simpl	Carrier Carrier Carrier	nt of c
Turnaround Time VuclexIMd GAYS Itim Benv VuclexIMd GAYS Itim Benv VuclexIMd GAYS Itim Benv VuclexIMd GAYS Itim Solution	106 - 100 - 2010 	Sampler
Internet Bestree 2 works 2 works 2 cers 2 ders 2	10452 50 0452 50 0452 50 0452 50 0428 4 0404 9010 8004 9010 7400 9010	
Sample Type Composition Compos	HUSS ANTA	
Codes for the sample in the	111100000	Sample Specific Notes
Codes for the sample in the	XXXXXXX	
a Codes for the sample in the	XXXXXXX	
Codes for the sample in the	XXX	
& Codes for the sample in the	XXX	
Codes for the sample in the	XXX	able cyanide
e Codes for the sample in the	X	bot rebund
e Codes for the sample in the		An color 1/19
e Codes for the sample in the		
e Codes for the sample in the		
e Codes for the sample in the		
and the second	Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)	samples are retained longer than 1 month)
	Return to Chent	Archive For Months
	0.6	
Custody Seals Intact As No Custody Seal No.	Cooler Temp. ("C). Obsid. D-	Corrd Therm ID No
RAPA Company GEI Datertime	Received by: Com	Company: Date/Time
Company Dates Inter	Received by. Com	Company: Date/Time
Setinquished by Company Company Data/Time R	Received in Laboratory by	Detertine 115K