



March 17, 2015

Mr. Jim Richmond
Oil Control Program
Maryland Department of the Environment
1800 Washington Blvd, Suite 620
Baltimore, Maryland 21230

RE: **MW-18S Replacement Well Installation Report**
Monrovia BP/Former Green Valley Citgo
11791 Fingerboard Road
Monrovia, Maryland
OCP Case #2005-0834-FR

Dear Mr. Richmond,

Groundwater & Environmental Services, Inc. (GES), on behalf of Carroll Independent Fuel Company (Carroll), respectfully submits this *MW-18S Replacement Well Installation Report* for the recent well installation at 11791 Fingerboard Road, Monrovia, Maryland (Site). This summary report is being provided per the Maryland Department of the Environment Oil Control Program (MDE-OCP) request from the *Monitoring Well Replacement Work Plan Approval* letter dated December 12, 2014.

The monitoring well, named MW-18S-R, was installed on January 27, 2015. The well was installed with the intention of it being a replacement for existing monitoring well, MW-18S, due to the anomalous water quality, geochemical, and other analytical parameters observed at monitoring well MW-18S since its installation in November 2010. The methodologies and results of the well installation, development, and sampling activities are described below, along with recommendations for the future use of monitoring wells MW-18S and MW-18S-R.

Well Installation

On January 23, 2015, a MISS Utility public utility markout request (ticket #15036014) was completed in preparation for scheduled drilling activities. A second request (ticket #15038939) by GES was completed on January 26, 2014 for the same location. On January 27, 2015, drilling activities initiated when Allied Environmental Services (Allied), a Maryland-licensed driller, performed a “soft dig” for the first 5 feet (ft) below grade surface (bgs) (i.e., utilizing air knifing techniques) as a precaution to avoid underground utility disturbance. Encountered lithology within the first 5 ft of the subsurface included red-orange silt and weathered rock, as anticipated by previous records of soil borings in the area. Cuttings throughout air knifing and subsequent drilling activities were field screened for volatile organic compounds (VOCs) with a calibrated photoionization detector (PID). Cuttings within the first 5 ft during utility clearance digging elicited no elevated PID response.

A Drilltech D25 Air Rotary rig utilizing an 8-inch drill bit was positioned over the pre-cleared hole and drilling was initiated. Cutting descriptions and screen values began at 5 ft bgs and were subsequently collected at 5 ft intervals to 70 ft bgs. PID values ranged from 0.0 to 1.5 parts per million (ppm). Cuttings were noted as red-orange and moist between 5 to 53 ft bgs and changed color to grey-green at 53 to 70 ft bgs. The driller estimation of top-of-competent rock, based on soil cutting color change and penetration



resistance, was determined to be approximately 53 ft bgs. A boring log, which summarizes observed lithology and PID screening levels, is attached as **Appendix A**.

MW-18S-R was cased through approximately 25 ft of weathered rock. The well was screened from 25 ft bgs to 70 ft bgs. Little to no water was generated during drilling activities for the well. The annular space between the casing and the surrounding weathered rock lithology had sand placed from 70 ft bgs up to 22 ft bgs. Bentonite was placed from 22 ft bgs up to 9 ft bgs. Finally, a bentonite and cement grout mixture was placed from 9 ft bgs up to approximately 1 ft bgs and allowed to harden. A well completion report is included in **Appendix B**. The drilling cutting disposal manifest is attached as **Appendix C**.

On January 29, 2015, monitoring wells MW-18S-R and MW-18S were developed by Allied. Both wells were developed by the surge and pump method. Approximately 40 gallons of groundwater was purged from MW-18S-R, and 50 gallons was purged from MW-18S. The groundwater disposal manifest is attached as **Appendix D**. Please note the disposal manifest includes an additional drum from the routine quarterly groundwater sampling activities.

Groundwater Sampling

Groundwater samples were collected on February 12, 2015 from MW-18S-R and MW-18S and were submitted for analysis of full suite VOCs with fuel oxygenates and naphthalene via EPA Method 8260, total petroleum hydrocarbon – gasoline range organics (TPH-GRO) via EPA Method 8015B, total chromium and total lead via EPA Method 200.8, dissolved chromium and dissolved lead via EPA Method 200.8, and hexavalent chromium via EPA Method 218.7.

The sample at MW-18S-R demonstrated MTBE a concentration of 470 micrograms per liter ($\mu\text{g/L}$). The methyl-tert-butyl ether (MTBE) concentration at MW-18S was 27 $\mu\text{g/L}$. At MW-18S-R, the TPH-GRO concentration was determined to be 400 $\mu\text{g/L}$, and at MW-18S the concentration was 63 $\mu\text{g/L}$. A summary of the groundwater analytical results for VOCs and TPH is presented as **Table 1**.

The MW-18S-R sample had a total chromium concentration of 3.9 $\mu\text{g/L}$ and a total lead concentration of 15 $\mu\text{g/L}$, and the concentration at MW-18S was 24 $\mu\text{g/L}$ for total chromium and 2.9 $\mu\text{g/L}$ for total lead. The sample at MW-18S-R demonstrated a non-detect for dissolved chromium and dissolved lead, and the sample at MW-18S demonstrated a concentration of 20 $\mu\text{g/L}$ for dissolved chromium and 0.78 $\mu\text{g/L}$ for dissolved lead. At MW-18S-R, hexavalent chromium was determined at a concentration of 0.087 $\mu\text{g/L}$, and at MW-18S the concentration for hexavalent chromium was determined to be 20 $\mu\text{g/L}$. The results of MW-18S-R and MW-18S do not correlate with each other. However, the results of MW-18S-R do correlate with the surrounding wells, such as MW-7, MW-8, MW-13, MW-15D, and MW-18D. A summary of the groundwater analytical results for metals parameters is presented as **Table 2**.

Groundwater analytical reports and associated Chains of Custody are attached as **Appendix E**.

Field Parameters

A YSI 600XL was used to collect down well water quality and geochemical readings at MW-18S-R and MW-18S on February 12, 2015. The down well pH reading was 5.69 at MW-18S-R and 5.43 at MW-18S. The reading for conductivity was 675 microsiemens per centimeter ($\mu\text{S/cm}$) at MW-18S-R and 5,633 $\mu\text{S/cm}$ at MW-18S. The oxidation reduction potential (ORP) was 121.5 millivolts (mV) at MW-18S-R and -57.6 mV at MW-18S. The field parameter values measured from MW-18S are anomalous compared with other monitoring wells in the area such as MW-7, MW-8, MW-13, MW-15D, and MW-



18D, while the field parameter values from MW-18S-R align with the field parameters readings from the surrounding wells. A summary of the field parameters is presented as **Table 3**.

Soil Sampling

Two soil samples were collected on February 12, 2015 from MW-18S-R at 65 ft bgs and 70 ft bgs. MW-18S-R(65') and MW-18S-R(70') were submitted for analysis of VOCs via EPA Method 8260, total lead, total iron, and total chromium via EPA 6010, hexavalent chromium via EPA Method 7190A, pH via EPA Method 9045, and ORP via ASTM D1498.

The soil sample collected at 65 ft bgs for MW-18S-R(65') demonstrated a concentration of MTBE of 11 micrograms per kilogram ($\mu\text{g}/\text{kg}$) and a concentration of tert-butyl alcohol (TBA) of 66 $\mu\text{g}/\text{kg}$. MW-18S-R(65') had detections of total chromium of 14.7 mg/kg, of total iron of 27,300 mg/kg, and of total lead of 18.0 mg/kg and hexavalent chromium was non-detect. The lab derived ORP at MW-18S-R (65') was 363 mV and the pH was 6.18. The soil sample collected at 70 ft bgs, MW-18S-R(70'), had detections of MTBE of 10 $\mu\text{g}/\text{kg}$ and a concentration of TBA of 70 $\mu\text{g}/\text{kg}$. MW-18S-R(70') had a total chromium concentration of 15.2 mg/kg, a total iron concentration of 32,500 mg/kg, a total lead concentration of 4.10 mg/kg and hexavalent chromium was non-detect. The lab derived ORP at MW-18S-R(70') was 376 mV, and the pH was 6.62. Summaries of the soil analytical results are presented as **Table 4** and **Table 5**.

The soil analytical report and associated Chain of Custody is attached as **Appendix F**.

Conclusions

As described in the *Monitoring Well MW-18S Replacement Work Plan*, MW-18S-R was installed in order to replace MW-18S, which has shown atypical results for a number of monitoring parameters. Based on the water quality, geochemical, and analytical parameters that were collected, MW-18S-R has a strong correlation with the surrounding wells, whereas MW-18S has particularly high pH, high conductivity, low ORP, and high levels of metals. This suggests that MW-18S is an anomalous well that has a poor hydraulic connection to the aquifer. In addition, it suggests that the levels of hexavalent chromium observed at MW-18S don't exist outside of the immediate vicinity of MW-18S. MW-18S is not a representative well.

As agreed to between Carroll and the MDE during the Oct 2014 meeting to discuss Carroll's dispute of the MDE's request to continue sampling all monitoring for metals, Carroll will collect one additional round of metals samples from select monitoring and potable wells (including MW-18S and MW-18S-R) during the 2Q 2015 sampling event. If the water quality, geochemical, and analytical parameters continue to suggest MW-18S is not representative of the aquifer conditions, GES recommends abandoning MW-18S and conducting future sampling in this area of the site at monitoring well MW-18S-R instead. Routine sampling at MW-18S-R (and all other monitoring wells) beyond the 2Q 2015 will include VOCs and TPH-GRO.

We appreciate the continued guidance of the MDE-OCP on this project. If you have any questions or would like additional information, please contact the undersigned at 800-220-3606, extension 3726 or 3717, respectively, or Herb Meade at 410-261-5450.

Sincerely,
GROUNDWATER & ENVIRONMENTAL SERVICES, INC.

Prepared By:



Danielle Rice
Associate Environmental Scientist

Reviewed By:



Gregory Reichart
Project Manager

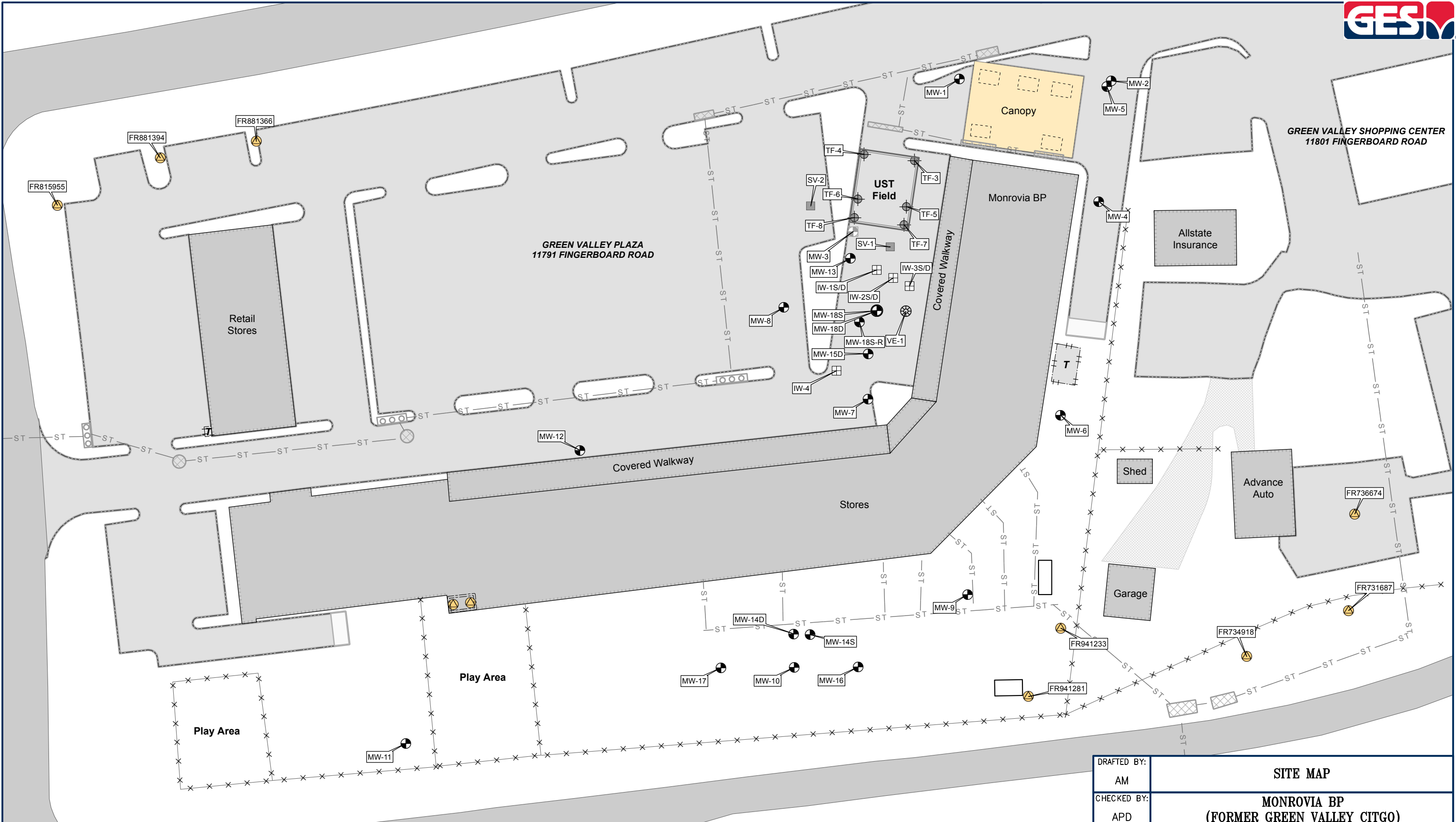
Attachments:

- Figure 1 – Site Map
 - Table 1 – Groundwater Analytical Data Summary – VOC and TPH Parameters
 - Table 2 – Groundwater Analytical Data Summary – Metals Parameters
 - Table 3 – Groundwater Field Parameters Summary
 - Table 4 – Soil Analytical Data Summary – VOC Parameters
 - Table 5 – Soil Analytical Data Summary – Metals Parameters
 - Appendix A – Boring Log
 - Appendix B – Well Completion Report
 - Appendix C – Soil Waste Manifest
 - Appendix D – Groundwater Waste Manifest
 - Appendix E – Groundwater Analytical Reports and Chain of Custody Documentation
 - Appendix F – Soil Analytical Report and Chain of Custody Documentation
- c: Jim Richmond – MDE (2 additional copies & CD)
Herb Meade – CIFIC (electronic copy)
Barry Glotfelty – Frederick County Health Department
Samir Andrawos – Timbercrest Limited Partnership
Jennifer Andrawos – Timbercrest Limited Partnership
File – GES, MD (PSID# 518753)



FIGURES

Z:\Projects\CarrollFuels\Monrovia\GIS\Maps\2012_Q2\CarrollFuels_Monrovia_Q2_2012_Fig1_SM.mxd - Scale 1:600 - Date: 02-11-15 - Time: [10:33 AM] - midmore



Legend

- | | | | | | | | | | |
|--|-----------------|--|----------------------------|--|------------------|--|------------|--|-------------|
| | Abandoned Well | | Abandoned Soil Vapor Point | | Fence | | Building | | Propane AST |
| | Monitoring Well | | Injection Well | | Storm Sewer | | Canopy | | Pump Room |
| | Potable Well | | Nested Obs Well | | Curb Catch Basin | | Dispenser | | Transformer |
| | Tank Field Well | | Vapor Extraction Well | | Catch Basin | | Tank Field | | Dumpster |

Source:
NAIP aerial photograph for Frederick Co. Based on GIS data provided by Environmental Alliance, Inc.

DRAFTED BY: AM	SITE MAP MONROVIA BP (FORMER GREEN VALLEY CITGO) 11791 FINGERBOARD ROAD MONROVIA, MARYLAND	
CHECKED BY: APD		
REVIEWED BY: GR		
NORTH 	Groundwater & Environmental Services, Inc. 2142 PRIEST BRIDGE COURT, SUITE 1, CROFTON, MD 21114	SCALE IN FEET
	DATE 2-11-15	FIGURE 1



TABLES

Table 1

GROUNDWATER ANALYTICAL DATA SUMMARY- VOC & TPH PARAMETERS

Carroll - Monrovia MD - Green Valley Citgo
11791 Fingerboard Rd
Monrovia, MD

Monitoring Well	Date	Sample Method	Top of Casing (ft)	Depth to Water (ft)	Depth to Bottom (Measured Depth) (ft)	GW Elevation (ft)	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Total Xylenes (µg/L)	Total BTEX (µg/L)	MTBE (µg/L)	Diisopropyl ether (µg/L)	Ethyl tert-butyl ether (µg/L)	Tert-amyl alcohol (µg/L)	Tert-amyl methyl ether (µg/L)	Tert-Butyl Alcohol (µg/L)	TPH-DRO (µg/L)	TPH-GRO (µg/L)
GW Clean-up Standards*							5	1,000	700	10,000	NA	20	NA	NA	NA	NA	NA	47	47
MW-18S (70) {2} [45-70]	11/23/2010	GRAB	98.29	69.05	-	29.24	<2	106	<2	<4	106	17,100	160	<2	-	385	16,500	984	1,540
	11/30/2010	-	98.29	64.28	-	34.01	-	-	-	-	-	-	-	-	-	-	-	-	-
	12/01/2010	-	98.29	64.34	-	33.95	-	-	-	-	-	-	-	-	-	-	-	-	-
	12/08/2010	P&S	98.29	64.25	70.26	34.04	<2	129	<2	<4	129	21,200	163	<2	-	545	24,200	621	1,740
	03/09/2011	-	98.29	61.49	70.28	36.80	-	-	-	-	-	-	-	-	-	-	-	-	-
	03/10/2011	LF (68)	98.29	60.81	70.28	37.48	<2.00	28.3	<2.00	<4.00	28.3	3,660	81.1	<2.00	-	156	1,540	<150	755
	05/10/2011	LF (68)	98.29	52.33	70.28	45.96	<2	8.68	<2	<4	9	7,040	87.8	<2	102	189	1,600	184	1,270
	07/12/2011	-	98.29	60.37	70.28	37.92	-	-	-	-	-	-	-	-	-	-	-	-	-
	07/13/2011	LF (68)	98.29	60.48	70.28	37.81	<2	4.68	<2	<4	5	4,740	89.5	<2	76.8	226	1,160	207	1,270
	09/14/2011	-	98.29	52.86	-	45.43	-	-	-	-	-	-	-	-	-	-	-	-	-
	09/20/2011	-	98.29	52.95	-	45.34	-	-	-	-	-	-	-	-	-	-	-	-	-
	09/27/2011	LF (68)	98.29	53.71	-	44.58	<2	<2	<2	<4	<10	9,660	106	<2	<10	526	471	189	1,760
	10/18/2011	LF (68)	98.29	53.88	70.00	44.41	<2	<2	<2	<4	<10	15,300	198	<2	<10	585	1,130	<168	877
	11/16/2011	LF (68)	98.29	55.34	-	42.95	<2	<2	<2	<4	<10	7,160	93.6	<2	<10	218	477	<150	992
	12/08/2011	-	98.29	53.24	-	45.05	-	-	-	-	-	-	-	-	-	-	-	-	-
	01/12/2012	LF (68)	98.29	55.10	70.00	43.19	<2	<2	<2	<4	<10	6,220	76.7	<2	<10	162	242	<174	905
	02/16/2012	-	98.29	57.98	-	40.31	-	-	-	-	-	-	-	-	-	-	-	-	-
	02/21/2012	-	98.29	58.39	-	39.90	-	-	-	-	-	-	-	-	-	-	-	-	-
	02/28/2012	-	98.29	59.08	-	39.21	-	-	-	-	-	-	-	-	-	-	-	-	-
	03/05/2012	-	98.29	58.88	-	39.41	-	-	-	-	-	-	-	-	-	-	-	-	-
	03/23/2012	-	98.29	58.75	-	39.54	-	-	-	-	-	-	-	-	-	-	-	-	-
	03/28/2012	-	98.29	58.66	-	39.63	-	-	-	-	-	-	-	-	-	-	-	-	-
	04/03/2012	LF (68)	98.29	59.05	70.25	39.24	<2	<2	<2	<4	<10	3,030 QK	80.5	<2	<10	70.2	365	<155	202
	04/11/2012	-	98.29	59.38	-	38.91	-	-	-	-	-	-	-	-	-	-	-	-	-
	04/26/2012	-	98.29	60.18	-	38.11	-	-	-	-	-	-	-	-	-	-	-	-	-
	04/30/2012	-	98.29	60.65	-	37.64	-	-	-	-	-	-	-	-	-	-	-	-	-
	05/07/2012	-	98.29	61.12	-	37.17	-	-	-	-	-	-	-	-	-	-	-	-	-
	05/15/2012	-	98.29	61.52	-	36.77	-	-	-	-	-	-	-	-	-	-	-	-	-
	05/21/2012	-	98.29	61.43	-	36.86	-	-	-	-	-	-	-	-	-	-	-	-	-
	05/24/2012	-	98.29	60.55	-	37.74	-	-	-	-	-	-	-	-	-	-	-	-	-
05/29/2012	-	98.29	60.99	-	37.30	-	-	-	-	-	-	-	-	-	-	-	-	-	
06/04/2012	-	98.29	57.00	-	41.29	-	-	-	-	-	-	-	-	-	-	-	-	-	

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GW Clean-up Standards*							5	1,000	700	10,000	NA	20	NA	NA	NA	NA	NA	47	47
MW-18S (cont.)	06/13/2012	-	98.29	56.95	70.55	41.34	-	-	-	-	-	-	-	-	-	-	-	-	-
	06/15/2012	LF (68)	98.29	56.43	-	41.86	<2	<2	<2	<4	<10	754 QK	7.12	<2	<10	18.7	<10	<156	270
	06/18/2012	-	98.29	56.97	-	41.32	-	-	-	-	-	-	-	-	-	-	-	-	-
	06/28/2012	-	98.29	57.93	-	40.36	-	-	-	-	-	-	-	-	-	-	-	-	-
	07/06/2012	-	98.29	57.84	-	40.45	-	-	-	-	-	-	-	-	-	-	-	-	-
	07/09/2012	-	98.29	58.13	-	40.16	-	-	-	-	-	-	-	-	-	-	-	-	-
	07/11/2012	-	98.29	56.08	70.26	42.21	-	-	-	-	-	-	-	-	-	-	-	-	-
	07/16/2012	-	98.29	56.50	70.25	41.79	-	-	-	-	-	-	-	-	-	-	-	-	-
	07/17/2012	LF (68)	98.29	56.52	70.20	41.77	<2	<2	<2	<4	<10	1,390	10.1	<2	<10	30.2	<10	<158	<100
	07/23/2012	-	98.29	55.99	-	42.30	-	-	-	-	-	-	-	-	-	-	-	-	-
	08/09/2012	LF (68)	98.29	57.06	-	41.23	<2	<2	<2	<4	<10	731 VH	8.84	<2	<10	17.6	<10	-	-
	09/05/2012	-	98.29	57.87	-	40.42	-	-	-	-	-	-	-	-	-	-	-	-	-
	10/03/2012	-	98.29	60.46	-	37.83	-	-	-	-	-	-	-	-	-	-	-	-	-
	10/08/2012	LF (68)	98.29	60.37	-	37.92	<2	<2	<2	<4	<10	118	<2	<2	<10	<2	32.1	<152	<100
	01/14/2013	-	98.29	60.84	-	37.45	-	-	-	-	-	-	-	-	-	-	-	-	-
	01/17/2013	LF (68)	98.29	60.13	70.61	38.16	<2	<2	<2	<4	<10	167	5.8	<2	<10	11.4	39.8	<153	<100
	04/22/2013	-	98.29	58.47	-	39.82	-	-	-	-	-	-	-	-	-	-	-	-	-
	04/25/2013	LF (68)	98.29	58.58	-	39.71	<2	3.08	2.28	13.42	19	214	3.06	<2	<10	3.76	<10	<153	188
	07/22/2013	-	98.29	60.39	-	37.90	-	-	-	-	-	-	-	-	-	-	-	-	-
	07/25/2013	LF (68)	98.29	60.71	-	37.58	<2.00	<2.00	<2.00	<4.00	<10.00	31.6	<2.00	<2.00	<10.0	<2.00	<10.0	<152	<100
	10/21/2013	-	98.29	62.79	-	35.50	-	-	-	-	-	-	-	-	-	-	-	-	-
	10/23/2013	LF (68)	98.29	59.04	-	39.25	<2.00	<2.00	<2.00	<4.00	<10.00	814	15.1	<2.00	<10.0	15.8	<10.0	<150	677
	01/09/2014	-	98.29	56.32	-	41.97	-	-	-	-	-	-	-	-	-	-	-	-	-
	01/16/2014	LF (68)	98.29	54.48	-	43.81	<2.00	<2.00	<2.00	<4.00	<10.00	198	8.32	<2.00	<10.0	5.94	<10.0	<152	343
	04/14/2014	-	98.29	50.69	-	47.60	-	-	-	-	-	-	-	-	-	-	-	-	-
	04/16/2014	LF (68)	98.29	50.93	-	47.36	<2.00	<2.00	<2.00	<4.00	<10.00	526	13.5	<2.00	<10.0	8.54	<10.0	<152	478
	07/28/2014	-	98.29	59.65	-	38.64	-	-	-	-	-	-	-	-	-	-	-	-	-
	08/01/2014	LF (68)	98.29	60.16	-	38.13	<1.00	<1.00	<1.00	<2.00	<5.00	12.4	<1.00	<1.00	<5.00	<1.00	<5.00	<153	<100
	11/17/2014	-	98.29	64.72	-	33.57	-	-	-	-	-	-	-	-	-	-	-	-	-
	11/20/2014	LF (68)	98.29	64.82	-	33.47	<1.00	<1.00	<1.00	<2.00	<5.00	16.0	<1.00	<1.00	<5.00	<1.00	<5.00	-	<100
	02/12/2015	LF (68)	98.29	57.78	-	40.51	<0.1	12	<0.1	0.1	12.1	27	1.5	<0.1	-	0.4	<4.0	-	63

Table 1

GROUNDWATER ANALYTICAL DATA SUMMARY- VOC & TPH PARAMETERS

Carroll - Monrovia MD - Green Valley Citgo
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Monrovia, MD

Monitoring Well	Date	Sample Method	Top of Casing (ft)	Depth to Water (ft)	Depth to Bottom (Measured Depth) (ft)	GW Elevation (ft)	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Total Xylenes (µg/L)	Total BTEX (µg/L)	MTBE (µg/L)	Diisopropyl ether (µg/L)	Ethyl tert-butyl ether (µg/L)	Tert-amyl alcohol (µg/L)	Tert-amyl methyl ether (µg/L)	Tert-Butyl Alcohol (µg/L)	TPH-DRO (µg/L)	TPH-GRO (µg/L)
GW Clean-up Standards*							5	1,000	700	10,000	NA	20	NA	NA	NA	NA	NA	47	47
MW-18S (DUP)	01/16/2014	-	-	-	-	-	<1.00	<1.00	<1.00	<2.00	<5.00	1.85	<1.00	<1.00	<5.00	<1.00	<5.00	<152	<100
MW-18S-R (70) {4} [25-70]	02/12/2015	LF (68)	-	59.53	-	-	<0.2	<0.2	<0.2	<0.2	<0.8	470	18	<0.2	-	7.5	25	-	400

Please note that compounds of concern are shown and all analytical results can be found in the Laboratory Reports and Chain of Custody Documentation.

* GW Clean-up Standards are the Maryland Department of the Environment (MDE) Groundwater Clean-up Standards for Type I and II Aquifers, except for TPH-GRO and TPH-DRO, which are Residential Clean-up Standards for Groundwater.

(##) = Depth to bottom of well in feet

{##} = Length of the Screened Interval in feet

{##} = Well Diameter in inches

LF (##) = Low Flow (depth that the sample was taken at)

<# = Less than the method detection limit

µg/L = Micrograms per liter

BTEX = Benzene, Toluene, Ethylbenzene, and Xylenes

ft = Feet

L10 = This sample was analyzed at a dilution due to the matrix. Reporting limits were adjusted accordingly.

MTBE = Methyl Tertiary Butyl Ether

NA = Not Available or Not Analyzed for that specific compound

QK = This result was above the calibration range; therefore it is an estimated value.

TPH-DRO = Total Petroleum Hydrocarbons - Diesel Range Organics

TPH-GRO = Total Petroleum Hydrocarbons - Gasoline Range Organics

VH = LCS value was outside the QC range. Data accepted based on acceptable check standard.

VOC = Volatile Organic Compounds

Table 2

GROUNDWATER ANALYTICAL DATA SUMMARY- METALS PARAMETERS

Carroll - Monrovia - Green Valley Citgo
11791 Fingerboard Rd
Monrovia, MD

Monitoring Well	Date	Top of Casing (ft)	Chromium (µg/L)	Chromium, Dissolved (µg/L)	Chromium (hexavalent) (µg/L)	Lead (µg/L)	Lead, Dissolved (µg/L)
GW Clean-up Standards*			100	100	NA	15	15
MW-7 (80) {4} [53-80]	11/23/2010	97.66	14.6	-	-	-	-
	07/13/2011	97.66	<1	-	-	-	-
	09/27/2011	97.66	1.14 B3	-	-	-	-
	10/18/2011	97.66	<1	-	-	-	-
	11/16/2011	97.66	<1	-	-	-	-
	04/03/2012	97.66	<1	-	-	-	-
	06/13/2012	97.66	<1	-	-	-	-
	07/17/2012	97.66	1.43	-	-	-	-
	08/09/2012	97.66	<1.0	<1.0	0.148	<1.0	<1.0
	10/08/2012	97.66	<1.0	<1.0	0.269	<1.0	<1.0
	01/17/2013	97.66	4.0	<1.0	0.507	4.6	<1.0
	10/24/2013	97.66	1.3	<1.0	0.69	1.0	0.55
11/20/2014	97.66	<1.0	1.2	0.65	<0.5	<0.5	
MW-8 (70) {4} [45-70]	11/23/2010	97.93	125.000	-	-	-	-
	04/03/2012	97.93	<1	-	-	-	-
	06/13/2012	97.93	<1	-	-	-	-
	07/17/2012	97.93	<1	-	-	-	-
	08/08/2012	97.93	<1.0	<1.0	<0.020	1.7	1.7
	10/08/2012	97.93	<1.0	<1.0	<0.020	1.8	1.7
	01/15/2013	97.93	<1.0	<1.0	-	2.1	1.6
	01/25/2013	97.93	-	-	<0.020	-	-
	04/24/2013	97.93	<1.0	<1.0	<0.03	1.5	1.5
	10/23/2013	97.93	<1.0	<1.0	0.03	0.6	<0.5
MW-13 (84) {4} [49-84]	11/23/2010	98.11	<1	-	-	-	-
	09/27/2011	98.11	2.49 B3	-	-	-	-
	10/18/2011	98.11	2.91 L12	-	-	-	-
	11/16/2011	98.11	3.13	-	<20	-	-

Table 2

GROUNDWATER ANALYTICAL DATA SUMMARY- METALS PARAMETERS

Carroll - Monrovia - Green Valley Citgo
11791 Fingerboard Rd
Monrovia, MD

Monitoring Well	Date	Top of Casing (ft)	Chromium (µg/L)	Chromium, Dissolved (µg/L)	Chromium (hexavalent) (µg/L)	Lead (µg/L)	Lead, Dissolved (µg/L)
GW Clean-up Standards*			100	100	NA	15	15
MW-13 (cont.)	01/12/2012	98.11	-	-	<20	-	-
	04/03/2012	98.11	2.98	-	<20	-	-
	06/13/2012	98.11	2.41	-	<20	-	-
	07/17/2012	98.11	<1	-	<20	-	-
	08/08/2012	98.11	<1.0	<1.0	0.596	<1.0	<1.0
	10/08/2012	98.11	<1.0	<1.0	0.297	1.2	1.1
	01/16/2013	98.11	<1.0	<1.0	0.131	1.4	1.5
	04/25/2013	98.11	<1.0	<1.0	0.11	1.2	1.2
	10/23/2013	98.11	9.2	2.9	0.06	1.5	1.5
	11/20/2014	98.11	<1.0	<1.0	0.17	<0.5	<0.5
MW-15D (134) {4} [46-134]	11/23/2010	97.67	1.57	-	-	-	-
	07/13/2011	97.67	<1	-	-	-	-
	09/27/2011	97.67	<1	-	-	-	-
	10/18/2011	97.67	<1	-	-	-	-
	11/16/2011	97.67	1.46	-	-	-	-
	04/03/2012	97.67	1.34	-	-	-	-
	06/13/2012	97.67	<1	-	-	-	-
	07/17/2012	97.67	<1	-	-	-	-
	08/09/2012	97.67	<1.0	<1.0	0.072	<1.0	<1.0
	10/08/2012	97.67	<1.0	<1.0	0.043	<1.0	<1.0
	01/18/2013	97.67	<1	<1	0.094	<1	<1
	04/25/2013	97.67	<1.0	<1.0	0.11	<0.5	<0.5
	10/24/2013	97.67	4.3	2.5	0.084	<0.5	<0.5
11/20/2014	97.67	1.2	<1.0	0.045	1.2	<0.5	
MW-18D (130) {2} [120-130]	11/23/2010	98.31	23.6	-	-	-	-
	12/08/2010	98.31	8.5	-	-	-	-
	07/13/2011	98.31	6.04	-	-	-	-

Table 2

GROUNDWATER ANALYTICAL DATA SUMMARY- METALS PARAMETERS

Carroll - Monrovia - Green Valley Citgo
11791 Fingerboard Rd
Monrovia, MD

Monitoring Well	Date	Top of Casing (ft)	Chromium (µg/L)	Chromium, Dissolved (µg/L)	Chromium (hexavalent) (µg/L)	Lead (µg/L)	Lead, Dissolved (µg/L)
GW Clean-up Standards*			100	100	NA	15	15
MW-18D (cont.)	09/27/2011	98.31	4.88 B3 D1	-	-	-	-
	10/18/2011	98.31	<1	-	-	-	-
	11/16/2011	98.31	<1	-	-	-	-
	04/03/2012	98.31	2.69	-	<20	-	-
	06/15/2012	98.31	<1	-	<20	-	-
	07/18/2012	98.31	<1	-	<20	-	-
	08/09/2012	98.31	11.6	<1.0	<0.020	21.7	<1.0
	10/08/2012	98.31	2.4	<1.0	<0.020	3.2	<1.0
	01/17/2013	98.31	<1.0	<1.0	<0.020	<1.0	<1.0
	04/25/2013	98.31	<1.0	<1.0	<0.03	<0.5	<0.5
	10/23/2013	98.31	5.3	4.4	<0.03	0.6	<0.5
	11/20/2014	98.31	<1.0	<1.0	0.083	<0.5	<0.5
MW-18S (70) {2} [45-70]	11/23/2010	98.29	1,590.00 L12	-	-	-	-
	12/08/2010	98.29	71.6	-	-	-	-
	07/13/2011	98.29	7.25	-	-	-	-
	09/27/2011	98.29	19.1 B3	-	-	-	-
	10/18/2011	98.29	21.3 L12	-	-	-	-
	11/16/2011	98.29	34.5	-	30.00 S3	-	-
	01/12/2012	98.29	-	-	40.00	-	-
	04/03/2012	98.29	60.6	-	30.00	-	-
	06/15/2012	98.29	9.97	-	<20	-	-
	07/17/2012	98.29	17.6	-	40.00	-	-
	08/09/2012	98.29	77.0	58.4	81.2	3.4	2.1
	10/08/2012	98.29	11.8	9.6	11.9	12.0	15.1
	01/17/2013	98.29	10.2	12.2	12.7	21.8	18.0
	04/25/2013	98.29	16	11.0 Q3	23	5.4	7.0 Q3
10/23/2013	98.29	52	37	45 H2	9.7	9.1	

Table 2

GROUNDWATER ANALYTICAL DATA SUMMARY- METALS PARAMETERS

Carroll - Monrovia - Green Valley Citgo
11791 Fingerboard Rd
Monrovia, MD

Monitoring Well	Date	Top of Casing (ft)	Chromium (µg/L)	Chromium, Dissolved (µg/L)	Chromium (hexavalent) (µg/L)	Lead (µg/L)	Lead, Dissolved (µg/L)
GW Clean-up Standards*			100	100	NA	15	15
MW-18S (cont.)	12/18/2013	98.29	10	10	9.7	4	11.0
	11/20/2014	98.29	9.6	9.1	9.5	1.9	1.4
	02/12/2015	98.29	24	20	20	2.9	0.78
MW-18S-R (70) {4} [25-70]	02/12/2015	NA	3.9	<1	0.087	15	<0.5

* GW Clean-up Standards are the Maryland Department of the Environment (MDE) Groundwater Clean-up Standards for Type I

(##) = Depth to bottom of well (ft)

[##] = Length of the Screened Interval (ft)

{##} = Well Diameter (in)

<# = Less than the method detection limit of #

µg/L = Micrograms/Liter

B3 = The prep blank associated with this sample had a result greater than the Method Reporting Limit (MRL). Data may be biased high.

D1 = The Relevant Percent Difference (RPD) result exceeded the Quality Control (QC) control limits for the duplicate sample analyzed.

H2 = Initial analysis within holding time. Reanalysis for the required dilution was past holding time.

L12 = The prep method Laboratory Control Sampling (LCS) spike recovery was outside acceptance limits.

The batch results were accepted based on the acceptable recovery of the other associated QC.

NA = Not Available or Not Analyzed for that specific compound

Q3 = Sample received with improper chemical preservation.

Table 3

HISTORICAL MONITORING WELL FIELD PARAMETERS DATA SUMMARY

Carroll - Monrovia MD - Green Valley Citgo
 11791 Fingerboard Rd
 Monrovia, MD

Monitoring Well	Date	Top of Casing (ft)	Well Temperature (°C)	Specific Conductance (µS/cm)	Dissolved Oxygen (mg/L)	Well pH	ORP (mV)
MW-7 (80) {4} [53-80]	11/30/2010	97.66	15.3	-	0.7	5.6	-50.0
	12/1/2010	97.66	14.73	11	3.37	6.25	220.1
	3/10/2011	97.66	14.71	440	1.96	5.04	283.7
	5/11/2011	97.66	17.78	430	2.47	4.89	238.1
	7/13/2011	97.66	22.39	570	1.28	4.92	315.8
	9/14/2011	97.66	-	361	2.14	5.56	38.8
	9/23/2011	97.66	15.93	366	1.71	5.29	208.8
	9/27/2011	97.66	15.95	400	15.5	5.26	105.9
	10/14/2011	97.66	17.41	491	1.45	5.26	142.8
	10/27/2011	97.66	17.74	392	3.47	5.31	287.6
	11/8/2011	97.66	17.02	405	3.43	5.34	293.0
	11/16/2011	97.66	15.57	409	5.90	5.36	302.9
	12/8/2011	97.66	17.00	457	4.74	7.85	154.0
	1/11/2012	97.66	15.31	462	2.04	5.51	322.8
	2/16/2012	97.66	13.09	505	1.06	5.31	177.3
	2/21/2012	97.66	12.98	502	0.73	5.35	201.5
	2/28/2012	97.66	12.87	499	3.31	5.20	-
	3/5/2012	97.66	12.70	472	2.84	5.09	282.4
	3/28/2012	97.66	13.56	480	1.17	-	223.7
	4/3/2012	97.66	14.81	4	11.86	4.28	370.6
	4/26/2012	97.66	12.96	491	1.19	5.19	346.8
	5/7/2012	97.66	15.54	480	1.21	5.31	241.4
	5/21/2012	97.66	15.26	471	0.72	5.64	245.4
	5/24/2012	97.66	15.71	582	3.56	-	-
	6/4/2012	97.66	15.57	458	4.45	5.58	246.2
	6/13/2012	97.66	15.5	426	3.87	5.64	325.4
	6/18/2012	97.66	15.46	440	4.27	5.60	227.4
	7/6/2012	97.66	15.63	452	3.96	5.72	177.6
	7/17/2012	97.66	15.50	414	0.01	5.68	123.5
	8/9/2012	97.66	12.01	573	5.40	13.19	-122.7
	9/5/2012	97.66	14.89	457	4.66	5.94	189.1
	10/8/2012	97.66	15.16	606	3.36	5.42	251.6
1/17/2013	97.66	14.63	562	4.92	5.57	270.1	
4/25/2013	97.66	15.17	577	5.71	5.33	241.5	
7/25/2013	97.66	-	704	5.06	5.35	219.6	
10/24/2013	97.66	15.01	618	6.71	5.58	258.4	
1/14/2014	97.66	15.29	825	4.89	5.45	310.7	
4/16/2014	97.66	15.30	681	5.28	5.43	145.6	
7/31/2014	97.66	17.47	848	6.33	5.28	174.3	
11/20/2014	97.66	13.86	789	5.35	5.48	242.9	
2/12/2015	97.66	15.17	796	5.42	5.88	189.1	
MW-8 (70) {4} [45-70]	3/11/2011	97.93	15.52	317	12.49	4.73	270.4
	5/11/2011	97.93	18.12	177	7.98	4.77	264.0
	7/13/2011	97.93	21.60	276	5.37	3.31	438.7
	9/14/2011	97.93	-	116	5.94	4.92	439.6
	9/23/2011	97.93	16.37	105	8.37	6.35	145.8
	9/27/2011	97.93	16.12	415	6.30	6.45	203.1
	10/14/2011	97.93	17.88	90	11.92	5.08	155.6
	10/27/2011	97.93	17.94	57	12.32	5.38	294.6
	11/8/2011	97.93	17.62	84	10.40	5.32	343.0
	11/16/2011	97.93	15.90	97	13.57	5.29	313.4
	12/8/2011	97.93	17.50	121	6.89	5.30	223.4
	1/11/2012	97.93	6.30	114	9.94	6.44	224.9
	2/16/2012	97.93	13.32	168	9.08	4.88	272.9
	2/28/2012	97.93	14.10	187	10.20	5.21	-

Table 3

HISTORICAL MONITORING WELL FIELD PARAMETERS DATA SUMMARY

Carroll - Monrovia MD - Green Valley Citgo
11791 Fingerboard Rd
Monrovia, MD

Monitoring Well	Date	Top of Casing (ft)	Well Temperature (°C)	Specific Conductance (µS/cm)	Dissolved Oxygen (mg/L)	Well pH	ORP (mV)
MW-8 (cont.)	3/28/2012	97.93	1420.00	191	12.13	-	250.8
	4/3/2012	97.93	15.77	331	4.29	5.21	249.7
	4/26/2012	97.93	13.54	214	6.85	5.00	360.0
	5/7/2012	97.93	15.92	243	7.47	5.33	204.0
	5/21/2012	97.93	15.92	373	1.70	5.70	192.8
	5/24/2012	97.93	15.98	454	2.25	-	-
	6/4/2012	97.93	16.32	206	11.44	5.49	196.2
	6/13/2012	97.93	15.92	126	21.12	5.70	198.5
	6/18/2012	97.93	16.17	152	21.58	5.68	225.8
	7/6/2012	97.93	16.14	174	19.83	5.65	145.0
	7/17/2012	97.93	16.06	451	0.02	5.91	35.2
	8/8/2012	97.93	18.72	293	10.21	4.70	339.1
	9/5/2012	97.93	15.42	305	7.04	5.63	199.2
	10/8/2012	97.93	15.56	294	10.80	5.25	194.4
	1/15/2013	97.93	15.86	174	13.15	5.08	320.5
	4/24/2013	97.93	16.28	232	16.38	4.97	241.0
	7/24/2013	97.93	15.29	320	12.64	4.76	261.3
	10/23/2013	97.93	15.62	489	5.48	5.88	243.7
	1/14/2014	97.93	15.77	202	9.52	5.09	333.3
	4/15/2014	97.93	16.52	221	13.27	5.01	171.0
7/31/2014	97.93	17.37	296	10.07	5.64	152.5	
11/19/2014	97.93	14.72	643	1.65	5.42	250.2	
1/28/2015	97.93	15.31	137	9.15	5.26	149.1	
MW-13 (84) {4} [49-84]	11/23/2010	98.11	18.12	542	1.70	5.14	325.0
	11/30/2010	98.11	15.4	-	0.7	6.1	-45.3
	3/10/2011	98.11	14.67	582	12.10	4.92	288.8
	3/14/2011	98.11	14.05	-	-	-	-
	5/11/2011	98.11	21.32	520	8.57	4.39	291.8
	5/12/2011	98.11	17.61	-	-	-	-
	7/12/2011	98.11	24.41	1	3.50	3.68	451.9
	9/15/2011	98.11	-	13	12.94	5.12	459.9
	9/20/2011	98.11	15.91	402	15.88	7.74	532.7
	9/23/2011	98.11	16.00	418	28.50	8.60	251.2
	9/27/2011	98.11	15.98	416	20.52	5.10	293.4
	10/4/2011	98.11	15.98	1,513	21.16	5.47	180.6
	10/14/2011	98.11	17.77	643	17.53	5.12	629.0
	10/18/2011	98.11	17.70	496	20.73	5.95	945.1
	10/27/2011	98.11	17.87	490	15.90	8.01	540.1
	11/2/2011	98.11	17.27	492	19.62	6.08	752.0
	11/8/2011	98.11	17.70	495	24.88	7.61	911.0
	11/15/2011	98.11	14.90	-	-	-	-
	11/16/2011	98.11	16.42	513	23.46	5.96	211.0
	12/8/2011	98.11	17.33	491	7.01	5.04	224.2
	1/12/2012	98.11	15.48	624	7.80	8.08	170.1
	2/16/2012	98.11	13.57	602	8.39	6.11	274.9
	2/21/2012	98.11	13.25	615	15.94	6.39	650.0
	2/28/2012	98.11	13.77	619	18.61	6.38	-
	3/5/2012	98.11	12.92	580	18.41	7.80	747.0
	3/28/2012	98.11	13.96	615	14.07	-	409.0
	4/3/2012	98.11	15.76	613	13.59	5.26	836.9
	4/11/2012	98.11	13.64	623	12.55	6.00	250.8
	4/26/2012	98.11	13.53	640	7.19	5.94	315.1
5/7/2012	98.11	16.09	591	15.36	7.23	818.9	
5/21/2012	98.11	15.91	573	5.48	6.35	860.0	
6/4/2012	98.11	16.09	548	14.14	5.65	349.6	

Table 3

HISTORICAL MONITORING WELL FIELD PARAMETERS DATA SUMMARY

Carroll - Monrovia MD - Green Valley Citgo
 11791 Fingerboard Rd
 Monrovia, MD

Monitoring Well	Date	Top of Casing (ft)	Well Temperature (°C)	Specific Conductance (µS/cm)	Dissolved Oxygen (mg/L)	Well pH	ORP (mV)
MW-13 (cont.)	6/13/2012	98.11	15.96	541	16.73	5.30	308.5
	6/18/2012	98.11	15.93	520	19.15	5.46	245.4
	7/6/2012	98.11	15.85	572	19.44	5.89	237.8
	7/17/2012	98.11	16.06	539	8.70	5.17	262.3
	8/8/2012	98.11	12.92	719	11.82	7.00	-88.3
	9/5/2012	98.11	15.36	570	10.53	5.23	247.1
	10/8/2012	98.11	15.63	725	10.89	5.22	-8.7
	1/16/2013	98.11	16.12	626	11.62	5.10	293.1
	4/25/2013	98.11	16.10	674	8.67	4.95	159.6
	7/24/2013	98.11	15.33	767	9.50	4.83	300.0
	10/23/2013	98.11	15.77	740	9.25	8.33	161.3
	1/14/2014	98.11	15.75	862	7.41	5.03	354.2
	4/15/2014	98.11	16.44	937	9.47	4.92	203.8
	7/31/2014	98.11	16.59	887	8.83	5.12	157.7
	11/20/2014	98.11	13.90	806	5.82	5.32	333.5
1/27/2015	98.11	15.26	808	4.46	5.16	115.7	
MW-15D (134) {4} [46-134]	11/23/2010	97.67	17.50	532	1.59	6.07	231.4
	11/30/2010	97.67	15.4	-	0.5	6.7	-56.0
	12/1/2010	97.67	14.70	303	2.19	7.57	130.0
	3/11/2011	97.67	14.83	502	5.30	5.38	259.1
	5/11/2011	97.67	20.74	511	2.61	5.32	180.0
	7/13/2011	97.67	31.87	693	5.43	5.46	360.9
	9/14/2011	97.67	-	648	4.20	6.68	31.3
	9/20/2011	97.67	15.82	367	7.16	5.39	209.0
	9/21/2011	97.67	-	-	-	-	-
	9/23/2011	97.67	16.21	378	6.77	5.40	208.4
	9/27/2011	97.67	16.12	415	6.30	6.45	203.1
	10/4/2011	97.67	15.97	436	8.30	5.46	154.0
	10/14/2011	97.67	17.39	536	8.43	5.65	150.0
	10/18/2011	97.67	17.32	416	11.46	5.55	136.2
	10/27/2011	97.67	17.63	422	10.64	5.54	277.2
	11/2/2011	97.67	17.28	433	8.74	5.64	241.5
	11/8/2011	97.67	17.10	433	11.39	5.63	279.4
	11/16/2011	97.67	15.69	450	14.88	5.59	307.8
	12/8/2011	97.67	17.09	493	3.42	8.80	119.1
	1/11/2012	97.67	15.41	471	4.14	5.42	338.3
	2/16/2012	97.67	13.38	503	2.78	5.54	164.2
	2/21/2012	97.67	13.45	497	2.75	5.49	201.9
	2/28/2012	97.67	13.40	500	7.21	5.47	-
	3/5/2012	97.67	13.32	503	8.85	5.50	268.0
	3/23/2012	97.67	13.67	514	8.67	5.49	252.8
	3/28/2012	97.67	13.53	517	9.05	-	220.6
	4/3/2012	97.67	15.37	536	7.71	5.69	211.2
	4/11/2012	97.67	13.33	539	17.01	7.84	175.7
	4/26/2012	97.67	13.37	511	6.79	5.80	341.0
	4/30/2012	97.67	13.30	526	4.57	7.30	218.8
	5/7/2012	97.67	15.72	519	7.93	5.89	232.0
	5/15/2012	97.67	15.75	523	8.90	5.75	274.9
	5/21/2012	97.67	15.34	508	4.98	6.02	239.9
5/24/2012	97.67	15.40	631	12.16	-	-	
5/29/2012	97.67	15.63	571	12.49	6.35	144.9	
6/4/2012	97.67	15.46	426	11.55	5.88	229.1	
6/13/2012	97.67	15.36	444	11.54	6.00	276.4	
6/18/2012	97.67	15.67	467	13.72	6.04	216.4	
6/28/2012	97.67	16.32	500	11.91	5.87	-	

Table 3

HISTORICAL MONITORING WELL FIELD PARAMETERS DATA SUMMARY

Carroll - Monrovia MD - Green Valley Citgo
11791 Fingerboard Rd
Monrovia, MD

Monitoring Well	Date	Top of Casing (ft)	Well Temperature (°C)	Specific Conductance (µS/cm)	Dissolved Oxygen (mg/L)	Well pH	ORP (mV)
MW-15D (cont.)	7/6/2012	97.67	15.58	499	13.00	6.07	180.3
	7/9/2012	97.67	15.58	495	11.62	7.08	192.2
	7/17/2012	97.67	14.58	458	7.42	6.72	154.1
	7/23/2012	97.67	15.25	433	7.83	6.75	209.2
	8/9/2012	97.67	16.57	664	9.50	12.60	-88.2
	9/5/2012	97.67	15.10	484	6.70	6.61	185.1
	10/8/2012	97.67	15.20	611	5.74	6.56	-38.4
	1/18/2013	97.67	14.63	531	5.98	6.11	191.8
	4/25/2013	97.67	15.80	592	7.20	5.48	257.2
	7/24/2013	97.67	14.90	719	6.40	5.27	289.6
	10/24/2013	97.67	15.59	604	7.76	7.38	171.8
	1/14/2014	97.67	15.23	803	6.04	5.56	295.9
	4/16/2014	97.67	15.08	721	5.64	5.40	170.2
	7/31/2014	97.67	17.14	869	6.27	5.81	165.3
	11/20/2014	97.67	14.02	708	5.67	6.07	297.7
1/28/2015	97.67	15.49	561	6.66	5.76	158.4	
MW-18D (130) {2} [120-130]	11/23/2010	98.31	17.61	7.80	5.29	7.16	285.8
	11/30/2010	98.31	14.3	-	6.0	10.0	-65.4
	12/1/2010	98.31	14.29	18	6.64	10.80	-73.0
	12/8/2010	98.31	14.94	717	5.32	7.42	50.7
	3/10/2011	98.31	11.36	3,566	4.92	10.11	85.9
	5/10/2011	98.31	21.97	884	3.37	10.75	119.4
	7/13/2011	98.31	20.41	812	1.80	9.39	233.0
	9/14/2011	98.31	-	176	0.99	9.99	159.0
	9/20/2011	98.31	16.08	195	0.81	9.78	68.0
	9/23/2011	98.31	16.53	170	1.20	6.78	228.8
	9/27/2011	98.31	16.04	174	3.25	9.46	159.1
	10/4/2011	98.31	15.90	184	1.00	7.99	142.0
	10/14/2011	98.31	17.79	255	1.70	9.52	82.6
	10/18/2011	98.31	17.80	215	2.90	9.59	98.8
	10/27/2011	98.31	17.44	332	5.17	9.68	54.4
	11/2/2011	98.31	17.53	348	5.75	9.82	59.0
	11/8/2011	98.31	17.69	367	5.73	10.10	100.6
	11/16/2011	98.31	15.87	353	5.96	9.58	129.1
	12/8/2011	98.31	16.93	370	4.02	6.97	150.8
	1/11/2012	98.31	15.08	412	2.38	7.04	170.6
	2/16/2012	98.31	13.74	452	1.71	9.48	-84.3
	2/21/2012	98.31	13.81	468	0.55	9.32	-125.2
	2/28/2012	98.31	13.12	3,584	10.92	12.70	-
	3/5/2012	98.31	13.68	460	1.66	9.35	-105.4
	3/23/2012	98.31	13.94	469	1.85	9.52	69.7
	3/28/2012	98.31	13.88	469	1.51	-	37.6
	4/3/2012	98.31	-	-	-	-	-
	4/4/2012	98.31	15.56	467	0.25	7.27	-160.7
	4/11/2012	98.31	13.49	989	1.67	9.88	53.9
	4/26/2012	98.31	12.58	493	9.83	9.83	136.9
	4/30/2012	98.31	13.56	493	1.38	9.71	132.4
	5/7/2012	98.31	15.88	474	1.08	9.63	55.1
	5/15/2012	98.31	15.87	479	1.13	9.67	-18.0
5/21/2012	98.31	15.94	478	1.44	8.86	39.7	
5/24/2012	98.31	15.60	575	2.22	-	-	
5/29/2012	98.31	16.04	463	1.85	8.55	87.2	
6/4/2012	98.31	15.85	434	2.29	8.97	116.2	
6/15/2012	98.31	16.28	465	0.69	8.64	142.3	

Table 3

HISTORICAL MONITORING WELL FIELD PARAMETERS DATA SUMMARY

Carroll - Monrovia MD - Green Valley Citgo
11791 Fingerboard Rd
Monrovia, MD

Monitoring Well	Date	Top of Casing (ft)	Well Temperature (°C)	Specific Conductance (µS/cm)	Dissolved Oxygen (mg/L)	Well pH	ORP (mV)
MW-18D (cont.)	6/18/2012	98.31	15.43	460	5.02	9.32	110.6
	6/28/2012	98.31	15.67	465	2.32	9.13	108.6
	7/6/2012	98.31	15.40	476	1.06	9.16	85.3
	7/9/2012	98.31	15.76	476	2.41	9.20	118.6
	7/18/2012	98.31	15.88	671	3.32	8.61	98.4
	7/23/2012	98.31	14.71	672	0.47	8.76	135.0
	8/9/2012	98.31	21.45	890	0.67	7.66	-95.1
	9/5/2012	98.31	15.27	672	1.03	9.17	-177.1
	10/8/2012	98.31	16.46	803	0.46	7.93	-180.4
	1/17/2013	98.31	14.98	607	0.40	8.19	-188.1
	4/25/2013	98.31	16.55	444	2.88	6.96	238.8
	7/25/2013	98.31	-	585	6.59	6.64	306.6
	10/23/2013	98.31	15.43	606	5.78	7.88	130.4
	1/16/2014	98.31	14.61	681	2.78	7.64	205.5
	4/16/2014	98.31	16.11	627	0.21	7.66	208.0
	8/1/2014	98.31	18.09	616	0.75	7.71	22.2
11/20/2014	98.31	14.21	618	4.08	7.79	229.7	
1/28/2015	98.31	16.39	16.39	5,292	9.80	8.59	165.1
MW-18S (70) {2} [45-70]	11/30/2010	98.29	15.3	-	11.3	11.1	-65.2
	12/1/2010	98.29	11.97	64	11.75	12.02	-91.3
	3/10/2011	98.29	14.93	7,076	7.03	12.99	-100.4
	5/10/2011	98.29	22.53	7,285	2.83	13.21	101.9
	7/13/2011	98.29	22.04	6,920	1.58	9.02	300.6
	9/14/2011	98.29	-	5,817	9.09	12.50	73.6
	9/20/2011	98.29	16.12	5,276	6.63	12.58	-32.8
	9/23/2011	98.29	16.37	5,252	5.65	12.70	-13.5
	9/27/2011	98.29	16.12	464	10.42	12.43	-39.1
	10/4/2011	98.29	16.06	5,027	8.65	12.82	-71.9
	10/14/2011	98.29	17.92	5,964	9.08	12.87	41.5
	10/18/2011	98.29	17.93	4,105	11.97	12.87	10.5
	10/27/2011	98.29	17.88	1,626	13.45	12.40	37.6
	11/2/2011	98.29	17.48	3,201	14.41	12.84	27.6
	11/8/2011	98.29	17.58	3,121	16.99	12.71	9.4
	11/16/2011	98.29	15.74	3,727	19.91	12.76	29.6
	12/8/2011	98.29	17.62	4,079	7.61	12.94	76.6
	1/12/2012	98.29	15.03	5,138	7.31	12.39	-115.0
	2/16/2012	98.29	13.13	3,534	5.11	12.66	-41.3
	2/21/2012	98.29	13.25	3,432	7.40	12.64	-37.7
	2/28/2012	98.29	13.78	463	1.51	9.63	-
	3/5/2012	98.29	13.13	5,331	6.03	12.90	-67.6
	3/23/2012	98.29	13.89	1,565	13.03	11.85	38.6
	3/28/2012	98.29	13.70	1,885	12.10	-	29.6
	4/3/2012	98.29	13.76	3,009	7.92	12.53	19.2
	4/11/2012	98.29	13.59	1,977	5.88	12.47	-25.9
	4/26/2012	98.29	13.50	3,499	6.11	12.64	60.0
	4/30/2012	98.29	13.33	2,697	5.79	12.34	76.8
	5/7/2012	98.29	15.83	3,595	6.42	12.39	-29.5
	5/15/2012	98.29	15.78	5,764	4.97	12.35	-26.9
	5/21/2012	98.29	15.81	2,656	4.29	12.43	-78.3
	5/24/2012	98.29	15.77	3,285	11.80	-	-
	5/29/2012	98.29	16.66	3,692	9.80	12.50	-43.4
6/4/2012	98.29	15.79	2,451	15.24	12.14	-12.5	
6/15/2012	98.29	16.01	2,011	19.11	12.32	-45.4	
6/18/2012	98.29	15.72	1,859	17.92	12.01	-30.7	
6/28/2012	98.29	16.54	1,703	18.23	11.88	-47.7	
7/6/2012	98.29	15.86	3,519	15.19	12.58	-78.7	
7/9/2012	98.29	16.21	1,801	16.24	12.17	-16.7	

Table 3

HISTORICAL MONITORING WELL FIELD PARAMETERS DATA SUMMARY

Carroll - Monrovia MD - Green Valley Citgo
 11791 Fingerboard Rd
 Monrovia, MD

Monitoring Well	Date	Top of Casing (ft)	Well Temperature (°C)	Specific Conductance (µS/cm)	Dissolved Oxygen (mg/L)	Well pH	ORP (mV)
MW-18S (cont.)	7/17/2012	98.29	17.44	1,697	13.78	11.78	45.8
	7/23/2012	98.29	16.53	1,631	8.31	12.17	-24.8
	8/9/2012	98.29	18.04	3,463	11.30	10.94	66.1
	9/5/2012	98.29	15.56	6,117	11.16	12.71	-48.9
	10/8/2012	98.29	16.24	7,086	9.45	12.54	-104.7
	1/17/2013	98.29	14.48	3,450	9.58	12.48	-67.0
	4/25/2013	98.29	16.32	1,762	10.77	11.69	134.6
	7/25/2013	98.29	15.29	5,727	9.47	12.62	-108.1
	10/23/2013	98.29	15.84	7,530	8.94	12.55	-146.6
	1/16/2014	98.29	15.14	2,866	15.14	12.19	-67.3
	4/16/2014	98.29	16.26	2,607	6.64	12.31	69.5
	8/1/2014	98.29	18.40	6,816	7.63	12.20	-69.1
	11/20/2014	98.29	14.53	8,083	5.05	12.83	-47.7
	2/12/2015	98.29	12.23	5,633	8.72	15.43	-57.6
MW-18S-R (70) {4} [25-70]	2/12/2015	NA	15.22	675	5.11	5.69	121.5

(##) = Depth to bottom of well (ft)
 [##] = Length of the Screened Interval (ft)
 {##} = Well Diameter (in)
 °C = Degrees Celsius
 µS/cm = Microsiemens per centimeter
 mg/L = Milligrams per liter
 mV = Millivolts
 NA = Not Available

Table 4

SOIL ANALYTICAL DATA SUMMARY - VOC PARAMETERS

Carroll - Monrovia MD - Green Valley Citgo
 11791 Fingerboard Rd
 Monrovia, MD

Soil Sample ID	Date	Depth (ft)	Benzene (µg/kg)	Toluene (µg/kg)	Ethylbenzene (µg/kg)	Total Xylenes (µg/kg)	MTBE (µg/kg)	tert-Butyl Alcohol (µg/kg)	tert-amyl methyl ether (µg/kg)	ethyl tert-butyl ether (µg/kg)	Diisopropyl ether (µg/kg)	pH	ORP (mV)
MDE Non-Residential Clean-up Standard for Soil (June 2008)			52,000	8,200,000	10,000,000	20,000,000	720,000	NA	NA	NA	NA	NA	NA
MW-18S-R(65')	01/27/15	65	<0.5	<1	<1	<1	11	66	<1	<1	<1	6.18	363
MW-18S-R(70')	01/27/15	70	<0.5	<1	<1	<1	10	70	<1	<1	<1	6.62	376

<# = Less than the method detection limit of #

ft = Feet

µg/kg = Micrograms per kilogram

MTBE = Methyl tertiary butyl ether

NA = Not applicable

ORP = Oxidation reduction potential

mV = Millivolts

Table 5

SOIL ANALYTICAL DATA SUMMARY - METALS PARAMETERS

Carroll - Monrovia MD - Green Valley Citgo
 11791 Fingerboard Rd
 Monrovia, MD

Soil Sample ID	Date	Depth (ft)	Chromium (mg/kg)	Chromium (hexavalent) (mg/kg)	Iron (mg/kg)	Lead (mg/kg)
MDE Non-Residential Clean-up Standard for Soil (June 2008)			310	310	72,000	1,000
MW-18S-R(65')	01/27/15	65	14.7	<0.52	27,300	18.0
MW-18S-R(70')	01/27/15	70	15.2	<0.51	32,500	4.10

<# = Less than the method detection limit of #
 ft = Feet
 mg/kg = Milligrams per kilogram





APPENDIX A

Boring Log



VAPOR POINT LOG

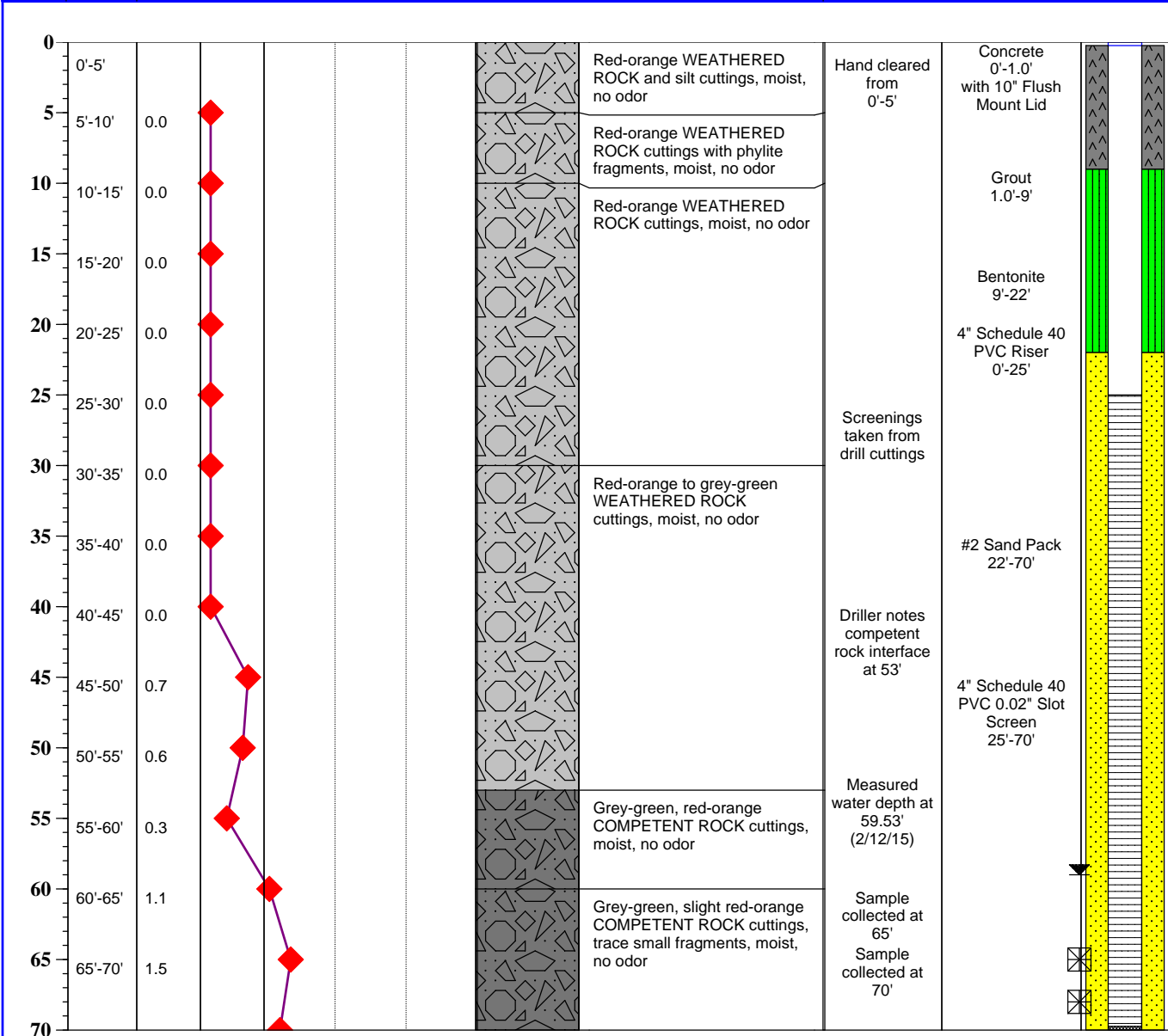
ID NO. **MW-18S-R**

Groundwater and Environmental Services, Inc.

PROJECT: **Carroll Monrovia** WATER DEPTH: **59.53** TOTAL DEPTH: **70'**
 ADDRESS: **11791 Fingerboard Rd, Monrovia, MD** WELL DIA.: **4"**
 JOB NO. **0402888** BOREHOLE DIA.: **8"**



Logged By: **P. Reichardt** Drilling Method: **Drilltech D25 Air Rotary**
 Dates Drilled: **1/27/2015** Field Screening: **PID, 10.6 eV Lamp**
 Drilling Company: **Allied Drilling Services** Soil Class. System: **Unified Soil Classification System**

Depth (feet)	Sample Interval (feet)	Field Screen: Total Organic Volatiles (ppm)	Sample Lithology	Comments	Completion Details
--------------	------------------------	---	------------------	----------	--------------------



LEGEND

Proportion Descriptions:
 Trace = <10% Some = <50%
 Little = <25% And = 50%

Symbol Key:
 Water Level 
 Sample Location 

eV = electron volt
 NA = not available
 ppm = parts per million
 " = inches

Well ID: **MW-18S-R**



APPENDIX B

Well Completion Report

C 1 28059 SEQUENCE NO. (MDE USE ONLY)

STATE OF MARYLAND WELL COMPLETION REPORT FILL IN THIS FORM COMPLETELY PLEASE TYPE

THIS REPORT MUST BE SUBMITTED WITHIN 45 DAYS AFTER WELL IS COMPLETED.

1 2 3 6 (THIS NUMBER IS TO BE PUNCHED IN COLS. 3-6 ON ALL CARDS)

COUNTY NUMBER

ST/CO USE ONLY DATE RECEIVED MM DD YY

DATE WELL COMPLETED MM DD YY 2015 27 22 Depth of Well 71 (TO NEAREST FOOT)

PERMIT NO. FROM "PERMIT TO DRILL WELL" FR-95-2578

OWNER Timber Crest Limited Partnership WELL SITE ADDRESS 11791 Fingerboard Rd TOWN Menrovia SUBDIVISION Green Valley SECTION 3 LOT 1

WELL LOG table with columns: DESCRIPTION, FEET (FROM, TO), check if water bearing. Includes entries for Brown Fin Sand, Orange Tan Weathered Rock, Brown Tan Weathered Rock, Tan Weathered Rock (soft), Gray Bedrock Harder, and EOB 71'.

GROUTING RECORD: WELL HAS BEEN GROUTED (Y), TYPE OF GROUTING MATERIAL (CM, BC), NO. OF BAGS (5), NO. OF POUNDS (250), GALLONS OF WATER (34), DEPTH OF GROUT SEAL (0 to 22 ft).

CASING RECORD: casing types insert appropriate code below (PL, ST, CO, OT), MAIN CASING TYPE (PL), Nominal diameter top (main) casing (4 inch), Total depth of main casing (26 feet).

OTHER CASING (if used) diameter inch, depth (feet) from to

SCREEN RECORD: screen type or open hole (PL), insert appropriate code below (ST, BR, HO, PL, OT), DEPTH (nearest ft.) 26 71

PUMPING TEST: HOURS PUMPED (8 9), PUMPING RATE (gal. per min.) 11 15, METHOD USED TO MEASURE PUMPING RATE, WATER LEVEL (distance from land surface) BEFORE PUMPING (20 ft), WHEN PUMPING (22 25 ft), TYPE OF PUMP USED (for test) C centrifugal, S submersible

PUMP INSTALLED: DRILLER INSTALLED PUMP YES NO, IF DRILLER INSTALLS PUMP, THIS SECTION MUST BE COMPLETED FOR ALL WELLS, TYPE OF PUMP INSTALLED PLACE (A,C,J,P,R,S,T,O) IN BOX 29: C, CAPACITY GALLONS PER MINUTE (to nearest gallon) 31 35, PUMP HORSE POWER 37 41, PUMP COLUMN LENGTH (nearest ft.) 43 47, CASING HEIGHT (circle appropriate box and enter casing height) + above, LAND SURFACE (nearest foot) 49 51

NUMBER OF UNSUCCESSFUL WELLS: 0 WELL HYDROFRACTURED YES (Y) NO (N)

CIRCLE APPROPRIATE LETTER: A A WELL WAS ABANDONED AND SEALED WHEN THIS WELL WAS COMPLETED, E ELECTRIC LOG OBTAINED, P TEST WELL CONVERTED TO PRODUCTION WELL

I HEREBY CERTIFY THAT THIS WELL HAS BEEN CONSTRUCTED IN ACCORDANCE WITH COMAR 26.04.04 "WELL CONSTRUCTION" AND IN CONFORMANCE WITH ALL CONDITIONS STATED IN THE ABOVE CAPTIONED PERMIT, AND THAT THE INFORMATION PRESENTED HEREIN IS ACCURATE AND COMPLETE TO THE BEST OF MY KNOWLEDGE.

DRILLERS LIC. NO. MWD 553 DRILLERS SIGNATURE John Ten LIC. NO. AWD 977

DEPTH (nearest ft.) 26 71, SLOT SIZE 1 0 2 2 3 0, DIAMETER OF SCREEN 4 (NEAREST INCH), GRAVEL PACK IF WELL DRILLED WAS FLOWING WELL INSERT F IN BOX 68: 22 71

MDE USE ONLY (NOT TO BE FILLED IN BY DRILLER) T (E.R.O.S.) W Q, TELESCOPE CASING LOG INDICATOR OTHER DATA

LATITUDE 39.343374 LONGITUDE 77.254040 (DEFAULT COORD. WGS 84) NOTES: Red 200'



APPENDIX C

Soil Waste Manifest

For Facility Use Only
I.D.# 63243

NON-HAZARDOUS MANIFEST

For Facility Use Only
Manifest# 75245

Date:

Reco BIOTECHNOLOGY
710 Hospital Street
Richmond, VA 23219
(804) 644-2800

Generator: Name Carroll Independent Fuels Co. Contact Name Danielle Rice
Address 2700 Lock Raven Rd Telephone 800-220-3606
Baltimore MD Ext: 8715
Retail gas/diesel station @ 11791 Fingerboard Rd, Monrovia MD

Transporter: Name First Call Contact Name _____
or Carrier Address Ashland VA Telephone _____

Destination: Reco Biotechnology Contact Reco Biotechnology
Delivery Address 710 Hospital Street Telephone (804) 644-2800
Richmond, VA 23219

Route: _____

NO. of Packages	(*) Container	Shipping Description	Soil Weight (Sub. to Cor.)
8	DM	Non-Regulated Material non-regulated None None (petroleum contaminated soil)	

* - DM = Drum DT = Dump Truck/Trailer Truck #: 750 *Gross Weight: _____
SC = Steel Container Tare Weight: _____
RC = Rail Car Net Weight: _____
* May attach weight tickets

Certification:

I/We certify that the above material is not a HAZARDOUS WASTE as defined by the Resource Conservation and Recovery Act (RCRA), Virginia Hazardous Waste Management Regulations or as defined by the state of origin.

Gregory Reichart on behalf of Carroll Ind. Fuel Co. [Signature] 2/18/15
PRINTED/TYPED NAME & TITLE SIGNATURE DATE

Truck Driver's Signature: [Signature] Date: 2/20/15

Discrepancies: _____

RECEIVED BY: Reco Biotechnology

SIGNED BY: [Signature]

DATE: 2-20-15

Aqua Clean of Virginia, LLC dba Reco Biotechnology



APPENDIX D

Groundwater Waste Manifest

Designated Facility: Reco Biotechnology MANIFEST NO. 1
 710 Hospital Street
 ASAP Richmond, VA 23219 RECO JOB NO. 33194
 (804) 644-2800

Generator: Carroll Independent Fuels Co. (CIFC) Contact: Danielle Rice
 Site Address: 11791 Fingerboard Rd Emergency Phone: 800-220-3606
Monrovia MD (retail gasoline / diesel station) ext: 3715

I declare that the material released to Reco Biotechnology is fully and accurately described and classified, is not a hazardous waste and in all respects in proper condition for transport by highway in accordance with all applicable federal, state and local regulations.

No. of Packages - Type	HM	Description of articles, special marks and exceptions	Hazard Class	I.D. Number	Packaging Group	Labels Required	Gallons Subject to Correction
2 DM		Non-regulated Material (purge water)	NA	NA	NA	NA	

*DM=Drum; TT=Tank Trucks; RC=Rail Car

Generator / Agent Authorized Signature: Gregory Reichart on Behalf of CIFC Date: 2-18-15

Transporter

Company: First Call Env Truck# 750
 Address: Ashland, VA Phone: _____

Driver (Printed Name): KR Ston Signature: _____
 Discrepancies: _____ Date: 2/20/15

Received by: Reco Biotechnology
 Printed Name: D Hunt Signature: _____
 Date: 2-20-15



APPENDIX E

Groundwater Analytical Reports and Chain of Custody Documentation

ANALYTICAL RESULTS

Prepared by:

Eurofins Lancaster Laboratories Environmental
2425 New Holland Pike
Lancaster, PA 17601

Prepared for:

GES, Inc.
Suite A
1350 Blair Dr
Odenton MD 21113

February 24, 2015

Project: Carroll Monrovia

Submittal Date: 02/13/2015
Group Number: 1538586
PO Number: 0402888-06-206
Release Number: MONROVIA
State of Sample Origin: MD

Client Sample Description

MW-7 Grab Groundwater
MW-14S Grab Groundwater
MW-14D Grab Groundwater
MW-17 Grab Groundwater
MW-18S-R Grab Groundwater
MW-18S Grab Groundwater

Lancaster Labs (LL) #

7772471
7772472
7772473
7772474
7772475
7772476

The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

Regulatory agencies do not accredit laboratories for all methods, analytes, and matrices. Our scopes of accreditation can be viewed at <http://www.eurofinsus.com/environment-testing/laboratories/eurofins-lancaster-laboratories-environmental/resources/certifications/> .

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GES, Inc.-MD
GES

Attn: Report Distribution

Attn: Greg Reichart

Respectfully Submitted,



Lynn M. Frederiksen
Principal Specialist Group Leader

(717) 556-7255

Sample Description: MW-7 Grab Groundwater
11791 Fingerboard Rd, Monrovia, MD
Carroll Monrovia

LL Sample # WW 7772471
LL Group # 1538586
Account # 08390

Project Name: Carroll Monrovia

Collected: 02/12/2015 08:40 by JP

GES, Inc.

Submitted: 02/13/2015 20:10

Suite A

Reported: 02/24/2015 17:00

1350 Blair Dr
Odenton MD 21113

MRV07

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC/MS	Volatiles	SW-846 8260B 25mL	ug/l	ug/l	
	purge				
02898	Acrylonitrile	107-13-1	N.D.	1.0	1
02898	t-Amyl methyl ether	994-05-8	N.D.	0.1	1
02898	Benzene	71-43-2	N.D.	0.1	1
02898	Bromobenzene	108-86-1	N.D.	0.1	1
02898	Bromochloromethane	74-97-5	N.D.	0.1	1
02898	Bromodichloromethane	75-27-4	N.D.	0.1	1
02898	Bromoform	75-25-2	N.D.	0.1	1
02898	Bromomethane	74-83-9	N.D.	0.1	1
02898	t-Butyl Alcohol	75-65-0	N.D.	4.0	1
02898	n-Butylbenzene	104-51-8	N.D.	0.1	1
02898	sec-Butylbenzene	135-98-8	N.D.	0.1	1
02898	tert-Butylbenzene	98-06-6	N.D.	0.1	1
02898	Carbon Disulfide	75-15-0	N.D.	0.4	1
02898	Chlorobenzene	108-90-7	N.D.	0.1	1
02898	Chloroethane	75-00-3	N.D.	0.1	1
02898	Chloroform	67-66-3	1	0.1	1
02898	Chloromethane	74-87-3	N.D.	0.2	1
02898	2-Chlorotoluene	95-49-8	N.D.	0.1	1
02898	4-Chlorotoluene	106-43-4	N.D.	0.1	1
02898	1,2-Dibromo-3-chloropropane	96-12-8	N.D.	0.2	1
02898	Dibromochloromethane	124-48-1	N.D.	0.1	1
02898	1,2-Dibromoethane	106-93-4	N.D.	0.1	1
02898	Dibromomethane	74-95-3	N.D.	0.1	1
02898	trans-1,4-Dichloro-2-butene	110-57-6	N.D.	1.0	1
02898	1,2-Dichlorobenzene	95-50-1	N.D.	0.1	1
02898	1,3-Dichlorobenzene	541-73-1	N.D.	0.1	1
02898	1,4-Dichlorobenzene	106-46-7	N.D.	0.1	1
02898	Dichlorodifluoromethane	75-71-8	N.D.	0.1	1
02898	1,1-Dichloroethane	75-34-3	N.D.	0.1	1
02898	1,2-Dichloroethane	107-06-2	N.D.	0.1	1
02898	1,1-Dichloroethene	75-35-4	N.D.	0.1	1
02898	cis-1,2-Dichloroethene	156-59-2	N.D.	0.1	1
02898	trans-1,2-Dichloroethene	156-60-5	N.D.	0.1	1
02898	1,2-Dichloropropane	78-87-5	N.D.	0.1	1
02898	1,3-Dichloropropane	142-28-9	N.D.	0.1	1
02898	2,2-Dichloropropane	594-20-7	N.D.	0.1	1
02898	1,1-Dichloropropene	563-58-6	N.D.	0.1	1
02898	cis-1,3-Dichloropropene	10061-01-5	N.D.	0.1	1
02898	trans-1,3-Dichloropropene	10061-02-6	N.D.	0.1	1
02898	Ethyl t-butyl ether	637-92-3	N.D.	0.1	1
02898	Ethylbenzene	100-41-4	N.D.	0.1	1
02898	Hexachlorobutadiene	87-68-3	N.D.	0.1	1
02898	di-Isopropyl Ether	108-20-3	3.5	0.1	1
02898	Isopropylbenzene	98-82-8	N.D.	0.1	1
02898	p-Isopropyltoluene	99-87-6	N.D.	0.1	1
02898	Methyl Tertiary Butyl Ether	1634-04-4	1.9	0.1	1
02898	Methylene Chloride	75-09-2	N.D.	0.2	1
02898	Naphthalene	91-20-3	N.D.	0.1	1
02898	n-Propylbenzene	103-65-1	N.D.	0.1	1

Sample Description: MW-7 Grab Groundwater
11791 Fingerboard Rd, Monrovia, MD
Carroll Monrovia

LL Sample # WW 7772471
LL Group # 1538586
Account # 08390

Project Name: Carroll Monrovia

Collected: 02/12/2015 08:40 by JP GES, Inc.
Suite A
Submitted: 02/13/2015 20:10 1350 Blair Dr
Reported: 02/24/2015 17:00 Odenton MD 21113

MRV07

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC/MS Volatiles		SW-846 8260B 25mL	ug/l	ug/l	
	purge				
02898	Styrene	100-42-5	N.D.	0.1	1
02898	1,1,1,2-Tetrachloroethane	630-20-6	N.D.	0.1	1
02898	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	0.1	1
02898	Tetrachloroethene	127-18-4	N.D.	0.1	1
02898	Toluene	108-88-3	N.D.	0.1	1
02898	1,2,3-Trichlorobenzene	87-61-6	N.D.	0.1	1
02898	1,2,4-Trichlorobenzene	120-82-1	N.D.	0.1	1
02898	1,1,1-Trichloroethane	71-55-6	N.D.	0.1	1
02898	1,1,2-Trichloroethane	79-00-5	N.D.	0.1	1
02898	Trichloroethene	79-01-6	N.D.	0.1	1
02898	Trichlorofluoromethane	75-69-4	N.D.	0.1	1
02898	1,2,3-Trichloropropane	96-18-4	N.D.	0.3	1
02898	1,2,4-Trimethylbenzene	95-63-6	N.D.	0.1	1
02898	1,3,5-Trimethylbenzene	108-67-8	N.D.	0.1	1
02898	Vinyl Chloride	75-01-4	N.D.	0.1	1
02898	Xylene (Total)	1330-20-7	N.D.	0.1	1
GC Volatiles		SW-846 8015B	ug/l	ug/l	
01635	TPH-GRO water C6-C10	n.a.	N.D.	20	1

General Sample Comments

Trip blank vials were not received by the laboratory for this sample group.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
02898	VOCs- 25ml Water by 8260B	SW-846 8260B 25mL	1	C150472AA	02/17/2015 03:47	Sara E Johnson	1
		purge					
01163	GC/MS VOA Water Prep	SW-846 5030B	1	C150472AA	02/17/2015 03:47	Sara E Johnson	1
01635	TPH-GRO water C6-C10	SW-846 8015B	1	15050B20A	02/23/2015 14:42	Marie D Beamenderfer	1
01146	GC VOA Water Prep	SW-846 5030B	1	15050B20A	02/23/2015 14:42	Marie D Beamenderfer	1

Sample Description: MW-14S Grab Groundwater
11791 Fingerboard Rd, Monrovia, MD
Carroll Monrovia

LL Sample # WW 7772472
LL Group # 1538586
Account # 08390

Project Name: Carroll Monrovia

Collected: 02/12/2015 10:15 by JP GES, Inc.
Suite A
Submitted: 02/13/2015 20:10 1350 Blair Dr
Reported: 02/24/2015 17:00 Odenton MD 21113

MR14S

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC/MS Volatiles		SW-846 8260B 25mL	ug/l	ug/l	
	purge				
02898	Styrene	100-42-5	N.D.	0.1	1
02898	1,1,1,2-Tetrachloroethane	630-20-6	N.D.	0.1	1
02898	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	0.1	1
02898	Tetrachloroethene	127-18-4	0.3 J	0.1	1
02898	Toluene	108-88-3	N.D.	0.1	1
02898	1,2,3-Trichlorobenzene	87-61-6	N.D.	0.1	1
02898	1,2,4-Trichlorobenzene	120-82-1	N.D.	0.1	1
02898	1,1,1-Trichloroethane	71-55-6	N.D.	0.1	1
02898	1,1,2-Trichloroethane	79-00-5	N.D.	0.1	1
02898	Trichloroethene	79-01-6	N.D.	0.1	1
02898	Trichlorofluoromethane	75-69-4	N.D.	0.1	1
02898	1,2,3-Trichloropropane	96-18-4	N.D.	0.3	1
02898	1,2,4-Trimethylbenzene	95-63-6	N.D.	0.1	1
02898	1,3,5-Trimethylbenzene	108-67-8	N.D.	0.1	1
02898	Vinyl Chloride	75-01-4	N.D.	0.1	1
02898	Xylene (Total)	1330-20-7	N.D.	0.1	1
GC Volatiles		SW-846 8015B	ug/l	ug/l	
01635	TPH-GRO water C6-C10	n.a.	N.D.	20	1

General Sample Comments

Trip blank vials were not received by the laboratory for this sample group.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
02898	VOCs- 25ml Water by 8260B	SW-846 8260B 25mL	1	C150472AA	02/17/2015 04:10	Sara E Johnson	1
		purge					
01163	GC/MS VOA Water Prep	SW-846 5030B	1	C150472AA	02/17/2015 04:10	Sara E Johnson	1
01635	TPH-GRO water C6-C10	SW-846 8015B	1	15050B20A	02/23/2015 15:09	Marie D Beamenderfer	1
01146	GC VOA Water Prep	SW-846 5030B	1	15050B20A	02/23/2015 15:09	Marie D Beamenderfer	1

Sample Description: MW-14D Grab Groundwater
11791 Fingerboard Rd, Monrovia, MD
Carroll Monrovia

LL Sample # WW 7772473
LL Group # 1538586
Account # 08390

Project Name: Carroll Monrovia

Collected: 02/12/2015 11:25 by JP

GES, Inc.

Submitted: 02/13/2015 20:10

Suite A

Reported: 02/24/2015 17:00

1350 Blair Dr
Odenton MD 21113

MR14D

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC/MS Volatiles		SW-846 8260B 25mL	ug/l	ug/l	
		purge			
02898	Acrylonitrile	107-13-1	N.D.	1.0	1
02898	t-Amyl methyl ether	994-05-8	0.5	0.1	1
02898	Benzene	71-43-2	N.D.	0.1	1
02898	Bromobenzene	108-86-1	N.D.	0.1	1
02898	Bromochloromethane	74-97-5	N.D.	0.1	1
02898	Bromodichloromethane	75-27-4	N.D.	0.1	1
02898	Bromoform	75-25-2	N.D.	0.1	1
02898	Bromomethane	74-83-9	N.D.	0.1	1
02898	t-Butyl Alcohol	75-65-0	9.3 J	4.0	1
02898	n-Butylbenzene	104-51-8	N.D.	0.1	1
02898	sec-Butylbenzene	135-98-8	N.D.	0.1	1
02898	tert-Butylbenzene	98-06-6	N.D.	0.1	1
02898	Carbon Disulfide	75-15-0	0.7 J	0.4	1
02898	Chlorobenzene	108-90-7	N.D.	0.1	1
02898	Chloroethane	75-00-3	N.D.	0.1	1
02898	Chloroform	67-66-3	N.D.	0.1	1
02898	Chloromethane	74-87-3	N.D.	0.2	1
02898	2-Chlorotoluene	95-49-8	N.D.	0.1	1
02898	4-Chlorotoluene	106-43-4	N.D.	0.1	1
02898	1,2-Dibromo-3-chloropropane	96-12-8	N.D.	0.2	1
02898	Dibromochloromethane	124-48-1	N.D.	0.1	1
02898	1,2-Dibromoethane	106-93-4	N.D.	0.1	1
02898	Dibromomethane	74-95-3	N.D.	0.1	1
02898	trans-1,4-Dichloro-2-butene	110-57-6	N.D.	1.0	1
02898	1,2-Dichlorobenzene	95-50-1	N.D.	0.1	1
02898	1,3-Dichlorobenzene	541-73-1	N.D.	0.1	1
02898	1,4-Dichlorobenzene	106-46-7	N.D.	0.1	1
02898	Dichlorodifluoromethane	75-71-8	N.D.	0.1	1
02898	1,1-Dichloroethane	75-34-3	N.D.	0.1	1
02898	1,2-Dichloroethane	107-06-2	N.D.	0.1	1
02898	1,1-Dichloroethene	75-35-4	N.D.	0.1	1
02898	cis-1,2-Dichloroethene	156-59-2	N.D.	0.1	1
02898	trans-1,2-Dichloroethene	156-60-5	N.D.	0.1	1
02898	1,2-Dichloropropane	78-87-5	N.D.	0.1	1
02898	1,3-Dichloropropane	142-28-9	N.D.	0.1	1
02898	2,2-Dichloropropane	594-20-7	N.D.	0.1	1
02898	1,1-Dichloropropene	563-58-6	N.D.	0.1	1
02898	cis-1,3-Dichloropropene	10061-01-5	N.D.	0.1	1
02898	trans-1,3-Dichloropropene	10061-02-6	N.D.	0.1	1
02898	Ethyl t-butyl ether	637-92-3	N.D.	0.1	1
02898	Ethylbenzene	100-41-4	N.D.	0.1	1
02898	Hexachlorobutadiene	87-68-3	N.D.	0.1	1
02898	di-Isopropyl Ether	108-20-3	3.2	0.1	1
02898	Isopropylbenzene	98-82-8	N.D.	0.1	1
02898	p-Isopropyltoluene	99-87-6	N.D.	0.1	1
02898	Methyl Tertiary Butyl Ether	1634-04-4	77	1.0	10
02898	Methylene Chloride	75-09-2	N.D.	0.2	1
02898	Naphthalene	91-20-3	N.D.	0.1	1
02898	n-Propylbenzene	103-65-1	N.D.	0.1	1

Sample Description: MW-14D Grab Groundwater
11791 Fingerboard Rd, Monrovia, MD
Carroll Monrovia

LL Sample # WW 7772473
LL Group # 1538586
Account # 08390

Project Name: Carroll Monrovia

Collected: 02/12/2015 11:25 by JP GES, Inc.
Suite A
Submitted: 02/13/2015 20:10 1350 Blair Dr
Reported: 02/24/2015 17:00 Odenton MD 21113

MR14D

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC/MS Volatiles SW-846 8260B 25mL purge			ug/l	ug/l	
02898	Styrene	100-42-5	N.D.	0.1	1
02898	1,1,1,2-Tetrachloroethane	630-20-6	N.D.	0.1	1
02898	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	0.1	1
02898	Tetrachloroethene	127-18-4	N.D.	0.1	1
02898	Toluene	108-88-3	N.D.	0.1	1
02898	1,2,3-Trichlorobenzene	87-61-6	N.D.	0.1	1
02898	1,2,4-Trichlorobenzene	120-82-1	N.D.	0.1	1
02898	1,1,1-Trichloroethane	71-55-6	N.D.	0.1	1
02898	1,1,2-Trichloroethane	79-00-5	N.D.	0.1	1
02898	Trichloroethene	79-01-6	N.D.	0.1	1
02898	Trichlorofluoromethane	75-69-4	N.D.	0.1	1
02898	1,2,3-Trichloropropane	96-18-4	N.D.	0.3	1
02898	1,2,4-Trimethylbenzene	95-63-6	N.D.	0.1	1
02898	1,3,5-Trimethylbenzene	108-67-8	N.D.	0.1	1
02898	Vinyl Chloride	75-01-4	N.D.	0.1	1
02898	Xylene (Total)	1330-20-7	N.D.	0.1	1
GC Volatiles SW-846 8015B			ug/l	ug/l	
01635	TPH-GRO water C6-C10	n.a.	74	20	1

General Sample Comments

Trip blank vials were not received by the laboratory for this sample group.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
02898	VOCs- 25ml Water by 8260B	SW-846 8260B 25mL	1	C150472AA	02/17/2015 05:17	Sara E Johnson	1
02898	VOCs- 25ml Water by 8260B	SW-846 8260B 25mL	1	C150472AA	02/17/2015 05:39	Sara E Johnson	10
01163	GC/MS VOA Water Prep	SW-846 5030B	1	C150472AA	02/17/2015 05:17	Sara E Johnson	1
01163	GC/MS VOA Water Prep	SW-846 5030B	2	C150472AA	02/17/2015 05:39	Sara E Johnson	10
01635	TPH-GRO water C6-C10	SW-846 8015B	1	15050B20A	02/23/2015 15:37	Marie D Beamenderfer	1
01146	GC VOA Water Prep	SW-846 5030B	1	15050B20A	02/23/2015 15:37	Marie D Beamenderfer	1

Sample Description: **MW-17 Grab Groundwater**
11791 Fingerboard Rd, Monrovia, MD
Carroll Monrovia

LL Sample # **WW 7772474**
LL Group # **1538586**
Account # **08390**

Project Name: **Carroll Monrovia**

Collected: 02/12/2015 12:20 by JP

GES, Inc.

Submitted: 02/13/2015 20:10

Suite A

Reported: 02/24/2015 17:00

1350 Blair Dr

Odenton MD 21113

MRV17

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC/MS Volatiles		SW-846 8260B 25mL	ug/l	ug/l	
		purge			
02898	Acrylonitrile	107-13-1	N.D.	1.0	1
02898	t-Amyl methyl ether	994-05-8	N.D.	0.1	1
02898	Benzene	71-43-2	N.D.	0.1	1
02898	Bromobenzene	108-86-1	N.D.	0.1	1
02898	Bromochloromethane	74-97-5	N.D.	0.1	1
02898	Bromodichloromethane	75-27-4	N.D.	0.1	1
02898	Bromoform	75-25-2	N.D.	0.1	1
02898	Bromomethane	74-83-9	N.D.	0.1	1
02898	t-Butyl Alcohol	75-65-0	7.5 J	4.0	1
02898	n-Butylbenzene	104-51-8	N.D.	0.1	1
02898	sec-Butylbenzene	135-98-8	N.D.	0.1	1
02898	tert-Butylbenzene	98-06-6	N.D.	0.1	1
02898	Carbon Disulfide	75-15-0	N.D.	0.4	1
02898	Chlorobenzene	108-90-7	N.D.	0.1	1
02898	Chloroethane	75-00-3	N.D.	0.1	1
02898	Chloroform	67-66-3	0.7	0.1	1
02898	Chloromethane	74-87-3	N.D.	0.2	1
02898	2-Chlorotoluene	95-49-8	N.D.	0.1	1
02898	4-Chlorotoluene	106-43-4	N.D.	0.1	1
02898	1,2-Dibromo-3-chloropropane	96-12-8	N.D.	0.2	1
02898	Dibromochloromethane	124-48-1	N.D.	0.1	1
02898	1,2-Dibromoethane	106-93-4	N.D.	0.1	1
02898	Dibromomethane	74-95-3	N.D.	0.1	1
02898	trans-1,4-Dichloro-2-butene	110-57-6	N.D.	1.0	1
02898	1,2-Dichlorobenzene	95-50-1	N.D.	0.1	1
02898	1,3-Dichlorobenzene	541-73-1	N.D.	0.1	1
02898	1,4-Dichlorobenzene	106-46-7	N.D.	0.1	1
02898	Dichlorodifluoromethane	75-71-8	N.D.	0.1	1
02898	1,1-Dichloroethane	75-34-3	N.D.	0.1	1
02898	1,2-Dichloroethane	107-06-2	N.D.	0.1	1
02898	1,1-Dichloroethene	75-35-4	N.D.	0.1	1
02898	cis-1,2-Dichloroethene	156-59-2	N.D.	0.1	1
02898	trans-1,2-Dichloroethene	156-60-5	N.D.	0.1	1
02898	1,2-Dichloropropane	78-87-5	N.D.	0.1	1
02898	1,3-Dichloropropane	142-28-9	N.D.	0.1	1
02898	2,2-Dichloropropane	594-20-7	N.D.	0.1	1
02898	1,1-Dichloropropene	563-58-6	N.D.	0.1	1
02898	cis-1,3-Dichloropropene	10061-01-5	N.D.	0.1	1
02898	trans-1,3-Dichloropropene	10061-02-6	N.D.	0.1	1
02898	Ethyl t-butyl ether	637-92-3	N.D.	0.1	1
02898	Ethylbenzene	100-41-4	N.D.	0.1	1
02898	Hexachlorobutadiene	87-68-3	N.D.	0.1	1
02898	di-Isopropyl Ether	108-20-3	4.1	0.1	1
02898	Isopropylbenzene	98-82-8	N.D.	0.1	1
02898	p-Isopropyltoluene	99-87-6	N.D.	0.1	1
02898	Methyl Tertiary Butyl Ether	1634-04-4	3.7	0.1	1
02898	Methylene Chloride	75-09-2	N.D.	0.2	1
02898	Naphthalene	91-20-3	N.D.	0.1	1
02898	n-Propylbenzene	103-65-1	N.D.	0.1	1

Sample Description: MW-17 Grab Groundwater
11791 Fingerboard Rd, Monrovia, MD
Carroll Monrovia

LL Sample # WW 7772474
LL Group # 1538586
Account # 08390

Project Name: Carroll Monrovia

Collected: 02/12/2015 12:20 by JP GES, Inc.
Suite A
Submitted: 02/13/2015 20:10 1350 Blair Dr
Reported: 02/24/2015 17:00 Odenton MD 21113

MRV17

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC/MS Volatiles		SW-846 8260B 25mL	ug/l	ug/l	
	purge				
02898	Styrene	100-42-5	N.D.	0.1	1
02898	1,1,1,2-Tetrachloroethane	630-20-6	N.D.	0.1	1
02898	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	0.1	1
02898	Tetrachloroethene	127-18-4	N.D.	0.1	1
02898	Toluene	108-88-3	N.D.	0.1	1
02898	1,2,3-Trichlorobenzene	87-61-6	N.D.	0.1	1
02898	1,2,4-Trichlorobenzene	120-82-1	N.D.	0.1	1
02898	1,1,1-Trichloroethane	71-55-6	N.D.	0.1	1
02898	1,1,2-Trichloroethane	79-00-5	N.D.	0.1	1
02898	Trichloroethene	79-01-6	N.D.	0.1	1
02898	Trichlorofluoromethane	75-69-4	N.D.	0.1	1
02898	1,2,3-Trichloropropane	96-18-4	N.D.	0.3	1
02898	1,2,4-Trimethylbenzene	95-63-6	N.D.	0.1	1
02898	1,3,5-Trimethylbenzene	108-67-8	N.D.	0.1	1
02898	Vinyl Chloride	75-01-4	N.D.	0.1	1
02898	Xylene (Total)	1330-20-7	N.D.	0.1	1
GC Volatiles		SW-846 8015B	ug/l	ug/l	
01635	TPH-GRO water C6-C10	n.a.	N.D.	20	1

General Sample Comments

Trip blank vials were not received by the laboratory for this sample group.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
02898	VOCs- 25ml Water by 8260B	SW-846 8260B 25mL	1	C150472AA	02/17/2015 04:32	Sara E Johnson	1
		purge					
01163	GC/MS VOA Water Prep	SW-846 5030B	1	C150472AA	02/17/2015 04:32	Sara E Johnson	1
01635	TPH-GRO water C6-C10	SW-846 8015B	1	15050B20A	02/23/2015 16:04	Marie D Beamenderfer	1
01146	GC VOA Water Prep	SW-846 5030B	1	15050B20A	02/23/2015 16:04	Marie D Beamenderfer	1

Sample Description: MW-18S-R Grab Groundwater
11791 Fingerboard Rd, Monrovia, MD
Carroll Monrovia

LL Sample # WW 7772475
LL Group # 1538586
Account # 08390

Project Name: Carroll Monrovia

Collected: 02/12/2015 13:50 by JP

GES, Inc.

Submitted: 02/13/2015 20:10

Suite A

Reported: 02/24/2015 17:00

1350 Blair Dr
Odenton MD 21113

MR18R

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC/MS Volatiles		SW-846 8260B 25mL	ug/l	ug/l	
		purge			
02898	Acrylonitrile	107-13-1	N.D.	2.0	2
02898	t-Amyl methyl ether	994-05-8	7.5	0.2	2
02898	Benzene	71-43-2	N.D.	0.2	2
02898	Bromobenzene	108-86-1	N.D.	0.2	2
02898	Bromochloromethane	74-97-5	N.D.	0.2	2
02898	Bromodichloromethane	75-27-4	0.2 J	0.2	2
02898	Bromoform	75-25-2	N.D.	0.2	2
02898	Bromomethane	74-83-9	N.D.	0.2	2
02898	t-Butyl Alcohol	75-65-0	25	8.0	2
02898	n-Butylbenzene	104-51-8	N.D.	0.2	2
02898	sec-Butylbenzene	135-98-8	N.D.	0.2	2
02898	tert-Butylbenzene	98-06-6	N.D.	0.2	2
02898	Carbon Disulfide	75-15-0	N.D.	0.8	2
02898	Chlorobenzene	108-90-7	N.D.	0.2	2
02898	Chloroethane	75-00-3	N.D.	0.2	2
02898	Chloroform	67-66-3	1.4	0.2	2
02898	Chloromethane	74-87-3	N.D.	0.4	2
02898	2-Chlorotoluene	95-49-8	N.D.	0.2	2
02898	4-Chlorotoluene	106-43-4	N.D.	0.2	2
02898	1,2-Dibromo-3-chloropropane	96-12-8	N.D.	0.4	2
02898	Dibromochloromethane	124-48-1	N.D.	0.2	2
02898	1,2-Dibromoethane	106-93-4	N.D.	0.2	2
02898	Dibromomethane	74-95-3	N.D.	2.0	2
02898	trans-1,4-Dichloro-2-butene	110-57-6	N.D.	0.2	2
02898	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	2
02898	1,3-Dichlorobenzene	541-73-1	N.D.	0.2	2
02898	1,4-Dichlorobenzene	106-46-7	N.D.	0.2	2
02898	Dichlorodifluoromethane	75-71-8	N.D.	0.2	2
02898	1,1-Dichloroethane	75-34-3	N.D.	0.2	2
02898	1,2-Dichloroethane	107-06-2	N.D.	0.2	2
02898	1,1-Dichloroethene	75-35-4	N.D.	0.2	2
02898	cis-1,2-Dichloroethene	156-59-2	N.D.	0.2	2
02898	trans-1,2-Dichloroethene	156-60-5	N.D.	0.2	2
02898	1,2-Dichloropropane	78-87-5	N.D.	0.2	2
02898	1,3-Dichloropropane	142-28-9	N.D.	0.2	2
02898	2,2-Dichloropropane	594-20-7	N.D.	0.2	2
02898	1,1-Dichloropropene	563-58-6	N.D.	0.2	2
02898	cis-1,3-Dichloropropene	10061-01-5	N.D.	0.2	2
02898	trans-1,3-Dichloropropene	10061-02-6	N.D.	0.2	2
02898	Ethyl t-butyl ether	637-92-3	N.D.	0.2	2
02898	Ethylbenzene	100-41-4	N.D.	0.2	2
02898	Hexachlorobutadiene	87-68-3	N.D.	0.2	2
02898	di-Isopropyl Ether	108-20-3	18	0.2	2
02898	Isopropylbenzene	98-82-8	N.D.	0.2	2
02898	p-Isopropyltoluene	99-87-6	N.D.	0.2	2
02898	Methyl Tertiary Butyl Ether	1634-04-4	470	2.0	20
02898	Methylene Chloride	75-09-2	N.D.	0.4	2
02898	Naphthalene	91-20-3	N.D.	0.2	2
02898	n-Propylbenzene	103-65-1	N.D.	0.2	2

Sample Description: MW-18S-R Grab Groundwater
11791 Fingerboard Rd, Monrovia, MD
Carroll Monrovia

LL Sample # WW 7772475
LL Group # 1538586
Account # 08390

Project Name: Carroll Monrovia

Collected: 02/12/2015 13:50 by JP GES, Inc.
Suite A
Submitted: 02/13/2015 20:10 1350 Blair Dr
Reported: 02/24/2015 17:00 Odenton MD 21113

MR18R

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC/MS Volatiles SW-846 8260B 25mL purge			ug/l	ug/l	
02898	Styrene	100-42-5	N.D.	0.2	2
02898	1,1,1,2-Tetrachloroethane	630-20-6	N.D.	0.2	2
02898	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	0.2	2
02898	Tetrachloroethene	127-18-4	N.D.	0.2	2
02898	Toluene	108-88-3	N.D.	0.2	2
02898	1,2,3-Trichlorobenzene	87-61-6	N.D.	0.2	2
02898	1,2,4-Trichlorobenzene	120-82-1	N.D.	0.2	2
02898	1,1,1-Trichloroethane	71-55-6	N.D.	0.2	2
02898	1,1,2-Trichloroethane	79-00-5	N.D.	0.2	2
02898	Trichloroethene	79-01-6	N.D.	0.2	2
02898	Trichlorofluoromethane	75-69-4	N.D.	0.2	2
02898	1,2,3-Trichloropropane	96-18-4	N.D.	0.6	2
02898	1,2,4-Trimethylbenzene	95-63-6	N.D.	0.2	2
02898	1,3,5-Trimethylbenzene	108-67-8	N.D.	0.2	2
02898	Vinyl Chloride	75-01-4	N.D.	0.2	2
02898	Xylene (Total)	1330-20-7	N.D.	0.2	2
GC Volatiles SW-846 8015B			ug/l	ug/l	
01635	TPH-GRO water C6-C10	n.a.	400	20	1

General Sample Comments

Trip blank vials were not received by the laboratory for this sample group.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
02898	VOCs- 25ml Water by 8260B	SW-846 8260B 25mL	1	C150472AA	02/17/2015 06:02	Sara E Johnson	2
02898	VOCs- 25ml Water by 8260B	SW-846 8260B 25mL	1	C150472AA	02/17/2015 06:24	Sara E Johnson	20
01163	GC/MS VOA Water Prep	SW-846 5030B	1	C150472AA	02/17/2015 06:02	Sara E Johnson	2
01163	GC/MS VOA Water Prep	SW-846 5030B	2	C150472AA	02/17/2015 06:24	Sara E Johnson	20
01635	TPH-GRO water C6-C10	SW-846 8015B	1	15050B20A	02/23/2015 16:32	Marie D Beamenderfer	1
01146	GC VOA Water Prep	SW-846 5030B	1	15050B20A	02/23/2015 16:32	Marie D Beamenderfer	1

Sample Description: MW-18S Grab Groundwater
11791 Fingerboard Rd, Monrovia, MD
Carroll Monrovia

LL Sample # WW 7772476
LL Group # 1538586
Account # 08390

Project Name: Carroll Monrovia

Collected: 02/12/2015 14:45 by JP

GES, Inc.

Submitted: 02/13/2015 20:10

Suite A

Reported: 02/24/2015 17:00

1350 Blair Dr
Odenton MD 21113

MRV18

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC/MS Volatiles		SW-846 8260B 25mL	ug/l	ug/l	
		purge			
02898	Acrylonitrile	107-13-1	N.D.	1.0	1
02898	t-Amyl methyl ether	994-05-8	0.4 J	0.1	1
02898	Benzene	71-43-2	N.D.	0.1	1
02898	Bromobenzene	108-86-1	N.D.	0.1	1
02898	Bromochloromethane	74-97-5	N.D.	0.1	1
02898	Bromodichloromethane	75-27-4	N.D.	0.1	1
02898	Bromoform	75-25-2	N.D.	0.1	1
02898	Bromomethane	74-83-9	N.D.	0.1	1
02898	t-Butyl Alcohol	75-65-0	N.D.	4.0	1
02898	n-Butylbenzene	104-51-8	N.D.	0.1	1
02898	sec-Butylbenzene	135-98-8	N.D.	0.1	1
02898	tert-Butylbenzene	98-06-6	N.D.	0.1	1
02898	Carbon Disulfide	75-15-0	N.D.	0.4	1
02898	Chlorobenzene	108-90-7	N.D.	0.1	1
02898	Chloroethane	75-00-3	N.D.	0.1	1
02898	Chloroform	67-66-3	N.D.	0.1	1
02898	Chloromethane	74-87-3	N.D.	0.2	1
02898	2-Chlorotoluene	95-49-8	N.D.	0.1	1
02898	4-Chlorotoluene	106-43-4	N.D.	0.1	1
02898	1,2-Dibromo-3-chloropropane	96-12-8	N.D.	0.2	1
02898	Dibromochloromethane	124-48-1	N.D.	0.1	1
02898	1,2-Dibromoethane	106-93-4	N.D.	0.1	1
02898	Dibromomethane	74-95-3	N.D.	0.1	1
02898	trans-1,4-Dichloro-2-butene	110-57-6	N.D.	1.0	1
02898	1,2-Dichlorobenzene	95-50-1	N.D.	0.1	1
02898	1,3-Dichlorobenzene	541-73-1	N.D.	0.1	1
02898	1,4-Dichlorobenzene	106-46-7	N.D.	0.1	1
02898	Dichlorodifluoromethane	75-71-8	N.D.	0.1	1
02898	1,1-Dichloroethane	75-34-3	N.D.	0.1	1
02898	1,2-Dichloroethane	107-06-2	N.D.	0.1	1
02898	1,1-Dichloroethene	75-35-4	N.D.	0.1	1
02898	cis-1,2-Dichloroethene	156-59-2	N.D.	0.1	1
02898	trans-1,2-Dichloroethene	156-60-5	N.D.	0.1	1
02898	1,2-Dichloropropane	78-87-5	N.D.	0.1	1
02898	1,3-Dichloropropane	142-28-9	N.D.	0.1	1
02898	2,2-Dichloropropane	594-20-7	N.D.	0.1	1
02898	1,1-Dichloropropene	563-58-6	N.D.	0.1	1
02898	cis-1,3-Dichloropropene	10061-01-5	N.D.	0.1	1
02898	trans-1,3-Dichloropropene	10061-02-6	N.D.	0.1	1
02898	Ethyl t-butyl ether	637-92-3	N.D.	0.1	1
02898	Ethylbenzene	100-41-4	N.D.	0.1	1
02898	Hexachlorobutadiene	87-68-3	N.D.	0.1	1
02898	di-Isopropyl Ether	108-20-3	1.5	0.1	1
02898	Isopropylbenzene	98-82-8	N.D.	0.1	1
02898	p-Isopropyltoluene	99-87-6	N.D.	0.1	1
02898	Methyl Tertiary Butyl Ether	1634-04-4	27	1.0	10
02898	Methylene Chloride	75-09-2	N.D.	0.2	1
02898	Naphthalene	91-20-3	N.D.	0.1	1
02898	n-Propylbenzene	103-65-1	N.D.	0.1	1

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Sample Description: MW-18S Grab Groundwater
11791 Fingerboard Rd, Monrovia, MD
Carroll Monrovia

LL Sample # WW 7772476
LL Group # 1538586
Account # 08390

Project Name: Carroll Monrovia

Collected: 02/12/2015 14:45 by JP GES, Inc.
Suite A
Submitted: 02/13/2015 20:10 1350 Blair Dr
Reported: 02/24/2015 17:00 Odenton MD 21113

MRV18

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC/MS Volatiles		SW-846 8260B 25mL	ug/l	ug/l	
		purge			
02898	Styrene	100-42-5	N.D.	0.1	1
02898	1,1,1,2-Tetrachloroethane	630-20-6	N.D.	0.1	1
02898	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	0.1	1
02898	Tetrachloroethene	127-18-4	N.D.	0.1	1
02898	Toluene	108-88-3	12	0.1	1
02898	1,2,3-Trichlorobenzene	87-61-6	N.D.	0.1	1
02898	1,2,4-Trichlorobenzene	120-82-1	N.D.	0.1	1
02898	1,1,1-Trichloroethane	71-55-6	N.D.	0.1	1
02898	1,1,2-Trichloroethane	79-00-5	N.D.	0.1	1
02898	Trichloroethene	79-01-6	N.D.	0.1	1
02898	Trichlorofluoromethane	75-69-4	N.D.	0.1	1
02898	1,2,3-Trichloropropane	96-18-4	N.D.	0.3	1
02898	1,2,4-Trimethylbenzene	95-63-6	N.D.	0.1	1
02898	1,3,5-Trimethylbenzene	108-67-8	N.D.	0.1	1
02898	Vinyl Chloride	75-01-4	N.D.	0.1	1
02898	Xylene (Total)	1330-20-7	0.1 J	0.1	1
GC Volatiles		SW-846 8015B	ug/l	ug/l	
01635	TPH-GRO water C6-C10	n.a.	63	20	1

General Sample Comments

Trip blank vials were not received by the laboratory for this sample group.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
02898	VOCs- 25ml Water by 8260B	SW-846 8260B 25mL	1	C150472AA	02/17/2015 04:54	Sara E Johnson	1
		purge					
02898	VOCs- 25ml Water by 8260B	SW-846 8260B 25mL	1	C150501AA	02/19/2015 15:00	Kerri E Legerlotz	10
		purge					
01163	GC/MS VOA Water Prep	SW-846 5030B	1	C150472AA	02/17/2015 04:54	Sara E Johnson	1
01163	GC/MS VOA Water Prep	SW-846 5030B	2	C150501AA	02/19/2015 15:00	Kerri E Legerlotz	10
01635	TPH-GRO water C6-C10	SW-846 8015B	1	15050B20A	02/23/2015 17:00	Marie D Beamenderfer	1
01146	GC VOA Water Prep	SW-846 5030B	1	15050B20A	02/23/2015 17:00	Marie D Beamenderfer	1

Quality Control Summary

Client Name: GES, Inc.
Reported: 02/24/15 at 05:00 PM

Group Number: 1538586

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

All Inorganic Initial Calibration and Continuing Calibration Blanks met acceptable method criteria unless otherwise noted on the Analysis Report.

Laboratory Compliance Quality Control

<u>Analysis Name</u>	<u>Blank Result</u>	<u>Blank MDL</u>	<u>Report Units</u>	<u>LCS %REC</u>	<u>LCSD %REC</u>	<u>LCS/LCSD Limits</u>	<u>RPD</u>	<u>RPD Max</u>
Batch number: C150472AA	Sample number(s): 7772471-7772476							
Acrylonitrile	N.D.	1.0	ug/l	93	88	75-133	5	30
t-Amyl methyl ether	N.D.	0.1	ug/l	111	106	80-120	5	30
Benzene	N.D.	0.1	ug/l	99	92	80-120	7	30
Bromobenzene	N.D.	0.1	ug/l	104	97	80-120	7	30
Bromochloromethane	N.D.	0.1	ug/l	101	93	80-125	8	30
Bromodichloromethane	N.D.	0.1	ug/l	107	100	80-120	7	30
Bromoform	N.D.	0.1	ug/l	119	110	64-134	8	30
Bromomethane	N.D.	0.1	ug/l	105	96	62-126	8	30
t-Butyl Alcohol	N.D.	4.0	ug/l	115	111	77-130	3	30
n-Butylbenzene	N.D.	0.1	ug/l	106	98	80-120	8	30
sec-Butylbenzene	N.D.	0.1	ug/l	110	101	80-120	8	30
tert-Butylbenzene	N.D.	0.1	ug/l	110	104	80-120	6	30
Carbon Disulfide	N.D.	0.4	ug/l	96	90	70-128	6	30
Chlorobenzene	N.D.	0.1	ug/l	103	98	80-120	5	30
Chloroethane	N.D.	0.1	ug/l	99	92	68-120	8	30
Chloroform	N.D.	0.1	ug/l	103	97	80-120	6	30
Chloromethane	N.D.	0.2	ug/l	104	96	55-125	8	30
2-Chlorotoluene	N.D.	0.1	ug/l	106	98	80-120	7	30
4-Chlorotoluene	N.D.	0.1	ug/l	106	99	80-120	6	30
1,2-Dibromo-3-chloropropane	N.D.	0.2	ug/l	97	91	72-136	7	30
Dibromochloromethane	N.D.	0.1	ug/l	117	108	80-126	8	30
1,2-Dibromoethane	N.D.	0.1	ug/l	110	106	80-120	4	30
Dibromomethane	N.D.	0.1	ug/l	105	99	80-120	6	30
trans-1,4-Dichloro-2-butene	N.D.	1.0	ug/l	83	75	14-166	10	30
1,2-Dichlorobenzene	N.D.	0.1	ug/l	105	97	80-120	7	30
1,3-Dichlorobenzene	N.D.	0.1	ug/l	105	98	80-120	7	30
1,4-Dichlorobenzene	N.D.	0.1	ug/l	103	97	80-120	6	30
Dichlorodifluoromethane	N.D.	0.1	ug/l	111	104	35-142	7	30
1,1-Dichloroethane	N.D.	0.1	ug/l	98	92	80-120	6	30
1,2-Dichloroethane	N.D.	0.1	ug/l	107	100	80-125	7	30
1,1-Dichloroethene	N.D.	0.1	ug/l	96	92	80-120	5	30
cis-1,2-Dichloroethene	N.D.	0.1	ug/l	103	97	80-120	6	30
trans-1,2-Dichloroethene	N.D.	0.1	ug/l	102	96	80-120	6	30
1,2-Dichloropropane	N.D.	0.1	ug/l	105	97	80-120	8	30
1,3-Dichloropropane	N.D.	0.1	ug/l	106	100	80-120	6	30
2,2-Dichloropropane	N.D.	0.1	ug/l	108	100	75-122	7	30
1,1-Dichloropropene	N.D.	0.1	ug/l	108	101	80-120	7	30
cis-1,3-Dichloropropene	N.D.	0.1	ug/l	109	102	80-120	7	30
trans-1,3-Dichloropropene	N.D.	0.1	ug/l	114	107	77-126	6	30
Ethyl t-butyl ether	N.D.	0.1	ug/l	108	101	76-120	6	30
Ethylbenzene	N.D.	0.1	ug/l	106	100	80-120	6	30
Hexachlorobutadiene	N.D.	0.1	ug/l	104	95	74-123	9	30
di-Isopropyl Ether	N.D.	0.1	ug/l	107	100	75-120	6	30

*- Outside of specification

- (1) The result for one or both determinations was less than five times the LOQ.
- (2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: GES, Inc.

Group Number: 1538586

Reported: 02/24/15 at 05:00 PM

<u>Analysis Name</u>	<u>Blank Result</u>	<u>Blank MDL</u>	<u>Report Units</u>	<u>LCS %REC</u>	<u>LCSD %REC</u>	<u>LCS/LCSD Limits</u>	<u>RPD</u>	<u>RPD Max</u>
Isopropylbenzene	N.D.	0.1	ug/l	112	104	80-120	7	30
p-Isopropyltoluene	N.D.	0.1	ug/l	107	99	80-120	8	30
Methyl Tertiary Butyl Ether	N.D.	0.1	ug/l	106	99	80-120	7	30
Methylene Chloride	N.D.	0.2	ug/l	99	94	80-120	5	30
Naphthalene	N.D.	0.1	ug/l	119	108	72-120	9	30
n-Propylbenzene	N.D.	0.1	ug/l	107	99	80-120	8	30
Styrene	N.D.	0.1	ug/l	113	107	80-120	6	30
1,1,1,2-Tetrachloroethane	N.D.	0.1	ug/l	110	103	80-120	6	30
1,1,2,2-Tetrachloroethane	N.D.	0.1	ug/l	107	101	80-120	6	30
Tetrachloroethene	N.D.	0.1	ug/l	102	96	80-120	6	30
Toluene	N.D.	0.1	ug/l	104	96	80-120	8	30
1,2,3-Trichlorobenzene	N.D.	0.1	ug/l	107	98	75-120	9	30
1,2,4-Trichlorobenzene	N.D.	0.1	ug/l	109	101	80-120	8	30
1,1,1-Trichloroethane	N.D.	0.1	ug/l	103	97	80-120	5	30
1,1,2-Trichloroethane	N.D.	0.1	ug/l	105	99	80-120	6	30
Trichloroethene	N.D.	0.1	ug/l	105	98	80-120	7	30
Trichlorofluoromethane	N.D.	0.1	ug/l	106	100	64-141	6	30
1,2,3-Trichloropropane	N.D.	0.3	ug/l	114	105	80-120	8	30
1,2,4-Trimethylbenzene	N.D.	0.1	ug/l	112	103	80-120	9	30
1,3,5-Trimethylbenzene	N.D.	0.1	ug/l	109	101	80-120	8	30
Vinyl Chloride	N.D.	0.1	ug/l	106	98	59-124	9	30
Xylene (Total)	N.D.	0.1	ug/l	109	102	80-120	6	30

Batch number: C150501AA	Sample number(s): 7772476							
Methyl Tertiary Butyl Ether	N.D.	0.1	ug/l	96		80-120		
Batch number: 15050B20A	Sample number(s): 7772471-7772476							
TPH-GRO water C6-C10	N.D.	20.	ug/l	105	107	80-129	2	30

Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
Background (BKG) = the sample used in conjunction with the duplicate

<u>Analysis Name</u>	<u>MS %REC</u>	<u>MSD %REC</u>	<u>MS/MSD Limits</u>	<u>RPD</u>	<u>RPD MAX</u>	<u>BKG Conc</u>	<u>DUP Conc</u>	<u>DUP RPD</u>	<u>Dup RPD Max</u>
Batch number: C150501AA	Sample number(s): 7772476 UNSPK: P773117								
Methyl Tertiary Butyl Ether	91	98	71-119	8	30				

Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: VOCs- 25ml Water by 8260B

Batch number: C150472AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
7772471	109	103	97	96
7772472	109	104	98	98
7772473	108	100	96	98

*- Outside of specification

- (1) The result for one or both determinations was less than five times the LOQ.
- (2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: GES, Inc.
Reported: 02/24/15 at 05:00 PM

Group Number: 1538586

Surrogate Quality Control

7772474	110	102	97	96
7772475	105	98	97	97
7772476	109	102	97	98
Blank	103	101	99	98
LCS	101	100	101	102
LCSD	102	99	100	102
Limits:	77-114	74-113	77-110	78-110

Analysis Name: TPH-GRO water C6-C10
Batch number: 15050B20A
Trifluorotoluene-F

7772471	84
7772472	87
7772473	86
7772474	89
7772475	86
7772476	84
Blank	89
LCS	95
LCSD	93
Limits:	63-135

*- Outside of specification

- (1) The result for one or both determinations was less than five times the LOQ.
- (2) The unspiked result was more than four times the spike added.

Environmental Analysis Request/Chain of Custody



**Lancaster Laboratories
Environmental**

Acct. # 8390 Group # 1538586 Sample # 7772471-76

Client: Groundwater & Environmental Services, Inc. (GES)				Matrix			Analyses Requested										For Lab Use Only					
Project Name/#: Carroll Monrovia		Site ID #: 0402888		<input type="checkbox"/> Sediment	<input checked="" type="checkbox"/> Ground	<input type="checkbox"/> Surface	Preservation Codes										SF #: _____					
Project Manager: Gregory Reichart		P.O. #: 0402888-06-206		<input type="checkbox"/> Potable	<input type="checkbox"/> NPDES	<input type="checkbox"/> Other:											SCR #: _____					
Sampler: <u>Jeff Plummer</u>		PWSID #:		<input type="checkbox"/> Soil	<input type="checkbox"/> Water	<input type="checkbox"/> Other:																
Phone #: 800-220-3606 x3717		Quote #:		Total # of Containers	Full Suite VOCs including Oxygenates and Naphthalene (8260)	TPH-GRO (8015B)																
State where sample(s) were collected: 11791 Fingerboard Rd, Monrovia, MD																	Collection	Grab	Composite			
Sample Identification		Date	Time	Soil	Water	Other:	Total # of Containers	Full Suite VOCs including Oxygenates and Naphthalene (8260)	TPH-GRO (8015B)													
<u>MW-7</u>		<u>2-12-15</u>	<u>0840</u>		<input checked="" type="checkbox"/>		<u>5</u>		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>												
<u>MW-14S</u>		↓	<u>1015</u>				↓															
<u>MW-14D</u>		↓	<u>1125</u>				↓															
<u>MW-17</u>		↓	<u>1220</u>				↓															
<u>MW-18S-R</u>		↓	<u>1350</u>				↓															
<u>MW-18S</u>		<u>2-12-15</u>	<u>1445</u>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		<u>5</u>		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>												
Turnaround Time Requested (TAT) (please check): Standard <input checked="" type="checkbox"/> Rush <input type="checkbox"/> (Rush TAT is subject to laboratory approval and surcharges.)				Relinquished by: <u>Jeff Plummer</u>		Date: <u>2-13-15</u> Time: <u>0800</u>		Received by: <u>Denise Woodry</u>		Date: <u>2-13-15</u> Time: <u>0800</u>												
Date results are needed:				Relinquished by: <u>Denise Woodry</u>		Date: <u>2-13-15</u> Time: <u>11:56</u>		Received by: <u>Mark Hecker</u>		Date: <u>2-13-15</u> Time: <u>11:56</u>												
Rush results requested by (please check): E-Mail <input checked="" type="checkbox"/> Phone <input type="checkbox"/>				Relinquished by: <u>Jeff Plummer</u>		Date: <u>2-13-15</u> Time: <u>0800</u>		Received by: _____		Date: _____ Time: _____												
E-mail Address: mdlabs@gesonline.com & ges@equisonline.com				Relinquished by: _____		Date: _____ Time: _____		Received by: _____		Date: _____ Time: _____												
Phone: _____				Relinquished by: _____		Date: _____ Time: _____		Received by: _____		Date: _____ Time: _____												
Data Package Options (please check if required)				Relinquished by: _____		Date: _____ Time: _____		Received by: _____		Date: _____ Time: _____												
Type I (Validation/non-CLP) <input type="checkbox"/>		MA MCP <input type="checkbox"/>		Relinquished by: _____		Date: _____ Time: _____		Received by: _____		Date: <u>2/13/15</u> Time: <u>2010</u>												
Type III (Reduced non-CLP) <input type="checkbox"/>		CT RCP <input type="checkbox"/>		Relinquished by: _____		Date: _____ Time: _____		Received by: _____		Date: _____ Time: _____												
Type VI (Raw Data Only) <input type="checkbox"/>		TX TRRP-13 <input type="checkbox"/>		Relinquished by: _____		Date: _____ Time: _____		Received by: _____		Date: _____ Time: _____												
NYSDEC Category <input type="checkbox"/> A or <input type="checkbox"/> B				Relinquished by Commercial Carrier: _____		Date: _____ Time: _____		Received by: _____		Date: _____ Time: _____												
EDD Required? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> If yes, format: <u>GES EQEDD</u>				UPS _____ FedEx _____ Other _____		Temperature upon receipt <u>0.2</u> °C																



Lancaster Laboratories
Environmental

Sample Administration Receipt Documentation Log

Doc Log ID: 55950
Group Number(s): ~~1538586~~
1538586
③ JWA
2/13/15

Client: GES

Delivery and Receipt Information

Delivery Method: ELLE Courier Arrival Timestamp: 02/13/2015 20:10
Number of Packages: 1 Number of Projects: 1
State/Province of Origin: MD

Arrival Condition Summary

Shipping Container Sealed:	No	Sample IDs on COC match Containers:	Yes
Custody Seal Present:	No	Sample Date/Times match COC:	Yes
Samples Chilled:	Yes	VOA Vial Headspace ≥ 6mm:	No
Paperwork Enclosed:	Yes	Total Trip Blank Qty:	0
Samples Intact:	Yes	Air Quality Samples Present:	No
Missing Samples:	No		
Extra Samples:	No		
Discrepancy in Container Qty on COC:	No		

Unpacked by Jordan Woods (6698) at 20:49 on 02/13/2015

Samples Chilled Details

Thermometer Types: DT = Digital (Temp. Bottle) IR = Infrared (Surface Temp) All Temperatures in °C.

Cooler #	Thermometer ID	Corrected Temp	Therm. Type	Ice Type	Ice Present?	Ice Container	Elevated Temp?
1	DT146	0.2	DT	Wet	Y	Bagged	N

Explanation of Symbols and Abbreviations

The following defines common symbols and abbreviations used in reporting technical data:

RL	Reporting Limit	BMQL	Below Minimum Quantitation Level
N.D.	none detected	MPN	Most Probable Number
TNTC	Too Numerous To Count	CP Units	cobalt-chloroplatinate units
IU	International Units	NTU	nephelometric turbidity units
umhos/cm	micromhos/cm	ng	nanogram(s)
C	degrees Celsius	F	degrees Fahrenheit
meq	milliequivalents	lb.	pound(s)
g	gram(s)	kg	kilogram(s)
µg	microgram(s)	mg	milligram(s)
mL	milliliter(s)	L	liter(s)
m³	cubic meter(s)	µL	microliter(s)
		pg/L	picogram/liter
<	less than		
>	greater than		
ppm	parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg) or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter per liter of gas.		
ppb	parts per billion		
Dry weight basis	Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis.		

Laboratory Data Qualifiers:

- B - Analyte detected in the blank
- C - Result confirmed by reanalysis
- E - Concentration exceeds the calibration range
- J (or G, I, X) - estimated value \geq the Method Detection Limit (MDL or DL) and the $<$ Limit of Quantitation (LOQ or RL)
- P - Concentration difference between the primary and confirmation column $>40\%$. The lower result is reported.
- U - Analyte was not detected at the value indicated
- V - Concentration difference between the primary and confirmation column $>100\%$. The reporting limit is raised due to this disparity and evident interference...

Additional Organic and Inorganic CLP qualifiers may be used with Form 1 reports as defined by the CLP methods. Qualifiers specific to Dioxin/Furans and PCB Congeners are detailed on the individual Analysis Report.

Analytical test results meet all requirements of the associated regulatory program (i.e., NELAC (TNI), DoD, ISO17025) unless otherwise noted under the individual analysis.

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff.

This report shall not be reproduced except in full, without the written approval of the laboratory.

Times are local to the area of activity. Parameters listed in the 40 CFR Part 136 Table II as "analyze immediately" are not performed within 15 minutes.

WARRANTY AND LIMITS OF LIABILITY - In accepting analytical work, we warrant the accuracy of test results for the sample as submitted. THE FOREGOING EXPRESS WARRANTY IS EXCLUSIVE AND IS GIVEN IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED. WE DISCLAIM ANY OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING A WARRANTY OF FITNESS FOR PARTICULAR PURPOSE AND WARRANTY OF MERCHANTABILITY. IN NO EVENT SHALL EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL, LLC BE LIABLE FOR INDIRECT, SPECIAL, CONSEQUENTIAL, OR INCIDENTAL DAMAGES INCLUDING, BUT NOT LIMITED TO, DAMAGES FOR LOSS OF PROFIT OR GOODWILL REGARDLESS OF (A) THE NEGLIGENCE (EITHER SOLE OR CONCURRENT) OF EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL AND (B) WHETHER EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL HAS BEEN INFORMED OF THE POSSIBILITY OF SUCH DAMAGES. We accept no legal responsibility for the purposes for which the client uses the test results. No purchase order or other order for work shall be accepted by Eurofins Lancaster Laboratories Environmental which includes any conditions that vary from the Standard Terms and Conditions, and Eurofins Lancaster Laboratories Environmental hereby objects to any conflicting terms contained in any acceptance or order submitted by client.

750 Royal Oaks Drive, Suite 100
Monrovia, California 91016-3629
Tel: (626) 386-1100
Fax: (626) 386-1101
1 800 566 LABS (1 800 566 5227)



AT-1807

Laboratory Report

for

Groundwater & Environmental Services, Inc.
1350 Blair Drive
Suite A
Odenton, MD 21113
Attention: Danielle Rice

Revised Report
Replace Original

Date of Issue
03/02/2015


EUROFINS EATON
ANALYTICAL

CPP: Cam P Pham
Project Manager

Report: 520599
Project: CARROLL-MONROVIA
Group: QUARTERLY
SAMPLING

* Accredited in accordance with TNI 2009 and ISO/IEC 17025:2005.

* Laboratory certifies that the test results meet all **TNI 2009 and ISO/IEC 17025:2005** requirements unless noted under the individual analysis.

* Following the cover page are State Certification List, ISO 17025 Accredited Method List, Acknowledgement of Samples Received, Comments, Hits Report, Data Report, QC Summary, QC Report and Regulatory Forms, as applicable.

* Test results relate only to the sample(s) tested.

STATE CERTIFICATION LIST

State	Certification Number	State	Certification Number
Alabama	41060	Mississippi	Certified
Alaska	CA00006	Montana	Cert 0035
Arizona	AZ0778	Nebraska	Certified
Arkansas	Certified	Nevada	CA00006-2014-1
California-Monrovia-ELAP	2813	New Hampshire *	2959
California-Colton- ELAP	2812	New Jersey *	CA 008
California-Folsom- ELAP	2820	New Mexico	Certified
Colorado	Certified	New York *	11320
Connecticut	PH-0107	North Carolina	06701
Delaware	CA 006	North Dakota	R-009
Florida *	E871024	Oregon (Primary AB) *	ORELAP 4034
Georgia	947	Pennsylvania *	68-565
Guam	14-003r	Rhode Island	LAO00326
Hawaii	Certified	South Carolina	87016
Idaho	Certified	South Dakota	Certified
Illinois *	200033	Tennessee	TN02839
Indiana	C-CA-01	Texas *	T104704230-14-7
Kansas *	E-10268	Utah *	CA000062014-7
Kentucky	90107	Vermont	VT0114
Louisiana *	LA140009	Virginia *	460260
Maine	CA0006	Washington	C838
Maryland	224	West Virginia	9943 C
Commonwealth of Northern Marianas Is.	MP0004	Wisconsin	998316660
Massachusetts	M-CA006	Wyoming	8TMS-L
Michigan	9906	EPA Region 5	Certified
Los Angeles County Sanitation Districts	10264		

* NELAP/TNI Recognized Accreditation Bodies

ISO 17025 Accredited Method List

The tests listed below are accredited and meet the requirements of ISO 17025 as verified by the ANSI-ASQ National Accreditation Board/ACLASS.
Refer to Certificate and scope of accreditation (AT 1807) found at: <http://www.eatonanalytical.com>

SPECIFIC TESTS	METHOD OR TECHNIQUE USED	Drinking Water	Food & Beverage	Waste Water
1,4-Dioxane	EPA 522	x	x	
2,3,7,8-TCDD	Modified EPA 1613B	x	x	
Acrylamide	In House Method	x	x	
Alkalinity	SM 2320B	x	x	x
Ammonia	EPA 350.1		x	x
Ammonia	SM 4500-NH3 H (18th)		x	x
Anions and DBPs by IC	EPA 300.0	x	x	x
Anions and DBPs by IC	EPA 300.1	x	x	
Asbestos	EPA 100.2	x		
Bicarbonate Alkalinity as HCO3	SM 2330B	x	x	x
BOD / CBOD	SM 5210B		x	x
Bromate	In House Method	x	x	
Carbamates	EPA 531.2	x	x	
Carbonate as CO3	SM 2330B	x	x	x
Carbonyls	EPA 556	x	x	
COD	EPA 410.4 / SM 5220D			x
Chloramines	SM 4500-CL G	x	x	x
Chlorinated Acids	EPA 515.4	x	x	
Chlorinated Acids	EPA 555	x	x	
Chlorine Dioxide	SM 4500-CLO2 D	x	x	
Chlorine -Total/Free/ Combined Residual	SM 4500-CI G	x	x	x
Conductivity	EPA 120.1			x
Conductivity	SM 2510B	x	x	x
Corrosivity (Langelier Index)	SM 2330B	x	x	
Cyanide, Amenable	SM 4500-CN G	x		x
Cyanide, Free	SM 4500CN F	x	x	x
Cyanide, Total	EPA 335.4	x	x	x
Cyanogen Chloride (screen)	In House Method	x	x	
Diquat and Paraquat	EPA 549.2	x	x	
DBP/HAA	SM 6251B	x	x	
Dissolved Oxygen	SM 4500-O G		x	x
E. Coli (MTF/EC+MUG)		x		
E. Coli	CFR 141.21(f)(6)(i)		x	x
E. Coli	SM 9223			x
E. Coli (Enumeration)	SM 9221B.1/ SM 9221F	x	x	
E. Coli (Enumeration)	SM 9223B	x	x	
EDB/DCBP	EPA 504.1	x		
EDB/DBCP and DBP	EPA 551.1	x	x	
EDTA and NTA	In House Method	x	x	
Endothall	EPA 548.1	x	x	
Enterococci	SM 9230B	x		x
Fecal Coliform	SM 9221 E (MTF/EC)	x		
Fecal Coliform	SM 9221 C, E (MTF/EC)			x
Fecal Coliform (Enumeration)	SM 9221E (MTF/EC)	x	x	
Fecal Coliform with Chlorine Present	SM 9221E			x
Fecal Streptococci	SM 9230B	x		x
Fluoride	SM 4500-F C	x	x	x
Glyphosate	EPA 547	x	x	
Gross Alpha/Beta	EPA 900.0	x	x	x
HAAs/ Dalapon	EPA 552.3	x	x	
Hardness	SM 2340B	x	x	x
Heterotrophic Bacteria	In House Method	x	x	
Heterotrophic Bacteria	SM 9215 B	x	x	
Hexavalent Chromium	EPA 218.6	x	x	x
Hexavalent Chromium	EPA 218.7	x	x	
Hexavalent Chromium	SM 3500-Cr B or C (20th)			x

SPECIFIC TESTS	METHOD OR TECHNIQUE USED	Drinking Water	Food & Beverage	Waste Water
Hormones	EPA 539	x	x	
Hydroxide as OH Calc.	SM 2330B	x	x	
Kjeldahl Nitrogen	EPA 351.2			x
Mercury	EPA 245.1	x	x	x
Metals	EPA 200.7 / 200.8	x	x	x
Microcystin LR	ELISA	x	x	
NDMA	EPA 521	x	x	
Nitrate/Nitrite Nitrogen	EPA 353.2	x	x	x
OCL, Pesticides/PCB	EPA 505	x	x	
Ortho Phosphate	EPA 365.1	x	x	
Ortho Phosphate and Total Phosphorous	EPA 365.1/SM 4500-P E			x
Ortho Phosphorous	SM 4500P E	x	x	
Oxyhalides Disinfection Byproducts	EPA 317.0	x	x	
Perchlorate	EPA 331.0	x	x	
Perchlorate	EPA 314.0	x	x	
Perfluorinated Alkyl Acids	EPA 537	x	x	
pH	EPA 150.1	x		
pH	SM 4500-H+B	x	x	x
Phenylurea Pesticides/ Herbicides	In House Method	x	x	
Pseudomonas	IDEXX Pseudalert	x	x	
Radium-226	RA-226 GA	x	x	
Radium-228	RA-228 GA	x	x	
Radon-222	SM 7500RN	x	x	
Residue, Filterable	SM 2540C	x	x	x
Residue, Non-filterable	SM 2540D			x
Residue, Total	SM 2540B		x	x
Residue, Volatile	EPA 160.4			x
Semi-VOC	EPA 525.2	x	x	
Semi-VOC	EPA 625	x	x	x
Silica	SM 4500-Si D	x	x	x
Silica	SM 4500-SiO2 C	x		x
Sulfide	SM 4500-S ⁻ D			x
Sulfite	SM 4500-SO ³ B	x	x	x
Surfactants	SM 5540C	x	x	x
Taste and Odor Analytes	SM 6040E	x	x	
Total Coliform	SM 9221 A, B	x	x	
Total Coliform (Enumeration)	SM 9221 A, B, C	x	x	
Total Coliform / E. coli	Colisure	x	x	
Total Coliform	SM 9221B			x
Total Coliform with Chlorine Present	SM 9221B			x
Total Coliform / E.coli	SM 9223	x	x	
TOC	SM 5310C		x	x
TOC/DOC	SM 5310C	x	x	
TOX	SM 5320B			x
Total Phenols	EPA 420.1			x
Total Phenols	EPA 420.4	x	x	x
Total Phosphorous	SM 4500 P F			x
Turbidity	EPA 180.1	x	x	x
Turbidity	SM 2130B	x		x
Uranium by ICP/MS	EPA 200.8	x	x	
UV 254	SM 5910B	x		
VOC	EPA 524.2/EPA 524.3	x	x	
VOC	EPA 624	x	x	x
VOC	EPA SW 846 8260	x	x	
VOC	In House Method	x	x	
Yeast and Mold	SM 9610	x	x	

750 Royal Oaks Dr., Ste 100, Monrovia, CA 91016 Tel (626) 386-1100 Fax (626) 386-1101 <http://www.EatonAnalytical.com>

Version 002. Issued: 06/03/2014

Acknowledgement of Samples Received

Addr: **Groundwater & Environmental Services, Inc.**
1350 Blair Drive
Suite A
Odenton, MD 21113

Client ID: GWENVSERVICE-MD
Folder #: 520599
Project: CARROLL-MONROVIA
Sample Group: QUARTERLY SAMPLING

Attn: Danielle Rice
Phone: 800-220-3606

Project Manager: Cam P Pham
Phone: (909) 254-0381

The following samples were received from you on **February 13, 2015** at **1148**. They have been scheduled for the tests listed below each sample. If this information is incorrect, please contact your service representative. Thank you for using Eurofins Eaton Analytical.

Sample #	Sample ID	Sample Date
<u>201502130328</u>	MW-18S-R	02/12/2015 1350
	218.7 Hexavalent Chromium (Dissolved)	Chromium dissolved ICAP/MS
	Lead dissolved ICAP/MS	Lead Total ICAP/MS
	Chromium Total ICAP/MS	
<u>201502130329</u>	MW-18S	02/12/2015 1445
	218.7 Hexavalent Chromium (Dissolved)	Chromium dissolved ICAP/MS
	Lead dissolved ICAP/MS	Lead Total ICAP/MS
	Chromium Total ICAP/MS	

Test Description



Eaton Analytical
formerly MWH Laboratories

750 Royal Oaks Drive, Suite 100
Monrovia, California 91016-3629
(626) 386-1100 FAX (626) 386-1101

Kit Order for Groundwater & Environmental Services, Inc.
Cam P Pham is your Eurofins Eaton Analytical Project Manager

Note: Sampler Please return this paper with your samples

Kit #: 104136

Client ID: GWENVSERVICE-MD

Created By: PRC

Project Code: CARROLL-MONROVIA Bottle Orders

Deliver By: 01/23/2015

Group Name: QUARTERLY SAMPLING

STG: Bottle Orders

PC#/JOB#:

Ice Type: W

Ship Sample Kits to
Groundwater & Environmental Services,
Inc.
1350 Blair Drive
Suite A
Odenton, MD 21113
Attr: Danielle Rice
Phone: 800-220-3606

Send Report to
Groundwater & Environmental Services,
Inc.
1350 Blair Drive
Suite A
Odenton, MD 21113
Attr: Danielle Rice
Phone: 800-220-3606

Billing Address
Groundwater & Environmental Services,
Inc.
1350 Blair Drive
Suite A
Odenton, MD 21113
Attr: Gregory Reichart
Phone: 800-220-3606

# of Sample	Tests	Bottles - Qty for each sample, type & preservative if a	UN DOT #
2	218.7 Hexavalent Chromium (Dissolved)	1 125ml poly 1.25 ml NH4SO4/NH4OH buffer	UN2031
2	Chromium dissolved ICAP/MS, Lead dissolved ICAP/MS	1 500ml acid poly 2ml HNO3 (18%)	UN2031
2	Chromium Total ICAP/MS, Lead Total ICAP/MS	1 500ml acid poly 2ml HNO3 (18%)	UN2031

Comments

SHIPPING - PLEASE INCLUDE 1 COCs. PLEASE INCLUDE PRE-PAID SHIPPING LABEL.

NEEDED BY 1/23/15.

PLEASE MARK COOLERS 'CARROLL MONROVIA'.

Code

Status

Date Shipped

Via

Tracking #

of Coolers

Prepared By

750 Royal Oaks Drive, Suite 100
Monrovia, California 91016-3629
Tel: (626) 386-1100
Fax: (626) 386-1101
1 800 566 LABS (1 800 566 5227)

Groundwater & Environmental Services, Inc.
Danielle Rice
1350 Blair Drive
Suite A
Odenton, MD 21113

Folder Comments

Report is revised to reflect the change in sample ID descriptions.

750 Royal Oaks Drive, Suite 100
 Monrovia, California 91016-3629
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 Fax: (626) 386-1101
 1 800 566 LABS (1 800 566 5227)

Laboratory Hits
 Report: 520599

Groundwater & Environmental Services, Inc.
 Danielle Rice
 1350 Blair Drive
 Suite A
 Odenton, MD 21113

Samples Received on:
 02/13/2015 1148

Analyzed	Analyte	Sample ID	Result	Federal MCL	Units	MRL
201502130328 <u>MW-18S-R</u>						
02/23/2015 17:03	Chromium Total ICAP/MS		3.9	100	ug/L	1
02/18/2015 10:29	Hexavalent Chromium (Dissolved)		0.087		ug/L	0.03
02/23/2015 17:03	Lead Total ICAP/MS		15	15	ug/L	0.5
201502130329 <u>MW-18S</u>						
02/17/2015 15:29	Chromium dissolved ICAP/MS		20		ug/L	1
02/23/2015 17:05	Chromium Total ICAP/MS		24	100	ug/L	1
02/19/2015 10:59	Hexavalent Chromium (Dissolved)		20		ug/L	0.06
02/17/2015 15:29	Lead dissolved ICAP/MS		0.78		ug/L	0.5
02/23/2015 17:05	Lead Total ICAP/MS		2.9	15	ug/L	0.5

750 Royal Oaks Drive, Suite 100
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Laboratory Data
Report: 520599

Groundwater & Environmental Services, Inc.
 Danielle Rice
 1350 Blair Drive
 Suite A
 Odenton, MD 21113

Samples Received on:
 02/13/2015 1148

Prepared	Analyzed	QC Ref #	Method	Analyte	Result	Units	MRL	Dilution
<u>MW-18S-R (201502130328)</u>						Sampled on 02/12/2015 1350		
EPA 200.8 - ICPMS Metals								
2/16/2015	02/17/2015	15:33 820826	(EPA 200.8)	Chromium dissolved ICAP/MS	ND	ug/L	1	1
2/16/2015	02/23/2015	17:03 821936	(EPA 200.8)	Chromium Total ICAP/MS	3.9	ug/L	1	1
2/16/2015	02/17/2015	15:33 820826	(EPA 200.8)	Lead dissolved ICAP/MS	ND	ug/L	0.5	1
2/16/2015	02/23/2015	17:03 821936	(EPA 200.8)	Lead Total ICAP/MS	15	ug/L	0.5	1
EPA 218.7 - UCMR3 Hexavalent Chromium								
	02/18/2015	10:29 821099	(EPA 218.7)	Hexavalent Chromium (Dissolved)	0.087	ug/L	0.03	1
<u>MW-18S (201502130329)</u>						Sampled on 02/12/2015 1445		
EPA 200.8 - ICPMS Metals								
2/16/2015	02/17/2015	15:29 820826	(EPA 200.8)	Chromium dissolved ICAP/MS	20	ug/L	1	1
2/16/2015	02/23/2015	17:05 821936	(EPA 200.8)	Chromium Total ICAP/MS	24	ug/L	1	1
2/16/2015	02/17/2015	15:29 820826	(EPA 200.8)	Lead dissolved ICAP/MS	0.78	ug/L	0.5	1
2/16/2015	02/23/2015	17:05 821936	(EPA 200.8)	Lead Total ICAP/MS	2.9	ug/L	0.5	1
EPA 218.7 - UCMR3 Hexavalent Chromium								
	02/19/2015	10:59 821419	(EPA 218.7)	Hexavalent Chromium (Dissolved)	20	ug/L	0.06	2

Rounding on totals after summation.
 (c) - indicates calculated results

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Groundwater & Environmental Services, Inc.

QC Ref # 820826 - ICPMS Metals

201502130328 MW-18S-R
201502130329 MW-18S

Analysis Date: 02/17/2015

Analyzed by: SXX
Analyzed by: SXX

QC Ref # 821099 - UCMR3 Hexavalent Chromium

201502130328 MW-18S-R

Analysis Date: 02/18/2015

Analyzed by: TLH

QC Ref # 821419 - UCMR3 Hexavalent Chromium

201502130329 MW-18S

Analysis Date: 02/19/2015

Analyzed by: TLH

QC Ref # 821936 - ICPMS Metals

201502130328 MW-18S-R
201502130329 MW-18S

Analysis Date: 02/23/2015

Analyzed by: AZS
Analyzed by: AZS

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Groundwater & Environmental Services, Inc.

QC Type	Analyte	Native	Spiked	Recovered	Units	Yield (%)	Limits (%)	RPDLimit (%)	RPD%
QC Ref# 820826 - ICPMS Metals by EPA 200.8					Analysis Date: 02/17/2015				
LCS1	Chromium dissolved ICAP/MS		100	94.8	ug/L	95	(85-115)		
LCS2	Chromium dissolved ICAP/MS		100	99.6	ug/L	100	(85-115)	20	4.9
MBLK	Chromium dissolved ICAP/MS			<1	ug/L				
MRL_CHK	Chromium dissolved ICAP/MS		1.0	0.849	ug/L	85	(50-150)		
MS_201502120682	Chromium dissolved ICAP/MS	NA	100	107	ug/L	107	(70-130)		
MS2_201501230313	Chromium dissolved ICAP/MS	NA	100	96.4	ug/L	96	(70-130)		
MSD_201502120682	Chromium dissolved ICAP/MS	NA	100	114	ug/L	114	(70-130)	20	6.3
MSD2_201501230313	Chromium dissolved ICAP/MS	NA	100	99.8	ug/L	100	(70-130)	20	3.5
LCS1	Chromium Total ICAP/MS		100	94.8	ug/L	95	(85-115)		
LCS2	Chromium Total ICAP/MS		100	99.6	ug/L	100	(85-115)	20	4.9
MBLK	Chromium Total ICAP/MS			<1	ug/L				
MRL_CHK	Chromium Total ICAP/MS		1.0	0.849	ug/L	85	(50-150)		
MS_201502120682	Chromium Total ICAP/MS	1.1	100	107	ug/L	107	(70-130)		
MS2_201501230313	Chromium Total ICAP/MS	ND	100	96.4	ug/L	96	(70-130)		
MSD_201502120682	Chromium Total ICAP/MS	1.1	100	114	ug/L	114	(70-130)	20	6.3
MSD2_201501230313	Chromium Total ICAP/MS	ND	100	99.8	ug/L	100	(70-130)	20	3.5
LCS1	Lead dissolved ICAP/MS		20	19.7	ug/L	99	(85-115)		
LCS2	Lead dissolved ICAP/MS		20	20.9	ug/L	104	(85-115)	20	5.9
MBLK	Lead dissolved ICAP/MS			<0.5	ug/L				
MRL_CHK	Lead dissolved ICAP/MS		0.5	0.443	ug/L	89	(50-150)		
MS_201502120682	Lead dissolved ICAP/MS	NA	20	20.0	ug/L	100	(70-130)		
MS2_201501230313	Lead dissolved ICAP/MS	NA	20	19.5	ug/L	98	(70-130)		
MSD_201502120682	Lead dissolved ICAP/MS	NA	20	22.8	ug/L	114	(70-130)	20	13
MSD2_201501230313	Lead dissolved ICAP/MS	NA	20	20.1	ug/L	100	(70-130)	20	3.0
LCS1	Lead Total ICAP/MS		20	19.7	ug/L	99	(85-115)		
LCS2	Lead Total ICAP/MS		20	20.9	ug/L	104	(85-115)	20	5.9
MBLK	Lead Total ICAP/MS			<0.5	ug/L				
MRL_CHK	Lead Total ICAP/MS		0.5	0.443	ug/L	89	(50-150)		
MS_201502120682	Lead Total ICAP/MS	ND	20	20.0	ug/L	100	(70-130)		
MS2_201501230313	Lead Total ICAP/MS	ND	20	19.5	ug/L	98	(70-130)		
MSD_201502120682	Lead Total ICAP/MS	ND	20	22.8	ug/L	114	(70-130)	20	13
MSD2_201501230313	Lead Total ICAP/MS	ND	20	20.1	ug/L	100	(70-130)	20	3.0
QC Ref# 821099 - UCMR3 Hexavalent Chromium by EPA 218.7					Analysis Date: 02/18/2015				
CCCH	Hexavalent Chromium (Dissolved)		20	20.0	ug/L	100	(85-115)		
CCCL	Hexavalent Chromium (Dissolved)		0.02	0.0221	ug/L	111	(50-150)		
CCCM	Hexavalent Chromium (Dissolved)		10	10.1	ug/L	101	(85-115)		

Spike recovery is already corrected for native results.

Spikes which exceed Limits and Method Blanks with positive results are highlighted by Underlining.

Criteria for MS and Dup are advisory only, batch control is based on LCS. Criteria for duplicates are advisory only, unless otherwise specified in the method.

RPD not calculated for LCS2 when different a concentration than LCS1 is used.

RPD not calculated for Duplicates when the result is not five times the MRL (Minimum Reporting Level).

(S) - Indicates surrogate compound.

(I) - Indicates internal standard compound.

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1 800 566 LABS (1 800 566 5227)

Groundwater & Environmental Services, Inc.

QC Type	Analyte	Native	Spiked	Recovered	Units	Yield (%)	Limits (%)	RPDLimit (%)	RPD%
MBLK	Hexavalent Chromium (Dissolved)			<0.01	ug/L				
MS_201501150190	Hexavalent Chromium (Dissolved)	0.58	2.0	2.67	ug/L	104	(85-115)		
MS2_201502120634	Hexavalent Chromium (Dissolved)	0.039	0.02	0.0558	ug/L	83	(50-150)		
MSD_201501150190	Hexavalent Chromium (Dissolved)	0.58	2.0	2.69	ug/L	106	(85-115)	15	0.75
MSD2_201502120634	Hexavalent Chromium (Dissolved)	0.039	0.02	0.0611	ug/L	109	(50-150)	50	9.1
QCS	Hexavalent Chromium (Dissolved)		10	9.94	ug/L	99	(90-110)		
QCSD	Hexavalent Chromium (Dissolved)		10	9.94	ug/L	99	(90-110)	15	0.0
QC Ref# 821419 - UCMR3 Hexavalent Chromium by EPA 218.7						Analysis Date: 02/19/2015			
CCCH	Hexavalent Chromium (Dissolved)		20	20.0	ug/L	100	(85-115)		
CCCL	Hexavalent Chromium (Dissolved)		0.02	0.0234	ug/L	117	(50-150)		
CCCM	Hexavalent Chromium (Dissolved)		10	10.1	ug/L	101	(85-115)		
MBLK	Hexavalent Chromium (Dissolved)			<0.01	ug/L				
MS_201502130292	Hexavalent Chromium (Dissolved)	0.43	2.0	2.52	ug/L	105	(85-115)		
MS2_201502160129	Hexavalent Chromium (Dissolved)	2.0	0.02	2.04	ug/L	63	(50-150)		
MSD_201502130292	Hexavalent Chromium (Dissolved)	0.43	2.0	2.53	ug/L	105	(85-115)	15	0.40
MSD2_201502160129	Hexavalent Chromium (Dissolved)	2.0	0.02	2.05	ug/L	122	(50-150)	50	0.49
QCS	Hexavalent Chromium (Dissolved)		10	9.95	ug/L	100	(90-110)		
QCSD	Hexavalent Chromium (Dissolved)		10	9.94	ug/L	99	(90-110)	15	0.10
QC Ref# 821936 - ICPMS Metals by EPA 200.8						Analysis Date: 02/23/2015			
LCS1	Chromium Total ICAP/MS		100	104	ug/L	104	(85-115)		
LCS2	Chromium Total ICAP/MS		100	101	ug/L	101	(85-115)	20	2.9
MBLK	Chromium Total ICAP/MS			<1	ug/L				
MRL_CHK	Chromium Total ICAP/MS		1.0	1.31	ug/L	131	(50-150)		
MS_201502120701	Chromium Total ICAP/MS	4.3	100	106	ug/L	102	(70-130)		
MS2_201502130202	Chromium Total ICAP/MS	ND	100	110	ug/L	109	(70-130)		
MSD_201502120701	Chromium Total ICAP/MS	4.3	100	113	ug/L	109	(70-130)	20	6.4
MSD2_201502130202	Chromium Total ICAP/MS	ND	100	102	ug/L	101	(70-130)	20	7.5
LCS1	Lead Total ICAP/MS		20	19.8	ug/L	99	(85-115)		
LCS2	Lead Total ICAP/MS		20	19.5	ug/L	98	(85-115)	20	1.5
MBLK	Lead Total ICAP/MS			<0.5	ug/L				
MRL_CHK	Lead Total ICAP/MS		0.5	0.507	ug/L	101	(50-150)		
MS_201502120701	Lead Total ICAP/MS	ND	20	20.5	ug/L	102	(70-130)		
MS2_201502130202	Lead Total ICAP/MS	ND	20	21.3	ug/L	106	(70-130)		
MSD_201502120701	Lead Total ICAP/MS	ND	20	20.0	ug/L	99	(70-130)	20	2.5
MSD2_201502130202	Lead Total ICAP/MS	ND	20	19.8	ug/L	98	(70-130)	20	7.3

Spike recovery is already corrected for native results.

Spikes which exceed Limits and Method Blanks with positive results are highlighted by Underlining.

Criteria for MS and Dup are advisory only, batch control is based on LCS. Criteria for duplicates are advisory only, unless otherwise specified in the method.

RPD not calculated for LCS2 when different a concentration than LCS1 is used.

RPD not calculated for Duplicates when the result is not five times the MRL (Minimum Reporting Level).

(S) - Indicates surrogate compound.

(I) - Indicates internal standard compound.



APPENDIX F

Soil Analytical Report and Chain of Custody Documentation

ANALYTICAL RESULTS

Prepared by:

Eurofins Lancaster Laboratories Environmental
2425 New Holland Pike
Lancaster, PA 17601

Prepared for:

GES, Inc.
Suite A
1350 Blair Dr
Odenton MD 21113

February 09, 2015

Project: Carroll Monrovia

Submittal Date: 01/29/2015
Group Number: 1534636
PO Number: 0402888-06-201
Release Number: MONROVIA
State of Sample Origin: MD

Client Sample Description

MW-18S-R 65' Grab Soil
MW-18S-R 70' Grab Soil

Lancaster Labs (LL) #

7754786
7754787

The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

Regulatory agencies do not accredit laboratories for all methods, analytes, and matrices. Our scopes of accreditation can be viewed at <http://www.eurofinsus.com/environment-testing/laboratories/eurofins-lancaster-laboratories-environmental/resources/certifications/>.

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ELECTRONIC COPY TO
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GES, Inc.-MD
GES

Attn: Report Distribution
Attn: Greg Reichart

Respectfully Submitted,



Lynn M. Frederiksen
Principal Specialist Group Leader

(717) 556-7255

Sample Description: MW-18S-R 65' Grab Soil
11791 Fingerboard Rd, Monrovia, MD
Carroll Monrovia

LL Sample # SW 7754786
LL Group # 1534636
Account # 08390

Project Name: Carroll Monrovia

Collected: 01/27/2015 11:39 by PR

GES, Inc.

Submitted: 01/29/2015 19:14

Suite A

Reported: 02/09/2015 09:12

1350 Blair Dr

Odenton MD 21113

CRRM1

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
GC/MS Volatiles SW-846 8260B			ug/kg	ug/kg	
10237	Acrylonitrile	107-13-1	N.D.	4	1.05
10237	t-Amyl methyl ether	994-05-8	N.D.	1	1.05
10237	Benzene	71-43-2	N.D.	0.5	1.05
10237	Bromobenzene	108-86-1	N.D.	1	1.05
10237	Bromochloromethane	74-97-5	N.D.	1	1.05
10237	Bromodichloromethane	75-27-4	N.D.	1	1.05
10237	Bromoform	75-25-2	N.D.	1	1.05
10237	Bromomethane	74-83-9	N.D.	2	1.05
10237	t-Butyl alcohol	75-65-0	66	22	1.05
10237	n-Butylbenzene	104-51-8	N.D.	1	1.05
10237	sec-Butylbenzene	135-98-8	N.D.	1	1.05
10237	tert-Butylbenzene	98-06-6	N.D.	1	1.05
10237	Carbon Disulfide	75-15-0	N.D.	1	1.05
10237	Chlorobenzene	108-90-7	N.D.	1	1.05
10237	Chloroethane	75-00-3	N.D.	2	1.05
10237	Chloroform	67-66-3	N.D.	1	1.05
10237	Chloromethane	74-87-3	N.D.	2	1.05
10237	2-Chlorotoluene	95-49-8	N.D.	1	1.05
10237	4-Chlorotoluene	106-43-4	N.D.	1	1.05
10237	1,2-Dibromo-3-chloropropane	96-12-8	N.D.	2	1.05
10237	Dibromochloromethane	124-48-1	N.D.	1	1.05
10237	1,2-Dibromoethane	106-93-4	N.D.	1	1.05
10237	Dibromomethane	74-95-3	N.D.	1	1.05
10237	trans-1,4-Dichloro-2-butene	110-57-6	N.D.	11	1.05
10237	1,2-Dichlorobenzene	95-50-1	N.D.	1	1.05
10237	1,3-Dichlorobenzene	541-73-1	N.D.	1	1.05
10237	1,4-Dichlorobenzene	106-46-7	N.D.	1	1.05
10237	Dichlorodifluoromethane	75-71-8	N.D.	2	1.05
10237	1,1-Dichloroethane	75-34-3	N.D.	1	1.05
10237	1,2-Dichloroethane	107-06-2	N.D.	1	1.05
10237	1,1-Dichloroethene	75-35-4	N.D.	1	1.05
10237	cis-1,2-Dichloroethene	156-59-2	N.D.	1	1.05
10237	trans-1,2-Dichloroethene	156-60-5	N.D.	1	1.05
10237	1,2-Dichloropropane	78-87-5	N.D.	1	1.05
10237	1,3-Dichloropropane	142-28-9	N.D.	1	1.05
10237	2,2-Dichloropropane	594-20-7	N.D.	1	1.05
10237	1,1-Dichloropropene	563-58-6	N.D.	1	1.05
10237	cis-1,3-Dichloropropene	10061-01-5	N.D.	1	1.05
10237	trans-1,3-Dichloropropene	10061-02-6	N.D.	1	1.05
10237	Ethyl t-butyl ether	637-92-3	N.D.	1	1.05
10237	Ethylbenzene	100-41-4	N.D.	1	1.05
10237	Hexachlorobutadiene	87-68-3	N.D.	2	1.05
10237	di-Isopropyl ether	108-20-3	N.D.	1	1.05
10237	Isopropylbenzene	98-82-8	N.D.	1	1.05
10237	p-Isopropyltoluene	99-87-6	N.D.	1	1.05
10237	Methyl Tertiary Butyl Ether	1634-04-4	11	0.5	1.05
10237	Methylene Chloride	75-09-2	N.D.	2	1.05
10237	Naphthalene	91-20-3	N.D.	1	1.05
10237	n-Propylbenzene	103-65-1	N.D.	1	1.05
10237	Styrene	100-42-5	N.D.	1	1.05

Sample Description: MW-18S-R 65' Grab Soil
11791 Fingerboard Rd, Monrovia, MD
Carroll Monrovia

LL Sample # SW 7754786
LL Group # 1534636
Account # 08390

Project Name: Carroll Monrovia

Collected: 01/27/2015 11:39 by PR GES, Inc.
Suite A
Submitted: 01/29/2015 19:14 1350 Blair Dr
Reported: 02/09/2015 09:12 Odenton MD 21113

CRRM1

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
GC/MS Volatiles SW-846 8260B			ug/kg	ug/kg	
10237	1,1,1,2-Tetrachloroethane	630-20-6	N.D.	1	1.05
10237	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	1	1.05
10237	Tetrachloroethene	127-18-4	N.D.	1	1.05
10237	Toluene	108-88-3	N.D.	1	1.05
10237	1,2,3-Trichlorobenzene	87-61-6	N.D.	1	1.05
10237	1,2,4-Trichlorobenzene	120-82-1	N.D.	1	1.05
10237	1,1,1-Trichloroethane	71-55-6	N.D.	1	1.05
10237	1,1,2-Trichloroethane	79-00-5	N.D.	1	1.05
10237	Trichloroethene	79-01-6	N.D.	1	1.05
10237	Trichlorofluoromethane	75-69-4	N.D.	2	1.05
10237	1,2,3-Trichloropropane	96-18-4	N.D.	1	1.05
10237	1,2,4-Trimethylbenzene	95-63-6	N.D.	1	1.05
10237	1,3,5-Trimethylbenzene	108-67-8	N.D.	1	1.05
10237	Vinyl Chloride	75-01-4	N.D.	1	1.05
10237	Xylene (Total)	1330-20-7	N.D.	1	1.05
Metals SW-846 6010B			mg/kg	mg/kg	
06951	Chromium	7440-47-3	14.7	0.111	1
01654	Iron	7439-89-6	27,300	3.38	1
06955	Lead	7439-92-1	18.0	0.506	1
Wet Chemistry ASTM D1498			mV	mV	
01821	Oxidation Reduction Potential	n.a.	363	10.0	1
The oxidation-reduction potential is reported in mV as referred to the standard hydrogen scale.					
SW-846 7196A			mg/kg	mg/kg	
00425	Hexavalent Chromium (SOLIDS)	18540-29-9	N.D.	0.52	1
SW-846 9045C modified			Std. Units	Std. Units	
00394	pH	n.a.	6.18	0.0100	1
The pH was measured in water at 19.6 C.					
Wet Chemistry SM 2540 G-1997			%	%	
00111	Moisture	n.a.	3.1	0.50	1
Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.					

General Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Sample Description: MW-18S-R 65' Grab Soil
11791 Fingerboard Rd, Monrovia, MD
Carroll Monrovia

LL Sample # SW 7754786
LL Group # 1534636
Account # 08390

Project Name: Carroll Monrovia

Collected: 01/27/2015 11:39 by PR GES, Inc.
Suite A
Submitted: 01/29/2015 19:14 1350 Blair Dr
Reported: 02/09/2015 09:12 Odenton MD 21113

CRRM1

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10237	VOCs- Solid by 8260B	SW-846 8260B	1	X150341AA	02/03/2015 18:32	Chelsea B Stong	1.05
02392	GC/MS - Field Preserved NaHSO4	SW-846 5035A	1	201502936700	01/27/2015 11:39	Client Supplied	1
02392	GC/MS - Field Preserved NaHSO4	SW-846 5035A	2	201502936700	01/27/2015 11:39	Client Supplied	1
07579	GC/MS-5g Field Preserv.MeOH-NC	SW-846 5035A	1	201502936700	01/27/2015 11:39	Client Supplied	1
06951	Chromium	SW-846 6010B	1	150335708001	02/03/2015 06:29	Joanne M Gates	1
01654	Iron	SW-846 6010B	1	150335708001	02/03/2015 06:29	Joanne M Gates	1
06955	Lead	SW-846 6010B	1	150335708001	02/03/2015 06:29	Joanne M Gates	1
05708	ICP-ICPMS - SW, 3050B - U3	SW-846 3050B	1	150335708001	02/02/2015 08:16	James L Mertz	1
01821	Oxidation Reduction Potential	ASTM D1498	1	15035182101B	02/04/2015 22:00	Michelle L Lalli	1
00425	Hexavalent Chromium (SOLIDS)	SW-846 7196A	1	15035042501A	02/04/2015 21:00	Daniel S Smith	1
00394	pH	SW-846 9045C modified	1	15035039401A	02/04/2015 22:00	Michelle L Lalli	1
07825	Hexavalent Cr (Extraction)	SW-846 3060A	1	15035042501A	02/03/2015 19:10	Daniel S Smith	1
00111	Moisture	SM 2540 G-1997	1	15035820001B	02/04/2015 20:04	Scott W Freisher	1

Sample Description: MW-18S-R 70' Grab Soil
11791 Fingerboard Rd, Monrovia, MD
Carroll Monrovia

LL Sample # SW 7754787
LL Group # 1534636
Account # 08390

Project Name: Carroll Monrovia

Collected: 01/27/2015 11:40 by PR

GES, Inc.

Submitted: 01/29/2015 19:14

Suite A

Reported: 02/09/2015 09:12

1350 Blair Dr

Odenton MD 21113

CRRM2

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
GC/MS Volatiles SW-846 8260B			ug/kg	ug/kg	
10237	Acrylonitrile	107-13-1	N.D.	4	1.04
10237	t-Amyl methyl ether	994-05-8	N.D.	1	1.04
10237	Benzene	71-43-2	N.D.	0.5	1.04
10237	Bromobenzene	108-86-1	N.D.	1	1.04
10237	Bromochloromethane	74-97-5	N.D.	1	1.04
10237	Bromodichloromethane	75-27-4	N.D.	1	1.04
10237	Bromoform	75-25-2	N.D.	1	1.04
10237	Bromomethane	74-83-9	N.D.	2	1.04
10237	t-Butyl alcohol	75-65-0	70	21	1.04
10237	n-Butylbenzene	104-51-8	N.D.	1	1.04
10237	sec-Butylbenzene	135-98-8	N.D.	1	1.04
10237	tert-Butylbenzene	98-06-6	N.D.	1	1.04
10237	Carbon Disulfide	75-15-0	N.D.	1	1.04
10237	Chlorobenzene	108-90-7	N.D.	1	1.04
10237	Chloroethane	75-00-3	N.D.	2	1.04
10237	Chloroform	67-66-3	N.D.	1	1.04
10237	Chloromethane	74-87-3	N.D.	2	1.04
10237	2-Chlorotoluene	95-49-8	N.D.	1	1.04
10237	4-Chlorotoluene	106-43-4	N.D.	1	1.04
10237	1,2-Dibromo-3-chloropropane	96-12-8	N.D.	2	1.04
10237	Dibromochloromethane	124-48-1	N.D.	1	1.04
10237	1,2-Dibromoethane	106-93-4	N.D.	1	1.04
10237	Dibromomethane	74-95-3	N.D.	1	1.04
10237	trans-1,4-Dichloro-2-butene	110-57-6	N.D.	11	1.04
10237	1,2-Dichlorobenzene	95-50-1	N.D.	1	1.04
10237	1,3-Dichlorobenzene	541-73-1	N.D.	1	1.04
10237	1,4-Dichlorobenzene	106-46-7	N.D.	1	1.04
10237	Dichlorodifluoromethane	75-71-8	N.D.	2	1.04
10237	1,1-Dichloroethane	75-34-3	N.D.	1	1.04
10237	1,2-Dichloroethane	107-06-2	N.D.	1	1.04
10237	1,1-Dichloroethene	75-35-4	N.D.	1	1.04
10237	cis-1,2-Dichloroethene	156-59-2	N.D.	1	1.04
10237	trans-1,2-Dichloroethene	156-60-5	N.D.	1	1.04
10237	1,2-Dichloropropane	78-87-5	N.D.	1	1.04
10237	1,3-Dichloropropane	142-28-9	N.D.	1	1.04
10237	2,2-Dichloropropane	594-20-7	N.D.	1	1.04
10237	1,1-Dichloropropene	563-58-6	N.D.	1	1.04
10237	cis-1,3-Dichloropropene	10061-01-5	N.D.	1	1.04
10237	trans-1,3-Dichloropropene	10061-02-6	N.D.	1	1.04
10237	Ethyl t-butyl ether	637-92-3	N.D.	1	1.04
10237	Ethylbenzene	100-41-4	N.D.	1	1.04
10237	Hexachlorobutadiene	87-68-3	N.D.	2	1.04
10237	di-Isopropyl ether	108-20-3	N.D.	1	1.04
10237	Isopropylbenzene	98-82-8	N.D.	1	1.04
10237	p-Isopropyltoluene	99-87-6	N.D.	1	1.04
10237	Methyl Tertiary Butyl Ether	1634-04-4	10	0.5	1.04
10237	Methylene Chloride	75-09-2	N.D.	2	1.04
10237	Naphthalene	91-20-3	N.D.	1	1.04
10237	n-Propylbenzene	103-65-1	N.D.	1	1.04
10237	Styrene	100-42-5	N.D.	1	1.04

Sample Description: MW-18S-R 70' Grab Soil
11791 Fingerboard Rd, Monrovia, MD
Carroll Monrovia

LL Sample # SW 7754787
LL Group # 1534636
Account # 08390

Project Name: Carroll Monrovia

Collected: 01/27/2015 11:40 by PR

GES, Inc.

Submitted: 01/29/2015 19:14

Suite A

Reported: 02/09/2015 09:12

1350 Blair Dr

Odenton MD 21113

CRRM2

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
GC/MS Volatiles SW-846 8260B			ug/kg	ug/kg	
10237	1,1,1,2-Tetrachloroethane	630-20-6	N.D.	1	1.04
10237	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	1	1.04
10237	Tetrachloroethene	127-18-4	N.D.	1	1.04
10237	Toluene	108-88-3	N.D.	1	1.04
10237	1,2,3-Trichlorobenzene	87-61-6	N.D.	1	1.04
10237	1,2,4-Trichlorobenzene	120-82-1	N.D.	1	1.04
10237	1,1,1-Trichloroethane	71-55-6	N.D.	1	1.04
10237	1,1,2-Trichloroethane	79-00-5	N.D.	1	1.04
10237	Trichloroethene	79-01-6	N.D.	1	1.04
10237	Trichlorofluoromethane	75-69-4	N.D.	2	1.04
10237	1,2,3-Trichloropropane	96-18-4	N.D.	1	1.04
10237	1,2,4-Trimethylbenzene	95-63-6	N.D.	1	1.04
10237	1,3,5-Trimethylbenzene	108-67-8	N.D.	1	1.04
10237	Vinyl Chloride	75-01-4	N.D.	1	1.04
10237	Xylene (Total)	1330-20-7	N.D.	1	1.04
Metals SW-846 6010B			mg/kg	mg/kg	
06951	Chromium	7440-47-3	15.2	0.111	1
01654	Iron	7439-89-6	32,500	16.9	5
06955	Lead	7439-92-1	4.10	0.506	1
Wet Chemistry ASTM D1498			mV	mV	
01821	Oxidation Reduction Potential	n.a.	376	10.0	1
The oxidation-reduction potential is reported in mV as referred to the standard hydrogen scale.					
SW-846 7196A			mg/kg	mg/kg	
00425	Hexavalent Chromium (SOLIDS)	18540-29-9	N.D.	0.51	1
SW-846 9045C modified			Std. Units	Std. Units	
00394	pH	n.a.	6.62	0.0100	1
The pH was measured in water at 20.2 C.					
Wet Chemistry SM 2540 G-1997			%	%	
00111	Moisture	n.a.	2.2	0.50	1
Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.					

General Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Sample Description: MW-18S-R 70' Grab Soil
11791 Fingerboard Rd, Monrovia, MD
Carroll Monrovia

LL Sample # SW 7754787
LL Group # 1534636
Account # 08390

Project Name: Carroll Monrovia

Collected: 01/27/2015 11:40 by PR GES, Inc.
Suite A
Submitted: 01/29/2015 19:14 1350 Blair Dr
Reported: 02/09/2015 09:12 Odenton MD 21113

CRRM2

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10237	VOCs- Solid by 8260B	SW-846 8260B	1	X150331AA	02/03/2015 00:34	Christopher G Torres	1.04
02392	GC/MS - Field Preserved NaHSO4	SW-846 5035A	1	201502936700	01/27/2015 11:40	Client Supplied	1
02392	GC/MS - Field Preserved NaHSO4	SW-846 5035A	2	201502936700	01/27/2015 11:40	Client Supplied	1
07579	GC/MS-5g Field Preserv.MeOH-NC	SW-846 5035A	1	201502936700	01/27/2015 11:40	Client Supplied	1
06951	Chromium	SW-846 6010B	1	150335708001	02/03/2015 06:34	Joanne M Gates	1
01654	Iron	SW-846 6010B	1	150335708001	02/03/2015 08:52	Joanne M Gates	5
06955	Lead	SW-846 6010B	1	150335708001	02/03/2015 06:34	Joanne M Gates	1
05708	ICP-ICPMS - SW, 3050B - U3	SW-846 3050B	1	150335708001	02/02/2015 08:16	James L Mertz	1
01821	Oxidation Reduction Potential	ASTM D1498	1	15035182101B	02/04/2015 22:00	Michelle L Lalli	1
00425	Hexavalent Chromium (SOLIDS)	SW-846 7196A	1	15035042501A	02/04/2015 21:00	Daniel S Smith	1
00394	pH	SW-846 9045C modified	1	15035039401A	02/04/2015 22:00	Michelle L Lalli	1
07825	Hexavalent Cr (Extraction)	SW-846 3060A	1	15035042501A	02/03/2015 19:10	Daniel S Smith	1
00111	Moisture	SM 2540 G-1997	1	15035820001B	02/04/2015 20:04	Scott W Freisher	1

Quality Control Summary

Client Name: GES, Inc.
Reported: 02/09/15 at 09:12 AM

Group Number: 1534636

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

All Inorganic Initial Calibration and Continuing Calibration Blanks met acceptable method criteria unless otherwise noted on the Analysis Report.

Laboratory Compliance Quality Control

<u>Analysis Name</u>	<u>Blank Result</u>	<u>Blank MDL</u>	<u>Report Units</u>	<u>LCS %REC</u>	<u>LCSD %REC</u>	<u>LCS/LCSD Limits</u>	<u>RPD</u>	<u>RPD Max</u>
Batch number: X150331AA	Sample number(s): 7754787							
Acrylonitrile	N.D.	4.	ug/kg	111		58-123		
t-Amyl methyl ether	N.D.	1.	ug/kg	104		63-130		
Benzene	N.D.	0.5	ug/kg	105		80-120		
Bromobenzene	N.D.	1.	ug/kg	100		78-120		
Bromochloromethane	N.D.	1.	ug/kg	96		80-128		
Bromodichloromethane	N.D.	1.	ug/kg	95		75-120		
Bromoform	N.D.	1.	ug/kg	82		70-126		
Bromomethane	N.D.	2.	ug/kg	90		32-162		
t-Butyl alcohol	N.D.	20.	ug/kg	105		72-125		
n-Butylbenzene	N.D.	1.	ug/kg	112		72-120		
sec-Butylbenzene	N.D.	1.	ug/kg	119		69-120		
tert-Butylbenzene	N.D.	1.	ug/kg	99		75-120		
Carbon Disulfide	N.D.	1.	ug/kg	98		63-128		
Chlorobenzene	N.D.	1.	ug/kg	98		80-120		
Chloroethane	N.D.	2.	ug/kg	91		17-171		
Chloroform	N.D.	1.	ug/kg	100		80-125		
Chloromethane	N.D.	2.	ug/kg	94		56-120		
2-Chlorotoluene	N.D.	1.	ug/kg	102		78-120		
4-Chlorotoluene	N.D.	1.	ug/kg	104		79-120		
1,2-Dibromo-3-chloropropane	N.D.	2.	ug/kg	102		59-122		
Dibromochloromethane	N.D.	1.	ug/kg	92		77-120		
1,2-Dibromoethane	N.D.	1.	ug/kg	103		80-120		
Dibromomethane	N.D.	1.	ug/kg	98		80-120		
trans-1,4-Dichloro-2-butene	N.D.	10.	ug/kg	116		70-128		
1,2-Dichlorobenzene	N.D.	1.	ug/kg	98		80-120		
1,3-Dichlorobenzene	N.D.	1.	ug/kg	101		80-120		
1,4-Dichlorobenzene	N.D.	1.	ug/kg	100		80-120		
Dichlorodifluoromethane	N.D.	2.	ug/kg	85		26-137		
1,1-Dichloroethane	N.D.	1.	ug/kg	98		80-122		
1,2-Dichloroethane	N.D.	1.	ug/kg	98		77-130		
1,1-Dichloroethene	N.D.	1.	ug/kg	103		73-129		
cis-1,2-Dichloroethene	N.D.	1.	ug/kg	106		80-120		
trans-1,2-Dichloroethene	N.D.	1.	ug/kg	107		80-129		
1,2-Dichloropropane	N.D.	1.	ug/kg	103		80-120		
1,3-Dichloropropane	N.D.	1.	ug/kg	103		80-120		
2,2-Dichloropropane	N.D.	1.	ug/kg	93		72-123		
1,1-Dichloropropene	N.D.	1.	ug/kg	105		80-126		
cis-1,3-Dichloropropene	N.D.	1.	ug/kg	96		74-120		
trans-1,3-Dichloropropene	N.D.	1.	ug/kg	101		76-120		
Ethyl t-butyl ether	N.D.	1.	ug/kg	102		70-122		
Ethylbenzene	N.D.	1.	ug/kg	105		80-120		
Hexachlorobutadiene	N.D.	2.	ug/kg	88		46-130		
di-Isopropyl ether	N.D.	1.	ug/kg	104		77-123		

*- Outside of specification

- (1) The result for one or both determinations was less than five times the LOQ.
- (2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: GES, Inc.

Group Number: 1534636

Reported: 02/09/15 at 09:12 AM

<u>Analysis Name</u>	<u>Blank Result</u>	<u>Blank MDL</u>	<u>Report Units</u>	<u>LCS %REC</u>	<u>LCSD %REC</u>	<u>LCS/LCSD Limits</u>	<u>RPD</u>	<u>RPD Max</u>
Isopropylbenzene	N.D.	1.	ug/kg	99	99	76-120		
p-Isopropyltoluene	N.D.	1.	ug/kg	110		69-120		
Methyl Tertiary Butyl Ether	N.D.	0.5	ug/kg	102		76-122		
Methylene Chloride	N.D.	2.	ug/kg	100		80-124		
Naphthalene	N.D.	1.	ug/kg	94		64-120		
n-Propylbenzene	N.D.	1.	ug/kg	118		77-120		
Styrene	N.D.	1.	ug/kg	105		76-120		
1,1,1,2-Tetrachloroethane	N.D.	1.	ug/kg	90		80-120		
1,1,2,2-Tetrachloroethane	N.D.	1.	ug/kg	108		71-123		
Tetrachloroethene	N.D.	1.	ug/kg	91		78-120		
Toluene	N.D.	1.	ug/kg	105		80-120		
1,2,3-Trichlorobenzene	N.D.	1.	ug/kg	90		64-120		
1,2,4-Trichlorobenzene	N.D.	1.	ug/kg	92		68-120		
1,1,1-Trichloroethane	N.D.	1.	ug/kg	90		63-135		
1,1,2-Trichloroethane	N.D.	1.	ug/kg	101		80-120		
Trichloroethene	N.D.	1.	ug/kg	103		80-125		
Trichlorofluoromethane	N.D.	2.	ug/kg	89		58-133		
1,2,3-Trichloropropane	N.D.	1.	ug/kg	105		71-123		
1,2,4-Trimethylbenzene	N.D.	1.	ug/kg	113		79-120		
1,3,5-Trimethylbenzene	N.D.	1.	ug/kg	113		78-120		
Vinyl Chloride	N.D.	1.	ug/kg	92		59-120		
Xylene (Total)	N.D.	1.	ug/kg	103		80-120		

Batch number: X150341AA

Sample number(s): 7754786

Acrylonitrile	N.D.	4.	ug/kg	102	99	58-123	4	30
t-Amyl methyl ether	N.D.	1.	ug/kg	108	106	63-130	1	30
Benzene	N.D.	0.5	ug/kg	104	101	80-120	3	30
Bromobenzene	N.D.	1.	ug/kg	102	99	78-120	2	30
Bromochloromethane	N.D.	1.	ug/kg	101	100	80-128	1	30
Bromodichloromethane	N.D.	1.	ug/kg	94	92	75-120	2	30
Bromoform	N.D.	1.	ug/kg	84	81	70-126	4	30
Bromomethane	N.D.	2.	ug/kg	92	90	32-162	1	30
t-Butyl alcohol	N.D.	20.	ug/kg	107	108	72-125	1	30
n-Butylbenzene	N.D.	1.	ug/kg	108	104	72-120	4	30
sec-Butylbenzene	N.D.	1.	ug/kg	117	111	69-120	5	30
tert-Butylbenzene	N.D.	1.	ug/kg	102	100	75-120	2	30
Carbon Disulfide	N.D.	1.	ug/kg	98	95	63-128	3	30
Chlorobenzene	N.D.	1.	ug/kg	99	97	80-120	2	30
Chloroethane	N.D.	2.	ug/kg	105	101	17-171	4	30
Chloroform	N.D.	1.	ug/kg	100	99	80-125	2	30
Chloromethane	N.D.	2.	ug/kg	98	96	56-120	2	30
2-Chlorotoluene	N.D.	1.	ug/kg	105	101	78-120	3	30
4-Chlorotoluene	N.D.	1.	ug/kg	104	101	79-120	3	30
1,2-Dibromo-3-chloropropane	N.D.	2.	ug/kg	92	87	59-122	5	30
Dibromochloromethane	N.D.	1.	ug/kg	93	91	77-120	2	30
1,2-Dibromoethane	N.D.	1.	ug/kg	104	101	80-120	3	30
Dibromomethane	N.D.	1.	ug/kg	96	94	80-120	1	30
trans-1,4-Dichloro-2-butene	N.D.	10.	ug/kg	108	104	70-128	4	30
1,2-Dichlorobenzene	N.D.	1.	ug/kg	97	96	80-120	2	30
1,3-Dichlorobenzene	N.D.	1.	ug/kg	101	99	80-120	2	30
1,4-Dichlorobenzene	N.D.	1.	ug/kg	100	98	80-120	2	30
Dichlorodifluoromethane	N.D.	2.	ug/kg	85	81	26-137	6	30
1,1-Dichloroethane	N.D.	1.	ug/kg	99	97	80-122	2	30
1,2-Dichloroethane	N.D.	1.	ug/kg	97	95	77-130	2	30
1,1-Dichloroethene	N.D.	1.	ug/kg	106	101	73-129	5	30
cis-1,2-Dichloroethene	N.D.	1.	ug/kg	106	105	80-120	2	30

*- Outside of specification

- (1) The result for one or both determinations was less than five times the LOQ.
- (2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: GES, Inc.

Group Number: 1534636

Reported: 02/09/15 at 09:12 AM

<u>Analysis Name</u>	<u>Blank Result</u>	<u>Blank MDL</u>	<u>Report Units</u>	<u>LCS %REC</u>	<u>LCSD %REC</u>	<u>LCS/LCSD Limits</u>	<u>RPD</u>	<u>RPD Max</u>
trans-1,2-Dichloroethene	N.D.	1.	ug/kg	108	105	80-129	3	30
1,2-Dichloropropane	N.D.	1.	ug/kg	100	99	80-120	2	30
1,3-Dichloropropane	N.D.	1.	ug/kg	98	96	80-120	2	30
2,2-Dichloropropane	N.D.	1.	ug/kg	95	92	72-123	3	30
1,1-Dichloropropene	N.D.	1.	ug/kg	108	104	80-126	5	30
cis-1,3-Dichloropropene	N.D.	1.	ug/kg	99	99	74-120	1	30
trans-1,3-Dichloropropene	N.D.	1.	ug/kg	100	99	76-120	0	30
Ethyl t-butyl ether	N.D.	1.	ug/kg	109	109	70-122	0	30
Ethylbenzene	N.D.	1.	ug/kg	104	102	80-120	2	30
Hexachlorobutadiene	N.D.	2.	ug/kg	93	91	46-130	3	30
di-Isopropyl ether	N.D.	1.	ug/kg	108	107	77-123	1	30
Isopropylbenzene	N.D.	1.	ug/kg	101	99	76-120	2	30
p-Isopropyltoluene	N.D.	1.	ug/kg	110	106	69-120	4	30
Methyl Tertiary Butyl Ether	N.D.	0.5	ug/kg	105	103	76-122	2	30
Methylene Chloride	N.D.	2.	ug/kg	98	95	80-124	3	30
Naphthalene	N.D.	1.	ug/kg	91	91	64-120	0	30
n-Propylbenzene	N.D.	1.	ug/kg	113	109	77-120	3	30
Styrene	N.D.	1.	ug/kg	103	100	76-120	3	30
1,1,1,2-Tetrachloroethane	N.D.	1.	ug/kg	91	89	80-120	3	30
1,1,2,2-Tetrachloroethane	N.D.	1.	ug/kg	101	98	71-123	3	30
Tetrachloroethene	N.D.	1.	ug/kg	101	98	78-120	3	30
Toluene	N.D.	1.	ug/kg	105	103	80-120	2	30
1,2,3-Trichlorobenzene	N.D.	1.	ug/kg	91	92	64-120	0	30
1,2,4-Trichlorobenzene	N.D.	1.	ug/kg	95	96	68-120	1	30
1,1,1-Trichloroethane	N.D.	1.	ug/kg	88	85	63-135	3	30
1,1,2-Trichloroethane	N.D.	1.	ug/kg	101	98	80-120	3	30
Trichloroethene	N.D.	1.	ug/kg	104	102	80-125	2	30
Trichlorofluoromethane	N.D.	2.	ug/kg	88	86	58-133	3	30
1,2,3-Trichloropropane	N.D.	1.	ug/kg	99	95	71-123	4	30
1,2,4-Trimethylbenzene	N.D.	1.	ug/kg	109	107	79-120	2	30
1,3,5-Trimethylbenzene	N.D.	1.	ug/kg	111	108	78-120	3	30
Vinyl Chloride	N.D.	1.	ug/kg	100	98	59-120	2	30
Xylene (Total)	N.D.	1.	ug/kg	104	101	80-120	2	30

Batch number: 150335708001

Sample number(s): 7754786-7754787

Chromium	N.D.	0.110	mg/kg	100		80-120
Iron	N.D.	3.34	mg/kg	105		80-120
Lead	N.D.	0.500	mg/kg	102		80-120

Batch number: 15035039401A
pH

Sample number(s): 7754786-7754787
100

95-105

Batch number: 15035042501A
Hexavalent Chromium (SOLIDS)

Sample number(s): 7754786-7754787
N.D. 0.50 mg/kg 89

80-120

Batch number: 15035182101B
Oxidation Reduction Potential

Sample number(s): 7754786-7754787
100

98-102

Batch number: 15035820001B
Moisture

Sample number(s): 7754786-7754787
100

99-101

Sample Matrix Quality Control

*- Outside of specification

- (1) The result for one or both determinations was less than five times the LOQ.
- (2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: GES, Inc.

Group Number: 1534636

Reported: 02/09/15 at 09:12 AM

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike

Background (BKG) = the sample used in conjunction with the duplicate

<u>Analysis Name</u>	<u>MS</u> <u>%REC</u>	<u>MSD</u> <u>%REC</u>	<u>MS/MSD</u> <u>Limits</u>	<u>RPD</u> <u>RPD</u>	<u>BKG</u> <u>MAX</u>	<u>DUP</u> <u>Conc</u>	<u>DUP</u> <u>RPD</u>	<u>Dup RPD</u> <u>Max</u>
Batch number: X150331AA	Sample number(s): 7754787 UNSPK: P754198							
Acrylonitrile	115	109	48-139	9	30			
t-Amyl methyl ether	118	109	50-132	12	30			
Benzene	131	117	55-143	13	30			
Bromobenzene	108	98	43-139	14	30			
Bromochloromethane	106	104	60-137	5	30			
Bromodichloromethane	109	100	53-136	12	30			
Bromoform	88	79	50-144	14	30			
Bromomethane	110	93	42-168	21	30			
t-Butyl alcohol	109	98	47-153	14	30			
n-Butylbenzene	109	93	30-146	19	30			
sec-Butylbenzene	130	109	33-157	21	30			
tert-Butylbenzene	114	97	41-152	20	30			
Carbon Disulfide	125	113	48-146	13	30			
Chlorobenzene	111	100	49-135	14	30			
Chloroethane	117	102	39-152	18	30			
Chloroform	119	112	61-142	10	30			
Chloromethane	117	106	36-143	13	30			
2-Chlorotoluene	115	103	42-146	15	30			
4-Chlorotoluene	110	97	39-145	17	30			
1,2-Dibromo-3-chloropropane	107	92	34-165	18	30			
Dibromochloromethane	103	95	51-128	12	30			
1,2-Dibromoethane	115	107	54-129	10	30			
Dibromomethane	110	102	57-130	12	30			
trans-1,4-Dichloro-2-butene	120	101	31-144	21	30			
1,2-Dichlorobenzene	100	86	36-133	19	30			
1,3-Dichlorobenzene	102	89	34-134	17	30			
1,4-Dichlorobenzene	100	87	35-136	17	30			
Dichlorodifluoromethane	113	98	26-151	18	30			
1,1-Dichloroethane	123	112	63-142	12	30			
1,2-Dichloroethane	92	83	54-143	11	30			
1,1-Dichloroethene	134	122	61-149	12	30			
cis-1,2-Dichloroethene	138*	123	67-135	13	30			
trans-1,2-Dichloroethene	137	125	64-144	13	30			
1,2-Dichloropropane	121	111	54-144	12	30			
1,3-Dichloropropane	115	104	51-140	13	30			
2,2-Dichloropropane	119	112	53-147	10	30			
1,1-Dichloropropene	132	121	54-145	12	30			
cis-1,3-Dichloropropene	110	104	45-137	9	30			
trans-1,3-Dichloropropene	111	104	51-134	10	30			
Ethyl t-butyl ether	122	115	58-124	10	30			
Ethylbenzene	122	110	44-141	13	30			
Hexachlorobutadiene	82	65	10-155	26	30			
di-Isopropyl ether	124	115	59-133	11	30			
Isopropylbenzene	112	100	38-144	15	30			
p-Isopropyltoluene	117	100	29-152	20	30			
Methyl Tertiary Butyl Ether	115	108	55-129	10	30			
Methylene Chloride	125	115	60-149	12	30			
Naphthalene	122	96	10-138	24	30			
n-Propylbenzene	130	113	39-157	18	30			
Styrene	109	100	35-134	12	30			
1,1,1,2-Tetrachloroethane	102	93	55-139	13	30			

*- Outside of specification

- (1) The result for one or both determinations was less than five times the LOQ.
- (2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: GES, Inc.
Reported: 02/09/15 at 09:12 AM

Group Number: 1534636

Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
Background (BKG) = the sample used in conjunction with the duplicate

Analysis Name	MS %REC	MSD %REC	MS/MSD Limits	RPD RPD	RPD MAX	BKG Conc	DUP Conc	DUP RPD	Dup RPD Max
1,1,2,2-Tetrachloroethane	124	111	29-182	14	30				
Tetrachloroethene	109	98	42-149	14	30				
Toluene	129	117	50-146	13	30				
1,2,3-Trichlorobenzene	68	58	10-140	19	30				
1,2,4-Trichlorobenzene	69	60	10-136	18	30				
1,1,1-Trichloroethane	112	105	52-146	10	30				
1,1,2-Trichloroethane	116	105	58-152	13	30				
Trichloroethene	127	117	53-144	10	30				
Trichlorofluoromethane	116	101	47-163	17	30				
1,2,3-Trichloropropane	117	106	36-180	14	30				
1,2,4-Trimethylbenzene	119	107	37-149	14	30				
1,3,5-Trimethylbenzene	121	110	38-150	13	30				
Vinyl Chloride	166*	142	50-154	11	30				
Xylene (Total)	118	107	44-136	13	30				

Batch number: 150335708001	Sample number(s): 7754786-7754787	UNSPK: P754772	BKG: P754772						
Chromium	95	148*	75-125	28*	20	16.4	29.5	57*	20
Iron	2576	14685	75-125	60*	20	11,700	27,700	81*	20
	(2)	(2)							
Lead	-46 (2)	-160	75-125	34*	20	65.8	45.5	36*	20
	(2)								

Batch number: 15035039401A	Sample number(s): 7754786-7754787	BKG: 7754787							
pH		6.62				6.64	0		3

Batch number: 15035042501A	Sample number(s): 7754786-7754787	UNSPK: 7754787	BKG: 7754787						
Hexavalent Chromium (SOLIDS)	88		75-125			N.D.	N.D.	0 (1)	20

Batch number: 15035182101B	Sample number(s): 7754786-7754787	BKG: 7754787							
Oxidation Reduction Potential		376				376	0		5

Batch number: 15035820001B	Sample number(s): 7754786-7754787	BKG: P754661							
Moisture		15.4				15.5	1		5

Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: VOCs- Solid by 8260B
Batch number: X150331AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
7754787	94	101	96	92
Blank	96	96	97	88
LCS	94	100	100	99
MS	94	97	103	98
MSD	95	100	102	99
Limits:	50-141	54-135	52-141	50-131

*- Outside of specification

- (1) The result for one or both determinations was less than five times the LOQ.
- (2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: GES, Inc.
Reported: 02/09/15 at 09:12 AM

Group Number: 1534636

Surrogate Quality Control

Analysis Name: VOCs- Solid by 8260B
Batch number: X150341AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
7754786	97	101	94	95
Blank	97	99	95	90
LCS	94	98	99	96
LCSD	95	97	100	97
Limits:	50-141	54-135	52-141	50-131

*- Outside of specification

- (1) The result for one or both determinations was less than five times the LOQ.
- (2) The unspiked result was more than four times the spike added.

Client: GES

Delivery and Receipt Information

Delivery Method: ELLE Courier Arrival Timestamp: 01/29/2015 19:14
 Number of Packages: 1 Number of Projects: 1
 State/Province of Origin: MD

Arrival Condition Summary

Shipping Container Sealed:	No	Sample IDs on COC match Containers:	Yes
Custody Seal Present:	No	Sample Date/Times match COC:	Yes
Samples Chilled:	Yes	VOA Vial Headspace ≥ 6mm:	No
Paperwork Enclosed:	Yes	Total Trip Blank Qty:	0
Samples Intact:	Yes	Air Quality Samples Present:	No
Missing Samples:	No		
Extra Samples:	No		
Discrepancy in Container Qty on COC:	No		

Unpacked by Jordan Woods (6698) at 19:40 on 01/29/2015

Samples Chilled Details

Thermometer Types: *DT = Digital (Temp. Bottle) IR = Infrared (Surface Temp)* *All Temperatures in °C.*

Cooler #	Thermometer ID	Corrected Temp	Therm. Type	Ice Type	Ice Present?	Ice Container	Elevated Temp?
1	DT146	1.7	DT	Wet	Y	Bagged	N

Explanation of Symbols and Abbreviations

The following defines common symbols and abbreviations used in reporting technical data:

RL	Reporting Limit	BMQL	Below Minimum Quantitation Level
N.D.	none detected	MPN	Most Probable Number
TNTC	Too Numerous To Count	CP Units	cobalt-chloroplatinate units
IU	International Units	NTU	nephelometric turbidity units
umhos/cm	micromhos/cm	ng	nanogram(s)
C	degrees Celsius	F	degrees Fahrenheit
meq	milliequivalents	lb.	pound(s)
g	gram(s)	kg	kilogram(s)
µg	microgram(s)	mg	milligram(s)
mL	milliliter(s)	L	liter(s)
m3	cubic meter(s)	µL	microliter(s)
		pg/L	picogram/liter
<	less than		
>	greater than		
ppm	parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg) or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter per liter of gas.		
ppb	parts per billion		
Dry weight basis	Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis.		

Laboratory Data Qualifiers:

- B - Analyte detected in the blank
- C - Result confirmed by reanalysis
- E - Concentration exceeds the calibration range
- J (or G, I, X) - estimated value \geq the Method Detection Limit (MDL or DL) and the $<$ Limit of Quantitation (LOQ or RL)
- P - Concentration difference between the primary and confirmation column $>40\%$. The lower result is reported.
- U - Analyte was not detected at the value indicated
- V - Concentration difference between the primary and confirmation column $>100\%$. The reporting limit is raised due to this disparity and evident interference...

Additional Organic and Inorganic CLP qualifiers may be used with Form 1 reports as defined by the CLP methods. Qualifiers specific to Dioxin/Furans and PCB Congeners are detailed on the individual Analysis Report.

Analytical test results meet all requirements of the associated regulatory program (i.e., NELAC (TNI), DoD, ISO17025) unless otherwise noted under the individual analysis.

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff.

This report shall not be reproduced except in full, without the written approval of the laboratory.

Times are local to the area of activity. Parameters listed in the 40 CFR Part 136 Table II as "analyze immediately" are not performed within 15 minutes.

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