

**1<sup>st</sup> SEMI-ANNUAL 2017  
GROUNDWATER MONITORING REPORT  
GREEN VALLEY GARAGE**

Prepared for:

**Mr. Ron Anderson  
Green Valley Garage  
11602 Finger Board Road  
Monrovia, MD 21770**

Prepared by:



**ARM Group Inc.  
9175 Guilford Road  
Suite 310  
Columbia, Maryland 21046**

**ARM Project No. 170167M**

**April 2017**

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Respectfully submitted:



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## 1 INTRODUCTION

### 1.1 Purpose

This report summarizes the findings of the 1<sup>st</sup> semi-annual 2017 groundwater monitoring event at the Green Valley Garage (the Site), located in Monrovia, Maryland. This 1<sup>st</sup> semi-annual 2017 Groundwater Monitoring Report for the Green Valley Garage has been prepared by ARM Group Inc. (ARM). The primary objective of this report is to evaluate and provide an interpretive discussion of the analytical groundwater results, including comparison to relevant regulatory criteria and addressing any changes in groundwater quality over time.

The following activities were performed for the 1<sup>st</sup> semi-annual 2017 groundwater monitoring event at the Site, and are documented in this report:

- the measurement of groundwater levels in each of the monitoring wells;
- the measurement of non-aqueous phase liquid (NAPL) thickness (if present) in each of the monitoring wells;
- the construction of a groundwater contour map based on potentiometric elevations;
- the sampling of monitoring wells;
- the collection of an influent and an effluent sample associated with the current domestic supply well's point of entry treatment (POET) system;
- the laboratory analysis of collected samples for volatile organic compounds (VOCs); and
- the evaluation of analytical data, including comparisons to previous sampling events.

## 2 SUMMARY OF SAMPLING EVENT

### 2.1 Groundwater Monitoring Network

The existing groundwater monitoring network consists of seven groundwater monitoring wells and one former domestic supply well. The wells have been denoted as MW-1 through MW-7, and Former Domestic Supply Well (Former DSW). In addition, influent and effluent water supply samples were collected from the POET system for the Current Domestic Supply Well (Current DSW).<sup>1</sup> Groundwater monitoring well locations, as well as groundwater contours constructed using groundwater level measurements taken during the 1<sup>st</sup> semi-annual 2017 sampling event, are shown on **Figure 1**. The direction of groundwater flow beneath the Site is generally to the north and northwest across the site. **Table 1** presents a summary of the March 2017 groundwater elevations.

### 2.2 Sample Collection Procedures

On March 1<sup>st</sup> and 2<sup>nd</sup>, 2017, groundwater samples were collected from MW-1 through MW-7 and Former DSW. The wells were purged and sampled in accordance with low-flow purging/sampling protocols, and applicable federal and state regulatory guidance. In order to facilitate low-flow purging, a flow-through cell was attached to the groundwater discharge tubing, and several water quality parameters were monitored to indicate stabilization.

Groundwater was evacuated from the well at a purge rate less than 500 milliliters per minute (ml/min). Readings were taken on indicator parameters every five (5) minutes with a multi-parameter water quality meter. The monitored parameters included temperature, pH, specific conductance, oxidation-reduction potential, dissolved oxygen, and turbidity. Groundwater purging continued until stabilization of the parameters had occurred for three (3) consecutive readings over a 15-minute period. The depth to water was also measured at five-minute intervals in order to monitor and prevent drawdown of the water column in the well during purging. The field sampling records for each well are included in **Appendix A**.

Two water supply samples, associated with the POET system for the Current DSW, were collected on March 1<sup>st</sup>, 2017 by a MDE-certified Drinking Water Sampler.

Prior to sampling, all required sample containers were labeled and readied for sample collection. Once the water quality parameters had stabilized, the groundwater samples were collected into laboratory provided sample containers while maintaining the appropriate low-flow discharge rates. Immediately prior to the first vial being filled at each location, the time of sampling was noted and all sample containers for the sample location were assigned the same sampling time. The sample containers were filled directly from the discharge tubing without allowing the tubing to touch the rim or inside of the containers. The groundwater was allowed to flow gently down

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<sup>1</sup> Not used for drinking water.

the inside of the sample containers so that no air bubbles were generated. Immediately following sample collection, the samples were stored in coolers with ice before being transferred to the laboratory under a completed chain-of-custody. Purged groundwater was treated with activated carbon before being discharged to the ground.

### 2.3 Laboratory Analysis

After sample collection, all samples were delivered to ALS Environmental Laboratories (ALS) of Middletown, Pennsylvania, for analysis. Samples were analyzed in accordance with EPA Method 8260 by ALS for volatile organic compounds (VOCs), including fuel oxygenates and naphthalene. The laboratory Certificates of Analysis for the 1<sup>st</sup> semi-annual 2017 sampling event are included as **Appendix B**.

Field QA/QC utilized during the 1<sup>st</sup> semi-annual 2017 sampling event included collection and analysis of a trip blank. A trip blank consists of reagent water that is transported to the sampling site and returned to the laboratory of origin without being opened. This serves as a check on sample contamination originating from sample transport, shipping, and laboratory sources. The holding time for the trip blank begins when received by the laboratory, unless otherwise specified by the client. There were no parameters detected in the trip blank for the 1<sup>st</sup> semi-annual 2017 sampling event.

### 3 SUMMARY OF RESULTS

#### 3.1 Summary of Detected Parameters

##### 3.1.1 Monitoring Wells

**Table 2** shows all parameters detected in the wells at the Site during the 1<sup>st</sup> semi-annual 2017 sampling event. Methyl tertiary butyl ether (MTBE), tert-Amyl methyl ether (TAME), and tert-Butyl Alcohol (TBA) were detected in all wells at the Site. During this sampling event, the following parameters were detected for the first time over the historical record at relatively low-level concentrations:

- diisopropyl ether in Former DSW and MW-2;
- bromomethane in MW-5; and
- trans-1,2-dichloroethene in MW-2, MW-3, and MW-7.

Benzene was also detected in wells MW-2, MW-3, and MW-4 at relatively low-level concentrations, although it has been previously detected in these wells over the historical record.

##### 3.1.2 Water Supply Samples

TBA was detected in the influent sample at a concentration of 24.1 µg/L, while MTBE was detected in the effluent sample at a concentration of 5.0 µg/L. These were the only detections in the water supply samples during this sampling event.

#### 3.2 Comparison to Groundwater Standards

Upon receipt of the analytical data, parameters detected in each monitoring well were evaluated and compared to the Maryland Department of the Environment 2008 Generic Numeric Cleanup Standards for Groundwater. Parameters detected in water supply samples (influent and effluent samples) were evaluated and compared to the established USEPA National Primary (MCLs) and Secondary (SMCLs) Drinking Water Standards. MCLs have been established based upon health concerns, whereas SMCLs are based upon aesthetic concerns, such as, taste, color, and odor.

**Table 2** shows all detected parameters and whether or not they were in exceedance of their respective criteria. MTBE was the only parameter to exhibit criteria exceedances for the 1<sup>st</sup> semi-annual 2017 sampling event. The detected concentrations of MTBE in all wells exceeded the MTBE action level in Maryland of 20 µg/L, which is consistent with historical data. An MTBE concentration contour map has been included as **Figure 2**. The concentration of MTBE detected in the effluent sample did not exceed the Maryland action level. It is important to note that there is no established MCL, Region III Regional Screening Level, or MDE Generic Numeric Cleanup Standard for TAME or TBA.

#### 4 SUMMARY AND CONCLUSIONS

MTBE was detected in all eight monitoring wells at the Site. Detected concentrations ranged from 70.3 µg/L in MW-7 to 2,000 µg/L in MW-5. All detected concentrations were above the MTBE action level in Maryland of 20 µg/L, which is consistent with historical data. Regarding water supply samples, MTBE was detected at a low concentration (below the action level in Maryland) in the Current DSW effluent sample but was not detected in the influent sample.

In MW-1, MW-2, MW-4, and Former DSW, MTBE concentrations have fluctuated, but have significantly decreased from historical maximum concentrations measured during 2007 and 2008 monitoring events. The MTBE concentration in MW-3 has significantly decreased from the historical maximum in March 2011. The MTBE concentrations in MW-5 and MW-6 have fluctuated over time, and historical maximum concentrations for both wells were observed during the Fall 2015 monitoring event. MTBE has sporadically been detected in Influent and Effluent samples. The concentration of MTBE in MW-7 has increased over the previous two sampling events. A summary of historical VOC detections, including MTBE, is included as **Table 3**. A time-series graph of MTBE concentrations at all sampling locations is included as **Figure 3**.

Fuel oxygenates TAME and TBA were detected in all eight groundwater wells at the Site. Concentrations of TAME ranged from 16.6 µg/L in MW-7 to 432 µg/L in MW-4. The concentration of TAME in MW-4 notably increased between the September 2016 sampling event (141 µg/L) and the March 2017 sampling event (432 µg/L). Concentrations of TBA ranged from 32.7 µg/L in MW-1 to 3,400 µg/L in MW-4. The concentration of TBA in MW-7 notably increased between the September 2016 sampling event (48.5 µg/L) and the March 2017 sampling event (603 µg/L). There is no MCL, Region III Regional Screening Level, or MDE Generic Numeric Cleanup Standard for either of these parameters. TBA was detected in the Current DSW influent sample at a concentration of 24.1 µg/L, and it was not detected in the effluent sample.

Diisopropyl ether, bromomethane, and trans-1,2-dichloroethene were detected in a few wells for the first time over the historical record during the 1<sup>st</sup> semi-annual monitoring event. The detections of these parameters were all relatively low-level concentrations, but they will be monitored closely during future monitoring events. Historically, benzene, toluene, ethylbenzene, xylenes, and naphthalene have been sporadically detected in monitoring wells at the Site. None of these parameters were detected during the 1<sup>st</sup> semi-annual 2017 monitoring event, except for benzene. Benzene was detected in wells MW-2, MW-3 and MW-4 at concentrations less than 2 µg/L. A summary of VOCs commonly detected over the historical record is included as **Table 3**.

In general, groundwater quality data and trends obtained from the Site during the 1<sup>st</sup> semi-annual 2017 monitoring event are generally consistent with historical data and trends.

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## **FIGURES**

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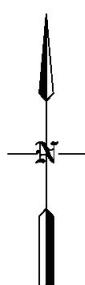
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#### LEGEND

- Monitoring Well, Groundwater Elevation (relative feet)
  - MW-3, 365.13
- Groundwater Elevation Contour (relative feet)
- Groundwater Flow Direction

0 25 50 100  
SCALE IN FEET

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#### Groundwater Contour Map

Green Valley Garage  
11602 Fingerboard Road  
Monrovia, MD

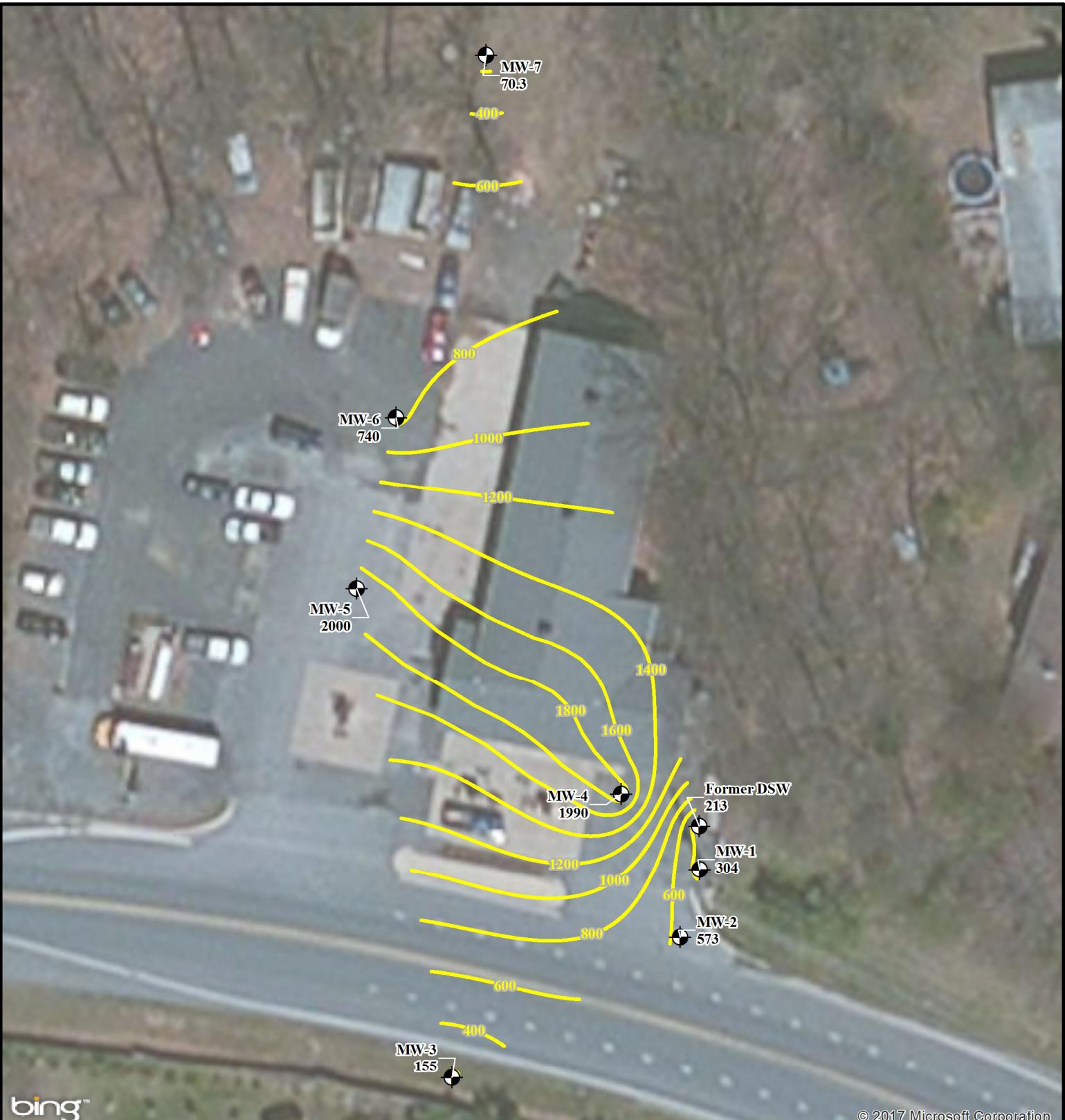
March 2017

ARM Project 170167M



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Figure 1



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#### LEGEND

Monitoring Well, MTBE Concentration ( $\mu\text{g}/\text{L}$ )

MW-3, 155

MTBE Concentration Contour ( $\mu\text{g}/\text{L}$ )

0 25 50 100  
SCALE IN FEET

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#### MTBE Concentration Contour Map

Green Valley Garage  
11602 Fingerboard Road  
Monrovia, MD

April 2017

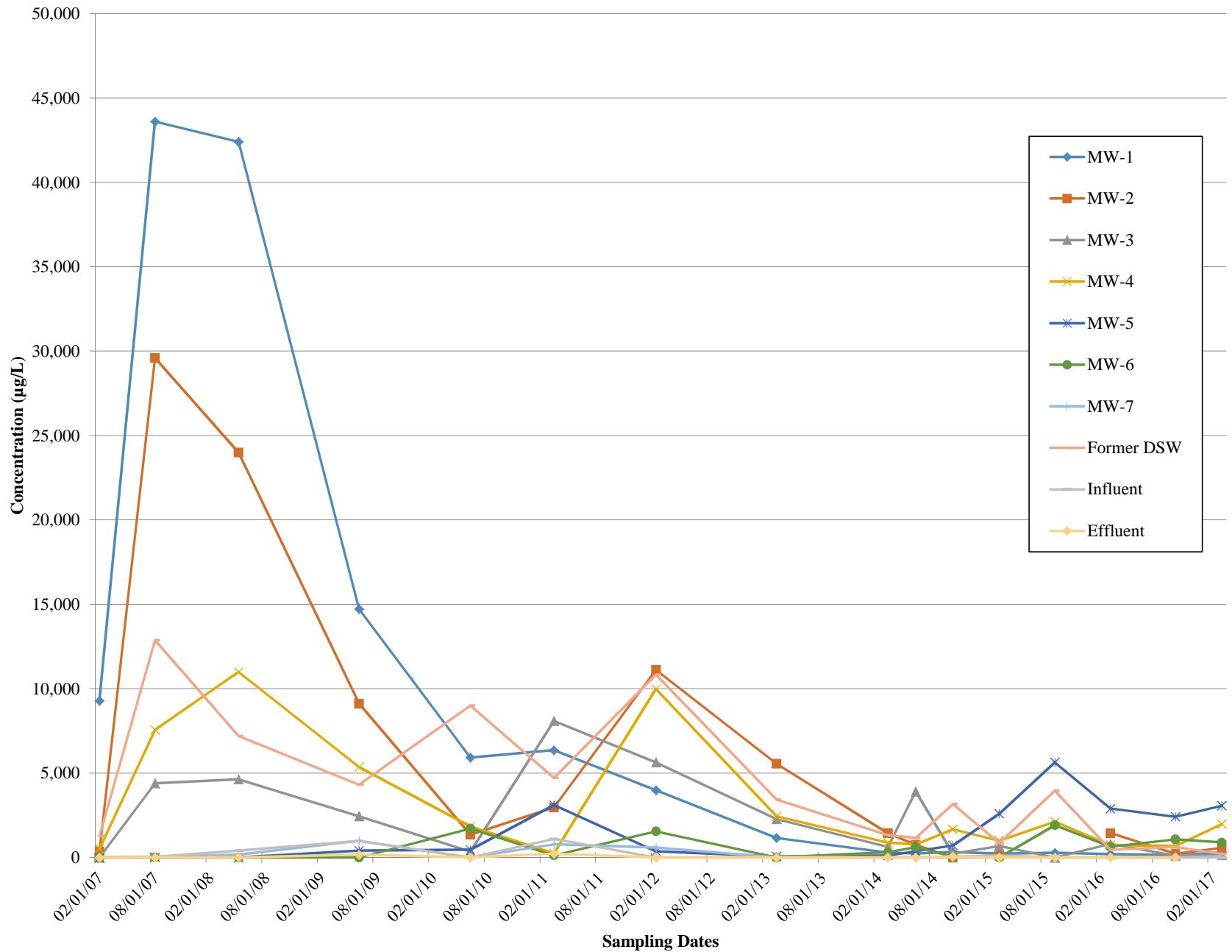
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Figure  
**2**

**Figure 3 - MTBE Time-Series Graph**



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## **TABLES**

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<b>Groundwater Potentiometric Level Measurement Log</b>		 <b>ARM Group Inc.</b> Earth Resource Engineers and Consultants		
Project Name:	Green Valley Garage	Project Number:	170167M	
Measurement Date:	3/1/2017			
<b>Table 1 - Groundwater Elevations - March 2017</b>				
Well Number	Depth to Water (ft)	Total Depth (ft)	Top of Casing from Survey Control Point* (feet)	Potentiometric Elevation* (relative feet)
MW-1	61.80	70.5	6.89	355.31
MW-2	59.52	70	9.39	355.09
MW-3	68.38	70.5	10.49	345.13
MW-4	56.09	84	6.07	361.84
MW-5	76.59	>100	4.73	342.68
MW-6	74.17	100	4.59	345.24
MW-7	79.56	86.5	7.62	336.82
Former Domestic Supply Well	67.59	NA	4.62	351.79

\*Elevation measurements made relative to an arbitrary survey control point.

**Table 2 - Detected Parameters and Criteria Comparison**

Location ID	Parameter	Result	unit	Comparison Criteria
Former DSW	Diisopropyl ether	2	µg/L	
	Methyl Tertiary Butyl Ether	213	µg/L	20
	tert-Amyl methyl ether	51.1	µg/L	
	tert-Butyl Alcohol	167	µg/L	
MW-1	Methyl Tertiary Butyl Ether	304	µg/L	20
	tert-Amyl methyl ether	107	µg/L	
	tert-Butyl Alcohol	32.7	µg/L	
MW-2	Benzene	1.6	µg/L	5
	Diisopropyl ether	5.8	µg/L	
	Methyl Tertiary Butyl Ether	573	µg/L	20
	tert-Amyl methyl ether	82.3	µg/L	
	tert-Butyl Alcohol	222	µg/L	
	Trans-1,2-dichloroethene	2.2	µg/L	100
MW-3	Benzene	1.7	µg/L	5
	Methyl Tertiary Butyl Ether	155	µg/L	20
	tert-Amyl methyl ether	120	µg/L	
	tert-Butyl Alcohol	684	µg/L	
	Trans-1,2-dichloroethene	2.4	µg/L	100
MW-4	Benzene	1.3	µg/L	5
	Methyl Tertiary Butyl Ether	1990	µg/L	20
	tert-Amyl methyl ether	432	µg/L	
	tert-Butyl Alcohol	3400	µg/L	
MW-5	Bromomethane	1.2	µg/L	
	Methyl Tertiary Butyl Ether	2000	µg/L	20
	tert-Amyl methyl ether	402	µg/L	
	tert-Butyl Alcohol	2980	µg/L	
MW-6	Methyl Tertiary Butyl Ether	740	µg/L	20
	tert-Amyl methyl ether	161	µg/L	
	tert-Butyl Alcohol	1060	µg/L	
MW-7	Methyl Tertiary Butyl Ether	70.3	µg/L	20
	tert-Amyl methyl ether	16.6	µg/L	
	tert-Butyl Alcohol	603	µg/L	
	Trans-1,2-dichloroethene	2.1	µg/L	100
Effluent	Methyl Tertiary Butyl Ether	5	µg/L	20
Influent	tert-Butyl Alcohol	24.1	µg/L	

**Table 3 - Historical VOC Detections**

Parameter	Monitoring Event	Effluent	Influent	Former DSW	MW-1	MW-2	MW-3	MW-4	MW-5	MW-6	MW-7
<b>Benzene</b> (comparison criterion: 5 µg/L)	February-07	ND	NS	346	119	11.9	ND	154	ND	ND	ND
	August-07	ND	ND	68	144	111	11	78.1	ND	ND	ND
	May-08	ND	ND	126	156	208	ND	62	ND	ND	ND
	June-09	ND	ND	79.9	24.1	43.1	ND	13.1	ND	ND	ND
	June-10	ND	ND	2600	14.4	308	34.9	11.8	112	331	ND
	March-11	ND	ND	ND	ND	ND	14.4	ND	ND	ND	ND
	February-12	ND	ND	ND	ND	ND	ND	6.76	ND	ND	ND
	March-13	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	March-14	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	June-14	ND	ND	ND	ND	ND	29.9	ND	ND	ND	ND
	October-14	ND	ND	6.78	ND	NS	ND	22.2	ND	ND	ND
	March-15	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	September-15	ND	ND	ND	ND	NS	ND	ND	ND	ND	ND
	December-15	NS	NS	NS	NS	NS	NS	NS	ND	ND	NS
	March-16	ND	ND	ND	ND	ND	1.1	ND	ND	ND	ND
	September-16	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	March-17	ND	ND	ND	1.6	1.7	1.3	ND	ND	ND	ND
<b>Ethylbenzene</b> (comparison criterion: 70 µg/L)	February-07	ND	NS	ND	ND	ND	ND	ND	ND	ND	ND
	August-07	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	May-08	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	June-09	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	June-10	ND	ND	ND	15.2	ND	ND	ND	ND	ND	ND
	March-11	ND	ND	ND	ND	ND	ND	ND	ND	ND	46.6
	February-12	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	March-13	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	March-14	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	June-14	ND	ND	ND	ND	ND	13.1	ND	ND	ND	ND
	October-14	ND	ND	ND	ND	NS	ND	ND	ND	ND	ND
	March-15	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	September-15	ND	ND	ND	ND	NS	ND	ND	ND	ND	ND
	December-15	NS	NS	NS	NS	NS	NS	NS	ND	ND	NS
	March-16	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	September-16	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	March-17	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
<b>Toluene</b> (comparison criterion: 1,000 µg/L)	February-07	ND	NS	ND	ND	ND	ND	ND	ND	ND	ND
	August-07	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	May-08	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	June-09	ND	ND	ND	ND	30.6	ND	ND	ND	ND	ND
	June-10	ND	ND	ND	5.61	ND	ND	ND	ND	ND	ND
	March-11	ND	ND	ND	26.8	ND	ND	ND	ND	ND	ND
	February-12	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	March-13	ND	ND	26.2	ND						
	March-14	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	June-14	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	October-14	ND	ND	ND	ND	NS	ND	5.87	ND	ND	ND
	March-15	ND	1.87	ND	ND	ND	ND	11.6	ND	ND	ND
	September-15	ND	ND	ND	ND	NS	ND	ND	ND	ND	ND
	December-15	NS	NS	NS	NS	NS	NS	NS	ND	ND	NS
	March-16	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	September-16	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	March-17	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
<b>Xylenes</b> (comparison criterion: 10,000 µg/L)	February-07	ND	NS	ND	47.4	ND	ND	9.26	ND	ND	ND
	August-07	ND	ND	45	7	ND	ND	ND	ND	ND	ND
	May-08	ND	ND	ND	68	7	ND	ND	ND	ND	ND
	June-09	ND	ND	ND	ND	110	ND	ND	ND	ND	ND
	June-10	ND	ND	ND	17.6	ND	ND	ND	ND	ND	ND
	March-11	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	February-12	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	March-13	ND	ND	135.6	ND						
	March-14	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	June-14	ND	ND	ND	ND	ND	87.2	ND	ND	ND	ND
	October-14	ND	ND	ND	ND	NS	ND	137	ND	ND	ND
	March-15	ND	1.42 J	ND	ND	ND	ND	ND	ND	ND	ND
	September-15	ND	ND	ND	ND	NS	ND	ND	ND	ND	ND
	December-15	NS	NS	NS	NS	NS	NS	NS	ND	ND	NS
	March-16	ND	ND	ND	ND	ND	1.2	ND	ND	ND	ND
	September-16	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	March-17	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

**Table 3 - Historical VOC Detections**

Parameter	Monitoring Event	Effluent	Influent	Former DSW	MW-1	MW-2	MW-3	MW-4	MW-5	MW-6	MW-7
<b>Methyl Tertiary Butyl Ether</b> (comparison criterion: 20 µg/L)	February-07	ND	NS	1275	9280	362	ND	524	ND	ND	ND
	August-07	ND	38	12880	43600	29600	4400	7560	11	6	52
	May-08	4.4	410	7200	42400	24000	4640	11000	ND	ND	168
	June-09	168	984	4320	14720	9120	2450	5360	413	ND	992
	June-10	ND	2.98	9000	5920	1360	357	1840	460	1720	ND
	March-11	232	1100	4720	6360	2970	8100	256	3120	134	792
	February-12	ND	6.98	10840	3988	11120	5640	9990	366	1550	585
	March-13	ND	ND	3440	1160	5560	2276	2440	64.47	ND	ND
	March-14	4.14	0.98 J	1323	297	1440	636	880	114	305	ND
	June-14	ND	14.9	1160	244	755	3920	776	382	617	ND
	October-14	60.7	23.8	3170	330	NS	226	1680	714	55.4	ND
	March-15	ND	115	852	231	122	690	1000	2600	ND	ND
	September-15	ND	ND	3960	279	NS	ND	2120	5640	1920	ND
	December-15	NS	NS	NS	NS	NS	NS	NS	2900	642	NS
	March-16	ND	1.2	450	199	1450	808	731	2420	1080	ND
	September-16	7.9	ND	626	148	233	116	685	3080	894	9.7
	March-17	5	ND	213	304	573	155	1990	2000	740	70.3
<b>tert-Amyl methyl ether</b>	March-16	ND	ND	121	67	302	244	177	577	273	ND
	September-16	0.91	ND	129	32.1	32.8	26.4	141	452	184	1.5
	March-17	ND	ND	51.1	107	82.3	120	432	402	161	16.6
<b>tert-Butyl Alcohol</b>	March-16	57.4	60	1430	51.7	333	1580	2450	2370	776	ND
	September-16	11.7	82.4	2860	ND	71.2	282	3570	4950	830	48.5
	March-17	ND	24.1	167	32.7	222	684	3400	2980	1060	603

All concentration units are µg/L

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**APPENDIX A –**  
**Field Sampling Records**

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## Well Sampling/ MicroPurge Log



ARM Group Inc.

Earth Resource Engineers and Consultants

Project Name: Green Valley Garage

Project Number: 170167M

Well Number: MW-1

Date: March 1, 2017

## WELL PURGING RECORD

Time	Volume Purged (gallons)	DTW (ft)	Temp (°C)	pH (s.u.)	Specific Conductance (mS/cm)	Dissolved Oxygen (mg/L)	ORP (mV)	Turbidity (NTU)	Comments
12.13	0.75	61.78	15.89	5.52	0.323	0.88	154.0	12.7	clear
12.13	1.25	61.99	15.94	5.51	0.299	0.77	154.7	10.2	
12.23	1.6	62.34	16.15	5.52	0.297	0.79	155.1	9.82	
12.28	2.2	62.81	16.39	5.52	0.304	0.73	158.6	14.8	
12.33	2.5	63.10	16.86	5.53	0.309	0.81	160.2	13.3	

## VOLUNTARY MONITORING SAMPLE RECORD

Sample ID	Collection Time	Parameter	Container	Preservative	Y/N
MW-1	1238	VOC/FM	2 - 40 mL VOA	HCL	Y

Sampled By: LMG Comments:

Notes:

Flow ~ 400 mL/min

truck battery low @ ~ 1225; turned on & flow ↑ ~ 500 mL/min  
(slowest it can purge out)

Casing Volume: 1" I.D. = 0.041 gal/ft - 2" I.D. = 0.163 gal/ft - 4" I.D. = 0.653 gal/ft - 6" I.D. = 1.47 gal/ft  
\_\_\_\_\_ ft x \_\_\_\_\_ gal/ft = \_\_\_\_\_ (gal)



## Well Sampling/ MicroPurge Log



**ARM Group Inc.**  
Earth Resource Engineers and Consultants

Project Name: Green Valley Garage

Project Number: 170167M

Well Number: MW-3

Date: March 2, 2017

### WELL PURGING RECORD

Time	Volume Purged (gallons)	DTW (ft)	Temp (°C)	pH (s.u.)	Specific Conductance (mS/cm)	Dissolved Oxygen (mg/L)	ORP (mV)	Turbidity (NTU)	Comments
0923	1.5	68.38	14.82	5.44	1.297	1.47	158.5	23.3	light brown/turbid
0928	2.25	48.59	14.89	5.45	1.288	1.07	-194	162.7	22.5
0933	3.0	69.01	14.86	5.45	1.287	1.09	164.3	18.7	
0938	3.7	69.28	14.89	5.46	1.284	1.11	166.3	12.1	

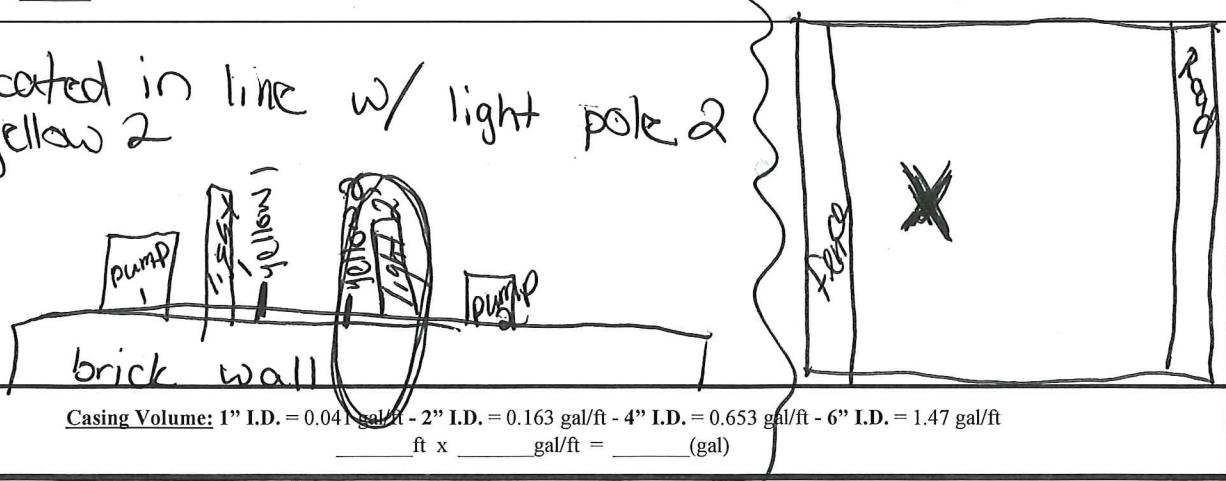
### VOLUNTARY MONITORING SAMPLE RECORD

Sample ID	Collection Time	Parameter	Container	Preservative	Y/N
MW-3	0943	VOC/FM	2 - 40 mL VOA	HCL	

Sampled By: LMG Comments:

Notes:

located in line w/  
+ yellow 2 light pole 2



Casing Volume: 1" I.D. = 0.041 gal/ft - 2" I.D. = 0.163 gal/ft - 4" I.D. = 0.653 gal/ft - 6" I.D. = 1.47 gal/ft  
 ft x \_\_\_\_\_ gal/ft = \_\_\_\_\_ (gal)

$$6 \text{ DTW} = 68.38$$

# Well Sampling/ MicroPurge Log



**ARM Group Inc.**

Earth Resource Engineers and Consultants

Project Name: Green Valley Garage

Project Number: 170167M

Well Number: MW-4

Date: March 1, 2017

## WELL PURGING RECORD

Time	Volume Purged (gallons)	DTW (ft)	Temp (°C)	pH (s.u.)	Specific Conductance (mS/cm)	Dissolved Oxygen (mg/L)	ORP (mV)	Turbidity (NTU)	Comments
1133	1.0	56.09	16.83	5.38	0.440	0.91	141.8	37.4	white/ cloudy
1138	1.5	56.15	16.33	5.34	0.438	0.67	146.5	34.9	
1143	2.0	56.38	16.38	5.33	0.430	0.61	149.1	32.1	
1148	2.5	56.47	16.45	5.33	0.429	0.58	152.0	18.2	

## VOLUNTARY MONITORING SAMPLE RECORD

Sample ID	Collection Time	Parameter	Container	Preservative	Y/N
MW-4	1153	VOC/FM	2 - 40 mL VOA	HCL	Y

Sampled By: LMG Comments:

Notes:

flow ~ 400 mL/min

Casing Volume: 1" I.D. = 0.041 gal/ft - 2" I.D. = 0.163 gal/ft - 4" I.D. = 0.653 gal/ft - 6" I.D. = 1.47 gal/ft  
                 ft x                  gal/ft =                  (gal)



## Well Sampling/ MicroPurge Log



**ARM Group Inc.**

Earth Resource Engineers and Consultants

Project Name: Green Valley Garage

Project Number: 170167M

Well Number: MW-6

Date: March 1, 2017

### WELL PURGING RECORD

Time	Volume Purged (gallons)	DTW (ft)	Temp (°C)	pH (s.u.)	Specific Conductance (mS/cm)	Dissolved Oxygen (mg/L)	ORP (mV)	Turbidity (NTU)	Comments
1017	1.0	74.23	14.43	7.18	0.512	0.93	17.2	286.8	clear
1022	1.5	74.34	14.79	7.23	0.511	0.75	8.6	41.7	
1027	2.0	74.58	15.01	7.23	0.501	0.64	5.1	40.7	
1032	2.5	74.69	15.08	7.22	0.60495	0.57	6.3	45.7	
1037									

### VOLUNTARY MONITORING SAMPLE RECORD

Sample ID		Collection Time	Parameter	Container	Preservative	Y/N
MW-6		1037	VOC/FM	2 - 40 mL VOA	HCL	Y

Sampled By: LMG Comments:

Notes:

flow ~ 400 mL/min

Casing Volume: 1" I.D. = 0.041 gal/ft - 2" I.D. = 0.163 gal/ft - 4" I.D. = 0.653 gal/ft - 6" I.D. = 1.47 gal/ft  
 \_\_\_\_\_ ft x \_\_\_\_\_ gal/ft = \_\_\_\_\_ (gal)

## **Well Sampling/ MicroPurge Log**



# ARM Group Inc.

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Project Name: Green Valley Garage

Project Number: 170167M

Well Number: MW-7

Date: March 2, 2017

## WELL PURGING RECORD

## VOLUNTARY MONITORING SAMPLE RECORD

Sample ID		Collection Time	Parameter	Container	Preservative	Y/N
MW-7		0750	VOC/FM	2 - 40 mL VOA	HCL	

Sampled By: LMG Comments:

### Notes:

flow  $\approx$  500 ml/min

**Casing Volume:** 1" I.D. = 0.041 gal/ft - 2" I.D. = 0.163 gal/ft - 4" I.D. = 0.653 gal/ft - 6" I.D. = 1.47 gal/ft  
ft x gal/ft = (gal)

## Well Sampling/ MicroPurge Log



ARM Group Inc.

## Earth Resource Engineers and Consultants

Project Name: Green Valley Garage

Project Number: 170167M

Well Number: ASW

Date: March 1, 2017

## WELL PURGING RECORD

## VOLUNTARY MONITORING SAMPLE RECORD

Sample ID		Collection Time	Parameter	Container	Preservative	Y/N
15W		1307	VOC/FM	2 - 40 mL VOA	HCL	Y

Sampled By: LMG Comments:

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**Notes:**

flow  $\approx$  500 ml/min

Casing Volume: 1" I.D. = 0.041 gal/ft - 2" I.D. = 0.163 gal/ft - 4" I.D. = 0.653 gal/ft - 6" I.D. = 1.47 gal/ft  
ft x gal/ft = (gal)

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**APPENDIX B –**  
**Laboratory Certificate of Analysis**

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March 9, 2017

Mr. Stewart Kabis  
ARM Group, Inc. - MD  
9175 Guilford Road  
Suite 310  
Columbia, MD 21046

## Certificate of Analysis

Revised Report - 3/9/2017 6:20:14 PM - See workorder comment section for explanation

Project Name:	<b>GVG SPRING/170167M-MD SITE</b>	Workorder:	<b>2211841</b>
Purchase Order:	<b>170167M</b>	Workorder ID:	<b>GVG SPRING/170167M-MD SITE</b>

Dear Mr. Kabis:

Enclosed are the analytical results for samples received by the laboratory on Wednesday, March 1, 2017.

The ALS Environmental laboratory in Middletown, Pennsylvania is a National Environmental Laboratory Accreditation Program (NELAP) accredited laboratory and as such, certifies that all applicable test results meet the requirements of NELAP.

If you have any questions regarding this certificate of analysis, please contact Ms. Susan J Scherer (Project Coordinator) at (717) 944-5541.

Analyses were performed according to our laboratory's NELAP-approved quality assurance program and any applicable state requirements. The test results meet requirements of the current NELAP standards or state requirements, where applicable. For a specific list of accredited analytes, refer to the certifications section of the ALS website at [www.alsglobal.com/en/Our-Services/Life-Sciences/Environmental/Downloads](http://www.alsglobal.com/en/Our-Services/Life-Sciences/Environmental/Downloads).

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

ALS Spring City: 10 Riverside Drive, Spring City, PA 19475 610-948-4903

CC: Mr. Eric Magdar , Accounts Payable

*This page is included as part of the Analytical Report and must be retained as a permanent record thereof.*

**Ms. Susan J Scherer**  
Project Coordinator

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## SAMPLE SUMMARY

Workorder: 2211841 GVG SPRING/170167M-MD SITE

Lab ID	Sample ID	Matrix	Date Collected	Date Received	Collected By
2211841001	Effluent	Drinking Water	3/1/2017 08:40	3/1/2017 21:30	Collected by Client
2211841002	Influent	Drinking Water	3/1/2017 08:45	3/1/2017 21:30	Collected by Client
2211841003	MW-5	Ground Water	3/1/2017 09:56	3/1/2017 21:30	Collected by Client
2211841004	MW-6	Ground Water	3/1/2017 10:37	3/1/2017 21:30	Collected by Client
2211841005	MW-4	Ground Water	3/1/2017 11:53	3/1/2017 21:30	Collected by Client
2211841006	MW-1	Ground Water	3/1/2017 12:38	3/1/2017 21:30	Collected by Client
2211841007	DSW	Ground Water	3/1/2017 13:07	3/1/2017 21:30	Collected by Client
2211841008	Trip Blank	Ground Water	3/1/2017 00:00	3/1/2017 21:30	Collected by Client

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## SAMPLE SUMMARY

Workorder: 2211841 GVG SPRING/170167M-MD SITE

### Notes

- Samples collected by ALS personnel are done so in accordance with the procedures set forth in the ALS Field Sampling Plan (20 - Field Services Sampling Plan).
- All Waste Water analyses comply with methodology requirements of 40 CFR Part 136.
- All Drinking Water analyses comply with methodology requirements of 40 CFR Part 141.
- Unless otherwise noted, all quantitative results for soils are reported on a dry weight basis.
- The Chain of Custody document is included as part of this report.
- All Library Search analytes should be regarded as tentative identifications based on the presumptive evidence of the mass spectra. Concentrations reported are estimated values.
- Parameters identified as "analyze immediately" require analysis within 15 minutes of collection. Any "analyze immediately" parameters not listed under the header "Field Parameters" are preformed in the laboratory and are therefore analyzed out of hold time.
- Method references listed on this report beginning with the prefix "S" followed by a method number (such as S2310B-97) refer to methods from "Standard Methods for the Examination of Water and Wastewater".
- For microbiological analyses, the "Prepared" value is the date/time into the incubator and the "Analyzed" value is the date/time out the incubator.

### Standard Acronyms/Flags

J	Indicates an estimated value between the Method Detection Limit (MDL) and the Practical Quantitation Limit (PQL) for the analyte
U	Indicates that the analyte was Not Detected (ND)
N	Indicates presumptive evidence of the presence of a compound
MDL	Method Detection Limit
PQL	Practical Quantitation Limit
RDL	Reporting Detection Limit
ND	Not Detected - indicates that the analyte was Not Detected at the RDL
Cntr	Analysis was performed using this container
RegLmt	Regulatory Limit
LCS	Laboratory Control Sample
MS	Matrix Spike
MSD	Matrix Spike Duplicate
DUP	Sample Duplicate
%Rec	Percent Recovery
RPD	Relative Percent Difference
LOD	DoD Limit of Detection
LOQ	DoD Limit of Quantitation
DL	DoD Detection Limit
I	Indicates reported value is greater than or equal to the Method Detection Limit (MDL) but less than the Report Detection Limit (RDL)
(S)	Surrogate Compound
NC	Not Calculated
*	Result outside of QC limits

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## PROJECT SUMMARY

Workorder: 2211841 GVG SPRING/170167M-MD SITE

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### Workorder Comments

This certificate of analysis was modified to report the requested analysis of EPA 524.2 for the effluent and influent locations as requested on the chain of custody. Originally SW846-8260B was analyzed and reported in error. SJS 03/08/17

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## ANALYTICAL RESULTS

Workorder: 2211841 GVG SPRING/170167M-MD SITE

Lab ID:	<b>2211841001</b>	Date Collected:	3/1/2017 08:40	Matrix:	Drinking Water
Sample ID:	<b>Effluent</b>	Date Received:	3/1/2017 21:30		

Parameters	Results	Flag	Units	RDL	Method	Prepared By	Analyzed By	By Cntr
<b>VOLATILE ORGANICS</b>								
Acetone	ND		ug/L	10.0	SW846 8260B		3/2/17 11:02	DD A
Acetone	ND		ug/L	5.0	EPA 524.2		3/8/17 18:36	TMP B
Acrylonitrile	ND		ug/L	2.5	EPA 524.2		3/8/17 18:36	TMP B
tert-Amyl methyl ether	ND		ug/L	1.0	SW846 8260B		3/2/17 11:02	DD A
tert-Amyl methyl ether	0.65		ug/L	0.50	EPA 524.2		3/8/17 18:36	TMP B
tert-Amyl Alcohol	ND		ug/L	5.0	EPA 524.2		3/8/17 18:36	TMP B
tert-Amyl Ethylether	ND		ug/L	0.50	EPA 524.2		3/8/17 18:36	TMP B
Benzene	ND		ug/L	1.0	SW846 8260B		3/2/17 11:02	DD A
Benzene	ND		ug/L	0.50	EPA 524.2		3/8/17 18:36	TMP B
Bromobenzene	ND		ug/L	0.50	EPA 524.2		3/8/17 18:36	TMP B
Bromoform	ND		ug/L	1.0	SW846 8260B		3/2/17 11:02	DD A
Bromoform	ND		ug/L	0.50	EPA 524.2		3/8/17 18:36	TMP B
Bromomethane	ND		ug/L	1.0	SW846 8260B		3/2/17 11:02	DD A
Bromomethane	ND		ug/L	0.50	EPA 524.2		3/8/17 18:36	TMP B
2-Butanone	ND		ug/L	10.0	SW846 8260B		3/2/17 11:02	DD A
2-Butanone	ND		ug/L	2.5	EPA 524.2		3/8/17 18:36	TMP B
tert-Butyl Alcohol	ND		ug/L	10.0	SW846 8260B		3/2/17 11:02	DD A
tert-Butyl Alcohol	9.8		ug/L	5.0	EPA 524.2		3/8/17 18:36	TMP B
n-Butylbenzene	ND		ug/L	0.50	EPA 524.2		3/8/17 18:36	TMP B
tert-Butylbenzene	ND		ug/L	0.50	EPA 524.2		3/8/17 18:36	TMP B
sec-Butylbenzene	ND		ug/L	0.50	EPA 524.2		3/8/17 18:36	TMP B
Carbon Disulfide	ND		ug/L	1.0	SW846 8260B		3/2/17 11:02	DD A
Carbon Disulfide	ND		ug/L	0.50	EPA 524.2		3/8/17 18:36	TMP B
Carbon Tetrachloride	ND		ug/L	1.0	SW846 8260B		3/2/17 11:02	DD A
Carbon Tetrachloride	ND		ug/L	0.50	EPA 524.2		3/8/17 18:36	TMP B
Chloroacetonitrile	ND		ug/L	2.5	EPA 524.2		3/8/17 18:36	TMP B
Chlorobenzene	ND		ug/L	1.0	SW846 8260B		3/2/17 11:02	DD A
Chlorobenzene	ND		ug/L	0.50	EPA 524.2		3/8/17 18:36	TMP B
1-Chlorobutane	ND		ug/L	1.0	EPA 524.2		3/8/17 18:36	TMP B
Chlorodibromomethane	ND		ug/L	1.0	SW846 8260B		3/2/17 11:02	DD A
Chlorodibromomethane	ND		ug/L	0.50	EPA 524.2		3/8/17 18:36	TMP B

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## ANALYTICAL RESULTS

Workorder: 2211841 GVG SPRING/170167M-MD SITE

Lab ID: **2211841001** Date Collected: 3/1/2017 08:40 Matrix: Drinking Water  
Sample ID: **Effluent** Date Received: 3/1/2017 21:30

Parameters	Results	Flag	Units	RDL	Method	Prepared By	Analyzed By	By	Cntr
Chloroethane	ND		ug/L	1.0	SW846 8260B		3/2/17 11:02	DD	A
Chloroethane	ND		ug/L	0.50	EPA 524.2		3/8/17 18:36	TMP	B
Chloroform	ND		ug/L	1.0	SW846 8260B		3/2/17 11:02	DD	A
Chloroform	ND		ug/L	0.50	EPA 524.2		3/8/17 18:36	TMP	B
Chloromethane	ND		ug/L	1.0	SW846 8260B		3/2/17 11:02	DD	A
Chloromethane	ND		ug/L	0.50	EPA 524.2		3/8/17 18:36	TMP	B
3-Chloro-1-propene	ND		ug/L	0.50	EPA 524.2		3/8/17 18:36	TMP	B
o-Chlorotoluene	ND		ug/L	0.50	EPA 524.2		3/8/17 18:36	TMP	B
p-Chlorotoluene	ND		ug/L	0.50	EPA 524.2		3/8/17 18:36	TMP	B
Cyclohexane	ND		ug/L	1.0	SW846 8260B		3/2/17 11:02	DD	A
Cyclohexane	ND		ug/L	0.50	EPA 524.2		3/8/17 18:36	TMP	B
1,2-Dibromo-3-chloropropane	ND		ug/L	7.0	SW846 8260B		3/2/17 11:02	DD	A
1,2-Dibromo-3-chloropropane	ND		ug/L	0.50	EPA 524.2		3/8/17 18:36	TMP	B
1,2-Dibromoethane	ND		ug/L	1.0	SW846 8260B		3/2/17 11:02	DD	A
1,2-Dibromoethane	ND		ug/L	0.50	EPA 524.2		3/8/17 18:36	TMP	B
Dibromomethane	ND		ug/L	0.50	EPA 524.2		3/8/17 18:36	TMP	B
trans-1,4-Dichloro-2-butene	ND		ug/L	1.0	EPA 524.2		3/8/17 18:36	TMP	B
1,1-Dichloro-2-Propanone	ND		ug/L	12.5	EPA 524.2		3/8/17 18:36	TMP	B
1,2-Dichlorobenzene	ND		ug/L	1.0	SW846 8260B		3/2/17 11:02	DD	A
1,2-Dichlorobenzene	ND		ug/L	0.50	EPA 524.2		3/8/17 18:36	TMP	B
1,3-Dichlorobenzene	ND		ug/L	1.0	SW846 8260B		3/2/17 11:02	DD	A
1,3-Dichlorobenzene	ND		ug/L	0.50	EPA 524.2		3/8/17 18:36	TMP	B
1,4-Dichlorobenzene	ND		ug/L	1.0	SW846 8260B		3/2/17 11:02	DD	A
1,4-Dichlorobenzene	ND		ug/L	0.50	EPA 524.2		3/8/17 18:36	TMP	B
Dichlorodifluoromethane	ND		ug/L	1.0	SW846 8260B		3/2/17 11:02	DD	A
Dichlorodifluoromethane	ND		ug/L	0.50	EPA 524.2		3/8/17 18:36	TMP	B
1,1-Dichloroethane	ND		ug/L	1.0	SW846 8260B		3/2/17 11:02	DD	A
1,1-Dichloroethane	ND		ug/L	0.50	EPA 524.2		3/8/17 18:36	TMP	B
1,2-Dichloroethane	ND		ug/L	1.0	SW846 8260B		3/2/17 11:02	DD	A
1,2-Dichloroethane	ND		ug/L	0.50	EPA 524.2		3/8/17 18:36	TMP	B
1,1-Dichloroethene	ND		ug/L	1.0	SW846 8260B		3/2/17 11:02	DD	A
1,1-Dichloroethene	ND		ug/L	0.50	EPA 524.2		3/8/17 18:36	TMP	B
cis-1,2-Dichloroethene	ND		ug/L	1.0	SW846 8260B		3/2/17 11:02	DD	A
cis-1,2-Dichloroethene	ND		ug/L	0.50	EPA 524.2		3/8/17 18:36	TMP	B
trans-1,2-Dichloroethene	ND		ug/L	1.0	SW846 8260B		3/2/17 11:02	DD	A

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## ANALYTICAL RESULTS

Workorder: 2211841 GVG SPRING/170167M-MD SITE

Lab ID: **2211841001** Date Collected: 3/1/2017 08:40 Matrix: Drinking Water  
Sample ID: **Effluent** Date Received: 3/1/2017 21:30

Parameters	Results	Flag	Units	RDL	Method	Prepared By	Analyzed By	By	Cntr
trans-1,2-Dichloroethene	ND		ug/L	0.50	EPA 524.2		3/8/17 18:36	TMP	B
Dichlorofluoromethane	ND		ug/L	0.50	EPA 524.2		3/8/17 18:36	TMP	B
1,3-Dichloropropane	ND		ug/L	0.50	EPA 524.2		3/8/17 18:36	TMP	B
2,2-Dichloropropane	ND		ug/L	0.50	EPA 524.2		3/8/17 18:36	TMP	B
1,2-Dichloropropane	ND		ug/L	1.0	SW846 8260B		3/2/17 11:02	DD	A
1,2-Dichloropropane	ND		ug/L	0.50	EPA 524.2		3/8/17 18:36	TMP	B
1,1-Dichloropropene	ND		ug/L	0.50	EPA 524.2		3/8/17 18:36	TMP	B
cis-1,3-Dichloropropene	ND		ug/L	1.0	SW846 8260B		3/2/17 11:02	DD	A
cis-1,3-Dichloropropene	ND		ug/L	0.50	EPA 524.2		3/8/17 18:36	TMP	B
trans-1,3-Dichloropropene	ND		ug/L	1.0	SW846 8260B		3/2/17 11:02	DD	A
trans-1,3-Dichloropropene	ND		ug/L	0.50	EPA 524.2		3/8/17 18:36	TMP	B
1,3-Dichloropropene, Total	ND		ug/L	1.0	EPA 524.2		3/8/17 18:36	TMP	B
Diisopropyl ether	ND		ug/L	1.0	SW846 8260B		3/2/17 11:02	DD	A
Diisopropyl ether	1.3		ug/L	0.50	EPA 524.2		3/8/17 18:36	TMP	B
1,4-Dioxane	ND		ug/L	320	SW846 8260B		3/2/17 11:02	DD	A
Ethyl Ether	ND		ug/L	0.50	EPA 524.2		3/8/17 18:36	TMP	B
Ethyl Methacrylate	ND		ug/L	0.50	EPA 524.2		3/8/17 18:36	TMP	B
Ethyl tert-butyl ether	ND		ug/L	0.50	EPA 524.2		3/8/17 18:36	TMP	B
Ethylbenzene	ND		ug/L	1.0	SW846 8260B		3/2/17 11:02	DD	A
Ethylbenzene	ND		ug/L	0.50	EPA 524.2		3/8/17 18:36	TMP	B
Freon 113	ND		ug/L	1.0	SW846 8260B		3/2/17 11:02	DD	A
Freon 113	ND		ug/L	0.50	EPA 524.2		3/8/17 18:36	TMP	B
Hexachlorobutadiene	ND		ug/L	0.50	EPA 524.2		3/8/17 18:36	TMP	B
Hexachloroethane	ND		ug/L	1.0	EPA 524.2		3/8/17 18:36	TMP	B
Hexane	ND		ug/L	0.50	EPA 524.2		3/8/17 18:36	TMP	B
2-Hexanone	ND		ug/L	5.0	SW846 8260B		3/2/17 11:02	DD	A
2-Hexanone	ND		ug/L	2.5	EPA 524.2		3/8/17 18:36	TMP	B
Iodomethane	ND		ug/L	0.50	EPA 524.2		3/8/17 18:36	TMP	B
Isopropyl Alcohol	ND		ug/L	25.0	EPA 524.2		3/8/17 18:36	TMP	B
Isopropylbenzene	ND		ug/L	1.0	SW846 8260B		3/2/17 11:02	DD	A
Isopropylbenzene	ND		ug/L	0.50	EPA 524.2		3/8/17 18:36	TMP	B
p-Isopropyltoluene	ND		ug/L	0.50	EPA 524.2		3/8/17 18:36	TMP	B
Methacrylonitrile	ND		ug/L	1.0	EPA 524.2		3/8/17 18:36	TMP	B
Methyl methacrylate	ND		ug/L	0.50	EPA 524.2		3/8/17 18:36	TMP	B
Methyl acetate	ND		ug/L	2.0	SW846 8260B		3/2/17 11:02	DD	A
Methyl acetate	ND		ug/L	0.50	EPA 524.2		3/8/17 18:36	TMP	B
Methyl acrylate	ND		ug/L	1.0	EPA 524.2		3/8/17 18:36	TMP	B

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State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

## ANALYTICAL RESULTS

Workorder: 2211841 GVG SPRING/170167M-MD SITE

Lab ID: **2211841001** Date Collected: 3/1/2017 08:40 Matrix: Drinking Water  
Sample ID: **Effluent** Date Received: 3/1/2017 21:30

Parameters	Results	Flag	Units	RDL	Method	Prepared By	Analyzed By	By	Cntr
Methyl cyclohexane	ND		ug/L	1.0	SW846 8260B		3/2/17 11:02	DD	A
Methyl cyclohexane	ND		ug/L	0.50	EPA 524.2		3/8/17 18:36	TMP	B
Methyl t-Butyl Ether	5.0		ug/L	1.0	SW846 8260B		3/2/17 11:02	DD	A
Methyl t-Butyl Ether	6.0		ug/L	0.50	EPA 524.2		3/8/17 18:36	TMP	B
4-Methyl-2-Pentanone(MIBK)	ND		ug/L	5.0	SW846 8260B		3/2/17 11:02	DD	A
4-Methyl-2-Pentanone(MIBK)	ND		ug/L	2.5	EPA 524.2		3/8/17 18:36	TMP	B
Methylene Chloride	ND		ug/L	1.0	SW846 8260B		3/2/17 11:02	DD	A
Methylene Chloride	ND		ug/L	0.50	EPA 524.2		3/8/17 18:36	TMP	B
Naphthalene	ND		ug/L	2.0	SW846 8260B		3/2/17 11:02	DD	A
Naphthalene	ND		ug/L	0.50	EPA 524.2		3/8/17 18:36	TMP	B
Nitrobenzene	ND		ug/L	5.0	EPA 524.2		3/8/17 18:36	TMP	B
2-Nitropropane	ND		ug/L	2.5	EPA 524.2		3/8/17 18:36	TMP	B
Octane	ND		ug/L	0.50	EPA 524.2		3/8/17 18:36	TMP	B
Pentachloroethane	ND		ug/L	0.50	EPA 524.2		3/8/17 18:36	TMP	B
Pentane	ND		ug/L	0.50	EPA 524.2		3/8/17 18:36	TMP	B
Propionitrile	ND		ug/L	2.5	EPA 524.2		3/8/17 18:36	TMP	B
n-Propylbenzene	ND		ug/L	0.50	EPA 524.2		3/8/17 18:36	TMP	B
Styrene	ND		ug/L	1.0	SW846 8260B		3/2/17 11:02	DD	A
Styrene	ND		ug/L	0.50	EPA 524.2		3/8/17 18:36	TMP	B
1,1,1,2-Tetrachloroethane	ND		ug/L	0.50	EPA 524.2		3/8/17 18:36	TMP	B
1,1,2,2-Tetrachloroethane	ND		ug/L	1.0	SW846 8260B		3/2/17 11:02	DD	A
1,1,2,2-Tetrachloroethane	ND		ug/L	0.50	EPA 524.2		3/8/17 18:36	TMP	B
Tetrachloroethene	ND		ug/L	1.0	SW846 8260B		3/2/17 11:02	DD	A
Tetrachloroethene	ND		ug/L	0.50	EPA 524.2		3/8/17 18:36	TMP	B
Tetrahydrofuran	ND		ug/L	2.5	EPA 524.2		3/8/17 18:36	TMP	B
Toluene	ND		ug/L	1.0	SW846 8260B		3/2/17 11:02	DD	A
Toluene	ND		ug/L	0.50	EPA 524.2		3/8/17 18:36	TMP	B
Total Xylenes	ND		ug/L	3.0	SW846 8260B		3/2/17 11:02	DD	A
Total Xylenes	ND		ug/L	0.50	EPA 524.2		3/8/17 18:36	TMP	B
1,2,3-Trichlorobenzene	ND		ug/L	2.0	SW846 8260B		3/2/17 11:02	DD	A
1,2,3-Trichlorobenzene	ND		ug/L	0.50	EPA 524.2		3/8/17 18:36	TMP	B
1,2,4-Trichlorobenzene	ND		ug/L	2.0	SW846 8260B		3/2/17 11:02	DD	A
1,2,4-Trichlorobenzene	ND		ug/L	0.50	EPA 524.2		3/8/17 18:36	TMP	B
1,1,1-Trichloroethane	ND		ug/L	1.0	SW846 8260B		3/2/17 11:02	DD	A
1,1,1-Trichloroethane	ND		ug/L	0.50	EPA 524.2		3/8/17 18:36	TMP	B

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## ANALYTICAL RESULTS

Workorder: 2211841 GVG SPRING/170167M-MD SITE

Lab ID: **2211841001** Date Collected: 3/1/2017 08:40 Matrix: Drinking Water  
Sample ID: **Effluent** Date Received: 3/1/2017 21:30

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
1,1,2-Trichloroethane	ND		ug/L	1.0	SW846 8260B			3/2/17 11:02	DD	A
1,1,2-Trichloroethane	ND		ug/L	0.50	EPA 524.2			3/8/17 18:36	TMP	B
Trichloroethene	ND		ug/L	1.0	SW846 8260B			3/2/17 11:02	DD	A
Trichloroethene	ND		ug/L	0.50	EPA 524.2			3/8/17 18:36	TMP	B
Trichlorofluoromethane	ND		ug/L	1.0	SW846 8260B			3/2/17 11:02	DD	A
Trichlorofluoromethane	ND		ug/L	0.50	EPA 524.2			3/8/17 18:36	TMP	B
1,2,3-Trichloropropane	ND		ug/L	0.50	EPA 524.2			3/8/17 18:36	TMP	B
1,2,4-Trimethylbenzene	ND		ug/L	0.50	EPA 524.2			3/8/17 18:36	TMP	B
1,3,5-Trimethylbenzene	ND		ug/L	0.50	EPA 524.2			3/8/17 18:36	TMP	B
Vinyl Acetate	ND		ug/L	0.50	EPA 524.2			3/8/17 18:36	TMP	B
Vinyl Chloride	ND		ug/L	1.0	SW846 8260B			3/2/17 11:02	DD	A
Vinyl Chloride	ND		ug/L	0.50	EPA 524.2			3/8/17 18:36	TMP	B
o-Xylene	ND		ug/L	1.0	SW846 8260B			3/2/17 11:02	DD	A
o-Xylene	ND		ug/L	0.50	EPA 524.2			3/8/17 18:36	TMP	B
mp-Xylene	ND		ug/L	2.0	SW846 8260B			3/2/17 11:02	DD	A
mp-Xylene	ND		ug/L	0.50	EPA 524.2			3/8/17 18:36	TMP	B
Surrogate Recoveries	Results	Flag	Units	Limits	Method	Prepared	By	Analyzed	By	Cntr
1,2-Dichlorobenzene-d4 (S)	84.6		%	70 - 130	EPA 524.2			3/8/17 18:36	TMP	B
4-Bromofluorobenzene (S)	102		%	70 - 130	EPA 524.2			3/8/17 18:36	TMP	B
Surrogate Recoveries	Results	Flag	Units	Limits	Method	Prepared	By	Analyzed	By	Cntr
1,2-Dichloroethane-d4 (S)	88.1		%	62 - 133	SW846 8260B			3/2/17 11:02	DD	A
4-Bromofluorobenzene (S)	87.3		%	79 - 114	SW846 8260B			3/2/17 11:02	DD	A
Dibromofluoromethane (S)	83.6		%	78 - 116	SW846 8260B			3/2/17 11:02	DD	A
Toluene-d8 (S)	84.4		%	76 - 127	SW846 8260B			3/2/17 11:02	DD	A

Ms. Susan J Scherer  
Project Coordinator

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## ANALYTICAL RESULTS

Workorder: 2211841 GVG SPRING/170167M-MD SITE

Lab ID:	<b>2211841002</b>	Date Collected:	3/1/2017 08:45	Matrix:	Drinking Water
Sample ID:	<b>Influent</b>	Date Received:	3/1/2017 21:30		

Parameters	Results	Flag	Units	RDL	Method	Prepared By	Analyzed By	By Cntr
<b>VOLATILE ORGANICS</b>								
Acetone	ND		ug/L	5.0	EPA 524.2		3/8/17 19:00	TMP C
Acrylonitrile	ND		ug/L	2.5	EPA 524.2		3/8/17 19:00	TMP C
tert-Amyl methyl ether	ND		ug/L	0.50	EPA 524.2		3/8/17 19:00	TMP C
tert-Amyl Alcohol	ND		ug/L	5.0	EPA 524.2		3/8/17 19:00	TMP C
tert-Amyl Ethylether	ND		ug/L	0.50	EPA 524.2		3/8/17 19:00	TMP C
Benzene	ND		ug/L	0.50	EPA 524.2		3/8/17 19:00	TMP C
Bromobenzene	ND		ug/L	0.50	EPA 524.2		3/8/17 19:00	TMP C
Bromoform	ND		ug/L	0.50	EPA 524.2		3/8/17 19:00	TMP C
Bromomethane	ND	1	ug/L	0.50	EPA 524.2		3/8/17 19:00	TMP C
2-Butanone	ND		ug/L	2.5	EPA 524.2		3/8/17 19:00	TMP C
tert-Butyl Alcohol	30.2		ug/L	5.0	EPA 524.2		3/8/17 19:00	TMP C
n-Butylbenzene	ND		ug/L	0.50	EPA 524.2		3/8/17 19:00	TMP C
tert-Butylbenzene	ND		ug/L	0.50	EPA 524.2		3/8/17 19:00	TMP C
sec-Butylbenzene	ND		ug/L	0.50	EPA 524.2		3/8/17 19:00	TMP C
Carbon Disulfide	ND		ug/L	0.50	EPA 524.2		3/8/17 19:00	TMP C
Carbon Tetrachloride	ND		ug/L	0.50	EPA 524.2		3/8/17 19:00	TMP C
Chloroacetonitrile	ND		ug/L	2.5	EPA 524.2		3/8/17 19:00	TMP C
Chlorobenzene	ND		ug/L	0.50	EPA 524.2		3/8/17 19:00	TMP C
1-Chlorobutane	ND		ug/L	1.0	EPA 524.2		3/8/17 19:00	TMP C
Chlorodibromomethane	ND		ug/L	0.50	EPA 524.2		3/8/17 19:00	TMP C
Chloroethane	ND		ug/L	0.50	EPA 524.2		3/8/17 19:00	TMP C
Chloroform	ND		ug/L	0.50	EPA 524.2		3/8/17 19:00	TMP C
Chloromethane	ND		ug/L	0.50	EPA 524.2		3/8/17 19:00	TMP C
3-Chloro-1-propene	ND		ug/L	0.50	EPA 524.2		3/8/17 19:00	TMP C
o-Chlorotoluene	ND		ug/L	0.50	EPA 524.2		3/8/17 19:00	TMP C
p-Chlorotoluene	ND		ug/L	0.50	EPA 524.2		3/8/17 19:00	TMP C
Cyclohexane	ND		ug/L	0.50	EPA 524.2		3/8/17 19:00	TMP C
1,2-Dibromo-3-chloropropane	ND		ug/L	0.50	EPA 524.2		3/8/17 19:00	TMP C
1,2-Dibromoethane	ND		ug/L	0.50	EPA 524.2		3/8/17 19:00	TMP C
Dibromomethane	ND		ug/L	0.50	EPA 524.2		3/8/17 19:00	TMP C
trans-1,4-Dichloro-2-butene	ND		ug/L	1.0	EPA 524.2		3/8/17 19:00	TMP C
1,1-Dichloro-2-Propanone	ND		ug/L	12.5	EPA 524.2		3/8/17 19:00	TMP C
1,2-Dichlorobenzene	ND		ug/L	0.50	EPA 524.2		3/8/17 19:00	TMP C
1,3-Dichlorobenzene	ND		ug/L	0.50	EPA 524.2		3/8/17 19:00	TMP C

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## ANALYTICAL RESULTS

Workorder: 2211841 GVG SPRING/170167M-MD SITE

Lab ID: **2211841002** Date Collected: 3/1/2017 08:45 Matrix: Drinking Water  
Sample ID: **Influent** Date Received: 3/1/2017 21:30

Parameters	Results	Flag	Units	RDL	Method	Prepared By	Analyzed By	By	Cntr
1,4-Dichlorobenzene	ND		ug/L	0.50	EPA 524.2		3/8/17 19:00	TMP	C
Dichlorodifluoromethane	ND		ug/L	0.50	EPA 524.2		3/8/17 19:00	TMP	C
1,1-Dichloroethane	ND		ug/L	0.50	EPA 524.2		3/8/17 19:00	TMP	C
1,2-Dichloroethane	ND		ug/L	0.50	EPA 524.2		3/8/17 19:00	TMP	C
1,1-Dichloroethene	ND		ug/L	0.50	EPA 524.2		3/8/17 19:00	TMP	C
cis-1,2-Dichloroethene	ND		ug/L	0.50	EPA 524.2		3/8/17 19:00	TMP	C
trans-1,2-Dichloroethene	ND		ug/L	0.50	EPA 524.2		3/8/17 19:00	TMP	C
Dichlorofluoromethane	ND		ug/L	0.50	EPA 524.2		3/8/17 19:00	TMP	C
1,3-Dichloropropane	ND		ug/L	0.50	EPA 524.2		3/8/17 19:00	TMP	C
2,2-Dichloropropane	ND		ug/L	0.50	EPA 524.2		3/8/17 19:00	TMP	C
1,2-Dichloropropene	ND		ug/L	0.50	EPA 524.2		3/8/17 19:00	TMP	C
1,1-Dichloropropene	ND		ug/L	0.50	EPA 524.2		3/8/17 19:00	TMP	C
cis-1,3-Dichloropropene	ND		ug/L	0.50	EPA 524.2		3/8/17 19:00	TMP	C
trans-1,3-Dichloropropene	ND		ug/L	0.50	EPA 524.2		3/8/17 19:00	TMP	C
1,3-Dichloropropene, Total	ND		ug/L	1.0	EPA 524.2		3/8/17 19:00	TMP	C
Diisopropyl ether	ND		ug/L	0.50	EPA 524.2		3/8/17 19:00	TMP	C
Ethyl Ether	ND		ug/L	0.50	EPA 524.2		3/8/17 19:00	TMP	C
Ethyl Methacrylate	ND		ug/L	0.50	EPA 524.2		3/8/17 19:00	TMP	C
Ethyl tert-butyl ether	ND		ug/L	0.50	EPA 524.2		3/8/17 19:00	TMP	C
Ethylbenzene	ND		ug/L	0.50	EPA 524.2		3/8/17 19:00	TMP	C
Freon 113	ND		ug/L	0.50	EPA 524.2		3/8/17 19:00	TMP	C
Hexachlorobutadiene	ND		ug/L	0.50	EPA 524.2		3/8/17 19:00	TMP	C
Hexachloroethane	ND		ug/L	1.0	EPA 524.2		3/8/17 19:00	TMP	C
Hexane	ND		ug/L	0.50	EPA 524.2		3/8/17 19:00	TMP	C
2-Hexanone	ND		ug/L	2.5	EPA 524.2		3/8/17 19:00	TMP	C
Iodomethane	ND		ug/L	0.50	EPA 524.2		3/8/17 19:00	TMP	C
Isopropyl Alcohol	ND		ug/L	25.0	EPA 524.2		3/8/17 19:00	TMP	C
Isopropylbenzene	ND		ug/L	0.50	EPA 524.2		3/8/17 19:00	TMP	C
p-Isopropyltoluene	ND		ug/L	0.50	EPA 524.2		3/8/17 19:00	TMP	C
Methacrylonitrile	ND		ug/L	1.0	EPA 524.2		3/8/17 19:00	TMP	C
Methyl methacrylate	ND		ug/L	0.50	EPA 524.2		3/8/17 19:00	TMP	C
Methyl acetate	ND		ug/L	0.50	EPA 524.2		3/8/17 19:00	TMP	C
Methyl acrylate	ND		ug/L	1.0	EPA 524.2		3/8/17 19:00	TMP	C
Methyl cyclohexane	ND		ug/L	0.50	EPA 524.2		3/8/17 19:00	TMP	C
Methyl t-Butyl Ether	ND		ug/L	0.50	EPA 524.2		3/8/17 19:00	TMP	C
4-Methyl-2-Pentanone(MIBK)	ND		ug/L	2.5	EPA 524.2		3/8/17 19:00	TMP	C
Methylene Chloride	ND		ug/L	0.50	EPA 524.2		3/8/17 19:00	TMP	C
Naphthalene	ND		ug/L	0.50	EPA 524.2		3/8/17 19:00	TMP	C

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## ANALYTICAL RESULTS

Workorder: 2211841 GVG SPRING/170167M-MD SITE

Lab ID: **2211841002** Date Collected: 3/1/2017 08:45 Matrix: Drinking Water  
Sample ID: **Influent** Date Received: 3/1/2017 21:30

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
Nitrobenzene	ND		ug/L	5.0	EPA 524.2			3/8/17 19:00	TMP	C
2-Nitropropane	ND		ug/L	2.5	EPA 524.2			3/8/17 19:00	TMP	C
Octane	ND		ug/L	0.50	EPA 524.2			3/8/17 19:00	TMP	C
Pentachloroethane	ND		ug/L	0.50	EPA 524.2			3/8/17 19:00	TMP	C
Pentane	ND		ug/L	0.50	EPA 524.2			3/8/17 19:00	TMP	C
Propionitrile	ND		ug/L	2.5	EPA 524.2			3/8/17 19:00	TMP	C
n-Propylbenzene	ND		ug/L	0.50	EPA 524.2			3/8/17 19:00	TMP	C
Styrene	ND		ug/L	0.50	EPA 524.2			3/8/17 19:00	TMP	C
1,1,1,2-Tetrachloroethane	ND		ug/L	0.50	EPA 524.2			3/8/17 19:00	TMP	C
1,1,2,2-Tetrachloroethane	ND		ug/L	0.50	EPA 524.2			3/8/17 19:00	TMP	C
Tetrachloroethene	ND		ug/L	0.50	EPA 524.2			3/8/17 19:00	TMP	C
Tetrahydrofuran	ND		ug/L	2.5	EPA 524.2			3/8/17 19:00	TMP	C
Toluene	ND		ug/L	0.50	EPA 524.2			3/8/17 19:00	TMP	C
Total Xylenes	ND		ug/L	0.50	EPA 524.2			3/8/17 19:00	TMP	C
1,2,3-Trichlorobenzene	ND		ug/L	0.50	EPA 524.2			3/8/17 19:00	TMP	C
1,2,4-Trichlorobenzene	ND		ug/L	0.50	EPA 524.2			3/8/17 19:00	TMP	C
1,1,1-Trichloroethane	ND		ug/L	0.50	EPA 524.2			3/8/17 19:00	TMP	C
1,1,2-Trichloroethane	ND		ug/L	0.50	EPA 524.2			3/8/17 19:00	TMP	C
Trichloroethene	ND		ug/L	0.50	EPA 524.2			3/8/17 19:00	TMP	C
Trichlorofluoromethane	ND		ug/L	0.50	EPA 524.2			3/8/17 19:00	TMP	C
1,2,3-Trichloropropane	ND		ug/L	0.50	EPA 524.2			3/8/17 19:00	TMP	C
1,2,4-Trimethylbenzene	ND		ug/L	0.50	EPA 524.2			3/8/17 19:00	TMP	C
1,3,5-Trimethylbenzene	ND		ug/L	0.50	EPA 524.2			3/8/17 19:00	TMP	C
Vinyl Acetate	ND		ug/L	0.50	EPA 524.2			3/8/17 19:00	TMP	C
Vinyl Chloride	ND		ug/L	0.50	EPA 524.2			3/8/17 19:00	TMP	C
o-Xylene	ND		ug/L	0.50	EPA 524.2			3/8/17 19:00	TMP	C
mp-Xylene	ND		ug/L	0.50	EPA 524.2			3/8/17 19:00	TMP	C
<i>Surrogate Recoveries</i>	<i>Results</i>	<i>Flag</i>	<i>Units</i>	<i>Limits</i>	<i>Method</i>	<i>Prepared</i>	<i>By</i>	<i>Analyzed</i>	<i>By</i>	<i>Cntr</i>
1,2-Dichlorobenzene-d4 (S)	86.2		%	70 - 130	EPA 524.2			3/8/17 19:00	TMP	C
4-Bromofluorobenzene (S)	99.3		%	70 - 130	EPA 524.2			3/8/17 19:00	TMP	C

*Susan J. Scherer*  
Ms. Susan J Scherer  
Project Coordinator

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## ANALYTICAL RESULTS

Workorder: 2211841 GVG SPRING/170167M-MD SITE

Lab ID:	<b>2211841003</b>	Date Collected:	3/1/2017 09:56	Matrix:	Ground Water
Sample ID:	<b>MW-5</b>	Date Received:	3/1/2017 21:30		

Parameters	Results	Flag	Units	RDL	Method	Prepared By	Analyzed By	By Cntr
<b>VOLATILE ORGANICS</b>								
Acetone	ND		ug/L	10.0	SW846 8260B		3/2/17 13:13	DD A
tert-Amyl methyl ether	402		ug/L	20.0	SW846 8260B		3/3/17 16:35	DD A
Benzene	ND		ug/L	1.0	SW846 8260B		3/2/17 13:13	DD A
Bromochloromethane	ND		ug/L	1.0	SW846 8260B		3/2/17 13:13	DD A
Bromodichloromethane	ND		ug/L	1.0	SW846 8260B		3/2/17 13:13	DD A
Bromoform	ND		ug/L	1.0	SW846 8260B		3/2/17 13:13	DD A
Bromomethane	1.2		ug/L	1.0	SW846 8260B		3/2/17 13:13	DD A
2-Butanone	ND		ug/L	10.0	SW846 8260B		3/2/17 13:13	DD A
tert-Butyl Alcohol	2980		ug/L	200	SW846 8260B		3/3/17 16:35	DD A
Carbon Disulfide	ND		ug/L	1.0	SW846 8260B		3/2/17 13:13	DD A
Carbon Tetrachloride	ND		ug/L	1.0	SW846 8260B		3/2/17 13:13	DD A
Chlorobenzene	ND		ug/L	1.0	SW846 8260B		3/2/17 13:13	DD A
Chlorodibromomethane	ND		ug/L	1.0	SW846 8260B		3/2/17 13:13	DD A
Chloroethane	ND		ug/L	1.0	SW846 8260B		3/2/17 13:13	DD A
Chloroform	ND		ug/L	1.0	SW846 8260B		3/2/17 13:13	DD A
Chloromethane	ND		ug/L	1.0	SW846 8260B		3/2/17 13:13	DD A
Cyclohexane	ND		ug/L	1.0	SW846 8260B		3/2/17 13:13	DD A
1,2-Dibromo-3-chloropropane	ND		ug/L	7.0	SW846 8260B		3/2/17 13:13	DD A
1,2-Dibromoethane	ND		ug/L	1.0	SW846 8260B		3/2/17 13:13	DD A
1,2-Dichlorobenzene	ND		ug/L	1.0	SW846 8260B		3/2/17 13:13	DD A
1,3-Dichlorobenzene	ND		ug/L	1.0	SW846 8260B		3/2/17 13:13	DD A
1,4-Dichlorobenzene	ND		ug/L	1.0	SW846 8260B		3/2/17 13:13	DD A
Dichlorodifluoromethane	ND		ug/L	1.0	SW846 8260B		3/2/17 13:13	DD A
1,1-Dichloroethane	ND		ug/L	1.0	SW846 8260B		3/2/17 13:13	DD A
1,2-Dichloroethane	ND		ug/L	1.0	SW846 8260B		3/2/17 13:13	DD A
1,1-Dichloroethene	ND		ug/L	1.0	SW846 8260B		3/2/17 13:13	DD A
cis-1,2-Dichloroethene	ND		ug/L	1.0	SW846 8260B		3/2/17 13:13	DD A
trans-1,2-Dichloroethene	ND		ug/L	1.0	SW846 8260B		3/2/17 13:13	DD A
1,2-Dichloropropane	ND		ug/L	1.0	SW846 8260B		3/2/17 13:13	DD A
cis-1,3-Dichloropropene	ND		ug/L	1.0	SW846 8260B		3/2/17 13:13	DD A
trans-1,3-Dichloropropene	ND		ug/L	1.0	SW846 8260B		3/2/17 13:13	DD A
Diisopropyl ether	ND		ug/L	1.0	SW846 8260B		3/2/17 13:13	DD A
1,4-Dioxane	ND		ug/L	320	SW846 8260B		3/2/17 13:13	DD A
Ethylbenzene	ND		ug/L	1.0	SW846 8260B		3/2/17 13:13	DD A
Freon 113	ND		ug/L	1.0	SW846 8260B		3/2/17 13:13	DD A
2-Hexanone	ND		ug/L	5.0	SW846 8260B		3/2/17 13:13	DD A

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## ANALYTICAL RESULTS

Workorder: 2211841 GVG SPRING/170167M-MD SITE

Lab ID:	<b>2211841003</b>	Date Collected:	3/1/2017 09:56	Matrix:	Ground Water
Sample ID:	<b>MW-5</b>	Date Received:	3/1/2017 21:30		

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
Isopropylbenzene	ND		ug/L	1.0	SW846 8260B			3/2/17 13:13	DD	A
Methyl acetate	ND		ug/L	2.0	SW846 8260B			3/2/17 13:13	DD	A
Methyl cyclohexane	ND		ug/L	1.0	SW846 8260B			3/2/17 13:13	DD	A
Methyl t-Butyl Ether	2000		ug/L	20.0	SW846 8260B			3/3/17 16:35	DD	A
4-Methyl-2-Pentanone(MIBK)	ND		ug/L	5.0	SW846 8260B			3/2/17 13:13	DD	A
Methylene Chloride	ND		ug/L	1.0	SW846 8260B			3/2/17 13:13	DD	A
Naphthalene	ND		ug/L	2.0	SW846 8260B			3/2/17 13:13	DD	A
Styrene	ND		ug/L	1.0	SW846 8260B			3/2/17 13:13	DD	A
1,1,2,2-Tetrachloroethane	ND		ug/L	1.0	SW846 8260B			3/2/17 13:13	DD	A
Tetrachloroethene	ND		ug/L	1.0	SW846 8260B			3/2/17 13:13	DD	A
Toluene	ND		ug/L	1.0	SW846 8260B			3/2/17 13:13	DD	A
Total Xylenes	ND		ug/L	3.0	SW846 8260B			3/2/17 13:13	DD	A
1,2,3-Trichlorobenzene	ND		ug/L	2.0	SW846 8260B			3/2/17 13:13	DD	A
1,2,4-Trichlorobenzene	ND		ug/L	2.0	SW846 8260B			3/2/17 13:13	DD	A
1,1,1-Trichloroethane	ND		ug/L	1.0	SW846 8260B			3/2/17 13:13	DD	A
1,1,2-Trichloroethane	ND		ug/L	1.0	SW846 8260B			3/2/17 13:13	DD	A
Trichloroethene	ND		ug/L	1.0	SW846 8260B			3/2/17 13:13	DD	A
Trichlorofluoromethane	ND		ug/L	1.0	SW846 8260B			3/2/17 13:13	DD	A
Vinyl Chloride	ND		ug/L	1.0	SW846 8260B			3/2/17 13:13	DD	A
o-Xylene	ND		ug/L	1.0	SW846 8260B			3/2/17 13:13	DD	A
mp-Xylene	ND		ug/L	2.0	SW846 8260B			3/2/17 13:13	DD	A
Surrogate Recoveries	Results	Flag	Units	Limits	Method	Prepared	By	Analyzed	By	Cntr
1,2-Dichloroethane-d4 (S)	87.5		%	62 - 133	SW846 8260B			3/2/17 13:13	DD	A
1,2-Dichloroethane-d4 (S)	91.4		%	62 - 133	SW846 8260B			3/3/17 16:35	DD	A
4-Bromofluorobenzene (S)	86.3		%	79 - 114	SW846 8260B			3/2/17 13:13	DD	A
4-Bromofluorobenzene (S)	85.5		%	79 - 114	SW846 8260B			3/3/17 16:35	DD	A
Dibromofluoromethane (S)	79.5		%	78 - 116	SW846 8260B			3/2/17 13:13	DD	A
Dibromofluoromethane (S)	87.5		%	78 - 116	SW846 8260B			3/3/17 16:35	DD	A
Toluene-d8 (S)	88		%	76 - 127	SW846 8260B			3/2/17 13:13	DD	A
Toluene-d8 (S)	91		%	76 - 127	SW846 8260B			3/3/17 16:35	DD	A

**Ms. Susan J Scherer**  
 Project Coordinator

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## ANALYTICAL RESULTS

Workorder: 2211841 GVG SPRING/170167M-MD SITE

Lab ID:	<b>2211841004</b>	Date Collected:	3/1/2017 10:37	Matrix:	Ground Water
Sample ID:	<b>MW-6</b>	Date Received:	3/1/2017 21:30		

Parameters	Results	Flag	Units	RDL	Method	Prepared By	Analyzed By	By Cntr
<b>VOLATILE ORGANICS</b>								
Acetone	ND		ug/L	10.0	SW846 8260B		3/2/17 12:51	DD A
tert-Amyl methyl ether	161		ug/L	20.0	SW846 8260B		3/3/17 16:13	DD A
Benzene	ND		ug/L	1.0	SW846 8260B		3/2/17 12:51	DD A
Bromochloromethane	ND		ug/L	1.0	SW846 8260B		3/2/17 12:51	DD A
Bromodichloromethane	ND		ug/L	1.0	SW846 8260B		3/2/17 12:51	DD A
Bromoform	ND		ug/L	1.0	SW846 8260B		3/2/17 12:51	DD A
Bromomethane	ND		ug/L	1.0	SW846 8260B		3/2/17 12:51	DD A
2-Butanone	ND		ug/L	10.0	SW846 8260B		3/2/17 12:51	DD A
tert-Butyl Alcohol	1060		ug/L	200	SW846 8260B		3/3/17 16:13	DD A
Carbon Disulfide	ND		ug/L	1.0	SW846 8260B		3/2/17 12:51	DD A
Carbon Tetrachloride	ND		ug/L	1.0	SW846 8260B		3/2/17 12:51	DD A
Chlorobenzene	ND		ug/L	1.0	SW846 8260B		3/2/17 12:51	DD A
Chlorodibromomethane	ND		ug/L	1.0	SW846 8260B		3/2/17 12:51	DD A
Chloroethane	ND		ug/L	1.0	SW846 8260B		3/2/17 12:51	DD A
Chloroform	ND		ug/L	1.0	SW846 8260B		3/2/17 12:51	DD A
Chloromethane	ND		ug/L	1.0	SW846 8260B		3/2/17 12:51	DD A
Cyclohexane	ND		ug/L	1.0	SW846 8260B		3/2/17 12:51	DD A
1,2-Dibromo-3-chloropropane	ND		ug/L	7.0	SW846 8260B		3/2/17 12:51	DD A
1,2-Dibromoethane	ND		ug/L	1.0	SW846 8260B		3/2/17 12:51	DD A
1,2-Dichlorobenzene	ND		ug/L	1.0	SW846 8260B		3/2/17 12:51	DD A
1,3-Dichlorobenzene	ND		ug/L	1.0	SW846 8260B		3/2/17 12:51	DD A
1,4-Dichlorobenzene	ND		ug/L	1.0	SW846 8260B		3/2/17 12:51	DD A
Dichlorodifluoromethane	ND		ug/L	1.0	SW846 8260B		3/2/17 12:51	DD A
1,1-Dichloroethane	ND		ug/L	1.0	SW846 8260B		3/2/17 12:51	DD A
1,2-Dichloroethane	ND		ug/L	1.0	SW846 8260B		3/2/17 12:51	DD A
1,1-Dichloroethene	ND		ug/L	1.0	SW846 8260B		3/2/17 12:51	DD A
cis-1,2-Dichloroethene	ND		ug/L	1.0	SW846 8260B		3/2/17 12:51	DD A
trans-1,2-Dichloroethene	ND		ug/L	1.0	SW846 8260B		3/2/17 12:51	DD A
1,2-Dichloropropane	ND		ug/L	1.0	SW846 8260B		3/2/17 12:51	DD A
cis-1,3-Dichloropropene	ND		ug/L	1.0	SW846 8260B		3/2/17 12:51	DD A
trans-1,3-Dichloropropene	ND		ug/L	1.0	SW846 8260B		3/2/17 12:51	DD A
Diisopropyl ether	ND		ug/L	1.0	SW846 8260B		3/2/17 12:51	DD A
1,4-Dioxane	ND		ug/L	320	SW846 8260B		3/2/17 12:51	DD A
Ethylbenzene	ND		ug/L	1.0	SW846 8260B		3/2/17 12:51	DD A
Freon 113	ND		ug/L	1.0	SW846 8260B		3/2/17 12:51	DD A
2-Hexanone	ND		ug/L	5.0	SW846 8260B		3/2/17 12:51	DD A

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## ANALYTICAL RESULTS

Workorder: 2211841 GVG SPRING/170167M-MD SITE

Lab ID:	<b>2211841004</b>	Date Collected:	3/1/2017 10:37	Matrix:	Ground Water
Sample ID:	<b>MW-6</b>	Date Received:	3/1/2017 21:30		

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
Isopropylbenzene	ND		ug/L	1.0	SW846 8260B			3/2/17 12:51	DD	A
Methyl acetate	ND		ug/L	2.0	SW846 8260B			3/2/17 12:51	DD	A
Methyl cyclohexane	ND		ug/L	1.0	SW846 8260B			3/2/17 12:51	DD	A
Methyl t-Butyl Ether	740		ug/L	20.0	SW846 8260B			3/3/17 16:13	DD	A
4-Methyl-2-Pentanone(MIBK)	ND		ug/L	5.0	SW846 8260B			3/2/17 12:51	DD	A
Methylene Chloride	ND		ug/L	1.0	SW846 8260B			3/2/17 12:51	DD	A
Naphthalene	ND		ug/L	2.0	SW846 8260B			3/2/17 12:51	DD	A
Styrene	ND		ug/L	1.0	SW846 8260B			3/2/17 12:51	DD	A
1,1,2,2-Tetrachloroethane	ND		ug/L	1.0	SW846 8260B			3/2/17 12:51	DD	A
Tetrachloroethene	ND		ug/L	1.0	SW846 8260B			3/2/17 12:51	DD	A
Toluene	ND		ug/L	1.0	SW846 8260B			3/2/17 12:51	DD	A
Total Xylenes	ND		ug/L	3.0	SW846 8260B			3/2/17 12:51	DD	A
1,2,3-Trichlorobenzene	ND		ug/L	2.0	SW846 8260B			3/2/17 12:51	DD	A
1,2,4-Trichlorobenzene	ND		ug/L	2.0	SW846 8260B			3/2/17 12:51	DD	A
1,1,1-Trichloroethane	ND		ug/L	1.0	SW846 8260B			3/2/17 12:51	DD	A
1,1,2-Trichloroethane	ND		ug/L	1.0	SW846 8260B			3/2/17 12:51	DD	A
Trichloroethene	ND		ug/L	1.0	SW846 8260B			3/2/17 12:51	DD	A
Trichlorofluoromethane	ND		ug/L	1.0	SW846 8260B			3/2/17 12:51	DD	A
Vinyl Chloride	ND		ug/L	1.0	SW846 8260B			3/2/17 12:51	DD	A
o-Xylene	ND		ug/L	1.0	SW846 8260B			3/2/17 12:51	DD	A
mp-Xylene	ND		ug/L	2.0	SW846 8260B			3/2/17 12:51	DD	A
<i>Surrogate Recoveries</i>	<i>Results</i>	<i>Flag</i>	<i>Units</i>	<i>Limits</i>	<i>Method</i>	<i>Prepared</i>	<i>By</i>	<i>Analyzed</i>	<i>By</i>	<i>Cntr</i>
1,2-Dichloroethane-d4 (S)	92.9		%	62 - 133	SW846 8260B			3/3/17 16:13	DD	A
1,2-Dichloroethane-d4 (S)	85.6		%	62 - 133	SW846 8260B			3/2/17 12:51	DD	A
4-Bromofluorobenzene (S)	85.9		%	79 - 114	SW846 8260B			3/3/17 16:13	DD	A
4-Bromofluorobenzene (S)	84.7		%	79 - 114	SW846 8260B			3/2/17 12:51	DD	A
Dibromofluoromethane (S)	88.2		%	78 - 116	SW846 8260B			3/3/17 16:13	DD	A
Dibromofluoromethane (S)	78.2		%	78 - 116	SW846 8260B			3/2/17 12:51	DD	A
Toluene-d8 (S)	88.2		%	76 - 127	SW846 8260B			3/3/17 16:13	DD	A
Toluene-d8 (S)	86		%	76 - 127	SW846 8260B			3/2/17 12:51	DD	A

**Ms. Susan J Scherer**  
 Project Coordinator

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## ANALYTICAL RESULTS

Workorder: 2211841 GVG SPRING/170167M-MD SITE

Lab ID:	<b>2211841005</b>	Date Collected:	3/1/2017 11:53	Matrix:	Ground Water
Sample ID:	<b>MW-4</b>	Date Received:	3/1/2017 21:30		

Parameters	Results	Flag	Units	RDL	Method	Prepared By	Analyzed By	By Cntr
<b>VOLATILE ORGANICS</b>								
Acetone	ND		ug/L	10.0	SW846 8260B		3/2/17 12:29	DD A
tert-Amyl methyl ether	432		ug/L	20.0	SW846 8260B		3/3/17 15:51	DD A
Benzene	1.3		ug/L	1.0	SW846 8260B		3/2/17 12:29	DD A
Bromochloromethane	ND		ug/L	1.0	SW846 8260B		3/2/17 12:29	DD A
Bromodichloromethane	ND		ug/L	1.0	SW846 8260B		3/2/17 12:29	DD A
Bromoform	ND		ug/L	1.0	SW846 8260B		3/2/17 12:29	DD A
Bromomethane	ND		ug/L	1.0	SW846 8260B		3/2/17 12:29	DD A
2-Butanone	ND		ug/L	10.0	SW846 8260B		3/2/17 12:29	DD A
tert-Butyl Alcohol	3400		ug/L	200	SW846 8260B		3/3/17 15:51	DD A
Carbon Disulfide	ND		ug/L	1.0	SW846 8260B		3/2/17 12:29	DD A
Carbon Tetrachloride	ND		ug/L	1.0	SW846 8260B		3/2/17 12:29	DD A
Chlorobenzene	ND		ug/L	1.0	SW846 8260B		3/2/17 12:29	DD A
Chlorodibromomethane	ND		ug/L	1.0	SW846 8260B		3/2/17 12:29	DD A
Chloroethane	ND		ug/L	1.0	SW846 8260B		3/2/17 12:29	DD A
Chloroform	ND		ug/L	1.0	SW846 8260B		3/2/17 12:29	DD A
Chloromethane	ND		ug/L	1.0	SW846 8260B		3/2/17 12:29	DD A
Cyclohexane	ND		ug/L	1.0	SW846 8260B		3/2/17 12:29	DD A
1,2-Dibromo-3-chloropropane	ND		ug/L	7.0	SW846 8260B		3/2/17 12:29	DD A
1,2-Dibromoethane	ND		ug/L	1.0	SW846 8260B		3/2/17 12:29	DD A
1,2-Dichlorobenzene	ND		ug/L	1.0	SW846 8260B		3/2/17 12:29	DD A
1,3-Dichlorobenzene	ND		ug/L	1.0	SW846 8260B		3/2/17 12:29	DD A
1,4-Dichlorobenzene	ND		ug/L	1.0	SW846 8260B		3/2/17 12:29	DD A
Dichlorodifluoromethane	ND		ug/L	1.0	SW846 8260B		3/2/17 12:29	DD A
1,1-Dichloroethane	ND		ug/L	1.0	SW846 8260B		3/2/17 12:29	DD A
1,2-Dichloroethane	ND		ug/L	1.0	SW846 8260B		3/2/17 12:29	DD A
1,1-Dichloroethene	ND		ug/L	1.0	SW846 8260B		3/2/17 12:29	DD A
cis-1,2-Dichloroethene	ND		ug/L	1.0	SW846 8260B		3/2/17 12:29	DD A
trans-1,2-Dichloroethene	ND		ug/L	1.0	SW846 8260B		3/2/17 12:29	DD A
1,2-Dichloropropane	ND		ug/L	1.0	SW846 8260B		3/2/17 12:29	DD A
cis-1,3-Dichloropropene	ND		ug/L	1.0	SW846 8260B		3/2/17 12:29	DD A
trans-1,3-Dichloropropene	ND		ug/L	1.0	SW846 8260B		3/2/17 12:29	DD A
Diisopropyl ether	ND		ug/L	1.0	SW846 8260B		3/2/17 12:29	DD A
1,4-Dioxane	ND		ug/L	320	SW846 8260B		3/2/17 12:29	DD A
Ethylbenzene	ND		ug/L	1.0	SW846 8260B		3/2/17 12:29	DD A
Freon 113	ND		ug/L	1.0	SW846 8260B		3/2/17 12:29	DD A
2-Hexanone	ND		ug/L	5.0	SW846 8260B		3/2/17 12:29	DD A

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## ANALYTICAL RESULTS

Workorder: 2211841 GVG SPRING/170167M-MD SITE

Lab ID:	<b>2211841005</b>	Date Collected:	3/1/2017 11:53	Matrix:	Ground Water
Sample ID:	<b>MW-4</b>	Date Received:	3/1/2017 21:30		

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
Isopropylbenzene	ND		ug/L	1.0	SW846 8260B			3/2/17 12:29	DD	A
Methyl acetate	ND		ug/L	2.0	SW846 8260B			3/2/17 12:29	DD	A
Methyl cyclohexane	ND		ug/L	1.0	SW846 8260B			3/2/17 12:29	DD	A
Methyl t-Butyl Ether	1990		ug/L	20.0	SW846 8260B			3/3/17 15:51	DD	A
4-Methyl-2-Pentanone(MIBK)	ND		ug/L	5.0	SW846 8260B			3/2/17 12:29	DD	A
Methylene Chloride	ND		ug/L	1.0	SW846 8260B			3/2/17 12:29	DD	A
Naphthalene	ND		ug/L	2.0	SW846 8260B			3/2/17 12:29	DD	A
Styrene	ND		ug/L	1.0	SW846 8260B			3/2/17 12:29	DD	A
1,1,2,2-Tetrachloroethane	ND		ug/L	1.0	SW846 8260B			3/2/17 12:29	DD	A
Tetrachloroethene	ND		ug/L	1.0	SW846 8260B			3/2/17 12:29	DD	A
Toluene	ND		ug/L	1.0	SW846 8260B			3/2/17 12:29	DD	A
Total Xylenes	ND		ug/L	3.0	SW846 8260B			3/2/17 12:29	DD	A
1,2,3-Trichlorobenzene	ND		ug/L	2.0	SW846 8260B			3/2/17 12:29	DD	A
1,2,4-Trichlorobenzene	ND		ug/L	2.0	SW846 8260B			3/2/17 12:29	DD	A
1,1,1-Trichloroethane	ND		ug/L	1.0	SW846 8260B			3/2/17 12:29	DD	A
1,1,2-Trichloroethane	ND		ug/L	1.0	SW846 8260B			3/2/17 12:29	DD	A
Trichloroethene	ND		ug/L	1.0	SW846 8260B			3/2/17 12:29	DD	A
Trichlorofluoromethane	ND		ug/L	1.0	SW846 8260B			3/2/17 12:29	DD	A
Vinyl Chloride	ND		ug/L	1.0	SW846 8260B			3/2/17 12:29	DD	A
o-Xylene	ND		ug/L	1.0	SW846 8260B			3/2/17 12:29	DD	A
mp-Xylene	ND		ug/L	2.0	SW846 8260B			3/2/17 12:29	DD	A
Surrogate Recoveries	Results	Flag	Units	Limits	Method	Prepared	By	Analyzed	By	Cntr
1,2-Dichloroethane-d4 (S)	85.2		%	62 - 133	SW846 8260B			3/2/17 12:29	DD	A
1,2-Dichloroethane-d4 (S)	93.9		%	62 - 133	SW846 8260B			3/3/17 15:51	DD	A
4-Bromofluorobenzene (S)	84.7		%	79 - 114	SW846 8260B			3/3/17 15:51	DD	A
4-Bromofluorobenzene (S)	84.9		%	79 - 114	SW846 8260B			3/2/17 12:29	DD	A
Dibromofluoromethane (S)	87.8		%	78 - 116	SW846 8260B			3/3/17 15:51	DD	A
Dibromofluoromethane (S)	76.7		%	78 - 116	SW846 8260B			3/2/17 12:29	DD	A
Toluene-d8 (S)	90		%	76 - 127	SW846 8260B			3/3/17 15:51	DD	A
Toluene-d8 (S)	84.5		%	76 - 127	SW846 8260B			3/2/17 12:29	DD	A

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State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

## ANALYTICAL RESULTS

Workorder: 2211841 GVG SPRING/170167M-MD SITE

Lab ID:	<b>2211841006</b>	Date Collected:	3/1/2017 12:38	Matrix:	Ground Water
Sample ID:	<b>MW-1</b>	Date Received:	3/1/2017 21:30		

Parameters	Results	Flag	Units	RDL	Method	Prepared By	Analyzed By	By Cntr
<b>VOLATILE ORGANICS</b>								
Acetone	ND		ug/L	10.0	SW846 8260B		3/2/17 11:46	DD A
tert-Amyl methyl ether	107		ug/L	1.0	SW846 8260B		3/2/17 11:46	DD A
Benzene	ND		ug/L	1.0	SW846 8260B		3/2/17 11:46	DD A
Bromochloromethane	ND		ug/L	1.0	SW846 8260B		3/2/17 11:46	DD A
Bromodichloromethane	ND		ug/L	1.0	SW846 8260B		3/2/17 11:46	DD A
Bromoform	ND		ug/L	1.0	SW846 8260B		3/2/17 11:46	DD A
Bromomethane	ND		ug/L	1.0	SW846 8260B		3/2/17 11:46	DD A
2-Butanone	ND		ug/L	10.0	SW846 8260B		3/2/17 11:46	DD A
tert-Butyl Alcohol	32.7		ug/L	10.0	SW846 8260B		3/2/17 11:46	DD A
Carbon Disulfide	ND		ug/L	1.0	SW846 8260B		3/2/17 11:46	DD A
Carbon Tetrachloride	ND		ug/L	1.0	SW846 8260B		3/2/17 11:46	DD A
Chlorobenzene	ND		ug/L	1.0	SW846 8260B		3/2/17 11:46	DD A
Chlorodibromomethane	ND		ug/L	1.0	SW846 8260B		3/2/17 11:46	DD A
Chloroethane	ND		ug/L	1.0	SW846 8260B		3/2/17 11:46	DD A
Chloroform	ND		ug/L	1.0	SW846 8260B		3/2/17 11:46	DD A
Chloromethane	ND		ug/L	1.0	SW846 8260B		3/2/17 11:46	DD A
Cyclohexane	ND		ug/L	1.0	SW846 8260B		3/2/17 11:46	DD A
1,2-Dibromo-3-chloropropane	ND		ug/L	7.0	SW846 8260B		3/2/17 11:46	DD A
1,2-Dibromoethane	ND		ug/L	1.0	SW846 8260B		3/2/17 11:46	DD A
1,2-Dichlorobenzene	ND		ug/L	1.0	SW846 8260B		3/2/17 11:46	DD A
1,3-Dichlorobenzene	ND		ug/L	1.0	SW846 8260B		3/2/17 11:46	DD A
1,4-Dichlorobenzene	ND		ug/L	1.0	SW846 8260B		3/2/17 11:46	DD A
Dichlorodifluoromethane	ND		ug/L	1.0	SW846 8260B		3/2/17 11:46	DD A
1,1-Dichloroethane	ND		ug/L	1.0	SW846 8260B		3/2/17 11:46	DD A
1,2-Dichloroethane	ND		ug/L	1.0	SW846 8260B		3/2/17 11:46	DD A
1,1-Dichloroethene	ND		ug/L	1.0	SW846 8260B		3/2/17 11:46	DD A
cis-1,2-Dichloroethene	ND		ug/L	1.0	SW846 8260B		3/2/17 11:46	DD A
trans-1,2-Dichloroethene	ND		ug/L	1.0	SW846 8260B		3/2/17 11:46	DD A
1,2-Dichloropropane	ND		ug/L	1.0	SW846 8260B		3/2/17 11:46	DD A
cis-1,3-Dichloropropene	ND		ug/L	1.0	SW846 8260B		3/2/17 11:46	DD A
trans-1,3-Dichloropropene	ND		ug/L	1.0	SW846 8260B		3/2/17 11:46	DD A
Diisopropyl ether	ND		ug/L	1.0	SW846 8260B		3/2/17 11:46	DD A
1,4-Dioxane	ND		ug/L	320	SW846 8260B		3/2/17 11:46	DD A
Ethylbenzene	ND		ug/L	1.0	SW846 8260B		3/2/17 11:46	DD A
Freon 113	ND		ug/L	1.0	SW846 8260B		3/2/17 11:46	DD A
2-Hexanone	ND		ug/L	5.0	SW846 8260B		3/2/17 11:46	DD A

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## ANALYTICAL RESULTS

Workorder: 2211841 GVG SPRING/170167M-MD SITE

Lab ID:	<b>2211841006</b>	Date Collected:	3/1/2017 12:38	Matrix:	Ground Water
Sample ID:	<b>MW-1</b>	Date Received:	3/1/2017 21:30		

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
Isopropylbenzene	ND		ug/L	1.0	SW846 8260B			3/2/17 11:46	DD	A
Methyl acetate	ND		ug/L	2.0	SW846 8260B			3/2/17 11:46	DD	A
Methyl cyclohexane	ND		ug/L	1.0	SW846 8260B			3/2/17 11:46	DD	A
Methyl t-Butyl Ether	304		ug/L	5.0	SW846 8260B			3/3/17 17:19	DD	A
4-Methyl-2-Pentanone(MIBK)	ND		ug/L	5.0	SW846 8260B			3/2/17 11:46	DD	A
Methylene Chloride	ND		ug/L	1.0	SW846 8260B			3/2/17 11:46	DD	A
Naphthalene	ND		ug/L	2.0	SW846 8260B			3/2/17 11:46	DD	A
Styrene	ND		ug/L	1.0	SW846 8260B			3/2/17 11:46	DD	A
1,1,2,2-Tetrachloroethane	ND		ug/L	1.0	SW846 8260B			3/2/17 11:46	DD	A
Tetrachloroethene	ND		ug/L	1.0	SW846 8260B			3/2/17 11:46	DD	A
Toluene	ND		ug/L	1.0	SW846 8260B			3/2/17 11:46	DD	A
Total Xylenes	ND		ug/L	3.0	SW846 8260B			3/2/17 11:46	DD	A
1,2,3-Trichlorobenzene	ND		ug/L	2.0	SW846 8260B			3/2/17 11:46	DD	A
1,2,4-Trichlorobenzene	ND		ug/L	2.0	SW846 8260B			3/2/17 11:46	DD	A
1,1,1-Trichloroethane	ND		ug/L	1.0	SW846 8260B			3/2/17 11:46	DD	A
1,1,2-Trichloroethane	ND		ug/L	1.0	SW846 8260B			3/2/17 11:46	DD	A
Trichloroethene	ND		ug/L	1.0	SW846 8260B			3/2/17 11:46	DD	A
Trichlorofluoromethane	ND		ug/L	1.0	SW846 8260B			3/2/17 11:46	DD	A
Vinyl Chloride	ND		ug/L	1.0	SW846 8260B			3/2/17 11:46	DD	A
o-Xylene	ND		ug/L	1.0	SW846 8260B			3/2/17 11:46	DD	A
mp-Xylene	ND		ug/L	2.0	SW846 8260B			3/2/17 11:46	DD	A
Surrogate Recoveries	Results	Flag	Units	Limits	Method	Prepared	By	Analyzed	By	Cntr
1,2-Dichloroethane-d4 (S)	96		%	62 - 133	SW846 8260B			3/3/17 17:19	DD	A
1,2-Dichloroethane-d4 (S)	86.1		%	62 - 133	SW846 8260B			3/2/17 11:46	DD	A
4-Bromofluorobenzene (S)	83.7		%	79 - 114	SW846 8260B			3/3/17 17:19	DD	A
4-Bromofluorobenzene (S)	87.6		%	79 - 114	SW846 8260B			3/2/17 11:46	DD	A
Dibromofluoromethane (S)	87.8		%	78 - 116	SW846 8260B			3/3/17 17:19	DD	A
Dibromofluoromethane (S)	81.2		%	78 - 116	SW846 8260B			3/2/17 11:46	DD	A
Toluene-d8 (S)	89.3		%	76 - 127	SW846 8260B			3/3/17 17:19	DD	A
Toluene-d8 (S)	85.9		%	76 - 127	SW846 8260B			3/2/17 11:46	DD	A

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## ANALYTICAL RESULTS

Workorder: 2211841 GVG SPRING/170167M-MD SITE

Lab ID:	<b>2211841007</b>	Date Collected:	3/1/2017 13:07	Matrix:	Ground Water
Sample ID:	<b>DSW</b>	Date Received:	3/1/2017 21:30		

Parameters	Results	Flag	Units	RDL	Method	Prepared By	Analyzed By	By Cntr
<b>VOLATILE ORGANICS</b>								
Acetone	ND		ug/L	10.0	SW846 8260B		3/2/17 12:08	DD A
tert-Amyl methyl ether	51.1		ug/L	1.0	SW846 8260B		3/2/17 12:08	DD A
Benzene	ND		ug/L	1.0	SW846 8260B		3/2/17 12:08	DD A
Bromochloromethane	ND		ug/L	1.0	SW846 8260B		3/2/17 12:08	DD A
Bromodichloromethane	ND		ug/L	1.0	SW846 8260B		3/2/17 12:08	DD A
Bromoform	ND		ug/L	1.0	SW846 8260B		3/2/17 12:08	DD A
Bromomethane	ND		ug/L	1.0	SW846 8260B		3/2/17 12:08	DD A
2-Butanone	ND		ug/L	10.0	SW846 8260B		3/2/17 12:08	DD A
tert-Butyl Alcohol	167		ug/L	10.0	SW846 8260B		3/2/17 12:08	DD A
Carbon Disulfide	ND		ug/L	1.0	SW846 8260B		3/2/17 12:08	DD A
Carbon Tetrachloride	ND		ug/L	1.0	SW846 8260B		3/2/17 12:08	DD A
Chlorobenzene	ND		ug/L	1.0	SW846 8260B		3/2/17 12:08	DD A
Chlorodibromomethane	ND		ug/L	1.0	SW846 8260B		3/2/17 12:08	DD A
Chloroethane	ND		ug/L	1.0	SW846 8260B		3/2/17 12:08	DD A
Chloroform	ND		ug/L	1.0	SW846 8260B		3/2/17 12:08	DD A
Chloromethane	ND		ug/L	1.0	SW846 8260B		3/2/17 12:08	DD A
Cyclohexane	ND		ug/L	1.0	SW846 8260B		3/2/17 12:08	DD A
1,2-Dibromo-3-chloropropane	ND		ug/L	7.0	SW846 8260B		3/2/17 12:08	DD A
1,2-Dibromoethane	ND		ug/L	1.0	SW846 8260B		3/2/17 12:08	DD A
1,2-Dichlorobenzene	ND		ug/L	1.0	SW846 8260B		3/2/17 12:08	DD A
1,3-Dichlorobenzene	ND		ug/L	1.0	SW846 8260B		3/2/17 12:08	DD A
1,4-Dichlorobenzene	ND		ug/L	1.0	SW846 8260B		3/2/17 12:08	DD A
Dichlorodifluoromethane	ND		ug/L	1.0	SW846 8260B		3/2/17 12:08	DD A
1,1-Dichloroethane	ND		ug/L	1.0	SW846 8260B		3/2/17 12:08	DD A
1,2-Dichloroethane	ND		ug/L	1.0	SW846 8260B		3/2/17 12:08	DD A
1,1-Dichloroethene	ND		ug/L	1.0	SW846 8260B		3/2/17 12:08	DD A
cis-1,2-Dichloroethene	ND		ug/L	1.0	SW846 8260B		3/2/17 12:08	DD A
trans-1,2-Dichloroethene	ND		ug/L	1.0	SW846 8260B		3/2/17 12:08	DD A
1,2-Dichloropropane	ND		ug/L	1.0	SW846 8260B		3/2/17 12:08	DD A
cis-1,3-Dichloropropene	ND		ug/L	1.0	SW846 8260B		3/2/17 12:08	DD A
trans-1,3-Dichloropropene	ND		ug/L	1.0	SW846 8260B		3/2/17 12:08	DD A
Diisopropyl ether	2.0		ug/L	1.0	SW846 8260B		3/2/17 12:08	DD A
1,4-Dioxane	ND		ug/L	320	SW846 8260B		3/2/17 12:08	DD A
Ethylbenzene	ND		ug/L	1.0	SW846 8260B		3/2/17 12:08	DD A
Freon 113	ND		ug/L	1.0	SW846 8260B		3/2/17 12:08	DD A
2-Hexanone	ND		ug/L	5.0	SW846 8260B		3/2/17 12:08	DD A

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State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

## ANALYTICAL RESULTS

Workorder: 2211841 GVG SPRING/170167M-MD SITE

Lab ID:	<b>2211841007</b>	Date Collected:	3/1/2017 13:07	Matrix:	Ground Water
Sample ID:	<b>DSW</b>	Date Received:	3/1/2017 21:30		

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
Isopropylbenzene	ND		ug/L	1.0	SW846 8260B			3/2/17 12:08	DD	A
Methyl acetate	ND		ug/L	2.0	SW846 8260B			3/2/17 12:08	DD	A
Methyl cyclohexane	ND		ug/L	1.0	SW846 8260B			3/2/17 12:08	DD	A
Methyl t-Butyl Ether	213		ug/L	5.0	SW846 8260B			3/3/17 16:57	DD	A
4-Methyl-2-Pentanone(MIBK)	ND		ug/L	5.0	SW846 8260B			3/2/17 12:08	DD	A
Methylene Chloride	ND		ug/L	1.0	SW846 8260B			3/2/17 12:08	DD	A
Naphthalene	ND		ug/L	2.0	SW846 8260B			3/2/17 12:08	DD	A
Styrene	ND		ug/L	1.0	SW846 8260B			3/2/17 12:08	DD	A
1,1,2,2-Tetrachloroethane	ND		ug/L	1.0	SW846 8260B			3/2/17 12:08	DD	A
Tetrachloroethene	ND		ug/L	1.0	SW846 8260B			3/2/17 12:08	DD	A
Toluene	ND		ug/L	1.0	SW846 8260B			3/2/17 12:08	DD	A
Total Xylenes	ND		ug/L	3.0	SW846 8260B			3/2/17 12:08	DD	A
1,2,3-Trichlorobenzene	ND		ug/L	2.0	SW846 8260B			3/2/17 12:08	DD	A
1,2,4-Trichlorobenzene	ND		ug/L	2.0	SW846 8260B			3/2/17 12:08	DD	A
1,1,1-Trichloroethane	ND		ug/L	1.0	SW846 8260B			3/2/17 12:08	DD	A
1,1,2-Trichloroethane	ND		ug/L	1.0	SW846 8260B			3/2/17 12:08	DD	A
Trichloroethene	ND		ug/L	1.0	SW846 8260B			3/2/17 12:08	DD	A
Trichlorofluoromethane	ND		ug/L	1.0	SW846 8260B			3/2/17 12:08	DD	A
Vinyl Chloride	ND		ug/L	1.0	SW846 8260B			3/2/17 12:08	DD	A
o-Xylene	ND		ug/L	1.0	SW846 8260B			3/2/17 12:08	DD	A
mp-Xylene	ND		ug/L	2.0	SW846 8260B			3/2/17 12:08	DD	A
Surrogate Recoveries	Results	Flag	Units	Limits	Method	Prepared	By	Analyzed	By	Cntr
1,2-Dichloroethane-d4 (S)	94.2		%	62 - 133	SW846 8260B			3/3/17 16:57	DD	A
1,2-Dichloroethane-d4 (S)	86.2		%	62 - 133	SW846 8260B			3/2/17 12:08	DD	A
4-Bromofluorobenzene (S)	84.8		%	79 - 114	SW846 8260B			3/3/17 16:57	DD	A
4-Bromofluorobenzene (S)	84.5		%	79 - 114	SW846 8260B			3/2/17 12:08	DD	A
Dibromofluoromethane (S)	79.5		%	78 - 116	SW846 8260B			3/2/17 12:08	DD	A
Dibromofluoromethane (S)	89.3		%	78 - 116	SW846 8260B			3/3/17 16:57	DD	A
Toluene-d8 (S)	85.3		%	76 - 127	SW846 8260B			3/2/17 12:08	DD	A
Toluene-d8 (S)	87.5		%	76 - 127	SW846 8260B			3/3/17 16:57	DD	A

**Ms. Susan J Scherer**  
 Project Coordinator

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State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

## ANALYTICAL RESULTS

Workorder: 2211841 GVG SPRING/170167M-MD SITE

Lab ID:	<b>2211841008</b>	Date Collected:	3/1/2017 00:00	Matrix:	Ground Water
Sample ID:	<b>Trip Blank</b>	Date Received:	3/1/2017 21:30		

Parameters	Results	Flag	Units	RDL	Method	Prepared By	Analyzed By	By Cntr
<b>VOLATILE ORGANICS</b>								
Acetone	ND		ug/L	10.0	SW846 8260B		3/2/17 10:40	DD A
tert-Amyl methyl ether	ND		ug/L	1.0	SW846 8260B		3/2/17 10:40	DD A
Benzene	ND		ug/L	1.0	SW846 8260B		3/2/17 10:40	DD A
Bromochloromethane	ND		ug/L	1.0	SW846 8260B		3/2/17 10:40	DD A
Bromodichloromethane	ND		ug/L	1.0	SW846 8260B		3/2/17 10:40	DD A
Bromoform	ND		ug/L	1.0	SW846 8260B		3/2/17 10:40	DD A
Bromomethane	ND		ug/L	1.0	SW846 8260B		3/2/17 10:40	DD A
2-Butanone	ND		ug/L	10.0	SW846 8260B		3/2/17 10:40	DD A
tert-Butyl Alcohol	ND		ug/L	10.0	SW846 8260B		3/2/17 10:40	DD A
Carbon Disulfide	ND		ug/L	1.0	SW846 8260B		3/2/17 10:40	DD A
Carbon Tetrachloride	ND		ug/L	1.0	SW846 8260B		3/2/17 10:40	DD A
Chlorobenzene	ND		ug/L	1.0	SW846 8260B		3/2/17 10:40	DD A
Chlorodibromomethane	ND		ug/L	1.0	SW846 8260B		3/2/17 10:40	DD A
Chloroethane	ND		ug/L	1.0	SW846 8260B		3/2/17 10:40	DD A
Chloroform	ND		ug/L	1.0	SW846 8260B		3/2/17 10:40	DD A
Chloromethane	ND		ug/L	1.0	SW846 8260B		3/2/17 10:40	DD A
Cyclohexane	ND		ug/L	1.0	SW846 8260B		3/2/17 10:40	DD A
1,2-Dibromo-3-chloropropane	ND		ug/L	7.0	SW846 8260B		3/2/17 10:40	DD A
1,2-Dibromoethane	ND		ug/L	1.0	SW846 8260B		3/2/17 10:40	DD A
1,2-Dichlorobenzene	ND		ug/L	1.0	SW846 8260B		3/2/17 10:40	DD A
1,3-Dichlorobenzene	ND		ug/L	1.0	SW846 8260B		3/2/17 10:40	DD A
1,4-Dichlorobenzene	ND		ug/L	1.0	SW846 8260B		3/2/17 10:40	DD A
Dichlorodifluoromethane	ND		ug/L	1.0	SW846 8260B		3/2/17 10:40	DD A
1,1-Dichloroethane	ND		ug/L	1.0	SW846 8260B		3/2/17 10:40	DD A
1,2-Dichloroethane	ND		ug/L	1.0	SW846 8260B		3/2/17 10:40	DD A
1,1-Dichloroethene	ND		ug/L	1.0	SW846 8260B		3/2/17 10:40	DD A
cis-1,2-Dichloroethene	ND		ug/L	1.0	SW846 8260B		3/2/17 10:40	DD A
trans-1,2-Dichloroethene	ND		ug/L	1.0	SW846 8260B		3/2/17 10:40	DD A
1,2-Dichloropropane	ND		ug/L	1.0	SW846 8260B		3/2/17 10:40	DD A
cis-1,3-Dichloropropene	ND		ug/L	1.0	SW846 8260B		3/2/17 10:40	DD A
trans-1,3-Dichloropropene	ND		ug/L	1.0	SW846 8260B		3/2/17 10:40	DD A
Diisopropyl ether	ND		ug/L	1.0	SW846 8260B		3/2/17 10:40	DD A
1,4-Dioxane	ND		ug/L	320	SW846 8260B		3/2/17 10:40	DD A
Ethylbenzene	ND		ug/L	1.0	SW846 8260B		3/2/17 10:40	DD A
Freon 113	ND		ug/L	1.0	SW846 8260B		3/2/17 10:40	DD A
2-Hexanone	ND		ug/L	5.0	SW846 8260B		3/2/17 10:40	DD A

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## ANALYTICAL RESULTS

Workorder: 2211841 GVG SPRING/170167M-MD SITE

Lab ID:	<b>2211841008</b>	Date Collected:	3/1/2017 00:00	Matrix:	Ground Water
Sample ID:	<b>Trip Blank</b>	Date Received:	3/1/2017 21:30		

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
Isopropylbenzene	ND		ug/L	1.0	SW846 8260B			3/2/17 10:40	DD	A
Methyl acetate	ND		ug/L	2.0	SW846 8260B			3/2/17 10:40	DD	A
Methyl cyclohexane	ND		ug/L	1.0	SW846 8260B			3/2/17 10:40	DD	A
Methyl t-Butyl Ether	ND		ug/L	1.0	SW846 8260B			3/2/17 10:40	DD	A
4-Methyl-2-Pentanone(MIBK)	ND		ug/L	5.0	SW846 8260B			3/2/17 10:40	DD	A
Methylene Chloride	ND		ug/L	1.0	SW846 8260B			3/2/17 10:40	DD	A
Naphthalene	ND		ug/L	2.0	SW846 8260B			3/2/17 10:40	DD	A
Styrene	ND		ug/L	1.0	SW846 8260B			3/2/17 10:40	DD	A
1,1,2,2-Tetrachloroethane	ND		ug/L	1.0	SW846 8260B			3/2/17 10:40	DD	A
Tetrachloroethene	ND		ug/L	1.0	SW846 8260B			3/2/17 10:40	DD	A
Toluene	ND		ug/L	1.0	SW846 8260B			3/2/17 10:40	DD	A
Total Xylenes	ND		ug/L	3.0	SW846 8260B			3/2/17 10:40	DD	A
1,2,3-Trichlorobenzene	ND		ug/L	2.0	SW846 8260B			3/2/17 10:40	DD	A
1,2,4-Trichlorobenzene	ND		ug/L	2.0	SW846 8260B			3/2/17 10:40	DD	A
1,1,1-Trichloroethane	ND		ug/L	1.0	SW846 8260B			3/2/17 10:40	DD	A
1,1,2-Trichloroethane	ND		ug/L	1.0	SW846 8260B			3/2/17 10:40	DD	A
Trichloroethene	ND		ug/L	1.0	SW846 8260B			3/2/17 10:40	DD	A
Trichlorofluoromethane	ND		ug/L	1.0	SW846 8260B			3/2/17 10:40	DD	A
Vinyl Chloride	ND		ug/L	1.0	SW846 8260B			3/2/17 10:40	DD	A
o-Xylene	ND		ug/L	1.0	SW846 8260B			3/2/17 10:40	DD	A
mp-Xylene	ND		ug/L	2.0	SW846 8260B			3/2/17 10:40	DD	A
Surrogate Recoveries	Results	Flag	Units	Limits	Method	Prepared	By	Analyzed	By	Cntr
1,2-Dichloroethane-d4 (S)	89.2		%	62 - 133	SW846 8260B			3/2/17 10:40	DD	A
4-Bromofluorobenzene (S)	84.6		%	79 - 114	SW846 8260B			3/2/17 10:40	DD	A
Dibromofluoromethane (S)	82		%	78 - 116	SW846 8260B			3/2/17 10:40	DD	A
Toluene-d8 (S)	84.1		%	76 - 127	SW846 8260B			3/2/17 10:40	DD	A

*Susan J. Scherer*  
Ms. Susan J Scherer  
Project Coordinator

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**PARAMETER QUALIFIERS**

Lab ID	#	Sample ID	Analytical Method	Analyte
<b>2211841001</b>	1	Effluent	EPA 524.2	Bromomethane
				The QC sample type LCS for method EPA 524.2 was outside the control limits for the analyte Bromomethane. The % Recovery was reported as 138 and the control limits were 70 to 130.
<b>2211841002</b>	1	Influent	EPA 524.2	Bromomethane
				The QC sample type LCS for method EPA 524.2 was outside the control limits for the analyte Bromomethane. The % Recovery was reported as 138 and the control limits were 70 to 130.

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## CHAIN OF CUSTODY/ REQUEST FOR ANALYSIS

ALL SHADED AREAS MUST BE COMPLETED BY THE CLIENT /  
SAMPLER. INSTRUCTIONS ON THE BACK.

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Middletown, PA 17057  
P. 717-944-5541  
F. 717-944-1430

### **Environment**

Co. Name: Eric Magdar, ARM Group  
Phone:  
Contact (Report):  
Address:  
Bill to (if different than Report):

Project Name#: Garage Spring 2017/170167M ALS Quote #:  
 Normal/Standard TAT is 10-12 business days.  
 Rush/Subject to ALS approval and surcharges. 5-day  
 Approved By: Brunk  
 Email: [Skabis@armgroup.net](mailto:Skabis@armgroup.net)  
 Fax?   
 NY No.:

Sample Description/Location  
(as it will appear on the lab report)

Normal/Standard TAT is 10-12 business days.  
 Rush/Subject to ALS approval and surcharges. 5-day  
 Approved By: Brunk  
 Email: [Skabis@armgroup.net](mailto:Skabis@armgroup.net)  
 Fax?   
 NY No.:

Sample Description/Location (as it will appear on the lab report)	COC Comments	Sample Date	Military Time	Matrix		Enter Number of Containers Per Analysis
				GC or C	Matrix	
1 Effluent		3-1-170840	AM 3			
2 Influent		0845	AM 3			
3 MW-5		0954	AM 2			
4 MW-6		1037	AM 2			
5 MW-7		1153	AM 2			
6 MW-1		1238	AM 2			
7 DSW		1357	AM 2			
8 Trip Blank			-			

SAMPLED BY (Please Print):  
 Jeandrea M. Glumace

Relinquished By / Company Name	Date	Time	Received By / Company Name	Date	Time	Data Deliverables	SDWA Form(s) to Collect Info?	State Samples Collected In?	ALS FIELD SERVICES	
				Date	Time		MD	NJ	NY	PA
3环境监测公司	3/17/17	11:30	2	3/17/17	16:21		yes	yes	yes	yes
3环境监测公司	3/17/17	12:30	4	3/17/17	16:00		yes	yes	yes	yes
3环境监测公司	3/17/17	12:30	6	3/17/17	16:20		yes	yes	yes	yes
7				8						
9										

\*G=Grab; C=Composite      \*Matrix: AM=Air; DW=Drinking Water; SW=Groundwater; Oil=Oil; O/W=Other Liquid; SL=Sludge; SO=Soil; WP=WPo; WW=Wastewater  
 \*\*Container Type: AG-Amber Glass; CG-Clear Glass; PL=Plastic. Container Size: 250ml, 500ml, 1L, 8oz, etc. Preservative: HCl, HNO3, NaOH, etc.  
 Copies: WHITE - ORIGINAL CHANAY - CUSTOMER COPY      Page: 26 of 26

DOD Criteria Required?

VOC/FA

EPA 24.2



Client Information			
Customer: <i>S</i>	Page: _____	of _____	Tracking #: _____
P. 2 2 1 1 8 4 1 *			
Contain'r Type: <b>4C1</b>	Contain'r Size: <b>46 oz/40 ml</b>	Preservative: <b>HCl</b>	Perfected by: <b>JK</b> SIGN HERE
Cooler Temp: <b>318</b>		Notes:	Container in good condition Y or N: <b>Y</b>
No. of Coolers:		Customer Seal's Present? <b>Y</b>	
Customer Seal's Complete/accurate? <b>Y</b>		Headspace/Volatiles? <b>Y</b>	Circles appropriate Yes or No: <b>Y</b>
Received on loc? <b>Y</b>		Correct sample volume? <b>Y</b>	Customer Seal's Present? <b>Y</b>
(if present) Sales Inclctr? <b>Y</b>		Customer Sample's Present? <b>Y</b>	Customer Seal's Complete/accurate? <b>Y</b>
Enter number of containers per analysis:			



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March 7, 2017

Accounts Payable  
ARM Group, Inc.  
PO Box 797  
Hershey, PA 17033

## Certificate of Analysis

Project Name:	<b>GVG SPRING/170167M-MD SITE</b>	Workorder:	<b>2212180</b>
Purchase Order:	<b>170167M</b>	Workorder ID:	<b>GVG SPRING/170167M-MD SITE</b>

Dear Accounts Payable:

Enclosed are the analytical results for samples received by the laboratory on Thursday, March 2, 2017.

The ALS Environmental laboratory in Middletown, Pennsylvania is a National Environmental Laboratory Accreditation Program (NELAP) accredited laboratory and as such, certifies that all applicable test results meet the requirements of NELAP.

If you have any questions regarding this certificate of analysis, please contact Ms. Susan J Scherer (Project Coordinator) at (717) 944-5541.

Analyses were performed according to our laboratory's NELAP-approved quality assurance program and any applicable state requirements. The test results meet requirements of the current NELAP standards or state requirements, where applicable. For a specific list of accredited analytes, refer to the certifications section of the ALS website at [www.alsglobal.com/en/Our-Services/Life-Sciences/Environmental/Downloads](http://www.alsglobal.com/en/Our-Services/Life-Sciences/Environmental/Downloads).

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ALS Spring City: 10 Riverside Drive, Spring City, PA 19475 610-948-4903

CC: Mr. Stewart Kabis , Mr. Eric Magdar

*This page is included as part of the Analytical Report and must be retained as a permanent record thereof.*

**Ms. Susan J Scherer**  
Project Coordinator

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## SAMPLE SUMMARY

Workorder: 2212180 GVG SPRING/170167M-MD SITE

Lab ID	Sample ID	Matrix	Date Collected	Date Received	Collected By
2212180001	MW-7	Ground Water	3/2/2017 07:50	3/2/2017 21:10	Collected by Client
2212180002	MW-2	Ground Water	3/2/2017 08:50	3/2/2017 21:10	Collected by Client
2212180003	MW-3	Ground Water	3/2/2017 09:43	3/2/2017 21:10	Collected by Client

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**Environmental**



34 Dogwood Lane ■ Middletown, PA 17057 ■ Phone: 717-944-5541 ■ Fax: 717-944-1430 ■ [www.alsglobal.com](http://www.alsglobal.com)

NELAP Certifications: NJ PA010 , NY 11759 , PA 22-293 DoD ELAP: A2LA 0818.01  
State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

## SAMPLE SUMMARY

Workorder: 2212180 GVG SPRING/170167M-MD SITE

### Notes

- Samples collected by ALS personnel are done so in accordance with the procedures set forth in the ALS Field Sampling Plan (20 - Field Services Sampling Plan).
- All Waste Water analyses comply with methodology requirements of 40 CFR Part 136.
- All Drinking Water analyses comply with methodology requirements of 40 CFR Part 141.
- Unless otherwise noted, all quantitative results for soils are reported on a dry weight basis.
- The Chain of Custody document is included as part of this report.
- All Library Search analytes should be regarded as tentative identifications based on the presumptive evidence of the mass spectra. Concentrations reported are estimated values.
- Parameters identified as "analyze immediately" require analysis within 15 minutes of collection. Any "analyze immediately" parameters not listed under the header "Field Parameters" are preformed in the laboratory and are therefore analyzed out of hold time.
- Method references listed on this report beginning with the prefix "S" followed by a method number (such as S2310B-97) refer to methods from "Standard Methods for the Examination of Water and Wastewater".
- For microbiological analyses, the "Prepared" value is the date/time into the incubator and the "Analyzed" value is the date/time out the incubator.

### Standard Acronyms/Flags

J	Indicates an estimated value between the Method Detection Limit (MDL) and the Practical Quantitation Limit (PQL) for the analyte
U	Indicates that the analyte was Not Detected (ND)
N	Indicates presumptive evidence of the presence of a compound
MDL	Method Detection Limit
PQL	Practical Quantitation Limit
RDL	Reporting Detection Limit
ND	Not Detected - indicates that the analyte was Not Detected at the RDL
Cntr	Analysis was performed using this container
RegLmt	Regulatory Limit
LCS	Laboratory Control Sample
MS	Matrix Spike
MSD	Matrix Spike Duplicate
DUP	Sample Duplicate
%Rec	Percent Recovery
RPD	Relative Percent Difference
LOD	DoD Limit of Detection
LOQ	DoD Limit of Quantitation
DL	DoD Detection Limit
I	Indicates reported value is greater than or equal to the Method Detection Limit (MDL) but less than the Report Detection Limit (RDL)
(S)	Surrogate Compound
NC	Not Calculated
*	Result outside of QC limits

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## ANALYTICAL RESULTS

Workorder: 2212180 GVG SPRING/170167M-MD SITE

Lab ID:	<b>2212180001</b>	Date Collected:	3/2/2017 07:50	Matrix:	Ground Water
Sample ID:	<b>MW-7</b>	Date Received:	3/2/2017 21:10		

Parameters	Results	Flag	Units	RDL	Method	Prepared By	Analyzed By	By Cntr
<b>VOLATILE ORGANICS</b>								
Acetone	ND		ug/L	10.0	SW846 8260B		3/3/17 16:37	DD A
tert-Amyl methyl ether	16.6		ug/L	1.0	SW846 8260B		3/3/17 16:37	DD A
Benzene	ND		ug/L	1.0	SW846 8260B		3/3/17 16:37	DD A
Bromochloromethane	ND		ug/L	1.0	SW846 8260B		3/3/17 16:37	DD A
Bromodichloromethane	ND		ug/L	1.0	SW846 8260B		3/3/17 16:37	DD A
Bromoform	ND		ug/L	1.0	SW846 8260B		3/3/17 16:37	DD A
Bromomethane	ND		ug/L	1.0	SW846 8260B		3/3/17 16:37	DD A
2-Butanone	ND		ug/L	10.0	SW846 8260B		3/3/17 16:37	DD A
tert-Butyl Alcohol	603		ug/L	10.0	SW846 8260B		3/3/17 16:37	DD A
Carbon Disulfide	ND		ug/L	1.0	SW846 8260B		3/3/17 16:37	DD A
Carbon Tetrachloride	ND		ug/L	1.0	SW846 8260B		3/3/17 16:37	DD A
Chlorobenzene	ND		ug/L	1.0	SW846 8260B		3/3/17 16:37	DD A
Chlorodibromomethane	ND		ug/L	1.0	SW846 8260B		3/3/17 16:37	DD A
Chloroethane	ND		ug/L	1.0	SW846 8260B		3/3/17 16:37	DD A
Chloroform	ND		ug/L	1.0	SW846 8260B		3/3/17 16:37	DD A
Chloromethane	ND		ug/L	1.0	SW846 8260B		3/3/17 16:37	DD A
Cyclohexane	ND		ug/L	1.0	SW846 8260B		3/3/17 16:37	DD A
1,2-Dibromo-3-chloropropane	ND		ug/L	7.0	SW846 8260B		3/3/17 16:37	DD A
1,2-Dibromoethane	ND		ug/L	1.0	SW846 8260B		3/3/17 16:37	DD A
1,2-Dichlorobenzene	ND		ug/L	1.0	SW846 8260B		3/3/17 16:37	DD A
1,3-Dichlorobenzene	ND		ug/L	1.0	SW846 8260B		3/3/17 16:37	DD A
1,4-Dichlorobenzene	ND		ug/L	1.0	SW846 8260B		3/3/17 16:37	DD A
Dichlorodifluoromethane	ND		ug/L	1.0	SW846 8260B		3/3/17 16:37	DD A
1,1-Dichloroethane	ND		ug/L	1.0	SW846 8260B		3/3/17 16:37	DD A
1,2-Dichloroethane	ND		ug/L	1.0	SW846 8260B		3/3/17 16:37	DD A
1,1-Dichloroethene	ND		ug/L	1.0	SW846 8260B		3/3/17 16:37	DD A
cis-1,2-Dichloroethene	ND		ug/L	1.0	SW846 8260B		3/3/17 16:37	DD A
trans-1,2-Dichloroethene	2.1		ug/L	1.0	SW846 8260B		3/3/17 16:37	DD A
1,2-Dichloropropane	ND		ug/L	1.0	SW846 8260B		3/3/17 16:37	DD A
cis-1,3-Dichloropropene	ND		ug/L	1.0	SW846 8260B		3/3/17 16:37	DD A
trans-1,3-Dichloropropene	ND		ug/L	1.0	SW846 8260B		3/3/17 16:37	DD A
Diisopropyl ether	ND		ug/L	1.0	SW846 8260B		3/3/17 16:37	DD A
1,4-Dioxane	ND		ug/L	320	SW846 8260B		3/3/17 16:37	DD A
Ethylbenzene	ND		ug/L	1.0	SW846 8260B		3/3/17 16:37	DD A
Freon 113	ND		ug/L	1.0	SW846 8260B		3/3/17 16:37	DD A
2-Hexanone	ND		ug/L	5.0	SW846 8260B		3/3/17 16:37	DD A

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## ANALYTICAL RESULTS

Workorder: 2212180 GVG SPRING/170167M-MD SITE

Lab ID:	<b>2212180001</b>	Date Collected:	3/2/2017 07:50	Matrix:	Ground Water
Sample ID:	<b>MW-7</b>	Date Received:	3/2/2017 21:10		

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
Isopropylbenzene	ND		ug/L	1.0	SW846 8260B			3/3/17 16:37	DD	A
Methyl acetate	ND		ug/L	2.0	SW846 8260B			3/3/17 16:37	DD	A
Methyl cyclohexane	ND		ug/L	1.0	SW846 8260B			3/3/17 16:37	DD	A
Methyl t-Butyl Ether	70.3	1	ug/L	1.0	SW846 8260B			3/3/17 16:37	DD	A
4-Methyl-2-Pentanone(MIBK)	ND		ug/L	5.0	SW846 8260B			3/3/17 16:37	DD	A
Methylene Chloride	ND		ug/L	1.0	SW846 8260B			3/3/17 16:37	DD	A
Naphthalene	ND		ug/L	2.0	SW846 8260B			3/3/17 16:37	DD	A
Styrene	ND		ug/L	1.0	SW846 8260B			3/3/17 16:37	DD	A
1,1,2,2-Tetrachloroethane	ND		ug/L	1.0	SW846 8260B			3/3/17 16:37	DD	A
Tetrachloroethene	ND		ug/L	1.0	SW846 8260B			3/3/17 16:37	DD	A
Toluene	ND		ug/L	1.0	SW846 8260B			3/3/17 16:37	DD	A
Total Xylenes	ND		ug/L	3.0	SW846 8260B			3/3/17 16:37	DD	A
1,2,3-Trichlorobenzene	ND		ug/L	2.0	SW846 8260B			3/3/17 16:37	DD	A
1,2,4-Trichlorobenzene	ND		ug/L	2.0	SW846 8260B			3/3/17 16:37	DD	A
1,1,1-Trichloroethane	ND		ug/L	1.0	SW846 8260B			3/3/17 16:37	DD	A
1,1,2-Trichloroethane	ND		ug/L	1.0	SW846 8260B			3/3/17 16:37	DD	A
Trichloroethene	ND		ug/L	1.0	SW846 8260B			3/3/17 16:37	DD	A
Trichlorofluoromethane	ND		ug/L	1.0	SW846 8260B			3/3/17 16:37	DD	A
Vinyl Chloride	ND		ug/L	1.0	SW846 8260B			3/3/17 16:37	DD	A
o-Xylene	ND		ug/L	1.0	SW846 8260B			3/3/17 16:37	DD	A
mp-Xylene	ND		ug/L	2.0	SW846 8260B			3/3/17 16:37	DD	A
<i>Surrogate Recoveries</i>	<i>Results</i>	<i>Flag</i>	<i>Units</i>	<i>Limits</i>	<i>Method</i>	<i>Prepared</i>	<i>By</i>	<i>Analyzed</i>	<i>By</i>	<i>Cntr</i>
1,2-Dichloroethane-d4 (S)	108		%	62 - 133	SW846 8260B			3/3/17 16:37	DD	A
4-Bromofluorobenzene (S)	101		%	79 - 114	SW846 8260B			3/3/17 16:37	DD	A
Dibromofluoromethane (S)	94.9		%	78 - 116	SW846 8260B			3/3/17 16:37	DD	A
Toluene-d8 (S)	93.1		%	76 - 127	SW846 8260B			3/3/17 16:37	DD	A

*Susan J. Scherer*  
Ms. Susan J Scherer  
Project Coordinator

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## ANALYTICAL RESULTS

Workorder: 2212180 GVG SPRING/170167M-MD SITE

Lab ID:	<b>2212180002</b>	Date Collected:	3/2/2017 08:50	Matrix:	Ground Water
Sample ID:	<b>MW-2</b>	Date Received:	3/2/2017 21:10		

Parameters	Results	Flag	Units	RDL	Method	Prepared By	Analyzed By	By Cntr
<b>VOLATILE ORGANICS</b>								
Acetone	ND		ug/L	10.0	SW846 8260B		3/3/17 16:59	DD A
tert-Amyl methyl ether	82.3		ug/L	10.0	SW846 8260B		3/7/17 02:39	SYB B
Benzene	1.6		ug/L	1.0	SW846 8260B		3/3/17 16:59	DD A
Bromochloromethane	ND		ug/L	1.0	SW846 8260B		3/3/17 16:59	DD A
Bromodichloromethane	ND		ug/L	1.0	SW846 8260B		3/3/17 16:59	DD A
Bromoform	ND		ug/L	1.0	SW846 8260B		3/3/17 16:59	DD A
Bromomethane	ND		ug/L	1.0	SW846 8260B		3/3/17 16:59	DD A
2-Butanone	ND		ug/L	10.0	SW846 8260B		3/3/17 16:59	DD A
tert-Butyl Alcohol	222		ug/L	100	SW846 8260B		3/7/17 02:39	SYB B
Carbon Disulfide	ND		ug/L	1.0	SW846 8260B		3/3/17 16:59	DD A
Carbon Tetrachloride	ND		ug/L	1.0	SW846 8260B		3/3/17 16:59	DD A
Chlorobenzene	ND		ug/L	1.0	SW846 8260B		3/3/17 16:59	DD A
Chlorodibromomethane	ND		ug/L	1.0	SW846 8260B		3/3/17 16:59	DD A
Chloroethane	ND		ug/L	1.0	SW846 8260B		3/3/17 16:59	DD A
Chloroform	ND		ug/L	1.0	SW846 8260B		3/3/17 16:59	DD A
Chloromethane	ND		ug/L	1.0	SW846 8260B		3/3/17 16:59	DD A
Cyclohexane	ND		ug/L	1.0	SW846 8260B		3/3/17 16:59	DD A
1,2-Dibromo-3-chloropropane	ND		ug/L	7.0	SW846 8260B		3/3/17 16:59	DD A
1,2-Dibromoethane	ND		ug/L	1.0	SW846 8260B		3/3/17 16:59	DD A
1,2-Dichlorobenzene	ND		ug/L	1.0	SW846 8260B		3/3/17 16:59	DD A
1,3-Dichlorobenzene	ND		ug/L	1.0	SW846 8260B		3/3/17 16:59	DD A
1,4-Dichlorobenzene	ND		ug/L	1.0	SW846 8260B		3/3/17 16:59	DD A
Dichlorodifluoromethane	ND		ug/L	1.0	SW846 8260B		3/3/17 16:59	DD A
1,1-Dichloroethane	ND		ug/L	1.0	SW846 8260B		3/3/17 16:59	DD A
1,2-Dichloroethane	ND		ug/L	1.0	SW846 8260B		3/3/17 16:59	DD A
1,1-Dichloroethylene	ND		ug/L	1.0	SW846 8260B		3/3/17 16:59	DD A
cis-1,2-Dichloroethene	ND		ug/L	1.0	SW846 8260B		3/3/17 16:59	DD A
trans-1,2-Dichloroethene	2.2		ug/L	1.0	SW846 8260B		3/3/17 16:59	DD A
1,2-Dichloropropane	ND		ug/L	1.0	SW846 8260B		3/3/17 16:59	DD A
cis-1,3-Dichloropropene	ND		ug/L	1.0	SW846 8260B		3/3/17 16:59	DD A
trans-1,3-Dichloropropene	ND		ug/L	1.0	SW846 8260B		3/3/17 16:59	DD A
Diisopropyl ether	5.8		ug/L	1.0	SW846 8260B		3/3/17 16:59	DD A
1,4-Dioxane	ND		ug/L	320	SW846 8260B		3/3/17 16:59	DD A
Ethylbenzene	ND		ug/L	1.0	SW846 8260B		3/3/17 16:59	DD A
Freon 113	ND		ug/L	1.0	SW846 8260B		3/3/17 16:59	DD A
2-Hexanone	ND		ug/L	5.0	SW846 8260B		3/3/17 16:59	DD A

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## ANALYTICAL RESULTS

Workorder: 2212180 GVG SPRING/170167M-MD SITE

Lab ID:	<b>2212180002</b>	Date Collected:	3/2/2017 08:50	Matrix:	Ground Water
Sample ID:	<b>MW-2</b>	Date Received:	3/2/2017 21:10		

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
Isopropylbenzene	ND		ug/L	1.0	SW846 8260B			3/3/17 16:59	DD	A
Methyl acetate	ND		ug/L	2.0	SW846 8260B			3/3/17 16:59	DD	A
Methyl cyclohexane	ND		ug/L	1.0	SW846 8260B			3/3/17 16:59	DD	A
Methyl t-Butyl Ether	573		ug/L	10.0	SW846 8260B			3/7/17 02:39	SYB	B
4-Methyl-2-Pentanone(MIBK)	ND		ug/L	5.0	SW846 8260B			3/3/17 16:59	DD	A
Methylene Chloride	ND		ug/L	1.0	SW846 8260B			3/3/17 16:59	DD	A
Naphthalene	ND		ug/L	2.0	SW846 8260B			3/3/17 16:59	DD	A
Styrene	ND		ug/L	1.0	SW846 8260B			3/3/17 16:59	DD	A
1,1,2,2-Tetrachloroethane	ND		ug/L	1.0	SW846 8260B			3/3/17 16:59	DD	A
Tetrachloroethene	ND		ug/L	1.0	SW846 8260B			3/3/17 16:59	DD	A
Toluene	ND		ug/L	1.0	SW846 8260B			3/3/17 16:59	DD	A
Total Xylenes	ND		ug/L	3.0	SW846 8260B			3/3/17 16:59	DD	A
1,2,3-Trichlorobenzene	ND		ug/L	2.0	SW846 8260B			3/3/17 16:59	DD	A
1,2,4-Trichlorobenzene	ND		ug/L	2.0	SW846 8260B			3/3/17 16:59	DD	A
1,1,1-Trichloroethane	ND		ug/L	1.0	SW846 8260B			3/3/17 16:59	DD	A
1,1,2-Trichloroethane	ND		ug/L	1.0	SW846 8260B			3/3/17 16:59	DD	A
Trichloroethene	ND		ug/L	1.0	SW846 8260B			3/3/17 16:59	DD	A
Trichlorofluoromethane	ND		ug/L	1.0	SW846 8260B			3/3/17 16:59	DD	A
Vinyl Chloride	ND		ug/L	1.0	SW846 8260B			3/3/17 16:59	DD	A
o-Xylene	ND		ug/L	1.0	SW846 8260B			3/3/17 16:59	DD	A
mp-Xylene	ND		ug/L	2.0	SW846 8260B			3/3/17 16:59	DD	A
Surrogate Recoveries	Results	Flag	Units	Limits	Method	Prepared	By	Analyzed	By	Cntr
1,2-Dichloroethane-d4 (S)	109		%	62 - 133	SW846 8260B			3/3/17 16:59	DD	A
1,2-Dichloroethane-d4 (S)	94.1		%	62 - 133	SW846 8260B			3/7/17 02:39	SYB	B
4-Bromofluorobenzene (S)	103		%	79 - 114	SW846 8260B			3/3/17 16:59	DD	A
4-Bromofluorobenzene (S)	101		%	79 - 114	SW846 8260B			3/7/17 02:39	SYB	B
Dibromofluoromethane (S)	93.1		%	78 - 116	SW846 8260B			3/3/17 16:59	DD	A
Dibromofluoromethane (S)	85.8		%	78 - 116	SW846 8260B			3/7/17 02:39	SYB	B
Toluene-d8 (S)	93.4		%	76 - 127	SW846 8260B			3/7/17 02:39	SYB	B
Toluene-d8 (S)	94.4		%	76 - 127	SW846 8260B			3/3/17 16:59	DD	A

**Ms. Susan J Scherer**  
 Project Coordinator

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## ANALYTICAL RESULTS

Workorder: 2212180 GVG SPRING/170167M-MD SITE

Lab ID:	<b>2212180003</b>	Date Collected:	3/2/2017 09:43	Matrix:	Ground Water
Sample ID:	<b>MW-3</b>	Date Received:	3/2/2017 21:10		

Parameters	Results	Flag	Units	RDL	Method	Prepared By	Analyzed By	By Cntr
<b>VOLATILE ORGANICS</b>								
Acetone	ND		ug/L	10.0	SW846 8260B		3/3/17 17:21	DD A
tert-Amyl methyl ether	120		ug/L	1.0	SW846 8260B		3/3/17 17:21	DD A
Benzene	1.7		ug/L	1.0	SW846 8260B		3/3/17 17:21	DD A
Bromochloromethane	ND		ug/L	1.0	SW846 8260B		3/3/17 17:21	DD A
Bromodichloromethane	ND		ug/L	1.0	SW846 8260B		3/3/17 17:21	DD A
Bromoform	ND		ug/L	1.0	SW846 8260B		3/3/17 17:21	DD A
Bromomethane	ND		ug/L	1.0	SW846 8260B		3/3/17 17:21	DD A
2-Butanone	ND		ug/L	10.0	SW846 8260B		3/3/17 17:21	DD A
tert-Butyl Alcohol	684		ug/L	100	SW846 8260B		3/7/17 03:01	SYB B
Carbon Disulfide	ND		ug/L	1.0	SW846 8260B		3/3/17 17:21	DD A
Carbon Tetrachloride	ND		ug/L	1.0	SW846 8260B		3/3/17 17:21	DD A
Chlorobenzene	ND		ug/L	1.0	SW846 8260B		3/3/17 17:21	DD A
Chlorodibromomethane	ND		ug/L	1.0	SW846 8260B		3/3/17 17:21	DD A
Chloroethane	ND		ug/L	1.0	SW846 8260B		3/3/17 17:21	DD A
Chloroform	ND		ug/L	1.0	SW846 8260B		3/3/17 17:21	DD A
Chloromethane	ND		ug/L	1.0	SW846 8260B		3/3/17 17:21	DD A
Cyclohexane	ND		ug/L	1.0	SW846 8260B		3/3/17 17:21	DD A
1,2-Dibromo-3-chloropropane	ND		ug/L	7.0	SW846 8260B		3/3/17 17:21	DD A
1,2-Dibromoethane	ND		ug/L	1.0	SW846 8260B		3/3/17 17:21	DD A
1,2-Dichlorobenzene	ND		ug/L	1.0	SW846 8260B		3/3/17 17:21	DD A
1,3-Dichlorobenzene	ND		ug/L	1.0	SW846 8260B		3/3/17 17:21	DD A
1,4-Dichlorobenzene	ND		ug/L	1.0	SW846 8260B		3/3/17 17:21	DD A
Dichlorodifluoromethane	ND		ug/L	1.0	SW846 8260B		3/3/17 17:21	DD A
1,1-Dichloroethane	ND		ug/L	1.0	SW846 8260B		3/3/17 17:21	DD A
1,2-Dichloroethane	ND		ug/L	1.0	SW846 8260B		3/3/17 17:21	DD A
1,1-Dichloroethene	ND		ug/L	1.0	SW846 8260B		3/3/17 17:21	DD A
cis-1,2-Dichloroethene	ND		ug/L	1.0	SW846 8260B		3/3/17 17:21	DD A
trans-1,2-Dichloroethene	2.4		ug/L	1.0	SW846 8260B		3/3/17 17:21	DD A
1,2-Dichloropropane	ND		ug/L	1.0	SW846 8260B		3/3/17 17:21	DD A
cis-1,3-Dichloropropene	ND		ug/L	1.0	SW846 8260B		3/3/17 17:21	DD A
trans-1,3-Dichloropropene	ND		ug/L	1.0	SW846 8260B		3/3/17 17:21	DD A
Diisopropyl ether	ND		ug/L	1.0	SW846 8260B		3/3/17 17:21	DD A
1,4-Dioxane	ND		ug/L	320	SW846 8260B		3/3/17 17:21	DD A
Ethylbenzene	ND		ug/L	1.0	SW846 8260B		3/3/17 17:21	DD A
Freon 113	ND		ug/L	1.0	SW846 8260B		3/3/17 17:21	DD A
2-Hexanone	ND		ug/L	5.0	SW846 8260B		3/3/17 17:21	DD A

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**ALS Environmental**



34 Dogwood Lane ■ Middletown, PA 17057 ■ Phone: 717-944-5541 ■ Fax: 717-944-1430 ■ www.alsglobal.com

NELAP Certifications: NJ PA010 , NY 11759 , PA 22-293 DoD ELAP: A2LA 0818.01  
State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

## ANALYTICAL RESULTS

Workorder: 2212180 GVG SPRING/170167M-MD SITE

Lab ID:	<b>2212180003</b>	Date Collected:	3/2/2017 09:43	Matrix:	Ground Water
Sample ID:	<b>MW-3</b>	Date Received:	3/2/2017 21:10		

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
Isopropylbenzene	ND		ug/L	1.0	SW846 8260B			3/3/17 17:21	DD	A
Methyl acetate	ND		ug/L	2.0	SW846 8260B			3/3/17 17:21	DD	A
Methyl cyclohexane	ND		ug/L	1.0	SW846 8260B			3/3/17 17:21	DD	A
Methyl t-Butyl Ether	155		ug/L	10.0	SW846 8260B			3/7/17 03:01	SYB	B
4-Methyl-2-Pentanone(MIBK)	ND		ug/L	5.0	SW846 8260B			3/3/17 17:21	DD	A
Methylene Chloride	ND		ug/L	1.0	SW846 8260B			3/3/17 17:21	DD	A
Naphthalene	ND		ug/L	2.0	SW846 8260B			3/3/17 17:21	DD	A
Styrene	ND		ug/L	1.0	SW846 8260B			3/3/17 17:21	DD	A
1,1,2,2-Tetrachloroethane	ND		ug/L	1.0	SW846 8260B			3/3/17 17:21	DD	A
Tetrachloroethene	ND		ug/L	1.0	SW846 8260B			3/3/17 17:21	DD	A
Toluene	ND		ug/L	1.0	SW846 8260B			3/3/17 17:21	DD	A
Total Xylenes	ND		ug/L	3.0	SW846 8260B			3/3/17 17:21	DD	A
1,2,3-Trichlorobenzene	ND		ug/L	2.0	SW846 8260B			3/3/17 17:21	DD	A
1,2,4-Trichlorobenzene	ND		ug/L	2.0	SW846 8260B			3/3/17 17:21	DD	A
1,1,1-Trichloroethane	ND		ug/L	1.0	SW846 8260B			3/3/17 17:21	DD	A
1,1,2-Trichloroethane	ND		ug/L	1.0	SW846 8260B			3/3/17 17:21	DD	A
Trichloroethene	ND		ug/L	1.0	SW846 8260B			3/3/17 17:21	DD	A
Trichlorofluoromethane	ND		ug/L	1.0	SW846 8260B			3/3/17 17:21	DD	A
Vinyl Chloride	ND		ug/L	1.0	SW846 8260B			3/3/17 17:21	DD	A
o-Xylene	ND		ug/L	1.0	SW846 8260B			3/3/17 17:21	DD	A
mp-Xylene	ND		ug/L	2.0	SW846 8260B			3/3/17 17:21	DD	A
Surrogate Recoveries	Results	Flag	Units	Limits	Method	Prepared	By	Analyzed	By	Cntr
1,2-Dichloroethane-d4 (S)	109		%	62 - 133	SW846 8260B			3/3/17 17:21	DD	A
1,2-Dichloroethane-d4 (S)	97.2		%	62 - 133	SW846 8260B			3/7/17 03:01	SYB	B
4-Bromofluorobenzene (S)	101		%	79 - 114	SW846 8260B			3/3/17 17:21	DD	A
4-Bromofluorobenzene (S)	97.6		%	79 - 114	SW846 8260B			3/7/17 03:01	SYB	B
Dibromofluoromethane (S)	86.2		%	78 - 116	SW846 8260B			3/7/17 03:01	SYB	B
Dibromofluoromethane (S)	95		%	78 - 116	SW846 8260B			3/3/17 17:21	DD	A
Toluene-d8 (S)	92.9		%	76 - 127	SW846 8260B			3/3/17 17:21	DD	A
Toluene-d8 (S)	92.4		%	76 - 127	SW846 8260B			3/7/17 03:01	SYB	B

**Ms. Susan J Scherer**  
 Project Coordinator

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State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

**PARAMETER QUALIFIERS**

Lab ID	#	Sample ID	Analytical Method	Analyte
2212180001	1	MW-7	SW846 8260B	Methyl t-Butyl Ether

The QC sample type LCS for method SW846 8260B was outside the control limits for the analyte Methyl t-Butyl Ether. The % Recovery was reported as 116 and the control limits were 69 to 115.

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# CHAIN OF CUSTODY/ REQUEST FOR ANALYSIS

ALL SHADED AREAS MUST BE COMPLETED BY THE CLIENT /  
SAMPLER. INSTRUCTIONS ON THE BACK.

34 Dogwood Lane  
Middletown, PA 17057  
P. 717-944-5541  
F. 717-944-1430

Co. Name: **ADM Group**

Phone:

Contact (Report to): **Eric Maggard**  
Address:

Fax?

Bill to (if different than Report to):

**Green Valley Garage**

Project Name# **SPR104 2017** / **1701674** / **ALS Quote #:**

TAT:  Normal-Standard TAT is 10-12 business days.

Date Required:

Rush-Subject to ALS approval and surcharges. **5 day**

Approved By: **Bark**

Email?  **skahis@acmegrp.net**

Fax?

Y. No.:

Matrix

G or C

\*\*\*Container  
Type: **NDA**  
\*\*\*Container  
Size: **40ml**  
\*\*\*  
Preservative: **HCl**

Enter Number of Containers Per Analysis

Sample Description/Location (as it will appear on the lab report)	COC Comments	Sample Date	Military Time	Matrix	Deliveryables	Standard	SDWA	Sum Sample Collected In?
1 MW-7		3/2/17 0850	6:00 AM	G		<input type="checkbox"/>	SDWA	MD
2 MW-4		3/2/17 0850	6:00 AM	G		<input type="checkbox"/>	Form 2-C	MD
3 HW-3		3/2/17 0850	6:00 AM	G		<input type="checkbox"/>	CLP-like	MD
4						<input type="checkbox"/>	NL-Reduced	MD
5						<input type="checkbox"/>	NL-Full	MD
6						<input type="checkbox"/>	Other	NY
7						<input type="checkbox"/>	PA	PA
8						<input type="checkbox"/>	Other	PA
9						<input type="checkbox"/>	Other	PA

SAMPLED BY (Please Print):

**London M. Columns**  
Relinquished By / Company Name **ADM Group**

**ALS**