



**Quarterly Groundwater Monitoring Report
Third Quarter – 2015**

**Gasoline Fueling Station – Royal Farms #1
2620 Mountain Road
Joppa, MD 21085
MDE Case No. 2005-0357-HA
MDE Facility ID No. 3965**

AEC Project Number: 05-056RF001

Prepared for:

Maryland Department of the Environment
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Oil Control Program
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And

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October 20, 2015

Regulatory Information

Regulatory Agency: Maryland Department of the Environment
Agency Contact: Jeannette DeBartolomeo
Facility ID: 3965
OCP Case No.: 2005-0357-HA
Current Case Status: Quarterly on-site potable well, groundwater monitoring well and tank pit observation well sampling.
Reporting Period: 7-1-15 through 9-30-15

General Site Information

Royal Farms Contact: Tom Ruszin
Consultant Contact: Jeff Stein
Facility Status: Operating fuel station
Area Property Use: See Site Vicinity Map and Site Map (Figures 1 and 2)
Monitoring Wells: MW-1R, MW-2R, MW-5R, MW-6, MW-7, MW-8, and MW-9
Monitoring Pipes: TFMP-1, TFMP-2, TFMP-3, TFMP-4
Potable Wells: On-site: 2620 Mountain Road (HA-94-1328 (currently in use) and HA-94-0892 (currently out of use))

Activities Completed this Period

Sampling Date: September 16, 2015
Wells Sampled: MW-1R, MW-2R, MW-5R, MW-6, MW-7, MW-8, and MW-9
LPH Present: None
Minimum/Maximum
Groundwater Elevation: 168.80 feet / 181.39 feet (Figure 3)
Groundwater Flow Direction: North and West (Figure 3)

Introduction

As required, Advantage Environmental Consultants (AEC) has completed quarterly sampling of the groundwater monitoring wells and tank pit observation wells in response to Subtitle 10 Oil Pollution and Tank Management, 26.10.02.03-4 (the “Final Emergency Regulation”) and correspondence from the Maryland Department of the Environment (MDE) dated September 7, 2006, January 23, 2008, August 12, 2009, April 6, 2011, June 21, 2011, and July 24, 2012.

Redevelopment of the Site finished during this quarter. Redevelopment included renovation of the store, removal of the underground storage tank (UST) system

on the eastern portion of the site, and installation of a new UST system on the western portion of the site.

AEC was unable to sample mid-points of the stores point of entry treatment (POET) system, due to sample ports not being installed prior to quarterly sampling.

The following is a description and summary of the results of the recent groundwater sampling effort. Figure 1 in Attachment A illustrates the site vicinity. Figure 2 in Attachment A illustrates the groundwater monitoring and tank pit observation well locations.

Groundwater Gauging, Sampling, and Analysis

Groundwater levels within each monitoring well were measured on a quarterly basis using an interface probe accurate to 0.01 feet. The interface probe was cleaned (Liquinox and water rinse) prior to use in each well. No liquid phase hydrocarbon (LPH) was observed in the monitoring wells. Monitoring well gauging data is summarized in Table 1 of Attachment B and Figure 3 of Attachment A. Normal flow direction is to the east-northeast.

The drinking water and monitoring well samples were collected September 16, 2015. All samples were analyzed according to Environmental Protection Agency (EPA) protocols. Groundwater samples were collected from the monitoring wells by first gauging and purging at least three well volumes using a PVC bailer, which was cleaned (liquinox and water rinse) prior to use in each well. After purging, each well was allowed to recharge for a period of at least one hour prior to sampling. The well samples were collected using a dedicated, disposable sampling bailer. The drinking water samples were obtained after purging the system for 15 minutes and were collected from the POET system's influent (PW-1) and effluent (PW-3).

The samples were transferred directly into the appropriate sample containers. The sample from each location was placed in 40-milliliter glass jars with teflon-lined septa and/or one-liter amber glass jars. The sample containers were preserved with hydrochloric acid, as appropriate. Once collected, the samples were placed on ice in a cooler to await shipment to the laboratory.

Groundwater samples collected from the monitoring wells were analyzed for volatile organic compounds (VOCs) including fuel oxygenates per EPA Analytical Method 8260B and Total Petroleum Hydrocarbons (TPH) Diesel Range Organics (DRO) and TPH Gasoline Range Organics (GRO) per EPA Analytical Method 8015M. Samples collected from the potable drinking water well POET treatment system were analyzed for VOCs including fuel oxygenates per EPA Analytical Method 524.2.

Monitoring Well Analytical Results

Laboratory analytical results for MW-1R indicate a TPH DRO concentration above regulatory standards (i.e., Generic Numeric Cleanup Standards for Groundwater and Soil – Interim Final Guidance Update No. 2.1 – June, 2008). Laboratory analytical results for this sample also show a detectable level of Methyl tert-butyl ether (MTBE) below regulatory standards. All other analytes were below detection limits (BDL).

Laboratory analytical results for MW-2R indicate a TPH DRO concentration above regulatory standards. Laboratory analytical results for this sample also show a detectable level of MTBE below regulatory standards. All other analytes were BDL.

Laboratory analytical results for MW-5R indicate a TPH DRO concentration above regulatory standards. All other analytes were BDL.

Laboratory analytical results for MW-6 indicate a TPH DRO concentration above regulatory standards. Laboratory analytical results for this sample also show a detectable level of MTBE below regulatory standards. Laboratory analytical results for this sample also show a detectable level of tert-butanol (TBA), for which there is no regulatory standard. All other analytes were BDL.

Laboratory analytical results for MW-7 indicate a TPH DRO concentration above regulatory standards. Laboratory analytical results for this sample also show detectable levels of cis-1,2-dichloroethene and MTBE below regulatory standards. All other analytes were BDL.

Laboratory analytical results for MW-8 indicate a TPH DRO concentration above regulatory standards. All other analytes were BDL.

Laboratory analytical results for MW-9 indicate an acetone concentration below regulatory standards. All other analytes were BDL.

No LPH was observed in any of the monitoring wells or tank field monitoring pipes (TFMP's).

Figure 4 in Attachment A summarizes the latest groundwater quality data. Table 2 in Attachment B summarizes current and historical groundwater analytical results.

On-Site POET System Analytical Results

Laboratory analytical results for PW-1 indicate chloroform, MTBE, and toluene concentrations were detected below regulatory standards. Laboratory analytical results for this sample also show detectable levels of TBA, for which there is no regulatory standard. All other analytes were BDL.

Laboratory analytical results for PW-3 indicate a chloroform concentration detected below regulatory standards. All other analytes were BDL.

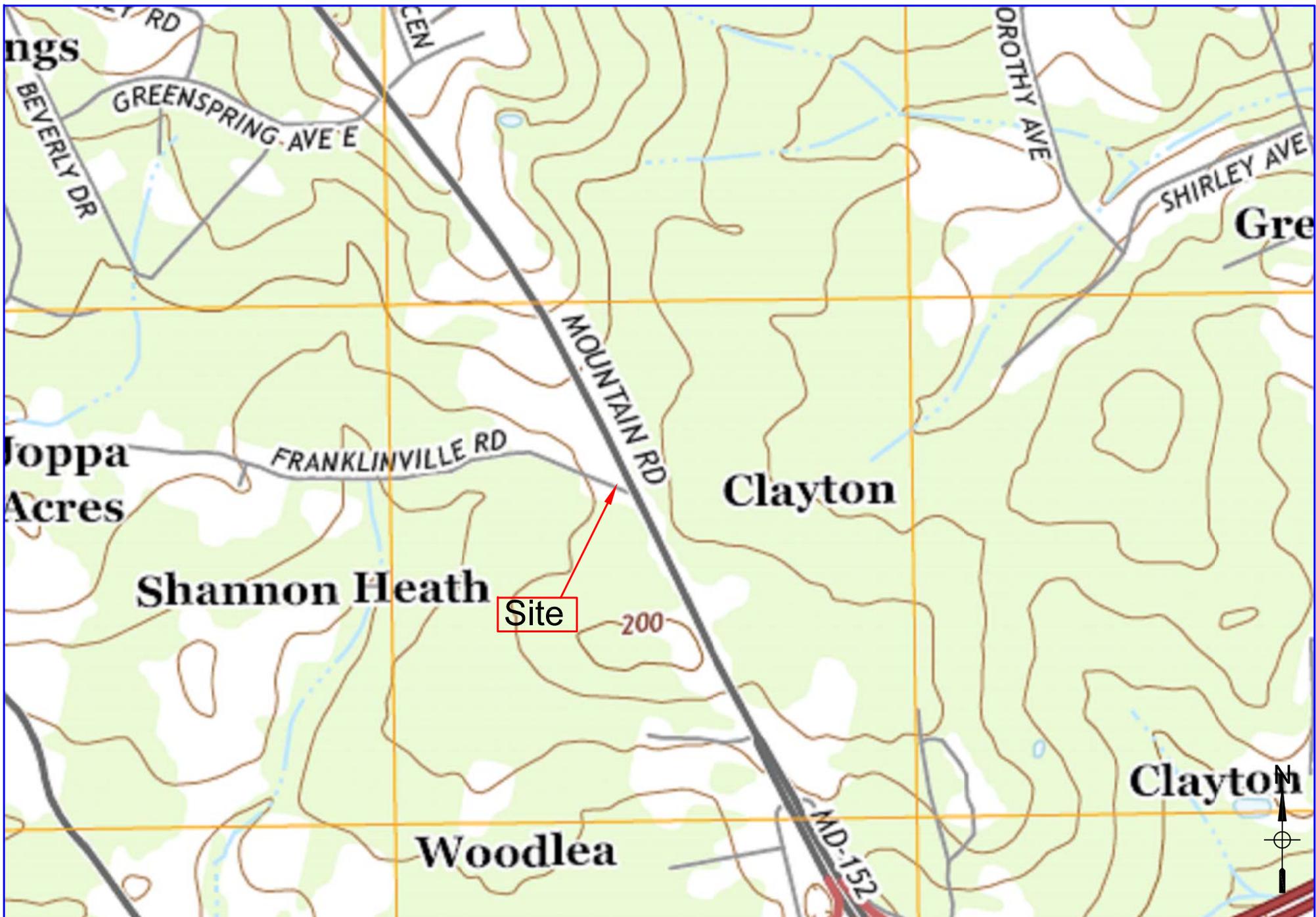
Table 3 in Attachment B summarizes current and historical potable well analytical results. The laboratory analytical report is presented in Attachment C.

Tank Field Monitoring Pipe Evaluation

On September 16, 2015 AEC screened each tank field monitoring pipe with a Photoionization Detector (PID) for the presence of petroleum hydrocarbon vapors. A plastic covering was securely fastened over each tank field monitoring pipe, and allowed to sit for a period of fifteen minutes. The plastic barrier was then punctured for the PID nozzle to enter, and a reading was taken. No vapors were detected in any of the tank field monitoring pipes (TFMP-1, TFMP-2, TFMP-3, and TFMP-4). The tank field monitoring pipes were gauged to determine the depth to water, and the presence of liquid-phase hydrocarbons. No liquid-phase hydrocarbons were detected in any of the tank field monitoring pipes.

Attachment A

Figures

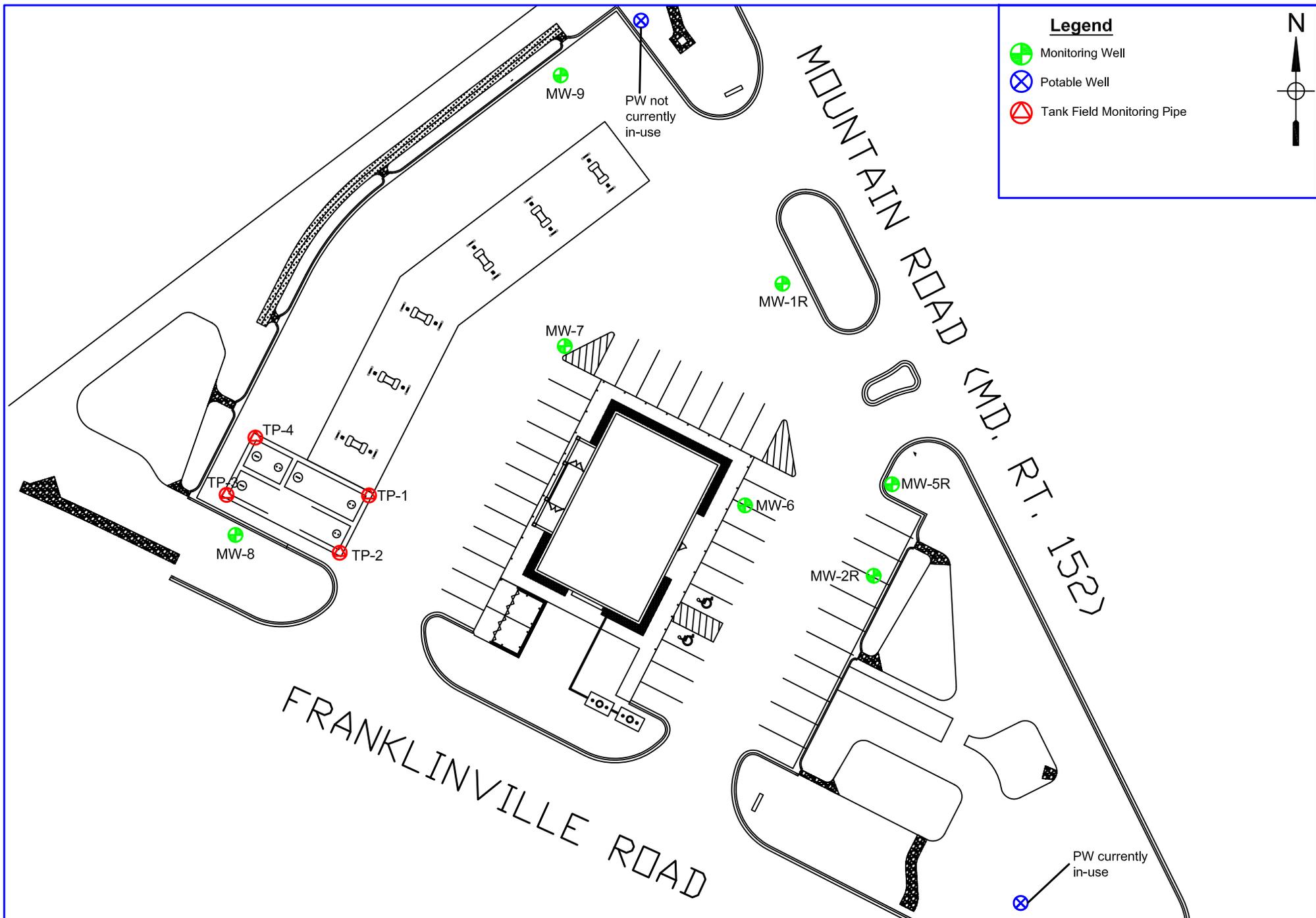


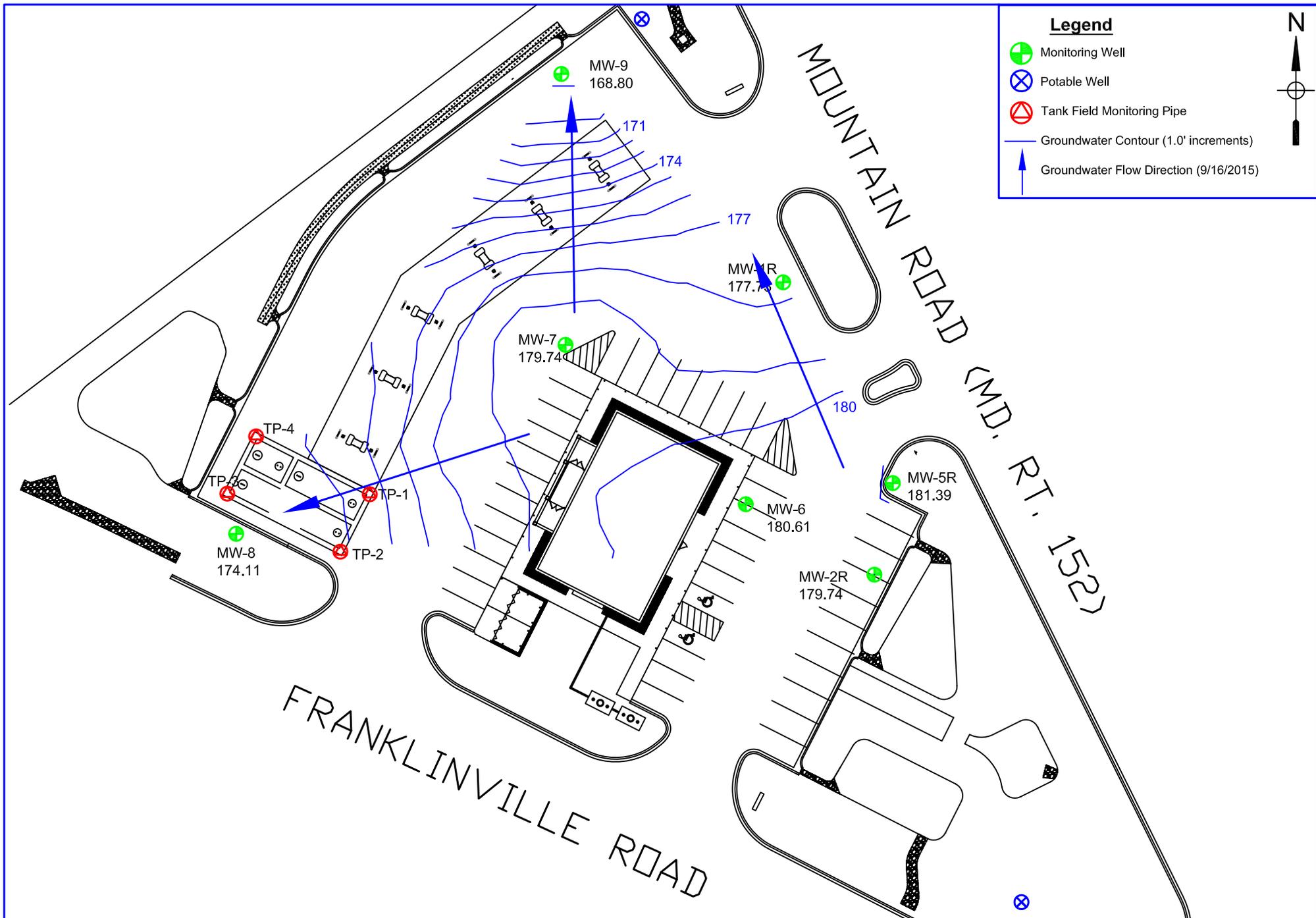
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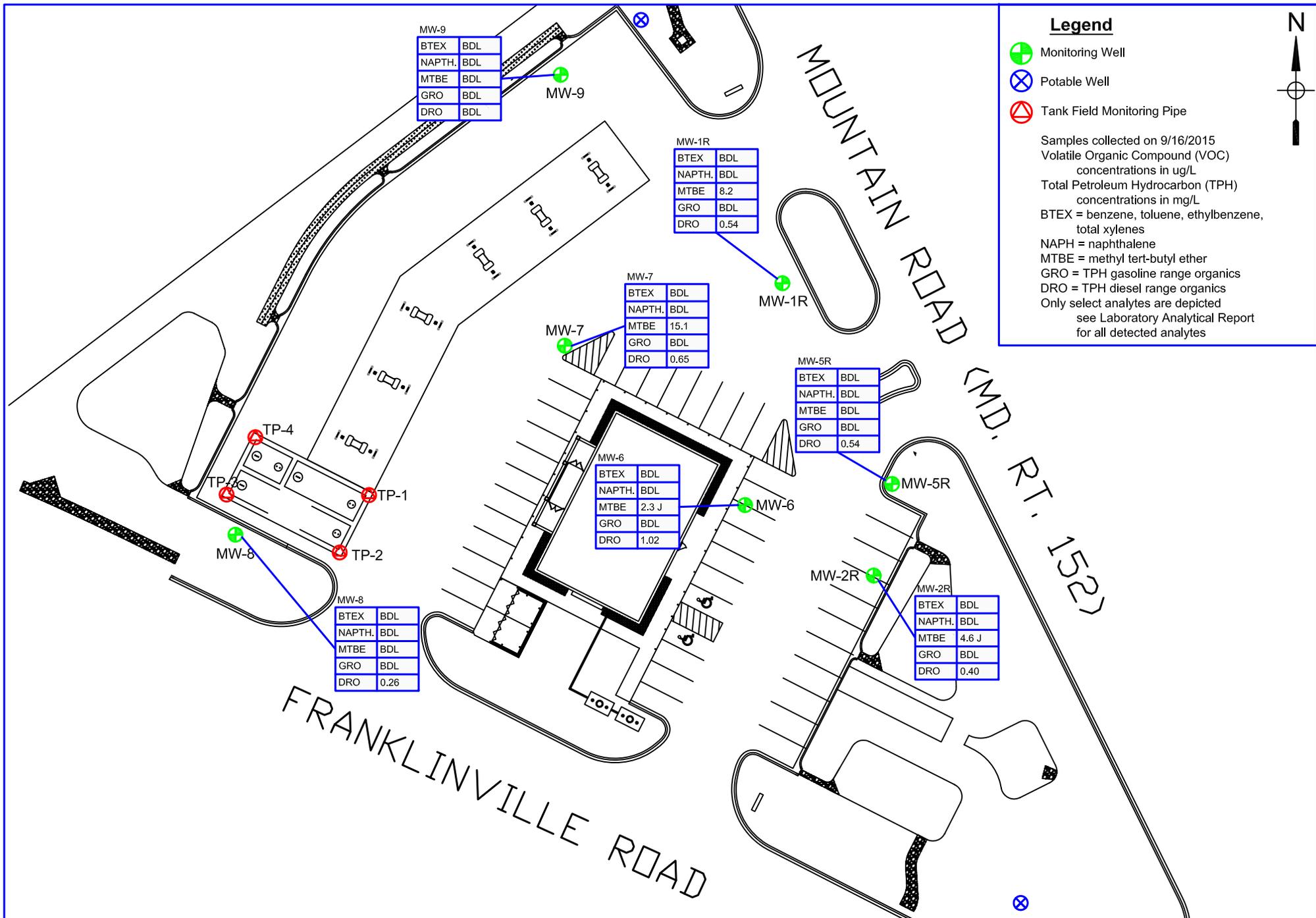
October 2015
 Project No. 05-056
 Task No. RF-001

Figure 1
 Drawn by: JSS

Site Vicinity Map
 Royal Farms Store No. 001
 2620 Mountain Road
 Joppa, MD 21085







Attachment B

Tables

**Table 1 - Historical Groundwater Elevation Data
Gasoline Fueling Station – Royal Farms #1
2620 Mountain Road, Joppa, Maryland 21085**

Well No.	Date	Depth to Water	TOC Elevation	Water Elevation	Comments
MW-1	7/9/2005	17.01	94.17	77.16	
	2/6/2006	18.11	94.17	76.06	
	6/29/2006	15.75	94.17	78.42	
	1/25/2007	17.23	94.17	76.94	
	1/26/2007	17.23	94.17	76.94	
	2/5/2007	17.29	94.17	76.88	
	2/12/2007	NG	94.17	NG	
	2/19/2007	NG	94.17	NG	
	2/21/2007	NG	94.17	NG	
	3/30/2007	NG	94.17	NG	
	4/23/2007	NG	94.17	NG	
	4/27/2007	NG	94.17	NG	
	7/25/2007	17.73	94.17	76.44	
	8/22/2007	17.92	94.17	76.25	
	9/12/2007	19.59	94.17	74.58	
	10/30/2007	20.83	94.17	73.34	
	1/29/2008	20.31	94.17	73.86	
	3/19/2008	17.91	94.17	76.26	
	5/29/2008	16.74	94.17	77.43	
	6/19/2008	15.55	94.17	78.62	
	9/30/2008	19.27	94.17	74.90	
	12/16/2008	20.05	94.17	74.12	
	3/25/2009	18.46	94.17	75.71	
	6/26/2009	15.31	94.17	78.86	
	9/28/2009	16.00	94.17	78.17	
	12/29/2009	16.19	94.17	77.98	
	3/31/2010	13.95	94.17	80.22	
	6/29/2010	16.00	94.17	78.17	
	9/28/2010	18.85	94.17	75.32	
	12/21/2010	18.87	94.17	75.30	
	3/28/2011	17.87	94.17	76.30	
	6/30/2011	15.36	186.19**	170.83**	
	8/8/2011	16.86	186.19	169.33	
	8/12/2011	16.90	186.19	169.29	
	8/13/2011	17.06	186.19	169.13	
	8/14/2011	17.11	186.19	169.08	
	8/15/2011	16.89	186.19	169.30	
	8/16/2011	16.71	186.19	169.48	
	9/8/2011	15.82	186.19	170.37	
	12/22/2011	15.14	186.19	171.05	
	3/21/2012	12.58	186.19	173.61	
	6/12/2012	14.42	186.19	171.77	Slight odor
	9/28/2012	16.28	186.19	169.91	
	12/27/2012	16.59	186.19	169.60	
	3/14/2013	13.51	186.19	172.68	
	6/17/2013	12.90	186.19	173.29	
	9/10/2013	15.19	186.19	171.00	
	12/3/2013	16.88	186.19	169.31	
	3/11/2014	11.83	186.19	174.36	
	6/10/2014	11.80	186.19	174.39	
	9/18/2014	15.78	186.19	170.41	
	12/4/2014	18.02	186.19	168.17	
	3/3/2015	13.56	186.19	172.63	
MW-1R	9/16/2015	6.85	184.58	177.73	
MW-2	7/9/2005	15.18	94.64	79.46	
	2/6/2006	16.57	94.64	78.07	
	6/29/2006	15.13	94.64	79.51	
	1/25/2007	15.62	94.64	79.02	
	1/26/2007	15.62	94.64	79.02	
	2/5/2007	15.67	94.64	78.97	

Well No.	Date	Depth to Water	TOC Elevation	Water Elevation	Comments
	2/12/2007	NG	94.64	NG	
	2/19/2007	NG	94.64	NG	
	2/21/2007	NG	94.64	NG	
	3/30/2007	NG	94.64	NG	
	4/23/2007	NG	94.64	NG	
	4/27/2007	NG	94.64	NG	
	7/25/2007	17.16	94.64	77.48	
	8/22/2007	17.64	94.64	77.00	
	9/12/2007	19.07	94.64	75.57	
	10/30/2007	20.42	94.64	74.22	
	1/29/2008	19.89	94.64	74.75	
	3/19/2008	17.66	94.64	76.98	
	5/29/2008	15.90	94.64	78.74	
	6/19/2008	14.82	94.64	79.82	
	9/30/2008	18.50	94.64	76.14	
	12/16/2008	19.92	94.64	74.72	
	3/25/2009	18.33	94.87*	76.54	
	6/26/2009	6.76	94.87	88.11	
	9/28/2009	6.90	94.87	87.97	
	12/29/2009	7.72	94.87	87.15	
	3/31/2010	8.15	94.87	86.72	
	6/29/2010	13.98	94.87	80.89	
	9/28/2010	16.55	94.87	78.32	
	12/21/2010	16.45	94.87	78.42	Slight odor
	3/28/2011	13.14	94.87	81.73	Slight odor
	6/30/2011	10.62	186.04**	175.42**	
	8/8/2011	15.72	186.04	170.32	
	8/12/2011	16.11	186.04	169.93	
	8/13/2011	16.51	186.04	169.53	
	8/14/2011	16.49	186.04	169.55	
	8/15/2011	15.75	186.04	170.29	
	8/16/2011	16.08	186.04	169.96	
	9/8/2011	15.25	186.04	170.79	
	12/22/2011	12.91	186.04	173.13	Slight odor
	3/21/2012	11.69	186.04	174.35	
	6/12/2012	13.83	186.04	172.21	Moderate odor
	9/28/2012	16.13	186.04	169.91	Moderate odor
	12/27/2012	15.63	186.04	170.41	
	3/14/2013	12.00	186.04	174.04	
	6/17/2013	11.44	186.04	174.60	Sheen
	9/10/2013	14.44	186.04	171.60	Moderate Odor
	12/3/2013	16.09	186.04	169.95	Slight Odor
	3/11/2014	9.48	186.04	176.56	Slight Odor
	6/10/2014	11.00	186.04	175.04	Slight Odor
	9/18/2014	16.60	186.04	169.44	Moderate Odor
	12/4/2014	20.06	186.04	165.98	Slight Odor
	3/3/2015	13.40	186.04	172.64	
MW-2R	9/16/2015	2.90	182.64	179.74	
MW-3	7/9/2005	14.62	93.08	78.46	
	2/6/2006	15.51	93.08	77.57	
	6/29/2006	14.72	93.08	78.36	
	1/25/2007	15.63	93.08	77.45	
	1/26/2007	15.63	93.08	77.45	
	2/5/2007	15.67	93.08	77.41	
	2/12/2007	NG	93.08	NG	
	2/19/2007	NG	93.08	NG	
	2/21/2007	NG	93.08	NG	
	3/30/2007	NG	93.08	NG	
	4/23/2007	NG	93.08	NG	
	4/27/2007	NG	93.08	NG	
	7/25/2007	16.70	93.08	76.38	
	8/22/2007	16.98	93.08	76.10	
	9/12/2007	7.50	93.08	85.58	
	10/30/2007	6.69	93.08	86.39	
	1/29/2008	6.61	93.08	86.47	
	3/19/2008	5.81	93.08	87.27	

Well No.	Date	Depth to Water	TOC Elevation	Water Elevation	Comments
	5/29/2008	5.39	93.08	87.69	
	6/19/2008	5.05	93.08	88.03	
	9/30/2008	6.13	93.08	86.95	
	12/16/2008	6.26	93.08	86.82	
	3/25/2009	6.90	93.08	86.18	
	6/26/2009	4.79	93.08	88.29	
	9/28/2009	4.66	93.08	88.42	
	12/29/2009	3.82	93.08	89.26	
	3/31/2010	2.86	93.08	90.22	
	6/29/2010	4.45	93.08	88.63	
	9/28/2010	5.42	93.08	87.66	
	12/21/2010	5.42	93.08	87.66	
	3/28/2011	4.56	93.08	88.52	
	6/30/2011	5.57	185.65**	180.08**	
	8/8/2011	6.72	185.65	178.93	
	8/12/2011	6.99	185.65	178.66	
	8/13/2011	7.02	185.65	178.63	
	8/14/2011	6.99	185.65	178.66	
	8/15/2011	6.90	185.65	178.75	
	8/16/2011	6.88	185.65	178.77	
	9/8/2011	5.86	185.65	179.79	
	12/22/2011	6.26	185.65	179.39	
	3/21/2012	5.37	185.65	180.28	
	6/12/2012	5.79	185.65	179.86	
	9/28/2012	7.18	185.65	178.47	
	12/27/2012	7.17	185.65	178.48	
	3/14/2013	6.21	185.65	179.44	
	6/17/2013	4.75	185.65	180.90	
	9/10/2013	6.49	185.65	179.16	
	12/3/2013	7.42	185.65	178.23	
	3/11/2014	4.75	185.65	180.90	
	6/10/2014	4.85	185.65	180.80	
	9/18/2014	7.01	185.65	178.64	
	12/4/2014	7.54	185.65	178.11	
	3/3/2015	6.52	185.65	179.13	
MW-4	6/30/2011	6.73	185.64	178.91	
	8/8/2011	11.46	185.64	174.18	
	8/12/2011	11.73	185.64	173.91	
	8/13/2011	11.84	185.64	173.80	
	8/14/2011	11.81	185.64	173.83	
	8/15/2011	7.68	185.64	177.96	
	8/16/2011	6.58	185.64	179.06	
	9/8/2011	4.81	185.64	180.83	
	12/22/2011	6.81	185.64	178.83	
	3/21/2012	4.52	185.64	181.12	Slight odor
	6/12/2012	5.39	185.64	180.25	Slight odor
	9/28/2012	7.54	185.64	178.10	
	12/27/2012	6.65	185.64	178.99	
	3/14/2013	5.76	185.64	179.88	
	6/17/2013	3.80	185.64	181.84	
	9/10/2013	6.90	185.64	178.74	
	12/3/2013	6.25	185.64	179.39	
	3/11/2014	4.98	185.64	180.66	
	6/10/2014	8.40	185.64	177.24	
	9/19/2014	10.10	185.64	175.54	
	12/4/2014	10.05	185.64	175.59	
	3/3/2015	NG	NG	NG	Blocked by ice
MW-5	6/30/2011	13.37	187.50	174.13	
	8/8/2011	16.76	187.50	170.74	
	8/12/2011	17.23	187.50	170.27	
	8/13/2011	17.49	187.50	170.01	
	8/14/2011	17.31	187.50	170.19	
	8/15/2011	17.45	187.50	170.05	
	8/16/2011	17.31	187.50	170.19	

Well No.	Date	Depth to Water	TOC Elevation	Water Elevation	Comments
	9/8/2011	14.80	187.50	172.70	Slight sheen
	12/22/2011	10.90	187.50	176.60	Slight odor
	3/21/2012	7.63	187.50	179.87	Slight odor
	6/12/2012	12.53	187.50	174.97	Moderate odor
	9/28/2012	16.96	187.50	170.54	Moderate odor
	12/27/2012	15.23	187.50	172.27	
	3/14/2013	11.41	187.50	176.09	Moderate odor
	6/17/2013	6.65	187.50	180.85	
	9/10/2013	15.79	187.50	171.71	Moderate odor
	12/3/2013	16.19	187.50	171.31	Moderate odor
	3/11/2014	8.66	187.50	178.84	Slight odor
	6/10/2014	7.79	187.50	179.71	Moderate odor
	9/18/2014	17.15	187.50	170.35	Slight Odor
	12/4/2014	16.76	187.50	170.74	Slight Odor
	3/3/2015	9.22	187.50	178.28	
MW-5R	9/16/2015	2.54	183.93	181.39	
MW-6	9/16/2015	3.11	183.72	180.61	
MW-7	9/16/2015	3.65	183.39	179.74	
MW-8	9/16/2015	4.86	178.97	174.11	
MW-9	9/16/2015	14.46	183.26	168.80	
TP-1	7/9/2005	NG	NM	NM	
	2/6/2006	NG	NM	NM	
	6/29/2006	NG	NM	NM	
	1/25/2007	5.03	NM	NM	LPH (0.01 ft.)
	1/26/2007	5.03	NM	NM	LPH (0.01 ft.)
	2/5/2007	5.08	NM	NM	LPH (0.01 ft.)
	2/12/2007	6.97	NM	NM	LPH (0.01 ft.)
	2/19/2007	6.94	NM	NM	LPH (0.01 ft.)
	2/21/2007	6.21	NM	NM	LPH (0.01 ft.)
	3/30/2007	6.18	NM	NM	LPH (0.01 ft.)
	4/23/2007	8.47	NM	NM	LPH (0.01 ft.)
	4/27/2007	8.21	NM	NM	LPH (0.01 ft.)
	5/25/2007	6.65	NM	NM	Sheen
	6/1/2007	6.34	NM	NM	Sheen
	6/10/2007	6.25	NM	NM	Sheen
	6/15/2007	6.22	NM	NM	Sheen
	7/25/2007	6.54	NM	NM	Slight Sheen
	8/22/2007	6.89	NM	NM	Slight Sheen
	9/12/2007	7.40	NM	NM	Slight Sheen
	10/30/2007	6.55	NM	NM	Slight Sheen
	11/13/2007	6.69	NM	NM	Slight Sheen
	12/18/2007	6.55	NM	NM	Slight Sheen
	1/29/2008	6.48	NM	NM	Slight Sheen
	2/26/2008	6.07	NM	NM	
	3/19/2008	6.13	NM	NM	Slight Sheen
	4/24/2008	6.40	NM	NM	
	5/29/2008	5.44	NM	NM	Slight Sheen
	6/19/2008	5.61	NM	NM	Slight Sheen
	7/3/2008	5.90	NM	NM	
	7/11/2008	6.02	NM	NM	
	7/18/2008	6.01	NM	NM	
	7/25/2008	6.08	NM	NM	
	8/1/2008	6.19	NM	NM	
	8/15/2008	6.44	NM	NM	
	8/22/2008	6.68	NM	NM	
	8/27/2008	6.49	NM	NM	
	9/12/2008	6.55	NM	NM	
	9/18/2008	6.53	NM	NM	
	9/26/2008	6.63	NM	NM	
	9/30/2008	5.69	NM	NM	
	10/7/2008	5.87	NM	NM	Odor
	10/16/2008	6.51	NM	NM	Sheen/Odor
	10/23/2008	6.48	NM	NM	Odor
	10/30/2008	5.99	NM	NM	Odor

Well No.	Date	Depth to Water	TOC Elevation	Water Elevation	Comments
	11/6/2008	6.28	NM	NM	
	11/11/2008	6.50	NM	NM	Sheen/Odor
	11/19/2008	5.89	NM	NM	Odor
	11/25/2008	6.18	NM	NM	Odor
	12/5/2008	6.18	NM	NM	Odor
	12/10/2008	6.19	NM	NM	Odor
	12/16/2008	5.76	NM	NM	Slight Sheen
	12/24/2008	5.59	NM	NM	Odor
	1/2/2009	5.92	NM	NM	Odor
	1/8/2009	5.63	NM	NM	Odor
	1/14/2009	5.98	NM	NM	Odor
	1/23/2009	5.90	NM	NM	Odor
	1/30/2009	6.03	NM	NM	Odor
	2/5/2009	6.00	NM	NM	Odor
	2/9/2009	5.98	NM	NM	Odor
	2/16/2009	6.12	NM	NM	Odor
	2/23/2009	6.29	NM	NM	Odor
	3/3/2009	6.38	NM	NM	Odor
	3/11/2009	6.42	NM	NM	Odor
	3/17/2009	6.39	NM	NM	Odor
	3/25/2009	6.59	NM	NM	Slight Sheen
	4/3/2009	6.08	NM	NM	Slight Sheen
	4/10/2009	5.11	NM	NM	Slight Sheen
	4/23/2009	4.50	NM	NM	Slight Sheen
	5/1/2009	4.82	NM	NM	
	5/6/2009	4.20	NM	NM	
	5/14/2009	4.29	NM	NM	
	5/21/2009	4.27	NM	NM	
	5/27/2009	4.31	NM	NM	
	6/3/2009	6.18	NM	NM	
	6/8/2009	6.15	NM	NM	
	6/18/2009	4.01	NM	NM	
	6/26/2009	4.09	NM	NM	
	7/2/2009	4.07	NM	NM	
	7/7/2009	4.19	NM	NM	
	7/17/2009	4.52	NM	NM	Slight Odor
	7/21/2009	4.04	NM	NM	
	8/27/2009	5.35	NM	NM	
	9/28/2009	3.48	NM	NM	Sheen/Odor
	10/30/2009	2.85	NM	NM	Slight Odor
	11/30/2009	2.94	NM	NM	Sheen/Odor
	12/29/2009	2.24	NM	NM	Slight Odor
	1/26/2010	NG	NM	NM	
	2/26/2010	1.34	NM	NM	Slight Odor
	3/31/2010	3.25	NM	NM	
	4/27/2010	1.67	NM	NM	
	5/25/2010	2.37	NM	NM	Slight Sheen
	6/29/2010	3.09	NM	NM	
	7/29/2010	3.51	NM	NM	
	8/31/2010	4.76	NM	NM	
	9/28/2010	3.13	NM	NM	
	10/28/2010	3.77	NM	NM	
	11/30/2010	4.84	NM	NM	
	12/21/2010	4.76	NM	NM	Mod. Odor
	1/4/2011	5.25	NM	NM	
	2/28/2011	3.60	NM	NM	Slight Sheen
	3/28/2011	3.07	NM	NM	Slight Odor
	4/26/2011	2.89	NM	NM	Mod. Odor
	5/25/2011	3.05	NM	NM	
	6/30/2011	4.18	NM	NM	
	7/26/2011	5.12	NM	NM	
	8/8/2011	5.33	NM	NM	Slight Odor
	8/12/2011	12.19	NM	NM	Surfactant Odor
	8/13/2011	11.86	NM	NM	Surfactant Odor

Well No.	Date	Depth to Water	TOC Elevation	Water Elevation	Comments
	8/14/2011	11.11	NM	NM	Surfactant Odor
	8/15/2011	10.66	NM	NM	Surfactant Odor
	8/16/2011	10.33	NM	NM	Surfactant Odor
	9/8/2011	4.11	NM	NM	Slight sheen
	10/31/2011	3.87	NM	NM	
	11/21/2011	4.57	NM	NM	
	12/22/2011	3.91	NM	NM	Mod. Odor
	1/26/2012	3.66	NM	NM	
	2/24/2012	4.15	NM	NM	Slight Odor
	3/21/2012	4.26	NM	NM	Moderate odor
	4/19/2012	4.77	NM	NM	Moderate odor
	5/24/2012	4.83	NM	NM	Slight odor
	6/12/2012	4.57	NM	NM	Moderate odor
	7/12/2012	5.03	NM	NM	Moderate odor/Slight sheen
	8/9/2012	5.05	NM	NM	Moderate odor
	9/28/2012	5.42	NM	NM	Slight Odor
	10/22/2012	4.86	NM	NM	
	11/20/2012	4.28	NM	NM	
	12/27/2012	3.86	NM	NM	
	1/14/2013	4.38	NM	NM	
	2/7/2013	4.29	NM	NM	Moderate Odor
	3/14/2013	3.85	NM	NM	Moderate Odor
	4/30/2013	4.03	NM	NM	Slight Odor
	5/17/2013	3.98	NM	NM	Slight Odor
	6/17/2013	3.15	NM	NM	Moderate Odor
	9/10/2013	4.81	NM	NM	
	12/3/2013	4.39	NM	NM	Moderate Odor
	3/11/2014	3.09	NM	NM	Slight Sheen
	6/10/2014	3.29	NM	NM	Slight Odor
	9/18/2014	5.24	NM	NM	Slight Odor
	12/4/2014	4.75	NM	NM	Slight Odor
	3/3/2015	4.08	NM	NM	
TFMP-1	9/16/2015	1.89	NM	NM	
TP-2	7/9/2005	NG	NM	NM	
	2/6/2006	NG	NM	NM	
	6/29/2006	NG	NM	NM	
	1/25/2007	5.05	NM	NM	LPH (0.02 ft.)
	1/26/2007	5.33	NM	NM	LPH (0.01 ft.)
	2/5/2007	5.09	NM	NM	LPH (0.01 ft.)
	2/12/2007	6.87	NM	NM	LPH (0.02 ft.)
	2/19/2007	6.85	NM	NM	LPH (0.02 ft.)
	2/21/2007	6.08	NM	NM	LPH (0.02 ft.)
	3/30/2007	6.03	NM	NM	LPH (0.02 ft.)
	4/23/2007	8.39	NM	NM	LPH (0.01 ft.)
	4/27/2007	8.20	NM	NM	LPH (0.01 ft.)
	5/25/2007	6.45	NM	NM	Sheen
	6/1/2007	6.17	NM	NM	Sheen
	6/10/2007	6.02	NM	NM	
	6/15/2007	6.03	NM	NM	
	7/25/2007	6.39	NM	NM	Slight Sheen
	8/22/2007	7.02	NM	NM	Slight Sheen
	9/12/2007	7.24	NM	NM	Slight Sheen
	10/30/2007	6.43	NM	NM	
	11/13/2007	6.51	NM	NM	Slight Sheen
	12/18/2007	6.49	NM	NM	Slight Sheen
	1/29/2008	6.30	NM	NM	Slight Sheen
	2/26/2008	5.81	NM	NM	
	3/19/2008	5.94	NM	NM	Slight Sheen
	4/24/2008	6.35	NM	NM	
	5/29/2008	5.27	NM	NM	Slight Sheen
	6/19/2008	5.44	NM	NM	Slight Sheen
	7/3/2008	5.73	NM	NM	
	7/11/2008	5.88	NM	NM	
	7/18/2008	5.86	NM	NM	

Well No.	Date	Depth to Water	TOC Elevation	Water Elevation	Comments
	7/25/2008	5.89	NM	NM	
	8/1/2008	6.00	NM	NM	
	8/15/2008	6.28	NM	NM	
	8/22/2008	6.47	NM	NM	
	8/27/2008	6.31	NM	NM	
	9/12/2008	6.38	NM	NM	
	9/18/2008	6.37	NM	NM	
	9/26/2008	6.48	NM	NM	
	9/30/2008	5.78	NM	NM	
	10/7/2008	5.61	NM	NM	
	10/16/2008	6.33	NM	NM	Sheen/Odor
	10/23/2008	6.57	NM	NM	Odor
	10/30/2008	5.83	NM	NM	Odor
	11/6/2008	6.12	NM	NM	
	11/11/2008	6.33	NM	NM	Sheen/Odor
	11/19/2008	5.47	NM	NM	Odor
	11/25/2008	6.01	NM	NM	Odor
	12/5/2008	6.03	NM	NM	Odor
	12/10/2008	6.36	NM	NM	Odor
	12/16/2008	5.61	NM	NM	Sheen/Odor
	12/24/2008	5.42	NM	NM	Odor
	1/2/2009	5.74	NM	NM	Odor
	1/8/2009	5.45	NM	NM	Odor
	1/14/2009	5.77	NM	NM	Odor
	1/23/2009	5.71	NM	NM	Odor
	1/30/2009	5.86	NM	NM	Odor
	2/5/2009	5.83	NM	NM	Odor
	2/9/2009	5.91	NM	NM	
	2/16/2009	6.03	NM	NM	
	2/23/2009	6.21	NM	NM	
	3/3/2009	6.34	NM	NM	
	3/11/2009	6.36	NM	NM	
	3/17/2009	6.33	NM	NM	
	3/25/2009	6.52	NM	NM	Slight Sheen
	4/3/2009	6.02	NM	NM	Odor
	4/10/2009	5.03	NM	NM	Odor
	4/23/2009	4.42	NM	NM	Odor
	5/1/2009	4.60	NM	NM	
	5/6/2009	4.15	NM	NM	
	5/14/2009	4.23	NM	NM	
	5/21/2009	4.21	NM	NM	
	5/27/2009	4.37	NM	NM	
	6/3/2009	6.09	NM	NM	
	6/8/2009	6.04	NM	NM	
	6/18/2009	4.08	NM	NM	
	6/26/2009	4.01	NM	NM	
	7/2/2009	3.99	NM	NM	
	7/7/2009	4.13	NM	NM	
	7/17/2009	4.45	NM	NM	Slight Odor
	7/21/2009	3.98	NM	NM	
	8/27/2009	5.27	NM	NM	
	9/28/2009	3.40	NM	NM	Sheen/Odor
	10/30/2009	2.78	NM	NM	Sheen/Odor
	11/30/2009	2.85	NM	NM	Slight Odor
	12/29/2009	NG	NM	NM	
	1/26/2010	2.59	NM	NM	Slight Sheen
	2/26/2010	1.28	NM	NM	Slight Odor
	3/31/2010	1.25	NM	NM	
	4/27/2010	1.61	NM	NM	
	5/25/2010	2.29	NM	NM	
	6/29/2010	3.02	NM	NM	
	7/29/2010	3.42	NM	NM	
	8/31/2010	4.68	NM	NM	
	9/28/2010	3.07	NM	NM	

Well No.	Date	Depth to Water	TOC Elevation	Water Elevation	Comments
	10/28/2010	3.83	NM	NM	
	11/30/2010	4.75	NM	NM	Strong Odor
	12/21/2010	4.70	NM	NM	Mod. Odor
	1/4/2011	5.32	NM	NM	
	2/28/2011	3.65	NM	NM	Slight Sheen
	3/28/2011	3.02	NM	NM	Slight Odor
	4/26/2011	2.81	NM	NM	Slight Odor
	5/25/2011	2.98	NM	NM	Slight Odor
	6/30/2011	4.12	NM	NM	
	7/26/2011	5.03	NM	NM	
	8/8/2011	5.26	NM	NM	Slight Odor
	8/12/2011	12.13	NM	NM	Surfactant Odor
	8/13/2011	11.81	NM	NM	Surfactant Odor
	8/14/2011	11.05	NM	NM	Surfactant Odor
	8/15/2011	10.61	NM	NM	Surfactant Odor
	8/16/2011	10.27	NM	NM	Surfactant Odor
	9/8/2011	4.06	NM	NM	Slight sheen
	10/31/2011	3.81	NM	NM	
	11/21/2011	4.50	NM	NM	
	12/22/2011	3.83	NM	NM	Sheen
	1/26/2012	3.58	NM	NM	Slight Odor
	2/24/2012	3.58	NM	NM	Slight Odor
	3/21/2012	4.20	NM	NM	Moderate odor
	4/19/2012	4.65	NM	NM	Moderate odor
	5/24/2012	4.70	NM	NM	Slight Odor
	6/12/2012	4.62	NM	NM	Moderate odor
	7/12/2012	4.94	NM	NM	Moderate odor/Slight sheen
	8/9/2012	4.97	NM	NM	Moderate odor
	9/28/2012	5.34	NM	NM	Slight Odor
	10/22/2012	4.81	NM	NM	
	11/20/2012	4.26	NM	NM	
	12/27/2012	3.78	NM	NM	
	1/14/2013	4.31	NM	NM	Slight Odor
	2/7/2013	4.22	NM	NM	Slight Odor
	3/14/2013	3.85	NM	NM	Moderate odor
	4/30/2013	3.97	NM	NM	Slight Odor
	5/17/2013	3.89	NM	NM	Slight Odor
	6/17/2013	3.09	NM	NM	Moderate odor
	9/10/2013	4.89	NM	NM	Moderate odor
	12/3/2013	4.31	NM	NM	Moderate Odor
	3/11/2014	3.01	NM	NM	Slight Sheen
	6/10/2014	3.21	NM	NM	
	9/16/2014	5.30	NM	NM	
	12/4/2014	4.63	NM	NM	Slight Odor
	3/3/2015	4.02	NM	NM	
TFMP-2	9/16/2015	2.78	NM	NM	
TFMP-3	9/16/2015	3.86	NM	NM	
TFMP-4	9/16/2015	2.76	NM	NM	

All measurements in feet

TOC = Top of Casing

NM = Not Measured

NG = Not Gauged

LPH = Liquid Phase Hydrocarbon

** = Change in the recorded elevation reflects a re-survey of all onsite wells using elevation from a *Site & Stormwater Plan* dated May 22, 1995. The southwestern corner of the dispenser island was used as a benchmark.

* = TOC Elevation change due to SVE Install

**Table 2 - Historical Groundwater Analytical Results
Gasoline Fueling Station – Royal Farms #1
2620 Mountain Road, Joppa, Maryland 21085**

Well No.	Date	B	T	E	X	Total BTEX	MTBE	TPH GRO	TPH DRO	
MW-1	7/9/2005	BDL	BDL	BDL	BDL	BDL	BDL	NS	NS	
	2/6/2006	BDL	BDL	BDL	BDL	BDL	BDL	NS	NS	
	6/29/2006	BDL	BDL	BDL	BDL	BDL	BDL	NS	NS	
	1/25/2007	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	
	7/25/2007	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	
	10/30/2007	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	
	1/29/2008	BDL	BDL	BDL	BDL	BDL	BDL	5.1	BDL	BDL
	3/19/2008	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
	6/19/2008	BDL	BDL	BDL	BDL	BDL	BDL	500	BDL	BDL
	9/30/2008	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
	12/16/2008	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
	3/25/2009	BDL	BDL	BDL	BDL	BDL	BDL	25	BDL	BDL
	6/26/2009	BDL	BDL	BDL	BDL	BDL	BDL	24	BDL	BDL
	9/28/2009	BDL	14	BDL	20	34	9	BDL	BDL	BDL
	12/29/2009	BDL	BDL	BDL	BDL	BDL	70	BDL	BDL	BDL
	3/31/2010	BDL	BDL	BDL	BDL	BDL	160	BDL	BDL	BDL
	6/29/2010	BDL	BDL	BDL	BDL	BDL	38	BDL	BDL	BDL
	9/28/2010	BDL	BDL	BDL	BDL	BDL	25	BDL	BDL	BDL
	12/21/2010	BDL	BDL	BDL	BDL	BDL	110	BDL	BDL	BDL
	3/28/2011	BDL	BDL	BDL	BDL	BDL	86	BDL	BDL	BDL
	6/30/2011	BDL	BDL	BDL	BDL	BDL	16	BDL	BDL	BDL
	9/8/2011	BDL	BDL	BDL	11	11	71	BDL	BDL	BDL
	12/22/2011	BDL	BDL	BDL	BDL	BDL	34	BDL	BDL	BDL
3/21/2012	BDL	BDL	BDL	BDL	BDL	46	BDL	BDL	BDL	
6/12/2012	BDL	BDL	BDL	BDL	BDL	54	BDL	BDL	BDL	
9/28/2012	BDL	BDL	BDL	BDL	BDL	39	BDL	BDL	BDL	
12/27/2012	BDL	BDL	BDL	BDL	BDL	8.2	BDL	BDL	BDL	
3/14/2013	BDL	BDL	BDL	BDL	BDL	41.5	BDL	BDL	BDL	
6/17/2013	BDL	BDL	3.1 J	2.3 J	5.4 J	85.4	BDL	BDL	BDL	
9/10/2013	2.4 J	BDL	30.5	25.7	58.6 J	27.0	0.161	BDL	BDL	
12/3/2013	BDL	BDL	9.9	6.8 J	16.7 J	15.7	BDL	BDL	BDL	
3/11/2014	2.8 J	BDL	24.2	4.7 J	31.7 J	26.0	BDL	BDL	BDL	
6/10/2014	7.7	BDL	75.6	18.5	101.8	139	0.362	0.41	BDL	
9/18/2014	5.2	BDL	54.0	4.4 J	63.6	21.6	0.143	BDL	BDL	
12/4/2014	2.3 J	BDL	11.9	BDL	14.2 J	16.0	BDL	BDL	BDL	
3/3/2015	BDL	BDL	10.2	BDL	10.2	16.6	BDL	BDL	BDL	
MW-1R	9/16/2015	BDL	BDL	BDL	BDL	BDL	8.2	BDL	0.54	
MW-2	7/9/2005	BDL	BDL	BDL	BDL	BDL	740	NS	NS	
	2/6/2006	BDL	BDL	BDL	BDL	BDL	560	NS	NS	
	6/29/2006	BDL	BDL	BDL	BDL	BDL	960	NS	NS	
	1/25/2007	74	BDL	25	11	110	15,000	BDL	BDL	
	7/25/2007	59	BDL	BDL	BDL	59	21,000	BDL	BDL	
	10/30/2007	12	BDL	BDL	BDL	12	4,800	BDL	BDL	
	1/29/2008	65	BDL	51	150	266	22,300	BDL	0.8	
	3/19/2008	23	BDL	93	89	205	25,000	BDL	BDL	
	6/19/2008	700	200	1,700	1,080	3,680	19,000	7.9	9.0	
	9/30/2008	720	19	1,300	261	2,300	11,300	5.0	3.9	
	12/16/2008	34	BDL	48	24	106	5,100	9.0	7.9	
	3/25/2009	214	18	400	56	688	2,900	1.7	BDL	
	6/26/2009	320	1100	800	1500	3,720	3000	6.0	3.4	
9/28/2009	19	BDL	110	44	173	160	0.5	BDL	BDL	
12/29/2009	350	14	920	950	2234	3,800	6.8	2.4	BDL	

Well No.	Date	B	T	E	X	Total BTEX	MTBE	TPH GRO	TPH DRO
	3/31/2010	250	10	1100	334	1694	3,800	3.2	2.6
	6/29/2010	200	6.6	620	357	1,184	720	2.5	1.9
	9/28/2010	220	14	840	453	1,527	800	4.2	1.5
	12/21/2010	160	7.5	2800	970	3,938	1100	3.6	2.0
	3/28/2011	120	BDL	800	BDL	920	620	1.6	1.2
	6/30/2011	80	BDL	500	84	664	250	2.5	0.8
	9/8/2011	80	7.5	370	51	508.5	440	2.6	0.5
	12/22/2011	150	BDL	720	588	1,458.0	1300	2.0	1.2
	3/21/2012	53	BDL	130	6.4	189.4	430	1.3	BDL
	6/12/2012	80	BDL	350	260	690	610	2.8	0.5
	9/28/2012	37	BDL	26	BDL	63	630	0.7	BDL
	12/27/2012	58.2	BDL	54.1	43.6	155.9	534	BDL	BDL
	3/14/2013	34.5J	BDL	BDL	BDL	34.5	266	0.550	2.56
	6/17/2013	42.2	BDL	2.4 J	BDL	44.6	178	0.305	1.47
	9/10/2013	37.9 J	BDL	BDL	BDL	37.9 J	177	0.363	2.29
	12/3/2013	34.4	BDL	18.5 J	19.8 J	72.7	262	0.972	2.77
	3/11/2014	BDL	BDL	BDL	BDL	BDL	116	0.259	2.45
	6/10/2014	41.3	BDL	15.7 J	BDL	57 J	237	0.463	3.01
	9/18/2014	30.8 J	BDL	BDL	BDL	30.8 J	265	0.446	2.30
	12/4/2014	27.8 J	BDL	BDL	BDL	27.8 J	391	1.00	2.30
	3/3/2015	25.0	BDL	BDL	2.1 J	27.1 J	176	0.359	2.33
MW-2R	9/16/2015	BDL	BDL	BDL	BDL	BDL	4.6 J	BDL	0.40
MW-3	7/9/2005	BDL	BDL	BDL	BDL	BDL	9.7	NS	NS
	2/6/2006	BDL	BDL	BDL	BDL	BDL	BDL	NS	NS
	6/29/2006	BDL	BDL	BDL	BDL	BDL	5.4	NS	NS
	1/25/2007	BDL	BDL	BDL	BDL	BDL	91	BDL	BDL
	7/25/2007	BDL	BDL	BDL	BDL	BDL	220	BDL	BDL
	10/30/2007	9.6	21	34	169	233.6	74	BDL	BDL
	1/29/2008	BDL	BDL	BDL	BDL	0	66	BDL	BDL
	3/19/2008	BDL	BDL	BDL	BDL	0	63	BDL	BDL
	6/19/2008	BDL	BDL	6.2	BDL	6.2	66	BDL	BDL
	9/30/2008	BDL	BDL	12	8.6	20.6	100	BDL	BDL
	12/16/2008	BDL	BDL	BDL	BDL	BDL	80	BDL	BDL
	3/25/2009	BDL	BDL	BDL	BDL	BDL	56	BDL	BDL
	6/26/2009	BDL	BDL	BDL	BDL	BDL	32	BDL	BDL
	9/28/2009	BDL	BDL	BDL	BDL	BDL	26	BDL	BDL
	12/29/2009	BDL	7.8	BDL	BDL	7.8	33	BDL	BDL
	3/31/2010	BDL	BDL	12	12	24	150	BDL	BDL
	6/29/2010	BDL	BDL	7.5	BDL	7.5	61	BDL	BDL
	9/28/2010	BDL	BDL	BDL	BDL	BDL	32	BDL	BDL
	12/21/2010	BDL	BDL	BDL	BDL	BDL	28	BDL	BDL
	3/28/2011	BDL	BDL	BDL	BDL	BDL	16	BDL	BDL
	6/30/2011	BDL	BDL	BDL	BDL	BDL	8.8	BDL	BDL
	9/8/2011	BDL	100	43	237	380	28	BDL	BDL
	12/22/2011	BDL	BDL	5.4	BDL	5.4	17	BDL	BDL
	3/21/2012	BDL	BDL	12	BDL	12	19	BDL	BDL
	6/12/2012	BDL	BDL	BDL	BDL	BDL	26	BDL	BDL
	9/28/2012	BDL	BDL	BDL	BDL	BDL	31	BDL	BDL
	12/27/2012	BDL	BDL	BDL	BDL	BDL	14.4	BDL	0.78
	3/14/2013	BDL	BDL	BDL	BDL	BDL	15.9	BDL	0.97
	6/17/2013	BDL	BDL	BDL	BDL	BDL	16.4	BDL	0.42
	9/10/2013	BDL	BDL	BDL	BDL	BDL	13.8	BDL	0.57
	12/3/2013	BDL	BDL	BDL	BDL	BDL	11.9	BDL	0.85
	3/11/2014	BDL	BDL	BDL	BDL	BDL	14	BDL	0.85
	6/10/2014	BDL	BDL	BDL	BDL	BDL	12.5	BDL	0.70

Well No.	Date	B	T	E	X	Total BTEX	MTBE	TPH GRO	TPH DRO
	9/18/2014	BDL	BDL	BDL	BDL	BDL	13.5	BDL	0.56
	12/4/2014	BDL	BDL	BDL	BDL	BDL	9.3	0.104	0.30
	3/3/2015	BDL	BDL	BDL	BDL	BDL	10.2	BDL	0.65
MW-4	6/30/2011	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
	9/8/2011	BDL	BDL	BDL	9.3	9.3	BDL	BDL	BDL
	12/22/2011	BDL	BDL	BDL	BDL	BDL	9	BDL	BDL
	3/21/2012	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
	6/12/2012	BDL	BDL	BDL	BDL	BDL	62	BDL	BDL
	9/28/2012	BDL	BDL	BDL	BDL	BDL	31	BDL	BDL
	12/27/2012	BDL	BDL	BDL	BDL	BDL	BDL	BDL	0.56
	3/14/2013	BDL	BDL	BDL	BDL	BDL	10.5	BDL	0.28
	6/17/2013	BDL	BDL	BDL	BDL	BDL	2.8 J	BDL	BDL
	9/10/2013	BDL	BDL	BDL	BDL	BDL	5.4	BDL	0.37
	12/3/2013	BDL	BDL	BDL	BDL	BDL	9.9	BDL	0.52
	3/11/2014	BDL	BDL	BDL	BDL	BDL	3.0 J	BDL	0.26
	6/10/2014	BDL	BDL	BDL	BDL	BDL	3.8 J	BDL	0.29
	9/18/2014	BDL	BDL	BDL	BDL	BDL	14.1	BDL	0.43
	12/4/2014	BDL	BDL	BDL	BDL	BDL	15.5	BDL	0.70
	3/3/2015*	NS	NS	NS	NS	NS	NS	NS	NS
MW-5	6/30/2011	52	260	680	4,100	5,092	BDL	1.50	4.70
	9/8/2011	11	BDL	120	72	203	100	0.90	BDL
	12/22/2011	65	540	1100	2,700	4,405	250	22.00	7.50
	3/21/2012	58	240	680	2,080	3,058	100	6.20	1.90
	6/12/2012	210	140	1000	2,080	3,430	100	7.10	3.50
	9/28/2012	41	21	1100	3,000	4,162	66	10.00	8.90
	12/27/2012	BDL	85.9	1440	4,370	5,896	BDL	10.9	4.12
	3/14/2013	BDL	33.4 J	625	2,222	2,880	BDL	6.300	3.01
	6/17/2013	121	191	695	2,370	3,377	39.1 J	5.720	2.18
	9/10/2013	76.9	68.0	863	1,656	2,664	38.4 J	7.160	3.06
	12/3/2013	BDL	BDL	500	667.6	1,168	BDL	4.690	3.11
	3/11/2014	56.1	54.5	1,040	2,790	3,941	64	6.280	5.07
	6/10/2014	51.5	37.1 J	932	1,762	2782.6 J	23.5 J	7.45	5.30
	9/18/2014	20.0 J	BDL	571	483	1074 J	BDL	3.150	2.94
	12/4/2014	BDL	BDL	367	518.5	885.50	BDL	3.330	2.07
	3/3/2015	BDL	BDL	243	285.2	528.2	8.8 J	2.780	1.80
MW-5R	9/16/2015	BDL	BDL	BDL	BDL	BDL	BDL	BDL	0.54
MW-6	9/16/2015	BDL	BDL	BDL	BDL	BDL	2.3 J	BDL	1.02
MW-7	9/16/2015	BDL	BDL	BDL	BDL	BDL	15.1	BDL	0.65
MW-8	9/16/2015	BDL	BDL	BDL	BDL	BDL	BDL	BDL	0.26
MW-9	9/16/2015	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
TP-1	7/9/2005	NS	NS	NS	NS	NS	NS	NS	NS
	2/6/2006	NS	NS	NS	NS	NS	NS	NS	NS
	6/29/2006	NS	NS	NS	NS	NS	NS	NS	NS
	1/25/2007	NS	NS	NS	NS	NS	NS	NS	NS
	7/25/2007	2,700	43,500	7,300	21,500	75,000	100,000	24.0	21.0
	10/30/2007	2,300	28,000	6,400	24,100	60,800	29,000	28.0	330.0
	1/29/2008	1,400	25,000	5,500	19,400	51,300	27,000	23.0	100.0
	3/19/2008	1,100	29,600	6,600	28,000	65,300	12,100	27.0	110.0
	6/19/2008	1,500	30,000	6,400	19,000	56,900	14,500	29.0	57.0
	9/30/2008	970	22,000	2,000	2,120	27,090	13,000	60.0	35.0
	12/16/2008	420	19,500	5,500	17,400	42,820	4,900	110.0	78.0
	3/25/2009	830	21,000	6,900	24,400	53,130	17,000	130.0	28.0
	6/26/2009	450	12,000	2,600	4,500	19,550	2,300	50.0	22.0
	9/28/2009	44	1,600	900	2,600	5144	190	11.0	75.0
	12/29/2009	200	10,000	4,900	15,300	30400	570	27.0	3.0

Well No.	Date	B	T	E	X	Total BTEX	MTBE	TPH GRO	TPH DRO
	3/31/2010	97	2,900	2,400	6,700	12097	730	3.9	2.8
	6/29/2010	44	1,700	1,300	4,000	7,044	114	6.2	5.5
	9/28/2010	BDL	70	85	490	645	BDL	1.2	BDL
	12/21/2010	46	1,000	1,900	5,200	8,100	BDL	12.0	2.0
	3/28/2011	50	610	740	1,380	2,730	BDL	4.2	1.1
	6/30/2011	24	630	800	1,660	3,114	52	4.7	0.9
	9/8/2011	20	340	700	2,320	3,380	BDL	14.0	2.8
	12/22/2011	70	1,500	3,400	10,200	15,170	BDL	19.0	19.0
	3/21/2012	280	1,000	1,100	3,000	5,380	150	11.0	8.7
	6/12/2012	130	1,300	2,300	7,400	11,130	230	29.0	10.0
	9/28/2012	90	2,500	4,600	12,900	20,090	BDL	19	12
	12/27/2012	165	1,360	1,940	7,170	10,635	BDL	16.2	10.2
	3/14/2013	192	863	1,260	4,340	6,655	BDL	11.00	8.17
	6/17/2013	86.1 J	986	1,560	4,460	7,006	140	11.100	5.24
	9/10/2013	48.2 J	128	1,090	2,880	4,146	25.3 J	9.210	7.92
	12/3/2013	102	188	950	3,070	4,310	BDL	11.50	8.20
	3/11/2014	180	484	1,030	2,950	4,644	40.8 J	9.130	5.05
	6/10/2014	88.0 J	232	1,260	3,530	5,110 J	63.6 J	11.2	5.39
	9/18/2014	26.3 J	BDL	1,050	1,744	2,820.3 J	BDL	6.770	5.70
	12/4/2014	42.2 J	56.8	819	1,942	2,860 J	BDL	3.490	4.01
	3/3/2015	117	142	1,580	4,350	6,189	85.4 J	11.600	6.01
TFMP-1	9/16/2015	NS	NS	NS	NS	NS	NS	NS	NS
TP-2	7/9/2005	NS	NS	NS	NS	NS	NS	NS	NS
	2/6/2006	NS	NS	NS	NS	NS	NS	NS	NS
	6/29/2006	NS	NS	NS	NS	NS	NS	NS	NS
	1/25/2007	NS	NS	NS	NS	NS	NS	NS	NS
	7/25/2007	3,400	41,400	6,300	21,800	72,900	128,000	22.0	22.0
	10/30/2007	2,400	32,200	7,500	21,700	63,800	38,000	29.0	160.0
	1/29/2008	1,800	28,000	6,800	20,400	57,000	48,000	17.0	125.0
	3/19/2008	1,600	31,000	7,700	25,200	65,500	44,000	6.8	120.0
	6/19/2008	700	28,000	6,500	19,700	54,900	3,000	3.1	54.0
	9/30/2008	860	20,000	7,000	23,500	51,360	14,000	48.0	35.0
	12/16/2008	950	23,400	8,000	27,200	59,550	11,300	80.0	46.0
	3/25/2009	1,100	21,000	7,100	23,700	52,900	6,100	91.0	38.0
	6/26/2009	470	10,000	3,500	5,800	19,770	1,100	17.0	17.0
	9/28/2009	70	5,100	5,800	21,000	31,970	180	3.8	125.0
	12/29/2009	NS	NS	NS	NS	NS	NS	NS	NS
	3/31/2010	67	2,600	1,000	2,140	5,807	600	2.4	3.4
	6/29/2010	61	1,700	1,900	5,800	9,461	230	5.5	1.9
	9/28/2010	37	1,400	620	3,600	5,657	53	5.0	1.1
	12/21/2010	130	5,800	5,200	19,700	30,830	BDL	11.0	7.5
	3/28/2011	26	340	520	1,604	2,490	BDL	3.0	0.6
	6/30/2011	100	1,400	3,300	7,700	12,500	BDL	27.0	6.9
	9/8/2011	21	330	660	2,170	3,181	BDL	18.0	5.1
	12/22/2011	140	1,800	3,300	11,100	16,340	210	28.0	14.0
	3/21/2012	580	3,300	2,700	9,800	16,380	160	19.0	7.3
	6/12/2012	100	1,100	1,900	7,600	10,700	BDL	33.0	6.3
	9/28/2012	150	2,300	4,700	15,000	22,150	210	19	9.0
	12/27/2012	BDL	677	1,450	5,580	7,707	BDL	13.6	6.02
	3/14/2013	BDL	555	2,490	9,040	12,085	BDL	23.20	6.86
	6/17/2013	136	570	894	3,270	4,870	BDL	8.970	2.58
	9/10/2013	41.4 J	550	2,110	5,670	8,371 J	BDL	15.500	7.17
	12/3/2013	BDL	53 J	747	2,709	3,509 J	BDL	8.89	7.30
	3/11/2014	87 J	256	1,920	5,940	8,203 J	52.4 J	13.800	7.55
	6/10/2014	101	94.2	1,460	4,410	6,065.20	37.2 J	7.12	2.63

Well No.	Date	B	T	E	X	Total BTEX	MTBE	TPH GRO	TPH DRO
	9/18/2014	30.9 J	31.2 J	1,130	2,160	3352.1 J	BDL	8.970	7.30
	12/4/2014	5.3 J	BDL	130	352	487.3 J	BDL	1.280	3.17
	3/3/2015	29.4 J	25.7 J	876	1,852	2,783.1 J	BDL	7.680	2.93
TFMP-2	9/16/2015	NS	NS	NS	NS	NS	NS	NS	NS
TFMP-3	9/16/2015	NS	NS	NS	NS	NS	NS	NS	NS
TFMP-4	9/16/2015	NS	NS	NS	NS	NS	NS	NS	NS
Type I and II Aquifers		5	1000	700	10000	NRS	20	0.047	0.047

*MW-4 was buried in ice on 3/3/2015 and thus could not be located or sampled

TPH GRO and DRO results in parts per million or mg/l

BTEX and MTBE results in parts per billion or ug/l

B = Benzene; T = Toluene; E = Ethylbenzene; X = Xylene

MTBE = Methyl-tert-butyl-ether

TPH GRO = Total Petroleum Hydrocarbons Gasoline Range Organics

TPH DRO = Total Petroleum Hydrocarbons Diesel Range Organics

BDL = Below Detection Limits

J = Estimated Value

NRS = No Regulatory Standard

NS = Not Sampled

Some compounds may have been detected but are not tabulated on this spreadsheet.

MDE Standards (Generic Numeric Cleanup Standards for Groundwater and Soil - Interim Final Guidance Update No. 2.1 - June 2008)

Well No.	Date	B	T	E	X	Total BTEX	MTBE	TPH GRO	TPH DRO
	6/30/2011	BDL	BDL	BDL	BDL	BDL	BDL	NS	NS
	9/8/2011	NS	NS	NS	NS	NS	NS	NS	NS
	12/22/2011	BDL	BDL	BDL	BDL	BDL	BDL	NS	NS
	3/21/2012	BDL	BDL	BDL	BDL	BDL	BDL	NS	NS
	6/12/2012	BDL	BDL	BDL	BDL	BDL	BDL	NS	NS
	9/28/2012	BDL	BDL	BDL	BDL	BDL	BDL	NS	NS
	12/27/2012	BDL	BDL	BDL	BDL	BDL	0.82	NS	NS
	3/14/2013	BDL	BDL	BDL	BDL	BDL	1.47	NS	NS
	6/17/2013	BDL	BDL	BDL	BDL	BDL	1.66	NS	NS
	9/10/2013	BDL	BDL	BDL	BDL	BDL	1.79	NS	NS
	12/3/2013	BDL	BDL	BDL	BDL	BDL	1.70	NS	NS
	3/11/2014	BDL	BDL	BDL	BDL	BDL	1.42	NS	NS
	4/30/2014	BDL	BDL	BDL	BDL	BDL	1.76	NS	NS
	9/18/2014	BDL	BDL	BDL	BDL	BDL	BDL	NS	NS
	12/4/2014	BDL	BDL	BDL	BDL	BDL	BDL	NS	NS
	9/16/2015	NS	NS	NS	NS	NS	NS	NS	NS
Supply (Mid2)	3/28/2011	BDL	BDL	BDL	BDL	BDL	BDL	NS	NS
	6/30/2011	BDL	BDL	BDL	BDL	BDL	BDL	NS	NS
	9/8/2011	BDL	BDL	BDL	BDL	BDL	BDL	NS	NS
	3/3/2015	25.0	BDL	BDL	2.1 J	27.1 J	176	0.359	2.3
	12/22/2011	BDL	BDL	BDL	BDL	BDL	BDL	NS	NS
	3/21/2012	BDL	BDL	BDL	BDL	BDL	BDL	NS	NS
	6/12/2012	BDL	BDL	BDL	BDL	BDL	BDL	NS	NS
	9/28/2012	BDL	BDL	BDL	BDL	BDL	BDL	NS	NS
	12/27/2012	BDL	BDL	BDL	BDL	BDL	BDL	NS	NS
	3/14/2013	BDL	BDL	BDL	BDL	BDL	BDL	NS	NS
	6/17/2013	BDL	BDL	BDL	BDL	BDL	BDL	NS	NS
	9/10/2013	BDL	BDL	BDL	BDL	BDL	BDL	NS	NS
	12/3/2013	BDL	BDL	BDL	BDL	BDL	BDL	NS	NS
	3/11/2014	BDL	BDL	BDL	BDL	BDL	BDL	NS	NS
	4/30/2014	BDL	BDL	BDL	BDL	BDL	BDL	NS	NS
	9/18/2014	BDL	BDL	BDL	BDL	BDL	BDL	NS	NS
	12/4/2014	BDL	BDL	BDL	BDL	BDL	BDL	NS	NS
	9/16/2015	NS	NS	NS	NS	NS	NS	NS	NS
Supply (Effluent)	7/9/2005	BDL	BDL	BDL	BDL	BDL	BDL	NS	NS
	2/6/2006	BDL	BDL	BDL	BDL	BDL	BDL	NS	NS
	6/29/2006	BDL	BDL	BDL	BDL	BDL	BDL	NS	NS
	1/25/2007	BDL	BDL	BDL	BDL	BDL	BDL	NS	NS
	7/25/2007	BDL	BDL	BDL	BDL	BDL	BDL	NS	NS
	10/30/2007	BDL	BDL	BDL	BDL	BDL	BDL	NS	NS
	1/29/2008	BDL	BDL	BDL	BDL	BDL	BDL	NS	NS
	3/12/2008	BDL	BDL	BDL	BDL	BDL	BDL	NS	NS
	6/19/2008	NS	NS	NS	NS	NS	NS	NS	NS
	9/30/2008	BDL	BDL	BDL	BDL	BDL	BDL	NS	NS
	12/16/2008	BDL	BDL	BDL	BDL	BDL	BDL	NS	NS
	3/25/2009	BDL	BDL	BDL	BDL	BDL	BDL	NS	NS
	6/26/2009	BDL	BDL	BDL	BDL	BDL	BDL	NS	NS
	9/28/2009	BDL	BDL	BDL	BDL	BDL	BDL	NS	NS
	12/29/2009	BDL	BDL	BDL	BDL	BDL	BDL	NS	NS
	3/31/2010	BDL	BDL	BDL	BDL	BDL	BDL	NS	NS
	6/29/2010	BDL	BDL	BDL	BDL	BDL	BDL	NS	NS
	9/28/2010	BDL	BDL	BDL	BDL	BDL	BDL	NS	NS
	12/21/2010	BDL	BDL	BDL	BDL	BDL	BDL	NS	NS
	3/28/2011	BDL	BDL	BDL	BDL	BDL	BDL	NS	NS
	6/30/2011	BDL	BDL	BDL	BDL	BDL	BDL	NS	NS
	9/8/2011	BDL	9.8	4	19	32.8	BDL	NS	NS
	3/3/2015	BDL	BDL	BDL	BDL	BDL	10.2	BDL	0.7

Well No.	Date	B	T	E	X	Total BTEX	MTBE	TPH GRO	TPH DRO
	12/22/2011	BDL	BDL	BDL	BDL	BDL	BDL	NS	NS
	3/21/2012	BDL	BDL	BDL	BDL	BDL	BDL	NS	NS
	6/12/2012	BDL	BDL	BDL	BDL	BDL	BDL	NS	NS
	9/28/2012	BDL	BDL	BDL	BDL	BDL	BDL	NS	NS
	12/27/2012	BDL	BDL	BDL	BDL	BDL	BDL	NS	NS
	3/14/2013	BDL	BDL	BDL	BDL	BDL	BDL	NS	NS
	6/17/2013	BDL	BDL	BDL	BDL	BDL	BDL	NS	NS
	9/10/2013	BDL	BDL	BDL	BDL	BDL	BDL	NS	NS
	12/3/2013	BDL	BDL	BDL	BDL	BDL	BDL	NS	NS
	3/11/2014	BDL	BDL	BDL	BDL	BDL	BDL	NS	NS
	4/30/2014	BDL	BDL	BDL	BDL	BDL	BDL	NS	NS
	9/18/2014	BDL	BDL	BDL	BDL	BDL	BDL	NS	NS
	12/4/2014	BDL	BDL	BDL	BDL	BDL	BDL	NS	NS
	9/16/2015	BDL	BDL	BDL	BDL	BDL	BDL	NS	NS
Type I and II Aquifers		5	1000	700	10000	NRS	20	0.047	0.047

BTEX and MTBE results in parts per billion or ug/l

B = Benzene; T = Toluene; E = Ethylbenzene; X = Xylene

MTBE = Methyl-tert-butyl-ether

TPH GRO = Total Petroleum Hydrocarbons Gasoline Range Organics

TPH DRO = Total Petroleum Hydrocarbons Diesel Range Organics

BDL = Below Detection Limits

J = Estimated Value

NRS = No Regulatory Standard

NS = Not Sampled

Some compounds may have been detected but are not tabulated on this spreadsheet.

MDE Standards (Generic Numeric Cleanup Standards for Groundwater and Soil - Interim Final Guidance Update No. 2.1 - June 2008)

Attachment C

Laboratory Analytical Report and Chain of Custody Form

22 September 2015

Jeffery Stein
Advantage Environmental Consultants, LLC
8610 Baltimore Washington Blvd, Suite 217
Jessup, MD 20794
RE: RF-001

Enclosed are the results of analyses for samples received by the laboratory on 09/16/15 15:55.

A more detailed report format is available upon request, which lists the accreditation status for all analytical methods performed.

Please visit our website at www.mdspectral.com for a complete listing of our accreditations.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Will Brewington
Staff Chemist

Analytical Results

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com

Project: RF-001

Project Number: 05-056 RF-01

Project Manager: Jeffery Stein

Reported:

09/22/15 12:26

Client Sample ID	Alternate Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
PW-1		5091613-01	Drinking Water	09/16/15 13:05	09/16/15 15:55
PW-3		5091613-02	Drinking Water	09/16/15 13:00	09/16/15 15:55



Will Brewington, Staff Chemist

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Analytical Results

Project: RF-001

Project Number: 05-056 RF-01

Project Manager: Jeffery Stein

Reported:

09/22/15 12:26

PW-1

5091613-01RE1 (Drinking Water)

Sample Date: 09/16/15

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Quantitation Limit (LOQ)	Dilution	Prepared	Analyzed	Analyst
VOLATILE ORGANICS BY EPA METHOD 524.2 (GC/MS)									
tert-Amyl alcohol (TAA)	ND		ug/L	10.0	10.0	1	09/21/15	09/21/15 13:03	WB
tert-Amyl methyl ether (TAME)	ND		ug/L	0.50	0.13	1	09/21/15	09/21/15 13:03	WB
Benzene	ND		ug/L	0.50	0.07	1	09/21/15	09/21/15 13:03	WB
Bromobenzene	ND		ug/L	0.50	0.10	1	09/21/15	09/21/15 13:03	WB
Bromochloromethane	ND		ug/L	0.50	0.14	1	09/21/15	09/21/15 13:03	WB
Bromodichloromethane	ND		ug/L	0.50	0.07	1	09/21/15	09/21/15 13:03	WB
Bromoform	ND		ug/L	0.50	0.14	1	09/21/15	09/21/15 13:03	WB
Bromomethane	ND		ug/L	0.50	0.07	1	09/21/15	09/21/15 13:03	WB
tert-Butanol (TBA)	25.4		ug/L	10.0	1.81	1	09/21/15	09/21/15 13:03	WB
n-Butylbenzene	ND		ug/L	0.50	0.05	1	09/21/15	09/21/15 13:03	WB
sec-Butylbenzene	ND		ug/L	0.50	0.05	1	09/21/15	09/21/15 13:03	WB
tert-Butylbenzene	ND		ug/L	0.50	0.06	1	09/21/15	09/21/15 13:03	WB
Carbon tetrachloride	ND		ug/L	0.50	0.07	1	09/21/15	09/21/15 13:03	WB
Chlorobenzene	ND		ug/L	0.50	0.05	1	09/21/15	09/21/15 13:03	WB
Chloroethane	ND		ug/L	0.50	0.13	1	09/21/15	09/21/15 13:03	WB
Chloroform	0.77		ug/L	0.50	0.07	1	09/21/15	09/21/15 13:03	WB
Chloromethane	ND		ug/L	0.50	0.25	1	09/21/15	09/21/15 13:03	WB
2-Chlorotoluene	ND		ug/L	0.50	0.20	1	09/21/15	09/21/15 13:03	WB
4-Chlorotoluene	ND		ug/L	0.50	0.20	1	09/21/15	09/21/15 13:03	WB
Dibromochloromethane	ND		ug/L	0.50	0.07	1	09/21/15	09/21/15 13:03	WB
1,2-Dibromo-3-chloropropane	ND		ug/L	0.50	0.18	1	09/21/15	09/21/15 13:03	WB
1,2-Dibromoethane (EDB)	ND		ug/L	0.50	0.08	1	09/21/15	09/21/15 13:03	WB
Dibromomethane	ND		ug/L	0.50	0.16	1	09/21/15	09/21/15 13:03	WB
1,2-Dichlorobenzene	ND		ug/L	0.50	0.10	1	09/21/15	09/21/15 13:03	WB
1,3-Dichlorobenzene	ND		ug/L	0.50	0.07	1	09/21/15	09/21/15 13:03	WB
1,4-Dichlorobenzene	ND		ug/L	0.50	0.07	1	09/21/15	09/21/15 13:03	WB
Dichlorodifluoromethane	ND		ug/L	0.50	0.33	1	09/21/15	09/21/15 13:03	WB
1,1-Dichloroethane	ND		ug/L	0.50	0.05	1	09/21/15	09/21/15 13:03	WB
1,2-Dichloroethane	ND		ug/L	0.50	0.11	1	09/21/15	09/21/15 13:03	WB
1,1-Dichloroethene	ND		ug/L	0.50	0.11	1	09/21/15	09/21/15 13:03	WB
cis-1,2-Dichloroethene	ND		ug/L	0.50	0.08	1	09/21/15	09/21/15 13:03	WB
trans-1,2-Dichloroethene	ND		ug/L	0.50	0.09	1	09/21/15	09/21/15 13:03	WB
1,2-Dichloropropane	ND		ug/L	0.50	0.10	1	09/21/15	09/21/15 13:03	WB
1,3-Dichloropropane	ND		ug/L	0.50	0.13	1	09/21/15	09/21/15 13:03	WB

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



Will Brewington, Staff Chemist

Analytical Results

Project: RF-001

Project Number: 05-056 RF-01

Project Manager: Jeffery Stein

Reported:

09/22/15 12:26

PW-1

5091613-01RE1 (Drinking Water)

Sample Date: 09/16/15

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Quantitation Limit (LOQ)	Dilution	Prepared	Analyzed	Analyst
VOLATILE ORGANICS BY EPA METHOD 524.2 (GC/MS) (continued)									
2,2-Dichloropropane	ND		ug/L	0.50	0.12	1	09/21/15	09/21/15 13:03	WB
1,1-Dichloropropene	ND		ug/L	0.50	0.06	1	09/21/15	09/21/15 13:03	WB
cis-1,3-Dichloropropene	ND		ug/L	0.50	0.06	1	09/21/15	09/21/15 13:03	WB
trans-1,3-Dichloropropene	ND		ug/L	0.50	0.08	1	09/21/15	09/21/15 13:03	WB
Diisopropyl ether (DIPE)	ND		ug/L	0.50	0.19	1	09/21/15	09/21/15 13:03	WB
Ethyl tert-butyl ether (ETBE)	ND		ug/L	0.50	0.24	1	09/21/15	09/21/15 13:03	WB
Ethylbenzene	ND		ug/L	0.50	0.06	1	09/21/15	09/21/15 13:03	WB
Hexachlorobutadiene	ND		ug/L	0.50	0.21	1	09/21/15	09/21/15 13:03	WB
Isopropylbenzene (Cumene)	ND		ug/L	0.50	0.04	1	09/21/15	09/21/15 13:03	WB
4-Isopropyltoluene	ND		ug/L	0.50	0.03	1	09/21/15	09/21/15 13:03	WB
Methyl tert-butyl ether (MTBE)	4.11		ug/L	0.50	0.21	1	09/21/15	09/21/15 13:03	WB
Methylene chloride	ND		ug/L	0.50	0.24	1	09/21/15	09/21/15 13:03	WB
Naphthalene	ND		ug/L	0.50	0.17	1	09/21/15	09/21/15 13:03	WB
n-Propylbenzene	ND		ug/L	0.50	0.05	1	09/21/15	09/21/15 13:03	WB
Styrene	ND		ug/L	0.50	0.06	1	09/21/15	09/21/15 13:03	WB
1,1,1,2-Tetrachloroethane	ND		ug/L	0.50	0.08	1	09/21/15	09/21/15 13:03	WB
1,1,2,2-Tetrachloroethane	ND		ug/L	0.50	0.08	1	09/21/15	09/21/15 13:03	WB
Tetrachloroethene	ND		ug/L	0.50	0.06	1	09/21/15	09/21/15 13:03	WB
Toluene	0.68		ug/L	0.50	0.06	1	09/21/15	09/21/15 13:03	WB
1,2,3-Trichlorobenzene	ND		ug/L	0.50	0.15	1	09/21/15	09/21/15 13:03	WB
1,2,4-Trichlorobenzene	ND		ug/L	0.50	0.07	1	09/21/15	09/21/15 13:03	WB
1,1,1-Trichloroethane	ND		ug/L	0.50	0.09	1	09/21/15	09/21/15 13:03	WB
1,1,2-Trichloroethane	ND		ug/L	0.50	0.16	1	09/21/15	09/21/15 13:03	WB
Trichloroethene	ND		ug/L	0.50	0.06	1	09/21/15	09/21/15 13:03	WB
Trichlorofluoromethane (Freon 11)	ND		ug/L	0.50	0.29	1	09/21/15	09/21/15 13:03	WB
1,2,3-Trichloropropane	ND		ug/L	0.50	0.26	1	09/21/15	09/21/15 13:03	WB
1,2,4-Trimethylbenzene	ND		ug/L	0.50	0.04	1	09/21/15	09/21/15 13:03	WB
1,3,5-Trimethylbenzene	ND		ug/L	0.50	0.04	1	09/21/15	09/21/15 13:03	WB
Vinyl chloride	ND		ug/L	0.50	0.20	1	09/21/15	09/21/15 13:03	WB
o-Xylene	ND		ug/L	0.50	0.07	1	09/21/15	09/21/15 13:03	WB
m- & p-Xylenes	ND		ug/L	0.50	0.07	1	09/21/15	09/21/15 13:03	WB
Surrogate: 4-Bromofluorobenzene		80-120		81 %			09/21/15	09/21/15 13:03	
Surrogate: 1,2-Dichlorobenzene-d4		80-120		88 %			09/21/15	09/21/15 13:03	

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Will Brewington, Staff Chemist

Analytical Results

Project: RF-001

Project Number: 05-056 RF-01

Project Manager: Jeffery Stein

Reported:

09/22/15 12:26

PW-3

5091613-02RE1 (Drinking Water)

Sample Date: 09/16/15

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Quantitation Limit (LOQ)	Dilution	Prepared	Analyzed	Analyst
VOLATILE ORGANICS BY EPA METHOD 524.2 (GC/MS)									
tert-Amyl alcohol (TAA)	ND		ug/L	10.0	10.0	1	09/21/15	09/21/15 13:36	WB
tert-Amyl methyl ether (TAME)	ND		ug/L	0.50	0.13	1	09/21/15	09/21/15 13:36	WB
Benzene	ND		ug/L	0.50	0.07	1	09/21/15	09/21/15 13:36	WB
Bromobenzene	ND		ug/L	0.50	0.10	1	09/21/15	09/21/15 13:36	WB
Bromochloromethane	ND		ug/L	0.50	0.14	1	09/21/15	09/21/15 13:36	WB
Bromodichloromethane	ND		ug/L	0.50	0.07	1	09/21/15	09/21/15 13:36	WB
Bromoform	ND		ug/L	0.50	0.14	1	09/21/15	09/21/15 13:36	WB
Bromomethane	ND		ug/L	0.50	0.07	1	09/21/15	09/21/15 13:36	WB
tert-Butanol (TBA)	ND		ug/L	10.0	1.81	1	09/21/15	09/21/15 13:36	WB
n-Butylbenzene	ND		ug/L	0.50	0.05	1	09/21/15	09/21/15 13:36	WB
sec-Butylbenzene	ND		ug/L	0.50	0.05	1	09/21/15	09/21/15 13:36	WB
tert-Butylbenzene	ND		ug/L	0.50	0.06	1	09/21/15	09/21/15 13:36	WB
Carbon tetrachloride	ND		ug/L	0.50	0.07	1	09/21/15	09/21/15 13:36	WB
Chlorobenzene	ND		ug/L	0.50	0.05	1	09/21/15	09/21/15 13:36	WB
Chloroethane	ND		ug/L	0.50	0.13	1	09/21/15	09/21/15 13:36	WB
Chloroform	ND		ug/L	0.50	0.07	1	09/21/15	09/21/15 13:36	WB
Chloromethane	1.40		ug/L	0.50	0.25	1	09/21/15	09/21/15 13:36	WB
2-Chlorotoluene	ND		ug/L	0.50	0.20	1	09/21/15	09/21/15 13:36	WB
4-Chlorotoluene	ND		ug/L	0.50	0.20	1	09/21/15	09/21/15 13:36	WB
Dibromochloromethane	ND		ug/L	0.50	0.07	1	09/21/15	09/21/15 13:36	WB
1,2-Dibromo-3-chloropropane	ND		ug/L	0.50	0.18	1	09/21/15	09/21/15 13:36	WB
1,2-Dibromoethane (EDB)	ND		ug/L	0.50	0.08	1	09/21/15	09/21/15 13:36	WB
Dibromomethane	ND		ug/L	0.50	0.16	1	09/21/15	09/21/15 13:36	WB
1,2-Dichlorobenzene	ND		ug/L	0.50	0.10	1	09/21/15	09/21/15 13:36	WB
1,3-Dichlorobenzene	ND		ug/L	0.50	0.07	1	09/21/15	09/21/15 13:36	WB
1,4-Dichlorobenzene	ND		ug/L	0.50	0.07	1	09/21/15	09/21/15 13:36	WB
Dichlorodifluoromethane	ND		ug/L	0.50	0.33	1	09/21/15	09/21/15 13:36	WB
1,1-Dichloroethane	ND		ug/L	0.50	0.05	1	09/21/15	09/21/15 13:36	WB
1,2-Dichloroethane	ND		ug/L	0.50	0.11	1	09/21/15	09/21/15 13:36	WB
1,1-Dichloroethene	ND		ug/L	0.50	0.11	1	09/21/15	09/21/15 13:36	WB
cis-1,2-Dichloroethene	ND		ug/L	0.50	0.08	1	09/21/15	09/21/15 13:36	WB
trans-1,2-Dichloroethene	ND		ug/L	0.50	0.09	1	09/21/15	09/21/15 13:36	WB
1,2-Dichloropropane	ND		ug/L	0.50	0.10	1	09/21/15	09/21/15 13:36	WB
1,3-Dichloropropane	ND		ug/L	0.50	0.13	1	09/21/15	09/21/15 13:36	WB

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Will Brewington, Staff Chemist

Analytical Results

Project: RF-001

Project Number: 05-056 RF-01

Project Manager: Jeffery Stein

Reported:

09/22/15 12:26

PW-3

5091613-02RE1 (Drinking Water)

Sample Date: 09/16/15

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Quantitation Limit (LOQ)	Dilution	Prepared	Analyzed	Analyst
VOLATILE ORGANICS BY EPA METHOD 524.2 (GC/MS) (continued)									
2,2-Dichloropropane	ND		ug/L	0.50	0.12	1	09/21/15	09/21/15 13:36	WB
1,1-Dichloropropene	ND		ug/L	0.50	0.06	1	09/21/15	09/21/15 13:36	WB
cis-1,3-Dichloropropene	ND		ug/L	0.50	0.06	1	09/21/15	09/21/15 13:36	WB
trans-1,3-Dichloropropene	ND		ug/L	0.50	0.08	1	09/21/15	09/21/15 13:36	WB
Diisopropyl ether (DIPE)	ND		ug/L	0.50	0.19	1	09/21/15	09/21/15 13:36	WB
Ethyl tert-butyl ether (ETBE)	ND		ug/L	0.50	0.24	1	09/21/15	09/21/15 13:36	WB
Ethylbenzene	ND		ug/L	0.50	0.06	1	09/21/15	09/21/15 13:36	WB
Hexachlorobutadiene	ND		ug/L	0.50	0.21	1	09/21/15	09/21/15 13:36	WB
Isopropylbenzene (Cumene)	ND		ug/L	0.50	0.04	1	09/21/15	09/21/15 13:36	WB
4-Isopropyltoluene	ND		ug/L	0.50	0.03	1	09/21/15	09/21/15 13:36	WB
Methyl tert-butyl ether (MTBE)	ND		ug/L	0.50	0.21	1	09/21/15	09/21/15 13:36	WB
Methylene chloride	ND		ug/L	0.50	0.24	1	09/21/15	09/21/15 13:36	WB
Naphthalene	ND		ug/L	0.50	0.17	1	09/21/15	09/21/15 13:36	WB
n-Propylbenzene	ND		ug/L	0.50	0.05	1	09/21/15	09/21/15 13:36	WB
Styrene	ND		ug/L	0.50	0.06	1	09/21/15	09/21/15 13:36	WB
1,1,1,2-Tetrachloroethane	ND		ug/L	0.50	0.08	1	09/21/15	09/21/15 13:36	WB
1,1,2,2-Tetrachloroethane	ND		ug/L	0.50	0.08	1	09/21/15	09/21/15 13:36	WB
Tetrachloroethene	ND		ug/L	0.50	0.06	1	09/21/15	09/21/15 13:36	WB
Toluene	ND		ug/L	0.50	0.06	1	09/21/15	09/21/15 13:36	WB
1,2,3-Trichlorobenzene	ND		ug/L	0.50	0.15	1	09/21/15	09/21/15 13:36	WB
1,2,4-Trichlorobenzene	ND		ug/L	0.50	0.07	1	09/21/15	09/21/15 13:36	WB
1,1,1-Trichloroethane	ND		ug/L	0.50	0.09	1	09/21/15	09/21/15 13:36	WB
1,1,2-Trichloroethane	ND		ug/L	0.50	0.16	1	09/21/15	09/21/15 13:36	WB
Trichloroethene	ND		ug/L	0.50	0.06	1	09/21/15	09/21/15 13:36	WB
Trichlorofluoromethane (Freon 11)	ND		ug/L	0.50	0.29	1	09/21/15	09/21/15 13:36	WB
1,2,3-Trichloropropane	ND		ug/L	0.50	0.26	1	09/21/15	09/21/15 13:36	WB
1,2,4-Trimethylbenzene	ND		ug/L	0.50	0.04	1	09/21/15	09/21/15 13:36	WB
1,3,5-Trimethylbenzene	ND		ug/L	0.50	0.04	1	09/21/15	09/21/15 13:36	WB
Vinyl chloride	ND		ug/L	0.50	0.20	1	09/21/15	09/21/15 13:36	WB
o-Xylene	ND		ug/L	0.50	0.07	1	09/21/15	09/21/15 13:36	WB
m- & p-Xylenes	ND		ug/L	0.50	0.07	1	09/21/15	09/21/15 13:36	WB
Surrogate: 4-Bromofluorobenzene		80-120		85 %			09/21/15	09/21/15 13:36	
Surrogate: 1,2-Dichlorobenzene-d4		80-120		87 %			09/21/15	09/21/15 13:36	

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Will Brewington, Staff Chemist

Analytical Results

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com

Project: RF-001

Project Number: 05-056 RF-01

Project Manager: Jeffery Stein

Reported:

09/22/15 12:26

Notes and Definitions

DET	Analyte DETECTED
ND	Analyte NOT DETECTED at or above the reporting limit
NR	Not Reported
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference



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Will Brewington, Staff Chemist

25 September 2015

Jeffery Stein
Advantage Environmental Consultants, LLC
8610 Baltimore Washington Blvd, Suite 217
Jessup, MD 20794
RE: RF-001

Enclosed are the results of analyses for samples received by the laboratory on 09/16/15 15:55.

A more detailed report format is available upon request, which lists the accreditation status for all analytical methods performed.

Please visit our website at www.mdspectral.com for a complete listing of our accreditations.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Will Brewington
Staff Chemist

Analytical Results

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com

Project: RF-001

Project Number: 05-056 RF-01

Project Manager: Jeffery Stein

Reported:

09/25/15 13:19

Client Sample ID	Alternate Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
MW-1R		5091612-01	Nonpotable Water	09/16/15 13:15	09/16/15 15:55
MW-2R		5091612-02	Nonpotable Water	09/16/15 13:30	09/16/15 15:55
MW-5R		5091612-03	Nonpotable Water	09/16/15 13:55	09/16/15 15:55
MW-6		5091612-04	Nonpotable Water	09/16/15 14:10	09/16/15 15:55
MW-7		5091612-05	Nonpotable Water	09/16/15 14:30	09/16/15 15:55
MW-8		5091612-06	Nonpotable Water	09/16/15 14:45	09/16/15 15:55
MW-9		5091612-07	Nonpotable Water	09/16/15 15:00	09/16/15 15:55



Will Brewington, Staff Chemist

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Analytical Results

Project: RF-001

Project Number: 05-056 RF-01

Project Manager: Jeffery Stein

Reported:

09/25/15 13:19

MW-1R

5091612-01 (Nonpotable Water)

Sample Date: 09/16/15

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Quantitation Limit (LOQ)	Dilution	Prepared	Analyzed	Analyst
VOLATILE ORGANICS BY EPA METHOD 8260B (GC/MS)									
Acetone	ND		ug/L	10.0	10.0	1	09/17/15	09/17/15 16:22	WB
tert-Amyl alcohol (TAA)	ND		ug/L	20.0	20.0	1	09/17/15	09/17/15 16:22	WB
tert-Amyl methyl ether (TAME)	ND		ug/L	5.0	2.0	1	09/17/15	09/17/15 16:22	WB
Benzene	ND		ug/L	5.0	2.0	1	09/17/15	09/17/15 16:22	WB
Bromobenzene	ND		ug/L	5.0	2.0	1	09/17/15	09/17/15 16:22	WB
Bromochloromethane	ND		ug/L	5.0	2.0	1	09/17/15	09/17/15 16:22	WB
Bromodichloromethane	ND		ug/L	5.0	2.0	1	09/17/15	09/17/15 16:22	WB
Bromoform	ND		ug/L	5.0	2.0	1	09/17/15	09/17/15 16:22	WB
Bromomethane	ND		ug/L	5.0	5.0	1	09/17/15	09/17/15 16:22	WB
tert-Butanol (TBA)	ND		ug/L	15.0	15.0	1	09/17/15	09/17/15 16:22	WB
2-Butanone (MEK)	ND		ug/L	10.0	10.0	1	09/17/15	09/17/15 16:22	WB
n-Butylbenzene	ND		ug/L	5.0	2.0	1	09/17/15	09/17/15 16:22	WB
sec-Butylbenzene	ND		ug/L	5.0	2.0	1	09/17/15	09/17/15 16:22	WB
tert-Butylbenzene	ND		ug/L	5.0	2.0	1	09/17/15	09/17/15 16:22	WB
Carbon disulfide	ND		ug/L	5.0	2.0	1	09/17/15	09/17/15 16:22	WB
Carbon tetrachloride	ND		ug/L	5.0	2.0	1	09/17/15	09/17/15 16:22	WB
Chlorobenzene	ND		ug/L	5.0	2.0	1	09/17/15	09/17/15 16:22	WB
Chloroethane	ND		ug/L	5.0	5.0	1	09/17/15	09/17/15 16:22	WB
Chloroform	ND		ug/L	5.0	2.0	1	09/17/15	09/17/15 16:22	WB
Chloromethane	ND		ug/L	5.0	5.0	1	09/17/15	09/17/15 16:22	WB
2-Chlorotoluene	ND		ug/L	5.0	2.0	1	09/17/15	09/17/15 16:22	WB
4-Chlorotoluene	ND		ug/L	5.0	2.0	1	09/17/15	09/17/15 16:22	WB
Dibromochloromethane	ND		ug/L	5.0	2.0	1	09/17/15	09/17/15 16:22	WB
1,2-Dibromo-3-chloropropane	ND		ug/L	5.0	2.0	1	09/17/15	09/17/15 16:22	WB
1,2-Dibromoethane (EDB)	ND		ug/L	5.0	2.0	1	09/17/15	09/17/15 16:22	WB
Dibromomethane	ND		ug/L	5.0	2.0	1	09/17/15	09/17/15 16:22	WB
1,2-Dichlorobenzene	ND		ug/L	5.0	2.0	1	09/17/15	09/17/15 16:22	WB
1,3-Dichlorobenzene	ND		ug/L	5.0	2.0	1	09/17/15	09/17/15 16:22	WB
1,4-Dichlorobenzene	ND		ug/L	5.0	2.0	1	09/17/15	09/17/15 16:22	WB
Dichlorodifluoromethane	ND		ug/L	5.0	2.0	1	09/17/15	09/17/15 16:22	WB
1,1-Dichloroethane	ND		ug/L	5.0	2.0	1	09/17/15	09/17/15 16:22	WB
1,2-Dichloroethane	ND		ug/L	5.0	2.0	1	09/17/15	09/17/15 16:22	WB
1,1-Dichloroethene	ND		ug/L	5.0	2.0	1	09/17/15	09/17/15 16:22	WB
cis-1,2-Dichloroethene	ND		ug/L	5.0	2.0	1	09/17/15	09/17/15 16:22	WB

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Will Brewington, Staff Chemist

Analytical Results

Project: RF-001

Project Number: 05-056 RF-01

Project Manager: Jeffery Stein

Reported:

09/25/15 13:19

MW-1R

5091612-01 (Nonpotable Water)

Sample Date: 09/16/15

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Quantitation Limit (LOQ)	Dilution	Prepared	Analyzed	Analyst
VOLATILE ORGANICS BY EPA METHOD 8260B (GC/MS) (continued)									
trans-1,2-Dichloroethene	ND		ug/L	5.0	2.0	1	09/17/15	09/17/15 16:22	WB
Dichlorofluoromethane	ND		ug/L	5.0	2.0	1	09/17/15	09/17/15 16:22	WB
1,2-Dichloropropane	ND		ug/L	5.0	2.0	1	09/17/15	09/17/15 16:22	WB
1,3-Dichloropropane	ND		ug/L	5.0	2.0	1	09/17/15	09/17/15 16:22	WB
2,2-Dichloropropane	ND		ug/L	5.0	2.0	1	09/17/15	09/17/15 16:22	WB
1,1-Dichloropropene	ND		ug/L	5.0	2.0	1	09/17/15	09/17/15 16:22	WB
cis-1,3-Dichloropropene	ND		ug/L	5.0	2.0	1	09/17/15	09/17/15 16:22	WB
trans-1,3-Dichloropropene	ND		ug/L	5.0	2.0	1	09/17/15	09/17/15 16:22	WB
Diisopropyl ether (DIPE)	ND		ug/L	5.0	2.0	1	09/17/15	09/17/15 16:22	WB
Ethyl tert-butyl ether (ETBE)	ND		ug/L	5.0	2.0	1	09/17/15	09/17/15 16:22	WB
Ethylbenzene	ND		ug/L	5.0	2.0	1	09/17/15	09/17/15 16:22	WB
Hexachlorobutadiene	ND		ug/L	5.0	2.0	1	09/17/15	09/17/15 16:22	WB
2-Hexanone	ND		ug/L	10.0	10.0	1	09/17/15	09/17/15 16:22	WB
Isopropylbenzene (Cumene)	ND		ug/L	5.0	2.0	1	09/17/15	09/17/15 16:22	WB
4-Isopropyltoluene	ND		ug/L	5.0	2.0	1	09/17/15	09/17/15 16:22	WB
Methyl tert-butyl ether (MTBE)	8.2		ug/L	5.0	2.0	1	09/17/15	09/17/15 16:22	WB
4-Methyl-2-pentanone	ND		ug/L	10.0	10.0	1	09/17/15	09/17/15 16:22	WB
Methylene chloride	ND		ug/L	10.0	10.0	1	09/17/15	09/17/15 16:22	WB
Naphthalene	ND		ug/L	5.0	2.0	1	09/17/15	09/17/15 16:22	WB
n-Propylbenzene	ND		ug/L	5.0	2.0	1	09/17/15	09/17/15 16:22	WB
Styrene	ND		ug/L	5.0	2.0	1	09/17/15	09/17/15 16:22	WB
1,1,1,2-Tetrachloroethane	ND		ug/L	5.0	2.0	1	09/17/15	09/17/15 16:22	WB
1,1,2,2-Tetrachloroethane	ND		ug/L	5.0	2.0	1	09/17/15	09/17/15 16:22	WB
Tetrachloroethene	ND		ug/L	5.0	2.0	1	09/17/15	09/17/15 16:22	WB
Toluene	ND		ug/L	5.0	2.0	1	09/17/15	09/17/15 16:22	WB
1,2,3-Trichlorobenzene	ND		ug/L	5.0	2.0	1	09/17/15	09/17/15 16:22	WB
1,2,4-Trichlorobenzene	ND		ug/L	5.0	2.0	1	09/17/15	09/17/15 16:22	WB
1,1,1-Trichloroethane	ND		ug/L	5.0	2.0	1	09/17/15	09/17/15 16:22	WB
1,1,2-Trichloroethane	ND		ug/L	5.0	2.0	1	09/17/15	09/17/15 16:22	WB
Trichloroethene	ND		ug/L	5.0	2.0	1	09/17/15	09/17/15 16:22	WB
Trichlorofluoromethane (Freon 11)	ND		ug/L	5.0	2.0	1	09/17/15	09/17/15 16:22	WB
1,2,3-Trichloropropane	ND		ug/L	5.0	2.0	1	09/17/15	09/17/15 16:22	WB
1,2,4-Trimethylbenzene	ND		ug/L	5.0	2.0	1	09/17/15	09/17/15 16:22	WB
1,3,5-Trimethylbenzene	ND		ug/L	5.0	2.0	1	09/17/15	09/17/15 16:22	WB

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Will Brewington, Staff Chemist

Analytical Results

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com

Project: RF-001

Project Number: 05-056 RF-01

Project Manager: Jeffery Stein

Reported:

09/25/15 13:19

MW-1R

5091612-01 (Nonpotable Water)

Sample Date: 09/16/15

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Quantitation Limit (LOQ)	Dilution	Prepared	Analyzed	Analyst
VOLATILE ORGANICS BY EPA METHOD 8260B (GC/MS) (continued)									
Vinyl chloride	ND		ug/L	5.0	2.0	1	09/17/15	09/17/15 16:22	WB
o-Xylene	ND		ug/L	5.0	2.0	1	09/17/15	09/17/15 16:22	WB
m- & p-Xylenes	ND		ug/L	5.0	2.0	1	09/17/15	09/17/15 16:22	WB
Surrogate: 1,2-Dichloroethane-d4		75-120		91 %	09/17/15		09/17/15 16:22		
Surrogate: Toluene-d8		88-110		100 %	09/17/15		09/17/15 16:22		
Surrogate: 4-Bromofluorobenzene		80-110		96 %	09/17/15		09/17/15 16:22		
GASOLINE RANGE ORGANICS BY EPA 8015B									
Gasoline-Range Organics	ND		ug/L	100	100	1	09/18/15	09/18/15 17:12	CMK
Surrogate: a,a,a-Trifluorotoluene		85-115		101 %	09/18/15		09/18/15 17:12		
DIESEL RANGE ORGANICS BY EPA 3510/8015B									
Diesel-Range Organics	0.54		mg/L	0.22	0.22	1	09/23/15	09/24/15 17:01	CMK
Surrogate: o-Terphenyl		60-120		86 %	09/23/15		09/24/15 17:01		

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Will Brewington, Staff Chemist

Analytical Results

Project: RF-001

Project Number: 05-056 RF-01

Project Manager: Jeffery Stein

Reported:

09/25/15 13:19

MW-2R

5091612-02 (Nonpotable Water)

Sample Date: 09/16/15

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Quantitation Limit (LOQ)	Dilution	Prepared	Analyzed	Analyst
VOLATILE ORGANICS BY EPA METHOD 8260B (GC/MS)									
Acetone	ND		ug/L	10.0	10.0	1	09/17/15	09/17/15 16:59	WB
tert-Amyl alcohol (TAA)	ND		ug/L	20.0	20.0	1	09/17/15	09/17/15 16:59	WB
tert-Amyl methyl ether (TAME)	ND		ug/L	5.0	2.0	1	09/17/15	09/17/15 16:59	WB
Benzene	ND		ug/L	5.0	2.0	1	09/17/15	09/17/15 16:59	WB
Bromobenzene	ND		ug/L	5.0	2.0	1	09/17/15	09/17/15 16:59	WB
Bromochloromethane	ND		ug/L	5.0	2.0	1	09/17/15	09/17/15 16:59	WB
Bromodichloromethane	ND		ug/L	5.0	2.0	1	09/17/15	09/17/15 16:59	WB
Bromoform	ND		ug/L	5.0	2.0	1	09/17/15	09/17/15 16:59	WB
Bromomethane	ND		ug/L	5.0	5.0	1	09/17/15	09/17/15 16:59	WB
tert-Butanol (TBA)	ND		ug/L	15.0	15.0	1	09/17/15	09/17/15 16:59	WB
2-Butanone (MEK)	ND		ug/L	10.0	10.0	1	09/17/15	09/17/15 16:59	WB
n-Butylbenzene	ND		ug/L	5.0	2.0	1	09/17/15	09/17/15 16:59	WB
sec-Butylbenzene	ND		ug/L	5.0	2.0	1	09/17/15	09/17/15 16:59	WB
tert-Butylbenzene	ND		ug/L	5.0	2.0	1	09/17/15	09/17/15 16:59	WB
Carbon disulfide	ND		ug/L	5.0	2.0	1	09/17/15	09/17/15 16:59	WB
Carbon tetrachloride	ND		ug/L	5.0	2.0	1	09/17/15	09/17/15 16:59	WB
Chlorobenzene	ND		ug/L	5.0	2.0	1	09/17/15	09/17/15 16:59	WB
Chloroethane	ND		ug/L	5.0	5.0	1	09/17/15	09/17/15 16:59	WB
Chloroform	ND		ug/L	5.0	2.0	1	09/17/15	09/17/15 16:59	WB
Chloromethane	ND		ug/L	5.0	5.0	1	09/17/15	09/17/15 16:59	WB
2-Chlorotoluene	ND		ug/L	5.0	2.0	1	09/17/15	09/17/15 16:59	WB
4-Chlorotoluene	ND		ug/L	5.0	2.0	1	09/17/15	09/17/15 16:59	WB
Dibromochloromethane	ND		ug/L	5.0	2.0	1	09/17/15	09/17/15 16:59	WB
1,2-Dibromo-3-chloropropane	ND		ug/L	5.0	2.0	1	09/17/15	09/17/15 16:59	WB
1,2-Dibromoethane (EDB)	ND		ug/L	5.0	2.0	1	09/17/15	09/17/15 16:59	WB
Dibromomethane	ND		ug/L	5.0	2.0	1	09/17/15	09/17/15 16:59	WB
1,2-Dichlorobenzene	ND		ug/L	5.0	2.0	1	09/17/15	09/17/15 16:59	WB
1,3-Dichlorobenzene	ND		ug/L	5.0	2.0	1	09/17/15	09/17/15 16:59	WB
1,4-Dichlorobenzene	ND		ug/L	5.0	2.0	1	09/17/15	09/17/15 16:59	WB
Dichlorodifluoromethane	ND		ug/L	5.0	2.0	1	09/17/15	09/17/15 16:59	WB
1,1-Dichloroethane	ND		ug/L	5.0	2.0	1	09/17/15	09/17/15 16:59	WB
1,2-Dichloroethane	ND		ug/L	5.0	2.0	1	09/17/15	09/17/15 16:59	WB
1,1-Dichloroethene	ND		ug/L	5.0	2.0	1	09/17/15	09/17/15 16:59	WB
cis-1,2-Dichloroethene	ND		ug/L	5.0	2.0	1	09/17/15	09/17/15 16:59	WB

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Will Brewington, Staff Chemist

Analytical Results

Project: RF-001

Project Number: 05-056 RF-01

Project Manager: Jeffery Stein

Reported:

09/25/15 13:19

MW-2R

5091612-02 (Nonpotable Water)

Sample Date: 09/16/15

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Quantitation Limit (LOQ)	Dilution	Prepared	Analyzed	Analyst
VOLATILE ORGANICS BY EPA METHOD 8260B (GC/MS) (continued)									
trans-1,2-Dichloroethene	ND		ug/L	5.0	2.0	1	09/17/15	09/17/15 16:59	WB
Dichlorofluoromethane	ND		ug/L	5.0	2.0	1	09/17/15	09/17/15 16:59	WB
1,2-Dichloropropane	ND		ug/L	5.0	2.0	1	09/17/15	09/17/15 16:59	WB
1,3-Dichloropropane	ND		ug/L	5.0	2.0	1	09/17/15	09/17/15 16:59	WB
2,2-Dichloropropane	ND		ug/L	5.0	2.0	1	09/17/15	09/17/15 16:59	WB
1,1-Dichloropropene	ND		ug/L	5.0	2.0	1	09/17/15	09/17/15 16:59	WB
cis-1,3-Dichloropropene	ND		ug/L	5.0	2.0	1	09/17/15	09/17/15 16:59	WB
trans-1,3-Dichloropropene	ND		ug/L	5.0	2.0	1	09/17/15	09/17/15 16:59	WB
Diisopropyl ether (DIPE)	ND		ug/L	5.0	2.0	1	09/17/15	09/17/15 16:59	WB
Ethyl tert-butyl ether (ETBE)	ND		ug/L	5.0	2.0	1	09/17/15	09/17/15 16:59	WB
Ethylbenzene	ND		ug/L	5.0	2.0	1	09/17/15	09/17/15 16:59	WB
Hexachlorobutadiene	ND		ug/L	5.0	2.0	1	09/17/15	09/17/15 16:59	WB
2-Hexanone	ND		ug/L	10.0	10.0	1	09/17/15	09/17/15 16:59	WB
Isopropylbenzene (Cumene)	ND		ug/L	5.0	2.0	1	09/17/15	09/17/15 16:59	WB
4-Isopropyltoluene	ND		ug/L	5.0	2.0	1	09/17/15	09/17/15 16:59	WB
Methyl tert-butyl ether (MTBE)	4.6	J	ug/L	5.0	2.0	1	09/17/15	09/17/15 16:59	WB
4-Methyl-2-pentanone	ND		ug/L	10.0	10.0	1	09/17/15	09/17/15 16:59	WB
Methylene chloride	ND		ug/L	10.0	10.0	1	09/17/15	09/17/15 16:59	WB
Naphthalene	ND		ug/L	5.0	2.0	1	09/17/15	09/17/15 16:59	WB
n-Propylbenzene	ND		ug/L	5.0	2.0	1	09/17/15	09/17/15 16:59	WB
Styrene	ND		ug/L	5.0	2.0	1	09/17/15	09/17/15 16:59	WB
1,1,1,2-Tetrachloroethane	ND		ug/L	5.0	2.0	1	09/17/15	09/17/15 16:59	WB
1,1,2,2-Tetrachloroethane	ND		ug/L	5.0	2.0	1	09/17/15	09/17/15 16:59	WB
Tetrachloroethene	ND		ug/L	5.0	2.0	1	09/17/15	09/17/15 16:59	WB
Toluene	ND		ug/L	5.0	2.0	1	09/17/15	09/17/15 16:59	WB
1,2,3-Trichlorobenzene	ND		ug/L	5.0	2.0	1	09/17/15	09/17/15 16:59	WB
1,2,4-Trichlorobenzene	ND		ug/L	5.0	2.0	1	09/17/15	09/17/15 16:59	WB
1,1,1-Trichloroethane	ND		ug/L	5.0	2.0	1	09/17/15	09/17/15 16:59	WB
1,1,2-Trichloroethane	ND		ug/L	5.0	2.0	1	09/17/15	09/17/15 16:59	WB
Trichloroethene	ND		ug/L	5.0	2.0	1	09/17/15	09/17/15 16:59	WB
Trichlorofluoromethane (Freon 11)	ND		ug/L	5.0	2.0	1	09/17/15	09/17/15 16:59	WB
1,2,3-Trichloropropane	ND		ug/L	5.0	2.0	1	09/17/15	09/17/15 16:59	WB
1,2,4-Trimethylbenzene	ND		ug/L	5.0	2.0	1	09/17/15	09/17/15 16:59	WB
1,3,5-Trimethylbenzene	ND		ug/L	5.0	2.0	1	09/17/15	09/17/15 16:59	WB

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Will Brewington, Staff Chemist

Analytical Results

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com

Project: RF-001

Project Number: 05-056 RF-01

Project Manager: Jeffery Stein

Reported:

09/25/15 13:19

MW-2R

5091612-02 (Nonpotable Water)

Sample Date: 09/16/15

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Quantitation Limit (LOQ)	Dilution	Prepared	Analyzed	Analyst
VOLATILE ORGANICS BY EPA METHOD 8260B (GC/MS) (continued)									
Vinyl chloride	ND		ug/L	5.0	2.0	1	09/17/15	09/17/15 16:59	WB
o-Xylene	ND		ug/L	5.0	2.0	1	09/17/15	09/17/15 16:59	WB
m- & p-Xylenes	ND		ug/L	5.0	2.0	1	09/17/15	09/17/15 16:59	WB
<i>Surrogate: 1,2-Dichloroethane-d4</i>				75-120	93 %		09/17/15	09/17/15 16:59	
<i>Surrogate: Toluene-d8</i>				88-110	99 %		09/17/15	09/17/15 16:59	
<i>Surrogate: 4-Bromofluorobenzene</i>				80-110	94 %		09/17/15	09/17/15 16:59	
GASOLINE RANGE ORGANICS BY EPA 8015B									
Gasoline-Range Organics	ND		ug/L	100	100	1	09/18/15	09/18/15 17:52	CMK
<i>Surrogate: a,a,a-Trifluorotoluene</i>				85-115	101 %		09/18/15	09/18/15 17:52	
DIESEL RANGE ORGANICS BY EPA 3510/8015B									
Diesel-Range Organics	0.40		mg/L	0.21	0.21	1	09/23/15	09/24/15 17:27	CMK
<i>Surrogate: o-Terphenyl</i>				60-120	84 %		09/23/15	09/24/15 17:27	

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Analytical Results

Project: RF-001

Project Number: 05-056 RF-01

Project Manager: Jeffery Stein

Reported:

09/25/15 13:19

MW-5R

5091612-03 (Nonpotable Water)

Sample Date: 09/16/15

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Quantitation Limit (LOQ)	Dilution	Prepared	Analyzed	Analyst
VOLATILE ORGANICS BY EPA METHOD 8260B (GC/MS)									
Acetone	ND		ug/L	10.0	10.0	1	09/17/15	09/17/15 17:32	WB
tert-Amyl alcohol (TAA)	ND		ug/L	20.0	20.0	1	09/17/15	09/17/15 17:32	WB
tert-Amyl methyl ether (TAME)	ND		ug/L	5.0	2.0	1	09/17/15	09/17/15 17:32	WB
Benzene	ND		ug/L	5.0	2.0	1	09/17/15	09/17/15 17:32	WB
Bromobenzene	ND		ug/L	5.0	2.0	1	09/17/15	09/17/15 17:32	WB
Bromochloromethane	ND		ug/L	5.0	2.0	1	09/17/15	09/17/15 17:32	WB
Bromodichloromethane	ND		ug/L	5.0	2.0	1	09/17/15	09/17/15 17:32	WB
Bromoform	ND		ug/L	5.0	2.0	1	09/17/15	09/17/15 17:32	WB
Bromomethane	ND		ug/L	5.0	5.0	1	09/17/15	09/17/15 17:32	WB
tert-Butanol (TBA)	ND		ug/L	15.0	15.0	1	09/17/15	09/17/15 17:32	WB
2-Butanone (MEK)	ND		ug/L	10.0	10.0	1	09/17/15	09/17/15 17:32	WB
n-Butylbenzene	ND		ug/L	5.0	2.0	1	09/17/15	09/17/15 17:32	WB
sec-Butylbenzene	ND		ug/L	5.0	2.0	1	09/17/15	09/17/15 17:32	WB
tert-Butylbenzene	ND		ug/L	5.0	2.0	1	09/17/15	09/17/15 17:32	WB
Carbon disulfide	ND		ug/L	5.0	2.0	1	09/17/15	09/17/15 17:32	WB
Carbon tetrachloride	ND		ug/L	5.0	2.0	1	09/17/15	09/17/15 17:32	WB
Chlorobenzene	ND		ug/L	5.0	2.0	1	09/17/15	09/17/15 17:32	WB
Chloroethane	ND		ug/L	5.0	5.0	1	09/17/15	09/17/15 17:32	WB
Chloroform	ND		ug/L	5.0	2.0	1	09/17/15	09/17/15 17:32	WB
Chloromethane	ND		ug/L	5.0	5.0	1	09/17/15	09/17/15 17:32	WB
2-Chlorotoluene	ND		ug/L	5.0	2.0	1	09/17/15	09/17/15 17:32	WB
4-Chlorotoluene	ND		ug/L	5.0	2.0	1	09/17/15	09/17/15 17:32	WB
Dibromochloromethane	ND		ug/L	5.0	2.0	1	09/17/15	09/17/15 17:32	WB
1,2-Dibromo-3-chloropropane	ND		ug/L	5.0	2.0	1	09/17/15	09/17/15 17:32	WB
1,2-Dibromoethane (EDB)	ND		ug/L	5.0	2.0	1	09/17/15	09/17/15 17:32	WB
Dibromomethane	ND		ug/L	5.0	2.0	1	09/17/15	09/17/15 17:32	WB
1,2-Dichlorobenzene	ND		ug/L	5.0	2.0	1	09/17/15	09/17/15 17:32	WB
1,3-Dichlorobenzene	ND		ug/L	5.0	2.0	1	09/17/15	09/17/15 17:32	WB
1,4-Dichlorobenzene	ND		ug/L	5.0	2.0	1	09/17/15	09/17/15 17:32	WB
Dichlorodifluoromethane	ND		ug/L	5.0	2.0	1	09/17/15	09/17/15 17:32	WB
1,1-Dichloroethane	ND		ug/L	5.0	2.0	1	09/17/15	09/17/15 17:32	WB
1,2-Dichloroethane	ND		ug/L	5.0	2.0	1	09/17/15	09/17/15 17:32	WB
1,1-Dichloroethene	ND		ug/L	5.0	2.0	1	09/17/15	09/17/15 17:32	WB
cis-1,2-Dichloroethene	ND		ug/L	5.0	2.0	1	09/17/15	09/17/15 17:32	WB

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Will Brewington, Staff Chemist

Analytical Results

Project: RF-001

Project Number: 05-056 RF-01

Project Manager: Jeffery Stein

Reported:

09/25/15 13:19

MW-5R

5091612-03 (Nonpotable Water)

Sample Date: 09/16/15

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Quantitation Limit (LOQ)	Dilution	Prepared	Analyzed	Analyst
VOLATILE ORGANICS BY EPA METHOD 8260B (GC/MS) (continued)									
trans-1,2-Dichloroethene	ND		ug/L	5.0	2.0	1	09/17/15	09/17/15 17:32	WB
Dichlorofluoromethane	ND		ug/L	5.0	2.0	1	09/17/15	09/17/15 17:32	WB
1,2-Dichloropropane	ND		ug/L	5.0	2.0	1	09/17/15	09/17/15 17:32	WB
1,3-Dichloropropane	ND		ug/L	5.0	2.0	1	09/17/15	09/17/15 17:32	WB
2,2-Dichloropropane	ND		ug/L	5.0	2.0	1	09/17/15	09/17/15 17:32	WB
1,1-Dichloropropene	ND		ug/L	5.0	2.0	1	09/17/15	09/17/15 17:32	WB
cis-1,3-Dichloropropene	ND		ug/L	5.0	2.0	1	09/17/15	09/17/15 17:32	WB
trans-1,3-Dichloropropene	ND		ug/L	5.0	2.0	1	09/17/15	09/17/15 17:32	WB
Diisopropyl ether (DIPE)	ND		ug/L	5.0	2.0	1	09/17/15	09/17/15 17:32	WB
Ethyl tert-butyl ether (ETBE)	ND		ug/L	5.0	2.0	1	09/17/15	09/17/15 17:32	WB
Ethylbenzene	ND		ug/L	5.0	2.0	1	09/17/15	09/17/15 17:32	WB
Hexachlorobutadiene	ND		ug/L	5.0	2.0	1	09/17/15	09/17/15 17:32	WB
2-Hexanone	ND		ug/L	10.0	10.0	1	09/17/15	09/17/15 17:32	WB
Isopropylbenzene (Cumene)	ND		ug/L	5.0	2.0	1	09/17/15	09/17/15 17:32	WB
4-Isopropyltoluene	ND		ug/L	5.0	2.0	1	09/17/15	09/17/15 17:32	WB
Methyl tert-butyl ether (MTBE)	ND		ug/L	5.0	2.0	1	09/17/15	09/17/15 17:32	WB
4-Methyl-2-pentanone	ND		ug/L	10.0	10.0	1	09/17/15	09/17/15 17:32	WB
Methylene chloride	ND		ug/L	10.0	10.0	1	09/17/15	09/17/15 17:32	WB
Naphthalene	ND		ug/L	5.0	2.0	1	09/17/15	09/17/15 17:32	WB
n-Propylbenzene	ND		ug/L	5.0	2.0	1	09/17/15	09/17/15 17:32	WB
Styrene	ND		ug/L	5.0	2.0	1	09/17/15	09/17/15 17:32	WB
1,1,1,2-Tetrachloroethane	ND		ug/L	5.0	2.0	1	09/17/15	09/17/15 17:32	WB
1,1,2,2-Tetrachloroethane	ND		ug/L	5.0	2.0	1	09/17/15	09/17/15 17:32	WB
Tetrachloroethene	ND		ug/L	5.0	2.0	1	09/17/15	09/17/15 17:32	WB
Toluene	ND		ug/L	5.0	2.0	1	09/17/15	09/17/15 17:32	WB
1,2,3-Trichlorobenzene	ND		ug/L	5.0	2.0	1	09/17/15	09/17/15 17:32	WB
1,2,4-Trichlorobenzene	ND		ug/L	5.0	2.0	1	09/17/15	09/17/15 17:32	WB
1,1,1-Trichloroethane	ND		ug/L	5.0	2.0	1	09/17/15	09/17/15 17:32	WB
1,1,2-Trichloroethane	ND		ug/L	5.0	2.0	1	09/17/15	09/17/15 17:32	WB
Trichloroethene	ND		ug/L	5.0	2.0	1	09/17/15	09/17/15 17:32	WB
Trichlorofluoromethane (Freon 11)	ND		ug/L	5.0	2.0	1	09/17/15	09/17/15 17:32	WB
1,2,3-Trichloropropane	ND		ug/L	5.0	2.0	1	09/17/15	09/17/15 17:32	WB
1,2,4-Trimethylbenzene	ND		ug/L	5.0	2.0	1	09/17/15	09/17/15 17:32	WB
1,3,5-Trimethylbenzene	ND		ug/L	5.0	2.0	1	09/17/15	09/17/15 17:32	WB

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Analytical Results

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com

Project: RF-001

Project Number: 05-056 RF-01
Project Manager: Jeffery Stein

Reported:
09/25/15 13:19

MW-5R

5091612-03 (Nonpotable Water)
Sample Date: 09/16/15

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Quantitation Limit (LOQ)	Dilution	Prepared	Analyzed	Analyst
VOLATILE ORGANICS BY EPA METHOD 8260B (GC/MS) (continued)									
Vinyl chloride	ND		ug/L	5.0	2.0	1	09/17/15	09/17/15 17:32	WB
o-Xylene	ND		ug/L	5.0	2.0	1	09/17/15	09/17/15 17:32	WB
m- & p-Xylenes	ND		ug/L	5.0	2.0	1	09/17/15	09/17/15 17:32	WB
Surrogate: 1,2-Dichloroethane-d4		75-120		94 %	09/17/15		09/17/15 17:32		
Surrogate: Toluene-d8		88-110		99 %	09/17/15		09/17/15 17:32		
Surrogate: 4-Bromofluorobenzene		80-110		93 %	09/17/15		09/17/15 17:32		
GASOLINE RANGE ORGANICS BY EPA 8015B									
Gasoline-Range Organics	ND		ug/L	100	100	1	09/18/15	09/18/15 18:32	CMK
Surrogate: a,a,a-Trifluorotoluene		85-115		100 %	09/18/15		09/18/15 18:32		
DIESEL RANGE ORGANICS BY EPA 3510/8015B									
Diesel-Range Organics	0.54		mg/L	0.19	0.19	1	09/23/15	09/24/15 17:53	CMK
Surrogate: o-Terphenyl		60-120		93 %	09/23/15		09/24/15 17:53		

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Analytical Results

Project: RF-001

Project Number: 05-056 RF-01

Project Manager: Jeffery Stein

Reported:

09/25/15 13:19

MW-6

5091612-04 (Nonpotable Water)

Sample Date: 09/16/15

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Quantitation Limit (LOQ)	Dilution	Prepared	Analyzed	Analyst
VOLATILE ORGANICS BY EPA METHOD 8260B (GC/MS)									
Acetone	ND		ug/L	10.0	10.0	1	09/17/15	09/17/15 18:05	WB
tert-Amyl alcohol (TAA)	ND		ug/L	20.0	20.0	1	09/17/15	09/17/15 18:05	WB
tert-Amyl methyl ether (TAME)	ND		ug/L	5.0	2.0	1	09/17/15	09/17/15 18:05	WB
Benzene	ND		ug/L	5.0	2.0	1	09/17/15	09/17/15 18:05	WB
Bromobenzene	ND		ug/L	5.0	2.0	1	09/17/15	09/17/15 18:05	WB
Bromochloromethane	ND		ug/L	5.0	2.0	1	09/17/15	09/17/15 18:05	WB
Bromodichloromethane	ND		ug/L	5.0	2.0	1	09/17/15	09/17/15 18:05	WB
Bromoform	ND		ug/L	5.0	2.0	1	09/17/15	09/17/15 18:05	WB
Bromomethane	ND		ug/L	5.0	5.0	1	09/17/15	09/17/15 18:05	WB
tert-Butanol (TBA)	77.4		ug/L	15.0	15.0	1	09/17/15	09/17/15 18:05	WB
2-Butanone (MEK)	ND		ug/L	10.0	10.0	1	09/17/15	09/17/15 18:05	WB
n-Butylbenzene	ND		ug/L	5.0	2.0	1	09/17/15	09/17/15 18:05	WB
sec-Butylbenzene	ND		ug/L	5.0	2.0	1	09/17/15	09/17/15 18:05	WB
tert-Butylbenzene	ND		ug/L	5.0	2.0	1	09/17/15	09/17/15 18:05	WB
Carbon disulfide	ND		ug/L	5.0	2.0	1	09/17/15	09/17/15 18:05	WB
Carbon tetrachloride	ND		ug/L	5.0	2.0	1	09/17/15	09/17/15 18:05	WB
Chlorobenzene	ND		ug/L	5.0	2.0	1	09/17/15	09/17/15 18:05	WB
Chloroethane	ND		ug/L	5.0	5.0	1	09/17/15	09/17/15 18:05	WB
Chloroform	ND		ug/L	5.0	2.0	1	09/17/15	09/17/15 18:05	WB
Chloromethane	ND		ug/L	5.0	5.0	1	09/17/15	09/17/15 18:05	WB
2-Chlorotoluene	ND		ug/L	5.0	2.0	1	09/17/15	09/17/15 18:05	WB
4-Chlorotoluene	ND		ug/L	5.0	2.0	1	09/17/15	09/17/15 18:05	WB
Dibromochloromethane	ND		ug/L	5.0	2.0	1	09/17/15	09/17/15 18:05	WB
1,2-Dibromo-3-chloropropane	ND		ug/L	5.0	2.0	1	09/17/15	09/17/15 18:05	WB
1,2-Dibromoethane (EDB)	ND		ug/L	5.0	2.0	1	09/17/15	09/17/15 18:05	WB
Dibromomethane	ND		ug/L	5.0	2.0	1	09/17/15	09/17/15 18:05	WB
1,2-Dichlorobenzene	ND		ug/L	5.0	2.0	1	09/17/15	09/17/15 18:05	WB
1,3-Dichlorobenzene	ND		ug/L	5.0	2.0	1	09/17/15	09/17/15 18:05	WB
1,4-Dichlorobenzene	ND		ug/L	5.0	2.0	1	09/17/15	09/17/15 18:05	WB
Dichlorodifluoromethane	ND		ug/L	5.0	2.0	1	09/17/15	09/17/15 18:05	WB
1,1-Dichloroethane	ND		ug/L	5.0	2.0	1	09/17/15	09/17/15 18:05	WB
1,2-Dichloroethane	ND		ug/L	5.0	2.0	1	09/17/15	09/17/15 18:05	WB
1,1-Dichloroethene	ND		ug/L	5.0	2.0	1	09/17/15	09/17/15 18:05	WB
cis-1,2-Dichloroethene	ND		ug/L	5.0	2.0	1	09/17/15	09/17/15 18:05	WB

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Analytical Results

Project: RF-001

Project Number: 05-056 RF-01

Project Manager: Jeffery Stein

Reported:

09/25/15 13:19

MW-6

5091612-04 (Nonpotable Water)

Sample Date: 09/16/15

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Quantitation Limit (LOQ)	Dilution	Prepared	Analyzed	Analyst
VOLATILE ORGANICS BY EPA METHOD 8260B (GC/MS) (continued)									
trans-1,2-Dichloroethene	ND		ug/L	5.0	2.0	1	09/17/15	09/17/15 18:05	WB
Dichlorofluoromethane	ND		ug/L	5.0	2.0	1	09/17/15	09/17/15 18:05	WB
1,2-Dichloropropane	ND		ug/L	5.0	2.0	1	09/17/15	09/17/15 18:05	WB
1,3-Dichloropropane	ND		ug/L	5.0	2.0	1	09/17/15	09/17/15 18:05	WB
2,2-Dichloropropane	ND		ug/L	5.0	2.0	1	09/17/15	09/17/15 18:05	WB
1,1-Dichloropropene	ND		ug/L	5.0	2.0	1	09/17/15	09/17/15 18:05	WB
cis-1,3-Dichloropropene	ND		ug/L	5.0	2.0	1	09/17/15	09/17/15 18:05	WB
trans-1,3-Dichloropropene	ND		ug/L	5.0	2.0	1	09/17/15	09/17/15 18:05	WB
Diisopropyl ether (DIPE)	ND		ug/L	5.0	2.0	1	09/17/15	09/17/15 18:05	WB
Ethyl tert-butyl ether (ETBE)	ND		ug/L	5.0	2.0	1	09/17/15	09/17/15 18:05	WB
Ethylbenzene	ND		ug/L	5.0	2.0	1	09/17/15	09/17/15 18:05	WB
Hexachlorobutadiene	ND		ug/L	5.0	2.0	1	09/17/15	09/17/15 18:05	WB
2-Hexanone	ND		ug/L	10.0	10.0	1	09/17/15	09/17/15 18:05	WB
Isopropylbenzene (Cumene)	ND		ug/L	5.0	2.0	1	09/17/15	09/17/15 18:05	WB
4-Isopropyltoluene	ND		ug/L	5.0	2.0	1	09/17/15	09/17/15 18:05	WB
Methyl tert-butyl ether (MTBE)	2.3	J	ug/L	5.0	2.0	1	09/17/15	09/17/15 18:05	WB
4-Methyl-2-pentanone	ND		ug/L	10.0	10.0	1	09/17/15	09/17/15 18:05	WB
Methylene chloride	ND		ug/L	10.0	10.0	1	09/17/15	09/17/15 18:05	WB
Naphthalene	ND		ug/L	5.0	2.0	1	09/17/15	09/17/15 18:05	WB
n-Propylbenzene	ND		ug/L	5.0	2.0	1	09/17/15	09/17/15 18:05	WB
Styrene	ND		ug/L	5.0	2.0	1	09/17/15	09/17/15 18:05	WB
1,1,1,2-Tetrachloroethane	ND		ug/L	5.0	2.0	1	09/17/15	09/17/15 18:05	WB
1,1,2,2-Tetrachloroethane	ND		ug/L	5.0	2.0	1	09/17/15	09/17/15 18:05	WB
Tetrachloroethene	ND		ug/L	5.0	2.0	1	09/17/15	09/17/15 18:05	WB
Toluene	ND		ug/L	5.0	2.0	1	09/17/15	09/17/15 18:05	WB
1,2,3-Trichlorobenzene	ND		ug/L	5.0	2.0	1	09/17/15	09/17/15 18:05	WB
1,2,4-Trichlorobenzene	ND		ug/L	5.0	2.0	1	09/17/15	09/17/15 18:05	WB
1,1,1-Trichloroethane	ND		ug/L	5.0	2.0	1	09/17/15	09/17/15 18:05	WB
1,1,2-Trichloroethane	ND		ug/L	5.0	2.0	1	09/17/15	09/17/15 18:05	WB
Trichloroethene	ND		ug/L	5.0	2.0	1	09/17/15	09/17/15 18:05	WB
Trichlorofluoromethane (Freon 11)	ND		ug/L	5.0	2.0	1	09/17/15	09/17/15 18:05	WB
1,2,3-Trichloropropane	ND		ug/L	5.0	2.0	1	09/17/15	09/17/15 18:05	WB
1,2,4-Trimethylbenzene	ND		ug/L	5.0	2.0	1	09/17/15	09/17/15 18:05	WB
1,3,5-Trimethylbenzene	ND		ug/L	5.0	2.0	1	09/17/15	09/17/15 18:05	WB

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Analytical Results

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com

Project: RF-001

Project Number: 05-056 RF-01

Project Manager: Jeffery Stein

Reported:

09/25/15 13:19

MW-6

5091612-04 (Nonpotable Water)

Sample Date: 09/16/15

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Quantitation Limit (LOQ)	Dilution	Prepared	Analyzed	Analyst
VOLATILE ORGANICS BY EPA METHOD 8260B (GC/MS) (continued)									
Vinyl chloride	ND		ug/L	5.0	2.0	1	09/17/15	09/17/15 18:05	WB
o-Xylene	ND		ug/L	5.0	2.0	1	09/17/15	09/17/15 18:05	WB
m- & p-Xylenes	ND		ug/L	5.0	2.0	1	09/17/15	09/17/15 18:05	WB
Surrogate: 1,2-Dichloroethane-d4		75-120		93 %	09/17/15		09/17/15 18:05		
Surrogate: Toluene-d8		88-110		99 %	09/17/15		09/17/15 18:05		
Surrogate: 4-Bromofluorobenzene		80-110		93 %	09/17/15		09/17/15 18:05		
GASOLINE RANGE ORGANICS BY EPA 8015B									
Gasoline-Range Organics	ND		ug/L	100	100	1	09/18/15	09/18/15 19:12	CMK
Surrogate: a,a,a-Trifluorotoluene		85-115		100 %	09/18/15		09/18/15 19:12		
DIESEL RANGE ORGANICS BY EPA 3510/8015B									
Diesel-Range Organics	1.02		mg/L	0.20	0.20	1	09/23/15	09/24/15 18:20	CMK
Surrogate: o-Terphenyl		60-120		97 %	09/23/15		09/24/15 18:20		

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Analytical Results

Project: RF-001

Project Number: 05-056 RF-01

Project Manager: Jeffery Stein

Reported:

09/25/15 13:19

MW-7

5091612-05 (Nonpotable Water)

Sample Date: 09/16/15

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Quantitation Limit (LOQ)	Dilution	Prepared	Analyzed	Analyst
VOLATILE ORGANICS BY EPA METHOD 8260B (GC/MS)									
Acetone	ND		ug/L	10.0	10.0	1	09/17/15	09/17/15 18:39	WB
tert-Amyl alcohol (TAA)	ND		ug/L	20.0	20.0	1	09/17/15	09/17/15 18:39	WB
tert-Amyl methyl ether (TAME)	ND		ug/L	5.0	2.0	1	09/17/15	09/17/15 18:39	WB
Benzene	ND		ug/L	5.0	2.0	1	09/17/15	09/17/15 18:39	WB
Bromobenzene	ND		ug/L	5.0	2.0	1	09/17/15	09/17/15 18:39	WB
Bromochloromethane	ND		ug/L	5.0	2.0	1	09/17/15	09/17/15 18:39	WB
Bromodichloromethane	ND		ug/L	5.0	2.0	1	09/17/15	09/17/15 18:39	WB
Bromoform	ND		ug/L	5.0	2.0	1	09/17/15	09/17/15 18:39	WB
Bromomethane	ND		ug/L	5.0	5.0	1	09/17/15	09/17/15 18:39	WB
tert-Butanol (TBA)	ND		ug/L	15.0	15.0	1	09/17/15	09/17/15 18:39	WB
2-Butanone (MEK)	ND		ug/L	10.0	10.0	1	09/17/15	09/17/15 18:39	WB
n-Butylbenzene	ND		ug/L	5.0	2.0	1	09/17/15	09/17/15 18:39	WB
sec-Butylbenzene	ND		ug/L	5.0	2.0	1	09/17/15	09/17/15 18:39	WB
tert-Butylbenzene	ND		ug/L	5.0	2.0	1	09/17/15	09/17/15 18:39	WB
Carbon disulfide	ND		ug/L	5.0	2.0	1	09/17/15	09/17/15 18:39	WB
Carbon tetrachloride	ND		ug/L	5.0	2.0	1	09/17/15	09/17/15 18:39	WB
Chlorobenzene	ND		ug/L	5.0	2.0	1	09/17/15	09/17/15 18:39	WB
Chloroethane	ND		ug/L	5.0	5.0	1	09/17/15	09/17/15 18:39	WB
Chloroform	ND		ug/L	5.0	2.0	1	09/17/15	09/17/15 18:39	WB
Chloromethane	ND		ug/L	5.0	5.0	1	09/17/15	09/17/15 18:39	WB
2-Chlorotoluene	ND		ug/L	5.0	2.0	1	09/17/15	09/17/15 18:39	WB
4-Chlorotoluene	ND		ug/L	5.0	2.0	1	09/17/15	09/17/15 18:39	WB
Dibromochloromethane	ND		ug/L	5.0	2.0	1	09/17/15	09/17/15 18:39	WB
1,2-Dibromo-3-chloropropane	ND		ug/L	5.0	2.0	1	09/17/15	09/17/15 18:39	WB
1,2-Dibromoethane (EDB)	ND		ug/L	5.0	2.0	1	09/17/15	09/17/15 18:39	WB
Dibromomethane	ND		ug/L	5.0	2.0	1	09/17/15	09/17/15 18:39	WB
1,2-Dichlorobenzene	ND		ug/L	5.0	2.0	1	09/17/15	09/17/15 18:39	WB
1,3-Dichlorobenzene	ND		ug/L	5.0	2.0	1	09/17/15	09/17/15 18:39	WB
1,4-Dichlorobenzene	ND		ug/L	5.0	2.0	1	09/17/15	09/17/15 18:39	WB
Dichlorodifluoromethane	ND		ug/L	5.0	2.0	1	09/17/15	09/17/15 18:39	WB
1,1-Dichloroethane	ND		ug/L	5.0	2.0	1	09/17/15	09/17/15 18:39	WB
1,2-Dichloroethane	ND		ug/L	5.0	2.0	1	09/17/15	09/17/15 18:39	WB
1,1-Dichloroethene	ND		ug/L	5.0	2.0	1	09/17/15	09/17/15 18:39	WB
cis-1,2-Dichloroethene	3.8	J	ug/L	5.0	2.0	1	09/17/15	09/17/15 18:39	WB

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Analytical Results

Project: RF-001

Project Number: 05-056 RF-01

Project Manager: Jeffery Stein

Reported:

09/25/15 13:19

MW-7

5091612-05 (Nonpotable Water)

Sample Date: 09/16/15

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Quantitation Limit (LOQ)	Dilution	Prepared	Analyzed	Analyst
VOLATILE ORGANICS BY EPA METHOD 8260B (GC/MS) (continued)									
trans-1,2-Dichloroethene	ND		ug/L	5.0	2.0	1	09/17/15	09/17/15 18:39	WB
Dichlorofluoromethane	ND		ug/L	5.0	2.0	1	09/17/15	09/17/15 18:39	WB
1,2-Dichloropropane	ND		ug/L	5.0	2.0	1	09/17/15	09/17/15 18:39	WB
1,3-Dichloropropane	ND		ug/L	5.0	2.0	1	09/17/15	09/17/15 18:39	WB
2,2-Dichloropropane	ND		ug/L	5.0	2.0	1	09/17/15	09/17/15 18:39	WB
1,1-Dichloropropene	ND		ug/L	5.0	2.0	1	09/17/15	09/17/15 18:39	WB
cis-1,3-Dichloropropene	ND		ug/L	5.0	2.0	1	09/17/15	09/17/15 18:39	WB
trans-1,3-Dichloropropene	ND		ug/L	5.0	2.0	1	09/17/15	09/17/15 18:39	WB
Diisopropyl ether (DIPE)	ND		ug/L	5.0	2.0	1	09/17/15	09/17/15 18:39	WB
Ethyl tert-butyl ether (ETBE)	ND		ug/L	5.0	2.0	1	09/17/15	09/17/15 18:39	WB
Ethylbenzene	ND		ug/L	5.0	2.0	1	09/17/15	09/17/15 18:39	WB
Hexachlorobutadiene	ND		ug/L	5.0	2.0	1	09/17/15	09/17/15 18:39	WB
2-Hexanone	ND		ug/L	10.0	10.0	1	09/17/15	09/17/15 18:39	WB
Isopropylbenzene (Cumene)	ND		ug/L	5.0	2.0	1	09/17/15	09/17/15 18:39	WB
4-Isopropyltoluene	ND		ug/L	5.0	2.0	1	09/17/15	09/17/15 18:39	WB
Methyl tert-butyl ether (MTBE)	15.1		ug/L	5.0	2.0	1	09/17/15	09/17/15 18:39	WB
4-Methyl-2-pentanone	ND		ug/L	10.0	10.0	1	09/17/15	09/17/15 18:39	WB
Methylene chloride	ND		ug/L	10.0	10.0	1	09/17/15	09/17/15 18:39	WB
Naphthalene	ND		ug/L	5.0	2.0	1	09/17/15	09/17/15 18:39	WB
n-Propylbenzene	ND		ug/L	5.0	2.0	1	09/17/15	09/17/15 18:39	WB
Styrene	ND		ug/L	5.0	2.0	1	09/17/15	09/17/15 18:39	WB
1,1,1,2-Tetrachloroethane	ND		ug/L	5.0	2.0	1	09/17/15	09/17/15 18:39	WB
1,1,2,2-Tetrachloroethane	ND		ug/L	5.0	2.0	1	09/17/15	09/17/15 18:39	WB
Tetrachloroethene	ND		ug/L	5.0	2.0	1	09/17/15	09/17/15 18:39	WB
Toluene	ND		ug/L	5.0	2.0	1	09/17/15	09/17/15 18:39	WB
1,2,3-Trichlorobenzene	ND		ug/L	5.0	2.0	1	09/17/15	09/17/15 18:39	WB
1,2,4-Trichlorobenzene	ND		ug/L	5.0	2.0	1	09/17/15	09/17/15 18:39	WB
1,1,1-Trichloroethane	ND		ug/L	5.0	2.0	1	09/17/15	09/17/15 18:39	WB
1,1,2-Trichloroethane	ND		ug/L	5.0	2.0	1	09/17/15	09/17/15 18:39	WB
Trichloroethene	ND		ug/L	5.0	2.0	1	09/17/15	09/17/15 18:39	WB
Trichlorofluoromethane (Freon 11)	ND		ug/L	5.0	2.0	1	09/17/15	09/17/15 18:39	WB
1,2,3-Trichloropropane	ND		ug/L	5.0	2.0	1	09/17/15	09/17/15 18:39	WB
1,2,4-Trimethylbenzene	ND		ug/L	5.0	2.0	1	09/17/15	09/17/15 18:39	WB
1,3,5-Trimethylbenzene	ND		ug/L	5.0	2.0	1	09/17/15	09/17/15 18:39	WB

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Analytical Results

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com

Project: RF-001

Project Number: 05-056 RF-01

Project Manager: Jeffery Stein

Reported:

09/25/15 13:19

MW-7

5091612-05 (Nonpotable Water)

Sample Date: 09/16/15

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Quantitation Limit (LOQ)	Dilution	Prepared	Analyzed	Analyst
VOLATILE ORGANICS BY EPA METHOD 8260B (GC/MS) (continued)									
Vinyl chloride	ND		ug/L	5.0	2.0	1	09/17/15	09/17/15 18:39	WB
o-Xylene	ND		ug/L	5.0	2.0	1	09/17/15	09/17/15 18:39	WB
m- & p-Xylenes	ND		ug/L	5.0	2.0	1	09/17/15	09/17/15 18:39	WB
Surrogate: 1,2-Dichloroethane-d4		75-120		94 %	09/17/15		09/17/15 18:39		
Surrogate: Toluene-d8		88-110		98 %	09/17/15		09/17/15 18:39		
Surrogate: 4-Bromofluorobenzene		80-110		92 %	09/17/15		09/17/15 18:39		
GASOLINE RANGE ORGANICS BY EPA 8015B									
Gasoline-Range Organics	ND		ug/L	100	100	1	09/18/15	09/18/15 21:15	CMK
Surrogate: a,a,a-Trifluorotoluene		85-115		100 %	09/18/15		09/18/15 21:15		
DIESEL RANGE ORGANICS BY EPA 3510/8015B									
Diesel-Range Organics	0.65		mg/L	0.22	0.22	1	09/23/15	09/24/15 18:46	CMK
Surrogate: o-Terphenyl		60-120		89 %	09/23/15		09/24/15 18:46		



Will Brewington, Staff Chemist

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Analytical Results

Project: RF-001

Project Number: 05-056 RF-01

Project Manager: Jeffery Stein

Reported:

09/25/15 13:19

MW-8

5091612-06 (Nonpotable Water)

Sample Date: 09/16/15

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Quantitation Limit (LOQ)	Dilution	Prepared	Analyzed	Analyst
VOLATILE ORGANICS BY EPA METHOD 8260B (GC/MS)									
Acetone	ND		ug/L	10.0	10.0	1	09/17/15	09/17/15 19:12	WB
tert-Amyl alcohol (TAA)	ND		ug/L	20.0	20.0	1	09/17/15	09/17/15 19:12	WB
tert-Amyl methyl ether (TAME)	ND		ug/L	5.0	2.0	1	09/17/15	09/17/15 19:12	WB
Benzene	ND		ug/L	5.0	2.0	1	09/17/15	09/17/15 19:12	WB
Bromobenzene	ND		ug/L	5.0	2.0	1	09/17/15	09/17/15 19:12	WB
Bromochloromethane	ND		ug/L	5.0	2.0	1	09/17/15	09/17/15 19:12	WB
Bromodichloromethane	ND		ug/L	5.0	2.0	1	09/17/15	09/17/15 19:12	WB
Bromoform	ND		ug/L	5.0	2.0	1	09/17/15	09/17/15 19:12	WB
Bromomethane	ND		ug/L	5.0	5.0	1	09/17/15	09/17/15 19:12	WB
tert-Butanol (TBA)	ND		ug/L	15.0	15.0	1	09/17/15	09/17/15 19:12	WB
2-Butanone (MEK)	ND		ug/L	10.0	10.0	1	09/17/15	09/17/15 19:12	WB
n-Butylbenzene	ND		ug/L	5.0	2.0	1	09/17/15	09/17/15 19:12	WB
sec-Butylbenzene	ND		ug/L	5.0	2.0	1	09/17/15	09/17/15 19:12	WB
tert-Butylbenzene	ND		ug/L	5.0	2.0	1	09/17/15	09/17/15 19:12	WB
Carbon disulfide	ND		ug/L	5.0	2.0	1	09/17/15	09/17/15 19:12	WB
Carbon tetrachloride	ND		ug/L	5.0	2.0	1	09/17/15	09/17/15 19:12	WB
Chlorobenzene	ND		ug/L	5.0	2.0	1	09/17/15	09/17/15 19:12	WB
Chloroethane	ND		ug/L	5.0	5.0	1	09/17/15	09/17/15 19:12	WB
Chloroform	ND		ug/L	5.0	2.0	1	09/17/15	09/17/15 19:12	WB
Chloromethane	ND		ug/L	5.0	5.0	1	09/17/15	09/17/15 19:12	WB
2-Chlorotoluene	ND		ug/L	5.0	2.0	1	09/17/15	09/17/15 19:12	WB
4-Chlorotoluene	ND		ug/L	5.0	2.0	1	09/17/15	09/17/15 19:12	WB
Dibromochloromethane	ND		ug/L	5.0	2.0	1	09/17/15	09/17/15 19:12	WB
1,2-Dibromo-3-chloropropane	ND		ug/L	5.0	2.0	1	09/17/15	09/17/15 19:12	WB
1,2-Dibromoethane (EDB)	ND		ug/L	5.0	2.0	1	09/17/15	09/17/15 19:12	WB
Dibromomethane	ND		ug/L	5.0	2.0	1	09/17/15	09/17/15 19:12	WB
1,2-Dichlorobenzene	ND		ug/L	5.0	2.0	1	09/17/15	09/17/15 19:12	WB
1,3-Dichlorobenzene	ND		ug/L	5.0	2.0	1	09/17/15	09/17/15 19:12	WB
1,4-Dichlorobenzene	ND		ug/L	5.0	2.0	1	09/17/15	09/17/15 19:12	WB
Dichlorodifluoromethane	ND		ug/L	5.0	2.0	1	09/17/15	09/17/15 19:12	WB
1,1-Dichloroethane	ND		ug/L	5.0	2.0	1	09/17/15	09/17/15 19:12	WB
1,2-Dichloroethane	ND		ug/L	5.0	2.0	1	09/17/15	09/17/15 19:12	WB
1,1-Dichloroethene	ND		ug/L	5.0	2.0	1	09/17/15	09/17/15 19:12	WB
cis-1,2-Dichloroethene	ND		ug/L	5.0	2.0	1	09/17/15	09/17/15 19:12	WB

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Analytical Results

Project: RF-001

Project Number: 05-056 RF-01

Project Manager: Jeffery Stein

Reported:

09/25/15 13:19

MW-8

5091612-06 (Nonpotable Water)

Sample Date: 09/16/15

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Quantitation Limit (LOQ)	Dilution	Prepared	Analyzed	Analyst
VOLATILE ORGANICS BY EPA METHOD 8260B (GC/MS) (continued)									
trans-1,2-Dichloroethene	ND		ug/L	5.0	2.0	1	09/17/15	09/17/15 19:12	WB
Dichlorofluoromethane	ND		ug/L	5.0	2.0	1	09/17/15	09/17/15 19:12	WB
1,2-Dichloropropane	ND		ug/L	5.0	2.0	1	09/17/15	09/17/15 19:12	WB
1,3-Dichloropropane	ND		ug/L	5.0	2.0	1	09/17/15	09/17/15 19:12	WB
2,2-Dichloropropane	ND		ug/L	5.0	2.0	1	09/17/15	09/17/15 19:12	WB
1,1-Dichloropropene	ND		ug/L	5.0	2.0	1	09/17/15	09/17/15 19:12	WB
cis-1,3-Dichloropropene	ND		ug/L	5.0	2.0	1	09/17/15	09/17/15 19:12	WB
trans-1,3-Dichloropropene	ND		ug/L	5.0	2.0	1	09/17/15	09/17/15 19:12	WB
Diisopropyl ether (DIPE)	ND		ug/L	5.0	2.0	1	09/17/15	09/17/15 19:12	WB
Ethyl tert-butyl ether (ETBE)	ND		ug/L	5.0	2.0	1	09/17/15	09/17/15 19:12	WB
Ethylbenzene	ND		ug/L	5.0	2.0	1	09/17/15	09/17/15 19:12	WB
Hexachlorobutadiene	ND		ug/L	5.0	2.0	1	09/17/15	09/17/15 19:12	WB
2-Hexanone	ND		ug/L	10.0	10.0	1	09/17/15	09/17/15 19:12	WB
Isopropylbenzene (Cumene)	ND		ug/L	5.0	2.0	1	09/17/15	09/17/15 19:12	WB
4-Isopropyltoluene	ND		ug/L	5.0	2.0	1	09/17/15	09/17/15 19:12	WB
Methyl tert-butyl ether (MTBE)	ND		ug/L	5.0	2.0	1	09/17/15	09/17/15 19:12	WB
4-Methyl-2-pentanone	ND		ug/L	10.0	10.0	1	09/17/15	09/17/15 19:12	WB
Methylene chloride	ND		ug/L	10.0	10.0	1	09/17/15	09/17/15 19:12	WB
Naphthalene	ND		ug/L	5.0	2.0	1	09/17/15	09/17/15 19:12	WB
n-Propylbenzene	ND		ug/L	5.0	2.0	1	09/17/15	09/17/15 19:12	WB
Styrene	ND		ug/L	5.0	2.0	1	09/17/15	09/17/15 19:12	WB
1,1,1,2-Tetrachloroethane	ND		ug/L	5.0	2.0	1	09/17/15	09/17/15 19:12	WB
1,1,2,2-Tetrachloroethane	ND		ug/L	5.0	2.0	1	09/17/15	09/17/15 19:12	WB
Tetrachloroethene	ND		ug/L	5.0	2.0	1	09/17/15	09/17/15 19:12	WB
Toluene	ND		ug/L	5.0	2.0	1	09/17/15	09/17/15 19:12	WB
1,2,3-Trichlorobenzene	ND		ug/L	5.0	2.0	1	09/17/15	09/17/15 19:12	WB
1,2,4-Trichlorobenzene	ND		ug/L	5.0	2.0	1	09/17/15	09/17/15 19:12	WB
1,1,1-Trichloroethane	ND		ug/L	5.0	2.0	1	09/17/15	09/17/15 19:12	WB
1,1,2-Trichloroethane	ND		ug/L	5.0	2.0	1	09/17/15	09/17/15 19:12	WB
Trichloroethene	ND		ug/L	5.0	2.0	1	09/17/15	09/17/15 19:12	WB
Trichlorofluoromethane (Freon 11)	ND		ug/L	5.0	2.0	1	09/17/15	09/17/15 19:12	WB
1,2,3-Trichloropropane	ND		ug/L	5.0	2.0	1	09/17/15	09/17/15 19:12	WB
1,2,4-Trimethylbenzene	ND		ug/L	5.0	2.0	1	09/17/15	09/17/15 19:12	WB
1,3,5-Trimethylbenzene	ND		ug/L	5.0	2.0	1	09/17/15	09/17/15 19:12	WB

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Analytical Results

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Baltimore MD 21227
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www.mdspectral.com

Project: RF-001

Project Number: 05-056 RF-01

Project Manager: Jeffery Stein

Reported:

09/25/15 13:19

MW-8

5091612-06 (Nonpotable Water)

Sample Date: 09/16/15

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Quantitation Limit (LOQ)	Dilution	Prepared	Analyzed	Analyst
VOLATILE ORGANICS BY EPA METHOD 8260B (GC/MS) (continued)									
Vinyl chloride	ND		ug/L	5.0	2.0	1	09/17/15	09/17/15 19:12	WB
o-Xylene	ND		ug/L	5.0	2.0	1	09/17/15	09/17/15 19:12	WB
m- & p-Xylenes	ND		ug/L	5.0	2.0	1	09/17/15	09/17/15 19:12	WB
Surrogate: 1,2-Dichloroethane-d4		75-120		93 %	09/17/15		09/17/15 19:12		
Surrogate: Toluene-d8		88-110		99 %	09/17/15		09/17/15 19:12		
Surrogate: 4-Bromofluorobenzene		80-110		93 %	09/17/15		09/17/15 19:12		
GASOLINE RANGE ORGANICS BY EPA 8015B									
Gasoline-Range Organics	ND		ug/L	100	100	1	09/18/15	09/18/15 21:56	CMK
Surrogate: a,a,a-Trifluorotoluene		85-115		100 %	09/18/15		09/18/15 21:56		
DIESEL RANGE ORGANICS BY EPA 3510/8015B									
Diesel-Range Organics	0.26		mg/L	0.24	0.24	1	09/23/15	09/24/15 19:12	CMK
Surrogate: o-Terphenyl		60-120		93 %	09/23/15		09/24/15 19:12		

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Analytical Results

Project: RF-001

Project Number: 05-056 RF-01

Project Manager: Jeffery Stein

Reported:

09/25/15 13:19

MW-9

5091612-07 (Nonpotable Water)

Sample Date: 09/16/15

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Quantitation Limit (LOQ)	Dilution	Prepared	Analyzed	Analyst
VOLATILE ORGANICS BY EPA METHOD 8260B (GC/MS)									
Acetone	15.9		ug/L	10.0	10.0	1	09/17/15	09/17/15 19:45	WB
tert-Amyl alcohol (TAA)	ND		ug/L	20.0	20.0	1	09/17/15	09/17/15 19:45	WB
tert-Amyl methyl ether (TAME)	ND		ug/L	5.0	2.0	1	09/17/15	09/17/15 19:45	WB
Benzene	ND		ug/L	5.0	2.0	1	09/17/15	09/17/15 19:45	WB
Bromobenzene	ND		ug/L	5.0	2.0	1	09/17/15	09/17/15 19:45	WB
Bromochloromethane	ND		ug/L	5.0	2.0	1	09/17/15	09/17/15 19:45	WB
Bromodichloromethane	ND		ug/L	5.0	2.0	1	09/17/15	09/17/15 19:45	WB
Bromoform	ND		ug/L	5.0	2.0	1	09/17/15	09/17/15 19:45	WB
Bromomethane	ND		ug/L	5.0	5.0	1	09/17/15	09/17/15 19:45	WB
tert-Butanol (TBA)	ND		ug/L	15.0	15.0	1	09/17/15	09/17/15 19:45	WB
2-Butanone (MEK)	ND		ug/L	10.0	10.0	1	09/17/15	09/17/15 19:45	WB
n-Butylbenzene	ND		ug/L	5.0	2.0	1	09/17/15	09/17/15 19:45	WB
sec-Butylbenzene	ND		ug/L	5.0	2.0	1	09/17/15	09/17/15 19:45	WB
tert-Butylbenzene	ND		ug/L	5.0	2.0	1	09/17/15	09/17/15 19:45	WB
Carbon disulfide	ND		ug/L	5.0	2.0	1	09/17/15	09/17/15 19:45	WB
Carbon tetrachloride	ND		ug/L	5.0	2.0	1	09/17/15	09/17/15 19:45	WB
Chlorobenzene	ND		ug/L	5.0	2.0	1	09/17/15	09/17/15 19:45	WB
Chloroethane	ND		ug/L	5.0	5.0	1	09/17/15	09/17/15 19:45	WB
Chloroform	ND		ug/L	5.0	2.0	1	09/17/15	09/17/15 19:45	WB
Chloromethane	ND		ug/L	5.0	5.0	1	09/17/15	09/17/15 19:45	WB
2-Chlorotoluene	ND		ug/L	5.0	2.0	1	09/17/15	09/17/15 19:45	WB
4-Chlorotoluene	ND		ug/L	5.0	2.0	1	09/17/15	09/17/15 19:45	WB
Dibromochloromethane	ND		ug/L	5.0	2.0	1	09/17/15	09/17/15 19:45	WB
1,2-Dibromo-3-chloropropane	ND		ug/L	5.0	2.0	1	09/17/15	09/17/15 19:45	WB
1,2-Dibromoethane (EDB)	ND		ug/L	5.0	2.0	1	09/17/15	09/17/15 19:45	WB
Dibromomethane	ND		ug/L	5.0	2.0	1	09/17/15	09/17/15 19:45	WB
1,2-Dichlorobenzene	ND		ug/L	5.0	2.0	1	09/17/15	09/17/15 19:45	WB
1,3-Dichlorobenzene	ND		ug/L	5.0	2.0	1	09/17/15	09/17/15 19:45	WB
1,4-Dichlorobenzene	ND		ug/L	5.0	2.0	1	09/17/15	09/17/15 19:45	WB
Dichlorodifluoromethane	ND		ug/L	5.0	2.0	1	09/17/15	09/17/15 19:45	WB
1,1-Dichloroethane	ND		ug/L	5.0	2.0	1	09/17/15	09/17/15 19:45	WB
1,2-Dichloroethane	ND		ug/L	5.0	2.0	1	09/17/15	09/17/15 19:45	WB
1,1-Dichloroethene	ND		ug/L	5.0	2.0	1	09/17/15	09/17/15 19:45	WB
cis-1,2-Dichloroethene	ND		ug/L	5.0	2.0	1	09/17/15	09/17/15 19:45	WB

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Analytical Results

Project: RF-001

Project Number: 05-056 RF-01

Project Manager: Jeffery Stein

Reported:

09/25/15 13:19

MW-9

5091612-07 (Nonpotable Water)

Sample Date: 09/16/15

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Quantitation Limit (LOQ)	Dilution	Prepared	Analyzed	Analyst
VOLATILE ORGANICS BY EPA METHOD 8260B (GC/MS) (continued)									
trans-1,2-Dichloroethene	ND		ug/L	5.0	2.0	1	09/17/15	09/17/15 19:45	WB
Dichlorofluoromethane	ND		ug/L	5.0	2.0	1	09/17/15	09/17/15 19:45	WB
1,2-Dichloropropane	ND		ug/L	5.0	2.0	1	09/17/15	09/17/15 19:45	WB
1,3-Dichloropropane	ND		ug/L	5.0	2.0	1	09/17/15	09/17/15 19:45	WB
2,2-Dichloropropane	ND		ug/L	5.0	2.0	1	09/17/15	09/17/15 19:45	WB
1,1-Dichloropropene	ND		ug/L	5.0	2.0	1	09/17/15	09/17/15 19:45	WB
cis-1,3-Dichloropropene	ND		ug/L	5.0	2.0	1	09/17/15	09/17/15 19:45	WB
trans-1,3-Dichloropropene	ND		ug/L	5.0	2.0	1	09/17/15	09/17/15 19:45	WB
Diisopropyl ether (DIPE)	ND		ug/L	5.0	2.0	1	09/17/15	09/17/15 19:45	WB
Ethyl tert-butyl ether (ETBE)	ND		ug/L	5.0	2.0	1	09/17/15	09/17/15 19:45	WB
Ethylbenzene	ND		ug/L	5.0	2.0	1	09/17/15	09/17/15 19:45	WB
Hexachlorobutadiene	ND		ug/L	5.0	2.0	1	09/17/15	09/17/15 19:45	WB
2-Hexanone	ND		ug/L	10.0	10.0	1	09/17/15	09/17/15 19:45	WB
Isopropylbenzene (Cumene)	ND		ug/L	5.0	2.0	1	09/17/15	09/17/15 19:45	WB
4-Isopropyltoluene	ND		ug/L	5.0	2.0	1	09/17/15	09/17/15 19:45	WB
Methyl tert-butyl ether (MTBE)	ND		ug/L	5.0	2.0	1	09/17/15	09/17/15 19:45	WB
4-Methyl-2-pentanone	ND		ug/L	10.0	10.0	1	09/17/15	09/17/15 19:45	WB
Methylene chloride	ND		ug/L	10.0	10.0	1	09/17/15	09/17/15 19:45	WB
Naphthalene	ND		ug/L	5.0	2.0	1	09/17/15	09/17/15 19:45	WB
n-Propylbenzene	ND		ug/L	5.0	2.0	1	09/17/15	09/17/15 19:45	WB
Styrene	ND		ug/L	5.0	2.0	1	09/17/15	09/17/15 19:45	WB
1,1,1,2-Tetrachloroethane	ND		ug/L	5.0	2.0	1	09/17/15	09/17/15 19:45	WB
1,1,2,2-Tetrachloroethane	ND		ug/L	5.0	2.0	1	09/17/15	09/17/15 19:45	WB
Tetrachloroethene	ND		ug/L	5.0	2.0	1	09/17/15	09/17/15 19:45	WB
Toluene	ND		ug/L	5.0	2.0	1	09/17/15	09/17/15 19:45	WB
1,2,3-Trichlorobenzene	ND		ug/L	5.0	2.0	1	09/17/15	09/17/15 19:45	WB
1,2,4-Trichlorobenzene	ND		ug/L	5.0	2.0	1	09/17/15	09/17/15 19:45	WB
1,1,1-Trichloroethane	ND		ug/L	5.0	2.0	1	09/17/15	09/17/15 19:45	WB
1,1,2-Trichloroethane	ND		ug/L	5.0	2.0	1	09/17/15	09/17/15 19:45	WB
Trichloroethene	ND		ug/L	5.0	2.0	1	09/17/15	09/17/15 19:45	WB
Trichlorofluoromethane (Freon 11)	ND		ug/L	5.0	2.0	1	09/17/15	09/17/15 19:45	WB
1,2,3-Trichloropropane	ND		ug/L	5.0	2.0	1	09/17/15	09/17/15 19:45	WB
1,2,4-Trimethylbenzene	ND		ug/L	5.0	2.0	1	09/17/15	09/17/15 19:45	WB
1,3,5-Trimethylbenzene	ND		ug/L	5.0	2.0	1	09/17/15	09/17/15 19:45	WB

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Will Brewington, Staff Chemist

Analytical Results

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com

Project: RF-001

Project Number: 05-056 RF-01

Project Manager: Jeffery Stein

Reported:

09/25/15 13:19

MW-9

5091612-07 (Nonpotable Water)

Sample Date: 09/16/15

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Quantitation Limit (LOQ)	Dilution	Prepared	Analyzed	Analyst
VOLATILE ORGANICS BY EPA METHOD 8260B (GC/MS) (continued)									
Vinyl chloride	ND		ug/L	5.0	2.0	1	09/17/15	09/17/15 19:45	WB
o-Xylene	ND		ug/L	5.0	2.0	1	09/17/15	09/17/15 19:45	WB
m- & p-Xylenes	ND		ug/L	5.0	2.0	1	09/17/15	09/17/15 19:45	WB
Surrogate: 1,2-Dichloroethane-d4		75-120		97 %	09/17/15		09/17/15 19:45		
Surrogate: Toluene-d8		88-110		99 %	09/17/15		09/17/15 19:45		
Surrogate: 4-Bromofluorobenzene		80-110		93 %	09/17/15		09/17/15 19:45		
GASOLINE RANGE ORGANICS BY EPA 8015B									
Gasoline-Range Organics	ND		ug/L	100	100	1	09/18/15	09/18/15 22:37	CMK
Surrogate: a,a,a-Trifluorotoluene		85-115		100 %	09/18/15		09/18/15 22:37		
DIESEL RANGE ORGANICS BY EPA 3510/8015B									
Diesel-Range Organics	ND		mg/L	0.21	0.21	1	09/23/15	09/24/15 19:38	CMK
Surrogate: o-Terphenyl		60-120		84 %	09/23/15		09/24/15 19:38		

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Project: RF-001

Project Number: 05-056 RF-01

Project Manager: Jeffery Stein

Reported:

09/25/15 13:19

Notes and Definitions

J	Detected but below the reporting limit; therefore, result is an estimated concentration (CLP J-Flag).
DET	Analyte DETECTED
ND	Analyte NOT DETECTED at or above the reporting limit
NR	Not Reported
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference



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Will Brewington, Staff Chemist

CHAIN-OF-CUSTODY RECORD

Company Name: **AEC**
 Project Manager: **Jeff Stein**
 Project Name: **Royal Farms 001**
 Project ID: **05-056-RF001**
 Sampler(s): **K Pellegrini**
 P.O. Number: **05-056-RF001**

Maryland Spectral Services, Inc.
 1500 Caton Center Drive, Suite G
 Baltimore, MD 21227
 410-247-7600 • Fax 410-247-7602
 labman@mdspectral.com

Matrix Codes: NW (nonpotable water)
 PW (potable water)

Preservative: 1+1
 HCL, H₂SO₄,
 Methanol,
 Na₂S₂O₃, NaHCO₃

Field pH, Residual
 Chlorine, QC
 Request, Trip
 Blank, Field Blank

MSS Lab ID

Field Sample ID	Date	Time	Water	Soil	Other	No. of Containers	Analysis Requested	Relinquished by: (Signature)	Date/Time	Received by: (Signature)
MW-1R	9/16/15	13:15	X			46	VOCS + Oxy + Naph 8260 TPH GRO 8015 TPH DRO 8015			
MW-2R		1330	X			45				
MW-5R		1355	X			45				
MW-6		1410	X			45				
MW-7		1430	X			45				
MW-8		1445	X			45				
MW-9		1500	X			45				

Relinquished by: (Signature) *Kevin Pellegrini* Date/Time 9-16-15 15:55 Received by: (Signature) _____ (Printed) _____

Relinquished by: (Signature) _____ Date/Time _____ Received by Lab: (Signature) *Hannah Rosier* (Printed) *Hannah Rosier*

Lab Use:
 Temp: 4.2 °C
 Received on Ice
 Received same day
 Preservation Appropriate

Sample Disposal:
 Return to Client
 Disposal by lab
 Archive for _____ days

Turn Around Time:
 Normal (7 day)
 5 day
 4 day
 3 day
 Rush (2 day)
 Next Day
 Other: _____ Due Date: _____

Special Instructions/QC Requirements & Comments:
 Report to: jstein@aec-env.com
kpellegrini@aec-env.com
jsheidy@aec-env.com

Delivery Method:
 Courier
 Client
 UPS
 FedEx
 USPS
 Other: _____