Quarterly Groundwater Monitoring Report
Second Quarter 2012

Gasoline Fueling Station – Royal Farms #72
2906 Churchville Road
Churchville, MD 21028

MDE Case No. 93-0197-HA
MDE Facility ID No. 3851

AEC Project Number: 05-056RF072

Prepared for:
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And

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May 25, 2012

ADVANTAGE ENVIRONMENTAL CONSULTANTS, LLC

Quarterly Monitoring Report
Second Quarter 2012

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Introduction

Advantage Environmental Consultants (AEC) has completed quarterly sampling of five groundwater monitoring wells, two tank pit observation wells, and the potable drinking water well filtration system as requested by the Maryland Department of the Environment (MDE) in correspondence dated July 12, 2011. Additionally, the point-of-entry, granular activated carbon (GAC) potable well filtration system is sampled monthly to monitor methyl tert-butyl ether (MTBE) breakthrough in the GAC system.

Figure 1 in Attachment A illustrates the site vicinity. Figure 2 in Attachment A illustrates the groundwater monitoring well, tank pit observation wells and on-site potable drinking water well locations. The following is a description of this work and the results of the recent groundwater sampling efforts.

Groundwater Sampling and Analysis

The monitoring well, tank pit observation well and drinking water samples were collected on May 8, 2012. All samples were analyzed according to United States Environmental Protection Agency (EPA) protocols. Groundwater samples were collected from the monitoring wells and tank pit observation wells by first gauging and purging at least three well volumes using a poly vinyl chloride (PVC) bailer which was cleaned (Liquinox and potable 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 monitoring well and tank pit observation well samples were collected using dedicated, pre-cleaned, disposable sampling bailers.

The potable drinking water well treatment system samples were obtained after purging the system for 15 minutes and were collected from the treatment system's influent (PW-1), mid-points (PW-2a, PW-2b, PW-2c) and effluent (PW-3). The potable well system is sampled monthly to monitor MTBE breakthrough in the GAC system. Carroll Water Systems replaced GAC within the filtration system for the potable well at the Site on December 22, 2011.

The groundwater flow direction for the monitoring wells on the day of the sampling event is depicted in Figure 3 (Attachment A). Monitoring well MW-1 groundwater elevation data was not contoured since MW-1 was previously contoured with now abandoned monitoring wells MW-3, MW-4 and MW-5 (i.e. shallow wells). Table 1 in Attachment B provides current and historical groundwater elevation data.

The samples were transferred directly into the appropriate sample containers. The sample from each location was placed in amber glass liter bottles, 250 milliliter plastic bottles, and 40 milliliter glass jars with Teflon-lined septa and preserved with hydrochloric acid, as appropriate. Once collected, the samples were placed on ice in a cooler to await shipment to the laboratory.

The monitoring wells and tank pit observation wells were analyzed for volatile organic compounds (VOCs), including fuel oxygenates, per EPA Analytical Method 8260, Total Petroleum Hydrocarbons (TPH) Diesel Range Organics (DRO), Gasoline Range Organics (GRO) per EPA Analytical Method 8015B. The potable drinking water well system samples were analyzed for VOCs, including fuel oxygenates, per EPA Analytical Method 524.2.

AEC monitored subsurface conditions to determine the progress of natural attenuation within the subsurface. Groundwater samples were field tested for conductivity, oxidation reduction potential and dissolved oxygen using a Horiba U-52 meter as well as iron with a Hach™ test kit. In addition to field testing, laboratory samples were analyzed for nitrate per EPA Analytical Method 352.1, sulfate per EPA Analytical Method 375.4, and methane per EPA Analytical Method 8015.

Results

Laboratory analytical results for samples collected from MW-2 indicate elevated concentrations of benzene, MTBE, TPH DRO and GRO, with respect to regulatory standards (MDE Clean-up Standards for Type I and II Aquifers). Laboratory analytical results indicate benzene, TPH DRO, and GRO at concentrations greater than regulatory standards for the sample collected from TP-2. Laboratory analytical results for TP-1 indicate elevated concentrations of benzene with respect to regulatory standards. Laboratory analytical results for MW-6 and MW-7 indicate elevated concentrations of TPH DRO with respect to regulatory standards. Figure 4 in Attachment A summarizes the latest groundwater quality data. Table 2 in Attachment B summarizes current and historical groundwater analytical results.

Concentrations of sulfate and nitrate tend to be higher in the upgradient wells (MW-7 and MW-8) than in the downgradient wells, indicating that anaerobic natural attenuation may be occurring. The presence of Fe^{2+} at MW-2 indicates that iron reduction is occurring within the plume. The presence of methane at MW-2, MW-7, MW-8, and TP-2 indicates methanogenesis may be occurring. Table 3 in Attachment B summarizes the field testing results.

Laboratory analytical results of the potable well system detected elevated concentrations of VOCs in the influent sample (PW-1), with respect to regulatory standards (MDE Clean-up Standards for Type I and II Aquifers), while the first mid-point (PW-2a) sample indicates a detectable concentration of MTBE. Samples collected from mid-points PW-2b, PW-2c, and the effluent (PW-3), indicate MTBE concentrations below laboratory detection limits. Tert-butanol (TBA) was detected in each sample including the effluent. Although there is no established regulatory standard for TBA, an order has been placed to Carroll Water Systems for replacement of GAC within the filtration system as TBA breakthrough is often a forerunner to MTBE breakthrough. Table 4 in Attachment B summarizes the potable well testing results. Laboratory analytical reports are presented in Attachment C.

Attachment A

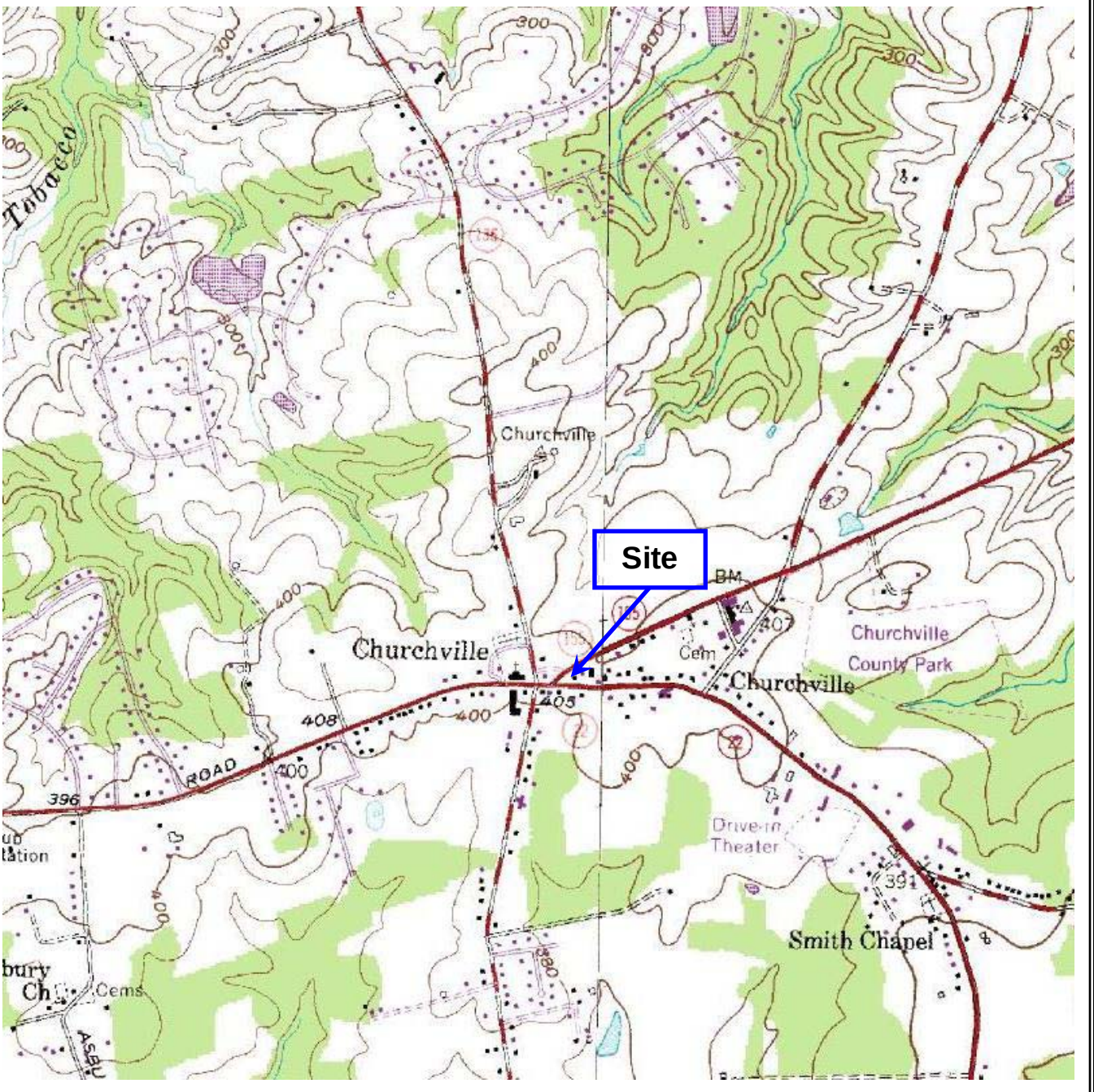
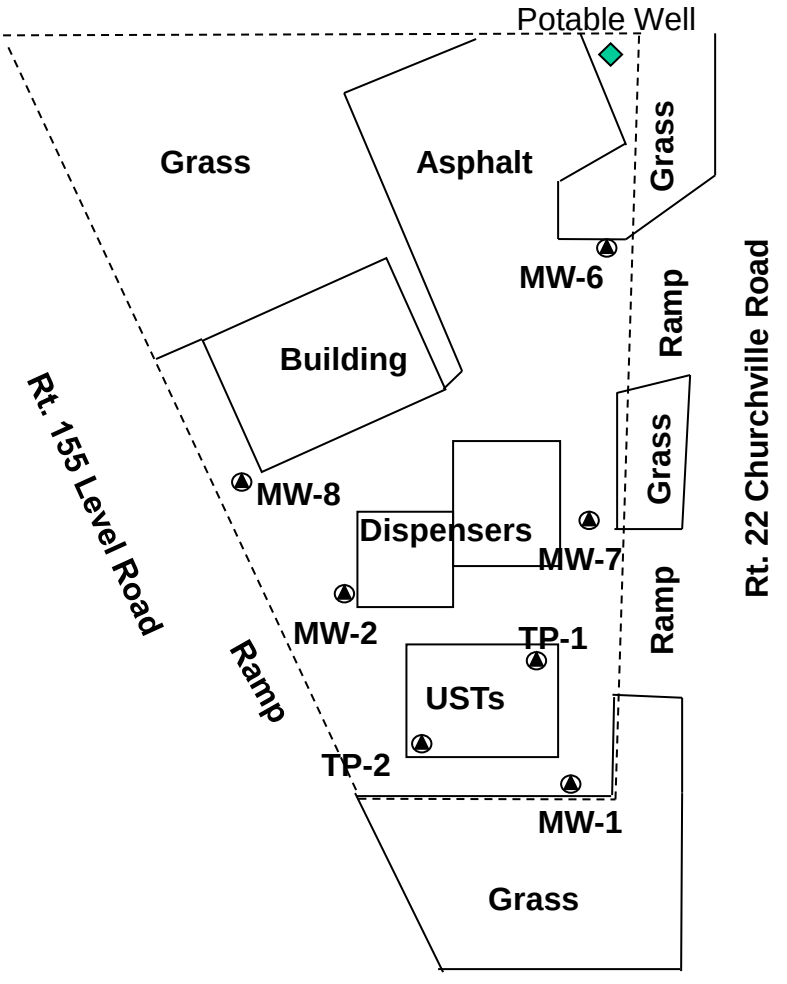


Figure 1 - Site Vicinity Map
Royal Farms Store #72
2906 Churchville Road
Churchville, Maryland 21028

Advantage Environmental Consultants, LLC

Project No.:	Date:	Drawn By:
05-056RF072	May 2012	JSS



Site Boundary

Monitoring/Tank Pit Well Location

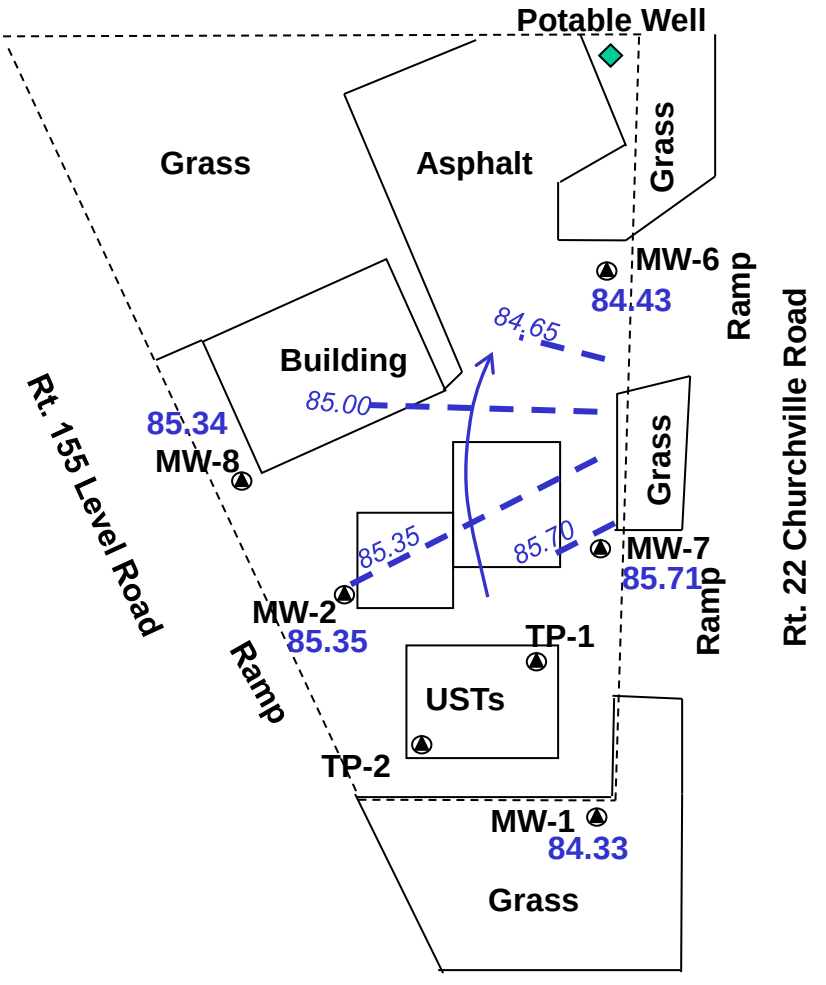
0 40
Approximate Scale (ft)

North

Advantage Environmental Consultants, LLC

Figure 2 - Site Map
Royal Farms Store #72
2906 Churchville Road
Churchville, Maryland 21028

Project No.:	Date:	Drawn By:
05-056RF-072	March 2012	JSS



North

Monitoring/Tank Pit Well Location

Contour Interval

Estimated Groundwater flow direction – Deep Wells

All measurements in feet (data collected 5/8/2012).

0 40

Approximate Scale (ft)

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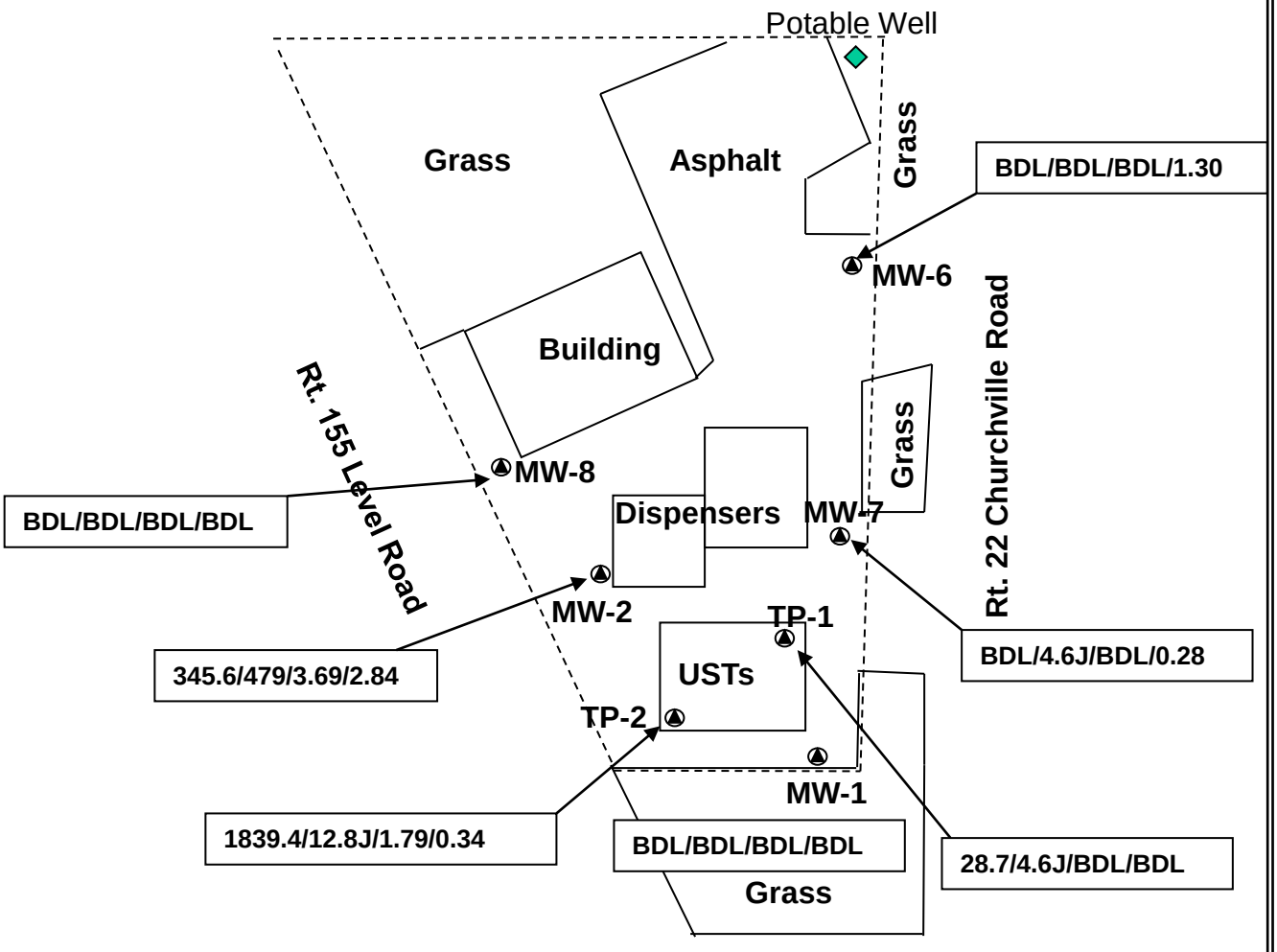
Figure 3 – Groundwater Gradient Map

Royal Farms Store #72
2906 Churchville Road
Churchville, Maryland 21028

Work Order No.:	Report Date:	Drawn By:
05-056RF072	May 2012	JDW



Monitoring/Tank Pit Well Location

Groundwater Samples Collected 5/8/12
Samples analyzed for VOCs per EPA 8260 plus oxygenates
TPH GRO/DRO per EPA 8015
Total BTEX/MTBE/GRO/DRO
VOCs in ug/l or ppb & TPH in mg/l or ppm
BDL = Below Detection Limits
NS = Not Sampled
J denotes an estimated value

North

0 40
Approximate Scale (ft)

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Figure 4 – Groundwater Quality Map
Royal Farms Store #72
2906 Churchville Road
Churchville, Maryland 21028

Work Order No.:	Report Date:	Drawn By:
05-056	May 2012	JDW

Attachment B

Table 1 - Historical Groundwater Elevation Data
Gasoline Fueling Station – Royal Farms #72
2906 Churchville Road, Churchville, MD 21028

Well No.	Date	Depth to Water	TOC Elevation	Water Elevation	Comments
MW-1	7/9/2005	12.59	97.75	85.16	
	2/3/2006	8.32	97.75	89.43	
	7/11/2006	9.66	97.75	88.09	
	1/31/2007	11.27	97.75	86.48	
	4/17/2007	8.25	97.75	89.50	
	7/30/2007	15.87	97.75	81.88	
	11/2/2007	16.62	97.75	81.13	
	1/29/2008	12.99	97.75	84.76	
	3/27/2008	10.73	97.75	87.02	
	6/25/2008	12.25	97.75	85.50	
	9/29/2008	15.10	97.75	82.65	
	12/30/2008	11.93	97.75	85.82	
	3/30/2009	13.21	97.75	84.54	
	6/24/2009	11.84	97.75	85.91	
	6/30/2009	12.40	97.75	85.35	
	9/30/2009*	6.82	97.75	90.93	
	11/3/2009	8.36	97.75	89.39	
	12/29/2009	11.30	97.75	86.45	
	3/25/2010	8.57	97.75	89.18	
	6/18/2010	7.09	97.75	90.66	
	8/31/2010	16.53	97.75	81.22	
	12/15/2010	11.88	97.75	85.87	
	3/1/2011	10.07	97.75	87.68	
	5/20/2011	10.98	97.75	86.77	
	8/31/2011	9.72	97.75	88.03	
	11/29/2011	10.09	97.75	87.66	
	2/28/2012	11.99	97.75	85.76	
	5/8/2012	13.42	97.75	84.33	
MW-2	7/9/2005	10.62	95.56	84.94	
	2/3/2006	7.55	95.56	88.01	
	7/11/2006	7.36	95.56	88.20	
	1/31/2007	9.21	95.56	86.35	
	4/17/2007	5.79	95.56	89.77	
	7/30/2007	13.77	95.56	81.79	
	11/2/2007	14.43	95.56	81.13	
	1/29/2008	9.83	95.56	85.73	
	3/27/2008	8.46	95.56	87.10	
	6/25/2008	9.80	95.56	85.76	
	9/29/2008	13.09	95.56	82.47	
	12/30/2008	9.86	95.56	85.70	
	3/30/2009	11.25	95.56	84.31	
	6/24/2009	9.64	95.56	85.92	
	6/30/2009	10.09	95.56	85.47	
	9/30/2009*	7.60	95.63	88.03	
	11/3/2009	6.28	95.63	89.35	
	12/29/2009	9.85	95.63	85.78	
	3/25/2010	6.27	96.63	90.36	
	6/18/2010	5.69	96.63	90.94	
	8/31/2010	14.25	96.63	82.38	
	12/16/2010	9.86	96.63	86.77	

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Well No.	Date	Depth to Water	TOC Elevation	Water Elevation	Comments
	3/1/2011	8.23	96.63	88.40	
	5/20/2011	8.62	96.63	88.01	
	8/31/2011	9.75	96.63	86.88	
	11/29/2011	7.36	96.63	89.27	
	2/28/2012	9.79	96.63	86.84	
	5/8/2012	11.28	96.63	85.35	Slight odor
MW-3	7/9/2005	8.69	95.44	86.75	
	2/3/2006	5.74	95.44	89.70	
	7/11/2006	6.36	95.44	89.08	
	1/31/2007	7.47	95.44	87.97	
	4/17/2007	2.96	95.44	92.48	
	7/30/2007	12.49	95.44	82.95	
	11/2/2007	13.32	95.44	82.12	
	1/29/2008	10.86	95.44	84.58	
	3/27/2008	7.44	95.44	88.00	
	6/25/2008	8.84	95.44	86.60	
	9/29/2008	11.82	95.44	83.62	
	12/30/2008	8.80	95.44	86.64	
	3/30/2009	10.07	95.44	85.37	
	6/24/2009	8.52	95.44	86.92	
	6/30/2009	9.06	95.44	86.38	
	9/30/2009*	6.52	94.46	87.94	
	11/3/2009	5.31	94.46	89.15	
	12/29/2009	7.45	94.46	87.01	
	3/25/2010	5.19	95.46	90.27	
	6/18/2010	4.71	95.46	90.75	
	8/31/2010	13.21	95.46	82.25	
	12/15/2010	8.76	95.46	86.70	
	3/1/2011	6.91	95.46	88.55	
	5/20/2011	7.49	95.46	87.97	
	8/31/2011	Abandoned	Abandoned	Abandoned	
MW-4	7/11/2006	6.13	94.48	88.35	
	1/31/2007	5.97	94.48	88.51	
	4/17/2007	4.17	94.48	90.31	
	7/30/2007	12.30	94.48	82.18	
	11/2/2007	12.63	94.48	81.85	
	1/29/2008	8.94	94.48	85.54	
	3/27/2008	6.70	94.48	87.78	
	6/25/2008	8.67	94.48	85.81	
	9/29/2008	11.60	94.48	82.88	
	12/30/2008	8.77	94.48	85.71	
	3/30/2009	10.19	94.48	84.29	
	6/24/2009	8.67	94.48	85.81	
	6/30/2009	9.13	94.48	85.35	
	9/30/2009*	7.94	95.32	87.38	
	11/3/2009	5.22	95.32	90.10	
	12/29/2009	8.92	95.32	86.40	
	3/25/2010	6.10	96.32	90.22	
	6/18/2010	5.05	96.32	91.27	
	8/31/2010	13.76	96.32	82.56	

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Well No.	Date	Depth to Water	TOC Elevation	Water Elevation	Comments
	12/15/2010	25.31	96.32	71.01	
	3/1/2011	7.65	96.32	88.67	
	5/20/2011	7.58	96.32	88.74	
	8/31/2011	Abandoned	Abandoned	Abandoned	
MW-5	7/11/2006	10.64	96.02	85.38	
	1/31/2007	9.27	96.02	86.75	
	4/17/2007	5.72	96.02	90.30	
	7/30/2007	17.07	96.02	78.95	
	11/2/2007	14.66	96.02	81.36	
	1/29/2008	11.45	96.02	84.57	
	3/27/2008	9.18	96.02	86.84	
	6/25/2008	9.81	96.02	86.21	
	9/29/2008	13.50	96.02	82.52	
	12/30/2008	10.37	96.02	85.65	
	3/30/2009	11.89	96.02	84.13	
	6/24/2009	10.34	96.02	85.68	
	6/30/2009	10.78	96.02	85.24	
	9/30/2009*	7.98	96.38	88.40	
	11/3/2009	6.64	96.38	89.74	
	12/29/2009	9.18	96.38	87.20	
	3/25/2010	6.53	97.38	90.85	
	6/18/2010	5.11	97.38	92.27	
	8/31/2010	14.58	97.38	82.80	
	12/15/2010	9.68	97.38	87.70	
	3/1/2011	8.24	97.38	89.14	
	5/20/2011	9.20	97.38	88.18	
	8/31/2011	Abandoned	Abandoned	Abandoned	
MW-6	6/24/2009	9.27	95.19	85.92	
	6/30/2009	9.79	95.19	85.40	
	9/30/2009*	6.48	95.30	88.82	
	11/3/2009	6.33	95.30	88.97	
	12/29/2009	NG	95.30	NG	
	3/25/2010	5.41	95.30	89.89	
	6/18/2010	4.37	95.30	90.93	
	8/31/2010	12.81	95.30	82.49	
	12/15/2010	9.33	95.30	85.97	
	3/1/2011	6.80	95.30	88.50	
	5/20/2011	8.11	95.30	87.19	
	8/31/2011	8.28	95.30	87.02	
	11/29/2011	6.93	95.30	88.37	
	2/28/2012	9.40	95.30	85.90	
	5/8/2012	10.87	95.30	84.43	
MW-7	6/24/2009	8.61	94.28	85.67	
	6/30/2009	8.97	94.28	85.31	
	9/30/2009*	8.41	94.32	85.91	
	11/3/2009	5.81	94.32	88.51	
	12/29/2009	NG	94.32	NG	
	3/25/2010	5.28	95.32	90.04	
	6/18/2010	4.43	95.32	90.89	
	8/31/2010	13.12	95.32	82.20	

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2906 Churchville Road, Churchville, MD 21028

Well No.	Date	Depth to Water	TOC Elevation	Water Elevation	Comments
	12/15/2010	8.69	95.32	86.63	
	3/1/2011	6.53	95.32	88.79	
	5/20/2011	7.61	95.32	87.71	
	8/31/2011	8.59	95.32	86.73	
	11/29/2011	6.72	95.32	88.60	
	2/28/2012	8.01	95.32	87.31	
	5/8/2012	9.61	95.32	85.71	
MW-8	6/24/2009	9.83	95.77	85.94	
	6/30/2009	10.31	95.77	85.46	
	9/30/2009*	7.10	95.86	88.76	
	11/3/2009	6.12	95.86	89.74	
	12/29/2009	NG	95.86	NG	
	3/25/2010	6.95	96.86	89.91	
	6/18/2010	5.63	96.86	91.23	
	8/31/2010	14.32	96.86	82.54	
	12/15/2010	9.72	96.86	87.14	
	3/1/2011	8.72	96.86	88.14	
	5/20/2011	8.75	96.86	88.11	
	8/31/2011	9.31	96.86	87.55	
	11/29/2011	7.49	96.86	89.37	
	2/28/2012	9.98	96.86	86.88	
	5/8/2012	11.52	96.86	85.34	
TP-1	7/9/2005	NG	NS	NS	
	2/3/2006	NG	NS	NS	
	7/11/2006	NG	NS	NS	
	1/31/2007	NG	NS	NS	
	4/27/2007	6.29	NS	NS	
	7/30/2007	12.68	NS	NS	
	11/2/2007	14.02	NS	NS	
	1/29/2008	10.28	NS	NS	
	3/27/2008	7.62	NS	NS	
	6/25/2008	8.54	NS	NS	
	9/29/2008	12.70	NS	NS	
	12/30/2008	9.24	NS	NS	
	3/30/2009	9.72	NS	NS	
	6/24/2009	NG	NS	NS	
	6/30/2009	9.00	NS	NS	
	9/30/2009	6.73	NS	NS	
	11/3/2009	6.13	NS	NS	
	12/29/2009	10.19	NS	NS	
	3/25/2010	4.91	NS	NS	
	6/18/2010	3.88	NS	NS	
	8/31/2010	13.26	NS	NS	
	12/15/2010	9.48	NS	NS	
	3/1/2011	7.56	NS	NS	
	5/20/2011	7.55	NS	NS	
	8/31/2011	10.21	NS	NS	
	11/29/2011	6.61	NS	NS	
	2/28/2012	8.64	NS	NS	
	5/8/2012	10.42	NS	NS	

Table 1 - Historical Groundwater Elevation Data
Gasoline Fueling Station – Royal Farms #72
2906 Churchville Road, Churchville, MD 21028

Well No.	Date	Depth to Water	TOC Elevation	Water Elevation	Comments
TP-2	7/9/2005	NG	NS	NS	
	2/3/2006	NG	NS	NS	
	7/11/2006	NG	NS	NS	
	1/31/2007	NG	NS	NS	
	4/27/2007	6.70	NS	NS	
	7/30/2007	13.02	NS	NS	
	11/2/2007	14.51	NS	NS	
	1/29/2008	10.35	NS	NS	
	3/27/2008	8.16	NS	NS	
	6/25/2008	9.07	NS	NS	
	9/29/2008	13.05	NS	NS	
	12/30/2008	9.76	NS	NS	
	3/30/2009	11.10	NS	NS	
	6/24/2009	NG	NS	NS	
	6/30/2009	9.40	NS	NS	
	9/30/2009	6.72	NS	NS	
	11/3/2009	5.72	NS	NS	
	12/29/2009	9.68	NS	NS	
	3/25/2010	4.94	NS	NS	
	6/18/2010	3.93	NS	NS	
	8/31/2010	13.68	NS	NS	
	12/15/2010	9.92	NS	NS	
	3/1/2011	8.13	NS	NS	
	5/20/2011	7.96	NS	NS	
	8/31/2011	10.69	NS	NS	
	11/29/2011	7.03	NS	NS	
	2/28/2012	9.23	NS	NS	
	5/8/2012	10.99	NS	NS	

All measurements in feet
TOC = Top of Casing
NS = Not Surveyed
NG = Not Gauged
* Top of casing elevation resurveyed on November 3, 2009

Table 2 - Historical Groundwater Analytical Results
Gasoline Fueling Station – Royal Farms #72
2906 Churchville Road, Churchville, MD 21028

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
	2/3/2006	BDL	BDL	BDL	BDL	BDL	BDL	NS	NS
	7/11/2006	BDL	BDL	BDL	BDL	BDL	BDL	NS	NS
	1/31/2007	BDL	BDL	BDL	BDL	BDL	BDL	NS	NS
	4/17/2007	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
	7/30/2007	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
	11/2/2007	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
	1/29/2008	BDL	11	BDL	5.3	16.3	370	BDL	BDL
	3/27/2008	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
	6/25/2008	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
	9/29/2008	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
	12/30/2008	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
	3/30/2009	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
	6/30/2009	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
	9/30/2009	BDL	7	BDL	8.1	15.1	BDL	BDL	BDL
	12/29/2009	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
	3/25/2010	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
	6/18/2010	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
	8/31/2010	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
	12/15/2010	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
	3/1/2011	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
	5/20/2011	BDL	BDL	BDL	BDL	BDL	6.2	BDL	BDL
	8/31/2011	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
	11/29/2011	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
	2/28/2012	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
	5/8/2012	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
MW-2	7/9/2005	160	13	87	160	420	2600	NS	NS
	2/3/2006	320	27	270	520	1137	860	NS	NS
	7/11/2006	134	17	172	328	651	930	NS	NS
	1/31/2007	190	12	140	210	552	800	NS	NS
	4/17/2007	132	11	87	173	403	870	5.1	0.7
	7/30/2007	700	63	450	810	2023	3200	8.2	BDL
	11/2/2007	155	14	120	280	569	900	7.4	3.3
	1/29/2008	54	BDL	60	134	248	10000	3.6	35.6
	3/27/2008	73	9.9	29	136	247.9	160	2.5	1.4
	6/25/2008	160	34	140	290	624	1100	5.2	0.9
	9/29/2008	160	12	120	220	512	2300	3.9	4.3
	12/30/2008	92	11	74	163	340	1000	6	12
	3/30/2009	84	BDL	60	84	228	1400	2	3.4
	6/30/2009	140	12	90	164	406	720	1.2	2
	9/30/2009	150	50	200	510	910	1200	4.7	5.4
	12/29/2009	70	11	130	260	471	510	2	4.1
	3/25/2010	57	90	5.6	161	313.6	800	3.3	2.6
	6/18/2010	130	15	130	234	509	1000	3.3	12
	8/31/2010	2580	17	170	295	3062	980	1.4	18
	12/15/2010	54	BDL	56	75	185	BDL	1.5	0.5
	3/1/2011	69	16	100	241	426	BDL	3.5	3.8
	5/20/2011	82	12	130	215	439	BDL	3.1	2.9
	8/31/2011	59.1	BDL	88.8	193.9	341.8	481	10.6	4.79
	11/29/2011	21.5	BDL	81.1	124.6	227.2	168	1.3	2.88
	2/28/2012	56	8.0 J	76.6	168.3	308.9	341	3.41	4.07
	5/8/2012	86.6	BDL	101	158	345.6	479	3.69	2.84
MW-3	7/9/2005	BDL	BDL	BDL	BDL	BDL	BDL	NS	NS
	2/3/2006	BDL	BDL	BDL	BDL	BDL	BDL	NS	NS
	7/11/2006	BDL	BDL	BDL	BDL	BDL	2.0 J	NS	NS
	1/31/2007	BDL	BDL	BDL	BDL	BDL	BDL	NS	NS
	4/17/2007	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL

Well No.	Date	B	T	E	X	Total BTEX	MTBE	TPH GRO	TPH DRO
	7/30/2007	56	320	70	273	719	70	1.1	BDL
	11/2/2007	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
	1/29/2008	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
	3/27/2008	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
	6/25/2008	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
	9/29/2008	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
	12/30/2008	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
	3/30/2009	BDL	BDL	BDL	BDL	BDL	2000	BDL	BDL
	6/30/2009	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
	9/30/2009	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
	12/29/2009	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
	3/25/2010	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
	6/18/2010	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
	8/31/2010	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
	12/15/2010	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
	3/1/2011	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
	5/20/2011	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
	8/31/2011	Abandoned							
MW-4	3/30/2006	BDL	BDL	BDL	BDL	BDL	BDL	NS	NS
	7/11/2006	BDL	BDL	BDL	BDL	BDL	BDL	NS	NS
	1/31/2007	BDL	BDL	BDL	BDL	BDL	17	NS	NS
	4/17/2007	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
	7/30/2007	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
	11/2/2007	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
	1/29/2008	BDL	BDL	BDL	BDL	BDL	19	BDL	BDL
	3/27/2008	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
	6/25/2008	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
	9/29/2008	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
	12/30/2008	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
	3/30/2009	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
	6/30/2009	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
	9/30/2009	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
	12/29/2009	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
	3/25/2010	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
	6/18/2010	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
	8/31/2010	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
	12/15/2010	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
	3/1/2011	BDL	13	BDL	15.8	28.8	20	BDL	BDL
	5/20/2011	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
	8/31/2011	Abandoned							
MW-5	3/30/2006	BDL	BDL	BDL	BDL	BDL	BDL	NS	NS
	7/11/2006	BDL	BDL	BDL	BDL	BDL	BDL	NS	NS
	1/31/2007	BDL	BDL	BDL	BDL	BDL	43	NS	NS
	4/17/2007	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
	7/30/2007	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
	11/2/2007	BDL	BDL	BDL	BDL	BDL	190	BDL	BDL
	1/29/2008	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
	3/27/2008	BDL	BDL	BDL	BDL	BDL	190	BDL	BDL
	6/25/2008	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
	9/29/2008	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
	12/30/2008	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
	3/30/2009	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
	6/30/2009	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
	9/30/2009	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
	12/29/2009	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
	3/25/2010	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
	6/18/2010	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
	8/31/2010	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
	12/15/2010	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
	3/1/2011	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
	5/20/2011	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL

Well No.	Date	B	T	E	X	Total BTEX	MTBE	TPH GRO	TPH DRO
	8/31/2011	Abandoned							
MW-6	6/30/2009	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
	9/30/2009	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
	12/29/2009	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
	3/25/2010	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
	6/18/2010	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
	8/31/2010	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
	12/15/2010	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
	3/1/2011	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
	5/20/2011	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
	8/31/2011	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
	11/29/2011	BDL	BDL	BDL	BDL	BDL	BDL	BDL	0.23
	2/28/2012	BDL	BDL	BDL	BDL	BDL	BDL	BDL	0.29
	5/8/2012	BDL	BDL	BDL	BDL	BDL	BDL	BDL	1.3
MW-7	6/30/2009	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
	9/30/2009	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
	12/29/2009	BDL	BDL	BDL	BDL	BDL	80	BDL	BDL
	3/25/2010	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
	6/18/2010	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
	8/31/2010	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
	12/15/2010	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
	3/1/2011	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
	5/20/2011	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
	8/31/2011	9.2	BDL	2.0 J	6.0 J	17.2 J	BDL	BDL	0.43
	11/29/2011	BDL	BDL	BDL	BDL	BDL	BDL	BDL	0.3
	2/28/2012	BDL	BDL	BDL	BDL	BDL	4.8 J	BDL	0.55
	5/8/2012	BDL	BDL	BDL	BDL	BDL	4.6 J	BDL	0.28
MW-8	6/30/2009	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
	9/30/2009	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
	12/29/2009	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
	3/25/2010	BDL	BDL	BDL	17.7	17.7	BDL	BDL	BDL
	6/18/2010	BDL	BDL	BDL	17.7	17.7	BDL	BDL	BDL
	8/31/2010	BDL	5	BDL	BDL	5	BDL	BDL	BDL
	12/15/2010	BDL	5	BDL	BDL	5	BDL	BDL	BDL
	3/1/2011	BDL	5	BDL	BDL	5	36	BDL	BDL
	5/20/2011	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
	8/31/2011	BDL	BDL	BDL	BDL	BDL	BDL	BDL	0.22
	11/29/2011	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
	2/28/2012	BDL	BDL	BDL	BDL	BDL	BDL	BDL	0.23
	5/8/2012	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
TP-1	3/30/2006	NS	NS	NS	NS	NS	NS	NS	NS
	7/11/2006	NS	NS	NS	NS	NS	NS	NS	NS
	1/31/2007	NS	NS	NS	NS	NS	NS	NS	NS
	4/27/2007	8.9	BDL	BDL	BDL	8.9	1400	BDL	BDL
	7/30/2007	BDL	BDL	BDL	BDL	BDL	1200	BDL	BDL
	11/2/2007	BDL	BDL	BDL	BDL	BDL	270	BDL	BDL
	1/29/2008	BDL	BDL	BDL	BDL	BDL	740	BDL	BDL
	3/27/2008	BDL	BDL	BDL	BDL	BDL	77	BDL	BDL
	6/25/2008	4	BDL	BDL	BDL	4	450	BDL	BDL
	9/29/2008	BDL	BDL	BDL	BDL	BDL	110	BDL	BDL
	12/30/2008	BDL	BDL	BDL	BDL	BDL	61	BDL	BDL
	3/30/2009	BDL	BDL	BDL	BDL	BDL	62	BDL	BDL
	6/30/2009	BDL	BDL	BDL	BDL	BDL	46	BDL	BDL
	9/30/2009	BDL	BDL	BDL	BDL	BDL	9	BDL	BDL
	12/29/2009	BDL	BDL	BDL	BDL	BDL	10	BDL	BDL
	3/25/2010	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
	6/18/2010	BDL	BDL	BDL	BDL	BDL	6.5	BDL	BDL
	8/31/2010	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
	12/15/2010	BDL	BDL	BDL	BDL	BDL	9.6	BDL	BDL
	3/1/2011	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
	5/20/2011	BDL	BDL	BDL	BDL	BDL	16	BDL	BDL

Well No.	Date	B	T	E	X	Total BTEX	MTBE	TPH GRO	TPH DRO
	8/31/2011	BDL	BDL	BDL	BDL	BDL	2.3j	BDL	BDL
	11/29/2011	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
	2/28/2012	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
	5/8/2012	12.5	13.5	BDL	2.7 J	28.7	4.6 J	BDL	BDL
TP-2	3/30/2006	NS	NS	NS	NS	NS	NS	NS	NS
	7/11/2006	NS	NS	NS	NS	NS	NS	NS	NS
	1/31/2007	NS	NS	NS	NS	NS	NS	NS	NS
	4/27/2007	13	8.5	BDL	BDL	21.5	720	BDL	BDL
	7/30/2007	BDL	BDL	BDL	BDL	BDL	46	BDL	BDL
	11/2/2007	BDL	BDL	BDL	BDL	BDL	74	BDL	BDL
	1/29/2008	BDL	BDL	BDL	BDL	BDL	660	BDL	BDL
	3/27/2008	BDL	BDL	BDL	BDL	BDL	200	BDL	BDL
	6/25/2008	6.5	5.3	BDL	8.6	20.4	400	BDL	BDL
	9/29/2008	6.5	6.2	BDL	8.6	21.3	230	BDL	BDL
	12/30/2008	BDL	BDL	BDL	BDL	BDL	160	BDL	BDL
	3/30/2009	BDL	BDL	BDL	BDL	BDL	85	BDL	BDL
	6/30/2009	BDL	BDL	BDL	BDL	BDL	32	BDL	BDL
	9/30/2009	BDL	BDL	BDL	BDL	BDL	41	BDL	BDL
	12/29/2009	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
	3/25/2010	BDL	BDL	BDL	BDL	BDL	9.8	BDL	BDL
	6/18/2010	BDL	BDL	BDL	BDL	BDL	10	BDL	BDL
	8/31/2010	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
	12/15/2010	BDL	BDL	BDL	BDL	BDL	70	BDL	BDL
	3/1/2011	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
	5/20/2011	BDL	BDL	BDL	BDL	BDL	50	BDL	BDL
	8/31/2011	BDL	BDL	BDL	BDL	BDL	3.9j	BDL	0.22
	11/29/2011	4.1 J	48	3.2 J	41.8	97.1	8.2	0.183	0.27
	2/28/2012	32.3	666	139	944	1781.3	13.0 J	2.66	0.61
	5/8/2012	96.4	799	118	826	1839.4	12.8 J	1.79	0.34
Type I and II Aquifers		**5**	**1000**	**700**	**10000**	**NRS**	**20**	**0.047**	**0.047**

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

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

BDL = Below Detection Limits

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

NS = Not Sampled

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

See laboratory analytical results reports for full results.

J Denotes Estimated Value

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

NRS = No Regulatory Standard

Table 3 - Natural Attenuation Monitoring Results
Gasoline Fueling Station – Royal Farms #72
2906 Churchville Road
Churchville, MD 21028

Well No.	Date	Cond	ORP	DO	Fe^{2+}	Methane	Sulfate	Nitrate
MW-1	8/31/2011	0.62	203	7.85	0.0	BDL	29.7	2.7
	11/29/2011	3.44	155	12.73	0.0	BDL	40	3.5
	2/28/2012	0.52	197	6.78	0.0	BDL	36.1	BDL
	5/8/2012	0.543	179	5.60	0.0	BDL	35.4	BDL
MW-2	8/31/2011	1.09	29	3.57	6.1	0.673	BDL	BDL
	11/29/2011	2.01	-59	2.93	0.0	0.442	BDL	BDL
	2/28/2012	1.25	20	2.06	3.1	0.833	BDL	0.7
	5/8/2012	1.44	-38	3.52	3.2	0.804	BDL	0.6
MW-6	8/31/2011	NR	192	2.93	0.0	0.0178	2.2	0.3
	11/29/2011	3.37	114	13.04	0.0	BDL	1.0	BDL
	2/28/2012	1.4	128	1.52	2.2	0.0496	2.2	1.5
	5/8/2012	0.534	131	12.72	0.0	BDL	11.2	1.0
MW-7	8/31/2011	8.29	185	5.13	0.0	0.0125	87.3	BDL
	11/29/2011	3.33	111	13.04	0.0	BDL	89.5	0.2
	2/28/2012	7.42	177	1.96	0.0	0.0248	94.6	0.3
	5/8/2012	7.82	158	8.00	0.0	0.0183	92.9	0.4
MW-8	8/31/2011	0.83	186	3.94	0.0	0.0254	31.4	17.9
	11/29/2011	0.434	-54	12.46	0.0	BDL	24.5	16.8
	2/28/2012	0.64	92	1.2	0.0	0.0526	36.6	18.9
	5/8/2012	0.901	141	4.88	0.0	0.0353	34.4	17.8
TP-1	8/31/2011	6.69	101	4.97	0.6	BDL	78.1	BDL
	11/29/2011	3.04	128	6.36	0.0	BDL	48.7	BDL
	2/28/2012	3.87	113	3.65	0.0	BDL	50.6	BDL
	5/8/2012	4.37	106	2.24	0.0	BDL	55	BDL
TP-2	8/31/2011	5.98	109	5.27	0.0	BDL	68.6	BDL
	11/29/2011	4.23	102	3.78	0.0	0.0187	48	0.8
	2/28/2012	4.03	104	1.70	0.0	0.0149	44.6	BDL
	5/8/2012	4.17	95	2.7	0.0	0.0123	46.8	0.8

Methane, Sulfate, Nitrate and Ferrous Iron (Fe^{2+}) results in parts per million or mg/l

Cond = Conductivity measured in Siemens per centimeter (S/cm)

ORP = Oxidation Reduction Potential measured in millivolts (mV)

DO = Dissolved Oxygen measured in milligrams per Liter (mg/L)

BDL = Below Detection Limits

NR = No Reading

Table 4 - Historical On-site Potable Well Analytical Results
Gasoline Fueling Station – Royal Farms #72
2906 Churchville Road, Churchville, MD 21028

Well No.	Date	B	T	E	X	TBA	MTBE	Napthalene
Supply	3/30/2006	BDL	BDL	BDL	BDL	BDL	BDL	BDL
(PW-1)	7/11/2006	BDL	BDL	BDL	BDL	194	52	BDL
	1/31/2007	BDL	BDL	BDL	BDL	BDL	33	BDL
	4/17/2007	BDL	BDL	BDL	BDL	BDL	18	BDL
	7/30/2007	BDL	BDL	BDL	BDL	BDL	32	BDL
	11/2/2007	BDL	BDL	BDL	BDL	BDL	BDL	BDL
	1/29/2008	BDL	BDL	BDL	BDL	BDL	250	BDL
	3/27/2008	BDL	BDL	BDL	BDL	BDL	220	BDL
	6/25/2008	BDL	BDL	BDL	BDL	BDL	140	BDL
	9/29/2008	BDL	2.3	BDL	BDL	BDL	160	2.5
	12/30/2008	BDL	BDL	BDL	BDL	BDL	95	BDL
	3/30/2009	BDL	BDL	BDL	BDL	BDL	400	BDL
	6/30/2009	BDL	BDL	BDL	BDL	BDL	170	BDL
	9/30/2009	BDL	BDL	BDL	BDL	BDL	110	BDL
	12/29/2009	BDL	BDL	BDL	BDL	21	170	BDL
	3/25/2010	BDL	BDL	BDL	BDL	BDL	470	BDL
	*6/18/2010	BDL	BDL	BDL	BDL	BDL	270	BDL
	*8/31/2010	BDL	BDL	BDL	BDL	BDL	260	1.2
	*12/15/2010	BDL	BDL	BDL	BDL	BDL	200	BDL
	*1/25/2011	BDL	BDL	BDL	BDL	BDL	216	BDL
	2/28/2011	BDL	BDL	BDL	BDL	BDL	240	BDL
	3/31/2011	BDL	BDL	BDL	BDL	BDL	230	BDL
	*4/26/2011	BDL	BDL	BDL	BDL	BDL	340	BDL
	5/20/2011	BDL	BDL	BDL	BDL	BDL	310	BDL
	6/29/2011	BDL	BDL	BDL	BDL	BDL	360	BDL
	7/25/2011	BDL	BDL	BDL	BDL	BDL	1300	BDL
	8/31/2011	BDL	BDL	BDL	BDL	BDL	270	BDL
	*9/30/2011	BDL	BDL	BDL	BDL	BDL	340	BDL
	10/31/2011	1.2	BDL	BDL	BDL	BDL	530	2.3
	11/29/2011	BDL	BDL	BDL	BDL	200	263	BDL
	12/20/2011	BDL	BDL	BDL	BDL	BDL	280	BDL
	1/18/2012	BDL	BDL	BDL	BDL	BDL	550	2.0
	2/28/2012	BDL	BDL	BDL	BDL	424	314	BDL
	3/14/2012	BDL	BDL	BDL	BDL	BDL	710	BDL
	4/19/2012	BDL	BDL	BDL	BDL	BDL	660	2.0
	5/8/2012	BDL	BDL	BDL	BDL	313	366	BDL
Supply	3/30/2006	BDL	BDL	BDL	BDL	BDL	BDL	BDL
(PW-2a)	7/11/2006	BDL	BDL	BDL	BDL	189	BDL	BDL
	1/31/2007	BDL	BDL	BDL	BDL	BDL	11	BDL
	4/17/2007	BDL	BDL	BDL	BDL	BDL	7.5	BDL
	7/30/2007	BDL	BDL	BDL	BDL	BDL	170	BDL
	11/2/2007	BDL	BDL	BDL	BDL	BDL	31	BDL
	1/29/2008	BDL	BDL	BDL	BDL	BDL	71	1.5
	3/27/2008	BDL	BDL	BDL	BDL	BDL	BDL	BDL
	6/25/2008	BDL	BDL	BDL	BDL	BDL	BDL	BDL
	9/29/2008	BDL	BDL	BDL	BDL	BDL	BDL	BDL
	12/30/2008	BDL	BDL	BDL	BDL	BDL	BDL	BDL
	3/30/2009	BDL	BDL	BDL	BDL	BDL	BDL	BDL
	6/30/2009	BDL	BDL	BDL	BDL	BDL	2.3	BDL
	9/30/2009	BDL	BDL	BDL	BDL	BDL	23	BDL
	12/29/2009	BDL	BDL	BDL	BDL	BDL	120	BDL
	3/25/2010	BDL	BDL	BDL	BDL	BDL	410	BDL
	*6/18/2010	BDL	BDL	BDL	BDL	BDL	311	BDL
	*8/31/2010	BDL	2.2	BDL	1.1	BDL	240	BDL
	*12/15/2010	BDL	BDL	BDL	BDL	BDL	73	BDL
	*1/25/2011	BDL	BDL	BDL	BDL	BDL	BDL	BDL
	2/28/2011	BDL	BDL	BDL	BDL	BDL	BDL	BDL
	3/31/2011	BDL	BDL	BDL	BDL	BDL	5.7	BDL

Well No.	Date	B	T	E	X	TBA	MTBE	Napthalene
	*4/26/2011	BDL	3.2	BDL	1	BDL	5.4	1.5
	5/20/2011	BDL	BDL	BDL	BDL	BDL	BDL	BDL
	6/29/2011	BDL	BDL	BDL	BDL	BDL	BDL	BDL
	7/25/2011	BDL	BDL	2.7	10.5	BDL	16	BDL
	8/31/2011	BDL	BDL	BDL	BDL	BDL	1.31	BDL
	*9/30/2011	BDL	BDL	BDL	BDL	BDL	5.5	BDL
	10/31/2011	BDL	BDL	BDL	BDL	BDL	31	BDL
	11/29/2011	BDL	BDL	BDL	BDL	258	7.66	BDL
	12/20/2011	BDL	BDL	BDL	BDL	BDL	48	BDL
	1/18/2012	BDL	BDL	BDL	BDL	BDL	BDL	BDL
	2/28/2012	BDL	BDL	BDL	BDL	243	1.02	BDL
	3/14/2012	BDL	BDL	BDL	BDL	BDL	9.4	BDL
	4/19/2012	BDL	BDL	BDL	BDL	BDL	34	BDL
	5/8/2012	BDL	BDL	BDL	BDL	292	7.87	BDL
Supply	3/31/2011	BDL	BDL	BDL	BDL	BDL	BDL	BDL
(PW-2b)	*4/26/2011	BDL	BDL	BDL	BDL	BDL	BDL	BDL
	5/20/2011	BDL	BDL	BDL	BDL	BDL	BDL	BDL
	6/29/2011	BDL	BDL	BDL	BDL	BDL	BDL	BDL
	7/25/2011	BDL	BDL	BDL	BDL	BDL	BDL	BDL
	8/31/2011	BDL	BDL	BDL	BDL	BDL	BDL	BDL
	*9/30/2011	BDL	BDL	BDL	BDL	BDL	BDL	BDL
	10/31/2011	2.7	6.1	1.6	4.4	BDL	BDL	1.3
	11/29/2011	BDL	BDL	BDL	BDL	134	BDL	BDL
	12/20/2011	BDL	BDL	BDL	BDL	BDL	BDL	BDL
	1/18/2012	BDL	BDL	BDL	BDL	BDL	BDL	BDL
	2/28/2012	BDL	BDL	BDL	BDL	113	BDL	BDL
	3/14/2012	BDL	BDL	BDL	BDL	BDL	BDL	BDL
	4/19/2012	BDL	BDL	BDL	BDL	BDL	BDL	BDL
	5/8/2012	BDL	BDL	BDL	BDL	289	BDL	BDL
Supply	3/31/2011	BDL	BDL	BDL	BDL	BDL	BDL	BDL
(PW-2c)	*4/26/2011	BDL	BDL	BDL	BDL	BDL	BDL	BDL
	5/20/2011	BDL	BDL	BDL	BDL	BDL	BDL	BDL
	6/29/2011	BDL	BDL	BDL	BDL	BDL	BDL	BDL
	7/25/2011	BDL	BDL	BDL	BDL	BDL	BDL	BDL
	8/31/2011	BDL	BDL	BDL	BDL	BDL	BDL	BDL
	*9/30/2011	BDL	BDL	BDL	BDL	BDL	BDL	BDL
	10/31/2011	BDL	BDL	BDL	BDL	BDL	BDL	BDL
	11/29/2011	BDL	BDL	BDL	BDL	124	1.43	BDL
	12/20/2011	BDL	BDL	BDL	BDL	BDL	BDL	BDL
	1/18/2012	BDL	BDL	BDL	BDL	BDL	BDL	BDL
	2/28/2012	BDL	BDL	BDL	BDL	BDL	BDL	BDL
	3/14/2012	BDL	BDL	BDL	BDL	BDL	BDL	BDL
	4/19/2012	BDL	BDL	BDL	BDL	BDL	BDL	BDL
	5/8/2012	BDL	BDL	BDL	BDL	217	BDL	BDL
Supply	7/9/2005	BDL	BDL	BDL	BDL	BDL	BDL	BDL
(PW-3)	2/3/2006	BDL	BDL	BDL	BDL	BDL	BDL	BDL
	7/11/2006	BDL	BDL	BDL	BDL	BDL	BDL	BDL
	1/31/2007	BDL	BDL	BDL	BDL	BDL	BDL	BDL
	4/17/2007	BDL	BDL	BDL	BDL	BDL	8	BDL
	7/30/2007	BDL	BDL	BDL	BDL	BDL	BDL	BDL
	11/2/2007	BDL	BDL	BDL	BDL	BDL	BDL	BDL
	1/29/2008	BDL	BDL	BDL	BDL	BDL	8.6	BDL
	3/27/2008	BDL	BDL	BDL	BDL	BDL	BDL	BDL
	6/25/2008	BDL	BDL	BDL	BDL	BDL	BDL	BDL
	9/29/2008	BDL	3	BDL	1.3	BDL	BDL	BDL
	12/30/2008	BDL	BDL	BDL	BDL	BDL	BDL	BDL
	3/30/2009	BDL	3	BDL	1.3	BDL	BDL	BDL
	6/30/2009	BDL	BDL	BDL	BDL	BDL	BDL	BDL
	9/30/2009	BDL	BDL	BDL	BDL	BDL	BDL	BDL
	12/29/2009	BDL	BDL	BDL	BDL	BDL	BDL	BDL
	3/25/2010	BDL	BDL	BDL	BDL	BDL	BDL	BDL

Well No.	Date	B	T	E	X	TBA	MTBE	Napthalene
	*6/18/2010	BDL	BDL	BDL	BDL	BDL	BDL	BDL
	*8/31/2010	BDL	1.5	BDL	2.5	BDL	2.6	BDL
	*12/15/2010	BDL	BDL	BDL	BDL	BDL	BDL	BDL
	*1/25/2011	BDL	BDL	BDL	BDL	BDL	BDL	BDL
	2/28/2011	BDL	BDL	BDL	BDL	BDL	BDL	BDL
	3/31/2011	BDL	BDL	BDL	BDL	BDL	BDL	BDL
	*4/26/2011	BDL	BDL	BDL	BDL	BDL	BDL	BDL
	5/20/2011	BDL	BDL	BDL	BDL	BDL	BDL	BDL
	6/29/2011	BDL	BDL	BDL	BDL	BDL	BDL	BDL
	7/25/2011	BDL	BDL	BDL	BDL	BDL	BDL	BDL
	8/31/2011	BDL	BDL	BDL	BDL	BDL	BDL	BDL
	*9/30/2011	BDL	BDL	BDL	BDL	BDL	BDL	BDL
	10/31/2011	3.6	2.4	BDL	1.4	BDL	BDL	1.6
	11/29/2011	BDL	BDL	BDL	BDL	BDL	BDL	BDL
	12/20/2011	BDL	BDL	BDL	BDL	BDL	BDL	BDL
	1/18/2012	BDL	BDL	BDL	BDL	BDL	BDL	BDL
	2/28/2012	BDL	BDL	BDL	BDL	BDL	BDL	BDL
	3/14/2012	BDL	BDL	BDL	BDL	BDL	BDL	BDL
	4/19/2012	BDL	BDL	BDL	BDL	BDL	BDL	BDL
	5/8/2012	BDL	BDL	BDL	BDL	71	BDL	BDL
Off-Site Well	8/31/2010	BDL	BDL	BDL	BDL	BDL	19	BDL
(PW-2907)	8/31/2011	BDL	BDL	BDL	BDL	BDL	5.27	BDL
Type I and II Aquifers		**5**	**1000**	**700**	**10000**	**NRS**	**20**	**0.65**

* - indicates that a carbon rebed took place between this date and the preceeding date

BDL = Below Detection Limits

B = Benzene; T = Toluene; E = Ethylbenzene; X = Xylene reported in parts per billion or ug/L

TBA = Tert-butanol

MTBE = Methyl-tert-butyl-ether

PW-1 = Potable Well Influent

PW-2a = First Potable Well Mid Point

PW-2b = Second Potable Well Mid Point

PW-2c = Third Potable Well Mid Point

PW-3 = Potable Well Effluent

NS = Not Sampled

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

See laboratory analytical results reports for full results.

J Denotes Estimated Value

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

NRS = No Regulatory Standard

Attachment C

Maryland spectral Services

Analytical Chemistry Services

Analytical Results

1500 Caton Center Dr Suite G
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www.mdspectral.com
VELAP ID 460040

Project: **RF-72**

Project Number: 05-056RF072

Project Manager: James Wolf

Report Issued: 05/18/12 11:56

Advantage Environmental Consultants, LLC
8610 Baltimore Washington Blvd, Suite 217
Jessup MD, 20794

CLIENT SAMPLE ID:		MW-1	MW-2	MW-6	MW-7	MW-8	TP-1
LAB SAMPLE ID:		2050901-01	2050901-02	2050901-03	2050901-04	2050901-05	2050901-06
SAMPLE DATE:		05/08/12	05/08/12	05/08/12	05/08/12	05/08/12	05/08/12
RECEIVED DATE:		05/09/12	05/09/12	05/09/12	05/09/12	05/09/12	05/09/12
MATRIX	Units	Nonpotable Water	Nonpotable Water	Nonpotable Water	Nonpotable Water	Nonpotable Water	Nonpotable Water
VOLATILE ORGANICS BY EPA METHOD 8260B (GC/MS) (Water)							
Acetone	ug/L	<10.0	<50.0	**10.2**	<10.0	<10.0	<10.0
tert-Amyl alcohol (TAA)	ug/L	<20.0	**870**	<20.0	<20.0	<20.0	<20.0
tert-Amyl methyl ether (TAME)	ug/L	<5.0	**20.3 [2]**	<5.0	<5.0	<5.0	<5.0
Benzene	ug/L	<5.0	**86.6**	<5.0	<5.0	<5.0	**12.5**
Bromobenzene	ug/L	<5.0	<25.0	<5.0	<5.0	<5.0	<5.0
Bromochloromethane	ug/L	<5.0	<25.0	<5.0	<5.0	<5.0	<5.0
Bromodichloromethane	ug/L	<5.0	<25.0	<5.0	<5.0	<5.0	<5.0
Bromoform	ug/L	<5.0	<25.0	<5.0	<5.0	<5.0	<5.0
Bromomethane	ug/L	<5.0	<25.0	<5.0	<5.0	<5.0	<5.0
tert-Butanol (TBA)	ug/L	<15.0	**3310**	<15.0	<15.0	<15.0	<15.0
2-Butanone (MEK)	ug/L	<10.0	<50.0	<10.0	<10.0	<10.0	<10.0
n-Butylbenzene	ug/L	<5.0	<25.0	<5.0	<5.0	<5.0	<5.0
sec-Butylbenzene	ug/L	<5.0	<25.0	<5.0	<5.0	<5.0	<5.0
tert-Butylbenzene	ug/L	<5.0	<25.0	<5.0	<5.0	<5.0	<5.0
Carbon disulfide	ug/L	<5.0	<25.0	<5.0	<5.0	<5.0	<5.0
Carbon tetrachloride	ug/L	<5.0	<25.0	<5.0	<5.0	<5.0	<5.0
Chlorobenzene	ug/L	<5.0	<25.0	<5.0	<5.0	<5.0	<5.0
Chloroethane	ug/L	<5.0	<25.0	<5.0	<5.0	<5.0	<5.0
Chloroform	ug/L	<5.0	<25.0	<5.0	<5.0	<5.0	<5.0
Chloromethane	ug/L	<5.0	<25.0	<5.0	<5.0	<5.0	<5.0
2-Chlorotoluene	ug/L	<5.0	**30.4**	<5.0	<5.0	<5.0	<5.0
4-Chlorotoluene	ug/L	<5.0	<25.0	<5.0	<5.0	<5.0	<5.0
Dibromochloromethane	ug/L	<5.0	<25.0	<5.0	<5.0	<5.0	<5.0
1,2-Dibromo-3-chloropropane	ug/L	<5.0	<25.0	<5.0	<5.0	<5.0	<5.0
1,2-Dibromoethane (EDB)	ug/L	<5.0	<25.0	<5.0	<5.0	<5.0	<5.0
Dibromomethane	ug/L	<5.0	<25.0	<5.0	<5.0	<5.0	<5.0
1,2-Dichlorobenzene	ug/L	<5.0	<25.0	<5.0	<5.0	<5.0	<5.0
1,3-Dichlorobenzene	ug/L	<5.0	<25.0	<5.0	<5.0	<5.0	<5.0
1,4-Dichlorobenzene	ug/L	<5.0	<25.0	<5.0	<5.0	<5.0	<5.0
Dichlorodifluoromethane	ug/L	<5.0	<25.0	<5.0	<5.0	<5.0	<5.0
1,1-Dichloroethane	ug/L	<5.0	<25.0	<5.0	<5.0	<5.0	<5.0
1,2-Dichloroethane	ug/L	<5.0	<25.0	<5.0	<5.0	<5.0	<5.0
1,1-Dichloroethene	ug/L	<5.0	<25.0	<5.0	<5.0	<5.0	<5.0
cis-1,2-Dichloroethene	ug/L	<5.0	<25.0	<5.0	<5.0	<5.0	<5.0
trans-1,2-Dichloroethene	ug/L	<5.0	<25.0	<5.0	<5.0	<5.0	<5.0
Dichlorofluoromethane	ug/L	<5.0	<25.0	<5.0	<5.0	<5.0	<5.0

1 = Resultderived from asecondanalysis diluted X10.

2 = Detected but below the reporting limit; therefore, result is an estimated concentration (CLP J-Flag).

Analytical Results

1500 Caton Center Dr Suite G
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VELAP ID 460040

Project: **RF-72**

Project Number: 05-056RF072

Project Manager: James Wolf

Report Issued: 05/18/12 11:56

Advantage Environmental Consultants, LLC
8610 Baltimore Washington Blvd, Suite 217
Jessup MD, 20794

CLIENT SAMPLE ID:		MW-1	MW-2	MW-6	MW-7	MW-8	TP-1
LAB SAMPLE ID:		2050901-01	2050901-02	2050901-03	2050901-04	2050901-05	2050901-06
SAMPLE DATE:		05/08/12	05/08/12	05/08/12	05/08/12	05/08/12	05/08/12
RECEIVED DATE:		05/09/12	05/09/12	05/09/12	05/09/12	05/09/12	05/09/12
MATRIX	Units	Nonpotable Water	Nonpotable Water	Nonpotable Water	Nonpotable Water	Nonpotable Water	Nonpotable Water
VOLATILE ORGANICS BY EPA METHOD 8260B (GC/MS) (continued)							
1,2-Dichloropropane	ug/L	<5.0	<25.0	<5.0	<5.0	<5.0	<5.0
1,3-Dichloropropane	ug/L	<5.0	<25.0	<5.0	<5.0	<5.0	<5.0
2,2-Dichloropropane	ug/L	<5.0	<25.0	<5.0	<5.0	<5.0	<5.0
1,1-Dichloropropene	ug/L	<5.0	<25.0	<5.0	<5.0	<5.0	<5.0
cis-1,3-Dichloropropene	ug/L	<5.0	<25.0	<5.0	<5.0	<5.0	<5.0
trans-1,3-Dichloropropene	ug/L	<5.0	<25.0	<5.0	<5.0	<5.0	<5.0
Diisopropyl ether (DIPE)	ug/L	<5.0	<25.0	<5.0	<5.0	<5.0	<5.0
Ethyl tert-butyl ether (ETBE)	ug/L	<5.0	<25.0	<5.0	**2.1 [2]**	<5.0	<5.0
Ethylbenzene	ug/L	<5.0	**101**	<5.0	<5.0	<5.0	<5.0
Hexachlorobutadiene	ug/L	<5.0	<25.0	<5.0	<5.0	<5.0	<5.0
2-Hexanone	ug/L	<10.0	<50.0	<10.0	<10.0	<10.0	<10.0
Isopropylbenzene (Cumene)	ug/L	<5.0	**29.9**	<5.0	<5.0	<5.0	<5.0
4-Isopropyltoluene	ug/L	<5.0	<25.0	<5.0	<5.0	<5.0	<5.0
Methyl tert-butyl ether (MTBE)	ug/L	<5.0	**479**	<5.0	**4.6 [2]**	<5.0	**4.6 [2]**
4-Methyl-2-pentanone	ug/L	<10.0	<50.0	<10.0	<10.0	<10.0	<10.0
Methylene chloride	ug/L	<10.0	<50.0	<10.0	<10.0	<10.0	<10.0
Naphthalene	ug/L	<5.0	**78.4**	<5.0	<5.0	<5.0	<5.0
n-Propylbenzene	ug/L	<5.0	**29.4**	<5.0	<5.0	<5.0	<5.0
Styrene	ug/L	<5.0	<25.0	<5.0	<5.0	<5.0	<5.0
1,1,1,2-Tetrachloroethane	ug/L	<5.0	<25.0	<5.0	<5.0	<5.0	<5.0
1,1,2,2-Tetrachloroethane	ug/L	<5.0	<25.0	<5.0	<5.0	<5.0	<5.0
Tetrachloroethene	ug/L	<5.0	<25.0	<5.0	<5.0	<5.0	<5.0
Toluene	ug/L	<5.0	<25.0	<5.0	<5.0	<5.0	**13.5**
1,2,3-Trichlorobenzene	ug/L	<5.0	<25.0	<5.0	<5.0	<5.0	<5.0
1,2,4-Trichlorobenzene	ug/L	<5.0	<25.0	<5.0	<5.0	<5.0	<5.0
1,1,1-Trichloroethane	ug/L	<5.0	<25.0	<5.0	<5.0	<5.0	<5.0
1,1,2-Trichloroethane	ug/L	<5.0	<25.0	<5.0	<5.0	<5.0	<5.0
Trichloroethene	ug/L	<5.0	<25.0	<5.0	<5.0	<5.0	<5.0
Trichlorofluoromethane	ug/L	<5.0	<25.0	<5.0	<5.0	<5.0	<5.0
1,2,3-Trichloropropane	ug/L	<5.0	<25.0	<5.0	<5.0	<5.0	<5.0
1,2,4-Trimethylbenzene	ug/L	<5.0	**103**	<5.0	<5.0	<5.0	<5.0
1,3,5-Trimethylbenzene	ug/L	<5.0	**105**	<5.0	<5.0	<5.0	<5.0
Vinyl chloride	ug/L	<5.0	<25.0	<5.0	<5.0	<5.0	<5.0
o-Xylene	ug/L	<5.0	**27.0**	<5.0	<5.0	<5.0	**2.7 [2]**
m- & p-Xylenes	ug/L	<5.0	**131**	<5.0	<5.0	<5.0	<5.0

1 = Resultderived from asecondanalysis diluted X10.

2 = Detected but below the reporting limit; therefore, result is an estimated concentration (CLP J-Flag).

Analytical Results

1500 Caton Center Dr Suite G
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VELAP ID 460040

Project: **RF-72**

Project Number: 05-056RF072

Project Manager: James Wolf

Report Issued: 05/18/12 11:56

Advantage Environmental Consultants, LLC
8610 Baltimore Washington Blvd, Suite 217
Jessup MD, 20794

CLIENT SAMPLE ID:		MW-1	MW-2	MW-6	MW-7	MW-8	TP-1
LAB SAMPLE ID:		2050901-01	2050901-02	2050901-03	2050901-04	2050901-05	2050901-06
SAMPLE DATE:		05/08/12	05/08/12	05/08/12	05/08/12	05/08/12	05/08/12
RECEIVED DATE:		05/09/12	05/09/12	05/09/12	05/09/12	05/09/12	05/09/12
MATRIX	Units	Nonpotable Water	Nonpotable Water	Nonpotable Water	Nonpotable Water	Nonpotable Water	Nonpotable Water
GASOLINE RANGE ORGANICS BY EPA 8015B (Water)							
Gasoline-Range Organics	ug/L	<100	**3690**	<100	<100	<100	<100
DIESEL RANGE ORGANICS BY EPA 3510/8015B (Water)							
Diesel-Range Organics	mg/L	<0.21	**2.84**	**1.30**	**0.28**	<0.22	<0.23
DISSOLVED GASES BY EPA SM6211B/EPA8015M (HEADSPACE/GC/FID) (Water)							
Methane	mg/L	<0.0057	**0.804**	<0.0061	**0.0183**	**0.0353**	<0.0140
ANIONS BY EPA 300.0 (Water)							
Nitrate (as N)	mg/L	<0.2	**0.6**	**1.0**	**0.4**	**17.8**	<0.2
Sulfate	mg/L	**35.4**	<1.0	**11.2**	**92.9**	**34.4**	**55.0**

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Analytical Results

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
VELAP ID 460040

Project: **RF-72**

Project Number: 05-056RF072

Project Manager: James Wolf

Report Issued: 05/18/12 11:56

Advantage Environmental Consultants, LLC
8610 Baltimore Washington Blvd, Suite 217
Jessup MD, 20794

CLIENT SAMPLE ID:		TP-2	PW-1	PW-2A	PW-2B	PW-2C	PW-3
LAB SAMPLE ID:		2050901-07	2050901-08	2050901-09	2050901-10	2050901-11	2050901-12
SAMPLE DATE:		05/08/12	05/08/12	05/08/12	05/08/12	05/08/12	05/08/12
RECEIVED DATE:		05/09/12	05/09/12	05/09/12	05/09/12	05/09/12	05/09/12
MATRIX	Units	Nonpotable Water	Potable Water	Potable Water	Potable Water	Potable Water	Potable Water

VOLATILE ORGANICS BY EPA METHOD 8260B (GC/MS) (Water)

Acetone	ug/L	<50.0
tert-Amyl alcohol (TAA)	ug/L	<100
tert-Amyl methyl ether (TAME)	ug/L	<25.0
Benzene	ug/L	**96.4**
Bromobenzene	ug/L	<25.0
Bromochloromethane	ug/L	<25.0
Bromodichloromethane	ug/L	<25.0
Bromoform	ug/L	<25.0
Bromomethane	ug/L	<25.0
tert-Butanol (TBA)	ug/L	**81.9**
2-Butanone (MEK)	ug/L	<50.0
n-Butylbenzene	ug/L	<25.0
sec-Butylbenzene	ug/L	<25.0
tert-Butylbenzene	ug/L	<25.0
Carbon disulfide	ug/L	<25.0
Carbon tetrachloride	ug/L	<25.0
Chlorobenzene	ug/L	<25.0
Chloroethane	ug/L	<25.0
Chloroform	ug/L	<25.0
Chloromethane	ug/L	<25.0
2-Chlorotoluene	ug/L	<25.0
4-Chlorotoluene	ug/L	<25.0
Dibromochloromethane	ug/L	<25.0
1,2-Dibromo-3-chloropropane	ug/L	<25.0
1,2-Dibromoethane (EDB)	ug/L	<25.0
Dibromomethane	ug/L	<25.0
1,2-Dichlorobenzene	ug/L	<25.0
1,3-Dichlorobenzene	ug/L	<25.0
1,4-Dichlorobenzene	ug/L	<25.0
Dichlorodifluoromethane	ug/L	<25.0
1,1-Dichloroethane	ug/L	<25.0
1,2-Dichloroethane	ug/L	<25.0
1,1-Dichloroethene	ug/L	<25.0
cis-1,2-Dichloroethene	ug/L	<25.0
trans-1,2-Dichloroethene	ug/L	<25.0
Dichlorofluoromethane	ug/L	<25.0

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Analytical Results

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VELAP ID 460040

Project: **RF-72**

Project Number: 05-056RF072

Project Manager: James Wolf

Report Issued: 05/18/12 11:56

Advantage Environmental Consultants, LLC
8610 Baltimore Washington Blvd, Suite 217
Jessup MD, 20794

CLIENT SAMPLE ID:		TP-2	PW-1	PW-2A	PW-2B	PW-2C	PW-3
LAB SAMPLE ID:		2050901-07	2050901-08	2050901-09	2050901-10	2050901-11	2050901-12
SAMPLE DATE:		05/08/12	05/08/12	05/08/12	05/08/12	05/08/12	05/08/12
RECEIVED DATE:		05/09/12	05/09/12	05/09/12	05/09/12	05/09/12	05/09/12
MATRIX	Units	Nonpotable Water	Potable Water	Potable Water	Potable Water	Potable Water	Potable Water

VOLATILE ORGANICS BY EPA METHOD 8260B (GC/MS) (continued)

1,2-Dichloropropane	ug/L	<25.0
1,3-Dichloropropane	ug/L	<25.0
2,2-Dichloropropane	ug/L	<25.0
1,1-Dichloropropene	ug/L	<25.0
cis-1,3-Dichloropropene	ug/L	<25.0
trans-1,3-Dichloropropene	ug/L	<25.0
Diisopropyl ether (DIPE)	ug/L	<25.0
Ethyl tert-butyl ether (ETBE)	ug/L	<25.0
Ethylbenzene	ug/L	**118**
Hexachlorobutadiene	ug/L	<25.0
2-Hexanone	ug/L	<50.0
Isopropylbenzene (Cumene)	ug/L	<25.0
4-Isopropyltoluene	ug/L	<25.0
Methyl tert-butyl ether (MTBE)	ug/L	**12.8 [2]**
4-Methyl-2-pentanone	ug/L	<50.0
Methylene chloride	ug/L	<50.0
Naphthalene	ug/L	**31.5**
n-Propylbenzene	ug/L	<25.0
Styrene	ug/L	<25.0
1,1,1,2-Tetrachloroethane	ug/L	<25.0
1,1,2,2-Tetrachloroethane	ug/L	<25.0
Tetrachloroethene	ug/L	<25.0
Toluene	ug/L	**799**
1,2,3-Trichlorobenzene	ug/L	<25.0
1,2,4-Trichlorobenzene	ug/L	<25.0
1,1,1-Trichloroethane	ug/L	<25.0
1,1,2-Trichloroethane	ug/L	<25.0
Trichloroethene	ug/L	<25.0
Trichlorofluoromethane	ug/L	<25.0
1,2,3-Trichloropropane	ug/L	<25.0
1,2,4-Trimethylbenzene	ug/L	**88.9**
1,3,5-Trimethylbenzene	ug/L	**33.0**
Vinyl chloride	ug/L	<25.0
o-Xylene	ug/L	**368**
m- & p-Xylenes	ug/L	**458**

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Analytical Results

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
VELAP ID 460040

Project: **RF-72**

Project Number: 05-056RF072

Project Manager: James Wolf

Report Issued: 05/18/12 11:56

Advantage Environmental Consultants, LLC
8610 Baltimore Washington Blvd, Suite 217
Jessup MD, 20794

CLIENT SAMPLE ID:		TP-2	PW-1	PW-2A	PW-2B	PW-2C	PW-3
LAB SAMPLE ID:		2050901-07	2050901-08	2050901-09	2050901-10	2050901-11	2050901-12
SAMPLE DATE:		05/08/12	05/08/12	05/08/12	05/08/12	05/08/12	05/08/12
RECEIVED DATE:		05/09/12	05/09/12	05/09/12	05/09/12	05/09/12	05/09/12
MATRIX	Units	Nonpotable Water	Potable Water	Potable Water	Potable Water	Potable Water	Potable Water
GASOLINE RANGE ORGANICS BY EPA 8015B (Water)							
Gasoline-Range Organics	ug/L	**1790**					
DIESEL RANGE ORGANICS BY EPA 3510/8015B (Water)							
Diesel-Range Organics	mg/L	**0.34**					
DISSOLVED GASES BY EPA SM6211B/EPA8015M (HEADSPACE/GC/FID) (Water)							
Methane	mg/L	**0.0123**					
ANIONS BY EPA 300.0 (Water)							
Nitrate (as N)	mg/L	**0.8**					
Sulfate	mg/L	**46.8**					

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Analytical Results

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VELAP ID 460040

Project: **RF-72**

Project Number: 05-056RF072

Project Manager: James Wolf

Report Issued: 05/18/12 11:56

Advantage Environmental Consultants, LLC
8610 Baltimore Washington Blvd, Suite 217
Jessup MD, 20794

CLIENT SAMPLE ID:		TP-2	PW-1	PW-2A	PW-2B	PW-2C	PW-3
LAB SAMPLE ID:		2050901-07	2050901-08	2050901-09	2050901-10	2050901-11	2050901-12
SAMPLE DATE:		05/08/12	05/08/12	05/08/12	05/08/12	05/08/12	05/08/12
RECEIVED DATE:		05/09/12	05/09/12	05/09/12	05/09/12	05/09/12	05/09/12
MATRIX	Units	Nonpotable Water	Potable Water	Potable Water	Potable Water	Potable Water	Potable Water
VOLATILE ORGANICS BY EPA METHOD 524.2 (GC/MS) (Water)							
tert-Amyl alcohol (TAA)	ug/L		<80.0	<10.0	<10.0	<10.0	<10.0
tert-Amyl methyl ether (TAME)	ug/L		**12.4**	<0.50	<0.50	<0.50	<0.50
Benzene	ug/L		<4.00	<0.50	<0.50	<0.50	<0.50
Bromobenzene	ug/L		<4.00	<0.50	<0.50	<0.50	<0.50
Bromochloromethane	ug/L		<4.00	<0.50	<0.50	<0.50	<0.50
Bromodichloromethane	ug/L		<4.00	<0.50	<0.50	<0.50	<0.50
Bromoform	ug/L		<4.00	<0.50	<0.50	<0.50	<0.50
Bromomethane	ug/L		<4.00	<0.50	<0.50	<0.50	<0.50
tert-Butanol (TBA)	ug/L		**313**	**292**	**289**	**217**	**71.0**
n-Butylbenzene	ug/L		<4.00	<0.50	<0.50	<0.50	<0.50
sec-Butylbenzene	ug/L		<4.00	<0.50	<0.50	<0.50	<0.50
tert-Butylbenzene	ug/L		<4.00	<0.50	<0.50	<0.50	<0.50
Carbon tetrachloride	ug/L		<4.00	<0.50	<0.50	<0.50	<0.50
Chlorobenzene	ug/L		<4.00	<0.50	<0.50	<0.50	<0.50
Chloroethane	ug/L		<4.00	<0.50	<0.50	<0.50	<0.50
Chloroform	ug/L		<4.00	<0.50	<0.50	<0.50	<0.50
Chloromethane	ug/L		<4.00	<0.50	<0.50	<0.50	<0.50
2- & 4-Chlorotoluene	ug/L		<4.00	<0.50	<0.50	<0.50	<0.50
Dibromochloromethane	ug/L		<4.00	<0.50	<0.50	<0.50	<0.50
1,2-Dibromo-3-chloropropane	ug/L		<4.00	<0.50	<0.50	<0.50	<0.50
1,2-Dibromoethane (EDB)	ug/L		<4.00	<0.50	<0.50	<0.50	<0.50
Dibromomethane	ug/L		<4.00	<0.50	<0.50	<0.50	<0.50
1,2-Dichlorobenzene	ug/L		<4.00	<0.50	<0.50	<0.50	<0.50
1,3-Dichlorobenzene	ug/L		<4.00	<0.50	<0.50	<0.50	<0.50
1,4-Dichlorobenzene	ug/L		<4.00	<0.50	<0.50	<0.50	<0.50
Dichlorodifluoromethane	ug/L		<4.00	<0.50	<0.50	<0.50	<0.50
1,1-Dichloroethane	ug/L		<4.00	<0.50	<0.50	<0.50	<0.50
1,2-Dichloroethane	ug/L		**11.8**	<0.50	<0.50	<0.50	<0.50
1,1-Dichloroethene	ug/L		<4.00	<0.50	<0.50	<0.50	<0.50
cis-1,2-Dichloroethene	ug/L		<4.00	<0.50	<0.50	<0.50	<0.50
trans-1,2-Dichloroethene	ug/L		<4.00	<0.50	<0.50	<0.50	<0.50
1,2-Dichloropropane	ug/L		<4.00	<0.50	<0.50	<0.50	<0.50
1,3-Dichloropropane	ug/L		<4.00	<0.50	<0.50	<0.50	<0.50
2,2-Dichloropropane	ug/L		<4.00	<0.50	<0.50	<0.50	<0.50
1,1-Dichloropropene	ug/L		<4.00	<0.50	<0.50	<0.50	<0.50
cis-1,3-Dichloropropene	ug/L		<4.00	<0.50	<0.50	<0.50	<0.50

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Analytical Results

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
VELAP ID 460040

Project: **RF-72**

Project Number: 05-056RF072

Project Manager: James Wolf

Report Issued: 05/18/12 11:56

Advantage Environmental Consultants, LLC
8610 Baltimore Washington Blvd, Suite 217
Jessup MD, 20794

CLIENT SAMPLE ID:		TP-2	PW-1	PW-2A	PW-2B	PW-2C	PW-3
LAB SAMPLE ID:		2050901-07	2050901-08	2050901-09	2050901-10	2050901-11	2050901-12
SAMPLE DATE:		05/08/12	05/08/12	05/08/12	05/08/12	05/08/12	05/08/12
RECEIVED DATE:		05/09/12	05/09/12	05/09/12	05/09/12	05/09/12	05/09/12
MATRIX	Units	Nonpotable Water	Potable Water	Potable Water	Potable Water	Potable Water	Potable Water
VOLATILE ORGANICS BY EPA METHOD 524.2 (GC/MS) (continued)							
trans-1,3-Dichloropropene	ug/L		<4.00	<0.50	<0.50	<0.50	<0.50
Diisopropyl ether (DIPE)	ug/L		**14.6**	<0.50	<0.50	<0.50	<0.50
Ethyl tert-butyl ether (ETBE)	ug/L		<4.00	<0.50	<0.50	<0.50	<0.50
Ethylbenzene	ug/L		<4.00	<0.50	<0.50	<0.50	<0.50
Hexachlorobutadiene	ug/L		<4.00	<0.50	<0.50	<0.50	<0.50
Isopropylbenzene (Cumene)	ug/L		<4.00	<0.50	<0.50	<0.50	<0.50
4-Isopropyltoluene	ug/L		<4.00	<0.50	<0.50	<0.50	<0.50
Methyl tert-butyl ether (MTBE)	ug/L		**366 [1]**	**7.87**	<0.50	<0.50	<0.50
Methylene chloride	ug/L		<4.00	<0.50	<0.50	<0.50	<0.50
Naphthalene	ug/L		<4.00	<0.50	<0.50	<0.50	<0.50
n-Propylbenzene	ug/L		<4.00	<0.50	<0.50	<0.50	<0.50
Styrene	ug/L		<4.00	<0.50	<0.50	<0.50	<0.50
1,1,1,2-Tetrachloroethane	ug/L		<4.00	<0.50	<0.50	<0.50	<0.50
1,1,2,2-Tetrachloroethane	ug/L		<4.00	<0.50	<0.50	<0.50	<0.50
Tetrachloroethene	ug/L		<4.00	<0.50	<0.50	<0.50	<0.50
Toluene	ug/L		<4.00	<0.50	<0.50	<0.50	<0.50
1,2,3-Trichlorobenzene	ug/L		<4.00	<0.50	<0.50	<0.50	<0.50
1,2,4-Trichlorobenzene	ug/L		<4.00	<0.50	<0.50	<0.50	<0.50
1,1,1-Trichloroethane	ug/L		<4.00	<0.50	<0.50	<0.50	<0.50
1,1,2-Trichloroethane	ug/L		<4.00	<0.50	<0.50	<0.50	<0.50
Trichloroethene	ug/L		<4.00	<0.50	<0.50	<0.50	<0.50
Trichlorofluoromethane	ug/L		<4.00	<0.50	<0.50	<0.50	<0.50
1,2,3-Trichloropropane	ug/L		<4.00	<0.50	<0.50	<0.50	<0.50
1,2,4-Trimethylbenzene	ug/L		<4.00	<0.50	<0.50	<0.50	<0.50
1,3,5-Trimethylbenzene	ug/L		<4.00	<0.50	<0.50	<0.50	<0.50
Vinyl chloride	ug/L		<4.00	<0.50	<0.50	<0.50	<0.50
o-Xylene	ug/L		<4.00	<0.50	<0.50	<0.50	<0.50
m- & p-Xylenes	ug/L		<4.00	<0.50	<0.50	<0.50	<0.50

1 = Resultderived from asecondanalysis diluted X10.

2 = Detected but below the reporting limit; therefore, result is an estimated concentration (CLP J-Flag).

Company Name: AEC	Project Manager: J. Wolf
Project Name: RF-72	Project ID: OS-056RF072
Sampler(s): J. Wolf	P.O. Number: OS-056RF072

CHAIN-OF-CUSTODY RECORD

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

Field Sample ID	Date	Time	Water	Soil	Other	No. of Containers	VOCs +Oxy 8260	TPH GRO/DRO 8015B	Nitrate 352.1	Sulfate 375.4	Methane 8015	VOCs +Oxy 524.2					Preservative/Remarks	MSS Lab ID
MW-1	5.8.12	15:40	X			6	X	X	X	X	X						HCl / None	2050901-01
MW-2		17:38																-02
MW-6		16:25																-03
MW-7		16:43																-04
MW-8		17:05																-05
TP-1		16:00																-06
TP-2		17:21																-07
PW-1		18:32				2						X					HCl	-08
PW-2a		18:30										X						-09
PW-2b		18:28										X						-10
PW-2c		18:26										X						-11
PW-3		18:24										X						-12

Relinquished by: (Signature)	Date/Time	Received by: (Signature)	Relinquished by: (Signature)	Date/Time	Received by: (Signature)
(Printed) J. Wolf	19:30 5.8.12	Robert Swaringer (Printed) Robert Schwaringer	Robert Swaringer (Printed) Robert Swaringer	5-9-12 8:15 AM	(Printed) SAM HAMMON
Relinquished by: (Signature) (Printed)	Date/Time	Received by Laboratory: (Signature) (Printed)	Date/Time	Remarks 6.3	

Results to J. Stein, J. Wolf

Page 1 of 1

6/07

SUBCONTRACT ORDER
Maryland Spectral Services

2050901

SENDING LABORATORY:

Maryland Spectral Services
1500 Caton Center Dr Suite G
Baltimore, MD 21227
Phone: 410.247.7600
Project Manager: Sam Hamner

RECEIVING LABORATORY:

Enviro-Chem Laboratories, Inc
47 Loveton Circle, Suite K
Sparks, MD 21152
Phone :(410) 472-1112
Fax: (410) 472-1116

Due EOB 5/22/2012

				Laboratory ID	Comm
Sample ID: 2050901-01	MW-1	Water	Sampled:05/08/12 15:40		
Nitrogen, Nitrate	Sulfate				
Containers Supplied: Plastic, 500mL (E)					
Sample ID: 2050901-02	MW-2	Water	Sampled:05/08/12 17:38		
Nitrogen, Nitrate	Sulfate				
Containers Supplied: Plastic, 500mL (E)					
Sample ID: 2050901-03	MW-6	Water	Sampled:05/08/12 16:25		
Nitrogen, Nitrate	Sulfate				
Containers Supplied: Plastic, 500mL (E)					
Sample ID: 2050901-04	MW-7	Water	Sampled:05/08/12 16:43		
Nitrogen, Nitrate	Sulfate				
Containers Supplied: Plastic, 500mL (E)					
Sample ID: 2050901-05	MW-8	Water	Sampled:05/08/12 17:03		
Nitrogen, Nitrate	Sulfate				
Containers Supplied: Plastic, 500mL (E)					
Sample ID: 2050901-06	TP-1	Water	Sampled:05/08/12 16:00		
Nitrogen, Nitrate	Sulfate				
Containers Supplied: Plastic, 500mL (E)					

Released By	Date	Received By	Date
Sam Hamner	5-9-12	[illegible]	5/9/12

SUBCONTRACT ORDER
Maryland Spectral Services

2050901

Due EOB 5/22/2012

	Laboratory ID	Comm

Sample ID: 2050901-07 TP-2 Water Sampled:05/08/12 17:21

Nitrogen, Nitrate Sulfate

Containers Supplied:
Plastic, 500mL (E)

Released By	Date	Received By	Date
[illegible]	5-9-12	[illegible]	5/9/12

Released By	Date	Received By	Date