



November 3, 2015

Mrs. Jeannette DeBartolomeo  
Maryland Department of the Environment (MDE)  
Oil Control Program  
1800 Washington Boulevard  
Baltimore, Maryland 21230-1719

Re: **Rebound Evaluation – Round Two – Months One and Two**  
**Royal Farms Store # 96**  
**500 Mechanics Valley Road**  
**North East, MD**  
**OCP Case No. 2011-0729-CE**  
**MDE Facility No. 13326**

Dear Mrs. DeBartolomeo,

Advantage Environmental Consultants, LLC (AEC), on behalf of Royal Farms / Two Farms, Inc. (Royal Farms), is presenting this data and analysis package for the first two months of the second round of the Rebound Evaluation following deactivation of the Vapor Extraction / Groundwater Extraction (VE/GE) remediation system located at 500 Mechanics Valley Road in North East, MD (i.e. the "Site"). Sampling procedures and analysis parameters used for this Rebound Evaluation are outlined in AEC's Rebound Evaluation Work Plan – Revised dated April 20, 2015 and approved by MDE in a letter dated May 21, 2015.

The rebound test is designed to continue for 12 months unless the evaluation determines that a restart of the VE/GE system is necessary. Data for the evaluation is obtained by sampling select representative wells on a monthly basis for the first 6 months following operation of the VE/GE System and then quarterly for the remainder of the rebound period. Eight wells are utilized for the purposes of this evaluation: MW-8, RW-1, RW-2, RW-4, RW-6, RW-8, RW-11, and RW-12. A figure depicting the well locations is included as Figure 1 of Attachment A.

### **Established Baseline**

The rebound in the selected wells is assessed for the following fuel constituents: benzene, total BTEX (benzene, toluene, ethylbenzene, and xylenes), and naphthalene. Baseline concentrations for these constituents in each respective well have been established based on results reported from sampling events after the discovery of the release and prior to the start-up of the VE/GE system. The baseline concentrations for the rebound study are listed in Table 1 of Attachment B.

### **Evaluation Parameters**

Laboratory results from each Rebound Evaluation event are compared to the baseline concentrations for benzene, total BTEX, and naphthalene in each well independently. A ratio is generated for each constituent in each well using the most recent laboratory results in relation to the established baseline concentration. The current rebound concentration ratios are listed in Table 1 of Attachment B. For analysis of the data obtained from each Rebound Evaluation sampling event, rebound response for benzene, total BTEX, and naphthalene in each well is classified under one of the following three cases:

- Case A – Little-to-No Rebound, defined as the rebound ratio less than 0.25 (25 percent);
- Case B – Gradual Rebound, defined as the rebound ratio greater than or equal to 0.25 percent but less than 0.75 ; and,
- Case C - Rapid Rebound, defined as the rebound ratio greater than or equal to 0.75 (75 percent).

If a rebound ratio for benzene, total BTEX, or naphthalene is greater than 75 percent (Case C - Rapid Rebound) in the same well during two consecutive sampling events, then the rebound test will be terminated and the VE/GE system will be restarted. Case C threshold concentrations for each constituent of concern in each selected well are included in Table 1 of Attachment B.

In the case that the rebound evaluation criteria is met, the VE/GE system will operate for one month before being shutdown again to begin a new round of the Rebound Evaluation. Sampling results from the third month of the first round of the Rebound Evaluation met the restart criteria for a single constituent in a single well and the VE/GE System was restarted for one month from August 5 through September 4, 2015.

### **Sampling Events**

The VE/GE system was shut down to begin the second round of the Rebound Evaluation on September 4, 2015. AEC performed sampling for the first month of the Rebound Evaluation as part of the regular quarterly sampling schedule on September 8<sup>th</sup> and 9<sup>th</sup>, 2015. AEC performed sampling for the second month of the Rebound Evaluation on October 6, 2015. Samples were collected using the purge and bail method in accordance with standard operating procedures for groundwater sampling at the Site.

### **Results**

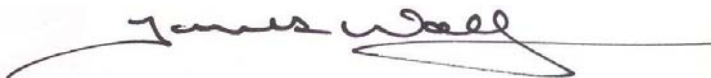
Sampling results indicate that the Case C criteria has not been met for any of the constituents of concern in any of the selected wells. Therefore, the VE/GE system will remain in a stand-by condition. The greatest rebound for any rebound evaluation constituent in any selected well is 0.604 or 60.4% for naphthalene in RW-11. Rebound results for all wells are included in Table 1 of Attachment B. Laboratory analytical results and chain of custody documentation is included as Attachment C.

In addition to benzene, total BTEX, and naphthalene; MTBE is also included in all laboratory analysis for this Rebound Evaluation at the request of MDE. MTBE was not reported above laboratory detection limits in samples from the selected rebound evaluation wells.

AEC will submit the results of the third month of Rebound Evaluation sampling upon receipt of the laboratory analytical results.

Sincerely,

**Advantage Environmental Consultants, LLC**

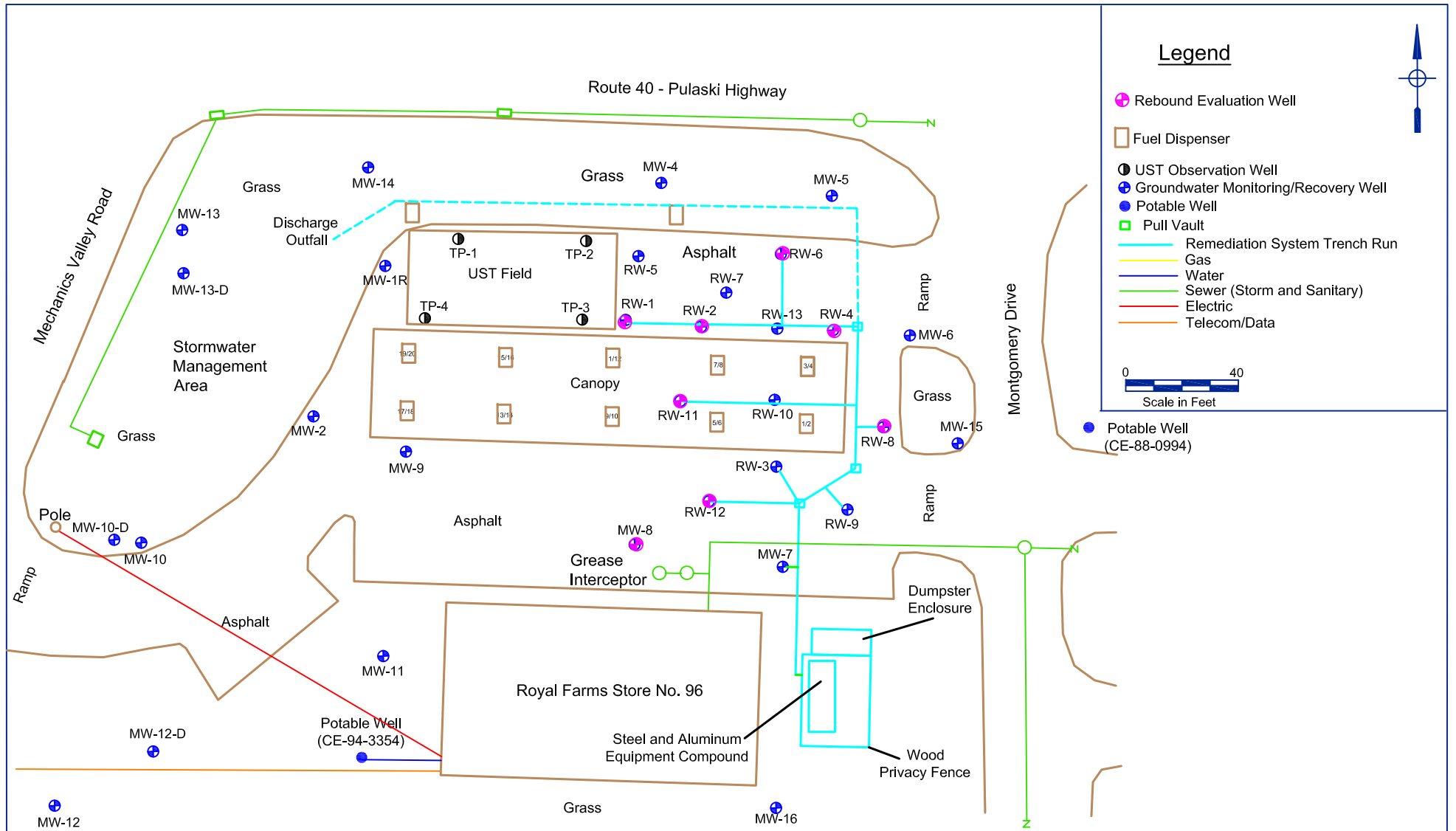


James Wolf  
Project Manager

Attachments

cc: T. Ruszin

**ATTACHMENT A**



**Advantage Environmental Consultants, LLC**

8610 Washington Blvd. Suite 217  
 Jessup, MD 20794  
 Phone 301-776-0500 Fax 301-776-1123

Project No.: 05-056

Task No.: RF96

File: Site Features

Drawn by: JDW

Date: 2-16-2015

Revision No.: 2

Figure 1 - Site Features Map with Selected Rebound Evaluation Wells  
 Royal Farms No. 96  
 500 Mechanics Valley Road  
 North East, MD

**ATTACHMENT B**

**Table 1 - Rebound Evaluation Analysis Worksheet**  
**Gasoline Fueling Station – Royal Farms #96**  
**500 Mechanics Valley Road, North East, MD 21901**

Well ID	Sample Date	Analyte	Pre-Start-up Mean (C <sub>o</sub> ):	Case C Threshold	Current Concentration (C)	Rebound Ratio (C/C <sub>o</sub> )	Rebound Condition	Restart Criteria Met?	
MW-8	5/28/2015	Benzene	15	11.3	0.1	0.007	Case A	No	
	6/29/2015		15	11.3	0.1	0.007	Case A	No	
	7/29/2015		15	11.3	0.1	0.007	Case A	No	
	9/8/2015		15	11.3	6.8	0.453	Case B	No	
	10/6/2015		15	11.3	0.1	0.007	Case A	No	
	5/28/2015	Total BTEX	356.8	267.6	0.1	0.000	Case A	No	
	6/29/2015		356.8	267.6	0.1	0.000	Case A	No	
	7/29/2015		356.8	267.6	0.1	0.000	Case A	No	
	9/8/2015		356.8	267.6	6.8	0.019	Case A	No	
	10/6/2015		356.8	267.6	0.1	0.000	Case A	No	
5/28/2015	Naphthalene	26	19.5	0.1	0.004	Case A	No		
		6/29/2015	26	19.5	0.1	0.004	Case A	No	
		7/29/2015	26	19.5	0.1	0.004	Case A	No	
		9/8/2015	26	19.5	0.1	0.004	Case A	No	
		10/6/2015	26	19.5	0.1	0.004	Case A	No	
5/28/2015	MTBE	NA	NA	BDL	NA	NA	NA		
		6/29/2015	NA	NA	BDL	NA	NA	NA	
		7/29/2015	NA	NA	BDL	NA	NA	NA	
		9/8/2015	NA	NA	BDL	NA	NA	NA	
		10/6/2015	NA	NA	BDL	NA	NA	NA	
RW-1	5/29/2015	Benzene	959.3	719.5	0.1	0.000	Case A	No	
	6/29/2015		15	11.3	0.1	0.007	Case A	No	
	7/29/2015		15	11.3	0.1	0.007	Case A	No	
	9/8/2015		15	11.3	0.1	0.007	Case A	No	
	10/6/2015		15	11.3	0.1	0.007	Case A	No	
	5/29/2015	Total BTEX	205428.3	154071.2	0.1	0.000	Case A	No	
	6/29/2015		205428.3	154071.2	0.1	0.000	Case A	No	
	7/29/2015		205428.3	154071.2	0.1	0.000	Case A	No	
	9/8/2015		205428.3	154071.2	0.1	0.000	Case A	No	
	10/6/2015		205428.3	154071.2	0.1	0.000	Case A	No	
	5/29/2015	Naphthalene	1351.8	1013.9	0.1	0.000	Case A	No	
			6/29/2015	1351.8	1013.9	0.1	0.000	Case A	No
			7/29/2015	1351.8	1013.9	0.1	0.000	Case A	No
9/8/2015			1351.8	1013.9	0.1	0.000	Case A	No	
10/6/2015			1351.8	1013.9	0.1	0.000	Case A	No	
5/28/2015	MTBE	NA	NA	BDL	NA	NA	NA		

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Gasoline Fueling Station – Royal Farms #96  
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Well ID	Sample Date	Analyte	Pre-Start-up Mean (C <sub>0</sub> ):	Case C Threshold	Current Concentration (C)	Rebound Ratio (C/C <sub>0</sub> )	Rebound Condition	Restart Criteria Met?
	6/29/2015		NA	NA	BDL	NA	NA	NA
	7/29/2015		NA	NA	BDL	NA	NA	NA
	9/8/2015		NA	NA	BDL	NA	NA	NA
	10/6/2015		NA	NA	BDL	NA	NA	NA
RW-2	5/29/2015	Benzene	8731	6548.3	5.4	0.001	Case A	No
	6/29/2015		8731	6548.3	0.1	0.000	Case A	No
	7/29/2015		8731	6548.3	2.5	0.000	Case A	No
	9/8/2015		8731	6548.3	0.1	0.000	Case A	No
	10/6/2015		8731	6548.3	0.1	0.000	Case A	No
	5/29/2015	Total BTEX	35956	26967.0	41.9	0.001	Case A	No
	6/29/2015		35956	26967.0	116.6	0.003	Case A	No
	7/29/2015		35956	26967.0	53.9	0.001	Case A	No
	9/8/2015		35956	26967.0	0.1	0.000	Case A	No
	10/6/2015		35956	26967.0	0.1	0.000	Case A	No
	5/28/2015	Naphthalene	26	19.5	0.1	0.004	Case A	No
	6/29/2015		26	19.5	0.1	0.004	Case A	No
	7/29/2015		26	19.5	0.1	0.004	Case A	No
	9/8/2015		26	19.5	0.1	0.004	Case A	No
	10/6/2015		26	19.5	0.1	0.004	Case A	No
	5/28/2015	MTBE	NA	NA	BDL	NA	NA	NA
	6/29/2015		NA	NA	BDL	NA	NA	NA
	7/29/2015		NA	NA	BDL	NA	NA	NA
	9/8/2015		NA	NA	BDL	NA	NA	NA
	10/6/2015		NA	NA	BDL	NA	NA	NA
RW-4	5/29/2015	Benzene	14250	10687.5	139	0.010	Case A	No
	6/29/2015		14250	10687.5	215	0.015	Case A	No
	7/29/2015		14250	10687.5	203	0.014	Case A	No
	9/8/2015		14250	10687.5	6.4	0.000	Case A	No
	10/6/2015		14250	10687.5	13.1	0.001	Case A	No
	5/29/2015	Total BTEX	59880	44910.0	2397	0.040	Case A	No
	6/29/2015		59880	44910.0	5661	0.095	Case A	No
	7/29/2015		59880	44910.0	4683	0.078	Case A	No
	9/8/2015		59880	44910.0	187.7	0.003	Case A	No
	10/6/2015		59880	44910.0	287	0.005	Case A	No
	5/29/2015	Naphthalene	1629	1221.8	81.9	0.050	Case A	No
	6/29/2015		1629	1221.8	202	0.124	Case A	No

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Well ID	Sample Date	Analyte	Pre-Start-up Mean (C <sub>0</sub> ):	Case C Threshold	Current Concentration (C)	Rebound Ratio (C/C <sub>0</sub> )	Rebound Condition	Restart Criteria Met?
	7/29/2015		1629	1221.8	388	0.238	Case A	No
	9/8/2015		1629	1221.8	14.9	0.009	Case A	No
	10/6/2015		1629	1221.8	17.3	0.011	Case A	No
	5/28/2015	MTBE	NA	NA	BDL	NA	NA	NA
	6/29/2015		NA	NA	BDL	NA	NA	NA
	7/29/2015		NA	NA	BDL	NA	NA	NA
	9/8/2015		NA	NA	BDL	NA	NA	NA
	10/6/2015		NA	NA	BDL	NA	NA	NA
RW-6	5/29/2015	Benzene	1378	1033.5	0.1	0.000	Case A	No
	6/29/2015		1378	1033.5	0.1	0.000	Case A	No
	7/29/2015		1378	1033.5	0.1	0.000	Case A	No
	9/8/2015		1378	1033.5	0.1	0.000	Case A	No
	10/6/2015		1378	1033.5	0.1	0.000	Case A	No
	5/29/2015	Total BTEX	7674.6	5756.0	0.1	0.000	Case A	No
	6/29/2015		7674.6	5756.0	0.1	0.000	Case A	No
	7/29/2015		7674.6	5756.0	2.6	0.000	Case A	No
	9/8/2015		7674.6	5756.0	77.2	0.010	Case A	No
	10/6/2015		7674.6	5756.0	0.1	0.000	Case A	No
	5/29/2015	Naphthalene	400.3	300.2	0.1	0.000	Case A	No
	6/29/2015		400.3	300.2	0.1	0.000	Case A	No
	7/29/2015		400.3	300.2	0.1	0.000	Case A	No
	9/8/2015		400.3	300.2	14.3	0.036	Case A	No
	10/6/2015		400.3	300.2	0.1	0.000	Case A	No
	5/28/2015	MTBE	NA	NA	BDL	NA	NA	NA
	6/29/2015		NA	NA	BDL	NA	NA	NA
	7/29/2015		NA	NA	BDL	NA	NA	NA
	9/8/2015		NA	NA	BDL	NA	NA	NA
	10/6/2015		NA	NA	BDL	NA	NA	NA
RW-8	5/29/2015	Benzene	2460	1845.0	0.1	0.000	Case A	No
	6/29/2015		2460	1845.0	0.1	0.000	Case A	No
	7/29/2015		2460	1845.0	0.1	0.000	Case A	No
	9/8/2015		2460	1845.0	0.1	0.000	Case A	No
	10/6/2015		2460	1845.0	0.1	0.000	Case A	No
	5/29/2015	Total BTEX	10688	8016.0	1174.8	0.110	Case A	No
	6/29/2015		10688	8016.0	683.2	0.064	Case A	No
	7/29/2015		10688	8016.0	592.2	0.055	Case A	No



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Well ID	Sample Date	Analyte	Pre-Start-up Mean (C <sub>0</sub> ):	Case C Threshold	Current Concentration (C)	Rebound Ratio (C/C <sub>0</sub> )	Rebound Condition	Restart Criteria Met?
	9/8/2015		10688	8016.0	0.1	0.000	Case A	No
	10/6/2015		10688	8016.0	0.1	0.000	Case A	No
	5/29/2015	Naphthalene	100	75.0	19.0	0.190	Case A	No
	6/29/2015		100	75.0	20.4	0.204	Case A	No
	7/29/2015		100	75.0	20.8	0.208	Case A	No
	9/8/2015		100	75.0	0.1	0.001	Case A	No
	10/6/2015		100	75.0	0.1	0.001	Case A	No
	5/29/2015	MTBE	NA	NA	BDL	NA	NA	NA
	6/29/2015		NA	NA	BDL	NA	NA	NA
	7/29/2015		NA	NA	BDL	NA	NA	NA
	9/8/2015		NA	NA	BDL	NA	NA	NA
	10/6/2015		NA	NA	BDL	NA	NA	NA
RW-11	5/29/2015	Benzene	5065	3798.8	278	0.055	Case A	No
	6/29/2015		5065	3798.8	193	0.038	Case A	No
	7/29/2015		5065	3798.8	265	0.052	Case A	No
	9/8/2015		5065	3798.8	206	0.041	Case A	No
	10/6/2015		5065	3798.8	170	0.034	Case A	No
	5/29/2015	Total BTEX	25170	18877.5	1550	0.062	Case A	No
	6/29/2015		25170	18877.5	4067	0.162	Case A	No
	7/29/2015		25170	18877.5	2609	0.104	Case A	No
	9/8/2015		25170	18877.5	1991	0.079	Case A	No
	10/6/2015		25170	18877.5	2843	0.113	Case A	No
	5/29/2015	Naphthalene	304.5	228.4	158	0.519	Case B	No
	6/29/2015		304.5	228.4	283	0.929	Case C	No
	7/29/2015		304.5	228.4	297	0.975	Case C	YES
	9/8/2015		304.5	228.4	92.6	0.304	Case B	No
	10/6/2015		304.5	228.4	184	0.604	Case B	No
	5/28/2015	MTBE	NA	NA	BDL	NA	NA	NA
	6/29/2015		NA	NA	BDL	NA	NA	NA
	7/29/2015		NA	NA	BDL	NA	NA	NA
	9/8/2015		NA	NA	BDL	NA	NA	NA
	10/6/2015		NA	NA	BDL	NA	NA	NA
RW-12	5/29/2015	Benzene	184	138.0	0.1	0.001	Case A	No
	6/29/2015		184	138.0	0.1	0.001	Case A	No
	7/29/2015		184	138.0	0.1	0.001	Case A	No
	9/8/2015		184	138.0	0.1	0.001	Case A	No

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500 Mechanics Valley Road, North East, MD 21901**

Well ID	Sample Date	Analyte	Pre-Start-up Mean (C <sub>o</sub> ):	Case C Threshold	Current Concentration (C)	Rebound Ratio (C/C <sub>o</sub> )	Rebound Condition	Restart Criteria Met?
	10/6/2015		184	138.0	0.1	0.001	Case A	No
	5/29/2015	Total BTEX	2045.9	1534.4	0.1	0.000	Case A	No
	6/29/2015		2045.9	1534.4	0.1	0.000	Case A	No
	7/29/2015		2045.9	1534.4	0.1	0.000	Case A	No
	9/8/2015		2045.9	1534.4	0.1	0.000	Case A	No
	10/6/2015		2045.9	1534.4	0.1	0.000	Case A	No
	5/29/2015	Naphthalene	26.3	19.7	0.1	0.004	Case A	No
	6/29/2015		26.3	19.7	0.1	0.004	Case A	No
	7/29/2015		26.3	19.7	0.1	0.004	Case A	No
	9/8/2015		26.3	19.7	0.1	0.004	Case A	No
	10/6/2015		26.3	19.7	0.1	0.004	Case A	No
	5/28/2015	MTBE	NA	NA	BDL	NA	NA	NA
	6/29/2015		NA	NA	BDL	NA	NA	NA
	7/29/2015		NA	NA	BDL	NA	NA	NA
	9/8/2015		NA	NA	BDL	NA	NA	NA
	10/6/2015		NA	NA	BDL	NA	NA	NA

VE/GE - Vapor Extraction / Groundwater Extraction

VE/GE System restart is necessary if an analyte in a single well meets the Case C criteria during two consecutive sampling events

Case C - Rapid Rebound Criteria (Rebound ratio greater than or equal to 0.75)

Case B - Gradual Rebound Criteria (Rebound ratio between 0.25 and 0.75)

Case A - Little-to-No Rebound Scenario (Rebound ratio less than or equal to 0.25)

Dotted line indicates a period of VE/GE System operation between the above and below sampling dates.

0.1 - placeholder for a result reported below detection limits for computational purposes

COC - Contaminant of Concern

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

MTBE = Methyl-tert-butyl-ether

NA - MTBE concentrations are monitored, but there is no associated restart criteria

BDL - MTBE result below laboratory detection limits

**ATTACHMENT C**

**Analytical Results**

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

**Project: RF-096**

Project Number: 05-056-RF96

Project Manager: James Wolf

Report Issued: 09/17/15 13:18

Advantage Environmental Consultants, LLC

8610 Baltimore Washington Blvd, Suite 217

Jessup MD, 20794

CLIENT SAMPLE ID:	RW-6	RW-7	RW-13	MW-5	MW-4	MW-14
<b>LAB SAMPLE ID:</b>	5090901-01	5090901-02	5090901-03	5090901-04	5090901-05	5090901-06
<b>SAMPLE DATE:</b>	09/08/15	09/08/15	09/08/15	09/08/15	09/08/15	09/08/15
<b>RECEIVED DATE:</b>	09/09/15	09/09/15	09/09/15	09/09/15	09/09/15	09/09/15
<b>MATRIX</b>	Units	Water	Water	Water	Water	Water

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

	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Acetone	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0
tert-Amyl alcohol (TAA)	<b>587</b>	<20.0	<20.0	<20.0	<20.0	<20.0
tert-Amyl methyl ether (TAME)	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Benzene	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Bromobenzene	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Bromochloromethane	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Bromodichloromethane	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Bromoform	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Bromomethane	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
tert-Butanol (TBA)	<b>40.0</b>	<15.0	<15.0	<15.0	<15.0	<15.0
2-Butanone (MEK)	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0
n-Butylbenzene	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
sec-Butylbenzene	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
tert-Butylbenzene	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Carbon disulfide	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Carbon tetrachloride	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Chlorobenzene	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Chloroethane	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
Chloroform	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Chloromethane	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
2-Chlorotoluene	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
4-Chlorotoluene	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Dibromochloromethane	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
1,2-Dibromo-3-chloropropane	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
1,2-Dibromoethane (EDB)	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Dibromomethane	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
1,2-Dichlorobenzene	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
1,3-Dichlorobenzene	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
1,4-Dichlorobenzene	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Dichlorodifluoromethane	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
1,1-Dichloroethane	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
1,2-Dichloroethane	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
1,1-Dichloroethene	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
cis-1,2-Dichloroethene	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
trans-1,2-Dichloroethene	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Dichlorofluoromethane	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0

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

**Analytical Results**

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

**Project: RF-096**

Project Number: 05-056-RF96

Project Manager: James Wolf

Report Issued: 09/17/15 13:18

Advantage Environmental Consultants, LLC

8610 Baltimore Washington Blvd, Suite 217

Jessup MD, 20794

CLIENT SAMPLE ID:	RW-6	RW-7	RW-13	MW-5	MW-4	MW-14
<b>LAB SAMPLE ID:</b>	5090901-01	5090901-02	5090901-03	5090901-04	5090901-05	5090901-06
<b>SAMPLE DATE:</b>	09/08/15	09/08/15	09/08/15	09/08/15	09/08/15	09/08/15
<b>RECEIVED DATE:</b>	09/09/15	09/09/15	09/09/15	09/09/15	09/09/15	09/09/15
<b>MATRIX</b>	Units	Water	Water	Water	Water	Water

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

1,2-Dichloropropane	ug/L	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
1,3-Dichloropropane	ug/L	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
2,2-Dichloropropane	ug/L	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
1,1-Dichloropropene	ug/L	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
cis-1,3-Dichloropropene	ug/L	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
trans-1,3-Dichloropropene	ug/L	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Diisopropyl ether (DIPE)	ug/L	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Ethyl tert-butyl ether (ETBE)	ug/L	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Ethylbenzene	ug/L	<b>8.3</b>	<2.0	<2.0	<2.0	<2.0	<2.0
Hexachlorobutadiene	ug/L	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
2-Hexanone	ug/L	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0
Isopropylbenzene (Cumene)	ug/L	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
4-Isopropyltoluene	ug/L	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Methyl tert-butyl ether (MTBE)	ug/L	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
4-Methyl-2-pentanone	ug/L	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0
Methylene chloride	ug/L	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0
Naphthalene	ug/L	<b>14.3</b>	<2.0	<2.0	<2.0	<2.0	<2.0
n-Propylbenzene	ug/L	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Styrene	ug/L	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
1,1,1,2-Tetrachloroethane	ug/L	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
1,1,2,2-Tetrachloroethane	ug/L	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Tetrachloroethene	ug/L	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Toluene	ug/L	<b>2.6 [1]</b>	<2.0	<2.0	<2.0	<2.0	<2.0
1,2,3-Trichlorobenzene	ug/L	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
1,2,4-Trichlorobenzene	ug/L	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
1,1,1-Trichloroethane	ug/L	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
1,1,2-Trichloroethane	ug/L	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Trichloroethene	ug/L	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Trichlorofluoromethane (Freon 11)	ug/L	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
1,2,3-Trichloropropane	ug/L	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
1,2,4-Trimethylbenzene	ug/L	<b>24.5</b>	<2.0	<2.0	<2.0	<2.0	<2.0
1,3,5-Trimethylbenzene	ug/L	<b>8.5</b>	<2.0	<2.0	<2.0	<2.0	<2.0
Vinyl chloride	ug/L	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
o-Xylene	ug/L	<b>38.3</b>	<2.0	<2.0	<2.0	<2.0	<2.0
m- & p-Xylenes	ug/L	<b>28.0</b>	<2.0	<2.0	<2.0	<2.0	<2.0
1,2-Dichloroethane-d4	[surr]	<u>90.5%</u>	<u>88.2%</u>	<u>90.9%</u>	<u>90.2%</u>	<u>91.0%</u>	<u>90.0%</u>

1 = 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-096**

Project Number: 05-056-RF96

Project Manager: James Wolf

Report Issued: 09/17/15 13:18

Advantage Environmental Consultants, LLC

8610 Baltimore Washington Blvd, Suite 217

Jessup MD, 20794

CLIENT SAMPLE ID:	RW-6	RW-7	RW-13	MW-5	MW-4	MW-14
<b>LAB SAMPLE ID:</b>	5090901-01	5090901-02	5090901-03	5090901-04	5090901-05	5090901-06
<b>SAMPLE DATE:</b>	09/08/15	09/08/15	09/08/15	09/08/15	09/08/15	09/08/15
<b>RECEIVED DATE:</b>	09/09/15	09/09/15	09/09/15	09/09/15	09/09/15	09/09/15
<b>MATRIX</b>	Units	Water	Water	Water	Water	Water

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

Toluene-d8	[surr]	<u>97.9%</u>	<u>98.2%</u>	<u>99.2%</u>	<u>99.0%</u>	<u>98.8%</u>	<u>100%</u>
4-Bromofluorobenzene	[surr]	<u>94.9%</u>	<u>93.2%</u>	<u>94.0%</u>	<u>91.8%</u>	<u>91.7%</u>	<u>92.6%</u>

**GASOLINE RANGE ORGANICS BY EPA 8015B (Water)**

Gasoline-Range Organics	ug/L	<b>142</b>	<100	<100	<100	<100	<100
a,a,a-Trifluorotoluene	[surr]	<u>98.0%</u>	<u>99.6%</u>	<u>99.7%</u>	<u>100%</u>	<u>100%</u>	<u>99.7%</u>

**DIESEL RANGE ORGANICS BY EPA 3510/8015B (Water)**

Diesel-Range Organics	mg/L	<b>1.32</b>	<0.20	<0.19	<0.20	<0.22	<0.20
o-Terphenyl	[surr]	<u>92.4%</u>	<u>101%</u>	<u>93.2%</u>	<u>95.6%</u>	<u>93.8%</u>	<u>91.6%</u>

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**Analytical Results**

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**Project: RF-096**

Project Number: 05-056-RF96

Project Manager: James Wolf

Advantage Environmental Consultants, LLC

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Report Issued: 09/17/15 13:18

Jessup MD, 20794

CLIENT SAMPLE ID:	MW-13	MW-10	MW-12	MW-11	MW-16	MW-15
LAB SAMPLE ID:	5090901-07	5090901-08	5090901-09	5090901-10	5090901-11	5090901-12
SAMPLE DATE:	09/08/15	09/08/15	09/08/15	09/08/15	09/08/15	09/08/15
RECEIVED DATE:	09/09/15	09/09/15	09/09/15	09/09/15	09/09/15	09/09/15
MATRIX	Units	Water	Water	Water	Water	Water

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

	ug/L	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0
Acetone	ug/L	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0
tert-Amyl alcohol (TAA)	ug/L	<20.0	<20.0	<20.0	<20.0	<20.0	<20.0
tert-Amyl methyl ether (TAME)	ug/L	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Benzene	ug/L	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Bromobenzene	ug/L	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Bromochloromethane	ug/L	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Bromodichloromethane	ug/L	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Bromoform	ug/L	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Bromomethane	ug/L	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
tert-Butanol (TBA)	ug/L	<15.0	<15.0	<15.0	<15.0	<15.0	<15.0
2-Butanone (MEK)	ug/L	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0
n-Butylbenzene	ug/L	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
sec-Butylbenzene	ug/L	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
tert-Butylbenzene	ug/L	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Carbon disulfide	ug/L	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Carbon tetrachloride	ug/L	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Chlorobenzene	ug/L	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Chloroethane	ug/L	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
Chloroform	ug/L	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Chloromethane	ug/L	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
2-Chlorotoluene	ug/L	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
4-Chlorotoluene	ug/L	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Dibromochloromethane	ug/L	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
1,2-Dibromo-3-chloropropane	ug/L	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
1,2-Dibromoethane (EDB)	ug/L	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Dibromomethane	ug/L	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
1,2-Dichlorobenzene	ug/L	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
1,3-Dichlorobenzene	ug/L	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
1,4-Dichlorobenzene	ug/L	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Dichlorodifluoromethane	ug/L	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
1,1-Dichloroethane	ug/L	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
1,2-Dichloroethane	ug/L	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
1,1-Dichloroethene	ug/L	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
cis-1,2-Dichloroethene	ug/L	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
trans-1,2-Dichloroethene	ug/L	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Dichlorofluoromethane	ug/L	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0

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

**Analytical Results**

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VELAP ID 460040

**Project: RF-096**

Project Number: 05-056-RF96

Project Manager: James Wolf

Advantage Environmental Consultants, LLC

8610 Baltimore Washington Blvd, Suite 217

Report Issued: 09/17/15 13:18

Jessup MD, 20794

CLIENT SAMPLE ID:	MW-13	MW-10	MW-12	MW-11	MW-16	MW-15
LAB SAMPLE ID:	5090901-07	5090901-08	5090901-09	5090901-10	5090901-11	5090901-12
SAMPLE DATE:	09/08/15	09/08/15	09/08/15	09/08/15	09/08/15	09/08/15
RECEIVED DATE:	09/09/15	09/09/15	09/09/15	09/09/15	09/09/15	09/09/15
MATRIX	Units	Water	Water	Water	Water	Water

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

1,2-Dichloropropane	ug/L	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
1,3-Dichloropropane	ug/L	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
2,2-Dichloropropane	ug/L	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
1,1-Dichloropropene	ug/L	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
cis-1,3-Dichloropropene	ug/L	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
trans-1,3-Dichloropropene	ug/L	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Diisopropyl ether (DIPE)	ug/L	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Ethyl tert-butyl ether (ETBE)	ug/L	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Ethylbenzene	ug/L	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Hexachlorobutadiene	ug/L	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
2-Hexanone	ug/L	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0
Isopropylbenzene (Cumene)	ug/L	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
4-Isopropyltoluene	ug/L	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Methyl tert-butyl ether (MTBE)	ug/L	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
4-Methyl-2-pentanone	ug/L	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0
Methylene chloride	ug/L	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0
Naphthalene	ug/L	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
n-Propylbenzene	ug/L	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Styrene	ug/L	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
1,1,1,2-Tetrachloroethane	ug/L	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
1,1,2,2-Tetrachloroethane	ug/L	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Tetrachloroethene	ug/L	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Toluene	ug/L	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
1,2,3-Trichlorobenzene	ug/L	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
1,2,4-Trichlorobenzene	ug/L	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
1,1,1-Trichloroethane	ug/L	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
1,1,2-Trichloroethane	ug/L	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Trichloroethene	ug/L	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Trichlorofluoromethane (Freon 11)	ug/L	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
1,2,3-Trichloropropane	ug/L	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
1,2,4-Trimethylbenzene	ug/L	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
1,3,5-Trimethylbenzene	ug/L	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Vinyl chloride	ug/L	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
o-Xylene	ug/L	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
m- & p-Xylenes	ug/L	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
1,2-Dichloroethane-d4	[surr]	<u>88.9%</u>	<u>88.9%</u>	<u>91.4%</u>	<u>94.3%</u>	<u>92.3%</u>	<u>92.8%</u>

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



**Analytical Results**

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**Project: RF-096**

Project Number: 05-056-RF96

Project Manager: James Wolf

Report Issued: 09/17/15 13:18

Advantage Environmental Consultants, LLC

8610 Baltimore Washington Blvd, Suite 217

Jessup MD, 20794

CLIENT SAMPLE ID:	MW-13	MW-10	MW-12	MW-11	MW-16	MW-15
<b>LAB SAMPLE ID:</b>	5090901-07	5090901-08	5090901-09	5090901-10	5090901-11	5090901-12
<b>SAMPLE DATE:</b>	09/08/15	09/08/15	09/08/15	09/08/15	09/08/15	09/08/15
<b>RECEIVED DATE:</b>	09/09/15	09/09/15	09/09/15	09/09/15	09/09/15	09/09/15
<b>MATRIX</b>	Units	Water	Water	Water	Water	Water

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

Toluene-d8	[surr]	<u>98.9%</u>	<u>100%</u>	<u>99.3%</u>	<u>100%</u>	<u>99.0%</u>	<u>99.1%</u>
4-Bromofluorobenzene	[surr]	<u>91.1%</u>	<u>90.6%</u>	<u>91.9%</u>	<u>91.2%</u>	<u>90.5%</u>	<u>91.0%</u>

**GASOLINE RANGE ORGANICS BY EPA 8015B (Water)**

Gasoline-Range Organics	ug/L	<100	<100	<100	<100	<100	<100
a,a,a-Trifluorotoluene	[surr]	<u>99.9%</u>	<u>99.8%</u>	<u>99.8%</u>	<u>100%</u>	<u>100%</u>	<u>100%</u>

**DIESEL RANGE ORGANICS BY EPA 3510/8015B (Water)**

Diesel-Range Organics	mg/L	<0.19	<0.21	<0.19	<0.20	<0.19	<0.20
o-Terphenyl	[surr]	<u>85.5%</u>	<u>90.7%</u>	<u>82.1%</u>	<u>84.8%</u>	<u>102%</u>	<u>89.3%</u>

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

**Analytical Results**

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

**Project: RF-096**

Project Number: 05-056-RF96

Project Manager: James Wolf

Report Issued: 09/17/15 13:18

Advantage Environmental Consultants, LLC

8610 Baltimore Washington Blvd, Suite 217

Jessup MD, 20794

CLIENT SAMPLE ID:	MW-6	MW-1R	MW-2	MW-7	MW-8	RW-3
<b>LAB SAMPLE ID:</b>	5090901-13	5090901-14	5090901-15	5090901-16	5090901-17	5090901-18
<b>SAMPLE DATE:</b>	09/08/15	09/08/15	09/08/15	09/08/15	09/08/15	09/08/15
<b>RECEIVED DATE:</b>	09/09/15	09/09/15	09/09/15	09/09/15	09/09/15	09/09/15
<b>MATRIX</b>	Units	Water	Water	Water	Water	Water

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

	ug/L	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0
Acetone	ug/L	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0
tert-Amyl alcohol (TAA)	ug/L	<20.0	<20.0	<20.0	<20.0	<20.0	<20.0
tert-Amyl methyl ether (TAME)	ug/L	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Benzene	ug/L	<2.0	<2.0	<2.0	<2.0	<b>6.8</b>	<b>13.0</b>
Bromobenzene	ug/L	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Bromochloromethane	ug/L	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Bromodichloromethane	ug/L	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Bromoform	ug/L	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Bromomethane	ug/L	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
tert-Butanol (TBA)	ug/L	<15.0	<15.0	<15.0	<15.0	<15.0	<15.0
2-Butanone (MEK)	ug/L	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0
n-Butylbenzene	ug/L	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
sec-Butylbenzene	ug/L	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
tert-Butylbenzene	ug/L	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Carbon disulfide	ug/L	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Carbon tetrachloride	ug/L	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Chlorobenzene	ug/L	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Chloroethane	ug/L	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
Chloroform	ug/L	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Chloromethane	ug/L	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
2-Chlorotoluene	ug/L	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
4-Chlorotoluene	ug/L	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Dibromochloromethane	ug/L	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
1,2-Dibromo-3-chloropropane	ug/L	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
1,2-Dibromoethane (EDB)	ug/L	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Dibromomethane	ug/L	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
1,2-Dichlorobenzene	ug/L	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
1,3-Dichlorobenzene	ug/L	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
1,4-Dichlorobenzene	ug/L	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Dichlorodifluoromethane	ug/L	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
1,1-Dichloroethane	ug/L	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
1,2-Dichloroethane	ug/L	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
1,1-Dichloroethene	ug/L	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
cis-1,2-Dichloroethene	ug/L	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
trans-1,2-Dichloroethene	ug/L	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Dichlorofluoromethane	ug/L	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0

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

**Analytical Results**

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VELAP ID 460040

**Project: RF-096**

Project Number: 05-056-RF96

Project Manager: James Wolf

Advantage Environmental Consultants, LLC

8610 Baltimore Washington Blvd, Suite 217

Report Issued: 09/17/15 13:18

Jessup MD, 20794

CLIENT SAMPLE ID:	MW-6	MW-1R	MW-2	MW-7	MW-8	RW-3
LAB SAMPLE ID:	5090901-13	5090901-14	5090901-15	5090901-16	5090901-17	5090901-18
SAMPLE DATE:	09/08/15	09/08/15	09/08/15	09/08/15	09/08/15	09/08/15
RECEIVED DATE:	09/09/15	09/09/15	09/09/15	09/09/15	09/09/15	09/09/15
MATRIX	Units	Water	Water	Water	Water	Water

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

1,2-Dichloropropane	ug/L	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
1,3-Dichloropropane	ug/L	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
2,2-Dichloropropane	ug/L	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
1,1-Dichloropropene	ug/L	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
cis-1,3-Dichloropropene	ug/L	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
trans-1,3-Dichloropropene	ug/L	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Diisopropyl ether (DIPE)	ug/L	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Ethyl tert-butyl ether (ETBE)	ug/L	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Ethylbenzene	ug/L	<2.0	<2.0	<2.0	<2.0	<2.0	<b>3.2 [1]</b>
Hexachlorobutadiene	ug/L	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
2-Hexanone	ug/L	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0
Isopropylbenzene (Cumene)	ug/L	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
4-Isopropyltoluene	ug/L	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Methyl tert-butyl ether (MTBE)	ug/L	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
4-Methyl-2-pentanone	ug/L	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0
Methylene chloride	ug/L	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0
Naphthalene	ug/L	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
n-Propylbenzene	ug/L	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Styrene	ug/L	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
1,1,1,2-Tetrachloroethane	ug/L	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
1,1,2,2-Tetrachloroethane	ug/L	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Tetrachloroethene	ug/L	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Toluene	ug/L	<2.0	<2.0	<2.0	<2.0	<2.0	<b>19.2</b>
1,2,3-Trichlorobenzene	ug/L	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
1,2,4-Trichlorobenzene	ug/L	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
1,1,1-Trichloroethane	ug/L	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
1,1,2-Trichloroethane	ug/L	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Trichloroethene	ug/L	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Trichlorofluoromethane (Freon 11)	ug/L	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
1,2,3-Trichloropropane	ug/L	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
1,2,4-Trimethylbenzene	ug/L	<2.0	<2.0	<2.0	<2.0	<2.0	<b>2.2 [1]</b>
1,3,5-Trimethylbenzene	ug/L	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Vinyl chloride	ug/L	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
o-Xylene	ug/L	<2.0	<2.0	<2.0	<2.0	<2.0	<b>9.0</b>
m- & p-Xylenes	ug/L	<2.0	<2.0	<2.0	<2.0	<2.0	<b>15.5</b>
1,2-Dichloroethane-d4	[surr]	<u>92.0%</u>	<u>94.4%</u>	<u>94.0%</u>	<u>93.3%</u>	<u>93.9%</u>	<u>92.7%</u>

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

**Analytical Results**

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

**Project: RF-096**

Project Number: 05-056-RF96

Project Manager: James Wolf

Report Issued: 09/17/15 13:18

Advantage Environmental Consultants, LLC

8610 Baltimore Washington Blvd, Suite 217

Jessup MD, 20794

CLIENT SAMPLE ID:	MW-6	MW-1R	MW-2	MW-7	MW-8	RW-3
LAB SAMPLE ID:	5090901-13	5090901-14	5090901-15	5090901-16	5090901-17	5090901-18
SAMPLE DATE:	09/08/15	09/08/15	09/08/15	09/08/15	09/08/15	09/08/15
RECEIVED DATE:	09/09/15	09/09/15	09/09/15	09/09/15	09/09/15	09/09/15
MATRIX	Units	Water	Water	Water	Water	Water

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

Toluene-d8	[surr]	<u>99.8%</u>	<u>99.1%</u>	<u>99.2%</u>	<u>101%</u>	<u>99.7%</u>	<u>100%</u>
4-Bromofluorobenzene	[surr]	<u>91.8%</u>	<u>91.3%</u>	<u>89.3%</u>	<u>90.8%</u>	<u>89.7%</u>	<u>92.8%</u>

**GASOLINE RANGE ORGANICS BY EPA 8015B (Water)**

Gasoline-Range Organics	ug/L	<100	<100	<100	<100	<100	<100
a,a,a-Trifluorotoluene	[surr]	<u>101%</u>	<u>101%</u>	<u>100%</u>	<u>101%</u>	<u>101%</u>	<u>101%</u>

**DIESEL RANGE ORGANICS BY EPA 3510/8015B (Water)**

Diesel-Range Organics	mg/L	<0.19	<0.20	<0.19	<0.20	<0.19	<0.25
o-Terphenyl	[surr]	<u>89.8%</u>	<u>86.1%</u>	<u>88.5%</u>	<u>99.3%</u>	<u>88.9%</u>	<u>89.5%</u>

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

**Analytical Results**

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**Project: RF-096**

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Project Manager: James Wolf

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8610 Baltimore Washington Blvd, Suite 217

Jessup MD, 20794

CLIENT SAMPLE ID:	RW-12	RW-1	RW-5	MW-9	RW-2	RW-9
<b>LAB SAMPLE ID:</b>	5090901-19	5090901-20	5090901-21	5090901-22	5090901-23	5090901-24
<b>SAMPLE DATE:</b>	09/08/15	09/08/15	09/08/15	09/08/15	09/08/15	09/09/15
<b>RECEIVED DATE:</b>	09/09/15	09/09/15	09/09/15	09/09/15	09/09/15	09/09/15
<b>MATRIX</b>	Units	Water	Water	Water	Water	Water

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

	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Acetone	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0
tert-Amyl alcohol (TAA)	<20.0	<b>59.3</b>	<20.0	<20.0	<20.0	<20.0
tert-Amyl methyl ether (TAME)	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Benzene	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Bromobenzene	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Bromochloromethane	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Bromodichloromethane	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Bromoform	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Bromomethane	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
tert-Butanol (TBA)	<15.0	<15.0	<15.0	<15.0	<15.0	<15.0
2-Butanone (MEK)	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0
n-Butylbenzene	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
sec-Butylbenzene	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
tert-Butylbenzene	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Carbon disulfide	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Carbon tetrachloride	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Chlorobenzene	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Chloroethane	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
Chloroform	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Chloromethane	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
2-Chlorotoluene	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
4-Chlorotoluene	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Dibromochloromethane	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
1,2-Dibromo-3-chloropropane	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
1,2-Dibromoethane (EDB)	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Dibromomethane	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
1,2-Dichlorobenzene	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
1,3-Dichlorobenzene	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
1,4-Dichlorobenzene	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Dichlorodifluoromethane	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
1,1-Dichloroethane	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
1,2-Dichloroethane	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
1,1-Dichloroethene	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
cis-1,2-Dichloroethene	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
trans-1,2-Dichloroethene	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Dichlorofluoromethane	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0

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

**Analytical Results**

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**Project: RF-096**

Project Number: 05-056-RF96

Project Manager: James Wolf

Advantage Environmental Consultants, LLC

8610 Baltimore Washington Blvd, Suite 217

Report Issued: 09/17/15 13:18

Jessup MD, 20794

CLIENT SAMPLE ID:	RW-12	RW-1	RW-5	MW-9	RW-2	RW-9
LAB SAMPLE ID:	5090901-19	5090901-20	5090901-21	5090901-22	5090901-23	5090901-24
SAMPLE DATE:	09/08/15	09/08/15	09/08/15	09/08/15	09/08/15	09/09/15
RECEIVED DATE:	09/09/15	09/09/15	09/09/15	09/09/15	09/09/15	09/09/15
MATRIX	Units	Water	Water	Water	Water	Water

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

1,2-Dichloropropane	ug/L	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
1,3-Dichloropropane	ug/L	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
2,2-Dichloropropane	ug/L	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
1,1-Dichloropropene	ug/L	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
cis-1,3-Dichloropropene	ug/L	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
trans-1,3-Dichloropropene	ug/L	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Diisopropyl ether (DIPE)	ug/L	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Ethyl tert-butyl ether (ETBE)	ug/L	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Ethylbenzene	ug/L	<2.0	<2.0	<2.0	<b>5.3</b>	<2.0	<2.0
Hexachlorobutadiene	ug/L	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
2-Hexanone	ug/L	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0
Isopropylbenzene (Cumene)	ug/L	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
4-Isopropyltoluene	ug/L	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Methyl tert-butyl ether (MTBE)	ug/L	<2.0	<2.0	<2.0	<b>3.6 [1]</b>	<2.0	<2.0
4-Methyl-2-pentanone	ug/L	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0
Methylene chloride	ug/L	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0
Naphthalene	ug/L	<2.0	<2.0	<2.0	<b>3.2 [1]</b>	<2.0	<2.0
n-Propylbenzene	ug/L	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Styrene	ug/L	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
1,1,1,2-Tetrachloroethane	ug/L	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
1,1,2,2-Tetrachloroethane	ug/L	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Tetrachloroethene	ug/L	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Toluene	ug/L	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
1,2,3-Trichlorobenzene	ug/L	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
1,2,4-Trichlorobenzene	ug/L	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
1,1,1-Trichloroethane	ug/L	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
1,1,2-Trichloroethane	ug/L	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Trichloroethene	ug/L	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Trichlorofluoromethane (Freon 11)	ug/L	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
1,2,3-Trichloropropane	ug/L	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
1,2,4-Trimethylbenzene	ug/L	<2.0	<2.0	<2.0	<b>8.6</b>	<2.0	<2.0
1,3,5-Trimethylbenzene	ug/L	<2.0	<2.0	<2.0	<b>2.2 [1]</b>	<2.0	<2.0
Vinyl chloride	ug/L	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
o-Xylene	ug/L	<2.0	<2.0	<2.0	<b>10.1</b>	<2.0	<2.0
m- & p-Xylenes	ug/L	<2.0	<2.0	<2.0	<b>9.6</b>	<2.0	<2.0
1,2-Dichloroethane-d4	[surr]	<u>92.8%</u>	<u>93.2%</u>	<u>92.6%</u>	<u>95.5%</u>	<u>110%</u>	<u>112%</u>

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

**Analytical Results**

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

**Project: RF-096**

Project Number: 05-056-RF96

Project Manager: James Wolf

Report Issued: 09/17/15 13:18

Advantage Environmental Consultants, LLC

8610 Baltimore Washington Blvd, Suite 217

Jessup MD, 20794

CLIENT SAMPLE ID:	RW-12	RW-1	RW-5	MW-9	RW-2	RW-9
LAB SAMPLE ID:	5090901-19	5090901-20	5090901-21	5090901-22	5090901-23	5090901-24
SAMPLE DATE:	09/08/15	09/08/15	09/08/15	09/08/15	09/08/15	09/09/15
RECEIVED DATE:	09/09/15	09/09/15	09/09/15	09/09/15	09/09/15	09/09/15
MATRIX	Units	Water	Water	Water	Water	Water

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

Toluene-d8	[surr]	<u>99.1%</u>	<u>99.7%</u>	<u>100%</u>	<u>99.6%</u>	<u>108%</u>	<u>107%</u>
4-Bromofluorobenzene	[surr]	<u>90.2%</u>	<u>90.2%</u>	<u>91.1%</u>	<u>91.7%</u>	<u>91.3%</u>	<u>92.0%</u>

**GASOLINE RANGE ORGANICS BY EPA 8015B (Water)**

Gasoline-Range Organics	ug/L	<100	<100	<100	<100	<100	<100
a,a,a-Trifluorotoluene	[surr]	<u>101%</u>	<u>101%</u>	<u>100%</u>	<u>101%</u>	<u>100%</u>	<u>101%</u>

**DIESEL RANGE ORGANICS BY EPA 3510/8015B (Water)**

Diesel-Range Organics	mg/L	<0.19	<b>0.39</b>	<0.19	<b>1.51</b>	<0.19	<0.20
o-Terphenyl	[surr]	<u>89.5%</u>	<u>91.1%</u>	<u>97.9%</u>	<u>101%</u>	<u>95.9%</u>	<u>94.5%</u>

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**Analytical Results**

1500 Caton Center Dr Suite G  
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**Project: RF-096**

Project Number: 05-056-RF96

Project Manager: James Wolf

Report Issued: 09/17/15 13:18

Advantage Environmental Consultants, LLC

8610 Baltimore Washington Blvd, Suite 217

Jessup MD, 20794

CLIENT SAMPLE ID:	RW-10	RW-11	RW-11	RW-4	RW-8	MW-10 D
LAB SAMPLE ID:	5090901-25	5090901-26	5090901-26RE1	5090901-27	5090901-28	5090901-29
SAMPLE DATE:	09/09/15	09/09/15	09/09/15	09/09/15	09/09/15	09/09/15
RECEIVED DATE:	09/09/15	09/09/15	09/09/15	09/09/15	09/09/15	09/09/15
MATRIX	Units	Water	Water	Water	Water	Water

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

	ug/L	<10.0	<50.0	<b>33.5</b>	<10.0	<10.0
Acetone	ug/L	<10.0	<50.0	<b>33.5</b>	<10.0	<10.0
tert-Amyl alcohol (TAA)	ug/L	<b>36.9</b>	<b>147</b>	<20.0	<20.0	<20.0
tert-Amyl methyl ether (TAME)	ug/L	<2.0	<10.0	<2.0	<2.0	<2.0
Benzene	ug/L	<b>16.3</b>	<b>206</b>	<b>6.4</b>	<2.0	<2.0
Bromobenzene	ug/L	<2.0	<10.0	<2.0	<2.0	<2.0
Bromochloromethane	ug/L	<2.0	<10.0	<2.0	<2.0	<2.0
Bromodichloromethane	ug/L	<2.0	<10.0	<2.0	<2.0	<2.0
Bromoform	ug/L	<2.0	<10.0	<2.0	<2.0	<2.0
Bromomethane	ug/L	<5.0	<25.0	<5.0	<5.0	<5.0
tert-Butanol (TBA)	ug/L	<15.0	<75.0	<15.0	<15.0	<15.0
2-Butanone (MEK)	ug/L	<10.0	<50.0	<10.0	<10.0	<10.0
n-Butylbenzene	ug/L	<2.0	<10.0	<2.0	<2.0	<2.0
sec-Butylbenzene	ug/L	<2.0	<10.0	<2.0	<2.0	<2.0
tert-Butylbenzene	ug/L	<2.0	<10.0	<2.0	<2.0	<2.0
Carbon disulfide	ug/L	<2.0	<10.0	<2.0	<2.0	<2.0
Carbon tetrachloride	ug/L	<2.0	<10.0	<2.0	<2.0	<2.0
Chlorobenzene	ug/L	<2.0	<10.0	<2.0	<2.0	<2.0
Chloroethane	ug/L	<5.0	<25.0	<5.0	<5.0	<5.0
Chloroform	ug/L	<2.0	<10.0	<2.0	<2.0	<2.0
Chloromethane	ug/L	<5.0	<25.0	<5.0	<5.0	<5.0
2-Chlorotoluene	ug/L	<2.0	<10.0	<2.0	<2.0	<2.0
4-Chlorotoluene	ug/L	<2.0	<10.0	<2.0	<2.0	<2.0
Dibromochloromethane	ug/L	<2.0	<10.0	<2.0	<2.0	<2.0
1,2-Dibromo-3-chloropropane	ug/L	<2.0	<10.0	<2.0	<2.0	<2.0
1,2-Dibromoethane (EDB)	ug/L	<2.0	<10.0	<2.0	<2.0	<2.0
Dibromomethane	ug/L	<2.0	<10.0	<2.0	<2.0	<2.0
1,2-Dichlorobenzene	ug/L	<2.0	<10.0	<2.0	<2.0	<2.0
1,3-Dichlorobenzene	ug/L	<2.0	<10.0	<2.0	<2.0	<2.0
1,4-Dichlorobenzene	ug/L	<2.0	<10.0	<2.0	<2.0	<2.0
Dichlorodifluoromethane	ug/L	<2.0	<10.0	<2.0	<2.0	<2.0
1,1-Dichloroethane	ug/L	<2.0	<10.0	<2.0	<2.0	<2.0
1,2-Dichloroethane	ug/L	<2.0	<10.0	<2.0	<2.0	<2.0
1,1-Dichloroethene	ug/L	<2.0	<10.0	<2.0	<2.0	<2.0
cis-1,2-Dichloroethene	ug/L	<2.0	<10.0	<2.0	<2.0	<2.0
trans-1,2-Dichloroethene	ug/L	<2.0	<10.0	<2.0	<2.0	<2.0
Dichlorofluoromethane	ug/L	<2.0	<10.0	<2.0	<2.0	<2.0

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**Analytical Results**

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Baltimore MD 21227  
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VELAP ID 460040

**Project: RF-096**

Project Number: 05-056-RF96

Project Manager: James Wolf

Advantage Environmental Consultants, LLC

8610 Baltimore Washington Blvd, Suite 217

Report Issued: 09/17/15 13:18

Jessup MD, 20794

CLIENT SAMPLE ID:	RW-10	RW-11	RW-11	RW-4	RW-8	MW-10 D
LAB SAMPLE ID:	5090901-25	5090901-26	5090901-26RE1	5090901-27	5090901-28	5090901-29
SAMPLE DATE:	09/09/15	09/09/15	09/09/15	09/09/15	09/09/15	09/09/15
RECEIVED DATE:	09/09/15	09/09/15	09/09/15	09/09/15	09/09/15	09/09/15
MATRIX	Units	Water	Water	Water	Water	Water

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

1,2-Dichloropropane	ug/L	<2.0	<10.0	<2.0	<2.0	<2.0
1,3-Dichloropropane	ug/L	<2.0	<10.0	<2.0	<2.0	<2.0
2,2-Dichloropropane	ug/L	<2.0	<10.0	<2.0	<2.0	<2.0
1,1-Dichloropropene	ug/L	<2.0	<10.0	<2.0	<2.0	<2.0
cis-1,3-Dichloropropene	ug/L	<2.0	<10.0	<2.0	<2.0	<2.0
trans-1,3-Dichloropropene	ug/L	<2.0	<10.0	<2.0	<2.0	<2.0
Diisopropyl ether (DIPE)	ug/L	<2.0	<10.0	<2.0	<2.0	<2.0
Ethyl tert-butyl ether (ETBE)	ug/L	<2.0	<10.0	<2.0	<2.0	<2.0
Ethylbenzene	ug/L	<b>2.1 [1]</b>	<b>268</b>	<b>9.9</b>	<2.0	<2.0
Hexachlorobutadiene	ug/L	<2.0	<10.0	<2.0	<2.0	<2.0
2-Hexanone	ug/L	<10.0	<50.0	<10.0	<10.0	<10.0
Isopropylbenzene (Cumene)	ug/L	<2.0	<b>10.2 [1]</b>	<2.0	<2.0	<2.0
4-Isopropyltoluene	ug/L	<2.0	<10.0	<2.0	<2.0	<2.0
Methyl tert-butyl ether (MTBE)	ug/L	<2.0	<10.0	<2.0	<2.0	<b>2.1 [1]</b>
4-Methyl-2-pentanone	ug/L	<10.0	<50.0	<10.0	<10.0	<10.0
Methylene chloride	ug/L	<10.0	<50.0	<10.0	<10.0	<10.0
Naphthalene	ug/L	<b>5.6</b>	<b>92.6</b>	<b>14.9</b>	<2.0	<2.0
n-Propylbenzene	ug/L	<2.0	<b>22.1 [1]</b>	<b>2.4 [1]</b>	<2.0	<2.0
Styrene	ug/L	<2.0	<10.0	<2.0	<2.0	<2.0
1,1,1,2-Tetrachloroethane	ug/L	<2.0	<10.0	<2.0	<2.0	<2.0
1,1,2,2-Tetrachloroethane	ug/L	<2.0	<10.0	<2.0	<2.0	<2.0
Tetrachloroethene	ug/L	<2.0	<10.0	<2.0	<2.0	<2.0
Toluene	ug/L	<2.0	<b>508</b>	<b>40.1</b>	<2.0	<2.0
1,2,3-Trichlorobenzene	ug/L	<2.0	<10.0	<2.0	<2.0	<2.0
1,2,4-Trichlorobenzene	ug/L	<2.0	<10.0	<2.0	<2.0	<2.0
1,1,1-Trichloroethane	ug/L	<2.0	<10.0	<2.0	<2.0	<2.0
1,1,2-Trichloroethane	ug/L	<2.0	<10.0	<2.0	<2.0	<2.0
Trichloroethene	ug/L	<2.0	<10.0	<2.0	<2.0	<2.0
Trichlorofluoromethane (Freon 11)	ug/L	<2.0	<10.0	<2.0	<2.0	<2.0
1,2,3-Trichloropropane	ug/L	<2.0	<10.0	<2.0	<2.0	<2.0
1,2,4-Trimethylbenzene	ug/L	<b>4.6 [1]</b>	<b>371</b>	<b>52.6</b>	<2.0	<2.0
1,3,5-Trimethylbenzene	ug/L	<2.0	<b>53.3</b>	<b>23.0</b>	<2.0	<2.0
Vinyl chloride	ug/L	<2.0	<10.0	<2.0	<2.0	<2.0
o-Xylene	ug/L	<b>4.5 [1]</b>	<b>392</b>	<b>65.6</b>	<2.0	<2.0
m- & p-Xylenes	ug/L	<2.0	<b>617</b>	<b>65.7</b>	<2.0	<2.0
1,2-Dichloroethane-d4	[surr]	<b>109%</b>	<b>106%</b>	<b>109%</b>	<b>108%</b>	<b>110%</b>

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

**Analytical Results**

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

**Project: RF-096**

Project Number: 05-056-RF96

Project Manager: James Wolf

Report Issued: 09/17/15 13:18

Advantage Environmental Consultants, LLC

8610 Baltimore Washington Blvd, Suite 217

Jessup MD, 20794

CLIENT SAMPLE ID:	RW-10	RW-11	RW-11	RW-4	RW-8	MW-10 D
LAB SAMPLE ID:	5090901-25	5090901-26	5090901-26RE1	5090901-27	5090901-28	5090901-29
SAMPLE DATE:	09/09/15	09/09/15	09/09/15	09/09/15	09/09/15	09/09/15
RECEIVED DATE:	09/09/15	09/09/15	09/09/15	09/09/15	09/09/15	09/09/15
MATRIX	Units	Water	Water	Water	Water	Water

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

Toluene-d8	[surr]	<u>107%</u>	<u>107%</u>	<u>106%</u>	<u>107%</u>	<u>107%</u>
4-Bromofluorobenzene	[surr]	<u>93.7%</u>	<u>98.5%</u>	<u>97.6%</u>	<u>92.8%</u>	<u>93.2%</u>

**GASOLINE RANGE ORGANICS BY EPA 8015B (Water)**

Gasoline-Range Organics	ug/L	<100	<b>3320</b>	<b>403</b>	<100	<100
a,a,a-Trifluorotoluene	[surr]	<u>101%</u>	<u>101%</u>	<u>101%</u>	<u>101%</u>	<u>101%</u>

**DIESEL RANGE ORGANICS BY EPA 3510/8015B (Water)**

Diesel-Range Organics	mg/L	<b>0.34</b>	<b>2.32</b>	<b>1.08</b>	<0.19	<0.19
o-Terphenyl	[surr]	<u>94.9%</u>	<u>88.0%</u>	<u>89.6%</u>	<u>95.7%</u>	<u>103%</u>

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## Analytical Results

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**Project: RF-096**

Project Number: 05-056-RF96

Project Manager: James Wolf

Advantage Environmental Consultants, LLC

8610 Baltimore Washington Blvd, Suite 217

Report Issued: 09/17/15 13:18

Jessup MD, 20794

CLIENT SAMPLE ID:	MW-12 D	MW-13 D SHALLOW	MW-13 D DEEP
LAB SAMPLE ID:	5090901-30	5090901-31	5090901-32
SAMPLE DATE:	09/09/15	09/09/15	09/09/15
RECEIVED DATE:	09/09/15	09/09/15	09/09/15
MATRIX	Units Water	Water	Water

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

Compound	Units	MW-12 D	MW-13 D SHALLOW	MW-13 D DEEP
Acetone	ug/L	<10.0	<10.0	<10.0
tert-Amyl alcohol (TAA)	ug/L	<20.0	<20.0	<20.0
tert-Amyl methyl ether (TAME)	ug/L	<2.0	<2.0	<2.0
Benzene	ug/L	<2.0	<2.0	<2.0
Bromobenzene	ug/L	<2.0	<2.0	<2.0
Bromochloromethane	ug/L	<2.0	<2.0	<2.0
Bromodichloromethane	ug/L	<2.0	<2.0	<2.0
Bromoform	ug/L	<2.0	<2.0	<2.0
Bromomethane	ug/L	<5.0	<5.0	<5.0
tert-Butanol (TBA)	ug/L	<15.0	<15.0	<15.0
2-Butanone (MEK)	ug/L	<10.0	<10.0	<10.0
n-Butylbenzene	ug/L	<2.0	<2.0	<2.0
sec-Butylbenzene	ug/L	<2.0	<2.0	<2.0
tert-Butylbenzene	ug/L	<2.0	<2.0	<2.0
Carbon disulfide	ug/L	<2.0	<2.0	<2.0
Carbon tetrachloride	ug/L	<2.0	<2.0	<2.0
Chlorobenzene	ug/L	<2.0	<2.0	<2.0
Chloroethane	ug/L	<5.0	<5.0	<5.0
Chloroform	ug/L	<2.0	<2.0	<2.0
Chloromethane	ug/L	<5.0	<5.0	<5.0
2-Chlorotoluene	ug/L	<2.0	<2.0	<2.0
4-Chlorotoluene	ug/L	<2.0	<2.0	<2.0
Dibromochloromethane	ug/L	<2.0	<2.0	<2.0
1,2-Dibromo-3-chloropropane	ug/L	<2.0	<2.0	<2.0
1,2-Dibromoethane (EDB)	ug/L	<2.0	<2.0	<2.0
Dibromomethane	ug/L	<2.0	<2.0	<2.0
1,2-Dichlorobenzene	ug/L	<2.0	<2.0	<2.0
1,3-Dichlorobenzene	ug/L	<2.0	<2.0	<2.0
1,4-Dichlorobenzene	ug/L	<2.0	<2.0	<2.0
Dichlorodifluoromethane	ug/L	<2.0	<2.0	<2.0
1,1-Dichloroethane	ug/L	<2.0	<2.0	<2.0
1,2-Dichloroethane	ug/L	<2.0	<2.0	<2.0
1,1-Dichloroethene	ug/L	<2.0	<2.0	<2.0
cis-1,2-Dichloroethene	ug/L	<2.0	<2.0	<2.0
trans-1,2-Dichloroethene	ug/L	<2.0	<2.0	<2.0
Dichlorofluoromethane	ug/L	<2.0	<2.0	<2.0

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**Analytical Results**

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**Project: RF-096**

Project Number: 05-056-RF96

Project Manager: James Wolf

Advantage Environmental Consultants, LLC

8610 Baltimore Washington Blvd, Suite 217

Report Issued: 09/17/15 13:18

Jessup MD, 20794

CLIENT SAMPLE ID:	MW-12 D	MW-13 D SHALLOW	MW-13 D DEEP
LAB SAMPLE ID:	5090901-30	5090901-31	5090901-32
SAMPLE DATE:	09/09/15	09/09/15	09/09/15
RECEIVED DATE:	09/09/15	09/09/15	09/09/15
MATRIX	Units Water	Water	Water

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

1,2-Dichloropropane	ug/L	<2.0	<2.0	<2.0
1,3-Dichloropropane	ug/L	<2.0	<2.0	<2.0
2,2-Dichloropropane	ug/L	<2.0	<2.0	<2.0
1,1-Dichloropropene	ug/L	<2.0	<2.0	<2.0
cis-1,3-Dichloropropene	ug/L	<2.0	<2.0	<2.0
trans-1,3-Dichloropropene	ug/L	<2.0	<2.0	<2.0
Diisopropyl ether (DIPE)	ug/L	<2.0	<2.0	<2.0
Ethyl tert-butyl ether (ETBE)	ug/L	<2.0	<2.0	<2.0
Ethylbenzene	ug/L	<2.0	<2.0	<2.0
Hexachlorobutadiene	ug/L	<2.0	<2.0	<2.0
2-Hexanone	ug/L	<10.0	<10.0	<10.0
Isopropylbenzene (Cumene)	ug/L	<2.0	<2.0	<2.0
4-Isopropyltoluene	ug/L	<2.0	<2.0	<2.0
Methyl tert-butyl ether (MTBE)	ug/L	<b>9.3</b>	<2.0	<2.0
4-Methyl-2-pentanone	ug/L	<10.0	<10.0	<10.0
Methylene chloride	ug/L	<10.0	<10.0	<10.0
Naphthalene	ug/L	<2.0	<2.0	<2.0
n-Propylbenzene	ug/L	<2.0	<2.0	<2.0
Styrene	ug/L	<2.0	<2.0	<2.0
1,1,1,2-Tetrachloroethane	ug/L	<2.0	<2.0	<2.0
1,1,2,2-Tetrachloroethane	ug/L	<2.0	<2.0	<2.0
Tetrachloroethene	ug/L	<2.0	<2.0	<2.0
Toluene	ug/L	<2.0	<2.0	<2.0
1,2,3-Trichlorobenzene	ug/L	<2.0	<2.0	<2.0
1,2,4-Trichlorobenzene	ug/L	<2.0	<2.0	<2.0
1,1,1-Trichloroethane	ug/L	<2.0	<2.0	<2.0
1,1,2-Trichloroethane	ug/L	<2.0	<2.0	<2.0
Trichloroethene	ug/L	<2.0	<2.0	<2.0
Trichlorofluoromethane (Freon 11)	ug/L	<2.0	<2.0	<2.0
1,2,3-Trichloropropane	ug/L	<2.0	<2.0	<2.0
1,2,4-Trimethylbenzene	ug/L	<2.0	<2.0	<2.0
1,3,5-Trimethylbenzene	ug/L	<2.0	<2.0	<2.0
Vinyl chloride	ug/L	<2.0	<2.0	<2.0
o-Xylene	ug/L	<2.0	<2.0	<2.0
m- & p-Xylenes	ug/L	<2.0	<2.0	<2.0

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

**Analytical Results**

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

**Project: RF-096**

Project Number: 05-056-RF96

Project Manager: James Wolf

Report Issued: 09/17/15 13:18

Advantage Environmental Consultants, LLC

8610 Baltimore Washington Blvd, Suite 217

Jessup MD, 20794

CLIENT SAMPLE ID:	MW-12 D	MW-13 D SHALLOW	MW-13 D DEEP
LAB SAMPLE ID:	5090901-30	5090901-31	5090901-32
SAMPLE DATE:	09/09/15	09/09/15	09/09/15
RECEIVED DATE:	09/09/15	09/09/15	09/09/15
MATRIX	Units Water	Water	Water

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

1,2-Dichloroethane-d4	[surr]	<u>109%</u>	<u>112%</u>	<u>111%</u>
Toluene-d8	[surr]	<u>107%</u>	<u>106%</u>	<u>107%</u>
4-Bromofluorobenzene	[surr]	<u>92.3%</u>	<u>92.6%</u>	<u>92.9%</u>

**GASOLINE RANGE ORGANICS BY EPA 8015B (Water)**

Gasoline-Range Organics	ug/L	<100	<100	<100
a,a,a-Trifluorotoluene	[surr]	<u>102%</u>	<u>101%</u>	<u>101%</u>

**DIESEL RANGE ORGANICS BY EPA 3510/8015B (Water)**

Diesel-Range Organics	mg/L	<0.20	<0.19	<0.19
o-Terphenyl	[surr]	<u>93.0%</u>	<u>98.6%</u>	<u>93.2%</u>

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

Page 1

Company Name:		Project Manager:		Analysis Requested		CHAIN-OF-CUSTODY RECORD	
AEC		S Stein				Maryland Spectral Services, Inc. 1500 Caton Center Drive, Suite G Baltimore, MD 21227 410-247-7600 • Fax 410-247-7602 labman@mdspectral.com	
Project Name:		Project ID:				Matrix Codes: NW (nonpotable water) PW (potable water)	
RF-096		05-056-RF-096				Preservative: 1+1 HCL, H <sub>2</sub> SO <sub>4</sub> , Methanol, Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub> , NaHCO <sub>3</sub>	
Sampler(s):		P.O. Number:				Field pH, Residual Chlorine, QC Request, Trip Blank, Field Blank	
K Pellegriini / S EUIS		05-056-RF-096				MSS Lab ID	
Field Sample ID		Date		Time		5090901-01	
RW-6		9-8-15		1545		-02	
RW-7				1600		-03	
RW-13				1610		-04	
MW-5				1605		-05	
MW-4				1620		-06	
MW-14				1625		-07	
MW-13				1630		-08	
MW-10				1635		-09	
MW-12				1645		-10	
MW-11				1650			
Relinquished by: (Signature)		Date/Time		Received by: (Signature)		Date/Time	
<i>[Signature]</i>		9-8-15		<i>Andrew Boecker</i>			
(Printed)		07:58		(Printed)		(Printed)	
Kevin Pellegriini				Andrew Boecker			
Relinquished by: (Signature)		Date/Time		Received by Lab: (Signature)		Lab Use:	
						Temp: 5.8 °C <input checked="" type="checkbox"/> Received on Ice <input type="checkbox"/> Received same day <input type="checkbox"/> Preservation Appropriate	
(Printed)				(Printed)		Sample Disposal: <input type="checkbox"/> Return to Client <input checked="" type="checkbox"/> Disposal by lab <input type="checkbox"/> Archive for _____ days	
Delivery Method:		Special Instructions/QC Requirements & Comments:		Turn Around Time:			
<input checked="" type="checkbox"/> Courier <input type="checkbox"/> Client <input type="checkbox"/> UPS <input type="checkbox"/> FedEx <input type="checkbox"/> USPS <input type="checkbox"/> Other:		results to: Kpellegriini@acc-env.com Jellis Jwolf Jstein		Normal (7 day) <input checked="" type="checkbox"/> 5 day <input type="checkbox"/> 4 day <input type="checkbox"/> 3 day Rush (2 day) <input type="checkbox"/> Next Day Other: _____ Specific Due Date: _____			

Page 2

Company Name:		Project Manager:		Analysis Requested		CHAIN-OF-CUSTODY RECORD	
AEC		J. Stein				Maryland Spectral Services, Inc. 1500 Caton Center Drive, Suite G Baltimore, MD 21227 410-247-7600 • Fax 410-247-7602 labman@mdspectral.com	
Project Name:		Project ID:				Matrix Codes: NW (nonpotable water) PW (potable water)	
RF-0910		05-056-RF096				Preservative: 1+1 HCL, H <sub>2</sub> SO <sub>4</sub> , Methanol, Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub> , NaHCO <sub>3</sub>	
Sampler(s):		P.O. Number:				Field pH, Residual Chlorine, QC Request, Trip Blank, Field Blank	
K. Pellegrini / Seilis		05-056-RF090				MSS Lab ID	
Field Sample ID	Date	Time	Water	Soil	Other	No. of Containers	MSS Lab ID
MW-10	9-8-15	1655	X			6	5090901-11
MW-15		1700				4	-12
MW-6		1705				7	-13
MW-1R		1710				4	-14
MW-2		1715					-15
MW-7		1720					-16
MW-8		1725					-17
RW-3		1730					-18
RW-12		1735					-19
RW-1		1740					-20
Relinquished by: (Signature)	Date/Time	Received by: (Signature)		Relinquished by: (Signature)		Date/Time	
<i>K. Pellegrini</i>	9-8-15	<i>Andrew Boecker</i>		<i>Andrew Boecker</i>			
(Printed)	07:58	(Printed)		(Printed)		(Printed)	
Relinquished by: (Signature)	Date/Time	Received by Lab: (Signature)		Turn Around Time:		Lab Use:	
<i>Kevin Pellegrini</i>		<i>Andrew Boecker</i>		Normal (7 day)		Temp: 5.8 °C	
(Printed)		(Printed)		<input checked="" type="checkbox"/> 5 day		<input checked="" type="checkbox"/> Received on Ice	
				<input type="checkbox"/> 4 day		<input type="checkbox"/> Received same day	
				<input type="checkbox"/> 3 day		<input type="checkbox"/> Preservation Appropriate	
				<input type="checkbox"/> Rush (2 day)		Sample Disposal:	
				<input type="checkbox"/> Next Day		<input type="checkbox"/> Return to Client	
				<input type="checkbox"/> Other: _____		<input checked="" type="checkbox"/> Disposal by lab	
				<input type="checkbox"/> Specific Due Date: _____		<input type="checkbox"/> Archive for _____ days	
Delivery Method:		Special Instructions/QC Requirements & Comments:					
<input type="checkbox"/> Courier		Same as page 1					
<input checked="" type="checkbox"/> Client							
<input type="checkbox"/> UPS							
<input type="checkbox"/> FedEx							
<input type="checkbox"/> USPS							
<input type="checkbox"/> Other: _____							





# 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

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

Preservative: 1+1  
HCL, H<sub>2</sub>SO<sub>4</sub>,  
Methanol,  
Na<sub>2</sub>S<sub>2</sub>O<sub>3</sub>, NaHCO<sub>3</sub>

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

MSS Lab ID

## Analysis Requested

Project Manager:  
**T. Stern**

Project ID:  
**05-056-056**

P.O. Number:  
**05-056-056**

Field Sample ID

Date

Time

Water

Soil

Other

No. of Containers

RW-9  
9-25 13:10 X 4 X 2  
Vols 8260  
TPI 60 Probes

RW-10  
13:20

RW-11  
13:30

RW-4  
13:40

RW-8  
13:50

MW-10D  
8:40

MW-12-D  
8:55

MW-130 Shallow  
9:10

MW-130-Deep  
9:25

Date/Time

9-9-15

Received by: (Signature)  
*[Signature]*

Received by: (Signature)  
*[Signature]*

Date/Time

Received by: (Signature)

Relinquished by: (Signature)

(Printed)

Date/Time

9/9/15 1548

Received by: (Signature)  
*[Signature]*

Received by: (Signature)  
*[Signature]*

Date/Time

Received by: (Signature)

Relinquished by: (Signature)

(Printed)

Date/Time

9/9/15 1548

Received by: (Signature)  
*[Signature]*

Received by: (Signature)  
*[Signature]*

Relinquished by: (Signature)

(Printed)

Date/Time

9/9/15 1548

Received by: (Signature)  
*[Signature]*

Received by: (Signature)  
*[Signature]*

Turn Around Time:

Normal (7 day)

5 day

4 day

3 day

Rush (2 day)

Next Day

Other: \_\_\_\_\_ Date: \_\_\_\_\_

Delivery Method:

- Courier
- Client
- UPS
- FedEx
- USPS
- Other: \_\_\_\_\_

Special Instructions/QC Requirements & Comments:

**T WOLF**  
**J STEIN / KELLEGRAN**  
**J ELUIS**

Lab Use:

Temp: **16** °C

Received on Ice

Received same day

Preservation Appropriate

Sample Disposal:

Return to Client

Disposal by lab

Archive for \_\_\_\_\_ days

**Analytical Results**

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

**Project: RF-096**

Project Number: 05-056-RF96

Project Manager: James Wolf

Advantage Environmental Consultants, LLC

8610 Baltimore Washington Blvd, Suite 217

Report Issued: 10/09/15 13:39

Jessup MD, 20794

CLIENT SAMPLE ID:	MW-8	RW-1	RW-12	RW-6	RW-2	RW-8
<b>LAB SAMPLE ID:</b>	5100622-01	5100622-02	5100622-03	5100622-04	5100622-05	5100622-06
<b>SAMPLE DATE:</b>	10/06/15	10/06/15	10/06/15	10/06/15	10/06/15	10/06/15
<b>RECEIVED DATE:</b>	10/06/15	10/06/15	10/06/15	10/06/15	10/06/15	10/06/15
<b>MATRIX</b>	Units	Water	Water	Water	Water	Water

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

Benzene	ug/L	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Ethylbenzene	ug/L	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
4-Isopropyltoluene	ug/L	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Methyl tert-butyl ether (MTBE)	ug/L	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Naphthalene	ug/L	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Toluene	ug/L	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
o-Xylene	ug/L	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
m- & p-Xylenes	ug/L	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
1,2-Dichloroethane-d4	[surr]	<u>115%</u>	<u>114%</u>	<u>119%</u>	<u>113%</u>	<u>118%</u>	<u>119%</u>
Toluene-d8	[surr]	<u>104%</u>	<u>103%</u>	<u>103%</u>	<u>103%</u>	<u>104%</u>	<u>104%</u>
4-Bromofluorobenzene	[surr]	<u>92.3%</u>	<u>90.7%</u>	<u>91.5%</u>	<u>91.7%</u>	<u>91.5%</u>	<u>91.4%</u>

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

**Analytical Results**

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

**Project: RF-096**

Project Number: 05-056-RF96

Project Manager: James Wolf

Report Issued: 10/09/15 13:39

Advantage Environmental Consultants, LLC

8610 Baltimore Washington Blvd, Suite 217

Jessup MD, 20794

<b>CLIENT SAMPLE ID:</b>	RW-4	RW-11
<b>LAB SAMPLE ID:</b>	5100622-07	5100622-08
<b>SAMPLE DATE:</b>	10/06/15	10/06/15
<b>RECEIVED DATE:</b>	10/06/15	10/06/15
<b>MATRIX</b>	Units	Water

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

Benzene	ug/L	<b><u>13.1</u></b>	<b><u>170</u></b>
Ethylbenzene	ug/L	<b><u>7.1</u></b>	<b><u>484</u></b>
4-Isopropyltoluene	ug/L	<2.0	<10.0
Methyl tert-butyl ether (MTBE)	ug/L	<2.0	<10.0
Naphthalene	ug/L	<b><u>17.3</u></b>	<b><u>184</u></b>
Toluene	ug/L	<b><u>62.8</u></b>	<b><u>518</u></b>
o-Xylene	ug/L	<b><u>138</u></b>	<b><u>551</u></b>
m- & p-Xylenes	ug/L	<b><u>66.0</u></b>	<b><u>1120</u></b>
1,2-Dichloroethane-d4	[surr]	<b><u>113%</u></b>	<b><u>114%</u></b>
Toluene-d8	[surr]	<b><u>104%</u></b>	<b><u>104%</u></b>
4-Bromofluorobenzene	[surr]	<b><u>98.0%</u></b>	<b><u>98.0%</u></b>

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

# 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

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

Preservative: 1+1  
 HCL, H<sub>2</sub>SO<sub>4</sub>,  
 Methanol,  
 Na<sub>2</sub>S<sub>2</sub>O<sub>3</sub>, NaHCO<sub>3</sub>  
 Field pH, Residual  
 Chlorine, QC  
 Request, Trip  
 Blank, Field Blank

MSS Lab ID

1F1 HCl  
 S100622-01  
 -02  
 -03  
 -04  
 -05  
 -06  
 -07  
 -08

## Analysis Requested

BTEX/Naphthalene 9260

No. of Containers

Project Manager:  
 Wolf

Project ID:  
 RF-96

P.O. Number:  
 05-056RF096

Field Sample ID

Date

Time

Water

Soil

Other

MW-8 10/6/15 15:15 NW  
 RW-1 15:25  
 RW-12 15:35  
 RW-6 15:45  
 RW-2 15:50  
 RW-8 16:10  
 RW-4 16:10  
 RW-11 16:20

Relinquished by: (Signature)

Date/Time

Received by: (Signature)

Date/Time

Received by: (Signature)

Date/Time

Received by: (Signature)

(Printed)

(Printed)

(Printed)

(Printed)

(Printed)

(Printed)

(Printed)

(Printed)

Lab Use:

Temp: 5 °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: \_\_\_\_\_  
 Specific Due Date: \_\_\_\_\_

Special Instructions/QC Requirements & Comments:

Delivery Method:  
 Courier  
 Client  
 UPS  
 FedEx  
 USPS  
 Other: \_\_\_\_\_