July 8, 2015

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

Re: **Rebound Evaluation – Month One**
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 month of the Rebound Evaluation following deactivation of the 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 as 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 will 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 and then quarterly for the remainder of the rebound test. Eight wells are utilized for the purposes of this evaluation including: 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 lab 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.

Sampling Event

The VE/GE system was shut down to begin the Rebound Evaluation on May 27, 2015. AEC performed scheduled quarterly groundwater sampling at the Site on May 28 and 29, 2015. Results from this sampling effort were used for analysis in this report. Groundwater pumps which were part of the VE/GE system were removed prior to sampling. 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 0.519 or 51.9% for naphthalene in RW-11. Rebound results for all wells is 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.

Sincerely,

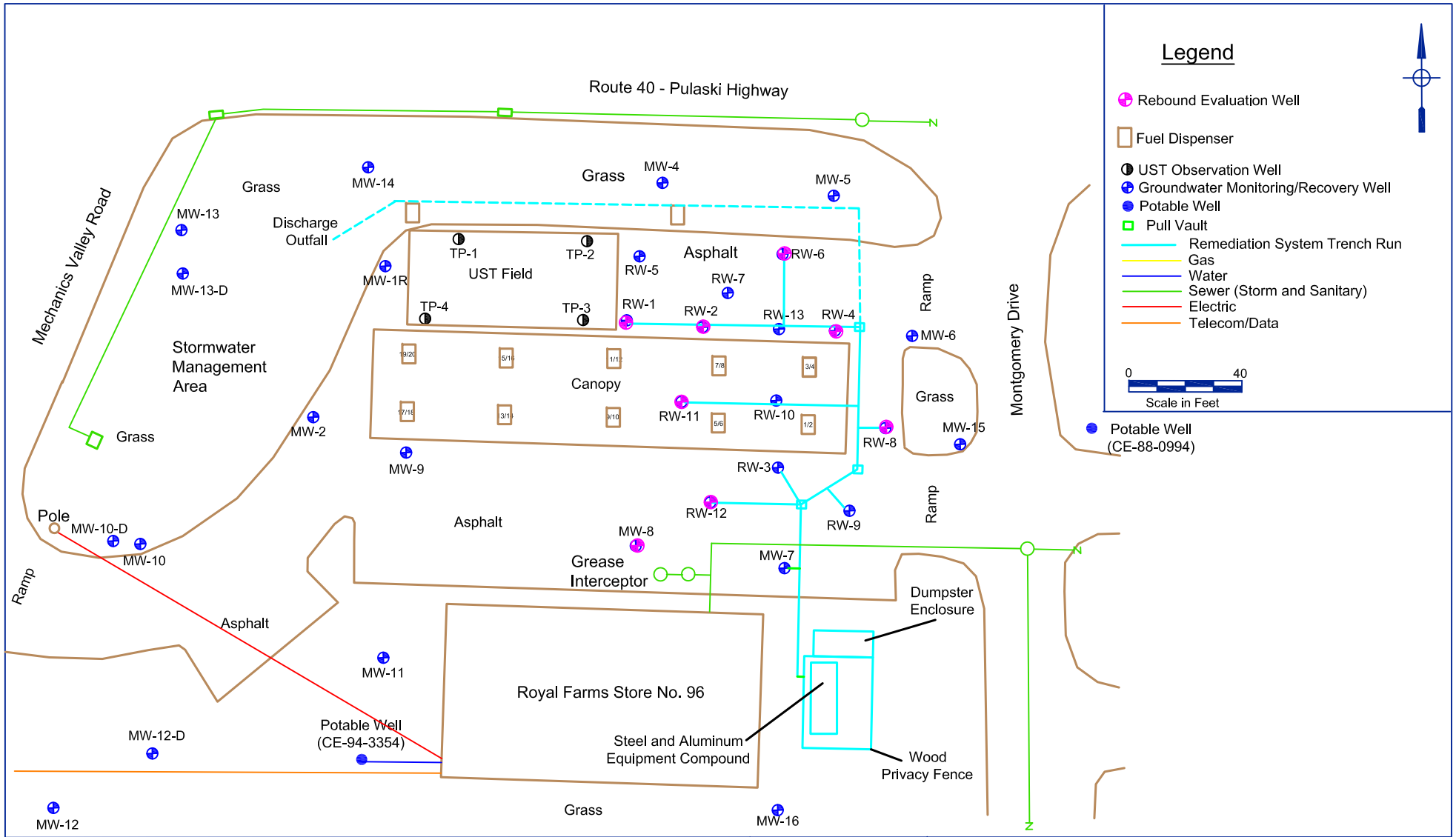
Advantage Environmental Consultants, LLC

Jeffery Stein
Principal

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	Drawn by: JDW
Task No.: RF96	Date: 2-16-2015
File: Site Features	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_o):	Case C Threshold	Current Concentration (C)	Rebound Ratio (C/C_o)	Rebound Condition	Restart VE/GE System?
MW-8	5/28/2015	Benzene	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
	5/28/2015	Naphthalene	26	19.5	0.1	0.004	Case A	No
RW-1	5/29/2015	Benzene	959.3	719.5	0.1	0.000	Case A	No
	5/29/2015	Total BTEX	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
RW-2	5/29/2015	Benzene	8731	6548.3	5.4	0.001	Case A	No
	5/29/2015	Total BTEX	35956	26967.0	41.9	0.001	Case A	No
	5/29/2015	Naphthalene	1794.3	1345.7	3.9	0.002	Case A	No
RW-4	5/29/2015	Benzene	14250	10687.5	139	0.010	Case A	No
	5/29/2015	Total BTEX	59880	44910.0	2397	0.040	Case A	No
	5/29/2015	Naphthalene	1629	1221.8	81.9	0.050	Case A	No
RW-6	5/29/2015	Benzene	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
	5/29/2015	Naphthalene	400.3	300.2	0.1	0.000	Case A	No
RW-8	5/29/2015	Benzene	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
	5/29/2015	Naphthalene	100	75.0	19.0	0.190	Case A	No
RW-11	5/29/2015	Benzene	5065	3798.8	278	0.055	Case A	No
	5/29/2015	Total BTEX	25170	18877.5	1550	0.062	Case A	No
	5/29/2015	Naphthalene	304.5	228.4	158	0.519	Case B	No
RW-12	5/29/2015	Benzene	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
	5/29/2015	Naphthalene	26.3	19.7	0.1	0.004	Case A	No

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)

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

Naph = Naphthalene

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: Jeffery Stein

Report Issued: 06/08/15 10:26

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

CLIENT SAMPLE ID:		MW-16	MW-15	MW-6	MW-5	MW-4	MW-1R
LAB SAMPLE ID:		5052813-01	5052813-02	5052813-03	5052813-04	5052813-05	5052813-06
SAMPLE DATE:		05/28/15	05/28/15	05/28/15	05/28/15	05/28/15	05/28/15
RECEIVED DATE:		05/28/15	05/28/15	05/28/15	05/28/15	05/28/15	05/28/15
MATRIX	Units	Water	Water	Water	Water	Water	Water
VOLATILE ORGANICS BY EPA METHOD 8260B (GC/MS) (Water)							
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).

Maryland spectral Services

Analytical Chemistry Services

Analytical Results

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CLIENT SAMPLE ID:		MW-16	MW-15	MW-6	MW-5	MW-4	MW-1R
LAB SAMPLE ID:		5052813-01	5052813-02	5052813-03	5052813-04	5052813-05	5052813-06
SAMPLE DATE:		05/28/15	05/28/15	05/28/15	05/28/15	05/28/15	05/28/15
RECEIVED DATE:		05/28/15	05/28/15	05/28/15	05/28/15	05/28/15	05/28/15
MATRIX	Units	Water	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]	106%	107%	108%	108%	109%	108%

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

As a NELAP accredited laboratory, MSS certifies that all applicable test results meet NELAC requirements.

Analytical Results

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VELAP ID 460040

Project: **RF-096**

Project Number: 05-056-RF96

Project Manager: Jeffery Stein

Report Issued: 06/08/15 10:26

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

CLIENT SAMPLE ID:		MW-16	MW-15	MW-6	MW-5	MW-4	MW-1R
LAB SAMPLE ID:		5052813-01	5052813-02	5052813-03	5052813-04	5052813-05	5052813-06
SAMPLE DATE:		05/28/15	05/28/15	05/28/15	05/28/15	05/28/15	05/28/15
RECEIVED DATE:		05/28/15	05/28/15	05/28/15	05/28/15	05/28/15	05/28/15
MATRIX	Units	Water	Water	Water	Water	Water	Water
VOLATILE ORGANICS BY EPA METHOD 8260B (GC/MS) (continued)							
Toluene-d8	[surr]	98.7%	99.0%	99.2%	98.5%	98.8%	98.7%
4-Bromofluorobenzene	[surr]	96.0%	97.5%	96.5%	96.4%	96.2%	96.1%
GASOLINE RANGE ORGANICS BY EPA 8015B (Water)							
Gasoline-Range Organics	ug/L	<100	<100	<100	<100	<100	<100
a,a,a-Trifluorotoluene	[surr]	100%	101%	100%	101%	100%	100%
DIESEL RANGE ORGANICS BY EPA 3510/8015B (Water)							
Diesel-Range Organics	mg/L	<0.19	<0.20	<0.19	<0.19	<0.20	<0.20
o-Terphenyl	[surr]	98.1%	84.4%	82.6%	81.9%	99.4%	96.0%
Metals (Water)							
Iron	mg/L			<0.050			
Wet Chemistry (Water)							
Nitrite (as N)	mg/L			<0.2			
Nitrate (as N)	mg/L			**2.0**			
Sulfate	mg/L			**11.8**			
Kjeldahl Nitrogen	mg/L			<0.4			

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

Maryland spectral Services

Analytical Chemistry Services

nelac

Analytical Results

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

CLIENT SAMPLE ID:		MW-14	MW-13	MW-10	MW-12	MW-11	MW-2
LAB SAMPLE ID:		5052813-07	5052813-08	5052813-09	5052813-10	5052813-11	5052813-12
SAMPLE DATE:		05/28/15	05/28/15	05/28/15	05/28/15	05/28/15	05/28/15
RECEIVED DATE:		05/28/15	05/28/15	05/28/15	05/28/15	05/28/15	05/28/15
MATRIX	Units	Water	Water	Water	Water	Water	Water
VOLATILE ORGANICS BY EPA METHOD 8260B (GC/MS) (Water)							
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

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: Jeffery Stein

Report Issued: 06/08/15 10:26

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

CLIENT SAMPLE ID:		MW-14	MW-13	MW-10	MW-12	MW-11	MW-2
LAB SAMPLE ID:		5052813-07	5052813-08	5052813-09	5052813-10	5052813-11	5052813-12
SAMPLE DATE:		05/28/15	05/28/15	05/28/15	05/28/15	05/28/15	05/28/15
RECEIVED DATE:		05/28/15	05/28/15	05/28/15	05/28/15	05/28/15	05/28/15
MATRIX	Units	Water	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]	109%	109%	97.8%	95.8%	96.0%	96.4%

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

Maryland spectral Services

Analytical Chemistry Services

nelac

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: Jeffery Stein

Report Issued: 06/08/15 10:26

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

CLIENT SAMPLE ID:		MW-14	MW-13	MW-10	MW-12	MW-11	MW-2
LAB SAMPLE ID:		5052813-07	5052813-08	5052813-09	5052813-10	5052813-11	5052813-12
SAMPLE DATE:		05/28/15	05/28/15	05/28/15	05/28/15	05/28/15	05/28/15
RECEIVED DATE:		05/28/15	05/28/15	05/28/15	05/28/15	05/28/15	05/28/15
MATRIX	Units	Water	Water	Water	Water	Water	Water
VOLATILE ORGANICS BY EPA METHOD 8260B (GC/MS) (continued)							
Toluene-d8	[surr]	98.5%	97.9%	97.9%	98.1%	98.2%	97.7%
4-Bromofluorobenzene	[surr]	95.1%	96.5%	92.3%	94.3%	93.9%	92.8%
GASOLINE RANGE ORGANICS BY EPA 8015B (Water)							
Gasoline-Range Organics	ug/L	<100	<100	<100	<100	<100	<100
a,a,a-Trifluorotoluene	[surr]	100%	100%	100%	100%	101%	100%
DIESEL RANGE ORGANICS BY EPA 3510/8015B (Water)							
Diesel-Range Organics	mg/L	<0.19	<0.21	<0.19	<0.20	<0.21	<0.19
o-Terphenyl	[surr]	83.7%	90.4%	89.1%	102%	78.7%	75.3%
Metals (Water)							
Iron	mg/L					**0.202**	
Wet Chemistry (Water)							
Nitrite (as N)	mg/L					<0.2	
Nitrate (as N)	mg/L					<0.2	
Sulfate	mg/L					**12.6**	
Kjeldahl Nitrogen	mg/L					<0.4	

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Analytical Results

1500 Caton Center Dr Suite G
Baltimore MD 21227
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VELAP ID 460040

Project: RF-096

Project Number: 05-056-RF96

Project Manager: Jeffery Stein

Report Issued: 06/08/15 10:26

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

CLIENT SAMPLE ID:		MW-9	MW-8
LAB SAMPLE ID:		5052813-13	5052813-14
SAMPLE DATE:		05/28/15	05/28/15
RECEIVED DATE:		05/28/15	05/28/15
MATRIX	Units	Water	Water

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

Acetone	ug/L	**183**	<10.0
tert-Amyl alcohol (TAA)	ug/L	<20.0	<20.0
tert-Amyl methyl ether (TAME)	ug/L	<2.0	<2.0
Benzene	ug/L	<2.0	<2.0
Bromobenzene	ug/L	<2.0	<2.0
Bromochloromethane	ug/L	<2.0	<2.0
Bromodichloromethane	ug/L	<2.0	<2.0
Bromoform	ug/L	<2.0	<2.0
Bromomethane	ug/L	<5.0	<5.0
tert-Butanol (TBA)	ug/L	<15.0	<15.0
2-Butanone (MEK)	ug/L	<10.0	<10.0
n-Butylbenzene	ug/L	<2.0	<2.0
sec-Butylbenzene	ug/L	<2.0	<2.0
tert-Butylbenzene	ug/L	<2.0	<2.0
Carbon disulfide	ug/L	<2.0	<2.0
Carbon tetrachloride	ug/L	<2.0	<2.0
Chlorobenzene	ug/L	<2.0	<2.0
Chloroethane	ug/L	<5.0	<5.0
Chloroform	ug/L	<2.0	<2.0
Chloromethane	ug/L	<5.0	<5.0
2-Chlorotoluene	ug/L	<2.0	<2.0
4-Chlorotoluene	ug/L	<2.0	<2.0
Dibromochloromethane	ug/L	<2.0	<2.0
1,2-Dibromo-3-chloropropane	ug/L	<2.0	<2.0
1,2-Dibromoethane (EDB)	ug/L	<2.0	<2.0
Dibromomethane	ug/L	<2.0	<2.0
1,2-Dichlorobenzene	ug/L	<2.0	<2.0
1,3-Dichlorobenzene	ug/L	<2.0	<2.0
1,4-Dichlorobenzene	ug/L	<2.0	<2.0
Dichlorodifluoromethane	ug/L	<2.0	<2.0
1,1-Dichloroethane	ug/L	<2.0	<2.0
1,2-Dichloroethane	ug/L	<2.0	<2.0
1,1-Dichloroethene	ug/L	<2.0	<2.0
cis-1,2-Dichloroethene	ug/L	<2.0	<2.0
trans-1,2-Dichloroethene	ug/L	<2.0	<2.0
Dichlorofluoromethane	ug/L	<2.0	<2.0

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

Maryland spectral Services

Analytical Chemistry Services

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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-096

Project Number: 05-056-RF96

Project Manager: Jeffery Stein

Report Issued: 06/08/15 10:26

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

CLIENT SAMPLE ID:		MW-9	MW-8
LAB SAMPLE ID:		5052813-13	5052813-14
SAMPLE DATE:		05/28/15	05/28/15
RECEIVED DATE:		05/28/15	05/28/15
MATRIX	Units	Water	Water

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

1,2-Dichloropropane	ug/L	<2.0	<2.0
1,3-Dichloropropane	ug/L	<2.0	<2.0
2,2-Dichloropropane	ug/L	<2.0	<2.0
1,1-Dichloropropene	ug/L	<2.0	<2.0
cis-1,3-Dichloropropene	ug/L	<2.0	<2.0
trans-1,3-Dichloropropene	ug/L	<2.0	<2.0
Diisopropyl ether (DIPE)	ug/L	<2.0	<2.0
Ethyl tert-butyl ether (ETBE)	ug/L	<2.0	<2.0
Ethylbenzene	ug/L	**3.8 [1]**	<2.0
Hexachlorobutadiene	ug/L	<2.0	<2.0
2-Hexanone	ug/L	<10.0	<10.0
Isopropylbenzene (Cumene)	ug/L	<2.0	<2.0
4-Isopropyltoluene	ug/L	<2.0	<2.0
Methyl tert-butyl ether (MTBE)	ug/L	**3.6 [1]**	<2.0
4-Methyl-2-pentanone	ug/L	<10.0	<10.0
Methylene chloride	ug/L	<10.0	<10.0
Naphthalene	ug/L	<2.0	<2.0
n-Propylbenzene	ug/L	<2.0	<2.0
Styrene	ug/L	<2.0	<2.0
1,1,1,2-Tetrachloroethane	ug/L	<2.0	<2.0
1,1,2,2-Tetrachloroethane	ug/L	<2.0	<2.0
Tetrachloroethene	ug/L	<2.0	<2.0
Toluene	ug/L	<2.0	<2.0
1,2,3-Trichlorobenzene	ug/L	<2.0	<2.0
1,2,4-Trichlorobenzene	ug/L	<2.0	<2.0
1,1,1-Trichloroethane	ug/L	<2.0	<2.0
1,1,2-Trichloroethane	ug/L	<2.0	<2.0
Trichloroethene	ug/L	<2.0	<2.0
Trichlorofluoromethane (Freon 11)	ug/L	<2.0	<2.0
1,2,3-Trichloropropane	ug/L	<2.0	<2.0
1,2,4-Trimethylbenzene	ug/L	**3.0 [1]**	<2.0
1,3,5-Trimethylbenzene	ug/L	<2.0	<2.0
Vinyl chloride	ug/L	<2.0	<2.0
o-Xylene	ug/L	**6.9**	<2.0
m- & p-Xylenes	ug/L	**7.6**	<2.0
1,2-Dichloroethane-d4	[surr]	97.1%	95.5%

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

As a NELAP accredited laboratory, MSS certifies that all applicable test results meet NELAC requirements.

Maryland spectral Services

Analytical Chemistry Services

nelac

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: Jeffery Stein

Report Issued: 06/08/15 10:26

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

CLIENT SAMPLE ID:		MW-9	MW-8
LAB SAMPLE ID:		5052813-13	5052813-14
SAMPLE DATE:		05/28/15	05/28/15
RECEIVED DATE:		05/28/15	05/28/15
MATRIX	Units	Water	Water
VOLATILE ORGANICS BY EPA METHOD 8260B (GC/MS) (continued)			
Toluene-d8	[surr]	97.1%	96.6%
4-Bromofluorobenzene	[surr]	95.6%	91.8%
GASOLINE RANGE ORGANICS BY EPA 8015B (Water)			
Gasoline-Range Organics	ug/L	<100	<100
a,a,a-Trifluorotoluene	[surr]	101%	101%
DIESEL RANGE ORGANICS BY EPA 3510/8015B (Water)			
Diesel-Range Organics	mg/L	**2.57**	<0.20
o-Terphenyl	[surr]	112%	80.3%
Metals (Water)			
Iron	mg/L	**13.4**	<0.050
Wet Chemistry (Water)			
Nitrite (as N)	mg/L	<0.2	<0.2
Nitrate (as N)	mg/L	<0.2	**1.3**
Sulfate	mg/L	**67.1**	**77.4**
Kjeldahl Nitrogen	mg/L	**2.0**	**0.4**

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

As a NELAP accredited laboratory, MSS certifies that all applicable test results meet NELAC requirements.

Page 1 of 2

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

Company Name: AEC
Project Name: RF-96
Sampler(s): S. Dessel/R. Swaninger
Project Manager: J. Stein
Project ID: 05-056-RF96
P.O. Number: 05-056-RF96

Matrix Codes: NW (nonpotable water), PW (potable water)
Preservative: 1+1 HCL, H_2SO_4, Methanol, $Na_2S_2O_3$, $NaHCO_3$
Analysis Requested: TPH DRO/GRO 8015, VOCs 8260, Sulfate, Sulfate, Nitrogen, Dissolved Iron 6020*, Field pH, Residual Chlorine, QC Request, Trip Blank, Field Blank

Field Sample ID	Date	Time	Water	Soil	Other	No. of Containers	MSS Lab ID
MW-16	5/28/15	13:25	X			2	5052813-01
MW-15		13:30				2	-02
MW-6		12:28				6	-03
MW-5		13:34				2	-04
MW-4		13:38				1	-05
MW-1R		13:42				1	-06
MW-14		13:43				1	-07
MW-13		13:54				1	-08
MW-10		13:57				1	-09
MW-12		14:00				1	-10

Relinquished by: (Signature) Date/Time
(Printed)
Received by: (Signature) Date/Time
(Printed)

Relinquished by: (Signature) Date/Time 5/28/15 16:42
(Printed) Stephen Dessel
Received by: (Signature) Date/Time
(Printed) Andrew Boecker

Relinquished by: (Signature)
(Printed)
Received by: (Signature)
(Printed)

Lab Use:
Temp: 2.0 °C
X Received on Ice
X Received same day
□ Preservation Appropriate

Turn Around Time:
X Normal (7 day)
□ 5 day
□ 4 day
□ 3 day
□ Rush (2 day)
□ Next Day
□ Other:
□ Specific Due Date: ____

Sample Disposal:
□ Return to Client
□ Disposal by lab
X Archive for 30 days

Delivery Method:
□ Courier
X Client
□ UPS
□ FedEx
□ USPS
□ Other: ____

Special Instructions/QC Requirements & Comments:
*Dissolved iron sample to be filtered by lab

MSS-F001-03/13

Company Name:	Project Manager:
AEC	J. Stein
Project Name:	**Project ID:**
RF-96	05-056-RF96
Sampler(s):	**P.O. Number:**
SDessel/R.Swaninger	05-056-RF96

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)

Field Sample ID	Date	Time	Water	Soil	Other	No. of Containers	TPH DRO/GRO 8015	VOCs 8260	Sulfate	Sulfite	Nitrogen	Dissolved Iron* 6020	Preservative: 1+1 HCL, H_2SO_4, Methanol, $Na_2S_2O_3$, $NaHCO_3$	Field pH, Residual Chlorine, QC Request, Trip Blank, Field Blank	MSS Lab ID
MW-11	5/28/15	12:53	X			6	X	X	X	X	X	X	1+1HCL/-		5052813-11
MW-2	"	14:09	"			2	"	"					1+1HCL		-12
MW-9	"	13:02	"			6	"	"	X	X	X	X	1+1HCL/-		-13
MW-8	"	13:11	"			6	"	"	X	X	X	X	1+1HCL/-		-14

Relinquished by: (Signature)	Date/Time	Received by: (Signature)	Relinquished by: (Signature)	Date/Time	Received by: (Signature)
(Printed) Stephen Dessel	5/28/15 16:42	(Printed) Andrew Boecker	(Printed)		(Printed)
Relinquished by: (Signature)	Date/Time	Received by Lab: (Signature)			
(Printed)		(Printed)			

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

Lab Use:
Temp: 2.0 °C
- ✓ Received on Ice
- ✓ Received same day
- ☐ Preservation Appropriate

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

Delivery Method:
- ☐ Courier
- ☐ Client
- ☐ UPS
- ☐ FedEx
- ☐ USPS
- ☐ Other:_____

Special Instructions/QC Requirements & Comments:
*Dissolved iron samples to be filtered by lab

MSS-F001-03/13

Company Name: AEC | Project Manager: J. Stein | Project Name: RF-96 | Project ID: 05-056-RF96 | Sampler(s): S. Dessel / R. Swaninger | P.O. Number: 05-056-RF96

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)

Analysis Requested: No. of Containers; TPH DRO/GRO 8015; VOCs 8260; Sulfate; Sulfite; Nitrogen; Dissolved Iron* 6020

Field Sample ID	Date	Time	Water	Soil	Other	No. of Containers	Preservative: 1+1 HCL, H_2SO_4, Methanol, $Na_2S_2O_3$, $NaHCO_3$	Field pH, Residual Chlorine, QC Request, Trip Blank, Field Blank	MSS Lab ID
MW-11	5/28/15	12:53	X			2	1+1HCL/-		5052813-11
MW-2	"	14:09	"			2	1+1HCL		-12
MW-9	"	13:02	"			2	1+1HCL/-		-13
MW-8	"	13:11	"			2	1+1HCL/-		-14

Relinquished by: (Signature) Stephen Dessel | Date/Time 5/28/15 16:42 | Received by: (Signature) Andrew Boecker | Relinquished by: (Signature) | Date/Time | Received by: (Signature)

Relinquished by: (Signature) | Date/Time | Received by Lab: (Signature)

Turn Around Time: X Normal (7 day); ☐ 5 day; ☐ 4 day; ☐ 3 day; ☐ Rush (2 day); ☐ Next Day; ☐ Other: ____; ☐ Specific Due Date: ____

Lab Use: Temp: 2.0 °C; ✓ Received on Ice; ✓ Received same day; ☐ Preservation Appropriate

Sample Disposal: ☐ Return to Client; X Disposal by lab; ☐ Archive for ____ days

Delivery Method: ☐ Courier; ☐ Client; ☐ UPS; ☐ FedEx; ☐ USPS; ☐ Other:____

Special Instructions/QC Requirements & Comments: *Dissolved iron samples to be filtered by lab

MSS-F001-03/13

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: Jeffery Stein

Report Issued: 06/05/15 12:59

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

CLIENT SAMPLE ID:		MW-12D	MW-10D	MW-13D Shallow	MW-13D Deep	RW-1	RW-2
LAB SAMPLE ID:		5052922-01	5052922-02	5052922-03	5052922-04	5052922-05	5052922-06
SAMPLE DATE:		05/29/15	05/29/15	05/29/15	05/29/15	05/29/15	05/29/15
RECEIVED DATE:		05/29/15	05/29/15	05/29/15	05/29/15	05/29/15	05/29/15
MATRIX	Units	Water	Water	Water	Water	Water	Water
VOLATILE ORGANICS BY EPA METHOD 8260B (GC/MS) (Water)							
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	**97.8**
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	**5.4**
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).

Maryland spectral Services

Analytical Chemistry Services

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Analytical Results

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VELAP ID 460040

Project: RF-096

Project Number: 05-056-RF96

Project Manager: Jeffery Stein

Report Issued: 06/05/15 12:59

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

CLIENT SAMPLE ID:		MW-12D	MW-10D	MW-13D Shallow	MW-13D Deep	RW-1	RW-2
LAB SAMPLE ID:		5052922-01	5052922-02	5052922-03	5052922-04	5052922-05	5052922-06
SAMPLE DATE:		05/29/15	05/29/15	05/29/15	05/29/15	05/29/15	05/29/15
RECEIVED DATE:		05/29/15	05/29/15	05/29/15	05/29/15	05/29/15	05/29/15
MATRIX	Units	Water	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	**11.8**	**2.6 [1]**	<2.0	**6.9**	<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	**3.9 [1]**
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	**5.0 [1]**
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	**25.8**
1,3,5-Trimethylbenzene	ug/L	<2.0	<2.0	<2.0	<2.0	<2.0	**7.9**
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	**15.3**
m- & p-Xylenes	ug/L	<2.0	<2.0	<2.0	<2.0	<2.0	**16.2**
1,2-Dichloroethane-d4	[surr]	97.7%	98.0%	99.8%	98.9%	97.4%	98.8%

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Analytical Results

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VELAP ID 460040

Project: RF-096

Project Number: 05-056-RF96
Project Manager: Jeffery Stein
Report Issued: 06/05/15 12:59

Advantage Environmental Consultants, LLC
8610 Baltimore Washington Blvd, Suite 217
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CLIENT SAMPLE ID:		MW-12D	MW-10D	MW-13D Shallow	MW-13D Deep	RW-1	RW-2
LAB SAMPLE ID:		5052922-01	5052922-02	5052922-03	5052922-04	5052922-05	5052922-06
SAMPLE DATE:		05/29/15	05/29/15	05/29/15	05/29/15	05/29/15	05/29/15
RECEIVED DATE:		05/29/15	05/29/15	05/29/15	05/29/15	05/29/15	05/29/15
MATRIX	Units	Water	Water	Water	Water	Water	Water
VOLATILE ORGANICS BY EPA METHOD 8260B (GC/MS) (continued)							
Toluene-d8	[surr]	96.9%	97.1%	97.6%	96.5%	97.1%	97.5%
4-Bromofluorobenzene	[surr]	91.6%	91.7%	90.5%	89.4%	91.1%	95.1%
GASOLINE RANGE ORGANICS BY EPA 8015B (Water)							
Gasoline-Range Organics	ug/L	<100	<100	<100	<100	<100	**119**
a,a,a-Trifluorotoluene	[surr]	100%	101%	101%	101%	101%	101%
DIESEL RANGE ORGANICS BY EPA 3510/8015B (Water)							
Diesel-Range Organics	mg/L	<0.19	<0.19	<0.21	<0.20	<0.20	**0.45**
o-Terphenyl	[surr]	106%	93.6%	83.9%	76.7%	87.9%	82.5%

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Maryland spectral Services
Analytical Chemistry Services
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Analytical Results

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CLIENT SAMPLE ID:		RW-3	RW-4	RW-5	RW-6	RW-7	RW-8
LAB SAMPLE ID:		5052922-07	5052922-08	5052922-09	5052922-10	5052922-11	5052922-12
SAMPLE DATE:		05/29/15	05/29/15	05/29/15	05/29/15	05/29/15	05/29/15
RECEIVED DATE:		05/29/15	05/29/15	05/29/15	05/29/15	05/29/15	05/29/15
MATRIX	Units	Water	Water	Water	Water	Water	Water
VOLATILE ORGANICS BY EPA METHOD 8260B (GC/MS) (Water)							
Acetone	ug/L	<10.0	<100	<10.0	<10.0	<10.0	<50.0
tert-Amyl alcohol (TAA)	ug/L	<20.0	<200	<20.0	**35.3**	<20.0	<100
tert-Amyl methyl ether (TAME)	ug/L	<2.0	<20.0	<2.0	<2.0	<2.0	<10.0
Benzene	ug/L	**10.0**	**139**	<2.0	<2.0	<2.0	<10.0
Bromobenzene	ug/L	<2.0	<20.0	<2.0	<2.0	<2.0	<10.0
Bromochloromethane	ug/L	<2.0	<20.0	<2.0	<2.0	<2.0	<10.0
Bromodichloromethane	ug/L	<2.0	<20.0	<2.0	<2.0	<2.0	<10.0
Bromoform	ug/L	<2.0	<20.0	<2.0	<2.0	<2.0	<10.0
Bromomethane	ug/L	<5.0	<50.0	<5.0	<5.0	<5.0	<25.0
tert-Butanol (TBA)	ug/L	<15.0	<150	<15.0	<15.0	<15.0	<75.0
2-Butanone (MEK)	ug/L	<10.0	<100	<10.0	<10.0	<10.0	<50.0
n-Butylbenzene	ug/L	<2.0	<20.0	<2.0	<2.0	<2.0	<10.0
sec-Butylbenzene	ug/L	<2.0	<20.0	<2.0	<2.0	<2.0	<10.0
tert-Butylbenzene	ug/L	<2.0	<20.0	<2.0	<2.0	<2.0	<10.0
Carbon disulfide	ug/L	<2.0	<20.0	<2.0	<2.0	<2.0	<10.0
Carbon tetrachloride	ug/L	<2.0	<20.0	<2.0	<2.0	<2.0	<10.0
Chlorobenzene	ug/L	<2.0	<20.0	<2.0	<2.0	<2.0	<10.0
Chloroethane	ug/L	<5.0	<50.0	<5.0	<5.0	<5.0	<25.0
Chloroform	ug/L	<2.0	<20.0	<2.0	<2.0	<2.0	<10.0
Chloromethane	ug/L	<5.0	<50.0	<5.0	<5.0	<5.0	<25.0
2-Chlorotoluene	ug/L	<2.0	<20.0	<2.0	<2.0	<2.0	<10.0
4-Chlorotoluene	ug/L	<2.0	<20.0	<2.0	<2.0	<2.0	<10.0
Dibromochloromethane	ug/L	<2.0	<20.0	<2.0	<2.0	<2.0	<10.0
1,2-Dibromo-3-chloropropane	ug/L	<2.0	<20.0	<2.0	<2.0	<2.0	<10.0
1,2-Dibromoethane (EDB)	ug/L	<2.0	<20.0	<2.0	<2.0	<2.0	<10.0
Dibromomethane	ug/L	<2.0	<20.0	<2.0	<2.0	<2.0	<10.0
1,2-Dichlorobenzene	ug/L	<2.0	<20.0	<2.0	<2.0	<2.0	<10.0
1,3-Dichlorobenzene	ug/L	<2.0	<20.0	<2.0	<2.0	<2.0	<10.0
1,4-Dichlorobenzene	ug/L	<2.0	<20.0	<2.0	<2.0	<2.0	<10.0
Dichlorodifluoromethane	ug/L	<2.0	<20.0	<2.0	<2.0	<2.0	<10.0
1,1-Dichloroethane	ug/L	<2.0	<20.0	<2.0	<2.0	<2.0	<10.0
1,2-Dichloroethane	ug/L	<2.0	<20.0	<2.0	<2.0	<2.0	<10.0
1,1-Dichloroethene	ug/L	<2.0	<20.0	<2.0	<2.0	<2.0	<10.0
cis-1,2-Dichloroethene	ug/L	<2.0	<20.0	<2.0	<2.0	<2.0	<10.0
trans-1,2-Dichloroethene	ug/L	<2.0	<20.0	<2.0	<2.0	<2.0	<10.0
Dichlorofluoromethane	ug/L	<2.0	<20.0	<2.0	<2.0	<2.0	<10.0

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

Analytical Results

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CLIENT SAMPLE ID:		RW-3	RW-4	RW-5	RW-6	RW-7	RW-8
LAB SAMPLE ID:		5052922-07	5052922-08	5052922-09	5052922-10	5052922-11	5052922-12
SAMPLE DATE:		05/29/15	05/29/15	05/29/15	05/29/15	05/29/15	05/29/15
RECEIVED DATE:		05/29/15	05/29/15	05/29/15	05/29/15	05/29/15	05/29/15
MATRIX	Units	Water	Water	Water	Water	Water	Water
VOLATILE ORGANICS BY EPA METHOD 8260B (GC/MS) (continued)							
1,2-Dichloropropane	ug/L	<2.0	<20.0	<2.0	<2.0	<2.0	<10.0
1,3-Dichloropropane	ug/L	<2.0	<20.0	<2.0	<2.0	<2.0	<10.0
2,2-Dichloropropane	ug/L	<2.0	<20.0	<2.0	<2.0	<2.0	<10.0
1,1-Dichloropropene	ug/L	<2.0	<20.0	<2.0	<2.0	<2.0	<10.0
cis-1,3-Dichloropropene	ug/L	<2.0	<20.0	<2.0	<2.0	<2.0	<10.0
trans-1,3-Dichloropropene	ug/L	<2.0	<20.0	<2.0	<2.0	<2.0	<10.0
Diisopropyl ether (DIPE)	ug/L	<2.0	<20.0	<2.0	<2.0	<2.0	<10.0
Ethyl tert-butyl ether (ETBE)	ug/L	<2.0	<20.0	<2.0	<2.0	<2.0	<10.0
Ethylbenzene	ug/L	**3.5 [1]**	**137**	<2.0	<2.0	<2.0	**97.6**
Hexachlorobutadiene	ug/L	<2.0	<20.0	<2.0	<2.0	<2.0	<10.0
2-Hexanone	ug/L	<10.0	<100	<10.0	<10.0	<10.0	<50.0
Isopropylbenzene (Cumene)	ug/L	<2.0	<20.0	<2.0	<2.0	<2.0	<10.0
4-Isopropyltoluene	ug/L	<2.0	<20.0	<2.0	<2.0	<2.0	<10.0
Methyl tert-butyl ether (MTBE)	ug/L	<2.0	<20.0	<2.0	<2.0	<2.0	<10.0
4-Methyl-2-pentanone	ug/L	<10.0	<100	<10.0	<10.0	<10.0	<50.0
Methylene chloride	ug/L	<10.0	<100	<10.0	<10.0	<10.0	<50.0
Naphthalene	ug/L	<2.0	**81.9**	<2.0	<2.0	<2.0	**19.0 [1]**
n-Propylbenzene	ug/L	<2.0	<20.0	<2.0	<2.0	<2.0	<10.0
Styrene	ug/L	<2.0	<20.0	<2.0	<2.0	<2.0	<10.0
1,1,1,2-Tetrachloroethane	ug/L	<2.0	<20.0	<2.0	<2.0	<2.0	<10.0
1,1,2,2-Tetrachloroethane	ug/L	<2.0	<20.0	<2.0	<2.0	<2.0	<10.0
Tetrachloroethene	ug/L	<2.0	<20.0	<2.0	<2.0	<2.0	<10.0
Toluene	ug/L	**26.6**	**930**	<2.0	<2.0	<2.0	**48.2**
1,2,3-Trichlorobenzene	ug/L	<2.0	<20.0	<2.0	<2.0	<2.0	<10.0
1,2,4-Trichlorobenzene	ug/L	<2.0	<20.0	<2.0	<2.0	<2.0	<10.0
1,1,1-Trichloroethane	ug/L	<2.0	<20.0	<2.0	<2.0	<2.0	<10.0
1,1,2-Trichloroethane	ug/L	<2.0	<20.0	<2.0	<2.0	<2.0	<10.0
Trichloroethene	ug/L	<2.0	<20.0	<2.0	<2.0	<2.0	<10.0
Trichlorofluoromethane (Freon 11)	ug/L	<2.0	<20.0	<2.0	<2.0	<2.0	<10.0
1,2,3-Trichloropropane	ug/L	<2.0	<20.0	<2.0	<2.0	<2.0	<10.0
1,2,4-Trimethylbenzene	ug/L	**4.0 [1]**	**316**	<2.0	<2.0	<2.0	**154**
1,3,5-Trimethylbenzene	ug/L	<2.0	**80.9**	<2.0	<2.0	<2.0	**50.9**
Vinyl chloride	ug/L	<2.0	<20.0	<2.0	<2.0	<2.0	<10.0
o-Xylene	ug/L	**11.2**	**492**	<2.0	<2.0	<2.0	**403**
m- & p-Xylenes	ug/L	**21.1**	**799**	<2.0	<2.0	<2.0	**626**
1,2-Dichloroethane-d4	[surr]	98.8%	99.3%	98.2%	97.6%	99.0%	98.5%

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

Maryland spectral Services

Analytical Chemistry Services

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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-096

Project Number: 05-056-RF96

Project Manager: Jeffery Stein

Report Issued: 06/05/15 12:59

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

CLIENT SAMPLE ID:		RW-3	RW-4	RW-5	RW-6	RW-7	RW-8
LAB SAMPLE ID:		5052922-07	5052922-08	5052922-09	5052922-10	5052922-11	5052922-12
SAMPLE DATE:		05/29/15	05/29/15	05/29/15	05/29/15	05/29/15	05/29/15
RECEIVED DATE:		05/29/15	05/29/15	05/29/15	05/29/15	05/29/15	05/29/15
MATRIX	Units	Water	Water	Water	Water	Water	Water
VOLATILE ORGANICS BY EPA METHOD 8260B (GC/MS) (continued)							
Toluene-d8	[surr]	98.4%	97.3%	98.6%	97.2%	97.7%	98.2%
4-Bromofluorobenzene	[surr]	95.3%	95.7%	92.3%	92.2%	90.4%	97.6%
GASOLINE RANGE ORGANICS BY EPA 8015B (Water)							
Gasoline-Range Organics	ug/L	<100	**3170**	<100	<100	<100	**1340**
a,a,a-Trifluorotoluene	[surr]	101%	101%	101%	101%	101%	101%
DIESEL RANGE ORGANICS BY EPA 3510/8015B (Water)							
Diesel-Range Organics	mg/L	**0.29**	**4.05**	<0.24	**0.38**	<0.22	**0.73**
o-Terphenyl	[surr]	81.5%	109%	85.3%	86.1%	82.0%	91.8%

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Analytical Results

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Project: RF-096

Project Number: 05-056-RF96

Project Manager: Jeffery Stein

Report Issued: 06/05/15 12:59

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

CLIENT SAMPLE ID:		RW-9	RW-10	RW-11	RW-12	MW-7
LAB SAMPLE ID:		5052922-13	5052922-14	5052922-15	5052922-16	5052922-17
SAMPLE DATE:		05/29/15	05/29/15	05/29/15	05/29/15	05/29/15
RECEIVED DATE:		05/29/15	05/29/15	05/29/15	05/29/15	05/29/15
MATRIX	Units	Water	Water	Water	Water	Water
VOLATILE ORGANICS BY EPA METHOD 8260B (GC/MS) (Water)						
Acetone	ug/L	<10.0	<10.0	<50.0	<10.0	<10.0
tert-Amyl alcohol (TAA)	ug/L	<20.0	<20.0	**120**	<20.0	<20.0
tert-Amyl methyl ether (TAME)	ug/L	<2.0	<2.0	<10.0	<2.0	<2.0
Benzene	ug/L	<2.0	**2.6 [1]**	**278**	<2.0	<2.0
Bromobenzene	ug/L	<2.0	<2.0	<10.0	<2.0	<2.0
Bromochloromethane	ug/L	<2.0	<2.0	<10.0	<2.0	<2.0
Bromodichloromethane	ug/L	<2.0	<2.0	<10.0	<2.0	<2.0
Bromoform	ug/L	<2.0	<2.0	<10.0	<2.0	<2.0
Bromomethane	ug/L	<5.0	<5.0	<25.0	<5.0	<5.0
tert-Butanol (TBA)	ug/L	<15.0	<15.0	<75.0	<15.0	<15.0
2-Butanone (MEK)	ug/L	<10.0	<10.0	<50.0	<10.0	<10.0
n-Butylbenzene	ug/L	<2.0	<2.0	<10.0	<2.0	<2.0
sec-Butylbenzene	ug/L	<2.0	<2.0	<10.0	<2.0	<2.0
tert-Butylbenzene	ug/L	<2.0	<2.0	<10.0	<2.0	<2.0
Carbon disulfide	ug/L	<2.0	<2.0	<10.0	<2.0	<2.0
Carbon tetrachloride	ug/L	<2.0	<2.0	<10.0	<2.0	<2.0
Chlorobenzene	ug/L	<2.0	<2.0	<10.0	<2.0	<2.0
Chloroethane	ug/L	<5.0	<5.0	<25.0	<5.0	<5.0
Chloroform	ug/L	<2.0	<2.0	<10.0	<2.0	<2.0
Chloromethane	ug/L	<5.0	<5.0	<25.0	<5.0	<5.0
2-Chlorotoluene	ug/L	<2.0	<2.0	<10.0	<2.0	<2.0
4-Chlorotoluene	ug/L	<2.0	<2.0	<10.0	<2.0	<2.0
Dibromochloromethane	ug/L	<2.0	<2.0	<10.0	<2.0	<2.0
1,2-Dibromo-3-chloropropane	ug/L	<2.0	<2.0	<10.0	<2.0	<2.0
1,2-Dibromoethane (EDB)	ug/L	<2.0	<2.0	<10.0	<2.0	<2.0
Dibromomethane	ug/L	<2.0	<2.0	<10.0	<2.0	<2.0
1,2-Dichlorobenzene	ug/L	<2.0	<2.0	<10.0	<2.0	<2.0
1,3-Dichlorobenzene	ug/L	<2.0	<2.0	<10.0	<2.0	<2.0
1,4-Dichlorobenzene	ug/L	<2.0	<2.0	<10.0	<2.0	<2.0
Dichlorodifluoromethane	ug/L	<2.0	<2.0	<10.0	<2.0	<2.0
1,1-Dichloroethane	ug/L	<2.0	<2.0	<10.0	<2.0	<2.0
1,2-Dichloroethane	ug/L	<2.0	<2.0	<10.0	<2.0	<2.0
1,1-Dichloroethene	ug/L	<2.0	<2.0	<10.0	<2.0	<2.0
cis-1,2-Dichloroethene	ug/L	<2.0	<2.0	<10.0	<2.0	<2.0
trans-1,2-Dichloroethene	ug/L	<2.0	<2.0	<10.0	<2.0	<2.0
Dichlorofluoromethane	ug/L	<2.0	<2.0	<10.0	<2.0	<2.0

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Maryland spectral Services

Analytical Chemistry Services

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Analytical Results

1500 Caton Center Dr Suite G
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410-247-7600
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VELAP ID 460040

Project: RF-096

Project Number: 05-056-RF96

Project Manager: Jeffery Stein

Report Issued: 06/05/15 12:59

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

CLIENT SAMPLE ID:		RW-9	RW-10	RW-11	RW-12	MW-7
LAB SAMPLE ID:		5052922-13	5052922-14	5052922-15	5052922-16	5052922-17
SAMPLE DATE:		05/29/15	05/29/15	05/29/15	05/29/15	05/29/15
RECEIVED DATE:		05/29/15	05/29/15	05/29/15	05/29/15	05/29/15
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	<10.0	<2.0	<2.0
1,3-Dichloropropane	ug/L	<2.0	<2.0	<10.0	<2.0	<2.0
2,2-Dichloropropane	ug/L	<2.0	<2.0	<10.0	<2.0	<2.0
1,1-Dichloropropene	ug/L	<2.0	<2.0	<10.0	<2.0	<2.0
cis-1,3-Dichloropropene	ug/L	<2.0	<2.0	<10.0	<2.0	<2.0
trans-1,3-Dichloropropene	ug/L	<2.0	<2.0	<10.0	<2.0	<2.0
Diisopropyl ether (DIPE)	ug/L	<2.0	<2.0	<10.0	<2.0	<2.0
Ethyl tert-butyl ether (ETBE)	ug/L	<2.0	<2.0	<10.0	<2.0	<2.0
Ethylbenzene	ug/L	<2.0	<2.0	**467**	<2.0	<2.0
Hexachlorobutadiene	ug/L	<2.0	<2.0	<10.0	<2.0	<2.0
2-Hexanone	ug/L	<10.0	<10.0	<50.0	<10.0	<10.0
Isopropylbenzene (Cumene)	ug/L	<2.0	<2.0	**23.9 [1]**	<2.0	<2.0
4-Isopropyltoluene	ug/L	<2.0	<2.0	<10.0	<2.0	<2.0
Methyl tert-butyl ether (MTBE)	ug/L	<2.0	<2.0	<10.0	<2.0	<2.0
4-Methyl-2-pentanone	ug/L	<10.0	<10.0	<50.0	<10.0	<10.0
Methylene chloride	ug/L	<10.0	<10.0	<50.0	<10.0	<10.0
Naphthalene	ug/L	<2.0	<2.0	**158**	<2.0	<2.0
n-Propylbenzene	ug/L	<2.0	<2.0	**54.0**	<2.0	<2.0
Styrene	ug/L	<2.0	<2.0	<10.0	<2.0	<2.0
1,1,1,2-Tetrachloroethane	ug/L	<2.0	<2.0	<10.0	<2.0	<2.0
1,1,2,2-Tetrachloroethane	ug/L	<2.0	<2.0	<10.0	<2.0	<2.0
Tetrachloroethene	ug/L	<2.0	<2.0	<10.0	<2.0	<2.0
Toluene	ug/L	<2.0	<2.0	**638**	<2.0	<2.0
1,2,3-Trichlorobenzene	ug/L	<2.0	<2.0	<10.0	<2.0	<2.0
1,2,4-Trichlorobenzene	ug/L	<2.0	<2.0	<10.0	<2.0	<2.0
1,1,1-Trichloroethane	ug/L	<2.0	<2.0	<10.0	<2.0	<2.0
1,1,2-Trichloroethane	ug/L	<2.0	<2.0	<10.0	<2.0	<2.0
Trichloroethene	ug/L	<2.0	<2.0	<10.0	<2.0	<2.0
Trichlorofluoromethane (Freon 11)	ug/L	<2.0	<2.0	<10.0	<2.0	<2.0
1,2,3-Trichloropropane	ug/L	<2.0	<2.0	<10.0	<2.0	<2.0
1,2,4-Trimethylbenzene	ug/L	<2.0	<2.0	**530**	<2.0	<2.0
1,3,5-Trimethylbenzene	ug/L	<2.0	<2.0	**67.6**	<2.0	<2.0
Vinyl chloride	ug/L	<2.0	<2.0	<10.0	<2.0	<2.0
o-Xylene	ug/L	<2.0	<2.0	**308**	<2.0	<2.0
m- & p-Xylenes	ug/L	<2.0	<2.0	**859**	<2.0	<2.0
1,2-Dichloroethane-d4	[surr]	98.4%	97.9%	98.8%	97.2%	99.9%

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

Maryland spectral Services

Analytical Chemistry Services

nelac

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: Jeffery Stein

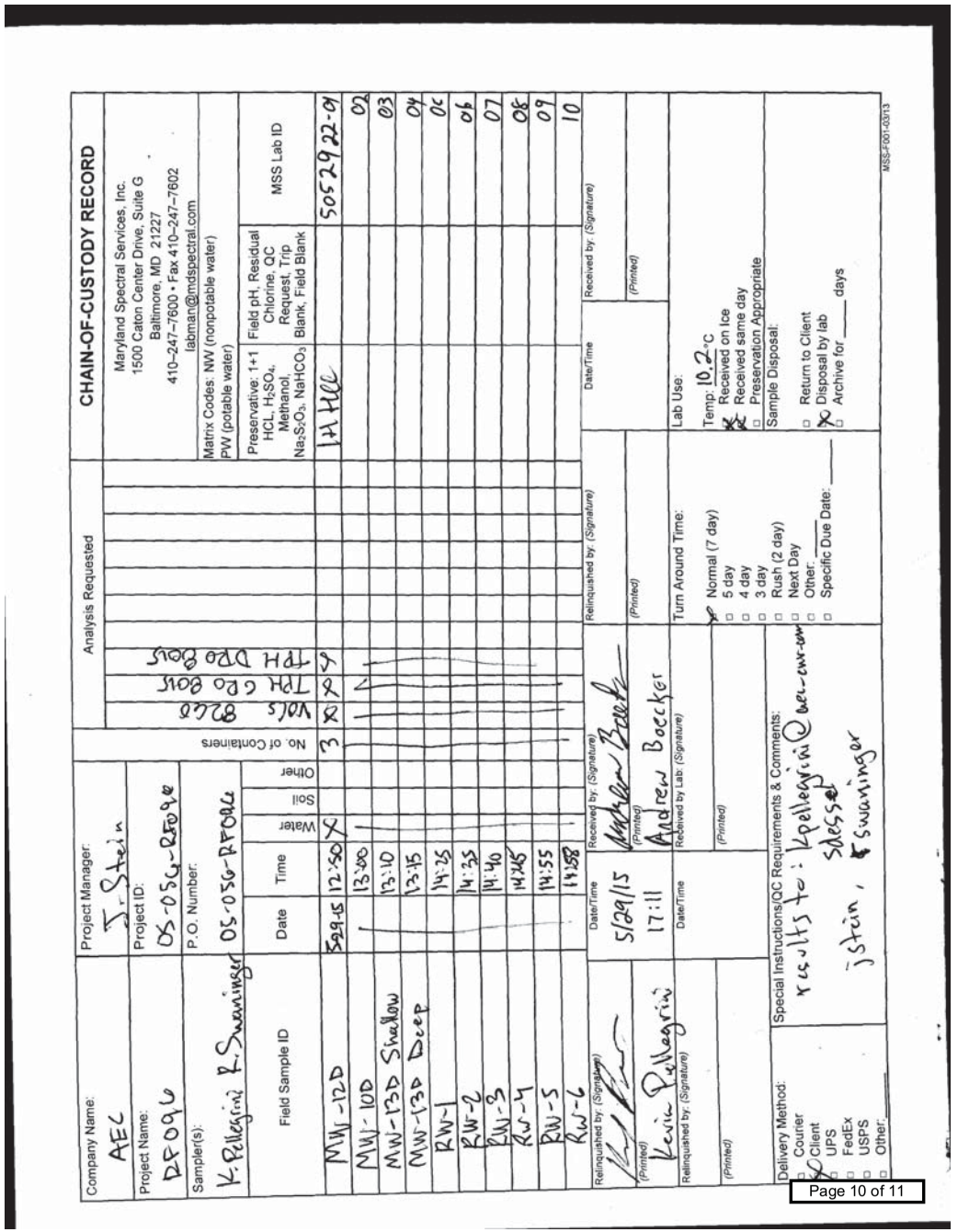
Report Issued: 06/05/15 12:59

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

CLIENT SAMPLE ID:		RW-9	RW-10	RW-11	RW-12	MW-7
LAB SAMPLE ID:		5052922-13	5052922-14	5052922-15	5052922-16	5052922-17
SAMPLE DATE:		05/29/15	05/29/15	05/29/15	05/29/15	05/29/15
RECEIVED DATE:		05/29/15	05/29/15	05/29/15	05/29/15	05/29/15
MATRIX	Units	Water	Water	Water	Water	Water
VOLATILE ORGANICS BY EPA METHOD 8260B (GC/MS) (continued)						
Toluene-d8	[surr]	97.3%	96.5%	96.5%	98.4%	97.6%
4-Bromofluorobenzene	[surr]	88.8%	88.7%	94.8%	92.3%	91.0%
GASOLINE RANGE ORGANICS BY EPA 8015B (Water)						
Gasoline-Range Organics	ug/L	<100	<100	**3510**	<100	<100
a,a,a-Trifluorotoluene	[surr]	101%	101%	102%	100%	101%
DIESEL RANGE ORGANICS BY EPA 3510/8015B (Water)						
Diesel-Range Organics	mg/L	<0.22	**0.37**	**1.94**	<0.21	<0.20
o-Terphenyl	[surr]	84.5%	83.7%	82.8%	78.9%	78.3%

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

As a NELAP accredited laboratory, MSS certifies that all applicable test results meet NELAC requirements.



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_2SO_4, Methanol, $Na_2S_2O_3$, $NaHCO_3$

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

MSS Lab ID

Company Name: AEC
Project Manager: J. Stein
Project Name: RF096
Project ID: 05-056-RF096
Sampler(s): K. Pellegrini, R. Swaninger
P.O. Number: 05-056-RF096

Analysis Requested: VOCs 8260, TPH GRO Bars, TPH DRO Bars

Field Sample ID	Date	Time	Water	Soil	Other	No. of Containers			MSS Lab ID
MW-12D	5-29-15	12:50	X			3	X	X	5052922-01
MW-10D		13:00							02
MW-13D Shallow		13:10							03
MW-13D Deep		13:15							04
RW-1		14:25							05
RW-2		14:35							06
RW-3		14:40							07
RW-4		14:45							08
RW-5		14:55							09
RW-6		14:58							10

Relinquished by: (Signature) — Date/Time — Received by: (Signature)
(Printed)

Relinquished by: (Signature) — Date/Time: 5/29/15 17:11 — Received by Lab: (Signature): Andrew Boecker
(Printed): Kevin Pellegrini

Relinquished by: (Signature) — Date/Time — Received by: (Signature)
(Printed)

Lab Use:
Temp: 10.2 °C
Received on Ice
Received same day
Preservation Appropriate

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

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

Delivery Method:
Courier
Client
UPS
FedEx
USPS
Other: ____

Special Instructions/QC Requirements & Comments:
Results to: kpellegrini@mdspectral.com
JStein, RSwaninger

MSS-F001-03/13

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)

Company Name:	Project Manager:
AEC	J Stein
Project Name:	**Project ID:**
RF096	05-056-RF096
Sampler(s):	**P.O. Number:**
KPellegrini/RSwaninger	05-056-RF096

Field Sample ID	Date	Time	Water	Soil	Other	No. of Containers	VOCs 8260	TPH GRO 8015	TPH DRO 8015	Preservative: 1+1 HCL, H_2SO_4, Methanol, $Na_2S_2O_3$, $NaHCO_3$	Field pH, Residual Chlorine, QC Request, Trip Blank, Field Blank	MSS Lab ID
RW-7	5-29-15	15:00	X			3	X	X	X	1+1 HCL		505292211
RW-8	↑	15:05	|	|	|	|	|	|	↑			12
RW-9		15:15										13
RW-10		15:25										14
RW-11		15:35										15
RW-12		15:40										16
MW-7		15:45										17

Relinquished by: (Signature)	Date/Time	Received by: (Signature)	Relinquished by: (Signature)	Date/Time	Received by: (Signature)
(Printed) Kevin Pellegrini	5/29/15 17:11	(Printed) Andrew Boecker	(Printed)		(Printed)
Relinquished by: (Signature)	Date/Time	Received by Lab: (Signature)			
(Printed)		(Printed)			

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

Lab Use:
Temp: 10.2 °C
- [x] Received on Ice
- [x] Received same day
- [ ] Preservation Appropriate

Delivery Method:
- [ ] Courier
- [x] Client
- [ ] UPS
- [ ] FedEx
- [ ] USPS
- [ ] Other: _____

Special Instructions/QC Requirements & Comments:
results to: kpellegrini@aec-env.com
sdesse1
rswaninger
jstein

Sample Disposal:
- [ ] Return to Client
- [x] Disposal by lab
- [ ] Archive for _____ days

MSS-F001-03/13