



November 2, 2015

Ms. Susan Bull
Maryland Department of the Environment (MDE)
Oil Control Program
1800 Washington Boulevard
Baltimore, Maryland 21230-1719

**Re: Infiltration Response Report
Gasoline Fueling Station – Royal Farms #001
2620 Mountain Road
Joppa, Maryland 21085
Facility ID: 3965
AEC Project No. 05-056-RF001**

Dear Ms. Bull:

Advantage Environmental Consultants, LLC (AEC) mobilized to the above referenced Site on August 3, 2015, in response a report of petroleum infiltration in one recently excavated pit on the eastern portion of the Site. A Site map illustrating the proposed Site conditions and the pit location is included as Attachment A. The pit was excavated on Friday, July 31, 2015 and was reported to be dry at close of business that day. On Monday, August 3, 2015, the pit contained approximately six inches of water presented with a sheen. The water exhibited a red, flakey surface characteristic of an iron sheen. Petroleum absorbent pads failed to capture any petroleum on the pond surface. No petroleum odor was detected near the pond. The soil located at the soil water interface was scanned with a photoionization detector (PID) for the presence of petroleum hydrocarbon vapors. No vapors were detected around the pond vicinity. Susan Bull of Maryland Department of the Environment (MDE) also responded on Site to the report of infiltration. MDE requested that water and soil samples be collected from the pond and analyzed. Water and soil samples were collected at the soil water interface and analyzed for volatile organic compounds (VOCs) including fuel oxygenates and naphthalene per United States Environmental Protection Agency (EPA) Analytical Method 8260, and Total Petroleum Hydrocarbons (TPH) Diesel Range Organics (DRO) and Gasoline Range Organics (GRO) per EPA Method 8015B. MDE's Report of Observations is included as Attachment B.

Laboratory analytical results for the water sample show elevated concentrations of benzene, methyl tert-butyl ether (MTBE), naphthalene, TPH GRO, and TPH DRO with respect to MDE's Generic Numeric Cleanup Standards for Groundwater, 2008 (Regulatory Standards). Laboratory analytical results for the water sample show detectable concentrations of acetone, tert-amyl alcohol (TAA), tert-butanol (TBA), n-butylbenzene, diisopropyl ether (DIPE), ethylbenzene, isopropylbenzene (cumene), n-propylbenzene, o-xylenes, and m- & p-xylenes. All liquid was removed by Petroleum Management, Inc., of Baltimore, Maryland via vacuum truck. Disposal manifest documentation is included as Attachment C.

Laboratory analytical results for the soil sample show detectable concentrations of acetone, TBA, and TPH DRO below Regulatory Standards.

Photographs of the Site taken on August 3, 2015 are presented in Attachment D. Laboratory analytical results are included as Attachment E.

If you have any questions regarding information in this report or if we can be of further assistance, please contact AEC at (301) 776-0500.

Sincerely,

Advantage Environmental Consultants, LLC



Kevin Pellegrini
Staff Scientist



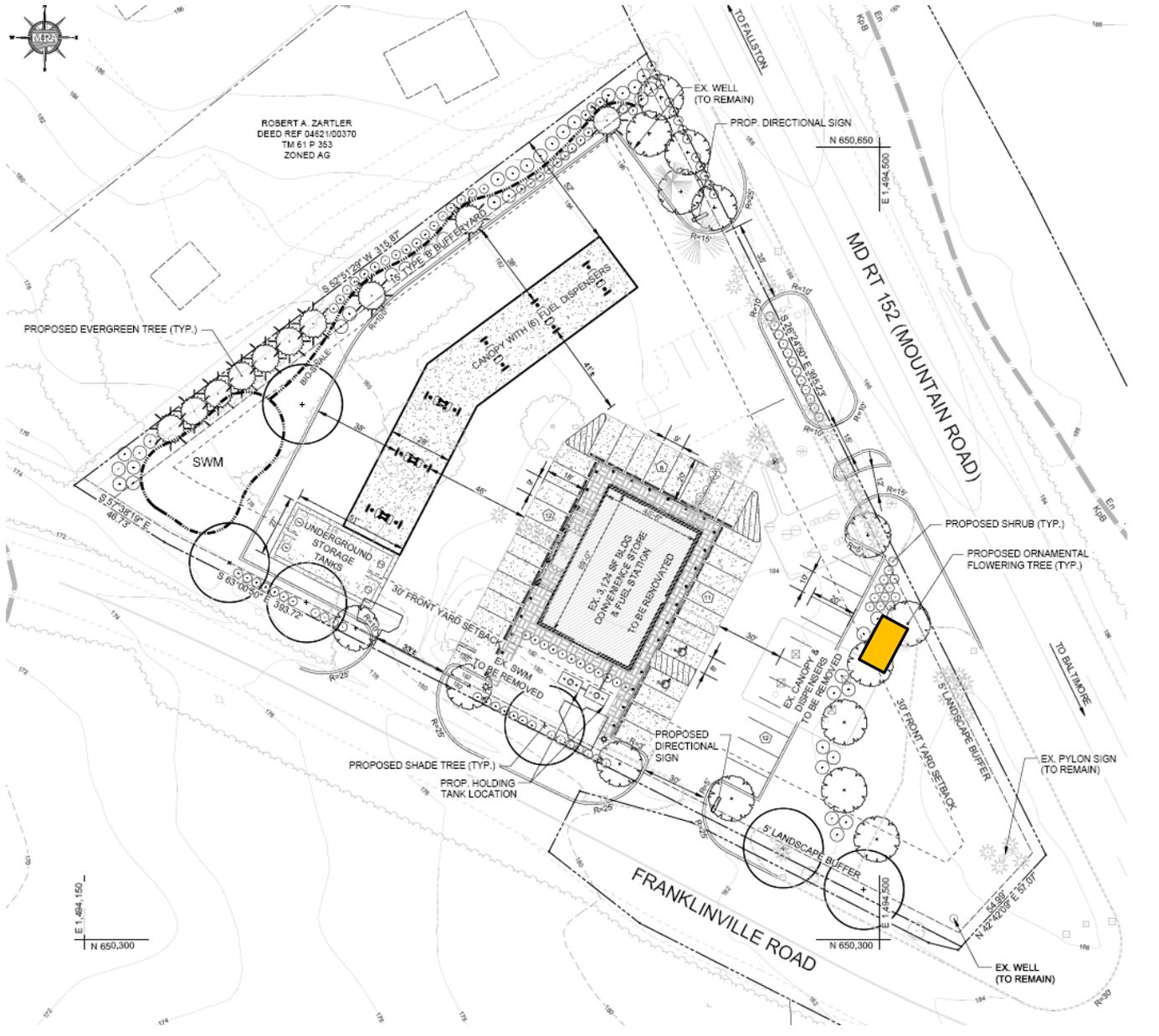
Jeffery S. Stein, P.G.
Principal

cc: Mr. Thomas E. Ruszin III – Royal Farms

Attachments

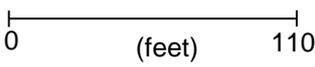
ATTACHMENT A

SITE MAP



 = Pit Location

Approximate Scale



8610 Washington Boulevard, Suite 217
 Jessup, Maryland 20794
 Phone: 301-776-0500 Fax: 301-776-1123

Attachment A – Site Map
 Royal Farms Store #1
 2620 Mountain Road
 Joppa, Maryland 21085

Work Order No.:
 05-056-RF001

Report Date:
 September 2015

Drawn By:
 KPP

ATTACHMENT B
MDE REPORT OF OBSERVATIONS

MARYLAND DEPARTMENT OF THE ENVIRONMENT
 1800 Washington Boulevard, Suite 620 • Baltimore Maryland 21230-1719
 (410) 537-3442 • 1-800-633-6101 • <http://www.mde.maryland.gov>
LAND MANAGEMENT ADMINISTRATION
 Oil Control Program

Report of Observations

Type of Inspection/Observations: B-3	Date: August 3, 2015
Site/Facility Name: Royal Farms #1	Facility ID #: 3965
Address: 2620 Mountain Road	Case #: 05-0357HA
City / County: Joppa, Harford County	Permit #:

Remarks: On this date, this writer responded to a report of petroleum infiltration into a pit recently excavated to become one of three storm water management ponds on the eastern portion of the property. Earth work was started on Friday. When the contractor left the site at close of business on Friday, the pit was dry. Water presented with a sheen was detected this morning when they arrived on-site. The detection was properly reported to MDE-OCP.

Upon arrival this morning about 6 inches of water was observed at the bottom of an approximate 7 foot deep excavation. The water was reddish color in color and surface of the water presented with what appeared to be iron sheen. Petroleum absorbent pads were placed on top of the water. No infiltration of petroleum was observed onto the pads. A representative from AEC collected water samples from the pond. Petroleum Management Services is in route, with a vacuum truck, to evacuate the water from the excavation. Soil samples will be collected at the soil water interface once all water is recovered from the excavation.

1. At a minimum, all soil and water samples should be analyze for full-suite volatile organic compounds (VOCs), including fuel oxygenates and naphthalene, using EPA Method 8260 and for TPH-DRO and TPH-GRO using EPA Method 8015B.
2. Submit copies of water disposal receipts and all analytical reports to the MDE-OCP for review and inclusion in the case file.

The below posted photos were taken on this date by Regional Supervisor Susan Bull. The first photo depicts the water discovered on the excavation. The absorbent pads floating on the water do not indicate the presence of petroleum on the water. The second photo shows the water at the edge of the excavation. The iron sheen and flock are visible.

**MDE/LMA/OCP
Report of Observation**



NOTES

- Report the following conditions to the Department immediately, but not later than 2 hours after the detection, at **410-537-3442** during normal business hours, or to the Emergency Response Division hotline at **1-866-633-4686**:
 - An oil spill or discharge
 - If a storage system fails a test for tightness,
 - A storage system is determined to be leaking,
 - There exists evidence of a discharge
 - Two consecutive inconclusive tests
 - Presence of liquid phase hydrocarbons
- Reports should not be made via voice messages to OCP case managers.
- Operating without a permit or in violation of a permit, regulation, or law may result in the assessment of civil or administrative penalties and or other legal sanctions.

MDE Representative: <i>Susan R Bell</i>	Person Interviewed:
Signature: <i>Susan R Bell</i>	Signature:
Date: <i>8-3-15</i>	Date:

ATTACHMENT C
DISPOSAL MANIFEST



Petroleum Management, Inc.



Day: Monday
Date: 08-31-15

Job Location: Royal Farm
2650 Mountain NC
32114 RD
Contact: _____
Phone: _____

Bill To: Royal Farm

Contact: _____
Phone: _____

JOB DESCRIPTION:

Run out sludge and water from a tank on site

Title / Name	Equipment Type/ Number	Start Time	Stop Time	Total Hours
<u>Mark Harris</u>	<u>VAC</u>	<u>11:00am</u>	<u>2:00pm</u>	<u>3</u>

Materials:

Description	Quantity

SubContractors:

Disposal:

	Amount in Gallons	Manifest Number
Liquid Disposal		
Sludge Disposal	<u>400</u>	<u>12060</u>
Other		

Petroleum Management

Print Name: Mark Harris
Signature: [Signature]
Date: 08-03-15

Client

Print Name: Kevin Pellegrini
Signature: [Signature]
Date: 08-03-15

Petroleum Management, Inc.

MD. Oil Operations Permit No: 2011-OPT-38311
 EPA Identification No: MDR000525278
 Federal ID No: 52-2014536

5218 Curtis Avenue ♦ Baltimore, Maryland 21226 ♦ Phone 410-354-0200 ♦ Fax 410-721-1390

Bill of Lading/Manifest No **12060**

Generator/Shipper: <i>Royal Farm</i>		Billing Name: <i>Royal Farm</i>	
Site Address: <i>2620 Montross Rd</i>		Address:	
City: <i>DMA</i>	State: <i>MD</i>	City:	State: Zip:
Phone: ()	Contact:	Phone: ()	Contact:

Purchase Order NO:

MATERIAL CHARACTERIZATION (CHECK ALL THAT APPLY):

Description:	Gallons	Description:	Gallons	Description:	Gallons
Gasoline, 3, UN1203, PGII		Hazardous Waste, Liquid, 9 NA3082, PGIII		JP#4	
#2 Fuel Oil, 3, NA1993, PGIII		Hazardous Waste, Solid, 9 NA3077, PGIII		JP#5	
#4 Fuel Oil, 3 NA1993, PGIII		Paint Thinners, 3, UN1263, PGI		Jet A	
#6 Fuel Oil, 3, NA1993, PGIII		Ethylene Glycol, 9, UN3082, PGIII		Sludge	<i>40</i>
Diesel, 3, NA1993, PGIII		Lube Oil		Petroleum Contaminated Water	
Flammable Liquids, NOS, 3, UN1993, PGI		Waste Oil		Other:	
Corrosive Liquids, NOS, 8, UN1760, PGII		Kerosene		Other:	
No. of Drums		No. of Tanks:		Other:	
Scale Weights (Soil): Total: (Tons)		Tare: (Tons)		Net: (Tons)	

Service Description: *Drop and haul tank that have water and sludge contents*

PLACARDS TENDERED: YES NO EMERGENCY CONTACT (410) 354-0200

Generator/Shipper Certification Statement

As the generator or shipper, I hereby certify that this material is properly classified and does not contain Polychlorinated Biphenyls (PCB'S). To the best of my knowledge it has not been mixed, combined or blended in any amount with any other material defined as hazardous waste under applicable law. Generator/Shipper agrees to indemnify and hold Petroleum Management, Inc. harmless for any damages arising from or in any way relating to a breach of this Certification Statement.

<input checked="" type="checkbox"/> Generator/Shipper Authorized Agent (Print) <i>Kevin Bellmann</i>	Date of Service <i>08-05-15</i>
<input checked="" type="checkbox"/> Generator/Shipper Authorized Agent Signature <i>[Signature]</i>	

HAULER/CARRIER INFORMATION

Co. Name Petroleum Management, Inc.		Driver Name (print) <i>Merrell Hines</i>
Street 5218 Curtis Avenue		Driver Signature <i>[Signature]</i>
City Baltimore	State MD	Zip 21226
		Phone <i>(410) 354-0200</i>

The above mentioned materials have been received by this facility and will be handled in accordance with all applicable rules and regulations. All quantities are subject to final verification by this facility and are indicated in far right box.	RECEIVING FACILITY ACCEPTANCE	
	Facility Name	
	Acceptance Signature	
Phone	Total Quantity Received	

White - Original Yellow - Transporter Pink - Facility Gold - Customer

ATTACHMENT D
SITE PHOTOGRAPHS



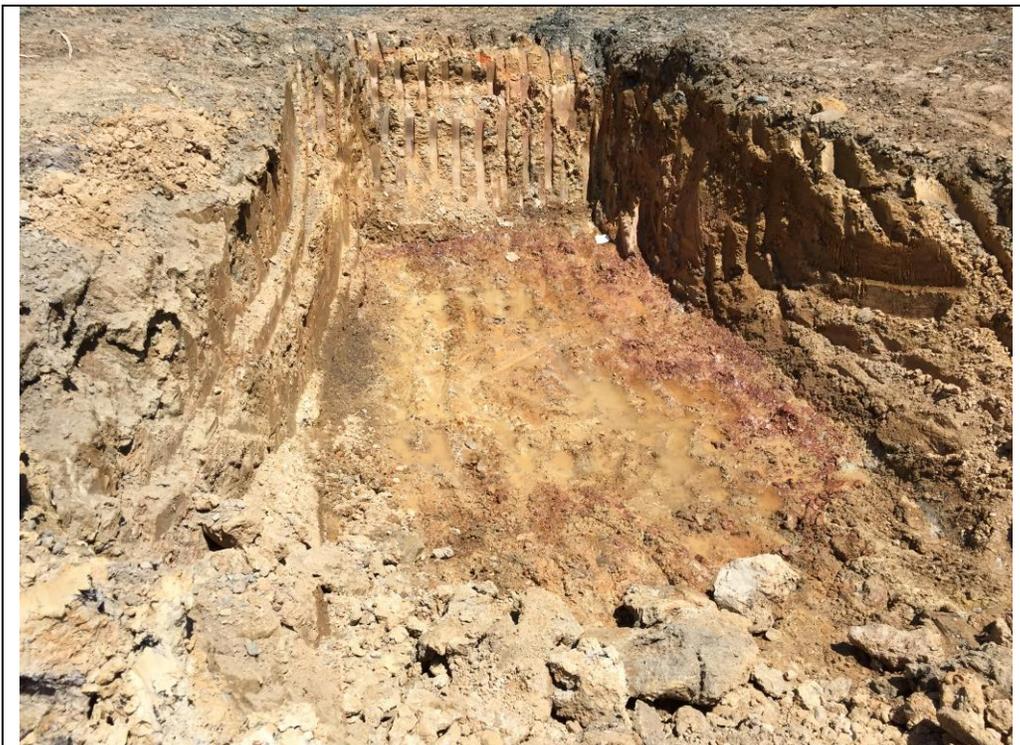
Photograph 1: View of the pond facing south.



Photograph 2: View of the water surface facing north.



Photograph 3: View of the pond facing west



Photograph 4: View of the pit following vacuum completion.

ATTACHMENT E
LABORATORY ANALYTICAL RESULTS

11 August 2015

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

Enclosed are the results of analyses for samples received by the laboratory on 08/03/15 14:30.

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

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

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

Sincerely,



Will Brewington
Staff Chemist

Analytical Results

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

Reported:
08/11/15 17:59

Project: RF-001

Project Number: 05-056 RF-001

Project Manager: Jeffery Stein

Client Sample ID	Alternate Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
POND 1		5080304-01	Nonpotable Water	08/03/15 10:30	08/03/15 14:30
POND 1		5080304-02	Soil	08/03/15 12:45	08/03/15 14:30



Will Brewington, Staff Chemist

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

Analytical Results

Project: RF-001

Project Number: 05-056 RF-001

Project Manager: Jeffery Stein

Reported:

08/11/15 17:59

POND 1

5080304-01 (Nonpotable Water)

Sample Date: 08/03/15

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Quantitation Limit (LOQ)	Dilution	Prepared	Analyzed	Analyst
VOLATILE ORGANICS BY EPA METHOD 8260B (GC/MS)									
Acetone	12.7		ug/L	10.0	10.0	1	08/04/15	08/04/15 14:21	WB
tert-Amyl alcohol (TAA)	91.5		ug/L	20.0	20.0	1	08/04/15	08/04/15 14:21	WB
tert-Amyl methyl ether (TAME)	ND		ug/L	5.0	2.0	1	08/04/15	08/04/15 14:21	WB
Benzene	10.2		ug/L	5.0	2.0	1	08/04/15	08/04/15 14:21	WB
Bromobenzene	ND		ug/L	5.0	2.0	1	08/04/15	08/04/15 14:21	WB
Bromochloromethane	ND		ug/L	5.0	2.0	1	08/04/15	08/04/15 14:21	WB
Bromodichloromethane	ND		ug/L	5.0	2.0	1	08/04/15	08/04/15 14:21	WB
Bromoform	ND		ug/L	5.0	2.0	1	08/04/15	08/04/15 14:21	WB
Bromomethane	ND		ug/L	5.0	5.0	1	08/04/15	08/04/15 14:21	WB
tert-Butanol (TBA)	1530	E	ug/L	15.0	15.0	1	08/04/15	08/04/15 14:21	WB
2-Butanone (MEK)	ND		ug/L	10.0	10.0	1	08/04/15	08/04/15 14:21	WB
n-Butylbenzene	5.4		ug/L	5.0	2.0	1	08/04/15	08/04/15 14:21	WB
sec-Butylbenzene	ND		ug/L	5.0	2.0	1	08/04/15	08/04/15 14:21	WB
tert-Butylbenzene	ND		ug/L	5.0	2.0	1	08/04/15	08/04/15 14:21	WB
Carbon disulfide	ND		ug/L	5.0	2.0	1	08/04/15	08/04/15 14:21	WB
Carbon tetrachloride	ND		ug/L	5.0	2.0	1	08/04/15	08/04/15 14:21	WB
Chlorobenzene	ND		ug/L	5.0	2.0	1	08/04/15	08/04/15 14:21	WB
Chloroethane	ND		ug/L	5.0	5.0	1	08/04/15	08/04/15 14:21	WB
Chloroform	ND		ug/L	5.0	2.0	1	08/04/15	08/04/15 14:21	WB
Chloromethane	ND		ug/L	5.0	5.0	1	08/04/15	08/04/15 14:21	WB
2-Chlorotoluene	ND		ug/L	5.0	2.0	1	08/04/15	08/04/15 14:21	WB
4-Chlorotoluene	ND		ug/L	5.0	2.0	1	08/04/15	08/04/15 14:21	WB
Dibromochloromethane	ND		ug/L	5.0	2.0	1	08/04/15	08/04/15 14:21	WB
1,2-Dibromo-3-chloropropane	ND		ug/L	5.0	2.0	1	08/04/15	08/04/15 14:21	WB
1,2-Dibromoethane (EDB)	ND		ug/L	5.0	2.0	1	08/04/15	08/04/15 14:21	WB
Dibromomethane	ND		ug/L	5.0	2.0	1	08/04/15	08/04/15 14:21	WB
1,2-Dichlorobenzene	ND		ug/L	5.0	2.0	1	08/04/15	08/04/15 14:21	WB
1,3-Dichlorobenzene	ND		ug/L	5.0	2.0	1	08/04/15	08/04/15 14:21	WB
1,4-Dichlorobenzene	ND		ug/L	5.0	2.0	1	08/04/15	08/04/15 14:21	WB
Dichlorodifluoromethane	ND		ug/L	5.0	2.0	1	08/04/15	08/04/15 14:21	WB
1,1-Dichloroethane	ND		ug/L	5.0	2.0	1	08/04/15	08/04/15 14:21	WB
1,2-Dichloroethane	ND		ug/L	5.0	2.0	1	08/04/15	08/04/15 14:21	WB
1,1-Dichloroethene	ND		ug/L	5.0	2.0	1	08/04/15	08/04/15 14:21	WB
cis-1,2-Dichloroethene	ND		ug/L	5.0	2.0	1	08/04/15	08/04/15 14:21	WB

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Will Brewington, Staff Chemist

Analytical Results

Project: RF-001

Project Number: 05-056 RF-001

Project Manager: Jeffery Stein

Reported:

08/11/15 17:59

POND 1

5080304-01 (Nonpotable Water)

Sample Date: 08/03/15

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Quantitation Limit (LOQ)	Dilution	Prepared	Analyzed	Analyst
VOLATILE ORGANICS BY EPA METHOD 8260B (GC/MS) (continued)									
trans-1,2-Dichloroethene	ND		ug/L	5.0	2.0	1	08/04/15	08/04/15 14:21	WB
Dichlorofluoromethane	ND		ug/L	5.0	2.0	1	08/04/15	08/04/15 14:21	WB
1,2-Dichloropropane	ND		ug/L	5.0	2.0	1	08/04/15	08/04/15 14:21	WB
1,3-Dichloropropane	ND		ug/L	5.0	2.0	1	08/04/15	08/04/15 14:21	WB
2,2-Dichloropropane	ND		ug/L	5.0	2.0	1	08/04/15	08/04/15 14:21	WB
1,1-Dichloropropene	ND		ug/L	5.0	2.0	1	08/04/15	08/04/15 14:21	WB
cis-1,3-Dichloropropene	ND		ug/L	5.0	2.0	1	08/04/15	08/04/15 14:21	WB
trans-1,3-Dichloropropene	ND		ug/L	5.0	2.0	1	08/04/15	08/04/15 14:21	WB
Diisopropyl ether (DIPE)	2.0	J	ug/L	5.0	2.0	1	08/04/15	08/04/15 14:21	WB
Ethyl tert-butyl ether (ETBE)	ND		ug/L	5.0	2.0	1	08/04/15	08/04/15 14:21	WB
Ethylbenzene	203	E	ug/L	5.0	2.0	1	08/04/15	08/04/15 14:21	WB
Hexachlorobutadiene	ND		ug/L	5.0	2.0	1	08/04/15	08/04/15 14:21	WB
2-Hexanone	ND		ug/L	10.0	10.0	1	08/04/15	08/04/15 14:21	WB
Isopropylbenzene (Cumene)	22.6		ug/L	5.0	2.0	1	08/04/15	08/04/15 14:21	WB
4-Isopropyltoluene	ND		ug/L	5.0	2.0	1	08/04/15	08/04/15 14:21	WB
Methyl tert-butyl ether (MTBE)	36.5		ug/L	5.0	2.0	1	08/04/15	08/04/15 14:21	WB
4-Methyl-2-pentanone	ND		ug/L	10.0	10.0	1	08/04/15	08/04/15 14:21	WB
Methylene chloride	ND		ug/L	10.0	10.0	1	08/04/15	08/04/15 14:21	WB
Naphthalene	20.5		ug/L	5.0	2.0	1	08/04/15	08/04/15 14:21	WB
n-Propylbenzene	36.5		ug/L	5.0	2.0	1	08/04/15	08/04/15 14:21	WB
Styrene	ND		ug/L	5.0	2.0	1	08/04/15	08/04/15 14:21	WB
1,1,1,2-Tetrachloroethane	ND		ug/L	5.0	2.0	1	08/04/15	08/04/15 14:21	WB
1,1,2,2-Tetrachloroethane	ND		ug/L	5.0	2.0	1	08/04/15	08/04/15 14:21	WB
Tetrachloroethene	ND		ug/L	5.0	2.0	1	08/04/15	08/04/15 14:21	WB
Toluene	ND		ug/L	5.0	2.0	1	08/04/15	08/04/15 14:21	WB
1,2,3-Trichlorobenzene	ND		ug/L	5.0	2.0	1	08/04/15	08/04/15 14:21	WB
1,2,4-Trichlorobenzene	ND		ug/L	5.0	2.0	1	08/04/15	08/04/15 14:21	WB
1,1,1-Trichloroethane	ND		ug/L	5.0	2.0	1	08/04/15	08/04/15 14:21	WB
1,1,2-Trichloroethane	ND		ug/L	5.0	2.0	1	08/04/15	08/04/15 14:21	WB
Trichloroethene	ND		ug/L	5.0	2.0	1	08/04/15	08/04/15 14:21	WB
Trichlorofluoromethane (Freon 11)	ND		ug/L	5.0	2.0	1	08/04/15	08/04/15 14:21	WB
1,2,3-Trichloropropane	ND		ug/L	5.0	2.0	1	08/04/15	08/04/15 14:21	WB
1,2,4-Trimethylbenzene	ND		ug/L	5.0	2.0	1	08/04/15	08/04/15 14:21	WB
1,3,5-Trimethylbenzene	ND		ug/L	5.0	2.0	1	08/04/15	08/04/15 14:21	WB

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Will Brewington, Staff Chemist

Analytical Results

Project: RF-001

Project Number: 05-056 RF-001

Project Manager: Jeffery Stein

Reported:

08/11/15 17:59

POND 1

5080304-01 (Nonpotable Water)

Sample Date: 08/03/15

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Quantitation Limit (LOQ)	Dilution	Prepared	Analyzed	Analyst
VOLATILE ORGANICS BY EPA METHOD 8260B (GC/MS) (continued)									
Vinyl chloride	ND		ug/L	5.0	2.0	1	08/04/15	08/04/15 14:21	WB
o-Xylene	2.4	J	ug/L	5.0	2.0	1	08/04/15	08/04/15 14:21	WB
m- & p-Xylenes	11.0		ug/L	5.0	2.0	1	08/04/15	08/04/15 14:21	WB
<i>Surrogate: 1,2-Dichloroethane-d4</i>				79.8-114	95 %		08/04/15	08/04/15 14:21	
<i>Surrogate: Toluene-d8</i>				89.9-110	99 %		08/04/15	08/04/15 14:21	
<i>Surrogate: 4-Bromofluorobenzene</i>				79.6-110	100 %		08/04/15	08/04/15 14:21	
GASOLINE RANGE ORGANICS BY EPA 8015B									
Gasoline-Range Organics	388		ug/L	100	100	1	08/04/15	08/04/15 18:25	GM
<i>Surrogate: a,a,a-Trifluorotoluene</i>				85-115	104 %		08/04/15	08/04/15 18:25	
DIESEL RANGE ORGANICS BY EPA 3510/8015B									
Diesel-Range Organics	2.08		mg/L	0.20	0.20	1	08/08/15	08/08/15 16:45	CMK
<i>Surrogate: o-Terphenyl</i>				60-120	104 %		08/08/15	08/08/15 16:45	

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Will Brewington, Staff Chemist

Analytical Results

Project: RF-001

Project Number: 05-056 RF-001

Project Manager: Jeffery Stein

Reported:

08/11/15 17:59

POND 1

5080304-02 (Soil)

Sample Date: 08/03/15

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Quantitation Limit (LOQ)	Dilution	Prepared	Analyzed	Analyst
VOLATILE ORGANICS BY EPA METHOD 8260B (GC/MS)									
Acetone	13.6		ug/kg dry	12.0	12.0	1	08/04/15	08/04/15 14:56	WB
tert-Amyl alcohol (TAA)	ND		ug/kg dry	60.2	60.2	1	08/04/15	08/04/15 14:56	WB
tert-Amyl methyl ether (TAME)	ND		ug/kg dry	6.0	2.4	1	08/04/15	08/04/15 14:56	WB
Benzene	ND		ug/kg dry	6.0	2.4	1	08/04/15	08/04/15 14:56	WB
Bromobenzene	ND		ug/kg dry	6.0	2.4	1	08/04/15	08/04/15 14:56	WB
Bromochloromethane	ND		ug/kg dry	6.0	2.4	1	08/04/15	08/04/15 14:56	WB
Bromodichloromethane	ND		ug/kg dry	6.0	2.4	1	08/04/15	08/04/15 14:56	WB
Bromoform	ND		ug/kg dry	6.0	2.4	1	08/04/15	08/04/15 14:56	WB
Bromomethane	ND		ug/kg dry	6.0	6.0	1	08/04/15	08/04/15 14:56	WB
tert-Butanol (TBA)	217		ug/kg dry	60.2	60.2	1	08/04/15	08/04/15 14:56	WB
2-Butanone (MEK)	ND		ug/kg dry	12.0	12.0	1	08/04/15	08/04/15 14:56	WB
n-Butylbenzene	ND		ug/kg dry	6.0	2.4	1	08/04/15	08/04/15 14:56	WB
sec-Butylbenzene	ND		ug/kg dry	6.0	2.4	1	08/04/15	08/04/15 14:56	WB
tert-Butylbenzene	ND		ug/kg dry	6.0	2.4	1	08/04/15	08/04/15 14:56	WB
Carbon disulfide	ND		ug/kg dry	6.0	2.4	1	08/04/15	08/04/15 14:56	WB
Carbon tetrachloride	ND		ug/kg dry	6.0	2.4	1	08/04/15	08/04/15 14:56	WB
Chlorobenzene	ND		ug/kg dry	6.0	2.4	1	08/04/15	08/04/15 14:56	WB
Chloroethane	ND		ug/kg dry	6.0	6.0	1	08/04/15	08/04/15 14:56	WB
Chloroform	ND		ug/kg dry	6.0	2.4	1	08/04/15	08/04/15 14:56	WB
Chloromethane	ND		ug/kg dry	6.0	6.0	1	08/04/15	08/04/15 14:56	WB
2-Chlorotoluene	ND		ug/kg dry	6.0	2.4	1	08/04/15	08/04/15 14:56	WB
4-Chlorotoluene	ND		ug/kg dry	6.0	2.4	1	08/04/15	08/04/15 14:56	WB
1,2-Dibromo-3-chloropropane	ND		ug/kg dry	6.0	2.4	1	08/04/15	08/04/15 14:56	WB
Dibromochloromethane	ND		ug/kg dry	6.0	2.4	1	08/04/15	08/04/15 14:56	WB
1,2-Dibromoethane (EDB)	ND		ug/kg dry	6.0	2.4	1	08/04/15	08/04/15 14:56	WB
Dibromomethane	ND		ug/kg dry	6.0	2.4	1	08/04/15	08/04/15 14:56	WB
1,2-Dichlorobenzene	ND		ug/kg dry	6.0	2.4	1	08/04/15	08/04/15 14:56	WB
1,3-Dichlorobenzene	ND		ug/kg dry	6.0	2.4	1	08/04/15	08/04/15 14:56	WB
1,4-Dichlorobenzene	ND		ug/kg dry	6.0	2.4	1	08/04/15	08/04/15 14:56	WB
Dichlorodifluoromethane	ND		ug/kg dry	6.0	2.4	1	08/04/15	08/04/15 14:56	WB
1,1-Dichloroethane	ND		ug/kg dry	6.0	2.4	1	08/04/15	08/04/15 14:56	WB
1,2-Dichloroethane	ND		ug/kg dry	6.0	2.4	1	08/04/15	08/04/15 14:56	WB
1,1-Dichloroethene	ND		ug/kg dry	6.0	2.4	1	08/04/15	08/04/15 14:56	WB
cis-1,2-Dichloroethene	ND		ug/kg dry	6.0	2.4	1	08/04/15	08/04/15 14:56	WB

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Will Brewington, Staff Chemist

Analytical Results

Project: RF-001

Project Number: 05-056 RF-001

Project Manager: Jeffery Stein

Reported:

08/11/15 17:59

POND 1

5080304-02 (Soil)

Sample Date: 08/03/15

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Quantitation Limit (LOQ)	Dilution	Prepared	Analyzed	Analyst
VOLATILE ORGANICS BY EPA METHOD 8260B (GC/MS) (continued)									
trans-1,2-Dichloroethene	ND		ug/kg dry	6.0	2.4	1	08/04/15	08/04/15 14:56	WB
Dichlorofluoromethane	ND		ug/kg dry	6.0	2.4	1	08/04/15	08/04/15 14:56	WB
1,2-Dichloropropane	ND		ug/kg dry	6.0	2.4	1	08/04/15	08/04/15 14:56	WB
1,3-Dichloropropane	ND		ug/kg dry	6.0	2.4	1	08/04/15	08/04/15 14:56	WB
2,2-Dichloropropane	ND		ug/kg dry	6.0	2.4	1	08/04/15	08/04/15 14:56	WB
1,1-Dichloropropene	ND		ug/kg dry	6.0	2.4	1	08/04/15	08/04/15 14:56	WB
cis-1,3-Dichloropropene	ND		ug/kg dry	6.0	2.4	1	08/04/15	08/04/15 14:56	WB
trans-1,3-Dichloropropene	ND		ug/kg dry	6.0	2.4	1	08/04/15	08/04/15 14:56	WB
Diisopropyl ether (DIPE)	ND		ug/kg dry	6.0	2.4	1	08/04/15	08/04/15 14:56	WB
Ethyl tert-butyl ether (ETBE)	ND		ug/kg dry	6.0	2.4	1	08/04/15	08/04/15 14:56	WB
Ethylbenzene	ND		ug/kg dry	6.0	2.4	1	08/04/15	08/04/15 14:56	WB
Hexachlorobutadiene	ND		ug/kg dry	6.0	2.4	1	08/04/15	08/04/15 14:56	WB
2-Hexanone	ND		ug/kg dry	12.0	12.0	1	08/04/15	08/04/15 14:56	WB
Isopropylbenzene (Cumene)	ND		ug/kg dry	6.0	2.4	1	08/04/15	08/04/15 14:56	WB
4-Isopropyltoluene	ND		ug/kg dry	6.0	2.4	1	08/04/15	08/04/15 14:56	WB
Methyl tert-butyl ether (MTBE)	ND		ug/kg dry	6.0	2.4	1	08/04/15	08/04/15 14:56	WB
4-Methyl-2-pentanone	ND		ug/kg dry	12.0	12.0	1	08/04/15	08/04/15 14:56	WB
Methylene chloride	ND		ug/kg dry	12.0	12.0	1	08/04/15	08/04/15 14:56	WB
Naphthalene	ND		ug/kg dry	6.0	2.4	1	08/04/15	08/04/15 14:56	WB
n-Propylbenzene	ND		ug/kg dry	6.0	2.4	1	08/04/15	08/04/15 14:56	WB
Styrene	ND		ug/kg dry	6.0	2.4	1	08/04/15	08/04/15 14:56	WB
1,1,1,2-Tetrachloroethane	ND		ug/kg dry	6.0	2.4	1	08/04/15	08/04/15 14:56	WB
1,1,2,2-Tetrachloroethane	ND		ug/kg dry	6.0	2.4	1	08/04/15	08/04/15 14:56	WB
Tetrachloroethene	ND		ug/kg dry	6.0	2.4	1	08/04/15	08/04/15 14:56	WB
Toluene	ND		ug/kg dry	6.0	2.4	1	08/04/15	08/04/15 14:56	WB
1,2,3-Trichlorobenzene	ND		ug/kg dry	6.0	2.4	1	08/04/15	08/04/15 14:56	WB
1,2,4-Trichlorobenzene	ND		ug/kg dry	6.0	2.4	1	08/04/15	08/04/15 14:56	WB
1,1,1-Trichloroethane	ND		ug/kg dry	6.0	2.4	1	08/04/15	08/04/15 14:56	WB
1,1,2-Trichloroethane	ND		ug/kg dry	6.0	2.4	1	08/04/15	08/04/15 14:56	WB
Trichloroethene	ND		ug/kg dry	6.0	2.4	1	08/04/15	08/04/15 14:56	WB
Trichlorofluoromethane (Freon 11)	ND		ug/kg dry	6.0	2.4	1	08/04/15	08/04/15 14:56	WB
1,2,3-Trichloropropane	ND		ug/kg dry	6.0	2.4	1	08/04/15	08/04/15 14:56	WB
1,2,4-Trimethylbenzene	ND		ug/kg dry	6.0	2.4	1	08/04/15	08/04/15 14:56	WB
1,3,5-Trimethylbenzene	ND		ug/kg dry	6.0	2.4	1	08/04/15	08/04/15 14:56	WB

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Will Brewington, Staff Chemist

Analytical Results

Project: RF-001

Project Number: 05-056 RF-001

Project Manager: Jeffery Stein

Reported:

08/11/15 17:59

POND 1

5080304-02 (Soil)

Sample Date: 08/03/15

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Quantitation Limit (LOQ)	Dilution	Prepared	Analyzed	Analyst
VOLATILE ORGANICS BY EPA METHOD 8260B (GC/MS) (continued)									
Vinyl chloride	ND		ug/kg dry	6.0	2.4	1	08/04/15	08/04/15 14:56	WB
o-Xylene	ND		ug/kg dry	6.0	2.4	1	08/04/15	08/04/15 14:56	WB
m- & p-Xylenes	ND		ug/kg dry	6.0	2.4	1	08/04/15	08/04/15 14:56	WB
Surrogate: 1,2-Dichloroethane-d4		82.9-124.4		98 %	08/04/15		08/04/15 14:56		
Surrogate: Toluene-d8		83.5-115		99 %	08/04/15		08/04/15 14:56		
Surrogate: 4-Bromofluorobenzene		64.6-115.4		92 %	08/04/15		08/04/15 14:56		
GASOLINE RANGE ORGANICS BY EPA 5030/8015B									
Gasoline-Range Organics	ND		mg/kg dry	0.12	0.12	1	08/04/15	08/04/15 22:58	CMK
Surrogate: a,a,a-Trifluorotoluene		85-115		104 %	08/04/15		08/04/15 22:58		
DIESEL RANGE ORGANICS BY EPA 3540/8015B									
Diesel-Range Organics	16.0		mg/kg dry	9.6	9.6	1	08/07/15	08/10/15 22:35	CMK
Surrogate: o-Terphenyl		70-130		100 %	08/07/15		08/10/15 22:35		
PERCENT SOLIDS BY ASTM D2216-05									
Percent Solids	83		%			1	08/04/15	08/04/15 14:35	AB

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Will Brewington, Staff Chemist

Analytical Results

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Project: RF-001

Project Number: 05-056 RF-001

Project Manager: Jeffery Stein

Reported:

08/11/15 17:59

Notes and Definitions

- J Detected but below the reporting limit; therefore, result is an estimated concentration (CLP J-Flag).
- E The concentration indicated for this analyte is an estimated value above the calibration range of the instrument. This value is considered an estimate (CLP E-flag).
- DET Analyte DETECTED
- ND Analyte NOT DETECTED at or above the reporting limit
- NR Not Reported
- dry Sample results reported on a dry weight basis
- RPD Relative Percent Difference



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Will Brewington, Staff Chemist

