



**VIA ELECTRONIC MAIL**

January 31, 2014

Mr. Alexander Wardle  
Virginia Department of Environmental Quality  
Northern Regional Office  
13901 Crown Court  
Woodbridge, Virginia, 22193

**RE: Fourth Quarter 2013 CAP Monitoring Report  
Fairfax Facility # 26140  
9901 Georgetown Pike  
Great Falls, Fairfax County, Virginia  
PC# 2010-3028**

Dear Mr. Wardle:

Kleinfelder, on behalf of Fairfax Petroleum Realty, LLC (Fairfax), is submitting this Corrective Action Plan (CAP) Monitoring Report for the above-referenced facility. This report includes the results of the groundwater sampling event completed in December 2013.

Please feel free to contact us at (410) 850-0404 should you have questions.

Sincerely,  
**Kleinfelder East, Inc.**

A handwritten signature in blue ink, appearing to read "Paxton Wertz".

Paxton Wertz  
Geologist

A handwritten signature in black ink, appearing to read "Mark C. Steele".

Mark C. Steele  
Program Manager

Attachment

cc: Ms. Megan Tingley – Fairfax Petroleum Realty, LLC



## CAP MONITORING REPORT – FOURTH QUARTER 2013

Fairfax Petroleum Facility # 26140

9901 Georgetown Pike

Great Falls, Fairfax County, Virginia

### REGULATORY INFORMATION

Regulatory Agency:	Virginia Department of Environmental Quality (DEQ)
Agency Contact:	Mr. Alexander Wardle
Pollution Complaint No.:	2010-3028
Current Case Status:	Corrective Action Plan (CAP) Implementation
Reporting Period:	October 1 through December 31, 2013
Last Report:	Corrective Action Plan, November 22, 2013

### GENERAL SITE INFORMATION

Fairfax Petroleum Realty Contact:	Ms. Megan Tingley
Consultant Contact:	Mr. Mark C. Steele
Facility Status:	Inactive retail service station with auto repair facilities.
Area Property Use:	See Local Area Map ( <b>Figure 1</b> )
Monitoring Wells:	MW-1 through MW-3, MW-5, MW-6S, MW-6D, MW-7 through MW-18D, W-1 through W-7, and PW-1
Site Geology:	Schist saprolite grading to competent schist bedrock
Surficial Groundwater Flow Direction:	Southeast

## ACTIVITIES COMPLETED THIS PERIOD

### December 17 through 19, 2013 – Groundwater Gauging/Sampling

Wells Gauged and Sampled:	MW-1, MW-5, MW-6S, MW-7 through MW-11, MW-13 through MW-16D, W-1 through W-7 and PW-1
Wells Gauged Only:	MW-3, MW-6D, MW-12D, MW-17D and MW-18D,
Liquid Phase Hydrocarbon:	None detected
Minimum/Maximum Depth to Water:	24.63 (MW-6S) / 41.60 (MW-18D) feet
Shallow Groundwater Flow Direction:	Southeast
Shallow Hydraulic Gradient:	0.025 ft/ft between MW-13 and W-5
Deep Groundwater Flow Direction:	Southeast
Deep Hydraulic Gradient:	0.027 ft/ft between PW-1 and MW-18D

On December 17 through 19, Kleinfelder personnel completed groundwater monitoring activities of the on and off-site monitoring well network associated with the Site. Monitoring well MW-3 was dry and not sampled. Deep monitoring wells (MW-6D, MW-12D, MW-17D, and MW-18D) were gauged only and not sampled with VADEQ approval. Monitoring well construction information is provided in **Table 1**. The monitoring well network was sampled via low flow, parameter stabilization methodology. During low-flow groundwater sampling activities, water quality data was obtained from the wells and upon observing stabilized parameters, samples were collected for laboratory analysis.

Groundwater samples were submitted under chain of custody protocol to Lancaster Laboratories for analysis of benzene, toluene, ethylbenzene, total xylenes (BTEX), methyl tertiary butyl ether (MTBE), tertiary amyl methyl ether (TAME), tertiary butyl alcohol (TBA), ethyl tertiary butyl ether (ETBE), and di-Isopropyl ether (DIPE) via Environmental Protection Agency (EPA) Method 8260B. Groundwater monitoring and analytical data for the shallow and deep monitoring wells is summarized in **Tables 2** and **3**. The groundwater analytical data and shallow monitoring well potentiometric surface is depicted on **Figure 2**. A deep monitoring well potentiometric surface map is included as **Figure 3**. An MTBE isoconcentration map of the analytical results from the shallow wells is included as **Figure 4**. The Lancaster Laboratories Analysis Report is included in **Appendix A**.

Groundwater samples from select monitoring wells were submitted under chain of custody protocol to Lancaster Laboratories for the analysis of the natural attenuation indicator parameters nitrate via EPA 353.2, ferrous iron via EPA SM 3500-Fe B modified, sulfate via EPA 300.0, and methane via EPA 8015B. Natural attenuation and select water quality parameters are summarized in **Table 4**. The Lancaster Laboratories Analysis Reports are included in **Appendix A**.

### **December 19, 2013 – Great Falls Swim & Tennis Club**

At the request of the DEQ, Kleinfelder, on behalf of the responsible party, executed an access agreement with the Great Falls Swim and Tennis Club (GFSTC) located at 761 Walker Road to attempt to locate the former potable well and collect a groundwater sample. The location of the GFSTC is depicted on **Figure 1**. According to public records, the well has not been used for potable water since 1994, the pump was to be removed and the well converted to a monitoring well in 1997 for use in the groundwater investigation of the adjacent Great Falls Shopping Center. On December 19, 2013, representatives from Kleinfelder and the GFSTC met to locate the former potable well using a map from the Fairfax County Health Department that marked the well location; however, the well could not be physically identified. The location of the well, as indicated by the well water supply record, is in a heavily landscaped area.

### **ACTIVITIES PLANNED FOR NEXT PERIOD (FIRST QUARTER 2014)**

Activities planned for the First Quarter 2014 includes one groundwater sampling event of the monitoring wells; continued pursuit of access to install off-site monitoring wells, the installation and startup of a temporary soil vapor extraction (SVE) system, and the installation of one on-site recovery well for the pre-design aquifer testing. The startup of the temporary SVE system is subject to the availability and connection of an electrical service from the utility provider.

## LIMITATIONS

This work was performed in a manner consistent with that level of care and skill ordinarily exercised by other members of Kleinfelder's profession practicing in the same locality, under similar conditions and at the date the services are provided. Our conclusions, opinions and recommendations are based on a limited number of observations and data. It is possible that conditions could vary between or beyond the data evaluated. Kleinfelder makes no other representation, guarantee or warranty, express or implied, regarding the services, communication (oral or written), report, opinion, or instrument of service provided.

## FIGURES AND TABLES:

- Figure 1: Local Area Map
- Figure 2: Hydrocarbon Distribution / Groundwater Contour Map  
(December 17 – 19, 2013)
- Figure 3: Deep Monitoring Well Potentiometric Surface Map  
(December 17-19, 2013)
- Figure 4: Shallow Monitoring Well MTBE Isoconcentration Map  
(December 17-19, 2013)
  
- Table 1: Monitoring Well Construction Data
- Table 2: Groundwater Monitoring & Analytical Data – Shallow Wells
- Table 3: Groundwater Monitoring & Analytical Data – Deep Wells
- Table 4: Groundwater Natural Attenuation Parameters & Analytical Data

## APPENDICES:

Appendix A: Lancaster Laboratories Analysis Reports

Prepared By:  
**Kleinfelder East, Inc.**



Paxton D. Wertz  
Geologist



Mark C. Steele  
Program Manager

## FIGURES



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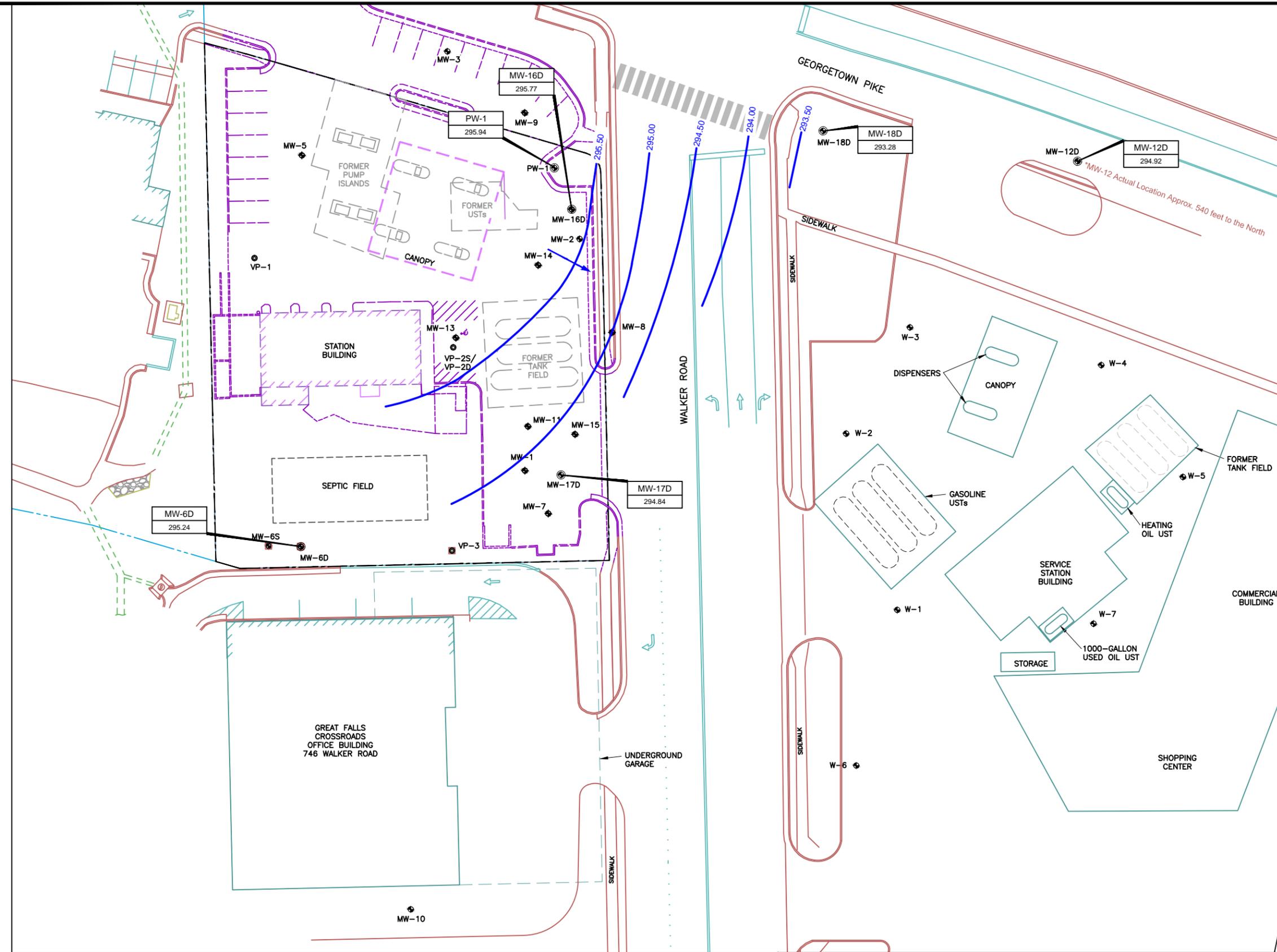
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<b>LOCAL AREA MAP</b>
INACTIVE FAIRFAX FACILITY # 26140 9901 GEORGETOWN PIKE GREAT FALLS, VIRGINIA

FIGURE  
**1**



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 ALBUQUERQUE, NM  
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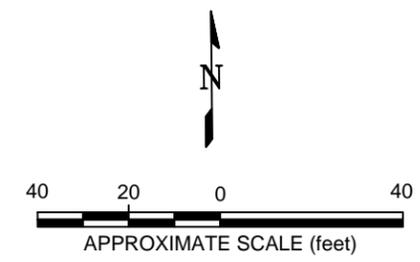


**LEGEND**

- ⊕ MONITORING WELL
- ⊕ 6" BEDROCK WELL
- ⊙ VAPOR MONITORING POINT
- GROUNDWATER CONTOUR  
CONTOUR INTERVAL = 0.50 FEET
- ← GROUNDWATER FLOW DIRECTION

MW-18D	WELL IDENTIFICATION
294.19	GROUNDWATER ELEVATION

NOTE: MW-12D WAS NOT USED TO CALCULATE GROUNDWATER CONTOURS.



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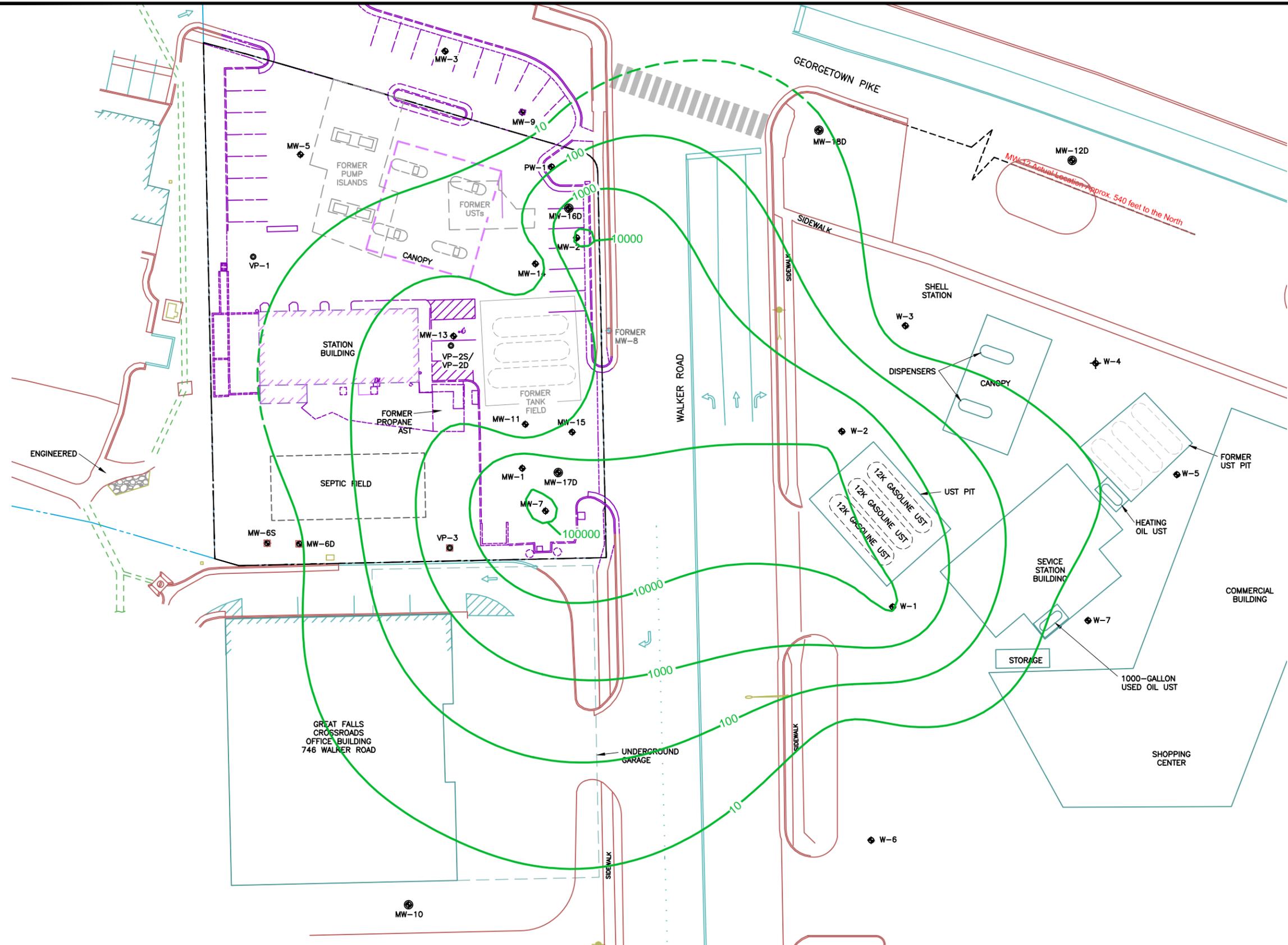
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**DEEP MONITORING WELL  
 POTENTIOMETRIC SURFACE MAP  
 DECEMBER 17-19, 2013**

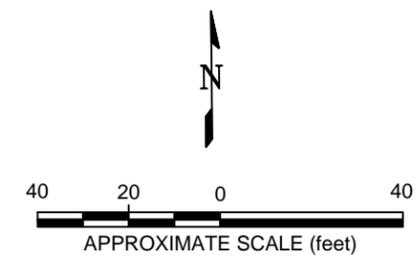
INACTIVE FAIRFAX FACILITY #26140  
 9901 GEORGETOWN PIKE  
 GREAT FALLS, VIRGINIA

FIGURE  
**3**

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 ATTACHED XREFS: XRef: X-Exst-S107520  
 ALBUQUERQUE, NM  
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- LEGEND**
- ◆ MONITORING WELL
  - ⊙ 6" BEDROCK WELL
  - VAPOR MONITORING POINT
  - DECEMBER 17-19, 2013 MTBE ISOCONCENTRATION CONTOUR (DASHED WHERE INFERRED)



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NOTE: BASE PLAN PROVIDED BY BOHLER ENGINEERING.

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**SHALLOW MONITORING WELL MTBE ISOCONCENTRATION MAP (DECEMBER 17-19, 2013)**

INACTIVE FAIRFAX FACILITY #26140  
 9901 GEORGETOWN PIKE  
 GREAT FALLS, VIRGINIA

FIGURE  
**4**

## TABLES

**TABLE 1**  
**Monitoring Well Construction Details**

Inactive Fairfax Facility #26140  
9901 Georgetown Pike  
Great Falls, VA

Monitoring Well	Installation Date	Well Type	Well Diameter (inch)	Top of Casing Elevation (feet)	Riser / Casing Length (feet)	Screen Length / Open Interval (feet)	Total Borehole Depth (feet below grade)	Screen / Open Interval (feet below grade)	Comments
MW-1	7/20/2009	Monitoring	2	328.99	20	17	37	20-37	
MW-2	7/21/2009	Monitoring	2	332.05	25	15	42	25-40	
MW-3	7/22/2009	Monitoring	2	333.98	25	10	35	25-35	
MW-5	7/22/2009	Monitoring	2	332.35	30	10	42	30-40	
MW-6S	9/11/2009	Monitoring	4	321.85	20	15	35	20-35	
MW-6D	9/11/2009	Deep Monitoring	6	323.09	70	50	120	70-120	Open borehole after 70 feet
MW-7	10/16/2009	Monitoring	2	327.96	15	25	40	15-40	
MW-8	10/8/2009	Monitoring	2	330.54	25	20	45	25-45	Abandoned 9/19/2013
MW-9	10/9/2009	Monitoring	2	333.46	25	20	45	25-45	
MW-10	10/12/2009	Monitoring	2	324.17	10	30	40	10-40	
MW-11	10/14/2009	Monitoring	2	329.64	10	30	40	10-40	
MW-12D	1/11/2011	Deep Monitoring	6	326.43	100	60	160	100-160	Open borehole after 100 feet
MW-13	8/18/2011	Monitoring	4	332.00	25	20	45	25-45	
MW-14	8/18/2011	Monitoring	4	331.81	25	20	45	25-45	
MW-15	8/18/2011	Monitoring	4	328.95	25	20	45	25-45	
MW-16D	11/22/2011	Monitoring	6	332.90	85	25	110	85-110	Open borehole after 85 feet.
MW-17D	4/9/2013	Deep Monitoring	6	328.99	68	82	150	68-150	Open borehole after 68 feet.
MW-18D	11/22/2011	Deep Monitoring	6	334.88	97	58	136	92-150	Open borehole after 92 feet. Borehole blocked by rock at 101 feet during testing on 4/30/13.
PW-1	Unknown	Deep Monitoring	6	328.95	55	20	75	55 - 75	Former potable well. Partially abandoned in November 2011. Original well depth was approximately 116 feet.

**Table 2**  
**Groundwater Monitoring & Analytical Data – Shallow Wells**

Inactive Fairfax Facility #26140  
 9901 Georgetown Pike  
 Great Falls, Virginia  
 January 18, 2003 through December 19, 2013

Well ID	Date	Gauging Data					Analytical Data									Comments	
		Top of Casing Elevation (feet)	Depth to Water (feet)	Depth to Hydro-carbon (feet)	Hydro-carbon Thickness (feet)	Corrected GW Elevation (feet)	Benzene (µg/L)	Toluene (µg/L)	Ethyl-benzene (µg/L)	Total Xylenes (µg/L)	MTBE (µg/L)	TBA (µg/L)	DIPE (µg/L)	ETBE (µg/L)	TAME (µg/L)		
MW-1	07/24/2009	100.00	30.45	ND	ND	69.55	13.3	<1.0	0.53	24	193000	NA	NA	NA	NA		
	08/18/2009	328.99	NM	NM	NM	NM	ND(200)	ND(200)	ND(200)	ND(200)	138000	NA	NA	NA	NA		
	10/15/2009	328.99	31.88	ND	ND	297.11	ND(200)	ND(200)	ND(200)	ND(200)	139000	47000	4070	ND(1000)	2130		
	06/22/2010	328.99	28.65	ND	ND	300.34	ND(5)	ND(7)	ND(8)	ND(8)	13000	NA	NA	NA	NA		
	09/30/2010	328.99	31.11	ND	ND	297.88	ND(50)	ND(70)	ND(80)	110	240000	NA	NA	NA	NA		
	12/16/2010	328.99	30.93	ND	ND	298.06	ND(100)	ND(140)	ND(160)	ND(160)	220000	NA	NA	NA	NA		
	02/17/2011	328.99	31.46	ND	ND	297.53	ND(250)	ND(350)	ND(400)	ND(400)	190000	NA	NA	NA	NA		
	05/24/2011	328.99	30.24	ND	ND	298.75	ND(50)	ND(70)	ND(80)	ND(80)	140000	NA	NA	NA	NA		
	09/02/2011	328.99	32.92	ND	ND	296.07	ND(50)	ND(70)	ND(80)	ND(80)	160000	NA	NA	NA	NA		
	12/29/2011	328.99	30.99	ND	ND	298.00	ND(50)	ND(70)	ND(80)	ND(80)	160000	NA	NA	NA	NA		
	06/01/2012	328.99	31.47	ND	ND	297.52	ND(50)	ND(70)	ND(80)	ND(80)	140000	NA	NA	NA	NA		
	02/25/2013	328.99	32.84	ND	ND	296.15	ND(250)	ND(250)	ND(250)	ND(250)	120000	15000	3700	ND(250)	1700		
	06/06/2013	328.99	32.14	ND	ND	296.85	ND(50)	ND(70)	ND(80)	ND(80)	150000	NA	NA	NA	NA		
12/19/2013	328.99	33.06	ND	ND	295.93	ND(250)	ND(250)	ND(250)	ND(250)	84000	6900	2200	ND(250)	1100			
MW-2	07/24/2009	102.90	33.19	ND	ND	69.71	70.2	8.0	1.0	131	107000	NA	NA	NA	NA		
	08/18/2009	332.05	NM	NM	NM	NM	ND(100)	ND(100)	ND(100)	ND(100)	87100	NA	NA	NA	NA		
	10/15/2009	332.05	34.41	ND	ND	297.64	ND(200)	ND(200)	ND(200)	ND(200)	122000	ND(5000)	6130	ND(1000)	2420		
	07/01/2010	332.05	31.63	ND	ND	300.42	ND(100)	91.3	ND(100)	ND(100)	52400	NA	NA	NA	NA		
	09/30/2010	332.05	32.96	ND	ND	299.09	ND(25)	ND(35)	ND(40)	ND(40)	37000	NA	NA	NA	NA		
	12/16/2010	332.05	NM	NM	NM	NM	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	Well inaccessible
	02/17/2011	332.05	34.15	ND	ND	297.90	ND(100)	ND(140)	ND(160)	ND(160)	140000	NA	NA	NA	NA		
	05/24/2011	332.05	32.92	ND	ND	299.13	ND(25)	ND(35)	ND(40)	ND(40)	54000	NA	NA	NA	NA		
	09/02/2011	332.05	35.53	ND	ND	296.52	ND(50)	ND(70)	ND(80)	ND(80)	160000	NA	NA	NA	NA		
	12/29/2011	332.05	33.64	ND	ND	298.41	ND(25)	ND(35)	ND(40)	ND(40)	49000	NA	NA	NA	NA		
	06/01/2012	332.05	34.16	ND	ND	297.89	ND(50)	ND(70)	ND(80)	ND(80)	100000	NA	NA	NA	NA		
	02/25/2013	332.05	35.47	ND	ND	296.58	ND(250)	ND(250)	ND(250)	ND(250)	71000	4600	1900	ND(250)	1100		
	06/06/2013	332.05	34.91	ND	ND	297.14	ND(3)	ND(4)	ND(4)	ND(4)	3500	NA	NA	NA	NA		
12/19/2013	332.05	35.50	ND	ND	296.55	ND(130)	ND(130)	ND(130)	ND(130)	19000	6800	710	ND(130)	280			

Table 2 (Continued)

## Groundwater Monitoring &amp; Analytical Data – Shallow Wells

Inactive Fairfax Facility #26140

9901 Georgetown Pike

Great Falls, Virginia

January 18, 2003 through December 19, 2013

Well ID	Date	Gauging Data					Analytical Data									Comments
		Top of Casing Elevation (feet)	Depth to Water (feet)	Depth to Hydro-carbon (feet)	Hydro-carbon Thickness (feet)	Corrected GW Elevation (feet)	Benzene (µg/L)	Toluene (µg/L)	Ethyl-benzene (µg/L)	Total Xylenes (µg/L)	MTBE (µg/L)	TBA (µg/L)	DIPE (µg/L)	ETBE (µg/L)	TAME (µg/L)	
MW-3	07/24/2009	104.99	33.67	ND	ND	71.32	<0.50	<1.0	<1.0	ND	5.7	NA	NA	NA	NA	
	08/18/2009	333.98	NM	NM	NM	NM	NS	NS	NS	NS	NS	NS	NS	NS	NS	
	10/15/2009	333.98	34.51	ND	ND	299.47	NS	NS	NS	NS	NS	NS	NS	NS	NS	Insufficient volume to sample
	07/01/2010	333.98	32.39	ND	ND	301.59	ND(2)	ND(2)	ND(2)	ND(2)	1.9	NA	NA	NA	NA	
	09/30/2010	333.98	DRY	DRY	DRY	DRY	NS	NS	NS	NS	NS	NS	NS	NS	NS	
	12/16/2010	333.98	DRY	DRY	DRY	DRY	NS	NS	NS	NS	NS	NS	NS	NS	NS	
	02/17/2011	333.98	DRY	DRY	DRY	DRY	NS	NS	NS	NS	NS	NS	NS	NS	NS	
	05/24/2011	333.98	33.63	ND	ND	300.35	ND(0.5)	ND(0.7)	ND(0.8)	ND(0.8)	2 J	NA	NA	NA	NA	
	09/02/2011	333.98	DRY	DRY	DRY	DRY	NS	NS	NS	NS	NS	NS	NS	NS	NS	
	12/29/2011	333.98	DRY	DRY	DRY	DRY	NS	NS	NS	NS	NS	NS	NS	NS	NS	
	06/01/2012	333.98	34.56	ND	ND	299.42	NS	NS	NS	NS	NS	NS	NS	NS	NS	Insufficient water for sample
	02/25/2013	333.98	DRY	DRY	DRY	DRY	NS	NS	NS	NS	NS	NS	NS	NS	NS	
06/06/2013	333.98	NM	NM	NM	NM	NS	NS	NS	NS	NS	NS	NS	NS	NS		
12/18/2013	333.98	DRY	DRY	DRY	DRY	NS	NS	NS	NS	NS	NS	NS	NS	NS		
MW-5	07/24/2009	103.43	30.72	ND	ND	72.71	<0.50	<1.0	<1.0	ND	1.3	NA	NA	NA	NA	
	08/18/2009	332.35	NM	NM	NM	NM	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	0.48	NA	NA	NA	NA	
	10/15/2009	332.35	32.51	ND	ND	299.84	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	11.4	ND(25)	0.46	ND(5.0)	ND(5.0)	
	06/22/2010	332.35	29.40	ND	ND	302.95	ND(0.5)	ND(0.7)	ND(0.8)	ND(0.8)	1 J	NA	NA	NA	NA	
	09/30/2010	332.35	32.30	ND	ND	300.05	ND(0.5)	ND(0.7)	ND(0.8)	ND(0.8)	1	NA	NA	NA	NA	
	12/16/2010	332.35	32.12	ND	ND	300.23	ND(0.5)	ND(0.7)	ND(0.8)	ND(0.8)	12	NA	NA	NA	NA	
	02/17/2011	332.35	32.31	ND	ND	300.04	ND(0.5)	ND(0.7)	ND(0.8)	ND(0.8)	2 J	NA	NA	NA	NA	
	05/24/2011	332.35	30.84	ND	ND	301.51	ND(0.5)	ND(0.7)	ND(0.8)	ND(0.8)	0.9 J	NA	NA	NA	NA	
	09/02/2011	332.35	33.39	ND	ND	298.96	ND(0.5)	ND(0.7)	ND(0.8)	ND(0.8)	0.9 J	NA	NA	NA	NA	
	12/29/2011	332.35	31.36	ND	ND	300.99	ND(0.5)	1 J	ND(0.8)	1 J	7	NA	NA	NA	NA	
	06/01/2012	332.35	31.93	ND	ND	300.42	ND(0.5)	ND(0.7)	ND(0.8)	ND(0.8)	0.8 J	NA	NA	NA	NA	
	02/25/2013	332.35	33.28	ND	ND	299.07	ND(5)	ND(5)	ND(5)	ND(5)	ND(5)	ND(80)	ND(5)	ND(5)	ND(5)	
06/06/2013	332.35	32.55	ND	ND	299.80	ND(0.5)	ND(0.7)	ND(0.8)	ND(0.8)	1 J	NA	NA	NA	NA		
12/18/2013	332.35	33.92	ND	ND	298.43	ND(5)	ND(5)	ND(5)	ND(5)	ND(5)	ND(80)	ND(5)	ND(5)	ND(5)		

Table 2 (Continued)

## Groundwater Monitoring &amp; Analytical Data – Shallow Wells

Inactive Fairfax Facility #26140

9901 Georgetown Pike

Great Falls, Virginia

January 18, 2003 through December 19, 2013

Well ID	Date	Gauging Data					Analytical Data									Comments
		Top of Casing Elevation (feet)	Depth to Water (feet)	Depth to Hydro-carbon (feet)	Hydro-carbon Thickness (feet)	Corrected GW Elevation (feet)	Benzene (µg/L)	Toluene (µg/L)	Ethyl-benzene (µg/L)	Total Xylenes (µg/L)	MTBE (µg/L)	TBA (µg/L)	DIPE (µg/L)	ETBE (µg/L)	TAME (µg/L)	
MW-6S	09/24/2009	NM	NM	NM	NM	NM	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	2.8	ND(25)	2.1	ND(5.0)	ND(5.0)	
	10/15/2009	321.85	23.35	ND	ND	298.50	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	2.8	ND(25)	1.3	ND(5.0)	ND(5.0)	
	06/22/2010	321.85	20.22	ND	ND	301.63	ND(0.5)	ND(0.7)	ND(0.8)	ND(0.8)	2	NA	NA	NA	NA	
	09/30/2010	321.85	23.00	ND	ND	298.85	ND(0.5)	ND(0.7)	ND(0.8)	ND(0.8)	0.9	NA	NA	NA	NA	
	12/16/2010	321.85	22.82	ND	ND	299.03	ND(0.5)	ND(0.7)	ND(0.8)	ND(0.8)	1	NA	NA	NA	NA	
	02/17/2011	321.85	23.02	ND	ND	298.83	ND(0.5)	ND(0.7)	ND(0.8)	ND(0.8)	1 J	NA	NA	NA	NA	
	05/24/2011	321.85	21.66	ND	ND	300.19	ND(0.5)	ND(0.7)	ND(0.8)	ND(0.8)	1 J	NA	NA	NA	NA	
	09/02/2011	321.85	24.04	ND	ND	297.81	ND(0.5)	ND(0.7)	ND(0.8)	ND(0.8)	1 J	NA	NA	NA	NA	
	12/29/2011	321.85	22.15	ND	ND	299.70	ND(0.5)	ND(0.7)	ND(0.8)	ND(0.8)	2 J	NA	NA	NA	NA	
	06/01/2012	321.85	22.72	ND	ND	299.13	ND(0.5)	ND(0.7)	ND(0.8)	ND(0.8)	0.8 J	NA	NA	NA	NA	
	02/25/2013	321.85	24.03	ND	ND	297.82	ND(5)	ND(5)	ND(5)	ND(5)	ND(5)	ND(80)	ND(5)	ND(5)	ND(5)	
	06/06/2013	321.85	23.49	ND	ND	298.36	ND(0.5)	ND(0.7)	ND(0.8)	ND(0.8)	ND(0.5)	NA	NA	NA	NA	
12/17/2013	321.85	24.63	ND	ND	297.22	ND(5)	ND(5)	ND(5)	ND(5)	ND(5)	ND(80)	ND(5)	ND(5)	ND(5)		
MW-7	10/15/2009	327.96	31.21	ND	ND	296.75	2.7	ND(10)	ND(10)	ND(10)	10600	2650	232	ND(50)	217	
	06/22/2010	327.96	28.00	ND	ND	299.96	ND(0.5)	ND(0.7)	ND(0.8)	ND(0.8)	87	NA	NA	NA	NA	
	09/30/2010	327.96	30.24	ND	ND	297.72	ND(0.5)	ND(0.7)	ND(0.8)	ND(0.8)	ND(0.5)	NA	NA	NA	NA	
	12/16/2010	327.96	30.15	ND	ND	297.81	2	ND(1)	ND(2)	ND(2)	2100	NA	NA	NA	NA	
	02/17/2011	327.96	30.75	ND	ND	297.21	ND(10)	ND(14)	ND(16)	ND(16)	9700	NA	NA	NA	NA	
	05/24/2011	327.96	29.56	ND	ND	298.40	ND(0.5)	ND(0.7)	ND(0.8)	ND(0.8)	130	NA	NA	NA	NA	
	09/02/2011	327.96	32.21	ND	ND	295.75	11 J	ND(14)	ND(16)	ND(16)	16000	NA	NA	NA	NA	
	12/29/2011	327.96	30.24	ND	ND	297.72	ND(1)	ND(1)	ND(2)	ND(2)	1600	NA	NA	NA	NA	
	06/01/2012	327.96	30.74	ND	ND	297.22	ND(5)	ND(7)	ND(8)	ND(8)	6700	NA	NA	NA	NA	
	02/25/2013	327.96	32.23	ND	ND	295.73	ND(250)	ND(250)	ND(250)	ND(250)	61000	14000	1700	ND(250)	940	
	06/06/2013	327.96	31.49	ND	ND	296.47	ND(0.5)	ND(0.7)	ND(0.8)	ND(0.8)	950	NA	NA	NA	NA	
12/18/2013	327.96	32.79	ND	ND	295.17	ND(250)	ND(250)	ND(250)	ND(250)	140000	29000	3000	ND(250)	1600		

**Table 2 (Continued)**  
**Groundwater Monitoring & Analytical Data – Shallow Wells**

Inactive Fairfax Facility #26140  
 9901 Georgetown Pike  
 Great Falls, Virginia  
 January 18, 2003 through December 19, 2013

Well ID	Date	Gauging Data					Analytical Data									Comments
		Top of Casing Elevation (feet)	Depth to Water (feet)	Depth to Hydro-carbon (feet)	Hydro-carbon Thickness (feet)	Corrected GW Elevation (feet)	Benzene (µg/L)	Toluene (µg/L)	Ethyl-benzene (µg/L)	Total Xylenes (µg/L)	MTBE (µg/L)	TBA (µg/L)	DIPE (µg/L)	ETBE (µg/L)	TAME (µg/L)	
MW-8	10/15/2009	330.54	34.01	ND	ND	296.53	ND(500)	ND(500)	ND(500)	ND(500)	226000	30800	6250	ND(2500)	3080	
	06/22/2010	330.54	30.91	ND	ND	299.63	ND(5)	ND(7)	ND(8)	ND(8)	15000	NA	NA	NA	NA	
	09/30/2010	330.54	32.97	ND	ND	297.57	11	ND(14)	ND(16)	ND(16)	44000	NA	NA	NA	NA	
	12/16/2010	330.54	32.85	ND	ND	297.69	ND(25)	ND(35)	ND(40)	ND(40)	49000	NA	NA	NA	NA	
	02/17/2011	330.54	33.62	ND	ND	296.92	ND(25)	ND(35)	ND(40)	ND(40)	41000	NA	NA	NA	NA	
	05/24/2011	330.54	32.44	ND	ND	298.10	ND(5)	ND(7)	ND(8)	ND(8)	8400	NA	NA	NA	NA	
	09/02/2011	330.54	35.18	ND	ND	295.36	ND(10)	ND(14)	ND(16)	ND(16)	15000	NA	NA	NA	NA	
	12/29/2011	330.54	33.23	ND	ND	297.31	ND(3)	ND(4)	ND(4)	ND(4)	1800	NA	NA	NA	NA	
	06/01/2012	330.54	33.73	ND	ND	296.81	3 J	ND(1)	ND(2)	4 J	1200	NA	NA	NA	NA	
	02/25/2013	330.54	35.27	ND	ND	295.27	ND(5)	ND(5)	ND(5)	ND(5)	180	280	220	ND(5)	ND(5)	
	06/06/2013	330.54	34.49	ND	ND	296.05	0.7 J	ND(0.7)	ND(0.8)	ND(0.8)	160	NA	NA	NA	NA	
09/19/2013	330.54	36.01	ND	ND	294.53	ND(5)	ND(5)	ND(5)	ND(5)	170	NA	NA	NA	NA	Abandoned (9/19/2013)	
MW-9	10/15/2009	333.46	35.60	ND	ND	297.86	ND(1.0)	0.33	ND(1.0)	0.38	64.7	ND(25)	125	ND(5.0)	2.9	
	06/22/2010	333.46	32.32	ND	ND	301.14	ND(0.5)	ND(0.7)	ND(0.8)	ND(0.8)	22	NA	NA	NA	NA	
	09/30/2010	333.46	34.85	ND	ND	298.61	ND(0.5)	ND(0.7)	ND(0.8)	ND(0.8)	52	NA	NA	NA	NA	
	12/16/2010	333.46	34.73	ND	ND	298.73	ND(0.5)	ND(0.7)	ND(0.8)	ND(0.8)	81	NA	NA	NA	NA	
	02/17/2011	333.46	35.28	ND	ND	298.18	ND(0.5)	ND(0.7)	ND(0.8)	ND(0.8)	48	NA	NA	NA	NA	
	05/24/2011	333.46	34.04	ND	ND	299.42	ND(0.5)	ND(0.7)	ND(0.8)	ND(0.8)	26	NA	NA	NA	NA	
	09/02/2011	333.46	36.86	ND	ND	296.60	ND(0.5)	ND(0.7)	ND(0.8)	ND(0.8)	80	NA	NA	NA	NA	
	12/29/2011	333.46	34.68	ND	ND	298.78	ND(0.5)	2 J	ND(0.8)	1 J	58	NA	NA	NA	NA	
	06/01/2012	333.46	35.17	ND	ND	298.29	ND(0.5)	ND(0.7)	ND(0.8)	ND(0.8)	190	NA	NA	NA	NA	
	02/25/2013	333.46	36.65	ND	ND	296.81	ND(5)	ND(5)	ND(5)	ND(5)	55	ND(80)	17	ND(5)	ND(5)	
	06/06/2013	333.46	35.98	ND	ND	297.48	ND(0.5)	ND(0.7)	ND(0.8)	ND(0.8)	20	NA	NA	NA	NA	
12/18/2013	333.46	37.33	ND	ND	296.13	ND(5)	ND(5)	ND(5)	ND(5)	ND(5)	ND(80)	ND(5)	ND(5)	ND(5)		

**Table 2 (Continued)**  
**Groundwater Monitoring & Analytical Data – Shallow Wells**

Inactive Fairfax Facility #26140  
 9901 Georgetown Pike  
 Great Falls, Virginia  
 January 18, 2003 through December 19, 2013

Well ID	Date	Gauging Data					Analytical Data									Comments	
		Top of Casing Elevation (feet)	Depth to Water (feet)	Depth to Hydro-carbon (feet)	Hydro-carbon Thickness (feet)	Corrected GW Elevation (feet)	Benzene (µg/L)	Toluene (µg/L)	Ethyl-benzene (µg/L)	Total Xylenes (µg/L)	MTBE (µg/L)	TBA (µg/L)	DIPE (µg/L)	ETBE (µg/L)	TAME (µg/L)		
MW-10	10/15/2009	324.17	28.77	ND	ND	295.40	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	10.3	ND(25)	ND(5.0)	ND(5.0)	ND(5.0)		
	06/22/2010	324.17	25.80	ND	ND	298.37	ND(0.5)	ND(0.7)	ND(0.8)	ND(0.8)	4	NA	NA	NA	NA		
	12/16/2010	324.17	27.72	ND	ND	296.45	ND(0.5)	ND(0.7)	ND(0.8)	ND(0.8)	10	NA	NA	NA	NA		
	02/17/2011	324.17	28.05	ND	ND	296.12	ND(0.5)	ND(0.7)	ND(0.8)	ND(0.8)	7	NA	NA	NA	NA		
	05/24/2011	324.17	27.04	ND	ND	297.13	ND(0.5)	ND(0.7)	ND(0.8)	ND(0.8)	3 J	NA	NA	NA	NA		
	09/02/2011	324.17	29.60	ND	ND	294.57	ND(0.5)	ND(0.7)	ND(0.8)	ND(0.8)	8	NA	NA	NA	NA		
	12/29/2011	324.17	NM	NM	NM	NM	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	Well inaccessible
	06/01/2012	324.17	28.17	ND	ND	296.00	ND(0.5)	ND(0.7)	ND(0.8)	ND(0.8)	4 J	NA	NA	NA	NA		
	02/25/2013	324.17	29.45	ND	ND	294.72	ND(5)	ND(5)	ND(5)	ND(5)	7	ND(80)	ND(5)	ND(5)	ND(5)		
	06/06/2013	324.17	28.87	ND	ND	295.30	ND(0.5)	ND(0.7)	ND(0.8)	ND(0.8)	ND(0.5)	NA	NA	NA	NA		
12/18/2013	324.17	30.04	ND	ND	294.13	ND(5)	ND(5)	ND(5)	ND(5)	ND(5)	ND(80)	ND(5)	ND(5)	ND(5)			
MW-11	10/16/2009	NM	NM	NM	NM	NM	15.3	ND(10)	ND(10)	10.9	38400	23300	1290	ND(50)	464		
	06/22/2010	329.64	29.00	ND	ND	300.64	ND(50)	ND(70)	ND(80)	ND(80)	170000	NA	NA	NA	NA		
	09/30/2010	329.64	31.42	ND	ND	298.22	ND(50)	ND(70)	ND(80)	ND(80)	130000	NA	NA	NA	NA		
	12/16/2010	329.64	31.22	ND	ND	298.42	ND(25)	ND(35)	ND(40)	ND(40)	41000	NA	NA	NA	NA		
	02/17/2011	329.64	31.81	ND	ND	297.83	ND(10)	ND(14)	ND(16)	ND(16)	23000	NA	NA	NA	NA		
	05/24/2011	329.64	30.56	ND	ND	299.08	ND(13)	ND(18)	ND(20)	ND(20)	16000	NA	NA	NA	NA		
	09/02/2011	329.64	33.22	ND	ND	296.42	4 J	ND(4)	ND(4)	ND(4)	7400	NA	NA	NA	NA		
	12/29/2011	329.64	31.29	ND	ND	298.35	ND(10)	ND(14)	ND(16)	ND(16)	9000	NA	NA	NA	NA		
	06/01/2012	329.64	31.77	ND	ND	297.87	7 J	21 J	ND(8)	34 J	4200	NA	NA	NA	NA		
	02/25/2013	329.64	33.03	ND	ND	296.61	ND(10)	ND(10)	ND(10)	ND(10)	1400	180	530	ND(10)	22		
	06/06/2013	329.64	32.46	ND	ND	297.18	ND(0.5)	ND(0.7)	ND(0.8)	ND(0.8)	770	NA	NA	NA	NA		
12/18/2013	329.64	33.91	ND	ND	295.73	ND(5)	ND(5)	ND(5)	7	140	ND(80)	130	ND(5)	ND(5)			

**Table 2 (Continued)**  
**Groundwater Monitoring & Analytical Data – Shallow Wells**

Inactive Fairfax Facility #26140  
 9901 Georgetown Pike  
 Great Falls, Virginia  
 January 18, 2003 through December 19, 2013

Well ID	Date	Gauging Data					Analytical Data									Comments
		Top of Casing Elevation (feet)	Depth to Water (feet)	Depth to Hydro-carbon (feet)	Hydro-carbon Thickness (feet)	Corrected GW Elevation (feet)	Benzene (µg/L)	Toluene (µg/L)	Ethyl-benzene (µg/L)	Total Xylenes (µg/L)	MTBE (µg/L)	TBA (µg/L)	DIPE (µg/L)	ETBE (µg/L)	TAME (µg/L)	
MW-13	09/02/2011	332.00	34.37	ND	ND	297.63	5	ND(0.7)	ND(0.8)	5	6800	NA	NA	NA	NA	
	12/29/2011	332.00	NM	NM	NM	NM	NS	NS	NS	NS	NS	NS	NS	NS	NS	Well inaccessible
	06/01/2012	332.00	32.88	ND	ND	299.12	ND(5)	ND(7)	ND(8)	ND(8)	5700	NA	NA	NA	NA	
	02/25/2013	332.00	33.80	ND	ND	298.20	ND(25)	ND(25)	ND(25)	ND(25)	5300	ND(400)	150	ND(25)	80	
	06/06/2013	332.00	33.33	ND	ND	298.67	ND(0.5)	ND(0.7)	ND(0.8)	ND(0.8)	1300	NA	NA	NA	NA	
	12/19/2013	332.00	34.43	ND	ND	297.57	ND(5)	ND(5)	ND(5)	ND(5)	1100	ND(80)	43	ND(5)	18	
MW-14	09/02/2011	331.81	35.02	ND	ND	296.79	54	ND(4)	ND(4)	55	170000	NA	NA	NA	NA	
	12/29/2011	331.81	33.36	ND	ND	298.45	ND(50)	ND(70)	ND(80)	ND(80)	99000	NA	NA	NA	NA	
	06/01/2012	331.81	33.90	ND	ND	297.91	ND(50)	ND(70)	ND(80)	ND(80)	91000	NA	NA	NA	NA	
	02/25/2013	331.81	35.07	ND	ND	296.74	ND(50)	ND(50)	ND(50)	ND(50)	29000	2500	1100	ND(50)	450	
	06/06/2013	331.81	34.35	ND	ND	297.46	ND(1)	ND(1)	ND(2)	ND(2)	3600	NA	NA	NA	NA	
	12/19/2013	331.81	35.15	ND	ND	296.66	ND(5)	ND(5)	ND(5)	ND(5)	33	ND(80)	11	ND(5)	ND(5)	
MW-15	09/02/2011	328.95	33.06	ND	ND	295.89	ND(0.5)	ND(0.7)	ND(0.8)	1 J	21000	NA	NA	NA	NA	
	12/29/2011	328.95	31.10	ND	ND	297.85	ND(1)	ND(1)	ND(2)	ND(2)	1100	NA	NA	NA	NA	
	06/01/2012	328.95	31.64	ND	ND	297.31	ND(10)	ND(14)	ND(16)	ND(16)	14000	NA	NA	NA	NA	
	02/25/2013	328.95	33.10	ND	ND	295.85	ND(10)	ND(10)	ND(10)	ND(10)	1800	300	140	ND(10)	28	
	06/06/2013	328.95	32.32	ND	ND	296.63	ND(0.5)	ND(0.7)	ND(0.8)	ND(0.8)	120	NA	NA	NA	NA	
	12/18/2013	328.95	33.86	ND	ND	295.09	ND(10)	ND(10)	ND(10)	14	1700	260	210	ND(10)	27	
W-1	01/18/2003	328.53	33.83	ND	ND	294.70	ND(5)	ND(5)	ND(5)	ND(10)	13000	9100	81	ND(5)	240	
	08/05/2008	328.53	34.81	ND	ND	293.72	9.6	ND(5.0)	ND(5.0)	ND(5.0)	5200	NA	NA	NA	NA	
	06/07/2013	328.53	34.52	ND	ND	294.01	ND(10)	ND(14)	ND(16)	ND(16)	26000	NA	NA	NA	NA	
	12/19/2013	328.53	36.11	ND	ND	292.42	ND(100)	ND(100)	ND(100)	ND(100)	13000	6900	150	ND(100)	130	
W-2	01/18/2003	329.47	34.56	ND	ND	294.91	ND(5)	ND(5)	ND(5)	ND(10)	100	ND(100)	ND(5)	ND(5)	ND(5)	
	08/05/2008	329.47	35.53	ND	ND	293.94	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	320	NA	NA	NA	NA	
	06/07/2013	329.47	35.30	ND	ND	294.17	ND(5)	ND(7)	ND(8)	ND(8)	14000	NA	NA	NA	NA	
	12/19/2013	329.47	36.82	ND	ND	292.65	ND(50)	ND(50)	ND(50)	ND(50)	7700	ND(800)	130	ND(50)	74	

**Table 2 (Continued)****Groundwater Monitoring & Analytical Data – Shallow Wells**

Inactive Fairfax Facility #26140

9901 Georgetown Pike

Great Falls, Virginia

January 18, 2003 through December 19, 2013

Well ID	Date	Gauging Data					Analytical Data									Comments
		Top of Casing Elevation (feet)	Depth to Water (feet)	Depth to Hydro-carbon (feet)	Hydro-carbon Thickness (feet)	Corrected GW Elevation (feet)	Benzene (µg/L)	Toluene (µg/L)	Ethyl-benzene (µg/L)	Total Xylenes (µg/L)	MTBE (µg/L)	TBA (µg/L)	DIPE (µg/L)	ETBE (µg/L)	TAME (µg/L)	
W-3	01/18/2003	330.14	35.88	ND	ND	294.26	ND(5)	ND(5)	ND(5)	ND(10)	ND(5)	ND(100)	ND(5)	ND(5)	ND(5)	
	08/05/2008	330.14	35.92	ND	ND	294.22	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	22	NA	NA	NA	NA	
	06/07/2013	330.14	35.84	ND	ND	294.30	ND(0.5)	ND(0.7)	ND(0.8)	ND(0.8)	2 J	NA	NA	NA	NA	
	12/18/2013	330.14	37.22	ND	ND	292.92	ND(5)	ND(5)	ND(5)	ND(5)	ND(5)	ND(80)	ND(5)	ND(5)	ND(5)	
W-4	01/18/2003	327.67	34.12	ND	ND	293.55	71	920	850	8700	55	790	ND(5)	ND(5)	ND(5)	
	08/05/2008	327.67	34.25	ND	ND	293.42	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	22	NA	NA	NA	NA	
	06/07/2013	327.67	34.08	ND	ND	293.59	ND(0.5)	ND(0.7)	ND(0.8)	ND(0.8)	ND(0.5)	NA	NA	NA	NA	
	12/18/2013	327.67	35.91	ND	ND	291.76	ND(5)	ND(5)	ND(5)	ND(5)	ND(5)	ND(80)	ND(5)	ND(5)	ND(5)	
W-5	08/05/2008	327.81	35.93	ND	ND	291.88	320	3000	3000	16000	ND(5.0)	NA	NA	NA	NA	
	06/07/2013	327.81	35.30	ND	ND	292.51	180	96	270	11000	ND(0.5)	NA	NA	NA	NA	
	12/18/2013	327.81	37.46	ND	ND	290.35	290	160	860	6000	ND(13)	ND(200)	ND(13)	ND(13)	ND(13)	
W-6	08/05/2008	325.21	31.63	ND	ND	293.58	ND(5.0)	ND(5.0)	ND(5.0)	18.6	16	NA	NA	NA	NA	
	06/07/2013	325.21	31.12	ND	ND	294.09	ND(0.5)	ND(0.7)	ND(0.8)	ND(0.8)	6	NA	NA	NA	NA	
	12/18/2013	325.21	32.12	ND	ND	293.09	ND(5)	ND(5)	ND(5)	ND(5)	ND(5)	ND(80)	ND(5)	ND(5)	ND(5)	
W-7	08/05/2008	329.77	37.35	ND	ND	292.42	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	16	NA	NA	NA	NA	
	06/06/2013	329.77	37.04	ND	ND	292.73	ND(0.5)	ND(0.7)	ND(0.8)	ND(0.8)	ND(0.5)	NA	NA	NA	NA	
	12/18/2013	329.77	38.24	ND	ND	291.53	ND(5)	ND(5)	ND(5)	ND(5)	ND(5)	ND(80)	ND(5)	ND(5)	ND(5)	

**Table 2 (Continued)**  
**Groundwater Monitoring & Analytical Data – Shallow Wells**

Inactive Fairfax Facility #26140  
9901 Georgetown Pike  
Great Falls, Virginia  
January 18, 2003 through December 19, 2013

**Notes:**

µg/L - micrograms per liter (µg/L)

DIPE - Isopropyl ether

ETBE - Ethyl tert-butyl ether

GW - Groundwater

J - Indicates an estimated value

MTBE - Methyl Tertiary Butyl Ether

NA - Not analyzed

ND - Not detected

ND(5.0) - Not detected at or above the laboratory reporting limit, laboratory reporting limit included.

NM - Not monitored

NS - Not sampled

NSVD - Not surveyed to vertical datum

TAME - Tert-Amyl methyl ether

TBA - Tert-Butyl alcohol

**Table 3****Groundwater Monitoring & Analytical Data – Deep Wells**

Inactive Fairfax Facility #26140

9901 Georgetown Pike

Great Falls, Virginia

August 17, 2009 through December 19, 2013

Well ID	Date	Gauging Data					Analytical Data									Comments
		Top of Casing Elevation (feet)	Depth to Water (feet)	Depth to Hydro-carbon (feet)	Hydro-carbon Thickness (feet)	Corrected GW Elevation (feet)	Benzene (µg/L)	Toluene (µg/L)	Ethyl-benzene (µg/L)	Total Xylenes (µg/L)	MTBE (µg/L)	TBA (µg/L)	DIPE (µg/L)	ETBE (µg/L)	TAME (µg/L)	
MW-6D(65)	06/22/2010	323.09	26.69	ND	ND	296.40	ND(0.5)	ND(0.7)	ND(0.8)	ND(0.8)	1	NA	NA	NA	NA	
	09/30/2010	323.09	26.52	ND	ND	296.57	ND(0.5)	ND(0.7)	ND(0.8)	ND(0.8)	1	NA	NA	NA	NA	
	12/16/2010	323.09	25.92	ND	ND	297.17	ND(0.5)	ND(0.7)	ND(0.8)	ND(0.8)	1	NA	NA	NA	NA	
	02/17/2011	323.09	26.14	ND	ND	296.95	ND(0.5)	ND(0.7)	ND(0.8)	ND(0.8)	1 J	NA	NA	NA	NA	
	05/24/2011	323.09	25.83	ND	ND	297.26	ND(0.5)	ND(0.7)	ND(0.8)	ND(0.8)	1 J	NA	NA	NA	NA	
	09/02/2011	323.09	27.45	ND	ND	295.64	ND(0.5)	ND(0.7)	ND(0.8)	ND(0.8)	0.9 J	NA	NA	NA	NA	
	12/22/2011	323.09	25.47	ND	ND	297.62	ND(0.5)	ND(0.7)	ND(0.8)	ND(0.8)	0.8 J	NA	NA	NA	NA	
	06/01/2012	323.09	25.95	ND	ND	297.14	ND(0.5)	ND(0.7)	ND(0.8)	ND(0.8)	0.8 J	NA	NA	NA	NA	
	02/25/2013	323.09	27.13	ND	ND	295.96	ND(5)	ND(5)	ND(5)	ND(5)	ND(5)	ND(80)	ND(5)	ND(5)	ND(5)	
	06/06/2013	323.09	26.66	ND	ND	296.43	ND(0.5)	ND(0.7)	ND(0.8)	ND(0.8)	ND(0.5)	NA	NA	NA	NA	
12/17/2013	323.09	27.85	ND	ND	295.24	NS	NS	NS	NS	NS	NS	NS	NS	NS		
MW-6D(75)	09/24/2009	NM	NM	NM	NM	NM	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	3.0	ND(25)	0.56	ND(5.0)	ND(5.0)	
	10/15/2009	323.09	26.69	ND	ND	296.40	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	2.8	ND(25)	0.49	ND(5.0)	ND(5.0)	
MW-6D(85)	06/22/2010	323.09	26.69	ND	ND	296.40	ND(0.5)	ND(0.7)	ND(0.8)	ND(0.8)	1	NA	NA	NA	NA	
	09/30/2010	323.09	26.51	ND	ND	296.58	ND(0.5)	ND(0.7)	ND(0.8)	ND(0.8)	1	NA	NA	NA	NA	
	12/16/2010	323.09	25.92	ND	ND	297.17	ND(0.5)	ND(0.7)	ND(0.8)	ND(0.8)	6	NA	NA	NA	NA	
	02/17/2011	323.09	26.14	ND	ND	296.95	ND(0.5)	ND(0.7)	ND(0.8)	ND(0.8)	1 J	NA	NA	NA	NA	
	05/24/2011	323.09	25.83	ND	ND	297.26	ND(0.5)	ND(0.7)	ND(0.8)	ND(0.8)	1 J	NA	NA	NA	NA	
	09/02/2011	323.09	27.45	ND	ND	295.64	ND(0.5)	ND(0.7)	ND(0.8)	ND(0.8)	0.9 J	NA	NA	NA	NA	
	12/22/2011	323.09	25.47	ND	ND	297.62	ND(0.5)	1 J	ND(0.8)	ND(0.8)	0.8 J	NA	NA	NA	NA	
	06/01/2012	323.09	25.95	ND	ND	297.14	ND(0.5)	ND(0.7)	ND(0.8)	ND(0.8)	0.8 J	NA	NA	NA	NA	
	02/25/2013	323.09	27.13	ND	ND	295.96	ND(5)	ND(5)	ND(5)	ND(5)	ND(5)	ND(80)	ND(5)	ND(5)	ND(5)	
06/06/2013	323.09	26.66	ND	ND	296.43	ND(0.5)	ND(0.7)	ND(0.8)	ND(0.8)	ND(0.5)	NA	NA	NA	NA		

Table 3 (Continued)

## Groundwater Monitoring &amp; Analytical Data – Deep Wells

Inactive Fairfax Facility #26140

9901 Georgetown Pike

Great Falls, Virginia

August 17, 2009 through December 19, 2013

Well ID	Date	Gauging Data					Analytical Data									Comments
		Top of Casing Elevation (feet)	Depth to Water (feet)	Depth to Hydro-carbon (feet)	Hydro-carbon Thickness (feet)	Corrected GW Elevation (feet)	Benzene (µg/L)	Toluene (µg/L)	Ethyl-benzene (µg/L)	Total Xylenes (µg/L)	MTBE (µg/L)	TBA (µg/L)	DIPE (µg/L)	ETBE (µg/L)	TAME (µg/L)	
MW-6D(105)	06/22/2010	323.09	26.69	ND	ND	296.40	ND(0.5)	ND(0.7)	ND(0.8)	ND(0.8)	2 J	NA	NA	NA	NA	
	09/30/2010	323.09	26.52	ND	ND	296.57	ND(0.5)	ND(0.7)	ND(0.8)	ND(0.8)	1	NA	NA	NA	NA	
	12/16/2010	323.09	25.92	ND	ND	297.17	ND(0.5)	ND(0.7)	ND(0.8)	ND(0.8)	1	NA	NA	NA	NA	
	02/17/2011	323.09	26.14	ND	ND	296.95	ND(0.5)	ND(0.7)	ND(0.8)	ND(0.8)	1 J	NA	NA	NA	NA	
	05/24/2011	323.09	25.83	ND	ND	297.26	ND(0.5)	ND(0.7)	ND(0.8)	ND(0.8)	1 J	NA	NA	NA	NA	
	09/02/2011	323.09	27.45	ND	ND	295.64	ND(0.5)	ND(0.7)	ND(0.8)	ND(0.8)	0.9 J	NA	NA	NA	NA	
	12/22/2011	323.09	25.47	ND	ND	297.62	ND(0.5)	1 J	ND(0.8)	ND(0.8)	0.9 J	NA	NA	NA	NA	
	06/01/2012	323.09	25.95	ND	ND	297.14	ND(0.5)	ND(0.7)	ND(0.8)	ND(0.8)	0.9 J	NA	NA	NA	NA	
	02/25/2013	323.09	27.13	ND	ND	295.96	ND(5)	ND(5)	ND(5)	ND(5)	ND(5)	ND(80)	ND(5)	ND(5)	ND(5)	
06/06/2013	323.09	26.66	ND	ND	296.43	ND(0.5)	ND(0.7)	ND(0.8)	ND(0.8)	ND(0.5)	NA	NA	NA	NA		
MW-6D(110)	09/24/2009	NM	NM	NM	NM	NM	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	3.0	ND(25)	0.57	ND(5.0)	ND(5.0)	
	10/15/2009	323.09	26.69	ND	ND	296.40	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	2.8	ND(25)	0.50	ND(5.0)	ND(5.0)	
MW-12D(110)	05/24/2011	326.43	28.12	ND	ND	298.31	ND(0.5)	ND(0.7)	ND(0.8)	ND(0.8)	ND(0.5)	NA	NA	NA	NA	
	09/02/2011	326.43	32.37	ND	ND	294.06	ND(0.5)	ND(0.7)	ND(0.8)	ND(0.8)	ND(0.5)	NA	NA	NA	NA	
	12/22/2011	326.43	29.63	ND	ND	296.80	ND(0.5)	ND(0.7)	ND(0.8)	ND(0.8)	ND(0.5)	NA	NA	NA	NA	
	06/01/2012	326.43	29.75	ND	ND	296.68	ND(0.5)	ND(0.7)	ND(0.8)	ND(0.8)	ND(0.5)	NA	NA	NA	NA	
	02/25/2013	326.43	30.86	ND	ND	295.57	ND(5)	ND(5)	ND(5)	ND(5)	ND(5)	ND(80)	ND(5)	ND(5)	ND(5)	
	06/06/2013	326.43	30.59	ND	ND	295.84	ND(0.5)	ND(0.7)	ND(0.8)	ND(0.8)	ND(0.5)	NA	NA	NA	NA	
	12/17/2013	326.43	31.51	ND	ND	294.92	NS	NS	NS	NS	NS	NS	NS	NS	NS	
MW-12D(127)	12/22/2011	326.43	29.63	ND	ND	296.80	ND(0.5)	ND(0.7)	ND(0.8)	ND(0.8)	ND(0.5)	NA	NA	NA	NA	
MW-12D(141)	12/22/2011	326.43	29.63	ND	ND	296.80	ND(0.5)	ND(0.7)	ND(0.8)	ND(0.8)	ND(0.5)	NA	NA	NA	NA	
MW-12D(153)	05/24/2011	326.43	28.12	ND	ND	298.31	ND(0.5)	ND(0.7)	ND(0.8)	ND(0.8)	ND(0.5)	NA	NA	NA	NA	
	09/02/2011	326.43	32.37	ND	ND	294.06	ND(0.5)	ND(0.7)	ND(0.8)	ND(0.8)	ND(0.5)	NA	NA	NA	NA	
	06/01/2012	326.43	29.75	ND	ND	296.68	ND(0.5)	ND(0.7)	ND(0.8)	ND(0.8)	ND(0.5)	NA	NA	NA	NA	
	02/25/2013	326.43	30.86	ND	ND	295.57	ND(5)	ND(5)	ND(5)	ND(5)	ND(5)	ND(80)	ND(5)	ND(5)	ND(5)	
	06/06/2013	326.43	30.59	ND	ND	295.84	ND(0.5)	ND(0.7)	ND(0.8)	ND(0.8)	ND(0.5)	NA	NA	NA	NA	
MW-16D(89)	12/22/2011	332.90	34.88	ND	ND	298.02	ND(3)	ND(4)	ND(4)	ND(4)	2600	NA	NA	NA	NA	

Table 3 (Continued)

## Groundwater Monitoring &amp; Analytical Data – Deep Wells

Inactive Fairfax Facility #26140

9901 Georgetown Pike

Great Falls, Virginia

August 17, 2009 through December 19, 2013

Well ID	Date	Gauging Data					Analytical Data									Comments
		Top of Casing Elevation (feet)	Depth to Water (feet)	Depth to Hydro-carbon (feet)	Hydro-carbon Thickness (feet)	Corrected GW Elevation (feet)	Benzene (µg/L)	Toluene (µg/L)	Ethyl-benzene (µg/L)	Total Xylenes (µg/L)	MTBE (µg/L)	TBA (µg/L)	DIPE (µg/L)	ETBE (µg/L)	TAME (µg/L)	
MW-16D(95)	06/01/2012	332.90	35.33	ND	ND	297.57	ND(0.5)	ND(0.7)	ND(0.8)	ND(0.8)	140	NA	NA	NA	NA	Abandoned to 110' (April 2011)
	02/25/2013	332.90	36.83	ND	ND	296.07	ND(100)	ND(100)	ND(100)	ND(100)	9800	ND(1600)	360	ND(100)	200	
	06/06/2013	332.90	36.15	ND	ND	296.75	18 J	ND(7)	ND(8)	ND(8)	11000	NA	NA	NA	NA	
	12/19/2013	332.90	37.13	ND	ND	295.77	ND(130)	ND(130)	ND(130)	ND(130)	19000	2800	770	ND(130)	390	
MW-16D(110)	12/22/2011	332.90	34.88	ND	ND	298.02	ND(3)	ND(4)	ND(4)	ND(4)	2600	NA	NA	NA	NA	Abandoned to 110' (April 2011)
MW-16D(125)	12/22/2011	332.90	34.88	ND	ND	298.02	ND(3)	ND(4)	ND(4)	ND(4)	2500	NA	NA	NA	NA	Abandoned to 110' (April 2011)
MW-17D	12/19/2013	328.99	34.15	ND	ND	294.84	NS	NS	NS	NS	NS	NS	NS	NS	NS	
MW-18D	06/06/2013	334.88	40.69	ND	ND	294.19	ND(0.5)	ND(0.7)	ND(0.8)	ND(0.8)	ND(0.5)	NA	NA	NA	NA	
	12/18/2013	334.88	41.60	ND	ND	293.28	NS	NS	NS	NS	NS	NS	NS	NS	NS	
MW-18D(1V)	05/10/2013	334.88	40.57	ND	ND	294.31	ND(5)	ND(5)	ND(5)	ND(5)	ND(5)	ND(80)	ND(5)	ND(5)	ND(5)	
MW-18D(3V)	05/10/2013	334.88	40.57	ND	ND	294.31	ND(5)	ND(5)	ND(5)	ND(5)	ND(5)	ND(80)	ND(5)	ND(5)	ND(5)	
PW-1	08/17/2009	NM	NM	NM	NM	NM	0.76	ND(0.50)	ND(0.50)	0.46 J	1320	80.9	148	ND(0.50)	36.8	Abandoned to 75' (Nov 2011)
PW-1(65)	10/16/2009	334.54	NM	NM	NM	NM	8	ND	ND	8.4	2520	NA	NA	NA	NA	
	06/22/2010	334.54	34.47	ND	ND	300.07	8	ND(0.7)	ND(0.8)	7	1600	NA	NA	NA	NA	
	09/30/2010	334.54	36.84	ND	ND	297.70	9	ND(0.7)	ND(0.8)	5	1600	NA	NA	NA	NA	
	12/16/2010	334.54	36.51	ND	ND	298.03	6	ND(1)	ND(2)	5	1700	NA	NA	NA	NA	
	05/24/2011	334.54	35.87	ND	ND	298.67	8 J	ND(4)	ND(4)	4 J	2100	NA	NA	NA	NA	
	09/02/2011	334.54	38.61	ND	ND	295.93	6	ND(0.7)	ND(0.8)	3 J	1800	NA	NA	NA	NA	Abandoned to 75' (Nov 2011)
	12/22/2011	334.54	36.37	ND	ND	298.17	4 J	ND(4)	ND(4)	ND(4)	1300	NA	NA	NA	NA	
	06/01/2012	334.54	36.82	ND	ND	297.72	3 J	ND(1)	ND(2)	ND(2)	860	NA	NA	NA	NA	
	02/25/2013	334.54	38.28	ND	ND	296.26	ND(5)	ND(5)	ND(5)	ND(5)	800	110	140	ND(5)	51	
	06/06/2013	334.54	37.41	ND	ND	297.13	3 J	ND(0.7)	ND(0.8)	ND(0.8)	1200	NA	NA	NA	NA	
12/19/2013	334.54	38.60	ND	ND	295.94	ND(25)	ND(25)	ND(25)	ND(25)	4700	630	280	ND(25)	140		
PW-1(85)	06/22/2010	334.54	34.47	ND	ND	300.07	8	ND(0.7)	ND(0.8)	5	2000	NA	NA	NA	NA	
	09/30/2010	334.54	36.85	ND	ND	297.69	9	ND(0.7)	ND(0.8)	6	1700	NA	NA	NA	NA	
	12/16/2010	334.54	36.51	ND	ND	298.03	8	ND(0.7)	ND(0.8)	6	1900	NA	NA	NA	NA	
	05/24/2011	334.54	35.87	ND	ND	298.67	6 J	ND(1)	ND(2)	3 J	2100	NA	NA	NA	NA	
	09/02/2011	334.54	38.61	ND	ND	295.93	5 J	ND(0.7)	ND(0.8)	2 J	1600	NA	NA	NA	NA	Abandoned to 75' (Nov 2011)

**Table 3 (Continued)****Groundwater Monitoring & Analytical Data – Deep Wells**

Inactive Fairfax Facility #26140

9901 Georgetown Pike

Great Falls, Virginia

August 17, 2009 through December 19, 2013

Well ID	Date	Gauging Data					Analytical Data									Comments
		Top of Casing Elevation (feet)	Depth to Water (feet)	Depth to Hydro-carbon (feet)	Hydro-carbon Thickness (feet)	Corrected GW Elevation (feet)	Benzene (µg/L)	Toluene (µg/L)	Ethyl-benzene (µg/L)	Total Xylenes (µg/L)	MTBE (µg/L)	TBA (µg/L)	DIPE (µg/L)	ETBE (µg/L)	TAME (µg/L)	
PW-1(105)	10/16/2009	334.54	NM	NM	NM	NM	5.8	ND	ND	4.1	1180	NA	NA	NA	NA	
	06/22/2010	334.54	34.47	ND	ND	300.07	5	ND(1)	ND(2)	3	2300	NA	NA	NA	NA	
	09/30/2010	334.54	36.85	ND	ND	297.69	9	ND(0.7)	ND(0.8)	5	1800	NA	NA	NA	NA	
	12/16/2010	334.54	36.51	ND	ND	298.03	8	ND(1)	ND(2)	5	1700	NA	NA	NA	NA	
	05/24/2011	334.54	35.87	ND	ND	298.67	5 J	ND(1)	ND(2)	2 J	1900	NA	NA	NA	NA	
	09/02/2011	334.54	38.61	ND	ND	295.93	3 J	ND(0.7)	ND(0.8)	1 J	1400	NA	NA	NA	NA	Abandoned to 75' (Nov 2011)

**Table 3 (Continued)****Groundwater Monitoring & Analytical Data – Deep Wells**

Inactive Fairfax Facility #26140  
9901 Georgetown Pike  
Great Falls, Virginia  
August 17, 2009 through December 19, 2013

**Notes:**

µg/L - micrograms per liter (µg/L)

DIPE - Isopropyl ether

ETBE - Ethyl tert-butyl ether

GW - Groundwater

J - Indicates an estimated value

MTBE - Methyl Tertiary Butyl Ether

NA - Not analyzed

ND - Not detected

ND(5.0) - Not detected at or above the laboratory reporting limit, laboratory reporting limit included.

NM - Not monitored

NS - Not sampled

NSVD - Not surveyed to vertical datum

TAME - Tert-Amyl methyl ether

TBA - Tert-Butyl alcohol

**TABLE 4**

Groundwater Natural Attenuation Parameters & Analytical Data  
 Inactive Fairfax Facility #26140  
 9901 Georgetown Pike  
 Great Falls, Virginia

December 17, 2013 through December 19, 2013

			Dissolved Oxygen (mg/L)	ORP (mV)	pH	Specific Conductance (mS/cm)	Nitrate Nitrogen (mg/L)	Ferrous Iron (mg/L)	Sulfate (mg/L)	Methane (mg/L)
	Sample ID	Date	Field Parameter	Field Parameter	Field Parameter	Field Parameter	EPA 353.2	SM 3500	EPA 300.0	SW-846 8015B modified
Upgradient	MW-5	12/18/2013	6.89	169.5	4.95	1.376	8.5	ND(0.10)	12.1	ND(0.0050)
	MW-6S	12/17/2013	1.56	121.6	5.53	0.355	5.5	0.64	5.4	ND(0.0050)
Source Area	MW-1	12/19/2013	1.32	209.2	4.95	0.355	13.8	0.35	ND(5.0)	ND(0.0050)
	MW-11	12/18/2013	4.27	162.6	4.86	0.587	2.4	0.17	ND(5.0)	0.0086
	MW-14	12/19/2013	3.53	192.3	5.29	0.877	5.7	0.43	ND(5.0)	ND(0.0050)
	MW-16D	12/19/2013	0.34	-67.6	6.52	0.521	0.46	60.4	ND(5.0)	0.130
Downgradient	W-1	12/19/2013	0.57	206.7	5.30	1.178	6.6	0.21	7.4	ND(0.0050)
	W-2	12/19/2013	3.64	135.4	5.68	0.452	1.3	1.5	40.6	ND(0.0050)
	W-7	12/18/2013	0.80	69.6	6.12	0.401	ND(0.10)	1.3	6.2	ND(0.0050)
Crossgradient	W-3	12/18/2013	8.79	161.3	5.00	0.485	5.9	0.44	ND(5.0)	ND(0.0050)
	W-6	12/18/2013	6.02	159.3	5.12	0.115	0.49	0.17	ND(5.0)	ND(0.0050)

Notes:

ND(5.0) - Not Detected at or above the laboratory reporting limit, laboratory reporting limit included.

mg/L - milligrams per liter

mV - millivolt

mS/cm °C - millisiemens per centimeter

**APPENDIX A:**  
**Lancaster Laboratories Analysis Reports**

## ANALYTICAL RESULTS

Prepared by:

Eurofins Lancaster Laboratories Environmental  
2425 New Holland Pike  
Lancaster, PA 17601

Prepared for:

Kleinfelder  
1 Speen Street  
Framingham MA 01701

January 06, 2014

Project: Fairfax 26140

Submittal Date: 12/20/2013

Group Number: 1442487

PO Number: 51141-286051

State of Sample Origin: VA

<u>Client Sample Description</u>	<u>Lancaster Labs (LL) #</u>
MW-1 Grab Water	7320507
MW-2 Grab Water	7320508
MW-5 Grab Water	7320509
MW-6S Grab Water	7320510
MW-7 Grab Water	7320511
MW-9 Grab Water	7320512
MW-10 Grab Water	7320513
MW-11 Grab Water	7320514
MW-13 Grab Water	7320515
MW-14 Grab Water	7320516
MW-15 Grab Water	7320517
MW-16D Grab Water	7320518
PW-1 Grab Water	7320519
W-1 Grab Water	7320520
W-2 Grab Water	7320521
W-3 Grab Water	7320522
W-4 Grab Water	7320523
W-5 Grab Water	7320524
W-6 Grab Water	7320525
W-7 Grab Water	7320526
Trip Blank Water	7320527

The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

ELECTRONIC COPY TO  
ELECTRONIC COPY TO

Kleinfelder  
Kleinfelder

Attn: Mark Steele

Attn: Angela Vogt

ELECTRONIC COPY TO  
ELECTRONIC COPY TO  
ELECTRONIC COPY TO

Kleinfelder  
Kleinfelder  
Kleinfelder

Attn: Venelda Williams  
Attn: Charlie Low  
Attn: Paxton Wertz

Respectfully Submitted,



Amek Carter  
Specialist

(717) 556-7252

Sample Description: MW-1 Grab Water  
Fairfax Petroleum 26140

LL Sample # WW 7320507  
LL Group # 1442487  
Account # 12152

Project Name: Fairfax 26140

Collected: 12/19/2013 12:30 by CL

Kleinfelder

1 Speen Street

Framingham MA 01701

Submitted: 12/20/2013 11:35

Reported: 01/06/2014 15:24

F2601

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Limit of Quantitation	Dilution Factor
<b>GC/MS</b>	<b>Volatiles</b>	<b>SW-846 8260B</b>	<b>ug/l</b>	<b>ug/l</b>	
10335	t-Amyl methyl ether	994-05-8	1,100	250	50
10335	Benzene	71-43-2	< 250	250	50
10335	t-Butyl alcohol	75-65-0	6,900	4,000	50
10335	Ethyl t-butyl ether	637-92-3	< 250	250	50
10335	Ethylbenzene	100-41-4	< 250	250	50
10335	di-Isopropyl ether	108-20-3	2,200	250	50
10335	Methyl Tertiary Butyl Ether	1634-04-4	84,000	2,500	500
10335	Toluene	108-88-3	< 250	250	50
10335	Xylene (Total)	1330-20-7	< 250	250	50

### General Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

### Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10335	BTEX + 5 Oxys	SW-846 8260B	1	W133611AA	12/27/2013 21:25	Kevin A Sposito	50
10335	BTEX + 5 Oxys	SW-846 8260B	1	W133611AA	12/27/2013 21:49	Kevin A Sposito	500
01163	GC/MS VOA Water Prep	SW-846 5030B	1	W133611AA	12/27/2013 21:25	Kevin A Sposito	50
01163	GC/MS VOA Water Prep	SW-846 5030B	2	W133611AA	12/27/2013 21:49	Kevin A Sposito	500

Sample Description: MW-2 Grab Water  
Fairfax Petroleum 26140

LL Sample # WW 7320508  
LL Group # 1442487  
Account # 12152

Project Name: Fairfax 26140

Collected: 12/19/2013 07:45 by CL

Kleinfelder  
1 Speen Street  
Framingham MA 01701

Submitted: 12/20/2013 11:35

Reported: 01/06/2014 15:24

F2602

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Limit of Quantitation	Dilution Factor
GC/MS	Volatiles	SW-846 8260B	ug/l	ug/l	
10335	t-Amyl methyl ether	994-05-8	280	130	25
10335	Benzene	71-43-2	< 130	130	25
10335	t-Butyl alcohol	75-65-0	6,800	2,000	25
10335	Ethyl t-butyl ether	637-92-3	< 130	130	25
10335	Ethylbenzene	100-41-4	< 130	130	25
10335	di-Isopropyl ether	108-20-3	710	130	25
10335	Methyl Tertiary Butyl Ether	1634-04-4	19,000	1,300	250
10335	Toluene	108-88-3	< 130	130	25
10335	Xylene (Total)	1330-20-7	< 130	130	25

### General Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

### Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10335	BTEX + 5 Oxys	SW-846 8260B	1	W133651AA	12/31/2013 18:01	Jason M Long	25
10335	BTEX + 5 Oxys	SW-846 8260B	1	W133651AA	12/31/2013 18:25	Jason M Long	250
01163	GC/MS VOA Water Prep	SW-846 5030B	1	W133651AA	12/31/2013 18:01	Jason M Long	25
01163	GC/MS VOA Water Prep	SW-846 5030B	2	W133651AA	12/31/2013 18:25	Jason M Long	250

Sample Description: MW-5 Grab Water  
Fairfax Petroleum 26140

LL Sample # WW 7320509  
LL Group # 1442487  
Account # 12152

Project Name: Fairfax 26140

Collected: 12/18/2013 11:00 by CL

Kleinfelder  
1 Speen Street  
Framingham MA 01701

Submitted: 12/20/2013 11:35

Reported: 01/06/2014 15:24

F2605

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Limit of Quantitation	Dilution Factor
<b>GC/MS</b>	<b>Volatiles</b>	<b>SW-846 8260B</b>	<b>ug/l</b>	<b>ug/l</b>	
10335	t-Amyl methyl ether	994-05-8	< 5	5	1
10335	Benzene	71-43-2	< 5	5	1
10335	t-Butyl alcohol	75-65-0	< 80	80	1
10335	Ethyl t-butyl ether	637-92-3	< 5	5	1
10335	Ethylbenzene	100-41-4	< 5	5	1
10335	di-Isopropyl ether	108-20-3	< 5	5	1
10335	Methyl Tertiary Butyl Ether	1634-04-4	< 5	5	1
10335	Toluene	108-88-3	< 5	5	1
10335	Xylene (Total)	1330-20-7	< 5	5	1

### General Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

### Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10335	BTEX + 5 Oxys	SW-846 8260B	1	W133611AA	12/27/2013 22:12	Kevin A Sposito	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	W133611AA	12/27/2013 22:12	Kevin A Sposito	1

Sample Description: MW-6S Grab Water  
Fairfax Petroleum 26140

LL Sample # WW 7320510  
LL Group # 1442487  
Account # 12152

Project Name: Fairfax 26140

Collected: 12/17/2013 08:20 by CL

Kleinfelder  
1 Speen Street  
Framingham MA 01701

Submitted: 12/20/2013 11:35

Reported: 01/06/2014 15:24

F2606

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Limit of Quantitation	Dilution Factor
<b>GC/MS</b>	<b>Volatiles</b>	<b>SW-846 8260B</b>	<b>ug/l</b>	<b>ug/l</b>	
10335	t-Amyl methyl ether	994-05-8	< 5	5	1
10335	Benzene	71-43-2	< 5	5	1
10335	t-Butyl alcohol	75-65-0	< 80	80	1
10335	Ethyl t-butyl ether	637-92-3	< 5	5	1
10335	Ethylbenzene	100-41-4	< 5	5	1
10335	di-Isopropyl ether	108-20-3	< 5	5	1
10335	Methyl Tertiary Butyl Ether	1634-04-4	< 5	5	1
10335	Toluene	108-88-3	< 5	5	1
10335	Xylene (Total)	1330-20-7	< 5	5	1

### General Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

### Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10335	BTEX + 5 Oxys	SW-846 8260B	1	W133611AA	12/27/2013 22:36	Kevin A Sposito	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	W133611AA	12/27/2013 22:36	Kevin A Sposito	1

Sample Description: MW-7 Grab Water  
Fairfax Petroleum 26140

LL Sample # WW 7320511  
LL Group # 1442487  
Account # 12152

Project Name: Fairfax 26140

Collected: 12/18/2013 15:45 by CL

Kleinfelder

1 Speen Street

Framingham MA 01701

Submitted: 12/20/2013 11:35

Reported: 01/06/2014 15:24

F2607

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Limit of Quantitation	Dilution Factor
GC/MS	Volatiles	SW-846 8260B	ug/l	ug/l	
10335	t-Amyl methyl ether	994-05-8	1,600	250	50
10335	Benzene	71-43-2	< 250	250	50
10335	t-Butyl alcohol	75-65-0	29,000	4,000	50
10335	Ethyl t-butyl ether	637-92-3	< 250	250	50
10335	Ethylbenzene	100-41-4	< 250	250	50
10335	di-Isopropyl ether	108-20-3	3,000	250	50
10335	Methyl Tertiary Butyl Ether	1634-04-4	140,000	2,500	500
10335	Toluene	108-88-3	< 250	250	50
10335	Xylene (Total)	1330-20-7	< 250	250	50

### General Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

### Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10335	BTEX + 5 Oxys	SW-846 8260B	1	W133611AA	12/27/2013 23:00	Kevin A Sposito	50
10335	BTEX + 5 Oxys	SW-846 8260B	1	W133611AA	12/27/2013 23:24	Kevin A Sposito	500
01163	GC/MS VOA Water Prep	SW-846 5030B	1	W133611AA	12/27/2013 23:00	Kevin A Sposito	50
01163	GC/MS VOA Water Prep	SW-846 5030B	2	W133611AA	12/27/2013 23:24	Kevin A Sposito	500

Sample Description: MW-9 Grab Water  
Fairfax Petroleum 26140

LL Sample # WW 7320512  
LL Group # 1442487  
Account # 12152

Project Name: Fairfax 26140

Collected: 12/18/2013 12:50 by CL

Kleinfelder  
1 Speen Street  
Framingham MA 01701

Submitted: 12/20/2013 11:35

Reported: 01/06/2014 15:24

F2609

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Limit of Quantitation	Dilution Factor
<b>GC/MS</b>	<b>Volatiles</b>	<b>SW-846 8260B</b>	<b>ug/l</b>	<b>ug/l</b>	
10335	t-Amyl methyl ether	994-05-8	< 5	5	1
10335	Benzene	71-43-2	< 5	5	1
10335	t-Butyl alcohol	75-65-0	< 80	80	1
10335	Ethyl t-butyl ether	637-92-3	< 5	5	1
10335	Ethylbenzene	100-41-4	< 5	5	1
10335	di-Isopropyl ether	108-20-3	< 5	5	1
10335	Methyl Tertiary Butyl Ether	1634-04-4	< 5	5	1
10335	Toluene	108-88-3	< 5	5	1
10335	Xylene (Total)	1330-20-7	< 5	5	1

### General Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

### Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10335	BTEX + 5 Oxys	SW-846 8260B	1	W133611AA	12/27/2013 23:48	Kevin A Sposito	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	W133611AA	12/27/2013 23:48	Kevin A Sposito	1

Sample Description: MW-10 Grab Water  
Fairfax Petroleum 26140

LL Sample # WW 7320513  
LL Group # 1442487  
Account # 12152

Project Name: Fairfax 26140

Collected: 12/18/2013 05:45 by CL

Kleinfelder  
1 Speen Street  
Framingham MA 01701

Submitted: 12/20/2013 11:35

Reported: 01/06/2014 15:24

F2610

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Limit of Quantitation	Dilution Factor
<b>GC/MS</b>	<b>Volatiles</b>	<b>SW-846 8260B</b>	<b>ug/l</b>	<b>ug/l</b>	
10335	t-Amyl methyl ether	994-05-8	< 5	5	1
10335	Benzene	71-43-2	< 5	5	1
10335	t-Butyl alcohol	75-65-0	< 80	80	1
10335	Ethyl t-butyl ether	637-92-3	< 5	5	1
10335	Ethylbenzene	100-41-4	< 5	5	1
10335	di-Isopropyl ether	108-20-3	< 5	5	1
10335	Methyl Tertiary Butyl Ether	1634-04-4	< 5	5	1
10335	Toluene	108-88-3	< 5	5	1
10335	Xylene (Total)	1330-20-7	< 5	5	1

### General Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

### Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10335	BTEX + 5 Oxys	SW-846 8260B	1	W133611AA	12/28/2013 00:12	Kevin A Sposito	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	W133611AA	12/28/2013 00:12	Kevin A Sposito	1

Sample Description: MW-11 Grab Water  
Fairfax Petroleum 26140

LL Sample # WW 7320514  
LL Group # 1442487  
Account # 12152

Project Name: Fairfax 26140

Collected: 12/18/2013 14:30 by CL

Kleinfelder  
1 Speen Street  
Framingham MA 01701

Submitted: 12/20/2013 11:35

Reported: 01/06/2014 15:24

F2611

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Limit of Quantitation	Dilution Factor
<b>GC/MS</b>	<b>Volatiles</b>	<b>SW-846 8260B</b>	<b>ug/l</b>	<b>ug/l</b>	
10335	t-Amyl methyl ether	994-05-8	< 5	5	1
10335	Benzene	71-43-2	< 5	5	1
10335	t-Butyl alcohol	75-65-0	< 80	80	1
10335	Ethyl t-butyl ether	637-92-3	< 5	5	1
10335	Ethylbenzene	100-41-4	< 5	5	1
10335	<b>di-Isopropyl ether</b>	108-20-3	<b>130</b>	5	1
10335	<b>Methyl Tertiary Butyl Ether</b>	1634-04-4	<b>140</b>	5	1
10335	Toluene	108-88-3	< 5	5	1
10335	<b>Xylene (Total)</b>	1330-20-7	<b>7</b>	5	1

### General Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

### Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10335	BTEX + 5 Oxys	SW-846 8260B	1	W133611AA	12/28/2013 00:36	Kevin A Sposito	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	W133611AA	12/28/2013 00:36	Kevin A Sposito	1

Sample Description: MW-13 Grab Water  
Fairfax Petroleum 26140

LL Sample # WW 7320515  
LL Group # 1442487  
Account # 12152

Project Name: Fairfax 26140

Collected: 12/19/2013 07:00 by CL

Kleinfelder  
1 Speen Street  
Framingham MA 01701

Submitted: 12/20/2013 11:35

Reported: 01/06/2014 15:24

F2613

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Limit of Quantitation	Dilution Factor
<b>GC/MS</b>	<b>Volatiles</b>	<b>SW-846 8260B</b>	<b>ug/l</b>	<b>ug/l</b>	
10335	t-Amyl methyl ether	994-05-8	18	5	1
10335	Benzene	71-43-2	< 5	5	1
10335	t-Butyl alcohol	75-65-0	< 80	80	1
10335	Ethyl t-butyl ether	637-92-3	< 5	5	1
10335	Ethylbenzene	100-41-4	< 5	5	1
10335	di-Isopropyl ether	108-20-3	43	5	1
10335	Methyl Tertiary Butyl Ether	1634-04-4	1,100	50	10
10335	Toluene	108-88-3	< 5	5	1
10335	Xylene (Total)	1330-20-7	< 5	5	1

### General Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

### Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10335	BTEX + 5 Oxys	SW-846 8260B	1	W133631AA	12/29/2013 20:03	Christopher G Torres	1
10335	BTEX + 5 Oxys	SW-846 8260B	1	W133631AA	12/29/2013 20:27	Christopher G Torres	10
01163	GC/MS VOA Water Prep	SW-846 5030B	1	W133631AA	12/29/2013 20:03	Christopher G Torres	1
01163	GC/MS VOA Water Prep	SW-846 5030B	2	W133631AA	12/29/2013 20:27	Christopher G Torres	10

Sample Description: MW-14 Grab Water  
Fairfax Petroleum 26140

LL Sample # WW 7320516  
LL Group # 1442487  
Account # 12152

Project Name: Fairfax 26140

Collected: 12/19/2013 08:30 by CL

Kleinfelder  
1 Speen Street  
Framingham MA 01701

Submitted: 12/20/2013 11:35

Reported: 01/06/2014 15:24

F2614

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Limit of Quantitation	Dilution Factor
<b>GC/MS</b>	<b>Volatiles</b>	<b>SW-846 8260B</b>	<b>ug/l</b>	<b>ug/l</b>	
10335	t-Amyl methyl ether	994-05-8	< 5	5	1
10335	Benzene	71-43-2	< 5	5	1
10335	t-Butyl alcohol	75-65-0	< 80	80	1
10335	Ethyl t-butyl ether	637-92-3	< 5	5	1
10335	Ethylbenzene	100-41-4	< 5	5	1
10335	<b>di-Isopropyl ether</b>	108-20-3	<b>11</b>	5	1
10335	<b>Methyl Tertiary Butyl Ether</b>	1634-04-4	<b>33</b>	5	1
10335	Toluene	108-88-3	< 5	5	1
10335	Xylene (Total)	1330-20-7	< 5	5	1

### General Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

### Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10335	BTEX + 5 Oxys	SW-846 8260B	1	W133631AA	12/29/2013 18:02	Christopher G Torres	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	W133631AA	12/29/2013 18:02	Christopher G Torres	1

Sample Description: MW-15 Grab Water  
Fairfax Petroleum 26140

LL Sample # WW 7320517  
LL Group # 1442487  
Account # 12152

Project Name: Fairfax 26140

Collected: 12/18/2013 13:45 by CL

Kleinfelder

1 Speen Street

Submitted: 12/20/2013 11:35

Framingham MA 01701

Reported: 01/06/2014 15:24

F2615

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Limit of Quantitation	Dilution Factor
GC/MS	Volatiles	SW-846 8260B	ug/l	ug/l	
10335	t-Amyl methyl ether	994-05-8	27	10	2
10335	Benzene	71-43-2	< 10	10	2
10335	t-Butyl alcohol	75-65-0	260	160	2
10335	Ethyl t-butyl ether	637-92-3	< 10	10	2
10335	Ethylbenzene	100-41-4	< 10	10	2
10335	di-Isopropyl ether	108-20-3	210	10	2
10335	Methyl Tertiary Butyl Ether	1634-04-4	1,700	100	20
10335	Toluene	108-88-3	< 10	10	2
10335	Xylene (Total)	1330-20-7	14	10	2

### General Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

### Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10335	BTEX + 5 Oxys	SW-846 8260B	1	W133611AA	12/28/2013 01:00	Kevin A Sposito	2
10335	BTEX + 5 Oxys	SW-846 8260B	1	W133611AA	12/28/2013 01:23	Kevin A Sposito	20
01163	GC/MS VOA Water Prep	SW-846 5030B	1	W133611AA	12/28/2013 01:00	Kevin A Sposito	2
01163	GC/MS VOA Water Prep	SW-846 5030B	2	W133611AA	12/28/2013 01:23	Kevin A Sposito	20

Sample Description: MW-16D Grab Water  
Fairfax Petroleum 26140

LL Sample # WW 7320518  
LL Group # 1442487  
Account # 12152

Project Name: Fairfax 26140

Collected: 12/19/2013 09:15 by CL

Kleinfelder  
1 Speen Street  
Framingham MA 01701

Submitted: 12/20/2013 11:35

Reported: 01/06/2014 15:24

F2616

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Limit of Quantitation	Dilution Factor
<b>GC/MS</b>	<b>Volatiles</b>	<b>SW-846 8260B</b>	<b>ug/l</b>	<b>ug/l</b>	
10335	t-Amyl methyl ether	994-05-8	390	130	25
10335	Benzene	71-43-2	< 130	130	25
10335	t-Butyl alcohol	75-65-0	2,800	2,000	25
10335	Ethyl t-butyl ether	637-92-3	< 130	130	25
10335	Ethylbenzene	100-41-4	< 130	130	25
10335	di-Isopropyl ether	108-20-3	770	130	25
10335	Methyl Tertiary Butyl Ether	1634-04-4	19,000	1,300	250
10335	Toluene	108-88-3	< 130	130	25
10335	Xylene (Total)	1330-20-7	< 130	130	25

### General Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

### Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10335	BTEX + 5 Oxys	SW-846 8260B	1	W133651AA	12/31/2013 18:49	Jason M Long	25
10335	BTEX + 5 Oxys	SW-846 8260B	1	W133651AA	12/31/2013 19:13	Jason M Long	250
01163	GC/MS VOA Water Prep	SW-846 5030B	1	W133651AA	12/31/2013 18:49	Jason M Long	25
01163	GC/MS VOA Water Prep	SW-846 5030B	2	W133651AA	12/31/2013 19:13	Jason M Long	250

Sample Description: PW-1 Grab Water  
Fairfax Petroleum 26140

LL Sample # WW 7320519  
LL Group # 1442487  
Account # 12152

Project Name: Fairfax 26140

Collected: 12/19/2013 06:00 by CL

Kleinfelder  
1 Speen Street  
Framingham MA 01701

Submitted: 12/20/2013 11:35

Reported: 01/06/2014 15:24

F26P1

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Limit of Quantitation	Dilution Factor
<b>GC/MS</b>	<b>Volatiles</b>	<b>SW-846 8260B</b>	<b>ug/l</b>	<b>ug/l</b>	
10335	t-Amyl methyl ether	994-05-8	140	25	5
10335	Benzene	71-43-2	< 25	25	5
10335	t-Butyl alcohol	75-65-0	630	400	5
10335	Ethyl t-butyl ether	637-92-3	< 25	25	5
10335	Ethylbenzene	100-41-4	< 25	25	5
10335	di-Isopropyl ether	108-20-3	280	25	5
10335	Methyl Tertiary Butyl Ether	1634-04-4	4,700	250	50
10335	Toluene	108-88-3	< 25	25	5
10335	Xylene (Total)	1330-20-7	< 25	25	5

### General Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

### Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10335	BTEX + 5 Oxys	SW-846 8260B	1	W133631AA	12/29/2013 23:14	Christopher G Torres	5
10335	BTEX + 5 Oxys	SW-846 8260B	1	W133631AA	12/29/2013 23:38	Christopher G Torres	50
01163	GC/MS VOA Water Prep	SW-846 5030B	1	W133631AA	12/29/2013 23:14	Christopher G Torres	5
01163	GC/MS VOA Water Prep	SW-846 5030B	2	W133631AA	12/29/2013 23:38	Christopher G Torres	50

Sample Description: W-1 Grab Water  
Fairfax Petroleum 26140

LL Sample # WW 7320520  
LL Group # 1442487  
Account # 12152

Project Name: Fairfax 26140

Collected: 12/19/2013 11:15 by CL

Kleinfelder

1 Speen Street

Submitted: 12/20/2013 11:35

Framingham MA 01701

Reported: 01/06/2014 15:24

F26W1

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Limit of Quantitation	Dilution Factor
<b>GC/MS</b>	<b>Volatiles</b>	<b>SW-846 8260B</b>	<b>ug/l</b>	<b>ug/l</b>	
10335	t-Amyl methyl ether	994-05-8	130	100	20
10335	Benzene	71-43-2	< 100	100	20
10335	t-Butyl alcohol	75-65-0	6,900	1,600	20
10335	Ethyl t-butyl ether	637-92-3	< 100	100	20
10335	Ethylbenzene	100-41-4	< 100	100	20
10335	di-Isopropyl ether	108-20-3	150	100	20
10335	Methyl Tertiary Butyl Ether	1634-04-4	13,000	1,000	200
10335	Toluene	108-88-3	< 100	100	20
10335	Xylene (Total)	1330-20-7	< 100	100	20

### General Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

### Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10335	BTEX + 5 Oxys	SW-846 8260B	1	W133651AA	12/31/2013 19:37	Jason M Long	20
10335	BTEX + 5 Oxys	SW-846 8260B	1	W133651AA	12/31/2013 20:00	Jason M Long	200
01163	GC/MS VOA Water Prep	SW-846 5030B	1	W133651AA	12/31/2013 19:37	Jason M Long	20
01163	GC/MS VOA Water Prep	SW-846 5030B	2	W133651AA	12/31/2013 20:00	Jason M Long	200

Sample Description: W-2 Grab Water  
Fairfax Petroleum 26140

LL Sample # WW 7320521  
LL Group # 1442487  
Account # 12152

Project Name: Fairfax 26140

Collected: 12/19/2013 10:15 by CL

Kleinfelder  
1 Speen Street  
Framingham MA 01701

Submitted: 12/20/2013 11:35

Reported: 01/06/2014 15:24

F26W2

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Limit of Quantitation	Dilution Factor
<b>GC/MS</b>	<b>Volatiles</b>	<b>SW-846 8260B</b>	<b>ug/l</b>	<b>ug/l</b>	
10335	t-Amyl methyl ether	994-05-8	74	50	10
10335	Benzene	71-43-2	< 50	50	10
10335	t-Butyl alcohol	75-65-0	< 800	800	10
10335	Ethyl t-butyl ether	637-92-3	< 50	50	10
10335	Ethylbenzene	100-41-4	< 50	50	10
10335	di-Isopropyl ether	108-20-3	130	50	10
10335	Methyl Tertiary Butyl Ether	1634-04-4	7,700	500	100
10335	Toluene	108-88-3	< 50	50	10
10335	Xylene (Total)	1330-20-7	< 50	50	10

### General Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

### Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10335	BTEX + 5 Oxys	SW-846 8260B	1	W133631AA	12/30/2013 01:37	Christopher G Torres	10
10335	BTEX + 5 Oxys	SW-846 8260B	1	W133631AA	12/30/2013 02:01	Christopher G Torres	100
01163	GC/MS VOA Water Prep	SW-846 5030B	1	W133631AA	12/30/2013 01:37	Christopher G Torres	10
01163	GC/MS VOA Water Prep	SW-846 5030B	2	W133631AA	12/30/2013 02:01	Christopher G Torres	100

Sample Description: W-3 Grab Water  
Fairfax Petroleum 26140

LL Sample # WW 7320522  
LL Group # 1442487  
Account # 12152

Project Name: Fairfax 26140

Collected: 12/18/2013 07:30 by CL

Kleinfelder  
1 Speen Street  
Framingham MA 01701

Submitted: 12/20/2013 11:35

Reported: 01/06/2014 15:24

F26W3

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Limit of Quantitation	Dilution Factor
<b>GC/MS</b>	<b>Volatiles</b>	<b>SW-846 8260B</b>	<b>ug/l</b>	<b>ug/l</b>	
10335	t-Amyl methyl ether	994-05-8	< 5	5	1
10335	Benzene	71-43-2	< 5	5	1
10335	t-Butyl alcohol	75-65-0	< 80	80	1
10335	Ethyl t-butyl ether	637-92-3	< 5	5	1
10335	Ethylbenzene	100-41-4	< 5	5	1
10335	di-Isopropyl ether	108-20-3	< 5	5	1
10335	Methyl Tertiary Butyl Ether	1634-04-4	< 5	5	1
10335	Toluene	108-88-3	< 5	5	1
10335	Xylene (Total)	1330-20-7	< 5	5	1

### General Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

### Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10335	BTEX + 5 Oxys	SW-846 8260B	1	W133611AA	12/28/2013 01:47	Kevin A Sposito	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	W133611AA	12/28/2013 01:47	Kevin A Sposito	1

Sample Description: W-4 Grab Water  
Fairfax Petroleum 26140

LL Sample # WW 7320523  
LL Group # 1442487  
Account # 12152

Project Name: Fairfax 26140

Collected: 12/18/2013 06:30 by CL

Kleinfelder  
1 Speen Street  
Framingham MA 01701

Submitted: 12/20/2013 11:35  
Reported: 01/06/2014 15:24

F26W4

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Limit of Quantitation	Dilution Factor
<b>GC/MS</b>	<b>Volatiles</b>	<b>SW-846 8260B</b>	<b>ug/l</b>	<b>ug/l</b>	
10335	t-Amyl methyl ether	994-05-8	< 5	5	1
10335	Benzene	71-43-2	< 5	5	1
10335	t-Butyl alcohol	75-65-0	< 80	80	1
10335	Ethyl t-butyl ether	637-92-3	< 5	5	1
10335	Ethylbenzene	100-41-4	< 5	5	1
10335	di-Isopropyl ether	108-20-3	< 5	5	1
10335	Methyl Tertiary Butyl Ether	1634-04-4	< 5	5	1
10335	Toluene	108-88-3	< 5	5	1
10335	Xylene (Total)	1330-20-7	< 5	5	1

### General Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

### Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10335	BTEX + 5 Oxys	SW-846 8260B	1	W133611AA	12/28/2013 02:11	Kevin A Sposito	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	W133611AA	12/28/2013 02:11	Kevin A Sposito	1

Sample Description: W-5 Grab Water  
Fairfax Petroleum 26140

LL Sample # WW 7320524  
LL Group # 1442487  
Account # 12152

Project Name: Fairfax 26140

Collected: 12/18/2013 12:00 by CL

Kleinfelder  
1 Speen Street  
Framingham MA 01701

Submitted: 12/20/2013 11:35  
Reported: 01/06/2014 15:24

F26W5

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Limit of Quantitation	Dilution Factor
<b>GC/MS</b>	<b>Volatiles</b>	<b>SW-846 8260B</b>	<b>ug/l</b>	<b>ug/l</b>	
10335	t-Amyl methyl ether	994-05-8	< 13	13	2.5
10335	<b>Benzene</b>	71-43-2	<b>290</b>	13	2.5
10335	t-Butyl alcohol	75-65-0	< 200	200	2.5
10335	Ethyl t-butyl ether	637-92-3	< 13	13	2.5
10335	<b>Ethylbenzene</b>	100-41-4	<b>860</b>	130	25
10335	di-Isopropyl ether	108-20-3	< 13	13	2.5
10335	Methyl Tertiary Butyl Ether	1634-04-4	< 13	13	2.5
10335	<b>Toluene</b>	108-88-3	<b>160</b>	13	2.5
10335	<b>Xylene (Total)</b>	1330-20-7	<b>6,000</b>	130	25

### General Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

### Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10335	BTEX + 5 Oxys	SW-846 8260B	1	W133611AA	12/28/2013 02:35	Kevin A Sposito	2.5
10335	BTEX + 5 Oxys	SW-846 8260B	1	W133611AA	12/28/2013 02:59	Kevin A Sposito	25
01163	GC/MS VOA Water Prep	SW-846 5030B	1	W133611AA	12/28/2013 02:35	Kevin A Sposito	2.5
01163	GC/MS VOA Water Prep	SW-846 5030B	2	W133611AA	12/28/2013 02:59	Kevin A Sposito	25

Sample Description: W-6 Grab Water  
Fairfax Petroleum 26140

LL Sample # WW 7320525  
LL Group # 1442487  
Account # 12152

Project Name: Fairfax 26140

Collected: 12/18/2013 10:00 by CL

Kleinfelder  
1 Speen Street  
Framingham MA 01701

Submitted: 12/20/2013 11:35

Reported: 01/06/2014 15:24

F26W6

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Limit of Quantitation	Dilution Factor
<b>GC/MS</b>	<b>Volatiles</b>	<b>SW-846 8260B</b>	<b>ug/l</b>	<b>ug/l</b>	
10335	t-Amyl methyl ether	994-05-8	< 5	5	1
10335	Benzene	71-43-2	< 5	5	1
10335	t-Butyl alcohol	75-65-0	< 80	80	1
10335	Ethyl t-butyl ether	637-92-3	< 5	5	1
10335	Ethylbenzene	100-41-4	< 5	5	1
10335	di-Isopropyl ether	108-20-3	< 5	5	1
10335	Methyl Tertiary Butyl Ether	1634-04-4	< 5	5	1
10335	Toluene	108-88-3	< 5	5	1
10335	Xylene (Total)	1330-20-7	< 5	5	1

### General Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

### Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10335	BTEX + 5 Oxys	SW-846 8260B	1	W133631AA	12/29/2013 18:27	Christopher G Torres	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	W133631AA	12/29/2013 18:27	Christopher G Torres	1

Sample Description: W-7 Grab Water  
Fairfax Petroleum 26140

LL Sample # WW 7320526  
LL Group # 1442487  
Account # 12152

Project Name: Fairfax 26140

Collected: 12/18/2013 08:50 by CL

Kleinfelder  
1 Speen Street  
Framingham MA 01701

Submitted: 12/20/2013 11:35

Reported: 01/06/2014 15:24

F26W7

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Limit of Quantitation	Dilution Factor
<b>GC/MS</b>	<b>Volatiles</b>	<b>SW-846 8260B</b>	<b>ug/l</b>	<b>ug/l</b>	
10335	t-Amyl methyl ether	994-05-8	< 5	5	1
10335	Benzene	71-43-2	< 5	5	1
10335	t-Butyl alcohol	75-65-0	< 80	80	1
10335	Ethyl t-butyl ether	637-92-3	< 5	5	1
10335	Ethylbenzene	100-41-4	< 5	5	1
10335	di-Isopropyl ether	108-20-3	< 5	5	1
10335	Methyl Tertiary Butyl Ether	1634-04-4	< 5	5	1
10335	Toluene	108-88-3	< 5	5	1
10335	Xylene (Total)	1330-20-7	< 5	5	1

### General Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

### Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10335	BTEX + 5 Oxys	SW-846 8260B	1	W133631AA	12/29/2013 18:51	Christopher G Torres	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	W133631AA	12/29/2013 18:51	Christopher G Torres	1

Sample Description: Trip Blank Water  
Fairfax Petroleum 26140

LL Sample # WW 7320527  
LL Group # 1442487  
Account # 12152

Project Name: Fairfax 26140

Collected: 12/17/2013

Kleinfelder

Submitted: 12/20/2013 11:35

1 Speen Street

Reported: 01/06/2014 15:24

Framingham MA 01701

F26TB

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Limit of Quantitation	Dilution Factor
<b>GC/MS</b>	<b>Volatiles</b>	<b>SW-846 8260B</b>	<b>ug/l</b>	<b>ug/l</b>	
10335	t-Amyl methyl ether	994-05-8	< 5	5	1
10335	Benzene	71-43-2	< 5	5	1
10335	t-Butyl alcohol	75-65-0	< 80	80	1
10335	Ethyl t-butyl ether	637-92-3	< 5	5	1
10335	Ethylbenzene	100-41-4	< 5	5	1
10335	di-Isopropyl ether	108-20-3	< 5	5	1
10335	Methyl Tertiary Butyl Ether	1634-04-4	< 5	5	1
10335	Toluene	108-88-3	< 5	5	1
10335	Xylene (Total)	1330-20-7	< 5	5	1

### General Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

### Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10335	BTEX + 5 Oxys	SW-846 8260B	1	W133611AA	12/27/2013 18:37	Kevin A Sposito	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	W133611AA	12/27/2013 18:37	Kevin A Sposito	1

## Quality Control Summary

Client Name: Kleinfelder  
Reported: 01/06/14 at 03:24 PM

Group Number: 1442487

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

All Inorganic Initial Calibration and Continuing Calibration Blanks met acceptable method criteria unless otherwise noted on the Analysis Report.

### Laboratory Compliance Quality Control

<u>Analysis Name</u>	<u>Blank Result</u>	<u>Blank LOQ</u>	<u>Report Units</u>	<u>LCS %REC</u>	<u>LCSD %REC</u>	<u>LCS/LCSD Limits</u>	<u>RPD</u>	<u>RPD Max</u>
Batch number: W133611AA	Sample number(s): 7320507,7320509-7320514,7320517,7320522-7320524,7320527							
t-Amyl methyl ether	< 5	5.	ug/l	103	105	75-120	1	30
Benzene	< 5	5.	ug/l	108	114	78-120	6	30
t-Butyl alcohol	< 80	80.	ug/l	105	106	75-120	0	30
Ethyl t-butyl ether	< 5	5.	ug/l	105	106	74-120	1	30
Ethylbenzene	< 5	5.	ug/l	107	113	79-120	5	30
di-Isopropyl ether	< 5	5.	ug/l	111	114	65-120	3	30
Methyl Tertiary Butyl Ether	< 5	5.	ug/l	105	107	75-120	1	30
Toluene	< 5	5.	ug/l	111	116	80-120	4	30
Xylene (Total)	< 5	5.	ug/l	107	112	80-120	4	30
Batch number: W133631AA	Sample number(s): 7320515-7320516,7320519,7320521,7320525-7320526							
t-Amyl methyl ether	< 5	5.	ug/l	102	103	75-120	1	30
Benzene	< 5	5.	ug/l	109	110	78-120	1	30
t-Butyl alcohol	< 80	80.	ug/l	101	103	75-120	2	30
Ethyl t-butyl ether	< 5	5.	ug/l	103	104	74-120	1	30
Ethylbenzene	< 5	5.	ug/l	105	106	79-120	2	30
di-Isopropyl ether	< 5	5.	ug/l	111	111	65-120	1	30
Methyl Tertiary Butyl Ether	< 5	5.	ug/l	105	105	75-120	0	30
Toluene	< 5	5.	ug/l	108	109	80-120	1	30
Xylene (Total)	< 5	5.	ug/l	106	107	80-120	0	30
Batch number: W133651AA	Sample number(s): 7320508,7320518,7320520							
t-Amyl methyl ether	< 5	5.	ug/l	107	108	75-120	1	30
Benzene	< 5	5.	ug/l	113	111	78-120	1	30
t-Butyl alcohol	< 80	80.	ug/l	107	109	75-120	1	30
Ethyl t-butyl ether	< 5	5.	ug/l	110	110	74-120	0	30
Ethylbenzene	< 5	5.	ug/l	109	109	79-120	0	30
di-Isopropyl ether	< 5	5.	ug/l	115	116	65-120	1	30
Methyl Tertiary Butyl Ether	< 5	5.	ug/l	109	109	75-120	1	30
Toluene	< 5	5.	ug/l	113	113	80-120	0	30
Xylene (Total)	< 5	5.	ug/l	110	110	80-120	1	30

### Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: 8260 VOCs

\*- Outside of specification

- (1) The result for one or both determinations was less than five times the LOQ.
- (2) The unspiked result was more than four times the spike added.

## Quality Control Summary

Client Name: Kleinfelder  
Reported: 01/06/14 at 03:24 PM

Group Number: 1442487

### Surrogate Quality Control

Batch number: W133611AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
7320507	95	101	102	99
7320509	95	99	101	98
7320510	94	101	100	96
7320511	95	101	101	97
7320512	97	100	100	97
7320513	95	102	101	98
7320514	94	98	100	98
7320517	95	99	101	98
7320522	95	96	100	97
7320523	95	98	101	98
7320524	96	102	101	96
7320527	95	99	100	99
Blank	95	100	102	100
LCS	96	102	102	100
LCSD	97	97	102	98
Limits:	80-116	77-113	80-113	78-113

Analysis Name: 8260 VOCs

Batch number: W133631AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
7320515	94	99	101	98
7320516	97	101	101	100
7320519	95	98	100	98
7320521	95	99	100	97
7320525	97	102	100	98
7320526	95	99	101	101
Blank	96	100	100	98
LCS	97	103	101	99
LCSD	98	99	101	99
Limits:	80-116	77-113	80-113	78-113

Analysis Name: 8260 VOCs

Batch number: W133651AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
7320508	95	99	101	97
7320518	94	99	100	98
7320520	95	99	101	98
Blank	96	100	99	99
LCS	95	97	101	100
LCSD	97	98	101	101
Limits:	80-116	77-113	80-113	78-113

\*- Outside of specification

- (1) The result for one or both determinations was less than five times the LOQ.
- (2) The unspiked result was more than four times the spike added.



Analysis Request/Environmental Services Chain of Custody

For Lancaster Laboratories use only Acct. #: 12152  
 Group #: \_\_\_\_\_ Sample #: \_\_\_\_\_  
1442487 7320507-27

Client: <u>Fairfax Petroleum</u>		Acct. #: _____		<table border="1"> <tr> <th colspan="2">Matrix</th> <th rowspan="4">Total # of Containers</th> <th colspan="10">Analyses Requested</th> <th colspan="2">For Lab Use Only</th> </tr> <tr> <td rowspan="3">Potable</td> <td rowspan="3">NPDES</td> <th colspan="10">Preservation Codes</th> <td>FSC: _____</td> <td rowspan="3">SCR#: _____</td> </tr> <tr> <td colspan="10"></td> <td rowspan="2">           Preservation Codes            H=HCl T=Thiosulfate            N=HNO3 B=NaOH            S=H2SO4 O=Other         </td> </tr> <tr> <td colspan="10"></td> <td>Temperature of samples upon receipt (if requested)</td> </tr> </table>		Matrix		Total # of Containers	Analyses Requested										For Lab Use Only		Potable	NPDES	Preservation Codes										FSC: _____	SCR#: _____											Preservation Codes H=HCl T=Thiosulfate N=HNO3 B=NaOH S=H2SO4 O=Other											Temperature of samples upon receipt (if requested)
Matrix		Total # of Containers	Analyses Requested										For Lab Use Only																																											
Potable	NPDES		Preservation Codes										FSC: _____	SCR#: _____																																										
													Preservation Codes H=HCl T=Thiosulfate N=HNO3 B=NaOH S=H2SO4 O=Other																																											
															Temperature of samples upon receipt (if requested)																																									
Project Name/#: <u>26140</u>		PWSID #: _____																																																						
Project Manager: <u>Mark C. Steele</u>		P.O. #: <u>51141-286051</u>																																																						
Sampler: <u>Charlie Low</u>		Quote #: _____																																																						
Name of State where samples were collected: <u>Virginia</u>																																																								
Sample Identification	Date Collected	Time Collected	Grab	Composite	Soil	Water	Other	BTEX + Oxygenates (TBA, TAME, ETBE, DIPE, MTBE)											Remarks																																					
MW-1	12-19-13	1230	X			X		3	X											Page 1 of 2																																				
MW-2	12-19-13	0745	X			X		3	X																																															
<del>MW-3</del>	<del>12-18-13</del>	<del>1100</del>	<del>X</del>			<del>X</del>		<del>3</del>	<del>X</del>																																															
MW-5	12-18-13	1100	X			X		3	X																																															
MW-6S	12-17-13	0820	X			X		3	X																																															
MW-7	12-18-13	1545	X			X		3	X																																															
MW-9	12-18-13	1250	X			X		3	X																																															
MW-10	12-18-13	0545	X			X		3	X																																															
MW-11	12-18-13	1430	X			X		3	X																																															
MW-13	12-19-13	0700	X			X		3	X																																															
MW-14	12-19-13	0830	X			X		3	X																																															
MW-15	12-18-13	1345	X			X		3	X																																															
<b>Turnaround Time Requested (TAT)</b> (please circle): <u>Normal</u> <del>Rush</del> (Rush TAT is subject to Lancaster Laboratories approval and surcharge.) Date results are needed: _____ Rush results requested by (please circle): Phone Fax E-mail Phone #: _____ Fax #: _____ E-mail address: _____				Relinquished by: <u>[Signature]</u> Date: <u>12-19-13</u> Time: <u>1800</u> Received by: <u>UPS</u> Date: <u>12-19-13</u> Time: <u>1800</u>																																																				
<b>Data Package Options</b> (please circle if required) Type I (validation/NJ reg) <u>TX-TRRP-13</u> Type II (Tier II) <u>MA MCP</u> <u>CT RCP</u> Type III (Reduced NJ) Type IV (CLP SOW) Type VI (Raw Data Only)				SDG Complete? Yes No State-specific QC (MS/MSD/Dup)? Yes No (If yes, indicated QC sample and submit triplicate volume) Internal COC required? Yes No																																																				
				Relinquished by: _____ Date: _____ Time: _____ Received by: _____ Date: _____ Time: _____																																																				
				Relinquished by: _____ Date: _____ Time: _____ Received by: _____ Date: _____ Time: _____																																																				
				Relinquished by: _____ Date: _____ Time: _____ Received by: <u>[Signature]</u> Date: <u>12-20-13</u> Time: _____																																																				

Lancaster Laboratories, Inc. 2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 717-656-2300  
 Copies: White and yellow should accompany samples to Lancaster Laboratories. The pink copy should be retained by the client

1135



# Explanation of Symbols and Abbreviations

The following defines common symbols and abbreviations used in reporting technical data:

<b>RL</b>	Reporting Limit	<b>BMQL</b>	Below Minimum Quantitation Level
<b>N.D.</b>	none detected	<b>MPN</b>	Most Probable Number
<b>TNTC</b>	Too Numerous To Count	<b>CP Units</b>	cobalt-chloroplatinate units
<b>IU</b>	International Units	<b>NTU</b>	nephelometric turbidity units
<b>umhos/cm</b>	micromhos/cm	<b>ng</b>	nanogram(s)
<b>C</b>	degrees Celsius	<b>F</b>	degrees Fahrenheit
<b>meq</b>	milliequivalents	<b>lb.</b>	pound(s)
<b>g</b>	gram(s)	<b>kg</b>	kilogram(s)
<b>µg</b>	microgram(s)	<b>mg</b>	milligram(s)
<b>mL</b>	milliliter(s)	<b>L</b>	liter(s)
<b>m<sup>3</sup></b>	cubic meter(s)	<b>µL</b>	microliter(s)
		<b>pg/L</b>	picogram/liter

< less than - The number following the sign is the limit of quantitation, the smallest amount of analyte which can be reliably determined using this specific test.

> greater than

**ppm** parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg), or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter per liter of gas.

**ppb** parts per billion

**Dry weight basis** Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis.

*Data Qualifiers:*

**C** – result confirmed by reanalysis.

**J** - estimated value – The result is  $\geq$  the Method Detection Limit (MDL) and  $<$  the Limit of Quantitation (LOQ).

*U.S. EPA CLP Data Qualifiers:*

**Organic Qualifiers**

**Inorganic Qualifiers**

<b>A</b>	TIC is a possible aldol-condensation product	<b>B</b>	Value is $<$ CRDL, but $\geq$ IDL
<b>B</b>	Analyte was also detected in the blank	<b>E</b>	Estimated due to interference
<b>C</b>	Pesticide result confirmed by GC/MS	<b>M</b>	Duplicate injection precision not met
<b>D</b>	Compound quantitated on a diluted sample	<b>N</b>	Spike sample not within control limits
<b>E</b>	Concentration exceeds the calibration range of the instrument	<b>S</b>	Method of standard additions (MSA) used for calculation
<b>N</b>	Presumptive evidence of a compound (TICs only)	<b>U</b>	Compound was not detected
<b>P</b>	Concentration difference between primary and confirmation columns $>$ 25%	<b>W</b>	Post digestion spike out of control limits
<b>U</b>	Compound was not detected	<b>*</b>	Duplicate analysis not within control limits
<b>X,Y,Z</b>	Defined in case narrative	<b>+</b>	Correlation coefficient for MSA $<$ 0.995

**Analytical test results meet all requirements of NELAC unless otherwise noted under the individual analysis.**

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff. This report shall not be reproduced except in full, without the written approval of the laboratory.

Times are local to the area of activity. Parameters listed in the 40 CFR part 136 Table II as “analyze immediately” are not performed within 15 minutes.

**WARRANTY AND LIMITS OF LIABILITY** - In accepting analytical work, we warrant the accuracy of test results for the sample as submitted. THE FOREGOING EXPRESS WARRANTY IS EXCLUSIVE AND IS GIVEN IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED. WE DISCLAIM ANY OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING A WARRANTY OF FITNESS FOR PARTICULAR PURPOSE AND WARRANTY OF MERCHANTABILITY. IN NO EVENT SHALL EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL, LLC BE LIABLE FOR INDIRECT, SPECIAL, CONSEQUENTIAL, OR INCIDENTAL DAMAGES INCLUDING, BUT NOT LIMITED TO, DAMAGES FOR LOSS OF PROFIT OR GOODWILL REGARDLESS OF (A) THE NEGLIGENCE (EITHER SOLE OR CONCURRENT) OF EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL AND (B) WHETHER EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL HAS BEEN INFORMED OF THE POSSIBILITY OF SUCH DAMAGES. We accept no legal responsibility for the purposes for which the client uses the test results. No purchase order or other order for work shall be accepted by Eurofins Lancaster Laboratories Environmental which includes any conditions that vary from the Standard Terms and Conditions, and Eurofins Lancaster Laboratories Environmental hereby objects to any conflicting terms contained in any acceptance or order submitted by client.

## ANALYTICAL RESULTS

Prepared by:

Eurofins Lancaster Laboratories Environmental  
2425 New Holland Pike  
Lancaster, PA 17601

Prepared for:

Kleinfelder  
1 Speen Street  
Framingham MA 01701

January 02, 2014

Project: Fairfax 26140

Submittal Date: 12/18/2013  
Group Number: 1441664  
PO Number: 51141-286051  
State of Sample Origin: VA

Client Sample Description

MW-6S Grab Water

Lancaster Labs (LL) #

7316693

The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

ELECTRONIC COPY TO	Kleinfelder	Attn: Mark Steele
ELECTRONIC COPY TO	Kleinfelder	Attn: Angela Vogt
ELECTRONIC COPY TO	Kleinfelder	Attn: Venelda Williams
ELECTRONIC COPY TO	Kleinfelder	Attn: Charlie Low
ELECTRONIC COPY TO	Kleinfelder	Attn: Paxton Wertz

Respectfully Submitted,



Amek Carter  
Specialist

(717) 556-7252



Sample Description: MW-6S Grab Water  
Fairfax 26140

LL Sample # WW 7316693  
LL Group # 1441664  
Account # 12152

Project Name: Fairfax 26140

Collected: 12/17/2013 08:20 by CL

Kleinfelder  
1 Speen Street  
Framingham MA 01701

Submitted: 12/18/2013 09:45

Reported: 01/02/2014 10:57

MW-6S

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Limit of Quantitation	Dilution Factor
<b>GC Miscellaneous</b>			SW-846 8015B modified ug/l	ug/l	
07105	Methane	74-82-8	< 5.0	5.0	1
<b>Wet Chemistry</b>			EPA 300.0 mg/l	mg/l	
00228	Sulfate	14808-79-8	5.4	5.0	5
			EPA 353.2 mg/l	mg/l	
00220	Nitrate Nitrogen	14797-55-8	5.5	0.50	5
			SM 3500-Fe B modified-1997 mg/l	mg/l	
08344	Ferrous Iron	n.a.	0.64	0.10	1

**General Sample Comments**

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

**Laboratory Sample Analysis Record**

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07105	Dissolved Gases Methane	SW-846 8015B modified	1	133540029A	12/23/2013 22:06	Elizabeth J Marin	1
00228	Sulfate	EPA 300.0	1	13353347601B	12/19/2013 17:39	Sandra J Miller	5
00220	Nitrate Nitrogen	EPA 353.2	1	13357106102B	12/23/2013 19:29	Joseph E McKenzie	5
08344	Ferrous Iron	SM 3500-Fe B modified-1997	1	13353834401A	12/19/2013 20:25	Daniel S Smith	1

## Quality Control Summary

Client Name: Kleinfelder  
Reported: 01/02/14 at 10:57 AM

Group Number: 1441664

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

All Inorganic Initial Calibration and Continuing Calibration Blanks met acceptable method criteria unless otherwise noted on the Analysis Report.

### Laboratory Compliance Quality Control

<u>Analysis Name</u>	<u>Blank Result</u>	<u>Blank LOQ</u>	<u>Report Units</u>	<u>LCS %REC</u>	<u>LCSD %REC</u>	<u>LCS/LCSD Limits</u>	<u>RPD</u>	<u>RPD Max</u>
Batch number: 133540029A Methane	Sample number(s): 7316693 < 26	26.	ug/l	110		80-120		
Batch number: 13353347601B Sulfate	Sample number(s): 7316693 < 1.0	1.0	mg/l	98		90-110		
Batch number: 13357106102B Nitrate Nitrogen	Sample number(s): 7316693 < 0.10	0.10	mg/l	97		90-110		
Batch number: 13353834401A Ferrous Iron	Sample number(s): 7316693 < 0.10	0.10	mg/l	100		93-105		

### Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike  
Background (BKG) = the sample used in conjunction with the duplicate

<u>Analysis Name</u>	<u>MS %REC</u>	<u>MSD %REC</u>	<u>MS/MSD Limits</u>	<u>RPD</u>	<u>RPD MAX</u>	<u>BKG Conc</u>	<u>DUP Conc</u>	<u>DUP RPD</u>	<u>Dup RPD Max</u>
Batch number: 133540029A Methane	Sample number(s): 7316693 102	83	35-157	16	20	UNSPK: P315216			
Batch number: 13353347601B Sulfate	Sample number(s): 7316693 117*		90-110			UNSPK: P316706 < 5.0	BKG: P316706 < 5.0	1 (1)	20
Batch number: 13357106102B Nitrate Nitrogen	Sample number(s): 7316693 98		90-110			UNSPK: P315365 < 0.10	BKG: P315365 < 0.10	0 (1)	2
Batch number: 13353834401A Ferrous Iron	Sample number(s): 7316693 96	96	81-112	0	6	UNSPK: P317665 17.9	BKG: P317665 18.9	5 (1)	5

### Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: Volatile Headspace Hydrocarbon  
Batch number: 133540029A

\*- Outside of specification

- (1) The result for one or both determinations was less than five times the LOQ.
- (2) The unspiked result was more than four times the spike added.

**Quality Control Summary**Client Name: Kleinfelder  
Reported: 01/02/14 at 10:57 AM

Group Number: 1441664

**Surrogate Quality Control**

Propene

---

7316693	92
Blank	92
LCS	101
MS	100
MSD	87

---

Limits: 42-131

\*- Outside of specification

- (1) The result for one or both determinations was less than five times the LOQ.
- (2) The unspiked result was more than four times the spike added.



Analysis Request/Environmental Services Chain of Custody

For Lancaster Laboratories use only Acct. #: 12152  
 Group #: \_\_\_\_\_ Sample #: \_\_\_\_\_

1441664 7316693

Client: <u>Fairfax Petroleum</u>		Acct. #: _____		<b>Matrix</b>		<b>Analyses Requested</b>					<b>For Lab Use Only</b>					
Project Name/#: <u>26140</u>		PWSID #: _____				<b>Preservation Codes</b>					FSC: _____					
Project Manager: <u>Mark C. Steele</u>		P.O. #: <u>51141-286051</u>				Potable	NPDES	H	S	H				SCR#: _____		
Sampler: <u>Charlie Low</u>		Quote #: _____												Preservation Codes H=HCl T=Thiosulfate N=HNO3 B=NaOH S=H2SO4 O=Other		
Name of State where samples were collected: <u>Virginia</u>				<b>Total # of Containers</b>		Ferrous Iron (EPA 3500 Fe D Mod.) Sulfate (EPA 300.0) Nitrate Nitrogen (EPA 353.2) Methane (EPA 8015B Mod.) Nitrate Nitrogen (EPA 353.2)					Remarks Temperature of samples upon receipt (if requested)					
<b>Sample Identification</b>		<b>Date Collected</b>	<b>Time Collected</b>										<b>Grab</b>	<b>Composite</b>	<b>Soil</b>	<b>Water</b>
<del>MW-1</del>				<del>X</del>			<del>X</del>									
<del>MW-5</del>				<del>X</del>			<del>X</del>									
MW-6S		<u>12-17-13</u>	<u>0820</u>	X			X			7	X	X	X	X	X	
<del>MW-11</del>				<del>X</del>			<del>X</del>				<del>X</del>	<del>X</del>	<del>X</del>	<del>X</del>	<del>X</del>	
<del>MW-14</del>				<del>X</del>			<del>X</del>				<del>X</del>	<del>X</del>	<del>X</del>	<del>X</del>	<del>X</del>	
<del>MW-15B</del>				<del>X</del>			<del>X</del>				<del>X</del>	<del>X</del>	<del>X</del>	<del>X</del>	<del>X</del>	
<del>MW-1</del>				<del>X</del>			<del>X</del>				<del>X</del>	<del>X</del>	<del>X</del>	<del>X</del>	<del>X</del>	
<del>MW-2</del>				<del>X</del>			<del>X</del>				<del>X</del>	<del>X</del>	<del>X</del>	<del>X</del>	<del>X</del>	
<del>MW-3</del>				<del>X</del>			<del>X</del>				<del>X</del>	<del>X</del>	<del>X</del>	<del>X</del>	<del>X</del>	
<del>MW-6</del>				<del>X</del>			<del>X</del>				<del>X</del>	<del>X</del>	<del>X</del>	<del>X</del>	<del>X</del>	
<del>MW-7</del>				<del>X</del>			<del>X</del>				<del>X</del>	<del>X</del>	<del>X</del>	<del>X</del>	<del>X</del>	

**Turnaround Time Requested (TAT)** (please circle): Normal ~~Rush~~  
 (Rush TAT is subject to Lancaster Laboratories approval and surcharge.)

Date results are needed: \_\_\_\_\_

Rush results requested by (please circle): Phone Fax E-mail

Phone #: \_\_\_\_\_ Fax #: \_\_\_\_\_

E-mail address: \_\_\_\_\_

**Data Package Options** (please circle if required)

Type I (validation/NJ reg) TX-TRRP-13

Type II (Tier II) MA MCP CT RCP

Type III (Reduced NJ)

Type IV (CLP SOW)

Type VI (Raw Data Only)

**SDG Complete?**  
Yes No

State-specific QC (MS/MSD/Dup)? Yes No  
 (If yes, indicated QC sample and submit triplicate volume)

Internal COC required? Yes No

Relinquished by: <u>Charlie</u>	Date: <u>12-17-13</u>	Time: <u>1430</u>	Received by: <u>UPS</u>	Date: <u>12-17-13</u>	Time: <u>1430</u>
Relinquished by:	Date:	Time:	Received by:	Date:	Time:
Relinquished by:	Date:	Time:	Received by:	Date:	Time:
Relinquished by:	Date:	Time:	Received by:	Date:	Time:
Relinquished by:	Date:	Time:	Received by: <u>CSL</u>	Date: <u>12/18/13</u>	Time: <u>0945</u>

Lancaster Laboratories, Inc. 2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 717-656-2300  
 Copies: White and yellow should accompany samples to Lancaster Laboratories. The pink copy should be retained by the client

# Explanation of Symbols and Abbreviations

The following defines common symbols and abbreviations used in reporting technical data:

<b>RL</b>	Reporting Limit	<b>BMQL</b>	Below Minimum Quantitation Level
<b>N.D.</b>	none detected	<b>MPN</b>	Most Probable Number
<b>TNTC</b>	Too Numerous To Count	<b>CP Units</b>	cobalt-chloroplatinate units
<b>IU</b>	International Units	<b>NTU</b>	nephelometric turbidity units
<b>umhos/cm</b>	micromhos/cm	<b>ng</b>	nanogram(s)
<b>C</b>	degrees Celsius	<b>F</b>	degrees Fahrenheit
<b>meq</b>	milliequivalents	<b>lb.</b>	pound(s)
<b>g</b>	gram(s)	<b>kg</b>	kilogram(s)
<b>µg</b>	microgram(s)	<b>mg</b>	milligram(s)
<b>mL</b>	milliliter(s)	<b>L</b>	liter(s)
<b>m<sup>3</sup></b>	cubic meter(s)	<b>µL</b>	microliter(s)
		<b>pg/L</b>	picogram/liter

< less than - The number following the sign is the limit of quantitation, the smallest amount of analyte which can be reliably determined using this specific test.

> greater than

**ppm** parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg), or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter per liter of gas.

**ppb** parts per billion

**Dry weight basis** Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis.

*Data Qualifiers:*

**C** – result confirmed by reanalysis.

**J** - estimated value – The result is  $\geq$  the Method Detection Limit (MDL) and  $<$  the Limit of Quantitation (LOQ).

*U.S. EPA CLP Data Qualifiers:*

**Organic Qualifiers**

- A** TIC is a possible aldol-condensation product
- B** Analyte was also detected in the blank
- C** Pesticide result confirmed by GC/MS
- D** Compound quantitated on a diluted sample
- E** Concentration exceeds the calibration range of the instrument
- N** Presumptive evidence of a compound (TICs only)
- P** Concentration difference between primary and confirmation columns  $>25\%$
- U** Compound was not detected
- X,Y,Z** Defined in case narrative

**Inorganic Qualifiers**

- B** Value is  $<$ CRDL, but  $\geq$ IDL
- E** Estimated due to interference
- M** Duplicate injection precision not met
- N** Spike sample not within control limits
- S** Method of standard additions (MSA) used for calculation
- U** Compound was not detected
- W** Post digestion spike out of control limits
- \*** Duplicate analysis not within control limits
- +** Correlation coefficient for MSA  $<0.995$

**Analytical test results meet all requirements of NELAC unless otherwise noted under the individual analysis.**

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff. This report shall not be reproduced except in full, without the written approval of the laboratory.

Times are local to the area of activity. Parameters listed in the 40 CFR part 136 Table II as “analyze immediately” are not performed within 15 minutes.

**WARRANTY AND LIMITS OF LIABILITY** - In accepting analytical work, we warrant the accuracy of test results for the sample as submitted. THE FOREGOING EXPRESS WARRANTY IS EXCLUSIVE AND IS GIVEN IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED. WE DISCLAIM ANY OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING A WARRANTY OF FITNESS FOR PARTICULAR PURPOSE AND WARRANTY OF MERCHANTABILITY. IN NO EVENT SHALL EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL, LLC BE LIABLE FOR INDIRECT, SPECIAL, CONSEQUENTIAL, OR INCIDENTAL DAMAGES INCLUDING, BUT NOT LIMITED TO, DAMAGES FOR LOSS OF PROFIT OR GOODWILL REGARDLESS OF (A) THE NEGLIGENCE (EITHER SOLE OR CONCURRENT) OF EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL AND (B) WHETHER EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL HAS BEEN INFORMED OF THE POSSIBILITY OF SUCH DAMAGES. We accept no legal responsibility for the purposes for which the client uses the test results. No purchase order or other order for work shall be accepted by Eurofins Lancaster Laboratories Environmental which includes any conditions that vary from the Standard Terms and Conditions, and Eurofins Lancaster Laboratories Environmental hereby objects to any conflicting terms contained in any acceptance or order submitted by client.

## ANALYTICAL RESULTS

Prepared by:

Eurofins Lancaster Laboratories Environmental  
2425 New Holland Pike  
Lancaster, PA 17601

Prepared for:

Kleinfelder  
1 Speen Street  
Framingham MA 01701

January 06, 2014

Project: Fairfax 26140

Submittal Date: 12/19/2013  
Group Number: 1442210  
PO Number: 51141-286051  
State of Sample Origin: VA

<u>Client Sample Description</u>	<u>Lancaster Labs (LL) #</u>
MW-5 Grab Water	7319013
MW-11 Grab Water	7319014
W-3 Grab Water	7319015
W-6 Grab Water	7319016
W-7 Grab Water	7319017

The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

ELECTRONIC COPY TO	Kleinfelder	Attn: Mark Steele
ELECTRONIC COPY TO	Kleinfelder	Attn: Angela Vogt
ELECTRONIC COPY TO	Kleinfelder	Attn: Venelda Williams
ELECTRONIC COPY TO	Kleinfelder	Attn: Paxton Wertz
ELECTRONIC COPY TO	Kleinfelder	Attn: Charlie Low

Respectfully Submitted,



Amek Carter  
Specialist

(717) 556-7252

Sample Description: MW-5 Grab Water  
Fairfax 26140

LL Sample # WW 7319013  
LL Group # 1442210  
Account # 12152

Project Name: Fairfax 26140

Collected: 12/18/2013 11:00 by CL

Kleinfelder  
1 Speen Street  
Framingham MA 01701

Submitted: 12/19/2013 17:00

Reported: 01/06/2014 13:26

14005

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Limit of Quantitation	Dilution Factor
<b>GC Miscellaneous</b>			<b>SW-846 8015B modified</b>	<b>ug/l</b>	
07105	Methane	74-82-8	< 5.0	5.0	1
<b>Wet Chemistry</b>			<b>EPA 300.0</b>	<b>mg/l</b>	
00228	Sulfate	14808-79-8	12.1	5.0	5
			<b>EPA 353.2</b>	<b>mg/l</b>	
00220	Nitrate Nitrogen	14797-55-8	8.5	0.50	5
			<b>SM 3500-Fe B modified-1997</b>	<b>mg/l</b>	
08344	Ferrous Iron	n.a.	< 0.10	0.10	1

### General Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

### Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07105	Dissolved Gases Methane	SW-846 8015B modified	1	133640019A	12/30/2013 23:34	Elizabeth J Marin	1
00228	Sulfate	EPA 300.0	1	13361347901B	12/27/2013 13:12	Sandra J Miller	5
00220	Nitrate Nitrogen	EPA 353.2	1	13359106101A	12/25/2013 20:10	Joseph E McKenzie	5
08344	Ferrous Iron	SM 3500-Fe B modified-1997	1	13353834401A	12/19/2013 20:25	Daniel S Smith	1

Sample Description: MW-11 Grab Water  
Fairfax 26140

LL Sample # WW 7319014  
LL Group # 1442210  
Account # 12152

Project Name: Fairfax 26140

Collected: 12/18/2013 14:30 by CL

Kleinfelder  
1 Speen Street  
Framingham MA 01701

Submitted: 12/19/2013 17:00

Reported: 01/06/2014 13:26

14011

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Limit of Quantitation	Dilution Factor
<b>GC Miscellaneous</b>			SW-846 8015B modified ug/l	ug/l	
07105	Methane	74-82-8	8.6	5.0	1
<b>Wet Chemistry</b>			EPA 300.0 mg/l	mg/l	
00228	Sulfate	14808-79-8	< 5.0	5.0	5
			EPA 353.2 mg/l	mg/l	
00220	Nitrate Nitrogen	14797-55-8	2.4	0.10	1
			SM 3500-Fe B modified-1997 mg/l	mg/l	
08344	Ferrous Iron	n.a.	0.17	0.10	1

**General Sample Comments**

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

**Laboratory Sample Analysis Record**

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07105	Dissolved Gases Methane	SW-846 8015B modified	1	133640019A	12/31/2013 00:27	Elizabeth J Marin	1
00228	Sulfate	EPA 300.0	1	13361347901B	12/27/2013 11:35	Sandra J Miller	5
00220	Nitrate Nitrogen	EPA 353.2	1	13359106101A	12/25/2013 20:13	Joseph E McKenzie	1
08344	Ferrous Iron	SM 3500-Fe B modified-1997	1	13353834401A	12/19/2013 20:25	Daniel S Smith	1

Sample Description: W-3 Grab Water  
Fairfax 26140

LL Sample # WW 7319015  
LL Group # 1442210  
Account # 12152

Project Name: Fairfax 26140

Collected: 12/18/2013 07:35 by CL

Kleinfelder

Submitted: 12/19/2013 17:00

1 Speen Street

Reported: 01/06/2014 13:26

Framingham MA 01701

14003

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Limit of Quantitation	Dilution Factor
<b>GC Miscellaneous</b>					
		SW-846 8015B modified	ug/l	ug/l	
07105	Methane	74-82-8	< 5.0	5.0	1
<b>Wet Chemistry</b>					
		EPA 300.0	mg/l	mg/l	
00228	Sulfate	14808-79-8	< 5.0	5.0	5
		EPA 353.2	mg/l	mg/l	
00220	Nitrate Nitrogen	14797-55-8	5.9	0.50	5
		SM 3500-Fe B modified-1997	mg/l	mg/l	
08344	Ferrous Iron	n.a.	0.44	0.10	1

### General Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

### Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07105	Dissolved Gases Methane	SW-846 8015B modified	1	133640019A	12/31/2013 00:45	Elizabeth J Marin	1
00228	Sulfate	EPA 300.0	1	13361347901B	12/27/2013 12:24	Sandra J Miller	5
00220	Nitrate Nitrogen	EPA 353.2	1	13359106101A	12/25/2013 20:15	Joseph E McKenzie	5
08344	Ferrous Iron	SM 3500-Fe B modified-1997	1	13353834401A	12/19/2013 20:25	Daniel S Smith	1

Sample Description: W-6 Grab Water  
Fairfax 26140

LL Sample # WW 7319016  
LL Group # 1442210  
Account # 12152

Project Name: Fairfax 26140

Collected: 12/18/2013 10:00 by CL

Kleinfelder

Submitted: 12/19/2013 17:00

1 Speen Street

Reported: 01/06/2014 13:26

Framingham MA 01701

14006

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Limit of Quantitation	Dilution Factor
<b>GC Miscellaneous</b>					
		SW-846 8015B modified	ug/l	ug/l	
07105	Methane	74-82-8	< 5.0	5.0	1
<b>Wet Chemistry</b>					
		EPA 300.0	mg/l	mg/l	
00228	Sulfate	14808-79-8	< 5.0	5.0	5
		EPA 353.2	mg/l	mg/l	
00220	Nitrate Nitrogen	14797-55-8	0.49	0.10	1
		SM 3500-Fe B modified-1997	mg/l	mg/l	
08344	Ferrous Iron	n.a.	0.17	0.10	1

### General Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

### Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07105	Dissolved Gases Methane	SW-846 8015B modified	1	133640019A	12/31/2013 01:03	Elizabeth J Marin	1
00228	Sulfate	EPA 300.0	1	13361347901B	12/27/2013 13:28	Sandra J Miller	5
00220	Nitrate Nitrogen	EPA 353.2	1	13359106101A	12/25/2013 20:16	Joseph E McKenzie	1
08344	Ferrous Iron	SM 3500-Fe B modified-1997	1	13353834401A	12/19/2013 20:25	Daniel S Smith	1

Sample Description: W-7 Grab Water  
Fairfax 26140

LL Sample # WW 7319017  
LL Group # 1442210  
Account # 12152

Project Name: Fairfax 26140

Collected: 12/18/2013 08:50 by CL

Kleinfelder

Submitted: 12/19/2013 17:00

1 Speen Street

Reported: 01/06/2014 13:26

Framingham MA 01701

14007

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Limit of Quantitation	Dilution Factor
<b>GC Miscellaneous</b>			<b>SW-846 8015B modified</b>	<b>ug/l</b>	
07105	Methane	74-82-8	< 5.0	5.0	1
<b>Wet Chemistry</b>			<b>EPA 300.0</b>	<b>mg/l</b>	
00228	Sulfate	14808-79-8	6.2	5.0	5
			<b>EPA 353.2</b>	<b>mg/l</b>	
00220	Nitrate Nitrogen	14797-55-8	< 0.10	0.10	1
			<b>SM 3500-Fe B modified-1997</b>	<b>mg/l</b>	
08344	Ferrous Iron	n.a.	1.3	0.40	4

### General Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

### Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07105	Dissolved Gases Methane	SW-846 8015B modified	1	133640019A	12/31/2013 01:21	Elizabeth J Marin	1
00228	Sulfate	EPA 300.0	1	13361347901B	12/27/2013 13:45	Sandra J Miller	5
00220	Nitrate Nitrogen	EPA 353.2	1	13359106101A	12/25/2013 18:35	Joseph E McKenzie	1
08344	Ferrous Iron	SM 3500-Fe B modified-1997	1	13353834401A	12/19/2013 20:25	Daniel S Smith	4

## Quality Control Summary

Client Name: Kleinfelder  
Reported: 01/06/14 at 01:26 PM

Group Number: 1442210

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

All Inorganic Initial Calibration and Continuing Calibration Blanks met acceptable method criteria unless otherwise noted on the Analysis Report.

### Laboratory Compliance Quality Control

<u>Analysis Name</u>	<u>Blank Result</u>	<u>Blank LOQ</u>	<u>Report Units</u>	<u>LCS %REC</u>	<u>LCSD %REC</u>	<u>LCS/LCSD Limits</u>	<u>RPD</u>	<u>RPD Max</u>
Batch number: 133640019A Methane	Sample number(s): 7319013-7319017 < 5.0	5.0	ug/l	103		80-120		
Batch number: 13359106101A Nitrate Nitrogen	Sample number(s): 7319013-7319017 < 0.10	0.10	mg/l	93		90-110		
Batch number: 13361347901B Sulfate	Sample number(s): 7319013-7319017 < 1.0	1.0	mg/l	102		90-110		
Batch number: 13353834401A Ferrous Iron	Sample number(s): 7319013-7319017 < 0.10	0.10	mg/l	100		93-105		

### Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike  
Background (BKG) = the sample used in conjunction with the duplicate

<u>Analysis Name</u>	<u>MS %REC</u>	<u>MSD %REC</u>	<u>MS/MSD Limits</u>	<u>RPD</u>	<u>RPD MAX</u>	<u>BKG Conc</u>	<u>DUP Conc</u>	<u>DUP RPD</u>	<u>Dup RPD Max</u>
Batch number: 133640019A Methane	Sample number(s): 7319013-7319017 90	91	35-157	2	20	UNSPK: 7319013			
Batch number: 13359106101A Nitrate Nitrogen	Sample number(s): 7319013-7319017 86*		90-110			UNSPK: 7319013 BKG: 7319013	8.5	8.6	1
Batch number: 13361347901B Sulfate	Sample number(s): 7319013-7319017 98		90-110			UNSPK: 7319014 BKG: 7319014	< 5.0	< 5.0	0 (1)
Batch number: 13353834401A Ferrous Iron	Sample number(s): 7319013-7319017 96	96	81-112	0	6	UNSPK: P317665 BKG: P317665	17.9	18.9	5 (1)

### Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: Volatile Headspace Hydrocarbon  
Batch number: 133640019A

\*- Outside of specification

- (1) The result for one or both determinations was less than five times the LOQ.
- (2) The unspiked result was more than four times the spike added.

## Quality Control Summary

Client Name: Kleinfelder  
Reported: 01/06/14 at 01:26 PM

Group Number: 1442210

### Surrogate Quality Control

Propene

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7319013	85
7319014	90
7319015	90
7319016	93
7319017	94
Blank	99
LCS	99
MS	85
MSD	84

---

Limits: 42-131

\*- Outside of specification

- (1) The result for one or both determinations was less than five times the LOQ.
- (2) The unspiked result was more than four times the spike added.



Analysis Request/Environmental Services Chain of Custody

For Lancaster Laboratories use only Acct. #: 12152  
 Group #: 1442210 Sample #: 7319018-17

Client: <u>Fairfax Petroleum</u>		Acct. #:		<table border="1"> <tr> <th colspan="3">Matrix</th> </tr> <tr> <td>Potable</td> <td>NPDES</td> <td></td> </tr> <tr> <td>Soil</td> <td>Water</td> <td>Other</td> </tr> </table>		Matrix			Potable	NPDES		Soil	Water	Other	<table border="1"> <tr> <th colspan="5">Analyses Requested</th> </tr> <tr> <th colspan="5">Preservation Codes</th> </tr> <tr> <td>H</td> <td>S</td> <td>H</td> <td></td> <td></td> </tr> <tr> <td>Ferrous Iron (EPA 3500 Fe D Mod.)</td> <td>Sulfate (EPA 300.0)</td> <td>Nitrate Nitrogen (EPA 353.2)</td> <td>Methane (EPA 8015B Mod.)</td> <td>Nitrate Nitrogen (EPA 353.2)</td> </tr> </table>					Analyses Requested					Preservation Codes					H	S	H			Ferrous Iron (EPA 3500 Fe D Mod.)	Sulfate (EPA 300.0)	Nitrate Nitrogen (EPA 353.2)	Methane (EPA 8015B Mod.)	Nitrate Nitrogen (EPA 353.2)	For Lab Use Only	
Matrix																																									
Potable	NPDES																																								
Soil	Water	Other																																							
Analyses Requested																																									
Preservation Codes																																									
H	S	H																																							
Ferrous Iron (EPA 3500 Fe D Mod.)	Sulfate (EPA 300.0)	Nitrate Nitrogen (EPA 353.2)	Methane (EPA 8015B Mod.)	Nitrate Nitrogen (EPA 353.2)																																					
Project Name/#: <u>26140</u>		PWSID #:							FSC: _____																																
Project Manager: <u>Mark C. Steele</u>		P.O. #: <u>51141-286051</u>							SCR#: _____																																
Sampler: <u>Charlie Low</u>		Quote #:							<table border="1"> <tr> <th colspan="2">Preservation Codes</th> </tr> <tr> <td>H=HCl</td> <td>T=Thiosulfate</td> </tr> <tr> <td>N=HNO3</td> <td>B=NaOH</td> </tr> <tr> <td>S=H2SO4</td> <td>O=Other</td> </tr> </table>		Preservation Codes		H=HCl	T=Thiosulfate	N=HNO3	B=NaOH	S=H2SO4	O=Other																							
Preservation Codes																																									
H=HCl	T=Thiosulfate																																								
N=HNO3	B=NaOH																																								
S=H2SO4	O=Other																																								
Name of State where samples were collected: <u>Virginia</u>									<table border="1"> <tr> <td colspan="2">Remarks</td> </tr> <tr> <td colspan="2">Temperature of samples upon receipt (if requested)</td> </tr> </table>		Remarks		Temperature of samples upon receipt (if requested)																												
Remarks																																									
Temperature of samples upon receipt (if requested)																																									
Sample Identification		Date Collected	Time Collected	Grab	Composite	Soil	Water	Other	Total # of Containers	Ferrous Iron (EPA 3500 Fe D Mod.)	Sulfate (EPA 300.0)	Nitrate Nitrogen (EPA 353.2)	Methane (EPA 8015B Mod.)	Nitrate Nitrogen (EPA 353.2)	Remarks																										
<del>MW-1</del>				X			X		7	X	X	X	X	X																											
MW-5		<u>12-18-13</u>	<u>1100</u>	X			X		7	X	X	X	X	X																											
<del>MW-6</del>				X			X		7	X	X	X	X	X																											
MW-11		<u>12-18-13</u>	<u>1430</u>	X			X		7	X	X	X	X	X																											
<del>MW-12</del>				X			X		7	X	X	X	X	X																											
<del>MW-13</del>				X			X		7	X	X	X	X	X																											
<del>MW-14</del>				X			X		7	X	X	X	X	X																											
<del>MW-15</del>				X			X		7	X	X	X	X	X																											
W-3		<u>12-18-13</u>	<u>0735</u>	X			X		7	X	X	X	X	X																											
W-6		<u>12-18-13</u>	<u>1000</u>	X			X		7	X	X	X	X	X																											
W-7		<u>12-18-13</u>	<u>0850</u>	X			X		7	X	X	X	X	X																											
<b>Turnaround Time Requested (TAT)</b> (please circle): <u>Normal</u> Rush (Rush TAT is subject to Lancaster Laboratories approval and surcharge.) Date results are needed: _____ Rush results requested by (please circle): Phone Fax E-mail Phone #: _____ Fax #: _____ E-mail address: _____						Relinquished by: <u>[Signature]</u> Date: <u>12-18-13</u> Time: <u>1600</u>		Received by: <u>UPS</u> Date: <u>12-18-13</u> Time: <u>1600</u>																																	
<b>Data Package Options</b> (please circle if required) Type I (validation/NJ reg) <u>TX-TRRP-13</u> Type II (Tier II) <u>MA MCP CT RCP</u> Type III (Reduced NJ) Type IV (CLP SOW) Type VI (Raw Data Only)						SDG Complete? Yes No State-specific QC (MS/MSD/Dup)? Yes No (If yes, indicated QC sample and submit triplicate volume) Internal COC required? Yes No		Relinquished by: _____ Date: _____ Time: _____ Relinquished by: _____ Date: _____ Time: _____ Relinquished by: _____ Date: _____ Time: _____ Relinquished by: _____ Date: _____ Time: _____		Received by: _____ Date: _____ Time: _____ Received by: _____ Date: _____ Time: _____ Received by: <u>[Signature]</u> Date: <u>12/19/13</u> Time: <u>1700</u>																															

Lancaster Laboratories, Inc. 2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 717-656-2300

Copies: White and yellow should accompany samples to Lancaster Laboratories. The pink copy should be retained by the client

# Explanation of Symbols and Abbreviations

The following defines common symbols and abbreviations used in reporting technical data:

<b>RL</b>	Reporting Limit	<b>BMQL</b>	Below Minimum Quantitation Level
<b>N.D.</b>	none detected	<b>MPN</b>	Most Probable Number
<b>TNTC</b>	Too Numerous To Count	<b>CP Units</b>	cobalt-chloroplatinate units
<b>IU</b>	International Units	<b>NTU</b>	nephelometric turbidity units
<b>umhos/cm</b>	micromhos/cm	<b>ng</b>	nanogram(s)
<b>C</b>	degrees Celsius	<b>F</b>	degrees Fahrenheit
<b>meq</b>	milliequivalents	<b>lb.</b>	pound(s)
<b>g</b>	gram(s)	<b>kg</b>	kilogram(s)
<b>µg</b>	microgram(s)	<b>mg</b>	milligram(s)
<b>mL</b>	milliliter(s)	<b>L</b>	liter(s)
<b>m<sup>3</sup></b>	cubic meter(s)	<b>µL</b>	microliter(s)
		<b>pg/L</b>	picogram/liter

< less than - The number following the sign is the limit of quantitation, the smallest amount of analyte which can be reliably determined using this specific test.

> greater than

**ppm** parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg), or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter per liter of gas.

**ppb** parts per billion

**Dry weight basis** Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis.

*Data Qualifiers:*

**C** – result confirmed by reanalysis.

**J** - estimated value – The result is  $\geq$  the Method Detection Limit (MDL) and  $<$  the Limit of Quantitation (LOQ).

*U.S. EPA CLP Data Qualifiers:*

**Organic Qualifiers**

- A** TIC is a possible aldol-condensation product
- B** Analyte was also detected in the blank
- C** Pesticide result confirmed by GC/MS
- D** Compound quantitated on a diluted sample
- E** Concentration exceeds the calibration range of the instrument
- N** Presumptive evidence of a compound (TICs only)
- P** Concentration difference between primary and confirmation columns  $>25\%$
- U** Compound was not detected
- X,Y,Z** Defined in case narrative

**Inorganic Qualifiers**

- B** Value is  $<$ CRDL, but  $\geq$ IDL
- E** Estimated due to interference
- M** Duplicate injection precision not met
- N** Spike sample not within control limits
- S** Method of standard additions (MSA) used for calculation
- U** Compound was not detected
- W** Post digestion spike out of control limits
- \*** Duplicate analysis not within control limits
- +** Correlation coefficient for MSA  $<0.995$

**Analytical test results meet all requirements of NELAC unless otherwise noted under the individual analysis.**

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff. This report shall not be reproduced except in full, without the written approval of the laboratory.

Times are local to the area of activity. Parameters listed in the 40 CFR part 136 Table II as “analyze immediately” are not performed within 15 minutes.

**WARRANTY AND LIMITS OF LIABILITY** - In accepting analytical work, we warrant the accuracy of test results for the sample as submitted. THE FOREGOING EXPRESS WARRANTY IS EXCLUSIVE AND IS GIVEN IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED. WE DISCLAIM ANY OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING A WARRANTY OF FITNESS FOR PARTICULAR PURPOSE AND WARRANTY OF MERCHANTABILITY. IN NO EVENT SHALL EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL, LLC BE LIABLE FOR INDIRECT, SPECIAL, CONSEQUENTIAL, OR INCIDENTAL DAMAGES INCLUDING, BUT NOT LIMITED TO, DAMAGES FOR LOSS OF PROFIT OR GOODWILL REGARDLESS OF (A) THE NEGLIGENCE (EITHER SOLE OR CONCURRENT) OF EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL AND (B) WHETHER EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL HAS BEEN INFORMED OF THE POSSIBILITY OF SUCH DAMAGES. We accept no legal responsibility for the purposes for which the client uses the test results. No purchase order or other order for work shall be accepted by Eurofins Lancaster Laboratories Environmental which includes any conditions that vary from the Standard Terms and Conditions, and Eurofins Lancaster Laboratories Environmental hereby objects to any conflicting terms contained in any acceptance or order submitted by client.

## ANALYTICAL RESULTS

Prepared by:

Eurofins Lancaster Laboratories Environmental  
2425 New Holland Pike  
Lancaster, PA 17601

Prepared for:

Kleinfelder  
1 Speen Street  
Framingham MA 01701

January 06, 2014

Project: Fairfax 26140

Submittal Date: 12/20/2013  
Group Number: 1442418  
PO Number: 51141-286051  
State of Sample Origin: VA

### Client Sample Description

MW-1 Grab Water  
MW-14 Grab Water  
MW-16D Grab Water  
W-1 Grab Water  
W-2 Grab Water

### Lancaster Labs (LL) #

7320104  
7320105  
7320106  
7320107  
7320108

The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

ELECTRONIC COPY TO Kleinfelder  
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ELECTRONIC COPY TO Kleinfelder  
ELECTRONIC COPY TO Kleinfelder

Attn: Mark Steele  
Attn: Charlie Low  
Attn: Venelda Williams  
Attn: Angela Vogt  
Attn: Don Trego

Respectfully Submitted,



Amek Carter  
Specialist

(717) 556-7252

Sample Description: MW-1 Grab Water  
Fairfax 26140

LL Sample # WW 7320104  
LL Group # 1442418  
Account # 12152

Project Name: Fairfax 26140

Collected: 12/19/2013 12:30 by CL

Kleinfelder  
1 Speen Street  
Framingham MA 01701

Submitted: 12/20/2013 11:35

Reported: 01/06/2014 13:28

140M1

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Limit of Quantitation	Dilution Factor
<b>GC Miscellaneous</b>			<b>SW-846 8015B modified</b>	<b>ug/l</b>	
07105	Methane	74-82-8	< 5.0	5.0	1
<b>Wet Chemistry</b>			<b>EPA 300.0</b>	<b>mg/l</b>	
00228	Sulfate	14808-79-8	< 5.0	5.0	5
			<b>EPA 353.2</b>	<b>mg/l</b>	
00220	Nitrate Nitrogen	14797-55-8	13.8	1.0	10
			<b>SM 3500-Fe B modified-1997</b>	<b>mg/l</b>	
08344	Ferrous Iron	n.a.	0.35	0.10	1

### General Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

### Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07105	Dissolved Gases Methane	SW-846 8015B modified	1	133640019A	12/31/2013 01:39	Elizabeth J Marin	1
00228	Sulfate	EPA 300.0	1	13364347901B	12/30/2013 17:39	Sandra J Miller	5
00220	Nitrate Nitrogen	EPA 353.2	1	13359106101B	12/25/2013 20:17	Joseph E McKenzie	10
08344	Ferrous Iron	SM 3500-Fe B modified-1997	1	13355834401A	12/21/2013 04:35	Daniel S Smith	1

Sample Description: MW-14 Grab Water  
Fairfax 26140

LL Sample # WW 7320105  
LL Group # 1442418  
Account # 12152

Project Name: Fairfax 26140

Collected: 12/19/2013 08:30 by CL

Kleinfelder  
1 Speen Street  
Framingham MA 01701

Submitted: 12/20/2013 11:35

Reported: 01/06/2014 13:28

14014

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Limit of Quantitation	Dilution Factor
<b>GC Miscellaneous</b>			<b>SW-846 8015B modified</b>	<b>ug/l</b>	
07105	Methane	74-82-8	< 5.0	5.0	1
<b>Wet Chemistry</b>			<b>EPA 300.0</b>	<b>mg/l</b>	
00228	Sulfate	14808-79-8	< 5.0	5.0	5
			<b>EPA 353.2</b>	<b>mg/l</b>	
00220	Nitrate Nitrogen	14797-55-8	5.7	0.50	5
			<b>SM 3500-Fe B modified-1997</b>	<b>mg/l</b>	
08344	Ferrous Iron	n.a.	0.43	0.10	1

### General Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

### Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07105	Dissolved Gases Methane	SW-846 8015B modified	1	133640019A	12/31/2013 02:15	Elizabeth J Marin	1
00228	Sulfate	EPA 300.0	1	13364347901B	12/30/2013 17:55	Sandra J Miller	5
00220	Nitrate Nitrogen	EPA 353.2	1	13359106101B	12/25/2013 20:18	Joseph E McKenzie	5
08344	Ferrous Iron	SM 3500-Fe B modified-1997	1	13355834401A	12/21/2013 04:35	Daniel S Smith	1

Sample Description: MW-16D Grab Water  
Fairfax 26140

LL Sample # WW 7320106  
LL Group # 1442418  
Account # 12152

Project Name: Fairfax 26140

Collected: 12/19/2013 09:15 by CL

Kleinfelder  
1 Speen Street  
Framingham MA 01701

Submitted: 12/20/2013 11:35

Reported: 01/06/2014 13:28

14016

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Limit of Quantitation	Dilution Factor
<b>GC Miscellaneous</b>					
		SW-846 8015B modified	ug/l	ug/l	
07105	Methane	74-82-8	130	5.0	1
<b>Wet Chemistry</b>					
		EPA 300.0	mg/l	mg/l	
00228	Sulfate	14808-79-8	< 5.0	5.0	5
		EPA 353.2	mg/l	mg/l	
00220	Nitrate Nitrogen	14797-55-8	0.46	0.10	1
		SM 3500-Fe B modified-1997	mg/l	mg/l	
08344	Ferrous Iron	n.a.	60.4	10.0	100

**General Sample Comments**

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

**Laboratory Sample Analysis Record**

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07105	Dissolved Gases Methane	SW-846 8015B modified	1	133640019A	12/31/2013 02:33	Elizabeth J Marin	1
00228	Sulfate	EPA 300.0	1	13364347901B	12/30/2013 18:11	Sandra J Miller	5
00220	Nitrate Nitrogen	EPA 353.2	1	13359106101B	12/25/2013 20:20	Joseph E McKenzie	1
08344	Ferrous Iron	SM 3500-Fe B modified-1997	1	13355834401A	12/21/2013 04:35	Daniel S Smith	100

Sample Description: W-1 Grab Water  
Fairfax 26140

LL Sample # WW 7320107  
LL Group # 1442418  
Account # 12152

Project Name: Fairfax 26140

Collected: 12/19/2013 11:15 by CL

Kleinfelder  
1 Speen Street  
Framingham MA 01701

Submitted: 12/20/2013 11:35

Reported: 01/06/2014 13:28

140W1

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Limit of Quantitation	Dilution Factor
<b>GC Miscellaneous</b>			SW-846 8015B modified ug/l	ug/l	
07105	Methane	74-82-8	< 5.0	5.0	1
<b>Wet Chemistry</b>			EPA 300.0 mg/l	mg/l	
00228	Sulfate	14808-79-8	7.4	5.0	5
			EPA 353.2 mg/l	mg/l	
00220	Nitrate Nitrogen	14797-55-8	6.6	0.50	5
			SM 3500-Fe B modified-1997 mg/l	mg/l	
08344	Ferrous Iron	n.a.	0.21	0.10	1

### General Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

### Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07105	Dissolved Gases Methane	SW-846 8015B modified	1	133640019A	12/31/2013 02:51	Elizabeth J Marin	1
00228	Sulfate	EPA 300.0	1	13364347901B	12/30/2013 18:27	Sandra J Miller	5
00220	Nitrate Nitrogen	EPA 353.2	1	13359106101B	12/25/2013 20:21	Joseph E McKenzie	5
08344	Ferrous Iron	SM 3500-Fe B modified-1997	1	13355834401A	12/21/2013 04:35	Daniel S Smith	1

Sample Description: W-2 Grab Water  
Fairfax 26140

LL Sample # WW 7320108  
LL Group # 1442418  
Account # 12152

Project Name: Fairfax 26140

Collected: 12/19/2013 10:15 by CL

Kleinfelder

Submitted: 12/20/2013 11:35

1 Speen Street

Reported: 01/06/2014 13:28

Framingham MA 01701

140W2

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Limit of Quantitation	Dilution Factor
<b>GC Miscellaneous</b>			SW-846 8015B modified ug/l	ug/l	
07105	Methane	74-82-8	< 5.0	5.0	1
<b>Wet Chemistry</b>			EPA 300.0 mg/l	mg/l	
00228	Sulfate	14808-79-8	40.6	5.0	5
			EPA 353.2 mg/l	mg/l	
00220	Nitrate Nitrogen	14797-55-8	1.3	0.10	1
			SM 3500-Fe B modified-1997 mg/l	mg/l	
08344	Ferrous Iron	n.a.	1.5	0.40	4

### General Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

### Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07105	Dissolved Gases Methane	SW-846 8015B modified	1	133640019A	12/31/2013 03:08	Elizabeth J Marin	1
00228	Sulfate	EPA 300.0	1	13364347901B	12/30/2013 19:16	Sandra J Miller	5
00220	Nitrate Nitrogen	EPA 353.2	1	13359106101B	12/25/2013 20:25	Joseph E McKenzie	1
08344	Ferrous Iron	SM 3500-Fe B modified-1997	1	13355834401A	12/21/2013 04:35	Daniel S Smith	4

## Quality Control Summary

Client Name: Kleinfelder  
Reported: 01/06/14 at 01:28 PM

Group Number: 1442418

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

All Inorganic Initial Calibration and Continuing Calibration Blanks met acceptable method criteria unless otherwise noted on the Analysis Report.

### Laboratory Compliance Quality Control

<u>Analysis Name</u>	<u>Blank Result</u>	<u>Blank LOQ</u>	<u>Report Units</u>	<u>LCS %REC</u>	<u>LCSD %REC</u>	<u>LCS/LCSD Limits</u>	<u>RPD</u>	<u>RPD Max</u>
Batch number: 133640019A Methane	Sample number(s): 7320104-7320108 < 5.0	5.0	ug/l	103		80-120		
Batch number: 13359106101B Nitrate Nitrogen	Sample number(s): 7320104-7320108 < 0.10	0.10	mg/l	93		90-110		
Batch number: 13364347901B Sulfate	Sample number(s): 7320104-7320108 < 1.0	1.0	mg/l	102		90-110		
Batch number: 13355834401A Ferrous Iron	Sample number(s): 7320104-7320108 < 0.10	0.10	mg/l	100		93-105		

### Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike  
Background (BKG) = the sample used in conjunction with the duplicate

<u>Analysis Name</u>	<u>MS %REC</u>	<u>MSD %REC</u>	<u>MS/MSD Limits</u>	<u>RPD</u>	<u>RPD MAX</u>	<u>BKG Conc</u>	<u>DUP Conc</u>	<u>DUP RPD</u>	<u>Dup RPD Max</u>
Batch number: 133640019A Methane	Sample number(s): 7320104-7320108 90	91	35-157	2	20	UNSPK: P319013			
Batch number: 13359106101B Nitrate Nitrogen	Sample number(s): 7320104-7320108 102		90-110			UNSPK: P320030 < 0.50	BKG: P320030 < 0.50	3* (1)	2
Batch number: 13364347901B Sulfate	Sample number(s): 7320104-7320108 104		90-110			UNSPK: P319002 < 5.0	BKG: P319002 < 5.0	8 (1)	20
Batch number: 13355834401A Ferrous Iron	Sample number(s): 7320104-7320108 95	99	81-112	3	6	UNSPK: 7320106 60.4	BKG: 7320106 61.3	1	5

### Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: Volatile Headspace Hydrocarbon  
Batch number: 133640019A

\*- Outside of specification

- (1) The result for one or both determinations was less than five times the LOQ.
- (2) The unspiked result was more than four times the spike added.

## Quality Control Summary

Client Name: Kleinfelder  
Reported: 01/06/14 at 01:28 PM

Group Number: 1442418

### Surrogate Quality Control

Propene

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7320104	73
7320105	91
7320106	89
7320107	79
7320108	91
Blank	99
LCS	99
MS	85
MSD	84

---

Limits: 42-131

\*- Outside of specification

- (1) The result for one or both determinations was less than five times the LOQ.
- (2) The unspiked result was more than four times the spike added.



Analysis Request/Environmental Services Chain of Custody

For Lancaster Laboratories use only Acct. #: 12152  
 Group #: \_\_\_\_\_ Sample #: \_\_\_\_\_  
1442418 7320104-08

Client: <u>Fairfax Petroleum</u>		Acct. #: _____		<table border="1"> <tr> <th colspan="3">Matrix</th> <th rowspan="4">Total # of Containers</th> <th colspan="5">Analyses Requested</th> </tr> <tr> <td rowspan="3">Potable</td> <td rowspan="3">NPDES</td> <td rowspan="3"></td> <th colspan="5">Preservation Codes</th> </tr> <tr> <td>H</td> <td>S</td> <td>H</td> <td></td> <td></td> </tr> <tr> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> </table>		Matrix			Total # of Containers	Analyses Requested					Potable	NPDES		Preservation Codes					H	S	H								For Lab Use Only	
Matrix			Total # of Containers			Analyses Requested																												
Potable	NPDES					Preservation Codes																												
						H	S	H																										
Project Name/ #: <u>26140</u>		PWSID #: _____		FSC: _____																														
Project Manager: <u>Mark C. Steele</u>		P.O. #: <u>51141-286051</u>		SCR#: _____																														
Sampler: <u>Charlie Low</u>		Quote #: _____		<table border="1"> <tr> <td colspan="2">Preservation Codes</td> </tr> <tr> <td>H=HCl</td> <td>T=Thiosulfate</td> </tr> <tr> <td>N=HNO3</td> <td>B=NaOH</td> </tr> <tr> <td>S=H2SO4</td> <td>O=Other</td> </tr> </table>					Preservation Codes		H=HCl	T=Thiosulfate	N=HNO3	B=NaOH	S=H2SO4	O=Other																		
Preservation Codes																																		
H=HCl	T=Thiosulfate																																	
N=HNO3	B=NaOH																																	
S=H2SO4	O=Other																																	
Name of State where samples were collected: <u>Virginia</u>																																		
Sample Identification	Date Collected	Time Collected	Grab	Composite	Soil	Water	Other	Ferrous Iron (EPA 3500 Fe D Mod.)	Sulfate (EPA 300.0)	Nitrate Nitrogen (EPA 353.2)	Methane (EPA 8015B Mod.)	Nitrate Nitrogen (EPA 353.2)	Remarks	Temperature of samples upon receipt (if requested)																				
MW-1	12-19-13	1230	X			X		X	X	X	X	X																						
[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]																				
MW-14	12-19-13	0830	X			X		X	X	X	X	X																						
MW-16D	12-19-13	0915	X			X		X	X	X	X	X																						
W-1	12-19-13	1115	X			X		X	X	X	X	X																						
W-2	12-19-13	1015	X			X		X	X	X	X	X																						
[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]																				
<b>Turnaround Time Requested (TAT)</b> (please circle): <u>Normal</u> Rush (Rush TAT is subject to Lancaster Laboratories approval and surcharge.) Date results are needed: _____ Rush results requested by (please circle): Phone Fax E-mail Phone #: _____ Fax #: _____ E-mail address: _____				Relinquished by: <u>[Signature]</u> Date: <u>12-19-13</u> Time: <u>1800</u>		Received by: <u>UPS</u> Date: <u>12-19-13</u> Time: <u>1800</u>																												
<b>Data Package Options</b> (please circle if required) Type I (validation/NJ reg) <u>TX-TRRP-13</u> Type II (Tier II) <u>MA MCP CT RCP</u> Type III (Reduced NJ) Type IV (CLP SOW) Type VI (Raw Data Only)				SDG Complete? Yes No State-specific QC (MS/MSD/Dup)? Yes No (If yes, indicated QC sample and submit triplicate volume) Internal COC required? Yes No		Relinquished by: _____ Date: _____ Time: _____		Received by: _____ Date: _____ Time: _____		Relinquished by: _____ Date: _____ Time: _____		Received by: <u>[Signature]</u> Date: <u>12/20/13</u> Time: <u>1135</u>																						

Lancaster Laboratories, Inc. 2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 717-656-2300  
 Copies: White and yellow should accompany samples to Lancaster Laboratories. The pink copy should be retained by the client

# Explanation of Symbols and Abbreviations

The following defines common symbols and abbreviations used in reporting technical data:

<b>RL</b>	Reporting Limit	<b>BMQL</b>	Below Minimum Quantitation Level
<b>N.D.</b>	none detected	<b>MPN</b>	Most Probable Number
<b>TNTC</b>	Too Numerous To Count	<b>CP Units</b>	cobalt-chloroplatinate units
<b>IU</b>	International Units	<b>NTU</b>	nephelometric turbidity units
<b>umhos/cm</b>	micromhos/cm	<b>ng</b>	nanogram(s)
<b>C</b>	degrees Celsius	<b>F</b>	degrees Fahrenheit
<b>meq</b>	milliequivalents	<b>lb.</b>	pound(s)
<b>g</b>	gram(s)	<b>kg</b>	kilogram(s)
<b>µg</b>	microgram(s)	<b>mg</b>	milligram(s)
<b>mL</b>	milliliter(s)	<b>L</b>	liter(s)
<b>m<sup>3</sup></b>	cubic meter(s)	<b>µL</b>	microliter(s)
		<b>pg/L</b>	picogram/liter

< less than - The number following the sign is the limit of quantitation, the smallest amount of analyte which can be reliably determined using this specific test.

> greater than

**ppm** parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg), or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter per liter of gas.

**ppb** parts per billion

**Dry weight basis** Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis.

*Data Qualifiers:*

**C** – result confirmed by reanalysis.

**J** - estimated value – The result is  $\geq$  the Method Detection Limit (MDL) and  $<$  the Limit of Quantitation (LOQ).

*U.S. EPA CLP Data Qualifiers:*

**Organic Qualifiers**

- A** TIC is a possible aldol-condensation product
- B** Analyte was also detected in the blank
- C** Pesticide result confirmed by GC/MS
- D** Compound quantitated on a diluted sample
- E** Concentration exceeds the calibration range of the instrument
- N** Presumptive evidence of a compound (TICs only)
- P** Concentration difference between primary and confirmation columns  $>25\%$
- U** Compound was not detected
- X,Y,Z** Defined in case narrative

**Inorganic Qualifiers**

- B** Value is  $<$ CRDL, but  $\geq$ IDL
- E** Estimated due to interference
- M** Duplicate injection precision not met
- N** Spike sample not within control limits
- S** Method of standard additions (MSA) used for calculation
- U** Compound was not detected
- W** Post digestion spike out of control limits
- \*** Duplicate analysis not within control limits
- +** Correlation coefficient for MSA  $<0.995$

**Analytical test results meet all requirements of NELAC unless otherwise noted under the individual analysis.**

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff. This report shall not be reproduced except in full, without the written approval of the laboratory.

Times are local to the area of activity. Parameters listed in the 40 CFR part 136 Table II as “analyze immediately” are not performed within 15 minutes.

**WARRANTY AND LIMITS OF LIABILITY** - In accepting analytical work, we warrant the accuracy of test results for the sample as submitted. THE FOREGOING EXPRESS WARRANTY IS EXCLUSIVE AND IS GIVEN IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED. WE DISCLAIM ANY OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING A WARRANTY OF FITNESS FOR PARTICULAR PURPOSE AND WARRANTY OF MERCHANTABILITY. IN NO EVENT SHALL EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL, LLC BE LIABLE FOR INDIRECT, SPECIAL, CONSEQUENTIAL, OR INCIDENTAL DAMAGES INCLUDING, BUT NOT LIMITED TO, DAMAGES FOR LOSS OF PROFIT OR GOODWILL REGARDLESS OF (A) THE NEGLIGENCE (EITHER SOLE OR CONCURRENT) OF EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL AND (B) WHETHER EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL HAS BEEN INFORMED OF THE POSSIBILITY OF SUCH DAMAGES. We accept no legal responsibility for the purposes for which the client uses the test results. No purchase order or other order for work shall be accepted by Eurofins Lancaster Laboratories Environmental which includes any conditions that vary from the Standard Terms and Conditions, and Eurofins Lancaster Laboratories Environmental hereby objects to any conflicting terms contained in any acceptance or order submitted by client.