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August 6, 2013

Timothy L. Bishop
Project Manager
Marketing Business Unit

**Chevron Environmental
Management Company**
6101 Bollinger Canyon Road
San Ramon, CA 94583
Tel (925) 790.6463
TimBishop@chevron.com

Mr. Keith Nowell
Alameda County Department of Environmental Health
1131 Harbor Bay Parkway
Alameda, California 94502-6577

RE: First Semi-Annual 2013 Groundwater Monitoring Report Submittal

Former Unocal Service Station 0746
3943 Broadway Avenue, Oakland, California
Fuel Leak Case No.: RO0000203

Dear Mr. Nowell,

I declare under penalty of perjury that to the best of my knowledge the information and/or recommendations contained in the attached report is/are true and correct.

If you have any questions or need additional information, please contact me at (925) 790-6463. Alternatively, you can contact Katherine Brandt at (510) 596-9675 or by email Katherine.brandt@arcadis-us.com.

Sincerely,

A handwritten signature in blue ink that reads "Tim Bishop".

Timothy L. Bishop
Union Oil of California – Project Manager

Attachment:
First Semi-Annual 2013 Groundwater Monitoring Report



ARCADIS U.S., Inc.
2000 Powell Street
7th Floor
Emeryville
California 94608
Tel 510.652.4500
Fax 510.652.4906
www.arcadis-us.com

Mr. Keith Nowell
Alameda County Department of Environmental Health
1131 Harbor Bay Parkway
Alameda, California 94502-6577

Subject:
First Semi-Annual 2013 Monitoring Report Submittal

ENVIRONMENT

Dear Mr. Nowell:

On behalf of Chevron Environmental Management Company, for itself and as Attorney-in-Fact for Union Oil Company of California (hereinafter "EMC"), ARCADIS is submitting the enclosed Semi-Annual Groundwater Monitoring Report for the following facility:

Date:
August 6, 2013

Contact:
Katherine Brandt

<u>Facility No.</u>	<u>Case No.</u>	<u>Location</u>
0746	RO0000203	3943 Broadway Avenue Oakland, California 94611

Phone:
510.596.9675

Email:
katherine.brandt@arcadis-us.com

If you have any questions, please contact Katherine Brandt at 510.596.9675.
Sincerely,

Our ref:
B0047338.2013

ARCADIS

Katherine Brandt
Certified Project Manager

Jacob Henry, P.G.
Professional Geologist



Copies:

Mr. Timothy L. Bishop, EMC
Ms. Cherie McCaulou, CRWQCB – San Francisco Bay Region, 1515 Clay Street, Suite
1400, Oakland, California 94612 (CD)
CJS Leung, LLC., Property Owner, 3943 Broadway Oakland, California 94611

**UNION OIL OF CALIFORNIA
SEMI-ANNUALLY MONITORING REPORT
FIRST SEMI-ANNUAL 2013
August 6, 2013**

Facility No.: 0746 Address: 3943 Broadway Avenue, Oakland, California 94611
 Consulting Company/Contact Person/Phone No.: ARCADIS / Katherine Brandt / 510.596.9675
 Primary Agency/Contact Person/Regulatory ID No.: Alameda County Department of Environmental Health / Mr. Keith Nowell / Case No. RO0000203

WORK PERFORMED DURING THIS REPORTING PERIOD (First Semi-Annual – 2013) :

1. Gettler-Ryan, Inc. (G-R) conducted groundwater monitoring and sampling on June 6, 2012. Field data sheets and general procedures are included as **Attachment A**. Eleven (11) groundwater monitoring wells were gauged and sampled this monitoring event (MW-1 through MW-7, MW-10, MW-11, MW-12, and RW-1).

Groundwater samples were analyzed for total petroleum hydrocarbons as gasoline (TPH-g; C₆-C₁₂) by United States Environmental Protection Agency (EPA) Method 8015B; and benzene, toluene, ethylbenzene, and total xylenes (BTEX, collectively), methyl tertiary butyl ether (MTBE), 1,2-dibromoethane (EDB), 1,2-dichloroethane (EDC), and ethanol by EPA Method 8260B.

The site location map, the site plan, and the groundwater contour map are presented on **Figures 1** through **3**. Concentration maps for TPH-g, benzene, and MTBE are on **Figures 4** through **6**. Current Groundwater Gauging and Analytical Results are summarized in **Table 1**, Historic Groundwater Gauging and Analytical Results are summarized in **Table 2**, and LPH Recovery Data are summarized in **Table 3**, and Historical Groundwater Results from TRC Solutions (TRC) are included as **Attachment B**. A copy of the laboratory analytical report and chain-of-custody documentation is included as **Attachment C**.

WORK PROPOSED FOR THE NEXT REPORTING PERIOD (Second Semi-Annual – 2013):

1. Perform groundwater monitoring and related reporting during the second half 2013.
2. Prepare and submitted a Conceptual Site Model and Low Threat Closure Request.

Current Phase of Project:	<u>Groundwater Monitoring</u>
Site Use:	<u>Active gasoline retail station</u>
Frequency of Sampling:	<u>Groundwater – Semi-Annually</u>
Frequency of Monitoring:	<u>Groundwater – Semi-Annually</u>
LPH Present On-Site:	<u>Yes (MW-5)</u>
Cumulative LPH Recovered to Date:	<u>4,429 gallons</u>
LPH Recovered This Quarter:	<u>None</u>
Bulk Soil Removed to Date:	<u>350 cubic yards during UST removal activities (1989)</u>
Bulk Soil Removed this Quarter:	<u>None</u>
Water Wells or Surface Waters within a 2,000' Radius and Their Respective Directions:	<u>Two irrigation wells located 1,330 feet east and 1,450 feet north of the site; the only surface water body (Glen Echo Creek) is located 1,630 feet southeast of the site</u>
Groundwater Use Designation:	<u>Irrigation</u>
Current Remediation Techniques:	<u>None</u>
Permits for Discharge (No.):	<u>None</u>
Approximate Depth to Groundwater:	<u>7.50 (MW-6) – 15.32 (MW-11) feet below top of casing (ft BTOC)</u>
	Measured <input checked="" type="checkbox"/> Estimated

**UNION OIL OF CALIFORNIA
SEMI-ANNUALLY MONITORING REPORT
FIRST SEMI-ANNUAL 2013
August 6, 2013**

Facility No.: 0746 Address: 3943 Broadway Avenue, Oakland, California 94611

Approximate Groundwater Elevation: 62.86 (MW-11) – 72.66 (MW-1) feet relative to mean sea level (ft MSL)

Measured Estimated

Groundwater Gradient: 0.044 ft/ft (Magnitude) Southwest (Direction)

DISCUSSION:

Groundwater conditions during the first half 2013 remained generally consistent with previous quarters. The maximum dissolved concentrations of TPH-g (30,000 micrograms per liter [$\mu\text{g/L}$]), benzene (410 $\mu\text{g/L}$), toluene (6.6 $\mu\text{g/L}$), ethylbenzene (970 $\mu\text{g/L}$), and total xylenes (1,300 $\mu\text{g/L}$) were detected in MW-5. An LPH skimmer was present in MW-5 prior to sampling which is likely cause of the elevated concentrations. The maximum dissolved concentrations of MTBE (11 $\mu\text{g/L}$) were detected in MW-3. EDB, EDC, and ethanol were not detected above the laboratory reporting limits for all wells sampled.

Groundwater elevations at the site vary by approximately 9.5 feet, creating a hydraulic gradient of 0.044 foot per foot in the southwest direction.

CONCLUSIONS AND RECOMMENDATIONS:

Dissolved hydrocarbon constituent concentrations have remained relatively consistent with previous quarters. Due to the minimal occurrence of product in MW-5 and RW-1, ARCADIS recommends reducing the frequency of monthly product gauging and bail down to semi-annual during regularly scheduled groundwater monitoring events.

ATTACHMENTS:

- Figure 1: Site Location Map
- Figure 2: Site Plan
- Figure 3: Groundwater Contour Map
- Figure 4: TPH-g Concentration Map
- Figure 5: Benzene Concentration Map
- Figure 6: MTBE Concentration Map

- Table 1: Current Groundwater Gauging and Analytical Results
- Table 2: Historic Groundwater Gauging and Analytical Results
- Table 3: Liquid Phase Hydrocarbon Recovery Data

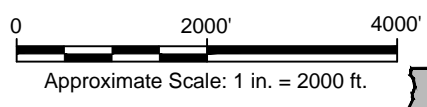
- Attachment A: Field Data Sheets and General Procedures
- Attachment B: Historical Groundwater Results from TRC
- Attachment C: Laboratory Report and Chain-of-Custody Documentation

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Figures



REFERENCE: BASE MAP USGS 7.5 MIN. TOPO. QUAD., OAKLAND WEST, CALIFORNIA, 1993, AND OAKLAND EAST, CALIFORNIA, 1997.

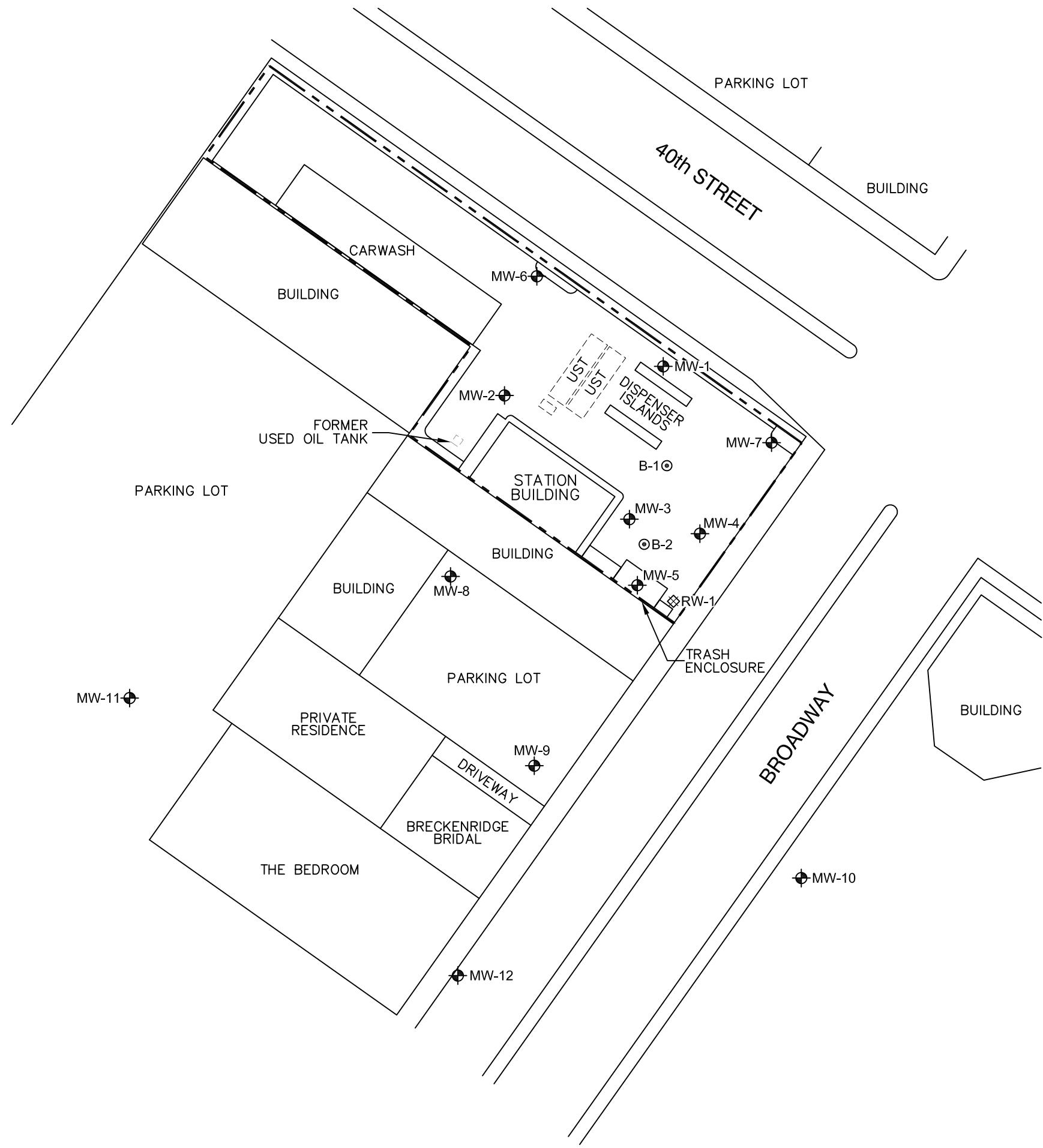


UNION OIL
 STATION NO. 0746
 3943 BROADWAY
 OAKLAND, CALIFORNIA

SITE LOCATION MAP



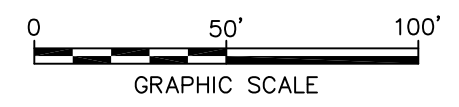
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 XREFS: IMAGES: PROJECTNAME: 47338X01



- LEGEND**
- PROPERTY BOUNDARY
 - MW-1 MONITORING WELL
 - RW-1 RECOVERY WELL
 - B-1 CPT BORING

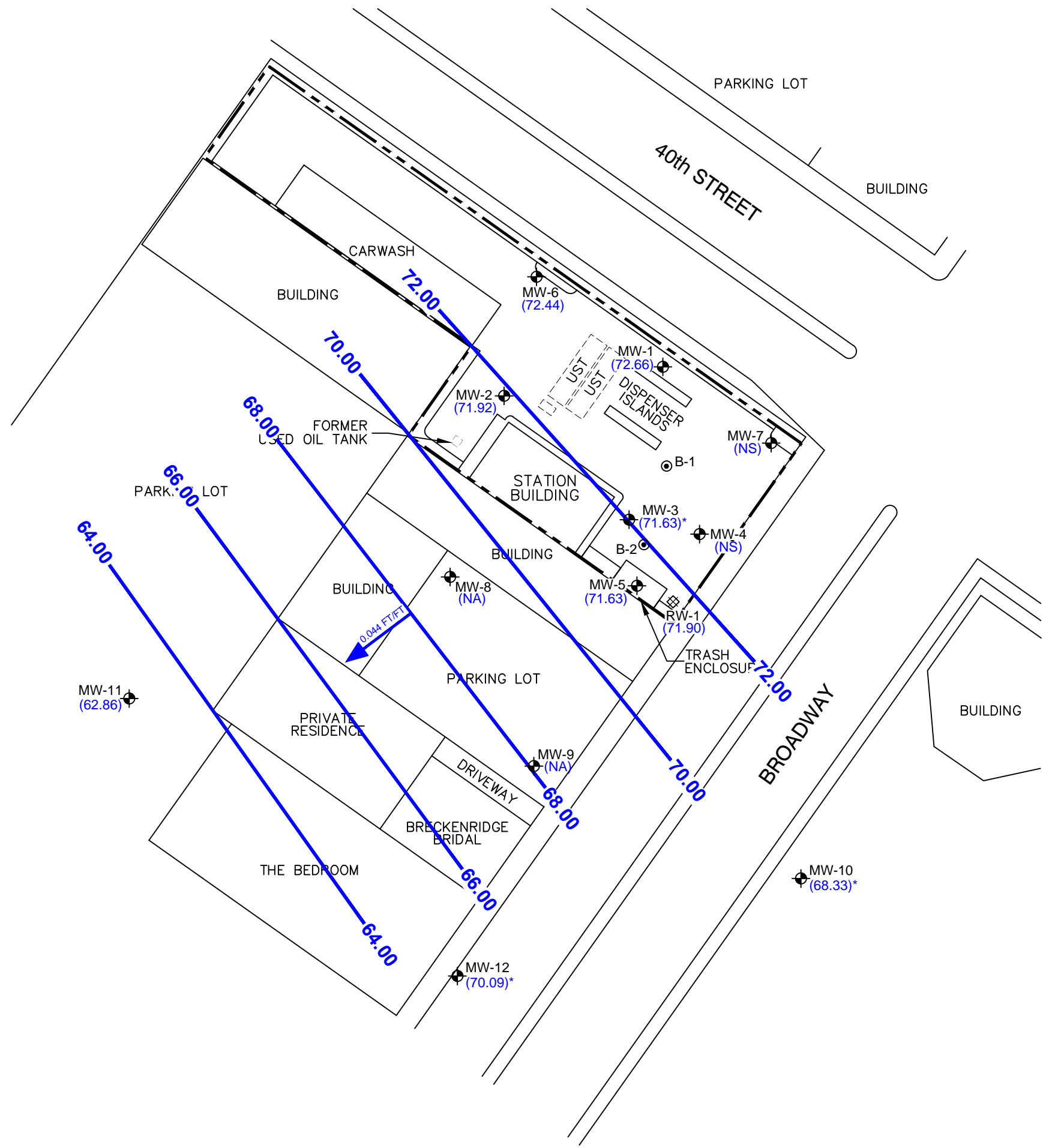


- NOTES:**
1. BASE MAP DIGITIZED FROM A FIGURE PDF PROVIDED BY DELTA, DATED 09/14/09, AT A SCALE OF 1"=50'.
 2. ALL SITE FEATURES AND LOCATIONS ARE APPROXIMATE.



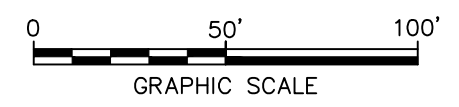
UNION OIL STATION NO. 0746 3943 BROADWAY OAKLAND, CALIFORNIA	
SITE MAP	
	FIGURE 2

CITY: PETALUMA, CA DIV/GROUP: ENV DE: J. HARRIS G:\ENV\CAD\Petalum\ACT18047338\2013\GWR012\Q13\DWG\47338W01.dwg LAYOUT: 3 SAVED: 7/29/2013 3:53 AM ACADVER: 18.15 (LMS TECH) PAGESETUP: SETUP1 PLOTSTYLETABLE: ARCADIS.CTB PLOTTED: 7/31/2013 8:31 AM BY: HARRIS, JESSICA XREFS: IMAGES: PROJECTNAME: ...



- LEGEND**
- PROPERTY BOUNDARY
 - MW-1 MONITORING WELL
 - RW-1 RECOVERY WELL
 - B-1 CPT BORING
 - (71.92) GROUNDWATER ELEVATION IN FEET RELATIVE TO MEAN SEA LEVEL (FT MSL)
 - 68.00 GROUNDWATER ELEVATION CONTOUR (FT MSL; DASHED WHERE INFERRED)
 - 0.044 FT/FT GROUNDWATER FLOW DIRECTION AND GRADIENT (FOOT PER FOOT)
 - (NA) NOT ACCESSIBLE
 - (NS) NOT SURVEYED
 - * NOT USED IN CONTOURING

- NOTES:**
1. BASE MAP DIGITIZED FROM A FIGURE PDF PROVIDED BY DELTA, DATED 09/14/09, AT A SCALE OF 1"=50'.
 2. ALL SITE FEATURES AND LOCATIONS ARE APPROXIMATE.
 3. GROUNDWATER MONITORING WELLS WERE GAUGED AND SAMPLED ON JUNE 6, 2013.



UNION OIL
STATION NO. 0746
3943 BROADWAY
OAKLAND, CALIFORNIA

**GROUNDWATER ELEVATION
CONTOUR MAP**

FIGURE
3

CITY: PETALUMA, CA DIV/GROUP: ENV DB: J. HARRIS
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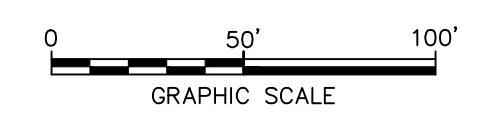
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 47338X01



LEGEND

- PROPERTY BOUNDARY
- MW-1 MONITORING WELL
- RW-1 RECOVERY WELL
- B-1 CPT BORING
- [TPH-g] TOTAL PETROLEUM HYDROCARBONS AS GASOLINE (C6-C12) CONCENTRATION IN MICROGRAMS PER LITER (µg/L)
- 1,000 TPH-g ISOCONCENTRATION CONTOUR (µg/L; DASHED WHERE INFERRED)
- < DENOTES LESS THAN LABORATORY REPORTING LIMIT
- [NA] NOT ACCESSIBLE

- NOTES:**
1. BASE MAP DIGITIZED FROM A FIGURE PDF PROVIDED BY DELTA, DATED 09/14/09, AT A SCALE OF 1"=50'.
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UNION OIL
 STATION NO. 0746
 3943 BROADWAY
 OAKLAND, CALIFORNIA

TPH-g CONCENTRATION MAP

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CITY: PETALUMA, CA DIV/GROUP: ENV DB: J. HARRIS
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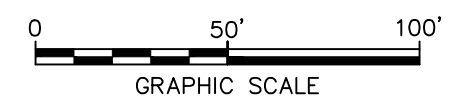
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LEGEND

- PROPERTY BOUNDARY
- MW-1 ◉ MONITORING WELL
- RW-1 ◈ RECOVERY WELL
- B-1 ◉ CPT BORING
- [BENZ] BENZENE CONCENTRATION IN MICROGRAMS PER LITER (µg/L)
- 100 --- BENZENE ISOCONCENTRATION CONTOUR (µg/L; DASHED WHERE INFERRED)
- < DENOTES LESS THAN LABORATORY REPORTING LIMIT
- [NA] NOT ACCESSIBLE

- NOTES:**
1. BASE MAP DIGITIZED FROM A FIGURE PDF PROVIDED BY DELTA, DATED 09/14/09, AT A SCALE OF 1"=50'.
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UNION OIL
 STATION NO. 0746
 3943 BROADWAY
 OAKLAND, CALIFORNIA

BENZENE CONCENTRATION MAP

ARCADIS

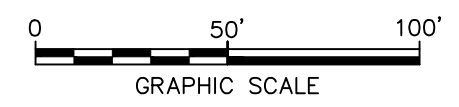
FIGURE
5

CITY: PETALUMA, CA DIV/GROUP: ENV DB: J. HARRIS
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- LEGEND**
- PROPERTY BOUNDARY
 - MW-1 MONITORING WELL
 - RW-1 RECOVERY WELL
 - B-1 CPT BORING
 - [MTBE] METHYL TERTIARY BUTYL ETHER CONCENTRATION IN MICROGRAMS PER LITER (µg/L)
 - 10 --- MTBE ISOCONCENTRATION CONTOUR (µg/L; DASHED WHERE INFERRED)
 - < DENOTES LESS THAN LABORATORY REPORTING LIMIT
 - [NA] NOT ACCESSIBLE

- NOTES:**
1. BASE MAP DIGITIZED FROM A FIGURE PDF PROVIDED BY DELTA, DATED 09/14/09, AT A SCALE OF 1"=50'.
 2. ALL SITE FEATURES AND LOCATIONS ARE APPROXIMATE.
 3. GROUNDWATER MONITORING WELLS WERE GAUGED AND SAMPLED ON JUNE 6, 2013.



UNION OIL STATION NO. 0746 3943 BROADWAY OAKLAND, CALIFORNIA	
MTBE CONCENTRATION MAP	
	FIGURE 6

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Tables

Table 1
Current Groundwater Gauging and Analytical Results
76 Station 0746
3943 Broadway Avenue, Oakland California

Well ID	Date Sampled	TOC (feet MSL)	DTW (feet BTOC)	LPH Thickness (feet)	GW Elevation (feet MSL)	TPH-g	Benzene	Toluene	Ethyl-benzene	Total Xylenes	MTBE	EDB	EDC	Ethanol	Comments
MW-1	6/6/2013	80.54	7.88	0.00	72.66	<50	<0.50	<0.50	<0.50	<1.0	0.51	<0.50	<0.50	<250	
MW-2	6/6/2013	81.32	9.40	0.00	71.92	<50	<0.50	<0.50	<0.50	<1.0	0.95	<0.50	<0.50	<250	
MW-3	6/6/2013	81.41	9.78	0.00	71.63	2,000	1.3	<0.50	12	<1.0	11	<0.50	<0.50	<250	A01
MW-4	6/6/2013	--	9.17	0.00	--	410	0.52	<0.50	<0.50	<1.0	<0.50	<0.50	<0.50	<250	
MW-5	6/6/2013	81.38	9.75	0.00	71.63	30,000	410	6.6	970	1,300	2.5	<0.50	<0.50	<250	A01, SPH Skimmer
MW-6	6/6/2013	79.94	7.50	0.00	72.44	<50	<0.50	<0.50	<0.50	<1.0	<0.50	<0.50	<0.50	<250	
MW-7	6/6/2013	--	8.56	0.00	--	<50	<0.50	<0.50	<0.50	<1.0	<0.50	<0.50	<0.50	<250	
MW-8	6/6/2013	81.41	--	--	--	--	--	--	--	--	--	--	--	--	
MW-9	6/6/2013	80.53	--	--	--	--	--	--	--	--	--	--	--	--	
MW-10	6/6/2013	81.61	13.28	0.00	68.33	<50	<0.50	<0.50	<0.50	<1.0	0.92	<0.50	<0.50	<250	
MW-11	6/6/2013	78.18	15.32	0.00	62.86	<50	<0.50	<0.50	<0.50	<1.0	<0.50	<0.50	<0.50	<250	
MW-12	6/6/2013	79.61	9.52	0.00	70.09	<50	<0.50	<0.50	<0.50	<1.0	<0.50	<0.50	<0.50	<250	
RW-1	6/6/2013	80.63	8.73	0.00	71.90	1,300	1.2	1.4	5.8	<1.0	<0.50	<0.50	<0.50	<250	

Note

Analytical results given in micrograms per liter (µg/l) unless otherwise stated

Standard Abbreviations

- not analyzed, measured, or collected
- < not detected at or above laboratory detection limit
- TOC top of casing (surveyed reference elevation)
- feet MSL feet relative to mean sea level
- DTW depth to water
- BTOC below top of casing
- LPH liquid-phase hydrocarbons
- GW groundwater
- GWE groundwater elevation

Analytes

- TPH-g total petroleum hydrocarbons with gasoline (C6-C12)
- MTBE methyl tertiary butyl ether
- EDB 1,2-dibromoethane (same as ethylene dibromide)
- EDC 1,2-dichloroethane (same as ethylene dichloride)
- 8015B EPA Method 8015B for TPH-g
- 8260B EPA Method 8260B for Volatile Organic Compounds

Laboratory Qualifiers

- A01 PQL's and MDL's are raised due to sample dilution.
- PQL practical quantitation limit
- MDL method detection limit

Table 2
Historic Groundwater Gauging and Analytical Results
76 Station 0746
3943 Broadway Avenue, Oakland California

Well ID	Date Sampled	TOC (feet MSL)	DTW (feet BTOC)	LPH Thickness (feet)	GW Elevation (feet MSL)	Previous Quarter GWE (feet MSL)	Change in Elevation (feet)	TPH-g	Benzene	Toluene	Ethyl-benzene	Total Xylenes	MTBE	EDB	EDC	Ethanol	Comments
MW-1	12/9/2011	80.54	7.97	0.00	72.57	74.29	-1.72	<50	<0.50	<0.50	<0.50	<1.0	4.2	<0.50	<0.50	<250	
MW-1	6/1/2012	80.54	7.63	0.00	72.91	72.57	0.34	<50	<0.50	<0.50	<0.50	<1.0	0.87	<0.50	<0.50	<250	
MW-1	6/6/2013	80.54	7.88	0.00	72.66	72.91	-0.25	<50	<0.50	<0.50	<0.50	<1.0	0.51	<0.50	<0.50	<250	
MW-2	12/9/2011	81.32	8.95	0.00	72.37	73.57	-1.20	<50	<0.50	<0.50	<0.50	<1.0	7.9	<0.50	<0.50	<250	
MW-2	6/1/2012	81.32	9.18	0.00	72.14	72.37	-0.23	<50	<0.50	<0.50	<0.50	<1.0	2.9	<0.50	<0.50	<250	
MW-2	6/6/2013	81.32	9.40	0.00	71.92	72.14	-0.22	<50	<0.50	<0.50	<0.50	<1.0	0.95	<0.50	<0.50	<250	
MW-3	12/9/2011	81.41	10.08	0.00	71.33	75.31	-3.98	9,900	11	<2.5	98	47	9.3	<2.5	<2.5	<1,200	A01
MW-3	6/1/2012	81.41	9.92	0.00	71.49	71.33	0.16	4,300	4.6	<0.50	17	3.4	19	<0.50	<0.50	<250	A01
MW-3	6/6/2013	81.41	9.78	0.00	71.63	71.49	0.14	2,000	1.3	<0.50	12	<1.0	11	<0.50	<0.50	<250	A01
MW-4	12/9/2011	--	9.04	0.00	--	--	--	1,900	<0.50	<0.50	1.4	<1.0	<0.50	<0.50	<0.50	<250	
MW-4	6/1/2012	--	9.92	0.00	--	--	--	680	<2.5	<2.5	<2.5	<5.0	<2.5	<2.5	<2.5	<1,200	A01
MW-4	6/6/2013	--	9.17	0.00	--	--	--	410	0.52	<0.50	<0.50	<1.0	<0.50	<0.50	<0.50	<250	
MW-5	9/13/2011	81.38	6.70	0.00	74.68	75.95	-1.27	--	--	--	--	--	--	--	--	--	
MW-5	10/21/2011	81.38	6.72	0.00	74.66	75.95	-1.29	--	--	--	--	--	--	--	--	--	
MW-5	11/4/2011	81.38	6.64	0.00	74.74	75.95	-1.21	--	--	--	--	--	--	--	--	--	
MW-5	12/9/2011	81.38	10.02	0.21	71.36	74.66	-3.30	--	--	--	--	--	--	--	--	--	
MW-5	1/12/2012	81.38	10.12	0.02	71.26	71.36	-0.10	--	--	--	--	--	--	--	--	--	
MW-5	6/1/2012	81.38	8.22	0.02	73.16	71.26	1.90	--	--	--	--	--	--	--	--	--	
MW-5	6/6/2013	81.38	9.75	0.00	71.63	73.16	-1.53	30,000	410	6.6	970	1,300	2.5	<0.50	<0.50	<250	A01
MW-6	12/9/2011	79.94	6.75	0.00	73.19	73.70	-0.51	<50	<0.50	<0.50	<0.50	<1.0	2.0	<0.50	<0.50	<250	
MW-6	6/1/2012	79.94	7.32	0.00	72.62	73.19	-0.57	<50	<0.50	<0.50	<0.50	<1.0	0.64	<0.50	<0.50	<250	
MW-6	6/6/2013	79.94	7.50	0.00	72.44	72.62	-0.18	<50	<0.50	<0.50	<0.50	<1.0	<0.50	<0.50	<0.50	<250	
MW-7	12/9/2011	--	8.54	0.00	--	--	--	120	<0.50	<0.50	<0.50	<1.0	4.5	<0.50	<0.50	<250	
MW-7	6/1/2012	--	8.22	0.00	--	--	--	<50	<0.50	<0.50	<0.50	<1.0	0.71	<0.50	<0.50	<250	
MW-7	6/6/2013	--	8.56	0.00	--	--	--	<50	<0.50	<0.50	<0.50	<1.0	<0.50	<0.50	<0.50	<250	
MW-8	12/9/2011	81.41	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-8	6/1/2012	81.41	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-8	6/6/2013	81.41	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-9	12/9/2011	80.53	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-9	6/1/2012	80.53	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-9	6/6/2013	80.53	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-10	12/9/2011	81.61	14.41	0.00	67.20	69.25	-2.05	<50	<0.50	<0.50	<0.50	<1.0	<0.50	<0.50	<0.50	<250	
MW-10	6/1/2012	81.61	12.65	0.00	68.96	67.20	1.76	<50	<0.50	<0.50	<0.50	<1.0	1.1	<0.50	<0.50	<250	

Table 2
Historic Groundwater Gauging and Analytical Results
76 Station 0746
3943 Broadway Avenue, Oakland California

Well ID	Date Sampled	TOC (feet MSL)	DTW (feet BTOC)	LPH Thickness (feet)	GW Elevation (feet MSL)	Previous Quarter GWE (feet MSL)	Change in Elevation (feet)	TPH-g	Benzene	Toluene	Ethyl-benzene	Total Xylenes	MTBE	EDB	EDC	Ethanol	Comments
MW-10	6/6/2013	81.61	13.28	0.00	68.33	68.96	-0.63	<50	<0.50	<0.50	<0.50	<1.0	0.92	<0.50	<0.50	<250	
MW-11	12/9/2011	78.18	13.27	0.00	64.91	62.39	2.52	<50	<0.50	<0.50	<0.50	<1.0	<0.50	<0.50	<0.50	<250	
MW-11	6/1/2012	78.18	14.50	0.00	63.68	64.91	-1.23	<50	<0.50	<0.50	<0.50	<1.0	<0.50	<0.50	<0.50	<250	
MW-11	6/6/2013	78.18	15.32	0.00	62.86	63.68	-0.82	<50	<0.50	<0.50	<0.50	<1.0	<0.50	<0.50	<0.50	<250	
MW-12	12/9/2011	79.61	9.42	0.00	70.19	72.28	-2.09	<50	<0.50	<0.50	<0.50	<1.0	<0.50	<0.50	<0.50	<250	
MW-12	6/1/2012	79.61	10.13	0.00	69.48	70.19	-0.71	<50	<0.50	<0.50	<0.50	<1.0	1.2	<0.50	<0.50	<250	
MW-12	6/6/2013	79.61	9.52	0.00	70.09	69.48	0.61	<50	<0.50	<0.50	<0.50	<1.0	<0.50	<0.50	<0.50	<250	
RW-1	10/21/2011	80.63	5.45	0.00	75.18	77.02	-1.84	--	--	--	--	--	--	--	--	--	
RW-1	12/9/2011	80.63	9.28	0.00	71.35	75.18	-3.83	2,900	240	1.2	180	30	<0.50	<0.50	<0.50	<250	A01
RW-1	1/12/2012	80.63	9.53	0.00	71.10	71.35	-0.25	--	--	--	--	--	--	--	--	--	
RW-1	6/1/2012	80.63	8.48	0.00	72.15	71.10	1.05	3,600	140	<2.5	56	<5.0	<2.5	<2.5	<2.5	<1,200	A01
RW-1	6/6/2013	80.63	8.73	0.00	71.90	72.15	-0.25	1,300	1.2	1.4	5.8	<1.0	<0.50	<0.50	<0.50	<250	

Note

Analytical results given in micrograms per liter (µg/l) unless otherwise stated

Standard Abbreviations

- not analyzed, measured, or collected
- < not detected at or above laboratory detection limit
- TOC top of casing (surveyed reference elevation)
- feet MSL feet relative to mean sea level
- DTW depth to water
- BTOC below top of casing
- LPH liquid-phase hydrocarbons
- GW groundwater
- GWE groundwater elevation

Analytes

- TPH-g total petroleum hydrocarbons with gasoline (C6-C12)
- MTBE methyl tertiary butyl ether
- EDB 1,2-dibromoethane (same as ethylene dibromide)
- EDC 1,2-dichloroethane (same as ethylene dichloride)
- 8015B EPA Method 8015B for TPH-g
- 8260B EPA Method 8260B for Volatile Organic Compounds

Laboratory Qualifiers

- A01 PQL's and MDL's are raised due to sample dilution.
- PQL practical quantitation limit
- MDL method detection limit

Table 3
Liquid Phase Hydrocarbon Recovery Data
76 Station 0746
3943 Broadway Avenue, Oakland California

Date	MW-5	RW-1
11/11/1998	0.00	0.00
2/22/1999	0.040	0.00
4/2/1999	0.070	0.00
5/4/1999	0.00	0.00
5/20/1999	0.00	0.00
6/29/1999	0.00	0.00
0729/99	0.00	0.00
8/24/1999	0.00	0.00
9/27/1999	0.00	0.00
10/28/1999	0.00	0.00
11/15/1999	0.00	0.00
12/20/1999	0.00	0.00
1/20/2000	0.00	0.00
2/26/2000	0.00	0.00
3/31/2000	0.00	0.00
4/13/2000	0.000	0.00
5/22/2000	0.00	0.00
11/22/2000	0.020	0.00
2/14/2001	0.060	0.00
3/28/2001	0.00	0.00
4/28/2001	0.00	0.00
5/15/2001	0.00	0.00
6/29/2001	0.00	0.00
7/17/2001	0.00	0.00
8/30/2001	0.000	0.00
9/24/2001	0.00	0.00
10/15/2001	0.030	0.00
11/23/2001	0.00	0.00
12/10/2001	0.000	0.00
1/14/2002	0.00	0.00
2/22/2002	0.00	0.00
3/11/2002	0.000	0.00
4/15/2002	0.00	0.00
5/24/2002	0.040	0.00
6/17/2002	0.040	0.00
7/15/2002	0.020	0.00
8/19/2002	0.050	0.00
9/5/2002	0.030	0.00
10/7/2002	0.020	0.00
11/29/2002	0.020	0.00
12/12/2002	0.010	0.00

Table 3
Liquid Phase Hydrocarbon Recovery Data
76 Station 0746
3943 Broadway Avenue, Oakland California

Date	MW-5	RW-1
1/6/2003	0.010	0.00
2/12/2003	0.020	0.00
3/13/2003	0.020	0.00
4/7/2003	0.010	0.00
5/15/2003	0.030	0.00
6/12/2003	0.020	0.00
7/7/2003	0.010	0.00
8/14/2003	0.020	0.00
9/12/2003	0.020	0.00
10/15/2003	0.087	0.000
11/4/2003	0.043	0.000
11/21/2003	0.032	0.000
12/18/2003	0.024	0.000
1/7/2004	0.009	0.000
2/9/2004	0.010	0.010
3/24/2004	0.031	0.000
4/16/2004	0.000	0.000
5/24/2004	0.050	0.000
6/8/2004	0.049	0.000
7/2/2004	0.046	0.000
8/20/2004	0.080	0.000
9/17/2004	0.048	0.000
10/22/2004	0.024	0.000
11/29/2004	0.036	0.000
12/21/2004	0.010	0.000
1/24/2005	0.027	0.000
2/18/2005	0.020	0.000
3/18/2005	0.024	0.000
4/14/2005	0.010	0.000
5/17/2005	0.010	0.000
6/24/2005	0.000	0.000
7/14/2005	0.020	0.000
8/5/2005	0.050	0.000
9/16/2005	0.009	0.000
10/21/2005	0.000	0.000
11/22/2005	0.000	0.000
12/15/2005	0.000	0.000
1/19/2006	0.000	0.000
2/15/2006	0.000	0.000
3/25/2006	0.000	0.000
4/27/2006	0.000	0.000
5/25/2006	0.000	0.000
6/14/2006	0.000	0.000
7/3/2006	0.000	0.000

Table 3
Liquid Phase Hydrocarbon Recovery Data
76 Station 0746
3943 Broadway Avenue, Oakland California

Date	MW-5	RW-1
8/10/2006	0.000	0.000
9/15/2006	0.027	0.000
10/27/2006	0.009	0.000
11/22/2006	0.017	0.000
12/21/2006	0.000	0.000
2/5/2007	0.010	0.000
2/20/2007	0.000	0.000
3/28/2007	0.000	0.000
4/30/2007	0.000	0.000
5/23/2007	0.073	0.000
6/28/2007	0.049	0.000
8/1/2007	0.000	0.000
8/27/2007	0.000	0.000
9/12/2007	0.040	0.000
10/16/2007	0.000	0.000
12/13/2007	0.029	0.000
1/29/2008	0.010	0.000
2/28/2008	0.020	0.000
3/21/2008	0.000	0.000
4/11/2008	0.058	0.000
5/21/2008	0.044	0.000
6/9/2008	0.029	0.000
7/18/2008	0.032	0.000
8/15/2008	0.024	0.000
9/24/2008	0.051	0.000
10/22/2008	0.044	0.000
11/26/2008	0.034	0.000
12/30/2008	0.022	0.000
1/23/2009	NA	0.000
3/27/2009	0.000	0.000
4/28/2009	0.102	0.000
5/28/2009	NA	NA
7/31/2009	0.034	0.000
8/21/2009	0.102	0.000
9/28/2009	0.017	0.000
10/26/2009	0.063	0.000
11/30/2009	0.075	0.000
12/15/2009	0.010	0.000
1/25/2010	0.003	0.000
2/26/2010	0.000	0.000
3/23/2010	0.010	0.000
4/22/2010	0.009	0.000
5/21/2010	0.117	0.000
6/28/2010	0.085	0.000
7/21/2010	0.040	0.000
8/18/2010	0.070	0.000
9/29/2010	0.030	0.000
10/18/2010	0.046	0.000
11/30/2010	0.058	0.000
12/29/2010	0.250	0.000
1/6/2011	0.138	0.000
1/20/2011	0.231	0.000
2/1/2011	0.230	0.000
2/14/2011	0.000	0.000

Table 3
Liquid Phase Hydrocarbon Recovery Data
76 Station 0746
3943 Broadway Avenue, Oakland California

Date	MW-5	RW-1
3/3/2011	0.000	0.000
3/22/2011	0.000	0.000
4/25/2011	0.000	0.000
5/27/2011	0.000	0.000
9/13/2011	0.000	0.000
10/20/2011	0.000	0.000
11/4/2011	0.000	0.000
12/23/2011	0.210	0.000
1/12/2012	0.020	0.000
6/1/2012	0.020	0.000
7/17/2012	0.150	0.000
12/27/2013	0.000	0.000
1/24/2013	0.050	0.000
2/24/2013	0.030	0.000
3/28/2013	0.120	0.000
4/17/2013	0.000	0.000
5/8/2013	0.130	0.000
6/6/2013	0.000	0.000

Total LPH Removed (gallons): 4.429 0.010

LPH removed for 2" casing well = (feet of product)(0.17 gallon/foot)

4" casing well = (feet of product)(0.67 gallon/foot)

6" casing well = (feet of product)(1.5 gallon/foot)

ARCADIS

Attachment A

Field Data Sheets and General Procedures



GETTLER-RYAN INC.



TRANSMITTAL

June 18, 2013
G-R #385648

TO: Ms. Katherine Brandt
Arcadis
2000 Powell Street, 7th Floor
Emeryville, CA 94608

FROM: Deanna L. Harding
Project Coordinator
Gettler-Ryan Inc.
6747 Sierra Court, Suite J
Dublin, California 94568

RE: **Chevron Facility**
#351647/0746
3943 Broadway
Oakland, California

WE HAVE ENCLOSED THE FOLLOWING:

COPIES	DESCRIPTION
VIA PDF	Groundwater Monitoring and Sampling Data Package First Semi-Annual Event of June 6, 2013

COMMENTS:

Pursuant to your request, we are providing you with copies of the above referenced data for your use.

Please provide us the updated historical data prior to the next monitoring and sampling event for our field use.

Please feel free to contact me if you have any comments/questions.

trans/351647 0746

WELL CONDITION STATUS SHEET

Client/
 Facility #: Chevron #351647 / 0746
 Site Address: 3943 Broadway
 City: Oakland, CA

Job #: 385648
 Event Date: 6/6/13
 Sampler: JOE

WELL ID	Vault Frame Condition	Gasket/O-Ring (M) Missing (R) Replaced	Bolts (M) Missing (R) Replaced	Bolt Flanges B=Broken S=Stripped R=Retap	Apron Condition C=Cracked B=Broken G=Gone	Grout Seal (Deficient) Inches from TOC	Casing (Condition prevents tight cap seal)	REPLACE LOCK Y/N	REPLACE CAP Y/N	WELL VAULT Manufacture/Size/ # of Bolts	Pictures Taken Y/N
MW-2	OK	—————	—————	—————	—————	—————	→	Y	N	Emco 12" 2	N
MW-6	OK	M	OK	—————	—————	—————	→	N	N	" " "	N
MW-7	OK	—————	—————	—————	—————	—————	→	Y	Y	" " "	N
MW-1	OK	M	OK	—————	—————	—————	→	Y	Y	Diversified 12" 2	N
MW-4	OK	M	—————	—————	—————	—————	→	Y	Y	Emco 12" 2	N
MW-3	OK	M	OK	—————	—————	—————	→	Y	X	Diversified 12" 2	N
MW-11	OK	—————	→	S=2	OK	—————	→	Y	Y	Universal 8" 2	N
MW-12	OK	M	OK	B=2	OK	—————	→	Y	Y	Brainard Killman 8" 2	N
MW-10	OK	—————	→	S=2	OK	—————	→	Y	Y	Universal 8" 3	N
RW-1	OK	M	OK	—————	—————	—————	→	N	N	Emco 18" 2	N
MW-5	OK	M	OK	—————	—————	—————	→	N	N	Emco 12" 2	N

Comments _____

STANDARD OPERATING PROCEDURE - GROUNDWATER SAMPLING

Gettler-Ryan Inc. (GR) field personnel adhere to the following procedures for the collection and handling of groundwater samples prior to analysis by the analytical laboratory. All work is performed in accordance with the GR Health & Safety Plan and all client-specific programs. The scope of work and type of analysis to be performed is determined prior to commencing field work.

Prior to sampling, the presence or absence of free-phase hydrocarbons is determined using an interface probe. Product thickness, if present, is measured to the nearest 0.01 foot and is noted in the field notes. In addition, all depth to water level measurements are collected with a static water level indicator and are also recorded in the field notes, prior to purging and sampling any wells.

After water levels are collected and prior to sampling, if purging is to occur, each well is purged a minimum of three well casing volumes of water using pre-cleaned pumps (stack, peristaltic or Grundfos), or disposable bailers. Temperature, pH and electrical conductivity are measured a minimum of three times during the purging (additional parameters such as dissolved oxygen, oxidation reduction potential, turbidity may also be measured, depending on specific scope of work.). Purging continues until these parameters stabilize.

Groundwater samples are collected using disposable bailers. The water samples are transferred from the bailer into appropriate containers. Pre-preserved containers, supplied by analytical laboratories, are used. When pre-preserved containers are not available, the laboratory is instructed to preserve the sample as appropriate. Duplicate samples are collected for the laboratory to use in maintaining quality assurance/quality control standards, as directed by the scope of work. The samples are labeled to include the job number, sample identification, collection date and time, analysis, preservation (if any), and the sample collector's initials. The water samples are placed in a cooler, maintained at 4°C for transport to the laboratory. Once collected in the field, all samples are maintained under chain of custody until delivered to the laboratory.

The chain of custody document includes the job number, type of preservation, if any, analysis requested, sample identification, date and time collected, and the sample collector's name. The chain of custody is signed and dated (including time of transfer) by each person who receives or surrenders the samples, beginning with the field personnel and ending with the laboratory personnel.

A laboratory supplied trip blank accompanies each sampling set. The trip blank is analyzed for some or all of the same compounds as the groundwater samples.

As requested by Chevron Environmental Management Company, the purge water and decontamination water generated during sampling activities is transported by Clean Harbors Environmental Services to Seaport Environmental located in Redwood City, California.



GETTLER-RYAN INC.

WELL MONITORING/SAMPLING FIELD DATA SHEET

Client/Facility#: Chevron #351647 / 0746
 Site Address: 3943 Broadway
 City: Oakland, CA

Job Number: 385648
 Event Date: 6/6/13 (inclusive)
 Sampler: JOE

Well ID: MW-1
 Well Diameter: 216 in.
 Total Depth: 19.80 ft.
 Depth to Water: 7.88 ft.

Date Monitored: 6/6/13

Volume Factor (VF)	3/4" = 0.02	1" = 0.04	2" = 0.17	3" = 0.38
	4" = 0.66	5" = 1.02	6" = 1.50	12" = 5.80

Check if water column is less than 0.50 ft.
 $11.92 \times VF 0.17 = 2.02$ x3 case volume = Estimated Purge Volume: 6.07 gal.
 Depth to Water w/ 80% Recharge [(Height of Water Column x 0.20) + DTW]: 10.26

Purge Equipment:
 Disposable Bailer
 Stainless Steel Bailer _____
 Stack Pump _____
 Suction Pump _____
 Grundfos _____
 Peristaltic Pump _____
 QED Bladder Pump _____
 Other: _____

Sampling Equipment:
 Disposable Bailer
 Pressure Bailer _____
 Metal Filters _____
 Peristaltic Pump _____
 QED Bladder Pump _____
 Other: _____

Time Started: _____ (2400 hrs)
 Time Completed: _____ (2400 hrs)
 Depth to Product: _____ ft
 Depth to Water: _____ ft
 Hydrocarbon Thickness: _____ ft
 Visual Confirmation/Description: _____
 Skimmer / Absorbant Sock (circle one)
 Amt Removed from Skimmer: _____ gal
 Amt Removed from Well: _____ gal
 Water Removed: _____

Start Time (purge): 0733 Weather Conditions: overcast
 Sample Time/Date: 0749 / 6/6/13 Water Color: gray Odor: Y / (N)
 Approx. Flow Rate: _____ gpm. Sediment Description: Light
 Did well de-water? no If yes, Time: _____ Volume: _____ gal. DTW @ Sampling: 7.90

Time (2400 hr.)	Volume (gal.)	pH	Conductivity (µmhos/cm) ^{MS}	Temperature (C / F)	D.O. (mg/L)	ORP (mV)
<u>0736</u>	<u>2</u>	<u>7.25</u>	<u>0.61</u>	<u>18.3</u>		
<u>0739</u>	<u>4</u>	<u>7.13</u>	<u>0.60</u>	<u>18.1</u>		
<u>0742</u>	<u>6</u>	<u>7.05</u>	<u>0.58</u>	<u>18.4</u>		

LABORATORY INFORMATION

SAMPLE ID	(#) CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
<u>MW-1</u>	<u>6</u> x voa vial	YES	HCL	BC LABS	TPH-GRO(C6-C12)(8015B)/BTEX+MTBE(8260)/ EDB/EDC(8260)/ETHANOL(8260B)

COMMENTS: _____

Add/Replaced Gasket: _____ Add/Replaced Bolt: _____ Add/Replaced Lock: Add/Replaced Plug:



GETTLER-RYAN INC.

WELL MONITORING/SAMPLING FIELD DATA SHEET

Client/Facility#: Chevron #351647 / 0746 Job Number: 385648
 Site Address: 3943 Broadway Event Date: 6/6/13 (inclusive)
 City: Oakland, CA Sampler: JOE

Well ID: Mw-2 Date Monitored: 6/6/13
 Well Diameter: 216 in.
 Total Depth: 19.80 ft.
 Depth to Water: 9.40 ft. Check if water column is less than 0.50 ft.
10.40 xVF 0.17 = 1.76 x3 case volume = Estimated Purge Volume: 5.30 gal.
 Depth to Water w/ 80% Recharge [(Height of Water Column x 0.20) + DTW]: 11.48

Volume	3/4"= 0.02	1"= 0.04	2"= 0.17	3"= 0.38
Factor (VF)	4"= 0.66	5"= 1.02	6"= 1.50	12"= 5.80

Purge Equipment:
 Disposable Bailer _____
 Stainless Steel Bailer _____
 Stack Pump _____
 Suction Pump _____
 Grundfos _____
 Peristaltic Pump _____
 QED Bladder Pump _____
 Other: _____

Sampling Equipment:
 Disposable Bailer _____
 Pressure Bailer _____
 Metal Filters _____
 Peristaltic Pump _____
 QED Bladder Pump _____
 Other: _____

Time Started: _____ (2400 hrs)
 Time Completed: _____ (2400 hrs)
 Depth to Product: _____ ft
 Depth to Water: _____ ft
 Hydrocarbon Thickness: _____ ft
 Visual Confirmation/Description: _____
 Skimmer / Absorbant Sock (circle one)
 Amt Removed from Skimmer: _____ gal
 Amt Removed from Well: _____ gal
 Water Removed: _____

Start Time (purge): 0635 Weather Conditions: overcast
 Sample Time/Date: 0651 6/6/13 Water Color: gray Odor: Y1(N)
 Approx. Flow Rate: _____ gpm. Sediment Description: Light
 Did well de-water? NO If yes, Time: _____ Volume: _____ gal. DTW @ Sampling: 9.70

Time (2400 hr.)	Volume (gal.)	pH	Conductivity (µmhos/cm - µS)	Temperature (°F)	D.O. (mg/L)	ORP (mV)
<u>0638</u>	<u>2</u>	<u>7.75</u>	<u>0.61</u>	<u>16.6</u>	_____	_____
<u>0641</u>	<u>4</u>	<u>7.53</u>	<u>0.59</u>	<u>16.5</u>	_____	_____
<u>0644</u>	<u>5.5</u>	<u>7.20</u>	<u>0.59</u>	<u>15.7</u>	_____	_____

LABORATORY INFORMATION

SAMPLE ID	(#) CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
<u>Mw-2</u>	<u>6</u> x voa vial	YES	HCL	BC LABS	TPH-GRO(C6-C12)(8015B)/BTEX+MTBE(8260)/ EDB/EDC(8260)/ETHANOL(8260B)

COMMENTS: _____

Add/Replaced Gasket: _____ Add/Replaced Bolt: _____ Add/Replaced Lock: Add/Replaced Plug: _____



GETTLER-RYAN INC.

WELL MONITORING/SAMPLING FIELD DATA SHEET

Client/Facility#: Chevron #351647 / 0746
 Site Address: 3943 Broadway
 City: Oakland, CA

Job Number: 385648
 Event Date: 6/6/13 (inclusive)
 Sampler: JOE

Well ID: MW-3
 Well Diameter: 216 in.
 Total Depth: 22.50 ft.
 Depth to Water: 9.78 ft.
12.72 xVF = 0.17 = 2.16

Date Monitored: 6/6/13

Volume	3/4"= 0.02	1"= 0.04	2"= 0.17	3"= 0.38
Factor (VF)	4"= 0.66	5"= 1.02	6"= 1.50	12"= 5.80

Check if water column is less than 0.50 ft.

x3 case volume = Estimated Purge Volume: 6.48 gal.

Depth to Water w/ 80% Recharge [(Height of Water Column x 0.20) + DTW]: 12.32

Purge Equipment:

Disposable Bailer
 Stainless Steel Bailer _____
 Stack Pump _____
 Suction Pump _____
 Grundfos _____
 Peristaltic Pump _____
 QED Bladder Pump _____
 Other: _____

Sampling Equipment:

Disposable Bailer
 Pressure Bailer _____
 Metal Filters _____
 Peristaltic Pump _____
 QED Bladder Pump _____
 Other: _____

Time Started: _____ (2400 hrs)
 Time Completed: _____ (2400 hrs)
 Depth to Product: _____ ft
 Depth to Water: _____ ft
 Hydrocarbon Thickness: _____ ft
 Visual Confirmation/Description: _____
 Skimmer / Absorbant Sock (circle one)
 Amt Removed from Skimmer: _____ gal
 Amt Removed from Well: _____ gal
 Water Removed: _____

Start Time (purge): 0951
 Sample Time/Date: 1012 16/6/13
 Approx. Flow Rate: _____ gpm.
 Did well de-water? No If yes, Time: _____ Volume: _____ gal.

Weather Conditions: overcast
 Water Color: clear Odor: 0/N mild
 Sediment Description: Light
 DTW @ Sampling: 11.97

Time (2400 hr.)	Volume (gal.)	pH	Conductivity ^{MS} (μ mhos/cm μ S)	Temperature (C / F)	D.O. (mg/L)	ORP (mV)
<u>0954</u>	<u>2</u>	<u>6.86</u>	<u>0.74</u>	<u>19.3</u>	_____	_____
<u>0957</u>	<u>4</u>	<u>6.82</u>	<u>0.77</u>	<u>19.5</u>	_____	_____
<u>1002</u>	<u>6.5</u>	<u>6.81</u>	<u>0.74</u>	<u>19.0</u>	_____	_____

LABORATORY INFORMATION

SAMPLE ID	(#) CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
<u>MW-3</u>	<u>6</u> x voa vial	YES	HCL	BC LABS	TPH-GRO(C6-C12)(8015B)/BTEX+MTBE(8260)/ EDB/EDC(8260)/ETHANOL(8260B)

COMMENTS: _____

Add/Replaced Gasket: _____ Add/Replaced Bolt: _____ Add/Replaced Lock: Add/Replaced Plug:



GETTLER-RYAN INC.

WELL MONITORING/SAMPLING FIELD DATA SHEET

Client/Facility#: Chevron #351647 / 0746
 Site Address: 3943 Broadway
 City: Oakland, CA

Job Number: 385648
 Event Date: 6/6/13 (inclusive)
 Sampler: JOE

Well ID: MW-4
 Well Diameter: 216 in.
 Total Depth: 19.77 ft.
 Depth to Water: 9.17 ft.
10.60 xVF = 0.17 = 1.80

Date Monitored: 6/6/13

Volume	3/4"= 0.02	1"= 0.04	2"= 0.17	3"= 0.38
Factor (VF)	4"= 0.66	5"= 1.02	6"= 1.50	12"= 5.80

Check if water column is less than 0.50 ft.

x3 case volume = Estimated Purge Volume: 5.40 gal.

Depth to Water w/ 80% Recharge [(Height of Water Column x 0.20) + DTW]: 11.29

Purge Equipment:

Disposable Bailer
 Stainless Steel Bailer _____
 Stack Pump _____
 Suction Pump _____
 Grundfos _____
 Peristaltic Pump _____
 QED Bladder Pump _____
 Other: _____

Sampling Equipment:

Disposable Bailer
 Pressure Bailer _____
 Metal Filters _____
 Peristaltic Pump _____
 QED Bladder Pump _____
 Other: _____

Time Started:	_____ (2400 hrs)
Time Completed:	_____ (2400 hrs)
Depth to Product:	_____ ft
Depth to Water:	_____ ft
Hydrocarbon Thickness:	_____ ft
Visual Confirmation/Description:	_____
Skimmer / Absorbant Sock (circle one)	_____
Amt Removed from Skimmer:	_____ gal
Amt Removed from Well:	_____ gal
Water Removed:	_____ gal

Start Time (purge): 0835 Weather Conditions: overcast
 Sample Time/Date: 0856 6/6/13 Water Color: gray Odor: Y10
 Approx. Flow Rate: _____ gpm. Sediment Description: Light
 Did well de-water? No If yes, Time: _____ Volume: _____ gal. DTW @ Sampling: 11.28

Time (2400 hr.)	Volume (gal.)	pH	Conductivity ^{MS} (µmhos/cm µS)	Temperature (°C / F)	D.O. (mg/L)	ORP (mV)
<u>0838</u>	<u>2</u>	<u>7.17</u>	<u>0.59</u>	<u>18.6</u>	_____	_____
<u>0841</u>	<u>4</u>	<u>7.09</u>	<u>0.59</u>	<u>18.2</u>	_____	_____
<u>0844</u>	<u>5.5</u>	<u>7.02</u>	<u>0.58</u>	<u>17.9</u>	_____	_____

LABORATORY INFORMATION

SAMPLE ID	(#) CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
<u>MW-4</u>	<u>6</u> x voa vial	YES	HCL	BC LABS	TPH-GRO(C6-C12)(8015B)/BTEX+MTBE(8260)/ EDB/EDC(8260)/ETHANOL(8260B)

COMMENTS:

Add/Replaced Gasket: _____ Add/Replaced Bolt: _____ Add/Replaced Lock: Add/Replaced Plug:



GETTLER - RYAN INC.

WELL MONITORING/SAMPLING FIELD DATA SHEET

Client/Facility#: Chevron #351647 / 0746 Job Number: 385648
 Site Address: 3943 Broadway Event Date: 6/6/13 (inclusive)
 City: Oakland, CA Sampler: JOE

Well ID: MW-5 Date Monitored: 6/6/13
 Well Diameter: 216 in.
 Total Depth: 20.01 ft.
 Depth to Water: 9.75 ft. Check if water column is less than 0.50 ft.
10.26 xVF 0.17 = 1.74 x3 case volume = Estimated Purge Volume: 5.25 gal.
 Depth to Water w/ 80% Recharge [(Height of Water Column x 0.20) + DTW]: 11.87

Volume	3/4" = 0.02	1" = 0.04	2" = 0.17	3" = 0.38
Factor (VF)	4" = 0.66	5" = 1.02	6" = 1.50	12" = 5.80

Purge Equipment:
 Disposable Bailer
 Stainless Steel Bailer _____
 Stack Pump _____
 Suction Pump _____
 Grundfos _____
 Peristaltic Pump _____
 QED Bladder Pump _____
 Other: _____

Sampling Equipment:
 Disposable Bailer
 Pressure Bailer _____
 Metal Filters _____
 Peristaltic Pump _____
 QED Bladder Pump _____
 Other: _____

Time Started: _____ (2400 hrs)
 Time Completed: _____ (2400 hrs)
 Depth to Product: _____ ft
 Depth to Water: _____ ft
 Hydrocarbon Thickness: _____ ft
 Visual Confirmation/Description: _____
 Skimmer / Absorbant Sock (circle one)
 Amt Removed from Skimmer: _____ gal
 Amt Removed from Well: _____ gal
 Water Removed: _____

Start Time (purge): 1025 Weather Conditions: overcast/clearing
 Sample Time/Date: 1044 / 6/6/13 Water Color: Clear Odor: ① IN STRONG
 Approx. Flow Rate: _____ gpm. Sediment Description: Light
 Did well de-water? NO If yes, Time: _____ Volume: _____ gal. DTW @ Sampling: 10.08

Time (2400 hr.)	Volume (gal.)	pH	Conductivity (µmhos/cm - µS)	Temperature (° / F)	D.O. (mg/L)	ORP (mV)
<u>1028</u>	<u>2</u>	<u>7.01</u>	<u>0.78</u>	<u>18.9</u>		
<u>1031</u>	<u>4</u>	<u>6.92</u>	<u>0.72</u>	<u>18.7</u>		
<u>1034</u>	<u>5.5</u>	<u>6.88</u>	<u>0.71</u>	<u>18.5</u>		

LABORATORY INFORMATION

SAMPLE ID	(#) CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
<u>MW-5</u>	<u>6</u> x voa vial	<u>YES</u>	<u>HCL</u>	<u>BC LABS</u>	<u>TPH-GRO(C6-C12)(8015B)/BTEX+MTBE(8260)/EDB/EDC(8260)/ETHANOL(8260B)</u>

COMMENTS: SHP/Skimmer in well

Add/Replaced Gasket: _____ Add/Replaced Bolt: _____ Add/Replaced Lock: _____ Add/Replaced Plug: _____



GETTLER-RYAN INC.

WELL MONITORING/SAMPLING FIELD DATA SHEET

Client/Facility#: Chevron #351647 / 0746
 Site Address: 3943 Broadway
 City: Oakland, CA

Job Number: 385648
 Event Date: 6/6/13 (inclusive)
 Sampler: JOE

Well ID: mw 6
 Well Diameter: 216 in.
 Total Depth: 19.55 ft.
 Depth to Water: 7.50 ft.

Date Monitored: 6/6/13

Volume	3/4"= 0.02	1"= 0.04	2"= 0.17	3"= 0.38
Factor (VF)	4"= 0.66	5"= 1.02	6"= 1.50	12"= 5.80

Check if water column is less than 0.50 ft.
 $12.05 \times VF 0.17 = 2.04$ x3 case volume = Estimated Purge Volume: 6.14 gal.

Depth to Water w/ 80% Recharge [(Height of Water Column x 0.20) + DTW]: 9.91

Purge Equipment:

Disposable Bailer

Stainless Steel Bailer _____

Stack Pump _____

Suction Pump _____

Grundfos _____

Peristaltic Pump _____

QED Bladder Pump _____

Other: _____

Sampling Equipment:

Disposable Bailer

Pressure Bailer _____

Metal Filters _____

Peristaltic Pump _____

QED Bladder Pump _____

Other: _____

Time Started:	_____ (2400 hrs)
Time Completed:	_____ (2400 hrs)
Depth to Product:	_____ ft
Depth to Water:	_____ ft
Hydrocarbon Thickness:	_____ ft
Visual Confirmation/Description:	_____
Skimmer / Absorbant Sock (circle one)	
Amt Removed from Skimmer:	_____ gal
Amt Removed from Well:	_____ gal
Water Removed:	_____ gal

Start Time (purge): 0705 Weather Conditions: overcast
 Sample Time/Date: 0721 6/6/13 Water Color: gray Odor: Y10
 Approx. Flow Rate: _____ gpm. Sediment Description: Light
 Did well de-water? No If yes, Time: _____ Volume: _____ gal. DTW @ Sampling: 7.60

Time (2400 hr.)	Volume (gal.)	pH	Conductivity (µmhos/cm)	Temperature (C / F)	D.O. (mg/L)	ORP (mV)
<u>0708</u>	<u>2</u>	<u>7.73</u>	<u>0.84</u>	<u>17.8</u>		
<u>0711</u>	<u>4</u>	<u>7.07</u>	<u>0.78</u>	<u>17.6</u>		
<u>0714</u>	<u>6.5</u>	<u>7.03</u>	<u>0.76</u>	<u>17.5</u>		

LABORATORY INFORMATION

SAMPLE ID	(#) CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
<u>mw 6</u>	<u>6 x voa vial</u>	<u>YES</u>	<u>HCL</u>	<u>BC LABS</u>	<u>TPH-GRO(C6-C12)(8015B)/BTEX+MTBE(8260)/EDB/EDC(8260)/ETHANOL(8260B)</u>

COMMENTS: _____

Add/Replaced Gasket: _____ Add/Replaced Bolt: _____ Add/Replaced Lock: _____ Add/Replaced Plug: _____



GETTLER-RYAN INC.

WELL MONITORING/SAMPLING FIELD DATA SHEET

Client/Facility#: Chevron #351647 / 0746 Job Number: 385648
 Site Address: 3943 Broadway Event Date: 6/6/13 (inclusive)
 City: Oakland, CA Sampler: JOE

Well ID: MW-7 Date Monitored: 6/6/13
 Well Diameter: 216 in.
 Total Depth: 19.65 ft.
 Depth to Water: 8.55 ft.
 Check if water column is less than 0.50 ft.
11.10 xVF 0.17 = 1.88 x3 case volume = Estimated Purge Volume: 5.66 gal.
 Depth to Water w/ 80% Recharge [(Height of Water Column x 0.20) + DTW]: 10.78

Volume	3/4"= 0.02	1"= 0.04	2"= 0.17	3"= 0.38
Factor (VF)	4"= 0.66	5"= 1.02	6"= 1.50	12"= 5.80

Purge Equipment:
 Disposable Bailer
 Stainless Steel Bailer _____
 Stack Pump _____
 Suction Pump _____
 Grundfos _____
 Peristaltic Pump _____
 QED Bladder Pump _____
 Other: _____

Sampling Equipment:
 Disposable Bailer
 Pressure Bailer _____
 Metal Filters _____
 Peristaltic Pump _____
 QED Bladder Pump _____
 Other: _____

Time Started: _____ (2400 hrs)
 Time Completed: _____ (2400 hrs)
 Depth to Product: _____ ft
 Depth to Water: _____ ft
 Hydrocarbon Thickness: _____ ft
 Visual Confirmation/Description: _____
 Skimmer / Absorbant Sock (circle one)
 Amt Removed from Skimmer: _____ gal
 Amt Removed from Well: _____ gal
 Water Removed: _____

Start Time (purge): 0803 Weather Conditions: overcast
 Sample Time/Date: 0819/ 6/6/13 Water Color: gray Odor: Y / N
 Approx. Flow Rate: — gpm. Sediment Description: Light
 Did well de-water? No If yes, Time: _____ Volume: _____ gal. DTW @ Sampling: 9.05

Time (2400 hr.)	Volume (gal.)	pH	Conductivity (µmhos/cm - µS)	Temperature (°C / F)	D.O. (mg/L)	ORP (mV)
<u>0806</u>	<u>2</u>	<u>7.21</u>	<u>0.60</u>	<u>19.4</u>		
<u>0809</u>	<u>4</u>	<u>7.12</u>	<u>0.60</u>	<u>18.9</u>		
<u>0812</u>	<u>6</u>	<u>7.05</u>	<u>0.60</u>	<u>18.8</u>		

LABORATORY INFORMATION

SAMPLE ID	(#) CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
<u>MW-7</u>	<u>6</u> x voa vial	<u>YES</u>	<u>HCL</u>	<u>BC LABS</u>	<u>TPH-GRO(C6-C12)(8015B)/BTEX+MTBE(8260)/ EDB/EDC(8260)/ETHANOL(8260B)</u>

COMMENTS: _____

Add/Replaced Gasket: _____ Add/Replaced Bolt: _____ Add/Replaced Lock: Add/Replaced Plug:



GETTLER-RYAN INC.

WELL MONITORING/SAMPLING FIELD DATA SHEET

Client/Facility#: Chevron #351647 / 0746
 Site Address: 3943 Broadway
 City: Oakland, CA

Job Number: 385648
 Event Date: 6/6/13 (inclusive)
 Sampler: JOE

Well ID: MW-10
 Well Diameter: 216 in.
 Total Depth: 21.70 ft.
 Depth to Water: 13.28 ft.
8.42 xVF = 0.17 = 1.43

Date Monitored: 6/6/13

Volume	3/4" = 0.02	1" = 0.04	2" = 0.17	3" = 0.38
Factor (VF)	4" = 0.66	5" = 1.02	6" = 1.50	12" = 5.80

Check if water column is less than 0.50 ft.

Depth to Water w/ 80% Recharge [(Height of Water Column x 0.20) + DTW]: 14.96
 x3 case volume = Estimated Purge Volume: 4.29 gal.

Purge Equipment:

Disposable Bailer
 Stainless Steel Bailer _____
 Stack Pump _____
 Suction Pump _____
 Grundfos _____
 Peristaltic Pump _____
 QED Bladder Pump _____
 Other: _____

Sampling Equipment:

Disposable Bailer
 Pressure Bailer _____
 Metal Filters _____
 Peristaltic Pump _____
 QED Bladder Pump _____
 Other: _____

Time Started:	_____ (2400 hrs)
Time Completed:	_____ (2400 hrs)
Depth to Product:	_____ ft
Depth to Water:	_____ ft
Hydrocarbon Thickness:	_____ ft
Visual Confirmation/Description:	_____
Skimmer / Absorbant Sock (circle one)	_____
Amt Removed from Skimmer:	_____ gal
Amt Removed from Well:	_____ gal
Water Removed:	_____ gal

Start Time (purge): 1245 Weather Conditions: Clear
 Sample Time/Date: 1303 6/6/13 Water Color: Clear Odor: Y10
 Approx. Flow Rate: _____ gpm. Sediment Description: Mgn
 Did well de-water? No If yes, Time: _____ Volume: _____ gal. DTW @ Sampling: 14.92

Time (2400 hr.)	Volume (gal.)	pH	Conductivity ^{MS} (µmhos/cm µS)	Temperature (C / F)	D.O. (mg/L)	ORP (mV)
<u>1247</u>	<u>1.43</u>	<u>7.20</u>	<u>0.51</u>	<u>20.3</u>	_____	_____
<u>1249</u>	<u>2.86</u>	<u>7.00</u>	<u>0.51</u>	<u>20.2</u>	_____	_____
<u>1251</u>	<u>4.29</u>	<u>6.91</u>	<u>0.52</u>	<u>20.0</u>	_____	_____

LABORATORY INFORMATION

SAMPLE ID	(#) CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
<u>MW-10</u>	<u>6</u> x voa vial	YES	HCL	BC LABS	TPH-GRO(C6-C12)(8015B)/BTEX+MTBE(8260)/EDB/EDC(8260)/ETHANOL(8260B)

COMMENTS:

Add/Replaced Gasket: _____ Add/Replaced Bolt: _____ Add/Replaced Lock: Add/Replaced Plug:



GETTLER-RYAN INC.

WELL MONITORING/SAMPLING FIELD DATA SHEET

Client/Facility#: Chevron #351647 / 0746
 Site Address: 3943 Broadway
 City: Oakland, CA

Job Number: 385648
 Event Date: 6/6/13 (inclusive)
 Sampler: JOE

Well ID: MW-11
 Well Diameter: 216 in.
 Total Depth: 19.11 ft.
 Depth to Water: 15.32 ft.
3.79 xVF = 0.17 = 0.64

Date Monitored: 6/6/13

Volume	3/4" = 0.02	1" = 0.04	2" = 0.17	3" = 0.38
Factor (VF)	4" = 0.66	5" = 1.02	6" = 1.50	12" = 5.80

Check if water column is less than 0.50 ft.

x3 case volume = Estimated Purge Volume: 1.93 gal.

Depth to Water w/ 80% Recharge [(Height of Water Column x 0.20) + DTW]: 16.07

Purge Equipment:

Disposable Bailer
 Stainless Steel Bailer _____
 Stack Pump _____
 Suction Pump _____
 Grundfos _____
 Peristaltic Pump _____
 QED Bladder Pump _____
 Other: _____

Sampling Equipment:

Disposable Bailer
 Pressure Bailer _____
 Metal Filters _____
 Peristaltic Pump _____
 QED Bladder Pump _____
 Other: _____

Time Started: _____ (2400 hrs)
 Time Completed: _____ (2400 hrs)
 Depth to Product: _____ ft
 Depth to Water: _____ ft
 Hydrocarbon Thickness: _____ ft
 Visual Confirmation/Description: _____
 Skimmer / Absorbant Sock (circle one)
 Amt Removed from Skimmer: _____ gal
 Amt Removed from Well: _____ gal
 Water Removed: _____

Start Time (purge): 0916 Weather Conditions: overcast
 Sample Time/Date: 0935 / 6/6/13 Water Color: clear Odor: Y10
 Approx. Flow Rate: _____ gpm. Sediment Description: None
 Did well de-water? No If yes, Time: _____ Volume: _____ gal. DTW @ Sampling: 16.06

Time (2400 hr.)	Volume (gal.)	pH	Conductivity ^{MS} (µmhos/cm µS)	Temperature (°C / F)	D.O. (mg/L)	ORP (mV)
<u>0917</u>	<u>.64</u>	<u>6.90</u>	<u>0.84</u>	<u>17.9</u>	_____	_____
<u>0918</u>	<u>1.28</u>	<u>6.83</u>	<u>0.84</u>	<u>17.7</u>	_____	_____
<u>0919</u>	<u>2</u>	<u>6.80</u>	<u>0.85</u>	<u>17.7</u>	_____	_____

LABORATORY INFORMATION

SAMPLE ID	(#) CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
<u>MW-11</u>	<u>6</u> x voa vial	<u>YES</u>	<u>HCL</u>	<u>BC LABS</u>	<u>TPH-GRO(C6-C12)(8015B)/BTEX+MTBE(8260)/ EDB/EDC(8260)/ETHANOL(8260B)</u>

COMMENTS:

Add/Replaced Gasket: _____ Add/Replaced Bolt: _____ Add/Replaced Lock: Add/Replaced Plug:



GETTLER-RYAN INC.

WELL MONITORING/SAMPLING FIELD DATA SHEET

Client/Facility#: Chevron #351647 / 0746
 Site Address: 3943 Broadway
 City: Oakland, CA

Job Number: 385648
 Event Date: 6/6/13 (inclusive)
 Sampler: JOE

Well ID: MW-12
 Well Diameter: 2.16 in.
 Total Depth: 17.58 ft.
 Depth to Water: 9.52 ft.
8.06 xVF = 0.17 = 1.37

Date Monitored: 6/6/13

Volume	3/4"= 0.02	1"= 0.04	2"= 0.17	3"= 0.38
Factor (VF)	4"= 0.66	5"= 1.02	6"= 1.50	12"= 5.80

Check if water column is less than 0.50 ft.

x3 case volume = Estimated Purge Volume: 4.11 gal.

Depth to Water w/ 80% Recharge [(Height of Water Column x 0.20) + DTW]: 11.13

Purge Equipment:
 Disposable Bailer
 Stainless Steel Bailer _____
 Stack Pump _____
 Suction Pump _____
 Grundfos _____
 Peristaltic Pump _____
 QED Bladder Pump _____
 Other: _____

Sampling Equipment:
 Disposable Bailer
 Pressure Bailer _____
 Metal Filters _____
 Peristaltic Pump _____
 QED Bladder Pump _____
 Other: _____

Time Started: _____ (2400 hrs)
 Time Completed: _____ (2400 hrs)
 Depth to Product: _____ ft
 Depth to Water: _____ ft
 Hydrocarbon Thickness: _____ ft
 Visual Confirmation/Description: _____
 Skimmer / Absorbant Sock (circle one)
 Amt Removed from Skimmer: _____ gal
 Amt Removed from Well: _____ gal
 Water Removed: _____

Start Time (purge): 1210 Weather Conditions: Clear/Warm
 Sample Time/Date: 1225 6/6/13 Water Color: Clear Odor: Y10
 Approx. Flow Rate: _____ gpm. Sediment Description: None
 Did well de-water? No If yes, Time: _____ Volume: _____ gal. DTW @ Sampling: 11.1

Time (2400 hr.)	Volume (gal.)	pH	Conductivity ^{MS} (µmhos/cm -pc)	Temperature (° / F)	D.O. (mg/L)	ORP (mV)
<u>1212</u>	<u>1.37</u>	<u>7.16</u>	<u>0.60</u>	<u>20.6</u>		
<u>1214</u>	<u>2.74</u>	<u>7.00</u>	<u>0.59</u>	<u>20.5</u>		
<u>1216</u>	<u>4.11</u>	<u>6.99</u>	<u>0.58</u>	<u>19.7</u>		

LABORATORY INFORMATION

SAMPLE ID	(#) CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
<u>MW-12</u>	<u>6</u> x voa vial	<u>YES</u>	<u>HCL</u>	<u>BC LABS</u>	<u>TPH-GRO(C6-C12)(8015B)/BTEX+MTBE(8260)/EDB/EDC(8260)/ETHANOL(8260B)</u>

COMMENTS:

Add/Replaced Gasket: _____ Add/Replaced Bolt: _____ Add/Replaced Lock: Add/Replaced Plug:



GETTLER-RYAN INC.

WELL MONITORING/SAMPLING FIELD DATA SHEET

Client/Facility#: Chevron #351647 / 0746 Job Number: 385648
 Site Address: 3943 Broadway Event Date: 6/6/13 (inclusive)
 City: Oakland, CA Sampler: JOE

Well ID: RW-1 Date Monitored: 6/6/13
 Well Diameter: 21(6) in.
 Total Depth: 16.34 ft.
 Depth to Water: 8.73 ft. Check if water column is less than 0.50 ft.
7.61 xVF 1.50 = 11.41 x3 case volume = Estimated Purge Volume: 34.24 gal.
 Depth to Water w/ 80% Recharge [(Height of Water Column x 0.20) + DTW]: 10.25

Volume	3/4"= 0.02	1"= 0.04	2"= 0.17	3"= 0.38
Factor (VF)	4"= 0.66	5"= 1.02	6"= 1.50	12"= 5.80

Purge Equipment:

Disposable Bailer _____
 Stainless Steel Bailer _____
 Stack Pump _____
 Suction Pump _____
 Grundfos _____
 Peristaltic Pump _____
 QED Bladder Pump _____
 Other: _____

Sampling Equipment:

Disposable Bailer _____
 Pressure Bailer _____
 Metal Filters _____
 Peristaltic Pump _____
 QED Bladder Pump _____
 Other: _____

Time Started: _____ (2400 hrs)
 Time Completed: _____ (2400 hrs)
 Depth to Product: _____ ft
 Depth to Water: _____ ft
 Hydrocarbon Thickness: _____ ft
 Visual Confirmation/Description: _____
 Skimmer / Absorbant Sock (circle one)
 Amt Removed from Skimmer: _____ gal
 Amt Removed from Well: _____ gal
 Water Removed: _____

Start Time (purge): 1131 Weather Conditions: Clear/warm
 Sample Time/Date: 1150 / 6/6/13 Water Color: Clear Odor: WIN Light
 Approx. Flow Rate: 2 gpm. Sediment Description: Light
 Did well de-water? yes If yes, Time: 1137 Volume: 17 gal. DTW @ Sampling: 10.23

Time (2400 hr.)	Volume (gal.)	pH	Conductivity $\mu\text{mhos/cm} - \mu\text{S}$	Temperature (C / F)	D.O. (mg/L)	ORP (mV)
<u>1135</u>	<u>12</u>	<u>6.72</u>	<u>0.38</u>	<u>20.7</u>		
<u>1140</u>						

LABORATORY INFORMATION

SAMPLE ID	(#) CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
<u>RW-1</u>	<u>6</u> x voa vial	<u>YES</u>	<u>HCL</u>	<u>BC LABS</u>	<u>TPH-GRO(C6-C12)(8015B)/BTEX+MTBE(8260)/EDB/EDC(8260)/ETHANOL(8260B)</u>

COMMENTS:

Add/Replaced Gasket: _____ Add/Replaced Bolt: _____ Add/Replaced Lock: _____ Add/Replaced Plug: _____

CHAIN OF CUSTODY FORM

Union Oil Company of California ■ 6101 Bollinger Canyon Road ■ San Ramon, CA 94583

COC 1 of 1

Union Oil Site ID: <u>0746</u>	Union Oil Consultant: <u>Arcadis</u>	ANALYSES REQUIRED											
Site Global ID: <u>70600101471</u>	Consultant Contact: <u>Katherine Brandt</u>	TPH - Diesel by EPA 8015 TPH - GC/MS (CG-C12) 8015B BTEX/MTBE/ OXYS by EPA 8260B Ethanol by EPA 8260B EPA 8260B Full List with OXYS EDB/EDC 8260B									Turnaround Time (TAT): Standard <input checked="" type="checkbox"/> 24 Hours <input type="checkbox"/> 48 Hours <input type="checkbox"/> 72 Hours <input type="checkbox"/>		
Site Address: <u>3943 Broad way oakland, CA</u>	Consultant Phone No. <u>(510) 596-9675</u>										Special Instructions <u>Run 8 OXYS on all 8260 MTBE HITS</u>		
Union Oil PM: <u>Roya Kambin</u>	Sampling Company: <u>GETTLER RYAN</u>												
Union Oil PM Phone No: <u>(925) 790-6270</u>	Sampled By (PRINT): <u>JOE D. LEWIS</u>												
Charge Code: <u>NWRB-0 351647-0-LAB</u>	Sampler Signature: <u>[Signature]</u>												
This is a LEGAL document. ALL fields must be filled out CORRECTLY and COMPLETELY.		BC Laboratories, Inc. Project Manager: Molly Meyers 4100 Atlas Court, Bakersfield, CA 93308 Phone No. 661-327-4911											

SAMPLE ID				Sample Time	# of Containers	ANALYSES REQUIRED										Notes / Comments
Field Point Name	Matrix	Depth	Date (yyymmdd)			TPH - Diesel by EPA 8015	TPH - GC/MS (CG-C12) 8015B	BTEX/MTBE/ OXYS by EPA 8260B	Ethanol by EPA 8260B	EPA 8260B Full List with OXYS	EDB/EDC 8260B					
MW-2	W-S-A		13/6/6	0651	6	X	X	X	X							
MW-6	W-S-A			0721												
MW-7	W-S-A			0819												
MW-1	W-S-A			0749												
MW-4	W-S-A			0856												
MW-3	W-S-A			1012												
MW-11	W-S-A			0935												
MW-12	W-S-A			1225												
MW-10	W-S-A			1303												
PW-1	W-S-A			1150												
MW 5	W-S-A			1044												
QA	W-S-A			NA	3											

Relinquished By: <u>Joe Lewis</u> Company: <u>FR</u> Date / Time: <u>01-26-13 11:00</u>	Relinquished By: <u>Manberg E-R</u> Company: <u>U</u> Date / Time: <u>10/13 1515</u>	Relinquished By: _____ Company: _____ Date / Time: _____
Received By: <u>GETTLER RYAN</u> Company: <u>FR</u> Date / Time: <u>01-27-13 16:00</u>	Received By: <u>Samy Bogan</u> Company: <u>Bchab</u> Date / Time: <u>6-10-13 1515</u>	Received By: _____ Company: _____ Date / Time: _____

ARCADIS

Attachment B

Historical Groundwater Results from TRC

Table 2
CURRENT FLUID LEVELS AND SELECTED ANALYTICAL RESULTS

76 Station 0746

Date Sampled	TOC Elevation (feet)	Depth to Water (feet)	LPH Thickness (feet)	Ground-Water Elevation (feet)	Change in Elevation (feet)	TPH-G 8015 (µg/l)	TPH-G (GC/MS) (µg/l)	Benzene (µg/l)	Toluene (µg/l)	Ethyl-benzene (µg/l)	Total Xylenes (µg/l)	MTBE (8021B) (µg/l)	MTBE (8260B) (µg/l)	Comments
MW-1														
11/1/1989	--	--	--	--	--	ND	--	ND	ND	ND	0.3	--	--	
2/15/1990	--	--	--	--	--	170	--	7.9	ND	2.2	2.8	--	--	
8/16/1990	--	--	--	--	--	ND	--	ND	ND	ND	ND	--	--	
11/7/1990	--	--	--	--	--	45	--	ND	ND	ND	ND	--	--	
2/25/1991	--	--	--	--	--	ND	--	ND	ND	ND	ND	--	--	
5/28/1991	--	--	--	--	--	ND	--	ND	ND	ND	ND	--	--	
8/28/1991	--	--	--	--	--	ND	--	ND	ND	ND	ND	--	--	
11/19/1991	--	--	--	--	--	ND	--	ND	ND	ND	ND	--	--	
2/6/1992	--	--	--	--	--	ND	--	ND	ND	ND	ND	--	--	
5/23/1992	--	--	--	--	--	ND	--	ND	ND	ND	ND	--	--	
8/26/1992	--	--	--	--	--	ND	--	ND	ND	ND	ND	--	--	
11/20/1992	--	--	--	--	--	ND	--	0.75	ND	ND	ND	--	--	
12/21/1992	81.07	8.12	0	72.95	--	--	--	--	--	--	--	--	--	
1/30/1993	81.07	7.63	0	73.44	0.49	--	--	--	--	--	--	--	--	
2/24/1993	81.07	7.16	0	73.91	0.47	1100	--	280	4.9	120	140	--	--	
3/22/1993	81.07	6.26	0	74.81	0.90	--	--	--	--	--	--	--	--	
4/28/1993	81.07	7.91	0	73.16	-1.65	--	--	--	--	--	--	--	--	
5/25/1993	81.07	7.87	0	73.20	0.04	260	--	27	4.9	2.6	54	--	--	
6/23/1993	80.54	7.66	0	72.88	-0.32	--	--	--	--	--	--	--	--	
7/22/1993	80.54	7.87	0	72.67	-0.21	--	--	--	--	--	--	--	--	
8/25/1993	80.54	8.00	0	72.54	-0.13	ND	--	ND	ND	ND	ND	--	--	
9/22/1993	80.54	8.10	0	72.44	-0.10	--	--	--	--	--	--	--	--	
10/28/1993	80.54	8.15	0	72.39	-0.05	--	--	--	--	--	--	--	--	
11/30/1993	80.54	7.65	0	72.89	0.50	--	--	--	--	--	--	--	--	Sampled semi-annually
2/16/1994	80.54	7.46	0	73.08	0.19	ND	--	0.84	ND	ND	0.59	--	--	
5/31/1994	80.54	7.80	0	72.74	-0.34	--	--	--	--	--	--	--	--	
8/31/1994	80.54	8.27	0	72.27	-0.47	ND	--	ND	0.98	ND	0.84	--	--	
9/27/1994	80.54	8.37	0	72.17	-0.10	--	--	--	--	--	--	--	--	
10/11/1994	80.54	8.36	0	72.18	0.01	--	--	--	--	--	--	--	--	
11/10/1994	80.54	6.43	0	74.11	1.93	--	--	--	--	--	--	--	--	
2/7/1995	80.54	7.06	0	73.48	-0.63	6100	--	670	ND	120	60	--	--	
5/3/1995	80.54	6.85	0	73.69	0.21	260	--	21	39	17	24	--	--	
8/3/1995	80.54	7.69	0	72.85	-0.84	--	--	--	--	--	--	--	--	
11/7/1995	80.54	8.15	0	72.39	-0.46	ND	--	ND	ND	ND	ND	--	--	
5/6/1996	80.54	7.40	0	73.14	0.75	170	--	1.0	20	2.3	17	55	--	
11/5/1996	80.54	7.90	0	72.64	-0.50	ND	--	ND	ND	ND	ND	5.2	--	
5/15/1997	80.54	7.77	0	72.77	0.13	ND	--	ND	ND	ND	ND	16	--	

Table 2
CURRENT FLUID LEVELS AND SELECTED ANALYTICAL RESULTS

76 Station 0746

Date Sampled	TOC Elevation (feet)	Depth to Water (feet)	Ground-LPH Thickness (feet)	Water Elevation (feet)	Change in Elevation (feet)	TPH-G 8015 (µg/l)	TPH-G (GC/MS) (µg/l)	Benzene (µg/l)	Toluene (µg/l)	Ethyl-benzene (µg/l)	Total Xylenes (µg/l)	MTBE (8021B) (µg/l)	MTBE (8260B) (µg/l)	Comments
11/12/1997	80.54	7.48	0	73.06	0.29	ND	--	ND	ND	ND	ND	11	--	
5/4/1998	80.54	7.39	0	73.15	0.09	ND	--	ND	ND	ND	ND	320	--	
11/11/1998	80.54	7.37	0	73.17	0.02	ND	--	ND	ND	ND	ND	200	--	
5/20/1999	80.54	7.41	0	73.13	-0.04	ND	--	ND	ND	ND	ND	89	47	
11/15/1999	80.54	7.84	0	72.70	-0.43	ND	--	ND	ND	ND	ND	8.12	7.19	
5/22/2000	80.54	7.53	0	73.01	0.31	ND	--	0.89	ND	ND	ND	220	290	
11/22/2000	80.54	7.35	0	73.19	0.18	ND	--	ND	ND	ND	ND	105	142	
5/15/2001	80.54	7.48	0	73.06	-0.13	345	--	ND	3.41	2.77	25.2	178	374	
11/23/2001	80.54	7.57	0	72.97	-0.09	ND<50	--	ND<0.50	ND<0.50	ND<0.50	ND<0.50	350	350	
5/24/2002	80.54	7.10	0	73.44	0.47	70	--	ND<0.50	ND<0.50	ND<0.50	ND<0.50	200	240	
11/29/2002	80.54	7.96	0	72.58	-0.86	ND<250	--	ND<2.5	ND<2.5	ND<2.5	ND<5.0	--	330	
5/15/2003	80.54	7.22	0	73.32	0.74	ND<250	--	ND<2.5	ND<2.5	ND<2.5	ND<5.0	--	210	
11/4/2003	80.54	7.94	0	72.60	-0.72	--	120	ND<1.0	ND<1.0	ND<1.0	ND<2.0	--	140	
5/24/2004	80.54	7.54	0	73.00	0.40	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	26	
11/29/2004	80.54	7.27	0	73.27	0.27	--	58	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	44	
6/24/2005	80.54	7.06	0	73.48	0.21	--	87	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	80	
12/15/2005	80.54	7.35	0	73.19	-0.29	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	32	
6/14/2006	80.54	7.06	0	73.48	0.29	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	44	
12/21/2006	80.54	7.12	0	73.42	-0.06	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	--	16	
6/28/2007	80.54	7.79	0	72.75	-0.67	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	--	5.6	
12/13/2007	80.54	7.94	0	72.60	-0.15	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	10	
6/9/2008	80.54	8.00	0	72.54	-0.06	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	29	
12/30/2008	80.54	7.51	0	73.03	0.49	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	3.2	
9/28/2009	80.54	8.10	0	72.44	-0.59	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	0.98	
12/15/2009	80.54	7.32	0	73.22	0.78	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	ND<0.50	
6/28/2010	80.54	7.80	0	72.74	-0.48	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	8.1	
12/29/2010	80.54	6.22	0	74.32	1.58	--	99	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	1.6	
MW-2														
11/1/1989	--	--	--	--	--	200	--	ND	ND	3.0	1.2	--	--	
2/15/1990	--	--	--	--	--	ND	--	ND	ND	ND	ND	--	--	
8/16/1990	--	--	--	--	--	ND	--	ND	6.7	ND	ND	--	--	
11/7/1990	--	--	--	--	--	ND	--	ND	ND	ND	ND	--	--	
2/25/1991	--	--	--	--	--	ND	--	0.68	0.42	ND	0.86	--	--	
5/28/1991	--	--	--	--	--	ND	--	ND	ND	ND	ND	--	--	
8/28/1991	--	--	--	--	--	ND	--	ND	ND	ND	ND	--	--	
11/19/1991	--	--	--	--	--	ND	--	ND	ND	ND	ND	--	--	
2/6/1992	--	--	--	--	--	ND	--	0.36	0.66	ND	0.62	--	--	
5/23/1992	--	--	--	--	--	ND	--	ND	ND	ND	ND	--	--	

Table 2
CURRENT FLUID LEVELS AND SELECTED ANALYTICAL RESULTS

76 Station 0746

Date Sampled	TOC Elevation (feet)	Depth to Water (feet)	LPH Thickness (feet)	Ground-Water Elevation (feet)	Change in Elevation (feet)	TPH-G 8015 (µg/l)	TPH-G (GC/MS) (µg/l)	Benzene (µg/l)	Toluene (µg/l)	Ethyl-benzene (µg/l)	Total Xylenes (µg/l)	MTBE (8021B) (µg/l)	MTBE (8260B) (µg/l)	Comments
4/8/1993	82.01	9.14	0.02	72.89	-0.33	--	--	--	--	--	--	--	--	LPH in well
4/28/1993	82.01	9.44	0.03	72.59	-0.29	--	--	--	--	--	--	--	--	LPH in well
5/12/1993	82.01	9.57	0.03	72.46	-0.13	--	--	--	--	--	--	--	--	LPH in well
5/25/1993	82.01	9.45	0.03	72.58	0.12	--	--	--	--	--	--	--	--	LPH in well
6/7/1993	81.41	8.94	0	72.47	-0.11	--	--	--	--	--	--	--	--	
6/23/1993	81.41	9.20	0.02	72.23	-0.24	--	--	--	--	--	--	--	--	LPH in well
7/8/1993	81.41	9.31	0.03	72.12	-0.10	--	--	--	--	--	--	--	--	LPH in well
7/22/1993	81.41	9.47	0	71.94	-0.18	--	--	--	--	--	--	--	--	
8/11/1993	81.41	9.59	0	71.82	-0.12	--	--	--	--	--	--	--	--	
8/25/1993	81.41	9.67	0.03	71.76	-0.06	--	--	--	--	--	--	--	--	LPH in well
9/8/1993	81.41	10.34	0	71.07	-0.69	--	--	--	--	--	--	--	--	
9/22/1993	81.41	9.84	0.02	71.59	0.51	--	--	--	--	--	--	--	--	LPH in well
10/7/1993	81.41	9.87	0	71.54	-0.05	--	--	--	--	--	--	--	--	
10/28/1993	81.41	10.03	0	71.38	-0.16	--	--	--	--	--	--	--	--	
11/12/1993	81.41	9.76	0	71.65	0.27	--	--	--	--	--	--	--	--	
11/30/1993	81.41	9.66	0.02	71.76	0.11	--	--	--	--	--	--	--	--	LPH in well
2/16/1994	81.41	8.87	0	72.54	0.78	57000	--	910	2500	2100	9000	--	--	Sheen
5/31/1994	81.41	9.48	0	71.93	-0.61	39000	--	670	630	1500	6200	--	--	
8/31/1994	81.41	10.08	0	71.33	-0.60	44000	--	500	240	1400	5700	--	--	
9/24/1994	81.41	10.22	0	71.19	-0.14	--	--	--	--	--	--	--	--	
10/11/1994	81.41	10.41	0.01	71.01	-0.18	--	--	--	--	--	--	--	--	LPH in well
11/10/1994	81.41	7.47	0	73.94	2.93	86000	--	3300	3800	1800	8300	--	--	Sheen
2/7/1995	81.41	8.05	0	73.36	-0.58	45000	--	1400	1300	1500	5600	--	--	
3/14/1995	81.41	7.05	0	74.36	1.00	--	--	--	--	--	--	--	--	
5/3/1995	81.41	7.91	0	73.50	-0.86	26000	--	740	990	1100	4400	--	--	
8/3/1995	81.41	9.28	0	72.13	-1.37	18000	--	59	ND	530	1900	--	--	
8/19/1995	81.41	--	0	--	--	--	--	--	--	--	--	--	--	
11/7/1995	81.41	10.79	0	70.62	--	17000	--	110	26	400	1500	880	--	
5/6/1996	81.41	9.44	0	71.97	1.35	5100	--	48	ND	87	210	370	--	Sheen
11/5/1996	81.41	10.64	0	70.77	-1.20	35000	--	2200	ND	1200	2800	460	--	
5/15/1997	81.41	9.61	0	71.80	1.03	2400	--	110	ND	ND	140	100	--	
11/12/1997	81.41	9.18	0	72.23	0.43	29000	--	2000	ND	1800	3000	ND	--	
5/4/1998	81.41	9.50	0	71.91	-0.32	8200	--	430	ND	310	320	ND	--	
11/11/1998	81.41	9.25	0	72.16	0.25	8700	--	500	ND	330	310	ND	--	
5/20/1999	81.41	8.95	0	72.46	0.30	4300	--	250	ND	ND	86	ND	--	
11/15/1999	81.41	10.35	0	71.06	-1.40	6720	--	326	ND	398	226	120	45.1	
5/22/2000	81.41	9.14	0	72.27	1.21	4000	--	99	4.5	190	75	100	94	
11/22/2000	81.41	9.33	0	72.08	-0.19	6130	--	93.7	6.71	174	47.8	212	131	

Table 2
CURRENT FLUID LEVELS AND SELECTED ANALYTICAL RESULTS

76 Station 0746

Date Sampled	TOC Elevation (feet)	Depth to Water (feet)	LPH Thickness (feet)	Ground-Water Elevation (feet)	Change in Elevation (feet)	TPH-G 8015 (µg/l)	TPH-G (GC/MS) (µg/l)	Benzene (µg/l)	Toluene (µg/l)	Ethyl-benzene (µg/l)	Total Xylenes (µg/l)	MTBE (8021B) (µg/l)	MTBE (8260B) (µg/l)	Comments
7/22/1993	81.29	9.26	0	72.03	-0.36	--	--	--	--	--	--	--	--	
8/25/1993	81.29	9.45	0	71.84	-0.19	640	--	100	1.1	100	22	--	--	
9/22/1993	81.29	9.63	0	71.66	-0.18	--	--	--	--	--	--	--	--	
10/28/1993	81.29	9.62	0	71.67	0.01	--	--	--	--	--	--	--	--	
11/30/1993	81.29	9.40	0	71.89	0.22	200	--	28	ND	17	8.1	--	--	
12/21/1993	81.48	9.10	0	72.38	0.49	--	--	--	--	--	--	--	--	
2/16/1994	81.29	9.21	0	72.08	-0.30	190	--	11	0.98	21	6.6	--	--	
5/31/1994	81.29	9.11	0	72.18	0.10	1100	--	190	ND	100	58	--	--	
8/31/1994	81.29	10.01	0	71.28	-0.90	400	--	17	0.94	14	5.2	--	--	
9/27/1994	81.29	10.09	0	71.20	-0.08	--	--	--	--	--	--	--	--	
10/11/1994	81.29	11.50	0	69.79	-1.41	--	--	--	--	--	--	--	--	
11/10/1994	81.29	9.21	0	72.08	2.29	7700	--	1800	280	460	1300	--	--	
2/7/1995	81.29	7.66	0	73.63	1.55	540	--	47	ND	17	2.5	--	--	
5/3/1995	81.29	8.29	0	73.00	-0.63	160	--	8.3	0.52	1.5	3.7	--	--	
8/3/1995	81.29	8.60	0	72.69	-0.31	57	--	2.0	ND	ND	ND	--	--	
8/19/1995	81.29	--	0	--	--	--	--	--	--	--	--	--	--	
11/7/1995	81.29	10.28	0	71.01	--	ND	--	0.71	ND	ND	ND	0.86	--	
5/6/1996	81.29	8.70	0	72.59	1.58	1200	--	12	11	15	36	ND	--	
11/5/1996	81.29	10.00	0	71.29	-1.30	700	--	32	0.71	1.8	1.3	6.5	--	
5/15/1997	81.29	9.37	0	71.92	0.63	51	--	ND	ND	ND	ND	ND	ND	
11/12/1997	81.29	8.92	0	72.37	0.45	74	--	1.7	ND	ND	ND	ND	ND	
5/4/1998	81.29	9.48	0	71.81	-0.56	ND	--	ND	ND	ND	ND	ND	ND	
11/11/1998	81.29	9.13	0	72.16	0.35	ND	--	0.63	ND	ND	ND	ND	ND	
5/20/1999	81.29	8.41	0	72.88	0.72	ND	--	ND	ND	ND	ND	ND	ND	
11/15/1999	81.29	9.68	0	71.61	-1.27	ND	--	ND	ND	ND	ND	ND	ND	
5/22/2000	81.29	8.60	0	72.69	1.08	ND	--	ND	ND	ND	ND	ND	ND	
11/22/2000	81.29	8.91	0	72.38	-0.31	ND	--	ND	ND	ND	ND	ND	ND	
5/15/2001	81.29	8.66	0	72.63	0.25	ND	--	ND	1.10	ND	1.16	ND	ND	
11/23/2001	81.29	8.84	0	72.45	-0.18	ND<50	--	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<5.0	--	
5/24/2002	81.29	7.93	0	73.36	0.91	ND<50	--	ND<0.50	ND<0.50	ND<0.50	ND<0.50	9.6	3.5	
11/29/2002	81.29	9.34	0	71.95	-1.41	ND<50	--	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	2.6	
5/15/2003	81.29	7.87	0	73.42	1.47	ND<50	--	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	ND<2.0	
11/4/2003	81.48	9.45	0	72.03	-1.39	--	61	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	ND<2.0	
5/24/2004	81.48	8.49	0	72.99	0.96	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	ND<0.50	
11/29/2004	81.48	9.01	0	72.47	-0.52	--	120	ND<0.50	ND<0.50	0.52	ND<1.0	--	0.55	
6/24/2005	81.48	7.81	0	73.67	1.20	--	90	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	ND<0.50	
12/15/2005	81.48	8.73	0	72.75	-0.92	--	170	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	0.65	
6/14/2006	81.48	7.43	0	74.05	1.30	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	ND<0.50	

**Table 2
CURRENT FLUID LEVELS AND SELECTED ANALYTICAL RESULTS**

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Date Sampled	TOC Elevation (feet)	Depth to Water (feet)	Ground- LPH Thickness (feet)	Water Elevation (feet)	Change in Elevation (feet)	TPH-G 8015 (µg/l)	TPH-G (GC/MS) (µg/l)	Benzene (µg/l)	Toluene (µg/l)	Ethyl- benzene (µg/l)	Total Xylenes (µg/l)	MTBE (8021B) (µg/l)	MTBE (8260B) (µg/l)	Comments
11/29/2004	81.38	9.16	0.21	72.38	0.14	--	--	--	--	--	--	--	--	LPH in well
6/24/2005	81.38	8.41	0	72.97	0.59	--	53000	560	230	1600	5100	--	82	
12/15/2005	81.38	8.96	0	72.42	-0.55	--	27000	130	ND<25	560	1800	--	120	
6/14/2006	81.38	8.41	0	72.97	0.55	--	11000	110	ND<12	360	640	--	48	
12/21/2006	81.38	9.65	0	71.73	-1.24	--	78000	490	43	1400	4300	--	96	
6/28/2007	81.38	9.99	0.29	71.61	-0.12	--	--	--	--	--	--	--	--	LPH in well
12/13/2007	81.38	10.12	0.17	71.39	-0.22	--	--	--	--	--	--	--	--	LPH in well
6/9/2008	81.38	10.12	0.17	71.39	0.00	--	--	--	--	--	--	--	--	LPH in well
12/30/2008	81.38	9.33	0.13	72.15	0.76	--	--	--	--	--	--	--	--	LPH in well
9/28/2009	81.38	9.77	0.01	71.62	-0.53	--	--	--	--	--	--	--	--	LPH in well
12/15/2009	81.38	8.87	0.01	72.52	0.90	--	--	--	--	--	--	--	--	LPH in well
6/28/2010	81.38	9.82	0.5	71.93	-0.58	--	--	--	--	--	--	--	--	LPH in well
12/29/2010	81.38	8.69	1.49	73.81	1.87	--	--	--	--	--	--	--	--	LPH in well
MW-6														
11/7/1990	--	--	--	--	--	ND	--	ND	ND	ND	ND	--	--	
2/25/1991	--	--	--	--	--	ND	--	0.37	0.4	0.35	1.5	--	--	
5/28/1991	--	--	--	--	--	ND	--	ND	ND	ND	0.42	--	--	
8/28/1991	--	--	--	--	--	ND	--	ND	ND	ND	ND	--	--	
11/19/1991	--	--	--	--	--	ND	--	ND	ND	ND	ND	--	--	
2/6/1992	--	--	--	--	--	ND	--	ND	ND	ND	ND	--	--	
5/23/1992	--	--	--	--	--	ND	--	ND	ND	ND	ND	--	--	
8/26/1992	--	--	--	--	--	ND	--	ND	ND	ND	ND	--	--	
11/20/1992	--	--	--	--	--	ND	--	ND	ND	ND	ND	--	--	
12/21/1992	80.47	7.71	0	72.76	--	--	--	--	--	--	--	--	--	
1/30/1993	80.47	7.25	0	73.22	0.46	--	--	--	--	--	--	--	--	
2/24/1993	80.47	6.74	0	73.73	0.51	ND	--	ND	ND	ND	ND	--	--	
3/22/1993	80.47	5.85	0	74.62	0.89	--	--	--	--	--	--	--	--	
4/28/1993	80.47	7.58	0	72.89	-1.73	--	--	--	--	--	--	--	--	
5/25/1993	80.47	7.48	0	72.99	0.10	ND	--	ND	ND	ND	ND	--	--	
6/23/1993	79.94	7.34	0	72.60	-0.39	--	--	--	--	--	--	--	--	
7/22/1993	79.94	7.53	0	72.41	-0.19	--	--	--	--	--	--	--	--	
8/25/1993	79.94	7.66	0	72.28	-0.13	ND	--	ND	ND	ND	ND	--	--	
9/22/1993	79.94	7.76	0	72.18	-0.10	--	--	--	--	--	--	--	--	
10/28/1993	79.94	8.30	0	71.64	-0.54	--	--	--	--	--	--	--	--	
11/30/1993	79.94	7.40	0	72.54	0.90	--	--	--	--	--	--	--	--	
2/16/1994	79.94	7.13	0	72.81	0.27	ND	--	ND	ND	ND	ND	--	--	
5/31/1994	79.94	7.49	0	72.45	-0.36	--	--	--	--	--	--	--	--	
8/31/1994	79.94	7.93	0	72.01	-0.44	ND	--	ND	1.5	ND	1.6	--	--	

**Table 2
CURRENT FLUID LEVELS AND SELECTED ANALYTICAL RESULTS**

76 Station 0746

Date Sampled	TOC Elevation (feet)	Depth to Water (feet)	LPH Thickness (feet)	Ground-Water Elevation (feet)	Change in Elevation (feet)	TPH-G 8015 (µg/l)	TPH-G (GC/MS) (µg/l)	Benzene (µg/l)	Toluene (µg/l)	Ethyl-benzene (µg/l)	Total Xylenes (µg/l)	MTBE (8021B) (µg/l)	MTBE (8260B) (µg/l)	Comments
9/27/1994	79.94	8.03	0	71.91	-0.10	--	--	--	--	--	--	--	--	
10/11/1994	79.94	8.05	0	71.89	-0.02	--	--	--	--	--	--	--	--	
11/10/1994	79.94	6.12	0	73.82	1.93	--	--	--	--	--	--	--	--	
2/7/1995	79.94	6.65	0	73.29	-0.53	ND	--	ND	ND	ND	ND	--	--	
5/3/1995	79.94	6.47	0	73.47	0.18	ND	--	ND	ND	ND	1.0	--	--	
8/3/1995	79.94	7.28	0	72.66	-0.81	--	--	--	--	--	--	--	--	
11/7/1995	79.94	7.98	0	71.96	-0.70	ND	--	ND	ND	ND	ND	--	--	
5/6/1996	79.94	7.80	0	72.14	0.18	--	--	--	--	--	--	--	--	
11/5/1996	79.94	7.63	0	72.31	0.17	--	--	--	--	--	--	--	--	
5/15/1997	79.94	7.41	0	72.53	0.22	--	--	--	--	--	--	--	--	
11/12/1997	79.94	7.51	0	72.43	-0.10	--	--	--	--	--	--	--	--	
5/4/1998	79.94	7.15	0	72.79	0.36	--	--	--	--	--	--	--	--	
11/11/1998	79.94	7.04	0	72.90	0.11	--	--	--	--	--	--	--	--	
5/20/1999	79.94	7.00	0	72.94	0.04	--	--	--	--	--	--	--	--	
11/15/1999	79.94	7.42	0	72.52	-0.42	--	--	--	--	--	--	--	--	
5/22/2000	79.94	7.24	0	72.70	0.18	--	--	--	--	--	--	--	--	
11/22/2000	79.94	7.40	0	72.54	-0.16	--	--	--	--	--	--	--	--	
5/15/2001	79.94	7.12	0	72.82	0.28	--	--	--	--	--	--	--	--	
11/23/2001	79.94	7.19	0	72.75	-0.07	--	--	--	--	--	--	--	--	
5/24/2002	79.94	6.54	0	73.40	0.65	--	--	--	--	--	--	--	--	
11/29/2002	79.94	7.26	0	72.68	-0.72	--	--	--	--	--	--	--	--	
5/15/2003	79.94	6.26	0	73.68	1.00	--	--	--	--	--	--	--	--	
11/4/2003	79.94	7.80	0	72.14	-1.54	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	2.4	
5/24/2004	79.94	7.54	0	72.40	0.26	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	2.8	
11/29/2004	79.94	7.01	0	72.93	0.53	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	4.8	
6/24/2005	79.94	7.68	0	72.26	-0.67	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	0.47	
12/15/2005	79.94	7.49	0	72.45	0.19	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	0.88	
6/14/2006	79.94	6.45	0	73.49	1.04	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	3.0	
12/21/2006	79.94	6.91	0	73.03	-0.46	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	--	1.0	
6/28/2007	79.94	7.46	0	72.48	-0.55	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	--	1.2	
12/13/2007	79.94	7.41	0	72.53	0.05	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	0.64	
6/9/2008	79.94	8.20	0	71.74	-0.79	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	0.65	
12/30/2008	79.94	7.47	0	72.47	0.73	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	ND<0.50	
9/28/2009	79.94	7.96	0	71.98	-0.49	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	0.67	
12/15/2009	79.94	7.22	0	72.72	0.74	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	ND<0.50	
6/28/2010	79.94	7.68	0	72.26	-0.46	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	ND<0.50	
12/29/2010	79.94	5.93	0	74.01	1.75	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	ND<0.50	

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Table 2
CURRENT FLUID LEVELS AND SELECTED ANALYTICAL RESULTS

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Date Sampled	TOC Elevation (feet)	Depth to Water (feet)	LPH Thickness (feet)	Ground-Water Elevation (feet)	Change in Elevation (feet)	TPH-G 8015 (µg/l)	TPH-G (GC/MS) (µg/l)	Benzene (µg/l)	Toluene (µg/l)	Ethyl-benzene (µg/l)	Total Xylenes (µg/l)	MTBE (8021B) (µg/l)	MTBE (8260B) (µg/l)	Comments
3/9/1993	81.71	--	--	--	--	--	--	--	--	--	--	--	--	Inaccessible
3/22/1993	81.71	--	--	--	--	--	--	--	--	--	--	--	--	Inaccessible
4/8/1993	81.71	--	--	--	--	--	--	--	--	--	--	--	--	Inaccessible
4/28/1993	81.71	--	--	--	--	--	--	--	--	--	--	--	--	Inaccessible
5/12/1993	81.71	--	--	--	--	--	--	--	--	--	--	--	--	Inaccessible
5/25/1993	81.71	10.12	0	71.59	--	1200	--	5.4	ND	9.0	21	--	--	
6/7/1993	81.41	9.98	0	71.43	-0.16	--	--	--	--	--	--	--	--	
6/23/1993	81.41	10.36	0	71.05	-0.38	--	--	--	--	--	--	--	--	
7/8/1993	81.41	10.52	0	70.89	-0.16	--	--	--	--	--	--	--	--	
7/22/1993	81.41	--	--	--	--	--	--	--	--	--	--	--	--	Inaccessible
8/11/1993	81.41	--	--	--	--	--	--	--	--	--	--	--	--	Inaccessible
8/25/1993	81.41	10.95	0	70.46	--	1800	--	11	17	8.9	29	--	--	
9/8/1993	81.41	11.34	0	70.07	-0.39	--	--	--	--	--	--	--	--	
9/22/1993	81.41	11.13	0	70.28	0.21	--	--	--	--	--	--	--	--	
10/7/1993	81.41	10.96	0	70.45	0.17	--	--	--	--	--	--	--	--	
10/28/1993	81.41	11.19	0	70.22	-0.23	--	--	--	--	--	--	--	--	
11/12/1993	81.41	--	--	--	--	--	--	--	--	--	--	--	--	Inaccessible
11/30/1993	81.41	10.42	0	70.99	--	3500	--	18	ND	ND	ND	--	--	
2/16/1994	81.41	9.86	0	71.55	0.56	990	--	4.9	1.8	2.4	4.5	--	--	
5/31/1994	81.41	10.61	0	70.80	-0.75	350	--	3.0	1.0	0.73	1.7	--	--	
8/31/1994	81.41	11.37	0	70.04	-0.76	1800	--	ND	ND	ND	ND	--	--	
9/27/1994	81.41	--	--	--	--	--	--	--	--	--	--	--	--	Car parked over well
10/11/1994	81.41	11.50	0	69.91	--	--	--	--	--	--	--	--	--	
11/10/1994	81.41	7.81	0	73.60	3.69	940	--	6.7	6.3	ND	16	--	--	
2/7/1995	81.41	8.69	0	72.72	-0.88	230	--	1.4	0.95	0.9	1.1	--	--	
5/3/1995	81.41	8.60	0	72.81	0.09	75	--	ND	ND	ND	1.0	--	--	
8/3/1995	81.41	--	--	--	--	--	--	--	--	--	--	--	--	Car parked over well
11/7/1995	81.41	11.05	0	70.36	--	210	--	1.3	1.2	ND	ND	--	--	
5/6/1996	81.41	--	--	--	--	--	--	--	--	--	--	--	--	Car parked over well
11/5/1996	81.41	--	--	--	--	--	--	--	--	--	--	--	--	Car parked over well
5/15/1997	81.41	10.46	0	70.95	--	ND	--	ND	ND	ND	ND	43	--	
11/12/1997	81.41	--	--	--	--	--	--	--	--	--	--	--	--	Car parked over well
5/4/1998	81.41	--	--	--	--	--	--	--	--	--	--	--	--	Car parked over well
11/11/1998	81.41	--	--	--	--	--	--	--	--	--	--	--	--	Car parked over well
5/20/1999	81.41	9.75	0	71.66	--	ND	--	ND	ND	ND	ND	23	10	
11/15/1999	81.41	--	--	--	--	--	--	--	--	--	--	--	--	Car parked over well
5/22/2000	81.41	9.80	0	71.61	--	ND	--	ND	1.9	ND	3.3	ND	--	
11/22/2000	81.41	9.76	0	71.65	0.04	ND	--	ND	1.16	ND	1.22	ND	--	

Table 2
CURRENT FLUID LEVELS AND SELECTED ANALYTICAL RESULTS

76 Station 0746

Date Sampled	TOC Elevation (feet)	Depth to Water (feet)	LPH Thickness (feet)	Ground-Water Elevation (feet)	Change in Elevation (feet)	TPH-G 8015 (µg/l)	TPH-G (GC/MS) (µg/l)	Benzene (µg/l)	Toluene (µg/l)	Ethyl-benzene (µg/l)	Total Xylenes (µg/l)	MTBE (8021B) (µg/l)	MTBE (8260B) (µg/l)	Comments
8/25/1993	80.53	10.44	0	70.09	-0.34	220	--	10	ND	6.8	1.4	--	--	
9/22/1993	80.53	10.64	0	69.89	-0.20	--	--	--	--	--	--	--	--	
10/28/1993	80.53	10.68	0	69.85	-0.04	--	--	--	--	--	--	--	--	
11/30/1993	80.53	9.87	0	70.66	0.81	200	--	5.6	ND	2.9	2.7	--	--	
2/16/1994	80.53	9.21	0	71.32	0.66	250	--	5.1	1.3	4.4	1.5	--	--	
5/31/1994	80.53	10.15	0	70.38	-0.94	360	--	7.8	0.97	4.6	2.2	--	--	
8/31/1994	80.53	10.97	0	69.56	-0.82	650	--	7.7	2.8	4.4	5.0	59	--	
9/27/1994	80.53	11.10	0	69.43	-0.13	--	--	--	--	--	--	--	--	
10/11/1994	80.53	11.20	0	69.33	-0.10	--	--	--	--	--	--	--	--	
11/10/1994	80.53	7.25	0	73.28	3.95	ND	--	ND	ND	ND	ND	--	--	
2/7/1995	80.53	7.76	0	72.77	-0.51	57	--	0.7	ND	0.86	ND	--	--	
5/3/1995	80.53	7.82	0	72.71	-0.06	ND	--	0.85	0.67	1.3	1.0	--	--	
8/3/1995	80.53	9.70	0	70.83	-1.88	91	--	1.1	ND	ND	ND	--	--	
11/7/1995	80.53	10.64	0	69.89	-0.94	130	--	1.5	0.62	0.71	ND	60	--	
5/6/1996	80.53	9.01	0	71.52	1.63	860	--	6.1	13	6.0	25	ND	--	
11/5/1996	80.53	11.42	0	69.11	-2.41	84	--	0.74	ND	1.2	4.5	ND	--	
5/15/1997	80.53	9.89	0	70.64	1.53	ND	--	ND	ND	ND	ND	ND	--	
11/12/1997	80.53	10.22	0	70.31	-0.33	ND	--	0.55	ND	ND	ND	74	--	
5/4/1998	80.53	10.05	0	70.48	0.17	ND	--	ND	ND	ND	ND	45	--	
11/11/1998	80.53	9.23	0	71.30	0.82	ND	--	ND	ND	ND	ND	ND	--	
5/20/1999	80.53	8.78	0	71.75	0.45	ND	--	ND	ND	ND	ND	ND	--	
11/15/1999	80.53	9.12	0	71.41	-0.34	ND	--	ND	ND	ND	ND	ND	--	
5/22/2000	80.53	9.17	0	71.36	-0.05	ND	--	ND	1.9	ND	3.5	ND	--	
11/22/2000	80.53	9.08	0	71.45	0.09	ND	--	ND	1.18	ND	1.16	ND	--	
5/15/2001	80.53	8.85	0	71.68	0.23	ND	--	ND	ND	ND	ND	ND	--	
11/23/2001	80.53	9.10	0	71.43	-0.25	ND<0.50	--	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<5.0	--	
5/24/2002	80.53	8.79	0	71.74	0.31	ND<0.50	--	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<5.0	--	
11/29/2002	80.53	9.24	0	71.29	-0.45	ND<0.50	--	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	ND<2.0	
5/15/2003	80.53	8.56	0	71.97	0.68	ND<0.50	--	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	ND<2.0	
11/4/2003	80.53	--	--	--	--	--	--	--	--	--	--	--	--	Car parked over well
5/24/2004	80.53	9.38	0	71.15	--	--	330	1.8	ND<0.50	ND<0.50	ND<1.0	--	160	
11/29/2004	80.53	9.55	0	70.98	-0.17	--	690	0.72	ND<0.50	1.3	ND<1.0	--	160	
6/24/2005	80.53	8.65	0	71.88	0.90	--	240	0.80	ND<0.50	0.55	ND<1.0	--	67	
12/15/2005	80.53	9.43	0	71.10	-0.78	--	400	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	82	
6/14/2006	80.53	9.43	0	71.10	0.00	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	5.2	
12/21/2006	80.53	9.01	0	71.52	0.42	--	580	ND<0.50	ND<0.50	0.71	ND<0.50	--	36	
6/28/2007	80.53	11.64	0	68.89	-2.63	--	1200	0.81	ND<0.50	ND<0.50	0.54	--	52	
12/13/2007	80.53	11.18	0	69.35	0.46	--	1100	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	31	

Table 2
CURRENT FLUID LEVELS AND SELECTED ANALYTICAL RESULTS

76 Station 0746

Date Sampled	TOC Elevation (feet)	Depth to Water (feet)	Ground-LPH Thickness (feet)	Water Elevation (feet)	Change in Elevation (feet)	TPH-G 8015 (µg/l)	TPH-G (GC/MS) (µg/l)	Benzene (µg/l)	Toluene (µg/l)	Ethyl-benzene (µg/l)	Total Xylenes (µg/l)	MTBE (8021B) (µg/l)	MTBE (8260B) (µg/l)	Comments
8/25/1993	78.18	14.10	0	64.08	1.36	ND	--	ND	ND	ND	ND	--	--	
9/22/1993	78.18	15.03	0	63.15	-0.93	--	--	--	--	--	--	--	--	
10/28/1993	78.18	13.84	0	64.34	1.19	--	--	--	--	--	--	--	--	
11/30/1993	78.18	13.04	0	65.14	0.80	ND	--	ND	ND	ND	ND	--	--	
2/16/1994	78.18	12.76	0	65.42	0.28	ND	--	ND	ND	ND	ND	--	--	
5/31/1994	78.18	12.79	0	65.39	-0.03	ND	--	ND	ND	ND	ND	--	--	
8/31/1994	78.18	12.97	0	65.21	-0.18	ND	--	ND	1.5	ND	1.8	--	--	
9/27/1994	78.18	14.88	0	63.30	-1.91	--	--	--	--	--	--	--	--	
10/11/1994	78.18	13.40	0	64.78	1.48	--	--	--	--	--	--	--	--	
11/10/1994	78.18	13.57	0	64.61	-0.17	ND	--	ND	ND	ND	ND	--	--	
2/7/1995	78.18	12.28	0	65.90	1.29	--	--	--	--	--	--	--	--	Sampled semi-annually
5/3/1995	78.18	9.28	0	68.90	3.00	ND	--	ND	ND	ND	ND	--	--	
8/3/1995	78.18	12.67	0	65.51	-3.39	--	--	--	--	--	--	--	--	
11/7/1995	78.18	12.28	0	65.90	0.39	ND	--	ND	ND	ND	ND	--	--	
5/6/1996	78.18	13.30	0	64.88	-1.02	--	--	--	--	--	--	--	--	Sampling discontinued
11/5/1996	78.18	10.90	0	67.28	2.40	--	--	--	--	--	--	--	--	
5/15/1997	78.18	11.65	0	66.53	-0.75	--	--	--	--	--	--	--	--	
11/12/1997	78.18	9.66	0	68.52	1.99	--	--	--	--	--	--	--	--	
5/4/1998	78.18	10.87	0	67.31	-1.21	--	--	--	--	--	--	--	--	
11/11/1998	78.18	11.40	0	66.78	-0.53	--	--	--	--	--	--	--	--	
5/20/1999	78.18	10.71	0	67.47	0.69	ND	--	ND	ND	ND	ND	ND	--	
11/15/1999	78.18	11.32	0	66.86	-0.61	ND	--	ND	1.04	ND	ND	ND	--	
5/22/2000	78.18	10.98	0	67.20	0.34	ND	--	ND	ND	ND	ND	ND	--	
11/22/2000	78.18	11.17	0	67.01	-0.19	ND	--	ND	ND	ND	ND	ND	--	
5/15/2001	78.18	10.93	0	67.25	0.24	ND	--	ND	ND	ND	ND	ND	--	
11/23/2001	78.18	11.08	0	67.10	-0.15	ND<0.50	--	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<5.0	--	
5/24/2002	78.18	10.58	0	67.60	0.50	ND<0.50	--	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<5.0	--	
11/29/2002	78.18	11.27	0	66.91	-0.69	ND<0.50	--	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	ND<2.0	
5/15/2003	78.18	10.25	0	67.93	1.02	ND<0.50	--	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	ND<2.0	
11/4/2003	78.18	11.23	0	66.95	-0.98	--	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	ND<2.0	
5/24/2004	78.18	10.10	0	68.08	1.13	--	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	ND<0.50	
11/29/2004	78.18	10.96	0	67.22	-0.86	--	63	ND<0.50	ND<0.50	1.0	2.5	--	ND<0.50	
6/24/2005	78.18	14.07	0	64.11	-3.11	--	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	ND<0.50	
12/15/2005	78.18	13.28	0	64.90	0.79	--	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	ND<0.50	
6/14/2006	78.18	12.53	0	65.65	0.75	--	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	ND<0.50	
12/21/2006	78.18	12.78	0	65.40	-0.25	--	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	--	ND<0.50	
6/28/2007	78.18	--	--	--	--	--	--	--	--	--	--	--	--	Bus parked over well
12/13/2007	78.18	15.37	0	62.81	--	--	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	ND<0.50	

Table 2
CURRENT FLUID LEVELS AND SELECTED ANALYTICAL RESULTS

76 Station 0746

Date Sampled	TOC Elevation (feet)	Depth to Water (feet)	Ground-LPH Thickness (feet)	Water Elevation (feet)	Change in Elevation (feet)	TPH-G 8015 (µg/l)	TPH-G (GC/MS) (µg/l)	Benzene (µg/l)	Toluene (µg/l)	Ethylbenzene (µg/l)	Total Xylenes (µg/l)	MTBE (8021B) (µg/l)	MTBE (8260B) (µg/l)	Comments
11/10/1994	80.63	6.34	0	74.29	3.27	--	--	--	--	--	--	--	--	
2/7/1995	80.63	7.18	0	73.45	-0.84	--	--	--	--	--	--	--	--	
3/14/1995	80.63	6.01	0	74.62	1.17	--	--	--	--	--	--	--	--	
11/7/1995	--	--	--	--	--	--	--	--	--	--	--	--	--	
10/15/2001	80.63	8.43	0	72.20	--	--	--	--	--	--	--	--	--	
11/23/2001	80.63	8.57	0	72.06	-0.14	--	--	--	--	--	--	--	--	
12/10/2001	80.63	8.51	0	72.12	0.06	--	--	--	--	--	--	--	--	
1/14/2002	80.63	8.13	0	72.50	0.38	--	--	--	--	--	--	--	--	
2/22/2002	80.63	6.18	0	74.45	1.95	--	--	--	--	--	--	--	--	
3/11/2002	80.63	6.31	0	74.32	-0.13	--	--	--	--	--	--	--	--	
4/15/2002	80.63	6.39	0	74.24	-0.08	--	--	--	--	--	--	--	--	
5/24/2002	80.63	8.14	0	72.49	-1.75	--	--	--	--	--	--	--	--	
6/17/2002	80.63	8.18	0	72.45	-0.04	--	--	--	--	--	--	--	--	
7/15/2002	80.63	8.29	0	72.34	-0.11	--	--	--	--	--	--	--	--	
8/19/2002	80.63	8.44	0	72.19	-0.15	--	--	--	--	--	--	--	--	
9/5/2002	80.63	8.47	0	72.16	-0.03	--	--	--	--	--	--	--	--	
10/7/2002	80.63	8.43	0	72.20	0.04	--	--	--	--	--	--	--	--	
11/29/2002	80.63	8.92	0	71.71	-0.49	--	--	--	--	--	--	--	--	
12/12/2002	80.63	8.87	0	71.76	0.05	--	--	--	--	--	--	--	--	
1/6/2003	80.63	8.66	0	71.97	0.21	--	--	--	--	--	--	--	--	
2/12/2003	80.63	8.39	0	72.24	0.27	--	--	--	--	--	--	--	--	
3/13/2003	80.63	8.06	0	72.57	0.33	--	--	--	--	--	--	--	--	
4/7/2003	80.63	8.09	0	72.54	-0.03	--	--	--	--	--	--	--	--	
5/15/2003	80.63	8.07	0	72.56	0.02	--	--	--	--	--	--	--	--	
6/12/2003	80.63	8.11	0	72.52	-0.04	--	--	--	--	--	--	--	--	
7/7/2003	80.63	8.13	0	72.50	-0.02	--	--	--	--	--	--	--	--	
8/14/2003	80.63	8.23	0	72.40	-0.10	--	--	--	--	--	--	--	--	
9/12/2003	80.63	8.29	0	72.34	-0.06	--	--	--	--	--	--	--	--	
11/4/2003	80.63	9.97	0	70.66	-1.68	--	2600	11	ND<10	ND<10	ND<20	--	210	
5/24/2004	80.63	8.31	0	72.32	1.66	--	3100	20	ND<5.0	16	ND<10	--	200	
11/29/2004	80.63	8.23	0	72.40	0.08	--	4500	46	ND<1.0	34	3.6	--	140	
6/24/2005	80.63	7.53	0	73.10	0.70	--	2000	20	0.87	50	3.0	--	56	
12/15/2005	80.63	8.11	0	72.52	-0.58	--	3300	37	0.70	35	4.7	--	44	
6/14/2006	80.63	7.41	0	73.22	0.70	--	1500	2.0	0.95	6.9	ND<1.0	--	21	
12/21/2006	80.63	7.78	0	72.85	-0.37	--	3100	21	0.65	56	5.4	--	27	
6/28/2007	80.63	9.09	0	71.54	-1.31	--	2800	46	0.96	44	2.6	--	65	
12/13/2007	80.63	9.21	0	71.42	-0.12	--	9100	190	2.1	400	81	--	30	
6/9/2008	80.63	9.30	0	71.33	-0.09	--	5400	23	ND<2.5	330	13	--	39	

Table 2
CURRENT FLUID LEVELS AND SELECTED ANALYTICAL RESULTS

76 Station 0746

Date Sampled	TOC Elevation (feet)	Depth to Water (feet)	LPH Thickness (feet)	Ground- Water Elevation (feet)	Change in Elevation (feet)	TPH-G 8015 (µg/l)	TPH-G (GC/MS) (µg/l)	Benzene (µg/l)	Toluene (µg/l)	Ethyl- benzene (µg/l)	Total Xylenes (µg/l)	MTBE (8021B) (µg/l)	MTBE (8260B) (µg/l)	Comments
12/30/2008	80.63	8.23	0	72.40	1.07	--	5800	130	ND<2.5	270	58	--	22	
9/28/2009	80.63	9.10	0	71.53	-0.87	--	3400	3.8	ND<2.5	23	5.0	--	21	
12/15/2009	80.63	7.96	0	72.67	1.14	--	9100	18	ND<2.5	450	160	--	ND<2.5	
6/28/2010	80.63	8.68	0	71.95	-0.72	--	2300	20	1.0	56	ND<1.0	--	5.6	
12/29/2010	80.63	6.04	0	74.59	2.64	--	4100	9.3	1.3	6.8	ND<1.0	--	1.6	

Table 2a
ADDITIONAL CURRENT ANALYTICAL RESULTS

76 Station 0746

Date Sampled	TBA (µg/l)	Ethanol (8260B) (µg/l)	Ethylene- dibromide (EDB) (µg/l)	EDB (504) (µg/l)	1,2-DCA (EDC) (µg/l)	DIPE (µg/l)	ETBE (µg/l)	TAME (µg/l)	Post-purge Dissolved Oxygen (mg/l)	Pre-purge Dissolved Oxygen (mg/l)	Comments
5/4/1998	--	--	--	--	--	--	--	--	--	2.94	
5/20/1999	--	--	--	--	--	--	--	--	--	3.22	
11/4/2003	--	ND<500	--	--	--	--	--	--	--	--	
5/24/2004	--	ND<50	--	--	--	--	--	--	--	--	
11/29/2004	--	ND<50	--	--	--	--	--	--	--	--	
6/24/2005	--	ND<1000	--	--	--	--	--	--	--	--	
12/15/2005	--	ND<250	--	--	--	--	--	--	--	--	
6/14/2006	--	ND<250	--	--	--	--	--	--	--	--	
12/21/2006	--	ND<250	--	--	--	--	--	--	--	--	
12/13/2007	--	ND<250	--	--	--	--	--	--	--	--	
6/9/2008	--	ND<250	--	--	--	--	--	--	--	--	
12/30/2008	--	ND<250	--	--	--	--	--	--	--	--	
9/28/2009	--	ND<250	--	--	--	--	--	--	--	--	
6/28/2010	--	ND<250	ND<0.50	--	ND<0.50	--	--	--	--	--	
12/29/2010	ND<10	ND<250	ND<0.50	--	ND<0.50	ND<0.50	ND<0.50	ND<0.50	--	--	
MW-12											
5/15/1997	--	--	--	--	--	--	--	--	--	2.10	
5/4/1998	--	--	--	--	--	--	--	--	--	3.41	
11/4/2003	ND<100	ND<500	--	--	--	ND<2.0	ND<2.0	ND<2.0	--	--	
5/24/2004	ND<5.0	ND<50	ND<0.50	--	ND<0.50	ND<1.0	ND<0.50	ND<0.50	--	--	
11/29/2004	ND<5.0	ND<50	ND<0.50	--	ND<0.50	ND<1.0	ND<0.50	ND<0.50	--	--	
6/24/2005	--	ND<1000	--	--	--	--	--	--	--	--	
12/15/2005	--	ND<250	--	--	--	--	--	--	--	--	
6/14/2006	--	ND<250	--	--	--	--	--	--	--	--	
12/21/2006	--	ND<250	--	--	--	--	--	--	--	--	
6/28/2007	--	ND<250	--	--	--	--	--	--	--	--	
12/13/2007	--	ND<250	--	--	--	--	--	--	--	--	
6/9/2008	--	ND<250	--	--	--	--	--	--	--	--	
12/30/2008	--	ND<250	--	--	--	--	--	--	--	--	
9/28/2009	--	ND<250	--	--	--	--	--	--	--	--	
12/15/2009	--	ND<250	--	--	--	--	--	--	--	--	
6/28/2010	--	ND<250	ND<0.50	ND<0.010	ND<0.50	--	--	--	--	--	
12/29/2010	ND<10	ND<250	ND<0.50	--	ND<0.50	ND<0.50	ND<0.50	ND<0.50	--	--	
RW-1											
11/7/1995	--	--	--	--	--	--	--	--	2.13	--	

Table 2a
ADDITIONAL CURRENT ANALYTICAL RESULTS

76 Station 0746

Date Sampled	TBA (µg/l)	Ethanol (8260B) (µg/l)	Ethylene- dibromide (EDB) (µg/l)	EDB (504) (µg/l)	1,2-DCA (EDC) (µg/l)	DIPE (µg/l)	ETBE (µg/l)	TAME (µg/l)	Post-purge Dissolved Oxygen (mg/l)	Pre-purge Dissolved Oxygen (mg/l)	Comments
11/4/2003	ND<2000	ND<10000	--	--	--	ND<40	ND<40	ND<40	--	--	
5/24/2004	ND<50	ND<500	ND<5.0	--	ND<5.0	ND<10	ND<5.0	ND<5.0	--	--	
11/29/2004	38	ND<100	ND<1.0	--	ND<1.0	ND<2.0	ND<1.0	1.3	--	--	
6/24/2005	--	ND<1000	--	--	--	--	--	--	--	--	
12/15/2005	ND<10	ND<250	ND<0.50	--	ND<0.50	ND<0.50	ND<0.50	ND<0.50	--	--	
6/14/2006	--	ND<250	--	--	--	--	--	--	--	--	
12/21/2006	34	ND<250	ND<0.50	--	ND<0.50	ND<0.50	ND<0.50	ND<0.50	--	--	
6/28/2007	--	ND<250	--	--	--	--	--	--	--	--	
12/13/2007	--	ND<500	--	--	--	--	--	--	--	--	
6/9/2008	--	ND<1200	--	--	--	--	--	--	--	--	
12/30/2008	--	ND<1200	--	--	--	--	--	--	--	--	
9/28/2009	--	ND<1200	--	--	--	--	--	--	--	--	
12/15/2009	--	ND<1200	--	--	--	--	--	--	--	--	
6/28/2010	--	ND<250	ND<0.50	--	ND<0.50	--	--	--	--	--	
12/29/2010	ND<10	ND<250	ND<0.50	--	ND<0.50	ND<0.50	ND<0.50	ND<0.50	--	--	

ARCADIS

Attachment C

Laboratory Report and Chain-of-Custody Documentation



Date of Report: 06/20/2013

Kathy Brandt

Arcadis

1900 Powell Street 12th Floor
Emeryville, CA 94608

Project: 0746
BC Work Order: 1312115
Invoice ID: B148875

Enclosed are the results of analyses for samples received by the laboratory on 6/10/2013. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Contact Person: Molly Meyers
Client Service Rep

Authorized Signature

Certifications: CA ELAP #1186; NV #CA00014



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#1312115

CHAIN OF CUSTODY FORM

Union Oil Company of California 6101 Bollinger Canyon Road San Ramon, CA 94583

COC 1 of 1

Union Oil Site ID: 0746
 Site Global ID: 70600101471
 Site Address: 3943 Broadway Oakland, CA
 Union Oil PM: ROYA KAMBIN
 Union Oil PM Phone No: (925) 790-6270
 Charge Code: NWRFB-0 351647.0-LAB

Union Oil Consultant: Arcadis
 Consultant Contact: Katherine Brandt
 Consultant Phone No: (510) 596-9675
 Sampling Company: GETHNER Ryan
 Sampled By (PRINT): JOE D. LEWIS
 Sampler Signature: [Signature]
 BC Laboratories, Inc.
 Project Manager: Molly Meyers
 4100 Atlas Court, Bakersfield, CA 93308
 Phone No. 661-327-4911

Field Point Name	Matrix	Depth	Date (yymmdd)	Sample Time	# of Containers	ANALYSES REQUIRED				Notes / Comments	
						TPH - Diesel by EPA 8015	TPH - G (C6-C12) 8015B	BTEX/MTBE by EPA 8260B	Ethanol by EPA 8260B		
1 MW-2	W-SA		13/6/6	0651	6	X	X	X	X	EPA 8260B Full List with OXYS	
2 MW-6	W-SA			0721							
3 MW-7	W-SA			0819							
4 MW-1	W-SA			0749							
5 MW-4	W-SA			0856							
6 MW-3	W-SA			1012							
7 MW-11	W-SA			0935							
8 MW-12	W-SA			1225							
9 MW-10	W-SA			1303							
10 RW-1	W-SA			1150							
11 MW-5	W-SA			1044							
12 QA	W-SA			NA	3						

Relinquished By: Joe Lewis
 Date/Time: 06-06-13 16:00
 Company: GETHNER-Ryan
 Relinquished By: [Signature]
 Date/Time: 6-10-13 15:15
 Company: Jany Bogan Bclab

Received By: [Signature]
 Date/Time: 06-06-13 16:00
 Company: GETHNER-Ryan
 Received By: [Signature]
 Date/Time: 6-10-13 18:30
 Company: JCLAB

REL: [Signature] 6.10.13 22:05 SAS 6.10.13 22:05



COOLER RECEIPT FORM

Rev. No. 13

08/17/12

Page 1 of 3

Chain of Custody and Cooler Receipt Form for 1312115 Page 2 of 3

BC LABORATORIES INC.

Submission #: 1312115

SHIPPING INFORMATION
Federal Express [] UPS [] Hand Delivery []
BC Lab Field Service [x] Other [] (Specify) _____

SHIPPING CONTAINER
Ice Chest [x] None []
Box [] Other [] (Specify) _____

Refrigerant: Ice [x] Blue Ice [] None [] Other [] Comments:

Custody Seals Ice Chest [] Containers [] None [x] Comments:
Intact? Yes [] No [] Intact? Yes [] No []

All samples received? Yes [x] No [] All samples containers intact? Yes [x] No [] Description(s) match COC? Yes [x] No []

COC Received
[x] YES [] NO

Emissivity: 0.95 Container: Voa Thermometer ID: 207
Temperature: (A) 14 °C / (C) 1.3 °C

Date/Time 6-10-13 2205
Analyst Init SAS

Table with columns for SAMPLE CONTAINERS and SAMPLE NUMBERS (1-10). Rows include various test types like QT GENERAL MINERAL, PT PE UNPRESERVED, etc. Handwritten 'A.C.' is present in row 4, columns 1-10.

CHK BY [Signature] DISTRIBUTION [Signature]
SUB OUT []

Signature: RWR Date: 6/11/13 @ 0720



Chain of Custody and Cooler Receipt Form for 1312115 Page 3 of 3

BC LABORATORIES INC. COOLER RECEIPT FORM Rev. No. 13 08/17/12 Page 3 of 3

Submission #: 1312115

SHIPPING INFORMATION Federal Express <input type="checkbox"/> UPS <input type="checkbox"/> Hand Delivery <input type="checkbox"/> BC Lab Field Service <input checked="" type="checkbox"/> Other <input type="checkbox"/> (Specify) _____		SHIPPING CONTAINER Ice Chest <input checked="" type="checkbox"/> None <input type="checkbox"/> Box <input type="checkbox"/> Other <input type="checkbox"/> (Specify) _____	
Refrigerant: Ice <input checked="" type="checkbox"/> Blue Ice <input type="checkbox"/> None <input type="checkbox"/> Other <input type="checkbox"/> Comments: _____		Custody Seals: Ice Chest <input type="checkbox"/> Containers <input type="checkbox"/> None <input checked="" type="checkbox"/> Comments: _____ Intact? Yes <input type="checkbox"/> No <input type="checkbox"/> Intact? Yes <input type="checkbox"/> No <input type="checkbox"/>	
All samples received? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> All samples containers intact? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Description(s) match COC? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		COC Received <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO Emissivity: <u>0.95</u> Container: <u>Vgc</u> Thermometer ID: <u>207</u> Date/Time <u>6-10-13 2205</u> Temperature: (A) <u>14</u> °C / (C) <u>1.3</u> °C Analyst Init <u>SAS</u>	

SAMPLE CONTAINERS	SAMPLE NUMBERS									
	1	2	3	4	5	6	7	8	9	10
QT GENERAL MINERAL/ GENERAL PHYSICAL										
PT PE UNPRESERVED										
QT INORGANIC CHEMICAL METALS										
PT INORGANIC CHEMICAL METALS										
PT CYANIDE										
PT NITROGEN FORMS										
PT TOTAL SULFIDE										
2oz. NITRATE / NITRITE										
PT TOTAL ORGANIC CARBON										
PT TOX										
PT CHEMICAL OXYGEN DEMAND										
PTA PHENOLICS										
40ml VOA VIAL TRAVEL BLANK										
40ml VOA VIAL	<u>A 6</u>	<u>A(3)</u>								
QT EPA 413.1, 413.2, 418.1										
PT ODOR										
RADIOLOGICAL										
BACTERIOLOGICAL										
40 ml VOA VIAL- 304										
QT EPA 308/602/6080										
QT EPA 315.1/315B										
QT EPA 325										
QT EPA 325 TRAVEL BLANK										
100ml EPA 347										
100ml EPA 331.1										
QT EPA 348										
QT EPA 349										
QT EPA 432										
QT EPA 501.5M										
QT AMBER										
8 OZ. JAR										
32 OZ. JAR										
SOIL SLEEVE										
PER VIAL										
PLASTIC BAG										
FLUORIDATION										

RW/R 6/11/13 0720



Arcadis
1900 Powell Street 12th Floor
Emeryville, CA 94608

Reported: 06/20/2013 11:16
Project: 0746
Project Number: 351647
Project Manager: Kathy Brandt

Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information
------------	---------------------------

1312115-01	COC Number: --- Project Number: 0746 Sampling Location: --- Sampling Point: MW-2-W-130606 Sampled By: GRD	Receive Date: 06/10/2013 22:05 Sampling Date: 06/06/2013 06:51 Sample Depth: --- Lab Matrix: Water Sample Type: Water Delivery Work Order: Global ID: T0600101471 Location ID (FieldPoint): MW-2 Matrix: W Sample QC Type (SACode): CS Cooler ID:
-------------------	--	--

1312115-02	COC Number: --- Project Number: 0746 Sampling Location: --- Sampling Point: MW-6-W-130606 Sampled By: GRD	Receive Date: 06/10/2013 22:05 Sampling Date: 06/06/2013 07:21 Sample Depth: --- Lab Matrix: Water Sample Type: Water Delivery Work Order: Global ID: T0600101471 Location ID (FieldPoint): MW-6 Matrix: W Sample QC Type (SACode): CS Cooler ID:
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1312115-03	COC Number: --- Project Number: 0746 Sampling Location: --- Sampling Point: MW-7-W-130606 Sampled By: GRD	Receive Date: 06/10/2013 22:05 Sampling Date: 06/06/2013 08:19 Sample Depth: --- Lab Matrix: Water Sample Type: Water Delivery Work Order: Global ID: T0600101471 Location ID (FieldPoint): MW-7 Matrix: W Sample QC Type (SACode): CS Cooler ID:
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Arcadis
1900 Powell Street 12th Floor
Emeryville, CA 94608

Reported: 06/20/2013 11:16
Project: 0746
Project Number: 351647
Project Manager: Kathy Brandt

Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information
------------	---------------------------

1312115-04	COC Number: --- Project Number: 0746 Sampling Location: --- Sampling Point: MW-1-W-130606 Sampled By: GRD	Receive Date: 06/10/2013 22:05 Sampling Date: 06/06/2013 07:49 Sample Depth: --- Lab Matrix: Water Sample Type: Water Delivery Work Order: Global ID: T0600101471 Location ID (FieldPoint): MW-1 Matrix: W Sample QC Type (SACode): CS Cooler ID:
-------------------	--	--

1312115-05	COC Number: --- Project Number: 0746 Sampling Location: --- Sampling Point: MW-4-W-130606 Sampled By: GRD	Receive Date: 06/10/2013 22:05 Sampling Date: 06/06/2013 08:56 Sample Depth: --- Lab Matrix: Water Sample Type: Water Delivery Work Order: Global ID: T0600101471 Location ID (FieldPoint): MW-4 Matrix: W Sample QC Type (SACode): CS Cooler ID:
-------------------	--	--

1312115-06	COC Number: --- Project Number: 0746 Sampling Location: --- Sampling Point: MW-3-W-130606 Sampled By: GRD	Receive Date: 06/10/2013 22:05 Sampling Date: 06/06/2013 10:12 Sample Depth: --- Lab Matrix: Water Sample Type: Water Delivery Work Order: Global ID: T0600101471 Location ID (FieldPoint): MW-3 Matrix: W Sample QC Type (SACode): CS Cooler ID:
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1900 Powell Street 12th Floor
Emeryville, CA 94608

Reported: 06/20/2013 11:16
Project: 0746
Project Number: 351647
Project Manager: Kathy Brandt

Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information
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1312115-07	COC Number: --- Project Number: 0746 Sampling Location: --- Sampling Point: MW-11-W-130606 Sampled By: GRD	Receive Date: 06/10/2013 22:05 Sampling Date: 06/06/2013 09:35 Sample Depth: --- Lab Matrix: Water Sample Type: Water Delivery Work Order: Global ID: T0600101471 Location ID (FieldPoint): MW-11 Matrix: W Sample QC Type (SACode): CS Cooler ID:
-------------------	---	---

1312115-08	COC Number: --- Project Number: 0746 Sampling Location: --- Sampling Point: MW-12-W-130606 Sampled By: GRD	Receive Date: 06/10/2013 22:05 Sampling Date: 06/06/2013 12:25 Sample Depth: --- Lab Matrix: Water Sample Type: Water Delivery Work Order: Global ID: T0600101471 Location ID (FieldPoint): MW-12 Matrix: W Sample QC Type (SACode): CS Cooler ID:
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1312115-09	COC Number: --- Project Number: 0746 Sampling Location: --- Sampling Point: MW-10-W-130606 Sampled By: GRD	Receive Date: 06/10/2013 22:05 Sampling Date: 06/06/2013 13:03 Sample Depth: --- Lab Matrix: Water Sample Type: Water Delivery Work Order: Global ID: T0600101471 Location ID (FieldPoint): MW-10 Matrix: W Sample QC Type (SACode): CS Cooler ID:
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Arcadis
1900 Powell Street 12th Floor
Emeryville, CA 94608

Reported: 06/20/2013 11:16
Project: 0746
Project Number: 351647
Project Manager: Kathy Brandt

Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information
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1312115-10	COC Number: --- Project Number: 0746 Sampling Location: --- Sampling Point: RW-1-W-130606 Sampled By: GRD	Receive Date: 06/10/2013 22:05 Sampling Date: 06/06/2013 11:50 Sample Depth: --- Lab Matrix: Water Sample Type: Water Delivery Work Order: Global ID: T0600101471 Location ID (FieldPoint): RW-1 Matrix: W Sample QC Type (SACode): CS Cooler ID:
-------------------	--	--

1312115-11	COC Number: --- Project Number: 0746 Sampling Location: --- Sampling Point: MW-5-W-130606 Sampled By: GRD	Receive Date: 06/10/2013 22:05 Sampling Date: 06/06/2013 10:44 Sample Depth: --- Lab Matrix: Water Sample Type: Water Delivery Work Order: Global ID: T0600101471 Location ID (FieldPoint): MW-5 Matrix: W Sample QC Type (SACode): CS Cooler ID:
-------------------	--	--

1312115-12	COC Number: --- Project Number: 0746 Sampling Location: --- Sampling Point: QA-W-130606 Sampled By: GRD	Receive Date: 06/10/2013 22:05 Sampling Date: 06/06/2013 00:00 Sample Depth: --- Lab Matrix: Water Sample Type: Water Delivery Work Order: Global ID: T0600101471 Location ID (FieldPoint): QA Matrix: W Sample QC Type (SACode): CS Cooler ID:
-------------------	--	--



Arcadis
1900 Powell Street 12th Floor
Emeryville, CA 94608

Reported: 06/20/2013 11:16
Project: 0746
Project Number: 351647
Project Manager: Kathy Brandt

Volatile Organic Analysis (EPA Method 8260)

BCL Sample ID: 1312115-01	Client Sample Name: 0746, MW-2-W-130606, 6/6/2013 6:51:00AM
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Constituent	Result	Units	PQL	Method	MB Bias	Lab Quals	Run #
Benzene	ND	ug/L	0.50	EPA-8260B	ND		1
1,2-Dibromoethane	ND	ug/L	0.50	EPA-8260B	ND		1
1,2-Dichloroethane	ND	ug/L	0.50	EPA-8260B	ND		1
Ethylbenzene	ND	ug/L	0.50	EPA-8260B	ND		1
Methyl t-butyl ether	0.95	ug/L	0.50	EPA-8260B	ND		1
Toluene	ND	ug/L	0.50	EPA-8260B	ND		1
Total Xylenes	ND	ug/L	1.0	EPA-8260B	ND		1
Ethanol	ND	ug/L	250	EPA-8260B	ND		1
1,2-Dichloroethane-d4 (Surrogate)	108	%	75 - 125 (LCL - UCL)	EPA-8260B			1
Toluene-d8 (Surrogate)	99.9	%	80 - 120 (LCL - UCL)	EPA-8260B			1
4-Bromofluorobenzene (Surrogate)	98.0	%	80 - 120 (LCL - UCL)	EPA-8260B			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8260B	06/14/13	06/15/13 00:11	EAR	MS-V12	1	BWF1087

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Arcadis
1900 Powell Street 12th Floor
Emeryville, CA 94608

Reported: 06/20/2013 11:16
Project: 0746
Project Number: 351647
Project Manager: Kathy Brandt

Purgeable Aromatics and Total Petroleum Hydrocarbons

BCL Sample ID: 1312115-01	Client Sample Name: 0746, MW-2-W-130606, 6/6/2013 6:51:00AM
----------------------------------	--

Constituent	Result	Units	PQL	Method	MB Bias	Lab Quals	Run #
Gasoline Range Organics (C6 - C12)	ND	ug/L	50	EPA-8015B	ND		1
a,a,a-Trifluorotoluene (FID Surrogate)	86.8	%	70 - 130 (LCL - UCL)	EPA-8015B			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8015B	06/17/13	06/17/13 20:27	jjh	GC-V9	1	BWF1133



Arcadis
1900 Powell Street 12th Floor
Emeryville, CA 94608

Reported: 06/20/2013 11:16
Project: 0746
Project Number: 351647
Project Manager: Kathy Brandt

Volatile Organic Analysis (EPA Method 8260)

BCL Sample ID: 1312115-02	Client Sample Name: 0746, MW-6-W-130606, 6/6/2013 7:21:00AM
----------------------------------	--

Constituent	Result	Units	PQL	Method	MB Bias	Lab Quals	Run #
Benzene	ND	ug/L	0.50	EPA-8260B	ND		1
1,2-Dibromoethane	ND	ug/L	0.50	EPA-8260B	ND		1
1,2-Dichloroethane	ND	ug/L	0.50	EPA-8260B	ND		1
Ethylbenzene	ND	ug/L	0.50	EPA-8260B	ND		1
Methyl t-butyl ether	ND	ug/L	0.50	EPA-8260B	ND		1
Toluene	ND	ug/L	0.50	EPA-8260B	ND		1
Total Xylenes	ND	ug/L	1.0	EPA-8260B	ND		1
Ethanol	ND	ug/L	250	EPA-8260B	ND		1
1,2-Dichloroethane-d4 (Surrogate)	101	%	75 - 125 (LCL - UCL)	EPA-8260B			1
Toluene-d8 (Surrogate)	98.1	%	80 - 120 (LCL - UCL)	EPA-8260B			1
4-Bromofluorobenzene (Surrogate)	96.9	%	80 - 120 (LCL - UCL)	EPA-8260B			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8260B	06/14/13	06/15/13 00:29	EAR	MS-V12	1	BWF1087



Arcadis
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Reported: 06/20/2013 11:16
Project: 0746
Project Number: 351647
Project Manager: Kathy Brandt

Purgeable Aromatics and Total Petroleum Hydrocarbons

BCL Sample ID: 1312115-02	Client Sample Name: 0746, MW-6-W-130606, 6/6/2013 7:21:00AM
----------------------------------	--

Constituent	Result	Units	PQL	Method	MB Bias	Lab Quals	Run #
Gasoline Range Organics (C6 - C12)	ND	ug/L	50	EPA-8015B	ND		1
a,a,a-Trifluorotoluene (FID Surrogate)	96.6	%	70 - 130 (LCL - UCL)	EPA-8015B			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8015B	06/17/13	06/17/13 20:48	jjh	GC-V9	1	BWF1133



Arcadis
1900 Powell Street 12th Floor
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Reported: 06/20/2013 11:16
Project: 0746
Project Number: 351647
Project Manager: Kathy Brandt

Volatile Organic Analysis (EPA Method 8260)

BCL Sample ID: 1312115-03	Client Sample Name: 0746, MW-7-W-130606, 6/6/2013 8:19:00AM
----------------------------------	--

Constituent	Result	Units	PQL	Method	MB Bias	Lab Quals	Run #
Benzene	ND	ug/L	0.50	EPA-8260B	ND		1
1,2-Dibromoethane	ND	ug/L	0.50	EPA-8260B	ND		1
1,2-Dichloroethane	ND	ug/L	0.50	EPA-8260B	ND		1
Ethylbenzene	ND	ug/L	0.50	EPA-8260B	ND		1
Methyl t-butyl ether	ND	ug/L	0.50	EPA-8260B	ND		1
Toluene	ND	ug/L	0.50	EPA-8260B	ND		1
Total Xylenes	ND	ug/L	1.0	EPA-8260B	ND		1
Ethanol	ND	ug/L	250	EPA-8260B	ND		1
1,2-Dichloroethane-d4 (Surrogate)	107	%	75 - 125 (LCL - UCL)	EPA-8260B			1
Toluene-d8 (Surrogate)	98.9	%	80 - 120 (LCL - UCL)	EPA-8260B			1
4-Bromofluorobenzene (Surrogate)	96.7	%	80 - 120 (LCL - UCL)	EPA-8260B			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8260B	06/14/13	06/15/13 00:47	EAR	MS-V12	1	BWF1087



Arcadis
1900 Powell Street 12th Floor
Emeryville, CA 94608

Reported: 06/20/2013 11:16
Project: 0746
Project Number: 351647
Project Manager: Kathy Brandt

Purgeable Aromatics and Total Petroleum Hydrocarbons

BCL Sample ID: 1312115-03	Client Sample Name: 0746, MW-7-W-130606, 6/6/2013 8:19:00AM
----------------------------------	--

Constituent	Result	Units	PQL	Method	MB Bias	Lab Quals	Run #
Gasoline Range Organics (C6 - C12)	ND	ug/L	50	EPA-8015B	ND		1
a,a,a-Trifluorotoluene (FID Surrogate)	89.6	%	70 - 130 (LCL - UCL)	EPA-8015B			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8015B	06/17/13	06/17/13 23:13	jjh	GC-V9	1	BWF1133

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Arcadis
1900 Powell Street 12th Floor
Emeryville, CA 94608

Reported: 06/20/2013 11:16
Project: 0746
Project Number: 351647
Project Manager: Kathy Brandt

Volatile Organic Analysis (EPA Method 8260)

BCL Sample ID: 1312115-04	Client Sample Name: 0746, MW-1-W-130606, 6/6/2013 7:49:00AM
----------------------------------	--

Constituent	Result	Units	PQL	Method	MB Bias	Lab Quals	Run #
Benzene	ND	ug/L	0.50	EPA-8260B	ND		1
1,2-Dibromoethane	ND	ug/L	0.50	EPA-8260B	ND		1
1,2-Dichloroethane	ND	ug/L	0.50	EPA-8260B	ND		1
Ethylbenzene	ND	ug/L	0.50	EPA-8260B	ND		1
Methyl t-butyl ether	0.51	ug/L	0.50	EPA-8260B	ND		1
Toluene	ND	ug/L	0.50	EPA-8260B	ND		1
Total Xylenes	ND	ug/L	1.0	EPA-8260B	ND		1
Ethanol	ND	ug/L	250	EPA-8260B	ND		1
1,2-Dichloroethane-d4 (Surrogate)	103	%	75 - 125 (LCL - UCL)	EPA-8260B			1
Toluene-d8 (Surrogate)	95.5	%	80 - 120 (LCL - UCL)	EPA-8260B			1
4-Bromofluorobenzene (Surrogate)	95.9	%	80 - 120 (LCL - UCL)	EPA-8260B			1

Run #	Method	Prep Date	Run		Analyst	Instrument	Dilution	QC
			Date/Time					Batch ID
1	EPA-8260B	06/14/13	06/15/13	01:04	EAR	MS-V12	1	BWF1087

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Arcadis
1900 Powell Street 12th Floor
Emeryville, CA 94608

Reported: 06/20/2013 11:16
Project: 0746
Project Number: 351647
Project Manager: Kathy Brandt

Purgeable Aromatics and Total Petroleum Hydrocarbons

BCL Sample ID: 1312115-04	Client Sample Name: 0746, MW-1-W-130606, 6/6/2013 7:49:00AM
----------------------------------	--

Constituent	Result	Units	PQL	Method	MB Bias	Lab Quals	Run #
Gasoline Range Organics (C6 - C12)	ND	ug/L	50	EPA-8015B	ND		1
a,a,a-Trifluorotoluene (FID Surrogate)	89.5	%	70 - 130 (LCL - UCL)	EPA-8015B			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8015B	06/17/13	06/17/13 23:34	jjh	GC-V9	1	BWF1133



Arcadis
1900 Powell Street 12th Floor
Emeryville, CA 94608

Reported: 06/20/2013 11:16
Project: 0746
Project Number: 351647
Project Manager: Kathy Brandt

Volatile Organic Analysis (EPA Method 8260)

BCL Sample ID: 1312115-05	Client Sample Name: 0746, MW-4-W-130606, 6/6/2013 8:56:00AM
----------------------------------	--

Constituent	Result	Units	PQL	Method	MB Bias	Lab Quals	Run #
Benzene	0.52	ug/L	0.50	EPA-8260B	ND		1
1,2-Dibromoethane	ND	ug/L	0.50	EPA-8260B	ND		1
1,2-Dichloroethane	ND	ug/L	0.50	EPA-8260B	ND		1
Ethylbenzene	ND	ug/L	0.50	EPA-8260B	ND		1
Methyl t-butyl ether	ND	ug/L	0.50	EPA-8260B	ND		1
Toluene	ND	ug/L	0.50	EPA-8260B	ND		1
Total Xylenes	ND	ug/L	1.0	EPA-8260B	ND		1
Ethanol	ND	ug/L	250	EPA-8260B	ND		1
1,2-Dichloroethane-d4 (Surrogate)	104	%	75 - 125 (LCL - UCL)	EPA-8260B			1
Toluene-d8 (Surrogate)	95.3	%	80 - 120 (LCL - UCL)	EPA-8260B			1
4-Bromofluorobenzene (Surrogate)	104	%	80 - 120 (LCL - UCL)	EPA-8260B			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8260B	06/14/13	06/15/13 01:22	EAR	MS-V12	1	BWF1087

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Arcadis
1900 Powell Street 12th Floor
Emeryville, CA 94608

Reported: 06/20/2013 11:16
Project: 0746
Project Number: 351647
Project Manager: Kathy Brandt

Purgeable Aromatics and Total Petroleum Hydrocarbons

BCL Sample ID: 1312115-05	Client Sample Name: 0746, MW-4-W-130606, 6/6/2013 8:56:00AM
----------------------------------	--

Constituent	Result	Units	PQL	Method	MB Bias	Lab Quals	Run #
Gasoline Range Organics (C6 - C12)	410	ug/L	50	EPA-8015B	ND		1
a,a,a-Trifluorotoluene (FID Surrogate)	131	%	70 - 130 (LCL - UCL)	EPA-8015B		A19	1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8015B	06/17/13	06/17/13 23:55	jjh	GC-V9	1	BWF1133



Arcadis
1900 Powell Street 12th Floor
Emeryville, CA 94608

Reported: 06/20/2013 11:16
Project: 0746
Project Number: 351647
Project Manager: Kathy Brandt

Volatile Organic Analysis (EPA Method 8260)

BCL Sample ID: 1312115-06	Client Sample Name: 0746, MW-3-W-130606, 6/6/2013 10:12:00AM
----------------------------------	---

Constituent	Result	Units	PQL	Method	MB Bias	Lab Quals	Run #
Benzene	1.3	ug/L	0.50	EPA-8260B	ND		1
1,2-Dibromoethane	ND	ug/L	0.50	EPA-8260B	ND		1
1,2-Dichloroethane	ND	ug/L	0.50	EPA-8260B	ND		1
Ethylbenzene	12	ug/L	0.50	EPA-8260B	ND		1
Methyl t-butyl ether	11	ug/L	0.50	EPA-8260B	ND		1
Toluene	ND	ug/L	0.50	EPA-8260B	ND		1
Total Xylenes	ND	ug/L	1.0	EPA-8260B	ND		1
Ethanol	ND	ug/L	250	EPA-8260B	ND		1
1,2-Dichloroethane-d4 (Surrogate)	102	%	75 - 125 (LCL - UCL)	EPA-8260B			1
Toluene-d8 (Surrogate)	95.2	%	80 - 120 (LCL - UCL)	EPA-8260B			1
4-Bromofluorobenzene (Surrogate)	109	%	80 - 120 (LCL - UCL)	EPA-8260B			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8260B	06/14/13	06/15/13 01:40	EAR	MS-V12	1	BWF1087



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Purgeable Aromatics and Total Petroleum Hydrocarbons

BCL Sample ID: 1312115-06	Client Sample Name: 0746, MW-3-W-130606, 6/6/2013 10:12:00AM
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Constituent	Result	Units	PQL	Method	MB Bias	Lab Quals	Run #
Gasoline Range Organics (C6 - C12)	2000	ug/L	500	EPA-8015B	ND	A01	1
a,a,a-Trifluorotoluene (FID Surrogate)	114	%	70 - 130 (LCL - UCL)	EPA-8015B			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8015B	06/17/13	06/18/13 00:16	jjh	GC-V9	10	BWF1133



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Volatile Organic Analysis (EPA Method 8260)

BCL Sample ID: 1312115-07	Client Sample Name: 0746, MW-11-W-130606, 6/6/2013 9:35:00AM
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Constituent	Result	Units	PQL	Method	MB Bias	Lab Quals	Run #
Benzene	ND	ug/L	0.50	EPA-8260B	ND		1
1,2-Dibromoethane	ND	ug/L	0.50	EPA-8260B	ND		1
1,2-Dichloroethane	ND	ug/L	0.50	EPA-8260B	ND		1
Ethylbenzene	ND	ug/L	0.50	EPA-8260B	ND		1
Methyl t-butyl ether	ND	ug/L	0.50	EPA-8260B	ND		1
Toluene	ND	ug/L	0.50	EPA-8260B	ND		1
Total Xylenes	ND	ug/L	1.0	EPA-8260B	ND		1
Ethanol	ND	ug/L	250	EPA-8260B	ND		1
1,2-Dichloroethane-d4 (Surrogate)	101	%	75 - 125 (LCL - UCL)	EPA-8260B			1
Toluene-d8 (Surrogate)	97.7	%	80 - 120 (LCL - UCL)	EPA-8260B			1
4-Bromofluorobenzene (Surrogate)	94.9	%	80 - 120 (LCL - UCL)	EPA-8260B			1

Run #	Method	Prep Date	Run		Analyst	Instrument	Dilution	QC
			Date/Time					Batch ID
1	EPA-8260B	06/14/13	06/15/13	01:58	EAR	MS-V12	1	BWF1087



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Purgeable Aromatics and Total Petroleum Hydrocarbons

BCL Sample ID: 1312115-07	Client Sample Name: 0746, MW-11-W-130606, 6/6/2013 9:35:00AM
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Constituent	Result	Units	PQL	Method	MB Bias	Lab Quals	Run #
Gasoline Range Organics (C6 - C12)	ND	ug/L	50	EPA-8015B	ND		1
a,a,a-Trifluorotoluene (FID Surrogate)	87.4	%	70 - 130 (LCL - UCL)	EPA-8015B			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8015B	06/17/13	06/18/13 00:37	jjh	GC-V9	1	BWF1133



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Volatile Organic Analysis (EPA Method 8260)

BCL Sample ID: 1312115-08 **Client Sample Name:** 0746, MW-12-W-130606, 6/6/2013 12:25:00PM

Constituent	Result	Units	PQL	Method	MB Bias	Lab Quals	Run #
Benzene	ND	ug/L	0.50	EPA-8260B	ND		1
1,2-Dibromoethane	ND	ug/L	0.50	EPA-8260B	ND		1
1,2-Dichloroethane	ND	ug/L	0.50	EPA-8260B	ND		1
Ethylbenzene	ND	ug/L	0.50	EPA-8260B	ND		1
Methyl t-butyl ether	ND	ug/L	0.50	EPA-8260B	ND		1
Toluene	ND	ug/L	0.50	EPA-8260B	ND		1
Total Xylenes	ND	ug/L	1.0	EPA-8260B	ND		1
Ethanol	ND	ug/L	250	EPA-8260B	ND		1
1,2-Dichloroethane-d4 (Surrogate)	102	%	75 - 125 (LCL - UCL)	EPA-8260B			1
Toluene-d8 (Surrogate)	99.4	%	80 - 120 (LCL - UCL)	EPA-8260B			1
4-Bromofluorobenzene (Surrogate)	102	%	80 - 120 (LCL - UCL)	EPA-8260B			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8260B	06/14/13	06/15/13 02:16	EAR	MS-V12	1	BWF1087



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Purgeable Aromatics and Total Petroleum Hydrocarbons

BCL Sample ID: 1312115-08	Client Sample Name: 0746, MW-12-W-130606, 6/6/2013 12:25:00PM
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Constituent	Result	Units	PQL	Method	MB Bias	Lab Quals	Run #
Gasoline Range Organics (C6 - C12)	ND	ug/L	50	EPA-8015B	ND		1
a,a,a-Trifluorotoluene (FID Surrogate)	90.7	%	70 - 130 (LCL - UCL)	EPA-8015B			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8015B	06/17/13	06/18/13 00:57	jjh	GC-V9	1	BWF1133



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Volatile Organic Analysis (EPA Method 8260)

BCL Sample ID: 1312115-09	Client Sample Name: 0746, MW-10-W-130606, 6/6/2013 1:03:00PM
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Constituent	Result	Units	PQL	Method	MB Bias	Lab Quals	Run #
Benzene	ND	ug/L	0.50	EPA-8260B	ND		1
1,2-Dibromoethane	ND	ug/L	0.50	EPA-8260B	ND		1
1,2-Dichloroethane	ND	ug/L	0.50	EPA-8260B	ND		1
Ethylbenzene	ND	ug/L	0.50	EPA-8260B	ND		1
Methyl t-butyl ether	0.92	ug/L	0.50	EPA-8260B	ND		1
Toluene	ND	ug/L	0.50	EPA-8260B	ND		1
Total Xylenes	ND	ug/L	1.0	EPA-8260B	ND		1
Ethanol	ND	ug/L	250	EPA-8260B	ND		1
1,2-Dichloroethane-d4 (Surrogate)	95.5	%	75 - 125 (LCL - UCL)	EPA-8260B			1
Toluene-d8 (Surrogate)	97.7	%	80 - 120 (LCL - UCL)	EPA-8260B			1
4-Bromofluorobenzene (Surrogate)	90.5	%	80 - 120 (LCL - UCL)	EPA-8260B			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8260B	06/14/13	06/15/13 02:34	EAR	MS-V12	1	BWF1087



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Purgeable Aromatics and Total Petroleum Hydrocarbons

BCL Sample ID: 1312115-09	Client Sample Name: 0746, MW-10-W-130606, 6/6/2013 1:03:00PM
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Constituent	Result	Units	PQL	Method	MB Bias	Lab Quals	Run #
Gasoline Range Organics (C6 - C12)	ND	ug/L	50	EPA-8015B	ND		1
a,a,a-Trifluorotoluene (FID Surrogate)	80.0	%	70 - 130 (LCL - UCL)	EPA-8015B			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8015B	06/17/13	06/18/13 01:18	jjh	GC-V9	1	BWF1133



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Volatile Organic Analysis (EPA Method 8260)

BCL Sample ID: 1312115-10	Client Sample Name: 0746, RW-1-W-130606, 6/6/2013 11:50:00AM
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Constituent	Result	Units	PQL	Method	MB Bias	Lab Quals	Run #
Benzene	1.2	ug/L	0.50	EPA-8260B	ND		1
1,2-Dibromoethane	ND	ug/L	0.50	EPA-8260B	ND		1
1,2-Dichloroethane	ND	ug/L	0.50	EPA-8260B	ND		1
Ethylbenzene	5.8	ug/L	0.50	EPA-8260B	ND		1
Methyl t-butyl ether	ND	ug/L	0.50	EPA-8260B	ND		1
Toluene	1.4	ug/L	0.50	EPA-8260B	ND		1
Total Xylenes	ND	ug/L	1.0	EPA-8260B	ND		1
Ethanol	ND	ug/L	250	EPA-8260B	ND		1
1,2-Dichloroethane-d4 (Surrogate)	99.1	%	75 - 125 (LCL - UCL)	EPA-8260B			1
Toluene-d8 (Surrogate)	94.8	%	80 - 120 (LCL - UCL)	EPA-8260B			1
4-Bromofluorobenzene (Surrogate)	96.4	%	80 - 120 (LCL - UCL)	EPA-8260B			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8260B	06/14/13	06/15/13 02:52	EAR	MS-V12	1	BWF1087



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Purgeable Aromatics and Total Petroleum Hydrocarbons

BCL Sample ID: 1312115-10	Client Sample Name: 0746, RW-1-W-130606, 6/6/2013 11:50:00AM
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Constituent	Result	Units	PQL	Method	MB Bias	Lab Quals	Run #
Gasoline Range Organics (C6 - C12)	1300	ug/L	50	EPA-8015B	ND		1
a,a,a-Trifluorotoluene (FID Surrogate)	211	%	70 - 130 (LCL - UCL)	EPA-8015B		A19	1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8015B	06/17/13	06/18/13 01:39	jjh	GC-V9	1	BWF1133



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Volatile Organic Analysis (EPA Method 8260)

BCL Sample ID: 1312115-11	Client Sample Name: 0746, MW-5-W-130606, 6/6/2013 10:44:00AM
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Constituent	Result	Units	PQL	Method	MB Bias	Lab Quals	Run #
Benzene	410	ug/L	25	EPA-8260B	ND	A01	1
1,2-Dibromoethane	ND	ug/L	0.50	EPA-8260B	ND		2
1,2-Dichloroethane	ND	ug/L	0.50	EPA-8260B	ND		2
Ethylbenzene	970	ug/L	25	EPA-8260B	ND	A01	1
Methyl t-butyl ether	2.5	ug/L	0.50	EPA-8260B	ND		2
Toluene	6.6	ug/L	0.50	EPA-8260B	ND		2
Total Xylenes	1300	ug/L	50	EPA-8260B	ND	A01	1
Ethanol	ND	ug/L	250	EPA-8260B	ND		2
1,2-Dichloroethane-d4 (Surrogate)	110	%	75 - 125 (LCL - UCL)	EPA-8260B			1
1,2-Dichloroethane-d4 (Surrogate)	102	%	75 - 125 (LCL - UCL)	EPA-8260B			2
Toluene-d8 (Surrogate)	99.1	%	80 - 120 (LCL - UCL)	EPA-8260B			1
Toluene-d8 (Surrogate)	99.6	%	80 - 120 (LCL - UCL)	EPA-8260B			2
4-Bromofluorobenzene (Surrogate)	101	%	80 - 120 (LCL - UCL)	EPA-8260B			1
4-Bromofluorobenzene (Surrogate)	94.3	%	80 - 120 (LCL - UCL)	EPA-8260B			2

Run #	Method	Prep Date	Run		Analyst	Instrument	Dilution	QC
			Date/Time					Batch ID
1	EPA-8260B	06/18/13	06/19/13	03:12	EAR	MS-V10	50	BWF1280
2	EPA-8260B	06/14/13	06/15/13	03:10	EAR	MS-V12	1	BWF1087



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Purgeable Aromatics and Total Petroleum Hydrocarbons

BCL Sample ID: 1312115-11	Client Sample Name: 0746, MW-5-W-130606, 6/6/2013 10:44:00AM
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Constituent	Result	Units	PQL	Method	MB Bias	Lab Quals	Run #
Gasoline Range Organics (C6 - C12)	30000	ug/L	1000	EPA-8015B	ND	A01	1
a,a,a-Trifluorotoluene (FID Surrogate)	114	%	70 - 130 (LCL - UCL)	EPA-8015B			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8015B	06/17/13	06/18/13 02:00	jjh	GC-V9	20	BWF1133

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Volatile Organic Analysis (EPA Method 8260)

BCL Sample ID: 1312115-12	Client Sample Name: 0746, QA-W-130606, 6/6/2013 12:00:00AM
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Constituent	Result	Units	PQL	Method	MB Bias	Lab Quals	Run #
Benzene	ND	ug/L	0.50	EPA-8260B	ND		1
1,2-Dibromoethane	ND	ug/L	0.50	EPA-8260B	ND		1
1,2-Dichloroethane	ND	ug/L	0.50	EPA-8260B	ND		1
Ethylbenzene	ND	ug/L	0.50	EPA-8260B	ND		1
Methyl t-butyl ether	ND	ug/L	0.50	EPA-8260B	ND		1
Toluene	ND	ug/L	0.50	EPA-8260B	ND		1
Total Xylenes	ND	ug/L	1.0	EPA-8260B	ND		1
Ethanol	ND	ug/L	250	EPA-8260B	ND		1
1,2-Dichloroethane-d4 (Surrogate)	107	%	75 - 125 (LCL - UCL)	EPA-8260B			1
Toluene-d8 (Surrogate)	96.1	%	80 - 120 (LCL - UCL)	EPA-8260B			1
4-Bromofluorobenzene (Surrogate)	99.6	%	80 - 120 (LCL - UCL)	EPA-8260B			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8260B	06/14/13	06/14/13 21:50	EAR	MS-V12	1	BWF1087



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Purgeable Aromatics and Total Petroleum Hydrocarbons

BCL Sample ID: 1312115-12	Client Sample Name: 0746, QA-W-130606, 6/6/2013 12:00:00AM
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Constituent	Result	Units	PQL	Method	MB Bias	Lab Quals	Run #
Gasoline Range Organics (C6 - C12)	ND	ug/L	50	EPA-8015B	ND		1
a,a,a-Trifluorotoluene (FID Surrogate)	83.1	%	70 - 130 (LCL - UCL)	EPA-8015B			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8015B	06/17/13	06/17/13 22:52	jjh	GC-V9	1	BWF1133

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Volatile Organic Analysis (EPA Method 8260)

Quality Control Report - Method Blank Analysis

Constituent	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
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QC Batch ID: BWF1087

Benzene	BWF1087-BLK1	ND	ug/L	0.50		
1,2-Dibromoethane	BWF1087-BLK1	ND	ug/L	0.50		
1,2-Dichloroethane	BWF1087-BLK1	ND	ug/L	0.50		
Ethylbenzene	BWF1087-BLK1	ND	ug/L	0.50		
Methyl t-butyl ether	BWF1087-BLK1	ND	ug/L	0.50		
Toluene	BWF1087-BLK1	ND	ug/L	0.50		
Total Xylenes	BWF1087-BLK1	ND	ug/L	1.0		
Ethanol	BWF1087-BLK1	ND	ug/L	250		
1,2-Dichloroethane-d4 (Surrogate)	BWF1087-BLK1	102	%	75 - 125 (LCL - UCL)		
Toluene-d8 (Surrogate)	BWF1087-BLK1	96.3	%	80 - 120 (LCL - UCL)		
4-Bromofluorobenzene (Surrogate)	BWF1087-BLK1	95.8	%	80 - 120 (LCL - UCL)		

QC Batch ID: BWF1280

Benzene	BWF1280-BLK1	ND	ug/L	0.50		
Ethylbenzene	BWF1280-BLK1	ND	ug/L	0.50		
Total Xylenes	BWF1280-BLK1	ND	ug/L	1.0		
1,2-Dichloroethane-d4 (Surrogate)	BWF1280-BLK1	110	%	75 - 125 (LCL - UCL)		
Toluene-d8 (Surrogate)	BWF1280-BLK1	99.7	%	80 - 120 (LCL - UCL)		
4-Bromofluorobenzene (Surrogate)	BWF1280-BLK1	101	%	80 - 120 (LCL - UCL)		



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Volatile Organic Analysis (EPA Method 8260)

Quality Control Report - Laboratory Control Sample

Constituent	QC Sample ID	Type	Result	Spike Level	Units	Percent Recovery	RPD	Control Limits		Lab
								Percent Recovery	RPD	
QC Batch ID: BWF1087										
Benzene	BWF1087-BS1	LCS	20.610	25.000	ug/L	82.4		70 - 130		
Toluene	BWF1087-BS1	LCS	19.980	25.000	ug/L	79.9		70 - 130		
1,2-Dichloroethane-d4 (Surrogate)	BWF1087-BS1	LCS	9.7900	10.000	ug/L	97.9		75 - 125		
Toluene-d8 (Surrogate)	BWF1087-BS1	LCS	10.260	10.000	ug/L	103		80 - 120		
4-Bromofluorobenzene (Surrogate)	BWF1087-BS1	LCS	9.7400	10.000	ug/L	97.4		80 - 120		
QC Batch ID: BWF1280										
Benzene	BWF1280-BS1	LCS	26.760	25.000	ug/L	107		70 - 130		
1,2-Dichloroethane-d4 (Surrogate)	BWF1280-BS1	LCS	10.750	10.000	ug/L	108		75 - 125		
Toluene-d8 (Surrogate)	BWF1280-BS1	LCS	10.150	10.000	ug/L	102		80 - 120		
4-Bromofluorobenzene (Surrogate)	BWF1280-BS1	LCS	10.190	10.000	ug/L	102		80 - 120		



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Volatile Organic Analysis (EPA Method 8260)

Quality Control Report - Precision & Accuracy

Constituent	Type	Source Sample ID	Source Result	Result	Spike Added	Units	RPD	Percent Recovery		Lab
								RPD	Percent Recovery	
QC Batch ID: BWF1087		Used client sample: N								
Benzene	MS	1310670-60	ND	25.240	25.000	ug/L		101		70 - 130
	MSD	1310670-60	ND	23.860	25.000	ug/L	5.6	95.4	20	70 - 130
Toluene	MS	1310670-60	ND	24.370	25.000	ug/L		97.5		70 - 130
	MSD	1310670-60	ND	21.430	25.000	ug/L	12.8	85.7	20	70 - 130
1,2-Dichloroethane-d4 (Surrogate)	MS	1310670-60	ND	9.8900	10.000	ug/L		98.9		75 - 125
	MSD	1310670-60	ND	10.280	10.000	ug/L	3.9	103		75 - 125
Toluene-d8 (Surrogate)	MS	1310670-60	ND	10.430	10.000	ug/L		104		80 - 120
	MSD	1310670-60	ND	9.8200	10.000	ug/L	6.0	98.2		80 - 120
4-Bromofluorobenzene (Surrogate)	MS	1310670-60	ND	9.8900	10.000	ug/L		98.9		80 - 120
	MSD	1310670-60	ND	9.9600	10.000	ug/L	0.7	99.6		80 - 120
QC Batch ID: BWF1280		Used client sample: N								
Benzene	MS	1310670-80	ND	27.250	25.000	ug/L		109		70 - 130
	MSD	1310670-80	ND	27.830	25.000	ug/L	2.1	111	20	70 - 130
1,2-Dichloroethane-d4 (Surrogate)	MS	1310670-80	ND	11.020	10.000	ug/L		110		75 - 125
	MSD	1310670-80	ND	10.590	10.000	ug/L	4.0	106		75 - 125
Toluene-d8 (Surrogate)	MS	1310670-80	ND	9.9800	10.000	ug/L		99.8		80 - 120
	MSD	1310670-80	ND	10.220	10.000	ug/L	2.4	102		80 - 120
4-Bromofluorobenzene (Surrogate)	MS	1310670-80	ND	10.210	10.000	ug/L		102		80 - 120
	MSD	1310670-80	ND	9.9200	10.000	ug/L	2.9	99.2		80 - 120

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Project Number: 351647
Project Manager: Kathy Brandt

Purgeable Aromatics and Total Petroleum Hydrocarbons

Quality Control Report - Method Blank Analysis

Constituent	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
QC Batch ID: BWF1133						
Gasoline Range Organics (C6 - C12)	BWF1133-BLK1	ND	ug/L	50		
a,a,a-Trifluorotoluene (FID Surrogate)	BWF1133-BLK1	90.5	%	70 - 130 (LCL - UCL)		



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Purgeable Aromatics and Total Petroleum Hydrocarbons

Quality Control Report - Laboratory Control Sample

Constituent	QC Sample ID	Type	Result	Spike Level	Units	Percent Recovery	RPD	Control Limits		Lab	Quals
								Percent Recovery	RPD		
QC Batch ID: BWF1133											
Gasoline Range Organics (C6 - C12)	BWF1133-BS1	LCS	856.99	1000.0	ug/L	85.7		85 - 115			
a,a,a-Trifluorotoluene (FID Surrogate)	BWF1133-BS1	LCS	36.950	40.000	ug/L	92.4		70 - 130			



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Quality Control Report - Precision & Accuracy

Constituent	Type	Source Sample ID	Source Result	Result	Spike Added	Units	RPD	Control Limits		Lab Quals
								Percent Recovery	RPD	
QC Batch ID: BWF1133		Used client sample: N								
Gasoline Range Organics (C6 - C12)	MS	1312498-02	ND	850.26	1000.0	ug/L		85.0		70 - 130
	MSD	1312498-02	ND	876.97	1000.0	ug/L	3.1	87.7	20	70 - 130
a,a,a-Trifluorotoluene (FID Surrogate)	MS	1312498-02	ND	34.229	40.000	ug/L		85.6		70 - 130
	MSD	1312498-02	ND	36.073	40.000	ug/L	5.2	90.2		70 - 130



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Notes And Definitions

- MDL Method Detection Limit
- ND Analyte Not Detected at or above the reporting limit
- PQL Practical Quantitation Limit
- RPD Relative Percent Difference
- A01 PQL's and MDL's are raised due to sample dilution.
- A19 Surrogate is high due to matrix interference. Interferences verified through second extraction/analysis.