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*By dehloptoxic at 3:26 pm, Oct 31, 2006*



Atlantic Richfield Company  
(a BP affiliated company)



P.O. Box 1257  
San Ramon, CA 94583  
Phone: (925) 275-3801  
Fax: (925) 275-3815

30 October 2006

Re: Third Quarter 2006 Annual Ground-Water Monitoring Report  
Atlantic Richfield Company (a BP affiliated company) Station #6148  
5131 Shattuck Avenue  
Oakland, California  
ACEH Case #RO000077

"I declare, that to the best of my knowledge at the present time, that the information and/or recommendations contained in the attached document are true and correct."

Submitted by:

Paul Supple  
Environmental Business Manger

**Third Quarter 2006 Annual Ground-Water  
Monitoring Report**  
Atlantic Richfield Company Station #6148  
5131 Shattuck Avenue  
Oakland, California

Prepared for

Mr. Paul Supple  
Environmental Business Manager  
Atlantic Richfield Company  
P.O. Box 1257  
San Ramon, California 94583

Prepared by



1324 Mangrove Avenue, Suite 212  
Chico, California 95926  
(530) 566-1400  
*www.broadbentinc.com*

30 October 2006

Project No. 06-08-638

Broadbent & Associates, Inc.  
1324 Mangrove Ave., Suite 212  
Chico, CA 95926  
Voice (530) 566-1400  
Fax (530) 566-1401



30 October 2006

Project No. 06-08-638

Atlantic Richfield Company  
P.O. Box 1257  
San Ramon, California 94583  
Submitted via ENFOS

Attn.: Mr. Paul Supple

Re: Third Quarter 2006 Annual Ground-Water Monitoring Report, Atlantic Richfield Company (a BP affiliated company) Station #6148, 5131 Shattuck Avenue, Oakland, Alameda County, California; ACEH Case #RO000077

Dear Mr. Supple:

Provided herein is the *Third Quarter 2006 Annual Ground-Water Monitoring Report* for Atlantic Richfield Company Station #6148 (herein referred to as Station #6148) located at 5131 Shattuck Avenue, Oakland, Alameda County, California (Property). This report presents results of annual ground-water monitoring conducted during Third Quarter 2006.

Should you have questions regarding the work performed or results obtained, please do not hesitate to contact us at (530) 566-1400.

Sincerely,

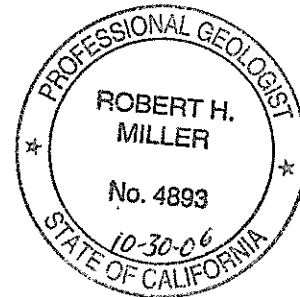
BROADBENT & ASSOCIATES, INC.

A handwritten signature in black ink that reads 'Thomas A. Venus'.

Thomas A. Venus, P.E.  
Senior Engineer

A handwritten signature in black ink that reads 'Robert H. Miller'.

Robert H. Miller, P.G., C.H.G.  
Principal Hydrogeologist



Enclosures

cc: Mr. Steven Plunkett, Alameda County Environmental Health (Submitted via ACEH ftp site)

## STATION #6148 ANNUAL GROUND-WATER MONITORING REPORT

Facility: #6148	Address: 5131 Shattuck Avenue, Oakland
Environmental Business Manager:	Mr. Paul Supple
Consulting Co./Contact Persons:	Broadbent & Associates, Inc.(BAI)/Rob Miller & Tom Venus (530) 566-1400
Consultant Project No.:	06-08-638
Primary Agency/Regulatory ID No.:	Alameda County Environmental Health (ACEH) ACEH Case #RO0000077
Facility Permits/Permitting Agency.:	NA

### WORK PERFORMED THIS QUARTER (Third Quarter 2006):

1. Submitted Second Quarter 2006 Status Report. Work performed by BAI.
2. Conducted Third Quarter 2006 annual ground-water monitoring/sampling. Work performed by Blaine Tech Services for URS on 29 August 2006.

### WORK PROPOSED FOR NEXT QUARTER (Fourth Quarter 2006):

1. Submitted Third Quarter 2006 Annual Ground-Water Monitoring Report (contained herein).
2. No environmental work is scheduled to be completed during Fourth Quarter 2006.

### QUARTERLY RESULTS SUMMARY:

Current phase of project:	<b>Ground-water monitoring/sampling</b>
Frequency of ground-water monitoring:	<b>Annually (3Q): Wells MW-1 through MW-7</b>
Frequency of ground-water sampling:	<b>Annually (3Q): Wells MW-1 through MW-7</b>
Is free product (FP) present on-site:	<b>No</b>
FP recovered this quarter:	<b>None</b>
Cumulative FP recovered:	<b>None</b>
Current remediation techniques:	<b>Not Applicable</b>
Depth to ground water (below TOC):	<b>14.29 ft (MW-6) to 17.63 ft (MW-1)</b>
General ground-water flow direction:	<b>Southwest</b>
Approximate hydraulic gradient:	<b>0.014 ft/ft</b>

### DISCUSSION:

Third quarter 2006 ground-water monitoring and sampling was conducted at Station #6148 on 29 August 2006 by Blaine Tech Services personnel for URS. Water levels were gauged in the seven wells at the Site. No irregularities were noted during water level gauging. Depth to water measurements ranged from 14.29 ft at MW-6 to 17.63 ft at MW-1. Resulting ground-water surface elevations ranged from 97.59 ft above mean sea level in up-gradient well MW-7 to 95.44 ft at well MW-5. Water level elevations were between historic minimum and maximum ranges for each well, as summarized in Table 1. Water level elevations yielded a potentiometric ground-water flow direction and gradient to the southwest at approximately 0.014 ft/ft, consistent with historical data (see Table 3). Ground-water monitoring field data sheets are provided within Appendix A. Measured depths to ground-water and respective ground-water elevations are summarized in Table 1. Potentiometric ground-water elevation contours are presented in Drawing 1.

Ground-water samples were collected from each of the seven wells at the Site. No irregularities were reported during sampling. Samples were submitted under chain of custody protocol to Test America Analytical Testing Corporation (Morgan Hill, California), for analysis of Gasoline Range Organics (GRO, C4-12) by the LUFT GCMS Method; for Benzene, Toluene, Ethylbenzene, and Total Xylenes (BTEX) by EPA Method 8260B; and tert-Amyl methyl ether (TAME), tert-Butyl alcohol (TBA), Diisopropyl ether (DIPE), 1,2-Dibromomethane (EDB), 1,2-Dichloroethane (1,2-DCA), Ethanol, Ethyl tert-butyl ether (ETBE), and Methyl tert-butyl ether (MTBE) by EPA Method 8260B. No irregularities were encountered during laboratory analysis of the samples. Ground-water sampling field data sheets and the laboratory analytical report, including chain of custody documentation, are provided in Appendix A.

Gasoline range organics (GRO) were detected above the laboratory reporting limits in two of the seven wells sampled at concentrations up to 660 micrograms per liter ( $\mu\text{g/L}$ ) in well MW-2. Benzene was detected above the laboratory reporting limit only in well MW-2 at a concentration of 6.4  $\mu\text{g/L}$ . Ethylbenzene was detected above the laboratory reporting limit only in well MW-2 at a concentration of 1.5  $\mu\text{g/L}$ . Total Xylenes were detected above the laboratory reporting limit in three of the seven wells sampled at concentrations up to 2.5  $\mu\text{g/L}$  in well MW-2. MTBE was detected above the laboratory reporting limit in two of the seven wells sampled at concentrations up to 1.1  $\mu\text{g/L}$  in well MW-5. The remaining fuel additives and oxygenates were not detected above their laboratory reporting limits in the seven wells sampled this quarter. Detected analyte concentrations were within the historic minimum and maximum ranges recorded for each well. Historic laboratory analytical results are summarized in Table 1 and Table 2. A copy of the Laboratory Analytical Report, including chain of custody documentation is provided in Appendix A.

#### **CLOSURE:**

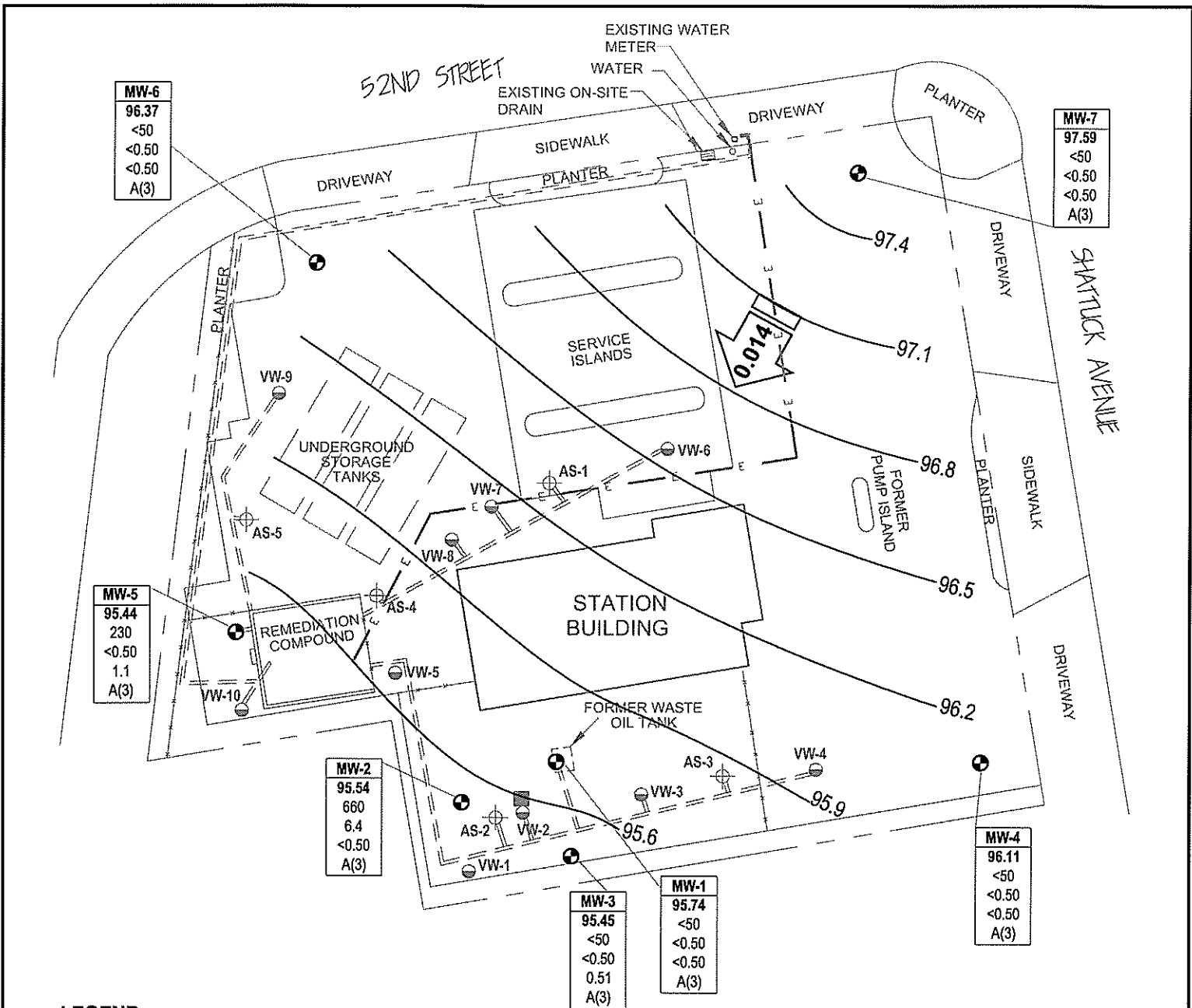
The findings presented in this report are based upon: observations of URS and Blaine Tech Services field personnel (see Appendix A), the points investigated, and results of laboratory tests performed by Test America (Morgan Hill, CA). Our services were performed in accordance with the generally accepted standard of practice at the time this report was written. No other warranty, expressed or implied was made. This report has been prepared for the exclusive use of Atlantic Richfield Company. It is possible that variations in soil or ground-water conditions could exist beyond points explored in this investigation. Also, changes in site conditions could occur in the future due to variations in rainfall, temperature, regional water usage, or other factors.

#### **ATTACHMENTS:**

- Drawing 1. Ground-Water Elevation Contour and Analytical Summary Map, 29 August 2006, Station #6148, 5131 Shattuck Avenue, Oakland, California
- Table 1. Summary of Ground-Water Monitoring Data: Relative Water Elevations and Laboratory Analyses, Station #6148, 5131 Shattuck Ave., Oakland, CA
- Table 2. Summary of Fuel Additives Analytical Data, Station #6148, 5131 Shattuck Ave., Oakland, CA
- Table 3. Historical Ground-Water Flow Direction and Gradient, Station #6148, 5131 Shattuck Ave., Oakland, CA

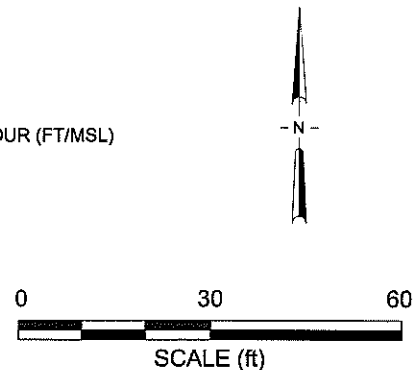
Appendix A. URS Groundwater Sampling Data Package (Includes Laboratory Report and Chain of Custody Documentation, Field and Laboratory Procedures, and Field Data Sheets)

Appendix B. GeoTracker Upload Confirmation



**LEGEND**

- MONITORING WELL
  - ⊕ AIR SPARGING WELL
  - ⊙ SOIL VAPOR EXTRACTION WELL
  - DESTROYED WELL
  - E — ELECTRICAL LINE
  - x — FENCING
  - — — REMEDIATION PIPING
  - ◁ 0.014 ▷ GROUND-WATER FLOW DIRECTION AND GRADIENT (FT/FT)
  - 96.2 GROUND-WATER ELEVATION CONTOUR (FT/MSL)
- | Well | ELEV   | GRO | Benzene | MTBE | A |
|------|--|-----|---------|------|---|
| A(3) | SAMPLED ANNUALLY, 3RD QUARTER                        |     |         |      |   |
| <    | NOT DETECTED AT OR ABOVE LABORATORY REPORTING LIMITS |     |         |      |   |
| NS   | NOT SAMPLED  |     |         |      |   |
| ORC  | OXYGEN RELEASING COMPOUND SOCK                       |     |         |      |   |



NOTE: SITE MAP ADAPTED FROM IT CORPORATION FIGURES. SITE DIMENSIONS AND FACILITY LOCATIONS NOT VERIFIED.

Table 1. Summary of Ground-Water Monitoring Data: Relative Water Elevations and Laboratory Analyses

Station #6148, 5131 Shattuck Ave., Oakland, CA

Well and Sample Date	P/NP	Comments	TOC (feet msl)	Top of Screen (ft bgs)	Bottom of Screen (ft bgs)	DTW (feet bgs)	Water Level Elevation (feet msl)	Concentrations in (µg/L)						DO (mg/L)	pH
								GRO/TPHg	Benzene	Toluene	Ethyl-Benzene	Total Xylenes	MTBE		
<b>MW-1</b>															
6/21/2000	--		107.80	13.00	26.00	17.49	90.31	<50	<0.5	<0.5	<0.5	<1.0	<3.0	--	--
9/20/2000	--		107.80	13.00	26.00	17.64	90.16	<50	<0.5	0.677	<0.5	0.969	<2.5	--	--
12/22/2000	--		107.80	13.00	26.00	16.87	90.93	186	5.38	0.522	9.52	30.2	8.91	--	--
3/26/2001	--		107.80	13.00	26.00	16.6	91.2	<50	<0.5	<0.5	<0.5	<0.5	9.1	--	--
5/30/2001	--		107.80	13.00	26.00	17.1	90.7	<50	<0.5	<0.5	<0.5	<0.5	<2.5	--	--
9/23/2001	--		107.80	13.00	26.00	17.53	90.27	<50	<0.5	<0.5	<0.5	<0.5	6.7	--	--
12/28/2001	--		107.80	13.00	26.00	15.57	92.23	<50	2.7	<0.5	<0.5	<0.5	20	--	--
3/21/2002	--		107.80	13.00	26.00	15.57	92.23	--	--	--	--	--	--	--	--
4/17/2002	--		107.80	13.00	26.00	16.25	91.55	<50	<0.5	<0.5	<0.5	<0.5	<2.5	--	--
8/19/2002	--		107.80	13.00	26.00	17.69	90.11	<50	<0.5	<0.5	<0.5	<0.5	<2.5	2.0	7.1
11/27/2002	--		107.80	13.00	26.00	17.45	90.35	<50	<0.50	1.8	0.65	3.5	1.7	1.0	6.3
2/5/2003	--	d	107.80	13.00	26.00	16.93	90.87	<50	<0.50	<0.50	<0.50	<0.50	1.1	1.2	7.3
5/13/2003	--		107.80	13.00	26.00	16.95	90.85	<50	<0.50	<0.50	<0.50	<0.50	<0.50	1.0	6.5
7/31/2003	--		107.80	13.00	26.00	17.74	90.06	<50	<0.50	<0.50	<0.50	<0.50	0.55	1.2	6
12/17/2003	NP		107.80	13.00	26.00	17.03	90.77	<50	<0.50	<0.50	<0.50	<0.50	2.5	2.0	6.5
05/05/2004	NP		113.37	13.00	26.00	17.28	96.09	<50	<0.50	<0.50	<0.50	<0.50	0.60	2.6	6.4
08/25/2004	NP		113.37	13.00	26.00	17.72	95.65	<50	<0.50	<0.50	<0.50	<0.50	<0.50	1.2	6.9
11/29/2004	NP		113.37	13.00	26.00	17.45	95.92	<50	<0.50	<0.50	<0.50	<0.50	0.62	0.92	6.8
01/31/2005	NP		113.37	13.00	26.00	16.67	96.70	<50	<0.50	<0.50	<0.50	<0.50	0.59	1.63	6.1
05/09/2005	NP		113.37	13.00	26.00	16.77	96.60	<50	<0.50	<0.50	<0.50	<0.50	0.55	1.03	6.7
08/10/2005	NP		113.37	13.00	26.00	17.76	95.61	<50	<0.50	<0.50	<0.50	<0.50	0.62	0.9	7.0
8/29/2006	P		113.37	13.00	26.00	17.63	95.74	<50	<0.50	<0.50	<0.50	<0.50	<0.50	1.5	6.6
<b>MW-2</b>															
6/21/2000	--		107.28	14.00	26.00	17.19	90.09	69	<0.5	<0.5	<0.5	<1.0	12	--	--
9/20/2000	--		107.28	14.00	26.00	17.31	89.97	<50	0.964	<0.5	<0.5	<0.5	5.05	--	--
12/22/2000	--		107.28	14.00	26.00	16.58	90.7	2,140	174	60.2	118	438	123	--	--
3/26/2001	--		107.28	14.00	26.00	16.45	90.83	8,490	333	148	495	1,660	<250	--	--
5/30/2001	--		107.28	14.00	26.00	16.83	90.45	4,700	200	71	260	780	43	--	--
9/23/2001	--		107.28	14.00	26.00	17.3	89.98	160	5.9	1.8	0.8	41	14	--	--
12/28/2001	--		107.28	14.00	26.00	15.38	91.9	1,800	54	<5.0	<5.0	240	30	--	--



Table 1. Summary of Ground-Water Monitoring Data: Relative Water Elevations and Laboratory Analyses

Station #6148, 5131 Shattuck Ave., Oakland, CA

Well and Sample Date	P/NP	Comments	TOC (feet msl)	Top of Screen (ft bgs)	Bottom of Screen (ft bgs)	DTW (feet bgs)	Water Level Elevation (feet msl)	Concentrations in (µg/L)						DO (mg/L)	pH
								GRO/TPHg	Benzene	Toluene	Ethyl-Benzene	Total Xylenes	MTBE		
<b>MW-2 Cont.</b>															
3/21/2002	--		107.28	14.00	26.00	15.36	91.92	--	--	--	--	--	--	--	--
4/17/2002	--		107.28	14.00	26.00	16.01	91.27	<50	<0.5	<0.5	<0.5	<0.5	10	--	--
8/19/2002	--	a	107.28	14.00	26.00	17.53	89.75	170	22	0.92	14	26	<2.5	3.0	6.9
11/27/2002	--		107.28	14.00	26.00	17.21	90.07	340	22	0.68	13	26	<0.50	1.6	6.6
2/5/2003	--	d	107.28	14.00	26.00	16.72	90.56	83	2.7	<0.50	0.97	15	4.3	0.7	7.0
05/13/2003	NP	f	107.28	14.00	26.00	16.72	90.56	<50	0.91	<0.50	<0.50	0.6	2.8	0.7	6.5
7/31/2003	--		107.28	14.00	26.00	17.51	89.77	<50	<0.50	<0.50	<0.50	<0.50	2.0	7.1	6.7
12/17/2003	NP		107.28	14.00	26.00	16.78	90.50	51	1.0	<0.50	<0.50	<0.50	2.4	8.1	7.1
02/13/2004	NP	e	112.87	14.00	26.00	16.63	96.24	50	0.70	<0.50	0.54	0.90	1.6	5.6	6.7
05/05/2004	NP		112.87	14.00	26.00	17.04	95.83	<50	<0.50	<0.50	<0.50	<0.50	0.99	4.3	6.9
08/25/2004	NP		112.87	14.00	26.00	17.55	95.32	<50	<0.50	<0.50	<0.50	<0.50	0.63	7.5	6.6
11/29/2004	NP		112.87	14.00	26.00	17.24	95.63	85	10	<0.50	4.6	1.0	0.55	1.41	6.9
01/31/2005	NP		112.87	14.00	26.00	16.48	96.39	<50	<0.50	<0.50	<0.50	<0.50	1.2	0.76	6.1
05/09/2005	NP		112.87	14.00	26.00	16.52	96.35	<50	0.68	<0.50	<0.50	<0.50	1.8	0.7	6.6
08/10/2005	NP		112.87	14.00	26.00	17.48	95.39	<50	1.8	<0.50	<0.50	<0.50	1.5	0.62	6.7
8/29/2006	P		112.87	14.00	26.00	17.33	95.54	660	6.4	<0.50	1.5	2.5	<0.50	0.8	6.4
<b>MW-3</b>															
6/21/2000	--		107.61	14.00	26.00	17.52	90.09	200	<0.5	<0.5	<0.5	2.1	24	--	--
9/20/2000	--		107.61	14.00	26.00	17.61	90	<50	<0.5	<0.5	<0.5	<0.5	20	--	--
12/22/2000	--		107.61	14.00	26.00	16.85	90.76	227	4.73	1.06	2.58	5.22	27.3	--	--
3/26/2001	--		107.61	14.00	26.00	16.79	90.82	287	6.29	1.58	6.47	12.1	24.2	--	--
5/30/2001	--		107.61	14.00	26.00	17.11	90.5	500	10	<0.5	7.00	16	20	--	--
9/23/2001	--		107.61	14.00	26.00	17.57	90.04	400	6.4	0.74	<0.5	0.62	22	--	--
12/28/2001	--		107.61	14.00	26.00	15.41	92.2	270	2.5	2.4	<0.5	2.3	9.2	--	--
3/21/2002	--		107.61	14.00	26.00	15.58	92.03	--	--	--	--	--	--	--	--
4/17/2002	--		107.61	14.00	26.00	16.25	91.36	360	2.5	0.72	<0.5	<0.5	12	--	--
8/19/2002	--	b	107.61	14.00	26.00	17.66	89.95	750	11	2.1	<0.5	2.4	14	1.4	6.8
11/27/2002	--		107.61	14.00	26.00	17.69	89.92	470	<0.50	<0.50	<0.50	<0.50	<0.50	1.1	6.6
2/5/2003	--	d	107.61	14.00	26.00	16.82	90.79	<50	<0.50	<0.50	<0.50	<0.50	2.4	1.3	6.6
5/13/2003	--		107.61	14.00	26.00	17.12	90.49	300	<0.50	<0.50	<0.50	<0.50	2.2	1.4	6.7

Table 1. Summary of Ground-Water Monitoring Data: Relative Water Elevations and Laboratory Analyses

Station #6148, 5131 Shattuck Ave., Oakland, CA

Well and Sample Date	P/NP	Comments	TOC (feet msl)	Top of Screen (ft bgs)	Bottom of Screen (ft bgs)	DTW (feet bgs)	Water Level Elevation (feet msl)	Concentrations in (µg/L)						DO (mg/L)	pH
								GRO/ TPHg	Benzene	Toluene	Ethyl- Benzene	Total Xylenes	MTBE		
<b>MW-3 Cont.</b>															
7/31/2003	--		107.61	14.00	26.00	17.72	89.89	320	<0.50	<0.50	<0.50	<0.50	2.1	1.4	6.8
12/17/2003	NP		107.61	14.00	26.00	16.95	90.66	340	0.51	<0.50	<0.50	<0.50	4.8	1.3	6.7
02/13/2004	NP	e	113.05	14.00	26.00	16.77	96.28	<50	<0.50	<0.50	<0.50	<0.50	3.1	2.1	7.1
05/05/2004	NP		113.05	14.00	26.00	17.22	95.83	<50	<0.50	<0.50	<0.50	<0.50	1.3	1.2	6.9
08/25/2004	NP		113.05	14.00	26.00	17.66	95.39	<50	<0.50	<0.50	<0.50	<0.50	3.3	1.2	7.1
11/29/2004	NP		113.05	14.00	26.00	17.47	95.58	110	<0.50	<0.50	<0.50	<0.50	1.4	1.0	6.9
01/31/2005	NP		113.05	14.00	26.00	16.16	96.89	<50	<0.50	<0.50	<0.50	<0.50	2.0	0.87	6.2
05/09/2005	NP		113.05	14.00	26.00	16.64	96.41	50	<0.50	<0.50	<0.50	<0.50	0.80	0.83	6.7
08/10/2005	NP		113.05	14.00	26.00	17.59	95.46	65	<0.50	<0.50	<0.50	<0.50	<0.50	0.82	6.7
8/29/2006	P		113.05	14.00	26.00	17.60	95.45	<50	<0.50	<0.50	<0.50	0.74	0.51	1.0	6.4
<b>MW-4</b>															
6/21/2000	--		106.71	11.50	26.50	16.00	90.71	1,400	5.3	7.3	36	85	4	--	--
9/20/2000	--		106.71	11.50	26.50	16.03	90.68	<50	<0.5	<0.5	<0.5	<0.5	<2.5	--	--
12/22/2000	--		106.71	11.50	26.50	--	--	--	--	--	--	--	--	--	--
3/26/2001	--		106.71	11.50	26.50	15.05	91.66	<50	<0.5	<0.5	<0.5	<0.5	<2.5	--	--
5/30/2001	--		106.71	11.50	26.50	15.62	91.09	--	--	--	--	--	--	--	--
9/23/2001	--		106.71	11.50	26.50	16.07	90.64	<50	<0.5	<0.5	<0.5	<0.5	<2.5	--	--
12/28/2001	--		106.71	11.50	26.50	13.68	93.03	--	--	--	--	--	--	--	--
3/21/2002	--		106.71	11.50	26.50	14.04	92.67	<50	<0.5	<0.5	<0.5	<0.5	<2.5	--	--
4/17/2002	--		106.71	11.50	26.50	14.78	91.93	--	--	--	--	--	--	--	--
8/19/2002	--		106.71	11.50	26.50	16.18	90.53	<50	<0.5	<0.5	<0.5	<0.5	<2.5	1.4	6.8
11/27/2002	--		106.71	11.50	26.50	15.89	90.82	--	--	--	--	--	--	--	--
2/5/2003	--	d	106.71	11.50	26.50	15.4	91.31	<50	<0.50	<0.50	<0.50	<0.50	<0.50	1.1	6.6
5/13/2003	--		106.71	11.50	26.50	15.42	91.29	--	--	--	--	--	--	--	--
7/31/2003	--		106.71	11.50	26.50	16.23	90.48	<50	<0.50	<0.50	<0.50	<0.50	<0.50	1.4	6.4
12/17/2003	--		106.71	11.50	26.50	15.57	91.14	--	--	--	--	--	--	--	--
02/13/2004	P	e	112.15	11.50	26.50	15.30	96.85	<50	<0.50	<0.50	<0.50	<0.50	<0.50	1.1	6.3
05/05/2004	--		112.15	11.50	26.50	15.69	96.46	--	--	--	--	--	--	--	--
08/25/2004	P		112.15	11.50	26.50	16.07	96.08	<50	<0.50	<0.50	<0.50	0.51	<0.50	1.6	6.4
11/29/2004	--		112.15	11.50	26.50	15.86	96.29	--	--	--	--	--	--	--	--

Table 1. Summary of Ground-Water Monitoring Data: Relative Water Elevations and Laboratory Analyses

Station #6148, 5131 Shattuck Ave., Oakland, CA

Well and Sample Date	P/NP	Comments	TOC (feet msl)	Top of Screen (ft bgs)	Bottom of Screen (ft bgs)	DTW (feet bgs)	Water Level Elevation (feet msl)	Concentrations in (µg/L)						DO (mg/L)	pH
								GRO/TPHg	Benzene	Toluene	Ethyl-Benzene	Total Xylenes	MTBE		
<b>MW-4 Cont.</b>															
01/31/2005	P		112.15	11.50	26.50	15.17	96.98	<50	<0.50	<0.50	<0.50	<0.50	<0.50	1.61	6.2
05/09/2005	--		112.15	11.50	26.50	15.25	96.90	--	--	--	--	--	--	--	--
08/10/2005	P		112.15	11.50	26.50	16.23	95.92	<50	<0.50	0.50	<0.50	1.1	<0.50	0.68	6.5
8/29/2006	P		<b>112.15</b>	<b>11.50</b>	<b>26.50</b>	<b>16.04</b>	<b>96.11</b>	<b>&lt;50</b>	<b>&lt;0.50</b>	<b>&lt;0.50</b>	<b>&lt;0.50</b>	<b>0.53</b>	<b>&lt;0.50</b>	<b>1.2</b>	<b>6.5</b>
<b>MW-5</b>															
3/26/2000	--		106.60	10.00	25.00	15.45	91.15	767	12.4	<5.0	<5.0	<5.0	163	--	--
6/21/2000	--		106.60	10.00	25.00	16.52	90.08	67	<0.5	<0.5	<0.5	<1.0	10	--	--
9/20/2000	--		106.60	10.00	25.00	16.34	90.26	<50	<0.5	<0.5	<0.5	<0.5	3.48	--	--
12/22/2000	--		106.60	10.00	25.00	15.58	91.02	341	11.5	2.53	4.02	6.25	146	--	--
5/30/2001	--		106.60	10.00	25.00	15.77	90.83	110	2.3	<0.5	<0.5	0.81	72	--	--
9/23/2001	--		106.60	10.00	25.00	16.16	90.44	<50	<0.5	<0.5	<0.5	<0.5	<2.5	--	--
12/28/2001	--		106.60	10.00	25.00	14.09	92.51	240	2.8	1.9	<0.5	2.6	48	--	--
3/21/2002	--		106.60	10.00	25.00	14.43	92.17	--	<0.5	<0.5	<0.5	<0.5	--	--	--
4/17/2002	--		106.60	10.00	25.00	14.96	91.64	<50	<0.5	<0.5	<0.5	<0.5	<2.5	--	--
8/19/2002	--	c	106.60	10.00	25.00	16.34	90.26	--	--	--	--	--	--	--	--
11/27/2002	--	c	106.60	10.00	25.00	--	--	--	--	--	--	--	--	--	--
2/5/2003	--	c, d	106.60	10.00	25.00	--	--	--	--	--	--	--	--	--	--
5/13/2003	NP	f	106.60	10.00	25.00	15.43	91.17	<50	<0.50	<0.50	<0.50	<0.50	15	1.4	6.2
7/31/2003	--		106.60	10.00	25.00	16.47	90.13	<50	<0.50	<0.50	<0.50	<0.50	1.2	14.1	8.1
12/17/2003	NP		106.60	10.00	25.00	15.99	90.61	<50	<0.50	<0.50	<0.50	<0.50	1.8	15.4	8.5
02/13/2004	NP	e	112.04	10.00	25.00	15.90	96.14	<50	<0.50	<0.50	<0.50	<0.50	2.6	11.1	7.0
05/05/2004	NP		112.04	10.00	25.00	16.28	95.76	51	<0.50	<0.50	<0.50	<0.50	1.2	0.8	7.2
08/25/2004	NP		112.04	10.00	25.00	16.67	95.37	<50	<0.50	<0.50	<0.50	<0.50	1.1	10.5	--
11/29/2004	NP		112.04	10.00	25.00	16.37	95.67	<50	<0.50	<0.50	<0.50	<0.50	0.61	1.0	7.0
01/31/2005	NP		112.04	10.00	25.00	15.73	96.31	<50	<0.50	<0.50	<0.50	<0.50	0.86	1.63	6.3
05/09/2005	NP		112.04	10.00	25.00	15.90	96.14	<50	<0.50	<0.50	<0.50	<0.50	0.60	1.12	7.2
08/10/2005	NP		112.04	10.00	25.00	16.65	95.39	740	<0.50	<0.50	<0.50	<0.50	2.5	--	7.3
8/29/2006	P		<b>112.04</b>	<b>10.00</b>	<b>25.00</b>	<b>16.60</b>	<b>95.44</b>	<b>230</b>	<b>&lt;0.50</b>	<b>&lt;0.50</b>	<b>&lt;0.50</b>	<b>&lt;0.50</b>	<b>1.1</b>	<b>--</b>	<b>6.4</b>
<b>MW-6</b>															

Table 1. Summary of Ground-Water Monitoring Data: Relative Water Elevations and Laboratory Analyses

Station #6148, 5131 Shattuck Ave., Oakland, CA

Well and Sample Date	P/NP	Comments	TOC (feet msl)	Top of Screen (ft bgs)	Bottom of Screen (ft bgs)	DTW (feet bgs)	Water Level Elevation (feet msl)	Concentrations in (µg/L)						DO (mg/L)	pH
								GRO/TPHg	Benzene	Toluene	Ethyl-Benzene	Total Xylenes	MTBE		
<b>MW-6 Cont.</b>															
6/21/2000	--		105.13	12.00	27.00	13.91	91.22	--	--	--	--	--	--	--	--
9/20/2000	--		105.13	12.00	27.00	14.03	91.1	--	--	--	--	--	--	--	--
12/22/2000	--		105.13	12.00	27.00	--	--	--	--	--	--	--	--	--	--
3/26/2001	--		105.13	12.00	27.00	12.59	92.54	<50	<0.5	<0.5	<0.5	<0.5	<2.5	--	--
5/30/2001	--		105.13	12.00	27.00	13.4	91.73	--	--	--	--	--	--	--	--
9/23/2001	--		105.13	12.00	27.00	13.49	91.64	--	--	--	--	--	--	--	--
12/28/2001	--		105.13	12.00	27.00	12.07	93.06	--	--	--	--	--	--	--	--
3/21/2002	--		105.13	12.00	27.00	11.79	93.34	<50	<0.5	<0.5	<0.5	<0.5	<2.5	--	--
4/17/2002	--		105.13	12.00	27.00	12.45	92.68	--	--	--	--	--	--	--	--
8/19/2002	--		105.13	12.00	27.00	13.96	91.17	<50	<0.5	<0.5	<0.5	<0.5	<2.5	2.8	6.9
11/27/2002	--		105.13	12.00	27.00	14.07	91.06	--	--	--	--	--	--	--	--
2/5/2003	--	d	105.13	12.00	27.00	13.55	91.58	--	--	--	--	--	--	--	--
5/13/2003	--		105.13	12.00	27.00	13.57	91.56	--	--	--	--	--	--	--	--
7/31/2003	--		105.13	12.00	27.00	14.18	90.95	67	<0.50	<0.50	<0.50	<0.50	<0.50	1.8	6.5
12/17/2003	--		105.13	12.00	27.00	14.12	91.01	--	--	--	--	--	--	--	--
02/13/2004	--	e	110.66	12.00	27.00	13.51	97.15	--	--	--	--	--	--	--	--
05/05/2004	--		110.66	12.00	27.00	13.95	96.71	--	--	--	--	--	--	--	--
08/25/2004	P		110.66	12.00	27.00	14.42	96.24	55	<0.50	0.98	<0.50	1.5	<0.50	3.6	6.7
11/29/2004	--		110.66	12.00	27.00	14.20	96.46	--	--	--	--	--	--	--	--
01/31/2005	--		110.66	12.00	27.00	13.33	97.33	--	--	--	--	--	--	--	--
05/09/2005	--		110.66	12.00	27.00	13.45	97.21	--	--	--	--	--	--	--	--
08/10/2005	P		110.66	12.00	27.00	14.29	96.37	53	<0.50	1.2	<0.50	2.6	<0.50	2.63	6.5
8/29/2006	P		110.66	12.00	27.00	14.29	96.37	<50	<0.50	<0.50	<0.50	<0.50	<0.50	--	6.5
<b>MW-7</b>															
6/21/2000	--		107.05	12.00	27.00	14.57	92.48	--	--	--	--	--	--	--	--
9/20/2000	--		107.05	12.00	27.00	14.58	92.47	--	--	--	--	--	--	--	--
12/22/2000	--		107.05	12.00	27.00	13.21	93.84	--	--	--	--	--	--	--	--
3/26/2001	--		107.05	12.00	27.00	13.18	93.87	71.4	<0.5	<0.5	<0.5	<0.5	<2.5	--	--
5/30/2001	--		107.05	12.00	27.00	13.8	93.25	--	--	--	--	--	--	--	--
9/23/2001	--		107.05	12.00	27.00	14.27	92.78	--	--	--	--	--	--	--	--

Table 1. Summary of Ground-Water Monitoring Data: Relative Water Elevations and Laboratory Analyses

Station #6148, 5131 Shattuck Ave., Oakland, CA

Well and Sample Date	P/NP	Comments	TOC (feet msl)	Top of Screen (ft bgs)	Bottom of Screen (ft bgs)	DTW (feet bgs)	Water Level Elevation (feet msl)	Concentrations in (µg/L)						DO (mg/L)	pH
								GRO/ TPHg	Benzene	Toluene	Ethyl- Benzene	Total Xylenes	MTBE		
MW-7 Cont.															
12/28/2001	--		107.05	12.00	27.00	12.24	94.81	--	--	--	--	--	--	--	--
3/21/2002	--		107.05	12.00	27.00	12.16	94.89	<50	<0.5	<0.5	<0.5	<0.5	<2.5	--	--
4/17/2002	--		107.05	12.00	27.00	13.08	93.97	--	--	--	--	--	--	--	--
8/19/2002	--		107.05	12.00	27.00	14.73	92.32	<50	<0.5	<0.5	<0.5	<0.5	<2.5	1.4	6.7
11/27/2002	--		107.05	12.00	27.00	14.76	92.29	--	--	--	--	--	--	--	--
2/5/2003	--	d	107.05	12.00	27.00	14.07	92.98	--	--	--	--	--	--	--	--
5/13/2003	--		107.05	12.00	27.00	14.00	93.05	--	--	--	--	--	--	--	--
7/31/2003	--		107.05	12.00	27.00	14.00	92.17	<50	<0.50	<0.50	<0.50	<0.50	<0.50	1.6	6.4
12/17/2003	--		107.05	12.00	27.00	14.10	92.95	--	--	--	--	--	--	--	--
02/13/2004	--	e	112.59	12.00	27.00	13.91	98.68	--	--	--	--	--	--	--	--
05/05/2004	--		112.59	12.00	27.00	14.60	97.99	--	--	--	--	--	--	--	--
08/25/2004	P		112.59	12.00	27.00	15.25	97.34	<50	<0.50	0.53	<0.50	0.91	<0.50	1.2	6.4
11/29/2004	--		112.59	12.00	27.00	15.00	97.59	--	--	--	--	--	--	--	--
01/31/2005	--		112.59	12.00	27.00	13.69	98.90	--	--	--	--	--	--	--	--
05/09/2005	--		112.59	12.00	27.00	13.79	98.80	--	--	--	--	--	--	--	--
08/10/2005	P		112.59	12.00	27.00	15.02	97.57	<50	<0.50	0.51	<0.50	<0.50	<0.50	1.45	6.4
8/29/2006	P		112.59	12.00	27.00	15.00	97.59	<50	<0.50	<0.50	<0.50	<0.50	<0.50	1.6	6.4

SYMBOLS AND ABBREVIATIONS:

-- = Not analyzed/applicable/measured/available

< = Not detected at or above specified laboratory reporting limit

DO = Dissolved Oxygen

DTW = Depth to water in feet below ground surface

ft bgs = feet below ground surface

GWE = Groundwater measured in feet above mean sea level

GRO = Gasoline Range Organics

mg/L = Milligrams per liter or parts per million (ppm)

MTBE = Methyl tertiary butyl ether analyzed by EPA Method 8021B unless otherwise noted (Prior to 2/5/03)

NP = Well not purged prior to sampling

P = Well purged prior to sampling

TOC = Top of casing measured in feet above mean sea level

TPH-g = Total Petroleum Hydrocarbons as Gasoline

ug/L = Micrograms per liter

FOOTNOTES:

a = Hydrocarbon pattern is present in the requested fuel quantitation range but does not resemble the pattern of the requested fuel (TPHg/GRO).

b = Chromatogram Pattern: Gasoline C6-C10 (TPHg/GRO).

c = Well MW-5 not sampled due to ORC sock wedged in well.

d = TPH-g, BTEX, and MTBE analyzed by EPA method 8260B beginning on 1st quarter sampling event (2/5/03).

e = Wells surveyed to NAVD'88 datum on January 29, 2004.

f = During this monitoring event, the oxygen releasing compounds (ORC) were replaced for this well.

NOTES:

Beginning in the fourth quarter 2003, the laboratory modified the reported analyte list. TPH-g was changed to GRO. The resulting data may be impacted by the potential inclusion of non-TPH-g analytes within the requested fuel range resulting in a higher concentration being reported. Beginning in the second quarter 2004, the carbon range for GRO was changed from C6-C10 to C4-C12.

The values for pH and DO were obtained from field measurements.

The top and bottom of screen depths for wells MW-1, MW-2 and MW-3 were obtained from EMCON O&M sampling sheets not from well logs.

Note: The data within this table collected prior to April 2006 was provided to Broadbent & Associates, Inc. by Atlantic Richfield Company and their previous consultants. Broadbent & Associates, Inc. has not verified the accuracy of this information.

**Table 2. Summary of Fuel Additives Analytical Data**  
**Station #6148, 5131 Shattuck Ave., Oakland, CA**

Well and Sample Date	Concentrations in (µg/L)								Comments
	Ethanol	TBA	MTBE	DIPE	ETBE	TAME	1,2-DCA	EDB	
<b>MW-1</b>									
2/5/2003	<40	<20	1.1	<0.50	<0.50	<0.50	--	--	
5/13/2003	<100	<20	<0.50	<0.50	<0.50	<0.50	--	--	
7/31/2003	<100	<20	0.55	<0.50	<0.50	<0.50	<0.50	<0.50	
12/17/2003	<100	<20	2.5	<0.50	<0.50	<0.50	<0.50	<0.50	
05/05/2004	<100	<20	0.60	<0.50	<0.50	<0.50	<0.50	<0.50	
08/25/2004	<100	<20	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	a
11/29/2004	<100	<20	0.62	<0.50	<0.50	<0.50	<0.50	<0.50	
01/31/2005	<100	<20	0.59	<0.50	<0.50	<0.50	<0.50	<0.50	
05/09/2005	<100	<20	0.55	<0.50	<0.50	<0.50	<0.50	<0.50	
08/10/2005	<100	<20	0.62	<0.50	<0.50	<0.50	<0.50	<0.50	
8/29/2006	<300	<20	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	
<b>MW-2</b>									
2/5/2003	<40	<20	4.3	<0.50	<0.50	<0.50	--	--	
5/13/2003	<100	<20	2.8	<0.50	<0.50	<0.50	--	--	
7/31/2003	<100	<20	2.0	<0.50	<0.50	<0.50	<0.50	<0.50	
12/17/2003	<100	<20	2.4	<0.50	<0.50	<0.50	<0.50	<0.50	
02/13/2004	<100	<20	1.6	<0.50	<0.50	<0.50	<0.50	<0.50	
05/05/2004	<100	<20	0.99	<0.50	<0.50	<0.50	<0.50	<0.50	
08/25/2004	<100	<20	0.63	<0.50	<0.50	<0.50	<0.50	<0.50	
11/29/2004	<100	<20	0.55	<0.50	<0.50	<0.50	<0.50	<0.50	
01/31/2005	<100	<20	1.2	<0.50	<0.50	<0.50	<0.50	<0.50	
05/09/2005	<100	<20	1.8	<0.50	<0.50	<0.50	<0.50	<0.50	
08/10/2005	<100	<20	1.5	<0.50	<0.50	<0.50	<0.50	<0.50	
8/29/2006	<300	<20	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	
<b>MW-3</b>									
2/5/2003	<40	<20	2.4	<0.50	<0.50	<0.50	--	--	
5/13/2003	<100	<20	2.2	<0.50	<0.50	<0.50	--	--	
7/31/2003	<100	<20	2.1	<0.50	<0.50	<0.50	<0.50	<0.50	
12/17/2003	<100	<20	4.8	<0.50	<0.50	<0.50	<0.50	<0.50	
02/13/2004	<100	<20	3.1	<0.50	<0.50	<0.50	<0.50	<0.50	

**Table 2. Summary of Fuel Additives Analytical Data**  
**Station #6148, 5131 Shattuck Ave., Oakland, CA**

Well and Sample Date	Concentrations in (µg/L)								Comments
	Ethanol	TBA	MTBE	DIPE	ETBE	TAME	1,2-DCA	EDB	
<b>MW-3 Cont.</b>									
05/05/2004	<100	<20	1.3	<0.50	<0.50	<0.50	<0.50	<0.50	
08/25/2004	<100	<20	3.3	<0.50	<0.50	<0.50	<0.50	<0.50	
11/29/2004	<100	<20	1.4	<0.50	<0.50	<0.50	<0.50	<0.50	
01/31/2005	<100	<20	2.0	<0.50	<0.50	<0.50	<0.50	<0.50	
05/09/2005	<100	<20	0.80	<0.50	<0.50	<0.50	<0.50	<0.50	
08/10/2005	<100	<20	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	
8/29/2006	<300	<20	0.51	<0.50	<0.50	<0.50	<0.50	<0.50	
<b>MW-4</b>									
7/31/2003	<100	<20	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	
02/13/2004	<100	<20	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	
08/25/2004	<100	<20	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	
01/31/2005	<100	<20	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	
08/10/2005	<100	<20	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	
8/29/2006	<300	<20	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	
<b>MW-5</b>									
5/13/2003	<100	<20	15	<0.50	<0.50	1.1	--	--	
7/31/2003	<100	<20	1.2	<0.50	<0.50	<0.50	<0.50	<0.50	
12/17/2003	<100	<20	1.8	<0.50	<0.50	<0.50	<0.50	<0.50	
02/13/2004	<100	<20	2.6	<0.50	<0.50	<0.50	<0.50	<0.50	
05/05/2004	<100	<20	1.2	<0.50	<0.50	<0.50	<0.50	<0.50	
08/25/2004	<100	<20	1.1	<0.50	<0.50	<0.50	<0.50	<0.50	
11/29/2004	<100	<20	0.61	<0.50	<0.50	<0.50	<0.50	<0.50	
01/31/2005	<100	<20	0.86	<0.50	<0.50	<0.50	<0.50	<0.50	
05/09/2005	<100	<20	0.60	<0.50	<0.50	<0.50	<0.50	<0.50	
08/10/2005	<100	<20	2.5	<0.50	<0.50	<0.50	<0.50	<0.50	
8/29/2006	<300	<20	1.1	<0.50	<0.50	<0.50	<0.50	<0.50	
<b>MW-6</b>									
7/31/2003	<100	<20	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	
08/25/2004	<100	<20	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	
08/10/2005	<100	<20	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	



**Table 2. Summary of Fuel Additives Analytical Data**  
**Station #6148, 5131 Shattuck Ave., Oakland, CA**

Well and Sample Date	Concentrations in (µg/L)								Comments
	Ethanol	TBA	MTBE	DIPE	ETBE	TAME	1,2-DCA	EDB	
MW-6 Cont.									
8/29/2006	<300	<20	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	
MW-7									
7/31/2003	<100	<20	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	
08/25/2004	<100	<20	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	
08/10/2005	<100	<20	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	
8/29/2006	<300	<20	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	

SYMBOLS AND ABBREVIATIONS:

< = Not detected at or above the specified laboratory reporting limit

-- = Not available/analyzed/applicable

DIPE = Di-isopropyl ether

EDB = 1,2-Dibromoethane

ETBE = Ethyl tert butyl ether

MTBE = Methyl tert-butyl ether

1,2-DCA = 1,2-Dichloroethane

TAME = tert-Amyl methyl ether

TBA = tert-Butyl alcohol

ug/L = micrograms per liter

FOOTNOTES:

a = This sample was analyzed beyond the EPA recommended holding time. The results may still be useful for their intended purpose.

Note: The data within this table collected prior to April 2006 was provided to Broadbent & Associates, Inc. by Atlantic Richfield Company and their previous consultants. Broadbent & Associates, Inc. has not verified the accuracy of this information.

**Table 3. Historical Ground-Water Flow Direction and Gradient**  
**Station #6148, 5131 Shattuck Ave., Oakland, CA**

Date Sampled	Approximate Flow Direction	Approximate Hydraulic Gradient
6/21/2000	South-Southwest	0.016
9/20/2000	South-Southwest	0.017
12/22/2000	South-Southwest	0.022
3/26/2001	South-Southwest	0.02
5/30/2001	South-Southwest	0.02
9/23/2001	South-Southwest	0.019
12/28/2001	Southwest	0.019
3/21/2002	Southwest	0.019
4/17/2002	Southwest	0.017
8/19/2002	Southwest	0.016
11/27/2002	Southwest	0.015
2/5/2003	Southwest	0.017
5/13/2003	Southwest	0.013
7/31/2003	Southwest	0.014
2/13/2004	Southwest	0.016
5/5/2004	Southwest	0.016
8/25/2004	Southwest	0.013
11/29/2004	Southwest	0.013
1/31/2005	Southwest	0.02
5/9/2005	Southwest	0.02
8/10/2005	Southwest	0.02
8/29/2006	Southwest	0.014

Note: The data within this table collected prior to April 2006 was provided to Broadbent & Associates, Inc. by Atlantic Richfield Company and their previous consultants. Broadbent & Associates, Inc. has not verified the accuracy of this information.

**APPENDIX A**

URS GROUNDWATER SAMPLING DATA PACKAGE (INCLUDES LABORATORY  
REPORT AND CHAIN OF CUSTODY DOCUMENTATION, FIELD AND  
LABORATORY PROCEDURES, AND FIELD DATA SHEETS)



September 29, 2006

Mr. Rob Miller  
Broadbent & Associates, Inc.  
2000 Kirman Avenue  
Reno, NV 89502

***Groundwater Sampling Data Package***

Arco Service Station #6148  
5131 Shattuck Avenue  
Oakland, CA  
Field Work Performed: 08/29/06

***General Information***

*Data Submittal Prepared/Reviewed by:* Scott Rice


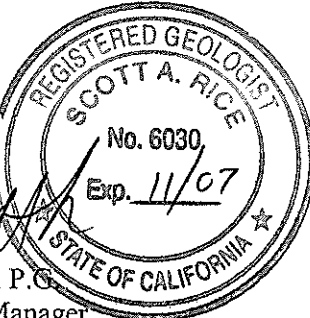
*Phone Number:* 916-679-2095

*On-Site Supplier Representative:* Blaine Tech

*Scope of Work Performed:* Groundwater Monitoring in accordance with 3rd Quarter 2006 protocols as identified in the Quarterly Monitoring Program Table in the Field and Laboratory Procedures Attachment.

*Variations from Work Scope:* None

This submittal presents the tabulation of data collected in association with routine groundwater monitoring. The attachments include, at a minimum, sampling procedures, field data collected, laboratory results, chain of custody documentation, and waste management activities. The information is being provided to BP-ARCO's Scoping Supplier for use in preparing a report for regulatory submittal. This submittal is limited to presentation of collected data and does not include data interpretation or conclusions or recommendations. Any questions concerning this submittal should be addressed to the Preparer/Reviewer identified above.

  
  
Scott Rice, P.C.  
Portfolio Manager

cc: Paul Supple, Atlantic Richfield Company (RM), electronic copy uploaded to ENFOS



## **Attachments**

Field and Laboratory Procedures

Laboratory Report

Chain of Custody Documentation

Field Data Sheets

Well Gauging Data

Well Monitoring Data Sheets

## FIELD & LABORATORY PROCEDURES

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### Sampling Procedures

The sampling procedure for each well consists first of measuring the water level and depth to bottom, and checking for the presence of free phase petroleum product (free product), using either an electronic indicator and a clear Teflon™ bailer or an oil-water interface probe. Wells not containing free product are purged approximately three casing volumes of water (or until dewatered) using a centrifugal pump, gas displacement pump, or bailer. Equipment and purging method used for the current sampling event is noted on the attached field data sheets. During purging, temperature, pH, and electrical conductivity are monitored to document that these parameters are stable prior to collecting samples. After purging, water levels are allowed to partially (approximately 80%) recover. Groundwater samples (both purge and no purge) are collected using a Teflon bailer, placed into appropriate Environmental Protection Agency- (EPA) approved containers, labeled, logged onto chain-of-custody records, and transported on ice to a California State-certified laboratory. Wells with free product are not sampled and free product is removed according to California Code of Regulation, Title 23, Div. 3, Chap. 16, Section 2655, UST Regulations.

### Laboratory Procedures

The groundwater samples were analyzed for the presence of the chemicals mentioned in the chain of custody using standard EPA methods. The methods of analysis for the groundwater samples are documented in the certified analytical report. The certified analytical reports and chain-of-custody record are presented in this attachment. The analytical data provided by the laboratory approved by RM have been reviewed and verified by that laboratory.

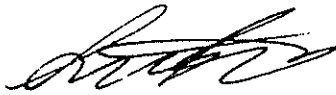
22 September, 2006

Lynelle Onishi  
URS Corporation [Arco]  
1333 Broadway, Suite 800  
Oakland, CA 94612

RE: ARCO #6148, Oakland, CA  
Work Order: MPH1061

Enclosed are the results of analyses for samples received by the laboratory on 08/30/06 14:30. If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Lisa Race  
Senior Project Manager

CA ELAP Certificate # 1210

The results in this laboratory report pertain only to the samples tested in the laboratory. The analyses contained in this report were performed in accordance with the BPGCLN Technical Specifications, applicable Federal, State, local regulations and certification requirements as well as the methodologies as described in laboratory SOPs reviewed by the BPGCLN. This entire report was reviewed and approved for release.



URS Corporation [Arco] 1333 Broadway, Suite 800 Oakland CA, 94612	Project: ARCO #6148, Oakland, CA Project Number: G0C2J-0012 Project Manager: Lynelle Onishi	MPH1061 Reported: 09/22/06 11:49
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**ANALYTICAL REPORT FOR SAMPLES**

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
MW-1	MPH1061-01	Water	08/29/06 12:53	08/30/06 14:30
MW-2	MPH1061-02	Water	08/29/06 13:07	08/30/06 14:30
MW-3	MPH1061-03	Water	08/29/06 13:00	08/30/06 14:30
MW-4	MPH1061-04	Water	08/29/06 13:23	08/30/06 14:30
MW-5	MPH1061-05	Water	08/29/06 12:38	08/30/06 14:30
MW-6	MPH1061-06	Water	08/29/06 13:50	08/30/06 14:30
MW-7	MPH1061-07	Water	08/29/06 13:36	08/30/06 14:30
TB-6148-082906	MPH1061-08	Water	08/29/06 13:36	08/30/06 14:30

The carbon range for the TPH-GRO has been changed from C6-C10 to C4-C12. The carbon range for TPH-DRO has been changed from C10-C28 to C10-C36. EPA 8015B has been modified to better meet the requirements of California regulatory agencies.

These samples were received with intact custody seals.

URS Corporation [Arco]  
1333 Broadway, Suite 800  
Oakland CA, 94612

Project: ARCO #6148, Oakland, CA  
Project Number: G0C2J-0012  
Project Manager: Lynelle Onishi

MPH1061  
Reported:  
09/22/06 11:49

**Total Purgeable Hydrocarbons by GC/MS (CA LUFT)**  
**TestAmerica - Morgan Hill, CA**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>MW-1 (MPH1061-01) Water</b> Sampled: 08/29/06 12:53 Received: 08/30/06 14:30									
Gasoline Range Organics (C4-C12)	ND	50	ug/l	1	6109005	09/09/06	09/09/06	LUFT GCMS	
Surrogate: 1,2-Dichloroethane-d4		87 %	60-145		"	"	"	"	
<b>MW-2 (MPH1061-02) Water</b> Sampled: 08/29/06 13:07 Received: 08/30/06 14:30									
Gasoline Range Organics (C4-C12)	660	50	ug/l	1	6108023	09/08/06	09/09/06	LUFT GCMS	
Surrogate: 1,2-Dichloroethane-d4		92 %	60-145		"	"	"	"	
<b>MW-3 (MPH1061-03) Water</b> Sampled: 08/29/06 13:00 Received: 08/30/06 14:30									
Gasoline Range Organics (C4-C12)	ND	50	ug/l	1	6108023	09/08/06	09/09/06	LUFT GCMS	
Surrogate: 1,2-Dichloroethane-d4		88 %	60-145		"	"	"	"	
<b>MW-4 (MPH1061-04) Water</b> Sampled: 08/29/06 13:23 Received: 08/30/06 14:30									
Gasoline Range Organics (C4-C12)	ND	50	ug/l	1	6108023	09/08/06	09/09/06	LUFT GCMS	
Surrogate: 1,2-Dichloroethane-d4		86 %	60-145		"	"	"	"	
<b>MW-5 (MPH1061-05) Water</b> Sampled: 08/29/06 12:38 Received: 08/30/06 14:30									
Gasoline Range Organics (C4-C12)	230	50	ug/l	1	6108023	09/08/06	09/09/06	LUFT GCMS	
Surrogate: 1,2-Dichloroethane-d4		89 %	60-145		"	"	"	"	
<b>MW-6 (MPH1061-06) Water</b> Sampled: 08/29/06 13:50 Received: 08/30/06 14:30									
Gasoline Range Organics (C4-C12)	ND	50	ug/l	1	6108023	09/08/06	09/09/06	LUFT GCMS	
Surrogate: 1,2-Dichloroethane-d4		88 %	60-145		"	"	"	"	
<b>MW-7 (MPH1061-07) Water</b> Sampled: 08/29/06 13:36 Received: 08/30/06 14:30									
Gasoline Range Organics (C4-C12)	ND	50	ug/l	1	6108023	09/08/06	09/09/06	LUFT GCMS	
Surrogate: 1,2-Dichloroethane-d4		86 %	60-145		"	"	"	"	

URS Corporation [Arco]  
1333 Broadway, Suite 800  
Oakland CA, 94612

Project: ARCO #6148, Oakland, CA  
Project Number: G0C2J-0012  
Project Manager: Lynelle Onishi

MPH1061  
Reported:  
09/22/06 11:49

**Volatile Organic Compounds by EPA Method 8260B**  
**TestAmerica - Morgan Hill, CA**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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**MW-1 (MPH1061-01) Water** Sampled: 08/29/06 12:53 Received: 08/30/06 14:30

tert-Amyl methyl ether	ND	0.50	ug/l	1	6109005	09/09/06	09/09/06	EPA 8260B	
Benzene	ND	0.50	"	"	"	"	"	"	
tert-Butyl alcohol	ND	20	"	"	"	"	"	"	
Di-isopropyl ether	ND	0.50	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	0.50	"	"	"	"	"	"	
1,2-Dichloroethane	ND	0.50	"	"	"	"	"	"	
Ethanol	ND	300	"	"	"	"	"	"	
Ethyl tert-butyl ether	ND	0.50	"	"	"	"	"	"	
Ethylbenzene	ND	0.50	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	0.50	"	"	"	"	"	"	
Toluene	ND	0.50	"	"	"	"	"	"	
Xylenes (total)	ND	0.50	"	"	"	"	"	"	
<i>Surrogate: Dibromofluoromethane</i>		89 %	75-130		"	"	"	"	
<i>Surrogate: 1,2-Dichloroethane-d4</i>		87 %	60-145		"	"	"	"	
<i>Surrogate: Toluene-d8</i>		87 %	70-130		"	"	"	"	
<i>Surrogate: 4-Bromofluorobenzene</i>		88 %	60-120		"	"	"	"	

**MW-2 (MPH1061-02) Water** Sampled: 08/29/06 13:07 Received: 08/30/06 14:30

tert-Amyl methyl ether	ND	0.50	ug/l	1	6108023	09/08/06	09/09/06	EPA 8260B	
<b>Benzene</b>	6.4	0.50	"	"	"	"	"	"	
tert-Butyl alcohol	ND	20	"	"	"	"	"	"	
Di-isopropyl ether	ND	0.50	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	0.50	"	"	"	"	"	"	
1,2-Dichloroethane	ND	0.50	"	"	"	"	"	"	
Ethanol	ND	300	"	"	"	"	"	"	
Ethyl tert-butyl ether	ND	0.50	"	"	"	"	"	"	
Ethylbenzene	1.5	0.50	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	0.50	"	"	"	"	"	"	
Toluene	ND	0.50	"	"	"	"	"	"	
<b>Xylenes (total)</b>	2.5	0.50	"	"	"	"	"	"	
<i>Surrogate: Dibromofluoromethane</i>		86 %	75-130		"	"	"	"	
<i>Surrogate: 1,2-Dichloroethane-d4</i>		92 %	60-145		"	"	"	"	
<i>Surrogate: Toluene-d8</i>		102 %	70-130		"	"	"	"	
<i>Surrogate: 4-Bromofluorobenzene</i>		97 %	60-120		"	"	"	"	

URS Corporation [Arco]  
1333 Broadway, Suite 800  
Oakland CA, 94612

Project: ARCO #6148, Oakland, CA  
Project Number: G0C2J-0012  
Project Manager: Lynelle Onishi

MPH1061  
Reported:  
09/22/06 11:49

**Volatile Organic Compounds by EPA Method 8260B**  
**TestAmerica - Morgan Hill, CA**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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**MW-3 (MPH1061-03) Water**    **Sampled: 08/29/06 13:00**    **Received: 08/30/06 14:30**

tert-Amyl methyl ether	ND	0.50	ug/l	1	6108023	09/08/06	09/09/06	EPA 8260B	
Benzene	ND	0.50	"	"	"	"	"	"	
tert-Butyl alcohol	ND	20	"	"	"	"	"	"	
Di-isopropyl ether	ND	0.50	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	0.50	"	"	"	"	"	"	
1,2-Dichloroethane	ND	0.50	"	"	"	"	"	"	
Ethanol	ND	300	"	"	"	"	"	"	
Ethyl tert-butyl ether	ND	0.50	"	"	"	"	"	"	
Ethylbenzene	ND	0.50	"	"	"	"	"	"	
<b>Methyl tert-butyl ether</b>	<b>0.51</b>	0.50	"	"	"	"	"	"	
Toluene	ND	0.50	"	"	"	"	"	"	
<b>Xylenes (total)</b>	<b>0.74</b>	0.50	"	"	"	"	"	"	
<i>Surrogate: Dibromofluoromethane</i>		87 %	75-130		"	"	"	"	
<i>Surrogate: 1,2-Dichloroethane-d4</i>		88 %	60-145		"	"	"	"	
<i>Surrogate: Toluene-d8</i>		89 %	70-130		"	"	"	"	
<i>Surrogate: 4-Bromofluorobenzene</i>		92 %	60-120		"	"	"	"	

**MW-4 (MPH1061-04) Water**    **Sampled: 08/29/06 13:23**    **Received: 08/30/06 14:30**

tert-Amyl methyl ether	ND	0.50	ug/l	1	6108023	09/08/06	09/09/06	EPA 8260B	
Benzene	ND	0.50	"	"	"	"	"	"	
tert-Butyl alcohol	ND	20	"	"	"	"	"	"	
Di-isopropyl ether	ND	0.50	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	0.50	"	"	"	"	"	"	
1,2-Dichloroethane	ND	0.50	"	"	"	"	"	"	
Ethanol	ND	300	"	"	"	"	"	"	
Ethyl tert-butyl ether	ND	0.50	"	"	"	"	"	"	
Ethylbenzene	ND	0.50	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	0.50	"	"	"	"	"	"	
Toluene	ND	0.50	"	"	"	"	"	"	
<b>Xylenes (total)</b>	<b>0.53</b>	0.50	"	"	"	"	"	"	
<i>Surrogate: Dibromofluoromethane</i>		88 %	75-130		"	"	"	"	
<i>Surrogate: 1,2-Dichloroethane-d4</i>		86 %	60-145		"	"	"	"	
<i>Surrogate: Toluene-d8</i>		87 %	70-130		"	"	"	"	
<i>Surrogate: 4-Bromofluorobenzene</i>		91 %	60-120		"	"	"	"	

URS Corporation [Arco]  
1333 Broadway, Suite 800  
Oakland CA, 94612

Project: ARCO #6148, Oakland, CA  
Project Number: G0C2J-0012  
Project Manager: Lynelle Onishi

MPH1061  
Reported:  
09/22/06 11:49

**Volatile Organic Compounds by EPA Method 8260B**  
**TestAmerica - Morgan Hill, CA**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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**MW-5 (MPH1061-05) Water**    **Sampled: 08/29/06 12:38**    **Received: 08/30/06 14:30**

tert-Amyl methyl ether	ND	0.50	ug/l	1	6108023	09/08/06	09/09/06	EPA 8260B	
Benzene	ND	0.50	"	"	"	"	"	"	
tert-Butyl alcohol	ND	20	"	"	"	"	"	"	
Di-isopropyl ether	ND	0.50	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	0.50	"	"	"	"	"	"	
1,2-Dichloroethane	ND	0.50	"	"	"	"	"	"	
Ethanol	ND	300	"	"	"	"	"	"	
Ethyl tert-butyl ether	ND	0.50	"	"	"	"	"	"	
Ethylbenzene	ND	0.50	"	"	"	"	"	"	
<b>Methyl tert-butyl ether</b>	<b>1.1</b>	0.50	"	"	"	"	"	"	
Toluene	ND	0.50	"	"	"	"	"	"	
Xylenes (total)	ND	0.50	"	"	"	"	"	"	
<i>Surrogate: Dibromofluoromethane</i>		87 %	75-130		"	"	"	"	
<i>Surrogate: 1,2-Dichloroethane-d4</i>		89 %	60-145		"	"	"	"	
<i>Surrogate: Toluene-d8</i>		92 %	70-130		"	"	"	"	
<i>Surrogate: 4-Bromofluorobenzene</i>		92 %	60-120		"	"	"	"	

**MW-6 (MPH1061-06) Water**    **Sampled: 08/29/06 13:50**    **Received: 08/30/06 14:30**

tert-Amyl methyl ether	ND	0.50	ug/l	1	6108023	09/08/06	09/09/06	EPA 8260B	
Benzene	ND	0.50	"	"	"	"	"	"	
tert-Butyl alcohol	ND	20	"	"	"	"	"	"	
Di-isopropyl ether	ND	0.50	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	0.50	"	"	"	"	"	"	
1,2-Dichloroethane	ND	0.50	"	"	"	"	"	"	
Ethanol	ND	300	"	"	"	"	"	"	
Ethyl tert-butyl ether	ND	0.50	"	"	"	"	"	"	
Ethylbenzene	ND	0.50	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	0.50	"	"	"	"	"	"	
Toluene	ND	0.50	"	"	"	"	"	"	
Xylenes (total)	ND	0.50	"	"	"	"	"	"	
<i>Surrogate: Dibromofluoromethane</i>		88 %	75-130		"	"	"	"	
<i>Surrogate: 1,2-Dichloroethane-d4</i>		88 %	60-145		"	"	"	"	
<i>Surrogate: Toluene-d8</i>		87 %	70-130		"	"	"	"	
<i>Surrogate: 4-Bromofluorobenzene</i>		90 %	60-120		"	"	"	"	

URS Corporation [Arco]  
1333 Broadway, Suite 800  
Oakland CA, 94612

Project: ARCO #6148, Oakland, CA  
Project Number: G0C2J-0012  
Project Manager: Lynelle Onishi

MPH1061  
Reported:  
09/22/06 11:49

**Volatile Organic Compounds by EPA Method 8260B**  
**TestAmerica - Morgan Hill, CA**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>MW-7 (MPH1061-07) Water Sampled: 08/29/06 13:36 Received: 08/30/06 14:30</b>									
tert-Amyl methyl ether	ND	0.50	ug/l	1	6108023	09/08/06	09/09/06	EPA 8260B	
Benzene	ND	0.50	"	"	"	"	"	"	
tert-Butyl alcohol	ND	20	"	"	"	"	"	"	
Di-isopropyl ether	ND	0.50	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	0.50	"	"	"	"	"	"	
1,2-Dichloroethane	ND	0.50	"	"	"	"	"	"	
Ethanol	ND	300	"	"	"	"	"	"	
Ethyl tert-butyl ether	ND	0.50	"	"	"	"	"	"	
Ethylbenzene	ND	0.50	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	0.50	"	"	"	"	"	"	
Toluene	ND	0.50	"	"	"	"	"	"	
Xylenes (total)	ND	0.50	"	"	"	"	"	"	
<i>Surrogate: Dibromofluoromethane</i>		88 %	75-130		"	"	"	"	
<i>Surrogate: 1,2-Dichloroethane-d4</i>		86 %	60-145		"	"	"	"	
<i>Surrogate: Toluene-d8</i>		86 %	70-130		"	"	"	"	
<i>Surrogate: 4-Bromofluorobenzene</i>		89 %	60-120		"	"	"	"	

URS Corporation [Arco]  
1333 Broadway, Suite 800  
Oakland CA, 94612

Project: ARCO #6148, Oakland, CA  
Project Number: G0C2J-0012  
Project Manager: Lynelle Onishi

MPH1061  
Reported:  
09/22/06 11:49

**Total Purgeable Hydrocarbons by GC/MS (CA LUFT) - Quality Control**  
**TestAmerica - Morgan Hill, CA**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch 6I08023 - EPA 5030B P/T / LUFT GCMS**

<b>Blank (6I08023-BLK1)</b>										
										Prepared & Analyzed: 09/08/06
Gasoline Range Organics (C4-C12)	ND	50	ug/l							
Surrogate: 1,2-Dichloroethane-d4	2.35		"	2.50		94	60-145			
<b>Laboratory Control Sample (6I08023-BS2)</b>										
										Prepared & Analyzed: 09/08/06
Gasoline Range Organics (C4-C12)	475	50	ug/l	440		108	75-140			
Surrogate: 1,2-Dichloroethane-d4	2.17		"	2.50		87	60-145			
<b>Matrix Spike (6I08023-MS1)</b>										
		<b>Source: MPH1062-01</b>		Prepared & Analyzed: 09/08/06						
Gasoline Range Organics (C4-C12)	195000	10000	ug/l	140000	65000	93	75-140			
Surrogate: 1,2-Dichloroethane-d4	2.23		"	2.50		89	60-145			
<b>Matrix Spike Dup (6I08023-MSD1)</b>										
		<b>Source: MPH1062-01</b>		Prepared & Analyzed: 09/08/06						
Gasoline Range Organics (C4-C12)	194000	10000	ug/l	140000	65000	92	75-140	0.5	20	
Surrogate: 1,2-Dichloroethane-d4	2.23		"	2.50		89	60-145			

**Batch 6I09005 - EPA 5030B P/T / LUFT GCMS**

<b>Blank (6I09005-BLK1)</b>										
										Prepared & Analyzed: 09/09/06
Gasoline Range Organics (C4-C12)	ND	50	ug/l							
Surrogate: 1,2-Dichloroethane-d4	2.20		"	2.50		88	60-145			
<b>Laboratory Control Sample (6I09005-BS2)</b>										
										Prepared & Analyzed: 09/09/06
Gasoline Range Organics (C4-C12)	482	50	ug/l	440		110	75-140			
Surrogate: 1,2-Dichloroethane-d4	2.08		"	2.50		83	60-145			
<b>Matrix Spike (6I09005-MS1)</b>										
		<b>Source: MPH1077-28</b>		Prepared & Analyzed: 09/09/06						
Gasoline Range Organics (C4-C12)	11000	500	ug/l	7000	4000	100	75-140			
Surrogate: 1,2-Dichloroethane-d4	2.16		"	2.50		86	60-145			

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MPH1061  
Reported:  
09/22/06 11:49

**Total Purgeable Hydrocarbons by GC/MS (CA LUFT) - Quality Control**  
**TestAmerica - Morgan Hill, CA**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch 6I09005 - EPA 5030B P/T / LUFT GCMS**

Matrix Spike Dup (6I09005-MSD1)	Source: MPH1077-28	Prepared & Analyzed: 09/09/06						
Gasoline Range Organics (C4-C12)	10800	500 ug/l	7000	4000	97	75-140	2	20
Surrogate: 1,2-Dichloroethane-d4	2.15	"	2.50		86	60-145		



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MPH1061  
Reported:  
09/22/06 11:49

**Volatile Organic Compounds by EPA Method 8260B - Quality Control**  
**TestAmerica - Morgan Hill, CA**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch 6I08023 - EPA 5030B P/T / EPA 8260B**

**Blank (6I08023-BLK1)**

Prepared & Analyzed: 09/08/06

tert-Amyl methyl ether	ND	0.50	ug/l							
Benzene	ND	0.50	"							
tert-Butyl alcohol	ND	20	"							
Di-isopropyl ether	ND	0.50	"							
1,2-Dibromoethane (EDB)	ND	0.50	"							
1,2-Dichloroethane	ND	0.50	"							
Ethanol	ND	300	"							
Ethyl tert-butyl ether	ND	0.50	"							
Ethylbenzene	ND	0.50	"							
Methyl tert-butyl ether	ND	0.50	"							
Toluene	ND	0.50	"							
Xylenes (total)	ND	0.50	"							
<i>Surrogate: Dibromofluoromethane</i>	2.24		"	2.50		90	75-130			
<i>Surrogate: 1,2-Dichloroethane-d4</i>	2.35		"	2.50		94	60-145			
<i>Surrogate: Toluene-d8</i>	2.18		"	2.50		87	70-130			
<i>Surrogate: 4-Bromofluorobenzene</i>	2.23		"	2.50		89	60-120			

**Laboratory Control Sample (6I08023-BS1)**

Prepared & Analyzed: 09/08/06

tert-Amyl methyl ether	9.72	0.50	ug/l	10.0		97	65-135			
Benzene	9.57	0.50	"	10.0		96	70-125			
tert-Butyl alcohol	198	20	"	200		99	60-135			
Di-isopropyl ether	10.3	0.50	"	10.0		103	70-130			
1,2-Dibromoethane (EDB)	9.37	0.50	"	10.0		94	80-125			
1,2-Dichloroethane	10.2	0.50	"	10.0		102	75-125			
Ethanol	272	300	"	200		136	15-150			
Ethyl tert-butyl ether	10.2	0.50	"	10.0		102	65-130			
Ethylbenzene	10.7	0.50	"	10.0		107	70-130			
Methyl tert-butyl ether	10.1	0.50	"	10.0		101	50-140			
Toluene	9.91	0.50	"	10.0		99	70-120			
Xylenes (total)	32.9	0.50	"	30.0		110	80-125			
<i>Surrogate: Dibromofluoromethane</i>	2.21		"	2.50		88	75-130			
<i>Surrogate: 1,2-Dichloroethane-d4</i>	2.26		"	2.50		90	60-145			
<i>Surrogate: Toluene-d8</i>	2.20		"	2.50		88	70-130			
<i>Surrogate: 4-Bromofluorobenzene</i>	2.25		"	2.50		90	60-120			

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MPH1061  
Reported:  
09/22/06 11:49

**Volatile Organic Compounds by EPA Method 8260B - Quality Control**  
**TestAmerica - Morgan Hill, CA**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch 6I08023 - EPA 5030B P/T / EPA 8260B**

Matrix Spike (6I08023-MS1)	Source: MPH1062-01	Prepared & Analyzed: 09/08/06								
tert-Amyl methyl ether	2000	100	ug/l	2000	100	95	65-135			
Benzene	9050	100	"	2000	7200	92	70-125			
tert-Butyl alcohol	39700	4000	"	40000	1200	96	60-135			
Di-isopropyl ether	2010	100	"	2000	ND	100	70-130			
1,2-Dibromoethane (EDB)	1850	100	"	2000	ND	92	80-125			
1,2-Dichloroethane	2060	100	"	2000	ND	103	75-125			
Ethanol	69800	60000	"	40000	ND	174	15-150			LM
Ethyl tert-butyl ether	1990	100	"	2000	ND	100	65-130			
Ethylbenzene	5410	100	"	2000	3200	110	70-130			
Methyl tert-butyl ether	14700	100	"	2000	13000	85	50-140			
Toluene	6510	100	"	2000	4500	100	70-120			
Xylenes (total)	17500	100	"	6000	11000	108	80-125			
Surrogate: Dibromofluoromethane	2.22		"	2.50		89	75-130			
Surrogate: 1,2-Dichloroethane-d4	2.23		"	2.50		89	60-145			
Surrogate: Toluene-d8	2.16		"	2.50		86	70-130			
Surrogate: 4-Bromofluorobenzene	2.26		"	2.50		90	60-120			

Matrix Spike Dup (6I08023-MSD1)	Source: MPH1062-01	Prepared & Analyzed: 09/08/06								
tert-Amyl methyl ether	2020	100	ug/l	2000	100	96	65-135	1	25	
Benzene	8930	100	"	2000	7200	86	70-125	1	15	
tert-Butyl alcohol	40700	4000	"	40000	1200	99	60-135	2	35	
Di-isopropyl ether	2010	100	"	2000	ND	100	70-130	0	35	
1,2-Dibromoethane (EDB)	1870	100	"	2000	ND	94	80-125	1	15	
1,2-Dichloroethane	2060	100	"	2000	ND	103	75-125	0	10	
Ethanol	63200	60000	"	40000	ND	158	15-150	10	35	LM
Ethyl tert-butyl ether	1980	100	"	2000	ND	99	65-130	0.5	35	
Ethylbenzene	5310	100	"	2000	3200	106	70-130	2	15	
Methyl tert-butyl ether	14700	100	"	2000	13000	85	50-140	0	25	
Toluene	6380	100	"	2000	4500	94	70-120	2	15	
Xylenes (total)	17200	100	"	6000	11000	103	80-125	2	15	
Surrogate: Dibromofluoromethane	2.21		"	2.50		88	75-130			
Surrogate: 1,2-Dichloroethane-d4	2.23		"	2.50		89	60-145			
Surrogate: Toluene-d8	2.20		"	2.50		88	70-130			
Surrogate: 4-Bromofluorobenzene	2.29		"	2.50		92	60-120			

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MPH1061  
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**Volatile Organic Compounds by EPA Method 8260B - Quality Control**  
**TestAmerica - Morgan Hill, CA**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch 6I09005 - EPA 5030B P/T / EPA 8260B**

**Blank (6I09005-BLK1)**

Prepared & Analyzed: 09/09/06

tert-Amyl methyl ether	ND	0.50	ug/l							
Benzene	ND	0.50	"							
tert-Butyl alcohol	ND	20	"							
Di-isopropyl ether	ND	0.50	"							
1,2-Dibromoethane (EDB)	ND	0.50	"							
1,2-Dichloroethane	ND	0.50	"							
Ethanol	ND	300	"							
Ethyl tert-butyl ether	ND	0.50	"							
Ethylbenzene	ND	0.50	"							
Methyl tert-butyl ether	ND	0.50	"							
Toluene	ND	0.50	"							
Xylenes (total)	ND	0.50	"							
<i>Surrogate: Dibromofluoromethane</i>	2.23		"	2.50		89	75-130			
<i>Surrogate: 1,2-Dichloroethane-d4</i>	2.20		"	2.50		88	60-145			
<i>Surrogate: Toluene-d8</i>	2.20		"	2.50		88	70-130			
<i>Surrogate: 4-Bromofluorobenzene</i>	2.19		"	2.50		88	60-120			

**Laboratory Control Sample (6I09005-BS1)**

Prepared & Analyzed: 09/09/06

tert-Amyl methyl ether	9.87	0.50	ug/l	10.0		99	65-135			
Benzene	9.70	0.50	"	10.0		97	70-125			
tert-Butyl alcohol	196	20	"	200		98	60-135			
Di-isopropyl ether	10.1	0.50	"	10.0		101	70-130			
1,2-Dibromoethane (EDB)	9.85	0.50	"	10.0		98	80-125			
1,2-Dichloroethane	9.79	0.50	"	10.0		98	75-125			
Ethanol	267	300	"	200		134	15-150			
Ethyl tert-butyl ether	10.1	0.50	"	10.0		101	65-130			
Ethylbenzene	10.7	0.50	"	10.0		107	70-130			
Methyl tert-butyl ether	10.0	0.50	"	10.0		100	50-140			
Toluene	10.2	0.50	"	10.0		102	70-120			
Xylenes (total)	32.8	0.50	"	30.0		109	80-125			
<i>Surrogate: Dibromofluoromethane</i>	2.21		"	2.50		88	75-130			
<i>Surrogate: 1,2-Dichloroethane-d4</i>	2.10		"	2.50		84	60-145			
<i>Surrogate: Toluene-d8</i>	2.22		"	2.50		89	70-130			
<i>Surrogate: 4-Bromofluorobenzene</i>	2.25		"	2.50		90	60-120			

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MPH1061  
Reported:  
09/22/06 11:49

**Volatile Organic Compounds by EPA Method 8260B - Quality Control**  
**TestAmerica - Morgan Hill, CA**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch 6I09005 - EPA 5030B P/T / EPA 8260B**

<b>Matrix Spike (6I09005-MS1)</b>	<b>Source: MPH1077-28</b>			<b>Prepared &amp; Analyzed: 09/09/06</b>						
tert-Amyl methyl ether	98.3	5.0	ug/l	100	ND	98	65-135			
Benzene	100	5.0	"	100	3.3	97	70-125			
tert-Butyl alcohol	1730	200	"	2000	ND	86	60-135			
Di-isopropyl ether	102	5.0	"	100	ND	102	70-130			
1,2-Dibromoethane (EDB)	97.2	5.0	"	100	ND	97	80-125			
1,2-Dichloroethane	97.6	5.0	"	100	ND	98	75-125			
Ethanol	2310	3000	"	2000	ND	116	15-150			
Ethyl tert-butyl ether	101	5.0	"	100	ND	101	65-130			
Ethylbenzene	198	5.0	"	100	87	111	70-130			
Methyl tert-butyl ether	102	5.0	"	100	ND	102	50-140			
Toluene	102	5.0	"	100	ND	102	70-120			
Xylenes (total)	374	5.0	"	300	45	110	80-125			
<i>Surrogate: Dibromofluoromethane</i>	2.20		"	2.50		88	75-130			
<i>Surrogate: 1,2-Dichloroethane-d4</i>	2.16		"	2.50		86	60-145			
<i>Surrogate: Toluene-d8</i>	2.25		"	2.50		90	70-130			
<i>Surrogate: 4-Bromofluorobenzene</i>	2.25		"	2.50		90	60-120			

<b>Matrix Spike Dup (6I09005-MSD1)</b>	<b>Source: MPH1077-28</b>			<b>Prepared &amp; Analyzed: 09/09/06</b>						
tert-Amyl methyl ether	97.4	5.0	ug/l	100	ND	97	65-135	0.9	25	
Benzene	97.1	5.0	"	100	3.3	94	70-125	3	15	
tert-Butyl alcohol	1810	200	"	2000	ND	90	60-135	5	35	
Di-isopropyl ether	99.4	5.0	"	100	ND	99	70-130	3	35	
1,2-Dibromoethane (EDB)	97.1	5.0	"	100	ND	97	80-125	0.1	15	
1,2-Dichloroethane	95.4	5.0	"	100	ND	95	75-125	2	10	
Ethanol	2640	3000	"	2000	ND	132	15-150	13	35	
Ethyl tert-butyl ether	97.8	5.0	"	100	ND	98	65-130	3	35	
Ethylbenzene	192	5.0	"	100	87	105	70-130	3	15	
Methyl tert-butyl ether	100	5.0	"	100	ND	100	50-140	2	25	
Toluene	99.3	5.0	"	100	ND	99	70-120	3	15	
Xylenes (total)	368	5.0	"	300	45	108	80-125	2	15	
<i>Surrogate: Dibromofluoromethane</i>	2.18		"	2.50		87	75-130			
<i>Surrogate: 1,2-Dichloroethane-d4</i>	2.15		"	2.50		86	60-145			
<i>Surrogate: Toluene-d8</i>	2.26		"	2.50		90	70-130			
<i>Surrogate: 4-Bromofluorobenzene</i>	2.30		"	2.50		92	60-120			

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MPH1061  
Reported:  
09/22/06 11:49

**Notes and Definitions**

LM MS and/or MSD above acceptance limits. See Blank Spike(LCS).  
DET Analyte DETECTED  
ND Analyte NOT DETECTED at or above the reporting limit or MDL, if MDL is specified  
NR Not Reported  
dry Sample results reported on a dry weight basis  
RPD Relative Percent Difference



# Chain of Custody Record

Project Name: Analytical for QMR sampling - 6148-060829-04-3  
 BP BU/AR Region/Enfos Segment: BP > Americas > West Coast > Retail > WCBU > CA > Central > 6148 > HistoricalBL  
 State or Lead Regulatory Agency: California Regional Water Quality Control Board - San Fr  
 Requested Due Date (mm/dd/yy): 10 Day TAT

On-site Time: <u>1200</u>	Temp: <u>620</u>
Off-site Time: <u>1430</u>	Temp: <u>650</u>
Sky Conditions: <u>cloudy</u>	
Meteorological Events:	
Wind Speed:	Direction:

Lab Name: <u>Sequoia</u>	BP/AR Facility No.: <u>6148</u>	Consultant/Contractor: <u>URS</u>
Address: <u>885 Jarvis Drive</u> <u>Morgan Hill, CA 95037</u>	BP/AR Facility Address: <u>5131 Shattuck Ave., Oakland, CA 94609</u>	Address: <u>1333 Broadway, Suite 800</u> <u>Oakland, CA 94612</u>
Lab PM: <u>Lisa Race / Katt Min</u>	California Global ID No.: <u>T0600100103</u>	Consultant/Contractor Project No.: <u>38487542</u>
Tele/Fax: <u>408.782.8156 / 408.782.6308</u>	Enfos Project No.: <u>G0C2J-0012</u>	Consultant/Contractor PM: <u>Barb Jakub</u>
BP/AR PM Contact: <u>Paul Supple</u>	Provision or RCOP: <u>Provision</u>	Tele/Fax: <u>510.874.3296 / 510.874.3268</u>
Address: <u>P.O. Box 6549</u> <u>Moraga, CA 94570</u>	Phase/WBS: <u>04 - Mon/Remed by Natural Attenuation</u>	Report Type & QC Level: <u>Level 1 with BDF</u>
Tele/Fax: <u>925.299.8891 / 925.299.8872</u>	Sub Phase/Task: <u>03 - Analytical</u>	E-mail EDD To: <u>jane_field@urscorp.com</u>
	Cost Element: <u>05 - Subcontracted Costs</u>	Invoice to: <u>Atlantic Richfield Company</u>

Item No.	Sample Description	Time	Date	Matrix			Laboratory No.	No. of Containers	Preservative					Requested Analysis						Sample Point Lat/Long and Comments					
				Soil/Solid	Water/Liquid	Air			Unpreserved	H <sub>2</sub> SO <sub>4</sub>	HNO <sub>3</sub>	HCl	Methanol	GR0 / BTEX (\$260)	MTBE, TAME, ETBE (\$260)	DIPE, TBA (\$260)	EDB, 1,2-DCA (\$260)	Ethanol (\$260)							
1	MW-1	1253	8-29	X			MPH1061	3						X	X	X	X								
2	MW-2	1307					02	1						X	X	X	X								
3	MW-3	1300					03	1						X	X	X	X								
4	MW-4	1323					04	1						X	X	X	X								
5	MW-5	1238					05	1						X	X	X	X								
6	MW-6	1350					06	1						X	X	X	X								
7	MW-7	1336					07	1						X	X	X	X								
8	TB-6148-082906	-					08	2																ON HOLD	
9																									
10																									

Sampler's Name: <u>Dave Walber</u>	Relinquished By / Affiliation	Date	Time	Accepted By / Affiliation	Date	Time
Sampler's Company: <u>Blaine Tech</u>	<u>David C. Hart</u>	<u>8/29/06</u>	<u>1520</u>	<u>[Signature]</u>	<u>8/29/06</u>	<u>1520</u>
Shipment Date:	<u>[Signature]</u>	<u>8/30/06</u>	<u>1355</u>	<u>[Signature]</u>	<u>8/30/06</u>	<u>1355</u>
Shipment Method:	<u>[Signature]</u>	<u>8/30/06</u>	<u>1450</u>	<u>[Signature]</u>	<u>8/30/06</u>	<u>1420</u>
Shipment Tracking No:				<u>1950</u>		

Special Instructions: CC to bpedf@broadbentinc.com

Seals In Place Yes  No  Temp Blank Yes  No  Cooler Temperature on Receipt 0.1 (C) Trip Blank Yes  No

# SEQUOIA ANALYTICAL SAMPLE RECEIPT LOG

CLIENT NAME: Bp.  
 REC. BY (PRINT) JULIE NG.  
 WORKORDER: MPH1061

DATE REC'D AT LAB: 8/30/06  
 TIME REC'D AT LAB: 1430  
 DATE LOGGED IN: 8/31/06

For Regulatory Purposes?  
 DRINKING WATER YES  NO   
 WASTE WATER YES  NO

CIRCLE THE APPROPRIATE RESPONSE	LAB SAMPLE #	DASH #	CLIENT ID	CONTAINER DESCRIPTION	PRESERVATIVE	pH	SAMPLE MATRIX	DATE SAMPLED	REMARKS: CONDITION (ETC.)
1. Custody Seal(s) Present / Absent Intact / Broken*									
2. Chain-of-Custody Present / Absent*									
3. Traffic Reports or Packing List: Present / Absent									
4. Airbill: Airbill / Sticker Present / Absent									
5. Airbill #:									
6. Sample Labels: Present / Absent									
7. Sample IDs: Listed / Not Listed on Chain-of-Custody									
8. Sample Condition: Intact / Broken* / Leaking*									
9. Does information on chain-of-custody, traffic reports and sample labels agree? Yes / No*									
10. Sample received within hold time? Yes / No*									
11. Adequate sample volume received? Yes / No*									
12. Proper preservatives used? Yes / No*									
13. Trip Blank / Temp Blank Received? (circle which, if yes) Yes / No*									
14. Read Temp: <u>2.1°C</u> Corrected Temp: <u>2.1°C</u> Is corrected temp 4 +/-2°C? Yes / No**									
(Acceptance range for samples requiring thermal pres.)									
**Exception (if any): METALS / DFF ON ICE or Problem COC									

JULIE 8/30/06 222057

\*IF CIRCLED, CONTACT PROJECT MANAGER AND ATTACH RECORD OF RESOLUTION.

## WELL GAUGING DATA

Project # 060829-DW-3 Date 8-29-06 Client ARCO 6148

Site 5131 Shattuck Ave Oakland

Well ID	Time	Well Size (in.)	Sheen / Odor	Depth to Immiscible Liquid (ft.)	Thickness of Immiscible Liquid (ft.)	Volume of Immiscibles Removed (ml)	Depth to water (ft.)	Depth to well bottom (ft.)	Survey Point: TOB or TOC	Notes
MW-1	1242	4					17.63	25.50		11.5'
MW-2	1246	4				17.33	25.67	12'		
MW-3	1244	4				17.60	25.58	10'		
MW-4	1220	4				16.04	26.08			
MW-5	1234	4				16.60	19.10	12'		
MW-6	1278	4				14.29	26.60			
MW-7	1234	4				15.00	27.00	└─┘		



## ARCO / BP WELL MONITORING DATA SHEET

BTS #: <u>060829-0W-3</u>	Station # <u>6148</u>
Sampler: <u>DW</u>	Date: <u>8-29-06</u>
Well I.D.: <u>MW-1</u>	Well Diameter: 2 3 <u>4</u> 6 8 _____
Total Well Depth: <u>25.50</u>	Depth to Water: <u>17.63</u>
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: <u>PVC</u> Grade	D.O. Meter (if req'd): <u>YSI</u> HACH

Well Diameter	Multiplier	Well Diameter	Multiplier
1"	0.04	4"	0.65
2"	0.16	6"	1.47
3"	0.37	Other	radius <sup>2</sup> * 0.163

Purge Method: <u>Bailer</u> Disposable Bailer Positive Air Displacement Electric Submersible Extraction Pump Other: _____	Sampling Method: <u>Bailer</u> <input checked="" type="checkbox"/> Disposable Bailer Extraction Port Other: _____
--	--

Top of Screen: 11.5' If well is listed as a no-purge, confirm that water level is below the top of screen. Otherwise, the well must be purged.

_____	X	_____	=	_____ Gals.
1 Case Volume (Gals.)		Specified Volumes		Calculated Volume

Time	Temp (°F)	pH	Conductivity (mS or <u>µS</u> )	Gals. Removed	Observations
<u>1253</u>	<u>67.7</u>	<u>6.6</u>	<u>606</u>	-	

Did well dewater? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Gallons actually evacuated: <u>  —  </u>
Sampling Time: <u>1253</u>	Sampling Date: <u>8-29-06</u>
Sample I.D.: <u>MW-1</u>	Laboratory: Pace <u>Sequoia</u> Other _____

Analyzed for: <u>MRD</u> <u>STEX</u> MTBE DRO <u>Oxy's</u> <u>1,2-DCAP</u> <u>EDB</u> <u>Ethanol</u> Other: _____
D.O. (if req'd): Pre-purge: _____ mg/L Post-purge: <u>1.5</u> mg/L
O.R.P. (if req'd): Pre-purge: _____ mV Post-purge: _____ mV

## ARCO / BP WELL MONITORING DATA SHEET

BTS #: <u>060829-0W-3</u>	Station # <u>6148</u>
Sampler: <u>DW</u>	Date: <u>8-29-06</u>
Well I.D.: <u>MW-2</u>	Well Diameter: 2 3 <u>(4)</u> 6 8 _____
Total Well Depth: <u>25.67</u>	Depth to Water: <u>17.33</u>
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: <u>(PVC)</u> Grade	D.O. Meter (if req'd): <u>(YSI)</u> HACH

Well Diameter	Multiplier	Well Diameter	Multiplier
1"	0.04	4"	0.65
2"	0.16	6"	1.47
3"	0.37	Other	radius <sup>2</sup> * 0.163

Purge Method: ~~Bailer~~  
 Disposable Bailer  
 Positive Air Displacement  
 Electric Submersible  
 Extraction Pump  
 Other: \_\_\_\_\_

Sampling Method: Bailer  
~~Disposable Bailer~~  
 Extraction Port  
 Other: \_\_\_\_\_

Top of Screen: 12' If well is listed as a no-purge, confirm that water level is below the top of screen. Otherwise, the well must be purged.

_____	X	_____	=	_____ Gals.
1 Case Volume (Gals.)		Specified Volumes		Calculated Volume

Time	Temp (°F)	pH	Conductivity (mS or <u>(µS)</u> )	Gals. Removed	Observations
1307	67.7	6.4	484	—	

Did well dewater? Yes  No  Gallons actually evacuated: —

Sampling Time: 1307 Sampling Date: 8-29-06

Sample I.D.: MW-2 Laboratory: Pace (Sequoia) Other \_\_\_\_\_

Analyzed for: (BRO) (STEX) MTBE DRO (Oxy's) (2-BCA) (EDB) (Ethanol) Other: \_\_\_\_\_

D.O. (if req'd):	Pre-purge:	mg/L	Post-purge:	0.8	mg/L
O.R.P. (if req'd):	Pre-purge:	mV	Post-purge:		mV

## ARCO / BP WELL MONITORING DATA SHEET

BTS #: <u>060829-DW-3</u>	Station # <u>6148</u>
Sampler: <u>DW</u>	Date: <u>8-29-06</u>
Well I.D.: <u>MW-3</u>	Well Diameter: 2 3 <u>4</u> 6 8 _____
Total Well Depth: <u>25.58</u>	Depth to Water: <u>17.60</u>
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: <u>PVC</u> Grade	D.O. Meter (if req'd): <u>YSI</u> HACH

Well Diameter	Multiplier	Well Diameter	Multiplier
1"	0.04	4"	0.65
2"	0.16	6"	1.47
3"	0.37	Other	radius <sup>2</sup> * 0.163

Purge Method: ~~Bailer~~  
                   ~~Disposable Bailer~~  
                   ~~Positive Air Displacement~~  
                   ~~Electric Submersible~~  
                   ~~Extraction Pump~~  
 Other: \_\_\_\_\_

Sampling Method: Bailer  
                       ~~Disposable Bailer~~  
                       ~~Extraction Port~~  
 Other: \_\_\_\_\_

Top of Screen: 10'      If well is listed as a no-purge, confirm that water level is below the top of screen. Otherwise, the well must be purged.

_____	X	_____	=	_____	Gals.
1 Case Volume (Gals.)		Specified Volumes		Calculated Volume	

Time	Temp (°F)	pH	Conductivity (mS or <u>µS</u> )	Gals. Removed	Observations
<u>1300</u>	<u>68.4</u>	<u>6.4</u>	<u>515</u>	-	

Did well dewater?    Yes      No      Gallons actually evacuated: \_\_\_\_\_

Sampling Time: 1300      Sampling Date: 8-29-06

Sample I.D.: MW-3      Laboratory: Pace Sequoia Other \_\_\_\_\_

Analyzed for: PRO STEX MTBE DRO Oxy's 1,2-DCP EDB Ethanol Other: \_\_\_\_\_

D.O. (if req'd):	Pre-purge:	mg/L	Post-purge: <u>1.0</u>	mg/L
O.R.P. (if req'd):	Pre-purge:	mV	Post-purge:	mV

## ARCO / BP WELL MONITORING DATA SHEET

BTS #: <u>060829-0W-3</u>	Station # <u>6148</u>
Sampler: <u>DW</u>	Date: <u>8-29-06</u>
Well I.D.: <u>MW-4</u>	Well Diameter: 2 3 <u>4</u> 6 8 _____
Total Well Depth: <u>26.08</u>	Depth to Water: <u>16.04</u>
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: <u>PVC</u> Grade	D.O. Meter (if req'd): <u>YSI</u> HACH

Well Diameter	Multiplier	Well Diameter	Multiplier
1"	0.04	4"	0.65
2"	0.16	6"	1.47
3"	0.37	Other	radius <sup>2</sup> * 0.163

Purge Method:  Bailer      Sampling Method:  Bailer

Disposable Bailer       Disposable Bailer

Positive Air Displacement       Extraction Port

Electric Submersible      Other: \_\_\_\_\_

Extraction Pump

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

Top of Screen: \_\_\_\_\_ If well is listed as a no-purge, confirm that water level is below the top of screen. Otherwise, the well must be purged.

<u>6.5</u>	X	<u>3</u>	=	<u>19.5</u>	Gals.
1 Case Volume (Gals.)		Specified Volumes		Calculated Volume	

Time	Temp (°F)	pH	Conductivity (mS or <u>µS</u> )	Gals. Removed	Observations
1315	69.7	6.5	422	6.5	
1317	70.2	6.4	415	13.0	
1318	70.8	6.5	404	19.5	

Did well dewater? Yes  No  Gallons actually evacuated: 19.5

Sampling Time: 1323      Sampling Date: 8-29-06

Sample I.D.: MW-4      Laboratory: Pace Sequoia Other \_\_\_\_\_

Analyzed for:  PFOA  PTEX MTBE DRO  Oxy's  1,2-DCM  EDB  Ethanol      Other: \_\_\_\_\_

D.O. (if req'd):	Pre-purge:	mg/L	Post-purge:	mg/L
			<u>1.2</u>	
O.R.P. (if req'd):	Pre-purge:	mV	Post-purge:	mV

## ARCO / BP WELL MONITORING DATA SHEET

BTS #: <u>060829-0W-3</u>	Station # <u>6148</u>
Sampler: <u>DW</u>	Date: <u>8-29-06</u>
Well I.D.: <u>MW-5</u>	Well Diameter: 2 3 <u>4</u> 6 8 _____
Total Well Depth: <u>19.10</u>	Depth to Water: <u>16.60</u>
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: <u>PVC</u> Grade	D.O. Meter (if req'd): <u>YSI</u> HACH

Well Diameter	Multiplier	Well Diameter	Multiplier
1"	0.04	4"	0.65
2"	0.16	6"	1.47
3"	0.37	Other	radius <sup>2</sup> * 0.163

Purge Method: ~~Bailer~~  
 Disposable Bailer  
 Positive Air Displacement  
 Electric Submersible  
 Extraction Pump  
 Other: \_\_\_\_\_

Sampling Method: ~~Bailer~~  
 X Disposable Bailer  
 Extraction Port  
 Other: \_\_\_\_\_

Top of Screen: 12' If well is listed as a no-purge, confirm that water level is below the top of screen. Otherwise, the well must be purged.

_____	X	_____	=	_____ Gals.
1 Case Volume (Gals.)		Specified Volumes		Calculated Volume

Time	Temp (°F)	pH	Conductivity (mS or <u>µS</u> )	Gals. Removed	Observations
<u>1238</u>	<u>66.1</u>	<u>6.4</u>	<u>430</u>	-	

Did well dewater? Yes  No  Gallons actually evacuated:     

Sampling Time: 1238 Sampling Date: 8-29-06

Sample I.D.: MW- Laboratory: Pace Sequoia Other \_\_\_\_\_

Analyzed for: DRO STEX MTBE DRO Oxys 1,2-DCAP EDB Ethanol Other: \_\_\_\_\_

D.O. (if req'd):	Pre-purge:	mg/L	Post-purge:	mg/L
O.R.P. (if req'd):	Pre-purge:	mV	Post-purge:	mV

## ARCO / BP WELL MONITORING DATA SHEET

BTS #: <u>060829-0W-3</u>	Station # <u>6148</u>
Sampler: <u>DW</u>	Date: <u>8-29-06</u>
Well I.D.: <u>MW-6</u>	Well Diameter: 2 3 <u>4</u> 6 8 _____
Total Well Depth: <u>26.60</u>	Depth to Water: <u>14.29</u>
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: <u>PVC</u> Grade	D.O. Meter (if req'd): <u>YSI</u> HACH

Well Diameter	Multiplier	Well Diameter	Multiplier
1"	0.04	4"	0.65
2"	0.16	6"	1.47
3"	0.37	Other	radius <sup>2</sup> * 0.163

Purge Method: <input type="checkbox"/> Bailer <input type="checkbox"/> Disposable Bailer <input type="checkbox"/> Positive Air Displacement <input checked="" type="checkbox"/> Electric Submersible <input type="checkbox"/> Extraction Pump Other: _____	Sampling Method: <input type="checkbox"/> Bailer <input checked="" type="checkbox"/> Disposable Bailer <input type="checkbox"/> Extraction Port Other: _____
---	---

Top of Screen: \_\_\_\_\_ If well is listed as a no-purge, confirm that water level is below the top of screen. Otherwise, the well must be purged.

<u>8</u>	x	<u>3</u>	=	<u>24</u>	Gals.
1 Case Volume (Gals.)		Specified Volumes		Calculated Volume	

Time	Temp (°F)	pH	Conductivity (mS or <u>µS</u> )	Gals. Removed	Observations
<u>1342</u>	<u>68.5</u>	<u>6.5</u>	<u>402</u>	<u>8</u>	
<u>1343</u>	<u>68.6</u>	<u>6.5</u>	<u>408</u>	<u>16</u>	
<u>1345</u>	<u>68.5</u>	<u>6.5</u>	<u>409</u>	<u>24</u>	

Did well dewater? Yes  No  Gallons actually evacuated: 24

Sampling Time: 1350 Sampling Date: 8-29-06

Sample I.D.: MW-6 Laboratory: Pace Sequoia Other \_\_\_\_\_

Analyzed for:  DRO  BTEX MTBE DRO  Ony's  1,2-DCA  EDB  Ethanol Other: \_\_\_\_\_

D.O. (if req'd):	Pre-purge:	mg/L		Post-purge:	mg/L
O.R.P. (if req'd):	Pre-purge:	mV		Post-purge:	mV

## ARCO / BP WELL MONITORING DATA SHEET

BTS #: <u>060829-0W-3</u>	Station # <u>6148</u>
Sampler: <u>DW</u>	Date: <u>8-29-06</u>
Well I.D.: <u>MW-7</u>	Well Diameter: 2 3 <u>(4)</u> 6 8 _____
Total Well Depth: <u>27.00</u>	Depth to Water: <u>15.00</u>
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: <u>PVC</u> Grade	D.O. Meter (if req'd): <u>YSI</u> HACH

Well Diameter	Multiplier	Well Diameter	Multiplier
1"	0.04	4"	0.65
2"	0.16	6"	1.47
3"	0.37	Other	radius <sup>2</sup> * 0.163

Purge Method:  Bailer      Sampling Method:  Bailer  
 Disposable Bailer       Disposable Bailer  
 Positive Air Displacement       Extraction Port  
 Electric Submersible      Other: \_\_\_\_\_  
 Extraction Pump

Top of Screen: \_\_\_\_\_ If well is listed as a no-purge, confirm that water level is below the top of screen. Otherwise, the well must be purged.

<u>7.8</u>	x	<u>3</u>	=	<u>23.4</u>	Gals.
1 Case Volume (Gals.)		Specified Volumes		Calculated Volume	

Time	Temp (°F)	pH	Conductivity (mS or <u>µS</u> )	Gals. Removed	Observations
<u>1328</u>	<u>69.9</u>	<u>6.4</u>	<u>380</u>	<u>7.8</u>	
<u>1329</u>	<u>70.0</u>	<u>6.4</u>	<u>374</u>	<u>15.6</u>	
<u>1331</u>	<u>70.1</u>	<u>6.4</u>	<u>372</u>	<u>23.4</u>	

Did well dewater? Yes  No  Gallons actually evacuated: 23.4

Sampling Time: 1336      Sampling Date: 8-29-06

Sample I.D.: MW-7      Laboratory: Pace Sequoia Other \_\_\_\_\_

Analyzed for:  TRD  STEX MTBE DRO  Oxy's  1,2-DCA  EDB  Ethanol Other: \_\_\_\_\_

D.O. (if req'd):	Pre-purge:	mg/L	Post-purge:	1.6	mg/L
O.R.P. (if req'd):	Pre-purge:	mV	Post-purge:		mV

**BP GEM OIL COMPANY TYPE A BILL OF LADING**

SOURCE RECORD **BILL OF LADING** FOR NON-HAZARDOUS PURGEWATER RECOVERED FROM GROUNDWATER WELLS AT BP GEM OIL COMPANY FACILITIES IN THE STATE OF CALIFORNIA. THE NON-HAZARDOUS PURGE- WATER WHICH HAS BEEN RECOVERED FROM GROUND- WATER WELLS IS COLLECTED BY THE CONTRACTOR, MADE UP INTO LOADS OF APPROPRIATE SIZE AND HAULED BY DILLARD ENVIRONMENTAL TO THE ALTAMONT LANDFILL AND RESOURCE RECOVERY FACILITY IN LIVERMORE, CALIFORNIA.

The contractor performing this work is BLAINE TECH SERVICES, INC. (BTS), 1680 Rogers Avenue, San Jose, CA 95112 (phone [408] 573-0555). Blaine Tech Services, Inc. is authorized by BP GEM OIL COMPANY to recover, collect, apportion into loads the Non-Hazardous Well Purgewater that is drawn from wells at the BP GEM Oil Company facility indicated below and deliver that purgewater to BTS. Transport routing of the Non-Hazardous Well Purgewater may be direct from one BP GEM facility to the designated destination point; from one BP GEM facility to the designated destination point via another BP GEM facility; from a BP GEM facility to the designated destination point via the contractor's facility, or any combination thereof. The Non-Hazardous Well Purgewater is and remains the property of BP GEM Oil Company.

This **Source Record BILL OF LADING** was initiated to cover the recovery of Non-Hazardous Well Purgewater from wells at the BP GEM Oil Company facility described below:

**6148**

Station # \_\_\_\_\_

**5131 Shattuck Ave Oakland**

Station Address \_\_\_\_\_

Total Gallons Collected From Groundwater Monitoring Wells:

**67**

---

added equip. \_\_\_\_\_ any other adjustments \_\_\_\_\_  
 rinse water 3

**TOTAL GALS. RECOVERED** 70 loaded onto BTS vehicle # 63

BTS event # \_\_\_\_\_ time \_\_\_\_\_ date \_\_\_\_\_  
060829-0W-3 1415 8/29/06

signature David C. Helt

\*\*\*\*\*

REC'D AT \_\_\_\_\_ time \_\_\_\_\_ date \_\_\_\_\_  
 \_\_\_\_\_ / \_\_\_\_ / \_\_\_\_

unloaded by \_\_\_\_\_  
 signature \_\_\_\_\_





**APPENDIX B**

**GEOTRACKER UPLOAD CONFIRMATION**

## Electronic Submittal Information

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Your EDF file has been successfully uploaded!

**Confirmation Number:** 9509165406  
**Date/Time of Submittal:** 10/23/2006 11:47:59 AM  
**Facility Global ID:** T0600100103  
**Facility Name:** ARCO #6148  
**Submittal Title:** 3Q 06 GW Monitoring  
**Submittal Type:** GW Monitoring Report

[Click here to view the detections report for this upload.](#)

<b>ARCO #6148</b> 5131 SHATTUCK OAKLAND, CA 94609	<b>Regional Board - Case #: 01-0111</b> SAN FRANCISCO BAY RWQCB (REGION 2) <b>Local Agency (lead agency) - Case #: RO0000077</b> ALAMEDA COUNTY LOP - (SP)
---	---

CONF #	TITLE	QUARTER
9509165406	3Q 06 GW Monitoring	Q3 2006
SUBMITTED BY	SUBMIT DATE	STATUS
Broadbent & Associates, Inc.	10/23/2006	PENDING REVIEW

### SAMPLE DETECTIONS REPORT

# FIELD POINTS SAMPLED	7
# FIELD POINTS WITH DETECTIONS	4
# FIELD POINTS WITH WATER SAMPLE DETECTIONS ABOVE MCL	2
SAMPLE MATRIX TYPES	WATER

### METHOD QA/QC REPORT

METHODS USED	8260FA,8260TPH
TESTED FOR REQUIRED ANALYTES?	Y
LAB NOTE DATA QUALIFIERS	Y

### QA/QC FOR 8021/8260 SERIES SAMPLES

TECHNICAL HOLDING TIME VIOLATIONS	0
METHOD HOLDING TIME VIOLATIONS	0
LAB BLANK DETECTIONS ABOVE REPORTING DETECTION LIMIT	0
LAB BLANK DETECTIONS	0
DO ALL BATCHES WITH THE 8021/8260 SERIES INCLUDE THE FOLLOWING?	
- LAB METHOD BLANK	Y
- MATRIX SPIKE	Y
- MATRIX SPIKE DUPLICATE	Y
- BLANK SPIKE	Y
- SURROGATE SPIKE	Y

### WATER SAMPLES FOR 8021/8260 SERIES

MATRIX SPIKE / MATRIX SPIKE DUPLICATE(S) % RECOVERY BETWEEN 65-135%	N
MATRIX SPIKE / MATRIX SPIKE DUPLICATE(S) RPD LESS THAN 30%	Y
SURROGATE SPIKES % RECOVERY BETWEEN 85-115%	Y
BLANK SPIKE / BLANK SPIKE DUPLICATES % RECOVERY BETWEEN 70-130%	Y

**SOIL SAMPLES FOR 8021/8260 SERIES**

MATRIX SPIKE / MATRIX SPIKE DUPLICATE(S) % RECOVERY BETWEEN 65-135% n/a  
MATRIX SPIKE / MATRIX SPIKE DUPLICATE(S) RPD LESS THAN 30% n/a  
SURROGATE SPIKES % RECOVERY BETWEEN 70-125% n/a  
BLANK SPIKE / BLANK SPIKE DUPLICATES % RECOVERY BETWEEN 70-130% n/a

**FIELD QC SAMPLES**

<u>SAMPLE</u>	<u>COLLECTED</u>	<u>DETECTIONS &gt; REPD</u>
QCTB SAMPLES	N	0
QCEB SAMPLES	N	0
QCAB SAMPLES	N	0

Logged in as BROADBENT-C (CONTRACTOR)

CONTACT SITE ADMINISTRATOR.

#6148

<b>Electronic Submittal Information</b>	
<a href="#">Main Menu</a>   <a href="#">View/Add Facilities</a>   <a href="#">Upload EDD</a>   <a href="#">Check EDD</a>	
<b>UPLOADING A GEO_WELL FILE</b>	
<b>Processing is complete. No errors were found!</b> <b>Your file has been successfully submitted!</b>	
<b>Submittal Title:</b>	<b>3Q 06 GEO_WELL</b>
<b>Submittal Date/Time:</b>	<b>10/23/2006 11:46:25 AM</b>
<b>Confirmation Number:</b>	<b>9823870599</b>
<b><a href="#">Back to Main Menu</a></b>	

Logged in as BROADBENT-C  
(CONTRACTOR)

[CONTACT SITE ADMINISTRATOR.](#)