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Atlantic Richfield Company  
(a BP affiliated company)

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

31 October 2006

Re: Third Quarter 2006 Ground-Water Monitoring Report  
Atlantic Richfield Company (a BP affiliated company) Station #4494  
566 Hegenberger Road  
Oakland, California  
ACEH Case #RO0000204

“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 Ground-Water Monitoring Report**  
Atlantic Richfield Company Station #4494  
566 Hegenberger Road  
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*

31 October 2006

Project No. 06-08-623

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



31 October 2006

Project No. 06-08-623

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

Attn.: Mr. Paul Supple

Re: Third Quarter 2006 Ground-Water Monitoring Report, Atlantic Richfield Company (a BP affiliated company) Station #4494, 566 Hegenberger Road, Oakland, California  
ACEH Case #RO0000204

Dear Mr. Supple:

Attached is the *Third Quarter 2006 Ground-Water Monitoring Report* for Atlantic Richfield Company Station #4494 (herein referred to as Station #4494) located at 566 Hegenberger Road, Oakland, California (Property). This report presents results of ground-water monitoring conducted at Station #4494 during the 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,

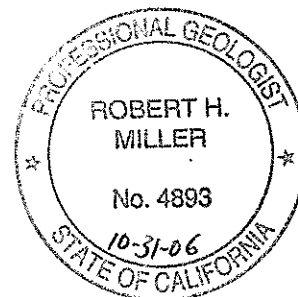
BROADBENT & ASSOCIATES, INC.

A handwritten signature in black ink, appearing to read 'Thomas A. Venus'.

Thomas A. Venus, P.E.  
Senior Engineer

A handwritten signature in black ink, appearing to read '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)  
Electronic copy uploaded to GeoTracker

## STATION #4494 GROUND-WATER MONITORING REPORT

Facility: #4494	Address:	566 Hegenberger Road, Oakland, California
Environmental Business Manager:		Mr. Paul Supple
Consulting Co./Contact Persons:		Broadbent & Associates, Inc.(BAI)/Rob Miller & Tom Venus (530) 566-1400
Consultant Project No.:		06-08-623
Primary Agency/Regulatory ID No.:		Alameda County Environmental Health (ACEH) ACEH Case #RO0000204
Facility Permits/Permitting Agency:		NA

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

1. Prepared and submitted Second Quarter 2006 status report. Work performed by BAI.
2. Conducted ground-water monitoring/sampling for Third Quarter 2006. Work performed on 27 September 2006 by Blaine Tech Services for URS.

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

1. Prepared and submitted this Third Quarter 2006 Ground-Water Monitoring Report (contained herein).
2. No environmental field work is currently anticipated during the Fourth Quarter 2006.
3. Prepare and submit Fourth Quarter 2006 Status Report.
4. Prepare and submit request for case closure.

### SUMMARY:

Current phase of project:	<b>Ground-water monitoring/sampling</b>
Frequency of ground-water monitoring:	<b>Semi-Annually (1Q, 3Q) = MW-1, MW-3 through MW-7, and RW-1</b>
Frequency of ground-water sampling:	<b>Semi-Annually (1Q, 3Q) = MW-1 and MW-6 Annually (3Q) = MW-3 through MW-5, MW-7, and RW-1</b>
Is free product (FP) present on-site:	<b>No</b>
Bulk soil removed to date:	<b>1,550 cubic yards</b>
Current remediation techniques:	<b>None</b>
Depth to ground water (below TOC):	<b>6.13 ft (MW-6) to 9.40 ft (MW-3)</b>
General ground-water flow direction:	<b>North-northwest</b>
Approximate hydraulic gradient:	<b>0.02 ft/ft</b>

### DISCUSSION:

Third quarter 2006 ground-water monitoring and sampling was conducted at Station #4494 on 27 September 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 6.13 ft at MW-6 to 9.40 ft at MW-3. Resulting ground-water surface elevations ranged from 4.59 ft above mean sea level in well MW-4 to 2.20 ft at well MW-7. Water level elevations were between historic minimum and maximum ranges for each well through 22 September 2003 (since the well elevations were resurveyed), as summarized in Table 1. Co-monitored water level elevations from the nearby Shell-branded Service Station at 540 Hegenberger Road were not used to create elevation contours due to suspicions regarding the accuracy of surveyed elevations at that site. Water level elevations from Station #4494 yielded a potentiometric ground-water flow direction and gradient to the north-northwest at

approximately 0.02 ft/ft, within the range of 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.

Consistent with the current ground-water sampling schedule, water samples were collected from the seven wells. No irregularities were reported during sampling, although well MW-1 dewatered during purging prior to 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 significant irregularities were encountered during laboratory analysis of the samples. MTBE was detected above the laboratory reporting limit in three of the seven wells sampled at concentrations up to 3.7 micrograms per liter ( $\mu\text{g/L}$ ) in well MW-7. TBA was detected above the laboratory reporting limit in just well MW-7 at a concentration of 120  $\mu\text{g/L}$ . The remaining analytes 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, Table 2, and Appendix B. A copy of the Laboratory Analytical Report, including chain of custody documentation is provided in Appendix A. The co-monitored elevation and analytical data for the nearby Shell-branded service station at 540 Hegenberger Road is provided in Appendix C.

#### **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, California). 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, 27 September 2006, Station #4494, 566 Hegenberger Road, Oakland, California
- Table 1. Summary of Ground-Water Monitoring Data: Relative Water Elevations and Laboratory Analyses, Station #4494, 566 Hegenberger Rd, Oakland, CA
- Table 2. Summary of Fuel Additives Analytical Data, Station #4494, 566 Hegenberger Rd, Oakland, CA
- Table 3. Historical Ground-Water Flow Direction and Gradient, Station #4494, 566 Hegenberger Rd, Oakland, CA

- Appendix A. URS Ground-Water Sampling Data Package (Includes Laboratory Report and Chain of Custody Documentation, Field and Laboratory Procedures, and Field Data Sheets)
- Appendix B. Historical Ground-Water Data
- Appendix C. Joint Monitoring Data
- Appendix D. GeoTracker Upload Confirmation



**LEGEND**

- Shell monitoring well
- ⊕ Tank backfill well
- ⊕ Well used for ground-water extraction
- ⊕ ARCO monitoring well
- ⊕ ARCO recovery well
- ▲ Canal sampling location
- ▲ Well designation
- Well
 

ELEV
GRO
Benzene
MTBE
Q or A
- Ground-water elevation (ft MSL)
- Concentration of GRO/TPH, Benzene, and MTBE in ground water (µg/L)
- Sampling frequency
- SA(1,3)
- Sampled semi-annually, 1st & 3rd quarters
- < Well not used to generate contours
- NS Not detected at or above specified laboratory reporting limits
- A(3) Not sampled
- Sampled annually during 3rd quarter
- Approximate ground-water flow direction and gradient (ft/ft)
- Ground-water elevation contour (ft MSL) (dashed where estimated)

NOTES: SITE MAP ADAPTED FROM CAMBRIA ENVIRONMENTAL FIGURES. SITE DIMENSIONS AND FACILITY LOCATIONS NOT VERIFIED.

Well	ELEV	GRO	Benzene	MTBE	Q or A	Sampling frequency
BW-D7	4.29	410	<0.50	2.9		
MW-37	2.22	555	1.70	24.5		
MW-21	1.74	276	<0.50	3.89		
MW-1	4.24	<50	<0.50	7.28		SA(1,3)
MW-57	2.09	528	<0.50	28.6		
MW-47	2.01	426	<0.50	16.5		
MW-4	4.59	<50	<0.50	<0.50		A(3)
MW-5	3.84	<50	<0.50	<0.50		A(3)
RW-1	3.93	<50	<0.50	<0.50		A(3)
MW-6	4.28	<50	<0.50	<0.50		SA(1,3)
MW-3	2.22	<50	<0.50	2.8		A(3)
MW-7	2.20	<50	<0.50	3.7		A(3)

**BROADBENT & ASSOCIATES, INC.**  
 ENGINEERING, WATER RESOURCES & ENVIRONMENTAL  
 1324 Mangrove Ave. Suite 212, Chico, California 95926  
 Project No.: 06-02-623 Date: 10/30/06

Station #4494  
 566 Hegenberger Road  
 Oakland, California

Ground-Water Elevation Contour  
 and Analytical Summary Map  
 27 September 2006

0 60 120  
 SCALE (ft)

Drawing 1

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

Station #4494, 566 Hegenberger Rd., 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>															
6/20/2000	--	a	106.1	13.0	--	7.02	99.08	<1,000	<10	<10	<10	<20	4000/ 15000	--	--
9/28/2000	--	a	106.1	13.0	--	7.07	99.03	<500	<5.0	<5.0	<5.0	<5.0	3000/ 18800	--	--
12/17/2000	--		106.1	13.0	--	6.95	99.15	<50	<0.5	<0.5	<0.5	<0.5	10,600	--	--
3/28/2001	--		106.1	13.0	--	6.88	99.22	<500	<5.0	<5.0	<5.0	<5.0	16,900	--	--
6/21/2001	--		106.1	13.0	--	7.18	98.92	<1,000	<10	<10	<10	<10	3,400	--	--
9/23/2001	--	a	106.1	13.0	--	7.11	98.99	<1,000	<10	<10	<10	<10	2200/1800	--	--
12/31/2001	--		106.1	13.0	--	6.91	99.19	<5,000	<50	<50	<50	<50	14,000	--	--
3/14/2002	--		106.1	13.0	--	6.85	99.25	<5,000	<50	<50	<50	<50	6,200	--	--
4/17/2002	--		106.1	13.0	--	5.89	100.21	<5,000	<50	<50	<50	<50	4,500	--	--
8/8/2002	--	a, b	106.1	13.0	--	7.19	98.91	230	<2.0	<2.0	<2.0	<2.0	660/440	4.5	7.8
12/12/2002	--	a, d	106.1	13.0	--	7.28	98.82	630	<5.0	<5.0	<5.0	<5.0	1300/830	1.9	7.6
3/20/2003	--	e	106.1	13.0	--	6.91	99.19	1,100	<5.0	<5.0	<5.0	<5.0	780	2.2	8.5
6/23/2003	--		106.1	13.0	--	7.61	98.49	530	<5.0	<5.0	<5.0	<5.0	260	1.2	7.6
9/22/2003	--		11.36	13.0	--	7.78	3.58	<50	<0.50	<0.50	<0.50	<0.50	17	3.5	7.7
12/03/2003	P		11.36	13.0	--	7.90	3.46	410	2.6	9.8	<2.5	11	260	2.1	6.9
03/18/2004	P		11.36	13.0	--	6.68	4.68	<250	<2.5	<2.5	<2.5	<2.5	130	2.4	7.0
05/25/2004	P		11.36	13.0	--	7.55	3.81	<250	<2.5	<2.5	<2.5	<2.5	120	1.3	7.0
09/22/2004	P		11.36	13.0	--	6.78	4.58	150	1.5	<1.0	<1.0	<1.0	140	3.8	7.12
12/22/2004	P		11.36	13.0	--	6.44	4.92	<500	<5.0	<5.0	<5.0	<5.0	74	1.7	6.8
02/23/2005	P		11.36	13.0	--	7.03	4.33	<50	<0.50	<0.50	<0.50	<0.50	6.0	2.1	7.2
06/27/2005	P		11.36	13.0	--	6.66	4.70	<250	<2.5	<2.5	<2.5	<2.5	150	3.6	7.4
08/31/2005	P		11.36	13.0	--	6.67	4.69	<50	<0.50	<0.50	<0.50	<0.50	0.82	3.8	7.2
03/08/2006	P	i	11.36	13.0	--	6.27	5.09	<50	<0.50	<0.50	<0.50	<0.50	6.8	3.9	7.5
9/27/2006	P		11.36	13.0	--	7.12	4.24	<50	<0.50	<0.50	<0.50	<0.50	2.8	3.1	7.1
<b>MW-3</b>															
6/20/2000	--	a	106.29	7.00	--	9.18	97.11	<50	<0.5	<0.5	<0.5	<1.0	27/27	--	--
9/28/2000	--	a	106.29	7.00	--	9.33	96.96	<50	<0.5	<0.5	<0.5	<1.0	4.3/<2.0	--	--
12/17/2000	--		106.29	7.00	--	9.31	96.98	<50	<0.5	<0.5	<0.5	<0.5	<2.5	--	--
3/28/2001	--		106.29	7.00	--	9.23	97.06	<50	<0.5	<0.5	<0.5	<0.5	7.42	--	--
6/21/2001	--		106.29	7.00	--	9.58	96.71	<50	<0.5	<0.5	<0.5	<0.5	<2.5	--	--



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

Station #4494, 566 Hegenberger Rd., 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>															
9/23/2001	--		106.29	7.00	--	9.76	96.53	<50	<0.5	<0.5	<0.5	<0.5	<2.5	--	--
12/31/2001	--		106.29	7.00	--	8.78	97.51	<50	<0.5	<0.5	<0.5	<0.5	<2.5	--	--
3/14/2002	--		106.29	7.00	--	9.25	97.04	<50	<0.5	<0.5	<0.5	<0.5	4.0	--	--
4/17/2002	--		106.29	7.00	--	8.44	97.85	<50	<0.5	<0.5	<0.5	<0.5	<2.5	--	--
8/8/2002	--		106.29	7.00	--	9.63	96.66	<50	<0.5	<0.5	<0.5	<0.5	<2.5	2.6	7.9
12/12/2002	--	d	106.29	7.00	--	9.51	96.78	<50	<0.5	<0.5	<0.5	<0.5	<2.5	3.0	6.8
3/20/2003	--	e	106.29	7.00	--	9.4	96.89	<50	<0.50	<0.50	<0.50	<0.50	6.1	1.2	7.0
6/23/2003	--		106.29	7.00	--	9.36	96.93	<50	<0.50	<0.50	<0.50	<0.50	5.2	0.9	8.2
9/22/2003	--		11.62	7.00	--	9.48	2.14	<50	<0.50	<0.50	<0.50	<0.50	3.9	1.4	7.9
12/03/2003	--	g	11.62	7.00	--	9.44	2.18	--	--	--	--	--	--	--	--
03/18/2004	NP		11.62	7.00	--	8.76	2.86	<50	<0.50	<0.50	<0.50	<0.50	4.6	0.8	7.3
05/25/2004	--	g	11.62	7.00	--	9.55	2.07	--	--	--	--	--	--	--	--
09/22/2004	NP		11.62	7.00	--	9.44	2.18	<50	<0.50	<0.50	<0.50	<0.50	4.7	--	--
12/22/2004	--		11.62	7.00	--	9.06	2.56	--	--	--	--	--	--	--	--
02/23/2005	NP		11.62	7.00	--	8.75	2.87	<50	<0.50	<0.50	<0.50	<0.50	<0.50	1.6	8.2
06/27/2005	--		11.62	7.00	--	9.35	2.27	--	--	--	--	--	--	--	--
08/31/2005	NP		11.62	7.00	--	9.31	2.31	<50	<0.50	<0.50	<0.50	<0.50	1.3	0.5	7.7
03/08/2006	--		11.62	7.00	--	9.03	2.59	--	--	--	--	--	--	--	--
9/27/2006	NP		11.62	7.00	--	9.40	2.22	<50	<0.50	<0.50	<0.50	<0.50	2.8	1.5	7.4
<b>MW-4</b>															
6/20/2000	--		107.4	7.0	--	8.49	98.91	<50	<0.5	<0.5	<0.5	<1.0	<10	--	--
9/28/2000	--		107.4	7.0	--	8.7	98.7	<50	<0.5	<0.5	<0.5	<1.0	<2.5	--	--
12/17/2000	--		107.4	7.0	--	8.53	98.87	<50	<0.5	<0.5	<0.5	<0.5	<2.5	--	--
3/28/2001	--		107.4	7.0	--	8.59	98.81	<50	<0.5	<0.5	<0.5	<0.5	<2.5	--	--
6/21/2001	--		107.4	7.0	--	8.79	98.61	<50	<0.5	<0.5	<0.5	<0.5	<2.5	--	--
9/23/2001	--		107.4	7.0	--	8.67	98.73	<50	<0.5	<0.5	<0.5	<0.5	<2.5	--	--
12/31/2001	--		107.4	7.0	--	8.03	99.37	<50	<0.5	<0.5	<0.5	<0.5	<2.5	--	--
3/14/2002	--		107.4	7.0	--	8.48	98.92	<50	<0.5	<0.5	<0.5	<0.5	<2.5	--	--
4/17/2002	--		107.4	7.0	--	7.79	99.61	<50	<0.5	<0.5	<0.5	<0.5	5.6	--	--
8/8/2002	--		107.4	7.0	--	8.9	98.5	<50	<0.5	<0.5	<0.5	<0.5	<2.5	4.5	8.0

**Table 1. Summary of Ground-Water Monitoring Data: Relative Water Elevations and Laboratory Analyses**  
**Station #4494, 566 Hegenberger Rd., 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>															
12/12/2002	--	d	107.4	7.0	--	9.07	98.33	<50	<0.5	<0.5	<0.5	<0.5	<2.5	5.6	6.2
3/20/2003	--	e	107.4	7.0	--	8.85	98.55	<50	<0.50	<0.50	<0.50	0.50	<0.50	4.8	7.8
6/23/2003	--		107.4	7.0	--	9.26	98.14	<50	<0.50	<0.50	<0.50	<0.50	<0.50	6.3	7.5
9/22/2003	--		13.18	7.0	--	9.22	3.96	<50	<0.50	<0.50	<0.50	<0.50	<0.50	7.4	8.0
12/03/2003	--	g	13.18	7.0	--	9.48	3.70	--	--	--	--	--	--	--	--
03/18/2004	NP		13.18	7.0	--	8.32	4.86	<50	<0.50	<0.50	<0.50	<0.50	<0.50	4.5	8.4
05/25/2004	--	g	13.18	7.0	--	9.03	4.15	--	--	--	--	--	--	--	--
09/22/2004	NP		13.18	7.0	--	8.62	4.56	<50	<0.50	<0.50	<0.50	<0.50	<0.50	3.7	--
12/22/2004	--		13.18	7.0	--	7.80	5.38	--	--	--	--	--	--	--	--
02/23/2005	NP		13.18	7.0	--	7.74	5.44	<50	<0.50	<0.50	<0.50	<0.50	<0.50	1.1	7.3
06/27/2005	--		13.18	7.0	--	8.38	4.80	--	--	--	--	--	--	--	--
08/31/2005	NP		13.18	7.0	--	8.15	5.03	<50	<0.50	<0.50	<0.50	<0.50	<0.50	1.7	6.9
03/08/2006	--		13.18	7.0	--	7.84	5.34	--	--	--	--	--	--	--	--
9/27/2006	NP		13.18	7.0	--	8.59	4.59	<50	<0.50	<0.50	<0.50	<0.50	<0.50	2.1	6.6
<b>MW-5</b>															
6/20/2000	--		105.19	8.0	--	7.65	97.54	<50	<0.5	<0.5	<0.5	<1.0	<10	--	--
9/28/2000	--		105.19	8.0	--	6.82	98.37	<50	<0.5	<0.5	<0.5	<1.0	<2.5	--	--
12/17/2000	--		105.19	8.0	--	6.5	98.69	<50	<0.5	<0.5	<0.5	<0.5	<2.5	--	--
3/28/2001	--		105.19	8.0	--	6.34	98.85	<50	<0.5	<0.5	<0.5	<0.5	<2.5	--	--
6/21/2001	--		105.19	8.0	--	7.88	97.31	<50	<0.5	<0.5	<0.5	<0.5	<2.5	--	--
9/23/2001	--		105.19	8.0	--	6.98	98.21	<50	<0.5	<0.5	<0.5	<0.5	<2.5	--	--
12/31/2001	--		105.19	8.0	--	5.01	100.18	<50	<0.5	<0.5	<0.5	<0.5	<2.5	--	--
3/14/2002	--		105.19	8.0	--	5.93	99.26	<50	<0.5	<0.5	<0.5	<0.5	<2.5	--	--
4/17/2002	--		105.19	8.0	--	5.37	99.82	<50	<0.5	<0.5	<0.5	<0.5	8.5	--	--
8/8/2002	--	b	105.19	8.0	--	6.85	98.34	<50	<0.5	<0.5	<0.5	<0.5	<2.5	0.7	7.3
12/12/2002	--	d	105.19	8.0	--	6.53	98.66	<50	2.2	4.7	1.3	6.8	<2.5	1.3	7.0
3/20/2003	--	e	105.19	8.0	--	6.4	98.79	<50	<0.50	<0.50	<0.50	<0.50	<0.50	2.7	7.1
6/23/2003	--		105.19	8.0	--	6.72	98.47	<50	<0.50	<0.50	<0.50	<0.50	<0.50	1.3	7.2
9/22/2003	--	f	10.63	8.0	--	6.76	3.87	<50	<0.50	<0.50	<0.50	<0.50	<0.50	1.7	7.2
12/03/2003	--	g	10.63	8.0	--	6.56	4.07	--	--	--	--	--	--	--	--

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

Station #4494, 566 Hegenberger Rd., 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-5 Cont.</b>															
03/18/2004	P	g	10.63	8.0	--	5.98	4.65	<50	<0.50	<0.50	<0.50	<0.50	<0.50	0.7	7.3
05/25/2004	--		10.63	8.0	--	6.77	3.86	--	--	--	--	--	--	--	--
09/22/2004	P		10.63	8.0	--	6.90	3.73	<50	<0.50	<0.50	<0.50	<0.50	<0.50	1.0	7.17
12/22/2004	--		10.63	8.0	--	6.18	4.45	--	--	--	--	--	--	--	--
02/23/2005	P		10.63	8.0	--	5.36	5.27	<50	<0.50	<0.50	<0.50	<0.50	<0.50	1.0	7.2
06/27/2005	--		10.63	8.0	--	6.26	4.37	--	--	--	--	--	--	--	--
08/31/2005	P		10.63	8.0	--	6.70	3.93	<50	<0.50	<0.50	<0.50	<0.50	1.9	0.8	7.2
03/08/2006	--		10.63	8.0	--	5.12	5.51	--	--	--	--	--	--	--	--
9/27/2006	P		10.63	8.0	--	6.69	3.94	<50	<0.50	<0.50	<0.50	<0.50	<0.50	1.1	7.2
<b>MW-6</b>															
6/20/2000	--	d e f g	105.07	8.0	--	6.24	98.83	<50	<0.5	<0.5	<0.5	<1.0	<10	--	--
9/28/2000	--		105.07	8.0	--	6.45	98.62	<50	<0.5	<0.5	<0.5	<1.0	<2.5	--	--
12/17/2000	--		105.07	8.0	--	6.26	98.81	<50	<0.5	<0.5	<0.5	<0.5	<2.5	--	--
3/28/2001	--		105.07	8.0	--	6.1	98.97	<50	<0.5	<0.5	<0.5	<0.5	<2.5	--	--
6/21/2001	--		105.07	8.0	--	7.68	97.39	<50	<0.5	<0.5	<0.5	<0.5	<2.5	--	--
9/23/2001	--		105.07	8.0	--	6.72	98.35	<50	<0.5	<0.5	<0.5	<0.5	<2.5	--	--
12/23/2001	--		105.07	8.0	--	4.68	100.39	<50	<0.5	<0.5	<0.5	<0.5	<2.5	--	--
3/14/2002	--		105.07	8.0	--	5.55	99.52	<50	<0.5	<0.5	<0.5	<0.5	<2.5	--	--
4/17/2002	--		105.07	8.0	--	4.96	100.11	<50	<0.5	<0.5	<0.5	<0.5	7.0	--	--
8/8/2002	--		105.07	8.0	--	6.46	98.61	<50	<0.5	<0.5	<0.5	<0.5	<2.5	0.7	7.3
12/12/2002	--		105.07	8.0	--	6.18	98.89	65	3.3	8.4	2.7	14	<2.5	1.1	6.9
3/20/2003	--		105.07	8.0	--	6.18	98.89	<50	<0.50	<0.50	<0.50	<0.50	<0.50	2.2	7.0
6/23/2003	--		105.07	8.0	--	6.15	98.92	<50	<0.50	<0.50	<0.50	<0.50	<0.50	2.0	7.1
9/22/2003	--		10.41	8.0	--	6.43	3.98	<50	<0.50	<0.50	<0.50	<0.50	<0.50	2.5	7.0
12/03/2003	--		10.41	8.0	--	6.12	4.29	--	--	--	--	--	--	--	--
03/18/2004	P		10.41	8.0	--	5.40	5.01	<50	<0.50	<0.50	<0.50	<0.50	<0.50	0.9	7.2
05/25/2004	--		10.41	8.0	--	6.30	4.11	--	--	--	--	--	--	--	--
09/22/2004	P		10.41	8.0	--	6.43	3.98	<50	<0.50	<0.50	<0.50	<0.50	<0.50	1.3	7.01
12/22/2004	--		10.41	8.0	--	5.73	4.68	--	--	--	--	--	--	--	--
02/23/2005	P		10.41	8.0	--	4.61	5.80	<50	<0.50	<0.50	<0.50	<0.50	5.0	2.6	7.1

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

Station #4494, 566 Hegenberger Rd., 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>															
06/27/2005	--		10.41	8.0	--	5.78	4.63	--	--	--	--	--	--	--	--
08/31/2005	P		10.41	8.0	--	6.19	4.22	<50	<0.50	<0.50	<0.50	<0.50	<0.50	0.9	7.0
03/08/2006	P	j	10.41	8.0	--	4.59	5.82	200	<0.50	<0.50	<0.50	<0.50	<0.50	2.8	7.3
9/27/2006	P		<b>10.41</b>	<b>8.0</b>	--	<b>6.13</b>	<b>4.28</b>	<b>&lt;50</b>	<b>&lt;0.50</b>	<b>&lt;0.50</b>	<b>&lt;0.50</b>	<b>&lt;0.50</b>	<b>&lt;0.50</b>	<b>1.8</b>	<b>7.1</b>
<b>MW-7</b>															
6/20/2000	--	a	105.52	9.0	--	8.65	96.87	<50	<0.5	<0.5	<0.5	<1.0	13/13	--	--
9/28/2000	--	a	105.52	9.0	--	8.75	96.77	<50	<0.5	<0.5	<0.5	<1.0	136/261	--	--
12/17/2000	--		105.52	9.0	--	8.62	96.9	<50	<0.5	<0.5	<0.5	<0.5	27.1	--	--
3/28/2001	--		105.52	9.0	--	8.66	96.86	<50	<0.5	<0.5	<0.5	<0.5	51.5	--	--
6/21/2001	--		105.52	9.0	--	8.84	96.68	<50	<0.5	<0.5	<0.5	<0.5	53	--	--
9/23/2001	--	a	105.52	9.0	--	8.75	96.77	<50	<0.5	<0.5	<0.5	<0.5	35/21	--	--
12/23/2001	--		105.52	9.0	--	7.79	97.73	<50	<0.5	<0.5	<0.5	<0.5	440	--	--
3/14/2002	--		105.52	9.0	--	8.3	97.22	<50	<0.5	<0.5	<0.5	<0.5	18	--	--
4/17/2002	--		105.52	9.0	--	7.43	98.09	<50	<0.5	<0.5	<0.5	<0.5	67	--	--
8/8/2002	--	a, b	105.52	9.0	--	8.61	96.91	55	<0.5	<0.5	<0.5	<0.5	130/100	1.1	7.1
12/12/2002	--	a, d, h	105.52	9.0	--	8.55	--	75	<0.5	<0.5	<0.5	<0.5	160/130	1.2	7.0
3/20/2003	--	e	105.52	9.0	--	8.38	--	<50	<0.50	<0.50	<0.50	<0.50	32	2.2	7.2
6/23/2003	--		105.52	9.0	--	8.37	--	<50	<0.50	<0.50	<0.50	<0.50	14	0.8	7.1
9/22/2003	--	f	10.51	9.0	--	8.95	1.56	<50	<0.50	<0.50	<0.50	<0.50	5.3	2.2	7.2
12/03/2003	P		10.51	9.0	--	8.86	1.65	<50	<0.50	<0.50	<0.50	<0.50	4.2	0.1	7.2
03/18/2004	P		10.51	9.0	--	8.03	2.48	<50	<0.50	<0.50	<0.50	<0.50	3.0	1.0	7.2
05/25/2004	P		10.51	9.0	--	8.37	2.14	<50	<0.50	<0.50	<0.50	<0.50	4.1	0.7	7.1
09/22/2004	P		10.51	9.0	--	8.90	1.61	<50	<0.50	<0.50	<0.50	<0.50	2.3	0.9	7.27
12/22/2004	P		10.51	9.0	--	7.90	2.61	<50	<0.50	<0.50	<0.50	<0.50	2.7	2.8	7.2
02/23/2005	P		10.51	9.0	--	8.23	2.28	180	<0.50	<0.50	<0.50	<0.50	<0.50	1.3	7.1
06/27/2005	P		10.51	9.0	--	8.24	2.27	<50	<0.50	<0.50	<0.50	<0.50	4.2	0.1	6.7
08/31/2005	P		10.51	9.0	--	8.27	2.24	<50	<0.50	<0.50	<0.50	<0.50	2.5	1.6	7.2
03/08/2006	--		10.51	9.0	--	7.73	2.78	--	--	--	--	--	--	--	--
9/27/2006	P		<b>10.51</b>	<b>9.0</b>	--	<b>8.31</b>	<b>2.20</b>	<b>&lt;50</b>	<b>&lt;0.50</b>	<b>&lt;0.50</b>	<b>&lt;0.50</b>	<b>&lt;0.50</b>	<b>3.7</b>	<b>1.1</b>	<b>7.3</b>

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

Station #4494, 566 Hegenberger Rd., 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>RW-1</b>															
6/20/2000	--		--	--	--	8.21	--	<50	<0.5	1.1	<0.5	<1.0	<10	--	--
9/28/2000	--		--	--	--	8.28	--	<50	<0.5	<0.5	<0.5	<1.0	<2.5	--	--
12/17/2000	--		--	--	--	8.29	--	<50	<0.5	<0.5	<0.5	<0.5	<2.5	--	--
3/28/2001	--		--	--	--	8.16	--	<50	<0.5	<0.5	<0.5	<0.5	<2.5	--	--
6/21/2001	--		--	--	--	9.37	--	160	5.1	<0.5	1.1	3.2	<2.5	--	--
9/23/2001	--		--	--	--	8.75	--	57	<0.5	<0.5	<0.5	<0.5	<2.5	--	--
12/31/2001	--		--	--	--	6.8	--	520	3.1	<0.5	6.4	4.7	<2.5	--	--
3/14/2002	--		--	--	--	7.86	--	240	3.7	<0.5	0.7	2.8	<2.5	--	--
4/17/2002	--		--	--	--	7.13	--	<50	<0.5	1.6	<0.5	0.72	<2.5	--	--
8/8/2002	--	a, c	--	--	--	8.48	--	<50	<0.5	<0.5	<0.5	<0.5	3.7/<0.5	1.1	7.0
12/12/2002	--		--	--	--	8.63	--	<50	<0.5	<0.5	<0.5	<0.5	<2.5	1.9	6.9
3/20/2003	--	e	--	--	--	8.08	--	<50	<0.50	<0.50	<0.50	<0.50	<0.50	1.9	7.3
6/23/2003	--		--	--	--	8.28	--	<50	<0.50	<0.50	<0.50	<0.50	<0.50	1.1	7.3
9/22/2003	--	f	11.97	--	--	8.42	3.55	<50	<0.50	<0.50	<0.50	<0.50	<0.50	1.8	7.1
12/03/2003	--	g	11.97	--	--	8.05	3.92	--	--	--	--	--	--	--	--
03/18/2004	P		11.97	--	--	7.18	4.79	50	0.54	<0.50	<0.50	<0.50	<0.50	0.9	7.1
05/25/2004	--	g	11.97	--	--	8.32	3.65	--	--	--	--	--	--	--	--
09/22/2004	P		11.97	--	--	8.42	3.55	<50	<0.50	<0.50	<0.50	<0.50	<0.50	1.0	6.7
12/22/2004	--		11.97	--	--	7.23	4.74	--	--	--	--	--	--	--	--
02/23/2005	P		11.97	--	--	6.89	5.08	190	<0.50	<0.50	<0.50	<0.50	<0.50	0.71	7.2
06/27/2005	--		11.97	--	--	7.86	4.11	--	--	--	--	--	--	--	--
08/31/2005	P		11.97	--	--	8.20	3.77	<50	<0.50	<0.50	<0.50	<0.50	<0.50	0.7	7.2
03/08/2006	--		11.97	--	--	6.49	5.48	--	--	--	--	--	--	--	--
9/27/2006	P		11.97	--	--	8.04	3.93	<50	<0.50	<0.50	<0.50	<0.50	<0.50	1.1	6.9

SYMBOLS AND ABBREVIATIONS:

--/-- = Not calculated, surveyed, available, applicable, analyzed  
< = Not detected at or above specified laboratory reporting limit  
DO = Dissolved oxygen  
DTW = Depth to water in ft bgs  
ft bgs = Feet below ground surface  
ft MSL = Feet above mean sea level  
GRO = Gasoline range organics  
GWE = Groundwater elevation in ft MSL  
mg/L = Milligrams per liter  
MTBE = Methyl tert-butyl ether analyzed by EPA Method 8021B prior to 3/20/03 unless otherwise noted  
NP = Well not purged prior to sampling  
P = Well purged prior to sampling  
TPH-g = Total petroleum hydrocarbons as gasoline analyzed by EPA Method 8015M prior to 3/20/03 and by 8260b henceforth  
TOC = Top of casing in ft MSL  
µg/L = Micrograms per liter

FOOTNOTES:

a = MTBE confirmation analyzed by EPA Method 8260.  
b = Hydrocarbon pattern is present in the requested fuel quantitation range for TPH-g/GRO but does not resemble the pattern of the requested fuel.  
c = This sample was analyzed beyond the EPA recommended holding time. The results may still be useful for their intended purpose.  
d = Analyzed by EPA Method 8215B/8021B for TPHg/GRO.  
e = TPH-g, BTEX, and MTBE analyzed by EPA method 8260B beginning on 2003 sampling event (03/20/03).  
f = TOC elevations were re-surveyed on July 18, 2003 by URS Corporation of Pleasant Hill, CA.  
g = Wells MW-3, MW-4, MW-5, MW-6 and RW-1 are sampled semi-annually in the 1st and 3rd quarters.  
h = TOC was found shattered on December 12, 2002. TOC unknown.  
i = Initial analysis for GRO and MTBE within holding time but failed QA/QC criteria.  
j = Hydrocarbon result for GRO partly due to individual peak(s) in quantitative range.

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 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 has been changed from C6-C10 to C4-C12.

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

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 #4494, 566 Hegenberger Rd., 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>									
3/20/2003	<1,000	640	780	<5.0	<5.0	<5.0	---	---	
6/23/2003	<1,000	<200	260	<5.0	<5.0	<5.0	<5.0	<5.0	
9/22/2003	<100	250	17	<0.50	<0.50	<0.50	---	---	
12/03/2003	<500	<100	260	<2.5	<2.5	<2.5	--	--	
03/18/2004	<500	<100	130	<2.5	<2.5	<2.5	<2.5	<2.5	
05/25/2004	<500	<100	120	<2.5	<2.5	<2.5	<2.5	<2.5	
09/22/2004	<200	<40	140	<1.0	<1.0	<1.0	<1.0	<1.0	
12/22/2004	<1,000	<200	74	<5.0	<5.0	<5.0	<5.0	<5.0	
02/23/2005	<100	<20	6.0	<0.50	<0.50	2.4	<0.50	<0.50	
06/27/2005	<500	<100	150	<2.5	<2.5	<2.5	<2.5	<2.5	
08/31/2005	<100	<20	0.82	<0.50	<0.50	<0.50	<0.50	<0.50	a
03/08/2006	<300	<20	6.8	<0.50	<0.50	<0.50	<0.50	<0.50	b
9/27/2006	<300	<20	2.8	<0.50	<0.50	<0.50	<0.50	<0.50	
<b>MW-3</b>									
3/20/2003	<100	<20	601	<0.50	<0.50	1.1	---	---	
6/23/2003	<100	<20	5.2	<0.50	<0.50	0.75	<0.50	<0.50	
9/22/2003	<100	<20	3.9	<0.50	<0.50	<0.50	---	---	
03/18/2004	<100	<20	4.6	<0.50	<0.50	<0.50	<0.50	<0.50	
09/22/2004	<100	<20	4.7	<0.50	<0.50	<0.50	<0.50	<0.50	
02/23/2005	<100	<20	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	
08/31/2005	<100	<20	1.3	<0.50	<0.50	<0.50	<0.50	<0.50	
9/27/2006	<300	<20	2.8	<0.50	<0.50	<0.50	<0.50	<0.50	
<b>MW-4</b>									
3/20/2003	<100	<20	<0.50	<0.50	<0.50	<0.50	---	---	
6/23/2003	<100	<20	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	
9/22/2003	<100	<20	<0.50	<0.50	<0.50	<0.50	---	---	
03/18/2004	<100	<20	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	
09/22/2004	<100	<20	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	
02/23/2005	<100	<20	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	
08/31/2005	<100	<20	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	

**Table 2. Summary of Fuel Additives Analytical Data  
Station #4494, 566 Hegenberger Rd., Oakland, CA**

Well and Sample Date	Concentrations in (µg/L)								Comments
	Ethanol	TBA	MTBE	DIPE	ETBE	TAME	1,2-DCA	EDB	
<b>MW-4 Cont.</b>									
9/27/2006	<300	<20	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	
<b>MW-5</b>									
3/20/2003	<100	<20	<0.50	<0.50	<0.50	<0.50	---	---	
6/23/2003	<100	<20	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	
9/22/2003	<100	<20	<0.50	<0.50	<0.50	<0.50	---	---	
03/18/2004	<100	<20	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	
09/22/2004	<100	<20	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	
02/23/2005	<100	<20	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	
08/31/2005	<100	<20	1.9	<0.50	<0.50	<0.50	<0.50	<0.50	
9/27/2006	<300	<20	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	
<b>MW-6</b>									
3/20/2003	<100	<20	<0.50	<0.50	<0.50	<0.50	---	---	
6/23/2003	<100	<20	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	
9/22/2003	<100	<20	<0.50	<0.50	<0.50	<0.50	---	---	
03/18/2004	<100	<20	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	
09/22/2004	<100	<20	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	
02/23/2005	<100	140	5.0	<0.50	<0.50	<0.50	<0.50	<0.50	
08/31/2005	<100	<20	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	
03/08/2006	<300	<20	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	b
9/27/2006	<300	<20	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	
<b>MW-7</b>									
3/20/2003	<100	<20	21	<0.50	<0.50	0.62	---	---	
6/23/2003	<100	170	14	<0.50	<0.50	<0.50	<0.50	<0.50	
9/22/2003	<100	170	5.3	<0.50	<0.50	<0.50	---	---	
12/03/2003	<100	85	4.2	<0.50	<0.50	<0.50	--	--	
03/18/2004	<100	<20	3.0	<0.50	<0.50	<0.50	<0.50	<0.50	a
05/25/2004	<100	43	4.1	<0.50	<0.50	<0.50	<0.50	<0.50	
09/22/2004	<100	<20	2.3	<0.50	<0.50	<0.50	<0.50	<0.50	
12/22/2004	<100	34	2.7	<0.50	<0.50	<0.50	<0.50	<0.50	
02/23/2005	<100	<20	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	



**Table 2. Summary of Fuel Additives Analytical Data  
Station #4494, 566 Hegenberger Rd., Oakland, CA**

Well and Sample Date	Concentrations in (µg/L)								Comments
	Ethanol	TBA	MTBE	DIPE	ETBE	TAME	1,2-DCA	EDB	
<b>MW-7 Cont.</b>									
06/27/2005	<100	86	4.2	<0.50	<0.50	<0.50	<0.50	<0.50	
08/31/2005	<100	41	2.5	<0.50	<0.50	<0.50	<0.50	<0.50	
9/27/2006	<300	120	3.7	<0.50	<0.50	<0.50	<0.50	<0.50	
<b>RW-1</b>									
3/20/2003	<100	<20	<0.50	<0.50	<0.50	<0.50	---	---	
6/23/2003	<100	<20	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	
9/22/2003	<100	<20	<0.50	<0.50	<0.50	<0.50	---	---	
03/18/2004	<100	<20	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	
09/22/2004	<100	<20	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	
02/23/2005	<100	<20	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	
08/31/2005	<100	<20	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	
9/27/2006	<300	<20	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	

SYMBOLS AND ABBREVIATIONS:

< = Not detected at or above specified laboratory reporting limit

--/-- = Not analyzed, sampled, available

1,2-DCA = 1,2-Dichloroethane

DIPE = Di-isopropyl ether

EDB = 1,2-Dibromoethane

ETBE = Ethyl tert-butyl ether

MTBE = Methyl tert-butyl ether

TAME = tert-Amyl methyl ether

TBA = tert-Butyl alcohol

µg/L = Micrograms per liter

FOOTNOTES:

a = The continuing calibration verification for ethanol was outside of client contractual acceptance limits. However, it was within method acceptance limits and should be useful for its intended purpose.

b = Possible high bias due to CCV falling outside acceptance criteria for TAME, MTBE, 1,2-DCA, and/or ETBE.

NOTES:

All fuel oxygenate compounds were analyzed using EPA Method 8260B.

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 #4494, 566 Hegenberger Rd., Oakland, CA**

<b>Date Sampled</b>	<b>Approximate Flow Direction</b>	<b>Approximate Hydraulic Gradient</b>
6/20/2000	North-Northeast	0.02
9/28/2000	North	0.02
12/17/2000	North-Northwest	0.01
3/28/2001	Northwest	0.01
6/21/2001	North	0.02
9/23/2001	North	0.02
12/31/2001	North-Northwest	0.02
3/14/2002	North-Northwest	0.02
4/14/2002	Northwest	0.01
8/8/2002	North-Northwest	0.02
12/12/2002	North-Northwest	0.02
3/20/2003	North-Northwest	0.02
6/23/2003	Northwest	0.01
9/22/2003	Northwest	0.02
12/3/2003	Northwest	0.01
3/18/2004	North-Northwest	0.01
5/25/2004	North-Northwest	0.01
9/22/2004	North-Northwest	0.02
12/22/2004	Northwest	0.02
2/23/2005	Northwest	0.02 (on-Site)
6/27/2005	Northwest	0.02 (on-Site)
8/31/2005	Northwest	0.02 (on-Site)
3/8/2006	Northwest	0.03 (on-Site)
9/27/2006	North-Northwest	0.02

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 GROUND-WATER SAMPLING DATA PACKAGE (INCLUDES LABORATORY  
REPORT AND CHAIN OF CUSTODY DOCUMENTATION, FIELD AND  
LABORATORY PROCEDURES, AND FIELD DATA SHEETS)



October 23, 2006

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

**Groundwater Sampling Data Package**

Station # 4494  
566 Hegenberger Rd.  
Oakland, CA 94621  
Field Work Performed: 09/27/06

**General Information**

*Data Submittal Prepared/Reviewed by:* Chani Leimbach

*Phone Number:* 916-679-2313

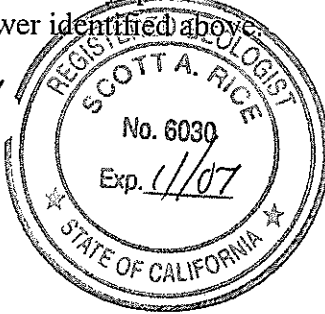
*On-Site Supplier Representative:* Blaine Tech Services, Inc.

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

*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. Laboratory data has not been reviewed by a URS chemist at the time of this data transmittal. Any questions concerning this submittal should be addressed to the Preparer/Reviewer identified above.

Scott Rice, P.G.  
Portfolio Manager



**Attachments**

Field and Laboratory Procedures  
Laboratory Report  
Chain of Custody Documentation  
Field Data Sheets  
    Well Gauging Data  
    Well Monitoring Data Sheets

URS Group, Inc.  
Crown Corporate Center  
2870 Gateway Oaks Drive, Suite 150  
Sacramento, CA 95833-3200  
Tel: 916.679.2000  
Fax: 916.679.2833

## FIELD AND LABORATORY PROCEDURES

### Sampling Procedures

Sampling equipment is thoroughly cleaned prior to the collection of each sample. The sampling procedure for each well includes measuring the water level and checking for the presence of separate-phase hydrocarbons (SPH), using either an electronic indicator and a clear Teflon® bailer or an oil-water interface probe. If the measured water level in the well is below the top of screen, the well may be sampled without purging. For non-purge wells, one set of water quality parameters are collected and the well is sampled with a disposable bailer. Wells not containing SPH that do not qualify as non-purge wells are purged of approximately three casing volumes of water (or to dryness) using a submersible pump, centrifugal pump, gas displacement pump, or bailer. The equipment and purging methods used for the current sampling event are noted on the attached field data sheets. During purging, temperature, pH, electrical conductivity, and dissolved oxygen are monitored in order to document that these parameters are stable prior to collecting samples. After purging, water levels are allowed to partially recover. Groundwater samples (both purge and no-purge) are collected using a clean disposable Teflon® bailer, placed into appropriate EPA-approved containers, labeled, logged onto chain-of-custody documents, and transported on ice to a California state-certified laboratory.

### Decontamination Procedures

Prior to sampling each well, reels and pumps will be decontaminated with a steam cleaner. Sensitive equipment such as the water level sounder are sprayed with a non-phosphate soap and deionized water solution and rinsed with deionized water. All water used for equipment decontamination is collected and contained in a truck-mounted water tank.

### Laboratory Procedures

The groundwater samples are analyzed for the presence of GRO (gasoline range organics C4 – C12) by using EPA Method 8015B due to capacity issues at the laboratory; benzene, toluene, ethylbenzene, total xylenes, 1,2-DCA, and EDB are analyzed by EPA Method 8260, and lead is analyzed by EPA Method 6010B. The methods of analysis for the groundwater samples are documented in the certified laboratory analytical report.

### Purge and Rinsate Water Disposal

Water generated during well sampling and equipment cleaning is pumped into a truck-mounted water tank. The water is transported to the Blaine Tech Services holding facility in Roseville, California, for temporary storage. The water is then transported by Dillard Environmental Services to the Altamont Landfill and Resource Recovery Facility in Altamont, California for disposal.

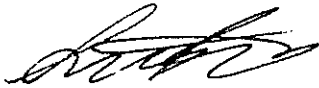
19 October, 2006

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

RE: ARCO #4494, Oakland, CA  
Work Order: MPJ0275

Enclosed are the results of analyses for samples received by the laboratory on 09/28/06 15:03. 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 #4494, Oakland, CA  
Project Number: G0C2G-0010  
Project Manager: Lynelle Onishi

MPJ0275  
Reported:  
10/19/06 12:39

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
MW-1	MPJ0275-01	Water	09/27/06 15:30	09/28/06 15:03
MW-3	MPJ0275-02	Water	09/27/06 14:02	09/28/06 15:03
MW-4	MPJ0275-03	Water	09/27/06 13:45	09/28/06 15:03
MW-5	MPJ0275-04	Water	09/27/06 14:40	09/28/06 15:03
MW-6	MPJ0275-05	Water	09/27/06 14:25	09/28/06 15:03
MW-7	MPJ0275-06	Water	09/27/06 14:50	09/28/06 15:03
RW-1	MPJ0275-07	Water	09/27/06 15:04	09/28/06 15:03
TB-4494-092706	MPJ0275-08	Water	09/27/06 00:00	09/28/06 15:03

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 #4494, Oakland, CA  
Project Number: G0C2G-0010  
Project Manager: Lynelle Onishi

MPJ0275  
Reported:  
10/19/06 12:39

**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 (MPJ0275-01) Water Sampled: 09/27/06 15:30 Received: 09/28/06 15:03</b>									
Gasoline Range Organics (C4-C12)	ND	50	ug/l	1	6J11009	10/11/06	10/11/06	LUFT GCMS	
Surrogate: 1,2-Dichloroethane-d4		111 %	60-145		"	"	"	"	
<b>MW-3 (MPJ0275-02) Water Sampled: 09/27/06 14:02 Received: 09/28/06 15:03</b>									
Gasoline Range Organics (C4-C12)	ND	50	ug/l	1	6J11009	10/11/06	10/11/06	LUFT GCMS	
Surrogate: 1,2-Dichloroethane-d4		112 %	60-145		"	"	"	"	
<b>MW-4 (MPJ0275-03) Water Sampled: 09/27/06 13:45 Received: 09/28/06 15:03</b>									
Gasoline Range Organics (C4-C12)	ND	50	ug/l	1	6J11009	10/11/06	10/11/06	LUFT GCMS	
Surrogate: 1,2-Dichloroethane-d4		117 %	60-145		"	"	"	"	
<b>MW-5 (MPJ0275-04) Water Sampled: 09/27/06 14:40 Received: 09/28/06 15:03</b>									
Gasoline Range Organics (C4-C12)	ND	50	ug/l	1	6J11009	10/11/06	10/11/06	LUFT GCMS	
Surrogate: 1,2-Dichloroethane-d4		116 %	60-145		"	"	"	"	
<b>MW-6 (MPJ0275-05) Water Sampled: 09/27/06 14:25 Received: 09/28/06 15:03</b>									
Gasoline Range Organics (C4-C12)	ND	50	ug/l	1	6J11009	10/11/06	10/11/06	LUFT GCMS	
Surrogate: 1,2-Dichloroethane-d4		119 %	60-145		"	"	"	"	
<b>MW-7 (MPJ0275-06) Water Sampled: 09/27/06 14:50 Received: 09/28/06 15:03</b>									
Gasoline Range Organics (C4-C12)	ND	50	ug/l	1	6J11009	10/11/06	10/11/06	LUFT GCMS	
Surrogate: 1,2-Dichloroethane-d4		120 %	60-145		"	"	"	"	
<b>RW-1 (MPJ0275-07) Water Sampled: 09/27/06 15:04 Received: 09/28/06 15:03</b>									
Gasoline Range Organics (C4-C12)	ND	50	ug/l	1	6J11009	10/11/06	10/11/06	LUFT GCMS	
Surrogate: 1,2-Dichloroethane-d4		121 %	60-145		"	"	"	"	

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

Project: ARCO #4494, Oakland, CA  
Project Number: G0C2G-0010  
Project Manager: Lynelle Onishi

MPJ0275  
Reported:  
10/19/06 12:39

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

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>MW-1 (MPJ0275-01) Water Sampled: 09/27/06 15:30 Received: 09/28/06 15:03</b>									
tert-Amyl methyl ether	ND	0.50	ug/l	1	6J11009	10/11/06	10/11/06	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>2.8</b>	0.50	"	"	"	"	"	"	
Toluene	ND	0.50	"	"	"	"	"	"	
Xylenes (total)	ND	0.50	"	"	"	"	"	"	
<i>Surrogate: Dibromofluoromethane</i>		108 %	75-130		"	"	"	"	
<i>Surrogate: 1,2-Dichloroethane-d4</i>		111 %	60-145		"	"	"	"	
<i>Surrogate: Toluene-d8</i>		97 %	70-130		"	"	"	"	
<i>Surrogate: 4-Bromofluorobenzene</i>		82 %	60-120		"	"	"	"	
<b>MW-3 (MPJ0275-02) Water Sampled: 09/27/06 14:02 Received: 09/28/06 15:03</b>									
tert-Amyl methyl ether	ND	0.50	ug/l	1	6J11009	10/11/06	10/11/06	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>2.8</b>	0.50	"	"	"	"	"	"	
Toluene	ND	0.50	"	"	"	"	"	"	
Xylenes (total)	ND	0.50	"	"	"	"	"	"	
<i>Surrogate: Dibromofluoromethane</i>		108 %	75-130		"	"	"	"	
<i>Surrogate: 1,2-Dichloroethane-d4</i>		112 %	60-145		"	"	"	"	
<i>Surrogate: Toluene-d8</i>		97 %	70-130		"	"	"	"	
<i>Surrogate: 4-Bromofluorobenzene</i>		82 %	60-120		"	"	"	"	

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

Project: ARCO #4494, Oakland, CA  
Project Number: G0C2G-0010  
Project Manager: Lynelle Onishi

MPJ0275  
Reported:  
10/19/06 12:39

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

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>MW-4 (MPJ0275-03) Water Sampled: 09/27/06 13:45 Received: 09/28/06 15:03</b>									
tert-Amyl methyl ether	ND	0.50	ug/l	1	6J11009	10/11/06	10/11/06	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>		110 %	75-130		"	"	"	"	
<i>Surrogate: 1,2-Dichloroethane-d4</i>		117 %	60-145		"	"	"	"	
<i>Surrogate: Toluene-d8</i>		99 %	70-130		"	"	"	"	
<i>Surrogate: 4-Bromofluorobenzene</i>		78 %	60-120		"	"	"	"	
<b>MW-5 (MPJ0275-04) Water Sampled: 09/27/06 14:40 Received: 09/28/06 15:03</b>									
tert-Amyl methyl ether	ND	0.50	ug/l	1	6J11009	10/11/06	10/11/06	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>		108 %	75-130		"	"	"	"	
<i>Surrogate: 1,2-Dichloroethane-d4</i>		116 %	60-145		"	"	"	"	
<i>Surrogate: Toluene-d8</i>		98 %	70-130		"	"	"	"	
<i>Surrogate: 4-Bromofluorobenzene</i>		82 %	60-120		"	"	"	"	

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

Project: ARCO #4494, Oakland, CA  
Project Number: G0C2G-0010  
Project Manager: Lynelle Onishi

MPJ0275  
Reported:  
10/19/06 12:39

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

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>MW-6 (MPJ0275-05) Water Sampled: 09/27/06 14:25 Received: 09/28/06 15:03</b>									
tert-Amyl methyl ether	ND	0.50	ug/l	1	6J11009	10/11/06	10/11/06	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>		110 %	75-130		"	"	"	"	
<i>Surrogate: 1,2-Dichloroethane-d4</i>		119 %	60-145		"	"	"	"	
<i>Surrogate: Toluene-d8</i>		96 %	70-130		"	"	"	"	
<i>Surrogate: 4-Bromofluorobenzene</i>		80 %	60-120		"	"	"	"	
<b>MW-7 (MPJ0275-06) Water Sampled: 09/27/06 14:50 Received: 09/28/06 15:03</b>									
tert-Amyl methyl ether	ND	0.50	ug/l	1	6J11009	10/11/06	10/11/06	EPA 8260B	
Benzene	ND	0.50	"	"	"	"	"	"	
<b>tert-Butyl alcohol</b>	<b>120</b>	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>3.7</b>	0.50	"	"	"	"	"	"	
Toluene	ND	0.50	"	"	"	"	"	"	
Xylenes (total)	ND	0.50	"	"	"	"	"	"	
<i>Surrogate: Dibromofluoromethane</i>		110 %	75-130		"	"	"	"	
<i>Surrogate: 1,2-Dichloroethane-d4</i>		120 %	60-145		"	"	"	"	
<i>Surrogate: Toluene-d8</i>		96 %	70-130		"	"	"	"	
<i>Surrogate: 4-Bromofluorobenzene</i>		79 %	60-120		"	"	"	"	

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

Project: ARCO #4494, Oakland, CA  
Project Number: G0C2G-0010  
Project Manager: Lynelle Onishi

MPJ0275  
Reported:  
10/19/06 12:39

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

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
RW-1 (MPJ0275-07) Water Sampled: 09/27/06 15:04 Received: 09/28/06 15:03									
tert-Amyl methyl ether	ND	0.50	ug/l	1	6J11009	10/11/06	10/11/06	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>		109 %	75-130		"	"	"	"	
<i>Surrogate: 1,2-Dichloroethane-d4</i>		121 %	60-145		"	"	"	"	
<i>Surrogate: Toluene-d8</i>		99 %	70-130		"	"	"	"	
<i>Surrogate: 4-Bromofluorobenzene</i>		81 %	60-120		"	"	"	"	

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Project Manager: Lynelle Onishi

MPJ0275  
Reported:  
10/19/06 12:39

**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
<b>Batch 6J11009 - EPA 5030B P/T / LUFT GCMS</b>										
<b>Blank (6J11009-BLK1)</b> Prepared & Analyzed: 10/11/06										
Gasoline Range Organics (C4-C12)	ND	50	ug/l							
Surrogate: 1,2-Dichloroethane-d4	2.60		"	2.50		104	60-145			
<b>Laboratory Control Sample (6J11009-BS2)</b> Prepared & Analyzed: 10/11/06										
Gasoline Range Organics (C4-C12)	392	50	ug/l	440		89	75-140			
Surrogate: 1,2-Dichloroethane-d4	2.58		"	2.50		103	60-145			
<b>Matrix Spike (6J11009-MS1)</b> Source: MPJ0278-04 Prepared & Analyzed: 10/11/06										
Gasoline Range Organics (C4-C12)	674	50	ug/l	700	ND	96	75-140			
Surrogate: 1,2-Dichloroethane-d4	2.51		"	2.50		100	60-145			
<b>Matrix Spike Dup (6J11009-MSD1)</b> Source: MPJ0278-04 Prepared & Analyzed: 10/11/06										
Gasoline Range Organics (C4-C12)	679	50	ug/l	700	ND	97	75-140	0.7	20	
Surrogate: 1,2-Dichloroethane-d4	2.52		"	2.50		101	60-145			

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Oakland CA, 94612

Project: ARCO #4494, Oakland, CA  
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Project Manager: Lynelle Onishi

MPJ0275  
Reported:  
10/19/06 12:39

**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 6J11009 - EPA 5030B P/T / EPA 8260B**

**Blank (6J11009-BLK1)**

Prepared & Analyzed: 10/11/06

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>	2.60		"	2.50		104	75-130			
<i>Surrogate: 1,2-Dichloroethane-d4</i>	2.60		"	2.50		104	60-145			
<i>Surrogate: Toluene-d8</i>	2.46		"	2.50		98	70-130			
<i>Surrogate: 4-Bromofluorobenzene</i>	2.08		"	2.50		83	60-120			

**Laboratory Control Sample (6J11009-BS1)**

Prepared & Analyzed: 10/11/06

tert-Amyl methyl ether	10.4	0.50	ug/l	10.0		104	65-135			
Benzene	9.67	0.50	"	10.0		97	70-125			
tert-Butyl alcohol	192	20	"	200		96	60-135			
Di-isopropyl ether	10.1	0.50	"	10.0		101	70-130			
1,2-Dibromoethane (EDB)	9.88	0.50	"	10.0		99	80-125			
1,2-Dichloroethane	9.70	0.50	"	10.0		97	75-125			
Ethanol	230	300	"	200		115	15-150			
Ethyl tert-butyl ether	10.4	0.50	"	10.0		104	65-130			
Ethylbenzene	9.91	0.50	"	10.0		99	70-130			
Methyl tert-butyl ether	10.1	0.50	"	10.0		101	50-140			
Toluene	9.78	0.50	"	10.0		98	70-120			
Xylenes (total)	31.1	0.50	"	30.0		104	80-125			
<i>Surrogate: Dibromofluoromethane</i>	2.59		"	2.50		104	75-130			
<i>Surrogate: 1,2-Dichloroethane-d4</i>	2.52		"	2.50		101	60-145			
<i>Surrogate: Toluene-d8</i>	2.55		"	2.50		102	70-130			
<i>Surrogate: 4-Bromofluorobenzene</i>	2.20		"	2.50		88	60-120			

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Project: ARCO #4494, Oakland, CA  
Project Number: G0C2G-0010  
Project Manager: Lynelle Onishi

MPJ0275  
Reported:  
10/19/06 12:39

**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 6J11009 - EPA 5030B P/T / EPA 8260B**

<b>Matrix Spike (6J11009-MS1)</b>	<b>Source: MPJ0278-04</b>			<b>Prepared &amp; Analyzed: 10/11/06</b>						
tert-Amyl methyl ether	11.1	0.50	ug/l	10.0	ND	111	65-135			
Benzene	10.4	0.50	"	10.0	ND	104	70-125			
tert-Butyl alcohol	207	20	"	200	ND	104	60-135			
Di-isopropyl ether	10.8	0.50	"	10.0	ND	108	70-130			
1,2-Dibromoethane (EDB)	10.6	0.50	"	10.0	ND	106	80-125			
1,2-Dichloroethane	10.4	0.50	"	10.0	ND	104	75-125			
Ethanol	257	300	"	200	ND	128	15-150			
Ethyl tert-butyl ether	11.2	0.50	"	10.0	ND	112	65-130			
Ethylbenzene	10.7	0.50	"	10.0	ND	107	70-130			
Methyl tert-butyl ether	11.0	0.50	"	10.0	ND	110	50-140			
Toluene	10.5	0.50	"	10.0	ND	105	70-120			
Xylenes (total)	33.2	0.50	"	30.0	ND	111	80-125			
<i>Surrogate: Dibromofluoromethane</i>	2.56		"	2.50		102	75-130			
<i>Surrogate: 1,2-Dichloroethane-d4</i>	2.51		"	2.50		100	60-145			
<i>Surrogate: Toluene-d8</i>	2.52		"	2.50		101	70-130			
<i>Surrogate: 4-Bromofluorobenzene</i>	2.26		"	2.50		90	60-120			

<b>Matrix Spike Dup (6J11009-MSD1)</b>	<b>Source: MPJ0278-04</b>			<b>Prepared &amp; Analyzed: 10/11/06</b>						
tert-Amyl methyl ether	11.2	0.50	ug/l	10.0	ND	112	65-135	0.9	25	
Benzene	10.3	0.50	"	10.0	ND	103	70-125	1	15	
tert-Butyl alcohol	209	20	"	200	ND	104	60-135	1	35	
Di-isopropyl ether	10.9	0.50	"	10.0	ND	109	70-130	0.9	35	
1,2-Dibromoethane (EDB)	10.7	0.50	"	10.0	ND	107	80-125	0.9	15	
1,2-Dichloroethane	10.3	0.50	"	10.0	ND	103	75-125	1	10	
Ethanol	270	300	"	200	ND	135	15-150	5	35	
Ethyl tert-butyl ether	11.2	0.50	"	10.0	ND	112	65-130	0	35	
Ethylbenzene	10.8	0.50	"	10.0	ND	108	70-130	0.9	15	
Methyl tert-butyl ether	10.9	0.50	"	10.0	ND	109	50-140	0.9	25	
Toluene	10.5	0.50	"	10.0	ND	105	70-120	0	15	
Xylenes (total)	33.1	0.50	"	30.0	ND	110	80-125	0.3	15	
<i>Surrogate: Dibromofluoromethane</i>	2.60		"	2.50		104	75-130			
<i>Surrogate: 1,2-Dichloroethane-d4</i>	2.52		"	2.50		101	60-145			
<i>Surrogate: Toluene-d8</i>	2.52		"	2.50		101	70-130			
<i>Surrogate: 4-Bromofluorobenzene</i>	2.23		"	2.50		89	60-120			



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

Project: ARCO #4494, Oakland, CA  
Project Number: G0C2G-0010  
Project Manager: Lynelle Onishi

MPJ0275  
Reported:  
10/19/06 12:39

**Notes and Definitions**

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 - 4494-060927-001  
 BP BU/AR Region/Enfos Segment: BP > Americas > West Coast > Retail > WCBU > CA > Central > 4494 > Historical/BI  
 State or Lead Regulatory Agency: California Regional Water Quality Control Board - San Fran  
 Requested Due Date (mm/dd/yy): 10 Day TAT

On-site Time: <u>1320</u>	Temp: <u>75.0</u>
Off-site Time: <u>1545</u>	Temp: <u>76.0</u>
Sky Conditions: <u>Sunny</u>	
Meteorological Events:	
Wind Speed:	Direction:

Lab Name: <u>Sequoia</u>	BP/AR Facility No.: <u>4494</u>	Consultant/Contractor: <u>URS</u>
Address: <u>885 Jarvis Drive</u> <u>Morgan Hill, CA 95037</u>	BP/AR Facility Address: <u>566 Hegenberger Rd., Oakland, CA 94621</u>	Address: <u>1333 Broadway, Suite 800</u> <u>Oakland, CA 94612</u>
Lab PM: <u>Lisa Race / Katt Min</u>	Site Lat/Long: <u>37.745046 / -122.195</u>	Consultant/Contractor Project No.: <u>38487533</u>
Tele/Fax: <u>408.782.8156 / 408.782.6308</u>	California Global ID No.: <u>T0600100104</u>	Consultant/Contractor PM: <u>Barb Jakub</u>
BP/AR PM Contact: <u>Paul Supple</u>	Enfos Project No.: <u>G0C2G-0010</u>	Tele/Fax: <u>510.874.3296 / 510.874.3268</u>
Address: <u>P.O. Box 6549</u> <u>Moraga, CA 94570</u>	Provision or RCOP: <u>Provision</u>	Report Type & QC Level: <u>Level 1 with EDF</u>
Tele/Fax: <u>925.299.8891 / 925.299.8872</u>	Phase/WBS: <u>04 - Mon/Remed by Natural Attenuation</u>	E-mail EDD To: <u>jane.field@urscorp.com</u>
Lab Bottle Order No: <u>4494</u>	Sub Phase/Task: <u>03 - Analytical</u>	Invoice to: <u>Atlantic Richfield Company</u>
	Cost Element: <u>05 - Subcontracted Costs</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	GRO/BTEX (8260)	MTBE, TAME, E1BE (8260)	DPE, TBA (8260)	EDB, 1,2-DCA (8260)	
1	MW-1	1530	9-27		X		01	3					X	X	X	X	<p style="text-align: center;">MPJ0275</p> <p style="text-align: center;">Sample Point Lat/Long and Comments</p> <p style="text-align: right;">ON HOLD</p>	
2	MW-3	1402					02						X	X	X	X		
3	MW-4	1345					03						X	X	X	X		
4	MW-5	1440					04						X	X	X	X		
5	MW-6	1425					05						X	X	X	X		
6	MW-7	1450					06						X	X	X	X		
7	RW-1	1504					07						X	X	X	X		
8	TB-4494-092706	-					08	2					X	X	X	X		
9																		
10																		

Sampler's Name: <u>Dave Walker</u>	Relinquished By / Affiliation		Date	Time	Accepted By / Affiliation	Date	Time
Sampler's Company: <u>Blaine Tech</u>	<u>David C. Marx</u>		<u>9-27-06</u>	<u>1658</u>	<u>(Sample Custodian)</u>	<u>9/27/06</u>	<u>1638</u>
Shipment Date:			<u>9/27/06</u>	<u>1405</u>	<u>(Case 00001)</u>	<u>9/27/06</u>	<u>1415</u>
Shipment Method:			<u>9/27/06</u>	<u>1503</u>		<u>9/28</u>	<u>1803</u>
Shipment Tracking No:							
Special Instructions: <u>CC to bpedf@broadbentinc.com</u>							

Seals In Place Yes  No  
 Temp Blank Yes  No  
 Cooler Temperature on Receipt 5.1 F/C  
 Trip Blank Yes  No  
 BP COC Rev. 4 10/1/04

# TEST AMERICA SAMPLE RECEIPT LOG

CLIENT NAME: Bp / 4494  
 REC. BY (PRINT) EH  
 WORKORDER: MPJ0275

DATE REC'D AT LAB: 9/28/06  
 TIME REC'D AT LAB: 1503  
 DATE LOGGED IN: 10-5-06

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

CIRCLE THE APPROPRIATE RESPONSE		LAB SAMPLE #	CLIENT ID	CONTAINER DESCRIPTION	PRESERVATIVE	pH	SAMPLE MATRIX	DATE SAMPLED	REMARKS: CONDITION (ETC.)
1. Custody Seal(s)	<input checked="" type="radio"/> Present / Absent <input checked="" type="radio"/> Intact / Broken*								<div style="font-size: 2em; font-weight: bold; margin-bottom: 10px;">9/28/06</div> <div style="font-size: 1.5em; font-weight: bold;">EH</div>
2. Chain-of-Custody	<input checked="" type="radio"/> Present / Absent*								
3. Traffic Reports or Packing List:	Present / <input checked="" type="radio"/> Absent								
4. Airbill:	Airbill / Sticker Present / <input checked="" type="radio"/> Absent								
5. Airbill #:									
6. Sample Labels:	<input checked="" type="radio"/> Present / Absent								
7. Sample IDs:	<input checked="" type="radio"/> Listed / Not Listed on Chain-of-Custody								
8. Sample Condition:	<input checked="" type="radio"/> Intact / Broken* / Leaking*								
9. Does information on chain-of-custody, traffic reports and sample labels agree?	<input checked="" type="radio"/> Yes / No*								
10. Sample received within hold time?	<input checked="" type="radio"/> Yes / No*								
11. Adequate sample volume received?	<input checked="" type="radio"/> Yes / No*								
12. Proper preservatives used?	<input checked="" type="radio"/> Yes / No*								
13. Trip Blank / Temp Blank Received? (circle which, if yes)	<input checked="" type="radio"/> Yes / No*								
14. Read Temp: <u>5.0°C</u> Corrected Temp: <u>5.0°C</u> Is corrected temp 4 +/-2°C? <input checked="" type="radio"/> Yes / No**									

(Acceptance range for samples requiring thermal pres.)  
 \*\*Exception (if any): METALS / DFF ON ICE or Problem COC



# Chain of Custody Record

Project Name: Analytical for QMR sampling - 4494-060927-00-2  
 BP BU/AR Region/Enfos Segment: BP > Americas > West Coast > Retail > WCBU > CA > Central > 4494 > Historical/BL  
 State or Lead Regulatory Agency: California Regional Water Quality Control Board - San Francisco  
 Requested Due Date (mm/dd/yy): 10 Day TAT

On-site Time: <u>1320</u>	Temp: <u>75.0</u>
Off-site Time: <u>1545</u>	Temp: <u>76.0</u>
Sky Conditions: <u>Sunny</u>	
Meteorological Events:	
Wind Speed:	Direction:

Lab Name: <u>Sequoia</u>	BP/AR Facility No.: <u>4494</u>	Consultant/Contractor: <u>URS</u>
Address: <u>885 Jarvis Drive</u>	BP/AR Facility Address: <u>566 Hegenberger Rd., Oakland, CA 94621</u>	Address: <u>1333 Broadway, Suite 800</u>
<u>Morgan Hill, CA 95037</u>	Site Lat/Long: <u>37.745046 / -122.195</u>	<u>Oakland, CA 94612</u>
Lab PM: <u>Lisa Race / Katt Min</u>	California Global ID No.: <u>T0600100104</u>	Consultant/Contractor Project No.: <u>38487533</u>
Tele/Fax: <u>408.782.8156 / 408.782.6308</u>	Enfos Project No.: <u>G0C2G-0010</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>	Phase/WBS: <u>04 - Mon/Remed by Natural Attenuation</u>	Report Type & QC Level: <u>Level 1 with EDF</u>
<u>Moraga, CA 94570</u>	Sub Phase/Task: <u>03 - Analytical</u>	E-mail EDD To: <u>jane.field@urscorp.com</u>
Tele/Fax: <u>925.299.8891 / 925.299.8872</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	GRO / BTEX (8260)	MTBE, TAME, ETBE	DPE, TBA (8260)	EDB, 1,2-DCA (8260)	Ethanol (8260)					
1	MW-1	1530	9-27	X				3					X	X	X	X							
2	MW-3	1402												X	X	X	X						
3	MW-4	1345												X	X	X	X						
4	MW-5	1440												X	X	X	X						
5	MW-6	1425												X	X	X	X						
6	MW-7	1450												X	X	X	X						
7	RW-1	1504												X	X	X	X						
8	TB-4494-092706	-						2														ON HOLD	
9																							
10																							

Sampler's Name: <u>Dave Walber</u>	Relinquished By / Affiliation: <u>David C. Mack</u>	Date: <u>9-27-06</u>	Time: <u>1638</u>	Accepted By / Affiliation: <u>(Signature)</u>	Date: <u>9/27/06</u>	Time: <u>1638</u>
Sampler's Company: <u>Blaine Tech</u>		Date: <u>9-27-06</u>	Time: <u>1445</u>		Date: <u>9/27/06</u>	Time: <u>1445</u>
Shipment Date:						
Shipment Method:						
Shipment Tracking No:						

Special Instructions: CC to bpedf@broadbentinc.com

Custody Seals In Place Yes  No  Temp Blank Yes  No  Cooler Temperature on Receipt  F/C  Trip Blank Yes  No

### WELL GAUGING DATA

Project # 060927-DW-2 Date 9-27-06 Client ARCO 4494

Site S66 Hegenberger Rd, 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 <u>FOC</u>	Notes
MW-1	1414	4					2.12	22.98	↓	
MW-3	<del>1358</del>	4				9.40	17.90	NPG7		
MW-4	1340	4				8.59	16.79	NPG7		
MW-5	1333	2				6.69	17.80			
MW-6	1330	2				6.13	18.58			
MW-7	<del>1358</del>	4				<del>9.40</del> <sup>8.31</sup>	13.45			
RW-1	1409	2				8.04	11.25	↓		

7  
5  
4  
6

## ARCO / BP WELL MONITORING DATA SHEET

BTS #: <b>060927-DW-2</b>	Station # <b>ARCO 4494</b>
Sampler: <b>DW/IR</b>	Date: <b>9-27-06</b>
Well I.D.: <b>MW-1</b>	Well Diameter: 2 3 <b>4</b> 6 8
Total Well Depth: <b>22.98</b>	Depth to Water: <b>7.12</b>
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: <b>HVC</b> Grade	D.O. Meter (if req'd): <b>YSI</b> 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.

<b>10.3</b>	x	<b>3</b>	=	<b>30.9</b>	Gals.
1 Case Volume (Gals.)		Specified Volumes		Calculated Volume	

Time	Temp (°F)	pH	Conductivity (mS or $\mu$ S)	Gals. Removed	Observations
1511	72.9	7.4	4167	10.3	
					well dewatered @ 14 gals.
1530	71.4	7.1	9390	-	

Did well dewater?  Yes      No      Gallons actually evacuated: **14**

Sampling Time: **1530**      Sampling Date: **9-27-06**

Sample I.D.: **MW-1**      Laboratory: Pace **Sequota** Other \_\_\_\_\_

Analyzed for:  GRO  BTEX  MTBE  DRO  Oxy  1,2-DC  EDB  Ethanol      Other: \_\_\_\_\_

D.O. (if req'd):	Pre-purge:	mg/L	Post-purge:	mg/L
			<b>3.1</b>	
O.R.P. (if req'd):	Pre-purge:	mV	Post-purge:	mV

## ARCO / BP WELL MONITORING DATA SHEET

BTS #: <b>060927-DW-2</b>	Station # <b>ARCO 4494</b>
Sampler: <b>DW/JR</b>	Date: <b>9-27-06</b>
Well I.D.: <b>MW-3</b>	Well Diameter: 2 3 <b>4</b> 6 8
Total Well Depth: <b>17.96</b>	Depth to Water: <b>9.40</b>
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: <b>PVC</b> Grade	D.O. Meter (if req'd): <b>YS</b> 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: 7' 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	<del>_____</del>	=	_____
1 Case Volume (Gals.)		Specified Volumes		Gals. Calculated Volume

Time	Temp (°F)	pH	Conductivity (mS or <u>µS</u> )	Gals. Removed	Observations
<b>1402</b>	<b>71.8</b>	<b>7.4</b>	<b>1876</b>	-	

Did well dewater? Yes  No  Gallons actually evacuated:   —  

Sampling Time: **1402** Sampling Date: **9-27-06**

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

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

D.O. (if req'd):	Pre-purge:	mg/L	Post-purge:	<b>1.5</b>	mg/L
O.R.P. (if req'd):	Pre-purge:	mV	Post-purge:		mV

**ARCO / BP WELL MONITORING DATA SHEET**

BTS #: <b>060927-DW-2</b>	Station # <b>ARCO 4494</b>
Sampler: <b>DW/JSR</b>	Date: <b>9-27-06</b>
Well I.D.: <b>MW-4</b>	Well Diameter: 2 3 <b>4</b> 6 8
Total Well Depth: <b>16.79</b>	Depth to Water: <b>8.59</b>
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: <input checked="" type="checkbox"/> <b>VC</b> Grade	D.O. Meter (if req'd): <input checked="" type="checkbox"/> <b>YSI</b> 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: **7'** 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	_____	=	_____
1 Case Volume (Gals.)		Specified Volumes		Gals. Calculated Volume

Time	Temp (°F)	pH	Conductivity (mS or $\mu$ S)	Gals. Removed	Observations
<b>1345</b>	<b>67.5</b>	<b>6.6</b>	<b>941</b>	-	

Did well dewater? Yes  No  Gallons actually evacuated: **-**

Sampling Time: **1345** Sampling Date: **9-27-06**

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

Analyzed for:  **GRO**  **STEX** MTBE DRO  **Oxy**  **2-DC**  **EDB**  **Ethanol** Other: \_\_\_\_\_

D.O. (if req'd):	Pre-purge:	mg/L	Post-purge:	<b>2.1</b>	mg/L
O.R.P. (if req'd):	Pre-purge:	mV	Post-purge:		mV



## ARCO / BP WELL MONITORING DATA SHEET

BTS #: <b>060927-DW-2</b>	Station # <b>ARCO 4494</b>
Sampler: <b>DW/JR</b>	Date: <b>9-27-06</b>
Well I.D.: <b>MW-5</b>	Well Diameter: <b>3</b> 4 6 8
Total Well Depth: <b>17.80</b>	Depth to Water: <b>6.69</b>
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: <b>PVC</b> Grade	D.O. Meter (if req'd): <b>YSI</b> 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.

<b>1.8</b>	x	<b>3</b>	=	<b>5.4</b>	Gals.
1-Case Volume (Gals.)		Specified Volumes		Calculated Volume	

Time	Temp (°F)	pH	Conductivity ( <del>MS</del> or µS)	Gals. Removed	Observations
1428	71.3	7.0	11.93	1.8	
1430	72.3	7.2	12.13	3.6	Sulfur odor
1432	72.2	7.2	11.69	5.4	

Did well dewater? Yes       Gallons actually evacuated: **5.4**

Sampling Time: **1440**      Sampling Date: **9-27-06**

Sample I.D.: **MW-5**      Laboratory: Pace **Sequota** Other \_\_\_\_\_

Analyzed for:  GRO  BTEX MTBE DRO  Oxy  1,2-DC  EDB  Ethanol      Other: \_\_\_\_\_

D.O. (if req'd):	Pre-purge:	mg/L	Post-purge:	<b>1.1</b>	mg/L
O.R.P. (if req'd):	Pre-purge:	mV	Post-purge:		mV

## ARCO / BP WELL MONITORING DATA SHEET

BTS #: <b>060927-DW-2</b>	Station # <b>ARCO 4494</b>
Sampler: <b>DW/IR</b>	Date: <b>9-27-06</b>
Well I.D.: <b>MW-6</b>	Well Diameter: <b>(2)</b> 3 4 6 8
Total Well Depth: <b>18.58</b>	Depth to Water: <b>6.13</b>
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: <b>(PVC)</b> Grade	D.O. Meter (if req'd): <b>(YSI)</b> 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  
 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.

<b>2.0</b>	x	<b>3</b>	=	<b>6</b>	Gals.
1 Case Volume (Gals.)		Specified Volumes		Calculated Volume	

Time	Temp (°F)	pH	Conductivity (mS or $\mu$ S)	Gals. Removed	Observations
<b>1410</b>	<b>70.9</b>	<b>7.1</b>	<b>5549</b>	<b>2</b>	
<b>1414</b>	<b>71.4</b>	<b>7.0</b>	<b>5915</b>	<b>4</b>	
<b>1418</b>	<b>71.9</b>	<b>7.1</b>	<b>6031</b>	<b>6</b>	

Did well dewater? Yes  Gallons actually evacuated: **6**

Sampling Time: **1425**      Sampling Date: **9-27-06**

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

Analyzed for: **(GRO) (BTEX) MTBE DRO (Oxy's) (2-DCA) (EDB) (Ethanol)** Other: \_\_\_\_\_

D.O. (if req'd):	Pre-purge: _____ mg/L	Post-purge: <b>1.8</b> mg/L
O.R.P. (if req'd):	Pre-purge: _____ mV	Post-purge: _____ mV

## ARCO / BP WELL MONITORING DATA SHEET

BTS #: <b>060927-DW-2</b>	Station # <b>ARCO 4494</b>
Sampler: <b>DW/JR</b>	Date: <b>9-27-06</b>
Well I.D.: <b>MW-7</b>	Well Diameter: 2 3 <input checked="" type="radio"/> 6 8 _____
Total Well Depth: <b>13.45</b>	Depth to Water: <b>8.31</b>
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: <input checked="" type="radio"/> <b>VC</b> Grade	D.O. Meter (if req'd): <input checked="" type="radio"/> <b>YSI</b> <input type="radio"/> 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.

<b>3.3</b>	x	<b>3</b>	=	<b>9.9</b>	Gals.
1 Case Volume (Gals.)		Specified Volumes		Calculated Volume	

Time	Temp (°F)	pH	Conductivity (mS or <del>µS</del> )	Gals. Removed	Observations
1445	70.7	7.6	7136	<del>1.9</del> 3.3	Brown water
1446	71.2	7.4	5590	<del>1.9</del> 6.6	—
1447	71.1	7.3	5140	9.9	—

Did well dewater? Yes  No  Gallons actually evacuated: **9.9**

Sampling Time: **1450**      Sampling Date: **9-27-06**

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

Analyzed for:  GRO  BTEX  MTBE  DRO  Oxy  1,2-DC  EDB  Ethanol Other: \_\_\_\_\_

D.O. (if req'd):	Pre-purge:	mg/L	Post-purge:	1.1	mg/L
	O.R.P. (if req'd):	Pre-purge:	mV	Post-purge:	mV

## ARCO / BP WELL MONITORING DATA SHEET

BTS #: <b>060927-DW-2</b>	Station # <b>ARCO 4494</b>
Sampler: <b>DW/JR</b>	Date: <b>9-27-06</b>
Well I.D.: <b>RW-1</b>	Well Diameter: <b>(2)</b> 3 4 6 8
Total Well Depth: <b>11.25</b>	Depth to Water: <b>8.04</b>
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: <b>PVC</b> Grade	D.O. Meter (if req'd): <b>(YS)</b> 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.

<b>0.5</b>	x	<b>3</b>	=	<b>1.5</b>	Gals.
1 Case Volume (Gals.)		Specified Volumes		Calculated Volume	

Time	Temp (°F)	pH	Conductivity (mS or <b>(μS)</b> )	Gals. Removed	Observations
<b>1458</b>	<b>69.8</b>	<b>6.9</b>	<b>17570</b>	<b>0.5</b>	
<b>1459</b>	<b>70.5</b>	<b>7.0</b>	<b>17250</b>	<b>1.0</b>	
<b>1500</b>	<b>70.9</b>	<b>6.9</b>	<b>18830</b>	<b>1.5</b>	

Did well dewater? Yes  **(No)**      Gallons actually evacuated: **1.5**

Sampling Time: **1504**      Sampling Date: **9-27-06**

Sample I.D.: **RW-1**      Laboratory: Pace **(Sequoia)** Other: \_\_\_\_\_

Analyzed for: **(GRO)** **(BTEX)** MTBE DRO **(Oxy)** **(2-DC)** **(EDB)** **(Ethanol)** Other: \_\_\_\_\_

D.O. (if req'd):	Pre-purge:	mg/L	<b>(Post-purge)</b>	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 ATLANTIC RICHFIELD COMPANY (ARC) A BP AFFILIATED COMPANY FACILITIES IN THE STATE OF CALIFORNIA. THE NON-HAZARDOUS PURGEWATER WHICH HAS BEEN RECOVERED FROM GROUNDWATER WELLS IS COLLECTED BY THE CONTRACTOR, MADE UP INTO LOADS OF APPROPRIATE SIZE AND HAULED BY AN ARC DIRECT BILL WASTE TRANSPORTER TO AN ARC APPROVED DISPOSAL FACILITY.

The contractor performing this work is BLAINE TECH SERVICES, INC. (BTS), 1680 Rogers Avenue, San Jose, CA 95112. (phone [408] 573-0555), 4731 Pell Drive #5, Sacramento, CA 95838. Blaine Tech Services, Inc. is authorized by ARC to recover, collect, apportion into loads the Non-Hazardous Well Purgewater that is drawn from wells at the ARC facility indicated below and deliver that purgewater to BTS. Transport routing of the Non-Hazardous Well Purgewater may be direct from one ARC facility to the designated destination point; from one ARC facility to the designated destination point via another ARC facility; from a ARC 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 ARC.

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

Station #	4494		
Station Address	566 Heigenberger Rd Oakland		
Total Gallons Collected From Groundwater Monitoring Wells:	36		
added equip. rinse water	2	any other adjustments	
TOTAL GALS. RECOVERED	38	loaded onto BTS vehicle #	63
BTS event #		time	date
	060927-01w-2	1530	9/27/06
signature	David C. Hall		
*****			
REC'D AT		time	date
			/ /
unloaded by			
signature			



**WELLHEAD INSPECTION CHECKLIST  
BP / GEM**

Date 9-27-06

Site Address 566 Hegenberges Rd, Oakland

Job Number 060927-DW-2 Technician DW

Well ID	Well Inspected - No Corrective Action Required	Water Balled From Wellbox	Wellbox Components Cleaned	Cap Replaced	Debris Removed From Wellbox	Lock Replaced	Other Action Taken (explain below)	Well Not Inspected (explain below)
MW-1	X							
MW-3	X							
MW-4	X							
MW-5	X							
MW-6	X							
MW-7	X							
RW-1	X							

NOTES: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

**APPENDIX B**

**HISTORICAL GROUND-WATER DATA**

Table 2  
Liquid Surface Elevation Data

ARCO Service Station 4494  
888 Hegenberger Road at Edes Avenue  
Oakland, California

Well Number	Date Gauged	Wat. Elevation (feet, MSL)	Depth to Water (feet, TOC)	Depth to Liquid (feet, TOC)	SPH Thickness (feet)	Liquid Surface Elevation (feet, MSL)
MW-1	08/03/80	105.21	8.85	8.85	0.00	98.08
	08/18/80		7.00	7.00	0.00	98.31
	08/21/80		7.05	7.05	0.00	98.26
	09/07/80		7.24	7.24	0.00	98.07
	11/23/80		7.46	7.46	0.00	97.85
	12/13/80		7.40	7.40	0.00	97.91
	01/29/81		8.80	8.80	0.00	98.32
	02/27/81		7.23	7.23	0.00	98.08
	03/07/81		7.45	7.45	0.00	97.86
	03/28/81		8.98	8.98	0.00	98.35
	05/02/81		7.04	7.04	0.00	98.29
	06/27/81		8.71	8.71	0.00	98.27
	07/24/81		8.91	8.91	0.00	98.00
	08/22/81		8.85	8.85	0.00	98.40
	09/30/81		7.04	7.04	0.00	98.48
	10/17/81		7.22	7.22	0.00	98.27
	11/21/81		7.17	7.17	0.00	98.09
	12/18/81		7.49	7.49	0.00	98.14
	01/19/82		7.44	7.44	0.00	97.95
	02/20/82	6.25	6.25	0.00	97.87	
	03/20/82	6.40	6.40	0.00	98.05	
	04/20/82	6.88	6.88	0.00	98.91	
	05/19/82	7.10	7.10	0.00	98.43	
	06/08/82	7.22	7.22	0.00	99.23	
	07/15/82	7.82	7.82	0.00	98.00	
	08/06/82	7.28	7.28	0.00	97.38	
	10/25/82	7.54	7.54	0.00	98.81	
	11/23/82	8.16	8.16	0.00	98.78	
	08/18/83	7.28	7.28	0.00	97.83	
	11/17/83	7.51	7.51	0.00	98.87	
	02/21/84	8.58	8.58	0.00	98.59	
	05/11/84	6.57	6.57	0.00	98.54	
	08/12/84	7.12	7.12	0.00	98.53	
11/17/84	6.89	6.89	0.00	98.58		
02/22/85	7.33	7.33	0.00	98.25		
05/24/85	7.07	7.07	0.00	98.75		
08/28/85	7.10	7.10	0.00	98.03		
11/17/85	7.72	7.72	0.00	98.60		
MW-2	08/08/80	105.78	9.92	9.00	0.92	95.66
	08/18/80		NM	NM	0.17	NM
	08/21/80		NM	NM	0.17	NM
	09/07/80		8.24	8.17	0.17	NM
	11/23/80		8.20	8.2	Shown	98.44
	11/28/80		8.92	8.82	Shown	98.58
	12/19/80		8.88	8.96	Shown	98.86
	01/29/81		8.01	8.01	Shown	98.83
	02/27/81		8.14	8.14	Shown	98.77
	03/07/81		8.94	8.94	Shown	98.84
	03/29/81		8.11	8.11	Shown	98.94
	05/02/81		8.72	8.72	0	97.08

3300412B\AQ05TELS.XLS\Table2

Recreated from hard copies of tables developed by Pacific Environmental Group, Inc.

February 16, 1996



Table 2 (continued)  
Liquid Surface Elevation Data

ARCO Service Station 4494  
666 Hegenberger Road at Estes Avenue  
Oakland, California

Well Number	Date Gauged	Well Elevation (feet, MSL)	Depth to Water (feet, TDC)	Depth to Liquid (feet, TDC)	SPH Thickness (feet)	Liquid Surface Elevation (feet, MSL)
MMF-2 (cont.)	08/27/81	109.67	9.20	9.22	Shoen	99.58
	07/24/81		9.25	9.25	0.00	99.53
	09/22/81		9.20	9.20	0.00	99.58
	09/30/81		9.31	9.31	Shoen	99.47
	10/17/81		9.39	9.39	Shoen	99.39
	11/21/81		9.20	9.2	0	99.58
	12/18/81		9.28	9.28	Shoen	99.58
	01/19/82		9.89**	9.89	Skimmer	99.59
	02/23/82		9.13**	9.13	Skimmer	99.82
	03/20/82		9.31**	9.31	Skimmer	99.85
	04/20/82		9.69	9.69	Skimmer	99.47
	05/19/82		9.82	9.82	Skimmer	99.79
	08/02/82		9.84	9.84	Skimmer	99.86
	07/15/82		10.19	10.19	Skimmer	99.94
	09/08/82		10.05	10.05	Skimmer	99.59
	10/29/82		10.00	10.00	Skimmer	99.82
11/23/82	9.88	9.87	Skimmer	99.67		
12/08/82			0.01	99.89		
Well Destroyed						
MMF-3	08/18/80	105.61	8.87	8.87	0.00	99.84
	08/21/80		8.88	8.88	0.00	99.83
	09/07/80		8.88	8.88	0.00	99.83
	11/20/80		9.10	9.10	0.00	99.63
	11/29/80		9.08	9.08	0.00	99.41
	12/19/80		8.67	8.67	0.00	99.48
	01/22/81		8.98	8.98	0.00	99.64
	02/27/81		8.71	8.71	0.00	99.65
	03/07/81		8.49	8.49	0.00	99.80
	03/28/81		7.95	7.88	0.00	97.02
	05/02/81		8.82	8.82	0.00	97.86
	06/27/81		8.84	8.84	0.00	98.82
	07/12/81		8.99	8.99	0.00	98.87
	08/22/81		8.82	8.82	0.00	98.85
	09/30/81		9.04	9.04	0.00	98.59
	10/17/81		8.12	8.12	0.00	98.47
	11/21/81		8.82	8.82	0.00	98.39
	12/18/81		8.97	8.97	0.00	98.59
	01/15/82		8.89	8.89	0.00	98.54
	02/23/82		7.78	7.78	0.00	96.82
	03/20/82		8.15	8.15	0.00	97.73
	04/20/82		8.57	8.57	0.00	97.36
	05/19/82		8.78	8.78	0.00	98.34
	08/08/82		8.74	8.74	0.00	98.76
	07/15/82		8.12	8.12	0.00	98.77
	09/08/82		8.95	8.95	0.00	98.99
	10/20/82		8.78	8.78	0.00	97.34
	11/23/82		8.91	8.91	0.00	97.51
	08/16/83		8.62	8.62	0.00	98.38
	11/17/83		8.72	8.72	0.00	97.57
02/21/84	7.91	7.91	0.00	97.57		
03/11/84	8.09	8.09	0.00	98.39		

3300412B\G55TBLS\LSJTable2

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February 15, 1998

Table 2 (continued)  
Liquid Surface Elevation Data

ARCO Service Station 4494  
568 Hegenberger Road at Edes Avenue  
Oakland, California

Well Number	Date Collected	Well Elevation (feet, MSL)	Depth to Water (feet, TOC)	Depth to Liquid (feet, TOC)	SPH Thickness (feet)	Liquid Surface Elevation (feet, MSL)
MW-3 (cont.)	08/12/84		8.78	8.78	0.00	97.51
	11/17/84		8.45	8.45	0.00	97.84
	02/22/85		8.85	8.85	0.00	97.34
	05/24/85		8.57	8.57	0.00	97.62
	08/23/85		8.17	8.17	0.00	97.12
	11/17/85		8.89	8.89	0.00	96.50
MW-4	08/16/80	103.61	8.19	8.19	0.00	98.45
	08/21/80		8.22	8.22	0.00	98.26
	09/07/80		8.38	8.38	0.00	98.22
	11/20/80		8.57	8.57	0.00	98.04
	11/23/80		8.63	8.63	0.00	98.08
	12/15/80		8.13	8.13	0.00	98.48
	01/28/81		8.68	8.68	0.00	97.65
	02/27/81		8.44	8.44	0.00	98.17
	03/07/81		8.15	8.15	0.00	98.43
	03/28/81		7.55	7.55	0.00	99.05
	05/02/81		8.25	8.25	0.00	98.39
	08/27/81		7.75	7.75	0.00	98.89
	07/24/81		8.12	8.12	0.00	98.49
	08/22/81		7.55	7.55	0.00	98.63
	09/30/81		8.25	8.25	0.00	98.35
	10/17/81		8.42	8.42	0.00	98.19
	11/21/81		8.05	8.05	0.00	97.96
	12/18/81		8.77	8.77	0.00	97.34
	01/16/82		8.42	8.42	0.00	98.19
	02/20/82		7.80	7.80	0.00	98.01
	03/20/82		7.91	7.91	0.00	98.60
	04/20/82		8.15	8.15	0.00	98.48
	05/19/82		8.14	8.14	0.00	98.47
	06/08/82		8.40	8.40	0.00	98.21
	07/15/82		8.72	8.72	0.00	97.89
	08/06/82	107.40	8.52	8.52	0.00	98.88
	10/29/82		8.53	8.53	0.00	98.37
	11/23/82		8.75	8.75	0.00	98.88
	08/16/83		8.89	8.89	0.00	98.71
	11/17/83		8.11	8.11	0.00	98.29
02/21/84		8.18	8.18	0.00	98.24	
08/11/84		8.29	8.29	0.00	98.11	
08/12/84		8.75	8.75	0.00	98.05	
11/17/84		8.40	8.40	0.00	99.00	
02/22/85		8.72	8.72	0.00	98.66	
05/24/85		8.53	8.53	0.00	98.77	
08/23/85		8.50	8.50	0.00	100.90	
11/17/85		8.15	8.15	0.00	98.25	
MW-5	08/08/82	105.19	7.18	7.18	0.00	99.00
	10/25/82		8.58	8.58	0.00	98.20
	11/23/82		8.80	8.80	0.00	98.28
	09/18/83		7.08	7.08	0.00	98.13
	11/17/83		8.91	8.91	0.00	98.28
	02/21/84		8.52	8.52	0.00	98.67
	05/11/84		8.18	8.18	0.00	99.01
	08/12/84		8.91	8.91	0.00	98.38
	11/17/84		8.38	8.38	0.00	98.81
	02/22/85		8.25	8.25	0.00	98.94

33004128V02657BLS.XLS!Table2

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February 15, 1989

Table 2 (continued)  
Liquid Surface Elevation Data  
ARCO Service Station 4494  
568 Hegenberger Road at Edes Avenue  
Oakland, California

Well Number	Date Gauged	Well Elevation (feet, MSL)	Depth to Water (feet, TOC)	Depth to Liquid (feet, TOC)	SPH Thickness (feet)	Liquid Surface Elevation (feet, MSL)
MW-5 (cont.)	05/23/85		6.30	6.30	0.00	88.29
	09/23/85		6.50	6.50	0.00	88.29
	11/17/85		7.02	7.02	0.00	88.17
MW-6	06/06/82	105.07	7.01	7.01	0.00	88.08
	10/22/82		6.70	6.70	0.00	88.37
	11/22/82		6.75	6.75	0.00	88.32
	05/18/83		6.71	6.71	0.00	88.33
	11/17/83		6.67	6.67	0.00	88.40
	02/21/84		5.31	5.31	0.00	89.76
	05/11/84		5.58	5.58	0.00	89.09
	09/12/84		6.00	6.00	0.00	88.47
	11/17/84		6.09	6.09	0.00	88.68
	02/22/85		6.63	6.63	0.00	89.22
	05/24/85		6.92	6.92	0.00	89.15
	08/23/85		6.50	6.50	0.00	88.87
	11/17/85		6.75	6.75	0.00	88.32
	08/09/82	108.52	8.28	8.28	0.00	87.24
	10/26/82		8.02	8.02	0.00	88.80
	11/22/82		8.21	8.21	0.00	87.31
06/16/83		8.11	8.11	0.00	87.41	
11/17/83		8.11	8.11	0.00	87.41	
02/21/84		7.34	7.34	0.00	88.18	
05/11/84		7.45	7.45	0.00	88.07	
09/12/84		8.13	8.13	0.00	87.36	
11/17/84		7.90	7.90	0.00	87.82	
02/22/85		8.40	8.40	0.00	87.12	
05/24/85		8.29	8.29	0.00	87.23	
08/23/85		8.80	8.80	0.00	86.82	
11/17/85		8.73	8.73	0.00	86.79	
RW-1	06/16/83	NM				
	11/17/83					
	02/21/84		7.89	7.89	0.00	NM
	05/11/84		7.55	7.55	0.00	NM
	09/12/84		7.59	7.59	0.00	NM
	11/17/84		7.55	7.55	0.00	NM
	02/22/85		8.00	8.00	0.00	NM
	05/24/85		8.10	8.10	0.00	NM
	08/23/85		8.67	8.67	0.00	NM
	11/17/85		8.15	8.15	0.00	NM

MSL = Mean Sea Level  
TOC = Top of casing  
\* = Separate-phase hydrocarbons present in well.  
\*\* = Skimmer installed (12/24/81).  
NM = Not measured

Table 3  
 Groundwater Analytical Data  
 Total Petroleum Hydrocarbons  
 (TPPH as Gasoline, BTEX Compounds, TPH as Diesel, and Total Oil and Grease)

ARCO Service Station 4494  
 565 Hegenberger Road at Edes Avenue  
 Oakland, California

Well Number	Date Sampled	TPPH as Gasoline (ppb)	Benzene (ppb)	Toluene (ppb)	Ethylbenzene (ppb)	Xylenes (ppb)	TPH as Diesel (ppb)	Total Oil and Grease (ppm)
MW-1	08/18/90	<50	<0.50	<0.50	<0.50	<0.50	<0.50	<5000
	08/18/90	<50	<0.50	<0.50	<0.50	<0.50	<0.50	N/A
	09/07/90	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	11/28/90	<50	<0.50	0.7	<0.50	<0.50	N/A	<5000
	03/07/91	<50	<0.50	<0.50	<0.50	<0.50	N/A	N/A
	06/27/91	<50	<0.50	<0.50	<0.50	<0.50	N/A	N/A
	09/30/91	<50	<0.50	<0.50	<0.50	<0.50	N/A	N/A
	12/18/91	<50	<0.50	<0.50	<0.50	<0.50	N/A	N/A
	03/20/92	<50	<0.50	<0.50	<0.50	<0.50	N/A	N/A
	06/08/92	<50	<0.50	<0.50	<0.50	<0.50	N/A	N/A
	08/08/92	<50	<0.50	<0.50	<0.50	<0.50	N/A	N/A
	10/28/92	<50	<0.5	<0.5	<0.5	<0.5	N/A	N/A
	08/18/93	<50	<0.5	<0.5	<0.5	<0.5	N/A	N/A
	11/17/93	<50	<0.5	<0.5	<0.5	<0.5	N/A	N/A
	02/22/94	<50	<0.5	<0.5	<0.5	<0.5	N/A	N/A
	05/11/94	<50	<0.5	<0.5	<0.5	<0.5	N/A	N/A
	08/12/94	<50	<0.5	<0.5	<0.5	<0.5	N/A	N/A
	11/17/94	<50	<0.5	<0.5	<0.5	<0.5	N/A	N/A
	02/22/95							
	05/24/95	<50	<0.50	<0.50	<0.50	<0.50	N/A	N/A
08/22/95								
11/17/95								
MW-2	08/18/90							
	08/18/90							
	09/07/90							
	11/28/90							
	03/07/91							
	06/27/91							
	09/30/91							
	12/18/91							
	03/20/92							
	06/08/92	48,000	2,000	650	2,300	7,000	N/A	N/A
08/08/92	43,000	2,000	840	240	5,100	N/A	N/A	
09/08/92	78,000	2,500	6,700	2,000	16,000	N/A	N/A	
10/28/92	NS	NS	NS	NS	NS	NS	NS	
12/08/92								
MW-3	08/18/90	<50	<0.50	<0.50	<0.50	<0.50	N/A	N/A
	08/18/90	N/A	N/A	N/A	N/A	N/A	N/A	<5000
	09/07/90	<50	<0.50	<0.50	<0.50	<0.50	N/A	N/A
	11/28/90	<50	<0.50	<0.50	<0.50	<0.50	N/A	N/A
	03/07/91	<50	<0.5	<0.5	<0.5	<0.5	N/A	N/A
	06/27/91	<50	<0.5	<0.5	<0.5	<0.5	N/A	N/A
	09/30/91	<50	<0.5	<0.5	<0.5	<0.5	N/A	N/A
	12/18/91	<50	<0.5	<0.5	<0.5	<0.5	N/A	N/A
	03/20/92	<50	<0.50	<0.50	<0.50	<0.50	N/A	N/A
	06/08/92	<50	<0.50	<0.50	<0.50	<0.50	N/A	N/A
	08/08/92	<50	<0.50	<0.50	<0.50	<0.50	N/A	N/A
	10/28/92	<50	<0.5	<0.5	<0.5	<0.5	N/A	N/A
	08/18/93	<50	<0.5	<0.5	<0.5	<0.5	N/A	N/A
11/17/93	<50	<0.5	<0.5	<0.5	<0.5	N/A	N/A	

3300412B\095TBLS.XLS\Table3

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February 15, 1998

Table 3 (continued)  
 Groundwater Analytical Data  
 Total Petroleum Hydrocarbons  
 (TPPH as Gasoline, BTEX Compounds, TEPH as Diesel, and Total Oil and Grease)

ARCO Service Station 4434  
 568 Hegenberger Road at Estes Avenue  
 Oakland, California

Well Number	Date Sampled	TPPH as Gasoline (ppb)	Benzene (ppb)	Toluene (ppb)	Ethylbenzene (ppb)	Xylenes (ppb)	TEPH as Diesel (ppb)	Total Oil and Grease (ppm)
MW-3 (cont.)	02/22/94	<0.5	<0.5	<0.5	<0.5	<0.5	N/A	N/A
	05/11/94	<0.5	<0.5	<0.5	<0.5	<0.5	N/A	N/A
	08/12/94	<0.5	<0.5	<0.5	<0.5	<0.5	N/A	N/A
	11/17/94	<0.5	<0.5	<0.5	<0.5	<0.5	N/A	N/A
	02/22/95	<0.5	<0.5	<0.5	<0.5	<0.5	N/A	N/A
	05/24/95	<0.5	<0.5	<0.5	<0.5	<0.5	N/A	N/A
	08/23/95	<0.5	<0.5	<0.5	<0.5	<0.5	N/A	N/A
11/17/95	<0.5	<0.5	<0.5	<0.5	<0.5	N/A	N/A	
Well Sampled Annually								
MW-4	05/18/90	<0.5	<0.5	<0.5	<0.5	<0.5	N/A	N/A
	09/07/90	N/A	N/A	N/A	N/A	N/A	N/A	<5.000
	11/29/90	<0.5	<0.5	<0.5	<0.5	<0.5	N/A	N/A
	03/07/91	<0.30	<0.30	<0.30	<0.30	<0.30	N/A	N/A
	08/27/91	0.75	1.1	0.50	1.5	1.5	N/A	N/A
	09/30/91	<0.50	<0.50	<0.50	<0.50	<0.50	N/A	N/A
	12/15/91	0.55	1.2	0.30	0.55	0.55	N/A	N/A
	03/23/92	<0.50	<0.50	<0.50	<0.50	<0.50	N/A	N/A
	06/30/92	<0.50	<0.50	<0.50	<0.50	<0.50	N/A	N/A
	08/05/92	<0.50	<0.50	<0.50	<0.50	<0.50	N/A	N/A
	10/29/92	<0.5	<0.5	<0.5	<0.5	<0.5	N/A	N/A
	06/15/93	<0.5	<0.5	<0.5	<0.5	<0.5	N/A	N/A
	11/17/93	<0.5	<0.5	<0.5	<0.5	<0.5	N/A	N/A
	03/22/94	<0.5	<0.5	<0.5	<0.5	<0.5	N/A	N/A
	05/11/94	<0.5	<0.5	<0.5	<0.5	<0.5	N/A	N/A
	08/12/94	<0.5	<0.5	<0.5	<0.5	<0.5	N/A	N/A
11/17/94	<0.5	<0.5	<0.5	<0.5	<0.5	N/A	N/A	
02/22/95	<0.5	<0.5	<0.5	<0.5	<0.5	N/A	N/A	
05/24/95	<0.5	<0.5	<0.5	<0.5	<0.5	N/A	N/A	
08/23/95	<0.5	<0.5	<0.5	<0.5	<0.5	N/A	N/A	
11/17/95	<0.5	<0.5	<0.5	<0.5	<0.5	N/A	N/A	
Well Sampled Annually								
MW-5	08/05/92	<0.50	<0.50	<0.50	<0.50	<0.50	N/A	N/A
	10/29/92	<0.5	<0.5	<0.5	<0.5	<0.5	N/A	N/A
	03/16/93	<0.5	<0.5	<0.5	<0.5	<0.5	N/A	N/A
	11/17/93	<0.5	<0.5	<0.5	<0.5	<0.5	N/A	N/A
	02/22/94	<0.5	<0.5	<0.5	<0.5	<0.5	N/A	N/A
	05/11/94	<0.5	<0.5	<0.5	<0.5	<0.5	N/A	N/A
	08/12/94	<0.5	<0.5	<0.5	<0.5	<0.5	N/A	N/A
	11/17/94	<0.5	<0.5	<0.5	<0.5	<0.5	N/A	N/A
	02/22/95	<0.5	<0.5	<0.5	<0.5	<0.5	N/A	N/A
	05/24/95	<0.5	<0.5	<0.5	<0.5	<0.5	N/A	N/A
08/23/95	<0.5	<0.5	<0.5	<0.5	<0.5	N/A	N/A	
11/17/95	<0.5	<0.5	<0.5	<0.5	<0.5	N/A	N/A	
Well Sampled Annually								
MW-6	03/06/92	<0.50	<0.50	<0.50	<0.50	<0.50	N/A	N/A
	10/29/92	<0.5	<0.5	<0.5	<0.5	<0.5	N/A	N/A
	03/16/93	<0.5	<0.5	<0.5	<0.5	<0.5	N/A	N/A
	11/17/93	<0.5	<0.5	<0.5	<0.5	<0.5	N/A	N/A
	02/22/94	<0.5	<0.5	<0.5	<0.5	<0.5	N/A	N/A
	05/11/94	<0.5	<0.5	<0.5	<0.5	<0.5	N/A	N/A
	08/12/94	<0.5	<0.5	<0.5	<0.5	<0.5	N/A	N/A
11/17/94	<0.5	<0.5	<0.5	<0.5	<0.5	N/A	N/A	
02/22/95	<0.5	<0.5	<0.5	<0.5	<0.5	N/A	N/A	
Well Sampled Annually								

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Table 3 (continued)  
 Groundwater Analytical Data  
 Total Petroleum Hydrocarbons  
 (TPPH as Gasoline, BTEX Compounds, TEPH as Diesel, and Total Oil and Grease)

ARCO Service Station 4484  
 599 Hoganberger Road at Edes Avenue  
 Oakland, California

Well Number	Date Sampled	TPPH as Gasoline (ppb)	Benzene (ppb)	Toluene (ppb)	Ethylbenzene (ppb)	Xylenes (ppb)	TEPH as Diesel (ppb)	Total Oil and Grease (ppm)
MW-6 (cont.)	09/24/98	<50	<0.50	<0.50	<0.50	<0.50	N/A	N/A
	08/23/98	Well Sampled Annually						
	11/17/98	Well Sampled Annually						
MW-7	08/28/92	<50	<0.50	<0.50	<0.50	<0.50	N/A	N/A
	10/29/92	<50	<0.5	<0.5	<0.5	<0.5	N/A	N/A
	08/19/93	<50	<0.5	<0.5	<0.5	<0.5	N/A	N/A
	11/17/93	<50	<0.5	<0.5	<0.5	<0.5	N/A	N/A
	02/22/94	<50	<0.5	<0.5	<0.5	<0.5	N/A	N/A
	05/17/94	<50	<0.5	<0.5	<0.5	<0.5	N/A	N/A
	09/12/94	<50	<0.5	<0.5	<0.5	<0.5	N/A	N/A
	11/17/94	<50	<0.5	<0.5	<0.5	<0.5	N/A	N/A
	02/22/95	<50	<0.5	<0.5	<0.5	<0.5	N/A	N/A
	03/24/95	Well Sampled Annually						
	08/23/95	<50	<0.50	<0.50	<0.50	<0.50	N/A	N/A
	11/17/95	Well Sampled Annually						
RW-1	08/19/93	NS	NS	NS	NS	NS	NS	NS
	11/17/93	NS	NS	NS	NS	NS	NS	NS
	02/22/94	230	2,100	19	40	66	N/A	N/A
	05/17/94	3,300	32	28	87	310	N/A	N/A
	08/12/94	4,800	49	59	160	400	N/A	N/A
	11/17/94	1,400	58	21	28	210	N/A	N/A
	02/22/95	8,100	140	<10	650	580	N/A	N/A
	05/24/95	940	53	0.78	11	1.4	N/A	N/A
	08/23/95	820	2.1	2.8	0.67	0.67	N/A	N/A
	11/17/95	1,100	7.9	21	48	180	N/A	N/A

ppb = Parts per billion  
 ppm = Parts per million  
 N/A = Not applicable  
 NS = Not sampled

Table 4  
Groundwater Analytical Data  
Total Methyl t-Butyl Ether

ARCO Service Station 4494  
508 Heyenberger Road at Eden Avenue  
Oakland, California

Well Number	Date Sampled	Methyl t-Butyl Ether (ppb)
MW-1	08/23/95	NS
MW-2	08/23/95	NS
MW-3	08/23/95	NS
MW-4	08/23/95	NS
MW-5	08/23/95	NS
MW-6	08/23/95	NS
MW-7	08/23/95	NS
RVL-1	08/23/95	19

ppb = Parts per Billion  
NS = Not sampled  
See certified analytical report for detection limit.

**APPENDIX C**

**JOINT MONITORING DATA**



**WELL CONCENTRATIONS**  
**Shell-branded Service Station**  
**540 Hegenberger Road**  
**Oakland, CA**

Well ID	Date	TPPH (ug/L)	B (ug/L)	T (ug/L)	E (ug/L)	X (ug/L)	MTBE 8020 (ug/L)	MTBE 8260 (ug/L)	DIPE (ug/L)	ETBE (ug/L)	TAME (ug/L)	TBA (ug/L)	Ethanol (ug/L)	TOC (MSL)	Depth to Water (ft.)	GW Elevation (MSL)	DO Reading (ppm)
MW-1 (a)	8/26/1998	2,700	28	55	59	39	33,000	NA	NA	NA	NA	NA	NA	10.54	7.91	2.63	1.8
MW-1 (b)	8/26/1998	<1,000	22	<10	<10	<10	17,000	NA	NA	NA	NA	NA	NA	10.54	7.91	2.63	2.2
MW-1	12/28/1998	<5,000	<50.0	<50.0	<50.0	<50.0	153,000	33,000	NA	NA	NA	NA	NA	10.54	8.75	1.79	1.9
MW-1	3/29/1999	<2,000	<20.0	<20.0	<20.0	<20.0	693,000	NA	NA	NA	NA	NA	NA	10.54	8.32	2.22	2.0
MW-1	6/22/1999	20,000	<200	<200	<200	<200	150,000	NA	NA	NA	NA	NA	NA	10.54	9.05	1.49	1.7
MW-1	9/30/1999	<2,500	<25.0	<25.0	<25.0	<25.0	30,900	NA	NA	NA	NA	NA	NA	10.54	8.35	2.19	2.6
MW-1	11/19/1999	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	10.54	9.58	0.96	NA
MW-1	11/24/1999	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	10.54	9.65	0.89	NA
MW-1	12/2/1999	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	10.54	9.55	0.99	NA
MW-1	12/10/1999	<50.0	29.7	<20.0	<20.0	<20.0	76,300	NA	NA	NA	NA	NA	NA	10.54	8.86	1.68	1.2
MW-1	3/2/2000	<2,500	<25.0	<25.0	<25.0	<25.0	27,600	NA	NA	NA	NA	NA	NA	10.54	8.83	1.71	3.2
MW-1	6/8/2000	<2,000	<20.0	<20.0	<20.0	<20.0	59,000	67,600	NA	NA	NA	NA	NA	10.54	7.78	2.76	1.9
MW-1	9/5/2000	<10,000	411	<100	<100	<100	71,100	115,000 e	NA	NA	NA	NA	NA	10.54	7.84	2.70	NA
MW-1	12/15/2000	35,600	1,310	<50.0	<50.0	<50.0	136,000	f	NA	NA	NA	NA	NA	10.54	7.65	2.89	NA
MW-1	3/9/2001	<10,000	1,390	<100	<100	<100	89,600	164,000	NA	NA	NA	NA	NA	10.54	6.44	4.10	NA
MW-1	6/27/2001	<5,000	<50	<50	<50	<50	NA	19,000	NA	NA	NA	NA	NA	10.54	8.46	2.08	NA
MW-1	9/19/2001	<5,000	<50	<50	<50	<50	NA	52,000	NA	NA	NA	NA	NA	10.54	8.10	2.44	NA
MW-1	12/31/2001	<5,000	<25	<25	<25	<25	NA	17,000	NA	NA	NA	NA	NA	10.54	7.31	3.23	NA
MW-1	3/14/2002	<20,000	<200	<200	<200	<200	NA	60,000	NA	NA	NA	NA	NA	10.54	7.68	2.86	NA
MW-1	6/25/2002	<5,000	<50	<50	<50	<50	NA	34,000	NA	NA	NA	NA	NA	10.54	8.40	2.14	NA
MW-1	9/19/2002	<2,500	<25	<25	<25	<25	NA	18,000	NA	NA	NA	NA	NA	10.52	8.58	1.94	NA
MW-1	12/12/2002	<5,000	<50	<50	<50	<50	NA	30,000	NA	NA	NA	NA	NA	10.52	8.41	2.11	NA
MW-1	1/2/2003	NA	<0.50	<0.50	<0.50	<1.0	NA	NA	NA	NA	NA	NA	NA	10.52	7.45	3.07	NA
MW-1	03/20/2003 g	3,800	<25	<25	<25	<25	5,500	NA	NA	NA	NA	NA	NA	10.52	8.21	2.31	NA
MW-1	6/23/2003	<10,000	<100	<100	<100	<200	NA	35,000	NA	NA	NA	NA	NA	10.52	9.02	1.50	NA
MW-1	9/22/2003	<5,000	<50	<50	<50	<100	NA	15,000	NA	NA	NA	NA	NA	10.52	15.74	-5.22	NA
MW-1	12/3/2003	<1,300	<13	<13	<13	<25	NA	3,600	NA	NA	NA	NA	NA	10.52	18.35 h	NA	NA
MW-1	3/18/2004	<250	<2.5	<2.5	<2.5	<5.0	NA	570	NA	NA	NA	NA	NA	10.52	7.32	3.20	NA

**WELL CONCENTRATIONS**  
**Shell-branded Service Station**  
**540 Hegenberger Road**  
**Oakland, CA**

Well ID	Date	TPPH (ug/L)	B (ug/L)	T (ug/L)	E (ug/L)	X (ug/L)	MTBE 8020 (ug/L)	MTBE 8260 (ug/L)	DIPE (ug/L)	ETBE (ug/L)	TAME (ug/L)	TBA (ug/L)	Ethanol (ug/L)	TOC (MSL)	Depth to Water (ft.)	GW Elevation (MSL)	DO Reading (ppm)
MW-1	5/25/2004	<250	<2.5	<2.5	<2.5	<5.0	NA	250	NA	NA	NA	NA	NA	10.52	6.80	3.72	NA
MW-1	9/22/2004	<2,000	<20	<20	<20	<40	NA	170	<80	<80	<80	20,000	<2,000	10.52	6.55	3.97	NA
MW-1	12/22/2004	<500	<5.0	<5.0	<5.0	<10	NA	57	NA	NA	NA	NA	NA	10.52	6.44	4.08	NA
MW-1	2/23/2005	<2,000	<20	<20	<20	<40	NA	110	NA	NA	NA	NA	NA	10.52	5.79	4.73	NA
MW-1	6/27/2005	<250	<2.5	<2.5	<2.5	<5.0	NA	16	NA	NA	NA	NA	NA	10.52	6.43	4.09	NA
MW-1	8/31/2005	<250	<2.5	<2.5	<2.5	<5.0	NA	32	<10	<10	<10	4,000	<250	9.27	6.38	2.89	NA
MW-1	12/14/2005	<50.0	<0.500	2.03	<0.500	<0.500	NA	30.4	NA	NA	NA	NA	NA	9.27	6.46	2.81	NA
MW-1	3/8/2006	417	1.87	<0.500	<0.500	0.830	NA	17.8	NA	NA	NA	3,380	NA	9.27	6.21	3.06	NA
MW-1	6/14/2006	728	282	1.61	4.16	9.82	NA	109	NA	NA	NA	2,950	NA	9.27	6.86	2.41	NA
MW-1	9/27/2006	817	<0.500	<0.500	<0.500	<0.500	NA	122	<0.500	<0.500	<0.500	1,420	<50.0	9.27	7.70	1.57	NA

MW-2 (a)	8/26/1998	<250	3.2	<2.5	<2.5	<2.5	4,000	NA	NA	NA	NA	NA	NA	9.21	7.18	2.03	2.4
MW-2 (b)	8/26/1998	<250	3.1	<2.5	<2.5	<2.5	4,800	NA	NA	NA	NA	NA	NA	9.21	7.18	2.03	2.7
MW-2 (D)(b)	8/26/1998	<250	4.8	<2.5	<2.5	6.0	3,300	NA	NA	NA	NA	NA	NA	9.21	7.18	2.03	2.7
MW-2	12/28/1998	<50.0	<0.500	<0.500	<0.500	<0.500	28.8	NA	NA	NA	NA	NA	NA	9.21	7.34	1.87	2.1
MW-2	3/29/1999	235	<0.500	<0.500	<0.500	3.4	101	NA	NA	NA	NA	NA	NA	9.21	6.85	2.36	2.0
MW-2	6/22/1999	<50	<0.50	<0.50	<0.50	<0.50	<2.5	NA	NA	NA	NA	NA	NA	9.21	7.10	2.11	1.9
MW-2	9/30/1999	<50.0	<0.500	<0.500	<0.500	<0.500	1,700	NA	NA	NA	NA	NA	NA	9.21	8.06	1.15	1.0
MW-2	12/10/1999	<50.0	<0.500	<0.500	<0.500	<0.500	<2.50	NA	NA	NA	NA	NA	NA	9.21	8.61	0.60	1.4
MW-2	3/2/2000	<500	11.5	<5.00	<5.00	<5.00	5,280	NA	NA	NA	NA	NA	NA	9.21	6.33	2.88	0.4
MW-2	6/8/2000	<50.0	0.670	<0.500	<0.500	<0.500	3,160	NA	NA	NA	NA	NA	NA	9.21	6.87	2.34	1.6
MW-2	9/5/2000	<1,000	<10.0	<10.0	<10.0	<10.0	9,600	NA	NA	NA	NA	NA	NA	9.21	6.79	2.42	NA
MW-2	12/15/2000	<200	<2.00	<2.00	<2.00	<2.00	6,320	NA	NA	NA	NA	NA	NA	9.21	6.76	2.45	NA
MW-2	3/9/2001	<500	<5.00	<5.00	<5.00	<5.00	17,200	NA	NA	NA	NA	NA	NA	9.21	6.28	2.93	NA
MW-2	6/27/2001	<100	1.4	<1.0	<1.0	<2.0	NA	470	NA	NA	NA	NA	NA	9.21	7.12	2.09	NA
MW-2	9/19/2001	<50	<0.50	<0.50	<0.50	<0.50	NA	330	NA	NA	NA	NA	NA	9.21	7.17	2.04	NA
MW-2	12/31/2001	<100	<1.0	<1.0	<1.0	<1.0	NA	420	NA	NA	NA	NA	NA	9.21	6.24	2.97	NA
MW-2	3/14/2002	<250	4.5	3.3	<2.5	<2.5	NA	1,600	NA	NA	NA	NA	NA	9.21	6.72	2.49	NA

**WELL CONCENTRATIONS**  
**Shell-branded Service Station**  
**540 Hegenberger Road**  
**Oakland, CA**

Well ID	Date	TPPH (ug/L)	B (ug/L)	T (ug/L)	E (ug/L)	X (ug/L)	MTBE 8020 (ug/L)	MTBE 8260 (ug/L)	DIPE (ug/L)	ETBE (ug/L)	TAME (ug/L)	TBA (ug/L)	Ethanol (ug/L)	TOC (MSL)	Depth to Water (ft.)	GW Elevation (MSL)	DO Reading (ppm)
MW-2	6/25/2002	<50	<0.50	<0.50	<0.50	<0.50	NA	110	NA	NA	NA	NA	NA	9.21	7.23	1.98	NA
MW-2	9/19/2002	<50	<0.50	<0.50	<0.50	<0.50	NA	90	NA	NA	NA	NA	NA	9.19	7.48	1.71	NA
MW-2	12/12/2002	<50	<0.50	<0.50	<0.50	<0.50	NA	170	NA	NA	NA	NA	NA	9.19	7.33	1.86	NA
MW-2	03/20/2003 g	56	<0.50	<0.50	<0.50	<0.50	58	NA	NA	NA	NA	NA	NA	9.19	7.65	1.54	NA
MW-2	6/23/2003	<50	<0.50	<0.50	<0.50	<1.0	NA	44	NA	NA	NA	NA	NA	9.19	8.72	0.47	NA
MW-2	9/22/2003	<250	<2.5	<2.5	<2.5	<5.0	NA	37	NA	NA	NA	NA	NA	9.19	8.84	0.35	NA
MW-2	12/3/2003	<250	<2.5	<2.5	<2.5	<5.0	NA	99	NA	NA	NA	NA	NA	9.19	8.95	0.24	NA
MW-2	3/18/2004	<50	<0.50	<0.50	<0.50	<1.0	NA	24	NA	NA	NA	NA	NA	9.19	7.19	2.00	NA
MW-2	5/25/2004	<50	<0.50	<0.50	<0.50	<1.0	NA	53	NA	NA	NA	NA	NA	9.19	8.40	0.79	NA
MW-2	9/22/2004	<50	<0.50	<0.50	<0.50	<1.0	NA	24	<2.0	<2.0	<2.0	100	<50	9.19	7.08	2.11	NA
MW-2	12/22/2004	<50	<0.50	<0.50	<0.50	<1.0	NA	39	NA	NA	NA	NA	NA	9.19	7.09	2.10	NA
MW-2	2/23/2005	<50	<0.50	<0.50	<0.50	<1.0	NA	38	NA	NA	NA	NA	NA	9.19	6.50	2.69	NA
MW-2	6/27/2005	<50	<0.50	<0.50	<0.50	<1.0	NA	28	NA	NA	NA	NA	NA	9.19	7.17	2.02	NA
MW-2	8/31/2005	<50	<0.50	<0.50	<0.50	<1.0	NA	5.5	<2.0	<2.0	<2.0	19	<50	9.19	7.21	1.98	NA
MW-2	12/14/2005	<50.0	<0.500	2.16	<0.500	<0.500	NA	5.33	NA	NA	NA	NA	NA	9.19	7.13	2.06	NA
MW-2	3/8/2006	<50.0	<0.500	<0.500	<0.500	0.560	NA	18.8	NA	NA	NA	<10.0	NA	9.19	6.02	3.17	NA
MW-2	6/14/2006	<50.0	<0.500	0.680	<0.500	<0.500	NA	2.17	NA	NA	NA	<10.0	NA	9.19	7.19	2.00	NA
MW-2	9/27/2006	276	<0.500	<0.500	<0.500	<0.500	NA	5.29	<0.500	<0.500	<0.500	29.9	<50.0	9.19	7.45	1.74	NA
MW-3 (a)	8/26/1998	2,300	180	330	<0.50	420	44,000	NA	NA	NA	NA	NA	NA	9.45	6.52	2.93	1.8
MW-3 (b)	8/26/1998	<50	<0.50	<0.50	<0.50	<0.50	52,000	75,000	NA	NA	NA	NA	NA	9.45	6.52	2.93	2.3
MW-3	12/28/1998	<5.00	139	<50.0	<50.0	<50.0	15,100	NA	NA	NA	NA	NA	NA	9.45	6.73	2.72	1.7
MW-3	3/29/1999	52,500	5,500	6,900	1,360	6,250	508,000	630,000 c	NA	NA	NA	NA	NA	9.45	6.21	3.24	2.1
MW-3	6/22/1999	58,000	6,600	9,850	1,640	6,950	677,000	653,000	NA	NA	NA	NA	NA	9.45	7.00	2.45	1.3
MW-3	9/30/1999	4,360	121	122	36.1	647	33,700	35,600	NA	NA	NA	NA	NA	9.45	6.84	2.61	0.6
MW-3	11/19/1999	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	9.45	7.93	1.52	NA
MW-3	11/24/1999	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	9.45	8.25	1.20	NA
MW-3	12/2/1999	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	9.45	7.55	1.90	NA

**WELL CONCENTRATIONS**  
**Shell-branded Service Station**  
**540 Hegenberger Road**  
**Oakland, CA**

Well ID	Date	TPPH (ug/L)	B (ug/L)	T (ug/L)	E (ug/L)	X (ug/L)	MTBE 8020 (ug/L)	MTBE 8260 (ug/L)	DIPE (ug/L)	ETBE (ug/L)	TAME (ug/L)	TBA (ug/L)	Ethanol (ug/L)	TOC (MSL)	Depth to Water (ft.)	GW Elevation (MSL)	DO Reading (ppm)
MW-3	12/10/1999	4,220	973	26.3	273	584	88,200	NA	NA	NA	NA	NA	NA	9.45	7.28	2.17	2.5
MW-3	3/2/2000	65,300	5,210	10,300	2,650	15,100	56,800	59,800 e	NA	NA	NA	NA	NA	9.45	5.87	3.58	d
MW-3	6/8/2000	72,700	3,570	10,200	2,100	13,400	44,400	NA	NA	NA	NA	NA	NA	9.45	5.32	4.13	1.1
MW-3	9/5/2000	26,100	959	2,910	1,090	5,640	24,000	NA	NA	NA	NA	NA	NA	9.45	5.60	3.85	NA
MW-3	12/15/2000	5,190	438	8.39	483	530	19,100	11,800 f	NA	NA	NA	NA	NA	9.45	6.27	3.18	NA
MW-3	3/9/2001	5,880	472	42.2	392	1,290	41,800	NA	NA	NA	NA	NA	NA	9.45	5.71	3.74	NA
MW-3	6/27/2001	9,100	330	79	140	1,600	NA	31,000	NA	NA	NA	NA	NA	9.45	6.88	2.57	NA
MW-3	9/19/2001	790	14	18	17	67	NA	8,100	NA	NA	NA	NA	NA	9.45	6.70	2.75	NA
MW-3	12/31/2001	<5,000	220	<50	86	<50	NA	22,000	NA	NA	NA	NA	NA	9.45	5.92	3.53	NA
MW-3	3/14/2002	<2,500	<25	<25	<25	<25	NA	12,000	NA	NA	NA	NA	NA	9.45	6.25	3.20	NA
MW-3	6/25/2002	<10,000	160	<100	<100	<100	NA	42,000	NA	NA	NA	NA	NA	9.45	6.65	2.80	NA
MW-3	9/19/2002	<10,000	650	<100	280	360	NA	84,000	NA	NA	NA	NA	NA	9.45	6.51	2.94	NA
MW-3	12/12/2002	<10,000	170	<100	<100	<100	NA	45,000	NA	NA	NA	NA	NA	9.45	6.97	2.48	NA
MW-3	1/2/2003	NA	59	<5.0	5.3	<10	NA	NA	NA	NA	NA	NA	NA	9.45	5.90	3.55	NA
MW-3	03/20/2003 g	5,100	<50	<50	<50	<50	4,400	NA	NA	NA	NA	NA	NA	9.45	6.87	2.58	NA
MW-3	6/23/2003	<5,000	<50	<50	<50	<100	NA	8,100	NA	NA	NA	NA	NA	9.45	13.80	-4.35	NA
MW-3	9/22/2003	<250	<2.5	4.6	<2.5	<5.0	NA	470	NA	NA	NA	NA	NA	9.45	6.31	3.14	NA
MW-3	12/3/2003	<50	<0.50	<0.50	<0.50	<1.0	NA	180	NA	NA	NA	NA	NA	9.45	14.77 h	NA	NA
MW-3	3/18/2004	<1,000	14	<10	<10	<20	NA	2,500	NA	NA	NA	NA	NA	9.45	6.07	3.38	NA
MW-3	5/25/2004	3,900	<10	66	23	470	NA	140	NA	NA	NA	NA	NA	9.45	14.63	-5.18	NA
MW-3	9/22/2004	<10,000	830	<100	290	450	NA	28,000	<400	<400	<400	13,000	<10,000	9.45	4.86	4.59	NA
MW-3	12/22/2004	94	<0.50	<0.50	<0.50	<1.0	NA	84	NA	NA	NA	NA	NA	9.45	6.93	2.52	NA
MW-3	2/23/2005	<50 i	<0.50	<0.50	<0.50	<1.0	NA	85	NA	NA	NA	NA	NA	9.45	5.68	3.77	NA
MW-3	6/27/2005	<2,500	96	<25	29	<50	NA	6,100	NA	NA	NA	NA	NA	9.45	4.80	4.65	NA
MW-3	8/31/2005	<50	<0.50	<0.50	<0.50	<1.0	NA	300	<2.0	<2.0	<2.0	700	<50	8.33	5.07	3.26	NA
MW-3	12/14/2005	647	6.16	2.37	1.88	<0.500	NA	303 j	NA	NA	NA	NA	NA	8.33	5.65	2.68	NA
MW-3	3/8/2006	901	20.8	<0.500	5.55	0.980	NA	313	NA	NA	NA	1,660	NA	8.33	5.57	2.76	NA
MW-3	6/14/2006	1,240	61.0	<0.500	11.0	0.730	NA	680	NA	NA	NA	5,660	NA	8.33	5.68	2.65	NA

**WELL CONCENTRATIONS**  
**Shell-branded Service Station**  
**540 Hegenberger Road**  
**Oakland, CA**

Well ID	Date	TPPH (ug/L)	B (ug/L)	T (ug/L)	E (ug/L)	X (ug/L)	MTBE 8020 (ug/L)	MTBE 8260 (ug/L)	DIPE (ug/L)	ETBE (ug/L)	TAME (ug/L)	TBA (ug/L)	Ethanol (ug/L)	TOC (MSL)	Depth to Water (ft.)	GW Elevation (MSL)	DO Reading (ppm)
MW-3	9/27/2006	555	1.70	<0.500	<0.500	<0.500	NA	24.5	<0.500	<0.500	<0.500	1,370	<50.0	8.33	6.11	2.22	NA
MW-4	9/25/2000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	9.88	7.64	2.24	NA
MW-4	12/15/2000	<50.0	<0.500	<0.500	<0.500	<0.500	<2.50	NA	NA	NA	NA	NA	NA	9.88	7.55	2.33	NA
MW-4	3/9/2001	<50.0	<0.500	0.730	<0.500	0.529	3.16	NA	NA	NA	NA	NA	NA	9.88	7.04	2.84	NA
MW-4	6/27/2001	<50	<0.50	<0.50	<0.50	<0.50	NA	<5.0	NA	NA	NA	NA	NA	9.88	7.76	2.12	NA
MW-4	9/19/2001	<50	<0.50	<0.50	<0.50	<0.50	NA	<5.0	NA	NA	NA	NA	NA	9.88	7.69	2.19	NA
MW-4	12/31/2001	<50	<0.50	<0.50	<0.50	<0.50	NA	<5.0	NA	NA	NA	NA	NA	9.88	7.08	2.80	NA
MW-4	3/14/2002	<50	<0.50	<0.50	<0.50	<0.50	NA	<5.0	NA	NA	NA	NA	NA	9.88	7.57	2.31	NA
MW-4	6/25/2002	<50	<0.50	<0.50	<0.50	<0.50	NA	<5.0	NA	NA	NA	NA	NA	9.88	8.50	1.38	NA
MW-4	9/19/2002	<50	<0.50	<0.50	<0.50	<0.50	NA	<5.0	NA	NA	NA	NA	NA	9.88	8.22	1.66	NA
MW-4	12/12/2002	<50	<0.50	<0.50	<0.50	<0.50	NA	<5.0	NA	NA	NA	NA	NA	9.88	8.08	1.80	NA
MW-4	03/20/2003 g	<50	<0.50	<0.50	<0.50	<0.50	<5.0	NA	NA	NA	NA	NA	NA	9.88	7.92	1.96	NA
MW-4	6/23/2003	<50	<0.50	<0.50	<0.50	<1.0	NA	<5.0	NA	NA	NA	NA	NA	9.88	8.18	1.70	NA
MW-4	9/22/2003	<50	<0.50	<0.50	<0.50	<1.0	NA	16	NA	NA	NA	NA	NA	9.88	8.28	1.60	NA
MW-4	12/3/2003	<50	<0.50	<0.50	<0.50	<1.0	NA	15	NA	NA	NA	NA	NA	9.88	8.44	1.44	NA
MW-4	3/18/2004	<50	<0.50	<0.50	<0.50	<1.0	NA	15	NA	NA	NA	NA	NA	9.88	7.52	2.36	NA
MW-4	5/25/2004	<50	<0.50	<0.50	<0.50	<1.0	NA	20	NA	NA	NA	NA	NA	9.88	8.30	1.58	NA
MW-4	9/22/2004	<50	<0.50	<0.50	<0.50	<1.0	NA	20	<2.0	<2.0	<2.0	<5.0	<50	9.88	7.72	2.16	NA
MW-4	12/22/2004	<50	<0.50	<0.50	<0.50	<1.0	NA	20	NA	NA	NA	NA	NA	9.88	7.32	2.56	NA
MW-4	2/23/2005	<50	<0.50	<0.50	<0.50	<1.0	NA	18	NA	NA	NA	NA	NA	9.88	6.95	2.93	NA
MW-4	6/27/2005	55	<0.50	<0.50	<0.50	<1.0	NA	14	NA	NA	NA	NA	NA	9.88	7.48	2.40	NA
MW-4	8/31/2005	<50	<0.50	<0.50	<0.50	<1.0	NA	15	<2.0	<2.0	<2.0	11	<50	9.88	7.53	2.35	NA
MW-4	12/14/2005	<50.0	<0.500	2.04	<0.500	<0.500	NA	10.1	NA	NA	NA	NA	NA	9.88	7.54	2.34	NA
MW-4	3/8/2006	<50.0	<0.500	<0.500	<0.500	<0.500	NA	5.73	NA	NA	NA	NA	NA	9.88	6.19	3.69	NA
MW-4	6/14/2006	<50.0	<0.500	0.590	<0.500	<0.500	NA	14.0	NA	NA	NA	NA	NA	9.88	7.63	2.25	NA
MW-4	9/27/2006	426	<0.500	<0.500	<0.500	<0.500	NA	16.5	<0.500	<0.500	<0.500	<10.0	<50.0	9.88	7.87	2.01	NA

**WELL CONCENTRATIONS**  
**Shell-branded Service Station**  
**540 Hegenberger Road**  
**Oakland, CA**

Well ID	Date	TPPH (ug/L)	B (ug/L)	T (ug/L)	E (ug/L)	X (ug/L)	MTBE 8020 (ug/L)	MTBE 8260 (ug/L)	DIPE (ug/L)	ETBE (ug/L)	TAME (ug/L)	TBA (ug/L)	Ethanol (ug/L)	TOC (MSL)	Depth to Water (ft.)	GW Elevation (MSL)	DO Reading (ppm)
MW-5	6/18/2002	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	8.36	NA	NA
MW-5	6/25/2002	<10,000	<100	<100	<100	<100	NA	60,000	NA	NA	NA	NA	NA	NA	8.30	NA	NA
MW-5	9/19/2002	<2,000	<20	<20	<20	<20	NA	7,200	NA	NA	NA	NA	NA	10.03	8.44	1.59	NA
MW-5	12/12/2002	<5,000	<50	<50	<50	<50	NA	33,000	NA	NA	NA	NA	NA	10.03	8.49	1.54	NA
MW-5	03/20/2003 g	12,000	<50	<50	<50	<50	15,000	NA	NA	NA	NA	NA	NA	10.03	8.23	1.80	NA
MW-5	6/23/2003	<1,000	<10	<10	<10	<20	NA	1,700	NA	NA	NA	NA	NA	10.03	16.70	-6.67	NA
MW-5	9/22/2003	<2,500	<25	<25	<25	<50	NA	4,400	NA	NA	NA	NA	NA	10.03	16.70	-6.67	NA
MW-5	12/3/2003	<50	<0.50	<0.50	<0.50	<1.0	NA	70	NA	NA	NA	NA	NA	10.03	16.79	-6.76	NA
MW-5	3/18/2004	<50	<0.50	<0.50	<0.50	<1.0	NA	43	NA	NA	NA	NA	NA	10.03	16.78	-6.75	NA
MW-5	5/25/2004	<50	<0.50	<0.50	<0.50	<1.0	NA	30	NA	NA	NA	NA	NA	10.03	13.02	-2.99	NA
MW-5	9/22/2004	<50	<0.50	<0.50	<0.50	<1.0	NA	20	<2.0	<2.0	<2.0	83	<50	10.03	5.91	4.12	NA
MW-5	12/22/2004	<50	<0.50	<0.50	<0.50	<1.0	NA	67	NA	NA	NA	NA	NA	10.03	5.72	4.31	NA
MW-5	2/23/2005	<50	<0.50	<0.50	<0.50	<1.0	NA	120	NA	NA	NA	NA	NA	10.03	4.41	5.62	NA
MW-5	6/27/2005	56	<0.50	<0.50	<0.50	<1.0	NA	46	NA	NA	NA	NA	NA	10.03	5.98	4.05	NA
MW-5	8/31/2005	<1,000	<10	<10	<10	<20	NA	69	<40	<40	<40	2,400	<1,000	9.03	6.60	2.43	NA
MW-5	12/14/2005	302	<0.500	2.02	<0.500	<0.500	NA	34.0	NA	NA	NA	NA	NA	9.03	5.00	4.03	NA
MW-5	3/8/2006	<50.0	<0.500	<0.500	<0.500	<0.500	NA	34.6	NA	NA	NA	677	NA	9.03	4.18	4.85	NA
MW-5	6/14/2006	<50.0	<0.500	<0.500	<0.500	<0.500	NA	30.4	NA	NA	NA	4,380	NA	9.03	6.10	2.93	NA
MW-5	9/27/2006	528	<0.500	<0.500	<0.500	<0.500	NA	28.6	<0.500	<0.500	<0.500	384	<50.0	9.03	6.94	2.09	NA
C-1	9/19/2001	<50	<0.50	<0.50	<0.50	<0.50	NA	<5.0	NA	NA	NA	NA	NA	NA	1.44	NA	NA
C-1	3/29/2002	<50	<0.50	<0.50	<0.50	<0.50	NA	<5.0	NA	NA	NA	NA	NA	NA	2.59	NA	NA
C-1	6/25/2002	<50	<0.50	<0.50	<0.50	<0.50	NA	<5.0	NA	NA	NA	NA	NA	NA	3.72	NA	NA
C-1	9/19/2002	<50	<0.50	<0.50	<0.50	<0.50	NA	<5.0	NA	NA	NA	NA	NA	NA	3.08	NA	NA
C-1	12/12/2002	<50	<0.50	<0.50	<0.50	<0.50	NA	<5.0	NA	NA	NA	NA	NA	NA	0.64	NA	NA
C-1	03/20/2003 g	<50	<0.50	<0.50	<0.50	<0.50	<5.0	NA	NA	NA	NA	NA	NA	NA	4.61	NA	NA
SD-1	9/19/2001	Unable to sample	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

**WELL CONCENTRATIONS**  
**Shell-branded Service Station**  
**540 Hegenberger Road**  
**Oakland, CA**

Well ID	Date	TPPH (ug/L)	B (ug/L)	T (ug/L)	E (ug/L)	X (ug/L)	MTBE 8020 (ug/L)	MTBE 8260 (ug/L)	DIPE (ug/L)	ETBE (ug/L)	TAME (ug/L)	TBA (ug/L)	Ethanol (ug/L)	TOC (MSL)	Depth to Water (ft.)	GW Elevation (MSL)	DO Reading (ppm)
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SD-1	3/29/2002	Dry	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SD-1	6/25/2002	Dry	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SD-1	9/19/2002	Dry	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SD-1	12/12/2002	Dry	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SD-1	3/20/2003	Dry	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

SD-2	9/19/2001	Unable to sample		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SD-2	3/29/2002	Dry	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SD-2	6/25/2002	Dry	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SD-2	9/19/2002	Dry	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SD-2	12/12/2002	Dry	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SD-2	3/20/2003	Dry	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

BW-A	6/22/1999	318	<0.50	<0.50	0.590	1.48	4,470	NA	NA	NA	NA	NA	NA	NA	4.71	NA	1.1
BW-A	6/25/2002	<500	<5.0	<5.0	<5.0	18	NA	3,100	NA	NA	NA	NA	NA	NA	5.14	NA	NA
BW-A	9/19/2002	<200	<2.0	<2.0	<2.0	<2.0	NA	<20	NA	NA	NA	NA	NA	NA	7.19	NA	NA
BW-A	12/12/2002	<500	<5.0	<5.0	<5.0	<5.0	NA	2,900	NA	NA	NA	NA	NA	NA	6.40	NA	NA
BW-A	03/20/2003 g	<2,500	<25	<25	<25	<25	<250	NA	NA	NA	NA	NA	NA	NA	5.36	NA	NA
BW-A	6/23/2003	<1,000	<10	<10	<10	<20	NA	<100	NA	NA	NA	NA	NA	NA	10.27	NA	NA
BW-A	9/22/2005	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	8.63	NA	NA	NA

BW-B	6/22/1999	<250	<2.5	<2.5	<2.5	<2.5	8,600	NA	NA	NA	NA	NA	NA	NA	5.90	NA	1.2
BW-B	6/27/2001	<5,000	<50	<50	<50	<50	NA	40,000	NA	NA	NA	NA	NA	NA	5.83	NA	NA
BW-B	12/31/2001	<2,000	<20	<20	<20	<20	NA	9,200	NA	NA	NA	NA	NA	NA	4.19	NA	NA
BW-B	3/14/2002	<2,000	<20	<20	<20	<20	NA	9,400	NA	NA	NA	NA	NA	NA	5.24	NA	NA
BW-B	6/25/2002	<2,000	<20	<20	<20	<20	NA	6,600	NA	NA	NA	NA	NA	NA	6.19	NA	NA
BW-B	9/19/2002	<500	<5.0	<5.0	<5.0	<5.0	NA	<50	NA	NA	NA	NA	NA	NA	8.46	NA	NA
BW-B	12/12/2002	<500	<5.0	<5.0	<5.0	<5.0	NA	1,700	NA	NA	NA	NA	NA	NA	7.46	NA	NA

**WELL CONCENTRATIONS**  
**Shell-branded Service Station**  
**540 Hegenberger Road**  
**Oakland, CA**

Well ID	Date	TPPH (ug/L)	B (ug/L)	T (ug/L)	E (ug/L)	X (ug/L)	MTBE 8020 (ug/L)	MTBE 8260 (ug/L)	DIPE (ug/L)	ETBE (ug/L)	TAME (ug/L)	TBA (ug/L)	Ethanol (ug/L)	TOC (MSL)	Depth to Water (ft.)	GW Elevation (MSL)	DO Reading (ppm)
BW-B	03/20/2003 g	170	<1.0	<1.0	<1.0	<1.0	190	NA	NA	NA	NA	NA	NA	NA	6.23	NA	NA
BW-B	6/23/2003	<50	<0.50	<0.50	<0.50	<1.0	NA	43	NA	NA	NA	NA	NA	NA	9.95	NA	NA
BW-B	9/22/2005	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	8.32	NA	NA	NA
BW-C	6/22/1999	<50	<0.50	<0.50	<0.50	0.98	11,000	NA	NA	NA	NA	NA	NA	NA	5.91	NA	1.6
BW-C	6/25/2002	<5,000	<50	<50	<50	<50	NA	20,000	NA	NA	NA	NA	NA	NA	6.49	NA	NA
BW-C	9/19/2002	<1,000	<10	<10	<10	<10	NA	400	NA	NA	NA	NA	NA	NA	8.52	NA	NA
BW-C	12/12/2002	<2,000	<20	<20	<20	<20	NA	8,000	NA	NA	NA	NA	NA	NA	7.57	NA	NA
BW-C	03/20/2003 g	270	<1.0	<1.0	<1.0	<1.0	250	NA	NA	NA	NA	NA	NA	NA	6.48	NA	NA
BW-C	6/23/2003	<1,000	<10	<10	<10	<20	NA	170	NA	NA	NA	NA	NA	NA	11.48	NA	NA
BW-C	9/22/2005	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	9.81	NA	NA	NA
BW-D	6/22/1999	<50.0	<0.500	<0.500	<0.500	<0.500	2,190	NA	NA	NA	NA	NA	NA	NA	4.78	NA	1.4
BW-D	6/25/2002	Well inaccessible		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BW-D	7/2/2002	<1,000	23	<10	<10	<10	NA	<100	NA	NA	NA	NA	NA	NA	6.36	NA	NA
BW-D	9/19/2002	<250	<2.5	<2.5	<2.5	<2.5	NA	<25	NA	NA	NA	NA	NA	NA	7.25	NA	NA
BW-D	12/12/2002	<5,000	<50	<50	<50	<50	NA	16,000	NA	NA	NA	NA	NA	NA	6.21	NA	NA
BW-D	03/20/2003 g	71	<0.50	<0.50	<0.50	<0.50	55	NA	NA	NA	NA	NA	NA	NA	5.23	NA	NA
BW-D	6/23/2003	<1,000	<10	<10	<10	<20	NA	<100	NA	NA	NA	NA	NA	NA	10.25	NA	NA
BW-D	9/22/2003	<100	<1.0	<1.0	<1.0	<2.0	NA	120	NA	NA	NA	NA	NA	NA	10.18	NA	NA
BW-D	12/3/2003	<1,300	110	<13	<13	29	NA	560	NA	NA	NA	NA	NA	NA	10.20	NA	NA
BW-D	3/18/2004	<50	0.67	<0.50	<0.50	<1.0	NA	12	NA	NA	NA	NA	NA	NA	3.42	NA	NA
BW-D	5/25/2004	<50	1.4	0.96	<0.50	<1.0	NA	1.7	NA	NA	NA	NA	NA	NA	8.83	NA	NA
BW-D	9/22/2004	<100	6.9	<1.0	2.1	4.2	NA	210	NA	NA	NA	NA	NA	NA	2.75	NA	NA
BW-D	12/22/2004	61	2.1	2.9	<0.50	3.6	NA	5.4	NA	NA	NA	NA	NA	NA	3.67	NA	NA
BW-D	2/23/2005	<50	<0.50	<0.50	<0.50	<1.0	NA	1.2	NA	NA	NA	NA	NA	NA	2.88	NA	NA
BW-D	6/27/2005	53	<0.50	<0.50	<0.50	<1.0	NA	1.8	NA	NA	NA	NA	NA	NA	3.70	NA	NA
BW-D	8/31/2005	<50	<0.50	<0.50	<0.50	<1.0	NA	1.4	NA	NA	NA	NA	NA	8.61	3.82	4.79	NA



**WELL CONCENTRATIONS**  
**Shell-branded Service Station**  
**540 Hegenberger Road**  
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Well ID	Date	TPPH (ug/L)	B (ug/L)	T (ug/L)	E (ug/L)	X (ug/L)	MTBE 8020 (ug/L)	MTBE 8260 (ug/L)	DIPE (ug/L)	ETBE (ug/L)	TAME (ug/L)	TBA (ug/L)	Ethanol (ug/L)	TOC (MSL)	Depth to Water (ft.)	GW Elevation (MSL)	DO Reading (ppm)
BW-D	12/14/2005	<50.0	<0.500	2.78	<0.500	<0.500	NA	2.26	NA	NA	NA	NA	NA	8.61	3.59	5.02	NA
BW-D	3/8/2006	<50.0	<0.500	<0.500	<0.500	<0.500	NA	2.23	NA	NA	NA	NA	NA	8.61	3.61	5.00	NA
BW-D	6/14/2006	<50.0	<0.500	<0.500	<0.500	<0.500	NA	18.1	NA	NA	NA	NA	NA	8.61	3.86	4.75	NA
<b>BW-D</b>	<b>9/27/2006</b>	<b>410</b>	<b>&lt;0.500</b>	<b>&lt;0.500</b>	<b>&lt;0.500</b>	<b>&lt;0.500</b>	<b>NA</b>	<b>2.90</b>	<b>&lt;0.500</b>	<b>&lt;0.500</b>	<b>&lt;0.500</b>	<b>77.6</b>	<b>&lt;50.0</b>	<b>8.61</b>	<b>4.32</b>	<b>4.29</b>	<b>NA</b>

Abbreviations:

TPPH = Total petroleum hydrocarbons as gasoline by EPA Method 8260B; prior to June 27, 2001, analyzed by EPA Method 8015.

BTEX = Benzene, toluene, ethylbenzene, xylenes by EPA Method 8260B; prior to June 27, 2001, analyzed by EPA Method 8020.

MTBE = Methyl tertiary butyl ether

DIPE = Di-isopropyl ether, analyzed by EPA Method 8260B

ETBE = Ethyl tertiary butyl ether, analyzed by EPA Method 8260B

TAME = Tertiary amyl methyl ether, analyzed by EPA Method 8260B

TBA = Tertiary butyl alcohol, analyzed by EPA Method 8260B

TOC = Top of Casing Elevation

GW = Groundwater

DO = Dissolved Oxygen

ppm = Parts per million

ug/L = Parts per billion

MSL = Mean sea level

ft. = Feet

<n = Below detection limit

(D) = Duplicate sample

NA = Not applicable

**WELL CONCENTRATIONS**  
**Shell-branded Service Station**  
**540 Hegenberger Road**  
**Oakland, CA**

Well ID	Date	TPPH (ug/L)	B (ug/L)	T (ug/L)	E (ug/L)	X (ug/L)	MTBE 8020 (ug/L)	MTBE 8260 (ug/L)	DIPE (ug/L)	ETBE (ug/L)	TAME (ug/L)	TBA (ug/L)	Ethanol (ug/L)	TOC (MSL)	Depth to Water (ft.)	GW Elevation (MSL)	DO Reading (ppm)
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Notes:

a = Pre-purge

b = Post purge

c = Lab confirmed MTBE by mistake. MTBE value at MW-1 should have been confirmed instead.

d = DO reading not taken.

e = Sample was analyzed outside of the EPA recommended holding time.

f = The second highest MTBE hit was mistakenly confirmed. MTBE for MW-1 should have been confirmed.

g = On March 20, 2003, all analyses run by EPA Method 8015/8020.

h = Depth to top of pump; pump prevented depth to water measurement.

i = The concentration reported reflects individual or discrete unidentified peaks not matching a typical fuel pattern.

j = Concentration estimated. Analyte exceeded calibration range. Reanalysis not performed due to holding time requirements.

Ethanol analyzed by EPA Method 8260B.

Site surveyed September 21, 2000 by Virgil Chavez Land Surveying of Vallejo, CA.

C-1 is a canal sample location.

SD-1 and SD-2 are storm drains.

Wells MW-1 through MW-5 surveyed January 24 and June 19, 2002 by Virgil Chavez Land Surveying of Vallejo, CA.

Wells MW-1, MW-3, MW-5, and BW-D surveyed on September 22, 2005 by Virgil Chavez Land Surveying of Vallejo, CA.

Unmonitored backfilled wells BW-A, BW-B, and BW-C surveyed on September 22, 2005 by Virgil Chavez Land Surveying of Vallejo, CA.

**APPENDIX D**

**GEOTRACKER UPLOAD CONFIRMATION**

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**Confirmation Number:** 6910876274  
**Date/Time of Submittal:** 10/26/2006 5:33:52 PM  
**Facility Global ID:** T0600100104  
**Facility Name:** ARCO #4494  
**Submittal Title:** 3Q 06 GW MONITORING  
**Submittal Type:** GW Monitoring Report

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

<b>ARCO #4494</b> 566 HEGENBERGER OAKLAND, CA 94621	<b>Regional Board - Case #: 01-0112</b> SAN FRANCISCO BAY RWQCB (REGION 2) <b>Local Agency (lead agency) - Case #: RO0000204</b> ALAMEDA COUNTY LOP - (SP)
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CONF #	TITLE	QUARTER
6910876274	3Q 06 GW MONITORING	Q3 2006
SUBMITTED BY	SUBMIT DATE	STATUS
Broadbent & Associates, Inc.	10/26/2006	PENDING REVIEW

### SAMPLE DETECTIONS REPORT

# FIELD POINTS SAMPLED	7
# FIELD POINTS WITH DETECTIONS	3
# FIELD POINTS WITH WATER SAMPLE DETECTIONS ABOVE MCL	1
SAMPLE MATRIX TYPES	WATER

### METHOD QA/QC REPORT

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

### 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%	Y
MATRIX SPIKE / MATRIX SPIKE DUPLICATE(S) RPD LESS THAN 30%	Y
SURROGATE SPIKES % RECOVERY BETWEEN 85-115%	N
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 L</u>
QCTB SAMPLES	N	0
QCEB SAMPLES	N	0
QCAB SAMPLES	N	0

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CONTACT SITE ADMINISTRATOR.

#4494

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<b><u>Submittal Title:</u></b>	<b>3Q 06 GEO_WELL</b>
<b><u>Submittal Date/Time:</u></b>	<b>10/26/2006 5:39:44 PM</b>
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