



February 15, 2005

Mr. Robert Schultz  
Alameda County Environmental Health  
1131 Harbor Bay Parkway, Suite 250  
Alameda, California 94502-8577

Alameda County  
MAR 18 2005  
Environmental Health

**RE: Electronic Report Submission**

Dear Mr. Schultz:

The purpose of this letter is to inform you that on behalf of the Atlantic Richfield Company (RM), a BP affiliated company, URS Corporation (URS) will issue all future quarterly monitoring reports (QMR) electronically to the State Water Resources Control Board's GEOTRACKER website (<http://www.geotracker.swrcb.ca.gov/>). You may access your report directly from this website. If you would prefer to have a PDF copy e-mailed to you or if you would like to continue receiving a paper copy, please contact Rick Murray at (510) 874-1755.

If you have any questions regarding this submission, please call me at (510) 874-3125.

Sincerely,

**URS CORPORATION**

Rachel Lindvall  
QMR Coordinator

## Electronic Submittal Information

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<b><u>Facility Name:</u></b>	ARCO # 06002
<b><u>Global ID:</u></b>	T0600100105
<b><u>Title:</u></b>	1Q 2005 QMR Site 6002
<b><u>Document Type:</u></b>	Reports - Other
<b><u>Submittal Type:</u></b>	GEO_REPORT
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Environmental Health

Alameda County  
MAR 18 2005

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Atlantic Richfield Company  
(a BP affiliated company)

P.O. Box 6549  
Moraga, California 94570  
Phone: (925) 299-8891  
Fax: (925) 299-8872

March 7, 2005

**Re: First Quarter 2005 Monitoring Report  
Former ARCO Service Station #6002  
6235 Seminary Avenue  
Oakland, California  
STID 3942**

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 Manager



March 11, 2005

Mr. Robert Schultz  
Alameda County Environmental Health  
1131 Harbor Bay Parkway, Suite 250  
Alameda, California 94502-6577

**Re: First Quarter 2005 Monitoring Report  
Former ARCO Service Station #6002  
6235 Seminary Avenue  
Oakland, California  
STID 3942**

Dear Mr. Schultz:

On behalf of Atlantic Richfield Company, a BP affiliated company, URS Corporation (URS) is submitting the *First Quarter 2005 Groundwater Monitoring Report* for the Former ARCO Service Station #6002, located at 6235 Seminary Avenue, Oakland, California.

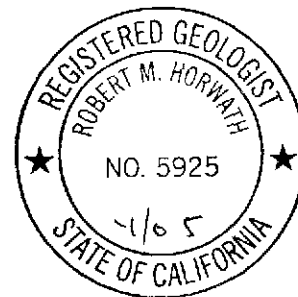
If you have any questions regarding this submission, please call (510) 874-3280.

Sincerely,

**URS CORPORATION**

Scott Robinson  
Project Manager

Robert Horwath, R.G.  
Portfolio Manager



Enclosure: First Quarter 2005 Groundwater Monitoring Report

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

**R E P O R T**

**FIRST QUARTER 2005  
GROUNDWATER MONITORING  
REPORT**

FORMER ARCO SERVICE STATION #6002  
6235 SEMINARY AVENUE  
OAKLAND, CALIFORNIA

*Prepared for*  
RM

March 11, 2005

**URS**

URS Corporation  
1333 Broadway, Suite 800  
Oakland, California 94612

Date: March 11, 2005

Quarter: 1Q05

### RM QUARTERLY GROUNDWATER MONITORING REPORT

Former Facility No.: 6002 Address: 6235 Seminary Avenue, Oakland, California  
RM Environmental Business Manager: Paul Supple  
Consulting Co./Contact Person: URS Corporation / Scott Robinson  
Primary Agency: Alameda County Environmental Health (ACEH)  
Agency Project No.: STID 3942

#### WORK PERFORMED THIS QUARTER (First – 2005):

1. Performed first quarter 2005 groundwater monitoring event on February 7, 2005.
2. Prepared and submitted First Quarter 2005 Groundwater Monitoring Report.

#### WORK PROPOSED FOR NEXT QUARTER (Second – 2005):

1. Perform second quarter 2005 groundwater monitoring event.
2. Prepare and submit Second Quarter 2005 Groundwater Monitoring Report.

#### SITE SUMMARY:

Current Phase of Project: GW monitoring/sampling  
Frequency of Groundwater Sampling: Annual (3<sup>rd</sup> quarter): MW-3, MW-4, MW-6, MW-7, and MW-8  
Quarterly: MW-5, VW-1, and VW-4  
Frequency of Groundwater Monitoring: Quarterly  
Is Free Product (FP) Present On-Site: No  
Bulk Soil Removed to Date : Approximately 370 cubic yards of TPH impacted soil  
Current Remediation Techniques: Natural Attenuation  
Approximate Depth to Groundwater: 7.25 (VM-1) to 15.26 (MW-6) feet  
Groundwater Gradient (direction): Southwest  
Groundwater Gradient (magnitude): 0.1 feet per foot

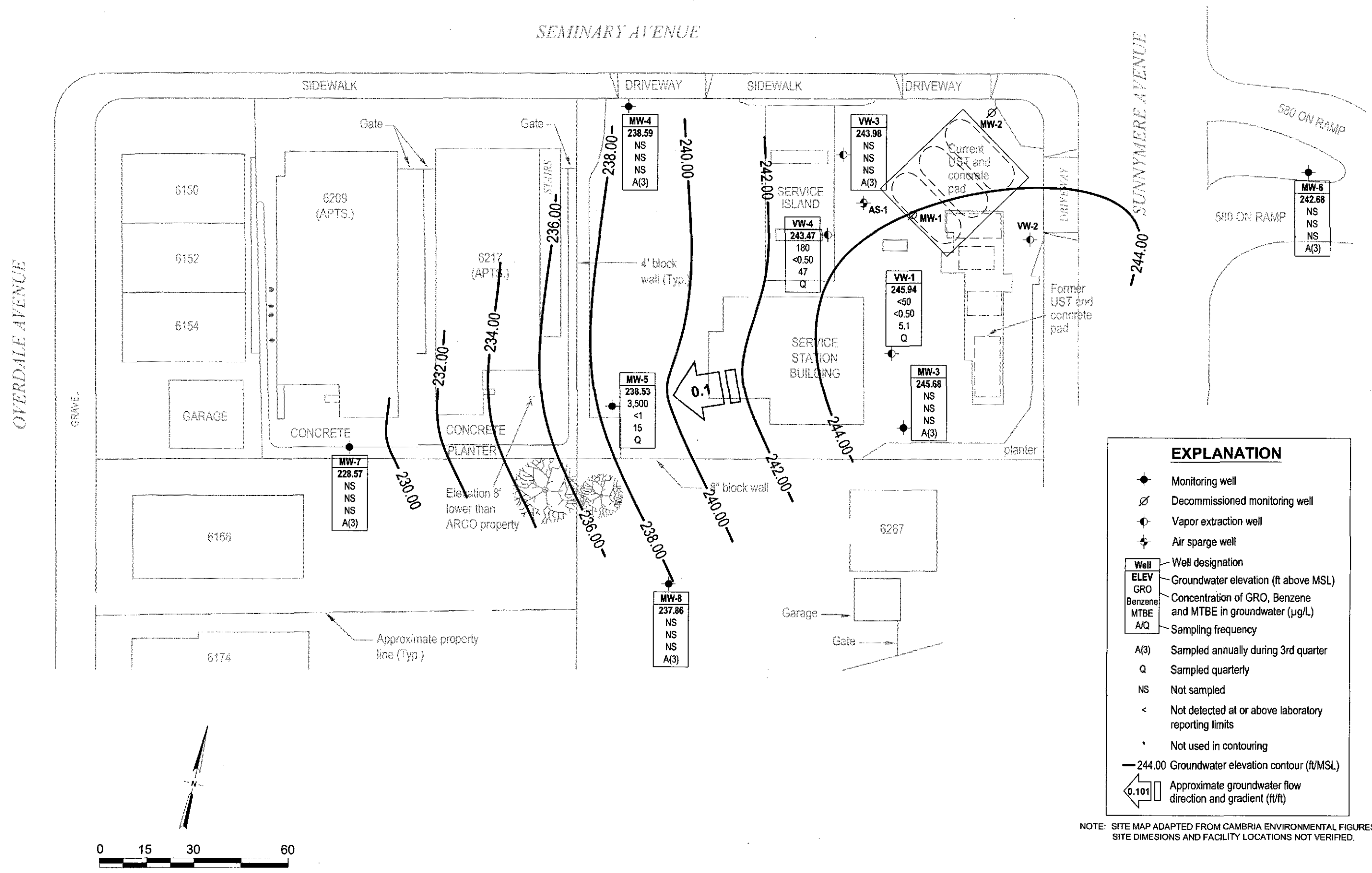
#### DISCUSSION:

Gasoline range organics were detected at or above the laboratory reporting limit in two of the three wells sampled this quarter at concentrations of 180 micrograms per liter ( $\mu\text{g/L}$ ) (VW-4) to 3,500  $\mu\text{g/L}$  (MW-5). Toluene, ethylbenzene and xylenes were detected at or above the laboratory reporting limit in one well (MW-5) at concentrations of 1.1  $\mu\text{g/L}$ , 16  $\mu\text{g/L}$ , and 2.6  $\mu\text{g/L}$ , respectively. Methyl tert-butyl ether was detected at or above the laboratory reporting limit in all three wells at concentrations ranging from 5.1  $\mu\text{g/L}$  (VW-1) to 47  $\mu\text{g/L}$  (VW-4). Tert-butyl alcohol and ethyl tert-butyl ether were detected at or above the laboratory reporting limit in one well (VW-4) at concentrations of 1,000  $\mu\text{g/L}$  and 0.89  $\mu\text{g/L}$ , respectively. No other fuel components were detected at or above their respective laboratory reporting limits in any wells sampled this quarter.

**ATTACHMENTS:**

- Figure 1 – Groundwater Elevation Contour and Analytical Summary Map – February 7, 2005
- Table 1 – Groundwater Elevation and Analytical Data
- Table 2 – Fuel Additives Analytical Data
- Table 3 – Groundwater Gradient Data
- Attachment A – Field Procedures and Field Data Sheets
- Attachment B – Laboratory Procedures, Certified Analytical Reports, and Chain-of-Custody Records
- Attachment C – Error Check Reports and EDF/Geowell Submittal Confirmations

Mar 03, 2005 - 1:49pm  
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EXPLANATION	
	Monitoring well
	Decommissioned monitoring well
	Vapor extraction well
	Air sparge well
<b>Well</b>	Well designation
<b>ELEV</b>	Groundwater elevation (ft above MSL)
<b>GRO</b>	Concentration of GRO, Benzene and MTBE in groundwater (µg/L)
<b>MTBE</b>	
<b>A/Q</b>	Sampling frequency
A(3)	Sampled annually during 3rd quarter
Q	Sampled quarterly
NS	Not sampled
<	Not detected at or above laboratory reporting limits
*	Not used in contouring
— 244.00	Groundwater elevation contour (ft/MSL)
	Approximate groundwater flow direction and gradient (ft/ft)

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

<b>URS</b>	Project No. 38487187	<b>GROUNDWATER ELEVATION CONTOUR AND ANALYTICAL SUMMARY MAP</b>	FIGURE <b>1</b>
	Former ARCO Service Station #6002 6235 Seminary Avenue Oakland, California		



**Table 1**  
**Groundwater Elevation and Analytical Data**  
Former ARCO Service Station #6002  
6235 Seminary Ave., Oakland, CA

Well No.	Date	P/ NP	Notes	TOC (feet)	Top of Screen (ft bgs)	Bottom of Screen (ft bgs)	DTW (ft bgs)	Product Thickness (feet)	GWE (feet)	GRO/ TPH-g (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethyl-benzene (µg/L)	Total Xylenes (µg/L)	MTBE (µg/L)	DO (mg/L)	pH
AS-1	6/29/1995	--		--	20.00	22.00	9.20	--	--	<50	1.6	<0.5	0.9	0.9	--	--	--
MW-1	3/15/1995	--		247.06	4.50	24.50	7.37	--	239.69	13,000	1,200	44	770	1,100	--	--	--
	5/30/1995	--		247.06	4.50	24.50	8.48	--	238.58	19,000	1,600	30	890	1,400	--	--	--
	9/1/1995	--		247.06	4.50	24.50	9.47	--	237.59	14,000	1,300	28	480	780	24,000	--	--
	11/13/1995	--	a, b	247.06	4.50	24.50	8.78	0.01	238.29	11,000	570	17	260	410	25,000	--	--
	2/23/1996	--	d	247.06	4.50	24.50	--	--	--	--	--	--	--	--	--	--	--
MW-2	3/15/1995	--		249.3	5.00	17.50	8.25	--	241.05	<50	<0.5	<0.5	<0.5	<0.5	--	--	--
	5/30/1995	--		249.3	5.00	17.50	9.93	--	239.37	<50	<0.5	<0.5	<0.5	<0.5	--	--	--
	9/1/1995	--		249.3	5.00	17.50	10.69	--	238.61	<50	<0.5	<0.5	<0.5	<0.5	<3	--	--
	11/13/1995	--		249.3	5.00	17.50	10.32	--	238.98	<50	<0.5	<0.5	<0.5	<0.5	--	--	--
	2/23/1996	--	d	249.3	5.00	17.50	--	--	--	--	--	--	--	--	--	--	--
MW-3	3/15/1995	--		248.35	5.00	24.50	6.76	--	241.59	<50	<0.5	<0.5	<0.5	<0.5	--	--	--
	5/30/1995	--		248.35	5.00	24.50	7.81	--	240.54	<50	<0.5	<0.5	<0.5	<0.5	--	--	--
	9/1/1995	--		248.35	5.00	24.50	8.65	--	239.70	<50	<0.5	<0.5	<0.5	<0.5	<3	--	--
	11/13/1995	--		248.35	5.00	24.50	8.25	--	240.10	120	45	0.7	<0.5	6.2	--	--	--
	2/23/1996	--		248.35	5.00	24.50	6.64	--	241.71	<50	<0.5	<0.5	0.6	1.9	<3	--	--
	5/10/1996	--		248.35	5.00	24.50	7.95	--	240.40	--	--	--	--	--	--	--	--
	8/9/1996	--		248.35	5.00	24.50	8.06	--	240.29	--	--	--	--	--	--	--	--
	11/8/1996	--	e	248.35	5.00	24.50	--	--	--	--	--	--	--	--	--	--	--
	3/21/1997	--		248.35	5.00	24.50	8.21	--	240.14	<50	<0.5	<0.5	<0.5	<0.5	<3	--	--
	5/27/1997	--		248.35	5.00	24.50	8.25	--	240.10	--	--	--	--	--	--	--	--
	8/5/1997	--		248.35	5.00	24.50	8.29	--	240.06	--	--	--	--	--	--	--	--
	10/29/1997	--		248.35	5.00	24.50	8.58	--	239.77	<50	<0.5	<0.5	<0.5	<0.5	<3	--	--
	2/25/1998	--		248.35	5.00	24.50	7.69	--	240.66	<50	<0.5	<0.5	<0.5	<0.5	<3	--	--
	5/12/1998	--		248.35	5.00	24.50	8.20	--	240.15	--	--	--	--	--	--	--	--
	7/28/1998	--		248.35	5.00	24.50	8.55	--	239.80	--	--	--	--	--	--	--	--
	10/27/1998	--		248.35	5.00	24.50	8.30	--	240.05	--	--	--	--	--	--	--	--
	2/8/1999	--		248.35	5.00	24.50	7.90	--	240.45	<50	<0.5	<0.5	<0.5	<0.5	<3	--	--
	6/1/1999	--		248.35	5.00	24.50	8.40	--	239.95	--	--	--	--	--	--	--	--
	8/25/1999	--		248.35	5.00	24.50	8.49	--	239.86	--	--	--	--	--	--	1.67	--
	10/29/1999	--		248.35	5.00	24.50	8.52	--	239.83	--	--	--	--	--	--	6.9	--
	2/18/2000	NP		248.35	5.00	24.50	8.03	--	240.32	<50	<0.5	0.8	<0.5	<1	<3	8.51	--

Table 1

**Groundwater Elevation and Analytical Data**  
 Former ARCO Service Station #6002  
 6235 Seminary Ave., Oakland, CA

Well No.	Date	P/ NP	Notes	TOC (feet)	Top of Screen (ft bgs)	Bottom of Screen (ft bgs)	DTW (ft bgs)	Product Thickness (feet)	GWE (feet)	GRO/ TPH-g (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethyl-benzene (µg/L)	Total Xylenes (µg/L)	MTBE (µg/L)	DO (mg/L)	pH	
MW-3	6/23/2000	--		248.35	5.00	24.50	7.55	--	240.80	--	--	--	--	--	--	2.1	--	
	8/17/2000	--		248.35	5.00	24.50	8.65	--	239.70	--	--	--	--	--	--	1.1	--	
	11/10/2000	--		248.35	5.00	24.50	7.19	--	241.16	--	--	--	--	--	--	--	--	
	2/12/2001	NP		248.35	5.00	24.50	8.60	--	239.75	<50	<0.50	<0.50	<0.50	<0.50	<2.5	0.81	--	
	4/13/2001	--		248.35	5.00	24.50	6.13	--	242.22	--	--	--	--	--	--	--	--	
	7/18/2001	--		248.35	5.00	24.50	6.47	--	241.88	--	--	--	--	--	--	--	--	--
	10/1/2001	--		248.35	5.00	24.50	6.99	--	241.36	--	--	--	--	--	--	--	--	--
	1/14/2002	NP		248.35	5.00	24.50	5.47	--	242.88	<50	<0.50	<0.50	<0.50	<0.50	<5.0	--	--	
	4/3/2002	--		248.35	5.00	24.50	6.95	--	241.40	--	--	--	--	--	--	--	--	
	8/8/2002	--		248.35	5.00	24.50	8.78	--	239.57	--	--	--	--	--	--	--	--	
	11/27/2002	--		248.35	5.00	24.50	8.52	--	239.83	--	--	--	--	--	--	--	--	
	2/10/2003	NP		248.35	5.00	24.50	8.40	--	239.95	<50	<0.50	<0.50	<0.50	<0.50	<0.50	0.7	6.4	
	6/3/2003	--		248.35	5.00	24.50	8.40	--	239.95	--	--	--	--	--	--	--	--	
	8/14/2003	--		248.35	5.00	24.50	8.60	--	239.75	--	--	--	--	--	--	--	--	
	11/13/2003	--		248.35	5.00	24.50	8.41	--	239.94	--	--	--	--	--	--	--	--	
	02/13/2004	--		253.88	5.00	24.50	8.40	--	245.48	--	--	--	--	--	--	--	--	
	05/05/2004	--		253.88	5.00	24.50	8.28	--	245.60	--	--	--	--	--	--	--	--	
	08/30/2004	NP		253.88	5.00	24.50	10.32	--	243.56	<50	<0.50	<0.50	<0.50	<0.50	0.72	1.4	6.4	
	11/08/2004	--		253.88	5.00	24.50	8.12	--	245.76	--	--	--	--	--	--	--	--	
	02/07/2005	--		253.88	5.00	24.50	8.20	--	245.68	--	--	--	--	--	--	--	--	
MW-4	3/15/1995	--		242.91	4.50	24.50	9.37	--	233.54	<50	<0.5	<0.5	<0.5	<0.5	--	--	--	
	5/30/1995	--		242.91	4.50	24.50	11.47	--	231.44	<50	<0.5	<0.5	<0.5	<0.5	--	--	--	
	9/1/1995	--		242.91	4.50	24.50	12.28	--	230.63	78	<0.5	0.7	<0.5	<0.5	<3	--	--	
	11/13/1995	--		242.91	4.50	24.50	11.75	--	231.16	<50	<0.5	<0.5	<0.5	<0.5	--	--	--	
	2/23/1996	--		242.91	4.50	24.50	8.51	--	234.40	59	1.2	7.4	1.6	9.3	3	--	--	
	5/10/1996	--		242.91	4.50	24.50	11.35	--	231.56	<50	<0.5	<0.5	<0.5	<0.5	<3	--	--	
	8/9/1996	--		242.91	4.50	24.50	9.70	--	233.21	<50	<0.5	<0.5	<0.5	<0.5	<3	--	--	
	11/8/1996	--		242.91	4.50	24.50	11.79	--	231.12	<50	<0.5	<0.5	<0.5	<0.5	<3	--	--	
	3/21/1997	--		242.91	4.50	24.50	10.94	--	231.97	<50	<0.5	<0.5	<0.5	<0.5	81	--	--	
	5/27/1997	--		242.91	4.50	24.50	11.51	--	231.40	<50	<0.5	<0.5	<0.5	<0.5	<3	--	--	
	8/5/1997	--		242.91	4.50	24.50	11.90	--	231.01	<50	<0.5	<0.5	<0.5	<0.5	<3	--	--	
	10/29/1997	--		242.91	4.50	24.50	12.00	--	230.91	<50	<0.5	<0.5	<0.5	<0.5	<3	--	--	
	2/25/1998	--		242.91	4.50	24.50	8.34	--	234.57	<50	<0.5	0.9	<0.5	0.9	4	--	--	

**Table 1**  
**Groundwater Elevation and Analytical Data**  
Former ARCO Service Station #6002  
6235 Seminary Ave., Oakland, CA

Well No.	Date	P/ NP	Notes	TOC (feet)	Top of Screen (ft bgs)	Bottom of Screen (ft bgs)	DTW (ft bgs)	Product Thickness (feet)	GWE (feet)	GRO/ TPH-g (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Total Xylenes (µg/L)	MTBE (µg/L)	DO (mg/L)	pH
MW-4	5/12/1998	--		242.91	4.50	24.50	10.93	--	231.98	<50	<0.5	<0.5	<0.5	<0.5	<3	--	--
	7/28/1998	--		242.91	4.50	24.50	12.08	--	230.83	<50	<0.5	<0.5	<0.5	<0.5	<3	--	--
	10/27/1998	--		242.91	4.50	24.50	11.40	--	231.51	<5,000	<50	<50	160	64	6,400	--	--
	2/8/1999	--		242.91	4.50	24.50	8.40	--	234.51	<50	<0.5	<0.5	<0.5	<0.5	<3	--	--
	6/1/1999	NP		242.91	4.50	24.50	11.93	--	230.98	<50	<0.5	<0.5	<0.5	<0.5	<3	4	6.26
	8/25/1999	NP		242.91	4.50	24.50	12.21	--	230.70	<50	<0.5	<0.5	<0.5	<0.5	<3	1.29	6.34
	10/29/1999	NP		242.91	4.50	24.50	12.37	--	230.54	<50	<0.5	<0.5	<0.5	<1	<3	1.5	5.60
	2/16/2000	NP		242.91	4.50	24.50	7.45	--	235.46	<50	<0.5	<0.5	<0.5	<1	<3	2.38	--
	6/23/2000	NP		242.91	4.50	24.50	12.31	--	230.60	<50	<0.50	<0.50	<0.50	<0.50	<2.50	2.8	--
	8/17/2000	--	f	242.91	4.50	24.50	--	--	--	<50	<0.50	<0.50	<0.50	<0.50	<2.50	--	--
	8/17/2000	NP		242.91	4.50	24.50	11.92	--	230.99	<50	<0.50	<0.50	<0.50	<0.50	<2.50	2.38	--
	11/10/2000	NP		242.91	4.50	24.50	10.80	--	232.11	<50	<0.50	<0.50	<0.50	<0.50	<2.50	1.55	--
	2/12/2001	NP		242.91	4.50	24.50	11.65	--	231.26	<50	<0.50	<0.50	<0.50	<0.50	<2.50	1.12	--
	4/13/2001	--	f	242.91	4.50	24.50	--	--	--	<50	<0.50	<0.50	<0.50	<0.50	<2.50	--	--
	4/13/2001	NP		242.91	4.50	24.50	8.17	--	234.74	<50	<0.50	<0.50	<0.50	<0.50	<2.50	--	--
	7/18/2001	NP		242.91	4.50	24.50	8.51	--	234.40	<50	<0.50	<0.50	<0.50	<0.50	<2.5	--	--
	10/1/2001	NP		242.91	4.50	24.50	8.71	--	234.20	<50	<0.50	<0.50	<0.50	<0.50	<2.5	--	--
	1/14/2002	--	f	242.91	4.50	24.50	--	--	--	<50	<0.50	<0.50	<0.50	<0.50	<5.0	--	--
	1/14/2002	NP		242.91	4.50	24.50	7.13	--	235.78	<50	<0.50	<0.50	<0.50	<0.50	<5.0	--	--
	4/3/2002	NP		242.91	4.50	24.50	10.10	--	232.81	<50	<0.50	<0.50	<0.50	<0.50	<2.5	--	--
8/8/2002	NP		242.91	4.50	24.50	12.64	--	230.27	<50	<0.50	<0.50	<0.50	<0.50	<2.5	2.4	8.1	
11/27/2002	NP		242.91	4.50	24.50	12.01	--	230.90	<50	<0.50	<0.50	<0.50	<0.50	4.7	2.5	6.5	
2/10/2003	NP		242.91	4.50	24.50	11.22	--	231.69	<50	<0.50	<0.50	<0.50	<0.50	<0.50	0.8	6.6	
6/3/2003	--		242.91	4.50	24.50	11.54	--	231.37	<50	<0.50	<0.50	<0.50	<0.50	<0.50	3.9	6	
8/14/2003	--		242.91	4.50	24.50	12.41	--	230.50	<50	<0.50	<0.50	<0.50	<0.50	<0.50	1.8	6.3	
11/13/2003	--		242.91	4.50	24.50	11.64	--	231.27	--	--	--	--	--	--	--	--	
02/13/2004	--		248.62	4.50	24.50	10.28	--	238.34	--	--	--	--	--	--	--	--	
05/05/2004	--		248.62	4.50	24.50	12.04	--	236.58	--	--	--	--	--	--	--	--	
08/30/2004	NP		248.62	4.50	24.50	12.98	--	235.64	<50	<0.50	<0.50	<0.50	<0.50	<0.50	1.6	5.8	
11/08/2004	--		248.62	4.50	24.50	11.29	--	237.33	--	--	--	--	--	--	--	--	
02/07/2005	--		248.62	4.50	24.50	10.03	--	238.59	--	--	--	--	--	--	--	--	
MW-5	3/15/1995	--		244.82	5.00	24.50	11.99	--	232.83	21,000	870	22	1,600	1,900	--	--	--
	5/30/1995	--		244.82	5.00	24.50	12.97	--	231.85	17,000	2,100	250	1,000	520	--	--	--

**Table 1**  
**Groundwater Elevation and Analytical Data**  
Former ARCO Service Station #6002  
6235 Seminary Ave., Oakland, CA

Well No.	Date	P/ NP	Notes	TOC (feet)	Top of Screen (ft bgs)	Bottom of Screen (ft bgs)	DTW (ft bgs)	Product Thickness (feet)	GWE (feet)	GRO/ TPH-g (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethyl-benzene (µg/L)	Total Xylenes (µg/L)	MTBE (µg/L)	DO (mg/L)	pH
MW-5	9/1/1995	--		244.82	5.00	24.50	14.03	--	230.79	19,000	1,500	25	1,600	880	8,300	--	--
	11/13/1995	--		244.82	5.00	24.50	13.65	--	231.17	21,000	1,300	22	1,400	630	--	--	--
	2/23/1996	--		244.82	5.00	24.50	11.93	--	232.89	27,000	1,300	<50	1,600	1,500	730	--	--
	5/10/1996	--		244.82	5.00	24.50	13.05	--	231.77	17,000	460	21	760	480	1,000	--	--
	8/9/1996	--		244.82	5.00	24.50	13.22	--	231.60	16,000	420	14	870	390	1,500	--	--
	11/8/1996	--	e	244.82	5.00	24.50	--	--	--	--	--	--	--	--	--	--	--
	3/21/1997	--		244.82	5.00	24.50	13.24	--	231.58	18,000	110	<50	730	1,500	1,800	--	--
	5/27/1997	--		244.82	5.00	24.50	13.10	--	231.72	21,000	86	<20	810	610	1,700	--	--
	8/5/1997	--		244.82	5.00	24.50	13.14	--	231.68	340	2.2	<0.5	15	8.8	39	--	--
	10/29/1997	--		244.82	5.00	24.50	13.03	--	231.79	19,000	130	<20	1,400	620	1,700	--	--
	2/25/1998	--		244.82	5.00	24.50	11.33	--	233.49	8,500	19	13	190	100	170	--	--
	5/12/1998	--		244.82	5.00	24.50	12.81	--	232.01	10,000	34	<10	390	220	610	--	--
	7/28/1998	--		244.82	5.00	24.50	13.12	--	231.70	15,000	68	<10	690	620	1,000	--	--
	10/27/1998	--		244.82	5.00	24.50	12.90	--	231.92	15,000	60	<10	770	400	890	--	--
	2/8/1999	--		244.82	5.00	24.50	11.08	--	233.74	8,200	23	<10	290	120	<60	--	--
	6/1/1999	NP		244.82	5.00	24.50	12.95	--	231.87	11,000	33	3.3	340	180	580	1	6.49
	8/25/1999	NP		244.82	5.00	24.50	12.99	--	231.83	9,200	26	14	420	270	1,100	0.37	7.78
	10/29/1999	NP		244.82	5.00	24.50	13.10	--	231.72	11,000	19	9.8	260	150	590	1.27	6.2
	2/16/2000	NP		244.82	5.00	24.50	8.21	--	236.61	12,000	8.1	10	340	160	130	1.42	--
	6/23/2000	NP		244.82	5.00	24.50	12.90	--	231.92	9,680	38	<20.0	212	114	930	1.4	--
	8/17/2000	NP		244.82	5.00	24.50	13.00	--	231.82	10,500	15	7.98	223	118	430	0.68	--
	11/10/2000	NP		244.82	5.00	24.50	12.50	--	232.32	7,030	19.7	<10.0	190	43.6	445	1.27	--
	2/12/2001	NP		244.82	5.00	24.50	12.81	--	232.01	8,840	33.9	<10.0	186	56.4	352	0.4	--
	4/13/2001	NP		244.82	5.00	24.50	11.31	--	233.51	9,020	54.2	43.3	137	96	297	--	--
	7/18/2001	NP		244.82	5.00	24.50	11.59	--	233.23	13,000	19	10	110	49	230	--	--
	10/1/2001	NP		244.82	5.00	24.50	11.84	--	232.98	8,500	6.9	<1.0	87	27	220	--	--
	1/14/2002	NP		244.82	5.00	24.50	10.75	--	234.07	9,500	<20	<20	140	22	<200	--	--
	4/3/2002	NP	f	244.82	5.00	24.50	--	--	--	2,700	24	5.1	92	8.5	130	--	--
	4/3/2002	NP		244.82	5.00	24.50	12.50	--	232.32	2,400	21	<5.0	91	8.5	130	--	--
	8/8/2002	NP		244.82	5.00	24.50	12.83	--	231.99	2,000	<20	<20	48	<20	520	0.8	6.9
	11/27/2002	NP		244.82	5.00	24.50	12.79	--	232.03	2,200	<10	<10	33	<10	150	0.8	6.4
	2/10/2003	NP		244.82	5.00	24.50	12.62	--	232.20	2,600	<2.5	<2.5	47	4.2	100	0.7	6.6
	6/3/2003	--		244.82	5.00	24.50	12.41	--	232.41	2,400	<5.0	<5.0	26	<5.0	160	1.8	6.3
	8/14/2003	--	e	244.82	5.00	24.50	--	--	--	--	--	--	--	--	--	--	--

Table 1

## Groundwater Elevation and Analytical Data

Former ARCO Service Station #6002

6235 Seminary Ave., Oakland, CA

Well No.	Date	P/ NP	Notes	TOC (feet)	Top of Screen (ft bgs)	Bottom of Screen (ft bgs)	DTW (ft bgs)	Product Thickness (feet)	GWE (feet)	GRO/ TPH-g (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethyl-benzene (µg/L)	Total Xylenes (µg/L)	MTBE (µg/L)	DO (mg/L)	pH
MW-5	11/13/2003	NP		244.82	5.00	24.50	12.49	--	232.33	1,900	<5.0	<5.0	13	<5.0	90	0.9	6.4
	02/13/2004	NP		250.55	5.00	24.50	12.38	--	238.17	1,400	1.4	1.9	23	3.6	90	1.1	62.8
	05/05/2004	NP		250.55	5.00	24.50	12.68	--	237.87	5,800	<2.5	<2.5	13	<2.5	130	1.1	6.3
	08/30/2004	P		250.55	5.00	24.50	12.96	--	237.59	4,100	<2.5	<2.5	<2.5	<2.5	85	--	6.4
	11/08/2004	NP		250.55	5.00	24.50	12.10	--	238.45	3,300	14	1.9	17	6.1	69	1.05	6.0
	02/07/2005	NP		250.55	5.00	24.50	12.02	--	238.53	3,500	<1.0	1.1	16	2.6	15	0.95	6.5
MW-6	6/29/1995	--		--	17.00	31.50	6.63	--	--	<50	<0.5	<0.5	<0.5	<0.5	--	--	--
	9/1/1995	--		--	17.00	31.50	--	--	--	--	--	--	--	--	--	--	--
	11/13/1995	--		--	17.00	31.50	7.70	--	--	<50	<0.5	<0.5	<0.5	<0.5	<3	--	--
	2/23/1996	--		--	17.00	31.50	9.82	--	--	<50	<0.5	0.8	<0.5	0.6	<3	--	--
	5/10/1996	--		--	17.00	31.50	15.25	--	--	--	--	--	--	--	--	--	--
	8/9/1996	--		252.2	17.00	31.50	11.11	--	241.09	--	--	--	--	--	--	--	--
	11/8/1996	--		252.2	17.00	31.50	9.31	--	242.89	--	--	--	--	--	--	--	--
	3/21/1997	--		252.2	17.00	31.50	9.40	--	242.80	<50	<0.5	<0.5	<0.5	<0.5	<3	--	--
	5/27/1997	--		252.2	17.00	31.50	7.08	--	245.12	--	--	--	--	--	--	--	--
	8/5/1997	--		252.2	17.00	31.50	7.12	--	245.08	--	--	--	--	--	--	--	--
	10/29/1997	--		252.2	17.00	31.50	7.42	--	244.78	<50	<0.5	<0.5	<0.5	<0.5	<3	--	--
	2/25/1998	--		252.2	17.00	31.50	10.35	--	241.85	<50	<0.5	<0.5	<0.5	<0.5	<3	--	--
	5/12/1998	--		252.2	17.00	31.50	15.83	--	236.37	--	--	--	--	--	--	--	--
	7/28/1998	--		252.2	17.00	31.50	11.84	--	240.36	--	--	--	--	--	--	--	--
	10/27/1998	--		252.2	17.00	31.50	9.73	--	242.47	--	--	--	--	--	--	--	--
	2/8/1999	--		252.2	17.00	31.50	8.10	--	244.10	<50	<0.5	<0.5	<0.5	<0.5	<3	--	--
	6/1/1999	--		252.2	17.00	31.50	17.84	--	234.36	--	--	--	--	--	--	--	--
	8/25/1999	--		252.2	17.00	31.50	11.00	--	241.20	--	--	--	--	--	--	0.77	--
	10/29/1999	--		252.2	17.00	31.50	9.03	--	243.17	--	--	--	--	--	--	3.42	--
	2/16/2000	P		252.2	17.00	31.50	7.71	--	244.49	<50	<0.5	<0.5	<0.5	<1	<3	2.42	--
	6/23/2000	--		252.2	17.00	31.50	6.69	--	245.51	--	--	--	--	--	--	2.3	--
	8/17/2000	--		252.2	17.00	31.50	6.95	--	245.25	--	--	--	--	--	--	2.51	--
	11/10/2000	--		252.2	17.00	31.50	11.79	--	240.41	--	--	--	--	--	--	--	--
		--	f	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	2/12/2001	P		252.2	17.00	31.50	7.35	--	244.85	<50	<0.50	<0.50	<0.50	<0.50	<2.5	1.66	7.77
	4/13/2001	--		252.2	17.00	31.50	10.52	--	241.68	--	--	--	--	--	--	--	--
	7/18/2001	--		252.2	17.00	31.50	11.03	--	241.17	--	--	--	--	--	--	--	--

Table 1

## Groundwater Elevation and Analytical Data

Former ARCO Service Station #6002

6235 Seminary Ave., Oakland, CA

Well No.	Date	P/ NP	Notes	TOC (feet)	Top of Screen (ft bgs)	Bottom of Screen (ft bgs)	DTW (ft bgs)	Product Thickness (feet)	GWE (feet)	GRO/ TPH-g (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethyl-benzene (µg/L)	Total Xylenes (µg/L)	MTBE (µg/L)	DO (mg/L)	pH
MW-6	10/1/2001	--		252.2	17.00	31.50	11.31	--	240.89	--	--	--	--	--	--	--	--
	1/14/2002	P		252.2	17.00	31.50	9.87	--	242.33	<50	<0.50	<0.50	<0.50	<0.50	<5.0	--	--
	4/3/2002	--		252.2	17.00	31.50	12.19	--	240.01	--	--	--	--	--	--	--	--
	8/8/2002	--		252.2	17.00	31.50	7.04	--	245.16	--	--	--	--	--	--	--	--
	11/27/2002	--		252.2	17.00	31.50	6.85	--	245.35	--	--	--	--	--	--	--	--
	2/10/2003	NP		252.2	17.00	31.50	6.74	--	245.46	<50	<0.50	<0.50	<0.50	<0.50	<0.50	1.1	7.4
	6/3/2003	--		252.2	17.00	31.50	14.35	--	237.85	--	--	--	--	--	--	--	--
	8/14/2003	--		252.2	17.00	31.50	10.74	--	241.46	--	--	--	--	--	--	--	--
	11/13/2003	--		252.20	17.00	31.50	10.68	--	241.52	--	--	--	--	--	--	--	--
	02/13/2004	--		257.94	17.00	31.50	7.38	--	250.56	--	--	--	--	--	--	--	--
	05/05/2004	--		257.94	17.00	31.50	7.43	--	250.51	--	--	--	--	--	--	--	--
	08/30/2004	P		257.94	17.00	31.50	7.39	--	250.55	<50	<0.50	<0.50	<0.50	<0.50	<0.50	2.5	7.0
	11/08/2004	--		257.94	17.00	31.50	15.57	--	242.37	--	--	--	--	--	--	--	--
	02/07/2005	--		257.94	17.00	31.50	15.26	--	242.68	--	--	--	--	--	--	--	--
MW-7	8/9/1996	--	g	235.95	8.50	13.50	--	--	--	--	--	--	--	--	--	--	--
	11/8/1996	--	g	235.95	8.50	13.50	--	--	--	--	--	--	--	--	--	--	--
	1/27/1997	--		235.95	8.50	13.50	--	--	--	2,900	29	<5	<5	580	220	--	--
	3/21/1997	--		235.95	8.50	13.50	7.13	--	228.82	590	3.5	<0.5	<0.5	1.3	90	--	--
	5/27/1997	--		235.95	8.50	13.50	9.02	--	226.93	<50	<0.5	<0.5	<0.5	<0.5	<3	--	--
	8/5/1997	--		235.95	8.50	13.50	12.33	--	223.62	110	0.5	<0.5	<0.5	0.8	81	--	--
	10/29/1997	--	g	235.95	8.50	13.50	--	--	--	--	--	--	--	--	--	--	--
	2/25/1998	--		235.95	8.50	13.50	8.04	--	227.91	<50	<0.5	0.6	<0.5	0.7	<3	--	--
	5/12/1998	--		235.95	8.50	13.50	8.88	--	227.07	<50	<0.5	<0.5	<0.5	<0.5	<3	--	--
	7/28/1998	--		235.95	8.50	13.50	10.50	--	225.45	<50	<0.5	<0.5	<0.5	<0.5	<3	--	--
	10/27/1998	--		235.95	8.50	13.50	8.75	--	227.20	<50	<0.5	<0.5	<0.5	<0.5	<3	--	--
	2/8/1999	--		235.95	8.50	13.50	9.35	--	226.60	<50	<0.5	<0.5	<0.5	<0.5	<3	--	--
	6/1/1999	NP		235.95	8.50	13.50	9.85	--	226.10	250	<0.5	0.6	<0.5	1.6	18	1	6.43
	8/25/1999	NP		235.95	8.50	13.50	11.31	--	224.64	119	<0.5	5.7	<0.5	<0.5	11	0.41	8.28
	10/29/1999	NP		235.95	8.50	13.50	9.08	--	226.87	<50	<0.5	<0.5	<0.5	<1	<3	1.29	5.82
	2/25/2000	NP		235.95	8.50	13.50	8.02	--	227.93	<50	<0.5	<0.5	<0.5	<1	38	2.1	--
	6/23/2000	NP		235.95	8.50	13.50	10.68	--	225.27	<50	<0.50	<0.50	<0.50	<0.50	14.4	1.6	--
	8/17/2000	NP		235.95	8.50	13.50	11.85	--	224.10	70	<0.500	0.678	<0.500	1.07	14.2	1.59	--
	11/10/2000	NP		235.95	8.50	13.50	9.62	--	226.33	<50	<0.50	<0.50	<0.50	<0.50	<2.5	1.09	--

Table 1

## Groundwater Elevation and Analytical Data

Former ARCO Service Station #6002

6235 Seminary Ave., Oakland, CA

Well No.	Date	P/ NP	Notes	TOC (feet)	Top of Screen (ft bgs)	Bottom of Screen (ft bgs)	DTW (ft bgs)	Product Thickness (feet)	GWE (feet)	GRO/ TPH-g (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethyl-benzene (µg/L)	Total Xylenes (µg/L)	MTBE (µg/L)	DO (mg/L)	pH
MW-7	2/12/2001	NP		235.95	8.50	13.50	12.10	--	223.85	<50	<0.50	<0.50	<0.50	<0.50	<2.5	0.84	--
	4/13/2001	P		235.95	8.50	13.50	7.95	--	228.00	<50	<0.50	<0.50	<0.50	<0.50	<2.5	--	--
	7/18/2001	P		235.95	8.50	13.50	8.20	--	227.75	<50	<0.50	<0.50	<0.50	<0.50	<2.5	--	--
	10/1/2001	NP		235.95	8.50	13.50	8.59	--	227.36	<50	<0.50	<0.50	<0.50	<0.50	<2.5	--	--
	1/14/2002	P		235.95	8.50	13.50	6.93	--	229.02	<50	<0.50	<0.50	<0.50	<0.50	<5.0	--	--
	4/3/2002	P		235.95	8.50	13.50	8.31	--	227.64	<50	<0.50	<0.50	<0.50	<0.50	<2.5	--	--
	8/8/2002	P	h	235.95	8.50	13.50	12.11	--	223.84	--	--	--	--	--	--	--	--
	11/27/2002	NP	h	235.95	8.50	13.50	13.01	--	222.94	--	--	--	--	--	--	--	--
	2/10/2003	NP		235.95	8.50	13.50	10.02	--	225.93	<50	<0.50	<0.50	<0.50	<0.50	<0.50	1.5	6.7
	6/3/2003	NP		235.95	8.50	13.50	6.82	--	229.13	<50	<0.50	<0.50	<0.50	<0.50	<0.50	8.1	6.8
	8/14/2003	P		235.95	8.50	13.50	8.16	--	227.79	<50	<0.50	<0.50	<0.50	<0.50	<0.50	2.8	6.7
	11/13/2003	NP		235.95	8.50	13.50	8.07	--	227.88	--	--	--	--	--	--	--	--
	02/13/2004	--		241.64	8.50	13.50	7.62	--	234.02	--	--	--	--	--	--	--	--
	05/05/2004	--		241.64	8.50	13.50	11.01	--	230.63	--	--	--	--	--	--	--	--
	08/30/2004	NP		241.64	8.50	13.50	13.27	--	228.37	--	--	--	--	--	--	--	--
	11/08/2004	--		241.64	8.50	13.50	13.22	--	228.42	--	--	--	--	--	--	--	--
	02/07/2005	--		241.64	8.50	13.50	13.07	--	228.57	--	--	--	--	--	--	--	--
MW-8	8/9/1996	--		240.37	5.50	14.00	9.41	--	230.96	<50	<0.5	<0.5	<0.5	<0.5	<3	--	--
	11/8/1996	--		240.37	5.50	14.00	9.19	--	231.18	<50	<0.5	<0.5	<0.5	<0.5	<3	--	--
	3/21/1997	--		240.37	5.50	14.00	8.55	--	231.82	<50	<0.5	<0.5	<0.5	<0.5	<3	--	--
	5/27/1997	--		240.37	5.50	14.00	11.06	--	229.31	91	0.6	<0.5	<0.5	0.6	66	--	--
	8/5/1997	--		240.37	5.50	14.00	9.32	--	231.05	<50	<0.5	<0.5	<0.5	<0.5	<3	--	--
	10/29/1997	--		240.37	5.50	14.00	9.35	--	231.02	<50	<0.5	<0.5	<0.5	<0.5	<3	--	--
	2/25/1998	--		240.37	5.50	14.00	7.08	--	233.29	<50	<0.5	<0.5	<0.5	<0.5	<3	--	--
	5/12/1998	--		240.37	5.50	14.00	8.61	--	231.76	<50	<0.5	<0.5	<0.5	<0.5	<3	--	--
	7/28/1998	--		240.37	5.50	14.00	9.63	--	230.74	<50	<0.5	<0.5	<0.5	<0.5	4	--	--
	10/27/1998	--		240.37	5.50	14.00	9.30	--	231.07	<50	<0.5	<0.5	<0.5	<0.5	<3	--	--
	2/8/1999	--		240.37	5.50	14.00	5.56	--	234.81	<50	<0.5	<0.5	<0.5	<0.5	<3	--	--
	6/1/1999	--	e	240.37	5.50	14.00	--	--	--	--	--	--	--	--	--	--	--
	8/25/1999	--	e	240.37	5.50	14.00	--	--	--	--	--	--	--	--	--	--	--
	10/29/1999	--	e	240.37	5.50	14.00	--	--	--	--	--	--	--	--	--	--	--
	2/16/2000	--	e	240.37	5.50	14.00	--	--	--	--	--	--	--	--	--	--	--
	6/23/2000	NP		240.37	5.50	14.00	9.45	--	230.92	<50	<0.50	<0.50	<0.500	<0.50	<2.5	1.9	--

Table 1

## Groundwater Elevation and Analytical Data

Former ARCO Service Station #6002

6235 Seminary Ave., Oakland, CA

Well No.	Date	P/ NP	Notes	TOC (feet)	Top of Screen (ft bgs)	Bottom of Screen (ft bgs)	DTW (ft bgs)	Product Thickness (feet)	GWE (feet)	GRO/ TPH-g (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethyl-benzene (µg/L)	Total Xylenes (µg/L)	MTBE (µg/L)	DO (mg/L)	pH
MW-8	8/17/2000	NP		240.37	5.50	14.00	6.40	--	233.97	<50	<0.50	<0.50	<0.50	<0.50	<2.5	2.56	--
	11/10/2000	--	f	240.37	5.50	14.00	--	--	--	<50	<0.50	<0.50	<0.50	<0.50	<2.5	--	--
	11/10/2000	NP		240.37	5.50	14.00	6.25	--	234.12	<50	<0.50	<0.50	<0.50	<0.50	<2.5	1.93	--
	2/12/2001	NP		240.37	5.50	14.00	8.11	--	232.26	<50	<0.50	<0.50	<0.50	<0.50	<2.5	1.65	--
	4/13/2001	P		240.37	5.50	14.00	5.19	--	235.18	<50	<0.50	<0.50	<0.50	<0.50	<2.5	--	--
	7/18/2001	NP		240.37	5.50	14.00	5.55	--	234.82	<50	<0.50	<0.50	<0.50	<0.50	<2.5	--	--
	10/1/2001	NP		240.37	5.50	14.00	6.41	--	233.96	<50	<0.50	<0.50	<0.50	<0.50	<2.5	--	--
	1/14/2002	P		240.37	5.50	14.00	5.07	--	235.30	<50	<0.50	<0.50	<0.50	<0.50	<5.0	--	--
	4/3/2002	P		240.37	5.50	14.00	8.60	--	231.77	<50	<0.50	<0.50	<0.50	<0.50	<2.5	--	--
	8/8/2002	P		240.37	5.50	14.00	9.58	--	230.79	<50	<0.50	<0.50	<0.50	<0.50	<2.5	1.7	7
	11/27/2002	P		240.37	5.50	14.00	9.15	--	231.22	<50	<0.50	<0.50	<0.50	<0.50	<0.50	3.1	6.7
	2/10/2003	P		240.37	5.50	14.00	8.55	--	231.82	<50	<0.50	<0.50	<0.50	<0.50	<0.50	1.3	6.6
	6/3/2003	--		240.37	5.50	14.00	8.72	--	231.65	<50	<0.50	<0.50	<0.50	<0.50	<0.50	9.1	6.3
	8/14/2003	--		240.37	5.50	14.00	9.52	--	230.85	<50	<0.50	<0.50	<0.50	<0.50	<0.50	5.5	6.4
	11/13/2003	--		240.37	5.50	14.00	9.45	--	230.92	--	--	--	--	--	--	--	--
	02/13/2004	--		246.09	5.50	14.00	8.38	--	237.71	--	--	--	--	--	--	--	--
	05/05/2004	--		246.09	5.50	14.00	9.30	--	236.79	--	--	--	--	--	--	--	--
	08/30/2004	P		246.09	5.50	14.00	9.69	--	236.40	<50	<0.50	<0.50	<0.50	0.75	<0.50	5.1	6.5
	11/08/2004	--		246.09	5.50	14.00	8.34	--	237.75	--	--	--	--	--	--	--	--
	02/07/2005	--		246.09	5.50	14.00	8.23	--	237.86	--	--	--	--	--	--	--	--
VW-1	2/23/1996	--		--	6.00	14.00	5.29	--	--	21,000	490	57	520	1,500	240	--	--
	5/10/1996	--		--	6.00	14.00	6.80	--	--	3,700	61	<5	100	50	200	--	--
	8/9/1996	--		--	6.00	14.00	7.03	--	--	970	2.7	<2.5	2.7	3.7	180	--	--
	11/8/1996	--	e	--	6.00	14.00	--	--	--	--	--	--	--	--	--	--	--
	3/21/1997	--		--	6.00	14.00	7.51	--	--	640	<4	<1	1	3	194	--	--
	5/27/1997	--		--	6.00	14.00	7.51	--	--	--	--	--	--	--	--	--	--
	8/5/1997	--		--	6.00	14.00	7.51	--	--	630	<1	<1	3	2	120	--	--
	10/29/1997	--		--	6.00	14.00	7.53	--	--	600	<0.5	<0.5	<0.5	1.6	84	--	--
	2/25/1998	--		--	6.00	14.00	6.77	--	--	230	<4	<0.7	1.2	0.5	27	--	--
	5/12/1998	--		--	6.00	14.00	7.43	--	--	340	<0.5	0.5	2.3	0.8	29	--	--
	7/28/1998	--		--	6.00	14.00	7.00	--	--	240	<0.5	<0.5	<0.5	1.1	54	--	--
	10/27/1998	--		--	6.00	14.00	7.52	--	--	230	<0.5	<0.5	<0.5	<0.5	65	--	--
	2/8/1999	--	c	--	6.00	14.00	7.05	--	--	<50	<0.5	<0.5	<0.5	<0.5	<3/36	--	--



Table 1

**Groundwater Elevation and Analytical Data**  
 Former ARCO Service Station #6002  
 6235 Seminary Ave., Oakland, CA

Well No.	Date	P/ NP	Notes	TOC (feet)	Top of Screen (ft bgs)	Bottom of Screen (ft bgs)	DTW (ft bgs)	Product Thickness (feet)	GWE (feet)	GRO/ TPH-g (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethyl-benzene (µg/L)	Total Xylenes (µg/L)	MTBE (µg/L)	DO (mg/L)	pH
VW-1	6/1/1999	NP		--	6.00	14.00	7.55	--	--	180	<0.5	<0.5	<0.5	<0.5	23	1	6.36
	8/25/1999	NP		--	6.00	14.00	7.66	--	--	130	<0.5	5.6	<0.5	<0.5	40	0.39	7.5
	10/29/1999	NP		--	6.00	14.00	7.59	--	--	200	1	<0.5	0.6	1.6	36	0.89	5.65
	2/16/2000	NP		--	6.00	14.00	7.03	--	--	210	<0.5	0.9	2.2	1.9	11	1.41	--
	6/23/2000	NP		--	6.00	14.00	7.71	--	--	175	1.04	<0.500	<0.500	<0.500	14.4	1.9	--
	8/17/2000	NP		--	6.00	14.00	7.75	--	--	180	<0.500	<0.500	0.622	0.76	23.7	0.63	--
	11/10/2000	NP		--	6.00	14.00	6.83	--	--	157	0.955	<0.500	0.973	<0.500	32.5	1.03	--
	2/12/2001	NP		--	6.00	14.00	7.85	--	--	273	0.627	<0.500	<0.500	0.507	9.19	0.47	--
	4/13/2001	P		--	6.00	14.00	5.11	--	--	213	<0.500	<0.500	<0.500	<0.500	6.38	--	--
	7/18/2001	P		--	6.00	14.00	5.39	--	--	270	<0.50	<0.50	<0.50	<0.50	20	--	--
	10/1/2001	NP		--	6.00	14.00	6.50	--	--	200	<0.50	<0.50	<0.50	0.81	14	--	--
	1/14/2002	P		--	6.00	14.00	5.04	--	--	110	<0.50	<0.50	<0.50	<0.50	6.4	--	--
	4/3/2002	P		--	6.00	14.00	7.51	--	--	91	0.72	<0.50	<0.50	<0.50	12	--	--
	8/8/2002	P		--	6.00	14.00	9.58	--	--	<50	<0.50	<0.50	<0.50	<0.50	33	0.6	6.3
	11/27/2002	P		--	6.00	14.00	7.42	--	--	52	0.72	0.78	<0.50	<0.50	21	1	6.1
	2/10/2003	NP		--	6.00	14.00	7.38	--	--	52	<0.50	<0.50	<0.50	<0.50	11	1.7	6.5
	6/3/2003	--		--	6.00	14.00	7.30	--	--	71	<0.50	<0.50	<0.50	<0.50	13	3.3	6.3
	8/14/2003	--		--	6.00	14.00	7.59	--	--	<50	<0.50	<0.50	<0.50	<0.50	18	0.3	6.1
	11/13/2003	P		--	6.00	14.00	7.43	--	--	<50	<0.50	<0.50	<0.50	<0.50	13	0.6	6.1
02/13/2004	P		253.19	6.00	14.00	7.35	--	245.84	59	<0.50	<0.50	<0.50	0.56	8.0	1.0	6.0	
05/05/2004	P		253.19	6.00	14.00	7.30	--	245.89	<50	0.71	<0.50	<0.50	0.60	11	0.1	6.4	
08/30/2004	P		253.19	6.00	14.00	8.50	--	244.69	<50	<0.50	<0.50	<0.50	<0.50	24	0.2	6.2	
11/08/2004	P		253.19	6.00	14.00	7.22	--	245.97	230	<0.50	<0.50	<0.50	0.75	27	0.65	5.1	
02/07/2005	P		253.19	6.00	14.00	7.25	--	245.94	<50	<0.50	<0.50	<0.50	<0.50	5.1	1.57	5.9	
VW-2	2/23/1996	--	i	--	--	--	6.92	--	--	--	--	--	--	--	--	--	--
	8/8/2002	--	i	--	--	--	10.51	--	--	--	--	--	--	--	--	--	--
VW-3	8/8/2002	--		--	5.50	14.50	8.85	--	--	<50	<0.50	<0.50	<0.50	<0.50	2.5	0.7	6.1
	11/27/2002	--	i	--	5.50	14.50	8.80	--	--	--	--	--	--	--	--	--	--
	2/10/2003	--	i	--	5.50	14.50	8.41	--	--	--	--	--	--	--	--	--	--
	6/3/2003	--	i	--	5.50	14.50	8.71	--	--	--	--	--	--	--	--	--	--
	8/14/2003	--	i	--	5.50	14.50	8.81	--	--	--	--	--	--	--	--	--	--
	11/13/2003	--		--	5.50	14.50	8.75	--	--	--	--	--	--	--	--	--	--
02/13/2004	--		252.26	5.50	14.50	8.48	--	243.78	--	--	--	--	--	--	--	--	

Table 1

## Groundwater Elevation and Analytical Data

Former ARCO Service Station #6002

6235 Seminary Ave., Oakland, CA

Well No.	Date	P/ NP	Notes	TOC (feet)	Top of Screen (ft bgs)	Bottom of Screen (ft bgs)	DTW (ft bgs)	Product Thickness (feet)	GWE (feet)	GRO/ TPH-g (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethyl-benzene (µg/L)	Total Xylenes (µg/L)	MTBE (µg/L)	DO (mg/L)	pH
VW-3	05/05/2004	--		252.26	5.50	14.50	8.85	--	243.41	--	--	--	--	--	--	--	--
	08/30/2004	--		252.26	5.50	14.50	9.07	--	243.19	--	--	--	--	--	--	--	--
	11/08/2004	--		252.26	5.50	14.50	8.32	--	243.94	--	--	--	--	--	--	--	--
	02/07/2005	--		252.26	5.50	14.50	8.28	--	243.98	--	--	--	--	--	--	--	--
VW-4	5/10/1996	--		--	5.50	14.50	8.58	--	--	13,000	2,500	41	420	660	43,000	--	--
	8/9/1996	--		--	5.50	14.50	11.70	--	--	<50	<0.5	<0.5	<0.5	<0.5	6,200	--	--
	11/8/1996	--		--	5.50	14.50	9.38	--	--	7,800	510	7	180	370	21,000	--	--
	3/21/1997	--		--	5.50	14.50	9.11	--	--	10,000	290	10	270	230	8,900	--	--
	5/27/1997	--		--	5.50	14.50	9.34	--	--	--	--	--	--	--	--	--	--
	8/5/1997	--		--	5.50	14.50	9.47	--	--	<10,000	180	<100	<100	110	12,000	--	--
	10/29/1997	--		--	5.50	14.50	9.35	--	--	9,800	200	69	260	360	4,900	--	--
	2/25/1998	--		--	5.50	14.50	7.08	--	--	<50	2.5	<0.5	<0.5	0.7	<3	--	--
	5/12/1998	--		--	5.50	14.50	9.17	--	--	3,200	<20	22	29	52	2,100	--	--
	7/28/1998	--		--	5.50	14.50	9.55	--	--	<10,000	<100	<100	<100	<100	5,100	--	--
	10/27/1998	--		--	5.50	14.50	9.92	--	--	<50	<0.5	<0.5	<0.5	<0.5	<3	--	--
	2/8/1999	--	c	--	5.50	14.50	7.50	--	--	<2,500	<25	<25	28	<25	2,400/3,100	--	--
	6/1/1999	NP		--	5.50	14.50	9.87	--	--	2,100	2.5	1.1	2.5	15	3,300	2	6.69
	8/25/1999	NP		--	5.50	14.50	9.78	--	--	1,300	4.4	4.9	1.7	2.9	4,600	0.36	7.94
	10/29/1999	NP		--	5.50	14.50	9.93	--	--	1,400	<0.5	1.8	1.6	3	4,200	1.18	6.64
	2/16/2000	NP		--	5.50	14.50	7.45	--	--	1,800	<0.5	2.9	15	10	3,400	1.01	--
	6/23/2000	--	f	--	5.50	14.50	--	--	--	1,260	<2.00	<2.00	<2.00	2.73	2,720	--	--
	6/23/2000	NP		--	5.50	14.50	9.74	--	--	1,360	<2.00	2.26	<2.00	2.25	4,900	1.5	--
	8/17/2000	NP		--	5.50	14.50	9.95	--	--	2,230	<10.0	<10.0	<10.0	<10.0	5,310	1.13	--
	11/10/2000	NP		--	5.50	14.50	9.22	--	--	1,390	18.5	<5.00	<5.00	<5.00	8,840	1.25	--
	2/12/2001	NP		--	5.50	14.50	8.99	--	--	1,400	9.42	<2.00	17.8	16.1	3,570	0.91	--
	4/13/2001	NP		--	5.50	14.50	7.80	--	--	556	3.82	<1.25	<1.25	<1.25	2,450	--	--
	7/18/2001	--	f	--	5.50	14.50	--	--	--	2,000	8.7	2.2	<2.0	<2.0	3,400	--	--
	7/18/2001	NP		--	5.50	14.50	7.73	--	--	2,100	9.2	<2.0	<2.0	<2.0	3,700	--	--
	10/1/2001	--	f	--	5.50	14.50	--	--	--	1,800	<10	<10	<10	<10	5,800	--	--
	10/1/2001	NP		--	5.50	14.50	6.69	--	--	2,000	<10	<10	<10	13	5,900	--	--
	1/14/2002	P		--	5.50	14.50	5.93	--	--	580	<2.0	<2.0	<2.0	<2.0	2,700	--	--
	4/3/2002	NP		--	5.50	14.50	9.60	--	--	1,400	5.2	16	<5.0	9.6	2,200	--	--
	8/8/2002	--	i	--	5.50	14.50	10.01	--	--	--	--	--	--	--	--	--	--

Table 1

## Groundwater Elevation and Analytical Data

Former ARCO Service Station #6002

6235 Seminary Ave., Oakland, CA

Well No.	Date	P/ NP	Notes	TOC (feet)	Top of Screen (ft bgs)	Bottom of Screen (ft bgs)	DTW (ft bgs)	Product Thickness (feet)	GWE (feet)	GRO/ TPH-g (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethyl-benzene (µg/L)	Total Xylenes (µg/L)	MTBE (µg/L)	DO (mg/L)	pH
VW-4	11/27/2002	P		--	5.50	14.50	10.30	--	--	<10,000	<100	<100	<100	<100	3,800	1.7	6.7
	2/10/2003	NP		--	5.50	14.50	10.06	--	--	<5,000	<50	<50	<50	<50	2,500	1	6.8
	6/3/2003	--		--	5.50	14.50	10.04	--	--	<1,000	<10	<10	<10	<10	440	1.9	6.6
	8/14/2003	--		--	5.50	14.50	9.66	--	--	<500	<5.0	<5.0	<5.0	<5.0	170	0.8	6.7
	11/13/2003	P		--	5.50	14.50	10.01	--	--	<500	<5.0	<5.0	<5.0	<5.0	130	1.7	6.4
	02/13/2004	P		252.69	5.50	14.50	9.34	--	243.35	330	<2.5	<2.5	<2.5	3.0	210	2.0	6.6
	05/05/2004	P		252.69	5.50	14.50	10.07	--	242.62	130	<1.0	<1.0	<1.0	<1.0	66	1.2	6.8
	08/30/2004	P		252.69	5.50	14.50	10.32	--	242.37	<500	<5.0	<5.0	<5.0	<5.0	220	1.1	6.6
	11/08/2004	P		252.69	5.50	14.50	9.35	--	243.34	480	<2.5	<2.5	<2.5	<2.5	140	1.1	6.0
	02/07/2005	P		252.69	5.50	14.50	9.22	--	243.47	180	<0.50	<0.50	<0.50	<0.50	47	1.83	6.5

**Table 1**

**Groundwater Elevation and Analytical Data**

Former ARCO Service Station #6002

6235 Seminary Ave., Oakland, CA

**ABBREVIATIONS:**

-- = Not analyzed/applicable/measured/available  
< = Not detected at or above 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, range C4-C12  
GWE = Groundwater elevation measured in ft MSL  
mg/L = Milligrams per liter  
MTBE = Methyl tert butyl ether  
NP = Not Purged before sampling  
P = Purge before sampling  
TOC = Top of casing measured in feet above mean sea level  
TPH-g = Total petroleum hydrocarbons as gasoline  
ug/L = Micrograms per liter

**FOOTNOTES:**

a = SPH detected and GWE corrected; corrected elevation (Z') =  $Z + (h * 0.73)$  where: Z: measured elevation, h: floating product thickness, 0.73: density ratio of oil to water.  
b = MTBE analyzed by EPA method 8240  
c = MTBE, sample also analyzed for fuel oxygenates  
d = Well was decommissioned on 2/12/1996.  
e = Well inaccessible.  
f = Duplicate  
g = Well is dry.  
h = Insufficient water to sample.  
i = Well is not part of the sampling program and therefore was not sampled.

**NOTES:**

Wells surveyed to NAVD'88 datum on 1/27/2004.

Beginning on the first quarter 2003 sampling event (2/10/2003), TPH-g, BTEX and MTBE analyzed by EPA method 8260. Prior to 2/10/2003, BTEX (Benzene, toluene, ethylbenzene, xylenes) by EPA method 8021B from 10/29/99 to 2/10/03, and 8020 prior to 10/29/99.

Beginning in the fourth quarter 2003, the laboratory modified the reported analyte list. TPH-g has been changed to GRO. The resulting data may be impacted by the potential of non-TPHg analytes within the requested fuel range resulting in a higher concentration being reported.

Beginning in the second quarter 2004, the carbon range for GRO was changed from C6-C10 to C4-C12

Values for DO and pH were obtained through field measurements.

Source : The data within this table collected prior to August 2002 was provided to URS by RM and their previous consultants. URS has not verified the accuracy of this information.

Table 2

**Fuel Additives Analytical Data**  
Former ARCO Service Station #6002  
6235 Seminary Ave., Oakland, CA

Well Number	Date Sampled	Ethanol (µg/L)	TBA (µg/L)	MTBE (µg/L)	DIPE (µg/L)	ETBE (µg/L)	TAME (µg/L)	1,2-DCA (µg/L)	EDB (µg/L)	Footnotes/Comments
MW-3	2/10/2003	<40	<20	<0.50	<0.50	<0.50	<0.50	--	--	
	08/30/2004	<100	<20	0.72	<0.50	<0.50	<0.50	<0.50	<0.50	
MW-4	2/10/2003	<40	<20	<0.50	<0.50	<0.50	<0.50	--	--	
	6/3/2003	<100	<20	<0.50	<0.50	<0.50	<0.50	--	--	
	8/14/2003	<100	<20	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	
	08/30/2004	<100	<20	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	
MW-5	2/10/2003	<200	<100	100	<0.50	<0.50	<0.50	--	--	
	6/3/2003	<1,000	<200	160	<5.0	<5.0	<5.0	--	--	
	11/13/2003	<1,000	<200	90	<5.0	<5.0	<5.0	--	--	
	02/13/2004	<200	41	90	<1.0	<1.0	<1.0	<1.0	<1.0	
	05/05/2004	<500	<100	130	<2.5	<2.5	<2.5	<2.5	<2.5	
	08/30/2004	<500	100	85	<2.5	<2.5	<2.5	<2.5	<2.5	
	11/08/2004	<200	43	69	<1.0	<1.0	<1.0	<1.0	<1.0	
	02/07/2005	<200	<40	15	<1.0	<1.0	<1.0	<1.0	<1.0	
MW-6	2/10/2003	<40	<20	<0.50	<0.50	<0.50	<0.50	--	--	
	08/30/2004	<100	<20	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	
MW-7	2/10/2003	<40	<20	<0.50	<0.50	<0.50	<0.50	--	--	
	6/3/2003	<100	<20	<0.50	<0.50	<0.50	<0.50	--	--	
	8/14/2003	<100	<20	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	
MW-8	2/10/2003	<40	<20	<0.50	<0.50	<0.50	<0.50	--	--	
	6/3/2003	<100	<20	<0.50	<0.50	<0.50	<0.50	--	--	
	8/14/2003	<100	<20	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	
	08/30/2004	<100	<20	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	
VW-1	2/10/2003	<40	<20	11	<0.50	<0.50	<0.50	--	--	
	6/3/2003	<100	<20	13	<0.50	<0.50	<0.50	--	--	
	8/14/2003	<100	<20	18	<0.50	<0.50	<0.50	<0.50	<0.50	
	11/13/2003	<100	<20	13	<0.50	<0.50	<0.50	--	--	
	02/13/2004	<100	<20	8.0	<0.50	<0.50	<0.50	<0.50	<0.50	
	05/05/2004	<100	<20	11	<0.50	<0.50	<0.50	<0.50	<0.50	
	08/30/2004	<100	<20	24	<0.50	<0.50	<0.50	<0.50	<0.50	
	11/08/2004	<100	<20	27	<0.50	<0.50	<0.50	<0.50	<0.50	

**Table 2**

**Fuel Additives Analytical Data**  
Former ARCO Service Station #6002  
6235 Seminary Ave., Oakland, CA

Well Number	Date Sampled	Ethanol (µg/L)	TBA (µg/L)	MTBE (µg/L)	DIPE (µg/L)	ETBE (µg/L)	TAME (µg/L)	1,2-DCA (µg/L)	EDB (µg/L)	Footnotes/ Comments
VW-1	02/07/2005	<100	<20	5.1	<0.50	<0.50	<0.50	<0.50	<0.50	
VW-4	2/10/2003	<4,000	<2,000	2500	<0.50	<0.50	<0.50	--	--	
	6/3/2003	<2,000	4,100	440	<10	<10	<10	--	--	
	8/14/2003	<1,000	3,200	170	<5.0	<5.0	<5.0	<5.0	<5.0	
	11/13/2003	<1,000	3,300	130	<5.0	<5.0	<5.0	--	--	
	02/13/2004	<500	1,300	210	<2.5	<2.5	<2.5	<2.5	<2.5	
	05/05/2004	<200	1,500	66	<1.0	1.3	<1.0	<1.0	<1.0	
	08/30/2004	<1,000	5,400	220	<5.0	5.4	<5.0	<5.0	<5.0	
	11/08/2004	<500	2,700	140	<2.5	<2.5	<2.5	<2.5	<2.5	
	02/07/2005	<100	1,000	47	<0.50	0.89	<0.50	<0.50	<0.50	

## Table 2

### Fuel Additives Analytical Data Former ARCO Service Station #6002 6235 Seminary Ave., Oakland, CA

#### ABBREVIATIONS:

-- = Not analyzed/applicable/measured/available

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

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

ug/L = Micrograms per Liter

#### NOTES:

All volatile organic compounds (Ethanol, TBA, MTBE, DIPE, ETBE, and TAME) analyzed using EPA Method 8260B.

Source : The data within this table collected prior to August 2002 was provided to URS by RM and their previous consultants. URS has not verified the accuracy of this information.

**Table 3****Groundwater Gradient Data**  
Former ARCO Service Station #6002  
6235 Seminary Ave., Oakland, CA

<b>Date Sampled</b>	<b>Approximate Flow Direction</b>	<b>Approximate Hydraulic Gradient</b>
3/15/1995	West-Southwest	0.08
5/30/1995	West-Southwest	0.08
9/1/1995	West-Southwest	0.09
11/13/1995	West-Southwest	0.08
2/23/1996	West-Southwest	0.08
5/10/1996	West-Southwest	0.08
8/9/1996	Southwest	0.08
11/8/1996	Southwest	0.06
3/21/1997	West-Southwest	0.05
5/27/1997	West-Southwest	0.07
8/5/1997	West	0.08
10/29/1997	West-Southwest	0.04
2/25/1998	West-Southwest	0.05
5/12/1998	West	0.07
7/28/1998	West	0.07
10/27/1998	West-Southwest	0.06
2/8/1999	West-Southwest	0.07
6/1/1999	West-Northwest	0.07
8/25/1999	West-Southwest	0.07
10/29/1999	West	0.07
2/16/2000	Southwest	0.05
6/23/2000	West	0.04
8/17/2000	West	0.09
11/10/2000	West-Southwest	0.08
2/12/2001	West-Southwest	0.07
4/13/2001	West	0.09
7/18/2001	West	0.08
10/1/2001	West-Southwest	0.08
1/14/2002	West-Southwest	0.07
4/3/2002	West-Southwest	0.08
8/8/2002	West-Southwest	0.09
11/27/2002	West-Southwest	0.08
2/10/2003	Southwest	0.06
6/3/2003	West	0.07
8/14/2003	West-Southwest	0.07
11/13/2003	West-Southwest	0.07
2/13/2004	Southwest	0.05
5/4/2004	Southwest	0.06



**Table 3**

**Groundwater Gradient Data**  
Former ARCO Service Station #6002  
6235 Seminary Ave., Oakland, CA

<b>Date Sampled</b>	<b>Approximate Flow Direction</b>	<b>Approximate Hydraulic Gradient</b>
8/30/2004	Southwest	0.07
11/8/2004	Southwest	0.10
2/7/2005	Southwest	0.1

Source : The data within this table collected prior to August 2002 was provided to URS by RM and their previous consultants. URS has not verified the accuracy of this information.

**ATTACHMENT A**  
**FIELD PROCEDURES AND FIELD DATA SHEETS**

## **FIELD PROCEDURES**

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### **Sampling Procedures**

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

WELL GAUGING DATA

Project # 050207-WC2 Date 2/7/05 Client URS@Aro#6002

Site 6235 Seminary Ave., Oakland

Well ID	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 TOG	
MW-3	4					8.20	24.42		
MW-4	4					10.03	24.16		
S MW-5	4					12.02	24.58		NR@5'
MW-6	2					15.26	32.03		
MW-7	2					13.07	13.30		
MW-8	2					8.23	14.02		
S VW-1	4					7.25	13.98		
VW-3	4					8.28	14.27		
S VW-4	4					9.22	14.91	V	

## ARCO / BP WELL MONITORING DATA SHEET

BTS #: <u>050207-WC2</u>	Station # <u>6002</u>
Sampler: <u>WC</u>	Date: <u>2/7/05</u>
Well I.D.: <u>MW-5</u>	Well Diameter: 2 3 <u>4</u> 6 8
Total Well Depth: <u>24.58</u>	Depth to Water: <u>12.02</u>
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: <u>FVC</u> Grade	D.O. Meter (if req'd): <u>ESP</u> HACH

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

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

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

Top of Screen: 5' If well is listed as a no-purge, confirm that water level is below the top of screen. Otherwise, the well must be purged.

<u>no</u> x <u>purge</u>	= _____ Gals.
1 Case Volume (Gals.)	Specified Volumes      Calculated Volume

Time	Temp (°F)	pH	Conductivity (mS or <u>LS</u> )	Gals. Removed	Observations
<u>1545</u>	<u>62.8</u>	<u>6.5</u>	<u>519</u>	—	<u>clear w/ Red flakes</u>

Did well dewater? Yes   No      Gallons actually evacuated: —

Sampling Time: 1547      Sampling Date: 2/7/05

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

Analyzed for: GRO EX MIBE DRO Other: see coc

D.O. (if req'd):	Pre-purge:	mg/L	Post-purge:	<u>0.95</u> mg/L
O.R.P. (if req'd):	Pre-purge:	mV	Post-purge:	mV

## ARCO / BP WELL MONITORING DATA SHEET

BTS #: <u>050207-wc2</u>	Station # <u>6002</u>
Sampler: <u>WC</u>	Date: <u>2/7/05</u>
Well I.D.: <u>VW-1</u>	Well Diameter: 2 3 <u>4</u> 6 8
Total Well Depth: <u>13.98</u>	Depth to Water: <u>7.25</u>
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: <u>PVC</u> Grade	D.O. Meter (if req'd): <u>YSI</u> HACH

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

Purge Method: <u>Bailer</u> Disposable Bailer Positive Air Displacement Electric <u>Submersible</u> Extraction Pump Other: _____	Sampling Method: <u>Bailer</u> Disposable Bailer Extraction Port Other: _____
---	--

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

<u>4.4</u>	X	<u>3</u>	=	<u>13.2</u>	Gals.
1 Case Volume (Gals.)		Specified Volumes		Calculated Volume	

Time	Temp (°F)	pH	Conductivity (mS or <u>µS</u> )	Gals. Removed	Observations
1506	62.3	6.4	844	5	cloudy
1507	62.0	6.2	847	10	clear
1508	63.1	5.9	830	15	"

Did well dewater? Yes <input checked="" type="radio"/> No <input checked="" type="radio"/>	Gallons actually evacuated: <u>15</u>
Sampling Time: <u>1513</u>	Sampling Date: <u>2/7/05</u>
Sample I.D.: <u>VW-1</u>	Laboratory: Pace <u>Sequippia</u> Other _____

Analyzed for: <input checked="" type="checkbox"/> GRD <input checked="" type="checkbox"/> BTEX MTBE DRO Other: <u>See COC</u>
D.O. (if req'd): Pre-purge: _____ mg/L Post-purge: <u>1.57</u> mg/L
O.R.P. (if req'd): Pre-purge: _____ mV Post-purge: _____ mV

## ARCO / BP WELL MONITORING DATA SHEET

BTS #: <u>050207-wel</u>	Station # <u>6002</u>
Sampler: <u>WL</u>	Date: <u>2/7/05</u>
Well I.D.: <u>VW-4</u>	Well Diameter: 2 3 <u>4</u> 6 8
Total Well Depth: <u>14.91</u>	Depth to Water: <u>9.22</u>
Depth to Free Product: <u>7.62</u>	Thickness of Free Product (feet):
Referenced to: <u>VVO</u> Grade:	D.O. Meter (if req'd): <u>YS</u> HACH

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

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

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

<u>3.7</u>	x	<u>3</u>	=	<u>11.1</u>	Gals.
1 Case Volume (Gals.)		Specified Volumes		Calculated Volume	

Time	Temp (°F)	pH	Conductivity (mS or $\mu$ S)	Gals. Removed	Observations
1524	61.0	6.3	753	4	clear
1525	62.6	6.5	699	8	cloudy
1526	62.8	6.5	697	12	cloudy

Did well dewater? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Gallons actually evacuated: <u>12</u>
Sampling Time: <u>1531</u>	Sampling Date: <u>2/7/05</u>
Sample I.D.: <u>VW-4</u>	Laboratory: Pace <input checked="" type="checkbox"/> Sequoia <input type="checkbox"/> Other _____
Analyzed for: <input checked="" type="checkbox"/> GRO <input checked="" type="checkbox"/> BTEX MTBE DRO	Other: <u>see COC</u>

D.O. (if req'd):	Pre-purge:	mg/L	Post-purge: <u>1.83</u>	mg/L
O.R.P. (if req'd):	Pre-purge:	mV	Post-purge:	mV

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

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

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

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

6002

Station #

6235 Seminary Ave, Oakland

Station Address

Total Gallons Collected From Groundwater Monitoring Wells:

27 gallons

added equip. rinse water

2 gal

any other adjustments

TOTAL GALS. RECOVERED

29 gal

loaded onto BTS vehicle #

22

BTS event #

time

date

050207-WC2 1615 2/7/05

signature

Will Crow

RECD AT

time

date

Blaine Tech

1730

2/7/05

unloaded by signature

Will Crow



**ATTACHMENT B**

**LABORATORY PROCEDURES,  
CERTIFIED ANALYTICAL REPORTS,  
AND CHAIN-OF-CUSTODY RECORDS**

## LABORATORY PROCEDURES

---

### **Laboratory Procedures**

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



22 February, 2005

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

RE: ARCO #6002, Oakland, CA  
Work Order: MOB0283

Enclosed are the results of analyses for samples received by the laboratory on 02/08/05 17:20. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Lisa Race  
Senior Project Manager

CA ELAP Certificate #1210

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

Project: ARCO #6002, Oakland, CA  
Project Number: G09JZ-0194  
Project Manager: Scott Robinson

MOB0283  
Reported:  
02/22/05 17:14

**ANALYTICAL REPORT FOR SAMPLES**

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
MW-5	MOB0283-01	Water	02/07/05 15:45	02/08/05 17:20
VW-1	MOB0283-02	Water	02/07/05 15:13	02/08/05 17:20
VW-4	MOB0283-03	Water	02/07/05 15:31	02/08/05 17:20
TB-6002-020705	MOB0283-04	Water	02/07/05 00:00	02/08/05 17:20

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 #6002, Oakland, CA  
 Project Number: G09JZ-0194  
 Project Manager: Scott Robinson

 MOB0283  
 Reported:  
 02/22/05 17:14

**Volatile Organic Compounds by EPA Method 8260B**  
**Sequoia Analytical - Morgan Hill**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>MW-5 (MOB0283-01) Water</b> <b>Sampled: 02/07/05 15:45</b> <b>Received: 02/08/05 17:20</b>									
tert-Amyl methyl ether	ND	1.0	ug/l	2	5B16006	02/16/05	02/16/05	EPA 8260B	
Benzene	ND	1.0	"	"	"	"	"	"	
tert-Butyl alcohol	ND	40	"	"	"	"	"	"	
Di-isopropyl ether	ND	1.0	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	1.0	"	"	"	"	"	"	
1,2-Dichloroethane	ND	1.0	"	"	"	"	"	"	
Ethanol	ND	200	"	"	"	"	"	"	
Ethyl tert-butyl ether	ND	1.0	"	"	"	"	"	"	
Ethylbenzene	16	1.0	"	"	"	"	"	"	
Methyl tert-butyl ether	15	1.0	"	"	"	"	"	"	
Toluene	1.1	1.0	"	"	"	"	"	"	
Xylenes (total)	2.6	1.0	"	"	"	"	"	"	
Gasoline Range Organics (C4-C12)	3500	100	"	"	"	"	"	"	
<i>Surrogate: 1,2-Dichloroethane-d4</i>		101 %		60-135	"	"	"	"	
<b>VW-1 (MOB0283-02) Water</b> <b>Sampled: 02/07/05 15:13</b> <b>Received: 02/08/05 17:20</b>									
tert-Amyl methyl ether	ND	0.50	ug/l	1	5B18007	02/18/05	02/18/05	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	100	"	"	"	"	"	"	
Ethyl tert-butyl ether	ND	0.50	"	"	"	"	"	"	
Ethylbenzene	ND	0.50	"	"	"	"	"	"	
Methyl tert-butyl ether	5.1	0.50	"	"	"	"	"	"	
Toluene	ND	0.50	"	"	"	"	"	"	
Xylenes (total)	ND	0.50	"	"	"	"	"	"	
Gasoline Range Organics (C4-C12)	ND	50	"	"	"	"	"	"	
<i>Surrogate: 1,2-Dichloroethane-d4</i>		85 %		60-135	"	"	"	"	



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

Project: ARCO #6002, Oakland, CA  
Project Number: G09JZ-0194  
Project Manager: Scott Robinson

MOB0283  
Reported:  
02/22/05 17:14

**Volatile Organic Compounds by EPA Method 8260B  
Sequoia Analytical - Morgan Hill**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>VW-4 (MOB0283-03) Water    Sampled: 02/07/05 15:31    Received: 02/08/05 17:20</b>									
tert-Amyl methyl ether	ND	0.50	ug/l	1	5B16006	02/16/05	02/16/05	EPA 8260B	
Benzene	ND	0.50	"	"	"	"	"	"	
<b>tert-Butyl alcohol</b>	<b>1000</b>	20	"	"	"	"	"	"	
Di-isopropyl ether	ND	0.50	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	0.50	"	"	"	"	"	"	
1,2-Dichloroethane	ND	0.50	"	"	"	"	"	"	
Ethanol	ND	100	"	"	"	"	"	"	
<b>Ethyl tert-butyl ether</b>	<b>0.89</b>	0.50	"	"	"	"	"	"	
Ethylbenzene	ND	0.50	"	"	"	"	"	"	
<b>Methyl tert-butyl ether</b>	<b>47</b>	0.50	"	"	"	"	"	"	
Toluene	ND	0.50	"	"	"	"	"	"	
Xylenes (total)	ND	0.50	"	"	"	"	"	"	
<b>Gasoline Range Organics (C4-C12)</b>	<b>180</b>	50	"	"	"	"	"	"	
<i>Surrogate: 1,2-Dichloroethane-d4</i>		87 %		60-135	"	"	"	"	



URS Corporation [Arco]  
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Oakland CA, 94612

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Project Number: G09JZ-0194  
Project Manager: Scott Robinson

MOB0283  
Reported:  
02/22/05 17:14

**Volatile Organic Compounds by EPA Method 8260B - Quality Control  
Sequoia Analytical - Morgan Hill**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch SB16006 - EPA 5030B P/T / EPA 8260B**

**Blank (SB16006-BLK1)**

Prepared & Analyzed: 02/16/05

tert-Amyl methyl ether	ND	0.50	ug/l							
Benzene	ND	0.50	"							
tert-Butyl alcohol	ND	5.0	"							
Di-isopropyl ether	ND	0.50	"							
1,2-Dibromoethane (EDB)	ND	0.50	"							
1,2-Dichloroethane	ND	0.50	"							
Ethanol	ND	100	"							
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	"							
Gasoline Range Organics (C4-C12)	ND	50	"							

*Surrogate: 1,2-Dichloroethane-d4*      4.79      "      5.00      96      60-135

**Laboratory Control Sample (SB16006-BS1)**

Prepared & Analyzed: 02/16/05

tert-Amyl methyl ether	9.80	0.50	ug/l	10.0		98	80-115			
Benzene	9.34	0.50	"	10.0		93	65-115			
tert-Butyl alcohol	50.8	20	"	50.0		102	75-150			
Di-isopropyl ether	9.55	0.50	"	10.0		96	75-125			
1,2-Dibromoethane (EDB)	10.7	0.50	"	10.0		107	85-120			
1,2-Dichloroethane	10.3	0.50	"	10.0		103	85-130			
Ethanol	178	100	"	200		89	70-135			
Ethyl tert-butyl ether	9.86	0.50	"	10.0		99	75-130			
Ethylbenzene	10.2	0.50	"	10.0		102	75-135			
Methyl tert-butyl ether	9.68	0.50	"	10.0		97	65-125			
Toluene	9.30	0.50	"	10.0		93	85-120			
Xylenes (total)	28.6	0.50	"	30.0		95	85-125			

*Surrogate: 1,2-Dichloroethane-d4*      4.70      "      5.00      94      60-135

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

 Project: ARCO #6002, Oakland, CA  
 Project Number: G09JZ-0194  
 Project Manager: Scott Robinson

 MOB0283  
 Reported:  
 02/22/05 17:14

**Volatile Organic Compounds by EPA Method 8260B - Quality Control**  
**Sequoia Analytical - Morgan Hill**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch 5B16006 - EPA 5030B P/T / EPA 8260B**
**Laboratory Control Sample (5B16006-BS2)**

Prepared &amp; Analyzed: 02/16/05

Benzene	5.33	0.50	ug/l	6.08		88	65-115			
Ethylbenzene	8.30	0.50	"	7.84		106	75-135			
Methyl tert-butyl ether	8.73	0.50	"	9.60		91	65-125			
Toluene	31.9	0.50	"	32.9		97	85-120			
Xylenes (total)	37.5	0.50	"	38.5		97	85-125			
Gasoline Range Organics (C4-C12)	396	50	"	440		90	70-124			
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>4.84</i>		<i>"</i>	<i>5.00</i>		<i>97</i>	<i>60-135</i>			

**Laboratory Control Sample Dup (5B16006-BSD1)**

Prepared &amp; Analyzed: 02/16/05

tert-Amyl methyl ether	9.95	0.50	ug/l	10.0		100	80-115	2	15	
Benzene	9.77	0.50	"	10.0		98	65-115	5	20	
tert-Butyl alcohol	48.6	20	"	50.0		97	75-150	4	25	
Di-isopropyl ether	10.1	0.50	"	10.0		101	75-125	6	15	
1,2-Dibromoethane (EDB)	10.7	0.50	"	10.0		107	85-120	0	15	
1,2-Dichloroethane	10.4	0.50	"	10.0		104	85-130	1	20	
Ethanol	205	100	"	200		102	70-135	14	35	
Ethyl tert-butyl ether	10.2	0.50	"	10.0		102	75-130	3	25	
Ethylbenzene	10.8	0.50	"	10.0		108	75-135	6	15	
Methyl tert-butyl ether	9.99	0.50	"	10.0		100	65-125	3	20	
Toluene	9.72	0.50	"	10.0		97	85-120	4	20	
Xylenes (total)	29.8	0.50	"	30.0		99	85-125	4	20	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>4.46</i>		<i>"</i>	<i>5.00</i>		<i>89</i>	<i>60-135</i>			

**Matrix Spike (5B16006-MS1)**

Source: MOB0332-03

Prepared &amp; Analyzed: 02/16/05

Benzene	1890	25	ug/l	304	1700	62	65-115			BB, LN
Ethylbenzene	867	25	"	392	480	99	75-135			
Methyl tert-butyl ether	470	25	"	480	45	89	65-125			
Toluene	1880	25	"	1640	320	95	85-120			
Xylenes (total)	2800	25	"	1920	920	98	85-125			
Gasoline Range Organics (C4-C12)	25700	2500	"	22000	7500	83	70-124			
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>4.56</i>		<i>"</i>	<i>5.00</i>		<i>91</i>	<i>60-135</i>			





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

Project: ARCO #6002, Oakland, CA  
Project Number: G09JZ-0194  
Project Manager: Scott Robinson

MOB0283  
Reported:  
02/22/05 17:14

**Volatile Organic Compounds by EPA Method 8260B - Quality Control**  
**Sequoia Analytical - Morgan Hill**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch 5B16006 - EPA 5030B P/T / EPA 8260B**

Matrix Spike Dup (5B16006-MSD1)	Source: MOB0332-03	Prepared: 02/16/05	Analyzed: 02/17/05							
Benzene	1900	25	ug/l	304	1700	66	65-115	0.5	20	
Ethylbenzene	876	25	"	392	480	101	75-135	1	15	
Methyl tert-butyl ether	476	25	"	480	45	90	65-125	1	20	
Toluene	1900	25	"	1640	320	96	85-120	1	20	
Xylenes (total)	2700	25	"	1920	920	93	85-125	4	20	
Gasoline Range Organics (C4-C12)	24400	2500	"	22000	7500	77	70-124	5	20	
Surrogate: 1,2-Dichloroethane-d4	4.34		"	5.00		87	60-135			

**Batch 5B18007 - EPA 5030B P/T / EPA 8260B**

Blank (5B18007-BLK1)	Prepared & Analyzed: 02/18/05									
tert-Amyl methyl ether	ND	0.50	ug/l							
Benzene	ND	0.50	"							
tert-Butyl alcohol	ND	5.0	"							
Di-isopropyl ether	ND	0.50	"							
1,2-Dibromoethane (EDB)	ND	0.50	"							
1,2-Dichloroethane	ND	0.50	"							
Ethanol	ND	100	"							
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	"							
Gasoline Range Organics (C4-C12)	ND	50	"							
Surrogate: 1,2-Dichloroethane-d4	4.49		"	5.00		90	60-135			

Laboratory Control Sample (5B18007-BS1)	Prepared & Analyzed: 02/18/05									
tert-Amyl methyl ether	9.99	0.50	ug/l	10.0		100	80-115			
Benzene	9.92	0.50	"	10.0		99	65-115			
tert-Butyl alcohol	50.1	20	"	50.0		100	75-150			
Di-isopropyl ether	10.1	0.50	"	10.0		101	75-125			
1,2-Dibromoethane (EDB)	10.7	0.50	"	10.0		107	85-120			
1,2-Dichloroethane	10.2	0.50	"	10.0		102	85-130			
Ethanol	200	100	"	200		100	70-135			
Ethyl tert-butyl ether	10.1	0.50	"	10.0		101	75-130			
Ethylbenzene	11.0	0.50	"	10.0		110	75-135			
Methyl tert-butyl ether	9.83	0.50	"	10.0		98	65-125			

Sequoia Analytical - Morgan Hill

*The results in this report apply to the samples analyzed in accordance with the chain of custody document. Unless otherwise stated, results are reported on a wet weight basis. This analytical report must be reproduced in its entirety.*

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

 Project: ARCO #6002, Oakland, CA  
 Project Number: G09JZ-0194  
 Project Manager: Scott Robinson

 MOB0283  
 Reported:  
 02/22/05 17:14

**Volatile Organic Compounds by EPA Method 8260B - Quality Control**  
**Sequoia Analytical - Morgan Hill**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch 5B18007 - EPA 5030B P/T / EPA 8260B**
**Laboratory Control Sample (5B18007-BS1)**

Prepared &amp; Analyzed: 02/18/05

Toluene	9.63	0.50	ug/l	10.0		96	85-120			
Xylenes (total)	30.8	0.50	"	30.0		103	85-125			
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>4.56</i>		"	<i>5.00</i>		<i>91</i>	<i>60-135</i>			

**Laboratory Control Sample (5B18007-BS2)**

Prepared &amp; Analyzed: 02/18/05

Benzene	5.42	0.50	ug/l	6.08		89	65-115			
Ethylbenzene	8.33	0.50	"	7.84		106	75-135			
Methyl tert-butyl ether	8.80	0.50	"	9.60		92	65-125			
Toluene	31.8	0.50	"	32.9		97	85-120			
Xylenes (total)	37.2	0.50	"	38.5		97	85-125			
Gasoline Range Organics (C4-C12)	383	50	"	440		87	70-124			
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>4.68</i>		"	<i>5.00</i>		<i>94</i>	<i>60-135</i>			

**Laboratory Control Sample Dup (5B18007-BSD1)**

Prepared &amp; Analyzed: 02/18/05

tert-Amyl methyl ether	9.81	0.50	ug/l	10.0		98	80-115	2	15	
Benzene	9.42	0.50	"	10.0		94	65-115	5	20	
tert-Butyl alcohol	50.1	20	"	50.0		100	75-150	0	25	
Di-isopropyl ether	10.4	0.50	"	10.0		104	75-125	3	15	
1,2-Dibromoethane (EDB)	10.4	0.50	"	10.0		104	85-120	3	15	
1,2-Dichloroethane	9.87	0.50	"	10.0		99	85-130	3	20	
Ethanol	210	100	"	200		105	70-135	5	35	
Ethyl tert-butyl ether	10.2	0.50	"	10.0		102	75-130	1	25	
Ethylbenzene	10.4	0.50	"	10.0		104	75-135	6	15	
Methyl tert-butyl ether	9.84	0.50	"	10.0		98	65-125	0.1	20	
Toluene	9.18	0.50	"	10.0		92	85-120	5	20	
Xylenes (total)	28.4	0.50	"	30.0		95	85-125	8	20	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>4.11</i>		"	<i>5.00</i>		<i>82</i>	<i>60-135</i>			

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

Project: ARCO #6002, Oakland, CA  
Project Number: G09JZ-0194  
Project Manager: Scott Robinson

MOB0283  
Reported:  
02/22/05 17:14

**Volatile Organic Compounds by EPA Method 8260B - Quality Control  
Sequoia Analytical - Morgan Hill**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch 5B18007 - EPA 5030B P/T / EPA 8260B</b>										
<b>Laboratory Control Sample Dup (5B18007-BSD2)</b>										
Prepared & Analyzed: 02/18/05										
Benzene	5.45	0.50	ug/l	6.08		90	65-115	0.6	20	
Ethylbenzene	8.36	0.50	"	7.84		107	75-135	0.4	15	
Methyl tert-butyl ether	8.67	0.50	"	9.60		90	65-125	1	20	
Toluene	30.9	0.50	"	32.9		94	85-120	3	20	
Xylenes (total)	38.7	0.50	"	38.5		101	85-125	4	20	
Gasoline Range Organics (C4-C12)	374	50	"	440		85	70-124	2	20	
Surrogate: 1,2-Dichloroethane-d4	4.39		"	5.00		88	60-135			



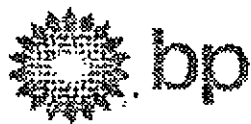
URS Corporation [Arco]  
1333 Broadway, Suite 800  
Oakland CA, 94612

Project:ARCO #6002, Oakland, CA  
Project Number:G09JZ-0194  
Project Manager:Scott Robinson

MOB0283  
Reported:  
02/22/05 17:14

**Notes and Definitions**

BB,LN Sample > 4x spike concentration.  
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: ARCO 6002 Analytical for QMR sampling  
 BP BU/AR Region/Enfos Segment: BP > Americas > West Coast > Retail > WCBU > CA > Central > 6002 > Historical/BL  
 State or Lead Regulatory Agency: Alameda County Environmental Health Agency  
 Requested Due Date (mm/dd/yy): 10 Day TAT

On-site Time: 1413 Temp: 59°F  
 Off-site Time: 1615 Temp: 56°F  
 Sky Conditions: partly cloudy  
 Meteorological Events: \_\_\_\_\_  
 Wind Speed: \_\_\_\_\_ Direction: \_\_\_\_\_

Lab Name: <u>Sequoia</u>	BVIAR Facility No.: <u>6002</u>	Consultant/Contractor: <u>URS</u>
Address: <u>885 Jarvis Drive</u> <u>Morgan Hill, CA 95037</u>	BVIAR Facility Address: <u>6235 Seminary Ave., Oakland, CA 94605</u>	Address: <u>1333 Broadway, Suite 800</u> <u>Oakland, CA 94612</u>
Lab PM: <u>Lisa Rice</u>	Site Lat/Long: <u>37.760021 / -122.173</u>	Consultant/Contractor Project No.: <u>38486577</u>
Tele/Fax: <u>408.782.8156 / 408.782.6308</u>	California Global ID No.: <u>T0600100105</u>	Consultant/Contractor PM: <u>Scott Robinson</u>
BVIAR PM Contact: <u>Paul Supple</u>	Enfos Project No.: <u>G0917-0194</u>	Tele/Fax: <u>510.874.3280 / 510.874.3268</u>
Address: <u>P.O. Box 6549</u> <u>Moraga, CA 94570</u>	Provision or RCUP: <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>Donna.Casper@arscorp.com</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	GROMETEX (8260)	MIBK, TAME, STAB, DIPB, TBA (8269)	EDB, LADCA (8260)	Brunel (8260)		
1	MW-5	1545	2/7/05		X		01	3						X	X	X	X	170B0283 on hold	
2	VW-1	1513	↓		X		02	1						X	X	X	X		
3	VW-4	1631	↓		X		03	1						X	X	X	X		
4	T0-6002-020705	-	2/7/05		X		04	2						X	X	X	X		
5																			
6																			
7																			
8																			
9																			
10																			

Sampler's Name: <u>Will Crow</u>	Relinquished By / Affiliation: <u>Will Crow</u>	Date: <u>2/8/05</u>	Time: <u>0850</u>	Accepted By / Affiliation: <u>[Signature]</u>	Date: <u>2/8/05</u>	Time: <u>0850</u>
Sampler's Company: <u>Blake Tech</u>		Date: <u>2/8/05</u>	Time: <u>1720</u>		Date: <u>2/8/05</u>	Time: <u>1720</u>
Shipment Date:						
Shipment Method:						
Shipment Tracking No:						

Special Instructions: \_\_\_\_\_

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

## SEQUOIA ANALYTICAL SAMPLE RECEIPT LOG

CLIENT NAME: ARCO 6002  
 REC. BY (PRINT): JB  
 WORKORDER: M0B628

DATE REC'D AT LAB: 2/8/05  
 TIME REC'D AT LAB: 1720  
 DATE LOGGED IN: 2-9-05

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

(For clients requiring preservation checks at receipt, document here ↓)

CIRCLE THE APPROPRIATE RESPONSE	LAB SAMPLE #	DASH #	CLIENT ID:	CONTAINER DESCRIPTION	PRESERVATIVE	pH	SAMPLE MATRIX	DATE SAMPLED	REMARKS: CONDITION (ETC.)
1. Custody Seal(s) Present / Absent Intact / Broken*	41		MW-5	RO4 (3)	HCl	—	W	2/7/05	<del>                     [Large diagonal line through the table with handwritten "2/8/05" and "JB" in the center]                 </del>
2. Chain-of-Custody Present / Absent*	03		VW-1	↓ ↓	↓	↓	↓	↓	
3. Traffic Reports or Packing List: Present / Absent	4		IR-6002-20705	↓ (2)	↓	↓	↓	↓	
4. Airbill: Airbill / Sticker Present / Absent									
5. Airbill #:									
6. Sample Labels: Present / Absent									
7. Sample IDs: Listed / Not Listed on Chain-of-Custody									
8. Sample Condition: Intact / Broken* / Leaking*									
9. Does information on chain-of-custody, traffic reports and sample labels agree? Yes / No*									
10. Sample received within hold time? Yes / No*									
11. Adequate sample volume received? Yes / No*									
12. Proper Preservatives used? Yes / No*									
13. Trip Blank / Temp Blank Received? (circle which, if yes) Yes / No*									
14. Temp Rec. at Lab: Is temp 4 ± 2°C? Yes / No** <small>(Acceptance range for samples requiring thermal pres.)</small>									

\*\*Exception (if any): METALS / OFF ON ICE or Problem COC

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

**ATTACHMENT C**

**ERROR CHECK REPORTS AND EDF/GEOWELL SUBMITTAL  
CONFIRMATIONS**

## Electronic Submittal Information

[Main Menu](#) | [View/Add Facilities](#) | [Upload EDD](#) | [Check EDD](#)

### SUCCESSFUL GEO\_WELL CHECK - NO ERRORS

<u>ORGANIZATION NAME:</u>	URS Corporation-Oakland Office
<u>USER NAME:</u>	URSCORP-OAKLAND
<u>DATE CHECKED:</u>	

**Processing is complete. No errors were found!**  
**You may now proceed to the [upload](#) page.**

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Logged in as URSCORP-OAKLAND (CONTRACTOR)

[CONTACT SITE ADMINISTRATOR.](#)



## Electronic Submittal Information

[Main Menu](#) | [View/Add Facilities](#) | [Upload EDD](#) | [Check EDD](#)

### UPLOADING A GEO\_WELL FILE

**Processing is complete. No errors were found!  
Your file has been successfully submitted!**

**Submittal Title:** 1Q 2005 BP/ARCO Site 6002  
GeoWell

**Submittal Date/Time:** 2/22/2005 10:04:24 PM

**Confirmation  
Number:** 7963729679

**[Back to Main Menu](#)**

Logged in as URSCORP-OAKLAND  
(CONTRACTOR)

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## Electronic Submittal Information

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<u>ORGANIZATION NAME:</u>	URS Corporation-Oakland Office
<u>USER NAME:</u>	URSCORP-OAKLAND
<u>DATE CHECKED:</u>	2/22/2005 10:05:16 PM
<u>GLOBAL ID:</u>	T0600100105
<u>FILE UPLOADED:</u>	ARCO#6002-EDF-MOB0283.zip

No errors were found in your EDF upload file.

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When you complete the submittal process, you will be given a confirmation number for your submittal.

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<b>ARCO # 06002</b>	<b><u>Regional Board - Case #: 01-0113</u></b>
6235 SEMINARY AVE	SAN FRANCISCO BAY RWQCB (REGION 2) -
OAKLAND, CA 94605	<b>(BG)</b>
	<b><u>Local Agency (lead agency) - Case #: 3942</u></b>
	ALAMEDA COUNTY LOP - <b>(AG)</b>

#### **SAMPLE DETECTIONS REPORT**

# FIELD POINTS SAMPLED	3
# FIELD POINTS WITH DETECTIONS	3
# FIELD POINTS WITH WATER SAMPLE DETECTIONS ABOVE MCL	2
SAMPLE MATRIX TYPES	WATER

#### **METHOD QA/QC REPORT**

METHODS USED	8260FA
TESTED FOR REQUIRED ANALYTES?	N
MISSING PARAMETERS NOT TESTED:	
- 8260FA REQUIRES DBFM TO BE TESTED	
- 8260FA REQUIRES BR4FBZ TO BE TESTED	
- 8260FA REQUIRES BZMED8 TO BE TESTED	
LAB NOTE DATA QUALIFIERS	Y

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

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

- BLANK SPIKE		Y
- SURROGATE SPIKE		Y
<b><u>WATER SAMPLES FOR 8021/8260 SERIES</u></b>		
MATRIX SPIKE / MATRIX SPIKE DUPLICATE(S) % RECOVERY BETWEEN 65-135%		Y
MATRIX SPIKE / MATRIX SPIKE DUPLICATE(S) RPD LESS THAN 30%		n/a
SURROGATE SPIKES % RECOVERY BETWEEN 85-115%		Y
BLANK SPIKE / BLANK SPIKE DUPLICATES % RECOVERY BETWEEN 70-130%		Y
<b><u>SOIL SAMPLES FOR 8021/8260 SERIES</u></b>		
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
<b><u>FIELD QC SAMPLES</u></b>		
<u>SAMPLE</u>	<u>COLLECTED</u>	<u>DETECTIONS &gt; REPDL</u>
QCTB SAMPLES	N	0
QCEB SAMPLES	N	0
QCAB SAMPLES	N	0

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**Confirmation Number:** 5806186497  
**Date/Time of Submittal:** 2/22/2005 10:06:33 PM  
**Facility Global ID:** T0600100105  
**Facility Name:** ARCO # 06002  
**Submittal Title:** 1Q 2005 QMR BP/ARCO 6002  
**Submittal Type:** GW Monitoring Report

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

<b>ARCO # 06002</b> 6235 SEMINARY AVE OAKLAND, CA 94605	<b>Regional Board - Case #: 01-0113</b> SAN FRANCISCO BAY RWQCB (REGION 2) - (BG) <b>Local Agency (lead agency) - Case #: 3942</b> ALAMEDA COUNTY LOP - (AG)
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CONF #	TITLE	QUARTER
5806186497	1Q 2005 QMR BP/ARCO 6002	Q1 2005
SUBMITTED BY	SUBMIT DATE	STATUS
Srijesh Thapa	2/22/2005	PENDING REVIEW

**SAMPLE DETECTIONS REPORT**

# FIELD POINTS SAMPLED	3
# FIELD POINTS WITH DETECTIONS	3
# FIELD POINTS WITH WATER SAMPLE DETECTIONS ABOVE MCL	2
SAMPLE MATRIX TYPES	WATER

**METHOD QA/QC REPORT**

METHODS USED	8260FA
TESTED FOR REQUIRED ANALYTES?	N
MISSING PARAMETERS NOT TESTED:	
- 8260FA REQUIRES DBFM TO BE TESTED	
- 8260FA REQUIRES BR4FBZ TO BE TESTED	
- 8260FA REQUIRES BZMED8 TO BE TESTED	
LAB NOTE DATA QUALIFIERS	Y

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

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

**WATER SAMPLES FOR 8021/8260 SERIES**

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

**SOIL SAMPLES FOR 8021/8260 SERIES**

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

**FIELD QC SAMPLES**

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

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