URS

October 18, 2002

Mr. Amir Gholami
Alameda County Health Care Services Agency
1131 Harbor Bay Parkway, Suite 250
Alameda, CA 94502-6577

Re: Second Quarter 2002 Monitoring Report
Former ARCO Service Station No. 6002
6235 Seminary Avenue
Oakland, California
URS Project #38645961

Dear Mr. Gholami:

On behalf of ARCO (affiliated to Group Environmental Management Company), URS Corporation (URS) is submitting the attached Groundwater Monitoring Report which presents the results of the second quarter 2002 groundwater monitoring program at former ARCO Service Station No. 6002, located at 6235 Seminary Avenue, Oakland, California. The monitoring program complies with the Alameda County Health Care Services Agency (ACHCSA) requirements regarding underground storage tank (UST) investigations.

Please call us at (510) 893-3600 if you have questions.

REGISTERED PROFESSIONAL ENGINEER
AMY BRECKENRIDGE
No. C057141
Exp 12/31/05
CIVIL
STATE OF CALIFORNIA

Sincerely,

URS CORPORATION

Scott Robinson
Project Manager

Amy Breckenridge
Portfolio Manager

Attachment: Quarterly Groundwater Monitoring Report, Second Quarter 2002

cc: Mr. Paul Supple, ARCO, PO Box 6549 Moraga, CA 94570

URS Corporation
500 12th Street, Suite 200
Oakland, CA 94607-4014
Tel: 510.893.3600
Fax: 510.874.3268

Quarterly Groundwater Monitoring Report

Second Quarter 2002

Former Arco Service Station 6002
6235 Seminary Avenue
Oakland, California
URS Project #38645961

Prepared For:

Mr. Paul Supple
ARCO

October 18, 2002

Prepared By:
URS Corporation.
500 12th Street, Suite 200
Oakland, California 94607-4014

URS

Date: October 18, 2002

Quarter: 2nd Quarter, 2002

ARCO QUARTERLY GROUNDWATER MONITORING REPORT

Station No.:	6002	Address:	6235 Seminary Avenue, Oakland, California
ARCO Environmental Engineer			Paul Supple / 925-299-8891
Consulting Co./Contact Person:			URS Corporation / Scott Robinson
			510-893-3600
Consultant Project No.:			38465961
Primary Agency/Regulatory ID No.:			ACHCSA

WORK PERFORMED THIS QUARTER (SECOND - 2002):

1. Submitted quarterly groundwater monitoring report for first quarter 2002.
2. Performed second quarter groundwater monitoring and sampling on April 3, 2002.

WORK PROPOSED FOR NEXT QUARTER (THIRD - 2002):

1. Prepare and submit quarterly groundwater monitoring report for second quarter 2002.
2. Perform quarterly groundwater monitoring and sampling for third quarter 2002.

QUARTERLY MONITORING:

Current Phase of Project:	Quarterly Groundwater Monitoring
Frequency of Sampling:	Annual (First Quarter): MW-3, MW-6 Quarterly: MW-4, MW-5, MW-7, MW-8, VW-1, VW-4
Frequency of Monitoring:	Quarterly (groundwater)
Is Floating Product (FP) Present On-site:	No
Bulk Soil Removed to Date :	Approximately 370 cubic yards of TPH impacted soil
Bulk Soil Removed This Quarter :	None
Water Wells or Surface Waters, Within 2000 ft., impacted by site:	None
Current Remediation Techniques:	Natural Attenuation
Average Depth to Groundwater:	9.47 feet
Groundwater Flow Direction and Gradient (Average):	0.084 feet per foot toward West-Southwest

DISCUSSION:

Based on field measurements collected on April 3, 2002, groundwater beneath the site flows towards the west-southwest at a gradient of 0.084 feet per foot. This is consistent with the historic groundwater flow direction and gradient.

Hydrocarbon concentrations detected this quarter are consistent with the previous sampling event. The maximum TPH-g and Benzene concentrations were detected in well MW-5 at 2400 micrograms per liter (µg/L) and 21 micrograms per liter (µg/L). The maximum MTBE concentration was detected in well VW-4 at 2,200 µg/L.

ATTACHMENTS:

- Disclaimer Statement - Groundwater Monitoring Report
- Table 1 - Summary of Groundwater Elevation and Analytical Data, Petroleum Hydrocarbons and Their Constituents
- Table 2 - Groundwater Flow Direction and Gradient
- Figure 1 - Groundwater Elevation Contour and Analytical Summary Map
- Attachment A - Groundwater Sampling Procedures
- Attachment B - Certified Analytical Reports and Chain-of-Custody
- Attachment C - Field Data Sheets
- Attachment D - Copy of EDCC Report, EDF and Geowell Submittal Confirmation Number Page

URS QUARTERLY MONITORING REPORT
DISCLAIMER
GROUP ENVIRONMENTAL MANAGEMENT COMPANY SITES

This report is based on data, site conditions, and other information that are generally applicable as of the date of the report, and the conclusions and recommendations herein are therefore applicable only to that time frame.

Background information, including but not limited to previous field measurements, analytical results, site plans, and other data has been furnished to URS by Group Environmental Management Company, its previous consultants, and/or third parties that URS has used in preparing this report. URS has relied on this information as furnished. URS is not responsible for nor has it confirmed the accuracy of this information.

The analytical data provided by the laboratory approved by Group Environmental Management Company have been reviewed and verified by that laboratory. URS has not performed an independent review of the data and is neither responsible for nor has confirmed the accuracy of these data. Field measurements have been supplied by a groundwater sampling subcontractor. URS has not performed an independent review of the field sampling data and is neither responsible for nor has confirmed the accuracy of these data.

SEMINARY AVENUE

OVERDALE AVENUE

SUNNYMERE AVENUE

SIDEWALK

DRIVEWAY

SIDEWALK

DRIVEWAY

Gate

Gate

6150

6152

6154

6209 (APTS.)

6217 (APTS.)

STAIRS

GARAGE

CONCRETE

CONCRETE

PLANTER

4' block wall (Typ.)

8" block wall

SERVICE ISLAND

SERVICE STATION BUILDING

Former UST and concrete pad

DRIVEWAY

580 ON RAMP

550 ON RAMP

planter

6166

6267

Garage

Gate

Elevation 8' lower than ARCO property

Approximate property line (Typ.)

6174

MW-4
232.81
<50
<0.50
<2.5

MW-5
232.32
2,400
21
130

MW-6
240.01
NS
NS
NS

MW-7
227.64
<50
<0.50
<2.5

MW-8
231.77
<50
<0.50
<2.5

MW-1 ⌀

MW-2

MW-3
241.40
NS
NS
NS

VW-1
NA
91
0.72
12

VW-2

VW-3

VW-4
NA
1,400
5.2
2,200

AS-1

0.084

232.00

234.00

236.00

238.00

240.00

230.00

228.00

EXPLANATION

- MW-2 ⊕ Monitoring Well Location
- MW-1 ⌀ Decommissioned monitoring well
- VW-1 ⊕ Vapor extraction well
- AS-1 ⊕ Air sparge well
- Well ID / ELEV / TPHg / Benzene / MTBE — Well Designation; Groundwater Elevation above MSL; Concentration of total petroleum hydrocarbons as gasoline, benzene, and MTBE in groundwater in micrograms per liter (µg/l). Samples collected on 04/03/02
- NA — Not Available, well casing
- NS — not sampled
- 240.00 — Groundwater elevation contour
- 0.084 — Approximate groundwater flow direction and gradient

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

N

0 15 30 60

Scale (ft)

URS

Project No. 38465961

Arco Service Station #6002
6235 Seminary Avenue
Oakland, California

**Groundwater Elevation Contour and Analytical Summary Map
Second Quarter 2002 (April 03, 2002)**

FIGURE
1

X:\x_env_waste\BP GEMS\Sites\Scott Robinson\Paul Supple\6002\Reports\Monitoring\Qtr 2,2002\Drawings\1_GWEC-AS_4-3-02.dwg

Table 1
Summary of Groundwater Elevation and Analytical Data
Petroleum Hydrocarbons and Their Constituents
1995 - Present**

ARCO Service Station 6002
6235 Seminary Avenue, Oakland, California

Well Number	Date Gauged	TOC Elevation (ft-MSL)	Depth to Water (feet)	FP Thickness (feet)	Groundwater Elevation (ft-MSL)	Date Sampled	TPHg (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethyl-benzene (µg/L)	Total Xylenes (µg/L)	MTBE 8021B* (µg/L)	MTBE 8260 (µg/L)	Dissolved Oxygen (mg/L)	Purged/ Not Purged (P/NP)
MW-1	03-15-95	247.06	7.37	0.00	239.69	03-15-95	13,000	1,200	44	770	1,100	--	--		
MW-1	05-30-95	247.06	8.48	0.00	238.58	05-30-95	19,000	1,600	30	890	1,400	--	--		
MW-1	09-01-95	247.06	9.47	0.00	237.59	09-01-95	14,000	1,300	28	480	780	24,000	--		
MW-1	11-13-95	247.06	8.78	0.01	238.29[1]	11-13-95	11,000	570	17	260	410	--	25,000[2]		
MW-1	02-23-96	247.06	Well was decommissioned on 2-12-96												
MW-2	03-15-95	249.30	8.25	0.00	241.05	03-15-95	<50	<0.5	<0.5	<0.5	<0.5	--	--		
MW-2	05-30-95	249.30	9.93	0.00	239.37	05-30-95	<50	<0.5	<0.5	<0.5	<0.5	--	--		
MW-2	09-01-95	249.30	10.69	0.00	238.61	09-01-95	<50	<0.5	<0.5	<0.5	<0.5	<3	--		
MW-2	11-13-95	249.30	10.32	0.00	238.98	11-13-95	<50	<0.5	<0.5	<0.5	<0.5	--	--		
MW-2	02-23-96	249.30	Well was decommissioned on 2-12-96												
MW-3	03-15-95	248.35	6.76	0.00	241.59	03-15-95	<50	<0.5	<0.5	<0.5	<0.5	--	--		
MW-3	05-30-95	248.35	7.81	0.00	240.54	05-30-95	<50	<0.5	<0.5	<0.5	<0.5	--	--		
MW-3	09-01-95	248.35	8.65	0.00	239.70	09-01-95	<50	<0.5	<0.5	<0.5	<0.5	<3	--		
MW-3	11-13-95	248.35	8.25	0.00	240.10	11-13-95	120	45	0.7	<0.5	6.2	--	--		
MW-3	02-23-96	248.35	6.64	0.00	241.71	03-01-96	<50	<0.5	<0.5	0.6	1.9	<3	--		
MW-3	05-10-96	248.35	7.95	0.00	240.40	05-10-96	Not sampled: well sampled annually, during the first quarter								
MW-3	08-09-96	248.35	8.06	0.00	240.29	08-09-96	Not sampled: well sampled annually, during the first quarter								
MW-3	11-08-96	248.35	NR	NR	NR	11-11-96	Not sampled: inaccessible								
MW-3	03-21-97	248.35	8.21	0.00	240.14	03-21-97	<50	<0.5	<0.5	<0.5	<0.5	<3	--		
MW-3	05-27-97	248.35	8.25	0.00	240.10	05-27-97	Not sampled: well sampled annually, during the first quarter								
MW-3	08-05-97	248.35	8.29	0.00	240.06	08-05-97	Not sampled: well sampled annually, during the first quarter								
MW-3	10-29-97	248.35	8.58	0.00	239.77	10-29-97	<50	<0.5	<0.5	<0.5	<0.5	<3	--		
MW-3	02-25-98	248.35	7.69	0.00	240.66	02-25-98	<50	<0.5	<0.5	<0.5	<0.5	<3	--		
MW-3	05-12-98	248.35	8.20	0.00	240.15	05-12-98	Not sampled: well sampled annually, during the first quarter								
MW-3	07-28-98	248.35	8.55	0.00	239.80	07-28-98	Not sampled: well sampled annually, during the first quarter								
MW-3	10-27-98	248.35	8.30	0.00	240.05	10-27-98	Not sampled: well sampled annually, during the first quarter								
MW-3	02-08-99	248.35	7.90	0.00	240.45	02-08-99	<50	<0.5	<0.5	<0.5	<0.5	<3	--		
MW-3	06-01-99	248.35	8.40	0.00	239.95	06-01-99	Not sampled: well sampled annually, during the first quarter								
MW-3	08-25-99	248.35	8.49	0.00	239.86	08-25-99	Not sampled: well sampled annually, during the first quarter							1.67	
MW-3	10-29-99	248.35	8.52	0.00	239.83	10-29-99	Not sampled: well sampled annually, during the first quarter							6.90	
MW-3	02-16-00	248.35	8.03	0.00	240.32	02-16-00	<50	<0.5	0.8	<0.5	<1	<3	--	8.51	NP
MW-3	06-23-00	248.35	7.55	0.00	240.80	06-23-00	Not sampled: well sampled annually, during the first quarter							2.10	
MW-3	08-17-00	248.35	8.65	0.00	239.70	08-17-00	Not sampled: well sampled annually, during the first quarter							1.10	
MW-3	11-10-00	248.35	7.19	0.00	241.16	11-10-00	Not sampled: well sampled annually, during the first quarter								
MW-3	02-12-01	248.35	8.60	0.00	239.75	02-12-01	<50.0	<0.500	<0.500	<0.500	<0.500	<2.50		0.81	NP
MW-3	04-13-01	248.35	6.13	0.00	242.22	04-13-01	Not sampled: well sampled annually, during the first quarter								
MW-3	07-18-01	248.35	6.47	0.00	241.88	07-18-01	Not sampled: well sampled annually, during the first quarter								
MW-3	10-01-01	248.35	6.99	0.00	241.36	10-01-01	Not sampled: well sampled annually, during the first quarter								

Table 1
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Petroleum Hydrocarbons and Their Constituents
1995 - Present**

ARCO Service Station 6002
6235 Seminary Avenue, Oakland, California

Well Number	Date Gauged	TOC Elevation (ft-MSL)	Depth to Water (feet)	FP Thickness (feet)	Groundwater Elevation (ft-MSL)	Date Sampled	TPHg (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethyl-benzene (µg/L)	Total Xylenes (µg/L)	MTBE 8021B* (µg/L)	MTBE 8260 (µg/L)	Dissolved Oxygen (mg/L)	Purged/ Not Purged (P/NP)
MW-3	01-14-02	248.35	5.47	0.00	242.88	01-14-02	<50	<0.50	<0.50	<0.50	<0.50	<5.0	–		NP
MW-3	**04-03-02**	**248.35**	**6.95**	**0.00**	**241.40**	**04-03-02**	**Not sampled: well sampled annually, during the first quarter**								
MW-4	03-15-95	242.91	9.37	0.00	233.54	03-15-95	<50	<0.5	<0.5	<0.5	<0.5	--	--		
MW-4	05-30-95	242.91	11.47	0.00	231.44	05-30-95	<50	<0.5	<0.5	<0.5	<0.5	--	--		
MW-4	09-01-95	242.91	12.28	0.00	230.63	09-01-95	78	<0.5	0.7	<0.5	<0.5	<3	--		
MW-4	11-13-95	242.91	11.75	0.00	231.16	11-13-95	<50	<0.5	<0.5	<0.5	<0.5	--	--		
MW-4	02-23-96	242.91	8.51	0.00	234.40	03-01-96	59	1.2	7.4	1.6	9.3	3	--		
MW-4	05-10-96	242.91	11.35	0.00	231.56	05-10-96	<50	<0.5	<0.5	<0.5	<0.5	<3	--		
MW-4	08-09-96	242.91	9.70	0.00	233.21	08-09-96	<50	<0.5	<0.5	<0.5	<0.5	<3	--		
MW-4	11-08-96	242.91	11.79	0.00	231.12	11-08-96	<50	<0.5	<0.5	<0.5	<0.5	<3	--		
MW-4	03-21-97	242.91	10.94	0.00	231.97	03-21-97	<50	<0.5	<0.5	<0.5	<0.5	81	--		
MW-4	05-27-97	242.91	11.51	0.00	231.40	05-27-97	<50	<0.5	<0.5	<0.5	<0.5	<3	--		
MW-4	08-05-97	242.91	11.90	0.00	231.01	08-05-97	<50	<0.5	<0.5	<0.5	<0.5	<3	--		
MW-4	10-29-97	242.91	12.00	0.00	230.91	10-29-97	<50	<0.5	<0.5	<0.5	<0.5	<3	--		
MW-4	02-25-98	242.91	8.34	0.00	234.57	02-25-98	<50	<0.5	0.9	<0.5	0.9	4	--		
MW-4	05-12-98	242.91	10.93	0.00	231.98	05-12-98	<50	<0.5	<0.5	<0.5	<0.5	<3	--		
MW-4	07-28-98	242.91	12.08	0.00	230.83	07-28-98	<50	<0.5	<0.5	<0.5	<0.5	<3	--		
MW-4	10-27-98	242.91	11.40	0.00	231.51	10-27-98	<5,000	<50	<50	160	64	6,400	--		
MW-4	02-08-99	242.91	8.40	0.00	234.51	02-08-99	<50	<0.5	<0.5	<0.5	<0.5	<3	--		
MW-4	06-01-99	242.91	11.93	0.00	230.98	06-01-99	<50	<0.5	<0.5	<0.5	<0.5	<3	--	4.0	NP
MW-4	08-25-99	242.91	12.21	0.00	230.70	08-25-99	<50	<0.5	<0.5	<0.5	<0.5	<3	--	1.29	NP
MW-4	10-29-99	242.91	12.37	0.00	230.54	10-29-99	<50	<0.5	<0.5	<0.5	<1	<3	--	1.50	NP
MW-4	02-16-00	242.91	7.45	0.00	235.46	02-16-00	<50	<0.5	<0.5	<0.5	<1	<3	--	2.38	NP
MW-4	06-23-00	242.91	12.31	0.00	230.60	06-23-00	<50.0	<0.500	<0.500	<0.500	<0.500	<2.50	--	2.80	NP
DUP	08-17-00	--	--	--	--	08-17-00	<50.0	<0.500	<0.500	<0.500	<0.500	<2.50	--		
MW-4	08-17-00	242.91	11.92	0.00	230.99	08-17-00	<50.0	<0.500	<0.500	<0.500	<0.500	<2.50	--	2.38	NP
MW-4	11-10-00	242.91	10.80	0.00	232.11	11-10-00	<50.0	<0.500	<0.500	<0.500	<0.500	<2.50	--	1.55	NP
MW-4	02-12-01	242.91	11.65	0.00	231.26	02-12-01	<50.0	<0.500	<0.500	<0.500	<0.500	<2.50	--	1.12	NP
MW-4	04-13-01	242.91	8.17	0.00	234.74	04-13-01	<50.0	<0.500	<0.500	<0.500	<0.500	<2.50	--		NP
DUP	04-13-01	--	--	--	--	04-13-01	<50.0	<0.500	<0.500	<0.500	<0.500	<2.50	--		
MW-4	07-18-01	242.91	8.51	0.00	234.40	07-18-01	<50	<0.50	<0.50	<0.50	<0.50	<2.5	--		NP
MW-4	10-01-01	242.91	8.71	0.00	234.20	10-01-01	<50	<0.50	<0.50	<0.50	<0.50	<2.5	--		NP
MW-4	01-14-02	242.91	7.13	0.00	235.78	01-14-02	<50	<0.50	<0.50	<0.50	<0.50	<5.0	--		NP
DUP	01-14-02	--	--	--	--	01-14-02	<50	<0.50	<0.50	<0.50	<0.50	<5.0	--		
MW-4	**04-03-02**	**242.91**	**10.1**	**0.00**	**232.81**	**04-03-02**	**<50**	**<0.50**	**<0.50**	**<0.50**	**<0.50**	**<2.5**	--		**NP**
MW-5	03-15-95	244.82	11.99	0.00	232.83	03-15-95	21,000	870	22	1,600	1,900	--	--		
MW-5	05-30-95	244.82	12.97	0.00	231.85	05-30-95	17,000	2,100	250	1,000	520	--	--		
MW-5	09-01-95	244.82	14.03	0.00	230.79	09-01-95	19,000	1,500	25	1,600	880	8,300	--		

Table 1
Summary of Groundwater Elevation and Analytical Data
Petroleum Hydrocarbons and Their Constituents
1995 - Present**

ARCO Service Station 6002
6235 Seminary Avenue, Oakland, California

Well Number	Date Gauged	TOC Elevation (ft-MSL)	Depth to Water (feet)	FP Thickness (feet)	Groundwater Elevation (ft-MSL)	Date Sampled	TPHg (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethyl-benzene (µg/L)	Total Xylenes (µg/L)	MTBE 8021B* (µg/L)	MTBE 8260 (µg/L)	Dissolved Oxygen (mg/L)	Purged/ Not Purged (P/NP)
MW-5	11-13-95	244.82	13.65	0.00	231.17	11-13-95	21,000	1,300	22	1,400	630	--	--		
MW-5	02-23-96	244.82	11.93	0.00	232.89	03-01-96	27,000	1,300	<50	1,600	1,500	730	--		
MW-5	05-10-96	244.82	13.05	0.00	231.77	05-10-96	17,000	460	21	760	480	1,000	--		
MW-5	08-09-96	244.82	13.22	0.00	231.60	08-09-96	16,000	420	14	870	390	1,500	--		
MW-5	11-08-96	244.82	NR	NR	NR	11-11-96	Not sampled: well inaccessible								
MW-5	03-21-97	244.82	13.24	0.00	231.58	03-21-97	18,000	110	<50	730	1,500	1,800	--		
MW-5	05-27-97	244.82	13.10	0.00	231.72	05-27-97	21,000	86	<20	810	610	1,700	--		
MW-5	08-05-97	244.82	13.14	0.00	231.68	08-05-97	340	2.2	<0.5	15	8.8	39	--		
MW-5	10-29-97	244.82	13.03	0.00	231.79	10-29-97	19,000	130	<20	1,400	620	1,700	--		
MW-5	02-25-98	244.82	11.33	0.00	233.49	02-25-98	8,500	19	13	190	100	170	--		
MW-5	05-12-98	244.82	12.81	0.00	232.01	05-12-98	10,000	34	<10	390	220	610	--		
MW-5	07-28-98	244.82	13.12	0.00	231.70	07-28-98	15,000	68	<10	690	620	1,000	--		
MW-5	10-27-98	244.82	12.90	0.00	231.92	10-27-98	15,000	60	<10	770	400	890	--		
MW-5	02-08-99	244.82	11.08	0.00	233.74	02-08-99	8,200	23	<10	290	120	<60	--		
MW-5	06-01-99	244.82	12.95	0.00	231.87	06-01-99	11,000	33	3.3	340	180	580	--	1.0	NP
MW-5	08-25-99	244.82	12.99	0.00	231.83	08-25-99	9,200	26	14	420	270	1,100	--	0.37	NP
MW-5	10-29-99	244.82	13.10	0.00	231.72	10-29-99	11,000	19	9.8	260	150	590	--	1.27	NP
MW-5	02-16-00	244.82	8.21	0.00	236.61	02-16-00	12,000	8.1	10	340	160	130	--	1.42	NP
MW-5	06-23-00	244.82	12.90	0.00	231.92	06-23-00	9,680	38.0	<20.0	212	114	930	--	1.40	NP
MW-5	08-17-00	244.82	13.00	0.00	231.82	08-17-00	10,500	15.0	7.98	223	118	430	--	0.68	NP
MW-5	11-10-00	244.82	12.50	0.00	232.32	11-10-00	7,030	19.7	<10.0	190	43.6	445	--	1.27	NP
MW-5	02-12-01	244.82	12.81	0.00	232.01	02-12-01	8,840	33.9	<10.0	186	56.4	352	--	0.40	NP
MW-5	04-13-01	244.82	11.31	0.00	233.51	04-13-01	9,020	54.2	43.3	137	96.0	297	--		NP
MW-5	07-18-01	244.82	11.59	0.00	233.23	07-18-01	13,000	19	10	110	49	230	--		NP
MW-5	10-01-01	244.82	11.84	0.00	232.98	10-01-01	8,500	6.9	<1.0	87	27	220	--		NP
MW-5	01-14-02	244.82	10.75	0.00	234.07	01-14-02	9,500	<20	<20	140	22	<200	--		NP
MW-5	**04-03-02**	**244.82**	**12.50**	**0.00**	**232.32**	**04-03-02**	**2,400**	**21**	**<5.0**	**91**	**8.5**	**130**	--		**NP**
DUP	**04-03-02**	--	--	--	--	**04-03-02**	**2,700**	**24.0**	**5.1**	**92**	**8.5**	**130**	--		**NP**
MW-6	06-29-95	NR	6.63	0.00	NR	06-30-95	<50	<0.5	<0.5	<0.5	<0.5	--	--		
MW-6	09-01-95	NR	NR	NR	NR	09-01-95	Not sampled								
MW-6	11-13-95	NR	7.70	0.00	NR	11-13-95	<50	<0.5	<0.5	<0.5	<0.5	<3	--		
MW-6	02-23-96	NR	9.82	0.00	NR	03-01-96	<50	<0.5	0.8	<0.5	0.6	<3	--		
MW-6	05-10-96	NR	15.25	0.00	NR	05-10-96	Not sampled: well sampled annually, during the first quarter								
MW-6	08-09-96	252.20	11.11	0.00	241.09	08-09-96	Not sampled: well sampled annually, during the first quarter								
MW-6	11-08-96	252.20	9.31	0.00	242.89	11-11-96	Not sampled: well sampled annually, during the first quarter								
MW-6	03-21-97	252.20	9.40	0.00	242.80	03-21-97	<50	<0.5	<0.5	<0.5	<0.5	<3	--		
MW-6	05-27-97	252.20	7.08	0.00	245.12	05-27-97	Not sampled: well sampled annually, during the first quarter								
MW-6	08-05-97	252.20	7.12	0.00	245.08	08-05-97	Not sampled: well sampled annually, during the first quarter								
MW-6	10-29-97	252.20	7.42	0.00	244.78	10-29-97	<50	<0.5	<0.5	<0.5	<0.5	<3	--		

Table 1
Summary of Groundwater Elevation and Analytical Data
Petroleum Hydrocarbons and Their Constituents
1995 - Present**

ARCO Service Station 6002
6235 Seminary Avenue, Oakland, California

Well Number	Date Gauged	TOC Elevation (ft-MSL)	Depth to Water (feet)	FP Thickness (feet)	Groundwater Elevation (ft-MSL)	Date Sampled	TPHg (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethyl-benzene (µg/L)	Total Xylenes (µg/L)	MTBE 8021B* (µg/L)	MTBE 8260 (µg/L)	Dissolved Oxygen (mg/L)	Purged/ Not Purged (P/NP)
MW-6	02-25-98	252.20	10.35	0.00	241.85	02-25-98	<50	<0.5	<0.5	<0.5	<0.5	<3	--		
MW-6	05-12-98	252.20	15.83	0.00	236.37	05-12-98	Not sampled: well sampled annually, during the first quarter								
MW-6	07-28-98	252.20	11.84	0.00	240.36	07-28-98	Not sampled: well sampled annually, during the first quarter								
MW-6	10-27-98	252.20	9.73	0.00	242.47	10-27-98	Not sampled: well sampled annually, during the first quarter								
MW-6	02-08-99	252.20	8.10	0.00	244.10	02-08-99	<50	<0.5	<0.5	<0.5	<0.5	<3	--		
MW-6	06-01-99	252.20	17.84	0.00	234.36	06-01-99	Not sampled: well sampled annually, during the first quarter								
MW-6	08-25-99	252.20	11.00	0.00	241.20	08-25-99	Not sampled: well sampled annually, during the first quarter							0.77	
MW-6	10-29-99	252.20	9.03	0.00	243.17	10-29-99	Not sampled: well sampled annually, during the first quarter							3.42	
MW-6	02-16-00	252.20	7.71	0.00	244.49	02-16-00	<50	<0.5	<0.5	<0.5	<1	<3	--	2.42	P
MW-6	06-23-00	252.20	6.69	0.00	245.51	06-23-00	Not sampled: well sampled annually, during the first quarter							2.30	
MW-6	08-17-00	252.20	6.95	0.00	245.25	08-17-00	Not sampled: well sampled annually, during the first quarter							2.51	
MW-6	11-10-00	252.20	11.79	0.00	240.41	11-10-00	Not sampled: well sampled annually, during the first quarter								
MW-6	02-12-01	252.20	7.35	0.00	244.85	02-12-01	<50.0	<0.500	<0.500	<0.500	<0.500	<2.50	--	1.66	P
DUP	02-12-01	--	--	--	--	02-12-01	<50.0	<0.500	<0.500	<0.500	<0.500	<2.50	--		
MW-6	04-13-01	252.20	10.52	0.00	241.68	04-13-01	Not sampled: well sampled annually, during the first quarter								
MW-6	07-18-01	252.20	11.03	0.00	241.17	07-18-01	Not sampled: well sampled annually, during the first quarter								
MW-6	10-01-01	252.20	11.31	0.00	240.89	10-01-01	Not sampled: well sampled annually, during the first quarter								
MW-6	01-14-02	252.20	9.87	0.00	242.33	04-03-02	<50	<0.50	<0.50	<0.50	<0.50	<5.0	--	--	P
MW-6	**04-03-02**	**252.20**	**12.19**	**0.00**	**240.01**	**04-03-02**	**Not sampled: well sampled annually, during the first quarter**								
MW-7	08-09-96	235.95	NR	NR	NR	08-09-96	Not sampled: well was dry								
MW-7	11-08-96	235.95	NR	NR	NR	11-11-96	Not sampled: well was dry								
MW-7	01-27-97	235.95	NR	NR	NR	01-27-97	2,900	29	<5	<5	580	220	--		
MW-7	03-21-97	235.95	7.13	0.00	228.82	03-21-97	590	3.5	<0.5	<0.5	1.3	90	--		
MW-7	05-27-97	235.95	9.02	0.00	226.93	05-27-97	<50	<0.5	<0.5	<0.5	<0.5	<3	--		
MW-7	08-05-97	235.95	12.33	0.00	223.62	08-05-97	110	0.5	<0.5	<0.5	0.8	81	--		
MW-7	10-29-97	235.95	NR	NR	NR	10-29-97	Not sampled: well was dry								
MW-7	02-25-98	235.95	8.04	0.00	227.91	02-25-98	<50	<0.5	0.6	<0.5	0.7	<3	--		
MW-7	05-12-98	235.95	8.88	0.00	227.07	05-12-98	<50	<0.5	<0.5	<0.5	<0.5	<3	--		
MW-7	07-28-98	235.95	10.50	0.00	225.45	07-28-98	<50	<0.5	<0.5	<0.5	<0.5	<3	--		
MW-7	10-27-98	235.95	8.75	0.00	227.20	10-27-98	<50	<0.5	<0.5	<0.5	<0.5	<3	--		
MW-7	02-08-99	235.95	9.35	0.00	226.60	02-08-99	<50	<0.5	<0.5	<0.5	<0.5	<3	--		
MW-7	06-01-99	235.95	9.85	0.00	226.10	06-01-99	250	<0.5	0.6	<0.5	1.6	18	--	1.0	NP
MW-7	08-25-99	235.95	11.31	0.00	224.64	08-25-99	119	<0.5	5.7	<0.5	<0.5	11	--	0.41	NP
MW-7	10-29-99	235.95	9.08	0.00	226.87	10-29-99	<50	<0.5	<0.5	<0.5	<1	<3	--	1.29	NP
MW-7	02-25-00	235.95	8.02	0.00	227.93	02-25-00	<50	<0.5	<0.5	<0.5	<1	38	--	2.10	NP
MW-7	06-23-00	235.95	10.68	0.00	225.27	06-23-00	<50.0	<0.500	<0.500	<0.500	<0.500	14.4	--	1.60	NP
MW-7	08-17-00	235.95	11.85	0.00	224.10	08-17-00	70.0	<0.500	0.678	<0.500	1.07	14.2	--	1.59	NP
MW-7	11-10-00	235.95	9.62	0.00	226.33	11-10-00	<50.0	<0.500	<0.500	<0.500	<0.500	<2.50	--	1.09	NP
MW-7	02-12-01	235.95	12.10	0.00	223.85	02-12-01	<50.0	<0.500	<0.500	<0.500	<0.500	<2.50	--	0.84	NP

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1995 - Present**

ARCO Service Station 6002
6235 Seminary Avenue, Oakland, California

Well Number	Date Gauged	TOC Elevation (ft-MSL)	Depth to Water (feet)	FP Thickness (feet)	Groundwater Elevation (ft-MSL)	Date Sampled	TPHg (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethyl-benzene (µg/L)	Total Xylenes (µg/L)	MTBE 8021B* (µg/L)	MTBE 8260 (µg/L)	Dissolved Oxygen (mg/L)	Purged/ Not Purged (P/NP)
MW-7	04-13-01	235.95	7.95	0.00	228.00	04-13-01	<50.0	<0.500	<0.500	<0.500	<0.500	<2.50	--		P
MW-7	07-18-01	235.95	8.20	0.00	227.75	07-18-01	<50	<0.50	<0.50	<0.50	<0.50	<2.5	--		P
MW-7	10-01-01	235.95	8.59	0.00	227.36	10-01-01	<50	<0.50	<0.50	<0.50	<0.50	<2.5	--		NP
MW-7	01-14-02	235.95	6.93	0.00	229.02	01-14-02	<50	<0.50	<0.50	<0.50	<0.50	<5.0	--		P
MW-7	**04-03-02**	**235.95**	**8.31**	**0.00**	**227.64**	**04-03-02**	**<50**	**<0.50**	**<0.50**	**<0.50**	**<0.50**	**<2.5**	--		P
MW-8	08-09-96	240.37	9.41	0.00	230.96	08-09-96	<50	<0.5	<0.5	<0.5	<0.5	<3	--		
MW-8	11-08-96	240.37	9.19	0.00	231.18	11-11-96	<50	<0.5	<0.5	<0.5	<0.5	<3	--		
MW-8	03-21-97	240.37	8.55	0.00	231.82	03-21-97	<50	<0.5	<0.5	<0.5	<0.5	<3	--		
MW-8	05-27-97	240.37	11.06	0.00	229.31	05-27-97	91	0.6	<0.5	<0.5	0.6	66	--		
MW-8	08-05-97	240.37	9.32	0.00	231.05	08-05-97	<50	<0.5	<0.5	<0.5	<0.5	<3	--		
MW-8	10-29-97	240.37	9.35	0.00	231.02	10-29-97	<50	<0.5	<0.5	<0.5	<0.5	<3	--		
MW-8	02-25-98	240.37	7.08	0.00	233.29	02-25-98	<50	<0.5	<0.5	<0.5	<0.5	<3	--		
MW-8	05-12-98	240.37	8.61	0.00	231.76	05-12-98	<50	<0.5	<0.5	<0.5	<0.5	<3	--		
MW-8	07-28-98	240.37	9.63	0.00	230.74	07-28-98	<50	<0.5	<0.5	<0.5	<0.5	4	--		
MW-8	10-27-98	240.37	9.30	0.00	231.07	10-27-98	<50	<0.5	<0.5	<0.5	<0.5	<3	--		
MW-8	02-08-99	240.37	5.56	0.00	234.81	02-17-99	<50	<0.5	<0.5	<0.5	<0.5	<3	--		
MW-8	06-01-99	240.37	NR	NR	NR	06-01-99	Not sampled: well inaccessible								
MW-8	08-25-99	240.37	NR	NR	NR	08-25-99	Not sampled: well inaccessible								
MW-8	10-29-99	240.37	NR	NR	NR	10-29-99	Not sampled: well inaccessible								
MW-8	02-16-00	240.37	NR	NR	NR	02-16-00	Not sampled: well inaccessible								
MW-8	06-23-00	240.37	9.45	0.00	230.92	06-23-00	<50.0	<0.500	<0.500	<0.500	<0.500	<2.50		1.90	NP
MW-8	08-17-00	240.37	6.40	0.00	233.97	08-17-00	<50.0	<0.500	<0.500	<0.500	<0.500	<2.50		2.56	NP
MW-8	11-10-00	240.37	6.25	0.00	234.12	11-10-00	<50.0	<0.500	<0.500	<0.500	<0.500	<2.50	--	1.93	NP
DUP	11-10-00	--	--	--	--	11-10-00	<50.0	<0.500	<0.500	<0.500	<0.500	<2.50	--		
MW-8	02-12-01	240.37	8.11	0.00	232.26	02-12-01	<50.0	<0.500	<0.500	<0.500	<0.500	<2.50	--	1.65	NP
MW-8	04-13-01	240.37	5.19	0.00	235.18	04-13-01	<50.0	<0.500	<0.500	<0.500	<0.500	<2.50	--		P
MW-8	07-18-01	240.37	5.55	0.00	234.82	07-18-01	<50	<0.50	<0.50	<0.50	<0.50	<2.5	--		NP
MW-8	10-01-01	240.37	6.41	0.00	233.96	10-01-01	<50	<0.50	<0.50	<0.50	<0.50	<2.5	--		NP
MW-8	01-14-02	240.37	5.07	0.00	235.30	01-14-02	<50	<0.50	<0.50	<0.50	<0.50	<5.0	--		P
MW-8	**04-03-02**	**240.37**	**8.60**	**0.00**	**231.77**	**04-03-02**	**<50**	**<0.50**	**<0.50**	**<0.50**	**<0.50**	**<2.5**	--		P
AS-1	06-29-95	NR	9.20	0.00	NR	06-30-95	<50	1.6	<0.5	0.9	0.9	--	--		
VW-1	02-23-96	NR	5.29	0.00	NR	03-01-96	21,000	490	57	520	1,500	240	--		
VW-1	05-10-96	NR	6.80	0.00	NR	05-10-96	3,700	61	<5	100	50	200	--		
VW-1	08-09-96	NR	7.03	0.00	NR	08-09-96	970	2.7	<2.5	2.7	3.7	180	--		
VW-1	11-08-96	NR	NR	NR	NR	11-11-96	Not sampled: well inaccessible								
VW-1	03-21-97	NR	7.51	0.00	NR	03-21-97	640	<4	<1	1	3	194	--		
VW-1	05-27-97	NR	7.51	0.00	NR	05-27-97	Not sampled: well sampled semi-annually, during the first and third quarters								

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ARCO Service Station 6002
6235 Seminary Avenue, Oakland, California

Well Number	Date Gauged	TOC Elevation (ft-MSL)	Depth to Water (feet)	FP Thickness (feet)	Groundwater Elevation (ft-MSL)	Date Sampled	TPHg (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethyl-benzene (µg/L)	Total Xylenes (µg/L)	MTBE 8021B* (µg/L)	MTBE 8260 (µg/L)	Dissolved Oxygen (mg/L)	Purged/ Not Purged (P/NP)
VW-1	08-05-97	NR	7.51	0.00	NR	08-05-97	630	<1	<1	3	2	120	--		
VW-1	10-29-97	NR	7.53	0.00	NR	10-29-97	600	<0.5	<0.5	<0.5	1.6	84	--		
VW-1	02-25-98	NR	6.77	0.00	NR	02-25-98	230	<4	<0.7	1.2	0.5	27	--		
VW-1	05-12-98	NR	7.43	0.00	NR	05-12-98	340	<0.5	0.5	2.3	0.8	29	--		
VW-1	07-28-98	NR	7.00	0.00	NR	07-28-98	240	<0.5	<0.5	<0.5	1.1	54	--		
VW-1	10-27-98	NR	7.52	0.00	NR	10-27-98	230	<0.5	<0.5	<0.5	<0.5	65	--		
VW-1	02-08-99	NR	7.05	0.00	NR	02-08-99	<50	<0.5	<0.5	<0.5	<0.5	<3	36[3]		
VW-1	06-01-99	NR	7.55	0.00	NR	06-01-99	180	<0.5	<0.5	<0.5	<0.5	23	--	1.0	NP
VW-1	08-25-99	NR	7.66	0.00	NR	08-25-99	130	<0.5	5.6	<0.5	<0.5	40	--	0.39	NP
VW-1	10-29-99	NR	7.59	0.00	NR	10-29-99	200	1.0	<0.5	0.6	1.6	36	--	0.89	NP
VW-1	02-16-00	NR	7.03	0.00	NR	02-16-00	210	<0.5	0.9	2.2	1.9	11	--	1.41	NP
VW-1	06-23-00	NR	7.71	0.00	NR	06-23-00	175	1.04	<0.500	<0.500	<0.500	14.4	--	1.90	NP
VW-1	08-17-00	NR	7.75	0.00	NR	08-17-00	180	<0.500	<0.500	0.622	0.760	23.7	--	0.63	NP
VW-1	11-10-00	NR	6.83	0.00	NR	11-10-00	157	0.955	<0.500	0.973	<0.500	32.5	--	1.03	NP
VW-1	02-12-01	NR	7.85	0.00	NR	02-12-01	273	0.627	<0.500	<0.500	0.507	9.19	--	0.47	NP
VW-1	04-13-01	NR	5.11	0.00	NR	04-13-01	213	<0.500	<0.500	<0.500	<0.500	6.38	--		P
VW-1	07-18-01	NR	5.39	0.00	NR	07-18-01	270	<0.50	<0.50	<0.50	<0.50	20	--		P
VW-1	10-01-01	NR	6.50	0.00	NR	10-01-01	200	<0.50	<0.50	<0.50	0.81	14	--		NP
VW-1	01-14-02	NR	5.04	0.00	NR	01-14-02	110	<0.50	<0.50	<0.50	<0.50	6.4	--		P
VW-1	04-03-02	NR	7.51	0.00	NR	04-03-02	91	0.72	<0.50	<0.50	<0.50	12.0	--		P
VW-2	02-23-96	NR	6.92	0.00	NR	03-01-96	Not sampled: well not part of sampling program								
VW-4	05-10-96	NR	8.58	0.00	NR	05-10-96	13,000	2,500	41	420	660	43,000	--		
VW-4	08-09-96	NR	11.70	0.00	NR	08-09-96	<50	<0.5	<0.5	<0.5	<0.5	6,200	--		
VW-4	11-08-96	NR	9.38	0.00	NR	11-08-96	7,800	510	7	180	370	21,000	--		
VW-4	03-21-97	NR	9.11	0.00	NR	03-21-97	10,000	290	10	270	230	8,900	--		
VW-4	05-27-97	NR	9.34	0.00	NR	05-27-97	Not sampled: well sampled semi-annually, during the first and third quarters								
VW-4	08-05-97	NR	9.47	0.00	NR	08-05-97	<10,000	180	<100	<100	110	12,000	--		
VW-4	10-29-97	NR	9.35	0.00	NR	10-29-97	9,800	200	69	260	360	4,900	--		
VW-4	02-25-98	NR	7.08	0.00	NR	02-25-98	<50	2.5	<0.5	<0.5	0.7	<3	--		
VW-4	05-12-98	NR	9.17	0.00	NR	05-12-98	3,200	<20	22	29	52	2,100	--		
VW-4	07-28-98	NR	9.55	0.00	NR	07-28-98	<10,000	<100	<100	<100	<100	5,100	--		
VW-4	10-27-98	NR	9.92	0.00	NR	10-27-98	<50	<0.5	<0.5	<0.5	<0.5	<3	--		
VW-4	02-08-99	NR	7.50	0.00	NR	02-08-99	<2,500	<25	<25	28	<25	2,400	3,100[3]		
VW-4	06-01-99	NR	9.87	0.00	NR	06-01-99	2,100	2.5	1.1	2.5	15	3,300	--	2.0	NP
VW-4	08-25-99	NR	9.78	0.00	NR	08-25-99	1,300	4.4	4.9	1.7	2.9	4,600	--	0.36	NP
VW-4	10-29-99	NR	9.93	0.00	NR	10-29-99	1,400	<0.5	1.8	1.6	3.0	4,200	--	1.18	NP
VW-4	02-16-00	NR	7.45	0.00	NR	02-16-00	1,800	<0.5	2.9	15	10	3,400	--	1.01	NP
DUP 1	06-23-00	--	--	--	--	06-23-00	1,260	<2.00	<2.00	<2.00	2.73	2,720	--		

Table 1
Summary of Groundwater Elevation and Analytical Data
Petroleum Hydrocarbons and Their Constituents
1995 - Present**

ARCO Service Station 6002
6235 Seminary Avenue, Oakland, California

Well Number	Date Gauged	TOC Elevation (ft-MSL)	Depth to Water (feet)	FP Thickness (feet)	Groundwater Elevation (ft-MSL)	Date Sampled	TPHg (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethyl-benzene (µg/L)	Total Xylenes (µg/L)	MTBE 8021B* (µg/L)	MTBE 8260 (µg/L)	Dissolved Oxygen (mg/L)	Purged/ Not Purged (P/NP)
VW-4	06-23-00	NR	9.74	0.00	NR	06-23-00	1,360	<2.00	2.26	<2.00	2.25	4,900	- -	1.50	NP
VW-4	08-17-00	NR	9.95	0.00	NR	08-17-00	2,230	<10.0	<10.0	<10.0	<10.0	5,310	- -	1.13	NP
VW-4	11-10-00	NR	9.22	0.00	NR	11-10-00	1,390	18.5	<5.00	<5.00	<5.00	8,840	- -	1.25	NP
VW-4	02-12-01	NR	8.99	0.00	NR	02-12-01	1,400	9.42	<2.00	17.8	16.1	3,570	- -	0.91	NP
VW-4	04-13-01	NR	7.80	0.00	NR	04-13-01	556	3.82	<1.25	<1.25	<1.25	2,450	- -		NP
VW-4	07-18-01	NR	7.73	0.00	NR	07-18-01	2,100	9.2	<2.0	<2.0	<2.0	3,700	- -		NP
DUP 1	07-18-01	- -	- -	- -	- -	07-18-01	2,000	8.7	2.2	<2.0	<2.0	3,400	- -		
VW-4	10-01-01	NR	6.69	0.00	NR	10-01-01	2,000	<10	<10	<10	13	5,900	- -		NP
DUP	10-01-01	- -	- -	- -	- -	10-01-01	1,800	<10	<10	<10	<10	5,800	- -		
VW-4	01-14-02	NR	5.93	0.00	NR	01-14-02	580	<2.0	<2.0	<2.0	<2.0	2,700	- -		P
VW-4	04-03-02	NR	9.6	0.00	NR	04-03-02	1,400	5.2	16.0	<5.0	9.6	2,200	- -		NP

TPHg: Total petroleum hydrocarbons as gasoline by modified EPA method 8015

BTEX: Benzene, toluene, ethylbenzene, xylenes by EPA method 8021B. (EPA method 8020 prior to 10/29/99).

MTBE: Methyl tertiary butyl ether

*: EPA method 8020 prior to 10/29/99

TOC: Top of Casing

ft-MSL: elevation in feet, relative to mean sea level

µg/L: micrograms per liter

mg/L: milligrams per liter

NR: not reported; data not available or not measurable

- -: not analyzed or not applicable

<: less than laboratory detection limit stated to the right

[1]: [corrected elevation (Z')] = Z + (h * 0.73) where: Z: measured elevation, h: floating product thickness, 0.73: density ratio of oil to water

[2]: analyzed by EPA method 8240

[3]: also analyzed for fuel oxygenates

**: For previous historical groundwater elevation data please refer to Fourth Quarter 1995 Groundwater Monitoring Program Results, ARCO Service Station 6002, Oakland, California, *(EMCON, February 23, 1996)*

DUP: duplicate

Table 2
Groundwater Flow Direction and Gradient

ARCO Service Station 6002
6235 Seminary Avenue, Oakland, California

Date Measured	Average Flow Direction	Average Hydraulic Gradient
03-15-95	West-Southwest	0.08
05-30-95	West-Southwest	0.08
09-01-95	West-Southwest	0.09
11-13-95	West-Southwest	0.08
02-23-96	West-Southwest	0.08
05-10-96	West-Southwest	0.08
08-09-96	Southwest	0.08
11-08-96	Southwest	0.055
03-21-97	West-Southwest	0.051
05-27-97	West-Southwest	0.069
08-05-97	West	0.076
10-29-97	West-Southwest	0.036
02-25-98	West-Southwest	0.052
05-12-98	West	0.07
07-28-98	West	0.07
10-27-98	West-Southwest	0.06
02-08-99	West-Southwest	0.07
06-01-99	West-Northwest	0.07
08-25-99	West-Southwest	0.07
10-29-99	West	0.07
02-16-00	Southwest	0.05
06-23-00	West	0.042
08-17-00	West	0.087
11-10-00	West-Southwest	0.080
02-12-01	West-Southwest	0.074
04-13-01	West	0.085
07-18-01	West	0.075
10-01-01	West-Southwest	0.083
01-14-02	West-Southwest	0.072
04-03-02	**West-Southwest**	**0.084**

ATTACHMENT A

GROUNDWATER SAMPLING PROCEDURES

ATTACHMENT A
GROUNDWATER SAMPLING PROCEDURES

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 that do not have submerged screens are then sampled without purging. Wells that have submerged screens are purged of approximately three casing volumes of water (or to dryness) 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 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.

ATTACHMENT B

CERTIFIED ANALYTICAL REPORTS
AND
CHAIN-OF-CUSTODY

Sequoia
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22 April, 2002

Ron Scheele
Cambria - Emeryville
6262 Hollis St.
Emeryville, CA 94608

RE: Arco #6002, Oakland,Ca
Sequoia Report: MLD0135

Enclosed are the results of analyses for samples received by the laboratory on 04/05/02 17:55. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Latonya K. Pelt

Latonya Pelt
Project Manager

CA ELAP Certificate #1210

Sequoia Analytical

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Cambria - Emeryville	Project: Arco #6002, Oakland,Ca	
6262 Hollis St.	Project Number: ARCO #6002, Oakland, CA	**Reported:**
Emeryville CA, 94608	Project Manager: Ron Scheele	04/22/02 07:05

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
MW-4	MLD0135-01	Water	04/03/02 08:35	04/05/02 17:55
MW-5	MLD0135-02	Water	04/03/02 09:40	04/05/02 17:55
MW-7	MLD0135-03	Water	04/03/02 07:50	04/05/02 17:55
MW-8	MLD0135-04	Water	04/03/02 08:15	04/05/02 17:55
VW-1	MLD0135-05	Water	04/03/02 09:00	04/05/02 17:55
VW-4	MLD0135-06	Water	04/03/02 09:20	04/05/02 17:55
DUP	MLD0135-07	Water	04/03/02 00:00	04/05/02 17:55

There were no custody seals that were received with this project.

Sequoia Analytical - Morgan Hill

Latonya K. Pelt

Latonya Pelt, Project Manager

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Sequoia Analytical

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Cambria - Emeryville	Project: Arco #6002, Oakland,Ca	
6262 Hollis St.	Project Number: ARCO #6002, Oakland, CA	**Reported:**
Emeryville CA, 94608	Project Manager: Ron Scheele	04/22/02 07:05

Total Purgeable Hydrocarbons (C6-C10) by EPA 8015B modified, BTEXM by EPA 8021B

Sequoia Analytical - Morgan Hill

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
MW-4 (MLD0135-01) Water Sampled: 04/03/02 08:35 Received: 04/05/02 17:55									
Gasoline Range Organics (C6-C10)	ND	50	ug/l	1	2D15002	04/15/02	04/15/02	8015Bm/8021 B	
Benzene	ND	0.50	"	"	"	"	"	"	
Toluene	ND	0.50	"	"	"	"	"	"	
Ethylbenzene	ND	0.50	"	"	"	"	"	"	
Xylenes (total)	ND	0.50	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	2.5	"	"	"	"	"	"	
Surrogate: a,a,a-Trifluorotoluene		*119 %*	*70-130*		"	"	"	"	
MW-5 (MLD0135-02) Water Sampled: 04/03/02 09:40 Received: 04/05/02 17:55									
Gasoline Range Organics (C6-C10)	**2400**	500	ug/l	10	2D15002	04/15/02	04/15/02	8015Bm/8021 B	P-03
Benzene	**21**	5.0	"	"	"	"	"	"	
Toluene	ND	5.0	"	"	"	"	"	"	
Ethylbenzene	**91**	5.0	"	"	"	"	"	"	
Xylenes (total)	**8.5**	5.0	"	"	"	"	"	"	
Methyl tert-butyl ether	**130**	25	"	"	"	"	"	"	
Surrogate: a,a,a-Trifluorotoluene		*105 %*	*70-130*		"	"	"	"	
MW-7 (MLD0135-03) Water Sampled: 04/03/02 07:50 Received: 04/05/02 17:55									
Gasoline Range Organics (C6-C10)	ND	50	ug/l	1	2D15002	04/15/02	04/15/02	8015Bm/8021 B	
Benzene	ND	0.50	"	"	"	"	"	"	
Toluene	ND	0.50	"	"	"	"	"	"	
Ethylbenzene	ND	0.50	"	"	"	"	"	"	
Xylenes (total)	ND	0.50	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	2.5	"	"	"	"	"	"	
Surrogate: a,a,a-Trifluorotoluene		*104 %*	*70-130*		"	"	"	"	

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Cambria - Emeryville	Project: Arco #6002, Oakland,Ca	
6262 Hollis St.	Project Number: ARCO #6002, Oakland, CA	**Reported:**
Emeryville CA, 94608	Project Manager: Ron Scheele	04/22/02 07:05

Total Purgeable Hydrocarbons (C6-C10) by EPA 8015B modified, BTEXM by EPA 8021B

Sequoia Analytical - Morgan Hill

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
MW-8 (MLD0135-04) Water Sampled: 04/03/02 08:15 Received: 04/05/02 17:55									
Gasoline Range Organics (C6-C10)	ND	50	ug/l	1	2D15002	04/15/02	04/15/02	8015Bm/8021B	
Benzene	ND	0.50	"	"	"	"	"	"	
Toluene	ND	0.50	"	"	"	"	"	"	
Ethylbenzene	ND	0.50	"	"	"	"	"	"	
Xylenes (total)	ND	0.50	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	2.5	"	"	"	"	"	"	
Surrogate: a,a,a-Trifluorotoluene		*111 %*		*70-130*	"	"	"	"	
VW-1 (MLD0135-05) Water Sampled: 04/03/02 09:00 Received: 04/05/02 17:55									
Gasoline Range Organics (C6-C10)	**91**	50	ug/l	1	2D15002	04/15/02	04/15/02	8015Bm/8021B	P-03
Benzene	**0.72**	0.50	"	"	"	"	"	"	
Toluene	ND	0.50	"	"	"	"	"	"	
Ethylbenzene	ND	0.50	"	"	"	"	"	"	
Xylenes (total)	ND	0.50	"	"	"	"	"	"	
Methyl tert-butyl ether	**12**	2.5	"	"	"	"	"	"	
Surrogate: a,a,a-Trifluorotoluene		*101 %*		*70-130*	"	"	"	"	
VW-4 (MLD0135-06) Water Sampled: 04/03/02 09:20 Received: 04/05/02 17:55									
Gasoline Range Organics (C6-C10)	**1400**	500	ug/l	10	2D17003	04/17/02	04/17/02	8015Bm/8021B	P-03
Benzene	**5.2**	5.0	"	"	"	"	"	"	
Toluene	**16**	5.0	"	"	"	"	"	"	
Ethylbenzene	ND	5.0	"	"	"	"	"	"	
Xylenes (total)	**9.6**	5.0	"	"	"	"	"	"	
Methyl tert-butyl ether	**2200**	25	"	"	"	"	"	"	
Surrogate: a,a,a-Trifluorotoluene		*86.1 %*		*70-130*	"	"	"	"	

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Cambria - Emeryville	Project: Arco #6002, Oakland,Ca	
6262 Hollis St.	Project Number: ARCO #6002, Oakland, CA	**Reported:**
Emeryville CA, 94608	Project Manager: Ron Scheele	04/22/02 07:05

Total Purgeable Hydrocarbons (C6-C10) by EPA 8015B modified, BTEXM by EPA 8021B

Sequoia Analytical - Morgan Hill

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
DUP (MLD0135-07) Water Sampled: 04/03/02 00:00 Received: 04/05/02 17:55									
Gasoline Range Organics (C6-C10)	**2700**	500	ug/l	10	2D17002	04/17/02	04/17/02	8015Bm/8021B	P-01
Benzene	**24**	5.0	"	"	"	"	"	"	
Toluene	**5.1**	5.0	"	"	"	"	"	"	
Ethylbenzene	**92**	5.0	"	"	"	"	"	"	
Xylenes (total)	**8.5**	5.0	"	"	"	"	"	"	
Methyl tert-butyl ether	**130**	25	"	"	"	"	"	"	
Surrogate: a,a,a-Trifluorotoluene		*113 %*	*70-130*		"	"	"	"	

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Cambria - Emeryville	Project: Arco #6002, Oakland,Ca	
6262 Hollis St.	Project Number: ARCO #6002, Oakland, CA	**Reported:**
Emeryville CA, 94608	Project Manager: Ron Scheele	04/22/02 07:05

Total Purgeable Hydrocarbons (C6-C10) by EPA 8015B modified, BTEXM by EPA 8021B - Quality Control
Sequoia Analytical - Morgan Hill

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 2D15002 - EPA 5030B [P/T]										
Blank (2D15002-BLK1)				Prepared & Analyzed: 04/15/02						
Gasoline Range Organics (C6-C10)	ND	50	ug/l							
Benzene	ND	0.50	"							
Toluene	ND	0.50	"							
Ethylbenzene	ND	0.50	"							
Xylenes (total)	ND	0.50	"							
Methyl tert-butyl ether	ND	2.5	"							
Surrogate: a,a,a-Trifluorotoluene	*10.2*		"	*10.0*		*102*	*70-130*			
LCS (2D15002-BS1)				Prepared & Analyzed: 04/15/02						
Benzene	11.2	0.50	ug/l	10.0		112	70-130			
Toluene	11.1	0.50	"	10.0		111	70-130			
Ethylbenzene	11.5	0.50	"	10.0		115	70-130			
Xylenes (total)	33.7	0.50	"	30.0		112	70-130			
Surrogate: a,a,a-Trifluorotoluene	*11.0*		"	*10.0*		*110*	*70-130*			
LCS (2D15002-BS2)				Prepared & Analyzed: 04/15/02						
Gasoline Range Organics (C6-C10)	240	50	ug/l	250		96.0	70-130			
Surrogate: a,a,a-Trifluorotoluene	*11.3*		"	*10.0*		*113*	*70-130*			
Matrix Spike (2D15002-MS1)		**Source: MLD0135-03**		Prepared & Analyzed: 04/15/02						
Gasoline Range Organics (C6-C10)	421	50	ug/l	550	ND	76.5	60-140			
Benzene	10.3	0.50	"	6.60	ND	156	60-140			QM-07
Toluene	36.5	0.50	"	39.7	ND	91.9	60-140			
Ethylbenzene	8.89	0.50	"	9.20	ND	96.6	60-140			
Xylenes (total)	43.3	0.50	"	46.1	ND	93.9	60-140			
Methyl tert-butyl ether	10.2	2.5	"	10.5	ND	97.1	60-140			
Surrogate: a,a,a-Trifluorotoluene	*10.1*		"	*10.0*		*101*	*70-130*			

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Cambria - Emeryville	Project: Arco #6002, Oakland,Ca	
6262 Hollis St.	Project Number: ARCO #6002, Oakland, CA	**Reported:**
Emeryville CA, 94608	Project Manager: Ron Scheele	04/22/02 07:05

Total Purgeable Hydrocarbons (C6-C10) by EPA 8015B modified, BTEXM by EPA 8021B - Quality Control

Sequoia Analytical - Morgan Hill

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 2D15002 - EPA 5030B [P/T]										
Matrix Spike Dup (2D15002-MSD1)	**Source: MLD0135-03**			Prepared & Analyzed: 04/15/02						
Gasoline Range Organics (C6-C10)	462	50	ug/l	550	ND	84.0	60-140	9.29	25	
Benzene	11.2	0.50	"	6.60	ND	170	60-140	8.37	25	QM-07
Toluene	41.4	0.50	"	39.7	ND	104	60-140	12.6	25	
Ethylbenzene	10.0	0.50	"	9.20	ND	109	60-140	11.8	25	
Xylenes (total)	48.8	0.50	"	46.1	ND	106	60-140	11.9	25	
Methyl tert-butyl ether	11.3	2.5	"	10.5	ND	108	60-140	10.2	25	
Surrogate: a,a,a-Trifluorotoluene	*10.0*		"	*10.0*		*100*	*70-130*			
Batch 2D17002 - EPA 5030B [P/T]										
Blank (2D17002-BLK1)				Prepared & Analyzed: 04/17/02						
Gasoline Range Organics (C6-C10)	ND	50	ug/l							
Benzene	ND	0.50	"							
Toluene	ND	0.50	"							
Ethylbenzene	ND	0.50	"							
Xylenes (total)	ND	0.50	"							
Methyl tert-butyl ether	ND	2.5	"							
Surrogate: a,a,a-Trifluorotoluene	*12.0*		"	*10.0*		*120*	*70-130*			
LCS (2D17002-BS1)				Prepared & Analyzed: 04/17/02						
Benzene	10.8	0.50	ug/l	10.0		108	70-130			
Toluene	10.7	0.50	"	10.0		107	70-130			
Ethylbenzene	11.0	0.50	"	10.0		110	70-130			
Xylenes (total)	32.4	0.50	"	30.0		108	70-130			
Surrogate: a,a,a-Trifluorotoluene	*10.2*		"	*10.0*		*102*	*70-130*			
LCS (2D17002-BS2)				Prepared & Analyzed: 04/17/02						
Gasoline Range Organics (C6-C10)	236	50	ug/l	250		94.4	70-130			
Surrogate: a,a,a-Trifluorotoluene	*8.97*		"	*10.0*		*89.7*	*70-130*			

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Cambria - Emeryville	Project: Arco #6002, Oakland,Ca	
6262 Hollis St.	Project Number: ARCO #6002, Oakland, CA	**Reported:**
Emeryville CA, 94608	Project Manager: Ron Scheele	04/22/02 07:05

Total Purgeable Hydrocarbons (C6-C10) by EPA 8015B modified, BTEXM by EPA 8021B - Quality Control

Sequoia Analytical - Morgan Hill

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 2D17002 - EPA 5030B [P/T]										
LCS Dup (2D17002-BSD1)				Prepared & Analyzed: 04/17/02						
Benzene	11.7	0.50	ug/l	10.0		117	70-130	8.00	25	
Toluene	11.6	0.50	"	10.0		116	70-130	8.07	25	
Ethylbenzene	11.9	0.50	"	10.0		119	70-130	7.86	25	
Xylenes (total)	35.1	0.50	"	30.0		117	70-130	8.00	25	
Surrogate: a,a,a-Trifluorotoluene	*11.4*		"	*10.0*		*114*	*70-130*			
LCS Dup (2D17002-BSD2)				Prepared & Analyzed: 04/17/02						
Gasoline Range Organics (C6-C10)	237	50	ug/l	250		94.8	70-130	0.423	25	
Surrogate: a,a,a-Trifluorotoluene	*9.43*		"	*10.0*		*94.3*	*70-130*			
Batch 2D17003 - EPA 5030B [P/T]										
Blank (2D17003-BLK1)				Prepared & Analyzed: 04/17/02						
Gasoline Range Organics (C6-C10)	ND	50	ug/l							
Benzene	ND	0.50	"							
Toluene	ND	0.50	"							
Ethylbenzene	ND	0.50	"							
Xylenes (total)	ND	0.50	"							
Methyl tert-butyl ether	ND	2.5	"							
Surrogate: a,a,a-Trifluorotoluene	*9.53*		"	*10.0*		*95.3*	*70-130*			
LCS (2D17003-BS1)				Prepared & Analyzed: 04/17/02						
Benzene	10.2	0.50	ug/l	10.0		102	70-130			
Toluene	10.3	0.50	"	10.0		103	70-130			
Ethylbenzene	10.0	0.50	"	10.0		100	70-130			
Xylenes (total)	30.3	0.50	"	30.0		101	70-130			
Surrogate: a,a,a-Trifluorotoluene	*9.97*		"	*10.0*		*99.7*	*70-130*			

Sequoia Analytical

885 Jarvis Drive
Morgan Hill, CA 95037
(408) 776-9600
FAX (408) 782-6308
www.sequoialabs.com

Cambria - Emeryville	Project: Arco #6002, Oakland,Ca	
6262 Hollis St.	Project Number: ARCO #6002, Oakland, CA	**Reported:**
Emeryville CA, 94608	Project Manager: Ron Scheele	04/22/02 07:05

Total Purgeable Hydrocarbons (C6-C10) by EPA 8015B modified, BTEXM by EPA 8021B - Quality Control

Sequoia Analytical - Morgan Hill

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 2D17003 - EPA 5030B [P/T]										
LCS (2D17003-BS2)				Prepared & Analyzed: 04/17/02						
Gasoline Range Organics (C6-C10)	246	50	ug/l	250		98.4	70-130			
Surrogate: a,a,a-Trifluorotoluene	*11.2*		"	*10.0*		*112*	*70-130*			
LCS Dup (2D17003-BSD1)				Prepared & Analyzed: 04/17/02						
Benzene	10.1	0.50	ug/l	10.0		101	70-130	0.985	25	
Toluene	9.62	0.50	"	10.0		96.2	70-130	6.83	25	
Ethylbenzene	9.16	0.50	"	10.0		91.6	70-130	8.77	25	
Xylenes (total)	29.5	0.50	"	30.0		98.3	70-130	2.68	25	
Surrogate: a,a,a-Trifluorotoluene	*9.44*		"	*10.0*		*94.4*	*70-130*			
LCS Dup (2D17003-BSD2)				Prepared & Analyzed: 04/17/02						
Gasoline Range Organics (C6-C10)	238	50	ug/l	250		95.2	70-130	3.31	25	
Surrogate: a,a,a-Trifluorotoluene	*11.3*		"	*10.0*		*113*	*70-130*			

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Cambria - Emeryville	Project: Arco #6002, Oakland,Ca	
6262 Hollis St.	Project Number: ARCO #6002, Oakland, CA	**Reported:**
Emeryville CA, 94608	Project Manager: Ron Scheele	04/22/02 07:05

Notes and Definitions

P-01	Chromatogram Pattern: Gasoline C6-C10
P-03	Chromatogram Pattern: Unidentified Hydrocarbons C6-C10
QM-07	The spike recovery was outside control limits for the MS and/or MSD. The batch was accepted based on acceptable LCS recovery.
DET	Analyte DETECTED
ND	Analyte NOT DETECTED at or above the reporting limit
NR	Not Reported
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference

ARCO Products Company
Division of Atlantic-Richfield Company

RAT#8

Task Order No. WARH 28855 00

Chain of Custody

ARCO Facility no. 6002 | City (Facility) Oakland | Project manager (Consultant) Ron Scheels | Laboratory name Sequoia

ARCO engineer Chuck Carmel | Telephone no. (ARCO) | Telephone no. (Consultant) 510-450-1983 | Fax no. (Consultant) 510-450-8295 | Contract number

Consultant name Cambria Environmental | Address (Consultant) 6262 Hollis St. Emeryville, Ca

Method of shipment

Sample I.D.	Lab no.	Container no.	Matrix: Soil	Matrix: Water	Matrix: Other	Preservation: Ice	Preservation: Acid	Sampling date	Sampling time	BTEX 602/EPA 8020	BTEX/TPH MTBE EPA M602/8020/8015	TPH Modified 8015 Gas ☐ Diesel ☐	Oil and Grease 413.1 ☐ 413.2 ☐	TPH EPA 418.1/SM503E	EPA 601/8010	EPA 624/8240	EPA 625/8270	TCLP Metals ☐ VOA ☐ Semi VOA ☐	CAM Metals EPA 6010/7000 TTLC ☐ STLC ☐	Lead Org/DHS ☐ Lead EPA 7420/7421 ☐
MW-4 ✓	01	4		X		X	X	4-3-02	8:35		X									
MW-5 ✓	02	4		X		X	X	4-3-02	9:40		X									
MW-7 ✓	03	4		X		X	X	4-3-02	7:50		X									
MW-8 ✓	04	4		X		X	X	4-3-02	8:15		X									
VW-1 ✓	05	4		X		X	X	4-3-02	9:00		X									
VW-4 ✓	06	4		X		X	X	4-3-02	9:20		X									
DUP ✓	07	4		X		X	X	4-3-02			X									

Special detection Limit/reporting: Lowest Possible

Special QA/QC

Remarks: Report Results in EDF format

Lab number: MLD0135

Turnaround time
- Priority Rush 1 Business Day ☐
- Rush 2 Business Days ☐
- Expedited 5 Business Days ☐
- Standard 10 Business Days ☒

Condition of sample: | Temperature received:

Relinquished by	Date	Time	Received by	Date	Time
Relinquished by sampler: [signature]	4-3-02	6:00	Secure location		
REL [signature]	4-5-2	1400	REL [signature]	4-5-2	1755
Relinquished by			Received by [signature]	4/5/02	1755

Distribution: White copy — Laboratory; Canary copy — ARCO Environmental Engineering; Pink copy — Consultant
APPC-3292 (2-91)

ATTACHMENT C

FIELD DATA SHEETS

CAMBRIA

WELL DEPTH MEASUREMENTS

Well ID	Time	Product Depth	Water Depth	Product Thickness	Well Depth	Comments
MW-3	7:00		6.95			gauge only
MW-4	6:50		10.10			no purge
MW-5	7:15		12.50			no purge oder sheen
MW-6	6:55		12.19			gauge only
MW-7	6:45		8.31			purge
MW-8	6:40		8.60			no purge
VW-1	7:05		7.51			no purge
VW-4	7:10		9.60			no purge

Project Name: Arco 6002

Project Number: 439-1810

Measured By: [signature]

Date: 4-3-02

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CAMBRIA

WELL SAMPLING FORM

Project Name: **ARCO 6002**	Cambria Mgr: **Ron Scheele**	Well ID: MW-4
Project Number: **436 - 1609**	Date: 4-3-02	Well Yield:
Site Address: **6235 Seminary Ave, Oakland**	Sampling Method: **Disposable bailer**	Well Diameter: 4" pvc
		Technician(s): SG
Initial Depth to Water: 10.10	Total Well Depth:	Water Column Height:
Volume/ft:	1 Casing Volume:	3 Casing Volumes:
Purge/(No Purge):		
Purging Device: **Submersible Pump**	Did Well Dewater?:	Total Gallons Purged:
Start Purge Time:	Stop Purge Time:	Total Time:

1 Casing Volume = Water column height x Volume/ ft.

Well Diam.	Volume/ft (gallons)
2"	0.16
4"	0.65
6"	1.47

Time	Casing Volume	Temp. C	pH	Cond. uS	Comments
		no purge			

Sample ID	Date	Time	Container Type	Preservative	Analytes	Analytic Method
MW-4	4-3-02	8:35	4 VOA	HCL	TPHg, BTEX, MTBE	8021B

CAMBRIA

WELL SAMPLING FORM

Project Name: **ARCO 6002**	Cambria Mgr: **Ron Scheele**	Well ID: MW-5
Project Number: **436 - 1609**	Date: 4-3-02	Well Yield:
Site Address: **6235 Seminary Ave, Oakland**	Sampling Method: **Disposable bailer**	Well Diameter: 4" pvc
		Technician(s): SG
Initial Depth to Water: 12.50	Total Well Depth:	Water Column Height:
Volume/ft:	1 Casing Volume:	3 Casing Volumes:
Purge/(No Purge)		
Purging Device: **Submersible Pump**	Did Well Dewater?:	Total Gallons Purged:
Start Purge Time:	Stop Purge Time:	Total Time:

1 Casing Volume = Water column height x Volume/ ft.

Well Diam.	Volume/ft (gallons)
2"	0.16
4"	0.65
6"	1.47

Time	Casing Volume	Temp. C	pH	Cond. uS	Comments
		no purge			

Sample ID	Date	Time	Container Type	Preservative	Analytes	Analytic Method
MW-5	4-3-02	9:40	**4 VOA**	**HCL**	**TPHg, BTEX, MTBE**	**8021B**
DUP						

D:\TEMPLATE\FORMS\FIELD\WELLSAMP.WPD
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CAMBRIA

WELL SAMPLING FORM

Project Name: **ARCO 6002**	Cambria Mgr: **Ron Scheele**	Well ID: MW-7
Project Number: **436 - 1609**	Date: 4-3-02	Well Yield:
Site Address: **6235 Seminary Ave, Oakland**	Sampling Method: **Disposable bailer**	Well Diameter: 2" pvc
		Technician(s): SG
Initial Depth to Water: 8.31	Total Well Depth: 13.30	Water Column Height: 4.99
Volume/ft: 0.16	1 Casing Volume: 0.79	3 Casing Volumes: 2.39
Purge/No Purge: purge		
Purging Device: **Submersible Pump**	Did Well Dewater?: NO	Total Gallons Purged: 3
Start Purge Time: 7:30	Stop Purge Time: 7:44	Total Time: 14 mins

1 Casing Volume = Water column height x Volume/ ft.

Well Diam.	Volume/ft (gallons)
2"	0.16
4"	0.65
6"	1.47

Time	Casing Volume	Temp. C	pH	Cond. uS	Comments
7:35	1	16.9	7.12	1520	
7:40	2	17.1	7.19	1359	
7:45	3	17.1	7.24	1380	

Sample ID	Date	Time	Container Type	Preservative	Analytes	Analytic Method
MW-7	4-3-02	7:50	**4 VOA**	**HCL**	**TPHg, BTEX, MTBE**	**8021B**

CAMBRIA

WELL SAMPLING FORM

Project Name: **ARCO 6002**	Cambria Mgr: **Ron Scheele**	Well ID: MW-8
Project Number: **436 - 1609**	Date: 4-3-02	Well Yield:
Site Address: **6235 Seminary Ave, Oakland**	Sampling Method: **Disposable bailer**	Well Diameter: 2" pvc
		Technician(s): SG
Initial Depth to Water: 8.60	Total Well Depth:	Water Column Height:
Volume/ft:	1 Casing Volume:	3 Casing Volumes:
Purge/(No Purge)		
Purging Device: **Submersible Pump**	Did Well Dewater?:	Total Gallons Purged:
Start Purge Time:	Stop Purge Time:	Total Time:

1 Casing Volume = Water column height x Volume/ ft.

Well Diam.	Volume/ft (gallons)
2"	0.16
4"	0.65
6"	1.47

Time	Casing Volume	Temp. C	pH	Cond. uS	Comments
		no purge			

Sample ID	Date	Time	Container Type	Preservative	Analytes	Analytic Method
MW-8	4-3-02	8:15	**4 VOA**	**HCL**	**TPHg, BTEX, MTBE**	**8021B**

CAMBRIA

WELL SAMPLING FORM

Project Name: **ARCO 6002**	Cambria Mgr: **Ron Scheele**	Well ID: VW-1
Project Number: **436 - 1609**	Date:	Well Yield:
Site Address: **6235 Seminary Ave, Oakland**	Sampling Method: **Disposable bailer**	Well Diameter: **" pvc**
		Technician(s):
Initial Depth to Water: 7.51	Total Well Depth:	Water Column Height:
Volume/ft:	1 Casing Volume:	3 Casing Volumes:
Purge/No Purge:		
Purging Device: **Submersible Pump**	Did Well Dewater?:	Total Gallons Purged:
Start Purge Time:	Stop Purge Time:	Total Time:

1 Casing Volume = Water column height x Volume/ ft.

Well Diam.	Volume/ft (gallons)
2"	0.16
4"	0.65
6"	1.47

Time	Casing Volume	Temp. C	pH	Cond. uS	Comments
		no purge			

Sample ID	Date	Time	Container Type	Preservative	Analytes	Analytic Method
VW-1	4-3-02	9:00	**4 VOA**	**HCL**	**TPHg, BTEX, MTBE**	**8021B**

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NSM 5/31/94

CAMBRIA

WELL SAMPLING FORM

Project Name: **ARCO 6002**	Cambria Mgr: **Ron Scheele**	Well ID: VW-4
Project Number: **436 - 1609**	Date: 4-3-02	Well Yield:
Site Address: **6235 Seminary Ave, Oakland**	Sampling Method: **Disposable bailer**	Well Diameter: 4" pvc
		Technician(s): SG
Initial Depth to Water: 9.60	Total Well Depth:	Water Column Height:
Volume/ft:	1 Casing Volume:	3 Casing Volumes:
Purge/(No Purge:)		
Purging Device: **Submersible Pump**	Did Well Dewater?:	Total Gallons Purged:
Start Purge Time:	Stop Purge Time:	Total Time:

1 Casing Volume = Water column height x Volume/ ft.

Well Diam.	Volume/ft (gallons)
2"	0.16
4"	0.65
6"	1.47

Time	Casing Volume	Temp. C	pH	Cond. uS	Comments
			no purge		

Sample ID	Date	Time	Container Type	Preservative	Analytes	Analytic Method
VW-4	4-3-02	9:20	**4 VOA**	**HCL**	**TPHg, BTEX, MTBE**	**8021B**

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NSM 5/31/94

ATTACHMENT E

EDCC REPORT
AND
EDF, GEOWELL SUBMITTAL CONFIRMATION NUMBER

Error Summary Log

07/30/02

EDF 1.2i All files present in deliverable.

Laboratory:	Sequoia Analytical Laboratories, Inc., Morgan Hill, CA
Project Name:	Arco #6002, Oakland,Ca
Work Order Number:	MLD0135
Global ID:	T0600100105
Lab Report Number:	MLD0135072920021420

Report Summary

Labreport	Sampid	Labsampid	Mtrx	QC	Anmcode	Exmcode	Logdate	Extdate	Anadate	Lablotctl	Run Sub
MLD01350729200 21420	MW-4	MLD013501	W	CS	SW8020F	SW5030B	04/03/02	04/15/02	04/15/02	2D15002	1
MLD01350729200 21420	MW-5	MLD013502	W	CS	SW8020F	SW5030B	04/03/02	04/15/02	04/15/02	2D15002	1
MLD01350729200 21420	MW-7	MLD013503	W	CS	SW8020F	SW5030B	04/03/02	04/15/02	04/15/02	2D15002	1
MLD01350729200 21420	MW-8	MLD013504	W	CS	SW8020F	SW5030B	04/03/02	04/15/02	04/15/02	2D15002	1
MLD01350729200 21420	VW-1	MLD013505	W	CS	SW8020F	SW5030B	04/03/02	04/15/02	04/15/02	2D15002	1
MLD01350729200 21420	VW-4	MLD013506	W	CS	SW8020F	SW5030B	04/03/02	04/17/02	04/17/02	2D17003	1
MLD01350729200 21420	VW-4DUP	MLD013507	W	CS	SW8020F	SW5030B	04/03/02	04/17/02	04/17/02	2D17002	1
		2D15002BS1	WQ	BS1	SW8020F	SW5030B	/ /	04/15/02	04/15/02	2D15002	1
		2D15002BS2	WQ	BS2	SW8020F	SW5030B	/ /	04/15/02	04/15/02	2D15002	1
		2D15002BLK1	WQ	LB1	SW8020F	SW5030B	/ /	04/15/02	04/15/02	2D15002	1
		2D15002MS1	W	MS1	SW8020F	SW5030B	/ /	04/15/02	04/15/02	2D15002	1
		2D15002MSD1	W	SD1	SW8020F	SW5030B	/ /	04/15/02	04/15/02	2D15002	1
		2D17002BSD1	WQ	BD1	SW8020F	SW5030B	/ /	04/17/02	04/17/02	2D17002	1
		2D17002BSD2	WQ	BD2	SW8020F	SW5030B	/ /	04/17/02	04/17/02	2D17002	1
		2D17002BS1	WQ	BS1	SW8020F	SW5030B	/ /	04/17/02	04/17/02	2D17002	1
		2D17002BS2	WQ	BS2	SW8020F	SW5030B	/ /	04/17/02	04/17/02	2D17002	1
		2D17002BLK1	WQ	LB1	SW8020F	SW5030B	/ /	04/17/02	04/17/02	2D17002	1
		2D17003BSD1	WQ	BD1	SW8020F	SW5030B	/ /	04/17/02	04/17/02	2D17003	1
		2D17003BSD2	WQ	BD2	SW8020F	SW5030B	/ /	04/17/02	04/17/02	2D17003	1
		2D17003BS1	WQ	BS1	SW8020F	SW5030B	/ /	04/17/02	04/17/02	2D17003	1
		2D17003BS2	WQ	BS2	SW8020F	SW5030B	/ /	04/17/02	04/17/02	2D17003	1
		2D17003BLK1	WQ	LB1	SW8020F	SW5030B	/ /	04/17/02	04/17/02	2D17003	1

EDFSAMP: Error Summary Log

07/30/02

Error type	Logcode	Projname	Npdlwo	Sampid	Matrix
There are no errors in this data file					

EDFTEST: Error Summary Log

07/30/02

Error type	Labsampid	Qccode	Anmcode	Exmcode	Anadate	Run number
There are no errors in this data file					/ /	0

EDFRES: Error Summary Log

07/30/02

Error type	Labsampid	Qccode	Matrix	Anmcode	Pvccode	Anadate	Run number	Parlabel
Warning: extra parameter	2D15002MS1	MS1	W	SW8020F	PR	04/15/02	1	AAATFBZME
Warning: extra parameter	2D15002MS1	MS1	W	SW8020F	PR	04/15/02	1	GROC6C10
Warning: extra parameter	2D15002MS1	MS1	W	SW8020F	PR	04/15/02	1	MTBE
Warning: extra parameter	2D15002MSD1	SD1	W	SW8020F	PR	04/15/02	1	AAATFBZME
Warning: extra parameter	2D15002MSD1	SD1	W	SW8020F	PR	04/15/02	1	GROC6C10
Warning: extra parameter	2D15002MSD1	SD1	W	SW8020F	PR	04/15/02	1	MTBE
Warning: extra parameter	MLD013501	CS	W	SW8020F	PR	04/15/02	1	AAATFBZME
Warning: extra parameter	MLD013501	CS	W	SW8020F	PR	04/15/02	1	GROC6C10
Warning: extra parameter	MLD013501	CS	W	SW8020F	PR	04/15/02	1	MTBE
Warning: extra parameter	MLD013502	CS	W	SW8020F	PR	04/15/02	1	AAATFBZME
Warning: extra parameter	MLD013502	CS	W	SW8020F	PR	04/15/02	1	GROC6C10
Warning: extra parameter	MLD013502	CS	W	SW8020F	PR	04/15/02	1	MTBE
Warning: extra parameter	MLD013503	CS	W	SW8020F	PR	04/15/02	1	AAATFBZME
Warning: extra parameter	MLD013503	CS	W	SW8020F	PR	04/15/02	1	GROC6C10
Warning: extra parameter	MLD013503	CS	W	SW8020F	PR	04/15/02	1	MTBE
Warning: extra parameter	MLD013504	CS	W	SW8020F	PR	04/15/02	1	AAATFBZME
Warning: extra parameter	MLD013504	CS	W	SW8020F	PR	04/15/02	1	GROC6C10
Warning: extra parameter	MLD013504	CS	W	SW8020F	PR	04/15/02	1	MTBE
Warning: extra parameter	MLD013505	CS	W	SW8020F	PR	04/15/02	1	AAATFBZME
Warning: extra parameter	MLD013505	CS	W	SW8020F	PR	04/15/02	1	GROC6C10
Warning: extra parameter	MLD013505	CS	W	SW8020F	PR	04/15/02	1	MTBE
Warning: extra parameter	MLD013506	CS	W	SW8020F	PR	04/17/02	1	AAATFBZME
Warning: extra parameter	MLD013506	CS	W	SW8020F	PR	04/17/02	1	GROC6C10
Warning: extra parameter	MLD013506	CS	W	SW8020F	PR	04/17/02	1	MTBE
Warning: extra parameter	MLD013507	CS	W	SW8020F	PR	04/17/02	1	AAATFBZME

Error type	Labsampid	Qccode	Matrix	Anmcode	Pvccode	Anadate	Run number	Parlabel
Warning: extra parameter	MLD013507	CS	W	SW8020F	PR	04/17/02	1	GROC6C10
Warning: extra parameter	MLD013507	CS	W	SW8020F	PR	04/17/02	1	MTBE
Warning: extra parameter	2D15002BLK1	LB1	WQ	SW8020F	PR	04/15/02	1	AAATFBZME
Warning: extra parameter	2D15002BLK1	LB1	WQ	SW8020F	PR	04/15/02	1	GROC6C10
Warning: extra parameter	2D15002BLK1	LB1	WQ	SW8020F	PR	04/15/02	1	MTBE
Warning: extra parameter	2D15002BS1	BS1	WQ	SW8020F	PR	04/15/02	1	AAATFBZME
Warning: extra parameter	2D15002BS2	BS2	WQ	SW8020F	PR	04/15/02	1	AAATFBZME
Warning: extra parameter	2D15002BS2	BS2	WQ	SW8020F	PR	04/15/02	1	GROC6C10
Warning: extra parameter	2D17002BLK1	LB1	WQ	SW8020F	PR	04/17/02	1	AAATFBZME
Warning: extra parameter	2D17002BLK1	LB1	WQ	SW8020F	PR	04/17/02	1	GROC6C10
Warning: extra parameter	2D17002BLK1	LB1	WQ	SW8020F	PR	04/17/02	1	MTBE
Warning: extra parameter	2D17002BS1	BS1	WQ	SW8020F	PR	04/17/02	1	AAATFBZME
Warning: extra parameter	2D17002BS2	BS2	WQ	SW8020F	PR	04/17/02	1	AAATFBZME
Warning: extra parameter	2D17002BS2	BS2	WQ	SW8020F	PR	04/17/02	1	GROC6C10
Warning: extra parameter	2D17002BSD1	BD1	WQ	SW8020F	PR	04/17/02	1	AAATFBZME
Warning: extra parameter	2D17002BSD2	BD2	WQ	SW8020F	PR	04/17/02	1	AAATFBZME
Warning: extra parameter	2D17002BSD2	BD2	WQ	SW8020F	PR	04/17/02	1	GROC6C10
Warning: extra parameter	2D17003BLK1	LB1	WQ	SW8020F	PR	04/17/02	1	AAATFBZME
Warning: extra parameter	2D17003BLK1	LB1	WQ	SW8020F	PR	04/17/02	1	GROC6C10
Warning: extra parameter	2D17003BLK1	LB1	WQ	SW8020F	PR	04/17/02	1	MTBE
Warning: extra parameter	2D17003BS1	BS1	WQ	SW8020F	PR	04/17/02	1	AAATFBZME
Warning: extra parameter	2D17003BS2	BS2	WQ	SW8020F	PR	04/17/02	1	AAATFBZME
Warning: extra parameter	2D17003BS2	BS2	WQ	SW8020F	PR	04/17/02	1	GROC6C10
Warning: extra parameter	2D17003BSD1	BD1	WQ	SW8020F	PR	04/17/02	1	AAATFBZME
Warning: extra parameter	2D17003BSD2	BD2	WQ	SW8020F	PR	04/17/02	1	AAATFBZME
Warning: extra parameter	2D17003BSD2	BD2	WQ	SW8020F	PR	04/17/02	1	GROC6C10

EDFQC: Error Summary Log

07/30/02

Error type	Lablotctl	Anmcode	Parlabel	Qccode	Labqcid
There are no errors in this data files					

EDFCL: Error Summary Log

07/30/02

Error type	Clrevdate	Anmcode	Exmcode	Parlabel	Clcode
There are no errors in this data file	/ /				

AB2886 Electronic Delivery

Main Menu | View/Add Facilities | Upload EDD | Check EDD

Your EDF file has been succcessfully uploaded!

Confirmation Number: 2310868501
Date/Time of Submittal: 7/31/2002 9:19:09 AM
Facility Global ID: T0600100105
Facility Name: ARCO
Submittal Title: 2nd Quarter Ground Water Monitoring report
Submittal Type: GW Monitoring Report

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