

URS

✓ 80 204

February 25, 2003

Ms. Barney Chan
Alameda County Health Care Services Agency
1131 Harbor Bay Parkway, Suite 250
Alameda, CA 94502-6577

**Re: Fourth Quarter 2002 Groundwater Monitoring Report
ARCO Service Station #4494
566 Hegenberger Road
Oakland, California
URS Project # 38486122**

Dear Mr. Chan:

On behalf of Atlantic Richfield Company (ARCO-an affiliated company of the Group Environmental Management Company), URS Corporation (URS) is submitting the *Fourth Quarter 2002 Groundwater Monitoring Report* for ARCO Service Station #4494, located at 566 Hegenberger Road, Oakland, California.

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

Sincerely,

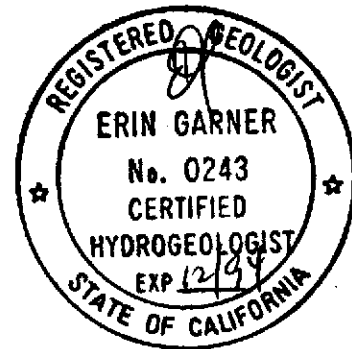
URS CORPORATION

Scott Robinson

Scott Robinson
Project Manager

Erin Garner

Erin Garner, CHG
Project Director



Enclosure: Fourth Quarter 2002 Groundwater Monitoring Report

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

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



Atlantic Richfield Company
(a BP affiliated company)

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

February 27, 2003

Re: Fourth Quarter 2002 Groundwater Monitoring Report
ARCO Station #4494
566 Hegenberger Rd.
Oakland, CA

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

R E P O R T

**FOURTH QUARTER 2002
GROUNDWATER MONITORING**

ARCO SERVICE STATION # 4494
566 HEGENBERGER ROAD
OAKLAND, CALIFORNIA

Prepared for
Atlantic Richfield Company

February 25, 2003

URS

URS Corporation
500 12th Street, Suite 200
Oakland, California 94607

38486122

Date: February 25, 2003

Quarter: 4Q 02

ATLANTIC RICHFIELD COMPANY QUARTERLY GROUNDWATER MONITORING REPORT

Facility No.: 4494 Address: 566 Hegenberger Road, Oakland, California
ARCO Environmental Engineer: Paul Supple
Consulting Co./Contact Person: URS Corporation/Scott Robinson
Consultant Project No.: 38486122
Primary Agency/Regulatory ID No. ACHCS/STID #3854

WORK PERFORMED THIS QUARTER (Fourth – 2002):

1. Performed fourth quarter 2002 monitoring event on December 12, 2002.
2. Prepared third quarter 2002 groundwater monitoring report.

WORK PROPOSED FOR NEXT QUARTER (First– 2003):

1. Perform first quarter 2003 groundwater monitoring event.
2. Prepare fourth quarter 2002 groundwater monitoring report.

Current Phase of Project	<u>GW monitoring/sampling</u>
Frequency of Groundwater Sampling:	<u>Wells MW-1, MW-3 to MW-7, RW-1 quarterly</u>
Frequency of Groundwater Monitoring:	<u>Quarterly</u>
Is Free Product (FP) Present On-Site:	<u>No</u>
FP Recovered this Quarter:	<u>None</u>
Cumulative FP Recovered to Date:	<u>volume not available</u>
Bulk Soil Removed This Quarter:	<u>350 cubic yards</u>
Bulk Soil Removed to Date:	<u>1,550 cubic yards</u>
Current Remediation Techniques:	<u>None</u>
Approximate Depth to Groundwater:	<u>6.18 (MW-6) to 9.51 (MW-3) feet</u>
Groundwater Gradient (direction)	<u>Northwest</u>
Groundwater Gradient (magnitude)	<u>0.017 feet per foot</u>

DISCUSSION:

TPH-g was detected in three of the seven wells sampled this quarter at concentrations ranking from 65 µg/L (MW-6) to 630 µg/L (MW-1). Benzene, toluene, ethylbenzene, and xylenes were detected in two wells at concentrations slightly exceeding specified laboratory method detection limits. MTBE was detected in two wells at concentrations of 160 µg/L (MW-7) and 1,300 µg/L (MW-1). MTBE was confirmed in both wells using EPA Method 8260B at concentrations of 130 µg/L (MW-7) and 870 µg/L (MW-1).

RECOMMENDATIONS:

Based on consistently low or non-detectable hydrocarbon concentrations for the past 2 years or more, URS recommends reducing the sampling frequency from quarterly to semi-annually in wells RW-1, MW-3, MW-4, MW-5 and MW-6. The well casing for MW-7 will be repaired and the well re-surveyed.



ATTACHMENTS:

- Table 1 – Groundwater Elevation and Analytical Data
- Table 2 – Groundwater Flow Direction and Gradient
- Figure 1 – Groundwater Elevation Contour and Analytical Summary Map – December 12, 2002
- Attachment A – Field Procedures and Field Data Sheets
- Attachment B – Laboratory Procedures, Certified Analytical Reports, and Chain-of-Custody Records
- Attachment C – Historic Groundwater Data
- Attachment D – EDCC Report and EDF/Geowell Submittal Confirmation

Table 1
Groundwater Elevation and Analytical Data

ARCO Service Station #4494
566 Hegenberger Road
Oakland, California

Well Number	Date Sampled	Top of Riser Elevation (ft)	Depth to Groundwater (ft)	Groundwater Elevation (ft)	TPH as Gasoline (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethyl-benzene (µg/L)	Total Xylenes (µg/L)	MTBE (µg/L)
MW-1	06/20/00	106.10	7.02	99.08	ND<1,000	ND<10	ND<10	ND<10	ND<20	14,000/15,000 ^a
	09/28/00		7.07	99.03	ND<500	ND<5.0	ND<5.0	ND<5.0	ND<5.0	13000/18,800 ^a
	12/17/00		6.95	99.15	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	10,600
	03/28/01		6.88	99.22	ND<500	ND<5.0	ND<5.0	ND<5.0	ND<5.0	16,900
	06/21/01		7.18	98.92	ND<1,000	ND<10	ND<10	ND<10	ND<10	3,400
	09/23/01		7.11	98.99	ND<1,000	ND<10	ND<10	ND<10	ND<10	2200/1800 ^a
	12/31/01		6.91	99.19	ND<5,000	ND<50	ND<50	ND<50	ND<50	14,000
	03/14/02		6.85	99.25	ND<5,000	ND<50	ND<50	ND<50	ND<50	6,200
	04/17/02		5.89	100.21	ND<5,000	ND<50	ND<50	ND<50	ND<50	4,500
	08/08/02		7.19	98.91	7.19	98.91	230 ^b	ND<2.0	ND<2.0	ND<2.0
12/12/02	7.28	98.82	7.28	98.82	630 ^d	ND<5.0	ND<5.0	ND<5.0	1300/830 ^a	
MW-3	06/20/00	106.29	9.18	97.11	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<1.0	27/27 ^a
	09/28/00		9.33	96.96	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<1.0	4.3/ND<2.0 ^a
	12/17/00		9.31	96.98	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<2.5
	03/28/01		9.23	97.06	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	7.42
	06/21/01		9.58	96.71	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<2.5
	09/23/01		9.76	96.53	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<2.5
	12/31/01		8.78	97.51	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<2.5
	03/14/02		9.25	97.04	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	4
	04/17/02		8.44	97.85	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<2.5
	08/08/02		9.63	96.66	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<2.5
12/12/02	9.51	96.78	9.51	96.78	ND<50 ^d	ND<0.5	ND<0.5	ND<0.5	ND<2.5	

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Oakland, California

Well Number	Date Sampled	Top of Riser Elevation (ft)	Depth to Groundwater (ft)	Groundwater Elevation (ft)	TPH as Gasoline (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethyl-benzene (µg/L)	Total Xylenes (µg/L)	MTBE (µg/L)
MW-4	06/20/00	107.40	8.49	98.91	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<1.0	ND<10
	09/28/00		8.70	98.70	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<1.0	ND<2.5
	12/17/00		8.53	98.87	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<2.5
	03/28/01		8.59	98.81	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<2.5
	06/21/01		8.79	98.61	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<2.5
	09/23/01		8.67	98.73	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<2.5
	12/31/01		8.03	99.37	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<2.5
	03/14/02		8.48	98.92	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<2.5
	04/17/02		7.79	99.61	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	5.6
	08/08/02		8.90	98.50	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<2.5
	12/12/02		9.07	98.33	ND<50 ^d	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<2.5
MW-5	06/20/00	105.19	7.65	97.54	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<1.0	ND<10
	09/28/00		6.82	98.37	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<1.0	ND<2.5
	12/17/00		6.50	98.69	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<2.5
	03/28/01		6.34	98.85	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<2.5
	06/21/01		7.88	97.31	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<2.5
	09/23/01		6.98	98.21	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<2.5
	12/31/01		5.01	100.18	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<2.5
	03/14/02		5.93	99.26	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<2.5
	04/17/02		5.37	99.82	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	8.5
	08/08/02		6.85	98.34	ND<50 ^b	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<2.5
	12/12/02		6.53	98.66	ND<50 ^d	2.2	4.7	1.3	6.8	ND<2.5

**Table 1
Groundwater Elevation and Analytical Data**

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566 Hegenberger Road
Oakland, California

Well Number	Date Sampled	Top of Riser Elevation (ft)	Depth to Groundwater (ft)	Groundwater Elevation (ft)	TPH as Gasoline (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethyl-benzene (µg/L)	Total Xylenes (µg/L)	MTBE (µg/L)
MW-6	06/20/00	105.07	6.24	98.83	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<1.0	ND<10
	09/28/00		6.45	98.62	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<1.0	ND<2.5
	12/17/00		6.26	98.81	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<2.5
	03/28/01		6.10	98.97	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<2.5
	06/21/01		7.68	97.39	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<2.5
	09/23/01		6.72	98.35	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<2.5
	12/23/01		4.68	100.39	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<2.5
	03/14/02		5.55	99.52	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<2.5
	04/17/02		4.96	100.11	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	7
	08/08/02		6.46	98.61	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<2.5
	12/12/02			6.18	98.89	65^d	3.3	8.4	2.7	14
MW-7	06/20/00	105.52	8.65	96.87	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<1.0	13/13 ^a
	09/28/00		8.75	96.77	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<1.0	136/261 ^a
	12/17/00		8.62	96.90	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	27.1
	03/28/01		8.66	96.86	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	51.5
	06/21/01		8.84	96.68	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	53
	09/23/01		8.75	96.77	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	35/21 ^a
	12/23/01		7.79	97.73	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	440
	03/14/02		8.30	97.22	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	18
	04/17/02		7.43	98.09	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	67
	08/08/02		8.61	96.91	55 ^b	ND<0.5	ND<0.5	ND<0.5	ND<0.5	130/100 ^a
	12/12/02	**		8.55	--	75^d	ND< 0.5	ND< 0.5	ND< 0.5	ND< 0.5

Table 1
Groundwater Elevation and Analytical Data

ARCO Service Station #4494
566 Hegenberger Road
Oakland, California

Well Number	Date Sampled	Top of Riser Elevation (ft)	Depth to Groundwater (ft)	Groundwater Elevation (ft)	TPH as Gasoline (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethyl-benzene (µg/L)	Total Xylenes (µg/L)	MTBE (µg/L)
RW-1	06/20/00	NE	8.21	NC	ND<50	ND<0.5	1.1	ND<0.5	ND<1.0	ND<10
	09/28/00		8.28	NC	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<1.0	ND<2.5
	12/17/00		8.29	NC	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<2.5
	03/28/01		8.16	NC	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<2.5
	06/21/01		9.37	NC	160	5.1	ND<0.5	1.1	3.2	ND<2.5
	09/23/01		8.75	NC	57	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<2.5
	12/31/01		6.80	NC	520	3.1	ND<0.5	6.4	4.7	ND<2.5
	03/14/02		7.86	NC	240	3.7	ND<0.5	0.7	2.8	ND<2.5
	04/17/02		7.13	NC	ND<50	ND<0.5	1.6	ND<0.5	0.72	ND<2.5
	08/08/02		8.48	NC	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	3.7/ND0.5 ^{a,c}
	12/12/02		8.63	NC	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<2.5

TPH = Total Petroleum Hydrocarbons

MTBE = Methyl tertiary butyl ether analyzed by EPA Method 8021B unless otherwise noted

µg/L = Micrograms per liter

NC = Not calculated

NE = Not surveyed/No elevation

ND< = Not detected at or above specified laboratory detection limit.

a = Analyzed by EPA Method 8260

b = Hydrocarbon pattern is present in the requested fuel quantitation range but does not resemble the pattern of the requested fuel.

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

d = Analyzed by EPA Method 8215B/8021B for Gasoline Range Organics

** = Top of casing was found shattered on December 12, 2002. Top of Casing (TOC) unknown.

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

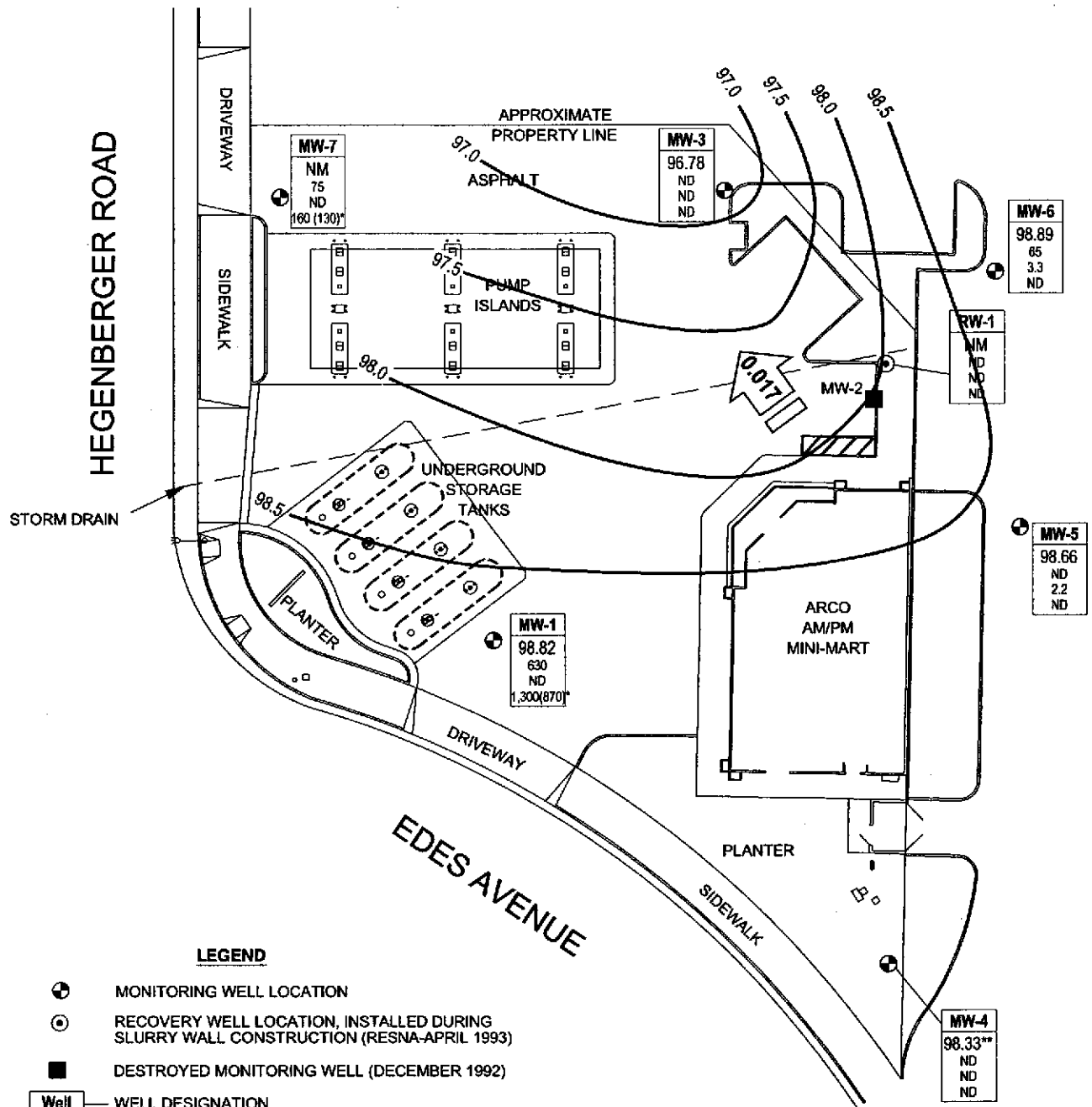
Table 2
Groundwater Flow Direction and Gradient

ARCO Service Station #4494
566 Hegenberger Road
Oakland, California

Date Measured	Average Flow Direction	Average Hydraulic Gradient
06/20/00	North-Northeast	0.015
09/28/00	North	0.018
12/17/00	North-Northwest	0.013
03/28/01	Northwest	0.011
06/21/01	North	0.017
09/23/01	North	0.020
12/31/01	North-Northwest	0.023
03/14/02	North-Northwest	0.017
04/14/02	Northwest	0.007
08/08/02	North-Northwest	0.022
12/12/02	North-Northwest	0.017

Note:

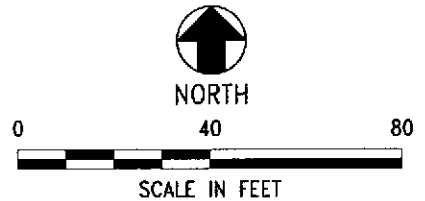
The data within this table collected prior to August 2002 was provided to URS by Group Environmental Management Company and their previous consultants. URS has not verified the accuracy of this information.



LEGEND

- ⊕ MONITORING WELL LOCATION
 - ⊙ RECOVERY WELL LOCATION, INSTALLED DURING SLURRY WALL CONSTRUCTION (RESNA-APRIL 1993)
 - DESTROYED MONITORING WELL (DECEMBER 1992)
- | Well | WELL DESIGNATION |
|---------|--------------------------------------------------------------------------|
| ELEV | GROUNDWATER ELEVATION CONTOUR (FT/MSL) |
| TPH-g | CONCENTRATION OF TPH-g, BENZENE, AND MTBE IN MICROGRAMS PER LITER (µg/L) |
| Benzene | |
| MTBE | |
- * CONFIRMED BY EPA METHOD 8260
 - ** GROUNDWATER ELEVATION NOT USED IN CONTOUR
 - ND NOT DETECTED AT OR ABOVE LABORATORY REPORTING LIMITS
 - NM NOT MEASURED
- ← 0.017 | GROUNDWATER FLOW AND GRADIENT (FT/FT)
- 98.0 | GROUNDWATER ELEVATION CONTOUR (FT/MSL)

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



Project No. 38486122
 Arco Service Station 4494
 566 Hegenberger Road
 Oakland, California

**GROUNDWATER ELEVATION CONTOUR
 AND ANALYTICAL SUMMARY MAP**
 Fourth Quarter 2002 (December 12, 2002)

FIGURE
 1

ATTACHMENT A

FIELD PROCEDURES AND FIELD DATA SHEETS

FIELD 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 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 # 021212-BAA Date 12/12/02 Client ARLO 4494

Site 566 HEGENBERGER RD, 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 TOC
MW-1	4					7.28	23.04	TOC
MW-3	4					9.51	17.85	
MW-4	4					9.07	16.62	
MW-5	2					6.53	16.82	
MW-6	2					6.18	18.07	
MW-7	4					8.55*	13.49	
RW-1	2					8.63	11.30	
* Casing shattered at top - TOC unknown								

ARCO / BP WELL MONITORING DATA SHEET

BTS #: <u>021212-BA2</u>	Station # <u>4494</u>
Sampler: <u>BRIAN ALLEN</u>	Date: <u>12/12/02</u>
Well I.D.: <u>MW-1</u>	Well Diameter: 2 3 <u>4</u> 6 8 <u> </u>
Total Well Depth: <u>23.04</u>	Depth to Water: <u>7.28</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 ² * 0.163

Purge Method: <u>Bailer</u> Disposable Bailer Middleburg Electric Submersible 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>10.2</u>	X	<u>3</u>	=	<u>30.6</u>	Gals.
1 Case Volume (Gals.)		Specified Volumes		Calculated Volume	

Time	Temp (°F)	pH	Conductivity (mS or μ S)	Gals. Removed	Observations
1535	70.0	7.6	7695	10.0	clear strong odor / light sheen
1537	<u>Well Dewatered</u>			@ 18.0	DTW @ 21.27
1545	70.1	7.6	7781	—	clear strong odor / light sheen

Did well dewater? <u>Yes</u> No	Gallons actually evacuated: <u>18</u>
Sampling Time: <u>1545</u>	Sampling Date: <u>12/12/02</u>
Sample I.D.: <u>MW-1</u>	Laboratory: Pace <u>Sequoia</u> Other _____
Analyzed for: <u>TPH-G BTEX MTBE</u> TPH-D Other:	
D.O. (if req'd):	Pre-purge: _____ mg/L
	Post-purge: <u>4.9</u> mg/L
O.R.P. (if req'd):	Pre-purge: _____ mV
	Post-purge: _____ mV

ARCO / BP WELL MONITORING DATA SHEET

BTS #: <u>021212-BA2</u>	Station # <u>4494</u>
Sampler: <u>BRIAN ALLEN</u>	Date: <u>12/12/02</u>
Well I.D.: <u>MW-3</u>	Well Diameter: 2 3 <u>4</u> 6 8 _____
Total Well Depth: <u>17.85</u>	Depth to Water: <u>9.51</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 ² * 0.163

Purge Method: ~~Bailer~~ ~~Disposable Bailer~~ ~~Middleburg~~ ~~Electric Submersible Extraction Pump~~ Other: _____

Sampling Method: Bailer Disposable Bailer Extraction Port Other: _____

Top of Screen: 7' If well is listed as a no-purge, confirm that water level is below the top of screen. Otherwise, the well must be purged.

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

Time	Temp (°F)	pH	Conductivity (mS or <u>µS</u>)	Gals. Removed	Observations
1315	70.2	6.8	1465	—	clear w/debris particles

Did well dewater? Yes No

Gallons actually evacuated: —

Sampling Time: 1315 Sampling Date: 12/12/02

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

Analyzed for: TPH-G BTEX MTBE TPH-D Other: _____

D.O. (if req'd):	Pre-purge:	mg/L	<u>Post-purge</u>	3.0	mg/L
O.R.P. (if req'd):	Pre-purge:	mV	<u>Post-purge</u>		mV

ARCO / BP WELL MONITORING DATA SHEET

BTS #: <u>021212-BAA</u>	Station # <u>4494</u>
Sampler: <u>BRIAN ALLEN</u>	Date: <u>12/12/02</u>
Well I.D.: <u>MW-4</u>	Well Diameter: 2 3 <u>(4)</u> 6 8
Total Well Depth: <u>16.62</u>	Depth to Water: <u>9.07</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 ² * 0.163

Purge Method: ~~Bailer~~
~~Disposable Bailer~~
~~Middleburg~~
~~Electric Submersible~~
~~Extraction Pump~~
 Other: _____

Sampling Method: Bailer
Disposable Bailer
 Extraction Port
 Other: _____

Top of Screen: 7' If well is listed as a no-purge, confirm that water level is below the top of screen. Otherwise, the well must be purged.

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

Time	Temp (°F)	pH	Conductivity (mS or <u>µS</u>)	Gals. Removed	Observations
<u>1245</u>	<u>67.0</u>	<u>6.2</u>	<u>1319</u>	—	<u>clear</u>

Did well dewater? Yes No Gallons actually evacuated: —

Sampling Time: 1245 Sampling Date: 12/12/02

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

Analyzed for: TPH-G BTEX MTBE TPH-D Other: _____

D.O. (if req'd):	Pre-purge:	mg/L	Post-purge:	<u>5.6</u>	mg/L
O.R.P. (if req'd):	Pre-purge:	mV	Post-purge:		mV

ARCO / BP WELL MONITORING DATA SHEET

BTS #: <u>021212-BA2</u>	Station # <u>4494</u>
Sampler: <u>BRIAN ALLEN</u>	Date: <u>12/12/02</u>
Well I.D.: <u>MW-5</u>	Well Diameter: <u>2</u> 3 4 6 8 _____
Total Well Depth: <u>16.82</u>	Depth to Water: <u>6.53</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 ² * 0.163

Purge Method: <u>Bailer</u> Disposable Bailer <u>Middleburg</u> Electric Submersible Extraction Pump Other: _____	Sampling Method: <u>Bailer</u> <u>Disposable Bailer</u> 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.

1.6	x	3	=	4.8	Gals.
1 Case Volume (Gals.)		Specified Volumes		Calculated Volume	

Time	Temp (°F)	pH	Conductivity (mS or μS)	Gals. Removed	Observations
1427	67.2	7.0	15.5	1.5	semi-cloudy gray very mild odor
1429	67.6	7.0	12.8	3.0	clear mild odor
1430	67.8	7.0	12.1	4.5	" DTW 6.83

Did well dewater? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Gallons actually evacuated: <u>5</u>
Sampling Time: <u>1435</u>	Sampling Date: <u>12/12/02</u>
Sample I.D.: <u>MW-5</u>	Laboratory: Pace <u>Sequoia</u> Other _____
Analyzed for: <u>TPH-G BTEX MTBE</u> TPH-D Other:	

D.O. (if req'd):	Pre-purge:	mg/l.	Post-purge:	1.3	mg/l.
O.R.P. (if req'd):	Pre-purge:	mV	Post-purge:		mV

ARCO / BP WELL MONITORING DATA SHEET

BTS #: <u>021212-BA2</u>	Station # <u>4494</u>
Sampler: <u>BRIAN ALLEN</u>	Date: <u>12/12/02</u>
Well I.D.: <u>MW-6</u>	Well Diameter: <u>(2)</u> 3 4 6 8 _____
Total Well Depth: <u>18.07</u>	Depth to Water: <u>6.18</u>
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: <u>(PVC)</u> Grnde	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 ² * 0.163

Purge Method: <u>Bailer</u> Disposable Bailer <u>(Middleburg)</u> Electric Submersible Extraction Pump Other: _____	Sampling Method: <u>Bailer</u> <u>(Disposable Bailer)</u> 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>1.9</u>	X	<u>3</u>	=	<u>5.7</u>	Gals.
1 Case Volume (Gals.)		Specified Volumes		Calculated Volume	

Time	Temp (°F)	pH	Conductivity (mS or <u>(µS)</u>)	Gals. Removed	Observations
1451	69.0	7.0	7007	2.0	cloudy gray mild odor
1454	69.7	6.9	6696	4.0	"
1456	69.7	6.9	6554	6.0	" DTW 6.28

Did well dewater? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Gallons actually evacuated: <u>6</u>
Sampling Time: <u>1500</u>	Sampling Date: <u>12/12/02</u>
Sample I.D.: <u>MW-6</u>	Laboratory: Pace <u>(Sequoia)</u> Other _____
Analyzed for: <u>(TPH-G BTEX MTBE)</u> TPH-D Other:	
D.O. (if req'd):	Pre-purge: _____ mg/L
	Post-purge: <u>(1.1)</u> mg/L
O.R.P. (if req'd):	Pre-purge: _____ mV
	Post-purge: _____ mV

ARCO / BP WELL MONITORING DATA SHEET

BTS #: <u>021212-BA2</u>	Station # <u>4494</u>
Sampler: <u>BRIAN ALLEN</u>	Date: <u>12/12/02</u>
Well I.D.: <u>MW-7</u>	Well Diameter: 2 3 <u>(4)</u> 6 8 _____
Total Well Depth: <u>13.49</u>	Depth to Water: <u>8.55</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 ² * 0.163

Purge Method: Bailer
Disposable Bailer
 Middleburg
 Electric Submersible
 Extraction Pump
 Other: _____

Sampling Method: Bailer
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>3.0</u>	x	<u>3</u>	=	<u>9.0</u>	Gals.
Case Volume (Gals.)		Specified Volumes		Calculated Volume	

Time	Temp (°F)	pH	Conductivity (mS or <u>µS</u>)	Gals. Removed	Observations
1346	69.4	6.9	4219	3.0	dark yellow - clear * no odor
1352	69.5	6.9	7026	6.0	" less yellow
1356	69.4	7.0	8263	9.0	" DTW 9.98

* Dark yellow water floating near top of column w/ no clear interface w/ clear layer beneath

Did well dewater? Yes <u>No</u>	Gallons actually evacuated: <u>9</u>
Sampling Time: <u>1400</u>	Sampling Date: <u>12/12/02</u>
Sample I.D.: <u>MW-7</u>	Laboratory: Pace <u>Sequoia</u> Other _____
Analyzed for: <u>TPH-G BTEX MTBE</u> TPH-D Other:	
D.O. (if req'd):	Pre-purge: _____ mg/L
	Post-purge: <u>1.2</u> mg/L
O.R.P. (if req'd):	Pre-purge: _____ mV
	Post-purge: _____ mV

ARCO / BP WELL MONITORING DATA SHEET

BTS #: <u>021212-BA2</u>	Station # <u>4494</u>
Sampler: <u>BRIAN ALLEN</u>	Date: <u>12/12/02</u>
Well I.D.: <u>RW-1</u>	Well Diameter: <u>(2)</u> 3 4 6 8 _____
Total Well Depth: <u>11.30</u>	Depth to Water: <u>8.63</u>
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: <u>(PVC)</u> Grade	D.O. Meter (if req'd): <u>(YSI)</u> HACH

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

Purge Method: <u>Bailer</u> <u>(Disposable Bailer)</u> Middleburg Electric Submersible Extraction Pump Other: _____	Sampling Method: <u>Bailer</u> <u>(Disposable Bailer)</u> 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>0.4</u>	X	<u>3</u>	=	<u>1.2</u>	Gals.
1 Case Volume (Gals.)		Specified Volumes		Calculated Volume	

Time	Temp (°F)	pH	Conductivity (mS or μS)	Gals. Removed	Observations
1514	62.8	7.0	26.7	0.5	clear
1518	62.9	6.9	28.5	1.0	"
1519	62.9	6.9	29.2	1.5	"

Did well dewater? Yes <u>(No)</u>	Gallons actually evacuated: <u>2</u>	
Sampling Time: <u>1525</u>	Sampling Date: <u>12/12/02</u>	
Sample I.D.: <u>RW-1</u>	Laboratory: Pace <u>(Sequoia)</u> Other _____	
Analyzed for: <u>(TPH-G BTEX MTBE)</u> TPH-D Other:		
D.O. (if req'd):	Pre-purge: _____ mg/L	Post-purge: <u>(1.9)</u> mg/L
O.R.P. (if req'd):	Pre-purge: _____ mV	Post-purge: _____ mV



Chain of Custody Record

Project Name _____

BP BU/GEM CO Portfolio: _____

BP Laboratory Contract Number: _____

Date: 12/12/02

Requested Due Date (mm/dd/yy) Standard

On-site Time:	Temp:
Off-site Time:	Temp:
Sky Conditions:	
Meteorological Events:	
Wind Speed:	Direction:

Send To:
 Lab Name: SEQUOIA
 Lab Address: 885 Jarvis Dr.
Morgan Hill, CA 95037
 Lab PM: Latonya Pelt
 Tele/Fax: 408-776-9600 / 408-782-6308
 Report Type & QC Level: Send EDF Reports
 BP/GEM Account No.: _____

BP/GEM Facility No.: _____
 BP/GEM Facility Address: 566 HEGENBERGER, OAKLAND, CA
 Site ID No. ARCO 4494
 Site Lat/Long: _____
 California Global ID #: T0600100104
 BP/GEM PM Contact: PAUL SUPPLE
 Address: _____
 Tele/Fax: _____

Consultant/Contractor: URS
 Address: 500 12th St., Ste. 200
Oakland, CA 94609-4014
 e-mail EDD: syed_rehan@urscorp.com
 Consultant/Contractor Project No.: J5-00004494.01 00427
 Consultant Tele/Fax: 510-874-1735/510-874-3268
 Consultant/Contractor PM: Scott Robinson
 Invoice to: Consultant/Contractor or BP/GEM (circle one)
 BP/GEM Work Release No: INTRIM -50443

Item No.	Sample Description	Time	Matrix				Laboratory No.	No. of containers	Preservatives			Requested Analysis						Sample Point Lat/Long and Comments
			Soil/Solid	Water/Liquid	Sediments	Air			Unpreserved	H ₂ SO ₄	HNO ₃	HCl	TPH-D / BTX (8015 / 8021)	TPH-D (8015)	MTBE (8021)	MTBE, TAME, GTBB / DIPB, TBA (8260)	1,2-DCA & EDB (8260)	
1	MW-1 ✓	1245		X														
2	MW-3 ✓	1315		X			6											
3	MW-4 ✓	1245		X			6											
4	MW-5 ✓	1435		X			6											
5	MW-6 ✓	1500		X			6											
6	MW-7 ✓	1400		X			6											
7	RW-1 ✓	1525		X			6											
8																		
9																		
10																		

Sampler's Name: Brian Alcorn

Sampler's Company: Brown Tech Services

Relinquished By / Affiliation: _____ Date: 12/13/02 Time: 10/12

Accepted By / Affiliation: _____ Date: 12/13/02 Time: 10/12

Relinquishment Method: _____

Relinquishment Tracking No.: _____

Additional Instructions: Address Invoice to BP/GEM but send to URS for approval

Body Seals In Place Yes No ✓ Temperature Blank Yes No ✓ Cooler Temperature on Receipt 2 65/61

WELLHEAD INSPECTION CHECKLIST

Page 1 of 1

Client ARCO 4494 Date 12/12/02

Site Address 506 HEGEWISBERGER RD, OAKLAND

Job Number 021212-BA2 Technician BRIAN ALCOB

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

NOTES: _____

BP GEM OIL COMPANY TYPE A BILL OF LADING

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

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

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

4494

Station #

506 HEGENBERGER RD, OAKLAND

Station Address

Total Gallons Collected From Groundwater Monitoring Wells:

40

added equip.
rinse water

10

any other
adjustments

TOTAL GALS.
RECOVERED

50

loaded onto
BTS vehicle #

14

BTS event #

021212-BA2

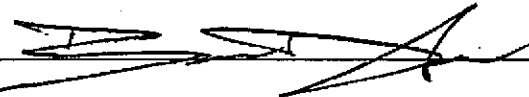
time

1600

date

12/12/02

signature



REC'D AT

time

date

unloaded by
signature

1 1

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 noted on 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 Group Environmental Management Company have been reviewed and verified by that laboratory.



10 January, 2003

Scott Robinson
URS Corporation
500 12th Street, Suite 100
Oakland, CA 94607

RE: ARCO #4494, Oakland, Ca
Sequoia Work Order: MLL0548

Enclosed are the results of analyses for samples received by the laboratory on 12/13/02 16:40. 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



URS Corporation
500 12th Street, Suite 100
Oakland CA, 94607

Project: ARCO #4494, Oakland, Ca
Project Number: ARCO #4494, Oakland, CA
Project Manager: Scott Robinson

MLL0548
Reported:
01/10/03 11:51

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
MW-1	MLL0548-01	Water	12/12/02 15:45	12/13/02 16:40
MW-3	MLL0548-02	Water	12/12/02 13:15	12/13/02 16:40
MW-4	MLL0548-03	Water	12/12/02 12:45	12/13/02 16:40
MW-5	MLL0548-04	Water	12/12/02 14:35	12/13/02 16:40
MW-6	MLL0548-05	Water	12/12/02 15:00	12/13/02 16:40
MW-7	MLL0548-06	Water	12/12/02 14:00	12/13/02 16:40
RW-1	MLL0548-07	Water	12/12/02 15:25	12/13/02 16:40

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

URS Corporation
 500 12th Street, Suite 100
 Oakland CA, 94607

 Project: ARCO #4494, Oakland, Ca
 Project Number: ARCO #4494, Oakland, CA
 Project Manager: Scott Robinson

 MLL0548
 Reported:
 01/10/03 11:51

Total Petroleum Hydrocarbons as Gasoline and BTEX by EPA 8015B/8021B
Sequoia Analytical - Petaluma

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
MW-1 (MLL0548-01) Water Sampled: 12/12/02 15:45 Received: 12/13/02 16:40									
Gasoline Range Organics	630	500	ug/l	10	2120741	12/26/02	12/26/02	EPA 8015B/8021B	
Benzene	ND	5.0	"	"	"	"	"	"	
Toluene	ND	5.0	"	"	"	"	"	"	
Ethylbenzene	ND	5.0	"	"	"	"	"	"	
Xylenes (total)	ND	5.0	"	"	"	"	"	"	
Methyl tert-butyl ether	1300	25	"	"	"	"	"	"	
Surrogate: a,a,a-Trifluorotoluene		95 %	65-135		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		82 %	65-135		"	"	"	"	
MW-3 (MLL0548-02) Water Sampled: 12/12/02 13:15 Received: 12/13/02 16:40									
Gasoline Range Organics	ND	50	ug/l	1	2120741	12/26/02	12/26/02	EPA 8015B/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		97 %	65-135		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		83 %	65-135		"	"	"	"	
MW-4 (MLL0548-03) Water Sampled: 12/12/02 12:45 Received: 12/13/02 16:40									
Gasoline Range Organics	ND	50	ug/l	1	2120741	12/26/02	12/26/02	EPA 8015B/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		94 %	65-135		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		81 %	65-135		"	"	"	"	

URS Corporation
 500 12th Street, Suite 100
 Oakland CA, 94607

 Project: ARCO #4494, Oakland, Ca
 Project Number: ARCO #4494, Oakland, CA
 Project Manager: Scott Robinson

 MLL0548
Reported:
 01/10/03 11:51

Total Petroleum Hydrocarbons as Gasoline and BTEX by EPA 8015B/8021B
Sequoia Analytical - Petaluma

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
MW-5 (MLL0548-04) Water Sampled: 12/12/02 14:35 Received: 12/13/02 16:40									
Gasoline Range Organics	ND	50	ug/l	1	2120741	12/26/02	12/26/02	EPA 8015B/8021B	
Benzene	2.2	0.50	"	"	"	"	"	"	"
Toluene	4.7	0.50	"	"	"	"	"	"	"
Ethylbenzene	1.3	0.50	"	"	"	"	"	"	"
Xylenes (total)	6.8	0.50	"	"	"	"	"	"	"
Methyl tert-butyl ether	ND	2.5	"	"	"	"	"	"	"
<i>Surrogate: a,a,a-Trifluorotoluene</i>		78 %		65-135	"	"	"	"	"
<i>Surrogate: 4-Bromofluorobenzene</i>		80 %		65-135	"	"	"	"	"
MW-6 (MLL0548-05) Water Sampled: 12/12/02 15:00 Received: 12/13/02 16:40									
Gasoline Range Organics	65	50	ug/l	1	2120759	12/26/02	12/26/02	EPA 8015B/8021B	
Benzene	3.3	0.50	"	"	"	"	"	"	"
Toluene	8.4	0.50	"	"	"	"	"	"	"
Ethylbenzene	2.7	0.50	"	"	"	"	"	"	"
Xylenes (total)	14	0.50	"	"	"	"	"	"	"
Methyl tert-butyl ether	ND	2.5	"	"	"	"	"	"	"
<i>Surrogate: a,a,a-Trifluorotoluene</i>		93 %		65-135	"	"	"	"	"
<i>Surrogate: 4-Bromofluorobenzene</i>		93 %		65-135	"	"	"	"	"
MW-7 (MLL0548-06) Water Sampled: 12/12/02 14:00 Received: 12/13/02 16:40									
Gasoline Range Organics	75	50	ug/l	1	2120759	12/26/02	12/26/02	EPA 8015B/8021B	
Benzene	ND	0.50	"	"	"	"	"	"	"
Toluene	ND	0.50	"	"	"	"	"	"	"
Ethylbenzene	ND	0.50	"	"	"	"	"	"	"
Xylenes (total)	ND	0.50	"	"	"	"	"	"	"
Methyl tert-butyl ether	160	2.5	"	"	"	"	"	"	"
<i>Surrogate: a,a,a-Trifluorotoluene</i>		94 %		65-135	"	"	"	"	"
<i>Surrogate: 4-Bromofluorobenzene</i>		83 %		65-135	"	"	"	"	"

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 500 12th Street, Suite 100
 Oakland CA, 94607

 Project: ARCO #4494, Oakland, Ca
 Project Number: ARCO #4494, Oakland, CA
 Project Manager: Scott Robinson

 MLL0548
Reported:
 01/10/03 11:51

Total Petroleum Hydrocarbons as Gasoline and BTEX by EPA 8015B/8021B
Sequoia Analytical - Petaluma

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
RW-1 (MLL0548-07) Water Sampled: 12/12/02 15:25 Received: 12/13/02 16:40									
Gasoline Range Organics	ND	50	ug/l	1	2120759	12/26/02	12/26/02	EPA 8015B/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	"	"	"	"	"	"	
<i>Surrogate: a,a,a-Trifluorotoluene</i>		91 %		65-135	"	"	"	"	
<i>Surrogate: 4-Bromofluorobenzene</i>		58 %		65-135	"	"	"	"	S-LIM
RW-1 (MLL0548-07RE1) Water Sampled: 12/12/02 15:25 Received: 12/13/02 16:40									
Gasoline Range Organics	ND	50	ug/l	1	2120772	12/27/02	12/27/02	EPA 8015B/8021B	HT-04
Benzene	ND	0.50	"	"	"	"	"	"	
Toluene	ND	0.50	"	"	"	"	"	"	
Ethylbenzene	ND	0.50	"	"	"	"	"	"	
Xylenes (total)	ND	0.50	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	2.5	"	"	"	"	"	"	
<i>Surrogate: a,a,a-Trifluorotoluene</i>		93 %		65-135	"	"	"	"	
<i>Surrogate: 4-Bromofluorobenzene</i>		105 %		65-135	"	"	"	"	



URS Corporation 500 12th Street, Suite 100 Oakland CA, 94607	Project: ARCO #4494, Oakland, Ca Project Number: ARCO #4494, Oakland, CA Project Manager: Scott Robinson	MLL0548 Reported: 01/10/03 11:51
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**Volatile Organic Compounds by EPA Method 8260B
Sequoia Analytical - Petaluma**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
MW-1 (MLL0548-01) Water Sampled: 12/12/02 15:45 Received: 12/13/02 16:40									HT-04
Methyl tert-butyl ether	870	25	ug/l	50	3010045	01/03/03	01/03/03	EPA 8260B	
Surrogate: Dibromofluoromethane		102 %	84-122		"	"	"	"	
MW-7 (MLL0548-06) Water Sampled: 12/12/02 14:00 Received: 12/13/02 16:40									HT-04
Methyl tert-butyl ether	130	5.0	ug/l	10	3010045	01/03/03	01/03/03	EPA 8260B	
Surrogate: Dibromofluoromethane		78 %	84-122		"	"	"	"	<i>S-LIM</i>

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 MLL0548
Reported:
 01/10/03 11:51

Total Petroleum Hydrocarbons as Gasoline and BTEX by EPA 8015B/8021B - Quality Control
Sequoia Analytical - Petaluma

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC %REC	%REC Limits	RPD RPD	RPD Limit	Notes
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Batch 2120741 - EPA 5030, waters
Blank (2120741-BLK1)

Prepared & Analyzed: 12/26/02

Gasoline Range Organics	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	"							
<i>Surrogate: a,a,a-Trifluorotoluene</i>	302		"	300		101	65-135			
<i>Surrogate: 4-Bromofluorobenzene</i>	246		"	300		82	65-135			

Laboratory Control Sample (2120741-BS1)

Prepared & Analyzed: 12/26/02

Gasoline Range Organics	2500	50	ug/l	2750		91	65-135			
Benzene	42.6	0.50	"	34.0		125	65-135			
Toluene	212	0.50	"	208		102	65-135			
Ethylbenzene	47.8	0.50	"	49.0		98	65-135			
Xylenes (total)	229	0.50	"	241		95	65-135			
Methyl tert-butyl ether	69.9	2.5	"	56.0		125	65-135			
<i>Surrogate: a,a,a-Trifluorotoluene</i>	324		"	300		108	65-135			
<i>Surrogate: 4-Bromofluorobenzene</i>	269		"	300		90	65-135			

Matrix Spike (2120741-MS1)

Source: P212486-06

Prepared: 12/26/02 Analyzed: 12/27/02

HT-04

Gasoline Range Organics	2360	50	ug/l	2750	32	85	65-135			
Benzene	41.5	0.50	"	34.0	ND	122	65-135			
Toluene	211	0.50	"	208	0.15	101	65-135			
Ethylbenzene	47.9	0.50	"	49.0	ND	98	65-135			
Xylenes (total)	231	0.50	"	241	0.30	96	65-135			
Methyl tert-butyl ether	95.4	2.5	"	56.0	34	110	65-135			
<i>Surrogate: a,a,a-Trifluorotoluene</i>	261		"	300		87	65-135			
<i>Surrogate: 4-Bromofluorobenzene</i>	244		"	300		81	65-135			

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Reported:
 01/10/03 11:51

Total Petroleum Hydrocarbons as Gasoline and BTEX by EPA 8015B/8021B - Quality Control
Sequoia Analytical - Petaluma

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 2120741 - EPA 5030, waters

Matrix Spike Dup (2120741-MSD1)	Source: P212486-06		Prepared: 12/26/02		Analyzed: 12/27/02		HT-04			
Gasoline Range Organics	2320	50	ug/l	2750	32	83	65-135	2	20	
Benzene	41.1	0.50	"	34.0	ND	121	65-135	1	20	
Toluene	209	0.50	"	208	0.15	100	65-135	1	20	
Ethylbenzene	47.6	0.50	"	49.0	ND	97	65-135	0.6	20	
Xylenes (total)	231	0.50	"	241	0.30	96	65-135	0	20	
Methyl tert-butyl ether	95.0	2.5	"	56.0	34	109	65-135	0.4	20	
<i>Surrogate: a,a,a-Trifluorotoluene</i>	258		"	300		86	65-135			
<i>Surrogate: 4-Bromofluorobenzene</i>	241		"	300		80	65-135			

Batch 2120759 - EPA 5030, waters

Blank (2120759-BLK1)	Prepared & Analyzed: 12/26/02									
Gasoline Range Organics	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	"							
<i>Surrogate: a,a,a-Trifluorotoluene</i>	282		"	300		94	65-135			
<i>Surrogate: 4-Bromofluorobenzene</i>	275		"	300		92	65-135			

Laboratory Control Sample (2120759-BS1)

	Prepared & Analyzed: 12/26/02									
Gasoline Range Organics	2350	50	ug/l	2750		85	65-135			
Benzene	40.3	0.50	"	34.0		119	65-135			
Toluene	205	0.50	"	208		99	65-135			
Ethylbenzene	43.6	0.50	"	49.0		89	65-135			
Xylenes (total)	222	0.50	"	241		92	65-135			
Methyl tert-butyl ether	73.4	2.5	"	56.0		131	65-135			
<i>Surrogate: a,a,a-Trifluorotoluene</i>	324		"	300		108	65-135			
<i>Surrogate: 4-Bromofluorobenzene</i>	287		"	300		96	65-135			

URS Corporation 500 12th Street, Suite 100 Oakland CA, 94607	Project: ARCO #4494, Oakland, Ca Project Number: ARCO #4494, Oakland, CA Project Manager: Scott Robinson	MLL0548 Reported: 01/10/03 11:51
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Total Petroleum Hydrocarbons as Gasoline and BTEX by EPA 8015B/8021B - Quality Control
Sequoia Analytical - Petaluma

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 2120759 - EPA 5030, waters

Matrix Spike (2120759-MS1)	Source: P212489-05			Prepared & Analyzed: 12/26/02						
Gasoline Range Organics	2330	50	ug/l	2750	19	84	65-135			
Benzene	40.1	0.50	"	34.0	ND	118	65-135			
Toluene	210	0.50	"	208	0.16	101	65-135			
Ethylbenzene	45.2	0.50	"	49.0	ND	92	65-135			
Xylenes (total)	223	0.50	"	241	ND	93	65-135			
Methyl tert-butyl ether	63.7	2.5	"	56.0	ND	114	65-135			
<i>Surrogate: a,a,a-Trifluorotoluene</i>	261		"	300		87	65-135			
<i>Surrogate: 4-Bromofluorobenzene</i>	269		"	300		90	65-135			

Matrix Spike Dup (2120759-MSD1)	Source: P212489-05			Prepared: 12/26/02 Analyzed: 12/27/02						HT-04
Gasoline Range Organics	2170	50	ug/l	2750	19	78	65-135	7	20	
Benzene	38.3	0.50	"	34.0	ND	113	65-135	5	20	
Toluene	202	0.50	"	208	0.16	97	65-135	4	20	
Ethylbenzene	43.7	0.50	"	49.0	ND	89	65-135	3	20	
Xylenes (total)	219	0.50	"	241	ND	91	65-135	2	20	
Methyl tert-butyl ether	61.6	2.5	"	56.0	ND	110	65-135	3	20	
<i>Surrogate: a,a,a-Trifluorotoluene</i>	250		"	300		83	65-135			
<i>Surrogate: 4-Bromofluorobenzene</i>	262		"	300		87	65-135			

Batch 2120772 - EPA 5030, waters

Blank (2120772-BLK1)	Prepared & Analyzed: 12/27/02									
Gasoline Range Organics	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	"							
<i>Surrogate: a,a,a-Trifluorotoluene</i>	283		"	300		94	65-135			
<i>Surrogate: 4-Bromofluorobenzene</i>	298		"	300		99	65-135			

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 01/10/03 11:51

Total Petroleum Hydrocarbons as Gasoline and BTEX by EPA 8015B/8021B - Quality Control
Sequoia Analytical - Petaluma

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 2120772 - EPA 5030, waters
Laboratory Control Sample (2120772-BS1)

Prepared & Analyzed: 12/27/02

Gasoline Range Organics	2570	50	ug/l	2750		93	65-135			
Benzene	40.9	0.50	"	34.0		120	65-135			
Toluene	208	0.50	"	208		100	65-135			
Ethylbenzene	43.4	0.50	"	49.0		89	65-135			
Xylenes (total)	221	0.50	"	241		92	65-135			
Methyl tert-butyl ether	53.3	2.5	"	56.0		95	65-135			
<hr/>										
Surrogate: a,a,a-Trifluorotoluene	319		"	300		106	65-135			
Surrogate: 4-Bromofluorobenzene	325		"	300		108	65-135			

Matrix Spike (2120772-MS1)

Source: P212485-08

Prepared & Analyzed: 12/27/02

Gasoline Range Organics	2500	50	ug/l	2750	120	87	65-135			
Benzene	40.6	0.50	"	34.0	ND	119	65-135			
Toluene	205	0.50	"	208	0.44	98	65-135			
Ethylbenzene	43.4	0.50	"	49.0	0.94	87	65-135			
Xylenes (total)	219	0.50	"	241	0.52	91	65-135			
Methyl tert-butyl ether	222	2.5	"	56.0	140	146	65-135			QM-07
<hr/>										
Surrogate: a,a,a-Trifluorotoluene	329		"	300		110	65-135			
Surrogate: 4-Bromofluorobenzene	301		"	300		100	65-135			

Matrix Spike Dup (2120772-MSD1)

Source: P212485-08

Prepared & Analyzed: 12/27/02

Gasoline Range Organics	2620	50	ug/l	2750	120	91	65-135	5	20	
Benzene	40.4	0.50	"	34.0	ND	119	65-135	0.5	20	
Toluene	207	0.50	"	208	0.44	99	65-135	1	20	
Ethylbenzene	43.6	0.50	"	49.0	0.94	87	65-135	0.5	20	
Xylenes (total)	221	0.50	"	241	0.52	91	65-135	0.9	20	
Methyl tert-butyl ether	213	2.5	"	56.0	140	130	65-135	4	20	
<hr/>										
Surrogate: a,a,a-Trifluorotoluene	324		"	300		108	65-135			
Surrogate: 4-Bromofluorobenzene	328		"	300		109	65-135			



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MLL0548
Reported:
01/10/03 11:51

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC %REC	%REC Limits	RPD	RPD Limit	Notes
Batch 3010045 - EPA 5030 waters										
Blank (3010045-BLK1)				Prepared & Analyzed: 01/03/03						
Methyl tert-butyl ether	ND	0.50	ug/l							
<i>Surrogate: Dibromofluoromethane</i>	5.39		"	5.80		93	84-122			
Laboratory Control Sample (3010045-BS1)				Prepared & Analyzed: 01/03/03						
Methyl tert-butyl ether	0.987	0.50	ug/l	1.00		99	79-118			
<i>Surrogate: Dibromofluoromethane</i>	5.15		"	5.80		89	84-122			
Matrix Spike (3010045-MS1)				Source: P212511-02		Prepared & Analyzed: 01/03/03				
Methyl tert-butyl ether	0.940	0.50	ug/l	1.00	ND	94	79-118			
<i>Surrogate: Dibromofluoromethane</i>	5.44		"	5.80		94	84-122			
Matrix Spike Dup (3010045-MSD1)				Source: P212511-02		Prepared & Analyzed: 01/03/03				
Methyl tert-butyl ether	0.949	0.50	ug/l	1.00	ND	95	79-118	1	20	
<i>Surrogate: Dibromofluoromethane</i>	5.48		"	5.80		94	84-122			



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Notes and Definitions

- HT-04 This sample was analyzed beyond the EPA recommended holding time. The results may still be useful for their intended purpose.
- QM-07 The spike recovery was outside control limits for the MS and/or MSD. The batch was accepted based on acceptable LCS recovery.
- S-LIM The surrogate recovery was outside control limits. The result may still be useful for its intended purpose.
- 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



Chain of Custody Record

Project Name _____
 BP BU/GEM CO Portfolio: _____
 BP Laboratory Contract Number: _____

On-site Time: _____ Temp: _____
 Off-site Time: _____ Temp: _____
 Sky Conditions: _____
 Meteorological Events: _____
 Wind Speed: _____ Direction: _____

Date: 12/12/02

Requested Due Date (mm/dd/yy) Standard M110548

Send To:
 Lab Name: SEQUOIA
 Lab Address: 685 Jarvis Dr.
 Morgan Hill, CA 95037
 Lab PM: Latonya Pelt
 Tele/Fax: 408-776-9600 / 408-782-6308
 Report Type & QC Level: Send EDF Reports
 BP/GEM Account No.: _____

BP/GEM Facility No.: _____
 BP/GEM Facility Address: 566 HEGENBERGER, OAKLAND, CA
 Site ID No. ARCO 4494
 Site Lat/Long: _____
 California Global ID #: T0600100104
 BP/GEM PM Contact: PAUL SUPPLE
 Address: _____
 Tele/Fax: _____

Consultant/Contractor: URS
 Address: 500 12th St., Ste. 200
 Oakland, CA 94609-4014
 e-mail EDD: syed_rehan@urscorp.com
 Consultant/Contractor Project No.: J5-00004494.01 00427
 Consultant Tele/Fax: 510-874-1735/510-874-3268
 Consultant/Contractor PM: Scott Robinson
 Invoice to: Consultant/Contractor or (BP/GEM) (Circle one)
 BP/GEM Work Release No: INTRIM -50443

Item No.	Sample Description	Time	Matrix				Laboratory No.	No. of containers	Preservatives				Requested Analysis				Sample Point Lat/Long and Comments
			Soil/Solid	Water/Liquid	Sediments	Air			Unpreserved	H ₂ SO ₄	HNO ₃	HCl	TPH-G/BTEX (8015/8021)	TPH-D (8015)	MTBE (8021)	MTBE, TAMS, ETBE, DIBP, TBA (8260)	
1	MW-1 ✓	1545	X				01	6					X	X			
2	MW-3 ✓	1315	X				02	6					X	X			
3	MW-4 ✓	1245	X				03	6					X	X			
4	MW-5 ✓	1435	X				04	6					X	X			
5	MW-6 ✓	1500	X				05	6					X	X			
6	MW-7 ✓	1400	X				06	6					X	X			
7	RW-1 ✓	1505	X				07	6					X	X			
8																	
9																	
10																	

Sampler's Name: BRAIN ALCONS Relinquished By / Affiliation: _____ Date: 12/13/02 Time: 10:12
 Sampler's Company: BRAIN TECH SERVICES _____ Date: 12/13/02 Time: 10:12
 Shipment Date: _____ Date: 12/13/02 Time: 14:40
 Shipment Method: _____
 Shipment Tracking No: _____

Special Instructions: Address Invoice to BP/GEM but send to URS for approval CONFIRM ALL MTBE HUG BY 8260

Body Seals in Place Yes No Temperature Blank Yes No Cooler Temperature on Receipt: 3 °F(C) Trip Blank Yes No

SEQUOIA ANALYTICAL SAMPLE RECEIPT LOG

CLIENT NAME: URS
 REC. BY (PRINT) HT
 WORKORDER: M126548

DATE Received at Lab: 2/13/02
 TIME Received at Lab: 1640
 LOGIN DATE: 12-17-01

Drinking water for regulatory purposes: YES/NO YES NO
 Wastewater for regulatory purposes: YES/NO YES NO

CIRCLE THE APPROPRIATE RESPONSE		LAB SAMPLE #	#	CLIENT ID	CONTAINER DESCRIPTION	SAMPLE MATRIX	DATE SAMPLED	REMARKS: CONDITION (ETC.)
1. Custody Seal(s)	Present / <input checked="" type="radio"/> Absent Intact / Broken*			Mw1	Gva (HCl)		12/13/01	Lot 8 2218050
2. Chain-of-Custody	<input checked="" type="radio"/> Present / Absent*			3				
3. Traffic Reports or Packing List:	Present / <input checked="" type="radio"/> Absent			4				
4. Airbill:	Airbill / Sticker Present / <input checked="" type="radio"/> Absent			5				
5. Airbill #:				6				
6. Sample Labels:	<input checked="" type="radio"/> Present / Absent			7				
7. Sample IDs:	<input checked="" type="radio"/> Listed / Not Listed on Chain-of-Custody			RW1				
8. Sample Condition:	<input checked="" type="radio"/> Intact / Broken* / Leaking*							
9. Does information on custody reports, traffic reports and sample labels agree?	<input checked="" type="radio"/> Yes / No*							
10. Sample received within hold time:	<input checked="" type="radio"/> Yes / No*							
11. Proper Preservatives used:	<input checked="" type="radio"/> Yes / No*							
12. Temp Rec. at Lab:	<u>3°C</u>							
(Acceptance range for samples requiring thermal pres.: 4±2°C)	<input checked="" type="radio"/> Yes / No**							
**Exception (if any):								

*If Circled, contact Project Manager and attach record of resolution.

ATTACHMENT C

HISTORIC GROUNDWATER DATA

Table 2
Liquid Surface Elevation Data

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

Well Number	Date Gauged	Well Elevation (feet, MSL)	Depth to Water (feet, TOC)	Depth to Liquid (feet, TOC)	SPH Thickness (feet)	Liquid Surface Elevation (feet, MSL)
MW-1	06/06/90	105.31	6.65	6.05	0.00	98.66
	08/16/90		7.00	7.00	0.00	98.31
	08/21/90		7.05	7.05	0.00	98.26
	09/07/90		7.24	7.24	0.00	98.07
	11/20/90		7.46	7.46	0.00	97.85
	11/29/90		7.40	7.40	0.00	97.91
	12/19/90		6.99	6.99	0.00	98.32
	01/29/91		7.23	7.23	0.00	98.08
	02/27/91		7.45	7.45	0.00	97.86
	03/07/91		6.96	6.96	0.00	98.35
	03/26/91		6.02	6.02	0.00	99.29
	05/02/91		7.04	7.04	0.00	98.27
	06/27/91		6.71	6.71	0.00	98.60
	07/24/91		6.91	6.91	0.00	98.40
	08/22/91		6.85	6.85	0.00	98.46
	09/30/91		7.04	7.04	0.00	98.27
	10/17/91		7.22	7.22	0.00	98.09
	11/21/91		7.17	7.17	0.00	98.14
	12/18/91		7.46	7.46	0.00	97.85
	01/19/92	7.44	7.44	0.00	97.87	
	02/20/92	6.25	6.25	0.00	99.06	
	03/20/92	6.40	6.40	0.00	98.91	
	04/20/92	6.88	6.88	0.00	98.43	
	05/19/92	7.10	7.10	0.00	98.21	
	06/08/92	7.22	7.22	0.00	98.09	
	07/15/92	106.10	7.92	7.92	0.00	97.39
	08/06/92		7.29	7.29	0.00	98.81
	10/29/92		7.34	7.34	0.00	98.76
	11/23/92		8.15	8.15	0.00	97.95
	08/16/93		7.23	7.23	0.00	98.87
	11/17/93		7.51	7.51	0.00	98.59
	02/21/94		6.56	6.56	0.00	99.54
	05/11/94		6.57	6.57	0.00	99.53
08/12/94	7.12		7.12	0.00	98.98	
11/17/94	6.85		6.85	0.00	99.28	
02/22/95	7.35		7.35	0.00	98.75	
05/24/95	7.07	7.07	0.00	99.03		
08/23/95	7.10	7.10	0.00	99.00		
11/17/95	7.72	7.72	0.00	98.38		
MW-2	06/06/90	105.78	9.92*	9.00	0.92	95.86
	08/16/90		NM	NM	0.17	NM
	08/21/90		NM	NM	0.17	NM
	09/07/90		9.34*	9.17	0.17	96.44
	11/20/90		9.20*	9.2	Sheen	96.58
	11/29/90		9.92*	9.92	Sheen	95.86
	12/19/90		8.95	8.95	0/00	96.83
	01/29/91		9.01	9.01	Sheen	96.77
	02/27/91		9.14	9.14	Sheen	96.64
	03/07/91		8.94	8.94	Sheen	96.84
	03/26/91		8.11	8.11	Sheen	97.67
05/02/91	8.72	8.72	0	97.06		

Table 2 (continued)
Liquid Surface Elevation Data

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

Well Number	Date Gauged	Well Elevation (feet, MSL)	Depth to Water (feet, TOC)	Depth to Liquid (feet, TOC)	SPH Thickness (feet)	Liquid Surface Elevation (feet, MSL)	
MW-2	06/27/91		9.20	9.2	Sheen	96.58	
(cont.)	07/24/91		9.25	9.25	0.00	96.53	
	08/22/91		9.20	9.20	0.00	96.58	
	09/30/91		9.31	9.31	Sheen	96.47	
	10/17/91		9.39	9.39	Sheen	96.39	
	11/21/91		9.20	9.2	0	96.58	
	12/18/91		9.23	9.23	Sheen	96.55	
	01/19/92		9.96**	9.96	Skimmer	95.82	
	02/20/92		9.13**	9.13	Skimmer	96.65	
	03/20/92		9.31**	9.31	Skimmer	96.47	
	04/20/92		9.69	9.69	Skimmer	96.09	
	05/19/92		9.92	9.92	Skimmer	95.86	
	06/08/92		9.84	9.84	Skimmer	95.94	
	07/15/92		10.19	10.19	Skimmer	95.59	
	08/06/92	106.57	10.05	10.05	Skimmer	96.52	
	10/29/92		10.00	10.00	Skimmer	96.57	
	11/23/92		9.88	9.87	0.01	96.69	
	12/08/92		-----Well Destroyed-----				
MW-3	08/16/90	105.51	8.87	8.87	0.00	96.64	
	08/21/90		8.85	8.85	0.00	96.66	
	09/07/90		8.98	8.98	0.00	96.53	
	11/20/90		9.10	9.10	0.00	96.41	
	11/29/90		9.05	9.05	0.00	96.46	
	12/19/90		8.67	8.67	0.00	96.84	
	01/29/91		8.96	8.96	0.00	96.55	
	02/27/91		8.71	8.71	0.00	96.80	
	03/07/91		8.49	8.49	0.00	97.02	
	03/26/91		7.65	7.65	0.00	97.86	
	05/02/91		8.62	8.62	0.00	96.89	
	06/27/91		8.94	8.94	0.00	96.57	
	07/24/91		8.96	8.96	0.00	96.55	
	08/22/91		8.92	8.92	0.00	96.59	
	09/30/91		9.04	9.04	0.00	96.47	
	10/17/91		9.12	9.12	0.00	96.39	
	11/21/91		8.92	8.92	0.00	96.59	
	12/18/91		8.97	8.97	0.00	96.54	
	01/19/92		8.69	8.69	0.00	96.82	
	02/20/92		7.78	7.78	0.00	97.73	
	03/20/92		8.15	8.15	0.00	97.36	
	04/20/92		8.57	8.57	0.00	96.94	
	05/19/92		8.76	8.76	0.00	96.75	
	06/08/92		8.74	8.74	0.00	96.77	
	07/15/92		9.12	9.12	0.00	96.39	
	08/06/92	106.29	8.95	8.95	0.00	97.34	
	10/29/92		8.78	8.78	0.00	97.51	
	11/23/92		9.91	9.91	0.00	96.38	
	08/16/93		8.62	8.62	0.00	97.67	
	11/17/93		8.72	8.72	0.00	97.57	
	02/21/94		7.91	7.91	0.00	98.38	
	05/11/94		8.09	8.09	0.00	98.20	

Table 2 (continued)
Liquid Surface Elevation Data

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

Well Number	Date Gauged	Well Elevation (feet, MSL)	Depth to Water (feet, TOC)	Depth to Liquid (feet, TOC)	SPH Thickness (feet)	Liquid Surface Elevation (feet, MSL)
MW-3 (cont.)	08/12/94		8.78	8.78	0.00	97.51
	11/17/94		8.45	8.45	0.00	97.84
	02/22/95		8.95	8.95	0.00	97.34
	05/24/95		8.67	8.67	0.00	97.62
	08/23/95		9.17	9.17	0.00	97.12
	11/17/95		9.39	9.39	0.00	96.90
MW-4	08/16/90	106.61	8.16	8.16	0.00	98.45
	08/21/90		8.22	8.22	0.00	98.39
	09/07/90		8.39	8.39	0.00	98.22
	11/20/90		8.57	8.57	0.00	98.04
	11/29/90		8.53	8.53	0.00	98.08
	12/19/90		8.13	8.13	0.00	98.48
	01/29/91		8.66	8.66	0.00	97.95
	02/27/91		8.44	8.44	0.00	98.17
	03/07/91		8.18	8.18	0.00	98.43
	03/26/91		7.56	7.56	0.00	99.05
	05/02/91		8.25	8.25	0.00	98.36
	06/27/91		7.75	7.75	0.00	98.86
	07/24/91		8.12	8.12	0.00	98.49
	08/22/91		7.98	7.98	0.00	98.63
	09/30/91		8.26	8.26	0.00	98.35
	10/17/91		8.42	8.42	0.00	98.19
	11/21/91		8.65	8.65	0.00	97.96
	12/18/91		8.77	8.77	0.00	97.84
	01/19/92		8.42	8.42	0.00	98.19
	02/20/92		7.60	7.60	0.00	99.01
	03/20/92		7.61	7.61	0.00	99.00
	04/20/92		8.15	8.15	0.00	98.46
	05/19/92		8.14	8.14	0.00	98.47
	06/08/92		8.40	8.40	0.00	98.21
	07/15/92		8.72	8.72	0.00	97.89
	08/06/92	107.40	8.52	8.52	0.00	98.88
	10/29/92		8.63	8.63	0.00	98.77
	11/23/92		8.75	8.75	0.00	98.65
	08/16/93		8.69	8.69	0.00	98.71
	11/17/93		9.11	9.11	0.00	98.29
02/21/94		8.16	8.16	0.00	99.24	
05/11/94		8.29	8.29	0.00	99.11	
08/12/94		8.75	8.75	0.00	98.65	
11/17/94		8.40	8.40	0.00	99.00	
02/22/95		8.72	8.72	0.00	98.68	
05/24/95		8.63	8.63	0.00	98.77	
08/23/95		6.50	6.50	0.00	100.90	
11/17/95		9.15	9.15	0.00	98.25	
MW-5	08/06/92	105.19	7.19	7.19	0.00	98.00
	10/29/92		6.99	6.99	0.00	98.20
	11/23/92		6.90	6.90	0.00	98.29
	08/16/93		7.06	7.06	0.00	98.13
	11/17/93		6.91	6.91	0.00	98.28
	02/21/94		5.52	5.52	0.00	99.67
	05/11/94		6.18	6.18	0.00	99.01
	08/12/94		6.81	6.81	0.00	98.38
	11/17/94		5.38	5.38	0.00	99.81
	02/22/95		6.25	6.25	0.00	98.94

Table 2 (continued)
Liquid Surface Elevation Data

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

Well Number	Date Gauged	Well Elevation (feet, MSL)	Depth to Water (feet, TOC)	Depth to Liquid (feet, TOC)	SPH Thickness (feet)	Liquid Surface Elevation (feet, MSL)
MW-5 (cont.)	05/24/95		6.30	6.30	0.00	98.89
	08/23/95		6.90	6.90	0.00	98.29
	11/17/95		7.02	7.02	0.00	98.17
MW-6	08/06/92	105.07	7.01	7.01	0.00	98.06
	10/29/92		6.70	6.70	0.00	98.37
	11/23/92		6.75	6.75	0.00	98.32
	08/16/93		6.71	6.71	0.00	98.36
	11/17/93		6.67	6.67	0.00	98.40
	02/21/94		5.31	5.31	0.00	99.76
	05/11/94		5.98	5.98	0.00	99.09
	08/12/94		6.60	6.60	0.00	98.47
	11/17/94		5.09	5.09	0.00	99.98
	02/22/95		5.85	5.85	0.00	99.22
	05/24/95		5.92	5.92	0.00	99.15
	08/23/95		6.50	6.50	0.00	98.57
	11/17/95		6.75	6.75	0.00	98.32
	MW-6	08/06/92	105.52	8.28	8.28	0.00
10/29/92			8.62	8.62	0.00	96.90
11/23/92			8.21	8.21	0.00	97.31
08/16/93			8.11	8.11	0.00	97.41
11/17/93			8.11	8.11	0.00	97.41
02/21/94			7.34	7.34	0.00	98.18
05/11/94			7.45	7.45	0.00	98.07
08/12/94			8.13	8.13	0.00	97.39
11/17/94			7.90	7.90	0.00	97.62
02/22/95			8.40	8.40	0.00	97.12
05/24/95			8.29	8.29	0.00	97.23
08/23/95			8.60	8.60	0.00	96.92
11/17/95			8.73	8.73	0.00	96.79
RW-1		08/16/93	NM			
	11/17/93					
	02/21/94		7.69	7.69	0.00	NM
	05/11/94		7.96	7.96	0.00	NM
	08/12/94		7.58	7.58	0.00	NM
	11/17/94		7.66	7.66	0.00	NM
	02/22/95		8.00	8.00	0.00	NM
	05/24/95		8.10	8.10	0.00	NM
	08/23/95		8.67	8.67	0.00	NM
	11/17/95		9.15	9.15	0.00	NM

MSL = Mean sea level
TOC = Top of casing
* = Separate-phase hydrocarbons present in well.
** = Skimmer installed (12/24/91).
NM = Not measured

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

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

Well Number	Date Sampled	TPPH as Gasoline (ppb)	Benzene (ppb)	Toluene (ppb)	Ethyl-benzene (ppb)	Xylenes (ppb)	TEPH as Diesel (ppb)	Total Oil and Grease (ppm)	
MW-1	06/19/90	<50	<0.50	<0.50	<0.50	<0.50	<0.50	<5000	
	08/16/90	<20	<0.50	<0.50	<0.50	<0.50	N/A	N/A	
	09/07/90	N/A	N/A	N/A	N/A	N/A	N/A	<5000	
	11/29/90	<50	<0.50	0.7	<0.50	<0.50	N/A	N/A	
	03/07/91	<50	<0.30	<0.30	<0.30	<0.30	N/A	N/A	
	06/27/91	<50	<0.30	<0.30	<0.30	<0.30	N/A	N/A	
	09/30/91	<50	<0.30	<0.30	<0.30	<0.30	N/A	N/A	
	12/18/91	<50	<0.30	<0.30	<0.30	<0.30	N/A	N/A	
	03/20/92	<50	<0.50	<0.50	<0.50	<0.50	N/A	N/A	
	06/08/92	<50	<0.50	<0.50	<0.50	<0.50	N/A	N/A	
	08/06/92	<50	<0.50	<0.50	<0.50	<0.50	N/A	N/A	
	10/29/92	<50	<0.5	<0.5	<0.5	<0.5	N/A	N/A	
	08/16/93	<50	<0.5	<0.5	<0.5	<0.5	N/A	N/A	
	11/17/93	<50	<0.5	<0.5	<0.5	<0.5	N/A	N/A	
	02/22/94	<50	<0.5	<0.5	<0.5	<0.5	N/A	N/A	
	05/11/94	<50	<0.5	<0.5	<0.5	<0.5	N/A	N/A	
	08/12/94	<50	<0.5	<0.5	<0.5	<0.5	N/A	N/A	
	11/17/94	<50	<0.5	<0.5	<0.5	<0.5	N/A	N/A	
	02/22/95	Well Sampled Annually							
	05/24/95	<50	<0.50	<0.50	<0.50	<0.50	N/A	N/A	
08/23/95	Well Sampled Annually								
11/17/95	Well Sampled Annually								
MW-2	06/19/90	-----0.92 foot of Separate-Phase Hydrocarbons-----							
	08/16/90	-----0.17 foot of Separate-Phase Hydrocarbons-----							
	09/07/90	-----Separate-Phase Hydrocarbons-----							
	11/29/90	-----Separate-Phase Hydrocarbons-----							
	03/07/91	-----Separate-Phase Hydrocarbons-----							
	06/27/91	-----Separate-Phase Hydrocarbons-----							
	09/30/91	-----Separate-Phase Hydrocarbons-----							
	12/18/91	-----Separate-Phase Hydrocarbons-----							
	03/20/92	48,000	2,000	580	2,300	7,000	N/A	N/A	
	06/08/92	43,000	2,900	940	240	5,100	N/A	N/A	
08/06/92	78,000	2,500	6,700	2,900	16,000	N/A	N/A		
10/29/92	NS	NS	NS	NS	NS	NS	NS		
12/08/92	-----Well Destroyed-----								
MW-3	06/19/90	<20	<0.50	<0.50	<0.50	<0.50	N/A	N/A	
	08/16/90	N/A	N/A	N/A	N/A	N/A	N/A	<5,000	
	09/07/90	<50	<0.50	<0.50	<0.50	<0.50	N/A	N/A	
	11/29/90	<50	<0.50	<0.50	<0.50	<0.50	N/A	N/A	
	03/07/91	<50	<30	<30	<30	<30	N/A	N/A	
	06/27/91	<30	<30	<30	<30	<30	N/A	N/A	
	09/30/91	<30	<30	<30	<30	<30	N/A	N/A	
	12/18/91	<30	<30	<30	<30	<30	N/A	N/A	
	03/20/92	<50	<0.50	<0.50	<0.50	<0.50	N/A	N/A	
	06/08/92	<50	<0.50	<0.50	<0.50	<0.50	N/A	N/A	
	08/06/92	<50	<0.50	<0.50	<0.50	<0.50	N/A	N/A	
	10/29/92	<50	<0.5	<0.5	<0.5	<0.5	N/A	N/A	
	08/16/93	<50	<0.5	<0.5	<0.5	<0.5	N/A	N/A	
	11/17/93	<50	<0.5	<0.5	<0.5	<0.5	N/A	N/A	

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

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

Well Number	Date Sampled	TPPH as Gasoline (ppb)	Benzene (ppb)	Toluene (ppb)	Ethylbenzene (ppb)	Xylenes (ppb)	TEPH as Diesel (ppb)	Total Oil and Grease (ppm)
MW-3 (cont.)	02/22/94	<50	<0.5	<0.5	<0.5	<0.5	N/A	N/A
	05/11/94	<50	<0.5	<0.5	<0.5	<0.5	N/A	N/A
	08/12/94	<50	<0.5	<0.5	<0.5	<0.5	N/A	N/A
	11/17/94	<50	<0.5	<0.5	<0.5	<0.5	N/A	N/A
	02/22/95	-----Well Sampled Annually-----						
	05/24/95	<50	<0.50	<0.50	<0.50	<0.50	N/A	N/A
	08/23/95	-----Well Sampled Annually-----						
	11/17/95	-----Well Sampled Annually-----						
MW-4	08/16/90	<20	<0.50	<0.50	<0.50	<0.50	N/A	N/A
	09/07/90	N/A	N/A	N/A	N/A	N/A	N/A	<5,000
	11/29/90	<50	<0.50	<0.50	<0.50	<0.50	N/A	N/A
	03/07/91	<50	<0.30	<0.30	<0.30	<0.30	N/A	N/A
	06/27/91	<50	0.75	1.1	<0.30	1.6	N/A	N/A
	09/30/91	<50	<0.30	<0.30	<0.30	<0.30	N/A	N/A
	12/18/91	<50	0.83	1.2	<0.30	0.58	N/A	N/A
	03/20/92	<50	<0.50	<0.50	<0.50	<0.50	N/A	N/A
	06/08/92	<50	<0.50	<0.50	<0.50	<0.50	N/A	N/A
	08/06/92	<50	<0.50	<0.50	<0.50	<0.50	N/A	N/A
	10/29/92	<50	<0.5	<0.5	<0.5	<0.5	N/A	N/A
	08/16/93	<50	<0.5	<0.5	<0.5	<0.5	N/A	N/A
	11/17/93	<50	<0.5	<0.5	<0.5	<0.5	N/A	N/A
	02/22/94	<50	<0.5	<0.5	<0.5	<0.5	N/A	N/A
	05/11/94	<50	<0.5	<0.5	<0.5	<0.5	N/A	N/A
	08/12/94	<50	<0.5	<0.5	<0.5	<0.5	N/A	N/A
	11/17/94	<50	<0.5	<0.5	<0.5	<0.5	N/A	N/A
	02/22/95	-----Well Sampled Annually-----						
	05/24/95	<50	<0.50	<0.50	<0.50	<0.50	N/A	N/A
	08/23/95	-----Well Sampled Annually-----						
11/17/95	-----Well Sampled Annually-----							
MW-5	08/06/92	<50	<0.50	<0.50	<0.50	<0.50	N/A	N/A
	10/29/92	<50	<0.5	<0.5	<0.5	<0.5	N/A	N/A
	08/16/93	<50	<0.5	<0.5	<0.5	<0.5	N/A	N/A
	11/17/93	<50	<0.5	<0.5	<0.5	<0.5	N/A	N/A
	02/22/94	<50	<0.5	<0.5	<0.5	<0.5	N/A	N/A
	05/11/94	<50	<0.5	<0.5	<0.5	<0.5	N/A	N/A
	08/12/94	<50	<0.5	<0.5	<0.5	<0.5	N/A	N/A
	11/17/94	<50	<0.5	<0.5	<0.5	<0.5	N/A	N/A
	02/22/95	-----Well Sampled Annually-----						
	05/24/95	<50	<0.50	<0.50	<0.50	<0.50	N/A	N/A
	08/23/95	-----Well Sampled Annually-----						
11/17/95	-----Well Sampled Annually-----							
MW-6	08/06/92	<50	<0.50	<0.50	<0.50	<0.50	N/A	N/A
	10/29/92	<50	<0.5	<0.5	<0.5	<0.5	N/A	N/A
	08/16/93	<50	<0.5	<0.5	<0.5	<0.5	N/A	N/A
	11/17/93	<50	<0.5	<0.5	<0.5	<0.5	N/A	N/A
	02/22/94	<50	<0.5	<0.5	<0.5	<0.5	N/A	N/A
	05/11/94	<50	<0.5	<0.5	<0.5	<0.5	N/A	N/A
	08/12/94	<50	<0.5	<0.5	<0.5	<0.5	N/A	N/A
	11/17/94	<50	<0.5	<0.5	<0.5	<0.5	N/A	N/A
	02/22/95	-----Well Sampled Annually-----						

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

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

Well Number	Date Sampled	TPPH as Gasoline (ppb)	Benzene (ppb)	Toluene (ppb)	Ethyl-benzene (ppb)	Xylenes (ppb)	TEPH as Diesel (ppb)	Total Oil and Grease (ppm)
MW-6 (cont.)	05/24/95	<50	<0.50	<0.50	<0.50	<0.50	N/A	N/A
	08/23/95	-----Well Sampled Annually-----						
	11/17/95	-----Well Sampled Annually-----						
MW-7	08/06/92	<50	<0.50	<0.50	<0.50	<0.50	N/A	N/A
	10/29/92	<50	<0.5	<0.5	<0.5	<0.5	N/A	N/A
	08/16/93	<50	<0.5	<0.5	<0.5	<0.5	N/A	N/A
	11/17/93	<50	<0.5	<0.5	<0.5	<0.5	N/A	N/A
	02/22/94	<50	<0.5	<0.5	<0.5	<0.5	N/A	N/A
	05/11/94	<50	<0.5	<0.5	<0.5	<0.5	N/A	N/A
	08/12/94	<50	<0.5	<0.5	<0.5	<0.5	N/A	N/A
	11/17/94	<50	<0.5	<0.5	<0.5	<0.5	N/A	N/A
	02/22/95	-----Well Sampled Annually-----						
	05/24/95	<50	<0.50	<0.50	<0.50	<0.50	N/A	N/A
	08/23/95	-----Well Sampled Annually-----						
	11/17/95	-----Well Sampled Annually-----						
	RW-1	08/16/93	NS	NS	NS	NS	NS	NS
11/17/93		NS	NS	NS	NS	NS	NS	NS
02/22/94		280	2,100	19	40	66	N/A	N/A
05/11/94		3,300	32	28	87	310	N/A	N/A
08/12/94		4,600	42	59	190	400	N/A	N/A
11/17/94		1,400	56	21	28	210	N/A	N/A
02/22/95		8,100	140	<10	550	560	N/A	N/A
05/24/95		940	53	0.75	11	1.4	N/A	N/A
08/23/95		620	2.1	2.3	0.67	0.67	N/A	N/A
11/17/95		1,100	7.6	21	46	180	N/A	N/A

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

Table 4
Groundwater Analytical Data
Total Methyl t-Butyl Ether

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

Well Number	Date Sampled	Methyl t-Butyl Ether (ppb)
MW-1	08/23/95	NS
MW-2	08/23/95	NS
MW-3	08/23/95	NS
MW-4	08/23/95	NS
MW-5	08/23/95	NS
MW-6	08/23/95	NS
MW-7	08/23/95	NS
RW-1	08/23/95	13

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

ATTACHMENT D

EDCC REPORT AND EDF/GEOWELL SUBMITTAL CONFIRMATION

Error Summary Log

02/17/03

EDF 1.2i All files present in deliverable.

Laboratory:	Sequoia Analytical Laboratories, Inc., Morgan Hill, CA
Project Name:	ARCO #4494, Oakland, Ca
Work Order Number:	MLL0548
Global ID:	T0600100104
Lab Report Number:	MLL0548011020031151

Report Summary

Labreport	Sampid	Labsampid	Mtrx	QC	Anmcode	Exmcode	Logdate	Extdate	Anadate	Lablotctl	Run	Sub
MLL05480110200 31151	MW-1	MLL054801	W	CS	SW8020F	SW5030	12/12/02	12/26/02	12/26/02	2120741	1	SEQP
MLL05480110200 31151	MW-1	MLL054801	W	CS	SW8260B	SW5030	12/12/02	01/03/03	01/03/03	3010045	1	SEQP
MLL05480110200 31151	MW-3	MLL054802	W	CS	SW8020F	SW5030	12/12/02	12/26/02	12/26/02	2120741	1	SEQP
MLL05480110200 31151	MW-4	MLL054803	W	CS	SW8020F	SW5030	12/12/02	12/26/02	12/26/02	2120741	1	SEQP
MLL05480110200 31151	MW-5	MLL054804	W	CS	SW8020F	SW5030	12/12/02	12/26/02	12/26/02	2120741	1	SEQP
MLL05480110200 31151	MW-6	MLL054805	W	CS	SW8020F	SW5030	12/12/02	12/26/02	12/26/02	2120759	1	SEQP
MLL05480110200 31151	MW-7	MLL054806	W	CS	SW8020F	SW5030	12/12/02	12/26/02	12/26/02	2120759	1	SEQP
MLL05480110200 31151	MW-7	MLL054806	W	CS	SW8260B	SW5030	12/12/02	01/03/03	01/03/03	3010045	1	SEQP
MLL05480110200 31151	RW-1	MLL054807	W	CS	SW8020F	SW5030	12/12/02	12/26/02	12/26/02	2120759	1	SEQP
MLL05480110200 31151	RW-1	MLL054807R1	W	CS	SW8020F	SW5030	12/12/02	12/27/02	12/27/02	2120772	1	SEQP
		P21248508	W	NC	SW8020F	SW5030	//	12/27/02	12/27/02	2120772	1	SEQP
		P21248606	W	NC	SW8020F	SW5030	//	12/26/02	12/27/02	2120741	1	SEQP
		P21248905	W	NC	SW8020F	SW5030	//	12/26/02	12/26/02	2120759	1	SEQP
		P21251102	W	NC	SW8260B	SW5030	//	01/03/03	01/03/03	3010045	1	SEQP
		2120741BS1	WQ	BS1	SW8020F	SW5030	//	12/26/02	12/26/02	2120741	1	SEQP
		2120741BLK1	WQ	LB1	SW8020F	SW5030	//	12/26/02	12/26/02	2120741	1	SEQP
		2120741MS1	W	MS1	SW8020F	SW5030	//	12/26/02	12/27/02	2120741	1	SEQP
		2120741MSD1	W	SD1	SW8020F	SW5030	//	12/26/02	12/27/02	2120741	1	SEQP
		2120759BS1	WQ	BS1	SW8020F	SW5030	//	12/26/02	12/26/02	2120759	1	SEQP
		2120759BLK1	WQ	LB1	SW8020F	SW5030	//	12/26/02	12/26/02	2120759	1	SEQP
		2120759MS1	W	MS1	SW8020F	SW5030	//	12/26/02	12/26/02	2120759	1	SEQP
		2120759MSD1	W	SD1	SW8020F	SW5030	//	12/26/02	12/27/02	2120759	1	SEQP
		2120772BS1	WQ	BS1	SW8020F	SW5030	//	12/27/02	12/27/02	2120772	1	SEQP
		2120772BLK1	WQ	LB1	SW8020F	SW5030	//	12/27/02	12/27/02	2120772	1	SEQP
		2120772MS1	W	MS1	SW8020F	SW5030	//	12/27/02	12/27/02	2120772	1	SEQP
		2120772MSD1	W	SD1	SW8020F	SW5030	//	12/27/02	12/27/02	2120772	1	SEQP
		3010045BS1	WQ	BS1	SW8260B	SW5030	//	01/03/03	01/03/03	3010045	1	SEQP
		3010045BLK1	WQ	LB1	SW8260B	SW5030	//	01/03/03	01/03/03	3010045	1	SEQP

Report Summary

Labreport	Sampid	Labsampid	Mtrx	QC	Anmcode	Exmcode	Logdate	Extdate	Anadate	Lablotctl	Run	Sub
		3010045MS1	W	MS1	SW8260B	SW5030	//	01/03/03	01/03/03	3010045	1	SEQP
		3010045MSD1	W	SD1	SW8260B	SW5030	//	01/03/03	01/03/03	3010045	1	SEQP

EDFSAMP: Error Summary Log

02/17/03

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

EDFTEST: Error Summary Log

02/17/03

Error type	Labsampid	Qccode	Anmcode	Exmcode	Anadate	Run number
There are no errors in this data file					11	0

EDFRES: Error Summary Log

02/17/03

Error type	Labsampid	Qccode	Matrix	Anmcode	Pvccode	Anadate	Run number	Parlabel
Warning: extra parameter	2120741MS1	MS1	W	SW8020F	PR	12/27/02	1	AAATFBZME
Warning: extra parameter	2120741MS1	MS1	W	SW8020F	PR	12/27/02	1	BR4FBZ
Warning: extra parameter	2120741MS1	MS1	W	SW8020F	PR	12/27/02	1	MTBE
Warning: extra parameter	2120741MSD1	SD1	W	SW8020F	PR	12/27/02	1	AAATFBZME
Warning: extra parameter	2120741MSD1	SD1	W	SW8020F	PR	12/27/02	1	BR4FBZ
Warning: extra parameter	2120741MSD1	SD1	W	SW8020F	PR	12/27/02	1	MTBE
Warning: extra parameter	2120759MS1	MS1	W	SW8020F	PR	12/26/02	1	AAATFBZME
Warning: extra parameter	2120759MS1	MS1	W	SW8020F	PR	12/26/02	1	BR4FBZ
Warning: extra parameter	2120759MS1	MS1	W	SW8020F	PR	12/26/02	1	MTBE
Warning: extra parameter	2120759MSD1	SD1	W	SW8020F	PR	12/27/02	1	AAATFBZME
Warning: extra parameter	2120759MSD1	SD1	W	SW8020F	PR	12/27/02	1	BR4FBZ
Warning: extra parameter	2120759MSD1	SD1	W	SW8020F	PR	12/27/02	1	MTBE
Warning: extra parameter	2120772MS1	MS1	W	SW8020F	PR	12/27/02	1	AAATFBZME
Warning: extra parameter	2120772MS1	MS1	W	SW8020F	PR	12/27/02	1	BR4FBZ
Warning: extra parameter	2120772MS1	MS1	W	SW8020F	PR	12/27/02	1	MTBE
Warning: extra parameter	2120772MSD1	SD1	W	SW8020F	PR	12/27/02	1	AAATFBZME
Warning: extra parameter	2120772MSD1	SD1	W	SW8020F	PR	12/27/02	1	BR4FBZ
Warning: extra parameter	2120772MSD1	SD1	W	SW8020F	PR	12/27/02	1	MTBE
Warning: extra parameter	MLL054801	CS	W	SW8020F	PR	12/26/02	1	AAATFBZME
Warning: extra parameter	MLL054801	CS	W	SW8020F	PR	12/26/02	1	BR4FBZ
Warning: extra parameter	MLL054801	CS	W	SW8020F	PR	12/26/02	1	MTBE
Warning: extra parameter	MLL054802	CS	W	SW8020F	PR	12/26/02	1	AAATFBZME
Warning: extra parameter	MLL054802	CS	W	SW8020F	PR	12/26/02	1	BR4FBZ
Warning: extra parameter	MLL054802	CS	W	SW8020F	PR	12/26/02	1	MTBE
Warning: extra parameter	MLL054803	CS	W	SW8020F	PR	12/26/02	1	AAATFBZME

Error type	Labsampid	Qccode	Matrix	Anmcode	Pvccode	Anadate	Run number	Parlabel
Warning: extra parameter	MLL054803	CS	W	SW8020F	PR	12/26/02	1	BR4FBZ
Warning: extra parameter	MLL054803	CS	W	SW8020F	PR	12/26/02	1	MTBE
Warning: extra parameter	MLL054804	CS	W	SW8020F	PR	12/26/02	1	AAATFBZME
Warning: extra parameter	MLL054804	CS	W	SW8020F	PR	12/26/02	1	BR4FBZ
Warning: extra parameter	MLL054804	CS	W	SW8020F	PR	12/26/02	1	MTBE
Warning: extra parameter	MLL054805	CS	W	SW8020F	PR	12/26/02	1	AAATFBZME
Warning: extra parameter	MLL054805	CS	W	SW8020F	PR	12/26/02	1	BR4FBZ
Warning: extra parameter	MLL054805	CS	W	SW8020F	PR	12/26/02	1	MTBE
Warning: extra parameter	MLL054806	CS	W	SW8020F	PR	12/26/02	1	AAATFBZME
Warning: extra parameter	MLL054806	CS	W	SW8020F	PR	12/26/02	1	BR4FBZ
Warning: extra parameter	MLL054806	CS	W	SW8020F	PR	12/26/02	1	MTBE
Warning: extra parameter	MLL054807	CS	W	SW8020F	PR	12/26/02	1	AAATFBZME
Warning: extra parameter	MLL054807	CS	W	SW8020F	PR	12/26/02	1	BR4FBZ
Warning: extra parameter	MLL054807	CS	W	SW8020F	PR	12/26/02	1	MTBE
Warning: extra parameter	MLL054807R1	CS	W	SW8020F	PR	12/27/02	1	AAATFBZME
Warning: extra parameter	MLL054807R1	CS	W	SW8020F	PR	12/27/02	1	BR4FBZ
Warning: extra parameter	MLL054807R1	CS	W	SW8020F	PR	12/27/02	1	MTBE
Warning: extra parameter	P21248508	NC	W	SW8020F	PR	12/27/02	1	AAATFBZME
Warning: extra parameter	P21248508	NC	W	SW8020F	PR	12/27/02	1	BR4FBZ
Warning: extra parameter	P21248508	NC	W	SW8020F	PR	12/27/02	1	MTBE
Warning: extra parameter	P21248606	NC	W	SW8020F	PR	12/27/02	1	AAATFBZME
Warning: extra parameter	P21248606	NC	W	SW8020F	PR	12/27/02	1	BR4FBZ
Warning: extra parameter	P21248606	NC	W	SW8020F	PR	12/27/02	1	MTBE
Warning: extra parameter	P21248905	NC	W	SW8020F	PR	12/26/02	1	AAATFBZME
Warning: extra parameter	P21248905	NC	W	SW8020F	PR	12/26/02	1	BR4FBZ
Warning: extra parameter	P21248905	NC	W	SW8020F	PR	12/26/02	1	MTBE
Warning: extra parameter	2120741BLK1	LB1	WQ	SW8020F	PR	12/26/02	1	AAATFBZME
Warning: extra parameter	2120741BLK1	LB1	WQ	SW8020F	PR	12/26/02	1	BR4FBZ
Warning: extra parameter	2120741BLK1	LB1	WQ	SW8020F	PR	12/26/02	1	MTBE

Error type	Labsampid	Qccode	Matrix	Anmcode	Pvccode	Anadate	Run number	Parlabel
Warning: extra parameter	2120741BS1	BS1	WQ	SW8020F	PR	12/26/02	1	AAATFBZME
Warning: extra parameter	2120741BS1	BS1	WQ	SW8020F	PR	12/26/02	1	BR4FBZ
Warning: extra parameter	2120741BS1	BS1	WQ	SW8020F	PR	12/26/02	1	MTBE
Warning: extra parameter	2120759BLK1	LB1	WQ	SW8020F	PR	12/26/02	1	AAATFBZME
Warning: extra parameter	2120759BLK1	LB1	WQ	SW8020F	PR	12/26/02	1	BR4FBZ
Warning: extra parameter	2120759BLK1	LB1	WQ	SW8020F	PR	12/26/02	1	MTBE
Warning: extra parameter	2120759BS1	BS1	WQ	SW8020F	PR	12/26/02	1	AAATFBZME
Warning: extra parameter	2120759BS1	BS1	WQ	SW8020F	PR	12/26/02	1	BR4FBZ
Warning: extra parameter	2120759BS1	BS1	WQ	SW8020F	PR	12/26/02	1	MTBE
Warning: extra parameter	2120772BLK1	LB1	WQ	SW8020F	PR	12/27/02	1	AAATFBZME
Warning: extra parameter	2120772BLK1	LB1	WQ	SW8020F	PR	12/27/02	1	BR4FBZ
Warning: extra parameter	2120772BLK1	LB1	WQ	SW8020F	PR	12/27/02	1	MTBE
Warning: extra parameter	2120772BS1	BS1	WQ	SW8020F	PR	12/27/02	1	AAATFBZME
Warning: extra parameter	2120772BS1	BS1	WQ	SW8020F	PR	12/27/02	1	BR4FBZ
Warning: extra parameter	2120772BS1	BS1	WQ	SW8020F	PR	12/27/02	1	MTBE

EDFQC: Error Summary Log

02/17/03

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

EDFCL: Error Summary Log

02/17/03

Error type	Cirevdate	Anmcode	Exmcode	Parlabel	Cicode
There are no errors in this data file	//				

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Facility Name: ARCO

Submittal Title: Fourth Quarter 2002 Groundwater Monitoring Report for Site #4494

Submittal Type: GW Monitoring Report

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#4494

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