



October 17, 2003

RO 204

Alameda County  
OCT 20 2003  
Environmental Health

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

**Re: Third Quarter 2003 Groundwater Monitoring Report  
ARCO Service Station #4494  
566 Hegenberger Road  
Oakland, California  
URS Project # 38486329**

Dear Mr. Gholami:

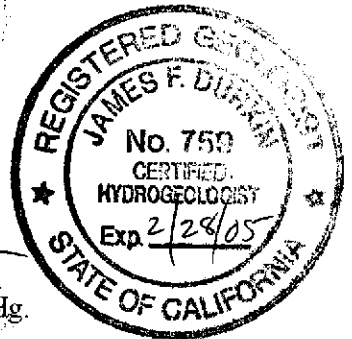
On behalf of Atlantic Richfield Company (ARCO – an affiliated company of the Group Environmental Management Company), URS Corporation (URS) is submitting the *Third Quarter 2003 Groundwater Monitoring Report* for ARCO Service Station #4494, located at 566 Hegenberger Road, Oakland, California.

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

Sincerely,

**URS CORPORATION**

Scott Robinson  
Project Manager

  
James F. Durkin, C.Hg.  
Senior Geologist

Enclosure: Third Quarter 2003 Groundwater Monitoring Report

cc: Mr. Paul Supple, ARCO, (electronic copy uploaded to ENFOS)



Atlantic Richfield Company  
(a BP affiliated company)

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



**Alameda County**

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RE: Third Quarter 2003 Groundwater Monitoring Report  
ARCO Service Station #4494  
566 Hegenberger Road  
Oakland, CA  
URS Project#38486329

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**

**THIRD QUARTER 2003  
GROUNDWATER MONITORING**

ARCO SERVICE STATION #4494  
566 HEGENBERGER ROAD  
OAKLAND, CALIFORNIA

*Prepared for*  
Atlantic Richfield Company

October 17, 2003

**URS**

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

38486329

Date: October 17, 2003

Quarter: 3Q 03

**ATLANTIC RICHFIELD COMPANY QUARTERLY GROUNDWATER MONITORING REPORT**

Facility No.: 4494 Address: 566 Hegenberger Road, Oakland, California  
ARCO Environmental Business Manager: Paul Supple  
Consulting Co./Contact Person: URS Corporation / Scott Robinson  
Consultant Project No.: 38486329  
Primary Agency/Regulatory ID No. Alameda County Health Services Agency  
(ACHCSA)/STID #3854

**WORK PERFORMED THIS QUARTER (Third – 2003):**

1. Performed third quarter 2003 monitoring event on September 22, 2003.
2. Prepared and submitted second quarter 2003 groundwater monitoring report.
3. Re-surveyed vertical elevations for all wells onsite on July 18, 2003.

**WORK PROPOSED FOR NEXT QUARTER (Fourth– 2003):**

1. Perform fourth quarter 2003 groundwater monitoring event.
2. Prepare and submit third quarter 2003 groundwater monitoring report.
3. Reduce the sampling frequency of RW-1 and MW-3 through MW-6 from quarterly to semi-annually.

Current Phase of Project: GW monitoring/sampling  
Frequency of Groundwater Sampling: Wells MW-1, MW-3 through MW-7, RW-1 quarterly  
Frequency of Groundwater Monitoring: Quarterly  
Is Free Product (FP) Present On-Site: No  
Bulk Soil Removed to Date: 1,550 cubic yards  
Current Remediation Techniques: None  
Approximate Depth to Groundwater: 6.43 (MW-6) to 9.48 (MW-3) feet  
Groundwater Gradient (direction): Northwest  
Groundwater Gradient (magnitude): 0.017 feet per foot

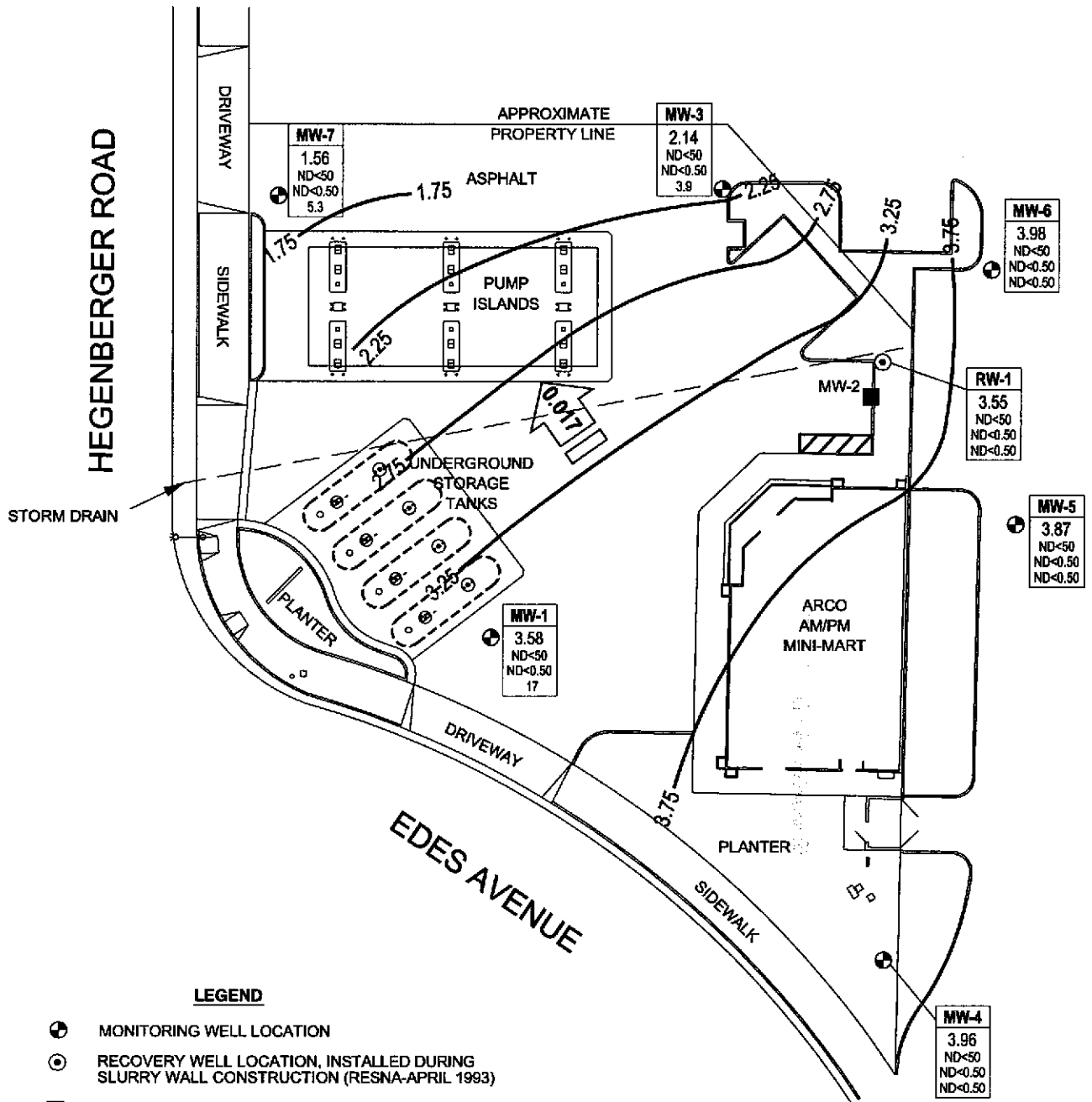
**DISCUSSION:**

TPH-g and benzene were not detected above their respective reporting limits in any of the seven wells sampled this quarter. MTBE was detected above the laboratory reporting limit in three wells at concentrations ranging from 3.9 µg/L (MW-3) to 17 µg/L (MW-1). TBA was detected above the laboratory reporting limit in two wells at concentrations of 170 µg/L (MW-7) and 250 µg/L (MW-1).

**ATTACHMENTS:**

- Figure 1 – Groundwater Elevation Contour and Analytical Summary Map – September 22, 2003
- Table 1 – Groundwater Elevation and Analytical Data
- Table 2 – Groundwater Flow Direction and Gradient
- Table 3 – Fuel Oxygenate Analytical Data
- 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 – Well Survey Data
- Attachment E – EDCC Report and EDF/Geowell Submittal Confirmation

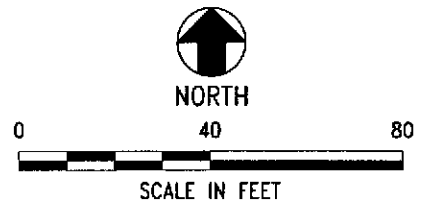
X:\x\_enu\waste\BP\_GEMISites\Scott Robinson\Paul\_Supple\4494\Monitoring\Ctr\_3\_2003\Drawings\GWEC-AS\_9-22.dwg, 10/15/2003 10:08:27 AM, JKMT, URS



**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<br>Benzene<br>MTBE | CONCENTRATION OF TPH-g, BENZENE, AND MTBE IN MICROGRAMS PER LITER (µg/L) |
- \* 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)
  - 3.25 — GROUNDWATER ELEVATION CONTOUR (FT/MSL)

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



Project No. 38486329  
 Arco Service Station 4494  
 566 Hegenberger Road  
 Oakland, California

**GROUNDWATER ELEVATION CONTOUR  
 AND ANALYTICAL SUMMARY MAP**  
 Third Quarter 2003 (September 22, 2003)

FIGURE  
 1

**Table 1  
Groundwater Elevation and Analytical Data**

ARCO Service Station #4494  
566 Hegenberger Road  
Oakland, California

Well Number	Date Sampled	Top of Riser Elevation <sup>f</sup> (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)	Dissolved Oxygen (mg/L)	pH
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 <sup>a</sup>	NA	NA
	09/28/00		7.07	99.03	ND<500	ND<5.0	ND<5.0	ND<5.0	ND<5.0	13000/18,800 <sup>a</sup>	NA	NA
	12/17/00		6.95	99.15	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	10,600	NA	NA
	03/28/01		6.88	99.22	ND<500	ND<5.0	ND<5.0	ND<5.0	ND<5.0	16,900	NA	NA
	06/21/01		7.18	98.92	ND<1,000	ND<10	ND<10	ND<10	ND<10	3,400	NA	NA
	09/23/01		7.11	98.99	ND<1,000	ND<10	ND<10	ND<10	ND<10	2200/1800 <sup>a</sup>	NA	NA
	12/31/01		6.91	99.19	ND<5,000	ND<50	ND<50	ND<50	ND<50	14,000	NA	NA
	03/14/02		6.85	99.25	ND<5,000	ND<50	ND<50	ND<50	ND<50	6,200	NA	NA
	04/17/02		5.89	100.21	ND<5,000	ND<50	ND<50	ND<50	ND<50	4,500	NA	NA
	08/08/02		7.19	98.91	230 <sup>b</sup>	ND<2.0	ND<2.0	ND<2.0	ND<2.0	660/440 <sup>a</sup>	4.5	7.8
	12/12/02		7.28	98.82	630 <sup>d</sup>	ND<5.0	ND<5.0	ND<5.0	ND<5.0	1300/830 <sup>a</sup>	1.9	7.6
	03/20/03 <sup>e</sup>		6.91	99.19	1,100	ND<5.0	ND<5.0	ND<5.0	ND<5.0	780	2.2	8.5
	06/23/03		7.61	98.49	530	ND<5.0	ND<5.0	ND<5.0	ND<5.0	260	1.2	7.6
	<b>09/22/03</b>		<b>11.36</b>	<b>7.78</b>	<b>3.58</b>	<b>ND&lt;50</b>	<b>ND&lt;0.50</b>	<b>ND&lt;0.50</b>	<b>ND&lt;0.50</b>	<b>ND&lt;0.50</b>	<b>17</b>	<b>3.5</b>
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 <sup>a</sup>	NA	NA
	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 <sup>a</sup>	NA	NA
	12/17/00		9.31	96.98	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<2.5	NA	NA
	03/28/01		9.23	97.06	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	7.42	NA	NA
	06/21/01		9.58	96.71	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<2.5	NA	NA
	09/23/01		9.76	96.53	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<2.5	NA	NA
	12/31/01		8.78	97.51	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<2.5	NA	NA
	03/14/02		9.25	97.04	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	4	NA	NA
	04/17/02		8.44	97.85	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<2.5	NA	NA
	08/08/02		9.63	96.66	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<2.5	2.6	7.9
	12/12/02		9.51	96.78	ND<50 <sup>d</sup>	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<2.5	3.0	6.8
	03/20/03 <sup>e</sup>		9.40	96.89	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	6.1	1.2	7.0
	06/23/03		9.36	96.93	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	5.2	0.9	8.2
	<b>09/22/03</b>		<b>11.62</b>	<b>9.48</b>	<b>2.14</b>	<b>ND&lt;50</b>	<b>ND&lt;0.50</b>	<b>ND&lt;0.50</b>	<b>ND&lt;0.50</b>	<b>ND&lt;0.50</b>	<b>3.9</b>	<b>1.4</b>

**Table 1**  
**Groundwater Elevation and Analytical Data**

ARCO Service Station #4494  
566 Hegenberger Road  
Oakland, California

Well Number	Date Sampled	Top of Riser Elevation <sup>f</sup> (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)	Dissolved Oxygen (mg/L)	pH	
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	NA	NA	
	09/28/00		8.70	98.70	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<1.0	ND<2.5	NA	NA	
	12/17/00		8.53	98.87	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<2.5	NA	NA	
	03/28/01		8.59	98.81	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<2.5	NA	NA	
	06/21/01		8.79	98.61	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<2.5	NA	NA	
	09/23/01		8.67	98.73	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<2.5	NA	NA	
	12/31/01		8.03	99.37	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<2.5	NA	NA	
	03/14/02		8.48	98.92	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<2.5	NA	NA	
	04/17/02		7.79	99.61	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	5.6	NA	NA	
	08/08/02		8.90	98.50	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<2.5	4.5	8.0	
	12/12/02		9.07	98.33	ND<50 <sup>d</sup>	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<2.5	5.6	6.2	
	03/20/03 <sup>e</sup>		8.85	98.55	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	0.50	ND<0.50	4.8	7.8
	06/23/03		9.26	98.14	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	6.3	7.5
	<b>09/22/03</b>	<b>13.18</b>	<b>9.22</b>	<b>3.96</b>	<b>ND&lt;50</b>	<b>ND&lt;0.50</b>	<b>ND&lt;0.50</b>	<b>ND&lt;0.50</b>	<b>ND&lt;0.50</b>	<b>ND&lt;0.50</b>	<b>7.4</b>	<b>8.0</b>	
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	NA	NA	
	09/28/00		6.82	98.37	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<1.0	ND<2.5	NA	NA	
	12/17/00		6.50	98.69	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<2.5	NA	NA	
	03/28/01		6.34	98.85	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<2.5	NA	NA	
	06/21/01		7.88	97.31	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<2.5	NA	NA	
	09/23/01		6.98	98.21	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<2.5	NA	NA	
	12/31/01		5.01	100.18	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<2.5	NA	NA	
	03/14/02		5.93	99.26	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<2.5	NA	NA	
	04/17/02		5.37	99.82	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	8.5	NA	NA	
	08/08/02		6.85	98.34	ND<50 <sup>b</sup>	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<2.5	0.7	7.3	
	12/12/02		6.53	98.66	ND<50 <sup>d</sup>	2.2	4.7	1.3	6.8	ND<2.5	1.3	7.0	
	03/20/03 <sup>e</sup>		6.40	98.79	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	2.7	7.1
	06/23/03		6.72	98.47	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	1.3	7.2
	<b>09/22/03</b>	<b>10.63</b>	<b>6.76</b>	<b>3.87</b>	<b>ND&lt;50</b>	<b>ND&lt;0.50</b>	<b>ND&lt;0.50</b>	<b>ND&lt;0.50</b>	<b>ND&lt;0.50</b>	<b>ND&lt;0.50</b>	<b>1.7</b>	<b>7.2</b>	



**Table 1**  
**Groundwater Elevation and Analytical Data**

ARCO Service Station #4494  
566 Hegenberger Road  
Oakland, California

Well Number	Date Sampled	Top of Riser Elevation <sup>f</sup> (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)	Dissolved Oxygen (mg/L)	pH	
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	NA	NA	
	09/28/00		6.45	98.62	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<1.0	ND<2.5	NA	NA	
	12/17/00		6.26	98.81	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<2.5	NA	NA	
	03/28/01		6.10	98.97	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<2.5	NA	NA	
	06/21/01		7.68	97.39	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<2.5	NA	NA	
	09/23/01		6.72	98.35	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<2.5	NA	NA	
	12/23/01		4.68	100.39	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<2.5	NA	NA	
	03/14/02		5.55	99.52	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<2.5	NA	NA	
	04/17/02		4.96	100.11	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	7	NA	NA	
	08/08/02		6.46	98.61	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<2.5	0.7	7.3	
	12/12/02		6.18	98.89	65 <sup>d</sup>	3.3	8.4	2.7	14	ND<2.5	1.1	6.9	
	03/20/03 <sup>e</sup>		6.18	98.89	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	2.2	7.0
	06/23/03		6.15	98.92	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	2.0	7.1
	<b>09/22/03</b>		<b>10.41</b>	<b>6.43</b>	<b>3.98</b>	<b>ND&lt;50</b>	<b>ND&lt;0.50</b>	<b>ND&lt;0.50</b>	<b>ND&lt;0.50</b>	<b>ND&lt;0.50</b>	<b>ND&lt;0.50</b>	<b>2.5</b>	<b>7.0</b>
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 <sup>a</sup>	NA	NA	
	09/28/00		8.75	96.77	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<1.0	136/261 <sup>a</sup>	NA	NA	
	12/17/00		8.62	96.90	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	27.1	NA	NA	
	03/28/01		8.66	96.86	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	51.5	NA	NA	
	06/21/01		8.84	96.68	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	53	NA	NA	
	09/23/01		8.75	96.77	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	35/21 <sup>a</sup>	NA	NA	
	12/23/01		7.79	97.73	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	440	NA	NA	
	03/14/02		8.30	97.22	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	18	NA	NA	
	04/17/02		7.43	98.09	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	67	NA	NA	
	08/08/02		8.61	96.91	55 <sup>b</sup>	ND<0.5	ND<0.5	ND<0.5	ND<0.5	130/100 <sup>a</sup>	1.1	7.1	
	12/12/02		**	8.55	NC	75 <sup>d</sup>	ND<0.5	ND<0.5	ND<0.5	ND<0.5	160/130 <sup>a</sup>	1.2	7.0
	03/20/03 <sup>e</sup>		8.38	NC	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	32	2.2	7.2
	06/23/03		8.37	NC	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	14	0.8	7.1
	<b>09/22/03</b>		<b>10.51</b>	<b>8.95</b>	<b>1.56</b>	<b>ND&lt;50</b>	<b>ND&lt;0.50</b>	<b>ND&lt;0.50</b>	<b>ND&lt;0.50</b>	<b>ND&lt;0.50</b>	<b>5.3</b>	<b>2.2</b>	<b>7.2</b>

**Table 1**  
**Groundwater Elevation and Analytical Data**

ARCO Service Station #4494  
566 Hegenberger Road  
Oakland, California

Well Number	Date Sampled	Top of Riser Elevation <sup>f</sup> (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)	Dissolved Oxygen (mg/L)	pH
RW-1	06/20/00	NE	8.21	NC	ND<50	ND<0.5	1.1	ND<0.5	ND<1.0	ND<10	NA	NA
	09/28/00		8.28	NC	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<1.0	ND<2.5	NA	NA
	12/17/00		8.29	NC	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<2.5	NA	NA
	03/28/01		8.16	NC	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<2.5	NA	NA
	06/21/01		9.37	NC	160	5.1	ND<0.5	1.1	3.2	ND<2.5	NA	NA
	09/23/01		8.75	NC	57	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<2.5	NA	NA
	12/31/01		6.80	NC	520	3.1	ND<0.5	6.4	4.7	ND<2.5	NA	NA
	03/14/02		7.86	NC	240	3.7	ND<0.5	0.7	2.8	ND<2.5	NA	NA
	04/17/02		7.13	NC	ND<50	ND<0.5	1.6	ND<0.5	0.72	ND<2.5	NA	NA
	08/08/02		8.48	NC	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	3.7/ND<0.5 <sup>a,c</sup>	1.1	7.0
	12/12/02		8.63	NC	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<2.5	1.9	6.9
	03/20/03 <sup>e</sup>		8.08	NC	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	1.9	7.3
	06/23/03		8.28	NC	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	1.1	7.3
	<b>09/22/03</b>	<b>11.97</b>	<b>8.42</b>	<b>3.55</b>	<b>ND&lt;50</b>	<b>ND&lt;0.50</b>	<b>ND&lt;0.50</b>	<b>ND&lt;0.50</b>	<b>ND&lt;0.50</b>	<b>ND&lt;0.50</b>	<b>1.8</b>	<b>7.1</b>

TPH = Total Petroleum Hydrocarbons analyzed by EPA Method 8015M. (prior to 3/20/03)

MTBE = Methyl tertiary butyl ether analyzed by EPA Method 8021B unless otherwise noted. (prior to 3/20/03)

µg/L = Micrograms per liter

mg/L = Milligrams per liter

NC = Not calculated

NE = Not surveyed/No elevation

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

NA = Not available, not applicable, or not analyzed

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

e = TPH-g, BTEX, and MTBE analyzed by EPA method 8260B beginning on 2003 sampling event (03/20/03)

f = Top of casing elevations were re-surveyed on July 18, 2003 by URS Corporation of Pleasant Hill, CA

\*\* = 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
03/20/03	North-Northwest	0.016
06/23/03	Northwest	0.014
<b>09/22/03</b>	<b>Northwest</b>	<b>0.017</b>

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.

**Table 3  
Fuel Oxygenate Analytical Data**

ARCO Service Station # 4494  
566 Hegenberger Road  
Oakland, California

Well Number	Date Sampled	Ethanol (µg/L)	TBA (µg/L)	MTBE (µg/L)	DIPE (µg/L)	ETBE (µg/L)	TAME (µg/L)	1,2-DCA (µg/L)	EDB (µg/L)
MW-1	03/20/03	ND<1,000	640	780	ND<5.0	ND<5.0	ND<5.0	NA	NA
	06/23/03	ND<1,000	ND<200	260	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
	09/22/03	ND<100	250	17	ND<0.50	ND<0.50	ND<0.50	NA	NA
MW-3	03/20/03	ND<100	ND<20	601	ND<0.50	ND<0.50	1.1	NA	NA
	06/23/03	ND<100	ND<20	5.2	ND<0.50	ND<0.50	0.75	ND<0.50	ND<0.50
	09/22/03	ND<100	ND<20	3.9	ND<0.50	ND<0.50	ND<0.50	NA	NA
MW-4	03/20/03	ND<100	ND<20	ND<0.50	ND<0.50	ND<0.50	ND<0.50	NA	NA
	06/23/03	ND<100	ND<20	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50
	09/22/03	ND<100	ND<20	ND<0.50	ND<0.50	ND<0.50	ND<0.50	NA	NA
MW-5	03/20/03	ND<100	ND<20	ND<0.50	ND<0.50	ND<0.50	ND<0.50	NA	NA
	06/23/03	ND<100	ND<20	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50
	09/22/03	ND<100	ND<20	ND<0.50	ND<0.50	ND<0.50	ND<0.50	NA	NA
MW-6	03/20/03	ND<100	ND<20	ND<0.50	ND<0.50	ND<0.50	ND<0.50	NA	NA
	06/23/03	ND<100	ND<20	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50
	09/22/03	ND<100	ND<20	ND<0.50	ND<0.50	ND<0.50	ND<0.50	NA	NA
MW-7	03/20/03	ND<100	ND<20	32	ND<0.50	ND<0.50	0.62	NA	NA
	06/23/03	ND<100	170	14	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50
	09/22/03	ND<100	170	5.3	ND<0.50	ND<0.50	ND<0.50	NA	NA
RW-1	03/20/03	ND<100	ND<20	ND<0.50	ND<0.50	ND<0.50	ND<0.50	NA	NA
	06/23/03	ND<100	ND<20	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50
	09/22/03	ND<100	ND<20	ND<0.50	ND<0.50	ND<0.50	ND<0.50	NA	NA

Note = All fuel oxygenate compounds analyzed using EPA Method 8260B  
TBA = tert-Butyl alcohol  
MTBE = Methyl tert-butyl ether  
DIPE = Di-isopropyl ether  
ETBE = Ethyl tert butyl ether  
TAME = tert-Amyl methyl ether  
1,2-DCA = 1,2-Dichloroethane  
EDB = 1,2-Dibromoethane  
µg/L = micrograms per liter  
ND< = Less than laboratory reporting limit  
NA = Not analyzed

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

## FIELD PROCEDURES

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### Sampling Procedures

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

## WELL GAUGING DATA

Project # 030922-MD2 Date 9/22/03 Client ARCO 4494

Site 566 Hagerberger 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 (OO)	
MW-1	4					7.78	22.96	↓	
MW-3	4					9.48	17.91		Np@7'
MW-4	4					9.22	16.61		Np@7'
MW-5	2					6.76	16.99		
MW-6	2					6.43	18.20		
MW-7	4					8.95	13.40		
RW-1	2					8.42	11.24		

## ARCO / BP WELL MONITORING DATA SHEET

BTS #: <u>030922-MD2</u>	Station # <u>Arco 4494</u>
Sampler: <u>John DeJong</u>	Date: <u>9/22/03</u>
Well I.D.: <u>Mw-1</u>	Well Diameter: 2 3 <u>(4)</u> 6 8
Total Well Depth: <u>22.96</u>	Depth to Water: <u>7.78</u>
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: <u>(RVC)</u> Grade	D.O. Meter (if req'd): <u>(YSI)</u> HACH

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

Purge Method: <u>Bailer</u> Disposable Bailer Positive Air Displacement <u>(Electric Submersible)</u> Extraction Pump Other: _____	Sampling Method: <u>Bailer</u> Disposable Bailer Extraction Port Other: _____
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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>9.9</u>	x	<u>3</u>	=	<u>29.7</u>	Gals.
1 Case Volume (Gals.)		Specified Volumes		Calculated Volume	

Time	Temp (°F)	pH	Conductivity (mS or μS)	Gals. Removed	Observations
<u>12:54</u>	<u>80.0</u>	<u>7.6</u>	<u>7580</u>	<u>10</u>	<u>clear, gas odor</u>
	<u>well dewatered @</u>			<u>14</u>	<u>DTW = 21.81</u>
<u>1505</u>	<u>87.1</u>	<u>7.7</u>	<u>18</u>	<u>---</u>	<u>DTW = 8.91</u>

Did well dewater? <u>(Yes)</u> No	Gallons actually evacuated: <u>14</u>
Sampling Time: <u>1505</u>	Sampling Date: <u>9/22/03</u>
Sample I.D.: <u>Mw-1</u>	Laboratory: Pace <u>(Sequoia)</u> Other _____
Analyzed for: <u>(IPH-C)</u> <u>(BTEX)</u> MTBE TPH-D	Other: <u>oxygnates</u> & <u>ETHANOL</u> all by 8260
D.O. (if req'd):	Pre-purge: _____ mg/L
	Post-purge: <u>(3.5)</u> mg/L
O.R.P. (if req'd):	Pre-purge: _____ mV
	Post-purge: _____ mV



## ARCO / BP WELL MONITORING DATA SHEET

BTS #: <u>030922-MD2</u>	Station # <u>Arco 4494</u>
Sampler: <u>John DeJong</u>	Date: <u>9/22/03</u>
Well I.D.: <u>MW-3</u>	Well Diameter: 2 3 <u>4</u> 6 8 _____
Total Well Depth: <u>17.91</u>	Depth to Water: <u>9.48</u>
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: <u>RVC</u> Grade	D.O. Meter (if req'd): <u>YSI</u> HACH

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

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

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

<u>No Purge</u>	X	_____	=	_____	Gals.
1 Case Volume (Gals.)		Specified Volumes		Calculated Volume	

Time	Temp (°F)	pH	Conductivity (mS or <u>µS</u> )	Gals. Removed	Observations
<u>1410</u>	<u>80.9</u>	<u>7.9</u>	<u>1677</u>	—	—

Did well dewater? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Gallons actually evacuated: <u>      </u>
Sampling Time: <u>1410</u>	Sampling Date: <u>9/22/03</u>
Sample I.D.: <u>MW-3</u>	Laboratory: Pace <u>Sequoia</u> Other _____
Analyzed for: <u>TPH-G</u> <u>BTEX</u> MTBE TPH-D Other: <u>Oxygens &amp; Ethanol all by 8260</u>	
D.O. (if req'd):	Pre-purge: _____ mg/L
	Post-purge: <u>1.4</u> mg/L
O.R.P. (if req'd):	Pre-purge: _____ mV
	Post-purge: _____ mV

## ARCO / BP WELL MONITORING DATA SHEET

BTS #: 030922-MD2	Station # Arco 4494
Sampler: John DeJong	Date: 9/22/03
Well I.D.: MW-4	Well Diameter: 2 3 <u>4</u> 6 8
Total Well Depth: 16.61	Depth to Water: 9.22
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: <u>RVC</u> Grade	D.O. Meter (if req'd): <u>YSI</u> HACH

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

Purge Method: <u>Bailer</u> Disposable Bailer Positive Air Displacement <del>Electric Submersible</del> Extraction Pump Other: _____	Sampling Method: <u>Bailer</u> Disposable Bailer Extraction Port Other: _____
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Top of Screen: \_\_\_\_\_ If well is listed as a no-purge, confirm that water level is below the top of screen. Otherwise, the well must be purged.

<u>4.8</u> No purge	<u>3</u>	=	<u>14.4</u> Gals.
1 Case Volume (Gals.)	Specified Volumes		Calculated Volume

Time	Temp (°F)	pH	Conductivity (mS or <u>µS</u> )	Gals. Removed	Observations
1310	77.4	8	1046	—	clear, no odor

Did well dewater? Yes  No  Gallons actually evacuated:       

Sampling Time: 1310 Sampling Date: 9/22/03

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

Analyzed for: TPH-G BTEX MTBE TPH-D Other: oxygens & Ethanol all by 8260

D.O. (if req'd):	Pre-purge:	mg/L	Post-purge:	7.4 mg/L
O.R.P. (if req'd):	Pre-purge:	mV	Post-purge:	mV

## ARCO / BP WELL MONITORING DATA SHEET

BTS #: <u>030922-MD2</u>	Station # <u>Arco 4494</u>
Sampler: <u>John DeJong</u>	Date: <u>9/22/03</u>
Well I.D.: <u>MW-5</u>	Well Diameter: <u>2</u> 3 4 6 8 _____
Total Well Depth: <u>16.99</u>	Depth to Water: <u>6.76</u>
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: <u>PVC</u> Grade	D.O. Meter (if req'd): <u>YSI</u> HACH

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

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

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

<u>1.6</u>	x	<u>3</u>	=	<u>4.8</u>	Gals.
1 Case Volume (Gals.)		Specified Volumes		Calculated Volume	

Time	Temp (°F)	pH	Conductivity (mS or <u>µS</u> )	Gals. Removed	Observations
1322	72.5	7.0	14	1.8	-sulfur odor, clear
1328	71.4	7.1	12	3.6	
1333	71.8	7.2	11	5.0	
					DTW = 6.91

Did well dewater? Yes  No       Gallons actually evacuated: 5.0

Sampling Time: 1340      Sampling Date: 9/22/03

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

Analyzed for: TPH-G BTEX MTBE TPH-D Other: Oxygenates + Ethanol all by 8260

D.O. (if req'd):	Pre-purge: _____ mg/L	Post-purge: <u>1.7</u> mg/L
O.R.P. (if req'd):	Pre-purge: _____ mV	Post-purge: _____ mV

## ARCO / BP WELL MONITORING DATA SHEET

BTS #: <u>030922-MD2</u>	Station # <u>Arco 4494</u>
Sampler: <u>John DeJong</u>	Date: <u>9/22/03</u>
Well I.D.: <u>MW-6</u>	Well Diameter: <u>(2)</u> 3 4 6 8
Total Well Depth: <u>18'20"</u>	Depth to Water: <u>6.43</u>
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: <u>RVC</u> Grade	D.O. Meter (if req'd): <u>YSI</u> HACH

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

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

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

Top of Screen: \_\_\_\_\_ 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
<u>1350</u>	<u>78.3</u>	<u>7.4</u>	<u>7174</u>	<u>2</u>	<u>clear, No odor</u>
<u>1355</u>	<u>76.2</u>	<u>7.0</u>	<u>6779</u>	<u>4</u>	
<u>1400</u>	<u>74.9</u>	<u>7.0</u>	<u>6391</u>	<u>6</u>	

Did well dewater? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Gallons actually evacuated: <u>6</u>
Sampling Time: <u>1400</u>	Sampling Date: <u>9/22/03</u>
Sample I.D.: <u>MW-6</u>	Laboratory: Pace <u>Sequoia</u> Other _____
Analyzed for: <u>TPH-G</u> <u>BTEX</u> MTBE TPH-D Other: <u>Oxygens &amp; Ethanol all by 8260</u>	
D.O. (if req'd):	Pre-purge: _____ mg/L
	Post-purge: <u>2.5</u> mg/L
O.R.P. (if req'd):	Pre-purge: _____ mV
	Post-purge: _____ mV

## ARCO / BP WELL MONITORING DATA SHEET

BTS #: <u>030922-MD2</u>	Station # <u>Arco 4494</u>
Sampler: <u>John DeJong</u>	Date: <u>9/22/03</u>
Well I.D.: <u>MW-7</u>	Well Diameter: 2 3 <u>4</u> 6 8
Total Well Depth: <u>13.40</u>	Depth to Water: <u>8.95</u>
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: <u>PVC</u> Grade	D.O. Meter (if req'd): <u>YSI</u> HACH

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

Purge Method: <u>Bailer</u> <input checked="" type="checkbox"/> <del>Disposable Bailer</del> <input type="checkbox"/> Positive Air Displacement <input type="checkbox"/> Electric Submersible <input type="checkbox"/> Extraction Pump Other: _____	Sampling Method: <u>Bailer</u> <input checked="" type="checkbox"/> <del>Disposable Bailer</del> <input type="checkbox"/> Extraction Port Other: _____
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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>2.9</u>	x	<u>3</u>	=	<u>8.7</u>	Gals.
1 Case Volume (Gals.)		Specified Volumes		Calculated Volume	

Time	Temp (°F)	pH	Conductivity (mS or <u>µS</u> )	Gals. Removed	Observations
1423	83.4	7.2	3111	3	clear
1424	81.1	7.2	7339	6	yellow, strong gas odor!
1425	79.2	7.2	5788	9	

Did well dewater? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Gallons actually evacuated: <u>9</u>
Sampling Time: <u>1430</u>	Sampling Date: <u>9/22/03</u>
Sample I.D.: <u>MW-7</u>	Laboratory: Pace <u>Sequoia</u> Other _____
Analyzed for: <u>TPH-G</u> <u>BTEX</u> MTBE TPH-D Other: <u>oxygens + Ethanol all by 8260</u>	
D.O. (if req'd):	Pre-purge: _____ mg/L
	Post-purge: <u>2.2</u> mg/L
O.R.P. (if req'd):	Pre-purge: _____ mV
	Post-purge: _____ mV

## ARCO / BP WELL MONITORING DATA SHEET

BTS #: <u>030922-MD2</u>	Station # <u>Arco 4494</u>
Sampler: <u>John DeJong</u>	Date: <u>9/22/03</u>
Well I.D.: <u>Rw-1</u>	Well Diameter: <u>(2)</u> 3 4 6 8 _____
Total Well Depth: <u>11.24</u>	Depth to Water: <u>8.42</u>
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: <u>RVC</u> Grade	D.O. Meter (if req'd): <u>YSI</u> HACH

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

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

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

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

Time	Temp (°F)	pH	Conductivity (mS or <u>μS</u> )	Gals. Removed	Observations
1440	76.2	7.5	33	0.5	clear, slight gas odor
1441	76.5	7.3	31	1	
1443	75.2	7.1	24	1.5	DTW = 8.89

Did well dewater? Yes <input type="checkbox"/> <u>No</u>	Gallons actually evacuated: <u>1.5</u>
Sampling Time: <u>1450</u>	Sampling Date: <u>9/22/03</u>
Sample I.D.: <u>Rw-1</u>	Laboratory: Pace <u>Sequoia</u> Other _____
Analyzed for: <u>TPH-G</u> <u>BTEX</u> MTBE TPH-D Other: <u>oxygens + Ethanol all by 8260</u>	
D.O. (if req'd):	Pre-purge: _____ mg/L
	Post-purge: <u>1.6</u> mg/L
O.R.P. (if req'd):	Pre-purge: _____ mV
	Post-purge: _____ mV

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

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

The contractor performing this work is 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:

AKO 4494  
 Station #

566 Hegenbrayer Rd, Oakland  
 Station Address

Total Gallons Collected From Groundwater Monitoring Wells:  
36

added equip. \_\_\_\_\_ any other adjustments \_\_\_\_\_  
 rinse water 2

**TOTAL GALS.** loaded onto  
**RECOVERED** 38 BTS vehicle # 11

BTS event # \_\_\_\_\_ time \_\_\_\_\_ date \_\_\_\_\_  
030922-MD2 1530 9/22/03

signature John DeJong

\*\*\*\*\*

REC'D AT \_\_\_\_\_ time \_\_\_\_\_ date \_\_\_\_\_  
Blaine Tech Services 9/22/03  
 unloaded by signature John DeJong





**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.



7 October, 2003

Scott Robinson  
URS Corporation [Arco]  
500 12th Street, Suite 200  
Oakland, CA 94607

RE: ARCO #4494, Oakland, CA  
Work Order: MMI0660

Enclosed are the results of analyses for samples received by the laboratory on 09/23/03 14:35. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Theresa Allen  
Project Manager

CA ELAP Certificate #1210

URS Corporation [Arco]  
 500 12th Street, Suite 200  
 Oakland CA, 94607

 Project: ARCO #4494, Oakland, CA  
 Project Number: INTRIM-50443  
 Project Manager: Scott Robinson

 MMI0660  
**Reported:**  
 10/07/03 09:08

**ANALYTICAL REPORT FOR SAMPLES**

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
MW-1	MMI0660-01	Water	09/22/03 15:05	09/23/03 14:35
MW-3	MMI0660-02	Water	09/22/03 14:10	09/23/03 14:35
MW-4	MMI0660-03	Water	09/22/03 13:10	09/23/03 14:35
MW-5	MMI0660-04	Water	09/22/03 13:40	09/23/03 14:35
MW-6	MMI0660-05	Water	09/22/03 14:00	09/23/03 14:35
MW-7	MMI0660-06	Water	09/22/03 14:30	09/23/03 14:35
RW-1	MMI0660-07	Water	09/22/03 14:50	09/23/03 14:35
Trip Blank	MMI0660-08	Water	09/22/03 12:30	09/23/03 14:35

There were custody seal received with this project.

URS Corporation [Arco]  
 500 12th Street, Suite 200  
 Oakland CA, 94607

 Project: ARCO #4494, Oakland, CA  
 Project Number: INTRIM-50443  
 Project Manager: Scott Robinson

 MMI0660  
**Reported:**  
 10/07/03 09:08

### Volatile Organic Compounds by EPA Method 8260B

#### Sequoia Analytical - Morgan Hill

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Not
<b>MW-1 (MMI0660-01) Water    Sampled: 09/22/03 15:05    Received: 09/23/03 14:35</b>									
Ethanol	ND	100	ug/l	1	3I30001	09/30/03	09/30/03	EPA 8260B	O-
<b>tert-Butyl alcohol</b>	<b>250</b>	20	"	"	"	"	"	"	"
<b>Methyl tert-butyl ether</b>	<b>17</b>	0.50	"	"	"	"	"	"	"
Di-isopropyl ether	ND	0.50	"	"	"	"	"	"	"
Ethyl tert-butyl ether	ND	0.50	"	"	"	"	"	"	"
tert-Amyl methyl ether	ND	0.50	"	"	"	"	"	"	"
Benzene	ND	0.50	"	"	"	"	"	"	"
Toluene	ND	0.50	"	"	"	"	"	"	"
Ethylbenzene	ND	0.50	"	"	"	"	"	"	"
Xylenes (total)	ND	0.50	"	"	"	"	"	"	"
Gasoline Range Organics (C6-C10)	ND	50	"	"	"	"	"	"	"
<i>Surrogate: 1,2-Dichloroethane-d4</i>		96.8 %		78-129	"	"	"	"	O-
<b>MW-3 (MMI0660-02) Water    Sampled: 09/22/03 14:10    Received: 09/23/03 14:35</b>									
Ethanol	ND	100	ug/l	1	3I30001	09/30/03	09/30/03	EPA 8260B	O-
tert-Butyl alcohol	ND	20	"	"	"	"	"	"	"
<b>Methyl tert-butyl ether</b>	<b>3.9</b>	0.50	"	"	"	"	"	"	"
Di-isopropyl ether	ND	0.50	"	"	"	"	"	"	"
Ethyl tert-butyl ether	ND	0.50	"	"	"	"	"	"	"
tert-Amyl methyl ether	ND	0.50	"	"	"	"	"	"	"
Benzene	ND	0.50	"	"	"	"	"	"	"
Toluene	ND	0.50	"	"	"	"	"	"	"
Ethylbenzene	ND	0.50	"	"	"	"	"	"	"
Xylenes (total)	ND	0.50	"	"	"	"	"	"	"
Gasoline Range Organics (C6-C10)	ND	50	"	"	"	"	"	"	"
<i>Surrogate: 1,2-Dichloroethane-d4</i>		98.6 %		78-129	"	"	"	"	O-

URS Corporation [Arco]  
 500 12th Street, Suite 200  
 Oakland CA, 94607

 Project: ARCO #4494, Oakland, CA  
 Project Number: INTRIM-50443  
 Project Manager: Scott Robinson

 MMI0660  
**Reported:**  
 10/07/03 09:08

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

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Not
<b>MW-4 (MMI0660-03) Water    Sampled: 09/22/03 13:10    Received: 09/23/03 14:35</b>									
Ethanol	ND	100	ug/l	1	3I30001	09/30/03	09/30/03	EPA 8260B	O-
tert-Butyl alcohol	ND	20	"	"	"	"	"	"	"
Methyl tert-butyl ether	ND	0.50	"	"	"	"	"	"	"
Di-isopropyl ether	ND	0.50	"	"	"	"	"	"	"
Ethyl tert-butyl ether	ND	0.50	"	"	"	"	"	"	"
tert-Amyl methyl ether	ND	0.50	"	"	"	"	"	"	"
Benzene	ND	0.50	"	"	"	"	"	"	"
Toluene	ND	0.50	"	"	"	"	"	"	"
Ethylbenzene	ND	0.50	"	"	"	"	"	"	"
Xylenes (total)	ND	0.50	"	"	"	"	"	"	"
Gasoline Range Organics (C6-C10)	ND	50	"	"	"	"	"	"	"
<i>Surrogate: 1,2-Dichloroethane-d4</i>		96.6 %		78-129	"	"	"	"	O-
<b>MW-5 (MMI0660-04) Water    Sampled: 09/22/03 13:40    Received: 09/23/03 14:35</b>									
Ethanol	ND	100	ug/l	1	3I30001	09/30/03	09/30/03	EPA 8260B	O-
tert-Butyl alcohol	ND	20	"	"	"	"	"	"	"
Methyl tert-butyl ether	ND	0.50	"	"	"	"	"	"	"
Di-isopropyl ether	ND	0.50	"	"	"	"	"	"	"
Ethyl tert-butyl ether	ND	0.50	"	"	"	"	"	"	"
tert-Amyl methyl ether	ND	0.50	"	"	"	"	"	"	"
Benzene	ND	0.50	"	"	"	"	"	"	"
Toluene	ND	0.50	"	"	"	"	"	"	"
Ethylbenzene	ND	0.50	"	"	"	"	"	"	"
Xylenes (total)	ND	0.50	"	"	"	"	"	"	"
Gasoline Range Organics (C6-C10)	ND	50	"	"	"	"	"	"	"
<i>Surrogate: 1,2-Dichloroethane-d4</i>		96.6 %		78-129	"	"	"	"	O-



URS Corporation [Arco]  
500 12th Street, Suite 200  
Oakland CA, 94607

Project: ARCO #4494, Oakland, CA  
Project Number: INTRIM-50443  
Project Manager: Scott Robinson

MMI0660  
**Reported:**  
10/07/03 09:08

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

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Net
<b>MW-6 (MMI0660-05) Water    Sampled: 09/22/03 14:00    Received: 09/23/03 14:35</b>									
Ethanol	ND	100	ug/l	1	3I30001	09/30/03	09/30/03	EPA 8260B	O-
tert-Butyl alcohol	ND	20	"	"	"	"	"	"	"
Methyl tert-butyl ether	ND	0.50	"	"	"	"	"	"	"
Di-isopropyl ether	ND	0.50	"	"	"	"	"	"	"
Ethyl tert-butyl ether	ND	0.50	"	"	"	"	"	"	"
tert-Amyl methyl ether	ND	0.50	"	"	"	"	"	"	"
Benzene	ND	0.50	"	"	"	"	"	"	"
Toluene	ND	0.50	"	"	"	"	"	"	"
Ethylbenzene	ND	0.50	"	"	"	"	"	"	"
Xylenes (total)	ND	0.50	"	"	"	"	"	"	"
Gasoline Range Organics (C6-C10)	ND	50	"	"	"	"	"	"	"
<i>Surrogate: 1,2-Dichloroethane-d4</i>		96.6 %		78-129	"	"	"	"	O-
<b>MW-7 (MMI0660-06) Water    Sampled: 09/22/03 14:30    Received: 09/23/03 14:35</b>									
Ethanol	ND	100	ug/l	1	3I30001	09/30/03	09/30/03	EPA 8260B	O-
<b>tert-Butyl alcohol</b>	<b>170</b>	20	"	"	"	"	"	"	"
<b>Methyl tert-butyl ether</b>	<b>5.3</b>	0.50	"	"	"	"	"	"	"
Di-isopropyl ether	ND	0.50	"	"	"	"	"	"	"
Ethyl tert-butyl ether	ND	0.50	"	"	"	"	"	"	"
tert-Amyl methyl ether	ND	0.50	"	"	"	"	"	"	"
Benzene	ND	0.50	"	"	"	"	"	"	"
Toluene	ND	0.50	"	"	"	"	"	"	"
Ethylbenzene	ND	0.50	"	"	"	"	"	"	"
Xylenes (total)	ND	0.50	"	"	"	"	"	"	"
Gasoline Range Organics (C6-C10)	ND	50	"	"	"	"	"	"	"
<i>Surrogate: 1,2-Dichloroethane-d4</i>		101 %		78-129	"	"	"	"	O-



URS Corporation [Arco]  
500 12th Street, Suite 200  
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Project: ARCO #4494, Oakland, CA  
Project Number: INTRIM-50443  
Project Manager: Scott Robinson

MMI0660  
**Reported:**  
10/07/03 09:08

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

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Not
<b>RW-1 (MMI0660-07) Water    Sampled: 09/22/03 14:50    Received: 09/23/03 14:35</b>									
Ethanol	ND	100	ug/l	1	3130001	09/30/03	09/30/03	EPA 8260B	0-
tert-Butyl alcohol	ND	20	"	"	"	"	"	"	"
Methyl tert-butyl ether	ND	0.50	"	"	"	"	"	"	"
Di-isopropyl ether	ND	0.50	"	"	"	"	"	"	"
Ethyl tert-butyl ether	ND	0.50	"	"	"	"	"	"	"
tert-Amyl methyl ether	ND	0.50	"	"	"	"	"	"	"
Benzene	ND	0.50	"	"	"	"	"	"	"
Toluene	ND	0.50	"	"	"	"	"	"	"
Ethylbenzene	ND	0.50	"	"	"	"	"	"	"
Xylenes (total)	ND	0.50	"	"	"	"	"	"	"
Gasoline Range Organics (C6-C10)	ND	50	"	"	"	"	"	"	"
<i>Surrogate: 1,2-Dichloroethane-d4</i>		<i>101 %</i>		<i>78-129</i>					<i>0-</i>





URS Corporation [Arco]  
500 12th Street, Suite 200  
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Project Number: INTRIM-50443  
Project Manager: Scott Robinson

MM10660  
Reported:  
10/07/03 09:08

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch 3I30001 - EPA 5030B P/T</b>										
<b>Blank (3I30001-BLK1)</b>				Prepared & Analyzed: 09/30/03						
Ethanol	ND	100	ug/l							O-
tert-Butyl alcohol	ND	20	"							
Methyl tert-butyl ether	ND	0.50	"							
Di-isopropyl ether	ND	0.50	"							
Ethyl tert-butyl ether	ND	0.50	"							
tert-Amyl methyl ether	ND	0.50	"							
1,2-Dichloroethane	ND	0.50	"							
1,2-Dibromoethane (EDB)	ND	0.50	"							
Benzene	ND	0.50	"							
Toluene	ND	0.50	"							
Ethylbenzene	ND	0.50	"							
Xylenes (total)	ND	0.50	"							
Gasoline Range Organics (C6-C10)	ND	50	"							
<i>Surrogate: 1,2-Dichloroethane-d4</i>	4.89		"	5.00		97.8	78-129			O-
<b>Laboratory Control Sample (3I30001-BS1)</b>				Prepared & Analyzed: 09/30/03						
Ethanol	150	100	ug/l	200		75.0	31-186			O-
tert-Butyl alcohol	53.4	20	"	50.0		107	0-206			
Methyl tert-butyl ether	8.96	0.50	"	10.0		89.6	63-137			
Di-isopropyl ether	9.18	0.50	"	10.0		91.8	76-130			
Ethyl tert-butyl ether	8.92	0.50	"	10.0		89.2	61-141			
tert-Amyl methyl ether	8.85	0.50	"	10.0		88.5	56-140			
1,2-Dichloroethane	9.10	0.50	"	10.0		91.0	77-136			
1,2-Dibromoethane (EDB)	9.84	0.50	"	10.0		98.4	77-132			
Benzene	9.03	0.50	"	10.0		90.3	78-124			
Toluene	9.71	0.50	"	10.0		97.1	78-129			
Ethylbenzene	9.81	0.50	"	10.0		98.1	84-117			
Xylenes (total)	29.9	0.50	"	30.0		99.7	83-125			
<i>Surrogate: 1,2-Dichloroethane-d4</i>	4.63		"	5.00		92.6	78-129			O-



URS Corporation [Arco]  
500 12th Street, Suite 200  
Oakland CA, 94607

Project: ARCO #4494, Oakland, CA  
Project Number: INTRIM-50443  
Project Manager: Scott Robinson

MMI0660  
Reported:  
10/07/03 09:08

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Notes
<b>Batch 3I30001 - EPA 5030B P/T</b>									
<b>Laboratory Control Sample (3I30001-BS2)</b>					Prepared & Analyzed: 09/30/03				
Gasoline Range Organics (C6-C10)	415	50	ug/l	440	94.3	70-113			
Surrogate: 1,2-Dichloroethane-d4	4.98		"	5.00	99.6	78-129			O-
<b>Laboratory Control Sample Dup (3I30001-BSD1)</b>					Prepared & Analyzed: 09/30/03				
Ethanol	179	100	ug/l	200	89.5	31-186	17.6	37	O-
tert-Butyl alcohol	51.2	20	"	50.0	102	0-206	4.21	22	
Methyl tert-butyl ether	8.83	0.50	"	10.0	88.3	63-137	1.46	13	
Di-isopropyl ether	9.21	0.50	"	10.0	92.1	76-130	0.326	9	
Ethyl tert-butyl ether	8.98	0.50	"	10.0	89.8	61-141	0.670	9	
tert-Amyl methyl ether	9.03	0.50	"	10.0	90.3	56-140	2.01	12	
1,2-Dichloroethane	9.06	0.50	"	10.0	90.6	77-136	0.441	13	
1,2-Dibromoethane (EDB)	10.0	0.50	"	10.0	100	77-132	1.61	9	
Benzene	8.82	0.50	"	10.0	88.2	78-124	2.35	12	
Toluene	9.52	0.50	"	10.0	95.2	78-129	1.98	10	
Ethylbenzene	9.51	0.50	"	10.0	95.1	84-117	3.11	10	
Xylenes (total)	29.4	0.50	"	30.0	98.0	83-125	1.69	11	
Surrogate: 1,2-Dichloroethane-d4	4.81		"	5.00	96.2	78-129			O-
<b>Laboratory Control Sample Dup (3I30001-BSD2)</b>					Prepared & Analyzed: 09/30/03				
Gasoline Range Organics (C6-C10)	390	50	ug/l	440	88.6	70-113	6.21	9	
Surrogate: 1,2-Dichloroethane-d4	4.78		"	5.00	95.6	78-129			O-



URS Corporation [Arco]  
500 12th Street, Suite 200  
Oakland CA, 94607

Project: ARCO #4494, Oakland, CA  
Project Number: INTRIM-50443  
Project Manager: Scott Robinson

MM10660  
**Reported:**  
10/07/03 09:08

### Notes and Definitions

- O-10 The result was reported with a possible low bias due to the continuing calibration verification falling outside the acceptance criteria.
- O-12 "The continuing calibration verification was outside of client contractual acceptance limits by 6.2% low. However, it was within method acceptance limits. The data should 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 4494 GWM

BP BU/GEM CO Portfolio Retail

BP Laboratory Contract Number: Atlantic Richfield Company

1910660

Date: 9/23/03

Requested Due Date (mm/dd/yy) 14 day TAT

On-site Time: 1230 Temp: 85  
 Off-site Time: 1545 Temp: 95  
 Sky Conditions: SUNNY  
 Meteorological Events: Hot  
 Wind Speed: \_\_\_\_\_ Direction: \_\_\_\_\_

Send To:	BP/GEM Facility No.: ARCO 4494	Consultant/Contractor: URS
Lab Name: SEQUOIA	BP/GEM Facility Address: 588 HEGENBERGER, OAKLAND, CA	Address: 500 12th St., Ste. 200
Lab Address: 885 Jarvis Dr. Morgan Hill, CA 95037	Site ID No. ARCO 4494	Oakland, CA 94608-4014
	Site Lat/Long:	e-mail EDD: donna.casper@URSCorp.com
	California Global ID #: T0600100104	Consultant/Contractor Project No.: J5-00001494.01 00427
Lab PM Theresa Allen	BP/GEM PM Contact: PAUL SUPPLE	Consultant Tele/Fax: 510-893-3600/510-874-3268
Tele/Fax: 408-776-9600 / 408-782-6308	Address: P.O. Box 6549	Consultant/Contractor PM: Scott Robinson
Report Type & QC Level: I Send EDF Reports	Moraga, CA 94570	Invoice to: Consultant/Contractor of <u>BP/GEM</u> (check one)
BP/GEM Account No.:	Tele/Fax: 925-299-8891/925-299-8872	BP/GEM Work Release No: INTIKIM -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 <sub>2</sub> SO <sub>4</sub>	HNO <sub>3</sub>	HCl	TPH-G/BTEX (8015/8021-8260)	TPH-D (8015)	MTBE (8021)	MTBE (8260)		MTBE, TAME, ETBE (8015/8021-8260)
1	MW-1	1505	✓	✓			4							✓				
2	MW-3	1410	✓	✓			3							✓				
3	MW-4	1310	✓	✓			2							✓				
4	MW-5	1340	✓	✓			2							✓				
5	MW-6	1400	✓	✓			3							✓				
6	MW-7	1430	✓	✓			2							✓				
7	RW-1	1450	✓	✓			2							✓				
8	Trip Blank	1230	✓	✓			2											"ON HOLD"
9	Temp Blank	1230	✓	✓			1											
10																		

Sampler's Name: <u>John De Jong</u>	Relinquished By / Affiliation: <u>[Signature]</u>	Date: <u>9/23/03</u>	Time: <u>1407</u>	Accepted By / Affiliation: <u>[Signature]</u>	Date: <u>9/23/03</u>	Time: <u>1407</u>
Sampler's Company: <u>Blaine Tech Services</u>		Date: <u>9/23/03</u>	Time: <u>1435</u>		Date: <u>9/23/03</u>	Time: <u>1435</u>
Shipment Date:						
Shipment Method:						
Shipment Tracking No:						

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

Seals In Place Yes  No  Temperature Blank Yes  No  Cooler Temperature on Receipt  <sup>0</sup>/C  Trip Blank Yes  No

# SEQUOIA ANALYTICAL SAMPLE RECEIPT LOG

CLIENT NAME: URS  
 REC. BY (PRINT) TL  
 WORKORDER: MMF0660

DATE REC'D AT LAB: 9/23/03  
 TIME REC'D AT LAB: 1435  
 DATE LOGGED IN: 9-24-03

Drinking water for regulatory purposes: YES /   
 Wastewater for regulatory purposes: YES /

CIRCLE THE APPROPRIATE RESPONSE	LAB SAMPLE #	DASII #	CLIENT ID	CONTAINER DESCRIPTION	PRESERVATIVE	SAMPLE MATRIX	DATE SAMPLED	REMARKS: CONDITION (ETC.)
1. Custody Seal(s): <input checked="" type="radio"/> Present / <input checked="" type="radio"/> Absent Intact / Broken* <u>9/23/03</u>			MW-1	(2) Vials	HCL	L	9/22/03	24.0640
2. Chain-of-Custody <input checked="" type="radio"/> Present / <input checked="" type="radio"/> Absent*			MW-3	Same	Same			
3. Traffic Reports or Packing List: <input checked="" type="radio"/> Present / <input checked="" type="radio"/> Absent			MW-4					
4. Airbill: <input checked="" type="radio"/> Airbill / <input checked="" type="radio"/> Sticker <input checked="" type="radio"/> Present / <input checked="" type="radio"/> Absent			MW-5					
5. Airbill #:			MW-6					
6. Sample Labels: <input checked="" type="radio"/> Present / <input checked="" type="radio"/> Absent			MW-7					
7. Sample IDs: <input checked="" type="radio"/> Listed / <input checked="" type="radio"/> Not Listed on Chain-of-Custody			RW-1					
8. Sample Condition: <input checked="" type="radio"/> Intact / <input checked="" type="radio"/> Broken* / <input checked="" type="radio"/> Leaking*			Tripblend	(2) Vials				
9. Does information on custody reports, traffic reports and sample labels agree? <input checked="" type="radio"/> Yes / <input checked="" type="radio"/> No*								
10. Sample received within hold time: <input checked="" type="radio"/> Yes / <input checked="" type="radio"/> No*								
11. Proper Preservatives used: <input checked="" type="radio"/> Yes / <input checked="" type="radio"/> No*								
12. Temp Rec. at Lab: Is temp 4 +/- 2°C? <input checked="" type="radio"/> Yes / <input checked="" type="radio"/> No**								
(Acceptance range for samples requiring thermal pres.)								
**Exception (if any): Metals / DRF (Direct From Field) or Problem COC								

**\*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	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	08/12/94		8.78	8.78	0.00	97.51
(cont.)	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

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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-----							

3300412B4Q95TBLS.XLS!Table3

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	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 Methl 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**  
**WELL SURVEY DATA**





**ATTACHMENT E**

**EDCC REPORT AND EDF/GEOWELL SUBMITTAL  
CONFIRMATION**

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## Error Summary Log

10/08/03

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:	MMI0660
Global ID:	T0600100104
Lab Report Number:	MMI0660100720030908

## Report Summary

Labreport	Sampid	Labsampid	Mtrx	QC	Anmcode	Exmcode	Logdate	Extdate	Anadate	Labiocfl	Run	Sub
MMI06601007200 30908	MW-1	MMI066001	W	CS	8260TPH	SW5030B	09/22/03	09/30/03	09/30/03	3130001	1	
MMI06601007200 30908	MW-3	MMI066002	W	CS	8260TPH	SW5030B	09/22/03	09/30/03	09/30/03	3130001	1	
MMI06601007200 30908	MW-4	MMI066003	W	CS	8260TPH	SW5030B	09/22/03	09/30/03	09/30/03	3130001	1	
MMI06601007200 30908	MW-5	MMI066004	W	CS	8260TPH	SW5030B	09/22/03	09/30/03	09/30/03	3130001	1	
MMI06601007200 30908	MW-6	MMI066005	W	CS	8260TPH	SW5030B	09/22/03	09/30/03	09/30/03	3130001	1	
MMI06601007200 30908	MW-7	MMI066006	W	CS	8260TPH	SW5030B	09/22/03	09/30/03	09/30/03	3130001	1	
MMI06601007200 30908	RW-1	MMI066007	W	CS	8260TPH	SW5030B	09/22/03	09/30/03	09/30/03	3130001	1	
		3130001BSD1	WQ	BD1	8260TPH	SW5030B	//	09/30/03	09/30/03	3130001	1	
		3130001BSD2	WQ	BD2	8260TPH	SW5030B	//	09/30/03	09/30/03	3130001	1	
		3130001BS1	WQ	BS1	8260TPH	SW5030B	//	09/30/03	09/30/03	3130001	1	
		3130001BS2	WQ	BS2	8260TPH	SW5030B	//	09/30/03	09/30/03	3130001	1	
		3130001BLK1	WQ	LB1	8260TPH	SW5030B	//	09/30/03	09/30/03	3130001	1	

## EDFSAMP: Error Summary Log

10/08/03

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

# EDFTEST: Error Summary Log

10/08/03

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

## EDFRES: Error Summary Log

10/08/03

Error type	Labsampid	Qccode	Matrix	Anmcode	Pvccode	Anadate	Run number	Parlabel
Error: LNOTE has an invalid note	MMI066001	CS	W	8260TPH	PR	09/30/03	1	ETHANOL
Error: LNOTE has an invalid note	MMI066002	CS	W	8260TPH	PR	09/30/03	1	ETHANOL
Error: LNOTE has an invalid note	MMI066003	CS	W	8260TPH	PR	09/30/03	1	ETHANOL
Error: LNOTE has an invalid note	MMI066004	CS	W	8260TPH	PR	09/30/03	1	ETHANOL
Error: LNOTE has an invalid note	MMI066005	CS	W	8260TPH	PR	09/30/03	1	ETHANOL
Error: LNOTE has an invalid note	MMI066006	CS	W	8260TPH	PR	09/30/03	1	ETHANOL
Error: LNOTE has an invalid note	MMI066007	CS	W	8260TPH	PR	09/30/03	1	ETHANOL
Error: LNOTE has an invalid note	3I30001BLK1	LB1	WQ	8260TPH	PR	09/30/03	1	ETHANOL
Error: LNOTE has an invalid note	3I30001BS1	BS1	WQ	8260TPH	PR	09/30/03	1	ETHANOL
Error: LNOTE has an invalid note	3I30001BSD1	BD1	WQ	8260TPH	PR	09/30/03	1	ETHANOL

---

## EDFQC: Error Summary Log

10/08/03

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

---

## EDFCL: Error Summary Log

10/08/03

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



## AB2886 Electronic Delivery

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**Confirmation Number:** 7147523283  
**Date/Time of Submittal:** 10/8/2003 2:36:12 PM  
**Facility Global ID:** T0600100104  
**Facility Name:** ARCO # 04494  
**Submittal Title:** 3rd Qtr 2003 Monitoring  
**Submittal Type:** GW Monitoring Report

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

**Submittal Title:            3rd Qtr 2003 Geowell for #4494**  
**Submittal Date/Time:    10/8/2003 2:37:12 PM**  
**Confirmation Number:   9310673356**

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