

**URS**

70494

Alameda County

October 15, 2004

OCT 25 2004

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

ENVIRONMENTAL HEALTH

**Re: Third Quarter 2004 Groundwater Monitoring Report  
ARCO Service Station #2111  
1156 Davis Street  
San Leandro, California  
URS Project #38486713**

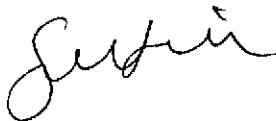
Dear Mr. Schultz:

On behalf of Atlantic Richfield Company (a BP affiliated company), URS Corporation (URS) is submitting the *Third Quarter 2004 Groundwater Monitoring Report* for ARCO Service Station #2111, located at 1156 Davis Street, San Leandro, California.

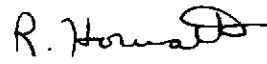
If you have any questions regarding this submission, please call (510) 874-3280.

Sincerely,

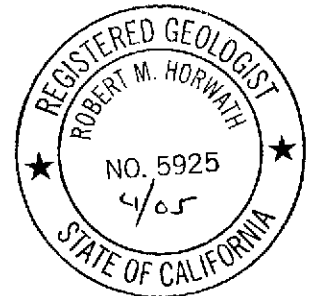
**URS CORPORATION**



Scott Robinson  
Project Manager



Robert Horwath, R.G.  
Portfolio Manager



Enclosure: Third Quarter 2004 Groundwater Monitoring Report

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

URS Corporation  
1333 Broadway, Suite 800  
Oakland, CA 94612-1924  
Tel: 510.893.3600  
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**R E P O R T**

**THIRD QUARTER 2004  
GROUNDWATER MONITORING**

ARCO  
SERVICE STATION #2111  
1156 DAVIS STREET  
SAN LEANDRO, CALIFORNIA

*Prepared for*  
RM

October 15, 2004

**URS**

URS Corporation  
1333 Broadway, Suite 800  
Oakland, California 94612

38486713

Date: October 15, 2004  
Quarter: 3Q 04

### RM QUARTERLY GROUNDWATER MONITORING REPORT

Facility No.: 2111 Address: 1156 Davis Street, San Leandro, California  
RM Environmental Business Manager: Paul Supple  
Consulting Co./Contact Person: URS Corporation / Scott Robinson  
Consultant Project No.: 38486713  
Primary Agency: Alameda County Environmental Health (ACEH)

#### WORK PERFORMED THIS QUARTER (Third – 2004):

1. Performed third quarter 2004 groundwater monitoring event on July 13, 2004.
2. Checked well MW-2 monthly for free product.
3. Secure new gas and electrical service from PG&E.
4. Secure BAAQMD Permit for DPE system.
5. Review of DPE system design in process.

#### WORK PROPOSED FOR NEXT QUARTER (Fourth – 2004):

1. Prepare and submit third quarter 2004 groundwater monitoring report.
2. Perform fourth quarter 2004 groundwater monitoring event.
3. Prepare and submit fourth quarter 2004 groundwater monitoring report.
4. Check MW-2 monthly for free product.
5. Begin installation of DPE system
6. Secure BAAQMD Permit for DPE system.

Current Phase of Project: Groundwater monitoring/sampling/interim remediation  
Frequency of Groundwater Sampling: Quarterly: Wells MW-1 through MW-5 and MW-8  
Annually (3<sup>rd</sup> Quarter): MW-6  
Frequency of Groundwater Monitoring: Quarterly  
Is Free Product (FP) Present On-Site: No (historically in MW-2)  
FP recovered this quarter (to 09/30/04): 0.00 gallons  
Cumulative FP Recovered from  
6/28/99 to 09/30/04 : 1.085 gallons  
Current Remediation Techniques: Bailing free product as needed from MW-2  
Approximate Depth to Groundwater: 14.65 (MW-6) to 17.57 (MW-1) feet  
Groundwater Gradient (direction): West-Southwest  
Groundwater Gradient (magnitude): 0.003 feet per foot

## **DISCUSSION:**

Gasoline Range Organics (GRO) were detected above laboratory reporting limits in three of the eight wells sampled this quarter at concentrations ranging from 77 µg/L (MW-4) to 59,000 µg/L (MW-2). Benzene was detected above laboratory reporting limits in one well at a concentration of 380 µg/L (MW-2). Methyl tert-butyl ether (MTBE) was detected above laboratory reporting limits in seven wells at concentrations ranging from 27 µg/L (MW-4) to 56,000 µg/L (MW-7). Tert-butyl alcohol (TBA) was detected above laboratory reporting limits in six wells at concentrations ranging from 26 µg/L (MW-4) to 12,000 µg/L (MW-2). Tert-Amyl methyl ether (TAME) was detected above laboratory reporting limits in four wells at concentrations ranging from 3.2 µg/L (MW-3) to 1,300 µg/L (MW-7).

URS performed a free product monitoring events at MW-2 on July 13, 2004, August 31, 2004, and September 7, 2004. No free product was detected in well MW-2 during the third quarter 2004.

## **ATTACHMENTS:**

- Figure 1 – Groundwater Elevation Contour and Analytical Summary Map – July 13, 2004
- Table 1 – Groundwater Elevation and Analytical Data
- Table 2 – Fuel Additive Analytical Data
- Table 3 –Groundwater Flow Direction and Gradient
- Table 4 – Approximate Cumulative Floating Product Recovered (1999 – Present)
- Attachment A – Field Procedures and Field Data Sheets
- Attachment B – Laboratory Procedures, Certified Analytical Reports and Chain-of-Custody Records
- Attachment C – EDCC and EDF/Geowell Submittal Confirmation

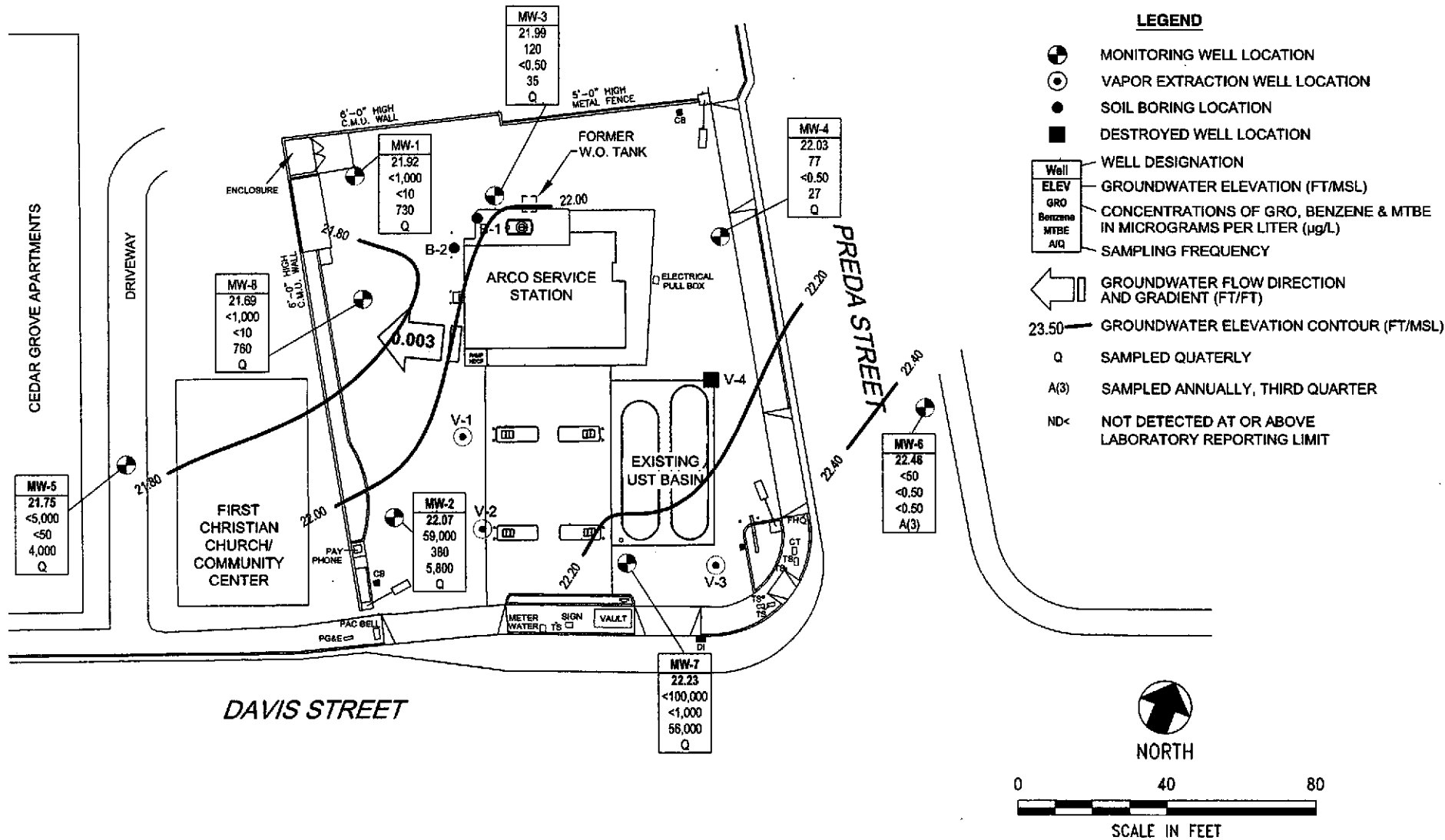
Table 1

## Groundwater Elevation and Analytical Data

ARCO Station #2111

1156 Davis St, San Leandro, CA

Well No.	Date	P/ NP	Notes	TOC (feet)	Top of Screen (ft bgs)	Bottom of Screen (ft bgs)	DTW (feet)	Product Thickness (feet)	GWE (feet)	GRO/ TPH-g (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethyl-benzene (µg/L)	Total Xylenes (µg/L)	MTBE (µg/L)	DO (mg/L)	pH
MW-1	6/26/2000	--		39.6	--	--	16.46	--	23.14	NA	NA	NA	NA	NA	--	NA	NA
	7/20/2000	--		39.6	--	--	16.89	--	22.71	360	110	<0.5	<0.5	2.7	2,100	NA	NA
	9/19/2000	--		39.6	--	--	17.62	--	21.98	290	76	<0.5	<0.5	2.3	1,500	NA	NA
	12/21/2000	--		39.6	--	--	17.39	--	22.21	257	64	2.89	1.31	4.57	1,080/1,060	NA	NA
	3/13/2001	--		39.6	--	--	15.70	--	23.90	<500	52.5	<5.0	<5.0	<5.0	1,430/1,370	NA	NA
	9/18/2001	--		39.6	--	--	18.24	--	21.36	<500	64	7.3	<5.0	52	810/1,100	NA	NA
	12/28/2001	--		39.6	--	--	15.95	--	23.65	<500	<5.0	<5.0	5	22	1,200/1,100	NA	NA
	3/14/2002	--		39.6	--	--	16.01	--	23.59	<50	<0.5	<0.5	<0.5	<0.5	34/40	NA	NA
	4/23/2002	--		39.6	--	--	15.43	--	24.17	<50	<0.5	<0.5	<0.5	<0.5	30	NA	NA
	7/17/2002	NP		39.6	--	--	17.50	--	22.10	<50	1.2	<0.50	<0.50	<0.50	29	6.9	6.9
	10/9/2002	--		39.6	--	--	18.27	--	21.33	240 c	4.9	<1.0	4.1	7.0	290	6.5	6.5
	1/13/2003	--		39.6	--	--	15.37	--	24.23	760 c	34	11	17	56	300	6.8	6.8
	04/07/03 n	--		39.6	--	--	16.61	--	22.99	<50	<0.50	<0.50	<0.50	<0.50	22	6.8	6.8
	7/9/2003	--		39.6	--	--	17.27	--	22.33	<2,500	<25	<25	<25	<25	690	6.7	6.7
	02/05/2004	NP	q	39.49	12.50	26.20	16.28	--	23.21	2,800	31	<25	<25	<25	1,100	0.9	6.5
04/05/2004	NP	odor	39.49	12.50	26.20	16.25	--	23.24	5,800	46	<25	<25	<25	1,700	1.0	--	
07/13/2004	NP		39.49	12.50	26.20	17.57	--	21.92	<1,000	<10	<10	<10	<10	730	0.5	6.6	
MW-2	6/26/2000	--		37.99	--	--	14.60	--	0.99	NA	NA	NA	NA	NA	--	NA	NA
	7/20/2000	--		37.99	--	--	15.14	--	22.85	95,000	2,300	18,000	2,500	19,000	13,000	NA	NA
	9/19/2000	--		37.99	--	--	15.95	--	22.04	63,000	1,200	6,300	2,000	14,000	19,000	NA	NA
	12/21/00 b	--	Not Sampled	37.99	--	--	--	--	NC	5,010	360	189	213	626	54,300/89,200	NA	NA
	12/21/2000	--		37.99	--	--	15.60	--	22.39	45,900	--	2,130	1,160	9,460	22,400/24,700	NA	NA
	3/13/2001	--		37.99	--	--	13.77	--	23.90	3,650	98.1	<5.0	<5.0	6.42	3,590/3,260	NA	NA
	3/13/2001b	--	Not Sampled	37.99	--	--	--	--	NC	<20,000	525	466	408	1,460	91,700/76,000	NA	NA
	9/18/2001a	--		37.99	--	--	16.86	--	21.13	NS	NS	NS	NS	NS	--	NA	NA
	12/28/2001	--		37.99	--	--	14.28	--	23.71	31,000	1,500	3,800	1,300	4,800	9,300/8,800	NA	NA
	3/14/2002	--		37.99	--	--	14.15	--	23.84	1,800	25	43	43	270	990/960	NA	NA
	4/23/2002	--		37.99	--	--	13.60	--	24.39	9,000	220	110	470	2,500	8,500	NA	NA
	7/17/2002	NP	SHEEN	37.99	--	--	15.75	--	--	74,000 c	280	290	820	10,000	19,000/0.4	6.8	6.8
	10/9/02 g	NP		37.99	--	--	16.69	--	--	NS	NS	NS	NS	NS	--	NM	NM



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

<b>URS</b>	Project No. 38486713	<b>GROUNDWATER ELEVATION CONTOUR AND ANALYTICAL SUMMARY MAP</b>	FIGURE <b>1</b>
	ARCO Service Station #2111 1156 Davis Street San Leandro, California		

**Table 1**  
**Groundwater Elevation and Analytical Data**  
 ARCO Station #2111  
 1156 Davis St, San Leandro, CA

Well No.	Date	P/ NP	Notes	TOC (feet)	Top of Screen (ft bgs)	Bottom of Screen (ft bgs)	DTW (feet)	Product Thickness (feet)	GWE (feet)	GRO/TPH-g (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethyl-benzene (µg/L)	Total Xylenes (µg/L)	MTBE (µg/L)	DO (mg/L)	pH
MW-2	1/13/03 g	--	FREE PRODUCT	37.99	--	--	13.59	--	24.61h	NS	NS	NS	NS	NS	--	NM	NM
	04/07/03 g	--	FREE PRODUCT	37.99	--	--	14.70	--	23.69h	NS	NS	NS	NS	NS	--	NM	NM
	07/09/03 g	--	FREE PRODUCT	37.99	--	--	15.48	--	22.57h	NS	NS	NS	NS	NS	--	NM	NM
	02/05/2004	NP	g,q,r	37.86	12.00	26.20	14.43	0.13	23.53	--	--	--	--	--	--	--	--
	04/05/2004	NP	odor	37.86	12.00	26.20	14.35	--	23.51	2,300	33	<5.0	<5.0	200	750	0.6	--
	07/13/2004	NP		37.86	12.00	26.20	15.79	--	22.07	59,000	380	<50	2,100	7,900	5,800	0.3	6.4
	08/31/2004	--		37.86	12.00	26.20	15.89	--	21.97	--	--	--	--	--	--	--	--
MW-3	6/26/2000	--		39.32	--	--	15.96	--	23.36	NA	NA	NA	NA	NA	--	NA	NA
	7/20/2000	--		39.32	--	--	16.42	--	22.90	<50	<0.5	<0.5	<0.5	<1.0	130	NA	NA
	9/19/2000	--		39.32	--	--	17.18	--	22.14	190	17	<0.5	1.4	2.4	160	NA	NA
	12/21/2000	--		39.32	--	--	16.97	--	22.35	187	17.8	<0.5	2.47	2.5	143/125	NA	NA
	3/13/2001	--		39.32	--	--	15.17	--	24.15	72.4	2.83	<0.5	<0.5	<0.5	126/122	NA	NA
	9/18/2001	--		39.32	--	--	17.81	--	21.51	140	6.4	<0.5	3.5	1.6	110/75	NA	NA
	12/28/2001	--		39.32	--	--	15.44	--	23.88	130	5.9	<0.5	0.99	0.55	90/63	NA	NA
	3/14/2002	--		39.32	--	--	15.50	--	23.82	<50	<0.5	<0.5	<0.5	<0.5	100/88	NA	NA
	4/23/2002	--		39.32	--	--	14.96	--	24.36	<50	<0.5	<0.5	<0.5	<0.5	77	NA	NA
	7/17/2002	NP		39.32	--	--	17.09	--	22.23	<50	<0.50	<0.50	<0.50	<0.50	47	7.2	7.2
	10/9/2002	NP		39.32	--	--	17.87	--	21.45	<50	<0.50	<0.50	<0.50	<0.50	26/29	7.2	7.2
	1/13/2003	NP		39.32	--	--	14.78	--	24.54	<50	<0.50	<0.50	<0.50	<0.50	59	6.8	6.8
	04/07/03 n	NP		39.32	--	--	16.15	--	23.17	88	<0.50	<0.50	<0.50	<0.50	75	7.0	7.0
	7/9/2003	--		39.32	--	--	16.79	--	22.53	100	<0.50	<0.50	<0.50	<0.50	52	6.5	6.5
	02/05/2004	NP	q	39.19	11.90	26.20	15.66	--	23.53	240	<0.50	<0.50	<0.50	<0.50	37	0.5	--
04/05/2004	NP		39.19	11.90	26.20	15.78	--	23.41	140	<0.50	<0.50	<0.50	0.60	53	1.0	6.6	
07/13/2004	NP		39.19	11.90	26.20	17.20	--	21.99	120	<0.50	<0.50	<0.50	<0.50	35	0.8	6.7	
MW-4	6/26/2000	--		38.1	--	--	14.59	--	23.51	NA	NA	NA	NA	NA	--	NA	NA
	7/20/2000	--		38.1	--	--	15.04	--	23.06	97	7.9	<0.5	<0.5	1.1	51	NA	NA
	9/19/2000	--		38.1	--	--	15.83	--	22.27	110	7	<0.5	<0.5	<1.0	60	NA	NA
	12/21/2000	--		38.1	--	--	15.59	--	22.51	120	5.6	<0.5	1.72	<0.5	46.3/48.6	NA	NA
	3/13/2001	--		38.1	--	--	13.73	--	24.37	76	0.796	<0.5	<0.5	<0.5	53.7/50	NA	NA
	9/18/2001	--		38.1	--	--	16.50	--	21.60	<50	<0.5	<0.5	<0.5	<0.5	25/26	NA	NA

**Table 1**  
**Groundwater Elevation and Analytical Data**  
 ARCO Station #2111  
 1156 Davis St, San Leandro, CA

Well No.	Date	P/ NP	Notes	TOC (feet)	Top of Screen (ft bgs)	Bottom of Screen (ft bgs)	DTW (feet)	Product Thickness (feet)	GWE (feet)	GRO/TPH-g (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethyl-benzene (µg/L)	Total Xylenes (µg/L)	MTBE (µg/L)	DO (mg/L)	pH
MW-4	12/28/2001	--		38.1	--	--	14.03	--	24.07	<50	<0.5	<0.5	<0.5	<0.5	15/11	NA	NA
	3/14/2002	--		38.1	--	--	14.10	--	24.00	<50	<0.5	<0.5	<0.5	<0.5	31/28	NA	NA
	4/23/2002	--		38.1	--	--	13.57	--	24.53	<50	2.8	<0.5	<0.5	<0.5	42	NA	NA
	7/17/2002	NP		38.1	--	--	15.76	--	22.34	<50	<0.50	<0.50	<0.50	<0.50	16	7.1	7.1
	10/9/2002	NP		38.1	--	--	16.59	--	21.51	<50	2.2	<0.50	<0.50	<0.50	20/23	7.1	7.1
	1/13/2003	NP		38.1	--	--	13.43	--	24.67	52 d	<0.50	1.6	<0.50	<0.50	22	6.6	6.6
	04/07/03 n	NP		38.1	--	--	14.74	--	23.36	65	<0.50	<0.50	<0.50	<0.50	24	6.6	6.6
	7/9/2003	--		38.1	--	--	15.44	--	22.66	120	<0.50	<0.50	<0.50	<0.50	34	6.6	6.6
	02/05/2004	NP	q	37.99	10.00	24.00	14.39	--	23.60	120	<0.50	<0.50	<0.50	<0.50	22	0.5	6.6
	04/05/2004	NP		37.99	10.00	24.00	14.37	--	23.62	110	<0.50	<0.50	<0.50	<0.50	27	1.1	6.5
<b>07/13/2004</b>	<b>NP</b>		<b>37.99</b>	<b>10.00</b>	<b>24.00</b>	<b>15.96</b>	--	<b>22.03</b>	<b>77</b>	<b>&lt;0.50</b>	<b>&lt;0.50</b>	<b>&lt;0.50</b>	<b>&lt;0.50</b>	<b>27</b>	<b>0.6</b>	<b>6.6</b>	
MW-5	6/26/2000	--		37.21	--	--	14.27	--	22.94	NA	NA	NA	NA	NA	--	NA	NA
	7/20/2000	--		37.21	--	--	14.69	--	22.52	55	<0.5	<0.5	<0.5	<1.0	14,000	NA	NA
	9/19/2000	--		37.21	--	--	15.36	--	21.85	54	<0.5	<0.5	<0.5	<1.0	13,000	NA	NA
	12/21/2000	--		37.21	--	--	15.15	--	22.06	72.9	2.51	<0.5	<0.5	0.961	19,200/21,200	NA	NA
	3/13/2001	--		37.21	--	--	13.50	--	23.71	<500	<5	<5	<5	<5	15,900/20,000	NA	NA
	9/18/2001	--		37.21	--	--	15.94	--	21.27	<10,000	<100	<100	<100	<1,000	22,000/20,000	NA	NA
	12/28/2001	--		37.21	--	--	13.45	--	23.76	<10,000	<100	<100	<100	<100	10,000/10,000	NA	NA
	3/14/2002	--		37.21	--	--	13.82	--	23.39	<5,000	<50	<50	<50	<50	7,100/7,700	NA	NA
	4/23/2002	--		37.21	--	--	13.25	--	23.96	<5,000	<50	<50	<50	<50	8,900	NA	NA
	7/17/2002	NP		37.21	--	--	15.27	--	21.94	7,900 d	<50	<50	<50	<50	13,000	7.5	7.5
	10/9/2002	NP		37.21	--	--	16.02	--	21.19	2,400e	<20	<20	<20	<20	7,300/7,500	6.7	6.7
	1/13/2003	NP		37.21	--	--	13.20	--	24.01	6,400 e	<50 j	<50	<50	<50 j	8,900 k	6.8	6.8
	04/07/03 n	NP		37.21	--	--	14.42	--	22.79	<10,000	<100	<100	<100	<100	3,700	6.8	6.8
7/9/2003	--		37.21	--	--	15.01	--	22.20	11,000	<50	<50	<50	<50	6,500	6.9	6.9	
02/05/2004	NP	q	37.12	9.40	23.40	14.10	--	23.02	8,100	<50	<50	<50	<50	7,900	1.5	--	
04/05/2004	NP		37.12	9.40	23.40	14.14	--	22.98	4,000	<25	<25	<25	<25	2,000	1.0	6.6	
<b>07/13/2004</b>	<b>NP</b>		<b>37.12</b>	<b>9.40</b>	<b>23.40</b>	<b>15.37</b>	--	<b>21.75</b>	<b>&lt;5,000</b>	<b>&lt;50</b>	<b>&lt;50</b>	<b>&lt;50</b>	<b>&lt;50</b>	<b>4,000</b>	<b>0.8</b>	<b>6.7</b>	
MW-6	6/26/2000	--		37.11	--	--	13.46	--	23.65	NA	NA	NA	NA	NA	--	NA	NA
	7/20/2000	--		37.11	--	--	13.94	--	23.17	<50	<0.5	<0.5	<0.5	<1.0	<3.0	NA	NA



Table 1

Groundwater Elevation and Analytical Data

ARCO Station #2111

1156 Davis St, San Leandro, CA

Well No.	Date	P/ NP	Notes	TOC (feet)	Top of Screen (ft bgs)	Bottom of Screen (ft bgs)	DTW (feet)	Product Thickness (feet)	GWE (feet)	GRO/ TPH-g (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethyl-benzene (µg/L)	Total Xylenes (µg/L)	MTBE (µg/L)	DO (mg/L)	pH
MW-6	9/19/2000	--		37.11	--	--	14.41	--	22.70	<50	<0.5	<0.5	<0.5	<1.0	<3.0	NA	NA
	12/21/2000	--		37.11	--	--	14.53	--	22.58	<50	<0.5	<0.5	<0.5	<0.5	<2.5	NA	NA
	3/13/2001	--		37.11	--	--	12.67	--	24.44	<50	<0.5	<0.5	<0.5	<0.5	<2.5	NA	NA
	9/18/2001	--		37.11	--	--	15.42	--	21.69	<50	<0.5	<0.5	<0.5	<0.5	<2.5/<2.0	NA	NA
	12/28/2001	--		37.11	--	--	12.96	--	24.15	<50	<0.5	<0.5	<0.5	<0.5	12/<0.5	NA	NA
	3/14/2002	--		37.11	--	--	12.98	--	24.13	<50	<0.5	<0.5	<0.5	<0.5	<2.5	NA	NA
	4/23/2002	--		37.11	--	--	12.44	--	24.67	<50	<0.5	<0.5	<0.5	<0.5	3.1	NA	NA
	7/17/2002	NP		37.11	--	--	14.65	--	22.46	<50	<0.50	<0.50	<0.50	<0.50	<2.5	7.3	7.3
	10/9/2002	NP		37.11	--	--	15.51	--	21.60	<50	<0.50	<0.50	<0.50	<0.50	<2.5	7.1	7.1
	1/13/2003	NP		37.11	--	--	12.27	--	24.84	<50	<0.50	<0.50	<0.50	<0.50	<2.5	6.8	6.8
	04/07/03 n	NP		37.11	--	--	13.61	--	23.50	<50	<0.50	<0.50	<0.50	<0.50	<0.50	6.6	6.6
	7/9/2003	--		37.11	--	--	14.34	--	22.77	<50	<0.50	<0.50	<0.50	<0.50	<0.50	7	7.0
	02/05/2004	--	q	37.11	10.00	25.00	13.38	--	23.73	--	--	--	--	--	--	--	--
04/05/2004	--		37.11	10.00	25.00	13.31	--	23.80	--	--	--	--	--	--	--	--	
07/13/2004	NP		37.11	10.00	25.00	14.65	--	22.46	<50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	2.7	6.8
MW-7	6/26/2000	--		38.68	--	--	14.34	--	24.34	NA	NA	NA	NA	NA	--	NA	NA
	7/20/2000	--		38.68	--	--	15.26	--	23.42	14,000	5.4	<0.5	2.8	5.9	71,000	NA	NA
	9/19/2000	--		38.68	--	--	15.70	--	22.98	8,400	420	38	470	220	5,600	NA	NA
	12/21/2000	--		38.68	--	--	16.02	--	22.66	NS	NS	NS	NS	NS	--	NA	NA
	3/13/2001	--		38.68	--	--	14.18	--	24.50	<2,000	154	63	46.3	127	175,000/160,000	NA	NA
	9/18/2001	--		38.68	--	--	17.02	--	21.66	<100,000	1,900	<1,000	<1,000	2,800	190,000/370,000	NA	NA
	12/28/2001	--		38.68	--	--	14.81	--	23.87	<20,000	<200	<200	<200	<200	84,000/72,000	NA	NA
	3/14/2002	--		38.68	--	--	14.60	--	24.08	<50,000	<500	<500	<500	<500	85,000/85,000	NA	NA
	4/23/2002	--		38.68	--	--	13.94	--	24.74	<20,000	530	200	220	800	67,000	NA	NA
	7/17/2002	NP		38.68	--	--	16.27	--	22.41	26,000 d	720	<250	<250	860	120,000	6.9	6.9
	10/9/2002	NP		38.68	--	--	17.16	--	21.52	110,000d	1,500	4,400	820	5,400	97,000/120,000	6.8	6.8
	1/13/2003	NP		38.68	--	--	13.82	--	24.86	<50,000 f	<500 f	<500 f	<500 f	2,200 f	33,000 f	6.6	6.6
	04/07/03 n	NP		38.68	--	--	14.52	--	24.16	<2,500	30	<25	<25	<25	710	7.0	7.0
7/9/2003	--		38.68	--	--	15.97	--	22.71	66,000	<500	<500	<500	<500	36,000	6.7	6.7	
02/05/2004	NP	q	38.54	12.00	27.00	14.75	--	23.79	55,000	300	<250	<250	<250	34,000	1.0	6.7	

Table 1

Groundwater Elevation and Analytical Data

ARCO Station #2111

1156 Davis St, San Leandro, CA

Well No.	Date	P/ NP	Notes	TOC (feet)	Top of Screen (ft bgs)	Bottom of Screen (ft bgs)	DTW (feet)	Product Thickness (feet)	GWE (feet)	GRO/ TPH-g (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethyl-benzene (µg/L)	Total Xylenes (µg/L)	MTBE (µg/L)	DO (mg/L)	pH
MW-7	04/05/2004	NP	odor	38.54	12.00	27.00	14.63	--	23.91	62,000	520	<250	<250	380	37,000	1.0	6.7
	07/13/2004	NP		38.54	12.00	27.00	16.31	--	22.23	<100,000	<1,000	<1,000	<1,000	<1,000	56,000	0.7	6.7
MW-8	02/05/2004	P	q	38.91	--	--	15.61	--	23.30	3,600	<25	<25	<25	<25	1,900	6.9	6.8
	04/05/2004	P		38.91	--	--	15.64	--	23.27	1,900	<10	<10	<10	<10	1,200	3.2	6.7
	07/13/2004	P		38.91	--	--	17.22	--	21.69	<1,000	<10	<10	<10	<10	760	1.6	6.7

**Table 1**  
**Groundwater Elevation and Analytical Data**  
ARCO Station #2111  
1156 Davis St, San Leandro, CA

Abbreviations

GRO = Gasoline Range Organics, range C4-C12  
TPH-g = Total Petroleum Hydrocarbons analyzed by EPA method 8260B. (Prior to 04/07/03, analyzed by EPA method 8015 modified.)  
MTBE = Methyl tertiary butyl ether analyzed by EPA Methods 8260B. (Prior to 04/07/03, analyzed by EPA methods 8020/ 8260B)  
ug/L = Micrograms per liter  
mg/L = Milligrams per liter  
NA = Not available  
NM = Not measured  
NC = Not calculated  
P/NP = Purged/ Not purged before sampling  
GWE = Groundwater elevation measured in feet above mean sea level  
TOC = Top of casing  
DTW = Depth to water measured in feet below ground surface (ft bgs)  
< = Not detected at or above specified laboratory method detection limit

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

Notes:

a = Product sheen noted  
b = Well was sampled after batch extraction event.  
c = Chromatogram Pattern: Gasoline C6-C10  
d = Hydrocarbon pattern is present in the requested fuel quantitation range but does not resemble the pattern of the requested fuel  
e = Discrete peak @C6-C7  
f = This sample was analyzed beyond the EPA recommended holding time. The results may still be useful for their intended purpose.  
g = Well not sampled due to the detection of free product.  
h = Groundwater elevation adjusted for free product: (thickness of free product x 0.8) + measured groundwater elevation  
j = The closing calibration was outside acceptance limits by 1%. This should be considered in evaluating the result. The average % difference for all analytes met the 15% requirement and the QC suggests that calibration linearity is not a factor.  
k = The closing calibration was outside acceptance limits by 6%. This should be considered in evaluating the result. The average % difference for all analytes met the 15% requirement and the QC suggests that calibration linearity is not a factor.  
l = This analyte was not confirmed using a secondary column in accordance to client contract.  
n = TPH-g, BTEX, and MTBE analyzed by EPA method 8260B beginning on the second quarter 2003 sampling event (04/07/03).  
o = Dissolved Oxygen and pH levels are field measurements.  
p = Please note that beginning in the Fourth Quarter 2003, the laboratory modified the reported analyte list. Total Petroleum Hydrocarbons as Gasoline (TPH-g) has been changed to Gasoline Range Organics (GRO). The resulting data may be impacted by the potential inclusion of non-TPHg analytes within the requested fuel range resulting in a higher concentration being reported.  
q = TOC elevations re-surveyed to NAVD '88 on February 23, 2004.  
r = Data collected during batch extraction activities.

1. Beginning in the Second Quarter 2004, the carbon range for the GRO has been changed from C6-C10 to C-4 to C-12. The carbon range for DRO has been changed from C10-C28 to C10-C36. EPA 8015B has been modified to better meet the requirements of California regulatory agencies.

Table 2

Fuel Additives Analytical Data

ARCO Station #2111

1156 Davis St, San Leandro, CA

Well Number	Date Sampled	Ethanol (µg/L)	TBA (µg/L)	MtBE (µg/L)	DIPE (µg/L)	EtBE (µg/L)	TAME (µg/L)	1,2-DCA (µg/L)	EDB (µg/L)	Comments
MW-1	4/7/2003	<100	<20	1,100	<0.50	<0.50	<0.50	--	--	
	7/9/2003	<5,000	<1,000	690	<25	<25	<25	--	--	
	02/05/2004	<5,000	<1,000	1,100	<25	<25	32	<25	<25	
	04/05/2004	<5,000	<1,000	1,700	<25	<25	38	<25	<25	a
	07/13/2004	<2,000	780	730	<10	<10	19	<10	<10	a
MW-2	04/05/2004	<1,000	<200	750	<5.0	<5.0	<5.0	<5.0	<5.0	
	07/13/2004	<10,000	12,000	5,800	<50	<50	<50	<50	<50	a
MW-3	4/7/2003	<100	<20	75	<0.50	<0.50	6.5	--	--	
	7/9/2003	<100	<20	52	<0.50	<0.50	4.2	--	--	
	02/05/2004	<100	<20	37	<0.50	<0.50	3.1	<0.50	<0.50	
	04/05/2004	<100	<20	53	<0.50	<0.50	3.7	<0.50	<0.50	a
	07/13/2004	<100	44	35	<0.50	<0.50	3.2	<0.50	<0.50	
MW-4	4/7/2003	<100	<20	24	<0.50	<0.50	7.3	--	--	
	7/9/2003	<100	<20	34	<0.50	<0.50	9.8	--	--	
	02/05/2004	<100	<20	22	<0.50	<0.50	6.2	<0.50	<0.50	
	04/05/2004	<100	<20	27	<0.50	<0.50	7.2	<0.50	<0.50	a
	07/13/2004	<100	26	27	<0.50	<0.50	7.4	<0.50	<0.50	a
MW-5	4/7/2003	<20,000	<4,000	3,700	<100	<100	<100	--	--	
	7/9/2003	<10,000	<2,000	6,500	<50	<50	<50	--	--	
	02/05/2004	<10,000	<2,000	7,900	<50	<50	<50	<50	<50	a
	04/05/2004	<5,000	<1,000	2,000	<25	<25	<25	<25	<25	a
	07/13/2004	<10,000	3,200	4,000	<50	<50	<50	<50	<50	a
MW-6	4/7/2003	<100	<20	<0.50	<0.50	<0.50	<0.50	--	--	
	7/9/2003	<100	<20	<0.50	<0.50	<0.50	<0.50	--	--	
	07/13/2004	<100	<20	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	a
MW-7	4/7/2003	<5,000	<1,000	710	<25	<25	<25	--	--	
	7/9/2003	<100,000	<20,000	36,000	<500	<500	<500	--	--	
	02/05/2004	<50,000	<10,000	34,000	<250	<250	<250	<250	<250	
	04/05/2004	<50,000	<10,000	37,000	<250	<250	<250	<250	<250	
	07/13/2004	<200,000	<40,000	56,000	<1,000	<1,000	1,300	<1,000	<1,000	
MW-8	02/05/2004	<5,000	<1,000	1,900	<25	<25	<25	<25	<25	

**Table 2**

**Fuel Additives Analytical Data**

ARCO Station #2111

1156 Davis St, San Leandro, CA

Well Number	Date Sampled	Ethanol (µg/L)	TBA (µg/L)	MtBE (µg/L)	DIPE (µg/L)	EtBE (µg/L)	TAME (µg/L)	1,2-DCA (µg/L)	EDB (µg/L)	Comments
MW-8	04/05/2004	<2,000	<400	1,200	<10	<10	12	<10	<10	a
	07/13/2004	<2,000	770	760	<10	<10	<10	<10	<10	a

**Table 2**

**Fuel Additives Analytical Data**

ARCO Station #2111

1156 Davis St, San Leandro, CA

Abbreviations:

TBA = tert-Butyl alcohol

MTBE = Methyl tert-butyl ether

DIPE = Di-isopropyl ether

ETBE = Ethyl tert butyl ether

TAME = tert-Amyl methyl ether

ug/L = micrograms per liter

< = Not detected at or above the laboratory reporting limit

NA = Data not available, not analyzed, or not applicable

NS = Not Sampled

Notes:

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

**Table 3**  
**Groundwater Gradient Data**  
 ARCO Station #2111  
 1156 Davis St, San Leandro, CA

<b>Date Sampled</b>	<b>Approximate Flow Direction</b>	<b>Approximate Hydraulic Gradient</b>
7/20/2000	West-Northwest	0.006
9/19/2000	West-Northwest	0.004
12/21/2000	West-Northwest	0.004
3/13/2001	West-Northwest	0.005
5/30/2001	West-Northwest	0.004
9/18/2001	West-Northwest	0.003
12/28/2001	West-Northwest	0.003
3/14/2002	West	0.004
4/23/2002	West	0.006
7/17/2002	West	0.003
10/9/2002	West	0.002
1/13/2003	Southwest	0.0043
4/7/2003	West-Northwest	0.009-0.011
7/9/2003	West-Northwest	0.004
10/1/2003	West	0.002
2/5/2004	West	0.004
4/5/2004	West-Southwest	0.004
7/13/2004	West-Southwest	0.003

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

**Table 4**  
**Approximate Cumulative Floating Product Recovered**  
**1999 - present**

ARCO Service Station #2111  
1156 Davis Street, San Leandro California

Well Designation	Product Recovery Field Date	Floating Product Thickness (feet)	Floating Product Recovered (gallons)
MW-2	06/28/99	0.45	0.300
MW-2	06/30/99	0.015	0.010
MW-2	07/07/99	0.06	0.040
MW-2	07/23/99	0.008	0.005
MW-2	08/25/99	0.02	0.013
MW-2	09/21/99	0.01	0.013
MW-2	11/10/99	ND	0.000
MW-2	02/09/00	ND	0.000
MW-2	04/23/02	ND	0.000
MW-2	07/17/02	Sheen	0.000
MW-2	10/9/2002*	NA	0.000
MW-2	01/13/03	0.26	0.132
MW-2	02/14/03	ND	0.000
MW-2	03/24/03	ND	0.000
MW-2	04/07/03	0.05	0.003
MW-2	05/23/03	ND	0.000
MW-2	06/24/03	0.03	0.012
MW-2	07/09/03	0.07	0.028
MW-2	07/31/03	0.05	0.034
MW-2	09/04/03	0.02	0.013
MW-2	10/01/03	0.07	0.021
MW-2	11/12/03	0.59	0.360
MW-2	12/11/03	0.05	0.066
MW-2	02/05/04	0.13	0.021
MW-2	02/16/04	0.02	0.013
MW-2	03/11/04	ND	0.000
MW-2	03/30/04	ND	0.000
MW-2	04/05/04	ND	0.000
<b>MW-2</b>	<b>07/13/04</b>	<b>ND</b>	<b>0.000</b>
<b>MW-2</b>	<b>08/31/04</b>	<b>ND</b>	<b>0.000</b>
<b>MW-2</b>	<b>09/07/04</b>	<b>ND</b>	<b>0.000</b>
<b>Approximate Cumulative Floating Product:</b>			<b>1.085</b>

\* = Free product encountered, but unable to gauge.



**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 # 040713-PC3 Date 7/13/04 Client Arco 211

Site 1156 Davis St., San Leandro

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 TOR	
MW-1	4					17.57	26.22	↓	N/A 12.5'
MW-2	4		No SPH detected w/ IP Probe			15.79	26.67		SPH 12'
MW-3	4					17.20	26.65		11.9'
MW-4	4					15.96	21.68		10'
MW-5	2					15.37	23.81		9.4'
MW-6	2					14.65	25.06		Tr. 10'
MW-7	4					16.31	27.15		12'
MW-8	2					17.22	39.70		Purge

## ARCO / BP WELL MONITORING DATA SHEET

BTS #: <u>040713-PC3</u>	Station # <u>Arco 2111</u>
Sampler: <u>PC</u>	Date: <u>7/13/04</u>
Well I.D.: <u>MW-1</u>	Well Diameter: 2 3 <u>4</u> 6 8 _____
Total Well Depth: <u>26.22</u>	Depth to Water: <u>17.57</u>
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: <u>(V)C</u> Grade	D.O. Meter (if req'd): <u>(VS)</u> HACH

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

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

Top of Screen: 12.5' If well is listed as a no-purge, confirm that water level is below the top of screen. Otherwise, the well must be purged.

_____	x	No Purge	=	_____	Gals.
1 Case Volume (Gals.)		Specified Volumes		Calculated Volume	

Time	Temp (°F)	pH	Conductivity (mS or $\mu$ )	Gals. Removed	Observations
1350	69.5	6.6	684	-	clear

Did well dewater? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Gallons actually evacuated: _____
Sampling Time: <u>1350</u>	Sampling Date: <u>7/13/04</u>
Sample I.D.: <u>MW-1</u>	Laboratory: Pace <u>Sequon</u> Other _____
Analyzed for: <u>GRO BTEX</u> MTBE DRO	Other: <u>see COL</u>
D.O. (if req'd):	Pre-purge: _____ mg/L
	Post-purge: <u>0.5</u> mg/L
O.R.P. (if req'd):	Pre-purge: _____ mV
	Post-purge: _____ mV

## ARCO / BP WELL MONITORING DATA SHEET

BTS #: <u>040713-PC3</u>	Station # <u>Arco 2111</u>
Sampler: <u>PC</u>	Date: <u>7/13/04</u>
Well I.D.: <u>MW-2</u>	Well Diameter: 2 3 <u>4</u> 6 8 _____
Total Well Depth: <u>26.67</u>	Depth to Water: <u>15.79</u>
Depth to Free Product: <u>N/A</u>	Thickness of Free Product (feet): <u>Ø</u>
Referenced to: <u>PVC</u> Grade	D.O. Meter (if req'd): <u>YS</u> HACH

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

Purge Method: Bailer      Sampling Method: Bailer

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

Top of Screen: 12'      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>No Purge</u>	=	_____ Gals.
1 Case Volume (Gals.)		Specified Volumes		Calculated Volume

Time	Temp (°F)	pH	Conductivity (mS or <u>µS</u> )	Gals. Removed	Observations
1448	69.7	6.4	659	-	clear, odor

Did well dewater?    Yes      No      Gallons actually evacuated: \_\_\_\_\_

Sampling Time: 1448      Sampling Date: 7/13/04

Sample I.D.: MW-2      Laboratory:    Pace    Sequia    Other \_\_\_\_\_

Analyzed for:    GRO    BTEX    MTBE    DRO    Other: see COC

D.O. (if req'd):	Pre-purge:	mg/L	Post-purge:	0.3 mg/L
O.R.P. (if req'd):	Pre-purge:	mV	Post-purge:	mV

## ARCO / BP WELL MONITORING DATA SHEET

BTS #: <u>040713-PC3</u>	Station # <u>Arco 2111</u>
Sampler: <u>PC</u>	Date: <u>7/13/04</u>
Well I.D.: <u>MW-3</u>	Well Diameter: 2 3 <u>4</u> 6 8 _____
Total Well Depth: <u>26.65</u>	Depth to Water: <u>17.20</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  
 Extraction Pump  
 Other: \_\_\_\_\_

Top of Screen: 11.9'      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>No Purge</u> Specified Volumes	=	_____ Gals.
1 Case Volume (Gals.)				Calculated Volume

Time	Temp (°F)	pH	Conductivity (mS or <u>µS</u> )	Gals. Removed	Observations
<u>1340</u>	<u>69.3</u>	<u>6.7</u>	<u>688</u>	-	<u>clear</u>

Did well dewater?    Yes      No      Gallons actually evacuated: \_\_\_\_\_

Sampling Time: 1340      Sampling Date: 7/13/04

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

Analyzed for: GRO BTEX MTBE DRO      Other: see CD

D.O. (if req'd):	Pre-purge:	mg/L	Post-purge:	mg/L
			<u>0.8</u>	
O.R.P. (if req'd):	Pre-purge:	mV	Post-purge:	mV

## ARCO / BP WELL MONITORING DATA SHEET

BTS #: <u>040713-PC3</u>	Station # <u>Arco 211</u>
Sampler: <u>PC</u>	Date: <u>7/13/04</u>
Well I.D.: <u>MW-4</u>	Well Diameter: 2 3 <u>4</u> 6 8 _____
Total Well Depth: <u>21.68</u>	Depth to Water: <u>15.96</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  
 Disposable Bailer  
 Positive Air Displacement  
 Electric Submersible Extraction Pump  
 Other: \_\_\_\_\_

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

Top of Screen: 10' 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>No Purge</u>	=	_____ Gals.
1 Case Volume (Gals.)		Specified Volumes		Calculated Volume

Time	Temp (°F)	pH	Conductivity (mS or $\mu$ )	Gals. Removed	Observations
1320	69.7	6.6	749	-	clear

Did well dewater? Yes  No  Gallons actually evacuated: \_\_\_\_\_

Sampling Time: 1320 Sampling Date: 7/13/04

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

Analyzed for: GRO BTEX MTBE DRO Other: see loc

D.O. (if req'd):	Pre-purge:	mg/L	Post-purge:	0.6 mg/L
O.R.P. (if req'd):	Pre-purge:	mV	Post-purge:	mV

## ARCO / BP WELL MONITORING DATA SHEET

BTS #: <u>040713-PC3</u>	Station # <u>Arco 2111</u>
Sampler: <u>PC</u>	Date: <u>7/13/04</u>
Well I.D.: <u>MW-5</u>	Well Diameter: <u>2</u> 3 4 6 8 <u>    </u>
Total Well Depth: <u>23.81</u>	Depth to Water: <u>15.37</u>
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: <u>(V/C)</u> Grade	D.O. Meter (if req'd): <u>(SD)</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: 9.41' 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	No Purge	=	_____	Gals.
1 Case Volume (Gals.)		Specified Volumes		Calculated Volume	

Time	Temp (°F)	pH	Conductivity (mS or <u>µS</u> )	Gals. Removed	Observations
<u>1500</u>	<u>70.0</u>	<u>6.7</u>	<u>659</u>	-	<u>clear</u>

Did well dewater? Yes <input type="checkbox"/> No <input type="checkbox"/>	Gallons actually evacuated: _____
Sampling Time: <u>1500</u>	Sampling Date: <u>7/13/04</u>
Sample I.D.: <u>MW-5</u>	Laboratory: Pace <u>Sequoia</u> Other _____
Analyzed for: <u>GRO BTEX</u> MTBE DRO Other: <u>409 COC</u>	
D.O. (if req'd):	Pre-purge: _____ mg/L
	Post-purge: <u>0.8</u> mg/L
O.R.P. (if req'd):	Pre-purge: _____ mV
	Post-purge: _____ mV



## ARCO / BP WELL MONITORING DATA SHEET

BTS #: <u>040713-003</u>	Station # <u>Arco 2111</u>
Sampler: <u>PC</u>	Date: <u>7/13</u>
Well I.D.: <u>MW-6</u>	Well Diameter: <u>2</u> 3 4 6 8 _____
Total Well Depth: <u>25.06</u>	Depth to Water: <u>14.65</u>
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: <u>PC</u> Grade	D.O. Meter (if req'd): <u>YS</u> HACH

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

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

Top of Screen: 10' 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>No-purge</u>	=	_____	Gals.
1 Case Volume (Gals.)		Specified Volumes		Calculated Volume	

Time	Temp (°F)	pH	Conductivity (mS or <u>µS</u> )	Gals. Removed	Observations
<u>1304</u>	<u>70.6</u>	<u>6.8</u>	<u>778</u>	-	<u>clear</u>

Did well dewater? Yes <input type="checkbox"/> No <input type="checkbox"/>	Gallons actually evacuated: _____
Sampling Time: <u>1304</u>	Sampling Date: <u>7/13/04</u>
Sample I.D.: <u>MW-6</u>	Laboratory: Pace <u>Sequidia</u> Other _____
Analyzed for: <u>GRO BTEX</u> MTBE DRO	Other: <u>see loc</u>
D.O. (if req'd):	Pre-purge: _____ mg/L
	Post-purge: <u>2.7</u> mg/L
O.R.P. (if req'd):	Pre-purge: _____ mV
	Post-purge: _____ mV

## ARCO / BP WELL MONITORING DATA SHEET

BTS #: <u>040703PC3</u>	Station # <u>Arco 2111</u>
Sampler: <u>PC</u>	Date: <u>7/13/04</u>
Well I.D.: <u>MU-7</u>	Well Diameter: 2 3 <input checked="" type="radio"/> 6 8 _____
Total Well Depth: <u>27.15</u>	Depth to Water: <u>16.31</u>
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: <input checked="" type="checkbox"/> PVC _____ Grade	D.O. Meter (if req'd): <input checked="" type="checkbox"/> HACH

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

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

Top of Screen: 12' 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>NO Purge</u>	=	_____	Gals.
I Case Volume (Gals.)		Specified Volumes		Calculated Volume	

Time	Temp (°F)	pH	Conductivity (mS or <input checked="" type="radio"/> µS)	Gals. Removed	Observations
<u>1520</u>	<u>69.4</u>	<u>6.7</u>	<u>1132</u>	<u>-</u>	<u>flakes</u>

Did well dewater? Yes <input type="checkbox"/> No <input type="checkbox"/>	Gallons actually evacuated: _____	
Sampling Time: <u>1520</u>	Sampling Date: <u>7/13/04</u>	
Sample I.D.: <u>MU-7</u>	Laboratory: Pace <input checked="" type="checkbox"/> SeqDora Other _____	
Analyzed for: <input checked="" type="checkbox"/> GRO <input checked="" type="checkbox"/> BTEX MTBE DRO	Other: <u>See LOC</u>	
D.O. (if req'd):	Pre-purge: _____ mg/L	Post-purge: <u>0.7</u> mg/L
O.R.P. (if req'd):	Pre-purge: _____ mV	Post-purge: _____ mV

## ARCO / BP WELL MONITORING DATA SHEET

BTS #: <u>040713-PC3</u>	Station # <u>Arco 211</u>
Sampler: <u>PC</u>	Date: <u>7/13/04</u>
Well I.D.: <u>MU-8</u>	Well Diameter: <u>0</u> 3 4 6 8 _____
Total Well Depth: <u>39.70</u>	Depth to Water: <u>17.22</u>
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: <u>(VPC)</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: <input type="checkbox"/> Bailer <input type="checkbox"/> Disposable Bailer <input checked="" type="checkbox"/> Positive Air Displacement <input type="checkbox"/> Electric Submersible <input type="checkbox"/> Extraction Pump Other: _____	Sampling Method: <input type="checkbox"/> Bailer <input checked="" type="checkbox"/> Disposable Bailer <input type="checkbox"/> Extraction Port Other: _____
---	---

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

<u>3.6</u>	x	<u>3</u>	=	<u>10.8</u>	Gals.
1 Case Volume (Gals.)		Specified Volumes		Calculated Volume	

Time	Temp (°F)	pH	Conductivity (mS or <del>µS</del> )	Gals. Removed	Observations
1415	69.5	6.8	681	3.6	brown
1420	68.7	6.7	678	7.2	↓
1426	69.4	6.7	677	10.8	

Did well dewater? Yes <input type="checkbox"/> <input checked="" type="checkbox"/> No	Gallons actually evacuated: <u>11</u>
Sampling Time: <u>1435</u>	Sampling Date: <u>7/13/04</u>
Sample I.D.: <u>MU-8</u>	Laboratory: Pace <u>Sequoia</u> Other _____

Analyzed for: <u>(BRO BTX)</u> MTBE DRO Other: <u>see LOD</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:

Arco 2111

Station #

1156 Davis St., San Leandro

Station Address

Total Gallons Collected From Groundwater Monitoring Wells:

20,11

added equip.

rinse water 5

any other

adjustments

TOTAL GALS.

RECOVERED 25,16

loaded onto

BTS vehicle # 52

BTS event #

040713-PC3

time

date

1400 7/13/04

signature

[Signature]

\*\*\*\*\*

REC'D AT

time

date

(BTS)

1500 7/13/04

unloaded by

signature [Signature]

### WELL GAUGING DATA

Project # DA-0821-MTA Date 8/31/04 Client 2111

Site 1156 Davis St., San Leandro

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-2	4					15.89	—	TOC	

## ARCO / BP WELL MONITORING DATA SHEET

BTS #: <u>DA0831-MTA</u>	Station # <u>2111</u>
Sampler: <u>MT</u>	Date: <u>8/31/04</u>
Well I.D.: <u>MW-2</u>	Well Diameter: 2 3 <u>4</u> 6 8
Total Well Depth: <u>—</u>	Depth to Water: <u>15.89</u>
Depth to Free Product: <u>—</u>	Thickness of Free Product (feet): <u>—</u>
Referenced to: <u>PVC</u> Grade	D.O. Meter (if req'd): YSI HACH

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

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

_____	X	_____	=	_____ Gals.
1 Case Volume (Gals.)		Specified Volumes		Calculated Volume

Time	Temp (°F)	pH	Conductivity (mS or µS)	Gals. Removed	Observations
		<u>No spH detected.</u>			

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

### WELL GAUGING DATA

Project # 010907-PC3 Date 9/7/04 Client URS Arco 2111

Site 1156 Davis St, San Leandro

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 <del>TOB</del>	
S-2	4	odor	NOS	PH Detected		16.42	-	TOC	

## ARCO / BP WELL MONITORING DATA SHEET

BTS #: <u>040907-003</u>	Station # <u>Arco 2111</u>
Sampler: <u>PC</u>	Date: <u>9/7/04</u>
Well I.D.: <u>MW-2</u>	Well Diameter: 2 3 <u>4</u> 6 8 <u>    </u>
Total Well Depth: <u>-</u>	Depth to Water: <u>16.42</u>
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: <u>(V)</u> Grade	D.O. Meter (if req'd): YSI 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> <del>Disposable Bailer</del> <del>Positive Air Displacement</del> <del>Electric Submersible Extraction Pump</del> Other: _____	Sampling Method: <u>Bailer</u> <del>Disposable Bailer</del> <del>Extraction Port</del> 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.

_____	X	_____	=	_____ Gals.
1 Case Volume (Gals.)		Specified Volumes		Calculated Volume

Time	Temp (°F)	pH	Conductivity (mS or µS)	Gals. Removed	Observations
			<u>NO SPH Detected</u>		

Did well dewater? Yes <input type="checkbox"/> No <input type="checkbox"/>	Gallons actually evacuated: _____
Sampling Time: _____	Sampling Date: _____
Sample I.D.: _____	Laboratory: <u>Pacc</u> Sequoia Other _____
Analyzed for: GRO BTEX MTBE DRO Other: _____	
D.O. (if req'd): _____	Pre-purge: _____ mg/L Post-purge: _____ mg/L
O.R.P. (if req'd): _____	Pre-purge: _____ mV Post-purge: _____ mV



**ATTACHMENT B**

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

## **LABORATORY PROCEDURES**

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### **Laboratory Procedures**

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



**Sequoia  
Analytical**

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

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3 August, 2004

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

RE: ARCO #2111, San Leandro, CA  
Work Order: MNG0318

Enclosed are the results of analyses for samples received by the laboratory on 07/14/04 11:03. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Lisa Race  
Senior Project Manager

CA ELAP Certificate #1210

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

Project: ARCO #2111, San Leandro, CA  
Project Number: INTRIM-50277  
Project Manager: Scott Robinson

MNG0318  
Reported:  
08/03/04 16:51

**ANALYTICAL REPORT FOR SAMPLES**

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
MW-1	MNG0318-01	Water	07/13/04 13:50	07/14/04 11:03
MW-2	MNG0318-02	Water	07/13/04 14:48	07/14/04 11:03
MW-3	MNG0318-03	Water	07/13/04 13:40	07/14/04 11:03
MW-4	MNG0318-04	Water	07/13/04 13:20	07/14/04 11:03
MW-6	MNG0318-05	Water	07/13/04 13:04	07/14/04 11:03
MW-7	MNG0318-06	Water	07/13/04 15:20	07/14/04 11:03
MW-8	MNG0318-07	Water	07/13/04 14:35	07/14/04 11:03
TB-2111-07132004	MNG0318-08	Water	07/13/04 00:00	07/14/04 11:03
MW-5	MNG0318-09	Water	07/13/04 15:00	07/14/04 11:03

The carbon range for the TPH-GRO has been changed from C6-C10 to C4-C12. The carbon range for TPH-DRO has been changed from C10-C28 to C10-C36. EPA 8015B has been modified to better meet the requirements of California regulatory agencies. These samples were received with intact custody seals.

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

Project: ARCO #2111, San Leandro, CA  
Project Number: INTRIM-50277  
Project Manager: Scott Robinson

MNG0318  
Reported:  
08/03/04 16:51

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

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>MW-1 (MNG0318-01) Water</b> <b>Sampled: 07/13/04 13:50</b> <b>Received: 07/14/04 11:03</b>									
Ethanol	ND	2000	ug/l	20	4G23004	07/23/04	07/23/04	EPA 8260B	IC
tert-Butyl alcohol	780	400	"	"	"	"	"	"	
Methyl tert-butyl ether	730	10	"	"	"	"	"	"	
Di-isopropyl ether	ND	10	"	"	"	"	"	"	
Ethyl tert-butyl ether	ND	10	"	"	"	"	"	"	
tert-Amyl methyl ether	19	10	"	"	"	"	"	"	
1,2-Dichloroethane	ND	10	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	10	"	"	"	"	"	"	
Benzene	ND	10	"	"	"	"	"	"	
Toluene	ND	10	"	"	"	"	"	"	
Ethylbenzene	ND	10	"	"	"	"	"	"	
Xylenes (total)	ND	10	"	"	"	"	"	"	
Gasoline Range Organics (C4-C12)	ND	1000	"	"	"	"	"	"	
<i>Surrogate: 1,2-Dichloroethane-d4</i>		86 %	78-129		"	"	"	"	
<b>MW-2 (MNG0318-02) Water</b> <b>Sampled: 07/13/04 14:48</b> <b>Received: 07/14/04 11:03</b>									
Ethanol	ND	10000	ug/l	100	4G22001	07/22/04	07/22/04	EPA 8260B	IC
tert-Butyl alcohol	12000	2000	"	"	"	"	"	"	
Methyl tert-butyl ether	5800	50	"	"	"	"	"	"	
Di-isopropyl ether	ND	50	"	"	"	"	"	"	
Ethyl tert-butyl ether	ND	50	"	"	"	"	"	"	
tert-Amyl methyl ether	ND	50	"	"	"	"	"	"	
1,2-Dichloroethane	ND	50	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	50	"	"	"	"	"	"	
Benzene	380	50	"	"	"	"	"	"	
Toluene	ND	50	"	"	"	"	"	"	
Ethylbenzene	2100	50	"	"	"	"	"	"	
Xylenes (total)	7900	50	"	"	"	"	"	"	
Gasoline Range Organics (C4-C12)	59000	5000	"	"	"	"	"	"	
<i>Surrogate: 1,2-Dichloroethane-d4</i>		87 %	78-129		"	"	"	"	



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

Project: ARCO #2111, San Leandro, CA  
 Project Number: INTRIM-50277  
 Project Manager: Scott Robinson

MNG0318  
 Reported:  
 08/03/04 16:51

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

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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**MW-3 (MNG0318-03) Water** Sampled: 07/13/04 13:40 Received: 07/14/04 11:03

Ethanol	ND	100	ug/l	1	4G22001	07/22/04	07/22/04	EPA 8260B	IC
tert-Butyl alcohol	44	20	"	"	"	"	"	"	
Methyl tert-butyl ether	35	0.50	"	"	"	"	"	"	
Di-isopropyl ether	ND	0.50	"	"	"	"	"	"	
Ethyl tert-butyl ether	ND	0.50	"	"	"	"	"	"	
tert-Amyl methyl ether	3.2	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	"	"	"	"	"	"	
<b>Gasoline Range Organics (C4-C12)</b>	<b>120</b>	<b>50</b>	"	"	"	"	"	"	

Surrogate: 1,2-Dichloroethane-d4 92 % 78-129 " " " "

**MW-4 (MNG0318-04) Water** Sampled: 07/13/04 13:20 Received: 07/14/04 11:03

Ethanol	ND	100	ug/l	1	4G22001	07/22/04	07/22/04	EPA 8260B	IC
tert-Butyl alcohol	26	20	"	"	"	"	"	"	
Methyl tert-butyl ether	27	0.50	"	"	"	"	"	"	
Di-isopropyl ether	ND	0.50	"	"	"	"	"	"	
Ethyl tert-butyl ether	ND	0.50	"	"	"	"	"	"	
tert-Amyl methyl ether	7.4	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	"	"	"	"	"	"	
<b>Gasoline Range Organics (C4-C12)</b>	<b>77</b>	<b>50</b>	"	"	"	"	"	"	

Surrogate: 1,2-Dichloroethane-d4 88 % 78-129 " " " "

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

 Project: ARCO #2111, San Leandro, CA  
 Project Number: INTRIM-50277  
 Project Manager: Scott Robinson

 MNG0318  
 Reported:  
 08/03/04 16:51

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

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>MW-6 (MNG0318-05) Water Sampled: 07/13/04 13:04 Received: 07/14/04 11:03</b>									
Ethanol	ND	100	ug/l	1	4G22001	07/22/04	07/22/04	EPA 8260B	IC
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 (C4-C12)	ND	50	"	"	"	"	"	"	"
<i>Surrogate: 1,2-Dichloroethane-d4</i>		92 %	78-129	"	"	"	"	"	"
<b>MW-7 (MNG0318-06) Water Sampled: 07/13/04 15:20 Received: 07/14/04 11:03</b>									
Ethanol	ND	200000	ug/l	2000	4G26011	07/26/04	07/26/04	EPA 8260B	
tert-Butyl alcohol	ND	40000	"	"	"	"	"	"	"
Methyl tert-butyl ether	56000	1000	"	"	"	"	"	"	"
Di-isopropyl ether	ND	1000	"	"	"	"	"	"	"
Ethyl tert-butyl ether	ND	1000	"	"	"	"	"	"	"
tert-Amyl methyl ether	1300	1000	"	"	"	"	"	"	"
1,2-Dichloroethane	ND	1000	"	"	"	"	"	"	"
1,2-Dibromoethane (EDB)	ND	1000	"	"	"	"	"	"	"
Benzene	ND	1000	"	"	"	"	"	"	"
Toluene	ND	1000	"	"	"	"	"	"	"
Ethylbenzene	ND	1000	"	"	"	"	"	"	"
Xylenes (total)	ND	1000	"	"	"	"	"	"	"
Gasoline Range Organics (C4-C12)	ND	100000	"	"	"	"	"	"	"
<i>Surrogate: 1,2-Dichloroethane-d4</i>		100 %	78-129	"	"	"	"	"	"



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 Project Manager: Scott Robinson

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

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>MW-8 (MNG0318-07) Water Sampled: 07/13/04 14:35 Received: 07/14/04 11:03</b>									
Ethanol	ND	2000	ug/l	20	4G23004	07/23/04	07/23/04	EPA 8260B	IC
tert-Butyl alcohol	770	400	"	"	"	"	"	"	
Methyl tert-butyl ether	760	10	"	"	"	"	"	"	
Di-isopropyl ether	ND	10	"	"	"	"	"	"	
Ethyl tert-butyl ether	ND	10	"	"	"	"	"	"	
tert-Amyl methyl ether	ND	10	"	"	"	"	"	"	
1,2-Dichloroethane	ND	10	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	10	"	"	"	"	"	"	
Benzene	ND	10	"	"	"	"	"	"	
Toluene	ND	10	"	"	"	"	"	"	
Ethylbenzene	ND	10	"	"	"	"	"	"	
Xylenes (total)	ND	10	"	"	"	"	"	"	
Gasoline Range Organics (C4-C12)	ND	1000	"	"	"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4		92 %	78-129		"	"	"	"	
<b>MW-5 (MNG0318-09) Water Sampled: 07/13/04 15:00 Received: 07/14/04 11:03</b>									
Ethanol	ND	10000	ug/l	100	4G23004	07/23/04	07/23/04	EPA 8260B	IC
tert-Butyl alcohol	3200	2000	"	"	"	"	"	"	
Methyl tert-butyl ether	4000	50	"	"	"	"	"	"	
Di-isopropyl ether	ND	50	"	"	"	"	"	"	
Ethyl tert-butyl ether	ND	50	"	"	"	"	"	"	
tert-Amyl methyl ether	ND	50	"	"	"	"	"	"	
1,2-Dichloroethane	ND	50	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	50	"	"	"	"	"	"	
Benzene	ND	50	"	"	"	"	"	"	
Toluene	ND	50	"	"	"	"	"	"	
Ethylbenzene	ND	50	"	"	"	"	"	"	
Xylenes (total)	ND	50	"	"	"	"	"	"	
Gasoline Range Organics (C4-C12)	ND	5000	"	"	"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4		89 %	78-129		"	"	"	"	



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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch 4G22001 - EPA 5030B P/T**

**Blank (4G22001-BLK1)**

Prepared & Analyzed: 07/22/04

Ethanol	ND	100	ug/l							IC
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 (C4-C12)	ND	50	"							

Surrogate: 1,2-Dichloroethane-d4

2.28

"

2.50

91

78-129

**Laboratory Control Sample (4G22001-BS1)**

Prepared & Analyzed: 07/22/04

Ethanol	382	100	ug/l	200		191	31-186			IC, HL
tert-Butyl alcohol	75.6	20	"	50.0		151	0-206			
Methyl tert-butyl ether	8.88	0.50	"	10.0		89	63-137			
Di-isopropyl ether	10.2	0.50	"	10.0		102	76-130			
Ethyl tert-butyl ether	10.0	0.50	"	10.0		100	61-141			
tert-Amyl methyl ether	10.3	0.50	"	10.0		103	56-140			
1,2-Dichloroethane	10.2	0.50	"	10.0		102	77-136			
1,2-Dibromoethane (EDB)	10.1	0.50	"	10.0		101	77-132			
Benzene	9.84	0.50	"	10.0		98	78-124			
Toluene	9.86	0.50	"	10.0		99	78-129			
Ethylbenzene	10.2	0.50	"	10.0		102	84-117			
Xylenes (total)	31.3	0.50	"	30.0		104	83-125			

Surrogate: 1,2-Dichloroethane-d4

2.19

"

2.50

88

78-129

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 Project Number: INTRIM-50277  
 Project Manager: Scott Robinson

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch 4G22001 - EPA 5030B P/T**
**Laboratory Control Sample (4G22001-BS2)**

Prepared &amp; Analyzed: 07/22/04

Methyl tert-butyl ether	8.27	0.50	ug/l	9.92		83	63-137			
Benzene	5.36	0.50	"	6.40		84	78-124			
Toluene	31.7	0.50	"	29.7		107	78-129			
Ethylbenzene	8.06	0.50	"	6.96		116	84-117			
Xylenes (total)	39.7	0.50	"	33.7		118	83-125			
Gasoline Range Organics (C4-C12)	432	50	"	440		98	70-124			
<i>Surrogate: 1,2-Dichloroethane-d4</i>	2.25		"	2.50		90	78-129			

**Laboratory Control Sample Dup (4G22001-BSD1)**

Prepared &amp; Analyzed: 07/22/04

Ethanol	301	100	ug/l	200		150	31-186	24	37	IC
tert-Butyl alcohol	90.2	20	"	50.0		180	0-206	18	22	
Methyl tert-butyl ether	9.55	0.50	"	10.0		96	63-137	7	13	
Di-isopropyl ether	9.48	0.50	"	10.0		95	76-130	7	9	
Ethyl tert-butyl ether	9.76	0.50	"	10.0		98	61-141	2	9	
tert-Amyl methyl ether	9.72	0.50	"	10.0		97	56-140	6	12	
1,2-Dichloroethane	9.99	0.50	"	10.0		100	77-136	2	13	
1,2-Dibromoethane (EDB)	10.2	0.50	"	10.0		102	77-132	1	9	
Benzene	8.92	0.50	"	10.0		89	78-124	10	12	
Toluene	9.11	0.50	"	10.0		91	78-129	8	10	
Ethylbenzene	9.62	0.50	"	10.0		96	84-117	6	10	
Xylenes (total)	29.4	0.50	"	30.0		98	83-125	6	11	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	2.29		"	2.50		92	78-129			

**Matrix Spike (4G22001-MS1)**

Source: MNG0318-02

Prepared &amp; Analyzed: 07/22/04

Methyl tert-butyl ether	5270	50	ug/l	992	5800	NR	63-137			LN
Benzene	896	50	"	640	380	81	78-124			
Toluene	3220	50	"	2970	24	108	78-129			
Ethylbenzene	2500	50	"	696	2100	57	84-117			LN
Xylenes (total)	10400	50	"	3370	7900	74	83-125			LN
Gasoline Range Organics (C4-C12)	83100	5000	"	44000	59000	55	70-124			LM
<i>Surrogate: 1,2-Dichloroethane-d4</i>	2.28		"	2.50		91	78-129			



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Reported:  
08/03/04 16:51

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch 4G22001 - EPA 5030B P/T**

Matrix Spike Dup (4G22001-MSD1)	Source: MNG0318-02			Prepared & Analyzed: 07/22/04						
Methyl tert-butyl ether	5950	50	ug/l	992	5800	15	63-137	12	13	LN
Benzene	905	50	"	640	380	82	78-124	1	12	
Toluene	3160	50	"	2970	24	106	78-129	2	10	
Ethylbenzene	2440	50	"	696	2100	49	84-117	2	10	LN
Xylenes (total)	10300	50	"	3370	7900	71	83-125	1	11	LN
Gasoline Range Organics (C4-C12)	82000	5000	"	44000	59000	52	70-124	1	20	LM
Surrogate: 1,2-Dichloroethane-d4	2.27		"	2.50		91	78-129			

**Batch 4G23004 - EPA 5030B P/T**

Blank (4G23004-BLK1)	Prepared & Analyzed: 07/23/04									
Ethanol	ND	100	ug/l							
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 (C4-C12)	ND	50	"							
Surrogate: 1,2-Dichloroethane-d4	2.32		"	2.50		93	78-129			

Laboratory Control Sample (4G23004-BS1)	Prepared & Analyzed: 07/23/04									
Ethanol	288	100	ug/l	200		144	31-186			IC
tert-Butyl alcohol	71.7	20	"	50.0		143	0-206			
Methyl tert-butyl ether	9.53	0.50	"	10.0		95	63-137			
Di-isopropyl ether	9.99	0.50	"	10.0		100	76-130			
Ethyl tert-butyl ether	9.90	0.50	"	10.0		99	61-141			
tert-Amyl methyl ether	10.2	0.50	"	10.0		102	56-140			
1,2-Dichloroethane	9.86	0.50	"	10.0		99	77-136			
1,2-Dibromoethane (EDB)	10.1	0.50	"	10.0		101	77-132			
Benzene	9.34	0.50	"	10.0		93	78-124			
Toluene	9.61	0.50	"	10.0		96	78-129			

Sequoia Analytical - Morgan Hill

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

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MNG0318  
Reported:  
08/03/04 16:51

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch 4G23004 - EPA 5030B P/T**
**Laboratory Control Sample (4G23004-BS1)**

Prepared &amp; Analyzed: 07/23/04

Ethylbenzene	10.1	0.50	ug/l	10.0		101	84-117			
Xylenes (total)	31.0	0.50	"	30.0		103	83-125			
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>2.19</i>		<i>"</i>	<i>2.50</i>		<i>88</i>	<i>78-129</i>			

**Laboratory Control Sample (4G23004-BS2)**

Prepared &amp; Analyzed: 07/23/04

Methyl tert-butyl ether	8.72	0.50	ug/l	9.92		88	63-137			
Benzene	5.46	0.50	"	6.40		85	78-124			
Toluene	31.3	0.50	"	29.7		105	78-129			
Ethylbenzene	7.93	0.50	"	6.96		114	84-117			
Xylenes (total)	39.5	0.50	"	33.7		117	83-125			
Gasoline Range Organics (C4-C12)	445	50	"	440		101	70-124			
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>2.23</i>		<i>"</i>	<i>2.50</i>		<i>89</i>	<i>78-129</i>			

**Laboratory Control Sample Dup (4G23004-BSD1)**

Prepared &amp; Analyzed: 07/23/04

Ethanol	375	100	ug/l	200		188	31-186	26	37	IC, HL
tert-Butyl alcohol	91.7	20	"	50.0		183	0-206	24	22	RB
Methyl tert-butyl ether	8.42	0.50	"	10.0		84	63-137	12	13	
Di-isopropyl ether	10.0	0.50	"	10.0		100	76-130	0.1	9	
Ethyl tert-butyl ether	9.89	0.50	"	10.0		99	61-141	0.1	9	
tert-Amyl methyl ether	9.80	0.50	"	10.0		98	56-140	4	12	
1,2-Dichloroethane	10.1	0.50	"	10.0		101	77-136	2	13	
1,2-Dibromoethane (EDB)	9.80	0.50	"	10.0		98	77-132	3	9	
Benzene	9.37	0.50	"	10.0		94	78-124	0.3	12	
Toluene	9.46	0.50	"	10.0		95	78-129	2	10	
Ethylbenzene	10.0	0.50	"	10.0		100	84-117	1	10	
Xylenes (total)	30.5	0.50	"	30.0		102	83-125	2	11	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>2.07</i>		<i>"</i>	<i>2.50</i>		<i>83</i>	<i>78-129</i>			



URS Corporation [Arco] 1333 Broadway, Suite 800 Oakland CA, 94612	Project: ARCO #2111, San Leandro, CA Project Number: INTRIM-50277 Project Manager: Scott Robinson	MNG0318 Reported: 08/03/04 16:51
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**Volatile Organic Compounds by EPA Method 8260B - Quality Control**  
**Sequoia Analytical - Morgan Hill**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch 4G23004 - EPA 5030B P/T**

Matrix Spike (4G23004-MS1)	Source: MNG0375-01			Prepared & Analyzed: 07/23/04						
Methyl tert-butyl ether	59.5	2.5	ug/l	49.6	34	51	63-137			LN
Benzene	198	2.5	"	32.0	170	88	78-124			
Toluene	160	2.5	"	148	3.3	106	78-129			
Ethylbenzene	83.2	2.5	"	34.8	42	118	84-117			LM
Xylenes (total)	216	2.5	"	168	20	117	83-125			
Gasoline Range Organics (C4-C12)	2920	250	"	2200	780	97	70-124			LM
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>2.31</i>		<i>"</i>	<i>2.50</i>		<i>92</i>	<i>78-129</i>			

Matrix Spike Dup (4G23004-MSD1)	Source: MNG0375-01			Prepared & Analyzed: 07/23/04						
Methyl tert-butyl ether	65.6	2.5	ug/l	49.6	34	64	63-137	10	13	
Benzene	187	2.5	"	32.0	170	53	78-124	6	12	LN
Toluene	160	2.5	"	148	3.3	106	78-129	0	10	
Ethylbenzene	81.8	2.5	"	34.8	42	114	84-117	2	10	
Xylenes (total)	214	2.5	"	168	20	115	83-125	0.9	11	
Gasoline Range Organics (C4-C12)	2840	250	"	2200	780	94	70-124	3	20	LM
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>2.04</i>		<i>"</i>	<i>2.50</i>		<i>82</i>	<i>78-129</i>			

**Batch 4G26011 - EPA 5030B P/T**

Blank (4G26011-BLK1)	Prepared & Analyzed: 07/26/04									
Ethanol	ND	100	ug/l							
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 (C4-C12)	ND	50	"							
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>4.73</i>		<i>"</i>	<i>5.00</i>		<i>95</i>	<i>78-129</i>			



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

Project: ARCO #2111, San Leandro, CA  
Project Number: INTRIM-50277  
Project Manager: Scott Robinson

MNG0318  
Reported:  
08/03/04 16:51

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch 4G26011 - EPA 5030B P/T**

**Laboratory Control Sample (4G26011-BS1)**

Prepared & Analyzed: 07/26/04

Ethanol	196	100	ug/l	200		98	31-186			
tert-Butyl alcohol	52.3	20	"	50.0		105	0-206			
Methyl tert-butyl ether	10.9	0.50	"	10.0		109	63-137			
Di-isopropyl ether	11.3	0.50	"	10.0		113	76-130			
Ethyl tert-butyl ether	11.2	0.50	"	10.0		112	61-141			
tert-Amyl methyl ether	10.8	0.50	"	10.0		108	56-140			
1,2-Dichloroethane	10.3	0.50	"	10.0		103	77-136			
1,2-Dibromoethane (EDB)	10.7	0.50	"	10.0		107	77-132			
Benzene	10.4	0.50	"	10.0		104	78-124			
Toluene	9.72	0.50	"	10.0		97	78-129			
Ethylbenzene	10.4	0.50	"	10.0		104	84-117			
Xylenes (total)	30.5	0.50	"	30.0		102	83-125			
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>4.97</i>		<i>"</i>	<i>5.00</i>		<i>99</i>	<i>78-129</i>			

**Laboratory Control Sample (4G26011-BS2)**

Prepared & Analyzed: 07/26/04

Gasoline Range Organics (C4-C12)	420	50	ug/l	440		95	70-124			
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>4.79</i>		<i>"</i>	<i>5.00</i>		<i>96</i>	<i>78-129</i>			

**Laboratory Control Sample Dup (4G26011-BSD1)**

Prepared & Analyzed: 07/26/04

Ethanol	177	100	ug/l	200		88	31-186	10	37	
tert-Butyl alcohol	49.7	20	"	50.0		99	0-206	5	22	
Methyl tert-butyl ether	11.3	0.50	"	10.0		113	63-137	4	13	
Di-isopropyl ether	10.6	0.50	"	10.0		106	76-130	6	9	
Ethyl tert-butyl ether	10.4	0.50	"	10.0		104	61-141	7	9	
tert-Amyl methyl ether	9.84	0.50	"	10.0		98	56-140	9	12	
1,2-Dichloroethane	9.47	0.50	"	10.0		95	77-136	8	13	
1,2-Dibromoethane (EDB)	9.27	0.50	"	10.0		93	77-132	14	9	RB
Benzene	9.29	0.50	"	10.0		93	78-124	11	12	
Toluene	8.90	0.50	"	10.0		89	78-129	9	10	
Ethylbenzene	8.98	0.50	"	10.0		90	84-117	15	10	RB
Xylenes (total)	26.9	0.50	"	30.0		90	83-125	13	11	RB
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>5.14</i>		<i>"</i>	<i>5.00</i>		<i>103</i>	<i>78-129</i>			



URS Corporation [Arco] 1333 Broadway, Suite 800 Oakland CA, 94612	Project: ARCO #2111, San Leandro, CA Project Number: INTRIM-50277 Project Manager: Scott Robinson	MNG0318 Reported: 08/03/04 16:51
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**Volatile Organic Compounds by EPA Method 8260B - Quality Control**  
**Sequoia Analytical - Morgan Hill**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch 4G26011 - EPA 5030B P/T**

<b>Matrix Spike (4G26011-MS1)</b>	<b>Source: MNG0318-06</b>		<b>Prepared &amp; Analyzed: 07/26/04</b>							
Gasoline Range Organics (C4-C12)	833000	100000	ug/l	880000	ND	95	70-124			
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>5.16</i>		<i>"</i>	<i>5.00</i>		<i>103</i>	<i>78-129</i>			
<b>Matrix Spike Dup (4G26011-MSD1)</b>	<b>Source: MNG0318-06</b>		<b>Prepared &amp; Analyzed: 07/26/04</b>							
Gasoline Range Organics (C4-C12)	577000	100000	ug/l	880000	ND	66	70-124	36	20	BA, LN
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>4.57</i>		<i>"</i>	<i>5.00</i>		<i>91</i>	<i>78-129</i>			

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

Project: ARCO #2111, San Leandro, CA  
Project Number: INTRIM-50277  
Project Manager: Scott Robinson

MNG0318  
Reported:  
08/03/04 16:51

### Notes and Definitions

RB RPD exceeded method control limit; % recoveries within limits.  
LN MS and/or MSD below acceptance limits. See Blank Spike(LCS).  
LM MS and/or MSD above acceptance limits. See Blank Spike(LCS).  
IC Calib. verif. is within method limits but outside contract limits  
HL Analyte recovery above established limit  
BA Relative percent difference out of control  
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: Z111 GWM  
 BP BU/GEM CO Portfolio Retail  
 BP Laboratory Contract Number: Atlantic Richfield Company 461000

Date: 7/13/04 Requested Due Date (mm/dd/yy) 14 day TAT

On-site Time: <u>1250</u>	Temp: <u>75°F</u>
Off-site Time: <u>1545</u>	Temp: <u>80°F</u>
Sky Conditions: <u>clear</u>	
Meteorological Events: <u>none</u>	
Wind Speed:	Direction:

Send To:	BP/GEM Facility No.: <u>ARCO 2111</u>	Consultant/Contractor: <u>URS</u>
Lab Name: <u>SEQUOIA</u>	BP/GEM Facility Address: <u>1156 DAVIS ST, San Leandro, CA</u>	Address: <u>1333 Broadway, Suite 800</u>
Lab Address: <u>885 Jarvis Dr.</u>	Site ID No. <u>ARCO 2111</u>	<u>Oakland, CA 94612</u>
<u>Morgan Hill, CA 95037</u>	Site Lat/Long:	e-mail EDD: <u>donna.casper@URSCorp.com</u>
Lab PM <u>Lisa Race</u>	California Global ID #: <u>T0600101764</u>	Consultant/Contractor Project No.: <u>J5-00002111.01 00427</u>
Tel/Fax: <u>408-776-9600 / 408-782-6308</u>	BP/GEM PM Contact: <u>PAUL SUPPLE</u>	Consultant Tele/Fax: <u>510-893-3600/510-874-3268</u>
Report Type & QC Level: <u>1 Send EDF Reports</u>	Address: <u>P.O. Box 6549</u>	Consultant/Contractor PM: <u>Scott Robinson</u>
BP/GEM Account No.:	<u>Moraga, CA 94570</u>	Invoice to: Consultant/Contractor of <u>BP/GEM</u> (Circle one)
Lab Bottle Order No:	Tel/Fax: <u>925-299-8891/925-299-8872</u>	BP/GEM Work Release No: <u>INTRIM -50277</u>

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	GRO/BTEX (8015) 2-8891-8891 88260	DRO W/SGC (8015)	MTBE (8021)	MTBE (8260)	MTBE, TAME, ETBE DIPE, TBA (8260)	
1	MW-1	1350					01	3				X			X	X	X	MPC 0318           on hold
2	MW-2	1448					02	3				X			X	X	X	
3	MW-3	1340					03	3				X			X	X	X	
4	MW-4	1320					04	3				X			X	X	X	
5	<del>MW-5</del>							3										
6	MW-6	1304					05	3				X			X	X	X	
7	MW-7	1520					06	3				X			X	X	X	
8	MW-8	1435					07	3				X			X	X	X	
9	TS-111-07132004						08	2										
10								2										

Sampler's Name: <u>P. Cornish</u>	Relinquished By / Affiliation	Date	Time	Accepted By / Affiliation	Date	Time
Sampler's Company: <u>Blaine Tech</u>	<u>[Signature]</u>	<u>7/14/04</u>	<u>8:56</u>	<u>[Signature]</u>	<u>7/14/04</u>	<u>8:56</u>
Shipment Date:		<u>7/14/04</u>	<u>11:03</u>	<u>[Signature]</u>	<u>7/14/04</u>	<u>11:03</u>
Shipment Method:						
Shipment Tracking No.:						

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 6°F Trip Blank Yes  No



### Chain of Custody Record

Project Name 211 GWM  
 BP BU/GEM CO Portfolio Retail  
 BP Laboratory Contract Number: Atlantic Richfield Company 46000  
 Date: 2/13/04 Requested Due Date (mm/dd/yy) 14 day TAT

MUG 0212

On-site Time: <u>1250</u>	Temp: <u>95°F</u>
Off-site Time: <u>1545</u>	Temp: <u>80°F</u>
Sky Conditions: <u>clear</u>	
Meteorological Events: <u>none</u>	
Wind Speed:	Direction:

Send To:	BP/GEM Facility No.: <u>ARCO 2111</u>	Consultant/Contractor: <u>URS</u>
Lab Name: <u>SEQUOIA</u>	BP/GEM Facility Address: <u>1156 DAVIS ST, San Leandro, CA</u>	Address: <u>1333 Broadway, Suite 800</u>
Lab Address: <u>885 Jarvis Dr.</u>	Site ID No. <u>ARCO 2111</u>	<u>Oakland, CA 94612</u>
<u>Morgan Hill, CA 95037</u>	Site Lat/Long:	e-mail EDD: <u>doma.cosper@URSCorp.com</u>
Lab PM <u>Lisa Race</u>	California Global ID #: <u>T0800101764</u>	Consultant/Contractor Project No.: <u>J5-0000211.01 00427</u>
Tele/Fax: <u>408-776-9600 / 408-782-6308</u>	BP/GEM PM Contact: <u>PAUL SUPPLE</u>	Consultant Tele/Fax: <u>510-893-3600/510-874-3268</u>
Report Type & QC Level: <u>1 Send EDI Reports</u>	Address: <u>P.O. Box 6549</u>	Consultant/Contractor PM: <u>Scott Robinson</u>
BP/GEM Account No.:	<u>Moraga, CA 94570</u>	Invoice to: Consultant/Contractor of <u>BP/GEM</u> (Circle one)
Lab Bottle Order No:	Tele/Fax: <u>925-298-8891/925-298-8872</u>	BP/GEM Work Release No: <u>INTRJM -50277</u>

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	ORO/BTEX (8015)	DRO WSGC (8015)	MTBE (8021)	MTBE (8260)	MTBE, TAME, ETBE, DIPE, TBA (8260)	1,2-DCA & EDB (8260)	Ethanol (8260)					
1	MW-5	1500	X				09	3/6					X				X	X						
2																								
3																								
4																								
5																								
6																								
7																								
8																								
9																								
10																								

Sampler's Name: <u>P. Cornish</u>	Relinquished By / Affiliation: <u>[Signature]</u>	Date: <u>2/19/04</u>	Time: <u>8:56</u>	Accepted By / Affiliation: <u>[Signature]</u>	Date: <u>2/14/04</u>	Time: <u>11:03</u>
Sampler's Company: <u>Blayne Tech</u>						
Shipment Date:						
Shipment Method:						
Shipment Tracking No.:						

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

Seals In Place Yes X No - Temperature Blank Yes A No - Cooler Temperature on Receipt 0 R/C Trip Blank Yes X No -

**ATTACHMENT C**

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

<b>Electronic Submittal Information</b> <a href="#">Main Menu</a>   <a href="#">View/Add Facilities</a>   <a href="#">Upload EDD</a>   <a href="#">Check EDD</a>	
<b>SUCCESSFUL GEO_WELL CHECK - NO ERRORS</b>	
<b>ORGANIZATION NAME:</b>	URS Corporation-Oakland Office
<b>USER NAME:</b>	URSCORP-OAKLAND
<b>DATE CHECKED:</b>	7/20/2004 6:51:35 PM
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### UPLOADING A GEO\_WELL FILE

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

<b>Submittal Title:</b>	<b>Geowell #2111 3Q 2004</b>
<b>Submittal Date/Time:</b>	<b>7/20/2004 6:56:36 PM</b>
<b>Confirmation Number:</b>	<b>3004932999</b>

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### SUCCESSFUL GEO\_WELL CHECK - NO ERRORS

ORGANIZATION NAME:	URS Corporation-Oakland Office
USER NAME:	URSCORP-OAKLAND
DATE CHECKED:	7/20/2004 6:51:35 PM

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**Confirmation Number:** 6734254956  
**Date/Time of Submittal:** 8/20/2004 11:22:10 AM  
**Facility Global ID:** T0600101764  
**Facility Name:** ARCO # 02111  
**Submittal Title:** 3rd Qtr 2004 Monitoring Report #2111  
**Submittal Type:** GW Monitoring Report

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

<b>ARCO # 02111</b> 1156 DAVIS ST SAN LEANDRO, CA 94577	<b>Regional Board - Case #: 01-1903</b> SAN FRANCISCO BAY RWQCB (REGION 2) - (RDB) <b>Local Agency (lead agency) - Case #: 744</b> ALAMEDA COUNTY LOP - (UNK)
---	--

CONF #	TITLE	QUARTER
6734254956	3rd Qtr 2004 Monitoring Report #2111	Q3 2004
SUBMITTED BY	SUBMIT DATE	STATUS
Srijesh Thapa	8/20/2004	PENDING REVIEW

### SAMPLE DETECTIONS REPORT

# FIELD POINTS SAMPLED	8
# FIELD POINTS WITH DETECTIONS	7
# FIELD POINTS WITH WATER SAMPLE DETECTIONS ABOVE MCL	6
SAMPLE MATRIX TYPES	WATER

### METHOD QA/QC REPORT

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

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

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

### WATER SAMPLES FOR 8021/8260 SERIES

MATRIX SPIKE / MATRIX SPIKE DUPLICATE(S) % RECOVERY BETWEEN 65-135%	Y
---	---

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

**SOIL SAMPLES FOR 8021/8260 SERIES**

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

**FIELD QC SAMPLES**

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

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