

20-393



Atlantic Richfield Company
(a BP affiliated company)

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

December 24, 2004

Second Semi-Annual 2004 Groundwater Monitoring Report
ARCO Service Station #6113
785 East Stanley Boulevard
Livermore, California
URS Project #38486729

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



December 24, 2004

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

**Re: Second Semi-Annual 2004 Groundwater Monitoring Report
ARCO Service Station #6113
785 East Stanley Boulevard
Livermore, California
URS Project # 38486729**

Dear Mr. Schultz:

On behalf of Atlantic Richfield Company, a BP affiliated company, URS Corporation (URS) is submitting the *Second Semi-Annual 2004 Groundwater Monitoring Report* for ARCO Service Station #6113, 785 East Stanley Boulevard, Livermore, California.

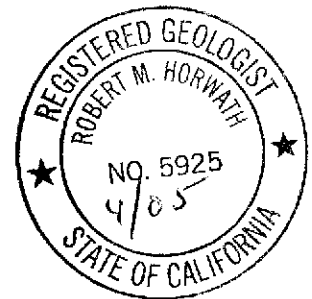
If you have any questions regarding this submission, please call (510) 874-3280.

Sincerely,

URS CORPORATION

Scott Robinson
Project Manager

Robert Horwath, R.G.
Portfolio Manager



Enclosure: *Second Semi-Annual 2004 Groundwater Monitoring Report*

cc: Mr. Paul Supple, Atlantic Richfield Company (RM), electronic copy uploaded to ENFOS
Mr. Paul M. Smith/Ms. Danielle Stefani, Livermore-Pleasanton Fire Department, 3560 Del Valle Pkwy, Pleasanton, CA. 94566

R E P O R T



**SECOND SEMI-ANNUAL 2004
GROUNDWATER MONITORING
REPORT**

**ARCO SERVICE STATION #6113
785 EAST STANLEY BOULEVARD
LIVERMORE, CALIFORNIA**

Prepared for
RM

December 24, 2004

URS

URS Corporation
1333 Broadway, Suite 800
Oakland, California 94612

38486729

Date: December 24, 2004

Quarter: 4Q 04

RM SECOND SEMI-ANNUAL GROUNDWATER MONITORING REPORT

Facility No.: 6113 Address: 785 East Stanley Boulevard, Livermore, California
RM Environmental Business Manager: Paul Supple
Consulting Co./Contact Person: URS Corporation / Scott Robinson
Consultant Project No.: 38486729
Primary Agency: Alameda County Environmental Health (ACEH)

WORK PERFORMED THIS QUARTER (Fourth – 2004):

1. Performed second quarter semi-annual 2004 groundwater monitoring event on October 28, 2004.
2. Prepared and submitted the Third Quarter 2004 Status Report.
3. Prepared and submitted this Second Semi-Annual 2004 Groundwater Monitoring Report.

WORK PROPOSED FOR NEXT QUARTER (First – 2005):

1. Prepare and submit the First Quarter 2005 Groundwater Status Report.

SITE SUMMARY

Current Phase of Project: Groundwater monitoring/sampling
Frequency of Groundwater Sampling: Annually (4th Quarter): Wells MW-3, MW-9 and MW-10
Semi-Annually (2nd/4th Quarter): Wells MW-4, MW-6, MW-7, MW-11 through MW-13, VW-1
Frequency of Groundwater Monitoring: Semi-Annual
Is Free Product (FP) Present On-Site: None
Bulk Soil Removed to Date: 288 cubic yards of TPH impacted soil
Current Remediation Techniques: Natural Attenuation
Approximate Depth to Groundwater: 18.33 (VW-1) to 20.66 (MW-12) feet
Groundwater Gradient (direction): North-Northeast
Groundwater Gradient (magnitude): 0.014 feet per foot

DISCUSSION:

Gasoline range organics (GRO) were detected at or above the laboratory reporting limit in three of the ten wells sampled this quarter at concentrations ranging from 210 micrograms per liter ($\mu\text{g/L}$) (VW-1) to 18,000 $\mu\text{g/L}$ (MW-13). Benzene was detected at or above the laboratory reporting limit in one well at a concentration of 350 $\mu\text{g/L}$ (MW-13). Ethylbenzene was detected at or above the laboratory reporting limit in two wells at concentrations of 0.67 $\mu\text{g/L}$ (VW-1) and 1,900 $\mu\text{g/L}$ (MW-13). Xylenes were detected at or above the laboratory reporting limit in one well at a concentration of 1,800 $\mu\text{g/L}$ (MW-13). Methyl tert-butyl ether (MTBE) was detected at or above the laboratory reporting limit in five wells at concentrations ranging from 4.5 $\mu\text{g/L}$ (MW-4) to 3,100 $\mu\text{g/L}$ (MW-6). No other fuel additives were detected above their respective laboratory reporting limits. Well MW-4 was not included in the contour map because it has a different screen interval than the other onsite wells (see Table 1 for details).

ATTACHMENTS:

- Figure 1 - Groundwater Elevation Contour and Analytical Summary Map – October 28, 2004
- Table 1 - Groundwater Elevation and Analytical Data
- Table 2 - Fuel Additives Analytical Data
- Table 3 - Groundwater Flow Direction and Gradient
- Attachment A - Field Procedures and Field Data Sheets
- Attachment B - Laboratory Procedures, Certified Analytical Reports and Chain-of-Custody Records
- Attachment C – Error Check Reports and EDF/Geowell Submittal Confirmations

Table 1
Groundwater Elevation and Analytical Data
 ARCO Service Station #6113
 785 East Stanley Blvd., Livermore, CA

Well No.	Date	P/ NP	Footnotes/ Comments	TOC (ft MSL)	Top of Screen (ft bgs)	Bottom of Screen (ft bgs)	DTW (ft bgs)	GWE (ft MSL)	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	3/23/1995	--	e	457.04	29.00	44.00	14.12	442.92	--	--	--	--	--	--	--	--
	5/31/1995	--	e	457.04	29.00	44.00	14.45	442.59	--	--	--	--	--	--	--	--
	8/31/1995	--	e	457.04	29.00	44.00	17.12	439.92	--	--	--	--	--	--	--	--
	11/28/1995	--		457.04	29.00	44.00	16.34	440.70	<50	<0.5	<0.5	<0.5	<0.5	<3	--	--
	2/22/1996	--	e	457.04	29.00	44.00	13.23	443.81	--	--	--	--	--	--	--	--
	5/23/1996	--	e	457.04	29.00	44.00	14.02	443.02	--	--	--	--	--	--	--	--
	8/8/1996	--	e	457.04	29.00	44.00	16.13	440.91	--	--	--	--	--	--	--	--
	11/7/1996	--		457.04	29.00	44.00	17.28	439.76	<50	<0.5	<0.5	<0.5	<0.5	<3	--	--
	3/27/1997	--	e	457.04	29.00	44.00	14.91	442.13	--	--	--	--	--	--	--	--
	5/19/1997	--	e	457.04	29.00	44.00	16.47	440.57	--	--	--	--	--	--	--	--
	5/18/1998	--	e	457.04	29.00	44.00	14.69	442.35	--	--	--	--	--	--	--	--
	11/2/1998	--		457.04	29.00	44.00	25.94	431.10	<50	<0.5	<0.5	<0.5	<0.5	<3	--	--
	6/4/1999	--	e	457.04	29.00	44.00	17.38	439.66	--	--	--	--	--	--	--	--
	11/11/1999	P		457.04	29.00	44.00	18.63	438.41	<50	<0.5	<0.5	<0.5	<1	<3	1.03	--
	6/20/2000	--	e	457.04	29.00	44.00	17.09	439.95	--	--	--	--	--	--	3.1	--
	8/29/2000	--	e	457.04	29.00	44.00	18.20	438.84	--	--	--	--	--	--	2.66	--
	11/29/2000	P		457.04	29.00	44.00	20.30	436.74	<50.0	<0.500	<0.500	<0.500	1.36	<2.50	0.71	--
	5/2/2001	--	e	457.04	29.00	44.00	22.39	434.65	--	--	--	--	--	--	--	--
	8/15/2001	--	e	457.04	29.00	44.00	24.97	432.07	--	--	--	--	--	--	--	--
	10/5/2001	P		457.04	29.00	44.00	25.09	431.95	<50	<0.50	<0.50	<0.50	<0.50	<2.5	0.78	--
	1/21/2002	--	e	457.04	29.00	44.00	24.58	432.46	--	--	--	--	--	--	--	--
	4/26/2002	--	e	457.04	29.00	44.00	24.19	432.85	--	--	--	--	--	--	--	--
	10/7/2002	--		457.04	29.00	44.00	20.13	436.91	<50	<0.50	<0.50	<0.50	<0.50	--	1.8	--
	05/01/2003	--	r	457.04	29.00	44.00	17.98	439.06	--	--	--	--	--	--	--	--
MW-2	3/23/1995	--		457.74	28.00	38.00	14.15	443.59	--	--	--	--	--	--	--	--
	5/31/1995	--	e	457.74	28.00	38.00	14.67	443.07	--	--	--	--	--	--	--	--
	8/31/1995	--	e	457.74	28.00	38.00	17.24	440.50	--	--	--	--	--	--	--	--
	11/28/1995	--		457.74	28.00	38.00	16.40	441.34	<50	<0.5	<0.5	<0.5	<0.5	<3	--	--
	2/22/1996	--	e	457.74	28.00	38.00	13.55	444.19	--	--	--	--	--	--	--	--
	5/23/1996	--	e	457.74	28.00	38.00	14.29	443.45	--	--	--	--	--	--	--	--
	8/8/1996	--	e	457.74	28.00	38.00	16.19	441.55	--	--	--	--	--	--	--	--
	11/7/1996	--		457.74	28.00	38.00	17.50	440.24	65	0.6	7.4	2.1	12	5	--	--
	3/27/1997	--	e	457.74	28.00	38.00	15.32	442.42	--	--	--	--	--	--	--	--

Table 1

Groundwater Elevation and Analytical Data

ARCO Service Station #6113
785 East Stanley Blvd., Livermore, CA

Well No.	Date	P/ NP	Footnotes/ Comments	TOC (ft MSL)	Top of Screen (ft bgs)	Bottom of Screen (ft bgs)	DTW (ft bgs)	GWE (ft MSL)	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	5/19/1997	--	e	457.74	28.00	38.00	16.62	441.12	--	--	--	--	--	--	--	--
	5/18/1998	--	e	457.74	28.00	38.00	15.12	442.62	--	--	--	--	--	--	--	--
	11/2/1998	--		457.74	28.00	38.00	26.66	431.08	<50	<0.5	<0.5	<0.5	<0.5	<3	--	--
	6/4/1999	--	e	457.74	28.00	38.00	17.74	440.00	--	--	--	--	--	--	--	--
	11/11/1999	P		457.74	28.00	38.00	18.75	438.99	<50	<0.5	<0.5	<0.5	<1	<3	0.82	--
	6/20/2000	--	e	457.74	28.00	38.00	17.21	440.53	--	--	--	--	--	--	2.6	--
	8/29/2000	--	e	457.74	28.00	38.00	18.25	439.49	--	--	--	--	--	--	2.65	--
	11/29/2000	P		457.74	28.00	38.00	20.69	437.05	<50.0	<0.500	0.581	0.827	4.38	<2.50	0.88	--
	5/2/2001	--	e	457.74	28.00	38.00	22.69	435.05	--	--	--	--	--	--	--	--
	8/15/2001	--	e	457.74	28.00	38.00	25.15	432.59	--	--	--	--	--	--	--	--
	10/5/2001	P		457.74	28.00	38.00	25.22	432.52	<50	<0.50	<0.50	<0.50	<0.50	<2.5	0.8	--
	1/21/2002	--	e	457.74	28.00	38.00	24.70	433.04	--	--	--	--	--	--	--	--
	4/26/2002	--	e	457.74	28.00	38.00	24.53	433.21	--	--	--	--	--	--	--	--
	10/7/2002	--		457.74	28.00	38.00	19.45	438.29	<50	<0.50	<0.50	<0.50	<0.50	--	1.5	--
	05/01/2003	--	r	457.74	28.00	38.00	18.18	439.56	--	--	--	--	--	--	--	--
MW-3	3/23/1995	--	e	456.97	28.50	38.50	14.13	442.84	--	--	--	--	--	--	--	--
	5/31/1995	--	e	456.97	28.50	38.50	14.46	442.51	--	--	--	--	--	--	--	--
	8/31/1995	--	e	456.97	28.50	38.50	17.06	439.91	--	--	--	--	--	--	--	--
	11/28/1995	--		456.97	28.50	38.50	16.27	440.70	<50	<0.5	<0.5	<0.5	<0.5	<3	--	--
	2/22/1996	--	e	456.97	28.50	38.50	13.14	443.83	--	--	--	--	--	--	--	--
	5/23/1996	--	e	456.97	28.50	38.50	13.95	443.02	--	--	--	--	--	--	--	--
	8/8/1996	--	e	456.97	28.50	38.50	16.03	440.94	--	--	--	--	--	--	--	--
	11/7/1996	--		456.97	28.50	38.50	17.26	439.71	<50	<0.5	0.9	<0.5	1.5	<3	--	--
	3/27/1997	--	e	456.97	28.50	38.50	14.85	442.12	--	--	--	--	--	--	--	--
	5/19/1997	--	e	456.97	28.50	38.50	16.40	440.57	--	--	--	--	--	--	--	--
	5/18/1998	--	e	456.97	28.50	38.50	14.66	442.31	--	--	--	--	--	--	--	--
	11/2/1998	--		456.97	28.50	38.50	25.85	431.12	<1,000	<10	<10	<10	<10	1,700	--	--
	6/4/1999	--	e	456.97	28.50	38.50	17.35	439.62	--	--	--	--	--	--	--	--
	11/11/1999	P		456.97	28.50	38.50	18.58	438.39	<50	<0.5	<0.5	<0.5	<1	<3	0.79	--
	6/20/2000	--	e	456.97	28.50	38.50	17.03	439.94	--	--	--	--	--	--	2.8	--
	8/29/2000	--	e	456.97	28.50	38.50	18.25	438.72	--	--	--	--	--	--	3.39	--
	11/29/2000	--		456.97	28.50	38.50	20.27	436.70	<50.0	<0.500	<0.500	1.08	3.34	<2.50	0.67	--
	5/2/2001	--	e	456.97	28.50	38.50	22.33	434.64	--	--	--	--	--	--	--	--

Table 1
Groundwater Elevation and Analytical Data
 ARCO Service Station #6113
 785 East Stanley Blvd., Livermore, CA

Well No.	Date	P/ NP	Footnotes/ Comments	TOC (ft MSL)	Top of Screen (ft bgs)	Bottom of Screen (ft bgs)	DTW (ft bgs)	GWE (ft MSL)	GRO/ TPH-g (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethyl-benzene (µg/L)	Total Xylenes (µg/L)	MTBE (µg/L)	DO (mg/L)	pH	
MW-3	8/15/2001	--	e	456.97	28.50	38.50	25.03	431.94	--	--	--	--	--	--	--	--	
	10/5/2001	P		456.97	28.50	38.50	25.17	431.80	<50	<0.50	<0.50	<0.50	<0.50	<2.5	0.79	--	
	1/21/2002	--	e	456.97	28.50	38.50	24.79	432.18	--	--	--	--	--	--	--	--	
	4/26/2002	--	e	456.97	28.50	38.50	24.27	432.70	--	--	--	--	--	--	--	--	
	10/7/2002	--		456.97	28.50	38.50	20.20	436.77	<50	<0.50	<0.50	<0.50	<0.50	--	1.2	--	
	05/01/2003	--	c, e	456.97	28.50	38.50	18.27	438.70	--	--	--	--	--	--	--	--	
	10/03/2003	P	d	456.97	28.50	38.50	20.07	436.90	<50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	5.2	7.3
	04/06/2004	--	e	459.32	28.50	38.50	17.24	442.08	--	--	--	--	--	--	--	--	
	10/28/2004	P		459.32	28.50	38.50	19.38	439.94	<50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	8.1	7.3
	MW-4	3/23/1995	--		456.55	21.00	27.00	15.39	441.16	210	2.1	0.6	0.8	2.1	--	--	--
5/31/1995		--		456.55	21.00	27.00	15.32	441.23	190	1.6	<0.5	0.7	0.9	--	--	--	
8/31/1995		--		456.55	21.00	27.00	17.86	438.69	160	1.2	0.7	<0.5	<2	<3	--	--	
11/28/1995		--		456.55	21.00	27.00	17.18	439.37	150	0.7	<0.5	0.7	1.4	<3	--	--	
2/22/1996		--		456.55	21.00	27.00	14.80	441.75	100	<0.5	<0.5	<0.6	0.8	<3	--	--	
5/23/1996		--		456.55	21.00	27.00	14.43	442.12	86	<0.5	<0.5	<0.5	<0.7	<3	--	--	
8/8/1996		--		456.55	21.00	27.00	16.80	439.75	98	<0.5	<0.5	<0.5	1.3	<3	--	--	
11/7/1996		--		456.55	21.00	27.00	17.90	438.65	140	<0.5	<0.5	<0.9	1.3	<3	--	--	
3/27/1997		--		456.55	21.00	27.00	15.22	441.33	<50	1.1	<0.5	<0.5	1.6	<3	--	--	
5/19/1997		--		456.55	21.00	27.00	16.98	439.57	62	<0.5	<0.5	<0.5	0.6	<3	--	--	
5/18/1998		--		456.55	21.00	27.00	14.99	441.56	<50	<0.5	<0.5	<0.5	<0.5	64	--	--	
11/2/1998		--		456.55	21.00	27.00	25.29	431.26	74	<0.5	<0.5	<0.5	<0.5	96	--	--	
6/4/1999		P		456.55	21.00	27.00	17.95	438.60	100	<0.5	<0.5	<0.5	<0.5	38	--	--	
11/11/1999		P		456.55	21.00	27.00	19.25	437.30	88	<0.5	<0.5	<0.5	<1	10	0.77	--	
6/20/2000		--	q	456.55	21.00	27.00	--	--	<50.0	<0.500	<0.500	<0.500	<0.500	62.3	--	--	
6/20/2000		P		456.55	21.00	27.00	17.79	438.76	<50.0	<0.500	<0.500	<0.500	<0.500	82.4	1.3	--	
8/29/2000		P		456.55	21.00	27.00	18.90	437.65	56	<0.500	<0.500	<0.500	<0.500	47.9	0.97	--	
11/29/2000		P		456.55	21.00	27.00	20.50	436.05	<50.0	<0.500	<0.500	<0.500	<0.500	9.88/10.4	0.59	--	
5/2/2001		--		456.55	21.00	27.00	--	--	<50.0	<0.500	<0.500	<0.500	<0.500	59.4/68.4	--	--	
5/2/2001		P	q	456.55	21.00	27.00	22.65	433.90	<50.0	<0.500	<0.500	<0.500	<0.500	61.1/70.9	0.74	--	
8/15/2001	--	f	456.55	21.00	27.00	--	--	--	--	--	--	--	--	--	--		
10/5/2001	--	f	456.55	21.00	27.00	--	--	--	--	--	--	--	--	--	--		
1/21/2002	--	f	456.55	21.00	27.00	--	--	--	--	--	--	--	--	--	--		
4/26/2002	P		456.55	21.00	27.00	20.15	436.40	110	<0.50	<0.50	<0.50	<0.50	150	0.21	--		

Table 1
Groundwater Elevation and Analytical Data
ARCO Service Station #6113
785 East Stanley Blvd., Livermore, CA

Well No.	Date	P/ NP	Footnotes/ Comments	TOC (ft MSL)	Top of Screen (ft bgs)	Bottom of Screen (ft bgs)	DTW (ft bgs)	GWE (ft MSL)	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	10/7/2002	P	a	456.55	21.00	27.00	20.76	435.79	96	<0.50	<0.50	0.54	<0.50	260	1.0	--
	05/01/2003	P	c	456.55	21.00	27.00	19.67	436.88	120	1.3	<0.50	<0.50	<0.50	86	1.7	--
	10/03/2003	P	d	456.55	21.00	27.00	20.23	436.32	<50	<0.50	<0.50	<0.50	<0.50	22	13.5	6.8
	04/06/2004	P		458.88	21.00	27.00	18.13	440.75	96	<0.50	<0.50	<0.50	<0.50	17	1.6	6.8
	10/28/2004	P		458.88	21.00	27.00	20.02	438.86	<50	<0.50	<0.50	<0.50	<0.50	4.5	1.2	6.7
MW-5	3/23/1995	--		455.84	43.00	63.00	13.97	441.87	68	4.2	3.4	2.3	12	--	--	--
	5/31/1995	--	g	455.84	43.00	63.00	---	---	--	--	--	--	--	--	--	--
	8/31/1995	--	g	455.84	43.00	63.00	---	---	--	--	--	--	--	--	--	--
	11/28/1995	--		455.84	43.00	63.00	16.46	439.38	960	41	24	38	210	<5	--	--
	2/22/1996	--	f	455.84	43.00	63.00	13.34	442.50	--	--	--	--	--	--	--	--
	5/23/1996	--		455.84	43.00	63.00	14.36	441.48	7,100	440	180	270	1,700	<50	--	--
	8/8/1996	--	f	455.84	43.00	63.00	16.38	439.46	--	--	--	--	--	--	--	--
	11/7/1996	--		455.84	43.00	63.00	17.26	438.58	5,600	230	86	210	1,100	<80	--	--
	3/27/1997	--	f	455.84	43.00	63.00	15.95	439.89	--	--	--	--	--	--	--	--
	5/19/1997	--		455.84	43.00	63.00	16.64	439.20	7,600	480	140	400	1,200	<40	--	--
	5/18/1998	--		455.84	43.00	63.00	14.75	441.09	990	46	13	45	180	4	--	--
	11/2/1998	--		455.84	43.00	63.00	27.83	428.01	14,000	690	140	550	2,200	100	--	--
	6/4/1999	P		455.84	43.00	63.00	17.47	438.37	8,300	690	370	90	440	1,400	--	--
	11/11/1999	P		455.84	43.00	63.00	18.80	437.04	18,000	900	190	1,100	3,200	72	0.86	--
	6/20/2000	P		455.84	43.00	63.00	17.14	438.70	10,200	618	122	832	2,020	<50.0	1.6	--
	8/29/2000	P		455.84	43.00	63.00	18.60	437.24	12,300	436	166	711	2,120	517	0.79	--
11/29/2000	P		455.84	43.00	63.00	20.57	435.27	26,000	491	149	1,090	3,810	671/<20.0	0.51	--	
5/2/2001	--		k	---	---	---	---	---	--	--	--	--	--	--	--	--
MW-6	3/23/1995	--		454.93	48.00	68.00	13.38	441.55	<50	1.5	<0.5	<0.5	0.9	--	--	--
	5/31/1995	--		454.93	48.00	68.00	13.96	440.97	<50	<0.5	<0.5	<0.5	<0.5	--	--	--
	8/31/1995	--		454.93	48.00	68.00	16.71	438.22	150	9	1.8	4	12	<3	--	--
	11/28/1995	--		454.93	48.00	68.00	15.65	439.28	<50	0.6	<0.5	<0.5	0.8	<3	--	--
	2/22/1996	--		454.93	48.00	68.00	12.53	442.40	<50	1.9	<0.5	0.8	2.1	<3	--	--
	5/23/1996	--		454.93	48.00	68.00	13.24	441.69	<50	<0.5	<0.5	<0.5	<0.5	<3	--	--
	8/8/1996	--		454.93	48.00	68.00	16.65	438.28	<50	0.5	<0.5	<0.5	0.5	<3	--	--
	11/7/1996	--		454.93	48.00	68.00	16.65	438.28	110	5.3	1.3	3.1	6.6	<3	--	--
	3/27/1997	--		454.93	48.00	68.00	14.25	440.68	<50	2.3	<0.5	0.9	3.5	4	--	--
	5/19/1997	--		454.93	48.00	68.00	15.87	439.06	<50	<0.5	<0.5	<0.5	<0.5	<3	--	--

Table 1

Groundwater Elevation and Analytical Data

ARCO Service Station #6113

785 East Stanley Blvd., Livermore, CA

Well No.	Date	P/ NP	Footnotes/ Comments	TOC (ft MSL)	Top of Screen (ft bgs)	Bottom of Screen (ft bgs)	DTW (ft bgs)	GWE (ft MSL)	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	5/18/1998	--		454.93	48.00	68.00	14.00	440.93	<50	<0.5	<0.5	<0.5	<0.5	<3	--	--
	11/2/1998	--		454.93	48.00	68.00	24.95	429.98	<50	1.2	<0.5	<0.5	<0.5	3	--	--
	6/4/1999	P		454.93	48.00	68.00	16.68	438.25	310	41	3.8	11	19	33	--	--
	11/11/1999	P		454.93	48.00	68.00	16.12	438.81	<50	0.5	<0.5	<0.5	<1	<3	0.92	--
	6/20/2000	P		454.93	48.00	68.00	16.63	438.30	<50.0	<0.500	<0.500	<0.500	<0.500	17.3	1.9	--
	8/29/2000	--	q	454.93	48.00	68.00	---	---	<50.0	<0.500	<0.500	<0.500	<0.500	<2.50	--	--
	8/29/2000	P		454.93	48.00	68.00	17.91	437.02	<50.0	<0.500	0.551	<0.500	<0.500	<2.50	1.67	--
	11/29/2000	P		454.93	48.00	68.00	20.30	434.63	<50.0	<0.500	<0.500	<0.500	1.03	<2.50	0.79	--
	5/2/2001	P		454.93	48.00	68.00	22.20	432.73	3,230	1,300	33.6	89.4	136	1,810/2,310	0.95	--
	8/15/2001	P		454.93	48.00	68.00	27.95	426.98	<50	<0.50	<0.50	<0.50	<0.50	21/25	0.63	--
	10/5/2001	P		454.93	48.00	68.00	28.05	426.88	<50	<0.50	<0.50	<0.50	<0.50	<2.5	0.85	--
	1/21/2002	P		454.93	48.00	68.00	26.81	428.12	<50	<0.50	<0.50	<0.50	<0.50	<5.0	0.91	--
	4/26/2002	P		454.93	48.00	68.00	26.27	428.66	<50	<0.50	<0.50	<0.50	<0.50	17	0.75	--
	10/7/2002	P	a	454.93	48.00	68.00	20.05	434.88	60	13	1.7	1.7	3.5	8	2.8	--
	05/01/2003	P	c	454.93	48.00	68.00	17.62	437.31	<50	5.4	<0.50	0.63	1.3	12	1.6	--
	10/03/2003	P	d	454.93	48.00	68.00	19.62	435.31	80	2.6	<2.5	<2.5	<2.5	120	5.1	6.9
	04/06/2004	P		457.24	48.00	68.00	16.88	440.36	<2,500	<25	<25	<25	<25	1,700	4.1	7.0
10/28/2004	P		457.24	48.00	68.00	19.20	438.04	3,200	<25	<25	<25	<25	3,100	6.8	6.9	
MW-7	3/23/1995	--		454.92	48.00	68.00	13.29	441.63	<50	<0.5	<0.5	<0.5	<0.5	--	--	--
	5/31/1995	--		454.92	48.00	68.00	13.72	441.20	<50	<0.5	<0.5	<0.5	<0.5	--	--	--
	8/31/1995	--		454.92	48.00	68.00	16.53	438.39	<50	<0.5	<0.5	<0.5	1.2	<3	--	--
	11/28/1995	--		454.92	48.00	68.00	15.50	439.42	<50	<0.5	<0.5	<0.5	<0.5	<3	--	--
	2/22/1996	--		454.92	48.00	68.00	12.30	442.62	<50	<0.5	<0.5	<0.5	<0.5	<3	--	--
	5/23/1996	--		454.92	48.00	68.00	13.02	441.90	<50	<0.5	<0.5	<0.5	<0.5	<3	--	--
	8/8/1996	--	m	454.92	48.00	68.00	---	---	--	--	--	--	--	--	--	--
	11/7/1996	--		454.92	48.00	68.00	16.50	438.42	<50	<0.5	<0.5	<0.5	0.8	<3	--	--
	3/27/1997	--		454.92	48.00	68.00	14.22	440.70	<50	<0.5	<0.5	<0.5	<0.5	<3	--	--
	5/19/1997	--		454.92	48.00	68.00	15.74	439.18	<50	<0.5	<0.5	<0.5	<0.5	<3	--	--
	5/18/1998	--		454.92	48.00	68.00	13.82	441.10	<50	<0.5	<0.5	<0.5	<0.5	<3	--	--
	11/2/1998	--		454.92	48.00	68.00	24.80	430.12	<50	<0.5	<0.5	<0.5	<0.5	4	--	--
	6/4/1999	P		454.92	48.00	68.00	16.55	438.37	<50	<0.5	<0.5	<0.5	<0.5	<3	--	--
	11/11/1999	P		454.92	48.00	68.00	18.02	436.90	<50	<0.5	<0.5	<0.5	<1	<3	1.03	--
6/20/2000	P		454.92	48.00	68.00	16.50	438.42	<50.0	<0.500	<0.500	<0.500	<0.500	<2.50	1.3	--	

Table 1

Groundwater Elevation and Analytical Data

ARCO Service Station #6113
785 East Stanley Blvd., Livermore, CA

Well No.	Date	P/ NP	Footnotes/ Comments	TOC (ft MSL)	Top of Screen (ft bgs)	Bottom of Screen (ft bgs)	DTW (ft bgs)	GWE (ft MSL)	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	8/29/2000	P		454.92	48.00	68.00	17.80	437.12	<50.0	<0.500	<0.500	<0.500	<0.500	<2.50	1.67	--
	11/29/2000	P		454.92	48.00	68.00	19.61	435.31	<50.0	<0.500	<0.500	<0.500	<0.500	<2.50	0.51	--
	5/2/2001	P		454.92	48.00	68.00	22.05	432.87	<50.0	<0.500	<0.500	<0.500	<0.500	<2.50/2.66	0.9	--
	8/15/2001	P		454.92	48.00	68.00	27.55	427.37	<50	<0.50	<0.50	<0.50	<0.50	<2.5	0.84	--
	10/5/2001	P		454.92	48.00	68.00	27.59	427.33	<50	<0.50	<0.50	<0.50	<0.50	<2.5	0.62	--
	1/21/2002	P		454.92	48.00	68.00	26.50	428.42	<50	<0.50	<0.50	<0.50	<0.50	15/21	0.65	--
	4/26/2002	P		454.92	48.00	68.00	26.22	428.70	<50	<0.50	<0.50	<0.50	<0.50	18	0.61	--
	10/7/2002	--		454.92	48.00	68.00	20.04	434.88	<50	1.2	<0.50	<0.50	0.77	--	4.8	--
	05/01/2003	P	c	454.92	48.00	68.00	17.47	437.45	<50	<0.50	<0.50	<0.50	0.5	43	2.7	--
	10/03/2003	P	d	454.92	48.00	68.00	19.55	435.37	<50	<1.0	<1.0	<1.0	<1.0	49	5.7	7.1
	04/06/2004	P		457.17	48.00	68.00	16.60	440.57	<50	<0.50	<0.50	<0.50	0.75	0.76	0.7	7.0
	10/28/2004	P		457.17	48.00	68.00	19.17	438.00	<50	<0.50	<0.50	<0.50	<0.50	14	6.7	6.9
MW-8	3/23/1995	--	e	456.97	47.00	67.00	11.55	445.42	--	--	--	--	--	--	--	--
	5/31/1995	--	e	456.97	47.00	67.00	12.37	444.60	--	--	--	--	--	--	--	--
	8/31/1995	--	e	456.97	47.00	67.00	15.68	441.29	--	--	--	--	--	--	--	--
	11/28/1995	--		456.97	47.00	67.00	14.15	442.82	<50	<0.5	<0.5	<0.5	<0.5	<3	--	--
	2/22/1996	--	e	456.97	47.00	67.00	10.97	446.00	--	--	--	--	--	--	--	--
	5/23/1996	--	e	456.97	47.00	67.00	11.90	445.07	--	--	--	--	--	--	--	--
	8/8/1996	--	e	456.97	47.00	67.00	13.85	443.12	--	--	--	--	--	--	--	--
	11/7/1996	--		456.97	47.00	67.00	15.08	441.89	<50	<0.5	<0.5	<0.5	<0.5	<3	--	--
	3/27/1997	--	e	456.97	47.00	67.00	12.96	444.01	--	--	--	--	--	--	--	--
	5/19/1997	--	e	456.97	47.00	67.00	14.35	442.62	--	--	--	--	--	--	--	--
	5/18/1998	--	e	456.97	47.00	67.00	12.97	444.00	--	--	--	--	--	--	--	--
	11/2/1998	--		456.97	47.00	67.00	26.01	430.96	<50	<0.5	<0.5	<0.5	<0.5	<3	--	--
	6/4/1999	--	e	456.97	47.00	67.00	15.53	441.44	--	--	--	--	--	--	--	--
	11/11/1999	P		456.97	47.00	67.00	16.67	440.30	<50	<0.5	<0.5	<0.5	<1	<3	1.01	--
	6/20/2000	--	e	456.97	47.00	67.00	15.29	441.68	--	--	--	--	--	--	2.4	--
	8/29/2000	--	e	456.97	47.00	67.00	16.59	440.38	--	--	--	--	--	--	3.37	--
	11/29/2000	P		456.97	47.00	67.00	19.80	437.17	<50.0	<0.500	<0.500	<0.500	0.772	<2.50	1.35	--
	5/2/2001	--	e	456.97	47.00	67.00	22.12	434.85	--	--	--	--	--	--	--	--
	8/15/2001	--	e	456.97	47.00	67.00	27.63	429.34	--	--	--	--	--	--	--	--
	10/5/2001	P		456.97	47.00	67.00	27.65	429.32	<50	<0.50	<0.50	<0.50	<0.50	<2.5	1.07	--
	1/21/2002	--	e	456.97	47.00	67.00	26.73	430.24	--	--	--	--	--	--	--	--

Table 1

Groundwater Elevation and Analytical Data

ARCO Service Station #6113
785 East Stanley Blvd., Livermore, CA

Well No.	Date	P/ NP	Footnotes/ Comments	TOC (ft MSL)	Top of Screen (ft bgs)	Bottom of Screen (ft bgs)	DTW (ft bgs)	GWE (ft MSL)	GRO/ TPH-g (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethyl-benzene (µg/L)	Total Xylenes (µg/L)	MTBE (µg/L)	DO (mg/L)	pH
MW-8	4/26/2002	--	e	456.97	47.00	67.00	26.39	430.58	--	--	--	--	--	--	--	--
	10/7/2002	--		456.97	47.00	67.00	18.43	438.54	<50	<0.50	<0.50	<0.50	0.86	--	4.2	--
	05/01/2003	--	r	456.97	47.00	67.00	16.47	440.50	--	--	--	--	--	--	--	--
MW-9	3/23/1995	--	e	456.18	48.00	68.00	13.18	443.00	--	--	--	--	--	--	--	--
	5/31/1995	--	e	456.18	48.00	68.00	12.66	443.52	--	--	--	--	--	--	--	--
	8/31/1995	--	e	456.18	48.00	68.00	14.40	441.78	--	--	--	--	--	--	--	--
	11/28/1995	--		456.18	48.00	68.00	14.26	441.92	<50	<0.5	<0.5	<0.5	<0.5	<3	--	--
	2/22/1996	--	e	456.18	48.00	68.00	12.05	444.13	--	--	--	--	--	--	--	--
	5/23/1996	--	e	456.18	48.00	68.00	12.07	444.11	--	--	--	--	--	--	--	--
	8/8/1996	--	e	456.18	48.00	68.00	14.12	442.06	--	--	--	--	--	--	--	--
	11/7/1996	--		456.18	48.00	68.00	15.42	440.76	<50	<0.5	<0.5	<0.5	<0.5	<3	--	--
	3/27/1997	--	e	456.18	48.00	68.00	13.01	443.17	--	--	--	--	--	--	--	--
	5/19/1997	--	e	456.18	48.00	68.00	14.60	441.58	--	--	--	--	--	--	--	--
	5/18/1998	--	e	456.18	48.00	68.00	12.60	443.58	--	--	--	--	--	--	--	--
	11/2/1998	--	e	456.18	48.00	68.00	25.08	431.10	--	--	--	--	--	--	--	--
	6/4/1999	P		456.18	48.00	68.00	15.87	440.31	<50	<0.5	<0.5	<0.5	<0.5	<3	--	--
	11/11/1999	P		456.18	48.00	68.00	17.02	439.16	<50	<0.5	<0.5	<0.5	<1	<3	0.96	--
	6/20/2000	--	e	456.18	48.00	68.00	15.54	440.64	--	--	--	--	--	--	2.1	--
	8/29/2000	--	e	456.18	48.00	68.00	16.81	439.37	--	--	--	--	--	--	2.59	--
	11/29/2000	P		456.18	48.00	68.00	18.81	437.37	<50.0	<0.500	<0.500	<0.500	<0.500	<2.50	0.81	--
	5/2/2001	--	e	456.18	48.00	68.00	22.09	434.09	--	--	--	--	--	--	--	--
	8/15/2001	--	e	456.18	48.00	68.00	27.59	428.59	--	--	--	--	--	--	--	--
	10/5/2001	--	q	456.18	48.00	68.00	27.63	428.55	<50	<0.50	<0.50	<0.50	<0.50	<2.5	--	--
10/5/2001	P		456.18	48.00	68.00	27.63	428.55	<50	<0.50	<0.50	<0.50	<0.50	<2.5	0.93	--	
1/21/2002	--	e	456.18	48.00	68.00	26.77	429.41	--	--	--	--	--	--	--	--	
4/26/2002	--	e	456.18	48.00	68.00	26.41	429.77	--	--	--	--	--	--	--	--	
10/7/2002	P		456.18	48.00	68.00	18.85	437.33	<50	<0.50	<0.50	<0.50	<0.50	<0.50	2.6	--	
05/01/2003	--		c, e	456.18	48.00	68.00	17.84	438.34	--	--	--	--	--	--	--	--
10/03/2003	P		d	456.18	48.00	68.00	18.69	437.49	<50	1.1	0.57	<0.50	<0.50	<0.50	4.9	6.8
04/06/2004	--		e	458.55	48.00	68.00	16.08	442.47	--	--	--	--	--	--	--	--
10/28/2004	P			458.55	48.00	68.00	18.35	440.20	<50	<0.50	<0.50	<0.50	<0.50	<0.50	6.8	6.9
MW-10	3/23/1995	--	e	456.85	32.00	52.00	14.86	441.99	--	--	--	--	--	--	--	--
	5/31/1995	--	e	456.85	32.00	52.00	15.63	441.22	--	--	--	--	--	--	--	--

Table 1
Groundwater Elevation and Analytical Data

ARCO Service Station #6113
785 East Stanley Blvd., Livermore, CA

Well No.	Date	P/ NP	Footnotes/ Comments	TOC (ft MSL)	Top of Screen (ft bgs)	Bottom of Screen (ft bgs)	DTW (ft bgs)	GWE (ft MSL)	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-10	8/31/1995	--	e	456.85	32.00	52.00	14.40	442.45	--	--	--	--	--	--	--	--
	11/28/1995	--		456.85	32.00	52.00	17.24	439.61	<50	<0.5	<0.5	<0.5	<0.5	<3	--	--
	2/22/1996	--	e	456.85	32.00	52.00	14.30	442.55	--	--	--	--	--	--	--	--
	5/23/1996	--	e	456.85	32.00	52.00	14.93	441.92	--	--	--	--	--	--	--	--
	8/8/1996	--	e	456.85	32.00	52.00	17.20	439.65	--	--	--	--	--	--	--	--
	11/7/1996	--		456.85	32.00	52.00	18.25	438.60	<50	<0.5	<0.5	<0.5	<0.5	<3	--	--
	3/27/1997	--	e	456.85	32.00	52.00	15.77	441.08	--	--	--	--	--	--	--	--
	5/19/1997	--	e	456.85	32.00	52.00	17.38	439.47	--	--	--	--	--	--	--	--
	5/18/1998	--	e	456.85	32.00	52.00	15.47	441.38	--	--	--	--	--	--	--	--
	11/2/1998	--		456.85	32.00	52.00	26.94	429.91	<50	<0.5	<0.5	<0.5	<0.5	<3	--	--
	6/4/1999	--	e	456.85	32.00	52.00	17.19	439.66	--	--	--	--	--	--	--	--
	11/11/1999	P		456.85	32.00	52.00	19.35	437.50	<50	<0.5	<0.5	<0.5	<1	<3	0.68	--
	6/20/2000	--	e	456.85	32.00	52.00	17.92	438.93	--	--	--	--	--	--	2.9	--
	8/29/2000	--	e	456.85	32.00	52.00	19.15	437.70	--	--	--	--	--	--	1.54	--
	11/29/2000	P		456.85	32.00	52.00	21.30	435.55	<50.0	<0.500	<0.500	<0.500	<0.500	<2.50	0.95	--
	5/2/2001	--	e	456.85	32.00	52.00	29.95	426.90	--	--	--	--	--	--	--	--
	8/15/2001	--	e	456.85	32.00	52.00	30.74	426.11	--	--	--	--	--	--	--	--
	10/5/2001	P		456.85	32.00	52.00	30.95	425.90	<50	<0.50	<0.50	<0.50	<0.50	<2.5	0.89	--
	1/21/2002	--	e	456.85	32.00	52.00	28.97	427.88	--	--	--	--	--	--	--	--
	4/26/2002	--	e	456.85	32.00	52.00	28.50	428.35	--	--	--	--	--	--	--	--
10/7/2002	--		456.85	32.00	52.00	21.15	435.70	<50	<0.50	<0.50	<0.50	<0.50	--	3.0	--	
05/01/2003	--	c, e	456.85	32.00	52.00	18.90	437.95	--	--	--	--	--	--	--	--	
10/03/2003	P	d	456.85	32.00	52.00	20.64	436.21	<50	<0.50	<0.50	<0.50	<0.50	<0.50	2.4	7.1	
04/06/2004	--	e	459.20	32.00	52.00	17.99	441.21	--	--	--	--	--	--	--	--	
10/28/2004	P		459.20	32.00	52.00	20.27	438.93	<50	<0.50	<0.50	<0.50	<0.50	<0.50	5.9	7.1	
MW-11	3/23/1995	--		455.07	38.00	45.00	17.34	437.73	--	--	--	--	--	--	--	--
	5/31/1995	--		455.07	38.00	45.00	16.68	438.39	<50	<0.5	<0.5	<0.5	<0.5	--	--	--
	8/31/1995	--	h	455.07	38.00	45.00	20.20	434.87	--	--	--	--	--	--	--	--
	11/28/1995	--		455.07	38.00	45.00	17.80	437.27	<50	<0.5	<0.5	<0.5	<0.5	<3	--	--
	2/22/1996	--	h	455.07	38.00	45.00	15.97	439.10	--	--	--	--	--	--	--	--
	5/23/1996	--		455.07	38.00	45.00	15.50	439.57	<50	<0.5	<0.5	<0.5	<0.5	<3	--	--
	8/8/1996	--	h	455.07	38.00	45.00	17.77	437.30	--	--	--	--	--	--	--	--
11/7/1996	--		455.07	38.00	45.00	17.45	437.62	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<3	--	--

Table 1

Groundwater Elevation and Analytical Data

ARCO Service Station #6113
785 East Stanley Blvd., Livermore, CA

Well No.	Date	P/ NP	Footnotes/ Comments	TOC (ft MSL)	Top of Screen (ft bgs)	Bottom of Screen (ft bgs)	DTW (ft bgs)	GWE (ft MSL)	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-11	3/27/1997	--	h	455.07	38.00	45.00	15.77	439.30	--	--	--	--	--	--	--	--
	5/19/1997	--		455.07	38.00	45.00	16.80	438.27	<50	1.1	4.5	<0.5	2.2	<3	--	--
	5/18/1998	--		455.07	38.00	45.00	15.38	439.69	<50	<0.5	<0.5	<0.5	<0.5	<3	--	--
	11/2/1998	--		455.07	38.00	45.00	24.15	430.92	<50	<0.5	<0.5	<0.5	<0.5	<3	--	--
	6/4/1999	P		455.07	38.00	45.00	18.39	436.68	<50	<0.5	<0.5	<0.5	<0.5	<3	--	--
	11/11/1999	P		455.07	38.00	45.00	18.62	436.45	<50	<0.5	<0.5	<0.5	<1	<3	1.01	--
	6/20/2000	P		455.07	38.00	45.00	17.82	437.25	<50.0	0.631	<0.500	<0.500	<0.500	<2.50	4.1	--
	8/29/2000	--	h	455.07	38.00	45.00	19.50	435.57	--	--	--	--	--	--	--	--
	11/29/2000	P		455.07	38.00	45.00	20.60	434.47	<50.0	<0.500	<0.500	<0.500	1.63	<2.50	0.97	--
	5/2/2001	P		455.07	38.00	45.00	22.42	432.65	<50.0	<0.500	<0.500	<0.500	<0.500	<2.50	1.04	--
	8/15/2001	--	h	455.07	38.00	45.00	27.41	427.66	--	--	--	--	--	--	--	--
	10/5/2001	P		455.07	38.00	45.00	27.59	427.48	<50	<0.50	<0.50	<0.50	<0.50	<2.5	1.05	--
	1/21/2002	--	h	455.07	38.00	45.00	26.75	428.32	--	--	--	--	--	--	--	--
	4/26/2002	P		455.07	38.00	45.00	26.50	428.57	<50	<0.50	<0.50	<0.50	<0.50	<2.5	0.47	--
	10/7/2002	--		455.07	38.00	45.00	20.79	434.28	<50	<0.50	<0.50	<0.50	<0.50	--	1.4	--
	05/01/2003	P	c	455.07	38.00	45.00	20.55	434.52	<50	<0.50	<0.50	<0.50	<0.50	1.5	3.2	--
	10/03/2003	P	d	455.07	38.00	45.00	20.58	434.49	<50	<0.50	<0.50	<0.50	<0.50	3.1	3.0	7.1
	04/06/2004	P		457.40	38.00	45.00	17.52	439.88	<50	<0.50	<0.50	<0.50	<0.50	14	5.1	6.7
	10/28/2004	P		457.40	38.00	45.00	20.32	437.08	<50	<0.50	<0.50	<0.50	<0.50	29	1.3	7.2
MW-12	3/23/1995	--	h	455.04	18.00	34.50	15.54	439.50	--	--	--	--	--	--	--	--
	5/31/1995	--		455.04	18.00	34.50	15.66	439.38	<50	<0.5	<0.5	<0.5	<0.5	--	--	--
	8/31/1995	--	h	455.04	18.00	34.50	18.23	436.81	--	--	--	--	--	--	--	--
	11/28/1995	--		455.04	18.00	34.50	17.53	437.51	<50	<0.5	<0.5	<0.5	<0.5	<3	--	--
	2/22/1996	--	h	455.04	18.00	34.50	14.45	440.59	--	--	--	--	--	--	--	--
	5/23/1996	--		455.04	18.00	34.50	14.88	440.16	<50	<0.5	<0.5	<0.5	<0.5	<3	--	--
	8/8/1996	--	h	455.04	18.00	34.50	17.30	437.74	--	--	--	--	--	--	--	--
	11/7/1996	--		455.04	18.00	34.50	18.30	436.74	<50	<0.5	<0.5	<0.5	<0.5	<3	--	--
	3/27/1997	--	h	455.04	18.00	34.50	15.69	439.35	--	--	--	--	--	--	--	--
	5/19/1997	--		455.04	18.00	34.50	17.41	437.63	<50	<0.5	<0.5	<0.5	<0.5	<3	--	--
	5/18/1998	--		455.04	18.00	34.50	15.21	439.83	<50	<0.5	<0.5	<0.5	<0.5	<3	--	--
	11/2/1998	--	m	455.04	18.00	34.50	---	---	--	--	--	--	--	--	--	--
	6/4/1999	--	m	455.04	18.00	34.50	---	---	--	--	--	--	--	--	--	--
	11/11/1999	--	m	455.04	18.00	34.50	---	---	--	--	--	--	--	--	--	--

Table 1

Groundwater Elevation and Analytical Data

ARCO Service Station #6113
785 East Stanley Blvd., Livermore, CA

Well No.	Date	P/ NP	Footnotes/ Comments	TOC (ft MSL)	Top of Screen (ft bgs)	Bottom of Screen (ft bgs)	DTW (ft bgs)	GWE (ft MSL)	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-12	6/20/2000	--	m	455.04	18.00	34.50	---	---	--	--	--	--	--	--	--	--
	8/29/2000	--	m	455.04	18.00	34.50	---	---	--	--	--	--	--	--	--	--
	11/29/2000	--	m	455.04	18.00	34.50	---	---	--	--	--	--	--	--	--	--
	5/2/2001	--	m	455.04	18.00	34.50	---	---	--	--	--	--	--	--	--	--
	8/15/2001	--	m	455.04	18.00	34.50	---	---	--	--	--	--	--	--	--	--
	10/5/2001	--	m	455.04	18.00	34.50	---	---	--	--	--	--	--	--	--	--
	1/21/2002	--	m	455.04	18.00	34.50	---	---	--	--	--	--	--	--	--	--
	4/26/2002	--	m	455.04	18.00	34.50	---	---	--	--	--	--	--	--	--	--
	10/7/2002	--	m	455.04	18.00	34.50	---	---	--	--	--	--	--	--	--	--
	05/01/2003	--	c, m	455.04	18.00	34.50	---	---	--	--	--	--	--	--	--	--
	10/03/2003	--	m	455.04	18.00	34.50	--	--	--	--	--	--	--	--	--	--
	04/06/2004	P		457.37	18.00	34.50	18.14	439.23	<50	<0.50	<0.50	<0.50	<0.50	<0.50	2.4	6.4
	10/28/2004	P		457.37	18.00	34.50	20.66	436.71	<50	<0.50	<0.50	<0.50	<0.50	<0.50	1.7	6.8
MW-13	1/21/2002	P		---	--	--	24.61	---	15,000	160	68	1,700	3,200	4,900/5,200	0.71	--
	4/26/2002	P		---	--	--	24.20	---	17,000	98	<100	1,700	3,400	1,600	0.6	--
	10/7/2002	--	b	---	--	--	20.12	---	14,000	510	<50	2,200	2,300	--	0.8	--
	05/01/2003	P	c	---	--	--	17.82	---	21,000	230	<50	1,900	2,300	1,600	1.9	--
	10/03/2003	P	d	--	--	--	19.91	--	19,000	570	55	1,900	2,300	2,400	0.8	6.9
	04/06/2004	P		457.91	--	--	17.14	440.77	15,000	470	35	1,600	1,300	1,800	2.0	6.7
	10/28/2004	P		457.91	--	--	18.83	439.08	18,000	350	<25	1,900	1,800	1,800	0.8	6.7
VW-1	8/29/2000	P		---	24.00	45.00	17.40	---	2,360	27.6	11.6	26.3	33.2	110	4.47	--
	11/29/2000	P		---	24.00	45.00	18.75	---	<50.0	<0.500	<0.500	<0.500	<0.500	<2.50	0.46	--
	5/2/2001	--		---	24.00	45.00	21.59	---	--	--	--	--	--	--	--	--
	8/15/2001	--	q	---	24.00	45.00	---	---	1,200	6.2	4.1	1.8	1.1	20/17	--	--
	8/15/2001	P		---	24.00	45.00	24.62	---	1,200	6.3	4.3	1.7	1.3	20/17	--	--
	10/5/2001	P		---	24.00	45.00	24.75	---	1,500	140	55	28	82	610/660	0.71	--
	1/21/2002	--	q	---	24.00	45.00	---	---	8,000	770	320	96	1,100	2,500/3,200	--	--
	1/21/2002	P		---	24.00	45.00	24.59	---	6,700	810	350	270	1,100	2,600/3,400	0.69	--
	4/26/2002	--	q	---	24.00	45.00	---	---	350	24	1.6	5.9	1.6	45	--	--
	4/26/2002	P		---	24.00	45.00	24.27	---	370	26	2.1	6.6	1.7	48	0.5	--
	10/7/2002	P	b	---	24.00	45.00	19.20	---	410	25	2.2	8	4.3	88	1.7	--
05/01/2003	P	c	---	24.00	45.00	16.60	---	240	6.4	<0.50	3.3	1.3	36	1.7	--	
10/03/2003	P	d	--	24.00	45.00	18.82	--	180	1.5	<0.50	0.69	<0.50	12	1.1	7.3	

Table 1
Groundwater Elevation and Analytical Data
 ARCO Service Station #6113
 785 East Stanley Blvd., Livermore, CA

Well No.	Date	P/ NP	Footnotes/ Comments	TOC (ft MSL)	Top of Screen (ft bgs)	Bottom of Screen (ft bgs)	DTW (ft bgs)	GWE (ft MSL)	GRO/ TPH-g (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethyl-benzene (µg/L)	Total Xylenes (µg/L)	MTBE (µg/L)	DO (mg/L)	pH
VW-1	04/06/2004	P		457.08	24.00	45.00	15.78	441.30	300	2.2	<0.50	3.0	1.3	13	2.4	7.2
	10/28/2004	P		457.08	24.00	45.00	18.33	438.75	210	<0.50	<0.50	0.67	<0.50	<0.50	1.2	7.1
VW-2	8/29/2000	--	g	---	28.00	49.50	---	---	--	--	--	--	--	--	--	--
	11/29/2000	--	g	---	28.00	49.50	---	---	--	--	--	--	--	--	--	--
	5/2/2001	--		---	28.00	49.50	---	---	--	--	--	--	--	--	--	--
	10/5/2001	--	g	---	28.00	49.50	---	---	--	--	--	--	--	--	--	--
	1/21/2002	--	g	---	28.00	49.50	---	---	--	--	--	--	--	--	--	--
	4/26/2002	--	m	---	28.00	49.50	---	---	--	--	--	--	--	--	--	--
	10/7/2002	--	g	---	28.00	49.50	---	---	--	--	--	--	--	--	--	--
	05/01/2003	--	c, g	---	28.00	49.50	---	---	--	--	--	--	--	--	--	--
	10/03/2003	--	g	---	---	28.00	49.50	---	---	--	--	--	--	--	--	--
	04/06/2004	--		458.64	28.00	49.50	16.96	441.68	--	--	--	--	--	--	--	--
	10/28/2004	--		458.64	28.00	49.50	19.35	439.29	--	--	--	--	--	--	--	--
VW-3	8/29/2000	P		---	15.50	24.00	17.93	---	25,400	3,540	10,600	1,280	43,000	44,700	--	--
	11/29/2000	P		---	15.50	24.00	19.75	---	54,200	9,450	1,870	2,350	9,400	12,300/15,100	0.47	--
	5/2/2001	--	k	---	15.50	24.00	---	---	--	--	--	--	--	--	--	--
VW-4	8/29/2000	--	g	---	17.00	30.00	---	---	--	--	--	--	--	--	--	--
	11/29/2000	--	q	---	17.00	30.00	---	---	36,100	3,700	206	1,850	7,890	6,430/8,460	--	--
	11/29/2000	P		---	17.00	30.00	19.45	---	37,500	4,510	206	2,100	9,030	6,770/7,880	0.42	--
	5/2/2001	--		---	17.00	30.00	21.66	---	--	--	--	--	--	--	--	--
	8/15/2001	--		---	17.00	30.00	---	---	--	--	--	--	--	--	--	--
	10/5/2001	--	f	---	17.00	30.00	---	---	--	--	--	--	--	--	--	--
	1/21/2002	--	f	---	17.00	30.00	---	---	--	--	--	--	--	--	--	--
	4/26/2002	--	f	---	17.00	30.00	---	---	--	--	--	--	--	--	--	--
	10/7/2002	--		---	17.00	30.00	19.25	---	--	--	--	--	--	--	--	--
	05/01/2003	--	c	---	17.00	30.00	17.29	---	--	--	--	--	--	--	--	--
	10/03/2003	P	d, n	---	17.00	30.00	19.10	---	48,000	3,300	1,700	3,600	21,000	1,600	10.5	6.7
	04/06/2004	--		456.99	17.00	30.00	18.05	438.94	--	--	--	--	--	--	--	--
	10/28/2004	--		456.99	17.00	30.00	18.71	438.28	--	--	--	--	--	--	--	--

Table 1

Groundwater Elevation and Analytical Data

ARCO Service Station #6113

785 East Stanley Blvd., Livermore, CA

SYMBOLS AND ABBREVIATIONS:

-- = Not analyzed/applicable/measured/available
< = Not detected at or above laboratory reporting limit
DO = Dissolved oxygen
DTW = Depth to water in feet below ground surface
ft bgs = feet below ground surface
ft MSL = feet above mean sea level
GRO = Gasoline Range Organics, range C4-C12
GWE = Groundwater elevation measured in feet above mean sea level
mg/L = Milligrams per liter
MTBE = Methyl tert butyl ether
NP = Not Purged
P = Purge
TOC = Top of casing measured in feet above mean sea level
TPH-g = Total petroleum hydrocarbons as gasoline
ug/L = Micrograms per liter

FOOTNOTES:

a = Hydrocarbon pattern is present in the requested fuel quantitation range but does not resemble the pattern of the requested fuel.
b = Chromatogram Pattern: C6-C10
c = TPH-g, BTEX and MTBE analyzed using EPA Method 8260B beginning second quarter 2003 (05/01/03)
d = This sample was analyzed 3 days after the EPA recommended holding time. The results may still be useful for their intended purpose.
e = Well sampled annually in the fourth quarter
f = Well dry
g = Well inaccessible
h = Well sampled semi-annually in second and fourth quarters
k = Well abandoned
m = Unable to locate well
n = Sheen in well
q = Duplicate sample
r = Well removed from sampling schedule

NOTES:

Beginning in the second quarter 2003 (05/01/03) TPH-g, BTEX (Benzene, toluene, ethylbenzene, total xylenes) and MTBE analyzed using EPA Method 8260B. Prior to 05/01/03, TPH-g by modified EPA method 8015; BTEX by EPA method 8021B (EPA method 8020 before 11/11/99); MTBE by EPA method 8021B. (EPA method 8020 before 11/11/99). Any MTBE Detection by 8021B was confirmed by EPA method 8260 beginning Third Quarter 2000 (08-29-00 Results).

Beginning in the fourth quarter 2003, the laboratory modified the reported analyte list. Total petroleum hydrocarbons as gasoline (TPHg) has been changed to gasoline range organics (GRO). The resulting data may be impacted by the potential of non-TPHg analytes within the requested fuel range resulting in a higher concentration being reported.

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

Wells were resurveyed to NAVD '88 datum by URS Corporation on March 8, 2004.

Values for dissolved oxygen (DO) and pH were obtained through field measurements.

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

Table 2

Fuel Additives Analytical Data
 ARCO Service Station #6113
 785 East Stanley Blvd., Livermore, CA

Well Number	Date Sampled	Ethanol (µg/L)	TBA (µg/L)	MTBE (µg/L)	DIPE (µg/L)	ETBE (µg/L)	TAME (µg/L)	1,2-DCA (µg/L)	EDB (µg/L)	Footnotes/Comments
MW-1	10/7/2002	<40	<20	--	<0.50	<0.50	<0.50	<0.50	<0.50	
MW-2	10/7/2002	<40	<20	--	<0.50	<0.50	<0.50	<0.50	<0.50	
MW-3	10/7/2002	<40	<20	--	<0.50	<0.50	<0.50	<0.50	<0.50	
	10/03/2003	<100	<20	<0.50	<1.0	<1.0	<1.0	<0.50	<0.50	a
	10/28/2004	<100	<20	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	
MW-4	10/7/2002	<400	<200	--	<5.0	<5.0	<5.0	<5.0	<5.0	
	5/1/2003	<100	25	--	<0.50	<0.50	<0.50	<0.50	<0.50	
	10/03/2003	<100	<20	22	<1.0	<1.0	<1.0	<0.50	<0.50	a
	04/06/2004	<100	<20	17	<0.50	<0.50	<0.50	<0.50	<0.50	
	10/28/2004	<100	<20	4.5	<0.50	<0.50	<0.50	<0.50	<0.50	
MW-6	10/7/2002	<40	<20	--	<0.50	<0.50	<0.50	<0.50	<0.50	
	5/1/2003	<100	<20	--	<0.50	<0.50	<0.50	<0.50	<0.50	
	10/03/2003	<500	<100	120	<5.0	<5.0	<5.0	<2.5	<2.5	a
	04/06/2004	<5,000	<1,000	1,700	<25	<25	<25	<25	<25	
	10/28/2004	<5,000	<1,000	3,100	<25	<25	<25	<25	<25	
MW-7	10/7/2002	<40	<20	--	<0.50	<0.50	<0.50	<0.50	<0.50	
	5/1/2003	<100	<20	--	<0.50	<0.50	<0.50	<0.50	<0.50	
	10/03/2003	<200	<40	49	<2.0	<2.0	<2.0	<1.0	<1.0	a
	04/06/2004	<100	<20	0.76	<0.50	<0.50	<0.50	<0.50	<0.50	
	10/28/2004	<100	<20	14	<0.50	<0.50	<0.50	<0.50	<0.50	
MW-8	10/7/2002	<40	<20	--	<0.50	<0.50	<0.50	<0.50	<0.50	
MW-9	10/7/2002	<40	<20	--	<0.50	<0.50	<0.50	<0.50	<0.50	
	10/03/2003	<100	<20	<0.50	<1.0	<1.0	<1.0	<0.50	<0.50	a
	10/28/2004	<100	<20	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	
MW-10	10/7/2002	<40	<20	--	<0.50	<0.50	<0.50	<0.50	<0.50	
	10/03/2003	<100	<20	<0.50	<1.0	<1.0	<1.0	<0.50	<0.50	a
	10/28/2004	<100	<20	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	
MW-11	10/7/2002	<40	<20	--	<0.50	<0.50	<0.50	<0.50	<0.50	
	5/1/2003	<100	<20	--	<0.50	<0.50	<0.50	<0.50	<0.50	
	10/03/2003	<100	<20	3.1	<1.0	<1.0	<1.0	<0.50	<0.50	a

Table 2

Fuel Additives Analytical Data
ARCO Service Station #6113
785 East Stanley Blvd., Livermore, CA

Well Number	Date Sampled	Ethanol (µg/L)	TBA (µg/L)	MTBE (µg/L)	DIPE (µg/L)	ETBE (µg/L)	TAME (µg/L)	1,2-DCA (µg/L)	EDB (µg/L)	Footnotes/ Comments
MW-11	04/06/2004	<100	<20	14	<0.50	<0.50	<0.50	<0.50	<0.50	
	10/28/2004	<100	<20	29	<0.50	<0.50	<0.50	<0.50	<0.50	
MW-12	04/06/2004	<100	<20	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	
	10/28/2004	<100	<20	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	
MW-13	10/7/2002	<4,000	<2,000	--	<50	<50	<50	<50	<50	
	5/1/2003	<10,000	<2,000	--	<50	<50	<50	<50	<50	
	10/03/2003	<10,000	<2,000	2,400	<100	<100	<100	<50	<50	a
	04/06/2004	<5,000	<1,000	1,800	<25	<25	<25	<25	<25	
	10/28/2004	<5,000	<1,000	1,800	<25	<25	<25	<25	<25	
VW-1	10/7/2002	<80	<40	--	<1.0	<1.0	<1.0	<1.0	<1.0	
	5/1/2003	<100	<20	--	<0.50	<0.50	<0.50	<0.50	<0.50	
	10/03/2003	<100	<20	12	<1.0	<1.0	<1.0	<0.50	<0.50	a
	04/06/2004	<100	<20	13	<0.50	<0.50	<0.50	<0.50	<0.50	
	10/28/2004	<100	<20	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	
VW-4	10/03/2003	<100,000	<20,000	1,600	<1,000	<1,000	<1,000	<500	<500	a

Table 2

Fuel Additives Analytical Data
ARCO Service Station #6113
785 East Stanley Blvd., Livermore, CA

SYMBOLS AND ABBREVIATIONS:

-- = Not analyzed/applicable/measured/available
< = Not detected at or above the laboratory reporting limit.
1,2-DCA = 1,2-Dichloroethane
DIPE = Di-isopropyl ether
EDB = 1,2-Dibromoethane
ETBE = Ethyl tert-butyl ether
MTBE = Methyl tert-butyl ether
TAME = tert-Amyl methyl ether
TBA = tert-Butyl alcohol
ug/L = Micrograms per Liter

FOOTNOTES:

a = This sample was analyzed 3 days after the EPA recommended holding time. The results may still be useful for their intended purpose.

NOTES:

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

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

Table 3

Groundwater Gradient Data
 ARCO Service Station #6113
 785 East Stanley Blvd., Livermore, CA

Date Sampled	Approximate Flow Direction	Approximate Hydraulic Gradient
3/23/1995	Northwest	0.035
5/31/1995	North-Northwest	0.028
8/31/1995	North-Northwest	0.03
11/28/1995	North-Northwest	0.025
2/22/1996	North-Northwest	0.031
5/23/1996	North-Northwest	0.025
8/8/1996	North	0.019
11/7/1996	North-Northeast	0.019
3/27/1997	North-Northwest	0.021
5/19/1997	North	0.019
5/18/1998	North	0.02
11/2/1998	North	0.02
6/4/1999	North	0.02
11/11/1999	North	0.03
6/20/2000	North-Northeast	0.014
8/29/2000	North-Northeast	0.013
11/29/2000	North-Northwest	0.026
5/2/2001	Northeast	0.026
8/15/2001	Northeast	0.047
10/5/2001	Northeast	0.031
1/21/2002	Northeast	0.033
4/26/2002	Northeast	0.031
10/7/2002	Northeast	0.017
5/1/2003	North-Northeast	0.011
10/3/2003	North-Northeast	0.016
4/6/2004	North-Northeast	0.013
10/28/2004	North-Northeast	0.014

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

ATTACHMENT A
FIELD PROCEDURES AND FIELD DATA SHEETS

FIELD PROCEDURES

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 TeflonTM 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 # 041028-BA1 Date 10/28/04 Client Arco 6113

Site 785 E. Stanley Blvd, Livermore

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-3	2					19.38	39.63	TOC
MW-4	4					20.02	26.66	
MW-6	4	vacuum				19.20	66.72	
MW-7	4	pressure				19.17	67.52	
MW-9	4					18.35	67.75	
MW-10	4					20.27	49.84	
MW-11	2	pressure				20.32	44.44	
MW-12	2					20.66	33.92	
MW-13	2					18.83	30.19	
VW-1	4					18.33	44.33	Heavy Vault Lid
50 VW-2	4					19.35	49.18	Heavy Vault Lid
60 VW-4	4	odor				18.71	24.48	→ Heavy Vault Lid

ARCO / BP WELL MONITORING DATA SHEET

BTS #: <u>041028-2A1</u>	Station # <u>6113</u>
Sampler: <u>Brian Alcom</u>	Date: <u>10/28/04</u>
Well I.D.: <u>MW-12</u>	Well Diameter: <u>(2)</u> 3 4 6 8 _____
Total Well Depth: <u>33.92</u>	Depth to Water: <u>20.66</u>
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: <u>PVC</u> Grade	D.O. Meter (if req'd): <u>YSI</u> HACH

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

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

Sampling Method: Bailer
~~Disposable Bailer~~
 Extraction Port
 Other: _____

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

<u>2.25</u>	X	<u>3</u>	=	<u>6.75</u>	Gals.
1 Case Volume (Gals.)		Specified Volumes		Calculated Volume	

Time	Temp (°F)	pH	Conductivity (mS or <u>µS</u>)	Gals. Removed	Observations
					<u>Well has bent casing at 18 feet. Unable to use pump.</u>
<u>1036</u>	<u>64.6</u>	<u>6.4</u>	<u>643.7</u>	<u>2.25</u>	<u>gray</u>
<u>1040</u>	<u>65.3</u>	<u>6.7</u>	<u>582.0</u>	<u>4.5</u>	"
<u>1045</u>	<u>65.1</u>	<u>6.8</u>	<u>572.8</u>	<u>6.75</u>	"

Did well dewater? Yes No Gallons actually evacuated: 6.75

Sampling Time: 1047 Sampling Date: 10/28/04

Sample I.D.: MW-12 Laboratory: Pace Sequoja Other _____

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

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

ARCO / BP WELL MONITORING DATA SHEET

BTS #: 041028-BA1	Station # 6113
Sampler: Brian Alcom	Date: 10/28/04
Well I.D.: MW-11	Well Diameter: (2) 3 4 6 8
Total Well Depth: 44.44	Depth to Water: 20.32
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: (PVC) 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 ² * 0.163

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

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>4.0</u>	x	<u>3</u>	=	<u>12.0</u>	Gals.
1 Case Volume (Gals.)		Specified Volumes		Calculated Volume	

Time	Temp (°F)	pH	Conductivity (mS or (uS))	Gals. Removed	Observations
1119	63.5	7.0 7.5	657.8	4.0	brown
1124	65.1	7.1	668.6	8.0	"
1129	65.2	7.2	671.4	12.0	"

Did well dewater? Yes (No) Gallons actually evacuated: 12.0

Sampling Time: 1130 Sampling Date: 10/28/04

Sample I.D.: MW-11 Laboratory: Pace (Sequoia) Other: _____

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

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

ARCO / BP WELL MONITORING DATA SHEET

BTS #: 041028-BA1	Station # 6113
Sampler: Brian Alcorn	Date: 10/28/04
Well I.D.: MW-3	Well Diameter: <u>3</u> 4 6 8
Total Well Depth: 39.03	Depth to Water: 19.38
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: <u>PVC</u> Grade	D.O. Meter (if req'd): <u>YSI</u> HACH

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

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

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

<u>3.25</u>	x	<u>3</u>	=	<u>9.75</u>	Gals.
1 Case Volume (Gals.)		Specified Volumes		Calculated Volume	

Time	Temp (°F)	pH	Conductivity (mS or <u>µS</u>)	Gals. Removed	Observations
1144	63.7	7.5X	586.0	3.25	gray
1147	63.8	7.3	577.7	6.5	clear
1149	63.3	7.3	576.3	9.75	"

3 extra vials

Did well dewater? Yes <u>No</u>	Gallons actually evacuated: <u>9.75</u>
Sampling Time: <u>1150</u>	Sampling Date: <u>10/28/04</u>
Sample I.D.: <u>MW-3</u>	Laboratory: Pace <u>Sequoia</u> Other _____
Analyzed for: TPH-G BTEX MTBE TPH-D Other:	
D.O. (if req'd):	Pre-purge: _____ mg/L
	Post-purge: <u>8.1</u> mg/L
O.R.P. (if req'd):	Pre-purge: _____ mV
	Post-purge: _____ mV

ARCO / BP WELL MONITORING DATA SHEET

BTS #: <u>041028-BA1</u>	Station # <u>6013</u>
Sampler: <u>Brian Alcom</u>	Date: <u>10/28/04</u>
Well I.D.: <u>MW-9</u>	Well Diameter: 2 3 <u>4</u> 6 8
Total Well Depth: <u>67.75</u>	Depth to Water: <u>18.35</u>
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: <u>PVC</u> Grade	D.O. Meter (if req'd): <u>YSI</u> HACH

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

Purge Method: Bailer Sampling Method: Bailer
 Disposable Bailer Disposable Bailer
 Middleburg 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>32.5</u>	x	<u>3</u>	=	<u>97.5</u>	Gals.
1 Case Volume (Gals.)		Specified Volumes		Calculated Volume	

Time	Temp (°F)	pH	Conductivity (mS or μ S)	Gals. Removed	Observations
1300	63.0	6.9	571.2	32.5	clear
1307	64.2	6.9	584.1	65.0	"
1314	64.4	6.9	580.2	97.5	"

Did well dewater? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Gallons actually evacuated: <u>97.5</u>
Sampling Time: <u>13:5</u>	Sampling Date: <u>10/28/04</u>
Sample I.D.: <u>MW-9</u>	Laboratory: Pace <u>Sequoia</u> Other _____
Analyzed for: TPH-G BTEX MTBE TPH-D Other:	
D.O. (if req'd):	Pre-purge: _____ mg/L Post-purge: <u>6.8</u> mg/L
O.R.P. (if req'd):	Pre-purge: _____ mV Post-purge: _____ mV

ARCO / BP WELL MONITORING DATA SHEET

BTS #: 041028-BA1	Station # 6113
Sampler: Brian Alcom	Date: 10/28/04
Well I.D.: MW-6	Well Diameter: 2 3 <u>4</u> 6 8
Total Well Depth: 66.72	Depth to Water: 19.20
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: <u>PVC</u> Grade	D.O. Meter (if req'd): <u>YSI</u> HACH

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

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

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.

31.0	x	3	=	93.0	Gals.
1 Case Volume (Gals.)		Specified Volumes		Calculated Volume	

Time	Temp (°F)	pH	Conductivity (mS or µS)	Gals. Removed	Observations
1353	63.9	6.8	655.9	31.0	clear, odor
1359	64.0	6.9	653.8	62.0	" "
1405	64.3	6.9	648.2	93.0	" "

Did well dewater? Yes No Gallons actually evacuated: 93.0

Sampling Time: 1406 Sampling Date: 10/28/04

Sample I.D.: MW-6 Laboratory: Pace Sequoia Other _____

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

D.O. (if req'd):	Pre-purge:	mg/L	<u>Post-purge:</u>	6.8	mg/L
O.R.P. (if req'd):	Pre-purge:	mV	Post-purge:		mV

ARCO / BP WELL MONITORING DATA SHEET

BTS #: 041028-BA1	Station # 6113
Sampler: Brian Alcom	Date: 10/28/04
Well I.D.: MW-7	Well Diameter: 2 3 <u>4</u> 6 8
Total Well Depth: 67.52	Depth to Water: 19.17
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: <u>PVC</u> Grade	D.O. Meter (if req'd): <u>YSI</u> HACH

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

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

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>31.5</u>	x	<u>3</u>	=	<u>94.5</u>	Gals.
1 Case Volume (Gals.)		Specified Volumes		Calculated Volume	

Time	Temp (°F)	pH	Conductivity (mS or µS)	Gals. Removed	Observations
1419	63.3	6.9	611.1	31.5	clear, odor
1425	63.3	6.9	605.5	63.0	" "
1431	64.0	6.9	603.0	94.5	" "

Did well dewater? Yes (No) Gallons actually evacuated: 94.5

Sampling Time: 1432 Sampling Date: 10/28/04

Sample I.D.: MW-7 Laboratory: Pace (Sequoia) Other: _____

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

D.O. (if req'd):	Pre-purge:	mg/L	Post-purge:	<u>6.7</u>	mg/L
O.R.P. (if req'd):	Pre-purge:	mV	Post-purge:		mV

ARCO / BP WELL MONITORING DATA SHEET

BTS #: 041028-BA1	Station # 6113
Sampler: Brian Alcom	Date: 10/28/04
Well I.D.: VW-1	Well Diameter: 2 3 (4) 6 8
Total Well Depth: 44.33	Depth to Water: 18.33
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: (PVC) 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 ² * 0.163

Purge Method: Bailer	Sampling Method: Bailer
Disposable Bailer	Disposable Bailer
Middleburg	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.

17.0	X	3	=	51.0	Gals.
1 Case Volume (Gals.)		Specified Volumes		Calculated Volume	

Time	Temp (°F)	pH	Conductivity (mS or (µS))	Gals. Removed	Observations
1445	64.7	7.1	553.9	17.0	cloudy gray
1449	65.4	7.1	549.5	34.0	"
1453	65.2	7.1	552.2	51.0	"

Did well dewater? Yes (No)	Gallons actually evacuated: 51.0
Sampling Time: 1455	Sampling Date: 10/28/04
Sample I.D.: VW-1	Laboratory: Pace (Sequoia) Other _____

Analyzed for: TPH-G BTEX MTBE TPH-D Other:			
D.O. (if req'd):	Pre-purge:	mg/L	Post-purge: 1.2 mg/L
O.R.P. (if req'd):	Pre-purge:	mV	Post-purge: mV

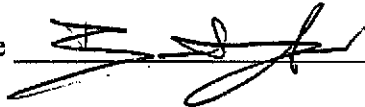
BP GEM OIL COMPANY TYPE **A** BILL OF LADING

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:

6113		
Station #		
785. E. Stanley, Livermore		
Station Address		
Total Gallons Collected From Groundwater Monitoring Wells:		

added equip. rince water _____	any other adjustments _____	
TOTAL GALS. RECOVERED <u>445</u>	loaded onto BTS vehicle # <u>58 +</u> <u>Trailer</u>	
BTS event # <u>041028-BA1</u>	time <u>1500</u>	date <u>10/28/04</u>
signature 	_____	

REC'D AT _____	time _____	date <u>1/1</u>
unloaded by signature _____	_____	

ATTACHMENT B

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

LABORATORY PROCEDURES

Laboratory Procedures

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



12 November, 2004

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

RE: ARCO #6113, Livermore, CA
Work Order: MNK0027

Enclosed are the results of analyses for samples received by the laboratory on 10/29/04 13:52. 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 #6113, Livermore, CA
Project Number: INTRIM-50739
Project Manager: Scott Robinson

MNK0027
Reported:
11/12/04 15:58

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
MW-12	MNK0027-01	Water	10/28/04 10:47	10/29/04 13:52
MW-11	MNK0027-02	Water	10/28/04 11:30	10/29/04 13:52
MW-3	MNK0027-03	Water	10/28/04 11:50	10/29/04 13:52
MW-13	MNK0027-04	Water	10/28/04 12:12	10/29/04 13:52
MW-10	MNK0027-05	Water	10/28/04 12:40	10/29/04 13:52
MW-9	MNK0027-06	Water	10/28/04 13:15	10/29/04 13:52
MW-4	MNK0027-07	Water	10/28/04 13:28	10/29/04 13:52
MW-6	MNK0027-08	Water	10/28/04 14:06	10/29/04 13:52
MW-7	MNK0027-09	Water	10/28/04 14:32	10/29/04 13:52
VW-1	MNK0027-10	Water	10/28/04 14:55	10/29/04 13:52
TB-6113-10282004	MNK0027-11	Water	10/28/04 15:00	10/29/04 13:52

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 no custody seals.

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

 Project: ARCO #6113, Livermore, CA
 Project Number: INTRIM-50739
 Project Manager: Scott Robinson

 MNK0027
 Reported:
 11/12/04 15:58

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

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
MW-12 (MNK0027-01) Water Sampled: 10/28/04 10:47 Received: 10/29/04 13:52									
tert-Amyl methyl ether	ND	0.50	ug/l	1	4K04004	11/04/04	11/04/04	EPA 8260B	
Benzene	ND	0.50	"	"	"	"	"	"	
tert-Butyl alcohol	ND	20	"	"	"	"	"	"	
Di-isopropyl ether	ND	0.50	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	0.50	"	"	"	"	"	"	
1,2-Dichloroethane	ND	0.50	"	"	"	"	"	"	
Ethanol	ND	100	"	"	"	"	"	"	
Ethyl tert-butyl ether	ND	0.50	"	"	"	"	"	"	
Ethylbenzene	ND	0.50	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	0.50	"	"	"	"	"	"	
Toluene	ND	0.50	"	"	"	"	"	"	
Xylenes (total)	ND	0.50	"	"	"	"	"	"	
Gasoline Range Organics (C4-C12)	ND	50	"	"	"	"	"	"	
<i>Surrogate: 1,2-Dichloroethane-d4</i>		90 %	78-129	"	"	"	"	"	
MW-11 (MNK0027-02) Water Sampled: 10/28/04 11:30 Received: 10/29/04 13:52									
tert-Amyl methyl ether	ND	0.50	ug/l	1	4K04004	11/04/04	11/04/04	EPA 8260B	
Benzene	ND	0.50	"	"	"	"	"	"	
tert-Butyl alcohol	ND	20	"	"	"	"	"	"	
Di-isopropyl ether	ND	0.50	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	0.50	"	"	"	"	"	"	
1,2-Dichloroethane	ND	0.50	"	"	"	"	"	"	
Ethanol	ND	100	"	"	"	"	"	"	
Ethyl tert-butyl ether	ND	0.50	"	"	"	"	"	"	
Ethylbenzene	ND	0.50	"	"	"	"	"	"	
Methyl tert-butyl ether	29	0.50	"	"	"	"	"	"	
Toluene	ND	0.50	"	"	"	"	"	"	
Xylenes (total)	ND	0.50	"	"	"	"	"	"	
Gasoline Range Organics (C4-C12)	ND	50	"	"	"	"	"	"	
<i>Surrogate: 1,2-Dichloroethane-d4</i>		87 %	78-129	"	"	"	"	"	

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

 Project: ARCO #6113, Livermore, CA
 Project Number: INTRIM-50739
 Project Manager: Scott Robinson

 MNK0027
 Reported:
 11/12/04 15:58

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

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
MW-3 (MNK0027-03) Water Sampled: 10/28/04 11:50 Received: 10/29/04 13:52										
tert-Amyl methyl ether	ND	0.50		ug/l	1	4K04004	11/04/04	11/04/04	EPA 8260B	
Benzene	ND	0.50		"	"	"	"	"	"	
tert-Butyl alcohol	ND	20		"	"	"	"	"	"	
Di-isopropyl ether	ND	0.50		"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	0.50		"	"	"	"	"	"	
1,2-Dichloroethane	ND	0.50		"	"	"	"	"	"	
Ethanol	ND	100		"	"	"	"	"	"	
Ethyl tert-butyl ether	ND	0.50		"	"	"	"	"	"	
Ethylbenzene	ND	0.50		"	"	"	"	"	"	
Methyl tert-butyl ether	ND	0.50		"	"	"	"	"	"	
Toluene	ND	0.50		"	"	"	"	"	"	
Xylenes (total)	ND	0.50		"	"	"	"	"	"	
Gasoline Range Organics (C4-C12)	ND	50		"	"	"	"	"	"	
<i>Surrogate: 1,2-Dichloroethane-d4</i>			85 %		78-129	"	"	"	"	
MW-13 (MNK0027-04) Water Sampled: 10/28/04 12:12 Received: 10/29/04 13:52										
tert-Amyl methyl ether	ND	25		ug/l	50	4K04004	11/04/04	11/04/04	EPA 8260B	
Benzene	350	25		"	"	"	"	"	"	
tert-Butyl alcohol	ND	1000		"	"	"	"	"	"	
Di-isopropyl ether	ND	25		"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	25		"	"	"	"	"	"	
1,2-Dichloroethane	ND	25		"	"	"	"	"	"	
Ethanol	ND	5000		"	"	"	"	"	"	
Ethyl tert-butyl ether	ND	25		"	"	"	"	"	"	
Ethylbenzene	1900	25		"	"	"	"	"	"	
Methyl tert-butyl ether	1800	25		"	"	"	"	"	"	
Toluene	ND	25		"	"	"	"	"	"	
Xylenes (total)	1800	25		"	"	"	"	"	"	
Gasoline Range Organics (C4-C12)	18000	2500		"	"	"	"	"	"	
<i>Surrogate: 1,2-Dichloroethane-d4</i>			87 %		78-129	"	"	"	"	

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

 Project: ARCO #6113, Livermore, CA
 Project Number: INTRIM-50739
 Project Manager: Scott Robinson

 MNK0027
 Reported:
 11/12/04 15:58

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

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
MW-10 (MNK0027-05) Water Sampled: 10/28/04 12:40 Received: 10/29/04 13:52										
tert-Amyl methyl ether	ND	0.50		ug/l	1	4K07001	11/08/04	11/08/04	EPA 8260B	
Benzene	ND	0.50		"	"	"	"	"	"	
tert-Butyl alcohol	ND	20		"	"	"	"	"	"	
Di-isopropyl ether	ND	0.50		"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	0.50		"	"	"	"	"	"	
1,2-Dichloroethane	ND	0.50		"	"	"	"	"	"	
Ethanol	ND	100		"	"	"	"	"	"	
Ethyl tert-butyl ether	ND	0.50		"	"	"	"	"	"	
Ethylbenzene	ND	0.50		"	"	"	"	"	"	
Methyl tert-butyl ether	ND	0.50		"	"	"	"	"	"	
Toluene	ND	0.50		"	"	"	"	"	"	
Xylenes (total)	ND	0.50		"	"	"	"	"	"	
Gasoline Range Organics (C4-C12)	ND	50		"	"	"	"	"	"	
<i>Surrogate: 1,2-Dichloroethane-d4</i>			109 %		78-129	"	"	"	"	
MW-9 (MNK0027-06) Water Sampled: 10/28/04 13:15 Received: 10/29/04 13:52										
tert-Amyl methyl ether	ND	0.50		ug/l	1	4K06001	11/06/04	11/06/04	EPA 8260B	
Benzene	ND	0.50		"	"	"	"	"	"	
tert-Butyl alcohol	ND	20		"	"	"	"	"	"	
Di-isopropyl ether	ND	0.50		"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	0.50		"	"	"	"	"	"	
1,2-Dichloroethane	ND	0.50		"	"	"	"	"	"	
Ethanol	ND	100		"	"	"	"	"	"	
Ethyl tert-butyl ether	ND	0.50		"	"	"	"	"	"	
Ethylbenzene	ND	0.50		"	"	"	"	"	"	
Methyl tert-butyl ether	ND	0.50		"	"	"	"	"	"	
Toluene	ND	0.50		"	"	"	"	"	"	
Xylenes (total)	ND	0.50		"	"	"	"	"	"	
Gasoline Range Organics (C4-C12)	ND	50		"	"	"	"	"	"	
<i>Surrogate: 1,2-Dichloroethane-d4</i>			85 %		78-129	"	"	"	"	

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

 Project: ARCO #6113, Livermore, CA
 Project Number: INTRIM-50739
 Project Manager: Scott Robinson

 MNK0027
 Reported:
 11/12/04 15:58

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

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
MW-4 (MNK0027-07) Water Sampled: 10/28/04 13:28 Received: 10/29/04 13:52										
tert-Amyl methyl ether	ND	0.50		ug/l	1	4K06001	11/06/04	11/06/04	EPA 8260B	
Benzene	ND	0.50		"	"	"	"	"	"	
tert-Butyl alcohol	ND	20		"	"	"	"	"	"	
Di-isopropyl ether	ND	0.50		"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	0.50		"	"	"	"	"	"	
1,2-Dichloroethane	ND	0.50		"	"	"	"	"	"	
Ethanol	ND	100		"	"	"	"	"	"	
Ethyl tert-butyl ether	ND	0.50		"	"	"	"	"	"	
Ethylbenzene	ND	0.50		"	"	"	"	"	"	
Methyl tert-butyl ether	4.5	0.50		"	"	"	"	"	"	
Toluene	ND	0.50		"	"	"	"	"	"	
Xylenes (total)	ND	0.50		"	"	"	"	"	"	
Gasoline Range Organics (C4-C12)	ND	50		"	"	"	"	"	"	
<i>Surrogate: 1,2-Dichloroethane-d4</i>			82 %		78-129	"	"	"	"	
MW-6 (MNK0027-08) Water Sampled: 10/28/04 14:06 Received: 10/29/04 13:52										
tert-Amyl methyl ether	ND	25		ug/l	50	4K06001	11/06/04	11/06/04	EPA 8260B	
Benzene	ND	25		"	"	"	"	"	"	
tert-Butyl alcohol	ND	1000		"	"	"	"	"	"	
Di-isopropyl ether	ND	25		"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	25		"	"	"	"	"	"	
1,2-Dichloroethane	ND	25		"	"	"	"	"	"	
Ethanol	ND	5000		"	"	"	"	"	"	
Ethyl tert-butyl ether	ND	25		"	"	"	"	"	"	
Ethylbenzene	ND	25		"	"	"	"	"	"	
Methyl tert-butyl ether	3100	25		"	"	"	"	"	"	
Toluene	ND	25		"	"	"	"	"	"	
Xylenes (total)	ND	25		"	"	"	"	"	"	
Gasoline Range Organics (C4-C12)	3200	2500		"	"	"	"	"	"	
<i>Surrogate: 1,2-Dichloroethane-d4</i>			81 %		78-129	"	"	"	"	

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

 Project: ARCO #6113, Livermore, CA
 Project Number: INTRIM-50739
 Project Manager: Scott Robinson

 MNK0027
 Reported:
 11/12/04 15:58

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

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
MW-7 (MNK0027-09) Water Sampled: 10/28/04 14:32 Received: 10/29/04 13:52									
tert-Amyl methyl ether	ND	0.50	ug/l	1	4K07001	11/08/04	11/08/04	EPA 8260B	
Benzene	ND	0.50	"	"	"	"	"	"	
tert-Butyl alcohol	ND	20	"	"	"	"	"	"	
Di-isopropyl ether	ND	0.50	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	0.50	"	"	"	"	"	"	
1,2-Dichloroethane	ND	0.50	"	"	"	"	"	"	
Ethanol	ND	100	"	"	"	"	"	"	
Ethyl tert-butyl ether	ND	0.50	"	"	"	"	"	"	
Ethylbenzene	ND	0.50	"	"	"	"	"	"	
Methyl tert-butyl ether	14	0.50	"	"	"	"	"	"	
Toluene	ND	0.50	"	"	"	"	"	"	
Xylenes (total)	ND	0.50	"	"	"	"	"	"	
Gasoline Range Organics (C4-C12)	ND	50	"	"	"	"	"	"	
<i>Surrogate: 1,2-Dichloroethane-d4</i>		<i>106 %</i>	<i>78-129</i>						
VW-1 (MNK0027-10) Water Sampled: 10/28/04 14:55 Received: 10/29/04 13:52									
tert-Amyl methyl ether	ND	0.50	ug/l	1	4K07001	11/08/04	11/08/04	EPA 8260B	
Benzene	ND	0.50	"	"	"	"	"	"	
tert-Butyl alcohol	ND	20	"	"	"	"	"	"	
Di-isopropyl ether	ND	0.50	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	0.50	"	"	"	"	"	"	
1,2-Dichloroethane	ND	0.50	"	"	"	"	"	"	
Ethanol	ND	100	"	"	"	"	"	"	
Ethyl tert-butyl ether	ND	0.50	"	"	"	"	"	"	
Ethylbenzene	0.67	0.50	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	0.50	"	"	"	"	"	"	
Toluene	ND	0.50	"	"	"	"	"	"	
Xylenes (total)	ND	0.50	"	"	"	"	"	"	
Gasoline Range Organics (C4-C12)	210	50	"	"	"	"	"	"	
<i>Surrogate: 1,2-Dichloroethane-d4</i>		<i>107 %</i>	<i>78-129</i>						

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

 Project: ARCO #6113, Livermore, CA
 Project Number: INTRIM-50739
 Project Manager: Scott Robinson

 MNK0027
 Reported:
 11/12/04 15:58

**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
Batch 4K04004 - EPA 5030B P/T / EPA 8260B									
Blank (4K04004-BLK1)					Prepared & Analyzed: 11/04/04				
tert-Amyl methyl ether	ND	0.50	ug/l						
Benzene	ND	0.50	"						
tert-Butyl alcohol	ND	20	"						
Di-isopropyl ether	ND	0.50	"						
1,2-Dibromoethane (EDB)	ND	0.50	"						
1,2-Dichloroethane	ND	0.50	"						
Ethanol	ND	100	"						
Ethyl tert-butyl ether	ND	0.50	"						
Ethylbenzene	ND	0.50	"						
Methyl tert-butyl ether	ND	0.50	"						
Toluene	ND	0.50	"						
Xylenes (total)	ND	0.50	"						
Gasoline Range Organics (C4-C12)	ND	50	"						
<i>Surrogate: 1,2-Dichloroethane-d4</i>	4.77		"	5.00		95		78-129	
Laboratory Control Sample (4K04004-BS1)					Prepared & Analyzed: 11/04/04				
tert-Amyl methyl ether	9.08	0.50	ug/l	10.0		91		82-140	
Benzene	9.61	0.50	"	10.0		96		69-124	
tert-Butyl alcohol	53.6	20	"	50.0		107		56-131	
Di-isopropyl ether	10.8	0.50	"	10.0		108		76-130	
1,2-Dibromoethane (EDB)	9.49	0.50	"	10.0		95		77-132	
1,2-Dichloroethane	10.4	0.50	"	10.0		104		77-136	
Ethanol	270	100	"	200		135		31-143	
Ethyl tert-butyl ether	10.4	0.50	"	10.0		104		81-121	
Ethylbenzene	9.97	0.50	"	10.0		100		84-132	
Methyl tert-butyl ether	9.67	0.50	"	10.0		97		63-137	
Toluene	9.97	0.50	"	10.0		100		78-129	
Xylenes (total)	34.1	0.50	"	30.0		114		83-137	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	4.77		"	5.00		95		78-129	

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

 Project: ARCO #6113, Livermore, CA
 Project Number: INTRIM-50739
 Project Manager: Scott Robinson

 MNK0027
 Reported:
 11/12/04 15:58

**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
Batch 4K04004 - EPA 5030B P/T / EPA 8260B										
Laboratory Control Sample (4K04004-BS2)				Prepared & Analyzed: 11/04/04						
Benzene	5.71	0.50	ug/l	6.40		89	69-124			
Ethylbenzene	7.32	0.50	"	7.52		97	84-132			
Methyl tert-butyl ether	9.47	0.50	"	9.92		95	63-137			
Toluene	31.3	0.50	"	31.9		98	78-129			
Xylenes (total)	39.8	0.50	"	36.6		109	83-137			
Gasoline Range Organics (C4-C12)	385	50	"	440		88	70-124			
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>4.81</i>		"	<i>5.00</i>		<i>96</i>	<i>78-129</i>			
Laboratory Control Sample Dup (4K04004-BSD1)				Prepared & Analyzed: 11/04/04						
tert-Amyl methyl ether	9.28	0.50	ug/l	10.0		93	82-140	2	20	
Benzene	9.07	0.50	"	10.0		91	69-124	6	20	
tert-Butyl alcohol	53.6	20	"	50.0		107	56-131	0	20	
Di-isopropyl ether	10.9	0.50	"	10.0		109	76-130	0.9	20	
1,2-Dibromoethane (EDB)	9.81	0.50	"	10.0		98	77-132	3	20	
1,2-Dichloroethane	10.3	0.50	"	10.0		103	77-136	1	20	
Ethanol	303	100	"	200		152	31-143	12	20	IC, HL
Ethyl tert-butyl ether	10.4	0.50	"	10.0		104	81-121	0	20	
Ethylbenzene	9.08	0.50	"	10.0		91	84-132	9	20	
Methyl tert-butyl ether	9.99	0.50	"	10.0		100	63-137	3	20	
Toluene	11.2	0.50	"	10.0		112	78-129	12	20	
Xylenes (total)	34.3	0.50	"	30.0		114	83-137	0.6	20	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>3.81</i>		"	<i>5.00</i>		<i>76</i>	<i>78-129</i>			<i>LG</i>
Matrix Spike (4K04004-MS1)				Source: MNK0027-04		Prepared & Analyzed: 11/04/04				
Benzene	602	25	ug/l	320	350	79	69-124			
Ethylbenzene	2160	25	"	376	1900	69	84-132			BB, LN
Methyl tert-butyl ether	2260	25	"	496	1800	93	63-137			
Toluene	1510	25	"	1600	22	93	78-129			
Xylenes (total)	3550	25	"	1830	1800	96	83-137			
Gasoline Range Organics (C4-C12)	35600	2500	"	22000	18000	80	70-124			
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>3.88</i>		"	<i>5.00</i>		<i>78</i>	<i>78-129</i>			

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

 Project: ARCO #6113, Livermore, CA
 Project Number: INTRIM-50739
 Project Manager: Scott Robinson

 MNK0027
 Reported:
 11/12/04 15:58

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
Batch 4K04004 - EPA 5030B P/T / EPA 8260B										
Matrix Spike Dup (4K04004-MSD1)	Source: MNK0027-04			Prepared & Analyzed: 11/04/04						
Benzene	600	25	ug/l	320	350	78	69-124	0.3	20	
Ethylbenzene	2420	25	"	376	1900	138	84-132	11	20	BB,LM
Methyl tert-butyl ether	2150	25	"	496	1800	71	63-137	5	20	
Toluene	1840	25	"	1600	22	114	78-129	20	20	
Xylenes (total)	4100	25	"	1830	1800	126	83-137	14	20	
Gasoline Range Organics (C4-C12)	43700	2500	"	22000	18000	117	70-124	20	20	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>3.70</i>		<i>"</i>	<i>5.00</i>		<i>74</i>	<i>78-129</i>			<i>LG</i>

Batch 4K06001 - EPA 5030B P/T / EPA 8260B

Blank (4K06001-BLK1)			Prepared & Analyzed: 11/06/04							
tert-Amyl methyl ether	ND	0.50	ug/l							
Benzene	ND	0.50	"							
tert-Butyl alcohol	ND	20	"							
Di-isopropyl ether	ND	0.50	"							
1,2-Dibromoethane (EDB)	ND	0.50	"							
1,2-Dichloroethane	ND	0.50	"							
Ethanol	ND	100	"							
Ethyl tert-butyl ether	ND	0.50	"							
Ethylbenzene	ND	0.50	"							
Methyl tert-butyl ether	ND	0.50	"							
Toluene	ND	0.50	"							
Xylenes (total)	ND	0.50	"							
Gasoline Range Organics (C4-C12)	ND	50	"							
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>4.24</i>		<i>"</i>	<i>5.00</i>		<i>85</i>	<i>78-129</i>			

Laboratory Control Sample (4K06001-BS1)			Prepared & Analyzed: 11/06/04							
tert-Amyl methyl ether	10.1	0.50	ug/l	10.0		101	82-140			
Benzene	8.96	0.50	"	10.0		90	69-124			
tert-Butyl alcohol	52.1	20	"	50.0		104	56-131			
Di-isopropyl ether	9.44	0.50	"	10.0		94	76-130			
1,2-Dibromoethane (EDB)	10.4	0.50	"	10.0		104	77-132			
1,2-Dichloroethane	10.4	0.50	"	10.0		104	77-136			
Ethanol	238	100	"	200		119	31-143			
Ethyl tert-butyl ether	9.78	0.50	"	10.0		98	81-121			
Ethylbenzene	10.6	0.50	"	10.0		106	84-132			
Methyl tert-butyl ether	9.86	0.50	"	10.0		99	63-137			

Sequoia Analytical - Morgan Hill

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

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

 Project: ARCO #6113, Livermore, CA
 Project Number: INTRIM-50739
 Project Manager: Scott Robinson

 MNK0027
 Reported:
 11/12/04 15:58

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
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	-------

Batch 4K06001 - EPA 5030B P/T / EPA 8260B
Laboratory Control Sample (4K06001-BS1)

Prepared & Analyzed: 11/06/04

Toluene	10.2	0.50	ug/l	10.0		102	78-129			
Xylenes (total)	29.9	0.50	"	30.0		100	83-137			
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>4.54</i>		"	<i>5.00</i>		<i>91</i>	<i>78-129</i>			

Laboratory Control Sample (4K06001-BS2)

Prepared & Analyzed: 11/06/04

Benzene	5.31	0.50	ug/l	6.40		83	69-124			
Ethylbenzene	8.06	0.50	"	7.52		107	84-132			
Methyl tert-butyl ether	9.54	0.50	"	9.92		96	63-137			
Toluene	32.9	0.50	"	31.9		103	78-129			
Xylenes (total)	36.8	0.50	"	36.6		101	83-137			
Gasoline Range Organics (C4-C12)	391	50	"	440		89	70-124			
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>4.58</i>		"	<i>5.00</i>		<i>92</i>	<i>78-129</i>			

Laboratory Control Sample Dup (4K06001-BSD1)

Prepared & Analyzed: 11/06/04

tert-Amyl methyl ether	10.0	0.50	ug/l	10.0		100	82-140	1	20	
Benzene	9.33	0.50	"	10.0		93	69-124	4	20	
tert-Butyl alcohol	52.7	20	"	50.0		105	56-131	1	20	
Di-isopropyl ether	9.43	0.50	"	10.0		94	76-130	0.1	20	
1,2-Dibromoethane (EDB)	10.3	0.50	"	10.0		103	77-132	1	20	
1,2-Dichloroethane	10.3	0.50	"	10.0		103	77-136	1	20	
Ethanol	219	100	"	200		110	31-143	8	20	
Ethyl tert-butyl ether	9.86	0.50	"	10.0		99	81-121	0.8	20	
Ethylbenzene	10.3	0.50	"	10.0		103	84-132	3	20	
Methyl tert-butyl ether	9.98	0.50	"	10.0		100	63-137	1	20	
Toluene	9.25	0.50	"	10.0		92	78-129	10	20	
Xylenes (total)	29.0	0.50	"	30.0		97	83-137	3	20	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>4.55</i>		"	<i>5.00</i>		<i>91</i>	<i>78-129</i>			

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

 Project: ARCO #6113, Livermore, CA
 Project Number: INTRIM-50739
 Project Manager: Scott Robinson

 MNK0027
 Reported:
 11/12/04 15:58

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
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	-------

Batch 4K06001 - EPA 5030B P/T / EPA 8260B
Matrix Spike (4K06001-MS1) Source: MNK0027-08 Prepared & Analyzed: 11/06/04

Benzene	250	25	ug/l	320	6.0	76	69-124			
Ethylbenzene	376	25	"	376	ND	100	84-132			
Methyl tert-butyl ether	3440	25	"	496	3100	69	63-137			
Toluene	1520	25	"	1600	ND	95	78-129			
Xylenes (total)	1730	25	"	1830	ND	95	83-137			
Gasoline Range Organics (C4-C12)	20900	2500	"	22000	3200	80	70-124			
Surrogate: 1,2-Dichloroethane-d4	4.44		"	5.00		89	78-129			

Matrix Spike Dup (4K06001-MSD1) Source: MNK0027-08 Prepared & Analyzed: 11/06/04

Benzene	258	25	ug/l	320	6.0	79	69-124	3	20	
Ethylbenzene	389	25	"	376	ND	103	84-132	3	20	
Methyl tert-butyl ether	3530	25	"	496	3100	87	63-137	3	20	
Toluene	1580	25	"	1600	ND	99	78-129	4	20	
Xylenes (total)	1820	25	"	1830	ND	99	83-137	5	20	
Gasoline Range Organics (C4-C12)	21900	2500	"	22000	3200	85	70-124	5	20	
Surrogate: 1,2-Dichloroethane-d4	4.50		"	5.00		90	78-129			

Batch 4K07001 - EPA 5030B P/T / EPA 8260B
Blank (4K07001-BLK1) Prepared & Analyzed: 11/08/04

tert-Amyl methyl ether	ND	0.50	ug/l							
Benzene	ND	0.50	"							
tert-Butyl alcohol	ND	20	"							
Di-isopropyl ether	ND	0.50	"							
1,2-Dibromoethane (EDB)	ND	0.50	"							
1,2-Dichloroethane	ND	0.50	"							
Ethanol	ND	100	"							
Ethyl tert-butyl ether	ND	0.50	"							
Ethylbenzene	ND	0.50	"							
Methyl tert-butyl ether	ND	0.50	"							
Toluene	ND	0.50	"							
Xylenes (total)	ND	0.50	"							
Gasoline Range Organics (C4-C12)	ND	50	"							
Surrogate: 1,2-Dichloroethane-d4	5.59		"	5.00		112	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.

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

 Project: ARCO #6113, Livermore, CA
 Project Number: INTRIM-50739
 Project Manager: Scott Robinson

 MNK0027
 Reported:
 11/12/04 15:58

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
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	-------

Batch 4K07001 - EPA 5030B P/T / EPA 8260B
Laboratory Control Sample (4K07001-BS1)

Prepared & Analyzed: 11/08/04

tert-Amyl methyl ether	10.2	0.50	ug/l	10.0		102	82-140			
Benzene	9.08	0.50	"	10.0		91	69-124			
tert-Butyl alcohol	49.5	20	"	50.0		99	56-131			
Di-isopropyl ether	9.55	0.50	"	10.0		96	76-130			
1,2-Dibromoethane (EDB)	10.3	0.50	"	10.0		103	77-132			
1,2-Dichloroethane	10.4	0.50	"	10.0		104	77-136			
Ethanol	234	100	"	200		117	31-143			
Ethyl tert-butyl ether	10.1	0.50	"	10.0		101	81-121			
Ethylbenzene	10.7	0.50	"	10.0		107	84-132			
Methyl tert-butyl ether	10.3	0.50	"	10.0		103	63-137			
Toluene	11.0	0.50	"	10.0		110	78-129			
Xylenes (total)	31.0	0.50	"	30.0		103	83-137			
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>5.52</i>		<i>"</i>	<i>5.00</i>		<i>110</i>	<i>78-129</i>			

Laboratory Control Sample (4K07001-BS2)

Prepared & Analyzed: 11/08/04

Benzene	5.03	0.50	ug/l	6.40		79	69-124			
Ethylbenzene	7.81	0.50	"	7.52		104	84-132			
Methyl tert-butyl ether	9.31	0.50	"	9.92		94	63-137			
Toluene	31.1	0.50	"	31.9		97	78-129			
Xylenes (total)	36.3	0.50	"	36.6		99	83-137			
Gasoline Range Organics (C4-C12)	383	50	"	440		87	70-124			
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>5.65</i>		<i>"</i>	<i>5.00</i>		<i>113</i>	<i>78-129</i>			

Laboratory Control Sample Dup (4K07001-BSD1)

Prepared & Analyzed: 11/08/04

tert-Amyl methyl ether	10.1	0.50	ug/l	10.0		101	82-140	1	20	
Benzene	9.35	0.50	"	10.0		94	69-124	3	20	
tert-Butyl alcohol	48.9	20	"	50.0		98	56-131	1	20	
Di-isopropyl ether	9.68	0.50	"	10.0		97	76-130	1	20	
1,2-Dibromoethane (EDB)	10.4	0.50	"	10.0		104	77-132	1	20	
1,2-Dichloroethane	10.7	0.50	"	10.0		107	77-136	3	20	
Ethanol	217	100	"	200		108	31-143	8	20	
Ethyl tert-butyl ether	10.3	0.50	"	10.0		103	81-121	2	20	
Ethylbenzene	9.93	0.50	"	10.0		99	84-132	7	20	
Methyl tert-butyl ether	10.7	0.50	"	10.0		107	63-137	4	20	
Toluene	9.07	0.50	"	10.0		91	78-129	19	20	
Xylenes (total)	27.9	0.50	"	30.0		93	83-137	11	20	

Sequoia Analytical - Morgan Hill

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

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

 Project: ARCO #6113, Livermore, CA
 Project Number: INTRIM-50739
 Project Manager: Scott Robinson

 MNK0027
 Reported:
 11/12/04 15:58

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
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	-------

Batch 4K07001 - EPA 5030B P/T / EPA 8260B
Laboratory Control Sample Dup (4K07001-BSD1)

Prepared & Analyzed: 11/08/04

Surrogate: 1,2-Dichloroethane-d4 5.09 ug/l 5.00 102 78-129

Matrix Spike (4K07001-MS1)

Source: MNJ0796-03

Prepared & Analyzed: 11/08/04

Benzene	600	25	ug/l	320	370	72	69-124			
Ethylbenzene	707	25	"	376	180	140	84-132			LM
Methyl tert-butyl ether	1880	25	"	496	1600	56	63-137			LN
Toluene	2170	25	"	1600	ND	136	78-129			LM
Xylenes (total)	2310	25	"	1830	24	125	83-137			
Gasoline Range Organics (C4-C12)	36500	2500	"	22000	8900	125	70-124			LM

Surrogate: 1,2-Dichloroethane-d4 4.92 " 5.00 98 78-129

Matrix Spike Dup (4K07001-MSD1)

Source: MNJ0796-03

Prepared & Analyzed: 11/08/04

Benzene	560	25	ug/l	320	370	59	69-124	7	20	LN
Ethylbenzene	664	25	"	376	180	129	84-132	6	20	
Methyl tert-butyl ether	1890	25	"	496	1600	58	63-137	0.5	20	LN
Toluene	2380	25	"	1600	ND	149	78-129	9	20	LM
Xylenes (total)	2320	25	"	1830	24	125	83-137	0.4	20	
Gasoline Range Organics (C4-C12)	40000	2500	"	22000	8900	141	70-124	9	20	LM

Surrogate: 1,2-Dichloroethane-d4 4.85 " 5.00 97 78-129

URS Corporation [Arco]
1333 Broadway, Suite 800
Oakland CA, 94612Project: ARCO #6113, Livermore, CA
Project Number: INTRIM-50739
Project Manager: Scott RobinsonMNK0027
Reported:
11/12/04 15:58**Notes and Definitions**

LN MS and/or MSD below acceptance limits. See Blank Spike(LCS).

LM MS and/or MSD above acceptance limits. See Blank Spike(LCS).

LG Surrogate recovery below the acceptance limits.

IC Calib. verif. is within method limits but outside contract limits

HL Analyte recovery above established limit

BB, LN Sample > 4x spike concentration.

BB, LM Sample > 4x spike concentration. MS and/or MSD above acceptance limits. See Blank Spike(LCS).

DET Analyte DETECTED

ND Analyte NOT DETECTED at or above the reporting limit or MDL, if MDL is specified

NR Not Reported

dry Sample results reported on a dry weight basis

RPD Relative Percent Difference



Chain of Custody Record

Project Name 6113 GWM
 BP BU/GEM CO Portfolio Retail
 BP Laboratory Contract Number: Atlantic Richfield Company

MDK0027

Date: 10/28/04

Requested Due Date (m/d/d/yy) 14 day CAT

On-site Time: 0900 Temp: 65
 Off-site Time: 1500 Temp: 70
 Sky Conditions: clear
 Meteorological Events: _____
 Wind Speed: _____ Direction: _____

Send To:	BP/GEM Facility No.: <u>ARCO 6113</u>	Consultant/Contractor: <u>URS</u>
Lab Name: <u>SEQUOIA</u>	BP/GEM Facility Address: <u>785 E. Stanley Blvd, LIVERMORE, CA</u>	Address: <u>1333 Broadway, Suite 800</u>
Lab Address: <u>885 Jarvis Dr.</u>	Site ID No. <u>ARCO 6113</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>T0600100111</u>	Consultant/Contractor Project No.: <u>35-00006113.01 00427</u>
Tele/Fax: <u>408-776-9600 / 408-782-6308</u>	BP/GEM PM Contact: <u>PAUL SUPPLE</u>	Consultant Tele/Fax: <u>510-893-3600/510-874-3288</u>
Report Type & QC Level: <u>1 Send IDIF 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>925-299-8891/925-299-8872</u>	BP/GEM Work Release No: <u>INTRIM -50739</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 ₂ SO ₄	HNO ₃	HCl	GRO/BTEX (8015) (8016) (8260)	DRO w/SGC (8015)	MTBE (8021)	MTBE (8260)	MTBE, TAME, ETBE, DIPN, TBA (8260)	1,2-DCA & EDB (8260)	
1	MW-12	1047	X				4					X			X	X	X		
2	MW-11	1130	X				5					X			X	X	X		
3	MW-3	1150	X				6					X			X	X	X		
4	MW-13	1212	X				04					X			X	X	X		
5	MW-10	1240	X				05					X			X	X	X		
6	MW-9	1315	X				06					X			X	X	X		
7	MW-4	1328	X				03					X			X	X	X		
8	MW-6	1406	X				08					X			X	X	X		
9	MW-7	1432	X				07					X			X	X	X		
10	VW-1	1455	X				10					X			X	X	X		

Sampler's Name: <u>Brian Alcorn</u>	Relinquished By / Affiliation: _____	Date: <u>10/28/04</u>	Time: <u>10:40</u>	Accepted By / Affiliation: _____	Date: <u>10/28/04</u>	Time: <u>10:40</u>
Sampler's Company: <u>Blaine Tech Services</u>	Signature: _____	Date: <u>10/28/04</u>	Time: <u>152</u>	Signature: _____	Date: <u>10/28/04</u>	Time: <u>1552</u>
Shipment Date: _____	Signature: _____	Date: _____	Time: _____	Signature: _____	Date: _____	Time: _____
Shipment Method: _____	Signature: _____	Date: _____	Time: _____	Signature: _____	Date: _____	Time: _____
Shipment Tracking No: _____	Signature: _____	Date: _____	Time: _____	Signature: _____	Date: _____	Time: _____
Special Instructions: <u>Address Invoice to BP/GEM but send to URS for approval</u>						
Custody Seals In Place Yes <input checked="" type="checkbox"/> No	Temperature Blank Yes <input checked="" type="checkbox"/> No	Cooler Temperature on Receipt <u>25 °F</u>	Trip Blank Yes <input checked="" type="checkbox"/> No			



Chain of Custody Record

Project Name 6113 GWM
 BP BU/GEM CO Portfolio Retail
 BP Laboratory Contract Number: Atlantic Richfield Company

HPK0027

Date: 10/28/04

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

On-site Time: 0900 Temp: 65
 Off-site Time: 1500 Temp: 70
 Sky Conditions: clear
 Meteorological Events:
 Wind Speed: --- Direction: ---

Send To:	BP/GEM Facility No.: <u>ARCO 6113</u>	Consultant/Contractor: <u>URS</u>
Lab Name: <u>SEQUOIA</u>	BP/GEM Facility Address: <u>765 E. Stanley Blvd, LIVERMORE, CA</u>	Address: <u>1333 Broadway, Suite 800</u>
Lab Address: <u>885 Jarvis Dr.</u>	Site ID No. <u>ARCO 6113</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>T0800100111</u>	Consultant/Contractor Project No.: <u>15-00096113.01 00-127</u>
Tele/Fax: <u>408-776-9600 / 408-782-9308</u>	BP/GEM PM Contact: <u>PAUL SUPPLE</u>	Consultant Tele/Fax: <u>510-893-3600/510-874-3288</u>
Report Type & QC Level: <u>1 Send EDF Reports</u>	Address: <u>P.O. Box 6548</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)
	Tele/Fax: <u>925-299-8891/925-299-8872</u>	BP/GEM Work Release No: <u>INTRIM-50739</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	D ₂ SO ₄	HNO ₃	HCl	CRO / BTX (8015/8260)	DRO W/SQC (8015)	MTBE (8021)	MTBE (8260)	MTBE, TAMS, BTX DIPE, TBA (8260)	1,2-DCA & EDB (8260)	Ethanol (8260)	
1	<u>TB-6113-10282ax1</u>	<u>1500</u>	<input checked="" type="checkbox"/>				<u>11</u>	<u>2</u>					<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<u>ON HOLD</u>	
2																				
3																				
4																				
5																				
6																				
7																				
8																				
9																				
10																				

Sampler's Name: <u>Brian Alcorn</u>	Relinquished By / Affiliation: <u>[Signature]</u>	Date: <u>10/28/04</u>	Time: <u>1040</u>	Accepted By / Affiliation: <u>[Signature]</u>	Date: <u>10/28/04</u>	Time: <u>1352</u>
Sampler's Company: <u>Blaine Tech Services</u>						
Shipment Date:						
Shipment Method:						
Shipment Tracking No:						

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

Custody Seals In Place Yes No Temperature Blank Yes No Cooler Temperature on Receipt 2.5 °C Trip Blank Yes No

SEQUOIA ANALYTICAL SAMPLE RECEIPT LOG

CLIENT NAME: Arco 6113
 REC. BY (PRINT): PO
 WORKORDER: MPK 6027

DATE REC'D AT LAB: 10/22/09
 TIME REC'D AT LAB: 1352
 DATE LOGGED IN: 11-1-09

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

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

- CIRCLE THE APPROPRIATE RESPONSE		LAB SAMPLE #	DASH #	CLIENT ID	CONTAINER DESCRIPTION	PRESERVATIVE	pH	SAMPLE MATRIX	DATE SAMPLED	REMARKS: CONDITION (ETC.)
1. Custody Seal(s)	Present / <u>Absent</u> Intact / Broken*	01	AC	1W-12	WA 3	HCl	---	w	10/25/09	NO CUSTODY SEALS
2. Chain-of-Custody	<u>Present</u> / Absent*	02		-11	↓	↓	↓	↓	↓	
3. Traffic Reports or Packing List:	Present / <u>Absent</u>	03		-3	↓	↓	↓	↓	↓	
4. Airbill:	Airbill / Slicker	04		-13	↓	↓	↓	↓	↓	
	Present / <u>Absent</u>	05		-10	↓	↓	↓	↓	↓	
5. Airbill #:		06		-9	↓	↓	↓	↓	↓	
6. Sample Labels:	<u>Present</u> / Absent	07		-9	↓	↓	↓	↓	↓	
7. Sample IDs:	Listed / Not Listed on Chain-of-Custody	08		-6	↓	↓	↓	↓	↓	
8. Sample Condition:	<u>Intact</u> / Broken* / Leaking*	09	AP	vw-1	↓	↓	↓	↓	↓	
9. Does information on chain-of-custody, traffic reports and sample labels agree?	<u>Yes</u> / No*	10		TD-6113-10782009	↓	↓	↓	↓	↓	
10. Sample received within hold time?	<u>Yes</u> / No*									
11. Adequate sample volume received?	<u>Yes</u> / No*									
12. Proper Preservatives used?	<u>Yes</u> / No*									
13. Trip Blank / Temp Blank Received? (circle which, if yes)	<u>Yes</u> / <u>No</u>									
14. Temp Rec. at Lab: Is temp 4 +/- 2°C? (Acceptance range for samples requiring thermal pres.)	<u>Yes</u> / No**									
**Exception (if any): METALS / OFF ON ICE or Problem COC										

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

ATTACHMENT C

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

Electronic Submittal Information

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

SUCCESSFUL GEO_WELL CHECK - NO ERRORS

<u>ORGANIZATION NAME:</u>	URS Corporation-Oakland Office
<u>USER NAME:</u>	URSCORP-OAKLAND
<u>DATE CHECKED:</u>	11/15/2004 3:24:39 PM

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

[Back to Main Menu](#)

Logged in as URSCORP-OAKLAND (CONTRACTOR)

CONTACT SITE [ADMINISTRATOR](#).

Electronic Submittal Information

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

UPLOADING A GEO_WELL FILE

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

Submittal Title: 4Q04 GEOWELL SUBMITTAL SITE
6113

Submittal Date/Time: 11/15/2004 3:25:19 PM

**Confirmation
Number:** 1403930485

[Back to Main Menu](#)

Logged in as URSCORP-OAKLAND
(CONTRACTOR)

[CONTACT SITE ADMINISTRATOR](#)

Electronic Submittal Information

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

SUCCESSFUL EDF CHECK - NO ERRORS

<u>ORGANIZATION NAME:</u>	URS Corporation-Oakland Office
<u>USER NAME:</u>	URSCORP-OAKLAND
<u>DATE CHECKED:</u>	11/15/2004 3:01:39 PM
<u>GLOBAL ID:</u>	T0600100111
<u>FILE UPLOADED:</u>	ARCO#6113-EDF-MNK0027.zip

No errors were found in your EDF upload file.

If you want to submit this file to the SWRCB, choose the "Upload EDD" option in the above menu and follow the instructions.

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

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

ARCO # 06113 785 STANLEY BLVD E LIVERMORE, CA 94550	<u>Regional Board - Case #: 01-0119</u> SAN FRANCISCO BAY RWQCB (REGION 2) - (BG) <u>Local Agency (lead agency) - Case #: 3883</u> ALAMEDA COUNTY LOP - (RWS)
---	---

SAMPLE DETECTIONS REPORT

# FIELD POINTS SAMPLED	10
# FIELD POINTS WITH DETECTIONS	6
# FIELD POINTS WITH WATER SAMPLE DETECTIONS ABOVE MCL	3
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%		N
MATRIX SPIKE / MATRIX SPIKE DUPLICATE(S) RPD LESS THAN 30%		Y
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 > REPD</u>
QCTB SAMPLES	N	0
QCEB SAMPLES	N	0
QCAB SAMPLES	N	0

Logged in as URSCORP-OAKLAND (CONTRACTOR)

CONTACT SITE ADMINISTRATOR.

Electronic Submittal Information

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

Your EDF file has been successfully uploaded!

Confirmation Number: 5460963666

Date/Time of Submittal: 11/15/2004 3:19:17 PM

Facility Global ID: T0600100111

Facility Name: ARCO # 06113

Submittal Title: 4Q04 GW Monitoring Report Site 6113

Submittal Type: GW Monitoring Report

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

ARCO # 06113 785 STANLEY BLVD E LIVERMORE, CA 94550	Regional Board - Case #: 01-0119 SAN FRANCISCO BAY RWQCB (REGION 2) - (BG) Local Agency (lead agency) - Case #: 3883 ALAMEDA COUNTY LOP - (RWS)
--	--

CONF #	TITLE	QUARTER
5460963666	4Q04 GW Monitoring Report Site 6113	Q4 2004
SUBMITTED BY	SUBMIT DATE	STATUS
Srijesh Thapa	11/15/2004	PENDING REVIEW

SAMPLE DETECTIONS REPORT

# FIELD POINTS SAMPLED	10
# FIELD POINTS WITH DETECTIONS	6
# FIELD POINTS WITH WATER SAMPLE DETECTIONS ABOVE MCL	3
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%	N
---	---

MATRIX SPIKE / MATRIX SPIKE DUPLICATE(S) RPD LESS THAN 30%	Y
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 > REPD</u>
QCTB SAMPLES	N	0
QCEB SAMPLES	N	0
QCAB SAMPLES	N	0

Logged in as URSCORP-OAKLAND (CONTRACTOR)

CONTACT SITE ADMINISTRATOR.