URS

November 10, 2003

Alameda County
NOV 20 2003
Environmental Health

Mr. Scott Seery
Hazardous Materials Specialist
Alameda County Health Care Services Agency
1131 Harbor Bay Parkway, Suite 250
Alameda, CA 94502-6577

Re: Second Semi-Annual 2003 Groundwater Monitoring Report
ARCO Service Station #6113
785 East Stanley Boulevard
Livermore, California
URS Project # 38486462

Dear Mr. Seery:

On behalf of Atlantic Richfield Company (ARCO – an affiliated company of the Group Environmental Management Company), URS Corporation (URS) is submitting the *Second Semi-Annual 2003 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

James F. Durkin, C.Hg.
Senior Geologist

REGISTERED GEOLOGIST
JAMES F. DURKIN
No. 759
CERTIFIED HYDROGEOLOGIST
Exp. 2/28/05
STATE OF CALIFORNIA

Enclosure: Second Semi-Annual 2003 Groundwater Monitoring Report

cc: Mr. Paul Smith, Livermore-Pleasanton Fire Department, 3560 Nevada St., Pleasanton, CA, 94566
Mr. Paul Supple, ARCO, (electronic copy uploaded to ENFOS)

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

SECOND SEMI-ANNUAL 2003 GROUNDWATER MONITORING

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

Prepared for
Atlantic Richfield Company

November 10, 2003

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

38486462

Date: November 10, 2003

Quarter: 4Q 03

ATLANTIC RICHFIELD COMPANY SEMI-ANNUAL GROUNDWATER MONITORING REPORT

Facility No.:	6113	Address:	785 East Stanley Boulevard, Livermore, California
Atlantic Richfield Co. Environmental Engineer:			Paul Supple
Consulting Co./Contact Person:			URS Corporation / Scott Robinson
Consultant Project No.:			38486462
Primary Agency:			Alameda County Health Care Services Agency (ACHCSA)

WORK PERFORMED THIS QUARTER (Fourth – 2003):

1. Performed fourth quarter 2003 groundwater monitoring event on October 3, 2003.
2. Prepared and submitted second semi-annual 2003 groundwater monitoring report.

WORK PROPOSED FOR NEXT QUARTER (First – 2004):

1. Prepare and submit first quarter 2004 groundwater status report.
2. Well repairs on MW-1 to MW-4, MW-7 to MW-11, VW-1 and VW-2

Current Phase of Project:	GW monitoring/sampling
Frequency of Groundwater Sampling:	Annually (4th Quarter): Wells MW-1 through MW-3, MW-8 through 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:	Sheen (VW-4)
Bulk Soil Removed to Date:	288 cubic yards of TPH impacted soil
Current Remediation Techniques:	Natural Attenuation
Approximate Depth to Groundwater:	18.69 (MW-9) to 20.64 (MW-10) feet
Groundwater Gradient (direction):	North-Northeast
Groundwater Gradient (magnitude):	0.016 feet per foot

DISCUSSION:

TPH-g was detected above the laboratory reporting limit in four of the ten wells sampled this quarter at concentrations ranging from 80 micrograms per liter (µg/L) in well MW-6 to 48,000 µg/L in well VW-4. Benzene was detected above the laboratory reporting limit in five wells at concentrations ranging from 1.1 µg/L in well MW-9 to 3,300 µg/L in well VW-4. MTBE was detected above the laboratory reporting limit in seven wells at concentrations ranging from 3.1 µg/L in well MW-11 to 2,400 µg/L in well MW-13. No fuel oxygenates were detected above their respective laboratory reporting limits, except MTBE as previously discussed. Well VW-2 was not sampled because it was not accessible. The well will be repaired during the fourth quarter.

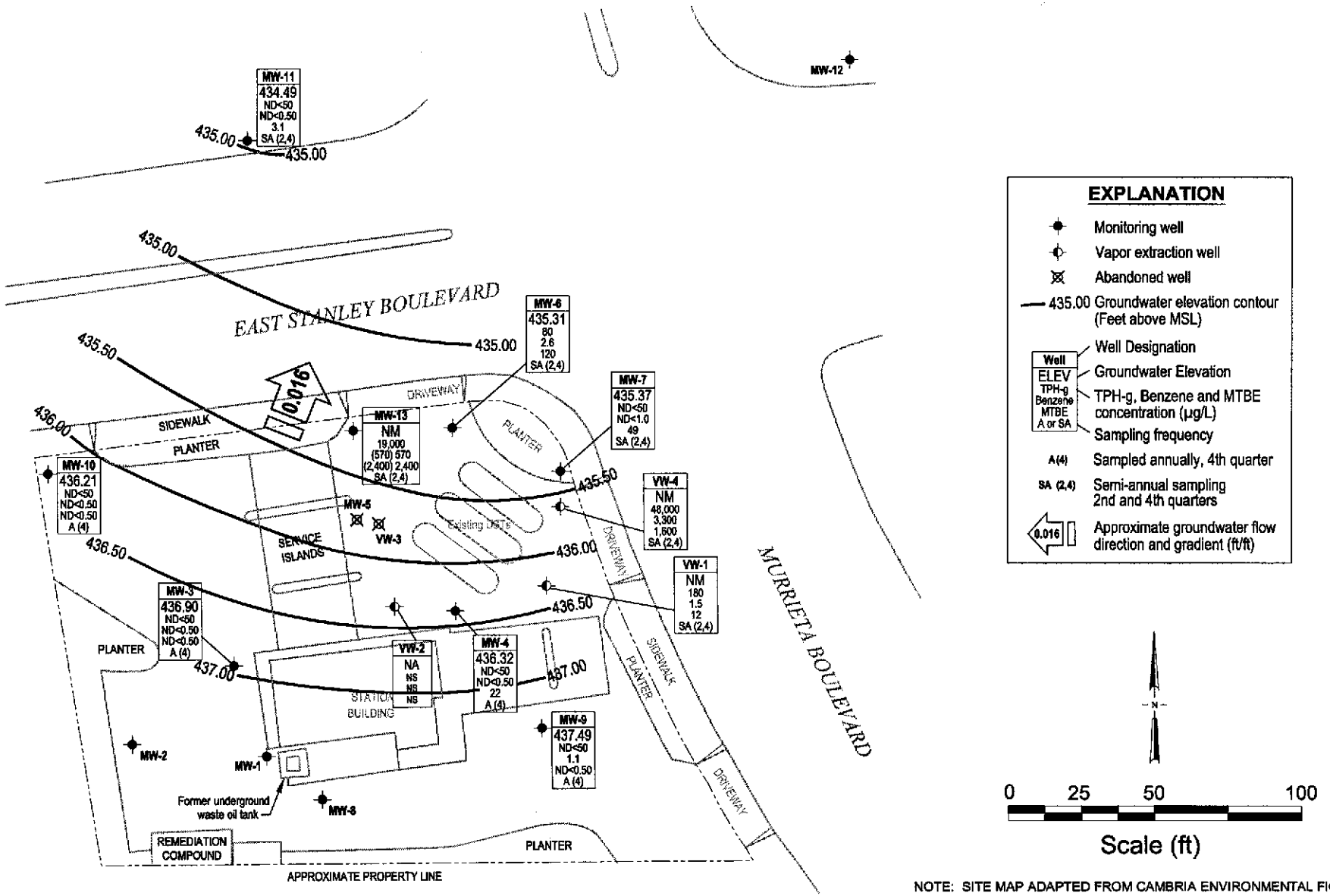
All samples collected from this site during the fourth quarter 2003 were analyzed three days beyond the U.S. EPA holding time of 14 days. Although the data may be estimated (biased low), the data should be useful for the purposes of this report.

Wells MW-1, MW-2, MW-8 and MW-12 were not sampled nor gauged during this monitoring event. Starting with the second semi-annual groundwater monitoring report in 2002, URS has recommended suspending the groundwater monitoring activities for wells MW-1, MW-2 and MW- 8 based on the lack of detections since 1995. These three wells will continue to be gauged but not sampled. MW-12 has not been located since 1998 and was also removed from the scope of work.

ATTACHMENTS:

- Figure 1 - Groundwater Elevation Contour and Analytical Summary Map – October 3, 2003
- Table 1 - Groundwater Elevation and Analytical Data
- Table 2 - Groundwater Flow Direction and Gradient
- Table 3 - Fuel Oxygenate Analytical Data
- Attachment A - Field Procedures and Field Data Sheets
- Attachment B - Laboratory Procedures, Certified Analytical Reports and Chain-of-Custody Records
- Attachment C - EDCC and EDF/Geowell Submittal Confirmation

X:\x_env_waste\BP GEM\Sites\Scott Robinson\Paul Supple\6113\Monitoring\Qtr. 4, 2003\Drawings\GWEC-AS_10-3.dwg, 11/14/2003 09:34:32 AM, JKMT, URS



EXPLANATION

- Monitoring well
- Vapor extraction well
- Abandoned well
- 435.00 Groundwater elevation contour (Feet above MSL)
- Well Designation
- Groundwater Elevation
- TPH-g, Benzene and MTBE concentration (µg/L)
- Sampling frequency
- A(4) Sampled annually, 4th quarter
- SA (2,4) Semi-annual sampling 2nd and 4th quarters
- 0.016 Approximate groundwater flow direction and gradient (ft/ft)

Well
ELEV
TPH-g
Benzene
MTBE
A or SA

N

0 25 50 100

Scale (ft)

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

URS	Project No. 38486462 Arco Service Station #6113 785 East Stanley Boulevard Livermore, California	GROUNDWATER ELEVATION CONTOUR AND ANALYTICAL SUMMARY MAP Fourth Quarter 2003 (October 3, 2003)	FIGURE 1

Table 1
Groundwater Elevation and Analytical Data

ARCO Service Station 6113
785 East Stanley Boulevard
Livermore, California

Well Number	Date Sampled		Top of Casing Elevation (ft-MSL)	Depth to Water (feet)	Groundwater Elevation (ft-MSL)	TPH Gasoline (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethyl-benzene (µg/L)	Total Xylenes (µg/L)	MTBE 8021B (µg/L)	MTBE 8260 (µg/L)	Dissolved Oxygen (mg/L)
MW-1	03/23/95		457.04	14.12	442.92	Not sampled: well sampled annually, during the fourth quarter							
	05/31/95			14.45	442.59	Not sampled: well sampled annually, during the fourth quarter							
	08/31/95			17.12	439.92	Not sampled: well sampled annually, during the fourth quarter							
	11/28/95			16.34	440.70	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<3		
	02/22/96			13.23	443.81	Not sampled: well sampled annually, during the fourth quarter							
	05/23/96			14.02	443.02	Not sampled: well sampled annually, during the fourth quarter							
	08/08/96			16.13	440.91	Not sampled: well sampled annually, during the fourth quarter							
	11/07/96			17.28	439.76	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<3		
	03/27/97			14.91	442.13	Not sampled: well sampled annually, during the fourth quarter							
	05/19/97			16.47	440.57	Not sampled: well sampled annually, during the fourth quarter							
	05/18/98			14.69	442.35	Not sampled: well sampled annually, during the fourth quarter							
	11/02/98			25.94	431.10	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<3		
	06/04/99			17.38	439.66	Not sampled: well sampled annually, during the fourth quarter							
	11/11/99	P		18.63	438.41	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<1	ND<3		1.03
	06/20/00			17.09	439.95	Not sampled: well sampled annually, during the fourth quarter							3.1
	08/29/00			18.20	438.84	Not sampled: well sampled annually, during the fourth quarter							2.66
	11/29/00	P		20.30	436.74	ND<50.0	ND<0.500	ND<0.500	ND<0.500	1.36	ND<2.50		0.71
	05/02/01			22.39	434.65	Not sampled: well sampled annually, during the fourth quarter							
	08/15/01			24.97	432.07	Not sampled: well sampled annually, during the fourth quarter							
	10/05/01	P		25.09	431.95	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<2.5		0.78
	01/21/02			24.58	432.46	Not sampled: well sampled annually, during the fourth quarter							
	04/26/02			24.19	432.85	Not sampled: well sampled annually, during the fourth quarter							
	10/07/02	P		20.13	436.91	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	--	ND<0.50	1.8
	05/01/03 [3]			17.98	439.06	Not sampled: well sampled annually, during the fourth quarter							
	10/03/03			**NR**	**NR**	**Not sampled: well removed from scope of work.**							

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Well Number	Date Sampled		Top of Casing Elevation (ft-MSL)	Depth to Water (feet)	Groundwater Elevation (ft-MSL)	TPH Gasoline (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethyl-benzene (µg/L)	Total Xylenes (µg/L)	MTBE 8021B (µg/L)	MTBE 8260 (µg/L)	Dissolved Oxygen (mg/L)
MW-2	03/23/95		457.74	14.15	443.59	Not sampled: well sampled annually, during the fourth quarter							
	05/31/95			14.67	443.07	Not sampled: well sampled annually, during the fourth quarter							
	08/31/95			17.24	440.50	Not sampled: well sampled annually, during the fourth quarter							
	11/28/95			16.40	441.34	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<3		
	02/22/96			13.55	444.19	Not sampled: well sampled annually, during the fourth quarter							
	05/23/96			14.29	443.45	Not sampled: well sampled annually, during the fourth quarter							
	08/08/96			16.19	441.55	Not sampled: well sampled annually, during the fourth quarter							
	11/07/96			17.50	440.24	65	0.6	7.4	2.1	12	5		
	03/27/97			15.32	442.42	Not sampled: well sampled annually, during the fourth quarter							
	05/19/97			16.62	441.12	Not sampled: well sampled annually, during the fourth quarter							
	05/18/98			15.12	442.62	Not sampled: well sampled annually, during the fourth quarter							
	11/02/98			26.66	431.08	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<3		
	06/04/99			17.74	440.00	Not sampled: well sampled annually, during the fourth quarter							
	11/11/99	P		18.75	438.99	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<1	ND<3		0.82
	06/20/00			17.21	440.53	Not sampled: well sampled annually, during the fourth quarter							2.6
	08/29/00			18.25	439.49	Not sampled: well sampled annually, during the fourth quarter							2.65
	11/29/00	P		20.69	437.05	ND<50.0	ND<0.500	0.581	0.827	4.38	ND<2.50		0.88
	05/02/01			22.69	435.05	Not sampled: well sampled annually, during the fourth quarter							
	08/15/01			25.15	432.59	Not sampled: well sampled annually, during the fourth quarter							
	10/05/01	P		25.22	432.52	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<2.5		0.80
	01/21/02			24.70	433.04	Not sampled: well sampled annually, during the fourth quarter							
	04/26/02			24.53	433.21	Not sampled: well sampled annually, during the fourth quarter							
	10/07/02	P		19.45	438.29	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	--	ND<0.50	1.5
	05/01/03 [3]			18.18	439.56	Not sampled: well sampled annually, during the fourth quarter							
	10/03/03			**NR**	**NR**	**Not sampled: well removed from scope of work.**							

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Well Number	Date Sampled		Top of Casing Elevation (ft-MSL)	Depth to Water (feet)	Groundwater Elevation (ft-MSL)	TPH Gasoline (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethyl-benzene (µg/L)	Total Xylenes (µg/L)	MTBE 8021B (µg/L)	MTBE 8260 (µg/L)	Dissolved Oxygen (mg/L)
MW-3	03/23/95		456.97	14.13	442.84	Not sampled: well sampled annually, during the fourth quarter							
	05/31/95			14.46	442.51	Not sampled: well sampled annually, during the fourth quarter							
	08/31/95			17.06	439.91	Not sampled: well sampled annually, during the fourth quarter							
	11/28/95			16.27	440.70	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<3		
	02/22/96			13.14	443.83	Not sampled: well sampled annually, during the fourth quarter							
	05/23/96			13.95	443.02	Not sampled: well sampled annually, during the fourth quarter							
	08/08/96			16.03	440.94	Not sampled: well sampled annually, during the fourth quarter							
	11/07/96			17.26	439.71	ND<50	ND<0.5	0.9	ND<0.5	1.5	ND<3		
	03/27/97			14.85	442.12	Not sampled: well sampled annually, during the fourth quarter							
	05/19/97			16.40	440.57	Not sampled: well sampled annually, during the fourth quarter							
	05/18/98			14.66	442.31	Not sampled: well sampled annually, during the fourth quarter							
	11/02/98			25.85	431.12	ND<1,000	ND<10	ND<10	ND<10	ND<10	1,700		
	06/04/99			17.35	439.62	Not sampled: well sampled annually, during the fourth quarter							
	11/11/99	P		18.58	438.39	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<1	ND<3		0.79
	06/20/00			17.03	439.94	Not sampled: well sampled annually, during the fourth quarter							2.8
	08/29/00			18.25	438.72	Not sampled: well sampled annually, during the fourth quarter							3.39
	11/29/00			20.27	436.70	ND<50.0	ND<0.500	ND<0.500	1.08	3.34	ND<2.50		0.67
	05/02/01			22.33	434.64	Not sampled: well sampled annually, during the fourth quarter							
	08/15/01			25.03	431.94	Not sampled: well sampled annually, during the fourth quarter							
	10/05/01	P		25.17	431.80	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<2.5		0.79
	01/21/02			24.79	432.18	Not sampled: well sampled annually, during the fourth quarter							
	04/26/02			24.27	432.70	Not sampled: well sampled annually, during the fourth quarter							
	10/07/02	P		20.20	436.77	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	--	ND<0.50	1.2
	05/01/03 [3]			18.27	438.70	Not sampled: well sampled annually, during the fourth quarter							
	10/03/03[4]	**P**		**20.07**	**436.90**	**ND<50**	**ND<0.50**	**ND<0.50**	**ND<0.50**	**ND<0.50**	**--**	**ND<0.50**	**5.2**

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MW-4	03/23/95		456.55	15.39	441.16	210	2.1	0.6	0.8	2.1	- -		
	05/31/95			15.32	441.23	190	1.6	ND<0.5	0.7	0.9	- -		
	08/31/95			17.86	438.69	160	1.2	0.7	ND<0.5	ND<2	ND<3		
	11/28/95			17.18	439.37	150	0.7	ND<0.5	0.7	1.4	ND<3		
	02/22/96			14.80	441.75	100	ND<0.5	ND<0.5	ND<0.6	0.8	ND<3		
	05/23/96			14.43	442.12	86	ND<0.5	ND<0.5	ND<0.5	ND<0.7	ND<3		
	08/08/96			16.80	439.75	98	ND<0.5	ND<0.5	ND<0.5	1.3	ND<3		
	11/07/96			17.90	438.65	140	ND<0.5	ND<0.5	ND<0.9	1.3	ND<3		
	03/27/97			15.22	441.33	ND<50	1.1	ND<0.5	ND<0.5	1.6	ND<3		
	05/19/97			16.98	439.57	62	ND<0.5	ND<0.5	ND<0.5	0.6	ND<3		
	05/18/98			14.99	441.56	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	64		
	11/02/98			25.29	431.26	74	ND<0.5	ND<0.5	ND<0.5	ND<0.5	96		
	06/04/99	P		17.95	438.60	100	ND<0.5	ND<0.5	ND<0.5	ND<0.5	38		
	11/11/99	P		19.25	437.30	88	ND<0.5	ND<0.5	ND<0.5	ND<1	10		0.77
DUP	06/20/00			NR	NR	ND<50.0	ND<0.500	ND<0.500	ND<0.500	ND<0.500	62.3		
	06/20/00	P		17.79	438.76	ND<50.0	ND<0.500	ND<0.500	ND<0.500	ND<0.500	82.4		1.3
	08/29/00	P		18.90	437.65	56.0	ND<0.500	ND<0.500	ND<0.500	ND<0.500	47.9		0.97
	11/29/00	P		20.50	436.05	ND<50.0	ND<0.500	ND<0.500	ND<0.500	ND<0.500	9.88	10.4	0.59
	05/02/01	P		22.65	433.90	ND<50.0	ND<0.500	ND<0.500	ND<0.500	ND<0.500	61.1	70.9	0.74
	05/02/01			NR	NR	ND<50.0	ND<0.500	ND<0.500	ND<0.500	ND<0.500	59.4	68.4	
	08/15/01			NR	NR	Not sampled: well dry							
	10/05/01			NR	NR	Not sampled: well dry							
	01/21/02			NR	NR	Not sampled: well dry							
	04/26/02	P		20.15	436.40	110	ND<0.50	ND<0.50	ND<0.50	ND<0.50	150		0.21
	10/07/02	P		20.76	435.79	96 [1]	ND<0.50	ND<0.50	0.54	ND<0.50	--	260	1.0
	05/01/03 [3]	P		19.67	436.88	120	1.3	ND<0.50	ND<0.50	ND<0.50	--	86	1.7
	10/03/03[4]	**P**		**20.23**	**436.32**	**ND<50**	**ND<0.50**	**ND<0.50**	**ND<0.50**	**ND<0.50**	--	**22**	**1.1**

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MW-5	03/23/95		455.84	13.97	441.87	68	4.2	3.4	2.3	12	- -		
	05/31/95			NR	NR	Not sampled: well was inaccessible							
	08/31/95			NR	NR	Not sampled: well was inaccessible							
	11/28/95			16.46	439.38	960	41	24	38	210	ND<5		
	02/22/96			13.34	442.50	Not sampled: well sampled semi-annually, during the second and fourth quarters							
	05/23/96			14.36	441.48	7,100	440	180	270	1,700	ND<50		
	08/08/96			16.38	439.46	Not sampled: well sampled semi-annually, during the second and fourth quarters							
	11/07/96			17.26	438.58	5,600	230	86	210	1,100	ND<80		
	03/27/97			15.95	439.89	Not sampled: well sampled semi-annually, during the second and fourth quarters							
	05/19/97			16.64	439.20	7,600	480	140	400	1,200	ND<40		
	05/18/98			14.75	441.09	990	46	13	45	180	4		
	11/02/98			27.83	428.01	14,000	690	140	550	2,200	100		
	06/04/99	P		17.47	438.37	8,300	690	370	90	440	1,400		
	11/11/99	P		18.80	437.04	18,000	900	190	1,100	3,200	72		0.86
	06/20/00	P		17.14	438.70	10,200	618	122	832	2,020	ND<50.0		1.6
	08/29/00	P		18.60	437.24	12,300	436	166	711	2,120	517		0.79
	11/29/00	P		20.57	435.27	26,000	491	149	1,090	3,810	671	ND<20.0	0.51
	05/02/01			NR	NR	Well Abandoned							

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Well Number	Date Sampled		Top of Casing Elevation (ft-MSL)	Depth to Water (feet)	Groundwater Elevation (ft-MSL)	TPH Gasoline (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethyl-benzene (µg/L)	Total Xylenes (µg/L)	MTBE 8021B (µg/L)	MTBE 8260 (µg/L)	Dissolved Oxygen (mg/L)
MW-6	03/23/95		454.93	13.38	441.55	ND<50	1.5	ND<0.5	ND<0.5	0.9	- -		
	05/31/95			13.96	440.97	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	- -		
	08/31/95			16.71	438.22	150	9	1.8	4	12	ND<3		
	11/28/95			15.65	439.28	ND<50	0.6	ND<0.5	ND<0.5	0.8	ND<3		
	02/22/96			12.53	442.40	ND<50	1.9	ND<0.5	0.8	2.1	ND<3		
	05/23/96			13.24	441.69	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<3		
	08/08/96			16.65	438.28	ND<50	0.5	ND<0.5	ND<0.5	0.5	ND<3		
	11/07/96			16.65	438.28	110	5.3	1.3	3.1	6.6	ND<3		
	03/27/97			14.25	440.68	ND<50	2.3	ND<0.5	0.9	3.5	4		
	05/19/97			15.87	439.06	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<3		
	05/18/98			14.00	440.93	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<3		
	11/02/98			24.95	429.98	ND<50	1.2	ND<0.5	ND<0.5	ND<0.5	3		
	06/04/99	P		16.68	438.25	310	41	3.8	11	19	33		
	11/11/99	P		16.12	438.81	ND<50	0.5	ND<0.5	ND<0.5	ND<1	ND<3		0.92
	06/20/00	P		16.63	438.30	ND<50.0	ND<0.500	ND<0.500	ND<0.500	ND<0.500	17.3		1.9
DUP	08/29/00		NR	NR	NR	ND<50.0	ND<0.500	ND<0.500	ND<0.500	ND<0.500	ND<2.50		
	08/29/00	P		17.91	437.02	ND<50.0	ND<0.500	0.551	ND<0.500	ND<0.500	ND<2.50		1.67
	11/29/00	P		20.30	434.63	ND<50.0	ND<0.500	ND<0.500	ND<0.500	1.03	ND<2.50		0.79
	05/02/01	P		22.20	432.73	3,230	1,300	33.6	89.4	136	1,810	2,310	0.95
	08/15/01	P		27.95	426.98	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	21	25	0.63
	10/05/01	P		28.05	426.88	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<2.5		0.85
	01/21/02	P		26.81	428.12	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<5.0		0.91
	04/26/02	P		26.27	428.66	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	17		0.75
	10/07/02	P		20.05	434.88	60[1]	13	1.7	1.7	3.5	--	8.0	2.8
	05/01/03[3]	P		17.62	437.31	ND<50	5.4	ND<0.50	0.63	1.3	--	12	1.6
	10/03/03[4]	**P**		**19.62**	**435.31**	**80**	**2.6**	**ND<2.5**	**ND<2.5**	**ND<2.5**	**--**	**120**	**5.1**

Table 1
Groundwater Elevation and Analytical Data

ARCO Service Station 6113
785 East Stanley Boulevard
Livermore, California

Well Number	Date Sampled		Top of Casing Elevation (ft-MSL)	Depth to Water (feet)	Groundwater Elevation (ft-MSL)	TPH Gasoline (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethyl-benzene (µg/L)	Total Xylenes (µg/L)	MTBE 8021B (µg/L)	MTBE 8260 (µg/L)	Dissolved Oxygen (mg/L)
MW-7	03/23/95		454.92	13.29	441.63	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	- -		
	05/31/95			13.72	441.20	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	- -		
	08/31/95			16.53	438.39	ND<50	ND<0.5	ND<0.5	ND<0.5	1.2	ND<3		
	11/28/95			15.50	439.42	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<3		
	02/22/96			12.30	442.62	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<3		
	05/23/96			13.02	441.90	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<3		
	08/08/96			NR	NR	Not sampled: unable to locate well							
	11/07/96			16.50	438.42	ND<50	ND<0.5	ND<0.5	ND<0.5	0.8	ND<3		
	03/27/97			14.22	440.70	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<3		
	05/19/97			15.74	439.18	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<3		
	05/18/98			13.82	441.10	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<3		
	11/02/98			24.80	430.12	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	4		
	06/04/99	P		16.55	438.37	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<3		
	11/11/99	P		18.02	436.90	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<1	ND<3		1.03
	06/20/00	P		16.50	438.42	ND<50.0	ND<0.500	ND<0.500	ND<0.500	ND<0.500	ND<2.50		1.3
	08/29/00	P		17.80	437.12	ND<50.0	ND<0.500	ND<0.500	ND<0.500	ND<0.500	ND<2.50		1.67
	11/29/00	P		19.61	435.31	ND<50.0	ND<0.500	ND<0.500	ND<0.500	ND<0.500	ND<2.50		0.51
	05/02/01	P		22.05	432.87	ND<50.0	ND<0.500	ND<0.500	ND<0.500	ND<0.500	ND<2.50	2.66	0.9
	08/15/01	P		27.55	427.37	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<2.5		0.84
	10/05/01	P		27.59	427.33	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<2.5		0.62
	01/21/02	P		26.50	428.42	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	15	21	0.65
	04/26/02	P		26.22	428.70	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	18		0.61
	10/07/02	P		20.04	434.88	ND<50	1.2	ND<0.50	ND<0.50	0.77	--	41	4.8
	05/01/03 [3]	P		17.47	437.45	ND<50	ND<0.50	ND<0.50	ND<0.50	0.50	--	43	2.7
	10/03/03[4]	**P**		**19.55**	**435.37**	**ND<50**	**ND<1.0**	**ND<1.0**	**ND<1.0**	**ND<1.0**	**--**	**49**	**5.2**

Table 1
Groundwater Elevation and Analytical Data

ARCO Service Station 6113
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Livermore, California

Well Number	Date Sampled		Top of Casing Elevation (ft-MSL)	Depth to Water (feet)	Groundwater Elevation (ft-MSL)	TPH Gasoline (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethyl-benzene (µg/L)	Total Xylenes (µg/L)	MTBE 8021B (µg/L)	MTBE 8260 (µg/L)	Dissolved Oxygen (mg/L)
MW-8	03/23/95		456.97	11.55	445.42	Not sampled: well sampled annually, during the fourth quarter							
	05/31/95			12.37	444.60	Not sampled: well sampled annually, during the fourth quarter							
	08/31/95			15.68	441.29	Not sampled: well sampled annually, during the fourth quarter							
	11/28/95			14.15	442.82	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<3		
	02/22/96			10.97	446.00	Not sampled: well sampled annually, during the fourth quarter							
	05/23/96			11.90	445.07	Not sampled: well sampled annually, during the fourth quarter							
	08/08/96			13.85	443.12	Not sampled: well sampled annually, during the fourth quarter							
	11/07/96			15.08	441.89	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<3		
	03/27/97			12.96	444.01	Not sampled: well sampled annually, during the fourth quarter							
	05/19/97			14.35	442.62	Not sampled: well sampled annually, during the fourth quarter							
	05/18/98			12.97	444.00	Not sampled: well sampled annually, during the fourth quarter							
	11/02/98			26.01	430.96	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<3		
	06/04/99			15.53	441.44	Not sampled: well sampled annually, during the fourth quarter							
	11/11/99	P		16.67	440.30	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<1	ND<3		1.01
	06/20/00			15.29	441.68	Not sampled: well sampled annually, during the fourth quarter							2.4
	08/29/00			16.59	440.38	Not sampled: well sampled annually, during the fourth quarter							3.37
	11/29/00	P		19.80	437.17	ND<50.0	ND<0.500	ND<0.500	ND<0.500	0.772	ND<2.50		1.35
	05/02/01			22.12	434.85	Not sampled: well sampled annually, during the fourth quarter							
	08/15/01			27.63	429.34	Not sampled: well sampled annually, during the fourth quarter							
	10/05/01	P		27.65	429.32	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<2.5		1.07
	01/21/02			26.73	430.24	Not sampled: well sampled annually, during the fourth quarter							
	04/26/02			26.39	430.58	Not sampled: well sampled annually, during the fourth quarter							
	10/07/02	P		18.43	438.54	ND<50	ND<0.50	ND<0.50	ND<0.50	0.86	--	ND<0.50	4.2
	05/01/03 [3]			16.47	440.50	Not sampled: well sampled annually, during the fourth quarter							
	10/03/03			**NR**	**NR**	**Not sampled: well removed from scope of work.**							

Table 1
Groundwater Elevation and Analytical Data

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Well Number	Date Sampled		Top of Casing Elevation (ft-MSL)	Depth to Water (feet)	Groundwater Elevation (ft-MSL)	TPH Gasoline (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethyl-benzene (µg/L)	Total Xylenes (µg/L)	MTBE 8021B (µg/L)	MTBE 8260 (µg/L)	Dissolved Oxygen (mg/L)
MW-9	03/23/95		456.18	13.18	443.00	Not sampled: well sampled annually, during the fourth quarter							
	05/31/95			12.66	443.52	Not sampled: well sampled annually, during the fourth quarter							
	08/31/95			14.40	441.78	Not sampled: well sampled annually, during the fourth quarter							
	11/28/95			14.26	441.92	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<3		
	02/22/96			12.05	444.13	Not sampled: well sampled annually, during the fourth quarter							
	05/23/96			12.07	444.11	Not sampled: well sampled annually, during the fourth quarter							
	08/08/96			14.12	442.06	Not sampled: well sampled annually, during the fourth quarter							
	11/07/96			15.42	440.76	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<3		
	03/27/97			13.01	443.17	Not sampled: well sampled annually, during the fourth quarter							
	05/19/97			14.60	441.58	Not sampled: well sampled annually, during the fourth quarter							
	05/18/98			12.60	443.58	Not sampled: well sampled annually, during the fourth quarter							
	11/02/98			25.08	431.10	Not sampled							
	06/04/99	P		15.87	440.31	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<3		
	11/11/99	P		17.02	439.16	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<1	ND<3		0.96
	06/20/00			15.54	440.64	Not sampled: well sampled annually, during the fourth quarter							2.1
	08/29/00			16.81	439.37	Not sampled: well sampled annually, during the fourth quarter							2.59
	11/29/00	P		18.81	437.37	ND<50.0	ND<0.500	ND<0.500	ND<0.500	ND<0.500	ND<2.50		0.81
	05/02/01			22.09	434.09	Not sampled: well sampled annually, during the fourth quarter							
	08/15/01			27.59	428.59	Not sampled: well sampled annually, during the fourth quarter							
	10/05/01	P		27.63	428.55	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<2.5		0.93
DUP	10/05/01		NR	NR	NR	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<2.5		
	01/21/02			26.77	429.41	Not sampled: well sampled annually, during the fourth quarter							
	04/26/02			26.41	429.77	Not sampled: well sampled annually, during the fourth quarter							
	10/07/02	P		18.85	437.33	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	--	ND<0.50	2.6
	05/01/03 [3]			17.84	438.34	Not sampled: well sampled annually, during the fourth quarter							
	10/03/03[4]	**P**		**18.69**	**437.49**	**ND<50**	**1.1**	**0.57**	**ND<0.50**	**ND<0.50**	--	**ND<0.50**	**4.9**

Table 1
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Well Number	Date Sampled		Top of Casing Elevation (ft-MSL)	Depth to Water (feet)	Groundwater Elevation (ft-MSL)	TPH Gasoline (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethyl-benzene (µg/L)	Total Xylenes (µg/L)	MTBE 8021B (µg/L)	MTBE 8260 (µg/L)	Dissolved Oxygen (mg/L)
MW-10	03/23/95		456.85	14.86	441.99	Not sampled: well sampled annually, during the fourth quarter							
	05/31/95			15.63	441.22	Not sampled: well sampled annually, during the fourth quarter							
	08/31/95			14.40	442.45	Not sampled: well sampled annually, during the fourth quarter							
	11/28/95			17.24	439.61	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<3		
	02/22/96			14.30	442.55	Not sampled: well sampled annually, during the fourth quarter							
	05/23/96			14.93	441.92	Not sampled: well sampled annually, during the fourth quarter							
	08/08/96			17.20	439.65	Not sampled: well sampled annually, during the fourth quarter							
	11/07/96			18.25	438.60	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<3		
	03/27/97			15.77	441.08	Not sampled: well sampled annually, during the fourth quarter							
	05/19/97			17.38	439.47	Not sampled: well sampled annually, during the fourth quarter							
	05/18/98			15.47	441.38	Not sampled: well sampled annually, during the fourth quarter							
	11/02/98			26.94	429.91	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<3		
	06/04/99			17.19	439.66	Not sampled: well sampled annually, during the fourth quarter							
	11/11/99	P		19.35	437.50	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<1	ND<3		0.68
	06/20/00			17.92	438.93	Not sampled: well sampled annually, during the fourth quarter							2.9
	08/29/00			19.15	437.70	Not sampled: well sampled annually, during the fourth quarter							1.54
	11/29/00	P		21.30	435.55	ND<50.0	ND<0.500	ND<0.500	ND<0.500	ND<0.500	ND<2.50		0.95
	05/02/01			29.95	426.90	Not sampled: well sampled annually, during the fourth quarter							
	08/15/01			30.74	426.11	Not sampled: well sampled annually, during the fourth quarter							
	10/05/01	P		30.95	425.90	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<2.5		0.89
	01/21/02			28.97	427.88	Not sampled: well sampled annually, during the fourth quarter							
	04/26/02			28.50	428.35	Not sampled: well sampled annually, during the fourth quarter							
	10/07/02	P		21.15	435.70	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	--	ND<0.50	3.0
	05/01/03 [3]			18.90	437.95	Not sampled: well sampled annually, during the fourth quarter							
	10/03/03[4]	**P**		**20.64**	**436.21**	**ND<50**	**ND<0.50**	**ND<0.50**	**ND<0.50**	**ND<0.50**	**--**	**ND<0.50**	**2.4**

Table 1
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Well Number	Date Sampled		Top of Casing Elevation (ft-MSL)	Depth to Water (feet)	Groundwater Elevation (ft-MSL)	TPH Gasoline (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethyl-benzene (µg/L)	Total Xylenes (µg/L)	MTBE 8021B (µg/L)	MTBE 8260 (µg/L)	Dissolved Oxygen (mg/L)
MW-11	03/23/95		455.07	17.34	437.73	Not sampled: well sampled semi-annually, during the second and fourth quarters							
	05/31/95			16.68	438.39	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	- -		
	08/31/95			20.20	434.87	Not sampled: well sampled semi-annually, during the second and fourth quarters							
	11/28/95			17.80	437.27	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<3		
	02/22/96			15.97	439.10	Not sampled: well sampled semi-annually, during the second and fourth quarters							
	05/23/96			15.50	439.57	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<3		
	08/08/96			17.77	437.30	Not sampled: well sampled semi-annually, during the second and fourth quarters							
	11/07/96			17.45	437.62	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<3		
	03/27/97			15.77	439.30	Not sampled: well sampled semi-annually, during the second and fourth quarters							
	05/19/97			16.80	438.27	ND<50	1.1	4.5	ND<0.5	2.2	ND<3		
	05/18/98			15.38	439.69	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<3		
	11/02/98			24.15	430.92	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<3		
	06/04/99	P		18.39	436.68	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<3		
	11/11/99	P		18.62	436.45	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<1	ND<3		1.01
	06/20/00	P		17.82	437.25	ND<50.0	0.631	ND<0.500	ND<0.500	ND<0.500	ND<2.50		4.1
	08/29/00			19.50	435.57	Not sampled: well sampled semi-annually, during the second and fourth quarters							
	11/29/00	P		20.60	434.47	ND<50.0	ND<0.500	ND<0.500	ND<0.500	1.63	ND<2.50		0.97
	05/02/01	P		22.42	432.65	ND<50.0	ND<0.500	ND<0.500	ND<0.500	ND<0.500	ND<2.50		1.04
	08/15/01			27.41	427.66	Not sampled: well sampled semi-annually, during the second and fourth quarters							
	10/05/01	P		27.59	427.48	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<2.5		1.05
	01/21/02			26.75	428.32	Not sampled: well sampled semi annually, during the second quarter							
	04/26/02	P		26.50	428.57	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<2.5		0.47
	10/07/02	P		20.79	434.28	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	--	1.0	1.4
	05/01/03 [3]	P		20.55	434.52	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	--	1.5	3.2
	10/03/03[4]	**P**		**20.58**	**434.49**	**ND<50**	**ND<0.50**	**ND<0.50**	**ND<0.50**	**ND<0.50**	**--**	**3.1**	**3.0**

Table 1
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Well Number	Date Sampled	Top of Casing Elevation (ft-MSL)	Depth to Water (feet)	Groundwater Elevation (ft-MSL)	TPH Gasoline (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethyl-benzene (µg/L)	Total Xylenes (µg/L)	MTBE 8021B (µg/L)	MTBE 8260 (µg/L)	Dissolved Oxygen (mg/L)
MW-12	03/23/95	455.04	15.54	439.50	Not sampled: well sampled semi-annually, during the second and fourth quarters							
	05/31/95		15.66	439.38	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	- -		
	08/31/95		18.23	436.81	Not sampled: well sampled semi-annually, during the second and fourth quarters							
	11/28/95		17.53	437.51	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<3		
	02/22/96		14.45	440.59	Not sampled: well sampled semi-annually, during the second and fourth quarters							
	05/23/96		14.88	440.16	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<3		
	08/08/96		17.30	437.74	Not sampled: well sampled semi-annually, during the second and fourth quarters							
	11/07/96		18.30	436.74	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<3		
	03/27/97		15.69	439.35	Not sampled: well sampled semi-annually, during the second and fourth quarters							
	05/19/97		17.41	437.63	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<3		
	05/18/98		15.21	439.83	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<3		
	11/02/98		NR	NR	Not sampled: unable to locate well							
	06/04/99		NR	NR	Not sampled: unable to locate well							
	11/11/99		NR	NR	Not sampled: unable to locate well							
	06/20/00		NR	NR	Not sampled: unable to locate well							
	08/29/00		NR	NR	Not sampled: unable to locate well							
	11/29/00		NR	NR	Not sampled: unable to locate well							
	05/02/01		NR	NR	Not sampled: unable to locate well							
	08/15/01		NR	NR	Not sampled: unable to locate well							
	10/05/01		NR	NR	Not sampled: unable to locate well							
	01/21/02		NR	NR	Not sampled: unable to locate well							
	04/26/02		NR	NR	Not sampled: unable to locate well							
	10/07/02		NR	NR	Not sampled: unable to locate well							
	05/01/03 [3]		NR	NR	Not sampled: unable to locate well							
	10/03/03		**NR**	**NR**	**Not sampled: well removed from scope of work.**							

Table 1
Groundwater Elevation and Analytical Data

ARCO Service Station 6113
785 East Stanley Boulevard
Livermore, California

Well Number	Date Sampled		Top of Casing Elevation (ft-MSL)	Depth to Water (feet)	Groundwater Elevation (ft-MSL)	TPH Gasoline (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethyl-benzene (µg/L)	Total Xylenes (µg/L)	MTBE 8021B (µg/L)	MTBE 8260 (µg/L)	Dissolved Oxygen (mg/L)
MW-13	01/21/02	P	NR	24.61	NR	15,000	160	68	1,700	3,200	4,900	5,200	0.71
	04/26/02	P		24.2	NR	17,000	98	ND<100	1,700	3,400	1,600		0.6
	10/07/02	P		20.12	NR	14,000 [2]	510	ND<50	2,200	2,300	--	2,800	0.8
	05/01/03 [3]	P		17.82	NR	21,000	230	ND<50	1,900	2,300	--	1,600	1.9
	10/03/03[4]	**P**		**19.91**	**NR**	**19,000**	**570**	**55**	**1,900**	**2,300**	**--**	**2,400**	**0.8**
VW-1	08/29/00	P	NR	17.40	NR	2,360	27.6	11.6	26.3	33.2	110		4.47
	11/29/00	P		18.75	NR	ND<50.0	ND<0.500	ND<0.500	ND<0.500	ND<0.500	ND<2.50		0.46
	05/02/01			21.59	NR	Well not sampled							
	08/15/01	P		24.62	NR	1,200	6.3	4.3	1.7	1.3	20	17	
DUP	08/15/01			NR	NR	1,200	6.2	4.1	1.8	1.1	20	17	
	10/05/01	P		24.75	NR	1,500	140	55	28	82	610	660	0.71
	01/21/02	P		24.59	NR	6,700	810	350	270	1,100	2,600	3,400	0.69
DUP	01/21/02			NR	NR	8,000	770	320	96	1,100	2,500	3,200	
	04/26/02	P		24.27	NR	370	26	2.1	6.6	1.7	48		0.50
DUP	04/26/02			NR	NR	350	24	1.6	5.9	1.6	45		
	10/07/02	P		19.20	NR	410 [2]	25	2.2	8.0	4.3	--	88	1.7
	05/01/03 [3]	P		16.60	NR	240	6.4	ND<0.50	3.3	1.3	--	36	1.7
	10/03/03[4]	**P**		**18.82**	**NR**	**180**	**1.5**	**ND<0.50**	**0.69**	**ND<0.50**	**--**	**12**	**1.1**
VW-2	08/29/00		NR	NR	NR	Well inaccessible							
	11/29/00			NR	NR	Well inaccessible							
	05/02/01			NR	NR	Well not sampled							
	05/02/01			NR	NR	Well not sampled							
	10/05/01			NR	NR	Well inaccessible							
	01/21/02			NR	NR	Well inaccessible							
	04/26/02			NR	NR	Not sampled: unable to locate well							
	10/07/02			NR	NR	Not sampled: well inaccessible							
	05/01/03 [3]			NR	NR	Not sampled: well inaccessible							
	10/03/03			**NR**	**NR**	**Not sampled: well inaccessible**							

Table 2
Groundwater Flow Direction and Gradient

ARCO Service Station 6113
785 East Stanley Boulevard
Livermore, California

Date Measured	Average Flow Direction	Average Hydraulic Gradient
03/23/95	Northwest	0.035
05/31/95	North-Northwest	0.028
08/31/95	North-Northwest	0.03
11/28/95	North-Northwest	0.025
02/22/96	North-Northwest	0.031
05/23/96	North-Northwest	0.025
08/08/96	North	0.019
11/07/96	North-Northeast	0.019
03/27/97	North-Northwest	0.021
05/19/97	North	0.019
05/18/98	North	0.02
11/02/98	North	0.02
06/04/99	North	0.02
11/11/99	North	0.03
06/20/00	North-Northeast	0.014
08/29/00	North-Northeast	0.013
11/29/00	North-Northwest	0.026
05/02/01	Northeast	0.026
08/15/01	Northeast	0.047
10/05/01	Northeast	0.031
01/21/02	Northeast	0.033
04/26/02	Northeast	0.031
10/07/02	Northeast	0.017
05/01/03	North-Northeast	0.011
10/03/03	**North-Northeast**	**0.016**

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

Table 3
Fuel Oxygenate Analytical Data

ARCO Service Station 6113
785 East Stanley Boulevard
Livermore, California

Well Number	Date Sampled	Ethanol (µg/L)	TBA (µg/L)	MTBE (µg/L)	DIPE (µg/L)	ETBE (µg/L)	TAME (µg/L)	1,2-DCA (µg/L)	EDB (µg/L)
MW-1	10/07/02	ND<40	ND<20	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50
MW-2	10/07/02	ND<40	ND<20	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50
MW-3	10/07/02	ND<40	ND<20	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50
	10/03/03[1]	**ND<100**	**ND<20**	**ND<0.50**	**ND<1.0**	**ND<1.0**	**ND<1.0**	**ND<0.50**	**ND<0.50**
MW-4	10/07/02	ND<400	ND<200	260	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
	05/01/03	ND<100	25	86	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50
	10/03/03[1]	**ND<100**	**ND<20**	**22**	**ND<1.0**	**ND<1.0**	**ND<1.0**	**ND<0.50**	**ND<0.50**
MW-6	10/07/02	ND<40	ND<20	8.0	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50
	05/01/03	ND<100	ND<20	12	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50
	10/03/03[1]	**ND<500**	**ND<100**	**120**	**ND<5.0**	**ND<5.0**	**ND<5.0**	**ND<2.5**	**ND<2.5**
MW-7	10/07/02	ND<40	ND<20	41	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50
	05/01/03	ND<100	ND<20	43	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50
	10/03/03[1]	**ND<200**	**ND<40**	**49**	**ND<2.0**	**ND<2.0**	**ND<2.0**	**ND<1.0**	**ND<1.0**
MW-8	10/07/02	ND<40	ND<20	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50
MW-9	10/07/02	ND<40	ND<20	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50
	10/03/03[1]	**ND<100**	**ND<20**	**ND<0.50**	**ND<1.0**	**ND<1.0**	**ND<1.0**	**ND<0.50**	**ND<0.50**
MW-10	10/07/02	ND<40	ND<20	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50
	10/03/03[1]	**ND<100**	**ND<20**	**ND<0.50**	**ND<1.0**	**ND<1.0**	**ND<1.0**	**ND<0.50**	**ND<0.50**
MW-11	10/07/02	ND<40	ND<20	1.0	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50
	05/01/03	ND<100	ND<20	1.5	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50
	10/03/03[1]	**ND<100**	**ND<20**	**3.1**	**ND<1.0**	**ND<1.0**	**ND<1.0**	**ND<0.50**	**ND<0.50**
MW-13	10/07/02	ND<4,000	ND<2,000	2,800	ND<50	ND<50	ND<50	ND<50	ND<50
	05/01/03	ND<10,000	ND<2,000	1,600	ND<50	ND<50	ND<50	ND<50	ND<50
	10/03/03[1]	**ND<10,000**	**ND<2,000**	**2,400**	**ND<100**	**ND<100**	**ND<100**	**ND<50**	**ND<50**
VW-1	10/07/02	ND<80	ND<40	88	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0
	05/01/03	ND<100	ND<20	36	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50
	10/03/03[1]	**ND<100**	**ND<20**	**12**	**ND<1.0**	**ND<1.0**	**ND<1.0**	**ND<0.50**	**ND<0.50**
VW-4	**10/03/03[1]**	**ND<100,000**	**ND<20,000**	**1,600**	**ND<1,000**	**ND<1,000**	**ND<1,000**	**ND<500**	**ND<500**

Note = All fuel oxygenate compounds analyzed using EPA Method 8260B
TBA = tert-Butyl alcohol
MTBE = Methyl tert-butyl ether
DIPE = Di-isopropyl ether
ETBE = Ethyl tert butyl ether
TAME = tert-Amyl methyl ether
1,2-DCA = 1,2-Dichloroethane
EDB = 1,2-Dibromoethane
µg/L = micrograms per liter
ND< = less than laboratory detection limit stated to the right
1 = This sample was analyzed a day after the EPA recommended holding time. The results may still be useful for their intended purpose.

ATTACHMENT A

FIELD PROCEDURES AND FIELD DATA SHEETS

FIELD PROCEDURES

Sampling Procedures

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

WELL GAUGING DATA

Project # 031003-DW-1 Date 10-3-03 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	
(6 wells) MW-3	2					20.07	39.09	TOC	
MW-4	4					20.23	26.75		
MW-6	4					19.62	66.80		
MW-7	4					19.55	67.80		
MW-9	4					18.69	68.10		
MW-10	4					20.64	49.90		
MW-11	2	well under pressure - waited 5 min to equ.				20.58	44.45		
MW-12		well removed from scope of work							
MW-13	2					19.91	30.35		
VW-1	4					18.82	44.42		
VW-2		unable to open well box (vault) Looks like a #9 metric hex key should work (I had an 8 & 10, 8 was too small, 10 was too big)							
VW-4	4					19.10	24.55		

ARCO / BP WELL MONITORING DATA SHEET

BTS #: 031003-DW-1	Station # 6113
Sampler: Dave Walter	Date: 10-3-03
Well I.D.: MW-3	Well Diameter: (2) 3 4 6 8 ___
Total Well Depth: 39.09	Depth to Water: 20.07
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	radius² * 0.163

Purge Method:
- Bailer
- Disposable Bailer
- X Middleburg
- Electric Submersible
- Extraction Pump
- Other: ___

Sampling Method:
- Bailer
- X 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.

3.0 (1 Case Volume (Gals.)) x 3 (Specified Volumes) = 9 (Calculated Volume) Gals.

Time	Temp (°F)	pH	Conductivity (mS or µS)	Gals. Removed	Observations
12:28	66.2	7.3	554	3	Clear
12:32	65.6	7.3	550	6	"
12:36	65.5	7.3	549	9	"

Did well dewater? Yes (No)		Gallons actually evacuated: 9		
Sampling Time: 12:40		Sampling Date: 10-3-03		
Sample I.D.: MW-3		Laboratory: Pace (Sequoia) Other ___		
Analyzed for: (TPH-G) (BTEX) MTBE TPH-D	Other: Oxygenates, Ethanol by 8260 1,2 DCA + EDB			
D.O. (if req'd): Pre-purge:	mg/L	Post-purge:	5.2	mg/L
O.R.P. (if req'd): Pre-purge:	mV	Post-purge:		mV

ARCO / BP WELL MONITORING DATA SHEET

BTS #: 031003-DW-1	Station # 6113
Sampler: Dave Walter	Date: 10-3-03
Well I.D.: MW-4	Well Diameter: 2 3 (4) 6 8 ___
Total Well Depth: 26.75	Depth to Water: 20.23
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	radius² * 0.163

Purge Method:
- Bailer
- Disposable Bailer
- Middleburg
- X Electric Submersible
- Extraction Pump
- Other: ___

Sampling Method:
- Bailer
- X 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.

4.2 (1 Case Volume (Gals.)) x 3 (Specified Volumes) = 12.6 (Calculated Volume) Gals.

Time	Temp (°F)	pH	Conductivity (mS or (µS))	Gals. Removed	Observations
1451	73.9	7.0	679	4.5	clear
1514	70.7	6.9	680	9	odor
1515	69.0	6.8	687	13.5	

Did well dewater? Yes (No) Gallons actually evacuated: 13.5

Sampling Time: 1520 Sampling Date: 10-3-03

Sample I.D.: MW-4 Laboratory: Pace (Sequoia) Other ___

Analyzed for: (TPH-G) (BTEX) MTBE TPH-D Other: Oxygenates, Ethanol by 8260 ~~1,2 DCA + EDB~~

D.O. (if req'd):	Pre-purge:	(mg/L)	(Post-purge:)	1.1 mg/L
O.R.P. (if req'd):	Pre-purge:	mV	Post-purge:	mV

ARCO / BP WELL MONITORING DATA SHEET

BTS #: 031003-DW-1	Station # 6113
Sampler: Dave Walter	Date: 10-3-03
Well I.D.: MW-6	Well Diameter: 2 3 (4) 6 8 ____
Total Well Depth: 66.80	Depth to Water: 19.62
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	radius² * 0.163

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

Sampling Method:
- Bailer
- X 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.

30.7 (1 Case Volume (Gals.)) X 3 (Specified Volumes) = 92.1 (Calculated Volume) Gals.

Time	Temp (°F)	pH	Conductivity (mS or (µS))	Gals. Removed	Observations
12:59	67.0	7.1	679	31	clear/odor
13:06	66.6	7.0	718	62	
13:17	67.1	6.9	721	93	

Did well dewater? Yes (No)		Gallons actually evacuated: 93	
Sampling Time: 13:18		Sampling Date: 10-3-03	
Sample I.D.: MW-6		Laboratory: Pace (Sequoia) Other ____	
Analyzed for: (TPH-G) (BTEX) MTBE TPH-D		Other: Oxygenates, Ethanol 1,2 DCA + EDB 8260	
D.O. (if req'd): Pre-purge:	____ mg/L	Post-purge:	5.1 mg/L
O.R.P. (if req'd): Pre-purge:	____ mV	Post-purge:	____ mV

ARCO / BP WELL MONITORING DATA SHEET

BTS #: 031003-DW-1	Station # 6113
Sampler: Dave Walter	Date: 10-3-03
Well I.D.: MW-7	Well Diameter: 2 3 (4) 6 8 ___
Total Well Depth: 67.80	Depth to Water: 19.55
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	radius² * 0.163

Purge Method: Bailer / Disposable Bailer / Middleburg / X Electric Submersible / Extraction Pump / Other: ___

Sampling Method: Bailer / X 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.

31.4 (1 Case Volume (Gals.)) x 3 (Specified Volumes) = 94.2 (Calculated Volume) Gals.

Time	Temp (°F)	pH	Conductivity (mS or µS)	Gals. Removed	Observations
13:35	68.0	7.1	667	32	odor
13:41	68.5	7.1	670	64	
13:48	68.7	7.1	663	96	

Did well dewater? Yes (No) Gallons actually evacuated: 96

Sampling Time: 13:53 Sampling Date: 10-3-03

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

Analyzed for: (TPH-G) (BTEX) MTBE TPH-D Other: Oxygenates, Ethanol by 8260 ~~1,2 DCA + EDB~~

D.O. (if req'd):	Pre-purge:	___ mg/L	Post-purge:	5.7 mg/L	
O.R.P. (if req'd):	Pre-purge:	___ mV	Post-purge:	___ mV	

ARCO / BP WELL MONITORING DATA SHEET

BTS #: 031003-DW-1	Station # 6113
Sampler: Dave Walter	Date: 10-3-03
Well I.D.: MW-9	Well Diameter: 2 3 (4) 6 8 ___
Total Well Depth: 68.10	Depth to Water: 18.69
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	radius² * 0.163

Purge Method: Bailer / Disposable Bailer / Middleburg / (X) Electric Submersible / Extraction Pump / Other: ___

Sampling Method: Bailer / (X) 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.

32.1 (1 Case Volume (Gals.)) x 3 (Specified Volumes) = 96.3 (Calculated Volume) Gals.

Time	Temp (°F)	pH	Conductivity (mS or (uS))	Gals. Removed	Observations
10:30	68.4	6.6	623	32.1	Clear
10:37	66.7	6.7	613	64.2	"
10:44	66.6	6.8	614	96.3	"

Did well dewater? Yes (No) Gallons actually evacuated: 96.3

Sampling Time: 10:50 Sampling Date: 10-3-03

Sample I.D.: MW-9 Laboratory: Pace (Sequoia) Other ___

Analyzed for: (TPH-G) (BTEX) MTBE TPH-D Other: Oxygenates, Ethanol by 8260 ~~1,2 DCA + EDB~~

D.O. (if req'd):	Pre-purge:		mg/L	Post-purge:	4.9 mg/L
O.R.P. (if req'd):	Pre-purge:		mV	Post-purge:	mV

ARCO / BP WELL MONITORING DATA SHEET

BTS #: 031003-DW-1	Station # 6113
Sampler: Dave Walter	Date: 10-3-03
Well I.D.: MW-10	Well Diameter: 2 3 (4) 6 8 ___
Total Well Depth: 49.90	Depth to Water: 20.64
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
- Disposable Bailer
- Middleburg
- X Electric Submersible
- Extraction Pump
- Other: ___

Sampling Method:
- Bailer
- X 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.

19.0 (1 Case Volume (Gals.)) x 3 (Specified Volumes) = 57 (Calculated Volume) Gals.

Time	Temp (°F)	pH	Conductivity (mS or (µS))	Gals. Removed	Observations
11:12	67.1	7.2	401	19	clear
11:16	65.6	7.2	393	38	Cloudy/brown
11:20	65.0	7.1	383	57	"

Did well dewater? Yes (No) Gallons actually evacuated: 57

Sampling Time: 11:25 Sampling Date: 10-3-03

Sample I.D.: MW-10 Laboratory: Pace (Sequoia) Other ___

Analyzed for: (TPH-G) (BTEX) MTBE TPH-D Other: Oxygenates, Ethanol by 8260 1,2 DCA + EDB

D.O. (if req'd):	Pre-purge:		mg/L	(Post-purge:)	2.4 mg/L
O.R.P. (if req'd):	Pre-purge:		mV	Post-purge:	mV

ARCO / BP WELL MONITORING DATA SHEET

BTS #: 031003-DW-1	Station # 6113
Sampler: Dave Walter	Date: 10-3-03
Well I.D.: MW-11	Well Diameter: (2) 3 4 6 8 ___
Total Well Depth: 44.45	Depth to Water: 20.58
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	radius² * 0.163

Purge Method: Bailer / Disposable Bailer / (X) Middleburg / Electric Submersible / Extraction Pump / Other: _____

Sampling Method: Bailer / (X) 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.

3.8 (1 Case Volume (Gals.)) x 3 (Specified Volumes) = 11.4 (Calculated Volume) Gals.

Time	Temp (°F)	pH	Conductivity (mS or (µS))	Gals. Removed	Observations
11:50	67.3	7.1	640	3.8	Brown
11:55	67.2	7.1	675	7.6	clearing
12:00	67.2	7.1	679	11.4	"

Did well dewater? Yes (No) Gallons actually evacuated: 11.4

Sampling Time: 12:05 Sampling Date: 10-3-03

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

Analyzed for: (TPH-G) (BTEX) MTBE TPH-D Other: Oxygenates, Ethanol by 8260 ~~1,2 DCA + EDI~~

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

ARCO / BP WELL MONITORING DATA SHEET

BTS #: 031003-DW-1	Station # 6113
Sampler: Dave Walter	Date: 10-3-03
Well I.D.: MW-13	Well Diameter: (2) 3 4 6 8 ___
Total Well Depth: 30.35	Depth to Water: 19.91
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	radius² * 0.163

Purge Method: Bailer / Disposable Bailer / X Middleburg / Electric Submersible / Extraction Pump / Other: ___

Sampling Method: Bailer / X 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.

1.7 (1 Case Volume (Gals.)) x 3 (Specified Volumes) = 5.1 (Calculated Volume) Gals.

Time	Temp (°F)	pH	Conductivity (mS or (µS))	Gals. Removed	Observations
1432	71.4	6.8	1084	1.7	gray / odor
1434	71.1	6.8	1149	3.4	" "
1436	70.5	6.9	1156	5.1	

Did well dewater? Yes (No) Gallons actually evacuated: 5.1

Sampling Time: 1441 Sampling Date: 10-3-03

Sample I.D.: MW-13 Laboratory: Pace (Sequoia) Other ___

Analyzed for: (TPH-G) (BTEX) MTBE TPH-D Other: Oxygenates, Ethanol by 8260 1,2 DCA + EDB

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

ARCO / BP WELL MONITORING DATA SHEET

BTS #: 031003-DW-1	Station # 6113
Sampler: Dave Walter	Date: 10-3-03
Well I.D.: VW-1	Well Diameter: 2 3 (4) 6 8 ___
Total Well Depth: 44.42	Depth to Water: 18.82
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
- Disposable Bailer
- Middleburg
- X Electric Submersible
- Extraction Pump
- Other: _____

Sampling Method:
- Bailer
- X 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.

16.6 (1 Case Volume (Gals.)) X 3 (Specified Volumes) = 49.8 (Calculated Volume) Gals.

Time	Temp (°F)	pH	Conductivity (mS or (µS))	Gals. Removed	Observations
14:56	70.5	7.5	498	17	cloudy
14:59	69.8	7.3	473	34	"
15:03	67.9	7.3	470	51	"

Did well dewater? Yes (No) Gallons actually evacuated: 51

Sampling Time: 15:08 Sampling Date: 10-3-03

Sample I.D.: VW-1 Laboratory: Pace (Sequoia) Other _____

Analyzed for: (TPH-G) (BTEX) MTBE TPH-D Other: Oxygenates, Ethanol by 8260 ~~1,2 DCA + EDB~~

D.O. (if req'd):	Pre-purge:	mg/L	Post-purge:	1.1	mg/L
O.R.P. (if req'd):	Pre-purge:	mV	Post-purge:		mV

ARCO / BP WELL MONITORING DATA SHEET

BTS #: 031003-DW-1	Station # 6113
Sampler: Dave Walter	Date: 10-3-03
Well I.D.: MW-2	Well Diameter: 2 3 4 6 8 ___
Total Well Depth: —	Depth to Water: —
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	radius² * 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.

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

Time	Temp (°F)	pH	Conductivity (mS or µS)	Gals. Removed	Observations
	Unable to access well.			Need Metric Hex wrench #9	

Did well dewater? Yes No		Gallons actually evacuated: —	
Sampling Time:		Sampling Date: 10-3-03	
Sample I.D.:		Laboratory: Pace (Sequoia) Other ___	
Analyzed for: (TPH-G) (BTEX) (MTBE) (TPH-D) Other: Oxygenates, Ethanol by 8260 1,2 DCA + EDB			
D.O. (if req'd): Pre-purge:	mg/L	Post-purge:	mg/L
O.R.P. (if req'd): Pre-purge:	mV	Post-purge:	mV

ARCO / BP WELL MONITORING DATA SHEET

BTS #: 031003-DW-1	Station # 6113
Sampler: Dave Walter	Date: 10-3-03
Well I.D.: VW-4	Well Diameter: 2 3 (4) 6 8 ___
Total Well Depth: 24.55	Depth to Water: 19.10
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	radius² * 0.163

Purge Method:
- Bailer
- Disposable Bailer
- Middleburg
- X Electric Submersible
- Extraction Pump
- Other: ___

Sampling Method:
- Bailer
- X 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.

3.5 (1 Case Volume (Gals.)) x 3 (Specified Volumes) = 10.5 (Calculated Volume) Gals.

Time	Temp (°F)	pH	Conductivity (mS or (µS))	Gals. Removed	Observations
15:18	72.5	7.0	585	3.5	odor
15:19	71.5	6.8	857	7	cloudy
15:20	70.9	6.7	935	10.5	gray / Heavy sheen
Bottom	6-9"	of pump	covered w/ silt		

Did well dewater? Yes (No) Gallons actually evacuated: 10.5

Sampling Time: 15:25 Sampling Date: 10-3-03

Sample I.D.: VW-4 Laboratory: Pace (Sequoia) Other ___

Analyzed for: (TPH-G) (BTEX) MTBE TPH-D Other: Oxygenates, Ethanol by 8260 1,2-DCA + EDI

D.O. (if req'd):	Pre-purge:	0.1 mg/L	Post-purge:	0.4	mg/L
O.R.P. (if req'd):	Pre-purge:	mV	Post-purge:		mV

WELLHEAD INSPECTION CHECKLIST
BP / GEM

Date 10-3-03

Site Address 785 E Stanley Blvd Livermore

Job Number 031003-DW-1 Technician Dave Walter

Well ID	Well Inspected - No Corrective Action Required	Water Bailed From Wellbox	Wellbox Components Cleaned	Cap Replaced	Debris Removed From Wellbox	Lock Replaced	Other Action Taken (explain below)	Well Not Inspected (explain below)
mw-3							X	
mw-4							X	
mw-6							X	
mw-7								
mw-9			X		X		X	
mw-10					X		X	
mw-11	X						X	
mw-12								X
mw-13	X							
VW-1							X	X
VW-2								X
VW-4	X							

NOTES: mw-9 1 bolt loose, other bolt very tight mw-10 2 of 2 bolts loose mw-11 unable to tighten bolts mw-3 well box filled w/soil. Casing sits below soil level mw-6 1 tab broken, other bolt unable to fasten mw-4 2 of 2 bolts loose mw-12 Removed from sow VW-2 unable to access VW-1 - Vault hazard. Lid comes up to just past 90° No bar or locking device to keep it in place. Very heavy & large

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 PLAINE 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 Blvd Livermore

Station Address

Total Gallons Collected From Groundwater Monitoring Wells:

453

added equip. rinse water 10

any other adjustments

TOTAL GALS. RECOVERED 463

loaded onto BTS vehicle # 47

BTS event # 031003-DW-1

time

date 10/3/03

signature David C. Scott

* *

REC'D AT

time

date ___/___/___

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

Sequoia
Analytical

885 Jarvis Drive
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31 October, 2003

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

RE: ARCO #6113, Livermore, CA
Work Order: MMJ0249

Enclosed are the results of analyses for samples received by the laboratory on 10/06/03 10:22. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Theresa Allen

Theresa Allen
Project Manager

CA ELAP Certificate #1210

Sequoia Analytical

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URS Corporation [Arco]	Project: ARCO #6113, Livermore, CA	MMJ0249
500 12th Street, Suite 200	Project Number: INTRIM-50739	**Reported:**
Oakland CA, 94607	Project Manager: Scott Robinson	10/31/03 11:58

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
MW-3	MMJ0249-01	Water	10/03/03 12:42	10/06/03 10:22
MW-4	MMJ0249-02	Water	10/03/03 14:20	10/06/03 10:22
MW-6	MMJ0249-03	Water	10/03/03 13:18	10/06/03 10:22
MW-7	MMJ0249-04	Water	10/03/03 13:53	10/06/03 10:22
MW-9	MMJ0249-05	Water	10/03/03 10:50	10/06/03 10:22
MW-10	MMJ0249-06	Water	10/03/03 11:25	10/06/03 10:22
MW-11	MMJ0249-07	Water	10/03/03 12:05	10/06/03 10:22
MW-13	MMJ0249-08	Water	10/03/03 14:41	10/06/03 10:22
VW-1	MMJ0249-09	Water	10/03/03 15:08	10/06/03 10:22
VW-4	MMJ0249-10	Water	10/03/03 15:25	10/06/03 10:22
Trip Blank	MMJ0249-11	Water	10/03/03 00:00	10/06/03 10:22

There were custody seals received with this project.

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URS Corporation [Arco]	Project: ARCO #6113, Livermore, CA	MMJ0249
500 12th Street, Suite 200	Project Number: INTRIM-50739	**Reported:**
Oakland CA, 94607	Project Manager: Scott Robinson	10/31/03 11:58

Purgeable Hydrocarbons by EPA 8015B

Sequoia Analytical - Petaluma

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
MW-3 (MMJ0249-01) Water Sampled: 10/03/03 12:42 Received: 10/06/03 10:22									**HT-04**
Gasoline Range Organics	ND	50	ug/l	1	3100462	10/20/03	10/20/03	EPA 8015B-VOA	
Surrogate: 4-Bromofluorobenzene		*93 %*	*65-135*		"	"	"	"	
MW-4 (MMJ0249-02) Water Sampled: 10/03/03 14:20 Received: 10/06/03 10:22									**HT-04**
Gasoline Range Organics	ND	50	ug/l	1	3100462	10/20/03	10/20/03	EPA 8015B-VOA	
Surrogate: 4-Bromofluorobenzene		*94 %*	*65-135*		"	"	"	"	
MW-6 (MMJ0249-03) Water Sampled: 10/03/03 13:18 Received: 10/06/03 10:22									**HT-04**
Gasoline Range Organics	**80**	50	ug/l	1	3100462	10/20/03	10/20/03	EPA 8015B-VOA	HC-19
Surrogate: 4-Bromofluorobenzene		*92 %*	*65-135*		"	"	"	"	
MW-7 (MMJ0249-04) Water Sampled: 10/03/03 13:53 Received: 10/06/03 10:22									**HT-04**
Gasoline Range Organics	ND	50	ug/l	1	3100462	10/20/03	10/20/03	EPA 8015B-VOA	
Surrogate: 4-Bromofluorobenzene		*92 %*	*65-135*		"	"	"	"	
MW-9 (MMJ0249-05) Water Sampled: 10/03/03 10:50 Received: 10/06/03 10:22									**HT-04**
Gasoline Range Organics	ND	50	ug/l	1	3100462	10/20/03	10/20/03	EPA 8015B-VOA	
Surrogate: 4-Bromofluorobenzene		*92 %*	*65-135*		"	"	"	"	
MW-10 (MMJ0249-06) Water Sampled: 10/03/03 11:25 Received: 10/06/03 10:22									**HT-04**
Gasoline Range Organics	ND	50	ug/l	1	3100462	10/20/03	10/20/03	EPA 8015B-VOA	
Surrogate: 4-Bromofluorobenzene		*91 %*	*65-135*		"	"	"	"	
MW-11 (MMJ0249-07) Water Sampled: 10/03/03 12:05 Received: 10/06/03 10:22									**HT-04**
Gasoline Range Organics	ND	50	ug/l	1	3100462	10/20/03	10/20/03	EPA 8015B-VOA	
Surrogate: 4-Bromofluorobenzene		*92 %*	*65-135*		"	"	"	"	

Sequoia Analytical

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URS Corporation [Arco]	Project: ARCO #6113, Livermore, CA	MMJ0249
500 12th Street, Suite 200	Project Number: INTRIM-50739	**Reported:**
Oakland CA, 94607	Project Manager: Scott Robinson	10/31/03 11:58

Purgeable Hydrocarbons by EPA 8015B

Sequoia Analytical - Petaluma

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
MW-13 (MMJ0249-08) Water Sampled: 10/03/03 14:41 Received: 10/06/03 10:22									**HT-04**
Gasoline Range Organics	**19000**	500	ug/l	10	3100462	10/20/03	10/20/03	EPA 8015B-VOA	
Surrogate: 4-Bromofluorobenzene		*92 %*	*65-135*		"	"	"	"	
VW-1 (MMJ0249-09) Water Sampled: 10/03/03 15:08 Received: 10/06/03 10:22									**HT-04**
Gasoline Range Organics	**180**	50	ug/l	1	3100462	10/20/03	10/20/03	EPA 8015B-VOA	
Surrogate: 4-Bromofluorobenzene		*93 %*	*65-135*		"	"	"	"	
VW-4 (MMJ0249-10) Water Sampled: 10/03/03 15:25 Received: 10/06/03 10:22									**HT-04**
Gasoline Range Organics	**48000**	5000	ug/l	100	3100462	10/20/03	10/20/03	EPA 8015B-VOA	
Surrogate: 4-Bromofluorobenzene		*90 %*	*65-135*		"	"	"	"	

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URS Corporation [Arco]	Project: ARCO #6113, Livermore, CA	MMJ0249
500 12th Street, Suite 200	Project Number: INTRIM-50739	**Reported:**
Oakland CA, 94607	Project Manager: Scott Robinson	10/31/03 11:58

Volatile Organic Compounds by EPA Method 8260B

Sequoia Analytical - Petaluma

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
MW-3 (MMJ0249-01) Water Sampled: 10/03/03 12:42 Received: 10/06/03 10:22									**HT-04**
Tert-amyl methyl ether	ND	1.0	ug/l	1	3100448	10/18/03	10/18/03	EPA 8260B	
Benzene	ND	0.50	"	"	"	"	"	"	
Tert-butyl alcohol	ND	20	"	"	"	"	"	"	
Di-isopropyl ether	ND	1.0	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	0.50	"	"	"	"	"	"	
1,2-Dichloroethane	ND	0.50	"	"	"	"	"	"	
Ethanol	ND	100	"	"	"	"	"	"	
Ethylbenzene	ND	0.50	"	"	"	"	"	"	
Ethyl tert-butyl ether	ND	1.0	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	0.50	"	"	"	"	"	"	
Toluene	ND	0.50	"	"	"	"	"	"	
Xylenes (total)	ND	0.50	"	"	"	"	"	"	
Surrogate: Dibromofluoromethane		*108 %*		*84-122*	"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4		*104 %*		*74-135*	"	"	"	"	
Surrogate: Toluene-d8		*116 %*		*84-119*	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*113 %*		*86-119*	"	"	"	"	
MW-4 (MMJ0249-02) Water Sampled: 10/03/03 14:20 Received: 10/06/03 10:22									**HT-04**
Tert-amyl methyl ether	ND	1.0	ug/l	1	3100448	10/18/03	10/18/03	EPA 8260B	
Benzene	ND	0.50	"	"	"	"	"	"	
Tert-butyl alcohol	ND	20	"	"	"	"	"	"	
Di-isopropyl ether	ND	1.0	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	0.50	"	"	"	"	"	"	
1,2-Dichloroethane	ND	0.50	"	"	"	"	"	"	
Ethanol	ND	100	"	"	"	"	"	"	
Ethylbenzene	ND	0.50	"	"	"	"	"	"	
Ethyl tert-butyl ether	ND	1.0	"	"	"	"	"	"	
Methyl tert-butyl ether	**22**	0.50	"	"	"	"	"	"	
Toluene	ND	0.50	"	"	"	"	"	"	
Xylenes (total)	ND	0.50	"	"	"	"	"	"	
Surrogate: Dibromofluoromethane		*110 %*		*84-122*	"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4		*107 %*		*74-135*	"	"	"	"	
Surrogate: Toluene-d8		*117 %*		*84-119*	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*116 %*		*86-119*	"	"	"	"	

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URS Corporation [Arco]	Project: ARCO #6113, Livermore, CA	MMJ0249
500 12th Street, Suite 200	Project Number: INTRIM-50739	**Reported:**
Oakland CA, 94607	Project Manager: Scott Robinson	10/31/03 11:58

Volatile Organic Compounds by EPA Method 8260B

Sequoia Analytical - Petaluma

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
MW-6 (MMJ0249-03) Water Sampled: 10/03/03 13:18 Received: 10/06/03 10:22									**HT-04**
Tert-amyl methyl ether	ND	5.0	ug/l	5	3100448	10/18/03	10/18/03	EPA 8260B	
Benzene	**2.6**	2.5	"	"	"	"	"	"	
Tert-butyl alcohol	ND	100	"	"	"	"	"	"	
Di-isopropyl ether	ND	5.0	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	2.5	"	"	"	"	"	"	
1,2-Dichloroethane	ND	2.5	"	"	"	"	"	"	
Ethanol	ND	500	"	"	"	"	"	"	
Ethylbenzene	ND	2.5	"	"	"	"	"	"	
Ethyl tert-butyl ether	ND	5.0	"	"	"	"	"	"	
Methyl tert-butyl ether	**120**	2.5	"	"	"	"	"	"	
Toluene	ND	2.5	"	"	"	"	"	"	
Xylenes (total)	ND	2.5	"	"	"	"	"	"	
Surrogate: Dibromofluoromethane		*110 %*	*84-122*		"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4		*107 %*	*74-135*		"	"	"	"	
Surrogate: Toluene-d8		*115 %*	*84-119*		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*111 %*	*86-119*		"	"	"	"	
MW-7 (MMJ0249-04) Water Sampled: 10/03/03 13:53 Received: 10/06/03 10:22									**HT-04**
Tert-amyl methyl ether	ND	2.0	ug/l	2	3100448	10/18/03	10/18/03	EPA 8260B	
Benzene	ND	1.0	"	"	"	"	"	"	
Tert-butyl alcohol	ND	40	"	"	"	"	"	"	
Di-isopropyl ether	ND	2.0	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	1.0	"	"	"	"	"	"	
1,2-Dichloroethane	ND	1.0	"	"	"	"	"	"	
Ethanol	ND	200	"	"	"	"	"	"	
Ethylbenzene	ND	1.0	"	"	"	"	"	"	
Ethyl tert-butyl ether	ND	2.0	"	"	"	"	"	"	
Methyl tert-butyl ether	**49**	1.0	"	"	"	"	"	"	
Toluene	ND	1.0	"	"	"	"	"	"	
Xylenes (total)	ND	1.0	"	"	"	"	"	"	
Surrogate: Dibromofluoromethane		*111 %*	*84-122*		"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4		*108 %*	*74-135*		"	"	"	"	
Surrogate: Toluene-d8		*112 %*	*84-119*		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*109 %*	*86-119*		"	"	"	"	

Sequoia Analytical

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URS Corporation [Arco]	Project: ARCO #6113, Livermore, CA	MMJ0249
500 12th Street, Suite 200	Project Number: INTRIM-50739	**Reported:**
Oakland CA, 94607	Project Manager: Scott Robinson	10/31/03 11:58

Volatile Organic Compounds by EPA Method 8260B

Sequoia Analytical - Petaluma

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
MW-9 (MMJ0249-05) Water Sampled: 10/03/03 10:50 Received: 10/06/03 10:22									**HT-04**
Tert-amyl methyl ether	ND	1.0	ug/l	1	3100448	10/18/03	10/18/03	EPA 8260B	
Benzene	**1.1**	0.50	"	"	"	"	"	"	
Tert-butyl alcohol	ND	20	"	"	"	"	"	"	
Di-isopropyl ether	ND	1.0	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	0.50	"	"	"	"	"	"	
1,2-Dichloroethane	ND	0.50	"	"	"	"	"	"	
Ethanol	ND	100	"	"	"	"	"	"	
Ethylbenzene	ND	0.50	"	"	"	"	"	"	
Ethyl tert-butyl ether	ND	1.0	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	0.50	"	"	"	"	"	"	
Toluene	**0.57**	0.50	"	"	"	"	"	"	
Xylenes (total)	ND	0.50	"	"	"	"	"	"	
Surrogate: Dibromofluoromethane		*113 %*		*84-122*	"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4		*109 %*		*74-135*	"	"	"	"	
Surrogate: Toluene-d8		*114 %*		*84-119*	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*111 %*		*86-119*	"	"	"	"	
MW-10 (MMJ0249-06) Water Sampled: 10/03/03 11:25 Received: 10/06/03 10:22									**HT-04**
Tert-amyl methyl ether	ND	1.0	ug/l	1	3100448	10/18/03	10/18/03	EPA 8260B	
Benzene	ND	0.50	"	"	"	"	"	"	
Tert-butyl alcohol	ND	20	"	"	"	"	"	"	
Di-isopropyl ether	ND	1.0	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	0.50	"	"	"	"	"	"	
1,2-Dichloroethane	ND	0.50	"	"	"	"	"	"	
Ethanol	ND	100	"	"	"	"	"	"	
Ethylbenzene	ND	0.50	"	"	"	"	"	"	
Ethyl tert-butyl ether	ND	1.0	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	0.50	"	"	"	"	"	"	
Toluene	ND	0.50	"	"	"	"	"	"	
Xylenes (total)	ND	0.50	"	"	"	"	"	"	
Surrogate: Dibromofluoromethane		*111 %*		*84-122*	"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4		*109 %*		*74-135*	"	"	"	"	
Surrogate: Toluene-d8		*116 %*		*84-119*	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*112 %*		*86-119*	"	"	"	"	

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URS Corporation [Arco]	Project: ARCO #6113, Livermore, CA	MMJ0249
500 12th Street, Suite 200	Project Number: INTRIM-50739	**Reported:**
Oakland CA, 94607	Project Manager: Scott Robinson	10/31/03 11:58

Volatile Organic Compounds by EPA Method 8260B

Sequoia Analytical - Petaluma

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
MW-11 (MMJ0249-07) Water Sampled: 10/03/03 12:05 Received: 10/06/03 10:22									**HT-04**
Tert-amyl methyl ether	ND	1.0	ug/l	1	3100448	10/18/03	10/18/03	EPA 8260B	
Benzene	ND	0.50	"	"	"	"	"	"	
Tert-butyl alcohol	ND	20	"	"	"	"	"	"	
Di-isopropyl ether	ND	1.0	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	0.50	"	"	"	"	"	"	
1,2-Dichloroethane	ND	0.50	"	"	"	"	"	"	
Ethanol	ND	100	"	"	"	"	"	"	
Ethylbenzene	ND	0.50	"	"	"	"	"	"	
Ethyl tert-butyl ether	ND	1.0	"	"	"	"	"	"	
Methyl tert-butyl ether	**3.1**	0.50	"	"	"	"	"	"	
Toluene	ND	0.50	"	"	"	"	"	"	
Xylenes (total)	ND	0.50	"	"	"	"	"	"	
Surrogate: Dibromofluoromethane		*110 %*		*84-122*	"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4		*108 %*		*74-135*	"	"	"	"	
Surrogate: Toluene-d8		*115 %*		*84-119*	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*114 %*		*86-119*	"	"	"	"	
MW-13 (MMJ0249-08) Water Sampled: 10/03/03 14:41 Received: 10/06/03 10:22									**HT-04**
Tert-amyl methyl ether	ND	100	ug/l	100	3100448	10/18/03	10/18/03	EPA 8260B	
Benzene	**570**	50	"	"	"	"	"	"	
Tert-butyl alcohol	ND	2000	"	"	"	"	"	"	
Di-isopropyl ether	ND	100	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	50	"	"	"	"	"	"	
1,2-Dichloroethane	ND	50	"	"	"	"	"	"	
Ethanol	ND	10000	"	"	"	"	"	"	
Ethylbenzene	**1900**	50	"	"	"	"	"	"	
Ethyl tert-butyl ether	ND	100	"	"	"	"	"	"	
Methyl tert-butyl ether	**2400**	50	"	"	"	"	"	"	
Toluene	**55**	50	"	"	"	"	"	"	
Xylenes (total)	**2300**	50	"	"	"	"	"	"	
Surrogate: Dibromofluoromethane		*112 %*		*84-122*	"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4		*109 %*		*74-135*	"	"	"	"	
Surrogate: Toluene-d8		*117 %*		*84-119*	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*116 %*		*86-119*	"	"	"	"	

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URS Corporation [Arco]	Project: ARCO #6113, Livermore, CA	MMJ0249
500 12th Street, Suite 200	Project Number: INTRIM-50739	**Reported:**
Oakland CA, 94607	Project Manager: Scott Robinson	10/31/03 11:58

Volatile Organic Compounds by EPA Method 8260B

Sequoia Analytical - Petaluma

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
VW-1 (MMJ0249-09) Water Sampled: 10/03/03 15:08 Received: 10/06/03 10:22									**HT-04**
Tert-amyl methyl ether	ND	1.0	ug/l	1	3100448	10/18/03	10/18/03	EPA 8260B	
Benzene	**1.5**	0.50	"	"	"	"	"	"	
Tert-butyl alcohol	ND	20	"	"	"	"	"	"	
Di-isopropyl ether	ND	1.0	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	0.50	"	"	"	"	"	"	
1,2-Dichloroethane	ND	0.50	"	"	"	"	"	"	
Ethanol	ND	100	"	"	"	"	"	"	
Ethylbenzene	**0.69**	0.50	"	"	"	"	"	"	
Ethyl tert-butyl ether	ND	1.0	"	"	"	"	"	"	
Methyl tert-butyl ether	**12**	0.50	"	"	"	"	"	"	
Toluene	ND	0.50	"	"	"	"	"	"	
Xylenes (total)	ND	0.50	"	"	"	"	"	"	
Surrogate: Dibromofluoromethane		*112 %*		*84-122*	"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4		*110 %*		*74-135*	"	"	"	"	
Surrogate: Toluene-d8		*117 %*		*84-119*	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*116 %*		*86-119*	"	"	"	"	
VW-4 (MMJ0249-10) Water Sampled: 10/03/03 15:25 Received: 10/06/03 10:22									**HT-04**
Tert-amyl methyl ether	ND	1000	ug/l	1000	3100448	10/18/03	10/18/03	EPA 8260B	
Benzene	**3300**	500	"	"	"	"	"	"	
Tert-butyl alcohol	ND	20000	"	"	"	"	"	"	
Di-isopropyl ether	ND	1000	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	500	"	"	"	"	"	"	
1,2-Dichloroethane	ND	500	"	"	"	"	"	"	
Ethanol	ND	100000	"	"	"	"	"	"	
Ethylbenzene	**3600**	500	"	"	"	"	"	"	
Ethyl tert-butyl ether	ND	1000	"	"	"	"	"	"	
Methyl tert-butyl ether	**1600**	500	"	"	"	"	"	"	
Toluene	**1700**	500	"	"	"	"	"	"	
Xylenes (total)	**21000**	500	"	"	"	"	"	"	
Surrogate: Dibromofluoromethane		*110 %*		*84-122*	"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4		*108 %*		*74-135*	"	"	"	"	
Surrogate: Toluene-d8		*115 %*		*84-119*	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*115 %*		*86-119*	"	"	"	"	

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URS Corporation [Arco]	Project: ARCO #6113, Livermore, CA	MMJ0249
500 12th Street, Suite 200	Project Number: INTRIM-50739	**Reported:**
Oakland CA, 94607	Project Manager: Scott Robinson	10/31/03 11:58

Purgeable Hydrocarbons by EPA 8015B - Quality Control

Sequoia Analytical - Petaluma

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 3100462 - EPA 5030, waters										
Blank (3100462-BLK1)				Prepared & Analyzed: 10/20/03						
Gasoline Range Organics	ND	50	ug/l							
Surrogate: 4-Bromofluorobenzene	*278*		"	*300*		*93*	*65-135*			
Laboratory Control Sample (3100462-BS1)				Prepared & Analyzed: 10/20/03						
Gasoline Range Organics	2290	50	ug/l	2750		83	65-135			
Surrogate: 4-Bromofluorobenzene	*296*		"	*300*		*99*	*65-135*			
Matrix Spike (3100462-MS1)	**Source: P310427-01**			Prepared & Analyzed: 10/20/03						
Gasoline Range Organics	2300	50	ug/l	2750	11	83	65-135			
Surrogate: 4-Bromofluorobenzene	*297*		"	*300*		*99*	*65-135*			
Matrix Spike Dup (3100462-MSD1)	**Source: P310427-01**			Prepared & Analyzed: 10/20/03						
Gasoline Range Organics	2190	50	ug/l	2750	11	79	65-135	5	20	
Surrogate: 4-Bromofluorobenzene	*288*		"	*300*		*96*	*65-135*			

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URS Corporation [Arco]	Project: ARCO #6113, Livermore, CA	MMJ0249
500 12th Street, Suite 200	Project Number: INTRIM-50739	**Reported:**
Oakland CA, 94607	Project Manager: Scott Robinson	10/31/03 11:58

Volatile Organic Compounds by EPA Method 8260B - Quality Control

Sequoia Analytical - Petaluma

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 3100448 - EPA 5030 waters										
Blank (3100448-BLK1)				Prepared & Analyzed: 10/18/03						
Tert-amyl methyl ether	ND	1.0	ug/l							
Benzene	ND	0.50	"							
Tert-butyl alcohol	ND	20	"							
Di-isopropyl ether	ND	1.0	"							
1,2-Dibromoethane (EDB)	ND	0.50	"							
1,2-Dichloroethane	ND	0.50	"							
Ethanol	ND	100	"							
Ethylbenzene	ND	0.50	"							
Ethyl tert-butyl ether	ND	1.0	"							
Methyl tert-butyl ether	ND	0.50	"							
Toluene	ND	0.50	"							
Xylenes (total)	ND	0.50	"							
Surrogate: Dibromofluoromethane	*4.77*		"	*4.50*		*106*	*84-122*			
Surrogate: 1,2-Dichloroethane-d4	*4.48*		"	*4.50*		*100*	*74-135*			
Surrogate: Toluene-d8	*5.16*		"	*4.50*		*115*	*84-119*			
Surrogate: 4-Bromofluorobenzene	*4.91*		"	*4.50*		*109*	*86-119*			
Laboratory Control Sample (3100448-BS1)				Prepared & Analyzed: 10/18/03						
Tert-amyl methyl ether	4.66	1.0	ug/l	5.00		93	70-116			
Benzene	4.97	0.50	"	5.00		99	81-118			
Tert-butyl alcohol	106	20	"	100		106	62-142			
Di-isopropyl ether	4.79	1.0	"	5.00		96	71-121			
1,2-Dibromoethane (EDB)	5.08	0.50	"	5.00		102	92-117			
1,2-Dichloroethane	4.72	0.50	"	5.00		94	79-126			
Ethanol	150	100	"	100		150	65-135			Q-29
Ethylbenzene	5.20	0.50	"	5.00		104	89-122			
Ethyl tert-butyl ether	4.61	1.0	"	5.00		92	71-110			
Methyl tert-butyl ether	4.54	0.50	"	5.00		91	77-123			
Toluene	5.15	0.50	"	5.00		103	84-119			
Xylenes (total)	15.9	0.50	"	15.0		106	86-132			
Surrogate: Dibromofluoromethane	*5.00*		"	*4.50*		*111*	*84-122*			
Surrogate: 1,2-Dichloroethane-d4	*4.64*		"	*4.50*		*103*	*74-135*			
Surrogate: Toluene-d8	*5.24*		"	*4.50*		*116*	*84-119*			
Surrogate: 4-Bromofluorobenzene	*5.23*		"	*4.50*		*116*	*86-119*			

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URS Corporation [Arco]	Project: ARCO #6113, Livermore, CA	MMJ0249
500 12th Street, Suite 200	Project Number: INTRIM-50739	**Reported:**
Oakland CA, 94607	Project Manager: Scott Robinson	10/31/03 11:58

Volatile Organic Compounds by EPA Method 8260B - Quality Control

Sequoia Analytical - Petaluma

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 3100448 - EPA 5030 waters										
Laboratory Control Sample Dup (3100448-BSD1)				Prepared & Analyzed: 10/18/03						
Tert-amyl methyl ether	5.04	1.0	ug/l	5.00		101	70-116	8	20	
Benzene	5.22	0.50	"	5.00		104	81-118	5	20	
Tert-butyl alcohol	87.0	20	"	100		87	62-142	20	20	
Di-isopropyl ether	5.01	1.0	"	5.00		100	71-121	4	20	
1,2-Dibromoethane (EDB)	5.40	0.50	"	5.00		108	92-117	6	20	
1,2-Dichloroethane	5.07	0.50	"	5.00		101	79-126	7	20	
Ethanol	110	100	"	100		110	65-135	31	20	Q-29
Ethylbenzene	5.46	0.50	"	5.00		109	89-122	5	20	
Ethyl tert-butyl ether	4.90	1.0	"	5.00		98	71-110	6	20	
Methyl tert-butyl ether	4.87	0.50	"	5.00		97	77-123	7	20	
Toluene	5.39	0.50	"	5.00		108	84-119	5	20	
Xylenes (total)	16.7	0.50	"	15.0		111	86-132	5	20	
Surrogate: Dibromofluoromethane	*5.00*		"	*4.50*		*111*	*84-122*			
Surrogate: 1,2-Dichloroethane-d4	*4.74*		"	*4.50*		*105*	*74-135*			
Surrogate: Toluene-d8	*5.20*		"	*4.50*		*116*	*84-119*			
Surrogate: 4-Bromofluorobenzene	*5.16*		"	*4.50*		*115*	*86-119*			

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URS Corporation [Arco]	Project: ARCO #6113, Livermore, CA	MMJ0249
500 12th Street, Suite 200	Project Number: INTRIM-50739	**Reported:**
Oakland CA, 94607	Project Manager: Scott Robinson	10/31/03 11:58

Notes and Definitions

HC-19	Discrete peak @ C5.
HT-04	This sample was analyzed beyond the EPA recommended holding time. The results may still be useful for their intended purpose.
Q-29	The percent recovery in the quality control analyte exceeded the upper control limit. Because there was no detectable amount of this compound in the associated sample, the result has been reported.
DET	Analyte DETECTED
ND	Analyte NOT DETECTED at or above the reporting limit
NR	Not Reported
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference

MM30249

Page 1 of 2

Chain of Custody Record

Project Name 613 GWM
BP BU/GEM CO Portfolio Retail
BP Laboratory Contract Number: Atlantic Richfield Company
Requested Due Date (mm/dd/yy) 14 day TAT

Date: 10-3-03

On-site Time:	900 Temp: 68°
Off-site Time:	1600 Temp: 76°
Sky Conditions:	Partly Cloudy
Meteorological Events:	
Wind Speed:	5 mph Direction: E

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

BP/GEM Facility No.: ARCO 6113
BP/GEM Facility Address: 785 E. Stanley Blvd, LIVERMORE, CA
Site ID No. ARCO 6113
Site Lat/Long:
California Global ID #: T0600100111
BP/GEM PM Contact: PAUL SUPPLE
Address: P.O. Box 6549
Moraga, CA 94570
Tele/Fax: 925-299-8891/925-299-8872

Consultant/Contractor: URS
Address: 500 12th St., Ste. 200
Oakland, CA 94609-4014
e-mail EDD: donna.cosper@URSCorp.com
Consultant/Contractor Project No.: 35-00006113.01 00427
Consultant Tele/Fax: 510-893-3600/510-874-3268
Consultant/Contractor PM: Scott Robinson
Invoice to: Consultant/Contractor or BP/GEM (Circle one)
BP/GEM Work Release No: INTRIM-50739

Lab Bottle Order No:

Item No.	Sample Description	Time	Matrix: Soil/Solid	Water/Liquid	Sediments	Air	Laboratory No.	No. of containers	Preservatives: Unpreserved	H_2SO_4	HNO_3	HCl	TPH-G / BTEX (8015/8021 or 8260)	TPH-D (8015)	MTBE (8021)	MTBE (8260)	MTBE, TAME, ETBE, DIPE, TBA (8260)	1,2-DCA & EDB (8260)	Ethanol (8260)	Sample Point Lat/Long and Comments
1	MW-3	1242		X			MM30249-01	6				X	X			X	X	X		
2	MW-4	1420					-02	3					X			X	X	X		
3	MW-6	1318					-03						X			X	X	X		
4	MW-7	1355					-04						X			X	X	X		
5	MW-9	1050					-05						X			X	X	X		
6	MW-10	1125					-06						X			X	X	X		
7	MW-11	1205					-07						X			X	X	X		
8	MW-13	1441					-08						X			X	X	X		
9	VW-1	1508					-09						V			X	X	X		
10	VW-4	1525					-10						X			X	X	X		

Sampler's Name: Dave Walter
Sampler's Company: Blaine Tech
Shipment Date:
Shipping Method:
Airbill Tracking No:

Relinquished By / Affiliation	Date	Time	Accepted By / Affiliation	Date	Time
	10/3/03	9:55		10/3/03	9:55
	10/3/03	1022		10/3/03	1022

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

Temperature Blank Yes X No Cooler Temperature on Receipt 4.0 °F/C Trip Blank Yes X No

Laboratory / Yellow Copy - BP/GEM / Pink Copy - Consultant/Contractor

(MM30249)

Chain of Custody Record

Project Name: 6113 GWM — 070003-DW1
BP BU/GEM CO Portfolio: Retail
BP Laboratory Contract Number: Atlantic Richfield Company
Date: 10-3-03
Requested Due Date (mm/dd/yy): 14 day TAT

On-site Time: 900 Temp: 68°
Off-site Time: 1100 Temp: 76°
Sky Conditions: Partly Cloudy
Meteorological Events:
Wind Speed: 5 mph Direction: E

Send To:	BP/GEM Facility No.: ARCO 6113	Consultant/Contractor: URS
Lab Name: SEQUOIA	BP/GEM Facility Address: 785 E. Stanley Blvd, LIVERMORE, CA	Address: 500 12th St., Ste. 200
Lab Address: 885 Jarvis Dr.	Site ID No.: ARCO 6113	Oakland, CA 94609-4014
Morgan Hill, CA 95037	Site Lat/Long:	e-mail EDD: donna.cosper@URSCorp.com
	California Global ID #: T0600100111	Consultant/Contractor Project No.: 15-00006113.01 00127
Lab PM: Theresa Allen	BP/GEM PM Contact: PAUL SUPPLE	Consultant Tele/Fax: 510-893-3600/510-874-3268
Tele/Fax: 408-776-9600 / 408-782-6308	Address: P.O. Box 6549	Consultant/Contractor PM: Scott Robinson
Report Type & QC Level: 1 Send EDF Reports	Moraga, CA 94570	Invoice to: Consultant/Contractor or BP/GEM (Circle one)
BP/GEM Account No.:	Tele/Fax: 925-299-8891/925-299-8872	BP/GEM Work Release No: INTRIM -50739

Lab Bottle Order No:

Item No.	Sample Description	Time	Matrix: Soil/Solid	Water/Liquid	Sediments	Air	Laboratory No.	No. of containers	Preservatives: Unpreserved	H_2SO_4	HNO_3	HCl	TPH-G / BTEX (8015/8021 or 8260)	TPH-D (8015)	MTBE (8021)	MTBE (8260)	MTBE, TAME, ETBE, DIPE, TBA (8260)	1,2-DCA & EDB (8260)	Ethanol (8260)	Sample Point Lat/Long and Comments
1	TRIP BLANK			X			MM30249-11	2				X								DO NOT HOLD
2																				
3																				
4																				
5																				
6																				
7																				
8																				
9																				
10																				

Sampler's Name:	Relinquished By / Affiliation	Date	Time	Accepted By / Affiliation	Date	Time
Sampler's Company: Dave Weller	David C. Weller	10/4/03	955		10/4/03	9:55
Shipment Date: Blaine Tech		10/4/03	1022		10-6-03	1022
Shipment Method:						
Shipment Tracking No:						

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

Received on Ice: Yes / No Temperature Blank: Yes / No Cooler Temperature on Receipt: 4.6 °F/C Trip Blank: Yes / No

White Copy - Laboratory / Yellow Copy - BP/GEM / Pink Copy - Consultant/Contractor

SEQUOIA ANALYTICAL SAMPLE RECEIPT LOG

CLIENT NAME: URS
REC. BY (PRINT): AS
WORKORDER: MM30849

DATE REC'D AT LAB: 10-6-03
TIME REC'D AT LAB: 0955 1022
DATE LOGGED IN: 10-9-03

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

CIRCLE THE APPROPRIATE RESPONSE	LAB SAMPLE #	DASH #	CLIENT ID	CONTAINER DESCRIPTION	PRESERVATIVE	SAMPLE MATRIX	DATE SAMPLED	REMARKS: CONDITION (ETC.)
1. Custody Seal(s): (Present) / Absent; (Intact) / Broken*	01		MW-3	(6) VOCs	HCl	L	10-3-03	10-HA 323 7090
	02		MW-4/in.	(3) VOCs				
2. Chain-of-Custody: (Present) / Absent*	03		MW-6					
3. Traffic Reports or Packing List: Present (Absent)	04		MW-7					
	05		MW-9					
4. Airbill: Airbill / Sticker Present (Absent)	06		MW-10					
	07		MW-11					
5. Airbill #:	08		MW-13					
6. Sample Labels: (Present) / Absent	09		VW-1					
7. Sample IDs: (Listed) / Not Listed on Chain-of-Custody	10		VW-4					
	11		Trip blank	(2) VOCs				
8. Sample Condition: (Intact) / Broken* / Leaking*								
9. Docs information on custody reports, traffic reports and sample labels agree? (Yes) / No*								
10. Sample received within hold time: (Yes) / No*								
11. Proper Preservatives used: (Yes) / No*								
12. Temp Rec. at Lab: 4.6 °C; Is temp 4 +/-2°C? (Yes) / No**								

(Acceptance range for samples requiring thermal pres.)

**Exception (if any): Metals / DFF (Direct From Field) or Problem COC

10-6-03 AS

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

ATTACHMENT C

EDCC REPORT AND EDF/GEOWELL SUBMITTAL CONFIRMATION

Error Summary Log

11/04/03

EDF 1.2i All files present in deliverable.

Laboratory:	Sequoia Analytical Laboratories, Inc., Morgan Hill, CA
Project Name:	ARCO #6113, Livermore, CA
Work Order Number:	MMJ0249
Global ID:	T0600100111
Lab Report Number:	MMJ0249103120031158

Report Summary

Labreport	Sampid	Labsampid	Mtrx	QC	Anmcode	Exmcode	Logdate	Extdate	Anadate	Lablotctl	Run	Sub
MMJ02491031200 31158	MW-10	MMJ024906	W	CS	8260FAB	SW5030	10/03/03	10/18/03	10/18/03	3100448	1	SEQP
MMJ02491031200 31158	MW-10	MMJ024906	W	CS	SW8015B	SW5030	10/03/03	10/20/03	10/20/03	3100462	1	SEQP
MMJ02491031200 31158	MW-11	MMJ024907	W	CS	8260FAB	SW5030	10/03/03	10/18/03	10/18/03	3100448	1	SEQP
MMJ02491031200 31158	MW-11	MMJ024907	W	CS	SW8015B	SW5030	10/03/03	10/20/03	10/20/03	3100462	1	SEQP
MMJ02491031200 31158	MW-13	MMJ024908	W	CS	8260FAB	SW5030	10/03/03	10/18/03	10/18/03	3100448	1	SEQP
MMJ02491031200 31158	MW-13	MMJ024908	W	CS	SW8015B	SW5030	10/03/03	10/20/03	10/20/03	3100462	1	SEQP
MMJ02491031200 31158	MW-3	MMJ024901	W	CS	8260FAB	SW5030	10/03/03	10/18/03	10/18/03	3100448	1	SEQP
MMJ02491031200 31158	MW-3	MMJ024901	W	CS	SW8015B	SW5030	10/03/03	10/20/03	10/20/03	3100462	1	SEQP
MMJ02491031200 31158	MW-4	MMJ024902	W	CS	8260FAB	SW5030	10/03/03	10/18/03	10/18/03	3100448	1	SEQP
MMJ02491031200 31158	MW-4	MMJ024902	W	CS	SW8015B	SW5030	10/03/03	10/20/03	10/20/03	3100462	1	SEQP
MMJ02491031200 31158	MW-6	MMJ024903	W	CS	8260FAB	SW5030	10/03/03	10/18/03	10/18/03	3100448	1	SEQP
MMJ02491031200 31158	MW-6	MMJ024903	W	CS	SW8015B	SW5030	10/03/03	10/20/03	10/20/03	3100462	1	SEQP
MMJ02491031200 31158	MW-7	MMJ024904	W	CS	8260FAB	SW5030	10/03/03	10/18/03	10/18/03	3100448	1	SEQP
MMJ02491031200 31158	MW-7	MMJ024904	W	CS	SW8015B	SW5030	10/03/03	10/20/03	10/20/03	3100462	1	SEQP
MMJ02491031200 31158	MW-9	MMJ024905	W	CS	8260FAB	SW5030	10/03/03	10/18/03	10/18/03	3100448	1	SEQP
MMJ02491031200 31158	MW-9	MMJ024905	W	CS	SW8015B	SW5030	10/03/03	10/20/03	10/20/03	3100462	1	SEQP
MMJ02491031200 31158	VW-1	MMJ024909	W	CS	8260FAB	SW5030	10/03/03	10/18/03	10/18/03	3100448	1	SEQP
MMJ02491031200 31158	VW-1	MMJ024909	W	CS	SW8015B	SW5030	10/03/03	10/20/03	10/20/03	3100462	1	SEQP
MMJ02491031200 31158	VW-4	MMJ024910	W	CS	8260FAB	SW5030	10/03/03	10/18/03	10/18/03	3100448	1	SEQP
MMJ02491031200 31158	VW-4	MMJ024910	W	CS	SW8015B	SW5030	10/03/03	10/20/03	10/20/03	3100462	1	SEQP
		P31042701	W	NC	SW8015B	SW5030	/ /	10/20/03	10/20/03	3100462	1	SEQP

Report Summary

Labreport	Sampid	Labsampid	Mtrx	QC	Anmcode	Exmcode	Logdate	Extdate	Anadate	Lablotctl	Run	Sub
		3100448BSD1	WQ	BD1	8260FAB	SW5030	/ /	10/18/03	10/18/03	3100448	1	SEQP
		3100448BS1	WQ	BS1	8260FAB	SW5030	/ /	10/18/03	10/18/03	3100448	1	SEQP
		3100448BLK1	WQ	LB1	8260FAB	SW5030	/ /	10/18/03	10/18/03	3100448	1	SEQP
		3100462BS1	WQ	BS1	SW8015B	SW5030	/ /	10/20/03	10/20/03	3100462	1	SEQP
		3100462BLK1	WQ	LB1	SW8015B	SW5030	/ /	10/20/03	10/20/03	3100462	1	SEQP
		3100462MS1	W	MS1	SW8015B	SW5030	/ /	10/20/03	10/20/03	3100462	1	SEQP
		3100462MSD1	W	SD1	SW8015B	SW5030	/ /	10/20/03	10/20/03	3100462	1	SEQP

EDFSAMP: Error Summary Log

11/04/03

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

EDFTEST: Error Summary Log

11/04/03

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

EDFRES: Error Summary Log

11/04/03

Error type	Labsampid	Qccode	Matrix	Anmcode	Pvccode	Anadate	Run number	Parlabel
Warning: extra parameter	3100462MS1	MS1	W	SW8015B	PR	10/20/03	1	BR4FBZ
Warning: extra parameter	3100462MS1	MS1	W	SW8015B	PR	10/20/03	1	GRO
Warning: extra parameter	3100462MSD1	SD1	W	SW8015B	PR	10/20/03	1	BR4FBZ
Warning: extra parameter	3100462MSD1	SD1	W	SW8015B	PR	10/20/03	1	GRO
Warning: extra parameter	MMJ024901	CS	W	8260FAB	PR	10/18/03	1	BR4FBZ
Warning: extra parameter	MMJ024901	CS	W	8260FAB	PR	10/18/03	1	BZMED8
Warning: extra parameter	MMJ024901	CS	W	8260FAB	PR	10/18/03	1	DBFM
Warning: extra parameter	MMJ024901	CS	W	8260FAB	PR	10/18/03	1	DCA12D4
Warning: extra parameter	MMJ024901	CS	W	SW8015B	PR	10/20/03	1	BR4FBZ
Warning: extra parameter	MMJ024901	CS	W	SW8015B	PR	10/20/03	1	GRO
Warning: extra parameter	MMJ024902	CS	W	8260FAB	PR	10/18/03	1	BR4FBZ
Warning: extra parameter	MMJ024902	CS	W	8260FAB	PR	10/18/03	1	BZMED8
Warning: extra parameter	MMJ024902	CS	W	8260FAB	PR	10/18/03	1	DBFM
Warning: extra parameter	MMJ024902	CS	W	8260FAB	PR	10/18/03	1	DCA12D4
Warning: extra parameter	MMJ024902	CS	W	SW8015B	PR	10/20/03	1	BR4FBZ
Warning: extra parameter	MMJ024902	CS	W	SW8015B	PR	10/20/03	1	GRO
Warning: extra parameter	MMJ024903	CS	W	8260FAB	PR	10/18/03	1	BR4FBZ
Warning: extra parameter	MMJ024903	CS	W	8260FAB	PR	10/18/03	1	BZMED8
Warning: extra parameter	MMJ024903	CS	W	8260FAB	PR	10/18/03	1	DBFM
Warning: extra parameter	MMJ024903	CS	W	8260FAB	PR	10/18/03	1	DCA12D4
Warning: extra parameter	MMJ024903	CS	W	SW8015B	PR	10/20/03	1	BR4FBZ
Warning: extra parameter	MMJ024903	CS	W	SW8015B	PR	10/20/03	1	GRO
Warning: extra parameter	MMJ024904	CS	W	8260FAB	PR	10/18/03	1	BR4FBZ
Warning: extra parameter	MMJ024904	CS	W	8260FAB	PR	10/18/03	1	BZMED8
Warning: extra parameter	MMJ024904	CS	W	8260FAB	PR	10/18/03	1	DBFM
Warning: extra parameter	MMJ024904	CS	W	8260FAB	PR	10/18/03	1	DCA12D4

Error type	Labsampid	Qccode	Matrix	Anmcode	Pvccode	Anadate	Run number	Parlabel
Warning: extra parameter	MMJ024904	CS	W	SW8015B	PR	10/20/03	1	BR4FBZ
Warning: extra parameter	MMJ024904	CS	W	SW8015B	PR	10/20/03	1	GRO
Warning: extra parameter	MMJ024905	CS	W	8260FAB	PR	10/18/03	1	BR4FBZ
Warning: extra parameter	MMJ024905	CS	W	8260FAB	PR	10/18/03	1	BZMED8
Warning: extra parameter	MMJ024905	CS	W	8260FAB	PR	10/18/03	1	DBFM
Warning: extra parameter	MMJ024905	CS	W	8260FAB	PR	10/18/03	1	DCA12D4
Warning: extra parameter	MMJ024905	CS	W	SW8015B	PR	10/20/03	1	BR4FBZ
Warning: extra parameter	MMJ024905	CS	W	SW8015B	PR	10/20/03	1	GRO
Warning: extra parameter	MMJ024906	CS	W	8260FAB	PR	10/18/03	1	BR4FBZ
Warning: extra parameter	MMJ024906	CS	W	8260FAB	PR	10/18/03	1	BZMED8
Warning: extra parameter	MMJ024906	CS	W	8260FAB	PR	10/18/03	1	DBFM
Warning: extra parameter	MMJ024906	CS	W	8260FAB	PR	10/18/03	1	DCA12D4
Warning: extra parameter	MMJ024906	CS	W	SW8015B	PR	10/20/03	1	BR4FBZ
Warning: extra parameter	MMJ024906	CS	W	SW8015B	PR	10/20/03	1	GRO
Warning: extra parameter	MMJ024907	CS	W	8260FAB	PR	10/18/03	1	BR4FBZ
Warning: extra parameter	MMJ024907	CS	W	8260FAB	PR	10/18/03	1	BZMED8
Warning: extra parameter	MMJ024907	CS	W	8260FAB	PR	10/18/03	1	DBFM
Warning: extra parameter	MMJ024907	CS	W	8260FAB	PR	10/18/03	1	DCA12D4
Warning: extra parameter	MMJ024907	CS	W	SW8015B	PR	10/20/03	1	BR4FBZ
Warning: extra parameter	MMJ024907	CS	W	SW8015B	PR	10/20/03	1	GRO
Warning: extra parameter	MMJ024908	CS	W	8260FAB	PR	10/18/03	1	BR4FBZ
Warning: extra parameter	MMJ024908	CS	W	8260FAB	PR	10/18/03	1	BZMED8
Warning: extra parameter	MMJ024908	CS	W	8260FAB	PR	10/18/03	1	DBFM
Warning: extra parameter	MMJ024908	CS	W	8260FAB	PR	10/18/03	1	DCA12D4
Warning: extra parameter	MMJ024908	CS	W	SW8015B	PR	10/20/03	1	BR4FBZ
Warning: extra parameter	MMJ024908	CS	W	SW8015B	PR	10/20/03	1	GRO
Warning: extra parameter	MMJ024909	CS	W	8260FAB	PR	10/18/03	1	BR4FBZ
Warning: extra parameter	MMJ024909	CS	W	8260FAB	PR	10/18/03	1	BZMED8
Warning: extra parameter	MMJ024909	CS	W	8260FAB	PR	10/18/03	1	DBFM
Warning: extra parameter	MMJ024909	CS	W	8260FAB	PR	10/18/03	1	DCA12D4

Error type	Labsampid	Qccode	Matrix	Anmcode	Pvccode	Anadate	Run number	Parlabel
Warning: extra parameter	MMJ024909	CS	W	SW8015B	PR	10/20/03	1	BR4FBZ
Warning: extra parameter	MMJ024909	CS	W	SW8015B	PR	10/20/03	1	GRO
Warning: extra parameter	MMJ024910	CS	W	8260FAB	PR	10/18/03	1	BR4FBZ
Warning: extra parameter	MMJ024910	CS	W	8260FAB	PR	10/18/03	1	BZMED8
Warning: extra parameter	MMJ024910	CS	W	8260FAB	PR	10/18/03	1	DBFM
Warning: extra parameter	MMJ024910	CS	W	8260FAB	PR	10/18/03	1	DCA12D4
Warning: extra parameter	MMJ024910	CS	W	SW8015B	PR	10/20/03	1	BR4FBZ
Warning: extra parameter	MMJ024910	CS	W	SW8015B	PR	10/20/03	1	GRO
Warning: extra parameter	P31042701	NC	W	SW8015B	PR	10/20/03	1	BR4FBZ
Warning: extra parameter	P31042701	NC	W	SW8015B	PR	10/20/03	1	GRO
Warning: extra parameter	3100448BLK1	LB1	WQ	8260FAB	PR	10/18/03	1	BR4FBZ
Warning: extra parameter	3100448BLK1	LB1	WQ	8260FAB	PR	10/18/03	1	BZMED8
Warning: extra parameter	3100448BLK1	LB1	WQ	8260FAB	PR	10/18/03	1	DBFM
Warning: extra parameter	3100448BLK1	LB1	WQ	8260FAB	PR	10/18/03	1	DCA12D4
Warning: extra parameter	3100448BS1	BS1	WQ	8260FAB	PR	10/18/03	1	BR4FBZ
Warning: extra parameter	3100448BS1	BS1	WQ	8260FAB	PR	10/18/03	1	BZMED8
Warning: extra parameter	3100448BS1	BS1	WQ	8260FAB	PR	10/18/03	1	DBFM
Warning: extra parameter	3100448BS1	BS1	WQ	8260FAB	PR	10/18/03	1	DCA12D4
Warning: extra parameter	3100448BSD1	BD1	WQ	8260FAB	PR	10/18/03	1	BR4FBZ
Warning: extra parameter	3100448BSD1	BD1	WQ	8260FAB	PR	10/18/03	1	BZMED8
Warning: extra parameter	3100448BSD1	BD1	WQ	8260FAB	PR	10/18/03	1	DBFM
Warning: extra parameter	3100448BSD1	BD1	WQ	8260FAB	PR	10/18/03	1	DCA12D4
Warning: extra parameter	3100462BLK1	LB1	WQ	SW8015B	PR	10/20/03	1	BR4FBZ
Warning: extra parameter	3100462BLK1	LB1	WQ	SW8015B	PR	10/20/03	1	GRO
Warning: extra parameter	3100462BS1	BS1	WQ	SW8015B	PR	10/20/03	1	BR4FBZ
Warning: extra parameter	3100462BS1	BS1	WQ	SW8015B	PR	10/20/03	1	GRO

EDFQC: Error Summary Log

11/04/03

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

EDFCL: Error Summary Log

11/04/03

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

AB2886 Electronic Delivery

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

Your EDF file has been succcessfully uploaded!

Confirmation Number: 8102514684
Date/Time of Submittal: 11/4/2003 3:45:35 PM
Facility Global ID: T0600100111
Facility Name: ARCO # 06113
Submittal Title: Fourth Quarter 03 Ground Water Monitoring site #6113
Submittal Type: GW Monitoring Report

Logged in as URSCORP-OAKLAND
(CONTRACTOR)

CONTACT SITE ADMINISTRATOR.

AB2886 Electronic Delivery

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: Fourth Quarter 03 Geowell for site #6113
Submittal Date/Time: 11/4/2003 3:53:51 PM
Confirmation Number: 3156956315

Back to Main Menu

Logged in as URSCORP-OAKLAND
(CONTRACTOR)

CONTACT SITE ADMINISTRATOR.