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URS

January 31, 2003

Alameda County
FEB 13 2003
Environmental Health

Ms. Eva Chu
Alameda County Health Care Services Agency
1131 Harbor Bay Parkway, Suite 250
Alameda, CA 94502

Re: Third Quarter 2002 Groundwater Monitoring Report
ARCO Service Station #00771
899 Rincon Avenue
Livermore, California
URS Project #38486090

Dear Ms. Chu:

On behalf of Atlantic Richfield Company (ARCO-an affiliated company of the Group Environmental Management Company), URS Corporation (URS) is submitting the *Third Quarter 2002 Groundwater Monitoring Report* for ARCO Service Station #0771, located at 899 Rincon Avenue, Livermore, California.

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

Sincerely,

URS CORPORATION

REGISTERED PROFESSIONAL ENGINEER
AMY BRECKENRIDGE
No. C057141
Exp. 12/31/05
CIVIL
STATE OF CALIFORNIA

Scott Robinson
Project Manager

Amy P. Breckenridge, P.E.
Portfolio Manager

Enclosure: Third Quarter 2002 Groundwater Monitoring Report

cc: Mr. Paul Supple, ARCO, PO Box 6549 Moraga, CA 94570
Danielle Stefani, City of Livermore Fire Dept., 4550 East Avenue, Livermore, CA 94550

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

Atlantic Richfield Company
(a BP affiliated company)

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

February 6, 2003

Re: ARCO Station # 771 • 899 Rincon Avenue • Livermore, CA
Third Quarter 2002 Quarterly Monitoring Report

"I declare, that to the best of my knowledge at the present time, that the information and/or recommendations contained in the attached document are true and correct.

Submitted by:

Paul Supple
Environmental Business Manager

REPORT

THIRD QUARTER 2002 GROUNDWATER MONITORING

ARCO SERVICE STATION #0771
899 RINCON AVENUE
LIVERMORE, CALIFORNIA

Prepared for
Atlantic Richfield Company

January 31, 2003

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

38486090

Date: January 31, 2003
Quarter: 3Q 02

ATLANTIC RICHFIELD COMPANY QUARTERLY GROUNDWATER MONITORING REPORT

Former Facility No.:	0771	Address:	899 Rincon Avenue, Livermore, California
Atlantic Richfield Co. Environmental Engineer:			Paul Supple
Consulting Co./Contact Person:			URS Corporation / Scott Robinson
Consultant Project No.:			38486090
Primary Agency:			ACHCSA

WORK PERFORMED THIS QUARTER (Third – 2002):

1. Performed third quarter 2002 groundwater monitoring event.
2. Prepared second quarter 2002 quarterly status report.
3. Oxygenate analyses added to monitoring event

WORK PROPOSED FOR NEXT QUARTER (Fourth – 2002):

1. Prepare third quarter 2002 groundwater monitoring report.

Current Phase of Project:	GW monitoring/sampling
Frequency of Groundwater Sampling:	Annual (3rd Qtr): MW-2, MW-5, MW-11 Semi-Annual (1st/3rd Qtr): MW-4, MW-6, MW-7, RW-1, VW-1
Frequency of Groundwater Monitoring:	Semi-annual
Is Free Product (FP) Present On-Site:	No
Cumulative FP Recovered to Date :	3.06 gallons, Wells MW-1, MW-2, and MW-5
FP Recovered This Quarter :	None (FP was last recovered in 1992.)
Bulk Soil Removed to Date :	1,700 cubic yards of TPH-impacted soil
Current Remediation Techniques:	Natural Attenuation
Approximate Depth to Groundwater:	22.42 (VW-1) to 35.30 (MW-8)
Groundwater Gradient (direction):	North-Northwest
Groundwater Gradient (magnitude):	0.044 feet per foot

DISCUSSION:

TPH-g was detected in five of the eight wells sampled this quarter at concentrations ranging from 60 µg/L (MW-6) to 5,700 µg/L (MW-7). Benzene was detected in five wells at concentrations ranging from 2.0 µg/L (MW-6) to 630 µg/L (MW-7). MTBE was detected in five wells at concentrations ranging from 13 µg/L (RW-1) to 180 µg/L (MW-5). TBA was detected in three wells at concentrations ranging from 280 µg/L (MW-7) to 820 µg/L (MW-5).

ATTACHMENTS:

- Table 1 - Groundwater Elevation and Analytical Data
- Table 2 - Groundwater Flow Direction and Gradient
- Table 3 – Oxygen Analytes
- Figure 1 - Groundwater Elevation Contour and Analytical Summary Map – July 19, 2002
- Attachment A - Field Procedures and Field Data Sheets
- Attachment B - Laboratory Procedures, Certified Analytical Reports and Chain-of-Custody Records
- Attachment C - EDCC and EDF/Geowell Submittal Confirmation

Table 1
Groundwater Elevation and Analytical Data**

ARCO Service Station # 0771
899 Rincon Avenue, Livermore, California

Well Number	Date Sampled		Well Elevation (feet, MSL)	Depth to Water (feet, TOC)	Groundwater Elevation (feet-MSL)	TPH-g (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethyl-benzene (µg/L)	Total Xylenes (µg/L)	MTBE (µg/L)	Dissolved Oxygen (mg/L)
MW-1	03/20/95	--	451.73	24.50	427.23	90,000	1,800	1,100	1,000	5,600	--	--
	06/02/95	--		25.60	426.13	81,000	2,000	1,400	990	4,600	--	--
	08/23/95	--		29.04	422.69	44,000	2,400	1,900	670	3,800	<300	--
	12/04/95	--		31.31	420.42	22,000	870	660	390	2,200	--	--
	02/20/96	--		22.26	429.47	21,000	1,500	1,200	650	3,500	<300	--
	05/15/96	--		23.42	428.31	36,000	3,000	2,500	960	5,700	<250	--
	08/13/96	--		26.83	424.90	19,000	730	580	450	2,500	<200	--
	11/13/96	--		31.05	420.68	6,600	47	16	74	160	<30	--
	03/26/97	--		26.29	425.44	1,900	100	55	37	200	<30	--
	05/15/97	--		28.65	423.08	16,000	490	250	250	1,100	<120	--
	08/26/97	--		31.53	420.20	190	7	3	6	25	<3	--
	11/05/97	--		33.93	417.80	63	1	<0.5	1	2	29	--
	02/18/98	--		20.46	431.27	23,000	1,500	610	550	3,000	<120	--
	05/20/98	--		23.84	427.89	50,000	4,400	1,900	1,400	80,000	<300	--
	07/30/98	P		26.94	424.79	150	<0.5	<0.5	<0.5	2	<3	8.7
	10/29/98	NP		32.58	419.15	<50	<0.5	<0.5	<0.5	2	<3	2.0
	03/16/99	P		26.20	425.53	3,200	160	32	89	390	270	2.0
	05/05/99	P		27.57	424.16	3,600	140	46	76	290	170	11.65
	08/26/99	P		30.25	421.48	3,200	210	29	100	220	120	1.43
	12/03/99	NP		32.70	419.03	53	<0.5	<0.5	<0.5	1	<3	2.12
	03/13/00	P		24.45	427.28	<50	<0.5	<0.5	<0.5	<1	<3	5.81
DUP	06/20/00	--	--	--	--	67.4	3.88	<0.500	1.78	1.48	<2.50	--
	06/20/00	P		27.79	423.94	356	40.1	7.17	11.9	22.7	<2.50	5.10
	08/31/00			30.35	421.38	Not sampled: well no longer part of sampling schedule						
	02/09/01			30.95	420.78	Not sampled: well no longer part of sampling schedule						
	09/17/01			30.85	420.88	Not sampled: well no longer part of sampling schedule						
	01/21/02			30.61	421.12	Not sampled: well no longer part of sampling schedule						
	07/19/02			**31.55**	**420.18**	**Not sampled: well no longer part of sampling schedule**						

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899 Rincon Avenue, Livermore, California

Well Number	Date Sampled		Well Elevation (feet, MSL)	Depth to Water (feet, TOC)	Groundwater Elevation (feet-MSL)	TPH-g (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethyl-benzene (µg/L)	Total Xylenes (µg/L)	MTBE (µg/L)	Dissolved Oxygen (mg/L)
MW-2	03/20/95	--	449.49	20.27	429.22	54,000	2,600	1,600	1,200	7,600	--	--
	06/02/95	--		22.32	427.17	37,000	2,200	800	980	4,800	--	--
	08/23/95	--		25.69	423.80	65,000	1,100	310	840	3,000	<500	--
	12/04/95	--		28.52	420.97	19,000	680	150	410	1,600	--	--
	02/20/96	--		19.00	430.49	22,000	1,200	240	590	2,200	<300	--
	05/15/96	--		20.03	429.46	25,000	1,200	240	610	2,100	<300	--
	08/13/96	--		24.44	425.05	19,000	640	110	420	1,200	<300	--
	11/13/96	--		28.42	421.07	15,000	260	52	220	640	<200	--
	03/26/97	--		22.98	426.51	17,000	580	120	360	980	<120	--
	05/15/97	--		25.40	424.09	18,000	420	63	340	730	<120	--
	08/26/97	--		28.38	421.11	5,300	210	26	140	270	<120	--
	11/05/97	--		31.93	417.56	560	42	3	7	9	<40	--
	02/18/98	--		16.87	432.62	18,000	710	120	480	1,100	130	--
	05/20/98	--		20.29	429.20	16,000	480	72	440	1,100	<120	--
	07/30/98	P		23.51	425.98	9,700	240	33	210	490	<120	9.2
	10/29/98	NP		30.08	419.41	58	<0.5	<0.5	<0.5	1	<3	1.0
	03/16/99	P		23.22	426.27	4,700	120	13	90	220	60	2.0
	05/05/99	P		24.05	425.44	5,500	58	7.1	58	98	17	9.09
	08/26/99	P		26.44	423.05	3,700	55	11	60	64	26	1.90
	12/03/99	NP		30.15	419.34	130	<0.5	<0.5	0.7	1.8	<3	1.96
	03/13/00	P		20.68	428.81	<50	<0.5	<0.5	<0.5	<1	<3	--
	06/20/00	P		23.08	426.41	226	2.20	<0.500	4.83	7.88	<2.50	4.90
	08/31/00	P		26.71	422.78	87.1	1.78	<0.500	1.33	1.15	<2.50	1.59
	02/09/01			29.65	419.84	Not sampled: well sampled annually, during the third quarter						
	09/17/01	P		27.62	421.87	3,100	300	12	8.8	18	120	1.70
	01/21/02			27.09	422.40	Not sampled: well sampled annually, during the third quarter						
	07/19/02	**P**		**27.82**	**421.67**	**4,700** [1]	**280**	**13**	**120**	**19**	**16**	**0.8**

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Well Number	Date Sampled		Well Elevation (feet, MSL)	Depth to Water (feet, TOC)	Groundwater Elevation (feet-MSL)	TPH-g (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethyl-benzene (µg/L)	Total Xylenes (µg/L)	MTBE (µg/L)	Dissolved Oxygen (mg/L)
MW-3	03/20/95	- -	450.28	22.19	428.09	94	<0.5	<0.5	<0.5	<0.5	- -	- -
	06/02/95	- -		23.28	427.00	72	<0.5	<0.5	<0.5	<0.5	- -	- -
	08/23/95	- -		26.55	423.73	98	<0.5	<0.5	<0.6	1	<3	- -
	12/04/95	- -		29.52	420.76	<50	<0.5	<0.5	<0.5	<0.5	- -	- -
	02/20/96	- -		19.83	430.45	130	<0.5	<0.5	<0.5	<0.5	<3	- -
	05/15/96	- -		21.03	429.25	120	<0.5	<0.5	<0.5	<0.5	<0.5	- -
	08/13/96	- -		25.67	424.61	<50	<0.5	<0.5	<0.5	<0.5	<3	- -
	11/13/96	- -		21.57	428.71	<50	<0.5	<0.5	<0.5	<0.5	<3	- -
	03/26/97	- -		24.15	426.13	<50	1	<0.5	<0.5	<0.5	<3	- -
	05/15/97	- -		26.85	423.43	<50	<0.5	<0.5	<0.5	<0.5	<3	- -
	08/26/97	- -		30.07	420.21	<50	<0.5	<0.5	<0.5	<0.5	<3	- -
	11/05/97	- -		32.46	417.82	<50	<0.5	1	<0.5	<0.5	<3	- -
	02/18/98	- -		17.82	432.46	<50	<0.5	<0.5	<0.5	<0.5	<3	- -
	05/20/98	- -		21.41	428.87	<50	<0.5	<0.5	<0.5	<0.5	<3	- -
	07/30/98	P		26.41	423.87	<50	<0.5	<0.5	<0.5	<0.5	<3	9.6
	10/29/98	P		31.33	418.95	<50	<0.5	<0.5	<0.5	<0.5	<3	1.0
	03/16/99	P		24.61	425.67	<50	<0.5	<0.5	<0.5	<0.5	<3	1.0
	05/05/99	P		25.75	424.53	140	<0.5	<0.5	0.6	<0.5	<3	4.43
	08/26/99	P		28.49	421.79	80	0.6	0.6	0.6	1	<3	1.69
	12/03/99	P		31.45	418.83	<50	<0.5	<0.5	<0.5	<1	<3	2.26
	03/13/00	P		22.18	428.10	<50	<0.5	<0.5	<0.5	<1	<3	4.41
	06/20/00	P		26.03	424.25	<50.0	<0.500	<0.500	<0.500	<0.500	<2.50	2.30
	08/31/00			28.75	421.53	Not sampled: well no longer part of sampling schedule						
	02/09/01			31.04	419.24	Not sampled: well no longer part of sampling schedule						
	09/17/01			29.04	421.24	Not sampled: well no longer part of sampling schedule						
	01/21/02			28.81	421.47	Not sampled: well no longer part of sampling schedule						
	07/19/02			**28.92**	**421.36**	**Not sampled: well no longer part of sampling schedule**						

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899 Rincon Avenue, Livermore, California

Well Number	Date Sampled		Well Elevation (feet, MSL)	Depth to Water (feet, TOC)	Groundwater Elevation (feet-MSL)	TPH-g (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethyl-benzene (µg/L)	Total Xylenes (µg/L)	MTBE (µg/L)	Dissolved Oxygen (mg/L)
MW-4	03/20/95	--	451.09	22.68	428.41	12,000	1,000	100	450	700	--	--
	06/02/95	--		24.41	426.68	9,000	850	56	380	430	--	--
	08/23/95	--		27.72	423.37	5,300	400	25	240	170	<100	--
	12/04/95	--		29.85	421.24	6,700	100	<10	90	38	--	--
	02/20/96	--		21.16	429.93	7,000	360	22	180	160	<70	--
	05/15/96			22.18	428.91	Not sampled: well sampled annually, during the first quarter						
	08/13/96			26.20	424.89	Not sampled: well sampled annually, during the first quarter						
	11/13/96			29.72	421.37	Not sampled: well sampled annually, during the first quarter						
	03/26/97	--		21.86	429.23	8,900	390	33	200	250	<70	--
	05/15/97			26.92	424.17	Not sampled: well sampled annually, during the first quarter						
	08/26/97			29.30	421.79	Not sampled: well sampled annually, during the first quarter						
	11/05/97			32.14	418.95	Not sampled: well sampled annually, during the first quarter						
	02/18/98	--		19.30	431.79	5,300	220	19	160	130	120	--
	05/20/98			22.40	428.69	Not sampled: well sampled annually, during the first quarter						
	07/30/98			25.74	425.35	Not sampled: well sampled annually, during the first quarter						
	10/29/98			31.26	419.83	Not sampled: well sampled annually, during the first quarter						
	03/16/99	P		25.05	426.04	1,900	49	<5	43	<5	82	1.5
	05/05/99			26.15	424.94	Not sampled: well sampled annually, during the first quarter						
	08/26/99			28.60	422.49	Not sampled: well sampled annually, during the first quarter						1.43
	12/03/99			31.53	419.56	Not sampled: well sampled annually, during the first quarter						
	03/13/00	P		23.61	427.48	<50	<0.5	<0.5	<0.5	<1	<3	3.82
	06/20/00			26.38	424.71	Not sampled: well sampled annually, during the first quarter						0.40
	08/31/00	NP		29.55	421.54	<50.0	<0.500	<0.500	<0.500	<0.500	<2.50	1.04
	02/09/01	NP		30.30	420.79	<50.0	<0.500	<0.500	<0.500	<0.500	<2.50	1.39
	09/17/01	NP		29.90	421.19	3,400	51	<5.0	16	23	360	0.92
	01/21/02	NP		29.51	421.58	1,900	140	12	27	48	300	1.03
	07/19/02	**NP**		**30.77**	**420.32**	**2,700** [1]	**150**	**9.9**	**<5.0**	**<5.0**	**130**	**1.0**

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Well Number	Date Sampled		Well Elevation (feet, MSL)	Depth to Water (feet, TOC)	Groundwater Elevation (feet-MSL)	TPH-g (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethyl-benzene (µg/L)	Total Xylenes (µg/L)	MTBE (µg/L)	Dissolved Oxygen (mg/L)
MW-5	03/20/95	--	451.40	23.20	428.20	26,000	1,300	180	890	2,900	--	--
	06/02/95	--		24.80	426.60	39,000	940	160	740	1,900	--	--
	08/23/95	--		28.10	423.30	14,000	490	74	250	890	<300	--
	12/04/95	--		29.83	421.57	7,600	230	13	61	80	--	--
	02/20/96	--		21.63	429.77	4,300	220	12	45	130	<50	--
	05/15/96	--		22.87	428.53	2,200	380	17	58	84	<40	--
	08/13/96	--		26.48	424.92	1,700	150	16	24	35	47	--
	11/13/96	--		29.68	421.72	850	150	11	19	37	66	--
	03/26/97	--		25.14	426.26	2,400	440	21	79	210	68	--
	05/15/97	--		27.38	424.02	3,900	510	19	140	240	48	--
	08/26/97	--		29.89	421.51	76	5	<0.5	2	2	9	--
	11/05/97	--		32.57	418.83	63	1	<0.5	<0.5	1	34	--
	02/18/98	--		19.99	431.41	6,200	630	70	320	640	320	--
	05/20/98	--		23.21	428.19	2,300	340	21	110	140	62	--
	07/30/98	P		26.19	425.21	<50	1	<0.5	1	1	<3	8.8
	10/29/98	NP		31.92	419.48	<50	<0.5	<0.5	<0.5	<0.5	<3	2.0
	03/16/99	P		25.80	425.60	1,300	170	8	59	65	120	2.0
	05/05/99	P		27.09	424.31	320	31	1.1	13	13	19	12.09
	08/26/99	P		29.67	421.73	260	13	1.7	4.2	6.3	150	1.31
	12/03/99			Not surveyed: well inaccessible								
	03/13/00	P		24.51	426.89	<50	<0.5	<0.5	<0.5	<1	<3	4.41
	06/20/00	P		27.37	424.03	60.8	4.84	<0.500	1.90	1.59	<2.50	5.30
	08/31/00	P		30.21	421.19	<50.0	1.18	<0.500	<0.500	<0.500	3.83	0.97
	02/09/01			30.19	421.21	Well sampled annually during the third quarter						
	09/17/01	P		30.71	420.69	2,700	120	10	90	77	330	0.81
	01/21/02			30.40	421.00	Well sampled annually during the third quarter						
	07/19/02	**P**		**31.93**	**419.47**	**1,600** [1]	**170**	**7.0**	**120**	**<5.0**	**180**	**1.7**

Table 1
Groundwater Elevation and Analytical Data**

ARCO Service Station # 0771
899 Rincon Avenue, Livermore, California

Well Number	Date Sampled		Well Elevation (feet, MSL)	Depth to Water (feet, TOC)	Groundwater Elevation (feet-MSL)	TPH-g (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethyl-benzene (µg/L)	Total Xylenes (µg/L)	MTBE (µg/L)	Dissolved Oxygen (mg/L)
MW-6	03/20/95	--	451.37	25.19	426.18	2,600	210	87	82	140	--	--
	06/02/95	--		25.75	425.62	1,600	55	8	40	26	--	--
	08/23/95	--		29.53	421.84	1,400	42	3	36	13	<20	--
	12/04/95	--		32.28	419.09	2,500	52	6	59	13	--	--
	02/20/96	--		22.27	429.10	2,500	120	16	73	12	<30	--
	05/15/96	--		23.86	427.51	2,000	71	6	47	25	<15	--
	08/13/96	--		28.55	422.82	3,800	91	8	69	25	<20	--
	11/13/96	--		32.04	419.33	1,900	55	3	55	9	16	--
	03/26/97	--		26.84	424.53	1,800	51	5	32	15	<30	--
	05/15/97	--		29.58	421.79	2,400	46	3	29	9	<12	--
	08/26/97	--		32.67	418.70	1,400	61	6	33	10	<12	--
	11/05/97	--		34.62	416.75	690	29	3	18	3	9	--
	02/18/98	--		20.09	431.28	1,800	74	5	24	12	19	--
	05/20/98	--		24.05	427.32	1,900	280	4	31	16	9	--
	07/30/98	P		28.72	422.65	2,300	110	7	36	20	<15	--
	10/29/98	P		32.77	418.60	2,500	14	13	17	12	<12	1.0
	03/16/99	P		26.45	424.92	1,200	65	4	27	13	18	0.5
	05/05/99	P		27.86	423.51	2,200	53	4	26	6	25	5.59
	08/26/99	P		30.49	420.88	1,100	11	6	10	4	13	2.35
	12/03/99	P		32.35	419.02	370	<0.5	<0.5	0.8	<1	4	2.36
	03/13/00	P		28.36	423.01	54	2.1	0.5	0.9	1.4	<3	4.22
	06/20/00	P		28.35	423.02	195	1.83	<0.500	0.528	<0.500	<2.50	3.50
	08/31/00	P		30.20	421.17	276	3.52	0.788	1.15	0.621	8.73	7.00
	02/09/01	P		30.70	420.67	253	5.44	2.93	0.924	0.977	48.9	0.59
DUP	02/09/01	--	--	--	--	222	4.49	2.73	0.579	0.523	57.1	--
	09/17/01	P		30.94	420.43	<50	<0.50	<0.50	<0.50	<0.50	<2.5	2.79
DUP	09/17/01	--	--	--	--	<50	<0.50	<0.50	<0.50	<0.50	<2.5	--
	01/21/02	P		30.55	420.82	<50	<0.50	<0.50	<0.50	<0.50	<5.0	1.90
	07/19/02	**P**		**30.27**	**421.10**	**60 [1]**	**2.0**	**<0.50**	**<0.50**	**<0.50**	**<0.50**	**3.5**

Table 1
Groundwater Elevation and Analytical Data**

ARCO Service Station # 0771
899 Rincon Avenue, Livermore, California

Well Number	Date Sampled		Well Elevation (feet, MSL)	Depth to Water (feet, TOC)	Groundwater Elevation (feet-MSL)	TPH-g (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethyl-benzene (µg/L)	Total Xylenes (µg/L)	MTBE (µg/L)	Dissolved Oxygen (mg/L)
MW-7	03/20/95	--	450.33	22.07	428.26	31,000	2,300	400	620	2,900	--	--
	06/02/95	--		23.42	426.91	40,000	1,400	280	610	2,400	--	--
	08/23/95	--		27.13	423.20	25,000	1,400	200	600	1,600	350	--
	12/04/95	--		29.45	420.88	23,000	1,100	74	490	720	--	--
	02/20/96	--		20.25	430.08	39,000	1,200	140	640	1,800	<400	--
	05/15/96			21.38	428.95	Not sampled: well sampled annually, during the first quarter						
	08/13/96			25.52	424.81	Not sampled: well sampled annually, during the first quarter						
	11/13/96			29.38	420.95	Not sampled: well sampled annually, during the first quarter						
	03/26/97	--		24.36	425.97	35,000	1,100	180	460	1,700	<300	--
	05/15/97			26.90	423.43	Not sampled: well sampled annually, during the first quarter						
	08/26/97			30.21	420.12	Not sampled: well sampled annually, during the first quarter						
	11/05/97			32.49	417.84	Not sampled: well sampled annually, during the first quarter						
	02/18/98	--		18.10	432.23	19,000	1,100	120	460	1,700	240	--
	05/20/98			21.68	428.65	Not sampled: well sampled annually, during the first quarter						
	07/30/98			26.07	424.26	Not sampled: well sampled annually, during the first quarter						
	10/29/98			31.13	419.20	Not sampled: well sampled annually, during the first quarter						
	03/16/99	P		24.45	425.88	8,600	430	51	200	680	<120	1.5
	05/05/99			25.84	424.49	Not sampled: well sampled annually, during the first quarter						
	08/26/99			28.28	422.05	Not sampled: well sampled annually, during the first quarter						1.51
	12/03/99			31.57	418.76	Not sampled: well sampled annually, during the first quarter						
	03/13/00			Not surveyed: well inaccessible								
	06/20/00			25.91	424.42	Not sampled: well sampled annually, during the first quarter						5.40
	08/31/00			28.40	421.93	8,410	344	58.9	276	581	202	0.09
	02/09/01			30.04	420.29	2,030	203	12.0	17.9	49.4	128	1.55
	09/17/01	P		29.03	421.30	4,800	200	14	9.9	27	160	0.29
	01/21/02	P		28.98	421.35	4,200	350	20	52	63	99	0.81
DUP	01/21/02		--	--	--	2,600	280	17	41	50	97	
	07/19/02	**P**		**28.70**	**421.63**	**5,700** [1]	**630**	**31**	**330**	**160**	**64**	**0.7**

Table 1
Groundwater Elevation and Analytical Data**

ARCO Service Station # 0771
899 Rincon Avenue, Livermore, California

Well Number	Date Sampled		Well Elevation (feet, MSL)	Depth to Water (feet, TOC)	Groundwater Elevation (feet-MSL)	TPH-g (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethyl-benzene (µg/L)	Total Xylenes (µg/L)	MTBE (µg/L)	Dissolved Oxygen (mg/L)
MW-8	03/20/95	- -	449.43	24.75	424.68	<50	<0.5	<0.5	<0.5	<0.5	- -	- -
	06/02/95			24.95	424.48	Not sampled: well sampled semi-annually, during the first and third quarters						
	08/23/95	- -		30.94	418.49	<50	<0.5	<0.5	<0.5	<0.5	<3	- -
	12/04/95			31.99	417.44	Not sampled: well sampled semi-annually, during the first and third quarters						
	02/20/96	- -		21.13	428.30	<50	<0.5	<0.5	<0.5	<0.5	<3	- -
	05/15/96			21.96	427.47	Not sampled: well sampled semi-annually, during the first and third quarters						
	08/13/96	- -		30.20	419.23	<50	<0.5	<0.5	<0.5	<0.5	<3	- -
	11/13/96			33.24	416.19	Not sampled: well sampled semi-annually, during the first and third quarters						
	03/26/97	- -		26.85	422.58	<50	<0.5	<0.5	<0.5	<0.5	<3	- -
	05/15/97			29.69	419.74	Not sampled: well sampled semi-annually, during the first and third quarters						
	08/26/97	- -		34.00	415.43	<50	<0.5	<0.5	<0.5	<0.5	<3	- -
	11/05/97			35.94	413.49	Not sampled: well sampled semi-annually, during the first and third quarters						
	02/18/98	- -		18.18	431.25	<50	1	1	<0.5	1	<3	- -
	05/20/98			22.85	426.58	Not sampled: well sampled semi-annually, during the first and third quarters						
	07/30/98	NP		30.31	419.12	<50	<0.5	<0.5	<0.5	<0.5	<3	8.2
	10/29/98			35.88	413.55	Not sampled: well sampled semi-annually, during the first and third quarters						
	03/16/99	NP		28.50	420.93	<50	<0.5	<0.5	<0.5	<0.5	<3	1.0
	05/05/99			29.76	419.67	Not sampled: well sampled semi-annually, during the first and third quarters						
	08/26/99	P		33.51	415.92	<50	<0.5	<0.5	<0.5	<0.5	<3	4.93
	12/03/99			35.83	413.60	Not sampled: well sampled semi-annually, during the first and third quarters						
	03/13/00	P		26.12	423.31	<50	<0.5	<0.5	<0.5	<1	<3	2.81
	06/20/00			30.91	418.52	Not sampled: well sampled semi-annually						5.80
	08/31/00			33.70	415.73	Not sampled: well no longer part of sampling schedule						
	02/09/01			30.90	418.53	Not sampled: well no longer part of sampling schedule						
	09/17/01			33.95	415.48	Not sampled: well no longer part of sampling schedule						
	01/21/02			33.71	415.72	Not sampled: well no longer part of sampling schedule						
	07/19/02			**35.30**	**414.13**	**Not sampled: well no longer part of sampling schedule**						

Table 1
Groundwater Elevation and Analytical Data**

ARCO Service Station # 0771
899 Rincon Avenue, Livermore, California

Well Number	Date Sampled		Well Elevation (feet, MSL)	Depth to Water (feet, TOC)	Groundwater Elevation (feet-MSL)	TPH-g (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethyl-benzene (µg/L)	Total Xylenes (µg/L)	MTBE (µg/L)	Dissolved Oxygen (mg/L)
MW-9	03/20/95	--	449.21	19.11	430.10	<50	<0.5	<0.5	<0.5	<0.5	--	--
	06/02/95			21.23	427.98	Not sampled: well sampled semi-annually, during the first and third quarters						
	08/23/95	--		24.33	424.88	<50	<0.5	<0.5	<0.5	<0.5	<3	--
	12/04/95			27.90	421.31	Not sampled: well sampled semi-annually, during the first and third quarters						
	02/20/96	--		17.86	431.35	<50	<0.5	<0.5	<0.5	<0.5	<3	--
	05/15/96			18.69	430.52	Not sampled: well sampled annually, during the first quarter						
	08/13/96			24.17	425.04	Not sampled: well sampled annually, during the first quarter						
	11/13/96			28.01	421.20	Not sampled: well sampled annually, during the first quarter						
	03/26/97	--		22.58	426.63	<50	<0.5	<0.5	<0.5	<0.5	<3	--
	05/15/97			25.12	424.09	Not sampled: well sampled annually, during the first quarter						
	08/26/97			28.28	420.93	Not sampled: well sampled annually, during the first quarter						
	11/05/97			31.18	418.03	Not sampled: well sampled annually, during the first quarter						
	02/18/98	--		16.03	433.18	<50	1	1	<0.5	1	<3	--
	05/20/98			19.31	429.90	Not sampled: well sampled annually, during the first quarter						
	07/30/98			24.90	424.31	Not sampled: well sampled annually, during the first quarter						
	10/29/98			30.08	419.13	Not sampled: well sampled annually, during the first quarter						
	03/16/99	P		22.68	426.53	<50	<0.5	<0.5	<0.5	<0.5	<3	1.0
	05/05/99			23.82	425.39	Not sampled: well sampled annually, during the first quarter						
	08/26/99			26.57	422.64	Not sampled: well sampled annually, during the first quarter						
	12/03/99			Not surveyed: well inaccessible								5.08
	03/13/00	P		25.62	423.59	<50	<0.5	<0.5	<0.5	<1	<3	5.43
	06/20/00			23.55	425.66	Not sampled: well sampled annually, during the first quarter						6.20
	08/31/00			27.39	421.82	Not sampled: well no longer part of sampling schedule						
	02/09/01			28.65	420.56	Not sampled: well no longer part of sampling schedule						
	09/17/01			27.51	421.70	Not sampled: well no longer part of sampling schedule						
	01/21/02			27.09	422.12	Not sampled: well no longer part of sampling schedule						
	07/19/02			**27.06**	**422.15**	**Not sampled: well no longer part of sampling schedule**						

Table 1
Groundwater Elevation and Analytical Data**

ARCO Service Station # 0771
899 Rincon Avenue, Livermore, California

Well Number	Date Sampled		Well Elevation (feet, MSL)	Depth to Water (feet, TOC)	Groundwater Elevation (feet-MSL)	TPH-g (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethyl-benzene (µg/L)	Total Xylenes (µg/L)	MTBE (µg/L)	Dissolved Oxygen (mg/L)
MW-10	03/20/95		449.22	20.96	428.26	Not sampled: well sampled annually, during the third quarter						
	06/02/95			22.15	427.07	Not sampled: well sampled annually, during the third quarter						
	08/23/95	--		24.47	424.75	<50	<0.5	<0.5	<0.5	<0.5	<3	--
	12/04/95			26.97	422.25	Not sampled: well sampled annually, during the third quarter						
	02/20/96	--		18.40	430.82	<50	<0.5	<0.5	<0.5	<0.5	<3	--
	05/15/96			--	--	Not surveyed: vehicle was parked on well						
	08/13/96			23.70	425.52	Not sampled: well sampled annually, during the first quarter						
	11/13/96			27.15	422.07	Not sampled: well sampled annually, during the first quarter						
	03/26/97	--		22.23	426.99	<50	<0.5	<0.5	<0.5	<0.5	<3	--
	05/15/97			24.57	424.65	Not sampled: well sampled annually, during the first quarter						
	08/26/97			27.62	421.60	Not sampled: well sampled annually, during the first quarter						
	11/05/97			30.79	418.43	Not sampled: well sampled annually, during the first quarter						
	02/18/98			--	--	Not surveyed: vehicle was parked on well						
	05/20/98			--	--	Not sampled: well sampled annually, during the first quarter						
	07/30/98			23.90	425.32	Not sampled: well sampled annually, during the first quarter						
	10/29/98			30.55	418.67	Not sampled: well sampled annually, during the first quarter						
	03/16/99	P		23.05	426.17	<50	<0.5	<0.5	<0.5	<0.5	<3	1.0
	05/05/99			24.00	425.22	Not sampled: well sampled annually, during the first quarter						
	08/26/99			26.50	422.72	Not sampled: well sampled annually, during the first quarter						5.15
	12/03/99			30.80	418.42	Not sampled: well sampled annually, during the first quarter						
	03/13/00			26.21	423.01	Not sampled: vehicle was parked on well						
	06/20/00			23.52	425.70	Not sampled: well sampled annually, during the first quarter						5.5
	08/31/00			27.52	421.70	Not sampled: well no longer part of sampling schedule						
	02/09/01			28.71	420.51	Not sampled: well no longer part of sampling schedule						
	09/17/01			27.94	421.28	Not sampled: well no longer part of sampling schedule						
	01/21/02			27.44	421.78	Not sampled: well no longer part of sampling schedule						
	07/19/02			**27.80**	**421.42**	**Not sampled: well no longer part of sampling schedule**						

Table 1
Groundwater Elevation and Analytical Data**

ARCO Service Station # 0771
899 Rincon Avenue, Livermore, California

Well Number	Date Sampled		Well Elevation (feet, MSL)	Depth to Water (feet, TOC)	Groundwater Elevation (feet-MSL)	TPH-g (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethyl-benzene (µg/L)	Total Xylenes (µg/L)	MTBE (µg/L)	Dissolved Oxygen (mg/L)
MW-11	03/20/95	--	448.02	25.02	423.00	<50	<0.5	<0.5	<0.5	<0.5	--	--
	06/02/95			23.82	424.20	Not sampled: well sampled semi-annually, during the first and third quarters						
	08/23/95	--		30.15	417.87	<50	<0.5	<0.5	<0.5	<0.5	<3	--
	12/04/95			31.63	416.39	Not sampled: well sampled semi-annually, during the first and third quarters						
	02/20/96	--		20.94	427.08	<50	<0.5	<0.5	<0.5	<0.5	<3	--
	05/15/96			23.03	424.99	Not sampled: well sampled semi-annually, during the first and third quarters						
	08/13/96	--		29.19	418.83	<50	<0.5	<0.5	<0.5	<0.5	<3	--
	11/13/96			31.96	416.06	Not sampled: well sampled semi-annually, during the first and third quarters						
	03/26/97	--		26.61	421.41	<50	<0.5	<0.5	<0.5	<0.5	<3	--
	05/15/97			29.39	418.63	Not sampled: well sampled semi-annually, during the first and third quarters						
	08/26/97	--		33.47	414.55	<50	<0.5	<0.5	<0.5	<0.5	<3	--
	11/05/97			35.12	412.90	Not sampled: well sampled semi-annually, during the first and third quarters						
	02/18/98	--		18.03	429.99	<50	<0.5	<0.5	<0.5	1	<3	--
	05/20/98			23.00	425.02	Not sampled: well sampled semi-annually, during the first and third quarters						
	07/30/98	P		29.30	418.72	<50	<0.5	<0.5	<0.5	<0.5	<3	5.6
	10/29/98			34.47	413.55	Not sampled: well sampled semi-annually, during the first and third quarters						
	03/16/99	P		27.88	420.14	<50	<0.5	<0.5	<0.5	<0.5	<3	1.0
	05/05/99			26.85	421.17	Not sampled: well sampled semi-annually, during the first and third quarters						
	08/26/99	P		32.74	415.28	<50	<0.5	<0.5	<0.5	<0.5	<3	4.59
	12/03/99			34.70	413.32	Not sampled: well sampled semi-annually, during the first and third quarters						
	03/13/00	P		25.94	422.08	<50	<0.5	<0.5	<0.5	<1	<3	3.21
	06/20/00			30.40	417.62	Not sampled: well sampled semi-annually, during the first and third quarters						3.30
DUP	08/31/00	--	--	--	--	<50.0	<0.500	<0.500	<0.500	<0.500	<2.50	--
	08/31/00	NP		32.68	415.34	<50.0	<0.500	<0.500	<0.500	<0.500	<2.50	0.40
	02/09/01			31.17	416.85	Not sampled: well sampled annually, during the third quarter						
	09/17/01	NP		32.98	415.04	<50	<0.50	<0.50	<0.50	<0.50	<2.5	0.62
	01/21/02			31.05	416.97	Not sampled: well sampled annually, during the third quarter						
	07/19/02	**P**		**31.67**	**416.35**	**<50**	**<0.50**	**<0.50**	**<0.50**	**<0.50**	**<0.50**	**3.7**

Table 1
Groundwater Elevation and Analytical Data**

ARCO Service Station # 0771
899 Rincon Avenue, Livermore, California

Well Number	Date Sampled		Well Elevation (feet, MSL)	Depth to Water (feet, TOC)	Groundwater Elevation (feet-MSL)	TPH-g (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethyl-benzene (µg/L)	Total Xylenes (µg/L)	MTBE (µg/L)	Dissolved Oxygen (mg/L)
RW-1	03/20/95	--	451.67	23.76	427.91	15,000	1,000	140	310	950	--	--
	06/02/95	--		25.12	426.55	12,000	1,300	280	420	1,100	--	--
	08/23/95	--		28.80	422.87	8,200	520	190	240	610	<50	--
	12/04/95	--		31.15	420.52	2,600	140	59	83	210	--	--
	02/20/96	--		21.45	430.22	6,300	410	160	180	650	<40	--
	05/15/96			22.97	428.70	Not sampled: well sampled annually, during the first quarter						
	08/13/96			24.74	426.93	Not sampled: well sampled annually, during the first quarter						
	11/13/96			30.69	420.98	Not sampled: well sampled annually, during the first quarter						
	03/26/97	--		25.69	425.98	500	57	3	6	18	54	--
	05/15/97			28.19	423.48	Not sampled: well sampled annually, during the first quarter						
	08/26/97			31.21	420.46	Not sampled: well sampled annually, during the first quarter						
	11/05/97			33.67	418.00	Not sampled: well sampled annually, during the first quarter						
	02/18/98	--		20.14	431.53	9,400	200	70	190	710	<60	--
	05/20/98			23.43	428.24	Not sampled: well sampled annually, during the first quarter						
	07/30/98			27.42	424.25	Not sampled: well sampled annually, during the first quarter						
	10/29/98			32.47	419.20	Not sampled: well sampled annually, during the first quarter						
	03/16/99	NP		25.45	426.22	1,100	140	19	45	83	530	1.0
	05/05/99			27.23	424.44	Not sampled: well sampled annually, during the first quarter						
	08/26/99			29.98	421.69	Not sampled: well sampled annually, during the first quarter						1.39
	12/03/99			32.38	419.29	Not sampled: well sampled annually, during the first quarter						
	03/13/00	NP		25.53	426.14	1,100	130	3.5	0.7	95	230	4.43
	06/20/00			28.31	423.36	Not sampled: well sampled annually, during the first quarter						1.90
	08/31/00	NP		30.61	421.06	<50.0	<0.500	<0.500	<0.500	<0.500	82.5	3.21
	02/09/01	NP		31.14	420.53	<50.0	<0.500	<0.500	<0.500	<0.500	<2.50	0.84
	09/17/01	NP		31.70	419.97	<50	<0.50	<0.50	<0.50	<0.50	<2.5	1.51
	01/21/02	NP		30.15	421.52	<50	7.7	<0.50	<0.50	1.5	18	0.63
	07/19/02	**NP**		**31.15**	**420.52**	**<50**	**<0.50**	**<0.50**	**<0.50**	**<0.50**	**13**	**1.4**

Table 1
Groundwater Elevation and Analytical Data**

ARCO Service Station # 0771
899 Rincon Avenue, Livermore, California

Well Number	Date Sampled		Well Elevation (feet, MSL)	Depth to Water (feet, TOC)	Groundwater Elevation (feet-MSL)	TPH-g (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethyl-benzene (µg/L)	Total Xylenes (µg/L)	MTBE (µg/L)	Dissolved Oxygen (mg/L)
VW-1	08/31/00	P	--	20.61	--	<50.0	<0.500	<0.500	<0.500	<0.500	<2.50	10.08
	02/09/01	P	--	22.10	--	<50.0	<0.500	<0.500	<0.500	<0.500	<2.50	0.53
	09/17/01	P	--	21.99	--	<50	<0.50	<0.50	<0.50	<0.50	<2.5	6.59
	01/21/02	P	--	21.50	--	<50	<0.50	<0.50	<0.50	<0.50	<5.0	0.70
	07/19/02	**P**		**22.42**		**<50**	**<0.50**	**<0.50**	**<0.50**	**<0.50**	**<0.50**	**4.9**

Notes

Note: Fuel oxygenate compounds (including methyl tertiary butyl ether (MTBE), di-isopropyl ether (DIPE), ethyl tertiary butyl ether (ETBE), tertiary amyl methyl ether (TAME) and tertiary butyl alcohol (TBA) analyzed using EPA Method 8260B.

TPH-g = Total petroleum hydrocarbons as gasoline analyzed using EPA Method 8015B modified
BTEX = Benzene, toluene, ethly benzene, and total xylenes analyzed using EPA Method8021B
* = EPA method 8020 prior to 12/03/99
µg/L = Micrograms per liter
mg/L = Milligrams per liter
-- = Not analyzed or not applicable
< = Less than laboratory detection limit stated to the right
DUP = Duplicate
MSL = Mean sea level
TOC = Top of casing
P = Purge
NP = No purge
1 = Chromatogram Pattern: Gasoline C6-C10
** For previous historical groundwater elevation and analytical data please refer to Fourth Quarter 1995 Groundwater Monitoring Program Results and Remediation System Performance Evaluation Report, ARCO Service Station 771, Livermore, California, (EMCON, March 1, 1996).

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

Table 2
Groundwater Flow Direction and Gradient

ARCO Service Station # 771
899 Rincon Avenue, Livermore, California

Date Measured	Average Flow Direction	Average Hydraulic Gradient
03/20/95	Northwest	0.03
06/02/95	North-Northwest	0.014
08/23/95	North-Northwest	0.03
12/04/95	North-Northwest	0.03
02/20/96	Northwest	0.016
05/15/96	Northwest	0.024
08/13/96	North-Northwest	0.03
11/13/96	North-Northwest	0.031
03/26/97	North-Northwest	0.044
05/15/97	North-Northwest	0.031
08/26/97	North-Northwest	0.042
11/05/97	North-Northwest	0.03
02/18/98	Northwest	0.01
05/20/98	Northwest	0.03
07/30/98	North	0.04
10/29/98	North	0.005
03/16/99	North-Northwest	0.03
05/05/99	North	0.04
08/26/99	North-Northwest	0.05
12/03/99	North-Northeast	0.06
03/13/00	North-Northwest	0.066
06/20/00	North-Northwest	0.050
08/31/00	North-Northwest	0.062
02/09/01	North-Northeast	0.014
09/17/01	North-Northwest	0.061
01/21/02	North-Northwest	0.050
07/19/02	**North-Northwest**	**0.044**

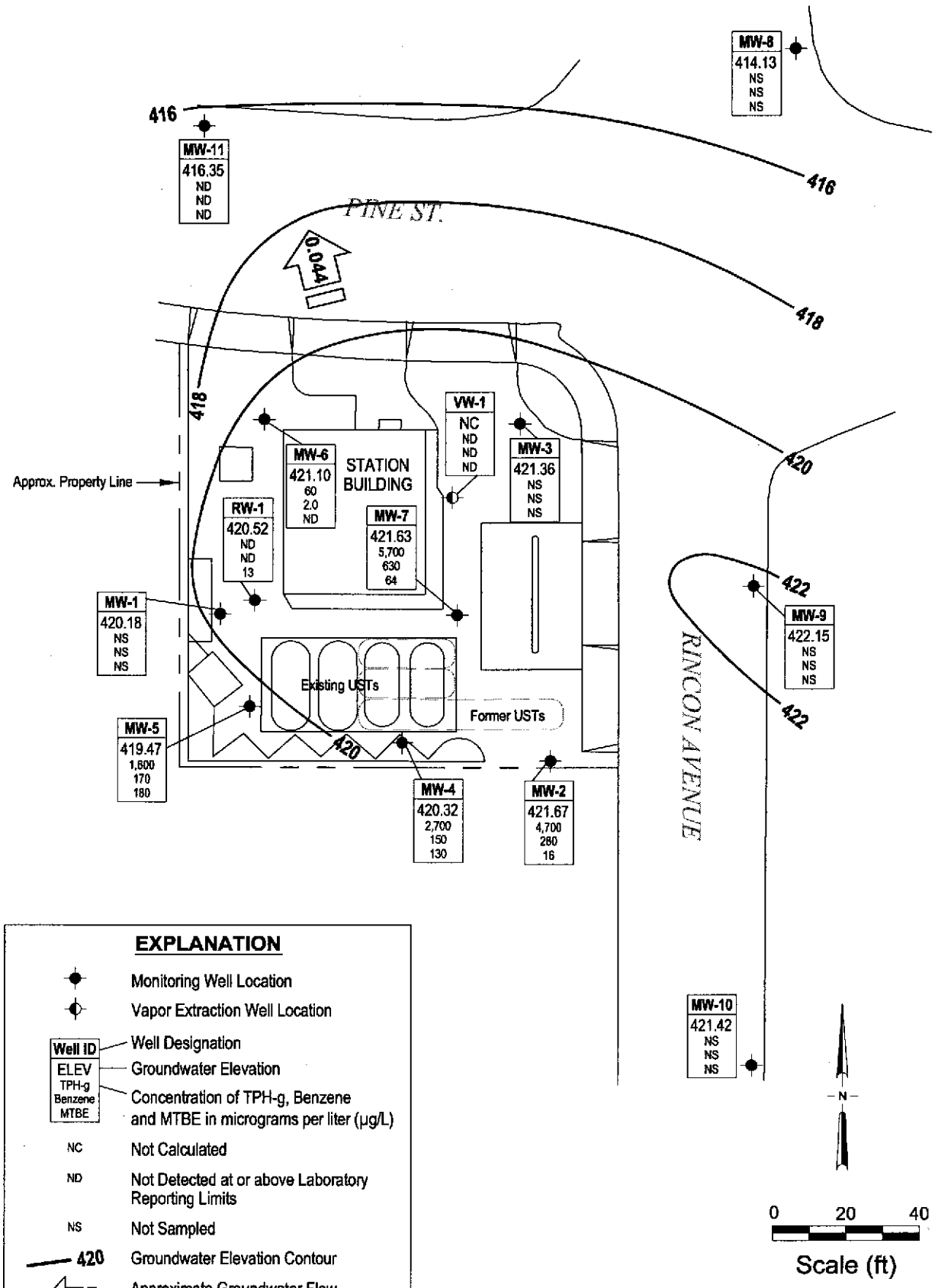
The data within this table collected prior to July 2002 was provided to URS by BP Group Environmental Management Company and their previous consultants. URS has not verified the accuracy of this information.

Table 3
Oxygen Analyte Table

ARCO Service Station # 0771
899 Rincon Avenue, 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-Dichloro-ethane (µg/L)	Ethylene Dibromide (µg/L)
MW-2	07/19/02	ND<400	ND<100	**16**	ND<2.5	ND<2.5	ND<2.5	ND<2.5	ND<2.5
MW-4	07/19/02	ND<400	**720**	**130**	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
MW-5	07/19/02	ND<400	**820**	**180**	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
MW-6	07/19/02	ND<40	ND<20	ND<0.5	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50
MW-7	07/19/02	ND<400	**280**	**64**	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
MW-11	07/19/02	ND<40	ND<20	ND<0.5	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50
RW-1	07/19/02	ND<40	ND<20	**13**	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50
VW-1	07/19/02	ND<40	ND<20	ND<0.5	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50

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
µg/L = micrograms per liter



EXPLANATION

- Monitoring Well Location
- Vapor Extraction Well Location
- Well ID / ELEV / TPH-g / Benzene / MTBE — Well Designation; Groundwater Elevation; Concentration of TPH-g, Benzene and MTBE in micrograms per liter (µg/L)
- NC — Not Calculated
- ND — Not Detected at or above Laboratory Reporting Limits
- NS — Not Sampled
- 420 — Groundwater Elevation Contour
- 0.044 — Approximate Groundwater Flow Direction and Gradient

URS	Project No. 38465892 ARCO Service Station 0771 899 Rincon Avenue Livermore, California	GROUNDWATER ELEVATION CONTOUR AND ANALYTICAL SUMMARY MAP Third Quarter 2002 (July 19, 2002)	FIGURE 1

X:\x_env\waste\BP GEMSites\Scott Robinson\Paul Supple\0771\Reports\Monitoring\Qtr. 3, 2002\Drawings\GWEC-AS_7-19.dwg

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 # 020719-B41 Date 7/19/02 Client Arco 771

Site 899 Rincon Ave, Livermore

	Well ID	Well Size (in.)	Sheen / Odor	Depth to Immiscible Liquid (ft.)	Thickness of Immiscible Liquid (ft.)	Volume of Immiscibles Removed (ml)	Depth to water (ft.)	Depth to well bottom (ft.)	Survey Point: TOB or TOC	
	MW-1	4					31.55	36.85	TOC	EXT
7	MW-2	4					27.82	34.19		EXT DEDICATED TUBE
	MW-3	4					28.92	39.59		
5	MW-4	4					30.77	41.25		EXT NP@26'
6	MW-5	4					31.93	40.18		EXT
2	MW-6	4					30.27	43.22		
8	MW-7	4					28.70	39.67		EXT DEDICATED TUBE
	MW-8	2					35.30	41.50		
	MW-9	2					27.06	39.05		
	MW-10	2					27.80	36.27		
1	MW-11	2					31.67	38.59		TRAFFIC CONTROL
4	RW-1	6					31.15	39.75		EXT NP@25.5'
3	VW-1	4					22.42	28.18		EXT

ARCO / BP WELL MONITORING DATA SHEET

BTS #: 020719-BH1	Station # 771
Sampler: Brian Alcorn	Date: 7/19/02
Well I.D.: MW-2	Well Diameter: 2 3 (4) 6 8 ____
Total Well Depth: 34.19	Depth to Water: 27.82
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	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.

4.1 (1 Case Volume (Gals.)) X 3 (Specified Volumes) = 12.3 (Calculated Volume) Gals.

Time	Temp (°F)	pH	Conductivity (mS or (µS))	Gals. Removed	Observations
1145	76.6	7.5	1149	4	clear
1146	72.7	7.2	1192	8	clear grey
1147	71.8	7.4	1214	10	"
DEWATERED DURING THIRD CASE VOLUME - SAMPLES TAKEN AS NORMAL					

Did well dewater? (Yes) No — Gallons actually evacuated: 10

Sampling Time: 1155 — Sampling Date: 7/19/02

Sample I.D.: MW-2 — Laboratory: Pace (Sequoia) Other _____

Analyzed for: (TPH-G) BTEX (MTBE) TPH-D Other: Oxygenates - MTBE, TBA, DIPE, ETBE, TAME

D.O. (if req'd):	Pre-purge:		mg/L	Post-purge:	0.9 mg/L
O.R.P. (if req'd):	Pre-purge:		mV	Post-purge:	mV

ARCO / BP WELL MONITORING DATA SHEET

BTS #: 020719-BA1	Station # 771
Sampler: Blaine Acosta	Date: 7/19/02
Well I.D.: MW-4	Well Diameter: 2 3 (4) 6 8 ____
Total Well Depth: 41.25	Depth to Water: 30.77
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: 26' 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	Specified Volumes	=	Calculated Volume
Ø	X	3	=	Ø Gals.

Time	Temp (°F)	pH	Conductivity (mS or (µS))	Gals. Removed	Observations
1100	71.7	7.3	1179	Ø	clear mild odor

Did well dewater? Yes (No)		Gallons actually evacuated: Ø	
Sampling Time: 1100		Sampling Date: 7/19/02	
Sample I.D.: MW-4		Laboratory: Pace (Sequoia) Other ____	
Analyzed for: (TPH-G) BTEX MTBE TPH-D	Other: Oxygenates - MTBE, TBA, DIPE, ETBE, TAME		
D.O. (if req'd):	Pre-purge: ____ mg/L	Post-purge: 1.0	mg/L
O.R.P. (if req'd):	Pre-purge: ____ mV	Post-purge:	mV

ARCO / BP WELL MONITORING DATA SHEET

BTS #: 020719-BA1	Station # 771
Sampler: Brian Alcorn	Date: 7/19/02
Well I.D.: MW5	Well Diameter: 2 3 (4) 6 8 ____
Total Well Depth: 40.18	Depth to Water: 31.93
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.

5.4 (1 Case Volume (Gals.)) X 3 (Specified Volumes) = 16.2 (Calculated Volume) Gals.

Time	Temp (°F)	pH	Conductivity (mS or (µS))	Gals. Removed	Observations
1120	74.1	7.3	1145	5.5	clear mild odor
1121	70.7	7.2	1132	11	"
1122	71.0	7.2	1139	15	"
DEWATERED DURING THIRD CASE VOLUME - SAMPLE TAKEN AS NORMAL					

Did well dewater? (Yes) No — Gallons actually evacuated: 15

Sampling Time: 1130 — Sampling Date: 7/19/02

Sample I.D.: MW-5 — Laboratory: Pace (Sequoia) Other ____

Analyzed for: (TPH-G) BTEX (MTBE) TPH-D Other: Oxygenates - MTBE, TBA, DIPE, ETBE, TAME

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

ARCO / BP WELL MONITORING DATA SHEET

BTS #: 020719-BA1	Station # 771
Sampler: Brian Allgeier	Date: 7/19/02
Well I.D.: MW-6	Well Diameter: 2 3 (4) 6 8 ___
Total Well Depth: 43.22	Depth to Water: 30.27
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.

8.4 (1 Case Volume (Gals.)) X 3 (Specified Volumes) = 25.2 (Calculated Volume) Gals.

Time	Temp (°F)	pH	Conductivity (mS or (µS))	Gals. Removed	Observations
0926	69.4	6.2	766	8.5	clear
DEWATERED					DTW 38.52
1345	72.3	7.9	812	—	clear GRAB SAMPLER DTW 31.02

Did well dewater? (Yes) No — Gallons actually evacuated: 9

Sampling Time: 1345 — Sampling Date: 7/19/02

Sample I.D.: MW-6 — Laboratory: Pace (Sequoia) Other ___

Analyzed for: (TPH-G) BTEX (MTBE) TPH-D Other: Oxygenates - MTBE, TBA, DIPE, ETBE, TAME

D.O. (if req'd):	Pre-purge:	mg/L	Post-purge:	3.5	mg/L
O.R.P. (if req'd):	Pre-purge:	mV	Post-purge:		mV

ARCO / BP WELL MONITORING DATA SHEET

BTS #: 020719-BA1	Station # 771
Sampler: Blaine Alcorn	Date: 7/19/02
Well I.D.: MW-7	Well Diameter: 2 3 (4) 6 8 ___
Total Well Depth: 39.67	Depth to Water: 28.70
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 Submergible) 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.

7.1 (1 Case Volume (Gals.)) X 3 (Specified Volumes) = 21.3 (Calculated Volume) Gals.

Time	Temp (°F)	pH	Conductivity (mS or (µS))	Gals. Removed	Observations
1213	72.4	7.4	1173	7	clear mild odor
1215	72.6	7.3	1158	13	"
DEWATERED DURING SECOND CASE VOLUME					DTW 35.18
1330	73.0	7.3	1095	—	GRAB SAMPLE DTW 31.71

Did well dewater? (Yes) No	Gallons actually evacuated: 13
Sampling Time: 1330	Sampling Date: 7/19/02
Sample I.D.: MW-7	Laboratory: Pace (Sequoia) Other ___
Analyzed for: (TPH-G) BTEX (MTBE) TPH-D Other: Oxygenates - MTBE, TBA, DIPE, ETBE, TAME	

D.O. (if req'd):	Pre-purge:	mg/L	Post-purge:	0.7 mg/L
O.R.P. (if req'd):	Pre-purge:	mV	Post-purge:	mV

ARCO / BP WELL MONITORING DATA SHEET

BTS #: 020719-BA1	Station # 771
Sampler: Brian Alcorn	Date: 7/19/02
Well I.D.: MW-11	Well Diameter: (2) 3 4 6 8 ____
Total Well Depth: 38.59	Depth to Water: 31.67
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.

1.1 (1 Case Volume (Gals.)) X 3 (Specified Volumes) = 3.3 (Calculated Volume) Gals.

Time	Temp (°F)	pH	Conductivity (mS or (µS))	Gals. Removed	Observations
1247	81.0	8.5	943	1	clear brown
1250	74.6	7.7	916	2	"
1252	73.5	7.7	933	3	"

Did well dewater? Yes (No) Gallons actually evacuated: 3

Sampling Time: 1300 Sampling Date: 7/19/02

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

Analyzed for: (TPH-G) BTEX MTBE TPH-D Other: Oxygenates - MTBE, TBA, DIPE, ETBE, TAME

D.O. (if req'd):	Pre-purge:	mg/L	Post-purge:	3.7	mg/L
O.R.P. (if req'd):	Pre-purge:	mV	Post-purge:		mV

ARCO / BP WELL MONITORING DATA SHEET

BTS #: 020719-BA1	Station # 771
Sampler: Brian Alcorn	Date: 7/19/02
Well I.D.: RW-1	Well Diameter: 2 3 4 (6) 8 ___
Total Well Depth: 39.75	Depth to Water: 31.15
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"	~~0.37~~
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: 25.5' If well is listed as a no-purge, confirm that water level is below the top of screen. Otherwise, the well must be purged.

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

Time	Temp (°F)	pH	Conductivity (mS or (µS))	Gals. Removed	Observations
1045	73.2	6.6	1084	Ø	clear

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

Sampling Time: 1045 Sampling Date: 7/19/02

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

Analyzed for: (TPH-G) BTEX (MTBE) TPH-D Other: Oxygenates - MTBE, TBA, DIPE, ETBE, TAME

D.O. (if req'd):	Pre-purge:	mg/L	Post-purge:	1.4	mg/L
O.R.P. (if req'd):	Pre-purge:	mV	Post-purge:		mV

ARCO / BP WELL MONITORING DATA SHEET

BTS #: 020719-BA1	Station # 771
Sampler: Brian Aleern	Date: 7/19/02
Well I.D.: VW-1	Well Diameter: 2 3 (4) 6 8 ____
Total Well Depth: 28.18	Depth to Water: 22.42
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.

3.7 (1 Case Volume (Gals.)) X 3 (Specified Volumes) = 11.1 (Calculated Volume) Gals.

Time	Temp (°F)	pH	Conductivity (mS or (µS))	Gals. Removed	Observations
1000	69.7	6.3	783	4	cloudy brown
1001	69.7	6.9	712	8	"
1002	69.5	7.1	709	12	"

Did well dewater? Yes (No)		Gallons actually evacuated: 12	
Sampling Time: 1005		Sampling Date: 7/19/02	
Sample I.D.: VW-1		Laboratory: Pace (Sequoia) Other ____	
Analyzed for: (TPH-G) BTEX MTBE TPH-D	Other: Oxygenates - MTBE, TBA, DIPE, ETBE, TAME		
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

WELLHEAD INSPECTION CHECKLIST AND REPAIR ORDER

Client ARCO Inspection Date 7/19/02

Site Address 899 RINCON AVENUE, LIVERMORE Inspected By BRIAN ACCORD

1. Lid on box?	6. Casing secure?	12. Water standing in wellbox?	15. Well cap functional?
2. Lid broken?	7. Casing cut level?	12a. Standing above the top of casing?	16. Can cap be pulled loose?
3. Lid bolts missing?	8. Debris in wellbox?	12b. Standing below the top of casing?	17. Can cap seal out water?
4. Lid bolts stripped?	9. Wellbox is too far above grade?	12c. Water even with the top of casing?	18. Padlock present?
5. Lid seal intact?	10. Wellbox is too far below grade?	13. Well cap present?	19. Padlock functional?
	11. Wellbox is crushed/damaged?	14. Well cap found secure?	

☐ Check box if no deficiencies were found. Note below deficiencies you were able to correct.

Well I.D.	Deficiency	Corrective Action Taken

Note below all defiencies that could not be corrected and still need to be corrected.

Well I.D.	Persisting Deficiency	BTS Office assigns or defers Correction to:	Date assigned	Date corrected
MW-5	(13) only PVC cap (18) No lock (3)	BTS can make		
MW-2	(19) unknown lock (3)	repairs if requested.		
MW-4	(19) unknown lock (3)			
MW-1	(15) cap broken (18) No lock (3)			
MW-6	(15) cap broken			
VW-1	(18) No Lock (3)			
MW-3	(4) (15) cap broken (19) unknown lock			
MW-7	(13) PVC cap (18) NO Lock (3)			
MW-10	(19) unknown lock			
MW-8	(19) rusted			

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

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

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

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

771

Station #

899 Rincon Ave, Livermore

Station Address

Total Gallons Collected From Groundwater Monitoring Wells:

_____

added equip. rinse water_____

any other adjustments_____

TOTAL GALS. RECOVERED 72

loaded onto BTS vehicle # _____

BTS event # 020719-BH1

time 1400

date 7/19/02

signature _____

* *

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.

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5 August, 2002

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

RE: ARCO #771, Livermore, Ca
Sequoia Report: MLG0423

Enclosed are the results of analyses for samples received by the laboratory on 07/22/02 13:35. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Latonya K. Pelt

Latonya Pelt
Project Manager

CA ELAP Certificate #1210

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URS Corporation	Project: ARCO #771, Livermore, Ca	
500 12th Street, Suite 100	Project Number: ARCO #771, Livermore, CA	**Reported:**
Oakland CA, 94607	Project Manager: Scott Robinson	08/05/02 07:00

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
MW-2	MLG0423-01	Water	07/19/02 11:55	07/22/02 13:35
MW-4	MLG0423-02	Water	07/19/02 11:00	07/22/02 13:35
MW-5	MLG0423-03	Water	07/19/02 11:30	07/22/02 13:35
MW-6	MLG0423-04	Water	07/19/02 13:15	07/22/02 13:35
MW-7	MLG0423-05	Water	07/19/02 13:30	07/22/02 13:35
MW-11	MLG0423-06	Water	07/19/02 13:00	07/22/02 13:35
RW-1	MLG0423-07	Water	07/19/02 10:45	07/22/02 13:35
VW-1	MLG0423-08	Water	07/19/02 10:05	07/22/02 13:35

Sequoia Analytical - Morgan Hill

Latonya K. Pelt

Latonya Pelt, Project Manager

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

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500 12th Street, Suite 100	Project Number: ARCO #771, Livermore, CA	**Reported:**
Oakland CA, 94607	Project Manager: Scott Robinson	08/05/02 07:00

Total Purgeable Hydrocarbons (C6-C10) by EPA 8015B modified, BTEX by EPA 8021B

Sequoia Analytical - Morgan Hill

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
MW-2 (MLG0423-01) Water Sampled: 07/19/02 11:55 Received: 07/22/02 13:35									
Gasoline Range Organics (C6-C10)	**4700**	500	ug/l	10	2G25002	07/25/02	07/25/02	8015Bm/8021B	HC-21
Benzene	**280**	5.0	"	"	"	"	"	"	
Toluene	**13**	5.0	"	"	"	"	"	"	
Ethylbenzene	**120**	5.0	"	"	"	"	"	"	
Xylenes (total)	**19**	5.0	"	"	"	"	"	"	
Surrogate: a,a,a-Trifluorotoluene		*130 %*	*70-130*		"	"	"	"	
MW-4 (MLG0423-02) Water Sampled: 07/19/02 11:00 Received: 07/22/02 13:35									
Gasoline Range Organics (C6-C10)	**2700**	500	ug/l	10	2G24003	07/24/02	07/24/02	8015Bm/8021B	HC-21
Benzene	**150**	5.0	"	"	"	"	"	"	
Toluene	**9.9**	5.0	"	"	"	"	"	"	
Ethylbenzene	ND	5.0	"	"	"	"	"	"	
Xylenes (total)	ND	5.0	"	"	"	"	"	"	
Surrogate: a,a,a-Trifluorotoluene		*125 %*	*70-130*		"	"	"	"	
MW-5 (MLG0423-03) Water Sampled: 07/19/02 11:30 Received: 07/22/02 13:35									
Gasoline Range Organics (C6-C10)	**1600**	500	ug/l	10	2G24003	07/24/02	07/24/02	8015Bm/8021B	HC-21
Benzene	**170**	5.0	"	"	"	"	"	"	
Toluene	**7.0**	5.0	"	"	"	"	"	"	
Ethylbenzene	**120**	5.0	"	"	"	"	"	"	
Xylenes (total)	ND	5.0	"	"	"	"	"	"	
Surrogate: a,a,a-Trifluorotoluene		*113 %*	*70-130*		"	"	"	"	
MW-6 (MLG0423-04) Water Sampled: 07/19/02 13:15 Received: 07/22/02 13:35									
Gasoline Range Organics (C6-C10)	**60**	50	ug/l	1	2G24003	07/24/02	07/24/02	8015Bm/8021B	HC-21
Benzene	**2.0**	0.50	"	"	"	"	"	"	
Toluene	ND	0.50	"	"	"	"	"	"	
Ethylbenzene	ND	0.50	"	"	"	"	"	"	
Xylenes (total)	ND	0.50	"	"	"	"	"	"	
Surrogate: a,a,a-Trifluorotoluene		*95.5 %*	*70-130*		"	"	"	"	

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500 12th Street, Suite 100	Project Number: ARCO #771, Livermore, CA	**Reported:**
Oakland CA, 94607	Project Manager: Scott Robinson	08/05/02 07:00

Total Purgeable Hydrocarbons (C6-C10) by EPA 8015B modified, BTEX by EPA 8021B

Sequoia Analytical - Morgan Hill

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
MW-7 (MLG0423-05) Water Sampled: 07/19/02 13:30 Received: 07/22/02 13:35									
Gasoline Range Organics (C6-C10)	**5700**	1000	ug/l	20	2G25002	07/25/02	07/25/02	8015Bm/8021 B	HC-21
Benzene	**630**	10	"	"	"	"	"	"	
Toluene	**31**	10	"	"	"	"	"	"	
Ethylbenzene	**330**	10	"	"	"	"	"	"	
Xylenes (total)	**160**	10	"	"	"	"	"	"	
Surrogate: a,a,a-Trifluorotoluene		*125 %*	*70-130*		"	"	"	"	
MW-11 (MLG0423-06) Water Sampled: 07/19/02 13:00 Received: 07/22/02 13:35									
Gasoline Range Organics (C6-C10)	ND	50	ug/l	1	2G24003	07/24/02	07/24/02	8015Bm/8021 B	
Benzene	ND	0.50	"	"	"	"	"	"	
Toluene	ND	0.50	"	"	"	"	"	"	
Ethylbenzene	ND	0.50	"	"	"	"	"	"	
Xylenes (total)	ND	0.50	"	"	"	"	"	"	
Surrogate: a,a,a-Trifluorotoluene		*85.9 %*	*70-130*		"	"	"	"	
RW-1 (MLG0423-07) Water Sampled: 07/19/02 10:45 Received: 07/22/02 13:35									
Gasoline Range Organics (C6-C10)	ND	50	ug/l	1	2G24002	07/24/02	07/24/02	8015Bm/8021 B	
Benzene	ND	0.50	"	"	"	"	"	"	
Toluene	ND	0.50	"	"	"	"	"	"	
Ethylbenzene	ND	0.50	"	"	"	"	"	"	
Xylenes (total)	ND	0.50	"	"	"	"	"	"	
Surrogate: a,a,a-Trifluorotoluene		*108 %*	*70-130*		"	"	"	"	
VW-1 (MLG0423-08) Water Sampled: 07/19/02 10:05 Received: 07/22/02 13:35									
Gasoline Range Organics (C6-C10)	ND	50	ug/l	1	2G24002	07/24/02	07/24/02	8015Bm/8021 B	
Benzene	ND	0.50	"	"	"	"	"	"	
Toluene	ND	0.50	"	"	"	"	"	"	
Ethylbenzene	ND	0.50	"	"	"	"	"	"	
Xylenes (total)	ND	0.50	"	"	"	"	"	"	
Surrogate: a,a,a-Trifluorotoluene		*95.4 %*	*70-130*		"	"	"	"	

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500 12th Street, Suite 100	Project Number: ARCO #771, Livermore, CA	**Reported:**
Oakland CA, 94607	Project Manager: Scott Robinson	08/05/02 07:00

Volatile Organic Compounds by EPA Method 8260B

Sequoia Analytical - Morgan Hill

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
MW-2 (MLG0423-01) Water Sampled: 07/19/02 11:55 Received: 07/22/02 13:35									
Ethanol	ND	200	ug/l	5	2G26013	07/26/02	07/26/02	EPA 8260B	
tert-Butyl alcohol	ND	100	"	"	"	"	"	"	
Methyl tert-butyl ether	**16**	2.5	"	"	"	"	"	"	
Di-isopropyl ether	ND	2.5	"	"	"	"	"	"	
Ethyl tert-butyl ether	ND	2.5	"	"	"	"	"	"	
tert-Amyl methyl ether	ND	2.5	"	"	"	"	"	"	
1,2-Dichloroethane	ND	2.5	"	"	"	"	"	"	
Ethylene dibromide	ND	2.5	"	"	"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4		*87.2 %*	*60-140*		"	"	"	"	
MW-4 (MLG0423-02) Water Sampled: 07/19/02 11:00 Received: 07/22/02 13:35									
Ethanol	ND	400	ug/l	10	2G26013	07/26/02	07/26/02	EPA 8260B	
tert-Butyl alcohol	**720**	200	"	"	"	"	"	"	
Methyl tert-butyl ether	**130**	5.0	"	"	"	"	"	"	
Di-isopropyl ether	ND	5.0	"	"	"	"	"	"	
Ethyl tert-butyl ether	ND	5.0	"	"	"	"	"	"	
tert-Amyl methyl ether	ND	5.0	"	"	"	"	"	"	
1,2-Dichloroethane	ND	5.0	"	"	"	"	"	"	
Ethylene dibromide	ND	5.0	"	"	"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4		*88.4 %*	*60-140*		"	"	"	"	
MW-5 (MLG0423-03) Water Sampled: 07/19/02 11:30 Received: 07/22/02 13:35									
Ethanol	ND	400	ug/l	10	2G26013	07/26/02	07/26/02	EPA 8260B	
tert-Butyl alcohol	**820**	200	"	"	"	"	"	"	
Methyl tert-butyl ether	**180**	5.0	"	"	"	"	"	"	
Di-isopropyl ether	ND	5.0	"	"	"	"	"	"	
Ethyl tert-butyl ether	ND	5.0	"	"	"	"	"	"	
tert-Amyl methyl ether	ND	5.0	"	"	"	"	"	"	
1,2-Dichloroethane	ND	5.0	"	"	"	"	"	"	
Ethylene dibromide	ND	5.0	"	"	"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4		*87.0 %*	*60-140*		"	"	"	"	

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500 12th Street, Suite 100	Project Number: ARCO #771, Livermore, CA	**Reported:**
Oakland CA, 94607	Project Manager: Scott Robinson	08/05/02 07:00

Volatile Organic Compounds by EPA Method 8260B

Sequoia Analytical - Morgan Hill

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
MW-6 (MLG0423-04) Water Sampled: 07/19/02 13:15 Received: 07/22/02 13:35									
Ethanol	ND	40	ug/l	1	2G26013	07/26/02	07/26/02	EPA 8260B	
tert-Butyl alcohol	ND	20	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	0.50	"	"	"	"	"	"	
Di-isopropyl ether	ND	0.50	"	"	"	"	"	"	
Ethyl tert-butyl ether	ND	0.50	"	"	"	"	"	"	
tert-Amyl methyl ether	ND	0.50	"	"	"	"	"	"	
1,2-Dichloroethane	ND	0.50	"	"	"	"	"	"	
Ethylene dibromide	ND	0.50	"	"	"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4		*89.6 %*	*60-140*		"	"	"	"	
MW-7 (MLG0423-05) Water Sampled: 07/19/02 13:30 Received: 07/22/02 13:35									
Ethanol	ND	400	ug/l	10	2G26013	07/26/02	07/26/02	EPA 8260B	
tert-Butyl alcohol	**280**	200	"	"	"	"	"	"	
Methyl tert-butyl ether	**64**	5.0	"	"	"	"	"	"	
Di-isopropyl ether	ND	5.0	"	"	"	"	"	"	
Ethyl tert-butyl ether	ND	5.0	"	"	"	"	"	"	
tert-Amyl methyl ether	ND	5.0	"	"	"	"	"	"	
1,2-Dichloroethane	ND	5.0	"	"	"	"	"	"	
Ethylene dibromide	ND	5.0	"	"	"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4		*84.0 %*	*60-140*		"	"	"	"	
MW-11 (MLG0423-06) Water Sampled: 07/19/02 13:00 Received: 07/22/02 13:35									
Ethanol	ND	40	ug/l	1	2G26013	07/26/02	07/26/02	EPA 8260B	
tert-Butyl alcohol	ND	20	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	0.50	"	"	"	"	"	"	
Di-isopropyl ether	ND	0.50	"	"	"	"	"	"	
Ethyl tert-butyl ether	ND	0.50	"	"	"	"	"	"	
tert-Amyl methyl ether	ND	0.50	"	"	"	"	"	"	
1,2-Dichloroethane	ND	0.50	"	"	"	"	"	"	
Ethylene dibromide	ND	0.50	"	"	"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4		*97.4 %*	*60-140*		"	"	"	"	

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500 12th Street, Suite 100	Project Number: ARCO #771, Livermore, CA	**Reported:**
Oakland CA, 94607	Project Manager: Scott Robinson	08/05/02 07:00

Volatile Organic Compounds by EPA Method 8260B

Sequoia Analytical - Morgan Hill

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
RW-1 (MLG0423-07) Water Sampled: 07/19/02 10:45 Received: 07/22/02 13:35									
Ethanol	ND	40	ug/l	1	2G26013	07/26/02	07/26/02	EPA 8260B	
tert-Butyl alcohol	ND	20	"	"	"	"	"	"	
Methyl tert-butyl ether	**13**	0.50	"	"	"	"	"	"	
Di-isopropyl ether	ND	0.50	"	"	"	"	"	"	
Ethyl tert-butyl ether	ND	0.50	"	"	"	"	"	"	
tert-Amyl methyl ether	ND	0.50	"	"	"	"	"	"	
1,2-Dichloroethane	ND	0.50	"	"	"	"	"	"	
Ethylene dibromide	ND	0.50	"	"	"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4		*101 %*	*60-140*		"	"	"	"	
VW-1 (MLG0423-08) Water Sampled: 07/19/02 10:05 Received: 07/22/02 13:35									
Ethanol	ND	40	ug/l	1	2G26013	07/26/02	07/26/02	EPA 8260B	
tert-Butyl alcohol	ND	20	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	0.50	"	"	"	"	"	"	
Di-isopropyl ether	ND	0.50	"	"	"	"	"	"	
Ethyl tert-butyl ether	ND	0.50	"	"	"	"	"	"	
tert-Amyl methyl ether	ND	0.50	"	"	"	"	"	"	
1,2-Dichloroethane	ND	0.50	"	"	"	"	"	"	
Ethylene dibromide	ND	0.50	"	"	"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4		*101 %*	*60-140*		"	"	"	"	

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URS Corporation	Project: ARCO #771, Livermore, Ca	
500 12th Street, Suite 100	Project Number: ARCO #771, Livermore, CA	**Reported:**
Oakland CA, 94607	Project Manager: Scott Robinson	08/05/02 07:00

Total Purgeable Hydrocarbons (C6-C10) by EPA 8015B modified, BTEX by EPA 8021B - Quality Control

Sequoia Analytical - Morgan Hill

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 2G24002 - EPA 5030B [P/T]										
Blank (2G24002-BLK1)				Prepared & Analyzed: 07/24/02						
Gasoline Range Organics (C6-C10)	ND	50	ug/l							
Benzene	ND	0.50	"							
Toluene	ND	0.50	"							
Ethylbenzene	ND	0.50	"							
Xylenes (total)	ND	0.50	"							
Surrogate: a,a,a-Trifluorotoluene	*10.7*		"	*10.0*		*107*	*70-130*			
LCS (2G24002-BS1)				Prepared & Analyzed: 07/24/02						
Benzene	10.1	0.50	ug/l	10.0		101	70-130			
Toluene	10.2	0.50	"	10.0		102	70-130			
Ethylbenzene	10.6	0.50	"	10.0		106	70-130			
Xylenes (total)	31.3	0.50	"	30.0		104	70-130			
Surrogate: a,a,a-Trifluorotoluene	*11.6*		"	*10.0*		*116*	*70-130*			
LCS (2G24002-BS2)				Prepared & Analyzed: 07/24/02						
Gasoline Range Organics (C6-C10)	258	50	ug/l	250		103	70-130			
Surrogate: a,a,a-Trifluorotoluene	*10.8*		"	*10.0*		*108*	*70-130*			
Matrix Spike (2G24002-MS1)		**Source: MLG0423-07**		Prepared & Analyzed: 07/24/02						
Gasoline Range Organics (C6-C10)	573	50	ug/l	550	ND	104	60-140			
Benzene	11.3	0.50	"	6.60	ND	171	60-140			QM-07
Toluene	44.5	0.50	"	39.7	ND	112	60-140			
Ethylbenzene	10.5	0.50	"	9.20	ND	114	60-140			
Xylenes (total)	52.3	0.50	"	46.1	ND	113	60-140			
Surrogate: a,a,a-Trifluorotoluene	*11.1*		"	*10.0*		*111*	*70-130*			
Matrix Spike Dup (2G24002-MSD1)		**Source: MLG0423-07**		Prepared & Analyzed: 07/24/02						
Gasoline Range Organics (C6-C10)	582	50	ug/l	550	ND	106	60-140	1.56	25	
Benzene	10.7	0.50	"	6.60	ND	162	60-140	5.45	25	QM-07
Toluene	43.4	0.50	"	39.7	ND	109	60-140	2.50	25	
Ethylbenzene	10.4	0.50	"	9.20	ND	113	60-140	0.957	25	
Xylenes (total)	51.7	0.50	"	46.1	ND	112	60-140	1.15	25	
Surrogate: a,a,a-Trifluorotoluene	*10.4*		"	*10.0*		*104*	*70-130*			

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500 12th Street, Suite 100	Project Number: ARCO #771, Livermore, CA	**Reported:**
Oakland CA, 94607	Project Manager: Scott Robinson	08/05/02 07:00

Total Purgeable Hydrocarbons (C6-C10) by EPA 8015B modified, BTEX by EPA 8021B - Quality Control

Sequoia Analytical - Morgan Hill

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 2G24003 - EPA 5030B [P/T]										
Blank (2G24003-BLK1)				Prepared & Analyzed: 07/24/02						
Gasoline Range Organics (C6-C10)	ND	50	ug/l							
Benzene	ND	0.50	"							
Toluene	ND	0.50	"							
Ethylbenzene	ND	0.50	"							
Xylenes (total)	ND	0.50	"							
Surrogate: a,a,a-Trifluorotoluene	*10.7*		"	*10.0*		*107*	*70-130*			
LCS (2G24003-BS1)				Prepared & Analyzed: 07/24/02						
Benzene	9.85	0.50	ug/l	10.0		98.5	70-130			
Toluene	9.73	0.50	"	10.0		97.3	70-130			
Ethylbenzene	10.4	0.50	"	10.0		104	70-130			
Xylenes (total)	31.0	0.50	"	30.0		103	70-130			
Surrogate: a,a,a-Trifluorotoluene	*9.85*		"	*10.0*		*98.5*	*70-130*			
LCS (2G24003-BS2)				Prepared & Analyzed: 07/24/02						
Gasoline Range Organics (C6-C10)	243	50	ug/l	250		97.2	70-130			
Surrogate: a,a,a-Trifluorotoluene	*10.7*		"	*10.0*		*107*	*70-130*			
Matrix Spike (2G24003-MS1)		**Source: MLG0422-02**		Prepared & Analyzed: 07/24/02						
Gasoline Range Organics (C6-C10)	539	50	ug/l	550	ND	94.4	60-140			
Benzene	8.87	0.50	"	6.60	ND	133	60-140			
Toluene	40.6	0.50	"	39.7	ND	102	60-140			
Ethylbenzene	10.1	0.50	"	9.20	ND	110	60-140			
Xylenes (total)	52.2	0.50	"	46.1	ND	113	60-140			
Surrogate: a,a,a-Trifluorotoluene	*12.4*		"	*10.0*		*124*	*70-130*			
Matrix Spike Dup (2G24003-MSD1)		**Source: MLG0422-02**		Prepared & Analyzed: 07/24/02						
Gasoline Range Organics (C6-C10)	506	50	ug/l	550	ND	88.4	60-140	6.32	25	
Benzene	7.96	0.50	"	6.60	ND	119	60-140	10.8	25	
Toluene	36.4	0.50	"	39.7	ND	91.2	60-140	10.9	25	
Ethylbenzene	9.25	0.50	"	9.20	ND	101	60-140	8.79	25	
Xylenes (total)	46.8	0.50	"	46.1	ND	102	60-140	10.9	25	
Surrogate: a,a,a-Trifluorotoluene	*10.9*		"	*10.0*		*109*	*70-130*			

Sequoia Analytical

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

URS Corporation	Project: ARCO #771, Livermore, Ca	
500 12th Street, Suite 100	Project Number: ARCO #771, Livermore, CA	**Reported:**
Oakland CA, 94607	Project Manager: Scott Robinson	08/05/02 07:00

Total Purgeable Hydrocarbons (C6-C10) by EPA 8015B modified, BTEX by EPA 8021B - Quality Control

Sequoia Analytical - Morgan Hill

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 2G25002 - EPA 5030B [P/T]										
Blank (2G25002-BLK1)				Prepared & Analyzed: 07/25/02						
Gasoline Range Organics (C6-C10)	ND	50	ug/l							
Benzene	ND	0.50	"							
Toluene	ND	0.50	"							
Ethylbenzene	ND	0.50	"							
Xylenes (total)	ND	0.50	"							
Surrogate: a,a,a-Trifluorotoluene	*12.1*		"	*10.0*		*121*	*70-130*			
LCS (2G25002-BS1)				Prepared & Analyzed: 07/25/02						
Benzene	10.7	0.50	ug/l	10.0		107	70-130			
Toluene	10.9	0.50	"	10.0		109	70-130			
Ethylbenzene	11.2	0.50	"	10.0		112	70-130			
Xylenes (total)	33.4	0.50	"	30.0		111	70-130			
Surrogate: a,a,a-Trifluorotoluene	*10.8*		"	*10.0*		*108*	*70-130*			
LCS (2G25002-BS2)				Prepared & Analyzed: 07/25/02						
Gasoline Range Organics (C6-C10)	268	50	ug/l	250		107	70-130			
Surrogate: a,a,a-Trifluorotoluene	*10.1*		"	*10.0*		*101*	*70-130*			
Matrix Spike (2G25002-MS1)		**Source: MLG0480-05**		Prepared & Analyzed: 07/25/02						
Gasoline Range Organics (C6-C10)	514	50	ug/l	550	ND	93.5	60-140			
Benzene	10.4	0.50	"	6.60	ND	158	60-140			QM-07
Toluene	43.1	0.50	"	39.7	ND	109	60-140			
Ethylbenzene	10.2	0.50	"	9.20	ND	111	60-140			
Xylenes (total)	51.3	0.50	"	46.1	ND	111	60-140			
Surrogate: a,a,a-Trifluorotoluene	*11.1*		"	*10.0*		*111*	*70-130*			
Matrix Spike Dup (2G25002-MSD1)		**Source: MLG0480-05**		Prepared & Analyzed: 07/25/02						
Gasoline Range Organics (C6-C10)	564	50	ug/l	550	ND	103	60-140	9.28	25	
Benzene	10.7	0.50	"	6.60	ND	162	60-140	2.84	25	QM-07
Toluene	42.6	0.50	"	39.7	ND	107	60-140	1.17	25	
Ethylbenzene	10.2	0.50	"	9.20	ND	111	60-140	0.00	25	
Xylenes (total)	50.9	0.50	"	46.1	ND	110	60-140	0.783	25	
Surrogate: a,a,a-Trifluorotoluene	*10.2*		"	*10.0*		*102*	*70-130*			

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URS Corporation	Project: ARCO #771, Livermore, Ca	
500 12th Street, Suite 100	Project Number: ARCO #771, Livermore, CA	**Reported:**
Oakland CA, 94607	Project Manager: Scott Robinson	08/05/02 07:00

Volatile Organic Compounds by EPA Method 8260B - Quality Control

Sequoia Analytical - Morgan Hill

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 2G26013 - EPA 5030B P/T										
Blank (2G26013-BLK1)				Prepared & Analyzed: 07/26/02						
Ethanol	ND	40	ug/l							
tert-Butyl alcohol	ND	20	"							
Methyl tert-butyl ether	ND	0.50	"							
Di-isopropyl ether	ND	0.50	"							
Ethyl tert-butyl ether	ND	0.50	"							
tert-Amyl methyl ether	ND	0.50	"							
1,2-Dichloroethane	ND	0.50	"							
Ethylene dibromide	ND	0.50	"							
Surrogate: 1,2-Dichloroethane-d4	*5.00*		"	*5.00*		*100*	*60-140*			
LCS (2G26013-BS1)				Prepared & Analyzed: 07/26/02						
Methyl tert-butyl ether	7.23	0.50	ug/l	10.0		72.3	70-130			
Surrogate: 1,2-Dichloroethane-d4	*4.39*		"	*5.00*		*87.8*	*60-140*			
LCS Dup (2G26013-BSD1)				Prepared & Analyzed: 07/26/02						
Methyl tert-butyl ether	7.35	0.50	ug/l	10.0		73.5	70-130	1.65	25	
Surrogate: 1,2-Dichloroethane-d4	*4.37*		"	*5.00*		*87.4*	*60-140*			

Sequoia Analytical

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URS Corporation	Project: ARCO #771, Livermore, Ca	
500 12th Street, Suite 100	Project Number: ARCO #771, Livermore, CA	**Reported:**
Oakland CA, 94607	Project Manager: Scott Robinson	08/05/02 07:00

Notes and Definitions

HC-21	Chromatogram Pattern: Gasoline C6-C10
QM-07	The spike recovery was outside control limits for the MS and/or MSD. The batch was accepted based on acceptable LCS recovery.
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

STANDARD TURNAROUND

Page 1 of 1

Chain of Custody Record

bp

Project Name

BP BU/GEM CO Portfolio:

BP Laboratory Contract Number:

Date. 7/19/02

Requested Due Date (mm/dd/yy)

MLG0923

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

Send To:	BP/GEM Facility No.:	Consultant/Contractor: URS
Lab Name: SEQUOIA	BP/GEM Facility Address: 699 RINCON AVE, LIVERMORE, CA	Address: 529 12th St, Ste. 200
Lab Address: 885 Jarvis Dr.	Site ID No. ARCO 771	Oakland, CA 94609-4014
Morgan Hill, CA 95037	Site Lat/Long:	e-mail EDD: syed_rehan@urscorp.com
	California Global ID #: T0600100113	Consultant/Contractor Project No.: 35-00000771.01 00427
Lab PM: Letonya Pell	BP/GEM PM Contact: PAUL SUPPLE	Consultant Tele/Fax: 510-874-3280/510-874-3268
Tele/Fax: 408-776-9600 / 408-782-6308	Address:	Consultant/Contractor PM: Scott Robinson
Report Type & QC Level: Send EDF Reports		Invoice to: Consultant/Contractor or BP/GEM (circle one)
BP/GEM Account No.:	Tele/Fax:	BP/GEM Work Release No:

Lab Bottle Order No:

Item No.	Sample Description	Time	Matrix: Soil/Solid	Matrix: Water/Liquid	Matrix: Sediments	Matrix: Air	Laboratory No.	No. of containers	Preservatives: Unpreserved	H_2SO_4	HNO_3	HCl			Requested Analysis: TPH-G / BTEX (8015 / 8021)	TPH-D (8015)	MTBE (8021)	MTBE, TAME, ETBE, DIPE, TBA (8260)	1,2-DCA & EDB (8260)	Ethanol					Sample Point Lat/Long and Comments
1	MW-2	1155		X				6				X			X			X	X	X					
2	MW-4	1100		X				6				X			X			X	X	X					
3	MW-5	1130		X				6				X			X			X	X	X					
4	MW-6	1315		X				6				X			X			X	X	X					
5	MW-7	1330		X				6				X			X			X	X	X					
6	MW-11	1300		X				6				X			X			X	X	X					
7	RW-1	1045		X				6				X			X			X	X	X					
8	VW-1	1005		X				6				X			X			X	X	X					
9																									
10																									

	Relinquished By / Affiliation	Date	Time	Accepted By / Affiliation	Date	Time
Sampler's Name: Brian Alcorn	[signature]	7/23/02	0908	[signature]	7/23/02	908
Sampler's Company: Blaine Tech						
Shipment Date:						
Shipment Method:						
Shipment Tracking No:						

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

Custody Seals In Place Yes ___ No ___ Temperature Blank Yes ___ No ___ Cooler Temperature on Receipt ___ °F/C Trip Blank Yes ___ No ___

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BLAINE TECH SERVICES

1680 Rogers Avenue
San Jose, CA 95112-1105

(408) 573-0555 Phone
(408) 573-7771 Fax

DATE 7/23/02

Total pages including cover sheet 2

TO Latonya Pelt

OF Sequoia

FROM Deidre Kerwin

MUG 0423

REMARKS: Arco COC Correction

Arco 771 - Please add 1,2-DCA, EDB and Ethanol to list of required analyses

Thanks

ATTACHMENT C

EDCC REPORT AND EDF/GEOWELL SUBMITTAL CONFIRMATION

Error Summary Log

01/24/03

EDF 1.2i All files present in deliverable.

Laboratory:	Sequoia Analytical Laboratories, Inc., Morgan Hill, CA
Project Name:	ARCO #771, Livermore, Ca
Work Order Number:	MLG0423
Global ID:	T0600100113
Lab Report Number:	MLG0423080520020705

Report Summary

Labreport	Sampid	Labsampid	Mtrx	QC	Anmcode	Exmcode	Logdate	Extdate	Anadate	Lablotctl	Run	Sub
MLG04230805200 20705	MW-11	MLG042306	W	CS	8260+OX	SW5030B	07/19/02	07/26/02	07/26/02	2G26013	1	
MLG04230805200 20705	MW-11	MLG042306	W	CS	SW8020F	SW5030B	07/19/02	07/24/02	07/24/02	2G24003	1	
MLG04230805200 20705	MW-2	MLG042301	W	CS	8260+OX	SW5030B	07/19/02	07/26/02	07/26/02	2G26013	1	
MLG04230805200 20705	MW-2	MLG042301	W	CS	SW8020F	SW5030B	07/19/02	07/25/02	07/25/02	2G25002	1	
MLG04230805200 20705	MW-4	MLG042302	W	CS	8260+OX	SW5030B	07/19/02	07/26/02	07/26/02	2G26013	1	
MLG04230805200 20705	MW-4	MLG042302	W	CS	SW8020F	SW5030B	07/19/02	07/24/02	07/24/02	2G24003	1	
MLG04230805200 20705	MW-5	MLG042303	W	CS	8260+OX	SW5030B	07/19/02	07/26/02	07/26/02	2G26013	1	
MLG04230805200 20705	MW-5	MLG042303	W	CS	SW8020F	SW5030B	07/19/02	07/24/02	07/24/02	2G24003	1	
MLG04230805200 20705	MW-6	MLG042304	W	CS	8260+OX	SW5030B	07/19/02	07/26/02	07/26/02	2G26013	1	
MLG04230805200 20705	MW-6	MLG042304	W	CS	SW8020F	SW5030B	07/19/02	07/24/02	07/24/02	2G24003	1	
MLG04230805200 20705	MW-7	MLG042305	W	CS	8260+OX	SW5030B	07/19/02	07/26/02	07/26/02	2G26013	1	
MLG04230805200 20705	MW-7	MLG042305	W	CS	SW8020F	SW5030B	07/19/02	07/25/02	07/25/02	2G25002	1	
MLG04230805200 20705	RW-1	MLG042307	W	CS	8260+OX	SW5030B	07/19/02	07/26/02	07/26/02	2G26013	1	
MLG04230805200 20705	RW-1	MLG042307	W	CS	SW8020F	SW5030B	07/19/02	07/24/02	07/24/02	2G24002	1	
MLG04230805200 20705	VW-1	MLG042308	W	CS	8260+OX	SW5030B	07/19/02	07/26/02	07/26/02	2G26013	1	
MLG04230805200 20705	VW-1	MLG042308	W	CS	SW8020F	SW5030B	07/19/02	07/24/02	07/24/02	2G24002	1	
		MLG042202	W	NC	SW8020F	SW5030B	/ /	07/24/02	07/24/02	2G24003	1	
		MLG048005	W	NC	SW8020F	SW5030B	/ /	07/25/02	07/25/02	2G25002	1	
		2G24002BS1	WQ	BS1	SW8020F	SW5030B	/ /	07/24/02	07/24/02	2G24002	1	
		2G24002BS2	WQ	BS2	SW8020F	SW5030B	/ /	07/24/02	07/24/02	2G24002	1	
		2G24002BLK1	WQ	LB1	SW8020F	SW5030B	/ /	07/24/02	07/24/02	2G24002	1	
		2G24002MS1	W	MS1	SW8020F	SW5030B	/ /	07/24/02	07/24/02	2G24002	1	
		2G24002MSD1	W	SD1	SW8020F	SW5030B	/ /	07/24/02	07/24/02	2G24002	1	

Report Summary

Labreport	Sampid	Labsampid	Mtrx	QC	Anmcode	Exmcode	Logdate	Extdate	Anadate	Lablotctl	Run	Sub
		2G24003BS1	WQ	BS1	SW8020F	SW5030B	/ /	07/24/02	07/24/02	2G24003	1	
		2G24003BS2	WQ	BS2	SW8020F	SW5030B	/ /	07/24/02	07/24/02	2G24003	1	
		2G24003BLK1	WQ	LB1	SW8020F	SW5030B	/ /	07/24/02	07/24/02	2G24003	1	
		2G24003MS1	W	MS1	SW8020F	SW5030B	/ /	07/24/02	07/24/02	2G24003	1	
		2G24003MSD1	W	SD1	SW8020F	SW5030B	/ /	07/24/02	07/24/02	2G24003	1	
		2G25002BS1	WQ	BS1	SW8020F	SW5030B	/ /	07/25/02	07/25/02	2G25002	1	
		2G25002BS2	WQ	BS2	SW8020F	SW5030B	/ /	07/25/02	07/25/02	2G25002	1	
		2G25002BLK1	WQ	LB1	SW8020F	SW5030B	/ /	07/25/02	07/25/02	2G25002	1	
		2G25002MS1	W	MS1	SW8020F	SW5030B	/ /	07/25/02	07/25/02	2G25002	1	
		2G25002MSD1	W	SD1	SW8020F	SW5030B	/ /	07/25/02	07/25/02	2G25002	1	
		2G26013BSD1	WQ	BD1	8260+OX	SW5030B	/ /	07/26/02	07/26/02	2G26013	1	
		2G26013BS1	WQ	BS1	8260+OX	SW5030B	/ /	07/26/02	07/26/02	2G26013	1	
		2G26013BLK1	WQ	LB1	8260+OX	SW5030B	/ /	07/26/02	07/26/02	2G26013	1	

EDFSAMP: Error Summary Log

01/24/03

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

EDFTEST: Error Summary Log

01/24/03

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

EDFRES: Error Summary Log

01/24/03

Error type	Labsampid	Qccode	Matrix	Anmcode	Pvccode	Anadate	Run number	Parlabel
Warning: extra parameter	2G24002MS1	MS1	W	SW8020F	PR	07/24/02	1	AAATFBZME
Warning: extra parameter	2G24002MS1	MS1	W	SW8020F	PR	07/24/02	1	GROC6C10
Warning: extra parameter	2G24002MSD1	SD1	W	SW8020F	PR	07/24/02	1	AAATFBZME
Warning: extra parameter	2G24002MSD1	SD1	W	SW8020F	PR	07/24/02	1	GROC6C10
Warning: extra parameter	2G24003MS1	MS1	W	SW8020F	PR	07/24/02	1	AAATFBZME
Warning: extra parameter	2G24003MS1	MS1	W	SW8020F	PR	07/24/02	1	GROC6C10
Warning: extra parameter	2G24003MSD1	SD1	W	SW8020F	PR	07/24/02	1	AAATFBZME
Warning: extra parameter	2G24003MSD1	SD1	W	SW8020F	PR	07/24/02	1	GROC6C10
Warning: extra parameter	2G25002MS1	MS1	W	SW8020F	PR	07/25/02	1	AAATFBZME
Warning: extra parameter	2G25002MS1	MS1	W	SW8020F	PR	07/25/02	1	GROC6C10
Warning: extra parameter	2G25002MSD1	SD1	W	SW8020F	PR	07/25/02	1	AAATFBZME
Warning: extra parameter	2G25002MSD1	SD1	W	SW8020F	PR	07/25/02	1	GROC6C10
Warning: extra parameter	MLG042202	NC	W	SW8020F	PR	07/24/02	1	AAATFBZME
Warning: extra parameter	MLG042202	NC	W	SW8020F	PR	07/24/02	1	GROC6C10
Warning: extra parameter	MLG042301	CS	W	SW8020F	PR	07/25/02	1	AAATFBZME
Warning: extra parameter	MLG042301	CS	W	SW8020F	PR	07/25/02	1	GROC6C10
Warning: extra parameter	MLG042302	CS	W	SW8020F	PR	07/24/02	1	AAATFBZME
Warning: extra parameter	MLG042302	CS	W	SW8020F	PR	07/24/02	1	GROC6C10
Warning: extra parameter	MLG042303	CS	W	SW8020F	PR	07/24/02	1	AAATFBZME
Warning: extra parameter	MLG042303	CS	W	SW8020F	PR	07/24/02	1	GROC6C10
Warning: extra parameter	MLG042304	CS	W	SW8020F	PR	07/24/02	1	AAATFBZME
Warning: extra parameter	MLG042304	CS	W	SW8020F	PR	07/24/02	1	GROC6C10
Warning: extra parameter	MLG042305	CS	W	SW8020F	PR	07/25/02	1	AAATFBZME
Warning: extra parameter	MLG042305	CS	W	SW8020F	PR	07/25/02	1	GROC6C10
Warning: extra parameter	MLG042306	CS	W	SW8020F	PR	07/24/02	1	AAATFBZME

Error type	Labsampid	Qccode	Matrix	Anmcode	Pvccode	Anadate	Run number	Parlabel
Warning: extra parameter	MLG042306	CS	W	SW8020F	PR	07/24/02	1	GROC6C10
Warning: extra parameter	MLG042307	CS	W	SW8020F	PR	07/24/02	1	AAATFBZME
Warning: extra parameter	MLG042307	CS	W	SW8020F	PR	07/24/02	1	GROC6C10
Warning: extra parameter	MLG042308	CS	W	SW8020F	PR	07/24/02	1	AAATFBZME
Warning: extra parameter	MLG042308	CS	W	SW8020F	PR	07/24/02	1	GROC6C10
Warning: extra parameter	MLG048005	NC	W	SW8020F	PR	07/25/02	1	AAATFBZME
Warning: extra parameter	MLG048005	NC	W	SW8020F	PR	07/25/02	1	GROC6C10
Warning: extra parameter	2G24002BLK1	LB1	WQ	SW8020F	PR	07/24/02	1	AAATFBZME
Warning: extra parameter	2G24002BLK1	LB1	WQ	SW8020F	PR	07/24/02	1	GROC6C10
Warning: extra parameter	2G24002BS1	BS1	WQ	SW8020F	PR	07/24/02	1	AAATFBZME
Warning: extra parameter	2G24002BS2	BS2	WQ	SW8020F	PR	07/24/02	1	AAATFBZME
Warning: extra parameter	2G24002BS2	BS2	WQ	SW8020F	PR	07/24/02	1	GROC6C10
Warning: extra parameter	2G24003BLK1	LB1	WQ	SW8020F	PR	07/24/02	1	AAATFBZME
Warning: extra parameter	2G24003BLK1	LB1	WQ	SW8020F	PR	07/24/02	1	GROC6C10
Warning: extra parameter	2G24003BS1	BS1	WQ	SW8020F	PR	07/24/02	1	AAATFBZME
Warning: extra parameter	2G24003BS2	BS2	WQ	SW8020F	PR	07/24/02	1	AAATFBZME
Warning: extra parameter	2G24003BS2	BS2	WQ	SW8020F	PR	07/24/02	1	GROC6C10
Warning: extra parameter	2G25002BLK1	LB1	WQ	SW8020F	PR	07/25/02	1	AAATFBZME
Warning: extra parameter	2G25002BLK1	LB1	WQ	SW8020F	PR	07/25/02	1	GROC6C10
Warning: extra parameter	2G25002BS1	BS1	WQ	SW8020F	PR	07/25/02	1	AAATFBZME
Warning: extra parameter	2G25002BS2	BS2	WQ	SW8020F	PR	07/25/02	1	AAATFBZME
Warning: extra parameter	2G25002BS2	BS2	WQ	SW8020F	PR	07/25/02	1	GROC6C10

EDFQC: Error Summary Log

01/24/03

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

EDFCL: Error Summary Log

01/24/03

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

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Facility Name: ARCO
Submittal Title: 3rd Qtr 2002 Monitoring Report for # 0771
Submittal Type: GW Monitoring Report

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Submittal Date/Time:	**1/24/2003 11:29:00 AM**
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