



February 26, 2003

Alameda County

MAR 04 2003

Barney Chan
Alameda Health Care Services Agency
1131 Harbor Bay Parkway, 2nd Floor
Alameda, California 94502

Environmental Health

**Re: Fourth Quarter 2002 Monitoring and Remediation System Performance Report
ARCO Service Station #2035
1001 San Pablo Avenue
Albany, California
URS Project #38486169**

Dear Mr. Chan:

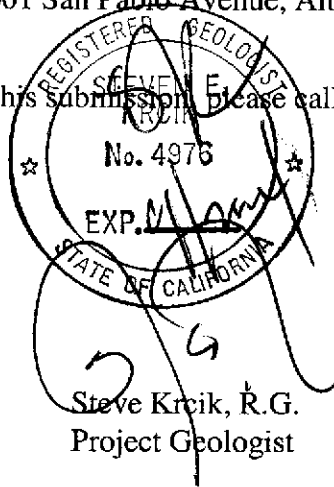
On behalf of Atlantic Richfield Company (ARCO – an affiliated company of the Group Environmental Management Company), URS Corporation (URS) is submitting the *Fourth Quarter 2002 Site Status and Remediation System Performance Report* for the ARCO Service Station #2035, which is located at 1001 San Pablo Avenue, Albany, California.

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

Sincerely,

URS CORPORATION

Scott Robinson
Project Manager



Steve Kreik, R.G.
Project Geologist

Enclosure: Fourth Quarter 2002 Site Status and Remediation System Performance Report

cc: Mr. Paul Supple, ARCO, PO Box 6549, Moraga, CA 94570
Barbara and James A. LeStrange, Property Owner, 6 La Canada Court, St. Helena, CA 94574
Muriel & Emile Turpin, Trustees, 957 Arlington Ave., Berkeley, CA 94707
Robert Cave, BAAQMD – Permit Division, 939 Ellis St., San Francisco, CA 94109

URS Corporation
500 12th Street, Suite 200
Oakland, CA 94607-4014
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Atlantic Richfield Company
(a BP affiliated company)

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

February 27, 2003

Re: Fourth Quarter 2002 Groundwater Monitoring Report
ARCO Station #2035
1001 San Pablo Avenue
Albany, CA

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

Submitted by:

Paul Supple
Environmental Business Manager

R E P O R T

**FOURTH QUARTER 2002
MONITORING AND
REMEDIATION SYSTEM
PERFORMANCE**

ARCO SERVICE STATION #2035
1001 SAN PABLO AVENUE
ALBANY, CALIFORNIA

Prepared for
Atlantic Richfield Company

February 26, 2003

URS

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

38486169

Date: February 26, 2003

Quarter: 4Q 02

**ATLANTIC RICHFIELD COMPANY QUARTERLY GROUNDWATER MONITORING AND
REMEDATION SYSTEM REPORT**

Facility No.: 2035 Address: 1001 San Pablo Avenue, Albany, California
Atlantic Richfield Co. Environmental Engineer: Paul Supple
Consulting Co./Contact Person: URS Corporation / Scott Robinson
Consultant Project No.: 38486169
Primary Agency/Regulatory ID No.: ACHCSA

WORK PERFORMED THIS QUARTER (Fourth – 2002):

1. Prepared third quarter quarterly status report.
2. Performed fourth quarter monitoring event on November 27, 2002.
3. Troubleshoot blower problem on soil vapor extraction (SVE) remediation system.

WORK PROPOSED FOR NEXT QUARTER (First – 2003):

1. Prepare and submit fourth quarter 2002 site status and remediation system performance report.
2. Operate soil vapor extraction (SVE) and air sparge (AS) remediation systems.

Current Phase of Project:	<u>Remediation/GW monitoring/sampling</u>
Frequency of Groundwater Sampling:	<u>Annually (2nd quarter): MW-5</u> <u>Semi-Annually (2nd /4th quarter): MW-1 through MW-4, MW-6, RW-1, and S-5</u>
Frequency of Groundwater Monitoring:	<u>Semi-annual</u>
Is Free Product (FP) Present On-Site:	<u>No</u>
Current Remediation Techniques:	<u>AS/SVE (under repair)</u>
Approximate Depth to Groundwater:	<u>9.20 (RW-1) to 11.42 (MW-6) feet</u>
Groundwater Gradient (direction):	<u>West</u>
Groundwater Gradient (magnitude):	<u>0.021 feet per foot</u>
Equipment Inventory:	<u>Therm Tech Model VAC-10 Thermal/Catalytic Oxidizer</u>
Operating Mode:	<u>Catalytic Oxidation</u>
BAAQMD Permit #:	<u>8694</u>
TPH Conc. End of Period (lab):	<u>NA</u>
Benzene Conc. End of Period (lab):	<u>NA</u>
SVE Flowrate End of Period:	<u>NA</u>
Total HC Destroyed This Period:	<u>NA</u>
Total HC Destroyed to Date:	<u>3,967 pounds</u>
Utility Usage	
Electric (kWh):	<u>0</u>
Gas (Therms):	<u>0</u>
Operating Hours This Period (SVE):	<u>0</u>
Operating Hours to Date (SVE):	<u>18,789 Hours</u>

Percent Operational This Period (SVE):	0%
Unit Maintenance:	Blower is currently under repair
Number of Auto Shut Downs:	2
Destruction Efficiency Permit Requirement:	98.5% (POC >2,000 ppmv); 97% (POC >200 ppmv); 90% (POC <200 ppmv)
Percent TPH Conversion:	Not calculated/Blower Under Repair
Average Stack Temperature:	Not Measured/Blower Under Repair
Average SVE Source Flow:	Not Measured/Blower Under Repair
Average SVE Process Flow:	Not Measured/Blower Under Repair
Average Source Vacuum:	Not Measured/Blower Under Repair

DISCUSSION:

TPHg was detected in one of the seven wells sampled this quarter at a concentration of 55000 µg/L in S-5. Benzene was detected in two wells at concentrations ranging from 720 µg/L in RW-1 to 1300 µg/L in S-5. MTBE was detected in four wells, at concentrations ranging from 1.7 µg/L in MW-1 to 56 µg/L in MW-3.

System influent and effluent vapor samples were last collected on April 2, 2002. The SVE system has been inoperable since the site was transitioned from Cambria Environmental Technology, Inc. (Cambria) on May 31, 2002. The blower, repaired by Cambria, became inoperable again soon after being started up by URS. The blower is being repaired and a URS Technician is currently trouble shooting the system.

RECOMMENDATIONS:

We recommend changing the sampling frequency of wells MW-1, MW-4, and MW-6 from semi-annually to annually. The concentrations in these three wells have consistently been low to non-detect for the constituents of concern.

ATTACHMENTS:

- Table 1 – Groundwater Elevation and Analytical Data
- Table 2 – Groundwater Flow Direction and Gradient
- Table 3 – SVE System Operational Uptime Information
- Table 4 – SVE System Flow Rates and Analytical Results of Air Samples
- Table 5 – SVE System Extraction Rates, Emission Rates, Destruction Efficiency and Mass Removed
- Figure 1 – Groundwater Elevation Contour and Analytical Summary Map – November 27, 2002
- Attachment A – Field Procedures and Field Data Sheets
- Attachment B – Laboratory Procedures, Certified Analytical Reports, and Chain-of-Custody Records
- Attachment C – Historical Groundwater Data Tables
- Attachment D – EDCC Report and EDF/Geowell Submittal Confirmation

Table 1
Grounwater Elevation and Analytical Data
 ARCO Service Station #2035
 1001 San Pablo Avenue,
 Albany, CA

Well Number	Date Sampled		Well Elevation ^a (feet, MSL)	Depth to Water (feet, TOC)	Groundwater Elevation (feet, MSL)	TPHg (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethyl- benzene (µg/L)	Xylenes (µg/L)	MTBE (µg/L)	DO (mg/L)	
MW-1	04/11/02	P	41.41	10.73	30.68	800	360	ND <5.0	ND <5.0	ND <5.0	ND <50	NA	
	11/27/02	P		10.22	31.19	ND <50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	1.7	1.1	
MW-2	04/11/02	P	40.38	11.05	29.33	ND <50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	24	NA	
	11/27/02	P		10.51	29.87	ND <50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	5.4	2.6	
MW-3	04/11/02	P	41.44	11.05	30.39	250	9.4	ND <0.50	ND <0.50	ND <0.50	120	NA	
	11/27/02	P		10.49	30.95	ND <100	ND <1.0	ND <1.0	ND <1.0	2.5	56	2.2	
MW-4	04/11/02	NP	40.33	10.81	29.52	ND <50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	11	NA	
	11/27/02	NP		10.09	30.24	ND <50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	6.5	1.8	
MW-5	04/11/02	NP	41.84	10.63	31.21	ND <50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <5.0	NA	
	11/27/02	NP		10.65	31.19	NS	NS	NS	NS	NS	NS	NA	
MW-6	04/11/02	NP	40.13	11.42	28.71	ND <50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <5.0	NA	
	11/27/02	NP		13.11	27.02	ND <50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	1.3	
RW-1 DUP	04/11/02	P	40.33	9.20	31.13	15,000	750	2,000	380	2,000	1,500	NA	
	04/11/02	—		--	--	--	24,000	840	2,300	500	2,800	970	NA
	11/27/02	P		10.31	30.02	ND <2,500	720	ND <25	ND <25	ND <25	ND <25	1.8	
S-5	04/11/02	P	--	10.17	--	30,000	390	1,400	410	7,400	ND <500	NA	
	11/27/02	P		9.77	--	55,000	1,300	450	1,400	13,000	ND <50	4.3	

Table 1
Grounwater Elevation and Analytical Data
ARCO Service Station #2035
1001 San Pablo Avenue,
Albany, CA

Note: First and third quarter not monitored or sampled

BTEX = Benzene, toluene, ethyl benzene, and total xylenes analyzed using EPA Method 8260B

TPH = Total petroleum hydrocarbons (Gasoline Range Organics C6-C10) analyzed using EPA Method 8260B

MTBE =Methyl tertiary butyl ether analyzed using EPA Method 8260B.

DO =Dissolved Oxygen

µg/L = Micrograms per liter equivalent to parts per billion (ppb)

mg/L = Milligrams per liter equivalent to parts per billion (ppb)

P = Purge

NP = Not Purge

MSL = Mean sea level

TOC = Top of casing

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

NS = Not sampled

NA = Not Available

a = Well elevation data obtained from historical groundwater elevation tables, Attachment D

b = Chromatogram Pattern: Unidentified Hydrocarbons C6-C10

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

Table 2
Groundwater Flow Direction and Gradient
ARCO Service Station #2035
1001 San pablo Avenue
Albany, CA

Date Measured	Average Flow Direction	Average Hydraulic Gradient
04-11-02	Southwest	0.012
11-27-02	West	0.021

Source:

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

Table 3
Soil Vapor Extraction System
Operational Uptime Information

ARCO Service Station #2035
 1001 San Pablo Avenue, Albany, California

Date	Meter (hours)	Period Operation				Cumulative Operation				Total Operating Time (hours)
		Total (days)	Uptime (days)	Downtime (days)	Uptime (%)	Total (days)	Uptime (days)	Downtime (days)	Uptime (%)	
11/01/97						1425	335	1090	24%	6873
12/01/97	11484	30	14	16	47	1455	349	1106	24%	7211
01/27/98	11484	57	0	57	0	1512	349	1163	23%	7211
08/12/98	11484	197	0	197	0	1709	349	1360	20%	7211
09/02/98	11485	21	0	21	0	1730	349	1381	20%	7211
10/19/98	12280	47	33	14	70	1777	382	1395	22%	8006
11/10/98	12809	22	22	0	100	1799	404	1395	22%	8536
01/22/99	12809	73	0	73	0	1872	404	1468	22%	8536
02/11/99	12810	20	0	20	0	1892	404	1488	21%	8536
04/01/99	12810	49	0	49	0	1941	404	1537	21%	8536
06/10/99	12810	70	0	70	0	2011	404	1607	20%	8537
06/24/99	13146	14	14	0	100	2025	418	1607	21%	8873
08/17/99	13146	54	0	54	0	2079	418	1661	20%	8873
09/09/99	13147	23	0	23	0	2102	418	1684	20%	8873
09/21/99	13435	12	12	0	100	2114	430	1684	20%	9162
10/06/99	13450	15	1	14	4	2129	431	1698	20%	9177
10/20/99	13475	14	1	13	7	2143	432	1711	20%	9202
11/03/99	13812	14	14	0	100	2157	446	1711	21%	9538
11/17/99	14148	14	14	0	100	2171	460	1711	21%	9875
12/01/99	14391	14	10	4	72	2185	470	1715	22%	10118
12/16/99	14751	15	15	0	100	2200	485	1715	22%	10478
01/05/00	14751	20	0	20	0	2220	485	1735	22%	10478
01/19/00	15087	14	14	0	100	2234	499	1735	22%	10814
02/21/00	15087	33	0	33	0	2267	499	1768	22%	10814
03/01/00	15303	9	9	0	100	2276	508	1768	22%	11030
03/23/00	15831	22	22	0	100	2298	530	1768	23%	11557

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		Total (days)	Uptime (days)	Downtime (days)	Uptime (%)	Total (days)	Uptime (days)	Downtime (days)	Uptime (%)	
10/17/00	15832	208	0	208	0	2506	530	1976	21%	11559
10/24/00	15998	7	7	0	99	2513	537	1976	21%	11725
11/13/00	16319	20	13	7	67	2533	551	1982	22%	12045
11/28/00	16319	15	0	15	0	2548	551	1997	22%	12046
12/20/00	16319	22	0	22	0	2570	551	2019	21%	12046
01/17/01	16324	28	0	28	1	2598	551	2047	21%	12050
02/14/01	16346	28	1	27	3	2626	552	2074	21%	12072
02/26/01	16458	12	5	7	39	2638	556	2082	21%	12185
03/13/01	16466	15	0	15	2	2653	557	2096	21%	12193
03/30/01	16872	17	17	0	99	2670	574	2096	21%	12599
04/19/01	17029	20	7	13	33	2690	580	2110	22%	12756
04/30/01	17292	11	11	0	99	2701	591	2110	22%	13018
05/14/01	17601	14	13	1	92	2715	604	2111	22%	13327
05/22/01	17793	8	8	0	100	2723	612	2111	22%	13520
06/05/01	18126	14	14	0	99	2737	626	2111	23%	13852
06/25/01	18305	20	7	13	37	2757	633	2124	23%	14032
07/06/01	18569	11	11	0	100	2768	644	2124	23%	14296
07/18/01	18856	12	12	0	100	2780	656	2124	24%	14583
07/31/01	19166	13	13	0	99	2793	669	2124	24%	14893
08/09/01	19388	9	9	0	103	2802	643	2159	23%	15115
08/23/01	19720	14	14	0	99	2816	656	2160	23%	15447
09/05/01	20029	13	13	0	99	2829	655	2174	23%	15756
09/17/01	20321	12	12	0	101	2841	668	2173	23%	16048
09/24/01	20420	7	4	3	59	2848	672	2176	24%	16146
10/01/01	20425	7	0	7	3	2855	672	2183	24%	16152

**Table 3
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Operational Uptime Information**

ARCO Service Station #2035
1001 San Pablo Avenue, Albany, California

Date	Meter (hours)	Period Operation			Cumulative Operation				Total Operating Time (hours)	
		Total (days)	Uptime (days)	Downtime (days)	Uptime (%)	Total (days)	Uptime (days)	Downtime (days)		Uptime (%)
10/09/01	20621	8	8	0	102	2863	680	2183	24%	16347
10/15/01	20762	6	6	0	98	2869	686	2183	24%	16489
11/07/01	21320	23	23	0	101	2892	709	2183	25%	17047
11/21/01	21650	14	14	0	98	2906	723	2183	25%	17377
12/05/01	21986	14	14	0	100	2920	737	2183	25%	17713
12/27/01	22514	22	22	0	100	2942	759	2183	26%	18241
01/09/02	22516	13	0	13	1	2955	759	2196	26%	18242
01/21/02	22803	12	12	0	100	2967	771	2196	26%	18530
02/05/02	23063	15	11	4	72	2982	782	2200	26%	18789
6/31/02						----System Not Operating----				
12/31/02						----System Not Operating----				

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

Table 4
Soil Vapor Extraction System
Flow Rates and Analytical Results of Air Samples

ARCO Service Station #2035
1001 San Pablo Avenue, Albany, California

Date	Sample Location	Vacuum (in. H2O)	Velocity		Flowrate ^{1,2} (scfm)	Hydrocarbon Concentrations (ppmv)					
			/Actual Flow (fpm/acfm)			TPHg	Benzene	Toluene	Ethylbenzene	Xylene	MTBE
12/01/97	Influent				221	160	0.6	ND<0.1	1.6	2.5	
	Effluent					8	ND<0.1	0.1	ND<0.1	0.3	
01/27/98	Influent	NA	NA		NA	NA	NA	NA	NA	NA	
	Effluent										
08/12/98	Influent	NA	NA		NA	NA	NA	NA	NA	NA	
	Effluent										
09/02/98	Influent	30.0	600		27	610	ND<1	ND<1	2	3	
	Effluent		1050		92	9	ND<0.1	ND<0.1	0.1	ND<0.2	
10/19/98	Influent	20.0	500		23	64	ND<0.1	0.7	ND<0.1	ND<0.2	
	Effluent		1200		106	ND<5	ND<0.1	ND<0.1	ND<0.1	ND<0.2	
11/10/98	Influent	20.0	500		23	8	ND<0.1	0.1	ND<0.1	ND<0.2	
	Effluent		1200		106	ND<5	ND<0.1	ND<0.1	ND<0.1	ND<0.2	
06/10/99	Influent	35.0	1500		67	100	0.5	3	ND<0.1	0.9	ND<1
	Effluent		975		75	ND<5	ND<0.1	ND<0.1	ND<0.1	ND<0.2	ND<1
09/09/99	Influent	15.4	1900		90	ND<49	0.7	1.1	ND<0.1	ND<0.2	33
	Effluent		1200		92	ND<5	ND<0.1	ND<0.1	ND<0.1	ND<0.2	ND<0.8
10/06/99	Influent	16.0	1825		86	240	1	2.9	ND<0.1	0.7	67
	Effluent		900		69	9	ND<0.1	0.1	0.1	ND<0.2	ND<0.8
12/01/99	Influent	11.0	1900		91	210	0.7	0.8	ND<0.2	0.2	61
	Effluent		1500		115	ND<5	ND<0.1	ND<0.1	ND<0.1	ND<0.2	1.4
01/05/00	Influent	9.8	800		38	90	0.4	0.7	0.1	ND<0.2	33
	Effluent		1450		111	ND<5	ND<0.1	ND<0.1	ND<0.1	ND<0.2	ND<0.8
03/01/00	Influent	9.8	2000		96	54	1.3	4.8	1.1	7.2	19
	Effluent		1500		115	ND<5	ND<0.1	ND<0.1	ND<0.1	ND<0.2	ND<0.8
10/17/00	Influent	10.0	--		27	77	1.4	1.8	0.33	1.4	20
	Effluent		--		103	6.0	0.044	0.16	0.055	0.38	0.59

Table 4
Soil Vapor Extraction System
Flow Rates and Analytical Results of Air Samples

ARCO Service Station #2035
1001 San Pablo Avenue, Albany, California

Date	Sample Location	Vacuum (in. H2O)	Velocity		Flowrate ^{1,2} (scfm)	Hydrocarbon Concentrations (ppmv)				
			/Actual Flow (fpm/acfm)			TPHg	Benzene	Toluene	Ethylbenzene	Xylene
02/26/01	Influent	60.0	180	153	50.4	0.850	3.84	0.390	2.02	11.6
	Effluent		180	153	ND<2.84	ND<0.0314	0.0769	ND<0.0230	0.754	0.132
04/19/01	Influent	45.0	124	110	180	2.0	2.6	0.25	2.0	ND<1.5
	Effluent		124	110	ND<10.0	ND<0.15	0.24	ND<0.15	0.79	ND<1.5
05/14/01	Influent	40.0	76	69	41.0	0.511	0.299	0.0357	0.293	0.492
	Effluent		76	69	ND<2.84	ND<0.0314	ND<0.0266	ND<0.0230	ND<0.0230	ND<0.111
06/05/01	Influent	45.0	108	96	6.6	ND<0.31	0.41	0.072	0.32	2.2
	Effluent		108	96	ND<2.4	ND<0.31	ND<0.027	ND<0.023	0.068	ND<0.14
08/09/01	Influent	40.0	98.5	89	4.3	0.034	0.19	ND<0.024	0.15	0.20
	Effluent		98.5	89	ND<2.8	ND<0.032	0.026	ND<0.024	0.13	ND<0.11
09/05/01	Influent	50.0	113	99	5.2	0.038	0.39	0.025	0.14	0.83
	Effluent		113	99	ND<2.8	ND<0.032	ND<0.026	ND<0.024	0.027	ND<0.11
10/01/01	Influent	40.0	218	197	31	0.23	0.56	0.077	0.30	2.1
	Effluent		218	197	ND<2.8	ND<0.032	0.071	ND<0.024	0.036	ND<0.11
11/07/01	Influent	48.0	221	195	6.4	ND<0.032	0.33	0.029	0.14	1.4
	Effluent		221	195	ND<2.8	ND<0.032	ND<0.026	ND<0.024	ND<0.024	ND<0.11
12/05/01	Influent	61.0	200	170	7.5	0.16	0.52	ND<0.024	0.11	
	Effluent		200	170	ND<2.8	ND<0.032	ND<0.026	ND<0.024	ND<0.024	
01/09/02	Influent	65.0	203	171	45	0.52	2.4	0.22	1.3	5.6
	Effluent		203	171	ND<2.8	ND<0.032	0.049	ND<0.024	0.052	ND<0.11
02/05/02	Influent	64.0	200	169	23	0.16	1.4	0.15	0.84	4.8
	Effluent		200	169	ND<2.8	ND<0.032	0.076	ND<0.024	0.059	ND<0.11
04/02/02	Influent	NA	NA	NA	45	0.38	1.00	0.18	1.50	20.00
	Effluent	NA	NA	NA	ND<2.4	ND<0.031	ND<0.027	ND<0.023	0.05	ND<0.14

Table 4
Soil Vapor Extraction System
Flow Rates and Analytical Results of Air Samples

ARCO Service Station #2035
1001 San Pablo Avenue, Albany, California

¹ Influent Flow Rate previous to 10/17/00, cfm = (Velocity, fpm)(Influent Pipe Area, sq. ft.)(406.8 in.H20 - Vacuum, in.H20) / (406.8 in.H20)

where Influent Pipe Diameter = 3"

Effluent Flow Rate, cfm = (Velocity, fpm)(Effluent Pipe Area, sq.ft.)/[(460° R + 77° F) / (460° R + Vapor Temp F)]

where Effluent (after blower) Pipe Diameter = 4"

² Influent Flow Rate 10/17/00 to present, cfm = (Actual flow, acfm)(406.8 in.H20 - Vacuum, in.H20) / (406.8 in.H20)

Effluent Flow Rate 10/17/00 to present, scfm = (Actual flow, acfm)/[(460° R + 77° F) / (460° R + Vapor Temp F)]

when dilution valve is open. If dilution valve is closed, influent flow = effluent flow

ND< = Not detected at or above the specified laboratory reporting limit

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

Table 5
Soil Vapor Extraction System
Extraction Rates, Emission Rates, Destruction Efficiency, and Mass Removed

ARCO Service Station #2035
1001 San Pablo Avenue, Albany, California

Date	Extraction Rate from Wellfield ¹		Emission Rate to Atmospher		Destruction Efficiency ³		Period Removal ⁴		Cumulative Removal	
	TPHg (lbs/day)	Benzene (lbs/day)	TPHg (lbs/day)	Benzene (lbs/day)	TPHg (%)	Benzene (%)	TPHg (lbs)	Benzene (lbs)	TPHg (lbs)	Benzene (lbs)
12/01/97	13.0	0.0381	0.651	ND<0.0064	95	NC	183.3	0.5	3022.6	250.5
09/02/98	6.11	0.0000	0.306	ND<0.0027	95	NC	0.1	0.0	3022.7	250.5
10/19/98	0.55	0.0000	ND<0.196	ND<0.0031	NC	NC	18.2	0.0	3040.8	250.5
11/10/98	0.07	0.0000	ND<0.196	ND<0.0031	NC	NC	1.5	0.0	3042.3	250.5
06/10/99	2.47	0.0097	ND<0.0138	ND<0.0021	NC	NC	0.1	0.0	3042.4	250.5
09/09/99	1.61	0.0180	ND<0.0165	ND<0.0026	NC	NC	22.6	0.3	3065.0	250.8
10/06/99	7.59	0.0247	0.229	ND<0.0020	97	NC	95.9	0.3	3160.9	251.1
12/01/99	7.00	0.0182	ND<0.212	ND<0.0033	NC	NC	274.4	0.7	3435.3	251.8
01/05/00	1.27	0.0044	ND<0.205	ND<0.0032	NC	NC	19.0	0.1	3454.3	251.9
03/01/00	1.90	0.0357	ND<0.212	ND<0.0033	NC	NC	43.7	0.8	3498.0	252.7
10/17/00	0.77	0.0110	ND<0.226	ND<0.0013	71	88	17.0	0.2	3515.0	252.9
02/26/01	2.84	0.0374	ND<0.160	ND<0.0014	NC	NC	74.1	1.0	3589.2	253.9
04/19/01	7.29	0.0633	ND<0.405	ND<0.0047	NC	NC	173.6	1.5	3762.8	255.4
05/14/01	1.03	0.0100	ND<0.0715	ND<0.0006	NC	NC	24.6	0.2	3787.4	255.7
06/25/01	0.23	ND<0.0085	ND<0.0847	ND<0.0085	NC	NC	6.8	0.3	3794.2	255.9
08/09/01	0.14	0.0009	ND<0.0914	ND<0.0008	NC	NC	6.3	0.0	3800.5	256.0
09/05/01	0.19	0.0011	ND<0.1020	ND<0.0009	NC	NC	5.1	0.0	3805.6	256.0
10/01/01	2.24	0.0130	ND<0.2022	ND<0.0018	NC	NC	36.9	0.2	3842.5	256.2
11/07/01	0.46	0.0018	ND<0.2005	ND<0.0018	NC	NC	17.1	0.1	3859.6	256.3
12/05/01	0.47	0.0078	ND<0.1745	ND<0.0016	NC	NC	13.0	0.2	3872.6	256.5
01/09/02	2.82	0.0255	ND<0.1755	ND<0.0016	NC	NC	62.2	0.6	3934.8	257.0
02/05/02	1.42	0.0077	ND<0.1734	ND<0.0015	NC	NC	32.5	0.2	3967.3	257.2
6/31/02					----System Not Operating----					
12/31/02					----System Not Operating----					

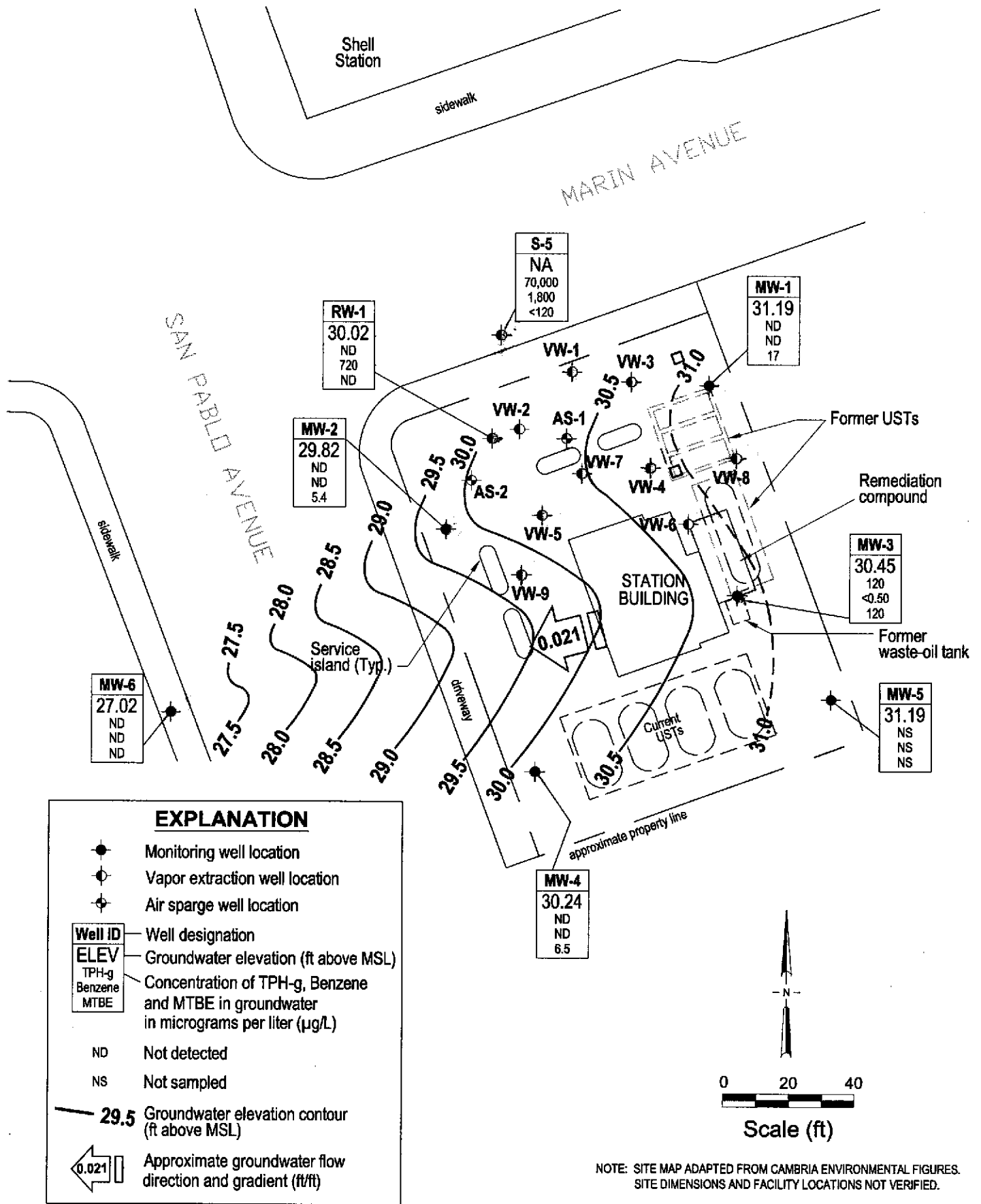
- ¹ Extraction Rate, lbs/day = (Influent Flow, cfm)(Influent conc., ppmv)(g/mole)(60 min/hr)(24 hr/day)(28.3 L/cf) / (10⁶)(24.45 moles/L)(453.6 g/lb)
where TPHg = 100 g/mole and Benzene = 78.1 g/mole; Influent conc. = 0, if reported as non-detect
- ² Emission Rate, lbs/day = (Effluent Flow, cfm)(Effluent conc., ppmv)(g/mole)(60 min/hr)(24 hr/day)(28.3 L/cf) / (10⁶)(24.45 moles/L)(453.6 g/lb)
where TPHg = 100 g/mole and Benzene = 78.1 g/mole; Effluent conc. = Method Reporting Limit, if reported as non-detect
- ³ Destruction Efficiency, % = (Extraction Rate - Emission Rate)(100) / (Extraction Rate); NC = Not Calculated due to non-detection.
- ⁴ Period Removal, lbs = (Extraction Rate)(Uptime)

NC = Not Calculated

ND< = Not detected at or above the specified laboratory reporting limit

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

X:\x_env\waste\BP_GEMS\Sites\Scott Robinson\Paul_Supples\2035\Reports\Monitoring\Dir_4_2002\Drawings\GW\EC-AS_11-27.dwg



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



Project No. 38486169
 Arco Service Station #2035
 1001 San Pablo Avenue
 Albany, California

**GROUNDWATER ELEVATION CONTOUR
 AND ANALYTICAL SUMMARY MAP**
 Fourth Quarter 2002 (November 27, 2002)

FIGURE
 1

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 # DZ-1121-PH1 Date 11/27/02 Client Arco 2035

Site 1001 San Pablo Ave., Albany

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 <u>LOC</u>
MW-1	4					10.22	30.30	↓
MW-2	4					10.51	29.40	
MW-3	4					10.51 10.49	29.40 34.90	
MW-4	4					10.09	25.95	
MW-5	4					10.65	24.40	
MW-6	2					13.11	24.40	
* RW-1	2	gauged up thru hole in pump				10.31	26.00	
S-5	4					9.77	15.70 ^{uv}	
* hard to gauge bottom accurately w/ pump in well								

Gauge out

ARCO / BP WELL MONITORING DATA SHEET

BTS #: 021127-RH1	Station # 1001 San Pablo Ave., Albany
Sampler: Ryan H	Date: 11/27/02
Well I.D.: MW-1	Well Diameter: 2 3 <u>4</u> 6 8
Total Well Depth: 30.30	Depth to Water: 10.22
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: <u>PVC</u> Grade	D.O. Meter (if req'd): <u>YSI</u> HACH

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

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

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

13	x	3	=	39	Gals.
1 Case Volume (Gals.)		Specified Volumes		Calculated Volume	

Time	Temp (°F)	pH	Conductivity (mS or <u>µS</u>)	Gals. Removed	Observations
1117	67.8	6.4	670.8	13.0	turbid
1119	68.5	6.4	690.3	26.0	clear
1121	68.1	6.4	709.4	39.0	"

Did well dewater? Yes No Gallons actually evacuated: 39.0

Sampling Time: 1120 Sampling Date: 11/27/02

Sample I.D.: MW-1 Laboratory: Pace Sequoia Other _____

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

D.O. (if req'd):	Pre-purge:	mg/L	<u>Post-purge:</u>	1.1	mg/L
	Pre-purge:	mV	Post-purge:		mV

ARCO / BP WELL MONITORING DATA SHEET

BTS #: 021127-RH1	Station # 1001 San Pablo Ave, Albany
Sampler: Ryan H	Date: 11/27/02
Well I.D.: MW-2	Well Diameter: 2 3 (4) 6 8
Total Well Depth: 10.51	Depth to Water: 29.40
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: (VVC) 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: <u>Bailer</u> Disposable Bailer Middleburg Electric Submersible Extraction Pump Other: _____	Sampling Method: <u>Bailer</u> Disposable Bailer Extraction Port Other: _____
--	---

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

<u>12.25</u>	x	<u>3</u>	=	<u>36.75</u>	Gals.
1 Case Volume (Gals.)		Specified Volumes		Calculated Volume	

Time	Temp (°F)	pH	Conductivity (mS or (μS))	Gals. Removed	Observations
1045	65.4	6.3	776.1	12.25	clear
1048	64.9	6.3	792.1	24.5	"
1051	66.2	6.5	773.4	36.75	"

Did well dewater? Yes <input type="checkbox"/> (No)	Gallons actually evacuated: 36.75			
Sampling Time: 1059	Sampling Date: 11/27/02			
Sample I.D.: MW-2	Laboratory: Pace (Sequoia) Other: _____			
Analyzed for: (PH-G) (BTEX) (MTBE) TPH-D Other: _____				
D.O. (if req'd):	Pre-purge:	mg/L	Post-purge:	mg/L
			2.6	
O.R.P. (if req'd):	Pre-purge:	mV	Post-purge:	mV

ARCO / BP WELL MONITORING DATA SHEET

BTS #: 021127-RH1	Station # 1001 San Pablo Ave, Albany
Sampler: Ryan H	Date: 11/27/02
Well I.D.: MW-3	Well Diameter: 2 3 <u>4</u> 6 8
Total Well Depth: 3490	Depth to Water: 10.49
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: <u>PVC</u> Grade	D.O. Meter (if req'd): <u>YSI</u> HACH

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

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

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

<u>16</u>	x	<u>3</u>	=	<u>48</u>	Gals.
1 Case Volume (Gals.)		Specified Volumes		Calculated Volume	

Time	Temp (°F)	pH	Conductivity (mS or <u>µS</u>)	Gals. Removed	Observations
1203	65.8	6.6	656.7	16.0	very cloudy
1206	65.9	6.7	656.2	32.0	clearing but still cloudy
1209	65.9	6.7	649.3	48.0	clearing brownish

Did well dewater? Yes <input checked="" type="checkbox"/> <u>No</u>	Gallons actually evacuated: <u>48.0</u>	
Sampling Time: <u>1215</u>	Sampling Date: <u>11/27/02</u>	
Sample I.D.: <u>MW-3</u>	Laboratory: Pace <u>Sequoia</u> Other _____	
Analyzed for: <u>PH-G</u> <u>BTEX</u> <u>MTBE</u> TPH-D Other:		
D.O. (if req'd):	Pre-purge: _____ mg/L	Post-purge: <u>2.2</u> mg/L
O.R.P. (if req'd):	Pre-purge: _____ mV	Post-purge: _____ mV

ARCO / ~~WELL~~ WELL MONITORING DATA SHEET

BTS #: 021127-RH1	Station # 1001 San Pablo Ave, Albany
Sampler: Ryan H	Date: 11/27/02
Well I.D.: MW-4	Well Diameter: 2 3 <u>4</u> 6 8
Total Well Depth: 25.95	Depth to Water: 10.09
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: <u>PVC</u> Grade	D.O. Meter (if req'd): <u>YSI</u> HACH

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

Purge Method: Bailer Sampling Method: Bailer

Disposable Bailer Disposable Bailer

Middleburg Extraction Port

Electric Submersible Other: _____

Extraction Pump

Other: _____

Top of Screen: 10.09 which is below 8.50 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	<u>3</u> Specified Volumes	=	_____ Gals. Calculated Volume
-----------------------	---	-------------------------------	---	----------------------------------

Time	Temp (°F)	pH	Conductivity (mS or µS)	Gals. Removed	Observations
1022	68.7	<u>6.5</u>	460.6	<u>3</u>	clear
 	 	 	 	 	
 	 	 	 	 	
 	 	 	 	 	

Did well dewater? Yes No Gallons actually evacuated: 0

Sampling Time: 1022 Sampling Date: 11/27/02

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

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

D.O. (if req'd):	Pre-purge:	mg/L	Post-purge:	 1.8 mg/L
	O.R.P. (if req'd):	mV	Post-purge:	mV

ARCO / BP WELL MONITORING DATA SHEET

BTS #: 021127-RH1	Station # 1001 San Pablo Ave, Albany
Sampler: Ryan H	Date: 11/27/02
Well I.D.: MH-6	Well Diameter: (2) 3 4 6 8
Total Well Depth: 24.40	Depth to Water: 13.11
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: PVC Grade	D.O. Meter (if req'd): (YSI) HACH

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

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

Top of Screen: 13.11 ^{which is below} 8.50 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	=	Gals.
		Specified Volumes		Calculated Volume

Time	Temp (°F)	pH	Conductivity (mS or µS)	Gals. Removed	Observations
1000	66.7	6.6	793.4	0	cloudy

Did well dewater? Yes No Gallons actually evacuated: 0

Sampling Time: 1000 Sampling Date: 11/27/02

Sample I.D.: MH-6 Laboratory: Pace (Sequoia) Other: _____

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

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

ARCO / BP WELL MONITORING DATA SHEET

BTS #: 021127-RH1	Station # 1001 San Pablo Ave, Albany
Sampler: Ryan H	Date: 11/27/02
Well I.D.: RW-1	Well Diameter: <u>(2)</u> ² 3 4 6 8 _____
Total Well Depth: 26.00	Depth to Water: 10.31
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: <u>(PVC)</u> Grade	D.O. Meter (if req'd): <u>(YSI)</u> HACH

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

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

2.5	x	3	=	7.5	Gals.
1 Case Volume (Gals.)		Specified Volumes		Calculated Volume	

Time	Temp (°F)	pH	Conductivity (mS or <u>(µS)</u>)	Gals. Removed	Observations
1332	67.9	7.0	733.3	2.5	brownish
1335	67.8	6.8	715.9	5.0	"
1339	67.4	6.8	718.6	7.5	"

Did well dewater? Yes <input type="checkbox"/> <u>(No)</u>	Gallons actually evacuated: 7.5
Sampling Time: 1344	Sampling Date: 11/27/02
Sample I.D.: RW-1	Laboratory: Pace <u>(Sequoia)</u> Other _____
Analyzed for: <u>(TPH-G)</u> <u>(BTEX)</u> <u>(MTBE)</u> TPH-D Other:	
D.O. (if req'd): Pre-purge: _____ mg/L	<u>(Post-purge)</u> 7.8 mg/L
O.R.P. (if req'd): Pre-purge: _____ mV	Post-purge: _____ mV

ARCO / BP WELL MONITORING DATA SHEET

BTS #: 021127-RH1	Station # 1001 San Pablo Ave., Albany
Sampler: Ryan H	Date: 11/27/02
Well I.D.: S-5	Well Diameter: 2 3 (4) 6 8
Total Well Depth: 15.70	Depth to Water: 9.77
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	radius ² * 0.163

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

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

<u>3.75</u>	x	<u>3</u>	=	<u>11.25</u>	Gals.
1 Case Volume (Gals.)		Specified Volumes		Calculated Volume	

60099

Time	Temp (°F)	pH	Conductivity (mS or µS)	Gals. Removed	Observations
1244	69.3	7.0	642.5	3.75	blackish, odor
					Well dewatered @ 5.0 gal
1249	69.2	6.9	703.1	5.0	DTW = 14.28

Did well dewater? <u>(Yes)</u> No	Gallons actually evacuated: <u>5.0</u>		
Sampling Time: <u>1255</u>	Sampling Date: <u>11/27/02</u>		
Sample I.D.: <u>S-5</u>	Laboratory: Pace <u>Sequoia</u> Other _____		
Analyzed for: <u>PHH-G</u> <u>BTEX</u> <u>MTBE</u> TPH-D Other:			
D.O. (if req'd): Pre-purge:	mg/L	Post-purge: <u>4.3</u>	mg/L
O.R.P. (if req'd): Pre-purge:	mV	Post-purge:	mV



Chain of Custody Record

Project Name _____
 BP BU/GEM CO Portfolio: _____
 BP Laboratory Contract Number: _____
 Date: 1/27/02 Requested Due Date (mm/dd/yy) _____

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: 1001 SAN PABLO AVE, ALBANY, CA	Address: 500 12th St, Ste. 200
Lab Address: 885 Jarvis Dr. Morgan Hill, CA 95037	Site ID No. ARCO 2035	Oakland, CA 94609-4014
	Site Lat/Long:	e-mail EDD: syed_rehan@urscorp.com
	California Global ID #: <u>TD600100081</u>	Consultant/Contractor Project No.: J5-0002035.01 00427
Lab PM: Latonya Pelt	BP/GEM PM Contact: PAUL SUPPLE	Consultant Tele/Fax: 510-874-1735/510-874-3268
Tele/Fax: 408-776-9600 / 408-782-6308	Address:	Consultant/Contractor PM: Scott Robinson
Report Type & QC Level: Send EDF Reports	Tele/Fax:	Invoice to: Consultant/Contractor or <u>BP/GEM</u> (Circle one)
BP/GEM Account No.:		BP/GEM Work Release No: INTRIM -50231

Item No.	Sample Description	Time	Matrix				Laboratory No.	No. of containers	Preservatives				Requested Analysis						Sample Point Lat/Long and Comments
			Soil/Solid	Water/Liquid	Sediments	Air			Unpreserved	H ₂ SO ₄	HNO ₃	HCl	TPH-G/BTEX (8015/8021)	TPH-D (8015)	MTBE (8021)	MTBE, TAME, ETBE DIPE, TBA (8260)	1,2-DCA & EDB (8260)		
1	MW-1	1126	X				6				X		X					 confirm all MTBE hits by 8260	
2	MW-2	1059	X				6				X		X						
3	MW-3	1215	X				6				X		X						
4	MW-4	1022	X				6				X		X						
5	MW-5																		
6	MW-B	1000	X				6				X		X						
7	BW-1	1344	X				6				X		X						
8	B-5	1255	X				6				X		X						
9																			
10																			

Sampler's Name: <u>Ryan Hanstedt</u>	Relinquished By / Affiliation: <u>[Signature] / BTS</u>	Date:	Time:	Accepted By / Affiliation:	Date:	Time:
Sampler's Company: <u>Blaine Tech</u>						
Shipment Date:						
Shipment Method:						
Shipment Tracking No.:						

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

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

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

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

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

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

Arco 2035

Station #

1001 San Pablo Ave.

Station Address

Total Gallons Collected From Groundwater Monitoring Wells:

~~99~~ 99

added equip.	any other
rinse water <u>4</u>	adjustments _____

TOTAL GALS. RECOVERED <u>103</u>	loaded onto BTS vehicle # <u>15</u>
----------------------------------	-------------------------------------

BTS event #	time	date
<u>021127-2H1</u>	<u>1430</u>	<u>11/27/02</u>

signature *[Signature]*

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

unloaded by signature _____

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

LABORATORY PROCEDURES

Laboratory Procedures

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



**Sequoia
Analytical**

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

23 December, 2002

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

RE: ARCO #2035, Albany, Ca.
Sequoia Work Order: MLL0090

Enclosed are the results of analyses for samples received by the laboratory on 12/03/02
14:50. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Latonya Pelt
Project Manager
CA ELAP Certificate #1210



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

Project: ARCO #2035, Albany, Ca.
Project Number: ARCO #2035, Albany, CA
Project Manager: Scott Robinson

MLL0090
Reported:
12/23/02 12:31

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
MW-1	MLL0090-01	Water	11/27/02 11:26	12/03/02 14:50
MW-2	MLL0090-02	Water	11/27/02 10:59	12/03/02 14:50
MW-3	MLL0090-03	Water	11/27/02 12:15	12/03/02 14:50
MW-4	MLL0090-04	Water	11/27/02 10:22	12/03/02 14:50
MW-6	MLL0090-05	Water	11/27/02 10:00	12/03/02 14:50
RW-1	MLL0090-06	Water	11/27/02 13:44	12/03/02 14:50
S-5	MLL0090-07	Water	11/27/02 12:55	12/03/02 14:50

There were no custody seals that were received with this project.



885 Jarvis Dr
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 FAX (408) 782-6308
 www.sequoialabs.com

URS Corporation 500 12th Street, Suite 100 Oakland CA, 94607	Project: ARCO #2035, Albany, Ca. Project Number: ARCO #2035, Albany, CA Project Manager: Scott Robinson	MLL0090 Reported: 12/23/02 12:31
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Volatile Organic Compounds by EPA Method 8260B
Sequoia Analytical - Morgan Hill

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
MW-1 (MLL0090-01) Water Sampled: 11/27/02 11:26 Received: 12/03/02 14:50									
Methyl tert-butyl ether	1.7	0.50	ug/l	1	2L13033	12/11/02	12/11/02	EPA 8260B	
Benzene	ND	0.50	"	"	"	"	"	"	
Toluene	ND	0.50	"	"	"	"	"	"	
Ethylbenzene	ND	0.50	"	"	"	"	"	"	
Xylenes (total)	ND	0.50	"	"	"	"	"	"	
Gasoline Range Organics (C6-C10)	ND	50	"	"	"	"	"	"	
<i>Surrogate: 1,2-Dichloroethane-d4</i>		99.6 %	78-129	"	"	"	"	"	
MW-2 (MLL0090-02) Water Sampled: 11/27/02 10:59 Received: 12/03/02 14:50									
Methyl tert-butyl ether	5.4	0.50	ug/l	1	2L13033	12/11/02	12/11/02	EPA 8260B	
Benzene	ND	0.50	"	"	"	"	"	"	
Toluene	ND	0.50	"	"	"	"	"	"	
Ethylbenzene	ND	0.50	"	"	"	"	"	"	
Xylenes (total)	ND	0.50	"	"	"	"	"	"	
Gasoline Range Organics (C6-C10)	ND	50	"	"	"	"	"	"	
<i>Surrogate: 1,2-Dichloroethane-d4</i>		105 %	78-129	"	"	"	"	"	
MW-3 (MLL0090-03) Water Sampled: 11/27/02 12:15 Received: 12/03/02 14:50 HT-04									
Methyl tert-butyl ether	56	1.0	ug/l	2	2L15001	12/15/02	12/15/02	EPA 8260B	
Benzene	ND	1.0	"	"	"	"	"	"	
Toluene	ND	1.0	"	"	"	"	"	"	
Ethylbenzene	ND	1.0	"	"	"	"	"	"	
Xylenes (total)	2.5	1.0	"	"	"	"	"	"	
Gasoline Range Organics (C6-C10)	ND	100	"	"	"	"	"	"	
<i>Surrogate: 1,2-Dichloroethane-d4</i>		98.4 %	78-129	"	"	"	"	"	

Sequoia Analytical - Morgan Hill

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



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

Project: ARCO #2035, Albany, Ca.
Project Number: ARCO #2035, Albany, CA
Project Manager: Scott Robinson

MLL0090
Reported:
12/23/02 12:31

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

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
MW-4 (MLL0090-04) Water Sampled: 11/27/02 10:22 Received: 12/03/02 14:50									
Methyl tert-butyl ether	6.5	0.50	ug/l	1	2L13033	12/11/02	12/11/02	EPA 8260B	
Benzene	ND	0.50	"	"	"	"	"	"	
Toluene	ND	0.50	"	"	"	"	"	"	
Ethylbenzene	ND	0.50	"	"	"	"	"	"	
Xylenes (total)	ND	0.50	"	"	"	"	"	"	
Gasoline Range Organics (C6-C10)	ND	50	"	"	"	"	"	"	
<i>Surrogate: 1,2-Dichloroethane-d4</i>		106 %	78-129	"	"	"	"	"	
MW-6 (MLL0090-05) Water Sampled: 11/27/02 10:00 Received: 12/03/02 14:50									
Methyl tert-butyl ether	ND	0.50	ug/l	1	2L13033	12/11/02	12/11/02	EPA 8260B	
Benzene	ND	0.50	"	"	"	"	"	"	
Toluene	ND	0.50	"	"	"	"	"	"	
Ethylbenzene	ND	0.50	"	"	"	"	"	"	
Xylenes (total)	ND	0.50	"	"	"	"	"	"	
Gasoline Range Organics (C6-C10)	ND	50	"	"	"	"	"	"	
<i>Surrogate: 1,2-Dichloroethane-d4</i>		102 %	78-129	"	"	"	"	"	
RW-1 (MLL0090-06) Water Sampled: 11/27/02 13:44 Received: 12/03/02 14:50									HT-04
Methyl tert-butyl ether	ND	25	ug/l	50	2L15001	12/15/02	12/15/02	EPA 8260B	
Benzene	720	25	"	"	"	"	"	"	
Toluene	ND	25	"	"	"	"	"	"	
Ethylbenzene	ND	25	"	"	"	"	"	"	
Xylenes (total)	ND	25	"	"	"	"	"	"	
Gasoline Range Organics (C6-C10)	ND	2500	"	"	"	"	"	"	
<i>Surrogate: 1,2-Dichloroethane-d4</i>		101 %	78-129	"	"	"	"	"	



URS Corporation 500 12th Street, Suite 100 Oakland CA, 94607	Project: ARCO #2035, Albany, Ca. Project Number: ARCO #2035, Albany, CA Project Manager: Scott Robinson	MLL0090 Reported: 12/23/02 12:31
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**Volatile Organic Compounds by EPA Method 8260B
Sequoia Analytical - Morgan Hill**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
S-5 (MLL0090-07) Water Sampled: 11/27/02 12:55 Received: 12/03/02 14:50									
Methyl tert-butyl ether	ND	50	ug/l	100	2L13033	12/11/02	12/11/02	EPA 8260B	
Benzene	1300	50	"	"	"	"	"	"	
Toluene	450	50	"	"	"	"	"	"	
Ethylbenzene	1400	50	"	"	"	"	"	"	
Xylenes (total)	13000	50	"	"	"	"	"	"	
Gasoline Range Organics (C6-C10)	55000	5000	"	"	"	"	"	"	
<i>Surrogate: 1,2-Dichloroethane-d4</i>		103 %		78-129	"	"	"	"	

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

 Project: ARCO #2035, Albany, Ca.
 Project Number: ARCO #2035, Albany, CA
 Project Manager: Scott Robinson

 MLL0090
 Reported:
 12/23/02 12:31

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC %REC	Limit Limits	RPD	RPD Limit	Notes
---------	--------	-----------------	-------	-------------	---------------	--------------	-----------------	-----	--------------	-------

Batch 2L13033 - EPA 5035
Blank (2L13033-BLK1)

Prepared & Analyzed: 12/11/02

Methyl tert-butyl ether	ND	0.50	ug/l							
Benzene	ND	0.50	"							
Toluene	ND	0.50	"							
Ethylbenzene	ND	0.50	"							
Xylenes (total)	ND	0.50	"							
Gasoline Range Organics (C6-C10)	ND	50	"							

Surrogate: 1,2-Dichloroethane-d4	5.07		"	5.00		101	78-129			
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Laboratory Control Sample (2L13033-BS1)

Prepared & Analyzed: 12/11/02

Methyl tert-butyl ether	10.4	0.50	ug/l	10.0		104	63-137			
Benzene	10.6	0.50	"	10.0		106	78-124			
Toluene	9.24	0.50	"	10.0		92.4	78-129			

Surrogate: 1,2-Dichloroethane-d4	5.08		"	5.00		102	78-129			
----------------------------------	------	--	---	------	--	-----	--------	--	--	--

Laboratory Control Sample Dup (2L13033-BSD1)

Prepared: 12/11/02 Analyzed: 12/12/02

Methyl tert-butyl ether	10.3	0.50	ug/l	10.0		103	63-137	0.966	13	
Benzene	10.8	0.50	"	10.0		108	78-124	1.87	12	
Toluene	9.25	0.50	"	10.0		92.5	78-129	0.108	10	

Surrogate: 1,2-Dichloroethane-d4	5.06		"	5.00		101	78-129			
----------------------------------	------	--	---	------	--	-----	--------	--	--	--

Batch 2L15001 - EPA 5035
Blank (2L15001-BLK1)

Prepared & Analyzed: 12/15/02

Methyl tert-butyl ether	ND	0.50	ug/l							
Benzene	ND	0.50	"							
Toluene	ND	0.50	"							
Ethylbenzene	ND	0.50	"							
Xylenes (total)	ND	0.50	"							
Gasoline Range Organics (C6-C10)	ND	50	"							

Surrogate: 1,2-Dichloroethane-d4	4.79		"	5.00		95.8	78-129			
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Sequoia Analytical - Morgan Hill

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

Project: ARCO #2035, Albany, Ca.
 Project Number: ARCO #2035, Albany, CA
 Project Manager: Scott Robinson

MLL0090
 Reported:
 12/23/02 12:31

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 2L15001 - EPA 5035										
Laboratory Control Sample (2L15001-BS1)				Prepared & Analyzed: 12/15/02						
Methyl tert-butyl ether	10.1	0.50	ug/l	10.0		101	63-137			
Benzene	11.0	0.50	"	10.0		110	78-124			
Toluene	9.51	0.50	"	10.0		95.1	78-129			
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>5.14</i>		<i>"</i>	<i>5.00</i>		<i>103</i>	<i>78-129</i>			
Laboratory Control Sample (2L15001-BS2)				Prepared & Analyzed: 12/15/02						
Methyl tert-butyl ether	8.54	0.50	ug/l	8.40		102	63-137			
Benzene	5.22	0.50	"	5.28		98.9	78-124			
Toluene	28.1	0.50	"	31.8		88.4	78-129			
Gasoline Range Organics (C6-C10)	403	50	"	440		91.6	70-113			
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>4.40</i>		<i>"</i>	<i>5.00</i>		<i>88.0</i>	<i>78-129</i>			
Laboratory Control Sample Dup (2L15001-BSD1)				Prepared & Analyzed: 12/15/02						
Methyl tert-butyl ether	9.43	0.50	ug/l	10.0		94.3	63-137	6.86	13	
Benzene	10.7	0.50	"	10.0		107	78-124	2.76	12	
Toluene	9.03	0.50	"	10.0		90.3	78-129	5.18	10	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>4.98</i>		<i>"</i>	<i>5.00</i>		<i>99.6</i>	<i>78-129</i>			
Laboratory Control Sample Dup (2L15001-BSD2)				Prepared: 12/15/02 Analyzed: 12/16/02						
Methyl tert-butyl ether	11.1	0.50	ug/l	8.40		132	63-137	26.1	13	QR-02
Benzene	5.06	0.50	"	5.28		95.8	78-124	3.11	12	
Toluene	28.0	0.50	"	31.8		88.1	78-129	0.357	10	
Gasoline Range Organics (C6-C10)	358	50	"	440		81.4	70-113	11.8	9	QR-02
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>4.70</i>		<i>"</i>	<i>5.00</i>		<i>94.0</i>	<i>78-129</i>			

Sequoia Analytical - Morgan Hill

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



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

Project: ARCO #2035, Albany, Ca.
Project Number: ARCO #2035, Albany, CA
Project Manager: Scott Robinson

MLL0090
Reported:
12/23/02 12:31

Notes and Definitions

- HT-04 This sample was analyzed beyond the EPA recommended holding time. The results may still be useful for their intended purpose.
- QR-02 The RPD result exceeded the control limits; however, both percent recoveries were acceptable. Sample results for the QC batch were accepted based on percent recoveries and completeness of QC data.
- 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

510 874 3268 P. 02/02



Chain of Custody Record

Project Name: BP BU/GEM CO Portfolio
 BP Laboratory Contract Number: 112102
 Requested Due Date (mm/dd/yy): 11/20/07

On-site Time: _____ Temp: _____
 Off-site Time: _____ Temp: _____
 Sky Conditions: _____
 Meteorological Events: _____
 Wind Speed: _____ Direction: _____
 Consultant/Contractor: LERS
 Address: 500 12th St, Ste 200
Oakland, CA 94608-4014
 Email EDD: syed.tajam@unscop.com
 Consultant/Contractor Project No.: 15-00012035.01 00 627
 Consultant Tele/Fax: 910-874-1735/10-874-3288
 Consultant/Contractor FIM: Scott Robinson
 Invoice to: Consultant/Contractor or BP/GEM (check one)
 BP/GEM Work Release No: INTRIM-50231

To: SEQUOIA
 Address: 885 Jarvis Dr
Morgan Hill, CA 95037
 M: Lakshya Patel
 Fax: 408-778-8500 / 408-782-8508
 n Type & QC Level: Stand EDS Reports
 EM Account No.: _____

BP/GEM Facility No.: _____
 BP/GEM Facility Address: 1001 SAN PABLO AVE, ALBANY, CA
 Site ID No: ARCO 2036
 Site Lat/Long: _____
 California Global ID #: T0600100081
 BP/GEM PM Contact: PAUL SUPPLE
 Address: _____
 Tele/Fax: _____

URS CORPORATION

14:08

No.	Sample Description	Time	Matrix			Laboratory No.	No. of containers	Preservatives				Requested Analysis				Sample Point Lat/Long and Comments
			Solid	Water	Residues			Unpreserved	H2O2	HNO3	HCl	TPH/O/BTEX (0015/0021)	TPH-D (0015)	MTBE (0021)	MTBE, TAME, ETBE, DPE, TEA (0260)	
1	✓ MW-1	1126	X	X		01	6				X	X			<p>★</p> <p>Confirmed 11 MTBE hits by 8260</p> <p>Custom MW-6 and highest peak at 8260</p>	
2	✓ MW-2	1059	X	X		02	6				X	X				
3	✓ MW-3	1215	X	X		03	6				X	X				
4	✓ MW-4	1022	X	X		04	6				X	X				
5	MW-5															
6	✓ MW-6	1000	X	X		05	6				X	X				
7	✓ MW-7	1344	X	X		06	6				X	X				
8	✓ MW-8	1255	X	X		07	6				X	X				
9																
10																

only 2 stapler

Sampler's Name: Lyan Housheer Date Analyzed By: [Signature]
 Sampler's Company: Blaine Tech Date Analyzed: 11/16/07
 Instrument: [Signature] Date: 11/16/07
 Instrument Method: _____

Instructions: Address Invoice to BP/GEM but send it to [unclear]
 Is in Place Yes No Temperature in Place Yes No
 Location: White Copy - Laboratory / Yellow Copy - B1732 / Pink Copy - Cont. [unclear]

TOTAL P. 02

SEQUOIA ANALYTICAL SAMPLE RECEIPT LOG

CLIENT NAME: URS
 REC. BY (PRINT) TL
 WORKORDER: ML0090

DATE Received at Lab: 12/3/02
 TIME Received at Lab: 12:50
 LOG IN DATE: 12-4-02

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

CIRCLE THE APPROPRIATE RESPONSE	LAB SAMPLE #	#	CLIENT ID	CONTAINER DESCRIPTION	SAMPLE MATRIX	DATE SAMPLED	REMARKS: CONDITION (ETC.)
1. Custody Seal(s) = Present / <u>Absent</u> Intact / Broken*	1		MW-1	(6) Vials H ₂ O	(1)	11/27/02	Lot B 2116020
2. Chain-of-Custody Present / <u>Absent</u> *	2		MW-2				
3. Traffic Reports or Packing List Present / <u>Absent</u> *	3		MW-3				
4. Airbill: Airbill / Sticker Present / <u>Absent</u> *	4		MW-4				
	5		MW-6				Sample 21-6
	6		Riv-1				
	7		S-5				
5. Airbill #:							
6. Sample Labels: Present / <u>Absent</u>							
7. Sample IDs: Listed / Not Listed on Chain-of-Custody							
8. Sample Condition: Intact / Broken* / Leaking*							
9. Does information on custody reports, traffic reports and sample labels agree? <u>Yes</u> / No*							
10. Sample received within hold time: <u>Yes</u> / No*							
11. Proper Preservatives used: <u>Yes</u> / No*							
12. Temp Rec. at Lab: <u>Yes</u> / No** (Acceptance range for samples requiring thermal pres. 4+/-2°C)							
**Exception (if any):							

***If Circled, contact Project Manager and attach record of resolution.**

ATTACHMENT C

HISTORICAL GROUNDWATER DATA TABLES

**Table 1
Groundwater Monitoring Data**

**ARCO Service Station No. 2035
1001 San Pablo Avenue, Albany, California**

Well Number	Date Gauged	TOC	Depth	FP	Groundwater		Ethyl- benzene	Total Xylenes	MTBE 8021B*	MTBE 8240/8260	Dissolved Oxygen	Purged/ Not Purged (P/NP)		
		Elevation (ft-MSL)	to Water (feet)	Thickness (feet)	Elevation [1] (ft-MSL)	Date Sampled							TPHg (µg/L)	Benzene (µg/L)
MW-1	03-23-91	41.41	6.21	0.00	35.20	03-23-91	8,800	3,600	<50	62	99	--	--	--
MW-1	05-23-91	41.41	9.37	0.00	32.04	05-23-91	4,800	2,000	<20	52	<20	--	--	--
MW-1	08-21-91	41.41	10.30	0.00	31.11	08-21-91	780	310	<2.5	12	<2.5	14	--	--
MW-1	11-08-91	41.41	12.25	0.00	29.16	11-08-91	58	14	<0.5	<0.5	<0.5	--	--	--
MW-1	02-26-92	41.41	9.08	0.00	32.33	02-26-92	2,700	930	12	18	32	51	--	--
MW-1	04-21-92	41.41	9.11	0.00	32.30	04-21-92	2,700	1,000	<10	22	<10	<60	--	--
MW-1	08-14-92	41.41	10.37	0.00	31.04	08-14-92	300	52	<0.5	0.9	<0.5	22	--	--
MW-1	12-09-92	41.41	8.79	0.00	32.62	12-09-92	270	63	0.7	<0.5	1	25	--	--
MW-1	03-26-93	41.41	9.80	0.00	31.61	03-26-93	1,500	610	<5	15	7	56	--	--
MW-1	05-21-93	41.41	9.65	0.00	31.76	05-21-93	110	6	<0.5	<0.5	0.7	10	--	--
MW-1	09-03-93	41.41	10.22	0.00	31.19	09-03-93	180	40	<0.5	1.2	0.5	26	--	--
MW-1	11-02-93	41.41	10.68	0.00	30.73	11-02-93	83	8	<0.5	<0.5	<0.5	13	--	--
MW-1	02-19-94	41.41	6.92	0.00	34.49	02-19-94	1,800	540	7	27	31	46	--	--
MW-1	05-17-94	41.41	9.28	0.00	32.13	05-17-94	4,500	1,300	20	57	20	<60	--	--
MW-1	08-19-94	41.41	10.05	0.00	31.36	08-20-94	530	110	<5	<5	<5	400	--	--
MW-1	10-19-94	41.41	10.42	0.00	30.99	10-19-94	66	9.1	<0.5	<0.5	<0.5	8	--	--
MW-1	02-15-95	41.41	8.10	0.00	33.31	02-15-95	1,200	390	<5	<5	6	45	--	--
MW-1	05-23-95	41.41	9.53	0.00	31.88	05-23-95	1,300	600	3	13	3	26	--	--
MW-1	08-23-95	41.41	10.03	0.00	31.38	08-23-95	100	21	1.3	<0.5	<0.5	8	--	0.55 P
MW-1	11-15-95	41.41	9.80	0.00	31.61	11-15-95	99	10	0.6	<0.5	<1	7	--	2.1 P
MW-1	01-31-96	41.41	8.82	0.00	32.59	02-01-96	400	93	1.6	3.6	3.7	19	--	1.0 P
DUP 1	06-20-96	--	--	--	--	06-20-96	416	88.4	<2.50	4.61	1.56	<5.00	--	--
MW-1	06-20-96	41.41	9.60	0.00	31.81	06-20-96	444	100	<2.50	4.15	<2.50	15.9	--	1.7 P
MW-1	11-05-96	41.41	9.50	0.00	31.91	11-05-96	73.2	17.8	<0.500	<0.500	<0.500	7.80	--	1.04 P
MW-1	05-03-97	41.41	9.28	0.00	32.13	05-03-97	714	392	<5.00	<5.00	<5.00	26.1	--	-- P
MW-1	10-02-97	41.41	10.50	0.00	30.91	10-02-97	<50	<0.50	<0.50	<0.50	<0.50	<2.5	--	0.59 P
DUP 1	10-02-97	--	--	--	--	10-02-97	<50	<0.50	<0.50	<0.50	0.52	<2.5	--	--

**Table 1
Groundwater Monitoring Data**

**ARCO Service Station No. 2035
1001 San Pablo Avenue, Albany, California**

Well Number	Date Gauged	TOC	Depth	FP	Groundwater		Ethyl-TPHg	Benzene	Toluene	Ethyl-benzene	Total Xylenes	MTBE 8021B*	MTBE 8240/8260	Dissolved Oxygen	Purged/Not Purged (P/NP)	
		Elevation (ft-MSL)	to Water (feet)	Thickness (feet)	Elevation [1] (ft-MSL)	Date Sampled										
MW-2	03-23-91	40.38	6.96	0.00	33.42	03-23-91	<50	<0.5	<0.5	<0.5	<0.5	--	--	--	--	
MW-2	05-23-91	40.38	10.02	0.00	30.36	05-23-91	Not sampled: well sampled semi-annually, during the first and third quarters									--
MW-2	08-21-91	40.38	10.87	0.00	29.51	08-21-91	<50	<0.5	<0.5	<0.5	<0.5	<3	--	--	--	
MW-2	11-08-91	40.38	13.12	0.00	27.26	11-08-91	Not sampled: well sampled semi-annually, during the first and third quarters									--
MW-2	02-26-92	40.38	10.25	0.00	30.13	02-26-92	<50	<0.5	<0.5	<0.5	<0.5	<3	--	--	--	
MW-2	04-21-92	40.38	9.98	0.00	30.40	04-21-92	Not sampled: well sampled semi-annually, during the first and third quarters									--
MW-2	08-14-92	40.38	11.10	0.00	29.28	08-14-92	<50	<0.5	<0.5	<0.5	<0.5	4	--	--	--	
MW-2	12-09-92	40.38	10.00	0.00	30.38	12-09-92	Not sampled: well sampled semi-annually, during the first and third quarters									--
MW-2	03-26-93	40.38	10.38	0.00	30.00	03-26-93	<50	<0.5	<0.5	<0.5	<0.5	12	--	--	--	
MW-2	05-21-93	40.38	10.65	0.00	29.73	05-21-93	Not sampled: well sampled semi-annually, during the first and third quarters									--
MW-2	09-03-93	40.38	10.87	0.00	29.51	09-03-93	<50	<0.5	<0.5	<0.5	<0.5	19	--	--	--	
MW-2	11-02-93	40.38	11.25	0.00	29.13	11-02-93	<50	<0.5	<0.5	<0.5	<0.5	18	--	--	--	
MW-2	02-19-94	40.38	7.69	0.00	32.69	02-19-94	<50	0.5	<0.5	<0.5	<0.5	12	--	--	--	
MW-2	05-17-94	40.38	9.88	0.00	30.50	05-17-94	<50	<0.5	<0.5	<0.5	<0.5	10	--	--	--	
MW-2	08-19-94	40.38	10.62	0.00	29.76	08-20-94	<50	<0.5	<0.5	<0.5	<0.5	3	--	--	--	
MW-2	10-19-94	40.38	11.00	0.00	29.38	10-19-94	<50	<0.5	<0.5	<0.5	<0.5	31	--	--	--	
MW-2	02-15-95	40.38	9.04	0.00	31.34	02-15-95	<50	<0.5	<0.5	<0.5	<0.5	13	--	--	--	
MW-2	05-23-95	40.38	9.90	0.00	30.48	05-23-95	<50	0.6	<0.5	<0.5	<0.5	47	--	--	--	
MW-2	08-23-95	40.38	10.60	0.00	29.78	08-23-95	<50	<0.5	<0.5	<0.5	<0.5	20	--	0.88	P	
MW-2	11-15-95	40.38	10.45	0.00	29.93	11-15-95	<50	<0.5	<0.5	<0.5	<1	<3	--	2.5	P	
MW-2	01-31-96	40.38	9.49	0.00	30.89	02-01-96	<50	<0.5	<0.5	<0.5	<1	59	--	1.0	P	
MW-2	06-20-96	40.38	10.30	0.00	30.08	06-20-96	<50.0	<0.500	<0.500	<0.500	<0.500	4.17	--	1.5	P	
MW-2	11-05-96	40.38	10.19	0.00	30.19	11-05-96	<50.0	<0.500	<0.500	<0.500	<0.500	30.6	--	1.27	P	
MW-2	05-03-97	40.38	10.15	0.00	30.23	05-03-97	<50.0	<0.500	<0.500	<0.500	<0.500	32.7	--	--	P	
DUP	05-03-97	--	--	--	--	05-03-97	<50.0	<0.500	<0.500	<0.500	1.18	31.5	--	--	--	
MW-2	10-02-97	40.38	10.97	0.00	29.41	10-02-97	<50	<0.50	<0.50	<0.50	<0.50	<2.5	--	0.63	P	

**Table 1
Groundwater Monitoring Data**

**ARCO Service Station No. 2035
1001 San Pablo Avenue, Albany, California**

Well Number	Date Gauged	TOC	Depth	FP	Groundwater		Ethyl- benzene	Total Xylenes	MTBE 8021B*	MTBE 8240/8260	Dissolved Oxygen	Purged/ Not Purged			
		Elevation (ft-MSL)	to Water (feet)	Thickness (feet)	Elevation [1] (ft-MSL)	Date Sampled							TPHg ($\mu\text{g/L}$)	Benzene ($\mu\text{g/L}$)	Toluene ($\mu\text{g/L}$)
MW-3	03-23-91	41.44	7.29	0.00	34.15	03-23-91	51	0.8	<0.5	2.4	<0.5	--	--	--	--
MW-3	05-23-91	41.44	9.53	0.00	31.91	05-23-91	<50	<0.5	<0.5	<0.5	<0.5	--	--	--	--
MW-3	08-21-91	41.44	11.19	0.00	30.25	08-21-91	<50	<0.5	<0.5	<0.5	<0.5	79	--	--	--
MW-3	11-08-91	41.44	12.77	0.00	28.67	11-08-91	<50	<0.5	<0.5	<0.5	<0.5	--	--	--	--
MW-3	02-26-92	41.44	9.41	0.00	32.03	02-26-92	120	3.6	<0.5	2.2	3.7	90	--	--	--
MW-3	04-21-92	41.44	9.63	0.00	31.81	04-21-92	<50	<0.5	<0.5	<0.5	<0.5	90	--	--	--
MW-3	08-14-92	41.44	11.12	0.00	30.32	08-14-92	<50	<0.5	<0.5	<0.5	<0.5	54	--	--	--
MW-3	12-09-92	41.44	10.34	0.00	31.10	12-09-92	71	<0.5	<0.5	<0.5	<0.5	130	--	--	--
MW-3	03-26-93	41.44	10.28	0.00	31.16	03-26-93	<100	<1	<1	<1	<1	170	--	--	--
MW-3	05-21-93	41.44	10.40	0.00	31.04	05-21-93	<100	<1	<1	<1	<1	95	--	--	--
MW-3	09-03-93	41.44	10.75	0.00	30.69	09-03-93	<50	<0.5	<0.5	<0.5	<0.5	37	--	--	--
MW-3	11-02-93	41.44	11.44	0.00	30.00	11-02-93	<200	<2	<2	<2	<2	130	--	--	--
MW-3	02-19-94	41.44	7.48	0.00	33.96	02-19-94	<200	<2	5	<2	8	140	--	--	--
MW-3	05-17-94	41.44	9.87	0.00	31.57	05-17-94	<100	<1	<1	<1	<1	150	--	--	--
MW-3	08-19-94	41.44	10.72	0.00	30.72	08-20-94	<200	<2	<2	<2	<2	210	--	--	--
MW-3	10-19-94	41.44	11.30	0.00	30.14	10-19-94	<200	<2	<2	<2	<2	270	--	--	--
MW-3	02-15-95	41.44	8.60	0.00	32.84	02-15-95	<500	<5	<5	<5	<5	700	--	--	--
MW-3	05-23-95	41.44	9.87	0.00	31.57	05-23-95	<50	<0.5	<0.5	<0.5	<0.5	150	140	--	--
MW-3	08-23-95	41.44	10.83	0.00	30.61	08-23-95	<50	<0.5	<0.5	<0.5	<0.5	54	71	0.41	P
MW-3	11-15-95	41.44	10.54	0.00	30.90	11-15-95	100	<0.5	3.3	<0.5	<1	500	--	6.2	P
MW-3	01-31-96	41.44	5.69	0.00	35.75	02-01-96	18,000	1,000	45	1,500	940	100	--	2.12	P
MW-3	06-20-96	41.44	9.99	0.00	31.45	06-20-96	90.9	1.52	<0.500	<0.500	<0.500	187	--	2.6	P
MW-3	11-05-96	41.44	10.15	0.00	31.29	11-05-96	138	2.37	<0.500	<0.500	<0.500	216	--	0.47	P
MW-3	05-03-97	41.44	10.17	0.00	31.27	05-03-97	316	15.7	1.14	<0.500	<0.500	178	--	--	P
MW-3	10-02-97	41.44	10.99	0.00	30.45	10-02-97	120	<0.50	<0.50	<0.50	<0.50	120	--	0.47	P

Table 1
Groundwater Monitoring Data

ARCO Service Station No. 2035
1001 San Pablo Avenue, Albany, California

Well Number	Date Gauged	TOC	Depth	FP	Groundwater		Ethyl- benzene	Total Xylenes	MTBE 8021B*	MTBE 8240/8260	Dissolved Oxygen	Purged/ Not Purged (P/NP)	
		Elevation (ft-MSL)	to Water (feet)	Thickness (feet)	Elevation [1] (ft-MSL)	Date Sampled							TPHg ($\mu\text{g/L}$)
MW-4	03-23-91	40.33	5.92	0.00	34.41	03-23-91	<50	<0.5	<0.5	<0.5	<0.5	--	--
MW-4	05-23-91	40.33	9.23	0.00	31.10	05-23-91	<50	<0.5	<0.5	<0.5	<0.5	--	--
MW-4	08-21-91	40.33	10.61	0.00	29.72	08-21-91	<50	<0.5	<0.5	<0.5	<0.5	99	--
MW-4	11-08-91	40.33	11.97	0.00	28.36	11-08-91	<50	<0.5	<0.5	<0.5	<0.5	--	89
MW-4	02-26-92	40.33	8.84	0.00	31.49	02-26-92	<50	0.8	<0.5	<0.5	<0.5	<3	--
MW-4	04-21-92	40.33	9.15	0.00	31.18	04-21-92	Not sampled: well sampled annually, during the first quarter					--	--
MW-4	08-14-92	40.33	10.35	0.00	29.98	08-14-92	Not sampled: well sampled annually, during the first quarter					--	--
MW-4	12-09-92	40.33	8.70	0.00	31.63	12-09-92	Not sampled: well sampled annually, during the first quarter					--	--
MW-4	03-26-93	40.33	9.75	0.00	30.58	03-26-93	<5,000	<50	<50	<50	<50	4,200	--
MW-4	05-21-93	40.33	9.91	0.00	30.42	05-21-93	Not sampled: well sampled annually, during the first quarter					--	--
MW-4	09-03-93	40.33	10.25	0.00	30.08	09-03-93	Not sampled: well sampled annually, during the first quarter					--	--
MW-4	11-02-93	40.33	10.79	0.00	29.54	11-02-93	<50	<0.5	<0.5	<0.5	<0.5	<3	--
MW-4	02-19-94	40.33	6.78	0.00	33.55	02-19-94	<2,000	<20	<20	<20	<20	3,300	--
MW-4	05-17-94	40.33	9.26	0.00	31.07	05-17-94	<50	<0.5	<0.5	<0.5	<0.5	<3	--
MW-4	08-19-94	40.33	10.10	0.00	30.23	08-20-94	<50	<0.5	<0.5	<0.5	<0.5	9	--
MW-4	10-19-94	40.33	10.43	0.00	29.90	10-19-94	<50	<0.5	<0.5	<0.5	<0.5	17	--
MW-4	02-15-95	40.33	8.56	0.00	31.77	02-15-95	<500	<5	<5	<5	<5	400	--
MW-4	05-23-95	40.33	9.52	0.00	30.81	05-23-95	<50	<0.5	<0.5	<0.5	<0.5	10	7.6
MW-4	08-23-95	40.33	9.99	0.00	30.34	08-23-95	<2,500	<25	<25	<25	<25	1,200	1,300
MW-4	11-15-95	40.33	9.80	0.00	30.53	11-15-95	<50	<0.5	<0.5	<0.5	<1	<3	--
MW-4	01-31-96	40.33	9.11	0.00	31.22	02-01-96	<50	<0.5	<0.5	<0.5	<1	1,200	--
MW-4	06-20-96	40.33	9.60	0.00	30.73	06-20-96	<50.0	<0.500	<0.500	<0.500	<0.500	60.5	--
MW-4	11-05-96	40.33	9.53	0.00	30.80	11-05-96	<50.0	<0.500	<0.500	<0.500	<0.500	14.0	--
MW-4	05-03-97	40.33	9.21	0.00	31.12	05-03-97	<50.0	<0.500	<0.500	<0.500	<0.500	83.6	--
MW-4	10-02-97	40.33	10.74	0.00	29.59	10-02-97	<50	<0.50	<0.50	<0.50	<0.50	260	--

Table 1
Groundwater Monitoring Data

ARCO Service Station No. 2035
1001 San Pablo Avenue, Albany, California

Well Number	Date Gauged	TOC	Depth	FP	Groundwater		Ethyl-TPHg	Benzene	Toluene	Ethyl-benzene	Total Xylenes	MTBE 8021B*	MTBE 8240/8260	Dissolved Oxygen	Purged/Not Purged (P/NP)	
		Elevation (ft-MSL)	to Water (feet)	Thickness (feet)	Elevation [1] (ft-MSL)	Date Sampled										
MW-5	03-23-91	41.84	6.23	0.00	35.61	03-23-91	<50	<0.5	<0.5	<0.5	<0.5	--	--	--	--	
MW-5	05-23-91	41.84	9.61	0.00	32.23	05-23-91	Not sampled: well sampled annually, during the first quarter								--	--
MW-5	08-21-91	41.84	11.12	0.00	30.72	08-21-91	Not sampled: well sampled annually, during the first quarter								--	--
MW-5	11-08-91	41.84	12.52	0.00	29.32	11-08-91	Not sampled: well sampled annually, during the first quarter								--	--
MW-5	02-26-92	41.84	9.52	0.00	32.32	02-26-92	<50	<0.5	<0.5	<0.5	<0.5	<3	--	--	--	
MW-5	04-21-92	41.84	9.44	0.00	32.40	04-21-92	Not sampled: well sampled annually, during the first quarter								--	--
MW-5	08-14-92	41.84	10.83	0.00	31.01	08-14-92	Not sampled: well sampled annually, during the first quarter								--	--
MW-5	12-09-92	41.84	9.20	0.00	32.64	12-09-92	Not sampled: well sampled annually, during the first quarter								--	--
MW-5	03-26-93	41.84	10.10	0.00	31.74	03-26-93	<50	<0.5	<0.5	<0.5	<0.5	<3	--	--	--	
MW-5	05-21-93	41.84	10.28	0.00	31.56	05-21-93	Not sampled: well sampled annually, during the first quarter								--	--
MW-5	09-03-93	41.84	10.73	0.00	31.11	09-03-93	Not sampled: well sampled annually, during the first quarter								--	--
MW-5	11-02-93	41.84	11.23	0.00	30.61	11-02-93	Not sampled: well sampled annually, during the first quarter								--	--
MW-5	02-19-94	41.84	6.67	0.00	35.17	02-19-94	<50	<0.5	<0.5	<0.5	<0.5	<3	--	--	--	
MW-5	05-17-94	41.84	9.61	0.00	32.23	05-17-94	Not sampled: well sampled annually, during the first quarter								--	--
MW-5	08-19-94	41.84	10.58	0.00	31.26	08-20-94	Not sampled: well sampled annually, during the first quarter								--	--
MW-5	10-19-94	41.84	10.66	0.00	31.18	10-19-94	Not sampled: well sampled annually, during the first quarter								--	--
MW-5	02-15-95	41.84	8.35	0.00	33.49	02-15-95	Not sampled								--	--
MW-5	05-23-95	41.84	9.95	0.00	31.89	05-23-95	<50	<0.5	<0.5	<0.5	<0.5	<3	--	--	--	
MW-5	08-23-95	41.84	10.51	0.00	31.33	08-23-95	<50	<0.5	<0.5	<0.5	<0.5	<3	--	0.79	NP	
MW-5	11-15-95	41.84	10.37	0.00	31.47	11-15-95	Not sampled: well sampled annually, during the second quarter								--	--
MW-5	01-31-96	41.84	9.35	0.00	32.49	02-01-96	<50	<0.5	<0.5	<0.5	<1	<3	--	1.0	NP	
MW-5	06-20-96	41.84	10.03	0.00	31.81	06-20-96	<50.0	<0.500	<0.500	<0.500	<0.500	<2.50	--	3.1	NP	
MW-5	11-05-96	41.84	9.89	0.00	31.95	11-05-96	Not sampled: well sampled annually, during the second quarter								--	--
MW-5	05-03-97	41.84	9.42	0.00	32.42	05-03-97	<50.0	<0.500	<0.500	<0.500	<0.500	<2.50	--	--	NP	
MW-5	10-02-97	41.84	10.55	0.00	31.29	10-02-97	Not sampled: well sampled annually, during the second quarter								--	--

**Table 1
Groundwater Monitoring Data**

**ARCO Service Station No. 2035
1001 San Pablo Avenue, Albany, California**

Well Number	Date Gauged	TOC	Depth	FP	Groundwater		Ethyl- benzene	Total Xylenes	MTBE 8021B*	MTBE 8240/8260	Dissolved Oxygen	Purged/ Not Purged (P/NP)	
		Elevation (ft-MSL)	to Water (feet)	Thickness (feet)	Elevation [1] (ft-MSL)	Date Sampled							TPHg (µg/L)
MW-6	03-23-91	40.13	9.03	0.00	31.10	03-23-91	<50	<0.5	<0.5	<0.5	<0.5	--	--
MW-6	05-23-91	40.13	12.45	0.00	27.68	05-23-91	Not sampled: well sampled annually, during the first quarter					--	--
MW-6	08-21-91	40.13	13.32	0.00	26.81	08-21-91	Not sampled: well sampled annually, during the first quarter					--	--
MW-6	11-08-91	40.13	14.13	0.00	26.00	11-08-91	Not sampled: well sampled annually, during the first quarter					--	--
MW-6	02-26-92	40.13	11.86	0.00	28.27	02-26-92	<50	<0.5	<0.5	<0.5	<3	--	--
MW-6	04-21-92	40.13	12.35	0.00	27.78	04-21-92	Not sampled: well sampled annually, during the first quarter					--	--
MW-6	08-14-92	40.13	13.18	0.00	26.95	08-14-92	Not sampled: well sampled annually, during the first quarter					--	--
MW-6	12-09-92	40.13	11.94	0.00	28.19	12-09-92	Not sampled: well sampled annually, during the first quarter					--	--
MW-6	03-26-93	40.13	13.10	0.00	27.03	03-26-93	<50	<0.5	<0.5	<0.5	<3	--	--
MW-6	05-21-93	40.13	13.00	0.00	27.13	05-21-93	Not sampled: well sampled annually, during the first quarter					--	--
MW-6	09-03-93	40.13	13.30	0.00	26.83	09-03-93	Not sampled: well sampled annually, during the first quarter					--	--
MW-6	11-02-93	40.13	13.42	0.00	26.71	11-02-93	<50	<0.5	<0.5	<0.5	<0.5	19	--
MW-6	02-19-94	40.13	10.57	0.00	29.56	02-19-94	<100	<1	<1	<1	<1	95	--
MW-6	05-17-94	40.13	12.64	0.00	27.49	05-17-94	<100	<1	<1	<1	<1	180	--
MW-6	08-19-94	40.13	13.13	0.00	27.00	08-20-94	<100	<1	<1	<1	<1	180	--
MW-6	10-19-94	40.13	13.48	0.00	26.65	10-19-94	<100	<1	<1	<1	<1	180	--
MW-6	02-15-95	40.13	11.92	0.00	28.21	02-15-95	<200	<2	<2	<2	<2	200	--
MW-6	05-23-95	40.13	12.80	0.00	27.33	05-23-95	<50	<0.5	<0.5	<0.5	<0.5	120	--
MW-6	08-23-95	40.13	13.03	0.00	27.10	08-23-95	<50	<0.5	<0.5	<0.5	<0.5	44	--
MW-6	11-15-95	40.13	12.70	0.00	27.43	11-15-95	<50	<0.5	<0.5	<0.5	<1	17	17
MW-6	01-31-96	40.13	8.61	0.00	31.52	02-01-96	<50	<0.5	<0.5	<0.5	<1	6	--
MW-6	06-20-96	40.13	12.88	0.00	27.25	06-20-96	<50.0	<0.500	<0.500	<0.500	<0.500	2.57	--
MW-6	11-05-96	40.13	12.74	0.00	27.39	11-05-96	<50.0	<0.500	<0.500	<0.500	<0.500	3.77	--
DUP	11-05-96	--	--	--	--	11-05-96	<50.0	<0.500	<0.500	<0.500	<0.500	4.03	--
MW-6	05-03-97	40.13	11.29	0.00	28.84	05-03-97	<50.0	<0.500	<0.500	<0.500	<0.500	10.5	12.3
MW-6	10-02-97	40.13	11.35	0.00	28.78	10-02-97	<50	<0.50	<0.50	<0.50	<0.50	5.8	4.8

**Table 1
Groundwater Monitoring Data**

**ARCO Service Station No. 2035
1001 San Pablo Avenue, Albany, California**

Well Number	Date Ganged	TOC	Depth	FP	Groundwater		Ethyl- benzene (µg/L)	Total Xylenes (µg/L)	MTBE 8021B* (µg/L)	MTBE 8240/8260 (µg/L)	Dissolved Oxygen (mg/L)	Purged/ Not Purged (P/NP)			
		Elevation (ft-MSL)	to Water (feet)	Thickness (feet)	Elevation [1] (ft-MSL)	Date Sampled							TPHg (µg/L)	Benzene (µg/L)	Toluene (µg/L)
RW-1	03-23-91	40.33	9.32	0.01	31.02	03-23-91	11,000	560	660	150	1,700	--	--	--	--
RW-1	05-23-91	40.33	9.75	0.03	30.60	05-23-91	Not sampled: well contained floating product					--	--		
RW-1	08-21-91	40.33	10.86	0.02	29.48	08-21-91	Not sampled: well contained floating product					--	--		
RW-1	11-08-91	40.33	20.61	0.00	19.72	11-08-91	1,600	79	46	13	240	--	--	--	--
RW-1	02-26-92	40.33	16.56	0.00	23.77	02-26-92	210	44	7.5	2.5	24	29	--	--	--
RW-1	04-21-92	40.33	9.65	0.00	30.68	04-21-92	36,000	7,400	3,700	580	3,400	<300	--	--	--
RW-1	08-14-92	40.33	10.60	0.00	29.73	08-14-92	1,800	31	38	15	150	<30	--	--	--
RW-1	12-09-92	40.33	8.72	0.00	31.61	12-09-92	25,000	1,900	1,000	330	3,200	<100	--	--	--
RW-1	03-26-93	40.33	10.33	0.00	30.00	03-26-93	7,200	1,900	59	95	240	480	--	--	--
RW-1	05-21-93	40.33	10.10	0.00	30.23	05-21-93	3,000	630	84	45	340	<60	--	--	--
RW-1	09-03-93	40.33	10.42	0.00	29.91	09-03-93	7,100	120	55	14	160	<60	--	--	--
RW-1	11-02-93	40.33	9.10	0.00	31.23	11-02-93	<200	14	19	3	19	140	--	--	--
RW-1	02-19-94	40.33	7.49	0.00	32.84	02-19-94	3,800	1,000	85	64	220	950	--	--	--
RW-1	05-17-94	40.33	8.90	0.00	31.43	05-17-94	<200	45	<2	2	4	220	--	--	--
RW-1	08-19-94	40.33	11.06	0.00	29.27	08-20-94	480	200	<2	<2	30	180	--	--	--
RW-1	10-19-94	40.33	11.12	0.00	29.21	10-19-94	110	36	2.9	<0.5	4.1	5	--	--	--
RW-1	02-15-95	40.33	7.70	0.00	32.63	02-16-95	250	61	2	2	19	94	--	--	--
RW-1	05-23-95	40.33	11.12	0.00	29.21	05-23-95	4,500	2,000	7	<2	180	35	--	--	--
RW-1	08-23-95	40.33	10.15	0.00	30.18	08-23-95	2,600	1,100	6.3	2.3	17	39	--	0.52	NP
RW-1	11-15-95	40.33	9.95	0.00	30.38	11-15-95	1,200	2,600	16	86	41	140	--	1.4	P
RW-1	01-31-96	40.33	11.88	0.00	28.45	02-01-96	11,000	980	230	200	1,400	38	--	1.0	NP
RW-1	06-20-96	40.33	9.83	0.00	30.50	06-20-96	899	278	<2.50	8.70	8.46	61.1	--	1.3	NP
RW-1	11-05-96	40.33	8.45	0.00	31.88	11-05-96	156,000	3,260	28,800	4,570	25,700	26,200	--	0.63	P
RW-1	05-03-97	40.33	8.57	0.00	31.76	05-03-97	244,000	8,420	56,000	5,660	36,200	23,400	11,000	--	P
RW-1	10-02-97	40.33	9.13	0.00	31.20	10-02-97	120,000	2,500	33,000	3,800	21,000	3,300	--	0.38	P
S-5	05-30-97	--	--	--	--	05-30-97	310,000	3,000	11,000	4,000	34,000	<2,500	--	--	--
S-5	10-02-97	--	10.00	--	--	10-02-97	70,000	1,800	7,800	1,400	20,000	<120	--	0.25	NP

Table 1
Groundwater Monitoring Data
ARCO Service Station No. 2035
1001 San Pablo Avenue, Albany, California

Well Number	Date Gauged	TOC Elevation (ft-MSL)	Depth to Water (feet)	FP Thickness (feet)	Groundwater Elevation [1] (ft-MSL)	Date Sampled	TPHg ($\mu\text{g/L}$)	Benzene ($\mu\text{g/L}$)	Toluene ($\mu\text{g/L}$)	Ethyl-benzene ($\mu\text{g/L}$)	Total Xylenes ($\mu\text{g/L}$)	MTBE 8021B* ($\mu\text{g/L}$)	MTBE 8240/8260 ($\mu\text{g/L}$)	Dissolved Oxygen (mg/L)	Purged/Not Purged (P/NP)
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TOC: top of casing

ft-MSL: elevation in feet, relative to mean sea level

TPH: total petroleum hydrocarbons as gasoline, California DHS LUFT Method

BTEX: benzene, toluene, ethylbenzene, total xylenes by EPA method 8021B. (EPA method 8020 prior to 11/16/99).

MTBE: Methyl tert-butyl ether

$\mu\text{g/L}$: micrograms per liter

mg/L: milligrams per liter

--: not analyzed or not applicable

<: denotes concentration not present at or above laboratory detection limit stated to the right.

[1] = Computed by adding correction factor to groundwater elevation. Correction factor = free product thickness times 0.73 (approximate specific gravity of gasoline).

*: EPA method 8020 prior to 11/16/99

**: 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 2035, Albany, California*, (EMCON, March 25, 1996).

DUP: duplicate sample

ATTACHMENT D

EDCC REPORT AND EDF/GEOWELL SUBMITTAL CONFIRMATION

Error Summary Log

01/09/03

EDF 1.2i All files present in deliverable.

Laboratory:	Sequoia Analytical Laboratories, Inc., Morgan Hill, CA
Project Name:	ARCO #2035, Albany, Ca.
Work Order Number:	MLL0090
Global ID:	T0600100081
Lab Report Number:	MLL0090122320021231

Report Summary

Labreport	Sampid	Labsampid	Mtrx	QC	Anmcode	Exmcode	Logdate	Extdate	Anadate	Lablotcl	Run	Sub
MLL00901223200 21231	MW-1	MLL009001	W	CS	8260+OX	SW5035	11/27/02	12/11/02	12/11/02	2L13033	1	
MLL00901223200 21231	MW-2	MLL009002	W	CS	8260+OX	SW5035	11/27/02	12/11/02	12/11/02	2L13033	1	
MLL00901223200 21231	MW-3	MLL009003	W	CS	8260+OX	SW5035	11/27/02	12/15/02	12/15/02	2L15001	1	
MLL00901223200 21231	MW-4	MLL009004	W	CS	8260+OX	SW5035	11/27/02	12/11/02	12/11/02	2L13033	1	
MLL00901223200 21231	MW-6	MLL009005	W	CS	8260+OX	SW5035	11/27/02	12/11/02	12/11/02	2L13033	1	
MLL00901223200 21231	RW-1	MLL009006	W	CS	8260+OX	SW5035	11/27/02	12/15/02	12/15/02	2L15001	1	
MLL00901223200 21231	S-5	MLL009007	W	CS	8260+OX	SW5035	11/27/02	12/11/02	12/11/02	2L13033	1	
		2L13033BSD1	WQ	BD1	8260+OX	SW5035	//	12/11/02	12/12/02	2L13033	1	
		2L13033BS1	WQ	BS1	8260+OX	SW5035	//	12/11/02	12/11/02	2L13033	1	
		2L13033BLK1	WQ	LB1	8260+OX	SW5035	//	12/11/02	12/11/02	2L13033	1	
		2L15001BSD1	WQ	BD1	8260+OX	SW5035	//	12/15/02	12/15/02	2L15001	1	
		2L15001BSD2	WQ	BD2	8260+OX	SW5035	//	12/15/02	12/16/02	2L15001	1	
		2L15001BS1	WQ	BS1	8260+OX	SW5035	//	12/15/02	12/15/02	2L15001	1	
		2L15001BS2	WQ	BS2	8260+OX	SW5035	//	12/15/02	12/15/02	2L15001	1	
		2L15001BLK1	WQ	LB1	8260+OX	SW5035	//	12/15/02	12/15/02	2L15001	1	

EDFSAMP: Error Summary Log

01/09/03

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

EDFTEST: Error Summary Log

01/09/03

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

EDFRES: Error Summary Log

01/09/03

Error type	Labsampid	Qccode	Matrix	Anmcode	Pvccode	Anadate	Run number	Parlabel
Warning: extra parameter	MLL009001	CS	W	8260+OX	PR	12/11/02	1	GROC6C10
Warning: extra parameter	MLL009001	CS	W	8260+OX	PR	12/11/02	1	XYLENES
Warning: extra parameter	MLL009002	CS	W	8260+OX	PR	12/11/02	1	GROC6C10
Warning: extra parameter	MLL009002	CS	W	8260+OX	PR	12/11/02	1	XYLENES
Warning: extra parameter	MLL009003	CS	W	8260+OX	PR	12/15/02	1	GROC6C10
Warning: extra parameter	MLL009003	CS	W	8260+OX	PR	12/15/02	1	XYLENES
Warning: extra parameter	MLL009004	CS	W	8260+OX	PR	12/11/02	1	GROC6C10
Warning: extra parameter	MLL009004	CS	W	8260+OX	PR	12/11/02	1	XYLENES
Warning: extra parameter	MLL009005	CS	W	8260+OX	PR	12/11/02	1	GROC6C10
Warning: extra parameter	MLL009005	CS	W	8260+OX	PR	12/11/02	1	XYLENES
Warning: extra parameter	MLL009006	CS	W	8260+OX	PR	12/15/02	1	GROC6C10
Warning: extra parameter	MLL009006	CS	W	8260+OX	PR	12/15/02	1	XYLENES
Warning: extra parameter	MLL009007	CS	W	8260+OX	PR	12/11/02	1	GROC6C10
Warning: extra parameter	MLL009007	CS	W	8260+OX	PR	12/11/02	1	XYLENES
Warning: extra parameter	2L13033BLK1	LB1	WQ	8260+OX	PR	12/11/02	1	GROC6C10
Warning: extra parameter	2L13033BLK1	LB1	WQ	8260+OX	PR	12/11/02	1	XYLENES
Warning: extra parameter	2L15001BLK1	LB1	WQ	8260+OX	PR	12/15/02	1	GROC6C10
Warning: extra parameter	2L15001BLK1	LB1	WQ	8260+OX	PR	12/15/02	1	XYLENES
Warning: extra parameter	2L15001BS2	BS2	WQ	8260+OX	PR	12/15/02	1	GROC6C10
Warning: extra parameter	2L15001BSD2	BD2	WQ	8260+OX	PR	12/16/02	1	GROC6C10

EDFQC: Error Summary Log

01/09/03

Error type	Lablctcl	Anmcode	Parlabel	Qccode	Labqid
There are no errors in this data files					

EDFCL: Error Summary Log

01/09/03

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

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Facility Name: ARCO

Submittal Title: Fourth Quarter Groundwater Monitoring Report for Site #2035

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