

Re - 255

July 31, 2003

Alameda County  
AUG 01 2003  
Environmental Health

Ms. eva chu  
Alameda County Health Care Services Agency  
1131 Harbor Bay Parkway  
Alameda, California 94502

**Re: Second Quarter 2003 Groundwater Monitoring and Remediation System Report**  
**ARCO Service Station #0608**  
**17601 Hesperian Boulevard**  
**San Lorenzo, California**  
**URS Project #38486167**

Dear Ms. chu:

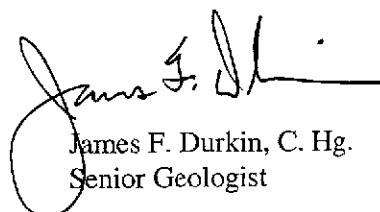
On behalf of Atlantic Richfield Company (ARCO - an affiliated company of the Group Environmental Management Company), URS Corporation (URS) is submitting the *Second Quarter 2003 Groundwater Monitoring and Remediation System Report* for ARCO Service Station #0608, located at 17601 Hesperian Boulevard, San Lorenzo, California.

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

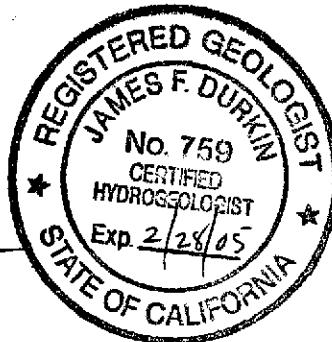
Sincerely,  
**URS CORPORATION**



Scott Robinson  
Project Manager



James F. Durkin, C. Hg.  
Senior Geologist



Enclosure: Second Quarter 2003 Groundwater Monitoring and Remediation System Report

cc: Mr. Paul Supple, ARCO, P.O. Box 6549, Moraga, CA 94549  
Mr. Ron Sykora/Mr. Robert L. Webster, David D. Bohannon Organization, 60 Hillsdale Mall,  
San Mateo, CA 94403  
Mr. John Kaiser, Regional Water Quality Control Board - San Francisco Bay Region, 1515 Clay  
Street, Suite 1400, Oakland, CA 94612

**R E P O R T**

**SECOND QUARTER 2003  
GROUNDWATER MONITORING  
AND REMEDIATION SYSTEM**

**ARCO SERVICE STATION #0608  
17601 HESPERIAN BOULEVARD  
SAN LORENZO, CALIFORNIA**

*Prepared for*  
**Atlantic Richfield Company**

July 31, 2003



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

38486167

Date: July 31, 2003  
Quarter: 2Q 03

## ARCO QUARTERLY GROUNDWATER MONITORING AND REMEDIATION SYSTEM REPORT

Facility No.: 608 Address: 17601 Hesperian Boulevard, San Lorenzo, California  
Atlantic Richfield Co. Environmental Engineer: Paul Supple  
Consulting Co./Contact Person: URS Corporation/Scott Robinson  
Consultant Project No.: 38486167  
Primary Agency: Alameda County Health Care Services (ACHCSA)

### WORK PERFORMED THIS QUARTER (Second – 2003):

1. Performed second quarter 2003 groundwater monitoring event on June 30, 2003.
2. Prepared and submitted first quarter 2003 groundwater monitoring and remediation report.
3. Continued monthly payments to homeowners for not using domestic irrigation wells.
4. Continued homeowner quarterly monitoring result notification program.
5. Continued operation and maintenance of the groundwater extraction and treatment (GWET) system.
6. Submitted monthly flow data to Oro Loma Sanitary District.
7. System shutdown reported on May 22, 2003, due to utility outage. Restarted system and performed May monthly sampling on May 30, 2003.

### WORK PROPOSED FOR NEXT QUARTER (Third – 2003):

1. Prepare and submit second quarter 2003 groundwater monitoring and remediation report.
2. Perform third quarter 2003 groundwater monitoring event.
3. Continue operation, maintenance and performance monitoring of GWET system.
4. Continue monthly payments to homeowners for not using domestic irrigation wells.
5. Continue homeowner quarterly monitoring result notification program.
6. Submit monthly flow data to Oro Loma Sanitary District.
7. Carbon change-out scheduled for July 24, 2003.
8. Renew Oro Loma Sanitary District discharge permit.

Current Phase of Project:	<u>GW monitoring/sampling/remediation</u>
Frequency of Groundwater Sampling:	<u>See Table 1</u>
Frequency of Groundwater Monitoring:	<u>See Table 1</u>
Is Free Product (FP) Present On-Site:	<u>No</u>
FP Recovered this Quarter	<u>None</u>
Current Remediation Techniques:	<u>GWET</u>
Approximate Depth to Groundwater:	<u>9.05 (MW-14) to 11.62 (MW-5) feet</u>

Groundwater Gradient (direction):	West-Southwest		
Groundwater Gradient (magnitude):	0.001 feet per foot		
Frequency of GWET System Lab Sampling:	Monthly		
Frequency of GWET System Field Monitoring:	Bi-weekly		
System Restart:	06/05/2000; 05/30/2003 due to utility outage		
Extraction Well:	E-1A		
Permits for Discharge:	Oro Loma Sanitary District Permit No. SDP-037 Expires 08/05/2003		
Gallons of Groundwater Treated and Discharge for this Quarter:	181,317		
Total Gallons of Groundwater Treated and Discharged to Date:	6,603,433		
Total Operation Hours to Date:	49,896		
Mass Removal (pounds):	Quarterly	Cumulative	
TPH-g:	0.14	7.22	
Benzene:	0.000	0.31	
MTBE:	0.05	2.59	
GWET System Samples Collection Dates and Effluent Results ( $\mu\text{g/L}$ ):	04/24/2003	05/30/2003	06/19/2003
TPH-g:	ND<50	ND<50	ND<50
Benzene:	ND<0.50	ND<0.50	ND<0.50
MTBE:	ND<0.50	ND<0.50	ND<2.5

#### DISCUSSION:

TPH-g was detected in two of the seven wells sampled this quarter at concentrations of 91  $\mu\text{g/L}$  (MW-5) and 140  $\mu\text{g/L}$  (E-1A). Benzene was not detected in any of the wells sampled this quarter. MTBE was detected in six wells at concentrations ranging from 12  $\mu\text{g/L}$  (MW-15) to 750  $\mu\text{g/L}$  (MW-10). TBA was detected in MW-5 at a concentration of 22  $\mu\text{g/L}$ . TAME was detected in five wells at concentrations ranging from 0.85  $\mu\text{g/L}$  (MW-8) to 81  $\mu\text{g/L}$  (MW-25).

Domestic irrigation wells 17302VM and 17371VM were not sampled because the owners were not home to grant access and the wells are not operational. Domestic irrigation wells 17197VM and 17349VM were not sampled, as the wells have been abandoned. Domestic irrigation wells 634H, 642H, 675H, 17203VM, 17372VM and 17348VE were not sampled because residents were not home to grant access to the wells or access was denied. As a result, none of the domestic wells were sampled this quarter. The property owners are currently under no obligation to allow access to their domestic wells.

From March 27, 2003 to June 19, 2003, the system operated 88 percent of the time. The system shutdown in May due to a power outage and was restarted on May 30, 2003. During this time period a total of 181,317 gallons of

groundwater were treated. Performance data and laboratory analytical data are listed in Tables 6 and 7.

Last quarter, URS recommended reducing the sampling frequency of wells MW-9, MW-11, MW-16, and MW-22 from quarterly to annually due to the consistently low to non-detect values for the constituents of concern. These wells, with the exception of MW-11, were changed to annual sampling.

**ATTACHMENTS:**

- Table 1 – Groundwater Sampling Schedule
- Table 2 – Groundwater Analytical Data – Domestic Irrigation Wells
- Table 3 – Groundwater Elevation and Analytical Data – Groundwater Monitoring Wells
- Table 4 – Groundwater Flow Direction and Gradient
- Table 5 – Fuel Oxygenate Analytical Data
- Table 6 – Groundwater Extraction System Performance Data
- Table 7 – Treatment System Analytical Data
- Figure 1 – Groundwater Elevation Contour and Analytical Summary Map – June 30, 2003
- Figure 2 – Groundwater Extraction System Mass Removal Trend TPH-g and Benzene
- Figure 3 – Groundwater Extraction System Concentration Trend TPH-g and Benzene
- Figure 4 – Groundwater Extraction System Mass Removal Trend MTBE
- Figure 5 – Groundwater Extraction System Concentration Trend MTBE
- 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**  
**Groundwater Sampling Schedule**  
ARCO Service Station #0608  
17601 Hesperian Boulevard, San Lorenzo, California

Well Number	First Quarter	Second Quarter	Third Quarter	Fourth Quarter	Sampling Frequency
<b>Groundwater Monitoring Wells</b>					
MW-5	a	a	a	a	Quarterly
MW-7	-----	Removed from Program	-----	-----	-----
MW-8	a	a	a	a	Quarterly
MW-9	a	a	a	a	Quarterly
MW-10	a	a	a	a	Quarterly
MW-11	a	a	a	a	Quarterly
E-1A	a	a	a	a	Quarterly
MW-13	-----	Removed from Program	-----	-----	-----
MW-14	a				Annually (March)
MW-15	a	a	a	a	Quarterly
MW-16	a	a	a	a	Quarterly
MW-17	-----	Destroyed	-----	-----	-----
MW-18	a				Annually (March)
MW-19	-----	Removed from Program	-----	-----	-----
MW-20	-----	Destroyed	-----	-----	-----
MW-21	a				Annually (March)
MW-22	a	a	a	a	Quarterly
MW-23	a				Annually (March)
MW-24	-----	Removed from Program	-----	-----	-----
MW-25	a	a	a	a	Quarterly
MW-26	a				Annually (March)

**Table 1**  
**Groundwater Sampling Schedule**  
ARCO Service Station #0608  
17601 Hesperian Boulevard, San Lorenzo, California

Well Number	First Quarter	Second Quarter	Third Quarter	Fourth Quarter	Sampling Frequency
<b>Domestic Irrigation Wells</b>					
590H				Destroyed	
633H				Destroyed	
634H	a	a	a	a	Quarterly
642H	a	a	a	a	Quarterly
675H	a	a	a	a	Quarterly
17197 VM				Destroyed	
17200 VM				Destroyed	
17203 VM	a	a	a	a	Quarterly
17302 VM	a	a	a	a	Quarterly
17348 VE	a	a	a	a	Quarterly
17349 VM				Destroyed	
17371 VM	a	a	a	a	Quarterly
17372 VM	a	a	a	a	Quarterly
17393 VM				Destroyed	

a. Beginning first quarter 2003, samples analyzed for TPH-g, BTEX compounds, and MTBE by EPA Method 8260B.

**Table 2**  
**Groundwater Analytical Data - Domestic Irrigation Wells**  
ARCO Service Station #0608  
17601 Hesperian Boulevard, San Lorenzo, California

Well Number	Date Sampled	TPH-g (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethyl-benzene (µg/L)	Xylenes (µg/L)	MTBE (µg/L)
634 H	03/13/02	NS	NS	NS	NS	NS	NS
	06/28/02	NS	NS	NS	NS	NS	NS
	09/20/02	NS	NS	NS	NS	NS	NS
	12/30/02	NS	NS	NS	NS	NS	NS
	03/27/03	NS	NS	NS	NS	NS	NS
	<b>06/30/03</b>	<b>NS</b>	<b>NS</b>	<b>NS</b>	<b>NS</b>	<b>NS</b>	<b>NS</b>
642 H	03/13/02	NS	NS	NS	NS	NS	NS
	06/28/02	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<2.5
	09/20/02	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<2.5
	12/30/02	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<2.5
	03/27/03	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50
	<b>06/30/03</b>	<b>NS</b>	<b>NS</b>	<b>NS</b>	<b>NS</b>	<b>NS</b>	<b>NS</b>
675 H	03/13/02	NS	NS	NS	NS	NS	NS
	06/28/02	NS	NS	NS	NS	NS	NS
	09/20/02	NS	NS	NS	NS	NS	NS
	12/30/02	NS	NS	NS	NS	NS	NS
	03/27/03	NS	NS	NS	NS	NS	NS
	<b>06/30/03</b>	<b>NS</b>	<b>NS</b>	<b>NS</b>	<b>NS</b>	<b>NS</b>	<b>NS</b>
17197 VM	03/13/02	NS	NS	NS	NS	NS	NS
	06/28/02	NS	NS	NS	NS	NS	NS
	09/20/02	NS	NS	NS	NS	NS	NS
	12/30/02	NS	NS	NS	NS	NS	NS
	03/27/03	NS	NS	NS	NS	NS	NS
	<b>06/30/03</b>	<b>NS</b>	<b>NS</b>	<b>NS</b>	<b>NS</b>	<b>NS</b>	<b>NS</b>

**Table 2**  
**Groundwater Analytical Data - Domestic Irrigation Wells**  
ARCO Service Station #0608  
17601 Hesperian Boulevard, San Lorenzo, California

Well Number	Date Sampled	TPH-g ( $\mu\text{g/L}$ )	Benzene ( $\mu\text{g/L}$ )	Toluene ( $\mu\text{g/L}$ )	Ethyl-benzene ( $\mu\text{g/L}$ )	Xylenes ( $\mu\text{g/L}$ )	MTBE ( $\mu\text{g/L}$ )
17203 VM	03/13/02	NS	NS	NS	NS	NS	NS
	06/28/02	NS	NS	NS	NS	NS	NS
	09/20/02	NS	NS	NS	NS	NS	NS
	12/30/02	NS	NS	NS	NS	NS	NS
	03/27/03	NS	NS	NS	NS	NS	NS
	06/30/03	NS	NS	NS	NS	NS	NS
17302 VM	03/13/02	NS	NS	NS	NS	NS	NS
	06/28/02	NS	NS	NS	NS	NS	NS
	09/20/02	NS	NS	NS	NS	NS	NS
	12/30/02	NS	NS	NS	NS	NS	NS
	03/27/03	NS	NS	NS	NS	NS	NS
	06/30/03	NS	NS	NS	NS	NS	NS
17348 VE	03/13/02	NS	NS	NS	NS	NS	NS
	06/28/02	NS	NS	NS	NS	NS	NS
	09/20/02	NS	NS	NS	NS	NS	NS
	12/30/02	NS	NS	NS	NS	NS	NS
	03/27/03	NS	NS	NS	NS	NS	NS
	06/30/03	NS	NS	NS	NS	NS	NS
17349 VM	03/13/02	ND<50	1	ND<0.50	ND<0.50	ND<0.50	49
	06/28/02	66	0.50	ND<0.50	ND<0.50	ND<0.50	45(47) <sup>a</sup>
	09/20/02	NS	NS	NS	NS	NS	NS
	12/30/02	NS	NS	NS	NS	NS	NS
	03/27/03	NS	NS	NS	NS	NS	NS
	06/30/03	NS	NS	NS	NS	NS	NS

**Table 2**  
**Groundwater Analytical Data - Domestic Irrigation Wells**  
ARCO Service Station #0608  
17601 Hesperian Boulevard, San Lorenzo, California

Well Number	Date Sampled	TPH-g (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethyl-benzene (µg/L)	Xylenes (µg/L)	MTBE (µg/L)
17371 VM	03/13/02	NS	NS	NS	NS	NS	NS
	06/28/02	NS	NS	NS	NS	NS	NS
	09/20/02	NS	NS	NS	NS	NS	NS
	12/30/02	NS	NS	NS	NS	NS	NS
	03/27/03	NS	NS	NS	NS	NS	NS
	06/30/03	NS	NS	NS	NS	NS	NS
17372 VM	03/13/02	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<2.5
	06/28/02	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<2.5
	09/20/02	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<2.5
	12/30/02	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<2.5
	03/27/03	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50
	06/30/03	NS	NS	NS	NS	NS	NS

**Table 2**  
**Groundwater Analytical Data - Domestic Irrigation Wells**

ARCO Service Station #0608  
17601 Hesperian Boulevard, San Lorenzo, California

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Note: Samples analyzed by EPA Method 8260B. Prior to March 27, 2003 samples analyzed for benzene, toluene, ethyl benzene, and total xylenes using EPA Method 8021B.

Tert-butyl alcohol (TBA), di-isopropyl ether (DIPE), ethyl tert-butyl (ETBE), and tert-amyl methyl ether (TAME) were not detected at or above the specified laboratory method detection limit in any of the groundwater samples analyzed.

TPH-g = Total petroleum hydrocarbons as gasoline analyzed.

MTBE = Methyl tertiary butyl ether

µg/L = Micrograms per liter

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

a = MTBE confirmed by EPA Method 8260B

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.

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**Table 3**  
**Groundwater Elevation and Analytical Data - Groundwater Monitoring Wells**  
ARCO Service Station #0608  
17601 Hesperian Boulevard, San Lorenzo, California

Well Number	Date Sampled	Casing Elevation (feet, MSL)	Depth to Water (feet, TOC)	Groundwater Elevation (feet, MSL)	TPH-g (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Xylenes (µg/L)	MTBE (µg/L)
MW-5	03/13/02	33.99	11.46	22.53	530	ND<2.5	ND<2.5	ND<2.5	ND<2.5	230
	06/28/02		11.75	22.24	180 <sup>b</sup>	ND<1.0	2.6	ND<1.0	1.2	230
	09/20/02		12.15	21.84	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.50	333
	12/30/02		9.73	24.26	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<2.5
	03/27/03		11.24	22.75	100	ND<0.50	ND<0.50	ND<0.50	ND<0.50	59
	06/30/03		P 11.62	22.37	91	ND<0.50	ND<0.50	ND<0.50	ND<0.50	58
MW-8	03/13/02	32.79	10.30	22.49	500	ND<2.5	ND<2.5	ND<2.5	ND<2.5	1,100
	06/28/02		10.30	22.49	150 <sup>b</sup>	ND<0.50	2.9	0.54	1.5	130
	09/20/02		10.84	21.95	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.50	273
	12/30/02		8.31	24.48	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	5.5
	03/27/03		9.85	22.94	63	ND<0.50	ND<0.50	ND<0.50	ND<0.50	33
	06/30/03		P 10.20	22.59	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	15
MW-9	03/13/02	32.11	9.49	22.62	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<2.5
	06/28/02		9.78	22.33	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<2.5
	09/20/02		10.29	21.82	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.50	ND<0.500
	12/30/02		7.60	24.51	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<2.5
	03/27/03		9.14	22.97	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50
	06/30/03		9.64 <sup>i</sup>	22.47	<b>Well Sampled Annually</b>					
MW-10	03/13/02	31.67	9.68	21.99	680	ND<5.0	ND<5.0	ND<5.0	ND<5.0	570
	06/28/02		9.84	21.83	820 <sup>b</sup>	ND<2.0	ND<2.0	ND<2.0	ND<2.0	1,200
	09/20/02		10.37	21.30	194	ND<0.50	ND<0.50	ND<0.50	ND<1.50	575
	12/30/02		7.70	23.97	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	490
	03/27/03		9.33	22.34	530	ND<5.0	ND<5.0	ND<5.0	ND<5.0	330
	06/30/03		P 9.75	21.92	ND<1,000	ND<10	ND<10	ND<10	ND<10	750

**Table 3**  
**Groundwater Elevation and Analytical Data - Groundwater Monitoring Wells**  
ARCO Service Station #0608  
17601 Hesperian Boulevard, San Lorenzo, California

Well Number	Date Sampled	Casing Elevation (feet, MSL)	Depth to Water (feet, TOC)	Groundwater Elevation (feet, MSL)	TPH-g ( $\mu\text{g/L}$ )	Benzene ( $\mu\text{g/L}$ )	Toluene ( $\mu\text{g/L}$ )	Ethyl-benzene ( $\mu\text{g/L}$ )	Xylenes ( $\mu\text{g/L}$ )	MTBE ( $\mu\text{g/L}$ )
MW-11	03/13/02	32.54	10.38	22.16	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<2.5
	06/28/02		10.74	21.80	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<2.5
	09/20/02		11.27	21.27	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.50	ND<0.500
	12/30/02		8.73	23.81	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<2.5
	03/27/03		10.25	22.29	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50
	06/30/03		P 10.65	21.89	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50
E-1A (MW-12)	03/13/02	33.06	21.75	11.31	200	ND<0.50	ND<0.50	ND<0.50	ND<0.50	310
	06/28/02		11.22	21.84	260 <sup>b</sup>	ND<0.50	11	1.2	1.2	150
	09/20/02		11.80	21.26	250	1.18	0.520	ND<0.5	ND<1.5	218
	12/30/02		16.33	16.73	190 <sup>c,e</sup>	ND<1.2 <sup>e</sup>	ND<1.2 <sup>e</sup>	ND<1.2 <sup>e</sup>	ND<1.2 <sup>e</sup>	190 <sup>e</sup>
	03/27/03		13.63 <sup>f</sup>	19.43	96	ND<0.50	ND<0.50	ND<0.50	ND<0.50	60
	06/30/03	P	9.60 <sup>h</sup>	23.46	140	ND<0.50	ND<0.50	ND<0.50	ND<0.50	37
MW-14	03/13/02	30.46	8.56	21.90	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<2.5
	06/28/02		9.12	21.34	-----	-----	-----	-----	Well Sampled Annually	-----
	09/20/02		9.79	20.67	-----	-----	-----	-----	Well Sampled Annually	-----
	12/30/02		7.13	23.33	-----	-----	-----	-----	Well Sampled Annually	-----
	03/27/03		8.53	21.93	ND<50	ND<0.50	0.86	ND<0.50	ND<0.50	ND<0.50
	06/30/03		9.05	21.41	-----	-----	-----	-----	Well Sampled Annually	-----
MW-15	03/13/02	31.41	10.03	21.38	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	21
	06/28/02		10.41	21.00	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	8.7
	09/20/02		11.00	20.41	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.50	21.6
	12/30/02		8.33	23.08	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	67
	03/27/03		9.83	21.58	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	17
	06/30/03	P	10.00	21.41	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	12

**Table 3**  
**Groundwater Elevation and Analytical Data - Groundwater Monitoring Wells**  
ARCO Service Station #0608  
17601 Hesperian Boulevard, San Lorenzo, California

Well Number	Date Sampled	Casing Elevation (feet, MSL)	Depth to Water (feet, TOC)	Groundwater Elevation (feet, MSL)	TPH-g ( $\mu\text{g/L}$ )	Benzene ( $\mu\text{g/L}$ )	Toluene ( $\mu\text{g/L}$ )	Ethyl-benzene ( $\mu\text{g/L}$ )	Xylenes ( $\mu\text{g/L}$ )	MTBE ( $\mu\text{g/L}$ )	
MW-16	03/13/02	31.39	10.51	20.88	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<2.5	
	06/28/02		10.96	20.43	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<2.5	
	09/20/02		10.47	20.92	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.50	1.67	
	12/30/02		NM		Well not sampled - Car Parked on Well						
	03/27/03		10.28	21.11	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	
	06/30/03		10.87 <sup>1</sup>	20.52	<b>Well Sampled Annually</b>						
MW-18	03/13/02	29.70	9.46	20.24	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<2.5	
	06/28/02		10.05	19.65		<b>Well Sampled Annually</b>					
	09/20/02		10.67	19.03		<b>Well Sampled Annually</b>					
	12/30/02		7.98	21.72		<b>Well Sampled Annually</b>					
	03/27/03		9.18	20.52	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	
	06/30/03		9.68	20.02		<b>Well Sampled Annually</b>					
MW-21	03/13/02	28.72	9.40	19.32	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<5.0	
	06/28/02		9.80	18.92		<b>Well Sampled Annually</b>					
	09/20/02		10.27	18.45		<b>Well Sampled Annually</b>					
	12/30/02		7.70	21.02		<b>Well Sampled Annually</b>					
	03/27/03		9.05	19.67	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	
	06/30/03		9.48	19.24		<b>Well Sampled Annually</b>					
MW-22	03/13/02	29.29	9.86	19.43	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<2.5	
	06/28/02		10.65	18.64	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<2.5	
	09/20/02		11.05	18.24	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.50	ND<0.500	
	12/30/02		8.28	21.01	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<2.5	
	03/27/03		9.85	19.44	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	
	06/30/03		10.20 <sup>1</sup>	19.09		<b>Well Sampled Annually</b>					

**Table 3**  
**Groundwater Elevation and Analytical Data - Groundwater Monitoring Wells**  
ARCO Service Station #0608  
17601 Hesperian Boulevard, San Lorenzo, California

Well Number	Date Sampled	Casing Elevation (feet, MSL)	Depth to Water (feet, TOC)	Groundwater Elevation (feet, MSL)	TPH-g (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Xylenes (µg/L)	MTBE (µg/L)
MW-23	03/13/02	30.99	11.01	19.98	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<2.5
	06/28/02		11.59	19.40	-----	-----	-----	-----	Well Sampled Annually	-----
	09/20/02		12.00	18.99	-----	-----	-----	-----	Well Sampled Annually	-----
	12/30/02		9.42	21.57	-----	-----	-----	-----	Well Sampled Annually	-----
	03/27/03		11.00	19.99	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50
	06/30/03		11.47	19.52	-----	-----	-----	-----	Well Sampled Annually	-----
MW-25	03/13/02	33.81	10.99	22.82	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<2.5
	06/28/02		11.26	22.55	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	36
	09/20/02		11.65	22.16	117	ND<0.50	ND<0.50	ND<0.50	ND<1.50	259
	12/30/02		9.33	24.48	95 <sup>d</sup>	13	ND<0.50	ND<0.50	ND<0.50	98 <sup>f</sup>
	03/27/03		10.82	22.99	150	ND<0.50	ND<0.50	ND<0.50	ND<0.50	90
	06/30/03	P	11.20	22.61	ND<500	ND<5.0	ND<5.0	ND<5.0	ND<5.0	130
MW-26	03/13/02	33.71	11.27	22.44	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<2.5
	06/28/02		11.70	22.01	-----	-----	-----	-----	Well Sampled Annually	-----
	09/20/02		12.10	21.61	-----	-----	-----	-----	Well Sampled Annually	-----
	12/30/02		9.60	24.11	-----	-----	-----	-----	Well Sampled Annually	-----
	03/27/03		11.15	22.56	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50
	06/30/03		11.61	22.10	-----	-----	-----	-----	Well Sampled Annually	-----

**Table 3**  
**Groundwater Elevation and Analytical Data - Groundwater Monitoring Wells**

ARCO Service Station #0608

17601 Hesperian Boulevard, San Lorenzo, California

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Note:	Samples analyzed by EPA Method 8260B. Prior to March 27, 2003 TPH-g was analyzed by EPA Method 8015; benzene, toluene, ethyl benzene, total xylenes and MTBE were analyzed by EPA Method 8021B.
TPH	= Total petroleum hydrocarbons as gasoline analyzed using EPA Method 8015, Modified
MTBE	= Methyl tertiary butyl ether
µg/L	= Micrograms per liter
P	= Purged
NP	= Not Purged
MSL	= Mean sea level
TOC	= Top of casing
ND<	= Not detected at or above specified laboratory method detection limit
a	= Well elevation data obtained from Quarterly Groundwater Monitoring and Site Status Report, Fourth Quarter 1994
b	= Chromatogram Pattern: Unidentified Hydrocarbons C6-C10
c	= Hydrocarbon pattern is present in the requested fuel quantitation range but does not resemble the pattern of the requested fuel.
d	= Chromatogram Pattern: C6-C10
e	= This sample was analyzed beyond the EPA recommended holding time. The results may still be useful for their intended purpose.
f	= The continuing calibration was outside the acceptance criteria. This should be considered in evaluating the result for its intended purpose
g	= Groundwater extraction system pumping; inaccurate depth to water.
h	= Groundwater extraction system not pumping.
i	= Sampling frequency changed from quarterly to annually per recommendations in first quarter 2003 groundwater monitoring report.
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.

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**Table 4**  
**Groundwater Flow Direction and Gradient**

ARCO Service Station #0608  
17601 Hesperian Boulevard, San Lorenzo, California

Date Measured	Average Flow Direction	Average Hydraulic Gradient
06-28-02	West	0.003
09-20-02	West	0.002
12-30-02	West	0.003
03-27-03	West	0.002
<b>06-30-03</b>	<b>West-Southwest</b>	<b>0.001</b>

**Table 5**  
**Fuel Oxygenate Analytical Data**

ARCO Service Station #0608  
17601 Hesperian Boulevard, San Lorenzo, California

Well Number	Date Sampled	Ethanol ( $\mu\text{g/L}$ )	TBA ( $\mu\text{g/L}$ )	MTBE ( $\mu\text{g/L}$ )	DIPE ( $\mu\text{g/L}$ )	ETBE ( $\mu\text{g/L}$ )	TAME ( $\mu\text{g/L}$ )	1,2-DCA ( $\mu\text{g/L}$ )	EDB ( $\mu\text{g/L}$ )
MW-5	03/27/03	ND<100	24	59	ND<0.50	ND<0.50	2.2	NA	NA
<b>MW-5</b>	<b>06/30/03</b>	<b>ND&lt;100</b>	<b>22</b>	<b>58</b>	<b>ND&lt;0.50</b>	<b>ND&lt;0.50</b>	<b>2.1</b>	<b>ND&lt;0.50</b>	<b>ND&lt;0.50</b>
MW-8	03/27/03	ND<100	ND<20	33	ND<0.50	ND<0.50	0.53	NA	NA
<b>MW-8</b>	<b>06/30/03</b>	<b>ND&lt;100</b>	<b>ND&lt;20</b>	<b>15</b>	<b>ND&lt;0.50</b>	<b>ND&lt;0.50</b>	<b>0.85</b>	<b>ND&lt;0.50</b>	<b>ND&lt;0.50</b>
MW-9	03/27/03	ND<100	ND<20	ND<0.50	ND<0.50	ND<0.50	ND<0.50	NA	NA
MW-10	03/27/03	ND<1,000	ND<200	330	ND<5.0	ND<5.0	15	NA	NA
<b>MW-10</b>	<b>06/30/03</b>	<b>ND&lt;2,000</b>	<b>ND&lt;400</b>	<b>750</b>	<b>ND&lt;10</b>	<b>ND&lt;10</b>	<b>28</b>	<b>ND&lt;10</b>	<b>ND&lt;10</b>
MW-11	03/27/03	ND<100	ND<20	ND<0.50	ND<0.50	ND<0.50	ND<0.50	NA	NA
<b>MW-11</b>	<b>06/30/03</b>	<b>ND&lt;100</b>	<b>ND&lt;20</b>	<b>ND&lt;0.50</b>	<b>ND&lt;0.50</b>	<b>ND&lt;0.50</b>	<b>ND&lt;0.50</b>	<b>ND&lt;0.50</b>	<b>ND&lt;0.50</b>
E-1A <sup>1</sup>	03/27/03	ND<100	ND<20	60	ND<0.50	ND<0.50	2.3	NA	NA
<b>E-1A<sup>1</sup></b>	<b>06/30/03</b>	<b>ND&lt;100</b>	<b>ND&lt;20</b>	<b>37</b>	<b>ND&lt;0.50</b>	<b>ND&lt;0.50</b>	<b>1.6</b>	<b>ND&lt;0.50</b>	<b>ND&lt;0.50</b>
MW-14	03/27/03	ND<100	ND<20	ND<0.50	ND<0.50	ND<0.50	ND<0.50	NA	NA
MW-15	03/27/03	ND<100	ND<20	17	ND<0.50	ND<0.50	ND<0.50	NA	NA
<b>MW-15</b>	<b>06/30/03</b>	<b>ND&lt;100</b>	<b>ND&lt;20</b>	<b>12</b>	<b>ND&lt;0.50</b>	<b>ND&lt;0.50</b>	<b>ND&lt;0.50</b>	<b>ND&lt;0.50</b>	<b>ND&lt;0.50</b>
MW-16	03/27/03	ND<100	ND<20	ND<0.50	ND<0.50	ND<0.50	ND<0.50	NA	NA
MW-18	03/27/03	ND<100	ND<20	ND<0.50	ND<0.50	ND<0.50	ND<0.50	NA	NA
MW-21	03/27/03	ND<100	ND<20	ND<0.50	ND<0.50	ND<0.50	ND<0.50	NA	NA
MW-22	03/27/03	ND<100	ND<20	ND<0.50	ND<0.50	ND<0.50	ND<0.50	NA	NA
MW-23	03/27/03	ND<100	ND<20	ND<0.50	ND<0.50	ND<0.50	ND<0.50	NA	NA
MW-25	03/27/03	ND<100	ND<20	90	ND<0.50	ND<0.50	40	NA	NA
<b>MW-25</b>	<b>06/30/03</b>	<b>ND&lt;1,000</b>	<b>ND&lt;200</b>	<b>130</b>	<b>ND&lt;5.0</b>	<b>ND&lt;5.0</b>	<b>81</b>	<b>ND&lt;5.0</b>	<b>ND&lt;5.0</b>
MW-26	03/27/03	ND<100	ND<20	ND<0.50	ND<0.50	ND<0.50	ND<0.50	NA	NA
642 H	3/27/2003	ND<100	ND<20	ND<0.50	ND<0.50	ND<0.50	ND<0.50	NA	NA
17372 VM	3/27/2003	ND<100	ND<20	ND<0.50	ND<0.50	ND<0.50	ND<0.50	NA	NA

**Table 5**  
**Fuel Oxygenate Analytical Data**

ARCO Service Station #0608  
17601 Hesperian Boulevard, San Lorenzo, California

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Note:

All fuel oxygenate compounds analyzed using EPA Method 8260B

**Abbreviations:**

TBA	= tert-Butyl alcohol
MTBE	= Methyl tert-butyl ether
DIPE	= Di-isopropyl ether
ETBE	= Ethyl tert butyl ether
TAME	= tert-Amyl methyl ether
1,2-DCA	= 1,2-Dichloroethane
EDB	= 1,2-Dibromoethane
NA	= Not analyzed
ND<	= Not detected above laboratory reporting limits.
mg/L	= micrograms per liter
<sup>1</sup>	= Previously named MW-12

**Table 6**  
**Groundwater Extraction System Performance Data**

ARCO Service Station #0608  
17601 Hesperian Boulevard at Hacienda Avenue  
San Lorenzo, California

Influent Sample Date	Hour	System		TPH-g			Benzene			MtBE			Primary MtBE Carbon Loading (%)		
	Meter Reading (hours)	Down Time (%)	Volume Reading (gallons)	Net Volume (gallons)	Average Flow (gpm)	Influent Concentration ( $\mu\text{g/L}$ )	Net Removed (pounds)	Removed To Date (pounds)	Influent Concentration ( $\mu\text{g/L}$ )	Net Removed (pounds)	Removed To Date (pounds)	Influent Concentration ( $\mu\text{g/L}$ )	Net Removed (pounds)	To Date (pounds)	
09/25/91	0	N/A	0	0	0.0	ND	N/A	0.00	N/A	0.000	0.00	N/A	N/A	N/A	0.0
09/26/91	N/A	N/A	1,144	1,144	N/A	38	0.00	0.00	4.8	0.000	0.00	N/A	N/A	N/A	0.0
10/22/91	26	96	12,844	11,700	7.6	ND	N/A	0.00	ND	0.000	0.00	N/A	N/A	N/A	0.0
11/22/91	77	93	52,532	39,688	13.0	ND	N/A	0.00	0.52	0.000	0.00	N/A	N/A	N/A	0.0
12/19/91	322	62	122,540	70,008	4.8	ND	N/A	0.00	ND	0.000	0.00	N/A	N/A	N/A	0.0
01/16/92	994	0	283,289	160,749	4.0	ND	N/A	0.00	ND	0.000	0.00	N/A	N/A	N/A	0.0
02/19/92	1,809	0	485,200	201,911	4.1	370	0.31	0.31	14	0.012	0.01	N/A	N/A	N/A	0.4
03/17/92	2,462	0	662,847	177,647	4.5	160	0.39	0.70	18	0.024	0.04	N/A	N/A	N/A	0.9
04/15/92	3,150	1	851,100	188,253	4.6	200	0.28	0.99	11	0.023	0.06	N/A	N/A	N/A	1.2
05/14/92	3,849	0	1,030,086	178,986	4.3	45	0.18	1.17	1.4	0.009	0.07	N/A	N/A	N/A	1.5
06/19/92	4,712	0	1,229,960	199,874	3.9	ND	N/A	1.17	ND	0.001	0.07	N/A	N/A	N/A	1.5
07/14/92	5,001	52	1,291,201	61,241	3.5	97	0.02	1.19	25.0	0.006	0.08	N/A	N/A	N/A	1.5
08/18/92	N/A	N/A	1,410,018	118,817	N/A	ND	N/A	1.19	ND	0.012	0.09	N/A	N/A	N/A	1.5
09/15/92	6,298	N/A	1,535,640	125,622	3.1	ND	N/A	1.19	ND	0.000	0.09	N/A	N/A	N/A	1.5
10/16/92	7,012	4	1,651,623	115,983	2.7	ND	N/A	1.19	ND	0.000	0.09	N/A	N/A	N/A	1.5
11/18/92	7,809	0	1,768,076	116,453	2.4	ND	N/A	1.19	ND	0.000	0.09	N/A	N/A	N/A	1.5
12/17/92	8,502	0	1,864,300	96,224	2.3	96	0.04	1.23	7.7	0.003	0.08	N/A	N/A	N/A	1.5
01/18/93	8,798	61	1,915,165	50,865	2.9	100	0.04	1.27	13	0.004	0.10	N/A	N/A	N/A	1.6
02/22/93	9,607	0	2,096,930	181,765	3.7	480	0.44	1.71	36	0.037	0.13	N/A	N/A	N/A	2.1
03/15/93	10,113	0	2,205,833	108,903	3.6	310	0.36	2.07	29	0.030	0.16	N/A	N/A	N/A	2.6
04/09/93	10,517	33	2,298,770	92,937	3.8	140	0.17	2.25	11	0.015	0.18	N/A	N/A	N/A	2.8
05/13/93	11,211	15	2,449,160	150,390	3.6	530	0.42	2.67	27	0.024	0.20	N/A	N/A	N/A	3.3
06/04/93	11,734	1	2,543,500	94,340	3.0	170	0.28	2.94	5.2	0.013	0.21	N/A	N/A	N/A	3.7
07/20/93	12,573	24	2,689,697	146,197	2.9	200	0.23	3.17	12	0.010	0.22	N/A	N/A	N/A	4.0
08/16/93	13,219	0	2,791,366	101,669	2.6	150	0.15	3.32	4.9	0.007	0.23	N/A	N/A	N/A	4.1
09/13/93	13,888	0	2,884,736	93,370	2.3	80	0.09	3.41	2.2	0.003	0.23	N/A	N/A	N/A	4.3
10/08/93	14,485	1	2,951,737	67,001	1.9	ND	0.02	3.43	ND	0.001	0.24	N/A	N/A	N/A	4.3
11/19/93	15,494	0	3,036,032	84,295	1.4	ND	0.00	3.43	ND	0.000	0.24	N/A	N/A	N/A	4.3
12/21/93	16,260	0	3,113,565	77,533	1.7	73	0.02	3.45	3.5	0.001	0.24	N/A	N/A	N/A	4.3
01/18/94	16,939	0	3,180,900	77,335	1.9	60	0.04	3.49	3.1	0.002	0.24	N/A	N/A	N/A	4.4
02/17/94	17,658	0	3,273,720	82,820	1.9	ND	0.02	3.51	2.5	0.002	0.24	N/A	N/A	N/A	4.4

**Table 6**  
**Groundwater Extraction System Performance Data**

ARCO Service Station #0608  
17601 Hesperian Boulevard at Hacienda Avenue  
San Lorenzo, California

Influent Sample Date	Hour	System			TPH-g			Benzene			MtBE			Primary MtBE Carbon Loading (%)	
	Meter Reading (hours)	Down Time (%)	Volume Reading (gallons)	Net Volume (gallons)	Average Flow (gpm)	Influent Concentration ( $\mu\text{g/L}$ )	Net Removed (pounds)	Removed To Date (pounds)	Influent Concentration ( $\mu\text{g/L}$ )	Net Removed (pounds)	Removed To Date (pounds)	Influent Concentration ( $\mu\text{g/L}$ )	Net Removed (pounds)	To Date (pounds)	
03/15/94	18,235	7	3,344,249	70,529	2.0	ND	0.00	3.51	ND	0.001	0.24	N/A	N/A	N/A	4.4
04/21/94	18,849	31	3,418,537	74,288	2.0	110	0.03	3.55	7.8	0.002	0.24	N/A	N/A	N/A	4.4
05/13/94	19,351	5	3,478,910	60,373	2.0	230	0.09	3.63	8.3	0.004	0.25	N/A	N/A	N/A	4.5
06/14/94	19,680	57	3,518,608 a	39,698	2.0	230	0.08	3.71	12	0.003	0.25	N/A	N/A	N/A	4.6
07/14/94	20,145	35	3,574,408 b	55,800	2.0	270	0.12	3.83	6.9	0.004	0.26	N/A	N/A	N/A	4.8
08/17/94	20,920	5	51,260 c	91,580 c	2.0	ND	0.10	3.93	1.8	0.003	0.26	N/A	N/A	N/A	4.9
09/12/94	21,549	0	120,910	69,650	1.8	ND	0.00	3.93	ND	0.001	0.26	N/A	N/A	N/A	4.9
10/18/94	22,408	1	211,880	90,970	1.8	ND	0.00	3.93	ND	0.000	0.26	N/A	N/A	N/A	4.9
11/15/94	23,080	0	280,840	68,960	1.7	ND	0.00	3.93	0.66	0.000	0.26	N/A	N/A	N/A	4.9
12/05/94	23,489	15	325,830	44,990	1.8	470	0.09	3.99	32	0.006	0.27	N/A	N/A	N/A	5.0
01/04/95	24,205	1	408,740	82,910	1.9	ND	0.16	4.15	1.1	0.011	0.28	N/A	N/A	N/A	5.2
02/06/95	24,926	9	499,690	90,950	2.1	100	0.04	4.19	2.4	0.001	0.28	N/A	N/A	N/A	5.2
03/02/95	25,465	6	569,180	69,490	2.1	ND	0.03	4.22	ND	0.001	0.28	N/A	N/A	N/A	5.3
04/04/95	26,253	1	672,510	103,330	2.2	290	0.12	4.34	6.6	0.003	0.28	N/A	N/A	N/A	5.4
05/02/95	26,924	0	760,350	87,840	2.2	240	0.19	4.54	7.1	0.005	0.29	N/A	N/A	N/A	5.7
06/05/95	27,721	2	848,810	88,460	1.9	ND	0.09	4.62	ND	0.003	0.29	N/A	N/A	N/A	5.8 f
07/06/95	28,464	0	921,260	72,450	1.6	270	0.08	4.71	2.4	0.001	0.29	N/A	N/A	N/A	5.9 g
08/21/95 d	29,568	0	993,320	72,060	1.1	230	0.15	4.86	1.8	0.001	0.29	N/A	N/A	N/A	5.9 g
08/05/00 e	29,592	N/A	976,600	N/A	N/A	700	N/A	4.86	7.2	N/A	0.29	361	N/A	0.00	N/A g
08/05/00	29,593	0	979,800	3,200	2.1	700	0.02	4.88	7.2	0.000	0.29	361	0.01	0.01	N/A g
07/08/00	30,352	4	1,131,560	151,760	3.3	133	0.53	5.40	5.1	0.008	0.30	272	0.40	0.41	N/A g
08/07/00	30,955	16	1,228,240	96,680	2.7	144	0.11	5.51	2.8	0.003	0.30	126	0.16	0.57	N/A g
09/08/00	31,528	25	1,306,300	78,060	2.3	261	0.13	5.65	2.7	0.002	0.30	120	0.08	0.65	N/A g
10/10/00	32,230	9	1,393,820	87,520	2.1	114	0.14	5.78	ND	0.001	0.31	ND	0.04	0.69	N/A g
11/07/00	32,880	3	1,472,930	79,110	2.0	128	0.08	5.86	ND	0.000	0.31	98.6	0.03	0.73	N/A g
12/05/00	33,516	5	1,548,840	75,910	2.0	167	0.09	5.96	0.775	0.000	0.31	104	0.06	0.79	N/A g
01/04/01	33,924	43	1,595,340	46,500	1.9	ND	0.03	5.99	ND	0.000	0.31	86.8	0.04	0.83	N/A g
02/06/01	34,556	20	1,672,330	76,990	2.0	203	0.07	6.05	0.572	0.000	0.31	80.5	0.05	0.88	N/A g
03/08/01	34,776	70	1,698,880	26,530	2.0	218	0.05	6.10	ND	0.000	0.31	81.0	0.02	0.90	N/A g
03/24/01	35,088	19	1,741,170	42,310	2.3	NS †	0.07	6.17	NS †	0.000	0.31	NS †	0.03	0.93	N/A g
04/18/01	35,335	59	1,770,860	29,690	2.0	74.5	0.04	6.21	ND	0.000	0.31	97.5	0.02	0.95	N/A g

**Table 6**  
**Groundwater Extraction System Performance Data**

ARCO Service Station #0608  
17601 Hesperian Boulevard at Hacienda Avenue  
San Lorenzo, California

Influent Sample Date	Hour	System			TPH-a			Benzene			MtBE			Primary MtBE Carbon Loading (%)	
	Meter Reading (hours)	Down Time (%)	Volume Reading (gallons)	Net Volume (gallons)	Average Flow (gpm)	Influent Concentration ( $\mu\text{g/L}$ )	Net Removed (pounds)	Removed To Date (pounds)	Influent Concentration ( $\mu\text{g/L}$ )	Net Removed (pounds)	Removed To Date (pounds)	Influent Concentration ( $\mu\text{g/L}$ )	Net Removed (pounds)	Removed To Date (pounds)	
05/04/01	35,716	0	1,812,690	41,830	1.8	63.3	0.02	6.23	ND	0.000	0.31	93.2	0.03	0.98	N/A g
06/09/01	36,345	27	1,879,710	67,020	1.8	64	0.04	6.27	ND	0.000	0.31	71	0.05	1.03	N/A g
07/05/01 h	36,469	80	1,897,180	17,470	2.3	100	0.01	6.28	ND	0.000	0.31	430	0.04	1.07	N/A g
08/14/01 h	36,822	63	1,928,510	31,330	1.5	290	0.05	6.33	2.2	0.000	0.31	870	0.17	1.24	N/A g
09/05/01	37,219	25	1,977,050	48,540	2.0	ND(100)	0.06	6.39	ND(1.0)	0.000	0.31	340	0.24	1.48	N/A g
10/05/01	37,932	0	2,040,950	63,900	1.5	ND	0.00	6.39	ND	0.000	0.31	150	0.13	1.61	N/A g
11/13/01	38,820	0	2,119,670	78,720	1.5	ND	0.00	6.39	ND	0.000	0.31	92	0.08	1.69	N/A g
12/11/01	39,496	0	2,186,530	66,860	1.6	65	0.02	6.41	ND	0.000	0.31	83	0.05	1.74	N/A g
01/04/02	40,063	0	2,248,700	62,170	1.8	ND(50)	0.02	6.43	ND	0.000	0.31	140	0.06	1.80	N/A g
02/05/02	40,830	0	2,333,090	84,390	1.8	100	0.04	6.46	ND	0.000	0.31	190	0.12	1.91	N/A g
03/05/02	40,968	79	2,353,460	20,370	2.5	150	0.02	6.48	ND(1.2)	0.000	0.31	350	0.05	1.96	N/A g
04/08/02	41,735	8	2,448,360	94,900	2.1	400	0.22	6.70	9.6	0.004	0.31	260	0.24	2.20	N/A g
05/16/02	42,642	1	2,499,320	50,960	0.9	310	0.15	6.85	ND(1.0)	0.002	0.31	330	0.13	2.33	N/A g
05/31/02	42,832	47	2,503,380	4,060	0.4	NS s	0.00	6.85	NS s	0.000	0.31	NS s	0.00	2.33	N/A g
08/19/02	44,925 i		2,520,289	16,909	0.1	NS s	0.00	6.85	NS s	0.000	0.31	NS s	0.00	2.33	N/A g
10/03/02	44,956 i		2,520,582	293	0.2	NS s	0.00	6.85	NS s	0.000	0.31	NS s	0.00	2.33	N/A g
10/07/02	44,956 i		2,522,394	1,812	N/A	160	0.00	6.86	ND(1.0)	0.000	0.31	130	0.00	2.33	N/A g
11/07/02	0 j		2,527,925	5,531	N/A	250	0.01	6.86	ND(1.0)	0.000	0.31	210	0.01	2.34	N/A g
12/05/02	479	29	2,528,113	188	0.0	220	0.00	6.86	ND(1.0)	0.000	0.31	110	0.00	2.34	N/A g
01/03/03	1,174	0	2,591,359	63,246	1.5	170	0.10	6.97	ND(1.0)	0.000	0.31	140	0.07	2.40	N/A g
02/13/03	2,156	0	2,682,710	101,351	1.72	ND(250)	0.07	7.04	ND(2.5)	0.000	0.31	66	0.09	2.49	N/A g
03/27/03	3,165	0	2,780,668	97,958	1.62	110	0.04	7.08	ND(0.50)	0.000	0.31	71	0.06	2.55	N/A g
04/24/03	4,172	0	2,865,050	74,382	1.23	120	0.07	7.16	ND(0.50)	0.000	0.31	56	0.04	2.59	N/A g
05/30/03	4,459	67	2,931,190	66,140	3.83	20	0.04	7.19	ND(5.0)	0.000	0.31	ND(50)	0.00	2.59	N/A g
06/19/03	4,940	0	2,971,985	40,795	1.41	160	0.03	7.22	ND(5.0)	0.000	0.31	46	0.01	2.59	N/A g
<b>REPORTING PERIOD:</b>		03/27/03 to 06/19/03													
<b>TOTAL GALLONS EXTRACTED:</b>		6,603,433													
<b>PERIOD GALLONS EXTRACTED:</b>		181,317													
<b>TOTAL POUNDS REMOVED:</b>		7.22													
<b>TOTAL GALLONS REMOVED:</b>		0.31													
<b>AVERAGE PERIOD FLOW RATE (gpm):</b>		1.18													
<b>PERIOD PERCENT OPERATIONAL:</b>		88%													
<b>PERIOD POUNDS REMOVED:</b>		0.14													
<b>PERIOD GALLONS REMOVED:</b>		0.000													
		0.02													
		0.000													

**Table 7**  
**Treatment System Analytical Data**

ARCO Service Station #0608  
17601 Hesperian Boulevard at Hacienda Avenue  
San Lorenzo, California

Date Sampled	TPH-g ( $\mu\text{g/L}$ )	Benzene ( $\mu\text{g/L}$ )	Toluene ( $\mu\text{g/L}$ )	Ethyl-benzene ( $\mu\text{g/L}$ )	Xylenes ( $\mu\text{g/L}$ )	MtBE ( $\mu\text{g/L}$ )	COD ( $\text{mg/L}$ )	TSS ( $\text{mg/L}$ )	pH (units)	DO ( $\text{mg/L}$ )
<b>INF1 (influent to primary carbon)</b>										
09/26/91	38	4.8	.6	1.6	1.1	NS	NS	NS	NA	NA
10/22/91	ND<30	ND<0.3	ND<0.3	ND<0.3	ND<0.3	NS	NS	NS	NA	NA
11/22/91	ND<30	0.5	ND<0.3	ND<0.3	ND<0.3	NS	NS	NS	NA	NA
12/19/91	ND<30	ND<0.3	ND<0.3	ND<0.3	ND<0.3	NS	NS	NS	NA	NA
01/16/91	ND<30	ND<0.3	ND<0.3	ND<0.3	ND<0.3	NS	NS	NS	NA	NA
02/19/92	370	14	0.34	14	2.4	NS	NS	NS	NA	NA
03/17/92	160	18	0.32	0.56	1.6	NS	NS	NS	NA	NA
04/15/92	200	11	ND<0.3	7.3	0.77	NS	NS	NS	NA	NA
05/14/92	45	1.4	ND<0.3	ND<0.3	ND<0.3	NS	NS	NS	NA	NA
06/19/92	ND<30	ND<0.3	ND<0.3	ND<0.3	ND<0.3	NS	NS	NS	NA	NA
07/14/92	97	25	ND<0.5	8.5	ND<0.5	NS	NS	NS	NA	NA
08/18/92	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	NS	NS	NS	NA	NA
09/15/92	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	NS	NS	NS	NA	NA
10/16/92	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	NS	NS	NS	NA	NA
11/18/92	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	NS	NS	NS	NA	NA
12/17/92	96	7.7	13	0.56	9.7	NS	NS	NS	NA	NA
01/18/93	100	13	6.6	1.1	11	NS	NS	NS	NA	NA
02/22/93	480	36	29	4.9	96	NS	NS	NS	NA	NA
03/15/93	310	29	14	4.9	55	NS	NS	NS	NA	NA
04/09/93	140	11	2.8	2.6	17	NS	NS	NS	NA	NA
05/13/93	530	27	12	18	96	NS	NS	NS	NA	NA
06/04/93	170	5.2	1.6	2.5	23	NS	NS	NS	NA	NA
07/20/93	200	12	0.91	8.2	29	NS	NS	NS	NA	NA
08/16/93	150	4.9	0.63	2.9	15	NS	NS	NS	NA	NA
09/13/93	80	2.2	ND<0.5	ND<0.5	4.8	NS	NS	NS	NA	NA
10/08/93	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	NS	NS	NS	NA	NA
11/19/93	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	NS	NS	NS	NA	NA
12/21/93	73	3.5	ND<0.5	1.9	8.4	NS	NS	NS	NA	NA
01/18/94	60	3.1	ND<0.5	3.2	4.3	NS	NS	NS	NA	NA
02/17/94	ND<50	2.5	ND<0.5	2.1	3.1	NS	NS	NS	NA	NA
03/15/94	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	NS	NS	NS	NA	NA
04/21/94	110	7.8	ND<1.0	9.6	ND<1.0	NS	NS	NS	NA	NA
05/13/94	230	8.3	ND<0.5	14	6.0	NS	NS	NS	NA	NA
06/14/94	230	12	ND<0.5	16	1.5	NS	NS	NS	NA	NA
07/14/94	270	6.9	ND<0.5	15	1.9	NS	NS	NS	NA	NA
08/18/94	ND<50	1.8	ND<0.5	1.5	ND<0.5	NS	NS	NS	NA	NA
09/12/94	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	NS	NS	NS	NA	NA

**Table 7**  
**Treatment System Analytical Data**

ARCO Service Station #0608  
17601 Hesperian Boulevard at Hacienda Avenue  
San Lorenzo, California

Date Sampled	TPH-g (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethyl-benzene (µg/L)	Xylenes (µg/L)	MtBE (µg/L)	COD (mg/L)	TSS (mg/L)	pH (units)	DO (mg/L)
<b>INFL (influent to primary carbon) (cont.)</b>										
10/18/94	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	NS	NS	NS	NA	NA
11/05/94	ND<50	0.66	ND<0.5	2.6	ND<0.5	NS	NS	NS	NA	NA
12/05/94	470	32	0.59	29	6.2	NS	NS	NS	NA	NA
01/04/95	ND<50	1.1	ND<0.50	1.4	ND<0.50	NS	NS	NS	NA	NA
02/06/95	100	2.4	1.1	1.2	2.8	NS	NS	NS	NA	NA
03/02/95	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	NS	NS	NS	NA	NA
04/04/95	290	6.6	ND<0.50	10	1.7	NS	NS	NS	NA	NA
05/02/95	240	7.1	ND<0.50	3.2	1.6	NS	NS	NS	NA	NA
06/05/95	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	NS	NS	NS	NA	NA
07/06/95	270	2.4	ND<0.50	7.6	1.0	NS	NS	NS	NA	NA
08/21/95	230	1.8	ND<0.50	1.6	0.9	NS	NS	NS	NA	NA
06/05/00	700	7.24	ND<1.00	2.11	ND<1.00	361	NS	NS	NA	NA
07/08/00	133	5.09	0.598	ND<0.500	ND<0.500	272	NS	NS	NA	NA
08/10/00	144	2.80	ND<0.500	1.04	ND<0.500	126	NS	NS	NA	NA
09/08/00	261	2.74	0.826	0.626	ND<0.500	120	NS	NS	NA	NA
10/10/00	114	ND<0.500	1.68	0.843	ND<0.500	ND<2.50	NS	NS	NA	NA
11/07/00	128	ND<0.500	ND<0.500	ND<0.500	ND<0.500	98.6	NS	NS	NA	NA
12/05/00	167	0.775	ND<0.500	ND<0.500	ND<0.500	104	NS	NS	NA	NA
01/04/01	ND<50.0	ND<0.500	ND<0.500	ND<0.500	ND<0.500	86.8	NS	NS	NA	NA
02/06/01	203	0.572	ND<0.500	0.513	ND<0.500	80.5	NS	NS	NA	NA
03/08/01	219	ND<0.500	6.16	1.21	0.682	81.0	NS	NS	NA	NA
04/18/01	74.5	ND<0.500	ND<0.500	ND<0.500	ND<0.500	97.5	NS	NS	NA	NA
05/04/01	63.3	ND<0.500	ND<0.500	ND<0.500	ND<0.500	93.2	NS	NS	NA	NA
06/09/01	64	ND<0.50	ND<0.50	ND<0.50	ND<0.50	71	NS	NS	NA	NA
07/05/01	100	ND<0.50	2.5	ND<0.50	ND<0.50	430	NS	NS	NA	NA
08/14/01	290	2.2	3.5	ND<1.0	ND<1.0	870	NS	NS	NA	NA
09/05/01	ND<100	ND<1.0	ND<1.0	ND<1.0	ND<1.0	340	NS	NS	NA	NA
10/05/01	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	150	NS	NS	NA	NA
11/13/01	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	92	NS	NS	NA	NA
12/11/01	65	ND<0.50	0.58	ND<0.50	ND<0.50	83	NS	NS	NA	NA
01/04/02	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	140	NS	NS	NA	NA
02/05/02	100	ND<0.50	ND<0.50	ND<0.50	ND<0.50	190	NS	NS	NA	NA
03/05/02	150	ND<1.2	ND<1.2	ND<1.2	ND<1.2	350	NS	NS	NA	NA
04/08/02	400	9.6	ND<1.0	1.4	ND<1.0	260	NS	NS	NA	NA
05/16/02	310	ND<1.0	ND<1.0	ND<1.0	ND<1.0	330	NS	NS	NA	NA
10/07/02	160	4.1	ND<1.0	ND<1.0	ND<1.0	130	NS	NS	NA	NA
11/07/02	250	ND<0.50	10	0.70	0.77	210	NS	NS	NA	NA
12/05/02	220	ND<1.0	ND<1.0	ND<1.0	ND<1.0	110	NS	NS	NA	NA
01/03/03	170	ND<1.0	ND<1.0	ND<1.0	ND<1.0	140	NS	NS	NA	NA
2/13/03*	ND<250	ND<2.5	ND<2.5	ND<2.5	ND<2.5	66	NS	NS	NA	NA
3/27/03*	110	ND<0.50	ND<0.50	ND<0.50	ND<0.50	71	NS	NS	NA	NA
4/24/03*	120	ND<0.50	ND<0.50	ND<0.50	ND<0.50	56	NS	NS	NA	NA
5/30/03*	20	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<50	NS	NS	NA	NA
06/19/03	160	ND<0.50	ND<0.50	ND<0.50	ND<0.50	46	NS	NS	NA	NA

**Table 7**  
**Treatment System Analytical Data**

ARCO Service Station #0608  
17601 Hesperian Boulevard at Hacienda Avenue  
San Lorenzo, California

Date Sampled	TPH-g (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethyl-benzene (µg/L)	Xylenes (µg/L)	MtBE (µg/L)	COD (mg/L)	TSS (mg/L)	pH (units)	DO (mg/L)
<b>MBD-1 (between primary and secondary carbons)</b>										
09/26/91	ND<30	ND<0.3	ND<0.3	ND<0.3	ND<0.3	NS	NS	NS	NA	NA
10/22/91	ND<30	ND<0.3	ND<0.3	ND<0.3	ND<0.3	NS	NS	NS	NA	NA
12/19/91	ND<30	ND<0.3	ND<0.3	ND<0.3	ND<0.3	NS	NS	NS	NA	NA
01/16/91	ND<30	ND<0.3	ND<0.3	ND<0.3	ND<0.3	NS	NS	NS	NA	NA
02/19/92	ND<30	ND<0.3	ND<0.3	ND<0.3	ND<0.3	NS	NS	NS	NA	NA
03/17/92	ND<30	ND<0.3	ND<0.3	ND<0.3	ND<0.3	NS	NS	NS	NA	NA
04/15/92	ND<30	ND<0.3	ND<0.3	ND<0.3	ND<0.3	NS	NS	NS	NA	NA
05/14/92	ND<30	ND<0.3	ND<0.3	ND<0.3	ND<0.3	NS	NS	NS	NA	NA
06/19/92	ND<30	ND<0.3	ND<0.3	ND<0.3	ND<0.3	NS	NS	NS	NA	NA
07/14/92	NS	NS	NS	NS	NS	NS	NS	NS	NA	NA
08/18/92	NS	NS	NS	NS	NS	NS	NS	NS	NA	NA
09/15/92	NS	NS	NS	NS	NS	NS	NS	NS	NA	NA
10/16/92	NS	NS	NS	NS	NS	NS	NS	NS	NA	NA
11/18/92	NS	NS	NS	NS	NS	NS	NS	NS	NA	NA
12/17/92	NS	NS	NS	NS	NS	NS	NS	NS	NA	NA
01/18/93	NS	NS	NS	NS	NS	NS	NS	NS	NA	NA
02/22/93	NS	NS	NS	NS	NS	NS	NS	NS	NA	NA
03/15/93	NS	NS	NS	NS	NS	NS	NS	NS	NA	NA
04/09/93	NS	NS	NS	NS	NS	NS	NS	NS	NA	NA
05/13/93	NS	NS	NS	NS	NS	NS	NS	NS	NA	NA
06/04/93	NS	NS	NS	NS	NS	NS	NS	NS	NA	NA
07/14/94	ND	ND	ND	ND	ND	NS	NS	NS	NA	NA
08/17/94	NS	NS	NS	NS	NS	NS	NS	NS	NA	NA
09/12/94	NS	NS	NS	NS	NS	NS	NS	NS	NA	NA
10/18/94	NS	NS	NS	NS	NS	NS	NS	NS	NA	NA
11/05/94	NS	NS	NS	NS	NS	NS	NS	NS	NA	NA
12/05/94	NS	NS	NS	NS	NS	NS	NS	NS	NA	NA
01/04/95	NS	NS	NS	NS	NS	NS	NS	NS	NA	NA
02/06/95	NS	NS	NS	NS	NS	NS	NS	NS	NA	NA
03/02/95	NS	NS	NS	NS	NS	NS	NS	NS	NA	NA
06/05/00	ND<50.0	ND<0.500	ND<0.500	ND<0.500	ND<0.500	ND<2.50	NS	NS	NA	NA
07/08/00	ND<50.0	ND<0.500	ND<0.500	ND<0.500	ND<0.500	ND<2.50	NS	NS	NA	NA
08/10/00	ND<50.0	ND<0.500	ND<0.500	ND<0.500	ND<0.500	ND<5.00	NS	NS	NA	NA
09/08/00	ND<50.0	ND<0.500	ND<0.500	ND<0.500	ND<0.500	ND<2.50	NS	NS	NA	NA

**Table 7**  
**Treatment System Analytical Data**

ARCO Service Station #0608  
 17601 Hesperian Boulevard at Hacienda Avenue  
 San Lorenzo, California

Date Sampled	TPH-g ( $\mu\text{g/L}$ )	Benzene ( $\mu\text{g/L}$ )	Toluene ( $\mu\text{g/L}$ )	Ethyl-benzene ( $\mu\text{g/L}$ )	Xylenes ( $\mu\text{g/L}$ )	MtBE ( $\mu\text{g/L}$ )	COD (mg/L)	TSS (mg/L)	pH (units)	DO (mg/L)
<b>MID-1 (cont.)</b>										
10/10/00	ND<50.0	ND<0.500	ND<0.500	ND<0.500	ND<0.500	ND<0.500	ND<2.50	NS	NS	NA
11/07/00	ND<50.0	ND<0.500	ND<0.500	ND<0.500	ND<0.500	ND<0.500	ND<2.50	NS	NS	NA
12/05/00	ND<50.0	ND<0.500	ND<0.500	ND<0.500	ND<0.500	ND<0.500	ND<2.50	NS	NS	NA
01/04/01	ND<50.0	ND<0.500	ND<0.500	ND<0.500	ND<0.500	ND<0.500	ND<2.50	NS	NS	NA
02/06/01	ND<50.0	ND<0.500	ND<0.500	ND<0.500	ND<0.500	ND<0.500	ND<2.50	NS	NS	NA
03/08/01	ND<50.0	ND<0.500	ND<0.500	ND<0.500	ND<0.500	ND<0.500	ND<2.50	NS	NS	NA
04/18/01	ND<50.0	ND<0.500	ND<0.500	ND<0.500	ND<0.500	ND<0.500	ND<2.50	NS	NS	NA
05/04/01	ND<50.0	ND<0.500	ND<0.500	ND<0.500	ND<0.500	ND<0.500	ND<2.50	NS	NS	NA
06/09/01	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<2.5	NS	NS	NA
07/05/01	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<2.5	NS	NS	NA
08/14/01	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<2.5	NS	NS	NA
09/05/01	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<2.5	NS	NS	NA
10/05/01	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<2.5	NS	NS	NA
11/13/01	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	3.3	NS	NS	NA
12/11/01	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	5.7	NS	NS	NA
01/04/02	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	9.0	NS	NS	NA
02/05/02	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	26	NS	NS	NA
03/05/02	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	17	NS	NS	NA
04/08/02	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	39	NS	NS	NA
05/16/02	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	58	NS	NS	NA
10/07/02	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	55	NS	NS	NA
11/07/02	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	100	NS	NS	NA
12/05/02	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	51	NS	NS	NA
01/03/03	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	66	NS	NS	NA
2/13/03*	ND<250	ND<2.5	ND<2.5	ND<2.5	ND<2.5	ND<2.5	130	NS	NS	NA
3/27/03*	ND<250	ND<2.5	ND<2.5	ND<2.5	ND<2.5	ND<2.5	120	NS	NS	NA
4/24/03*	280	ND<2.5	ND<2.5	ND<2.5	ND<2.5	ND<2.5	110	NS	NS	NA
5/30/03*	ND<250	ND<2.5	ND<2.5	ND<2.5	ND<2.5	ND<2.5	140	NS	NS	NA
06/19/03	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	110	NS	NS	NA

**Table 7**  
**Treatment System Analytical Data**

ARCO Service Station #0608  
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 San Lorenzo, California

Date Sampled	TPH-g ( $\mu\text{g/L}$ )	Benzene ( $\mu\text{g/L}$ )	Toluene ( $\mu\text{g/L}$ )	Ethyl-benzene ( $\mu\text{g/L}$ )	Xylenes ( $\mu\text{g/L}$ )	MtBE ( $\mu\text{g/L}$ )	COD ( $\text{mg/L}$ )	TSS ( $\text{mg/L}$ )	pH (units)	DO ( $\text{mg/L}$ )
<b>MID-2 (between secondary and tertiary carbons)</b>										
06/05/00	ND<50.0	ND<0.500	ND<0.500	ND<0.500	ND<0.500	ND<2.50	NS	NS	NA	NA
07/08/00	NS	NS	NS	NS	NS	NS	NS	NS	NA	NA
09/08/00	NS	NS	NS	NS	NS	NS	NS	NS	NA	NA
10/10/00	NS	NS	NS	NS	NS	NS	NS	NS	NA	NA
11/07/00	NS	NS	NS	NS	NS	NS	NS	NS	NA	NA
12/05/00	NS	NS	NS	NS	NS	NS	NS	NS	NA	NA
01/04/01	ND<50.0	ND<0.500	ND<0.500	ND<0.500	ND<0.500	ND<2.50	NS	NS	NA	NA
02/06/01	ND<50.0	ND<0.500	ND<0.500	ND<0.500	ND<0.500	ND<2.50	NS	NS	NA	NA
03/08/01	ND<50.0	ND<0.500	ND<0.500	ND<0.500	ND<0.500	ND<2.50	NS	NS	NA	NA
04/18/01	ND<50.0	ND<0.500	ND<0.500	ND<0.500	ND<0.500	ND<2.50	NS	NS	NA	NA
05/04/01	ND<50.0	ND<0.500	ND<0.500	ND<0.500	ND<0.500	ND<2.50	NS	NS	NA	NA
06/09/01	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<2.5	NS	NS	NA	NA
07/05/01	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<2.5	NS	NS	NA	NA
08/14/01	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<2.5	NS	NS	NA	NA
09/05/01	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<2.5	NS	NS	NA	NA
10/05/01	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<2.5	NS	NS	NA	NA
11/13/01	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<2.5	NS	NS	NA	NA
12/11/01	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<2.5	NS	NS	NA	NA
01/04/02	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<2.5	NS	NS	NA	NA
02/05/02	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<2.5	NS	NS	NA	NA
03/05/02	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<2.5	NS	NS	NA	NA
04/08/02	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	4.7	NS	NS	NA	NA
05/16/02	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<2.5	NS	NS	NA	NA
10/07/02	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<2.5	NS	NS	NA	NA
11/07/02	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<2.5	NS	NS	NA	NA
12/05/02	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<2.5	NS	NS	NA	NA
01/03/03	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<2.5	NS	NS	NA	NA
2/13/03*	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	1.0	NS	NS	NA	NA
3/27/03*	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	0.94	NS	NS	NA	NA
4/24/03*	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	0.95	NS	NS	NA	NA
5/30/03*	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	1.1	NS	NS	NA	NA
06/19/03	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<2.5	NS	NS	NA	NA

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San Lorenzo, California

Date Sampled	TPH-g ( $\mu\text{g/L}$ )	Benzene ( $\mu\text{g/L}$ )	Toluene ( $\mu\text{g/L}$ )	Ethyl-benzene ( $\mu\text{g/L}$ )	Xylenes ( $\mu\text{g/L}$ )	MtBE ( $\mu\text{g/L}$ )	COD (mg/L)	TSS (mg/L)	pH (units)	DO (mg/L)
<b>EFFL (effluent to sewer)</b>										
09/26/91	ND<30	ND<0.3	ND<0.3	ND<0.3	ND<0.3	NS	NS	NS	NA	NA
10/22/91	ND<30	ND<0.3	ND<0.3	ND<0.3	ND<0.3	NS	NS	NS	NA	NA
11/22/91	ND<30	ND<0.3	ND<0.3	ND<0.3	ND<0.3	NS	NS	NS	NA	NA
12/19/91	ND<30	ND<0.3	ND<0.3	ND<0.3	ND<0.3	NS	NS	NS	NA	NA
01/16/92	ND<30	ND<0.3	ND<0.3	ND<0.3	ND<0.3	NS	NS	NS	NA	NA
02/19/92	ND<30	ND<0.3	ND<0.3	ND<0.3	ND<0.3	NS	NS	NS	NA	NA
03/17/92	ND<30	ND<0.3	ND<0.3	ND<0.3	ND<0.3	NS	NS	NS	NA	NA
04/15/92	ND<30	ND<0.3	ND<0.3	ND<0.3	ND<0.3	NS	NS	NS	NA	NA
05/14/92	ND<30	ND<0.3	ND<0.3	ND<0.3	ND<0.3	NS	NS	NS	NA	NA
06/19/92	ND<30	ND<0.3	ND<0.3	ND<0.3	ND<0.3	NS	NS	NS	NA	NA
07/14/92	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	NS	NS	NS	NA	NA
08/18/92	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	NS	NS	NS	NA	NA
09/15/92	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	NS	NS	NS	NA	NA
10/16/92	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	NS	NS	NS	NA	NA
11/18/92	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	NS	NS	NS	NA	NA
12/17/92	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	NS	NS	NS	NA	NA
01/18/93	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	NS	NS	NS	NA	NA
02/22/93	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	NS	NS	NS	NA	NA
03/15/93	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	NS	NS	NS	NA	NA
04/09/93	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	NS	NS	NS	NA	NA
05/13/93	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	NS	NS	NS	NA	NA
06/04/93	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	NS	NS	NS	NA	NA
07/20/93	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	NS	NS	NS	NA	NA
08/16/93	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	NS	NS	NS	NA	NA
09/13/93	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	NS	NS	NS	NA	NA
10/08/93	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	NS	NS	NS	NA	NA
11/19/93	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	NS	NS	NS	NA	NA
12/21/93	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	NS	NS	NS	NA	NA
01/18/94	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	NS	NS	NS	NA	NA
02/17/94	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	NS	NS	NS	NA	NA
03/15/94	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	NS	NS	NS	NA	NA
04/21/94	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	NS	NS	NS	NA	NA
05/13/94	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	NS	NS	NS	NA	NA
06/14/94	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	NS	NS	NS	NA	NA
07/14/94	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	NS	NS	NS	NA	NA
08/17/94	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	NS	NS	NS	NA	NA
09/12/94	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	NS	NS	NS	NA	NA
10/18/94	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	NS	NS	NS	NA	NA
11/05/94	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	NS	NS	NS	NA	NA
12/05/94	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	NS	NS	NS	NA	NA
01/04/95	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	NS	NS	NS	NA	NA
02/06/95	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	NS	NS	NS	NA	NA
03/02/95	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	NS	NS	NS	NA	NA
04/04/95	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	NS	NS	NS	NA	NA
05/02/95	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	NS	NS	NS	NA	NA
06/05/95	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	NS	NS	NS	NA	NA
07/06/95	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	NS	NS	NS	NA	NA
08/21/95	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	NS	NS	NS	NA	NA
06/05/00	ND<50.0	ND<0.500	ND<0.500	ND<0.500	ND<0.500	ND<2.50	NS	NS	7.19	NA
06/12/00	ND<50.0	NS	NS	NS	NS	NS	NS	NS	NA	NA
07/08/00	ND<50.0	ND<0.500	ND<0.500	ND<0.500	ND<0.500	ND<2.50	32.1	ND<10.0	7.08	NA

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Date Sampled	TPH-g ( $\mu\text{g}/\text{L}$ )	Benzene ( $\mu\text{g}/\text{L}$ )	Toluene ( $\mu\text{g}/\text{L}$ )	Ethyl-benzene ( $\mu\text{g}/\text{L}$ )	Xylenes ( $\mu\text{g}/\text{L}$ )	MtBE ( $\mu\text{g}/\text{L}$ )	COD ( $\text{mg}/\text{L}$ )	TSS ( $\text{mg}/\text{L}$ )	pH (units)	DO ( $\text{mg}/\text{L}$ )
<b>EFFL (effluent to sewer) (cont.)</b>										
08/10/00	ND<50.0	ND<0.500	ND<0.500	ND<0.500	ND<0.500	ND<5.00	23.4	ND<10.0	6.67	NA
09/08/00	ND<50.0	ND<0.500	ND<0.500	ND<0.500	ND<0.500	ND<2.50	29.2	ND<10.0	6.82	NA
10/10/00	ND<50.0	ND<0.500	ND<0.500	ND<0.500	ND<0.500	ND<2.50	ND<20.0	ND<10.0	7.25	NA
11/07/00	ND<50.0	ND<0.500	ND<0.500	ND<0.500	ND<0.500	ND<2.50	ND<20.0	ND<10.0	7.24	NA
12/05/00	ND<50.0	ND<0.500	ND<0.500	ND<0.500	ND<0.500	ND<2.50	44.0	ND<10.0	7.48	NA
01/04/01	ND<50.0	ND<0.500	ND<0.500	ND<0.500	ND<0.500	ND<2.50	ND<20.0	ND<10.0	7.00	NA
02/06/01	ND<50.0	ND<0.500	ND<0.500	ND<0.500	ND<0.500	ND<2.50	ND<20.0	10.7	7.03	NA
03/08/01	ND<50.0	ND<0.500	ND<0.500	ND<0.500	ND<0.500	ND<2.50	ND<20.0	ND<10.0	7.04	NA
04/18/01	ND<50.0	ND<0.500	ND<0.500	ND<0.500	ND<0.500	ND<2.50	28.5	ND<10.0	7.06	NA
05/04/01	ND<50.0	ND<0.500	ND<0.500	ND<0.500	ND<0.500	ND<2.50	ND<20.0	ND<10.0	7.31	NA
06/09/01	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<2.5	34	ND<10	7.05	NA
07/05/01	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<2.5	ND<20	ND<10	7.10	NA
08/14/01	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<2.5	ND<20	14	7.09	NA
09/05/01	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<2.5	70	ND<10	7.07	NA
10/05/01	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<2.5	55	ND<10	6.89	NA
11/13/01	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<2.5	150	ND<10	6.98	NA
12/11/01	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<2.5	34	ND<10	7.01	NA
01/04/02	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<2.5	52	ND<10	7.22	NA
02/05/02	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<2.5	ND<20	ND<10	6.91	NA
03/05/02	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<2.5	ND<20	ND<10	6.77	NA
04/08/02	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<2.5	ND<20	ND<10	6.52	NA
05/16/02	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<2.5	ND<20	ND<10	6.60	NA
10/07/02	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<2.5	NS	NS	NA	NA
11/07/02	ND<50	ND<0.50	ND<0.50	ND<0.50	0.74	ND<2.5	ND<30	ND<10	7.80	NA
12/05/02	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<2.0	ND<30	ND<10	7.40	0.27
01/03/03	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<2.5	ND<30	ND<10	7.50	NA
2/13/03*	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<30	ND<10	7.15	0.12
3/27/03*	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	32	ND<10	7.5	0.08
4/24/03*	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<30	ND<10	6.95	10.23
5/30/03*	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<30	ND<10	6.95	NA
06/19/03	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<2.5	ND<20	ND<10	7.02	9.75

TPH-g =Total purgeable petroleum hydrocarbons as gasoline, analyzed using EPA Method 8015B/8021B

MtBE =Methyl tert Butyl Ether, analyzed using EPA Method 8015B/8021B

COD =Chemical oxygen demand, analyzed using EPA Method 410.4

TSS =Total suspended solids, analyzed using EPA Method 160.2

DO =Dissolved Oxygen, field measurement

$\mu\text{g}/\text{L}$  =Micrograms per liter

$\text{mg}/\text{L}$  =Milligrams per liter

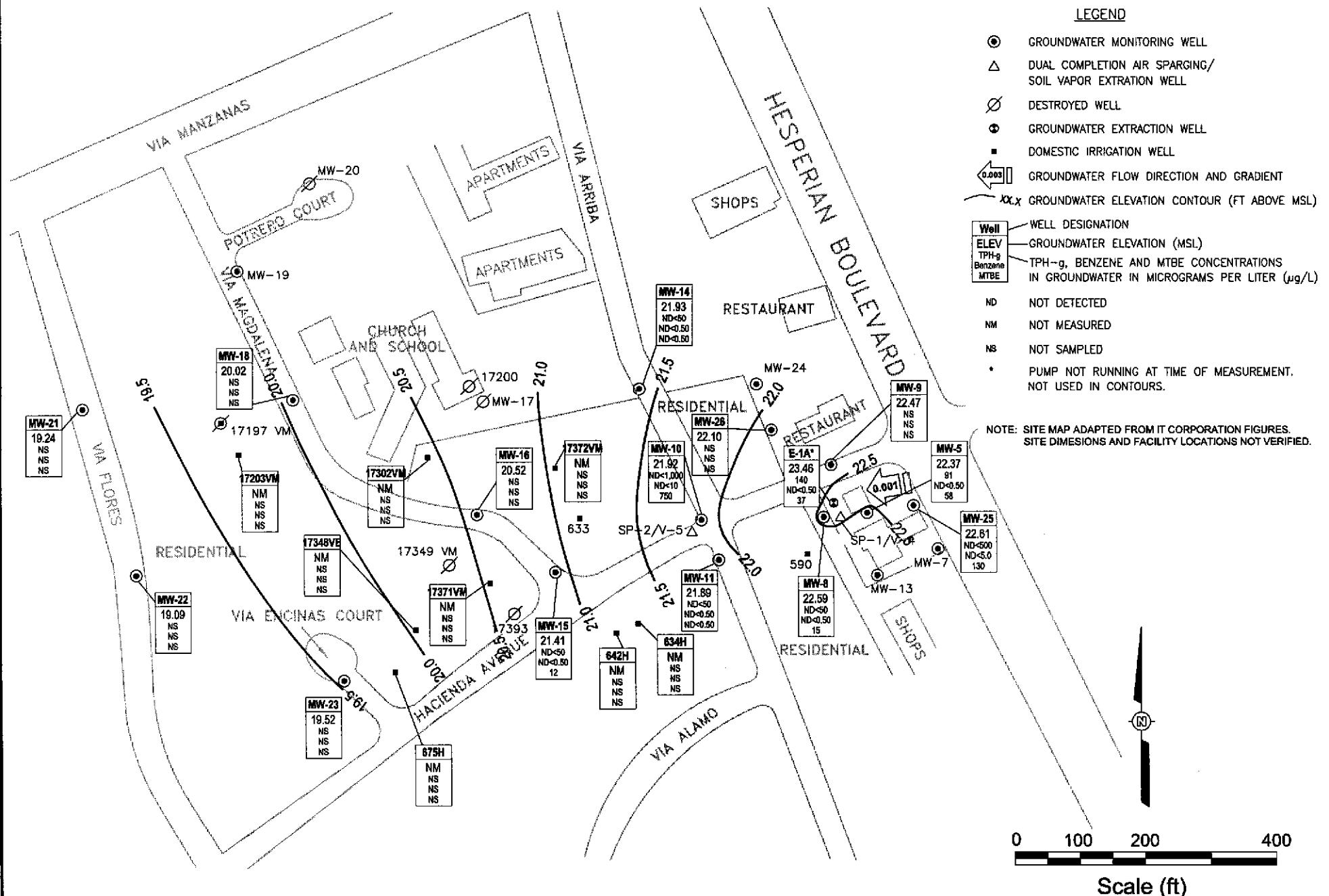
ND< =Denotes minimum laboratory reporting limit.

NA =Not applicable or not available

NS =Not sampled

\* =Analyzed with EPA Method 8260

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

**URS**

Project No. 38486167

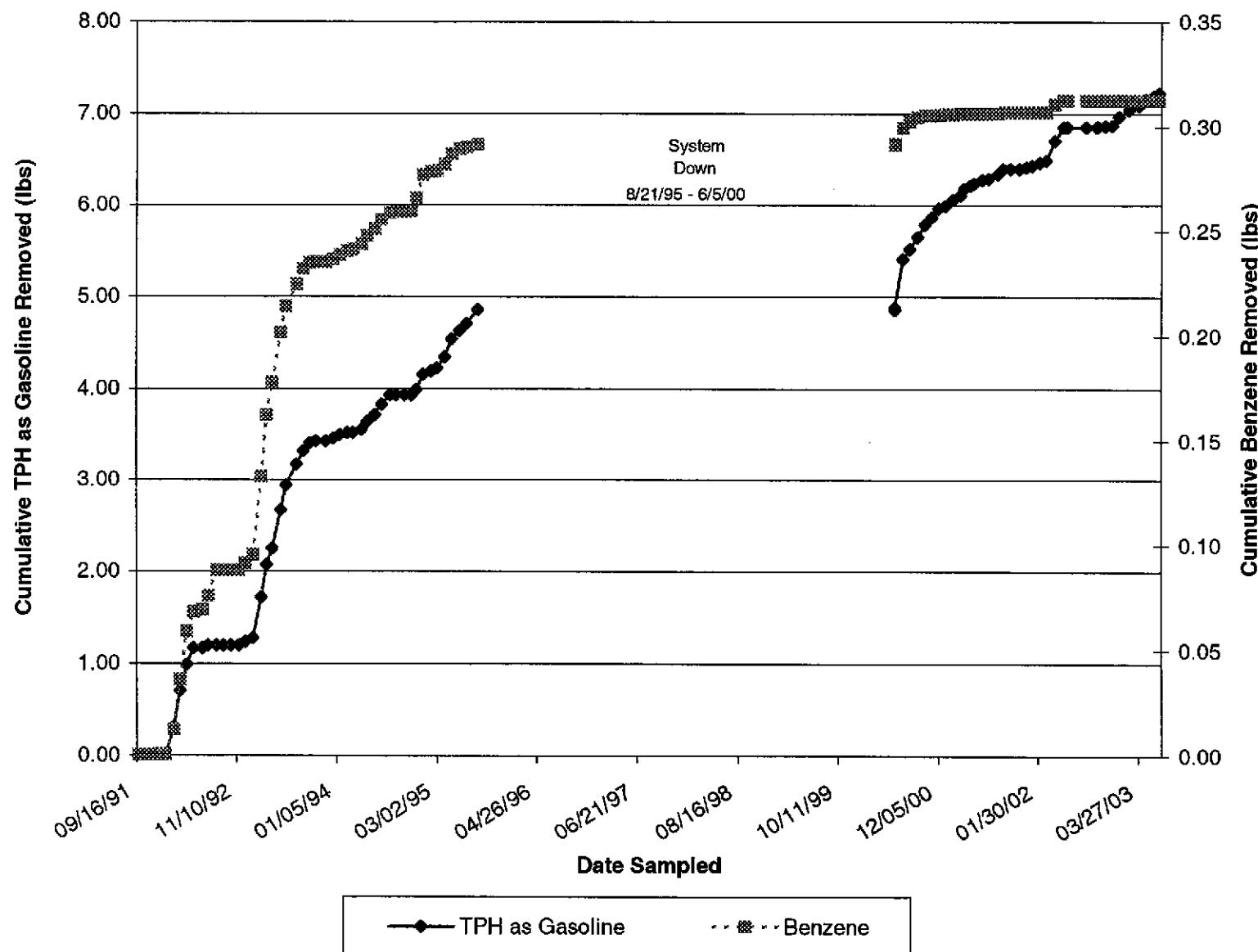
Arco Service Station #0608  
17601 Hesperian Boulevard  
San Lorenzo, California

Groundwater Elevation Contour and  
Analytical Summary Map  
Second Quarter 2003 (June 30, 2003)

FIGURE  
1

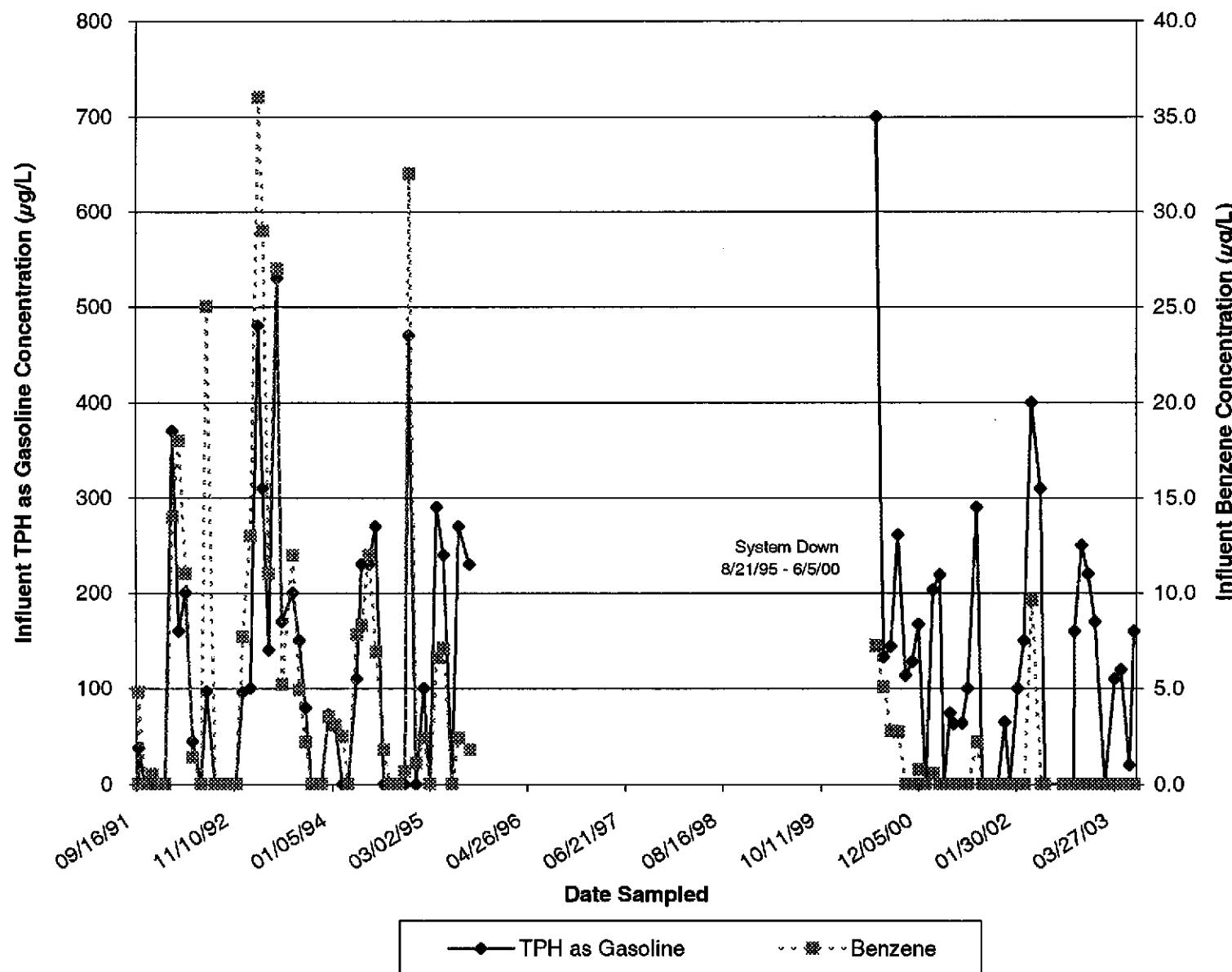
**Figure 2**  
Groundwater Extraction System Mass Removal Trend  
TPH-g and Benzene

ARCO Service Station #0608  
17601 Hesperian Boulevard at Hacienda Avenue  
San Lorenzo, California



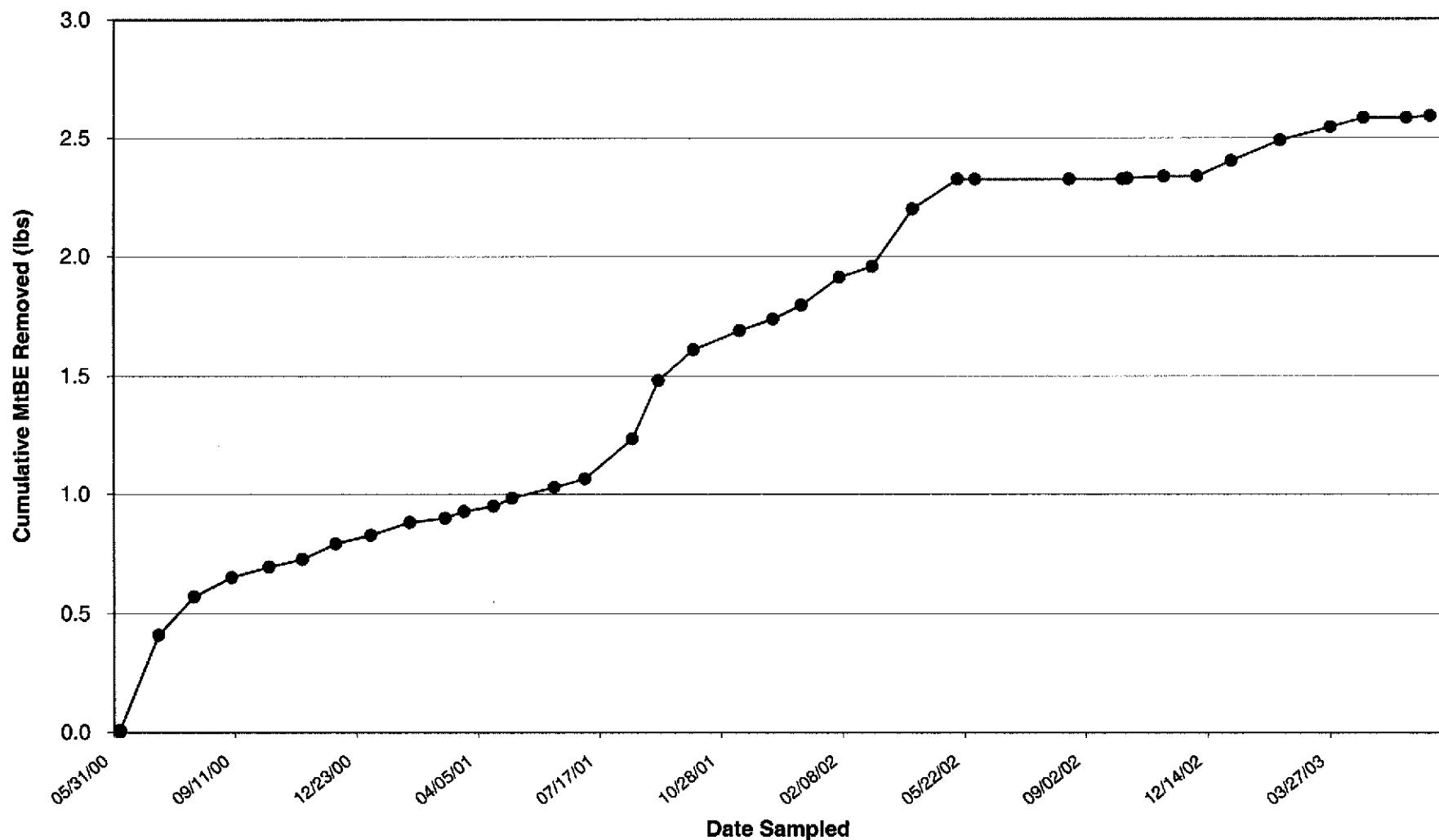
**Figure 3**  
**Groundwater Extraction System Concentration Trend**  
**TPH-g and Benzene**

ARCO Service Station #0608  
 17601 Hesperian Boulevard at Hacienda Avenue  
 San Lorenzo, California



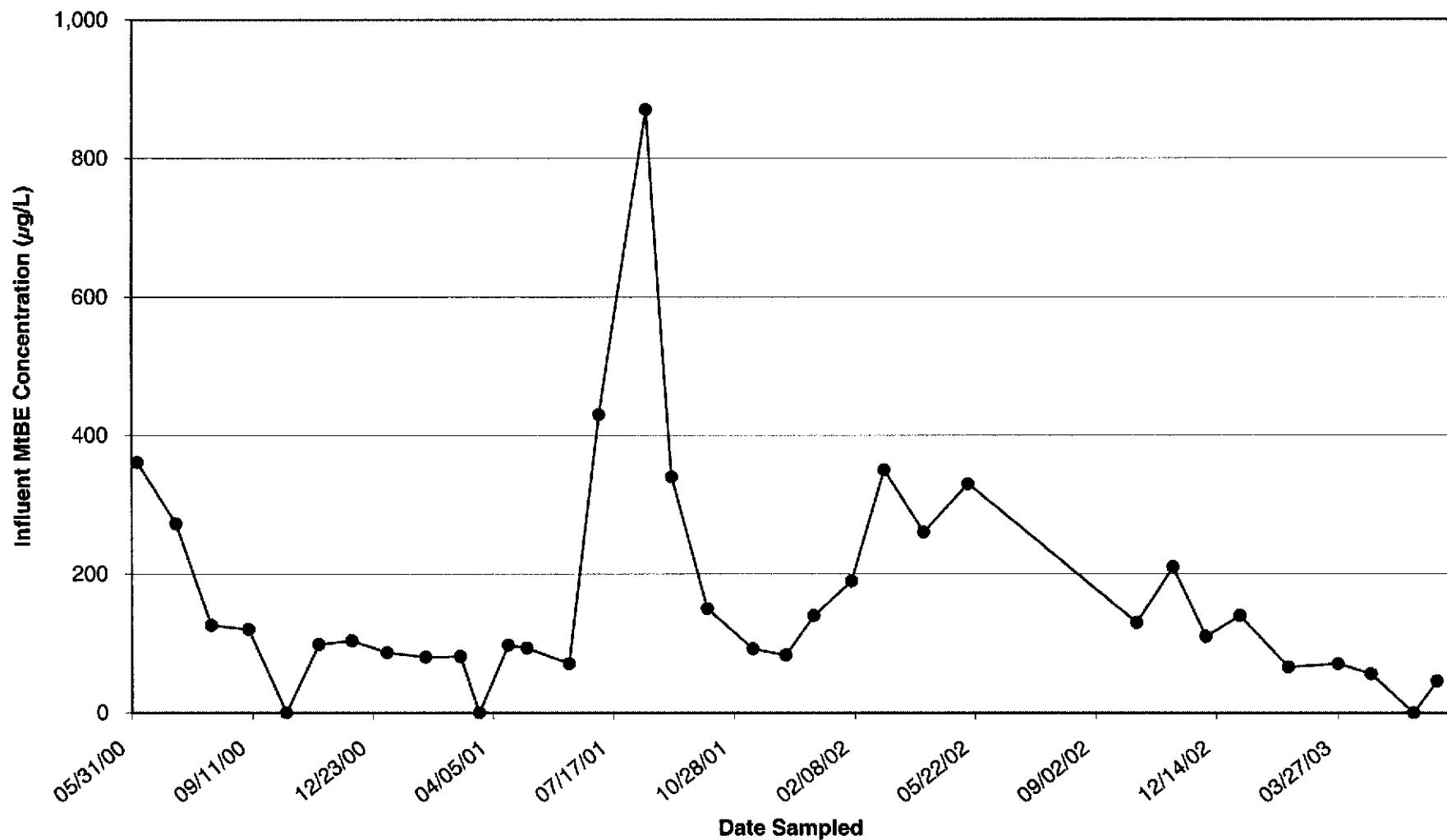
**Figure 4**  
**Groundwater Extraction System Mass Removal Trend**  
**MtBE**

ARCO Service Station #0608  
17601 Hesperian Boulevard at Hacienda Avenue  
San Lorenzo, California



**Figure 5**  
Groundwater Extraction System Concentration Trend  
MtBE

ARCO Service Station #0608  
17601 Hesperian Boulevard at Hacienda Avenue  
San Lorenzo, California



**ATTACHMENT A**

**FIELD PROCEDURES AND FIELD DATA SHEETS**

## **FIELD PROCEDURES**

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### **Sampling Procedures**

The sampling procedure for each well consists first of measuring the water level and depth to bottom, and checking for the presence of free phase petroleum product (free product), using either an electronic indicator and a clear Teflon™ bailer or an oil-water interface probe.

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

## WELL GAUGING DATA

Project # 03NG30-551 Date 6/30/03 Client Area # D608Site 17601 HESPERIAN BLVD. AN LORENZO

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: TQB or TOC	
MW-5	4					11.62	13.65		
MW-8	3					10.20	20.45		
MW-9	3					9.64	18.30		GO
MW-10	3					9.75	22.45		
MW-11	3					10.65	18.74		
E-1A	6	PUMP NOT RUNNING.				9.60	—		
MW-14	3					9.05	23.00		GO
MW-15	3					10.00	23.21		
MW-16	3					10.87	23.10		GO
MW-18	3					9.68	21.55		GO
MW-21	3					9.48	21.60		GO
MW-22	3					10.20	21.50		GO
MW-23	3					11.47	21.70		GO
MW-25	2					11.20	18.50		
MW-26	2					11.61	19.45	✓	GO
<del>16211</del>									
<del>14211</del>									

# ARCO / BP WELL MONITORING DATA SHEET

BTS #:	030630-SS1	Station #	0608
Sampler:	SOCUT	Date:	6/30/03
Well I.D.:	MW-5	Well Diameter:	2 3 (4) 6 8
Total Well Depth:	13.65	Depth to Water:	11.62
Depth to Free Product:		Thickness of Free Product (feet):	
Referenced to:	PVC	Grade	D.O. Meter (if req'd): YSI HACH

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

$$1.3 \text{ } \frac{\text{1 Case Volume (Gals.)}}{\text{X Specified Volumes}} = \frac{3}{3} \text{ Gals. Calculated Volume}$$

Time	Temp (°F)	pH	Conductivity (mS or µS)	Gals. Removed	Observations
1238	70.7	6.8	866	1.3	TURBID
1241	69.8	6.8	861	2.6	"
1244	69.9	6.8	868	4.0	LESS TURBID

Did well dewater? Yes  No  Gallons actually evacuated: 4

Sampling Time: 1246 Sampling Date: 6/30/03

Sample I.D.: MW-5 Laboratory: Pace Sequoia Other \_\_\_\_\_

Analyzed for: TPH-G BTEX MTBE TPH-D Other: OXY'S T-ETHANOL BY 826.0

D.O. (if req'd): Pre-purge: mg/L Post-purge: 1.6 mg/L

O.R.P. (if req'd): Pre-purge: mV Post-purge: mV

# ARCO / BP WELL MONITORING DATA SHEET

BTS #:	030630-SS1	Station #	0603
Sampler:	soot	Date:	6/30/03
Well I.D.:	MW-8	Well Diameter:	2 3 4 6 8
Total Well Depth:	20.95	Depth to Water:	10.20
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 <sup>2</sup> * 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	X	3	=	12	Gals.
1 Case Volume (Gals.)		Specified Volumes		Calculated Volume	

Time	Temp (°F)	pH	Conductivity (mS or µS)	Gals. Removed	Observations
1200	70.0	7.00	922	4	CLEAR
1304	69.2	7.00	912	8	"
1308	69.5	7.00	904	12	"

Did well dewater? Yes No Gallons actually evacuated: 12

Sampling Time: 1312 Sampling Date: 6/30/03

Sample I.D.: MW-8 Laboratory: Pace Sequoia Other \_\_\_\_\_

Analyzed for: TPH-G BTEX MTBE TPH-D Other: OXY'S T-ETHANOL BT & 300

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

# ARCO / BP WELL MONITORING DATA SHEET

BTS #:	030030-SS1	Station #	0608
Sampler:	SOCUT	Date:	6/30/03
Well I.D.:	MW-10	Well Diameter:	2 (3) 4 6 8
Total Well Depth:	22.45	Depth to Water:	9.75
Depth to Free Product:		Thickness of Free Product (feet):	
Referenced to:	PVC	Grade	D.O. Meter (if req'd): YSI HACH

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

Purge Method:  Baile  Sampling Method:  Baile  
 Disposable Baile   Disposable Baile  
 Middleburg  Extraction Port  
 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.  
Pump @ 2.5 gpm

$$\frac{5}{1 \text{ Case Volume (Gals.)}} \times \frac{3}{\text{Specified Volumes}} = \frac{15}{\text{Calculated Volume}} \text{ Gals.}$$

Time	Temp (°F)	pH	Conductivity (mS or µS)	Gals. Removed	Observations
1322	68.9	6.9	846	5	MILD GAS odor / clear
1324	68.7	6.9	836	10	clear
1326	68.5	6.9	834	15	"

Did well dewater? Yes  No Gallons actually evacuated: 15

Sampling Time: 1330 Sampling Date: 6/30/03

Sample I.D.: MW-10 Laboratory: Pace  Sequoia Other \_\_\_\_\_

Analyzed for: TPH-G BTEX MTBE TPH-D Other: OXY'S T-ENHANCE OF 5260

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

# ARCO / BP WELL MONITORING DATA SHEET

BTS #:	030630-SS1	Station #	0603
Sampler:	soot	Date:	6/30/03
Well I.D.:	MW-11	Well Diameter:	2 3 4 6 8
Total Well Depth:	18.74	Depth to Water:	10.65
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 <sup>2</sup> * 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.

$$\frac{3}{\text{1 Case Volume (Gals.)}} \times \frac{3}{\text{Specified Volumes}} = \frac{9}{\text{Calculated Volume}} \text{ Gals.}$$

Time	Temp (°F)	pH	Conductivity (mS or µS)	Gals. Removed	Observations
1055	66.4	7.5	973	3	cloudy
1059	67.8	7.4	973	6	"
1103	67.9	7.4	968	9	"

Did well dewater? Yes  No Gallons actually evacuated: 9

Sampling Time: 1107 Sampling Date: 6/30/03

Sample I.D.: MW-11 Laboratory: Pace Sequoia Other \_\_\_\_\_

Analyzed for: TPH-G BTEX MTBE TPH-D Other: OXY'S T-ETHANOL 8/826.0

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

**ARCO / BP WELL MONITORING DATA SHEET**

BTS #:	030630-SS1	Station #	0603
Sampler:	soocit	Date:	6/30/03
Well I.D.:	E-1A	Well Diameter:	2 3 4 <u>6</u> 8
Total Well Depth:	24.55	Depth to Water:	9.60
Depth to Free Product:		Thickness of Free Product (feet):	
Referenced to:	PVC	Grade	D.O. Meter (if req'd): YSI HACH

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

80% = 12.59

Purge Method: Bailer  
 Disposable Bailer  
 Middleburg  
Electric Submersible  
 Extraction Pump  
 Other: \_\_\_\_\_

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

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

<u>22</u>	X	<u>3</u>	=	<u>66</u>	Gals.
1 Case Volume (Gals.)		Specified Volumes		Calculated Volume	

Time	Temp (°F)	pH	Conductivity (mS or µS)	Gals. Removed	Observations
1210	106.0	7.3	997	22	Brown / HOT WATER
1214	water temperature e 24	gal.			DTW = 21.10
1230	100.0	7.2	976	—	MBD DTW = 12.00

Did well dewater? Yes No Gallons actually evacuated: 24

Sampling Time: 1230 Sampling Date: 6/30/03

Sample I.D.: E-1A Laboratory: Pace Sequoia Other \_\_\_\_\_

Analyzed for: TPH-G BTEX MTBE TPH-D Other: OXY'S + ETHANOL 843260

D.O. (if req'd): Pre-purge: mg/L Post-purge: 2.2 mg/L

O.R.P. (if req'd): Pre-purge: mV Post-purge: mV

## ARCO / BP WELL MONITORING DATA SHEET

BTS #:	030630-SSI	Station #	0608
Sampler:	SOCUT	Date:	6/30/03
Well I.D.:	MW-15	Well Diameter:	2 3 4 6 8
Total Well Depth:	23.21	Depth to Water:	10.00
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 <sup>2</sup> * 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.

$$\frac{5}{1 \text{ Case Volume (Gals.)}} \times \frac{3}{\text{Specified Volumes}} = \frac{15}{\text{Calculated Volume}} \text{ Gals.}$$

Time	Temp (°F)	pH	Conductivity (mS or µS)	Gals. Removed	Observations
1021	65.9	6.5	969	5	Brown / cloudy
1031	65.0	6.6	927	10	" "
1035	65.2	6.6	926	15	ALMOST CLEAR

Did well dewater? Yes  No Gallons actually evacuated: 15

Sampling Time: 1040 Sampling Date: 6/30/03

Sample I.D.: MW-15 Laboratory: Pace  Sequoia Other \_\_\_\_\_

Analyzed for: TPH-G BTEX MTBE TPH-D Other: OXY'S + ETHANOL BT 5260

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

**ARCO / BP WELL MONITORING DATA SHEET**

BTS #:	030630-551	Station #	0608
Sampler:	soot	Date:	6/30/03
Well I.D.:	MW-25	Well Diameter:	(2) 3 4 6 8
Total Well Depth:	18.50	Depth to Water:	16.20
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 <sup>2</sup> * 0.163

Purge Method:  Boiler  Disposable Baile  Middleburg  Electric Submersible  Extraction Pump  
 Other: \_\_\_\_\_

Sampling Method:  Baile  Disposable Baile  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.

1.2	X	3	=	3.6	Gals.
1 Case Volume (Gals.)		Specified Volumes		Calculated Volume	

Time	Temp (°F)	pH	Conductivity (mS or µS)	Gals. Removed	Observations
1121	67.2	7.0	955	1.2	TPBID
1123	66.5	6.9	953	2.4	"
1125	66.5	6.9	956	3.6	"

Did well dewater? Yes  No  Gallons actually evacuated: 3.6

Sampling Time: 1127 Sampling Date: 6/30/03

Sample I.D.: MW-25 Laboratory: Pace  Sequoia  Other \_\_\_\_\_

Analyzed for:  TPH-G  BTEX  MTBE  TPH-D Other: OXY'S TENTHOR 81526.0

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

# ARCO / BP WELL MONITORING DATA SHEET

BTS #:	030630-SS1		Station #	0603				
Sampler:	Soilpit		Date:	6/30/03				
Well I.D.:	634H		Well Diameter:	2	3	4	6	8
Total Well Depth:			Depth to Water:					
Depth to Free Product:			Thickness of Free Product (feet):					
Referenced to:	PVC	Grade	D.O. Meter (if req'd):	YSI	HACH			

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

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

Time	Temp (°F)	pH	Conductivity (mS or µS)	Gals. Removed	Observations
					NO ONE HOME, UNABLE TO SAMPLE

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

Sampling Time: \_\_\_\_\_ Sampling Date:  6/30/03

Sample I.D.: \_\_\_\_\_ Laboratory:  Paco  Sequoia  Other \_\_\_\_\_

Analyzed for:  TPH-G  BTEX  MTBE  TPH-D  Other: OXY'S T-ETHANOL BT 5260

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

# ARCO / BP WELL MONITORING DATA SHEET

BTS #: 030630-SS1	Station # 0603	
Sampler: Socut	Date: 6/30/03	
Well I.D.: 6424	Well Diameter: 2 3 4 6 8	
Total Well Depth:	Depth to Water:	
Depth to Free Product:	Thickness of Free Product (feet):	
Referenced to:	PVC Grade	D.O. Meter (if req'd): YSI HACH

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

Purge Method: Bailer  
 Disposable Bailer  
 Middleburg  
 Electric Submersible  
 Extraction Pump  
 Other: \_\_\_\_\_

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

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

1 Case Volume (Gals.)	$\times$	3	=	Gals.
Specified Volumes				Calculated Volume

Time	Temp (°F)	pH	Conductivity (mS or µS)	Gals. Removed	Observations
	NO ONE HOME.	UNABLE TO SAMPLE.			

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

Sampling Time: \_\_\_\_\_ Sampling Date: 6/30/03

Sample I.D.: \_\_\_\_\_ Laboratory: Pac Sequoia Other: \_\_\_\_\_

Analyzed for: TPH-G BTEX MTBE TPH-D Other: OXY'S T-ETHANOL 615260

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

O.R.P. (if req'd): Pre-purge: mV Post-purge: mV

# ARCO / BP WELL MONITORING DATA SHEET

BTS #:	030630-SS1	Station #	0608
Sampler:	SOLOIT	Date:	6/30/03
Well I.D.:	675H	Well Diameter:	2 3 4 6 8
Total Well Depth:		Depth to Water:	
Depth to Free Product:		Thickness of Free Product (feet):	
Referenced to:	PVC	Grade	D.O. Meter (if req'd): YSI HACH

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

$$\frac{1 \text{ Case Volume (Gals.)}}{\text{Specified Volumes}} \times \frac{3}{\text{Calculated Volume}} = \text{Gals.}$$

Time	Temp (°F)	pH	Conductivity (mS or µS)	Gals. Removed	Observations
					NO ONE HOME. UNABLE TO SAMPLE.

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

Sampling Time: \_\_\_\_\_ Sampling Date: 6/30/03 /

Sample I.D.: \_\_\_\_\_ Laboratory: Pace Sequoia Other: \_\_\_\_\_

Analyzed for: TPH-G BTEX MTBE TPH-D Other: OXY'S T-ENTANOL BT-5260

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

# ARCO / BP WELL MONITORING DATA SHEET

BTS #:	030630-SS1		Station #	0003						
Sampler:	soocit		Date:	6/30/03						
Well I.D.:	17197 VM		Well Diameter:	2	3	4	6	8		
Total Well Depth:			Depth to Water:							
Depth to Free Product:			Thickness of Free Product (feet):							
Referenced to:	PVC	Grade	D.O. Meter (if req'd):	YSI	HACH					

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

Purge Method:  Bailer  
 Disposable Bailer  
 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.

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

Time	Temp (°F)	pH	Conductivity (mS or µS)	Gals. Removed	Observations

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

Sampling Time: \_\_\_\_\_ Sampling Date: 6/30/03

Sample I.D.: \_\_\_\_\_ Laboratory: Pace Sequoia Other \_\_\_\_\_

Analyzed for:  TPH-G  BTEX  MTBE  TPH-D Other: OXY'S TETHANOL BT 5260

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

# ARCO / BP WELL MONITORING DATA SHEET

BTS #:	030630-551		Station #	0608					
Sampler:	soilstt		Date:	6/30/03					
Well I.D.:	17203 VM		Well Diameter:	2	3	4	6	8	
Total Well Depth:			Depth to Water:						
Depth to Free Product:			Thickness of Free Product (feet):						
Referenced to:	PVC	Grade	D.O. Meter (if req'd):	YSI	HACH				

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

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

Time	Temp (°F)	pH	Conductivity (mS or µS)	Gals. Removed	Observations
	DENIED	ACCESS	.		

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

Sampling Time: \_\_\_\_\_      Sampling Date: 6/30/03

Sample I.D.: \_\_\_\_\_      Laboratory: Pace    Sequoia    Other: \_\_\_\_\_

Analyzed for: TPH-G    BTEX    MTBE    TPH-D    Other: OXY'S TENTATOR BY 8260

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

**ARCO / BP WELL MONITORING DATA SHEET**

BTS #:	030030-SS1	Station #	0608
Sampler:	sooth	Date:	6/30/03
Well I.D.:	17302 VM	Well Diameter:	2 3 4 6 8
Total Well Depth:		Depth to Water:	
Depth to Free Product:		Thickness of Free Product (feet):	
Referenced to:	PVC	Grade	D.O. Meter (if req'd): YSI HACH

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

$$1 \text{ Case Volume (Gals.)} \times 3 = \text{Calculated Volume Gals.}$$

Time	Temp (°F)	pH	Conductivity (mS or µS)	Gals. Removed	Observations
					No one home. pump not functioning per scope.

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

Sampling Time: \_\_\_\_\_ Sampling Date: 6/30/03

Sample I.D.: \_\_\_\_\_ Laboratory: Pace Sequoia Other \_\_\_\_\_

Analyzed for: TPH-G BTEX MTBE TPH-D Other: OXY'S TENTHANOL 815260

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

O.R.P. (if req'd): Pre-purge: mV Post-purge: mV

# ARCO / BP WELL MONITORING DATA SHEET

BTS #:	030030-SS1		Station #	0608						
Sampler:	soocit		Date:	6/30/03						
Well I.D.:	17349VM		Well Diameter:	2	3	4	6	8	_____	
Total Well Depth:			Depth to Water:							
Depth to Free Product:			Thickness of Free Product (feet):							
Referenced to:	PVC	Grade	D.O. Meter (if req'd):	YSI	HACH					

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

Purge Method:  
 Bailer  
 Disposable Bailer  
 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.

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

Time	Temp (°F)	pH	Conductivity (mS or µS)	Gals. Removed	Observations

Did well dewater? Yes No Gallons actually evacuated:

Sampling Time: \_\_\_\_\_ Sampling Date: 6/30/03

Sample I.D.: Laboratory: Pace Sequoia Other \_\_\_\_\_

Analyzed for: TPH-G BTEX MTBE TPH-D Other: OXY'S T-ETHANOL 818260

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

# ARCO / BP WELL MONITORING DATA SHEET

BTS #:	030630-SS1		Station #	0608					
Sampler:	Stock		Date:	6/30/03					
Well I.D.:	(737) VM		Well Diameter:	2	3	4	6	8	
Total Well Depth:			Depth to Water:						
Depth to Free Product:			Thickness of Free Product (feet):						
Referenced to:	PVC	Grade	D.O. Meter (if req'd):	YSI	HACH				

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

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

Time	Temp (°F)	pH	Conductivity (mS or µS)	Gals. Removed	Observations
					NO ONE HOME. PUMP NOT FUNCTIONING per scope.

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

Sampling Time: \_\_\_\_\_ Sampling Date: 6/30/03

Sample I.D.: \_\_\_\_\_ Laboratory: Pace Sequoia Other \_\_\_\_\_

Analyzed for: TPH-G BTEX MTBE TPH-D Other: OXY'S + ETHANOL BT 3260

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

O.R.P. (if req'd):	Pre-purge:	mV	Post-purge:	mV
--------------------	------------	----	-------------	----

# ARCO / BP WELL MONITORING DATA SHEET

BTS #: <i>85 0306030-030630-551</i>	Station # <i>0608</i>		
Sampler: <i>soot</i>	Date: <i>6/30/03</i>		
Well I.D.: <i>17372VM</i>	Well Diameter: 2    3    4    6    8		
Total Well Depth:	Depth to Water:		
Depth to Free Product:	Thickness of Free Product (feet):		
Referenced to: PVC	Grade	D.O. Meter (if req'd): YSI	HACH

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

Purge Method: *Bailer*  
*Disposable Bailer*  
*Middleburg*  
*Electric Submersible*  
*Extraction Pump*  
*Other: \_\_\_\_\_*

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

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

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

Time	Temp (°F)	pH	Conductivity (mS or µS)	Gals. Removed	Observations
					<i>NO ONE HOME - UNABLE TO SAMPLE</i>

Did well dewater? Yes No Gallons actually evacuated:

Sampling Time: Sampling Date:

Sample I.D.: Laboratory: Pace Sequoia Other \_\_\_\_\_

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

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

**Blaine Tech Services, Inc. 1680 Rogers Ave., San Jose, CA 95112 (408) 573-0555**

# ARCO / BP WELL MONITORING DATA SHEET

BTS #:	030630-551		Station #	0608						
Sampler:	SD0014		Date:	6/30/03						
Well I.D.:	17348 VE		Well Diameter:	2	3	4	6	8	_____	
Total Well Depth:			Depth to Water:							
Depth to Free Product:			Thickness of Free Product (feet):							
Referenced to:	PVC	Grade	D.O. Meter (if req'd):	YSI	HACH					

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

Purge Method:  Bailer  Disposable Bailer  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.

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

Time	Temp (°F)	pH	Conductivity (mS or µS)	Gals. Removed	Observations
	DENIED	ACCESS . OWNERS	NOT HOME		

Did well dewater? Yes  No  Gallons actually evacuated:

Sampling Time: \_\_\_\_\_ Sampling Date: 6/30/03

Sample I.D.: \_\_\_\_\_ Laboratory: Pace Sequoja Other \_\_\_\_\_

Analyzed for:  TPH-G  BTEX  MTBE  TPH-D Other: OXY'S + ETHANOL BT 8260

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



## Chain of Custody Record

Project Name ARCO 0608  
 BP BU/GEM CO Portfolio:  
 BP Laboratory Contract Number:

Date: 6/30/03Requested Due Date (mm/dd/yy) Standard

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

Send To:			BP/GEM Facility No.:			Consultant/Contractor: URS						
ab Name: SEQUOIA			BP/GEM Facility Address: 17601 HESPERIAN BL, SAN LORENZO, CA			Address: 500 12th St., Ste. 200						
ab Address: 885 Jarvis Dr. Morgan Hill, CA 95037			Site ID No. ARCO 608			Oakland, CA 94609-4014						
			Site Lat/Long:			e-mail EDD: syed_rehan@urscorp.com						
			California Global ID #:			Consultant/Contractor Project No.: J5-00000608.01 00427						
ab PM: Latonya Pelt			BP/GEM PM Contact: PAUL SUPPLE			Consultant Tele/Fax: 510-874-1735/510-874-3268						
ele/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)						
P/GEM Account No.:						BP/GEM Work Release No: INTRIM -50715						
ab Bottle Order No:			Matrix						Sample Point Lat/Long and Comments			
Item No.	Sample Description	Time	Soil/Solid	Water/Liquid	Sediments	Laboratory No.	No. of containers	Preservatives	Requested Analysis			
								H <sub>2</sub> SO <sub>4</sub> Unpreserved	HNO <sub>3</sub>	HCl		
1	MW-5	1246	X				3		X	X		
2	MW-8	1312	X				1		X	X		
3	MW-10	1330	X				1		X	X		
4	MW-11	1107	X				1		X	X		
5	E-1A	1230	X				1		X	X		
6	MW-15	1040	X				1		X	X		
7	MW-25	1127	X				1		X	X		
8												
9												
10												

ampler's Name: <u>SUNGJUN SUNG</u>	Relinquished By / Affiliation	Date	Time	Accepted By / Affiliation	Date	Time	
ampler's Company: <u>BLAINE TECH</u>	<u>BSB</u>						
hipment Date:							
hipment Method:							
hipment 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:

0608

Station #

17601 HESPERIAN BLVD. SAN LORENZO

Station Address

Total Gallons Collected From Groundwater Monitoring Wells:

added equip.  
rinse water \_\_\_\_\_

any other  
adjustments \_\_\_\_\_

TOTAL GALS.  
RECOVERED 83

loaded onto  
BTS vehicle # \_\_\_\_\_

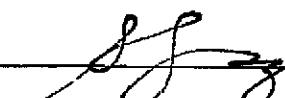
BTS event #

time date

630630-551

1430 6/20/03

signature



\*\*\*\*\*  
REC'D AT

time date

unloaded by  
signature

1/1/1

**ATTACHMENT B**

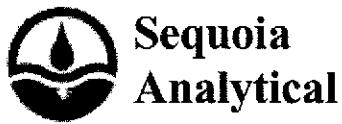
**LABORATORY PROCEDURES,  
CERTIFIED ANALYTICAL REPORTS,  
AND CHAIN-OF-CUSTODY RECORDS**

## **LABORATORY PROCEDURES**

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### **Laboratory Procedures**

The groundwater samples were analyzed for the presence of the chemicals 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.



885 Jarvis Drive  
Morgan Hill, CA 95037  
(408) 766-9600  
FAX (408) 782-6308  
[www.sequoialabs.com](http://www.sequoialabs.com)

---

22 July, 2003

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

RE: ARCO #608, San Lorenzo, CA  
Work Order: MMG0039

Enclosed are the results of analyses for samples received by the laboratory on 07/01/03 11:12. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink that appears to read "Theresa Allen".

Theresa Allen  
Project Manager

CA ELAP Certificate #1210



885 Jarvis Drive  
Morgan Hill, CA 95037  
(408) 766-9600  
FAX (408) 782-6308  
[www.sequoialabs.com](http://www.sequoialabs.com)

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

Project: ARCO #608, San Lorenzo, CA  
Project Number: INTRIM - 50715  
Project Manager: Scott Robinson

MMG0039  
Reported:  
07/22/03 09:03

#### ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
MW-5	MMG0039-01	Water	06/30/03 12:46	07/01/03 11:12
MW-8	MMG0039-02	Water	06/30/03 13:12	07/01/03 11:12
MW-10	MMG0039-03	Water	06/30/03 13:30	07/01/03 11:12
MW-11	MMG0039-04	Water	06/30/03 11:07	07/01/03 11:12
E-1A	MMG0039-05	Water	06/30/03 12:30	07/01/03 11:12
MW-15	MMG0039-06	Water	06/30/03 10:40	07/01/03 11:12
MW-25	MMG0039-07	Water	06/30/03 11:27	07/01/03 11:12

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

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

Project: ARCO #608, San Lorenzo, CA  
 Project Number: INTRIM - 50715  
 Project Manager: Scott Robinson

MMG0039  
 Reported:  
 07/22/03 09:03

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

Analyte	Result	Reporting						Method	Notes
		Limit	Units	Dilution	Batch	Prepared	Analyzed		
<b>MW-5 (MMG0039-01) Water   Sampled: 06/30/03 12:46   Received: 07/01/03 11:12</b>									
Ethanol	ND	100	ug/l	1	3G09009	07/09/03	07/09/03	EPA 8260B	
tert-Butyl alcohol	22	20	"	"	"	"	"	"	"
Methyl tert-butyl ether	58	0.50	"	"	"	"	"	"	"
Di-isopropyl ether	ND	0.50	"	"	"	"	"	"	"
Ethyl tert-butyl ether	ND	0.50	"	"	"	"	"	"	"
tert-Amyl methyl ether	2.1	0.50	"	"	"	"	"	"	"
1,2-Dichloroethane	ND	0.50	"	"	"	"	"	"	"
1,2-Dibromoethane (EDB)	ND	0.50	"	"	"	"	"	"	"
Benzene	ND	0.50	"	"	"	"	"	"	"
Toluene	ND	0.50	"	"	"	"	"	"	"
Ethylbenzene	ND	0.50	"	"	"	"	"	"	"
Xylenes (total)	ND	0.50	"	"	"	"	"	"	"
<b>Gasoline Range Organics (C6-C10)</b>	<b>91</b>	<b>50</b>	<b>"</b>	<b>"</b>	<b>"</b>	<b>"</b>	<b>"</b>	<b>"</b>	<b>"</b>
<i>Surrogate: 1,2-Dichloroethane-d4</i>		98.2 %	78-129	"	"	"	"	"	"
<b>MW-8 (MMG0039-02) Water   Sampled: 06/30/03 13:12   Received: 07/01/03 11:12</b>									
Ethanol	ND	100	ug/l	1	3G10010	07/10/03	07/10/03	EPA 8260B	
tert-Butyl alcohol	ND	20	"	"	"	"	"	"	"
Methyl tert-butyl ether	15	0.50	"	"	"	"	"	"	"
Di-isopropyl ether	ND	0.50	"	"	"	"	"	"	"
Ethyl tert-butyl ether	ND	0.50	"	"	"	"	"	"	"
tert-Amyl methyl ether	0.85	0.50	"	"	"	"	"	"	"
1,2-Dichloroethane	ND	0.50	"	"	"	"	"	"	"
1,2-Dibromoethane (EDB)	ND	0.50	"	"	"	"	"	"	"
Benzene	ND	0.50	"	"	"	"	"	"	"
Toluene	ND	0.50	"	"	"	"	"	"	"
Ethylbenzene	ND	0.50	"	"	"	"	"	"	"
Xylenes (total)	ND	0.50	"	"	"	"	"	"	"
<b>Gasoline Range Organics (C6-C10)</b>	<b>ND</b>	<b>50</b>	<b>"</b>	<b>"</b>	<b>"</b>	<b>"</b>	<b>"</b>	<b>"</b>	<b>"</b>
<i>Surrogate: 1,2-Dichloroethane-d4</i>		99.2 %	78-129	"	"	"	"	"	"



885 Jarvis Drive  
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URS Corporation [Arco]  
500 12th Street, Suite 100  
Oakland CA, 94607

Project: ARCO #608, San Lorenzo, CA  
Project Number: INTRIM - 50715  
Project Manager: Scott Robinson

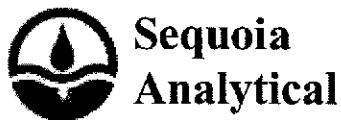
MMG0039  
Reported:  
07/22/03 09:03

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

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>MW-10 (MMG0039-03) Water Sampled: 06/30/03 13:30 Received: 07/01/03 11:12</b>									
Ethanol	ND	2000	ug/l	20	3G10010	07/10/03	07/10/03	EPA 8260B	
tert-Butyl alcohol	ND	400	"	"	"	"	"	"	"
Methyl tert-butyl ether	750	10	"	"	"	"	"	"	"
Di-isopropyl ether	ND	10	"	"	"	"	"	"	"
Ethyl tert-butyl ether	ND	10	"	"	"	"	"	"	"
tert-Amyl methyl ether	28	10	"	"	"	"	"	"	"
1,2-Dichloroethane	ND	10	"	"	"	"	"	"	"
1,2-Dibromoethane (EDB)	ND	10	"	"	"	"	"	"	"
Benzene	ND	10	"	"	"	"	"	"	"
Toluene	ND	10	"	"	"	"	"	"	"
Ethylbenzene	ND	10	"	"	"	"	"	"	"
Xylenes (total)	ND	10	"	"	"	"	"	"	"
Gasoline Range Organics (C6-C10)	ND	1000	"	"	"	"	"	"	"
<i>Surrogate: 1,2-Dichloroethane-d4</i>		104 %	78-129	"	"	"	"	"	"
<b>MW-11 (MMG0039-04) Water Sampled: 06/30/03 11:07 Received: 07/01/03 11:12</b>									
Ethanol	ND	100	ug/l	1	3G10010	07/10/03	07/10/03	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	"	"	"	"	"	"	"
1,2-Dibromoethane (EDB)	ND	0.50	"	"	"	"	"	"	"
Benzene	ND	0.50	"	"	"	"	"	"	"
Toluene	ND	0.50	"	"	"	"	"	"	"
Ethylbenzene	ND	0.50	"	"	"	"	"	"	"
Xylenes (total)	ND	0.50	"	"	"	"	"	"	"
Gasoline Range Organics (C6-C10)	ND	50	"	"	"	"	"	"	"
<i>Surrogate: 1,2-Dichloroethane-d4</i>		101 %	78-129	"	"	"	"	"	"

Sequoia Analytical - Morgan Hill

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



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

Project: ARCO #608, San Lorenzo, CA  
Project Number: INTRIM - 50715  
Project Manager: Scott Robinson

MMG0039  
Reported:  
07/22/03 09:03

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

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>E-1A (MMG0039-05) Water Sampled: 06/30/03 12:30 Received: 07/01/03 11:12</b>									
Ethanol	ND	100	ug/l	1	3G10010	07/10/03	07/10/03	EPA 8260B	"
tert-Butyl alcohol	ND	20	"	"	"	"	"	"	"
Methyl tert-butyl ether	37	0.50	"	"	"	"	"	"	"
Di-isopropyl ether	ND	0.50	"	"	"	"	"	"	"
Ethyl tert-butyl ether	ND	0.50	"	"	"	"	"	"	"
tert-Amyl methyl ether	1.6	0.50	"	"	"	"	"	"	"
1,2-Dichloroethane	ND	0.50	"	"	"	"	"	"	"
1,2-Dibromoethane (EDB)	ND	0.50	"	"	"	"	"	"	"
Benzene	ND	0.50	"	"	"	"	"	"	"
Toluene	ND	0.50	"	"	"	"	"	"	"
Ethylbenzene	ND	0.50	"	"	"	"	"	"	"
Xylenes (total)	ND	0.50	"	"	"	"	"	"	"
<b>Gasoline Range Organics (C6-C10)</b>	<b>140</b>	<b>50</b>	<b>"</b>	<b>"</b>	<b>"</b>	<b>"</b>	<b>"</b>	<b>"</b>	<b>"</b>
<i>Surrogate: 1,2-Dichloroethane-d4</i>		99.0 %		78-129	"	"	"	"	"
<b>MW-15 (MMG0039-06) Water Sampled: 06/30/03 10:40 Received: 07/01/03 11:12</b>									
Ethanol	ND	100	ug/l	1	3G10010	07/10/03	07/10/03	EPA 8260B	"
tert-Butyl alcohol	ND	20	"	"	"	"	"	"	"
Methyl tert-butyl ether	12	0.50	"	"	"	"	"	"	"
Di-isopropyl ether	ND	0.50	"	"	"	"	"	"	"
Ethyl tert-butyl ether	ND	0.50	"	"	"	"	"	"	"
tert-Amyl methyl ether	ND	0.50	"	"	"	"	"	"	"
1,2-Dichloroethane	ND	0.50	"	"	"	"	"	"	"
1,2-Dibromoethane (EDB)	ND	0.50	"	"	"	"	"	"	"
Benzene	ND	0.50	"	"	"	"	"	"	"
Toluene	ND	0.50	"	"	"	"	"	"	"
Ethylbenzene	ND	0.50	"	"	"	"	"	"	"
Xylenes (total)	ND	0.50	"	"	"	"	"	"	"
<b>Gasoline Range Organics (C6-C10)</b>	<b>ND</b>	<b>50</b>	<b>"</b>	<b>"</b>	<b>"</b>	<b>"</b>	<b>"</b>	<b>"</b>	<b>"</b>
<i>Surrogate: 1,2-Dichloroethane-d4</i>		101 %		78-129	"	"	"	"	"

Sequoia Analytical - Morgan Hill

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

Project: ARCO #608, San Lorenzo, CA  
 Project Number: INTRIM - 50715  
 Project Manager: Scott Robinson

MMG0039  
 Reported:  
 07/22/03 09:03

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

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
<b>MW-25 (MMG0039-07) Water   Sampled: 06/30/03 11:27   Received: 07/01/03 11:12</b>									
Ethanol	ND	1000	ug/l	10	3G10010	07/10/03	07/10/03	EPA 8260B	
tert-Butyl alcohol	ND	200	"	"	"	"	"	"	"
<b>Methyl tert-butyl ether</b>	<b>130</b>	5.0	"	"	"	"	"	"	"
Di-isopropyl ether	ND	5.0	"	"	"	"	"	"	"
Ethyl tert-butyl ether	ND	5.0	"	"	"	"	"	"	"
<b>tert-Amyl methyl ether</b>	<b>81</b>	5.0	"	"	"	"	"	"	"
1,2-Dichloroethane	ND	5.0	"	"	"	"	"	"	"
1,2-Dibromoethane (EDB)	ND	5.0	"	"	"	"	"	"	"
Benzene	ND	5.0	"	"	"	"	"	"	"
Toluene	ND	5.0	"	"	"	"	"	"	"
Ethylbenzene	ND	5.0	"	"	"	"	"	"	"
Xylenes (total)	ND	5.0	"	"	"	"	"	"	"
Gasoline Range Organics (C6-C10)	ND	500	"	"	"	"	"	"	"

Surrogate: 1,2-Dichloroethane-d4

98.6 %      78-129



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URS Corporation [Arco]  
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Oakland CA, 94607

Project: ARCO #608, San Lorenzo, CA  
Project Number: INTRIM - 50715  
Project Manager: Scott Robinson

MMG0039  
Reported:  
07/22/03 09:03

**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 3G09009 - EPA 5030B P/T**

Blank (3G09009-BLK1)		Prepared & Analyzed: 07/09/03					
Ethanol	ND	100	ug/l				
tert-Butyl alcohol	ND	20	"				
Methyl tert-butyl ether	ND	0.50	"				
Di-isopropyl ether	ND	0.50	"				
Ethyl tert-butyl ether	ND	0.50	"				
tert-Amyl methyl ether	ND	0.50	"				
1,2-Dichloroethane	ND	0.50	"				
1,2-Dibromoethane (EDB)	ND	0.50	"				
Benzene	ND	0.50	"				
Toluene	ND	0.50	"				
Ethylbenzene	ND	0.50	"				
Xylenes (total)	ND	0.50	"				
Gasoline Range Organics (C6-C10)	ND	50	"				
<i>Surrogate: 1,2-Dichloroethane-d4</i>	4.72	"	5.00		94.4	78-129	

Laboratory Control Sample (3G09009-BS1)		Prepared & Analyzed: 07/09/03					
Methyl tert-butyl ether	10.1	0.50	ug/l	10.0	101	63-137	
Benzene	9.87	0.50	"	10.0	98.7	78-124	
Toluene	10.3	0.50	"	10.0	103	78-129	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	4.70	"	5.00		94.0	78-129	

Laboratory Control Sample (3G09009-BS2)		Prepared & Analyzed: 07/09/03					
Gasoline Range Organics (C6-C10)	425	50	ug/l	440	96.6	70-113	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	4.86	"	5.00		97.2	78-129	

Matrix Spike (3G09009-MS1)		Source: MMG0039-07RE1 Prepared & Analyzed: 07/09/03					
Methyl tert-butyl ether	916	50	ug/l	992	170	75.2	63-137
Benzene	509	50	"	640	ND	79.5	78-124
Toluene	3040	50	"	2970	ND	102	78-129
Gasoline Range Organics (C6-C10)	40100	5000	"	44000	ND	91.1	70-113
<i>Surrogate: 1,2-Dichloroethane-d4</i>	5.17	"	5.00		103	78-129	

Sequoia Analytical - Morgan Hill

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

Project: ARCO #608, San Lorenzo, CA  
 Project Number: INTRIM - 50715  
 Project Manager: Scott Robinson

MMG0039  
 Reported:  
 07/22/03 09:03

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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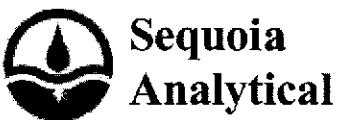
**Batch 3G09009 - EPA 5030B P/T**

<b>Matrix Spike Dup (3G09009-MSD1)</b>	<b>Source: MMG0039-07RE1</b>			<b>Prepared &amp; Analyzed: 07/09/03</b>						
Methyl tert-butyl ether	903	50	ug/l	992	170	73.9	63-137	1.43	13	
Benzene	478	50	"	640	ND	74.7	78-124	6.28	12	QM-07
Toluene	3020	50	"	2970	ND	102	78-129	0.660	10	
Gasoline Range Organics (C6-C10)	39400	5000	"	44000	ND	89.5	70-113	1.76	9	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	4.89		"	5.00		97.8	78-129			

**Batch 3G10010 - EPA 5030B P/T**

<b>Blank (3G10010-BLK1)</b>	<b>Prepared &amp; Analyzed: 07/10/03</b>					
Ethanol	ND	100	ug/l			
tert-Butyl alcohol	ND	20	"			
Methyl tert-butyl ether	ND	0.50	"			
Di-isopropyl ether	ND	0.50	"			
Ethyl tert-butyl ether	ND	0.50	"			
tert-Amyl methyl ether	ND	0.50	"			
1,2-Dichloroethane	ND	0.50	"			
1,2-Dibromoethane (EDB)	ND	0.50	"			
Benzene	ND	0.50	"			
Toluene	ND	0.50	"			
Ethylbenzene	ND	0.50	"			
Xylenes (total)	ND	0.50	"			
Gasoline Range Organics (C6-C10)	ND	50	"			
<i>Surrogate: 1,2-Dichloroethane-d4</i>	4.79		"	5.00	95.8	78-129

<b>Laboratory Control Sample (3G10010-BS1)</b>	<b>Prepared &amp; Analyzed: 07/10/03</b>					
Methyl tert-butyl ether	9.32	0.50	ug/l	10.0	93.2	63-137
Benzene	9.28	0.50	"	10.0	92.8	78-124
Toluene	9.73	0.50	"	10.0	97.3	78-129
<i>Surrogate: 1,2-Dichloroethane-d4</i>	4.82		"	5.00	96.4	78-129



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

Project: ARCO #608, San Lorenzo, CA  
Project Number: INTRIM - 50715  
Project Manager: Scott Robinson

MMG0039  
Reported:  
07/22/03 09:03

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch 3G10010 - EPA 5030B P/T**

Laboratory Control Sample (3G10010-BS2)						Prepared & Analyzed: 07/10/03				
Gasoline Range Organics (C6-C10)		436	50	ug/l	440		99.1	70-113		
Surrogate: 1,2-Dichloroethane-d4		5.06	"	"	5.00		101	78-129		
Matrix Spike (3G10010-MS1)						Prepared & Analyzed: 07/10/03				
Methyl tert-butyl ether	1010	10	ug/l	198	750	131	63-137		QM-07	
Benzene	92.2	10	"	128	ND	72.0	78-124		QM-07	
Toluene	580	10	"	594	ND	97.6	78-129			
Gasoline Range Organics (C6-C10)	8580	1000	"	8800	800	88.4	70-113			
Surrogate: 1,2-Dichloroethane-d4	5.11	"	"	5.00		102	78-129			
Matrix Spike Dup (3G10010-MSD1)						Prepared & Analyzed: 07/10/03				
Methyl tert-butyl ether	1030	10	ug/l	198	750	141	63-137	1.96	13	QM-07
Benzene	95.2	10	"	128	ND	74.4	78-124	3.20	12	QM-07
Toluene	608	10	"	594	ND	102	78-129	4.71	10	
Gasoline Range Organics (C6-C10)	8860	1000	"	8800	800	91.6	70-113	3.21	9	
Surrogate: 1,2-Dichloroethane-d4	4.99	"	"	5.00		99.8	78-129			

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

Project: ARCO #608, San Lorenzo, CA  
Project Number: INTRIM - 50715  
Project Manager: Scott Robinson

MMG0039  
**Reported:**  
07/22/03 09:03

#### Notes and Definitions

- 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



mm60039

Page 1 of 1

## Chain of Custody Record

Project Name ARCO 0608

BP BU/GEM CO Portfolio:

BP Laboratory Contract Number:

Date: 6/30/03

Requested Due Date (mm/dd/yy) Standard

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

Send To:	BP/GEM Facility No.:	Consultant/Contractor:
Lab Name: SEQUOIA	BP/GEM Facility Address: 17601 HESPERIAN BL, SAN LORENZO, CA	Address: 600 12th St., Ste. 200
Lab Address: 885 Jarvis Dr. Morgan Hill, CA 95037	Site ID No. ARCO 0608	Oakland, CA 94609-4014
	Site Lat/Long:	e-mail EIDJ: syed_rehan@urscorp.com
	California Global ID #: T0600100085	Consultant/Contractor Project No.: JS-00000608.01 00427
Lab PM: Lalonya Peff	BP/GEM PM Contact: PAUL SUPPLE	Consultant TeleFax: 510-874-1735/510-874-3268
Tel/Fax: 408-776-9600 / 408-782-6308	Address:	Consultant/Contractor PM: Scott Robinson
Report Type & QC Level: Send B1B Reports		Invoice to: Consultant/Contractor or BP/GEM (check one)
BP/GEM Account No.:	Tele/Fax:	BP/GEM Work Release No: INTRIM -50715

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			HgSO <sub>4</sub>	HNO <sub>3</sub>	HCl	TPH-G / BTEX (SAS / SPCEC/240)	TPH-D (8015)	MTBE (8021)	MTBE, TBA, FAME (8250)	DIPG, TBA (8250)
1	MW-5	1246	X			01	3			3	X	X	X	X	
2	MW-8	1312	X			02					X	X	X	X	
3	MW-10	1330	X			03	1				X	X	X	X	
4	MW-11	1107	X			04					X	X	X	X	
5	E-1A	1230	X			05					X	X	X	X	
6	MW-15	1040	X			06					X	X	X	X	
7	MW-25	1127	X			07	1				X	X	X	X	
8															
9															
10															

Sampler's Name: SUKHEON SUNG

Relinquished By / Affiliation

Date

Time

Accepted By / Affiliation

Date

Time

Sampler's Company: BIAONE TECH

7/1/03 1043

7/1/03 1043

ipment Date:

ment Method:

Tracking No:

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

In Place Yes No Temperature Blank Yes No Cooler Temperature on Receipt O/D/C Trip Blank Yes No 

X

## SEQUOIA ANALYTICAL SAMPLE RECEIPT LOG

CLIENT NAME: *BP*  
 REC. BY (PRINT): *JL*  
 WORKORDER: *MM60039*

DATE REC'D AT LAB: *6/27/03*  
 TIME REC'D AT LAB: *11:12*  
 DATE LOGGED IN: *7-2-03*

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

CIRCLE THE APPROPRIATE RESPONSE	LAB SAMPLE #	DASH #	CLIENT ID	CONTAINER DESCRIPTION	PRESERVATIVE	SAMPLE MATRIX	DATE SAMPLED	REMARKS: CONDITION (ETC.)
1. Custody Seal(s) Present / Absent	01		MW-5	(3) vials	HCl	C	6/30/03	
Intact / Broken*	02		8					
2. Chain-of-Custody Present / Absent*	03		10					
3. Traffic Reports or Packing List: Present / Absent	04		↓ 11					
4. Airbill: Airbill / Sticker	05		E-A					
Present / Absent	06		MW-15					
5. Airbill #: _____	07		↓ 25					
6. Sample Labels: Present / Absent								
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? Yes / No*								
10. Sample received within hold time: Yes / No*								
11. Proper Preservatives used: Yes / No*								
12. Temp Rec. at Lab: <i>6°C</i> Is temp 4 +/- 2°C? (Acceptance range for samples requiring thermal pres.)								
**Exception (if any): Metals / DPF (Direct From Field) or Problem CQC								

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



**Sequoia  
Analytical**

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---

8 May, 2003

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

RE: ARCO #608, San Lorenzo, Ca  
Sequoia Work Order: MMD0783

Enclosed are the results of analyses for samples received by the laboratory on 04/25/03 19:40. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink that reads "Latonya K. Pelt".

Latonya Pelt  
Project Manager

CA ELAP Certificate #1210



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

Project: ARCO #608, San Lorenzo, Ca  
Project Number: N/P  
Project Manager: Scott Robinson

MMD0783  
Reported:  
05/08/03 09:05

#### ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
INFL	MMD0783-01	Water	04/24/03 13:15	04/25/03 19:40
MID-1	MMD0783-02	Water	04/24/03 13:10	04/25/03 19:40
MID-2	MMD0783-03	Water	04/24/03 13:05	04/25/03 19:40
EFFL	MMD0783-04	Water	04/24/03 13:00	04/25/03 19:40

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



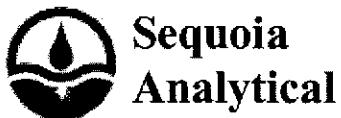
URS Corporation  
500 12th Street, Suite 100  
Oakland CA, 94607

Project: ARCO #608, San Lorenzo, Ca  
Project Number: N/P  
Project Manager: Scott Robinson

MMD0783  
Reported:  
05/08/03 09:05

**Total Purgeable Hydrocarbons (C6-C10) and Volatile Organic Compounds by EPA method 8260B**  
**Sequoia Analytical - Morgan Hill**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>INFL (MMD0783-01) Water Sampled: 04/24/03 13:15 Received: 04/25/03 19:40</b>									
Methyl tert-butyl ether	56	0.50	ug/l	1	3E01005	05/01/03	05/01/03	EPA 8260B	
Benzene	ND	0.50	"	"	"	"	"	"	"
Toluene	ND	0.50	"	"	"	"	"	"	"
Ethylbenzene	ND	0.50	"	"	"	"	"	"	"
Xylenes (total)	ND	0.50	"	"	"	"	"	"	"
<b>Gasoline Range Organics (C6-C10)</b>	<b>120</b>	<b>50</b>	<b>"</b>	<b>"</b>	<b>"</b>	<b>"</b>	<b>"</b>		
<i>Surrogate: 1,2-Dichloroethane-d4</i>		97.8 %		78-129		"	"	"	"
<b>MID-1 (MMD0783-02) Water Sampled: 04/24/03 13:10 Received: 04/25/03 19:40</b>									
Methyl tert-butyl ether	110	2.5	ug/l	5	3E01005	05/01/03	05/01/03	EPA 8260B	
Benzene	ND	2.5	"	"	"	"	"	"	"
Toluene	ND	2.5	"	"	"	"	"	"	"
Ethylbenzene	ND	2.5	"	"	"	"	"	"	"
Xylenes (total)	ND	2.5	"	"	"	"	"	"	"
<b>Gasoline Range Organics (C6-C10)</b>	<b>280</b>	<b>250</b>	<b>"</b>	<b>"</b>	<b>"</b>	<b>"</b>	<b>"</b>		HC-19
<i>Surrogate: 1,2-Dichloroethane-d4</i>		90.2 %		78-129		"	"	"	"
<b>MID-2 (MMD0783-03) Water Sampled: 04/24/03 13:05 Received: 04/25/03 19:40</b>									
Methyl tert-butyl ether	0.95	0.50	ug/l	1	3E01005	05/01/03	05/01/03	EPA 8260B	
Benzene	ND	0.50	"	"	"	"	"	"	"
Toluene	ND	0.50	"	"	"	"	"	"	"
Ethylbenzene	ND	0.50	"	"	"	"	"	"	"
Xylenes (total)	ND	0.50	"	"	"	"	"	"	"
<b>Gasoline Range Organics (C6-C10)</b>	<b>ND</b>	<b>50</b>	<b>"</b>	<b>"</b>	<b>"</b>	<b>"</b>	<b>"</b>		
<i>Surrogate: 1,2-Dichloroethane-d4</i>		93.8 %		78-129		"	"	"	"



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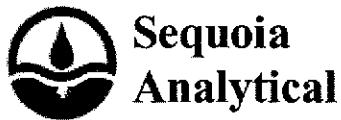
URS Corporation  
500 12th Street, Suite 100  
Oakland CA, 94607

Project: ARCO #608, San Lorenzo, Ca  
Project Number: N/P  
Project Manager: Scott Robinson

MMD0783  
Reported:  
05/08/03 09:05

**Total Purgeable Hydrocarbons (C6-C10) and Volatile Organic Compounds by EPA method 8260B**  
**Sequoia Analytical - Morgan Hill**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>EFFL (MMD0783-04) Water   Sampled: 04/24/03 13:00   Received: 04/25/03 19:40</b>									
Methyl tert-butyl ether	ND	0.50	ug/l	1	3E01005	05/01/03	05/01/03	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>		90.0 %		78-129		"	"	"	"



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Project: ARCO #608, San Lorenzo, Ca  
Project Number: N/P  
Project Manager: Scott Robinson

MMD0783  
Reported:  
05/08/03 09:05

**Conventional Chemistry Parameters by APHA/EPA Methods**  
**Sequoia Analytical - Morgan Hill**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>EFFL (MMD0783-04) Water   Sampled: 04/24/03 13:00   Received: 04/25/03 19:40</b>									
Chemical Oxygen Demand	ND	30	mg/l	1	3E07036	05/07/03	05/07/03	EPA 410.4	
Total Suspended Solids	ND	10	"	"	3D26004	04/25/03	04/26/03	EPA 160.2	



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500 12th Street, Suite 100  
Oakland CA, 94607

Project: ARCO #608, San Lorenzo, Ca  
Project Number: N/P  
Project Manager: Scott Robinson

MMD0783  
Reported:  
05/08/03 09:05

**al Purgeable Hydrocarbons (C6-C10) and Volatile Organic Compounds by EPA method 8260B - Quality Con  
Sequoia Analytical - Morgan Hill**

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

**Batch 3E01005 - EPA 5030B P/T**

Blank (3E01005-BLK1)				Prepared & Analyzed: 05/01/03				
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      4.92      "      5.00      98.4      78-129

Laboratory Control Sample (3E01005-BS1)				Prepared & Analyzed: 05/01/03				
Methyl tert-butyl ether	9.06	0.50	ug/l	10.0		90.6	63-137	
Benzene	9.40	0.50	"	10.0		94.0	78-124	
Toluene	9.49	0.50	"	10.0		94.9	78-129	

Surrogate: 1,2-Dichloroethane-d4      4.70      "      5.00      94.0      78-129

Laboratory Control Sample (3E01005-BS2)				Prepared & Analyzed: 05/01/03				
Methyl tert-butyl ether	8.10	0.50	ug/l	9.04		89.6	63-137	
Benzene	5.14	0.50	"	5.44		94.5	78-124	
Toluene	31.8	0.50	"	32.8		97.0	78-129	
Gasoline Range Organics (C6-C10)	393	50	"	440		89.3	70-113	

Surrogate: 1,2-Dichloroethane-d4      4.77      "      5.00      95.4      78-129

Matrix Spike (3E01005-MS1)				Source: MMD0783-02      Prepared & Analyzed: 05/01/03				
Methyl tert-butyl ether	160	2.5	ug/l	45.2	110	111	63-137	
Benzene	25.8	2.5	"	27.2	ND	94.9	78-124	
Toluene	160	2.5	"	164	0.35	97.3	78-129	
Gasoline Range Organics (C6-C10)	2220	250	"	2200	280	88.2	70-113	

Surrogate: 1,2-Dichloroethane-d4      4.89      "      5.00      97.8      78-129



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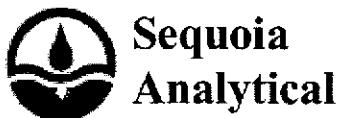
MMD0783  
Reported:  
05/08/03 09:05

**al Purgeable Hydrocarbons (C6-C10) and Volatile Organic Compounds by EPA method 8260B - Quality Con  
Sequoia Analytical - Morgan Hill**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch 3E01005 - EPA 5030B P/T**

Matrix Spike Dup (3E01005-MSD1)	Source: MMD0783-02		Prepared & Analyzed: 05/01/03						
Methyl tert-butyl ether	164	2.5	ug/l	45.2	110	119	63-137	2.47	13
Benzene	25.4	2.5	"	27.2	ND	93.4	78-124	1.56	12
Toluene	158	2.5	"	164	0.35	96.1	78-129	1.26	10
Gasoline Range Organics (C6-C10)	2140	250	"	2200	280	84.5	70-113	3.67	9
Surrogate: 1,2-Dichloroethane-d4	5.01		"	5.00		100	78-129		



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MMD0783  
Reported:  
05/08/03 09:05

**Conventional Chemistry Parameters by APHA/EPA Methods - Quality Control**  
**Sequoia Analytical - Morgan Hill**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch 3D26004 - General Preparation**

<b>Blank (3D26004-BLK1)</b>					Prepared: 04/25/03	Analyzed: 04/26/03
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Total Suspended Solids ND 10 mg/l

<b>Duplicate (3D26004-DUP1)</b>		Source: MMD0642-01	Prepared: 04/25/03	Analyzed: 04/26/03
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Total Suspended Solids 154 10 mg/l 150 2.63 20

**Batch 3E07036 - General Preparation**

<b>Blank (3E07036-BLK1)</b>				Prepared & Analyzed: 05/07/03
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Chemical Oxygen Demand ND 30 mg/l

<b>Laboratory Control Sample (3E07036-BS1)</b>				Prepared & Analyzed: 05/07/03
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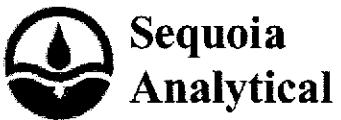
Chemical Oxygen Demand 105 30 mg/l 100 105 80-124

<b>Matrix Spike (3E07036-MS1)</b>		Source: MMD0783-04	Prepared & Analyzed: 05/07/03	
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Chemical Oxygen Demand 0.904 0.30 mg/l 1.00 ND 90.4 80-124

<b>Matrix Spike Dup (3E07036-MSD1)</b>		Source: MMD0783-04	Prepared & Analyzed: 05/07/03	
--	--	--------------------	-------------------------------	--

Chemical Oxygen Demand 0.897 0.30 mg/l 1.00 ND 89.7 80-124 0.777 23



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MMD0783  
Reported:  
05/08/03 09:05

#### Notes and Definitions

HC-19	Discrete peak @ C6-C7.
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



Date: 11/14/03

## Chain of Custody Record

Project Name: Station 608 -18501 Hesperian Blvd, San Lorenzo, CA  
 Business Unit: Atlantic Richfield Company/Northern CA Portfolio  
 BP Laboratory Contract Number: 4 8 1 0 0 0

Requested Due Date: 5/8/03

(mm/dd/yy - 2 weeks from sampling date)

On-site Time:	1300	Temp:	66
Off-site Time:	1400	Temp:	67
Sky Conditions:	Cloudy		
Meteorological Events:	None		
Wind Speed:		Direction:	

Send To:	BP/GEM Facility No.: Station 608	Consultant: URN Oakland
Lab Name: Sequoia Analytical	BP/GEM Facility Address: 18501 Hesperian Blvd, San Lorenzo, CA	Address: 500 12th Street, #200
Lab Address: 883 Jarvis Drive	Site ID No. Station 608	Oakland, CA 94607
Morgan Hill, CA 95037	California Global ID #: J0600101665	e-mail EDD: NO EDD
Lab PM: Latonya Pelt	BP/GEM PM Contact: Paul Supple	Consultant Project No.: 38486167.00327
Tele/Fax: 408-782-8154/408-782-6308	Address: P.O. Box 6549, Moraga, CA 94570	Consultant Tele/Fax: 510-874-3280/510-874-3268
Report Type & QC Level: I	Tele/Fax: 925-299-8891/925-299-8872	Consultant PM: Scott Robinson
BP/GEM Account No.:		Invoice to: Atlantic Richfield Company
Lab Bottle Order No.:		BP/GEM Work Release No.:

Item No.	Field Point ID	Sample ID	Time	Matrix	Laboratory No.	No. of specimens	Preservatives				Requested Analysis				Sample Point Lat/Long and Comments				
							Soil/Solid	Water/Liquid	Sediments	Air	Unpreserved	H <sub>2</sub> SO <sub>4</sub>	HNO <sub>3</sub>	HO	TPEB (8015)	STEX (8021)	MTBE (8021)	COD	TSS
1	INFL	INFL		X	1315	3					X	X	X						
2	MID-1	MID-1		X	1310	3					X	X	X						
3	MID-2	MID-2		X	1305	3					X	X	X						
4	EFFL	EFFL		X	1300	7	X	X	X		X	X	X	X	X				
5																			
6																			
7																			
8																			
9																			
10																			

Sampler's Name: George Bradshaw

Sampler's Company: URS Oakland

Shipment Date:

Shipment Method: Hand Deliver

Shipment Tracking No.:

Special Instructions: COD = Chemical Oxygen Demand (3 VOS's w/ H<sub>2</sub>SO<sub>4</sub>), TSS = Total Suspended Solids (1 Liter poly unpreserved)Custody Scales In Place Yes No Temperature Blank Yes No Cooler Temperature on Receipt Trip Blank Yes No

## SEQUOIA ANALYTICAL SAMPLE RECEIPT LOG

CLIENT NAME: VRS  
 REC. BY (PRINT): TJ  
 WORKORDER: KM20783

DATE REC'D AT LAB: 4/25/03  
 TIME REC'D AT LAB: 11:19:40  
 DATE LOGGED IN: 4/26/03

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

CIRCLE THE APPROPRIATE RESPONSE		LAB SAMPLE #	BATCH #	CLIENT ID	CONTAINER DESCRIPTION	PRESERVATIVE	SAMPLE MATRIX	DATE SAMPLED	REMARKS: CONDITION (ETC.)
1. Custody Seal(s)	Present <input checked="" type="radio"/> Absent <input type="radio"/>	01		Eff 1	(3) Vessel	H2O		4/24/03	
	Intact / Broken*	02		mid 1					
2. Chain-of-Custody	Present <input checked="" type="radio"/> Absent <input type="radio"/>	03		mid 2					
3. Traffic Reports or Packing List:	Present <input checked="" type="radio"/> Absent <input type="radio"/>	04		Eff 1	(6) Vessel	(3) H2O / (3) <sup>(3)</sup>			
4. Airbill:	Airbill / Sticker								
	Present / Absent				(1) IL Poly				
5. Airbill #:									
6. Sample Labels:	Present / Absent								
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?	Yes / No*								
10. Sample received within hold time:	Yes / No*								
11. Proper Preservatives used:	Yes / No*								
12. Temp Rec. at Lab:	5 °C								
Is temp 4 +/- 2°C?	Yes / No**								
(Acceptance range for samples requiring thermal pres.)									
**Exception (if any): Metals / DMT (Direct From Field) or Problem COC									

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



# Sequoia Analytical

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---

13 June, 2003

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

RE: ARCO #608, San Lorenzo, CA  
Sequoia Work Order: MME0810

Enclosed are the results of analyses for samples received by the laboratory on 05/30/03 15:25. 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



**Sequoia  
Analytical**

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500 12th Street, Suite 100  
Oakland CA, 94607

Project: ARCO #608, San Lorenzo, CA  
Project Number: N/P  
Project Manager: Scott Robinson

MME0810  
Reported:  
06/13/03 08:33

**ANALYTICAL REPORT FOR SAMPLES**

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
INFL	MME0810-01	Water	05/30/03 09:40	05/30/03 15:25
MID-1	MME0810-02	Water	05/30/03 09:45	05/30/03 15:25
MID-2	MME0810-03	Water	05/30/03 09:49	05/30/03 15:25
EFFL	MME0810-04	Water	05/30/03 10:19	05/30/03 15:25

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



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

Project: ARCO #608, San Lorenzo, CA  
Project Number: N/P  
Project Manager: Scott Robinson

MME0810  
Reported:  
06/13/03 08:33

**Total Purgeable Hydrocarbons (C6-C10) and Volatile Organic Compounds by EPA method 8260B**  
**Sequoia Analytical - Morgan Hill**

Analyte	Result	Reporting	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b><u>INFL (MME0810-01) Water   Sampled: 05/30/03 09:40   Received: 05/30/03 15:25</u></b>										
Methyl tert-butyl ether	20	ug/l	0.50	ug/l	1	3F10038	06/10/03	06/11/03	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>		113 %		78-129		"	"	"	"	"
<b><u>MID-1 (MME0810-02) Water   Sampled: 05/30/03 09:45   Received: 05/30/03 15:25</u></b>										
Methyl tert-butyl ether	140	ug/l	2.5	ug/l	5	3F11036	06/11/03	06/12/03	EPA 8260B	
Benzene	ND	"	2.5	"	"	"	"	"	"	"
Toluene	ND	"	2.5	"	"	"	"	"	"	"
Ethylbenzene	ND	"	2.5	"	"	"	"	"	"	"
Xylenes (total)	ND	"	2.5	"	"	"	"	"	"	"
Gasoline Range Organics (C6-C10)	ND	"	250	"	"	"	"	"	"	"
<i>Surrogate: 1,2-Dichloroethane-d4</i>		114 %		78-129		"	"	"	"	"
<b><u>MID-2 (MME0810-03) Water   Sampled: 05/30/03 09:49   Received: 05/30/03 15:25</u></b>										
Methyl tert-butyl ether	1.1	ug/l	0.50	ug/l	1	3F10038	06/10/03	06/11/03	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>		111 %		78-129		"	"	"	"	"

Sequoia Analytical - Morgan Hill

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



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Project: ARCO #608, San Lorenzo, CA  
Project Number: N/P  
Project Manager: Scott Robinson

MME0810  
Reported:  
06/13/03 08:33

**Total Purgeable Hydrocarbons (C6-C10) and Volatile Organic Compounds by EPA method 8260B**  
**Sequoia Analytical - Morgan Hill**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>EFFL (MME0810-04) Water Sampled: 05/30/03 10:19 Received: 05/30/03 15:25</b>									
Methyl tert-butyl ether	ND	0.50	ug/l	1	3F10038	06/10/03	06/10/03	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	"	"	"	"	"	"	"
Surrogate: 1,2-Dichloroethane-d4		108 %		78-129		"	"	"	"



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Project Manager: Scott Robinson

MME0810  
Reported:  
06/13/03 08:33

### Conventional Chemistry Parameters by APHA/EPA Methods

#### Sequoia Analytical - Morgan Hill

Analyte	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
	Result	Limit							
<b>EFFL (MME0810-04) Water Sampled: 05/30/03 10:19 Received: 05/30/03 15:25</b>									
Chemical Oxygen Demand	ND	30	mg/l	1	3F10028	06/10/03	06/10/03	EPA 410.4	
Total Suspended Solids	ND	10	"	"	3F03020	05/30/03	05/31/03	EPA 160.2	



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Oakland CA, 94607

Project: ARCO #608, San Lorenzo, CA  
Project Number: N/P  
Project Manager: Scott Robinson

MME0810  
Reported:  
06/13/03 08:33

**Total Purgeable Hydrocarbons (C6-C10) and 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
<b>Batch 3F10038 - EPA 5030B P/T</b>										
<b>Blank (3F10038-BLK1)</b> Prepared & Analyzed: 06/10/03										
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      "										
<i>Surrogate: 1,2-Dichloroethane-d4</i> 5.37      "      5.00      107      78-129										
<b>Laboratory Control Sample (3F10038-BS1)</b> Prepared & Analyzed: 06/10/03										
Methyl tert-butyl ether      10.2      0.50      ug/l      10.0      102      63-137										
Benzene      10.3      0.50      "      10.0      103      78-124										
Toluene      10.4      0.50      "      10.0      104      78-129										
<i>Surrogate: 1,2-Dichloroethane-d4</i> 5.65      "      5.00      113      78-129										
<b>Laboratory Control Sample (3F10038-BS2)</b> Prepared & Analyzed: 06/10/03										
Methyl tert-butyl ether      9.55      0.50      ug/l      9.92      96.3      63-137										
Benzene      5.74      0.50      "      6.40      89.7      78-124										
Toluene      32.9      0.50      "      29.7      111      78-129										
Gasoline Range Organics (C6-C10)      484      50      "      440      110      70-113										
<i>Surrogate: 1,2-Dichloroethane-d4</i> 5.68      "      5.00      114      78-129										
<b>Matrix Spike (3F10038-MS1)</b> Source: MMF0133-02      Prepared: 06/10/03      Analyzed: 06/11/03										
Methyl tert-butyl ether      373      5.0      ug/l      99.2      270      104      63-137										
Benzene      58.9      5.0      "      64.0      ND      92.0      78-124										
Toluene      333      5.0      "      297      ND      112      78-129										
Gasoline Range Organics (C6-C10)      5130      500      "      4400      360      108      70-113										
<i>Surrogate: 1,2-Dichloroethane-d4</i> 5.72      "      5.00      114      78-129										

Sequoia Analytical - Morgan Hill

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



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

Project: ARCO #608, San Lorenzo, CA  
Project Number: N/P  
Project Manager: Scott Robinson

MME0810  
Reported:  
06/13/03 08:33

**Total Purgeable Hydrocarbons (C6-C10) and 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 3F10038 - EPA 5030B P/T**

<b>Matrix Spike Dup (3F10038-MSD1)</b>		<b>Source: MMF0133-02</b>		<b>Prepared: 06/10/03</b>		<b>Analyzed: 06/11/03</b>			
Methyl tert-butyl ether	372	5.0	ug/l	99.2	270	103	63-137	0.268	13
Benzene	58.4	5.0	"	64.0	ND	91.2	78-124	0.853	12
Toluene	336	5.0	"	297	ND	113	78-129	0.897	10
Gasoline Range Organics (C6-C10)	5030	500	"	4400	360	106	70-113	1.97	9

Surrogate: 1,2-Dichloroethane-d4      5.73      "      5.00      115      78-129

**Batch 3F11036 - EPA 5030B P/T**

<b>Blank (3F11036-BLK1)</b>		<b>Prepared &amp; Analyzed: 06/11/03</b>				
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      5.48      "      5.00      110      78-129

<b>Laboratory Control Sample (3F11036-BS1)</b>		<b>Prepared &amp; Analyzed: 06/11/03</b>				
Methyl tert-butyl ether	10.3	0.50	ug/l	10.0	103	63-137
Benzene	10.3	0.50	"	10.0	103	78-124
Toluene	10.6	0.50	"	10.0	106	78-129
Surrogate: 1,2-Dichloroethane-d4	5.69	"		5.00	114	78-129

<b>Laboratory Control Sample (3F11036-BS2)</b>		<b>Prepared &amp; Analyzed: 06/11/03</b>				
Methyl tert-butyl ether	9.49	0.50	ug/l	9.92	95.7	63-137
Benzene	5.69	0.50	"	6.40	88.9	78-124
Toluene	32.7	0.50	"	29.7	110	78-129
Gasoline Range Organics (C6-C10)	481	50	"	440	109	70-113
Surrogate: 1,2-Dichloroethane-d4	5.72	"		5.00	114	78-129

Sequoia Analytical - Morgan Hill

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Oakland CA, 94607

Project: ARCO #608, San Lorenzo, CA  
Project Number: N/P  
Project Manager: Scott Robinson

MME0810  
Reported:  
06/13/03 08:33

**Total Purgeable Hydrocarbons (C6-C10) and 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 3F11036 - EPA 5030B P/T**

<b>Matrix Spike (3F11036-MS1)</b>		<b>Source: MMF0155-01</b>		<b>Prepared: 06/11/03</b>		<b>Analyzed: 06/12/03</b>				
Methyl tert-butyl ether	1360	10	ug/l	198	1200	80.8	63-137			
Benzene	111	10	"	128	ND	86.7	78-124			
Toluene	634	10	"	594	ND	107	78-129			
Gasoline Range Organics (C6-C10)	10100	1000	"	8800	1700	95.5	70-113			

*Surrogate: 1,2-Dichloroethane-d4*      5.80      "      5.00      116      78-129

<b>Matrix Spike Dup (3F11036-MSD1)</b>		<b>Source: MMF0155-01</b>		<b>Prepared: 06/11/03</b>		<b>Analyzed: 06/12/03</b>				
Methyl tert-butyl ether	1370	10	ug/l	198	1200	85.9	63-137	0.733	13	
Benzene	114	10	"	128	ND	89.1	78-124	2.67	12	
Toluene	667	10	"	594	ND	112	78-129	5.07	10	
Gasoline Range Organics (C6-C10)	10600	1000	"	8800	1700	101	70-113	4.83	9	

*Surrogate: 1,2-Dichloroethane-d4*      5.92      "      5.00      118      78-129



URS Corporation [Arco]  
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Project Manager: Scott Robinson

MME0810  
Reported:  
06/13/03 08:33

**Conventional Chemistry Parameters by APHA/EPA Methods - Quality Control**  
**Sequoia Analytical - Morgan Hill**

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

**Batch 3F03020 - General Preparation**

<b>Blank (3F03020-BLK1)</b>					Prepared: 05/30/03	Analyzed: 05/31/03
Total Suspended Solids	ND	10	mg/l			
						20

**Batch 3F10028 - General Preparation**

<b>Blank (3F10028-BLK1)</b>					Prepared & Analyzed: 06/10/03	
Chemical Oxygen Demand	ND	30	mg/l			

<b>Laboratory Control Sample (3F10028-BS1)</b>					Prepared & Analyzed: 06/10/03	
Chemical Oxygen Demand	96.7	30	mg/l	100	96.7	80-124

<b>Matrix Spike (3F10028-MS1)</b>					Source: MME0810-04	Prepared & Analyzed: 06/10/03	
Chemical Oxygen Demand	1010	300	mg/l	1000	ND	101	80-124

<b>Matrix Spike Dup (3F10028-MSD1)</b>					Source: MME0810-04	Prepared & Analyzed: 06/10/03			
Chemical Oxygen Demand	977	300	mg/l	1000	ND	97.7	80-124	3.32	23



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Project Manager: Scott Robinson

MME0810  
Reported:  
06/13/03 08:33

#### Notes and Definitions

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



Date: 5/30/03

Project Name  
Business Unit  
BP Laboratory Contract Number:

Chain of Custody Record  
Station 608 - 18501 Hesperian Blvd, San Lorenzo, CA  
Atlantic Richfield Company/Northern CA Portfolio

Requested Due Date:

(mm/dd/yy ± 2 weeks from sampling date)

4 6 1 0 0 0

MME0810

Page 1 of 1

On-site Time:	9:15	Temp:	65°
Off-site Time:	10:40	Temp:	
Sky Conditions:	Cloudy		
Meteorological Events:	Nistiving		
Wind Speed:	0-5	Direction:	

Send To:	BP/GEM Facility No.: Station 608	Consultant: URS Oakland
Lab Name: Sequoia - Petaluma	BP/GEM Facility Address: 18501 Hesperian Blvd, San Lorenzo, CA	Address: 500 12th Street, #200
Lab Address: 1455 N. McDowell Blvd. Suite D Petaluma, CA 95954	Site ID No. Station 608 California Global ID #: T0600101665	Oakland, CA 94607
Lab PM: Angelee Cari	BW/GEM PM Contact: Paul Supple	e-mail EDD: NO EDD
Tele/Fax: 707-792-7527/ 707-792-0342	Address: P.O. Box 6549, Moraga, CA 94570	Consultant Project No.: 38486167.00327
Report Type & QC Level: I	Tele/Fax: 925-299-8891/925-299-8872	Consultant Tele/Fax: 510-874-3280/510-874-3268
BP/GEM Account No.:		Consultant PM: Scott Robinson
Lab Bottle Order No.:		Invoice to: Atlantic Richfield Company
		BP/GEM Work Release No.:

Item No.	Field Point ID	Sample ID	Time	Matrix	Laboratory No.	No. of containers	Preservatives				Requested Analysis				Sample Point Lat/Long and Comments	
							Unpreserved	H2SO4	ENo2	Cu	TIPER (8015)	BTEX (8021)	MTBE (8021)	COD	TSS	
1	INEL	INEL	9:40	X		3			X		X	X	X			
2	MID-1	MID-1	9:45	X		3			X		X	X	X			
3	MID-2	MID-2	9:49	X		3			X		X	X	X			
4	EEFL	RPT.	10:19	X		7	X	X	X		X	X	X	X	X	
5																
6																
7																
8																
9																
10																

Sampler's Name:	George Bradshaw <i>Teresa</i>	Released By / Affiliation:	Date:	Time:	Accepted By / Affiliation:	Date:	Time:
Sampler's Company:	URS Oakland	Tamburro <i>Jillian Tamburro</i>	5/30/03	12:45	Carlos S10A	5/30/03	1:21
Shipment Date:	5/30/03	Carlos S10A	5/30/03	1:25	<i>SCC</i>	5/30/03	1:24
Shipment Method:	Hand-Deliver Pick-up						
Shipment Tracking No.:							

Special Instructions: COD = Chemical Oxygen Demand (3 VOS's w/ H2SO4), TSS = Total Suspended Solids (1 liter poly unpreserved)

Custody Seals In Place Yes  No  Temperature Blank Ycs  No  Cooler Temperature on Receipt  60 °F/C  Trip Blank Yes  No

# SEQUOIA ANALYTICAL SAMPLE RECEIPT LOG

CLIENT NAME: BP  
 REC. BY (PRINT): ST  
 WORKORDER: 11466810

DATE REC'D AT LAB: 5/30/03  
 TIME REC'D AT LAB: 15:25  
 DATE LOGGED IN: 5-30-03

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

CIRCLE THE APPROPRIATE RESPONSE	LAB SAMPLE #	DASH #	CLIENT ID:	CONTAINER DESCRIPTION	PRESERVATIVE	SAMPLE MATRIX	DATE SAMPLED	REMARKS:
								CONDITION (ETC.)
1. Custody Seal(s) <input checked="" type="radio"/> Present <input type="radio"/> Absent <input type="radio"/> Intact / <input checked="" type="radio"/> Broken*			(NFL)	(3) vials	HCl	C	5/30/03	
2. Chain-of-Custody <input checked="" type="radio"/> Present / <input type="radio"/> Absent*			M1B-1					
3. Traffic Reports or Packing List: <input checked="" type="radio"/> Present <input type="radio"/> Absent			EFCL					
4. Airbill: <input type="radio"/> Airbill / Sticker <input checked="" type="radio"/> Present / <input type="radio"/> Absent*								
5. Airbill #:								
6. Sample Labels: <input checked="" type="radio"/> Present <input type="radio"/> Absent								
7. Sample IDs: <input checked="" type="radio"/> Listed <input type="radio"/> Not Listed on Chain-of-Custody								
8. Sample Condition: <input type="radio"/> Intact / <input checked="" type="radio"/> Broken* / <input type="radio"/> Leaking*								
9. Does information on custody reports, traffic reports and sample labels agree? <input checked="" type="radio"/> Yes <input type="radio"/> No*								
10. Sample received within hold time: <input checked="" type="radio"/> Yes <input type="radio"/> No*								
11. Proper Preservatives used: <input checked="" type="radio"/> Yes <input type="radio"/> No*								
12. Temp Rec. at Lab: Is temp 4 +/- 2°C? <input checked="" type="radio"/> Yes <input type="radio"/> No**								
(Acceptance range for samples requiring thermal pres.)								
**Exception (if any): Metals / DFF (Direct From Field) or Problem COC								

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

**ATTACHMENT C**  
**HISTORICAL GROUNDWATER DATA TABLES**













**Table 2**  
**Groundwater Elevation and Analytical Data**  
**Groundwater Monitoring Wells**

ARCO Service Station 0608  
 17601 Hesperian Boulevard at Hacienda Avenue  
 San Lorenzo, California

Well Number	Date Sampled	Well Elevation (feet, MSL)	Depth to Water (feet, TOB)	Groundwater Elevation (feet, MSL)	TPPH as Gasoline (ppb)	Benzene (ppb)	Toluene (ppb)	Ethylbenzene (ppb)	Xylenes (ppb)	MIBE (ppb)	Dissolved Oxygen (ppm)
	03/31-04/01/97		11.84	21.87	<50	<0.50	<0.50	<0.50	<0.50	<2.5	NM
	08/25/97		12.94	20.77	<50	<0.50	<0.50	<0.50	<0.50	<2.5	NM

Table 2  
**Groundwater Elevation and Analytical Data**  
**Groundwater Monitoring Wells**

ARCO Service Station 0608  
 17801 Hesperian Boulevard at Hacienda Avenue  
 San Lorenzo, California

Well Number	Date Sampled	Well Elevation (feet, MSL)	Depth to Water (feet, TOB)	Groundwater Elevation (feet, MSL)	TPPH as Gasoline (ppb)	Benzene (ppb)	Toluene (ppb)	Ethylbenzene (ppb)	Xylenes (ppb)	MBE (ppb)	Dissolved Oxygen (ppm)
MW-26	09/09/10/97		12.77	20.94	<50	<0.50	<0.50	<0.50	<0.50	<2.5	5.0
(cont.)	11/24/25/97		12.55	21.16	<50	<0.50	<0.50	<0.50	<0.50	<2.5	3.6
	03/19/20/98		10.55	23.18	<50	<0.50	<0.50	<0.50	<0.50	<2.5	2.6
	06/04/98		11.22	22.49	<50	<0.50	<0.30	<0.30	<0.60	<10	2.1
	09/21/22/98		12.45	21.26	<50	<0.50	<0.50	<0.50	<0.50	<2.5	1.8
	12/14/15/98		11.83	21.88	<50	<0.50	<0.50	<0.50	<0.50	<2.5	1.0
	03/15/16/99		10.86	22.85	<50	<0.50	<0.50	<0.50	<0.50	<5.0	1.0
	06/14/15/99		12.17	21.54							
	09/15/99		12.70	21.01							
	12/08/09/99		12.57	21.14							
	03/15/00		10.50	23.21	<50	<0.50	<0.50	<0.50	<0.50	6.55	1.4
	06/13/00 b		12.20	21.51							
	9/19/20/00		12.38	21.33							
	12/14/15/00		11.88	21.83							
	3/8/9/01		10.78	22.93	<50	<0.50	<0.50	<0.50	<0.50	<2.5	2.6
	06/14/01		12.17	21.54							
	09/28/01		12.70	21.01							
	12/29/01		10.41	23.30							
	03/13/02		11.27	22.44	<50	<0.50	<0.50	<0.50	<0.50	<2.5	1.4

MtBE = Methyl tert-butyl ether

MSL = Mean sea level

TOB = Top of box

ppb = Parts per billion

ppm = Parts per million

< = Less than laboratory detection limit

† = Well sampled without purging.

†† = ORC program initiated September 21, 1995 and discontinued on May 15, 1997.

NA = Not analyzed

NM = Not measured

NS = Not sampled

a. = MtBE result confirmed by EPA Method 8260.

b. = Depth to water originally measured from TOC. Depth to water adjusted to reflect a TOB measurement by adding the average difference between TOB and TOC measurements over the last four gauging events.

c. = well elevation changed during station reconstruction.  
well resurveyed 11/6/2001

Please see certified analytical reports for laboratory notes and definitions.

Table 3  
Groundwater Analytical Data  
Domestic Irrigation Wells

ARCO Service Station 0608  
17601 Hesperian Boulevard at Hacienda Avenue  
San Lorenzo, California

Well Address	Date Sampled	TPPH as Gasoline (ppb)	Benzene (ppb)	Toluene (ppb)	Ethybenzene (ppb)	Xylenes (ppb)	MIBE (ppb)	Dissolved Oxygen (ppm)
590 H	03/14/96	<50	<0.50	<0.50	<0.50	<0.50	NA	NM
	05/29/96	<50	<0.50	<0.50	<0.50	<0.50	NA	NM
	08/29/96 a	NS	NS	NS	NS	NS	NA	NM
	11/26/96	NS	NS	NS	NS	NS	NS	NM
	03/31/97	<50	<0.50	<0.50	<0.50	<0.50	<2.5	NM
	06/25/97 a	NS	NS	NS	NS	NS	NS	NM
	09/09/97	<50	<0.50	<0.50	<0.50	<0.50	<2.5	2.0
	11/24/97 a	NS	NS	NS	NS	NS	NS	NM
	03/19/98	<50	<0.50	<0.50	<0.50	<0.50	<2.5	1.0
	06/03/98	<50	<0.50	<0.50	<0.50	<0.50	<0.50	3.8
	09/21/98	<50	<0.50	<0.50	<0.50	<0.50	<2.5	3.2
	12/14/98	<50	<0.50	<0.50	<0.50	<0.50	<2.0	2.2
	03/15/99 a	NS	NS	NS	NS	NS	NS	NM
	06/14/99	<50	<0.50	<0.50	<0.50	<0.50	<2.5	NM
	09/15/99 a	NS	NS	NS	NS	NS	NS	NM
	12/08/99 a	NS	NS	NS	NS	NS	NS	NM
	03/15/00 a	NS	NS	NS	NS	NS	NS	NM
	06/13/00 a	NS	NS	NS	NS	NS	NS	NM
----- Well Destroyed -----								
633 H	03/14/96	480	10	11	1.8	140	NA	NM
	05/13/96 b	<50	<0.50	<0.50	<0.50	<0.50	NA	NM
	05/27/96	<50	<0.50	<0.50	<0.50	<0.50	NA	NM
	08/29/96	<50	<0.50	<0.50	<0.50	<0.50	NA	NM
	11/26/96	<50	<0.50	<0.50	<0.50	<0.50	3.70	NM
	12/30/96	--	--	--	--	--	4.9	c NM
	03/31/97	NS	NS	NS	NS	NS	NS	NM
	06/25/97 a	NS	NS	NS	NS	NS	NS	NM
	09/10/97	<50	<0.50	<0.50	<0.50	0.66	<2.5	1.0
	11/24/97	110	2.0	2.1	1.0	4.2	<2.5	c NM
	03/19/98	150	1.8	0.62	<0.50	28	77	NM
	03/19/98	--	--	--	--	--	<2.0	c NM
	06/03/98	480	6.2	4.3	2.9	120	28	1.3
	09/21/98	<50	<0.50	<0.50	<0.50	0.66	<2.5	1.2
	12/14/98	<50	<0.50	<0.50	<0.50	2.21	11.7	NM
	03/15/99	<50	0.513	<0.50	<0.50	0.542	31	NM
	06/14/99	<50	<0.50	<0.50	<0.50	<0.50	7.93	NM
	09/15/99	<50	<0.50	<0.50	<0.50	<0.50	5.65	0.0
	12/08/99	<50	<0.50	<0.50	<0.50	<0.50	<5.0	1.4
	03/15/00	<50	<0.50	<0.50	<0.50	<0.50	17.5	1.2
	06/13/00	240	5.03	1.01	2.39	53.8	10.5	NM
----- Well Destroyed -----								
634 H	03/13/96 a	NS	NS	NS	NS	NS	NA	NM
	05/27/96 a	NS	NS	NS	NS	NS	NA	NM
	08/29/96 a	NS	NS	NS	NS	NS	NA	NM
	11/26/96	NS	NS	NS	NS	NS	NS	NM
	03/31/97	NS	NS	NS	NS	NS	NS	NM
	06/25/97 a	NS	NS	NS	NS	NS	NS	NM
	09/09/97 g	NS	NS	NS	NS	NS	NS	NM
	11/24/97 g	NS	NS	NS	NS	NS	NS	NM
	03/19/98 e	NS	NS	NS	NS	NS	NS	NM

Table 3  
**Groundwater Analytical Data**  
**Domestic Irrigation Wells**

ARCO Service Station 0608  
 17601 Hesperian Boulevard at Hacienda Avenue  
 San Lorenzo, California

Well Address	Date Sampled	TPPH as Gasoline (ppb)	Benzene (ppb)	Toluene (ppb)	Ethylbenzene (ppb)	Xylenes (ppb)	MBE (ppb)	Dissolved Oxygen (ppm)
634 H (cont.)	06/03/98 e	NS	NS	NS	NS	NS	NS	NM
	09/21/98 e	NS	NS	NS	NS	NS	NS	NM
	12/14/98 e	NS	NS	NS	NS	NS	NS	NM
	03/15/99 e	NS	NS	NS	NS	NS	NS	NM
	06/14/99 e	NS	NS	NS	NS	NS	NS	NM
	09/15/99 e	NS	NS	NS	NS	NS	NS	NM
	12/08/99 e	NS	NS	NS	NS	NS	NS	NM
	03/15/00 e	NS	NS	NS	NS	NS	NS	NM
	06/13/00 e	NS	NS	NS	NS	NS	NS	NM
	09/19/00 e	NS	NS	NS	NS	NS	NS	NM
	12/14/00 e	NS	NS	NS	NS	NS	NS	NM
	03/08/01 e	NS	NS	NS	NS	NS	NS	NM
	06/14/01 e	NS	NS	NS	NS	NS	NS	NM
	09/26/01 e	NS	NS	NS	NS	NS	NS	NM
	12/29/01 e	NS	NS	NS	NS	NS	NS	NM
	03/13/02 e	NS	NS	NS	NS	NS	NS	NM
642 H	03/15/96	<50	<0.50	<0.50	<0.50	<0.50	NA	NM
	05/27/96	<50	<0.50	<0.50	<0.50	<0.50	NA	NM
	08/29/96	<50	<0.50	<0.50	<0.50	<0.50	NA	NM
	11/26/96	<50	<0.50	<0.50	<0.50	<0.50	<2.5	NM
	03/31/97	NS	NS	NS	NS	NS	NS	NM
	06/25/97	NS	NS	NS	NS	NS	NS	NM
	09/08/97 a	NS	NS	NS	NS	NS	NS	NM
	11/24/97	<50	<0.50	<0.50	<0.50	<0.50	<2.5	NM
	03/19/98 a	NS	NS	NS	NS	NS	NS	NM
	06/03/98	<50	<0.50	<0.50	<0.50	<0.50	<0.50	NM
	09/21/98 a	NS	NS	NS	NS	NS	NS	NM
	12/14/98 a	NS	NS	NS	NS	NS	NS	NM
	03/15/99 a	NS	NS	NS	NS	NS	NS	NM
	06/14/99	<50	<0.50	<0.50	<0.50	<0.50	<2.5	1.0
	09/15/99	<50	<0.50	<0.50	<0.50	<0.50	<5.0	2.2
	12/08/99	<50	<0.50	<0.50	<0.50	<0.50	<5.0	2.4
	03/15/00	<50	<0.50	<0.50	<0.50	<0.50	<2.5	2.8
	06/13/00	<50	<0.50	<0.50	<0.50	<0.50	<2.5	NM
	09/19/00 a	NS	NS	NS	NS	NS	NS	NM
	12/14/00	<50	<0.50	<0.50	<0.50	<0.50	<2.5	2.2
	03/08/01 a	NS	NS	NS	NS	NS	NS	NM
	06/14/01 a	NS	NS	NS	NS	NS	NS	NM
	09/26/01 a	NS	NS	NS	NS	NS	NS	NM
	12/29/01 a	NS	NS	NS	NS	NS	NS	NM
	03/13/02 a	NS	NS	NS	NS	NS	NS	NM
675 H	03/13/96 a	NS	NS	NS	NS	NS	NA	NM
	05/27/96 a	NS	NS	NS	NS	NS	NA	NM
	08/29/96 d	NS	NS	NS	NS	NS	NA	NM
	11/26/96	NS	NS	NS	NS	NS	NS	NM
	03/31/97	NS	NS	NS	NS	NS	NS	NM
	06/25/97	<50	<0.50	<0.50	<0.50	<0.50	<2.5	NM
	09/09/97 f	NS	NS	NS	NS	NS	NS	NM
	11/24/97 f	NS	NS	NS	NS	NS	NS	NM
	03/19/98 f	NS	NS	NS	NS	NS	NS	NM
	06/03/98 f	NS	NS	NS	NS	NS	NS	NM
	09/21/98 a,f	NS	NS	NS	NS	NS	NS	NM
	12/14/98 f	NS	NS	NS	NS	NS	NS	NM
	03/15/99 f	NS	NS	NS	NS	NS	NS	NM
	06/14/99 f	NS	NS	NS	NS	NS	NS	NM
	09/15/99 f	NS	NS	NS	NS	NS	NS	NM
	12/08/99 f	NS	NS	NS	NS	NS	NS	NM
	03/15/00 f	NS	NS	NS	NS	NS	NS	NM
	06/13/00 f	NS	NS	NS	NS	NS	NS	NM
	09/19/00 f	NS	NS	NS	NS	NS	NS	NM

Table 3  
Groundwater Analytical Data  
Domestic Irrigation Wells

ARCO Service Station 0608  
17601 Hesperian Boulevard at Hacienda Avenue  
San Lorenzo, California

Well Address	Date Sampled	TPPH as Gasoline (ppb)	Benzene (ppb)	Toluene (ppb)	Ethyl-benzene (ppb)	Xylenes (ppb)	MIBE (ppb)	Dissolved Oxygen (ppm)
675 H (cont.)	12/14/00 f	NS	NS	NS	NS	NS	NS	NM
	03/08/01 f	NS	NS	NS	NS	NS	NS	NM
	06/14/01 f	NS	NS	NS	NS	NS	NS	NM
	09/26/01 f	NS	NS	NS	NS	NS	NS	NM
	12/29/01 f	NS	NS	NS	NS	NS	NS	NM
	03/13/02 f	NS	NS	NS	NS	NS	NS	NM
17197 VM	03/15/96	<50	<0.50	<0.50	<0.50	<0.50	NA	NM
	05/27/96	<50	<0.50	<0.50	<0.50	<0.50	NA	NM
	08/29/96	<50	<0.50	<0.50	<0.50	<0.50	NA	NM
	11/26/96	<50	<0.50	<0.50	<0.50	<0.50	<2.5	NM
	03/31/97	<50	<0.50	<0.50	<0.50	<0.50	<2.5	NM
	06/25/97	<50	<0.50	<0.50	<0.50	<0.50	<2.5	NM
	09/09/97	<50	<0.50	<0.50	<0.50	<0.50	<2.5	3.0
	11/24/97	<50	<0.50	<0.50	<0.50	<0.50	<2.5	2.4
	03/19/98	<50	<0.50	<0.50	<0.50	<0.50	<2.5	2.2
	06/03/98	<50	<0.50	<0.50	<0.50	<0.50	<0.50	3.2
	09/21/98	<50	<0.50	<0.50	<0.50	<0.50	<2.5	3.0
	12/14/98	<50	<0.50	<0.50	<0.50	<0.50	<2.0	2.4
	03/15/99	<50	<0.50	<0.50	<0.50	<0.50	<5.0	1.6
	06/14/99	<50	<0.50	<0.50	<0.50	<0.50	<2.5	1.8
	09/15/99	<50	<0.50	<0.50	<0.50	<0.50	<5.0	1.0
	12/08/99 a	NS	NS	NS	NS	NS	NS	NM
	03/15/00 a	NS	NS	NS	NS	NS	NS	NM
	06/13/00	<50	<0.50	<0.50	<0.50	<0.50	<2.5	NM
	09/19/00	<50	<0.50	<0.50	<0.50	<0.50	<2.5	NM
	12/14/00 f	NS	NS	NS	NS	NS	NS	NM
	03/08/01 f	NS	NS	NS	NS	NS	NS	NM
	06/14/01 f	NS	NS	NS	NS	NS	NS	NM
	09/26/01 f	NS	NS	NS	NS	NS	NS	NM
	12/29/01 f	NS	NS	NS	NS	NS	NS	NM
	03/13/02 f	NS	NS	NS	NS	NS	NS	NM
17200 VM	03/15/96	730	<1.0	<1.0	1.5	1.7	NA	NM
	05/27/96	200	<0.50	<0.50	1.4	1.8	NA	NM
	08/29/96						Well Destroyed	
17203 VM	03/15/96	<50	<0.50	<0.50	<0.50	<0.50	NA	NM
	05/27/96	<50	<0.50	<0.50	<0.50	<0.50	NA	NM
	08/29/96	<50	<0.50	<0.50	<0.50	<0.50	NA	NM
	11/26/96	<50	<0.50	<0.50	<0.50	<0.50	<2.5	NM
	03/31/97 f	NS	NS	NS	NS	NS	NS	NM
	06/25/97	<50	<0.50	<0.50	<0.50	<0.50	<2.5	NM
	09/09/97 f	NS	NS	NS	NS	NS	NS	NM
	11/24/97 f	NS	NS	NS	NS	NS	NS	NM
	03/19/98						Well Dry	
	06/03/98 f	NS	NS	NS	NS	NS	NS	NM
	09/21/98 f	NS	NS	NS	NS	NS	NS	NM
	12/14/98 f	NS	NS	NS	NS	NS	NS	NM
	03/15/99 f	NS	NS	NS	NS	NS	NS	NM
	06/14/99 f	NS	NS	NS	NS	NS	NS	NM
	09/15/99 f	NS	NS	NS	NS	NS	NS	NM
	12/08/99 f	NS	NS	NS	NS	NS	NS	NM
	03/15/00 f	NS	NS	NS	NS	NS	NS	NM
	06/13/00 f	NS	NS	NS	NS	NS	NS	NM
	09/19/00 f	NS	NS	NS	NS	NS	NS	NM
	12/14/00 f	NS	NS	NS	NS	NS	NS	NM
	03/08/01 f	NS	NS	NS	NS	NS	NS	NM
	06/14/01 f	NS	NS	NS	NS	NS	NS	NM
	09/26/01 f	NS	NS	NS	NS	NS	NS	NM
	12/29/01 f	NS	NS	NS	NS	NS	NS	NM
	03/13/02 f	NS	NS	NS	NS	NS	NS	NM
17302 VM	03/15/96	<50	<0.50	<0.50	<0.50	<0.50	NA	NM
	05/27/96	<50	<0.50	<0.50	<0.50	<0.50	NA	NM
	08/29/96	<50	<0.50	<0.50	<0.50	<0.50	NA	NM

Table 3  
Groundwater Analytical Data  
Domestic Irrigation Wells

ARCO Service Station 0608  
17601 Hesperian Boulevard at Hacienda Avenue  
San Lorenzo, California

Well Address	Date Sampled	TPPH as Gasoline (ppb)	Benzene (ppb)	Toluene (ppb)	Ethyl-benzene (ppb)	Xylenes (ppb)	MBE (ppb)	Dissolved Oxygen (ppm)
17302 VM	11/26/96	<50	<0.50	<0.50	<0.50	<0.50	<2.5	NM
(cont.)	03/31/97	<50	<0.50	<0.50	<0.50	<0.50	<2.5	NM
	09/09/97 f	NS	NS	NS	NS	NS	NS	NM
	11/24/97 f	NS	NS	NS	NS	NS	NS	NM
	03/19/98 f	NS	NS	NS	NS	NS	NS	NM
	06/03/98 f	NS	NS	NS	NS	NS	NS	NM
	09/21/98 f	NS	NS	NS	NS	NS	NS	NM
	12/14/98 f	NS	NS	NS	NS	NS	NS	NM
	03/15/99 f	NS	NS	NS	NS	NS	NS	NM
	06/14/99 f	NS	NS	NS	NS	NS	NS	NM
	09/15/99 f	NS	NS	NS	NS	NS	NS	NM
	12/08/99 f	NS	NS	NS	NS	NS	NS	NM
	12/08/99 f	NS	NS	NS	NS	NS	NS	NM
	03/16/00 f	NS	NS	NS	NS	NS	NS	NM
	06/13/00 f	NS	NS	NS	NS	NS	NS	NM
	09/19/00 f	NS	NS	NS	NS	NS	NS	NM
	12/14/00 f	NS	NS	NS	NS	NS	NS	NM
	03/08/01 f	NS	NS	NS	NS	NS	NS	NM
	06/14/01 f	NS	NS	NS	NS	NS	NS	NM
	09/26/01 f	NS	NS	NS	NS	NS	NS	NM
	12/29/01 f	NS	NS	NS	NS	NS	NS	NM
	03/13/02 f	NS	NS	NS	NS	NS	NS	NM
17348 VE	03/13/96	<50	<0.50	<0.50	<0.50	<0.50	NA	NM
	05/27/96	-----	-----	-----	-----	Well Dry	-----	-----
	08/29/96	-----	-----	-----	-----	Well Dry	-----	-----
	11/26/96	-----	-----	-----	-----	Well Dry	-----	-----
	03/31/97	-----	-----	-----	-----	Well Dry	-----	-----
	06/25/97	-----	-----	-----	-----	Well Inaccessible	-----	-----
	09/09/97 g	NS	NS	NS	NS	NS	NS	NM
	11/24/97 g	NS	NS	NS	NS	NS	NS	NM
	03/19/98 a	NS	NS	NS	NS	NS	NS	NM
	06/03/98 a	NS	NS	NS	NS	NS	NS	NM
	09/21/98 a	NS	NS	NS	NS	NS	NS	NM
	12/14/98 a	NS	NS	NS	NS	NS	NS	NM
	03/15/99 a	NS	NS	NS	NS	NS	NS	NM
	06/14/99 f	NS	NS	NS	NS	NS	NS	NM
	09/15/99 f	NS	NS	NS	NS	NS	NS	NM
	12/08/99 f	NS	NS	NS	NS	NS	NS	NM
	03/15/00 a	NS	NS	NS	NS	NS	NS	NM
	06/13/00 f	NS	NS	NS	NS	NS	NS	NM
	09/19/00 f	NS	NS	NS	NS	NS	NS	NM
	12/14/00 f	NS	NS	NS	NS	NS	NS	NM
	03/08/01 f	NS	NS	NS	NS	NS	NS	NM
	06/14/01 f	NS	NS	NS	NS	NS	NS	NM
	09/26/01 f	NS	NS	NS	NS	NS	NS	NM
	12/29/01 f	NS	NS	NS	NS	NS	NS	NM
	03/13/02 f	NS	NS	NS	NS	NS	NS	NM
17349 VM	03/15/96	1,700	<2.0	<2.0	2.5	13	NA	NM
	05/27/96	320	4.2	1.3	0.95	0.71	NA	NM
	08/29/96	410	7.5	<0.50	<0.50	1.1	NA	NM
	11/26/96	300	<1.0	1.7	<1.0	2.1	55	*
	03/31/97	430	<1.0	2.7	<1.0	1.0	57	c
	06/25/97 **	2,100	30	<5.0	<5.0	6.7	140	NM
	08/18/97	320	2.0	<0.5	<0.5	<0.5	34	NM
	08/18/97	--	--	--	--	--	31	c
	09/09/97	380	6.0	1.4	0.98	<0.50	38	3.0
	09/09/97	--	--	--	--	--	34	c
	11/24/97	240	<1.0	1.1	<1.0	1.4	53	2.4
	11/24/97	--	--	--	--	--	33	c†
	03/19/98	1,300	14	<0.50	<0.50	1.2	250	1.0
	03/19/98	--	--	--	--	--	27	c

Table 3  
Groundwater Analytical Data  
Domestic Irrigation Wells

ARCO Service Station 0608  
17601 Hesperian Boulevard at Hacienda Avenue  
San Lorenzo, California

Well Address	Date Sampled	TPPH as			Ethyl-benzene (ppb)	Xylenes (ppb)	MIBE (ppb)	Dissolved Oxygen (ppm)
		Gasoline (ppb)	Benzene (ppb)	Toluene (ppb)				
17349 VM (cont.)	06/03/98	860	8.7	<0.50	0.7	8.0	38	4.9
	07/29/98	860	20	2.1	<1.2	<1.2	27	NM
	07/29/98	--	--	--	--	--	25	c NM
	09/21/98	200	<0.50	<0.50	<0.50	14	14	5.2
	12/14/98	254	<0.50	6.92	0.604	1.58	21.7	1.0
	03/15/99	172	1.35	<0.50	<0.50	<0.50	24.2	3.6
	06/14/99	91	<0.50	3.53	<0.50	<0.50	88.3	2.8
	09/15/99 a	133	<0.50	<0.50	<0.50	<0.50	184	2.2
	12/08/99	136	0.681	<0.50	<0.50	<0.50	267	c 2.4
	03/15/00	<50	<0.50	<0.50	<0.50	<0.50	82.1	c 2.8
	06/13/00	319	5.28	<0.5	<0.50	<0.50	97.1	NM
	06/13/00	--	--	--	--	--	85.1	c NM
	09/19/00	106	<0.50	2	<0.50	<0.50	204.0	NM
	09/19/00	--	--	--	--	--	84.0	c NM
	12/14/00	65.9	0.61	<0.50	<0.50	<0.50	188.0	1.8
	12/14/00	--	--	--	--	--	197.0	c NM
	03/08/01	<50	<0.50	<0.50	<0.50	<0.50	91.8	1.8
	03/08/01	--	--	--	--	--	98.3	c NM
	06/14/01	<50	<0.50	<0.50	<0.50	<0.50	68.0	2.8
	06/14/01	--	--	--	--	--	99.0	c NM
	09/26/01	62	0.53	<0.50	<0.50	<0.50	49.0	1.8
	09/26/01	--	--	--	--	--	54.0	c NM
	12/29/01	<50.0	<0.50	0.78	<0.50	<0.50	58.0	NM
	12/29/01	--	--	--	--	--	48.0	c NM
	03/13/02	<50.0	1	<0.50	<0.50	<0.50	49.0	2.0
	03/13/02	--	--	--	--	--	47.0	c NM
17371 VM	03/13/96 e	NS	NS	NS	NS	NS	NA	NM
	05/27/96 e	NS	NS	NS	NS	NS	NA	NM
	08/29/96 e	NS	NS	NS	NS	NS	NA	NM
	11/26/96 e	NS	NS	NS	NS	NS	NS	NM
	03/31/97 e	NS	NS	NS	NS	NS	NS	NM
	06/25/97 e	NS	NS	NS	NS	NS	NS	NM
	09/09/97 e	NS	NS	NS	NS	NS	NS	NM
	11/24/97 e	NS	NS	NS	NS	NS	NS	NM
	03/19/98 e	NS	NS	NS	NS	NS	NS	NM
	06/03/98 e	NS	NS	NS	NS	NS	NS	NM
	09/21/98 e	NS	NS	NS	NS	NS	NS	NM
	12/14/98 e	NS	NS	NS	NS	NS	NS	NM
	03/15/99 e	NS	NS	NS	NS	NS	NS	NM
	06/14/99 e	NS	NS	NS	NS	NS	NS	NM
	09/15/99 e	NS	NS	NS	NS	NS	NS	NM
	12/08/99 f	NS	NS	NS	NS	NS	NS	NM
	03/15/00 f	NS	NS	NS	NS	NS	NS	NM
	06/13/00 f	NS	NS	NS	NS	NS	NS	NM
	09/19/00 f	NS	NS	NS	NS	NS	NS	NM
	12/14/00 f	NS	NS	NS	NS	NS	NS	NM
	03/08/01 f	NS	NS	NS	NS	NS	NS	NM
	06/14/01 f	NS	NS	NS	NS	NS	NS	NM
	09/26/01 f	NS	NS	NS	NS	NS	NS	NM
	12/29/01 f	NS	NS	NS	NS	NS	NS	NM
	03/13/02 f	NS	NS	NS	NS	NS	NS	NM
17372 VM	03/14/96	<50	<0.50	<0.50	<0.50	<0.50	NA	NM
	05/27/96	<50	<0.50	<0.50	<0.50	<0.50	NA	NM
	08/29/96	<50	<0.50	<0.50	<0.50	<0.50	NA	NM
	11/26/96	<50	<0.50	<0.50	<0.50	<0.50	<2.5	NM
	03/31/97	<50	<0.50	<0.50	<0.50	<0.50	<2.5	NM
	06/25/97	<50	<0.50	<0.50	<0.50	<0.50	<2.5	NM
	09/09/97	<50	<0.50	<0.50	<0.50	<0.50	<2.5	4.0
	11/24/97	<50	<0.50	<0.50	<0.50	<0.50	<2.5	2.0
	03/19/98	<50	<0.50	<0.50	<0.50	<0.50	1,200	1.8
	06/03/98	<50	<0.50	<0.50	<0.50	<0.50	1,400	c NM
	07/29/98	<200	<2.0	<2.0	<2.0	<2.0	16,000	1.8
							940	NM

Table 3  
Groundwater Analytical Data  
Domestic Irrigation Wells

ARCO Service Station 0608  
17601 Hesperian Boulevard at Hacienda Avenue  
San Lorenzo, California

Well Address	Date Sampled	TPPH as Gasoline (ppb)	Benzene (ppb)	Toluene (ppb)	Ethybenzene (ppb)	Xylenes (ppb)	MTBE (ppb)	Dissolved Oxygen (ppm)
17372 VM	07/29/98	--	--	--	--	--	1,100	c NM
(cont.)	09/21/98	<50	<0.50	<0.50	<0.50	<0.50	200	1.6
	09/21/98	-	--	--	--	--	360	c NM
	12/14/98	<50	<0.50	0.823	<0.50	<0.50	20.1	3.8
	03/15/99	<50	<0.50	<0.50	<0.50	<0.50	6.66	4.6
	06/14/99	<50	<0.50	<0.50	<0.50	<0.50	3.33	4.0
	09/15/99	<50	<0.50	<0.50	<0.50	<0.50	<5.0	2.0
	12/08/99	<50	<0.50	<0.50	<0.50	<0.50	<5.0	NM
	03/15/00	<50	<0.50	<0.50	<0.50	<0.50	<2.5	1.6
	06/13/00	<50	<0.50	<0.50	<0.50	<0.50	<2.5	NM
	09/19/00	<50	<0.50	<0.50	<0.50	<0.50	<2.5	NM
	12/14/00	<50	<0.50	<0.50	<0.50	<0.50	<2.5	2.0
	03/08/01	<50	<0.50	<0.50	<0.50	<0.50	<2.5	2.4
	06/14/01	<50	<0.50	<0.50	<0.50	<0.50	<2.5	2.8
	09/26/01	<50	<0.50	<0.50	<0.50	<0.50	<2.5	2.2
	12/29/01	<50	<0.50	<0.50	<0.50	<0.50	<2.5	2.1
	03/13/02	<51	<0.50	<0.50	<0.50	<0.50	<2.6	1.8
17393 VM	03/14/96	<50	<0.50	<0.50	<0.50	<0.50	NA	NM
	05/27/96	<50	<0.50	<0.50	<0.50	<0.50	NA	NM
	08/29/96	<50	<0.50	<0.50	<0.50	<0.50	NA	NM
VM	11/26/96	<50	<0.50	<0.50	<0.50	<0.50	<2.5	NM
	03/31/97 a	NS	NS	NS	NS	NS	NS	NM
	06/25/97	-----	-----	-----	-----	Well Destroyed	-----	-----

TPPH = Total purgeable petroleum hydrocarbons

MTBE = Methyl tert-butyl ether

NA = Not analyzed

NS = Not sampled

ppb = Parts per billion

H = Hacienda Avenue

VM = Via Magdalena

VE = Via Encinas

< = Less than laboratory detection limit stated to the right.

\* = MtBE data maybe anomalous; unable to confirm with EPA Method 8260.

\*\* = Concentration data are suspect due to inadequate purging. Well resampled on August 18, 1997 for confirmation purposes.

a. Owner not available to approve sampling access; well not sampled.

b. Well resampled to confirm data of March 14, 1996.

c. MtBE result confirmed by EPA Method 8260.

d. Pumping equipment obstructing sampling access; well not sampled.

e. Access denied by owner; well not sampled.

f. Pump on well does not work.

g. Well blocked and pump non-operational; well cannot be sampled.

**Notes:**

Homeowners are contacted 1 week prior to sampling event.

Please see certified analytical reports for laboratory notes and definitions

**ATTACHMENT D**

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

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## Error Summary Log

07/24/03

EDF 1.2i All files present in deliverable.

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Laboratory: Sequoia Analytical Laboratories, Inc., Morgan Hill, CA  
Project Name: ARCO #608, San Lorenzo, C  
Work Order Number: MMG0039  
Global ID: T0600100085  
Lab Report Number: MMG0039072220030903

## Report Summary

Labreport	Sampid	Labsampid	Mtrx	QC	Anmcode	Exmcode	Logdate	Extdate	Anadate	Lablotcti	Run Sub
MMG0039072220 030903	E-1A	MMG003905	W	CS	8260+OX	SW5030B	06/30/03	07/10/03	07/10/03	3G10010	1
MMG0039072220 030903	MW-10	MMG003903	W	CS	8260+OX	SW5030B	06/30/03	07/10/03	07/10/03	3G10010	1
MMG0039072220 030903	MW-11	MMG003904	W	CS	8260+OX	SW5030B	06/30/03	07/10/03	07/10/03	3G10010	1
MMG0039072220 030903	MW-15	MMG003906	W	CS	8260+OX	SW5030B	06/30/03	07/10/03	07/10/03	3G10010	1
MMG0039072220 030903	MW-25	MMG003907	W	CS	8260+OX	SW5030B	06/30/03	07/10/03	07/10/03	3G10010	1
MMG0039072220 030903	MW-5	MMG003901	W	CS	8260+OX	SW5030B	06/30/03	07/09/03	07/09/03	3G09009	1
MMG0039072220 030903	MW-8	MMG003902	W	CS	8260+OX	SW5030B	06/30/03	07/10/03	07/10/03	3G10010	1
		MMG003907R1	W	NC	8260+OX	SW5030B	//	07/09/03	07/09/03	3G09009	1
		3G09009BS1	WQ	BS1	8260+OX	SW5030B	//	07/09/03	07/09/03	3G09009	1
		3G09009BS2	WQ	BS2	8260+OX	SW5030B	//	07/09/03	07/09/03	3G09009	1
		3G09009BLK1	WQ	LB1	8260+OX	SW5030B	//	07/09/03	07/09/03	3G09009	1
		3G09009MS1	W	MS1	8260+OX	SW5030B	//	07/09/03	07/09/03	3G09009	1
		3G09009MSD1	W	SD1	8260+OX	SW5030B	//	07/09/03	07/09/03	3G09009	1
		3G10010BS1	WQ	BS1	8260+OX	SW5030B	//	07/10/03	07/10/03	3G10010	1
		3G10010BS2	WQ	BS2	8260+OX	SW5030B	//	07/10/03	07/10/03	3G10010	1
		3G10010BLK1	WQ	LB1	8260+OX	SW5030B	//	07/10/03	07/10/03	3G10010	1
		3G10010MS1	W	MS1	8260+OX	SW5030B	//	07/10/03	07/10/03	3G10010	1
		3G10010MSD1	W	SD1	8260+OX	SW5030B	//	07/10/03	07/10/03	3G10010	1

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## EDFSAMP: Error Summary Log

07/24/03

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

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## EDFTEST: Error Summary Log

07/24/03

Error type	Labsampid	Qccode	Anmcode	Exmcode	Anadate	Run number
There are no errors in this data file					11	0

## EDFRES: Error Summary Log

07/24/03

Error type	Labsampid	Qccode	Matrix	Anmcode	Pvccode	Anadate	Run number	Parlabel
Warning: extra parameter	3G09009MS1	MS1	W	8260+OX	PR	07/09/03	1	GROC6C10
Warning: extra parameter	3G09009MSD1	SD1	W	8260+OX	PR	07/09/03	1	GROC6C10
Warning: extra parameter	3G10010MS1	MS1	W	8260+OX	PR	07/10/03	1	GROC6C10
Warning: extra parameter	3G10010MSD1	SD1	W	8260+OX	PR	07/10/03	1	GROC6C10
Warning: extra parameter	MMG003901	CS	W	8260+OX	PR	07/09/03	1	GROC6C10
Warning: extra parameter	MMG003901	CS	W	8260+OX	PR	07/09/03	1	XYLENES
Warning: extra parameter	MMG003902	CS	W	8260+OX	PR	07/10/03	1	GROC6C10
Warning: extra parameter	MMG003902	CS	W	8260+OX	PR	07/10/03	1	XYLENES
Warning: extra parameter	MMG003903	CS	W	8260+OX	PR	07/10/03	1	GROC6C10
Warning: extra parameter	MMG003903	CS	W	8260+OX	PR	07/10/03	1	XYLENES
Warning: extra parameter	MMG003904	CS	W	8260+OX	PR	07/10/03	1	GROC6C10
Warning: extra parameter	MMG003904	CS	W	8260+OX	PR	07/10/03	1	XYLENES
Warning: extra parameter	MMG003905	CS	W	8260+OX	PR	07/10/03	1	GROC6C10
Warning: extra parameter	MMG003905	CS	W	8260+OX	PR	07/10/03	1	XYLENES
Warning: extra parameter	MMG003906	CS	W	8260+OX	PR	07/10/03	1	GROC6C10
Warning: extra parameter	MMG003906	CS	W	8260+OX	PR	07/10/03	1	XYLENES
Warning: extra parameter	MMG003907	CS	W	8260+OX	PR	07/10/03	1	GROC6C10
Warning: extra parameter	MMG003907	CS	W	8260+OX	PR	07/10/03	1	XYLENES
Warning: extra parameter	MMG003907R1	NC	W	8260+OX	PR	07/09/03	1	GROC6C10
Warning: extra parameter	3G09009BLK1	LB1	WQ	8260+OX	PR	07/09/03	1	GROC6C10
Warning: extra parameter	3G09009BLK1	LB1	WQ	8260+OX	PR	07/09/03	1	XYLENES
Warning: extra parameter	3G09009BS2	BS2	WQ	8260+OX	PR	07/09/03	1	GROC6C10
Warning: extra parameter	3G10010BLK1	LB1	WQ	8260+OX	PR	07/10/03	1	GROC6C10
Warning: extra parameter	3G10010BLK1	LB1	WQ	8260+OX	PR	07/10/03	1	XYLENES
Warning: extra parameter	3G10010BS2	BS2	WQ	8260+OX	PR	07/10/03	1	GROC6C10

## EDFQC: Error Summary Log

07/24/03

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

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## EDFCL: Error Summary Log

07/24/03

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

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**Confirmation Number:** 3951270520

**Date/Time of Submittal:** 7/24/2003 11:47:16 AM

**Facility Global ID:** T0600100085

**Facility Name:** ARCO # 00608

**Submittal Title:** Second Quarter 2003 Groundwater Monitoring Report Site #608

**Submittal Type:** GW Monitoring Report

Logged in as URSCORP-OAKLAND (CONTRACTOR)

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### UPLOADING A GEO\_WELL FILE

Processing is complete. No errors were found!  
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Submittal Title: Second Quarter 2003 Geo Well Site  
#608

Submittal Date/Time: 7/24/2003 11:48:19 AM

Confirmation Number: 9640949845

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