



November 13, 2003

Mr. Jeff Carson  
Oro Loma Sanitary District  
2600 Grant Avenue  
San Lorenzo, CA 94580

**Re: Monthly Discharge Report – October 2003**  
**Discharge Permit # SDP-037**  
**ARCO Service Station #0608**  
**17601 Hesperian Boulevard**  
**San Lorenzo, California**

Dear Mr. Carson:

On behalf of Atlantic Richfield Company (ARCO – an affiliated company of the Group Environmental Management Company), URS Corporation (URS) is operating a groundwater extraction and treatment (GWET) system at the site referenced above. This letter transmits GWET system operational data for the period between September 25 and October 23, 2003 (Tables 1 and 2). Operational parameters are summarized in the table shown below.

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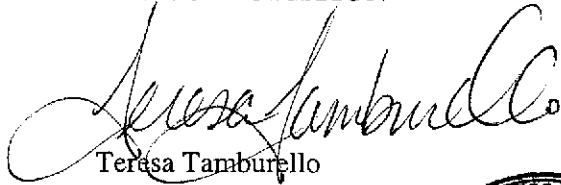
<i>Treatment System Status:</i>	<i>Operational</i>
<i>Reporting Period:</i>	9/25/03 to 10/23/03
<i>Period Volume Discharged:</i>	54,180 gallons
<i>Effluent pH Reading:</i>	6.82
<i>Period Flow Rate:</i>	1.34 gpm
<i>Analytical Reports:</i>	Attachment A
<i>O &amp; M Field Information:</i>	Attachment B

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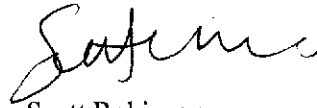
If you have any questions regarding this project or require further information, please do not hesitate to call me at 510-874-3099.

Sincerely,

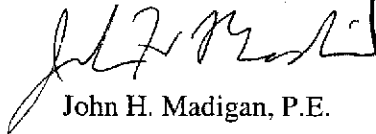
**URS CORPORATION**



Teresa Tamburello  
Staff Engineer



Scott Robinson  
Project Manager



John H. Madigan, P.E.



Attachments: Table 1 - Treatment System Metered Volume  
Table 2 - Treatment System Analytical Data  
Attachment A - Certified Analytical Report and Chain-of-Custody  
Documentation, October 23, 2003  
Attachment B - Operation and Maintenance Field Logs

cc: Mr. Paul Supple, ARCO, (electronic copy submitted to ENFOS)  
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  
Ms. eva chu, Alameda County Health Care Services Agency, 1131 Harbor Bay  
Parkway, Alameda, CA 94502

**Table I**  
**Treatment System Metered Volume**

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

Meter Reading Date	Hour Meter Reading (hours)	Total (hours)	System Downtime <sup>(b)</sup> (%)	Volume Reading (gallons)	Net Volume (gallons)	Cumulative Volume Removed (gallons)	Average Flow Rate (gpm)
06/05/00	a 29,593		97	979,800	3,200	3,200	2.1
06/19/00	29,896		10	1,052,390	72,590	75,790	4.0
06/28/00	30,062		23	1,082,340	29,950	105,740	3.0
07/08/00	30,352		0	1,131,560	49,220	154,960	2.8
07/26/00	30,749		8	1,196,420	64,860	219,820	2.7
08/07/00	30,955		28	1,228,020	31,600	251,420	2.6
08/29/00	31,309		33	1,276,650	48,630	300,050	2.3
09/08/00	31,528		9	1,306,300	29,650	329,700	2.3
09/28/00	32,011		0	1,368,410	62,110	391,810	2.1
10/28/00	32,638		13	1,444,183	75,773	467,583	2.0
11/30/00	33,399		4	1,534,960	90,777	558,360	2.0
12/28/00	33,761		46	1,576,520	41,560	599,920	1.9
01/04/01	33,924		3	1,595,340	18,820	618,740	1.9
02/06/01	34,556		20	1,672,330	76,990	695,730	2.0
03/08/01	34,776		70	1,698,860	26,530	722,260	2.0
03/24/01	35,088		19	1,741,170	42,310	764,570	2.3
04/05/01	35,310		23	1,767,530	26,360	790,930	2.0
04/18/01	35,335		92	1,770,860	3,330	794,260	2.3
05/04/01	35,716		1	1,812,690	41,830	836,090	1.8
06/09/01	36,345		27	1,879,710	67,020	903,110	1.8
07/05/01	b 36,469		80	1,897,180	17,470	920,580	2.3
07/28/01	36,821		36	1,928,250	31,070	951,650	1.5
08/14/01	c 36,822		100	1,928,510	260	951,910	5.4
09/05/01	37,219		25	1,977,050	48,540	1,000,450	2.0
10/05/01	37,932		1	2,040,950	63,900	1,064,350	1.5
11/13/01	38,820		5	2,119,670	78,720	1,143,070	1.5
12/11/01	39,496		0	2,186,530	66,860	1,209,930	1.6
01/04/02	40,063		2	2,248,700	62,170	1,272,100	1.8
01/31/02	40,716		0	2,321,310	72,610	1,344,710	1.9
02/05/02	40,830		5	2,333,090	11,780	1,356,490	1.7
02/25/02	40,831		100	2,333,270	180	1,356,670	1.7
03/05/02	40,968		29	2,353,460	20,190	1,376,860	2.5
04/08/02	41,735		6	2,448,360	94,900	1,471,760	2.1
05/04/02	42,362		0	2,487,090	38,730	1,510,490	1.0
05/31/02	d 42,832		27	2,503,380	16,290	1,526,780	0.6
08/19/02	44,925		0	2,520,289	16,909	1,543,689	0.1
10/03/02	e 44,956		97	2,520,582	293	1,543,982	N/A
10/07/02	e 44,956		100	2,522,394	1,812	1,545,794	N/A
10/24/02	e 44,956		100	2,527,898	5,504	1,551,298	N/A
11/07/02	f 0	44,956	-	2,527,925	27	1,551,325	N/A
11/21/02	336	45,292	0	2,527,945	20	1,551,345	0.00
12/05/02	g 479	45,435	58	2,528,113	168	1,551,513	0.02
12/18/02	g 788	45,744	1	2,555,895	27,782	1,579,295	1.50
01/03/02	g 1,174	46,130	100	2,591,359	35,464	1,614,759	1.53
01/16/03	g 1,486	46,442	97	2,625,812	34,453	1,649,212	1.84
02/13/03	g 2,156	47,112	0	2,692,710	66,898	1,716,110	1.67
03/13/03	g 2,832	47,788	0	2,758,948	66,238	1,782,348	1.63
03/27/03	g 3,165	48,121	1	2,790,668	31,720	1,814,068	1.58
04/10/03	3,500	48,456	0	2,828,060	37,392	1,851,460	1.86

**Table 1**  
**Treatment System Metered Volume**

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

Meter Reading Date	Hour Meter Reading (hours)	Total (hours)	System Downtime <sup>(k)</sup> (%)	Volume Reading (gallons)	Net Volume (gallons)	Cumulative Volume Removed (gallons)	Average Flow Rate (gpm)
04/24/03	3,837	48,793	0	2,865,050	36,990	1,888,450	1.83
05/08/03	4,172	49,128	0	2,900,937	35,887	1,924,337	1.79
05/22/03	4,459 h	49,415	14	2,931,190	30,253	1,954,590	1.75
05/30/03	4,459 i	49,415	100	2,931,190	0	1,954,590	0.00
06/05/03	4,606	49,562	0	2,946,180	14,990	1,969,580	1.69
06/19/03	4,940	49,896	1	2,971,985	25,805	1,995,385	1.29
07/11/03	4,940	49,896	100	2,971,985	0	1,995,385	0.00
07/24/03	5,331	50,287	0	2,972,362	377	1,995,762	0.02
08/14/03	5,831	50,787	1	3,013,517	41,532	2,036,917	0.78
08/28/03	6,165	51,121	1	3,040,900	27,383	2,064,300	1.37
09/11/03	6,503	51,459	0	3,067,641	26,741	2,091,041	1.32
09/25/03	6,838	51,794	0	3,095,020	27,379	2,118,420	1.36
10/09/03	7,176	52,132	0	3,122,624	27,604	2,146,024	1.36
10/23/03	7,512	52,468	0	3,149,200	26,576	2,172,600	1.32
<b>REPORTING PERIOD:</b>						<b>09/25/03 to 10/23/03</b>	
<b>PERIOD AVERAGE FLOW RATE (gpm):</b>							<b>1.34</b>
<b>PERIOD VOLUME DISCHARGED:</b>							<b>54,180</b>

gpm = Gallons per minute

N/A = Not available or not applicable

Initial 3-hour startup pumping period May 31, 2000

- a. System restarted 6/5/00 (previously ran 9/25/91 - 8/21/95)
- b. System down during construction to main sewer line starting 6/25/01.
- c. System restarted 8/14/01 following completion of construction work.
- d. Hour meter reading not recorded. Estimated hours using last 3 months average.
- e. Hour meter reading not functioning.
- f. Hour meter replaced.
- g. An error in the table has been corrected to show correct flow rate values.
- h. System was down upon arrival due to utility power outage.
- i. System restarted 5/30/03 after power restored to system.
- j. System was down upon arrival due pump overload. Pump was pulled for cleaning and inspection
- k. Downtime calculated by the following:  $100 - \{(\text{Hours Running in Period}) / ((\text{Days in Reporting Period}) * (24 \text{ hours/day}))\}$

**Table 2**  
**Treatment System Analytical Data**  
**Total Petroleum Hydrocarbons**  
**(TPH as Gasoline and BTEX Compounds)**

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>INFL (influent to primary carbon)</b>										
09/26/91	38	4.8	0.6	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 2**  
**Treatment System Analytical Data**  
**Total Petroleum Hydrocarbons**  
**(TPH as Gasoline and BTEX Compounds)**

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>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
07/24/03	51	ND<0.50	ND<0.50	ND<0.50	ND<0.50	41 (47)**	NS	NS	NA	NA
08/28/03	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	30 (40)**	NS	NS	NA	NA
09/25/03	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	28	NS	NS	NA	NA
10/23/03	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	28 (28)**	NS	NS	NA	NA

**Table 2**  
**Treatment System Analytical Data**  
**Total Petroleum Hydrocarbons**  
**(TPH as Gasoline and BTEX Compounds)**

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 (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 2**  
**Treatment System Analytical Data**  
**Total Petroleum Hydrocarbons**  
**(TPH as Gasoline and BTEX Compounds)**

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<2.50	NS	NS	NA	NA
11/07/00	ND<50.0	ND<0.500	ND<0.500	ND<0.500	ND<0.500	ND<2.50	NS	NS	NA	NA
12/05/00	ND<50.0	ND<0.500	ND<0.500	ND<0.500	ND<0.500	ND<2.50	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	3.3	NS	NS	NA	NA
12/11/01	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	5.7	NS	NS	NA	NA
01/04/02	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	9.0	NS	NS	NA	NA
02/05/02	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	26	NS	NS	NA	NA
03/05/02	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	17	NS	NS	NA	NA
04/08/02	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	39	NS	NS	NA	NA
05/16/02	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	58	NS	NS	NA	NA
10/07/02	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	55	NS	NS	NA	NA
11/07/02	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	100	NS	NS	NA	NA
12/05/02	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	51	NS	NS	NA	NA
01/03/03	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	66	NS	NS	NA	NA
2/13/03*	ND<250	ND<2.5	ND<2.5	ND<2.5	ND<2.5	130	NS	NS	NA	NA
3/27/03*	ND<250	ND<2.5	ND<2.5	ND<2.5	ND<2.5	120	NS	NS	NA	NA
4/24/03*	280	ND<2.5	ND<2.5	ND<2.5	ND<2.5	110	NS	NS	NA	NA
5/30/03*	ND<250	ND<2.5	ND<2.5	ND<2.5	ND<2.5	140	NS	NS	NA	NA
06/19/03	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	110	NS	NS	NA	NA
07/24/03	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<2.5	NS	NS	NA	NA
08/28/03	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<2.5	NS	NS	NA	NA
09/25/03	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<2.5	NS	NS	NA	NA
10/23/03	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<2.5 (1.3)**	NS	NS	NA	NA



**Table 2**  
**Treatment System Analytical Data**  
**Total Petroleum Hydrocarbons**  
**(TPH as Gasoline and BTEX Compounds)**

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>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
07/24/03	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<2.5	NS	NS	NA	NA
08/28/03	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<2.5	NS	NS	NA	NA
09/25/03	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<2.5	NS	NS	NA	NA
10/23/03	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<2.5 (<0.5)**	NS	NS	NA	NA

**Table 2**  
**Treatment System Analytical Data**  
**Total Petroleum Hydrocarbons**  
**(TPH as Gasoline and BTEX Compounds)**

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>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
01/16/91	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	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

**Table 2**  
**Treatment System Analytical Data**  
**Total Petroleum Hydrocarbons**  
**(TPH as Gasoline and BTEX Compounds)**

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>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
07/24/03	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<2.5	ND<20	ND<10	7.07	3.00
08/28/03	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<2.5	ND<20	ND<10	7.03	2.12
09/25/03	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<2.5	ND<20	ND<10	6.79	2.70
10/23/03	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<2.5 (<0.5)**	ND<20	ND<10	6.82	3.45

- 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
- $\mu\text{g/L}$  =Micrograms per liter
- mg/L =Milligrams per liter
- ND< =Not detected above the laboratory reporting limit.
- NA =Not applicable or not available
- NS =Not sampled
- \* =Analyzed with EPA Method 8260
- \*\* =MTBE concentration analyzed by EPA methods 8021B and 8260B (Results of EPA Method 8260 shown in parenthesis).

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.

**ATTACHMENT A**

**CERTIFIED ANALYTICAL REPORT  
AND CHAIN-OF-CUSTODY DOCUMENTATION  
SEPTEMBER 25, 2003**



6 November, 2003

Scott Robinson  
URS Corp. - Oakland  
500 12th St. Suite 200  
Oakland, CA 94607

RE: Arco Site #608, San Lorenzo, CA  
Work Order: P310549

Enclosed are the results of analyses for samples received by the laboratory on 10/23/03 15:00. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Angelee Cari  
Project Manager

CA ELAP Certificate #2374



URS Corp. - Oakland  
500 12th St. Suite 200  
Oakland CA, 94607

Project: Arco Site #608, San Lorenzo, CA  
Project Number: [none]  
Project Manager: Scott Robinson

P310549  
**Reported:**  
11/06/03 19:22

**ANALYTICAL REPORT FOR SAMPLES**

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
INFL	P310549-01	Water	10/23/03 11:45	10/23/03 15:00
MID-1	P310549-02	Water	10/23/03 11:40	10/23/03 15:00
MID-2	P310549-03	Water	10/23/03 11:35	10/23/03 15:00
EFFL	P310549-04	Water	10/23/03 11:30	10/23/03 15:00

Samples were not received with custody seals.

URS Corp. - Oakland  
 500 12th St. Suite 200  
 Oakland CA, 94607

 Project: Arco Site #608, San Lorenzo, CA  
 Project Number: [none]  
 Project Manager: Scott Robinson

 P310549  
 Reported:  
 11/06/03 19:22

**Purgeable Hydrocarbons and BTEX by EPA 8015B/8021B**  
**Sequoia Analytical - Petaluma**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>INFL (P310549-01) Water Sampled: 10/23/03 11:45 Received: 10/23/03 15:00</b>									
Gasoline Range Organics	ND	50	ug/l	1	3110025	11/03/03	11/03/03	EPA 8015B/8021B	
Benzene	ND	0.50	"	"	"	"	"	"	
Toluene	ND	0.50	"	"	"	"	"	"	
Ethylbenzene	ND	0.50	"	"	"	"	"	"	
Xylenes (total)	ND	0.50	"	"	"	"	"	"	
Methyl tert-butyl ether	28	2.5	"	"	"	"	"	"	
<i>Surrogate: a,a,a-Trifluorotoluene</i>		106 %		65-135	"	"	"	"	
<i>Surrogate: 4-Bromofluorobenzene</i>		93 %		65-135	"	"	"	"	
<b>MID-1 (P310549-02) Water Sampled: 10/23/03 11:40 Received: 10/23/03 15:00</b>									
Gasoline Range Organics	ND	50	ug/l	1	3110025	11/03/03	11/03/03	EPA 8015B/8021B	
Benzene	ND	0.50	"	"	"	"	"	"	
Toluene	ND	0.50	"	"	"	"	"	"	
Ethylbenzene	ND	0.50	"	"	"	"	"	"	
Xylenes (total)	ND	0.50	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	2.5	"	"	"	"	"	"	
<i>Surrogate: a,a,a-Trifluorotoluene</i>		106 %		65-135	"	"	"	"	
<i>Surrogate: 4-Bromofluorobenzene</i>		94 %		65-135	"	"	"	"	
<b>MID-2 (P310549-03) Water Sampled: 10/23/03 11:35 Received: 10/23/03 15:00</b>									
Gasoline Range Organics	ND	50	ug/l	1	3110025	11/03/03	11/03/03	EPA 8015B/8021B	
Benzene	ND	0.50	"	"	"	"	"	"	
Toluene	ND	0.50	"	"	"	"	"	"	
Ethylbenzene	ND	0.50	"	"	"	"	"	"	
Xylenes (total)	ND	0.50	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	2.5	"	"	"	"	"	"	
<i>Surrogate: a,a,a-Trifluorotoluene</i>		106 %		65-135	"	"	"	"	
<i>Surrogate: 4-Bromofluorobenzene</i>		97 %		65-135	"	"	"	"	

URS Corp. - Oakland  
500 12th St. Suite 200  
Oakland CA, 94607

Project: Arco Site #608, San Lorenzo, CA  
Project Number: [none]  
Project Manager: Scott Robinson

P310549  
Reported:  
11/06/03 19:22

**Purgeable Hydrocarbons and BTEX by EPA 8015B/8021B**

**Sequoia Analytical - Petaluma**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>EFFL (P310549-04) Water</b> <b>Sampled: 10/23/03 11:30</b> <b>Received: 10/23/03 15:00</b>									
Gasoline Range Organics	ND	50	ug/l	1	3110025	11/03/03	11/03/03	EPA 8015B/8021B	
Benzene	ND	0.50	"	"	"	"	"	"	
Toluene	ND	0.50	"	"	"	"	"	"	
Ethylbenzene	ND	0.50	"	"	"	"	"	"	
Xylenes (total)	ND	0.50	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	2.5	"	"	"	"	"	"	
Surrogate: <i>a,a,a</i> -Trifluorotoluene		107 %		65-135	"	"	"	"	
Surrogate: <i>4</i> -Bromofluorobenzene		94 %		65-135	"	"	"	"	



URS Corp. - Oakland  
 500 12th St. Suite 200  
 Oakland CA, 94607

 Project: Arco Site #608, San Lorenzo, CA  
 Project Number: [none]  
 Project Manager: Scott Robinson

 P310549  
 Reported:  
 11/06/03 19:22

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

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>INFL (P310549-01) Water    Sampled: 10/23/03 11:45    Received: 10/23/03 15:00</b>									
<b>Tert-amyl methyl ether</b>	<b>1.3</b>	1.0	ug/l	1	3100829	10/31/03	10/31/03	EPA 8260B	
Tert-butyl alcohol	ND	20	"	"	"	"	"	"	
Di-isopropyl ether	ND	1.0	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	0.50	"	"	"	"	"	"	
1,2-Dichloroethane	ND	0.50	"	"	"	"	"	"	
Ethanol	ND	100	"	"	"	"	"	"	
Ethyl tert-butyl ether	ND	1.0	"	"	"	"	"	"	
<b>Methyl tert-butyl ether</b>	<b>28</b>	0.50	"	"	"	"	"	"	
<i>Surrogate: Dibromofluoromethane</i>		111 %	84-122		"	"	"	"	
<i>Surrogate: 1,2-Dichloroethane-d4</i>		123 %	74-135		"	"	"	"	
<i>Surrogate: Toluene-d8</i>		97 %	84-119		"	"	"	"	
<b>MID-1 (P310549-02) Water    Sampled: 10/23/03 11:40    Received: 10/23/03 15:00</b>									
Tert-amyl methyl ether	ND	1.0	ug/l	1	3100829	10/31/03	10/31/03	EPA 8260B	
Tert-butyl alcohol	ND	20	"	"	"	"	"	"	
Di-isopropyl ether	ND	1.0	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	0.50	"	"	"	"	"	"	
1,2-Dichloroethane	ND	0.50	"	"	"	"	"	"	
Ethanol	ND	100	"	"	"	"	"	"	
Ethyl tert-butyl ether	ND	1.0	"	"	"	"	"	"	
<b>Methyl tert-butyl ether</b>	<b>1.3</b>	0.50	"	"	"	"	"	"	
<i>Surrogate: Dibromofluoromethane</i>		113 %	84-122		"	"	"	"	
<i>Surrogate: 1,2-Dichloroethane-d4</i>		123 %	74-135		"	"	"	"	
<i>Surrogate: Toluene-d8</i>		98 %	84-119		"	"	"	"	

URS Corp. - Oakland  
500 12th St. Suite 200  
Oakland CA, 94607

Project: Arco Site #608, San Lorenzo, CA  
Project Number: [none]  
Project Manager: Scott Robinson

P310549  
**Reported:**  
11/06/03 19:22

**Volatile Organic Compounds by EPA Method 8260B**

**Sequoia Analytical - Petaluma**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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**MID-2 (P310549-03) Water** Sampled: 10/23/03 11:35 Received: 10/23/03 15:00

Tert-amyl methyl ether	ND	1.0	ug/l	1	3100829	10/31/03	10/31/03	EPA 8260B	
Tert-butyl alcohol	ND	20	"	"	"	"	"	"	
Di-isopropyl ether	ND	1.0	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	0.50	"	"	"	"	"	"	
1,2-Dichloroethane	ND	0.50	"	"	"	"	"	"	
Ethanol	ND	100	"	"	"	"	"	"	
Ethyl tert-butyl ether	ND	1.0	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	0.50	"	"	"	"	"	"	
<i>Surrogate: Dibromofluoromethane</i>		113 %	84-122		"	"	"	"	
<i>Surrogate: 1,2-Dichloroethane-d4</i>		130 %	74-135		"	"	"	"	
<i>Surrogate: Toluene-d8</i>		98 %	84-119		"	"	"	"	

**EFFL (P310549-04) Water** Sampled: 10/23/03 11:30 Received: 10/23/03 15:00

Tert-amyl methyl ether	ND	1.0	ug/l	1	3100829	10/31/03	10/31/03	EPA 8260B	
Tert-butyl alcohol	ND	20	"	"	"	"	"	"	
Di-isopropyl ether	ND	1.0	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	0.50	"	"	"	"	"	"	
1,2-Dichloroethane	ND	0.50	"	"	"	"	"	"	
Ethanol	ND	100	"	"	"	"	"	"	
Ethyl tert-butyl ether	ND	1.0	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	0.50	"	"	"	"	"	"	
<i>Surrogate: Dibromofluoromethane</i>		111 %	84-122		"	"	"	"	
<i>Surrogate: 1,2-Dichloroethane-d4</i>		127 %	74-135		"	"	"	"	
<i>Surrogate: Toluene-d8</i>		96 %	84-119		"	"	"	"	



URS Corp. - Oakland  
500 12th St. Suite 200  
Oakland CA, 94607

Project: Arco Site #608, San Lorenzo, CA  
Project Number: [none]  
Project Manager: Scott Robinson

P310549  
Reported:  
11/06/03 19:22

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

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
<b>EFFL (P310549-04) Water    Sampled: 10/23/03 11:30    Received: 10/23/03 15:00</b>										
Chemical Oxygen Demand	ND	20000		ug/l	1	3110102	11/05/03	11/05/03	EPA 410.4	
Total Suspended Solids	ND	10000		"	"	3100779	10/30/03	10/30/03	EPA 160.2	

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 Project Number: [none]  
 Project Manager: Scott Robinson

 P310549  
 Reported:  
 11/06/03 19:22

**Purgeable Hydrocarbons and BTEX by EPA 8015B/8021B - Quality Control  
Sequoia Analytical - Petaluma**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch 3110025 - EPA 5030, waters**
**Blank (3110025-BLK1)**

Prepared &amp; Analyzed: 11/03/03

Gasoline Range Organics	ND	50	ug/l							
Benzene	ND	0.50	"							
Toluene	ND	0.50	"							
Ethylbenzene	ND	0.50	"							
Xylenes (total)	ND	0.50	"							
Methyl tert-butyl ether	ND	2.5	"							
<i>Surrogate: a,a,a-Trifluorotoluene</i>	307		"	300		102	65-135			
<i>Surrogate: 4-Bromofluorobenzene</i>	287		"	300		96	65-135			

**Laboratory Control Sample (3110025-BS1)**

Prepared &amp; Analyzed: 11/03/03

Gasoline Range Organics	2350	50	ug/l	2750		85	65-135			
Benzene	42.4	0.50	"	40.5		105	65-135			
Toluene	223	0.50	"	208		107	65-135			
Ethylbenzene	48.9	0.50	"	45.0		109	65-135			
Xylenes (total)	231	0.50	"	218		106	65-135			
Methyl tert-butyl ether	74.9	2.5	"	63.0		119	65-135			
<i>Surrogate: a,a,a-Trifluorotoluene</i>	351		"	300		117	65-135			
<i>Surrogate: 4-Bromofluorobenzene</i>	303		"	300		101	65-135			

**Matrix Spike (3110025-MS1)**

Source: P310534-01

Prepared &amp; Analyzed: 11/03/03

Gasoline Range Organics	2370	50	ug/l	2750	21	85	65-135			
Benzene	41.6	0.50	"	40.5	ND	103	65-135			
Toluene	225	0.50	"	208	0.37	108	65-135			
Ethylbenzene	49.2	0.50	"	45.0	ND	109	65-135			
Xylenes (total)	237	0.50	"	218	ND	109	65-135			
Methyl tert-butyl ether	92.1	2.5	"	63.0	25	107	65-135			
<i>Surrogate: a,a,a-Trifluorotoluene</i>	341		"	300		114	65-135			
<i>Surrogate: 4-Bromofluorobenzene</i>	300		"	300		100	65-135			

URS Corp. - Oakland  
 500 12th St. Suite 200  
 Oakland CA, 94607

 Project: Arco Site #608, San Lorenzo, CA  
 Project Number: [none]  
 Project Manager: Scott Robinson

 P310549  
**Reported:**  
 11/06/03 19:22

**Purgeable Hydrocarbons and BTEX by EPA 8015B/8021B - Quality Control**  
**Sequoia Analytical - Petaluma**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch 3110025 - EPA 5030, waters**
**Matrix Spike Dup (3110025-MSD1)**
**Source: P310534-01**
**Prepared & Analyzed: 11/03/03**

Gasoline Range Organics	2340	50	ug/l	2750	21	84	65-135	1	20	
Benzene	42.4	0.50	"	40.5	ND	105	65-135	2	20	
Toluene	223	0.50	"	208	0.37	107	65-135	0.9	20	
Ethylbenzene	48.5	0.50	"	45.0	ND	108	65-135	1	20	
Xylenes (total)	232	0.50	"	218	ND	106	65-135	2	20	
Methyl tert-butyl ether	110	2.5	"	63.0	25	135	65-135	18	20	
<i>Surrogate: a, a, a-Trifluorotoluene</i>	<i>351</i>		<i>"</i>	<i>300</i>		<i>117</i>	<i>65-135</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>301</i>		<i>"</i>	<i>300</i>		<i>100</i>	<i>65-135</i>			

URS Corp. - Oakland  
 500 12th St. Suite 200  
 Oakland CA, 94607

 Project: Arco Site #608, San Lorenzo, CA  
 Project Number: [none]  
 Project Manager: Scott Robinson

 P310549  
 Reported:  
 11/06/03 19:22

### Volatile Organic Compounds by EPA Method 8260B - Quality Control

#### Sequoia Analytical - Petaluma

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch 3100829 - EPA 5030 waters**
**Blank (3100829-BLK1)**

Prepared &amp; Analyzed: 10/31/03

Tert-amyl methyl ether	ND	1.0	ug/l							
Tert-butyl alcohol	ND	20	"							
Di-isopropyl ether	ND	1.0	"							
1,2-Dibromoethane (EDB)	ND	0.50	"							
1,2-Dichloroethane	ND	0.50	"							
Ethanol	ND	100	"							
Ethyl tert-butyl ether	ND	1.0	"							
Methyl tert-butyl ether	ND	0.50	"							
<i>Surrogate: Dibromofluoromethane</i>	5.36		"	5.00		107	84-122			
<i>Surrogate: 1,2-Dichloroethane-d4</i>	5.92		"	5.00		118	74-135			
<i>Surrogate: Toluene-d8</i>	4.94		"	5.00		99	84-119			

**Laboratory Control Sample (3100829-BS1)**

Prepared &amp; Analyzed: 10/31/03

Tert-amyl methyl ether	5.56	1.0	ug/l	5.00		111	70-116			
Tert-butyl alcohol	97.4	20	"	100		97	62-142			
Di-isopropyl ether	5.82	1.0	"	5.00		116	71-121			
1,2-Dibromoethane (EDB)	5.57	0.50	"	5.00		111	92-117			
1,2-Dichloroethane	4.87	0.50	"	5.00		97	79-126			
Ethanol	100	100	"	100		100	65-135			
Ethyl tert-butyl ether	5.72	1.0	"	5.00		114	71-110			Q-29
Methyl tert-butyl ether	5.97	0.50	"	5.00		119	77-123			
<i>Surrogate: Dibromofluoromethane</i>	5.06		"	5.00		101	84-122			
<i>Surrogate: 1,2-Dichloroethane-d4</i>	5.04		"	5.00		101	74-135			
<i>Surrogate: Toluene-d8</i>	5.09		"	5.00		102	84-119			

**Laboratory Control Sample Dup (3100829-BSD1)**

Prepared &amp; Analyzed: 10/31/03

Tert-amyl methyl ether	4.92	1.0	ug/l	5.00		98	70-116	12	20	
Tert-butyl alcohol	92.7	20	"	100		93	62-142	5	20	
Di-isopropyl ether	4.93	1.0	"	5.00		99	71-121	17	20	
1,2-Dibromoethane (EDB)	5.70	0.50	"	5.00		114	92-117	2	20	
1,2-Dichloroethane	5.33	0.50	"	5.00		107	79-126	9	20	
Ethanol	78.0	100	"	100		78	65-135	25	20	QR-02
Ethyl tert-butyl ether	5.46	1.0	"	5.00		109	71-110	5	20	
Methyl tert-butyl ether	5.04	0.50	"	5.00		101	77-123	17	20	
<i>Surrogate: Dibromofluoromethane</i>	5.51		"	5.00		110	84-122			
<i>Surrogate: 1,2-Dichloroethane-d4</i>	5.68		"	5.00		114	74-135			

Sequoia Analytical - Petaluma

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



URS Corp. - Oakland  
500 12th St. Suite 200  
Oakland CA, 94607

Project: Arco Site #608, San Lorenzo, CA  
Project Number: [none]  
Project Manager: Scott Robinson

P310549  
Reported:  
11/06/03 19:22

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch 3100829 - EPA 5030 waters**

**Laboratory Control Sample Dup (3100829-BSD1)**

Prepared & Analyzed: 10/31/03

Surrogate: Toluene-d8	5.20		ug/l	5.00		104	84-119			
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Oakland CA, 94607

Project: Arco Site #608, San Lorenzo, CA  
Project Number: [none]  
Project Manager: Scott Robinson

P310549  
**Reported:**  
11/06/03 19:22

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch 3100779 - General Preparation</b>										
<b>Blank (3100779-BLK1)</b> Prepared & Analyzed: 10/30/03										
Total Suspended Solids	ND	10000	ug/l							
<b>Duplicate (3100779-DUP1)</b> Source: P310549-04 Prepared & Analyzed: 10/30/03										
Total Suspended Solids	ND	10000	ug/l		ND				20	
<b>Batch 3110102 - General Preparation</b>										
<b>Blank (3110102-BLK1)</b> Prepared & Analyzed: 11/05/03										
Chemical Oxygen Demand	ND	20000	ug/l							
<b>Laboratory Control Sample (3110102-BS1)</b> Prepared & Analyzed: 11/05/03										
Chemical Oxygen Demand	249000	20000	ug/l	250000		100	80-120			
<b>Matrix Spike (3110102-MS1)</b> Source: P310549-04 Prepared & Analyzed: 11/05/03										
Chemical Oxygen Demand	420000	20000	ug/l	500000	ND	84	75-125			
<b>Matrix Spike Dup (3110102-MSD1)</b> Source: P310549-04 Prepared & Analyzed: 11/05/03										
Chemical Oxygen Demand	416000	20000	ug/l	500000	ND	83	75-125	1	20	





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Oakland CA, 94607

Project: Arco Site #608, San Lorenzo, CA  
Project Number: [none]  
Project Manager: Scott Robinson

P310549  
**Reported:**  
11/06/03 19:22

### Notes and Definitions

- Q-29 The percent recovery in the quality control analyte exceeded the upper control limit. Because there was no detectable amount of this compound in the associated sample, the result has been reported.
- QR-02 The RPD result exceeded the control limits; however, both percent recoveries were acceptable. Sample results for the QC batch were accepted based on percent recoveries and completeness of QC data.
- DET Analyte DETECTED
- ND Analyte NOT DETECTED at or above the reporting limit
- NR Not Reported
- dry Sample results reported on a dry weight basis
- RPD Relative Percent Difference



# 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 6 1 0 0 0

On-site Time:	<u>1130</u>	Temp:	<u>67</u>
Off-site Time:	<u>1230</u>	Temp:	<u>72</u>
Sky Conditions:	<u>Clear, Sunny w/ clouds</u>		
Meteorological Events:	<u>None</u>		
Wind Speed:	<u>N/A</u>	Direction:	<u>N/A</u>

Date: 10/23/03

Requested Due Date: 11/6/03  
 (mm/dd/yy - 2 weeks from sampling date)

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.	Site ID No. Station 608	Oakland, CA 94607
Suite D	California Global ID #:T0600101665	e-mail EDD: NO EDD
Petaluma, CA 95954	BP:GEM PM Contact: Paul Supple	Consultant Project No.: 38486167.00327
Lab PM: Angelee Cari	Address: P.O. Box 6549, Moraga, CA 94570	Consultant Tele/Fax: 510-874-3280/510-874-3268
Tele/Fax: 707-792-7527 / 707-792-0342	Tele/Fax: 925-299-8891/925-299-8872	Consultant PM: Scott Robinson
Report Type & QC Level: 1		Invoice to: Atlantic Richfield Company
BP:GEM Account No.:		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		
				Soil/Solid	Water/Liquid	Sediments	Air			Unpreserved	H <sub>2</sub> SO <sub>4</sub>	HNO <sub>3</sub>	HCl	TPH-g (8015)	BTEX (8021)	MTBE (8021)	COD	TSS	Fuel Oxy. (8260)			
1	INFL	INFL	<u>1145</u>	X				<u>P310549-1</u>	3				X	X	X		X					
2	MID-1	MID-1	<u>1140</u>	X				<u>-2</u>	3				X	X	X		X					
3	MID-2	MID-2	<u>1135</u>	X				<u>-3</u>	3				X	X	X		X					
4	EFFL	EFFL	<u>1130</u>	X				<u>-4</u>	7	X	X	X	X	X	X	X	X	X				
5																						
6																						
7																						
8																						
9																						
10																						

COOLER CUSTODY SEALS INTACT   
 NOT INTACT   
 COOLER TEMPERATURE 4.2 °C

Sampler's Name: <u>George Bradshaw</u>	Relinquished By: <u>[Signature]</u>	Date: <u>10/23</u>	Time: <u>180</u>	Accepted By / Affiliation: <u>[Signature]</u>	Date: <u>10/23/03</u>	Time: <u>1500</u>
Sampler's Company: <u>URS Oakland</u>						
Shipment Date:					<u>10-24</u>	<u>1500</u>
Shipment Method: <u>Hand Deliver</u>						<u>1630</u>
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 x Temperature Blank Yes No x Cooler Temperature on Receipt 4.2 °F/C Trip Blank Yes No x

## SEQUOIA ANALYTICAL SAMPLE RECEIPT LOG

**CLIENT NAME:** URS -BP  
**REC. BY (PRINT):** ACI  
**WORKORDER:** P310549

**DATE Received at Lab:** 10-24-23  
**TIME Received at Lab:** 1630  
**LOG IN DATE:** 10/24/23

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

CIRCLE THE APPROPRIATE RESPONSE		LAB SAMPLE #	#	CLIENT ID	DESCRIPTION	SAMPLE MATRIX	DATE SAMPLED	CONDITION (ETC.)
1. Custody Seal(s)	Present / <input checked="" type="radio"/> Absent			INFL	3xPV	W	10-23	
	Intact / Broken*			MID-1	↓	↓	↓	
2. Chain-of-Custody	<input checked="" type="radio"/> Present / Absent*			MID-2	↓	↓	↓	
3. Traffic Reports or Packing List:	Present / <input checked="" type="radio"/> Absent			EFFL	3xPV, 3xPV H2O2 1LP	↓	↓	
4. Airbill:	Airbill / Sticker Present / <input checked="" type="radio"/> Absent			↓				
5. Airbill #:								
6. Sample Labels:	<input checked="" type="radio"/> Present / Absent							
7. Sample IDs:	<input checked="" type="radio"/> Listed / Not Listed on Chain-of-Custody							
8. Sample Condition:	<input checked="" type="radio"/> Intact / Broken* / Leaking*							
9. Does information on custody reports, traffic reports and sample labels agree?	<input checked="" type="radio"/> Yes / No*							
10. Sample received within hold time:	<input checked="" type="radio"/> Yes / No*							
11. Proper Preservatives used:	<input checked="" type="radio"/> Yes / No*							
12. Temp Rec. at Lab: (Acceptance range for samples requiring thermal pres.: 4+/-2°C)	<u>4.2</u> <input checked="" type="radio"/> Yes / No*							

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

**ATTACHMENT B**

**OPERATION AND MAINTENANCE FIELD LOGS**

Date: 10/9/03

**Groundwater Extraction & Treatment System**  
**ARCO Service Station 0608**  
**17601 Hesperian Boulevard**  
**38486314.0L041**  
**August 14, 2003**

**System Description:**

**Groundwater Pumps**

Well	Type	Size	Control	Set Depth (TOB)
E-1A	Electric	3"	panel	23.9'

Carbon Vessels: Three ASC-2,400  
 Filter: Rosedale P2 25 micron

**PART A: SYSTEM DATA (Semi-Monthly)**

System on upon arrival? Operating (if no, specify reason in comments)

ELECTRIC METER READING (kw hrs)	<u>35192</u>	HOUR METER READING (hrs)	<u>7175.6</u>
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MEASUREMENT	ON ARRIVAL	ON-DEPARTURE
TOTALIZER (gallons)	<u>3122611</u>	<u>3122624</u>
FILTER INLET PRESSURE (psig)	<u>11</u>	(ideal range: 8 to 12 psig)
CARBON #1 INLET PRESSURE (psig)	<u>9.4</u>	(ideal range: 5 to 9 psig)
CARBON #2 INLET PRESSURE (psig)	<u>9.2</u>	(ideal range: 1 to 4 psig)
DISCHARGE PRESSURE (psig)	<u>0</u>	(ideal range: 0 to 2 psig)

**PART B: COMMENTS**

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**PART C: WELL DATA (Monthly)**

\* ALLOW SYSTEM TO RUN 1 HOUR BEFORE OBTAINING DTW READINGS

WELL	DTW (TOB)	TOTALIZER (gallons)	FLOWRATE (gpm)	COMMENTS/ ADJUSTMENTS
E-1A				
UST-A		N/A	N/A	
UST-B		N/A	N/A	
SP1-V4		N/A	N/A	

**PART D: SAMPLING (Monthly)**

SAMPLE	ANALYSIS	COMPLETED
INFLUENT	TPH-gasoline, BTEX compounds, MtBE	
EFFLUENT	TPH-gasoline, BTEX compounds, MtBE COD, TSS	
MID-1	TPH-gasoline, BTEX compounds, MtBE	
MID-2	TPH-gasoline, BTEX compounds, MtBE	

**PART E: READINGS (Monthly)**

EFFLUENT	TEMP (°F)	CONDUCTIVITY (umhos)	pH (units)	DISSOLVED OXYGEN (ppm)

**PART F: SYSTEM MAINTENANCE I (Monthly)**

NUMBER OF SPARE FILTERS ON SITE?	0	CHANGE FILTERS? (if necessary)	Yes
PUMP AMP DRAW	N/A	H2O2 injection well EA-1 (if necessary)	N/A
SWEEP ENCLOSURE	No		

**PART G: SYSTEM MAINTENANCE II (Quarterly)**

TEST ALARM SWITCHES		BACKFLUSH CARBONS	
CLEAN TOTALIZERS			

Date: 8/23/03

**Groundwater Extraction & Treatment System**  
**ARCO Service Station 0608**  
 17601 Hesperian Boulevard  
 38486314.0L041  
 August 14, 2003

**System Description:**

Groundwater Pumps				
Well	Type	Size	Control	Set Depth (TOB)
E-1A	Electric	3"	panel	23.9'

Carbon Vessels: Three ASC-2.400  
 Filter: Rosedale P2 25 micron

**PART A: SYSTEM DATA (Semi-Monthly)**

System on upon arrival? Operating (if no. specify reason in comments)

ELECTRIC METER READING (kw hrs)	35247	HOUR METER READING (hrs)	7511.7
		Time:	1130

MEASUREMENT	ON ARRIVAL	ON DEPARTURE
TOTALIZER (gallons)	3149124	3149260
FILTER INLET PRESSURE (psig)	13	(ideal range: 8 to 12 psig)
CARBON #1 INLET PRESSURE (psig)	10	(ideal range: 5 to 9 psig)
CARBON #2 INLET PRESSURE (psig)	9.5 / 5.0	(ideal range: 1 to 4 psig)
DISCHARGE PRESSURE (psig)	1	(ideal range: 0 to 2 psig)

**PART B: COMMENTS**

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**PART C: WELL DATA (Monthly)**

\* ALLOW SYSTEM TO RUN 1 HOUR BEFORE OBTAINING DTW READINGS

WELL	DTW (TOB)	TOTALIZER (gallons)	FLOWRATE (gpm)	COMMENTS/ ADJUSTMENTS
E-1A				
UST-A		N/A	N/A	
UST-B		N/A	N/A	
SP1-V4		N/A	N/A	

**PART D: SAMPLING (Monthly)**

SAMPLE	ANALYSIS	COMPLETED
INFLUENT	TPH-gasoline, BTEX compounds, MIBE	10/23
EFFLUENT	TPH-gasoline, BTEX compounds, MIBE COD, TSS	10/23
MID-1	TPH-gasoline, BTEX compounds, MIBE	10/23
MID-2	TPH-gasoline, BTEX compounds, MIBE	10/23

**PART E: READINGS (Monthly)**

EFFLUENT	TEMP (°F)	CONDUCTIVITY (umhos)	pH (units)	DISSOLVED OXYGEN (ppm)
	21.6°C	904µS	6.82	3.45

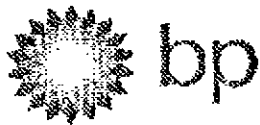
**PART F: SYSTEM MAINTENANCE I (Monthly)**

NUMBER OF SPARE FILTERS ON SITE?	0	CHANGE FILTERS? (if necessary)	Yes
PUMP AMP DRAW	N/A	H2O2 injection well EA-1 (if necessary)	N/A
SWEEP ENCLOSURE	N/A		

**PART G: SYSTEM MAINTENANCE II (Quarterly)**

TEST ALARM SWITCHES	Y	BACKFLUSH CARBONS	N/A
CLEAN TOTALIZERS	Y		





**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 6 1 0 0 0

Date: 10/23/03

Requested Due Date: 11/6/03  
 (mm/dd/yy - 2 weeks from sampling date)

On-site Time: 1130 Temp: 67  
 Off-site Time: 1230 Temp: 72  
 Sky Conditions: Clear, Sunny w/ clouds  
 Meteorological Events: None  
 Wind Speed: N/A Direction: N/A

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.				Site ID No. Station 608										Oakland, CA 94607													
Suite D				California Global ID #: T0600101665										e-mail EDD: NO EDD													
Petaluma, CA 95954				BP GEM PM Contact: Paul Supple										Consultant Project No.: 38486167.00327													
Lab PM: Angeles Cari				Address: P.O. Box 6549, Moraga, CA 94570										Consultant Tele-Fax: 510-874-3280/510-874-3268													
Tele-Fax: 707-792-7527 707-792-6342				Tele Fax: 925-299-8891 925-299-8872										Consultant PAF: Scott Robinson													
Report Type & QC Level: 1														Invoice to: Atlantic Richfield Company													
BP GEM Account No.:														BP GEM Work Release No.:													
Lab Bottle Order No.:				Matrix				Preservatives				Requested Analysis				Sample Point Lat/Long and Comments											
Item No.	Field Point ID	Sample ID	Time	Soil Solid	Water Liquid	Sediments	Air	Laboratory No.	No. of Containers	Unpreserved	H <sub>2</sub> SO <sub>4</sub>	LiNH <sub>2</sub>	HCl	TD10g (8012)	BTEN (8021)					MTDE (8021)	COD	TSS	Fuel Oxy. (8260)				
1	INFL	INFL	1145	X					3				X	X	X			X									
2	MID-1	MID-1	1140	X					3				X	X	X			X									
3	MID-2	MID-2	1135	X					3				X	X	X			X									
4	EFFL	EFFL	1130	X					7	X	X	X	X	X	X	X	X	X	X	X							
5																											
6																											
7																											
8																											
9																											
10																											
Sampler's Name: George Bradshaw				Relinquish By: <i>[Signature]</i>				Date: <u>10/23/03</u>				Time: <u>12:00</u>				Accepted By: <i>[Signature]</i>				Date: <u>10/23/03</u>				Time: <u>1530</u>			
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 Seals In Place Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>				Temperature Blank Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>				Cooler Temperature on Receipt <input type="checkbox"/> <u>0</u> F/C				Trip Blank Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>															